PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184, LOT 1
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

PROPERTY OWNERS WITHIN 200'

BLOCK	LOT	ADDRESS
183	2	RMC LLC 7 LAUREL AVE KEANSBURG, NJ 07734
183	3.03	BOROUGH OF KEANSBURG 29 CHURCH ST KEANSBURG, NJ 07734
3	1.01	BEACHWAY LUXURY TOWNHOMES
	1.04	BEACHWAY BROOKLYN, NY 11230
3	1.03	BEACHWAY APARTMENTS LLC 1009 E 14TH STREET BROOKLYN, NY 11230
3	1.005	FRANCO LUIGI & TORRES EDGAR F 516 BEACHWAY AVENUE KEANSBURG, NJ 07748
3	1.006	MAZZA, MICHAEL & DOLORESSI 8304 12th AVENUE BROOKLYN, NY 11228
3	1.007	YOUSEF, MAAROOF M. & TAMARA BEBENKO 154 BRAHMA AVENUE BRIDGEWATER, NJ 08807
3	1.008	GOLUB JANET 661 MONMOUTH AVENUE PORT MONMOUTH, NJ 07758
3	1.009	ROME JOANNE LYNN & COCO KIM LEE 582 BEACHWAY AVE UNIT 9 KEANSBURG, NJ 07734
3	1.01	HOFFMAN, JASON 586 BEACHWAY AVENUE KEANSBURG, NJ 07734
3	1.011	CANTILLON, MARC & MO, ZHIHONG LILY 134 WALNUT STREET LIVINGSTON, NJ 07039
3	1.012	LIN, PETER S. 30 N MOUNTAIN AVE CARRIAGE MONTCLAIR, NJ 07042
3	1.013	ELKASIM, SHARIN 598 BEACHWAY AVENUE KEANSBURG, NJ 07734
3	2	JERSEY BEANS COLD BREW LLC 16 SOUTHSIDE AVE ATL HIGHLANDS, NJ 07716
3	3	INTELLI, T & D & PARDO, F & J 216 RAMBLER AVE NEW MILFORD, NJ 07646
3	4	LOWREY ANNA MARIE 5805 BRIERCLIFF ROAD KNOXVILLE, TN 07734
3	5	O'KEEFE, JAMES J & KATHI A 183 SEABREEZE WAY KEANSBURG, NJ 07734
3	6	BENNETT, BARBARA 179 SEABREEZE WAY KEANSBURG, NJ 07734
3	7	MEJIA MONICA & MANUEL & SANDRA 175 SEABREEZE WAY KEANSBURG, NJ 07734
3	8	NEGRI, JOSEPH SR. & JOSEPH, JR. 105 DAUM ROAD MANALAPAN, NJ 07726
3	9	LUPINO, CHARLES & DOROTHY 167 SEABREEZE WAY KEANSBURG, NJ 07734
3	10	ULATOWSKI, FRANK L. JR. 163 SEABREEZE WAY KEANSBURG, NJ 07734
3	11	ALPAGUH MARK JR 159 SEABREEZE WAY KEANSBURG, NJ 07734
3	12	TRAPASSO, MARCELLA 155 SEABREEZE WAY KEANSBURG, NJ 07734
3	13	DOINOV, ROBERT, LILIANA & ANGEL 153 SEASBREEZE WAY KEANSBURG, NJ 07734
3	14	COMRAS, JENNIFER 130 MERIDEN ROAD BOONTON, NJ 07005
3	15	CHERONE, LOUIS & JANE 15 HUGO ST CLIFRON, NJ 07012
3	16	MCLEOD, SHARON 141 SEABREEZE WAY KEANSBURG, NJ 07734
3	17	20 OAKWOOD PLACE, LLC 244 OCEAN AVE APT 4 SEA BRIGHT, NJ 07760
3	18	NAPP, SUSAN & NEEDHAM, JASON 9 OAKWOOD PLACE KEANSBURG, NJ 07734
3	1.001	SAMUEL VINCENT L 500 BEACHWAY AVE #1 KEANSBURG, NJ 07734
3	1.002	KOSBAB CHARLES & DELORES 504 BEACHWAY AVE KEANSBURG, NJ 07734
3	1.003	BINETTI GIULIO 508 BEACHWAY AVE KEANSBURG, NJ 07734
3	1.004	PAGE ANTHONY KYLE 512 BEACHWAY AVE KEANSBURG, NJ 07734
5	1.01	LAKSHMANAN KISHORE KUMAR & POORANI SR 16 DEERFIELD TRAIL MOMOUTH JUNCTION NJ 08852
5	2.01	WINSLOW ELIZABETH 480 BEACHWAY AVE KEANSBURG, NJ 07734
5	3.01	DEMOBITZ EDWARD 450 BEACHWAY AVE KEANSBURG, NJ 07734
5	21	ORLANDO-FEDE JANICE 125 SEABREEZE WAY KEANSBURG, NJ 07734
5	22	CABE WENDY R 127 SEABREEZE WAY KEANSBURG, NJ 07734
5	23	RUSSO MICHAEL 129 SEABREEZE WAY KEANSBURG, NJ 07734
5	24	PIETRO ALAMIA 137 SEABREEZE WAY KEANSBURG, NJ 07734

UTILITY CONTACTS

MONMOUTH COUNTY PLANNING BOARD
HALL OF RECORDS ANNEX
FREEHOLD, NJ 07728

BOARD OF FIRE COMMISIONERS
29 CHURCH STREET
KEANSBURG, NJ 07734

VERIZON
540 BROAD STREET
NEWARK, NJ 07102

NJ NATURAL GAS CO.
1415 WYCKOFF ROAD
WALL TOWNSHIP, NJ

KEANSBURG WATER & SEWER
29 CHURCH STREET
KEANSBURG, NJ 07734

JERSEY CENTRAL POWER & LIGHT
ONE RIVER CENTRE
331 NEWMAN SPRINGS ROAD, BLDG 3
RED BANK, NJ 07701

CABLEVISION RARITAN VALLEY
275 CENTENNIAL AVENUE CN6805
PISCATAWAY, NJ 08855
ATTN CONSTRUCTION DEPT

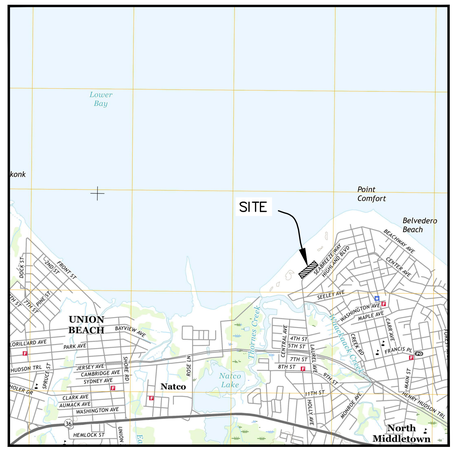
SHEET INDEX

No.	Description	Revision Date
1.	COVER SHEET	ORIGINAL SUBMISSION
2.	EXISTING CONDITIONS & DEMOLITION PLAN	ORIGINAL SUBMISSION
3.	LAYOUT PLAN	ORIGINAL SUBMISSION
4.	TRUCK TURNING	ORIGINAL SUBMISSION
5.	GRADING PLAN	ORIGINAL SUBMISSION
6.	ADA RAMP PLAN	ORIGINAL SUBMISSION
7.	UTILITY PLAN	ORIGINAL SUBMISSION
8.	PROFILES	ORIGINAL SUBMISSION
9.	LANDSCAPE PLAN	ORIGINAL SUBMISSION
10.	LIGHTING PLAN	ORIGINAL SUBMISSION
11.	LANDSCAPE & LIGHTING DETAILS	ORIGINAL SUBMISSION
12.	SOIL EROSION & SEDIMENT CONTROL PLAN	ORIGINAL SUBMISSION
13.	SOIL EROSION & SEDIMENT CONTROL DETAILS	ORIGINAL SUBMISSION
14.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION
15.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION
16.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION

ROAD MAP

NORTH

400 200 0 500 1000 1500
500 300 100
GRAPHIC SCALE
1 inch = 500 feet



LOCATIONAL KEY MAP
KEYPORT NJ-NY QUADRANGLE

NJSPCS_NAD_83

1600 800 0 2000 4000 6000
2000 1200 400
GRAPHIC SCALE
1 inch = 2000 feet

AERIAL MAP

TAX MAP

400 200 0 500 1000 1500
500 300 100
GRAPHIC SCALE
1 inch = 500 feet

GENERAL NOTES

1. APPLICANT: BEACHWAY AVENUE REALTY, LLC, 7 HEYWARD HILLS DRIVE, HOLMDEL, NJ 07733 — OWNER: PIZZO AT KEANSBURG, LLC, 1065 US HIGHWAY 22, BRIDGEWATER, NJ 08807
2. PROJECT SITE KNOWN AND DESIGNATED AS LOT 1; BLOCK 184 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE BOROUGH OF KEANSBURG, NEW JERSEY (SHEET 33), CONTAINING A TOTAL 2.71 ACRES.
3. LOT INFORMATION AND TOPOGRAPHY BASED UPON SURVEY ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 184, LOT 1, SITUATED IN THE BOROUGH OF KEANSBURG, NEW JERSEY, DATED 09/01/23" PREPARED BY MIDATLANTIC ENGINEERING PARTNERS.
4. SITE COORDINATES: 589,598' N, 591,766' E
5. HORIZONTAL DATUM: NAD 83 VERTICAL DATUM: NAVD 88
6. THE SITE IS LOCATED WITHIN ZONE AE (EL 12) AND PARTIALLY WITHIN ZONE VE (EL 14-16) ACCORDING TO FEMA PRELIMINARY FLOOD INSURANCE RATE MAP NUMBER 34025C0034G HAVING AN EFFECTIVE DATE OF JANUARY 31, 2014. THE SITE IS LOCATED WITHIN ZONE AE (EL 11) ACCORDING TO FEMA FLOOD INSURANCE RATE MAP NUMBER 34025C0034F HAVING AN EFFECTIVE DATE OF SEPTEMBER 25, 2009. THE PROPOSED DEVELOPMENT WILL BE LOCATED IN AREAS WITHIN ZONE AE.
7. THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES (INCLUDING BUT NOT LIMITED TO SANITARY SEWERS, STORM SEWERS, POTABLE WATER LINES AND APPURTENANCES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CATV LINES AND UNDERGROUND STORAGE TANKS) THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF THE WORK ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY IN THE FIELD ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES OR OTHER CONSTRUCTION OBSTACLES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROJECT DESIGN.
8. FINAL DESIGN TO COORDINATE WITH ARCHITECTURAL, MEP, STRUCTURAL PLANS ETC. AND MAY VARY.
9. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (1-800-272-1000) TO HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO ANY DEMOLITION, CONSTRUCTION, ABANDONMENT, SOILS INVESTIGATION, AND/OR EXCAVATIONS.
10. ALL CONSTRUCTION AND DEMOLITION SHALL CONFORM WITH ANY APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND TO CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES REMAIN THE OBLIGATION OF THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.
11. ALL SIGNAGE TO BE POSTED IN ACCORDANCE WITH THE UNITED STATES DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS (MUTCD), LATEST EDITION.
12. THE CONTRACTOR'S WORK SHALL BE IN CONFORMANCE WITH NJDOT 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION', LATEST EDITION.

ZONING SCHEDULE BOROUGH OF KEANSBURG	ZONE: BEACHWAY AVENUE WATERFRONT REDEVELOPMENT PLAN			
PROPOSED PERMITTED USE	MULTI-FAMILY RESIDENTIAL			
	BLOCK 184, LOT 1			
	REQUIRED	EXISTING	PROPOSED	COMPLIES
MIN. LOT AREA	2.00 AC	2.71 AC	2.71 AC	YES
MIN. DEVELOPABLE AREA	2.00 AC [1]	2.65 AC [1]	2.65 AC [1]	YES
MIN. LOT FRONTAGE	150 FT	150 FT	687.3 FT	YES
MIN. FRONT SETBACK	50 FT	N/A	79.94 FT	YES
MIN. SIDE SETBACK (EACH)	10 FT	N/A	11.00 FT	YES
MIN. REAR SETBACK	N/A [2]	N/A	11.78 FT	YES
MAX. LOT COVERAGE	80% [3]	33.2%	78.46%	YES
MAX. FLOOR AREA RATIO (FAR) [4]	2.5 [1]	N/A	1.71	YES
MIN. GROSS FLOOR AREA	75,000 SF	N/A	201,471 SF	YES
MAX. RESIDENTIAL DENSITY	50 DWELLINGS/ACRE	N/A	35.4 DWELLINGS/ACRE	YES
MAX. BUILDING HEIGHT	6 STORIES OR 70 FT	N/A	5 STORIES / 56.5 FT	YES
MIN. OPEN SPACE [5]	30%	N/A	14.5% V	NO

[1] DEVELOPABLE ACRES (LAND FREE OF WETLANDS, BEACHES, DUNES, EASEMENTS, OR OTHER ENCUMBERANCES)
[2] NO REQUIREMENT EXCEPT SETBACKS FROM DUNES SHALL BE SUBJECT TO CAFRA REQUIREMENTS.
[3] PER CAFRA REGULATIONS
[4] GROUND LEVEL PARKING WITHIN PROPOSED STRUCTURES SHALL NOT BE INCLUDED IN CALCULATION OF FAR.
[5] OPEN SPACE AREA (17,106 SF) = ROOF AREA (10,866 SF) + REAR AND SIDE YARD AREA (6,240 SF).
V VARIANCE REQUESTED

OFF-STREET PARKING (REQUIRED 9 FT X 18 FT SPACES)

REQUIRED OFF-STREET PARKING

Multi-Family Dwelling (RSIS): (1)
2.0 spaces / 2 bedroom-dwelling unit
96 units * 2.0 = 192 parking spaces
Total Required = 192 parking spaces

10% EV reduction =19.2 spaces (2)

Total = 172.8 **SAY 173 Spaces**

MINIMUM MAKE READY EVSE

15% of total required (192 Spaces) = 28.8 **SAY 29 EVSE Spaces** (3)

Accessible EVSE 5% of total (29) = 1.5 **Say 2 Accessible EVSE Spaces** (4)

1/3 of Total EVSE provided at time of construction **= 10 EVSE Spaces**

PROPOSED OFF- STREET PARKING

Total Proposed = **199 parking spaces**
Including 6 Van Accessible parking spaces
Including 27 EVSE spaces
Including 2 EVSE Van Accessible parking spaces

ON-STREET PARKING (7 FT X 25 FT SPACES)

Beachway Avenue = 14 proposed parallel parking spaces

(1) Per RSIS: N.J.A.C. 5:21-4.16 Table 4.4 Note C, Parking Requirements based upon 2-Bedroom Garden Apartment Standard.
(2) Pursuant to P.L. c.171, A parking space prepared with electric vehicle supply equipment or Make-Ready equipment pursuant to this section shall count as at least two parking spaces for the purpose of complying with a minimum parking space requirement. This subsection shall result in a reduction of no more than 10 percent of the total required parking.
(3) Pursuant to P.L. c.171, prepare as Make-Ready parking spaces at least 15 percent of the required off-street parking spaces, and install electric vehicle supply equipment in at least one-third of the 15 percent of Make-Ready parking spaces.
(4) Pursuant to P.L. c.171, Throughout the installation of electric vehicle supply equipment in the Make-Ready parking spaces, at least five percent of the electric vehicle supply equipment shall be accessible for people with disabilities.

CAFRA Compliance Chart – Lot Coverage Breakdown

	Pre-Development Coverage		Post-Development Coverage	
Building	0 SF	0%	36,770 SF	31.18%
Sidewalk	294 SF	0.2%	6,763 SF	5.73%
Pavers	0 SF	0%	1,825 SF	1.55%
Pavement	38,316 SF	32.5%	45,643 SF	38.70%
Retaining Wall	0 SF	0%	1,527 SF	1.30%
Total Impervious	38,610 SF	32.7%	92,528 SF	78.46%
Vegetative Cover	79,317 SF	67.3%	25,399 SF	21.54%
Total	117,927 SF			

CAFRA Compliance Chart – Coastal Metropolitan Planning Area

	Required	Proposed
Impervious Coverage Percentage	80%	78.46%
Tree Preservation Percentage for Forested Portion of Site	10%	N/A
Tree Preservation and/or Planting Percentage for Unforested Portion of Site	0%	>0%
Open View Corridor along Waterfront Frontage	30%	30.6%

APPROVED BY THE BOROUGH OF KEANSBURG PLANNING BOARD OF ADJUSTMENTS AS A PRELIMINARY / FINAL MAJOR SITE PLAN

CHAIRPERSON DATE

SECRETARY DATE

PLANNING BOARD ENGINEER DATE

DRAWN BY: M.B | CHECKED BY: JMF
HORIZONTAL SCALE: AS SHOWN | VERTICAL SCALE: N/A
PROJECT No.: BAR-2301
DATE: 03/12/24

DATE	REVISIONS	DRAWN BY	CHECKED BY

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050201500
Certificate of Authorization No. GA51A5858200

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
COVER SHEET
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
20 W. State Street, Media, PA 19063, 610-565-0520
591 Washington St. 3rd Floor, Morristown NJ 07960, 973-716-8662
1971 Highway 34, Suite 201, Wall Township, NJ 07719, 732-723-5899
2200B Boyer Rd. Suite 107, Mt. Laurel Twp., NJ 08054, 609-910-4450

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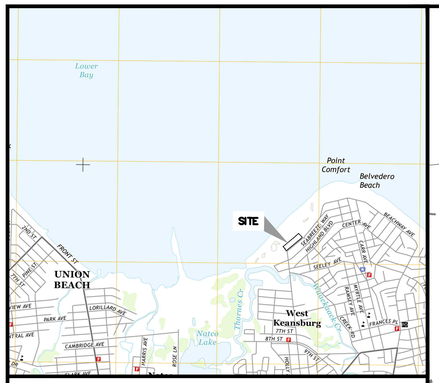
Sheet Number
1 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave – Keansburg\Civil\DWG\01–Title.dwg
Plot Time: Mar 12, 2024 – 5:05pm



LOCATION MAP

KEYPORT NJ–NY USGS QUAD MAP
SCALE: 1"=2000'

ARMY CORPS OF ENGINEERS BEACH AND DUNE RECONSTRUCTION PROJECT LANDWARD LIMIT AS SHOWN ON DEED OF DEDICATION AND SHORE PROTECTION EASEMENT PLAN (LOCATION APPROXIMATE)

ZONE X

ZONE AE (EL 11)

RARITAN BAY

N.J.S.P.C.S. (NAD83)

LIMIT OF MODERATE WAVE ACTION ZONE PER FEMA PRELIMINARY FLOOD INSURANCE RATE MAP NUMBER 34025C0034G HAVING AN EFFECTIVE DATE OF JANUARY 31, 2014.

TOE OF VEGETATED SAND DUNE PER REFERENCE #2

WOODED AREA/DUNES

PER LIBER H-10 PAGE 7 "AREA TO BE DEEDED TO THE STATE OF NEW JERSEY UPON ISSUANCE OF THIS GRANT" (EXCEPTION #15 ON REFERENCED TITLE REPORT) (APPROXIMATE LOCATION)

DUNE LIMIT AS PER ECOLSCIENCES, INC 2017

CB=N44°51'34"E 117.51'
R=585.60' L=117.71'

S50°37'04"W 10.00

N50°37'04"E 547.15'

LIMIT OF GRANT IN DB 8545 PG 8970

6.8 BLOCK RETAINING WALL

GUARD RAIL

CONSERVATION RESTRICTION EASEMENT DB 9321 PG 1021 (EXCEPTION #10)

S39°22'56"E 86.48'

N39°22'56"W 96.84'

BITUMINOUS PARKING AREA

**MEAN HIGH WATER LINE (EL=2.4–1968) PER TAX MAP & REFERENCE #2 AREA HAS BEEN GRANTED TO LOT 1 BLOCK 184 BY DB 8545 PG 8970 (EXCEPTION 15)

PIPE TO BE CUT AT PROPERTY LINE AND REMOVED

BELGIAN BLOCK CURB

TYPE 'B' INLET TC 10.88 GR 10.24 INV 6.74

TYPE 'B' INLET TC 11.32 GR 10.65 INV 7.35 (12") INV 7.25 (15")

APPROXIMATE LOCATION OF PERMANENT HURRICANE PROTECTION EASEMENT (EXCEPTION #11 AND 12 ON REFERENCED TITLE REPORT)

NJDEP TIDELANDS BUREAU MAPS (588–2142) (APPROXIMATE LOCATION–PER REFERENCE #2) AREA ON THE WATERWARD SIDE OF THE CLAIM LINE HAS BEEN GRANTED TO LOT 1 BLOCK 184 BY DB 8545 PG 8970 (EXCEPTION 15)

2'x2' YARD DRAIN GR 10.93 UNABLE TO OPEN

2'x2' YARD DRAIN GR 10.95 UNABLE TO OPEN

12" WIDE STRIP OF LAND PARALLEL WITH AND ADJACENT TO ALL STREET AND PARKING LOT LINES (EXCEPTION #14 ON REFERENCED TITLE REPORT)

ALL IMPROVEMENTS WITHIN PROPERTY BOUNDARY TO BE REMOVED UNLESS OTHERWISE NOTED.

