FTA ALTERNATIVES ANALYSIS
DRAFT/FINAL ENVIRONMENTAL IMPACT STATEMENT

DANBURY BRANCH IMPROVEMENT PROGRAM TASK 5

ENVIRONMENTAL TECHNICAL MEMORANDUM IMPACTS ANALYSIS

STATE PROJECT 302-008



SECTION 12: LAND USE

DECEMBER 2011

SECTION 12. LAND USE

INTRODUCTION

Existing conditions regarding land use in the study corridor can be found in *Section 12: Land Use* (May 2009) of the Environmental Technical Memorandum. When examining land uses within the study corridor, the consultant team had originally planned to use land use and zoning GIS information provided by the Housatonic Valley Council of Elected Officials (HVCEO) and the South Western Regional Planning Agency (SWRPRA) as well aerial photography from the Connecticut Department of Environmental Protection (DEP) and/or provided by the Connecticut Department of Transportation (CTDOT). After extensive research, however, it was determined that this GIS data was not available. Thus, the primary sources of the information became the official existing land use map from each community and the Locational Guide Map for each community, as seen in the Conservation and Development Policies Plan for Connecticut. Due to the limitation in data (large scale maps with limited resolution), CTDOT and the consultant team agreed that when discussing land use the consultant team could prepare a narrative based on the available information.

METHODOLOGY

Impacts on Land Use were evaluated by comparing the locations of improvement concepts associated with each of the Build Alternatives with the existing land use conditions. Due to a lack of GIS data, however, the quantitative analysis has limitations. It is assumed that impacts to land use will only occur where the taking of land is necessary for an improvement concept. Areas where takings may occur were tentatively identified on the land use map and the Locational Guide Map for each community. The uses of this proposed taken land is discussed in the following section.

When discussing the land uses on the Location Guide Map for each community, the following categories, as defined in the Conservation and Development Policies Plan for Connecticut, are used:

- **Conservation Areas** – Plan for the long-term management of lands that contribute to the state's need for food, water and other resources and environmental quality by ensuring that any changes in use are compatible with the identified conservation value.

- **Existing Preserved Open Space** – Support the permanent protection of public and quasi-public land dedicated for open space purposes.

- **Growth Areas** – Support staged urban-scale expansion in areas suitable for long-term economic growth that are currently less than 80% built up, but have existing or planned infrastructure to support future growth in the region.

- **Neighborhood Conservation Areas** – Promote infill development and redevelopment in areas that are at least 80% built up and have existing water, sewer, and transportation infrastructure to support such development.

- **Preservation Areas** – Protect significant resource, heritage, recreation, and hazard-prone areas by avoiding structural development, except as directly consistent with the preservation value.

- **Regional Centers** – Redevelop and revitalize the economic, social, and physical environment of the state's traditional centers of industry and commerce.

- **Rural Lands** – Protect the rural character of these areas by avoiding development forms and intensities that exceed on-site carrying capacity for water supply and sewage disposal, except where necessary to resolve localized public health concerns.

IMPACTS

Alternative A: No Build

The No Build Alternative would not impact Land Use as no new construction would take place as part of this alternative.

Alternative B: Transportation System Management (TSM)

The TSM Alternative would not impact Land Use as no new construction would take place as part of this alternative.

Alternative C: South Norwalk to Danbury Improvements

Alternative C would provide infrastructure and service improvements between South Norwalk and Danbury on the existing Branch. Improvements would include upgrading track to 60 mile per hour maximum speed; expanding parking and improving access at stations; upgrading 15 bridges from an older open deck structure to modern ballast deck bridges; upgrading the rail yard and providing a new maintenance facility at Danbury Yard; and electrifying the rail line. New rolling stock would be added to allow for expanded service or for the electric trains. Improvements under Alternative C would require the taking of 13.76 acres of land. These takings are summarized below and shown in Table 1.

<u>Passenger Stations (Existing Station Upgrades)</u>

Upgrades to the following existing stations would require the taking of land:

> **Merritt 7**: Upgrades to Merritt 7 Station would require the taking of 1.6 acres of "primarily commercial" land. According to the Location Guide Map for Norwalk, this land falls under the category of "neighborhood conservation area." It is also within an aquifer protection area.

Cannondale: Upgrades to Cannondale Station would require the taking of 0.57 acres of commercial land. According to the Location Guide Map for Wilton, this land falls under the category of "existing preserved open space."

