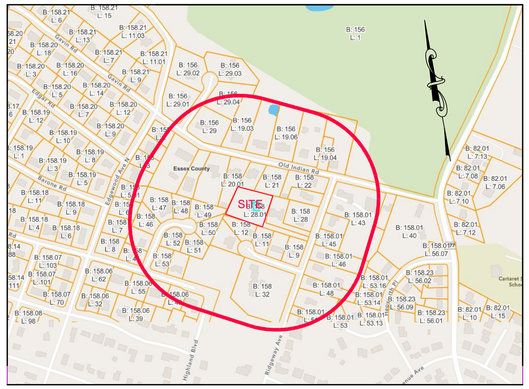
MINOR SUBDIVISION PLAN
15 RIDGEWAY AVENUE
LOT 28.01 IN BLOCK 158
TOWNSHIP OF WEST ORANGE, ESSEX COUNTY, N.J.



AREA MAP
(NJDEP GEOWEB)
(APPROXIMATE 500' RADIUS IS SHOWN)

LOT OWNERS
(WITHIN 200 FT OF SITE)

BLOCK 158 – LOT 9
WOODWARD, RUSSELL & CLAUDIA
1 RIDGEWAY CT.
WEST ORANGE, NJ 07052
RE: 1 RIDGEWAY CT.

BLOCK 158 – LOT 10
FALCONI, STEFANO & JACQUE
3 RIDGEWAY CT.
WEST ORANGE, NJ 07052
RE: 3 RIDGEWAY CT.

BLOCK 158 – LOT 11
CONKLIN, CRAIG
5 RIDGEWAY CT.
WEST ORANGE, NJ 07052
RE: 5 RIDGEWAY CT.

BLOCK 158 – LOT 12
RUSSO, LUKE WILLAM & SYLVIE
7 RIDGEWAY CT.
WEST ORANGE, NJ 07052
RE: 7 RIDGEWAY CT.

BLOCK 158 – LOT 14
ELMAN, ANDREW & RANDY
9 RIDGEWAY CT.
WEST ORANGE, NJ 07052
RE: 9 RIDGEWAY CT.

BLOCK 158 – LOT 20
LEVINE, MATTHEW &
CALALANG, DEBORAH
48 INDIAN RD.
WEST ORANGE, NJ 07052
RE: 48 INDIAN RD.

BLOCK 158 – LOT 20.01
SOLORZANO M & MENENDEZ M
& CASTILLO, L.
40 INDIAN RD.
WEST ORANGE, NJ 07052
RE: 40 INDIAN RD.

BLOCK 158 – LOT 21.01
BASHKOFF, PERRY & NICOLE
38 INDIAN RD.
WEST ORANGE, NJ 07052
RE: 38 INDIAN RD.

BLOCK 158 – LOT 21
RYAN, JOSEPH & PATRICIA
36 INDIAN RD.
UNION, NJ 07083.
RE: 36 INDIAN RD.

BLOCK 158 – LOT 22
MICHELET, CHARLES & HORNE, ELLEN
1 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 1 RIDGEWAY AVE

BLOCK 158– LOT 27
WILLIAMS, GREGORY & SARAH
5 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 5 RIDGEWAY AVE.

BLOCK 158 – LOT 28
HARRIS, EVAN & CAROLINE
11 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 11 RIDGEWAY AVE.

BLOCK 158 – LOT 28.02
KHAWAJA, AFTAB & ASIA
13 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 13 RIDGEWAY AVE.

BLOCK 158 – LOT 39
TOWNSHIP OF WEST ORANGE
66 MAIN STREET
WEST ORANGE, NJ 07052
RE: 55-57 RIDGEWAY AVE.

BLOCK 158.01 – LOT 43
ST. CLOUD PRESBYTERIAN CHURCH
20 OLD INDIAN RD.
WEST ORANGE, NJ 07052
RE: 6 RIDGEWAY AVE.

BLOCK 158.01 – LOT 44
SCHMIDT, KARL & TIONGSON, SUZETTE
12 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 12 OLD INDIAN RD.

BLOCK 158.01 – LOT 45
GARRAWAY, PAULRICK & ANDREA
14 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 14 RIDGEWAY AVE.

BLOCK 158.01 – LOT 46
FAGONE, PATER & JOANNE
16 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 16 RIDGEWAY AVE.

BLOCK 158.01 – LOT 47.01
GREENE, STACEY
22 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 22 RIDGEWAY AVE.

BLOCK 158.01 – LOT 48
JOSEPH SINISI JR.
28 RIDGEWAY AVE.
WEST ORANGE, NJ 07052
RE: 28 RIDGEWAY AVE.

