

WILL MOREY
Freeholder

CAPE MAY COUNTY
DEPARTMENT OF PUBLIC WORKS
Office of the COUNTY ENGINEER

DALE M. FOSTER
Engineer

4 Moore Road

Cape May Court House, N.J. 08210-1601
(609) 465-1035 Fax: (609) 465-1418

KENT SCHELLINGER
Assistant Engineer

E-mail: countyengineer@co.cape-may.nj.us
Website: www.capemaycountynj.gov



TIMOTHY DONOHUE

September 9, 2016

**Re: Ocean Drive (CR 619) Resurfacing Improvements
from 29th Street to 80th Street, Borough of Avalon**

Dear Neighbor:

Cape May County is nearing completion of the design phase of improvements to Ocean Drive (County Road No. 619) from 29th Street to 62nd Street in the Borough of Avalon and is currently seeking authorization to proceed to construction.

While the main purpose of the project is to address the riding surface of the roadway by milling and resurfacing, this project does much more. The work program includes replacing deteriorated or out of grade concrete curbs, gutters, sidewalks and driveway aprons; updating the traffic signal systems at the 30th Street and 42nd Street intersections; updating or installing Americans with Disabilities Act handicap access ramps; replacing or repairing deteriorated stormwater catch basins and manholes; updating stormwater grates to current bicycle compatible requirements; installing additional stormwater facilities; and roadway restriping. The 42nd Street traffic signal system will be replaced with pedestrian countdown displays. The 30th Street traffic signal will have minor adjustments and upgrades.

The existing elevation of certain road areas are below 3.0-ft (NAVD 88), which is lower than monthly high tides (known as spring tides); see illustration as shown on attached Figure 1. Consequently, these low lying areas experience flooding insofar as the tidal elevation is controlling and thus impeding vehicle access and safety during certain storm events. Comparatively, the 10-year and 100-year storm still water elevations are 5.0-ft and 8.5-ft (NAVD88) respectively (source: Borough of Avalon Base Flood Insurance Study). Flooding occurrences are not unfamiliar in Avalon Borough. To address persistent flooding of Ocean Drive, the goal of this project is to raise the roadway elevation as high as possible without compounding flooding on adjacent properties.

Raising the road will situate the gutter higher than the sidewalk in select areas, and is explained in detail corresponding to the attached color-coded CROSS SECTION KEY SHEET and CROSS SECTION EXAMPLES 1 sheet. The colored cross sections shown on the CROSS SECTION EXAMPLES 1 sheet are an example of the proposed construction for the corresponding colored properties on the CROSS SECTION KEY SHEET. The specified drainage actions at these highlighted locations include:

1. Added road inlets to capture road runoff, and the driveway aprons will have a 1.5 inch lip to keep road runoff on the road.

2. Added field inlets in the road right-of-way at the low point, sometimes between the curb and sidewalk and others between the sidewalk and the private property line, to capture runoff from the curb pitching toward the private property boundary plus runoff from the private property. In Avalon, private properties are required to slope from the rear property boundary toward the road to the property line; not all do.

3. Lawn grates placed between the sidewalk and private property line will be spaced so that the depth of water is calculated to be no more than 1-inch deep at the low point valley in the right-of-way, with the corresponding "spread" temporarily extending on to private property (see Cross-Section Example), using the rational method to calculate peak flow for a 10-year/24-hour storm interval event.

4. Field inlets pipes, having stainless steel check valves connected to the road inlets, will be sized for at least a 10-year storm.

The 10-year storm capacity drainage facilities will only function during low tide (no tailwater condition) and may partially function, or not function at all, during certain high tide events (tailwater condition) that impedes discharge; the same would apply for larger capacity infrastructure. When the tide is controlling, flooding occurs in the current condition and will continue in the proposed condition, where added rainfall will find its water surface equilibrium level in a similar fashion, but perhaps not exactly, as in the current condition. The Cross-Section Examples show that the water surface elevation for a 10-year storm tidal still-water elevation is controlling when compared with the 1-inch valley runoff water surface elevation depth. The resulting "effects" are not expected to hinder a private property owner's land use, in any material way, compared to the current persistent flooding conditions. The Ocean Drive road raising goal is shared by the Borough of Avalon, and in the interest of public safety, and long term benefit and quality of life of its property owners and residents.

