US Army Corps
of Engineers®
New York District

WESTCHESTER COUNTY STREAMS, BYRAM RIVER BASIN

FLOOD RISK MANAGEMENT FEASIBILITY STUDY

FAIRFIELD COUNTY, CONNECTICUT AND WESTCHESTER COUNTY, NEW YORK

FINAL INTEGRATED FEASIBILITY REPORT & ENVIRONMENTAL IMPACT STATEMENT

APPENDIX B.3:

Non-Structural

1. INTRODUCTION

This Appendix documents the activities performed in support of the Conceptual Design that is part of Phase III in the Project Management Plan (PMP) for the Flood Risk Management and Watershed Management of the Byram River Basin. The Non-structural Plan was initially developed during Phase II using estimated main floor and low opening elevations based on Geographic Information System (GIS) data. The purpose of the Conceptual Design as part of Phase III is to optimize the Non-structural Plan using more detailed information. The following summarizes the results of the Phase III non-structural evaluation.

2. PROJECT AREA

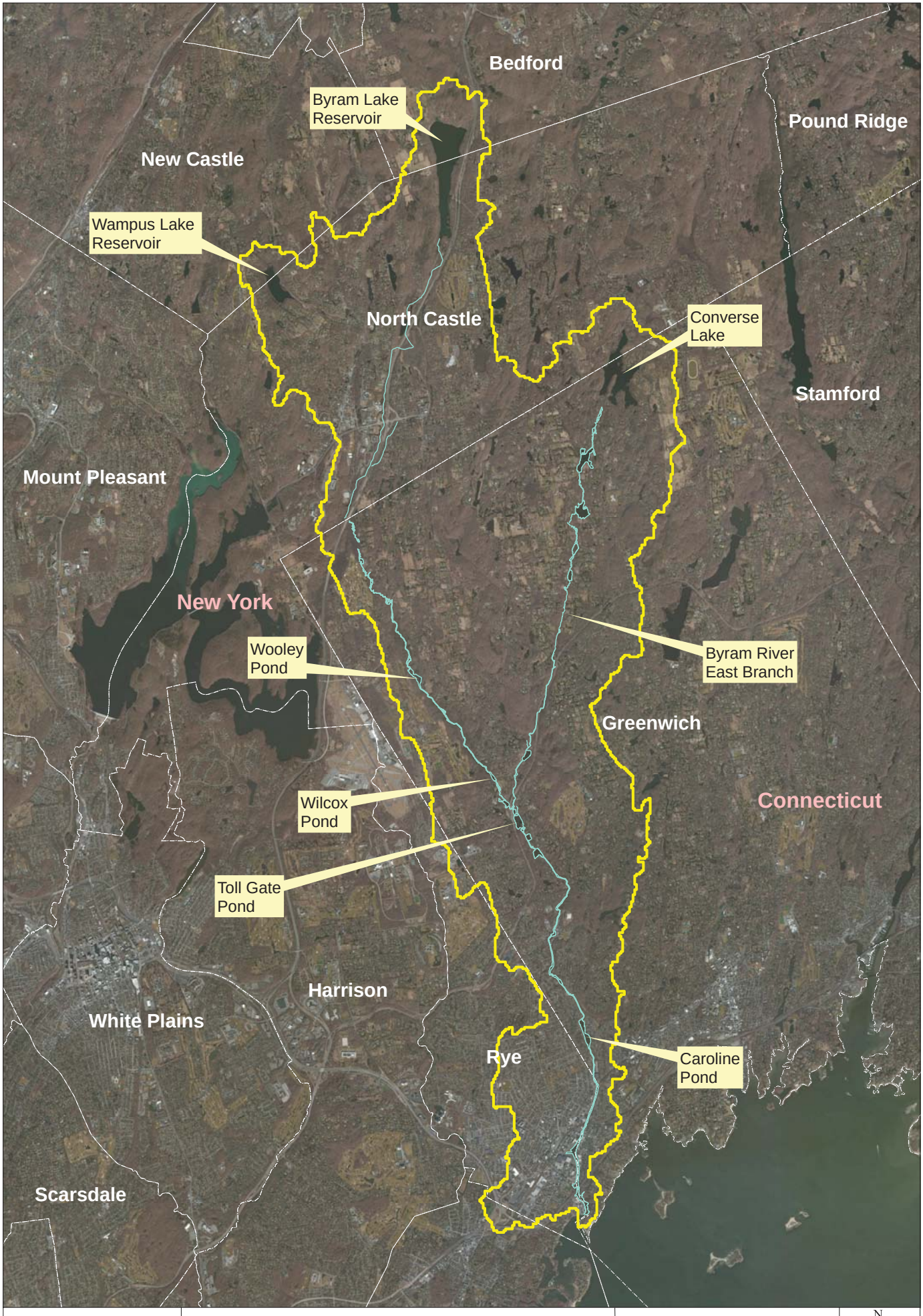
The Byram River basin is located within the Town of Greenwich (the Town) in Fairfield County Connecticut with headwaters north across the border in Westchester County, New York (**Figure 1**). The Byram River, with a length of 13.5 miles, flows south and empties into Long Island Sound. The lower portion of the river for a length of 1.3 miles is tidal. At the mouth of the river, the Byram River is the state boundary between Connecticut and New York. The total contributing area at the river mouth is 30 square miles. The riparian zone of the lower three miles of the Byram River is populated with suburban housing and commercial buildings. In the upper reach, generally upstream of the bridge at Bailiwick Road the area is less densely developed.

The Byram River project area includes area west and east of the river, extending between just north of Bailiwick Road to South of West Putnam Avenue (**Figure 2**). Structures within the project area were evaluated for non-structural flood protection using a structure inventory provided by the Town, topographic mapping, and floodplain delineations.

3. STRUCTURE INVENTORY

A structure inventory was developed by the Town of Greenwich to provide information on each structure to be used in the evaluation process (**Attachment A**). Information provided in the inventory included the type of structure, land use, construction, garage, foundation, structure condition, ground elevation, low opening elevation, and main floor elevation. Under Phase II, all information was collected from the Town's Tax Assessor's property information, field visits, Google Earth, and the Town's GIS data. For Phase III, main floor elevations were surveyed by Milone and MacBroom Inc. (MMI) and low opening elevations were field verified by the Town.

While collecting main floor and low opening elevations for 18 Halock Drive and a low opening elevation for 11 Hollow Wood Lane, the properties were under construction and therefore the respective data could not be collected. For these properties the estimated elevations used in the non-structural assessment under Phase II were used in this evaluation.



Legend

Byram River

Byram Watershed

Byram River Nonstructural Feasibility Study

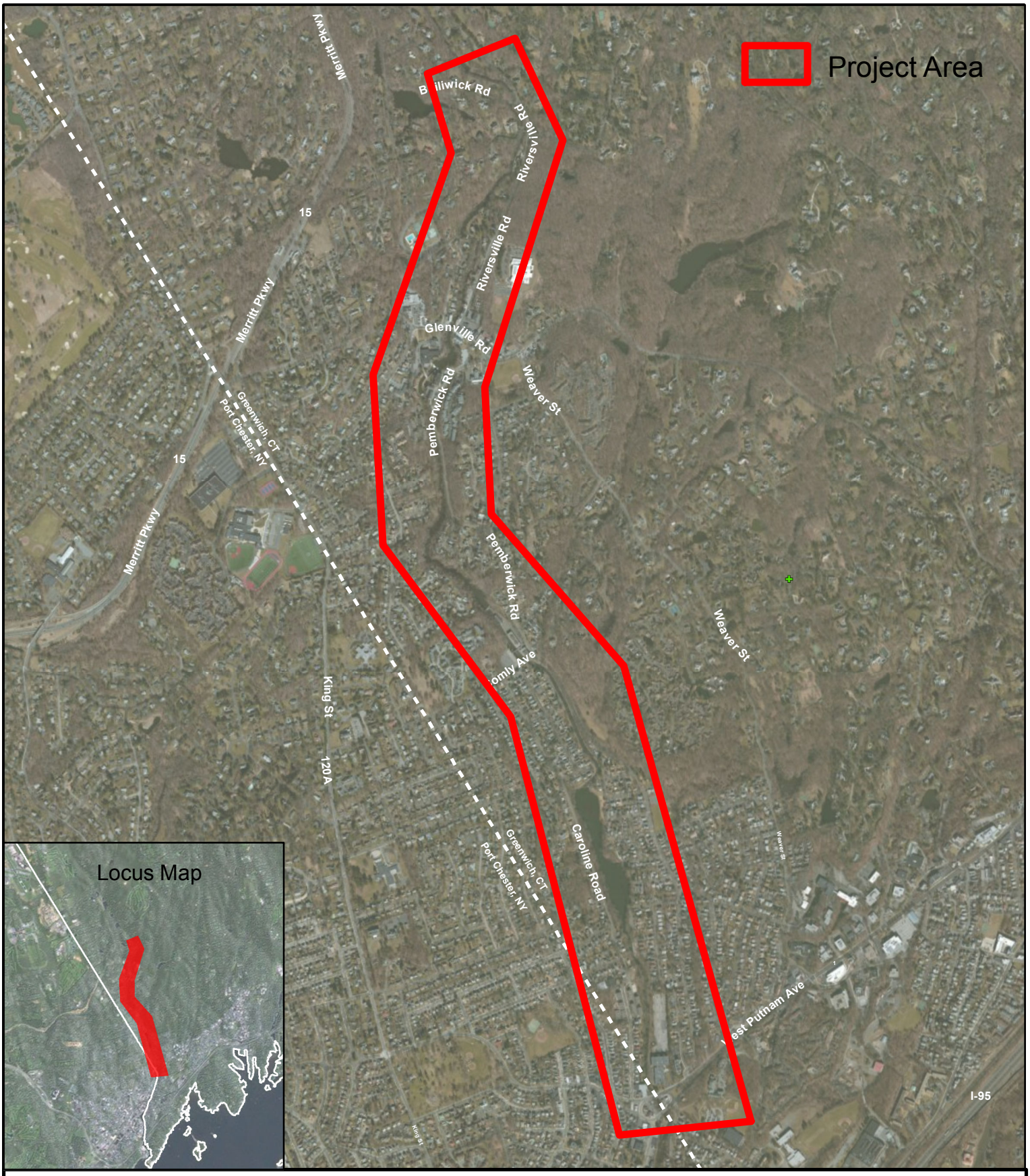
Figure 1: Study Area

Greenwich, Connecticut

January 2014

0 2,400 4,800 9,600 Feet

N W E S



Byram River Basin Feasibility Study

Figure 2: Project Area

Greenwich, Connecticut

May 8, 2014

N

0 1,500 3,000 Feet

Land use types within the project area include residential and commercial. Residential structure types include slab-on-grade foundations, subgrade basements, elevated, bi-levels, raised ranches, split levels, and large residential. Nonresidential structure types include slab-on-grade foundations, subgrade basements, and raised foundations. The following provides a brief description and example of each structure type.

3.1. Slab-on-Grade Foundation

A slab-on-grade foundation structure includes structures constructed on a slab foundation at grade.

Example of Slab-on-Grade Structure Type
499 Den Lane, Greenwich, CT (Pump Station)

3.2. Sub-grade Basement

Sub-grade basement structures contain a basement with all sides sub-grade. Basements were considered to be equivalent to main floor space located just below the main floor on a slab.

Example of Subgrade Basement Structure Type
98 Monica Road, Greenwich, CT

3.3. Elevated

Elevated structures include structures raised on posts, piles, piers, or extended walls.

Example of Elevated Structure Type
18 Hollow Wood Lane, Greenwich, CT

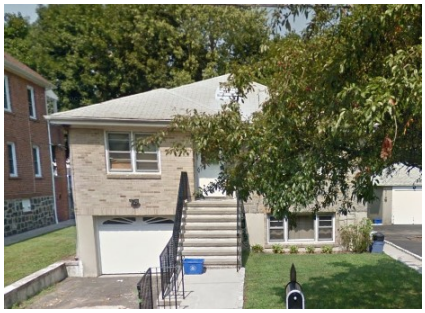
3.4. Bi-Level

Bi-level structures consist of two stories, with the first story (typically a living space or garage) partially below grade. The second story (the main floor) is typically above the first story, with the main entrance located between the two stories.

Example of Bi-Level Structure Type
39 Angelus Drive, Greenwich, CT

3.5. Raised Ranch

Raised ranches consist of two stories, with the first story (typically a living space or garage) built slab-on-grade and the second story (the main floor) directly above the first story. The main entrance is typically located on the main floor with stairs leading up to it.



Example of Raised Ranch Structure Type
9 Lucy Street, Greenwich, CT

3.6. Raised Foundation

Raised foundation structures contain a space below the main floor not big enough for a basement (typically a crawlspace).

Example of Raised Foundation Structure Type
9 Fletcher Avenue, Greenwich, CT

3.7. Split Level

Split levels consist of at least three levels, with the lower and upper level stacked, and the main floor level adjacent between the two. Each level is at a different elevation and connected by short stairways. The lower level is typically on a slab foundation and is living space and/or a garage. The main floor is typically on a raised foundation and is where the main entrance is located.

Example of Split Level Structure Type
19 Halock Drive, Greenwich, CT

3.8. Large Residential

Large residential structures include apartments, townhouses, and multi-family units. Foundation types typical of large residential structures include slab-on-grade, raised foundation, and subgrade basement.

Example of Large Residential Structure Type
2 Homestead Lane, Greenwich, CT

4. NON-STRUCTURAL FLOOD PROTECTION MEASURES

Non-structural flood protection measures involve adaption to the natural floodplain without changing structural characteristics. Non-structural flood protection measures considered in this study include dry flood proofing, wet flood proofing, ringwalls, elevation, and acquisition. The following provides a brief description of each type of protection.

4.1. Dry Flood Proofing

Dry flood proofing prevents water from entering structures through sealants and closures. It includes the addition of waterproofing compounds, impermeable sheeting or other flood-damage resistant materials to the structure's walls (sealants) and attachment of watertight closures to all openings, such as doorways and windows, below the flood elevation (closures). Dry flood proofing is most effective for structures without basements and at flood depths less than 2-feet, which includes 1-foot of freeboard. For structures with basements, dry flood proofing should be implemented in conjunction with wet flood proofing. The main floor should be protected through dry flood proofing methods and the basement should be filled or wet flood proofed.

4.2. Wet Flood Proofing

Wet flood proofing involves decreasing flood damage to the structure's foundation by allowing flood waters to enter low, nonliving areas of the structure through vents and other openings. Allowing floodwaters to enter the structure reduces the effects of hydrostatic pressure and in turn decreases flood related damage to the structure's foundation. Wet flood proofing should be implemented in conjunction with protection of all utilities and any other important equipment below the flood depth. This is typically achieved through elevation. Wet flood proofing is suitable for all flood depths.

4.3. Ringwall

Ringwalls (also known as floodwalls) prevent floodwater from reaching the structure through construction of a barrier. Other types of flood barriers include levees and berms but due to the medium to high density of the project area, only ringwalls were considered.

4.4. Elevation

Elevation involves raising the lowest finished floor of the structure to a height at least one foot above the 1-percent flood elevation. Structures can be elevated on fill, piers, posts, columns, or through extension of foundation walls.

4.5. Acquisition

Acquisition (buyout) involves acquiring the land and structure to demolish, sell and remove, or to be used by the municipality. In cases where elevation is required but not suitable, typically due to the condition of the structure, acquisition is recommended.

5. RECOMMENDATIONS

The structure inventory showed structures within the project area to be primarily residential, with several commercial and one utility (**Attachment A**). All structures with both residential and commercial land use were assessed as residential structures. Each residential structure was evaluated based on depth of inundation, structure type, square footage and condition. Nonresidential structures were assessed based on depth of inundation, construction type, structure type and structure condition.

Using the criteria listed above, an algorithm was developed to determine the appropriate recommendation for each parcel (**Attachment B**). Structures included in the structure inventory outside of the flood limits were considered "No Action" structures. These structures were determined through identifying any structure with ground elevations greater than the flood elevation. They were also determined visually in GIS using flood inundation mapping. All structures within the flood limits were assessed based on a foot of freeboard to serve as a factor of safety. Each structure was assessed for the 10-, 4-, 2-, and 1-percent storm events.

Based on the ACOE requirements, structures within the 10-, 4-, and 2-percent floodplain were improved to the 1-percent level of protection for flood proofing recommendations. Where dry or wet flood proofing was recommended, ringwalls were also considered. A final recommendation was made based on the structure and its surrounding site characteristics. General assumptions made in the assessment process were:

- Flood velocity is negligible.
- Debris impacts are negligible.
- Flooding is gradual (no flash flooding).
- Structures elevated will be raised (finished floor elevation) 1 foot above the 1-percent flood elevation.

Under Phase II, a total of 493 structures were evaluated for non-structural flood protection within the project area, of which 202 required flood proofing for the 1-percent storm event. Under Phase III, these 202 structures with one additional new property were evaluated using the updated main floor and low opening elevations. **Table 1** provides a summary of the recommendations for the 10-, 4-, 2-, and 1-percent storm events respectively. Recommendations are also presented in the structure inventory (**Attachment A**) and shown in **Figures 3a,b,c** (10-percent storm event), **Figures 4a,b,c** (4-percent storm event), **Figures 5a,b,c** (2-percent storm event), and **Figures 6a,b,c** (1-percent storm event).

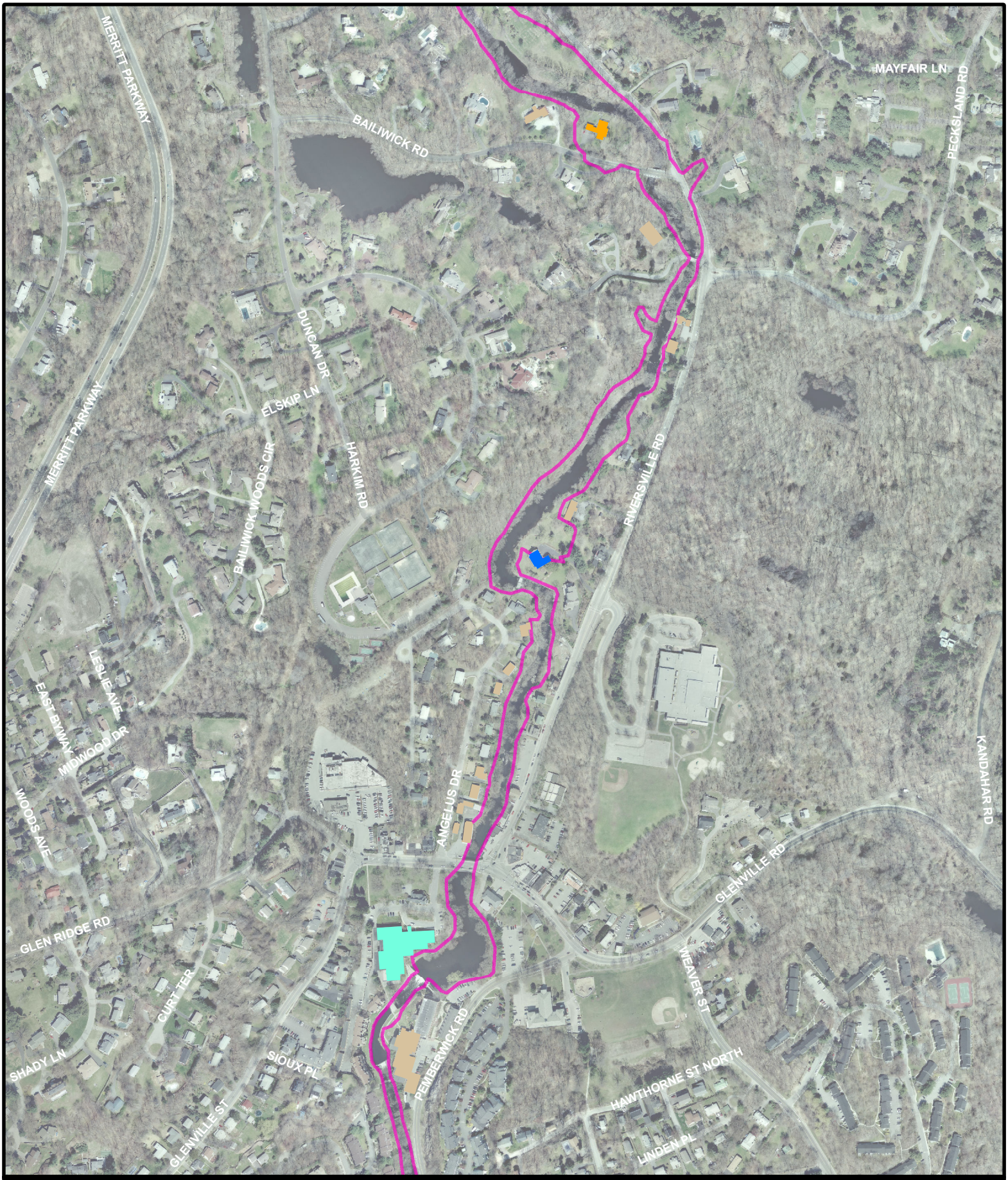
Table 1 Non-structural Flood Proofing Summary

Flood Protection	Number of Structures Requiring Protection for each Storm Event			
	10%	**4%**	**2%**	**1%**
Dry Flood Proofing	*9*	*35*	*47*	*59*
Wet Flood Proofing	*8*	*29*	*60*	*90*
Ringwall	*9*	*11*	*12*	*12*
Elevation	*15*	*22*	*22*	*22*
Total	**41**	**97**	**141**	**183**

Note: This table displays recommendations from Phase III of the study which evaluated structures using surveyed main floor and low opening elevations.

For all storm events it was determined that flood proofing is not required for a majority of the structures in the upstream region of the project area and mostly required for structures in the downstream region on the east side of the Byram River between Halock Drive and West Putnam Avenue. It was also determined that acquisition was not required for any of the structures.

For example, only seven structures require flood proofing in the upstream region for the 1-percent storm event include elevation for several structures near Bailiwick Road, and mostly wet flood proofing and dry flood proofing for several houses located on Angelus Drive, Riversville Road, Glenville Street, and Pemberwick Road (**Figure 6a**). Between Sioux Place and Upland Street East no structures were found to need flood protection for the 1-percent storm event other than 200 Pemberwick Road where a ringwall is recommended (**Figure 6b**). A majority of the structures requiring flood protection for the 1-percent storm event are located in the downstream region of the project area on the east side of the Byram River. In the downstream region several structures on the west side of the Byram River located on Riverdale Avenue require flood protection for the 1-percent storm event as well. All non-structural flood proofing measures presented in this report are recommended in the downstream region other than acquisition (**Figure 6c**). A majority of the structures require either dry or wet flood proofing for the 1-percent storm event.



