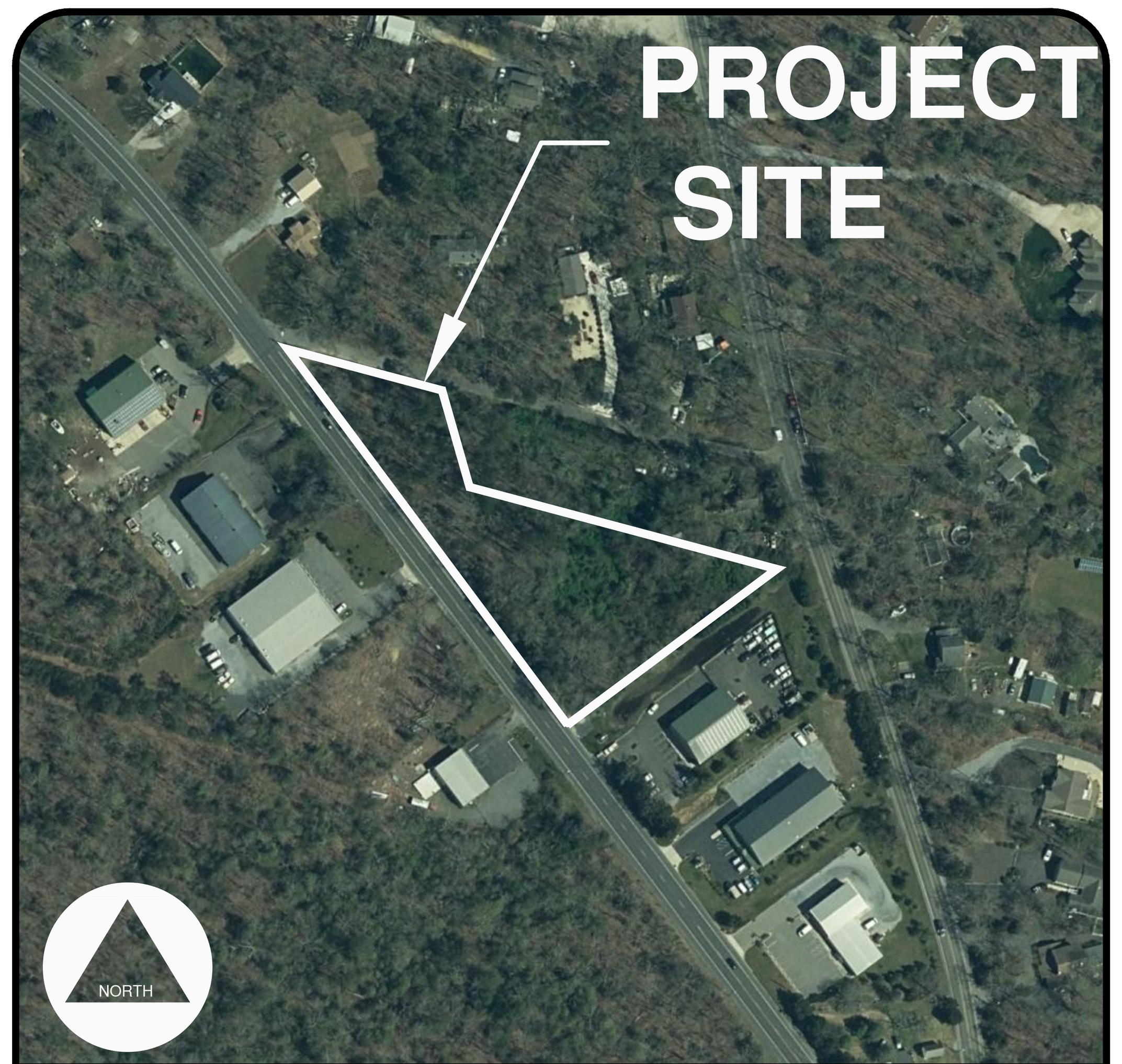
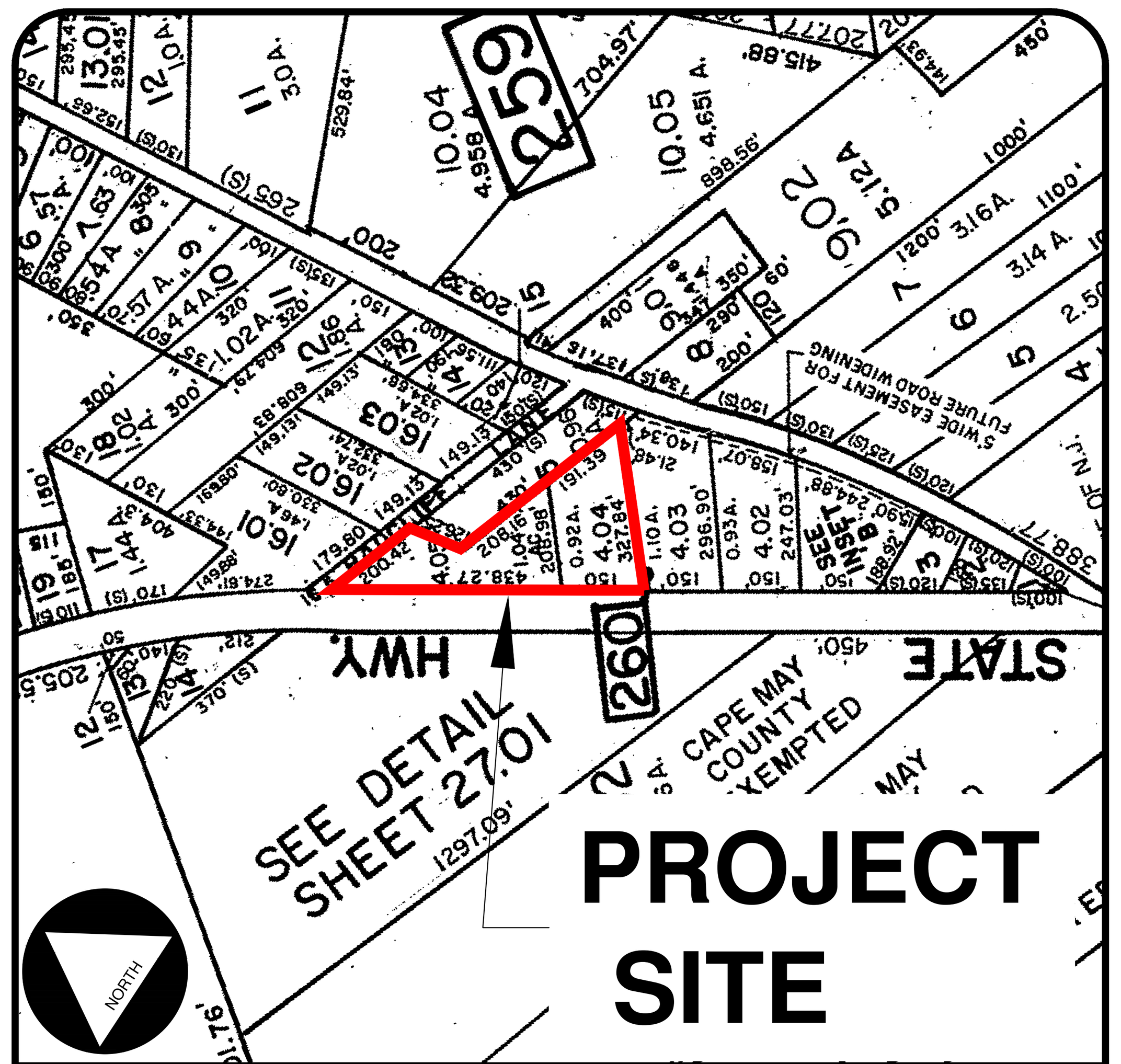
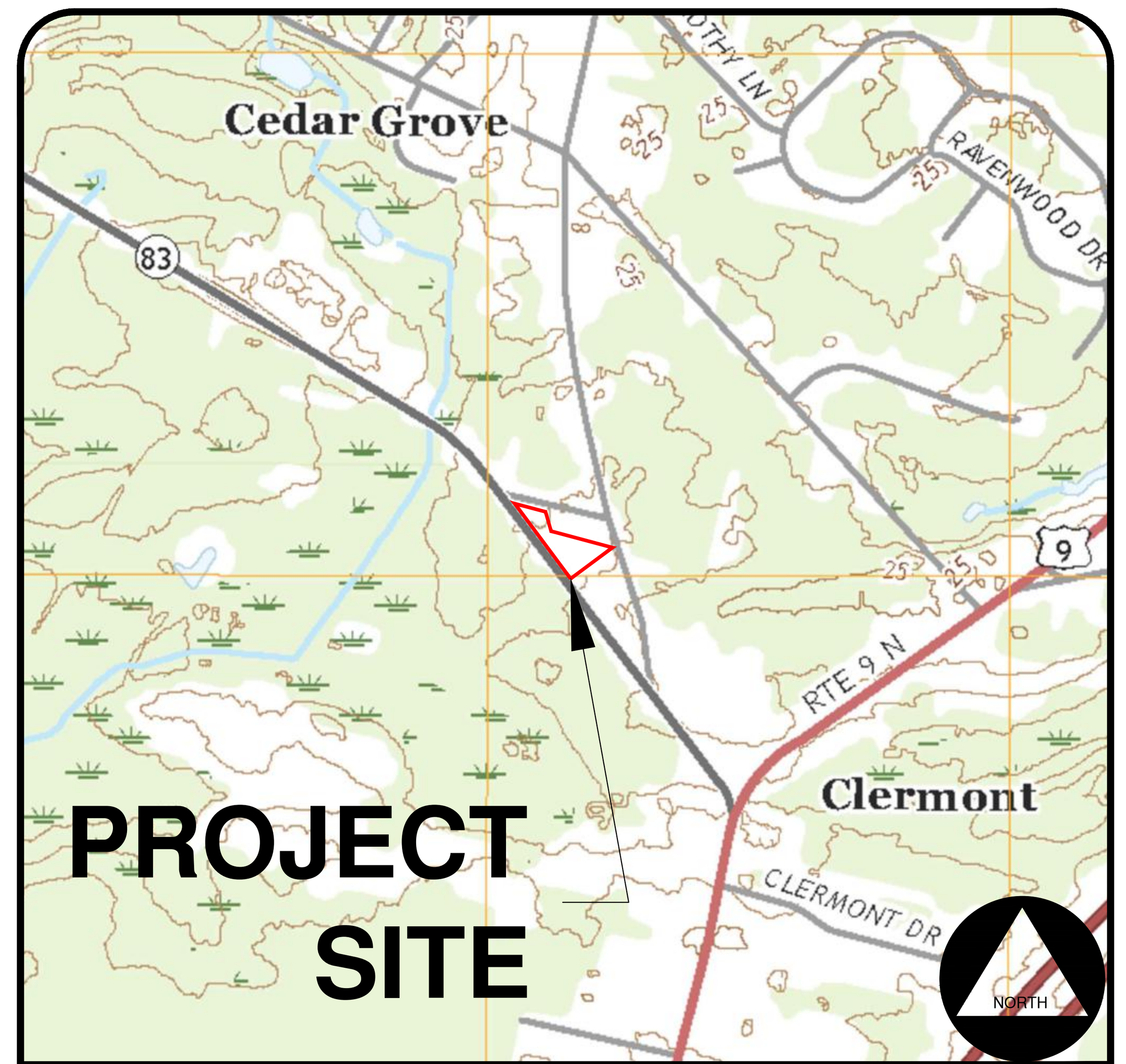


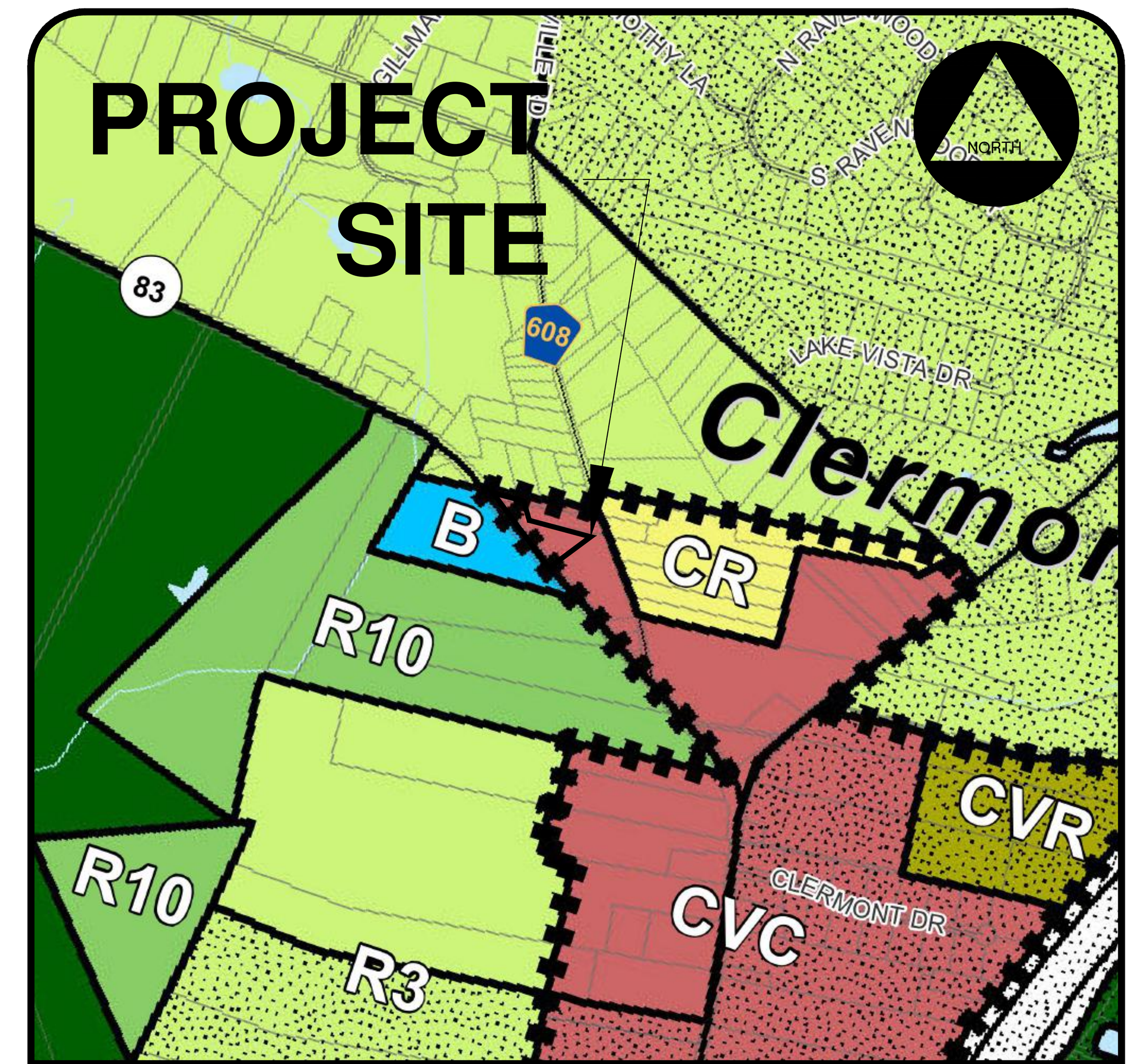
GENERAL LOCATION 1" = 200'
(NJDEP AERIAL 2020)



DENNIS TOWNSHIP TAX MAP 1" = 300'
(SHEET #28)



U.S.G.S. MAP 1" = 1000'
(WOODBINE QUADRANGLE)



DENNIS TOWNSHIP ZONING MAP 1" = 1000'
(CVC) CLERMONT VILLAGE CENTER ZONING DISTRICT

PROPERTY OWNERS WITHIN 200' OF BLOCK 260 , LOTS 4.04 & 4.05 TOWNSHIP OF DENNIS , CAPE MAY COUNTY, NJ

THIS IS TO CERTIFY THAT THE FOLLOWING LIST OF PROPERTY OWNERS ARE WITHIN 200 FEET OF BLOCK 260 LOTS 4.04 & 4.05 ACCORDING TO THE OFFICIAL TAX MAP OF DENNIS TOWNSHIP.