Construction is anticipated to begin in early 2017, proceed from north to south, shutdown for the summer on or about June 9, 2017, and will be made safe for the summer season. The Contractor will return after September 5, and work under the contract should be completed by the end of 2017. The proposed construction traffic control will close traffic in one direction daily while the drainage and concrete work is being performed in that lane, and traffic detoured to Dune Drive. When milling and paving operations are underway, all traffic will be detoured to Dune Drive. At no time will Ocean Drive be closed to traffic over a weekend.

Please be advised that once the roadway resurfacing improvement project is completed and the project is accepted by the Cape May County Board of Chosen Freeholders, no permits will be issued to allow the opening of Ocean Drive between 29th Street and 62nd Street for a period of five (5) years. Therefore any modifications or upgrades to utilities or service connections located in the Ocean Drive roadbed shall be undertaken prior to February 1, 2017, otherwise said utility modifications cannot be performed for at least five (5) years after acceptance of the project.

The project is listed in the State Transportation Improvement Program for \$1.7 million. As designed the project is estimated to cost \$4.0 million. The project still needs to be authorized by NJ Department of Transportation in order to secure the federal funds. Depending on the availability of federal funds, the State may only authorize the project for the \$1.7 million amount.

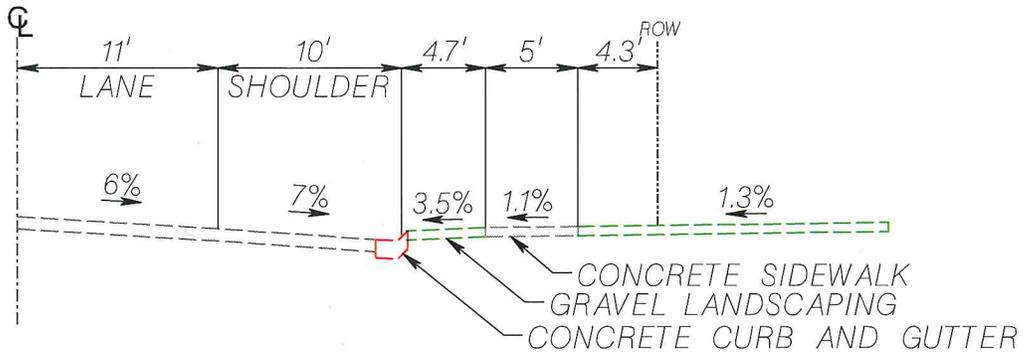
This letter and the enclosures will be posted to the County website at the following link:
<http://capemaycountynj.gov/1069/Reports-and-Studies> .

Should you have any questions, please do not hesitate to contact this office.

