

CITY OF OCEAN CITY
POST-SANDY PLANNING ASSISTANCE GRANT



DESIGN STANDARDS

9TH STREET & 34TH STREET GATEWAYS

CENTRAL BUSINESS DISTRICT

A handwritten signature in black ink, reading "Randall E. Scheule".

Randall E. Scheule, PP/AICP

The original of this document has been signed
and sealed as required by NJS 45:14A-12.

A handwritten signature in black ink, reading "Stephen B. Griffith".

Stephen B. Griffith
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Introduction

The purpose of this document is to identify a set of conceptual plans and design standards for the 9th Street Gateway, 34th Street Gateway and Central Business District (CBD). These plans and standards illustrate ways in which the scale and character of the 9th Street Gateway and CBD complement each other and how the appearance and functionality of the Gateway corridors and downtown can be enhanced.

The 9th Street Corridor area in Ocean City is a continuation of NJ Route 52, which spans Egg Harbor Bay from Somers Point. 9th Street is the primary route into Ocean City that provides direct access to the north-south connector at West Avenue, the downtown business area at Asbury Avenue, and the Boardwalk. Of the four entrance points into Ocean City, 9th Street has the highest traffic volumes. The number of pedestrians and bicyclists on 9th Street has increased significantly since completion of the Route 52 improvements in 2012. The 9th Street corridor is also important for commerce and functions as an emergency evacuation route. Ninth Street consists of four lanes and provides access to the City's downtown area, the beaches and boardwalk.

The 34th Street Gateway is intended to accentuate this entry into the City by encouraging development that is compatible in terms of use, scale and appearance for this location. Roosevelt Boulevard and 34th Street experience the second highest traffic volumes in the City, second only to Route 52/9th Street. This zone will promote and reinforce a positive business climate; enhance and strengthen the aesthetic appearance, character, vitality and overall identity of the business corridor; limit more intense uses to properties fronting 34th Street, creating a buffer to the surrounding residential zones; encourage indoor recreational uses to serve as a year-round attraction to the zone; and improve the physical function and operational efficiency of the corridor, including traffic calming.

Ocean City's Central Business District (CBD) is located on Asbury Avenue between 6th Street and 14th Street. Asbury Avenue represents the City's Downtown commercial area and contains an assortment of unique shopping venues. This corridor displays a broad range of architectural types and styles in the City. It has a great potential for mixed-use development, improved streetscapes and pedestrian improvements. Primary land uses within the CBD include retail, restaurants/cafes and finance; residential uses are secondary.

This document contains concept plans and design standards for the 9th Street Gateway Corridor and the Central Business District. These concept plans and design standards are intended to enhance flood resilience while encouraging commerce in the City's business areas within the constraints imposed by historic building patterns and infrastructure requirements.

The basis for the concept plans and design standards contained herein consist of detailed analysis of existing building and infrastructure conditions, first floor elevations, topography, development trends, flood history and building requirements. These analyses are contained in a companion document titled “Community Resilience Plan – 9th Street Gateway, Central Business District.”

The preparation of these “Design Standards” has been funded by a Post-Sandy Planning Assistance Grant (DS-2016-0508-683) awarded to Ocean City by the New Jersey Department of Community Affairs.

Constraints Analysis

The scope of work for this report requires analysis of constraints to improving resilience for future flooding associated with historic building patterns and infrastructure. A detailed analysis of existing conditions identifying infrastructure constraints including dimensional and elevation data for cartways, gutters, stormwater inlets, sidewalks, handicap ramps, driveways, and first floors of adjacent buildings is included in the “Community Resilience Plan (9th Street and CBD).” Key points regarding these constraints are described below. These constraints provide significant constraints to adoption of form based codes that regulate building placement.

9th Street Gateway

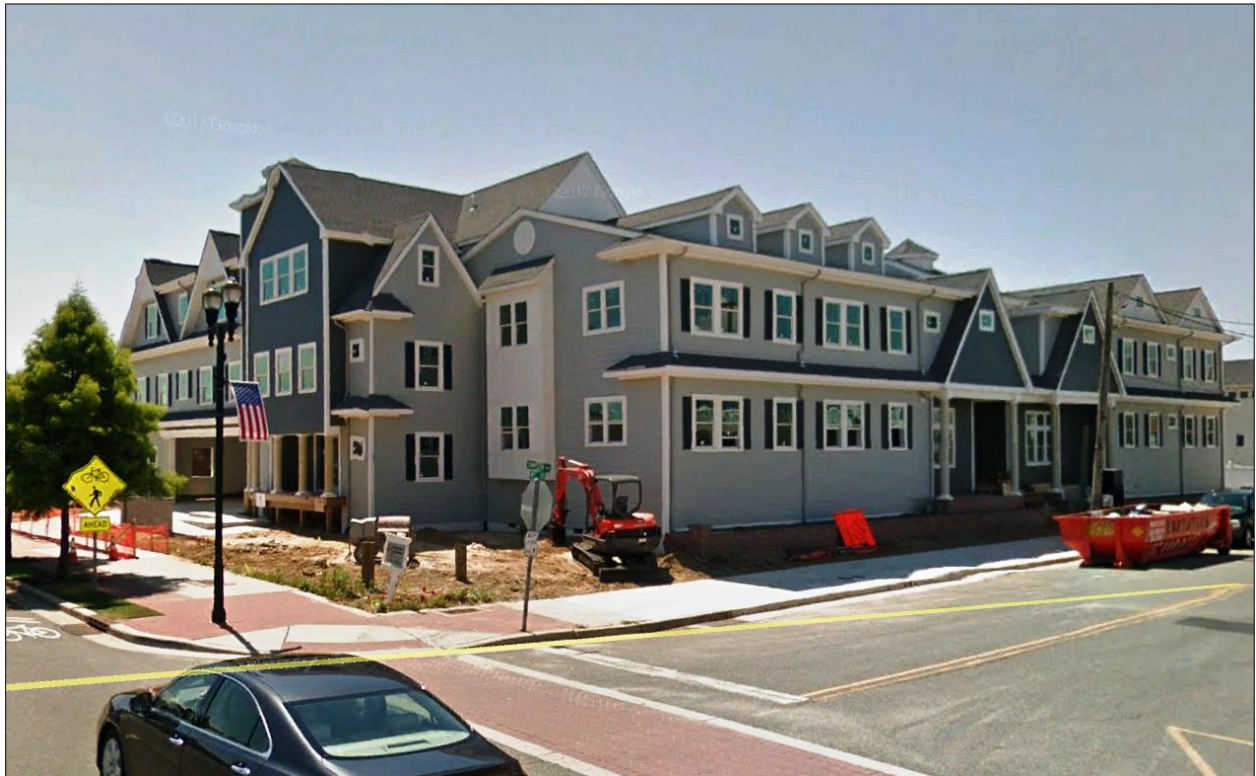
The 9th Street Gateway corridor includes all properties fronting 9th Street between Central Avenue and the 9th Street Bridge. This corridor is characterized by an 80’ right-of-way from the bridge to Asbury Avenue and a 60’ right-of-way from Asbury to Central. Development along the corridor consists of commercial, office and recreational uses. The City has recently obtained properties on the north side west of Bay Avenue and is converting them to green space.



9th Street Gateway Corridor (view from the bridge looking east)

Adjacent Building Floor Elevations & Access

The grade level floor elevations associated with the existing buildings along the 9th Street corridor will have a major impact on the ability to raise the cartway and still provide sufficient slope (1% minimum for sheet flow) away from the buildings and toward the gutter.



9th Street Gateway Corridor (new development at Simpson Avenue)

Building Setbacks & Sidewalk Widths

The existing buildings along 9th Street and between Central Avenue and West Avenue are generally setback only 10' to 14' from the curb line. The width between the buildings and curb line affects the ability to provide a transition slope if the building first floors are raised or the street cartway is raised independent of each other.

Alley & Adjacent Driveway Grade Transitions

Raising the cartway will need to be sensitive to the additional improvements required to provide safe vehicular and pedestrian access to private facilities along the corridor, primarily between West Avenue and the bridge. These improvements may include “ramped” access driveways and stormwater infrastructure to accommodate any resultant changes in runoff patterns.

9th Street Gateway Corridor



Stormwater Infrastructure

The stormwater infrastructure improvements are expected to be limited to raising the existing inlet grates and not involve additional stormwater infrastructure.

The controlling factors regarding the raising of the portion of 9th Street west of West Avenue are the intersecting street elevations and the elevations of the adjacent parking lots and driveways. Buildings are typically setback much further in this portion of the 9th Street corridor and have first floor elevations that are typically higher than the area between Central Avenue & West Avenue.

Central Business District

Ocean City central business district extends from 6th Street to 14th Street on Asbury Avenue. These blocks include the surviving, intact, pre-1935 portions of the city's central business district. With the exception of the bank building at 8th Street, the commercial buildings that make up the district are from one to two stories tall, predominantly masonry construction, in a variety of styles and dates from 1875 to the early 1930s, illustrating the development of the downtown during that period.

Central Business District (6th – 10th Street)



Central Business District (10th – 14th Street)



Asbury Avenue 900 Block



Available information indicates 57% were built prior to 1930, and only 14% have been redeveloped since 2000. Post-2000 construction of mixed-use buildings has been limited to three blocks between 10th Street and 13th Street. The core of the central business district remains largely intact. Except for the most recent construction, buildings are located in close proximity to the property lines; a 4-foot front setback is common. A majority of structures between 7th Street and 14th Street are connected via shared party walls. The age of structures, construction characteristics and diverse ownership present significant challenges to redevelopment in a large part of the central business district.



The storm resiliency improvement goal is to raise the Asbury Avenue cartway and adjacent curb and sidewalk elevation in the central business district to the greatest extent possible. The key factor affecting the extent of the raising is maintenance of the existing buildings and associated first floor elevations in the interim until the properties along Asbury Avenue are redeveloped. Additional detail regarding these constraints is described below.

800 Block Asbury Avenue

Existing Building Floor Elevations & Lower Level Pedestrian Access

A portion of the existing concrete sidewalk along the existing building frontages will need to be maintained for building access.

Upper Level Pedestrian Walkway

A pedestrian walkway at a higher elevation consistent with the new raised elevation of the cartway and curb will need to be provided.

Pedestrian Walkway Transition

Sufficient area must be provided for the transition between the elevated sidewalk and the existing sidewalk along the buildings. The transition is expected to be accomplished through the provision of stairs and handicapped ramps.

Sidewalk Stormwater Drainage

Those properties along Asbury Avenue that have open space between adjacent buildings typically have high point elevations along the common side property lines at a point generally mid-way between the right-of-way or front property line and the public alley. Many of the properties have frontages that are completely developed with the exterior walls abutting the building on the adjacent lots. Therefore stormwater runoff currently drains toward the existing gutter line.

Since raising the cartway and a portion of the existing sidewalk will present a barrier to stormwater runoff, provisions for stormwater management must be provided.

Intersection Elevations and Stormwater Infrastructure

As indicated previously, the highest cartway, sidewalk and general floor elevations are at mid-block between the intersecting numbered streets and stormwater runoff flows within the gutter line to stormwater inlets at the street intersections.

Raising the intersection elevations will require additional transition improvements from the raised Asbury Avenue sidewalk to the existing sidewalk along the intersecting streets. Raising the intersection stormwater inlet grates will result in the establishment of new low points along the intersecting street gutter lines that will most likely require installation of additional stormwater infrastructure.