BLOCK 260 LOT 4.04 & 4.05

ATTEST Lee Ann Russ
LEE ANN RUSS, CTA

CAPE MAY COUNTY PLANNING BOARD
DN-309, CENTRAL MAIL ROOM
CAPE MAY COURT HOUSE, NJ 08210

VERIZON COMMUNICATIONS
% ENGINEERING DEPARTMENT
10 TANSBORO RD, FL 2
BERLIN, NJ 08009

SOUTH JERSEY GAS COMPANY
% JOSEPH SCHNEIDER
GENERAL MANAGER
SYSTEM ENGINEERING & PLANNING
1 SO JERSEY PLAZA
FOLSOM, NJ 08037

CONECTIV REAL ESTATE DEPARTMENT
5100 HARDING HIGHWAY, SUITE 399
MAYS LANDING, NJ 08330-9902

COMCAST CABLE
901 W LEEDS AVENUE
ABSECON, NJ 08201

PUBLIC SERVICE ELECTRIC & GAS CO.
MANAGER-CORPORATE PROPERTIES
80 PARK PLAZA, T6B
NEWARK, NJ 07102

CAPE ATLANTIC SOIL
CONSERVATION DISTRICT
ATTN: MICHAEL KENT
6260 OLD HARDING HIGHWAY
MAYS LANDING, NJ 08330

BLOCK	LOT	QUAL	PROPERTY OWNER & MAILING ADDRESS PROPERTY LOCATION
258	15		GAY, CHRISTOPHER 147 KINGS HWY CAPE MAY COURT HOUSE, NJ 08210 147 KINGS HWY
258	16.01		CAMPBELL, FRANCIS E 1104 RT 83 CLERMONT, NJ 08210 1104 RT 83
258	16.02		DEVER, THOMAS F 7 RADCLIFF LA CLERMONT, NJ 08210 7 RADCLIFF LA
258	16.03		FITZPATRICK, CHARLES J 1208 CONCORD LN CHERRY HILL, NJ 08003 74 RADCLIFF LA
259	7		PITTALUGA, MATTHEW A 134 KINGS HWY CAPE MAY COURT HOUSE, NJ 08210 134 KINGS HWY
259	9.01		RAFF, SUSAN 144 KINGS HWY CAPE MAY COURT HOUSE, NJ 08210 144 KINGS HWY
260	4.02		SKBC ASSOCIATES, LLC 2153 RTE 9 N CAPE MAY COURT HOUSE, NJ 08210 1072 RT 83
260	4.03		SUHONEN, RODNEY & MARY 112 GRAVEL HOLE RD CAPE MAY COURT HOUSE, NJ 08210 1078 RT 83
260	5		WALKER, SANDRA L 143 KINGS HWY CAPE MAY COURT HOUSE, NJ 08210 143 KINGS HWY
261	15.01		PRUCHNICKI, DENNIS 500 WHITE HORSE PIKE ABSECON, NJ 08201 1071 RT 83
261	15.02		1077 NJ 83 LLC 468 LOUCROFT RD HADDONFIELD, NJ 08033 1077 RT 83
261	15.03	C-1	K & A PROPERTY MANAGEMENT LLC 16 KELLY COURT CAPE MAY COURT HOUSE, NJ 08210 1083 ROUTE 83 #1
261	15.03	C-2	MCCORMICK, WILLIAM 22 CEDAR DR, PO BOX 111 OCEAN VIEW, NJ 08230 1083 RT 83 #2
261	15.03	C-3	DONLEY, JOHN K & ROBERTSON, SANDRA 17 SWAINTON GOSHEN RD CAPE MAY COURT HOUSE, NJ 08210 1083 RT 83 #3
261	15.03	C-4	CAPE ATLANTIC RE INV @ BINDER J 5 HARBOR COVE CAPE MAY, NJ 08204 1083 RT 83 #4
261	15.04		4ZZZZ LLC 3735 OCEAN DR AVALON, NJ 08202 1089 RT 83
261	15.05		RUSCO, DANNAUAL A & JANE 1095 RT 83 CAPE MAY COURT HOUSE, NJ 08210 1095 RT 83
261	16.02		CAPE MAY COUNTY 4 MOORE RD CAPE MAY COURT HOUSE, NJ 08210.1654 1057 RT 83

PROPERTY OWNERS LIST WITHIN 200'

1. Applicant/Owner:
   Ryan Development Group
   Matt Ryan
   3283 Dune Drive
   Avalon, NJ 08202
   Phone (410)-371-3122

   Site Address:
   1084 Route 83
   Dennis, NJ 08210

2. The project site is known as Block 260 Lots 4.04 & 4.05, as shown on the Tax Sheet #28 of the Dennis Township Tax Maps.
3. The property is located in both the CVC - Clermont Village Center and R3 - Rural Density Residential Zoning Districts. It is currently vacant / wooded.
4. The project site consists of a total area of 1.966 Acres (85638.96 SF). Lot 4.04 consists of 0.924 AC (40,249.44SF) & Lot 4.05 consists of 1.042 AC (45,389.52 SF).
5. It is the intent of the Applicant to construct five contractor workshop units with office space. The building will be a total of 11,900 SF with an adjacent parking lot. Two basins are proposed to mitigate stormwater runoff.
6. Stormwater calculations were prepared by Engineering Design Associates and dated December 2022 last revised January 2023.
7. The Proposed improvements will be serviced from a proposed on-site septic system and proposed well.
8. All concrete curb, sidewalk, pavement disturbed in kind within road rights-of-way are to be repaired in kind.
9. All traffic signs, other signs, mailboxes, poles and/or safety devices that will be removed during construction are to be reinstalled at the proper location.
10. The proposed application will require approvals from the following agencies:

- New Jersey Department of Transportation
- Dennis Township Land Use Board
- Cape May County Planning Board
- Cape May County Soil Conservation District
- Cape Atlantic Soil Conservation District

GENERAL NOTES

Outbound and topographic survey information taken from plan entitled "Survey of Premises 1084 & 1092 Route 83 Block 260: Lot 4.04, 4.05", prepared by Gregory K. Schneider N.J.P.L.S. #42577, dated 10/12/22.

SURVEY INFORMATION

This set of plans has been prepared for purposes of municipal and agency review and approval. This set of plans shall not be utilized as construction documents until all conditions of approval have been satisfied on the drawings and each drawing has been revised to indicate " Issued for Construction."

Contractor shall check and verify all existing utilities, grades, site dimensions and existing conditions before proceeding with construction. Any discrepancies or unusual conditions are to be reported to design engineer/project staff immediately for adjustments or directions.

All construction to be performed in accordance with NJDOT Standard Specifications and supplementary specifications for this project.

These drawings do not include the necessary components for construction safety; however, all construction must be done in compliance with the Occupational Safety and Health Act of 1970 and all rules and regulations appurtenant to this project.

CONTRACTOR NOTES

ZONING INFORMATION
(CVC) CLERMONT VILLAGE CENTER DISTRICT
EDA #9444

Requirement	Required	Existing (4.04)	Existing (4.05)	Proposed	Variance
Lot Area	1 AC	0.924 AC	1.042 AC	1.966 AC	NO
Lot Width	150'	150'	638.69'	788.69'	NO
Lot Depth	200'	268.41'	144.34'	203.77'	NO
Front Yard Setback (Primary)	0'-8'	N/A	N/A	8'	NO
Front Yard Setback (Secondary)	0'-4'	N/A	N/A	195.5	YES
Side Yard Setback	30'	N/A	N/A	71.3'	NO
Rear Yard Setback	55'	N/A	N/A	45.96'	YES
Building Coverage	35%	N/A	N/A	13.8%	NO
Impervious Coverage	60%	0%	0%	35.5%	NO
Building Height (Feet)	30'	N/A	N/A	<30'	NO
Building Height (Stories)	2.5	N/A	N/A	1	NO
Building Length	100'	N/A	N/A	170'	YES
Distance Between Buildings	20'	N/A	N/A	N/A	NO
Parking Setbacks					
Parking Front Setback (Primary)	30'	N/A	N/A	8'	YES
Parking Front Setback (Secondary)	10'	N/A	N/A	134.0'	NO
Parking Side Setback	10'	N/A	N/A	10'	NO
Parking Rear Setback	10'	N/A	N/A	10'	NO

Parking Requirement	Required	Proposed	Variance
1,000 SF Contractor Office 1 space/200 SF	5 spaces	5 Spaces	
10,900 SF Workshop 1 space/700 SF	16 spaces	16 Spaces	
Total	21 spaces	21 spaces	No
Sign Requirement			
Building Mounted Sign Area	30 SF MAX	30 SF MAX	No

Variances:
- Section 185-18(D): Bulk Standards Secondary Front Yard; To permit a 195.5' setback, where a 0'-4' setback is required
- Section 185-18(D): Bulk Standards Rear yard; To permit a setback of 45.96', where a 55' setback is required.
- Section 185-18(D): Bulk Standards Building Length; To permit a building length of 170', where the maximum length is 100'
- Section 185-18(E): Bulk Standards Parking Setback; To permit a front yard parking setback of 8', where 30' is required.

Waivers:
- Requiring curbing in all parking areas (Section 185-38A(2))
- Clearing Limits as it pertains to Section 185-41J(2)
- Environmental Assessment Report (Section 185-41K(2)(c))
- Traffic Impact Study (Section 165-54.B.2(h))

ZONING INFORMATION

SITE PLAN FOR
RYAN DEVELOPMENT GROUP
BLOCK 260, LOTS 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

EDA Engineers - Landscape Architects - Planners

SCHEDULE OF SHEETS	SHEET NUMBER	ORIGINAL DATE	LAST REVISION DATE
COVER SHEET	1 OF 9	12/13/2022	2/2/2023
EXISTING CONDITIONS PLAN	2 OF 9	12/13/2022	2/2/2023
SITE PLAN	3 OF 9	12/13/2022	2/2/2023
GRADING AND SOIL EROSION PLAN	4 OF 9	12/13/2022	2/2/2023
LANDSCAPING AND LIGHTING PLAN	5 OF 9	12/13/2022	2/2/2023
ENGINEERING DETAILS	6 OF 9	12/13/2022	2/2/2023
ENGINEERING DETAILS	7 OF 9	12/13/2022	2/2/2023
SOIL EROSION AND SEDIMENT CONTROL NOTES	8 OF 9	12/13/2022	2/2/2023
NJDOT TRAFFIC CONTROL PLAN	9 OF 9	2/2/2023	---

TOWNSHIP OF DENNIS APPROVAL BLOCK

Chairman ____________ Date ______

Secretary ____________ Date ______

Engineer ____________ Date ______

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION#: 24GA27970300

COVER SHEET
BLOCK 260 LOTS 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230
STATE OF NEW JERSEY STEVEN L. FILIPPONE No. GE29230 LICENSED PROFESSIONAL ENGINEER
Steven L. Filippone

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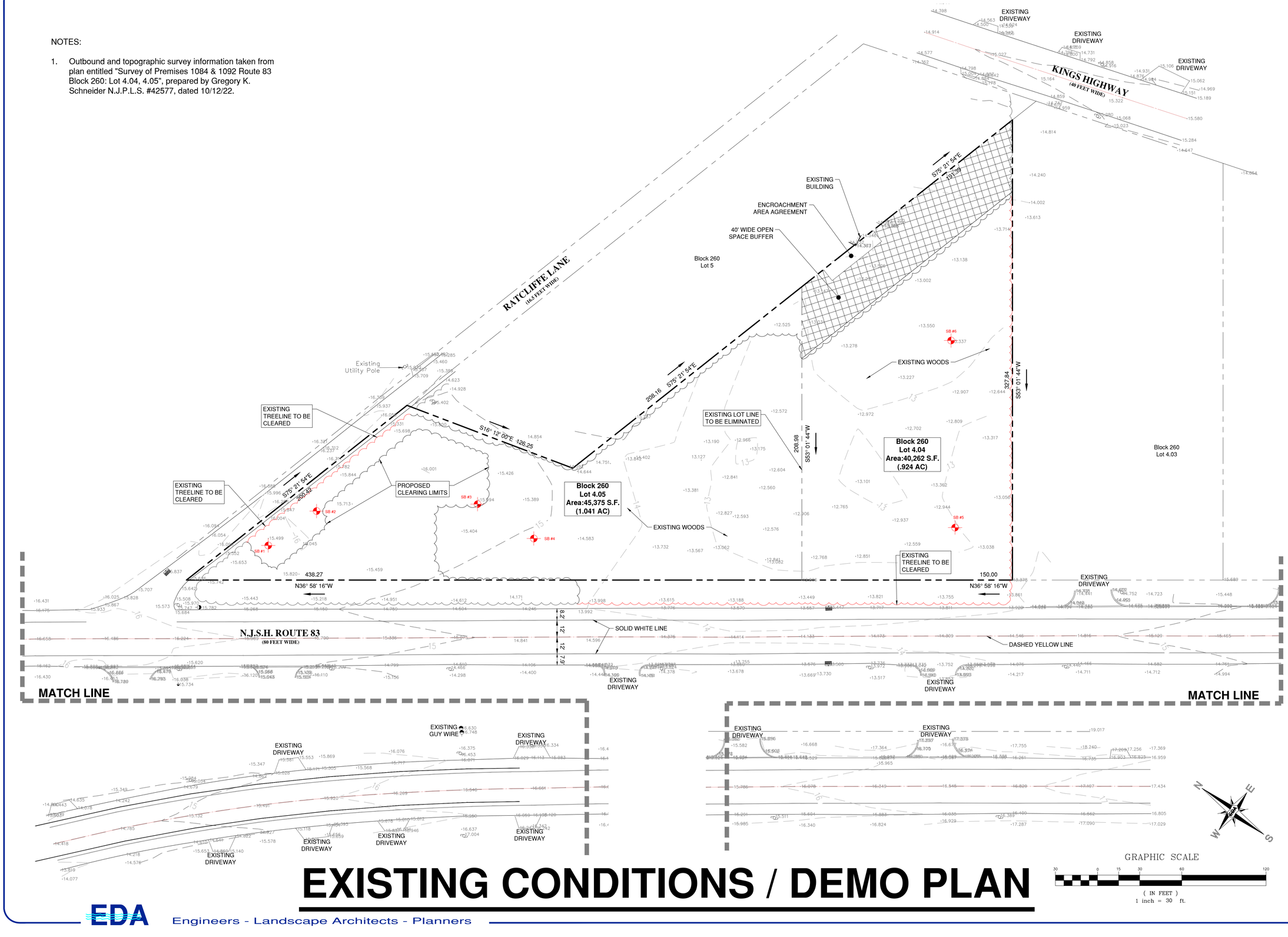
REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

EDA

DATE: 12/13/2022	DRAWN BY: MSB
SCALE: AS NOTED	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 1 0F 9

NOTES:

1. Outbound and topographic survey information taken from plan entitled "Survey of Premises 1084 & 1092 Route 83 Block 260: Lot 4.04, 4.05", prepared by Gregory K. Schneider N.J.P.L.S. #42577, dated 10/12/22.



EXISTING CONDITIONS / DEMO PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
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5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA27970000

EXISTING CONDITIONS / DEMOLITION PLAN
BLOCK 260, LOT 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230

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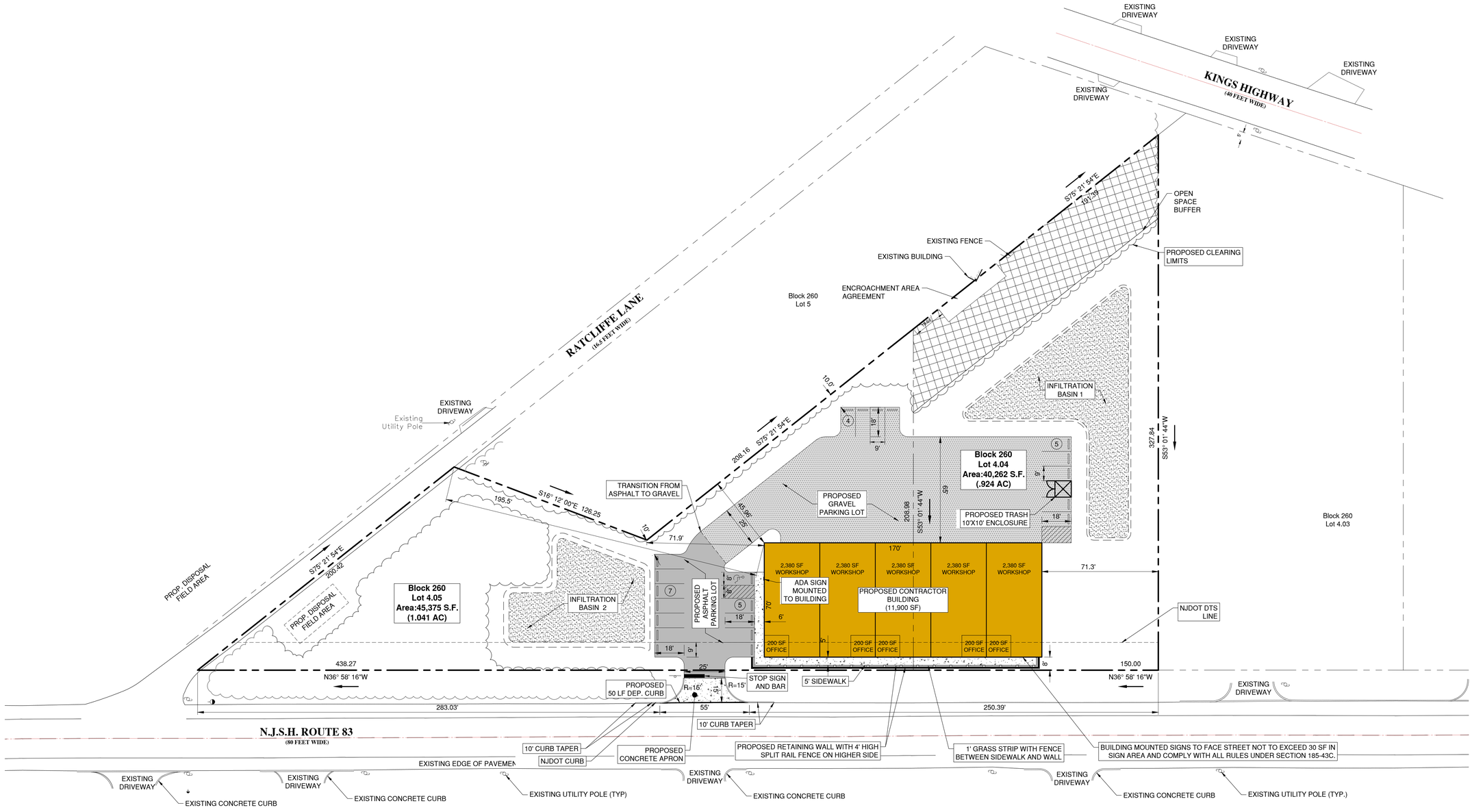
REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

DATE: 11/30/22	DRAWN BY: MSB
SCALE: 1" = 30'	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 2 0F 9



MAJOR SITE PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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MAJOR SITE PLAN
BLOCK 260, LOT 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

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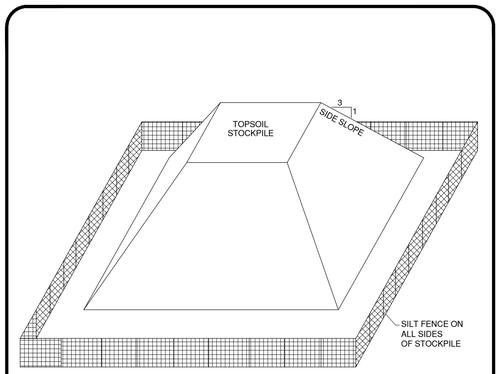
PROJECT #: 9444	SHEET: 3 0F 9



TOPSOIL STOCKPILE DETAIL N.T.S.

