

THOMAS J. EVANS
Director of Revenue and Finance



CODE ENFORCEMENT DEPT.

DAVID BERRY
Construction Official
Zoning Official

TOWNSHIP OF NUTLEY

1 KENNEDY DRIVE
NUTLEY, NEW JERSEY 07110

BUILDING
PLUMBING
ELECTRICAL
FIRE
ZONING

TELEPHONE: (973) 284-4957 · FACSIMILE: (973) 284-0071

March 4, 2025

Mr. Tom DiBiasi
DiBiasi & Rinaldi, LLC
345 Centre Street
Nutley NJ 07110

**RE: Proposed New Two-Family Dwelling
113 Saint Mary's Place
Block/Lot: 7004/13**

Dear Mr. DiBiasi,

Your request on behalf of your client, 113 ST MARY'S PL LLC C/O UNION PROP, for a permit to construct a new two-family dwelling located in a R-2 zoning district, with a lot size of 54.89' x 100', which is a pre-existing non-conforming parking lot, as shown on the plans prepared by Architect Dassa Haines dated February 5, 2025 is denied for the following reasons:

This property is located in an R-2 district as shown on the Nutley Zoning Map.

Chapter 700, Article VIII Section 700-46 A of the Codes of Nutley, entitled "Schedule of Regulations as to Bulk, Height, and Other Requirements," requires the following (see attached checklist on page 2).

Chapter 700, Article XIII, Section 700-94 A (1) of the Codes of Nutley states the driveway shall consist of the area directly opposite to an attached garage, detached garage or not more than two feet in front of the main dwelling when a two-foot in-depth landscape area is provided directly in front of the main dwelling or depressed garage or the extension of the side yard into the front yard. The driveway width shall not exceed 16 feet in width for lots up to 50 feet in width. Lots having a width greater than 50 feet may have a driveway width of up to 18 feet in width when conforming to § 700-48. However, if there is no garage and no available side yard, a driveway not to exceed 16 feet in width from the side lot line may be constructed. *The maximum width is 18', the proposed is 24'.*

Chapter 700, Article XIII, Section 700-94 A (3) (b) of the Codes of Nutley states curb cuts in all other districts shall not exceed 24 feet in length. *The maximum width is 18', the proposed is 24'.*

Chapter 700, Article VIII, Section 700-48 of the Codes of Nutley states Any lot containing a residence for one or two families shall have at least 60% of the required front yard in landscaping. This area shall not be covered with paving, walkways or any other impervious surface. Landscaping may consist of grass, ground cover, shrubs and other plant material. *The required landscaping is 60%, the proposed is 54%.*

A non-refundable filing fee of \$500 for the application and an escrow fee of \$750 is to be paid to the Code Enforcement Office in order to begin the application process. *All tax and water bills must be paid to date prior to the processing of a variance fee.*

Information on procedures for an appeal of this decision to the Board of Adjustment can be obtained from Jessica D'Onofrio, jdonofrio@nutleynj.org or at 973-284-4957. It should be noted that, under State Statute, notice of appeal of this decision must be filed with this office no later than twenty (20) calendar days from the date of this notice.

Any changes to the proposed plans must be submitted prior the applications being returned to the Code Enforcement Office. No changes can be made once the application is received by this office.

Very truly yours,

DAVID BERRY
Zoning Official

DBJ

ZONING CHECKLIST

ZONE	REQUIRED	PROPOSED	VARIANCE
R-2	Use Two Family	Two Family	
Lot Area	6,500 sf	5,819 sf	Yes
Lot Width	65'	54.89'	Yes
Lot Depth	100'	100'	No
Per Dwelling Unit	3,250 sf	2,909 sf	Yes
Front Yard (Centre Street)	25'	22'	Yes
Rear Yard	30'	6'6"	Yes
1 Side	6'	20'	No
Side Other (Saint Mary's Place)	25'	20'6"	Yes
Stories	2.5	2.5	No
Feet	30'	29.9'	No
Maximum Lot Coverage	35%	29.9%	No
Maximum Impervious Surface Coverage	70%	42.9%	No



TOWNSHIP OF NUTLEY, NEW JERSEY

ZONING BOARD OF ADJUSTMENT APPLICATION FORM

Docket No: _____

TO ALL APPLICANTS: This application form is designed to obtain from you information necessary for the processing of your application by the Zoning Board of Adjustment.

Application Fee: \$ 500.00 (on denial letter)

Date of Denial Letter: March 4, 2025

Section I: SUBJECT PROPERTY

Address: 113 Saint Mary's Place, Nutley, New Jersey 07110

Block: 7004 Lot: 13 Zone: R-2

	District Requirements	Proposed
Lot Area	<u>6,500 sf</u>	<u>5,819 sf*</u>
Lot Width	<u>65 ft</u>	<u>54.89 ft</u>
Lot Depth	<u>100 ft</u>	<u>100 ft</u>
Front Yard	<u>25 ft</u>	<u>22 ft*</u>
Side Yard	<u>6 ft/25 ft</u>	<u>6.6 ft/20.5 ft*</u>
Rear Yard	<u>30 ft</u>	<u>20 ft*</u>
Other		
Density	<u>3,250 sf</u>	<u>2,909 sf *</u>
Height: Stories/Ft	<u>2.5/30 ft</u>	<u>2.5/29.9 ft</u>
Max Lot Coverage	<u>35%</u>	<u>29.35 %</u>
Max. Imperv. Coverage	<u>70%</u>	<u>43.18%</u>

Section II: APPLICANT INFORMATION

Name: 113 ST MARY'S PL LLC C/O UNION PROPS

Address: 38 CENTRE STREET

NUTLEY, NEW JERSEY 07110

Telephone: 973-652-1730

Email Address: rusdmdpc@gmail.com

Applicant is a:

 Corporation Partnership x LLC Individual

ZONING CHECKLIST

ZONE	REQUIRED	PROPOSED	VARIANCE
R-2	Use Two Family	Two Family	
Lot Area	6,500 sf	5,819 sf	Yes
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Side Other (Saint Mary's Place)	25'	20'6"	Yes
Stories	2.5	2.5	No
Feet	30'	29.9'	No
Maximum Lot Coverage	35%	29.9%	No
Maximum Impervious Surface Coverage	70%	42.9%	No

If the owner is not the applicant, the following must be provided:

Owner Name: 113 ST MARY'S PL LLC C/O UNION PROPS
Address: 38 CENTRE STREET
NUTLEY, NEW JERSEY 07110
Telephone: 973-652-1730
Email Address: rusdmdpc@gmail.com

Section III: DISCLOSURE STATEMENT

Pursuant to N.J.S. 40:55D-48.1 the names and address of all persons owning 10% of the stock in a corporation or a 10% interest in any partnership must disclosed by the applicant. In accordance with N.J.S. 40:55D-48.2, that disclosure requirement applies to any corporation or partnership which owns more than 10% interest.