BLOCK 184
LOT 3
CONTAINING
329,296 S.F.
7.56 ACRES

S50°37'04"E 176.74'

BLOCK 184
LOT 1
CONTAINING
117,927 S.F.
2.71 ACRES

3 PHASE UTILITY POLE TO BE REMOVED AND RELOCATED ONSITE

3 PHASE UTILITY POLE TO BE REMOVED AND RELOCATED ONSITE

CASTING TO BE REMOVED AND REPLACED WITH TYPE E INLET FRAME & GRATE

CASTING TO BE REMOVED AND REPLACED WITH TYPE E INLET FRAME & GRATE

**LANDS NOW OR FORMERLY BELOW MEAN HIGH WATER (APPROXIMATE LOCATION) PER REFERENCE #2 AREA HAS BEEN GRANTED TO LOT 1 BLOCK 184 BY DB 8545 PG 8970 (EXCEPTION 15)

UTILITY POLES TO BE REMOVED AND RELOCATED ONSITE

UTILITY POLE TO BE REMOVED AND RELOCATED ONSITE

UTILITY POLE TO BE REMOVED AND RELOCATED ONSITE

POINT OF BEGINNING

S39°06'05"W 52.08'

CAPPED PIN FND

SAN MH RIM 9.38 UNABLE TO OPEN

SAN MH RIM 9.31 INV 4.51 (8") INV 4.11 (8")

STORM MH RIM 11.17 INV 0.85

STORM MH RIM 10.58 INV 5.32

VORTECHNICS UNIT RIM 9.68 (W) RIM 9.64 (E) INV 5.36

TYPE 'E' INLET GR 9.76 INV 5.31 (1) INV 5.11 (2)

TYPE 'DBL E' INLET GR 9.58 INV 5.61 (12") INV 5.53 (36") CASTING TO BE REMOVED AND REPLACED WITH TYPE 'E' INLET FRAME & GRATE

TYPE 'E' INLET GR 9.64 INV 5.29

TYPE 'B' INLET GR 9.30 INV 5.44 (1) INV 5.36 (2) INV 5.33 (3)

TYPE 'B' INLET TC 9.20 GR 8.59 INV 7.07

TYPE 'B' INLET TC 10.22 GR 9.57 INV 6.42

TYPE 'B' INLET TC 9.54 GR 8.69 INV IN 5.69 INV OUT 5.49

TYPE 'DBL E' INLET GR 9.54 INV 5.09

TYPE 'B' INLET TC 8.81 GR 8.13 INV IN 4.99 OUT

TYPE 'B' INLET GR 9.72 INV 5.33 (1) INV 5.14 (2) INV 5.12 (3)

TYPE 'B' INLET TC 9.12 GR 8.45 INV 6.55 (1) INV 2.20 (2) INV 2.10 (3)

TYPE 'B' INLET GR 9.61 INV 5.36 (12") INV 5.26 (36")

TYPE 'B' INLET TC 8.56 GR 8.69 INV 3.03 (1) INV 2.72 (2) INV 2.71 (3)

2'x2' YARD DRAIN GR 11.03 INV 6.58

2'x2' YARD DRAIN GR 10.77 INV 7.03

2'x2' YARD DRAIN GR 11.16 INV 5.41

2'x2' YARD DRAIN GR 11.41 INV IN 6.01 INV OUT 7.91

2'x2' YARD DRAIN GR 11.21 INV 8.22

ELECTRIC METER

CONCRETE

4' HIGH VINYL FENCE

POST

METAL POST

36" CPP

12" CPP

10" HDPE

15" RCP

18" RCP

8" PVC

BITUMINOUS WALK

CURB LINE

PHYSICAL CENTERLINE

S50°37'04"W 635.22'

TBR

PIPE TO BE REMOVED AND REPLACED WITH 15" RCP

PIPE TO BE REMOVED AND REPLACED WITH 15" RCP

PIPE TO BE REMOVED AND REPLACED WITH 15" RCP

CAPPED PIN FND

CAPPED PIN FND

EXTENDED SOUTHWESTERLY LINE OF OAKWOOD PLACE (POB TIE PER DEED)

BEACHWAY
(FORMERLY OCEAN AVE)
(VARIABLE R.O.W.)
BITUMINOUS PAVING

LAUREL AVENUE
(VARIABLE WIDTH)

OAKWOOD PLACE
(50' R.O.W.)

ZONE AE (EL 11)

ZONE X

LOT 1.12

LOT 1.03

LOT 1.06

BLOCK 3

TC 9.22 R=190.00' L=10.01' Δ=3°01'08"

TC 9.20 G 9.06

TC 8.41 G 8.46

TC 8.71 G 8.55

TC 9.08 G 8.70

TC 8.81 G 8.44

TC 8.67 G 8.46

TC 8.77 G 8.40

TC 8.82 G 8.44

TC 8.73 G 8.31

TC 8.76 G 8.31

TC 8.80 G 8.49

TC 8.91 G 8.72

TC 8.96 G 8.72

TC 9.14 G 8.80

TC 9.28 G 8.79

TC 8.95 G 8.98

TC 8.77 G 8.40

TC 8.86 G 8.44

TC 8.56 G 8.15

TC 8.64 G 8.15

TC 9.24 G 8.70

TC 9.35 G 8.68

TC 9.52 G 8.17

TC 9.49 G 8.33

TC 9.59 G 8.44

TC 9.61 G 9.29

TC 9.68 G 9.46

TC 9.80 G 9.42

TC 9.71 G 9.42

TC 8.63 G 9.32

TC 10.87 G 10.32

TC 11.05 G 10.40

TC 10.71 G 10.11

TC 10.34 G 9.76

TC 10.89 G 10.26

TC 11.24 G 10.55

TC 11.29 G 10.62

TC 11.50 G 10.85

TC 11.55 G 10.91

TC 11.41 G 10.91

TC 11.50 G 11.06

TC 11.57 G 10.94

TC 11.52 G 10.98

TC 11.64 G 11.04

TC 11.48 G 10.98

TC 11.62 G 11.55

TC 11.85 G 11.52

TC 12.04 G 11.69

TC 12.17 G 11.57

TC 12.34 G 11.66

TC 11.89 G 11.30

TC 12.56 G 11.92

TC 12.64 G 11.98

TC 12.77 BW 8.77

TC 12.85 BW 8.85

TC 13.25 G 11.61

TC 12.97 G 12.97

TC 12.72 G 12.04

TC 12.55 G 11.86

TC 12.58 G 11.95

TC 12.31 G 12.29

TC 12.27 G 11.59

TC 12.45 G 11.84

TC 12.47 G 11.82

TC 12.35 G 11.73

TC 11.87 G 11.26

TC 11.90 G 11.26

TC 11.66 G 11.06

TC 11.68 G 11.04

TC 11.48 G 10.86

TC 11.12 G 10.49

TC 10.12 G 9.50

TC 10.02 G 9.37

TC 9.82 G 9.20

TC 9.71 G 9.03

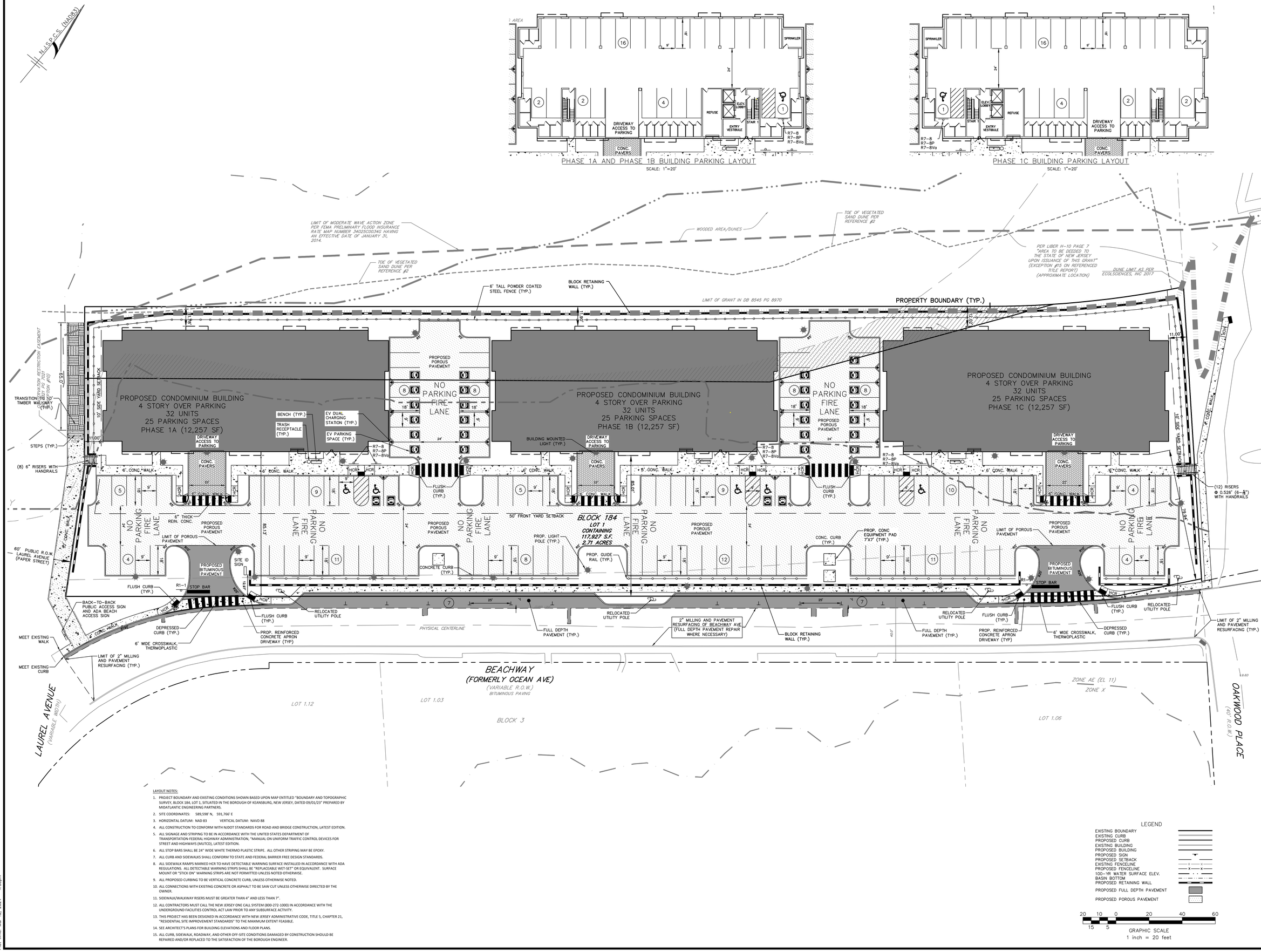
TC 9.44 G 8.81

TC 9.46 G 8.81

TC 9.24 G 8.53

TC 8.89 G 8.46

TC 8.91 G 8.46



LAYOUT NOTES:

1. PROJECT BOUNDARY AND EXISTING CONDITIONS SHOWN BASED UPON MAP ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 184, LOT 1, SITUATED IN THE BOROUGH OF KEANSBURG, NEW JERSEY, DATED 09/01/23" PREPARED BY MIDATLANTIC ENGINEERING PARTNERS.
2. SITE COORDINATES: 589,598' N, 591,766' E
3. HORIZONTAL DATUM: NAD 83 VERTICAL DATUM: NAVD 88
4. ALL CONSTRUCTION TO CONFORM WITH NJDOT STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
5. ALL SIGNAGE AND STRIPING TO BE IN ACCORDANCE WITH THE UNITED STATES DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS (MUTCD), LATEST EDITION.
6. ALL STOP BARS SHALL BE 24" WIDE WHITE THERMO PLASTIC STRIPE. ALL OTHER STRIPING MAY BE EPOXY.
7. ALL CURB AND SIDEWALKS SHALL CONFORM TO STATE AND FEDERAL BARRIER FREE DESIGN STANDARDS.
8. ALL SIDEWALK RAMPS MARKED HCR TO HAVE DETECTABLE WARNING SURFACE INSTALLED IN ACCORDANCE WITH ADA REGULATIONS. ALL DETECTABLE WARNING STRIPS SHALL BE "REPLACEABLE WET-SET" OR EQUIVALENT. SURFACE MOUNT OR "STICK ON" WARNING STRIPS ARE NOT PERMITTED UNLESS NOTED OTHERWISE.
9. ALL PROPOSED CURBING TO BE VERTICAL CONCRETE CURB, UNLESS OTHERWISE NOTED.
10. ALL CONNECTIONS WITH EXISTING CONCRETE OR ASPHALT TO BE SAW CUT UNLESS OTHERWISE DIRECTED BY THE OWNER.
11. SIDEWALK/WALKWAY RISERS MUST BE GREATER THAN 4" AND LESS THAN 7".
12. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (800-272-1000) IN ACCORDANCE WITH THE UNDERGROUND FACILITIES CONTROL ACT LAW PRIOR TO ANY SUBSURFACE ACTIVITY.
13. THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH NEW JERSEY ADMINISTRATIVE CODE, TITLE 5, CHAPTER 21, "RESIDENTIAL SITE IMPROVEMENT STANDARDS" TO THE MAXIMUM EXTENT FEASIBLE.
14. SEE ARCHITECT'S PLANS FOR BUILDING ELEVATIONS AND FLOOR PLANS.
15. ALL CURB, SIDEWALK, ROADWAY, AND OTHER OFF-SITE CONDITIONS DAMAGED BY CONSTRUCTION SHOULD BE REPAIRED AND/OR REPLACED TO THE SATISFACTION OF THE BOROUGH ENGINEER.

DATE	REVISIONS	DRAWN BY	CHECKED BY

DRAWN BY: M.B
CHECKED BY: JMF
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: N/A
PROJECT No.: BAR-2301
DATE: 03/12/24

3.12.24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050201500
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
LAYOUT PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners
1121 Highway #1, Suite 101
Wall Township, NJ 07719
732-722-5899
20 W. State Street
Media, PA 19063
610-565-0200
28 Washington St. 3rd Floor
Morristown, NJ 07960
973-716-8602
2200 Bryan Rd. Suite 200
Mt. Laurel Twp., NJ 08054
609-910-4450

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Sheet Number
3 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave – Keansburg\Civil\DWG\03-Layout.dwg
Plot time: Mar 12, 2024 – 4:56pm

N.J.S.P.C.S. (NAD83)

CONSERVATION RESTRICTION EASEMENT BOOK 7631 PAGE 1931 (EXCEPTION #10)

PROPOSED CONDOMINIUM BUILDING
4 STORY OVER PARKING
32 UNITS
25 PARKING SPACES
PHASE 1A
(12,257 SF)

NO PARKING FIRE LANE

PROPOSED CONDOMINIUM BUILDING
4 STORY OVER PARKING
32 UNITS
25 PARKING SPACES
PHASE 1B
(12,257 SF)

NO PARKING FIRE LANE

PROPOSED CONDOMINIUM BUILDING
4 STORY OVER PARKING
32 UNITS
25 PARKING SPACES
PHASE 1C
(12,257 SF)

BUILDING MOUNTED LIGHT (TYP.)

NO PARKING FIRE LANE

POST

METAL POST

PROP. LIGHT POLE (TYP.)

RELOCATED UTILITY POLE

RELOCATED UTILITY POLE

RELOCATED UTILITY POLE

RELOCATED UTILITY POLE
New Fire Truck

PHYSICAL CENTERLINE

BEACHWAY
(FORMERLY OCEAN AVE)
(VARIABLE R.O.W.)
BITUMINOUS PAVING

LOT 1.03

EXTENDED SOUTHWESTERLY LINE OF OAKWOOD PLACE (PCB TIE PER DEED)

ZONE AE (EL 11)
ZONE X

FIRE TRUCK MANEUVER

Aerial Fire Truck	
Overall Length	39.000ft
Overall Width	8.333ft
Overall Body Height	9.250ft
Min Body Ground Clearance	2.100ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

RELOCATED UTILITY POLE
New Rear-Load Garbage Truck

TRASH TRUCK MANEUVER

Rear-Load Garbage Truck	
Overall Length	35.000ft
Overall Width	8.375ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.000ft
Track Width	8.375ft
Lock-to-lock time	6.0s
Curb to Curb Turning Radius	29.300ft

GRAPHIC SCALE
1 inch = 20 feet

DRAWN BY:	CHECKED BY:
M.B	JMF

HORIZONTAL SCALE:	VERTICAL SCALE:
1"=20'	N/A

PROJECT No.: BAR-2301

DATE: 03/12/24

NO.	REVISIONS	DATE	DRAWN BY	CHECKED BY

3-12-24

Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50302500
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
TRUCK TURNING
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners
2260B Bryan Rd. Suite 201
Mt. Laurel Twp., NJ 08054
609-910-4450

1971 Highway 34, Suite 201
Wall Township, NJ 07719
732-723-5899

20 W. State Street
Media, PA 19063
610-565-0020

30 Washington St. 3rd Floor
Morristown, NJ 07960
973-716-8662

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Sheet Number
4 of 16

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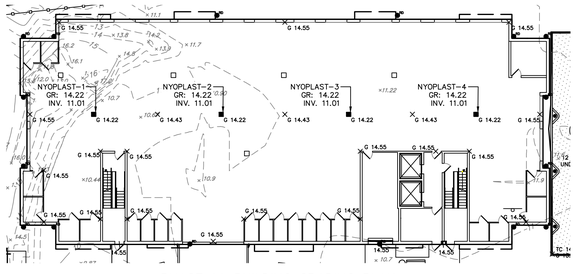
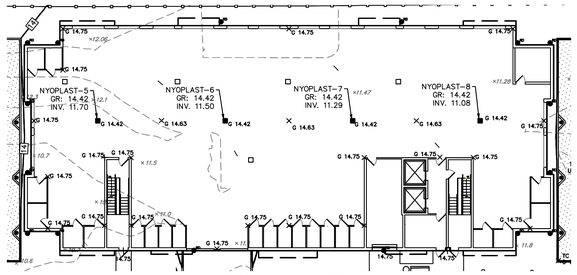


PHASE 1A BUILDING GRADING PLAN

SCALE: 1"=20'



PHASE 1B BUILDING GRADING PLAN

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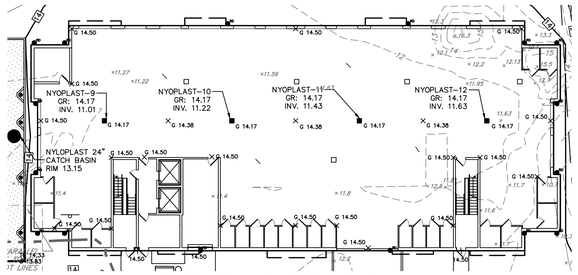
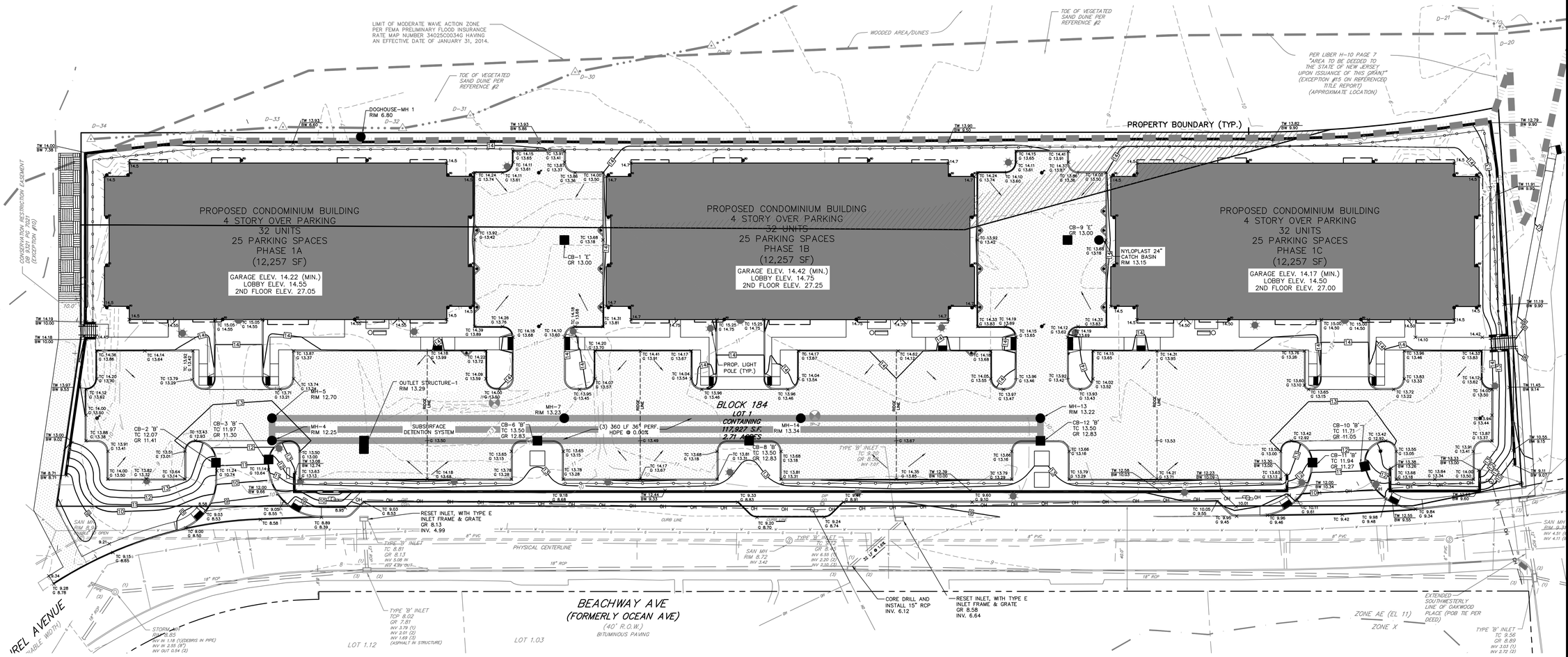


PHASE 1C BUILDING GRADING PLAN

SCALE: 1"=20'



Grading Notes

1. Horizontal Datum: NAD 83 Vertical Datum: NAVD 88
2. All curbs shall be pavement flush depressed at crosswalks and handicapped ramps to conform to applicable state and federal barrier free design standards.
3. ADA designated units are to conform to the accessibility standards set forth in the Americans with Disabilities Act. Where applicable, all walkways, ramps, risers, and improvements shall be ADA compliant.
4. All walkways to have a maximum cross slope of 2% and running slope of 5% unless otherwise noted.
5. Sidewalk/walkway risers must be greater than 4" and less than 7". Tread depth to be 11" min.
6. All proposed curbing shall have a 6" reveal, unless otherwise stated.
7. All grading within grassed areas to be a minimum of 2% and a maximum of 3:1 slope unless otherwise noted.
8. All grading in pavement areas shall be greater than 1% unless otherwise noted.
9. Positive drainage to be maintained from all buildings in accordance with applicable regulations and building code.
10. Floor elevations, adjacent grade, doorway locations and elevations shall be confirmed with architectural plans prior to construction by the contractor.
11. All grassed areas to have a minimum of 4" clean top soil when sod is being installed or 6" clean top soil for seeding applications.
12. All contractors must call the New Jersey One Call System (800-272-1000) in accordance with the Underground Facilities Control Act Law prior to any subsurface activity.
13. Soil compaction to be per architectural requirements based on slab and footing design. 95% minimum compaction required per modified proctor moisture density test procedure ASTM D1557.

LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING STORM SEWER LINE
PROPOSED STORM SEWER LINE
EXISTING INLET
PROPOSED INLET
PROPOSED MANHOLE
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
100-YR WATER SURFACE ELEV.
PROPOSED STORM CLEANOUT
PROPOSED ROOF DRAIN
PROPOSED INSPECTION PORT
FLOW ARROW

x 57.6

20 10 0 20 40 60
15 5
GRAPHIC SCALE
1 inch = 20 feet

DATE	REVISIONS	DRAWN BY	CHECKED BY

DRAWN BY: M.B
CHECKED BY: JMF
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: N/A
PROJECT No.: BAR-2301
DATE: 03/12/24

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050202200
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
GRADING PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
1901 Hurley Pk. Suite 201 Wall Township, NJ 07719 732-720-5899
20260 Ripley Rd. Suite 200 Mt. Laurel Twp. NJ 08054 609-810-0400
211 E. State Street Media, PA 19063 610-565-0000
28 Washington St. 3rd Flr. Morristown, NJ 07950 973-715-8652

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Sheet Number
5 of 16

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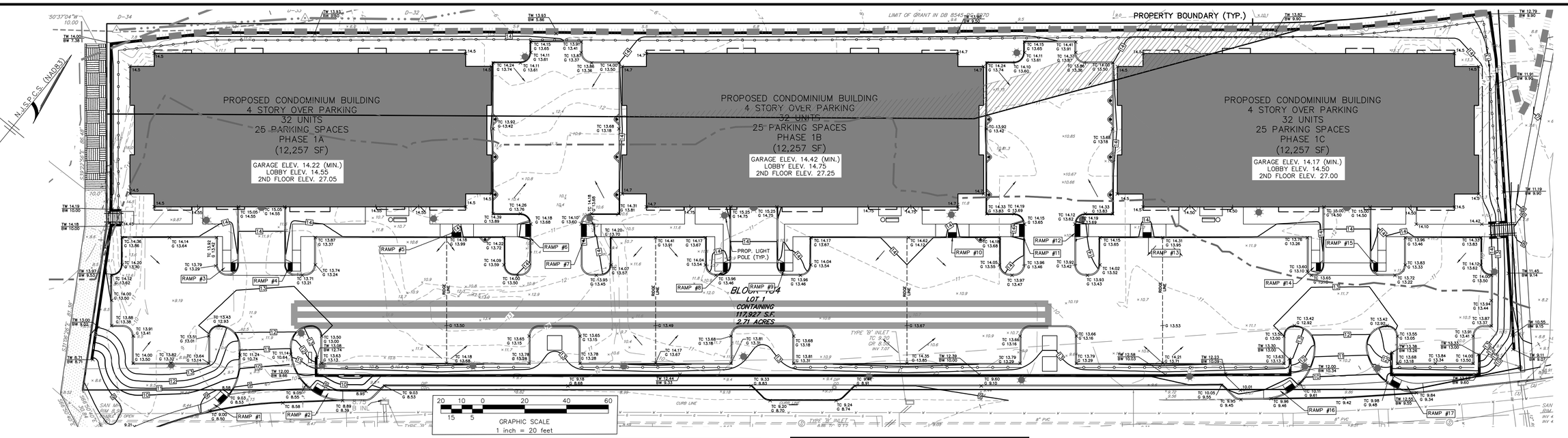

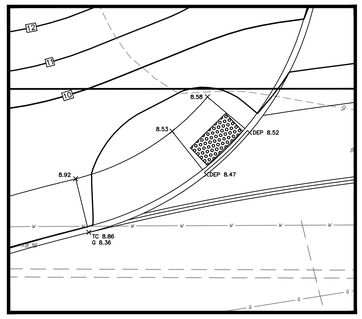

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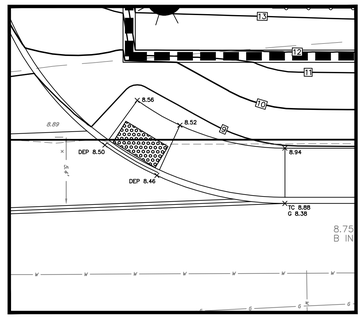

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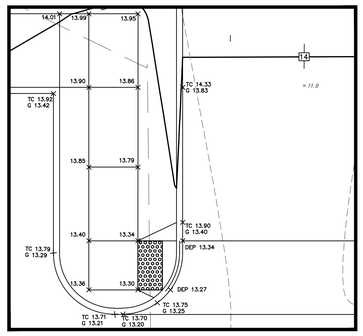

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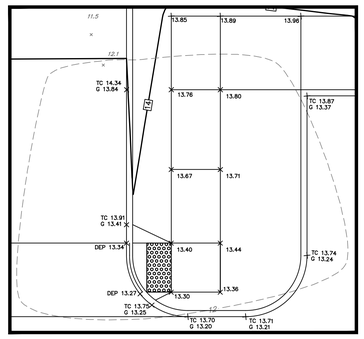

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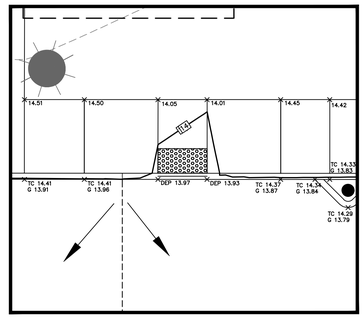

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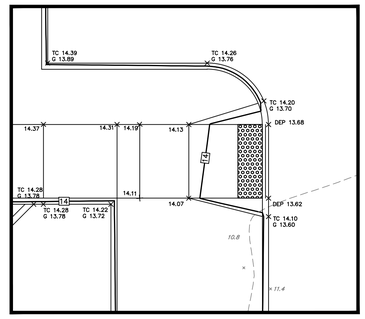

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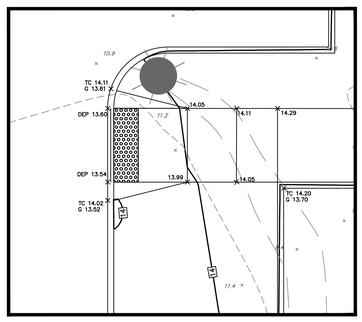

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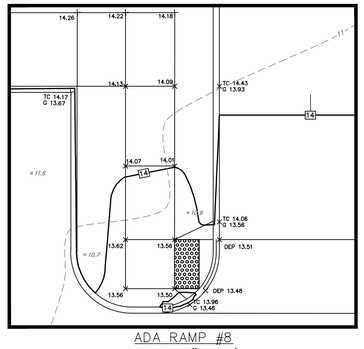

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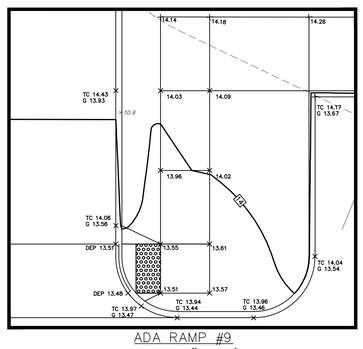

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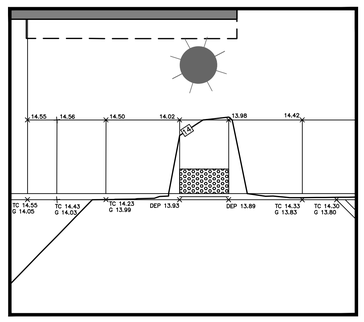

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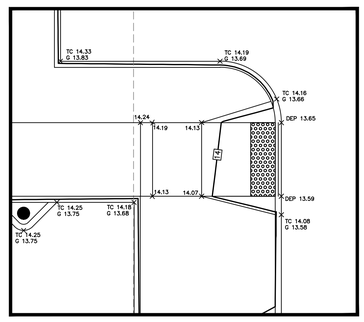

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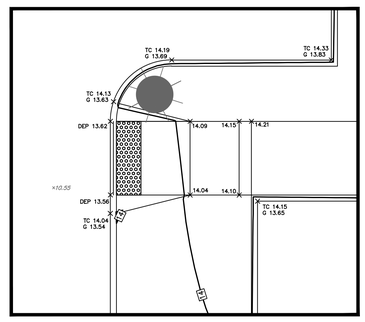

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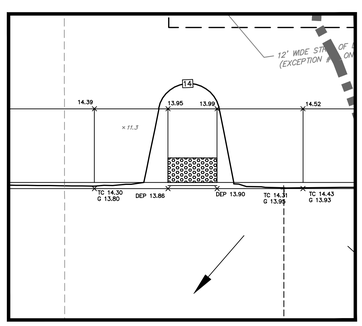

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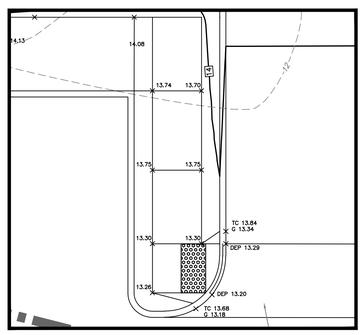

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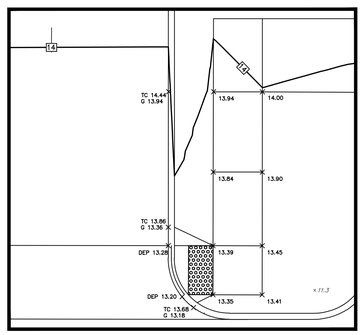

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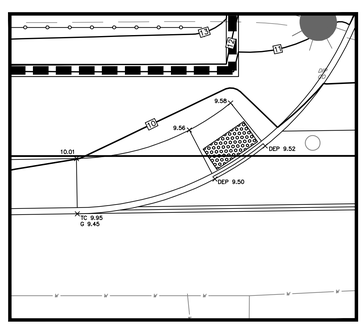

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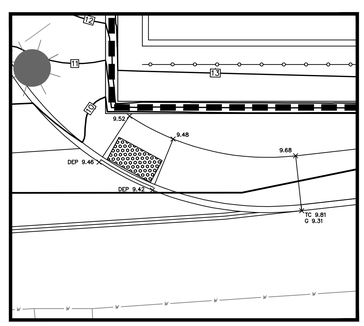

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LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING STORM SEWER LINE
PROPOSED STORM SEWER LINE
EXISTING INLET
PROPOSED INLET
PROPOSED MANHOLE
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
100-YR WATER SURFACE ELEV.

GRAPHIC SCALE
1 inch = 5 feet

DRAWN BY:	CHECKED BY:	HORIZONTAL SCALE:	VERTICAL SCALE:	PROJECT No.:	DATE:
M.B	JMF	1"=20'	N/A	BAR-2301	03/12/24

DATE	REVISIONS	DRAWN BY	CHECKED BY

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50302500
Certificate of Authorization No. GA51645Business

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
ADA RAMP PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
1971 Highway 34, Suite 201
Wall Township, NJ 07719
732-722-5899
609-910-4450
20 W. Main Street
Moorestown, NJ 08057
856-638-0220
29 Washington St. 3rd Floor
Morristown, NJ 07960
973-716-8662
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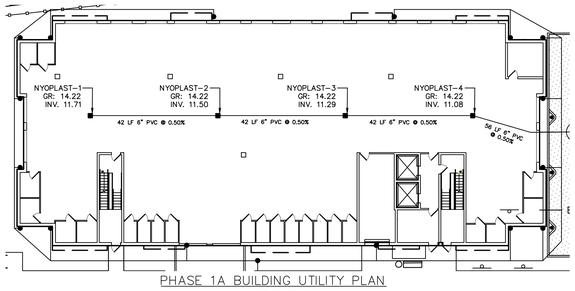
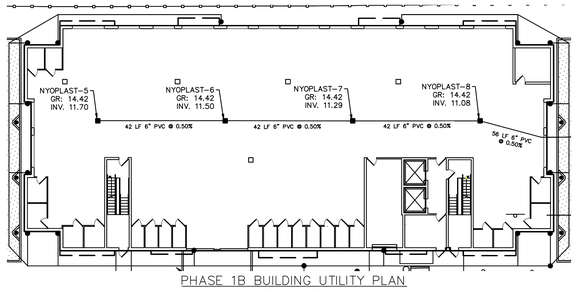
Sheet Number
6 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave – Keansburg\Civil\DWG\04–Grading.dwg
Plot Time: Mar 12, 2024 – 5:53pm



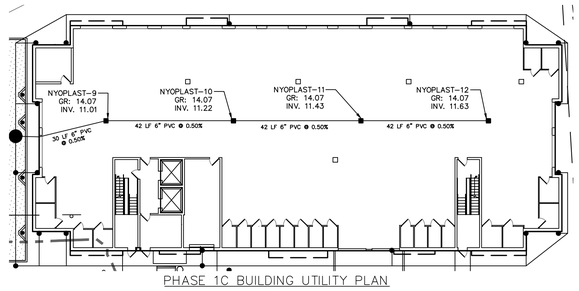
PHASE 1A BUILDING UTILITY PLAN

SCALE: 1"=20'



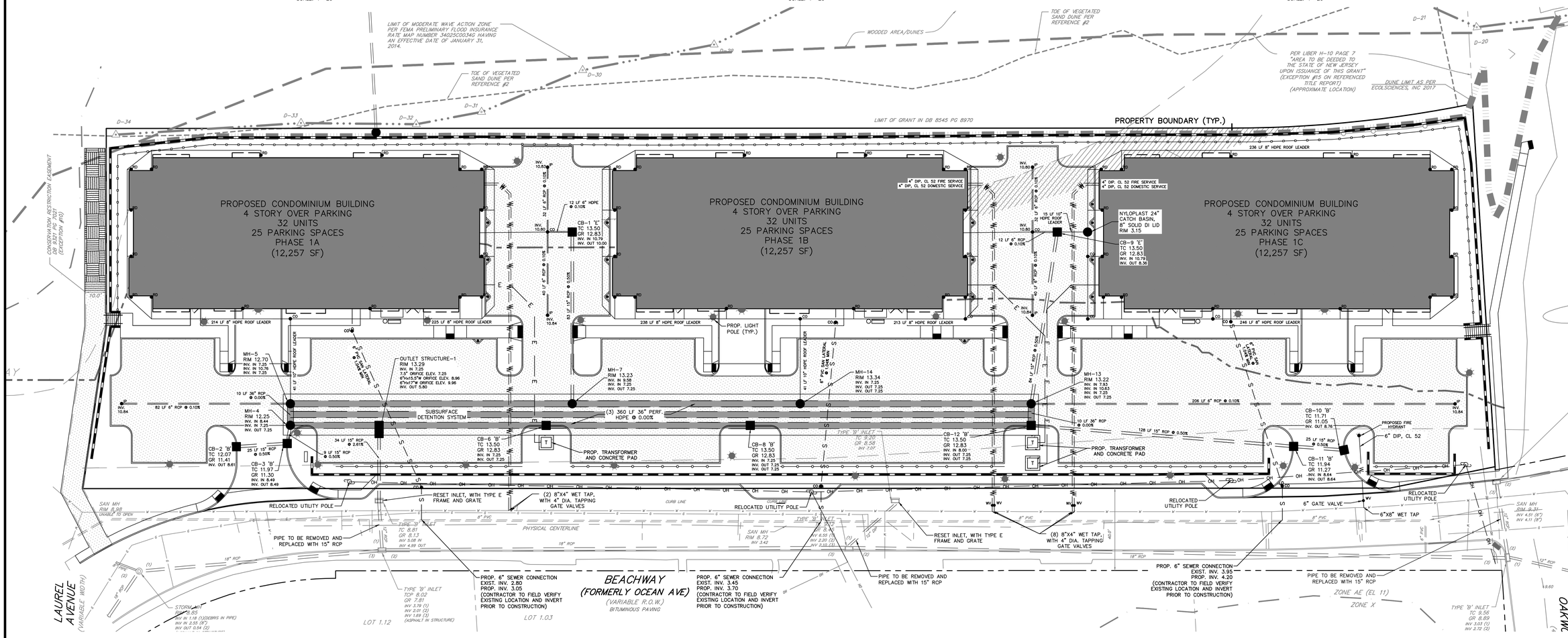
PHASE 1B BUILDING UTILITY PLAN

SCALE: 1"=20'



PHASE 1C BUILDING UTILITY PLAN

SCALE: 1"=20'



Utility Notes

1. Horizontal Datum: Deed Book 1733, Page 232 Vertical Datum: NAVD 88
2. The Horizontal Datum of this plan was measured in New Jersey Plan Coordinate Grid System as established by GPS observations using Leica Smartnet (NAD 83). The meridian and bearings labeled hereon are deed based.
3. All contractors must call the New Jersey One Call System (800-272-1000) in accordance with the Underground Facilities Control Act Law prior to any subsurface activity.
4. Attention to the contractor is directed to the fact that the approximate locations of known utility structures and facilities (including but not limited to sanitary sewers, storm sewers, potable water lines and appurtenances, natural gas lines, electric, telephone and CATV lines and underground storage tanks) that may be encountered within and adjacent to the limits of the work are shown on the plans. The accuracy and completeness of this information is not guaranteed by the engineer, and the contractor is advised to verify in the field all the facts concerning the location of these utilities or other construction obstacles prior to construction. The contractor shall notify the engineer, in writing, prior to construction, of any discrepancies which may affect the project design.
5. Contractor to perform test pits to verify existing utility depths, sizes and locations prior to connecting proposed sewer and water mains to existing sewer and water mains. The contractor shall notify the engineer in writing of any conflicts so that design modifications can be made if necessary.
6. All construction shall conform to any applicable federal, state and local regulations. Contractor has sole responsibility for site safety and to conform to and abide by all current OSHA standards or regulations. Safe construction practices remain the obligation of the contractor. The contractor shall obtain all applicable federal, state and local permits prior to construction.
7. See MEP/Architectural plans for all utility connections to building. All utility connections shall be reviewed & verified by the contractor prior to start of site construction.
8. Shop drawings and product catalog information for all water and sanitary sewer structures, conduits, materials, and appurtenances, to be provided to the project engineer for review and approval prior to purchasing.
9. All utility service connections to buildings to be located underground.
10. Pipe lengths indicated are measured center to center of each structure.
11. All sanitary and drainage structures shall be precast concrete unless otherwise specified.
12. Refer to water and sanitary technical specifications for material, installation and testing requirements.
13. At stub locations for future connections all tie rods and clamps to be installed with two (2) coats of bitumastic paint. Provide one complete section of pipe between gate valve and end cap with thrust block.

