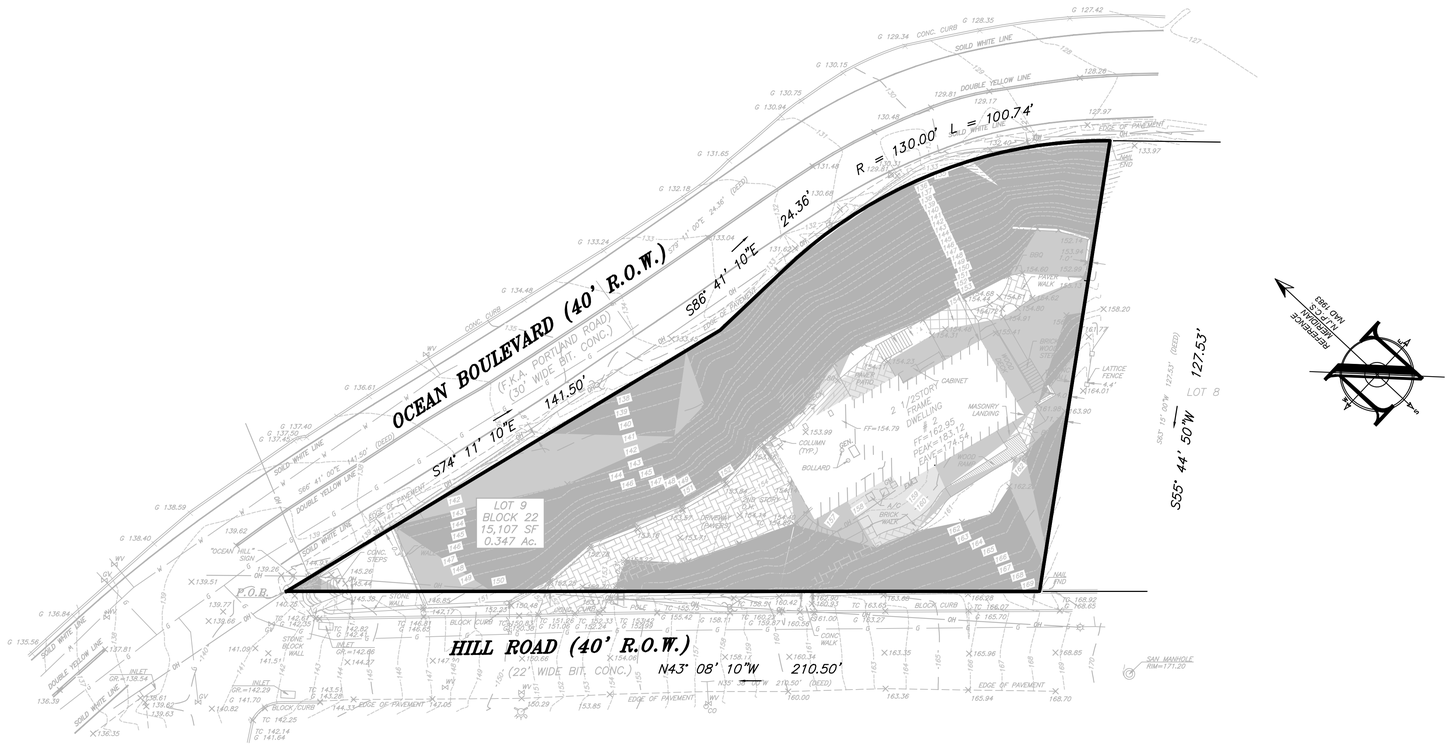
SLOPE ANALYSIS: LOT AREA = 15,107 SF		
150-78.E(1) - MINIMUM LOT SIZE		
30 % OR MORE SLOPES	= 8,355.19 SF * 0.10 =	835.52 SF
20% TO 29.99% SLOPES	= 2,414.79 SF * 0.20 =	482.96 SF
15% TO 19.99% SLOPES	= 491.56 SF * 0.50 =	245.78 SF
LESS THAN 15% SLOPES	= 3,845.46 SF * 1.00 =	3,845.46 SF
MODIFIED MINIMUM LOT AREA	=	5,409.72 SF
150-78.E(2) - MAXIMUM LOT COVERAGE		
30 % OR MORE SLOPES	= 8,355.19 SF * 0.25 =	2,088.80 SF
20% TO 29.99% SLOPES	= 2,414.79 SF * 0.50 =	1,070.90 SF
15% TO 19.99% SLOPES	= 491.56 SF * 0.75 =	368.67 SF
LESS THAN 15% SLOPES	= 3,845.46 SF * 1.00 =	3,845.46 SF
TOTAL	=	7,510.32 SF
MAXIMUM PERMITTED = 7,510.32 * 0.30	=	2,253.10 SF
EXISTING LOT COVERAGE	=	3,978.82 SF (N)
PROPOSED LOT COVERAGE	=	4,903.84 SF (V)
150-78.E(3) - MAXIMUM IMPERVIOUS AREA		
30 % OR MORE SLOPES	= 8,355.19 SF * 0.10 =	835.52 SF
20% TO 29.99% SLOPES	= 2,414.79 SF * 0.15 =	362.22 SF
15% TO 19.99% SLOPES	= 491.56 SF * 0.25 =	122.89 SF
LESS THAN 15% SLOPES	= 3,845.46 SF * 0.35 =	1,345.91 SF
MAXIMUM PERMITTED IMPERVIOUS AREA	=	2,666.54 SF
EXISTING IMPERVIOUS AREA		
BUILDINGS	= 2,107.59 SF	
DRIVEWAYS	= 1,054.96 SF	
WALKWAYS, PATIOS, ETC.	= 816.27 SF	
TOTAL	= 3,798.82 SF (N)	
PROPOSED IMPERVIOUS AREA		
BUILDINGS	= 2,196.98 SF	
DRIVEWAYS	= 1,046.13 SF	
WALKWAYS, PATIOS, ETC.	= 1,600.63 SF	
TOTAL	= 4,903.84 SF (V)	
150-78.E(4) = MAXIMUM LOT DISTURBANCE		
PERMITTED	2,666.54 * 130% = 3,466.50 SF	
PROPOSED	= 7,755 SF (N)(V)	

(N) EXISTING NON-CONFORMITY (I) IMPROVED CONDITION
(V) PROPOSED VARIANCE

SLOPE ANALYSIS				
LETTER	RANGE BEG.	RANGE END	PERCENT	AREA (SF)
	>30.00		55.31	8,355.19
	20.00	29.99	15.98	2,414.79
	15.00	19.99	3.25	491.56
	0.00	14.99	25.45	3,845.46



20 0 20 40
SCALE : 1" = 20'

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
50	CONTOUR LINE	50
+ 46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G G	GAS	GAS
W W	WATER	WTR
	INLET	
	STORM	D
	SANITARY MAIN	S
SAN.	SANITARY LATERAL	SAN.
OH	OVERHEAD WIRE	O/H
E E	ELECTRIC	E
T T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
x x	FENCE	x x
	LIGHT FIXTURE	
TP-1	TEST PIT LOCATION	TP-1
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:
BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

CALL BEFORE YOU DIG!
NJ ONE CALL.....800-272-1000
(at least 3 days prior to excavation)

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
1955 ROUTE 34, SUITE 1A, WALL, NJ 07719
165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev.#	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE: 1"=20'	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

NOT FOR CONSTRUCTION
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:

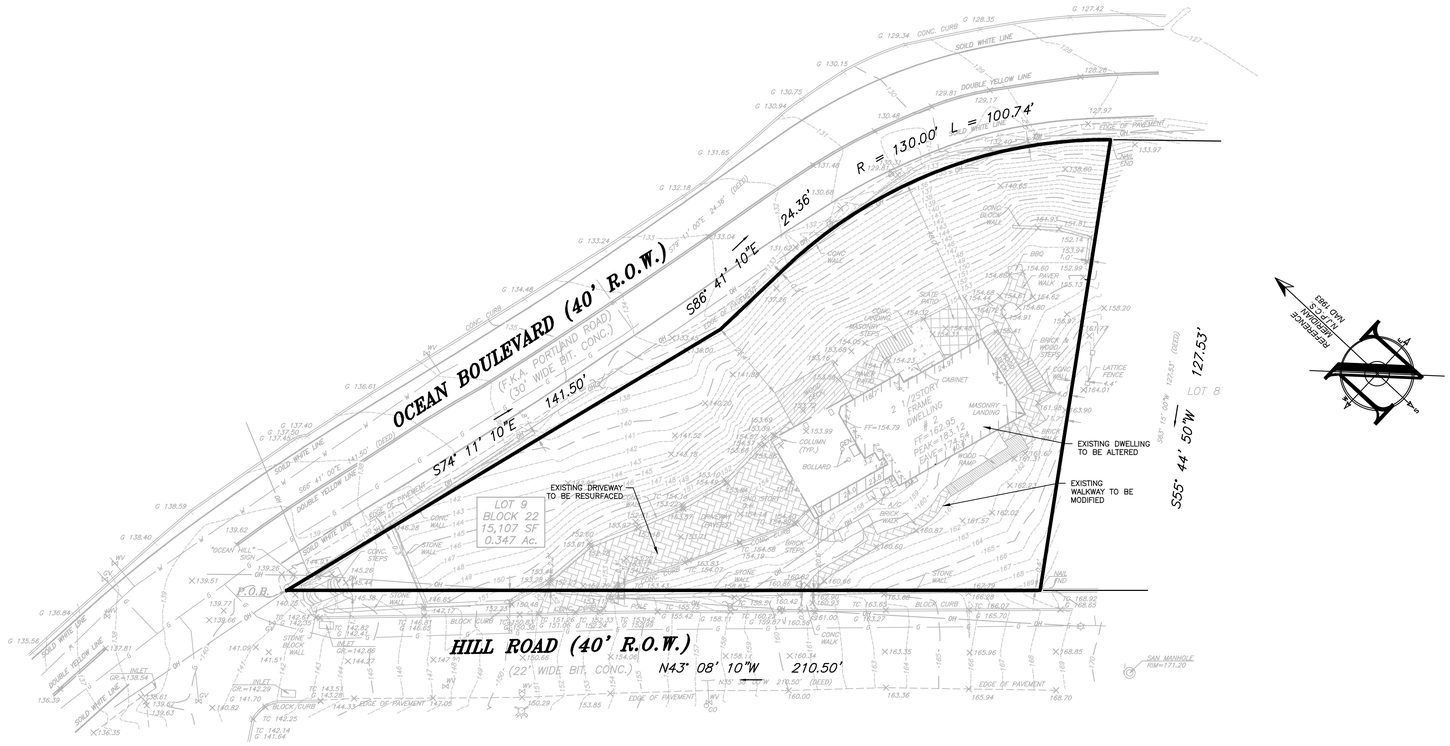
PLOT PLAN

SHEET TITLE:

STEEP SLOPE ANALYSIS

SHEET NO:

1 OF 7



20 0 20 40

SCALE : 1" = 20'

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
10	CONTOUR LINE	10
+ 46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G G	GAS	GAS
W W	WATER	WTR
	INLET	
	STORM	D
	SANITARY MAIN	S
SAN SAN	SANITARY LATERAL	SAN
OH OH	OVERHEAD WIRE	O/H
E E	ELECTRIC	E
T T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
x x	FENCE	x x
	LIGHT FIXTURE	
TP-1	TEST PIT LOCATION	TP-1
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:

BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

CALL BEFORE YOU DIG!
NJ ONE CALL.....800-272-1000
(at least 3 days prior to excavation)

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200

1955 ROUTE 34, SUITE 1A, WALL, NJ 07719

165 CHESTNUT STREET, SUITE 200,
ALLENDALE, NJ 07401

20 N. MAIN STREET, SUITE 2B,
MANAHAWKIN, NJ 08050

732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev #	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE: 1"=20'	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

NOT FOR CONSTRUCTION

APPROVED BY:

FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:

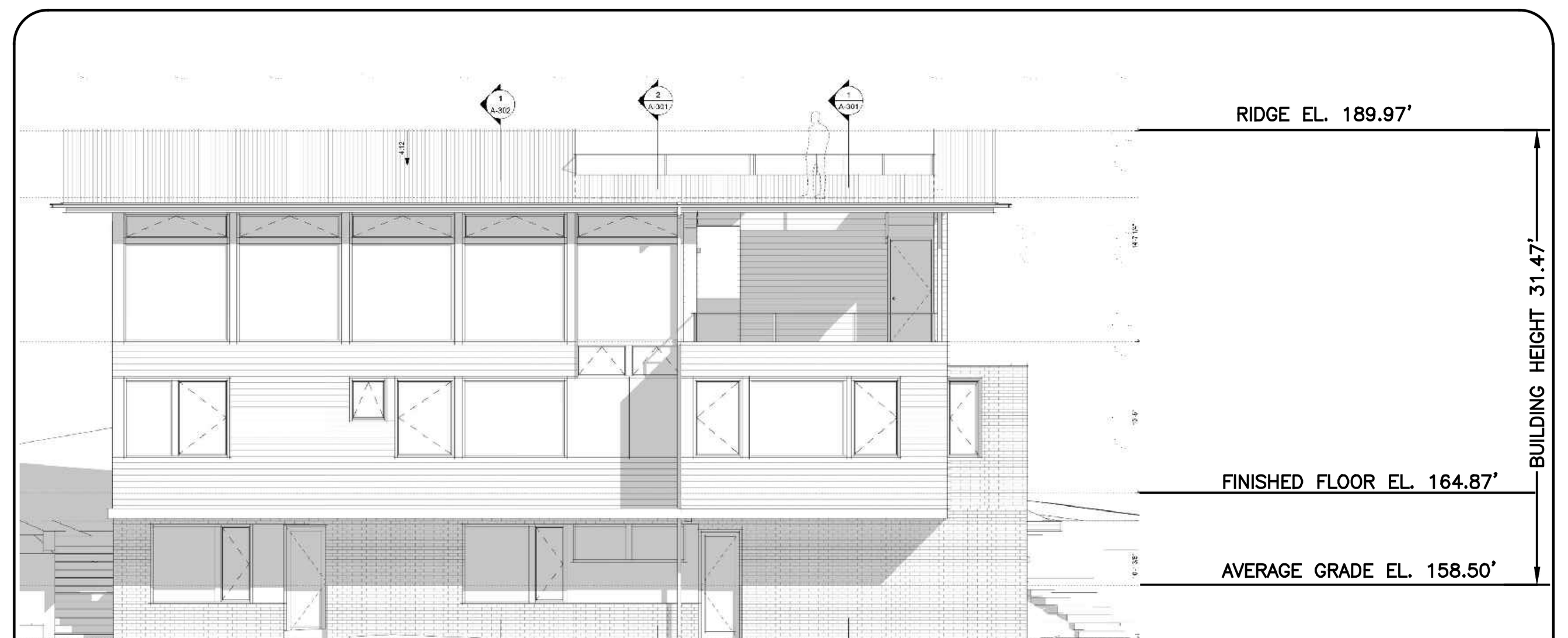
PLOT PLAN

SHEET TITLE:

EXISTING CONDITIONS

SHEET NO:

2 OF 7



BUILDING HEIGHT COMPLIANCE PER MUNICIPAL ORDINANCE

NTS

GENERAL NOTES

1. **SUBJECT PROPERTY**
   TAX MAP #9: BLOCK 22, LOT #9, BOROUGH OF ATLANTIC HIGHLANDS, MONMOUTH COUNTY, NEW JERSEY

2. **OWNER / APPLICANT**
   TWO HILL PROPERTIES, LLC
   2 HILL ROAD
   ATLANTIC HIGHLANDS, NJ 07716

3. **PURPOSE OF THIS PLAN SET**
   THIS PLAN SET HAS BEEN PREPARED TO SUPPORT AN APPLICATION TO THE MUNICIPALITY FOR ENGINEERING AND ZONING APPROVAL AND TO SUPPORT AN APPLICATION TO FREEHOLD SOIL CONSERVATION DISTRICT (FOR PLAN CERTIFICATION).

4. **PERMITS & APPROVALS**
   CONTRACTOR IS RESPONSIBLE TO ENSURE COPIES OF ALL AGENCY PERMITS AND APPROVALS ARE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. ANY CHANGES MADE TO THE APPROVED DESIGN DOCUMENTS AFTER MUNICIPAL PERMITS ARE ISSUED SHALL BE SUBMITTED TO THE MUNICIPALITY BY THE CONTRACTOR FOR REVIEW AND APPROVAL.

5. **SURVEY DATA**
   SURVEY INFORMATION CONTAINED HEREON IS BASED ON A FIELD SURVEY PERFORMED BY INSITE SURVEYING LLC, ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY", WITH THE LATEST REVISION BEING DATED 08/02/23. A SIGNED AND SEALED COPY OF THIS SURVEY SHALL ALWAYS ACCOMPANY THIS SITE PLAN AS AN INDEPENDENT SHEET. TOPOGRAPHIC INFORMATION ON THE SURVEY REFERENCES THE NAVD88 VERTICAL DATUM.

6. **ARCHITECTURAL INFORMATION**
   ARCHITECTURAL INFORMATION CONTAINED HEREON IS BASED ON PLANS PREPARED BY PARNAGIAN ARCHITECTS LLC, INC, ENTITLED "TWO HILL ADDITION & RENOVATION".

7. **BUILDING SETBACK DIMENSIONS**
   BUILDING SETBACK DIMENSIONS SHOWN HEREON ARE MEASURED FROM CONCRETE BUILDING FOUNDATION WALLS (+ 2" VENEER) TO PROPERTY LINES OR OTHER SITE FEATURES. THE CONTRACTOR, ARCHITECT, OR OWNER SHALL VERIFY (IF ANY PROPOSED VENEER(S)) (IF THE PROPOSED VENEER(S) THICKNESS EXCEEDS 2") WILL BE APPLIED TO BUILDING WALLS THAT MAY DECREASE THE SETBACK DIMENSIONS BECAUSE THIS MAY CAUSE THE BUILDING(S) TO BECOME NON-COMPLIANT WITH ZONING APPROVAL. THE CONTRACTOR, ARCHITECT, OR OWNER SHALL CONTACT THE UNDERSIGNED WITH ANY CHANGES OR QUESTIONS REGARDING SETBACKS DIMENSIONS.

8. **BASE FLOOD ELEVATION**
   PROPERTY IS NOT LOCATED IN FLOOD ZONE.

9. **UNDERGROUND UTILITIES NOTIFICATION**
   FOR ANY EXCAVATION IN NEW JERSEY, THE CONTRACTOR SHALL CALL PLANT LOCATION SERVICE AT 1-800-272-1000 FOR A MARKOUT REQUEST NO LESS THAN THREE (3) WORKING DAYS PRIOR TO STARTING ANY EXCAVATION.

10. **VERIFICATION OF UTILITIES**
    EXISTING UTILITIES SHOWN ON THIS SITE PLAN ARE APPROXIMATE PER THE REFERENCED SURVEY. THE CONTRACTOR SHALL PERFORM SAMPLE TEST PITS TO DETERMINE EXACT LOCATIONS.

11. **EXISTING UTILITIES**
    ALL EXISTING UTILITIES TO REMAIN AND BE UTILIZED. THE CONTRACTOR SHALL CONFIRM ADEQUACY AND CONDITION OF ALL EXISTING UTILITIES.

12. **LIMIT OF DISTURBANCE**
    PRIOR TO THE START OF SITE WORK, THE LIMIT OF DISTURBANCE SHALL BE DELINEATED WITH SNOW FENCING OR OTHER APPROPRIATE MARKERS. SOIL DISTURBANCE IS LESS THAN 5,000 SF, THEREFORE PLAN CERTIFICATION IS FROM THE SOIL CONSERVATION DISTRICT IS NOT REQUIRED.

13. **RESTORATION**
    ALL AREAS DISTURBED DURING THE COURSE OF CONSTRUCTION SHALL BE RESTORED "IN-KIND" AS NEARLY AS PRACTICAL TO THEIR ORIGINAL STATE. AREAS WHERE SOIL IS LEFT EXPOSED SHALL BE GRADED, RAKED SMOOTH AND SEEDED IMMEDIATELY UPON COMPLETION OF SOIL DISTURBANCE.

14. **POTABLE WATER**
    PRIOR TO THE START OF CONSTRUCTION, A COPY OF THIS PLAN SHALL ACCOMPANY AN APPLICATION TO THE APPLICABLE WATER COMPANY SO THAT CONNECTION TO THE EXISTING WATER MAIN IS COORDINATED PROPERLY.

15. **SANITARY SEWER**
    PRIOR TO THE START OF CONSTRUCTION, A COPY OF THE PLAN SHALL ACCOMPANY AN APPLICATION TO THE APPLICABLE SEWERAGE AUTHORITY SO THAT CONNECTION TO THE EXISTING SANITARY SEWER SYSTEM IS COORDINATED PROPERLY.

16. **STRUCTURAL ENGINEERING**
    THIS PLAN DOES NOT INCLUDE OR IMPLY STRUCTURAL ENGINEERING DETAILS OR PROVISIONS, INCLUDING FOUNDATIONS, BULKHEADS, AND RETAINING WALLS.

17. **CONSTRUCTION REQUIREMENTS**
    a. ALL CONSTRUCTION AND DEMOLITION SHALL CONFORM WITH ANY APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY WAYS, MEANS AND METHODS OF CONSTRUCTION, AND SHALL 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.
    b. THE CONTRACTOR SHALL PERFORM ALL WORK IN A FINISHED AND WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER AND IN ACCORDANCE WITH THE BEST RECOGNIZED TRADE PRACTICES.
    c. THE CONTRACTOR SHALL PROVIDE NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY WITHIN THE PROJECT FOR THE PROTECTION AND THE SAFETY OF THE PUBLIC AND MAINTAIN THROUGHOUT CONSTRUCTION.
    d. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE CLEANUP WITHIN THE CONSTRUCTION AREA AND SHALL DISPOSE OF DEBRIS IN ACCORDANCE WITH ANY LOCAL, STATE OR FEDERAL REGULATIONS.
    e. ANY DAMAGE TO PUBLIC STREETS, CURBS, SIDEWALKS AND UTILITIES AS A RESULT OF SITE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR.

