

OC 814-05 Ocean Isle
Site Plan 05-18100031

MSA-5-1829-5078



STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

February 13, 2007

Mr. Blaine Smith, Zoning Administrator
Town of Ocean City
PO Box 158
Ocean City, MD 21843

**RE: Site Plan – 67th Street; Ocean Isle Areas 1- 5; Case # 06-181000008
CAC File #: OC 814-05**

Dear Mr. Smith:

I have received revised plans and supplemental information regarding the referenced project. It is my understanding that the project consists of five separate areas that are proposed to be developed as a single project. The total site area consists of 4.697 acres or 204,580 square feet. Parcel 2 is waterfront and subject to a 25 foot setback. Parcel 5 is water front and subject to 10 foot setback. Parcels 1, 3, and 4 are non waterfront and are located outside of the 100-foot Buffer. Based on the plans submitted, the entire area of all parcels will be disturbed during construction; therefore, all stormwater, Buffer, and landscape performance standards shall be calculated for the entire site. Staff has reviewed the information supplied and has the following comments:

1. The "Atlantic Coastal Bays Critical Area Report" includes drawings and details of the piers prepared by Lawrence T. Whitlock Associates, Inc. In Area 2, these drawings show a concrete walkway within the 25-foot setback, and the drawings appear to be inconsistent with the recently submitted Site Plan. Only pervious, wooden walkways with spaces between the boards can be located within the 25-foot setback. Walkways that parallel the shoreline are not permitted in the setback.
2. The drawings of the piers prepared by Lawrence T. Whitlock Associates, Inc., show a 12-foot wide walkway adjacent to the bulkhead in Area 5. This walkway cannot be permitted in the 10-foot setback. If access parallel to the shoreline is needed, the applicant will need to revise the pier permit to accommodate the walkway below mean high water or change the building location so that the walkway can be located outside the setback.

TTY for the Deaf

Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

3. The Critical Area Report states that there are tidal and non-tidal wetlands present on this site, and it includes an approval letter from the U.S. Army Corps of Engineers regarding the jurisdictional determination. Although the wetlands and wetland buffers are shown on the Site Plans, it is not clear that these are based on the delineation approved by the Corps. Please provide a copy of the wetland delineation that was the basis of the approval.
4. It appears that there may be acceptable habitat on this site for a state listed endangered species identified during the environmental review from DNR's Wildlife and Heritage Service. We suggest that a qualified expert provide the Commission with a survey of the property to establish if this species is present.
5. The numbers of existing slips and proposed slips are not clear. Please clarify and add appropriate notes. Please provide evidence of consistency and justification between the Critical Area Law and the proposed number of slips indicated on the site plan.
6. The Landscape Plans, Sheet C6.1 through Sheet C6.4, indicates that River Birch (*Betula nigra*) is considered a small tree and has a landscape credit of 100 square feet per tree. The Critical Area Report indicates that large trees are proposed to be planted and uses a landscape credit of 200 square feet per tree. The proposed quantities appear to be based on the higher credit. River Birch is considered a canopy tree or "large tree;" however, the Landscape Plans show these trees planted in 5-foot wide planting strips. Generally, Commission staff does not support large trees planted in small landscape islands because they will not survive in these locations. Large trees should be located in planting areas that are at least 10-feet wide. It is important to remember that the square footage credit is supposed to approximate the canopy coverage of a full-grown tree. The use of large trees in the small islands needs to be discussed with Commission staff, City staff, and the City arborist to determine if the proposed species are appropriate for the planned locations.
7. There appear to be many areas on the site where large trees could be located in areas that provide a root area that is significantly wider than 5-feet. These areas should be re-evaluated for planting with large trees.
8. The Landscape Plans, Sheet C6.1 through Sheet C6.4, indicates that all plantings will be River Birch (*Betula nigra*) and some species of Juniper (See Comment #8.). When required planting exceeds 5,000 square feet, at least three different species of each plant "type" (large tree, small tree, large shrub, etc.) should be used.
9. On the Landscape Plan, the large shrub species, *Juniperus chinensis*, is identified as Moonglow Juniper. My research indicates that *Juniperus chinensis* is actually Chinese Juniper. Neither of these species is native to the Chesapeake or Atlantic Coastal Bays watershed. At a minimum, 25 percent of the large shrub plantings should be native species.
10. On Sheet C6.2, on the eastern side of the project site, there is an area identified as a "Landscaped Courtyard," but there appears to be very minimal landscaping in this area. Could pervious openings be created in this area for additional planting?

C6.1

441

4571

1 tree
for every
35 feet
landscape plan

- 599 Area 2
w/ mooring
water
- BMP
11. The Plans for Area 2 show a 6-foot by 170-foot access walk pier. Is this structure located over open water, State tidal wetlands, or private tidal wetlands? The Site Plan should accurately depict the proposed erosion control measures, piers, walkways, slips, and mooring piles.
 12. The Plans do not accurately show or describe the current condition of the shoreline and shore erosion control measures in Area 2 and Area 5. Is the shoreline of Area 5 bulkheaded? What type of bulkhead? Are any repairs or changes to the bulkhead proposed? Appropriate notes should be placed on the Plans. Is the shoreline of Area 2 protected with nonstructural measures? What are they? Are any repairs or changes to the shoreline proposed? Appropriate notes should be placed on the Plans.
 13. Please provide engineering details concerning the type of pervious pavers being proposed, requirements for installation, and an ongoing maintenance agreement.
 14. It is not clear if the detail on Sheet C4.1 is supposed to be the "Pervious Pavers BMP." Please provide appropriate labels. It is not clear that this BMP is correctly designed. In order to use this BMP to meet the 10% pollutant reduction requirement, the pavers must be designed to function like an infiltration trench and should generally match the sketch shown in Figure E.16 of the *Critical Area 10% Rule Guidance Manual*.
 15. In the pollutant removal calculations for Area 4, an efficiency rating of 100% is used. It is not clear that the "Pervious Pavers BMP" for this area is different from that used in the other areas that had an efficiency rating of 50%. Please provide clarification and an additional detail as necessary.

Thank you for the opportunity to provide comments on this project. If you have any questions or concerns, please contact me directly at 410-260-3476.

Sincerely,



Mary R. Owens, Chief
Program Implementation Division

cc: OC 814-05
Gail Blazer, Ocean City

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

July 25, 2007

Mr. Blaine Smith, Zoning Administrator
Town of Ocean City
PO Box 158
Ocean City, MD 21843

RE: Site Plan – 67th Street; Ocean Isle Areas 1- 5; Case # 06-181000008

Dear Mr. Smith:

Thank you for providing information on the above referenced application. The applicant proposes to develop five separate areas into a single project. Total developable area on the site is 4.6562 acres (202,823 square feet). Parcel 2 is waterfront and is subject to a 10-foot setback, while Parcel 5 is waterfront and is subject to a 25-foot setback. Parcels 1, 3, and 4 are non-waterfront and are located outside of the 100-foot Buffer. All lands will be disturbed on this site, so stormwater management, pollution removal, and afforestation will be required for the entire site.

Thank you for sending the revised plans and comment letter from Roger Kahl of AES, dated February 23, 2007 and addressed to Mary Owens. Based on the information provided, we have the following comments to provide:

1. The note for sheet C2.1 should replace the word "LANDLORD" with "LANDWARD."
2. Please have the applicant provide a copy of the Department of Natural Resources' Wildlife and Heritage letter to this office.

Thank you again for providing clarification for this project. I look forward to your responses and receiving the above information so that I can complete the review of this project. If you have any questions, feel free to call me at (410) 260-3483.

Sincerely,

Nick Kelly

Nick Kelly
Natural Resource Planner
cc: OC 814-05

NDE
Permits

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

**STATE OF MARYLAND
CRITICAL AREA COMMISSION
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1804 West Street, Suite 100, Annapolis, Maryland 21401

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www.dnr.state.md.us/criticalarea/

August 27, 2007

Mr. Blaine Smith, Zoning Administrator
Town of Ocean City
PO Box 158
Ocean City, MD 21843

RE: Site Plan – 67th Street; Ocean Isle Areas 1- 5; Case # 06-181000008

Dear Mr. Smith:

Thank you for providing information on the above referenced application. The applicant proposes to develop five separate areas into a single project. Total developable area on the site is 4.6562 acres (202,823 square feet). Parcel 2 is waterfront and is subject to a 10-foot setback, while Parcel 5 is waterfront and is subject to a 25-foot setback. Parcels 1, 3, and 4 are non-waterfront and are located outside of the 100-foot Buffer. All lands will be disturbed on this site, so stormwater management, pollution removal, and afforestation will be required for the entire site.

Thank you for sending the additional information that I requested in a letter on July 25, 2007. Based on the information provided, I have no additional comments for this project. If you have any other questions, please call me at (410) 260-3483.

Sincerely,

Nick Kelly
Natural Resource Planner
cc: OC 814-05



MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Robert L. Ehrlich, Jr., Governor

Michael S. Steele, Lt. Governor

C. Ronald Franks, Secretary

May 31, 2005

Mr. Thomas D. Plotts
AES ArchiTech
110 West Church Street
Salisbury, MD 21801

RE: Environmental Review for Holland Family, LLC Property, Between 66th and 68th Streets and Coastal Highway, Ocean City, Worcester County, Maryland.

Dear Mr. Plotts:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. Please note however that the utilization of state funds, the need to obtain a state-authorized permit, or changes to the plan might warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. Please contact us again for further coordination if this project falls into one of those categories.

We would also like to point out that our initial evaluation of this project should not be interpreted as meaning that it is not possible for rare, threatened or endangered species to be present. Certain species could be present without documentation because adequate surveys may not have been conducted in the past. Although we are not requiring any surveys, we would like to bring to your attention that Wildlife and Heritage Service's Natural Heritage database records do indicate that there are several occurrences of state-listed endangered Beach Plum (*Prunus maritima*) known to occur within the vicinity of the project site. If the appropriate habitat is present for this species it could potentially occur on the project site itself. Since the population of this native plant has declined historically we would encourage efforts to help conserve it across the state. Feel free to contact us if you would like technical assistance regarding the conservation of this important species.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

RECEIVED

AUG 03 2007

ER #2005.0371.wo
Cc: S.A. Smith, DNR

CRITICAL AREA COMMISSION

ERI #0394-0010

March 8, 2007

Mr. Roy Barnett, Sr.
Van Metre at Ocean Isle II, LLC
c/o Van Metre Companies
5252 Lyngate Court
Burke, VA 22015

Re: Ocean Isle, 67th St, and Coastal Highway
Parcels 6646 through 6671, Tax Map 14
Ocean City, Worcester County, Maryland

Dear Mr. Barnett:

Environmental Resources, Inc. (ERI), has prepared this letter and enclosures for the Van Metre Companies in order to respond to several comments provided by the Chesapeake Bay Critical Areas Commission contained in their letter to Blaine Smith, Town of Ocean City Zoning Administrator dated February 13, 2007.

ERI has investigated the above referenced Van Metre property for the presence of beach plum (*Prunus maritima*) or suitable habitat. Beach plum is a coastal shrub whose habitat can be described as relatively undisturbed coastal dunes. It is a State rare species.

The Ocean Isle project site is best described as a redevelopment project. For the most part the only relatively natural habitat lies between 67th and 68th Streets, fronting Broadmarsh lagoon which marks the westerly extent of the property. A small fringe of *Spartina* sp. tidal wetlands and tidally-influenced nontidal wetlands, mostly dominated by the invasive common reed (*Phragmites australis*), occupies the shoreline frontage. The upland shoreline edge was formed from historically placed fill material. Accordingly coastal dune habitat typically occupied by beach plum is not present on the property in ERI's opinion.

Nonetheless, ERI's botanist has made a thorough survey of the property. Existing shrubby vegetation along the west edge of the property was carefully evaluated. The detailed survey

Mr. Roy Barnette, Sr.
Van Metre Companies
March 8, 2007
Page 2

ERI #0394-0010

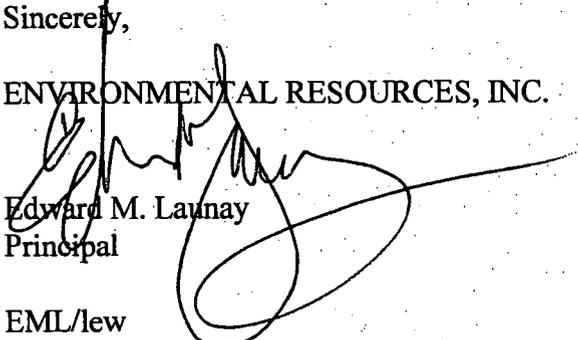
concluded that neither beach plum nor suitable habitat for the species is present on the Ocean Isle site. A copy of the botanist's report is enclosed.

ERI was also requested to provide information regarding the jurisdictional determination approved by the Corps of Engineers for the Ocean Isle site. In April 2002, Environmental Resources, Inc., delineated the boundaries of State and federally regulated wetlands on all of the properties owned by Holland Island, LLC at that time. This included the current Ocean Isle site. Following ERI's delineation, a wetland boundary map was completed and submitted to The Corps of Engineers. A site inspection was performed by Mr. Woody Francis. Following his inspection, the Baltimore District issued a jurisdictional determination letter for what is now the Sunset Island and Ocean Isle properties. Enclosed with this response is a copy of the Corps' jurisdictional determination approval letter and approved wetlands delineation plan.

Upon your review of these materials, please let me know if you have any questions or if ERI can be of any additional assistance.

Sincerely,

ENVIRONMENTAL RESOURCES, INC.


Edward M. Launay
Principal

EML/lew

S:\Projects 300 to 399\0394-0010 Van Metre\Barnett.394-010.wpd

Encl.

**PROJECT INFORMATION
BUILDING AND CODE DATA**

A. Name/Owner:
 1. Project Name: Ocean Isle
 2. Parcels:
 Area 1 (78,650 SF): Parcels 6649-6658, Part of Parcel 6648 & 6659,
 & portions of vacated alleys
 Area 2 (90,000 SF): Parcels 6646, 6647, 6660-6668, Part of Parcels
 6648 & 6659, & portions of vacated alleys
 Area 3 (3,600 SF): Part of Parcel 6677
 Area 4 (9,600 SF): Parcel 6678 and Part of Parcel 6677
 Area 5 (30,000 SF): Parcel 6669
 3. Owner:
 Area 1, 3, and 5: Van Metre at Ocean Isle, L.L.C.
 5252 Lyngate Court
 Burke, Virginia 22015
 Area 2: Van Metre at Ocean Isle II, L.L.C.
 5252 Lyngate Court
 Burke, Virginia 22015

B. SITE DEVELOPMENT DATA (ALLOWABLE):
 1. Site Area:
 Area 1: Net Developable 78,650 SF
 Area 2: Gross 90,000 SF
 State Wetlands 8,418 SF
 Net Developable 81,582 SF
 Area 3: Net Developable 3,600 SF
 Area 4: Net Developable 9,600 SF
 Area 5: Gross 30,000 SF
 State Wetlands 609 SF
 Net Developable 29,391 SF
 TOTAL Net Developable 202,823 SF or 4.6562 Acres

2. Existing Zoning:
 Area 1: LC-1
 Area 2: LC-1 and BMUO
 Area 3: LC-1
 Area 4: LC-1
 Area 5: BMUO

3. Allowable Density:
 Area 1: 76 Multifamily
 Area 2: 79 Multifamily
 Area 3: 3 Multifamily
 Area 4: 6 Multifamily
 Area 5: 27 Multifamily
 TOTAL 191 Multifamily

4. Minimum Yards:
 Front 10 feet
 Side 10 feet
 Rear 10 feet

5. Maximum Building Height: 50 feet

C. SITE DEVELOPMENT DATA (PROPOSED):

1. Proposed Use
 Area 1: Building 1: 8 Multifamily Flats Two Bedroom
 24 Multifamily Flats Three Bedroom
 Building 3: 20 Multifamily Flats Three Bedroom
 Building 4: 20 Multifamily Flats Three Bedroom
 Sub Total: 72 Multifamily
 Area 2: Building 2: 24 Multifamily Flats Three Bedroom
 Townhouses: 32 Multifamily 2/2 Three Bedroom
 Sub Total: 56 Multifamily
 Area 3: Parking Only
 Area 4: Parking Only
 Area 5: Townhouses: 18 Multifamily 2/2 Three Bedroom
 TOTAL 146 Multifamily

PARKING REQUIRED

AREA 1
 BUILDING 1: (24) 3BR UNITS @ 2.5 SPACES PER UNIT = 60 SPACES
 (8) 2BR UNITS @ 2 SPACES PER UNIT = 16 SPACES
 BUILDING 3: (20) 3BR UNITS @ 2.5 SPACES PER UNIT = 50 SPACES
 BUILDING 4: (20) 3BR UNITS @ 2.5 SPACES PER UNIT = 50 SPACES
 AREA 1 TOTAL 176 SPACES
AREA 2
 BUILDING 2: (24) 3BR UNITS @ 2.5 SPACES PER UNIT = 60 SPACES
 TOWNHOUSES: (32) 3BR UNITS @ 2.5 SPACES PER UNIT = 80 SPACES
 AREA 2 TOTAL 140 SPACES

AREA 3: NO BUILDINGS / UNITS
AREA 4: NO BUILDINGS / UNITS
AREA 5:
 TOWNHOUSES: (18) 3 BR UNITS @ 2.5 SPACES PER UNIT = 45 SPACES

TOTAL REQUIRED = 361 SPACES

PARKING PROVIDED

AREA 1
 BUILDING 1 GARAGE: 44 SPACES
 SURFACE PARKING: 56 SPACES
 BUILDING 3 GARAGE: 29 SPACES
 BUILDING 4 GARAGE: 29 SPACES
 AREA 1 TOTAL 158 SPACES
AREA 2
 BUILDING 2 GARAGE: 35 SPACES
 TOWNHOUSE GARAGE(STACKED): 32 SPACES
 TOWNHOUSE SURFACE PARKING: 35 SPACES
 GENERAL SURFACE PARKING: 18 SPACES
 AREA 2 TOTAL 120 SPACES
AREA 3: SURFACE PARKING: 12 SPACES
AREA 4: SURFACE PARKING: 33 SPACES
 (12 SPACES TO GO TO AREA 1)
 (6 SPACES TO GO TO AREA 1)
 (20 SPACES TO GO TO AREA 2)
 (7 SPACES TO GO TO AREA 5)
AREA 5:
 TOWNHOUSE GARAGE(STACKED): 18 SPACES
 SURFACE PARKING: 20 SPACES
 AREA 5 TOTAL 38 SPACES
 TOTAL PROVIDED 361 SPACES

TOTAL STACKED SPACES 50 SPACES (13.9%)

TRASH CALCULATIONS (COMPACTOR)

REQUIREMENTS: 1 1/2 CY/4 UNITS
 AREA 1: 72 UNITS/4 x 1.5 CY = 27 CY
 AREA 2: 56 UNITS/4 x 1.5 CY = 21 CY
 AREA 5: 18 UNITS/4 x 1.5 CY = 7 CY
 TOTAL = 55 CY

PROVIDED
 AREA 1: 5 x 6 CY = 30 CY

AREA 2: 3 x 6 CY = 18 CY
 1 x 8 CY = 8 CY

AREA 5: 1 x 8 CY = 8 CY

TOTAL: 64 CY

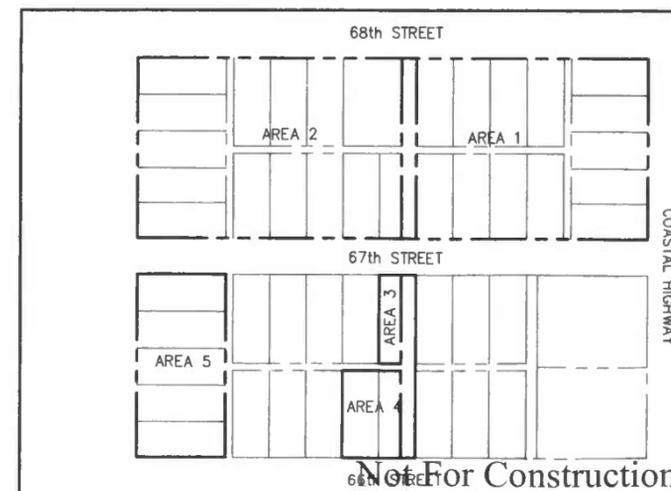
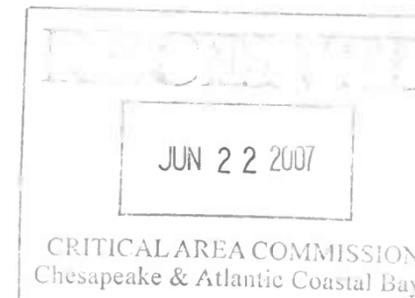
RECYCLING

TOTAL UNITS - 146

RECYCLE CONTAINERS REQUIRED
 PER SECTION 70-106
 3--300 GALLON CONTAINERS FOR EACH STREAM OR AS
 DIRECTED BY THE SOLID WASTE SUPERINTENDENT DURING THE
 LAN REVIEW
 RECYCLE CONTAINERS PROVIDED - 6

SITE

FLOOD ZONE- THIS PROPERTY IS LOCATED WITHIN ZONE A6 ELEVATION 8 PER FEMA FIRM
 COMMUNITY PANEL 245207 0002 DATED MARCH 4, 1983
 CRITICAL AREAS-A PORTION OF THIS SITE IS LOCATED WITHIN THE CRITICAL AREAS
 BUFFER.
 SOIL TYPE- M_a-MADE LAND.



Not For Construction

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 RELEASED WITHOUT WRITTEN PERMISSION. COPYRIGHT © 2006

I certify that these documents were prepared or approved by me, and that I am a duly Licensed Architect under the laws of the State of Virginia.
 License number: 13208
 Expiration date: 2007

OWNER & DEVELOPER:
 Van Metre at Ocean Isle, LLC &
 Van Metre at Ocean Isle II, LLC
 5252 Lyngate Ct.
 Burke, VA, 22015
 (703) 425-2600

AES ArchiTech
 ARCHITECTURE • ENGINEERING • SURVEYING • LAND PLANNING
 PH: 410.543.4595
 PH: 410.546.0561
 FAX: 410.543.4898
 110 West Church Street
 Salisbury, MD 21801
 www.aesarchitech.com
 "Where the art of architecture and the science of technology and engineering meet"

Van Metre at Ocean Isle, LLC
 Van Metre at Ocean Isle II, LLC
Ocean Isle
 Coastal Highway & 67th Street
 Ocean City, Maryland

Cover Sheet

PROJECT STATUS:
Planning Submission
 SCALE: PROJECT NUMBER:
 As Noted 05139
 DRAWN BY: DRAWING NUMBER:
 ISSUE DATE: 22 Nov 06
 LAST REVISION DATE: 28 Feb 07
CS1.1

**PROJECT INFORMATION
BUILDING AND CODE DATA**

- A. Name/Owner:**
 1. Project Name: Ocean Isle
 2. Parcels:
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 Area 5 (30,000 SF): Parcel 6669

- 3. Owner:**
 Area 1, 3, and 5: Van Metre at Ocean Isle, L.L.C.
 5252 Lyngate Court
 Burke, Virginia 22015

- Area 2: Van Metre at Ocean Isle II, L.L.C.
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B. SITE DEVELOPMENT DATA (ALLOWABLE):

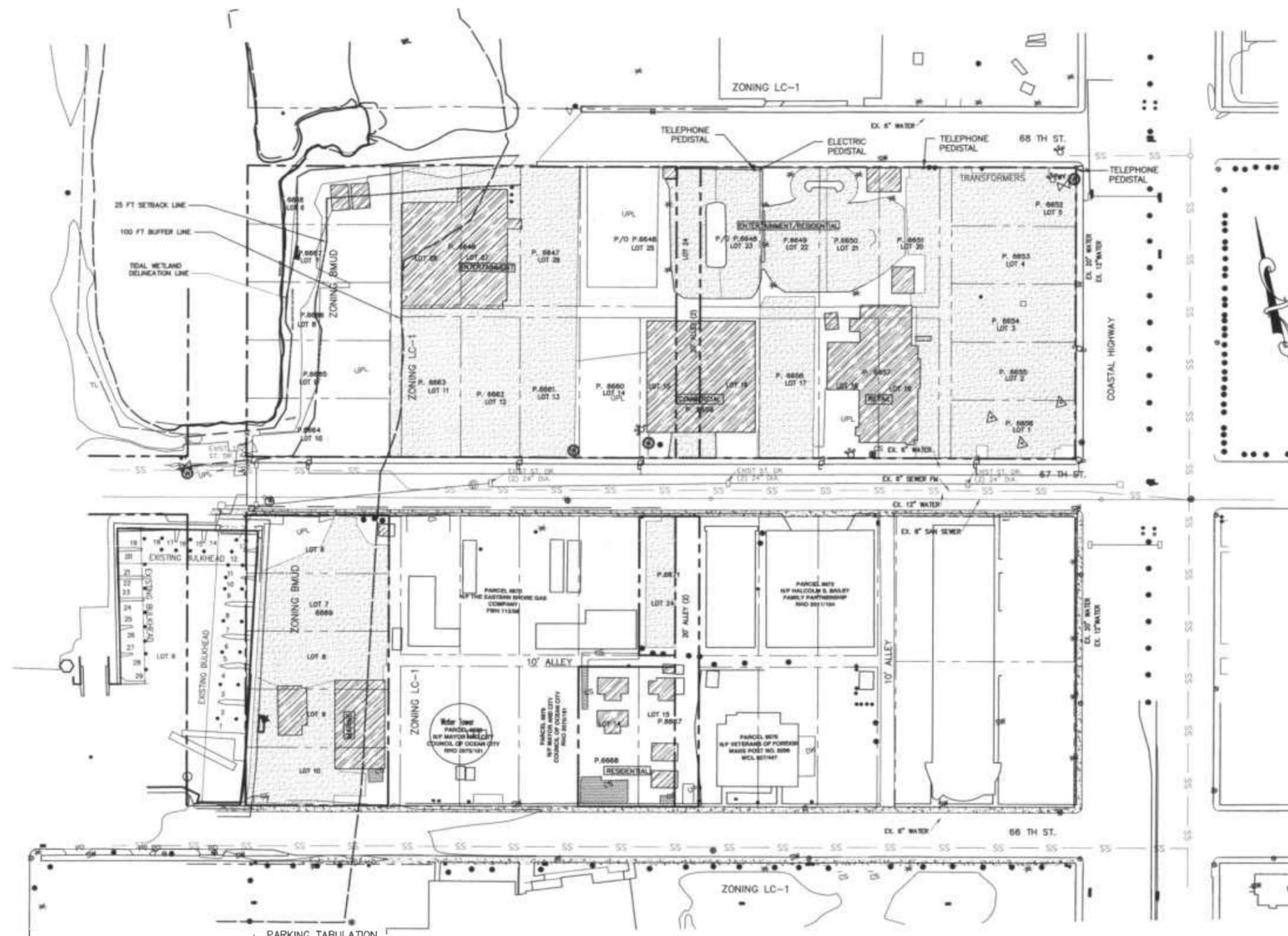
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 Area 2: Gross 90,000 SF
 State Wetlands 8,418 SF
 Net Developable 81,582 SF
 Area 3: Net Developable 3,600 SF
 Area 4: Net Developable 9,600 SF
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 State Wetlands 609 SF
 Net Developable 29,391 SF
TOTAL Net Developable 202,823 SF or 4.6562 Acres

- 2. Existing Zoning:**
 Area 1: LC-1
 Area 2: LC-1 and BMUD
 Area 3: LC-1
 Area 4: LC-1
 Area 5: BMUD

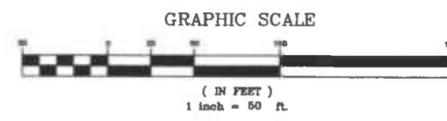
- 3. Allowable Density:**
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 Area 2: 79 Multifamily
 Area 3: 3 Multifamily
 Area 4: 6 Multifamily
 Area 5: 27 Multifamily
TOTAL 191 Multifamily

- 4. Minimum Yards:**
 Front 10 feet
 Side 10 feet
 Rear 10 feet

- 5. Maximum Building Height:** 50 feet

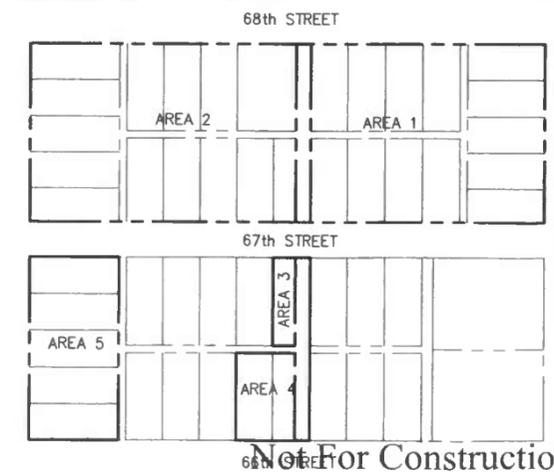


Ocean Isle - Area Total		
	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	135,242.0	59,569.0
Driveways	0.0	0.0
Sidewalks/conc	2,625.0	17,043.0
Building	30,335.0	79,202.0
Decks	0.0	0.0
Pools/Ponds	0.0	600.0
Other	0.0	0.0
Total Impervious	166,202.0	156,414.0
Landscape Area	36,378.0	39,489.0
PerVIOUS Paver	0.0	7,818.0
PerVIOUS Wooden Decks	0.0	0.0
Total PerVIOUS	36,378.0	47,307.0
Total Area	204,580.0	204,580.0
Percent Impervious	82.2%	78.5%
Percent Landscaped	17.8%	19.3%
Percent PerVIOUS	17.8%	23.1%
Rv	0.8	0.7
WCv	13,467.8	12,583.5
Storage (20% Erg + 100% New)	2,663.5	-884.1
Total Required Storage	1,869.4	
Area of Pavers (sf)	11,658.0	
Depth required @ 40% Void (ft)	0.4	
Depth required @ 40% Void (in)	4.7	
Storage Provided	6994.8	
(assuming 1.5' stone @ 40%)		
SF of impervious area supported for quality control	83937.8	
	41.03%	



GENERAL NOTES:

- THE MEAN HIGH WATER IS AT THE +/-1 FOOT CONTOUR, AS DETERMINED BY ENVIRONMENTAL RESOURCES, INC..
- WETLANDS WERE DELINEATED BY ENVIRONMENTAL RESOURCES, INC. AND FIELD LOCATED BY BECKER - MORGAN GROUP. MDE REGULATED TIDAL WETLANDS ARE IDENTIFIED AS "MDE MAPPED TIDAL WETLANDS AS PER WORCESTER COUNTY TIDAL WETLAND MAP #4 PHOTO WO 317R1. LIMITS OF CORP OF ENGINEERS SECTION 404 NON-TIDAL WETLAND BOUNDARY ESTABLISHED IN ACCORDANCE WITH 1987 CORPS OF ENGINEER WETLAND MANUAL.
 (CORP OF ENGINEER APPLICATION #: CENAB-OP-RMS(HOLLAND FAMILY LLC/JD)02-63910-01 DATED APRIL 26, 2002)
 (BASIS OF JURISDICTIONAL DETERMINATION FILE # 200263910, DATED JUNE 18, 2002)



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I certify that these documents were prepared or approved by me, and that I am a duly licensed Architect under the laws of the State of Maryland. License number: 11909. Expiration date: 2/28/07

OWNER & DEVELOPER:
 Van Metre at Ocean Isle, LLC & Van Metre at Ocean Isle II, LLC
 5252 Lyngate Ct.
 Burke, VA, 22015
 (703) 425-2600

AES ArchiTech
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 www.aesarchitech.com

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"Where the art of architecture and the science of technology and engineering meet"

Van Metre at Ocean Isle, LLC
 Van Metre at Ocean Isle II, LLC

Ocean Isle
 Coastal Highway & 67th Street
 Ocean City, Maryland

Existing Site

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	
22 Nov 06	
LAST REVISION DATE	
28 Feb 07	

C1.1

Ask Bob kbisz
 Apr. 1 Steh
 Bob Hamilton

If apply for new pier; won't set it
 ↳ combined 2 properties
 ?

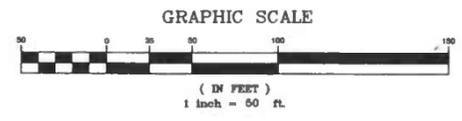
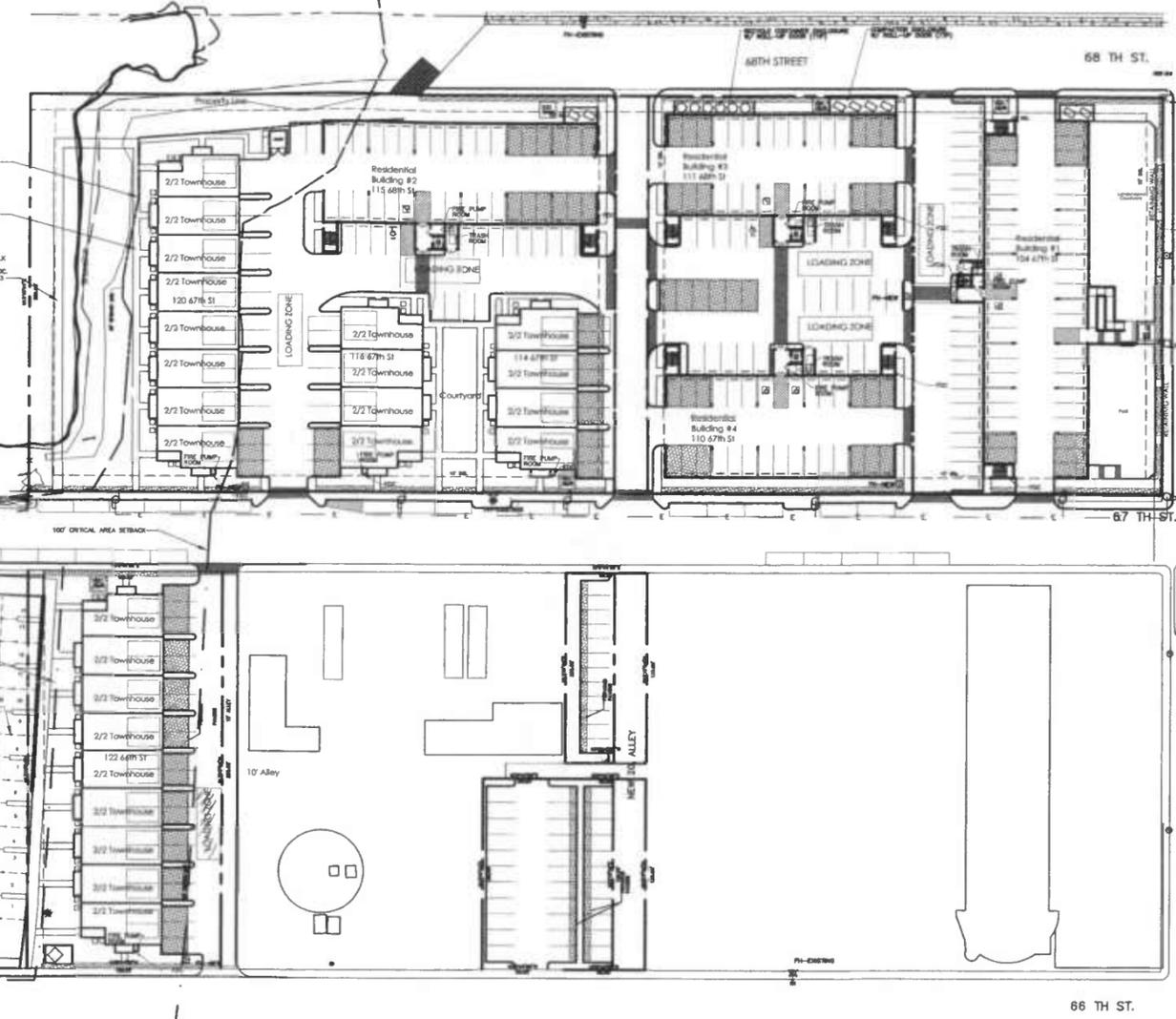
apply prior to re-zoning, set 2 piers

↳ if not goes into C.A. single-family pier then for townhomes

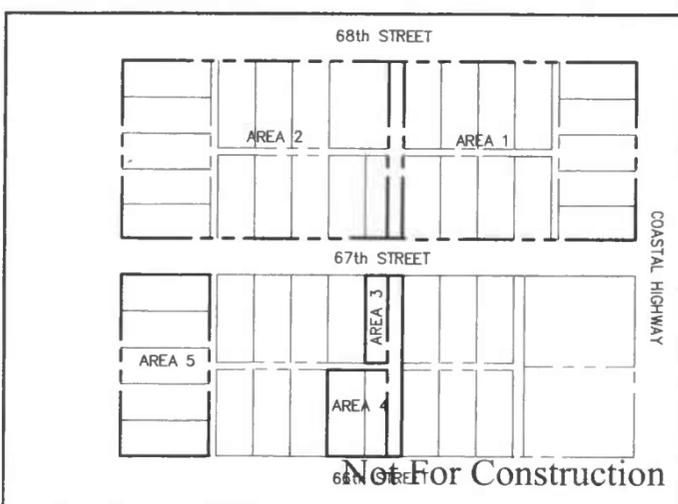
1 slip per 50 ft

Approved under Cat III (Commercial)

Find out if re-zoned to 1 property or not under 2 sq parcels
 ↳ If so, & didn't apply under old ownership



- GENERAL NOTES:**
- EASEMENTS WILL BE PROVIDED FOR ALL UTILITIES LINES AS REQUIRED BY TOWN OF OCEAN CITY.
 - INGRESS/EGRESS EASEMENTS WILL BE PROVIDED FOR ALL DEPARTMENTS AS REQUIRED BY TOWN OF OCEAN CITY.
 - COORDINATE CONSTRUCTION WITH CONNECTIVE.
 - PARALLEL PARKING ON THE STREET TO BE REMOVED FOR FIRE DEPARTMENT ACCESS.
 - ALL CONSTRUCTION OF PIERS, BULKHEADS, SHORELINES AND SLIPS WATER WARD OF HIGH TIDE LINE ARE NOT PART OF THIS PERMIT. THEY WERE APPROVED BY THE BOARD OF PORT WARDENS ON JUNE 8TH, 2006, BASED ON DRAWINGS BY LAWRENCE T. WHITLOCK AND ASSOCIATES. THEY ARE SHOWN HERE FOR REFERENCE ONLY. ANYTHING ON THIS SET OF DRAWINGS ON THE LANDLORD SIDE OF HIGH TIDE SHALL TAKE PRECEDENT OVER THE DRAWINGS PREPARED BY LAWRENCE T. WHITLOCK AND ASSOCIATES.