Typical Lot Width & Future Building Access

The typical lot width along Asbury Avenue is 30 feet. Since the desire is to have the first floor elevations of future buildings significantly higher than existing, the ability to provide handicapped access to the future buildings from the existing sidewalk elevation is critical. The preferred means of providing handicapped access is via a ramp meeting ADA requirements.

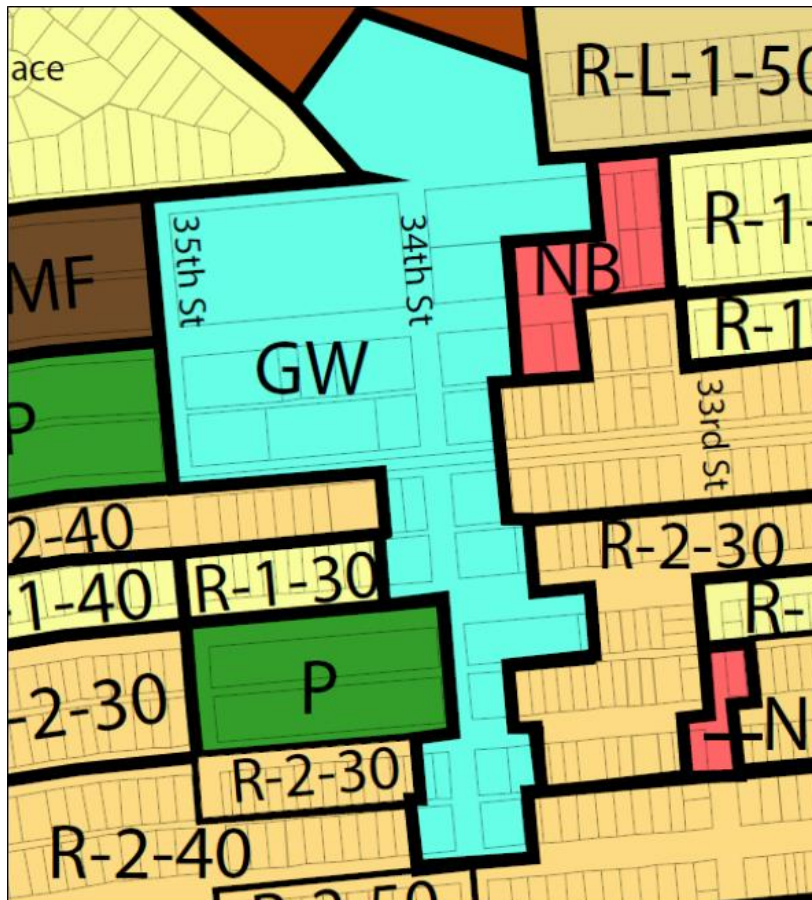
For the purposes of this study, it is assumed that the future buildings will be constructed to the full lot width (zero side yard setback as permitted by Ocean City Zoning Ordinances). Therefore ramps will need to be oriented parallel to the building frontage and have a scissor design that will maximize the height of the floor above existing grade. This design would involve a main landing at the building entrance located at the end of the building and a mid-level landing at the opposite end of the building. Under this scenario, the maximum height of the building floor above existing grade is approximately 2.8 feet. It's anticipated that the total ramp assembly width would be on the order of 10 feet. This would result in buildings being setback approximately 14 feet from the ROW line or 10 feet behind the existing building line.

The future floor elevations represent an important design parameter for the vertical extent of the

cartway raising as the future buildout condition would preferably preclude building access steps or handicapped barriers

34th Street Gateway Corridor

The 34th Street Gateway District includes all lots adjacent to 34th Street between the easterly side of Bay Avenue and extending to the westerly side of Central Avenue, and including all cross streets within the designated area.



[Building Floor Elevations & Access](#)

The grade level floor elevations associated with the existing buildings along the 34th Street corridor will have a major impact on the ability to raise the cartway and still provide sufficient slope (1% minimum for sheet flow) away from the buildings and toward the gutter.

[Building Setbacks & Sidewalk Widths](#)

Although the existing buildings are generally setback in excess of ten feet from the curb line, the width between the buildings and curb line affects the ability to provide a transition slope if

the building first floors are raised or the street cartway is raised independent of each other.

[Alley & Adjacent Driveway Grade Transitions](#)

Raising the cartway will need to be sensitive to the additional improvements required to provide safe vehicular and pedestrian access along the corridor. These improvements may include “ramped” access driveways and stormwater infrastructure to accommodate any resultant changes in runoff patterns.

[Stormwater Infrastructure](#)

The controlling factors regarding the raising of the portion of 34th Street are the intersecting street elevations and the elevations of the adjacent parking lots and driveways.



34 Street Gateway at Bay Avenue looking east

[Intersection Elevations and Stormwater Infrastructure](#)

Raising the intersection elevations will require additional transition improvements from the any new sidewalk to the existing sidewalk along the intersecting streets. Raising the intersection stormwater inlet grates will result in the establishment of new low points along the intersecting street gutter lines that will most likely require installation of additional stormwater infrastructure.

9th Street Gateway Concept Plan

Central Avenue to Asbury Avenue

Cartway & Sidewalk Elevations

The controlling factor regarding the raising of this portion of 9th Street are the building first floor elevations along the cartway including the City Hall ground floor at elevation 5.72. The centerline elevations can be raised from an average elevation of 5.05 (ranging from 4.70 to 5.61) to 5.60 and therefore achieve the goal of matching the Central Avenue intersection elevation (5.61).

Southern Curb and Gutter Line - The existing average southern gutter elevation is 4.31 (ranging from 4.08 to 4.86). The average top curb elevation is 4.68. The average gutter elevation could be raised to 4.90+/- or approximately 0.60 feet above existing. The corresponding average top curb elevation would be 5.50+/- and provide a maximum 2% slope away from the building entries. The westerly gutter low points (El. 4.16 and 4.08) would be raised to elevations 4.75 and 4.80 or approximately 0.60 to 0.72 feet. The easterly gutter low point would be raised from elevation 4.32 to 4.80.

Northern Curb and Gutter Line - The existing average northern gutter elevation is 4.40 (ranging from 3.94 to 4.64). The average top curb elevation is 4.90. The average gutter elevation could be raised to 4.90+/- or approximately 0.50 feet above existing. The corresponding average top curb elevation would be 5.40+/- and provide sufficient sidewalk slope away from the building entries. The westerly gutter low point (El. 4.39) would be raised to elevation 4.75 or approximately 0.35 feet. The easterly gutter low points would be raised from elevation 3.94 and 4.40 to 4.60 and 4.80. A summary of potential cartway elevations and extent of raising is provided in Figure No. 1.

Pedestrian Sidewalk Improvements

Raising the cartway will include the reconstruction of the 10 feet wide concrete sidewalk between the curb and property line or 14 feet width the curb and building line. This will allow for a two-way pedestrian walkway that can be integrated with outside dining areas.

Stormwater Infrastructure Improvements

The stormwater infrastructure improvements are expected to be limited to raising the existing inlet grates to elevations as shown in Figure No. 2 and not involve additional stormwater infrastructure. The inlets between Central Avenue and Asbury Avenue could be raised approximately 4 to 9 inches. The potential inlet elevations would range between 4.75 and 4.80.

Figure No. 1

9th Street Gateway Raising Summary

Existing 9th Street Corridor Elevations						
9th Street Corridor Section	Centerline Elevations		South Gutter Elevations		North Gutter Elevations	
	Average	Lowest	Average	Lowest	Average	Lowest
Central Ave. to Asbury Ave.	5.05	4.70	4.31	4.08	4.40	3.94
Asbury Ave. to West Ave.	4.15	3.83	3.41	3.14	4.00	2.96
West Ave. to Bay Ave.	4.49	4.15	3.49	3.16	3.42	3.12
Bay Ave. to Bridge	5.07	4.47	3.80	3.49	3.46	2.95

Potential 9th Street Corridor Elevations						
9th Street Corridor Section	Centerline Elevations		South Gutter Elevations		North Gutter Elevations	
	Average	Lowest	Average	Lowest	Average	Lowest
Central Ave. to Asbury Ave.	5.60	5.60	4.95	4.80	4.85	4.60
Asbury Ave. to West Ave.	5.60	5.60	4.45	4.00	4.45	3.90
West Ave. to Bay Ave.	5.60	5.60	4.35	4.10	4.35	4.00
Bay Ave. to Bridge	5.87	5.65	5.15	5.00	5.00	4.65

Potential Extent of 9th Street Corridor Raising						
9th Street Corridor Section	Centerline Raising Height (Feet)		South Gutter Raising Height (Feet)		North Gutter Raising Height (Feet)	
	Average	Lowest	Average	Lowest	Average	Lowest
Central Ave. to Asbury Ave.	0.55	0.90	0.64	0.72	0.45	0.66
Asbury Ave. to West Ave.	1.45	1.77	1.04	0.86	0.45	0.94
West Ave. to Bay Ave.	1.11	1.45	0.86	0.94	0.93	0.88
Bay Ave. to Bridge	0.80	1.18	1.35	1.51	1.54	1.70

[Side Street/Alley Improvements](#)

Raising the gutter lines will require the regrading and reconstruction of a portion of the intersecting mid-block alleys.

[Streetscape Improvements](#)

Street trees were considered along this portion of 9th Street, however, it appears that the area required to be dedicated for trees would impact the sidewalk width and pedestrian walkway along this main corridor between Asbury Avenue and the Boardwalk.

Decorative pavers could be installed that would match the existing paver and concrete walkway between Asbury Avenue and West Avenue. There is the potential to replace the existing area street lighting with ornamental lighting that would match the street lighting between West Avenue and the bridge.

Benches and trash receptacles could potentially be provided considering this is the primary pedestrian route between the downtown commercial area and the boardwalk and beach.

Figure 2

9th Street Gateway –Inlet Raising Summary

9th Street Corridor Inlet Raising Summary			
9th Street Corridor Section	Inlet Gate Elevations		Elevation Increase (Feet)
	Existing	Potential	
Central Ave. to Asbury Ave.	4.31	4.80	0.49
	4.40	4.80	0.40
	4.39	4.75	0.36
	4.08	4.80	0.72
Asbury Ave. to West Ave.	3.89	4.75	0.86
	3.08	3.90	0.82
	3.00	4.00	1.00
West Ave. to Bay Ave.	3.31	4.15	0.84
	3.42	4.10	0.68
	3.16	4.50	1.34
	3.03	4.50	1.47
	3.29	4.50	1.21
	3.29	4.65	1.36
	3.15	4.00	0.85
	3.19	4.60	1.41
	3.14	4.18	1.04
	3.10	4.00	0.90
	Bay Ave. to Bridge	3.00	5.00
3.49		5.15	1.66
3.49		5.12	1.63
3.00		5.05	2.05
2.95		5.05	2.10
3.76		5.20	1.44
	4.71	4.71	0.00

Asbury Avenue to West Avenue

Cartway & Sidewalk Elevations

The controlling factor regarding the raising of this portion of 9th Street is the building first floor elevations along the cartway which are limited to Collette (El. 5.28) and Domino’s (El. 5.61) at the corner of 9th Street & Asbury Avenue and Luigi’s (El. 4.90) at the southeast corner of 9th Street and West Avenue. The City park and public parking exists along the north side and Luigi’s parking lot is located along the south side.

The centerline elevations can be raised from an average elevation of 4.15 (ranging from 3.83 to 4.52) to 5.60 and therefore achieve the goal of matching the Central Avenue intersection elevation (5.61).