Name: Michael Russ
Address: 38 Centre Street
Nutley, New Jersey 07110
Interest: 100%

Name: _____
Address: _____
Interest: _____

Name: _____
Address: _____
Interest: _____

Section IV: PROPERTY INFORMATION

	Existing	Proposed
Total existing and total proposed dwelling units	<u>0</u>	<u>2</u>
Total existing and total proposed professional offices	<u>0</u>	<u>0</u>
Total existing and total proposed parking spaces	<u></u>	<u>4</u>

Present use of premises: Parking Lot

Has there been any previous appeal, request, or application to this or any other Township of Nutley Board or the Construction Code Official involving these premises? NO

If yes, state the nature, date and the disposition of each such matter: N/A

Section V: PROFESSIONAL INFORMATION

Applicant's Attorney

Name: Thomas S. DiBiasi, Esq.
Address: DiBiasi & Rinaldi LLC
345 Centre Street, Suite 1, Nutley, New Jersey 07110
Telephone: 973-235-1414 Fax: 973-235-1575
Email Address: tom@dibiasilaw.com

Applicant's Architect

Name: Joseph L. Haines, AIA, PP
Address: Dassa Haines Architectural Goup, LLC
74 E. Passaic Avenue, Nutley, NJ 07110
Telephone: 973-233-9355 Fax: _____
Email Address: jh@dassahaines.com

Applicant's Engineer

Name: David Fantina, P.E.
Address: David Fantina Engineering, LLC
15 Sunset Drive, Bernardsville, New Jersey 07924
Telephone: 908-696-9598 Fax: _____
Email Address: dfantina@fantinaengineering.com

Applicant's Planning Consultant

Name: Salvatore Corvino, AIA, PP
Address: Salvatore Corvino Architect & Planner, LLC
111 Brookfield Avenue, Nutley, New Jersey 07110
Telephone: 973-943-5026 Fax: _____
Email Address: scorvino@optonline.net

***List any other expert who will submit a report or who will testify for the applicant.
(Attach additional sheets, if necessary)***

Name: _____
Address: _____

Telephone: _____ Fax: _____
Email Address: _____ Field of Expertise: _____

Section VI: GENERAL INFORMATION

In the space below, state the nature of the constraints imposed by the physical characteristics of the land under consideration (i.e. exceptional narrowness, shallowness 01' topographic conditions).

SEE ATTACHMENT - Section VI: A-1: C. (1)a & C. (1)b.

In the space below, state any other extraordinary or exceptional situation or condition of the land involved which would constrain development in accordance with Zoning Regulations

SEE ATTACHMENT - Section VI: A-2: C. (1)c.

Explain how not granting this variance request would impose peculiar and exceptional practical difficulties or exceptional or undue hardship upon you.

SEE ATTACHMENT - Section VI: A-3.

Explain how the granting of this variance will not detrimentally affect the public good or substantially impair the intent and purpose of the Zone Plan and Zoning Ordinance.

SEE ATTACHMENT - Section VI: A-4.

SALVATORE CORVINO, AIA

ARCHITECT & PLANNER, LLC

Section VI: General Information

Attachment A-1:

C. (1)a Variance: The existing corner property is an existing parking lot has an existing non-conforming lot width & area in that the lot width is 54.89 min (58.20 average), where 65.0 ft is required and lot area is 5819 sf, where 6500 sf is required. The diminished Front Yard Setbacks of 20.5 ft (on St. Mary's Place) and 22 ft (on Centre St) where 25 ft is required and the diminished Rear Yard Setback of 20 ft, where 30 ft is required is a direct result of an undersized lot condition.

C. (1)b: Despite the topographic condition of a sloped site which slopes up 7.0 ft from facing St Mary's Place to the rear property line which compels the placement of attached parking for the proposed residence to be located below the living space at ground floor with access to St Mary's Place, the height of building still complies with maximum height of 2 ½ stories/29.9 ft where 2 ½ stories/30ft is required. However, this does affect the driveway width to access the 2 side by side garage doors @ 24.0 similar to existing 23.75 ft, where 18 ft is allowed.

Attachment A-2:

C. (1)c Variance: The existing parking lot being converted to a 2 family residence is a corner lot and requires 2 front yards, and therefore, constricts the foot print of building, which results in a diminished front yard setback on both frontages – 20.5 on St Mary's Place & 22 ft on Centre Street, where 25 ft is required and a diminished rear yard of 20 ft, where 30 ft is required to accommodate the permitted 2 family use in less buildable area. Despite these front and rear yard variances, the 2-family development does comply with total lot coverage 29.35% where 35% is allowed and total impervious coverage of 43.18% where 77.64% existed and 70 % is allowed.

Attachment A-3:

Not granting this variance request would impose a peculiar and exceptional practical difficulties in that for the minor diminished lot area and lot width, a permitted two family residence use is not allowed to be constructed in the zone which allows it. It is a diminimus difference in area which is further exasperated by the corner lot set back requirements.

The exceptional and undue hardship is created by the existing non-conforming lot width and corner lot requirement of 2 front yards thereby restricting the owners ability to develop the site without violating front and rear yard setback to accommodate a footprint for a modestly sized dwelling at each floor of 1600 sf.

(cont.)

Attachment A-4:

Granting this variance will not detrimentally affect the public good or substantially impair the intent and purposes of the Zone Plan and Zoning Ordinance for the following reasons:

1. The 2 family residence is an allowed use in the R-2 Zone
2. The existing public parking lot which is being removed is not a permitted use.
3. The existing public parking lot has an existing non-conforming Impervious Lot Covering of 77.64%, where 70% is allowed and the proposed 2 family dwelling Impervious Lot Coverage is only 43.18% despite not meeting front and rear yard setbacks.
4. The Front Yard Required Landscaped Area for the new 2 family dwelling complies with zoning ordinance at 74.30% proposed, where the existing parking lot is 0.0% existing, and where 60% is required.
5. This reduction in Impervious lot coverage benefits the town and neighborhood in that it contributes to alleviating flooding by reducing the paved or developed surface area.
6. The number of driveways is reduced from 2 to 1 with similar width of the larger driveway.

