

**Connecticut Department of Transportation  
Americans with Disabilities Act  
Transition Plan for Public Rights-of-Way  
Along State Highways**

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## Americans with Disabilities Transition Plan for

### Public Rights-of-Way Along State Highways

#### Introduction

Public rights-of-way are required to be accessible to persons with disabilities through the following Federal Statutes: Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 (ADA).

These Statutes prohibit agencies from discriminating against persons with disabilities by excluding them from services, programs or activities. These Statutes mean that the agency must provide pedestrian access for the agency's streets and sidewalks, wherever a pedestrian facility exists as an accessible route.

United States Department of Justice regulations designate the United States Department of Transportation (USDOT) as the agency responsible for overseeing public agencies' compliance with the ADA. The USDOT in turn has delegated to the Federal Highway Administration (FHWA) the responsibility to ensure ADA compliance in the public right-of-way and on projects using surface transportation funds.

The ADA requires public agencies with more than 50 employees to develop a transition plan in the event that structural changes to facilities are needed to achieve program accessibility. Due to the Department's size (over 3300 employees) and recognition that there are numerous physical barriers in the State Highway right of way which impact the access of persons with disabilities, the above titled transition plan has been developed.

#### Discussion

Many highway elements can affect the accessibility and mobility of disabled individuals. These elements include sidewalks, crosswalks, traffic signals, and roadway structures. An inventory of these locations will not be accomplished at this time. It is felt that the Department's limited resources would be put to their best use by addressing such deficiencies rather than compiling a listing. In this regard, the Bureau of Engineering and Construction in consultation with the FHWA had several meetings to discuss strategies designed to bring the infrastructure along Connecticut's State highway roadside into ADA compliance. It was mutually agreed that a good first step would be for the Department to determine whether its current policies and procedures were in compliance with the ADA. Such a determination would ensure that all new construction activities from a particular point in time would be ADA compliant.

## Review of Existing Design Procedures

### New Construction/Significant Alterations Activity

A review of the Bureau's policies and procedures governing new construction in the State highway right-of-way was undertaken to determine if they were in compliance with ADA guidelines. Construction activity in the State highway right-of-way can occur under two mechanisms, Department project or encroachment permit.

The majority of new construction in the State highway right-of-way is undertaken by the Department, under a Federal and/or State funded construction project. The design standard governing such work is known as the "Connecticut Department of Transportation Highway Design Manual (2003 Edition)" (HDM). ADA design considerations are present throughout this publication, where applicable, and specific accessibility guidance is available as well for designers in Chapter 15, entitled Special Design Elements. This edition of the manual was therefore reviewed for compliance with the ADA.

The second manner in which new work or significant alterations may occur in the State highway right of way is under the Department's encroachment permit process. Through this process, non-Department entities such as private developers, municipalities, and utilities or their contractors seek permission to work within the State highway right-of-way. The design for such work is routinely reviewed by the appropriate Department disciplines to ensure conformity with agency standards, policy, procedures, Federal laws, State Statutes, etc. State regulations governing the issuance of highway encroachment permits reference the previously mentioned HDM. In addition to the design review component of this process, an inspection component ensures conformance with approved plans and specifications.

In both cases, the designer is responsible for accommodating all users of the right of way (motorist, bicyclist, pedestrian, utilities, and adjacent property owners) during construction. This is accomplished through the development of temporary traffic control plans and/or specifications. In terms of pedestrian access, providing the level of accessibility for disabled individuals experienced prior to the project is the goal until the completed project's ADA amenities are constructed. For example, should sidewalk ramps exist prior to construction, temporary ramps, walkways, etc., will be installed with appropriate signage during construction and/or some alternate means of access provided.

## Traffic Signals

The design and operation of a traffic control signal takes into consideration the particular characteristics of the intersection as well as the needs of vehicular, pedestrian, and bicycle traffic. There are circumstances where it is reasonable to expect pedestrians to have a need to cross a street. If the basic signal operation does not include satisfactory provisions for pedestrians, additional pedestrian control features are considered. In Connecticut, these additional features would be either pedestrian push buttons for actuating the side street green phase or an exclusive walk phase.