Branchville: Upgrades to Branchville Station would require the taking of 1.09 acres of residential land. According to the Location Guide Map for Ridgefield, this land mostly falls under the category of "neighborhood conservation area," though part of the taking would also consist of "rural lands."

Redding: Upgrades to Redding Station would require the taking of 0.4 acres of "preservation area" land.

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)

Neither of the two RTUs would require the taking of land. The following takings would be necessary for the substations:

Norwalk Substation: The Norwalk Substation would require the taking of 0.58 acres of "primarily industrial" land. According to the Location Guide Map for Norwalk, this land falls under the category of "neighborhood conservation area." It is also within an aquifer protection area.

Branchville Substation: The Branchville Substation would require the taking of 0.25 acres of vacant land. According to the Location Guide Map for Ridgefield, this land falls under the category of "rural lands."

Redding Substation: The Redding Substation would require the taking of 0.3 acres of "preservation area" land.

Danbury Substation: The Danbury Substation would require the taking of 1.0 acres of commercial land. According to the Location Guide Map for Danbury, this land falls under the category of "regional center." It is also within an aquifer protection area.

Catenary and support structures

For Alternative C, there are no catenary poles that would require the taking of land.

Track Reconfigurations, Sidings and Connections

Many track reconfigurations are included in Alternative C to improve rail operations and/or speed. Approximately 23 curve adjustments plus a reconfiguration (CP 241) are planned to improve the branch connection with the New Haven mainline in South Norwalk. There are no passing or storage sidings included in Alternative C. The following takings would be necessary for these reconfigurations

Track curve reconfigurations

Norwalk

- CP 241 would require the taking of 1.55 acres of "regional center" land. This land also falls under the "regional center" category on the Location Guide Map.
- Curves 0E, 1A, and 1B would require the taking of 1.24 acres of "primarily industrial" land. According to the Location Guide Map, this land falls under the category of "regional center."
- Curves 2B, 3A, 3B, and 3C would require the taking of 0.93 acres of "primarily commercial" land. According to the Location Guide Map, this land falls under the categories of "neighborhood conservation area" and "preservation area." It is also within an aquifer protection area.

Wilton

- Curve 9C would require the taking of 0.5 acres of commercial land. According to the Location Guide Map, this land falls under the category of "rural lands."
- Curves 10B and 11A would require the taking of 0.14 acres of "dedicated open space" land. According to the Location Guide Map, this land falls under the category of "neighborhood conservation area."

Ridgefield

- Curve 12B would require the taking of 0.34 acres of residential land. According to the Location Guide Map, this land falls under the category of "rural lands."

Redding

- Curves 14B, 14C, 14D, and 15A would require the taking of 0.62 acres of vacant and residential land. According to the Location Guide Map, this land falls under the categories of "conservation area" and "rural lands."
- Curves 16A and 16B would require the taking of 1.73 acres of institutional land. According to the Location Guide Map, this land falls under the categories of "conservation area" and "preservation area."

Structures and Bridges

None of the work associated with bridges in Alternative C would require the taking of additional land. Bridges that are associated with other improvements are identified in Table 1.

Storage and Maintenance Yards

The planned work at the Danbury Yard would require the taking of 0.92 acres of "high density" land. According to the Location Guide Map for Danbury, this land falls under the category of "regional center." It is also within an aquifer protection area.

Alternative D: Extension from Danbury to New Milford

Alternative D would extend existing Danbury Branch passenger service 14.7 miles from Danbury to New Milford. This includes replacing the existing freight track by constructing new track along the same alignment to accommodate speeds up to 60 miles per hour, adding new stations and parking facilities at Danbury North, Brookfield and New Milford, and adding new rolling stock. A new maintenance facility and storage yard would also be built in the vicinity of New Milford. Improvements under Alternative D would require the taking of 12.74 acres of land. These takings are summarized below and shown in Table 2.

Passenger Stations (New)

The development of new passenger stations would require the following taking of land:

> **Brookfield**: The creation of Brookfield Station would require the taking of 1.14 acres of residential and "public utility/railroad" land. According to the Location Guide Map for Brookfield, this land falls under the category of "rural lands."
>
> **New Milford**: The creation of New Milford Station would require the taking of 2.9 acres of commercial and residential land. According to the Location Guide Map for New Milford, this land falls under the category of "growth area" and "conservation area." It is also within an aquifer protection area.

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. The only takings of land would be as follows:

> **Brookfield Substation**: The Brookfield Substation would require the taking of 1.0 acres of mixed use land. According to the Location Guide Map for Norwalk, this land falls under the category of "neighborhood conservation area."
>
> **New Milford Substation**: The New Milford Substation is included in the taking associated with the New Milford Storage and Maintenance Yard.