CERTIFICATION

STATE OF NEW JERSEY }
COUNTY OF ESSEX } ss.

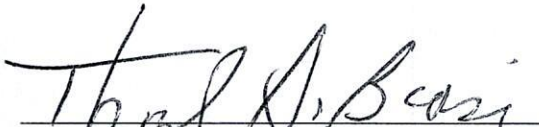
Thomas S. DiBiasi, Esq., being duly sworn, hereby cellify (*check one*)

➤ that I am the applicant


or

➤ ☒ that I am the Attorney of 113 ST MARY'S PL LLC C/O UNION PROPS,
(Title) (Company Name)
the Applicant, and that I am duly empowered and authorized to make this representation
on behalf of 113 ST MARY'S PL LLC C/O UNION PROPS ;
(Company Name)

and that the information presented in this application is true, complete and accurate.


Applicant/Applicant's Authorized
Officer or Representative
Thomas S. Di Biasi, Esq.
Attorney at Law
State of New Jersey

Subscribed and sworn to before me
this 29th day of May, 2025.


Signature of person authorized to take oaths

Melanie M Ammiano
Notary Public
New Jersey
My Commission Expires 9-24-2023
No. 2438791



Nutley Parcel Offset List

Target Parcel(s): Block-Lot: 7004-13
113 ST MARY'S PL LLC C/O UNION PROP
113 SAINT MARY'S PLACE

25 parcels fall within 200 feet of this parcel(s).

Block-Lot: 6901-3

ALVAREZ, NARCISO & IRIS
126 SAINT MARYS PL
NUTLEY, NJ 07110
RE: 126 SAINT MARY'S PLACE

Block-Lot: 7004-14

38 CENTRE ST LLC C/O UNION AVE PROP
414 CENTRE STREET
NUTLEY, NJ 07110
RE: 38 CENTRE STREET

Block-Lot: 7004-12

GRABOWSKI, RICHARD M. & ANNETTE B.
117 SAINT MARYS PL
NUTLEY, NJ 07110
RE: 117 SAINT MARY'S PLACE

Block-Lot: 6901-5

MONCELSI, CANDACE ET AL
18 CENTRE ST
NUTLEY, NJ 07110
RE: 18 CENTRE STREET

Block-Lot: 7004-18

SOLTYS, MARIOLA & ADRIAN
56 CENTRE STREET
NUTLEY, NJ 07110
RE: 56 CENTRE STREET

Block-Lot: 7004-17

AYALA-ABAD, MARCELO & MAYLIN AYALA
52 CENTRE ST
NUTLEY, NJ 07110
RE: 52 CENTRE STREET

Block-Lot: 7004-16

SECRIERU, STANISLAV & DULCE, LUMINI
48 CENTRE ST
NUTLEY, NJ 07110
RE: 48 CENTRE STREET

Block-Lot: 7004-15

SARRIDO, GIANFRANCO C & MARIA E
44 CENTRE ST
NUTLEY, NJ 07110
RE: 44 CENTRE STREET

Block-Lot: 6901-2

SAINT MARY'S ROMAN CATHOLIC CHURCH
7-17 MSGR. OWENS PLACE
NUTLEY, NJ 07110
RE: 130 SAINT MARY'S PLACE

Block-Lot: 6901-4

WRIGHT, JAMES E. & CHARLENE R.
24 CENTRE ST
NUTLEY, NJ 07110
RE: 24 CENTRE STREET

Block-Lot: 6901-6

REMUSZKA, LINDA
14 CENTRE ST
NUTLEY, NJ 07110
RE: 14 CENTRE STREET

Block-Lot: 7000-19

TENORIO, ALFREDO & CORDOVA, CINTHIA
51 CENTRE ST
NUTLEY, NJ 07110
RE: 51 CENTRE STREET

Block-Lot: 7000-20

DI MAIO, MARK & DORIS
53 CENTRE ST
NUTLEY, NJ 07110
RE: 53 CENTRE STREET

Block-Lot: 7000-21

OROZCO, JESSIKA
41 CENTRE STREET
NUTLEY, NJ 07110
RE: 41 CENTRE STREET

Block-Lot: 7000-22

MARTINEZ, JONATHAN TORIBIO
35 CENTRE ST
NUTLEY, NJ 07110
RE: 35 CENTRE STREET

Block-Lot: 7000-23

LIBERTY APARTMENTS, INC
P.O. BOX 488
UNION, NJ 07083
RE: 101 SAINT MARY'S PLACE

Block-Lot: 9503-10

DEANDRADE, EMILIO T.
25 CENTRE STREET
NUTLEY, NJ 07110
RE: 25 CENTRE STREET

Block-Lot: 9503-11

DESAI INVESTMENT LLC,
117 MARCELLA ROAD
PARSIPPANY, NJ 07054
RE: 17 CENTRE STREET

Block-Lot: 7000-24

SALGADO, FREDDY G. & AMY TRACY
97 SAINT MARYS PL
NUTLEY, NJ 07110
RE: 97 SAINT MARY'S PLACE

Block-Lot: 9503-12

NGUYEN, HIEN D. & NGOC N. NHAN
13 CENTRE ST
NUTLEY, NJ 07110
RE: 13 CENTRE STREET

Block-Lot: 9503-9

LOK, JIN & MEI F. CHEUNG
96 SAINT MARYS PL
NUTLEY, NJ 07110
RE: 96 SAINT MARY'S PLACE

Block-Lot: 7004-9

CIFELLI, GIOVANNI & FLORA
21 MONSIGNOR OWENS PL
NUTLEY, NJ 07110
RE: 21 MSGR. OWENS PLACE

Block-Lot: 6901-1

SAINT MARY'S ROMAN CATHOLIC CHURCH
7-17 MSGR. OWENS PLACE
NUTLEY, NJ 07110
RE: 140 SAINT MARY'S PLACE

Block-Lot: 7004-10

CORRIGAN, ELLEN L.
19 MONSIGNOR OWENS PL
NUTLEY, NJ 07110
RE: 19 MSGR. OWENS PLACE

Block-Lot: 7004-11

SAINT MARY'S ROMAN CATHOLIC CHURCH
7-17 MSGR. OWENS PLACE
NUTLEY, NJ 07110
RE: 17 MSGR. OWENS PLACE



UTILITIES

(A)