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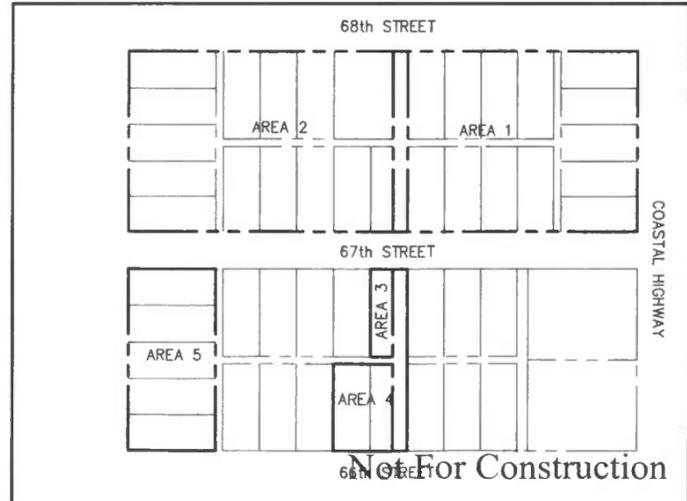
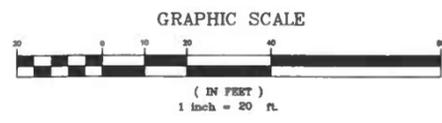
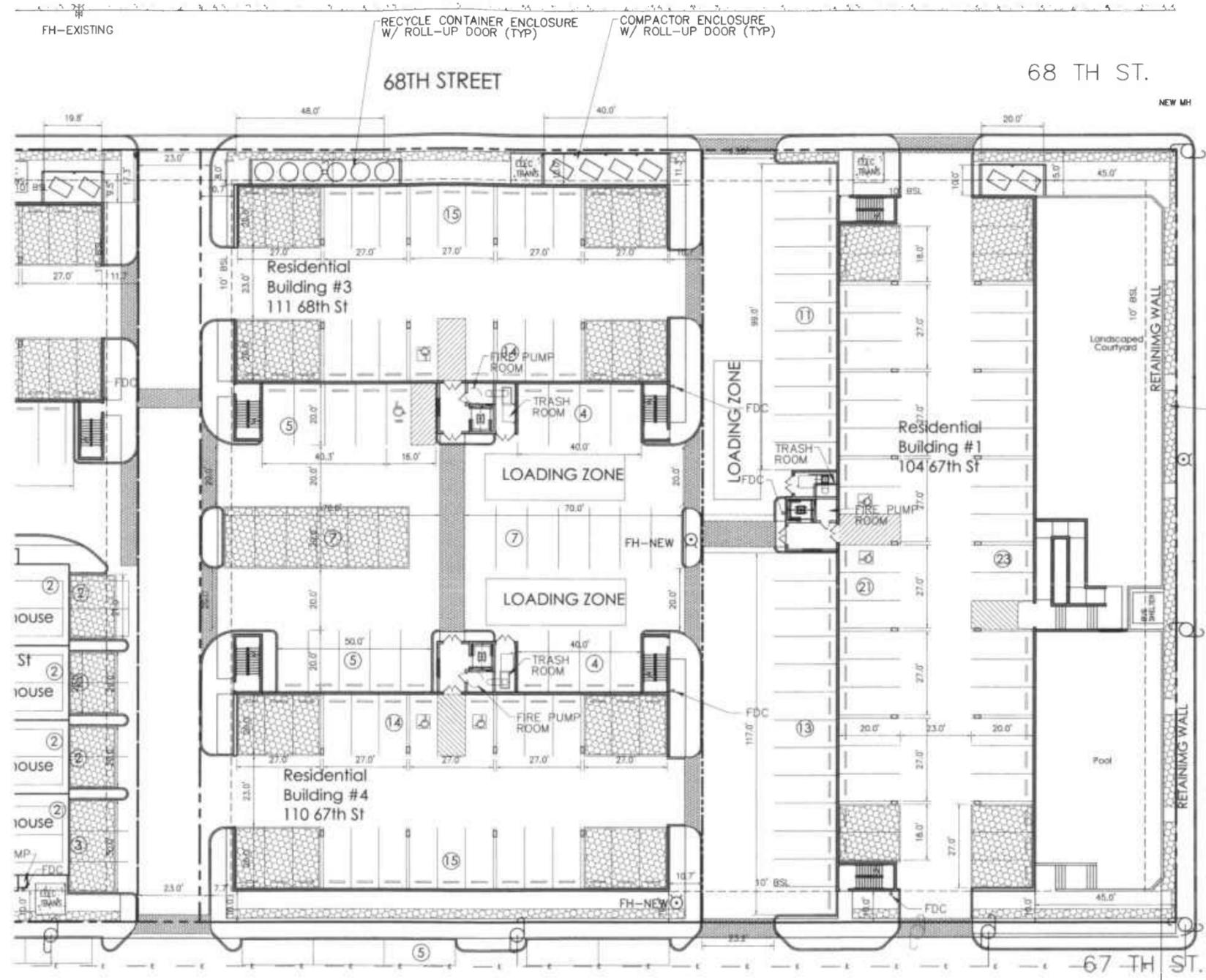
OWNER & DEVELOPER:
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Ocean Isle
 Coastal Highway & 67th Street
 Ocean City, Maryland

Proposed Site

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	C2.1
22 Nov 06	
LAST REVISION DATE	
28 Feb 07	



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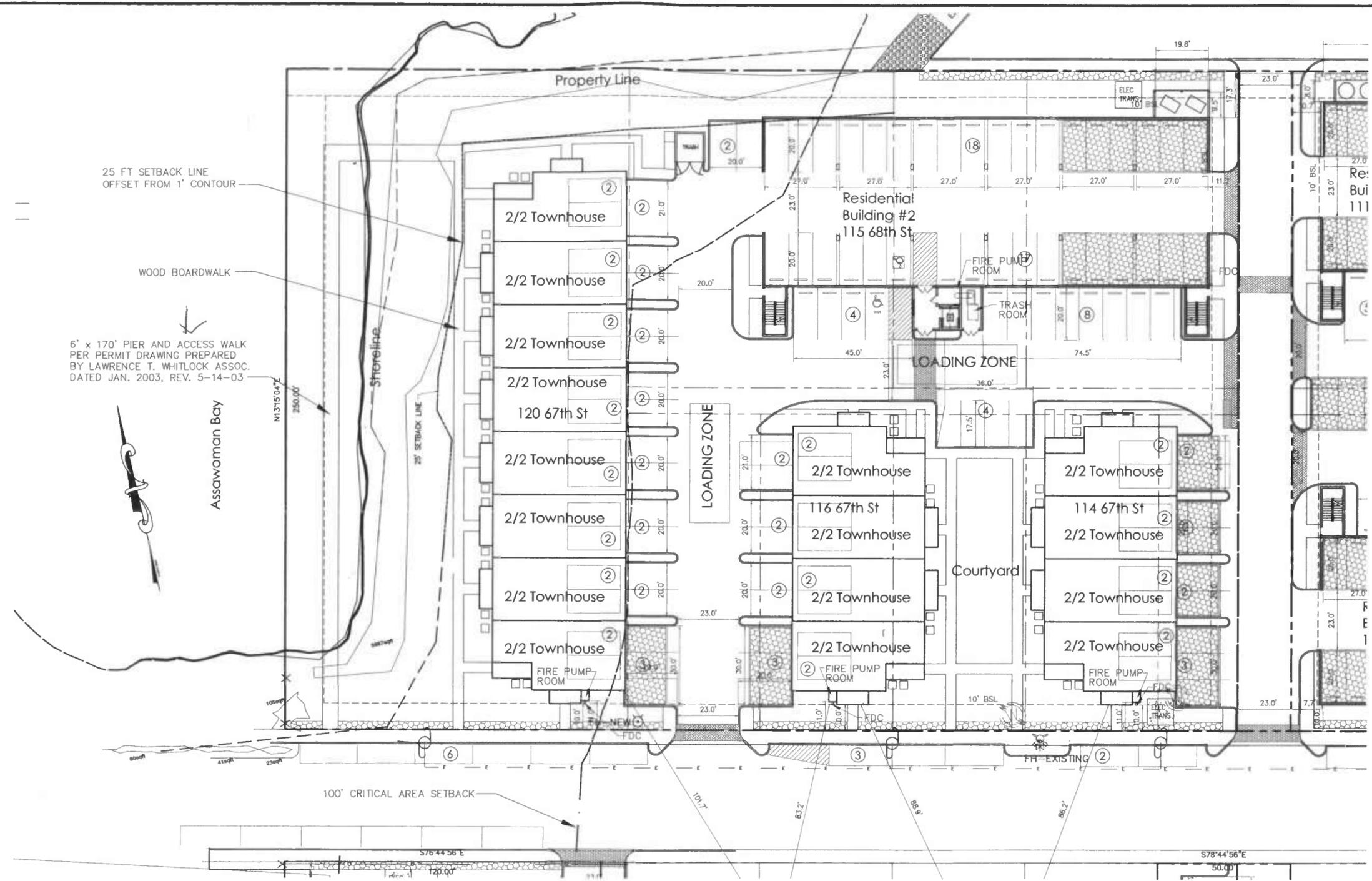
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Ocean Isle
 Coastal Highway & 67th Street
 Ocean City, Maryland

Proposed Site

Planning Submission

SCALE: As Noted	PROJECT NUMBER: 05139
DRAWN BY:	DRAWING NUMBER:
ISSUE DATE: 22 Nov 06	C2.2
LAST REVISION DATE: 28 Feb 07	

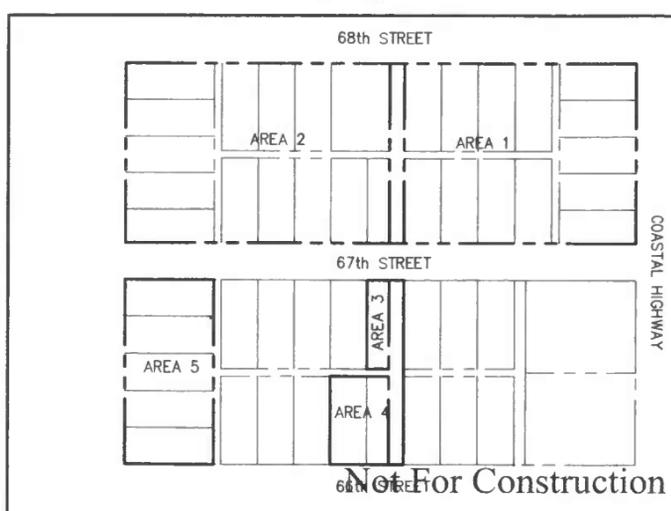
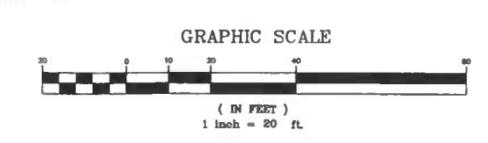
E:\G01\109 Ocean\A01 Drawings\119x--site--nose.dwg, C2.2, 3/1/2007 9:31:18 AM



25 FT SETBACK LINE
OFFSET FROM 1' CONTOUR

WOOD BOARDWALK

6' x 170' PIER AND ACCESS WALK
PER PERMIT DRAWING PREPARED
BY LAWRENCE T. WHITLOCK ASSOC.
DATED JAN. 2003, REV. 5-14-03



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Re: Bui 111

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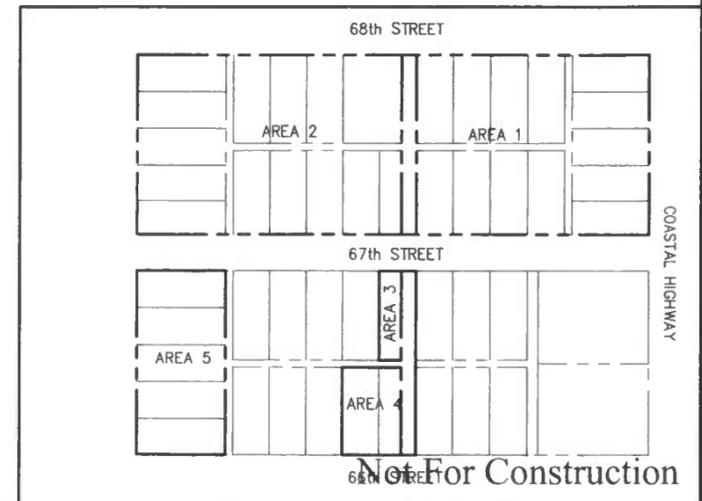
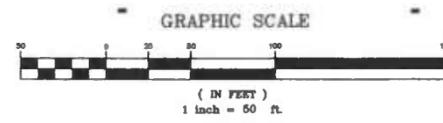
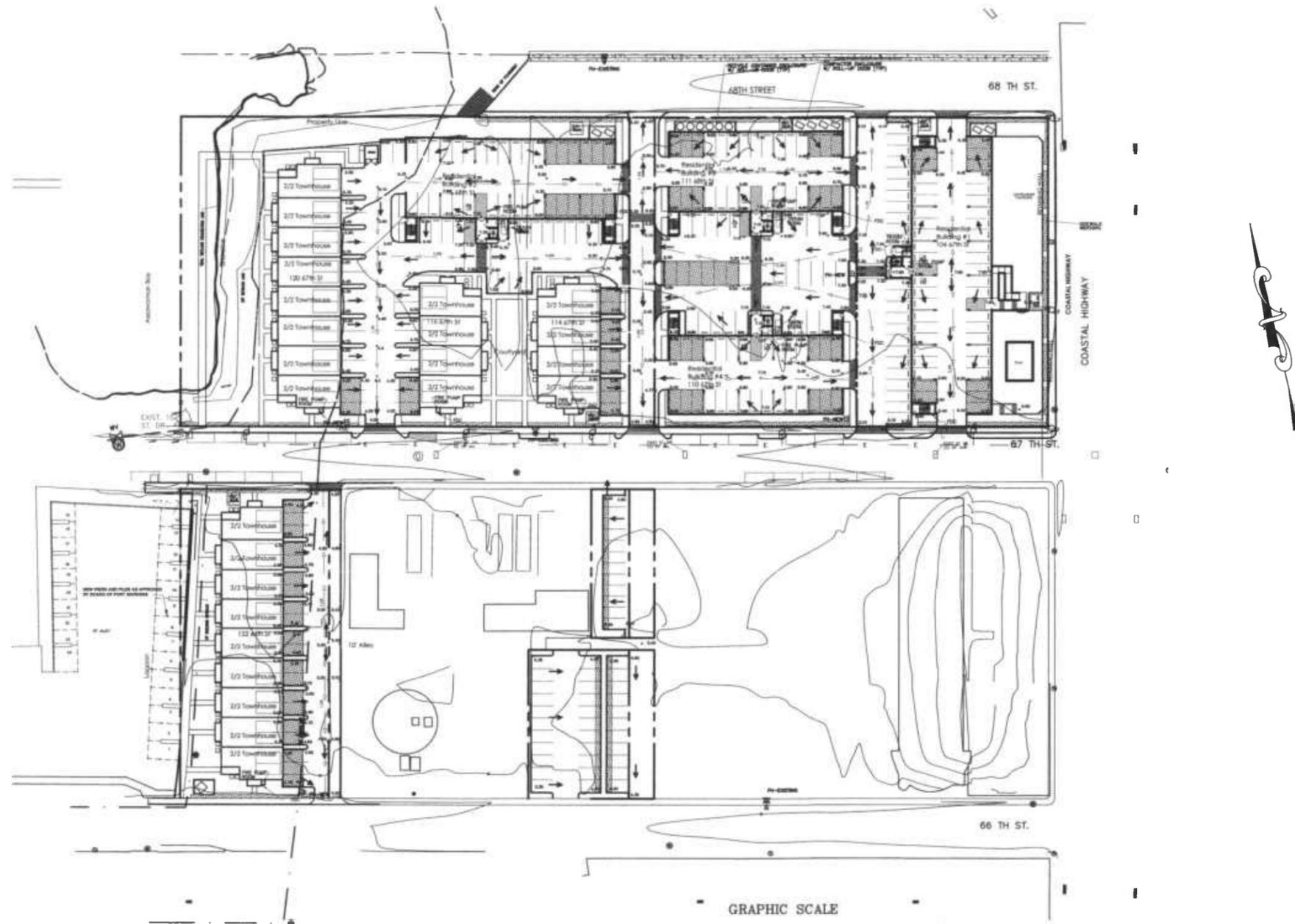
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Ocean City, Maryland

Proposed Site

PROJECT STATUS	
Planning Submission	
SCALE:	PROJECT NUMBER:
As Noted	05139
DRAWN BY:	DRAWING NUMBER:
ISSUE DATE:	C2.3
22 Nov 06	
LAST REVISION DATE:	28 Feb 07



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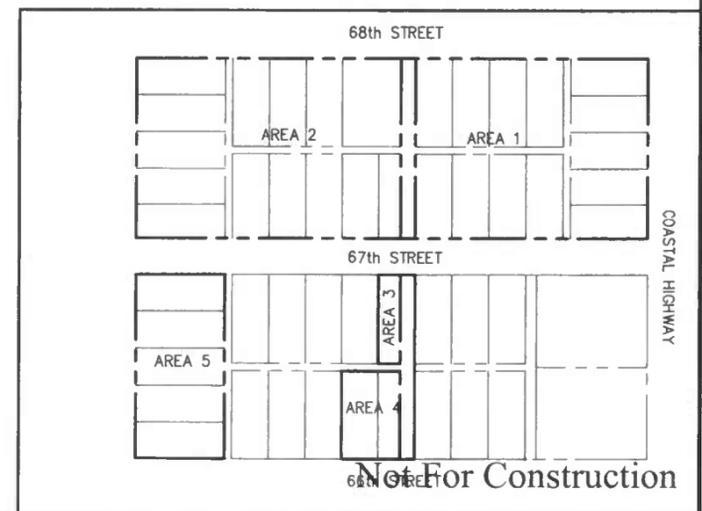
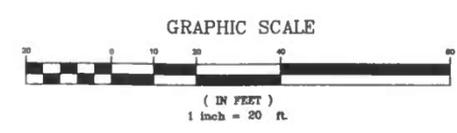
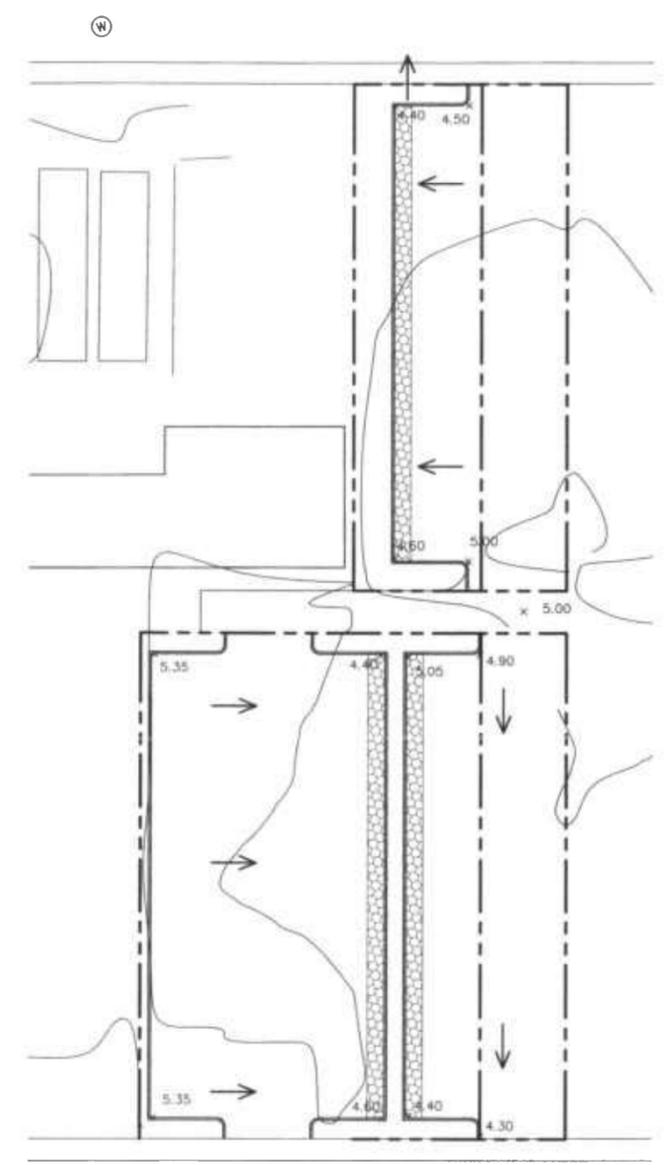
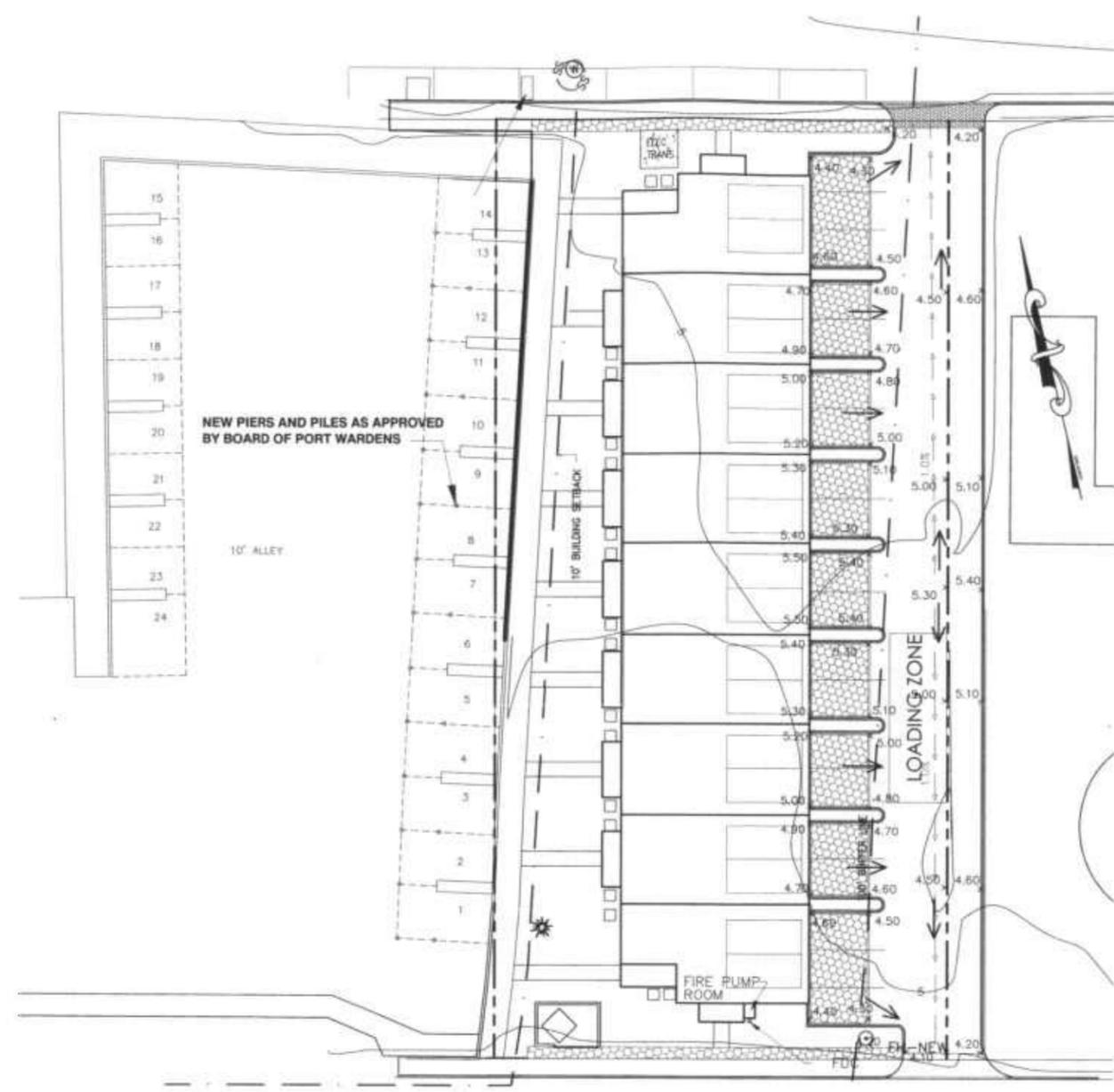
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Proposed Grading

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	C3.1
22 Nov 06	
LAST REVISION DATE	
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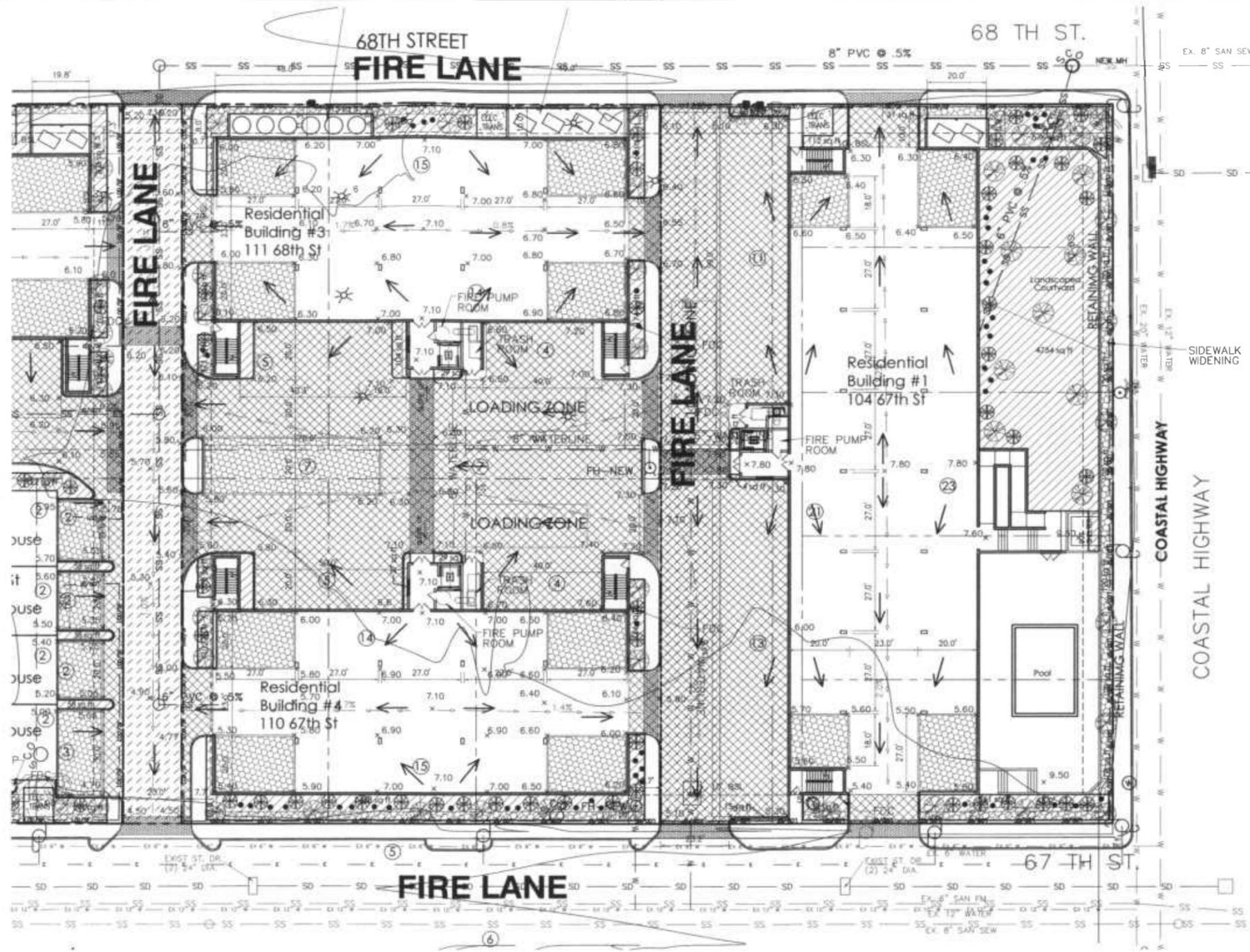
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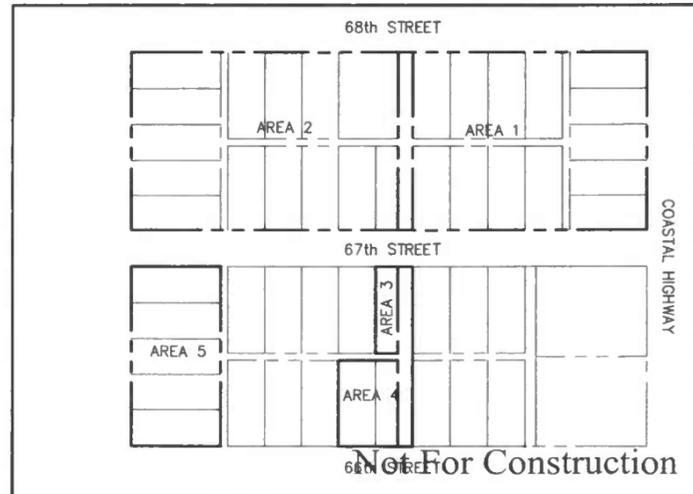
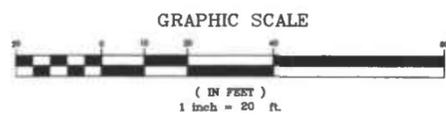
Ocean Isle
 Coastal Highway & 67th Street
 Ocean City, Maryland

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	C3.4
22 Nov 06	
LAST REVISION DATE	
28 Feb 07	



AREA 1	
4754 sq ft	1113 sq ft
561 sq ft	130 sq ft
132 sq ft	130 sq ft
15 sq ft	130 sq ft
1458 sq ft	130 sq ft
102 sq ft	130 sq ft
170 sq ft	113 sq ft
27 sq ft	
29 sq ft	
766 sq ft	
170 sq ft	
104 sq ft	
29 sq ft	
102 sq ft	
174 sq ft	
415 sq ft	
165 sq ft	
43 sq ft	
112 sq ft	
31 sq ft	
578 sq ft	
22 sq ft	
43 sq ft	
10416 sq ft	

Ocean Isle - Area 1		
	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	56,147.0	23,868.0
Driveways	0.0	0.0
Sidewalks/conc	1,100.0	7,228.0
Building	12,436.0	35,417.0
Decks	0.0	0.0
Pools/Ponds	0.0	600.0
Other	0.0	0.0
Total Impervious	69,683.0	67,113.0
Landscape Area	8,967.0	10,418.0
PerVIOUS Paver	0.0	1,121.0
PerVIOUS Wooden Decks	0.0	0.0
Total PerVIOUS	8,967.0	11,537.0
Total Area	78,650.0	78,650.0
Percent Impervious	88.6%	85.3%
Percent Landscaped	11.4%	13.2%
Percent PerVIOUS	11.4%	14.7%
Rv	0.8	0.6
WQv	5,553.9	5,361.2
Storage (20% Exg + 100% New)	1,110.6	-192.8
Total Required Storage	918.0	
Area of Pavers (sf)	8,764.0	
Depth required @ 40% Void (ft)	0.3	
Depth required @ 40% Void (in)	4.1	
Storage Provided (assuming 1.5' stone @ 40%)	4058.4	
SF of impervious area supported for quality control	48700.8	61.92%



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Ocean Isle
Coastal Highway & 67th Street
Ocean City, Maryland

SWM/Critical Area Site Plan

PROJECT STATUS: **Planning Submission**

SCALE: **As Noted** PROJECT NUMBER: **05139**

DRAWN BY: DRAWING NUMBER:

ISSUE DATE: **22 Nov 06** **C4.2**

LAST REVISION DATE: **28 Feb 07**

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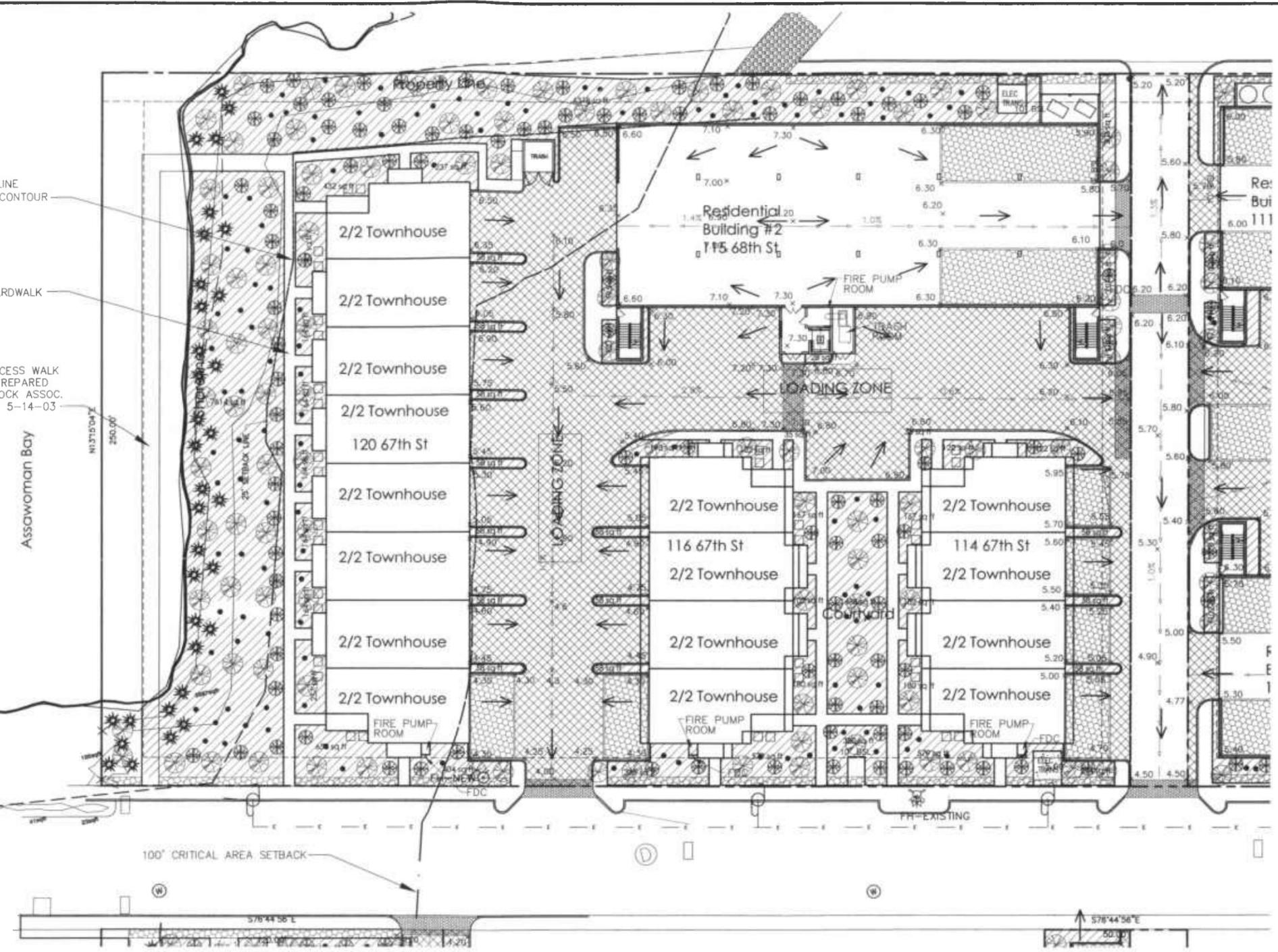
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 Coastal Highway & 67th Street
 Ocean City, Maryland

SWM/Critical Area Plan

PROJECT STATUS: Planning Submission

SCALE: As Noted	PROJECT NUMBER: 05139
DRAWN BY:	DRAWING NUMBER:
ISSUE DATE: 22 Nov 06	C4.3
LAST REVISION DATE: 28 Feb 07	

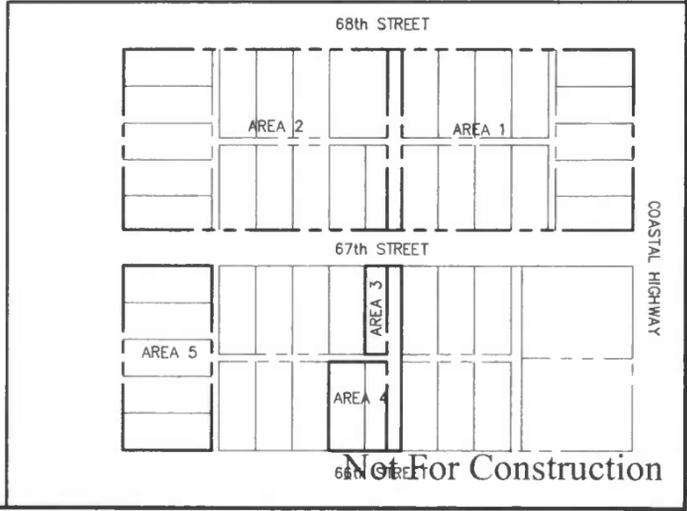


AREA 2

7614 sq ft	58 sq ft
571 sq ft	58 sq ft
180 sq ft	58 sq ft
164 sq ft	28 sq ft
164 sq ft	157 sq ft
164 sq ft	102 sq ft
164 sq ft	180 sq ft
164 sq ft	345 sq ft
257 sq ft	654 sq ft
432 sq ft	380 sq ft
237 sq ft	579 sq ft
58 sq ft	258 sq ft
58 sq ft	102 sq ft
58 sq ft	167 sq ft
58 sq ft	122 sq ft
58 sq ft	193 sq ft
58 sq ft	58 sq ft
58 sq ft	58 sq ft
404 sq ft	58 sq ft
95 sq ft	294 sq ft
120 sq ft	6217 sq ft
193 sq ft	203 sq ft
122 sq ft	107 sq ft
35 sq ft	35 sq ft
21996 sq ft	

Ocean Isle - Area 2

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	56,883.0	19,253.0
Driveways	0.0	0.0
Sidewalks/conc	50.0	7,546.0
Building	11,782.0	32,234.0
Decks	0.0	0.0
Pools/Ponds	0.0	0.0
Other	0.0	0.0
Total Impervious	68,695.0	59,033.0
Landscape Area	14,844.0	21,996.0
Penious Paver	0.0	2,310.0
Penious Wooden Decks	0.0	0.0
Total Penious	14,644.0	24,306.0
Total Area	83,339.0	83,339.0
Percent Impervious	82.4%	70.8%
Percent Landscaped	17.6%	26.4%
Percent Penious	17.6%	29.2%
Rv	0.8	0.7
WQv	5,499.4	4,774.7
Storage (20% Exg + 100% New)	1,099.9	-724.7
Total Required Storage	375.2	
Area of Pavers (sf)	507.0	
Depth required @ 40% Void (ft)	1.9	
Depth required @ 40% Void (in)	22.2	
Storage Provided (assuming 1.5' stone @ 40%)	2310	
SF of impervious area supported for quality control	27720	33.26%



Not For Construction

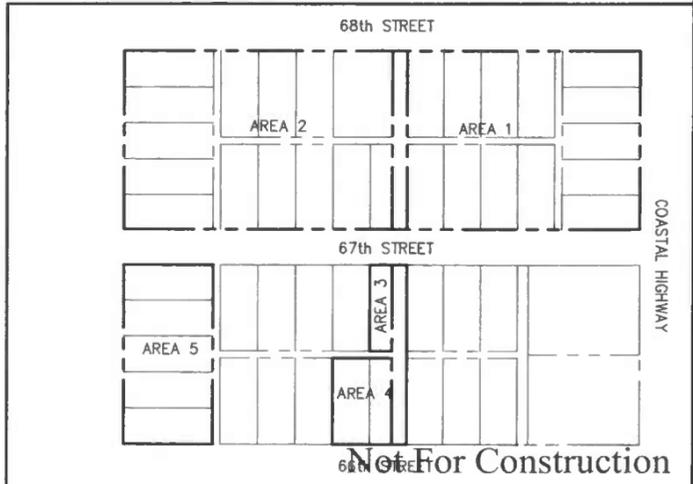
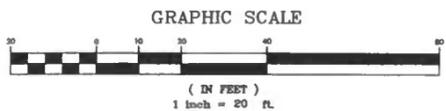
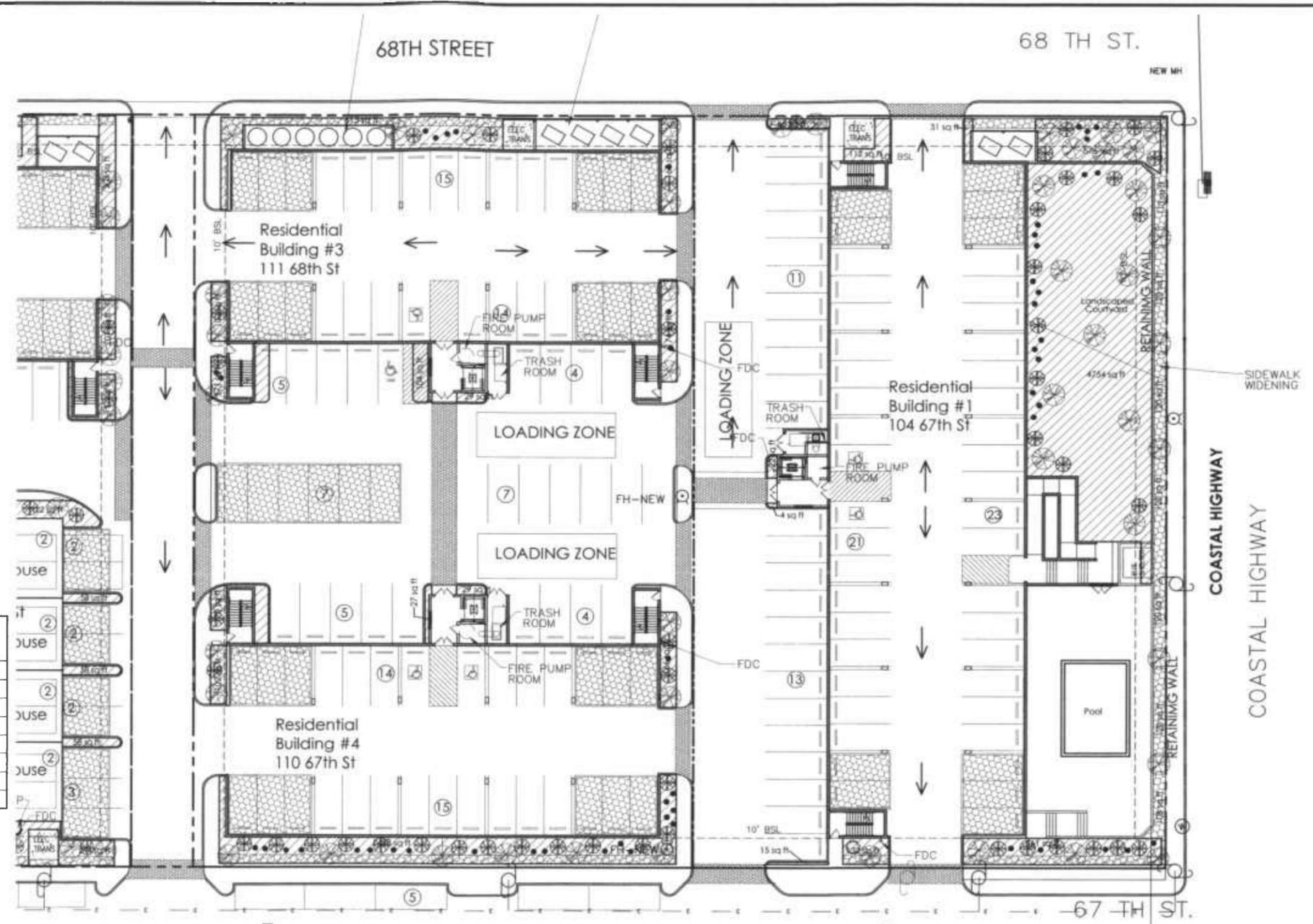
AREA 1	
4754 sq ft	113 sq ft
561 sq ft	120 sq ft
132 sq ft	120 sq ft
15 sq ft	120 sq ft
1458 sq ft	120 sq ft
102 sq ft	120 sq ft
170 sq ft	113 sq ft
27 sq ft	
29 sq ft	
166 sq ft	
170 sq ft	
104 sq ft	
29 sq ft	
102 sq ft	
174 sq ft	
615 sq ft	
165 sq ft	
43 sq ft	
112 sq ft	
31 sq ft	
576 sq ft	
22 sq ft	
4 sq ft	
10416 sq ft	



PROPOSED LANDSCAPE SCHEDULE

NAME	PLANTING SIZE	HEIGHT AT MATURITY	AMOUNT
RIVER BIRCH, <i>Betula nigra</i>	6" TALL, 1 1/2" CALIPER	40'-70'	39
HIGH TIDE BUSH, <i>baccharis halimifolia</i>	3 GALLON	6'-12'	51
LITTLE RED HOLLY, <i>ilex x (VAR)</i>	3 GALLON	6'-12'	46

BALANCE OF SITE IS TO RECEIVE SELECT GRASS SEED



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Landscape Plan

PROJECT STATUS	
Planning Submission	
SCALE:	PROJECT NUMBER:
As Noted	05139
DRAWN BY:	DRAWING NUMBER:
ISSUE DATE:	C6.2
22 Nov 06	
LAST REVISION DATE:	
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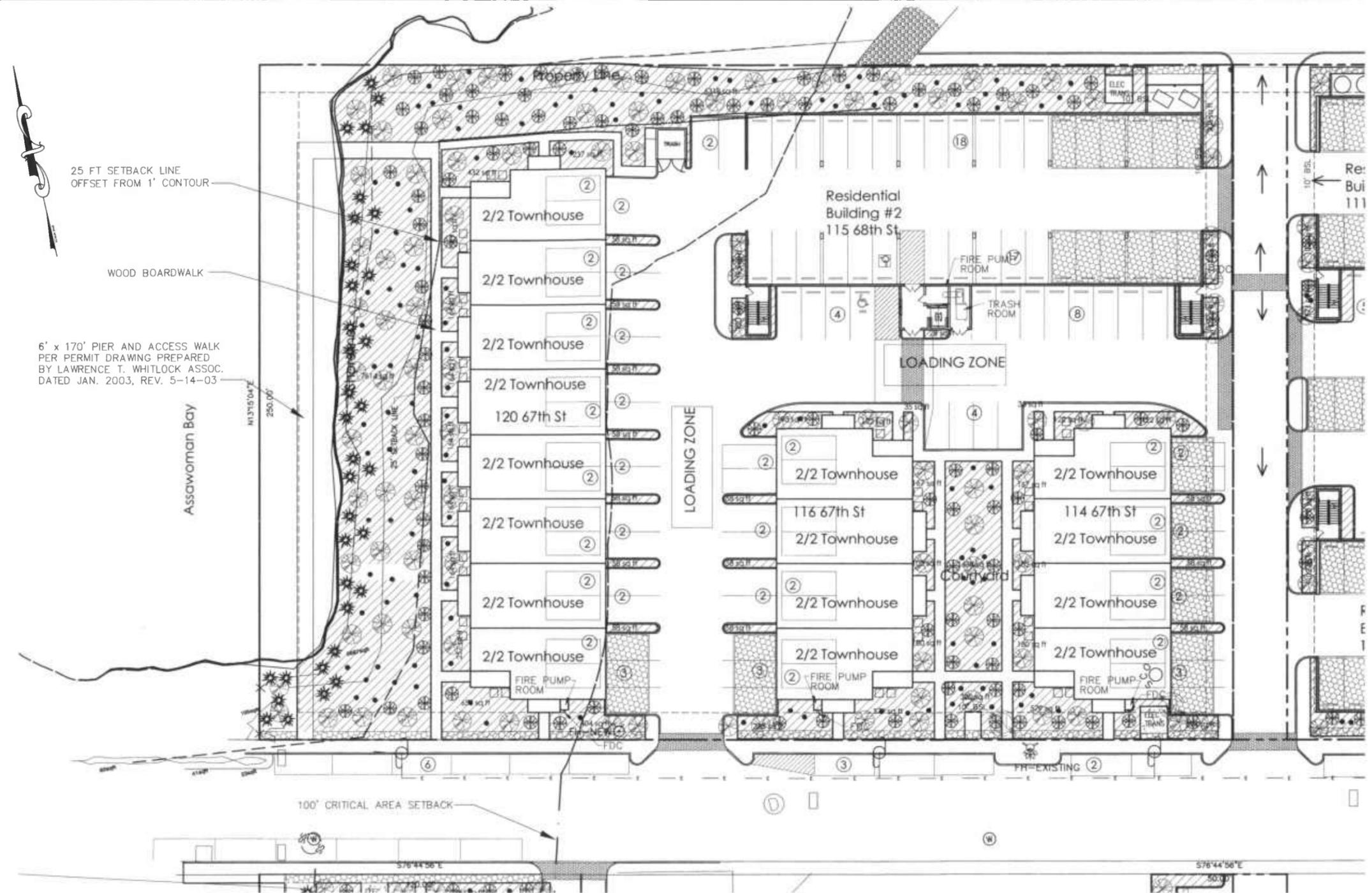
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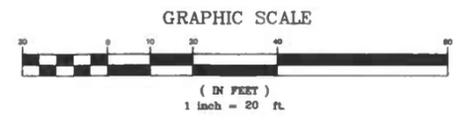
Landscape Plan

