

DANBURY BRANCH IMPROVEMENT PROGRAM TASK 5

ENVIRONMENTAL TECHNICAL MEMORANDUM IMPACTS ANALYSIS

STATE PROJECT 302-008



SECTION 13: HAZARDOUS CONTAMINATION

JANUARY 2011

SECTION 13. HAZARDOUS CONTAMINATION

METHODOLOGY

The potential for controlled material (media impacted with concentrations of regulated substances) present at locations within and/or near the rail corridor to impact project improvements were evaluated by identifying known and suspected contaminant sources (hazardous/contaminated locations) and rating the potential for each identified source to affect the rail corridor. The objective of this evaluation is to determine the likelihood of the presence of controlled material within the rail corridor areas of possible construction, and the potential impact resulting from activities and/or releases from identified hazardous/contaminated locations.

The evaluation consisted of a review and analysis of the hazardous/contaminated locations presented in the *Section 15: Hazardous Contamination* (August 2009) of the Environmental Technical Memorandum, which can be found on the project website. The hazardous/contaminated locations are properties, businesses, or locations identified via an environmental database search. The rail corridor itself and probable adjacent industrial and/or commercial sites that may not have been identified in the original memorandum were also considered for evaluation.

Each known hazardous/contaminated site was located on mapping illustrating the potential rail corridor improvement associated with the study alternatives. Site specific information from each hazardous/contaminated location was evaluated for its potential to affect improvements to the rail corridor. Each hazardous/contaminated location was then assigned a rating (low, moderate or high risk) relative to its potential to affect the improvements to the rail corridor. A low rating was assigned to locations with minimal potential to impact the rail corridor. A moderate rating was assigned to locations with the likely presence of material with the potential to impact the rail corridor. A high rating was assigned to locations with the confirmed presence of material with the potential to impact the rail corridor.

IMPACTS

Most (97.4%) identified hazardous/contaminated locations were rated low or moderate risk. Approximately one-half (50.6%) of these were categorized as low risk because the specific types of activities or release that are present or occurred at these locations would not likely affect material within the rail corridor, primarily due to distance from the corridor. A substantial number of the hazardous/contaminated locations (46.8%) were categorized as moderate risk. The moderate rating was assigned primarily due to a hazardous/contaminated location's proximity to the rail corridor. A high rating was assigned to those few hazardous/contaminated locations (2.6%) with documented releases that could likely impact the rail corridor and were proximate to or within the rail corridor.

IMPACTS TO/FROM THE EXISTING RAIL CORRIDOR

This evaluation identified the potential for the presence of impacted controlled material within the existing rail corridor. Material within the rail corridor (soil, sediment, debris, rail ballast, and railroad ties) are commonly impacted with petroleum products utilized by railroad locomotives or preservation of railroad ties, coal and coal ash residue resulting from the use of coal fired locomotives, herbicides used for vegetative control purposes, and metals from railroad cars and/or waste oils. The existing rail corridor has been assigned a moderate rating as there is the likely potential that the rail corridor is impacted with these types of contaminants released as a result of historic railroad practices conducted within the rail corridor.

IMPACTS FROM EXISTING INDUSTRIAL/URBAN PROPERTIES

This evaluation has identified the potential for the presence along portions of the rail corridor of industrial and/or urban properties not identified as hazardous/contaminated locations by *Section 15: Hazardous Contamination* (August 2009) of the Environmental Technical Memorandum. Activities at these types of properties commonly result in releases of regulated substances to soil and/or groundwater. Existing industrial/urban properties that may exist along the rail corridor have been assigned a moderate rating as there is the likely potential that activities and/or releases of regulated substances at or from these types of properties could impact the adjacent rail corridor.

SUMMARY OF IMPACTS BY ALTERNATIVE

Alternative A - No Build

Alternative A does not include any construction and would have no impacts relating to hazardous/contaminated site.

Alternative B - Transportation System Management (TSM)

Alternative B does not include any construction and would have no impacts relating to hazardous/contaminated site.

Alternative C - South Norwalk to Danbury Improvements

For Alternative C, 143 low risk sites, 23 moderate risk sites, and 10 high risk sites were identified. Table 1 details these hazardous/contaminated locations.

