

DANBURY BRANCH IMPROVEMENT PROGRAM TASK 5

ENVIRONMENTAL TECHNICAL MEMORANDUM IMPACTS ANALYSIS

STATE PROJECT 302-008



SECTION 15: PUBLIC RECREATIONAL/4(F)/6(F) LANDS

MAY 2011

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INTRODUCTION

This section discusses public recreational lands within the study corridor. Public recreational lands consist of locally, state, and nationally owned parks, open spaces, greenways and trails, and recreational facilities. Information on existing resources contained in the PUBLIC RECREATIONAL/4(f)/6(f) LANDS, Draft Tech Memo 1 – March 2009, is updated and impacts to public lands for each of the study alternatives are described.

Regulatory Context

Section 4(f) Lands

In accordance with Section 4(f) of the 1966 Federal Aid and Highway Act, special efforts must be made to protect any public park, recreation area, or wildlife/waterfowl refuge from any disturbance or adverse impact as the result of a Department of Transportation project. Furthermore, approval for use of said properties is contingent on a determination that there are no possible alternatives to using the land for the project and that all possible planning has been undertaken to minimize any detrimental effect to the land as the result of the project. Section 4(f) sites are considered “potential” until they are impacted and confirmed to be eligible by the lead federal agency.

Section 6(f) Lands

According to Section 6(f) of the Land and Water Conservation Fund Act (LWCFA), “any lands purchased or developed with LWCFA funds cannot be ‘converted’ to another use for purposes inconsistent with the Act without being replaced with other land that is of equal value to the land proposed for conversion.” Section 6(f) lands have been identified on Sheets 1-12.

IMPACT ASSESSMENT METHODOLOGY

Impacts on Public Recreational Lands were evaluated by comparing the locations of improvement concepts associated with each of the Build Alternatives with the GIS base-mapping (existing conditions) of those resources. Improvement concept plans were visually compared with the GIS resource mapping to derive quantitative estimates (in acres and square feet) of direct impacts. Direct impacts were considered to potentially occur where project activities are anticipated to be located within the boundaries of present 4(f) or 6(f) designated lands.

The results of this assessment provide an understanding of possible scale-of-magnitude impacts and point to locations of particular potential concern. Site-specific plans, surveys and mapping have not been produced for potential improvements at this planning stage. More defined impacts at any one site can be determined for the selected program of improvements during the project design stage.

Table 1: Potential Direct Impact Zones Associated with Project Improvements

Improvement Type	Potential Direct Impact Zone
Passenger Stations (New or Upgrades)	Footprint of new or improved structures and parking areas plus 15 feet around all sides.
Bridges (New or Replacement)	Footprint of structure plus 25 feet around all sides.
Curve Shifts	Footprint of new alignment plus 15 feet from center line of new track in the direction of the track shift.
Rail Sidings and Maintenance Yards	Footprint of new facilities plus 15 feet around all sides.
Electrical Substations and RTUs	Footprint of new facilities plus 20 feet around all sides.
Catenary Poles and Anchors	10 square feet per pole or anchor; pole locations are always within 15 feet of center line of nearest track.
Communication and signal (C&S)	None: C&S system improvements assumed to occur adjacent to tracks on previously disturbed and maintained right-of-way.

The types and locations of specific improvements for each Build Alternative are shown in Tables 2, 3, and 4 for Alternatives C, D, and E. Where an improvement type is not included in an alternative, it is not shown on the table. Potential impacts are expressed as area impacts, in square feet and acres.

IMPACTS

Alternative A: No Build

The No Build Alternative would not impact Public Recreational Lands as no new construction would take place as part of this alternative.

Alternative B: Transportation System Management (TSM)

The TSM Alternative would not impact Public Recreational Lands as no new construction would take place as part of this alternative.

Alternative C: South Norwalk to Danbury Improvements

Impacts to public recreational lands that could result from the Alternative C improvements are shown in Table 2 and described below by improvement type.

Passenger Stations (Existing Station Upgrades)

There are no identified potential 4(f) or 6(f) lands in the vicinity of upgrades to existing passenger stations: Merritt 7, Cannondale, Branchville, Redding, and Bethel.