Intersections with side street green push buttons are intended to give pedestrians the ability to stop the arterial traffic flow and, thereby, cross the major street during the minor street green interval. Under this type of pedestrian accommodation, pedestrians crossing the major street may encounter conflicting vehicular turning movements entering the intersection from the minor street. For this reason, this type of control is not considered appropriate for accessible pedestrian signals (APS). However, pushbuttons installed for this purpose are ADA compatible (height, operating force, size) with access to the adjacent sidewalk network provided (ramps, sidewalk extensions, etc., as necessary).

Intersections with exclusive walk phases are intended to give pedestrians the ability to stop all traffic at a particular location and cross the designated intersection approaches with no vehicular conflicts. This type of control provides pedestrian signals which indicate the appropriate time to cross and includes clearance intervals. An APS is only installed at traffic signals with this type of pedestrian control. APS is considered at existing or proposed traffic signal installations with exclusive pedestrian phases when there is a request made by, or on behalf of, a visually impaired pedestrian. All requests involving State maintained traffic signals received by the Department are discussed with a representative of the Connecticut Board of Education and Services for the Blind and the Local Traffic Authority. In some cases, it has been necessary to upgrade the pedestrian accommodation at an existing signalized intersection from side street green to exclusive walk phase in order to provide the requested APS. As with side street green push buttons, the actuation buttons for exclusive walk phases are ADA compatible with sidewalk access provided under all new construction installations.

### Review of Existing Design Procedures Conclusions

In Connecticut, the HDM serves as the basis for all new highway construction/significant alteration activity occurring within the State highway right-of-way. The Department's review of this standard has determined that the HDM is largely in compliance with ADA guidelines; however, the sidewalk grade requirement does require revision. The HDM needs to be revised to detail how designers should address sidewalk accessibility issues when the adjacent roadway grade at new or altered structures exceeds 5%. The HDM should also introduce language that

reinforces the need to provide safe, functional, and accessible facilities and structures based on the current best practices.

In regard to traffic signals, the Department's procedures and practices related to APS are not contained in the HDM. However, such features are addressed by the Division of Traffic Engineering's Traffic Signal Design Manual (TSDM). This document was revised in the fall of 2009 to address the Department's current APS design procedure. Similar to the HDM, this manual serves as the design guidance document for all traffic signal installations occurring in the State highway right-of-way regardless of whether the signal is designed by a consultant or State forces. The Department's reliance on the TSDM ensures a consistent APS treatment at those signalized intersections where pedestrian accessibility may be compromised for individuals with disabilities.

During the review of the design process, the following recommendations were identified which could augment the above described Bureau of Engineering and Construction policies and procedures:

1. Task: Revise Chapter 15 of the HDM to address the sidewalk grade issue, to reinforce the need for to provide compliant facilities, and to introduce design process changes as needed.

Responsibility: Engineering Administrator

Status: A subcommittee was formed to review ADA compliance issues in design and construction. The group will review the HDM and recommend changes to the existing guidelines as needed. The goal is to have the revisions approved by the HDM Committee at their October 2010 quarterly meeting.

2. Task: Revise Highway Encroachment Permit Regulations Manual to strengthen the linkage to the HDM and to emphasize to permit applicants the necessity to address access needs of persons with disabilities.

Responsibility: Transportation Maintenance Director

Status: An update to these regulations is not imminent. The entire document requires an update; however, this process has not yet begun. Due to statutory approval requirement for updating this document, the ADA issue will be pended until the document in total is updated. Increased awareness through staff training and updates to other documents will insure that designs for Highway Encroachment Permits are ADA compliant.

3. Task: Revise Stewardship Agreement checklist to include sign off for designer indicating that ADA design considerations were included in the Final Design.

**Responsibility:** Engineering Administrator

**Status:** Checklist will be updated once changes to the HDM are finalized and staff training has occurred.

4. **Task:** Conduct Training Session for appropriate Office of Engineering personnel to promote awareness of ADA accessibility considerations both during design and construction.

**Responsibility:** Engineering Administrator

**Status:** Resources are not available in-house to perform training sessions. On line learning tools and the Designing Pedestrian Facilities for Accessibility Course available from the FHWA Resource Center are options being considered.

5. **Task:** Address ADA accessibility in the Department's Sidewalk Policy Statement

**Responsibility:** Principal Engineer-Design Development Unit

**Status:** The Department is currently revising the Sidewalk Policy Statement. A revised policy should be issued winter 2010-11.