Alternative D - Extension from Danbury to New Milford

For Alternative D, 42 low risk sites, 10 moderate risk sites, and one high risk site were identified. Table 2 details these hazardous/contaminated locations.

Alternative E - Improvements from South Norwalk to Wilton (Merritt 7)

For Alternative E, 96 low risk sites, four moderate risk sites, and eight high risk sites were identified. Table 3 details these hazardous/contaminated locations.

MITIGATION

Performance of a Connecticut Department of Transportation Task 210: Subsurface Site Investigation Report (Task 210) of the rail corridor proposed construction area for the selected project is recommended before construction of this project begins. The purpose of the Task 210 would be to ascertain the presence of contamination through the collection and review of soil data (and other data as applicable) from within the proposed rail corridor. Such an evaluation would likely consist of the drilling of soil borings in selected locations throughout the corridor and the collection and analysis of soil (and/or other media) samples for parameters appropriate to assess for the presence of specific contaminants of concern.

Controlled material (media impacted with concentrations of regulated substances) encountered within the proposed construction area of the rail corridor may require remediation and/or special handling due to the presence of contaminants. Abatement and disposal plans will be developed as the construction limits are defined and mitigation requirements are more definitively determined. The plans will detail specific material handling practices designed to limit exposure to, and the spread of, contaminants. Excavated or removed controlled material will be tested and managed in accordance with State and Federal regulations and established protocols. Furthermore, if impacted material is present within the proposed rail corridor, there may be a requirement to address worker health & safety in accordance with OSHA requirements, as presented in 29 CFR 1910.120.

**Table 1
Hazardous Contamination Impacts from Alternative C**

Improvement Type	Location	Study Milepost (MP)		Plan No.	Presence of Impacted material (No. of sites)		
		From	To		High*	Moderate *	Low*
Existing Stations (Upgrades)							
Merritt 7	Norwalk	3.6	3.6	PLN-08/09	1	0	10
Cannondale	Wilton	8.85	8.85	PLN-19	0	0	0
Branchville	Ridgefield	12.65	12.65	PLN-27	1	0	2
Redding	Redding	17.1	17.1	PLN-35/36	0	0	1
Bethel	Bethel	21	21	PLN-44/45	0	3	4
Undergrade Bridges							
Washington & South Main St.	Norwalk	0.0	0.0	PLN-00	0	1	5
Marshall St.	Norwalk	0.1	0.1	PLN-01			
Ann St.	Norwalk	0.2	0.2	PLN-01	3	1	8
Norwalk River	Norwalk	3.2	3.2	PLN-07	0	0	6
Small stream	Norwalk	5.12	5.12	PLN-11	0	0	1
Small stream	Norwalk	6.43	6.43	PLN-14			
Norwalk River	Wilton	6.64	6.64	PLN-14	0	0	0
Norwalk River	Wilton	8.7	8.7	PLN-17/18	0	0	4
Norwalk River	Wilton	9.42	9.42	PLN-20/21	0	0	0
Old Mill Rd.	Wilton	11.01	11.01	PLN-23			
Norwalk River	Wilton	11.55	11.55	PLN-24	0	2	1
Factory Pond	Wilton	12.17	12.17	PLN-26	0	1	0
Old Redding Rd.	Redding	14.16	14.16	PLN-30	0	0	0
Simpaug Tpke.	Redding	14.8	14.8	PLN-31	0	0	0
Umpawaug Pond Brook	Redding	16.4	16.4	PLN-35			
Saugatuck River	Redding	17.1	17.1	PLN-36	0	0	1
Grassy Plains Rd. (Rt. 53)	Bethel	19.64	19.64	PLN-42	0	0	0
Sympaug Brook	Bethel	21.4	21.4	PLN-44/45	0	3	4
Overhead Bridges							
Route 7	Wilton	7.87	7.87	PLN-17	0	0	2
Traction Power System - Electrification							
Catenary and support structures	Norwalk to Danbury	1.1	23.9		0	All	0
RTU (CP401)	Norwalk	0.63	0.63	PLN-02	0	0	6
Substation (SUB-41D)	Norwalk	1.62	1.62	PLN-04	0	0	6
Substation (SUB-170D)	Wilton	7.25	7.25	PLN-16	0	0	3
Substation (SUB-305D)	Ridgefield	13	13	PLN-27	1	0	2

Hazardous Contamination Impacts from Alternative C (ctd.)