Traction Power System - Electrification

Facilities associated with a new Traction Power System (facilities for electrification) would extend from approximately MP 1.1 in Norwalk to MP 23.9 in Danbury. Facilities include electrical substations, smaller remote terminal units (RTUs), and catenary and support structures.

Substations and remote terminal units (RTUs)

None of the two RTUs or four electrical substations would be situated within identified potential 4(f) or 6(f) lands. Substation 41D in Norwalk would be adjacent to Riverside Park.

Catenary and support structures

For Alternative C, there no catenary poles would be located within public recreational lands.

Track Reconfigurations, Sidings and Connections

Many track reconfigurations are included in Alternative C to improve rail operations and/or speed. Approximately 23 curve reconfigurations plus a reconfiguration are planned to improve the branch connection with the New Haven mainline in South Norwalk. This branch connection improvement appears as CP241 under the Track Reconfigurations in Table 2. There are no passing or storage sidings included in Alternative C.

The planned new connection at CP 241 would eliminate the Madison Street Park (approximately 0.7 acres) in Norwalk.

Track curve reconfigurations

Although there are potential 4(f) and 6(f) lands adjacent to the railroad right-of-way in the Alternative C section of the study corridor, none of the track reconfigurations are expected to impact such lands.

Structures and Bridges

Although there are potential 4(f) lands adjacent to some of the undergrade bridges included in Alternative C, no bridge work has potential impact except for the new rail bridge over Washington and Main Streets that is part of the new connection at CP 241. There is no recreational land adjacent to the overhead bridge in this alternative.

Alternative D: Extension from Danbury to New Milford

Alternative D would involve reconstruction of the entire 14.7 miles of single track from Danbury to New Milford. This work would be required to provide a higher grade of rail on new ties in order to accommodate passenger train speeds up to 60 miles per hour. All work except for the two stations and storage yard are planned to be within the existing railroad right-of-way.

Although there are potential 4(f) lands adjacent to the railroad right-of-way in the Alternative D section of the study corridor, none are potentially impacted.

Passenger Stations (New)

The construction of new passenger stations and their associated passing sidings in Brookfield and New Milford would not impact public recreational lands.

Traction Power System - Electrification Option

Electrification is an option under Alternative D, extending from approximately MP 23.9 in Danbury to MP 39 in New Milford. Facilities required for electrification include electrical substations and catenary and support structures. There are no RTUs in this alternative. In addition, seven overhead bridges would need to be raised to provide the required clearance to allow the catenary wires to pass under them. These work items are included under “Traction Power System – Electrification” in Table 3. There are no impacts to potential public recreational lands anticipated due to these improvements

Track Reconfigurations, Storage Sidings, and Connections

There are five track curve reconfigurations included under Alternative D to improve rail operations and/or speed. Crossover connections at the Danbury Yard and at MP 26.96, approximately 2.6 miles north of Danbury Yard, are included for operational improvements. One storage siding is included. There are no impacts to potential public recreational lands anticipated due to these improvements.

Structures and Bridges

There are six undergrade bridge replacements included in Alternative D. There are no impacts to potential public recreational lands anticipated due to these bridge improvements.

Storage and Maintenance Yards

There are no impacts to potential public recreational lands anticipated with construction of the New Milford Storage and Maintenance Yard.

Alternative E: Improvements from South Norwalk to Wilton

Alternative E would provide for partial electrification of the Danbury Branch from South Norwalk to Wilton, from approximately MP 1.1 to MP 7.5.

The planned connection between the Danbury Branch and the New Haven Mainline and the new rail bridge over Washington and Main Streets in Norwalk will eliminate the Madison Street Park (approximately 0.7 acres) as discussed under Alternative C.

Although there are more public recreational lands adjacent to the railroad right-of-way in the Alternative E section of the study corridor, no other work has potential impact.

CONCLUSIONS AND MITIGATION

One potential Section 4(f) property would be impacted with the elimination of Madison Street Park in Norwalk as a result of the new planned connection at CP 241, associated with Alternatives C and E. No other impacts to potential 4(f) or 6(f) lands have been identified in any of the study alternatives.