6. **Task:** Review and revise the Departments curb ramp standard drawings to insure they are in conformance with current guidelines. Review current best practices in design and revise drawings where needed.

**Responsibility:** Principal Engineer-Design Development Unit

**Status:** Review has just started and updates should be completed by late winter of 2010-11

#### **Review Existing Construction Procedures**

All new construction projects occurring in the State highway right-of-way are administered by the Department's Office of Construction. However, the prime designer is responsible for developing a concept for the safe and efficient movement of traffic (motor vehicle, bicycle, pedestrian) through the work zone. Experience has shown that when the contract plans, specifications and estimates (PS&E) properly anticipates the accessibility needs of a project during construction that a greater willingness on the part of the contractor and Department personnel exists to ensure that such accommodations are provided.

Much of the Department's highway program does not occur on new alignments but rather includes work on existing highways. Department highway construction will therefore often disrupt existing traffic operations and typically will take place under live traffic conditions. It is the Department's practice to provide at least the level of

accessibility which existed prior to the project until the final pedestrian amenities are constructed and available for safe use.

The construction of any transportation project consists of a number of operations that must be integrated in order to produce a finished product. Each operation may affect the level of accessibility differently. The prime designer must anticipate these different operations at every construction stage so that appropriate accommodations are included in the project PS&E.

The particular project's maintenance and protection of traffic (M&PT) plans and special provisions should provide direction to the contractor and the Office of Construction how to process pedestrian traffic through a work zone in a safe and efficient manner. The M&PT plans may range from set plans that include every detail of traffic accommodation to the standard temporary control plan sheets. The scope of the M&PT plans and special provisions will depend on the complexity and duration of the construction project.

As with accessibility considerations for final design, the HDM serves as the Department's design standard for accessibility accommodations needed during all stages of construction as well. This publication addresses M&PT issues in Chapter 14 entitled: Temporary Traffic Control. While the need to accommodate pedestrians and maintain access to roadside properties is mentioned in this chapter, specific emphasis on maintaining the pre-project level of accessibility during construction for disabled individuals is lacking.

In the field, the Department's Construction Manual (CM) serves as the authoritative reference for staff administering the agency construction program. This manual contains significant guidance to ensure contractor conformance with the approved PS&E. However, should ADA access issues, either temporary or final, be overlooked by the designer no direction is indicated.

#### Review of Existing Construction Procedures Conclusions

The Department review of the HDM and the CM indicates that both publications contain substantial direction and guidance sufficient to ensure achievement of the ADA accessibility objective in all new construction/significant alteration work being accomplished in the State highway right-of-way. However, both manuals lack sufficient emphasis on the Department's obligation to maintain the pre-project level of accessibility for disabled individuals during construction. The following recommendations were identified which could address this finding.

1. Task: Revise Stewardship Agreement checklist to include sign off for designer indicating ADA design considerations were included in the project PS&E for the various stages of construction.

Responsibility: Engineering Administrator

Status: Checklist will be updated once changes to the HDM are finalized and staff training has occurred.

2. Task: Revise HDM Chapter 14 to emphasize to project designers that when considering M&PT, that at least the pre-project level of accessibility be provided for all stages of construction through the project limits.

Responsibility: Engineering Administrator

Status: Recommended change to HDM Chapter 14 was discussed at the April 2010 HDM Committee Meeting. A subcommittee was formed to review ADA compliance issues in design and construction. The group will review the HDM and recommend changes to improve clarity of the guidance and/or revised guidelines. The goal is to have the revisions approved by the HDM Committee at their October 2010 quarterly meeting.

3. Task: Revise CM to emphasize to construction personnel that at least the pre-project level of accessibility be provided for all stages of construction throughout the project limits.

Responsibility: Construction Division Chief

Status: Revised language has been developed and will be included in the next update to the CM (Fall 2010).

4. Task: Conduct Training session for Office of Construction personnel to promote awareness of ADA accessibility considerations during construction.

Responsibility: Construction Division Chief

Status: Training for Office of Construction will be coordinated with Office of Engineering's training.

#### Existing Conditions Plan and Schedule of Modifications

To this point, the Department's Transition Plan for Public Rights-of-Way along State Highways has focused on new construction projects either while they are in construction, or in their final as-built condition. However, it is recognized that such new construction activity only covers a small portion of State maintained highway system. Taking into account those roadways where pedestrians are prohibited, such as expressways, about 3000 miles of designated State Routes require a review for ADA compliance and possible corrective action.