16. **POOL COMPLIANT FENCE**
    THE APPLICANT SHALL PROVIDE A COMPLIANT POOL FENCE AND GATE IN ACCORDANCE WITH THE MUNICIPAL ORDINANCE, THE 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE (ISPSC), AND ALL APPLICABLE CODES.

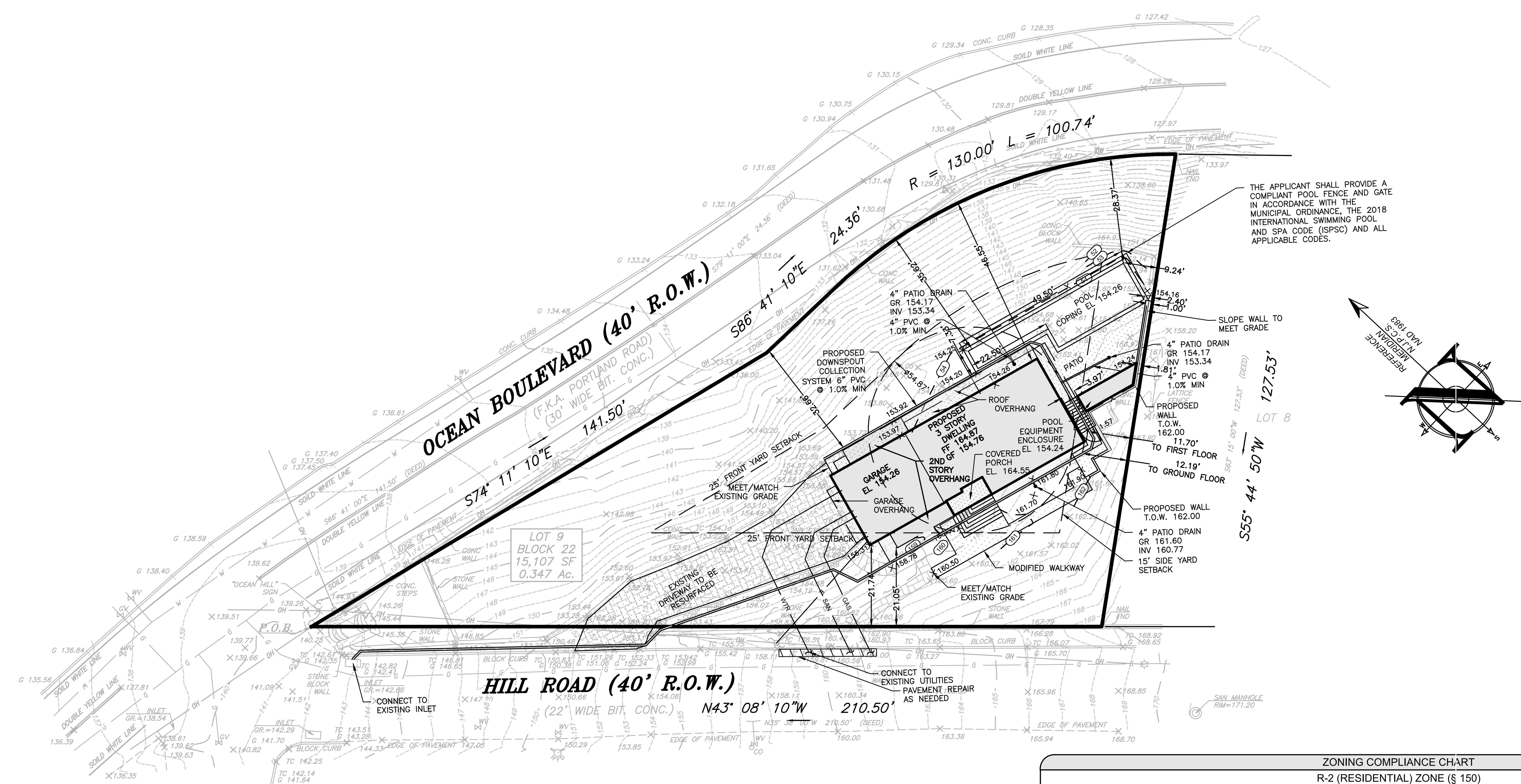
20 0 20 40

SCALE : 1" = 20'

LEGEND

EXISTING / PROPOSED

- BOUNDARY LINE
- CONTOUR LINE
- SPOT ELEVATION (+ 46.80 / +46.80)
- BUILDING
- WALL
- GAS (G / GAS)
- WATER (W / WTR)
- INLET
- STORM
- SANITARY MAIN
- SANITARY LATERAL (SAN CO / SAN CO)
- OVERHEAD WIRE (OH / O/H)
- ELECTRIC (E / E)
- TELEPHONE (T / TEL)
- UTILITY POLE
- HYDRANT
- SIGN POST
- FENCE
- LIGHT FIXTURE
- TEST PIT LOCATION (TP-1 / TP-1)
- GRADE FLOW ARROW
- SWALE CENTER LINE



ZONING COMPLIANCE CHART					
R-2 (RESIDENTIAL) ZONE (§ 150)					
SINGLE-FAMILY - PERMITTED					
ORD.SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
150 ATTACH 1	MIN. LOT AREA (SF)	15,000	15,107	NO CHANGE	YES
150 ATTACH 1	MIN. LOT WIDTH (FT)	100	210.50	NO CHANGE	YES
150 ATTACH 1	MIN. LOT FRONTAGE (FT)	100	210.50	NO CHANGE	YES
	PRINCIPAL BUILDING				
150 ATTACH 1	MIN. FRONT YARD SETBACK (FT)				
	OCEAN BOULEVARD (FT)	25	23.40 (N)	32.66 (X)	YES
	HILL ROAD (FT)	25	20.60 (N)	21.05 (I)	NO
150 ATTACH 1	MIN. SIDEYARD SETBACK (FT)	15	11.70 (N)	NO CHANGE (N)	NO
150 ATTACH 1	MIN. LOT SHAPE DIAMETER (FT)	60	54.87 (N)	NO CHANGE (N)	NO
150 ATTACH 1	MAX. BUILDING HEIGHT (FT)	35	21.96	31.47	YES
150 ATTACH 1	MAX. BUILDING HEIGHT (STORIES)	2.5	(a)	3.0 (V)	NO
150 ATTACH 1	MAX. USABLE FLOOR AREA RATIO (UFAR)	0.35	(a)	0.25	YES
150 ATTACH 1	MIN. GROSS FLOOR AREA (SF) FIRST FLOOR	1,200	(a)	1,413	YES
150 ATTACH 1	MIN. GROSS FLOOR AREA (SF) TOTAL	1,800	(a)	3,715	YES
	ACCESSORY STRUCTURE (POOL EQUIPMENT ENCLOSURE)				
150-54A(2)	ALLOWABLE YARD LOCATION	SIDE/REAR	N/A	SIDE	YES
150 ATTACH 1	MIN. SIDE YARD SETBACK (FT)	10	N/A	1.81 (V)	NO
150-54D	MIN. DISTANCE FROM PRINCIPAL BLDG (FT)	5	N/A	3.97 (V)	NO
	LOT COVERAGE				
150 ATTACH 1	MAX. BUILDING COVERAGE (%)	15	13.95	14.96	YES
150 ATTACH 1	MAX. IMPERVIOUS COVERAGE (%)	40	26.34	32.46	YES
	POOL				
150-54G(2)	MIN. SIDE YARD SETBACK	10	N/A	2.40 (V)	NO
150-54G(2)	MIN. REAR YARD SETBACK	10	N/A	N/A	YES
150-54A(2)	ALLOWABLE YARD LOCATION	SIDE/REAR	N/A	FRONT (V)	NO
	MIN. POOL EQUIPMENT SETBACK (FT)	5	N/A	1.81 (V)	NO
	PATIO (1)				
150 ATTACH 1	MIN. SIDE YARD SETBACK	10	N/A	1.00 (V)	NO
150 ATTACH 1	MIN. REAR YARD SETBACK	5	N/A	N/A	YES