11. All sanitary and drainage structures shall be precast concrete unless otherwise specified.
12. Refer to water and sanitary technical specifications for material, installation and testing requirements.
13. Unless otherwise indicated:
    a. RCP shall be Class 3 wall, bell and spigot type with O-ring gaskets.
    b. HDPE pipes shall be ADS N-12 with soil tight joints or approved equal.
    c. DIP water main shall be Class PSI 350 cement lined ductile iron pipe (polyethylene encasement).
    d. Sanitary sewer mains and laterals shall be PVC SDR-26, push on, gasketed joint (ASTM-3034).
14. All new water mains and services shall be installed with a minimum of 4 feet of cover (relative to proposed grade) over the pipe to prevent freezing.
15. All new sanitary sewer mains and laterals shall be installed with a minimum of 3 feet of cover (relative to proposed grade) over the pipe to prevent freezing.
16. 4" sanitary sewer laterals shall be sloped at 1:48 (2.1%). 6" laterals shall be sloped at 1:96 (1.04%).
17. A 10-ft. horizontal distance shall separate water mains and sanitary sewer mains. Where such separation is not possible, the water mains and sanitary sewer mains shall be installed in separate trenches with the water main at least 18 inches above the sewer main. Where such vertical separation is not possible, the sewer main shall be constructed with watertight joints for a distance of 10 feet in either direction of the water main (N.J.A.C. 7:10-11.7(d)-5).
18. Adequate structural support of sewers and water lines at all points of crossing shall be provided to prevent excessive deflection, settlement or damage. The crossings shall be arranged such that the joints in the pipes are equidistant and as far apart as possible from the other pipe.
19. Where utilities cross beneath existing / proposed water mains or storm and sanitary sewers, the utility contractor shall provide adequate structural support by installing select backfill from the utility to the spring line of the water main or sewer. Select backfill shall be clean sand or NJDOT soil I-9 compacted to 95% of the modified proctor aggregate type density ASTM D-698 Method D. It shall extend a minimum of 10 feet each way from the centerline of the crossing.
20. Electrical, telephone, CATV and all other wire-served utility extensions and services shall be installed underground with standards established by the servicing utility company.
21. Electrical transformer pad specifications, conduit locations and installation to be coordinated with electric company prior to installation.
22. All on-site water facilities including but not limited to fire hydrants shall be privately owned and maintained by American Properties at Burlington and their successors.
23. Wet tap(s) shall be performed only with Mueller tapping sleeve with 304 SS Flange and Mueller tapping valve. Retaining gland must be used on first pipe segment from tap.
24. Proposed fire, domestic service, and irrigation line(s) for each building shall be provided with a backflow preventer, located within the interior of the building.
25. Televising between the manholes upstream and downstream of the proposed doghouse manhole shall be performed by the Contractor prior to construction of the doghouse manhole. Televising results shall be provided to the Township Engineer's office at least 72-hours prior to any doghouse manhole work being performed. After construction, televising shall again be performed by the Contractor.
26. All sanitary sewer piping and appurtenances to the point of connection into the existing Township system shall be privately owned, operated and maintained by American Properties at Burlington and their successors.
27. Proposed sanitary sewer lines and manholes locations are subject to Township review and approval along with conformance to NJDEP regulations. Sanitary sewer main piping (8-inch diameter and greater) where shown to be PVC shall be SDR-26 per ASTM D3034. Lateral piping (less than 8-inch diameter) shall be PVC SDR-26 or PVC SCH 40. Sewer lines, including laterals shall be installed to provide a minimum three feet (3') of cover from the top of pipe to the proposed grade.
28. The Township shall be notified to witness all sanitary sewer main air and mandrel testing along with manhole vacuum testing per the specifications. Contractor shall provide minimum of 72-hours advance notice.
29. Proposed off-site improvements to the Fountain Ave Pump Station to accommodate flows from this project involve the rehab/replacement of the existing pump control panel, starters and wet well level indicator.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- 100-YR WATER SURFACE ELEV.
- EXISTING SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- EXISTING INLET
- PROPOSED INLET
- PROPOSED MANHOLE
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY CLEANOUT
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING HYDRANT
- PROPOSED WATER HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER LATERAL
- EXISTING GAS LINE
- PROPOSED GAS LINE
- PROPOSED STORM CLEANOUT
- PROPOSED ROOF DRAIN
- PROPOSED INSPECTION PORT
- PROPOSED ELECTRIC LINE
- PROPOSED TRANSFORMER

20 10 0 20 40 60
15 5
GRAPHIC SCALE
1 inch = 20 feet

DRAWN BY:	CHECKED BY:
M.B	JMF
HORIZONTAL SCALE: 1"=20'	VERTICAL SCALE: N/A
PROJECT No.: BAR-2301	
DATE: 03/12/24	

DATE	REVISIONS	DRAWN BY	CHECKED BY

3/12/24

Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50302500
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
UTILITY PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
10000 Bridge Rd, Suite 200, Mt. Laurel Twp. NJ 08054, 609-910-4450
1971 Highway 34, Suite 201, Wall Township, NJ 07719, 732-720-0889
20 Watermark Dr, 3rd Floor, Morristown, NJ 07960, 973-714-8802
201 W. Glen Street, Media, PA 19063, 610-466-0020

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Sheet Number
7 of 16

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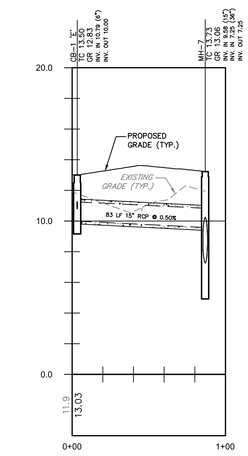
Plot time: Mar 12, 2024 - 4:03pm



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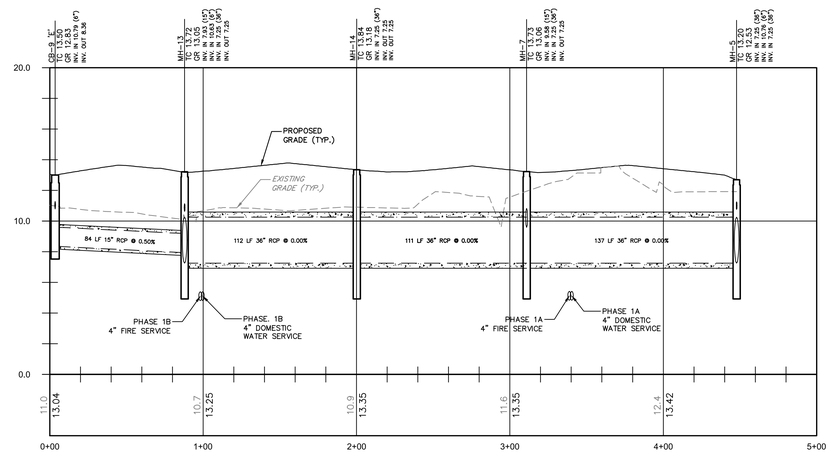

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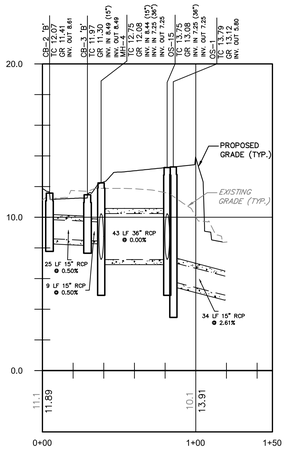

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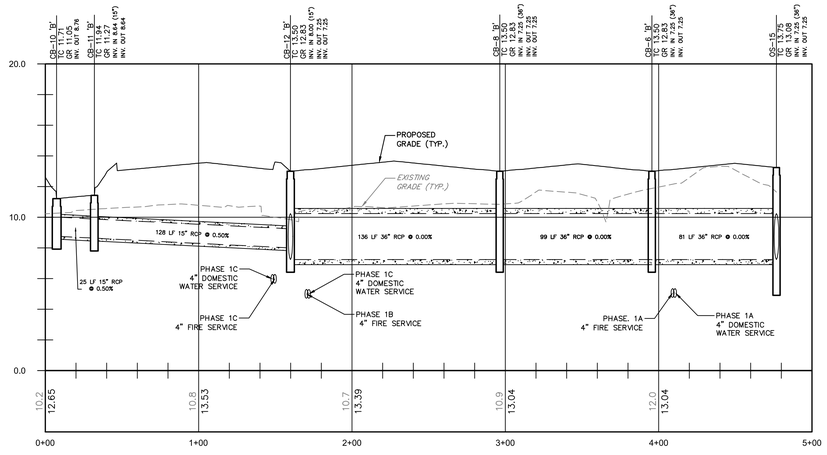

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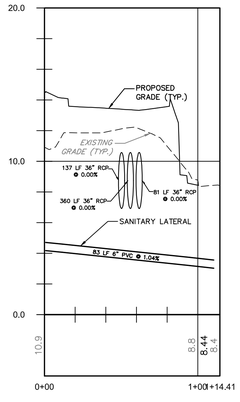

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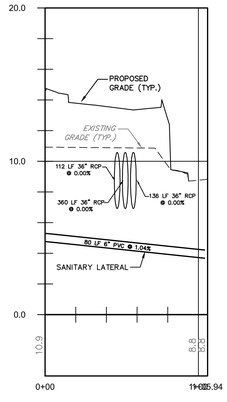

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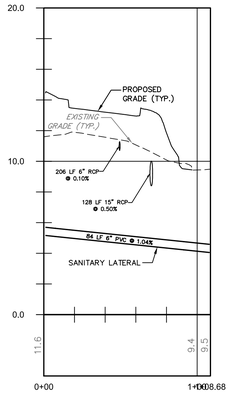

1C to MAIN

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30 10
GRAPHIC SCALE
1 INCH = 40 FEET

2 1 0 2 4 6
1.5 0.5
VERTICAL GRAPHIC SCALE
1 INCH = 2 FEET

DATE	REVISIONS	DRAWN BY	CHECKED BY

DRAWN BY: M.B
CHECKED BY: JMF
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=2'
PROJECT No.: BAR-2301
DATE: 03/12/24

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50030700
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
PROFILES
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners
20 Brace Rd. Suite 200
Mt. Laurel Twp, NJ 08054
609-810-4450
1711 Highway 34, Suite 201
Wall Township, NJ 07719
732-720-0889
21 W. State Street
Media, PA 19063
610-565-4000
99 Washington St. 3rd Floor
Morristown, NJ 07960
973-719-8652
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Sheet Number
8 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave – Keansburg\Civil\DWG\P–Grading.dwg
Plot Time: Mar 12, 2024 – 4:15pm

N.J.S.P.C.S. (NAD83)

PLANT LIST

EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
BMJ	3	Buxus microphylla japonica `Winter Gem`	Winter Gem Boxwood	18-24" HT.	B&B	18-24" spread
IGL	130	Ilex glabra	inkberry Holly	18-24" HT.	B&B	Native Plant Species
IGD	6	Ilex glabra `Densa`	Inkberry Holly	18-24" HT.	B&B	native plant species
IGS	9	Ilex glabra Strongbox	Strongbox Inkberry Holly	18-24" HT.	B&B	native evergreen, compact 2.5-3' ht.
JHS	50	Juniperus horizontalis Sargentii	Sargent Juniper	18-24" HT.	B&B	Mature ht. of 12"
AZ	18	Rhododendron x `Robles`	Autumn Lilac Encore Azalea	18-24" HT.		

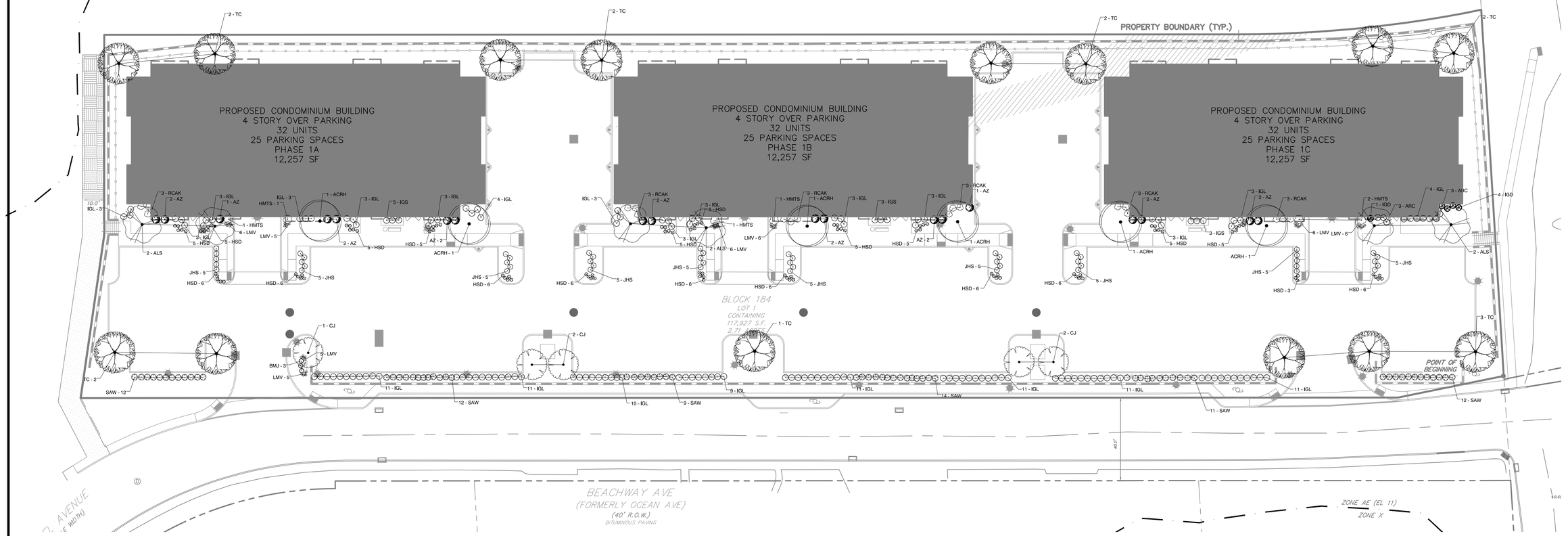
FLOWERING SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ARC	6	Abelia x `Rose Creek`	Rose Creek Abelia	18-24" HT.	B&B	
HMTS	6	Hydrangea macrophylla `Twist-n-Shout`	Twist-n-Shout Hydrangea	18-24" HT.	B&B	18-24" spread
RCAK	18	Rhododendron catawbiense `Anah Kruschke`	Catawba Rhododendron	24-30"	B&B	
SAW	69	Spirea x bumalda Anthony Waterer	Anthony Waterer Spirea	24-30" Ht.	B&B	

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ACRH	6	Amelanchier canadensis `Robin Hill`	Canadian Serviceberry	2-2½" cal.	B&B	single stem

FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ALS	6	Amelanchier laevis `Snowcloud`	Snowcloud Allegheny Serviceberry	2-2½" cal.	B&B	8-10' Ht., single stem

PERENNIAL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
HSD	98	Hemerocallis 'Stella D'Oro'	Stella D`Oro Daylily	1 gal.	Pot	Mature ht. 3-4`
LMV	45	Liriope muscari `Variegata`	Variegated Liriope	6" pot	Pot	

STREET TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
TC	14	Tilia cordata `Greenspire`	Greenspire Littleleaf Linden	2-2½" cal.	B&B	Mature Ht. 40`
CJ	5	Cercidiphyllum Japonica	Heronswood Globe	2-2½" cal.	B&B	Mature Ht. 20`



Planting Notes

1. The contractor shall furnish and plant all plants shown on the drawings, as specified, and in quantities indicated on the plant list.
2. All plants shall be nursery grown.
3. All plants shall be in accordance with the "American Standard for Nursery Stock", latest edition.
4. All plants shall be hardy under climatic conditions similar to those in the locality of the project.
5. All plants shall be typical of their species or variety and shall have a normal habit of growth. They shall be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease and insect pests, eggs or larvae. They shall have healthy, well developed root systems.
6. Substitutions: When plants of a specified kind or size are not available within a reasonable distance, substitutions may be made upon request by the contractor, if approved by the owner or his representative.
7. Measurement: Dimensions of trees and shrubs shall conform to the "American Standard for Nursery Stock", latest edition.
8. Size: All plants shall conform to the measurements specified on the plant list, unless authorized in writing by the owner or his representative.
9. Balled and bur lapped plants shall be dug with firm natural balls of earth, of diameter and depth to include most of the fibrous roots. Container grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil together firm and whole. No plants shall be loose in the container.
10. Root balls of all plants shall be adequately protected at all times from the sun and drying winds or frost.
11. Owner or his representative shall be notified prior to beginning planting operations.
12. Plants with broken root balls or excessive damage to the crown shall be replaced prior to planting.
13. All trees shall be staked and guyed according to the details on the plans. In parking lot areas and planting areas adjacent to walkways vertical tree stakes shall be used in accordance with standard nursery practice.
14. All trees shall be wrapped immediately after they are planted. Approved tree wrap shall be installed according to the details on the plans.
15. Each tree and shrub shall be pruned in accordance with the ANSI standards to preserve the natural character of the plant. All dead wood or suckers and all broken or badly bruised branches shall be removed. Cuts over 1" (one inch) in diameter shall be painted with an approved tree paint.
16. Mulch: Immediately after planting operations are completed all trees and shrub planting pits shall be covered with a four-inch (4 inch) layer of licorice root or other material approved by the owner or his representative. The limit of this mulch for deciduous trees and single evergreen trees shall be the area of the pit; for evergreen tree clusters, a mulch bed shall be created.
17. Trees in leaf when planted shall be treated with anti-desiccant such as Wilt-Proof.
18. Planting soil of 50% top soil and 50% peat moss shall be mixed with existing soil at a rate of 1/3 planting soil and 2/3 existing soil.
19. Newly installed plant material shall be watered at the time of installation. Regular watering shall be provided to ensure the establishment growth and survival of plants.
20. Guarantee: All plant material shall be guaranteed by the contractor for twenty-four (24) months from the date of final approval by the township, except as otherwise stated in the township ordinance. The owner shall be responsible for maintenance unless otherwise agreed with contractor. It shall be the contractor's responsibility to monitor the project during the guarantee and notify the owner if problems develop with the plant material. Any material that is 25% dead or more shall be considered dead and must be replaced at no charge. A tree shall be considered dead when the main leader has died back, or there is 25% of the crown dead.
21. All planting shall be at the locations indicated on the drawings. The contractor shall be responsible for planting at the correct grades, alignment, and to the indicated layout of planting beds.
22. All planting beds should be free and clear of weeds prior to installation of mulch.
23. All deciduous trees to be incorporated into planting bed (mulch) or have 2' radius mulch ring.
24. Irrigation to be provided for the proposed development by a certified irrigation designer. The system is to be a design-built system and specifications shall be provided to the board professionals for review prior to installation.
25. All ground vegetation within a sight triangle cannot exceed a height of 24" and all trees within a sight triangle must be limbed to a height of at least 7'.
26. All trees over roadways shall be trimmed to a minimum height of 12' over the roadway grade to ensure proper clearance for emergency vehicle access.
28. All areas where natural vegetation and/or specimen trees are to remain shall be protected by the erection of fencing, and no disturbance shall occur prior to inspection by the township engineer and the issuance of written authorization to proceed with construction. These protective measures shall not be altered or removed without the approval of the township engineer.
29. All underground sprinkler lines must be installed out of the township right-of-way.
30. Prior to initial grading, the Township will conduct an inspection confirming accuracy of field stakes limiting said limit of disturbance.
31. A post-construction landscaping inspection may require additional plantings to achieve the performance objective for adequate landscaping screening.
32. The use of plastic under landscape or gravel is prohibited. All subgravel liners must be made of filter cloth or other permeable material.

LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING STORM SEWER LINE
PROPOSED STORM SEWER LINE
EXISTING INLET
PROPOSED INLET
EXISTING MANHOLE
PROPOSED MANHOLE
EXISTING WATER LINE
PROPOSED WATER LINE
EXISTING WATER VALVE
PROPOSED WATER VALVE
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING SAN CLEAN OUT
PROPOSED SAN CLEAN OUT
EXISTING SIGN
PROPOSED SIGN
EXISTING LIGHT
PROPOSED LIGHT
EXISTING FENCELINE
PROPOSED FENCELINE

GRAPHIC SCALE
1 inch = 20 feet

DRAWN BY: MJB
CHECKED BY: JMF
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: N/A
PROJECT No.: BAR-2301
DATE: 03/12/24

DATE	REVISIONS	DRAWN BY	CHECKED BY

3.12.24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050202500
Certificate of Authorization No. 24GA28048600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
LANDSCAPE PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
10000 Bingle Rd., Suite 200, Houston, TX 77042
Mt. Laurel Twp., NJ 08054
1971 Highway 34, Suite 201, Wall Township, NJ 07719
26 Washington St., 2nd Floor, Morristown, NJ 07960
973-71-6802
501 W. State Street, Media, PA 19063, 610-566-0020
732-720-0889

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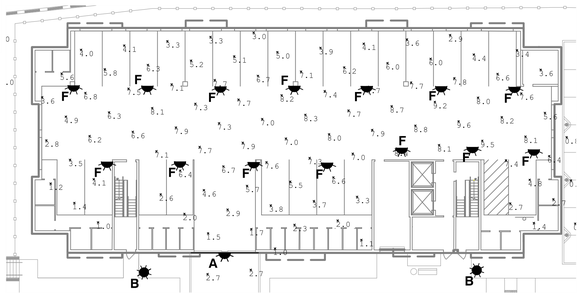
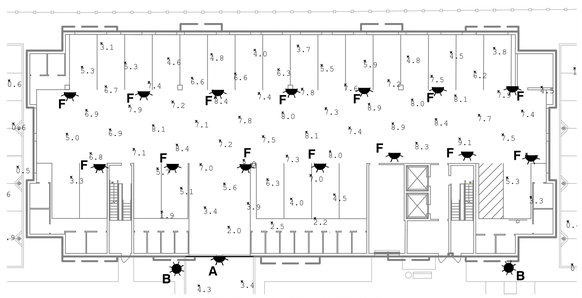
Sheet Number
9 of 16

File Name: G:\Beachway Avenue Realty_OBS\BAR-2301 Beachway Ave - Keansburg\Civil\DWG\06-Landscape & Lighting.dwg
Plot Time: Mar 12, 2024 - 3:45pm

N.J.S.P.C.S. (NAD83)



PHASE 1A GARAGE LIGHTING PLAN
SCALE: 1"=20'



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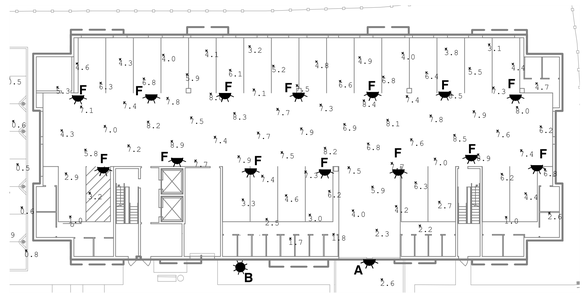
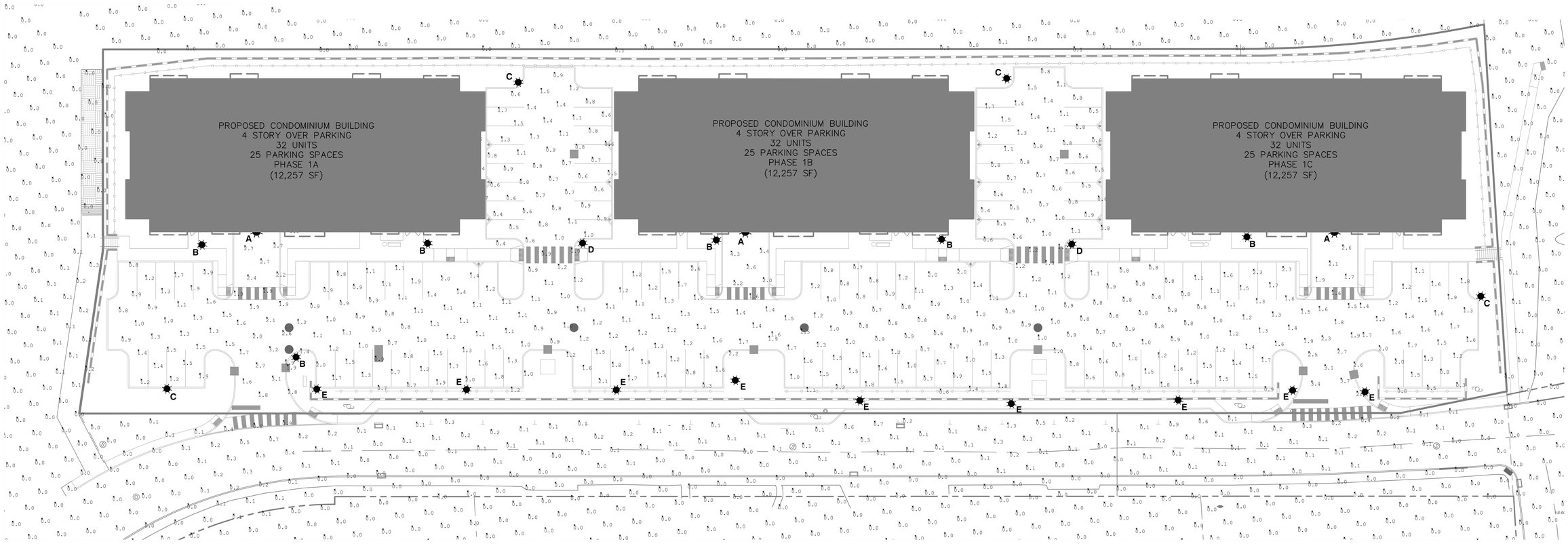
SCALE: 1"=20'



PHASE 1C GARAGE LIGHTING PLAN
SCALE: 1"=20'



Lighting Notes:

1) Proposed pole mounted light fixtures shall be installed with a mounting height of 14.5 feet (fixture to grade).
2) Poles shall be set at least 3 feet behind the curb. Where 3 feet cannot be provided, contractor shall contact the Engineer for location of pole.
3) Light pole bases to be installed by contractor.
4) Exterior site lights shall operate based on a programmed and managed schedule by owner utilizing timers and/or photo sensors. Lighting shall be used to address site specific needs and safety requirements. Full 'plan' intensity shall be provided for high use times such as: ½ hour before sunset to ½ past business closure or until 11 PM for residential uses; and ½ hour before business open or 6 am until ½ hour past sunrise. Wherever possible, overnight lighting shall be reduced to appropriate minimums, by either entirely turning off individual fixtures or reducing fixture output to a 50% or lower percentage of max.
5) Cut-off shields, house side shields, etc shall be provided if / as required.
6) All fixtures, poles and bollards are as specified or approved equal.
7) Lighting to be fully screened from off-site glare and uplighting.