Southern Curb and Gutter Line - The existing average southern gutter elevation is 3.41 (ranging from 3.14 to 4.11). The average top curb elevation is 3.83. The average gutter elevation could be raised to 4.45+/- or approximately 12 inches above existing. The corresponding average top curb elevation would be 4.80+/- based on a 4 inch curb reveal along this section of 9th Street. The

estimated top curb elevations will provide sufficient sidewalk slope away from the building entries. The westerly gutter low point (El. 3.00+/-) would be raised to elevations 4.00 or approximately 12 inches.

Northern Curb and Gutter Line - The existing average northern gutter elevation is 4.00 (ranging from 2.96 to 4.40). The average top curb elevation is 4.45. The average gutter elevation could be raised to 4.40+/- or approximately 0.40 feet above existing. The corresponding average top curb elevation would be 4.90+/- and provide sufficient sidewalk slope away from the building entries. The gutter low point (El. 4.39) at the alley would be raised to elevation 3.90 or approximately 0.80 feet. The easterly gutter low point would be raised from elevation 3.89 to 4.75 or approximately 0.85 feet.

A summary of potential cartway elevations and extent of raising is provided in Figure No. 1.

Pedestrian Sidewalk Improvements

Raising the cartway will include the reconstruction of the 10 feet wide concrete and paver sidewalk between the curb and property line.

Stormwater Infrastructure Improvements

The stormwater infrastructure improvements should be limited to raising the existing inlet grates to elevations as shown in Figure No. 2 and not involve additional stormwater infrastructure. The inlets between Asbury Avenue and West Avenue could be raised approximately 10 to 12 inches. The potential inlet elevations would range between 3.90 and 4.75.

Side Street/Alley Improvements

Raising the gutter lines will require the regrading and reconstruction of a portion of the intersecting mid-block alleys.

Streetscape Improvements

Street trees and decorative paver and concrete sidewalks exist along this portion of 9th Street. There is the potential to replace the existing area street lighting with ornamental lighting that would match the street lighting between West Avenue and the bridge. Benches and trash receptacles could potentially be provided.

West Avenue to Bay Avenue

Cartway Elevations & Extent of Raising

The controlling factors regarding the raising of this portion of 9th Street are the intersecting street elevations and the elevations of the adjacent parking lots and driveways. Buildings are typically

setback much further in this portion of the 9th Street corridor and have first floor elevations that are typically higher than the area between Central Avenue and West Avenue.

The centerline elevations can be raised from an average elevation of 4.49 (ranging from 4.15 to 4.90) to 5.60 and therefore achieve the goal of matching the Central Avenue intersection elevation (5.61).

Southern Curb and Gutter Line - The existing average southern gutter elevation is 3.49 (ranging from 3.16 to 4.30). The average gutter elevation could be raised to 4.35+/- or approximately 0.86 feet above existing. The lowest gutter elevation could be raised from 3.16 to 4.10 or 0.94 feet.

Northern Curb and Gutter Line - The existing average northern gutter elevation is 3.42 (ranging from 3.12 to 4.50). The average gutter elevation could be raised to 4.35+/- or approximately 0.93 feet above existing. The lowest gutter elevation could be raised from 3.12 to 4.00 or 0.88 feet.

A summary of potential cartway elevations and extent of raising is provided in Figure No. 1.

[Pedestrian Sidewalk Improvements](#)

Raising the cartway would include the reconstruction of the 10 feet wide concrete and paver sidewalk between the curb and property line along the south side of 9th Street.

The cartway would also include the reconstruction of the 6 feet wide concrete sidewalk along the majority of the south side of 9th Street. It's expected that the 6 feet wide concrete sidewalk would be extended along the existing Wiesenthal's Service Station and Sunoco Gas Station frontages to provide a defined pedestrian walkway while still providing vehicular access at driveways. The sidewalk area crossing driveways is expected to be defined utilizing a differential surface treatment or painted crosswalk.

[Stormwater Infrastructure Improvements](#)

The stormwater infrastructure improvements should be limited to raising the existing inlet grates to elevations as shown in Figure No. 2 and not involve additional stormwater infrastructure.

The inlet grates between West Avenue and Bay Avenue could be raised approximately 8 to 18 inches. The potential inlet elevations would range from 4.00 to 4.65.

[Side Street/Alley Improvements](#)

Raising the gutter lines will require the regrading and reconstruction of a portion of the intersecting mid-block alleys and the intersecting streets. This would include the provision of new inlets and drainage pipe at the newly formed gutter low points as a result of the 9th Street cartway raising.

Adjacent Property Improvements

South Side - A portion of the McDonald's and Commuter parking lots will need to be reconstructed to provide driveway access from the raised cartway and to provide positive drainage to the new inlets along Haven Avenue and within the alley.

The existing Pirate's Cove facility and the commercial building under construction between Haven Avenue and Simpson Avenue have higher ground floor (8.37 & 8.74 respectively) and site elevations so that any required on-site improvements associated with the cartway and adjacent sidewalk raising should be minimal.

The commercial business facility parking lot on the northwest corner at Simpson Avenue will need to be reconstructed to provide driveway access from the raised cartway and to provide positive drainage to the new inlets along Simpson Avenue and within the alley. It's expected that the development of the vacant lot on the southwest corner at Bay Avenue will be sensitive to the potential cartway raising.

North Side - The gas stations and ACME access driveways will need to be reconstructed to provide access from the raised cartway and stormwater infrastructure, including but not limited to inlets and collection pipe, will most likely be required to provide stormwater drainage.

A portion of the TD Bank parking lot and access driveway will need to be reconstructed to provide driveway access from the raised cartway and to provide positive drainage to the raised inlets along 9th Street the new inlet required along Bay Avenue.

Streetscape Improvements

Existing street trees and ornamental street lighting along the south side of 9th Street are expected to be maintained. Benches and trash receptacles could potentially be provided considering this is the primary pedestrian route between the downtown commercial area and the bridge pedestrian walk. The existing ornamental street lighting along the north side is expected to be maintained. The potential for the provision of street trees and other amenities along the north side is impacted by the lack of public right-of-way area beyond the curb line.

Bay Avenue to 9th Street Bridge

Cartway Elevations and Extent of Raising

The controlling factors regarding the raising of this portion of 9th Street are the intersecting street elevations at Pleasure Avenue, the elevations of the Island Beach Gear and Sherwin Williams parking lots and driveways and the Sherwin Williams floor elevation. The north side of 9th Street should not have any impact on the future cartway raising as these properties are vacant.

The centerline elevations can be raised from an average elevation of 5.07 (ranging from 4.47 to 6.00) to 5.87 and therefore achieve the goal of matching the Central Avenue intersection elevation (5.61).

Southern Curb and Gutter Line - The existing average southern gutter elevation is 3.80 (ranging from 3.07 to 5.37). The average gutter elevation could be raised to 5.15+/- or approximately 1.35 feet above existing. The lowest gutter elevation could be raised from 2.95 to 5.00 or 2.05 feet. A summary of potential cartway elevations and extent of raising is provided in Figure 1.

Pedestrian Sidewalk Improvements

Raising the cartway would include the reconstruction of the 10-foot wide concrete and paver sidewalk between the curb and property line along the south side of 9th Street. The cartway would also include the reconstruction of the 4-foot wide concrete sidewalk along the south side of 9th Street.

Stormwater Infrastructure Improvements

The stormwater infrastructure improvements should be limited to raising the existing inlet grates to elevations as shown in Figure No. 2 and not involve additional stormwater infrastructure. The inlet grates between Bay Avenue and the bridge at the expected point of matching elevations (beginning of guardrail on north side) could be raised approximately 18 to 24 inches. The potential inlet elevations would range from 4.71 to 5.20. The trench drains at the driveways along the north side of 9th Street will need to be raised/reconstructed.

Side Street Improvements

Raising the gutter lines will require the regrading and reconstruction of a portion of Pleasure Avenue. This should not require the installation of new inlets or stormwater infrastructure.

Adjacent Property Improvements

South Side - A portion of the Island Beach Gear and Sherwin Williams parking lots will need to be reconstructed to provide driveway access from the raised cartway and to provide positive drainage to the raised inlets along 9th Street and/or the existing inlets along Pleasure Avenue.

North Side - The two former gas station properties along the north side of 9th Street are currently City owned vacant land and it is expected that any future development will take into consideration the potential for the subject roadway raising. Raising the cartway is expected to be limited to the existing northerly bridge guardrail which is at the easterly portion of the Bud's Outboard Marine property. The extent of cartway raising should be minimal in this area and therefore any required site improvements required for access to the property should be minimal.

Streetscape Improvements

The existing street trees and ornamental street lighting along the south side of 9th Street are expected to be maintained. Benches and trash receptacles could potentially be provided considering this is the primary pedestrian route between the downtown commercial area and the bridge pedestrian walk. The existing ornamental street lighting along the north side is expected to be maintained. The potential for the provision of street trees and other amenities along the north side is impacted by the lack of public right-of-way area beyond the curb line.

Phasing Plan

Due to the low stormwater inlet grate elevations (El. 3.00+/-) along the northerly curb line west of Bay Avenue (El. 3.00+/-) and between West Avenue and Bay Avenue (El. 3.15+/-) it would be appropriate to phase the potential improvements described above. Improvements between West Avenue and the bridge would comprise Phase 1. Phase 2 would extend from Central Avenue to West Avenue and could potentially be performed in connection with the Asbury Avenue improvements described within this assessment.

Central Business District Concept Plan

Cartway Width Reduction and Sidewalk Width Increase

In order to provide the additional “sidewalk area” width required for transition between an upper cartway /walkway and a lower walkway along the building fronts, the cartway needs to be reduced in width.

The AASHTO “Policy on Geometric Design of Highways and Streets” indicates that 12-foot wide travel lanes are desirable, however, “in urban areas where pedestrian crossings, right-of-way, or existing development become stringent controls, the use of 11-foot lanes is acceptable”

The cartway width also includes parallel parking spaces. The AASHTO standard cited above indicates a desirable minimum parking lane width of 8 feet. However, the AASHTO standard also states:

“On urban collector streets with residential neighborhoods where only passenger vehicles need to be accommodated in the parking lane, 7 foot parking lanes have been successfully used. In fact, a total width of 36 feet, consisting of two travel lanes of 11 feet and parking lanes of 7 feet on each side, is frequently used.”

It should be noted that the parking lanes along Asbury Avenue are typically used for passenger

vehicles only and are not typically used for commercial loading or other traffic operations.

The Residential Site Improvement Standards (RSIS) (NJAC 5-21, 2013) provide standards for roadway design including right-of-way and cartway widths based on the intensity of roadway use. Although the uses along Asbury Avenue are predominantly commercial, these standards have also been considered.

Asbury Avenue is considered to be a “minor collector” with medium to high intensities for the purposes of this study. Figure 3 indicates the RSIS standards for Minor Collectors with two parking lanes. The standard cartway width is 36 feet with a 22-foot wide traveled way and two 7-foot wide parking lanes consistent with the AASHTO standards described above. The NJDOT Roadway Design Manual also states that lane widths of 11 feet in urban areas are acceptable.

The existing Asbury Avenue right-of-way is 65 feet wide and the cartway is 45 feet wide. Based on the design standards described above, it appears that the cartway width could be reduced by 9 feet to 36 feet and still maintain 7-foot wide parking lanes on both sides of the street. Therefore, the adjacent sidewalk widths within the right-of-way could be increased from 10 feet to 14.5 feet on each side of the street.

Since the buildings are typically setback four feet from the ROW line in conformance with the minimum setback per Ocean City ordinances, the actual future pedestrian sidewalk width would be 18.5 feet. The potential improvements are provided in section in Figure No. 4.