Byram River Basin Feasibility Study

Figure 3a: Nonstructural Plan (10% Storm Event)

Greenwich, Connecticut

July 2015

10% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

Figure 3b: Nonstructural Plan (10% Storm Event)

Greenwich, Connecticut

July 2015

10% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

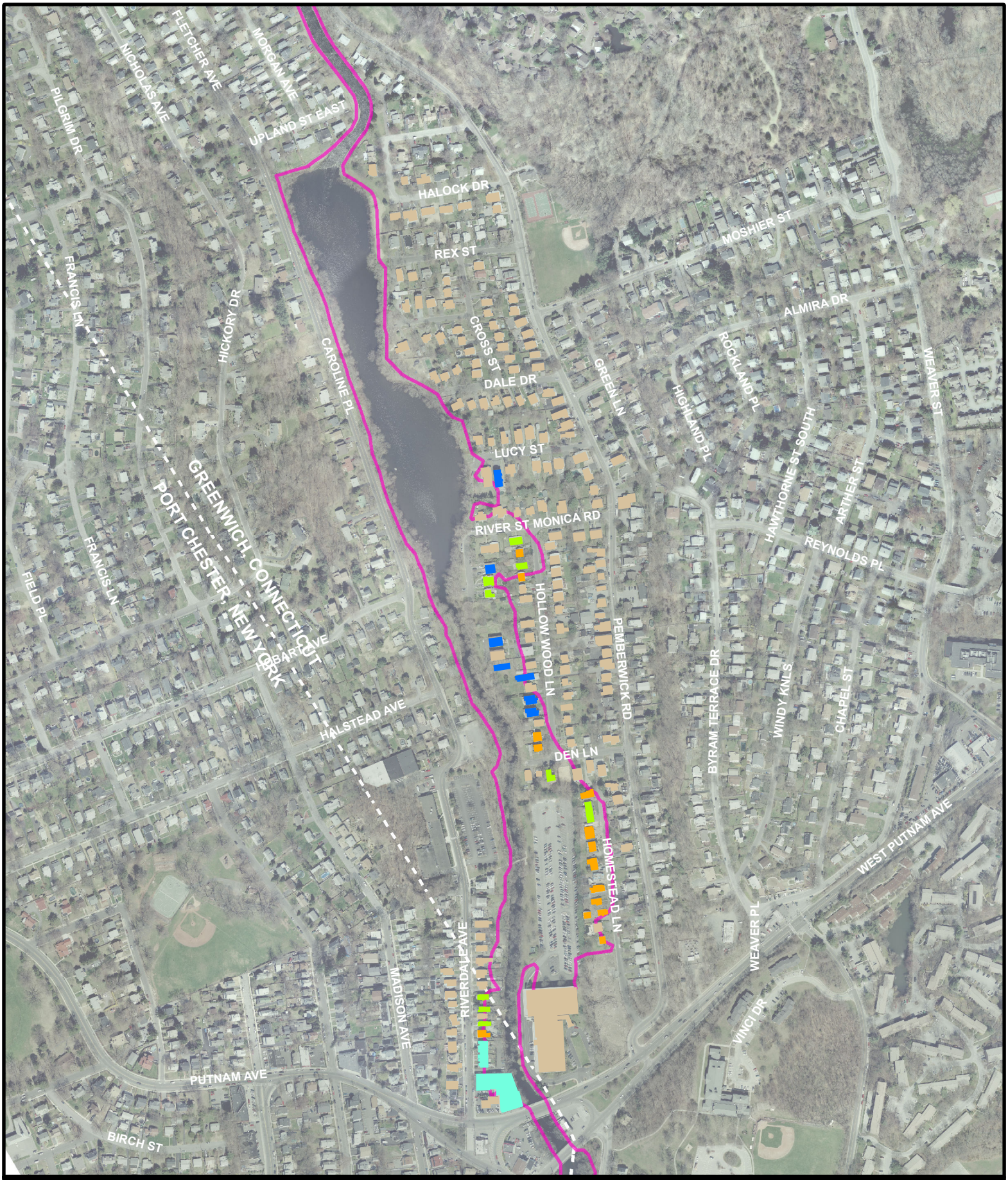
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 3c: Nonstructural Plan
(10% Storm Event)

Greenwich, Connecticut
July 2015

10% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

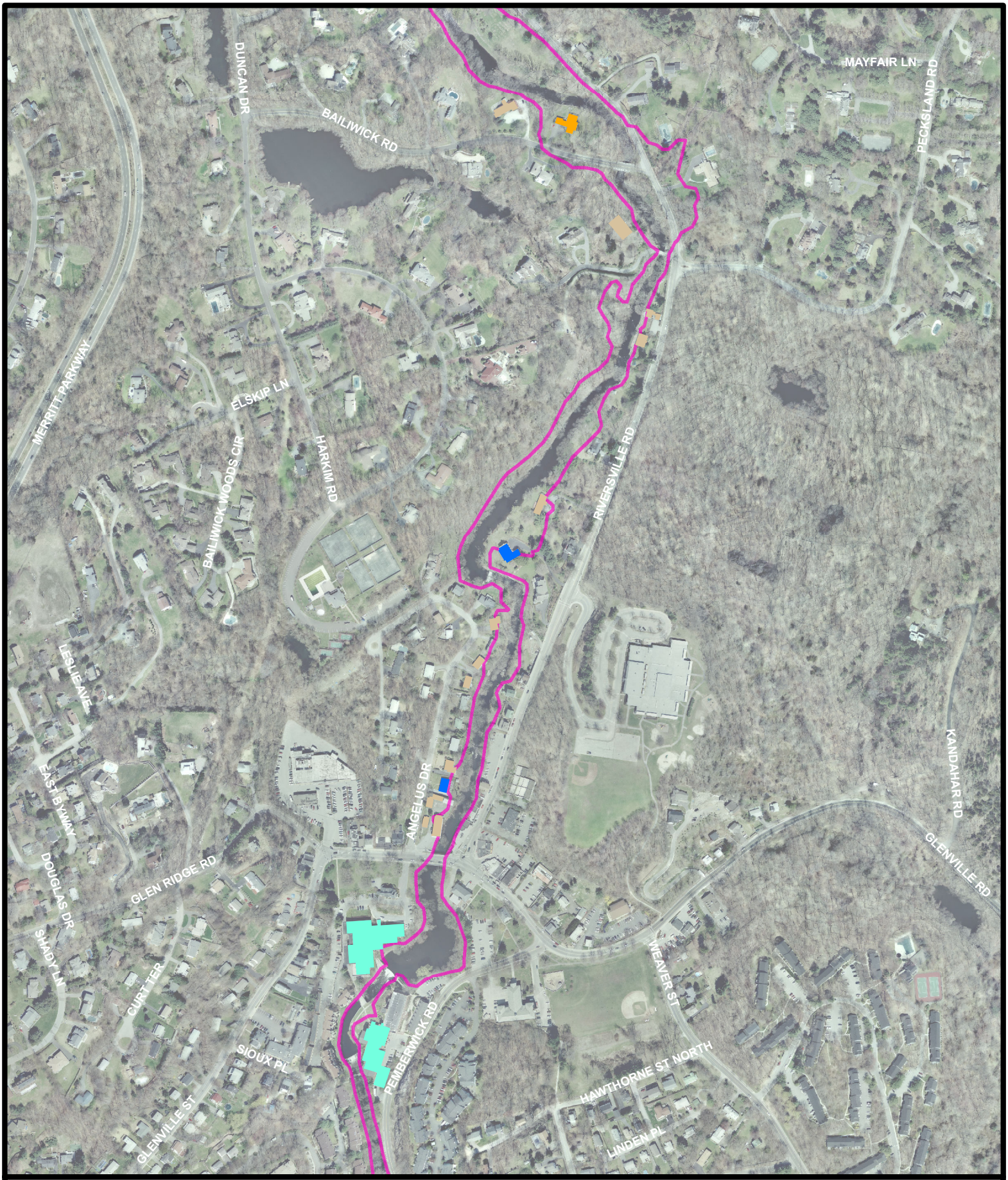
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 4a: Nonstructural Plan
(4% Storm Event)

Greenwich, Connecticut
July 2015

Byram River Basin Feasibility Study

Figure 4b: Nonstructural Plan
(4% Storm Event)

Greenwich, Connecticut
July 2015

4% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

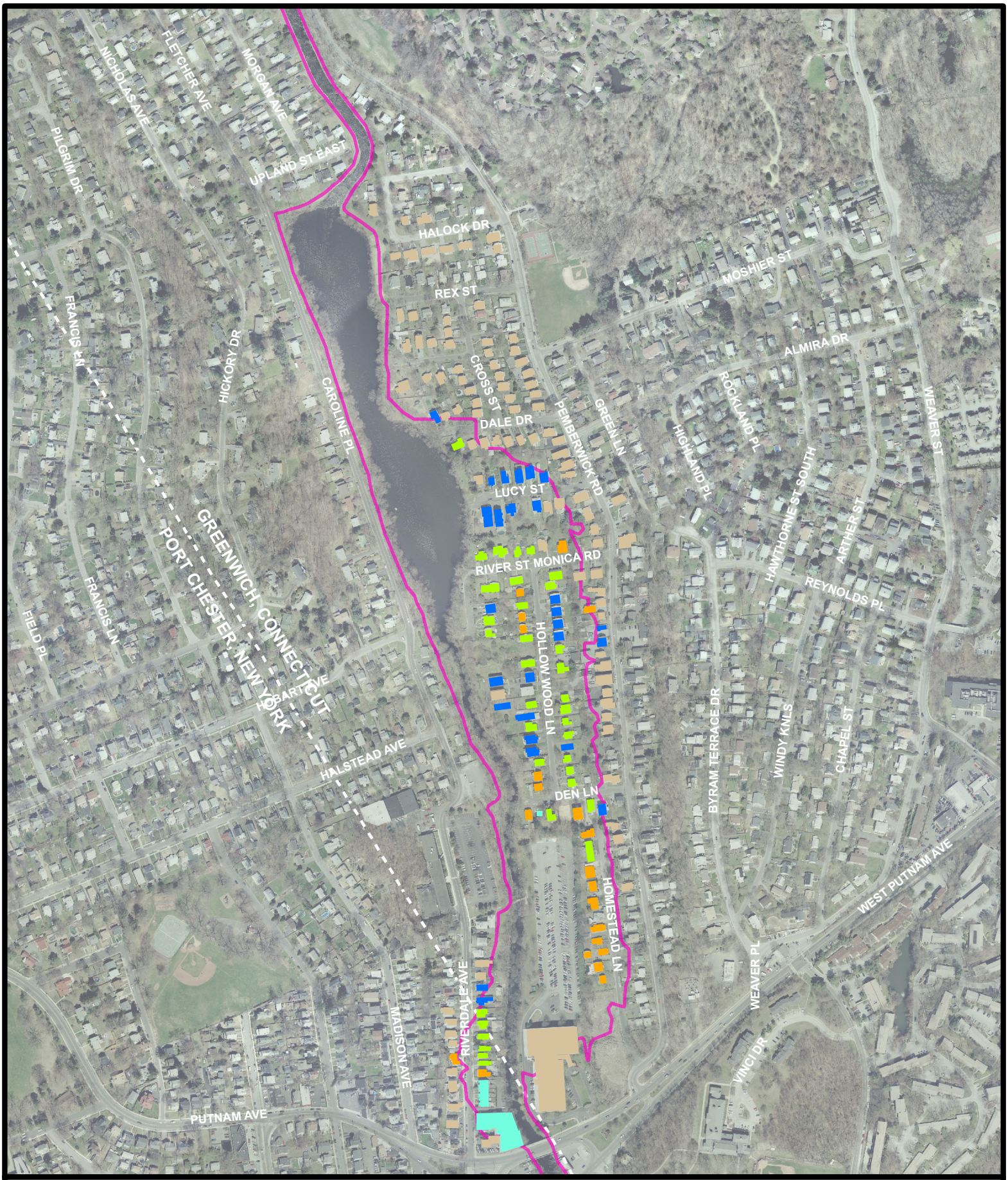
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 4c: Nonstructural Plan
(4% Storm Event)

Greenwich, Connecticut
July 2015

4% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

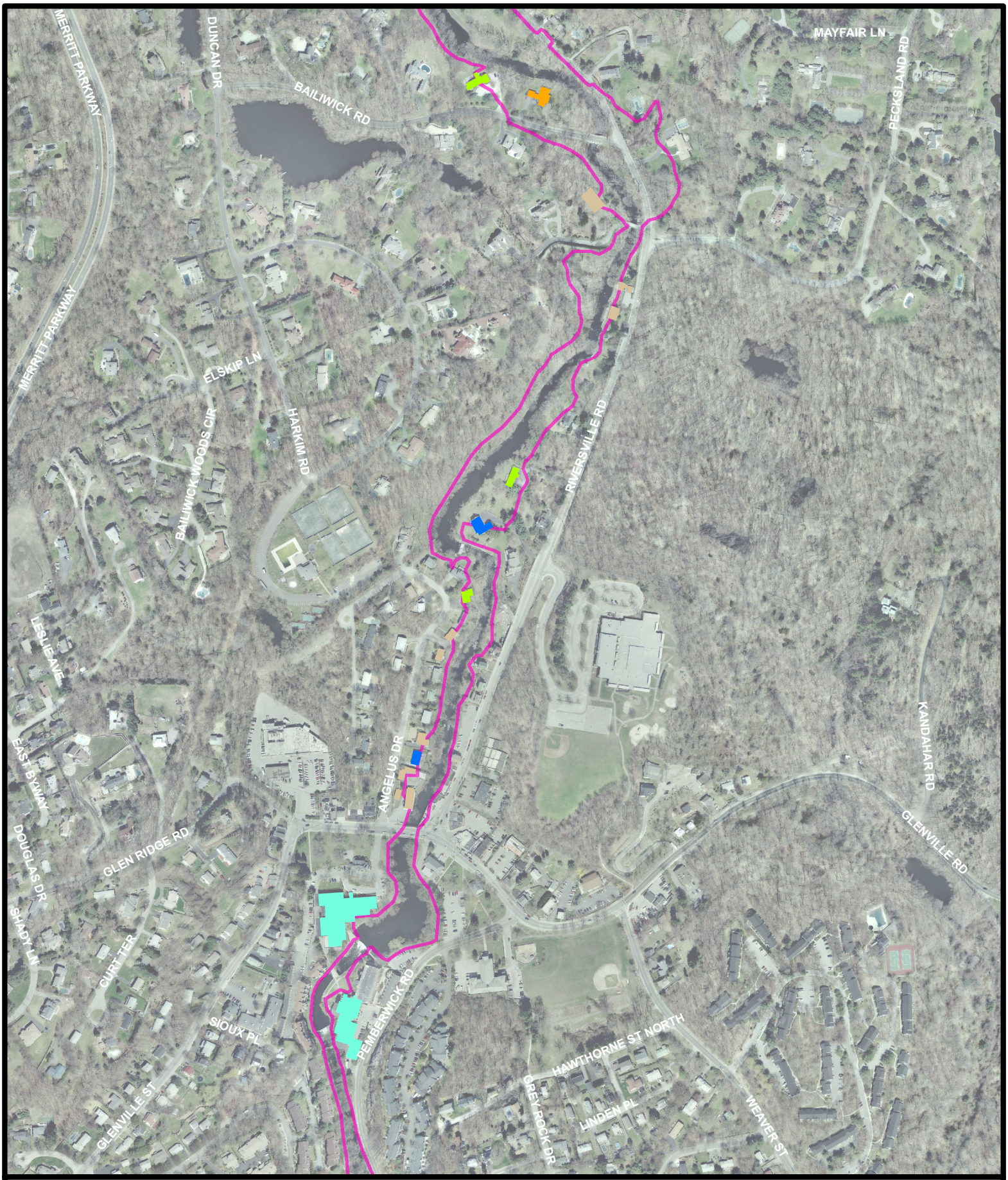
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 5a: Nonstructural Plan
(2% Storm Event)

Greenwich, Connecticut
July 2015

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

Figure 5b: Nonstructural Plan
(2% Storm Event)

Greenwich, Connecticut
July 2015

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

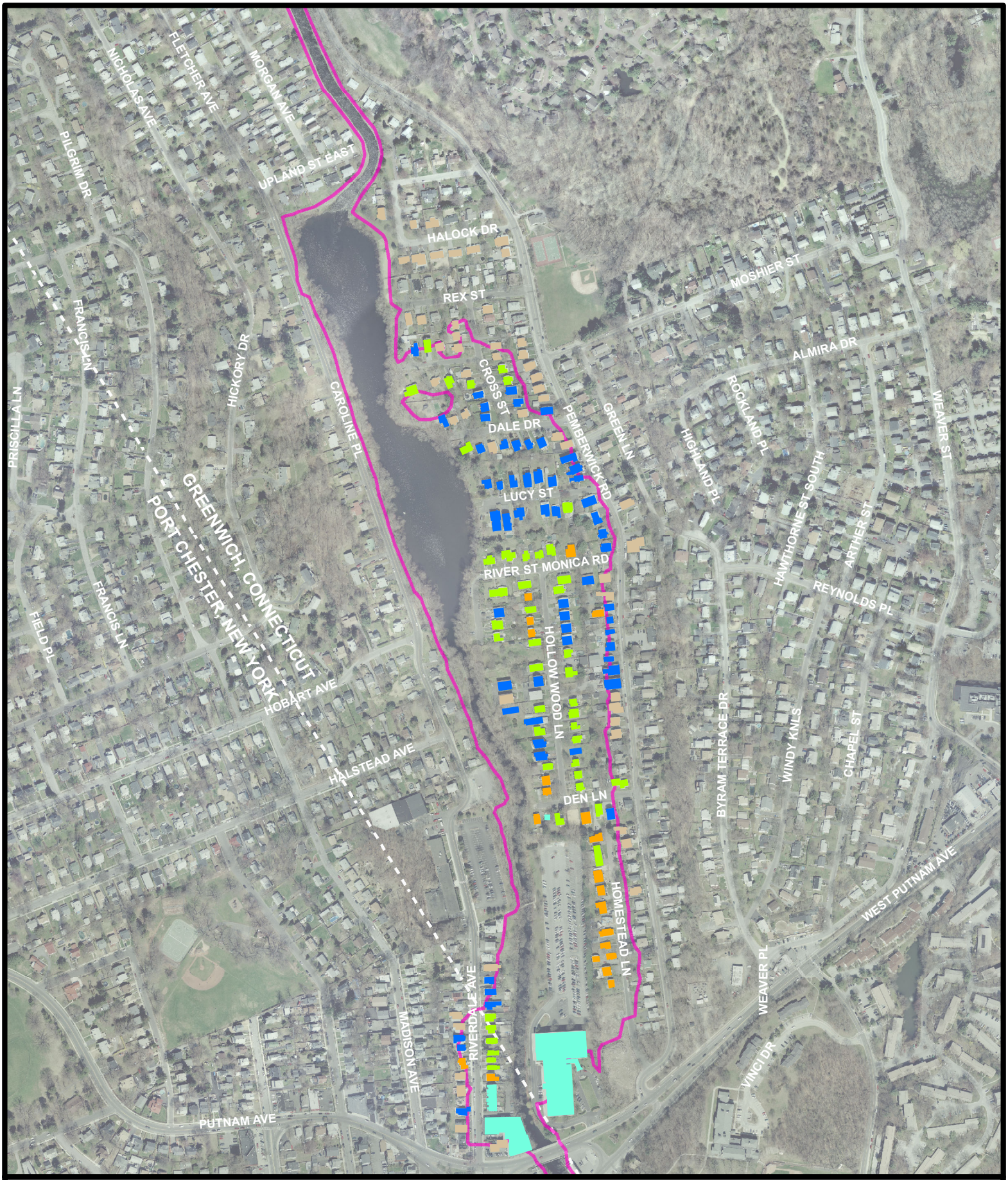
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 5c: Nonstructural Plan
(2% Storm Event)

Greenwich, Connecticut
July 2015

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

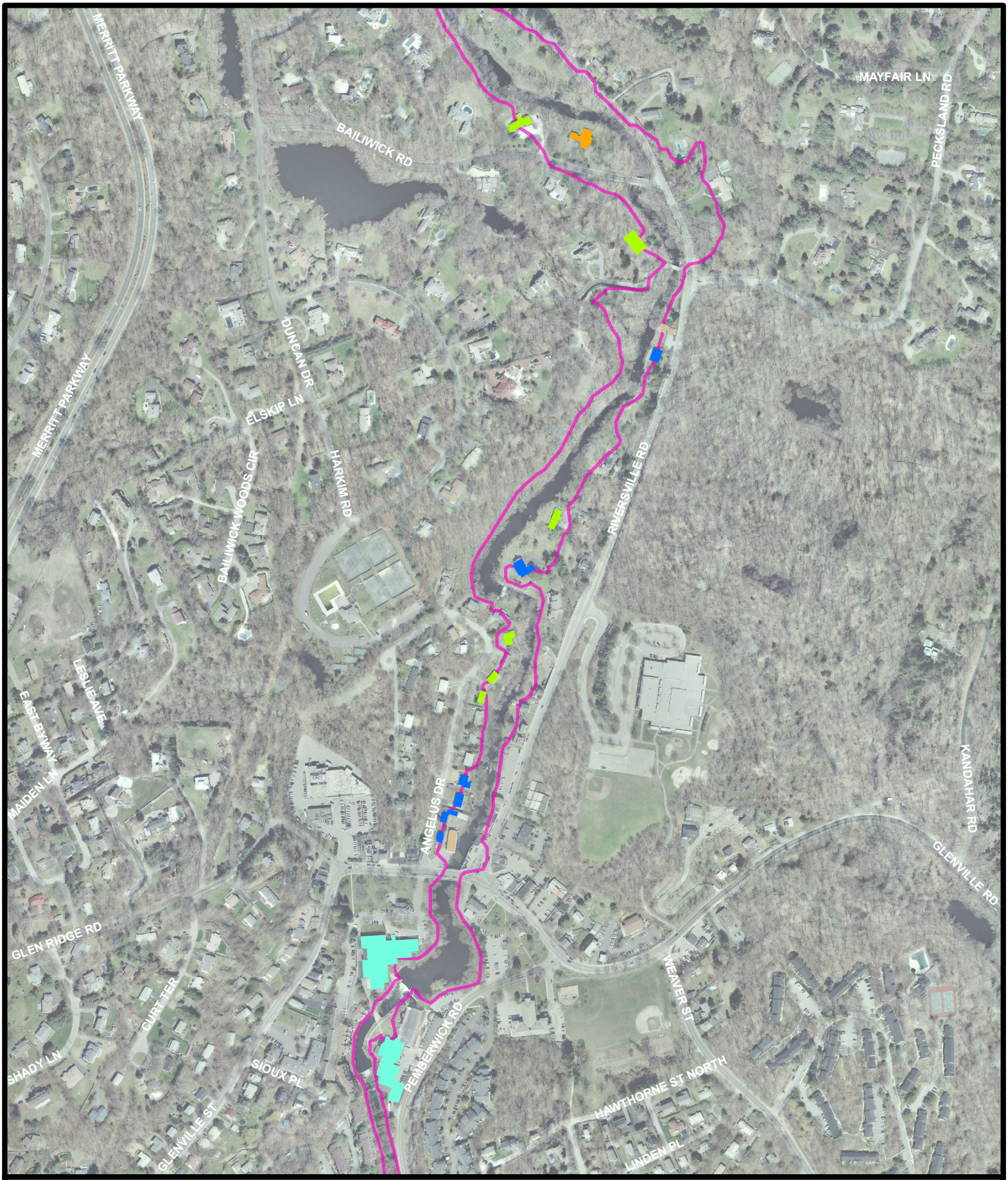
Ringwall

Elevation

No Action

N

0 250 500 Feet



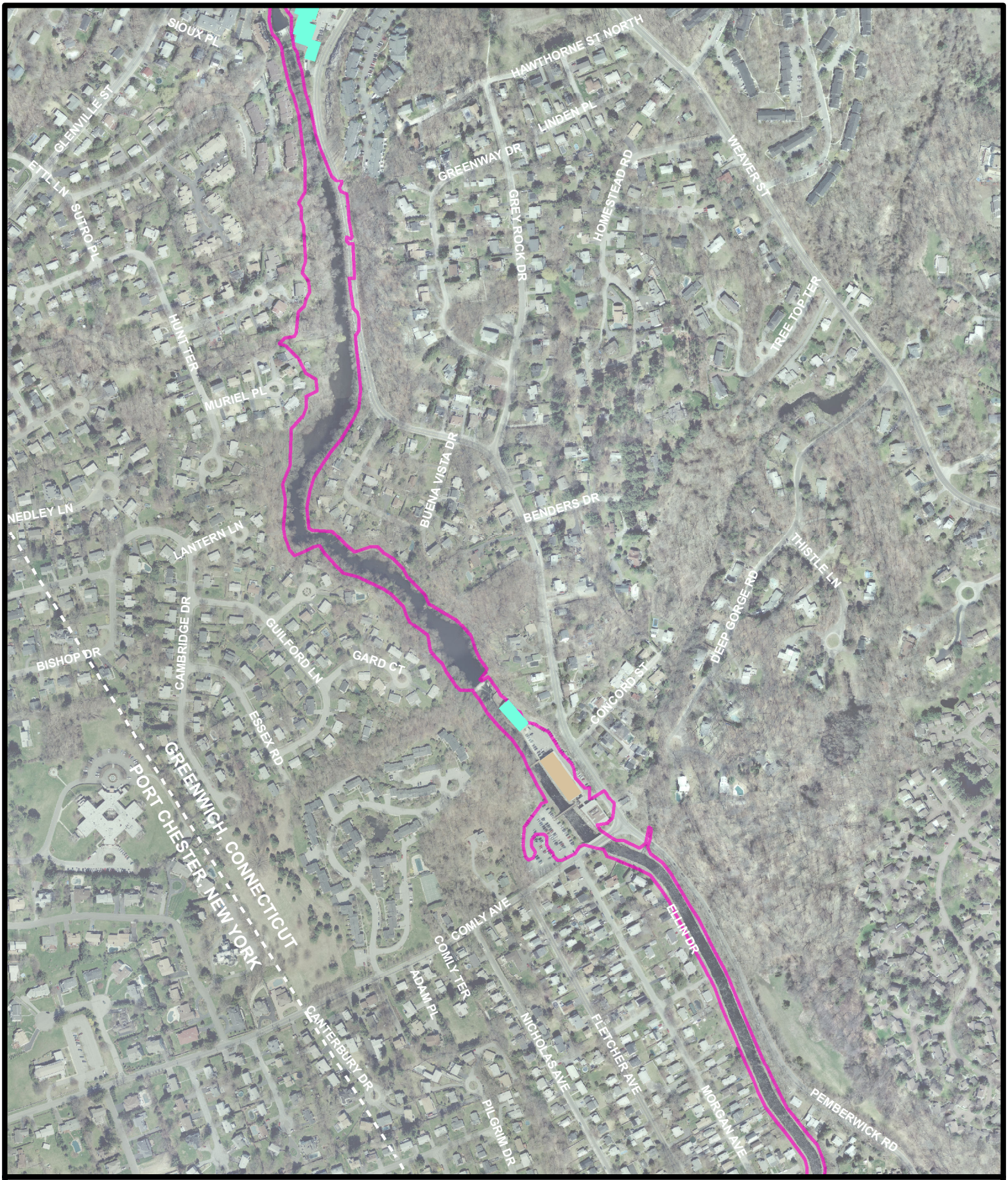
Byram River Basin Feasibility Study

Figure 6a: Nonstructural Plan
(1% Storm Event)
Greenwich, Connecticut
August 2015