Improvement Type	Location	Study Milepost (MP)		Plan No.	Presence of Impacted material (No. of sites)		
		From	To		High*	Moderate *	Low*
Substation (SUB-RED)	Redding	17.2	17.2	PLN-35/36	0	0	1
RTU (CP421)	Bethel	20.22	20.22	PLN-43	0	0	4
Track Reconfigurations							
CP 241	Norwalk	0	0.3	PLN-00/01	3	2	13
Curves 0E, 1A & 1B	Norwalk	1	1.7	PLN-02/03	0	0	13
Curves 2B, 3A, 3B & 3C	Norwalk	2.7	4	PLN-06/07	0	0	14
Curve 3D	Norwalk	3.82	3.96	PLN-08/09	0	0	13
Curve 4C	Wilton	4.8	4.97	PLN-11	0	0	1
Curve 5	Wilton	5.75	5.83	PLN-13	0	0	0
Curve 6A	Wilton	6.07	6.24	PLN-13/14	0	0	0
Curve 6B	Wilton	6.53	6.68	PLN-14	0	0	0
Curves 7E & 8	Wilton	7.71	8.47	PLN-17/18	0	0	4
Curve 9C	Wilton	9.53	9.84	PLN-20/21	0	0	0
Curves 10B & 11A	Wilton	11	11.47	PLN-23/24	0	2	1
Curve 12A	Wilton	12.21	12.33	PLN-26	0	1	0
Curve 12B	Wilton/Ridgefield	12.42	12.57	PLN-26/27	1	1	2
Curve 13B	Redding	13.25	13.4	PLN-28	0	0	0
Curve 13C	Redding	13.46	13.59	PLN-29			
Curve 13D	Redding	13.63	13.7	PLN-29	0	0	2
Curve 14A	Redding	13.97	14.1	PLN-30	0	0	0
Curves 14B, 14C, 14D & 15A	Redding	14.24	15.14	PLN-31/32	0	0	0
Curves 15B & 15C	Redding	15.26	15.77	PLN-33	0	0	0
Curves 16A & 16B	Redding	16.58	16.89	PLN-35/36	0	0	1
Curve 17A	Redding	17.25	17.45	PLN-37	0	0	0
Curve 17B	Redding	17.57	17.72	PLN-38			
Curve 17C	Redding	17.83	18.01	PLN-38	0	0	0
Curve 19A	Bethel	19.07	19.18	PLN-41	0	0	0
Rail Storage and Maintenance Yards							
Danbury Yard	Danbury	23	24	PLN-49	0	4	8
TOTAL					10	23	143