UTILITIES

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

WATER
NEW JERSEY AMERICAN WATER CO.
167 JOHN F. KENNEDY PARKWAY
SHORT HILLS, NJ 07078

CABLE TV
COMCAST CABLEVISION
800 RAHWAY AVENUE
UNION, NJ 07083

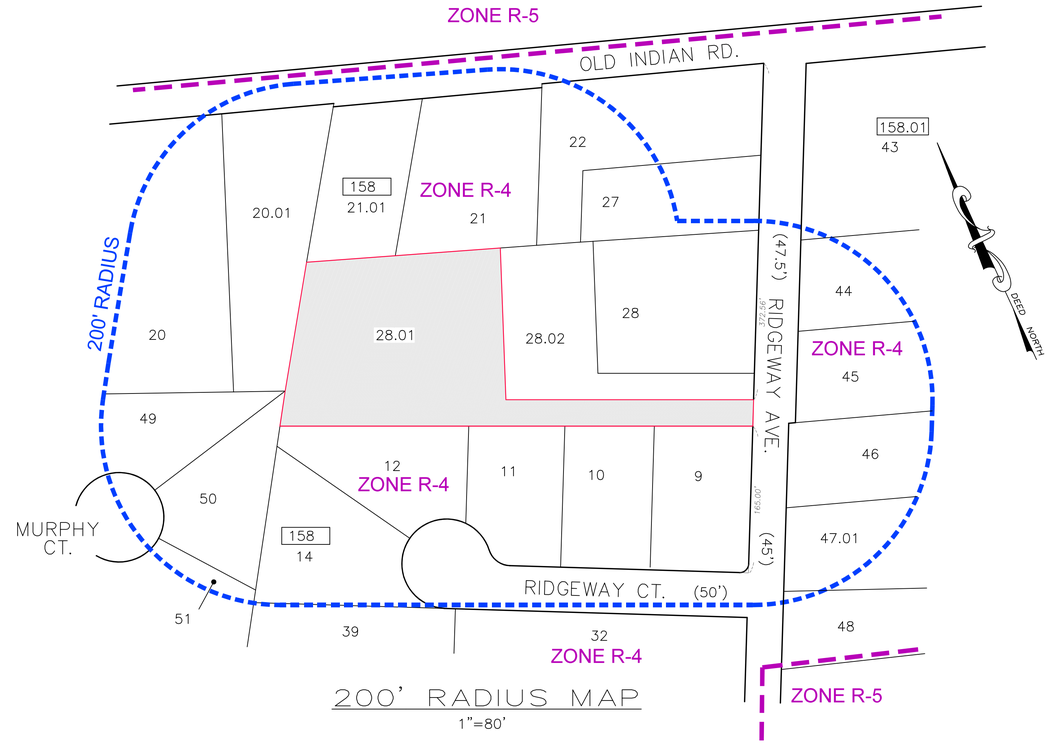
TELEPHONE
VERIZON
540 BROAD STREET
NEWARK, NJ 07101

SEWER
TOWNSHIP OF WEST ORANGE
MUNICIPAL BUILDING
66 MAIN STREET
WEST ORANGE, NJ 07052

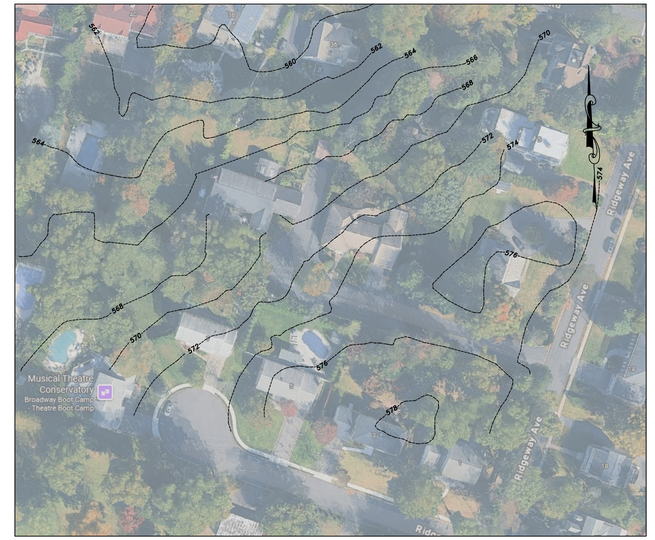
JOINT MEETING OF ESSEX AND UNION COUNTIES
500 SOUTH FIRST STREET
ELIZABETH, NJ 07202

CITY OF ORANGE TOWNSHIP
29 NORTH DAY STREET
ORANGE, NJ 07050

ESSEX COUNTY
ESSEX COUNTY PLANNING BOARD
900 BLOOMFIELD AVENUE
VERONA, NJ 07044



200' RADIUS MAP
1"=80'



AREA TOPOGRAPHIC MAP
SCALE: 1"=80'

Contours are shown in accord with DEP mapping and are intended only to depict the overall drainage patterns of the surrounding area.

§ 25-29.10 Requirements for Site Development Stormwater Plan: Major Development Checklist.

