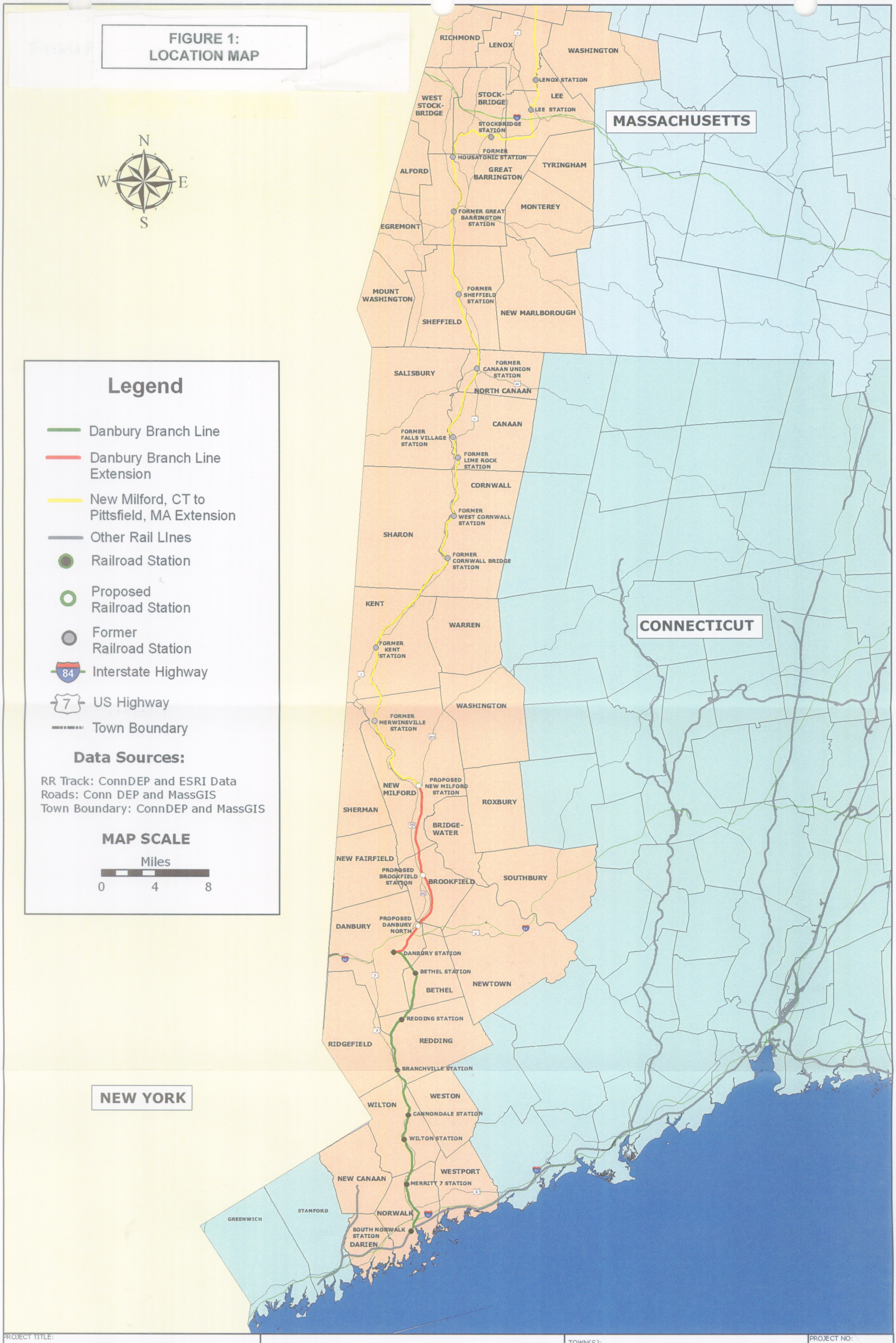
FIGURES

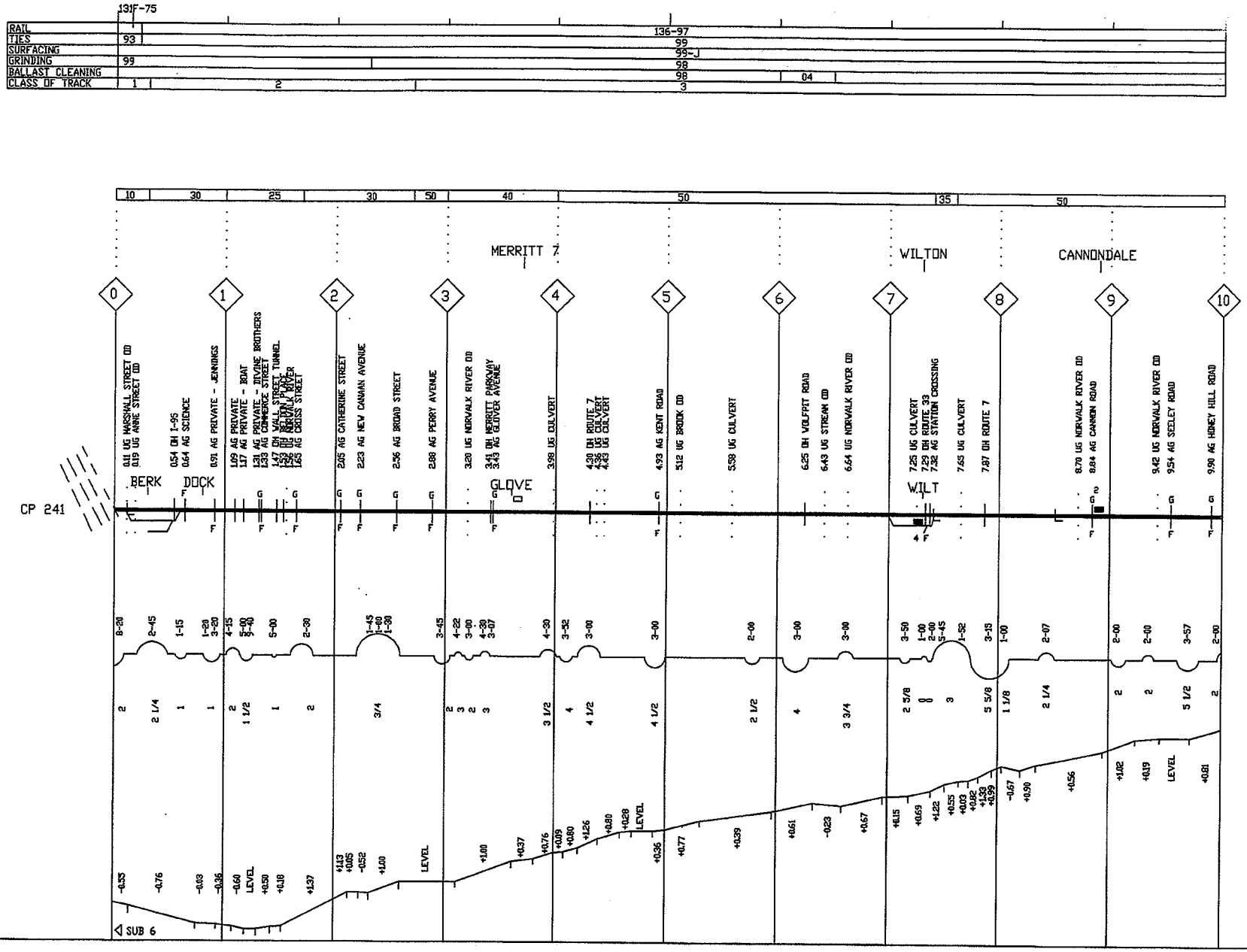
FIGURES

FIGURE 1: LOCATION MAP



PROJECT TITLE:		TOWN(S):	PROJECT NO:
DANBURY BRANCH IMPROVEMENT PROGRAM EIS	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	NORWALK CT TO PITTSFIELD MA	MAP NO:
GIS MAPPING BY: URS CORPORATION DATE : 01-20-09		MAP TITLE: STUDY CORRIDOR	SHEET NO: 1 of 1

FIGURE 2: METRO-NORTH TRACK CHART
(1 OF 3)



MP 0.00 - MP 10.00 CT

DANBURY BRANCH

DANBURY BRANCH

MP 10.00 - MP 20.00 CT

FIGURE 2: METRO-NORTH TRACK CHART
(2 OF 3)

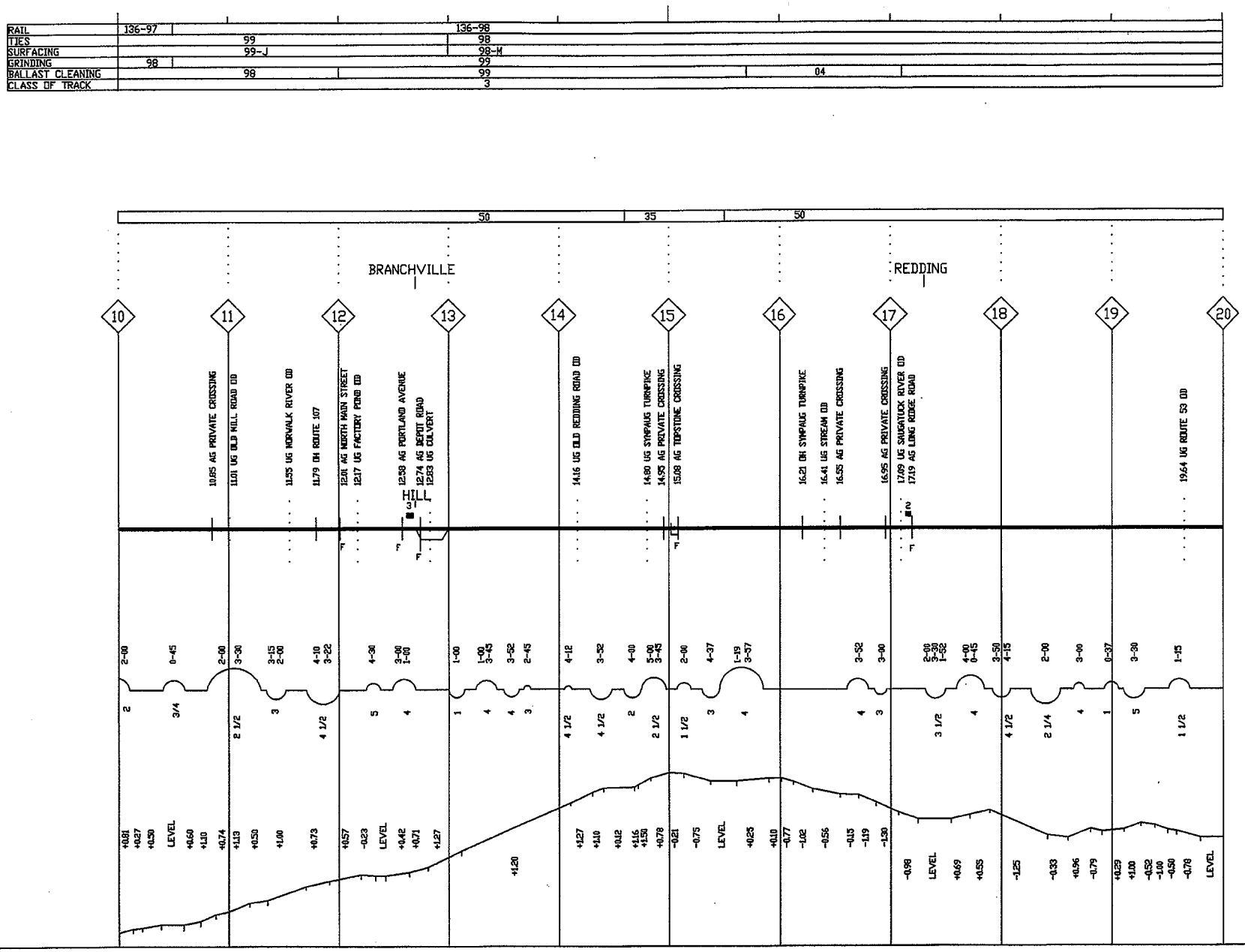
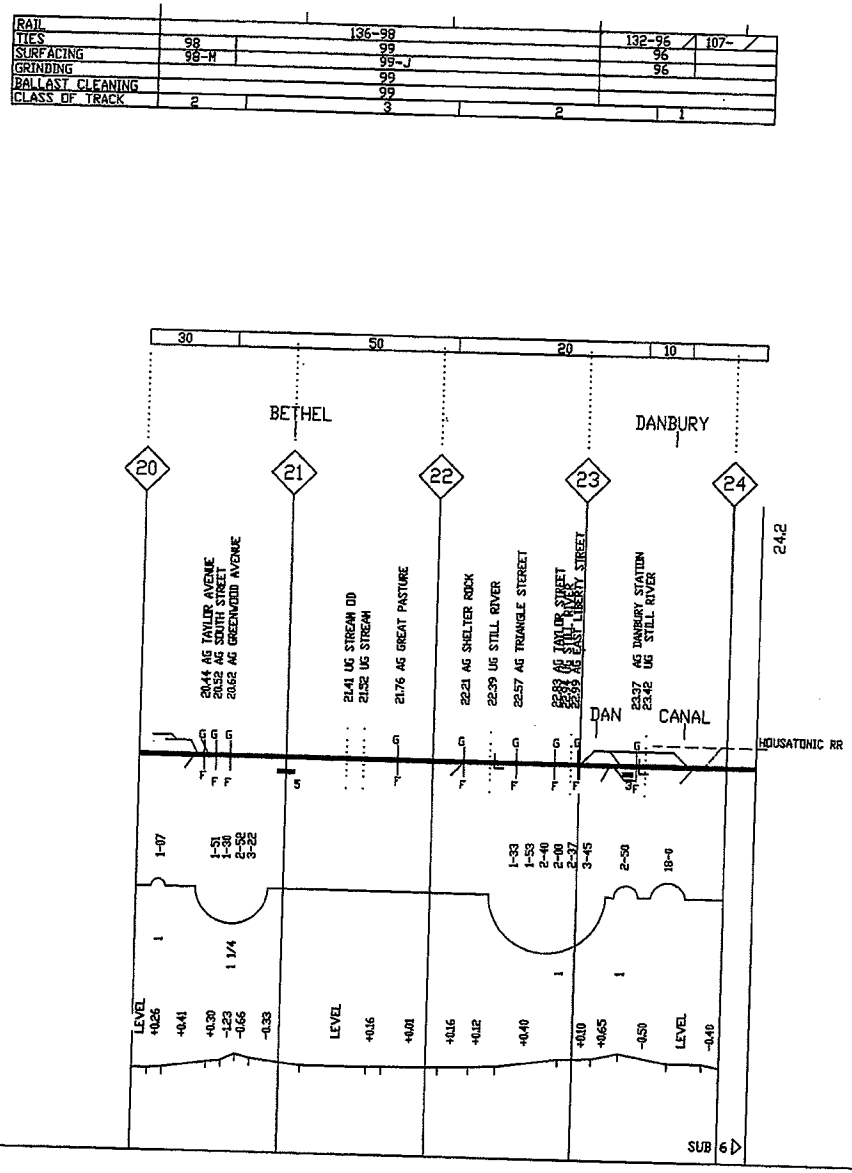