Track Reconfigurations, Storage Sidings, and Connections

There are five track curve reconfigurations included under Alternative D to improve rail operations and/or speed. None of these reconfigurations would require the taking of land.

Structures and Bridges

There are six undergrade bridge replacements included in Alternative D. None of these improvements would require the taking of land.

Storage and Maintenance Yards

The construction of the New Milford Storage and Maintenance Yard would require the taking of 7.7 acres of industrial land. According to the Location Guide Map for New Milford, this land falls under the categories of "growth area" and "conservation area." It is also within an aquifer protection area.

Alternative E: Improvements from South Norwalk to Wilton

Alternative E is being considered at the direction of the State of Connecticut's Transportation Strategy Board. It would provide partial electrification of the Danbury Branch, from South Norwalk to Wilton, a distance of 7.5 miles. Parking and access improvements would be made at Merritt 7 station, and there would be minor modifications to track and structures along this section. Impacts from this alternative are therefore a subset of the impacts of Alternative C. Improvements under Alternative E would require the taking of 5.32 acres of land. These takings are summarized below and shown in Table 3.

Passenger Stations (Existing Station Upgrades)

Upgrades to the following existing station would require the taking of land:

> **Merritt 7**: Upgrades to Merritt 7 Station would require the taking of 1.6 acres of "primarily commercial" land. According to the Location Guide Map for Norwalk, this land falls under the category of "neighborhood conservation area." It is also within an aquifer protection area.

Track Reconfigurations, Sidings and Connections

The following takings would be necessary for the reconfigurations included in Alternative E.

> **Norwalk**
>
> - CP 241 would require the taking of 1.55 acres of "regional center" land. This land also falls under the "regional center" category on the Location Guide Map.
> - Curve 0E would require the taking of 1.24 acres of "primarily industrial" land. According to the Location Guide Map, this land falls under the category of "regional center."
> - Curves 2B, 3A, 3B, and 3C would require the taking of 0.93 acres of "primarily commercial" land. According to the Location Guide Map, this land falls under the categories of "neighborhood conservation" and "preservation area." It is also within an aquifer protection area.

Structures and Bridges

None of the work associated with bridges in Alternative C would require the taking of additional land. Bridges that are associated with other improvements are identified in Table 3.

Table 1: Alternative C Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Existing Stations (Upgrades)						
Merritt 7	Norwalk	3.6	3.6	1.6	Primarily Commercial	Neighborhood Conservation Aquifer Protection Area
Cannondale	Wilton	8.85	8.85	0.57	Commercial	Existing Preserved Open Space
Branchville	Ridgefield	12.65	12.65	1.09	Residential	Neighborhood Conservation Rural Lands
Redding	Redding	17.1	17.1	0.4	Centennial Watershed State Forest	Preservation Area
Bethel	Bethel	21	21	0	n/a	n/a
Undergrade Bridges (Rail goes over Road or Water)						
Washington & South Main St.	Norwalk	0.0	0.0	(a)	(a)	(a)
Marshall St.	Norwalk	0.1	0.1	0	n/a	n/a
Ann St.	Norwalk	0.2	0.2	0	n/a	n/a
Norwalk River	Norwalk	3.2	3.2	(b)	(b)	(b)
Small stream	Norwalk	5.12	5.12	0	n/a	n/a
Small stream	Norwalk	6.43	6.43	0	n/a	n/a
Norwalk River	Wilton	6.64	6.64	0	n/a	n/a
Norwalk River	Wilton	8.7	8.7	0	n/a	n/a
Norwalk River	Wilton	9.42	9.42	0	n/a	n/a
Old Mill Rd.	Wilton	11.01	11.01	0	n/a	n/a
Norwalk River	Wilton	11.55	11.55	0	n/a	n/a
Factory Pond	Wilton	12.17	12.17	0	n/a	n/a
Old Redding Rd.	Redding	14.16	14.16	0	n/a	n/a
Simpaug Tpke.	Redding	14.8	14.8	0	n/a	n/a
Umpawaug Pond Brook	Redding	16.4	16.4	0	n/a	n/a
Saugatuck River	Redding	17.1	17.1	0	n/a	n/a
Grassy Plains Rd. (Rt. 53)	Bethel	19.64	19.64	0	n/a	n/a
Sympaug Brook	Bethel	21.4	21.4	0	n/a	n/a
Overhead Bridges (Rail goes under Road)						
Route 7	Wilton	7.87	7.87	0	n/a	n/a
Traction Power System - Electrification						
Catenary and support structures	Norwalk to Danbury	1.1	23.9	0	n/a	n/a
RTU (CP401)	Norwalk	0.63	0.63	0	n/a	n/a