*	X	1. *Topographic base map. The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond limits of the proposed development, at a scale of one inch equals 200 feet or greater, showing two-foot contour intervals. The map as appropriate may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and floodplains along with their appropriate buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and man-made features not otherwise shown.*
**	X	2. *Environmental site analysis. A written and graphic description of the natural and man-made features of the site and its surroundings shall be submitted. This description shall include a discussion of soil conditions, slopes, wetlands, waterways and vegetation on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development. The map shall indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, springs, seeps, intermittent or perennial streams, wetlands, and floodplains along with their appropriate buffer strips, marshlands and other wetlands, forests, and core forests, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and man-made features not otherwise shown.*
**	X	3. *Project description and site plans. A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations will occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high groundwater elevations. A written description of the site plan and justification for proposed changes in natural conditions shall also be provided.*
**	X	4. *Land use planning and source control plan. This plan shall provide a demonstration of how the goals and standards of §§ 25-29.3 through 25-29.5 are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.*
**	X	5. *Stormwater management facilities map. The following information, illustrated on a map of the same scale as the topographic base map, shall be included:* *(a) Total area to be disturbed, paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to control and dispose of stormwater.* *(b) Details of all stormwater management facility designs, during and after construction, including discharge provisions, discharge capacity for each outlet at different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.* *(c) Location and results of all test pits, overlaid with the location of all BMPS. The SHWT, depth of mottling observed, and bottom elevation of the BMP shall be listed in a comprehensive chart.* *(d) Map of predevelopment and post-development drainage areas.* *(e) Map demonstrating the contributory drainage area for each BMP.*
***	X	6. *(a) Calculations.* *(b) Comprehensive hydrologic and hydraulic design calculations for the predevelopment and post-development conditions for the design storms specified in § 25-29.4 of this section.* *(c) When the proposed stormwater management control measures depend on the hydrologic properties of soils or require certain separation from the seasonal high-water table, then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure.*
***	X	7. *Maintenance and repair plan. The design and planning of the stormwater management facility shall meet the maintenance requirements of § 25-29.12.*

* *On site topography provided at one foot contours within site plan. A surrounding area topographic map was added to sheet one to demonstrate the general direction of surrounding drainage. There are no unique surface features within two hundred feet.*

** *Provided within the Minor Subdivision plan set.*

*** *Provided under separate cover. Stormwater report and O & M Manual by Ensurplan dated 4/13/26*

PROPERTY NOTES:

1. PROPERTY KNOWN AS LOT 28.01 IN BLOCK 158 ON THE CURRENT TAX MAP OF THE TOWNSHIP OF WEST ORANGE, SHEET NO. 91.
2. BEING MORE COMMONLY KNOWN AS 15 RIDGEWAY AVENUE, TOWNSHIP OF WEST ORANGE, N.J.
3. BEING THE SAME PREMISES DESCRIBED IN A DEED RECORDED IN THE ESSEX COUNTY CLERK'S OFFICE ON OCTOBER 2, 2025 AS INSTRUMENT #2025062136.
4. PROPERTY CONTAINS 53,084 SF OR 1.2186 ACRES (MORE OR LESS).
5. THIS PLAN HAS BEEN PREPARED TO INDICATE THE ZONING REQUIREMENTS IN ACCORD WITH ZONE R-4 (ZONING MAP DATED 11-19-2020) AND THE SCHEDULE OF REQUIREMENTS DATED MAY 2020.
6. PROPERTY SITUATED IN FLOOD ZONE X (AREA OF MINIMAL FLOODING) AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR ESSEX COUNTY, NEW JERSEY, ON MAP No. 340130094F DATED 6/04/2007.
7. THIS MAP AND SUBDIVISION IS BASED UPON A SURVEY OF LOT 28.01 IN BLOCK 158 PREPARED BY ENSURPLAN, INC. DATED AUGUST 21, 2025.

PROJECT NARRATIVE:

THIS PLAN PROPOSES TO SUBDIVIDE THE PROPERTY TO CREATE TWO FLAG LOTS. ONE SINGLE FAMILY DWELLING SHALL BE CONSTRUCTED ON EACH LOT.

A CROSS ACCESS AND UTILITY EASEMENT, ENCOMPASSING THE FLAG PORTION OF BOTH LOTS IS PROPOSED.

EXISTING AND/OR PROPOSED DEED RESTRICTIONS OR COVENANTS

A common use ingress/egress easement between Lots 28.01 and 28.02 was extinguished DB 5975-496.

A common use ingress/egress easement as shown on the site plan shall be established between Lot 28.03 and 28.04. A utility easement as shown on the site plan shall be established between Lot 28.03 and 28.04. Deed restrictions pursuant to the Stormwater Operations and Maintenance requirements shall be filed.

AFFORDABLE HOUSING DEVELOPMENT FEE

The development shall comply with the Township of West Orange Affordable Housing Development Fee Ordinance.

A development fee of 1.5% of the equalized assessed value of each new residential unit shall be paid in accordance with Township requirements. The final fee shall be determined by the Township Tax Assessor prior to issuance of a Certificate of Occupancy.

STEEP SLOPE STATEMENT PER TWP CODE SECTION 25.28

The existing topography as shown on the site plans has been analyzed and found not to include any areas in which a two foot vertical differential occurs within a twenty foot horizontal run.
Therefore the site is not subject to steep slope provisions per Twp Code Section 25-28.

SOIL MOVEMENT PERMIT STATEMENTS PER TWP CODE SECTION 25-51.6

15 RIDGEWAY LLC
ATTN: AMOGHENE FRANCIS UMUDE
43 EDGEWOOD AVENUE
WEST ORANGE, N.J. 07052

Owner/Applicant Signature

I by filing of this plan certify that upon apprvoal a licensed land surveyor shall be hired to place or caused to be placed stakes at each corner of the lands from which soil is to be removed, and further that a licensed professional engineer shall be hired to place or caused to be placed grade stakes at the existing elevation points designated on the topographical map pursuant to the provisions of paragraph C of Township Code Section 25-51.6, clearly marked to indicate the soil cuts or fill.