PROJECT STATUS: **Planning Submission**
SCALE: **As Noted** PROJECT NUMBER: **05139**
DRAWN BY: DRAWING NUMBER:
ISSUE DATE: **22 Nov 06** **C6.3**
LAST REVISION DATE: **28 Feb 07**



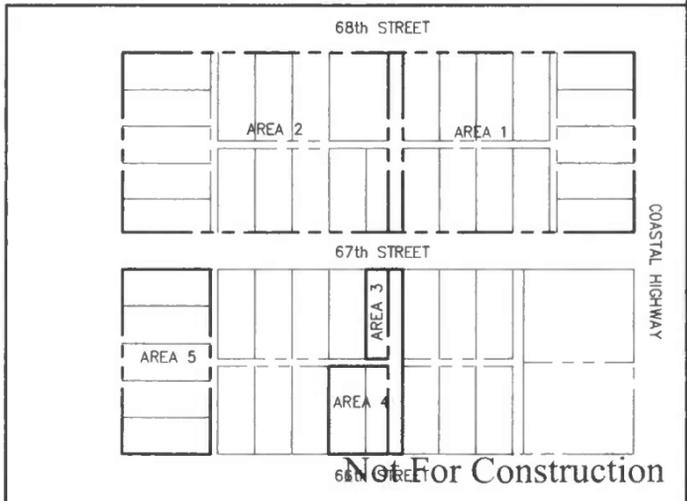
AREA 2

7814 sq ft	58 sq ft
591 sq ft	58 sq ft
180 sq ft	58 sq ft
164 sq ft	28 sq ft
164 sq ft	167 sq ft
164 sq ft	102 sq ft
164 sq ft	180 sq ft
164 sq ft	365 sq ft
257 sq ft	656 sq ft
432 sq ft	360 sq ft
237 sq ft	379 sq ft
58 sq ft	256 sq ft
58 sq ft	102 sq ft
58 sq ft	167 sq ft
58 sq ft	122 sq ft
58 sq ft	193 sq ft
58 sq ft	58 sq ft
58 sq ft	58 sq ft
404 sq ft	58 sq ft
75 sq ft	294 sq ft
120 sq ft	4217 sq ft
193 sq ft	203 sq ft
122 sq ft	107 sq ft
35 sq ft	35 sq ft
21996 sq ft	



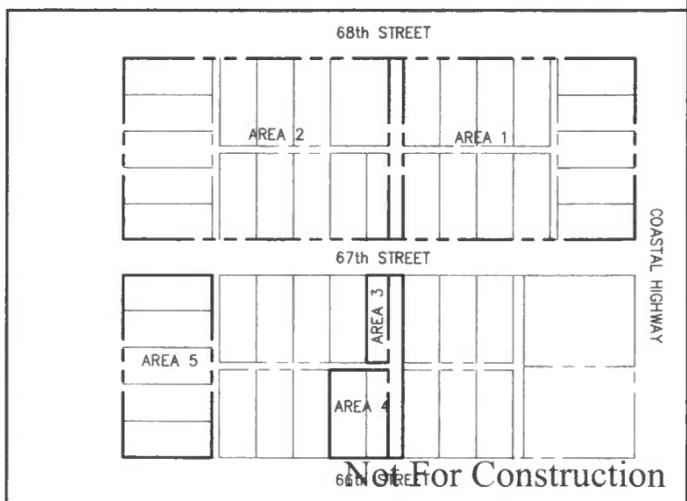
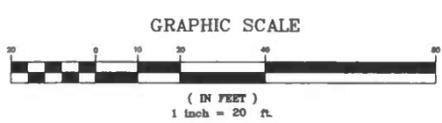
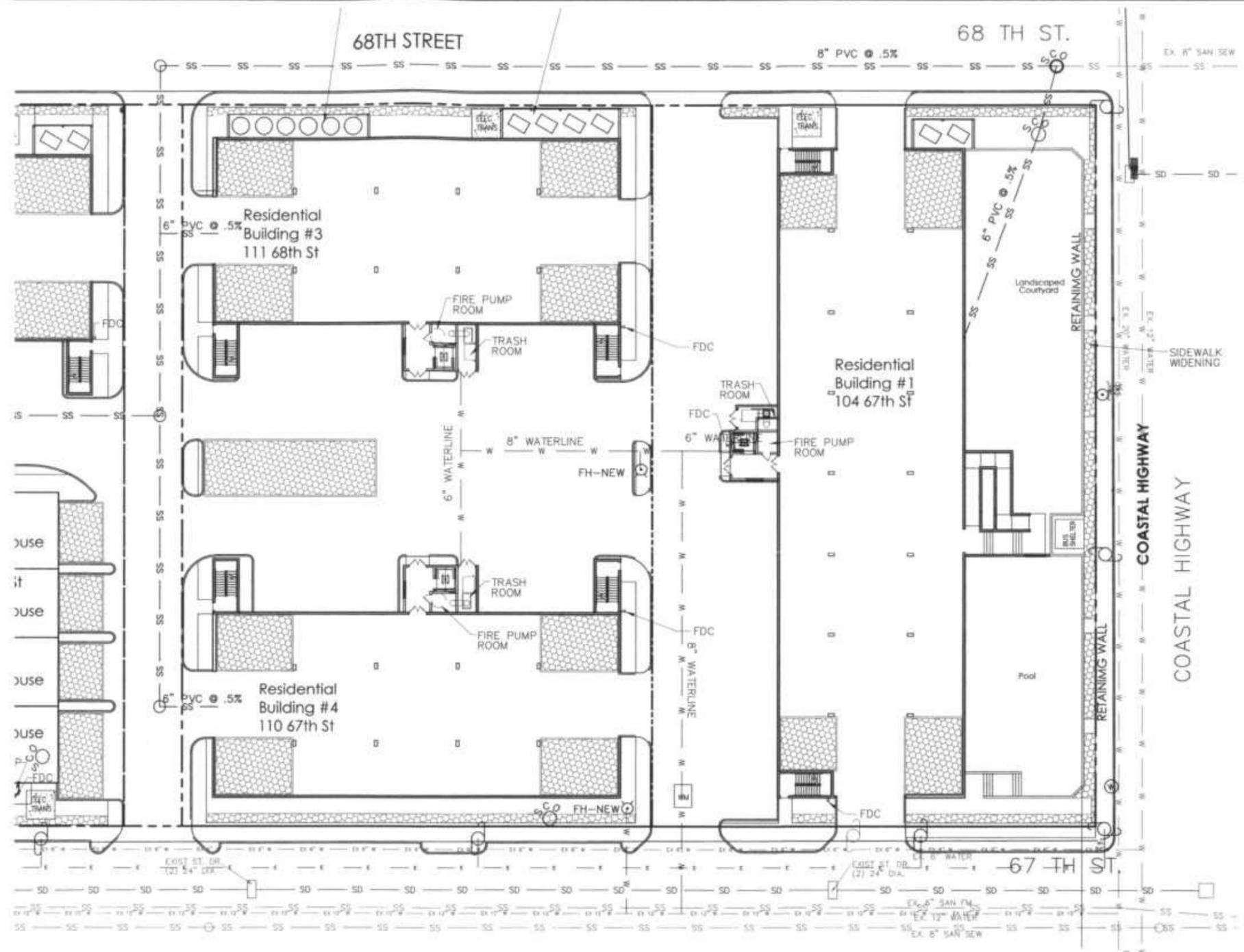
PROPOSED LANDSCAPE SCHEDULE

	NAME	PLANTING SIZE	HEIGHT AT MATURITY	AMOUNT
⊗	RIVER BIRCH, <i>Betula nigra</i>	6" TALL, 1 1/2" CALIPER	40'-70'	101
⊗	LITTLE RED HOLLY, <i>ilex x (VAR)</i>	3 GALLON	6'-12'	99
⊗	SWAMP ROSE, <i>Rosa palustris</i>	3 GALLON	2'-7'	34
•	HIGH TIDE BUSH, <i>baccharis halimifolia</i>	3 GALLON	6'-12'	117



BALANCE OF SITE IS TO RECEIVE SELECT GRASS SEED

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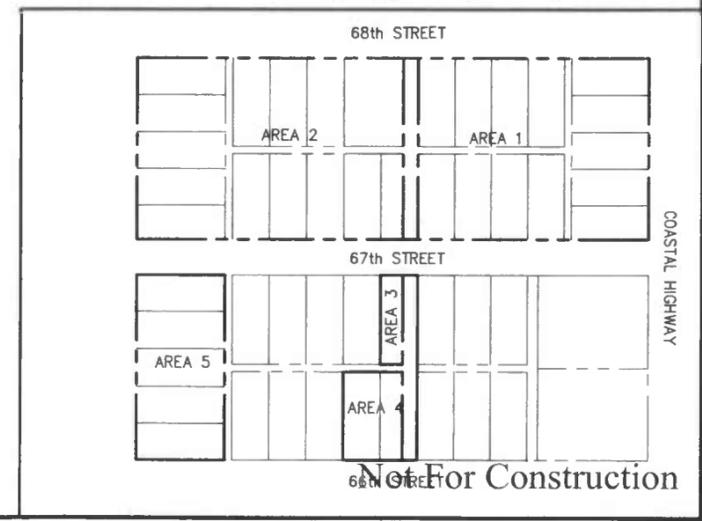
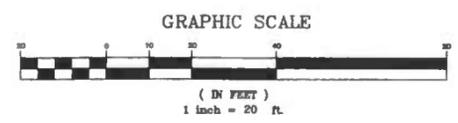
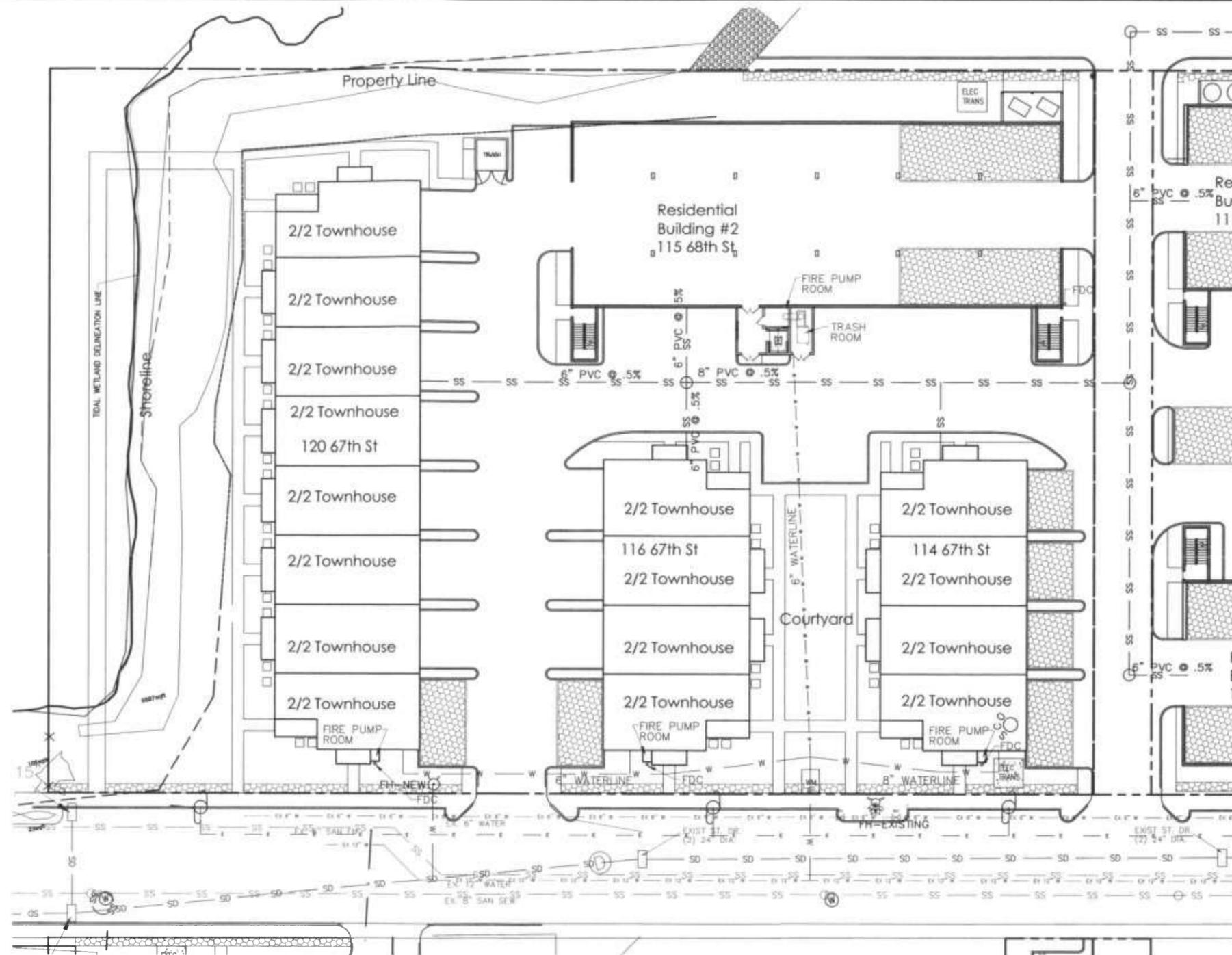
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PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY:	DRAWING NUMBER
ISSUE DATE	C7.2
22 Nov 06	
LAST REVISION DATE:	
28 Feb 07	



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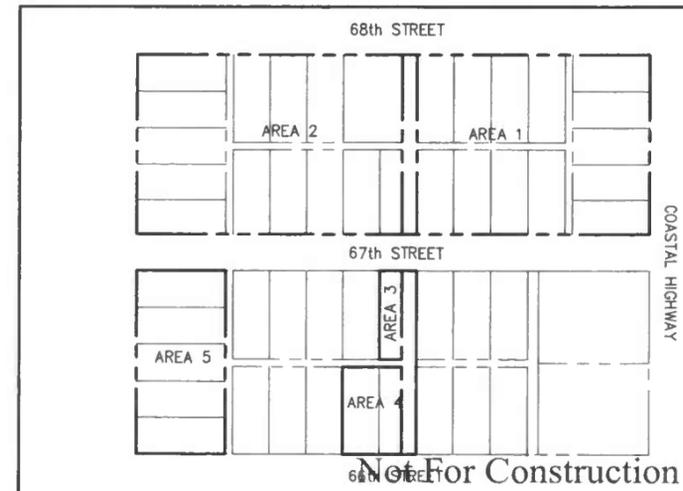
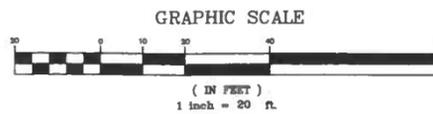
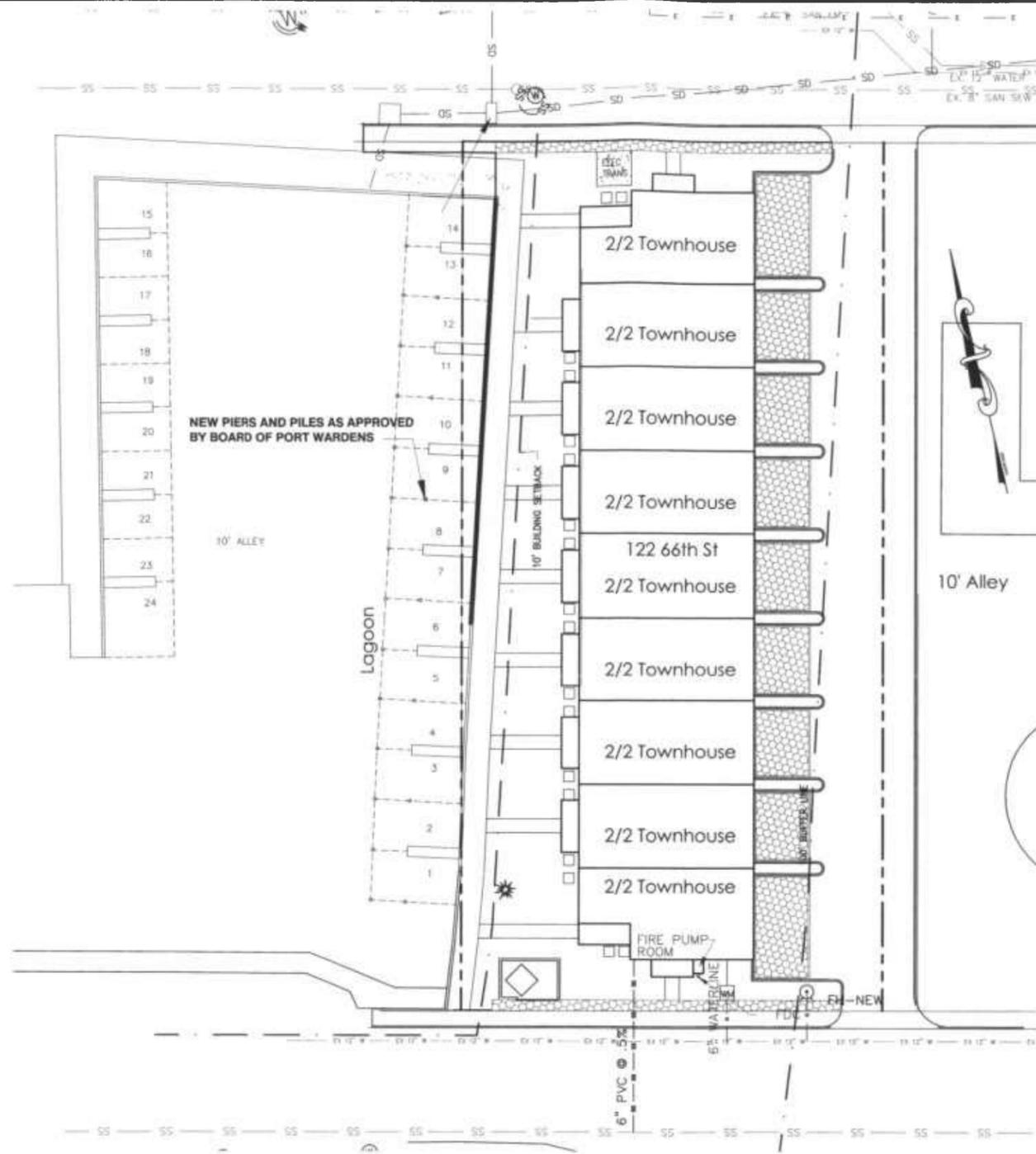
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Utility Plan

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
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22 Nov 06	
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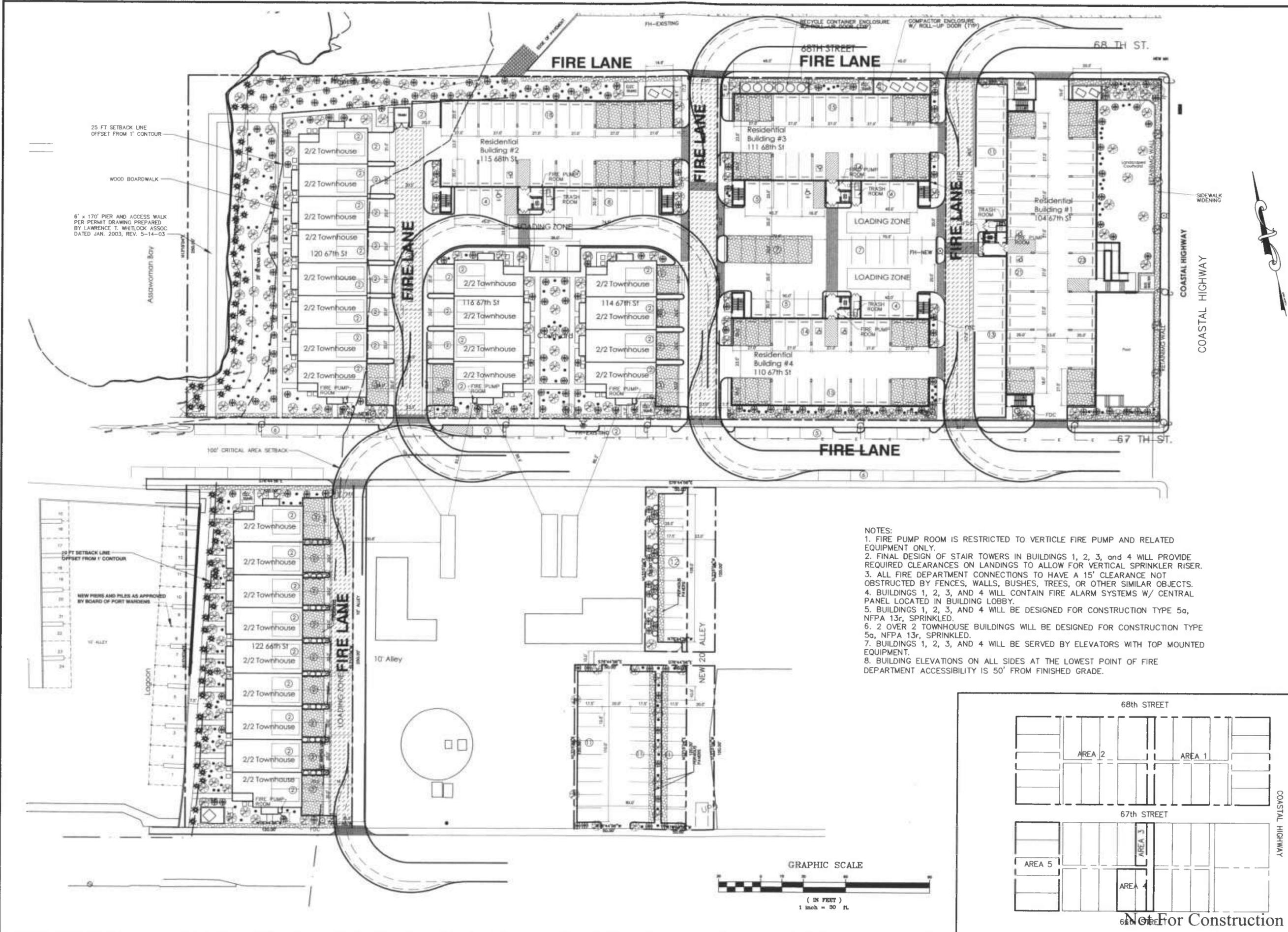
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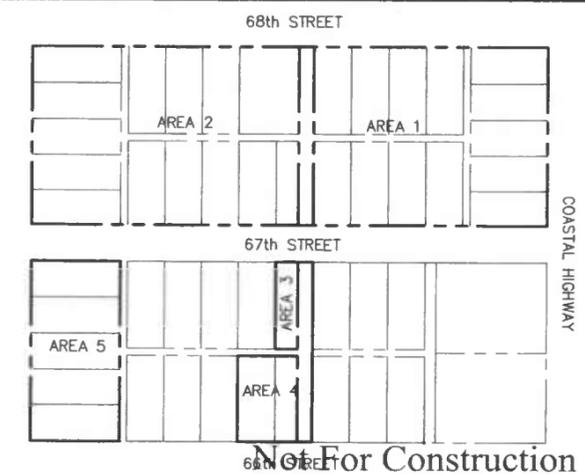
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Utility Plan

PROJECT STATUS: Planning Submission	
SCALE: As Noted	PROJECT NUMBER: 05139
DRAWN BY:	DRAWING NUMBER:
ISSUE DATE: 22 Nov 06	C7.4
LAST REVISION DATE: 28 Feb 07	



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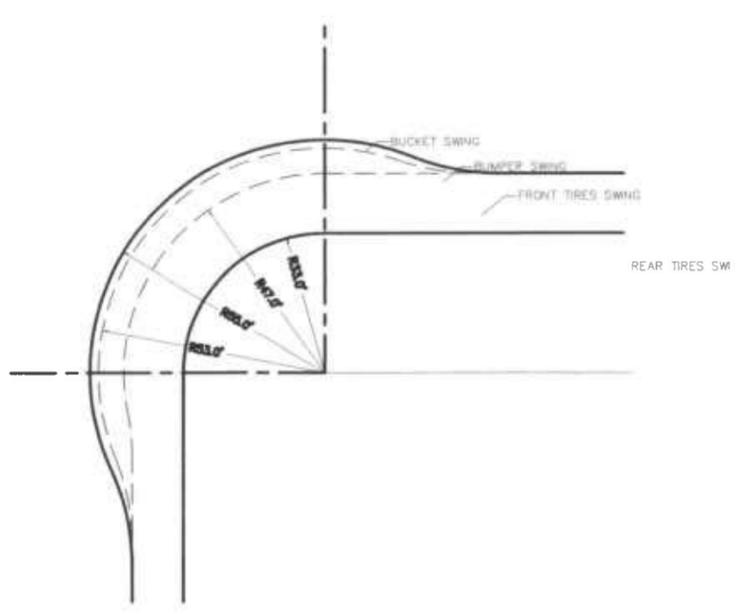
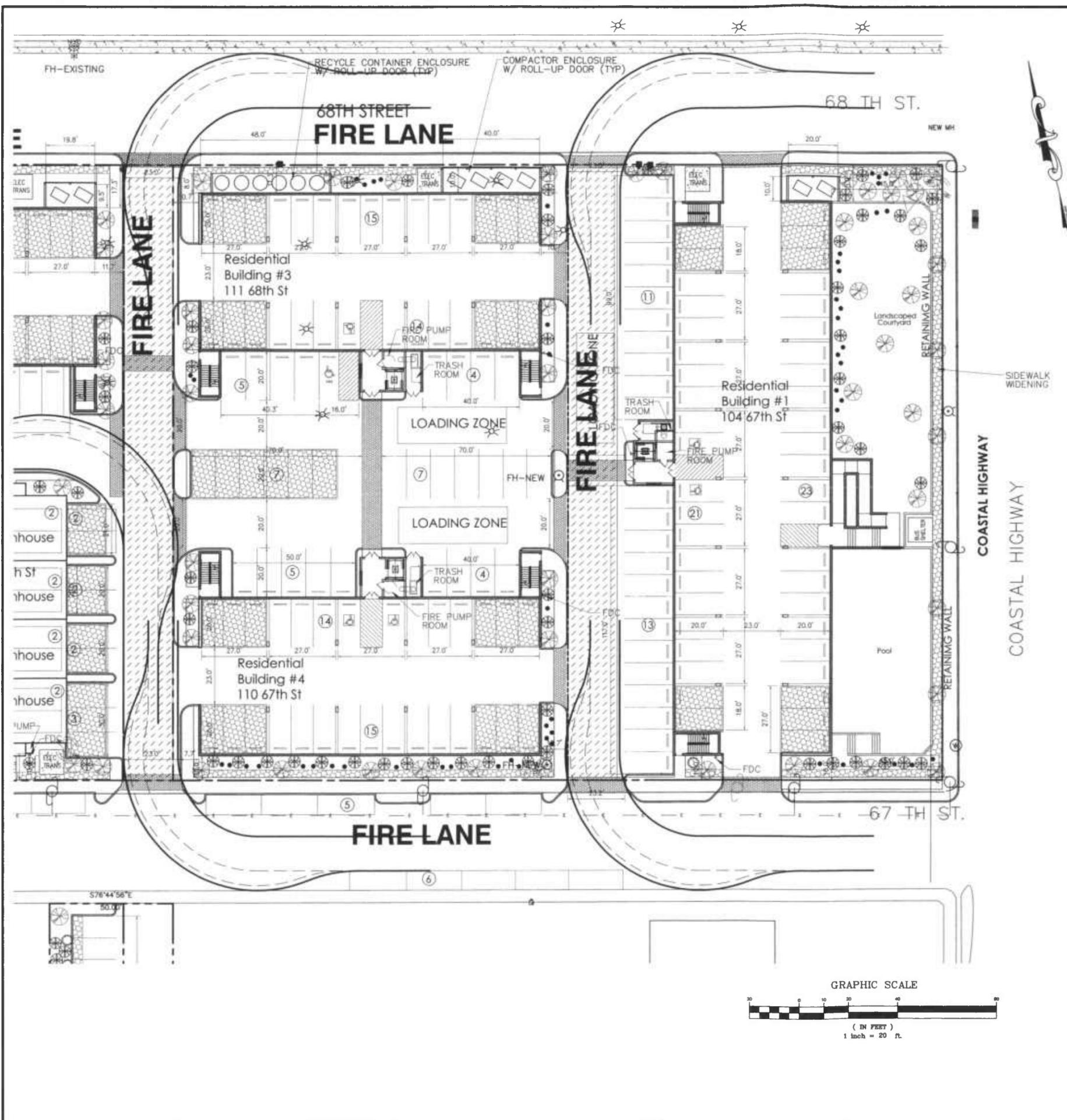
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Fire Marshal Site Plan

PROJECT STATUS:
Planning Submission

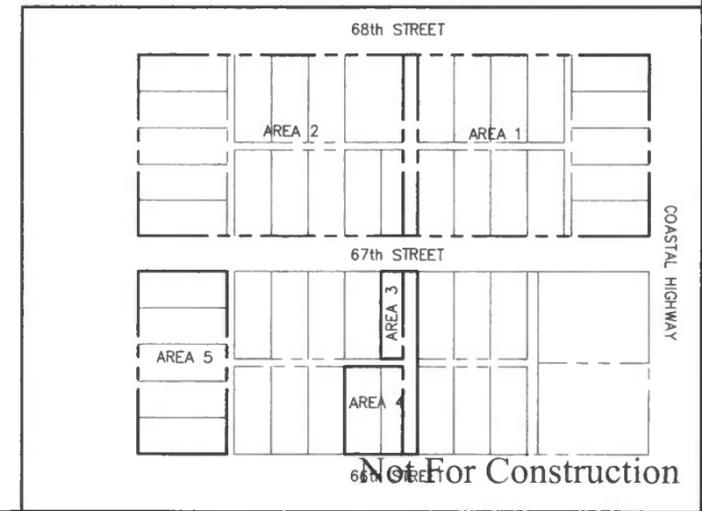
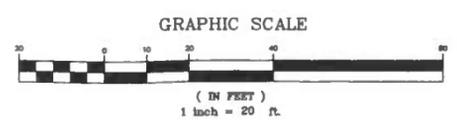
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C8.1



OCEAN CITY FIRE DEPARTMENT
TURNING TEMPLATE

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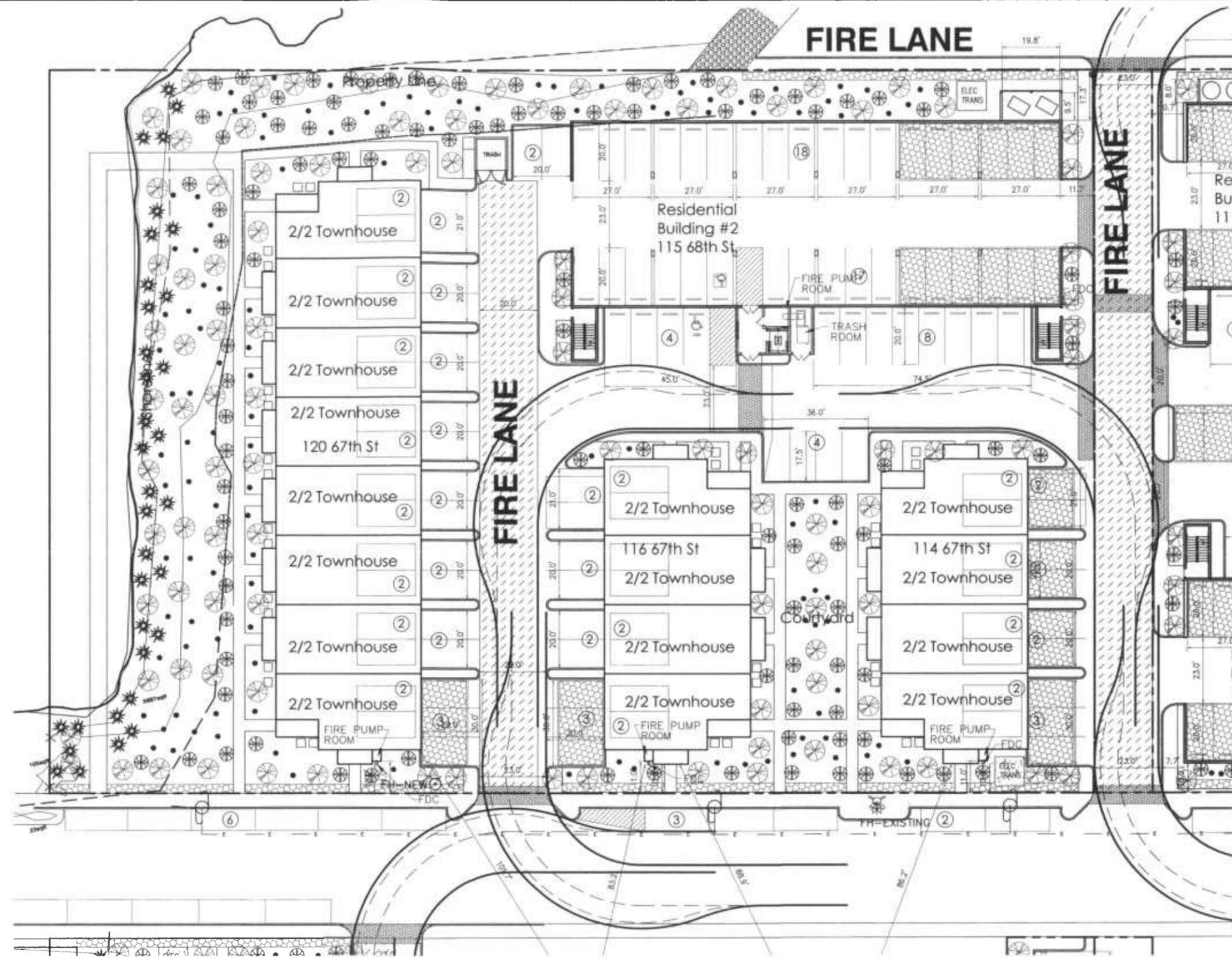
Fire Marshal
Site Plan

PROJECT STATUS:
Planning Submission

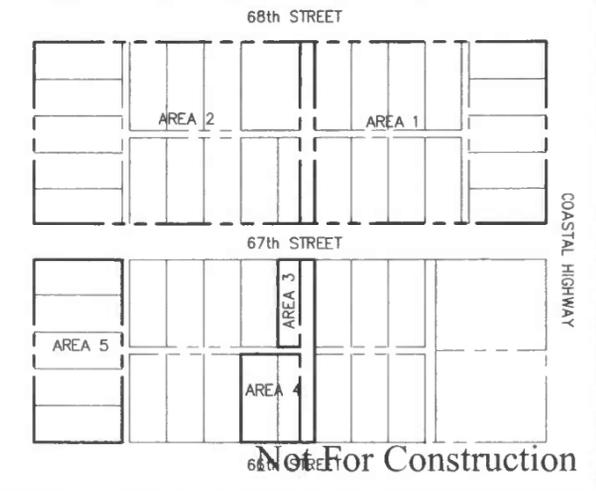
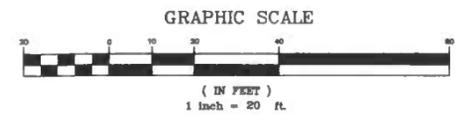
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ISSUE DATE: 22 Nov 06
LAST REVISION DATE: 28 Feb 07

C8.2

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Fire Marshal
 Site Plan

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 Planning Submission

SCALE:
 As Noted

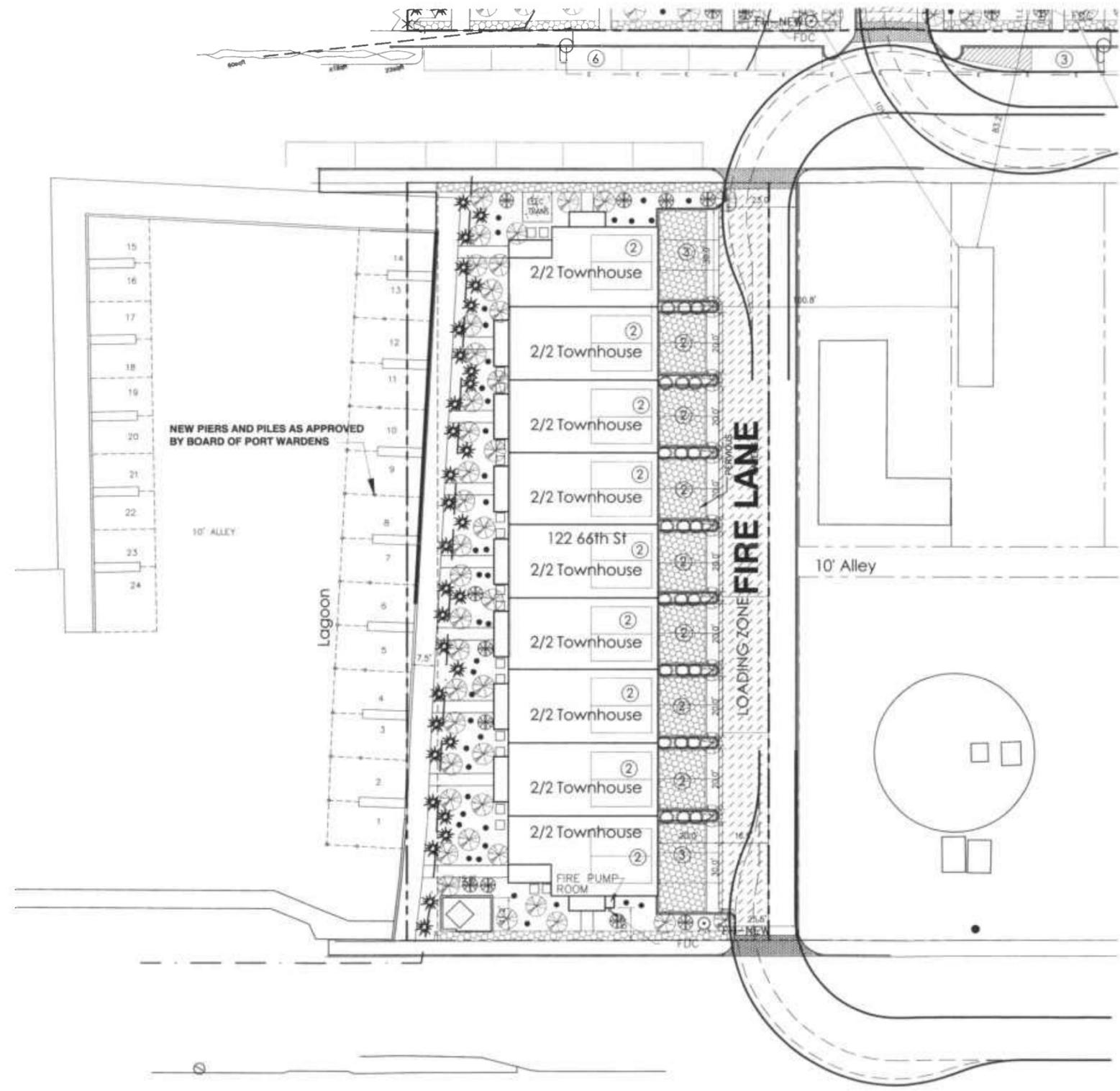
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NEW PIERS AND PILES AS APPROVED BY BOARD OF PORT WARDENS

10' ALLEY

Lagoon

2/2 Townhouse

2/2 Townhouse

2/2 Townhouse

2/2 Townhouse

122 66th St
2/2 Townhouse

LOADING ZONE FIRE LANE

10' Alley

FIRE PUMP ROOM

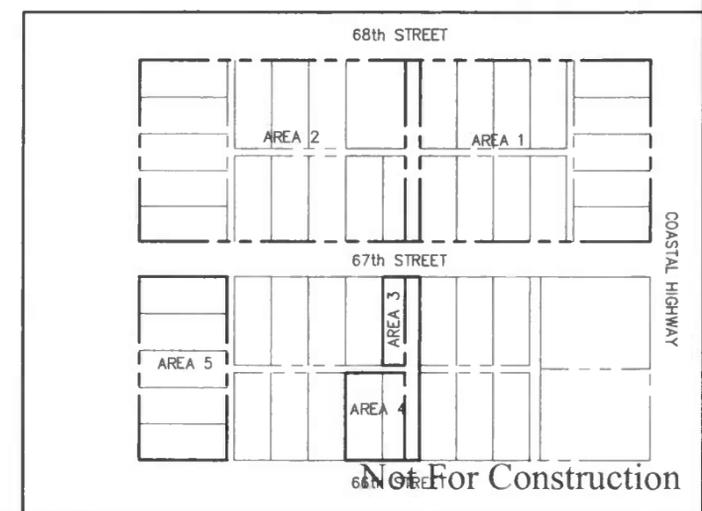
GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



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SCALE: As Noted	PROJECT NUMBER: 05139
DRAWN BY: DRAWING NUMBER:	
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LAST REVISION DATE: 28 Feb 07	

C8.4

MAINTENANCE CRITERIA

- Regular removal of accumulated solids from the pretreatment device to prevent them from moving into the trench. Sediment chambers should be cleaned out when it accumulates to a depth of 6 inches.
- Implement source controls, such as street sweeping, landscaping practices, and other good housekeeping practices, which reduce the generation of sediments.
- Removing sediment and other organic matter that accumulated within the infiltration pipe.
- Pipes should be inspected quarterly for the first year to determine how quickly materials accumulate in them. Accumulated materials can be vacuumed out with a vacuor. High-pressure cleaning of the holes or slats in the pipes can help reduce clogging.
- Removing sediments, which accumulate within the aggregate envelope with possible replacement of aggregate necessary if sediments aren't removed from the pipe.
- The infiltration system needs to be monitored periodically. For the first year after construction, the pipes should be monitored quarterly. The pretreatment device should be checked monthly.
- BMP's with a sediment chamber outlet device shall be cleaned/inspected when draw down times within the chamber exceed 36 hours. Trash and debris shall be removed as necessary.
 - Coll Engineering for initial, progress and final inspections 48 hours in advance at 410-289-884.
 - Final Grades should have positive drainage and runoff drain toward street/bay over grass. Drainage arrows are shown in red. An adjustment of the grade to the site is the responsibility of the contractor - minimum slope is 1" in 10'. Ponding water unacceptable unless part of a designed Stormwater Management System.
 - Use wall/berm/awaile at property line to prevent drainage and sediment on to adjacent lots.
 - Install and maintain silt fence until property is stabilized - bare soil will need to be stabilized with vegetation, straw, or other appropriate measure prior to Certificate of Occupancy. All stormwater Management structural devices will be protected from siltation until site is stabilized.
 - Keep streets clean of dirt and debris and site free of litter and debris.
 - Site grading.
 - Fill material is required clean and be free of debris and organic material.
 - Stockpiles of dirt should be stabilized with vegetation or protected with silt fence, hay bales, straw or other appropriate protection.
 - Compaction of fill is required.
 - Slope and height of fill should not exceed requirements for retaining wall. Building permit required for retaining wall.
 - Remove all construction materials, dumpsters, port-a-pots, etc. from City property and rights-of-way at completion of project.
 - A Maintenance & Inspection Agreement for structural stormwater management measure will need to be recorded in the Land Records of Worcester County.
 - All Stormwater Management, calculations, design, construction, exemption/waiver request will adhere to the current 2000 Maryland Stormwater Design Manual volumes I and II and the code of the Town of Ocean City, Section 30-141 through 30-153, for Stormwater Management and Stormwater Plan for this site. All information set forth in this plan accurately conveys this site's conditions and meets the current Stormwater management ordinance to the best of my knowledge. All measures approved on this plan will be inspected and maintained according to the recorded agreement. Structural Stormwater Management measures are covered under the architect affidavit and are ultimately the responsibility of the Architect that the construction meets the City Code and State guidelines. As-built survey may be requested should site conditions merit such a request.
 - If approved Stormwater Management Plan will need to be submitted to Engineering for review.
 - Entire site will be permanently stabilized with acceptable methods outlined in the Sediment and Erosion Control Manual.