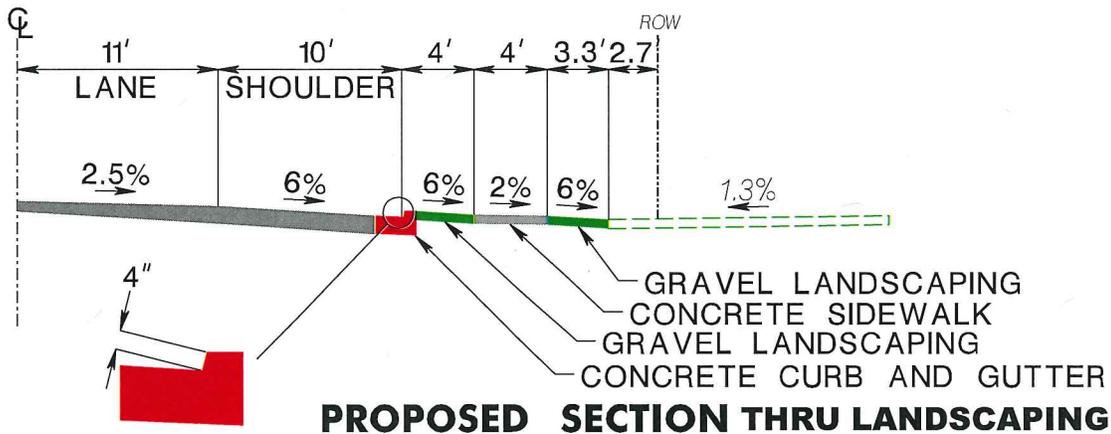
Very truly yours,



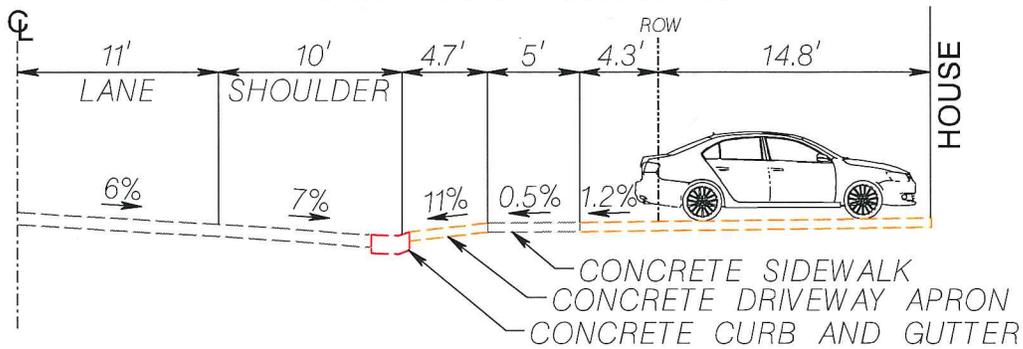
Dale M. Foster, P.E.
County Engineer
DMF/amc