FIGURE 2:
METRO-NORTH TRACK CHART
(3 OF 3)



DANBURY BRANCH

MP 20.00 - MP 24.20 CT

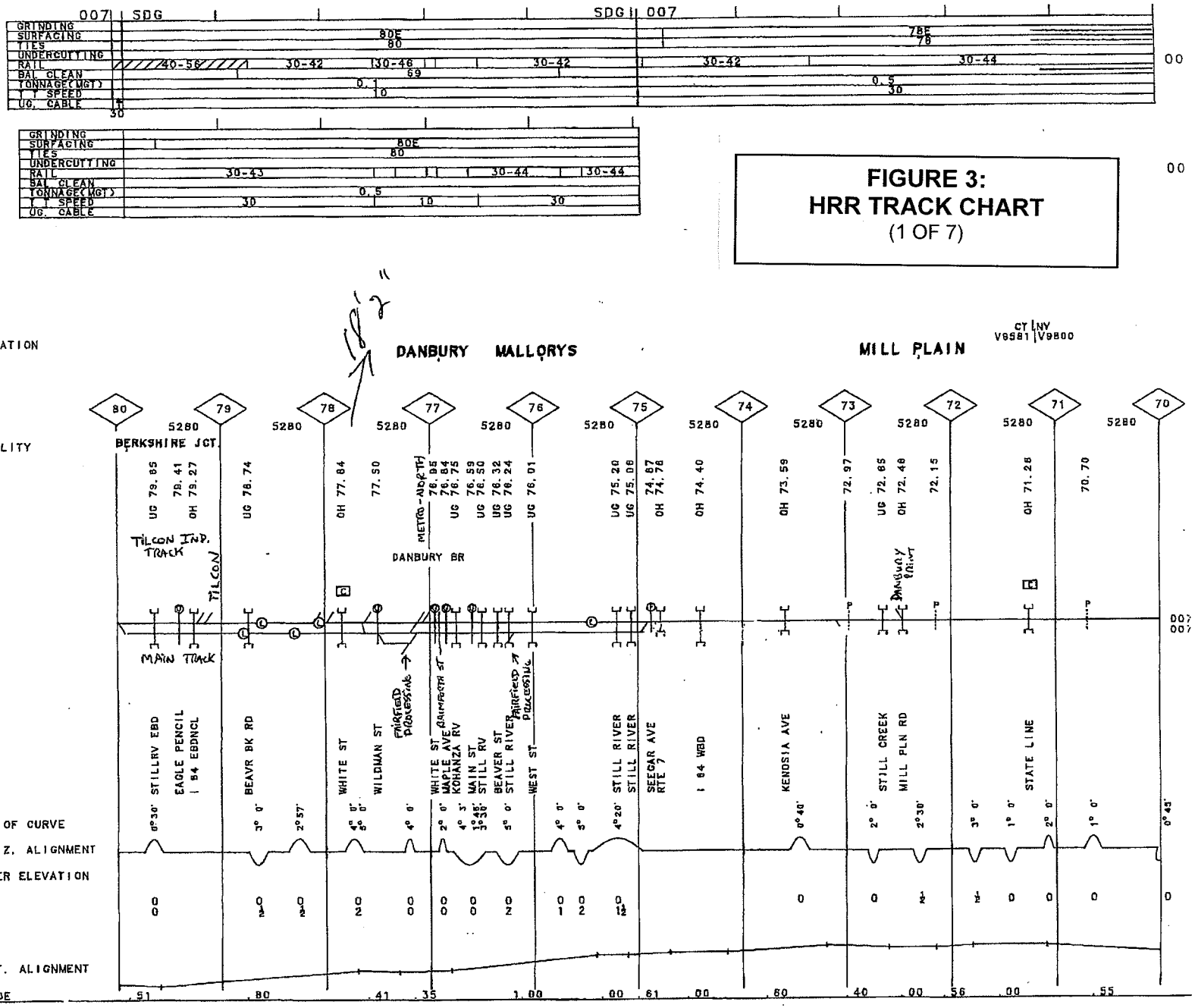


FIGURE 3:
HRR TRACK CHART
(1 OF 7)

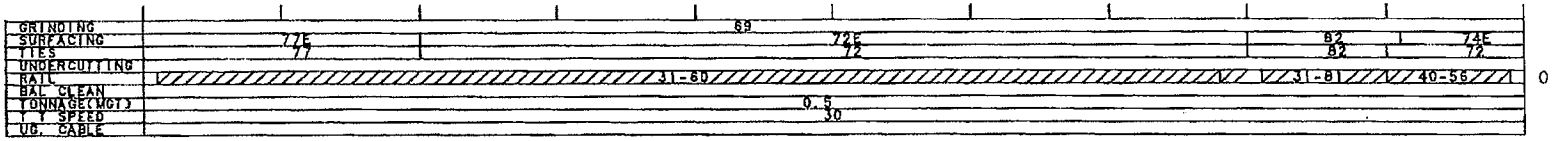


FIGURE 3:
HRR TRACK CHART
(2 OF 7)

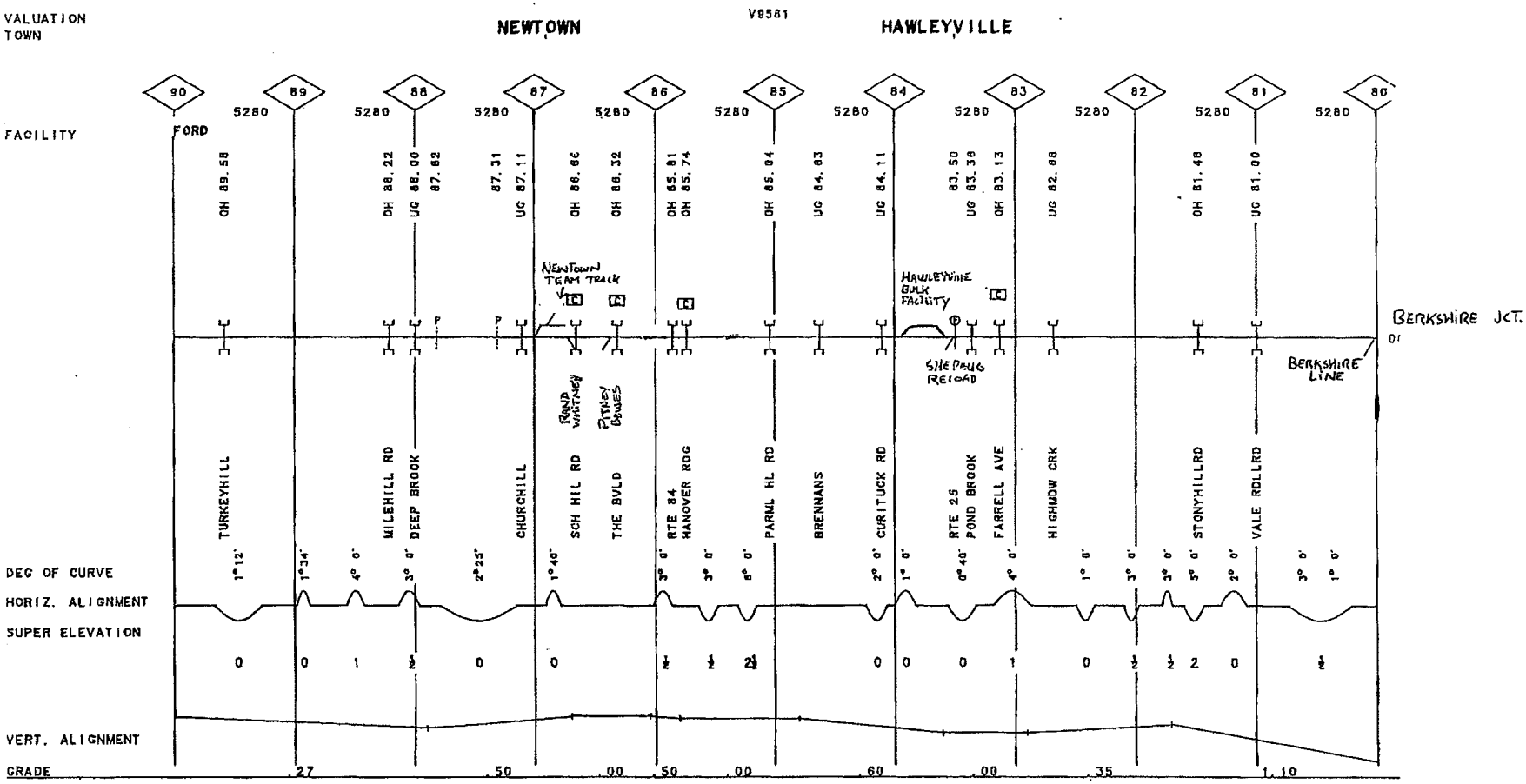


FIGURE 3:
HRR TRACK CHART
(3 OF 7)

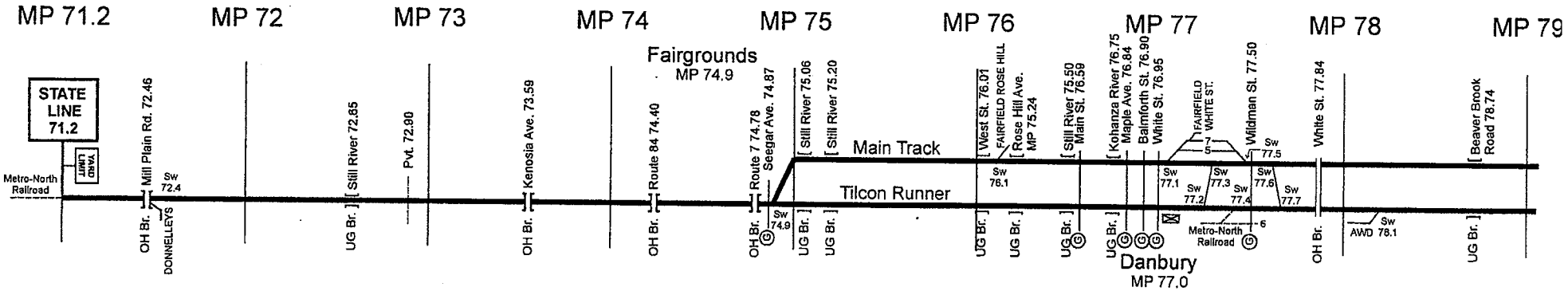
MAYBROOK LINE

Danbury to Derby Junction

The direction from Danbury to Derby Junction is East

NORMAL POSITION OF SWITCHES
Switch at MP 74.9 is considered lined Normal when lined for movements from Maybrook Line single track to Maybrook Line main track.