AT & T
Corporate Office
P.O. Box 7207
Bedminster, NJ 07921-7207

(B)

NJ Dept. of Transportation
1035 Parkway Avenue
CN-600
Trenton, NJ 08625

(C)

Essex County Planning Board
Public Works Building
900 Bloomfield Avenue
Verona, NJ 07044

(D)

PSE&G Company
Manager-Corporate Properties
80 Park Plaza, T6B
Newark, NJ 07102

(E)

North Jersey District Water Supply Co.
1 F.A. Orechio Drive
Wanaque, NJ 07465

(F)

Passaic Valley Water Co.
1525 Main Avenue
Clifton, NJ 07011

(G)

Verizon
540 Broad Street, Room 305
Newark, NJ 07101

(H)

TCI of Northern New Jersey
40 Potash Road
Oakland, NJ 07436
Attn: Dan Gannon

(I)

Essex County Utilities Authority
Leroy R. Smith Jr. Public Safety Building
60 Nelson Place – 6th Floor
Newark, NJ 07102

(J)

Norfolk Southern Railway
125 County Road
Jersey City, NJ 07307

Zoning Drawings
for:
Proposed Two-Family Dwelling
located at:
**113 St. Mary's
Nutley, NJ 07110**
Lot: 13 Block: 7004

SCOPE OF WORK

WORK INCLUDES THE DEMOLITION OF AN
EXISTING NON-CONFORMING ASPHALT
PARKING LOT AND A NEW TWO-FAMILY
DWELLING WILL BE CONSTRUCTED.

AREA CALCULATIONS

	PROPOSED AREA
FIRST FLOOR	1,562 SQ. FT.
SECOND FLOOR	1,536 SQ. FT.
TOTAL AREA	3,098 SQ. FT.
BASEMENT	1,600 SQ. FT.

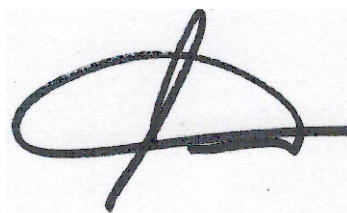
APPROVALS

TOWNSHIP OF NUTLEY
PLANNING BOARD

BOARD CHAIR	DATE
SECRETARY	DATE
ENGINEER	DATE

05/07/2025	RE: ISSUED FOR ZONING REVIEW
07/05/2025	ISSUED FOR ZONING REVIEW

Dassa • Haines
Architectural Group, LLC.
Architecture • Planning
Construction Management