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.

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

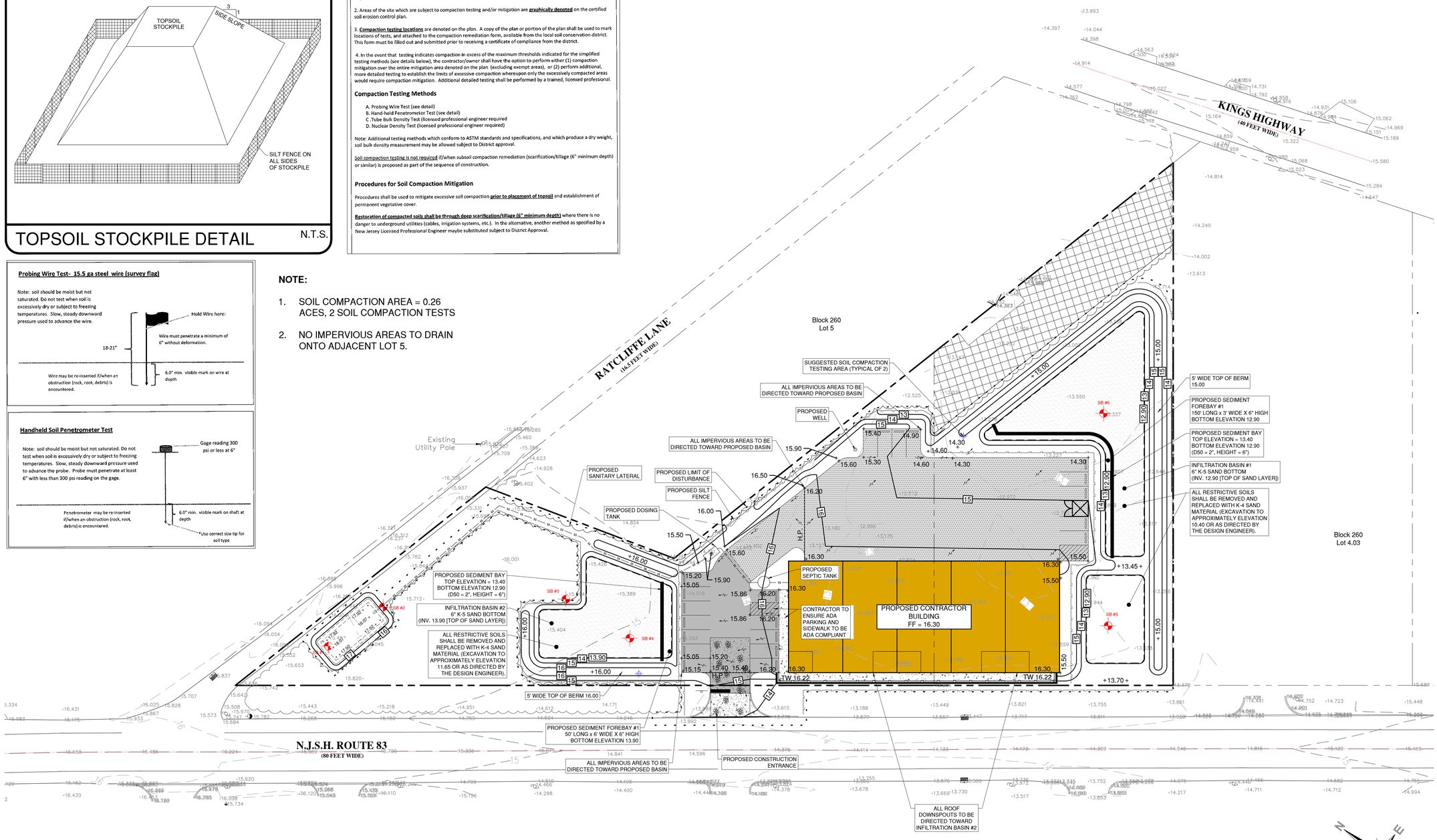
Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.

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.

NOTE:

1. SOIL COMPACTION AREA = 0.26 ACES, 2 SOIL COMPACTION TESTS
2. NO IMPERVIOUS AREAS TO DRAIN ONTO ADJACENT LOT 5.



GRADING, DRAINAGE & SESC PLAN

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

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GRADING, DRAINAGE & SESC PLAN
BLOCK 260, LOT 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

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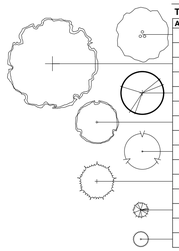
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

EDA

DATE: 11/30/22	DRAWN BY: MSB
SCALE: 1" = 30'	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 4 0F 9

PLANTING LEGEND



TREES

ABRV	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	QTY
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	7'-8'	B&B	4
AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	7'-8'	B&B	6
CC	CERCIS CANADENSIS	EASTERN REDBUD	6'-7'	B&B	3
CF	CORNUS FLORIDA	FLOWERING DOGWOOD	6'-7'	B&B	4
IO	ILEX OPACA	AMERICAN HOLLY	5'-6'	B&B	18
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	5'-6'	B&B	6
JT	JUNIPERUS VIRGINIANA 'TAYLOR'	TAYLOR EASTERN RED CEDAR	5'-6'	B&B	27
TO	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	5'-6'	B&B	18

SHRUBS

IG	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	#5	CONT.	39
IV	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	#5	CONT.	15
JC	JUNIPERUS CONFERA 'BLUE PACIFIC'	BLUE PACIFIC SHORE JUNIPER	#1	CONT.	30
SJ	SPIREA JAPONICA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	#3	CONT.	25
SS	SEDUM SPECTABILE 'AUTUMN JOY'	AUTUMN JOY SPIREA	#1	CONT.	15

NOTE: ALL LANDSCAPED AREAS SHALL BE IRRIGATED. IRRIGATION SYSTEM TO HAVE RAIN SENSOR.
IRRIGATION DESIGN TO BE PROVIDED BY LANDSCAPE CONTRACTOR & SUBMITTED TO CONSTRUCTION OFFICE.

PLANT SCHEDULE

1. DRAWINGS TO BE SCALED FOR PURPOSES OF LOCATING SOIL BERMS, PLANT MATERIAL, PLANTING BEDS, GROUND COVER AREAS AND OTHER SITE AMENITIES SHOWN. DRAWINGS ARE DIAGRAMATIC; PLANT MATERIAL SUBJECT TO FIELD ADJUSTMENT.

2. ALL PLANT MATERIAL TO BE SET IN PREPARED MULCH BEDS. FINAL BED LINES TO BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT OR REPRESENTATIVE.

3. ALL PLANT MATERIAL TO BE IRRIGATED.

4. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANT MATERIAL QUANTITIES. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. PLAN HOLDS PRECEDENT.

GRASSES
AREAS TO BE SEEDED SHALL CONSIST OF THE FOLLOWING SEED MIXTURES TO INSURE A HIGH QUALITY GRASS.

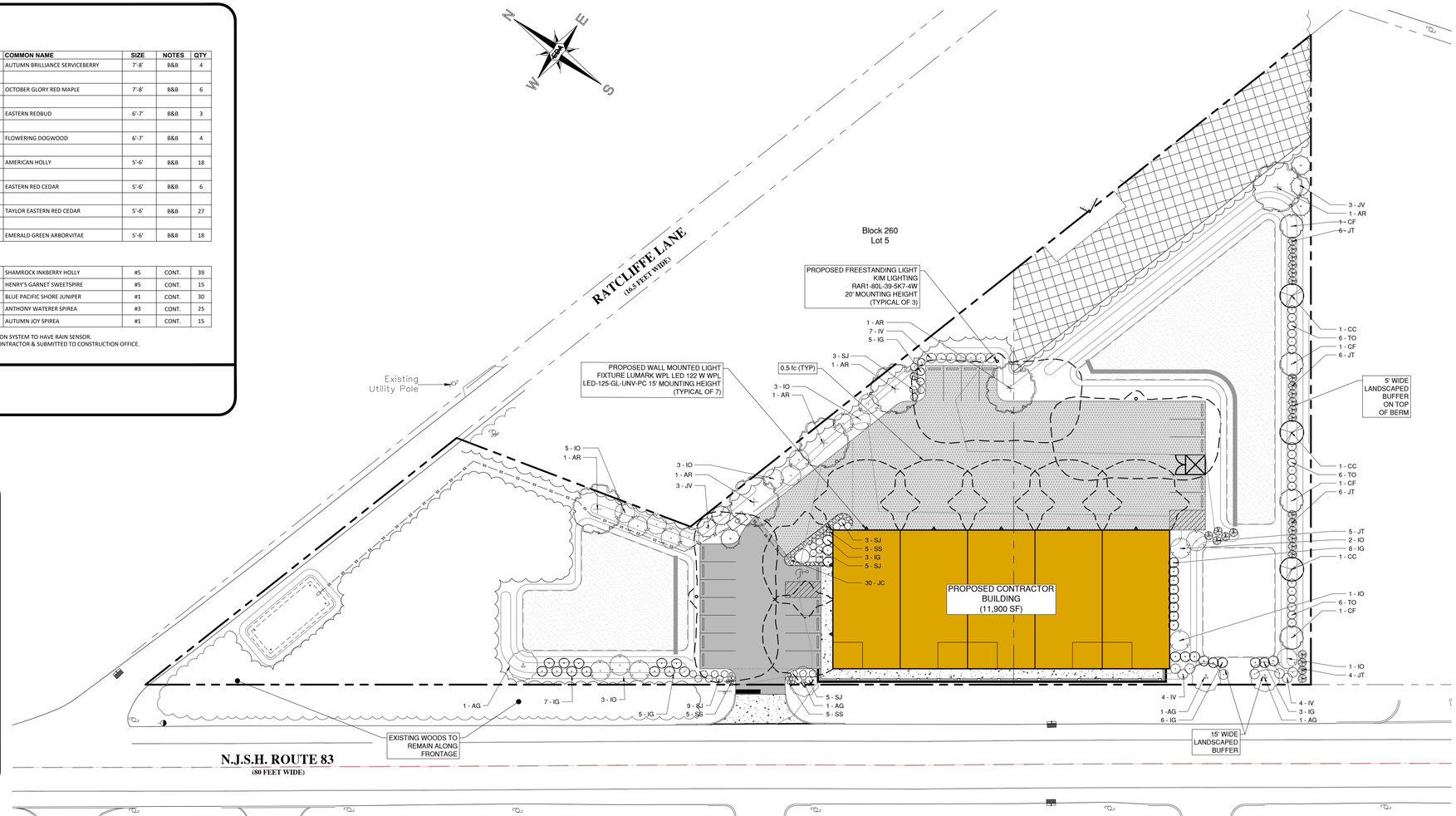
REBEL II TALL FESCUE - 8 LBS PER 1000 SF
ECLIPSE KENTUCKY BLUE GRASS - 4 LBS PER 1000 SF

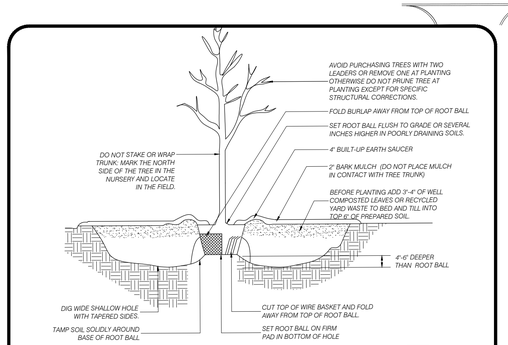
FERTILIZING AND LIMING SHALL BE COMPLETED PRIOR TO SEEDING LAWN AREAS TWICE PER YEAR.

PLANTING BED - TO BE CONSTRUCTED AS SHOWN ON PLAN. USE THE FOLLOWING SPECIFICATIONS OR AN APPROVED EQUAL.

A. MULCH - BEDS TO BE FILLED WITH A 4" LAYER OF LICORICE ROOT MULCH (RIGHT DRESS INC.)
B. WEED BARRIER - MULCH TO BE PLACED OVER TERRA TOP LS WEED CONTROL FABRIC OR 4 MIL. BLACK POLYETHYLENE.
C. EDGING - PLANTING BED TO BE EDGED WITH BLACK DIAMOND POLYETHYLENE BED DIVIDER (VALLEY VIEW SPECIALTIES CO.)

CONTRACTOR NOTES

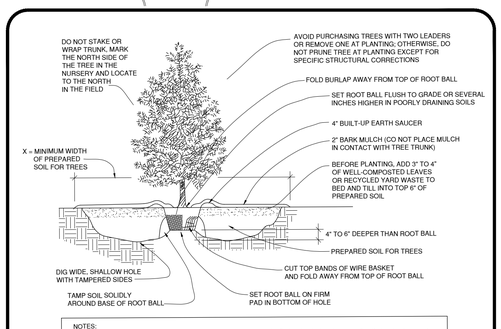




NOTES:
1. For container-grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
2. Incorporate commercially prepared mycorrhiza spores in the soil immediately around the root ball at rates specified by the manufacturer.
3. During the design phase, confirm that water drains out of the soil, design alternative drainage systems as required.
4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
5. The planting process is similar for deciduous and evergreen trees.

DECIDUOUS TREE PLANTING DETAIL

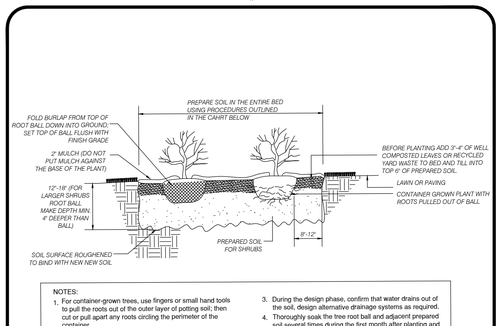
N.T.S.



NOTES:
1. For container-grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
2. Incorporate commercially prepared mycorrhiza spores in the soil immediately around the root ball at rates specified by the manufacturer.
3. During the design phase, confirm that water drains out of the soil, design alternative drainage systems as required.
4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
5. The planting process is similar for deciduous and evergreen trees.

EVERGREEN TREE PLANTING DETAIL

N.T.S.



NOTES:
1. For container-grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
2. Incorporate commercially prepared mycorrhiza spores in the soil immediately around the root ball at rates specified by the manufacturer.
3. During the design phase, confirm that water drains out of the soil, design alternative drainage systems as required.
4. Thoroughly soak the tree root ball and adjacent prepared soil several times during the first month after planting and regularly throughout the following two summers.
5. The planting process is similar for deciduous and evergreen trees.

SHRUB PLANTING DETAIL

N.T.S.