EXFILTRATION TRENCH

CONSTRUCTION

- The developer shall notify the Town of Ocean City at least 48 hours before commencing any work in conjunction with the storm water management plan and upon completion of the project when a final inspection will be conducted.
- Inspections shall be conducted by the Town of Ocean City, its authorized representative, or certified by a professional engineer licensed in the State. Written inspection reports shall be made of the periodic inspections necessary during construction of storm water management systems to ensure compliance with the approved plans.
- Written inspection reports shall include:
 - The date and location of the inspection;
 - Whether construction was in compliance with the approved stormwater management plan;
 - Any variations from the approved construction specifications; and
 - Any violations that exist.
- Inspection requirements during construction. At a minimum regular inspections shall be made and documented at the following specified stages of construction - for exfiltration trenches:
 - During excavation to sub grade;
 - During placement and backfill of under drain systems and observation well;
 - During placement of geotextiles and all filter media;
 - During construction of appurtenant conveyance systems such as diversion structures, pre-filters and filters, inlets, outlets, and flow distribution structures; and
 - Upon completion of final grading and establishment of permanent stabilization
- The Trench should not be constructed or place into service until all of the contributing drainage area is completely stabilized.
- Special care must be taken to prevent soil from getting into the trench between the aggregate and the geotextile fabric.
- Once trench is excavated, bottom and sides should be lined with appropriate geotextile fabric to prevent upward piping of underlying soils. Before installing the fabric inspect the bottom and sides walls of the facility for any protruding objects like tree roots that may puncture the filter fabric. Care should be taken in selection of the proper kind of fabric as available brands differ significantly in their permeability and strength. When cutting the fabric be sure the length and width are sufficient to conform to the trench's dimensions and allow a 12 inch minimum top overlap. If more than one roll of fabric is needed, the upstream roll should overlap at least 2 feet over the downstream roll to provide a shingled effect.
- Vertically excavated walls may be difficult to maintain. This may require laying back the sides slopes or using trench safety procedures. Trapezoidal excavation may result when laying back the side slopes creating a need to carefully back fill the space between the filter fabric and the excavation sides. Natural soils should be placed in these spaces at the most convenient time during construction to assure fabric conformity to the final side dimensions. Trenches over four feet deep require shoring pursuant to OSHA regulations.
- Stone aggregate should be clean, washed stone. It should be placed in lifts and compacted with plate compactors. Soft stones such as limestone or bluestone aggregates should be avoided. A maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides thereby reducing potential for soil piping, fabric clogging and settling problems.
- Annual inspection report will be required.

DEVELOPERS CERTIFICATION

ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN AND THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND FURTHER AUTHORIZE THE RIGHT OF ENTRY AND PERIODIC ON-SITE EVALUATION BY THE WORCESTER SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AGENTS.

Roy Barnett
Van Metre at Ocean Isle, LLC.
5252 Lyngate Court
Burke, Virginia 22015
(703) 425-2614

RESPONSIBLE PERSONNEL CERTIFICATION

ALL RESPONSIBLE PERSONNEL (ONE MINIMUM) INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE DEPARTMENT OF NATURAL RESOURCES, STATE OF MARYLAND, APPROVED TRAINING PROGRAM FOR SOIL EROSION AND SEDIMENT CONTROL.

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GENERAL NOTES

- Refer to MOE "Standards and Specifications for Soil Erosion and Sediment Control for Developing Areas", for standard details and detailed specifications of each practice specified herein.
- With the approval of the Sediment Control Inspector, minor field adjustments can and will be made to insure the control of any sediment. All changes in sediment control practices require prior approval of the Sediment Control Inspector and the Soil Conservation District.
- At the end of each work day, all sediment control practices shall be inspected and left in operational condition.
- Any disturbed earth left idle for periods exceeding fourteen(14) days shall be stabilized according to temporary stabilization control specifications.
- Any changes in grading proposed on this Plan requires re-submission to Soil Conservation District for approval of changes.
- Temporary methods of dust control shall be:
 - Irrigation-This is generally done as an emergency treatment. Site to be sprinkled with water until the surface is moist. Repeat as needed. At no time should the site irrigated to the point that run-off begins to flow.
 - Calcium Chloride-Apply at rates that will keep the surface moist. May require re-treatment.
- Any variation for sequence of operation stated on this approved plan requires the new approval of the Sediment Control Inspector and the Soil Conservation District prior to initiating the change.

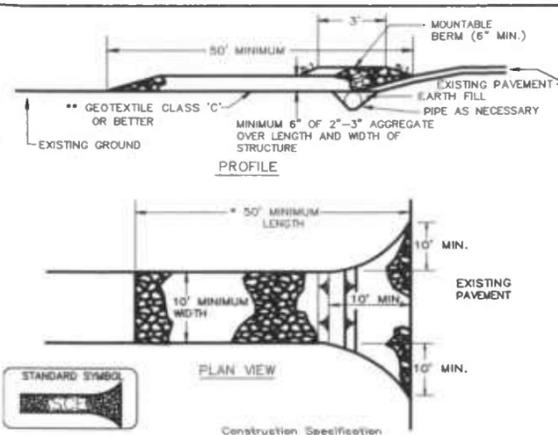
NOTE:
COUNCIL ENGINEERING TO BE CALLED TO INSPECT S.W.M. CONSTRUCTION

SEQUENCE OF CONSTRUCTION

- CONTACT MARYLAND DEPARTMENT OF THE ENVIRONMENT AND OCEAN CITY ENGINEERING OFFICE WITHIN SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR A PRECONSTRUCTION MEETING.
- CONTACT THE WORCESTER COUNTY DEPT. OF REVIEW AND PERMITTING AT 410-632-1200 TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS PRIOR TO COMMENCING ANY SITE WORK, FAILURE TO DO SO MAY RESULT IN AN IMMEDIATE STOPWORK ORDER.
- CLEAR AND GRUB TO INSTALL PERIMETER CONTROLS.
- ESTABLISH SILT FENCE AS SHOWN ON PLANS
- ESTABLISH SCE
- DEMOLISH EXISTING OBJECTS.
- ROUGH GRADE SITE.
- INSTALL UTILITIES.
- INSTALL FOUNDATIONS OF CONDO, SITE LIGHTING AND SITE IMPROVEMENTS.
- PROVIDE STABILIZATION OF AREAS TO BE PAVED.
- CONSTRUCT BUILDING.
- FINAL GRADE AND SEED AREAS, INSTALL PLANTINGS
- INSTALL PAVEMENT AND PERVIOUS PAVEMENT SYSTEM.
- REMOVE REMAINING SILT FENCE AFTER A STAND OF GRASS HAS BEEN MOWED TWICE.
- REPAIR SILT FENCE TRENCH AS NECESSARY

NOTES:
1. FOREST CONSERVATION NOT REQUIRED FOR THIS SITE.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Length - minimum of 50' (*30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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STABILIZED CONSTRUCTION ENTRANCE

- Length - minimum of 50' (* 30' for single residence lot).
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- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3"), or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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TEMPORARY SEEDING SUMMARY

SEED MIXTURE (FOR HARDINESS ZONE 7A) (FROM TABLE 26)						FERTILIZER RATE (10-10-10)	Lime Rate
No.	Species	Application Rate(lb/ac)	Seeding Oates	Seeding Depths			
	Rye	140	2/1 - 4/30 8/15 - 11/30	1"-2"			
	Annual Rye	50	2/1 - 4/30 8/15 - 11/1	1/4"-1/2"	600 lb/ac (15 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)	
	Millet	50	5/1 - 8/14	1/2"			

PERMANENT SEEDING SUMMARY

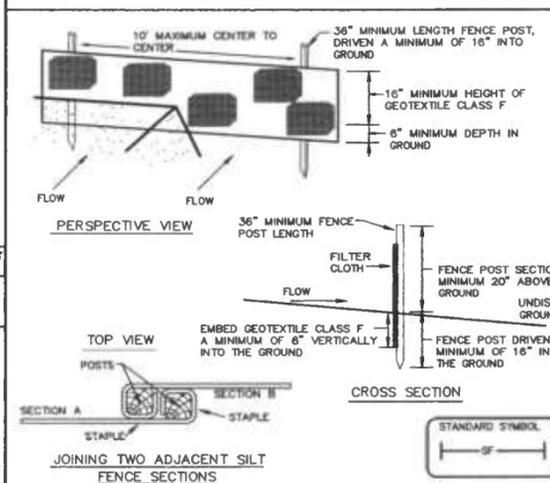
SEED MIXTURE (FOR HARDINESS ZONE 7A) (FROM TABLE 25)						FERTILIZER RATE (10-20-20)			Lime Rate
No.	Species	Application Rate(lb/ac)	Seeding Oates	Seeding Depths		N	P205	K20	
7	Tall fescue 83% Weeping lovegrass 2% Sercla lespedeza 15%	133	3/1 - 5/15 5/18 - 8/14 8/15 - 11/15	1/4"-1/2"		90 lb/ac (2.0 lb/1000 sf)	175 lb/ac (4.0 lb/1000 sf)	175 lb/ac (4.0 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)
1	Tall fescue 75% Cora do bluegrass 10% Kentucky bluegrass 10% red top 5%	150	3/1 - 5/15 8/15 - 11/15	1/4"-1/2"					

NOTE: THE DEVELOPER MUST NOTIFY THE MD DEPT. OF THE ENVIRONMENT (410)- 543-6763 OR (410)- 635-3510 AT LEAST 48 HOURS PRIOR TO COMMENCING CLEARING OR GRADING.

RESTORATION OF DISTURBED AREAS:
DETAILS OF TEMPORARY AND PERMANENT STABILIZATION MEASURES INCLUDING PLACEMENT OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THE REQUIREMENTS OF THIS SUBPARAGRAPH DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE, OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED OR INTO INTERIOR AREAS OF A SURFACE MINE SITE WHERE STABILIZATION MATERIAL WOULD CONTAMINATE THE RECOVERABLE RESOURCE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE "1994 MARYLAND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."

AREA OF DISTURBANCE = 211,850 SF (4.86 AC)
PREDOMINANT SOIL TYPE: Ma (Made Land)

DETAIL 22 - SILT FENCE



- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" squares (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum)	(Maximum)
	Slope Length	Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	80 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: in areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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I certify that these documents were prepared or approved by me, and that I am a duly licensed Engineer under the laws of the State of Virginia.
License number: 2286
Expiration date: 2/28/07

OWNER & DEVELOPER:
Van Metre at Ocean Isle, LLC & Van Metre at Ocean Isle II, LLC
5252 Lyngate Ct.
Burke, VA, 22015
(703) 425-2600

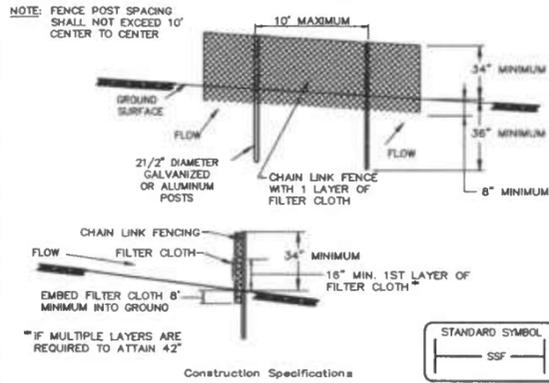
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Van Metre at Ocean Isle, LLC
Van Metre at Ocean Isle II, LLC
Ocean Isle
Coastal Highway & 67th Street
Ocean City, Maryland

Details

PROJECT STATUS: Planning Submission	
SCALE: As Noted	PROJECT NUMBER: 05139
DRAWN BY: 22 Nov 06	DRAWING NUMBER: C9.1
ISSUE DATE: 22 Nov 06	
LAST REVISION DATE: 28 Feb 07	

DETAIL 33 - SUPER SILT FENCE



- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fences shall be fastened securely to the fence posts with wire ties. The lower tension wire, brads and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-26-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

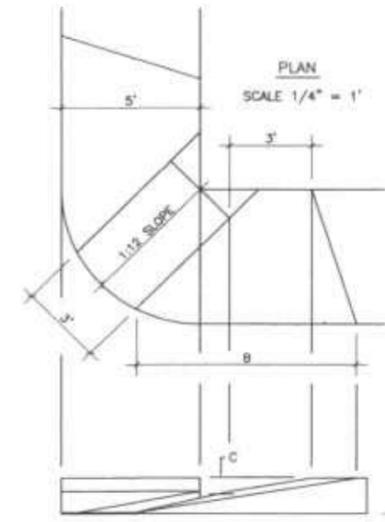
SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-26-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTE: STANDARD SIDEWALK AND CURB DETAILS OBTAINED FROM TOWN OF OCEAN CITY ENGINEERING DEPARTMENT.



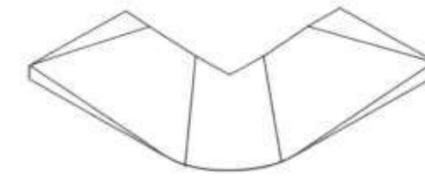
NOTES

- HANDICAP RAMP TO MEET OCEAN CITY SIDEWALK STANDARDS
- RAMP TO BE HANDICAP ACCESSIBLE ALL SLOPES TO BE 1:12 FALL
- INSPECTION BY THE TOWN OF OCEAN CITY ENGINEERING DEPT. 289-8221

PROFILE

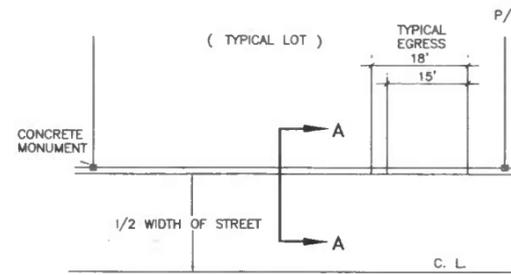
VERTICAL - 1/2" = 1'
HORIZONTAL - 1/4" = 1'

X	A	B	C
8"	3'	8'	3"
7"	2'	7'	2"
6"	1'	6'	1"
5"	-	5'	-
4"	-	4'	-
3"	-	3'	-
2"	-	2'	-
1"	-	1'	-

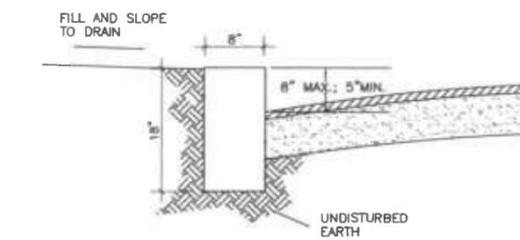


ISOMETRIC VIEW

A HANDICAP RAMP



STREET PLAN



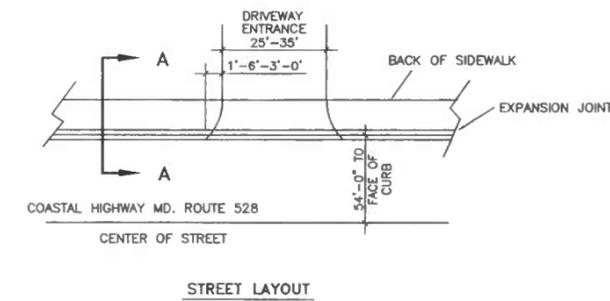
SECTION A-A

NOTES

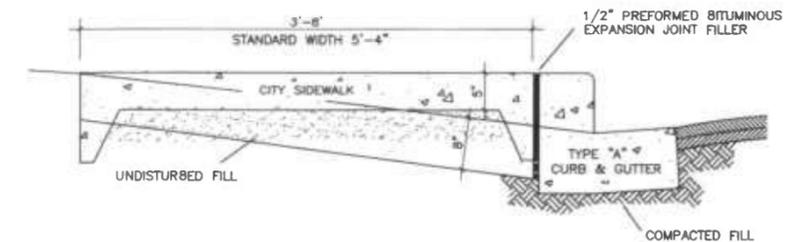
- TYPE "A" CURB TO MEET MD. S.H.A. SPECIFICATIONS.
- SIDEWALK TO MEET OCEAN CITY SIDEWALK STANDARDS WITH THE FOLLOWING EXCEPTIONS:
 - THE DRIVEWAY RAMP WITH A THICKNESS OF 5" AND WIRE MESH, IS REPLACED WITH AN 8" THICK RAMP AND NO WIRE MESH.
 - DRIVEWAYS TO BE 25'-35' WIDE AS APPROVED BY THE MD. SHA WITH AN ACCESS PERMIT OBTAINED
 - TRAFFIC CONTROL DURING CONSTRUCTION IS TO MEET THE SHA STANDARDS.
 - THE SIDEWALK WIDTH VARIES BETWEEN 3'-7' DEPENDING ON THE DISTANCE BETWEEN THE CURB LINE PROPERTY LINE. THE CURB LINE (FACE OF CURB) IS ALWAYS 54'-0" FROM THE CENTER OF THE HIGHWAY

NOTES

- FLOAT AND BROOM FINISH
- ALL CONCRETE TO CONFORM TO BUILDING CODE (A.C.I. 318) REQUIREMENTS FOR REINFORCED CONCRETE 63 OR AS AMENDED TO DATE
- ALL CONCRETE TO BE 3,000 PSI MINIMUM IN 28 DAYS
- INSTALL 1/2" PREMOLD EXPANSION JOINT MAXIMUM AT 30'
- INSPECTION REQUIRED BEFORE POURING (ENG. DEPT.)
- FOR INSTALLATION, A SURVEY SHOWING GRADES AT PROPERTY LINE, & STREET CENTER LINE MAYBE REQUIRED

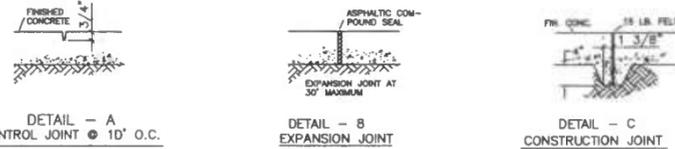


STREET LAYOUT



B CURB AND CITY SIDEWALK

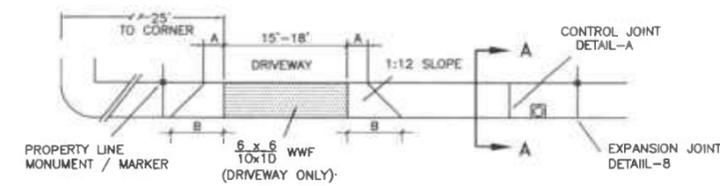
C9.3 NOT TO SCALE



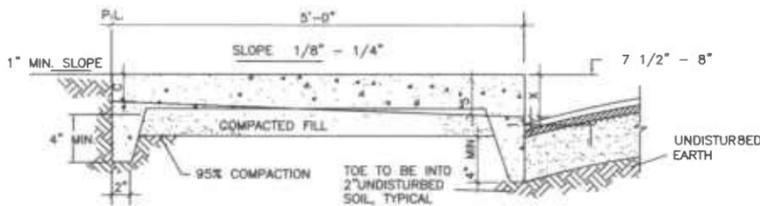
DETAIL - A CONTROL JOINT @ 10' O.C.

DETAIL - B EXPANSION JOINT

DETAIL - C CONSTRUCTION JOINT



STREET LAYOUT



SECTION A-A

NOTES

- FLOAT AND BROOM FINISH WITH SLOPED SURFACE TO DRAIN 1/8" L.F.
- ALL CONCRETE TO BE 3,000 PSI MINIMUM IN 28 DAYS.
- INSPECTION REQUIRED BEFORE POURING (ENGINEERING DEPT.)
- THE SIDEWALK IS TO BE PLACED ON THE LOT SIDE OF THE PROPERTY LINE. IF THE STREET WIDTH IS LESS THAN 50'
- FOR SIDEWALK INSTALLATION, A LOT SURVEY SHOWING GRADES AT PROPERTY LINE, & STREET CENTER LINE, MAYBE REQUIRED
- MINIMUM 12" STEEL FORMS; RADIUS TO BE STEEL FLEXIBLE TRUE TO FORM LINE AND GRADE; ALL FORMS TO BE UNIFORM.
- PLACE EXPANSION JOINTS AT FIRE HYDRANTS, UTILITY POLES, RAMPS, OR OTHER STRUCTURES WITHIN SIDEWALK AREA
- FOR RELOCATION OF HYDRANTS, UTILITY POLES, ETC., NOTIFY PROPER PARTY, WELL IN ADVANCE OF INSTALLATION.
- IN EVENT THE ROAD GRADE IS BELOW DESIGN GRADE, TOE REQUIRED AT 4" MINIMUM BELOW EXISTING CONDITION.
- ALL DRIVEWAYS TO BE HANDICAPP ACCESSIBLE SIDE SLOPES TO BE 1:12 FALL

X	A	B	C
8"	3'	8'	3"
7"	2'	7'	2"
6"	1'	6'	1"
5"	-	5'	-
4"	-	4'	-
3"	-	3'	-
2"	-	2'	-
1"	-	1'	-

D 5' WIDE CITY SIDEWALK

C9.3 NOT TO SCALE

C 8" CITY CURB

C9.3 NOT TO SCALE

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OWNER & DEVELOPER:
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Van Metre at Ocean Isle II, LLC
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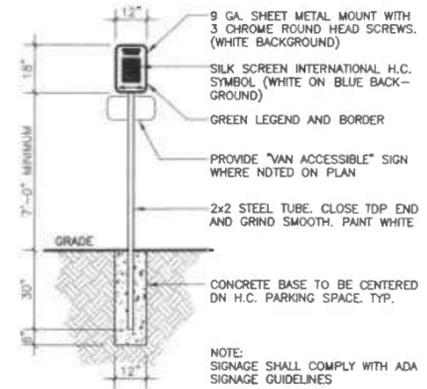
Van Metre at Ocean Isle, LLC
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Coastal Highway & 67th Street
Ocean City, Maryland

Details

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	C9.2
22 Nov 06	
LAST REVISION DATE	28 Feb 07



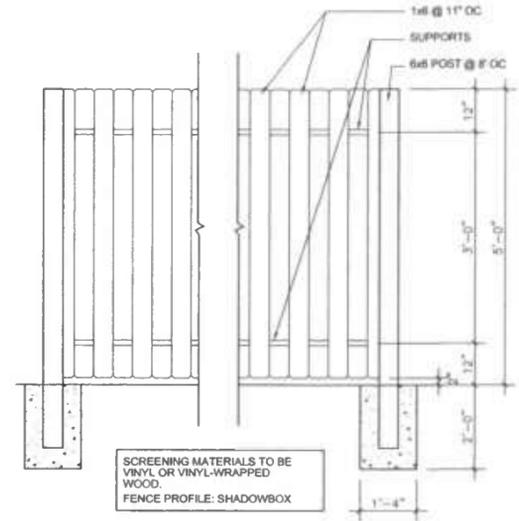
A SIGN DETAIL ACCESSIBLE PARKING SPACE
C9.1 NOT TO SCALE



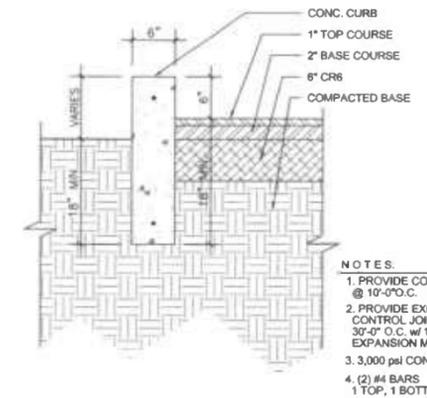
B EXTERIOR HANDICAPPED SIGN
C9.1 N.T.S.



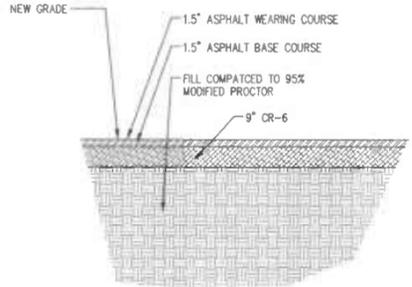
C DETAIL HANDICAPPED SYMBOL
C9.1 NOT TO SCALE



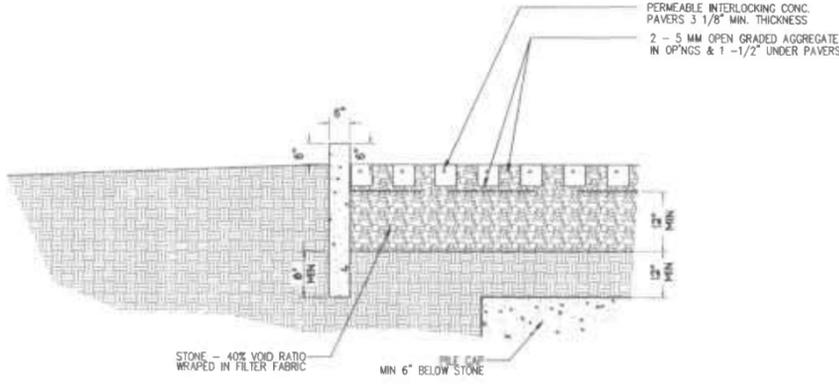
D 72" SCREENING DETAIL
C9.1 NOT TO SCALE



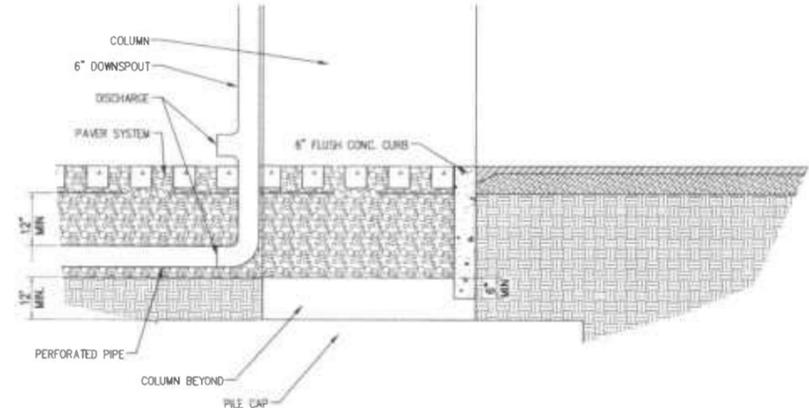
E DETAIL: CURB @ ASPHALT
C9.1 NOT TO SCALE



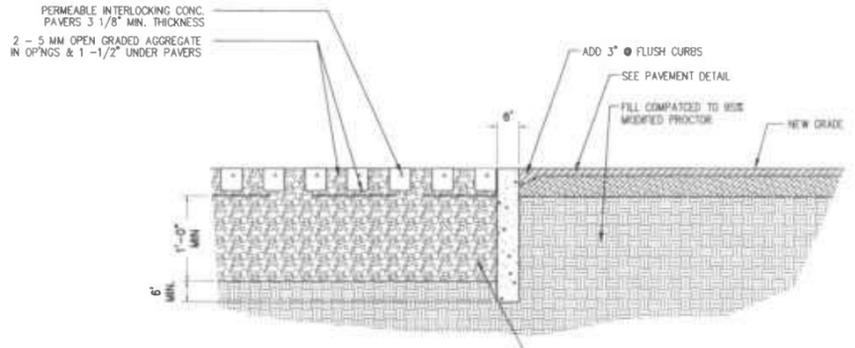
F PAVEMENT DETAIL
C9.1 NOT TO SCALE



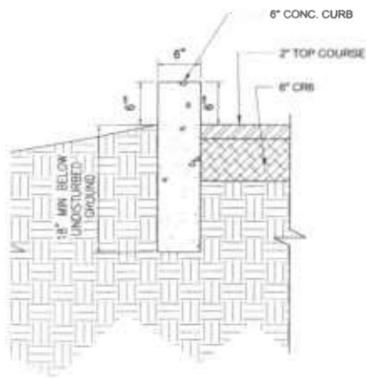
G PAVER DETAIL (OPEN TO THE SKY)
C9.1 NOT TO SCALE



H PAVER DETAIL (UNDER BUILDING)
C9.1 NOT TO SCALE



I PAVER DETAIL (OPEN TO THE SKY)
C9.1 NOT TO SCALE



J CURB DETAIL
C9.1 NOT TO SCALE

- NOTES:**
1. PROVIDE CONTROL JOINTS @ 10'-0" O.C.
 2. PROVIDE EXPANSION CONTROL JOINTS @ 30'-0" O.C. w/ 12" EXPANSION MATERIAL
 3. 3,000 psi CONCRETE
 4. (2) #4 BARS
1 TOP, 1 BOTTOM

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I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Virginia. License number: 3229. Expiration date: 2/28/07

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Details

PROJECT STATUS	
Planning Submission	
SCALE	PROJECT NUMBER
As Noted	05139
DRAWN BY	DRAWING NUMBER
ISSUE DATE	22 Nov 06
LAST REVISION DATE	28 Feb 07

C9.3

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Ronald M. Wilson
3740 Ridge Road
Snow Hill, MD 21863
Phone: 410-632-3892
FAX: 410-632-0292
Email: rmwilson@comcast.net

Delmarva Botanical Surveys

March 7, 2007

Attn: Ed Launay
Environmental Resources, Inc.
100 East Main Street, Suite 500
Salisbury, MD 21801

Dear Mr. Launay:

The purpose of this letter is to report the results of a rare plant search that was conducted for the Beach Plum (*Prunus maritima*) on a proposed development site (Ocean Isle Areas 1-5) in the vicinity of 67th Street and 68th Street in Ocean City, MD (See Figure 1 for Project Area). This survey was completed at your request to address the concerns of the State of Maryland Critical Area Commission that the Beach Plum may be present on the site. The field work was done on March 5, 2007 by Ron Wilson of Delmarva Botanical Surveys.

In this area, the Beach Plum is normally found on coastal sand dunes. Historically it was found frequently along the coastal strand that is now Ocean City, but with the extreme development that has taken place there in recent years, the plant is now mostly relegated to the relatively undisturbed Assateague Island in Maryland. While it is still possible for isolated populations to be "holding on" in Ocean City proper, the probability for this is low, unless the lot or area has not been disturbed appreciably.

The project area consisted of the entire block between 67th and 68th streets and a small marina/boat storage facility on the block immediately to the south. All of the project area, except for an approximately 80' x 250' strip along the edge of the dredged canal and a narrow fringe of uplands along the extension of 68th street (See Study Area in Figure 2), consisted of impervious surfaces, which could hardly be classified as undisturbed. Because of this, only the portion of the site labeled as "study area" in Figure 2 was surveyed for this study.

The 2004 photo background in Figure 2 indicates that even a large portion of the study area was covered by buildings as recently as three years ago. All structures had been cleared as of the date of this survey. The 1952 aerial photo (See Figure 3) shows that nearly all of the project area was a marsh at that time and was subsequently filled in for purposes of development. Since the area was not historically a dune habitat, it is very unlikely that Beach Plum would move into a highly disturbed habitat such as this.

The vegetation that was present in the uplands of the study area consisted of a mixture of native and alien species. The dominant plant was the highly invasive Multiflora Rose (*Rosa multiflora*) which formed dense, nearly impenetrable tangles throughout. Other non-natives included a narrow band of Common Reed (*Phragmites australis*) near the water, Japanese Honeysuckle (*Lonicera japonica*), Tall Fescue Grass (*Festuca elatior*), and Autumn Olive (*Elaeagnus umbellata*).

Native shrubs/trees in the uplands included Groundsel Tree (*Baccharis halimifolia*), Staghorn Sumac (*Rhus typhina*), Southern Wax Myrtle (*Myrica cerifera*), Eastern Red Cedar (*Juniperus virginiana*), and Wild Black Cherry (*Prunus serotina*). The herbaceous species consisted of Horseweed (*Conyza canadensis*), Pokeweed (*Phytolacca americana*), Broom-sedge (*Andropogon virginicus*), Seaside Goldenrod (*Solidago sempervirens*), and Common Evening Primrose (*Oenothera biennis*). Typical views of this habitat can be seen in Photo 1 taken facing north from Photo Point #1 and in Photo #2 taken facing east from Photo Point #2 (See Figure 2).

The study area was bounded on the west by a canal and on the north by a salt marsh. Even though this is not habitat for the Beach Plum, some of the species seen will be noted. Along the canal, there was an extremely narrow band of Smooth Saltmarsh Cordgrass (*Spartina alterniflora*) and a few individuals of Marsh Elder (*Iva frutescens*) just upslope. A representative view of this habitat can be seen in Photo #3 taken facing north from Photo Point #3 (See Figure 2). The salt marsh along the northern edge of the property also featured Smooth Saltmarsh Cordgrass as well as Black Needlerush (*Juncus roemerianus*), Marsh Hibiscus (*Hibiscus moscheutos*), and Saltmeadow Cordgrass (*Spartina patens*).

To summarize, there was no Beach Plum found on site. The small uplands area that was not covered with impervious surfaces was created by fill materials in what was previously a tidal marsh. This highly disturbed substrate is not considered good habitat for Beach Plum and is more conducive to the growth of weedy species, which, indeed, were abundant.

Sincerely,



Ronald M. Wilson
Environmental Consultant
Delmarva Botanical Surveys

Figure 1 - Site Map with 2004 Aerial Photo



0 100 200 400 600 800 1,000 1,200 Feet

Legend

 Project Area

Scale: 1 inch = 200 feet



Figure 2 - Study Area & Photo Points with 2004 Aerial Photo



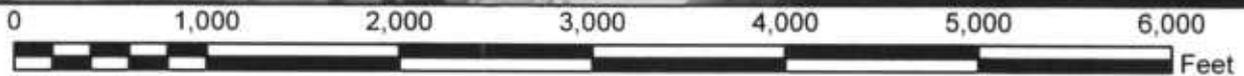
Legend

-  Photo Points
-  Marina Area
-  Study Area

Scale: 1 inch = 100 feet



Figure 3 - Site Map with 1952 Aerial Photo



Legend

Project Area

Scale: 1 inch = 1,000 feet



PHOTO 1



PHOTO 2



PHOTO 3



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February 23, 2007

Mary Owens
State of Maryland Critical Area Commission Chesapeake and Atlantic Coastal Bays
1804 West Street, Suite 100
Annapolis, Maryland 21401
(410) 260-3460-Phone
(410) 974-5338-Fax

Project: Ocean Isle: 05139
RE: Response Letter

Dear Mary:

1. The "Atlantic Coastal Bays Critical Area Report" includes drawings and details of the piers prepared by Lawrence T. Whitlock Associates, Inc. In Area 2, these drawings show a concrete walkway within the 25-foot setback, and the drawings appear to be inconsistent with the recently submitted Site Plan. Only pervious, wooden walkways with spaces between the boards can be located within the 25-foot setback. Walkways that parallel the shoreline are not permitted in the setback.

The following note was added to sheet C2.1 "ALL CONSTRUCTION OF PIERS, BULKHEADS, SHORELINES AND SLIPS WATER WARD OF HIGH TIDE LINE ARE NOT PART OF THIS PERMIT. THEY WERE APPROVED BY THE BOARD OF PORT WARDENS ON JUNE 8TH, 2006, BASED ON DRAWINGS BY LAWRENCE T. WHITLOCK AND ASSOCIATES. THEY ARE SHOWN HERE FOR REFERENCE ONLY. ANYTHING ON THIS SET OF DRAWINGS ON THE LANDLORD SIDE OF HIGH TIDE SHALL TAKE PRECEDENT OVER THE DRAWINGS PREPARED BY LAWRENCE T. WHITLOCK AND ASSOCIATES."

The wooden walk indicated on the site plan will be built.

2. The drawings of the piers prepared by Lawrence T. Whitlock Associates, Inc., show a 12-foot wide walkway adjacent to the bulkhead in Area 5. This walkway cannot be permitted in the 10-foot setback. If access parallel to the shoreline is needed, the applicant will need to revise the pier permit to accommodate the walkway below mean high water or change the building location so that the walkway can be located outside the setback.

The following note was added to sheet C2.1 "ALL CONSTRUCTION OF PIERS, BULKHEADS, SHORELINES AND SLIPS WATER WARD OF HIGH TIDE LINE ARE NOT PART OF THIS PERMIT. THEY WERE APPROVED BY THE BOARD OF PORT WARDENS ON JUNE 8TH, 2006, BASED ON DRAWINGS BY LAWRENCE T. WHITLOCK AND ASSOCIATES. THEY ARE SHOWN HERE FOR REFERENCE ONLY. ANYTHING ON THIS SET OF DRAWINGS ON THE LANDLORD SIDE OF HIGH TIDE SHALL TAKE PRECEDENT OVER THE DRAWINGS PREPARED BY LAWRENCE T. WHITLOCK AND ASSOCIATES."

The 7.5' wide wooden walk indicated on the site plan will be built.

"Where the art of architecture and the science of technology and engineering meet"

110 West Church Street, Salisbury, MD 21801 Tel: 410-543-4595 Fax: 410-543-4898 Website: www.aesarchitech.com

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3. The Critical Area Report states that there are tidal and non-tidal wetlands present on this site, and it includes an approval letter from the U.S. Army Corps of Engineers regarding the jurisdictional determination. Although the wetlands and wetland buffers are shown on the Site Plans, it is not clear that these are based on the delineation approved by the Corps. Please provide a copy of the wetland delineation that was the basis of the approval.

*Approved
replumnt*

The drawing on C1.1 was taken directly from the cad file provided by the original delineation drawing. The note on C1.1 is this "WETLANDS WERE DELINEATED BY ENVIRONMENTAL RESOURCES, INC. AND FIELD LOCATED BY BECKER - MORGAN GROUP. MDE REGULATED TIDAL WETLANDS ARE IDENTIFIED AS "MDE MAPPED TIDAL WETLANDS AS PER WORCESTER COUNTY TIDAL WETLAND MAP #4 PHOTO WO 317R1. LIMITS OF CORP OF ENGINEERS SECTION 404 NON-TIDAL WETLAND BOUNDARY ESTABLISHED IN ACCORDANCE WITH 1987 CORPS OF ENGINEER WETLAND MANUAL (CORP OF ENGINEER APPLICATION #: CENAB-OP-RMS(HOLLAND FAMILY LLC/JD)02-63910-01 DATED APRIL 26, 2002) (BASIS OF JURISDICTIONAL DETERMINATION FILE # 200263910, DATED JUNE 18, 2002)

Further information will be provided by Environmental Resources with their Endangered species report.

4. It appears that there may be acceptable habitat on this site for a state listed endangered species identified during the environmental review from DNR's Wildlife and Heritage Service. We suggest that a qualified expert provide the Commission with a survey of the property to establish if this species is present.

The owner has contracted Environmental Resources to perform this. We are awaiting their report.

5. The numbers of existing slips and proposed slips are not clear. Please clarify and add appropriate notes. Please provide evidence of consistency and justification between the Critical Area Law and the proposed number of slips indicated on the site plan.

No additional slips are being added. Finger piers and mooring piles are being replaced. The existing and proposed slips have been numbered.

6. The Landscape Plans, Sheet C6.1 through Sheet C6.4, indicates that River Birch (*Betula nigra*) is considered a small tree and has a landscape credit of 100 square feet per tree. The Critical Area Report indicates that large trees are proposed to be planted and uses a landscape credit of 200 square feet per tree. The proposed quantities appear to be based on the higher credit. River Birch is considered a canopy tree or "large tree;" however, the Landscape Plans show those trees planted in 5-foot wide planting strips. Generally, Commission staff does not support large trees planted in small landscape islands because they will not survive in these locations. Large trees should be located in planting areas that are at least 10-foot wide. It is important to remember that the square footage credit is supposed to approximate the canopy coverage of a full-grown tree. The use of large trees in the small islands needs to be discussed with Commission staff, City staff, and the City arborist to determine if the proposed species are appropriate for the planned locations.

River Birch has been changed to a 100 square foot credit. The entire landscape plan was redone to add more trees, and add more species. The width of the landscape width is per Ocean City regulations, and has been discussed with them.

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7. There appear to be many areas on the site where large trees could be located in areas that provide a root area that is significantly wider than 5-feet. These areas should be re-evaluated for planting with large trees.

The entire landscape plan was redone to add more trees, and add more species. The width of the landscape width is per Ocean City regulations, and has been discussed with them.

8. The Landscape Plans, Sheet C6.1 through Sheet C6.4, indicates that all plantings will be River Birch (*Betula nigra*) and some species of Juniper (See comment #9.) When required planting exceeds 5,000 square feet, at least three different species of each plant "type" (large tree, small tree, large shrub, etc.) should be used.

The entire landscape plan was redone to add more trees, and add more species.

9. On the Landscape Plan, the large shrub species, *Juniperus chinensis*, is identified as Moonglow Juniper. My research indicates that *Juniperus chinensis* is actually Chinese Juniper. Neither of these species is native to the Chesapeake or Atlantic coastal Bays watershed. At a minimum, 25 percent of the large shrub plantings should be native species.

Species removed and replaced with others.