Further upon approval, I will cause the proposed work to be performed, and consent to the Township, in the event I fail to have the work completed, to cause the proposed work to be completed or otherwise terminated in keeping with the purposes and objectives of Twp Code Section 25-51.

The project design includes a projected export of approximately 890 cy of soil.

MAJOR STORMWATER DESIGN JUSTIFICATION/DESCRIPTION

This report has been prepared to demonstrate that the runoff from the proposed improvements to the site, which result in an increase of impervious coverage, is properly mitigated in accord with the requirements for a NJ DEP major stormwater project, and will pose no negative impact to any surrounding downstream properties.

To ensure that the design complies with the requirements and goals of the Township Stormwater Ordinance a detailed analysis of the site condition was performed. A soils evaluator tested various areas of the site to identify both seasonal high water levels and the ability of the soil to infiltrate runoff. Additionally areas allowing for use of low impact development were identified; including potential preservation of large deciduous trees, lessening the slope of surfaces and elongation of drainage paths. This study focused the design on the area of the site which would allow for use of infiltration.

Two stormwater management basins were designed for the project. The first, known as the 'Front Yard Basin', a small scale sub-surface extended infiltration basin (a system allowing for infiltration and controlled release) was chosen as the green infrastructure BMP to provide infiltration and recharge as well as reduction of runoff quantity. The basin is located at the area of the site where the soils evaluation determined an acceptable infiltration rate for design (A factor of safety was applied to the analysis by utilizing ½ of the measured infiltration rate in all calculations).

The 'Front Yard Basin' works in conjunction with the proposed permeable pavement, another green infrastructure BMP, which is specified for all driveway surfaces. When rainfall from the Water Quality Storm is filtered by passing through the permeable pavement, conveyed to the basin and infiltrated, the system is rated for 80% total suspended solids reduction providing water quality treatment for the site. Runoff entering the permeable pavement shall be collected within a stone bed below the pavement. It is proposed to allow runoff to travel through the stone bed (supplemental by a series of perforated pipes) and enter the infiltration basin.

The second basin, known as the 'Rear Yard Basin', collects runoff from roof surfaces, lawn areas, sidewalks and patios. As these surfaces are not subject to vehicle traffic provision of water quality treatment for this runoff is not required. The 'Rear Yard Basin' is located at an area where the measured infiltration rate is less than 1"/hr, therefore although some infiltration will occur, it is not considered within the routing of the basin.

The basins shall be shared systems, accepting runoff from both lots, therefore easements allowing for common use and maintenance shall be established. Operations and maintenance requirements and responsibilities shall be filed with the record owner deeds.

The analysis shows that the runoff from the developed portion of the site directed towards the stormwater basins when combined with the runoff rate from the portions of the site which bypass the system, has been reduced to no more than 50% of the two year storm rate. 75% of the 10 year storm rate and 80% for the 100 year storm rate from what would have occurred if the design area were an undeveloped wooded lot.

Additionally, provisions for recharge and water quality have been provided and meet the requirements of the NJ DEP. The project also meets the requirements of the Township of West Orange Stormwater Ordinance with the exception of retaining the design 'retention storm'. The limitations of the sub-soil on the property will not allow for infiltration of this volume, which exceeds the NJ DEP requirements, and a waiver will be required. The proposed improvements provide a reduction in runoff rate from what occurs currently, provides water quality for motor vehicle surfaces where none is currently provided, and maintains 100% of the existing infiltration on the site, justifying the requested waiver.

ANTICIPATED AGENCY APPROVALS REQUIRED:

TOWNSHIP OF WEST ORANGE PLANNING BOARD
TOWNSHIP OF WEST ORANGE BOARD OF HEALTH
HUDSON-ESSEX-PASSAIC SOIL EROSION DISTRICT

PROPOSED LOT NUMBERS AND STREET ADDRESSES TO BE ASSIGNED BY THE TAX ASSESSOR.

LOT GRADING PLANS:

AN INDIVIDUAL LOT GRADING PLAN FOR NEW LOT 28.03 AND NEW LOT 28.04 SHALL BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

SUBDIVISION FILING TYPE:

THE APPLICANT SHALL FILE THE SUBDIVISION BY DEED.

OWNER & APPLICANT:

15 RIDGEWAY LLC
ATTN: AMOGHENE FRANCIS UMUDE
43 EDGEWOOD AVENUE
WEST ORANGE, N.J. 07052

SHEET INDEX:

1. COVER SHEET, RADIUS MAP, LOT OWNERS
2. EXISTING CONDITIONS SURVEY & DEMOLITION
3. PROPOSED CONDITION PLOT PLAN
4. GRADING AND UTILITY PLAN
5. ENVIRONMENTAL SITE ANALYSIS AND USE
6. STORMWATER MANAGEMENT FACILITIES MAP PLANNING & SOURCE CONTROL PLAN
7. STORMWATER MANAGEMENT DETAILS AND NOTES

I CERTIFY THAT THIS MAP WAS DULY APPROVED BY RESOLUTION OF THE PLANNING BOARD OF THE TOWNSHIP OF WEST ORANGE AT A MEETING