138-4 HIGHWAY CROSSING WARNING
ALL CROSSINGS BETWEEN MP 74 & MP 78
Apparatus provided to manually activate crossing protection. Trains must STOP prior to entering crossing and not proceed until gates are in horizontal position and/or the protection has been operating continuously for a minumum of 30 seconds.



Metro-North Beacon Line Timetable & Rules Apply											
STATE LINE	Rule 93	Yard Limits	Single Track	Yard Limits	Rule 93	Yard Limits	Main Track	Yard Limits	Rule 93		
							Tilcon Running Track		Rule 97		
	Restricted Speed						MAIN TRACK - RESTRICTED SPEED				
							TILCON RUNNING TRACK - RESTRICTED SPEED NOT EXCEEDING 10 MPH				
	Danbury						Danbury				

FIGURE 3:
HRR TRACK CHART
(4 OF 7)

138-4 HIGHWAY CROSSING WARNING
RUSTY RAIL, EAGLE PENCIL ROAD MP 79.41
When rusty rail conditions exist, trains must comply with Rule 138 (c), Item 1, unless railroad flagger is providing warning at the crossing.

NORMAL POSITION OF SWITCHES
Switches at Berkshire Junction are considered lined Normal when lined for movements from Maybrook Line single track to Tilcon Running Track.

MAYBROOK LINE

Danbury to Derby Junction

The direction from Danbury to Derby Junction is East

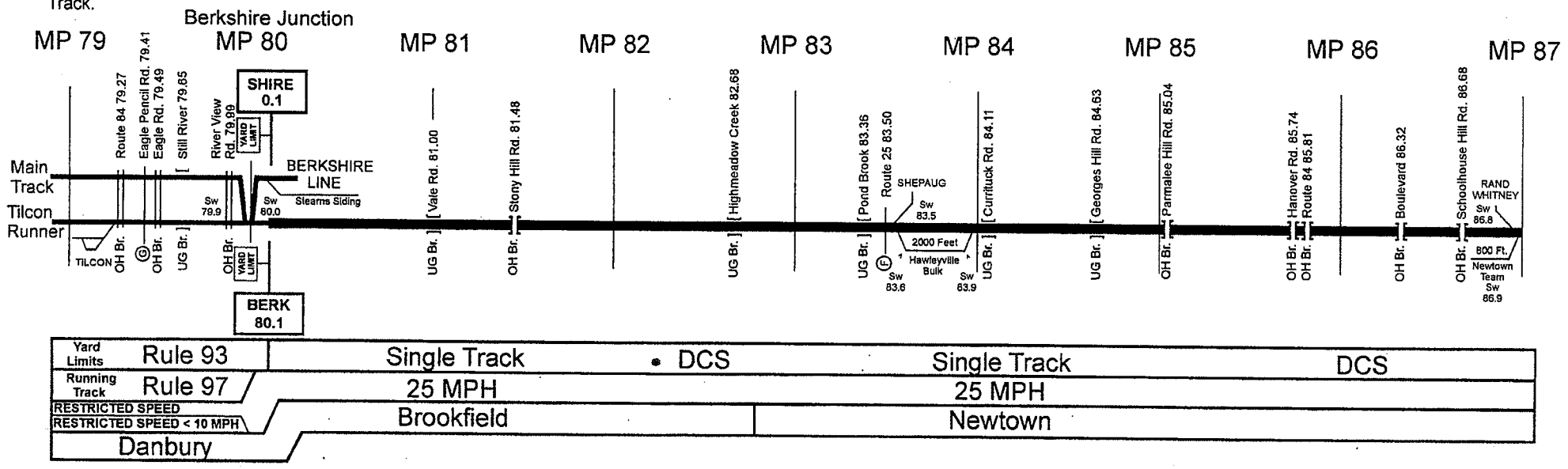


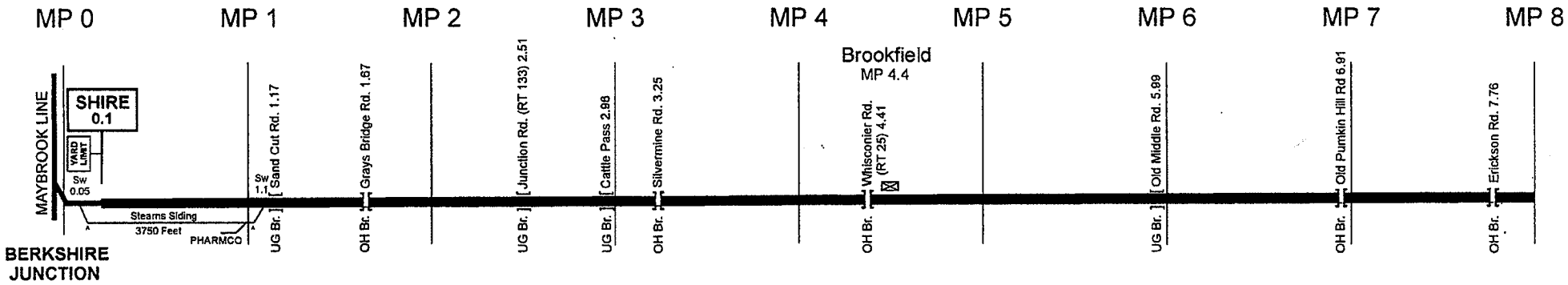
FIGURE 3:
HRR TRACK CHART
(5 OF 7)

BERKSHIRE LINE

Danbury to Pittsfield

The direction from Danbury to Pittsfield is North

NORMAL POSITION OF SWITCHES
Switches at Berkshire Junction are considered lined Normal when lined for movements from Maybrook Line single track to Tilcon Running Track.



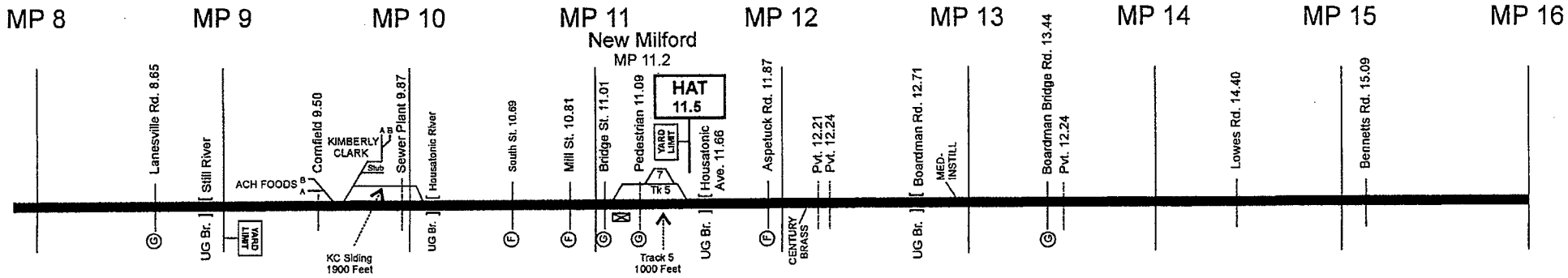
Yard Limits 93	Single Track	DCS	Single Track	DCS
10 MPH SHIRE	25 MPH		25 MPH	
	Brookfield		Brookfield	New Milford

FIGURE 3:
HRR TRACK CHART
(6 OF 7)

BERKSHIRE LINE

Danbury to Pittsfield

The direction from Danbury to Pittsfield is North



DCS		Yard Limits	Rule 93 & DCS		Yard Limits		Single Track	DCS	Single Track	
25 MPH	KC Jct MP 9.0	Restricted Speed not exceeding 20 MPH		KC Jct MP 10.69	Restricted Speed not exceeding 10 MPH	HAT	25 MPH		25 MPH	
New Milford							New Milford			

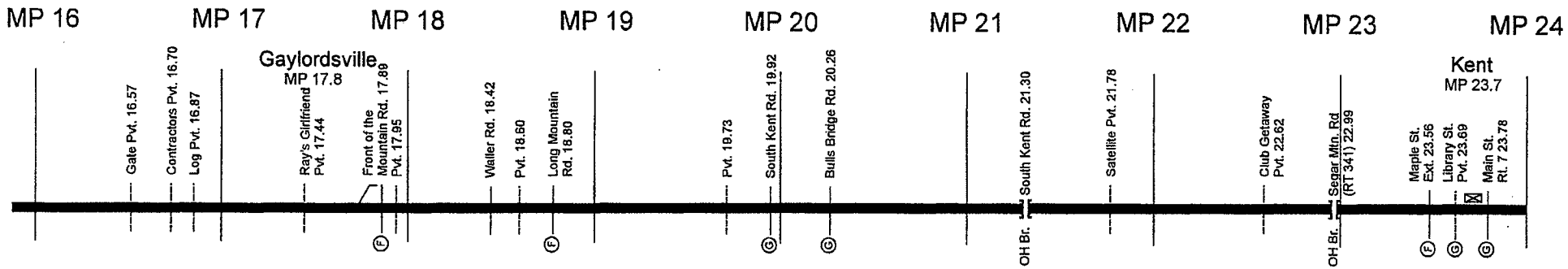
FIGURE 3:
HRR TRACK CHART
(7 OF 7)

BERKSHIRE LINE

Danbury to Pittsfield

The direction from Danbury to Pittsfield is North

138-4 HIGHWAY CROSSING WARNING
WALLER ROAD MP 18.42
A crewmember or properly equipped flagger must protect the crossing in advance of each movement using proper flagging equipment.



DCS	Single Track	DCS	Single Track	DCS
	25 MPH		25 MPH	
	New Milford		Kent	

A	B	C	D	E	F
	10	132	1992	S.NORWALK PASS. SIDING SO. MP 0.1	
	15	132	1992	S.NORWALK PASS. SIDING NO. MP 0.6	
	15	132	1991	WILTON SOUTH MP 7.0	
	15	132	1991	WILTON NORTH MP 7.4	
	15	132	1992	BRANCHVILLE SOUTH MP 12.7	
	15	132	1992	BRANCHVILLE NORTH MP 13.0	
	10	132	1995	VANDERBILT CHEMICAL MP 20.3	
	10	132	1995	BETHEL NORTH MP 20.4	

A	B	C	D	E	F
	8	132	1995	RINGS END LUMBER MP 20.4	
	10	136	1998	SPERRY RAIL SERVICE MP 22.2	1998
	15	132	1992	8S MP 23.0	
	8	132	1994	LINK SOUTH MP 23.1	
	8	132	1996	STATION STUB MP 23.2	1998
	10	132	1994	68S MP 23.1	1998
	10	132	1994	68N MP 23.2	1998
	10	136	2005	8N MP 23.8	2005
	8	136	2005	LINK NORTH MP 23.9	2005