Diversifed NJ Luminaire Schedule

Qty	Type	Arrangement	Symbol	Manufacturer	Light Fixture	CCT	Lum. Lumens	LLF	Lum. Watts	Pole / Bracket	Mounting AFG (FT)
3	A	Single		SUN VALLEY LIGHTING	COL12-VLED-ASY-24LED-350mA-WW	3000K	2184	1.000	26	WALL MOUNTED	10
6	B	Single		US ARCH	COL21 PLED-III-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4031	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
4	C	Single		U.S. ARCHITECTURAL LIGHTING	COL21 PLED-III-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4061	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
2	D	Single		US ARCH	COL21 PLED-VSQ-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	5529	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
9	E	Single		U.S. ARCHITECTURAL LIGHTING	COL21 PLED-IV-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4915	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
42	F	Single		LSI INDUSTRIES, INC.	OPS-PD 06L-5R-U-VOLTS-30K8-COLOR-R56	3000	6118	0.880	41	GARAGE FIXTURE PENDANT MOUNTED	14.5

20 10 0 20 40 60
15 5
GRAPHIC SCALE
1 inch = 20 feet

LEGEND

EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING STORM SEWER LINE
PROPOSED STORM SEWER LINE
EXISTING INLET
PROPOSED INLET
PROPOSED MANHOLE
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
PROPOSED SANITARY CLEANOUT
PROPOSED WATER MAIN
PROPOSED WATER METER
PROPOSED ELECTRIC TRENCH
EXISTING FENCELINE
PROPOSED FENCELINE
100-YR WATER SURFACE ELEV.
PROPOSED LIGHT POLE
PROPOSED WALL MOUNTED LIGHT

	DATE	REVISIONS	DRAWN BY	CHECKED BY

DRAWN BY: M.B
CHECKED BY: JMF
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: N/A
PROJECT No.: BAR-2301
DATE: 03/12/24

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050202900
Certificate of Authorization No. 24GA28054600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
LIGHTING PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners
1311 Wemrock Rd, Suite 200
Mt. Laurel Twp, NJ 08054
609-491-0440
1311 Highway 34, Suite 201
Wall Township, NJ 07719
732-720-8899
56 Washington St, 2nd Floor
Morristown, NJ 07960
973-719-8662

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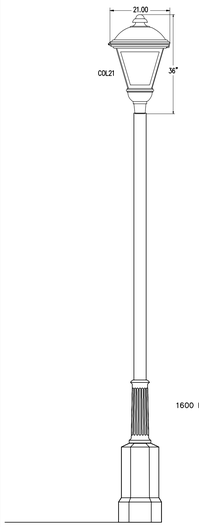
Sheet Number
10 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave - Keansburg\Civil\DWG\06-Landscape & Lighting.dwg
Plot Time: Mar 12, 2024 - 3:42pm



Specifications

All Models

Fixture Housing - One piece low copper heavy wall aluminum casting (A356 alloy; <.02Cu). Hood is fastened to the Housing with a stainless steel hinge and secured with a tool-less stainless steel latch 180° opposite the hinge. Housing and Hood is sealed with an extruded closed cell silicone gasket.

Lenses

COL HID and LED models - See HID Lamp/Electrical and VLED for lens specification.

COL-WA - Opal White Acrylic is standard. Lenses are gasketed at housing.

COL-CPA - Clear Patterned Acrylic is standard. Lenses are gasketed at housing.

Finish - Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step sand blast and iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.Texture finish is standard.

VLED

VLED® Optical Module – Low copper A356 alloy (<.2% copper) cast aluminum housing. Integrated clear tempered 3/16" glass lens sealed with a continuous silicone gasket protects emitters (LEDs) and emitter Reflector-Prism optics, and seals the module from water intrusion and environmental contaminants. Entire module meets an IP67 rating. Emitters (LED's) are high output, standard Neutral White nominal 4000K CCT for the entire module (Warm white 3000K CCT and Cool White 5000K CCT also available). Each emitter is optically controlled by a Reflector-Prism injection molded from H12 acrylic (3 types per module; one from 0° - 50°; one from 50° - 65°; one from 65° - 72°). Each Reflector-Prism has indexing pins for aiming and is secured to an optical plate made of matte black anodized aluminum. The optical plate locates every Reflector-Prism over an emitter. The Reflector-Prisms are arrayed to produce IES Type II, IES Type III, IES Type IV or IES Type V-SQ light distributions. The entire Optical Module is field rotatable in 90° increments. Both module and drivers are factory wired using wafer resistant, insulated cord. Lens, module and drivers are field replaceable.

Driver – UL and CUL recognized Constant Current LED drivers operate on input voltages from 120 – 277VAC, 50/60Hz and are mounted to an aluminum bracket secured to the barrier plate. Driver is independently sealed and UL listed for wet location. Consult Factory for High-Low and dimming options. (Consult factory for dimming applications and alternate voltages.)

COL - Clear Glass Lens

LED Order Information

Optic

Enclosed Module

VLED® MODULE

VLED®

LED

Spec/Order Example: COL21/VLED-VSQ/120LED CW/3-90/RAL7004/DF

MODEL	OPTICS	LED MODE	MOUNTING	FINISH	OPTIONS
	VLED®	No. LEDs / DRIVE CURRENT / COLOR TEMP - CCT / VOLTAGE	ARM MOUNT	STANDARD TEXTURED FINISH	
☐ COL21	☐ TYPE II VLED - II ☐ TYPE III VLED - III ☐ TYPE IV VLED - IV ☐ TYPE V VLED-VSQ	COL21: ☐ 120LED (150 Watts) ☐ 100LED (110 Watts) ☐ 80LED (89 Watts) ☐ 64LED (72 Watts); ☐ 350mA ☐ 525mA; ☐ NW (4000K)* STANDARD ☐ CW (5000K) ☐ WW (3000K) OTHER LED COLORS AVAILABLE CONSULT FACTORY; ☐ 120 ☐ 208 ☐ 240 ☐ 277 ☐ 347 ☐ 480	☐ 1 ☐ 2-180 ☐ 2-90 ☐ 3-90 ☐ 3-120 ☐ 4-90	☐ BLACK RAL-9005-T ☐ WHITE RAL-9003-T ☐ GREY RAL-7004-T ☐ DARK BRONZE RAL-8019-T ☐ GREEN RAL-6005-T	☐ INTERNAL HOUSE SIDE SHIELD ..... HS ☐ DIMMABLE DRIVER(S) (0-10V) ..... DIM ☐ HIGH-LOW DIMMING FOR HARDWIRED SWITCHING OR NON-INTEGRATED MOTION SENSOR ..... HLSW ☐ 10KV SURGE PROTECTOR ..... 10SP ☐ 20KV SURGE PROTECTOR (277V & 480V Only) ..... 20SP ☐ PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) ..... PC+V ☐ TWIST LOCK PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) ..... TPC+V (COL21 & COL18 Only) ☐ TWIST LOCK RECEPTACLE ONLY ..... TPR (COL21 & COL18 Only) ☐ SINGLE FUSE (120V, 277V) ..... SF ☐ DOUBLE FUSE (208V, 240V) ..... DF
☐ COL18		COL18: ☐ 64LED (73 Watts) ☐ 48LED (53 Watts)			
☐ COL12	☐ TYPE ASYMMETRIC VLED - ASY ☐ TYPE SYMMETRIC VLED - SYM	COL12: ☐ 24LED (28 Watts); ☐ NW (4000K)* STANDARD ☐ CW (5000K) ☐ WW (3000K) OTHER LED COLORS AVAILABLE CONSULT FACTORY; ☐ 120 ☐ 208 ☐ 240 ☐ 277 ☐ 347 ☐ 480; COL12 AVAILABLE IN 350mA ONLY	WALL MOUNT Refer to Sun Valley Lighting bracket or website section Arm/Mast Brackets FOR SMOOTH FINISH, REMOVE "TEXTURE" FROM SUFFIX (EXAMPLE: RAL-9005) ☐ WM ..... POST TOP ☐ PT	CONSULT FACTORY FOR CUSTOM COLORS	

LIGHT FIXTURE DETAILS (OR EQUIVALENT)– TYPE A

NOT TO SCALE

Opulence Small Pendant & Surface Mount (OPS PD/SD)

Outdoor Pendant & Surface Mount Luminaire

IP66

OVERVIEW	
Lumen Package (lm)	3,000 - 14,000
Wattage Range (W)	20 - 100
Efficacy Range (LPW)	128 - 165
Weight lbs (kg)	16 (7.3)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction
- Rugged die-cast aluminum housing.
- Architecturally pleasing with no visible electronics, hardware, or seams from ground level.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Optional spun aluminum shroud provides a streamlined transition from stem to luminaire while also deterring nesting (3/4" stem/pendant only).
- External Shield available for field installation (see accessory ordering information and dimensions for details).

Optical System
- High density LED optical system delivers industry leading optical performance and visual comfort.
- 7 distribution types 3W, 4F, 5Q, 5C, 5R, 5D & AD
- Diffused lens version provides maximum visual comfort with reduced brightness and LED pixelization.
- Zero uplight.
- Available in 5000K, 4000K, 3500K, 3000K and 2700K color temperatures per ANSI C78.377. Also available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 80

Electrical
- High-performance driver features overvoltage, under-voltage, short-circuit and over temperature protection (6kV surge standard).
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 VAC) Input 50/60 Hz or optional High Voltage (347-480 VAC).
- Total harmonic distortion (THD): <20%
- Operating temperature: -40°C to +40°C (-40°F to +104°F).
- Power factor (PF): >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Driver is fully encased in potting material for moisture resistance and complies with FCC standards. Driver and key electronic components can easily be accessed.
- Optional 16w battery backup provides 90-minutes of constant power (~2,000-2,500 lumens) to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. Standard battery rated for 0° to 40° with cold weather battery rated for -20°C to 40°, 120-277V Only.

Controls
- Integral passive infrared Bluetooth™ motion and photocell sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app.
- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule. Updates and modifications to the control strategy are easily implemented via an intuitive iOS app.

Installation
- Pendant mounting via rigid 3/4" stem (order stem seperately), 36" wire leads provided.
- Direct/surface mounts to a 4" (102mm) square or octagon box (box by others).
- Hinged 16ga galvanized mounting bracket provided for ease of installation and maintenance.
- Optional stainless steel crown for mounting to 2" tenon (order tenon seperately). Wire leads pass through compression seal fitting to prevent water entry. Once-piece silicone gasket provides water and dust tight seal.
- For wall mount arm please reference OPS wall mount spec sheet.

Warranty
- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings
- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K and warmer color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598-1.
- IK08 rated luminaire per IEC 66262 mechanical impact code with polycarbonate lens (PLY).
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

LSI Industries Inc. 10000 Alliance Rd. Cincinnati, OH 45242 • (513) 372-3200 • www.lsicorp.com
©LSI Industries Inc. All Rights Reserved. Specifications and dimensions subject to industry standard tolerances. Specifications subject to change without notice.

Opulence Small Pendant & Surface Mount (OPS PD/SD)

Have questions? Call us at (800) 436-7800

Type: _____

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: OPS PD 8L 5Q UNV 40KB BLK ALBCS1

Prefix	Mounting	Lumen Package	Distribution	Uplight	Voltage
OPS - Opulence Small	PD - Pendant SD - Surface/Direct	3L - 3,000 5L - 5,000 8L - 8,000 11L - 11,000 14L - 14,000 20L - 20,000 32L - 32,000 40L - 40,000	3W - Type 3 (Wide Throw) 4F - Type 4 (Forward Throw) 5Q - Type 5 Square 5R - Type 5 Diffused 5W - Type 5 Wet Location 5C - Type 5 Concentrated AD - Asymmetric Diffused	Blank - None UP - Uplight Module (5% uplight) V1 - Uplight Module (10% uplight)	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)

Color Temperature / Rendering	Finish	Controls	Options
27KB - 2700K CCT / 80 CRI 30KB - 3000K CCT / 80 CRI 35KB - 3500K CCT / 80 CRI 40KB - 4000K CCT / 80 CRI 50KB - 5000K CCT / 80 CRI APB - Phosphor Converted Amber[1]	BLK - Black BRZ - Dark Bronze GMG - Gun Metal Gray GPI - Graphite MSV - Metallic Silver PLP - Platinum Plus WHT - White	Blank - None Wireless Controls System ALBCS1 - ArcLink Blue Wireless Motion & Photo Sensor Controller (8-24' Mh) ALBCS2 - ArcLink Blue Wireless Motion & Photo Sensor Controller (25-40' Mh) Stand-Alone Controls EXT - 0-10v Dimming leads extended to housing exterior IMSBT1L - Integral Bluetooth® Motion and Photocell Sensor (8-24' Mh)[2] IMSBT2L - Integral Bluetooth® Motion and Photocell Sensor (25-40' Mh)[2]	Blank - None BB - Battery Back-up (0°C)[3] CWBB - Cold Weather Battery Back-up (-20°C)[3] SP1 - 10kV Surge Protection Device EXTDT2 - Power and dimming leads extended 72" PLY - Polycarbonate Lens[4]

Need more information? Click here for our glossary

Have additional questions? Call us at (800) 436-7800

ACCESSORY ORDERING INFORMATION

Order Number	Description	Image
701340	EHS - External Shield (Black Finish Only)	

POST TOP ORDERING INFORMATION[5]

Order Number[5]	Description	Image
TMBL 1 CLR	Single Classic Hook (3/4" Stem)	
TMBL 2 CLR	2@180° Classic Hook (3/4" Stem)	

STEM/PENDANT MOUNT ORDERING INFORMATION

Order Number[5]	Description	Image
778046CLR	Spun Aluminum Decorative Shroud & Bird Guard (3/4" Stem)[5]	
778047	Translucent Decorative Shroud & Bird Guard (For Uplight Versions)	
BCS03 3 CLR	3/4" (3) mm) Top Decorative Box Cover Aligner	
BCS05 CLR	3/4" (39 mm) Top Round Box Cover Aligner	
BCS0550 CLR	3/4" (39 mm) Top Square Box Cover Aligner	
SI_1 CLR	3/4" Rigid Stem (Specify Stem Length: 6, 12, 18, 24, 36, 48 inches)[5]	

WALL MOUNT ORDERING INFORMATION[5]

Order Number[5]	Description	Image
GA-A 34 CLR	2' Gooseneck Wall Bracket, A Style (3/4" Stem)	
GA-C 34 CLR	2' Gooseneck Wall Bracket, C Style (3/4" Stem)	
GA-H 34 CLR	2' Gooseneck Wall Bracket, H Style (3/4" Stem)	
GA-K 34 CLR	1' Gooseneck Wall Bracket, K Style (3/4" Stem)	
CWBH 1 CLR	Contemporary Wall Bracket 1 (3/4" Stem)	
CWBH 2 CLR	Contemporary Wall Bracket 2 (3/4" Stem)	

5 Not available with 12' or 40 distributions.
6 "CLR" to be replaced by paint finish selection. See finish options for paint color selections.
7 30", 48", classic hook, 2' gooseneck and contemporary wall brackets require the EXT(12)" extended lead(s) option.

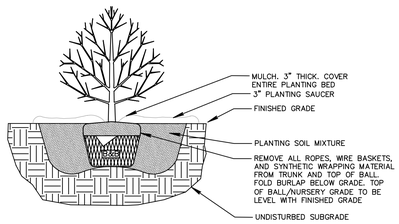
1 Not available with uplight.
2 Amber LEDs not available in CS, or HL lumen packages
3 IMSBTxL is field configurable via the Lumitrac app that can be downloaded from your smartphone's app store.
4 120-277V Only. Not available with SK Lumen Package.

LIGHT FIXTURE DETAILS (OR EQUIVALENT)– TYPE F

NOT TO SCALE

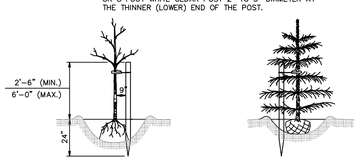
LIGHT POLE

NOT TO SCALE



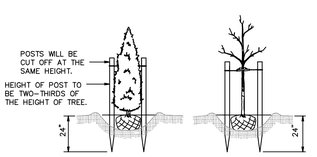
SHRUB PLANTING DETAIL

NOT TO SCALE



TREES REQUIRING ONE STAKE

DECIDUOUS TREES (EXCEPT SALIX) 1" TO 1" CALIPER, INCLUSIVE. CONE TYPE (PYRAMIDAL) TREES 3 FEET TO 5 FEET HIGH, AND COLUMNAR EVERGREEN TREES 4 FEET TO 7 FEET HIGH, INCLUSIVE.

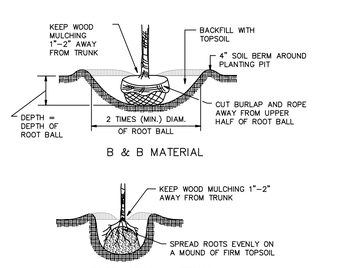


TREES REQUIRING TWO STAKES

DECIDUOUS TREES OVER 1" TO 2" CALIPER, INCLUSIVE. ALL SALIX REGARDLESS OF HEIGHT, CALIPER, BARE ROOT OR BALLED AND BURLAPPED. CONE TYPE (PYRAMIDAL) TREES 5 FEET TO 7 FEET HIGH AND COLUMNAR EVERGREEN TREES 7 FEET TO 9 FEET HIGH, INCLUSIVE.

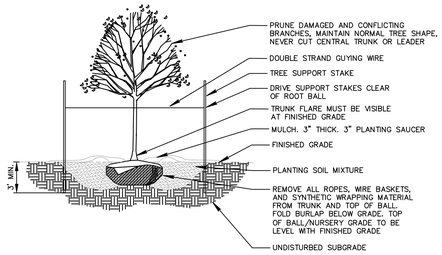
STAKING DETAILS

NOT TO SCALE



TREE & SHRUB PLANTING DETAIL

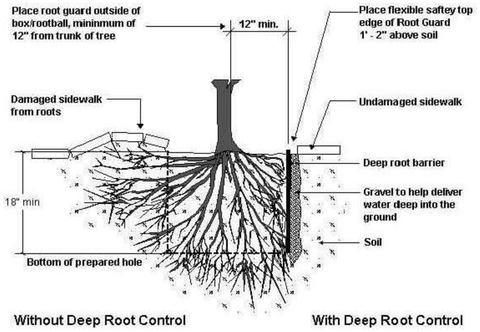
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

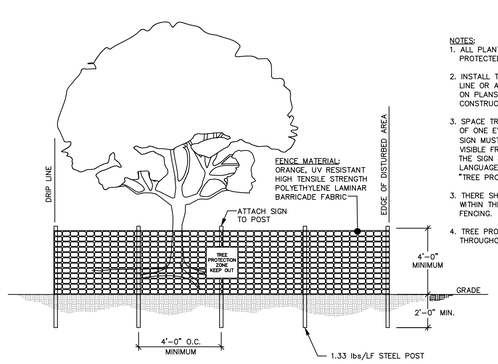
NOTE: HEIGHT OF GUYING WIRES BETWEEN ⅓ AND ½ TREE HEIGHT



NOTES:
1. OR APPROVED EQUAL.
2. ROOT BARRIERS MUST BE PROVIDED FOR TREES TO BE PLANTED WITHIN 6 FT OF AN IMPERVIOUS SURFACE (SIDEWALK, DRIVEWAY, ROAD, ETC.).