(N) EXISTING NON-CONFORMITY
(E) EXISTING VARIANCE
(V) PROPOSED VARIANCE
(I) IMPROVED CONDITION
(X) VARIANCE / NON-CONFORMITY ELIMINATED
(W) PROPOSED WAIVER
N/A - NOT APPLICABLE
N/S - NOT SPECIFIED
(a) THIS PERTAINS TO AN EXISTING STRUCTURE WHICH WAS NOT MADE AVAILABLE TO THIS OFFICE
(1) A PORCH, DECK, PATIO, OR SIMILAR STRUCTURE DESIGNED TO ADJOIN OR AS PART OF THE PRINCIPAL BUILDING SHALL IN ALL CASES CONFORM TO THE YARD REQUIREMENTS FOR THE PRINCIPAL BUILDING; EXCEPT WHERE THE STRUCTURE HAS NO ROOF AND IS CONSTRUCTED NOT MORE THAN SIX INCHES ABOVE GRADE, IT SHALL ADHERE TO THE YARD REQUIREMENTS FOR AN ACCESSORY STRUCTURE.

LOT COVERAGE CALCULATIONS		
ITEM	EXISTING (SF)	PROPOSED (SF)
DWELLING	1,661.80	1,612.55
OVERHANGS	N/A	514.97
COVERED PORCH	N/A	56.52
WALKWAY	329.65	399.52
WOOD RAMP	86.07	N/A
WOOD DECK	300.83	N/A
A/C UNITS	8.00	N/A
MASONRY LANDING/STEPS	62.12	N/A
CONC. LANDING	144.96	N/A
PATIO	248.91	423.96
DRIVEWAY	1,054.96	1,046.13
FRONT STEPS	N/A	45.08
SIDE STEPS	N/A	5.25
WALLS	81.52	195.66
POOL	N/A	400.50
CURB	N/A	29.47
POOL EQUIPMENT ENCLSOURE	N/A	74.23
TOTAL	3,978.82	4,903.84

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:
BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

CALL BEFORE YOU DIG!
NJ ONE CALL.....800-272-1000
(at least 3 days prior to excavation)

InSite Engineering • Surveying • Planning
InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
1955 ROUTE 34, SUITE 1A, WALL, NJ 07719
165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev.#	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE: 1"=20'	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

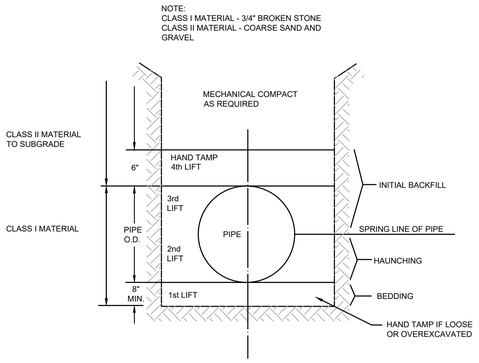
[X] NOT FOR CONSTRUCTION
APPROVED BY:
[ ] FOR CONSTRUCTION

PLAN INFORMATION

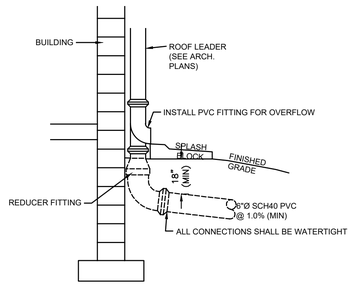
DRAWING TITLE:
PLOT PLAN

SHEET TITLE:
PROPOSED CONDITIONS

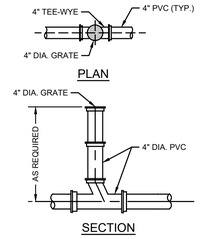
SHEET NO:



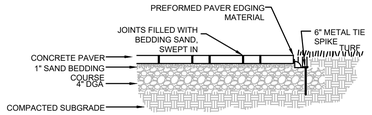
PIPE BEDDING DETAIL
NTS



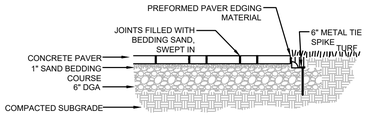
EXTERIOR DOWNSPOUT COLLECTOR
NTS



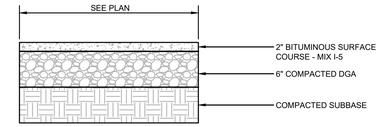
4" PATIO DRAIN
NTS



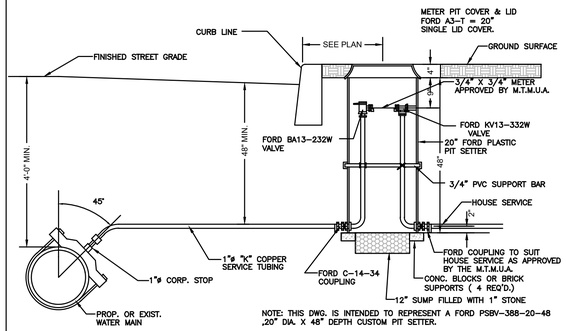
CONCRETE PAVER WALKWAY
NTS



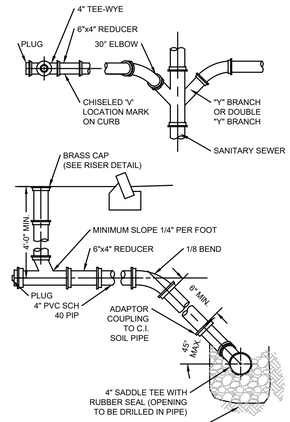
CONCRETE PAVER DRIVEWAY
NTS



DRIVEWAY PAVEMENT
NTS



TYPICAL SERVICE CONNECTION WITH FORD METER PIT
NTS



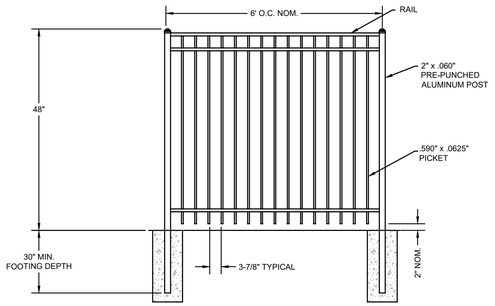
STANDARD CONNECTION

NOTES:

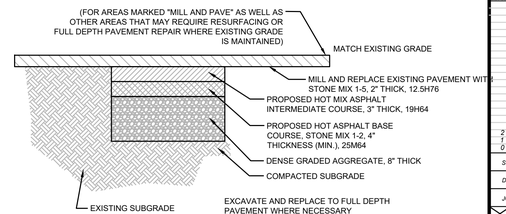
1. SUBGRADE CONDITIONS AND COMPACTION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE INSTALLATION OF THE WALL.
2. ALL RETAINING WALLS SHALL BE DESIGNED TO INCORPORATE ANY APPLICABLE SURCHARGE ABOVE THE WALLS AND ADDRESS SATURATED CONDITIONS.
3. ALL PROPOSED RETAINING WALL DETAILS AND STRUCTURAL DESIGN CALCULATIONS SHALL BE PROVIDED BY THE SITE CONTRACTOR AND SUBMITTED TO THE OWNER, SITE ENGINEER, PLANNING BOARD ENGINEER AND THE MUNICIPAL CONSTRUCTION OFFICAL FOR REVIEW, APPROVAL AND PERMITTING PRIOR TO CONSTRUCTION OF THE WALL.
4. WALL INSTALLATION CONTRACTOR SHALL VERIFY THAT THE WALL CONSTRUCTION DESIGN/DETAILS CAN BE CONSTRUCTED WITHOUT ENCROACHING ONTO ADJACENT PROPERTY, EXISTING OR PROPOSED STRUCTURES AND SUBSURFACE SITE IMPROVEMENTS (eg. UTILITY LINES, DRAINAGE PIPES, ETC.) PRIOR TO CONSTRUCTION.
   IF AN ENCROACHMENT ISSUE IS DETERMINED, THE WALL INSTALLATION CONTRACTOR SHALL NOTIFY THE WALL DESIGNER AND REVISE DESIGN AS NEEDED.
5. PROPOSED FENCE, MINIMUM HEIGHT: 42" (FOR ALL WALLS GREATER THAN 30" IN HEIGHT).

(NOT FOR CONSTRUCTION)

SEGMENTAL BLOCK RETAINING WALL
NTS



ALUMINUM FENCE
NTS



PAVEMENT CONSTRUCTION SEQUENCE:
1. MILL AND EXCAVATE WHERE NOTED ON PLAN.
2. PREPARE BASE WHERE NECESSARY.
3. INSTALL SURFACE COURSE OVER ENTIRE PAVED AREA AT ONE TIME.

MATERIALS FOR ASPHALT SURFACE SHALL CONFORM TO SECTION 404.02 OF THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION). MATERIALS FOR ASPHALT BASE SHALL CONFORM TO SECTIONS 301.02 AND 304.02 OF THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

PAVEMENT REPAIR
NTS

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:
BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:
TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

CALL BEFORE YOU DIG!
NJ ONE CALL....800-272-1000
(at least 3 days prior to excavation)

INSITE Engineering • Surveying • Planning

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
1955 ROUTE 34, SUITE 1A, WALL, NJ 07719
165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev #	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE:	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

NOT FOR CONSTRUCTION

APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PLOT PLAN

SHEET TITLE:
CONSTRUCTION DETAILS

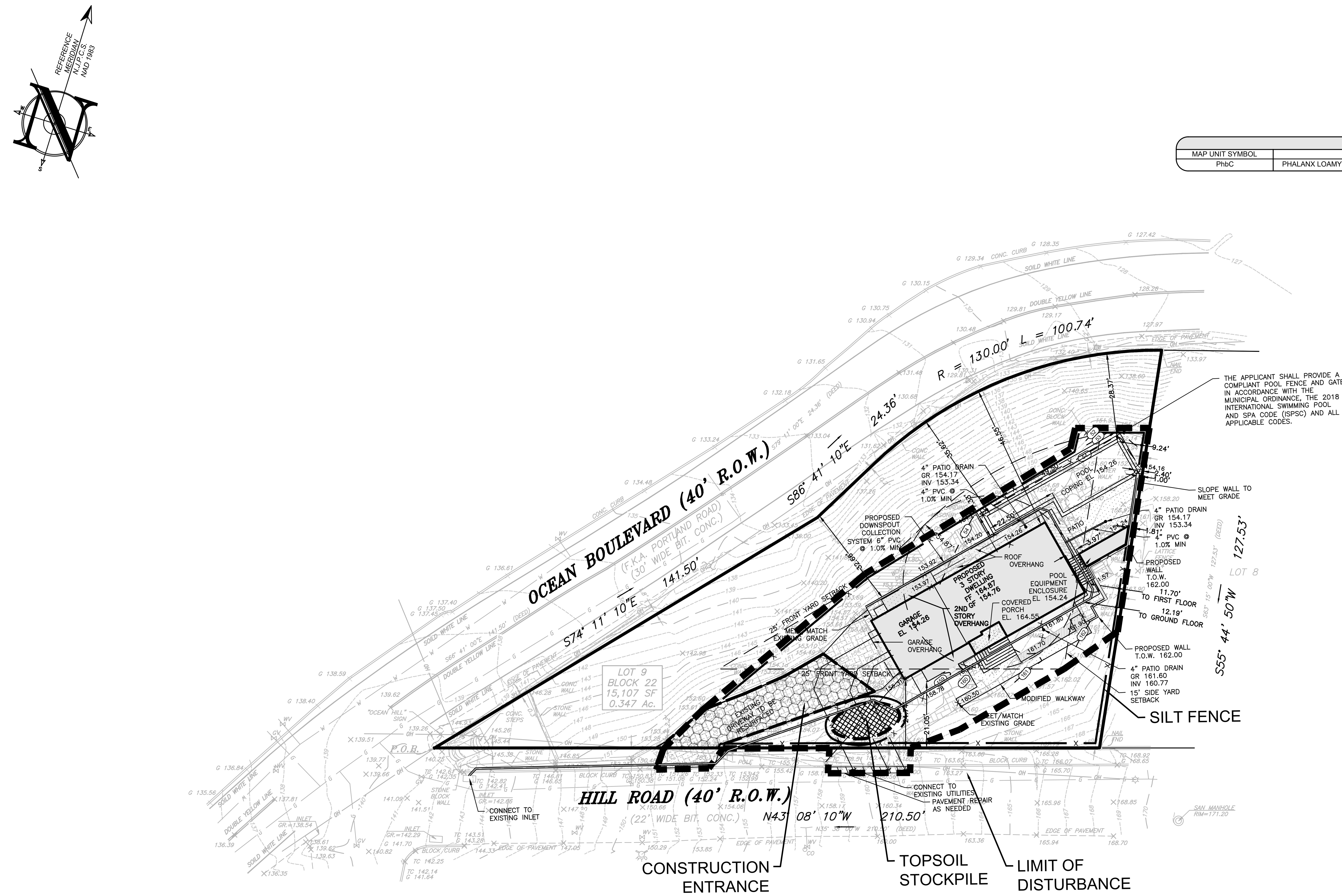
SHEET NO:
4 OF 7

SOILS MAP

200 0 200 400

Scale: 1"=200'

SOIL DESIGNATION LEGEND		
MAP UNIT SYMBOL	MAP UNIT NAME	RATING
PhbC	PHALANX LOAMY SAND, 5 TO 10 PERCENT SLOPES	A



20 0 20 40

SCALE : 1" = 20'

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR LINE	
+46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G	GAS	GAS
W	WATER	WTR
	INLET	
	STORM	
	SANITARY MAIN	
SAN	SANITARY LATERAL	SAN
OH	OVERHEAD WIRE	O/H
E	ELECTRIC	E
T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
	FENCE	
	LIGHT FIXTURE	
TP-1	TEST PIT LOCATION	
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

SOIL EROSION LEGEND

- LIMIT OF DISTURBANCE
- SILT FENCE
- INLET PROTECTION
- PROPOSED TREE PROTECTION
- SOIL COMPACTION TEST LOCATION
- STABILIZED CONSTRUCTION ENTRANCE
- RIP-RAP APRON, SCOUR HOLE
- SOIL RESTORATION AREA

CONSTRUCTION / SPPP NOTE

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

PLEASE NOTE - THIS PLAN IS NOT TO BE USED FOR SITE CONSTRUCTION.