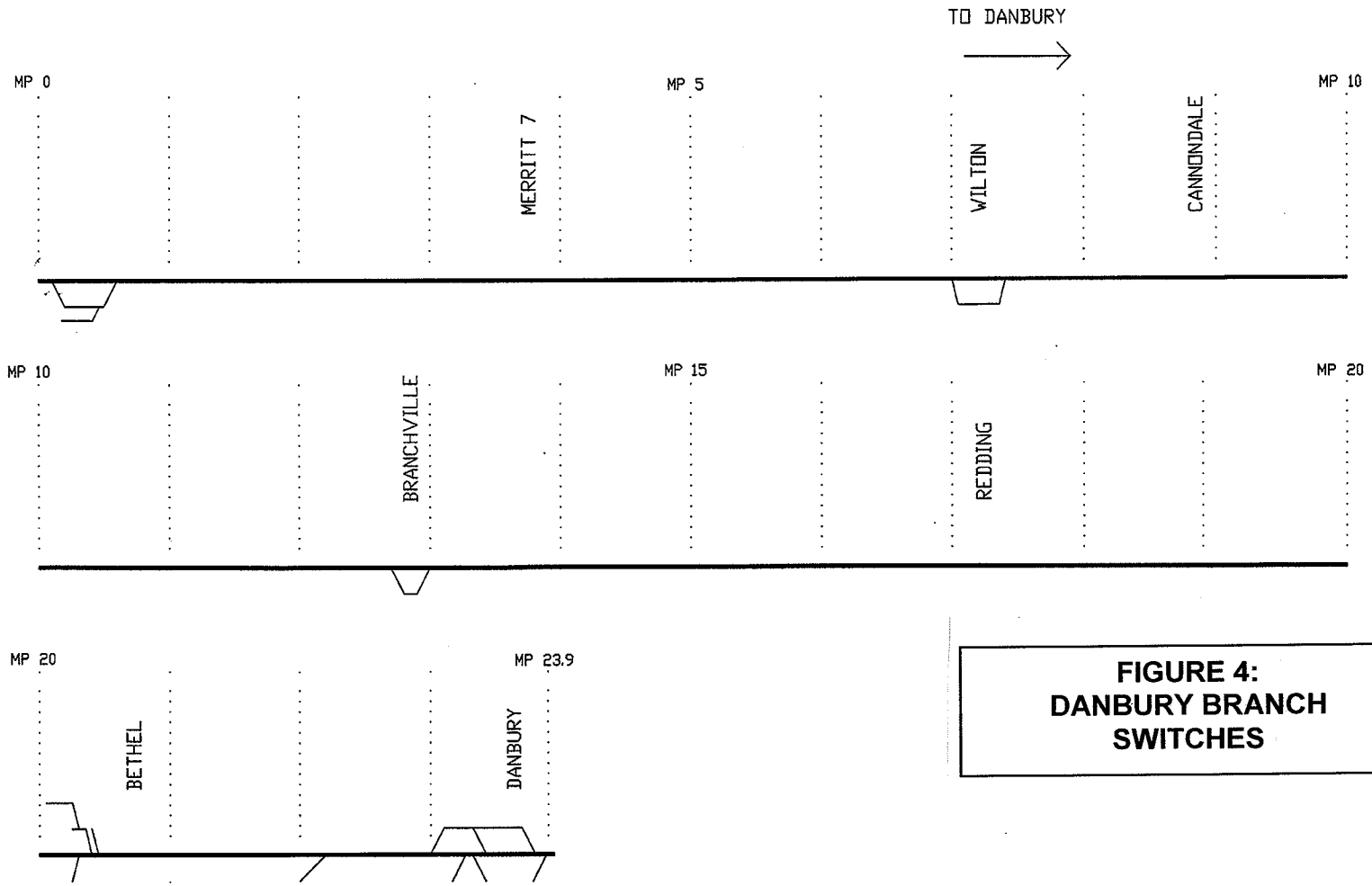
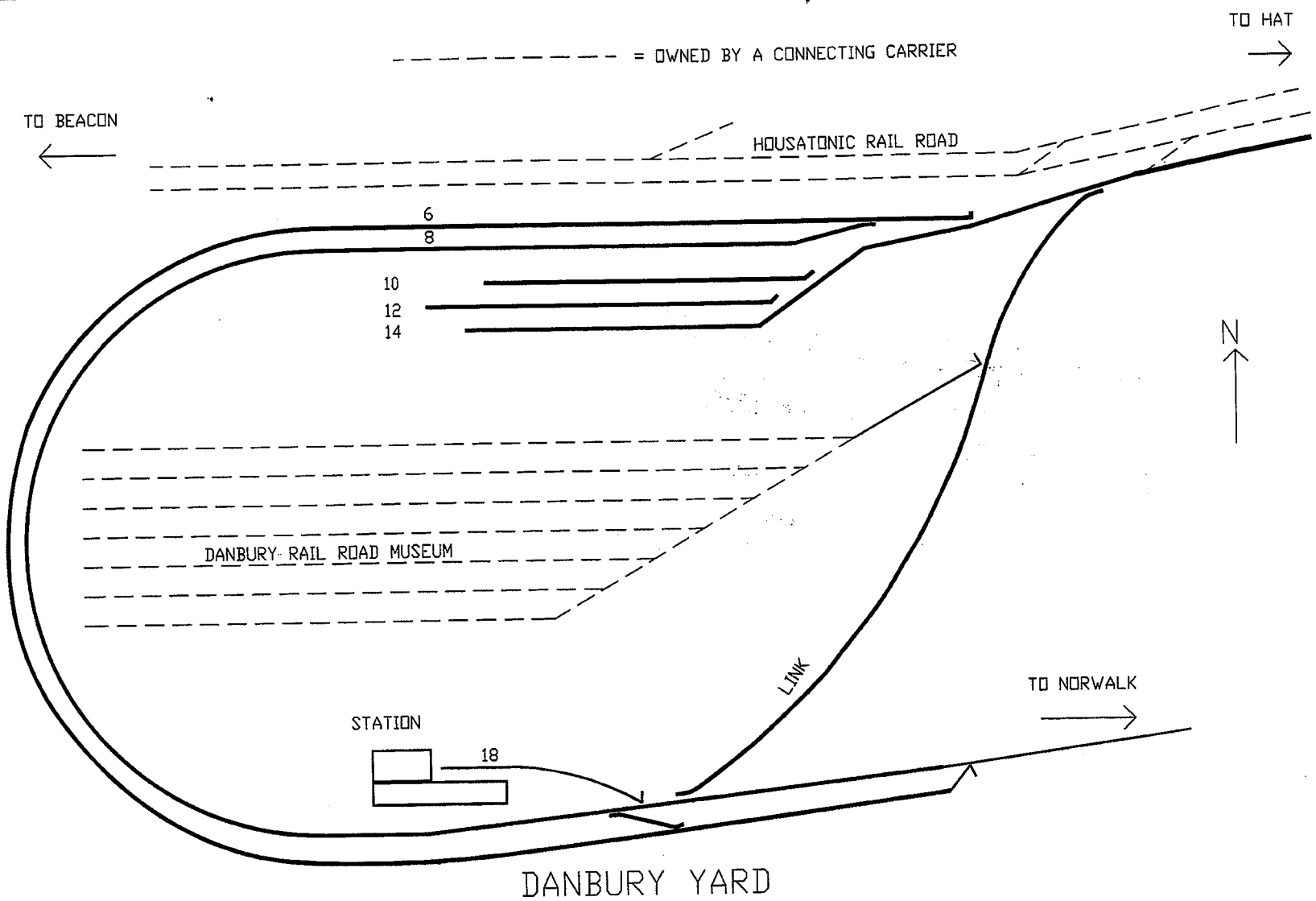


FIGURE 4: DANBURY BRANCH SWITCHES

OUTLYING SWITCHES (DANBURY BRANCH)

A	B	C	D	E	F	G
LINK S	8	132	1135	1994		1994
LINK N	8	136		2005		2005
10	8	136	644	2005		2005
12	8	136	658	2005		2005
14	10	136	658	2005		2005
18	8	132	413	1996		
16	8	136		2005	DANBURY RAIL ROAD MUSEUM LEAD	2005
	8	136		2005	SWITCH TO MAYBROOK	2005

FIGURE 5: DANBURY RAIL YARD



A	B	C	D	E	F
	10	119	1995	RINGS END MP 36.9 EL	1996
13A	20	136	2001		2001
13B	20	136	2001		2001
12A	20	136	2001	MPF	2001
12B	20	136	2001	MPF	2005
21A	20	136	2001	MPF	2001
21B	20	136	2001	MPF	2003
24A	20	136	2003	MPF	2005
24B	20	136	2003	MPF	2005

CP 240 ↑ ↓ CP 244 CP 241→

A	B	C	D	E	F
30W	16.6	136	2002	DERAIL	2005
10W	16.6	136	1999	DERAIL	2004
20W	16.6	136	1999	DERAIL	2001
40W	16.6	136	2003	DERAIL	2003
30E	16.6	136	2002	DERAIL	2004
10E	16.6	136	1999	DERAIL	1999
20E	16.6	136	1999	DERAIL	1999
40E	16.6	136	2003	DERAIL	2003

A	B	C	D	E	F
64	8	140	1985		2005
31A	15	140	1985		1996
31B	15	140	1985		2002
42A	15	140	1985		2005
42B	15	140	1985		1998
21A	10	140	1985		1998
21B	10	140	1985		2004
13A	10	140	1985		2004
13B	10	136	2007		2007
53	10	140	1985		1996
35	8	140	1991		2006
12A	10	140	1983		2004
12B	10	140	1983		2004
24A	10	140	1983		1998
24B	10	140	1983		1998
10W	16.6	136	1999	DERAIL	1999
20W	16.6	136	1999	DERAIL	2001
40W	16.6	136	2003	DERAIL	2005
10E	16.6	136	1999	DERAIL	2004
20E	16.6	136	1999	DERAIL	2004
30E	16.6	136	1999	DERAIL	2004
40E	16.6	136	2003	DERAIL	2003