PLANTING NOTES

1. PLANT MATERIALS SHALL BE FURNISHED AND INSTALLED AS INDICATED INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS AND CLEAN UP
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING CORRECT GRADES ANMD ALIGNMENT.
3. PLANTS SHALL NE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS, WELL DEVELOPED BRANCHES, DENSELY FOLIATED; VIGROUS ROOT SYSTEMS AND BE FREE FROM DETECTS AND INJURIES.
4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST TWO (2) YEARS FOR TEES AND A MINIMUM OF TWO GROWING SEASONS FOR SCRUBS. REPLACMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACMENTS SHALL HAVE A GUARANTEE EQUAL TO THATSTATED ABOVE.
6. IN SO FAR AS IT PRACTIABLE, PLANT MATERIALS SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT TO BE PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE (3) DAY PERIOD AFTER DELIVERY.
7. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60 (REV 1980) "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMMERICAN ASSOCIATION OF NURSERYMAN, INC.
8. ALL PLANTS SHALL BE PLANTED IN TOPSOIL THAT IS THROUGHLY WATERED AND TAMPED AS BACKFILLING PROGRESSES. NOTHING BUT SUITABLE TOPSOIL, FREE OF DRY SOD, STIFF CLAY, LITTER, ETC., SHALL BE USED FOR PLANTING.
9. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME AS TO DAMAGE THE BARK AND BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE BALL ONLY.
10. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTABLE LOCAL PRACTICE.
11. NO PLANT, EXCEPT GROUND COVERS, SHALL BE PLANTED LESS THEN TWO (2) FEET FROM EXISTING STRUCTURES AND SIDEWALKS.
12. SET ALL PLANTS PLUMB AND STRAIGHT, SET AT SUCH LEVEL THAT, AFTER SETTLEMENT A NORMAL OR NATURAL RELATIONSHP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANT IN THE CENTER OF THE PIT.
13. ALL INJURED SHALL BE PRUNED TO MAKE CLEAN ENDS BEFORE PLANTING. IT IS ADVISABLE TO PRUNE APPROXIMATELY 1/3" OF THE GROWTH OF LARGE TREES (2" CALIPER AND OVER) BY THE REMOVAL OF SUPERFUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER OF TREES MUST NOT BE CUT BACK. LONG SIDE BRANCHES, HOWEVER, MUST BE SHORTENED.
14. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE NATURAL CHARACTER OF PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. CUT OVER 3/4" IN DIAMETER SHALL BE PAINTED WITH SUITABLE TREE PAINT.
15. TREES SHALL BE SUPPOTED IMMEDIATELY AFT ER PLANTING. ALL TREES SIX (6) INCHES AND OVER IN CALIPER SHALL BE GUYED. SMALLER TREES SHALL BE STAKED. GUYING WIRES AND STAKES SHALL BE INSTALLED AS INDICATED.
16. THE TRUNKS OF ALL TREES SHALL BE WRAPPED AS SCON AS POSSIBLE AFTER PLANTING ACCORDING TO STANDARD PROCEDURES AND AS INDICATED.

PLANTING NOTES

N.T.S.

LANDSCAPING & LIGHTING PLAN

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA27970000

LANDSCAPING & LIGHTING PLAN
BLOCK 260, LOT 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230

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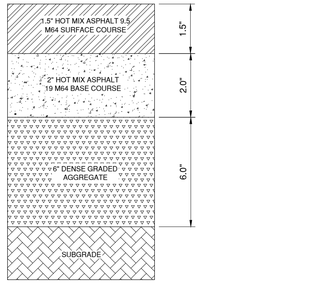
REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

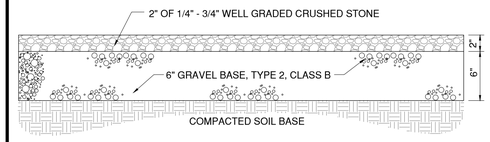
DATE: 11/30/22	DRAWN BY: MSB
SCALE: 1" = 30'	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 5 0F 9



1. MATERIALS FOR THE ASPHALT CONCRETE SURFACE SHALL CONFORM TO SECTION 404.02 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
2. MATERIALS FOR THE ASPHALT CONCRETE BASE SHALL CONFORM TO SECTIONS 301.02 AND 304.02 OF THE N.J. DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
3. THICKNESSES MAY HAVE TO BE CONSTRUCTED IN MULTIPLE LIFTS, BASED ON EQUIPMENT CAPABILITIES.
4. THE GRANULAR BASE SHALL BE DENSE GRADED AGGREGATE CONFORMING TO SECTION 901.09 OR SOIL AGGREGATE DESIGNATED I-5 CONFORMING TO SECTION 901.09 AND SHOWN IN TABLE 901-2 OF THE N.J. DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989).
5. SUBGRADES SHALL BE CONSIDERED "POOR," UNLESS THE APPLICANT PROVES OTHERWISE THROUGH CBR TESTING OR FIELD EVALUATION OF SOIL CLASSIFICATION. TEST RESULTS SHALL BE REVIEWED BY THE MUNICIPAL ENGINEER.
6. SUBGRADE COMPACTION SHALL BE APPROVED BY THE MUNICIPAL ENGINEER.
7. DRAWINGS ARE BASED ON THE FOLLOWING DESIGN ASSUMPTIONS: A 20-YEAR DESIGN PERIOD WITH STAGED CONSTRUCTION IS USED. BASE COURSES ARE DESIGNED TO WITHSTAND THE CONSTRUCTION TRAFFIC ANTICIPATED DURING A 3-YEAR CONSTRUCTION PERIOD AND HAVE A RESIDUAL LIFE OF 17 YEARS AT THE END OF THE 3-YEAR PERIOD. THE ENTIRE PAVEMENT SECTION, BASE COURSE PLUS FINISH COURSE, IS DESIGNED TO WITHSTAND THE TRAFFIC LOADING FOR THE REMAINING 17 YEARS OF THE 20-YEAR DESIGN PERIOD.

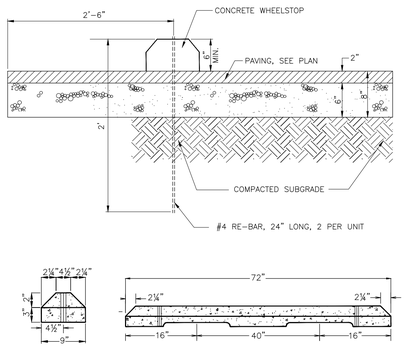
ASPHALT PAVING DETAIL

N.T.S.



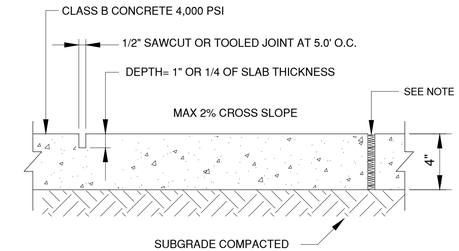
STONE PAVING DETAIL

N.T.S.



CONCRETE WHEEL STOP DETAIL

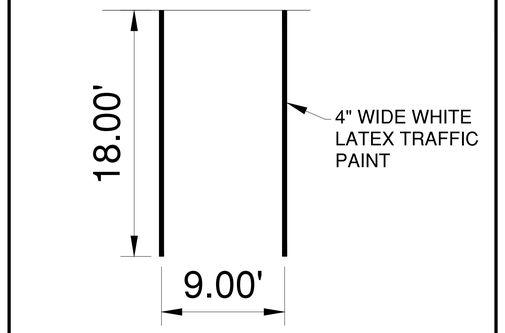
N.T.S.



NOTE : INSTALL 1/2" WIDE TRAVERSE JOINTS IN SIDEWALK 20.0' C-C. FILL JOINTS WITH PREFORMED BITUMINOUS IMPREGNATED FIBER JOINT FILLER WHICH COMPLIES WITH REQUIREMENTS FOR TYPE 3 FILLER IN AASHTO SPEC M-153.

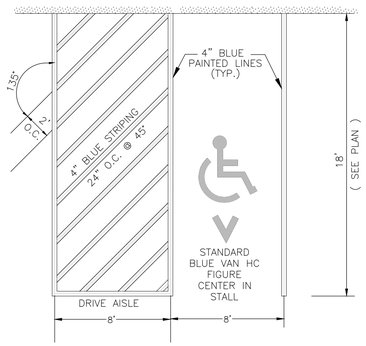
SIDEWALK DETAIL

N.T.S.



PARKING STRIPING DETAIL

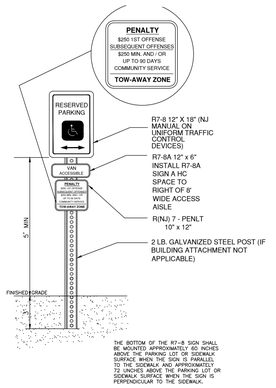
N.T.S.



NOTE:
THE ACCESS AISLE SHOULD BE 8 FEET WIDE FOR CAR ACCESSIBLE SPACES

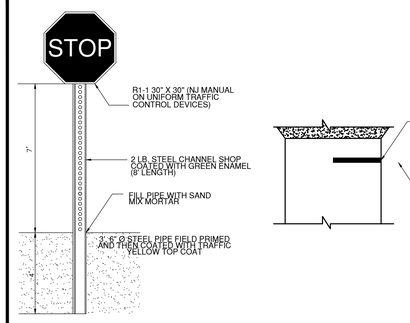
ADA PARKING STRIPING DETDETAIL

N.T.S.



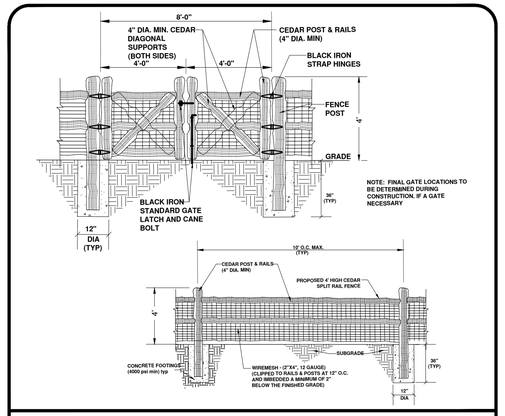
ADA PARKING SIGN DETAIL

N.T.S.



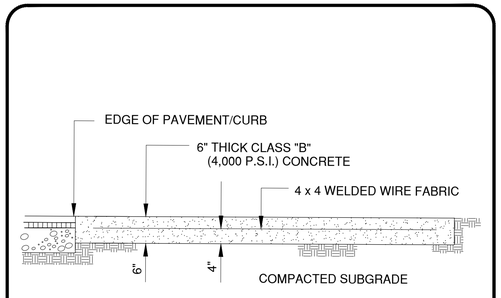
STOP SIGN DETAIL

N.T.S.



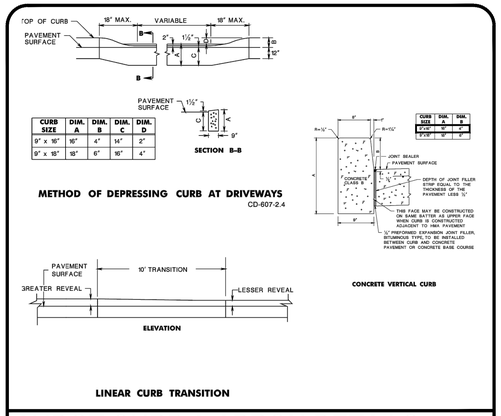
4' HIGH WOODEN SPLIT RAIL FENCE & GATE DETAIL

N.T.S.



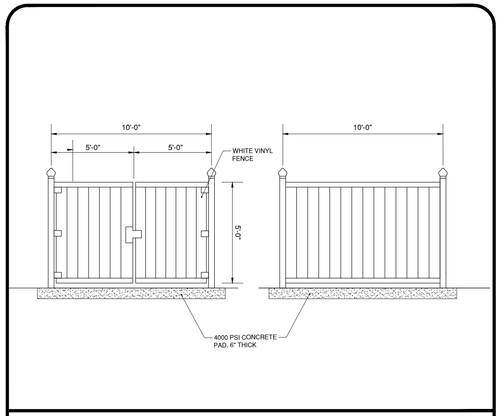
DRIVEWAY DETAIL

N.T.S.



NJDOT CURB & APRON DETAILS

N.T.S.



TRASH ENCLOSURE DETAIL

N.T.S.

EDA
Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive ◦ Orchard Park, NY 14127
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION# 24GA0797000

ENGINEERING DETAILS I
BLOCK 260 LOTS 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230

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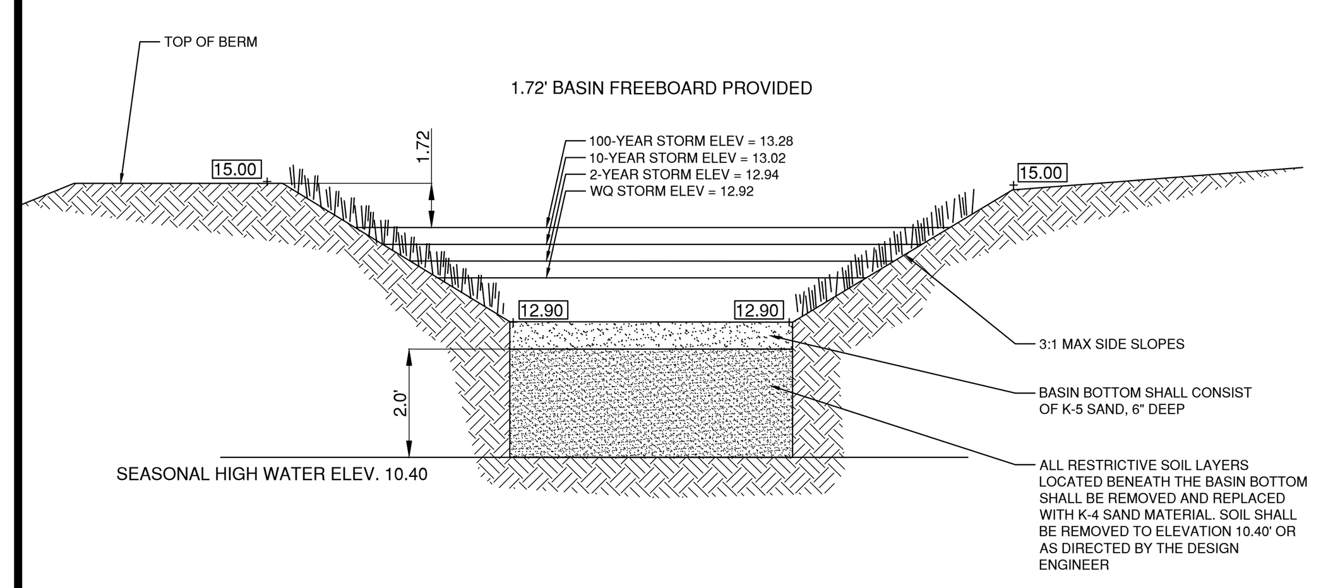
REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

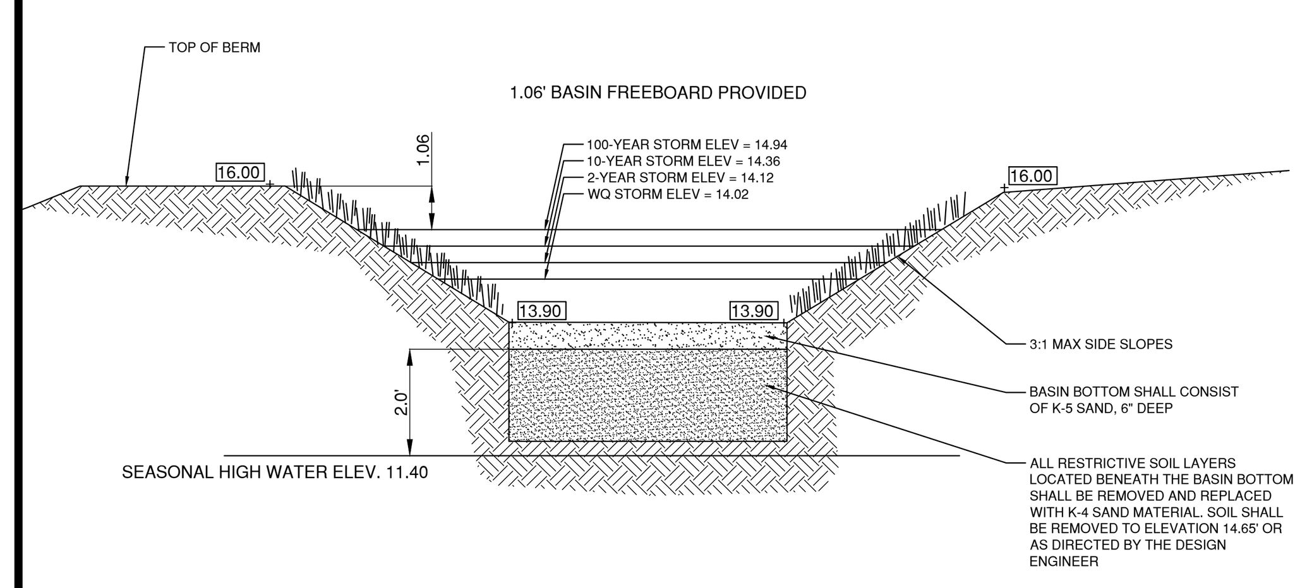
EDA

DATE: 12/13/22	DRAWN BY: MSB
SCALE: AS NOTED	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 6 OF 9



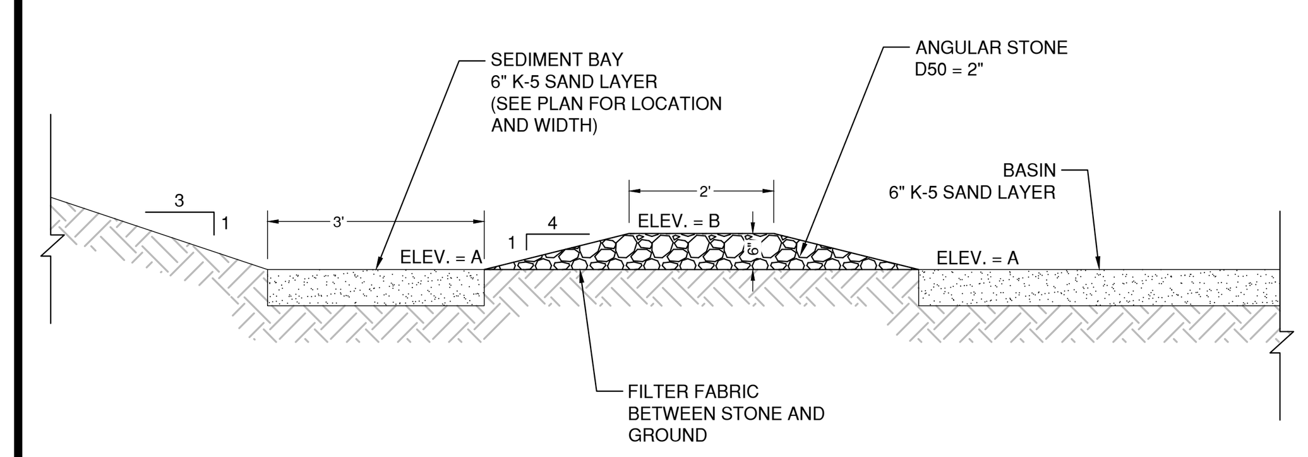
SMALL-SCALE INFILTRATION BASIN #1

N.T.S.