10. ON sheet C6.2, on the eastern side of the project site, there is an area identified as a "Landscaped Courtyard," but there appears to be very minimal landscaping in this area. Could pervious openings be created in this area for additional planting/

The entire landscape plan was redone to add more trees, and add more species. Landscaping has been added to this area.

11. The plans for area 2 show a 6-foot by 170-foot access walk pier. Is this structure located over open water, State tidal wetlands, or private tidal wetlands? The Site plan should accurately depict the proposed erosion control measures, piers, walkways, slips, and mooring piles.

This access walk is over tidal area, and not part of this contract. See reply to number 1.

12. The plans do not accurately show or describe the current condition of the shoreline and shore erosion control measures in Area 2 and 5. Is the shoreline of Area 5 bulkheaded? What type of bulkhead? Are any repairs or changes to the bulkhead proposed? Appropriate notes should be placed on the Plans. Is the shoreline of Area 2 protected with nonstructural incisures? What are they? Are any repairs or changes to the shoreline proposed? Appropriate notes should be placed in the Plans.

This is not part of this contract. See reply to number 1.

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13. Please provide engineering details concerning the type of pervious pavers being proposed, requirements for installation, and an ongoing maintenance agreement.

Details added to set under the C9.x series of drawings. Specifics for installation and maintenance will be as required by the manufacturer chosen and the Town of Ocean City in order to comply with all regulations covering the site.

14. It is not clear if the detail on sheet C4.1 is supposed to be the "Pervious Pavers BMP." Please provide appropriate labels. It is not clear that this BMP is correctly designed. In order to use this BMP to meet the 10% pollutant reduction requirement, the pavers must be designed to function like an infiltration trench and should generally match the sketch shown in figure E.16 of the *Critical Area 10% Rule Guidance Manual*.

This detail is for the widening of sidewalks with a pervious paver system per Ocean City requirements. It is not a BMP.

15. In the pollutant removal calculations for Area 4, an efficiency rating of 100% is used. It is not clear that the "Pervious Pavers BMP" for this area is different from that used in the other areas that had an efficiency rating of 50%. Please provide clarification and an additional details necessary.

All removal changed to an efficiency effectiveness of 50%. This number is used to cut down the efficiency as indicated in the Maryland SWM manual due to ground water elevations issues.

Sincerely,



Roger Kahl

***ATLANTIC COASTAL BAYS
CRITICAL AREA REPORT***

FOR

Ocean Isle

Ocean City, Maryland

February 28, 2007

1. Site Data Summary Chart

- **Tax Map and Parcel Number**

Map	
Parcel	6649-6658, 6648, 6659, 6646, 6647, 6660-6668, 6648, 6659, 6677, 6678, 6677, 6669
District	
Zoning	LC-1, BMUD
Use	Multi-Family

- **Total Site Area**

204,212 Square Feet (4.68 Acres)

- **Flood Zone**

The Project is located within Zone "A6" based on *The Federal Emergency Management Agency* Flood Insurance Rate Map for Ocean City Maryland – Community Panel Number 245207 0002 F.

- **Recorded Property Owner**

Van Meter at Ocean Isle, LLC
5252 Lyngate Court
Burke, Virginia 22015

Van Meter at Ocean Isle II, LLC
5252 Lyngate Court
Burke, Virginia 22015

- **Wetlands**

Tidal and Non-tidal wetlands are located on the site. Wetland Delineation information attached.

2. Forest Cover

No forest cover exists on the site

3. Shoreline Condition

The Site contains existing piers and bulkheads, as well as normal shoreline.

4. Storm Water Management

This site has been previously developed and currently exists with buildings, compacted gravel parking areas, as well as pavement parking areas. There is currently no existing Storm Water System for the existing conditions. The proposed Storm Water Management design will be in accordance with MDE and Ocean City approved plans. The new Storm Water Management measures will meet the 10% pollutant Removal Requirement (RR).

5. Site Topography and Soils Condition

This site is gently sloping. The natural slope is less than 1% with sheet flow in various conditions.

Proposed grading will be minimal. Storm water will be directed to a paver storage system. The overflow from which will be directed toward public streets.

Site Topography was provided by:

Atlantic Group

Engineers & Surveyors

10038 Old Ocean City Road

Berlin, Maryland 21811

Soils are shown per USDA Web Soil Survey Map for Worcester County, Maryland. (*See Attachment No. 2*)

The soils of this site are Ma – Made Land

These soils are suitable for development.

6. Proposed Clearing, Excavation and Grading

This site is currently developed. For re-development, existing buildings will be demolished and removed from site.

7. Discussion of Proposed Development

Proposed **re-development** of this site into multi family housing and parking to replace the existing buildings and parking. The proposed Site Plan addresses all requirements of Ocean City Planning and Zoning, Ocean City Storm Water Management and the Critical Area requirements. This proposed plan exceeds the 10% reduction of pollutants commonly referred to as the "10% rule".

The 15% buffer forestation requirement is met by allowing landscape area to transfer across alleys only. Parcel 1 is 158 sf short, while Parcel 2 is 9,717 sf over, therefore combined they meet the requirement. Parcel 4 is 158 sf under the requirement, but can use part of the 734 sf that Parcel 3 is over, thereby meeting the requirement.

Some of the parcels are indicated as not meeting the mitigation requirement. The owner has the option of paying into a fund for this.

8. Impact on Water Quality and Habitat Protection Area

- **Impact on Water Quality**

The existing development is not served by a Storm Water Management System. The proposed re-development will include a Storm Water Storage and treatment prior to discharge from site via the City Storm Water system. The "10% Rule" for pollutant removal has been met.

- **Habitat Protection Area**

There is no known record for rare or endangered species on site. There are several occurrences of endangered plants within the vicinity. An expert will be employed to verify the absence or occurrence on the site. At that time measures will be taken if needed.

9. Documentation of All Correspondence

- Flood Zone – *Attachment No. 1*
- "10% Rule" Pollutant Removal – *Attachment No. 2*
- *Wetlands Delineation Information*

**Critical Area Project Application
Town of Ocean City**

Date: _____

File# _____

Project Name: Ocean Isle – Area 1

Project Address: 67th Street and Coastal Highway

Tax Map: ____ **Parcel:** 6649-6658, Part of 6648 and 6659 **Block:** ____ **Lot#:** ____ **Zoning:** LC-1

Property Owner: Van Metre at Ocean Isle, LLC **Phone:** (703) 425-2614

Property Owner Address: 5252 Lyngate Court, Burke, Va 22015

Parcel size (SF): 78,650

I. Project Description

In the 100 foot buffer? Yes: _____ **No:** _____ *(If yes, continue with Sec. I)
(If no, skip to Sec. III)*

Parcels 40,000 SF or more: Critical Area setback is 25 feet. No impervious surface or cantilevering permitted within 25 feet of the shoreline/wetlands. ("Pervious" decks are permitted 10' into setback, per construction standards.)

Parcels less than 40,000 SF: Critical Area set back is equal to the zoning setback (_____ feet). No impervious surfaces permitted within the setback. ("Pervious" decks at ground level are permitted in the setback, per construction standards.)

Existing Conditions

Impervious surface (SF) _____ % of site impervious: _____

Impervious surface within the 100-foot buffer (SF): _____

Proposed Conditions

Impervious surface (SF): _____ % of site impervious: _____

Total SF of disturbed area: _____

Impervious surface within the 100-foot buffer (SF): _____

II. Mitigation Worksheet in the 100-foot Buffer

1. Detached Single Family Dwellings

Value of Construction: \$ _____

- a. Landscaping required in the amount of 2% of the cost of construction
(Value of construction x .02 = \$ _____)**
- b. Total landscaping provided. Attach cost values and plant schedule. (Must
equal or exceed "Means" book value.)
\$ _____**
- c. Mitigation requirement (if $a - b > 0$) = Fee in Lieu of landscaping.
\$ _____ (To be paid prior to issuance of Certificate of
Occupancy.)**

2. Multi-Family and Commercial Mitigation worksheet (within the 100' buffer)

- If not in 100-foot buffer skip to Section III below.

- All SF values determined from "Landscaping Conversion Table" below.

Activity Description (Complete all that apply):

a. Trees or shrubs removed from buffer (outside of setback):	#	_____	x	_____	SF	x	1	=	_____	SF
b. Trees or shrubs removed from setback	#	_____	x	_____	SF	x	2	=	_____	SF
c. Pervious to impervious		_____		_____	SF	x	2	=	_____	SF
d. Improved pervious to improved pervious		_____		_____	SF	x	1	=	_____	SF
e. Undisturbed surface disturbed but remaining pervious		_____		_____	SF	x	1	=	_____	SF
f. Impervious to impervious		_____		_____	SF	x	1	=	_____	SF
g. Impervious to pervious		_____		_____	SF	x	0	=	_____	SF
h. Construction of decks in setback		_____		_____	SF	x	2	=	_____	SF
i. Total mitigation required (sum of a through h) =									_____	SF

j. Total landscaping provided (Refer to "Landscaping Conversion Chart" below)

	Number		Value	Total
Large trees	_____ x		200 SF	_____ 0 SF
Small trees	_____ x		100 SF	_____ 0 SF
Large shrubs	_____ x		75 SF	_____ 0 SF
Small shrubs	_____ x		50 SF	_____ 0 SF
Plants	_____ x		2 SF	_____ 0 SF
Total value of Landscaping provided				_____ 0 SF

(Must provide this SF of plantable area not only the plants listed above)

Fee-in-Lieu of Landscaping (Offset)

i	-	j	x	\$1.20	
0	-	0	x	\$1.20	= _____ \$0.00

(To be paid prior to issuance of Certificate of Occupancy)

k. Setback from water/wetlands

_____ SF	x	0.25	=	_____ 0 SF
----------	---	------	---	------------

(Landscape to be provided in setback area)

LANDSCAPING CONVERSION CHART

Large tree = 200 square feet of mitigation
 Small tree = 100 square feet " " "
 Large shrub = 75 square feet " " "
 Small shrub = 50 square feet " " "
 Herbaceous plants = 2 square feet of mitigation per plant

III. Afforestation (Landscaping) Requirements Outside the 100-foot Buffer

1. All Development within the 1000' Critical Area (but outside the 100' buffer) every development or redevelopment must be planted in woody vegetation in an amount of 15% of the site area.

a. Total landscaping required: Parcel Size 78650 SF x 0.15 = 11797.5 SF
 (This SF area must be plantable and planted with the following number of plants)

b. Landscaping provided (use Landscaping Conversion Chart)

622.5
Short

	Number		Value	Total
Large trees	_____	x	200 SF	_____
Small trees	<u>39</u>	x	100 SF	<u>3900</u> SF
Large shrubs	<u>97</u>	x	75 SF	<u>7275</u> SF
Small shrubs	_____	x	50 SF	<u>0</u> SF
Total value of Landscaping provided:				<u>11175</u> SF

IV. Stormwater management and the 10% rule - Pollutant reduction requirement for all disturbances over 250 SF in the 1000 foot Critical Area.

1. Single family development subject to stormwater management requirements that use the "Standard Stormwater Management Plan" automatically meet the 10% Rule.

2. Single family development not subject to stormwater management regulations can meet the intent of the 10% Rule by submitting a Water Quality Management Plan.

3. Commercial and multi-family development must submit the 10% Rule Worksheet.

V. Habitat Protection (skip if it is less than 40,000 SF)

For lots of 40,000 square feet or greater, the applicant must consult with the Maryland Department of Natural Resources to determine the existence of any Habitat Protection Areas that may be affected by the proposed development.

VI. Landscape Plan

ALL VEGETATION SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 98, ARTICLE II, LANDSCAPING, OF THE CODE.

VII. Site plan requirements

Critical Area site plan is required and it must include the following information:

1. Topography
2. Mean high water line
3. Delineation of private and State tidal wetlands
4. Delineation of non-tidal wetlands
5. Soil Types
6. Tree cover (show location of individual trees or a tree line defining wooded areas).
7. Landscaping plan with required plants and plantable area
8. 100-foot Buffer and applicable setback
9. Habitat protection areas (if applicable)
10. All impervious surfaces labeled as existing or proposed.
11. All proposed clearing, grading and disturbance.
11. Computation of total existing and proposed impervious surfaces, existing forest cover and proposed clearing and total area of disturbance.
12. Proposed landscaping/mitigation plan.

Reviewed by: J. Sklar Smith Zoning Administrator (Date 6/19/07)
J. P. Blayer Environmental Engineer (Date 6/20/07)

Ocean Isle - Area 1

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	56,147.0	23,868.0
Driveways	0.0	0.0
Sidewalks/conc	1,100.0	7,228.0
Building	12,436.0	35,417.0
Decks	0.0	0.0
Pools/Ponds	0.0	600.0
Other	0.0	0.0
Total Impervious	69,683.0	67,113.0
Landscape Area	8,967.0	10,416.0
Pervious Paver	0.0	1,121.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	8,967.0	11,537.0
Total Area	78,650.0	78,650.0
Percent Impervious	88.6%	85.3%
Percent Landscaped	11.4%	13.2%
Percent Pervious	11.4%	14.7%
Rv	0.8	0.8
WQv	5,553.9	5,361.2
Storage (20% Exg + 100% New)	1,110.8	-192.8
Total Required Storage	918.0	
Area of Pavers (sf)	6,764.0	
Depth required @ 40% Void (ft)	0.3	
Depth required @ 40% Void (in)	4.1	
Storage Provided (assuming 1.5' stone @ 40%)	4058.4	
SF of impervious area supported for quality control	48700.8 61.92%	

Project: Ocean Isle - Area 1
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 78650 sf 1.806 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	56147	1.2890	23868	0.5479
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	1100	0.0253	7228	0.1659
Rooftops	12436	0.2855	35417	0.8131
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	600	0.0138
Other	0	0.0000	0	0.0000
Impervious Surface Area	69683	1.5997	67113	1.5407

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area	
	sf	acres
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
Disconnected Rooftop Impervious Area	0	0.0000

4) Adjusted Proposed Impervious Surface Area
 = Proposed Impervious Surface Area - Disconnected Impervious Area
 = Step 2b - Step 3
 = 1.5407 - 0.0000
 = 1.5407 acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, I_{pre} = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 1.5997 / 1.8056
 = 88.5989 %

Proposed Imperviousness, I_{post} = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 1.5407 / 1.8056
 = 85.3312 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (L_{pre})

A. Redevelopment

L_{pre} = R_v C A 8.16
 R_v = 0.05 + 0.009 (I_{pre})
 = 0.8474
 L_{pre} = 3.745 lbs/year of total phosphorus

Where:

- L_{pre} = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
- R_v = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
- I_{pre} = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
- C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
- A = Area if site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

B. New Development

$$\begin{aligned} L_{pre} &= 0.5 A \\ L_{pre} &= 0.000 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \\ 0.5 &= \text{Annual total phosphorous load from undeveloped Lands} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \end{aligned}$$

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

$$\begin{aligned} L_{post} &= R_v C A 8.16 \\ R_v &= 0.05 + 0.009 (l_{post}) \\ &= 0.8180 \\ L_{pre} &= 3.615 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ R_v &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff} \\ l_{post} &= \text{Post-development (proposed) site imperviousness (ie } l=75 \text{ if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)} \\ &= 0.3 \text{ mg/l} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ 8.16 &= \text{includes regional constants and conversion factors} \end{aligned}$$

Step 4: Calculate Pollutant Removal Requirement

$$\begin{aligned} RR &= L_{post} - 0.9 L_{pre} \\ &= 3.615 - 0.9 \cdot 3.745 \\ &= 0.2446 \end{aligned}$$

Where:

$$\begin{aligned} RR &= \text{pollutant removal requirement (lbs/yr)} \\ L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \end{aligned}$$

**Critical Area Project Application
Town of Ocean City**

Date: _____

File# _____

Project Name: Ocean Isle – Area 2

Project Address: 67th Street and Coastal Highway

Tax Map: ___ **Parcel:** 6646, 6647, 6660-6668, Part of 6648 **Block:** ___ **Lot#:** ___ **Zoning:** LC-1
And 6649, and portions of vacated alleys

Property Owner: Van Metre at Ocean Isle II, LLC **Phone:** (703)425-2614

Property Owner Address: 5252 Lyngate Court, Burke, Va 22015

Parcel size (SF): 81,582

I. Project Description

In the 100 foot buffer? Yes: ___ **X** ___ **No:** _____ *(If yes, continue with Sec. I)*
(If no, skip to Sec. III)

Parcels 40,000 SF or more: Critical Area setback is 25 feet. No impervious surface or cantilevering permitted within 25 feet of the shoreline/wetlands. (“Pervious” decks are permitted 10’ into setback, per construction standards.)

Parcels less than 40,000 SF: Critical Area set back is equal to the zoning setback (25feet). No impervious surfaces permitted within the setback. (“Pervious” decks at ground level are permitted in the setback, per construction standards.)

Existing Conditions

Impervious surface (SF): 68,695 **% of site impervious:** 82.4%

Impervious surface within the 100-foot buffer (SF): 6,920

Proposed Conditions

Impervious surface (SF): 56,990 **% of site impervious:** 68.4%

Total SF of disturbed area: 83,339

Impervious surface within the 100-foot buffer (SF): 13,886

II. Mitigation Worksheet in the 100-foot Buffer

1. Detached Single Family Dwellings

Value of Construction: \$ _____

- a. Landscaping required in the amount of 2% of the cost of construction
(Value of construction x .02 = \$ _____)**
- b. Total landscaping provided. Attach cost values and plant schedule. (Must
equal or exceed "Means" book value.)
\$ _____**
- c. Mitigation requirement (if $a - b > 0$) = Fee in Lieu of landscaping.
\$ _____ (To be paid prior to issuance of Certificate of
Occupancy.)**

2. Multi-Family and Commercial Mitigation worksheet (within the 100' buffer)

- If not in 100-foot buffer skip to Section III below.

- All SF values determined from "Landscaping Conversion Table" below.

Activity Description (Complete all that apply):

a. Trees or shrubs removed from buffer (outside of setback):	#	<u>0</u>	x	<u>0</u>	SF	x	1	=	<u>0</u>	SF
b. Trees or shrubs removed from setback	#	<u>1</u>	x	<u>5687</u>	SF	x	2	=	<u>11374</u>	SF
c. Pervious to impervious				<u>6966</u>	SF	x	2	=	<u>13932</u>	SF
d. Improved pervious to improved pervious				<u>0</u>	SF	x	1	=	<u>0</u>	SF
e. Undisturbed surface disturbed but remaining pervious				<u>15359</u>	SF	x	1	=	<u>15359</u>	SF
f. Impervious to impervious				<u>6920</u>	SF	x	1	=	<u>6920</u>	SF
g. Impervious to pervious				<u>0</u>	SF	x	0	=	<u>0</u>	SF
h. Construction of decks in setback				<u>0</u>	SF	x	2	=	<u>0</u>	SF
i. Total mitigation required (sum of a through h) =									<u>47585</u>	SF

j. Total landscaping provided (Refer to "Landscaping Conversion Chart" below)

	<u>Number</u>		<u>Value</u>		<u>Total</u>
Large trees	<u>0</u>	x	200 SF		<u>0 SF</u>
Small trees	<u>101</u>	x	100 SF		<u>10100 SF</u>
Large shrubs	<u>250</u>	x	75 SF		<u>18750 SF</u>
Small shrubs	<u>0</u>	x	50 SF		<u>0 SF</u>
Plants	<u>0</u>	x	2 SF		<u>0 SF</u>
Total value of Landscaping provided					<u>28850 SF</u>

(Must provide this SF of plantable area not only the plants listed above)

Fee-in-Lieu of Landscaping (Offset)

	i	-	j	x	\$1.20	
	47585	-	28850	x	\$1.20	= <u>\$12,965.00</u>

(To be paid prior to issuance of Certificate of Occupancy)

k. Setback from water/wetlands

	<u>29245</u>	SF	x	0.25	=	<u>7311.25</u>	SF
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(Landscape to be provided in setback area)

LANDSCAPING CONVERSION CHART

Large tree = 200 square feet of mitigation
 Small tree = 100 square feet " " "
 Large shrub = 75 square feet " " "
 Small shrub = 50 square feet " " "
 Herbaceous plants = 2 square feet of mitigation per plant

III. Afforestation (Landscaping) Requirements Outside the 100-foot Buffer

1. All Development within the 1000' Critical Area (but outside the 100' buffer) every development or redevelopment must be planted in woody vegetation in an amount of 15% of the site area.

a. Total landscaping required: Parcel Size 81582 SF x 0.15 = 12237.3 SF
(This SF area must be plantable and planted with the following number of plants)

b. Landscaping provided (use Landscaping Conversion Chart)

	Number		Value	Total
Large trees		x	200 SF	0 SF
Small trees	101	x	100 SF	10100 SF
Large shrubs	250	x	75 SF	18750 SF
Small shrubs	0	x	50 SF	0 SF
Total value of Landscaping provided:				28850 SF

IV. Stormwater management and the 10% rule - Pollutant reduction requirement for all disturbances over 250 SF in the 1000 foot Critical Area.

1. Single family development subject to stormwater management requirements that use the "Standard Stormwater Management Plan" automatically meet the 10% Rule.

2. Single family development not subject to stormwater management regulations can meet the intent of the 10% Rule by submitting a Water Quality Management Plan.

3. Commercial and multi-family development must submit the 10% Rule Worksheet.

V. Habitat Protection (skip if it is less than 40,000 SF)

For lots of 40,000 square feet or greater, the applicant must consult with the Maryland Department of Natural Resources to determine the existence of any Habitat Protection Areas that may be affected by the proposed development.

VI. Landscape Plan

ALL VEGETATION SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 98, ARTICLE II, LANDSCAPING, OF THE CODE.

VII. Site plan requirements

Critical Area site plan is required and it must include the following information:

- 1. Topography**
- 2. Mean high water line**
- 3. Delineation of private and State tidal wetlands**
- 4. Delineation of non-tidal wetlands**
- 5. Soil Types**
- 6. Tree cover (show location of individual trees or a tree line defining wooded areas).**
- 7. Landscaping plan with required plants and plantable area**
- 8. 100-foot Buffer and applicable setback**
- 9. Habitat protection areas (if applicable)**
- 10. All impervious surfaces labeled as existing or proposed.**
- 11. All proposed clearing, grading and disturbance.**
- 11. Computation of total existing and proposed impervious surfaces, existing forest cover and proposed clearing and total area of disturbance.**
- 12. Proposed landscaping/mitigation plan.**

Reviewed by: J. Skene Smith Zoning Administrator (Date 6/20/07)
Paul P. Blayz Environmental Engineer (Date 6-20-07)

Ocean Isle - Area 2

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	56,883.0	19,253.0
Driveways	0.0	0.0
Sidewalks/conc	50.0	7,546.0
Building	11,762.0	32,234.0
Decks	0.0	0.0
Pools/Ponds	0.0	0.0
Other	0.0	0.0
Total Impervious	68,695.0	59,033.0
Landscape Area	14,644.0	21,996.0
Pervious Paver	0.0	2,310.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	14,644.0	24,306.0
Total Area	83,339.0	83,339.0
Percent Impervious	82.4%	70.8%
Percent Landscaped	17.6%	26.4%
Percent Pervious	17.6%	29.2%
Rv	0.8	0.7
WQv	5,499.4	4,774.7
Storage (20% Exg + 100% New)	1,099.9	-724.7
Total Required Storage	375.2	
Area of Pavers (sf)	507.0	
Depth required @ 40% Void (ft)	1.9	
Depth required @ 40% Void (in)	22.2	
Storage Provided (assuming 1.5' stone @ 40%)	2310	
SF of impervious area supported for quality control	27720 33.26%	

Project: Ocean Isle - Area 2
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 83339 sf 1.913 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	56883	1.3059	19253	0.4420
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	50	0.0011	7546	0.1732
Rooftops	11762	0.2700	32234	0.7400
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	0	0.0000
Other	0	0.0000	0	0.0000
Impervious Surface Area	68695	1.5770	59033	1.3552

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area
	sf acres
	0 0.0000
	0 0.0000
	0 0.0000
	0 0.0000
	0 0.0000
	0 0.0000
Disconnected Rooftop Impervious Area	0 0.0000

4) Adjusted Proposed Impervious Surface Area

= Proposed Impervious Surface Area - Disconnected Impervious Area
 = Step 2b - Step 3
 = 1.3552 - 0.0000
 = 1.3552 acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, Ipre = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 1.5770 / 1.9132
 = 82.4284 %

Proposed Imperviousness, Ipost = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 1.3552 / 1.9132
 = 70.8348 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (Lpre)

A. Redevelopment

Lpre = Rv C A 8.16
 Rv = 0.05 + 0.009 (Ipre)
 = 0.7919
 Lpre = 3.709 lbs/year of total phosphorus

Where:

- Lpre = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
- Ipre = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
- C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
- A = Area of site within the Critical Area IDA (acres)
- 8.16 = includes regional constants and conversion factors

B. New Development

$$\begin{aligned} L_{pre} &= 0.5 A \\ L_{pre} &= 0.000 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \\ 0.5 &= \text{Annual total phosphorous load from undeveloped Lands} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \end{aligned}$$

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

$$\begin{aligned} L_{post} &= Rv C A 8.16 \\ Rv &= 0.05 + 0.009 (l_{post}) \\ &= 0.6875 \\ L_{pre} &= 3.220 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{post} &= \text{Average annual load of total phosphorous exported from the post developmentsite (lbs/year)} \\ Rv &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff} \\ l_{post} &= \text{Post-development (proposed) site imperviousness (ie } l=75 \text{ if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)} \\ &= 0.3 \text{ mg/l} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ 8.16 &= \text{includes regional constants and conversion factors} \end{aligned}$$

Step 4: Calculate Pollutant Removal Requirement

$$\begin{aligned} RR &= L_{post} - 0.9 L_{pre} \\ &= 3.220 - 0.9 \cdot 3.709 \\ &= -0.1178 \end{aligned}$$

Where:

$$\begin{aligned} RR &= \text{pollutant removal requirement (lbs/yr)} \\ L_{post} &= \text{Average annual load of total phosphorous exported from the post developmentsite (lbs/year)} \\ L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \end{aligned}$$

Step 5: Identify Feasible BMP (s)

Select BMP options using the screening matrices provided in the chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each Option

BMP	Lpost	BMPre	%DA	Efficiency	=	LR
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
	3.220				=	0.0000 lbs/yr
				Load Removed (total)	=	0.0000
				Pollutant removal Requirement (from Step 4)	=	-0.1178

Where:

Load Removed = Annual total phosphorous load removed by the proposed BMP (lbs/year)

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)

BMPre = BMP removal Efficiency for total phosphorus, Table 4.8 (%)

RR = pollutant removal requirement (lbs/yr)

Has the RR (pollutant removal requirement) been met? Yes

Pollutant removal requirement not served 0.0000 lbs

Fee In Lieu \$0.00

**Critical Area Project Application
Town of Ocean City**

Date: _____

File# _____

Project Name: Ocean Isle – Area 3

Project Address: 67th Street and Coastal Highway

Tax Map: ___ **Parcel:** Part of Parcel 6677 **Block:** ___ **Lot#:** ___ **Zoning:** LC-1

Property Owner: Van Metre at Ocean Isle, LLC **Phone:** (703) 425-2614

Property Owner Address: 5252 Lyngate Court, Burke, Va 22015

Parcel size (SF): 3,600

I. Project Description

In the 100 foot buffer? Yes: _____ No: *(If yes, continue with Sec. I)
(If no, skip to Sec. III)*

Parcels 40,000 SF or more: Critical Area setback is 25 feet. No impervious surface or cantilevering permitted within 25 feet of the shoreline/wetlands. ("Pervious" decks are permitted 10' into setback, per construction standards.)

Parcels less than 40,000 SF: Critical Area set back is equal to the zoning setback (_____ feet). No impervious surfaces permitted within the setback. ("Pervious" decks at ground level are permitted in the setback, per construction standards.)

Existing Conditions

Impervious surface (SF) _____ % of site impervious: _____

Impervious surface within the 100-foot buffer (SF): _____

Proposed Conditions

Impervious surface (SF): _____ % of site impervious: _____

Total SF of disturbed area: _____

Impervious surface within the 100-foot buffer (SF): _____

II. Mitigation Worksheet in the 100-foot Buffer

1. Detached Single Family Dwellings

Value of Construction: \$ _____

- a. Landscaping required in the amount of 2% of the cost of construction
(Value of construction x .02 = \$ _____)**
- b. Total landscaping provided. Attach cost values and plant schedule. (Must
equal or exceed "Means" book value.)
\$ _____**
- c. Mitigation requirement (if a - b > 0) = Fee in Lieu of landscaping.
\$ _____ (To be paid prior to issuance of Certificate of
Occupancy.)**

2. Multi-Family and Commercial Mitigation worksheet (within the 100' buffer)

- If not in 100-foot buffer skip to Section III below.

- All SF values determined from "Landscaping Conversion Table" below.

Activity Description (Complete all that apply):

a. Trees or shrubs removed from buffer (outside of setback):	# _____	x	_____ SF	x	1	=	<u>0</u> SF
b. Trees or shrubs removed from setback	# _____	x	_____ SF	x	2	=	<u>0</u> SF
c. Pervious to impervious			_____ SF	x	2	=	<u>0</u> SF
d. Improved pervious to improved pervious			_____ SF	x	1	=	<u>0</u> SF
e. Undisturbed surface disturbed but remaining pervious			_____ SF	x	1	=	<u>0</u> SF
f. Impervious to impervious			_____ SF	x	1	=	<u>0</u> SF
g. Impervious to pervious			_____ SF	x	0	=	<u>0</u> SF
h. Construction of decks in setback			_____ SF	x	2	=	<u>0</u> SF
i. Total mitigation required (sum of a through h) =							<u>0</u> SF

j. Total landscaping provided (Refer to "Landscaping Conversion Chart" below)

	Number		Value	Total
Large trees	_____	x	200 SF	<u>0</u> SF
Small trees	_____	x	100 SF	<u>0</u> SF
Large shrubs	_____	x	75 SF	<u>0</u> SF
Small shrubs	_____	x	50 SF	<u>0</u> SF
Plants	_____	x	2 SF	<u>0</u> SF
Total value of Landscaping provided				<u>0</u> SF

(Must provide this SF of plantable area not only the plants listed above)

Fee-in-Lieu of Landscaping (Offset)

i	-	j	x	\$1.20	
0	-	0	x	\$1.20	= <u>\$0.00</u>

(To be paid prior to issuance of Certificate of Occupancy)

k. Setback from water/wetlands

_____ SF	x	0.25	=	<u>0</u> SF
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(Landscape to be provided in setback area)

LANDSCAPING CONVERSION CHART

Large tree = 200 square feet of mitigation
 Small tree = 100 square feet " " "
 Large shrub = 75 square feet " " "
 Small shrub = 50 square feet " " "
 Herbaceous plants = 2 square feet of mitigation per plant

III. Afforestation (Landscaping) Requirements Outside the 100-foot Buffer

1. All Development within the 1000' Critical Area (but outside the 100' buffer) every development or redevelopment must be planted in woody vegetation in an amount of 15% of the site area.

a. Total landscaping required: Parcel Size 3600 SF x 0.15 = 540 SF
(This SF area must be plantable and planted with the following number of plants)

b. Landscaping provided (use Landscaping Conversion Chart)

	Number		Value	Total
Large trees		x	200 SF	0 SF
Small trees	5	x	100 SF	500 SF
Large shrubs	20	x	75 SF	1500 SF
Small shrubs		x	50 SF	0 SF
Total value of Landscaping provided:				2000 SF

IV. Stormwater management and the 10% rule - Pollutant reduction requirement for all disturbances over 250 SF in the 1000 foot Critical Area.

1. Single family development subject to stormwater management requirements that use the "Standard Stormwater Management Plan" automatically meet the 10% Rule.

2. Single family development not subject to stormwater management regulations can meet the intent of the 10% Rule by submitting a Water Quality Management Plan.

3. Commercial and multi-family development must submit the 10% Rule Worksheet.

V. Habitat Protection (skip if it is less than 40,000 SF)

For lots of 40,000 square feet or greater, the applicant must consult with the Maryland Department of Natural Resources to determine the existence of any Habitat Protection Areas that may be affected by the proposed development.

VI. Landscape Plan

ALL VEGETATION SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 98, ARTICLE II, LANDSCAPING, OF THE CODE.

VII. Site plan requirements

Critical Area site plan is required and it must include the following information:

1. Topography
2. Mean high water line
3. Delineation of private and State tidal wetlands
4. Delineation of non-tidal wetlands
5. Soil Types
6. Tree cover (show location of individual trees or a tree line defining wooded areas).
7. Landscaping plan with required plants and plantable area
8. 100-foot Buffer and applicable setback
9. Habitat protection areas (if applicable)
10. All impervious surfaces labeled as existing or proposed.
11. All proposed clearing, grading and disturbance.
11. Computation of total existing and proposed impervious surfaces, existing forest cover and proposed clearing and total area of disturbance.
12. Proposed landscaping/mitigation plan.

Reviewed by: J. Sklar Zoning Administrator (Date 6/19/07)

J. P. Blay Environmental Engineer (Date 6/20/07)

Ocean Isle - Area 3

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	2,709.0	1,896.0
Driveways	0.0	0.0
Sidewalks/conc	0.0	77.0
Building	0.0	0.0
Decks	0.0	0.0
Pools/Ponds	0.0	0.0
Other	0.0	0.0
Total Impervious	2,709.0	1,973.0
Landscape Area	891.0	1,274.0
Pervious Paver	0.0	432.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	891.0	1,706.0
Total Area	3,600.0	3,600.0
Percent Impervious	75.3%	54.8%
Percent Landscaped	24.8%	35.4%
Percent Pervious	24.8%	47.4%
Rv	0.7	0.5
WQv	218.2	163.0
Storage (20% Exg + 100% New)	43.6	-55.2
Total Required Storage	-11.6	

Project: Ocean Isle - Area 3
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 3600 sf 0.083 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	2709	0.0622	1896	0.0435
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	0	0.0000	77	0.0018
Rooftops	0	0.0000	0	0.0000
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	0	0.0000
Other	0	0.0000	0	0.0000
Impervious Surface Area	2709	0.0622	1973	0.0453

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area	
	sf	acres
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
Disconnected Rooftop Impervious Area	0	0.0000

4) Adjusted Proposed Impervious Surface Area

= Proposed Impervious Surface Area - Disconnected Impervious Area
 = Step 2b - Step 3
 = 0.0453 - 0.0000
 = 0.0453 acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, I_{pre} = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 0.0622 / 0.0826
 = 75.2500 %

Proposed Imperviousness, I_{post} = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 0.0453 / 0.0826
 = 54.8056 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (L_{pre})

A. Redevelopment

L_{pre} = Rv C A 8.16
 Rv = 0.05 + 0.009 (I_{pre})
 = 0.7273
 L_{pre} = 0.147 lbs/year of total phosphorus

Where:

- L_{pre} = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
- I_{pre} = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
- C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
- A = Area if site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

B. New Development

Lpre = 0.5 A
 Lpre = 0.000 lbs/year of total phosphorus

Where:

Lpre = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
 0.5 = Annual total phosphorous load from undeveloped Lands
 A = Area if site within the Critical Area IDA (acres)
 A = Area if site within the Critical Area IDA (acres)

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

Lpost = Rv C A 8.16
 Rv = 0.05 + 0.009 (lpost)
 = 0.5433
 Lpre = 0.110 lbs/year of total phosphorus

Where:

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)
 Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
 lpost = Post-development (proposed) site imperviousness (ie I=75 if site is 75% impervious)
 C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
 A = Area if site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

Step 4: Calculate Pollutant Removal Requirement

RR = Lpost - 0.9 Lpre
 = 0.110 - 0.9 0.147
 = -0.0225

Where:

RR = pollutant removal requirement (lbs/yr)
 Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)
 Lpre = Average annual load of total phosphorous exported from the site prior to development (lbs/year)

Step 5: Identify Feasible BMP (s)

Select BMP options using the screening matrices provided in the chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each Option

BMP	Lpost	BMPre	%DA	Efficiency	=	LR
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
	0.110				=	0.0000 lbs/yr
					=	0.0000
					=	-0.0225

Where:

Load Removed = Annual total phosphorous load removed by the proposed BMP (lbs/year)

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)

BMPre = BMP removal Efficiency for total phosphorus, Table 4.8 (%)

RR = pollutant removal requirement (lbs/yr)

Has the RR (pollutant removal requirement) been met? Yes

Pollutant removal requirement not served 0.0000 lbs

Fee In Lieu \$0.00

**Critical Area Project Application
Town of Ocean City**

Date: _____ **File#** _____

Project Name: Ocean Isle – Area 4

Project Address: 67th Street and Coastal Highway

Tax Map: ____ **Parcel:** Part of Parcel 6678 **Block:** ____ **Lot#:** ____ **Zoning:** LC-1
And Part of 6677

Property Owner: Van Metre at Ocean Isle II, LLC **Phone:** (703) 425-2614

Property Owner Address: 5252 Lyngate Court, Burke, Va 22015

Parcel size (SF): 9,600

I. Project Description

In the 100 foot buffer? Yes: _____ No: _____ *(If yes, continue with Sec. I)*
(If no, skip to Sec. III)

Parcels 40,000 SF or more: Critical Area setback is 25 feet. No impervious surface or cantilevering permitted within 25 feet of the shoreline/wetlands. (“Pervious” decks are permitted 10’ into setback, per construction standards.)

Parcels less than 40,000 SF: Critical Area set back is equal to the zoning setback (_____ feet). No impervious surfaces permitted within the setback. (“Pervious” decks at ground level are permitted in the setback, per construction standards.)

Existing Conditions

Impervious surface (SF) _____ **% of site impervious:** _____

Impervious surface within the 100-foot buffer (SF): _____

Proposed Conditions

Impervious surface (SF): _____ **% of site impervious:** _____

Total SF of disturbed area: _____

Impervious surface within the 100-foot buffer (SF): _____

II. Mitigation Worksheet in the 100-foot Buffer

1. Detached Single Family Dwellings

Value of Construction: \$ _____

- a. Landscaping required in the amount of 2% of the cost of construction
(Value of construction x .02 = \$ _____)**

- b. Total landscaping provided. Attach cost values and plant schedule. (Must
equal or exceed "Means" book value.)
\$ _____**

- c. Mitigation requirement (if $a - b > 0$) = Fee in Lieu of landscaping.
\$ _____ (To be paid prior to issuance of Certificate of
Occupancy.)**

2. Multi-Family and Commercial Mitigation worksheet (within the 100' buffer)
 - If not in 100-foot buffer skip to Section III below.
 - All SF values determined from "Landscaping Conversion Table" below.

Activity Description (Complete all that apply):

a. Trees or shrubs removed from buffer (outside of setback):	# _____	x	_____ SF	x	1	=	<u>0</u>	SF
b. Trees or shrubs removed from setback	# _____	x	_____ SF	x	2	=	<u>0</u>	SF
c. Pervious to impervious	_____		_____ SF	x	2	=	<u>0</u>	SF
d. Improved pervious to improved pervious	_____		_____ SF	x	1	=	<u>0</u>	SF
e. Undisturbed surface disturbed but remaining pervious	_____		_____ SF	x	1	=	<u>0</u>	SF
f. Impervious to impervious	_____		_____ SF	x	1	=	<u>0</u>	SF
g. Impervious to pervious	_____		_____ SF	x	0	=	<u>0</u>	SF
h. Construction of decks in setback	_____		_____ SF	x	2	=	<u>0</u>	SF
i. Total mitigation required (sum of a through h) =							<u>0</u>	SF

j. Total landscaping provided (Refer to "Landscaping Conversion Chart" below)

	Number		Value	Total
Large trees	_____	x	200 SF	<u>0</u> SF
Small trees	_____	x	100 SF	<u>0</u> SF
Large shrubs	_____	x	75 SF	<u>0</u> SF
Small shrubs	_____	x	50 SF	<u>0</u> SF
Plants	_____	x	2 SF	<u>0</u> SF
Total value of Landscaping provided				<u>0</u> SF

(Must provide this SF of plantable area not only the plants listed above)

Fee-in-Lieu of Landscaping (Offset)

i	-	j	x	\$1.20	
0	-	0	x	\$1.20	= <u>\$0.00</u>

(To be paid prior to issuance of Certificate of Occupancy)

k. Setback from water/wetlands

_____ SF	x	0.25	=	<u>0</u> SF
----------	---	------	---	-------------

(Landscape to be provided in setback area)

LANDSCAPING CONVERSION CHART

Large tree = 200 square feet of mitigation
 Small tree = 100 square feet " " "
 Large shrub = 75 square feet " " "
 Small shrub = 50 square feet " " "
 Herbaceous plants = 2 square feet of mitigation per plant

III. Afforestation (Landscaping) Requirements Outside the 100-foot Buffer

1. All Development within the 1000' Critical Area (but outside the 100' buffer) every development or redevelopment must be planted in woody vegetation in an amount of 15% of the site area.

a. Total landscaping required: Parcel Size 9600 SF x 0.15 = 1440 SF
(This SF area must be plantable and planted with the following number of plants)

b. Landscaping provided (use Landscaping Conversion Chart)

	Number		Value	Total
Large trees	<u>0</u>	x	200 SF	<u>0</u> SF
Small trees	<u>14</u>	x	100 SF	<u>1400</u> SF
Large shrubs	<u>26</u>	x	75 SF	<u>1950</u> SF
Small shrubs	<u> </u>	x	50 SF	<u>0</u> SF
Total value of Landscaping provided:				<u>3350</u> SF

IV. Stormwater management and the 10% rule - Pollutant reduction requirement for all disturbances over 250 SF in the 1000 foot Critical Area.

1. Single family development subject to stormwater management requirements that use the "Standard Stormwater Management Plan" automatically meet the 10% Rule.

2. Single family development not subject to stormwater management regulations can meet the intent of the 10% Rule by submitting a Water Quality Management Plan.

3. Commercial and multi-family development must submit the 10% Rule Worksheet.

V. Habitat Protection (skip if it is less than 40,000 SF)

For lots of 40,000 square feet or greater, the applicant must consult with the Maryland Department of Natural Resources to determine the existence of any Habitat Protection Areas that may be affected by the proposed development.

VI. Landscape Plan.

ALL VEGETATION SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 98, ARTICLE II, LANDSCAPING, OF THE CODE.

VII. Site plan requirements

Critical Area site plan is required and it must include the following information:

1. Topography
2. Mean high water line
3. Delineation of private and State tidal wetlands
4. Delineation of non-tidal wetlands
5. Soil Types
6. Tree cover (show location of individual trees or a tree line defining wooded areas).
7. Landscaping plan with required plants and plantable area
8. 100-foot Buffer and applicable setback
9. Habitat protection areas (if applicable)
10. All impervious surfaces labeled as existing or proposed.
11. All proposed clearing, grading and disturbance.
11. Computation of total existing and proposed impervious surfaces, existing forest cover and proposed clearing and total area of disturbance.
12. Proposed landscaping/mitigation plan.