In accordance with Section 4(f) of the 1966 Federal Aid and Highway Act, special efforts must be made to protect any public park, recreation area, or wildlife/waterfowl refuge from any disturbance or adverse impact as the result of a Department of Transportation project. Furthermore, approval for use of said properties is contingent on a determination that there are no possible alternatives to using the land for the project and that all possible planning has been undertaken to minimize any detrimental effect to the land as the result of the project. Section 4(f) sites are considered “potential” until they are impacted and confirmed to be eligible by the lead federal agency.

If this new connection is pursued, mitigation for the loss of the Madison St. Park could be the creation of a new park on excess acquired land about 0.3 miles to the east that is also related to the new connection at CP 241. In the conceptual engineering phase it appears that there is no other viable alignment that would add a second connection between the branch and the mainline. However, as the project progresses, alternatives may be considered and coordinated with the lead federal agency.

Table 2: Potential Public Recreational Land Impacts from Alternative C

Improvement Type	Location	Study Milepost (MP)		Potential Public Recreational Land Impacts	Potential Section 4(f) Impacts		Section 6(f) Land Impacts		
		From	To		Square Feet (sf)	Acres (ac)	Square Feet (sf)	Acres (ac)	
Existing Stations (Upgrades)									
Merritt 7	Norwalk	3.6	3.6	No	0	0	0	0	
Cannondale	Wilton	8.85	8.85	No	0	0	0	0	
Branchville	Ridgefield	12.65	12.65	No	0	0	0	0	
Redding	Redding	17.1	17.1	No	0	0	0	0	
Bethel	Bethel	21	21	No	0	0	0	0	
Undergrade Bridges									
Washington & South Main St.	Norwalk	0.0	0.0	yes**	0	0	0	0	
Marshall St.	Norwalk	0.1	0.1	No	0	0	0	0	
Ann St.	Norwalk	0.2	0.2	No	0	0	0	0	
Norwalk River	Norwalk	3.2	3.2	No	0	0	0	0	
Small stream	Norwalk	5.12	5.12	No	0	0	0	0	
Small stream	Norwalk	6.43	6.43	No	0	0	0	0	
Norwalk River	Wilton	6.64	6.64	No*	0	0	0	0	
Norwalk River	Wilton	8.7	8.7	No	0	0	0	0	
Norwalk River	Wilton	9.42	9.42	No	0	0	0	0	
Old Mill Rd.	Wilton	11.01	11.01	No	0	0	0	0	
Norwalk River	Wilton	11.55	11.55	No	0	0	0	0	
Factory Pond	Wilton	12.17	12.17	No	0	0	0	0	
Old Redding Rd.	Redding	14.16	14.16	No	0	0	0	0	
Simpaug Tpke.	Redding	14.8	14.8	No	0	0	0	0	
Umpawaug Pond Brook	Redding	16.4	16.4	No	0	0	0	0	
Saugatuck River	Redding	17.1	17.1	No	0	0	0	0	
Grassy Plains Rd. (Rt. 53)	Bethel	19.64	19.64	No	0	0	0	0	
Sympaug Brook	Bethel	21.4	21.4	No	0	0	0	0	
Overhead Bridges									
Route 7	Wilton	7.87	7.87	No	0	0	0	0	
Traction Power System - Electrification									
Catenary and support structures	Norwalk to Danbury	1.1	23.9	No*	0	0	8 poles	**	
RTU (CP401)	Norwalk	0.63	0.63	No	0	0	0	0	
Substation (SUB-41D)	Norwalk	1.62	1.62	No	0	0	0	0	
Substation (SUB-170D)	Wilton	7.25	7.25	No	0	0	0	0	
Substation (SUB-305D)	Ridgefield	13	13	No	0	0	0	0	
Substation (SUB-RED)	Redding	17.2	17.2	No	0	0	0	0	
RTU (CP421)	Bethel	20.22	20.22	No	0	0	0	0	
Substation (SUB-560D)	Danbury	23.3	23.3	No	0	0	0	0	