HELD ON _____

AND HAS BEEN MEMORIALIZED ON _____

BOARD CHAIRMAN _____ DATE

BOARD SECRETARY _____ DATE

BOARD ENGINEER _____ DATE

Revision Table:
4) 11-19-26 ELIMINATE REAR YARD VARIANCE & REVISE DRIVE
3) 5-26-26 STORMWATER
2) TOWNSHIP ZONING/ENGINEERING REVIEW 04-13-26
1) UPDATE FOR NEW HOUSE PLAN 01-06-2026
0) INITIAL ISSUE 11-25-2025

WILLIAM S. SCOTT, P.E.
Professional Engineer,
N.J. License No. GE44863

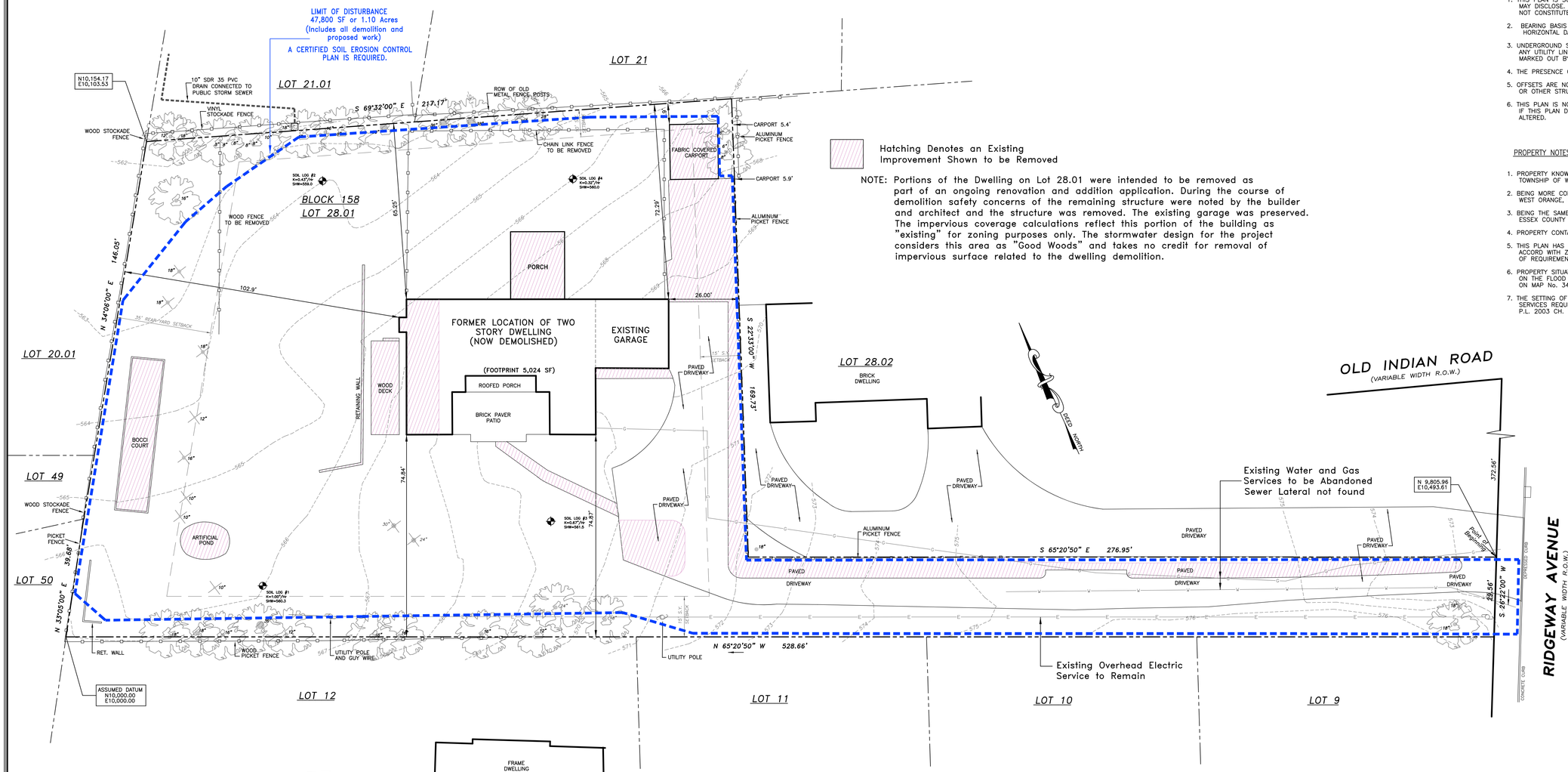
NANCY J. SCOTT, P.L.S.
Professional Land Surveyor
N.J. License No. GS35875

ENGINEERING
SURVEYING
PLANNING
ENSURPLAN INC.
(Certificate of Authorization No. 24GA27997700)
P.O. BOX 4304, WARREN, N.J. 07059
Tel: 732-469-0400
ensurplan@gmail.com

MINOR SUBDIVISION PLAN FOR
15 RIDGEWAY AVENUE
LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
SITUATED IN THE
TOWNSHIP OF WEST ORANGE,
ESSEX COUNTY, NJ

SCALE: 1"=20'	ORDER: E-10877
DATE: 11-25-2025	FILE: 29906

1/7



Hatching Denotes an Existing Improvement Shown to be Removed

NOTE: Portions of the Dwelling on Lot 28.01 were intended to be removed as part of an ongoing renovation and addition application. During the course of demolition safety concerns of the remaining structure were noted by the builder and architect and the structure was removed. The existing garage was preserved. The impervious coverage calculations reflect this portion of the building as "existing" for zoning purposes only. The stormwater design for the project considers this area as "Good Woods" and takes no credit for removal of impervious surface related to the dwelling demolition.