ROOT BARRIER DETAIL

NOT TO SCALE



NOTES:
1. ALL PLANTS DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING, AS ILLUSTRATED.
2. INSTALL TREE PROTECTION FENCE AT TREE DRIP LINE OR AT EDGE OF DISTURBED AREA, AS SHOWN ON PLANS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. SPACE TREE PROTECTION ZONE SIGNS A MINIMUM OF ONE EVERY 300 FEET. THE SIZE OF EACH SIGN MUST BE A MINIMUM OF 2' x 2' AND BE VISIBLE FROM BOTH SIDES OF THE FENCE. THE SIGN MUST CONTAIN THE FOLLOWING LANGUAGE IN BOTH ENGLISH & SPANISH: "TREE PROTECTION ZONE, KEEP OUT".
3. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

TREE PROTECTION FENCE

NOT TO SCALE

NOTE: SILT FENCE AND TREE PROTECTION FENCE MAY BE FASTENED TO THE SAME POST WHERE THEY ARE CONCIDENTAL

Diversifed NJ Luminaire Schedule

Qty	Type	Arrangement	Symbol	Manufacturer	Light Fixture	CCT	Lum. Lumens	LLF	Lum. Watts	Pole / Bracket	Mounting AFG (FT)
3	A	Single		SUN VALLEY LIGHTING	COL12-VLED-ASY-24LED-350mA-WW	3000K	2184	1.000	26	WALL MOUNTED	10
6	B	Single		US ARCH	COL21 PLED-III-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4031	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
4	C	Single		U.S. ARCHITECTURAL LIGHTING	COL21 PLED-III-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4061	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
2	D	Single		US ARCH	COL21 PLED-VSQ-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	5529	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
9	E	Single		U.S. ARCHITECTURAL LIGHTING	COL21 PLED-IV-W-36LED-525MA 30K VOLTS PM COLOR R56	3000K	4915	0.880	59.4	1600B 12' 5" 188 COLOR PG13	14.5
42	F	Single		LSI INDUSTRIES, INC.	OPS-PD 06L-SR-U-VOLTS-30K8-COLOR-R56	3000	6118	0.880	41	GARAGE FIXTURE PENDANT MOUNTED	14.5

AREA & ROADWAY LIGHTING

COLONIAL® - PLED

4-SIDED TRADITIONAL LANTERN

Luminaire
Heavy cast corrosion resistant low copper aluminum (A356 alloy, <0.2% copper) traditionally styled housing and top. Minimum wall thickness is .188". Top hinges for easy access. Silicone gasket between housing and hood. Four piece clear patterned acrylic lenses, or opal white acrylic lenses provided. All hardware is stainless steel.

Diffuser
No Lens Open Frame is standard. Option of Clear Patterned Acrylic (CPA) or White Acrylic (WA) Lens Panels. Lenses are mechanically fastened to the frame and sealed with closed cell silicone gasketing.

PLED™ Optics
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side, maximizing usable light. Optional house side shields are available that cover each individual optic. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments. Quick-disconnects are provided above each panel for fast field replacement. No lens fixture option will provide "U0" no uplight optical package.

Ambiance Low Luminance Lens
Optional Ambiance Lens (AL) provides low luminance reduced glare distributions. Lens diffuses the PLED Optics and provides a more uniform luminance across the aperture reducing glare at all angles. Lens is provided with an aluminum frame and is sealed to the housing with high temp gasketing.

LED Emitters
High Power White LED's are driven between 350mA and 875mA for a maximum output of 2.5 Watts nominal. LED's are available in standard Neutral White (4000K). Cool White (5000K), or Warm White (2700K & 3000K). All Standard LED's have a minimum of 70 CRI. Consult Factory for other LED options. Lumen Maintenance of L94 at 60,000 hours (TM-21 calculated at 6x Test Time).

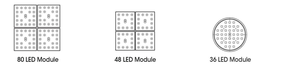
True Amber LED's TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. True Amber has negligible blue light and is suitable for wildlife.

LED Driver
Constant current electronic with a power factor of > 90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

Finish
Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.

COL SERIES - PLED

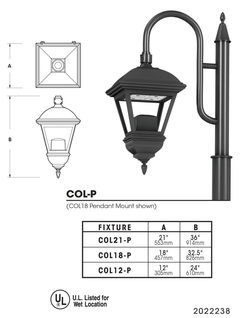
PLED™ MODULES



ORDERING INFORMATION

Spec/Order Example: COL20T/PLED-III/20LED-525mA/40K/240/2-180/RUST-S/WA

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
☐ COL21 ☐ COL18 ☐ COL12	PLED™ Distribution Type For NL & CPA Lens Options: ☐ PLED-II ☐ PLED-II-FR ☐ PLED-III ☐ PLED-III-W ☐ PLED-IV ☐ PLED-IV-FT ☐ PLED-V-SQ-N ☐ PLED-V-SQ-M ☐ PLED-V-SQ-W For WFA Lens Option: ☐ PLED-ASY-W1 ☐ PLED-ASY-W2 (Intrinsic HS) ☐ PLED-ASY-N1 ☐ PLED-ASY-N2 (Intrinsic HS) ☐ PLED-SYM Ambiance Lens Option[3]: ☐ AL-ASY ☐ AL-ASY-HS ☐ AL-SYM	# of LEDs: ☐ 80LED[1] ☐ 48LED ☐ 36LED ☐ 20LED[2]; Drive Current: ☐ 875mA ☐ 700mA ☐ 525mA[4] ☐ 350mA ☐ 175mA; Color Temp - CCT: ☐ 27K (2700K) ☐ 30K (3000K) ☐ 40K (4000K) ☐ 50K (5000K) ☐ TRA[5] True Amber. NOTES: 1 - 80LED available in COL21 only 2 - COL12 available in 20LED only 3 - TRA available in 350mA & 525mA Drive Currents only 4 - COL18 Max Drive Current is 525mA 5 - Ambiance Lens available in COL21 (80LED) and COL18 (48LED) only. Consult factory for other CCT, CRI, & Drive Current options	☐ 120 ☐ 208 ☐ 240 ☐ 277 ☐ 347 ☐ 480	Post Top: ☐ PT23 (To fit 2 3/8" O.D.) ☐ PT27 (To fit 2 7/8" O.D.); Pendant Mount: ☐ PM; Arm Mount: ☐ 1 ☐ 2-180 ☐ 2-90 ☐ 3-90 ☐ 3-120 ☐ 4-90; Wall Mount: ☐ WM	Standard Textured Finish: ☐ Black RAL-9005-T ☐ White RAL-9003-T ☐ Grey RAL-7004-T ☐ Dark Bronze RAL-8019-T ☐ Green RAL-6005-T; Premium Finishes: ☐ Rust ☐ Patina Copper PC. For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9003-S) Consult factor for custom colors	Lens Options: ☐ Open Frame No Lens NL ☐ Clear Patterned Acrylic CPA ☐ White Acrylic WA ☐ Cohesory Mount (Cable Box/Clamp Bracket) CCB ☐ Stem Mount + Length(in) (48" Max) SM+L ☐ Chain Mount + Length(in) (48" Max) CHN+L ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED-48) HS-PLED ☐ Twist Lock Receptable Only TPR ☐ 7 Pin Twist Lock Receptable Only TPR7 ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW ☐ Photo Cell + Voltage (Example: PC120V) PC+V ☐ Single Fuse (120V, 277V) SF ☐ Double Fuse (208V, 240V) DF ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100 Photo 7fc) MS#311



COL-P
(COL18 Pendant Mount shown)

FIXTURE	A	B
COL21-P	21" 533mm	36" 914mm
COL18-P	18" 457mm	33.5" 838mm
COL12-P	12" 305mm	24" 610mm

UL Listed for Wet Location

2022238

LIGHT FIXTURE DETAILS (OR EQUIVALENT)– TYPES B,C,D & E

NOT TO SCALE

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PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
LANDSCAPE & LIGHTING DETAILS
SITUATED IN
BORROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

DRAWN BY:	CHECKED BY:	DATE	REVISIONS	DRAWN BY	CHECKED BY
JMF					
HORIZONTAL SCALE: 1" = 20'	VERTICAL SCALE: N/A				
PROJECT No.: BAR-2301					
DATE: 03/12/24					

Sheet Number
11 of 16

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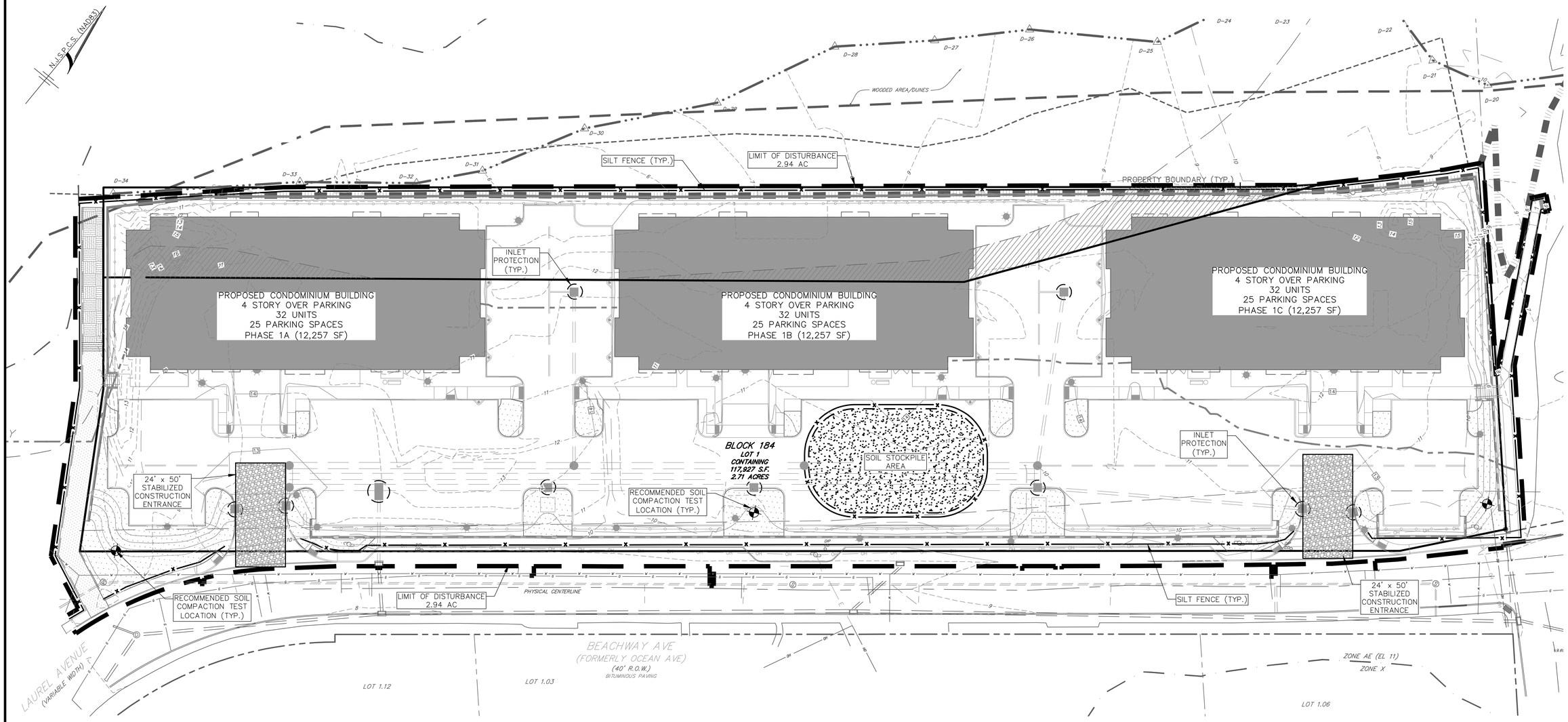
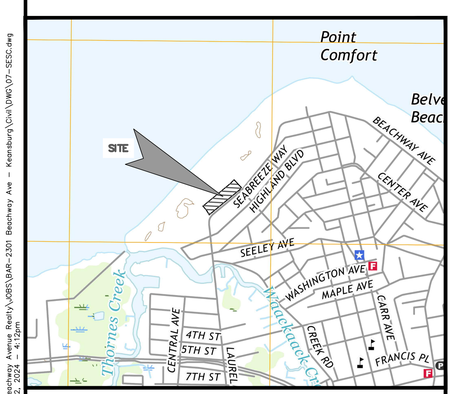


LEGEND

SOIL COMPACTION TESTING AREAS

RECOMMENDED SOIL COMPACTION TEST LOCATION (APPROX. 1 PER/.5 ACRE)



LOCATION MAP

KEYPORT NJ–NY USGS QUAD MAP
SCALE: 1"=1000'

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

1. Subgrade soils **prior to the application of topsoil** (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.

2. Areas of the site which are subject to compaction testing and/or mitigation are **graphically denoted** on the certified soil erosion control plan.

3. **Compaction testing locations** are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.

4. In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

A. Probing Wire Test (see detail)
B. Hand-held Penetrometer Test (see detail)
C. Tube Bulk Density Test (licensed professional engineer required
D. Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

Procedures for Soil Compaction Mitigation

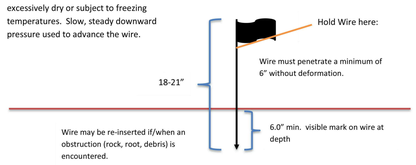
Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

Simplified Testing Methods

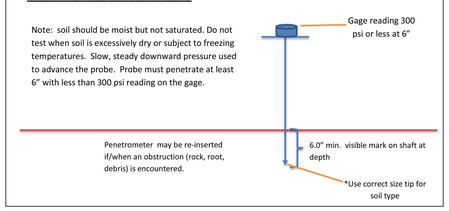
Probing Wire Test- 15.5 ga steel wire (survey flag)

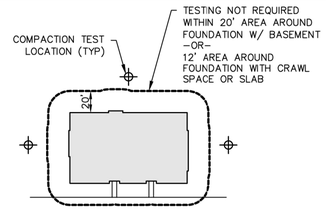
Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.





C. MULTIFAMILY HOUSING OR OTHER NON–RESIDENTIAL BUILDING/STRUCTURE

NOTE: SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FREQUENCY LISTED IN THE LEGEND (THIS SHEET).

TYPICAL SOIL COMPACTION TESTING LOCATIONS

NOT TO SCALE

THIS PLAN WAS PREPARED TO ADDRESS EROSION AND SEDIMENT CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) AT TIME OF DESIGN. ALL OTHER COMPONENTS OF THE SPPP AND GENERAL STORMWATER PERMIT TO BE RESPONSIBILITY OF THE DEVELOPER AND/OR SITE CONTRACTOR.

20 10 0 20 40 60
15 5
GRAPHIC SCALE
1 inch = 20 feet

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER AND THE CONTRACTOR IS ADVISED TO VERIFY, IN THE FILED, ALL THE FACTS CONCERNING THE LOCATION OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTRACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION NOTE

THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES ONLY. THIS PLAN IS NOT TO BE USED FOR SITE CONSTRUCTION.

LEGEND

EXISTING CONTOUR
PROPOSED CONTOUR
EXISTING SPOT ELEVATION x 57.6
PROPOSED SPOT ELEVATION x 57.6
EXISTING SANITARY SEWER LINE
PROPOSED SANITARY SEWER LINE
EXISTING STORM SEWER LINE
PROPOSED STORM SEWER LINE
EXISTING INLET
PROPOSED INLET
EXISTING MANHOLE
PROPOSED MANHOLE
EXISTING WATER LINE
PROPOSED WATER LINE
EXISTING WATER VALVE
PROPOSED WATER VALVE
EXISTING GAS LINE
PROPOSED GAS LINE
EXISTING SAN CLEAN OUT
PROPOSED SAN CLEAN OUT
EXISTING SIGN
PROPOSED SIGN
EXISTING LIGHT
PROPOSED LIGHT
EXISTING FENCELINE
PROPOSED FENCELINE
PROPOSED LIMIT OF DISTURBANCE
PROPOSED SILT FENCE
PROPOSED INLET PROTECTION
PROPOSED SOIL STOCKPILE AREA
PROPOSED TRACKING PAD

DRAWN BY: M.B	CHECKED BY: JMF		
HORIZONTAL SCALE: 1"=20'	VERTICAL SCALE: N/A		
PROJECT No.: BAR-2301			
DATE: 03/12/24			
		DATE	REVISIONS
			DRAWN BY CHECKED BY

3/12/24
Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50500500
Certificate of Authorization No. GA50400

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
SOIL EROSION & SEDIMENT CONTROL PLAN
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

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Sheet Number
12 of 16

File Name: G:\Beachway Avenue Realty\JOBS\BAR-2301 Beachway Ave – Keansburg\Civil\DWG\07-SESC.dwg
Plot Time: Mar 12, 2024 – 4:12pm

PERMANENT VEGETATIVE COVER
METHODS AND MATERIALS

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.

B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading .

C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.

D. Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.

2. Seedbed Preparation

A. Uniformly apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.

B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

3. Seeding

A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Only a 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.

2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85° F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.

3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65°F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

B. **Conventional Seeding** is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil.

C. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

D. **Hydroseeding is** a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. **Mulch shall not be included in the tank with seed**. Short-fibered mulch may be applied with a hydroseeder following seeding. (also see Section 4-Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

4. Mulching

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings - Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring coulter tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

b. Use one of the following:

(1) Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrained networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. **Mulch shall not be mixed in the tank with seed**. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch - compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and accurately to 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

5. Irrigation (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

6. Topdressing

Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

7. Establishing Permanent Vegetative Stabilization

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. **Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once.** Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION
METHODS AND MATERIALS

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. **This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).**

2. Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or disking operation should

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.

3. Seeding

A. Select seed from recommendations in Table 7-2.

TABLE 7-2

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	SEEDING RATE (pounds)		OPTIMUM SEEDING DATE Based on Plant Hardiness Zone[3]			OPTIMUM SEED DEPTH[4] (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring oats	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-6/1 8/15-10/1	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

1 Seeding rate for warm season grass, selections 5 - 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
2 May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3 Plant Hardiness Zone (see figure 7-1, pg. 7-4.)
4 Twice the depth for sandy soils

B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.

C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch **shall not** be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

4. Mulching

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring tool). A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch-Binders. – May be used to anchor hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

b. Use one of the following:

(1) Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrained networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders – High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

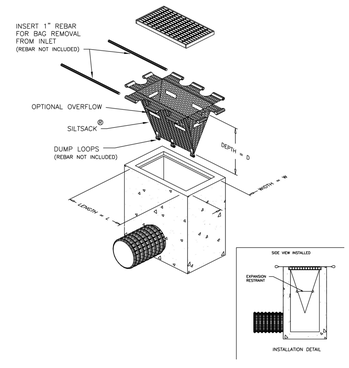
C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

FREEHOLD SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A 4:24–39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT–BY–LOT OR SECTION–BY–SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB–BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB–BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION AREA FROM PAVED ROADWAYS. ANY ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1" – 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT–OF–WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMODELED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ALLOW THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON–VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

FREEHOLD SOIL CONSERVATION DISTRICT
4000 KOZLOSKI ROAD, FREEHOLD, NJ 07728, (732) 683–8500, FAX (732) 683–9140,
EMAIL: info@freeholdscd.org.



1. FOLLOW MFG. SPECIFICATIONS AND RECOMMENDATIONS FOR INSTALLATION AND MAINTENANCE.

SILT SACK TYPE INLET PROTECTION DETAIL (OR APPROVED EQUAL)

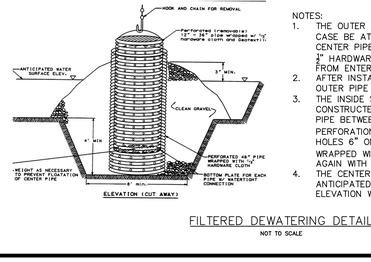
NOT TO SCALE

CONSTRUCTION SEQUENCE

EXACT TIMING FOR DEVELOPMENT OF THIS PROJECT IS NOT KNOWN AT THIS TIME. HOWEVER, IT IS ANTICIPATED THAT CONSTRUCTION WILL COMMENCE IN SPRING 2024 AND WILL PROCEED IMMEDIATELY AND CONTINUOUSLY ONCE THE REQUIRED APPROVALS ARE SECURED. ITEMS AND DURATIONS OF CONSTRUCTION WILL APPROXIMATELY AS FOLLOWS:

	DURATION
TEMPORARY SOIL EROSION FACILITIES	IMMEDIATELY
CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE	IMMEDIATELY
INSTALL SILT FENCE & INLET PROTECTION	IMMEDIATELY
CLEARING AND GRUBBING TREES	2 WEEKS
CONSTRUCT STORMWATER SEDIMENT BASINS WITH TEMPORARY FLOATING SKIMMERS	2 WEEKS
ROUGH SITE GRADING	1 MONTH
CONSTRUCTION & STABILIZATION OF STORMWATER MANAGEMENT FACILITIES	4 MONTHS
TEMPORARY SEEDING*	IMMEDIATELY
SLOPE & EMBANKMENT PROTECTION	IMMEDIATELY
ROAD SUB–BASE	IMMEDIATELY
MAINTENANCE OF TEMPORARY EROSION CONTROL MEASURES	CONTINUOUSLY
BUILDING CONSTRUCTION	36 MONTHS
REMOVAL OF ALL TEMPORARY SEDIMENT CONTROL STRUCTURES	IMMEDIATELY
SOIL RESTORATION	2 WEEKS
FINAL SEEDING AND LANDSCAPING	4 WEEKS
REMOVE SEDIMENT AND TEMPORARY FLOATING SKIMMER FROM BASINS.	2 WEEKS
COMPLETE INFILTRATION BASIN & SAND BOTTOM (AFTER SITE IS STABLE)	2 WEEKS
FINAL PAVEMENT COURSE	2 WEEK

* TEMPORARY SEEDING SHALL ALSO BE PERFORMED WHEN NECESSARY IN ACCORDANCE WITH NOTE No. 2 OF THE SOIL EROSION AND SEDIMENT CONTROL NOTES.