1% Storm Flood Limits
Wet Flood Proofing
Dry Flood Proofing
Ringwall
Elevation
No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 6b: Nonstructural Plan (1% Storm Event)

Greenwich, Connecticut

July 2015

1% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

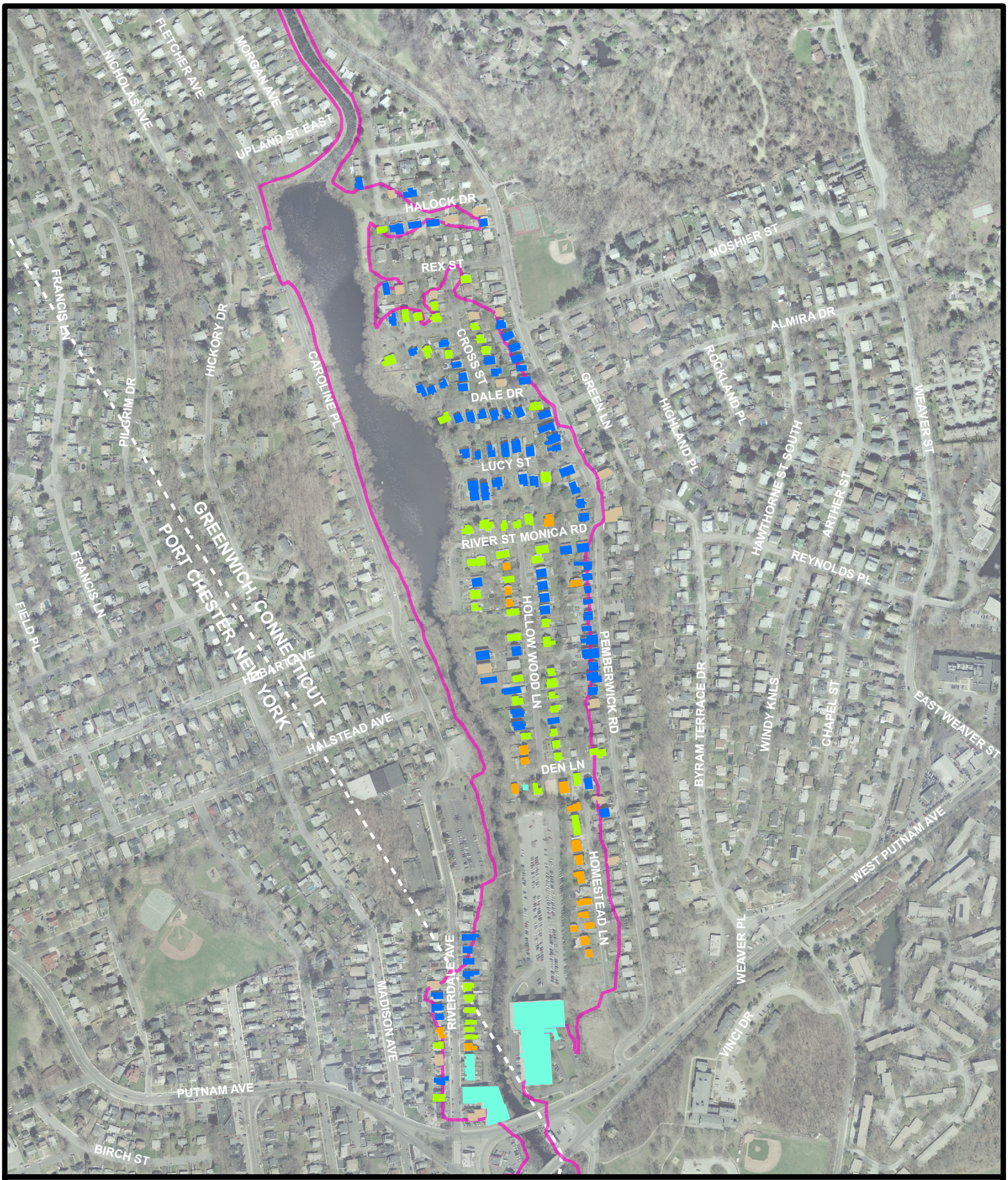
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 6c: Nonstructural Plan (1% Storm Event)

Greenwich, Connecticut

July 2015

1% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

6. U.S. ROUTE 1 BRIDGE REPLACEMENT

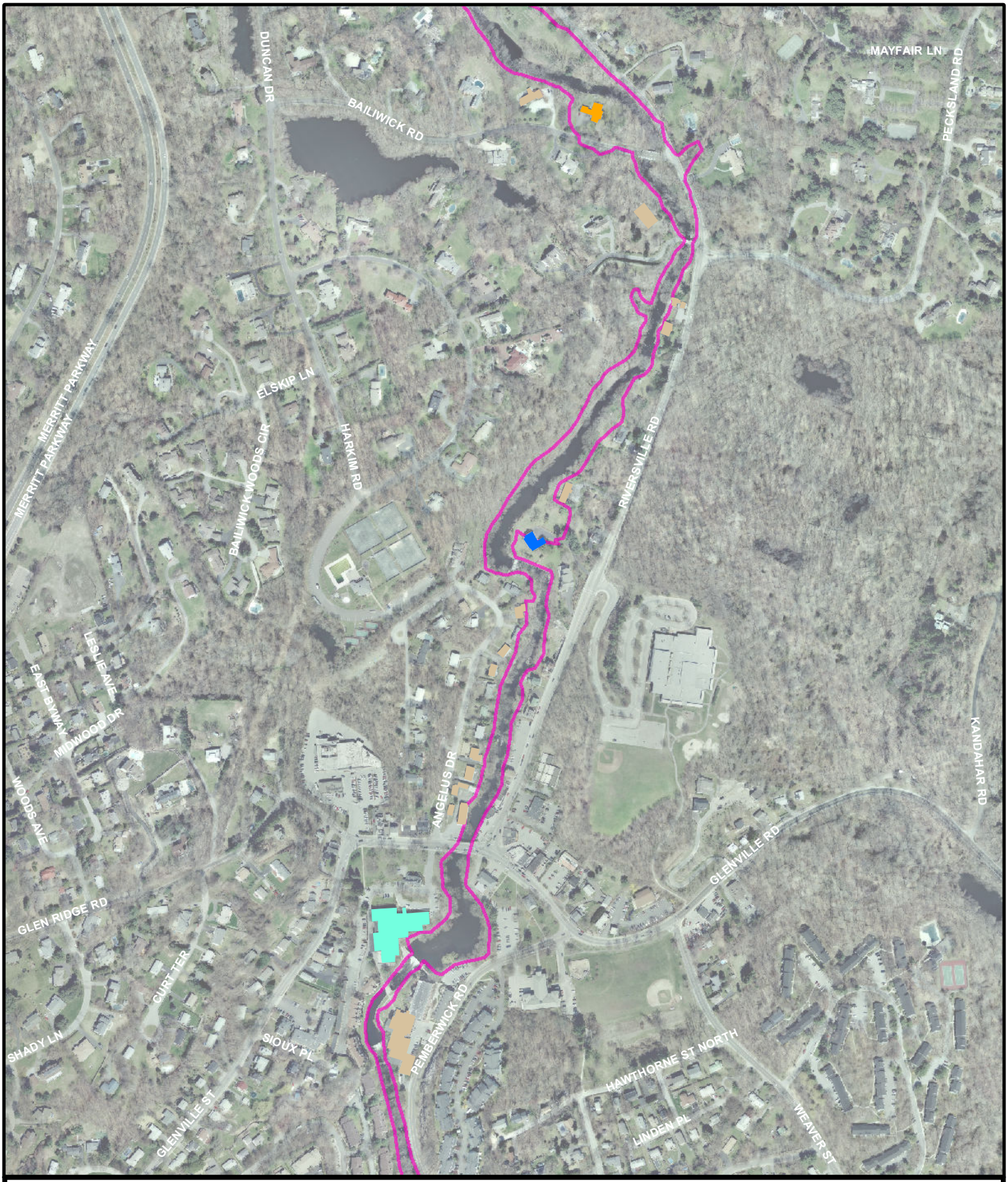
For comparison purposes, the U.S. Route 1 Bridge Replacement and Non-structural Flood Proofing alternative originally assessed under Phase II was reevaluated using the updated main floor and low opening elevations. Water surface elevations associated with the U.S. Route 1 bridge alternative were determined using the recommended bridge replacement presented in the *U.S. Route 1 Bridges - Bridge Alternative Impacts (CDM Smith, October 2016)* technical memorandum. The recommended bridge replacement included a raised roadway with prestressed concrete box beams. The superstructure consists of a bridge depth of 4.5-ft and an approximate roadway elevation of 17.7-ft for the U.S. Route 1 southbound bridge and 17.0-ft for the U.S. Route 1 northbound bridge. The advantages of this bridge type includes the ability to accommodate critical vertical clearance requirements, ease of construction over a waterway and the reduction of trapped debris during high flow events. Replacement of the U.S. Route 1 bridges also reduces the severity and number of structures impacted due to flooding. Structures that were shown to remain impacted were evaluated for non-structural flood risk management measures. **Table 2** presents a comparison summary of the non-structural recommendations with and without the U.S. Route 1 bridge replacement for the 10-, 4-, 2-, and 1-percent storm event. Individual structure recommendations for the non-structural evaluation with the bridge replacement are presented in Attachment D and shown in **Figures 7a,b,c** (10-percent storm event), **Figures 8a,b,c** (4-percent storm event), **Figures 9a,b,c** (2-percent storm event), and **Figures 10a,b,c** (1-percent storm event).

Table 2 Comparison of Non-structural Recommendations with and without the U.S. Route 1 Bridge Replacement

Flood Protection	Non-structural Comparison							
	10% Flood		4% Flood		2% Flood		1% Flood	
	Non-structural	Non-structural w. Bridge Replacement	Non-structural	Non-structural w. Bridge Replacement	Non-structural	Non-structural w. Bridge Replacement	Non-structural	Non-structural w. Bridge Replacement
Dry Flood Proofing	9	6	35	11	47	20	59	24
Wet Flood Proofing	8	20	29	40	60	56	90	85
Ringwall	9	9	11	10	12	11	12	11
Elevation	15	6	22	6	22	8	22	8
Total	**41**	**41**	**97**	**67**	**141**	**95**	**183**	**128**
Difference	**0**		**30**		**46**		**55**	

For the non-structural plan with the U.S. Route 1 bridge replacement, the number of structures requiring non-structural flood proofing was not impacted for the 10-percent storm event, was

slightly impacted for the 4-percent storm event, and was significantly impacted for the 2- and 1-percent storm events. For all storm events however, the number of properties requiring elevation decreased significantly with the U.S. Route 1 bridge replacement.



Byram River Basin Feasibility Study

Figure 7a: Nonstructural w. Route 1 Bridge Replacement (10% Storm Event)

Greenwich, Connecticut
September 2016

10% Storm Flood Limits
Wet Flood Proofing
Dry Flood Proofing
Ringwall
Elevation
No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

Figure 7b: Nonstructural w. Route 1 Bridge Replacement (10% Storm Event)

Greenwich, Connecticut
September 2016

10% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

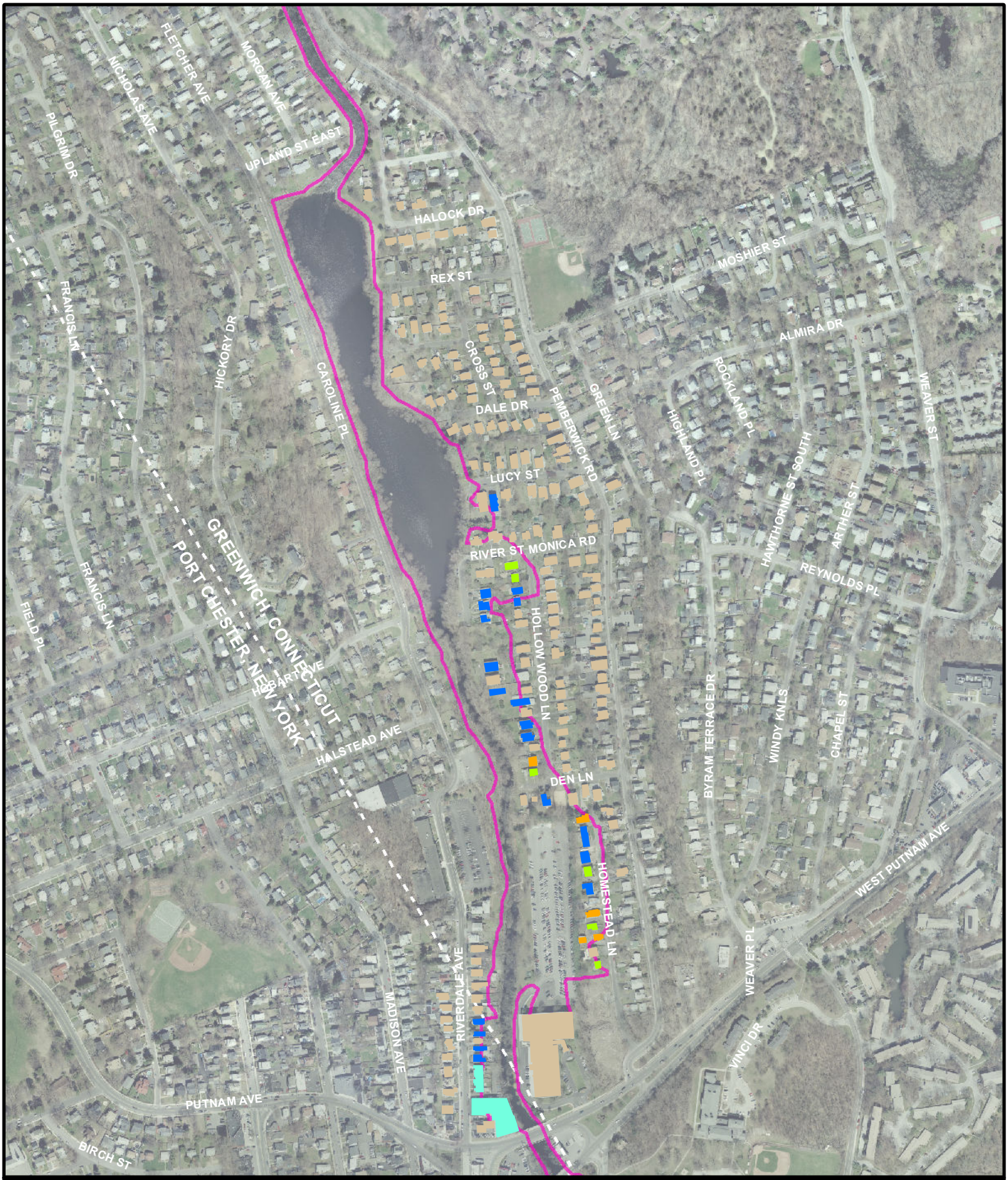
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 7c: Nonstructural w. Route 1 Bridge Replacement (10% Storm Event)

Greenwich, Connecticut

September 2016

10% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

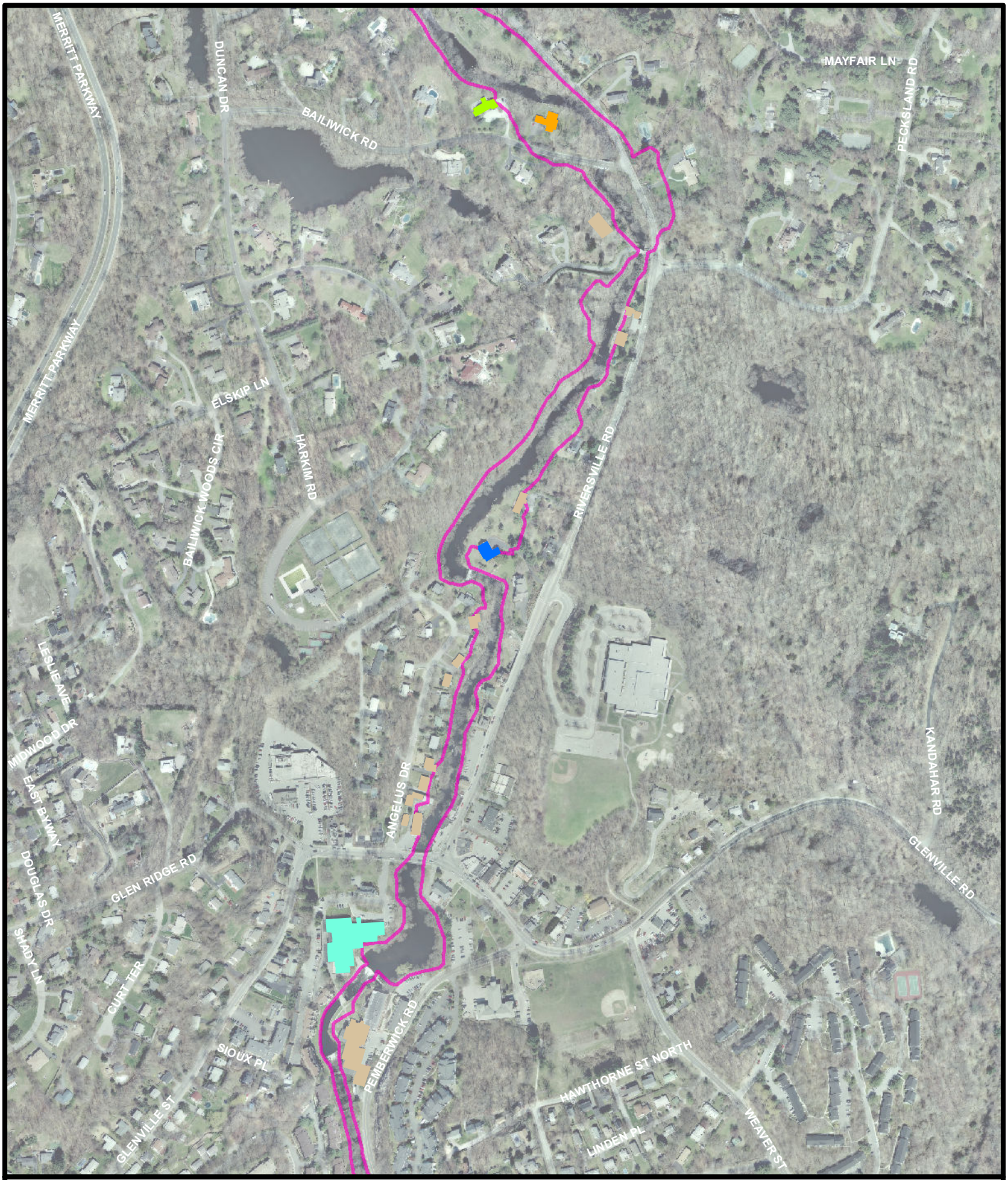
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 8a: Nonstructural w. Route 1 Bridge Replacement (4% Storm Event)

Greenwich, Connecticut

September 2016

4% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

Figure 8b: Nonstructural w. Route 1 Bridge Replacement (4% Storm Event)