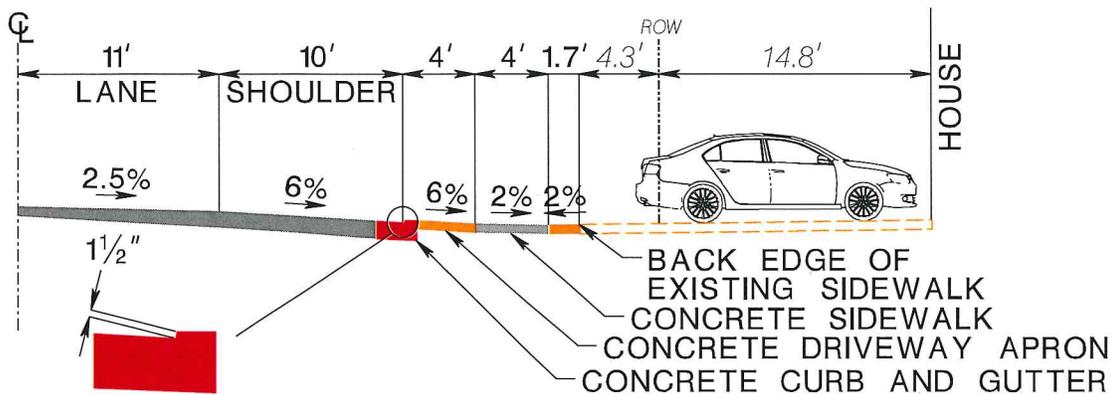
EXISTING SECTION THRU LANDSCAPING



PROPOSED SECTION THRU LANDSCAPING



EXISTING SECTION AT DRIVEWAY

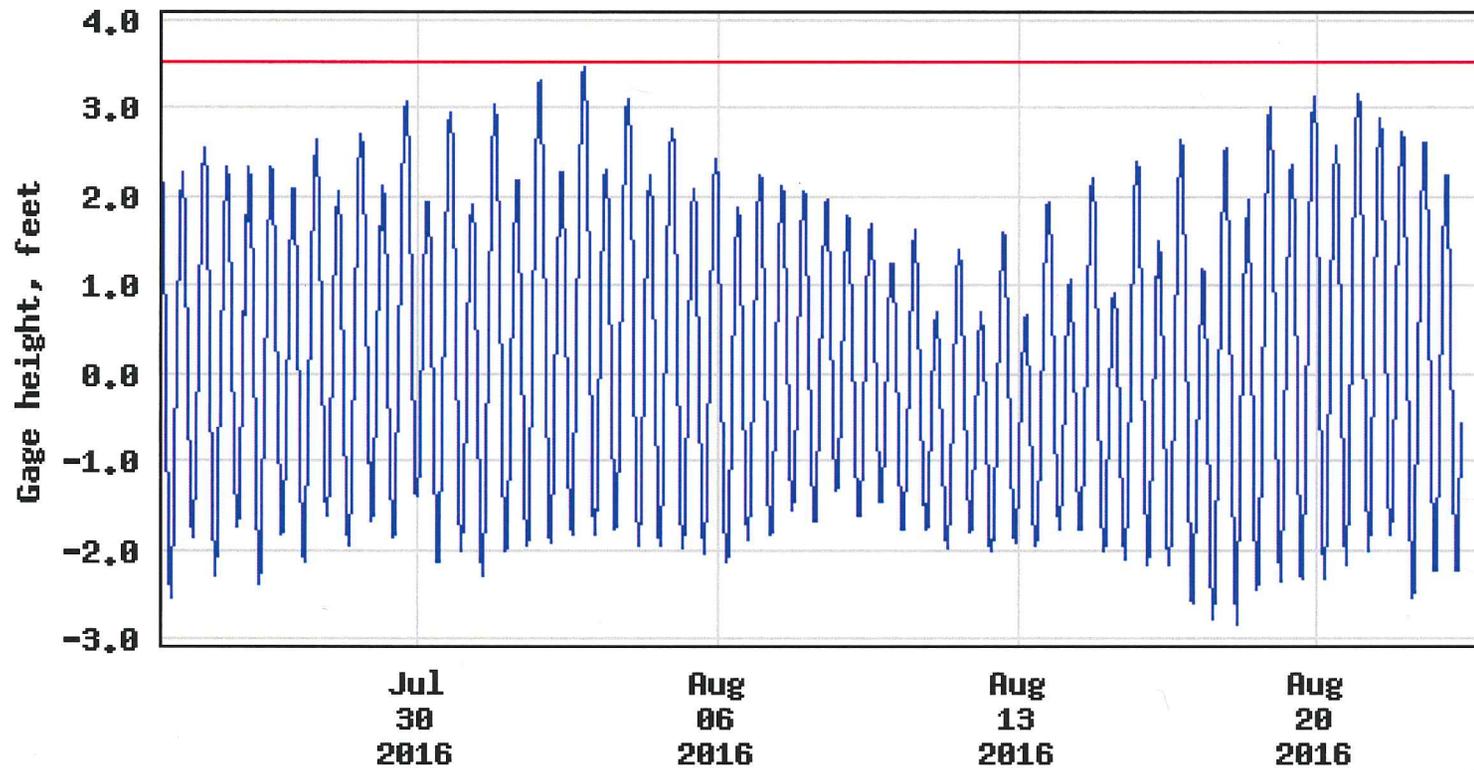


PROPOSED SECTION AT DRIVEWAY

GENERIC CROSS SECTIONS



USGS 01411355 Ingram Thorofare at Avalon, NJ



----- Provisional Data Subject to Revision -----

- Gage height
- Gage cannot accurately measure above this tide level

Figure 1 USGS Tide Elevations (NAVD 88)

August 2nd – New Moon/August 18th – Full Moon

BOROUGH OF AVALON

COUNTY OF CAPE MAY

BEGIN PROJECT

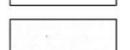
END PROJECT

Ocean Drive (C.R. 619)

Ocean Drive (C.R. 619)

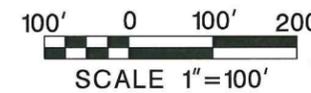
Ocean Drive (C.R. 619)

LEGEND

-  SHORE LINE
-  CROSS SECTION TYPE A
-  CROSS SECTION TYPE B
-  CROSS SECTION TYPE C
-  ASPHALT PAVEMENT

CROSS SECTION KEY SHEET

N. J. Plane Coordinate System



COUNTY OF CAPE MAY



JOB: **OCEAN DRIVE (CR 619) FROM 29TH TO 62ND STREET
RESURFACING IMPROVEMENTS**
Borough of Avalon, Cape May County, NJ