Typical Lot Width & Future Building Access

The typical lot width along Asbury Avenue is 30 feet. Since the desire is to have the first floor elevations of future buildings be significantly higher than existing, the ability to provide handicapped access to the future buildings from the existing sidewalk elevation is critical. The preferred means of providing handicapped access is via a ramp meeting ADA requirements. An alternative means may be to provide a mechanical lift or elevator.

For the purposes of this study, it's assumed that the future buildings will be constructed to the full lot width (0 side yard setback as permitted by Ocean City Zoning Ordinances). Therefore ramps will need to be oriented parallel to the building frontage and have a scissor design that will maximize the height of the floor above existing grade. This design would involve a main landing at the building entrance located at the end of the building and a mid-level landing at the opposite end of the building as indicated in Figure No. 5. Under this scenario, the maximum height of the building floor above existing grade is approximately 2.8 feet. It's anticipated that the total ramp assembly width would be on the order of 10 feet. This would result in buildings being setback approximately 14 feet from the ROW line or 10 feet behind the existing building line.

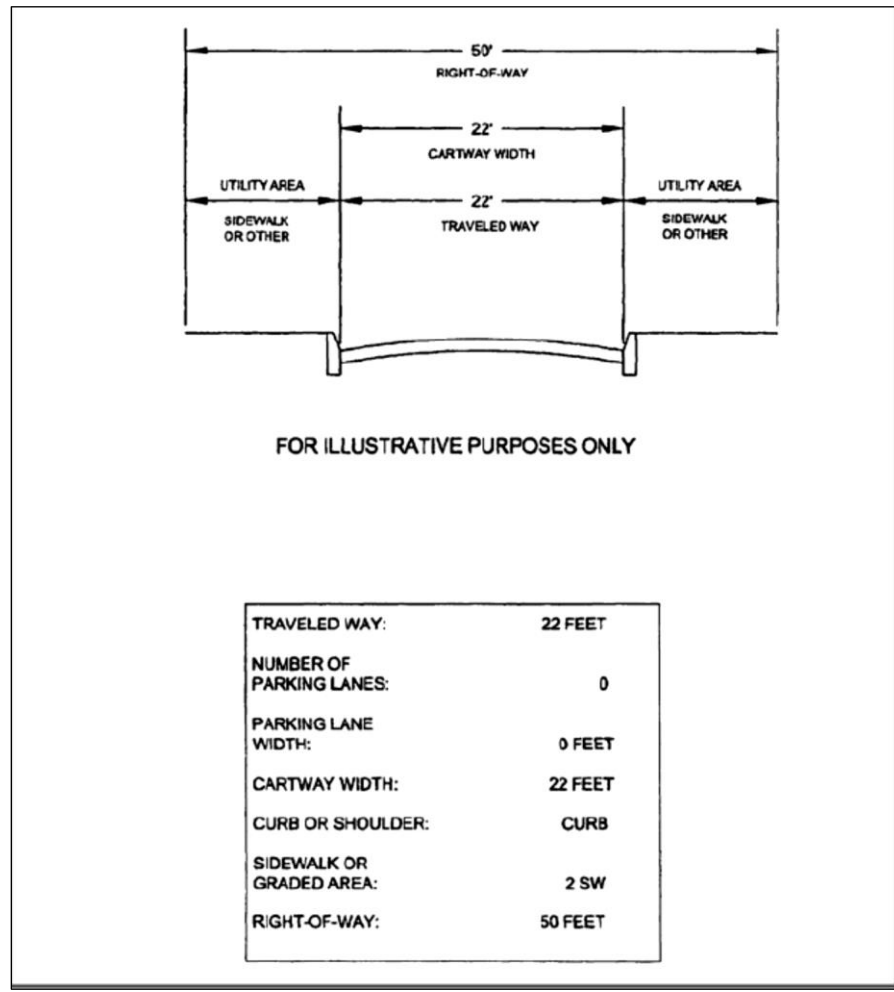
The future floor elevations represent an important design parameter for the vertical extent of the cartway raising as the future buildout condition would preferably preclude building access steps or handicapped barriers.

Maximum Future Top Curb Elevation

The elevation relationship between the future building first floor elevations and the maximum curb elevations along the property frontage can be established based on the provision of a maximum 2% sidewalk cross slope. If the building is setback approximately 25 feet from the curb, the new curb elevation should be 0.50 feet or 6 inches lower than the building floor. Therefore the new curb elevations along Asbury Avenue should be set at approximately 2.3 feet above the existing sidewalk elevation at the building frontages.

Figure 3

Minor Collector – Medium/High Intensity w/ Two Parking Lanes



Interim Retaining Wall with Integrated Seating.

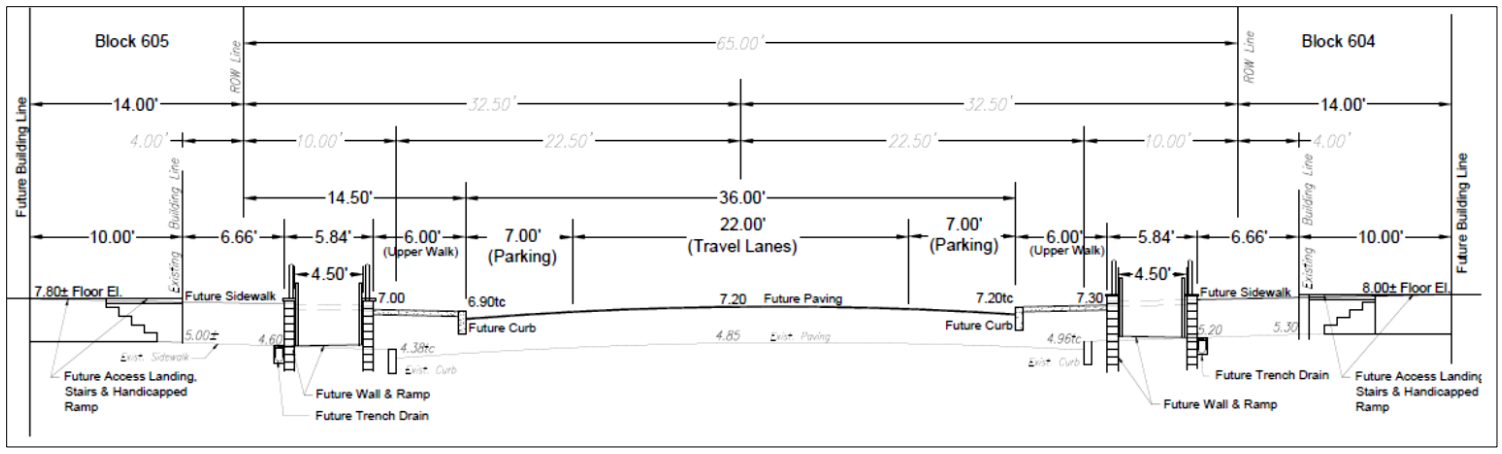
Raising the cartway and a portion of the adjacent sidewalk will require an interim retaining wall that will separate the upper level walk and the lower level walk along the buildings. The wall is expected to be a decorative block wall with a stone cap that will be approximately 12 inches wide and 15 to 18 inches high measured from the upper level walk. The upper level walk width will need to provide for a pedestrian access way as well as sufficient width for parking meters, street lights and amenities such as trash receptacles, etc. A 9-foot wide sidewalk width will provide a 6-foot pedestrian access way along the wall and a 3-foot wide area along the curb for street lighting, parking meters, amenities, etc.

The remaining area between the interim retaining wall and the building frontages will be approximately 8.5 feet wide.

The interim retaining wall is expected to terminate at the end of each block at a point approximately 35 feet from the intersecting street curb line. The distance from the intersecting street curb line will be similar to the beginning of the curb transition described in a following section. The potential improvements are provided in section in Figure No. 4.

Figure 4

Potential Asbury Avenue Raising – Mid-block 600



Interim Mid-Block Stair/Ramp Access

Access between the upper and lower walkways will be provided at each end of the block as well as at mid-block. It's expected that the greatest vertical separation between the upper and lower walks will occur at mid-block and therefore the allowable area for transition will be an issue

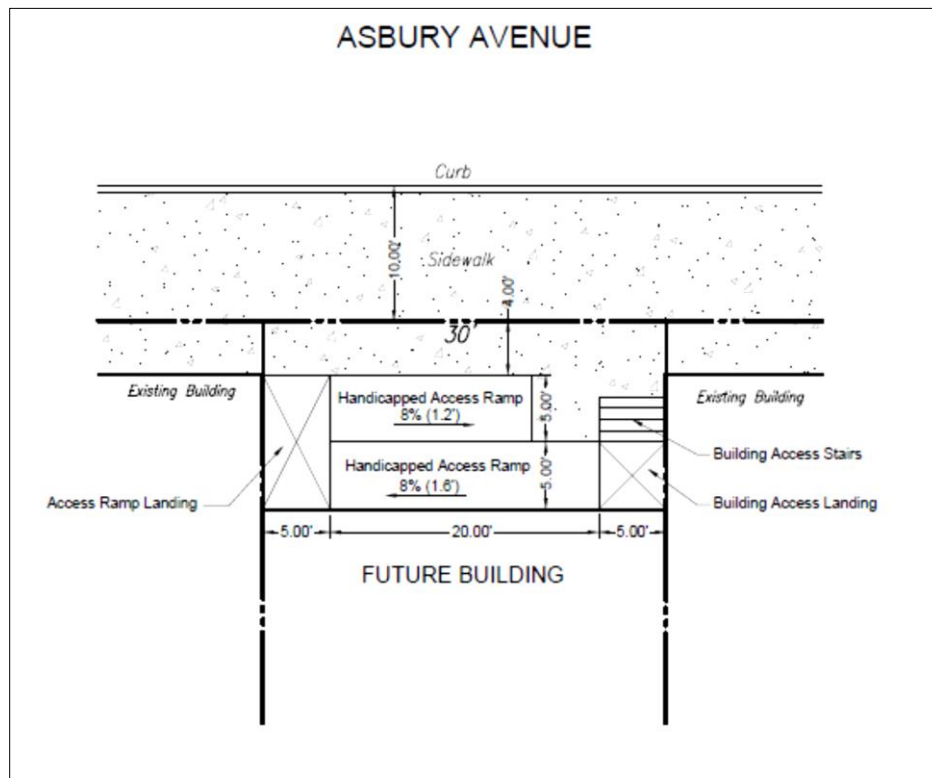
controlling the extent of the cartway raising.

If the maximum curb elevation based on the future building floors is 2.3 feet higher than the elevation at the building frontage, the elevation change between the upper and lower walks will be approximately 2.8 feet at mid-block. This will require five stair risers and a 35 feet long handicapped ramp to provide the mid-block access. The maximum ramp length without a mid-level landing is 30 feet. In an effort to limit the ramp impact on the sidewalk area, etc., the upper to lower level mid-block grade transition will be limited to 2.5 feet which would require a 30-foot long ramp

The maximum height of a walkway above adjacent grade without a railing is 30 inches based on the Uniform Construction Code (UCC). Therefore, in order to not block the view of the building frontages that would result from a railing the recommended maximum elevation difference between the upper walk and the lower existing walk is 30 inches.

Figure 5

Future Building Access (30 FT Lot)



The improvement concept is to provide a mid-block stair and handicapped ramps paralleling the building frontages and extending from the lower level to the upper level in a northerly and

southerly direction. The width of the ramp from the street side of the retaining wall to the inside edge of the ramp will be approximately 5 feet.

The provision of the handicapped ramps will result in a 6 feet wide upper level walk and a 7.5 feet wide lower walk between the ramp and the building. The additional width on the lower walk will accommodate door swings, etc. The potential improvements are provided in section in Figure No. 4.