Table 1: Alternative C Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Substation (SUB-41D)	Norwalk	1.62	1.62	0.58	Primarily Industrial	Neighborhood Conservation Area Aquifer Protection Area
Substation (SUB-170D)	Wilton	7.25	7.25	0	n/a	n/a
Substation (SUB-305D)	Ridgefield	13	13	0.25	Vacant	Rural Lands
Substation (SUB-RED)	Redding	17.2	17.2	0.3	Centennial Watershed State Forest	Preservation Area
RTU (CP421)	Bethel	20.22	20.22	0	n/a	n/a
Substation (SUB-560D)	Danbury	23.3	23.3	1	Commercial	Regional Center Aquifer Protection Area
Track Reconfigurations						
CP 241	Norwalk	0	0.3	1.55	Regional Center	Regional Center
Curves 0E, 1A & 1B	Norwalk	1	1.7	1.24	Primarily Industrial	Regional Center
Curves 2B, 3A, 3B & 3C (incl. Bridge MP 3.2)	Norwalk	2.7	4	0.93	Primarily Commercial	Neighborhood Conservation Area Preservation Area Aquifer Protection Area
Curve 3D	Norwalk	3.82	3.96	0	n/a	n/a
Curve 4C	Wilton	4.8	4.97	0	n/a	n/a
Curve 5	Wilton	5.75	5.83	0	n/a	n/a
Curve 6A	Wilton	6.07	6.24	0	n/a	n/a
Curve 6B (incl. Bridge MP 6.64)	Wilton	6.53	6.68	0	n/a	n/a
Curves 7E & 8	Wilton	7.71	8.47	0	n/a	n/a
Curve 9C	Wilton	9.53	9.84	0.5	Commercial	Rural Lands
Curves 10B & 11A	Wilton	11	11.47	0.14	Dedicated Open Space	Neighborhood Conservation Area
Curve 12A	Wilton	12.21	12.33	0	n/a	n/a
Curve 12B	Ridgefield	12.42	12.57	0.34	Residential	Rural Lands
Curve 13B	Redding	13.25	13.4	0	n/a	n/a
Curve 13C	Redding	13.46	13.59	0	n/a	n/a
Curve 13D	Redding	13.63	13.7	0	n/a	n/a
Curve 14A	Redding	13.97	14.1	0	n/a	n/a
Curves 14B, 14C, 14D & 15A	Redding	14.24	15.14	0.62	Vacant Residential	Rural Lands Conservation Area
Curves 15B & 15C	Redding	15.26	15.77	0	n/a	n/a
Curves 16A & 16B	Redding	16.58	16.89	1.73	Institutional	Preservation Area Conservation Area
Curve 17A	Redding	17.25	17.45	0	n/a	n/a

Table 1: Alternative C Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Curve 17B	Redding	17.57	17.72	0	n/a	n/a
Curve 17C	Redding	17.83	18.01	0	n/a	n/a
Curve 19A	Bethel	19.07	19.18	0	n/a	n/a
Rail Storage and Maintenance Yards						
Danbury Yard	Danbury	23	24	0.92	High Density	Regional Center Aquifer Protection Area
TOTAL				13.76		