GENERAL NOTES:

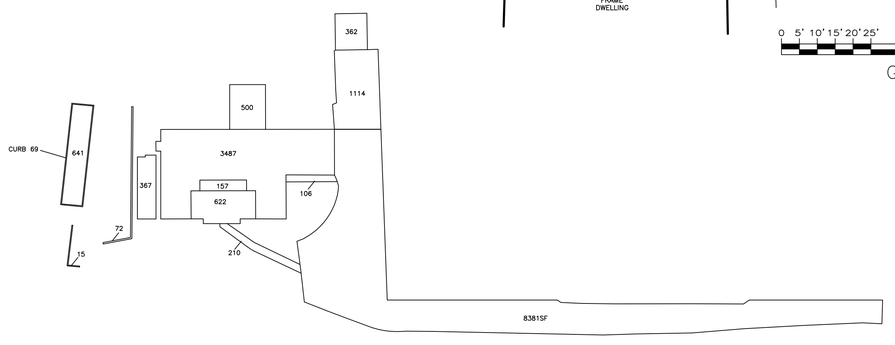
1. THIS PLAN IS SUBJECT TO SHUCH FACTS AS AN ACCURATE TITLE SEARCH MAY DISCLOSE. SUBJECT TO EASMENTS OF RECORD. THIS PLAN DOES NOT CONSTITUTE A TITLE SEARCH BY ENSURPLAN, INC.
2. BEARING BASIS IN ACCORD WITH DEED BOOK #2015075914. HORIZONTAL DATUM IS ASSUMED.
3. UNDERGROUND STRUCTURES OR UTILITIES HAVE NOT BEEN LOCATED. ANY UTILITY LINES INDICATED HEREON ARE IN ACORD WITH LOCATIONS MARKED OUT BY UTILITY COMPANIES.
4. THE PRESENCE OR ABSENCE OF WETLANDS HAS NOT BEEN DETERMINED.
5. OFFSETS ARE NOT TO BE USED FOR THE CONSTRUCTION OF FENCES OR OTHER STRUCTURES.
6. THIS PLAN IS NOT VALID WITHOUT A SIGNATURE AND RAISED SEAL. IF THIS PLAN DOES NOT CONTAIN A RAISED SEAL IT MAY HAVE BEEN ALTERED.

PROPERTY NOTES:

1. PROPERTY KNOWN AS LOT 28.01 IN BLOCK 158 ON THE CURRENT TAX MAP OF THE TOWNSHIP OF WEST ORANGE, SHEET NO. 91.
2. BEING MORE COMMONLY KNOWN AS 15 RIDGEWAY AVENUE, TOWNSHIP OF WEST ORANGE, N.J.
3. BEING THE SAME PREMISES DESCRIBED IN A DEED RECORDED IN THE ESSEX COUNTY CLERK'S OFFICE AS INSTRUMENT #2015075914.
4. PROPERTY CONTAINS 53,084 SF OR 1.2186 ACRES (MORE OR LESS).
5. THIS PLAN HAS BEEN PREPARED TO INDICATE THE ZONING REQUIREMENTS IN ACCORD WITH ZONE R-4 (ZONING MAP DATED 11-19-2020) AND THE SCHEDULE OF REQUIREMENTS DATED MAY 2020.
6. PROPERTY SITUATED IN FLOOD ZONE X (AREA OF MINIMAL FLOODING) AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) FOR ESSEX COUNTY, NEW JERSEY, ON MAP No. 340130094F DATED 6/04/2007.
7. THE SETTING OF PROPERTY CORNER MRKERS WAS NOT INCLUDED IN THE SCOPE OF SERVICES REQUESTED BY THE CLIENT PURSUANT TO N.J.A.C. 13:40-5.1(d) AND P.L. 2003 CH. 14(45:8-36:3).

0 5' 10' 15' 20' 25' 50' 100'

GRAPHIC SCALE
1"=20'



EXISTING IMPERVIOUS COVER
1" = 40'

EXISTING LOT COVERAGE CALCULATIONS:

TWO STORY DWELLING & GARAGE:	3487 SF
CARPORT:	362 SF
COVERED PORCH:	157 SF
REAR PORCH:	500 SF
FRONT PATIO:	622 SF
FRONT WALK:	210 SF
GARAGE APRON:	106 SF
BOCCI COURT	710 SF
DETACHED DECK:	367 SF
WALLS:	87 SF
DRIVE:	8,381 SF
TOTAL EXISTING COVERAGE:	14,989 SF

14,989 SF / 53,084 SF = 28.2%

EXISTING BUILDING COVERAGE CALCULATIONS:

TWO STORY DWELLING & GARAGE:	3487 SF
CARPORT:	362 SF
COVERED PORCH:	157 SF
REAR PORCH:	500 SF
TOTAL EXISTING COVERAGE:	4,506 SF

4,506 SF / 53,084 SF = 8.4%

TREE REMOVAL

PROPOSED IMPROVEMENTS RESULT IN REMOVAL OF 11 TREES. (3)10",12",16"(4)18",24" & 30" DBH

THE PLAN SHALL BE SUBMITTED TO THE TOWNSHIP FORRESTER FOR REVIEW.