TOTAL LIMIT OF DISTURBANCE = 0.18 AC.

SOIL RESTORATION EXEMPTION

AS DETERMINED BY THE STATE POLICY MAP, THE PROJECT AREA FALLS WITHIN AN AREA OF "URBAN REDEVELOPMENT" AND IS CONSIDERED "PREVIOUSLY DEVELOPED" AS DEFINED BY THE NJDEP. IN ACCORDANCE WITH NEW JERSEY STANDARD FOR LAND REGRADING (REVISED 2017), THE SITE IS EXEMPT FROM SOIL RESTORATION REQUIREMENTS.

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:

BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

CALL BEFORE YOU DIG!
NJ ONE CALL.....800-272-1000
(at least 3 days prior to excavation)

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200

1955 ROUTE 34, SUITE 1A, WALL, NJ 07719

165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401

20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050

732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev.#	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE: 1"=20'	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

☒ NOT FOR CONSTRUCTION

APPROVED BY:

☐ FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:

PLOT PLAN

SHEET TITLE:

SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NO:

5 OF 7

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 STATE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. 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 SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ENTRANCE 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 REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST 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.

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

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. LIMING RATES SHALL BE ESTABLISHED VIA SOIL TESTING. 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 BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

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. TEMPORARY VEGETATIVE SEEDING COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1 POUND PER 1,000 SF (100 LBS/AC) WITH AN OPTIMUM SEED DEPTH OF 0.5" (TWICE THE DEPTH IF SANDY SOILS), IN ACCORDANCE WITH TABLE 7-2, PAGE 7-3.

*SEEDING DATES: 2/15-5/1 AND 8/15-10/15

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. UNNROTTED 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 CRIS-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 MEMBRANED 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 PONDS 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 BEE 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.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

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 TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, 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 (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

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

(ZONE 6B)

A. 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.

SEED MIXTURE #13 FOR LAWN AREAS	PLANTING RATE LBS/1,000 (LBS/ACRE)
HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE	4 (175)
PERENNIAL RYEGRASS	1 (45)
KENTUCKY BLUEGRASS (BLEND)	1 (45)

*ACCEPTABLE SEEDING DATES: 3/1-4/30 AND 5/1-8/14**
*OPTIMAL SEEDING DATES: 8/15-10/15
**SUMMER SEEDING SHALL ONLY BE CONDUCTED WHEN SITE IS IRRIGATED

SEED MIXTURE #7 FOR BASIN, SIDE SLOPES, AND SWALES	PLANTING RATE LBS/ 2,000 (LBS/ACRE)
STRONG CREEPING RED FESCUE	3 (130)
KENTUCKY BLUEGRASS	1 (50)
PERENNIAL RYEGRASS	0.5 (20)
OR REDTOP	0.25 (10)
PLUS WHITE CLOVER	0.10 (5)

*ACCEPTABLE SEEDING DATES: 3/1-4/30 AND 5/1-8/14**
*OPTIMAL SEEDING DATES: 8/15-10/15
**SUMMER SEEDING SHALL ONLY BE CONDUCTED WHEN SITE IS IRRIGATED

3. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 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.

4. WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85O 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.

5. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 8 MANY GRASSES BECOME ACTIVE AT 65OF. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATE 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, TO BE 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 MEMBRANED 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 STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY JANUARY 2014GROWTH 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 BEMIXEDIN 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 MAYECTI CONTAIN CO-POLYMERS, TACKIFIERS,FERTILIZERS,AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO AW SEEDED AREA AND WATERED, FORM A MULCHMAT. 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 ACTIVATED WITH 0.2 TO0.4 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 TACKIFIERAGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEEDBED 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.TOP DRESSING

SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED INSECTION 2A-SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOP DRESSING IS MANDATORY. AN EXCEPTION MAYBE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOP DRESS 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.

STANDARD FOR DUST CONTROL

DEFINITION
THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCED ON-SITE AND OFF-SITE DAMAGE AND HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITION WHERE PRACTICE APPLIES
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTION.

WATER QUALITY ENHANCEMENT
SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL MATERIAL WHICH IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED. USE OF THIS STANDARD WILL HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SUITES AND SUBSEQUENT BLOWING AND DEPOSITION INTO LOCAL SURFACE WATER RESOURCES.

PLANNING CRITERIA
THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES - SEE STANDARD OF STABILIZATION WITH MULCHES ONLY, PG 5-1

VEGETATIVE COVER - SEE STANDARD FOR:
TEMPORARY VEGETATIVE COVER, PG. 7-1,
PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1, AND
PERMANENT STABILIZATION WITH SOD, PG. 6-1

SPRAY ON ADHESIVE - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

DUST CONTROL MATERIALS

MATERIALS	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIGN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) - SPRAY ON POLYACRYLAMIDE (PAM) - DRY SPREAD	APPLY ACCORDINGLY TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD PG. 26-1		
ACIDULATED SOY BEAM SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE, THIS IS A TEMPORARY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEING PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACES ABOUT 12 INCHES APART AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEE THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE, IS USED ON STEEPER SLOPES THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCLIMATION AROUND PLANTS.

SLOPE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

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.

CONDITION WHERE PRACTICE APPLIES
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTION.

WATER QUALITY ENHANCEMENT
PROVIDES TEMPORARY MECHANICAL PROTECTION AGAINST WIND OR RAINFALL INDUCED SOIL EROSION UNTIL PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED.

WHERE APPLICABLE
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 WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.

C. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.

D. 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 HYDROSEEDER.

E. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.

F. 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.

G. 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 BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.

   b. 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 AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

CONSTRUCTION SEQUENCE

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

1. TEMPORARY SOIL EROSION FACILITIES	CONTINUOUSLY
2. ROUGH CLEARING AND GRADING	1 WEEK
3. TEMPORARY SEEDING	1 DAY
4. UTILITY INSTALLATION	1 WEEK
5. CURB CONSTRUCTION	1 WEEK
6. CONSTRUCTION OF BUILDINGS	9 MONTHS
7. MAINTENANCE OF TEMPORARY EROSION CONRTOL MEASURES	CONTINUOUSLY
8. PRELIMINARY INSTALLATION OF LANDSCAPE	1 WEEK
9. FINAL CONSTRUCTION/STABILIZATION OF SITE	1 WEEK

*TEMPORARY SEEDING SHALL ALSO BE PERFORMED WHEN NECESSARY IN ACCORDANCE WITH NOTE NO. 1 OF THE SOIL EROSION AND SEDIMENT CONTROL NOTES.

NOTES:
CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. THE PROPERTY OWNERS SHALL ASSUME THIS RESPONSIBILITY AFTER CONSTRUCTION IS COMPLETED AND CERTIFICATES OF OCCUPANCY ARE ISSUED.

THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ROADWAYS CLEAN AT ALL TIMES. ANY SEDIMENT SPILLED OR TRACKED ON THE ROADWAY WILL BE CLEANED UP IMMEDIATELY, OR AT MINIMUM, BY THE END OF EACH WORK DAY.

DUST GENERATION SHALL BE CONTROLLED ON A CONSTANT BASIS BY WETTING THE SURFACE AND/OR APPLICATION OF CALCIUM CHLORIDE.