Obviously, there are funding, manpower, and time constraints to addressing a task of this magnitude. It is therefore the Department's intention to program a series of annual ADA compliance projects. The projects will be designed to take a segment of State Route(s) and systematically address accessibility barriers. Due to the

extreme funding constraints the Department is facing in the near term; the first series of projects will address only curb ramps. Other non-compliance issues relating to sidewalks, crossings and intersections, or pedestrian signals will not be addressed by these projects; however, deficiencies noted within the project limits will be documented for future corrective action. As noted earlier, the Department does not have the resources to inventory the entire network; but, the Department will capture the work being performed by new construction/reconstruction projects as well as the ADA compliance projects. Accessibility barriers that were identified in the design of new construction/reconstruction projects, however, were beyond the scope of the project to correct will also be captured and included in future updates of the Transition Plan. This information will allow the Department to report the progress that is being made on this effort, and over time, allow for the development of an inventory. Since the scope of the effort and future year funding commitments are not defined at this time, it is not realistic to project a date when the network will be become fully ADA compliant.

For FY's 2012-2016, the Department is dedicating \$500,000 per year to fund the design and construction projects to address ADA compliance. In addition to these projects, the Department will continue to address ADA non-compliance issues through new construction/reconstruction and traffic signal replacement projects. In FY 2009, the Department spent approximately \$4,000,000 on ADA compliant sidewalk, sidewalk ramps and traffic signal related items; similar levels of ADA compliant construction are anticipated in future year projects. As the fiscal outlook for the Department improves in future years, a greater commitment may be made when the next series of ADA compliance projects is planned.

The Department's efforts have started with a planning effort which identifies project location(s) and scopes that match the Department's funding commitment. In order that estimates and coordination with other projects remain meaningful, the Transition Plan has identified projects for the construction in FY's 2012-2016. In FY 2015, another planning effort will be undertaken to identify future fiscal year projects. These series of activities will repeat as long as necessary to address the Department's ADA needs along the State highway right-of-way. The project programming schedule for the next seven Federal Fiscal Years (FFY) is as follows:

Transition Plan Schedule

| <u>FFY</u> | <u>Activity</u>                                     |
|------------|---|
| 2010       | Planning Project covering First 5 Years of Program. |
| 2011       | (PE) for First construction project.                |
| 2012       | Construction of First project.                      |

|      |   |
|------|---|
|      | PE for Second construction project.   |
| 2013 | Construction of Second project.<br>PE for Third construction project.   |
| 2014 | Construction of Third project.<br>PE for Fourth construction project.   |
| 2015 | Construction of Fourth project.<br>PE for Fifth construction project.<br>Planning Project covering next 5 years of Program. |
| 2016 | Construction of Fifth project.<br>PE for Sixth Construction Project.  |

The scope of the five (5) projects identified in the Transition Plan is limited to the following criteria:

- Installation of curb ramps where none exist
- Reconstructing existing sidewalk curb ramps with a running slope of greater than 1 to 12.
- Reconstructing existing sidewalk curb ramps with widths of less than 36 inches.
- Retrofitting of existing sidewalk curb ramps to include a detectable warning strip.
- Reconstruction of a curb ramp with insufficient landing, if feasible.
- Relocation/removal of obstructions within the curb ramp or landing, if feasible.

To most effectively use the available monies, a number of factors were used to establish the location and limits of the five projects. Population related factors were primary consideration in selecting a location:

- Presence of Disabled Population Greater than 16 yrs. Of Age (US Census data)
- Population 75 years and older (US Census Data)
- Population Density (US Census Data)

A statewide plot of this data clearly showed that certain urban centers would be better served by these projects. To determine which urban areas would be included in the first projects, the location of the state routes (which did not already lie within a planned construction project) were evaluated based on their proximity to:

- Hospitals/Medical Centers (CTDEP DATA)
- Schools (CTDEP DATA)
- Government Facilities (CTDEP DATA)
- Train Stations(CDOT DATA)