Mid-Block Crosswalk & Sidewalk Extension

The mid-block stairway should be oriented perpendicular to the building and roadway and extend into the upper level sidewalk area. The provision of a mid-block curb and sidewalk projection into the cartway could provide sufficient area for pedestrians to bypass the stairs.

The mid-block curb and sidewalk projection could extend into the cartway 7 feet (to the limit of parking) and be integrated with the mid-block painted crosswalk. The projection should be considered a means of “traffic calming” and also result in the pedestrian crosswalks being more identifiable to motorists.

End-of-Block Curb Transition to Existing Curb Alignment

Maintaining of the existing curb alignment at the street intersections is recommended so that the existing inlets do not need to be relocated. The curb transition from the new to the existing curb alignment should begin 35 feet from the intersecting street curb line. The transitional curb will not have an impact on parking since this portion of the curb is required to be painted yellow.

On-Street Parking

The provision of the mid-block curb and sidewalk projection will not have an impact on the provision of on-street parking through the re-stripping of the parking spaces. The length of the existing parallel parking spaces along Asbury Avenue generally ranges from 20 feet to 30 feet. The Ocean City Ordinances require parallel parking spaces to have a 19-foot length. The 2009 USDOT Manual on Uniform Traffic Control Devices (MUTCD), Section 3B.19 provides examples of on-street parallel parking spaces with a typical length of 20 feet for end spaces and 22 to 26 feet for interior spaces.

Approximately 40 parking spaces are currently provided along Asbury Avenue in each block. The recommended re-stripping in association with the described improvements will result in 7' x 22' spaces and 40 spaces will continue to be provided.

Elimination of non-residential parking requirements could be considered to offset the potential increase in front yard building setback. However, parking for residential units should be

provided as is currently required by the City Code and the Residential Site Improvement Standards.

Trench Drain

A trench drain should be provided along the back side or building side of the proposed retaining wall separating the upper and lower level pedestrian walkways. The trench drain will collect storm water runoff as the existing sidewalk is sloped to the street. The trench drain will be connected to the existing stormwater infrastructure at the street intersection via storm pipe.

End-of-Block/Intersection Improvements

Raising the intersecting street intersections including the curb and sidewalk at the intersection corners will require a transition from the raised intersection to the existing sidewalk elevations between the retaining wall and the building frontage. The transition slope should not exceed 5%. A slope greater than 5% would be considered a handicapped ramp and require handrails. The transition elevation difference is expected to be approximately 12 inches and therefore, the transition should be approximately 20 feet long as measured from the end of the retaining wall.

The trench drain along the back of the retaining wall as described previously is expected to terminate at the “low point” and approximately 20 feet from the end of the retaining wall.

The ability to raise the intersection cartway and corner sidewalk area will be limited by the first floor elevations of the corner buildings. At several intersections, the extent of raising is limited to less than 12 inches due to the need to provide slope from the building entry to the curb and not have barriers to access. If the intersection is to be raised to an elevation greater than the existing corner building floor elevation, it would require the extension of the retaining wall separating the upper and lower walks around the corner and down the numbered side streets. This is considered impractical due to the interruption of pedestrian access.

Side Street Stormwater Improvements and Paving Transition

Raising the street intersections will require raising the existing stormwater inlets at the intersection corners. This will not be an issue for the Asbury Avenue gutter flow as well as the numbered street inlets west of Asbury Avenue. The numbered street gutter lines generally slope away from Asbury Avenue currently and therefore the raising of the inlets at the intersection will not result in a change to the direction of flow.

However, the gutter line east of Asbury Avenue slopes toward the Asbury Avenue intersection inlets. Therefore the raising of the inlets along the numbered intersecting streets east of Asbury Avenue will result in the relocation of the gutter low point. This will require the relocation of the existing inlets or the installation of new inlets at the created low point.

Future Building First Floor Elevations

The future building first floor elevations can be projected taking into consideration the existing sidewalk and floor elevations, the limited ability to provide handicapped access to future buildings, limited access between the upper and lower walks in the extended interim condition and the desire to eliminate the need for steps or ramps at the building entries at build out. The future top curb and building first floor elevations for each block in the study area are summarized in Figures No. 6 and 7. The highest estimated first floor elevations (7.40+/- to 8.50+/-) are associated with the mid-block buildings with the floor elevations being lower toward the end of each block consistent with the future curb elevations. The building first floor elevations at the block corners are expected to range from 4.80+/- to 6.25+/-.

The average future building floor elevations between 8th Street and 14th Street exceed elevation 7.28 with the lowest future elevations being 6.00+/- at the block ends. The 7.28 elevation is higher than the tidal flooding elevation associated with Superstorm Sandy (elevation 7.25). The 6.00 elevation is the same as the tidal flooding elevation associated with “The Perfect Storm” on October 31, 1991. The flooding associated with this storm was exceeded by only four other storm events. The average future building floor elevations between 6th Street and 8th Street range from 6.06 to 7.02 with the lowest future elevation being 5.30.

The minimum first floor elevation for new commercial buildings along Asbury Avenue should be based on the height above the existing sidewalk elevation at the mid-point of the front property line. The height above existing sidewalk should be a minimum of 2.3 feet which will enable a scissor handicapped ramp on a typical 30-foot wide lot and allow for a 2% sidewalk cross slope in the future build-out condition. The height could be increased to 2.8 feet with the expectation that steps and ramps may still be required after the Asbury Avenue roadway is raised.

Figure 6
Elevation Raising Summary (600-900 Blocks)

	Existing Curb Elev.	Future Curb Elev.	Elev. Increase	Exist. Elev. @ Bldg	Future Building 1st Floor Elev.	1st Floor Ht. Above Exist Elevation at Property Line (Ft.)	1st Floor Ht. Above Future Curb Elev. (Ft.)	Average Future Building Floors	
Block 604 (East)									
Mid-Block High Pt.	4.96	7.20	2.24	5.40	7.70	2.30	0.50	7.40	Middle Lots
6th Street End									
7th Street End	4.08	4.78	0.70	4.30	5.35	1.05	0.57	5.80	Last 2 lots
Average Building Elev.								6.28	
Block 605 (West)									
Mid-Block High Pt.	4.38	6.90	2.52	5.08	7.40	2.32	0.50	7.10	Middle Lots
6th Street End									
7th Street End	3.78	4.78	1.00	4.30	5.30	1.00	0.52	5.90	Last 2 lots
Average Building Elev.								6.06	
Block 707 (East)									
Mid-Block High Pt.	4.88	7.10	2.22	5.30	7.60	2.30	0.50	7.30	Middle Lots
7th Street End	4.24	5.24	1.00	5.05	5.74	0.69	0.50	6.19	Last 2 Lots
8th Street End	4.2	5.2	1.00	4.95	5.70	0.75	0.50	6.15	Last 2 lots
Average Building Elev.								7.02	
Block 708 (West)									
Mid-Block High Pt.	4.73	7.05	2.32	5.23	7.55	2.32	0.50	7.25	Middle Lots
7th Street End	3.91	4.33	0.42	4.60	4.83	0.23	0.50	5.28	Last 2 Lots
8th Street End	3.95	4.60	0.65	4.55	5.10	0.55	0.50	5.55	Last 2 lots
Average Building Elev.								6.79	
Block 806 (East)									
Mid-Block High Pt.	5.00	7.50	2.50	5.50	8.00	2.50	0.50	7.70	Middle Lots
8th Street End	4.02	5.00	0.98	5.25	5.50	0.25	0.50	5.95	Last 2 Lots
9th Street End	4.45	5.25	0.80	4.60	5.75	1.15	0.50	6.2	Last 2 lots
Average Building Elev.								7.29	
Block 807 (West)									
Mid-Block High Pt.	4.97	7.50	2.53	5.75	8.00	2.25	0.50	7.70	Middle Lots
8th Street End	4.01	5.25	1.24	5.75	5.75	0.00	0.50	6.2	Last 2 Lots
9th Street End	4.24	5.25	1.01	5.50	5.75	0.25	0.50	6.2	Last 2 lots
Average Building Elev.								7.33	
Block 904 (East)									
Mid-Block High Pt.	5.30	7.80	2.50	6.05	8.30	2.25	0.50	8.00	Middle Lots
9th Street End	4.52	5.25	0.73	5.00	5.75	0.75	0.50	6.2	Last 2 Lots
10th Street End	4.66	5.25	0.59	5.50	5.75	0.25	0.50	6.2	Last 2 lots
Average Building Elev.								7.55	
Block 905 (West)									
Mid-Block High Pt.	5.20	7.70	2.50	6.25	8.20	1.95	0.50	7.90	Middle Lots
9th Street End	4.68	5.10	0.42	5.30	5.60	0.30	0.50	6.05	Last 2 Lots
10th Street End	4.54	5.00	0.46	5.30	5.50	0.20	0.50	5.95	Last 2 lots
Average Building Elev.								7.43	

Figure 7

Elevation Raising Summary (600-900 Blocks)

	Existing Curb Elev.	Future Curb Elev.	Elev. Increase	Exist. Elev. @ Bldg	Future Building 1st Floor Elev.	1st Floor Ht. Above Exist Elevation at Property Line (Ft.)	1st Floor Ht. Above Future Curb Elev. (Ft.)	Average Future Building Floors	
Block 1004 (East)									
Mid-Block High Pt.	5.48	8.00	2.52	6.15	8.50	2.35	0.50	8.20	Middle Lots
10th Street End	4.75	5.25	0.50	5.50	5.75	0.25	0.50	6.2	Last 2 Lots
11th Street End	4.99	5.75	0.76	5.95	6.25	0.30	0.50	6.7	Last 2 lots
Average Building Elev.								7.76	
Block 1005 (West)									
Mid-Block High Pt.	5.20	7.70	2.50	5.90	8.20	2.30	0.50	7.90	Middle Lots
10th Street End	4.76	5.25	0.49	5.00	5.75	0.75	0.50	6.2	Last 2 Lots
11th Street End	4.72	5.75	1.03	6.00	6.25	0.25	0.50	6.7	Last 2 lots
Average Building Elev.								7.54	
Block 1104 (East)									
Mid-Block High Pt.	5.52	8.00	2.48	6.00	8.50	2.50	0.50	8.20	Middle Lots
11th Street End	5.10	5.60	0.50	5.77	6.10	0.33	0.50	6.55	Last 2 Lots
12th Street End	4.67	5.50	0.83	5.85	6.00	0.15	0.50	6.45	Last 2 lots
Average Building Elev.								7.78	
Block 1105 (West)									
Mid-Block High Pt.	5.21	7.70	2.49	6.10	8.20	2.10	0.50	7.90	Middle Lots
11th Street End	4.73	5.75	1.02	6.25	6.25	0.00	0.50	6.7	Last 2 Lots
12th Street End	4.78	5.25	0.47	5.50	5.75	0.25	0.50	6.2	Last 2 lots
Average Building Elev.								7.54	
Block 1204 (East)									
Mid-Block High Pt.	5.32	7.80	2.48	5.80	8.30	2.50	0.50	8.00	Middle Lots
12th Street End	4.61	5.15	0.54	5.05	5.65	0.60	0.50	6.1	Last 2 Lots
13th Street End	4.68	4.90	0.22	5.13	5.60	0.47	0.70	6.05	Last 2 lots
Average Building Elev.								7.52	
Block 1205 (West)									
Mid-Block High Pt.	5.00	7.50	2.50	5.80	8.00	2.20	0.50	7.70	Middle Lots
12th Street End	4.51	4.90	0.39	5.12	5.40	0.28	0.50	5.85	Last 2 Lots
13th Street End	4.39	5.25	0.86	5.50	5.75	0.25	0.50	6.2	Last 2 lots
Average Building Elev.								7.28	
Block 1304 (East)									
Mid-Block High Pt.	5.27	7.70	2.43	5.75	8.20	2.45	0.50	7.90	Middle Lots
13th Street End	4.67	4.84	0.17	5.04	5.34	0.30	0.50	5.79	Last 2 Lots
14th Street End	4.88	5.50	0.62	6.00	6.00	0.00	0.50	6.45	Last 2 lots
Average Building Elev.								7.46	
Block 1305 (West)									
Mid-Block High Pt.	5.07	7.50	2.43	5.75	8.00	2.25	0.50	7.70	Middle Lots
13th Street End	4.54	5.15	0.61	5.40	5.65	0.25	0.50	6.1	Last 2 Lots
14th Street End	4.50	5.25	0.75	5.48	5.75	0.27	0.50	6.2	Last 2 lots
Average Building Elev.								7.31	

Future Building Setbacks

The front building setback along Asbury Avenue should be increased from 4 feet to 14 feet to allow for handicapped access and to allow for greater sidewalk width in the build-out condition. The front setback to handicapped access ramps and stairs should be 4 feet. This setback will maximize the interim sidewalk width along the building frontages.