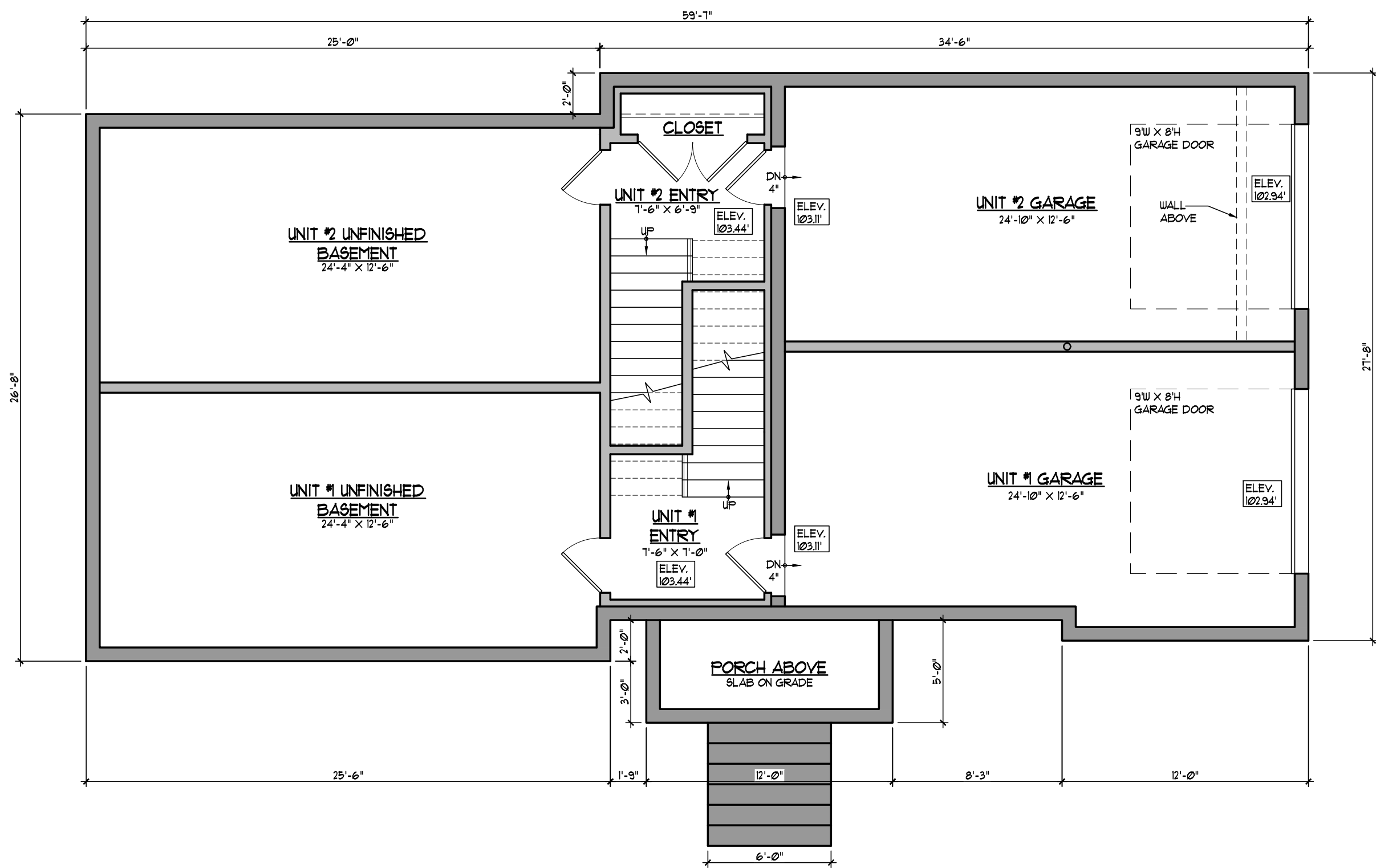


74 E. Passaic Ave.
Nutley, NJ 07110
tel: 973.233.9355
fax: 973.233.9358

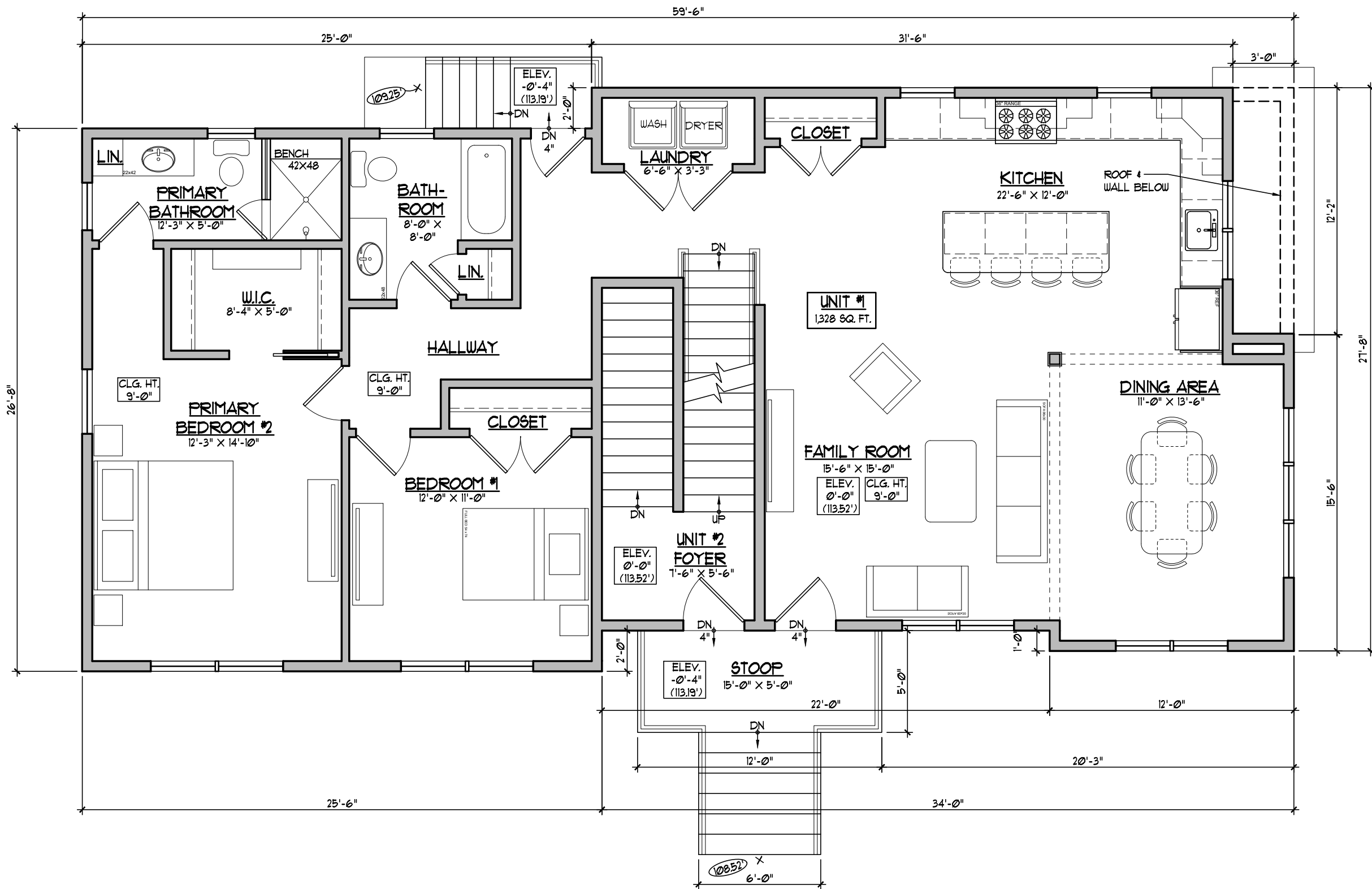
Joseph L. Haines, AIA, PP
NJ lic.# AI12995

**Proposed
Floor Plans**

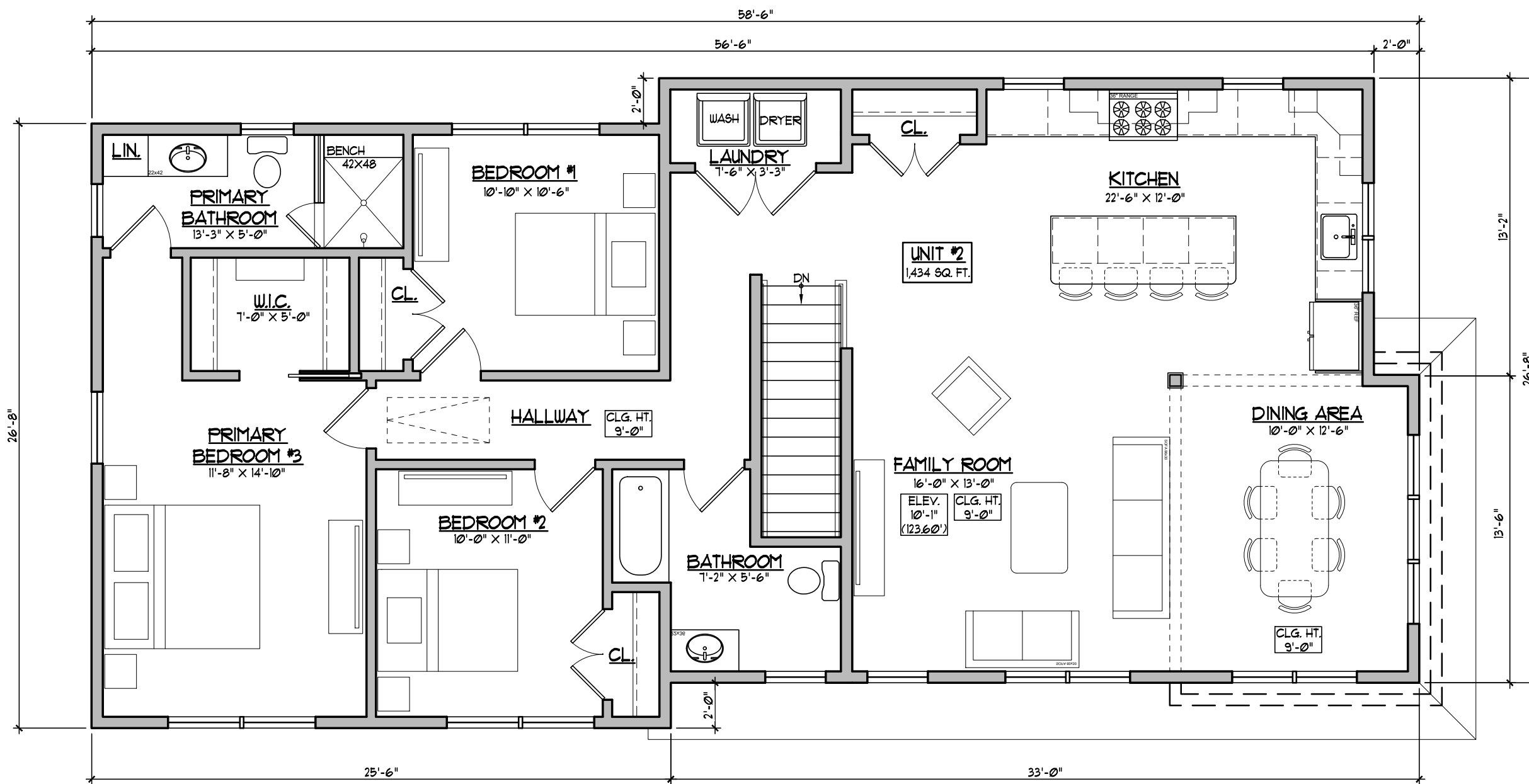
DATE: 02/05/2025	Z1
SCALE: AS SHOWN	
JOB # 24-122	
BIN:	
DRAWN BY: JS	CHECKED BY: JPH
1	OF 2