Greenwich, Connecticut

September 2016

4% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

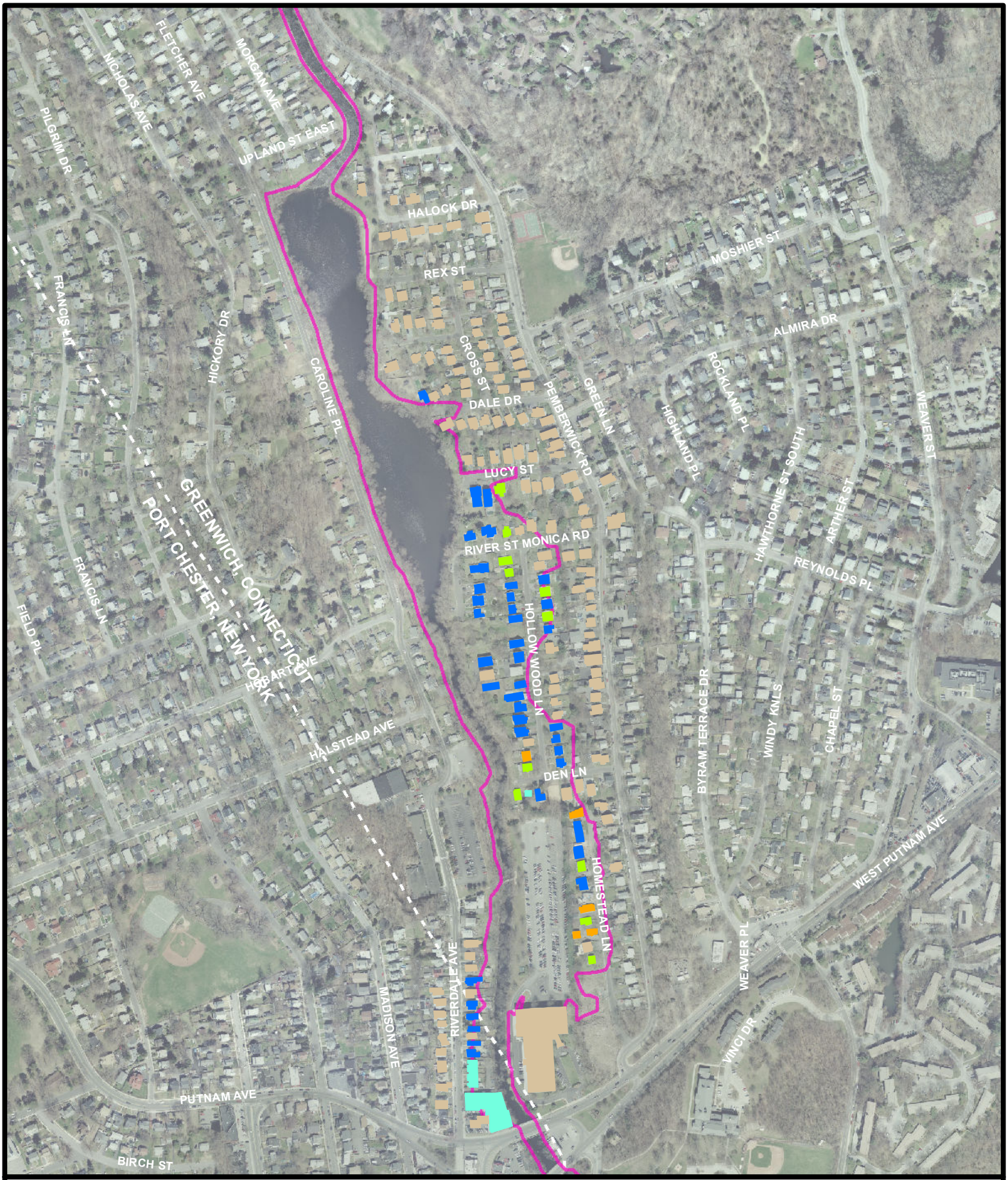
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 8c: Nonstructural w. Route 1 Bridge Replacement (4% Storm Event)

Greenwich, Connecticut

September 2016

4% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

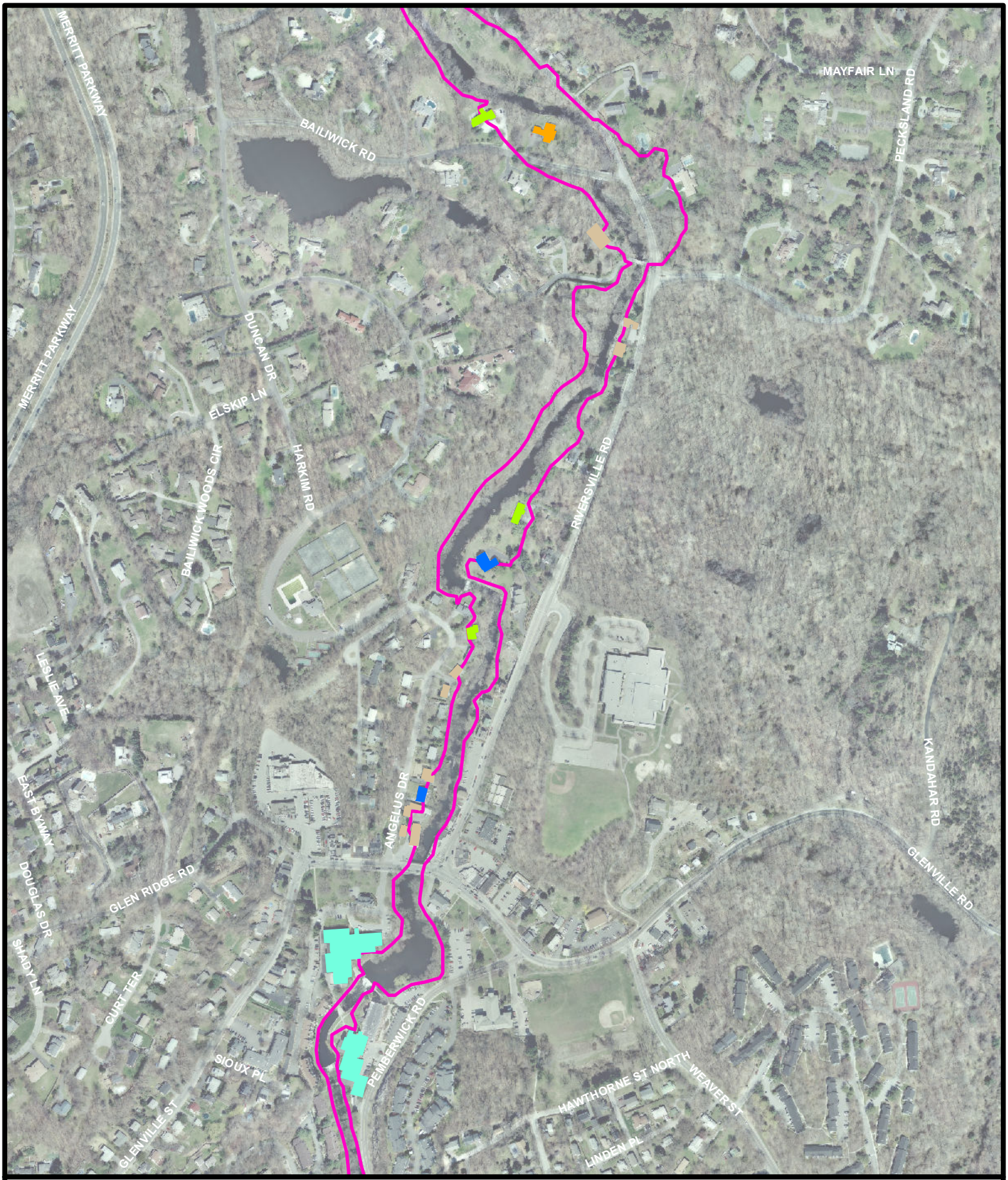
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 9a: Nonstructural w. Route 1 Bridge Replacement (2% Storm Event)

Greenwich, Connecticut

September 2016

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

Figure 9b: Nonstructural w. Route 1 Bridge Replacement (2% Storm Event)

Greenwich, Connecticut

September 2016

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

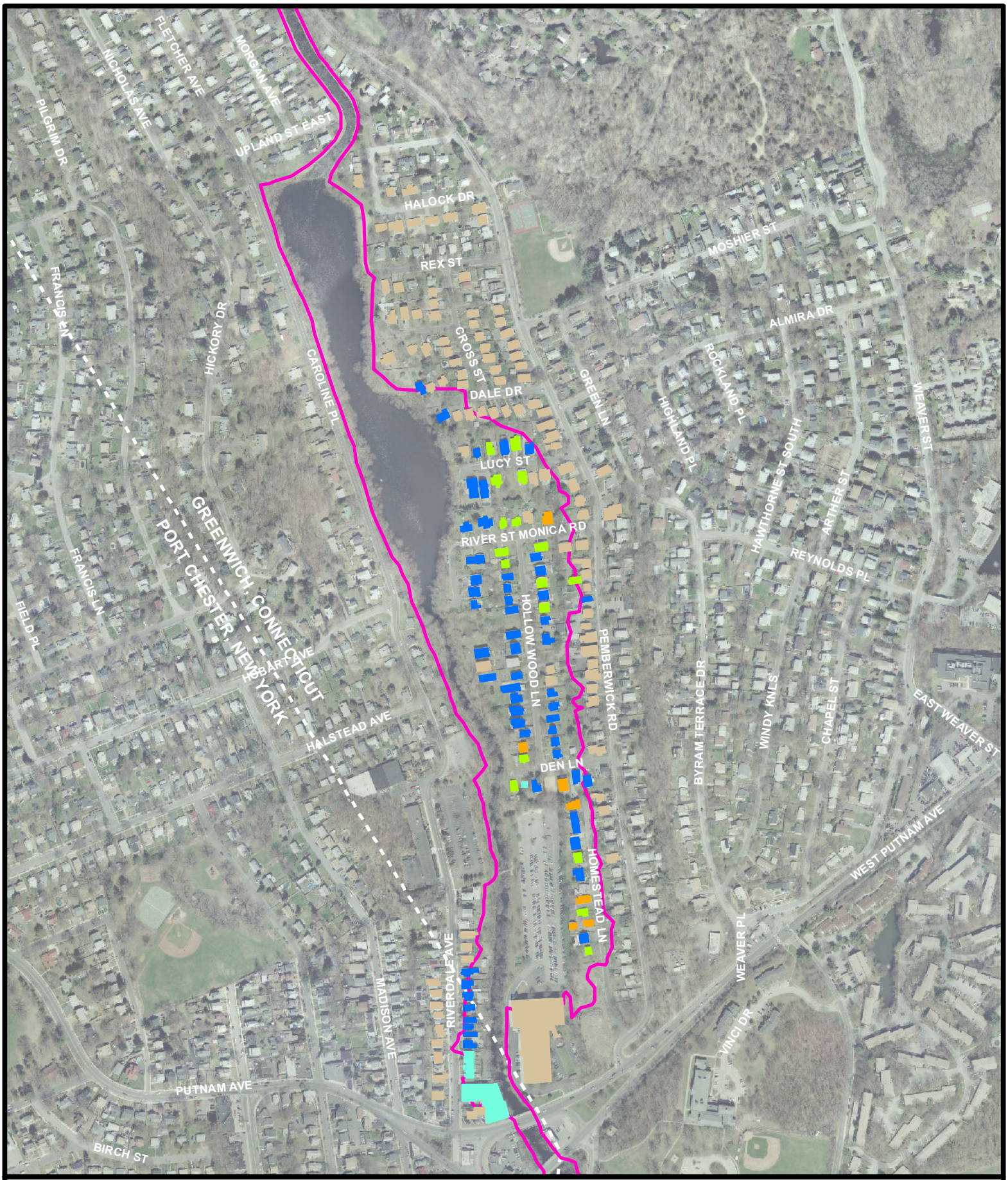
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 9c: Nonstructural w. Route 1 Bridge Replacement (2% Storm Event)

Greenwich, Connecticut

September 2016

2% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

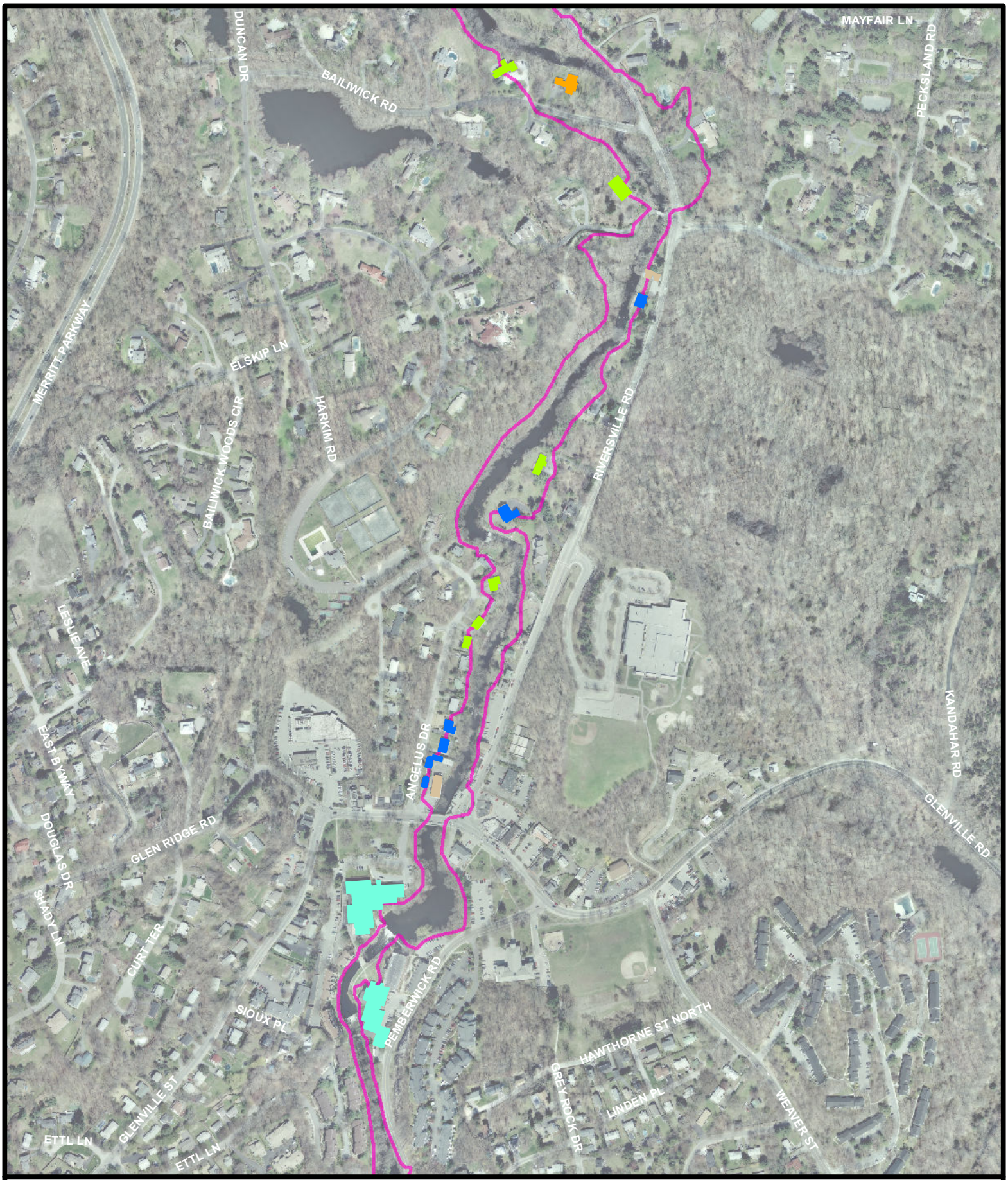
Ringwall

Elevation

No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 10a: Nonstructural w. Route 1 Bridge Replacement (1% Storm Event)

Greenwich, Connecticut
September 2016

1% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

Byram River Basin Feasibility Study

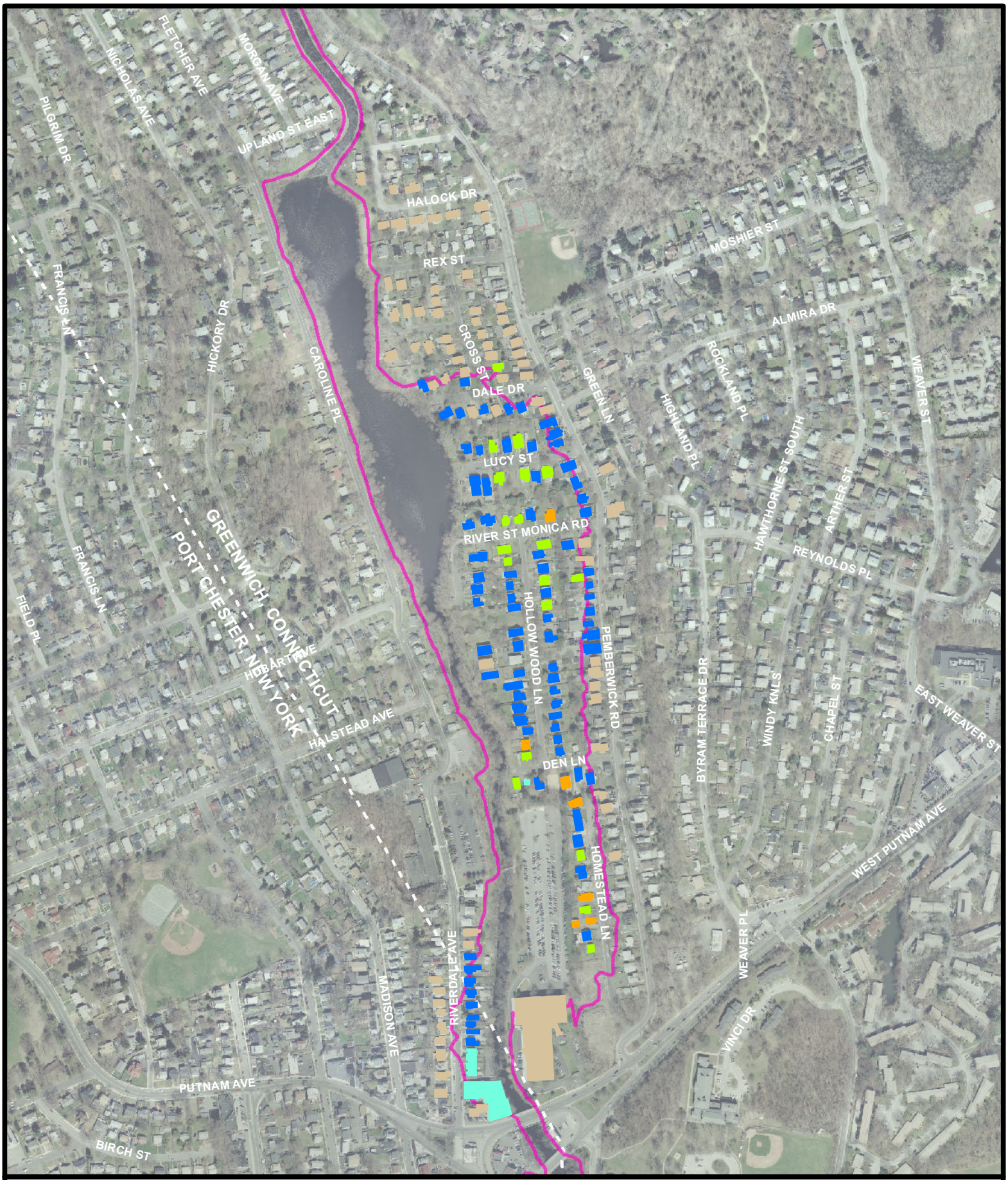
Figure 10b: Nonstructural w. Route 1 Bridge Replacement (1% Storm Event)

Greenwich, Connecticut
September 2016

1% Storm Flood Limits
Wet Flood Proofing
Dry Flood Proofing
Ringwall
Elevation
No Action

N

0 250 500 Feet



Byram River Basin Feasibility Study

Figure 10c: Nonstructural w. Route 1 Bridge Replacement (1% Storm Event)

Greenwich, Connecticut
September 2016

1% Storm Flood Limits

Wet Flood Proofing

Dry Flood Proofing

Ringwall

Elevation

No Action

N

0 250 500 Feet

7. ATTACHMENTS

Attachment A – Structure Inventory Key

Attachment B – Structure Type Key

Attachment C - Non- Structural Evaluation Summary of Recommendations

Attachment D – Non-Structural Plan with Route 1 Bridge Replacement Recommendations

Attachment A

Structure Inventory Key

Byram River Basin Feasibility Study 2013-2014
Structure Inventory Key

Ground Elevation (GE)

Ground Elevations were determined using the Town of Greenwich's contours in GIS.

Main Floor Elevation (ME)

Main Floor Elevations are based on the number of steps to the front door of the structure. Each step was assumed to have a height of 7-inches (ME = # of Steps **x** 7 inches **÷** 12 inches per foot).

Low Opening Elevation (LE)

Low Opening Elevations are based on the lowest opening visible from the street. Measurements were taken in the field and from Google Earth.

Flood Elevation (FE)

Flood Elevations are the water elevations during a storm event.

Flood Depth (FD)

FD = [ME]or[LE] – FE

*Negative flood depth values indicate flooding

Structure Type

Structure Type was assumed based on the structure's property information from the Town of Greenwich's Tax Assessor, Google Earth and typical structure type characteristics.

A	Apartment
BL	Bi-Level
E	Elevated
M	Multifamily
RF	Raised Foundation
RR	Raised Ranch
S	Slab-on-Grade
SB	Subgrade Basement
SL	Split Level

The following structure characteristics were populated using the Town of Greenwich's Tax Assessor's property information. Any discrepancies between the Tax Assessor's information and what was seen in the field was assessed and updated.

Land Use Type

C	Commercial
R	Residential
U	Utilities

Construction Type

Wood, Stucco, Composition, Alum/Vinyl, Brick

Garage Type

A	Attached
BI	Built In
D	Detached
N	None

Foundation Type

Basement, Slab, Crawlspace, Unknown

Condition

Structure Condition was assessed from field visits and from Google Earth.

P	Poor
F	Fair
G	Good
E	Excellent

Recommendation

Flood Proofing Recommendations were based on a combination of structure type, land use type, construction type, and condition and flood depth using an algorithm (Attachment B).

WET	Wet Flood Proofing
DRY	Dry Flood Proofing
RW	Ringwall
E	Elevation
BO	Buyout

BYRAM RIVER BASIN FEASIBILITY STUDY
NONSTRUCTURAL PLAN - RECOMMENDATIONS

	Flood Depth equals 0, Recommendation based on 1-foot of freeboard
	Flood Depth between 0 and 2 feet
	Flood Depth greater than 2-feet

	User Input
	Calculated

NOTE: *DRY/WET* entails wet floor proofing of areas below the main floor elevation, including protection/raising of utilities where necessary, and dry flood proofing for the area above the main floor elevation.