Reviewed by: J. Blazer Smith Zoning Administrator (Date 6/19/07)

Dwight P. Blazer Environmental Engineer (Date 6/20/07)

Ocean Isle - Area 4

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	0.0	7,471.0
Driveways	0.0	0.0
Sidewalks/conc	1,271.0	238.0
Building	1,840.0	0.0
Decks	0.0	0.0
Pools/Ponds	0.0	0.0
Other	0.0	0.0
Total Impervious	3,111.0	7,709.0
Landscape Area	6,489.0	1,283.0
Pervious Paver	0.0	835.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	6,489.0	2,118.0
Total Area	9,600.0	9,600.0
Percent Impervious	32.4%	80.3%
Percent Landscaped	67.6%	13.4%
Percent Pervious	67.6%	22.1%
Rv	0.3	0.8
WQv	273.3	618.2
Storage (20% Exg + 100% New)	54.7	344.9
Total Required Storage	399.5	
Area of Pavers (sf)	835.0	
Depth required @ 40% Void (ft)	1.2	
Depth required @ 40% Void (in)	14.4	
Storage Provided (assuming 1.5' stone @ 40%)	501	
SF of impervious area supported for quality control	6012 62.63%	

Project: Ocean Isle - Area 4
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 9600 sf 0.220 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	0	0.0000	7471	0.1715
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	1271	0.0292	238	0.0055
Rooftops	1840	0.0422	0	0.0000
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	0	0.0000
Other	0	0.0000	0	0.0000
Impervious Surface Area	3111	0.0714	7709	0.1770

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area	
	sf	acres
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
Disconnected Rooftop Impervious Area	0	0.0000

4) Adjusted Proposed Impervious Surface Area
 = Proposed Impervious Surface Area - Disconnected Impervious Area
 = Step 2b - Step 3
 = 0.1770 - 0.0000
 = 0.1770 acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, I_{pre} = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 0.0714 / 0.2204
 = 32.4063 %

Proposed Imperviousness, I_{post} = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 0.1770 / 0.2204
 = 80.3021 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (L_{pre})

A. Redevelopment

L_{pre} = Rv C A 8.16
 Rv = 0.05 + 0.009 (I_{pre})
 = 0.3417
 L_{pre} = 0.184 lbs/year of total phosphorus

Where:

- L_{pre} = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
- I_{pre} = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
- C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
- A = Area of site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

B. New Development

Lpre = 0.5 A
 Lpre = 0.000 lbs/year of total phosphorus

Where:

Lpre = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
 0.5 = Annual total phosphorous load from undeveloped Lands
 A = Area if site within the Critical Area IDA (acres)
 A = Area if site within the Critical Area IDA (acres)

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

Lpost = Rv C A 8.16
 Rv = 0.05 + 0.009 (lpost)
 = 0.7727
 Lpre = 0.417 lbs/year of total phosphorus

Where:

Lpost = Average annual load of total phosphorous exported from the post developmentsite (lbs/year)
 Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
 lpost = Post-development (proposed) site imperviousness (ie I=75 if site is 75% impervious)
 C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
 A = Area if site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

Step 4: Calculate Pollutant Removal Requirement

RR = Lpost - 0.9 Lpre
 = 0.417 - 0.9 0.184
 = 0.2510

Where:

RR = pollutant removal requirement (lbs/yr)
 Lpost = Average annual load of total phosphorous exported from the post developmentsite (lbs/year)
 Lpre = Average annual load of total phosphorous exported from the site prior to development (lbs/year)

Step 5: Identify Feasible BMP (s)

Select BMP options using the screening matrices provided in the chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each Option

BMP	Lpost	BMPre	%DA	Efficiency	=	LR
Pavers	0.417	65%	63%	50%	=	0.0848 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
	0.417				=	0.0000 lbs/yr
					=	0.0848
					=	0.2510

Where:

Load Removed = Annual total phosphorous load removed by the proposed BMP (lbs/year)

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)

BMPre = BMP removal Efficiency for total phosphorus, Table 4.8 (%)

RR = pollutant removal requirement (lbs/yr)

Has the RR (pollutant removal requirement) been met? No

Pollutant removal requirement not served 0.1661 lbs

Fee In Lieu \$3,322.87

**Critical Area Project Application
Town of Ocean City**

Date: _____

File# _____

Project Name: Ocean Isle – Area 5

Project Address: 67th Street and Coastal Highway

Tax Map: ___ **Parcel:** 6669 **Block:** ___ **Lot#:** ___ **Zoning:** BMUD

Property Owner: Van Metre at Ocean Isle, LLC **Phone:** (703)425-2614

Property Owner Address: 5252 Lyngate Court, Burke, Va 22015

Parcel size (SF): 29,391

I. Project Description

In the 100 foot buffer? Yes: ___ **X** ___ **No:** _____ *(If yes, continue with Sec. I)
(If no, skip to Sec. III).*

Parcels 40,000 SF or more: Critical Area setback is 25 feet. No impervious surface or cantilevering permitted within 25 feet of the shoreline/wetlands. ("Pervious" decks are permitted 10' into setback, per construction standards.)

Parcels less than 40,000 SF: Critical Area set back is equal to the zoning setback (25feet). No impervious surfaces permitted within the setback. ("Pervious" decks at ground level are permitted in the setback, per construction standards.)

Existing Conditions

Impervious surface (SF): 24,004 **% of site impervious:** 81.7%

Impervious surface within the 100-foot buffer (SF): 21,886

Proposed Conditions

Impervious surface (SF): 20,586 **% of site impervious:** 68.4%

Total SF of disturbed area: 29,391

Impervious surface within the 100-foot buffer (SF): 16,718

II. Mitigation Worksheet in the 100-foot Buffer

1. Detached Single Family Dwellings

Value of Construction: \$ _____

- a. Landscaping required in the amount of 2% of the cost of construction
(Value of construction x .02 = \$ _____)**

- b. Total landscaping provided. Attach cost values and plant schedule. (Must
equal or exceed "Means" book value.)
\$ _____**

- c. Mitigation requirement (if $a - b > 0$) = Fee in Lieu of landscaping.
\$ _____ (To be paid prior to issuance of Certificate of
Occupancy.)**

2. Multi-Family and Commercial Mitigation worksheet (within the 100' buffer)
 - If not in 100-foot buffer skip to Section III below.
 - All SF values determined from "Landscaping Conversion Table" below.

Activity Description (Complete all that apply):

a. Trees or shrubs removed from buffer (outside of setback):	#	<u>0</u>	x	<u>0</u>	SF	x	1	=	<u>0</u>	SF
b. Trees or shrubs removed from setback	#	<u>0</u>	x	<u>0</u>	SF	x	2	=	<u>0</u>	SF
c. Pervious to impervious				<u>0</u>	SF	x	2	=	<u>0</u>	SF
d. Improved pervious to improved pervious				<u>0</u>	SF	x	1	=	<u>0</u>	SF
e. Undisturbed surface disturbed but remaining pervious				<u>5387</u>	SF	x	1	=	<u>5387</u>	SF
f. Impervious to impervious				<u>16718</u>	SF	x	1	=	<u>16718</u>	SF
g. Impervious to pervious				<u>3418</u>	SF	x	0	=	<u>0</u>	SF
h. Construction of decks in setback				<u>0</u>	SF	x	2	=	<u>0</u>	SF
i. Total mitigation required (sum of a through h) =									<u>22105</u>	SF

j. Total landscaping provided (Refer to "Landscaping Conversion Chart" below)

	<u>Number</u>		<u>Value</u>	<u>Total</u>
Large trees		x	200 SF	<u>0 SF</u>
Small trees	<u>48</u>	x	100 SF	<u>4800 SF</u>
Large shrubs	<u>88</u>	x	75 SF	<u>6600 SF</u>
Small shrubs	<u>0</u>	x	50 SF	<u>0 SF</u>
Plants	<u>0</u>	x	2 SF	<u>0 SF</u>
Total value of Landscaping provided				<u>11400 SF</u>

(Must provide this SF of plantable area not only the plants listed above)

Fee-in-Lieu of Landscaping (Offset)

i	-	j	x	\$1.20	
22105	-	11400	x	\$1.20	= <u>\$8,425.00</u>

(To be paid prior to issuance of Certificate of Occupancy)

k. Setback from water/wetlands

<u>29245</u>	SF	x	0.25	=	<u>7311.25</u>	SF
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(Landscape to be provided in setback area)

LANDSCAPING CONVERSION CHART

Large tree = 200 square feet of mitigation
 Small tree = 100 square feet " " "
 Large shrub = 75 square feet " " "
 Small shrub = 50 square feet " " "
 Herbaceous plants = 2 square feet of mitigation per plant

III. Afforestation (Landscaping) Requirements Outside the 100-foot Buffer

1. All Development within the 1000' Critical Area (but outside the 100' buffer) every development or redevelopment must be planted in woody vegetation in an amount of 15% of the site area.

a. Total landscaping required: Parcel Size 29391 SF x 0.15 = 4408.65 SF
(This SF area must be plantable and planted with the following number of plants)

b. Landscaping provided (use Landscaping Conversion Chart)

	Number		Value	Total
Large trees	<u> </u>	x	200 SF	<u> </u> 0 SF
Small trees	<u> 48</u>	x	100 SF	<u> </u> 4800 SF
Large shrubs	<u> 88</u>	x	75 SF	<u> </u> 6600 SF
Small shrubs	<u> 0</u>	x	50 SF	<u> </u> 0 SF
Total value of Landscaping provided:				<u> </u> 11400 SF

IV. Stormwater management and the 10% rule - Pollutant reduction requirement for all disturbances over 250 SF in the 1000 foot Critical Area.

1. Single family development subject to stormwater management requirements that use the "Standard Stormwater Management Plan" automatically meet the 10% Rule.

2. Single family development not subject to stormwater management regulations can meet the intent of the 10% Rule by submitting a Water Quality Management Plan.

3. Commercial and multi-family development must submit the 10% Rule Worksheet.

V. Habitat Protection (skip if it is less than 40,000 SF)

For lots of 40,000 square feet or greater, the applicant must consult with the Maryland Department of Natural Resources to determine the existence of any Habitat Protection Areas that may be affected by the proposed development.

VI. Landscape Plan

ALL VEGETATION SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 98, ARTICLE II, LANDSCAPING, OF THE CODE.

VII. Site plan requirements

Critical Area site plan is required and it must include the following information:

1. Topography
2. Mean high water line
3. Delineation of private and State tidal wetlands
4. Delineation of non-tidal wetlands
5. Soil Types
6. Tree cover (show location of individual trees or a tree line defining wooded areas).
7. Landscaping plan with required plants and plantable area
8. 100-foot Buffer and applicable setback
9. Habitat protection areas (if applicable)
10. All impervious surfaces labeled as existing or proposed.
11. All proposed clearing, grading and disturbance.
11. Computation of total existing and proposed impervious surfaces, existing forest cover and proposed clearing and total area of disturbance.
12. Proposed landscaping/mitigation plan.

Reviewed by: J. Slavic Smith Zoning Administrator (Date 6/19/07)
Jan P Blazer Environmental Engineer (Date 6/20/07)

Ocean Isle - Area 5

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	19,503.0	7,081.0
Driveways	0.0	0.0
Sidewalks/conc	204.0	1,954.0
Building	4,297.0	11,551.0
Decks	0.0	0.0
Pools/Ponds	0.0	0.0
Other	0.0	0.0
Total Impervious	24,004.0	20,586.0
Landscape Area	5,387.0	4,520.0
Pervious Paver	0.0	3,120.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	5,387.0	7,640.0
Total Area	29,391.0	29,391.0
Percent Impervious	81.7%	70.0%
Percent Landscaped	18.3%	15.4%
Percent Pervious	18.3%	26.0%
Rv	0.8	0.7
WQv	1,922.8	1,666.4
Storage (20% Exg + 100% New)	384.6	-256.4
Total Required Storage	128.2	
Area of Pavers (sf)	3,120.0	
Depth required @ 40% Void (ft)	0.1	
Depth required @ 40% Void (in)	1.2	
Storage Provided (assuming 1.5' stone @ 40%)	1872	
SF of impervious area supported for quality control	22464 76.43%	

Project: Ocean Isle - Area 5
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 29391 sf 0.675 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	19503	0.4477	7081	0.1626
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	204	0.0047	1954	0.0449
Rooftops	4297	0.0986	11551	0.2652
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	0	0.0000
Other	0	0.0000	0	0.0000
Impervious Surface Area	24004	0.5511	20586	0.4726

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area	
	sf	acres
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
Disconnected Rooftop Impervious Area	0	0.0000

4) Adjusted Proposed Impervious Surface Area

=	Proposed Impervious Surface Area	-	Disconnected Impervious Area
=	Step 2b	-	Step 3
=	0.4726	-	0.0000
=	0.4726		acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, I_{pre} = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 0.5511 / 0.6747
 = 81.6713 %

Proposed Imperviousness, I_{post} = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 0.4726 / 0.6747
 = 70.0418 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (L_{pre})

A. Redevelopment

L_{pre} = R_v C A 8.16
 R_v = 0.05 + 0.009 (I_{pre})
 = 0.7850
 L_{pre} = 1.297 lbs/year of total phosphorus

Where:

- L_{pre} = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
 R_v = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
 I_{pre} = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
 C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
 A = Area if site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

B. New Development

$$\begin{aligned} L_{pre} &= 0.5 A \\ L_{pre} &= 0.000 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \\ 0.5 &= \text{Annual total phosphorous load from undeveloped Lands} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \end{aligned}$$

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

$$\begin{aligned} L_{post} &= Rv C A 8.16 \\ Rv &= 0.05 + 0.009 (l_{post}) \\ &= 0.6804 \\ L_{pre} &= 1.124 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ Rv &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff} \\ l_{post} &= \text{Post-development (proposed) site imperviousness (ie } l=75 \text{ if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)} \\ &= 0.3 \text{ mg/l} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ 8.16 &= \text{includes regional constants and conversion factors} \end{aligned}$$

Step 4: Calculate Pollutant Removal Requirement

$$\begin{aligned} RR &= L_{post} - 0.9 L_{pre} \\ &= 1.124 - 0.9 \cdot 1.297 \\ &= -0.0432 \end{aligned}$$

Where:

$$\begin{aligned} RR &= \text{pollutant removal requirement (lbs/yr)} \\ L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \end{aligned}$$

Step 5: Identify Feasible BMP (s)

Select BMP options using the screening matrices provided in the chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each Option

BMP	Lpost	BMPre	%DA	Efficiency	=	LR
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
	1.124				=	0.0000 lbs/yr
				Load Removed (total)	=	0.0000
				Pollutant removal Requirement (from Step 4)	=	-0.0432

Where:

Load Removed = Annual total phosphorous load removed by the proposed BMP (lbs/year)

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)

BMPre = BMP removal Efficiency for total phosphorus, Table 4.8 (%)

RR = pollutant removal requirement (lbs/yr)

Has the RR (pollutant removal requirement) been met? Yes

Pollutant removal requirement not served 0.0000 lbs

Fee In Lieu \$0.00

Ocean Isle - Area Total

	Pre-Development	Post-Development
Roads	0.0	0.0
Parking Lots	135,242.0	59,569.0
Driveways	0.0	0.0
Sidewalks/conc	2,625.0	17,043.0
Building	30,335.0	79,202.0
Decks	0.0	0.0
Pools/Ponds	0.0	600.0
Other	0.0	0.0
Total Impervious	168,202.0	156,414.0
Landscape Area	36,378.0	39,489.0
Pervious Paver	0.0	7,818.0
Pervious Wooden Decks	0.0	0.0
Total Pervious	36,378.0	47,307.0
Total Area	204,580.0	204,580.0
Percent Impervious	82.2%	76.5%
Percent Landscaped	17.8%	19.3%
Percent Pervious	17.8%	23.1%
Rv	0.8	0.7
WQv	13,467.6	12,583.5
Storage (20% Exg + 100% New)	2,693.5	-884.1
Total Required Storage	1,809.4	
Area of Pavers (sf)	11,658.0	
Depth required @ 40% Void (ft)	0.4	
Depth required @ 40% Void (in)	4.7	
Storage Provided (assuming 1.5' stone @ 40%)	6994.8	
SF of impervious area supported for quality control	83937.6 41.03%	

Project: Ocean Isle - Area Total
 Coastal Highway and 67th Street
 Ocean City, Maryland

Worksheet A: Standard Application Process

Calculate Pollutant Removal Requirements

Step 1: Calculate Existing and Proposed Site Imperviousness

1) Site Area within the Critical Area IDA, A= 204580 sf 4.697 Ac

2) Site Impervious Surface Area, Existing and Proposed, (See table 4.1 for details)

	(a) Existing		(b) Proposed	
	sf	acres	sf	acres
Roads	0	0.0000	0	0.0000
Parking Lots	135242	3.1047	59569	1.3675
Driveways	0	0.0000	0	0.0000
Sidewalks/Paths	2625	0.0603	17043	0.3913
Rooftops	30335	0.6964	79202	1.8182
Decks	0	0.0000	0	0.0000
Swimming Pools/Ponds	0	0.0000	600	0.0138
Other	0	0.0000	0	0.0000
Impervious Surface Area	168202	3.8614	156414	3.5908

3) Non-Structural BMP's Applied to the Site

Non-Structural BMP	Disconnected Impervious Area	
	sf	acres
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
	0	0.0000
Disconnected Rooftop Impervious Area	0	0.0000

4) Adjusted Proposed Impervious Surface Area

= Proposed Impervious Surface Area - Disconnected Impervious Area
 = Step 2b - Step 3
 = 3.5908 - 0.0000
 = 3.5908 acres

Note: All acreage used in this worksheet refers to areas within the Ida Critical Area Only

5) Imperviousness (I)

Existing Imperviousness, I_{pre} = Impervious Surface Area/Site Area
 = Step 2a / Step 1
 = 3.8614 / 4.6965
 = 82.2182 %

Proposed Imperviousness, I_{post} = Impervious Surface Area/Site Area
 = Step 4 / Step 1
 = 3.5908 / 4.6965
 = 76.4562 %

C. Define Development Category

- 1) Redevelopment: Existing Imperviousness greater than 15% (Go to Step 2A)
- 2) New Development: Existing Imperviousness Less than 15% (Go to Step 2B)
- 3) Single Lot Residential Single Lot being developed or improved; single family residential; and more than 250 sf being disturbed (Go to Section 5, Residential approach, for detailed criteria and requirements.)

Step 2: Calculate the Predevelopment Load (L_{pre})

A. Redevelopment

L_{pre} = Rv C A 8.16
 Rv = 0.05 + 0.009 (I_{pre})
 = 0.7900
 L_{pre} = 9.082 lbs/year of total phosphorus

Where:

- L_{pre} = Average annual load of total phosphorous exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff
- I_{pre} = Predevelopment (existing) site imperviousness (ie I=75 if site is 75% impervious)
- C = Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)
 = 0.3 mg/l
- A = Area of site within the Critical Area IDA (acres)
 8.16 = includes regional constants and conversion factors

B. New Development

$$\begin{aligned} L_{pre} &= 0.5 A \\ L_{pre} &= 0.000 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \\ 0.5 &= \text{Annual total phosphorous load from undeveloped Lands} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \end{aligned}$$

Step 3: Calculate the Post-development Load (Lpost)

A. Redevelopment

$$\begin{aligned} L_{post} &= R_v C A 8.16 \\ R_v &= 0.05 + 0.009 (I_{post}) \\ &= 0.7381 \\ L_{pre} &= 8.486 \text{ lbs/year of total phosphorus} \end{aligned}$$

Where:

$$\begin{aligned} L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ R_v &= \text{Runoff coefficient, which expresses the fraction of rainfall which is converted to runoff} \\ I_{post} &= \text{Post-development (proposed) site imperviousness (ie } I=75 \text{ if site is 75\% impervious)} \\ C &= \text{Flow weighted mean concentration of pollutant (total phosphorous) in urban runoff (mg/l)} \\ &= 0.3 \text{ mg/l} \\ A &= \text{Area if site within the Critical Area IDA (acres)} \\ 8.16 &= \text{includes regional constants and conversion factors} \end{aligned}$$

Step 4: Calculate Pollutant Removal Requirement

$$\begin{aligned} RR &= L_{post} - 0.9 L_{pre} \\ &= 8.486 - 0.9 \cdot 9.082 \\ &= 0.3120 \end{aligned}$$

Where:

$$\begin{aligned} RR &= \text{pollutant removal requirement (lbs/yr)} \\ L_{post} &= \text{Average annual load of total phosphorous exported from the post development site (lbs/year)} \\ L_{pre} &= \text{Average annual load of total phosphorous exported from the site prior to development (lbs/year)} \end{aligned}$$

Step 5: Identify Feasible BMP (s)

Select BMP options using the screening matrices provided in the chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each Option

BMP	Lpost	BMPre	%DA	Efficiency	=	LR
Pavers	8.486	65%	41%	50%	=	1.1316 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
	8.486				=	0.0000 lbs/yr
					=	1.1316
					=	0.3120

Where:

Load Removed = Annual total phosphorous load removed by the proposed BMP (lbs/year)

Lpost = Average annual load of total phosphorous exported from the post development site (lbs/year)

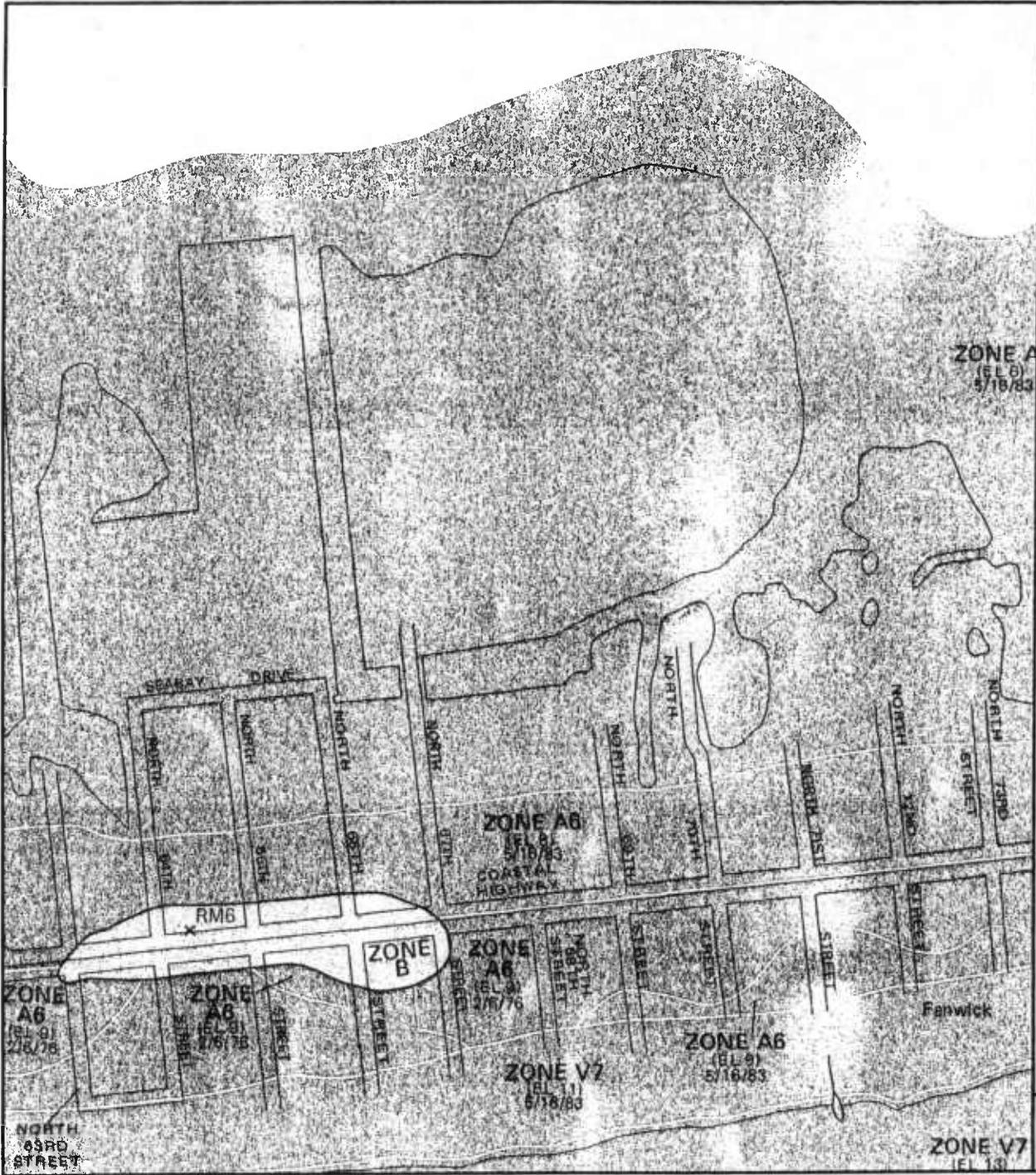
BMPre = BMP removal Efficiency for total phosphorus, Table 4.8 (%)

RR = pollutant removal requirement (lbs/yr)

Has the RR (pollutant removal requirement) been met? Yes

Pollutant removal requirement not served 0.0000 lbs

Fee In Lieu \$0.00



APPROXIMATE SCALE



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
OCEAN CITY,
MARYLAND
WORCESTER COUNTY

PANEL 2 OF 3

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
245207 0002 F

MAP REVISED:
MARCH 4, 1986



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

SOIL SURVEY OF WORCESTER COUNTY, MARYLAND

Ocean Isle



0 30 60 120 Meters

0 50 100 200 300 400 Feet

SOIL SURVEY OF WORCESTER COUNTY, MARYLAND

Ocean Isle

MAP LEGEND

-  Soil Map Units
-  Cities
-  Detailed Counties
-  Detailed States
-  Interstate Highways
-  Roads
-  Rails
-  Water
-  Hydrography
-  Oceans
-  Escarpment, bedrock
-  Escarpment, non-bedrock
-  Gully
-  Levee
-  Slope
-  Blowout
-  Borrow Pit
-  Clay Spot
-  Depression, closed
-  Eroded Spot
-  Gravel Pit
-  Gravelly Spot
-  Gully
-  Lava Flow
-  Landfill
-  Marsh or Swamp
-  Miscellaneous Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Slide or Slip
-  Sinkhole
-  Sodic Spot
-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Perennial Water
-  Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 18

Soil Survey Area: Worcester County, Maryland
 Spatial Version of Data: 3
 Soil Map Compilation Scale: 1:12000

Map comprised of aerial images photographed on these dates:
 4/12/1989; 3/24/1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend Summary

Worcester County, Maryland

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AcB	Acquango sand, 2 to 5 percent slopes	4.8	9.3
Pu	Purnell peat	1.0	2.0
Uc	Urban land-Acquango complex	9.0	17.3
Um	Urban land-Askecksy complex	18.5	35.7
Un	Urban land-Brockatonorton complex	13.3	25.7
Uz	Udorthents	3.4	6.6
W	Water	1.5	3.0



Robert L. Ehrlich, Jr., Governor

Michael S. Steele, Lt. Governor

C. Ronald Franks, Secretary

May 31, 2005

Mr. Thomas D. Plotts
AES ArchiTech
110 West Church Street
Salisbury, MD 21801

RE: Environmental Review for Holland Family, LLC Property, Between 66th and 68th Streets and Coastal Highway, Ocean City, Worcester County, Maryland.

Dear Mr. Plotts:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. Please note however that the utilization of state funds, the need to obtain a state-authorized permit, or changes to the plan might warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. Please contact us again for further coordination if this project falls into one of those categories.

We would also like to point out that our initial evaluation of this project should not be interpreted as meaning that it is not possible for rare, threatened or endangered species to be present. Certain species could be present without documentation because adequate surveys may not have been conducted in the past. Although we are not requiring any surveys, we would like to bring to your attention that Wildlife and Heritage Service's Natural Heritage database records do indicate that there are several occurrences of state-listed endangered Beach Plum (*Prunus maritima*) known to occur within the vicinity of the project site. If the appropriate habitat is present for this species it could potentially occur on the project site itself. Since the population of this native plant has declined historically we would encourage efforts to help conserve it across the state. Feel free to contact us if you would like technical assistance regarding the conservation of this important species.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

A handwritten signature in dark ink, appearing to read "Lori A. Byrne". The signature is fluid and cursive.

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2005.0371.wo
Cc: S.A. Smith, DNR



**HARDIN
KIGHT
ASSOCIATES,
INC.**

TRANSMITTAL

Job No.: **04529**

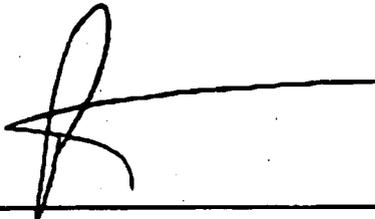
Date: February 2, 2004

TO: **WILES MENSCH CORP
ATLANTIC GROUP
10038 Old Ocean City Road
Berlin, Maryland 21811**

Attention:

Project: **HOLLAND ISLAND GROUNDWATER STUDY
OCEAN CITY, MARYLAND**

Remarks: **1 Copy Auger Probe logs with water depth & location sketch.**

Signed By _____


Hardin-Kight Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Office: 410-352-5001
 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-1**
 Job #: **04529**

Sampler

Datum -
 Surf. Elev.
 Date Started **1/23/04**

Foreman -
 Inspector **RC/KB**
 Date Finished **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample
				Notes
	Orange-brown, dry to moist, fine to coarse SAND little to trace silt, clay (SM/SC) (FILL)	1.5	1.0	Water @ 4.5' 2" asphalt
	Light grey to tan, moist to wet, fine to coarse SAND, trace silt (SP/SM)	5.0	2.0 3.0 4.0	
	Bottom of Auger Probe - 5.0'		5.0 6.0 7.0 8.0	

Sampler Type

- DS - DRIVEN SPLT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION _____ FT
- AFTER 15 MIN _____ FT
- AFTER 24 HRS _____ FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

Margin-Kight Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-2**
 Job #: **04529**

Sampler

Datum
 Surf. Elev.
 Date Started **1/23/04**

Foreman
 Inspector **RC/KB**
 Date Finished **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Brown, moist, fine to medium SAND, little to some silt, trace fine to medium gravel, trace organics (SM) (FILL)	1.0	1.0	Water encountered @ 4.0'
	Grey and tan, moist, fine to medium SAND, little silt (SM) (FILL)	2.0	2.0	
	Yellow, tan, moist to wet, fine to coarse SAND, trace silt (SP)	5.0	3.0 4.0 5.0	
	Bottom of Auger Probe - 5.0'		6.0 7.0 8.0	

Sampler Type

- DS - DRIVEN SPUD POON
- PT - PRESSED SHELVY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 3.7 FT
- AFTER NRS _____ FT
- AFTER 24 NRS _____ FT

Boring Method

- HBA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30". COUNT MADE AT 6" INTERVALS

Hardin-Kight Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

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 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-3**
 Job #: **04529**

Sampler

Datum
 Sur. Elev.
 Date Started **1/23/04**

Foreman
 Inspector **RC/KB**
 Date Finished **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample
				Notes
	Brown, moist, fine to medium SAND, little to some silt (SM) (FILL)			2" top soil
		2.0	1.0	Water encountered @ 3.0'
	Grey, moist to wet, fine to medium SAND, trace silt, trace roots (SP/SM) (FILL)	2.5	2.0	
	Brown, wet PEAT and fine to medium sand (PT) (FILL)	3.0	3.0	
	Grey, wet, fine to medium SAND, little to trace silt (SP/SM) (FILL)	4.0	4.0	
	Brown, wet, PEAT (PT)	4.5	4.5	
	Grey, very wet, fine to medium SAND little silt (SM)	5.0	5.0	
	Bottom of Auger Probe - 5.0'		6.0	
			7.0	
			8.0	

Sampler Type

- DS - DRIVEN SPLIT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 4.0 FT
- AFTER 72 HRS 2.5 FT
- AFTER 24 HRS FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

Hardin-Kight Associates, Inc.
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 Bishopville, Maryland 21813

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 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-4**
 Job #: **04529**

Sampler

Datum
 Surf. Elev.
 Date Started **1/23/04**

Foreman
 Inspector **RC/KB**
 Date Finished **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Orange, moist, fine to medium SAND little to some silt, trace gravel at surface (SM) (FILL)	2.0	1.0 2.0	Water encountered @ 2.7'
	Grey, moist to wet, fine to medium SAND, trace to little silt, trace organics (SM) (POSSIBLE FILL)	4.0	3.0 4.0	
	Tan, wet, fine to medium gravel and fine to coarse SAND (SP)	5.0	5.0	
	Bottom of auger probe - 5.0'		6.0 7.0 8.0	

Sampler Type

- OS - DRIVEN SPLIT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOEY

Ground Water Depth

- AT COMPLETION 2.5 FT
- AFTER 72 HRS 2.8 FT
- AFTER 24 HRS FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

Hardin-Kight Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

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 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-5**
 Job #: **04528**

Sampler

Date: -
 Surf. Elev. -
 Date Started: **1/23/04**

Foreman: -
 Inspector: **RC/KB**
 Date Finished: **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Brown, grey, moist, fine to medium SAND, little to some silt, trace clay, trace to little fine to medium stone (SM) (FILL)	2.0	1.0 2.0	1" topsoil Water encountered @ 3.3'
	Grey, moist to wet, fine to medium SAND, trace to little silt, trace clay trace peat (SM) (FILL)	3.5	3.0	
	Brown, wet, PEAT (PT)	5.0	4.0 5.0	
	Bottom of Auger Probe - 5.0'		6.0 7.0 8.0	

Sampler Type

- DS - DRIVEN SPLUT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 3.8 FT
- AFTER 1 HRS FT
- AFTER 24 HRS FT

Boring Method

- MSA - MOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CABING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

Hartill-Right Associates, Inc.
 12515 Caterpillar Lane
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 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-6**
 Job #: **04529**

Sampler

Datum
 Surf. Elev.
 Date Started **1/23/04**

Foreman
 Inspector **RC/KB**
 Date Finished **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Orange, brown, moist, fine to medium SAND, little silt (SM) (FILL)		1.0	2" topsoil Water encountered @ 4.5'
		2.0	2.0	
	Tan, moist, fine to medium SAND trace of silt (SP) (FILL)		3.0	
		3.5	4.0	
	Black-brown, wet, fine to medium SAND, little organics (SM)	4.0	4.0	
	Grey, wet, fine to medium SAND, trace silt (SP/SM)		5.0	
	Bottom of Auger Probe - 5.0'		5.0	
			6.0	
			7.0	
			8.0	

Sampler Type

- DS - DRIVEN SPLT SPOON
- FT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

AT COMPLETION 4.5 FT
 AFTER HRS _____ FT
 AFTER 24 HRS _____ FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

Radon-Right Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-7**
 Job #: **04529**

Sampler

Datum: -
 Surf. Elev.: -
 Date Started: **1/23/04**

Foreman: -
 Inspector: **RC/KB**
 Date Finished: **1/23/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Tan, moist, fine to medium SAND trace silt (SP/SM) (FILL)		1.0 2.0 3.0	3" topsoil Water encountered @ 3.0'
	PEAT (PT)		4.0	
	Brown, grey, fine to medium SAND little to trace silt (SM)		5.0	
	Bottom of Auger Probe - 5.0'		6.0 7.0 8.0	

Sampler Type

- DB - DRIVEN SPLIT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 3.5 FT
- AFTER 72 HRS 2.5 FT
- AFTER 24 HRS FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

HARDING-NIGHT ASSOCIATES, INC.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Office: 410-352-3001
 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-8**
 Job #: **04529**

Sampler

Datum
 Surf. Elev.
 Date Started **1/27/04**

Foreman
 Inspector **RC/KB**
 Date Finished **1/27/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Brown, grey, moist, fine to medium SAND, some silt, some fine to medium gravel (SM) (FILL)	1.5	1.0	6" top soil / peat Sample frog planter elev +.5' Water encountered @ 5.0'
	Tan, moist, fine to medium SAND, little to trace silt (SP/SM) (FILL)	4.5	2.0	
	Grey, wet, fine to medium SAND, little silt, trace organics/peat (SM) (POSSIBLE FILL)	5.0	3.0	
	Bottom of Auger Probe - 5.0		4.0	
			5.0	
			6.0	
			7.0	
			8.0	

Sampler Type

- DS - DRIVEN SPLIT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 5.0 FT
- AFTER HRS _____ FT
- AFTER 24 HRS _____ FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

hkaoc Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-9**
 Job #: **04529**

Sampler

Datum: -
 Surf. Elev.: -
 Date Started: **1/27/04**

Foreman: -
 Inspector: **KB**
 Date Finished: **1/27/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample
				Notes
	Brown, grey, moist, fine to medium silty SAND, some fine to medium stone (SM) (FILL)		1.0 2.0	Water encountered @ 4.0'
	Tan, grey, moist to wet, fine to medium SAND, little silt trace peat, trace clay (SM) (FILL)	2.0 4.0	3.0 4.0	
	PEAT (PT)	5.0	5.0	
	Grey, wet, fine to medium SAND, little silt (SM)	5.2	6.0	
	Bottom of Auger probe - 5.2'		7.0 8.0	

Sampler Type

- OS - DRIVEN SPLIT BROOM
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- O - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION #.8 ___ FT
- AFTER 1 HR. ___ FT
- AFTER 24 HRS. ___ FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

HAROLD-NIGHT ASSOCIATES, INC.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Office: 410-352-3001
 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-10**
 Job #: **04529**

Sampler

Datum: -
 Surf. Elev.: -
 Date Started: **1/27/04**

Foreman: -
 Inspector: **KB**
 Date Finished: **1/27/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Oyster shells	.3		Water encountered @ 4.5'
	Brown, grey, moist, fine to medium silty SAND, some fine to medium stone (SM)	2.0	1.0	
	Tan, grey, moist to wet, fine to medium SAND, little silt, trace peat (SM) (FILL)	4.5	2.0	
	PEAT (PT)	5.0	3.0	
	Bottom of Auger Probe - 5.0'		4.0	
			5.0	
			6.0	
			7.0	
			8.0	

Sampler Type

- DS - DRIVEN SPLIT SPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

Ground Water Depth

- AT COMPLETION 5.0 FT
- AFTER 1 HR FT
- AFTER 24 HRS FT

Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" O.D. SAMPLER WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS

Harbin-Kight Associates, Inc.
 12515 Caterpillar Lane
 Bishopville, Maryland 21813

Office: 410-352-5007
 Fax: 410-352-3228
 Email: hkaoc@aol.com

Record of Soil Exploration

Contracted With: **WILES MENSCH CORPORATION - ATLANTIC GROUP**
 Projects Name: **HOLLAND ISLAND GROUNDWATER STUDY**
 Location: **67TH ST, OCEAN CITY, MARYLAND**

Auger Probe: **AP-11**
 Job #: **04529**

Sampler

Datum
 Surf. Elev.
 Date Started **1/27/04**

Foreman
 Inspector **KB**
 Date Finished **1/27/04**

Elev.	Soil Description <small>Color, Moisture, Density Plasticity, Size Proportions</small>	Strata Depth	Depth Scale	Boring & Sample Notes
	Grey, brown, moist, fine, silty SAND and fine to medium stone (SM/GM) (FILL)	1.5	1.0	Water encountered @ 4.0'
	Tan, grey, moist to wet SAND, little to trace silt (SP/SM) (FILL)	4.0	2.0	
	PEAT (PT)	5.0	3.0	
	Grey, wet, fine to medium SAND, some silt (SM)	5.2	4.0	
	Bottom of Auger Probe - 5.2'		5.0	
			6.0	
			7.0	
			8.0	

Sampler Type

- DS - DRIVEN SPLT BPOON
- PT - PRESSED SHELBY TUBE
- CA - CONTINUOUS FLIGHT AUGER
- RC - ROCK CORE

Sample Conditions

- D - DISINTEGRATED
- I - INTACT
- U - UNDISTURBED
- L - LOST

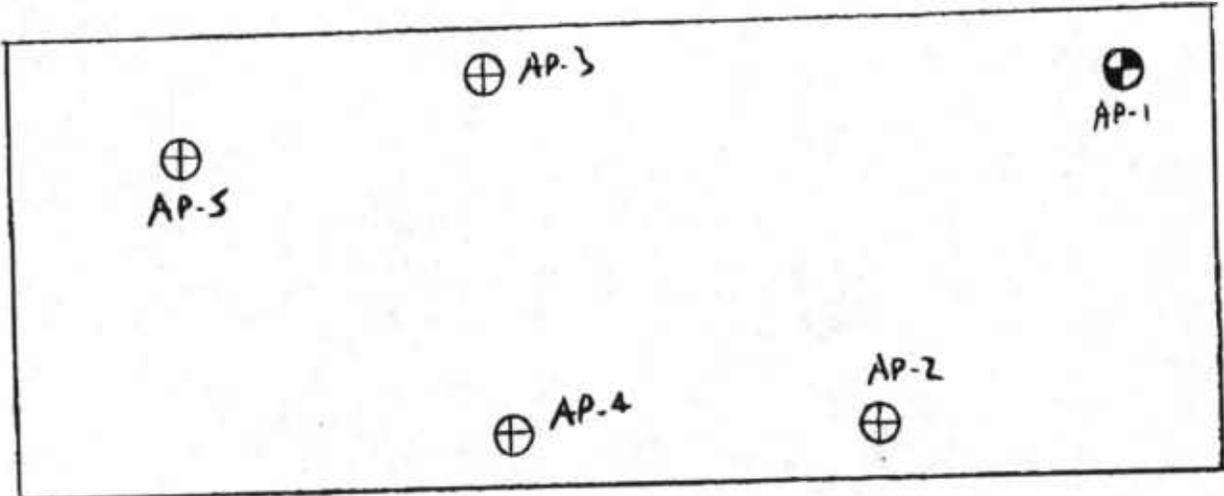
Ground Water Depth

- AT COMPLETION _B.D.____ FT
- AFTER HRS _____ FT
- AFTER 24 HRS _____ FT

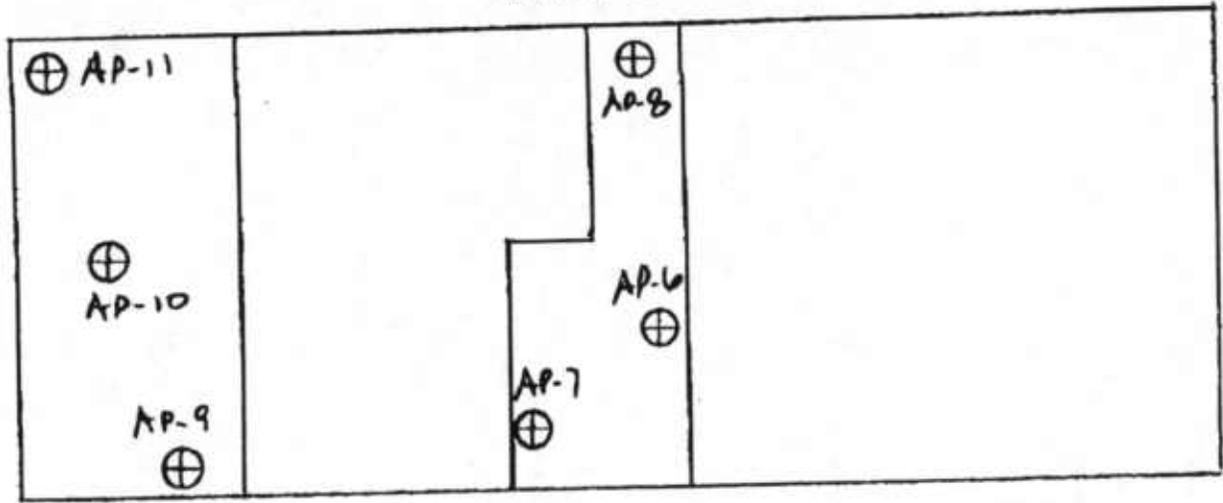
Boring Method

- HSA - HOLLOW STEM AUGERS
- CFA - CONTINUOUS FLIGHT AUGERS
- DC - DRIVEN CASING
- MD - MUD DRILLING

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS



67TH STREET



COSTA HIGHWAY

PROJECT: 04529	HOLLAND ISLAND GROUNDWATER STUDY	DATE: 2-2-04
SCALE: N.T.S.		DRAWN BY: [Signature]
DRAWING:	FILE:	CHECKED BY:
		HARDIN-KIGHT ASSOCIATES, INC. CONSULTING ENGINEERS



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

REPLY TO
ATTENTION OF

Operations Division

JUN 28 2002

Mr. Jay Bergey, Trustee
Holland Family LLC
c/o Mr. Edward Launay
Environmental Resources, Inc.
One Plaza East, Suite 319
106 East Main Street
Salisbury, Maryland 21801

Dear Mr. Bergey:

This is in reference to your application CENAB-OP-RMS(HOLLAND FAMILY LLC/JD)02-63910-1 dated April 26, 2002, which we received on May 6, 2002, requesting a jurisdictional determination (JD) and verification of the delineation of Waters of the United States, including jurisdictional wetlands, located on a parcel of property adjacent to Assawoman Bay, between 67th and 68th Streets, Ocean City, Worcester County, Maryland.