The existing CBD zoning bulk requirements require a 4' rear yard setback and allow 90% building coverage and 100% impervious coverage. The potential building setback increase from 4 feet to 14 feet should not have a negative impact on redevelopment since the rear yard setback is only 4 feet. There is the potential to reduce the rear yard setback to offset the potential increased front building setback, however, the narrow alley width (15 feet) is a concern. Opportunities to utilize a “floating building envelope” are not available due to the existing 4-foot setback and alley width.

The additional area required for handicapped access (ramp and landing system) at the front of the buildings should not have a negative impact on re-development due to the associated additional impervious coverage since there is no limit per zoning.

Streetscape

Decorative pavers exist at street intersections along the entire Asbury Avenue business district and along some building frontages. The City is currently in the process of repairing sidewalks on Asbury Avenue. Future sidewalk improvements within the Central Business District will be concrete.

If the future redevelopment of the properties along Asbury Avenue results in a 14-foot setback and the cartway is narrowed from 45 to 36 feet as part of a future right-of-way raising, the resultant sidewalk width between the curb and buildings would increase from 14 to 28.5 feet. This additional sidewalk width would facilitate an area for street trees and an outdoor area for dining and or retail.

Currently ornamental street lighting exists between 6th Street and 11th Street. The potential exists for the existing area street lighting between 11th Street and 14th Street to be replaced with matching ornamental lighting.

Potential Phasing

Due to the extensive interim improvements that would be required, including the split level pedestrian walkway, the raising of the cartway and adjacent sidewalk could be delayed until a significant amount of the lots are redeveloped with raised building floors as described above.

Under this scenario, it is expected that the final design and roadway construction plans would be sensitive to the existing building floor elevations at that time.

Design Standards – (9th Street Gateway and Central Business District)

These design standards which incorporate elements of form based codes, apply to new development in the 9th Street Gateway and Central Business District. The 9th Street Corridor includes all properties fronting 9th Street between Central Avenue and the 9th Street Bridge. The Central Business District includes all properties fronting Asbury Avenue from 6th Street to 14th Street.

Minimum First Floor Standards.

- a. Minimum first floor elevations for all commercial land mixed-use buildings shall be in compliance with the NJDEP standard of twelve (12) inches above BFE or elevation 10.00 (NAVD 1988).
- b. Minimum 1st Floor Commercial Floor Area. Fifteen hundred (1,500) square feet or fifty percent (50%) of the lot area, whichever results in the greater floor area. (CBD only).
- c. The minimum required interior floor-to-ceiling height for new first floor commercial space shall be twelve feet (12'). This minimum ceiling height may be reduced to eight feet (8') when buildings are being renovated to comply with BFE requirements. (CBD only).
- d. Minimum Interior Store Width. Twenty-four feet (24'). (CBD only).

Front Façade (CBD only)

- a. Transparent windows equal in area to not less than forty-five percent (45%) of the first floor commercial unit's front facade are required subject to the following:
 - (1) Buildings located on corner lots shall meet this requirement for both street-facing facades.
 - (2) Windows shall use clear or lightly tinted glass, except for decorative or architectural accents, typical of commercial storefronts and not of the type utilized on residential dwellings. Reflective glass is not an acceptable window material.
 - (3) The percentage of glass shall be calculated by measuring the height (from the base of the front wall to the top of the first wall plate) and width of the front wall of the commercial unit, and the area of glass within the main frame(s) of the windows and doors. Frames, grids and mullions shall not be included in this calculation.
- b. Vinyl and aluminum siding on front facades is prohibited.
- c. Front facades shall be designed to be compatible with adjacent structures in terms of vertical and horizontal building elements, and to provide interest to pedestrians

- through the use of architectural relief, selection of materials and components, window and door frames, pediments, columns, etc.
- d. Where the side of a building is visible from an adjoining property or the public right-of-way, the design and materials used on the front facade shall be extended to at least one-third (1/3) of the building's side facade

Corner Lots

- a. Buildings located on corner lots shall treat both street frontages as front facades in terms of architecture, setbacks, balconies, porches and decks.
- b. Buildings on corner lots shall have the main entrance on the primary street (Asbury Avenue or Central Avenue). This requirement does not preclude additional rear or side entrances.

Front Entry

- a. An entry from the street providing access to the upper floors is required on all lots forty feet (40') or greater in width. This entry shall be secondary in terms of design to the primary access for the commercial space. (CBD only)
- b. All new structures shall have the primary entrance oriented toward the street or public walkway, with direct, barrier-free and convenient pedestrian access

Location Restrictions

- a. Utility meters: rear yard only
- b. Trash/recycling enclosures: rear yard only
- c. Air-conditioning compressors, dryer and oven vents: rear yard and roof only
- d. Electric, telephone and cable lines: underground if existing along Asbury Avenue
- e. Shutoffs, cleanouts and other similar utility elements: 1 foot off the curb and below grade along Asbury Avenue.

Roof Terrace and Decks

- a. Porches and decks are permitted at the rear second and third floor levels.
- b. Roof decks shall not be visible from the adjoining street(s), shall only be accessed by internal stairs, and shall be setback a minimum of six (6) feet from the edges of the building or shall be screened by a parapet not less than 3 feet high.
- c. Enclosure of rooftop areas, terraces, or balconies is not permitted; however, rooftop planters, fences below the height of the parapets or railings and outdoor furniture are allowed.
- d. No other structure or accessory use is permitted above a roof deck including without limitation, awnings anchored or otherwise, canopies, pergolas or other structures permanent or temporary.
- e. Flat roofs are to be enclosed by a parapet.

Street and Garden Walls, and Fences

- a. Garden walls that define the outdoor areas and separate the sidewalk from the private space (parking lots, trashcans, gardens and equipment) should be designed with the same material and finish as the main structure. Garden walls shall be a minimum of 8 inches thick and have a horizontal cap.
- b. Garden walls shall be a minimum of 24 inches and a maximum of 36 inches in height.
- c. Fences may be used in the rear yards to enclose trashcans. These shall be a maximum of 6' in height and shall be solid board wood fencing, and may have stucco or masonry piers. Chain link fences shall not be permitted.
- d. Sitting walls, between twelve inches (12") and twenty-four inches (24") in height and 18" deep, shall be incorporated whenever possible.
- e. Masonry piers with steel, aluminum or iron fencing may replace solid masonry walls.
- f. Hedges may not be used in place of garden walls or fences.

Lighting

- a. Exterior lighting should highlight building elements, signs, or other distinctive features and not the lighting feature itself.
- b. All building and site lighting fixtures shall be decorative.
- c. Design, size and location of lighting fixtures must be compatible with overall design of the building.
- d. Goose neck fixtures or shadowbox lighting are permitted for storefront lighting. Indirect lighting should be used whenever possible.
- e. Exterior building lighting should be appropriate to and complimentary with the building's architectural style.
- f. Accent lighting highlighting the building façade is encouraged
- g. Prohibited building lighting includes:
 - (1) Flashing, pulsating or moving lights or lights that produce excessive glare; and,
 - (2) Neon tubing surrounding display windows.

Utilities and Mechanical Equipment

- a. Roof-vent penetrations shall be located at least 10 feet from the primary exterior building face. Flat roofs are to be enclosed by a parapet to conceal rooftop mechanical equipment, HVAC, dryer vents.
- b. Bulkheads and/or mechanical equipment shall be enclosed on the roof, set back and housed in an enclosure utilizing the same material or comparable material as the rest of the building facades.
- c. Mechanical equipment, such as electrical transformer boxes, shall be screened to minimize views from the street. Decorative plantings or public art may be placed on/above the mechanical equipment enclosures.

Site Access, Driveways and Alleys.

- a. Driveway access shall be from the alley for all lots adjoining an alley
- b. Rear alleys providing access to parking, deliveries and service areas and shall comply with the following:
 - (1) Provide adequate lighting to ensure safety
 - (2) Enclose trash and recycling cans.
 - (3) Maintain adequate clear width and height for truck access.

Side Streets.

Streetscape improvements along the “Side Streets” are necessary to achieve a uniform character for the entire 9th Street Gateway and CBD area. The streetscape improvements such as street trees, street furniture, paving, etc., on these side streets shall be consistent with the improvements along Asbury Avenue and 9th Street.

Street Signage

- a. Street signage shall be coordinated with street furniture to create an orderly, safe environment and to reduce visual clutter.
- b. Traffic signals, traffic signs, wayfinding signage and street name signs shall be attached to light poles whenever possible to reduce the amount of poles.
- c. Additional sign poles shall be powder-coated black. The style shall be similar to the prevailing streetlights.
- d. Street identification signs shall be silver letters on a blue background or coordinated with the wayfinding signage package.
- e. Wayfinding signage may include a complete map of the Area and indicate locations of transportation stops, retail areas, recreational facilities and entertainment centers.
- f. Wayfinding signage shall be multifunctional to address the pedestrian and automotive realms.
- g. Wayfinding signage shall be incorporated into the overall streetscape design.

Street Trees

- a. Street tree layout will be based upon final engineered streetscape layout.
- b. Street trees should be planted at an appropriate spacing distance of 30 to 50 feet.
- c. Street trees shall be placed on property lines (between properties) so as not to block storefronts.
- d. Street trees shall be at least 1-3/4 – 2” in trunk caliper measured 6” above the ground, and meet specifications set forth in American Standard for Nursery Stock (ANSI Z60.1-2004).
- e. Selected trees shall be as approved by the Shade Tree Committee.
- f. Plant materials and irrigation techniques that require less water should be considered.

- g. Columnar shaped trees are recommended where narrow sidewalks and awnings restrict the growth of a larger canopy.
- h. Smaller leafed, spreading forms allow better visibility to building facades and signage. Smaller leaves generally are dispersed by the wind, require less fall cleanup and are less apt to clog storm sewers.
- i. Salt injury to tree leaves is a frequent occurrence within the downtown district, especially during extended dry spells. A brief hosing to wash off accumulating salts is beneficial in the absence of rainfall.
- j. Barrier island sandy ground is naturally nutrient poor, so trees will benefit from the addition of light applications of slow-release fertilizers (e.g. Nature Safe Natural & Organic Fertilizer).
- k. In case of salt water street flooding, consider adding gypsum (calcium sulfate) as soon as possible after inundation at rates between 10 to 50 pounds per 100 square feet to bind up the salt.