			GE	ME	LE	FD								STRUCTURE										RECOMMENDATION			
	StreetNAME	BYRAM RIVER STATION	GROUND ELEVATION AT BUILDING	SURVEYED MAIN FLOOR ELEVATION	SURVEYED LOW OPENING ELEVATION	DEPTH OF 10% FLOODING VS. FIRST FLOOR	DEPTH OF 10% FLOODING VS. LOW OPENING	DEPTH OF 4% FLOODING VS. FIRST FLOOR	DEPTH OF 4% FLOODING VS. LOW OPENING	DEPTH OF 2% FLOODING VS. FIRST FLOOR	DEPTH OF 2% FLOODING VS. LOW OPENING	DEPTH OF 1% FLOODING VS. FIRST FLOOR	DEPTH OF 1% FLOODING VS. LOW OPENING	STRUCTURE TYPE	LAND USE TYPE	# OF FLOORS	TOTAL SQ. FT.	CONSTRUCTION TYPE	BASEMENT	GARAGE TYPE	FOUNDATION TYPE	CONDITION	10-PERCENT FLOOD	4-PERCENT FLOOD	2-PERCENT FLOOD	1-PERCENT FLOOD
	Hillside Avenue	9512	16.0	18.3	18.3	-8	-8	-3	-3	-2	-2	-1	-1	S	C	1.5	1,959	Brick	None	N	Unknown	G	--	--	--	--
	Riverdale Avenue	9591	8.0	14.6	8.8	-4	2	0	6	2	7	3	9	S	C	2	34,584	Brick	None	N	Unknown	F	RW	RW	RW	RW
	Riverdale Avenue	9612	15.0	25.7	16.9	-15	-6	-11	-2	-10	-1	-8	1	RR	R	2	4,056	Wood	Bsmt	2BI	Unknown	G	--	--	--	DRY/WET
	Riverdale Avenue	9668	10.5	16.8	8.7	-6	2	-2	6	-1	8	1	9	SB - M	R	2	1,568	Wood	Bsmt	N	Unknown	G	RW	RW	RW	RW
	Riverdale Avenue	9668	13.0	27.4	15.2	-17	-4	-12	0	-11	1	-9	3	SB	R	2.5	2,786	Wood	Bsmt	2D	Unknown	P	--	--	WET	WET
	Riverdale Avenue	9680	10.5	16.8	8.7	-6	2	-2	6	-1	8	1	9	SB - M	R	2	1,352	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
	Riverdale Avenue	9686	10.5	16.7	8.6	-6	2	-2	6	0	8	1	9	SB - M	R	2	1,516	Composition	Bsmt	N	Unknown	F	RW	RW	RW	RW
	Riverdale Avenue	9698	10.5	16.9	8.8	-6	2	-2	6	-1	7	1	9	SB - M	R	2	1,506	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
	Riverdale Avenue	9718	10.5	16.7	8.6	-6	2	-2	6	0	8	1	9	SB - M	R	2	1,516	Wood	Bsmt	N	Unknown	G	RW	RW	RW	RW
	Riverdale Avenue	9727	11.0	16.8	8.7	-6	2	-2	6	-1	8	1	9	SB - M	R	2	1,498	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
	Riverdale Avenue	9727	13.0	27.2	19.2	-16	-8	-12	-4	-11	-3	-9	-1	RR	R	2	4,250	Wood	Bsmt	1BI	Unknown	G	--	--	--	--
	Riverdale Avenue	9761	11.0	15.3	9.2	-4	2	0	6	1	7	3	9	RF	R	2	2,349	Stucco	Bsmt	1D	Unknown	F	E	E	E	E
	Riverdale Avenue	9761	14.0	26.4	18.3	-16	-7	-11	-3	-10	-2	-8	0	RR	R	2	2,076	Wood	Bsmt	1BI	Unknown	G	--	--	--	DRY/WET
	West Putnam Avenue Lot 48A	9771	18.0	19.6	16.7	-9	-6	-5	-2	-3	0	-2	1	S	C	3	140,445	Reinforced Concrete	None	N	Slab	G	--	--	RW	RW
	Riverdale Avenue	9786	12.0	16.2	9.1	-5	2	-1	6	0	7	2	9	SB	R	2	1,294	Wood - Alum/Vinyl	Bsmt	1D	Unknown	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9798	14.0	14.8	14.7	-4	-4	0	0	1	2	3	3	RR	R	2	2,588	Wood	Bsmt	1BI	Unknown	G	--	E	E	E
	Riverdale Avenue	9811	12.0	15.9	12.6	-5	-2	-1	3	0	4	2	6	SB	R	2	1,620	Alum/Vinyl	Bsmt	N	Unknown	F	--	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9835	12.0	15.9	8.4	-5	3	-1	7	1	8	2	10	SB	R	2	2,300	Wood	Bsmt	N	Unknown	F	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9860	14.5	19.1	16.0	-8	-5	-4	-1	-3	0	-1	2	SB	R	2.5	1,616	Wood	Bsmt	1D	Unknown	F	--	--	WET	WET
	Riverdale Avenue	9873	13.0	17.0	8.9	-6	2	-2	6	-1	7	1	9	SB	R	2	2,008	Wood	Bsmt	N	Unknown	P	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9885	15.0	19.3	16.8	-8	-6	-4	-2	-3	0	-1	1	SB	R	2.5	2,756	Wood	Bsmt	2D	Unknown	G	--	--	WET	WET
	Riverdale Avenue	9910	13.0	17.0	12.0	-6	-1	-2	3	-1	4	1	6	RF	R	2	2,342	Alum/Vinyl	Bsmt	N	Slab	G	--	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9922	15.0	20.1	17.5	-9	-6	-5	-2	-4	-1	-2	1	SB	R	2	2,356	Wood	Bsmt	3D	Unknown	G	--	--	--	WET
	Riverdale Avenue	9947	15.0	18.7	12.9	-8	-2	-3	2	-2	4	0	5	SB	R	2	1,834	Stucco	Bsmt	1D	Unknown	G	--	DRY/WET	DRY/WET	DRY/WET
	Riverdale Avenue	9960	17.0	22.5	20.3	-11	-9	-7	-5	-6	-4	-4	-2	SB	R	2.5	3,140	Wood	Bsmt	N	Unknown	G	--	--	--	--
	Riverdale Avenue	9972	17.0	19.1	11.9	-8	-1	-4	3	-3	5	-1	6	SB	R	2		Wood	Bsmt	2D	Unknown	G	--	WET	WET	WET
	Riverdale Avenue	10022	19.0	21.0	14.2	-10	-3	-6	1	-4	2	-3	4	SB	R	2		Wood	Bsmt	3D	Unknown	F	--	WET	WET	WET
	Riverdale Avenue	10066	22.0	23.2	16.8	-12	-6	-8	-1	-7	0	-5	2	SB	R	2		Wood	Bsmt	N	Unknown	F	--	--	WET	WET
	Riverdale Avenue	10111	24.0	26.3	18.8	-15	-7	-11	-3	-10	-2	-8	0	SB	R	2		Wood	Bsmt	N	Unknown	G	--	--	--	WET
	Homestead Lane	10129	12.0	14.1	10.8	-3	0	1	5	3	6	4	8	SB	R	1	810	Wood	Full Bsmt	N	Basement	G	E	E	E	E
	Homestead Lane	10155	12.0	15.7	13.6	-4	-2	0	2	1	3	3	5	SB	R	2	2,502	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	E	E	E
	Homestead Lane	10172	10.0	11.5	10.7	0	1	4	5	5	6	7	8	S	R	2	1,486	Wood	None	1BI	Slab	G	E	E	E	E
	Homestead Lane	10182	10.0	11.5	10.5	0	1	4	5	5	6	7	8	RF	R	1	1,011	Wood	Full Crawl	N	Crawl Space	G	E	E	E	E
	Homestead Lane	10203	10.0	14.3	10.1	-3	1	1	5	2	7	4	8	SB	R	2	2,222	Wood frame, aluminum ext	1/2 Bsmt	N	Basement	G	E	E	E	E
	Homestead Lane	10227	10.0	10.9	7.9	1	4	5	8	6	9	8	11	SB	R	1	1,520	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	F	E	E	E	E
	Homestead Lane	10327	10.0	18.2	9.3	-7	2	-3	6	-1	7	0	9	RR	R	2	3,434	Wood frame, vinyl exterior	1/4 Bsmt, Lower level	1BI	Basement	G	E	E	E	E
	Pemberwick Road	10459	28.0	32.1	27.2	-20	-16	-17	-12	-15	-10	-14	-9	SB	R	2	2,876	Wood frame, vinyl exterior	1/2 Bsmt	N	Basement	G	--	--	--	--
	Homestead Lane	10500	10.0	14.7	11.4	-3	0	1	4	2	5	4	7	SB	R	2	2,424	Wood	Full Bsmt	N	Basement	G	E	E	E	E
	Homestead Lane Lot 485, 486	10569	12.0	17.8	11.3	-6	1	-2	4	-1	6	1	7	RR	R	2		Wood	Full Bsmt	2BI	Basement	-	E	E	E	E
	Homestead Lane Lot 487, 488	10660	12.0	16.2	9.7	-4	2	-1	6	1	7	2	9	SB	R	2	3,646	Wood	Full Bsmt	2BI	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	10694	30.0	32.3	18.3	-20	-6	-17	-3	-15	-1	-14	0	SB	R	2	2,860	Wood frame, vinyl exterior	Full Bsmt	2BI	Basement	G	--	--	--	WET
	Den Lane	10699	11.0	13.5	13.5	-1	-1	2	2	3	3	5	5	S	U	1	146	Brick	None	N	Slab	G	--	RW	RW	RW
	Pemberwick Road	10699	29.0	22.4	22.4	-10	-10	-7	-7	-6	-6	-4	-4	SB	R	2	2,676	Wood	1/2 Bsmt	N	Basement	F	--	--	--	--
	Den Lane	10703	10.0	15.0	12.7	-3	-1	1	3	2	4	4	6	SB	R	2	3,380	Wood	3/4 Bsmt, 1/4 Crawl	1D	Basement	G	--	E	E	E
	Den Lane	10706	11.5	17.1	11.8	-5	0	-1	4	0	5	2	7	SL	R	3	4,122	Wood/Brick	1/2 Bsmt, Lower level	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Homestead Lane Unit A /B	10726	13.0	13.2	8.9	-1	3	2	7	4	8	5	10	RR	R	2	3,068	Brick/Wood	Full Bsmt	N	Basement	G	E	E	E	E
	Den Lane Unit 1	10729	13.0	14.1	14.0	-2	-2	2	2	3	3	4	5	RR	R	3	4,296	Wood	Full Bsmt	2BI	Basement	E	--	E	E	E
	Den Lane	10767	14.0	17.3	13.3	-5	-1	-2	2	0	4	1	5	SB	R	2	2,800	Wood frame, vinyl/masonite	1/4 Crawl, Lower level	N	Crawl Space	G	--	DRY/WET	DRY/WET	DRY/WET
	Den Lane	10879	16.0	20.3	12.2	-8	0	-5	4	-3	5	-2	6	RR	R	2	2,954	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	WET	WET	WET
	Den Lane	10879	11.0	15.8	11.8	-3	1	0	4	1	5	3	7	SB	R	2	2,938	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	E	E	E	E
	Hollow Wood Lane	10898	13.0	16.8	13.3	-4	-1	-1	2	0	4	2	5	SB	R	2	2,100	Wood	Full Bsmt	D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	10907	22.0	26.9	16.8	-14	-4	-11	-1	-10	0	-8	2	RR	R	2	3,964	Wood	Full Bsmt	N	Basement	G	--	--	DRY/WET	DRY/WET
	Hollow Wood Lane	10909	12.0	14.9	11.0	-2	2	1	5	2	6	4	8	BL	R	2	2,542	Wood	1/4 Bsmt, Lower level	1BI	Basement	G	E	E	E	E
	Hollow Wood Lane	10943	14.0	17.0	13.8	-4	-1	-1	2	0	3	2	5	SB	R	2	1,922	Wood	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane Unit A/B	11003	12.5	21.0	12.2	-8	1	-5	4	-4	5	-2	7	RR	R	3	4,527	Wood frame, vinyl exterior	None	2BI	Slab	G	WET	WET	WET	WET
	Pemberwick Road	11172	27.0	28.3	19.8	-15	-7	-12	-4	-11	-3	-10	-1	SB	R	1.5	2,384	Wood frame, composition ext	1/4 Bsmt, Lower level	1BI	Basement	G	--	--	--	--
	Hollow Wood Lane	11242	14.0	20.9	10.8	-8	2	-5	5	-4	6	-2	8	RR	R	-	-	-	-	-	Unknown	-	--	WET	WET	WET
	Hollow Wood Lane	11243	14.0	16.8	13.5	-4	0	-1	2	0	4	2	5	SB	R	2	1,680	Wood frame, vinyl exterior	Full Bsmt	2D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11243	14.0	17.7	15.6	-5	-3	-2	0	-1	2	1	3	SB	R	1	1,481	Wood	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11272	13.0	17.5	14.9	-4	-2	-2	1	0	2	1	4	SB	R	2	2,176	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11298	26.0	27.9	19.3	-15	-6	-12	-3	-11	-2	-9	0	SB	R	1	1,322	Wood frame, vinyl exterior	Lower level	1BI	Slab	G	--	--	--	WET
	Hollow Wood Lane	11310	14.0	18.3	15.1	-5	-2	-2	1	-1	2	1	4	SB	R	2	2,180	Wood	Full Bsmt	N	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11339	26.0	25.8	18.6	-13	-5	-10	-3	-9	-1	-7	0	SB	R	2	4,164	Brick	Bsmt	N	Basement	F	--	--	--	WET
	Hollow Wood Lane	11350	14.0	18.0	14.0	-5	-1	-2	2	-1	3	1	5	SB	R	1	890	Wood frame, aluminum ext	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane Unit B	11350	12.5	21.8	13.0	-8	0	-6	3	-4	4	-3	6	RR	R	3	5,325	Wood frame, wood/vinyl ext	None	2BI	Slab	G	WET	WET	WET	WET
	Hollow Wood Lane	11353	14.0	18.6	16.0	-5	-3	-3	0	-1	1	0	3	SB	R	2	1,956	Wood	Bsmt	1D	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11368	24.0	27.0	19.2	-14	-6	-11	-3	-10	-2	-8	0	SB	R	1.5	1,983	Brick	Lower level	2D	Unknown	G	--	--	--	WET
	Hollow Wood Lane	11388	13.0	17.2	14.7	-4	-1	-1	1	0	3	2	4	SB	R	1	1,523	Wood	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11408	23.0	24.1	17.0	-11	-4	-8	-1	-7	0	-5	2	SB	R	2	5,418	Brick	Bsmt	1D	Basement	G	--	--	WET	WET
	Hollow Wood Lane	11432	12.0	21.9	12.5	-8	1	-6	4	-4	5	-3	6	RR	R	2	4,026	Wood frame, vinyl exterior	None	N	Slab	G	WET	WET	WET	WET
	Pemberwick Road	11432	22.0	23.2	16.8	-10	-3	-7	-1	-6	1	-4	2	SB	R/C	2	4,460	Wood frame, brick	Bsmt	1D	Basement	G	--	--	WET	WET
	Pemberwick Road	11443	20.0	20.4	17.0	-7	-3	-4	-1	-3	0	-1	2	SB	R/C	2	4,266	Wood frame, concrete	Bsmt	D	Basement	G	--	--	WET	WET
	Hollow Wood Lane	11449	14.0	18.8	14.8	-5	-1	-3	1	-1	3	0	4	SB	R	2.5	2,963	Wood frame, stucco exterior	Full Bsmt	N	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane Unit A	11449	10.0	22.3	11.7	-9	2	-6	5	-5	6	-3	7	RR	R	2	3,772	Wood	Full Bsmt	4BI	Basement	G	WET	WET	WET	WET
	Hollow Wood Lane Unit B	11449	10.0	21.7	11.0	-8	3	-5	5	-4	6	-3	8	RR	R	2	3,772	Wood	Full Bsmt	4BI	Basement	G	WET	WET	WET	WET
	Hollow Wood Lane	11464	14.0	19.0	13.6	-5	0	-3	3	-2	4	0	5	SB	R	2	3,242	Wood frame, vinyl exterior	1/2 Bsmt, 1/2 Crawl	N	Basement/Crawl	G	--	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11481	21.0	24.4	16.1	-11	-2	-8	0	-7	1	-5	3	SB	R	2	2,536	Brick	Full Bsmt	2D	Basement	G	--	WET	WET	WET
	Hollow Wood Lane	11484	14.0	18.8	14.4	-5	-1	-3	2	-1	3	0	5	SB	R	2	2,078	Wood	Full Bsmt	N	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11516	14.0	18.4	15.7	-5	-2	-2	1	-1	2	1	3	SB	R	2	2,466	Brick/Wood	Full Bsmt	2D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11525	14.0	23.4	15.1	-10	-1	-7	1	-6	2	-4	4	RR	R	2	2,860	Wood frame, composition ext	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
	Pemberwick Road	11525	20.0	21.4	16.1	-8	-2	-5	0	-4	1	-2	3	SB	R/C	1	1,463	Wood	Bsmt	2D	Basement	G	--	WET	WET	WET
	Pemberwick Road	11529	21.0	23.1	16.8	-9	-3	-7	0	-6	1	-4	2	SB	R	2	2,838	Wood	Full Bsmt	3A	Basement	G	--	--	WET	WET
	Hollow Wood Lane	11533	14.0	21.9	14.0	-8	0	-6	2	-4	4	-3	5	SB	R	2	2,998	Wood	Full Bsmt	1D	Basement	G	--	WET	WET	WET
	Hollow Wood Lane	11533	12.0	22.0	22.0	-8	-8	-6	-6	-4	-4	-3	-3	E	R	2	4,054	Wood frame, vinyl exterior	None	N	Slab	G	--	--	--	--
	Hollow Wood Lane	11537	14.0	19.5	11.8	-6	2	-3	5	-2	6	0	7	RR	R	2	1,884	Brick/Wood	Full Bsmt	1BI	Basement	G	--	E	E	E
	River Street	11537	12.0	17.9	13.2	-4	1	-2	3	0	4	1	6	SB	R	2	1,894	Wood frame, vinyl/brick ext	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11549	14.0	19.4	15.1	-6	-1	-3	1	-2	2	0	4	SB	R	1.5	2,081	Wood frame, composition ext	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane Unit 1/2	11562	14.0	22.9	14.6	-9	-1	-6	2	-5	3	-4	5	RR	R	2	2,200	Wood frame, composition ext	Full Bsmt	2BI	Basement	G	--	WET	WET	WET

BYRAM RIVER BASIN FEASIBILITY STUDY
NONSTRUCTURAL PLAN - RECOMMENDATIONS

	Flood Depth equals 0, Recommendation based on 1-foot of freeboard
	Flood Depth between 0 and 2 feet
	Flood Depth greater than 2-feet

	User Input
	Calculated

NOTE: *DRY/WET* entails wet floor proofing of areas below the main floor elevation, including protection/raising of utilities where necessary, and dry flood proofing for the area above the main floor elevation.