SMALL-SCALE INFILTRATION BASIN #2

N.T.S.



SEDIMENT BAY SCHEDULE		
	A	B
SEDIMENT BAY #1	12.90	12.90
SEDIMENT BAY #2	13.90	13.90

SEDIMENT BAY DETAIL

N.T.S.

Description

This work consists of furnishing materials and performing all work necessary to install straw blanket on roadway ditches or slopes, or as directed by the engineer.

Material

All materials shall meet the requirements of the following specifications. The blanket shall consist of clean wheat straw from agricultural crops made into a knitted straw blanket that is machine assembled. The straw shall be evenly distributed throughout the blanket. The top side of the standard blanket shall be covered with a degradable synthetic mesh that is adhered to the straw by a knitting process using degradable thread. The high velocity blanket shall be covered with a degradable synthetic mesh on top and bottom sides.

Width (min.)	7.5 feet	(2.3m)
Length	120 feet (Standard) 120 feet (High Velocity)	(36.6m) (36.6m)
Weight per roll	50 lbs.± 10% (Standard) 50 lbs.± 10% (High Velocity)	(22.7 kg) (24.9 kg)
Volume per roll	100 sq. yds. (Standard) 100 sq. yds. (High Velocity)	(83.6 m²) (83.6 m²)

"U" shaped staples shall be made of 11 gauge or heavier steel wire and shall have 6 inch legs and a 1 inch crown.

Construction Methods

The area to be covered shall be properly prepared, fertilized and seeded before the blanket is placed. When the mat is unrolled, the netting shall be on top and the fibers shall be in contact with the soil. In ditches, blankets shall be unrolled in the direction of the flow of water. The end of the upstream blanket shall overlap the buried end of the downstream blanket a maximum of 8 inches and a minimum of 4 inches, forming a junction slot. This junction slot shall be stapled across at 8 inch intervals, alternating the center row so that the staples form an "X" pattern. A common row of staples shall be used on adjoining blankets. Overlaps shall be limited to one for each 6 feet of width.

The contractor shall maintain the blanket until all work on the contract has been completed and accepted. Maintenance shall consist of the repair of areas where damaged by any causes. All damaged areas shall be repaired to reestablish the condition and grade of the soil prior to application of the covering and shall be refertilized, reseeded, and remulched as directed.

Erosion Control Systems

9015 Energy Lane
Northport, Alabama 35476-6542
1-800-942-1986
1 - 205-333-3080
(fax) 205-333-3090

Erosion Control Revegetation Mat
Standard Straw Mat
3/4" (1.9 cm) photodegradable netting stitched on 1.5" (3.8 cm) centers on one side only.

Width 7.5 ft

Length Approx. 120 ft.

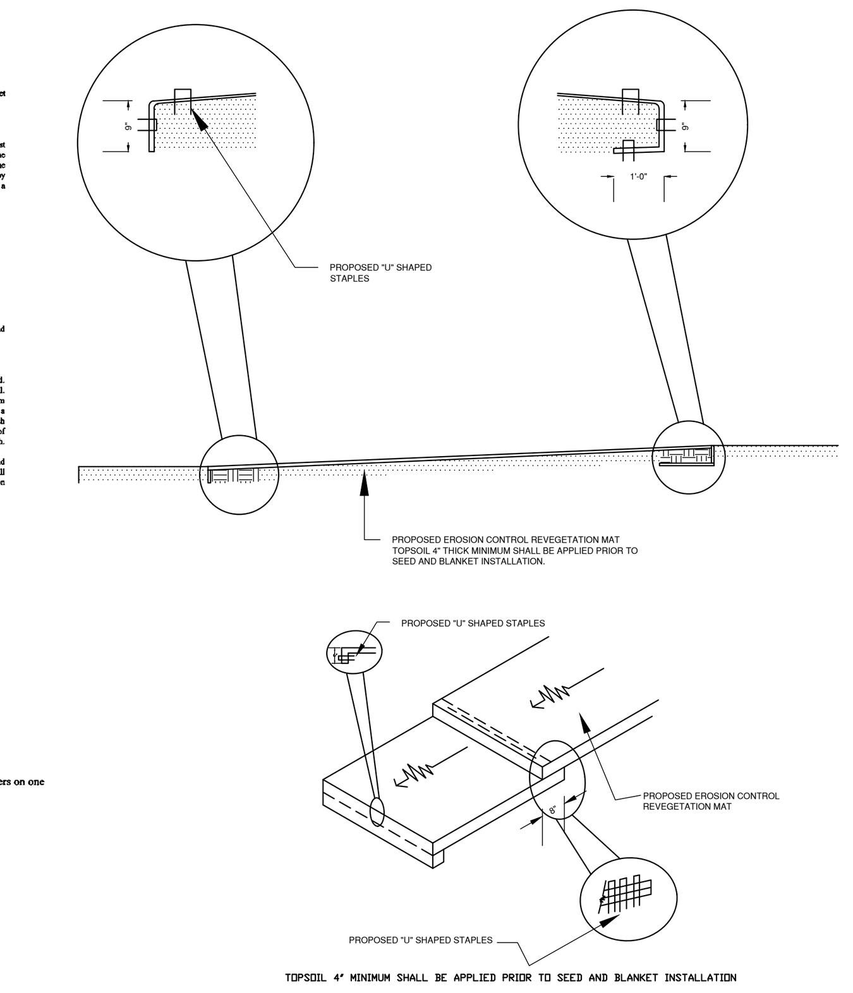
Weight 50 lbs./ Roll

Area 100 sq.yds.

Packaging Vented Plastic

Water Velocities For Various Soil Conditions

	Clay Clay Loam	Loam Silty Clay	Fine Sandy Loam
Standard Straw	4.8 fps.	4.8 fps	3.9 fps



EROSION CONTROL MATTING

N.T.S.

TEST PIT #1

DEPTH	DESCRIPTION
0″- 8″	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
8″- 14″	10YR 6/3 Pale Brown, Loamy Sand, Subangular Blocky, Friable
14″- 25″	10YR 6/6 Brownish Yellow, Loamy Sand, Subangular Blocky, Friable
25″- 43″	10YR 6/6 Brownish Yellow, Sandy Loam, Subangular Blocky, Friable
43″- 70″	10YR 8/2 Very Pale Brown, Fine Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Few, Fine & Faint
70″- 99″	10YR 7/1 Light Gray, Fine Sand, Single Grain, Loose
99″- 123″	10YR 6/3 Pale Brown, Fine Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Common, Medium & Distinct

Depth of Seasonal High Water: 43″
Depth of Groundwater: 120″
Date Performed: 11/17/2022
Witnessed By: Heather Carr Johnson, Cape May County Health Dept.
Performed By: Christopher J. Carey, LLA

TEST PIT #2

DEPTH	DESCRIPTION
0″- 5″	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
5″- 15″	10YR 5/4 Yellowish Brown, Loamy Sand, Subangular Blocky, Friable
15″- 26″	10YR 5/4 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
26″- 35″	10YR 6/3 Pale Brown, Loamy Sand, Subangular Blocky, Friable
35″- 53″	10YR 7/4 Very Pale Brown, Loamy Sand, Subangular Blocky, Friable
53″- 86″	10YR 7/3 Very Pale Brown, Loamy Sand, Subangular Blocky, Friable, w/mottles of 10YR 8/1 White, Few, Fine & Faint
86″- 123″	10YR 6/3 Pale Brown, Fine Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint

Depth of Seasonal High Water: 53″
Depth of Groundwater: 120″
Date Performed: 11/17/2022
Witnessed By: Heather Carr Johnson, Cape May County Health Dept.
Performed By: Christopher J. Carey, LLA

TEST PITS #1-2

N.T.S.

TEST PIT #3

DEPTH	DESCRIPTION
0″- 6″	10YR 3/2 Very Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
6″- 26″	10YR 5/3 Brown, Loamy Sand, Subangular Blocky, Friable
26″- 36″	10YR 5/6 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
36″- 43″	10YR 7/3 Very Pale Brown, Sand, Single Grain, Loose
43″- 123″	10YR 8/2 Very Pale Brown, Fine Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint

Depth of Seasonal High Water: 43″
Depth of Groundwater: 110″
Date Performed: 11/17/2022
Performed By: Christopher J. Carey, LLA

TEST PIT #4

DEPTH	DESCRIPTION
0″- 8″	10YR 3/2 Very Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
8″- 21″	10YR 5/3 Brown, Loamy Sand, Subangular Blocky, Friable
21″- 36″	10YR 5/4 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
36″- 39″	10YR 7/4 Very Pale Brown, Sand, Single Grain, Loose
39″- 82″	10YR 8/2 Very Pale Brown, Fine Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Few, Fine & Faint
82″- 120″	10YR 6/2 Light Brownish Gray, Fine Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Common, Medium & Distinct

Depth of Seasonal High Water: 39″
Depth of Groundwater: 96″
Date Performed: 11/17/2022
Performed By: Christopher J. Carey, LLA

TEST PITS #3-4

N.T.S.

TEST PIT #5

DEPTH	DESCRIPTION
0″- 8″	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
8″- 30″	10YR 6/4 Light Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
30″- 65″	10YR 6/2 Light Brownish Gray, Fine Sand, Single Grain, Loose w/mottles of 10YR 7/1 Light Gray, Few, Fine & Faint
65″- 112″	10YR 6/1 Gray, Fine Sand, Single Grain, Loose w/mottles of 10YR 7/3 Very Pale Brown, Common, Medium & Distinct

Depth of Seasonal High Water: 30″
Depth of Groundwater: 48″
Date Performed: 11/17/2022
Performed By: Christopher J. Carey, LLA

TEST PIT #6

DEPTH	DESCRIPTION
0″- 7″	10YR 3/2 Dark Brown, Sandy Loam, Subangular Blocky, Friable
7″- 12″	10YR 4/2 Dark Grayish Brown, Sandy Loam, Subangular Blocky, Friable
12″- 35″	10YR 5/4 Yellowish Brown, Sandy Loam, Subangular Blocky, Friable
35″- 59″	10YR 7/2 Light Gray, Sand, Single Grain, Loose w/mottles of 10YR 8/1 White, Few, Fine & Faint
59″- 107″	10YR 6/1 Gray, Fine Sand, Single Grain, Loose

Depth of Seasonal High Water: 35″
Depth of Groundwater: 72″
Date Performed: 11/17/2022
Performed By: Christopher J. Carey, LLA

TEST PITS #5-6

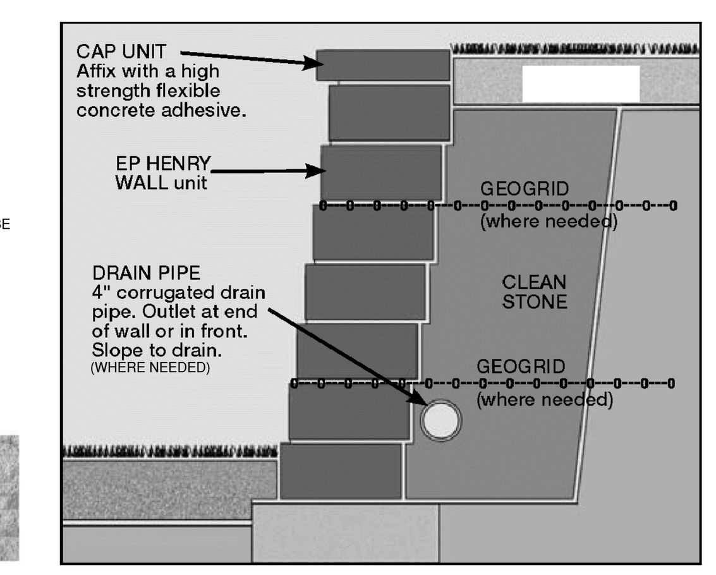
N.T.S.

EP HENRY®
VERTICA™

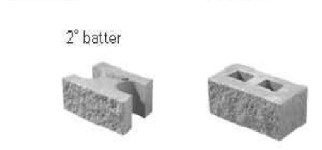
NOTES:

1. WALL TO BE EP HENRY VERTICA, OR APPROVED EQUAL. COLOR TO BE CHOSEN DETERMINED BY APPLICANT.
2. WALL HEIGHT TO BE NO MORE THAN 4'
3. WALL TO BE DESIGNED BY OTHERS

TYPICAL WALL



These units are 8" high



	STRETCHER	CORNER
SIZE (LxD)	18" x 11"	18" x 9"
PCS PER SF	1	1
SF PER CUBE	48	60
PCS PER CUBE	48	60
LBS PER PIECE	82	84
LBS PER CUBE	4,141	5,010

FORMULAS/NOTES

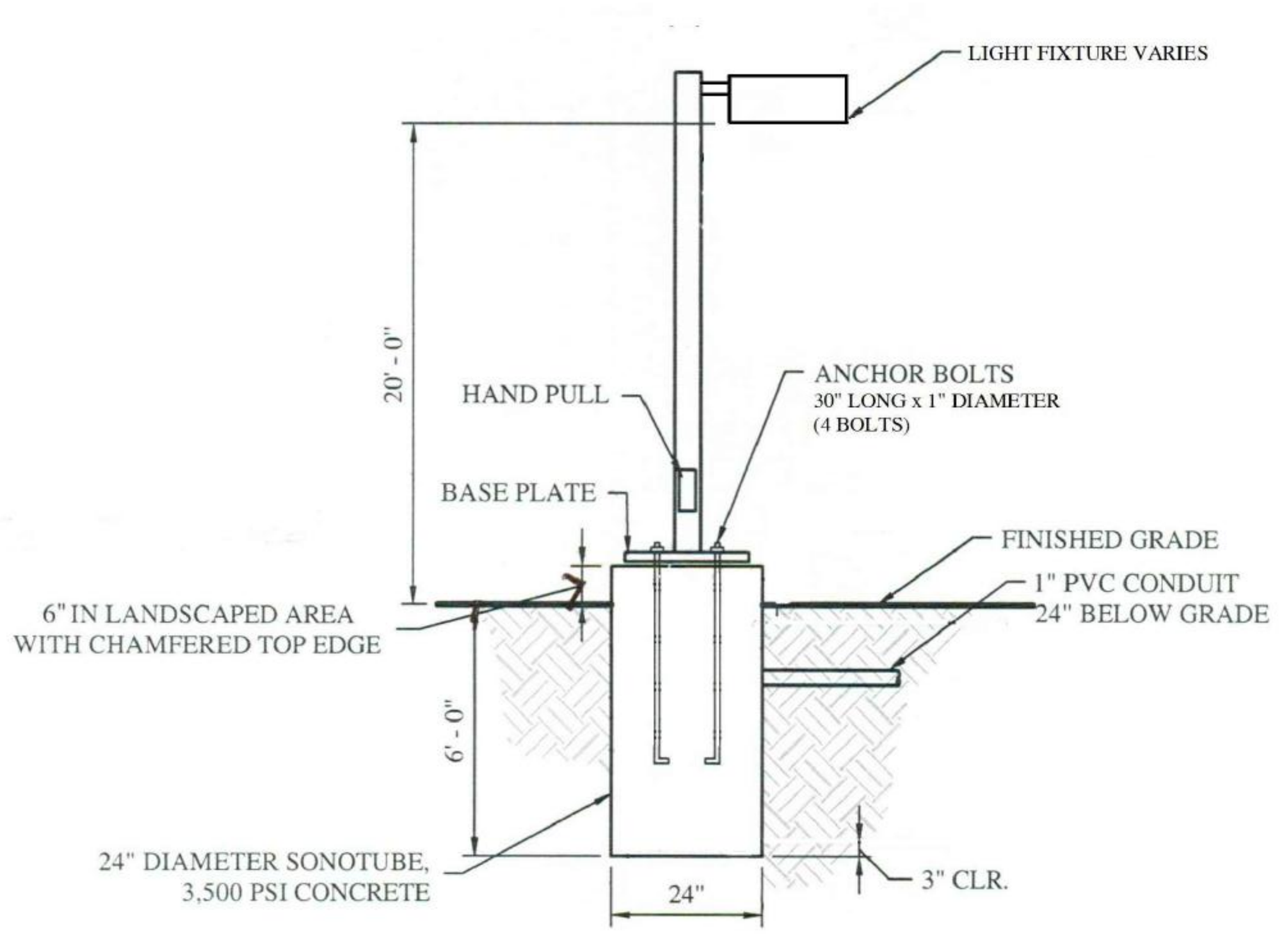
- 1 piece = 1 sf of wall face
- Minimum inside radius = 69" (from back of block)
- Maximum unreinforced, exposed wall height is 32" (4 courses) under ideal conditions
- Geogrid must be used in walls over 32" high
- For walls over 48" high, EP Henry recommends that you consult a Professional Engineer

Vertica is also available in 12" D unit with 4° batter by special order

Available in Stone Cut Finish by special order.