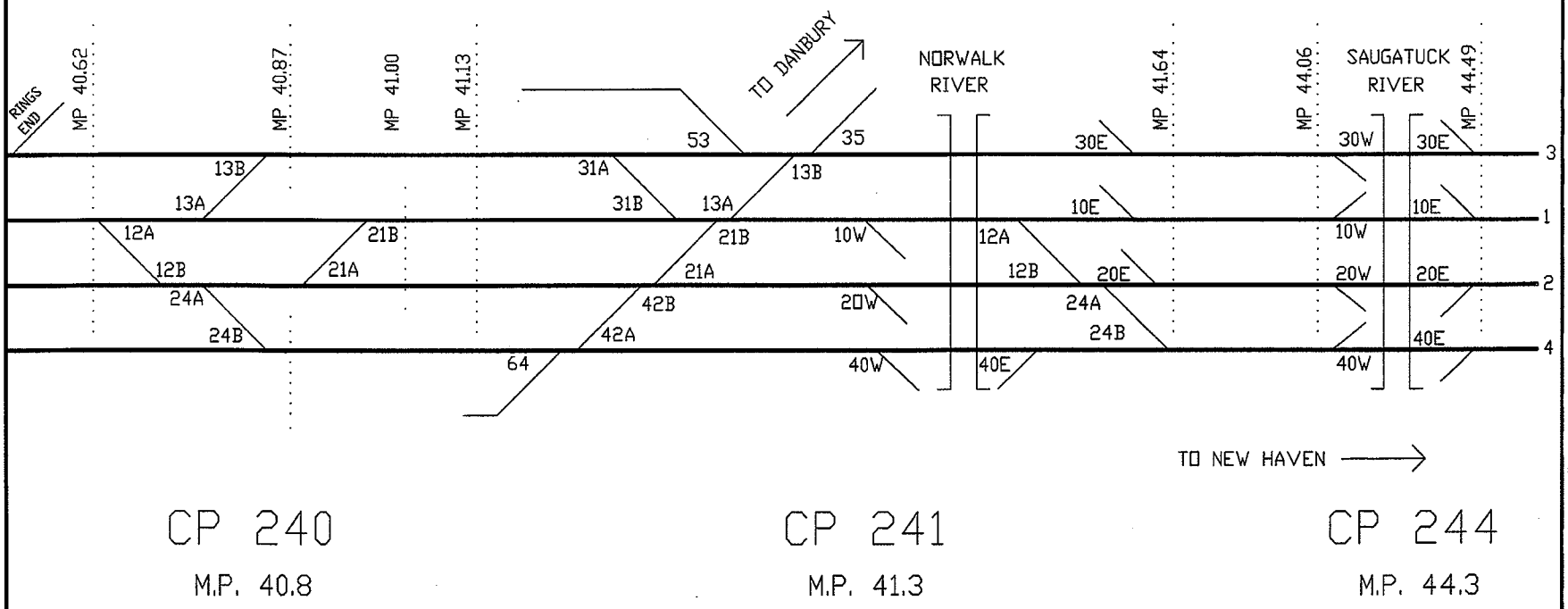


FIGURE 6: CP 241 INTERLOCKING DIAGRAM

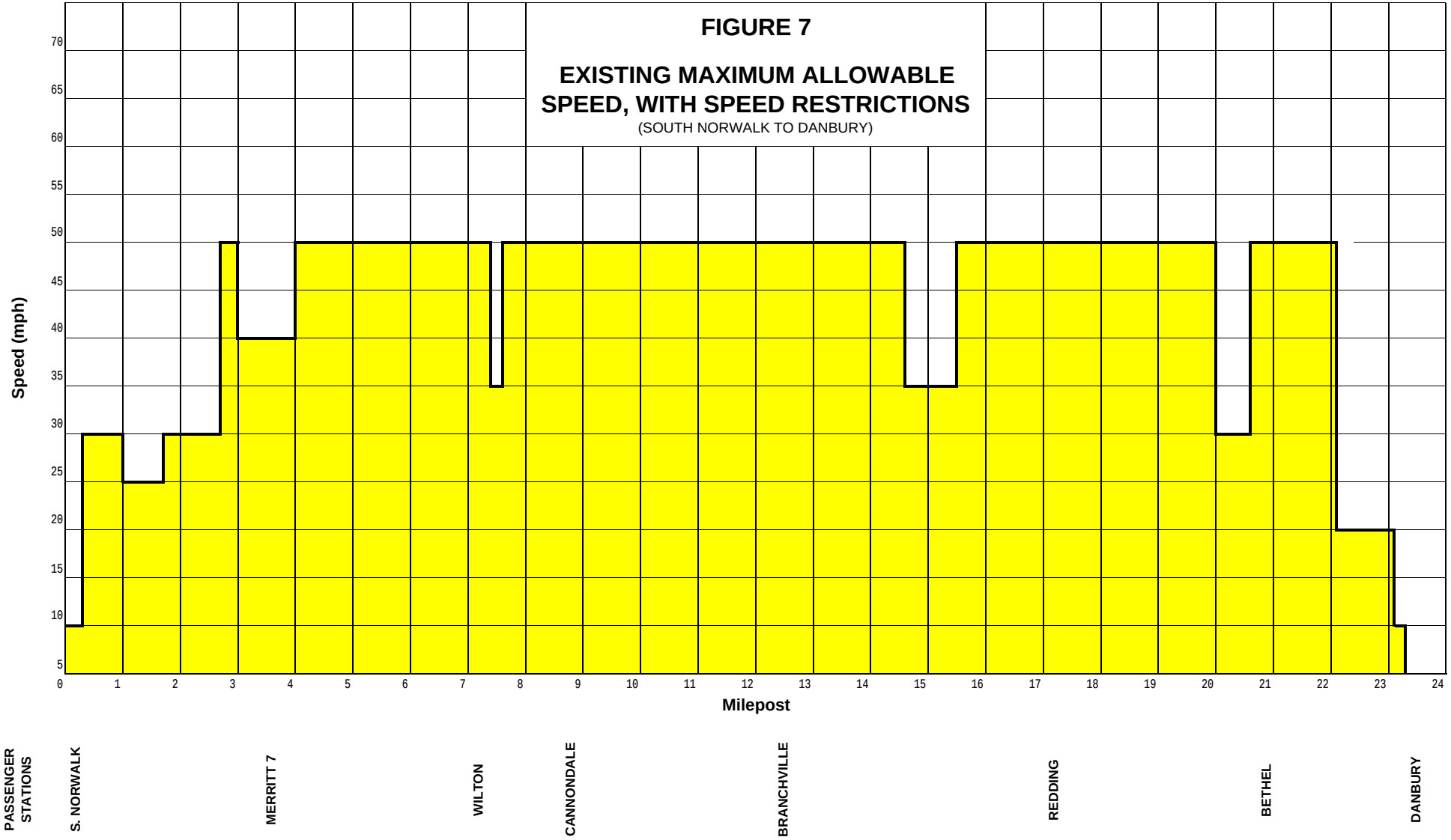
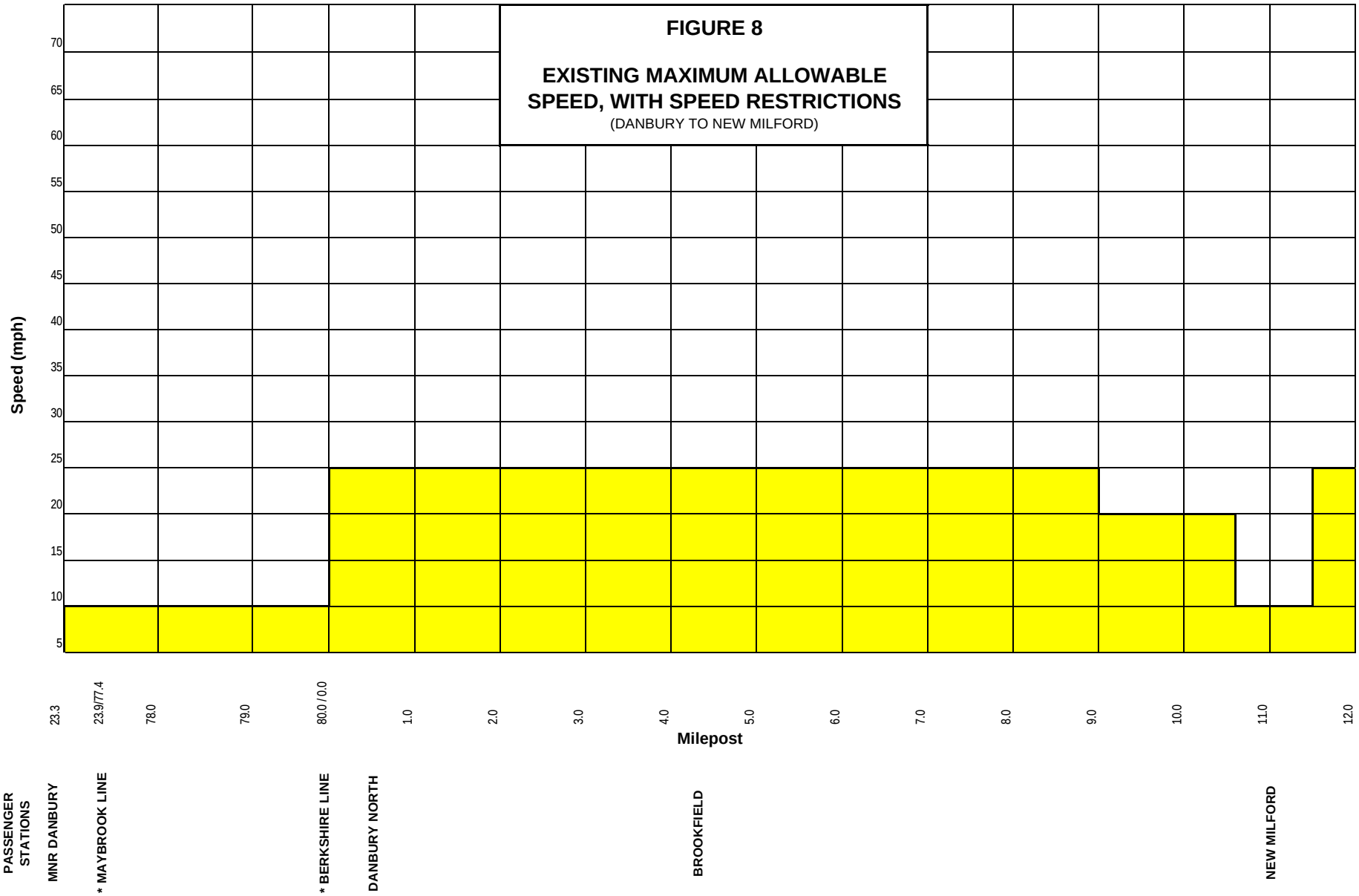
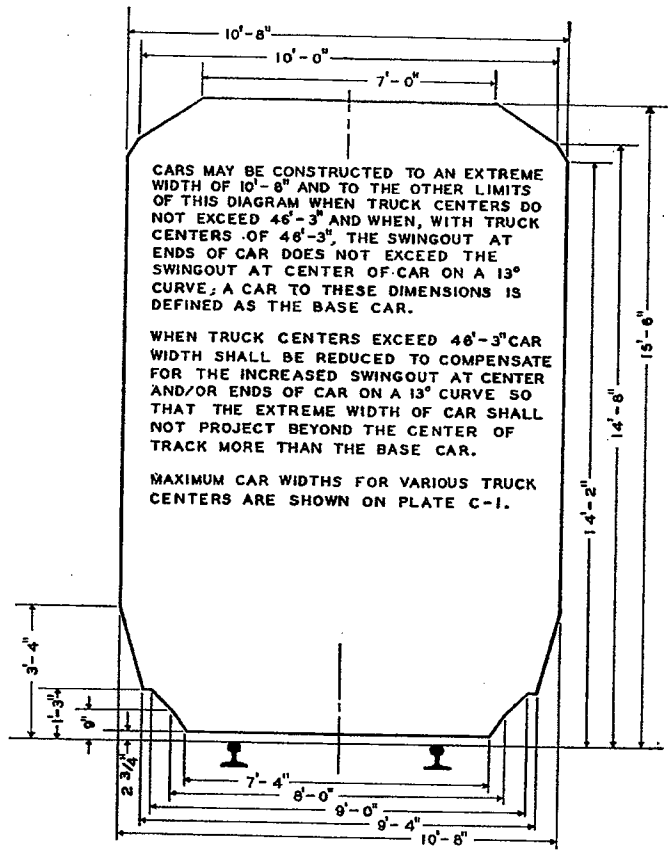


FIGURE 7
EXISTING MAXIMUM ALLOWABLE SPEED, WITH SPEED RESTRICTIONS
(SOUTH NORWALK TO DANBURY)
Speed (mph)
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
Milepost
PASSENGER STATIONS
S. NORWALK
MERRITT 7
WILTON
CANNONDALE
BRANCHVILLE
REDDING
BETHEL
DANBURY



* NOTE: TRAINS WILL HAVE TO STOP TO MANUALLY OPERATE HAND-THROW SWITCHES

2.3 EQUIPMENT DIAGRAM FOR LIMITED INTERCHANGE SERVICE—PLATE C*

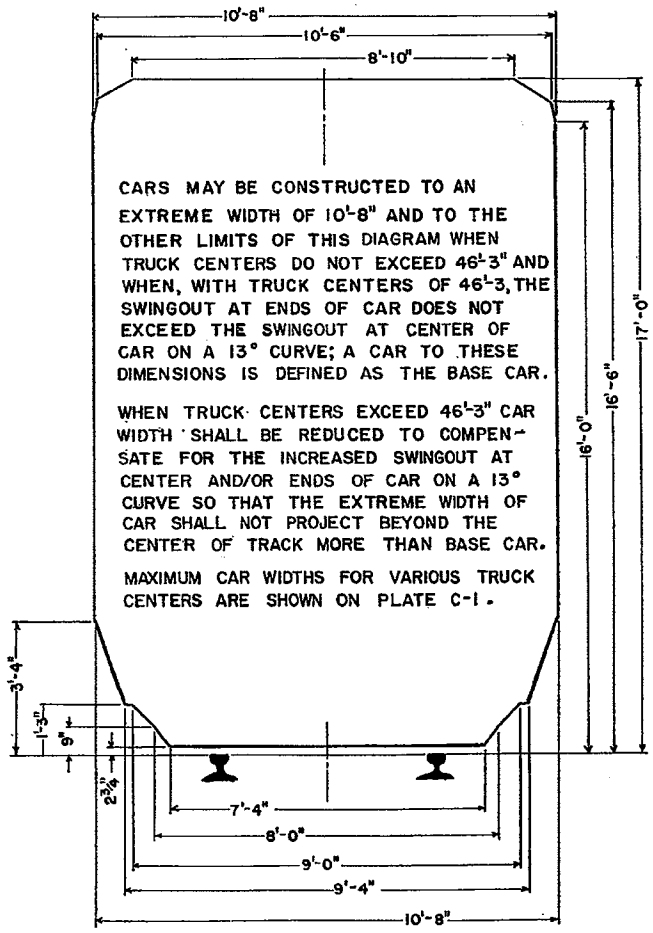


THE 2 3/4" ABOVE TOP OF RAIL IS ABSOLUTE MINIMUM UNDER ANY AND ALL CONDITIONS OF LADING, OPERATION, AND MAINTENANCE.

*THIS DIAGRAM IS THE SAME AS PLATE C OF THE MECHANICAL DIVISION, A.A.R., AND IS INCLUDED IN A.R.E.A MANUAL FOR CONVENIENT REFERENCE. FOR RESTRICTIONS APPLICABLE TO THIS DIAGRAM SEE "RAILWAY LINE CLEARANCES".

FIGURE 9: AREMA CLEARANCE ENVELOPE CRITERIA (MNR)

2.7 EQUIPMENT DIAGRAM FOR LIMITED INTERCHANGE SERVICE—PLATE F*



THE 2¾ ABOVE TOP OF RAIL IS ABSOLUTE MINIMUM UNDER ANY AND ALL CONDITIONS OF LADING, OPERATION, AND MAINTENANCE.

* THIS DIAGRAM IS THE SAME AS PLATE F OF THE MECHANICAL DIVISION, AAR, AND IS INCLUDED IN A.R.E.A. MANUAL FOR CONVENIENT REFERENCE. FOR RESTRICTIONS APPLICABLE TO THIS DIAGRAM SEE "RAILWAY LINE CLEARANCES."

FIGURE 10: AREMA CLEARANCE ENVELOPE CRITERIA (HRRC)

TABLES

TABLES

TABLE 1
EXISTING CURVE DATA

Curve data chart: Existing MNR Operations - South Norwalk / Danbury

Metro North RR - Danbury Br

Curve data from MNR 2003 Track Chart.