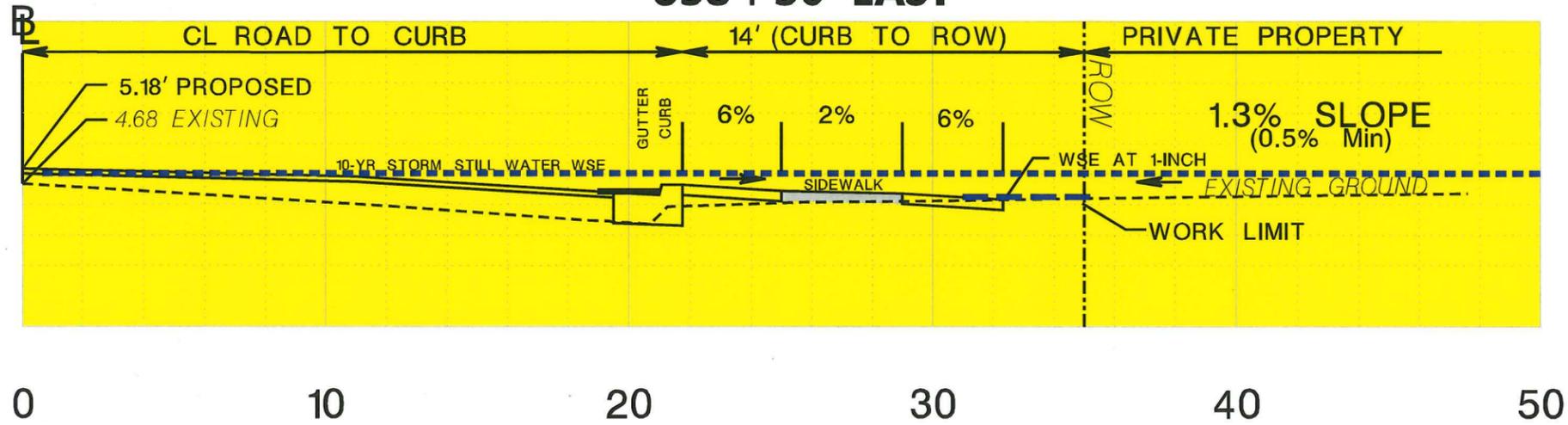
PREPARED BY: **URBAN ENGINEERS, INC.** 220 LAKE DRIVE EAST, SUITE 300
CHERRY HILL, NJ 08002-1165

DRAWN: _____ DATE: SEPTEMBER 2016 SCALE: _____ SHEET OF 87
PREPARED FOR: COUNTY OF CAPE MAY CAPE MAY COURT HOUSE
CAPE MAY COUNTY, NEW JERSEY

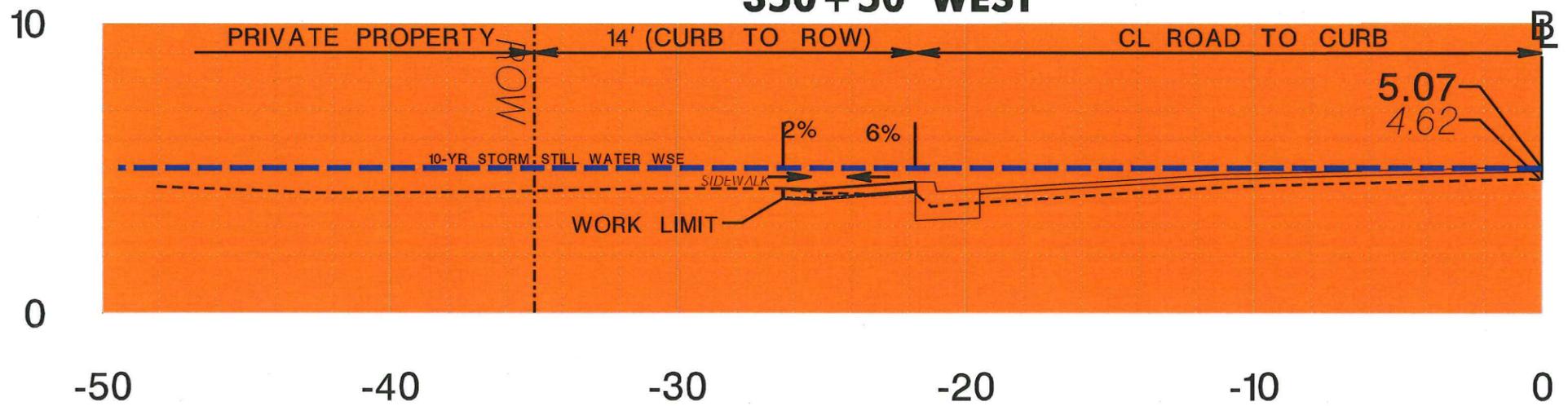
APPROVED: **STEVEN B. LOCKE, P.E.** _____ DATE _____
N.J. PROFESSIONAL ENGINEER No. 24GE04526.300