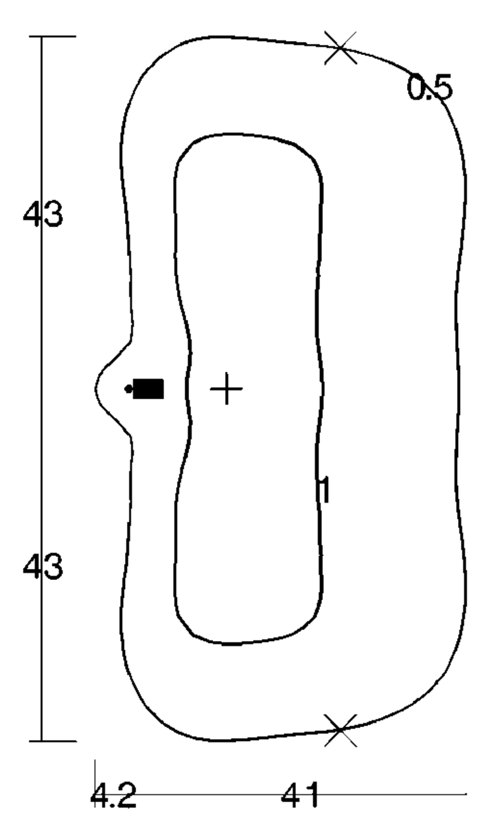
WALL DETAIL

N.T.S.



LIGHT POLE DETAIL

N.T.S.



FREESTANDING LIGHT DETAIL

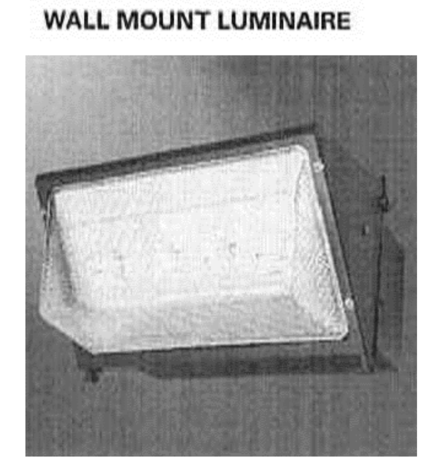
N.T.S.

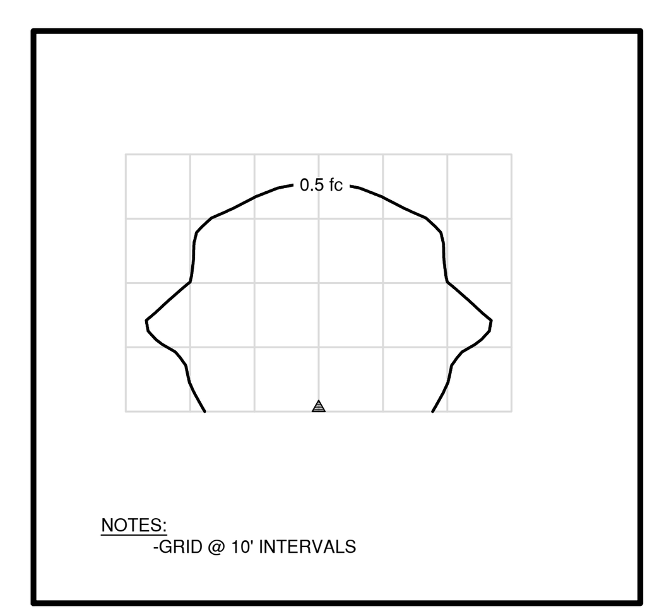
Lumark

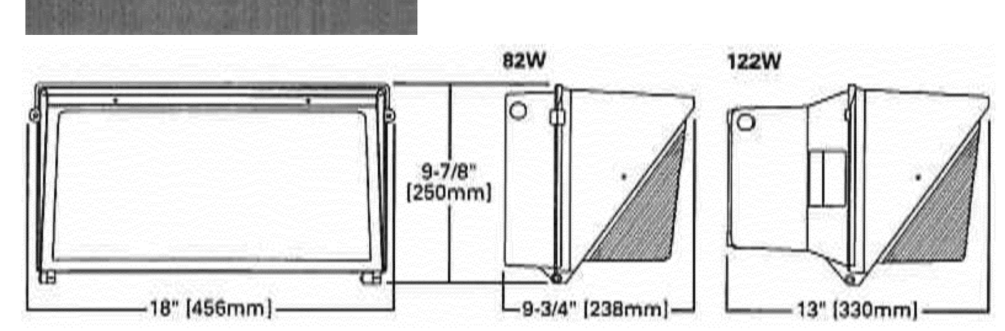
WPLLED

82W, 122W
LED

WALL MOUNT LUMINAIRE







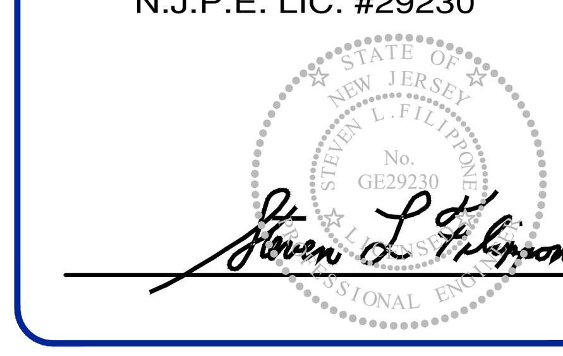
BUILDING MOUNTED LIGHT DETAIL

N.T.S.

EDA
Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ∘ Fax (609) 390-9204 ∘ www.engineeringdesign.com ∘ CERTIFICATE OF AUTHORIZATION#: 24GA27970300

ENGINEERING DETAILS II
BLOCK 260 LOTS 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230



IF THIS PLAN OR DOCUMENT DOES NOT CONTAIN A RAISED SEAL IMPRESSION BEARING THE NAME AND REGISTRATION NUMBER OF THE ABOVE SIGNED PROFESSIONAL, IT MAY NOT BE AN AUTHORIZED COPY OF THE ORIGINAL DOCUMENT AND MAY HAVE BEEN ALTERED. REPRODUCTION OR FURTHER DISSEMINATION OF THE CONTENTS IN WHOLE OR IN PART REQUIRES PERMISSION IN WRITING FROM ENGINEERING DESIGN ASSOCIATES, P.A.

REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

EDA

DATE: 12/13/22	DRAWN BY: MSB
SCALE: AS NOTED	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 7 0F 9

SOIL EROSION AND SEDIMENT CONTROL PLAN

1. All applicable erosion and sediment control practices shall be in place prior to any grading or installation of proposed structures or utilities.
2. Soil Erosion and Sediment Control practices on this plan shall be constructed in accordance with the standards for Soil Erosion and Sediment Control in New Jersey.
3. Applicable erosion and sediment control practices shall be left in place until construction is completed and/or the area is stabilized.
4. The contractor shall perform all work, furnich all materials and install all measures required to reasonably control soil erosion resulting from construction operations and prevent excessive flow of sediment from the construction site.
5. Any disturbed area that is to be left exposed for more than thirty (30) days and not subject to construction traffic shall immediately receive a temporary seeding and fertilization in accordance with the New Jersey Standards and their rates should be included in the narrative. If the season prohibits temporary seeding, the disturbed areas will be mulched with salt hay or equivalent and anchored in accordance with the New Jersey Standards (ie. peg and twine, mulch netting or liquid mulch binder).
6. It shall be the responsibility of the developer to provide confirmation of lime, fertilizer and seed and seed application and rates of application at the request of the Cumberland soil conservation district.
7. All critical areas subject to erosion will receive a temporary seeding in combination with straw mulch at a rate of 2 tons per acre, according to the New Jersey Standards immediately following rough grading.
8. The site shall at all times be graded and maintained such that all storm water runoff is diverted to soil erosion and sediment control facilities.
9. All sedimentation structures will be inspected and maintained on a regular basis and after every storm event.
10. A crushed stone, tire cleaning pad will be installed wherever a construction access exists. The stabilized pad will be installed according to the standards for stabilized construction access.
11. All driveways must be stabilized with 2 1/2" crushed stone or subbase prior to individual lot construction.
12. All paved areas must be kept clean at all times.
13. All catch basin inlets will be protected according to the certified plan.
14. All storm drainage outlets will be stabilized, as required, before the discharge points become operational.
15. All dewatering operations must discharge directly into a sediment filter area. The sediment filter should be composed of a suitable sediment filter fabric. (see detail). The basin must be dewatered to normal pool within 10 days of the design storm.
16. NJSA 4:24-39, Est Seq. requires that no certificate of occupancy be issued before all provisions of the certified soil erosion and sediment control plan have been complied with for permanent measures. All site work for the project must be completed prior to the district issuing a report of compliance as a prerequisite to the issuance of a certificate of occupancy by the municipality.
17. Mulching is required on all seeded areas to insure against erosion before grass is established to promote earlier vegetation cover.
18. Offsite sediment disturbance may require additional control measures to be determined by the erosion control inspector.
19. A copy of the certified Soil Erosion and Sediment Control Plan must be maintained on the project site during construction.
20. The Cumberland Soil Conservation District shall be notified 48 hours prior to any land disturbance.
21. Any conveyance of this project prior to its completion will transfer full responsibility for compliance with the certified plan to any subsequent owners.
22. Immediately after the completion of stripping and stockpiling of topsoil, the stockpile must be stabilized according to the standard for temporary vegetative cover. Stabilize topsoil with straw mulch for protection if the season does not permit the application and establishment of temporary seeding. All soil stockpiles are not to be located within fifty (50) feet of a floodplain, slope, roadway or drainage facility and the base must be protected with a sediment barrier.
23. Any changes to the site plan will require the submission of a revised Soil Erosion and Sediment Control Plan to the Cumberland Soil Conservation District. The revised plan must be in accordance with the current New Jersey Standards for Soil Erosion and Sediment Control.
24. Methods for the management of high acid producing soils shall be in accordance with the standards. High acid producing soils are those found to contain iron sulfides or have a pH of 4 or less.
25. Temporary and permanent seeding measures must be applies according to the New Jersey Standards, and mulched with salt hay or equivalent and anchored in accordance with the New Jersey Standards (ie. peg and twine, mulch netting or liquid mulch binder).
26. Minimum side slopes of all exposed surfaces shall not be constructed steeper than 3:1 unless otherwise approved by the district.
27. Dust is to be controlled by an approved method according to the New Jersey Standards and may include watering with a solution of calcium chloride and water.
28. Adjoining properties shall be protected from excavation and land filling operations on the proposed site.
29. Use staged construction methods to minimize exposed surfaces, where applicable.
30. All vegetative material shall be selected in accordance with American Standards for Nursery Stock of the American Association of the Nuseryman and in accordance with the New Jersey Standards.
31. Natural vegetation and species shall be retained where specified on the Landscaping Plan.
32. The soil erosion inspector may require additional soil erosion measures to be installed, as directed by the district inspector.

STORMWATER MANAGEMENT MAINTENANCE PROGRAM

BASIN MAINTENANCE

In order to ensure that all retention and detention basins function properly, a maintenance program must be followed. The following are the minimum requirements for the maintenance of all basins.

1. Annual visual inspection of outlet structures and basins.
   a. Inspection of outlet structures to include checking for obstructions of outfall pipes and the accumulation of silts and sediments.
   b. Inspection of basins to include the removal of debris and accumulated particles such as silts and sediments.
2. For maintenance of vegetated basins:
   a. Mowing of grass is required regularly to ensure the aesthetic quality of the site. All clippings shall be raked and bagged to avoid thatch buildup.
   b. A dense turf, with extensive root growth, is encouraged to reduce erosion and enhance infiltration throughout the bottom and the side of the basin. Well-established turf of the floor and sides will grow through sediment deposits, thus forming a porous turf and preventing the formation of an impermeable layer.
   c. Grasses of the fescue family are recommended for seeding, primarily due to their adaptability to dry sandy soils, drought resistance, hardiness, and ability to withstand brief inundations. Fescues will also permit longer intervals between mowings.
   d. Seed type: A mixture of the following special water-tolerant seed will ensure a high quality grass for retention basins.

INGREDIENTS

Mixture 8	SEEDING RATE
Fescue	2.1Lb./1,000 SF
Perennial Rye Grass	0.25Lb./1,000 SF
Kentucky Bluegrass	0.25Lb./1,000 SF
White Clover	0.10Lb./1,000 SF

   e. Fertilizing and liming: Bi-annually
   Fertilize with 10-20-10 at a rate of 11lbs./1,000 SF
   Lime with pulverizer dolomite limestone at a rate of 90lbs./1,000 SF
3. Long term Maintenance
   a. In order to ensure proper function of all basins, every seven years each basin bottom shall be scarified to a depth of 4" to remove sediments and silts. Then 4" of topsoil must be added and resided.

STORM WATER STRUCTURE MAINTENANCE

Maintenance is the work required to keep structures in practice, or restore them to their original physical and functional condition. Maintenance as it applies to this situation shall be divided into two stages: that which is necessary to allow for continuing performance of storm water controls during the construction period and long term maintenance following construction. Both stages are necessary for the life of the storm water structures and systems.

1. MINIMUM REQUIREMENTS FOR MAINTENANCE
   a. TRENCHES/SWALES
   Tenches/Swales to be inspected for rubbish or channel obstructions, bank failure,accumulation of silts and sediments, undesirable vegetation growth, rodents, and overall system failure.
   b. OUTLET STRUCTURE/CONDUIT
   Inspection of outlet structures and conduit to include checking for obstruction of pipe, accumulation of silts and sediments, cracking, corrosion, deterioration from freezing, salt or chemicals, excessive wear or damage from settling.
   c. SPILLWAYS/INLETS/MANHOLES
   Inspection to include checking for cracking, rodents, obtructions(silt-sediment, trash or other.) Check any gates, racks, or grates, for damage from corrosion, ice debris. Check for unauthorized modifications, tampering or vandalism.
2. LONG TERM MAINTENANCE
   As noted, any basin, pipe, pit, trench or inlet not functioning as designed will be thoroughly as prescribed. Any system that continues to remain inoperable after thorough cleaning must be removed and replaced.

RESPONSIBILITY

All on-site retention facilities shall be the sole responsibility of the developer/owner, his assigns and/or heir. The responsibility shall include but not be limited to installation, inspection, and maintenance.

DETENTION FACILITY MAINTENANCE

The primary mechanical equipment use in the Annual Maintenance of the Basins will be for lawn cutting. The exact type and size of this equipment is to be determined by the maintenance service under contract for the project.

MULCHING

Mulching is required on all seeding. It is defined as stabilizing exposed soils with non-vegetative materials. The purpose is to protect exposed soil surfaces from erosion damage and to reduce offsite environmental damage. Mulching provides temporary mechanical protection against wind or rainfall induced soil erosion until permanent vegetative cover may be established. 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.

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.

PROTECTIVE MATERIALS

a. Mulch materials should be unrotted small grain straw, hay free of seeds, or salt hay to be applied at the rate of 2.0 to 2.5 tons per acre (90 to 115 pounds per 1,000 square feet.)

- Asphalt emulsion is recommended at the rate of 600 to 1,200 gallons per acres. This is suitable for a limited period of time where travel by people, animals, or machines is not a problem.
- Synthetic or organic soil stabilizers may be used under suitable conditions and in quanitities as recommended by the manufacturer.
- Wood-fiber or paper-fiber mulch at a rate of 1,500 pounds per acre may be applied by a hydroseeder.
- Mulch netting such as paper jute, excelsior, cotton, or plastic, may be used.
- 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.
- Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 SF applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.

b. Mulch anchoring should 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 depending upon the size of the area, steepness of slopes, and costs.

- 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 with two or more round turns.
- Mulch Nettings - Staple paper, jute,cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
- Crimper (mulch anchoring tool) - A tractor-drawn implement, somewhat like a disc-harrow, especially designed to push or customer of the broadcast long fiber mulch 3 to 4 inches into the soil as to anchor it and leave part standing upright. This technique is limited to areas traversible 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.

SOIL CONSERVATION NOTES

c. Liquid Mulch-Binders - May be used to anchor salt hay, hay, or straw mulches
- 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.
- Use one of the following:
(1) Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, and CRS-2). Apply 0.04 gal/sq./yd. or 194 gal./acre on flat slopes less than 8 feet high. On slopes 8 feet or more high, use 0.075 gal./sq./yd. or 363 gal/acre. These materials may be difficult to apply uniformly and will discolor surfaces.
(2) Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials that mixed with formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetative gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
(3) High polymer synthetic emulsion, with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersed in water. It shall be applied at rates weather conditions recommended by the manufacturer and remain tacky until germination of grass.

STANDARDS FOR TOPSOILING

METHODS AND MATERIALS

1. Materials
a. Topsoil should be friable1, loamy2, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desiccate seedlings and adversely impact growth). Imported topsoil shall have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
b. Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.

2. Stripping and Stockpiling
a. Field exploration should be made to determine whether quantity and or quality of surface soil justifies stripping.
b. Stripping shall be confined to the immediate construction area.
c. Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5.
d. A 4-6 inch stripping depth is common, but may vary depending on the particular soil.
e. Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage.
f. Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

3. Site Preparation
a. Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence
b. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.
c. As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.
d. Prior to topsoiling, the subsoil shall be in compliance with the Standard for Land Grading, pg. 19-1.
e. Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.