It is my understanding that Mr. Woody Francis from this office met with Mr. Edward Launay and Mr. Larry Whitlock on-site during a visit to the property on March 27, 2002, and that he verbally confirmed that the delineation of Waters of the United States, including jurisdictional wetlands, as identified on site was accurate, for purposes of Corps jurisdiction pursuant to Section 404 of the Clean Water Act. Accordingly, those areas indicated as wetlands, on plans dated March 27, 2002, copy enclosed, are considered to be Waters of the United States, and are therefore, regulated by this office pursuant to Section 404 of the Clean Water Act. Enclosed is a document that outlines the basis of our determination of jurisdiction over these areas. In addition, the wetlands and waters of Assawoman Bay including the canals and lagoons adjacent to the property are also subject to Corps regulatory jurisdiction pursuant to both Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act.

Please note that on March 28, 2000, an administrative appeals process was established for JDs. Enclosed is a JD appeals form that can be used if you believe the JD you received warrants further review. You may accept this JD, submit new information seeking reconsideration of the JD or appeal the JD. If you accept the JD, you do not need to notify the Corps. A JD will be reconsidered if you submit new information or data to the Baltimore District Engineer (DE) within 60 days from the date of this letter. If you decide to appeal the approved JD, please submit the attached form within 60 days from the date of this letter to our Regulatory Appeals Review Officer at the following address:

James W. Haggerty
Regulatory Appeals Review Officer
North Atlantic Division, US Army Corps of Engineers
Fort Hamilton Military Community
General Lee Avenue, Bldg 301
Brooklyn, NY 11252-6700

If we do not hear from you within 60 days, we will consider this JD accepted by you. This approved JD is valid for five years from the date of issuance unless new information warrants a revision before the expiration date.

Please be advised that various developmental activities within jurisdictional streams and wetlands, such as filling, mechanical landclearing, and construction of some piling supported structures, are regulated by the Corps. Wetlands under the jurisdiction of the Maryland Department of the Environment may also be located on the property. You may wish to contact Mr. Steve Dawson of MDE's Salisbury office at 410-543-6703 for information regarding MDE's jurisdiction and any permitting requirements that may be associated with any future developmental proposal. We are providing a copy of our jurisdictional determination to Mr. Dawson for his information. We are also providing a copy of our jurisdictional determination to the Worcester County Planning and Zoning office, and the Town of Ocean City for their records.

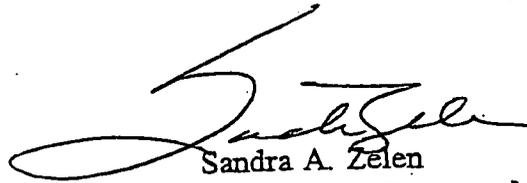
Please include the file number referenced in the first paragraph of this letter in any future correspondence or permit applications regarding this property.

You are reminded that any grading or filling of Waters of the United States, including jurisdictional wetlands, is subject to Department of the Army authorization. State and local authorizations may also be required to conduct activities in the locations. In addition, the Interstate Land Sales Full Disclosure Act may require that prospective buyers be made aware, by the seller, of the Federal authority over any Waters of the United States, including jurisdictional wetlands, being purchased.

This delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA (United States Department of Agriculture) program participants, or anticipate participation in USDA programs, you should request a certified wetland delineation from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any questions concerning this matter, please call Mr. Woody Francis, of this office, at (410) 962-5689.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandra A. Zelen". The signature is fluid and cursive, with a large initial "S" and "Z".

Sandra A. Zelen
Enforcement Program Manager

Enclosures

BASIS OF JURISDICTIONAL DETERMINATION

Applicant: Holland Family LLC
File No.: 200263910

Date: June 18, 2002

1. The jurisdictional determination outlined in the attached letter was based on the following:

A. There are no Waters of the United States present at the site.
 Does not meet any of the items listed below

B. The Waters of the United States present at the site are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce. This includes waters which are subject to the ebb and flow of the tide.

C. The Waters of the United States at the site are interstate waters, including interstate wetlands.

D. The Waters of the United States at the site are other waters such as intrastate lakes, rivers, streams (including intermittent streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds containing a nexus to interstate commerce).

The nexus to interstate commerce consists of:

- recreational or other purposes
- fish or shellfish
- industrial or commercial purpose
- habitat for migratory birds or game birds or wildlife
- commercial saleable timber products
- sand, gravel, oil, gas or other commodities of commerce
- other _____

E. The Waters of the United States present at the site contain impoundments of waters otherwise defined as Waters of the United States

F. The Waters of the United States present at the site are part of a tributary system to waters identified in B-E above.

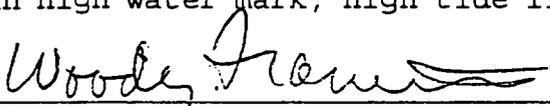
G. The Waters of the United States present at the site are part of the territorial seas.

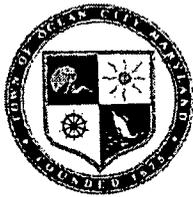
H. There are wetlands present at the site which are adjacent to waters identified in B-G above.

2. The lateral extent of the Waters of the United States, including wetlands at the site identified on the accompanying map was based on one or more of the following:

A. The presence of wetlands has been determined by the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual and guidance supporting the manual.

B. Ordinary high water mark, mean high water mark, high tide line, mean high tide line.


Project Manager



TOWN OF
OCEAN CITY

The White Marlin Capital of the World

Reply To: Board of Port Wardens
POB 158
Ocean City, Maryland 21843
Phone: 410-289-8855
Fax: 410-289-8705

MAYOR & CITY COUNCIL
P.O. BOX 158
OCEAN CITY,
MARYLAND 21843-0158

www.town.ocean-city.md.us

MAYOR
JAMES N. MATHIAS, JR.

CITY COUNCIL MEMBERS

RICHARD W. MEEHAN
President
JAMES S. HALL
Secretary
JOSEPH T. HALL, II
JAMES W. HANCOCK, III
NANCY L. HOWARD
LLOYD MARTIN
JOSEPH M. MITRECIC

June 14, 2006

VAN METRE AT OCEAN ISLE LLC
5252 LYN GATE CT
BURKE VA 22015-1688

Dear Property Owner:

Re: 06-0000076 – 122-66th Street & 6700 thru 6708 Seabay Dr.
6669 -6 -117 - -0 -0114-079578

DENNIS W. DARE
City Manager

CAROL L. JACOBS
City Clerk

On June 8, 2006, the Board of Port Wardens met and approved your request by a vote of 6-0 for work at the above location. The proposed request is described as follows: **for work at an existing dead-end lagoon north side of 67th Street. Part of this permit has been previously approved (see board of Port Wardens Permit #PW03-154), building permit has never been pulled. Part of this request is to delete previous permitted access walk at center of pier and add 2 new 6' wide pedestrian access points at each end to connect with residential development walkway system; also existing dead end lagoon south side of 67th Street maintenance repair and or replacement of approximately 240 L.F. of existing bulkhead with vinyl sheeting maximum 18" channelward encroachment. Void area between replacement bulkhead and old bulkhead (approximately 360 sq. ft.) to be backfilled with 53+/- cubic yards of clean sand; installation of a 12' wide wood walkway landward of bulkhead approximately 250' long; installation of 8 – 3'x15' wood finger piers (replacements of existing), and Installation of 22 free standing mooring piles. Please find any/all provisions listed below:**

PROVISIONS:

1. The issuance of this permit does not and is not intended to confer any property rights or interests.
2. Authorization from the U.S. Corps of Engineers and Maryland Department of Natural Resources must be obtained before proposed work may begin.
3. **SPECIAL PROVISIONS:**
Staff finds that this application meets or exceeds minimum BOPW specifications using:
 - a. 0'-3' pier standards.
 - b. Engineered sealed drawings must be submitted prior to the issuance of a building permit due to the use of vinyl material.
 - c. The existing 7 piers may be replaced. No additional piers may be added.
4. A Building permit shall be obtained from the Building Official of the Town of Ocean City prior to the start of any construction.
5. The building inspection office for the Town of Ocean City must be notified for inspections at the following three (3) stages:

Ocean City, MD



VAN METRE AT OCEAN ISLE LLC

June 14, 2006

Page 2

- a. the beginning of proposed construction
- b. prior to any backfilling, and,
- c. the completion of the construction

It is the finding of the Board that the proposed work will be of economic benefit will not unduly affect marine life and will improve the recreational potential of the city.

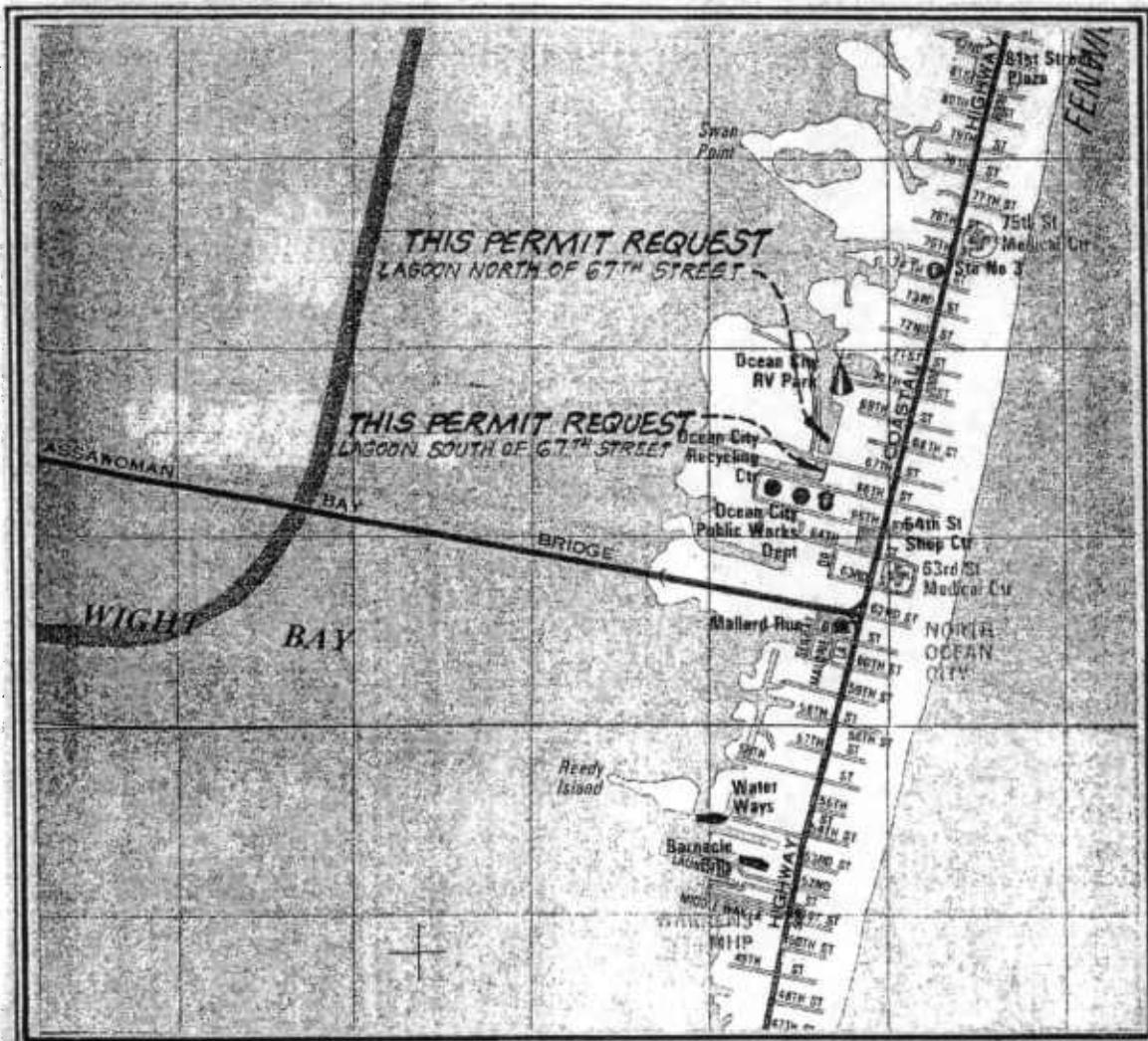
Sincerely,

A handwritten signature in black ink, appearing to read "B.T. Trumpower" followed by a slanted line, possibly indicating a signature or initials.

B. T. Trumpower,
Chairman

/ral

cc: Dennis W. Dare, City Manager
Lawrence T. Whitlock Associates, Inc. POB 110, Berlin, MD 21811
Joseph E. Moore, Esq., 3509 Coastal Highway, Ocean City, MD 21842



**THIS PERMIT REQUEST
LAGOON SOUTH SIDE 67TH STREET**

MAINTENANCE, REPAIR AND OR REPLACEMENT OF APPROXIMATELY 240 L.F. OF EXISTING BULKHEAD WITH VINYL SHEETING MAXIMUM 18" CHANNELWARD ENCROACHMENT. VOID AREA (360 +/- SQ. FT.) BETWEEN REPLACEMENT BULKHEAD AND EXISTING BULKHEAD TO BE BACKFILLED WITH 53 +/- CUBIC YARDS OF CLEAN SAND. INSTALLATION OF 12' WIDE WOOD WALKWAY LANDWARD OF BULKHEAD APPROXIMATELY 250' LONG, INSTALLATION OF 8-3'x15' WOOD REPLACEMENT FINGER PIERS, 22 FREESTANDING REPLACEMENT MOORING PILES CREATING 16-13'x25' BOAT MOORING SLIPS.

LAGOON NORTH SIDE 67TH STREET

INSTALLATION OF TWO (2) 6' WIDE WOOD WALKWAYS CONNECTING PREVIOUSLY PERMITTED PIER WITH PROPOSED INTERIOR WALKWAY SYSTEM FOR ACCESS FROM RESIDENTIAL DEVELOPMENT AND CONNECTION TO EXISTING CONCRETE SIDEWALK ALONG 67TH STREET. PROPOSED WALK LENGTHS TO BE 25' AND 45' (30' BELOW 404' LINE AND 15' ABOVE 404' LINE)

NOTE: INFORMATION SHOWN HEREON AS "PREVIOUSLY PERMITTED" WAS APPROVED ON 05-14-03 UNDER PERMIT NUMBER 2003G1728/03GP1164. THIS PERMIT WILL EXPIRE PRIOR TO COMMENCEMENT OF CONSTRUCTION. WE SEEK TO HAVE THE "PREVIOUSLY PERMITTED" ITEMS RE-PERMITTED AND INCLUDED AS PART OF THIS PERMIT REQUEST.

APPLICANT-PROPERTY OWNER

VAN METRE AT OCEAN ISLE II LLC
5252 LYNKATE COURT
BURKE, VIRGINIA 22015
PHONE:

Lawrence T. Whitlock Associates, Inc.

Landscaps Architects • Planners • Prime Consultants
P.O. BOX 110 9040 Worcester Highway Berlin, Maryland 21811
Fax (410) 641-9948 Phone (410) 641-9980

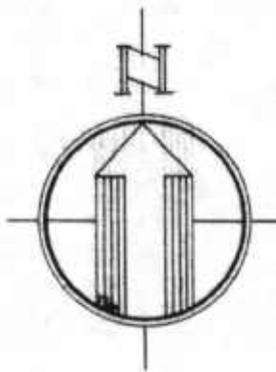
**VICINITY MAP
AND
PERMIT REQUEST**

FOR
UNNAMED DEAD-END LAGOONS ON NORTH AND
SOUTH SIDE 67TH STREET OCEAN CITY MD.
ADJACENT TO SUNSET ISLAND RESID. DEVELOPMT

SCALE: NONE	DRAWN: L. PIZZA
DATE: MARCH 2006	SHEET N ^o 1 OF 5

REVISIONS:

**SUNSET ISLAND
EXISTING RESIDENTIAL DEVELOPMENT**



**EXISTING
DEAD-END
LAGOON**

**68TH
STREET**
TO COASTAL
HIGHWAY

--- APPROXIMATE MHW SHORELINE ---

PREVIOUSLY PERMITTED LOW
PROFILE STONE RIP-RAP SHORELINE
STABILIZATION

PREVIOUSLY PERMITTED 6' WIDE
170' LONG PARALLEL WOOD PIER

PREVIOUSLY PERMITTED BACKFILLED
AND PLANTED WITH SPARTINA
ALTERNIFLORA (920+) AREA

PREVIOUSLY PERMITTED - AREA OF
EXISTING SLOPE BELOW 404 JURISD.
LINE TO HAVE VEGETATION SELECTIVELY
CLEARED OF UNDESIRABLE SPECIES -
(I.E. PHRAGMITIES, POISON IVY ETC)

PREVIOUSLY PERMITTED CONG.
RUBBLE REMOVAL AND REPLACED
WITH CLEAN STONE RIP-RAP

PROPOSED CONCRETE WALK

THIS PERMIT REQUEST
6' WIDE - 25' LONG WOODEN WALK
CONNECTING PREVIOUS PERMITTED
PIER TO PROPOSED CONCRETE
ACCESS WALK

APPLICANT

PROPOSED
MULTI-FAMILY
DEVELOPMENT

PREVIOUSLY PERMITTED
6' WIDE ACCESS WALK

404 JURISDICTIONAL LINE

EXISTING FRINGE MARSH
TO BE RETAINED

THIS PERMIT REQUEST
6' WIDE - 45' LONG WOODEN
WALK CONNECTING PREVIOUS
PERMITTED PIER WITH EXISTING
CONCRETE SIDEWALK

EXISTING CONCRETE SIDEWALK

67TH STREET
TO COASTAL
HIGHWAY

EX. FLUSHING TUBE
PREVIOUSLY PERMITTED
BY OTHERS

EX. FLUSHING TUBE
PREVIOUSLY PERMITTED
BY OTHERS

NOTE:

INFORMATION SHOWN HEREON AS
PREVIOUSLY PERMITTED WAS APPROVED
ON 05-14-03 UNDER PERMIT NUMBER
2003G1728 / 03GP1164. THIS PERMIT
WILL EXPIRE PRIOR TO COMMENCEMENT
OF CONSTRUCTION. WE SEEK TO HAVE THE
PREVIOUSLY PERMITTED ITEMS
RE-PERMITTED AND INCLUDED AS PART
OF THIS PERMIT REQUEST.

PERMIT QUANTITIES THIS SHEET

45' LONG x 6' WIDE (30' LF BELOW 404 JURISDICTION
LINE) TO CONNECT PREVIOUSLY PERMITTED PIER TO
EXISTING CONG. WALK ALONG 67TH STREET

25' LONG x 6' WIDE WOOD WALKWAY CONNECTING
PREVIOUSLY PERMITTED PIER TO PROPOSED
CONCRETE SITE ACCESS SIDEWALK

SEE SHEET No 3 OF 8 FOR
PERMIT REQUEST THIS LAGOON
(PART OF THIS PERMIT REQUEST)

APPLICANT

PROPOSED
MULTI-FAMILY
DEVELOPMENT

Lawrence T. Whitlock Associates, Inc.

Engineers, Architects, Planners, and Environmental Scientists
P.O. BOX 110 3040 Worcester Highway, Pikesville, Maryland 21111
Fax (410) 641-9948 Phone (410) 641-9980

SITE PLAN
SHOWING

CONNECTIONS FOR PEDESTRIAN
ACCESS TO PREVIOUS PERMITTED
PIER IN UN-NAMED DEAD END LAGOON
NORTH SIDE 67TH ST. OCEAN CITY MD.

SCALE: 1" = 50' DRAWN BY L. PIZZA

PERMIT REQUEST QUANTITIES THIS SHEET

MAINTENANCE, REPAIR AND OR REPLACEMENT BULKHEAD
MAX. 18" CHANNELWARD (VINYL SHEETING) - 240 L.F. +/-

12" WIDE WOOD WALKWAY LANDWARD OF BULKHEAD
250' L.F. +/-

NEW FREESTANDING MOORING PILES = 22 TOTAL

3'x15' WOOD FINGER PIERS = 8 TOTAL

16 - 13'x25' MOORING SLIPS

BACKFILL AREA BETWEEN NEW REPLACEMENT BULKHEAD
AND EXISTING BULKHEAD WITH CLEAN SAND.
360 SQUARE FEET +/- AND 53 +/- CUBIC YARDS

SEE SHEET NO 2 OF 8 FOR
PERMIT REQUEST THIS LAGOON
(PART OF THIS PERMIT REQUEST)

EXISTING DEAD-END
LAGOON

APPLICANT

PROPOSED MULTI-FAMILY DEVELOPMENT (RESIDENTIAL)

PART OF THIS REQUEST SEE SHEET NO OF

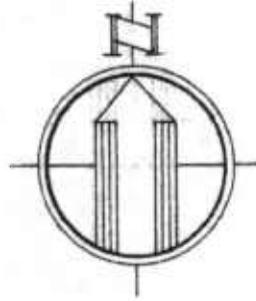
EXIST. FLUSHING TUBE

EXIST. FLUSHING TUBE

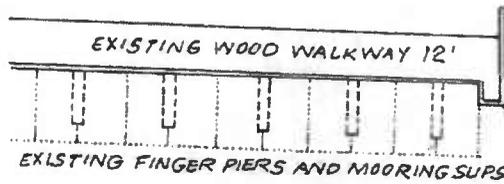
EXISTING

CONCRETE SIDEWALK

67TH STREET
TO COASTAL HWY.

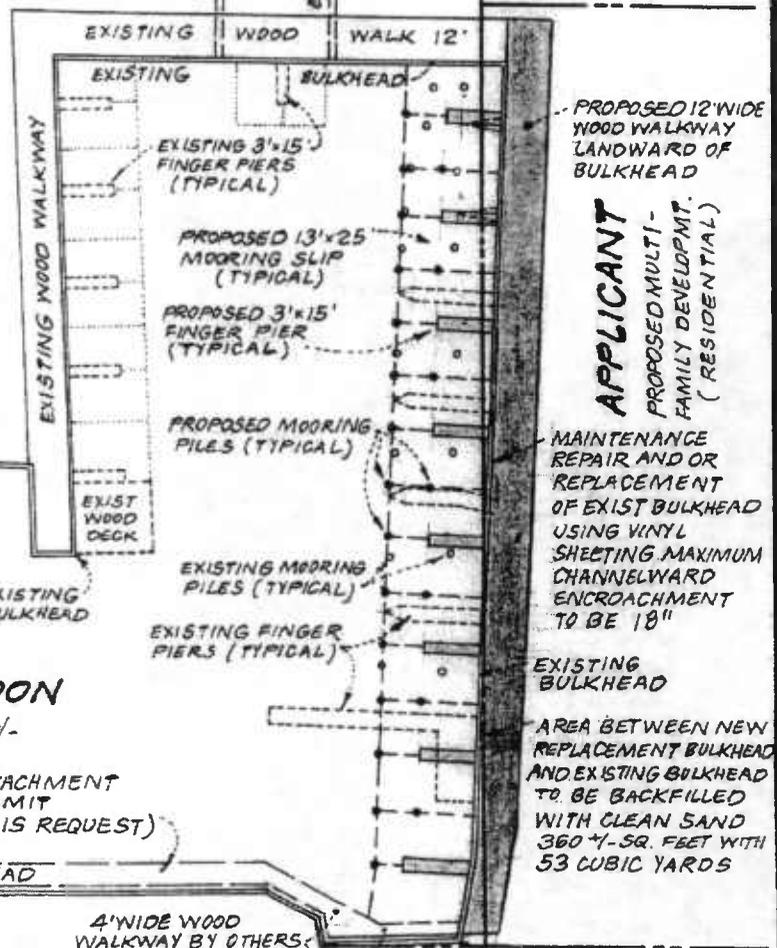


**SUNSET ISLAND
EXISTING RESIDENTIAL DEVELOPMENT**



EXISTING DEAD END LAGOON
TO ASSAWOMAN BAY 425' +/-

PROPOSED 6' WIDE FREE-STANDING (NO ATTACHMENT TO EXISTING BULKHEAD) WOOD WALKWAY. PERMIT APPLIED FOR BY OTHERS (NOT PART OF THIS REQUEST)



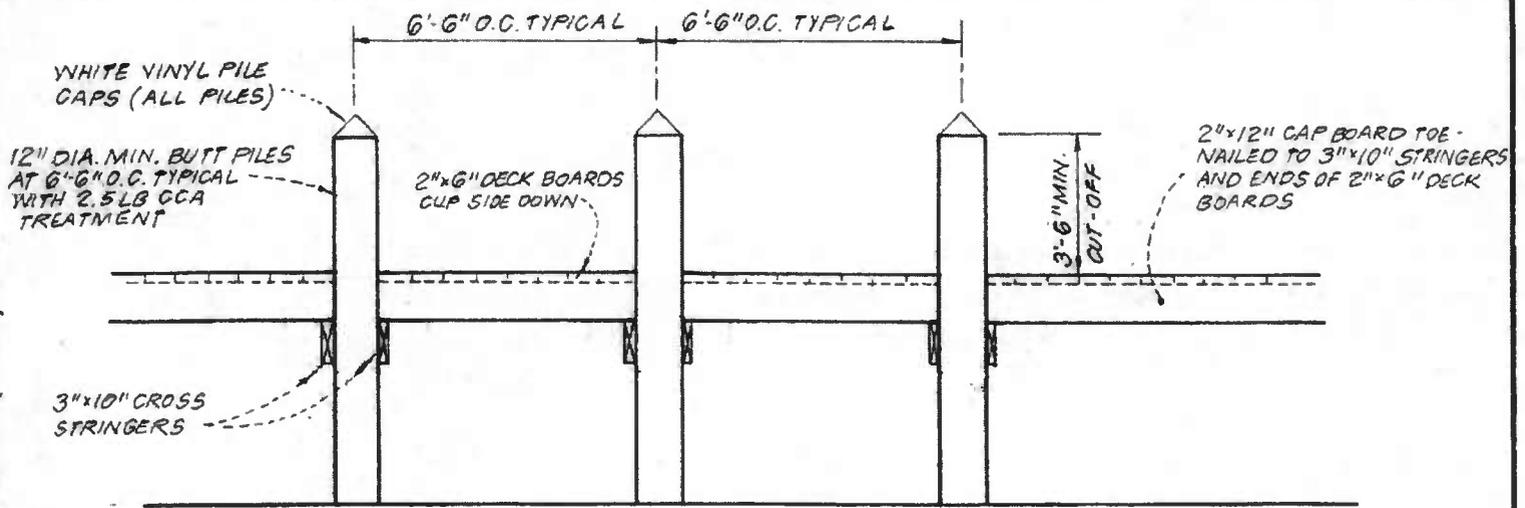
Lawrence T. Whitlock Associates, Inc.

Landscape Architects Planners Home Consultants
P.O. BOX 110 9040 Worcester Highway Berlin, Maryland 21811
Fax (410) 641-9948 Phone (410) 641-9980

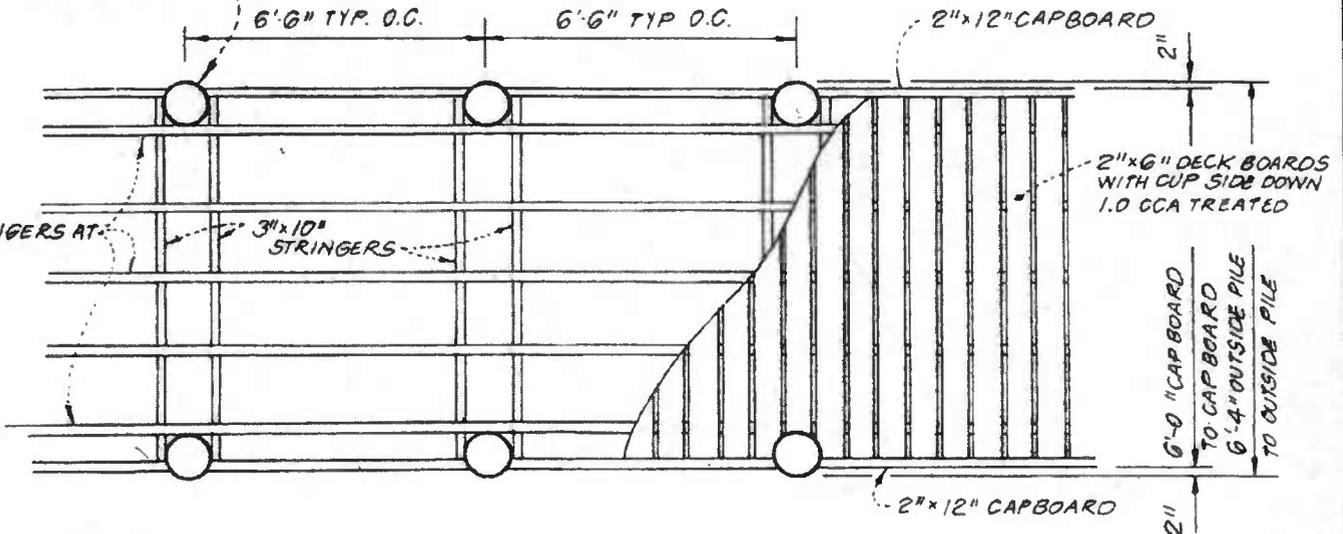
SITE PLAN
SHOWING
PROPOSED REPLACEMENT FINGER PIERS, MOORING PILES, VINYL BULKHEAD AND 12" WIDE WOOD WALKWAY SOUTH SIDE 67TH ST OCEAN CITY MD.

SCALE 1" = 50'	DRAWN L. PIZZA
DATE MARCH 2006	SHEET NO 3 OF 3

REVISIONS



12" DIAMETER MINIMUM BUTT
PILES AT 6'-6" O.C. TYPICAL
WITH 2.5 CCA TREATMENT



NOTES:

1. ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED THE MINIMUM STANDARDS AND SPECIFICATIONS AS SET FORTH BY THE TOWN OF OCEAN CITY BOARD OF PORT WARDENS.
2. ALL PILES TO BE 2.5 CCA TREATED, ALL OTHER LUMBER TO BE 1.0 CCA TREATED.
3. ALL HARDWARE TO BE NEW HOT DIPPED GALVANIZED MARINE GRADE

Lawrence T. Whitlock Associates, Inc.

Landscape Architects Planners Prime Consultants
 P.O. Box 113 3040 Worcester Highway Parris, Maryland 21657
 Fax: (410) 841-9948 Phone: (410) 841-9980

TYPICAL DETAIL

FOR
 PROPOSED 6' WIDE CONNECTION
 WALKWAYS TO MATCH PREVIOUS
 EXISTING 6' WIDE PARALLEL PIER
 SECTION ON NORTH SIDE OF 11' ST.

SCALE: 1/4" = 1'-0"

DRAWN: L. PIZZA

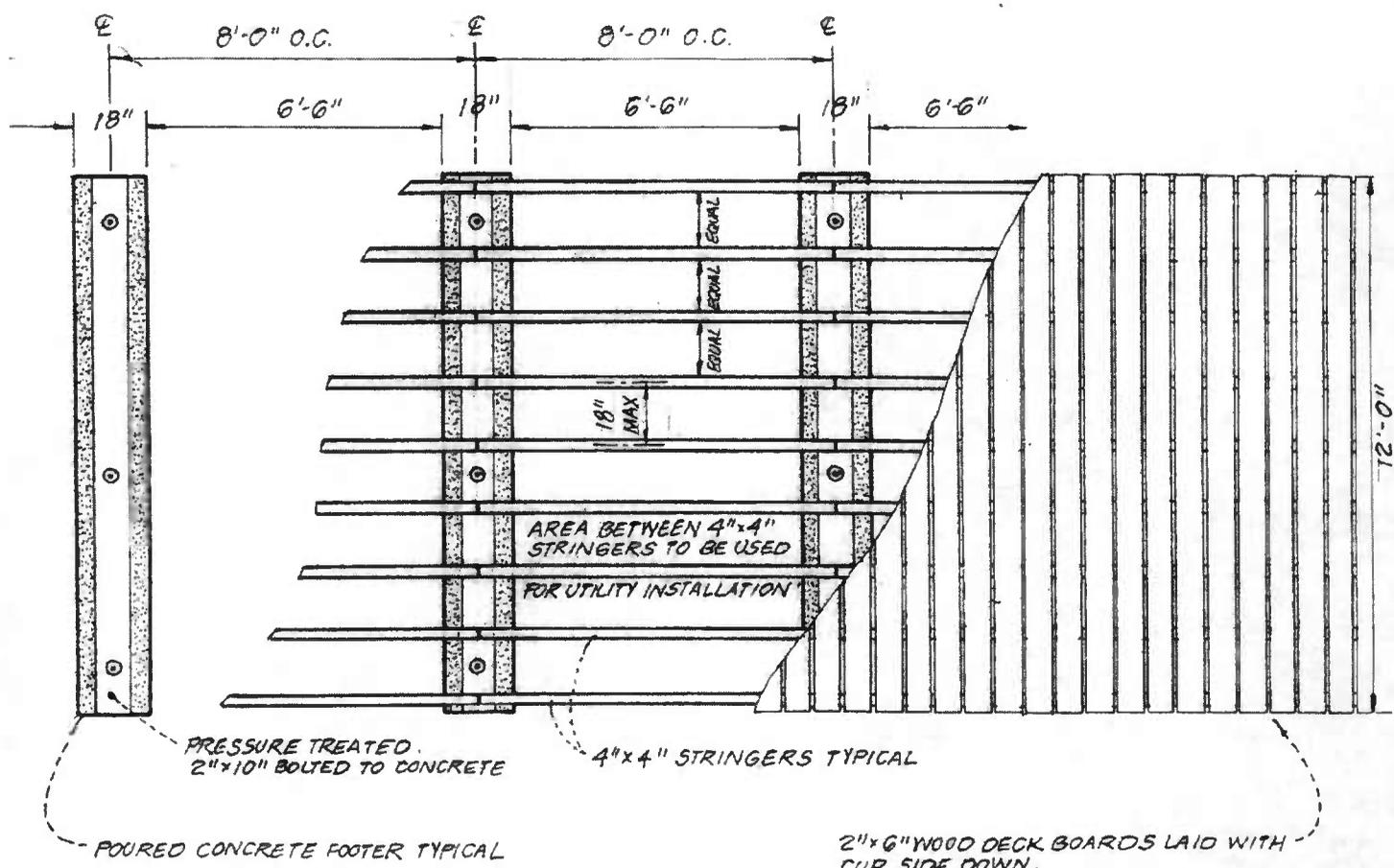
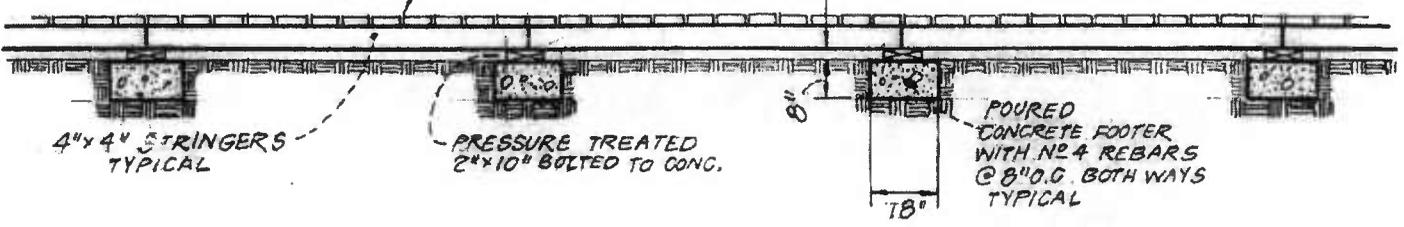
REVISIONS:

DATE:

SHEET N°

2" x 6" WOOD DECK BOARDS LAID WITH CUP SIDE DOWN
 OPTION TO INSTALL SYNTHETIC DECKING IN PLACE OF WOOD

1/2" CLEAR MIN



2" x 6" WOOD DECK BOARDS LAID WITH CUP SIDE DOWN.
 OPTION TO INSTALL SYNTHETIC DECKING IN PLACE OF WOOD

Lawrence T. Whitlock Associates, Inc.

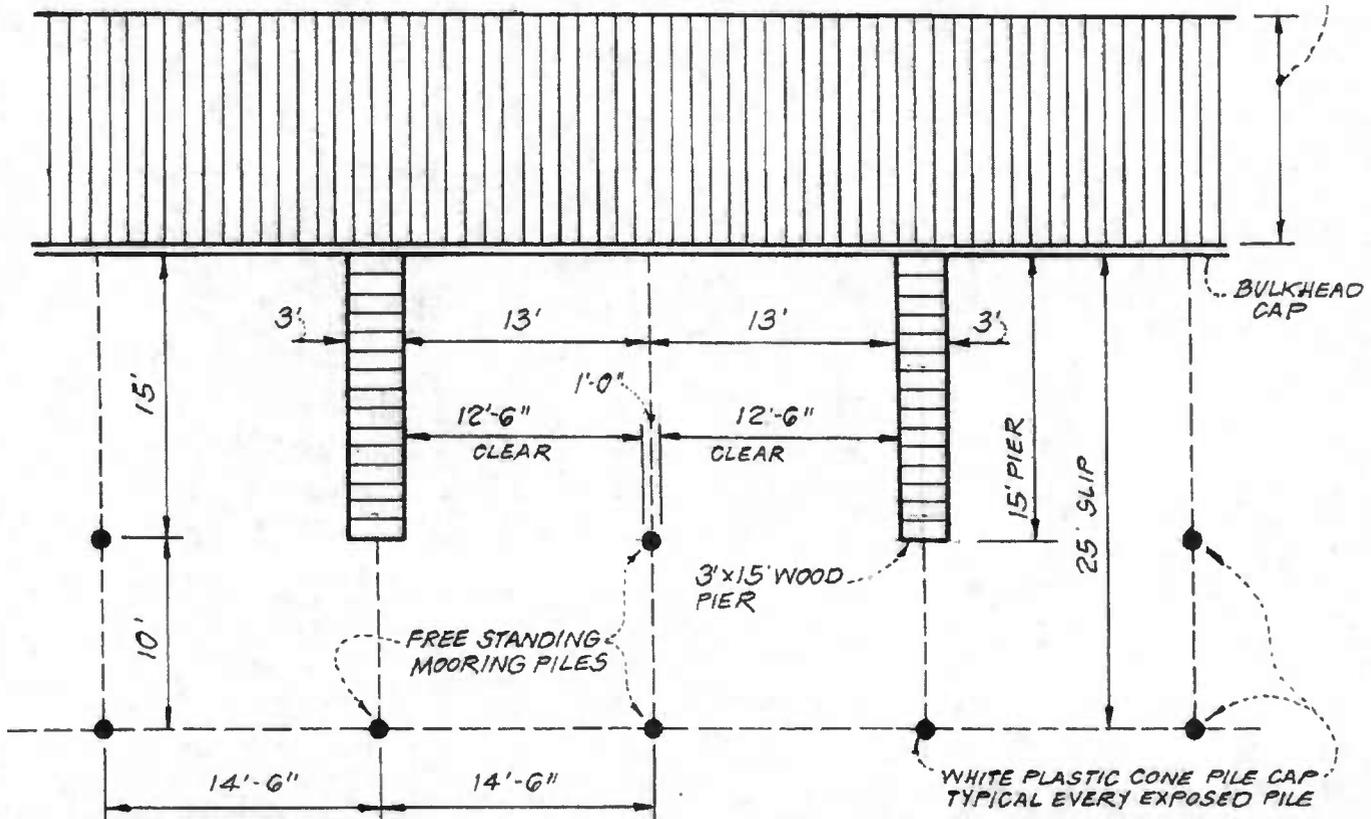
Landscape Architects • Planners • Planning Consultants
 P.O. Box 110, 2040 Worcester Highway, Berlin, Maryland 21011
 Fax (410) 641-8948 Phone (410) 641-8980

TYPICAL DETAIL
 FOR
**PROPOSED 12' WIDE WALKWAY
 PARALLEL TO AND LANDWARD
 OF BULKHEAD**
 (LADON SOUTH SIDE OF 67TH STREET OFFSHORE CITY MD)

DRAWN: L PIZZA DATE: FEBRUARY 2000
 SCALE: 1/4" = 1'-0" SHEET NO. OF

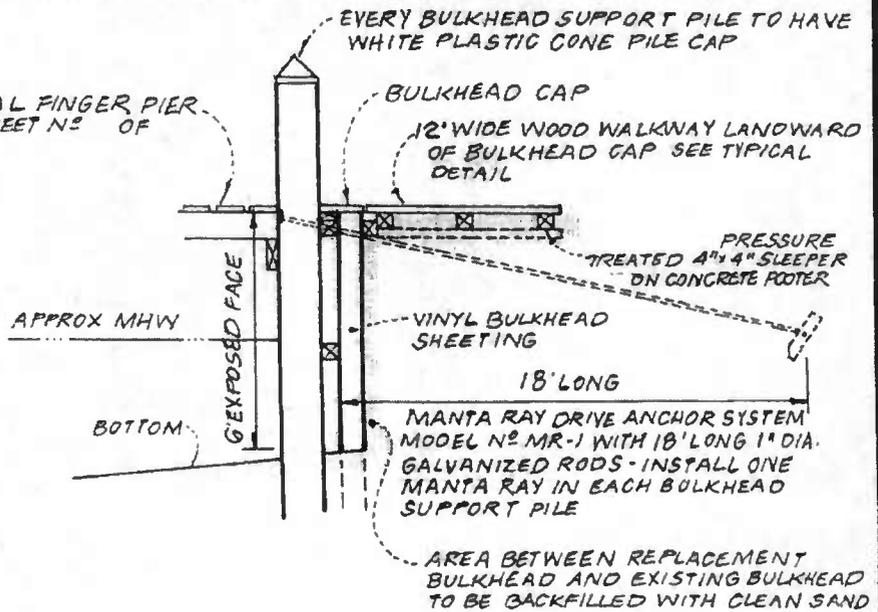
REVISIONS

PROPOSED 12' WIDE WOOD WALKWAY PARALLEL TO AND LANDWARD OF BULKHEAD CAP
 TO AND LANDWARD OF BULKHEAD CAP
 SEE TYPICAL DETAIL SHEET NO. OF



TYPICAL FINGER PIER, MOORING PILE AND MOORING SLIP DIMENSIONS

SEE TYPICAL FINGER PIER
 DETAILS SHEET NO. OF



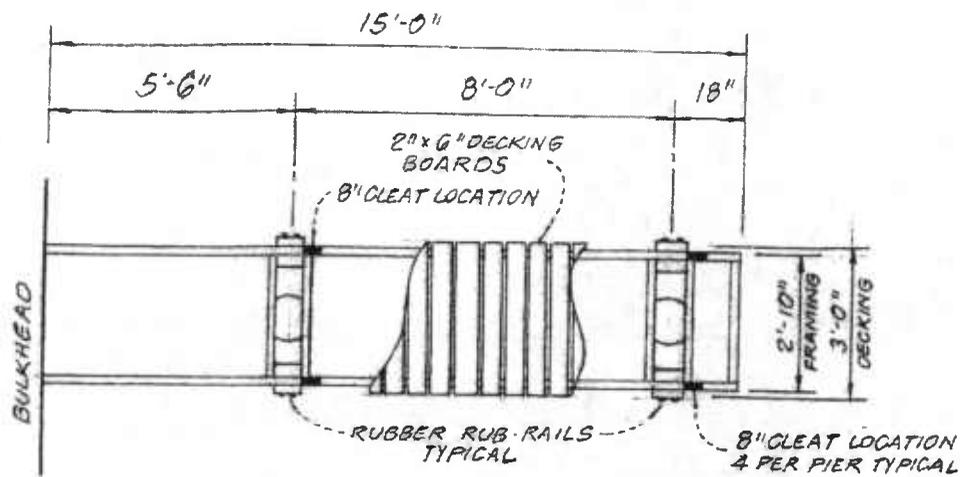
TYPICAL SECTION THRU BULKHEAD

Lawrence T. Whitlock Associates, Inc.