FILTERED DEWATERING DETAIL

NOT TO SCALE

NOTES:
1. THE OUTER PIPE SHOULD BE 48" DIA. OR SHALL IN ANY CASE BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH ¼" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE ¾" x 6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH ¼" HARDWARE CLOTH FIRST THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.

STANDARD FOR STABILIZATION WITH MULCH ONLY

DEFINITION

STABILIZING EXPOSED SOILS WITH NON–VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS

PURPOSE

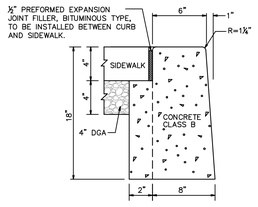
TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION–RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

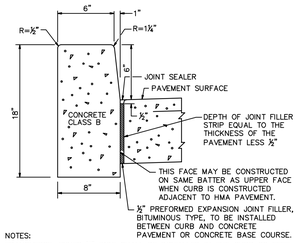
METHODS AND MATERIALS

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
2. PROTECTIVE MATERIALS
   A. UNROTTED SMALL–GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WITH THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
   B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
   C. WOOD–FIBER OR PAPER–FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDRO SEEDER.
   D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
   E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.
   F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C–33) IS RECOMMENDED.
3. MULCH ANCHORING – SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.
   A. PEG AND TWINE – DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS–CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
   B. MULCH NETTINGS – STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
   C. CRIMPER MULCH ANCHORING COULTER TOOL – A TRACTOR–DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.
   D. LIQUID MULCH–BINDERS
      1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
      2. USE ONE OF THE FOLLOWING:
         a. ORGANIC AND VEGETABLE BASED



CONCRETE VERTICAL CURB ABUTTING SIDEWALK

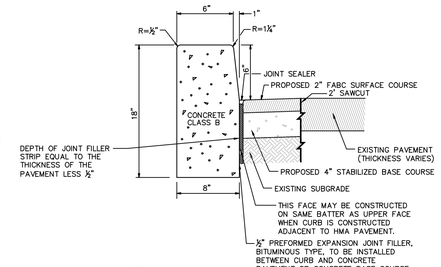
NOT TO SCALE



NOTES:
TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20 FEET APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED ¼" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB.

CONCRETE VERTICAL CURB

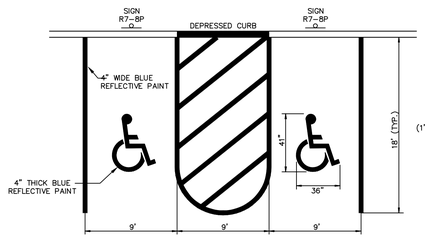
NOT TO SCALE



NOTES:
TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20 FEET APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED ¼" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB.

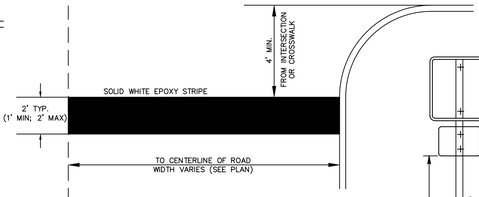
CONCRETE VERTICAL CURB & SAWCUT PAVEMENT REPLACEMENT

NOT TO SCALE



HANDICAP PARKING STALL STRIPING

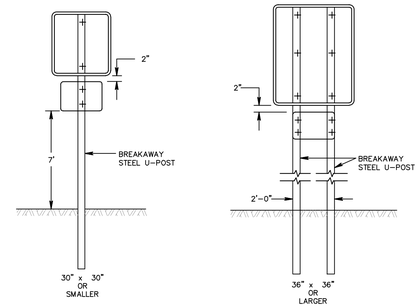
NOT TO SCALE



STOP BAR DETAIL

NOT TO SCALE

NOTE:
IF A CROSSWALK EXISTS AT THE INTERSECTION, THEN THE STOP BAR SHALL BE PLACED A MINIMUM OF 4 FEET AWAY FROM THE CROSSWALK. IF NO CROSSWALK EXISTS, THEN THE STOP BAR SHALL BE PLACED A MINIMUM OF 4 FEET AWAY FROM THE INTERSECTION.



BREAKAWAY SIGN POST

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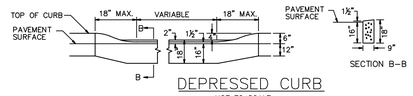
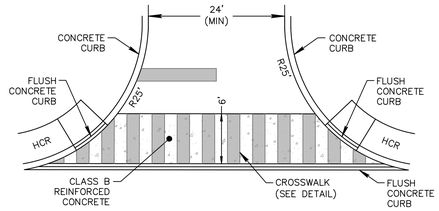


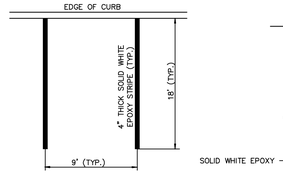
DEPRESSED CURB

NOT TO SCALE



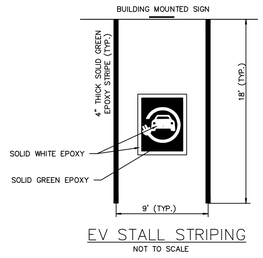
DRIVEWAY APRON DETAIL (BEACHWAY AVE)

NOT TO SCALE



TYPICAL PARKING STALL STRIPING

NOT TO SCALE



EV STALL STRIPING

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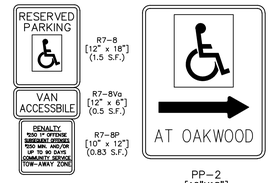
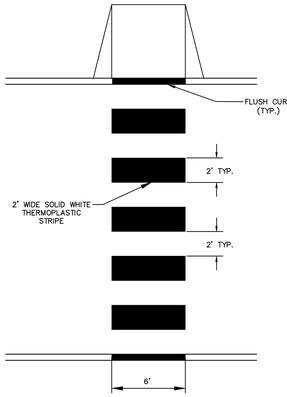


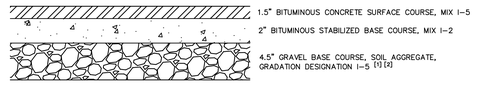
PP-2
[12"X18"]
(1.5 S.F.)

PP-1
[12"X18"]
(1.5 S.F.)



CROSSWALK DETAIL

NOT TO SCALE

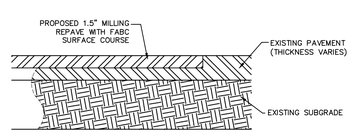


PAVEMENT SECTION (ON-SITE PARKING & DRIVE AISLES – NON-POROUS PAVEMENT SECTIONS)

NOT TO SCALE

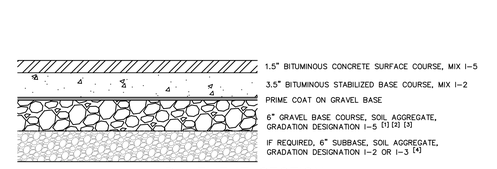
IN ACCORDANCE WITH ORDINANCE SECTION 22-9.8.C.3

NOTES:
[1] BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED FOR GRAVEL BASE COURSE ON A 1 TO 3 INCH RATIO
[2] IF SUBGRADE IS APPROVED AS ADEQUATE BY THE ENGINEER, GRAVEL BASE COURSE MAY BE COMPLETELY ELIMINATED AND BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED ON A 1 TO 3 INCH RATIO



PAVEMENT MILLING DETAIL

NOT TO SCALE

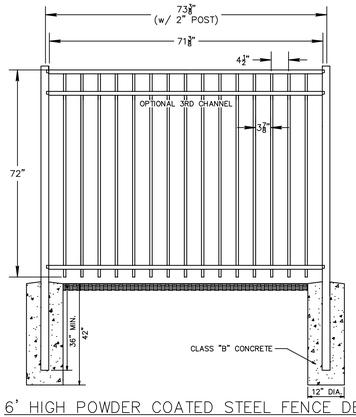


PAVEMENT SECTION (BEACHWAY AVENUE)

NOT TO SCALE

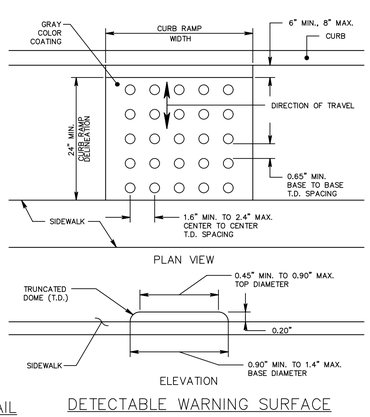
IN ACCORDANCE WITH ORDINANCE SECTION 22-9.8.C.3

NOTES:
[1] BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED FOR GRAVEL BASE COURSE ON A 1 TO 3 INCH RATIO
[2] IF SUBGRADE IS APPROVED AS ADEQUATE BY THE ENGINEER, GRAVEL BASE COURSE MAY BE COMPLETELY ELIMINATED AND BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED ON A 1 TO 3 INCH RATIO
[3] GRAVEL BASE COURSE MAY BE REDUCED TO 3 INCH MINIMUM IF SUBBASE IS PROVIDED
[4] SUBBASE MAY BE REQUIRED DEPENDING ON SUBGRADE SOILS, GROUND WATER ELEVATIONS, AND OTHER VARIABLES



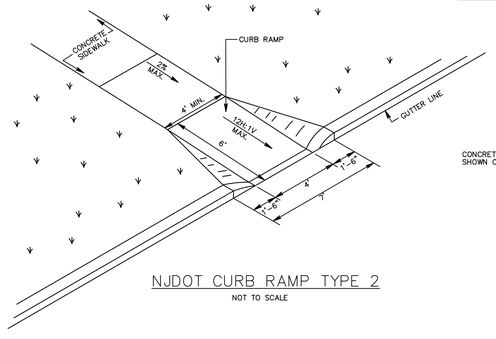
6' HIGH POWDER COATED STEEL FENCE DETAIL

NOT TO SCALE



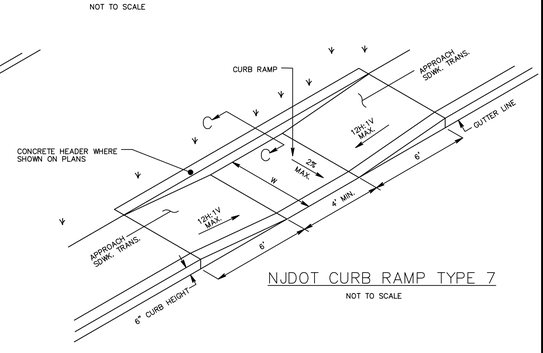
DETECTABLE WARNING SURFACE

NOTES:
1. MUST BE INSTALLED AT ALL HCR LOCATIONS AS WELL AS ANY SIDEWALKS THAT TERMINATE AT A ROAD/PARKING CROSSING.
2. PREFERRED MANUFACTURERS:
   A. ARMOR-TILE
   B. ADA SOLUTIONS
   C. VANGUARD ADA SYSTEMS OF AMERICA



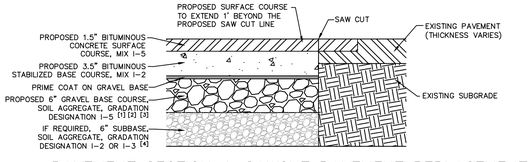
NJDOT CURB RAMP TYPE 2

NOT TO SCALE



NJDOT CURB RAMP TYPE 7

NOT TO SCALE

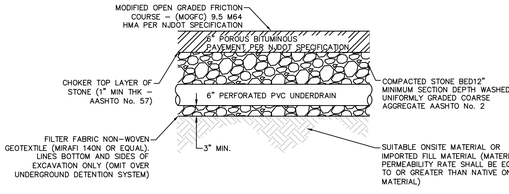


PAVEMENT SECTION & SAWCUT PAVEMENT REPLACEMENT (BEACHWAY AVENUE)

NOT TO SCALE

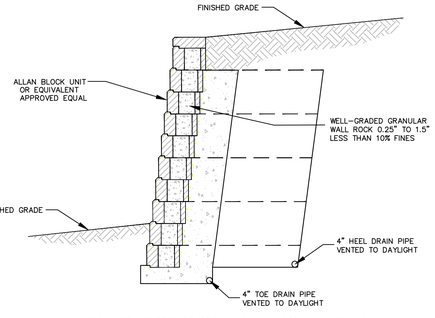
IN ACCORDANCE WITH ORDINANCE SECTION 22-9.8.C.3

NOTES:
[1] BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED FOR GRAVEL BASE COURSE ON A 1 TO 3 INCH RATIO
[2] IF SUBGRADE IS APPROVED AS ADEQUATE BY THE ENGINEER, GRAVEL BASE COURSE MAY BE COMPLETELY ELIMINATED AND BITUMINOUS STABILIZED BASE COURSE MAY BE SUBSTITUTED ON A 1 TO 3 INCH RATIO
[3] GRAVEL BASE COURSE MAY BE REDUCED TO 3 INCH MINIMUM IF SUBBASE IS PROVIDED
[4] SUBBASE MAY BE REQUIRED DEPENDING ON SUBGRADE SOILS, GROUND WATER ELEVATIONS, AND OTHER VARIABLES



TYPICAL POROUS (PERVIOUS) PAVEMENT SECTION

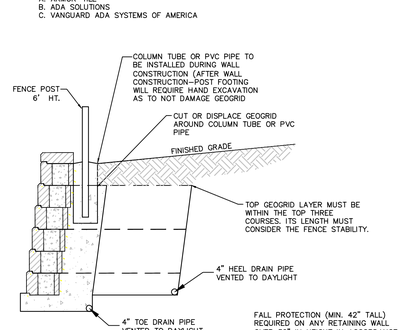
NOT TO SCALE



* CONTRACTOR TO PROVIDE RETAINING WALL DESIGN CALCULATIONS AND SPECIFICATIONS, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER, TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

BLOCK RETAINING WALL DETAIL (TYP.)

NOT TO SCALE



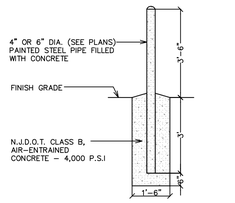
*CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION

RETAINING WALL AND FENCE

NOT TO SCALE

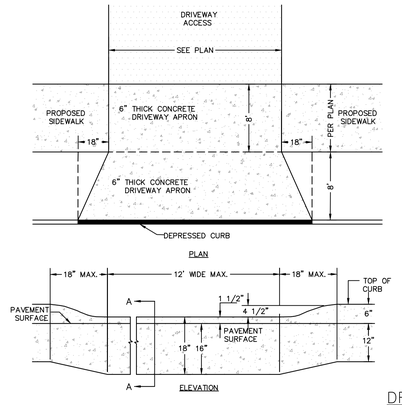
[12" X 18"]
(1.5 S.F.)

R1-1
30" x 30"
(6.3 S.F.)



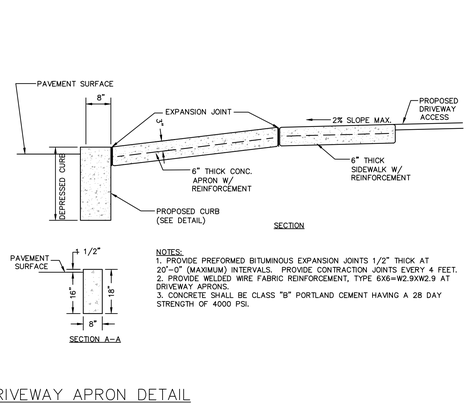
BOLLARD SECTION DETAIL

NOT TO SCALE



DRIVEWAY APRON DETAIL

NOT TO SCALE



NOTES:
1. PROVIDE PREFORMED BITUMINOUS EXPANSION JOINTS 1/2" THICK AT 20'-0" (MAXIMUM) INTERVALS. PROVIDE CONTRACTION JOINTS EVERY 4 FEET.
2. PROVIDE WELDED WIRE FABRIC REINFORCEMENT, TYPE 6X6=W2.9XW2.9 AT DRIVEWAY APRONS.
3. CONCRETE SHALL BE CLASS "B" PORTLAND CEMENT HAVING A 28 DAY STRENGTH OF 4000 PSI.

DRAWN BY:	MJB
CHECKED BY:	JMF
HORIZONTAL SCALE:	1"=20'
VERTICAL SCALE:	N/A
PROJECT No.:	BAR-2301
DATE:	03/12/24

DATE	REVISIONS	DRAWN BY	CHECKED BY

3/12/24

Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050201900
Certificate of Authorization No. GA51A5581600

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
CONSTRUCTION DETAILS
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
2000B Route 34, Suite 200, Wall Township, NJ 07719
191 Highway 24, Suite 201, Mt. Laurel Twp., NJ 08054
609-910-4450
20 W. State Street, Media, PA 19063, 610-565-0300
89 Washington St. 1st Floor, Morristown NJ 07960, 973-716-8662
728-720-5899

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Sheet Number
14 of 16

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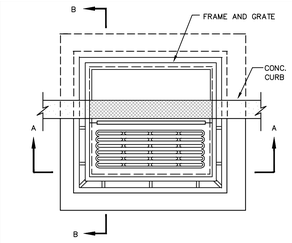
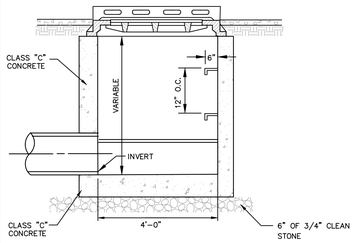
Plot Time: Mar 12, 2024 – 4:45pm

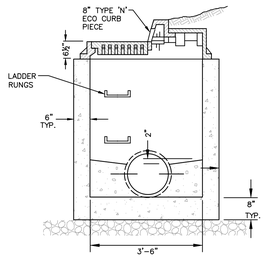


GENERAL NOTES

1. FRAME AND GRATE TO BE BRIDGESTATE FOUNDRY NO. 2618 BICYCLE GRATE WITH TYPE 'N' ECO CURB PIECE OR APPROVED EQUAL.
2. PROVIDE CAMPBELL FOUNDRY NO 2593–2254 NJDOT STANDARD PLASTIC COATED STEEL STEPS, 12" O.C.
3. CONCRETE STRENGTH: 4000 PSI MIN. @ 28 DAYS.
4. STRUCTURE TO CONFORM TO ASTM C913–02.
5. DESIGN TO CONFORM TO HS–25 TRAFFIC LOADING.



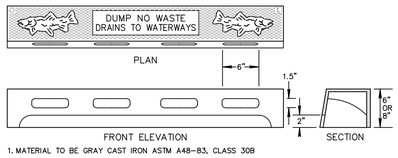
SECTION A–A



SECTION B–B

TYPE 'B' INLET

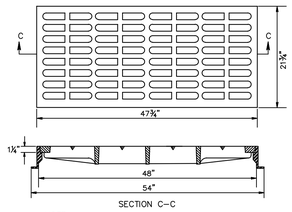
NOT TO SCALE



1. MATERIAL TO BE GRAY CAST IRON ASTM A48–83, CLASS 30B

TYPE 'N' ECO CURB PIECE

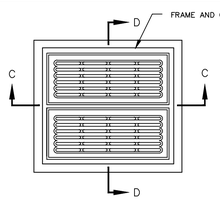
NOT TO SCALE



NOTE:
–FOR TYPE 'B' INLETS BRIDGESTATE FOUNDRY NO 2618 BICYCLE SAFE GRATE OR APPROVED EQUAL
–FOR TYPE 'E' INLETS BRIDGESTATE FOUNDRY NO 3425 BICYCLE SAFE GRATE OR APPROVED EQUAL
–FOR TYPE 'A' INLETS BRIDGESTATE FOUNDRY NO 3405 BICYCLE SAFE GRATE OR APPROVED EQUAL

BICYCLE SAFE GRATE

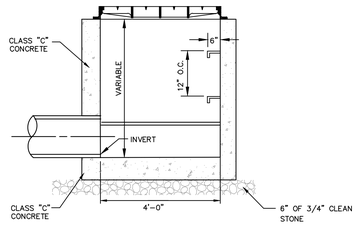
NOT TO SCALE



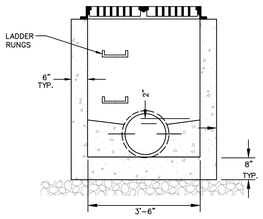
PLAN

GENERAL NOTES

1. FRAME AND GRATE TO BE BRIDGESTATE FOUNDRY NO. 3425 BICYCLE SAFE GRATE OR APPROVED EQUAL.
2. PROVIDE CAMPBELL FOUNDRY NO 2593–2254 NJDOT STANDARD PLASTIC COATED STEEL STEPS, 12" O.C.
3. CONCRETE STRENGTH: 4000 PSI MIN. @ 28 DAYS.
4. STRUCTURE TO CONFORM TO ASTM C913–02.
5. DESIGN TO CONFORM TO HS–25 TRAFFIC LOADING.



SECTION 'C–C'

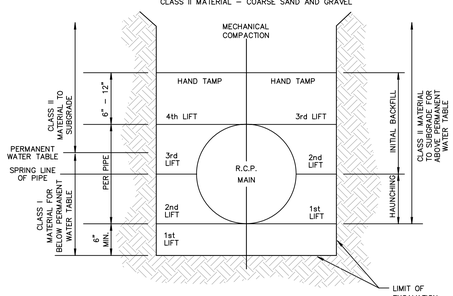


SECTION 'D–D'

TYPE 'E' INLET

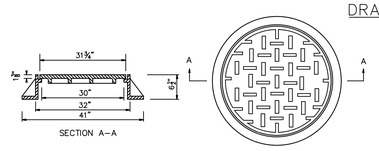
NOT TO SCALE

NOTE:
CLASS I MATERIAL – 3/4" CLEAN CRUSHED STONE
CLASS II MATERIAL – COARSE SAND AND GRAVEL



R.C.P. BEDDING DETAIL

NOT TO SCALE



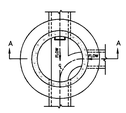
NOTE:
FRAME AND COVER TO BE BRIDGESTATE FOUNDRY PATTERN NUMBER 1012A OR APPROVED EQUAL

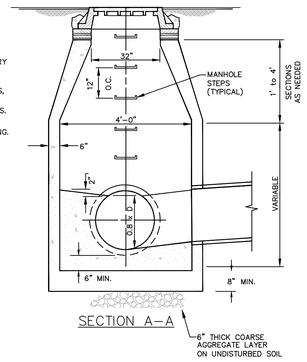
DRAINAGE MANHOLE FRAME AND COVER

NOT TO SCALE

GENERAL NOTES

1. FRAME AND COVER TO BE BRIDGESTATE FOUNDRY NO. 1012A OR APPROVED EQUAL.
2. PROVIDE BRIDGESTATE FOUNDRY NO 2593–2254 NJDOT STANDARD PLASTIC COATED STEEL STEPS, 12" O.C.
3. CONCRETE STRENGTH: 4000 PSI MIN. @ 28 DAYS.
4. STRUCTURE TO CONFORM TO ASTM C913–02.
5. DESIGN TO CONFORM TO HS–25 TRAFFIC LOADING.