Tree Grates

- a. Tree grates and coordinated tree guards are required for all street trees.
- b. Tree grates shall be set parallel and flush with the curb line.
- c. Tree grates shall be made of heavy grade, cast iron or cast aluminum of black finish. Cast iron Model R-8708 180 degrees, 4' X 4' square as produced by Neenah Foundry Company shall be used.
- d. The center hole of the tree grate shall be expandable to accommodate tree growth. The initial center hole shall be a minimum of 12 inches in diameter.
- e. Electrical outlets should be provided in the tree grate area.

Benches

- a. Benches shall be Model FM-324 or Model FB-324 in the Framers Modern™ Series as manufactured by Victor Stanley, Inc.
- b. The metal armrests shall be powder coated VS Black. The seating and backrest shall be natural or synthetic mahogany wood.
- c. A minimum of 2 benches should be provided on each block face along Asbury Avenue. Benches are encouraged in appropriate locations on other streets.
- d. Benches located along the curb shall be set back from areas of on-street parking to accommodate auto door swing and shall generally be placed at the end of a parking space. Seating should not interfere with plant materials or pedestrian circulation.
- e. Benches may also be placed adjacent to building walls subject to approval by owner.
- f. Seating should be secured permanently to paved surfaces for safety and to avoid vandalism.

- g. Comfortable seating should provide a sense of having protection from behind and something interesting to look at such as shop-fronts or other pedestrians.
- h. All fabricated metal components should be steel shotblasted, etched, phosphatized, preheated and electrostatically powder-coated with TGIC polyester powder coatings to ensure durability in outdoor use in Ocean City's marine environment as well as provide ease of maintenance.

Litter Receptacles

- a. Trash and recycling receptacles, at a minimum, are required at each corner of all intersections, a total of four pairs per block or block face per block inset from the corner. They should be conveniently placed near benches, bus stops and other activity nodes, arranged with other streetscape elements into functional compositions and where feasible, placed at the end of parking spaces. These may be left freestanding or surface mounted on site.
- b. The trash receptacles shall be Ironsites Series Model S-45 with 45 gallon total capacity as manufactured by Victor Stanley, Inc. The recycling Receptacles shall be Ironsites Series Model S-42 with 36 gallon total capacity as manufactured by Victor Stanley, Inc.
- c. The trash and recycling receptacles shall be powder coated finish for durability in Ocean City's marine environment. The color shall be black.
- d. Trash and recycling receptacles should be designed in two pieces. The inner container should ensure easy trash pickup and removal and an outer shell should blend aesthetically with the other streetscape elements.

Design Standards – (34th Street Gateway)

These design standards which incorporate elements of form based codes, apply to new mixed-use and commercial development in the 34th Street Gateway District including all lots adjoining 34th Street between the easterly side of Bay Avenue and extending to the westerly side of Central Avenue, and extending along all cross streets within the designated area. All improvements within the 34th Street right-of-way shall be approved by Cape May County.

Minimum First Floor Standards.

- a. Minimum first floor elevations for all commercial land mixed-use buildings shall be in compliance with the NJDEP standard of twelve (12) inches above BFE or elevation 10.00 (NAVD 1988).
- b. The minimum required interior floor-to-ceiling height for new first floor commercial space shall be ten feet (10'). This minimum ceiling height may be reduced to eight feet (8') when buildings are being renovated to comply with BFE requirements.
- c. Minimum Interior Store Width. Twenty-four feet (24').

Front and Side Façades

- a. Transparent windows equal in area to not less than forty-five percent (45%) of the first floor commercial unit's front facade are required subject to the following:
 - (1) Buildings located on corner lots shall meet this requirement for both street-facing facades.
 - (2) Windows shall use clear or lightly tinted glass, except for decorative or architectural accents, typical of commercial storefronts and not of the type utilized on residential dwellings. Reflective glass is not an acceptable window material.
 - (3) Windows shall allow pedestrians unobstructed views into the building or into display windows from the outside extending at least ten feet (10') into the interior. Closely-gridded residential style windows are not permitted.
 - (4) The percentage of glass shall be calculated by measuring the height (from the base of the front wall to the top of the first wall plate) and width of the front wall of the commercial unit, and the area of glass within the main frame(s) of the windows and doors. Frames, grids and mullions shall not be included in this calculation.
- b. Vinyl and aluminum siding on front facades is prohibited.
- c. Front facades shall be designed to be compatible with adjacent structures in terms of vertical and horizontal building elements, and to provide interest to pedestrians through the use of architectural relief, selection of materials and components, window and door frames, pediments, columns, etc.
- d. Where the side of a building is visible from an adjoining property or the public right-of-way, the design and materials used on the front facade shall be extended to at least one-third (1/3) of the building's side façade.

Corner Lots and Building Access

- a. Buildings located on corner lots shall treat both street frontages as front facades in terms of architecture, windows and building setbacks.
- b. Buildings on corner lots shall have the main entrance on the primary street. This requirement does not preclude additional rear or side entrances.
- c. All new structures shall have the primary entrance oriented toward the street or public walkway, with direct, barrier-free and convenient pedestrian access.

Location Restrictions

- a. Utility meters: rear yard only
- b. Trash/recycling enclosures: rear yard only
- c. Air-conditioning compressors, dryer and oven vents: rear yard and roof only
- d. Electric, telephone and cable lines: underground if existing along 34th Street
- e. Shutoffs, cleanouts and other similar utility elements: a minimum of one (1) foot off the curb and below grade along 34th Street.

Roof Treatment and Decks

- a. Porches and decks are permitted at the second and third floor levels.
- b. Roof decks shall not be visible from the adjoining street(s), shall only be accessed by internal stairs, and shall be setback a minimum of six (6) feet from the edges of the building or shall be screened by a parapet not less than 3 feet high.
- c. Enclosure of rooftop areas, terraces, or balconies is not permitted; however, rooftop planters, fences below the height of the parapets or railings and outdoor furniture are allowed.
- d. No other structure or accessory use is permitted above a roof deck including without limitation, awnings anchored or otherwise, canopies, pergolas or other structures permanent or temporary.
- e. Flat roofs are to be enclosed by a parapet.

Street and Garden Walls, and Fences

- a. Garden walls that define the outdoor areas and separate the sidewalk from the private space (parking lots, trashcans, gardens and equipment) should be designed with the same material and finish as the main structure. Garden walls shall be a minimum of 8 inches thick and have a horizontal cap.
- b. Garden walls shall be a minimum of 24 inches and a maximum of 36 inches in height.
- c. Fences may be used in the rear yards to enclose trash receptacles. These fences shall be a maximum of 6' in height and shall be solid board wood fencing, and may have stucco or masonry piers. Chain link fences shall not be permitted.
- d. Sitting walls, between twelve inches (12") and twenty-four inches (24") in height and 18" deep, shall be incorporated whenever possible.
- e. Masonry piers with steel, aluminum or iron fencing may replace solid masonry walls.
- f. Hedges may not be used in place of garden walls or fences.

Lighting

- a. Exterior lighting should highlight building elements, signs, or other distinctive features and not the lighting feature itself.
- b. All building and site lighting fixtures shall be decorative.
- c. Design, size and location of lighting fixtures must be compatible with overall design of the building.
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- d. The center hole of the tree grate shall be expandable to accommodate tree growth. The initial center hole shall be a minimum of 12 inches in diameter.
- e. Electrical outlets should be provided in the tree grate area.

Benches

- a. Benches shall be Model CR-96 by Victor Stanley, Inc.
- b. Six foot (6’) long, vertical steel slats, Color – RAL 3011.
- c. Average one (1) bench per fifty (50) LF of frontage along 34th Street. Benches are encouraged in appropriate locations on other streets.
- d. Benches located along the curb shall be set back from areas of on-street parking to accommodate auto door swing and shall generally be placed at the end of a

parking space. Seating should not interfere with plant materials or pedestrian circulation.

- e. Benches may also be placed adjacent to building walls subject to approval by owner.
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- c. The trash and recycling receptacles shall be powder coated finish for durability in Ocean City's marine environment. The color shall be RAL 3011.
- d. Trash and recycling receptacles should be designed in two pieces. The inner container should ensure easy trash pickup and removal and an outer shell should blend aesthetically with the other streetscape elements.

Light Fixture

- a. Model CY5501 by Cyclone Lighting.
- b. 150 watt metal halide; Pole – PA42, 4" aluminum, 16' height.
- c. Base – BD56; Arm – M-211; Color – RAL 3011.

34th Street Gateway Design Concept

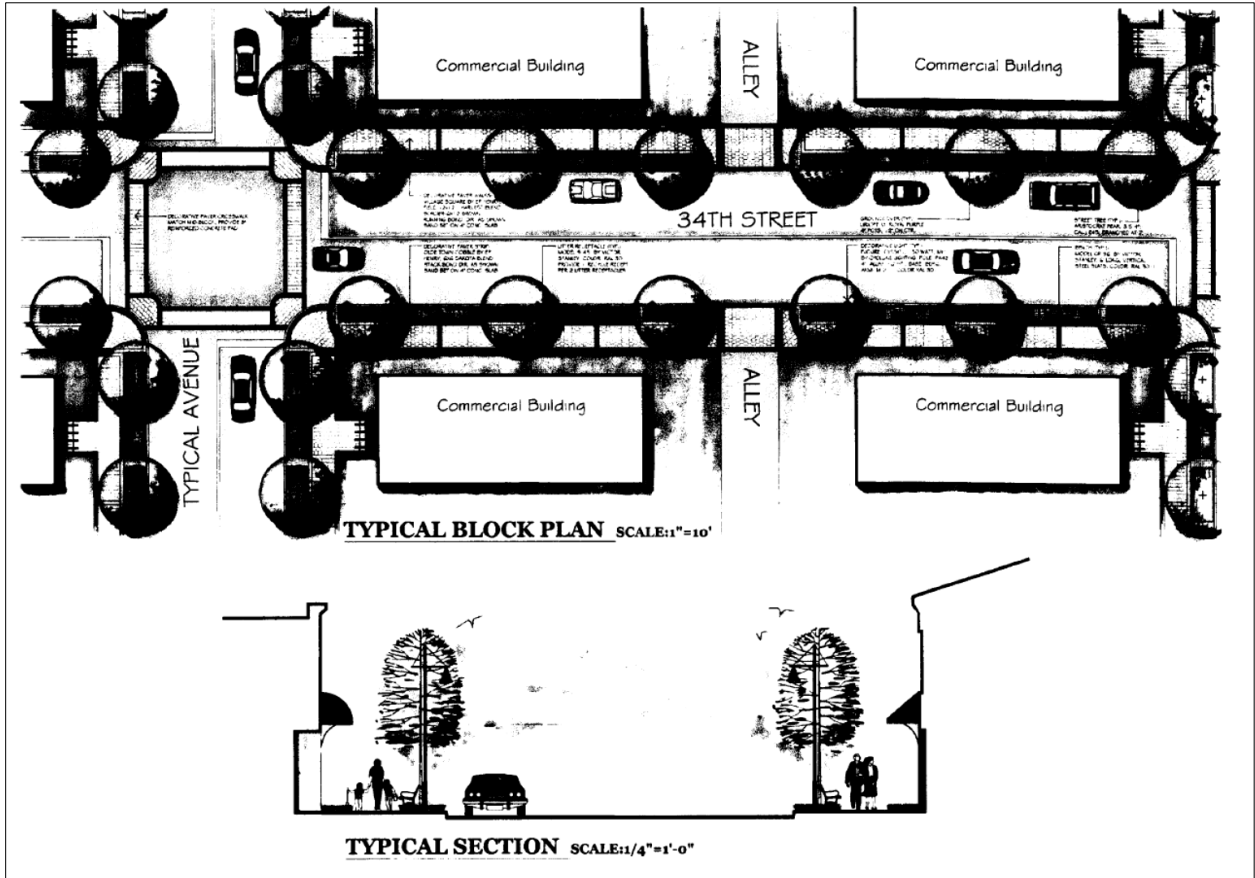


Figure 8 - Ornamental Street Light (9th Street)