Landscape Architects Planners Public Consultants
 P.O. BOX 710 8040 Ambassador Highway Seattle, Washington 98148
 Fax (410) 541-9948 Phone (410) 541-9980

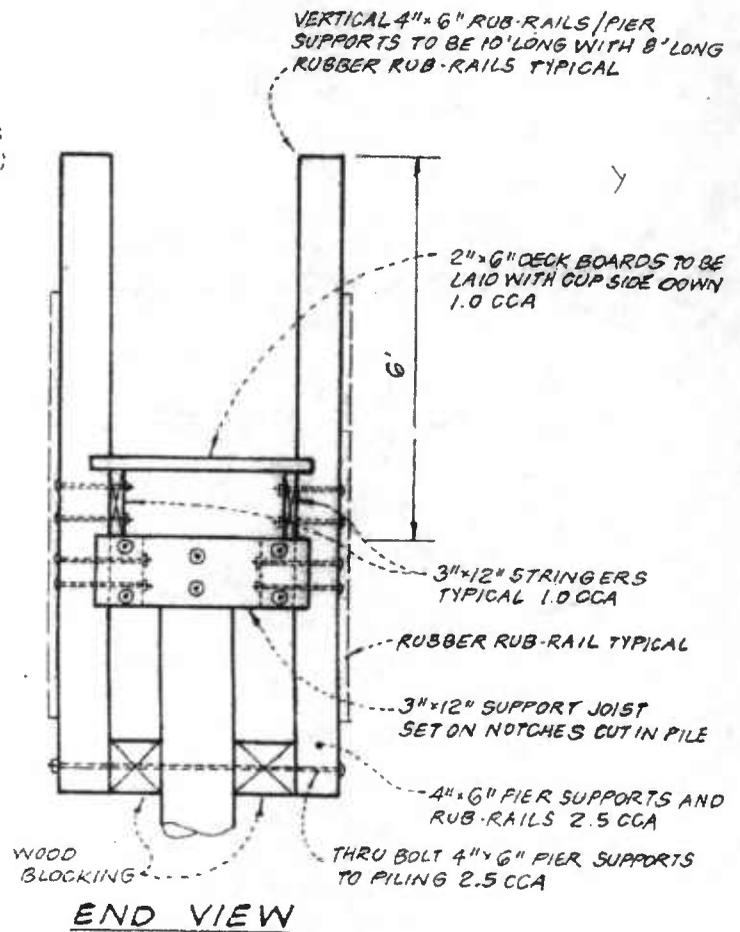
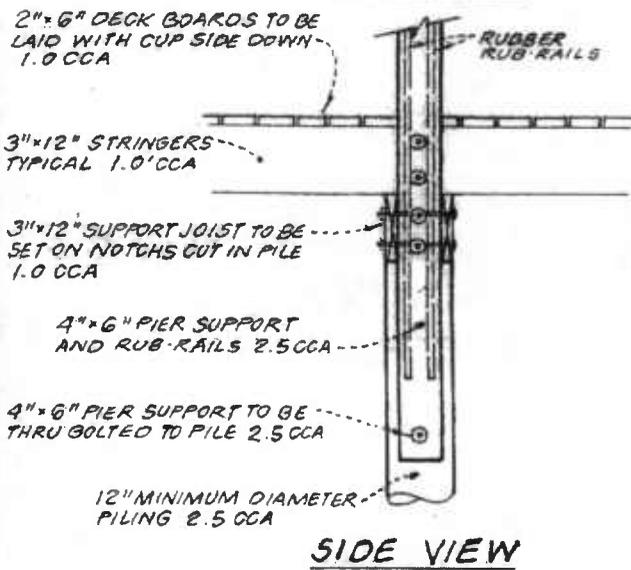
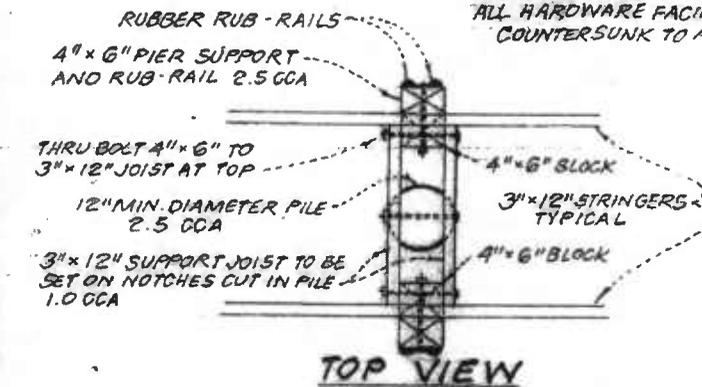
TYPICAL PIER, SLIP, PILING, AND
 12' WIDE WOOD WALKWAY LAYOUT
 AND
 TYPICAL SECTION THRU BULKHEAD

DATE	NOV 8	DESIGNED BY	P/ZZA
DATE	MARCH 1988	CHECKED BY	W. J. P. S.



TYPICAL FINGER PIER

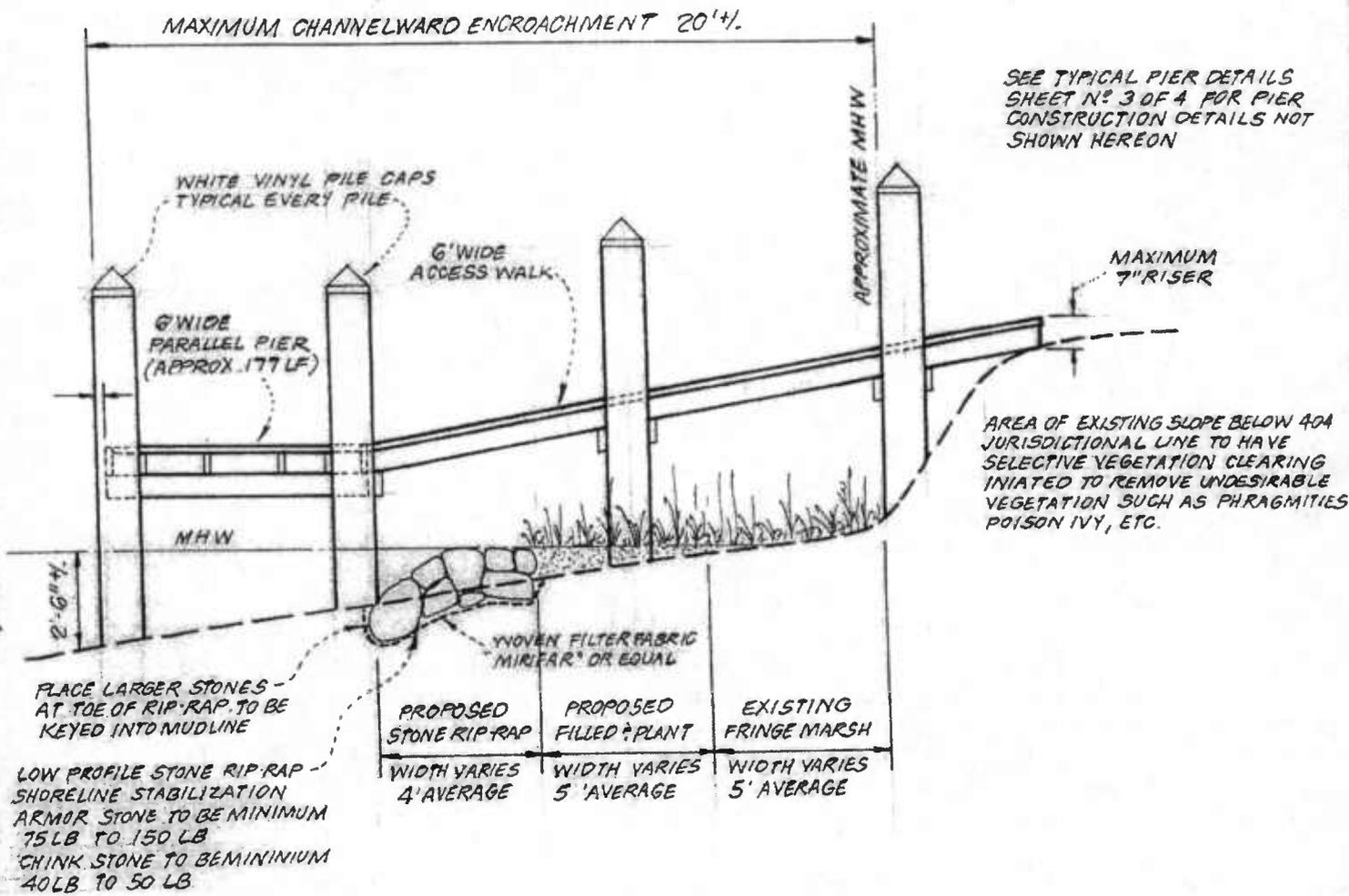
NOTE:
ALL HARDWARE TO BE NEW HOT DIPPED GALVANIZED MARINE GRADE
ALL HARDWARE FACING INTO SLIP AREAS TO HAVE DOME HEADS OR
COUNTERSUNK TO AVOID DAMAGE TO MOORED VESSELS



Lawrence T. Whitlock Associates, Inc.

Landscape Architects Planners Prime Consultants
P.O. BOX 110 9040 Worcester Highway Berlin, Maryland 21811
Fax (410) 641-9948 Phone (410) 641-9950

TYPICAL DETAILS
FOR
PROPOSED 3' x 15' WOOD
PIERMENT FINGER PIER



SEE TYPICAL PIER DETAILS SHEET N° 3 OF 4 FOR PIER CONSTRUCTION DETAILS NOT SHOWN HEREON

AREA OF EXISTING SLOPE BELOW 404 JURISDICTIONAL LINE TO HAVE SELECTIVE VEGETATION CLEARING INITIATED TO REMOVE UNDESIRABLE VEGETATION SUCH AS PHRAGMITIES POISON IVY, ETC.

PROPOSED STONE RIP-RAP	PROPOSED FILLED & PLANT	EXISTING FRINGE MARSH
WIDTH VARIES 4' AVERAGE	WIDTH VARIES 5' AVERAGE	WIDTH VARIES 5' AVERAGE

PLACE LARGER STONES - AT TOE OF RIP-RAP TO BE KEYED INTO MUDLINE

LOW PROFILE STONE RIP-RAP - SHORELINE STABILIZATION ARMOR STONE TO BE MINIMUM 75 LB TO 150 LB CHINK STONE TO BE MINIMUM 40 LB TO 50 LB

NOTE:
 INFORMATION SHOWN HEREON WAS "PREVIOUSLY PERMITTED" ON 05-14-03 UNDER PERMIT NUMBER 200361728 / 03GP1164. THIS PERMIT WILL EXPIRE PRIOR TO COMMENCEMENT OF CONSTRUCTION. WE SEEK TO HAVE RE-PERMITTED AND INCLUDED AS PART OF THIS PERMIT REQUEST.

TYPICAL SECTION THRU PROPOSED STONE RIP-RAP AND PROPOSED PARALLEL PIER

TAX MAP 114 PARCELS 6664, 6665, 6666, 6667 AND 6668 (ADJACENT TO BUT NOT PART OF PROPOSED SUNSET ISLAND RESIDENTIAL DEVELOPMENT)

SCALE: 1/4" = 1'-0"	DRAWN: L PIZZA
DATE: MARCH 2006	SHEET N° 8 OF 8

LTWA Lawrence T. Whitlock Associates, Inc
 Landscape Architects · Planners · Prime Consultants
 3409 Coastal Highway · Ocean City, Maryland 21842
 FAX: 410-289-3458 (410)-289-3202

REVISED 5-14-03 PER MDE, CORP COMMENTS



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

Jonas A. Jacobson
Deputy Secretary

September 1, 2006

Van Metre at Ocean Isle II, LLC
c/o Lawrence T. Whitlock Associates, Inc.
P.O. Box 110
Berlin, MD 21811

Re: MDE Authorization Number: 06-GL-1755
MDSPGP-2 Authorization: 200664029

Dear Roy R. Barnett:

Your application to alter tidal wetlands has been evaluated by the Tidal Wetlands Division. Your State license or permit authorizing work in tidal wetlands is attached. If your project qualifies for federal approval under the Maryland State Programmatic General Permit (MDSPGP), that permit is also attached. If the MDSPGP is not attached, your project does not qualify for federal authorization under this permit and you will hear directly from the Corps of Engineers. You should not begin any work until you have obtained all necessary State, local and federal authorizations.

Please take a moment to read and review your authorizations to insure that you understand the limits of the authorized works and all of the general and special conditions. If you are aggrieved by the Department's decision to authorize this project subject to the conditions set forth in the License, you may petition the circuit court in the county where the land is located within 30 days after receiving this license. Please call me at 410-537-3835 with any questions.

Sincerely,

Richard J. Ayella, Chief
Tidal Wetlands Division



MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Kendl P. Philbrick
Secretary

Jonas A. Jacobson
Deputy Secretary

GENERAL TIDAL WETLANDS LICENSE 06-GL-1755

Licensee: Van Metre at Ocean Isle II LLC
Address: c/o Lawrence T. Whitlock Associates Inc.
P.O. Box 110
Berlin, MD 21811

Under the authority of the Board of Public Works of the State of Maryland and in accordance with Title 16, Wetlands and Riparian Rights, Environment Article, Annotated Code of Maryland and COMAR 23.02.04 and COMAR 26.24 and the conditions of this license, the licensee is authorized to perform the following activity:

To fill, grade, and plant marsh vegetation along 230 feet of eroding shoreline with 170 cubic yards of sand and a low profile, stone, sand containment sill emplaced within a maximum of 14 feet channelward of the mean high water line; to construct a 6-foot wide by 215-foot long parallel walkway and a 6-foot 25-foot access walkway within a maximum of 20 feet channelward of the mean high water line; to construct and backfill 240 feet of replacement bulkhead within a maximum of 18 inches channelward of a deteriorating bulkhead; to replace eight irregular piers with eight 3-foot wide by 15-foot long piers and 22 associated mooring piles, all extending a maximum of 25 feet channelward of the new bulkhead on two unnamed lagoons off of the Assawoman Bay at the end of 67th Street in Ocean City as depicted on the attached plan dated March 2006.

By applying for and receiving this General License the licensee shall be considered to have knowledge of and to have accepted the special and general conditions of this license. Licensee agrees that all work shall be performed in compliance with these conditions.

This general license is subject to the following conditions:

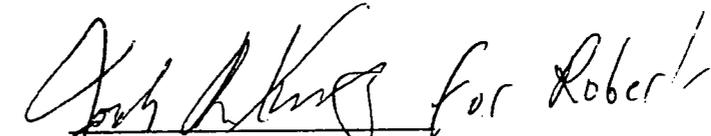
SPECIAL CONDITIONS

- A. Marsh Creation shall be completed prior to any pier construction.
- B. Marsh establishment:
 - 1. The licensee shall use clean substrate fill material, no more than 10% of which shall pass through a standard number 100 sieve.
 - 2. The marsh establishment area shall be planted within one year following completion of the filling operation.
 - 3. The marsh establishment project shall be maintained as a wetland, with non-nuisance species' aerial coverage of at least 85% for three consecutive years. If 85% coverage is not attained, the reasons for failure shall be determined, corrective measures shall be taken, and the area shall be replanted.

4. If the fill is graded hydraulically, the licensee shall use a turbidity curtain around the perimeter of the instream work.
 5. If the existing bank is to be cleared or graded, the licensee shall obtain any required approvals of an erosion and sediment control plan from the applicable sediment and erosion control agency.
- C. Ocean City Critical Area Commission shall approve any walkway above jurisdictional tidal wetlands.

GENERAL CONDITIONS

- A. The licensee shall obtain an approved sediment and erosion control plan from the local soil conservation district when the area disturbed is greater than 5000 square feet;
- B. The licensee certifies real property interest in the contiguous upland;
- C. This license is valid only for use by the licensee. Permission for transfer of the license shall be obtained from the Maryland Department of the Environment. The terms and conditions of this license shall be binding on any assignee or successor in interest of the licensee;
- D. The licensee acknowledges that this license does not transfer any property interest in State tidal wetlands. This license allows the licensee to use State tidal wetlands only for the structure or activity authorized herein and in no way limits the use of waters of the State by the public;
- E. This license is void if the licensee fails to obtain all required State, Federal, and local approvals before beginning work on the licensed structure or activity;
- F. The licensee shall allow representatives of the Maryland Department of the Environment to enter the property at reasonable times to inspect the ongoing or completed work under the license;
- G. The licensee shall make every reasonable effort to design and construct the structure or perform the activity authorized in this license in a manner which minimizes adverse impacts on natural resource values, including water quality, plants, wildlife, plant and wildlife habitat, and on historic property values;
- H. The licensee shall notify the Water Management Administration, Inspections and Compliance Division at (410) 901-4020 at least 5 days before beginning the activity;
- I. This license expires 3 years after the date of issuance. The licensee shall complete construction of the activity authorized under this license within the allowed 3 years, otherwise a new general license shall be obtained;
- J. The Maryland Department of the Environment may suspend or revoke this license upon written finding for good cause that suspension or revocation is in the State's best interest.


Robert Tabisz, Chief
License and Permit Review Section
Tidal Wetlands Division

Tabisz

Date of Issuance: September 1, 2006



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

IMPORTANT INFORMATION ABOUT YOUR PROJECT

Date:

September 12, 2006

Corps Permit No.:

200664033

MDSPGP-2 Category and Activity No.:

I-F3, I-G4

Permittee/Project Name:

Va Metre at Ocean Isle

Dear Applicant:

The U. S. Army Corps of Engineers, Baltimore District, has determined that the proposed work meets the terms and conditions of the Maryland State Programmatic General Permit (MDSPGP-2), provided the work is completed in compliance with the enclosed plan(s), the standard MDSPGP-2 conditions, the applicable MDSPGP-2 activity-specific conditions, and special conditions (enclosed, if applicable). This MDSPGP-2 verification is provided pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. If any of the information contained in your application and/or plans is later found to be in error, the MDSPGP-2 authorization for your project may be modified, suspended, or revoked.

Your MDSPGP-2 authorization is valid for three years from the date of this letter, or until September 30, 2006, whichever is sooner, unless the MDSPGP-2 is modified, reissued, or revoked. If the MDSPGP-2 is modified, reissued, or revoked, your authorization may be valid for less than three years. You must remain informed of the changes to the MDSPGP-2. When changes to the MDSPGP-2 occur, a public notice announcing the changes will be issued. If you have not completed this work before the date that the MDSPGP-2 is modified or revoked, you will have 12 months from the effective date of the modification or revocation to complete the work under the present terms and conditions of this MDSPGP-2.

In order for this authorization to be valid, you must obtain all required Federal, State, and local permits.

Walter Washington, Jr.
Chief, Maryland Section Southern

Janet M. Vine
Chief, Maryland Section Northern



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

REPLY TO
ATTENTION OF

Effective October 1, 2001

Corps Permit Number

CENAB-OP-R-MDSPGP-2 (MARYLAND STATE PROGRAMMATIC GENERAL PERMIT-2)

TO WHOM IT MAY CONCERN:

Upon the recommendation of the Chief of Engineers, and under the provisions of Section 404 of the Clean Water Act, as amended, and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the Secretary of the Army hereby authorizes the discharge of dredged or fill material or the placement of structures into Waters of the United States, including wetlands and navigable waters. These discharges and structures must comply with all the terms and conditions identified in this MDSPGP-2. It has been determined that the project qualifies for the MDSPGP-2. Accordingly, you are authorized to undertake the activity pursuant to:

1. Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); and/or
2. Section 404 of the Clean Water Act (33 U.S.C. 1344).

You are authorized to perform work in accordance with the terms and conditions specified in Section VI of the MDSPGP-2 effective on October 1, 2001.

VI. General Conditions

The following conditions apply to all activities authorized under the MDSPGP-2.

A. General Requirements:

1. **Other Permits.** Authorization under the MDSPGP-2 does not obviate the need to obtain other Federal, State, or local authorizations required by law.
2. **Applicability.** Applicability of the MDSPGP-2 shall be reviewed with reference to the Corps definition of Waters of the United States, including wetlands and navigable waters of the United States. Applicants are responsible for delineating boundaries of all Waters of the United States, including wetland boundaries. The delineation of wetland boundaries shall be accomplished in accordance with the current Federal manual for identifying jurisdictional wetlands and appropriate guidance issued by the Corps of Engineers.
3. **Minimal Effects.** Projects authorized by the MDSPGP-2 shall have no more than minimal individual and cumulative adverse environmental effects.
4. **Discretionary Authority.** Notwithstanding compliance with the terms and conditions of the MDSPGP-2, the Corps retains discretionary authority to require an alternate Corps permit review for any project under all categories of the MDSPGP-2 based on concerns for the aquatic environment or for any other factor of the public interest. This authority is invoked on a case-by-case basis during the review process for Category III activities whenever the Corps determines that, based on the concerns stated above, the potential consequences of the proposal warrant individual review. In some instances the Corps may have concerns for the aquatic environment or for any other public interest factor pertaining to a specific project, which has received a case-specific verification as a Category I activity. In order to evaluate this project under an alternate Corps permit review, the verification must be suspended in accordance with VII.E on page 85 of the MDSPGP-2.

Whenever the Corps notifies an applicant that an alternate Corps permit may be required, authorization under the MDSPGP-2 is voided. No work may be conducted until the Corps permit is obtained, or until the Corps notifies the applicant that further review has demonstrated that the work may proceed under the MDSPGP-2.

5. **Single and Complete Projects.** The MDSPGP-2 shall not be used for piecemeal work and shall be applied to single and complete projects, including maintenance activities. All components of a project shall be reviewed together as constituting one single and complete project. All planned phases of multi-phased projects shall be applied for and reviewed together as constituting one single and complete project. The MDSPGP-2 shall not be used for any activity or portion of a project, e.g., a pier or boat ramp, that is part of, or dependent on, an overall project, e.g., the dredging of a main navigation channel or a spur channel, for which an individual permit or some other alternate Corps permit is required.
6. **Stacking of Category I activities.** Activity d.(2) in Category I (e.g., Underground and Overhead Utility Lines) may not be stacked or combined with any other Category I activity. Any single and complete project with both

utility line impact(s) and other Category I activity(s). will be reviewed as a Category III project in accordance with the Category III process specified on page 9, provided the total impact to Waters of the United States, including wetlands, is less than one acre. If any other Category I activities, except Activity d.(2), are stacked or combined to authorize a single and complete project, the total impact to Waters of the United States for all activities in the single and complete project must not exceed the 500 linear feet limit or be greater than 5,000 square feet impact limit (except for tidal marsh creation projects that have a limit of less than 17,500 square feet), while complying with each activity-specific impact limit and conditions. For example, total road crossing impacts are still limited to not exceed 200 linear feet.

7. **Authorized activities in navigable waters subject to Section 10 of the Rivers and Harbors Act of 1899.**
 - a. If future operations by the United States require removal, relocation or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable water, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States on account of any such removal or alteration.
 - b. The U.S. Code of Federal Regulations, Title 33, Part 64 states that all structures erected in navigable waters in depths in excess of three feet at mean low water (MLW) require obstruction lights unless the applicant is advised to the contrary by the Coast Guard District Commander. If the structures authorized by this permit are to be built in water depths in excess of three feet at MLW, the permittee must contact the Commander (AOWW), Fifth Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia, 23704, to ascertain the need for obstruction lights.

B. National Concern:

1. **Historic Properties.** Any activity authorized by the MDSPGP-2 shall comply with Section 106 of the National Historic Preservation Act. The Maryland Department of the Environment (MDE), in cooperation with the Maryland Historic Preservation Office, shall conduct an initial review and notify the Corps if any archaeological or other cultural resources are in the vicinity of the project. The Corps may require applicants to perform a survey of archeological and historical resources in the project area. The Corps shall determine if consultation under Section 106 with the Maryland Historic Trust or the Advisory Council on Historic Preservation is required. The applicant must notify the Corps if the activity may affect any historic properties listed or eligible for listing, or that the applicant has reason to believe may be eligible for listing on the National Register of Historic Places. If the permittee, during construction of work authorized herein, encounters a previously unidentified archaeological or other cultural resource within the permit area subject to Department of the Army jurisdiction that might be eligible for listing in the National Register of Historic Places, the permittee shall immediately stop work in the permit area and notify the District Engineer. The permittee shall not begin or continue work until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity may proceed. Information on the location and existence of historical resources can be obtained from the Maryland Historic Trust, Office of Preservation Services, and the National Register of Historic Places.
2. **National Lands.** Activities authorized by the MDSPGP-2 shall not impinge upon the value of any Federal land, including but not limited to, National Wildlife Refuge, National Forests, National Marine Sanctuaries or any area administered by the National Park Service (e.g. Assateague Island National Seashore).
3. **Endangered Species.** The MDSPGP-2 does not authorize any activity that may affect a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA); or which is likely to destroy or adversely modify the critical habitat of such species unless and until appropriate coordination with the applicable resource agency(s) is complete and all such issues are resolved in accordance with the applicable regulations and the procedures outlined in the MDSPGP-2 Standard Operating Procedures. MDE, in cooperation with Maryland Department of Natural Resources, shall conduct an initial review and notify the Corps and the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) if any Federally listed species or critical habitat is likely to be in the vicinity of the project. The Corps shall determine if consultation with FWS or NMFS is required under Section 7 of the ESA. If consultation is required, the applicant, after notification, shall not begin or continue work until notified by the District Engineer that the requirements of the ESA have been satisfied and that the activity is eligible for authorization. Information on the location of threatened and endangered species and their critical habitat can be obtained from the FWS and NMFS.
4. **Essential Fish Habitat (EFH).** Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires an EFH consultation with the NMFS for any action or proposed action authorized, funded, or undertaken by a federal agency that may adversely affect EFH. EFH has been defined by Congress as "those waters and substrate necessary to fish for spawning, breeding, feeding or growing to maturity." The designation and conservation of EFH seeks to minimize adverse effects on habitat caused by fishing and non-fishing activities. NMFS, in consultation with the District, has determined that projects authorized under Category I (includes projects reviewed under Category II) of the MDSPGP-2 which comply with all terms and

conditions of the MDSPGP-2 and all activity-specific impact limits and conditions, will not have an adverse effect on EFH. Projects that are proposed in areas designated as EFH and that do not qualify for MDSPGP-2 authorization under Category 1, will require a case-by-case EFH effect determination.

5. **Wild and Scenic Rivers.** No activity is authorized under the MDSPGP-2 that occurs in a component of the National Wild and Scenic River System, including rivers officially designated by Congress as study rivers for possible inclusion in the system, while such rivers are in an official study status, unless the appropriate Federal agency, with direct management responsibility for the river, has determined in writing that the proposed activity will not adversely affect any National Wild and Scenic River, including study rivers. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, or U.S. Fish and Wildlife Service).

6. **Federally Authorized Civil Works Projects.**

- a. **Federal Navigation Project.** The MDSPGP-2 does not authorize interference with any Federal navigation project. The permittee understands and agrees that, if future operations of the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration. (See VI.A.7.a. of the MDSPGP-2)
- b. **Other Federally Authorized Civil Work Projects (i.e., flood control, dams, and reservoirs).** The MDSPGP-2 does not authorize interference with any proposed or existing Federally authorized civil works project.

7. **Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project, or uses thereof, as a result of other permitted or unpermitted activities or from natural causes;
- b. Damages to the permitted project, or uses thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit;
- d. Design or construction deficiencies associated with the permitted work; and
- e. Damage claims associated with any future modification, suspension, or revocation of the MDSPGP-2 or any specific MDSPGP-2 verification.

8. **Navigation.** Projects authorized under the MDSPGP-2 shall not cause interference with navigation, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized under the MDSPGP-2. Nothing in the MDSPGP-2 shall in any way restrict the District Engineer, U.S. Army Engineer District, Baltimore, from exercising his legal authority to protect the public interest in navigation or from exercising his authority under Navigation Servitude of the United States. (See VI.A.7.a of the MDSPGP-2)

C. Minimization of Environmental Impacts:

1. **Minimization.** Discharges of dredged or fill material into Waters of the United States and adverse impacts of such discharges on the aquatic ecosystem shall be avoided and minimized to the maximum extent practicable on-site.
2. **Mitigation.** Generally, compensatory mitigation will be required for all permanent tidal or nontidal wetland impacts either through the State's tidal or nontidal wetland compensation fund or by the permittee as required by the special condition of the MDSPGP-2 or the State authorization.
3. **Work in Wetlands.** Heavy equipment working in wetlands shall be avoided if possible and, if required, shall minimize soil and vegetation disturbance by using techniques such as timber mats, geotextile fabric, and vehicles with low-pressure tires. Disturbed areas in wetlands shall be restored to pre-construction contours and elevations upon completion of the work.
4. **Temporary Fill and Mats.** Temporary fill and the use of mats are both considered discharge of fill material and must be included in the quantification of impact area authorized by the MDSPGP-2. Temporary fill (e.g., access roads, cofferdams) in waters and wetlands authorized by the MDSPGP-2 shall be properly stabilized during use to

prevent erosion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade. Upon completion of the work, all temporary fills shall be disposed of at an upland site, suitably contained to prevent erosion and transport to a waterway or wetland. Temporary fill areas shall be restored to their original contours and elevations and revegetated with comparable native species.

5. **Erosion and Sediment Control.** Adequate erosion and sediment control measures, practices and devices, such as vegetated filter strips, geotextile silt fences, phased construction, or other devices or methods, shall be used to reduce erosion and retain sediment on-site during and after construction. These devices and methods shall be capable of a) preventing erosion, b) collecting sediment and suspended and floating materials, and c) filtering fine sediment. Erosion and sediment control devices shall be removed when the work is complete and the site has been successfully stabilized. The sediment collected by these devices shall be removed and placed at an upland location, in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.
6. **Water Crossings.**
 - a. All temporary and permanent crossings of waterbodies shall be suitably bridged, culverted or otherwise constructed to withstand and to prevent the restriction of high flows; to maintain existing low flows; and to prevent the obstruction of movement by aquatic life indigenous to the waterbody.
 - b. No open trench excavation shall be conducted in-stream without use adequate diversion structures.
 - c. Equipment shall cross streams only at suitably constructed permanent or temporary crossings.
 - d. Temporary structures and fills shall be removed and the area restored to its original contours and elevations, or to the conditions specified in the approved plans. The temporary structures and the areas of fill associated with these structures must be included in the total waterway/wetlands impacts.
7. **Utility Lines.**
 - a. Impacts shall be minimized by using directional drilling, jack and bore, missile, or similar methods when feasible.
 - b. All in-stream work shall be conducted "in the dry" whenever practicable, by using stream diversion devices other than earthen or stone cofferdams.
8. **Discharge of Pollutants.** All activities that are authorized under the MDSPGP-2 and that involve any discharge or relocation of pollutants into Waters of the United States shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1251 et. Seq.), and applicable State and local laws and regulations.
9. **Spawning Areas.** Discharge in fish and shellfish spawning or nursery areas during spawning seasons shall be avoided. Impacts to these areas shall be avoided or minimized to the maximum extent practicable during all other times of year.
10. **Environmental Values.** The permittee shall make every reasonable effort to construct or operate the work authorized under the MDSPGP-2 in a manner that maintains as many environmental values as practicable, and that avoids or minimizes any adverse impacts on existing fish, wildlife and natural environmental values.

D. Procedural Conditions:

1. **Inspections.** The permittee shall permit the District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary to ensure that the work is being performed in accordance with the terms and conditions of the MDSPGP-2. The District Engineer may also require post-construction engineering drawings (as-built plans) for completed work, and post-dredging survey drawings for any dredging work.
2. **Compliance Certification.** Every permittee who receives a written MDSPGP-2 verification shall submit a signed certification regarding the completed work and any required mitigation. The certification form will be forwarded to the permittee with the MDSPGP-2 verification. The completed form will include the following:
 - a. A statement that the authorized work either was or was not done in accordance with the MDSPGP-2 verification, including any general and/or specific conditions. If the activity was not done in accordance with the MDSPGP-2 verification, including any general and/or specific conditions, the permittee shall describe the specifics of the deviation from the authorized activity.
 - b. A statement that any required mitigation was or was not completed in accordance with the permit conditions. If the mitigation was not completed in accordance with the permit conditions, the permittee shall describe the specifics of the deviation from the permit conditions.

- c. The signature of the permittee, certifying the completion of the work and compensatory mitigation.

After the project is completed, the certification shall be sent to the District at the following address:

U.S. Army Corps of Engineers
Baltimore District
Attn: CENAB-OP-R
P.O. Box 1715
Baltimore, MD 21203-1715

3. **Maintenance.** The permittee shall maintain the work or structures authorized in good condition and in compliance with the terms and conditions of the MDSPGP-2.
4. **Property Rights.** The MDSPGP-2 does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.
5. **Modification, Suspension and Revocation.** The MDSPGP-2, or any verification under it, may be either modified, suspended, or revoked in whole or in part pursuant to Department of the Army policies and procedures and any such action shall not be the basis for any claim for damages against the United States.
6. **Restoration.** The permittee, upon receipt of a notice of revocation of authorization under the MDSPGP-2, shall restore the wetland or waterway to its former condition, without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.
7. **Special Conditions.** The Corps may impose other special conditions on any project authorized under the MDSPGP-2, in cases where the Corps determines that special conditions are necessary to avoid or minimize adverse effects on the environment or on any other factor of public interest. Failure to comply with all conditions of the authorization/verification, including special conditions, will constitute a permit violation/unauthorized work and may subject the permittee to criminal, civil, or administrative penalties, and/or restoration.
8. **False or Incomplete Information.** If the Corps verifies a project under the MDSPGP-2 and subsequently discovers that it has relied on false, incomplete or inaccurate information provided by the permittee, the MDSPGP-2 verification may be revoked and the Government may institute appropriate legal proceedings.
9. **Compliance.** Any activity performed in Waters of the United States, including wetlands and navigable waters, that is not in compliance with all the terms and conditions of the MDSPGP-2 that includes the MDSPGP-2 Category List activity-specific conditions, constitutes unauthorized work and is subject to an enforcement action by the Corps or the Environmental Protection Agency (EPA). Furthermore, the MDSPGP-2 does not delegate any Section 404 enforcement or regulatory authority. When unauthorized work occurs in Waters of the United States, including wetlands and navigable waters, it is subject to one or more of the following responses by EPA and/or the Corps:
 - a. A Cease and Desist order and/or an administrative compliance order requiring remedial action.
 - b. Initiation and assessment of Class I administrative penalty order pursuant to Section 309(g) of the Clean Water Act.
 - c. Initiation and assessment of a Class II administrative penalty for continuing violation pursuant to Section 309(g) of the Clean Water Act.
 - d. Referral of the case to the U.S. Attorney with a recommendation for a civil or criminal action.
 - e. If the Corps determines that an after-the-fact application is appropriate, it will be reviewed following the appropriate procedures.
 - f. Any other appropriate response.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1718
BALTIMORE, MD 21203-1718

MDSPGP-2 PERMIT COMPLIANCE, SELF-CERTIFICATION FORM (10/1/01)

Corps Permit No. _____ Date of Issuance _____

Project Name _____ Applicant Name _____

Waterway _____ County _____

Dear Permittee:

In accordance with the compliance certification condition of your MDSPGP-2 authorization, you are required upon completion of all permitted work, or if mitigation/compensation is required, within one year from the date of issuance of the above referenced permit, to complete and sign this certification form and return it to the Corps of Engineers, Baltimore District to the address shown above and include ATTN: CENAB-OP-R.

Please note that the permitted activity is subject to compliance inspections by U.S. Army Corps of Engineers representatives.

As a condition of this permit, failure to return this notification form, provide the required information below, or to perform the authorized work in compliance with the permit, can result in suspension, modification or revocation of your authorization in accordance with 33 CFR Part 325.7 and/or administrative, civil, and/or criminal penalties, in accordance with 33 CFR part 326.

Please provide the following information:

1. Date authorized work commenced: _____ 2. Date authorized work completed: _____

3. Was all work and any required mitigation, completed in accordance with your MDSPGP-2 authorization, including all general and/or specific conditions? YES ___ NO ___

4. Explain in detail any deviations to the authorized work and/or mitigation (use additional sheets if necessary) _____

5. Was mitigation accomplished through a contribution to the Maryland Nontidal Wetlands Compensation Fund? YES ___ NO ___ (if NO complete Nos. 6 and 7 below).

6. Wetland Mitigation: Required? YES ___ NO ___ Required Completion Date _____
Completed? YES ___ NO ___ Mitigation Monitoring Reports Required? YES ___ NO ___

7. Attach labeled photographs showing completed work including mitigation area(s).

I hereby certify that, except as noted above, that all work, including mitigation, has been completed in accordance with the terms and conditions, including special conditions of the above referenced permit.

Signature of Permittee _____ Date _____

Signature of Contractor/Agent _____ Date _____

Address: _____

Address: _____

Telephone: _____

Telephone: _____



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

Corps Permit Number

MDSPGP-2
CATEGORY I ACTIVITIES
Shoreline/Bank Stabilization Activities
Tidal Shoreline Erosion Control Structures (Not Revetments)

This activity authorizes discharges of dredged or fill material associated with construction of a shoreline erosion control structure. All work authorized by this activity, including discharges, must comply with all activity-specific impact limits and conditions listed below, in addition to the general conditions of this permit. Work, including discharges, that does not meet the impact limits and/or conditions does not qualify for authorization under Category I and will be reviewed under Category III and alternate Corps permit review. (Sections 10 and 404; limited to all tidal waters and wetlands.)

A. Impact Limits: The erosion control structure is limited to 300 feet in length along the shoreline, must not exceed 10 feet channelward of the mean high water line and must not impact more than 10% of any adjacent marsh, wetland or submerged aquatic vegetation (SAV), with the total impact to Waters of the United States, including wetlands, less than 3,000 square feet.

B. Conditions:

1. Application must be submitted to MDE for Federal authorization.
2. The discharge must be part of a single and complete project that includes all attendant features, both temporary and permanent. (See General Condition VI.A.5 concerning "single and complete project.")
3. No material may be placed in excess of the minimum needed for erosion protection.
4. Only shore erosion control structures other than revetments are authorized by this activity. Toe protection for new bulkheads is also authorized.
5. The erosion control structure must be constructed parallel to the uplands.
6. The erosion control structure must be constructed as close to the uplands as structurally feasible.
7. This activity does not authorize reclaiming eroded land.
8. No material must be of the size or type or placed in any location or in any manner, so as to impair surface water flow into or out of any wetland area.
9. Filter cloth must be used or the project must otherwise be designed and constructed to prevent soil from washing into the waterway.



REPLY TO
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DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

Corps Permit Number

MDSPGP-2
CATEGORY I ACTIVITIES
Boating/Navigation-Related Structures and Activities
Piers

This activity authorizes private, non-commercial piers that meet the criteria in COMAR 26.24.04.02. Piers authorized by this activity must comply with all activity-specific conditions listed below, in addition to the general conditions of this permit. Piers that do not meet these conditions do not qualify for authorization under Category I and will be reviewed under Category III or alternate Corps permit review. (Section 10; limited to all tidal waters.)

Conditions:

1. Application must be submitted to MDE for Federal authorization.
2. The project must be part of a single and complete project that includes all attendant features, both temporary and permanent. (See General Condition V1.A.5 concerning "single and complete project.")
3. This activity does not authorize the construction of a pier, or any addition, if its most channelward end is in water depths of 2 feet or less below mean low water.
4. This activity authorizes only 1 pier and 4 boat hoists or lifts per property.
5. The width of the main section of the pier must not exceed 6 feet.
6. The total area of all fixed and floating auxiliary platforms including Ts, Ls, and step down platforms must not exceed 200 square feet and must not be located over vegetated wetlands.
7. Platforms must not be constructed within the landward 50% of the main pier section.
8. The project must not create more than 4 boat slips.
9. The project must not include more than 2 osprey poles per property.
10. The project must not include more than 2 three-pile dolphins.
11. The project must not include more than two, 3-foot wide finger piers, and the finger piers must not exceed 50 % of the proposed slip length.
12. The finger piers must be constructed on the landward side of the end of a private pier.
13. The project must meet the minimum extended property line setback requirements established by the local jurisdictions in which the activity is proposed.
14. In localities where there are no set back requirements, the structure(s) must be constructed in a manner that does not obstruct ingress and egress from adjacent properties.
14. Piers over vegetated tidal wetlands must be constructed a minimum of 3 feet above the wetlands.
15. Piers must not extend within 100 feet of an MDE-approved ski course.
16. Piers must not extend more than a distance of 25 % of the width of the waterway, channelward of the mean high water line and/or vegetated tidal wetlands; provided the pier does not come within 20 feet of a marked or commonly used channel (natural deep water) or within 150 feet of the horizontal limits of a Federal navigation channel.
17. The project must not obstruct the flow of the tide
18. This activity does not authorize dredging