Revision Table:
4) 11-19-26 ELIMINATE REAR YARD VARIANCE & REVISE DRIVE
3) 5-26-26 STORMWATER
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WILLIAM S. SCOTT, P.E.
Professional Engineer,
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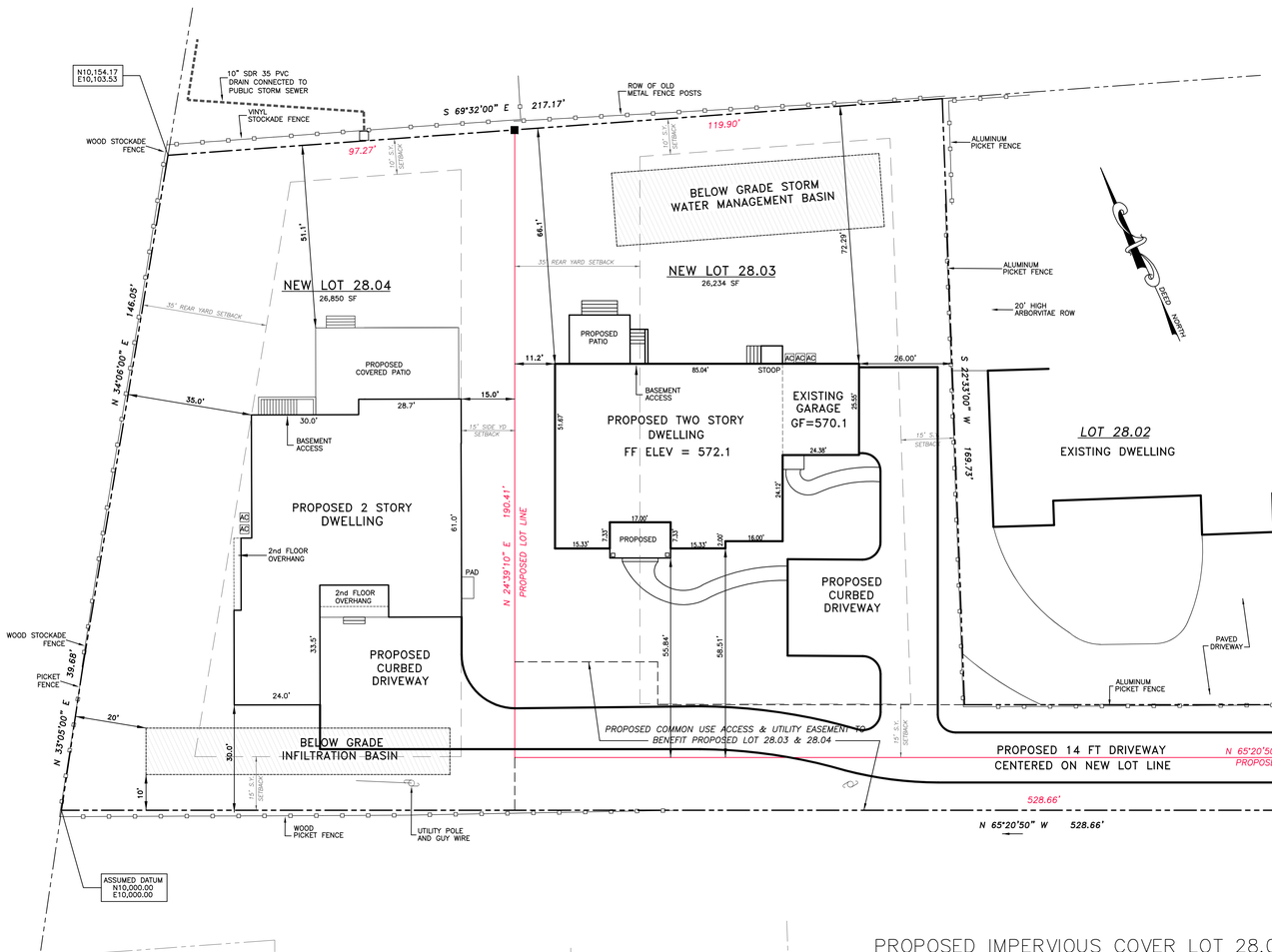
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Tel: 732-469-0400
ensurplan@gmail.com

EXISTING CONDITIONS SURVEY DEPICTING IMPROVEMENTS TO BE REMOVED
15 RIDGEWAY AVENUE
LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
SITUATED IN THE
TOWNSHIP OF WEST ORANGE,
ESSEX COUNTY, NJ