- Bus Routes

The routes selected had a number of these types of facilities located along them, or had these facilities located in close proximity to the route. The existing condition of the ramps along these routes was reviewed using Digital Highway and Google Maps. The estimated costs to bring the existing curb ramps into compliance for the selected segment of roadways(s) was performed, and the project limits were established when the cost estimate reached the annual funding level. A map showing approximate project limits for each town is provided in the Appendix. The actual limits of the construction projects may vary slightly based on field conditions observed and refined cost estimates made during the design process. The following is a schedule of towns that are to be addressed in the Department's 5-year program. :

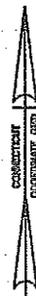
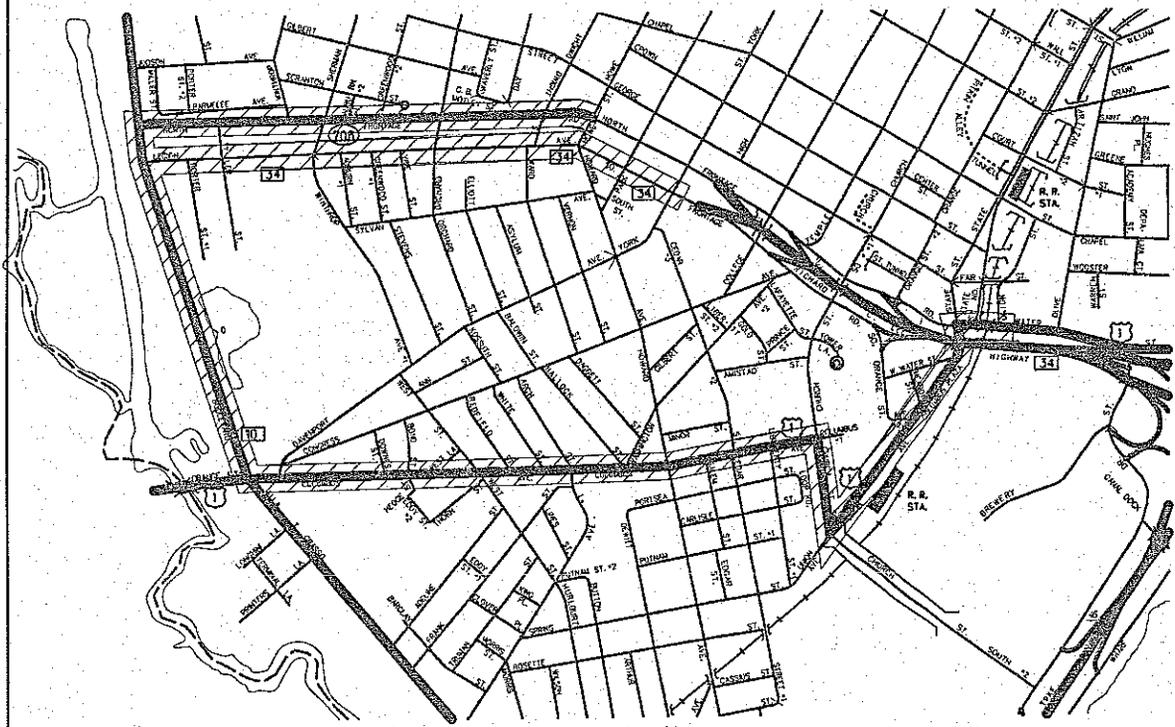
| PE (fy) | CONST. (fy) | City        | Project Limits |
|---------|-------------|-------------|----------------|
| 2011    | 2012        | New Haven   | See Figure 1   |
| 2012    | 2013        | Waterbury   | See Figure 2   |
| 2013    | 2014        | Stamford    | See Figure 3   |
| 2014    | 2015        | New London  | See Figure 4   |
| 2015    | 2016        | New Britain | See Figure 5   |

### Plan Monitoring

In order to ensure that the Department's ADA Transition Plan for the Public Right-of-Way Along State Highways remain on track, it is recommended that its progress be monitored at least once a year. This monitoring could take place in the form of an Annual Meeting convened by the Department's Office of Equal Opportunity and Diversity. The Commissioner has designated the Director of that office to have responsibility for all affirmative action activities and investigation of discrimination complaints pursuant to Federal and State Law. The Director of that office is also designated as the Department's ADA Coordinator. The meeting should include representation from those offices of the Department responsible for planning and designing of the ADA program, representation from the Department's Office of Financial Management, the Engineering Administrator, the Director of the Office of Equal Opportunity and Diversity, and appropriate FHWA personnel. A report of meeting will document the Department's progress and reflect any program adjustments that may be necessary.