1 Length & location of curves are approximate as they were scaled from the Track Chart.

2 Convention for RH or LH curve is facing RR north.

3 The MP location of the curves was taken at the approximate mid point.

4 Underbalance, Eu, is the difference between equilibrium superelevation (EQ) and actual superelevation (Ea, from the track charts)

Station	Curve No.	Degree of Curve	RH / LH Curve	EQ (in.)	Ea (in)	Eu (in)	Max. Speed (MPH)	Length (mi)	Location (MP)	Comments
	62	17 ^{0}	RH	1.19	??	??	10	0.25	23.60	
Danbury	61	2 ^{0} 50'	RH	0.79	1	-0.21	20	0.20	23.40	
	60	3 ^{0} 45'	LH	1.05	1	0.05	20	0.75	22.80	Compound Curve 3 AG x-ings, UG 22.94
		2 ^{0} 37'	LH	0.73	1	-0.27	20			
		2 ^{0} 00'	LH	0.56	1	-0.44	20			
		2 ^{0} 40'	LH	0.75	1	-0.25	20			
		1 ^{0} 53'	LH	0.53	1	-0.47	20			
		1 ^{0} 33'	LH	0.43	1	-0.57	20			
Bethel		**TANGENT TRACK**								
	59	3 ^{0} 22'	LH	5.89	1.25	4.64	50	0.50	20.70	Compound Curve with Speed Change in Curve, 3 AG x-ings
		2 ^{0} 52'	LH	5.02	1.25	3.77	50			
		1 ^{0} 30'	LH	0.95	1.25	-0.31	30			
		1 ^{0} 51'	LH	1.17	1.25	-0.08	30			
	58	1 ^{0} 07'	RH	0.70	1	-0.30	30	0.10	20.15	
	57	1 ^{0} 15'	RH	2.19	1.5	0.69	50	0.20	19.60	UG 19.64
	56	3 ^{0} 30'	LH	6.13	5	1.13	50	0.20	19.20	Rev. Curve
	55	0 ^{0} 37'	RH	1.08	1	0.08	50	0.15	19.00	
	54	3 ^{0} 00'	RH	5.25	4	1.25	50	0.10	18.70	
	53	2 ^{0} 00'	LH	3.50	2.25	1.25	50	0.30	18.35	
	52	4 ^{0} 15'	LH	7.44	4.5	2.94	50	0.20	18.00	Compound Curve
		3 ^{0} 50'	LH	6.71	4.5	2.21	50			
	51	0 ^{0} 45'	RH	1.31	4	-2.69	50	0.30	17.70	Compound Curve
		4 ^{0} 00'	RH	7.00	4	3.00	50			
	50	1 ^{0} 52'	LH	3.27	3.5	-0.23	50	0.20	17.40	Compound Curve
		3 ^{0} 30'	LH	6.13	3.5	2.63	50			
		2 ^{0} 00'	LH	3.50	3.5	0.00	50			

TABLE 1
EXISTING CURVE DATA

	Curve data chart: Existing MNR Operations - South Norwalk / Danbury
	Metro North RR - Danbury Br
	Curve data from MNR 2003 Track Chart.
1	Length & location of curves are approximate as they were scaled from the Track Chart.
2	Convention for RH or LH curve is facing RR north.
3	The MP location of the curves was taken at the approximate mid point.
4	Underbalance, Eu, is the difference between equilibrium superelevation (EQ) and actual superelevation (Ea, from the track charts)

Station	Curve No.	Degree of Curve	RH / LH Curve	EQ (in.)	Ea (in)	Eu (in)	Max. Speed (MPH)	Length (mi)	Location (MP)	Comments	
Redding		**TANGENT TRACK**									
	49	3 ^{0} 00'	LH	5.25	3	2.25	50	0.15	16.90		
	48	3 ^{0} 52'	RH	6.77	4	2.77	50	0.20	16.70		
	47	3 ^{0} 57'	RH	6.91	4	2.91	50	0.40	15.60	Compound with speed change in curve	Short Tangent Between Reverse Curves
		1 ^{0} 19'	RH	1.13	4	-2.87	35				
	46	4 ^{0} 37'	LH	3.96	3	0.96	35	0.15	15.35		
	45	2 ^{0} 00'	RH	1.72	1.5	0.22	35	0.15	15.15		
	44	3 ^{0} 45'	RH	3.22	2.5	0.72	35	0.20	14.80	Compound Curve, UG 14.80	Short Tangent Between Reverse Curves
		5 ^{0} 00'	RH	4.29	2.5	1.79	35				
	43	4 ^{0} 00'	LH	3.43	2	1.43	35	0.20	14.60		
	42	3 ^{0} 52'	LH	6.77	4.5	2.27	50	0.20	14.35		
	41	4 ^{0} 12'	RH	7.35	4.5	2.85	50	0.10	14.10		
	40	2 ^{0} 45'	RH	4.81	3	1.81	50	0.10	13.70		Short Tangent Between Reverse Curves
	39	3 ^{0} 52'	LH	6.77	4	2.77	50	0.20	13.55		
	38	3 ^{0} 45'	RH	6.56	4	2.56	50	0.25	13.30	Compound Curve	
		1 ^{0} 00'	RH	1.75	4	-2.25	50				
	37	1 ^{0} 00'	LH	1.75	1	0.75	50	0.20	13.10		
Branch-ville	36	1 ^{0} 00'	RH	1.75	4	-2.25	50	0.20	12.60	Compound Curve, AG 12.74, AG 12.01	
		3 ^{0} 00'	RH	5.25	4	1.25	50				
	35	4 ^{0} 30'	RH	7.88	5	2.88	50	0.15	12.35		
	34	3 ^{0} 22'	LH	5.89	4.5	1.39	50	0.40	11.80	Compound Curve, OH 11.79	
		4 ^{0} 10'	LH	7.29	4.5	2.79	50				
	33	2 ^{0} 00'	LH	3.50	3	0.50	50	0.20	11.40	Compound Curve	
		3 ^{0} 15'	LH	5.69	3	2.69	50				
	32	3 ^{0} 30'	RH	6.13	2.5	3.63	50	0.50	11.10	Compound Curve, UG 11.01	
		2 ^{0} 00'	RH	3.50	2.5	1.00	50				
	31	0 ^{0} 45'	RH	1.31	0.75	0.56	50	0.20	10.50		
	30	2 ^{0} 00'	RH	3.50	2	1.50	50	0.20	10.05		
	29	3 ^{0} 57'	LH	6.91	5.5	1.41	50	0.20	9.70		
	28	2 ^{0} 00'	RH	3.50	2	1.50	50	0.15	9.40		
	27	2 ^{0} 00'	LH	3.50	2	1.50	50	0.20	9.10		

TABLE 1
EXISTING CURVE DATA

	Curve data chart: Existing MNR Operations - South Norwalk / Danbury
	Metro North RR - Danbury Br
	Curve data from MNR 2003 Track Chart.
1	Length & location of curves are approximate as they were scaled from the Track Chart.
2	Convention for RH or LH curve is facing RR north.
3	The MP location of the curves was taken at the approximate mid point.
4	Underbalance, Eu, is the difference between equilibrium superelevation (EQ) and actual superelevation (Ea, from the track charts)

Station	Curve No.	Degree of Curve	RH / LH Curve	EQ (in.)	Ea (in)	Eu (in)	Max. Speed (MPH)	Length (mi)	Location (MP)	Comments	
Cannon-dale		**TANGENT TRACK**									
	26	2 ^{0} 07'	RH	3.70	2.25	1.45	50	0.20	8.50		
	25	1 ^{0} 00'	LH	1.75	1.125	0.63	50	0.35	7.90	Compound Curve, OH 7.87	Short Tangent Between Reverse Curves, OH 7.87, UG 7.65
		3 ^{0} 15'	LH	5.69	5.625	0.06	50				
	24	1 ^{0} 52'	RH	3.27	3	0.27	50	0.35	7.55	Compound Curve with Speed Change in Curve	
		5 ^{0} 45'	RH	4.93	3	1.93	35				No Tangents Between Reverse Curves, AG 7.32, OH 7.29, UG 7.25
Wilton	23	2 ^{0} 00'	LH	1.72	0	1.72	35	0.05	7.40	Reverse Curve	
	22	1 ^{0} 00'	RH	1.75	0	1.75	50	0.05	7.30		
	21	3 ^{0} 50'	LH	6.71	2.625	4.08	50	0.10	7.20		
	20	3 ^{0} 00'	RH	5.25	3.75	1.50	50	0.20	6.60	UG 6.64	
	19	3 ^{0} 08'	LH	5.48	4	1.48	50	0.30	6.20	OH 6.25	
	18	2 ^{0} 00'	LH	3.50	2.5	1.00	50	0.20	5.80		
	17	3 ^{0} 00'	LH	5.25	4.5	0.75	50	0.20	4.80	AG 4.93	
	16	3 ^{0} 00'	RH	5.25	4.5	0.75	50	0.20	4.30	OH 4.30, UG 4.36	Short Tangents Between Reverse Curves
	15	3 ^{0} 52'	LH	6.77	4	2.77	50	0.15	4.10		
	14	4 ^{0} 30'	RH	5.04	3.5	1.54	40	0.10	3.90	UG 3.98	
Merritt 7		**TANGENT TRACK**									
	13	3 ^{0} 07'	RH	3.49	3	0.49	40	0.15	3.40	Compound Curve, OH 3.41, AG 3.43	
		4 ^{0} 30'	RH	5.04	3	2.04	40				
	12	3 ^{0} 00'	LH	3.36	2	1.36	40	0.10	3.20	UG 3.20	
	11	4 ^{0} 22'	RH	4.89	3	1.89	40	0.10	3.10		
	10	3 ^{0} 45'	LH	6.56	2	4.56	50	0.20	2.95	AG 2.86	
	9	1 ^{0} 30'	RH	0.95	0.75	0.20	30	0.40	2.40	Compound Curve, AG 2.56, AG 2.23	
		1 ^{0} 00'	RH	0.63	0.75	-0.12	30				
		1 ^{0} 45'	RH	1.10	0.75	0.35	30				
	8	2 ^{0} 30'	RH	1.58	2	-0.43	30	0.20	1.70	speed changes in curve	
	7	5 ^{0} 00'	LH	2.19	1	1.19	25	0.05	1.50	AG 1.65	
	6	9 ^{0} 40'	LH	4.23	1.50	2.73	25	0.20	1.30	Compound Curve, AG 1.33	
		5 ^{0} 00'	LH	2.19	1.50	0.69	25				
	5	4 ^{0} 15'	RH	1.86	2	-0.14	25	0.10	1.05		Short Tangents Between Reverse Curves
	4	3 ^{0} 20'	LH	2.10	1	1.10	30	0.20	0.80	Compound Curve	
		1 ^{0} 20'	LH	0.84	1	-0.16	30				
	3	1 ^{0} 15'	LH	0.79	1	-0.21	30	0.10	0.60	AG 0.64	
	2	2 ^{0} 45'	RH	1.73	2.25	-0.52	30	0.30	0.40		
	1	8 ^{0} 20'	LH	0.58	2	-1.42	10	0.10	0.00	UG 0.19, UG 0.11	
	0	10D 45M	LH	0.75	3.75	-3.00	10		0.00	Curved Lead of No. 8 Turnout (connection to NHL)	

TABLE 2
EXISTING CURVE DATA

Curve data chart

Housatonic RR Co - Danbury to New Milford

Inventory from HRRC Track Charts

1 Length & location of curves are approximate as they were scaled from the Track Chart.

2 Convention for RH or LH curve is facing RR north.

3 The MP location of the curves was taken at the approximate mid point.

4 Underbalance, Eu, is the difference between equilibrium superelevarion, Eeq, and the actual superelevation, Ea. (Ea from the HRRC track charts).