			GE	ME	LE	FD								STRUCTURE									RECOMMENDATION			
	StreetNAME	BYRAM RIVER STATION	GROUND ELEVATION AT BUILDING	SURVEYED MAIN FLOOR ELEVATION	SURVEYED LOW OPENING ELEVATION	DEPTH OF 10% FLOODING VS. FIRST FLOOR	DEPTH OF 10% FLOODING VS. LOW OPENING	DEPTH OF 4% FLOODING VS. FIRST FLOOR	DEPTH OF 4% FLOODING VS. LOW OPENING	DEPTH OF 2% FLOODING VS. FIRST FLOOR	DEPTH OF 2% FLOODING VS. LOW OPENING	DEPTH OF 1% FLOODING VS. FIRST FLOOR	DEPTH OF 1% FLOODING VS. LOW OPENING	STRUCTURE TYPE	LAND USE TYPE	# OF FLOORS	TOTAL SQ. FT.	CONSTRUCTION TYPE	BASEMENT	GARAGE TYPE	FOUNDATION TYPE	CONDITION	10-PERCENT FLOOD	4-PERCENT FLOOD	2-PERCENT FLOOD	1-PERCENT FLOOD
	Hollow Wood Lane	11606	15.0	23.0	14.7	-9	-1	-7	2	-5	3	-4	4	RR	R	2	2,852	Wood	Full Bsmt	2BI	Basement	F	--	WET	WET	WET
	Hollow Wood Lane	11606	14.0	19.3	11.6	-5	2	-3	5	-2	6	0	8	RR	R	2	1,838	Wood	Full Bsmt	N	Basement	G	E	E	E	E
	River Street	11606	13.0	17.8	13.5	-4	0	-1	3	0	4	1	6	SB	R	2	2,952	Brick/wood	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Pemberwick RoadBuilding 1	11662	22.0	23.4	17.7	-9	-4	-7	-1	-6	0	-4	2	SB	R	2	2,658	Wood frame, stucco exterior	Full Bsmt	N	Basement	F	--	--	WET	WET
	Pemberwick RoadBuilding 2	11703	17.0	16.8	16.8	-3	-3	0	0	1	1	3	3	SB	R	2	2,246	Wood	Full Bsmt	N	Basement	F	--	E	E	E
	Hollow Wood Lane	11751	15.0	23.1	14.9	-9	-1	-6	2	-5	3	-4	5	RR	R	2	2,878	Wood	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
	Pemberwick Road	11767	22.0	23.8	18.6	-9	-4	-7	-2	-6	-1	-4	1	SB	R	2	3,608	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	WET
	Hollow Wood Lane	11779	14.0	19.2	14.7	-5	0	-3	2	-1	3	0	5	SB	R	2	1,838	Wood frame, aluminum ext	Full Bsmt	2D	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	River Street	11779	12.5	20.9	13.0	-7	1	-4	4	-3	5	-1	6	RR	R	2	2,998	Brick/wood	Full Bsmt	2BI	Basement	F	WET	WET	WET	WET
	Hollow Wood Lane	11841	14.0	16.1	14.1	-2	0	1	3	2	4	3	5	SB	R	2	1,884	Wood	Full Bsmt	1D	Basement	G	E	E	E	E
	Monica Road	11847	18.0	21.9	18.5	-7	-4	-5	-2	-4	-1	-2	1	SB	R	2	3,324	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	WET
	Hollow Wood Lane	11848	15.0	19.1	16.5	-5	-2	-2	0	-1	1	0	3	SB	R	2	2,512	Wood frame, stucco exterior	Full Bsmt	2D	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11868	14.0	19.2	16.1	-5	-2	-2	1	-1	2	0	3	SB	R	1	2,314	Wood frame, aluminum ext	Full Bsmt	1A	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11868	16.5	21.6	18.3	-7	-4	-5	-1	-4	0	-2	1	SB	R	2	3,326	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Monica Road	11878	16.0	22.1	17.2	-8	-3	-5	0	-4	1	-3	2	BL	R	2	3,482	Wood	1/4 Bsmt	2BI	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Hollow Wood Lane	11880	14.0	18.0	14.1	-3	0	-1	3	0	4	2	5	SB	R	1	1,549	Wood	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
	Pemberwick Road	11908	18.0	20.8	17.1	-6	-3	-4	0	-3	1	-1	2	SB	R	2	2,842	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Pemberwick Road	11910	20.0	20.4	20.4	-6	-6	-4	-4	-2	-2	-1	-1	S	R/C	2	6,642	Wood/Masonry	None	N	Slab	F	--	--	--	--
	Pemberwick Road	11933	18.5	23.7	16.7	-9	-2	-7	0	-6	1	-4	3	SB	R	1.5	1,947	Wood frame, stone/stucco ext	Full Bsmt	N	Basement	G	--	--	WET	WET
	Monica Road	11961	16.5	16.4	8.4	-2	6	0	8	2	10	3	11	RR	R	2	3,716	Brick/Stone	None	N	Slab	G	--	E	E	E
	Pemberwick Road	11962	18.0	20.8	15.9	-6	-1	-4	1	-3	2	-1	4	SL	R	1.5	3,107	Wood frame, brick/vinyl ext	1/2 Bsmt, 1/4 Crawl, Lower level	1BI	Basement/Crawl	G	--	--	WET	WET
	Monica Road	11966	14.5	17.8	15.4	-3	-1	-1	1	0	3	2	4	SB	R	2	2,034	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11969	14.0	18.4	15.7	-4	-1	-2	1	0	2	1	4	SB	R	2	2,778	Brick/wood	Full Bsmt	1A	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11969	15.0	17.9	16.5	-3	-2	-1	0	0	1	2	3	SB	R	1	1,026	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11976	14.0	19.5	15.1	-5	-1	-3	2	-1	3	0	4	SB	R	1	1,684	Wood frame, vinyl exterior	Full Bsmt	1A	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Monica Road	11976	16.0	19.5	17.6	-5	-3	-3	-1	-2	0	0	2	SB	R	1	1,569	Wood frame, vinyl/brick	3/4 Bsmt, 1/4 Crawl	N	Basement/Crawl	G	--	--	DRY/WET	DRY/WET
	Lucy Street	11990	16.0	20.8	11.9	-6	3	-4	5	-3	6	-1	8	RR	R	2	4,392	Wood frame, vinyl exterior	None	2BI	Slab	E	WET	WET	WET	WET
	Pemberwick Road	11990	19.5	27.5	20.0	-13	-5	-11	-3	-10	-2	-8	-1	RR	R	2.5	4,398	Wood frame, aluminum ext	Full Bsmt, Lower level	N	Basement	G	--	--	--	--
	Pemberwick Road	12000	18.0	22.4	17.4	-8	-3	-6	-1	-4	1	-3	2	SB	R	2	4,162	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Lucy Street	12097	16.0	20.4	17.9	-6	-3	-4	-1	-2	0	-1	2	SB	R	1	1,446	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Lucy Street	12100	17.0	18.1	18.1	-4	-4	-1	-1	0	0	1	1	SB	R	2	3,474	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	DRY/WET	DRY/WET
	Lucy Street	12100	14.5	20.8	15.8	-6	-1	-4	1	-3	2	-1	4	SL	R	2	6,250	Wood frame, stucco exterior	1/2 Bsmt, Lower level	2BI	Basement	G	--	WET	WET	WET
	Lucy Street	12102	16.0	24.5	16.8	-10	-2	-8	0	-7	1	-5	3	RR	R	2	3,198	Brick	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
	Lucy Street	12107	16.0	23.7	15.7	-9	-1	-7	1	-6	2	-4	4	RR	R	2	3,282	Brick	Full Bsmt	N	Basement	F	--	WET	WET	WET
	Lucy Street	12174	18.0	22.9	18.0	-8	-4	-6	-1	-5	0	-3	1	SB	R	1	849	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Lucy Street	12183	16.0	24.0	15.8	-9	-1	-7	1	-6	2	-4	4	RR	R	2	3,748	Wood frame, Brick exterior	1/4 Bsmt, Lower level	1BI	Basement	G	--	WET	WET	WET
	Lucy Street	12183	16.0	23.4	15.7	-9	-1	-7	1	-5	2	-4	4	SB	R	2	3,682	Wood frame, Brick exterior	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
	Lucy Street	12222	16.0	23.2	17.2	-9	-3	-6	0	-5	1	-4	2	SB	R	1	1,389	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	WET	WET	WET
	Pemberwick Road	12224	19.0	23.5	17.6	-9	-3	-7	-1	-5	0	-4	2	SB	R	2	3,416	Wood frame, brick/wood ext	Full Bsmt	1A	Basement	G	--	--	WET	WET
	Lucy Street	12248	16.0	22.2	16.5	-8	-2	-5	0	-4	2	-3	3	RR	R	2	2,612	Wood	3/4 Bsmt, 1/4 Crawl	1BI	Basement	G	--	WET	WET	WET
	Lucy Street	12252	16.0	21.3	15.3	-7	-1	-5	1	-3	3	-2	4	RR	R	2	1,690	Wood frame, aluminum ext	Full Bsmt	1BI	Basement	F	--	WET	WET	WET
	Pemberwick Road	12252	19.0	21.3	16.2	-7	-2	-5	1	-3	2	-2	3	SB	R	2	3,936	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Lucy Street	12263	16.0	20.4	17.8	-6	-3	-4	-1	-2	0	-1	2	SB	R	2	2,492	Wood frame, stone/vinyl ext	Full Bsmt	1BI	Basement	G	--	--	WET	WET
	Pemberwick Road	12284	19.0	26.0	18.7	-11	-4	-9	-2	-8	-1	-6	1	SB	R	1.5	2,069	Wood	3/4 Bsmt, Lower level	N	Basement	F	--	--	--	WET
	Dale Drive	12304	18.0	24.2	19.0	-10	-4	-7	-2	-6	-1	-5	1	RR	R	1	1,369	Wood	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
	Dale Drive	12309	18.0	21.4	18.0	-7	-3	-5	-1	-3	0	-2	2	SB	R	2	2,562	Wood	Full Bsmt	N	Basement	G	--	--	WET	WET
	Dale Drive	12318	17.5	22.1	17.9	-8	-3	-5	-1	-4	0	-3	2	SB	R	2	3,434	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	WET	WET
	Dale Drive	12326	17.0	21.0	18.5	-6	-4	-4	-2	-3	0	-1	1	SB	R	2	2,846	Wood frame, aluminum ext	Full Bsmt	1D	Basement	F	--	--	WET	WET
	Dale Drive	12337	16.5	21.6	17.4	-7	-3	-5	-1	-4	1	-2	2	SB	R	2	2,294	Wood frame, vinyl exterior	Full Bsmt	1A	Basement	G	--	--	WET	WET
	Dale Drive	12340	16.2	21.4	18.7	-7	-4	-5	-2	-3	-1	-2	1	SB	R	2	2,874	Wood frame, vinyl exterior	Full Bsmt	N	Basement	F	--	--	--	WET
	Dale Drive	12345	16.0	21.7	18.3	-7	-4	-5	-1	-4	0	-2	1	SB	R	2	2,252	Wood	Full Bsmt	N	Basement	G	--	--	WET	WET
	Dale Drive	12353	16.0	19.6	16.4	-5	-2	-3	0	-2	2	0	3	SB	R	2	3,278	Wood	Full Bsmt	N	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
	Dale Drive	12393	18.0	22.5	18.0	-8	-3	-6	-1	-5	0	-3	2	SB	R	2	3,014	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
	Cross Street	12411	18.0	22.7	18.0	-8	-3	-6	-1	-5	0	-3	2	RR	R	1	1,084	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Dale Drive	12418	18.0	21.2	21.2	-7	-7	-4	-4	-3	-3	-2	-2	SB	R	2	2,724	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	--
	Pemberwick Road	12431	22.0	23.3	17.9	-9	-3	-6	-1	-5	0	-4	2	SB	R	1.5	1,590	Wood	Full Bsmt	1D	Basement	G	--	--	--	WET
	Cross Street	12489	18.0	21.0	15.8	-6	-1	-4	1	-3	2	-1	4	RR	R	2	2,474	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	WET	WET
	Pemberwick Road	12526	23.0	25.8	18.8	-11	-4	-9	-2	-8	-1	-6	1	SB	R	2.5	3,548	Brick	Full Bsmt	N	Basement	F	--	--	--	WET
	Cross Street	12537	18.0	22.6	18.9	-8	-4	-6	-2	-5	-1	-3	1	RR	R	2	1,898	Wood frame, vinyl/wood ext	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
	Cross Street	12579	16.0	23.3	17.7	-9	-3	-7	-1	-5	0	-4	2	SL	R	2	2,306	Wood frame, vinyl exterior	1/4 Bsmt, Lower level	1BI	Basement	F	--	--	WET	WET
	Pemberwick Road	12664	24.0	26.7	20.0	-12	-5	-10	-3	-9	-2	-7	0	SB	R	2.5	3,483	Brick	Full Bsmt	N	Basement	G	--	--	--	WET
	Cross Street	12674	18.0	22.4	18.4	-8	-4	-6	-2	-4	0	-3	1	SB	R	2	2,332	Wood	Full Bsmt	N	Basement	G	--	--	WET	WET
	Cross Street	12674	18.0	22.0	18.5	-7	-4	-5	-2	-4	0	-2	1	SB	R	2	2,950	Wood	1/2 Bsmt, Lower level	N	Basement	G	--	--	WET	WET
	Dale Drive	12674	17.5	22.0	18.9	-7	-4	-5	-2	-4	-1	-3	1	SB	R	2	1,928	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	WET
	Dale Drive	12695	16.0	22.1	19.7	-8	-5	-5	-3	-4	-2	-3	0	SB	R	2	2,094	Wood frame, Brick/Composit	Full Bsmt	1BI	Basement	P	--	--	--	WET
	Cross Street	12696	19.0	22.5	22.5	-8	-8	-6	-6	-4	-4	-3	-3	SB	R	1	1,335	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	N	Basement	G	--	--	--	--
	Cross Street	12717	18.0	23.8	19.0	-9	-4	-7	-2	-6	-1	-4	0	RR	R	1	1,417	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
	Pemberwick Road	12723	26.0	27.2	21.8	-13	-7	-10	-5	-9	-4	-8	-2	RR	R	1	1,181	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	--
	Garden Place	12726	18.0	22.6	17.6	-8	-3	-6	-1	-5	0	-3	2	SB	R	1	1,275	Wood	Full Bsmt	2D	Basement	F	--	--	WET	WET
	Cross Street	12729	18.0	21.2	17.1	-7	-3	-4	0	-3	1	-2	2	RR	R	1	1,162	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Garden Place	12730	18.0	24.6	18.7	-10	-4	-8	-2	-7	-1	-5	1	RR	R	2	2,398	Brick facing	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
	Pemberwick Road	12732	25.0	26.9	19.1	-12	-5	-10	-2	-9	-1	-7	0	SB	R	2.5	3,610	Brick	Full Bsmt	N	Basement	F	--	--	--	WET
	Garden Place	12735	18.0	26.9	18.3	-12	-4	-10	-1	-9	0	-7	1	RR	R	2	3,110	Wood	1/2 Bsmt, Lower level	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Dale Drive	12736	16.0	23.4	14.7	-9	0	-7	2	-5	3	-4	5	SB	R	2	2,716	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	WET	WET	WET
	Cross Street	12746	18.0	23.6	18.4	-9	-4	-7	-2	-6	0	-4	1	SB	R	2	2,082	Wood frame, wood/stucco ext	Full Bsmt	N	Basement	G	--	--	WET	WET
	Pemberwick Road	12773	26.0	27.5	18.3	-13	-4	-11	-2	-9	0	-8	1	SB	R	1.5	2,007	Brick frame, brick/vinyl ext	Lower level	N	Basement	G	--	--	--	WET
	Cross Street	12791	18.0	21.5	18.0	-7	-3	-5	-1	-3	0	-2	2	RR	R	1	1,053	Wood	Full Bsmt	1BI	Basement	F	--	--	DRY/WET	DRY/WET
	Garden Place	12820	18.0	22.3	18.0	-8	-3	-6	-1	-4	0	-3	2	RR	R	2	2,944	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	E	--	--	DRY/WET	DRY/WET
	Cross Street	12826	18.0	20.6	18.9	-6	-4	-4	-2	-3	-1	-1	1	SB	R	1.5	1,707	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	WET
	Garden Place	12841	18.0	21.5	19.5	-7	-5	-5	-3	-3	-2	-2	0	SB	R	1	1,018	Wood	Full Bsmt	1D	Basement	G	--	--	--	WET
	Garden Place	12853	18.0	21.9	18.1	-7	-4	-5	-1	-4	0	-2	1	RR	R	1	1,924	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Cross Street	12864	18.0	23.9	19.7	-9	-5	-7	-3	-6	-2	-4	0	RR	R	2	2,804	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	DRY/WET
	Cross Street	12894	18.0	24.3	20.1	-10	-6	-7	-3	-6	-2	-5	-1	RR	R	2	1,760	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
	Cross Street	12906	20.0	23.0	19.4	-8	-5	-6	-3	-5	-1	-3	0	RR	R	2	2,530	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
	Rex Street	12944	20.0	24.8	21.9	-10	-7	-8	-5	-7	-4	-5	-2	RR	R	1.5	1,563	Wood frame, brick facing	Full Bsmt	1BI	Basement	G	--	--	--	--
	Rex Street	12962	19.5	23.1	19.2	-8	-5	-6	-2	-5	-1	-3	0	SB	R	1.5	1,976	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	WET
	Pemberwick Road	13125	26.0	28.6	19.7	-14	-5	-12	-3	-11	-2	-9	0	SB	R	2	2,162	Brick frame, brick/vinyl ext	1/2 Bsmt, Lower level	N	Basement	G	--	--	--	WET
	Pemberwick Road	13223	26.5	28.0	21.2	-13	-7	-11	-4	-10	-3	-8	-2	SB	R	2	3,922	Wood frame, Brick exterior	1/2 Bsmt, Lower level	N	Basement	G	--	--	--	--

BYRAM RIVER BASIN FEASIBILITY STUDY
NONSTRUCTURAL PLAN - RECOMMENDATIONS

	Flood Depth equals 0, Recommendation based on 1-foot of freeboard
	Flood Depth between 0 and 2 feet
	Flood Depth greater than 2-feet

	User Input
	Calculated

NOTE: *DRY/WET* entails wet floor proofing of areas below the main floor elevation, including protection/raising of utilities where necessary, and dry flood proofing for the area above the main floor elevation.

			GE	ME	LE	FD								STRUCTURE										RECOMMENDATION			
	StreetNAME	BYRAM RIVER STATION	GROUND ELEVATION AT BUILDING	SURVEYED MAIN FLOOR ELEVATION	SURVEYED LOW OPENING ELEVATION	DEPTH OF 10% FLOODING VS. FIRST FLOOR	DEPTH OF 10% FLOODING VS. LOW OPENING	DEPTH OF 4% FLOODING VS. FIRST FLOOR	DEPTH OF 4% FLOODING VS. LOW OPENING	DEPTH OF 2% FLOODING VS. FIRST FLOOR	DEPTH OF 2% FLOODING VS. LOW OPENING	DEPTH OF 1% FLOODING VS. FIRST FLOOR	DEPTH OF 1% FLOODING VS. LOW OPENING	STRUCTURE TYPE	LAND USE TYPE	# OF FLOORS	TOTAL SQ. FT.	CONSTRUCTION TYPE	BASEMENT	GARAGE TYPE	FOUNDATION TYPE	CONDITION	10-PERCENT FLOOD	4-PERCENT FLOOD	2-PERCENT FLOOD	1-PERCENT FLOOD
	Halock Drive	13263	19.5	21.9	20.1	-7	-6	-5	-3	-4	-2	-2	-1	SB	R	1.5	2,703	Wood	Full Bsmt	2BI	Basement	F	--	--	--	--
	Halock Drive	13292	19.0	21.4	19.6	-7	-5	-5	-3	-3	-2	-2	0	SB	R	2	2,984	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	2BI	Basement	G	--	--	--	WET
	Halock Drive	13334	19.0	21.4	19.0	-7	-4	-5	-2	-3	-1	-2	1	SL	R	1.5	2,229	Wood frame, vinyl exterior	1/2 Bsmt, Lower level	2A	Basement	G	--	--	--	WET
	Halock Drive	13350	18.5	20.8	18.6	-6	-4	-4	-2	-3	-1	-1	1	SL	R	1.5	3,230	Wood frame, vinyl exterior	1/4 Bsmt, 1/4 Crawl, Lower level	1A	Basement	F	--	--	--	WET
	Halock Drive	13376	18.0	19.8	18.0	-5	-4	-3	-1	-2	0	0	1	SB	R	1.5	1,757	Wood	1/2 Bsmt, Lower level	1A	Basement	P	--	--	--	DRY/WET
	Halock Drive	13531	19.0	21.7	19.3	-8	-5	-5	-3	-4	-2	-3	0	SL	R	1.5	2,568	Wood frame, vinyl exterior	1/4 Bsmt, 1/4 Crawl, Lower level	2A	Basement	G	--	--	--	WET
	Halock Drive	13564	19.0	21.3	20.2	-7	-6	-5	-4	-4	-3	-2	-1	SL	R	1.5	1,680	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1A	Basement	G	--	--	--	--
	Halock Drive	13723	19.0	20.8	18.4	-5	-2	-3	-1	-3	0	-1	1	SL	R	1.5	2,199	Wood frame, composition ext	1/2 Bsmt, 1/4 Crawl, Lower level	1A	Basement	G	--	--	--	WET
	Pemberwick RoadBuilding 2	15675	40.0	40.6	40.6	-4	-4	-2	-2	-1	-1	-1	-1	S	C	2	40,852	Brick	None	N	Unknown	G	--	--	--	--
	Pemberwick RoadBuilding 3	15998	40.0	42.3	42.3	0	0	1	1	3	3	4	4	S	C	2	40,852	Brick	None	N	Unknown	G	RW	RW	RW	RW
	Pemberwick Road	19390	119.0	120.4	88.8	-34	-2	-32	0	-31	1	-30	2	SB	C	3	54,720	Brick	Full Bsmt	N	Basement	G	--	RW	RW	RW
	Glenville Street	19780	128.0	110.8	101.3	3	13	4	14	5	14	5	15	SB	C	2	58,992	Brick	Full Bsmt	N	Basement	G	RW	RW	RW	RW
	Glenville Street	20352	118.0	120.3	120.3	-5	-5	-4	-4	-3	-3	-1	-1	S	R	1	2,848	Wood	None	2A	Slab	G	--	--	--	--
	Angelus Drive	20408	125.0	126.5	118.3	-11	-2	-10	-2	-9	-1	-6	2	SB	R	1	1,876	Wood	3/4 Bsmt, Lower level	N	Basement	G	--	--	--	WET
	Glenville StreetBldg 1	20440	122.0	124.0	119.2	-8	-3	-7	-2	-6	-2	-4	1	SB	R	2	2,072	Wood frame, vinyl exterior	3/4 Bsmt	1D	Basement	G	--	--	--	WET
	Glenville StreetBldg 2	20440	124.0	126.0	118.2	-10	-2	-9	-1	-9	-1	-6	2	SB	R	1	836	Wood frame, wood exterior	Full Bsmt	3BI	Basement	G	--	--	--	WET
	Angelus Drive	20475	125.0	126.8	117.3	-11	-1	-10	0	-9	0	-6	3	RR	R	1	1,902	Wood	1/4 Bsmt, Lower Level	1BI	Basement	G	--	WET	WET	WET
	Angelus Drive	21094	126.0	130.0	121.2	-13	-4	-12	-3	-11	-2	-9	0	RR	R	1	1,287	Wood	1/4 Bsmt, Lower level	1BI	Basement	G	--	--	--	DRY/WET
	Angelus Drive	21105	126.0	128.5	120.2	-12	-3	-10	-2	-9	-1	-7	1	RR	R	2	2,874	Wood	1/2 Bsmt, Lower level	1BI	Basement	G	--	--	--	DRY/WET
	Angelus Drive	21331	122.0	123.9	119.7	-6	-2	-5	-1	-4	0	-2	2	BL	R	1	1,627	Wood	1/2 Bsmt, Lower level	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Riversville Road	21635	124.5	128.3	123.8	-5	0	-4	0	-4	1	-3	1	SB	R	1.5	5,331	Wood	Full Bsmt	N	Basement	G	WET	WET	WET	WET
	Riversville Road	22041	127.0	127.2	127.2	-1	-1	-1	-1	0	0	0	0	SB	R	1	2,446	Brick frame, brick/wood ext	Bsmt	1BI	Basement	G	--	--	DRY/WET	DRY/WET
	Riversville RoadBuilding 1	22869	132.0	139.0	130.6	-11	-3	-10	-2	-9	-1	-8	0	RF	R	1	2,019	Wood	None	1D	Slab	G	--	--	--	WET
	Riversville RoadBuilding 2	22987	132.0	141.3	134.5	-13	-6	-12	-5	-11	-4	-10	-3	RF	R	1	1,485	Wood	None	N	Slab	G	--	--	--	--
	Riversville Road	23571	134.0	138.7	136.8	-7	-6	-5	-3	-3	-1	0	2	SB	R	2	11,612	Wood	Full Bsmt	N	Basement	G	--	--	--	DRY/WET
	Bailiwick Road	24130	133.0	134.3	134.3	0	0	1	1	2	2	5	5	SB	R	2	7,862	Wood frame, stucco exterior	Full Crawl	1A	Crawl Space	G	E	E	E	E
	Bailiwick Road	24300	136.0	138.8	136.3	-4	-2	-3	0	-2	1	0	3	S	R	1.5	4,907	Wood frame, wood exterior	None	2A	Slab	G	--	--	DRY/WET	DRY/WET

Attachment B

Structure Type Key

Westchester County Streams
Byram River Basin Flood Risk Management Study
Attachment B – Structure Type Key

Structure Type Slab-on-Grade Foundation

Description Structures that are constructed on a slab foundation at grade.

Assumptions Structures will not be dry flood proofed for main floor flood depths greater than 2-feet.

Algorithm

Residential

I. If FE < GE then No Flood Proofing Required
II. If FE+1 < ME then No Flood Proofing Required
III. If FE+1 > ME then
    a. If FE+1 > ME+3 then
        i. If Poor Condition then Buyout
        ii. Otherwise Elevation
    b. If FE+1 < ME+3 then
        i. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Dry Flood Proofing

Nonresidential

I. If FE<GE then No Flood Proofing Required
II. If Wood or Metal Construction Type then
    a. If FE+1 < ME then No Flood Proofing Required
    b. If FE+1 > ME then
        i. If FE+1 > ME+3 then
            1. If Poor Condition then Buyout
            2. Otherwise Elevation
        ii. If FE+1 < ME+3 then Dry Flood Proofing or Ringwall
III. If Masonry Construction Type then
    a. If FE +1 < ME then No Flood Proofing Required
    b. If FE +1 > ME then
        i. If FE+1 > GE+3 then Ringwall
        ii. If FE+1 < GE+3 then Dry Flood Proofing or Ringwall

Structure Type Subgrade Basement

Description Subgrade Basement Structures contain a basement with all sides subgrade. Basements were considered to be one floor equivalent of space located below the main floor on a slab.

Assumptions
-All basements were considered unfinished and containing major utilities.
-All basement foundation types are unreinforced, 8" concrete masonry units (CMUs).
-Any dry flood proofing will be implemented in conjunction with wet flood proofing of the basement area.

Algorithm

Residential

I. If FE<GE then No Flood Proofing Required
II. If FE+1 > ME +3 then
    a. If Poor Condition then Buyout
    b. Otherwise Elevation
III. If FE+1 < ME +3 then
    a. If FE+1 > ME then
        i. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Dry Flood Proofing
    b. If FE+1 < ME then
        i. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Wet Flood Proofing

Nonresidential

I. If FE<GE then No Flood Proofing Required
II. If Wood or Metal Construction Type then
    a. If FE +1 > ME +3 then
        i. If Poor Condition then Buyout
        ii. Otherwise Elevation
    b. If FE+1 < ME +3 then
        i. If FE+1 > ME then
            1. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
            2. If FE+1 > GE+6 then Dry Flood Proofing
        ii. If FE+1 < ME then

1. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
2. If FE+1 > GE+6 then Wet Flood Proofing

III. If Masonry Construction Type then Ringwall

Structure Type Elevated

Description Structures elevated on posts, piles, piers, or extended walls.

Assumptions No major utilities located below the main floor elevation.

Algorithm

Residential

I. If FE<GE then No Flood Proofing Required
II. If FE+1 > ME then
    a. If FE+1 > ME+3 then
        i. If Poor Condition then Buyout
        ii. Otherwise Elevation
    b. If FE+1 < ME+3 then
        i. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Dry Flood Proofing
III. If FE+1 < ME then No Flood Proofing Required

Nonresidential

Not Applicable

Structure Type Bi-Levels/Raised Ranches

Description Bi-Level structures consist of two stories, with the first story (typically a living space or garage) partially below grade. The second story (the main floor) is typically above the first story, with the main entrance located between the two stories.

Raised Ranches consist of two stories, with the first story (typically a living space or garage) built slab-on-grade and the second story (the main floor) directly above the first story.

Assumptions
-The first floor (lower portion) walls are masonry.
-The foundation is slab-on-grade.
-The main floor can separated from the lower level to allow for elevation.