# Appendix

**FIGURE 1: FY 2011 PE Project Limits**



 AREA OF CURB RAMP IMPROVEMENTS



STATE PROJECT NO.:  
170-2866.  
CITY/TOWN:  
NEW HAVEN



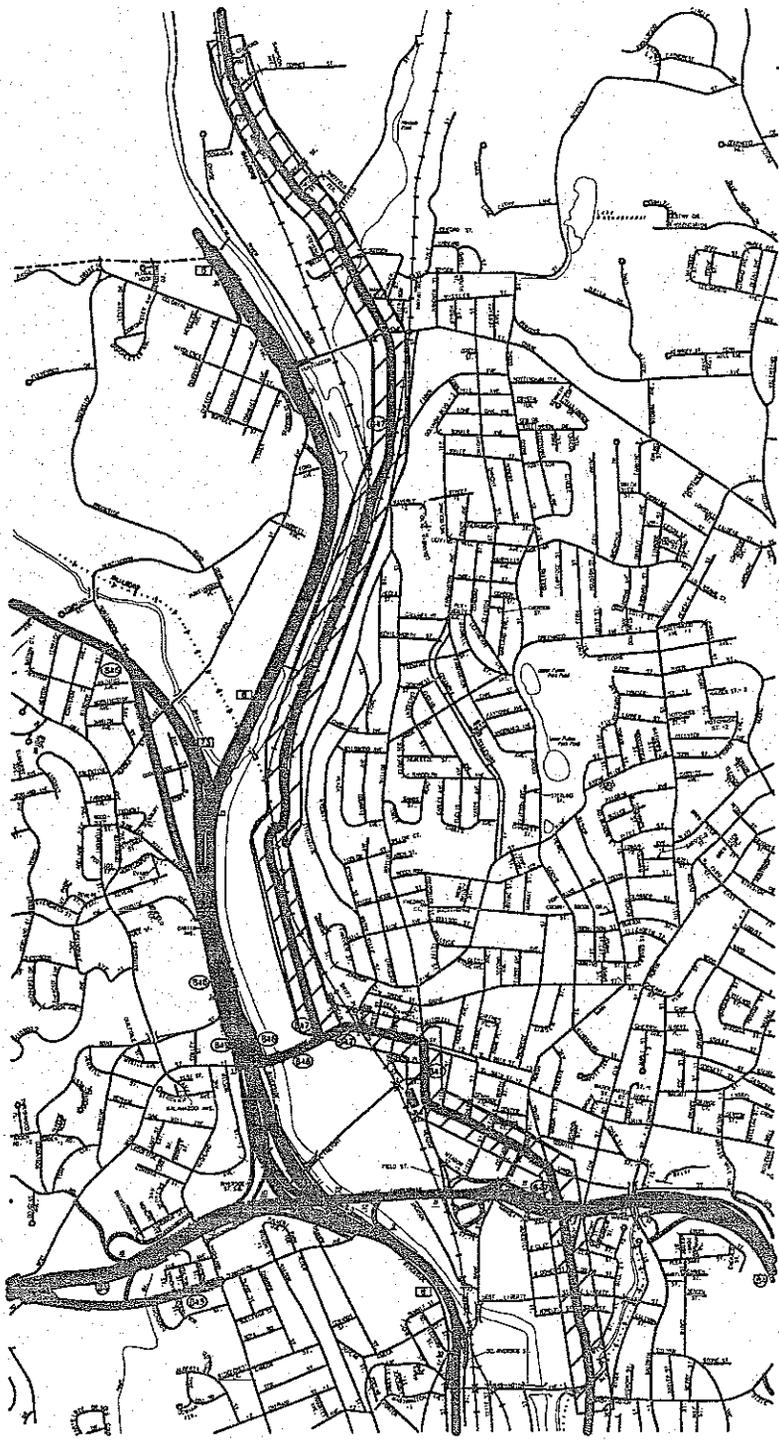
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ADA TRANSITION PLAN  
FY 2011 PE PROJECT LIMITS