Table 2: Potential Public Recreational Land Impacts from Alternative C

Improvement Type	Location	Study Milepost (MP)		Potential Public Recreational Land Impacts	Potential Section 4(f) Impacts		Section 6(f) Land Impacts		
		From	To		Square Feet (sf)	Acres (ac)	Square Feet (sf)	Acres (ac)	
Track Reconfigurations									
CP 241	Norwalk	0	0.3	yes	3,700	0.7	0	0	
Curves 0E, 1A & 1B	Norwalk	1	1.7	No	0	0	0	0	
Curves 2B, 3A, 3B & 3C	Norwalk	2.7	4	No	0	0	0	0	
Curve 3D	Norwalk	3.82	3.96	No	0	0	0	0	
Curve 4C	Wilton	4.8	4.97	No	0	0	0	0	
Curve 5	Wilton	5.75	5.83	No	0	0	0	0	
Curve 6A	Wilton	6.07	6.24	No	0	0	0	0	
Curve 6B	Wilton	6.53	6.68	No*	0	0	0	0	
Curves 7E & 8	Wilton	7.71	8.47	No	0	0	0	0	
Curve 9C	Wilton	9.53	9.84	No*	0	0	0	0	
Curves 10B & 11A	Wilton	11	11.47	No	0	0	0	0	
Curve 12A	Wilton	12.21	12.33	No	0	0	0	0	
Curve 12B	Wilton/Ridgefield	12.42	12.57	No	0	0	0	0	
Curve 13B	Redding	13.25	13.4	No	0	0	0	0	
Curve 13C	Redding	13.46	13.59	No	0	0	0	0	
Curve 13D	Redding	13.63	13.7	No	0	0	0	0	
Curve 14A	Redding	13.97	14.1	No	0	0	0	0	
Curves 14B, 14C, 14D & 15A	Redding	14.24	15.14	No*	0	0	0	0	
Curves 15B & 15C	Redding	15.26	15.77	No*	0	0	0	0	
Curves 16A & 16B	Redding	16.58	16.89	No	0	0	0	0	
Curve 17A	Redding	17.25	17.45	No	0	0	0	0	
Curve 17B	Redding	17.57	17.72	No	0	0	0	0	
Curve 17C	Redding	17.83	18.01	No*	0	0	0	0	
Curve 19A	Bethel	19.07	19.18	No	0	0	0	0	
Rail Storage and Maintenance Yards									
Danbury Yard	Danbury	23	24	No	0	0	0	0	
TOTAL					3,700	0.7	0	0	

*There is public recreational land adjacent to the railroad.

**See Track reconfigurations, CP 241

Table 3: Potential Public Recreational Lands Impacts from Alternative D

Improvement Type	Location	Study Milepost (MP)		Potential Public Recreational Land Impacts	Potential Section 4(f) Land Impacts		Section 6(f) Land Impacts	
		From	To		Square Feet (sf)	Acres (ac)	Square Feet (sf)	Acres (ac)
Proposed Stations								
Brookfield Station	Brookfield	31.5	31.5	No	0	0	0	0
Brookfield Passing Siding at Station	Brookfield	31.46	31.96	No	0	0	0	0
New Milford Station	New Milford	38.35	38.35	No	0	0	0	0
New Milford Passing Siding at Station	New Milford	38.0	38.46	No	0	0	0	0
Undergrade Bridges								
Still River Junction Rd. (Rt. 133)	Danbury	26.6	26.6	No	0	0	0	0
Farm Pass	Brookfield	29.47	29.47	No	0	0	0	0
Old Middle Rd.	Brookfield	29.9	29.9	No	0	0	0	0
Still River	Brookfield	33.07	33.07	No	0	0	0	0
Housatonic Ave.	New Milford	35.1	35.1	No	0	0	0	0
	New Milford	38.62	38.62	No	0	0	0	0
Traction Power System - Electrification								
Catenary and support structures	Danbury to New Milford	23.9	39.0 +/-	No*	0	0	0	0
Raise Bridge - White St.	Danbury	24.33	24.33	No	0	0	0	0
Raise Bridge - I-84	Danbury	26.2	26.2	No	0	0	0	0
Raise Bridge - I-84	Danbury	26.2	26.2	No	0	0	0	0
Substation (SUB-BRK)	Brookfield	29.5	29.5	No	0	0	0	0
Raise Bridge - Silvermine Rd.	Brookfield	30.2	30.2	No	0	0	0	0
Raise Bridge - Whisconier Rd. (Rt. 25)	Brookfield	31.26	31.26	No	0	0	0	0
Raise Bridge - Old Pumpkin Hill Rd.	New Milford	33.9	33.9	No	0	0	0	0
Raise Bridge - Erickson Rd.	New Milford	34.74	34.74	No*	0	0	0	0
Substation	New Milford	39.0 +/-	39.0 +/-	No	0	0	0	0
Curve Reconfigurations								
Curve 1A	Brookfield	28.22	28.43	No	0	0	0	0
Curve 1B	Brookfield	28.72	28.82	No	0	0	0	0
Curve 6A	New Milford	33.2	33.35	No	0	0	0	0
Curve 8A	New Milford	33.53	35.6	No	0	0	0	0
Curve 9A	New Milford	35.96	36.12	No*	0	0	0	0