Station	Curve No.	Degree of Curve	RH / LH Curve	Eeq (in.)	Ea (in)	Eu (in)	Max. Speed (MPH)	Length (mi)	Location (MP)	Comments	
	89	1° 24'	LH	0.88	0	0.88	30	0.05	11.10		HRRC Berkshire Line
	88	0° 34'	RH	0.36	0	0.36	30	0.15	10.75		
	87	2° 00'	LH	1.26	0	1.26	30	0.20	10.40	compound	
		4° 00'	LH	2.52	0	2.52	30				
		2° 00'	LH	1.26	0	1.26	30				
	86	1° 15'	LH	0.79	0	0.79	30	0.20	9.00	compound	
		2° 30'	LH	1.58	0	1.58	30				
		1° 15'	LH	0.79	0	0.79	30				
	85	2° 30'	RH	1.58	0	1.58	30	0.15	8.50		
	84	1° 38'	RH	1.03	0	1.03	30	0.10	7.60		
	83	1° 25'	RH	0.89	0	0.89	30	0.40	7.00		
	82	2° 34'	LH	1.62	0	1.62	30	0.15	6.20		
	81	0° 41'	LH	0.43	0	0.43	30	0.1	5.95		
	80	1° 46'	RH	1.11	0	1.11	30	0.2	5.50		
	79	1° 49'	LH	1.14	0	1.14	30	0.1	4.95		
	78	1° 15'	RH	0.79	0	0.79	30	0.5	4.40	compound	
		1° 00'	RH	0.63	0	0.63	30				
	77	1° 00'	LH	0.63	0	0.63	30	0.15	3.80	compound	
		2° 00'	LH	1.26	0	1.26	30				
		1° 00'	LH	0.63	0	0.63	30				
	76	1° 04'	RH	0.67	0	0.67	30	0.05	3.50		
	75	0° 30'	LH	0.32	0	0.32	30	0.2	3.10	compound	
		1° 00'	LH	0.63	0	0.63	30				
		0° 30'	LH	0.32	0	0.32	30				
	74	1° 02'	LH	0.65	0	0.65	30	0.1	2.40	compound	
		1° 19'	LH	0.83	0	0.83	30				
	73	2° 00'	LH	1.26	0	1.26	30	0.1	2.20		
	72	3° 30'	LH	2.21	0	2.21	30	0.15	1.70	compound	
		1° 45'	LH	1.10	0	1.10	30				
	71	2° 00'	LH	1.26	0	1.26	30	0.15	1.25	compound	
		4° 00'	LH	2.52	0	2.52	30				
		2° 00'	LH	1.26	0	1.26	30				
	70	2° 00'	LH	1.26	0	1.26	30	0.8	0.80		
	69	2° 00'	RH	1.26	0	1.26	30	0.4	0.40		
	68	0° 40'	RH	0.42	0	0.42	30	0.2	0.20		
	CP Berkshire Jct ---------- tangent								80.00		HRRC Maybrook Line
	67	0° 30'	LH	0.22	0	0.22	25	0.2	79.65		
	66	3° 00'	RH	1.31	1/2	0.81	25	0.2	78.70		
	65	2° 57'	LH	1.29	1/2	0.79	25	0.2	78.20		
	64	4° 00'	LH	1.75	2	-0.25	25	0.1	77.70	compound	
		5° 00'	LH	2.19	2	0.19	25	0.1			
	63	4° 00'	LH	0.28	1	-0.72	10	0.1	77.20		
	A63	Turnout connection between MNR Danbury Branch and Housitonic RR Maybrook Secondary. No data on track charts.									

Table 3: Danbury Branch Line - Undergrade Bridge Inspection Report Summary

RAIL LINE	MP LOC.	BRIDGE NO.	CROSSING	BRIDGE DESCRIPTION	# SPANS	OVERALL RATING (1)(2)	Comments
MNR	0.11	04134R	Marshall St			5	
	0.19	08200R	Anne St			5	
	1.56	08201R	Norwalk Rv	Steel Girder	Assumed 2 span	7	
	3.20	08202R	Norwalk Rv	Steel Girder	Assumed 1 span	5	
	5.12 (3)	08203R	Norwalk Rv			5	
	6.43	08204R	stream	Multibeam Deck	Assumed 1 span	4	General condition ratings indicate this bridge is in poor condition.
	6.64	08205R	Norwalk Rv	Steel Girder	1 span	5	
	8.70	08206R	Norwalk Rv	Steel Girder	1 span	4	General condition ratings indicate this bridge is in poor condition.
	9.42	08207R	Norwalk Rv	Steel Girder	4 span	5	
	9.91 (3)	8208R	Brook	Culvert Masonry		3	General condition ratings indicate this bridge is in serious condition.
	11.01	08209R	Old Mill Rd		2 span	4	General condition ratings indicate this bridge is in poor condition.
	11.55	08210R	Norwalk Rv	Steel Girder		5	
	12.17	08211R	Factory Pond		1 span	5	
	12.83	08212R	Branchville Brook				Inspection not required for vertical openings of less than 5'.
	14.16	08213R	Old Redding Rd		1 span	6	
	14.80	08214R	Simpaug Tpk			6	
	16.41	08215R	Umpawaug Pond Brook	Steel Girder	1 span	5	
	17.09	08216R	Saugatuck River	Steel Girder	1 span	5	
	19.23 (3)	08217R	Culvert	Culvert			ROW removed - inspection not required.
	19.64	01020R	Rt 53		1 span	5	
	19.79 (3)	08224R	Sympaug Brook	Double Barrel Masonry Culvert		4	General condition ratings indicate this bridge is in poor condition.
	19.99	08217R	Brook	Concrete		5	
	21.41	08218R	Sympaug Brook	Multibeam Deck	1 span	4	General condition ratings indicate this bridge is in poor condition.
	21.52	08219R	Sympaug Brook	Concrete Slab	1 span	5	
	22.39	08220R	Still River	Steel Girder	Assumed 2 span	7	
	22.94	05100R	Still River	Concrete Culvert		7	
	23.18 (3)	08223R	Still River	Concrete Culvert		7	
	23.42	04290R	Still River	Concrete Culvert		6	
HRR-May - brook Line	78.74	78.74	Beaver Brook Road	Stone Arch	1 span		
	79.65	79.65	Still River	Deck Plate Girder	4 spans	R	Bearings and abutments need immediate cleaning of ballast and debris.
HRR - Berkshire Line	1.09	1.09	Sandhcut Hill Road	Concrete & Stone Arch	1 span	R	Southeast wingwall in need of immediate attention as a stone is out of position by 1 ft.
	2.44	2.44	Center Road	Through Girder	1 span	R	All bearings are in need of immediate attention as there is concrete spalling and deterioration at girders.
	2.93	2.93	Farm Pass	I-Beam	1 span	R	Bearings in need of cleaning immediately.
	6.11	6.11	Old Middle Road	I-Beam	1 span		
	8.95	8.95	Still River	Deck Girder	1 span	R	Bearings and abutments are in need of immediate cleaning.
	10.18	10.18	Housatonic River	Through Truss	3 spans	R	Repairs needed immediately include cleaning bearings, pointing abutments & piers & replacing bottom lateral angle brace at southwest bearing gusset plate.
	10.78	10.78	Butler Brook	Concrete and Stone Arch	1 span	R	Repairs needed immediately include pointing arch and some major cleaning and repairs of arch.

Notes:

1. ConnDOT highway rating system:
   - 0 Failed condition - out of service - beyond corrective action.
   - 1 "Imminent" Failure Condition - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service.
   - 2 Critical Condition - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
   - 3 Serious Condition - loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in steel or shear cracks in concrete may be present.
   - 4 Poor Condition - advanced section loss, deterioration, spalling or scour.
   - 5 Fair Condition - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
   - 6 Satisfactory Condition - structural elements show some minor deterioration.
   - 7 Good Condition - some minor problems.
   - 8 Very Good Condition - no problems noted.
   - 9 Excellent Condition
   - N Not Applicable
2. HRR bridges rated "R" are in need of immediate repair.
3. Indicates that these undergrade bridges are not listed in the Track Charts.

Table 4: Danbury Branch Line Overhead Bridge Inspection Report Summary

Rail Line	MP LOC.	BRIDGE NO.	CROSSING	BRIDGE DESCRIPTION	# SPANS	MIN. VERTICAL CLEARANCE			MIN. LATERAL CLEARANCE (2)			Deck Rating (3)	Super-Structure Rating (3)	Sub-Structure Rating (3)	Comments
						Ref. (1)	ft	in	Ref. (1)	ft	in				
MNR	0.54	00058	I 95	Steel stringer/multi-beam or girder	3 span	R	24	7	H	10	5	6	5	6	
	1.47	04048	Wall St tunnel	concrete slab	1 span	R	16	10	R	8	6	6	4	5	Bridge Superstructure is rated as being in poor condition
	1.53	04046	"Burnell Blvd"/Beldon Pl	Steel stringer/multi-beam or girder	3 span	R	18	10	R	14	1	3	4	5	Bridge deck is rated as being in serious condition; Bridge Superstructure is rated as being in poor condition.
	3.41	00720	Merritt Pkw	concrete frame	1 span	R	21	7	R	10	0	N	5	5	
	4.30	06070	Rt 7	Steel stringer/multi-beam or girder	1 span	R	22	9	R	20	1	7	7	7	
	6.25	04342	Wolfpit Rd	Steel continuous stringer/ multi-beam or girder	3 span	R	21	6	R	25	0	6	7	7	
	7.29	00941	Rt 33	steel continuous frame	5 span	H	18	1	H	2	0	7	5	6	
	7.87	05260	Rt 7	concrete frame	1 span	R	22	7	R	14	6	N	5	6	
	11.79	01304	Rt 107	Steel continuous Stringer/Multi-Beam or Girder	2 span	R	19	3	R	22	0	5	7	7	
	16.21	05225	Simpaug Tpk	Steel stringer/multi-beam or girder	3 span	R	17	6	R	8	8	6	5	2	Bridge substructure is rated as being in critical condition.
HRR - Maybrook Line	77.84	03705	White Street	Prestressed concrete channel beam	1 span	R	18	4	R	8	7	7	7	6	
	79.27	1195	Interstate 84 EB	Steel stringer/multi-beam or girder	5 spans	H	18	6	H	9	7	6	7	5	
	79.27	1196	Interstate 84 WB	Steel stringer/multi-beam or girder	5 spans	H	17	11	H	0	0	6	5	5	
HRR - Berkshire line	1.59	04265	Grays Bridge Road	Prestressed concrete arch - deck	1 span	R	22	4	R	20	2	N	7	7	
	3.25	05747	Silvermine Road	Steel continuous Stringer/Multi-Beam or Girder	3 spans	R	18	1	R	7	6	7	8	7	
	4.3	05776	Route 25	Steel stringer/multi-beam or girder	1 span	R	18	10	R	8	5	7	7	7	
	6.93	06053	Old Pumpkin Hill Road	Steel continuous Stringer/Multi-Beam or Girder	3 spans	R	18	8	R	7	6	8	8	8	
	7.76	06156	Erickson road	Steel continuous Stringer/Multi-Beam or Girder	3 spans	R	18	9	R	8	0	7	8	7	

Notes:

1. "Reference" is the feature the minimum measurement is in reference to, either railroad or highway if both features are under the highway. "R" indicates the measure is in reference to the railroad line beneath the structure. "H" indicates the measure is in reference to the highway. If the reference is a highway, then the vertical clearance over the railroad is higher than the value given in this table.
2. If the reference for minimum lateral clearance is railroad, then it this measure is taken from the centerline of track to the nearest substructure unit, rigid barrier, or to the toe of slope steeper than 1 to 3. If the reference to the min. lateral clearance is a highway, then the listed min. lateral clearance is actually larger on the side of the railroad tracks.
3. ConnDOT highway rating system:
   - 0 Failed condition - out of service - beyond corrective action.
   - 1 "Imminent" Failure Condition - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service.
   - 2 Critical Condition - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
   - 3 Serious Condition - loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in steel or shear cracks in concrete may be present.
   - 4 Poor Condition - advanced section loss, deterioration, spalling or scour.
   - 5 Fair Condition - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
   - 6 Satisfactory Condition - structural elements show some minor deterioration.
   - 7 Good Condition - some minor problems.
   - 8 Very Good Condition - no problems noted.
   - 9 Excellent Condition
   - N Not Applicable

TABLE 5
RAILROAD - HIGHWAY GRADE CROSSINGS

Metro North RR - Danbury Br

Inventory from CD video & MNR Track Charts

ITEM	MP LOC.	TYPE	DESCRIPTION	WARNING SYSTEM	Track No., Length (ft.)
1	0.64	AG	Science	F	S - 66
2	0.91	AG	Jennings Pvt.	F	S - 33
3	1.09	AG	Pvt.	CS	S - 12
4	1.17	AG	Pvt Boat	S	S - 25
5	1.31	AG	Divine Pvt.	S	S - 24
6	1.33	AG	Commerce	F, G	S - 148
7	1.65	AG	Cross St	F, G	S - 65
8	2.05	AG	Catherine St	F, G	S - 55
9	2.23	AG	New Canaan Ave	F, G	S - 59
10	2.56	AG	Broad St	F, G	S - 29
11	2.88	AG	Perry Ave	F, G	S - 30
12	3.43	AG	Glover Ave	F, G	S - 50
13	4.93	AG	Kent Rd	F, G	S - 34
14	7.30	AG	Wilton Station	F	S - 40
15	8.84	AG	Cannon Rd	F, G	S - 33
16	9.54	AG	Seeley Rd	F, G	S - 33
17	9.90	AG	Honey Hill Rd	F, G	S - 33
18	10.85	AG	Pvt.	S	S - 17
19	12.01	AG	North Main St	F	S - 40
20	12.58	AG	Portland Ave	F	S - 44
21	12.74	AG	Depot Rd	F	S & S - 40
22	14.95	AG	Pvt.	S	S - 20
23	15.08	AG	Topstone Rd	F	S - 44
24	16.55	AG	Pvt.	S	S - 30
25	16.95	AG	Pvt.	S	S - 20
26	17.19	AG	Long Ridge Rd	F	S - 30
27	20.44	AG	Taylor Ave	F, G	S - 51
28	20.52	AG	South St	F, G	S - 51
29	20.62	AG	Greenwood Ave	F,G	S - 72
30	21.76	AG	Great Pasture	F, G	S - 36
31	22.21	AG	Shelter Rock Rd	F, G	S - 33
32	22.57	AG	Triangle St	F, G	S - 66
33	22.83	AG	Taylor St	F, G	S - 42
34	22.99	AG	East Liberty St	F, G	S - 42
35	22.6	AG	Station Access	F, G	S & S - 40