REVISION	BY	CK'D	DATE

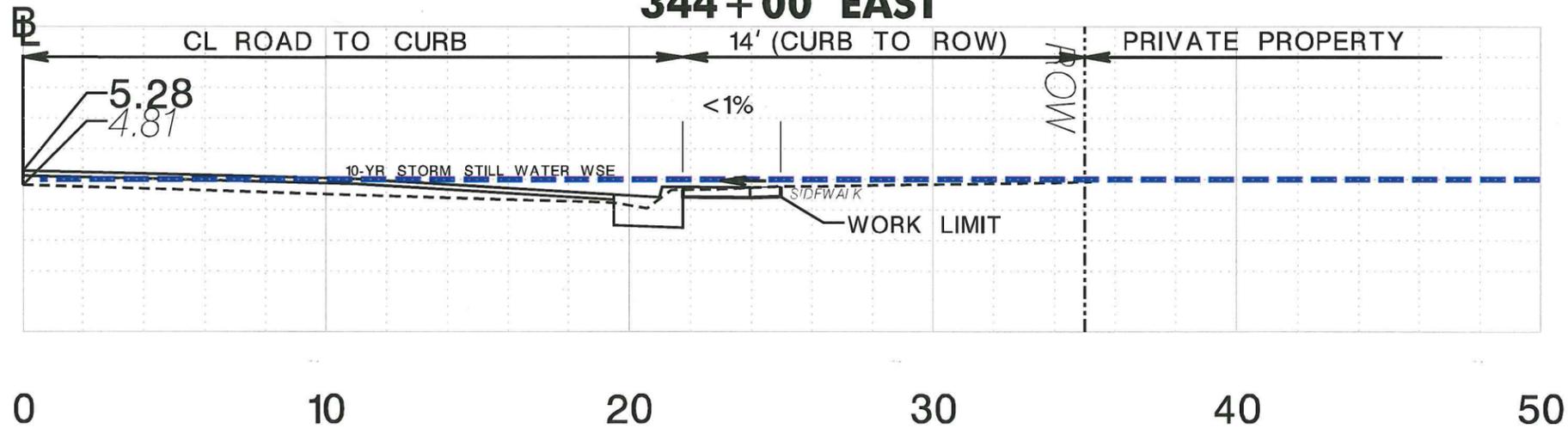
358+50 EAST



350+50 WEST



344+00 EAST



10'
8'
6'
4'
2'
0

10'
8'
6'
4'
2'
0

10'
8'
6'
4'
2'
0



SCALE 1"=10'

CROSS SECTION EXAMPLES 1

COUNTY OF CAPE MAY



JOB: OCEAN DRIVE (CR 619) FROM 29TH TO 62ND STREET
RESURFACING IMPROVEMENTS
Borough of Avalon, Cape May County, NJ

PREPARED BY: URBAN ENGINEERS, INC. 220 LAKE DRIVE EAST, SUITE 300
CHERRY HILL, NJ 08002-1165

DRAWN: DATE: SEPTEMBER 2016 SCALE: SHEET OF 87

PREPARED FOR: COUNTY OF CAPE MAY CAPE MAY COURT HOUSE
CAPE MAY COUNTY, NEW JERSEY

APPROVED: STEVEN B. LODGE, P.E. N.J. PROFESSIONAL ENGINEER No. 240204326300