**Table 2
Hazardous Contamination Impacts from Alternative D**

Improvement Type	Location	Study Milepost (MP)		Plan No.	Presence of Impacted material (No. of sites)		
		From	To		High*	Moderate *	Low*
Proposed Stations							
Brookfield Station	Brookfield	31.5	31.5	PLN-64	0	1	4
Brookfield Passing Siding at Station	Brookfield	31.46	31.96	PLN-64			
New Milford Station	New Milford	38.35	38.35	PLN-77/78	0	2	3
New Milford Passing Siding at Station	New Milford	38.0	38.46	PLN-77/78			
Undergrade Bridges							
Still River	Danbury	26.6	26.6	PLN-54	1	0	0
Junction Rd. (Rt. 133)	Brookfield	29.47	29.47	PLN-60	0	0	1
Farm Pass	Brookfield	29.9	29.9	PLN-61	0	0	2
Old Middle Rd.	Brookfield	33.07	33.07	PLN-67	0	0	0
Still River	New Milford	35.1	35.1	PLN-73	0	0	0
Housatonic Ave.	New Milford	38.62	38.62	PLN-78	0	2	3
Traction Power System - Electrification							
Catenary and support structures	Danbury to New Milford	23.9	39.0 +/-	NA	0	All	0
Substation (SUB-560D)	Danbury	23.3	23.3	PLN-49	0	2	8
Raise Bridge - White St.	Danbury	24.33	24.33	PLN-50	0	1	8
Raise Bridge - I-84	Danbury	26.2	26.2	PLN-53	0	0	5
Raise Bridge - I-84	Danbury	26.2	26.2	PLN-53			
Substation (SUB-BRK)	Brookfield	29.5	29.5	PLN-60	0	0	1
Raise Bridge - Silvermine Rd.	Brookfield	30.2	30.2	PLN-61/62	0	0	2
Raise Bridge - Whisconier Rd. (Rt. 25)	Brookfield	31.26	31.26	PLN-64	0	1	4
Raise Bridge - Old Pumpkin Hill Rd.	New Milford	33.9	33.9	PLN-69	0	0	0
Raise Bridge - Erickson Rd.	New Milford	34.74	34.74	PLN-71	0	0	0
Substation	New Milford	39.0 +/-	39.0 +/-	PLN-79/80	0	0	0
Curve Reconfigurations							
Curve 1A	Brookfield	28.22	28.43	PLN-57	0	1	1
Curve 1B	Brookfield	28.72	28.82	PLN-58	0	0	0
Curve 6A	New Milford	33.2	33.35	PLN-67	0	0	0
Curve 8A	New Milford	33.53	35.6				
Curve 9A	New Milford	35.96	36.12	PLN-73	0	0	0
Storage Sidings							

Hazardous Contamination Impacts from Alternative D (ctd.)

Improvement Type	Location	Study Milepost (MP)		Plan No.	Presence of Impacted material (No. of sites)		
		From	To		High*	Moderate *	Low*
Storage Siding	Danbury/Brookfield	27.24	27.58	PLN-55	0	0	0
Rail Storage and Maintenance Yards							
New Milford Yard	New Milford	39.0 +/-	39.0 +/-	PLN-79/80	0	0	0
TOTAL					1	10	42

**Table 3
Hazardous Contamination Impacts from Alternative E**

Improvement Type	Location	Study Milepost (MP)		Plan No.	Presence of Impacted material (No. of sites)			
		From	To		High*	Moderate *	Low*	
Existing Stations (Upgrades)								
Merritt 7	Norwalk	3.6	3.6	PLN-08/09	1	0	10	
Undergrade Bridges								
Washington & South Main St.	Norwalk	0.0	0.0	PLN-00	0	1	5	
Marshall St.	Norwalk	0.1	0.1	PLN-01	3	1	8	
Ann St.	Norwalk	0.2	0.2	PLN-01				
Norwalk River	Norwalk	3.2	3.2	PLN-07	0	0	6	
Small Stream	Norwalk	5.12	5.12	PLN-11	0	0	1	
Small Stream	Norwalk	6.43	6.43	PLN-14	0	0	0	
Norwalk River	Wilton	6.64	6.64	PLN-14				
Traction Power System - Electrification								
Catenary and support structures	Norwalk to Danbury	1.1	23.9	NA	0	All	0	
RTU (CP401)	Norwalk	0.63	0.63	PLN-02	0	0	6	
Substation (SUB-41D)	Norwalk	1.62	1.62	PLN-04	0	0	6	
Substation (SUB-170D)	Wilton	7.25	7.25	PLN-16	0	0	3	
Track Reconfigurations								
CP 241	Norwalk	0	0.3	PLN-00/01	3	2	13	
Curves 0E, 1A & 1B	Norwalk	1	1.7	PLN-02/03	0	0	13	
Curves 2B, 3A, 3B & 3C	Norwalk	2.7	4	PLN-06/07	0	0	14	
Curve 3D	Norwalk	3.82	3.96	PLN-08/09	1	0	10	
Curve 4C	Wilton	4.8	4.97	PLN-11	0	0	1	
Curve 5	Wilton	5.75	5.83	PLN-13	0	0	0	
Curve 6A	Wilton	6.07	6.24	PLN-13/14	0	0	0	
Curve 6B	Wilton	6.53	6.68	PLN-14	0	0	0	
TOTAL					8	4	96	