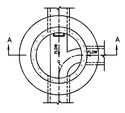
SECTION A–A

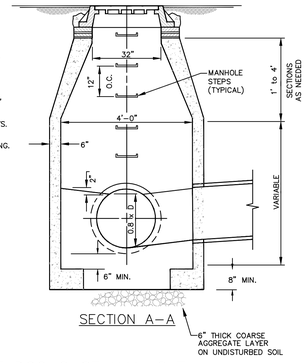
DRAINAGE MANHOLE

NOT TO SCALE

GENERAL NOTES

1. FRAME AND GRATE TO BE CAMPBELL FOUNDARY NO. 2618 BICYCLE GRATE WITH TYPE 'J' ECO CURB PIECE OR APPROVED EQUAL.
2. PROVIDE CAMPBELL FOUNDRY NO 2593–2254 NJDOT STANDARD PLASTIC COATED STEEL STEPS, 12" O.C.
3. CONCRETE STRENGTH: 4000 PSI MIN. @ 28 DAYS.
4. STRUCTURE TO CONFORM TO ASTM C913–02.
5. DESIGN TO CONFROM TO HS–25 TRAFFIC LOADING.

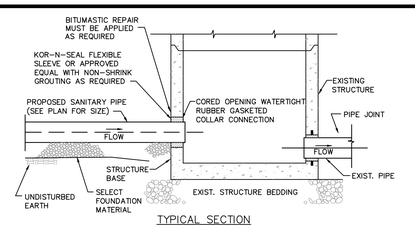




SECTION A–A

DRAINAGE DOGHOUSE MANHOLE

NOT TO SCALE



TYPICAL SECTION

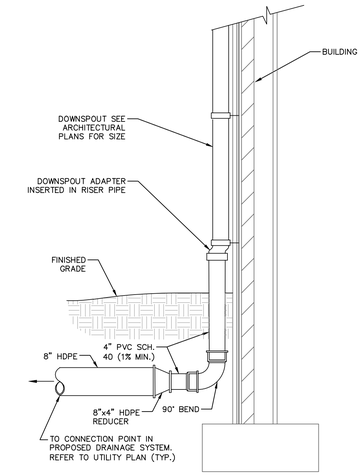
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OPERATION OF THE EXISTING PIPES CONNECTED TO THE EXISTING STRUCTURE. AT NO TIME SHALL THE CONSTRUCTION OF THE NEW SANITARY SEWER MAIN IMPEDE THE OPERATION OF THE EXISTING SANITARY SEWER.
2. WHERE NEW PIPE IS TO BE CONNECTED INTO AN EXISTING STRUCTURE, THE CONTRACTOR SHALL CORE DRILL ALL HOLES INTO STRUCTURE WALL AND SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY.

   PIPE SHALL BE SEALED USING KOR–N–SEAL ADAPTERS OR APPROVED EQUAL AND ON–SHRINK GROUT.
3. ANY DAMAGE TO THE EXISTING STRUCTURE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

CONNECTION TO EXISTING STRUCTURE DETAIL

NOT TO SCALE



ROOF LEADER DOWNSPOUT CONNECTION DETAIL

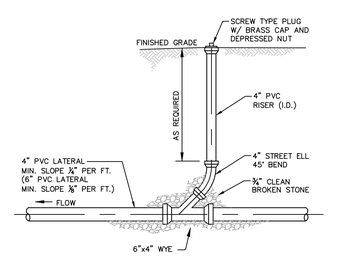
NOT TO SCALE

NOTE:
CENTERLINE OF HEADER PIPES TO BE LOCATED 2.5' OFF BUILDINGS.

NOTE:
1. ALL PVC CLEAN–OUTS TO HAVE FRAME & COVER

CLEAN–OUT PROTECTION BOX DETAIL

NOT TO SCALE



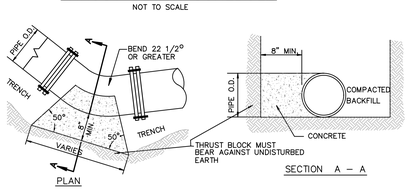
STANDARD CLEANOUT DETAIL

NOT TO SCALE

REACTION TYPE		PIPE SIZE										
		4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
TEST PRESSURE =100 PSIG	A	0.89	2.19	3.92	5.57	8.62	10.91	15.41	18.02	24.06	34.64	53.83	77.39
	B	0.65	1.55	2.76	4.19	6.09	8.37	10.89	13.87	17.01	24.49	38.06	54.72
	C	0.48	1.19	2.12	3.01	4.66	5.91	5.91	9.71	13.02	18.75	29.13	41.88
	D	0.25	0.60	1.08	1.54	2.37	3.01	3.01	4.97	6.64	9.56	14.85	21.55
	E	0.13	0.30	.54	0.77	1.19	1.52	1.52	2.51	3.33	4.79	7.45	10.71
OTHER PRESSURES FOR THE ABOVE REACTIONS		TEST PRESSURE TO BE 100 PSI MIN. AT HIGH END OF THE TEST SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR THE OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE. FOR INSTANCE AT A 200 PSI TEST PRESSURE, THE REQUIRED THRUST BLOCK SQUARE FOOTAGE IS DOUBLE WHAT IS INDICATED IN THE ABOVE TABLE.										

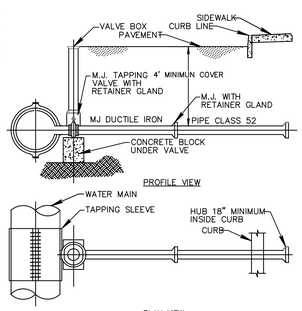
THRUST BLOCK SCHEDULE

NOT TO SCALE



THRUST BLOCK

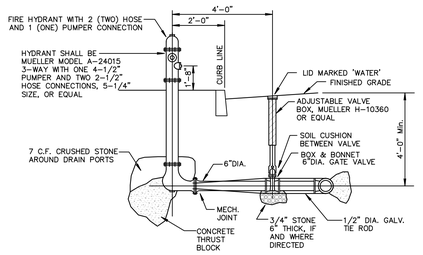
NOT TO SCALE



NOTE: RETAINER GLANDS TO BE USED ON ALL MECHANICAL JOINTS. ADDITIONAL RESTRAINTS EITHER CONCRETE TRUST BLOCK OR STEEL TIE RODS MAY BE REQUIRE BY THE DIVISION.

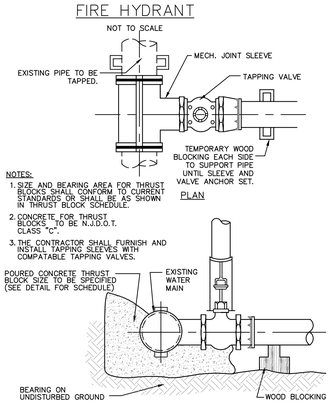
TYPICAL INSTALLATION OF 4"–12" SERVICES

NOT TO SCALE



FIRE HYDRANT

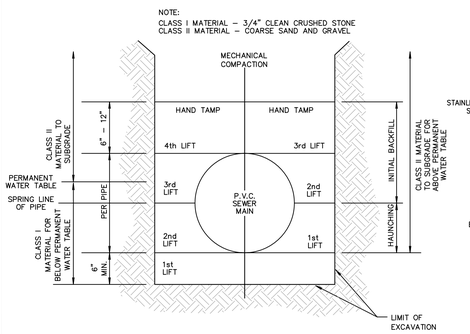
NOT TO SCALE



WET TAP ASSEMBLY

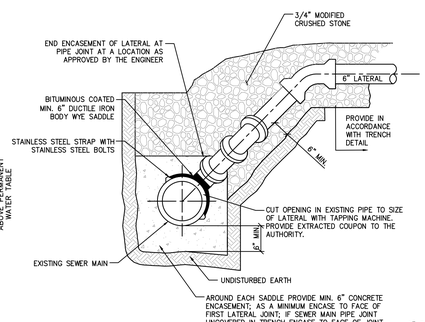
NOT TO SCALE

NOTE:
CLASS I MATERIAL – 3/4" CLEAN CRUSHED STONE
CLASS II MATERIAL – COARSE SAND AND GRAVEL



P.V.C. BEDDING DETAIL

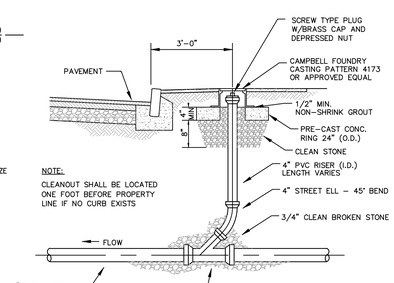
NOT TO SCALE



NOTE: FOR REMAINING DETAILS FOR LATERAL CONSTRUCTION, SEE TYPICAL LATERAL BASEMENT CONNECTION PLAN AND PROFILE DETAILS.

SADDLE CONNECTION DETAIL

NOT TO SCALE



NOTE:
CLEANOUT SHALL BE LOCATED ONE FOOT BEFORE PROPERTY LINE IF NO CURB EXISTS

CLEANOUT AT CURB DETAIL

NOT TO SCALE

DRAWN BY:	M.B
CHECKED BY:	JMF
HORIZONTAL SCALE:	1"=20'
VERTICAL SCALE:	N/A
PROJECT No.:	BAR–2301
DATE:	03/12/24

DATE	REVISIONS	DRAWN BY	CHECKED BY

3/12/24

Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE050201500
Certificate of Authorization No. GA51A00Nations

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
CONSTRUCTION DETAILS
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
20000 Rand Rd. Suite 100, Lynd Park NJ 08004, 609-910-4450
1971 Highway 34, Suite 201, Wall Township NJ 07719, 732-722-0889
37 W. State Street, Media, PA 19063, 610-566-0000
26 Watermark St. 3rd Floor, Morristown NJ 07950, 973-716-9652

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Sheet Number
15 of 16

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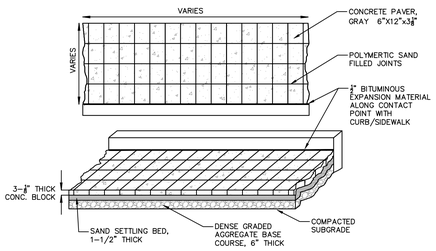
Plot time: Mar 12, 2024 – 4:15pm

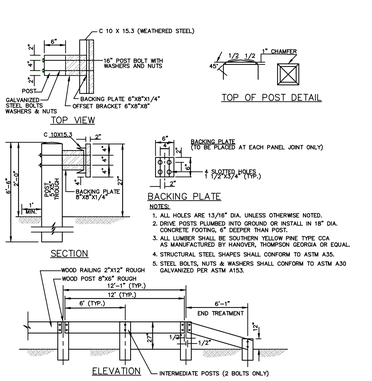


CONCRETE PAVER DETAIL

NOT TO SCALE

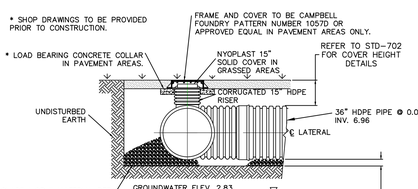
NOTES:

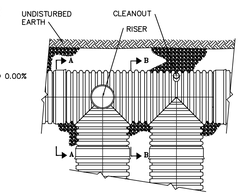
1. PAVER SIZE AND COLOR IS SUBJECT TO CHANGE PER MATERIAL AVAILABILITY.
2. PAVERS TO BE FLUSH WITH CURB AND SIDEWALK.
3. PAVERS TO BE PRECAST CONCRETE, 3–⅛" THICK.

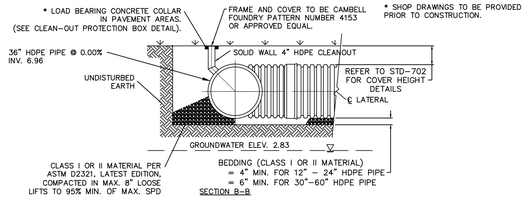


WOOD BEAM GUIDE RAIL DETAIL

NOT TO SCALE







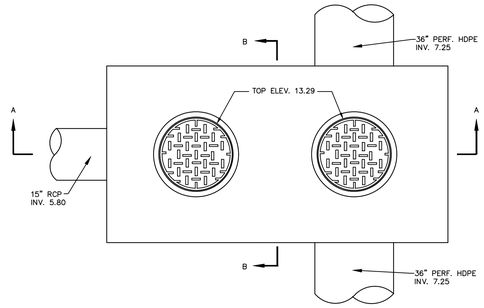
DETENTION BASIN RISER CLEANOUT DETAIL

NOT TO SCALE

NOTES:

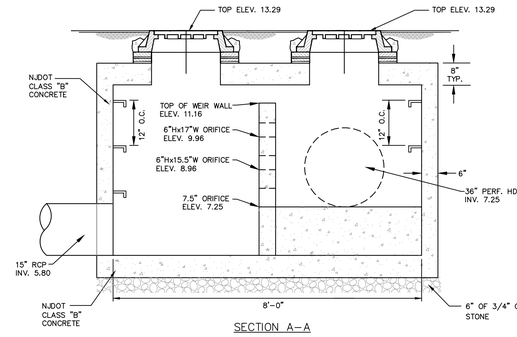
1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"–24" (100mm–600mm); 6" (150mm) FOR 30"–60" (750mm–900mm).
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON–TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" – 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "S"	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"	H (NON–TRAFFIC)	H (TRAFFIC)
36" (900 MM)	42" (1067 MM)	22" (559 MM)	63" (1600 MM)	18" (457 MM)	12" (292 MM)	12" (292 MM)



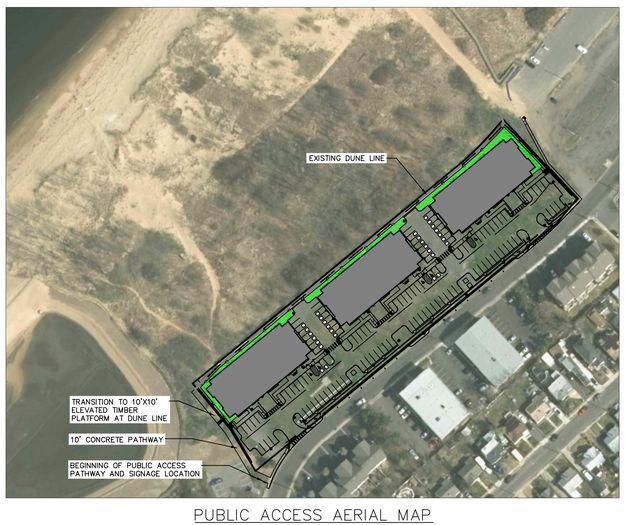
GENERAL NOTES

1. FRAME AND COVER TO BE BRIDGESTATE FOUNDRY NO. 1012A OR APPROVED EQUAL.
2. PROVIDE CAMPBELL FOUNDRY NO 2593–2254 NJDOT STANDARD PLASTIC COATED STEEL STEPS, 12" O.C.
3. CONCRETE TO BE NJDOT CLASS B.
4. STRUCTURE TO CONFORM TO ASTM C913–02.
5. DESIGN TO CONFORM TO HS–25 TRAFFIC LOADING.



OUTLET STRUCTURE–1

NOT TO SCALE

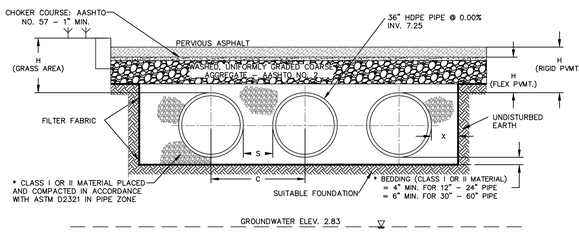


PUBLIC ACCESS AERIAL MAP

1 INCH = 100 FEET

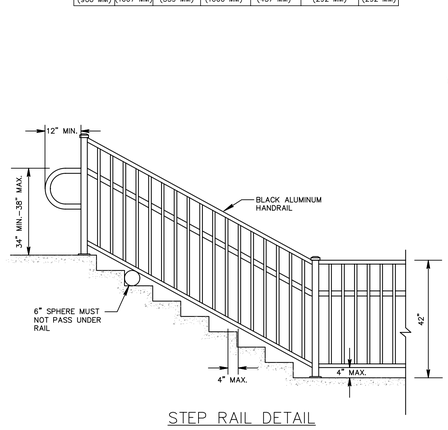
NOTES:

1. EXACT PATH LOCATION TO BE FIELD DETERMINED; MEANDER PATH TO AVOID DISTURBANCE TO SIGNIFICANT VEGETATION WHERE FEASIBLE.



DETENTION BASIN CROSS SECTION DETAIL
(3) 360 LF 36" PERF. HDPE

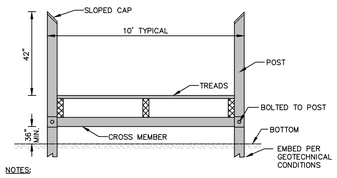
NOT TO SCALE



STEP RAIL DETAIL

NOT TO SCALE

AS MANUFACTURED BY FAIRWAY RAILING, DELGARD, ETC OR APPROVED EQUAL

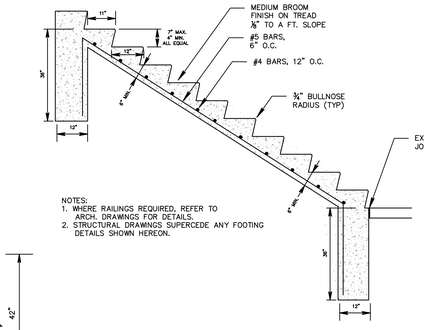


NOTES:

1. ALL LUMBER SHALL BE DOUGLAS FIR, SOUTHERN PINE, OR CYPRESS.
2. ALL TIMBER TO BE PRESSURE TREATED WITH CCA–TYPE C "WOLMANIZED".
3. THE CONSTRUCTION OF THE BOARDWALK WILL MEET THE STANDARDS IN N.J.A.C. 7:7 COASTAL ZONE MANAGEMENT RULES.
4. THE STRUCTURAL DESIGN OF THE TIMBER BOARDWALK TO BE PROVIDED IN CONSTRUCTION DOCUMENTS.

TIMBER WALKWAY DETAIL

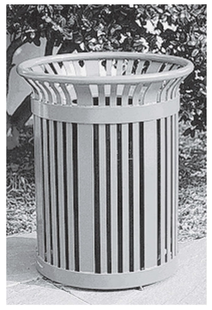
NOT TO SCALE



NOTES:
1. WHERE RAILINGS REQUIRED, REFER TO ARCH. DRAWINGS FOR DETAILS.
2. STRUCTURAL DRAWINGS SUPERCEDE ANY FOOTING DETAILS SHOWN HEREON.

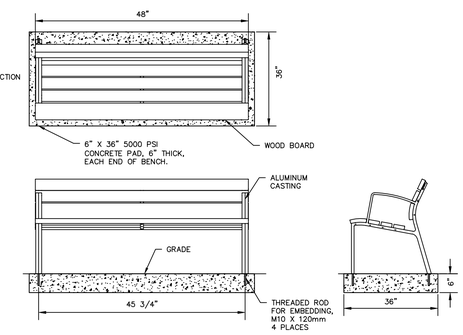
TYPICAL CONCRETE STEP DETAIL

NOT TO SCALE



TRASH RECEPTACLE DETAIL

NOT TO SCALE



BENCH FOOTING DETAIL

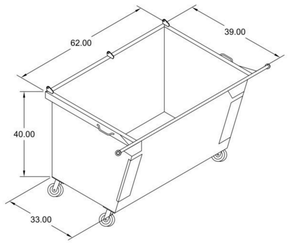
NOT TO SCALE

Victor Stanley - Model CM-324 (4,6, or 8 ft,)

Surface bolt mounted.

BENCH DETAIL

NOT TO SCALE



2–CUBIC YARD ROLL OUT DUMPSTER

NOT TO SCALE

DRAWN BY: MJB	CHECKED BY: JMF		DRAWN BY CHECKED BY
HORIZONTAL SCALE: 1"=20'	VERTICAL SCALE: N/A		
PROJECT No.: BAR–2301			REVISIONS
DATE: 03/12/24			DATE

3/12/24

Jason M. Fogler, P.E.
PROFESSIONAL ENGINEER
N.J. Lic. No. GE50202500
Certificate of Authorization No. GA0540Affiliations

PRELIMINARY/FINAL MAJOR SITE PLAN
BEACHWAY AVENUE WATERFRONT REDEVELOPMENT
BLOCK 184; LOT 1
CONSTRUCTION DETAILS
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic Engineering Partners
20000 Bristol Rd. Suite 300 Mt. Laurel Twp, NJ 08054 609-810-4450
1971 Highway 34, Suite 201 Wall Township, NJ 07719 732-720-0889
29 W Washington St. 3rd Floor Morristown, NJ 07960 973-711-8822
21 W. State Street Media, PA 19063 610-565-0000

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Sheet Number
16 of 16

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