STEEP SLOPES SHALL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR SUITABLE EQUAL. (SEE ANCHORING NOTES & NOTE NO. 6 OF SOIL EROSION & SEDIMENT CONTROL NOTES.)

ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON INDIVIDUAL SITES SHALL APPLY TO ANY SUBSEQUENT OWNERS.

STANDARD FOR TOPSOILING

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. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.
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.

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:

BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

CALL BEFORE YOU DIG!
NJ ONE CALL.....800-272-1000
(at least 3 days prior to excavation)

INSITE
Engineering • Surveying • Planning

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200

☐ 1955 ROUTE 34, SUITE 1A, WALL, NJ 07719

☐ 165 CHESTNUT STREET, SUITE 200,
ALLENDALE, NJ 07401

☐ 20 N. MAIN STREET, SUITE 2B,
MANAHAWKIN, NJ 08050

732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

Douglas D Clelland

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev.#	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE:	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

☒ NOT FOR CONSTRUCTION
APPROVED BY:
☐ FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:

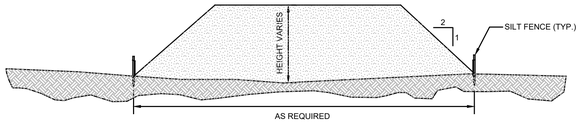
PLOT PLAN

SHEET TITLE:

SESC NOTES & DETAILS

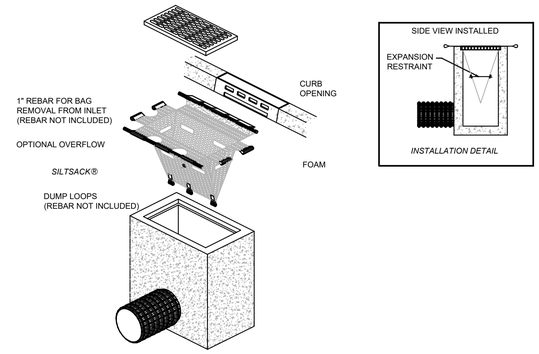
SHEET NO:

6 OF 7



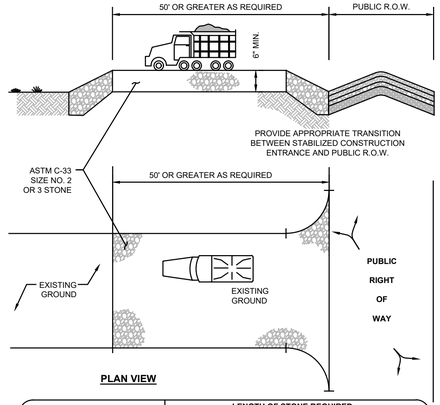
SECTION THROUGH SOIL STOCKPILE (TYP.)

NTS



INLET PROTECTION DETAIL

NTS



PLAN VIEW

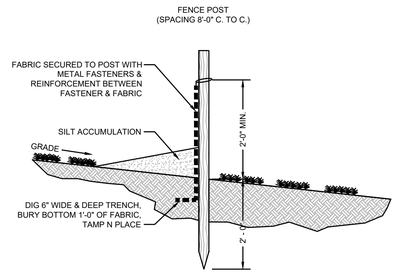
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COURSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
> 5%	ENTIRE SURFACE STABILIZED WITH FABC HOT MIX ASPHALT BASE COURSE, MIX 1-2 [1]	

1. AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ENTRANCE

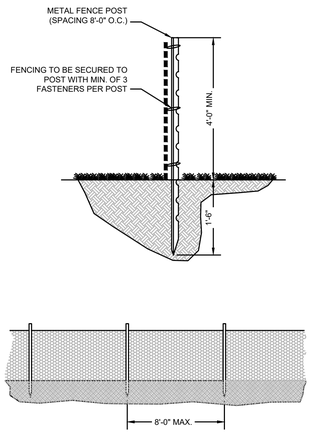
NTS

NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THE THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY.



SILT FENCE DETAIL

NTS



TREE PROTECTION FENCING

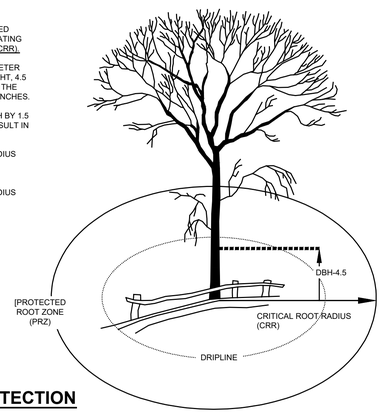
NTS

ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).

1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF TREE) IN INCHES.
2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

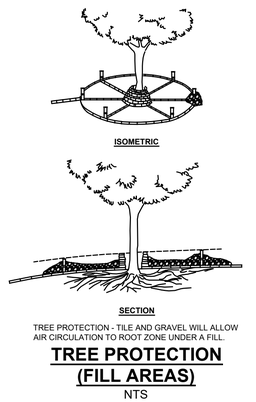
DBH X 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.

DBH X 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES.



TREE ROOT PROTECTION

NTS

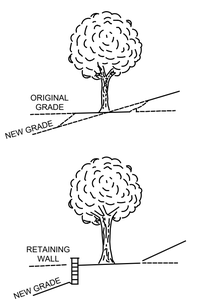


TREE PROTECTION - TILE AND GRAVEL WILL ALLOW AIR CIRCULATION TO ROOT ZONE UNDER A FILL.

TREE PROTECTION (FILL AREAS)

NTS

A RETAINING WALL PROTECTS A TREE FROM A LOWERED GRADE.



TREE PROTECTION (CUT AREAS)

NTS

PROJECT INFORMATION

PROJECT NAME:

GREEN RESIDENCE

PROJECT LOCATION:

BLOCK 22, LOT 9
2 HILL ROAD
BOROUGH OF ATLANTIC HIGHLANDS,
MONMOUTH COUNTY, NJ

OWNER:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT:

TWO HILL PROPERTIES, LLC
2 HILL ROAD
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT'S PROFESSIONALS

ATTORNEY:
MARK R. AIKINS, ESQ
MARK R. AIKINS, LLC
3350 ROUTE 138
BUILDING 1, SUITE 113
WALL, NEW JERSEY 07719

ARCHITECT:
PARNAGIAN ARCHITECTS LLC
32 MONMOUTH STREET
RED BANK, NJ 07701

SURVEYOR:
INSITE SURVEYING LLC
1955 ROUTE 34
WALL, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

CALL BEFORE YOU DIG!
NJ ONE CALL....800-272-1000
(at least 3 days prior to excavation)

INSITE Engineering • Surveying • Planning

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
1955 ROUTE 34, SUITE 1A, WALL, NJ 07719
165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
732-531-7100 (Ph) 732-531-7344 (Fax)
InSite@InSiteEng.net www.InSiteEng.net

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL AND MAY HAVE BEEN ALTERED

DOUGLAS D. CLELLAND, PE
PROFESSIONAL ENGINEER
NJ PE 24GE05331000

REVISIONS

Rev #	Date	Comment
2	11/05/24	REVISIONS PER ARCHITECT
1	10/25/24	REVISED OWNER/APPLICANT
0	09/23/24	INITIAL RELEASE

SCALE:	DESIGNED BY: JMW
DATE: 09/23/24	DRAWN BY: MR
JOB #: 23-2199-01	CHECKED BY: JMW

NOT FOR CONSTRUCTION

APPROVED BY:

FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:

PLOT PLAN

SHEET TITLE:

SESC NOTES & DETAILS

SHEET NO:

7 OF 7