4. Applying Topsoil
a. Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).
b. A uniform application to an average depth of 5.0 inches, minimum of 4 inches, firmed in place is required. Alternative depths may be considered where special regulatory and/or industry design standards are appropriate such as on golf courses, sports fields, landfill capping, etc.. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1-1).
c. Pursuant to the requirements in Section 7 of the Standard for Permanent Vegetative Stabilization, the contractor is responsible to ensure that permanent vegetative cover becomes established on at least 80% of the soils to be stabilized with vegetation. Failure to achieve the minimum coverage may require additional work to be performed by the contractor to include some or all of the following: supplemental seeding, re-application of lime and fertilizers, and/or the addition of organic matter (i.e. compost) as a top dressing. Such additional measures shall be based on soil tests such as those offered by Rutgers Cooperative Extension Service or other approved laboratory facilities qualified to test soil samples for agronomic properties.

DUST CONTROL STANDARDS

The following methods should be considered for dust control at the request of the Township Construction Code Official, or upon inspection by an S.C.D. official.

1. Spray - On Adhesive - On mineral soils (not effective on muck soils.) Keep traffic off these areas.

	Water Dilution	Type of Nozzle	Apply Gallons/Acre
Anionic asphalt emulsion	7:1	Coarse spray	1,200
Latex emulsion	12 1/2 :1	Fine spray	235
Resin in water	4:1	Fine spray	300

2. Tillage - To roughen surface and bring clods to the surface. This is a temporary emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, and spring-toothed harrows are examples of equipment which may produce the desired effect.
3. Sprinkling - Site is sprinkled until the surface is wet.
4. Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to crate walls, bales of hay and similar material can be used to control air currents and soil blowing.
5. Calcium Chloride - Shall be in the form of loose dry granules at a rate that will keep surface moist but not cause or flakes fine enough to feed through commonly used spreaders pollution or plant damage. If used on steeper slopes, Then pollution or plant damage. If used on steeper slopes, Then use other practices to prevent washing into streams or accumulation around plants.
6. Stone - Cover surface with crushed stone or coarse gravel.
7. Mulch - Stabilization with approved mulches and vegetation cover being temporary of permanent.

SEEDING SPECIFICATIONS

Temporary Seeding		
Fertilizer	(10-20-10 or equivalent)	11 Lbs./1,000 SF
Limestone	(50% Calcium plus MgO)	90 Lbs./1,000 SF
Perennial Rye Grass	(Lolium multiflorum)	1 Lb./1,000 SF
Permanent Seeding		
Fertilizer	(10-20-10 or equivalent)	11 Lbs./1,000 SF
Limestone	(50% Calcium plus MgO)	90 Lbs./1,000 SF
Mixture B-15	Kentucky Bluegrass	0.9 Lbs./1,000 SF
	(Three Cultivar Blend)	
	Hard Fescue	4.0 Lbs./1,000 SF
	Perennial Rye Grass	0.7 Lbs./1,000 SF

FERTILIZER

Work lime and fertilizer into soil as nearly as practical to depth of four inches (4"0). Remove from the surface all stones two inches (2") or larger. Roll soil to firm the seed bed where feasible. Use specifications as shown above.
Note: Optimum seeding dates February 1 to April 30 and August 15 to October 30.

STANDARD FOR LAND GRADING

PLANNING CRITERIA

The grading plan and installation shall be based upon adequate topographic surveys and investigations. The plan is to show the location, slope, cut, fill and finish elevation of the surfaces to be graded. The plan should also include auxiliary practices for safe disposal of runoff water, slope stabilization, erosion control and drainage. Facilities such as waterways, ditches, diversions, grade stabilization structures, retaining walls and subsurface drains should be included where necessary.
Erosion control measures shall be designed and installed in accordance with the applicable standard contained herein.
The development and establishment of the plan shall include the following:

1. The cut face of earth excavations and fills shall be no steeper than the safe angle of repose for the materials encountered and flat enough for proper maintenance.
2. The permanently exposed faces of earth cuts and fills shall be vegetated or otherwise protected from erosion.
3. Provisions shall be made to safely conduct surface water to storm drains or suitable water courses and to prevent surface runoff from damaging cut faces and fill slopes.
4. Subsurface drainage is to be provided in areas having a high water table, to intercept seepage that would adversely affect slope stability, building foundations or create undesirable wetness. See Standard for Subsurface Drainage, pg. 32-1.
5. Adjoining property shall be protected from excavation and filling operations.
6. Fill shall not be placed adjacent to the bank of a stream or channel, unless provisions are made to protect the hydraulic, biological, aesthetic and other environmental functions of the stream.

Soil Management and Preparation

Subgrade soils prior to the application of topsoil shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
This section of this Standard addresses the potential for excessive soil compaction in light of the intended land use, testing for excessive soil compaction where permanent vegetation is to be established and mitigation of excessive soil compaction when appropriate.
Due to use or setting, certain disturbed areas will not require compaction remediation including, but not limited to the following:
1. Within 20 feet of building foundations with basements, 12 feet from slab or crawl space construction.
2. Where soils or gravel surfaces will be required to support post-construction vehicular traffic loads such as roads, parking lots and driveways (including gravel surfaces), bicycle paths or pedestrian walkways (sidewalks etc)
3. Airports, railways or other transportation facilities
4. Areas requiring industry or government specified soil designs, including golf courses, landfills, wetland restoration, septic disposal fields, wet/lined ponds, etc.
5. Areas governed or regulated by other local, state or federal regulations which dictate soil conditions
6. Brownfields (capped uses), urban redevelopment areas, , in-fill areas, , recycling yards, junk yards, quarries and
7. Slopes determined to be inappropriate for safe operation of equipment
8. Portions of a site where no heavy equipment travel or other disturbance has taken place
9. Areas receiving temporary vegetative stabilization in accordance with the Standard.
10. Where the area available for remediation practices is 500 square feet or less in size.
11. Locations containing shallow (close to the surface) bedrock conditions.

Areas of the site which are subject to compaction testing and/or mitigation shall be graphically denoted on the certified soil erosion control plan.
Soil compaction remediation or testing to prove remediation is not necessary will be required in areas where permanent vegetation is to be established that are not otherwise exempted above. Testing method shall be selected, and soil compaction testing shall be performed by, the contractor or other project owner's representative (e.g. engineer). A minimum of two (2) tests shall be performed for projects with an overall limit of disturbance of up to one (1) acre and at a rate of two (2) tests per acre of the overall limit of disturbance for larger areas which shall be evenly distributed over the area of disturbance subject to testing. Tests shall be performed in areas representative of the construction activity prevailing in the area. In the event this testing indicates compaction in excess of the maximum thresholds indicated for the testing method, the contractor/owner shall have the option to perform compaction mitigation over the entire disturbed area (excluding exempt areas) or to perform additional testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation.
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.

SOIL CONSERVATION NOTES

Soil Test Method Options

1. Probing Wire Test Method
This test shall be conducted with a firm wire (15-1/2 gauge steel wire - e.g. survey marker flag, straight wire stock, etc.), 18 to 21 inches in length, with 6" inches from one end visibly marked on the wire. Conduct wire flag test by holding the wire flag near the flag end and push it vertically into the soil at several different locations in the field to the lesser of a 6 inch depth or the depth at which it bends due to resistance in the soil. Record the depth at which it bends due to resistance in the soil. The wire should penetrate without bending or deforming at least 6" into the ground by hand, without the use of tools. If penetration fails and an obstruction is suspected (rocks, root, debris, etc.) the test can be repeated in the same general area. If the test is successful the soil is not excessively compacted. If the wire is difficult to insert (wire bends or deforms prior to reaching 6 inches in depth) the soil may be excessively compacted and compaction mitigation or further testing via method 3 or 4 below is required, the choice of which is at the contractor/owner's discretion.

2. Handheld Soil Penetrometer Test Method
This test shall be conducted based on the Standard Operation Procedure (SOP) #RCE2010-001, prepared by the Rutgers Cooperative Extension, Implemented June 1, 2010, last revised February 28, 2011. A result of less than or equal to 300 psi shall be considered passing. If the result is greater than 300 psi the soil may be excessively compacted and compaction mitigation or further testing via method 3 or 4 below is required, the choice of which is at the contractor/owner's discretion.

3. Tube Bulk Density Test Method
This test shall be certified by a New Jersey Licensed Professional Engineer utilizing only undisturbed samples (reconstitution of the sample not permitted) collected utilizing the procedure for Soil Bulk Density Tests as described in the USDA NRCS Soil Quality Test Kit Guide, Section 1-4, July 2001. When the texture of the soil to be tested is a sand or loamy sand and lack of soil cohesion or the presence of large amounts of coarse fragments, roots or worm channels prevent the taking of undisturbed samples, this test shall not be used.
Where the results of replicate tests differ by more than ten percent (10%), the samples shall be examined for the following defects:
- Cracks, worm channels, large root channels or poor soil tube contact within the samples;
- Large pieces of gravel, roots or other foreign objects
- Smearing or compaction of the upper or lower surface of the samples

If any of the defects described in 3 (i-iii) above are found, the defective core(s) shall be discarded
and the test repeated using a new replicate sample for each defective replicate sample. The bulk density (defined as the weight of dry soil per volume) results shall be compared with the Maximum Dry Bulk Densities in Table 19-1. A result of less than or equal to the applicable maximum bulk density shall be considered passing. If the result is greater than the maximum bulk density the soil shall be considered excessively compacted and compaction mitigation is required.

4. Nuclear Density Test Method
This test shall be certified by a New Jersey Licensed Professional Engineer and conducted by a nuclear gauge certified inspector pursuant to ASTM D6938 . The bulk density measurement results shall be compared with the Maximum Dry Bulk Densities in Table 19-1. A result of less than or equal to the applicable maximum bulk density shall be considered passing. If the result is greater than the maximum bulk density the soil shall be considered excessively compacted and compaction mitigation is required.

Maximum Dry Bulk Densities (grams/cubic centimeter) by soil type

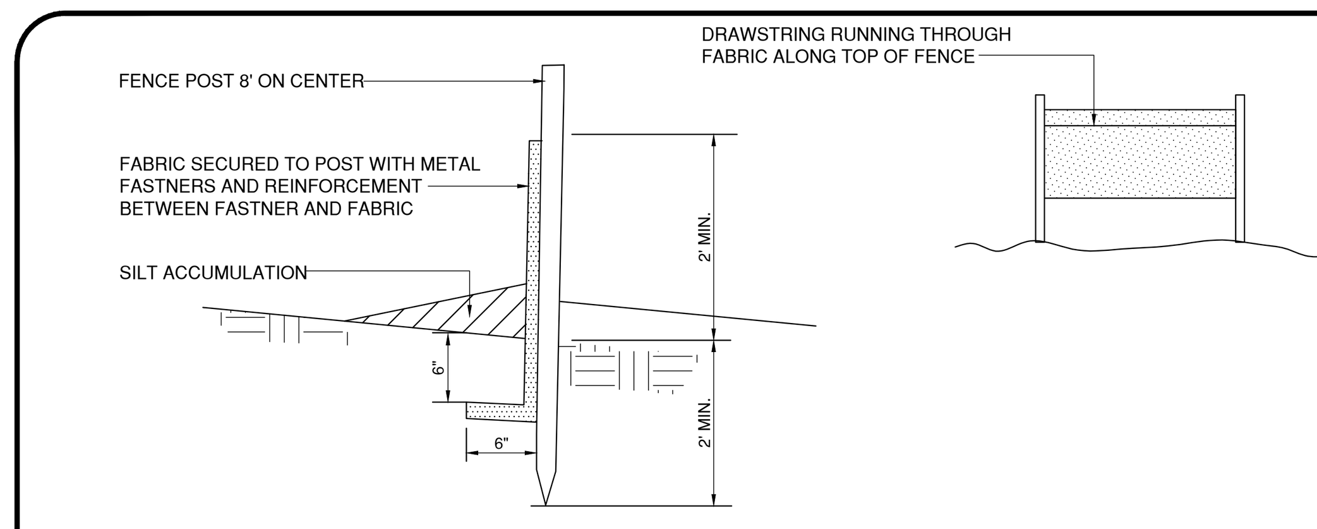
Soil Type/Texture	Bulk Density (g/cc)
Coarse, Medium and Fine Sands and Loamy Sands	1.80
Very Fine Sand and Loamy Very Fine Sand	1.77
Sandy Loam	1.75
Loam, Sandy Clay Loam	1.70
Clay Loam	1.65
Sandy Clay	1.60
Silt, Silt Loam	1.55
Silty Clay Loam	1.50
Silty Clay	1.45
Clay	1.40

Source: USDA Natural Resource Conservation Service, Soil Quality Information Sheet, Soil Quality Resource Concerns: Compaction, April 1996
5.Additional testing methods which comform to ASTM standards and specificaitons, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

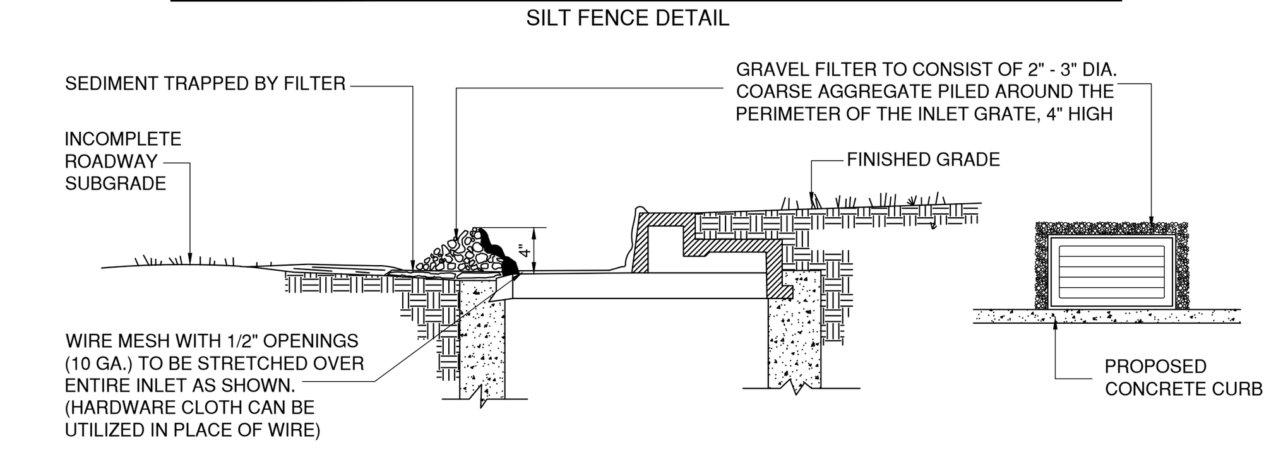
Procedures for Soil Compaction Mitigation
If subgrade soils are determined to be excessively compacted by testing, as identified above, procedures shall be used to mitigate excessive soil compaction prior to placement of topsoil and establishment of permanent vegetative cover. Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.) or in the alternative, another method as specified by a New Jersey Licensed Professional Engineer.

Installation Requirements
- Timber, logs, brush, rubbish, rocks, stumps and vegetative matter which will interfere with the grading operation or affect the planned stability or fill areas shall be removed and disposed of according to the plan.
- Topsoil is to be stripped and stockpiled in amounts necessary to complete finish grading of all exposed areas requiring topsoil. See Standard for Topsoiling.
- Fill material is to be free of brush, rubbish, timber, logs, vegetative matter and stumps in amounts that will be detrimental to constructing stable fills.
- All structural fills shall be compacted as determined by structural engineering requirements for their intended purpose and as required to reduce slipping, erosion or excessive saturation.
- All disturbed areas shall be left with a neat and finished appearance and shall be protected from erosion. See Standards for Permanent Vegetative Cover for Soil Stabilization.
- Trees to be retained shall be protected if necessary in accordance with the Standard for Tree Protection During Construction.

SOIL CONSERVATION NOTES

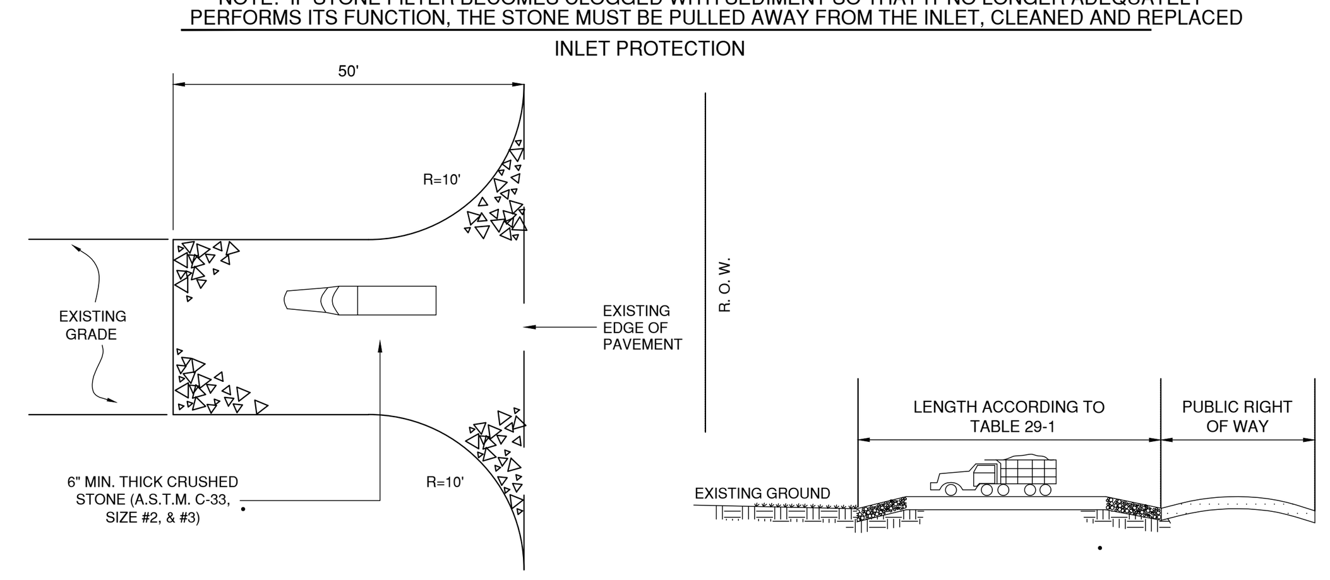


SILT FENCE DETAIL



NOTE: IF STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED

INLET PROTECTION



CONTRACTOR TO PROVIDE APPROPRIATE TRANSITION BETWEEN THE STABILIZED ENTRY AND THE R.O.W.