Table 3: Potential Public Recreational Lands Impacts from Alternative D

Improvement Type	Location	Study Milepost (MP)		Potential Public Recreational Land Impacts	Potential Section 4(f) Land Impacts		Section 6(f) Land Impacts	
		From	To		Square Feet (sf)	Acres (ac)	Square Feet (sf)	Acres (ac)
Storage Sidings								
Storage Siding	Danbury/Brookfield	27.24	27.58	No	0	0	0	0
Rail Storage and Maintenance Yards								
New Milford Yard	New Milford	39.0 +/-	39.0 +/-	No	0	0	0	0
TOTAL					0	0	0	0

*There is public recreational land adjacent to the railroad.

Table 4: Potential Public Recreational Lands Impacts from Alternative E

Improvement Type	Location	Study Milepost (MP)		Public Recreational Lands Impacted	Potential section 4(f) Lands Impacts		Section 6(f) Lands Impact	
		From	To		Square Feet (sf)	Acres (ac)	Square Feet (sf)	Acres (ac)
Existing Stations (Upgrades)								
Merritt 7	Norwalk	3.6	3.6	No	0	0	0	0
Undergrade Bridges								
Washington & South Main St.	Norwalk	0.0	0.0	Yes**	0	0	0	0
Marshall St.	Norwalk	0.1	0.1	No	0	0	0	0
Ann St.	Norwalk	0.2	0.2	No	0	0	0	0
Norwalk River	Norwalk	3.2	3.2	No	0	0	0	0
Small stream	Norwalk	5.12	5.12	No	0	0	0	0
Small stream	Norwalk	6.43	6.43	No	0	0	0	0
Norwalk River	Wilton	6.64	6.64	No*	0	0	0	0
Traction Power System - Electrification								
Catenary and support structures	Norwalk to Wilton	1.1	7.5	No*	0	0	0	0
RTU (CP401)	Norwalk	0.63	0.63	No	0	0	0	0
Substation (SUB-170D)	Wilton	7.25	7.25	No	0	0	0	0
Track Reconfigurations								
CP 241	Norwalk	0	0.3	Yes	3,700	0.7	0	0
Curves 0E, 1A & 1B	Norwalk	1	1.7	No	0	0	0	0
Curves 2B, 3A, 3B & 3C	Norwalk	2.7	4	No	0	0	0	0
Curve 3D	Norwalk	3.82	3.96	No	0	0	0	0
Curve 4C	Wilton	4.8	4.97	No	0	0	0	0
Curve 5	Wilton	5.75	5.83	No	0	0	0	0
Curve 6A	Wilton	6.07	6.24	No	0	0	0	0
Curve 6B	Wilton	6.53	6.68	No*	0	0	0	0
TOTAL					3,700	0.7	0	0

*There is public recreational land adjacent to the railroad.

**See Track reconfigurations, CP 241