AG: At Grade

Pvt: Private Crossing

Warning Systems:

F: Flashing Lights

G: Gates

S: Signs

CS: Cable or Fence

Track No.:

S: Single

S&S: Single & Siding

TABLE 6
RAILROAD - HIGHWAY GRADE CROSSINGS

Housatonic RR Co - Danbury to New Milford

Inventory from HRRC Track Charts

ITEM	MP LOC	TYPE	DESCRIPTION	WARNING SYSTEM	NO. OF TRACKS	
1	11.01	AG	Bridge St (U.S.202)	F, G	S	HRRC Berkshire Line
2	10.89	AG	Mill St	F	S	
3	10.77	AG	South Ave	F	S	
4	9. 81	AG	Kimberly Clarke - Pvt.	Unkown	S & Sdg.	
5	9.32	AG	Farm - Pvt.	Unknown	S	
6	8.60	AG	Laneseller Rd	F, G	S	
7	79.41	AG	Eagle Pencil	F, G	2	HRRC Maybrook Line
8	77.50	AG	Wildman St	F, G	2	

AG: Grade Crossing
Pvt.: Private Crossing

F: Flashing Lights
G: Gates

S: Single Track

Table 7: Transverse Utilities/Railroad Crossings from South Norwalk to Danbury

MP (1)	Agreement Date	Applicant	Type	Description	Street Crossing (2)	Town (3)
0.08	9/11/1981	City of Norwalk	Sansewer	1-10" pvc - 36" cas, 1-36" RCP		Norwalk
0.09	3/7/1975	So Norwalk Electric	Utility	8-poles, 3-2400v wire		Norwalk
0.11	3/5/2001	Cablevision of CT	CND	3-4" CND, cable	Marshall St	Norwalk
0.11	9/19/2002	City of Norwalk	Easement	ingress and egress rights	Marshall St	Norwalk
0.19	11/6/2006	Yankee Gas Services	Gas	6" HDP Gas Main	Ann St	Norwalk
0.54	10/17/2000	City of Norwalk	Utility	Siding, tunrout, tracks	Oyster Shell Park	Norwalk
0.56	3/5/1959	King's Company	Water	1-8" water pipe, 18" sleeve		Norwalk
0.64	1/12/1998	City	Lease	Parcel for emerg. Genera.	Science Road	Norwalk
0.64	8/7/2000	CLP	ElecCND	4-4" CND, 16" stl Case	Science Road	Norwalk
0.64	1/12/1998	King's Industries, Inc.	Lease	0.096 acre lease parcel	Science Road	Norwalk
0.64	11/18/1993	Rosse Advertising Co	Elec	1-2" stl cnd, 1-110v/40A	Science Road	Norwalk
0.69	12/10/1981	City of Norwalk	StmDrain	1-36" RCP storm drain		Norwalk
0.91	11/28/1994	City of Norwalk	Drain	38x60 ell storm drain	Jennings Place	Norwalk
1.07	9/19/1978	Maritronics Company	Cable CN	3/4" pipe tel & elec		Norwalk
1.23	7/22/1981	City of Norwalk	StmDrain	1-54" RCP stm Dr, Comm		Norwalk
1.26	8/26/1981	CLP	GasMain	1-12" gas main, 1-16" casing		Norwalk
1.33	8/18/1997	SNET	CableCN	Conduits & Cable	Commerce	Norwalk
1.33	1/10/1995	Yankee Gas	Sansewer	1-6" PVC, 10" casing	Commerce St	Norwalk
1.33	7/30/1996	Cablevision of So CT	TVCable	1-coaxial #8 strand wire	Commerce	Norwalk
1.47	6/22/1993	CL&P	Elec	Crossing Wall St Br.	Wall St	Norwalk
1.47	3/18/1993	SNET	CableCN	6-4" fiber CNS conc slab	Wall St	Norwalk
1.60	9/10/1970	City of Norwalk	Elec	2" conduit, 110v	Cross St	Norwalk
1.61	6/15/1982	Cablevision of CT	TVCable	2-coaxial cable		Norwalk
1.61	10/24/1995	Cablevision of CT	TVCable	3-cable/2-fiber optic		Norwalk
1.65	11/23/1999	Cablevision of So. CT	Cable	5-coaxial, 2-fiber optic	Cross St	Norwalk
1.68	12/8/1982	City of Norwalk	StmDrain	1-60" RCP, 1-MH, School St		Norwalk
2.05	8/18/1997	SNET	CableCN	Conduits & Cable	Catherine	Norwalk
2.19	10/24/1979	CLP	CableCN	6-5" CND, 30" case, 3-27.6Kv		Norwalk
2.56	8/18/1997	SNET	CableCN	Conduits & Cable	Broad	Norwalk
2.56	6/20/1986	CLP	ElecCND	1-48" pipe, 14-5" pvc, 4-pwr	Broad St	Norwalk
2.56	6/1/2003	Yankee Gas Service	Gas	12" stl gas, 16" stl Case	Broad St	Norwalk
2.74	9/12/2002	Route 7 Car Wash LL	Lease	ROW lease .007 acre	Main St	Norwalk
2.88	11/27/1974	SNET	CableCN	1-24" pipe, 12-4" pvc cnds	Perry Ave	Norwalk
2.94	11/18/1987	City of Norwalk	StmDrain	1-60" RCP, 30" no culvert		Norwalk
3.30	11/12/1991	Yankee Gas	Gasmain	1-4" stl, 6" casing		Norwalk
3.42	7/5/1990	Cablevision of CT	TVCable	TV Cable, 1-#8 strand, 2-pol		Norwalk
3.43	6/15/1979	City of Norwalk	Sansewer	1-12" RCP sewer, Glover Ave		Norwalk
3.43	1/3/2001	Yankee Gas	Gas	1-42" sleeve, 8" stlgas, 12" C	Glover Ave	Norwalk
3.43	11/10/1993	SNET	CableCN	10-4" pvc, 2-4x1.25, 1-30" pi		Norwalk
3.43	1/23/2004	Building & land Tech	Utility	Br OH Flyover	Glover Ave	Norwalk
	12/8/1972	City of Norwalk	WtrMain	1-12"Cl Wtr Main, 1-24" cas		Norwalk
	8/4/1976	City of Norwalk	StmSewr	1-48" RCP storm sewer		Norwalk
3.60	7/24/1980	City of Norwalk	StmDrain	1-60" RCP Storm drain		Wilton
4.21	5/10/1977	US Surgical Corp	StmDrain	1-48"RCP Storm Drain		Wilton
4.93	9/8/1998	CL&P	Cable	Fiber Optic Cable	Kent Road	Wilton
6.25	2/7/1996	Bridgeport Hydraulic	WtrMain	2-12" Water pipes	Wolfpit Rd	Wilton
6.25	9/8/1999	Level 3 Communication	Cable	3-5" FRE, 7-11/4" PVC ducts	Wolfpit Rd	Wilton
6.25	1/22/1996	SNET	CableCN	4-4" Fiber Tel Conduits	Wolfpit Rd	Wilton
6.77	3/18/1974	Town of Wilton	Sansewer	1-30" sewer pipe		Wilton
7.04	4/27/1981	SNET	CableCN	1-30"RCP, 25-4" PVC pipe		Wilton
7.05	1/9/1984	Cablevision of CT	TVCable	1-TV cable crossing		Wilton
7.32	7/28/1999	SNET	CableCN	22-4" CND	Station Rd	Wilton
7.47	6/6/1984	Town of Wilton	Sansewer	1-8", 1-36" casing sewer		Wilton
7.99	1/3/1973	SNET	CableCN	1-30"RCP, 25-4" PVC pipe		Wilton

Table 7: Transverse Utilities/Railroad Crossings from South Norwalk to Danbury

MP (1)	Agreement Date	Applicant	Type	Description	Street Crossing (2)	Town (3)
8.01	7/15/2005	Northeast Utilities	Elec	345Kv CND pipes		Wilton
8.63	9/15/1970	CLP	Utility	2-poles, 2-anchors, guy wire		Wilton
8.78	11/1/1996	Town of Wilton	Sansewer	1-8"DI San Pipe, 1-36" casi		Wilton
8.84	6/18/1993	SNET	CableCN	1-4"Stl CND	Cannon Road	Wilton
9.02	5/16/1989	SNET	CableCN	1-600pr OH Cannon Rd	Cannon Road	Wilton
9.54	6/18/1993	SNET	CableCN	1-4"Stl CND	Seeley Road	Wilton
9.90	6/18/1993	SNET	CableCN	1-4"Stl CND	Honey Hill Rd	Wilton
9.90	6/5/1999	Bridgeport Hydraulic	Water	16" Cl water pipe xing	Honey Hill Rd	Wilton
10.38	2/14/1986	Town of Wilton	Wtr/Elec	1-8" Stl cas, 1-2" pvc water		Wilton
11.01	6/5/1999	Bridgeport Hydraulic	Water	16" Cl water pipe xing	Old Mill Road	Wilton
	9/30/1965	Bridgeport Hydraulic	WtrMain	1-24" Water main		Wilton
11.79	6/8/1999	Bridgeport Hydraulic	Water	12"water, 20" steel case	Route 107	Ridgefield
	4/1/1986	Group W Cable Inc	TVCable	1-TV coaxial cable		Ridgefield
12.07	7/15/2005	Northeast Utilities	Elec	345kv CND Crossing		Redding
16.91	2/8/1995	SNET	Cable	Telephone Cable xing		Redding
17.44	9/26/2001	SNET	Cable	1-25PR cable OH wire		Redding
17.68	7/14/1988	Cablevision of CT	TVCable	TV coaxial cable		Redding
19.64	10/1/1998	ATT	CableCN	Fiber Optic Cable/CND	Route 53	Bethel
21.03	2/21/1985	SNET	Cable	1-3" wood duct, 100pr tel		Bethel
21.03	12/27/1972	Tel Prompter CT CAT	TVCable	No 10M Strand - TV Cable		Bethel
21.05	8/14/1950	H.B. Senior Lumber	CommCa	Communcation Cable		Bethel
21.12	12/27/1972	Tel Prompter CT CAT	TVCable	No 10M Strand - TV Cable		Bethel
21.13	12/4/1975	Town of Bethel	Wtr main	12" DI Wtr Main/30" stl ca		Bethel
21.23	3/17/1971	SNET	CableCN	1-30" stlp, 20-4" ducts CND		Bethel
21.28	4/12/1978	Robert C. Kovacs	Prv/Xing	Prv Grade sta 159+55		Bethel
22.36	8/10/1979	City of Danbury	Utility	2-8" DI pipe, 1-pole, 1-panl		Bethel
22.40	3/15/1991	Town of Bethel	Sansewer	12"DI San Sewr/24" Stl ca	Great Pasture Road	Bethel
22.40	12/27/1972	Tel Prompter CT CAT	TVCable	No 10M Strand - TV Cable		Bethel
22.40	9/8/1986	City of Danbury	Wtr/Sewr	12"/36"wtr, 8"/36"san sewr	Great Pasture Road	Bethel
22.47	2/23/1984	City of Danbury	StmSewr	24"RCP storm drain		Danbury
22.57	9/6/1996	CLP	Utility	1-steel guy wire	Triangle St	Danbury
23.47	1/22/1975	CLP	Elec	1-36" RCP, 2-6" stl, 3-115kv		Danbury
23.62	4/22/1975	SNET	CableCN	4-4" cns-Br # 25.69		Danbury
23.68	12/27/1972	Tel Prompter CT CAT	TVCable	No 10M Strand - TV Cable		Danbury
23.82	12/21/1994	City of Danbury	Lease	Danbury Railway Museum		Danbury
23.82	11/4/1976	SNET	CableCN	4" stl Cnd - Danbury Yard		Danbury
23.82	2/22/1996	Yankee Gas	Gas	Gas pipe Danbury Station		Danbury
24.03	5/1/2004	City of Danbury	Storm	5'x10'box culvert		Danbury
24.14	4/23/1975	SNET	CableCN	4-4" CND - Br 26.40 UG		Danbury
	5/15/1960	Federal Realty Co	Utility	guy wire and anchor		Danbury

Notes: 1. Interpolated or extracted from original file "location" column using stationing & mileposts given
2. Extracted from original file "location" column
3. Inferred from original file "location" column

SOURCE: Metro-North