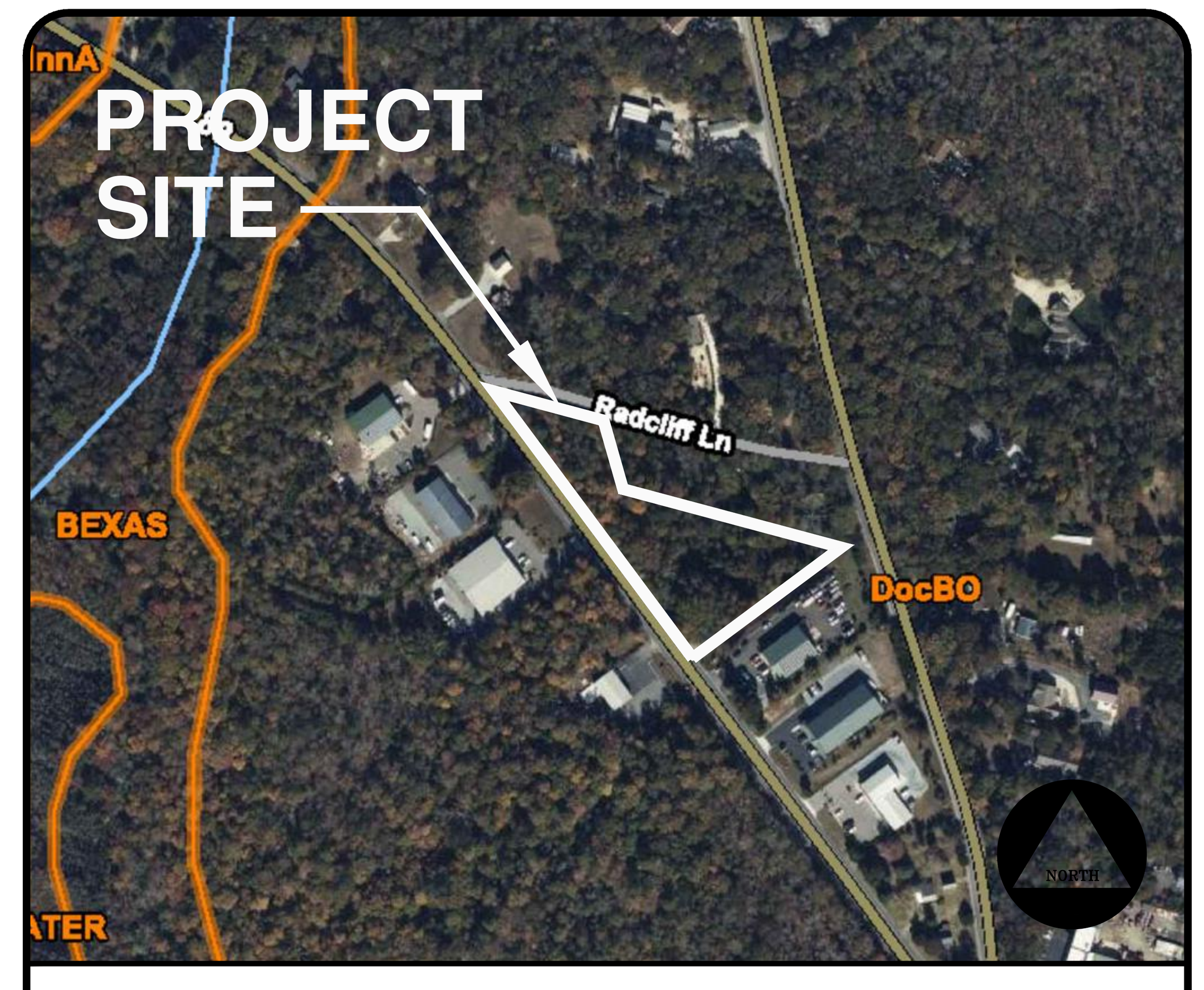
STABILIZED CONSTRUCTION ENTRANCE

Maintenance

The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto roadways. This may require periodic dressing with additional stone or additional length as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto roadways (public or private) or other impervious surfaces must be removed immediately.

Where accumulation of dust/sediment is inadequately cleaned or removed by conventional methods, a power broom or street sweeper will be required to clean paved or impervious surfaces. All other access points which are not stabilized shall be blocked off.

SOIL CONSERVATION DETAILS



S.C.D. SOILS MAP

1" = 1000'

Cape May County, New Jersey

DocBO—Downer loamy sand, 0 to 5 percent slopes, Northern Tidewater Area

Map Unit Setting
National map unit symbol: 2thw1
Elevation: 60 to 90 feet
Mean annual precipitation: 41 to 50 inches
Mean annual air temperature: 46 to 66 degrees F
Frost-free period: 190 to 260 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Downer and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Downer

Setting
Landform: Knolls, low hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Loamy fluviomarine deposits

Typical profile
Ap - 0 to 10 inches: loamy sand
BE - 10 to 16 inches: loamy sand
Bt - 16 to 28 inches: sandy loam
C1 - 28 to 48 inches: loamy sand
C2 - 48 to 80 inches: sand

Properties and qualities
Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 0.2 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hammonton
Percent of map unit: 10 percent
Landform: Broad interstream divides, flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Dip
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Atsion
Percent of map unit: 5 percent
Landform: Depressions, drainageways, deflation flats, flats
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Hydric soil rating: Yes

Evesboro
Percent of map unit: 5 percent
Landform: Fluviomarine terraces, dunes, flats, knolls
Landform position (three-dimensional): Riser, rise
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Data Source Information

Soil Survey Area: Cape May County, New Jersey
Survey Area Data: Version 18, Aug 29, 2022

SOILS DESCRIPTION

PHASE	OPERATION	TIME PERIOD
A.	ESTABLISH EROSION CONTROL MEASURES	2 DAYS
B.	SITE CLEARING	5 DAYS
C.	ROUGH GRADING	5 DAYS
D.	CONSTRUCT STORM WATER BASIN INCLUDING VEGETATIVE STABILIZATION	10 DAYS
E.	CONSTRUCT SANITARY SEWER SYSTEM & WATER SYSTEM	5 DAYS
F.	CONSTRUCT STORM DRAINAGE STRUCTURES (IF NECESSARY)	5 DAYS
G.	FINE GRADE AND CONSTRUCT STONE BASE	5 DAYS
H.	SOIL COMPACTION TESTING PRIOR TO THE INSTALLATION OF TOPSOIL.	1 DAY
	RESTORATION AS REQUIRED	N/A
I.	PERFORM TEMPORARY SEEDING AS NECESSARY	2 DAYS
J.	PERFORM PAVING AND CONSTRUCT SIDEWALKS	5 DAYS
K.	LAY BUILDING FOUNDATIONS	90 DAYS
L.	PERFORM PERMANENT SEEDING AND LANDSCAPING	5 DAYS

VARIOUS LOT GRADING TO CONTINUE THROUGHOUT CONSTRUCTION SEQUENCE.
DURATION OF EACH SEQUENCE WILL VARY DUE TO SECTIONALIZATION AND MARKET CONDITIONS.
CONSTRUCTION WILL BEGIN SPRING 2023.

CONSTRUCTION SEQUENCE

LAND COVER

A. Total Area of Site: .... 1.966 Acres

B. Present Cover: .... Impervious Grassland Woodland

C. Total Area of Disturbance: .... 1.56 Acres

D. Adjacent Site Conditions: .... Car Repair Shop / Residential

RESPONSIBILITY

All soil erosion and sediment control measures and facilities shall be the sole responsibility of the developer/owner. The responsibility shall include, but not be limited to installation, inspection, and maintenance of conditions during and following construction.

Applicant/Owner:
Ryan Development Group
Matt Ryan
3283 Dune Drive
Avalon, NJ 08202
Phone (410)-371-3122

Site Address:
1084 Route 83
Dennis, NJ 08210

GENERAL INFORMATION

EDA
Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
CAMBRIDGE PROFESSIONAL OFFICES
5 Cambridge Drive Ocean View New Jersey 08230
(609) 390-0332 ◦ Fax (609) 390-9204 ◦ www.engineeringdesign.com ◦ CERTIFICATE OF AUTHORIZATION#: 24GA27970300

SOIL EROSION & SEDIMENT CONTROL NOTES
BLOCK 260 LOTS 4.04 & 4.05
DENNIS TOWNSHIP
CAPE MAY COUNTY, NEW JERSEY

STEVEN L. FILIPPONE
PROFESSIONAL ENGINEER
N.J.P.E. LIC. #29230
STATE OF NEW JERSEY STEVEN L. FILIPPONE No. GE29230 LICENSED PROFESSIONAL ENGINEER

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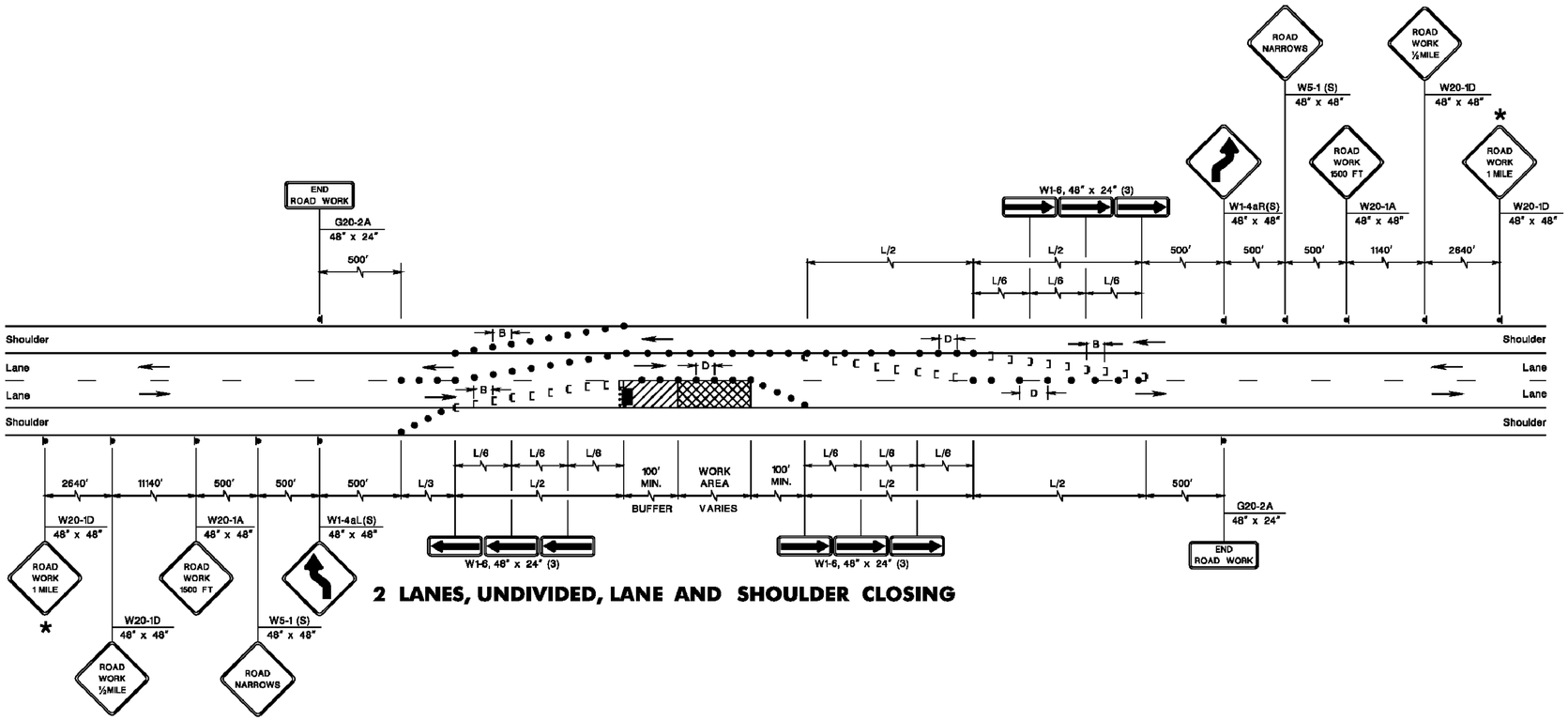
REVISION	DATE	BY
REV PER DENNIS TWP. LETTER DATED 1/2/23	2/2/2023	MSB

EDA

DATE: 12/13/22	DRAWN BY: MSB
SCALE: AS NOTED	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 8 0F 9



2 LANES, UNDIVIDED, LANE AND SHOULDER CLOSING

REGULATORY APPROACH SPEED OF TRAFFIC MILES/HOUR	RECOMMENDED SIGHT DISTANCE TO BEGINNING OF CHANNELIZING TAPERS		
	DESIRABLE		MINIMUM
	RURAL FEET	URBAN FEET	RURAL AND URBAN FEET
25	375	525	150
30	450	625	200
35	525	725	250
40	600	825	325
45	675	925	400
50	750	1025	475
55	875	1150	550
60	1000	1275	650
65	1050		725

NOTES:

1. AVOIDANCE MANEUVER IS FOR A SPEED, PATH, AND / OR DIRECTION CHANGE PRIOR TO THE BEGINNING OF CHANNELIZING TAPERS.
2. RECOMMENDED DISTANCES BETWEEN TWO SEPARATE LANE CLOSURES ARE DOUBLE THE VALUES SHOWN ABOVE.
3. RURAL AND URBAN ROAD DESIGNATIONS ARE AS DEFINED IN THE NJDOT STATE HIGHWAY STRAIGHT LINE DIAGRAMS.
4. PROVIDE DESIRABLE VALUES WHEREVER POSSIBLE. IF IT IS NOT FEASIBLE OR PRACTICAL TO PROVIDE DESIRABLE VALUES BECAUSE OF HORIZONTAL OR VERTICAL CURVATURE OR IF RELOCATION OF THE TAPER IS NOT POSSIBLE, THEN MINIMUM VALUES CAN BE APPLIED. WHEN MINIMUM VALUES ARE USED, PAY SPECIAL ATTENTION TO THE USE OF SUITABLE TRAFFIC CONTROL DEVICES WHEN PROVIDING ADVANCED WARNING OF THE CONDITIONS THAT ARE LIKELY TO BE ENCOUNTERED.
5. LOCATE TAPERS TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.

OPTIONAL CONNECTION TYPE B TREATMENT AT VERTICAL DROP OFF

RECOMMENDED TAPER LENGTH AND SPACING FOR CHANNELIZING TAPERS						RECOMMENDED SPACING ALONG TANGENTS
REGULATORY APPROACH SPEED OF TRAFFIC MILES /HOUR	MINIMUM TAPER RATIO IN LENGTH PER FOOT OF WIDTH	MINIMUM TAPER LENGTH L – FOR LANE WIDTHS 10′	11′	12′	MAXIMUM DEVICE (B) SPACING ALONG TAPERS IN FEET	MAXIMUM DEVICE (D) SPACING ALONG TANGENTS IN FEET
25	10.5:1	105	115	125	25	50
30	15:1	150	165	180	30	60
35	20.5:1	205	225	245	35	70
40	27:1	270	300	325	40	80
45	45:1	450	495	540	45	90
50	50:1	500	550	600	50	100
55	55:1	550	605	660	55	110
60	60:1	600	660	720	60	120
65	65:1	650	715	780	65	130

NOTE:
THE MAXIMUM DEVICE SPACING ALONG CURVES IS DEFINED FOR TAPERS (B) IN THE ABOVE TABLE.

ALLOWABLE WORKING HOURS

TO BE PROVIDED BY NJDOT

NOTE:

1. CONTRACTOR TO OBTAIN NJ ONE-CALL NUMBER FOR UTILITY MARK OUT AND SUPPLY CONFIRMATION NUMBER TO NJDOT.

EDA Engineering Design Associates, P.A.
Engineers Environmental Planners Landscape Architects
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NJDOT TRAFFIC CONTROL PLAN
BLOCK 260 LOTS 4.04 & 4.05
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REVISION	DATE	BY

DATE: 2/2/2023	DRAWN BY: MSB
SCALE: AS NOTED	CHECKED BY: SLF
PROJECT #: 9444	SHEET: 9 0F 9