PROPOSED BASEMENT PLAN
SCALE: 3/16" = 1'-0"



PROPOSED FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"

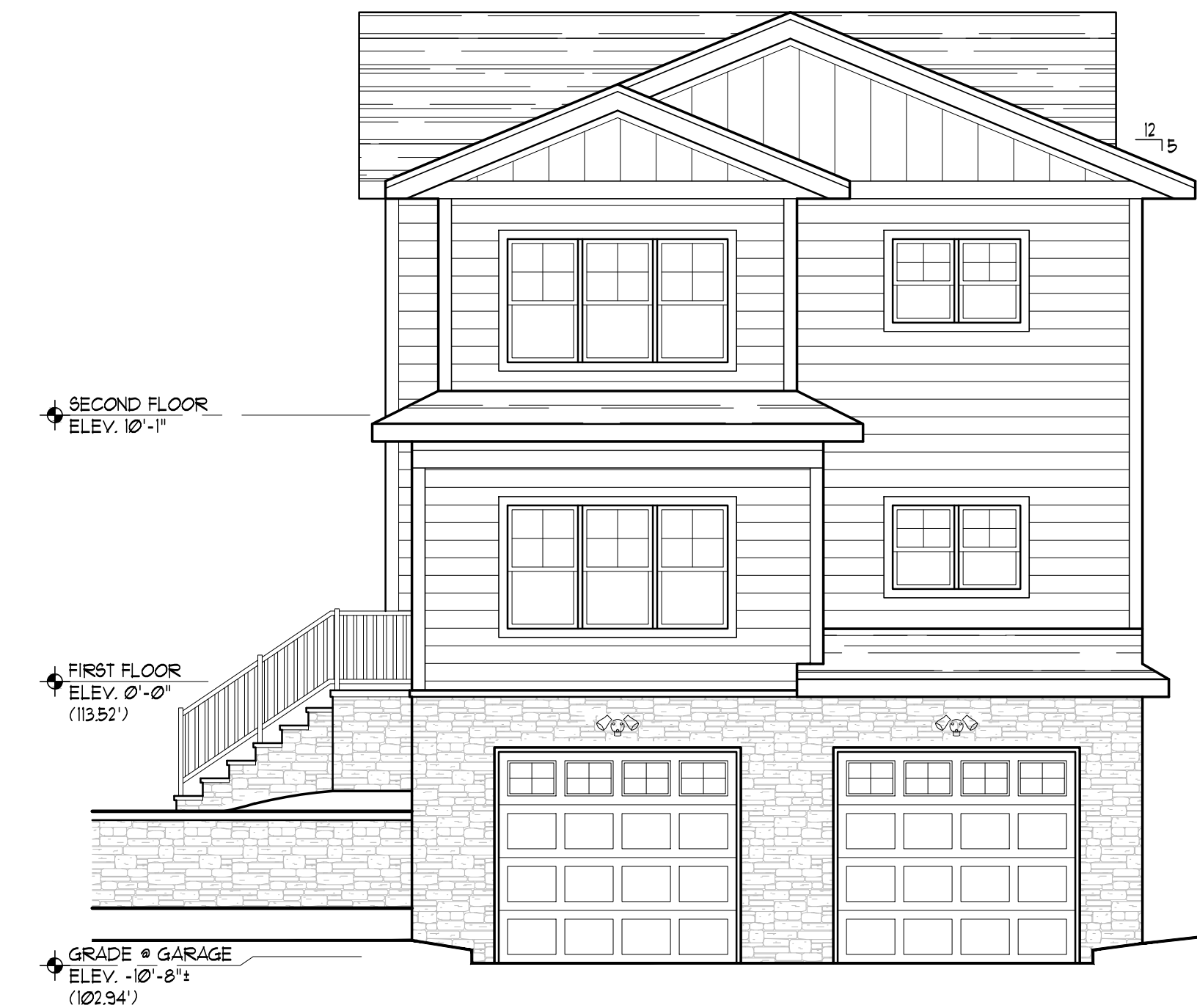


PROPOSED SECOND FLOOR PLAN
SCALE: 3/16" = 1'-0"

Zoning Drawings
for:
**Proposed Two-
Family Dwelling**
located at:
113 St. Mary's
Nutley, NJ 07110
Lot: 13 Block: 7004



PROPOSED SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



PROPOSED EAST ELEVATION
SCALE: 3/16" = 1'-0"



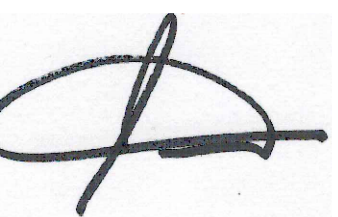
PROPOSED NORTH ELEVATION
SCALE: 3/16" = 1'-0"



PROPOSED WEST ELEVATION
SCALE: 3/16" = 1'-0"