Algorithm

Residential

I. If FE<GE then No Flood Proofing Required
II. If FE+1 > ME then
    a. If Poor Condition then Buyout
    b. Otherwise Elevation
III. If FE+1 < ME then
    a. If FE+1 < GE+3 then Dry Flood Proofing or Ringwall
    b. If FE+1 > GE+3 then
        i. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Wet Flood Proofing

Nonresidential

Not Applicable

Structure Type Raised Foundations/Split Levels

Description Raised Foundation Structures contain a space below the main floor not big enough for a basement (typically a crawl space).

Split Levels consist of at least three levels, with the lower and upper level stacked, and the main floor level adjacent between the two. Each level is at a different elevation and connected by short stairways. The lower level is typically on a slab foundation and is living space and/or a garage. The main floor is typically on a raised foundation and is where the main entrance is located.

Assumptions
-No major utilities are located in the crawl space.
-In cases of dry flood proofing the crawl space will be flooded, and wet flood proofing should be implemented in the area.
-The lower level is slab-on-grade.
-The low level (lower portion) walls are masonry.
-The main floor can be raised separately from the lower level.
-Nonresidential flood proofing applies to raised foundation structure types only.

Algorithm

Residential

I. If FE<GE then No Flood Proofing Required
II. If FE+1 > ME+3 then
    a. If Poor Condition then Buyout
    b. Otherwise Elevation
III. If FE+1 < ME+3 then
    a. If FE+1 > ME then
        i. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Dry Flood Proofing
    b. If FE+1 <ME then
        i. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Wet Flood Proofing

Raised Foundation/Split Level Algorithm Continued...

Nonresidential

I. If FE<GE then No Flood Proofing Required
II. If Wood or Metal Construction Type then
    a. If FE+1 > ME+3 then
        i. If Poor Condition then Buyout
        ii. Otherwise Elevation
    b. If FE+1 <ME+3 then
        i. If FE+1 > ME then
            1. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
            2. If FE+1 > GE+6 then Dry Flood Proofing
        ii. If FE+1 <ME then
            1. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
            2. If FE+1 > GE+6 then Wet Flood Proofing
III. If Masonry Construction Type then
    a. If FE+1 >ME+3 then Ringwall
    b. If FE+1 <ME+3 then
        i. If FE+1 > ME then
            1. If FE+1 < GE+6 then Dry Flood Proofing or Ringwall
            2. If FE+1 > GE+6 then Dry Flood Proofing
        ii. If FE+1 <ME then
            1. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
            2. If FE+1 > GE+6 then Wet Flood Proofing

Structure Type Large Residential

Description Large Residential structures include apartments, townhouses, and multi-family units. Foundation types typical of large residential structures include slab-on-grade, raised foundation, and subgrade basement.

Assumptions All assumptions made for slab-on-grade, raised foundation, and subgrade basements apply to large residential structures.

Algorithm

Residential

I. If FE<GE then No Flood Proofing Required
II. If Subgrade Basement then
    a. If FE+1 > ME then
        i. If Multi-Family Structure with Footprint > 2000 sf, Apartment or Townhouse then Ringwall
        ii. If Multi-Family Structure with Footprint < 2000 sf then
            1. If Poor Condition then Buyout
            2. Otherwise Elevation
    b. If FE+1 < ME then
        i. If FE+1 < GE+6 then Wet Flood Proofing or Ringwall
        ii. If FE+1 > GE+6 then Wet Flood Proofing
III. If Slab-On-Grade or Raised Foundation then
    a. If FE+1 > ME then
        i. If Apartment or Townhouse then Ringwall
        ii. If Multi-Family Structure then
            1. If FE+1 < GE+3 then Dry Flood Proofing or Ringwall
            2. If FE+1 > GE+3 then
                a. If Footprint of Structure is > 2000 sf then Ringwall
                b. If Footprint of Structure is < 2000 sf then
                    i. If Poor Condition then Buyout
                    ii. Otherwise Elevation
    b. If FE+1 < ME then No Flood Proofing Required

Nonresidential

Not Applicable

Attachment C

Summary of Recommendations

Byram River Basin Feasibility Study
Nonstructural Evaluation – Task 2.2.g Recommendation Summaries

Table C.1 Summary of Recommendations (10-Percent Storm Event)

Structure Type	Flood Proofing Measure				
	Dry	Wet	Ringwall	Elevation	Acquisition
Slab-on-Grade	-	-	*4*	*1*	-
Subgrade Basement*	*4*	-	*1*	*18*	*1*
Elevated	-	-	-	-	-
Bi-Levels*	-	-	-	*1*	-
Raised Ranch	-	*1*	-	*7*	-
Raised Foundation*	-	-	-	*1*	-
Split Level*	*1*	-	-	*1*	-
Large Residential	-	-	*6*	-	-
Flood Proofing Measures Total	**5**	**1**	**11**	**29**	**1**

** Dry Flood Proofing entails wet flood proofing of areas below the main floor elevation and dry flood proofing of areas impacted above the main floor elevation.*

Table C.2 Summary of Recommendations (1-Percent Storm Event)

Structure Type	Flood Proofing Measure				
	Dry	Wet	Ringwall	Elevation	Acquisition
Slab-on-Grade	4	-	4	2	-
Subgrade Basement*	34	55	1	28	1
Elevated	1	-	-	-	-
Bi-Levels*	1	1	-	1	-
Raised Ranch*	6	28	-	15	-
Raised Foundation	-	2	-	3	-
Split Level*	1	7	-	1	-
Large Residential	-	-	6	-	-
Flood Proofing Measures Total	**47**	**93**	**11**	**50**	**1**

** Dry Flood Proofing entails wet flood proofing of areas below the main floor elevation and dry flood proofing of areas impacted above the main floor elevation.*

Table C.3 Summary of Recommendations (0.2-Percent Storm Event)

Structure Type	Flood Proofing Measure				
	Dry	Wet	Ringwall	Elevation	Acquisition
Slab-on-Grade	5	-	6	4	-
Subgrade Basement*	48	85	1	62	2
Elevated	2	-	-	1	-
Bi-Levels*	1	-	-	3	-
Raised Ranch	2	19	-	40	-
Raised Foundation*	5	8	-	4	-
Split Level*	12	4	-	2	-
Large Residential	-	-	6	-	-
Flood Proofing Measures Total	**75**	**116**	**13**	**116**	**2**

***** *Dry Flood Proofing entails wet flood proofing of areas below the main floor elevation and dry flood proofing of areas impacted above the main floor elevation.*

Attachment D

Non-Structural Plan with Route 1 Bridge Replacement Recommendations

BYRAM RIVER BASIN FEASIBILITY STUDY
NONSTRUCTURAL PLAN WITH ROUTE 1 BRIDGE REPLACEMENT - RECOMMENDATIONS

	Flood Depth equals 0, Recommendation based on 1-foot of freeboard
	Flood Depth between 0 and 2 feet
	Flood Depth greater than 2-feet

	User Input
	Calculated

NOTE: *DRY/WET* entails wet floor proofing of areas below the main floor elevation, including protection/raising of utilities where necessary, and dry flood proofing for the area above the main floor elevation.

			GE	ME	LE	FD								STRUCTURE										RECOMMENDATION			
HOUSE #	STREET NAME	BYRAM RIVER STATION	GROUND ELEVATION AT BUILDING	SURVEYED MAIN FLOOR ELEVATION	SURVEYED LOW OPENING ELEVATION	DEPTH OF 10% FLOODING VS. FIRST FLOOR	DEPTH OF 10% FLOODING VS. LOW OPENING	DEPTH OF 4% FLOODING VS. FIRST FLOOR	DEPTH OF 4% FLOODING VS. LOW OPENING	DEPTH OF 2% FLOODING VS. FIRST FLOOR	DEPTH OF 2% FLOODING VS. LOW OPENING	DEPTH OF 1% FLOODING VS. FIRST FLOOR	DEPTH OF 1% FLOODING VS. LOW OPENING	STRUCTURE TYPE	LAND USE TYPE	# OF FLOORS	TOTAL SQ. FT.	CONSTRUCTION TYPE	BASEMENT	GARAGE TYPE	FOUNDATION TYPE	CONDITION	10-PERCENT FLOOD	4-PERCENT FLOOD	2-PERCENT FLOOD	1-PERCENT FLOOD
11	Hillside Avenue	9512	16.0	18.3	18.3	-8	-8	-7	-7	-6	-6	-5	-5	S	C	1.5	1,959	Brick	None	N	Unknown	G	--	--	--	--
13	Riverdale Avenue	9591	8.0	14.6	8.8	-5	1	-3	3	-2	4	-1	5	S	C	2	34,584	Brick	None	N	Unknown	F	RW	RW	RW	RW
18	Riverdale Avenue	9612	15.0	25.7	16.9	-16	-7	-14	-5	-13	-4	-12	-3	RR	R	2	4,056	Wood	Bsmt	2BI	Unknown	G	--	--	--	--
15	Riverdale Avenue	9668	10.5	16.8	8.7	-7	2	-5	3	-4	4	-3	5	SB - M	R	2	1,568	Wood	Bsmt	N	Unknown	G	RW	RW	RW	RW
20	Riverdale Avenue	9668	13.0	27.4	15.2	-17	-5	-16	-3	-15	-2	-14	-1	SB	R	2.5	2,786	Wood	Bsmt	2D	Unknown	P	--	--	--	--
17	Riverdale Avenue	9680	10.5	16.8	8.7	-7	2	-5	3	-4	4	-3	5	SB - M	R	2	1,352	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
19	Riverdale Avenue	9686	10.5	16.7	8.6	-7	2	-5	3	-4	4	-3	5	SB - M	R	2	1,516	Composition	Bsmt	N	Unknown	F	RW	RW	RW	RW
21	Riverdale Avenue	9698	10.5	16.9	8.8	-7	1	-5	3	-4	4	-3	5	SB - M	R	2	1,506	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
23	Riverdale Avenue	9718	10.5	16.7	8.6	-6	2	-5	3	-4	4	-3	5	SB - M	R	2	1,516	Wood	Bsmt	N	Unknown	G	RW	RW	RW	RW
25	Riverdale Avenue	9727	11.0	16.8	8.7	-7	2	-5	3	-4	4	-3	5	SB - M	R	2	1,498	Wood	Bsmt	N	Unknown	F	RW	RW	RW	RW
26	Riverdale Avenue	9727	13.0	27.2	19.2	-17	-9	-16	-8	-14	-6	-13	-5	RR	R	2	4,250	Wood	Bsmt	1BI	Unknown	G	--	--	--	--
27	Riverdale Avenue	9761	11.0	15.3	9.2	-5	1	-4	3	-2	4	-1	5	RF	R	2	2,349	Stucco	Bsmt	1D	Unknown	F	WET	WET	WET	WET
28	Riverdale Avenue	9761	14.0	26.4	18.3	-16	-8	-15	-7	-14	-5	-13	-4	RR	R	2	2,076	Wood	Bsmt	1BI	Unknown	G	--	--	--	--
777	West Putnam Avenue Lot 48A	9771	18.0	19.6	16.7	-9	-6	-8	-5	-7	-4	-6	-3	S	C	3	140,445	Reinforced Concrete	None	N	Slab	G	--	--	--	--
29	Riverdale Avenue	9786	12.0	16.2	9.1	-6	1	-4	3	-3	4	-2	5	SB	R	2	1,294	Wood - Alum/Vinyl	Bsmt	1D	Unknown	G	WET	WET	WET	WET
36	Riverdale Avenue	9798	14.0	14.8	14.7	-5	-4	-3	-3	-2	-2	-1	-1	RR	R	2	2,588	Wood	Bsmt	1BI	Unknown	G	--	--	--	--
31	Riverdale Avenue	9811	12.0	15.9	12.6	-6	-2	-4	-1	-3	0	-2	1	SB	R	2	1,620	Alum/Vinyl	Bsmt	N	Unknown	F	--	--	WET	WET
33	Riverdale Avenue	9835	12.0	15.9	8.4	-5	2	-4	4	-3	5	-2	6	SB	R	2	2,300	Wood	Bsmt	N	Unknown	F	WET	WET	WET	WET
38	Riverdale Avenue	9860	14.5	19.1	16.0	-9	-6	-7	-4	-6	-3	-5	-2	SB	R	2.5	1,616	Wood	Bsmt	1D	Unknown	F	--	--	--	--
35	Riverdale Avenue	9873	13.0	17.0	8.9	-7	1	-5	3	-4	4	-3	5	SB	R	2	2,008	Wood	Bsmt	N	Unknown	P	WET	WET	WET	WET
40	Riverdale Avenue	9885	15.0	19.3	16.8	-9	-6	-7	-5	-6	-4	-5	-3	SB	R	2.5	2,756	Wood	Bsmt	2D	Unknown	G	--	--	--	--
37	Riverdale Avenue	9910	13.0	17.0	12.0	-6	-1	-5	0	-4	1	-3	2	RF	R	2	2,342	Alum/Vinyl	Bsmt	N	Slab	G	--	WET	WET	WET
44	Riverdale Avenue	9922	15.0	20.1	17.5	-10	-7	-8	-5	-7	-4	-6	-3	SB	R	2	2,356	Wood	Bsmt	3D	Unknown	G	--	--	--	--
47	Riverdale Avenue	9947	15.0	18.7	12.9	-8	-2	-7	-1	-5	0	-4	1	SB	R	2	1,834	Stucco	Bsmt	1D	Unknown	G	--	--	WET	WET
46	Riverdale Avenue	9960	17.0	22.5	20.3	-12	-10	-10	-8	-9	-7	-8	-6	SB	R	2.5	3,140	Wood	Bsmt	N	Unknown	G	--	--	--	--
49	Riverdale Avenue	9972	17.0	19.1	11.9	-9	-1	-7	0	-6	1	-5	3	SB	R	2		Wood	Bsmt	2D	Unknown	G	--	WET	WET	WET
51	Riverdale Avenue	10022	19.0	21.0	14.2	-10	-4	-9	-2	-7	-1	-6	0	SB	R	2		Wood	Bsmt	3D	Unknown	F	--	--	--	WET
53	Riverdale Avenue	10066	22.0	23.2	16.8	-12	-6	-11	-4	-10	-3	-8	-2	SB	R	2		Wood	Bsmt	N	Unknown	F	--	--	--	--
59	Riverdale Avenue	10111	24.0	26.3	18.8	-15	-8	-14	-6	-13	-5	-11	-4	SB	R	2		Wood	Bsmt	N	Unknown	G	--	--	--	--
16	Homestead Lane	10129	12.0	14.1	10.8	-3	0	-2	2	0	3	1	4	SB	R	1	810	Wood	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
18	Homestead Lane	10155	12.0	15.7	13.6	-5	-3	-3	-1	-2	0	-1	1	SB	R	2	2,502	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
20A	Homestead Lane	10172	10.0	11.5	10.7	-1	0	1	2	2	3	3	4	S	R	2	1,486	Wood	None	1BI	Slab	G	E	E	E	E
20	Homestead Lane	10182	10.0	11.5	10.5	-1	0	1	2	2	3	3	4	RF	R	1	1,011	Wood	Full Crawl	N	Crawl Space	G	E	E	E	E
22	Homestead Lane	10203	10.0	14.3	10.1	-3	1	-2	2	0	4	1	5	SB	R	2	2,222	Wood frame, aluminum ext	1/2 Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
24	Homestead Lane	10227	10.0	10.9	7.9	0	3	2	5	3	6	4	7	SB	R	1	1,520	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	F	E	E	E	E
28	Homestead Lane	10327	10.0	18.2	9.3	-7	2	-5	3	-4	5	-3	6	RR	R	2	3,434	Wood frame, vinyl exterior	1/4 Bsmt, Lower level	1BI	Basement	G	WET	WET	WET	WET
26	Pemberwick Road	10459	28.0	32.1	27.2	-21	-16	-19	-14	-18	-13	-17	-12	SB	R	2	2,876	Wood frame, vinyl exterior	1/2 Bsmt	N	Basement	G	--	--	--	--
30	Homestead Lane	10500	10.0	14.7	11.4	-3	0	-2	2	-1	3	0	4	SB	R	2	2,424	Wood	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
32	Homestead Lane Lot 485, 486	10569	12.0	17.8	11.3	-6	0	-5	2	-4	3	-3	4	RR	R	2		Wood	Full Bsmt	2BI	Basement	-	WET	WET	WET	WET
32	Homestead Lane Lot 487, 488	10660	12.0	16.2	9.7	-4	2	-3	3	-2	5	-1	6	SB	R	2	3,646	Wood	Full Bsmt	2BI	Basement	G	WET	WET	WET	WET
34	Pemberwick Road	10694	30.0	32.3	18.3	-20	-6	-19	-5	-18	-4	-17	-3	SB	R	2	2,860	Wood frame, vinyl exterior	Full Bsmt	2BI	Basement	G	--	--	--	--
499	Den Lane	10699	11.0	13.5	13.5	-1	-1	0	0	1	1	2	2	S	U	1	146	Brick	None	N	Slab	G	--	RW	RW	RW
36	Pemberwick Road	10699	29.0	22.4	22.4	-10	-10	-9	-9	-8	-8	-7	-7	SB	R	2	2,676	Wood	1/2 Bsmt	N	Basement	F	--	--	--	--
495	Den Lane	10703	10.0	15.0	12.7	-3	-1	-2	1	-1	2	0	3	SB	R	2	3,380	Wood	3/4 Bsmt, 1/4 Crawl	1D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
493	Den Lane	10706	11.5	17.1	11.8	-5	0	-4	1	-3	2	-2	4	SL	R	3	4,122	Wood/Brick	1/2 Bsmt, Lower level	N	Basement	G	WET	WET	WET	WET
40	Homestead Lane Unit A /B	10726	13.0	13.2	8.9	-1	3	0	4	1	5	2	6	RR	R	2	3,068	Brick/Wood	Full Bsmt	N	Basement	G	E	E	E	E
491	Den Lane Unit 1	10729	13.0	14.1	14.0	-2	-2	-1	-1	0	0	1	1	RR	R	3	4,296	Wood	Full Bsmt	2BI	Basement	E	--	--	E	E
490	Den Lane	10767	14.0	17.3	13.3	-5	-1	-4	0	-3	1	-2	2	SB	R	2	2,800	Wood frame, vinyl/masonite	1/4 Crawl, Lower level	N	Crawl Space	G	--	--	WET	WET
488	Den Lane	10879	16.0	20.3	12.2	-8	0	-7	1	-6	2	-5	3	RR	R	2	2,954	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	WET	WET
494	Den Lane	10879	11.0	15.8	11.8	-3	1	-2	2	-1	3	0	4	SB	R	2	2,938	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
1	Hollow Wood Lane	10898	13.0	16.8	13.3	-4	-1	-3	0	-2	1	-1	2	SB	R	2	2,100	Wood	Full Bsmt	D	Basement	G	--	WET	WET	WET
42	Pemberwick Road	10907	22.0	26.9	16.8	-14	-4	-13	-3	-12	-2	-11	-1	RR	R	2	3,964	Wood	Full Bsmt	N	Basement	G	--	--	--	--
4	Hollow Wood Lane	10909	12.0	14.9	11.0	-2	1	-1	3	0	4	1	5	BL	R	2	2,542	Wood	1/4 Bsmt, Lower level	1BI	Basement	G	E	E	E	E
3	Hollow Wood Lane	10943	14.0	17.0	13.8	-4	-1	-3	0	-2	1	-1	2	SB	R	2	1,922	Wood	Full Bsmt	N	Basement	G	--	WET	WET	WET
8	Hollow Wood Lane Unit A/B	11003	12.5	21.0	12.2	-8	0	-7	2	-6	3	-5	4	RR	R	3	4,527	Wood frame, vinyl exterior	None	2BI	Slab	G	WET	WET	WET	WET
50	Pemberwick Road	11172	27.0	28.3	19.8	-15	-7	-14	-6	-13	-5	-12	-4	SB	R	1.5	2,384	Wood frame, composition ext	1/4 Bsmt, Lower level	1BI	Basement	G	--	--	--	--
7	Hollow Wood Lane	11242	14.0	20.9	10.8	-8	2	-7	3	-6	4	-5	5	RR	R	-	-	-	-	-	Unknown	-	--	WET	WET	WET
5	Hollow Wood Lane	11243	14.0	16.8	13.5	-4	0	-3	1	-2	2	-1	3	SB	R	2	1,680	Wood frame, vinyl exterior	Full Bsmt	2D	Basement	G	--	WET	WET	WET
13	Hollow Wood Lane	11243	14.0	17.7	15.6	-5	-3	-4	-2	-3	-1	-2	0	SB	R	1	1,481	Wood	Full Bsmt	N	Basement	G	--	--	--	WET
6	Hollow Wood Lane	11272	13.0	17.5	14.9	-4	-2	-3	-1	-2	0	-1	1	SB	R	2	2,176	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	F	--	--	WET	WET
52	Pemberwick Road	11298	26.0	27.9	19.3	-15	-6	-14	-5	-13	-4	-12	-3	SB	R	1	1,322	Wood frame, vinyl exterior	Lower level	1BI	Slab	G	--	--	--	--
9	Hollow Wood Lane	11310	14.0	18.3	15.1	-5	-2	-4	-1	-3	0	-2	1	SB	R	2	2,180	Wood	Full Bsmt	N	Basement	F	--	--	WET	WET
54	Pemberwick Road	11339	26.0	25.8	18.6	-13	-5	-11	-4	-10	-3	-9	-2	SB	R	2	4,164	Brick	Bsmt	N	Basement	F	--	--	--	--
11	Hollow Wood Lane	11350	14.0	18.0	14.0	-5	-1	-4	0	-3	1	-2	2	SB	R	1	890	Wood frame, aluminum ext	Full Bsmt	N	Basement	G	--	--	WET	WET
10	Hollow Wood Lane Unit B	11350	12.5	21.8	13.0	-9	0	-7	1	-6	2	-5	3	RR	R	3	5,325	Wood frame, wood/vinyl ext	None	2BI	Slab	G	WET	WET	WET	WET
15	Hollow Wood Lane	11353	14.0	18.6	16.0	-5	-3	-4	-2	-3	-1	-2	0	SB	R	2	1,956	Wood	Bsmt	1D	Basement	F	--	--	--	WET
56	Pemberwick Road	11368	24.0	27.0	19.2	-14	-6	-13	-5	-12	-4	-11	-3	SB	R	1.5	1,983	Brick	Lower level	2D	Unknown	G	--	--	--	--
12	Hollow Wood Lane	11388	13.0	17.2	14.7	-4	-1	-3	0	-2	1	-1	2	SB	R	1	1,523	Wood	Full Bsmt	N	Basement	G	--	WET	WET	WET
58	Pemberwick Road	11408	23.0	24.1	17.0	-11	-4	-9	-2	-8	-1	-7	0	SB	R	2	5,418	Brick	Bsmt	1D	Basement	G	--	--	--	WET
20R	Hollow Wood Lane	11432	12.0	21.9	12.5	-8	1	-7	2	-6	3	-5	4	RR	R	2	4,026	Wood frame, vinyl exterior	None	N	Slab	G	WET	WET	WET	WET
60	Pemberwick Road	11432	22.0	23.2	16.8	-10	-3	-8	-2	-7	-1	-6	0	SB	R/C	2	4,460	Wood frame, brick	Bsmt	1D	Basement	G	--	--	--	WET
62	Pemberwick Road	11443	20.0	20.4	17.0	-7	-4	-6	-2	-5	-1	-4	0	SB	R/C	2	4,266	Wood frame, concrete	Bsmt	D	Basement	G	--	--	--	WET
16	Hollow Wood Lane	11449	14.0	18.8	14.8	-5	-1	-4	0	-3	1	-2	2	SB	R	2.5	2,963	Wood frame, stucco exterior	Full Bsmt	N	Basement	F	--	WET	WET	WET
14	Hollow Wood Lane Unit A	11449	10.0	22.3	11.7	-9	2	-8	3	-7	4	-6	5	RR	R	2	3,772	Wood	Full Bsmt	4BI	Basement	G	WET	WET	WET	WET
14	Hollow Wood Lane Unit B	11449	10.0	21.7	11.0	-8	3	-7	4	-6	5	-5	6	RR	R	2	3,772	Wood	Full Bsmt	4BI	Basement	G	WET	WET	WET	WET
24	Hollow Wood Lane	11464	14.0	19.0	13.6	-5	0	-4	1	-3	2	-2	3	SB	R	2	3,242	Wood frame, vinyl exterior	1/2 Bsmt, 1/2 Crawl	N	Basement/Crawl	G	--	WET	WET	WET
64	Pemberwick Road	11481	21.0	24.4	16.1	-11	-3	-10	-1	-9	0	-8	1	SB	R	2	2,536	Brick	Full Bsmt	2D	Basement	G	--	--	--	WET
25	Hollow Wood Lane	11484	14.0	18.8	14.4	-5	-1	-4	0	-3	2	-2	2	SB	R	2	2,078	Wood	Full Bsmt	N	Basement	F	--	WET	WET	WET
21	Hollow Wood Lane	11516	14.0	18.4	15.7	-5	-2	-3	-1	-2	0	-1	1	SB	R	2	2,466	Brick/Wood	Full Bsmt	2D	Basement	G	--	--	WET	WET
27	Hollow Wood Lane	11525	14.0	23.4	15.1	-10	-1	-8	0	-7	1	-6	2	RR	R	2	2,860	Wood frame, composition ext	Full Bsmt	2BI	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
66	Pemberwick Road	11525	20.0	21.4	16.1	-8	-2	-6	-1	-5	0	-4	1	SB	R/C	1	1,463	Wood	Bsmt	2D	Basement	G	--	--	WET	WET
68	Pemberwick Road	11529	21.0	23.1	16.8	-9	-3	-8	-2	-7	-1	-6	0	SB	R	2	2,838	Wood	Full Bsmt	3A	Basement	G	--	--	--	WET
20	Hollow Wood Lane	11533	14.0	21.9	14.0	-8	0	-7	1	-6	2	-5	3	SB	R	2	2,998	Wood	Full Bsmt	1D	Basement	G	--	WET	WET	WET
18R	Hollow Wood Lane	11533	12.0	22.0	22.0	-8	-8	-7	-7	-6	-6	-5	-5	E	R	2	4,054	Wood frame, vinyl exterior	None	N	Slab	G	--	--	--	--
30	Hollow Wood Lane	11537	14.0	19.5	11.8	-6	2	-4	3	-3	4	-2	5	RR	R	2	1,884	Brick/Wood	Full Bsmt	1BI	Basement	G	--	WET	WET	WET
5	River Street	11537	12.0	17.9	13.2	-4	1	-3	2	-2	3	-1	4	SB	R	2	1,894	Wood frame, vinyl/brick ext	Full Bsmt	N	Basement	G	WET	WET	WET	WET
28	Hollow Wood Lane	11549	14.0	19.4	15.1	-6	-1	-4	0	-3	1	-2	2	SB	R	1.5	2,081	Wood frame, composition ext	Full Bsmt	N	Basement	G	--	WET	WET	WET