OFFICE OF  
ENGINEERING

DATE:  
JUNE 2010

**FIGURE 2: FY 2012 PE Project Limits**



 AREA OF CURB RAMP IMPROVEMENTS

SCALE IN FEET



STATE PROJECT NO.:

170-2866

CITY/TOWN:

WATERBURY



STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

ADA TRANSITION PLAN  
FY 2012 PE PROJECT LIMITS



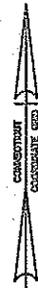
OFFICE OF  
ENGINEERING



DATE:

JUNE 2010

**FIGURE 3: FY 2013 PE Project Limits**



 AREA OF CURB RAMP IMPROVEMENTS



STATE PROJECT NO.:  
170-2866  
CITY/TOWN:  
STAMFORD



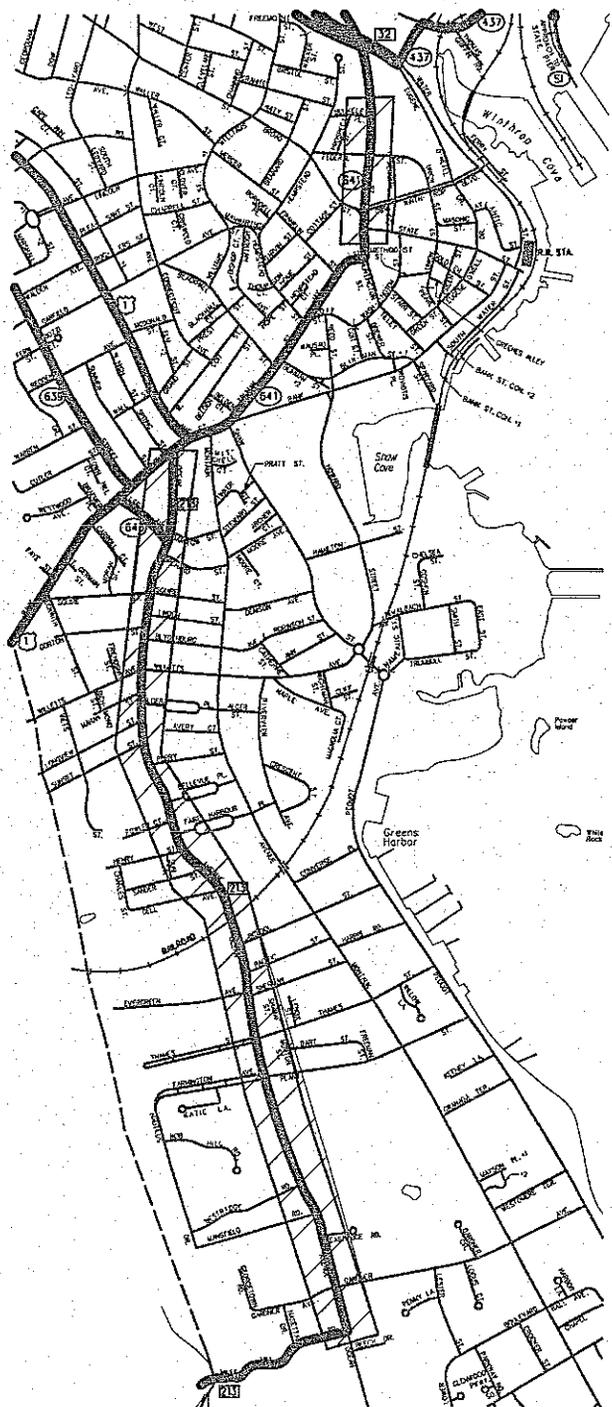
STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
ADA TRANSITION PLAN  
FY 2013 PE PROJECT LIMITS