05/07/2025	RE-ISSUED FOR ZONING REVIEW
07/05/2025	ISSUED FOR ZONING REVIEW

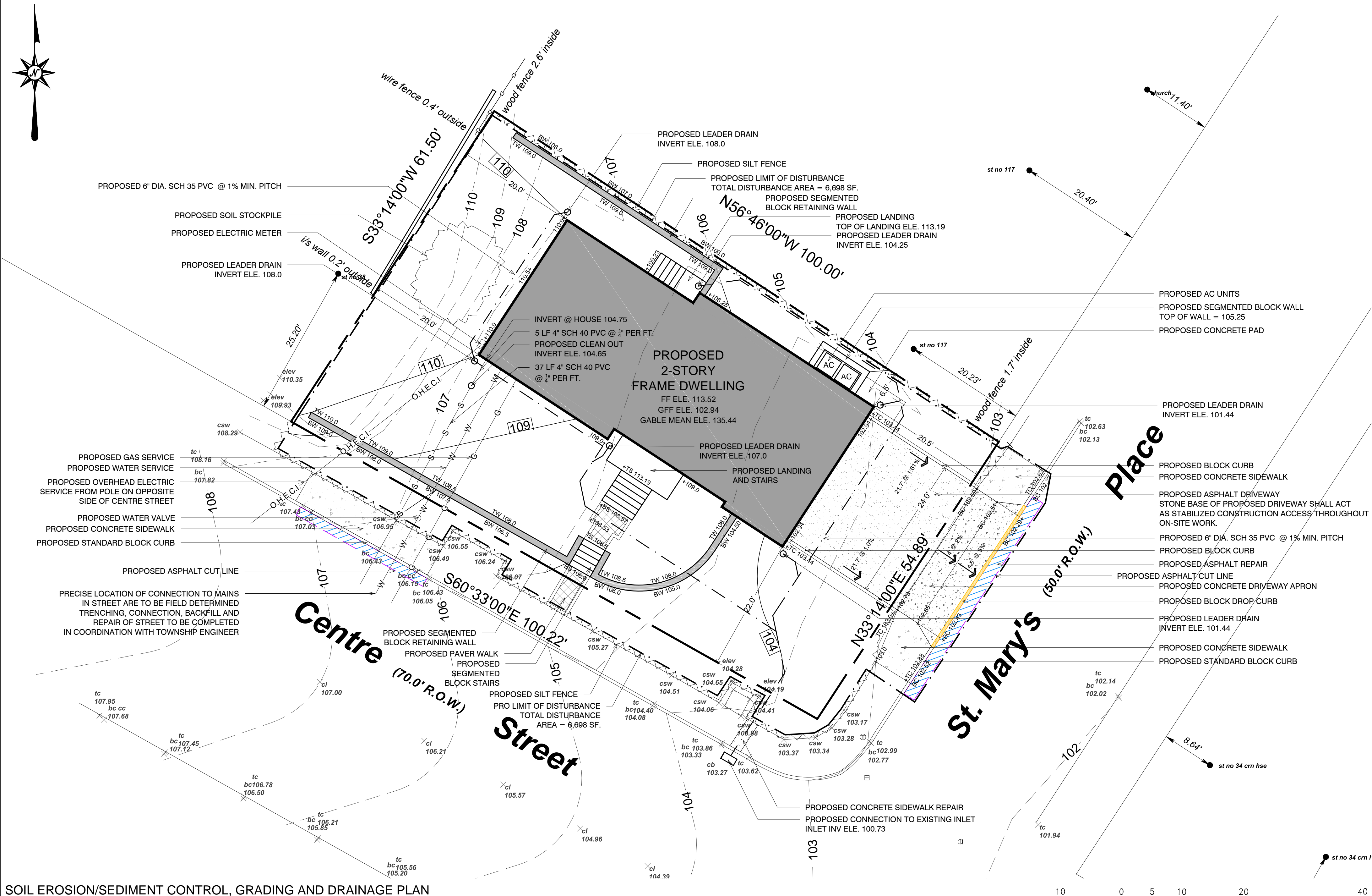
Dassa • Haines
Architectural Group, LLC.
Architecture • Planning
Construction Management