(a) see track reconfiguration CP 241

(b) see track reconfiguration Curves 2B, 3A, 3B & 3C

Table 2: Alternative D Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Rail Reconstruction						
Reconstruct Track	Danbury to New Milford	23.9	39.16	No	0	0
Proposed Stations						
Brookfield Station	Brookfield	31.5	31.5	1.14	Residential Public Utility/Railroad	Rural Land
Brookfield Passing Siding at Station	Brookfield	31.46	31.96	0	n/a	n/a
New Milford Station	New Milford	38.35	38.35	2.9	Commercial Residential	Neighborhood Conservation Area Aquifer Protection Area
New Milford Passing Siding at Station	New Milford	38.0	38.46	0	n/a	n/a
Undergrade Bridges (Rail goes over Road or Water)						
Still River	Danbury	26.6	26.6	0	n/a	n/a
Junction Rd. (Rt. 133)	Brookfield	29.47	29.47	0	n/a	n/a
Farm Pass	Brookfield	29.9	29.9	0	n/a	n/a
Old Middle Rd.	Brookfield	33.07	33.07	0	n/a	n/a
Still River	New Milford	35.1	35.1	0	n/a	n/a
Housatonic Ave.	New Milford	38.62	38.62	0	n/a	n/a
Traction Power System - Electrification						
Catenary and support structures	Danbury to New Milford	23.9	39.0 +/-	0	n/a	n/a
Raise Bridge - White St.	Danbury	24.33	24.33	0	n/a	n/a
Raise Bridge - I-84	Danbury	26.2	26.2	0	n/a	n/a
Raise Bridge - I-84	Danbury	26.2	26.2	0	n/a	n/a
Substation (SUB-BRK)	Brookfield	29.5	29.5	1	Mixed Use	Neighborhood Conservation Area
Raise Bridge - Silvermine Rd.	Brookfield	30.2	30.2	0	n/a	n/a
Raise Bridge - Whisconier Rd. (Rt. 25)	Brookfield	31.26	31.26	0	n/a	n/a
Raise Bridge - Old Pumpkin Hill Rd.	New Milford	33.9	33.9	0	n/a	n/a
Raise Bridge - Erickson Rd.	New Milford	34.74	34.74	0	n/a	n/a
Substation	New Milford	39.0 +/-	39.0 +/-	(a)	(a)	(a)

Table 2: Alternative D Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Track Reconfigurations						
Curve 1A	Brookfield	28.22	28.43	0	n/a	n/a
Curve 1B	Brookfield	28.72	28.82	0	n/a	n/a
Curve 6A	New Milford	33.2	33.35	0	n/a	n/a
Curve 8A	New Milford	33.53	35.6	0	n/a	n/a
Curve 9A	New Milford	35.96	36.12	0	n/a	n/a
Storage Sidings						
Storage Siding	Danbury/ Brookfield	27.24	27.58	0	n/a	n/a
Rail Storage and Maintenance Yards						
New Milford Yard	New Milford	39.0 +/-	39.0 +/-	7.7	Industrial	Growth Area Conservtion Area Aquifer Protection Area
				12.74		

(a) see New Milford Yard

Table 3: Alternative E Impacts to Land Use

Improvement Type	Location	Study Milepost (MP)		Property Acquisition (Acres)	Existing Land Use	Use from the Conservation and Development Policies Plan for Connecticut
		From	To			
Existing Stations (Upgrades)						
Merritt 7	Norwalk	3.6	3.6	1.6	Primarily Commercial	Neighborhood Conservation Area Aquifer Protection Area
Undergrade Bridges (Rail goes over Road or Water)						
Washington & South Main St.	Norwalk	0.0	0.0	(a)	(a)	(a)
Marshall St.	Norwalk	0.1	0.1	0	n/a	n/a
Ann St.	Norwalk	0.2	0.2	0	n/a	n/a
Norwalk River	Norwalk	3.2	3.2	(b)	(b)	(b)
Small stream	Norwalk	5.12	5.12	0	n/a	n/a
Small stream	Norwalk	6.43	6.43	0	n/a	n/a
Norwalk River	Wilton	6.64	6.64	0	n/a	n/a
Traction Power System - Electrification						
Catenary and support structures	Norwalk to Wilton	1.1	7.5	0	n/a	n/a
RTU (CP401)	Norwalk	0.63	0.63	0	n/a	n/a
Substation (SUB-170D)	Wilton	7.25	7.25	0	n/a	n/a
Track Reconfigurations						
CP 241	Norwalk	0	0.3	1.55	Regional Center	Regional Center
Curves 0E, 1A & 1B	Norwalk	1	1.7	1.24	Primarily Industrial	Regional Center
Curves 2B, 3A, 3B & 3C (incl. Bridge MP 3.2)	Norwalk	2.7	4	0.93	Primarily Commercial	Neighborhood Conservation Area Preservation Area Aquifer Protection Area
Curve 3D	Norwalk	3.82	3.96	0	n/a	n/a
Curve 4C	Wilton	4.8	4.97	0	n/a	n/a
Curve 5	Wilton	5.75	5.83	0	n/a	n/a
Curve 6A	Wilton	6.07	6.24	0	n/a	n/a
Curve 6B (incl. Bridge MP 6.64)	Wilton	6.53	6.68	0	n/a	n/a
TOTAL				5.32		

(a) see track reconfigurations CP 241

(b) see Track reconfigurations Curves 2B, 3A, 3B & 3C