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ENGINEERING

DATE:  
JUNE 2010

**FIGURE 4: FY 2014 PE Project Limits**



▨ AREA OF CURB RAMP IMPROVEMENTS

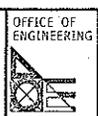
SCALE IN FEET



STATE PROJECT NO.:  
170-2866  
  
CITY/TOWN:  
NEW LONDON

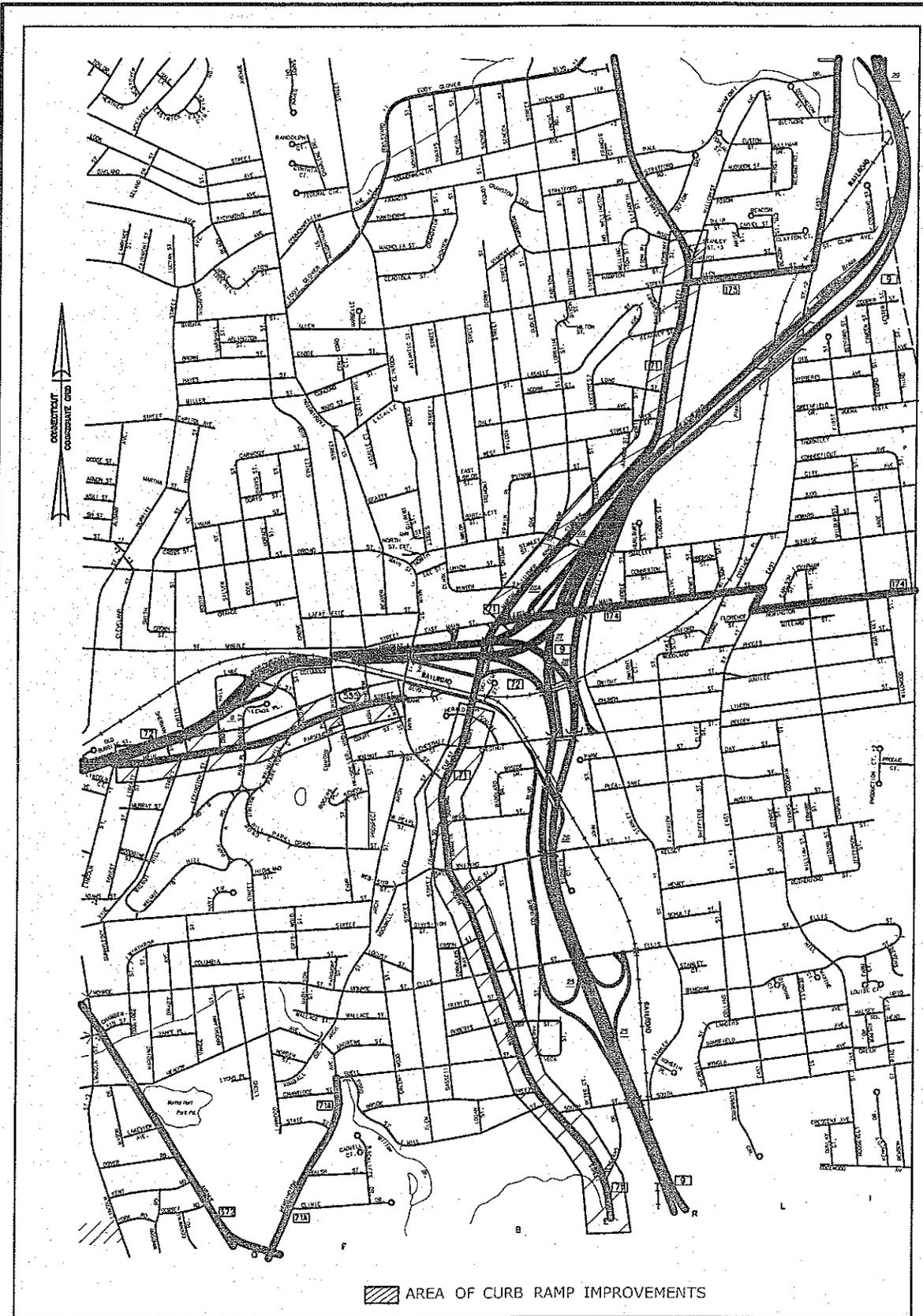


STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
  
ADA TRANSITION PLAN  
FY 2014 PE PROJECT LIMITS



DATE:  
JUNE 2010

**FIGURE 5: FY 2015 PE Project Limits**



▨ AREA OF CURB RAMP IMPROVEMENTS

SCALE IN FEET



STATE PROJECT NO.:

170-2866

CITY/TOWN:

NEW BRITAIN



STATE OF CONNECTICUT  
DEPARTMENT OF TRANSPORTATION

ADA TRANSITION PLAN  
FY 2015 PE PROJECT LIMITS



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DATE:

JUNE 2010

**Title II-Americans with Disabilities Act  
(ADA)/504 Complaint Disposition Process and  
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