74 E. Passaic Ave.
Nutley, NJ 07110
tel: 973.233.9355
fax: 973.233.9358
Joseph L. Haines, AIA, PP
NJ lic.# AI12995

Proposed Elevations

DATE: 02/05/2025	Z2
SCALE: AS SHOWN	
JOB # 24-122	
BIN:	
DRAWN BY: JA	CHECKED BY: JH
2	OF 2



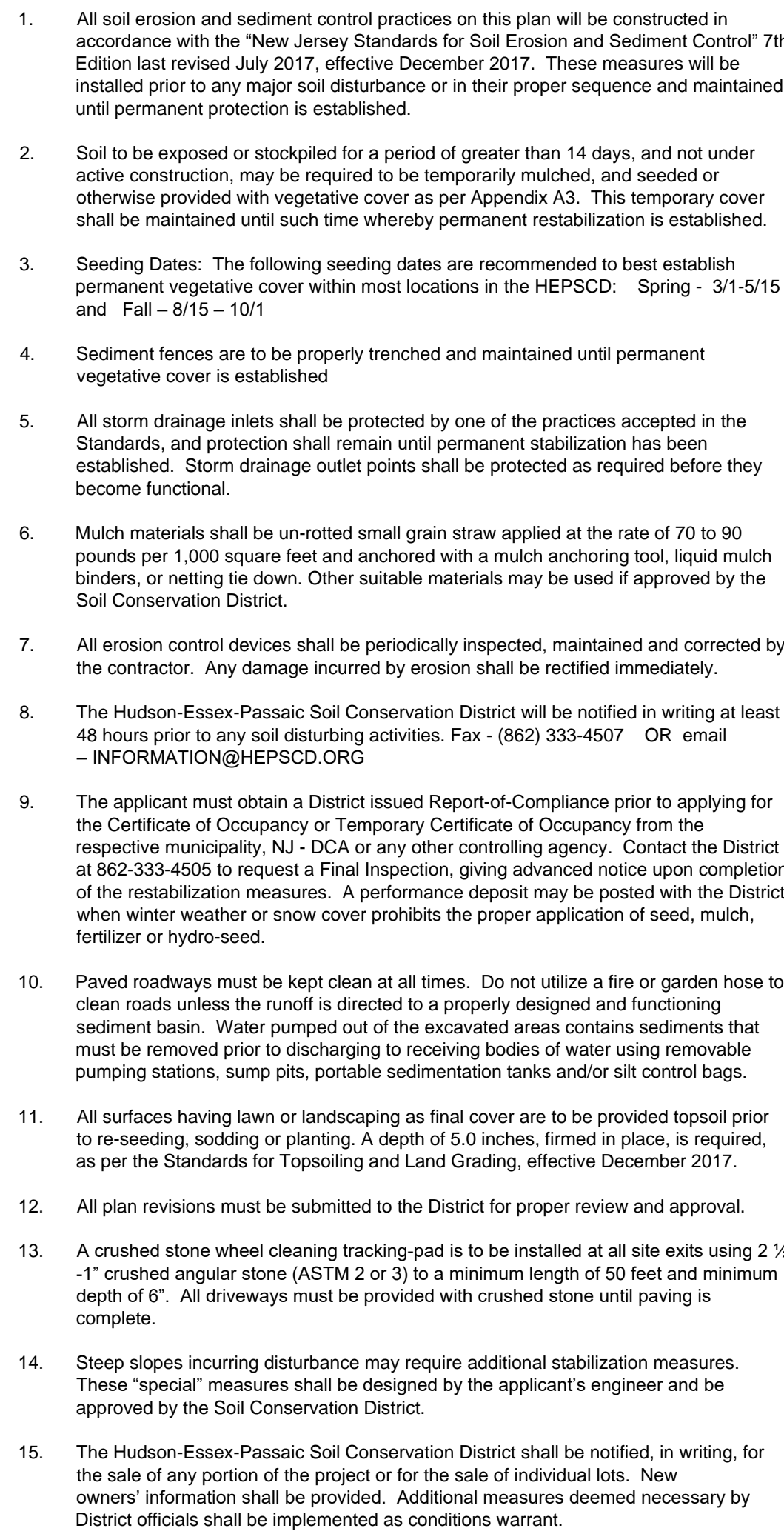
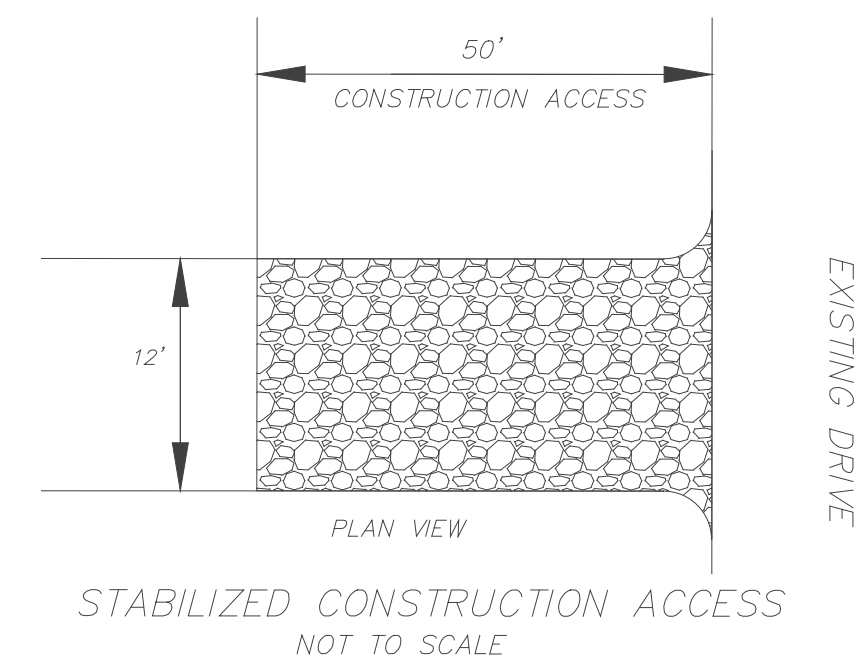
PROPOSED
2-STORY
FRAME DWELLING

FF ELE. 113.52
GFF ELE. 102.94
GABLE MEAN ELE. 135.44

+110.0
+102.94
+103.44
+BS 108.57

BUILDING HEIGHT CALCULATION

GRAPHIC SCALE
SCALE: 1" = 10' - 00"



STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with 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 reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

3. Seeding

A. SEE SEEDING SPECIFICATIONS ON THIS SHEET.
Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. 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.

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

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

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

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

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered 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 coultter 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 growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

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

5. Irrigation (where feasible)

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

6. Topdressing

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

7. Establishing Permanent Vegetative Stabilization

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

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

1. Site Preparation

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

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

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

2. Seedbed Preparation

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

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

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

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

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

4. Mulching

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

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section. Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

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

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

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

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

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

b. Use one of the following:
(1) Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form 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.

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

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

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

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

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

Compaction Testing Methods

A. Probing Wire Test (see detail)

B. Hand-held Penetrometer Test (see detail)

C. Tube Bulk Density Test (licensed professional engineer required)

D. Nuclear Density Test (licensed professional engineer required)

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

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

Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.**Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth)** where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

Simplified Testing Methods

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

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

18-21"

Wire must penetrate a minimum of 6" without deformation.

6.0" min. visible mark on wire at depth

Wire may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

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.

Gage reading 300 psi or less at 6"

6.0" min. visible mark on shaft at depth

*Use correct size tip for soil type

Penetrometer may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with 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 reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

3. Seeding

A. SEE SEEDING SPECIFICATIONS ON THIS SHEET.
Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. 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.

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

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

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

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

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered 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 coultter 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 to 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 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.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

1. Site Preparation

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

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

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

2. Seedbed Preparation

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

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

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.

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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 coultter 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 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 given 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.

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

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

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

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

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

Compaction Testing Methods

A. Probing Wire Test (see detail)

B. Hand-held Penetrometer Test (see detail)

C. Tube Bulk Density Test (licensed professional engineer required)

D. Nuclear Density Test (licensed professional engineer required)

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

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

Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.**Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth)** where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

Simplified Testing Methods

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

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

18-21"

Wire must penetrate a minimum of 6" without deformation.

6.0" min. visible mark on wire at depth

Wire may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

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.

Gage reading 300 psi or less at 6"

6.0" min. visible mark on shaft at depth

*Use correct size tip for soil type

Penetrometer may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with 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 reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

3. Seeding

A. SEE SEEDING SPECIFICATIONS ON THIS SHEET.
Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. 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.

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

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

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

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

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered 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 coultter tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some