BYRAM RIVER BASIN FEASIBILITY STUDY
NONSTRUCTURAL PLAN WITH ROUTE 1 BRIDGE REPLACEMENT - RECOMMENDATIONS

	Flood Depth equals 0, Recommendation based on 1-foot of freeboard
	Flood Depth between 0 and 2 feet
	Flood Depth greater than 2-feet

	User Input
	Calculated

NOTE: *DRY/WET* entails wet floor proofing of areas below the main floor elevation, including protection/raising of utilities where necessary, and dry flood proofing for the area above the main floor elevation.

			GE	ME	LE	FD								STRUCTURE										RECOMMENDATION			
HOUSE #	STREET NAME	BYRAM RIVER STATION	GROUND ELEVATION AT BUILDING	SURVEYED MAIN FLOOR ELEVATION	SURVEYED LOW OPENING ELEVATION	DEPTH OF 10% FLOODING VS. FIRST FLOOR	DEPTH OF 10% FLOODING VS. LOW OPENING	DEPTH OF 4% FLOODING VS. FIRST FLOOR	DEPTH OF 4% FLOODING VS. LOW OPENING	DEPTH OF 2% FLOODING VS. FIRST FLOOR	DEPTH OF 2% FLOODING VS. LOW OPENING	DEPTH OF 1% FLOODING VS. FIRST FLOOR	DEPTH OF 1% FLOODING VS. LOW OPENING	STRUCTURE TYPE	LAND USE TYPE	# OF FLOORS	TOTAL SQ. FT.	CONSTRUCTION TYPE	BASEMENT	GARAGE TYPE	FOUNDATION TYPE	CONDITION	10-PERCENT FLOOD	4-PERCENT FLOOD	2-PERCENT FLOOD	1-PERCENT FLOOD
29	Hollow Wood Lane Unit 1/2	11562	14.0	22.9	14.6	-9	-1	-8	1	-7	2	-6	3	RR	R	2	2,200	Wood frame, composition ext	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
31	Hollow Wood Lane	11606	15.0	23.0	14.7	-9	-1	-8	0	-7	2	-6	2	RR	R	2	2,852	Wood	Full Bsmt	2BI	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
32	Hollow Wood Lane	11606	14.0	19.3	11.6	-5	2	-4	4	-3	5	-2	6	RR	R	2	1,838	Wood	Full Bsmt	N	Basement	G	WET	WET	WET	WET
7	River Street	11606	13.0	17.8	13.5	-4	0	-3	2	-2	3	-1	4	SB	R	2	2,952	Brick/wood	Full Bsmt	N	Basement	G	WET	WET	WET	WET
70	Pemberwick Road Building 1	11662	22.0	23.4	17.7	-9	-4	-8	-2	-7	-1	-6	0	SB	R	2	2,658	Wood frame, stucco exterior	Full Bsmt	N	Basement	F	--	--	--	WET
70	Pemberwick Road Building 2	11703	17.0	16.8	16.8	-3	-3	-1	-1	0	0	1	1	SB	R	2	2,246	Wood	Full Bsmt	N	Basement	F	--	--	DRY/WET	DRY/WET
33	Hollow Wood Lane	11751	15.0	23.1	14.9	-9	-1	-8	1	-7	2	-6	3	RR	R	2	2,878	Wood	Full Bsmt	2BI	Basement	G	--	WET	WET	WET
72	Pemberwick Road	11767	22.0	23.8	18.6	-9	-4	-8	-3	-7	-2	-6	-1	SB	R	2	3,608	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	--
124	Hollow Wood Lane	11779	14.0	19.2	14.7	-5	0	-4	1	-3	2	-2	3	SB	R	2	1,838	Wood frame, aluminum ext	Full Bsmt	2D	Basement	G	WET	WET	WET	WET
9	River Street	11779	12.5	20.9	13.0	-7	1	-5	3	-4	4	-3	5	RR	R	2	2,998	Brick/wood	Full Bsmt	2BI	Basement	F	WET	WET	WET	WET
126	Hollow Wood Lane	11841	14.0	16.1	14.1	-2	0	0	2	1	3	2	4	SB	R	2	1,884	Wood	Full Bsmt	1D	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
76	Pemberwick Road	11847	18.0	21.9	18.5	-7	-4	-6	-3	-5	-2	-4	-1	SB	R	2	3,324	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	--
35	Hollow Wood Lane	11848	15.0	19.1	16.5	-5	-2	-3	-1	-2	0	-1	1	SB	R	2	2,512	Wood frame, stucco exterior	Full Bsmt	2D	Basement	F	--	--	WET	WET
98	Monica Road	11868	14.0	19.2	16.1	-5	-2	-3	0	-2	1	-1	2	SB	R	1	2,314	Wood frame, aluminum ext	Full Bsmt	1A	Basement	G	--	WET	WET	WET
102	Monica Road	11868	16.5	21.6	18.3	-7	-4	-6	-2	-5	-1	-4	0	SB	R	2	3,326	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	WET
37	Hollow Wood Lane Unit B	11878	16.0	22.1	17.2	-8	-3	-6	-1	-5	0	-4	1	BL	R	2	3,482	Wood	1/4 Bsmt	2BI	Basement	G	--	--	DRY/WET	DRY/WET
100	Hollow Wood Lane	11880	14.0	18.0	14.1	-3	0	-2	2	-1	3	0	4	SB	R	1	1,549	Wood	Full Bsmt	N	Basement	G	DRY/WET	DRY/WET	DRY/WET	DRY/WET
78	Pemberwick Road	11908	18.0	20.8	17.1	-6	-3	-5	-1	-4	0	-3	1	SB	R	2	2,842	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	WET
83	Pemberwick Road	11910	20.0	20.4	20.4	-6	-6	-5	-5	-4	-4	-3	-3	S	R/C	2	6,642	Wood/Masonry	None	N	Slab	F	--	--	--	--
80	Pemberwick Road	11933	18.5	23.7	16.7	-9	-2	-8	-1	-7	0	-6	1	SB	R	1.5	1,947	Wood frame, stone/stucco ex	Full Bsmt	N	Basement	G	--	--	--	WET
131	Monica Road	11961	16.5	16.4	8.4	-2	6	-1	7	0	8	1	9	RR	R	2	3,716	Brick/Stone	None	N	Slab	G	--	--	E	E
82	Pemberwick Road	11962	18.0	20.8	15.9	-6	-1	-5	0	-4	1	-3	2	SL	R	1.5	3,107	Wood frame, brick/vinyl ext	1/2 Bsmt, 1/4 Crawl, Lower level	1BI	Basement/Crawl	G	--	--	--	WET
103	Monica Road	11966	14.5	17.8	15.4	-3	-1	-2	0	-1	1	0	2	SB	R	2	2,034	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1D	Basement	G	--	DRY/WET	DRY/WET	DRY/WET
99	Monica Road	11969	14.0	18.4	15.7	-4	-1	-3	0	-2	1	-1	2	SB	R	2	2,778	Brick/wood	Full Bsmt	1A	Basement	G	--	WET	WET	WET
105	Monica Road	11969	15.0	17.9	16.5	-3	-2	-2	-1	-1	0	0	1	SB	R	1	1,026	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	DRY/WET	DRY/WET
101	Monica Road	11976	14.0	19.5	15.1	-5	-1	-4	1	-3	2	-2	3	SB	R	1	1,684	Wood frame, vinyl exterior	Full Bsmt	1A	Basement	G	--	WET	WET	WET
107	Monica Road	11976	16.0	19.5	17.6	-5	-3	-4	-2	-3	-1	-2	0	SB	R	1	1,569	Wood frame, vinyl/brick	3/4 Bsmt, 1/4 Crawl	N	Basement/Crawl	G	--	--	--	WET
14	Lucy Street	11990	16.0	20.8	11.9	-6	3	-5	4	-4	5	-3	6	RR	R	2	4,392	Wood frame, vinyl exterior	None	2BI	Slab	E	WET	WET	WET	WET
89	Pemberwick Road	11990	19.5	27.5	20.0	-13	-6	-12	-4	-11	-3	-10	-2	RR	R	2.5	4,398	Wood frame, aluminum ext	Full Bsmt, Lower level	N	Basement	G	--	--	--	--
84	Pemberwick Road	12000	18.0	22.4	17.4	-8	-3	-7	-2	-6	-1	-5	0	SB	R	2	4,162	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	--	WET
6	Lucy Street	12097	16.0	20.4	17.9	-6	-3	-5	-2	-3	-1	-3	0	SB	R	1	1,446	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	--	WET
4	Lucy Street	12100	17.0	18.1	18.1	-4	-4	-2	-2	-1	-1	0	0	SB	R	2	3,474	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	DRY/WET
16	Lucy Street	12100	14.5	20.8	15.8	-6	-1	-5	0	-4	1	-3	2	SL	R	2	6,250	Wood frame, stucco exterior	1/2 Bsmt, Lower level	2BI	Basement	G	--	WET	WET	WET
8	Lucy Street	12102	16.0	24.5	16.8	-10	-2	-9	-1	-8	0	-7	1	RR	R	2	3,198	Brick	Full Bsmt	2BI	Basement	G	--	--	DRY/WET	DRY/WET
12	Lucy Street	12107	16.0	23.7	15.7	-9	-1	-8	0	-7	1	-6	2	RR	R	2	3,282	Brick	Full Bsmt	N	Basement	F	--	DRY/WET	DRY/WET	DRY/WET
1	Lucy Street	12174	18.0	22.9	18.0	-8	-4	-7	-2	-6	-1	-5	0	SB	R	1	849	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	WET
9	Lucy Street	12183	16.0	24.0	15.8	-9	-1	-8	0	-7	1	-6	2	RR	R	2	3,748	Wood frame, Brick exterior	1/4 Bsmt, Lower level	1BI	Basement	G	--	--	DRY/WET	DRY/WET
11	Lucy Street	12183	16.0	23.4	15.7	-9	-1	-8	0	-7	1	-6	2	SB	R	2	3,682	Wood frame, Brick exterior	Full Bsmt	2BI	Basement	G	--	--	WET	WET
7	Lucy Street	12222	16.0	23.2	17.2	-9	-3	-7	-1	-6	0	-5	1	SB	R	1	1,389	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	WET	WET
88	Pemberwick Road	12224	19.0	23.5	17.6	-9	-3	-8	-2	-7	-1	-6	0	SB	R	2	3,416	Wood frame, brick/wood ext	Full Bsmt	1A	Basement	G	--	--	--	WET
13	Lucy Street	12248	16.0	22.2	16.5	-8	-2	-6	-1	-5	0	-4	1	RR	R	2	2,612	Wood	3/4 Bsmt, 1/4 Crawl	1BI	Basement	G	--	--	DRY/WET	DRY/WET
15	Lucy Street	12252	16.0	21.3	15.3	-7	-1	-5	1	-4	2	-3	3	RR	R	2	1,690	Wood frame, aluminum ext	Full Bsmt	1BI	Basement	F	--	--	WET	WET
90	Pemberwick Road	12252	19.0	21.3	16.2	-7	-2	-5	0	-4	1	-3	2	SB	R	2	3,936	Wood frame, Brick exterior	Full Bsmt	N	Basement	G	--	--	--	WET
17	Lucy Street	12263	16.0	20.4	17.8	-6	-3	-5	-2	-4	-1	-3	0	SB	R	2	2,492	Wood frame, stone/vinyl ext	Full Bsmt	1BI	Basement	G	--	--	--	WET
92	Pemberwick Road	12284	19.0	26.0	18.7	-11	-4	-10	-3	-9	-2	-8	-1	SB	R	1.5	2,069	Wood	3/4 Bsmt, Lower level	N	Basement	F	--	--	--	--
2	Dale Drive	12304	18.0	24.2	19.0	-10	-4	-8	-3	-7	-2	-6	-1	RR	R	1	1,369	Wood	Full Bsmt	1BI	Basement	G	--	--	--	--
6	Dale Drive	12309	18.0	21.4	18.0	-7	-3	-6	-2	-4	-1	-4	0	SB	R	2	2,562	Wood	Full Bsmt	N	Basement	G	--	--	--	WET
8	Dale Drive	12318	17.5	22.1	17.9	-8	-3	-6	-2	-5	-1	-4	0	SB	R	2	3,434	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	WET
10	Dale Drive	12326	17.0	21.0	18.5	-6	-4	-5	-3	-4	-2	-3	-1	SB	R	2	2,846	Wood frame, aluminum ext	Full Bsmt	1D	Basement	F	--	--	--	--
12	Dale Drive	12337	16.5	21.6	17.4	-7	-3	-6	-2	-5	-1	-4	0	SB	R	2	2,294	Wood frame, vinyl exterior	Full Bsmt	1A	Basement	G	--	--	--	WET
14	Dale Drive	12340	16.2	21.4	18.7	-7	-4	-6	-3	-5	-2	-4	-1	SB	R	2	2,874	Wood frame, vinyl exterior	Full Bsmt	N	Basement	F	--	--	--	--
16	Dale Drive	12345	16.0	21.7	18.3	-7	-4	-6	-2	-5	-1	-4	0	SB	R	2	2,252	Wood	Full Bsmt	N	Basement	G	--	--	--	WET
20	Dale Drive	12353	16.0	19.6	16.4	-5	-2	-4	-1	-3	0	-2	1	SB	R	2	3,278	Wood	Full Bsmt	N	Basement	G	--	--	WET	WET
3	Dale Drive	12393	18.0	22.5	18.0	-8	-4	-7	-2	-6	-1	-5	0	SB	R	2	3,014	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	--
10	Cross Street	12411	18.0	22.7	18.0	-8	-3	-7	-2	-6	-1	-5	0	RR	R	1	1,084	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
5	Dale Drive	12418	18.0	21.2	21.2	-7	-7	-5	-5	-4	-4	-3	-3	SB	R	2	2,724	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	--
100	Pemberwick Road	12431	22.0	23.3	17.9	-9	-3	-7	-2	-6	-1	-5	0	SB	R	1.5	1,590	Wood	Full Bsmt	1D	Basement	G	--	--	--	--
4	Cross Street	12489	18.0	21.0	15.8	-6	-1	-5	0	-4	1	-3	2	RR	R	2	2,474	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	DRY/WET
102	Pemberwick Road	12526	23.0	25.8	18.8	-11	-4	-10	-3	-9	-2	-8	-1	SB	R	2.5	3,548	Brick	Full Bsmt	N	Basement	F	--	--	--	--
12	Cross Street	12537	18.0	22.6	18.9	-8	-4	-7	-3	-6	-2	-5	-1	RR	R	2	1,898	Wood frame, vinyl/wood ext	Full Bsmt	1BI	Basement	G	--	--	--	--
1	Cross Street	12579	16.0	23.3	17.7	-9	-3	-7	-2	-6	-1	-5	0	SL	R	2	2,306	Wood frame, vinyl exterior	1/4 Bsmt, Lower level	1BI	Basement	F	--	--	--	WET
104	Pemberwick Road	12664	24.0	26.7	20.0	-12	-5	-11	-4	-10	-3	-9	-2	SB	R	2.5	3,483	Brick	Full Bsmt	N	Basement	G	--	--	--	--
5	Cross Street	12674	18.0	22.4	18.4	-8	-4	-7	-3	-5	-2	-5	-1	SB	R	2	2,332	Wood	Full Bsmt	N	Basement	G	--	--	--	--
6	Cross Street	12674	18.0	22.0	18.5	-7	-4	-6	-3	-5	-2	-4	-1	SB	R	2	2,950	Wood	1/2 Bsmt, Lower level	N	Basement	G	--	--	--	--
15	Dale Drive	12674	17.5	22.0	18.9	-8	-4	-6	-3	-5	-2	-4	-1	SB	R	2	1,928	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	--
19	Dale Drive	12695	16.0	22.1	19.7	-8	-5	-6	-4	-5	-3	-4	-2	SB	R	2	2,094	Wood frame, Brick/Composit	Full Bsmt	1BI	Basement	P	--	--	--	--
14	Cross Street	12696	19.0	22.5	22.5	-8	-8	-7	-7	-6	-6	-5	-5	SB	R	1	1,335	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	N	Basement	G	--	--	--	--
17	Cross Street	12717	18.0	23.8	19.0	-9	-4	-8	-3	-7	-2	-6	-1	RR	R	1	1,417	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
110	Pemberwick Road	12723	26.0	27.2	21.8	-13	-7	-11	-6	-10	-5	-9	-4	RR	R	1	1,181	Wood frame, stucco exterior	Full Bsmt	N	Basement	G	--	--	--	--
1	Garden Place	12726	18.0	22.6	17.6	-8	-3	-7	-2	-6	-1	-5	0	SB	R	1	1,275	Wood	Full Bsmt	2D	Basement	F	--	--	--	--
8	Cross Street	12729	18.0	21.2	17.1	-7	-3	-5	-1	-4	0	-3	1	RR	R	1	1,162	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
5	Garden Place	12730	18.0	24.6	18.7	-10	-4	-9	-3	-8	-2	-7	-1	RR	R	2	2,398	Brick facing	Full Bsmt	1BI	Basement	G	--	--	--	--
106	Pemberwick Road	12732	25.0	26.9	19.1	-12	-5	-11	-3	-10	-2	-9	-1	SB	R	2.5	3,610	Brick	Full Bsmt	N	Basement	F	--	--	--	--
3	Garden Place	12735	18.0	26.9	18.3	-12	-4	-11	-2	-10	-1	-9	0	RR	R	2	3,110	Wood	1/2 Bsmt, Lower level	1BI	Basement	G	--	--	--	--
21	Dale Drive	12736	16.0	23.4	14.7	-9	0	-8	1	-7	2	-6	3	SB	R	2	2,716	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	WET	WET	WET
11	Cross Street	12746	18.0	23.6	18.4	-9	-4	-8	-3	-7	-2	-6	-1	SB	R	2	2,082	Wood frame, wood/stucco ex	Full Bsmt	N	Basement	G	--	--	--	--
108	Pemberwick Road	12773	26.0	27.5	18.3	-13	-4	-12	-2	-11	-1	-10	0	SB	R	1.5	2,007	Brick frame, brick/vinyl ext	Lower level	N	Basement	G	--	--	--	--
13	Cross Street	12791	18.0	21.5	18.0	-7	-3	-6	-2	-5	-1	-4	0	RR	R	1	1,053	Wood	Full Bsmt	1BI	Basement	F	--	--	--	--
8	Garden Place	12820	18.0	22.3	18.0	-8	-3	-6	-2	-5	-1	-4	0	RR	R	2	2,944	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	E	--	--	--	--
15	Cross Street	12826	18.0	20.6	18.9	-6	-4	-5	-3	-4	-2	-3	-1	SB	R	1.5	1,707	Wood frame, vinyl exterior	Full Bsmt	N	Basement	G	--	--	--	--
6	Garden Place	12841	18.0	21.5	19.5	-7	-5	-6	-4	-5	-3	-4	-2	SB	R	1	1,018	Wood	Full Bsmt	1D	Basement	G	--	--	--	--
2	Garden Place	12853	18.0	21.9	18.1	-7	-4	-6	-2	-5	-1	-4	0	RR	R	1	1,924	Wood frame, vinyl exterior	3/4 Bsmt, 1/4 Crawl	1BI	Basement	G	--	--	--	--
19	Cross Street	12864	18.0	23.9	19.7	-9	-5	-8	-4	-7	-3	-6	-2	RR	R	2	2,804	Wood frame, vinyl exterior	Full Bsmt	1D	Basement	G	--	--	--	--
21	Cross Street	12894	18.0	24.3	20.1	-10	-6	-8	-4	-7	-3	-6	-2	RR	R	2	1,760	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
20	Cross Street	12906	20.0	23.0	19.4	-8	-5	-7	-4	-6	-3	-5	-2	RR	R	2	2,530	Wood frame, vinyl exterior	Full Bsmt	1BI	Basement	G	--	--	--	--
8	Rex Street	12944	20.0	24.8	21.9	-10	-7	-9	-6	-8	-5	-7	-4	RR	R	1.5	1,563	Wood frame, brick facing	Full Bsmt	1BI	Basement	G	--	--	--	--