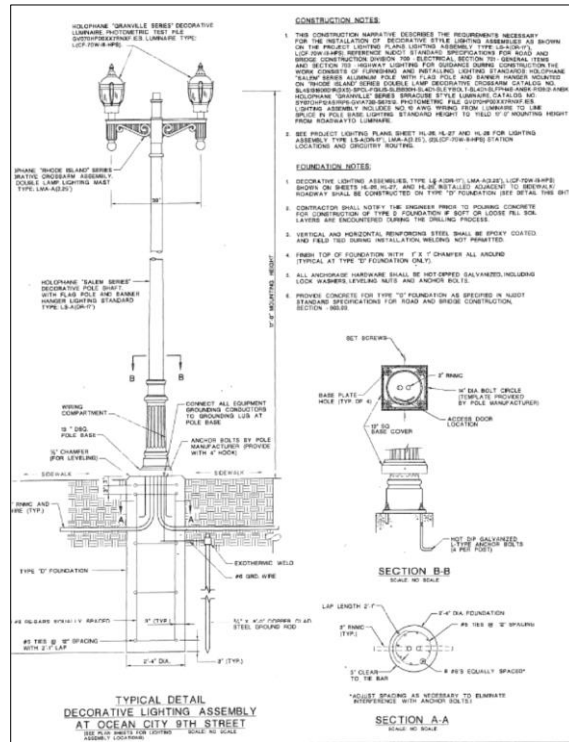


Figure 9 - Intersection Improvements (9th Street Gateway)

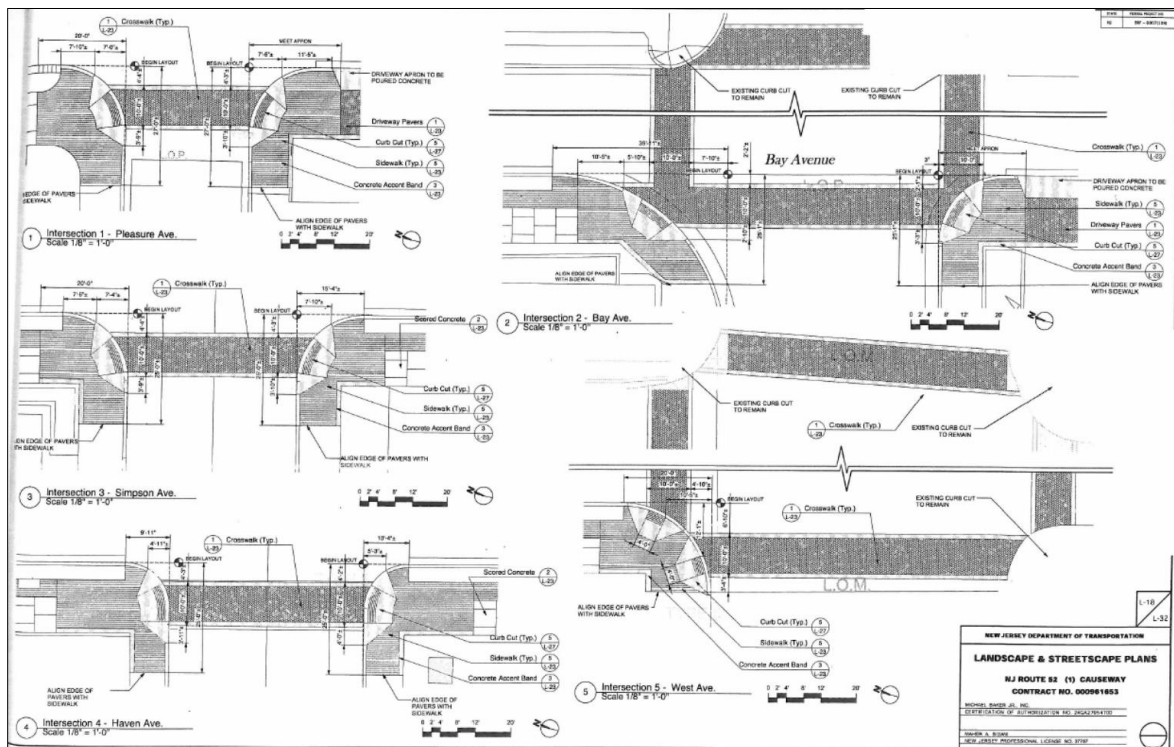


Figure 10 - Crosswalk, Paver, Sidewalk, Wall (9th Street Gateway)

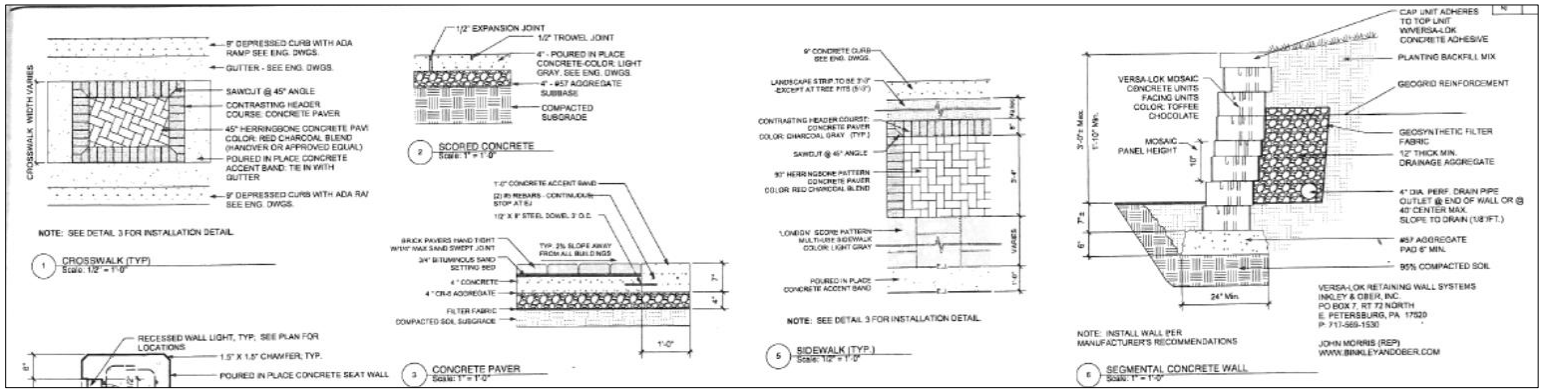
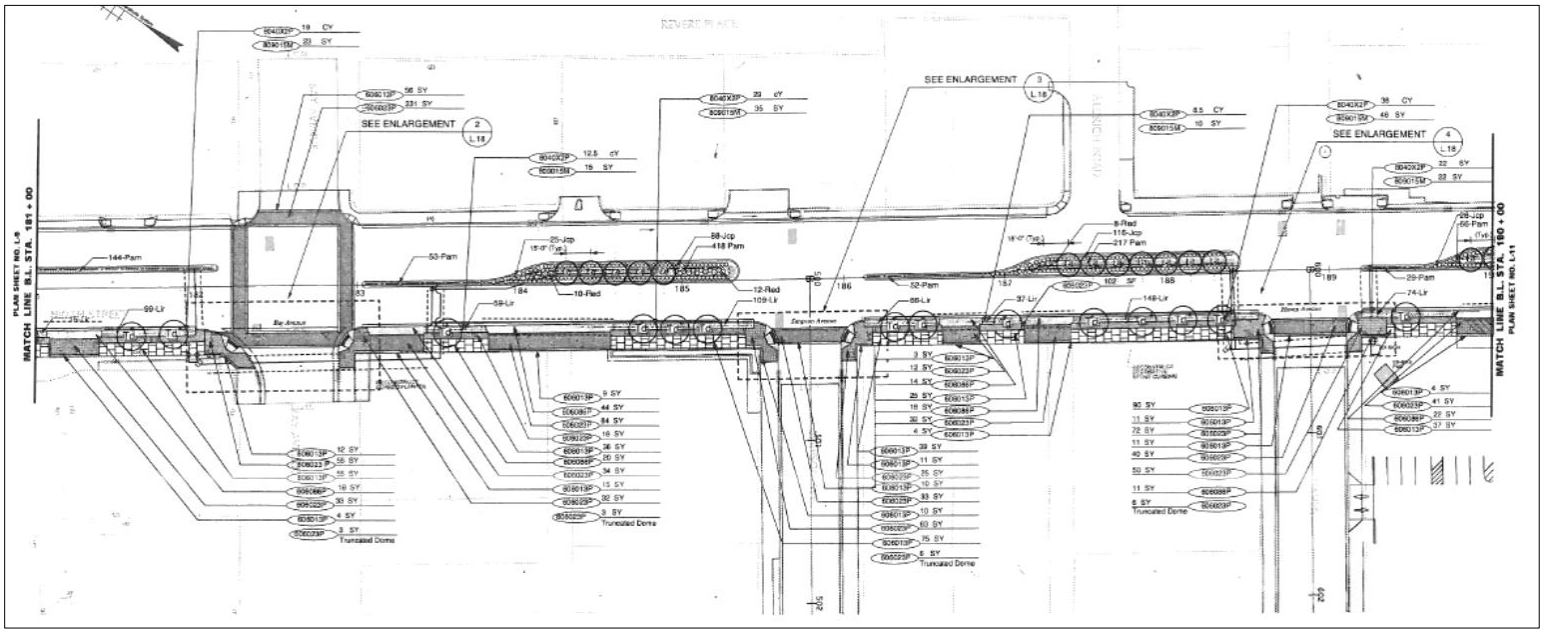


Figure 11 - Landscaping (9th Street Gateway)



References

The following documents and resources have been reviewed and utilized in the preparation of this Plan:

- Topographic Survey Information Provided By Fralinger Engineering and Based on Field Surveys Performed in December 2016 and January 2017.
- NJDOT “Construction Plans,” NJ Route 52 Causeway, Sheet 36 last revised March 22, 2011.
- NJDOT “Construction Plans,” NJ Route 52 Causeway, Sheet 37 last revised March 10, 2011.
- NJDOT “Drainage and Utility Plans with Existing Contours and Drainage Areas,” NJ Route 52 Causeway, Sheet 1/1 last revised February 7, 2011.
- NJDOT “Grades,” NJ Route 52 Causeway, Sheet 118, last revised March 22, 2011.
- New Jersey Residential Site Improvement Standards (NJAC 5:21) 2011.
- A Policy on Geometric Design of Highways and Streets, 2001 prepared by American Association of State Highway and Transportation Officials (AASHTO).
- New Jersey Department of Transportation Roadway Design Manual, 2015.
- Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), 2009 Edition, U.S. Department of Transportation.
- FEMA Cape May County, NJ Preliminary Flood Maps 34009C0087F dated January 30, 2015 and 34009C0089F dated June 30, 2014.
- FEMA Flood Insurance Rate Maps
- NJDEP Flood Hazard Area Control Act Rules (NJAC 7:13), Last Amended February 2, 2015.
- 2009 ICC/ANSI A117.1 Accessible Usable Buildings and Facilities.
- New Jersey Uniform Construction Code (NJAC 5:23), June 5, 2017.