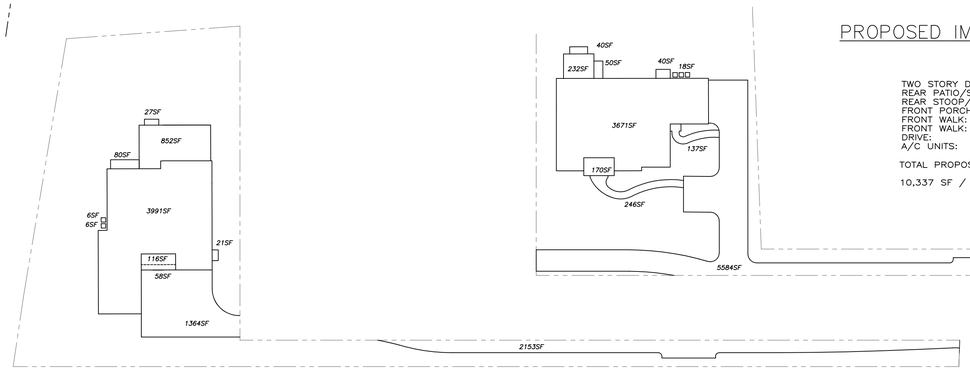
SCALE: 1"=20'	ORDER: E-11156
DATE: 11-25-2025	FILE: 29906

PROPOSED CONDITION PLOT PLAN



ZONING REQUIREMENTS: RESIDENTIAL DISTRICT R-4

	ZONE R-4	LOT 28.01	VARIANCE	LOT 28.03	VARIANCE	LOT 28.04	VARIANCE
LOT AREA	15,000 SF	53,084 SF	NO	26,234 SF	NO	26,850 SF	NO
LOT FRONTAGE: (75% OF REQ. WIDTH)	75 FT	29.56 FT	"EX-COND"	14.78 FT	YES	14.78 FT	YES
LOT WIDTH:	100 FT	29.56 FT	"EX-COND"	14.78 FT	YES	14.78 FT	YES
MINIMUM LOT DEPTH	N/A	191.24 FT	NO	–	NO	–	NO
PRINCIPAL BUILDING FRONT YARD (MINIMUM)	30 FT	302.95 FT	NO	302.95 FT	NO	427.31 FT	NO
PRINCIPAL BUILDING REAR YARD (MINIMUM)	35 FT	102.9 FT	NO	11.2 FT	YES	35.0 FT	NO
PRINCIPAL BUILDING SIDE YARD (MINIMUM)	10 FT 15 FT	65.25/74.84 FT 26 FT	NO	66.1/55.8 FT 26 FT	NO	49.9/30.0 FT 25 FT	NO
ACCESSORY USE REAR YARD:	–	7.9 FT	–	–	–	VACANT	–
ACCESSORY USE SIDE YARD:	–	5.4 FT	–	–	–	VACANT	–
ACCESSORY USE MAX REAR YD COVER:	–	–	–	–	–	VACANT	–
MAXIMUM BUILDING COVERAGE:	30%	4,006 SF 7.5%	NO	4,073 SF 15.5%	NO	4,959 SF± 18.5% ±	NO
MAXIMUM LOT COVERAGE:	40%	14,989 SF 28.2%	NO	10,337 SF 39.4%	NO	8,674 SF 32.3%	NO
MAXIMUM BUILDING HEIGHT:	2.5 STY/35 FT	2 STY	NO	2 STY/34.2 FT	NO	2 STY/34.5 FT	NO



PROPOSED IMPERVIOUS COVER LOT 28.03

1" = 40'

TWO STORY DWELLING & GARAGE:	3671 SF
REAR PATIO/STEPS:	272 SF
REAR STOOP/STEP:	90 SF
FRONT PORCH:	170 SF
FRONT WALK:	137 SF
FRONT WALK:	246 SF
DRIVE:	5733 SF
A/C UNITS:	18 SF
TOTAL PROPOSED COVERAGE:	10,337 SF

10,337 SF / 26,234 SF = 39.4%

PROPOSED BUILDING COVER LOT 28.03

1" = 40'

TWO STORY DWELLING & GARAGE:	3671 SF
REAR PORCH:	232 SF
FRONT PORCH:	170 SF
TOTAL PROPOSED COVERAGE:	4,073 SF

4,073 SF / 26,234 SF = 15.5%

PROPOSED IMPERVIOUS COVER LOT 28.04

1" = 40'

TWO STORY DWELLING & OVERHANGS:	4107 SF
FRONT PATIO:	58 SF
GARAGE CONC PAD:	21 SF
A/C:	12 SF
BASEMENT ENTRANCE:	80 SF
REAR PORCH:	852 SF
REAR PORCH STEPS:	27 SF
DRIVEWAY:	3517 SF
TOTAL PROPOSED COVERAGE:	8,674 SF

8,674 SF / 26,850 SF = 32.3%

PROPOSED BUILDING COVER LOT 28.04

1" = 40'

TWO STORY DWELLING & OVERHANGS:	4107 SF
REAR PORCH:	852 SF
TOTAL PROPOSED COVERAGE:	4,959 SF

4,959 SF / 26,850 SF = 18.5%

THE PROPOSED SUBDIVISION SHALL BE FILED BY DEED

■ INDICATES A PROPOSED MONUMENT TO BE SET

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4) 11-19-26 ELIMINATE REAR YARD VARIANCE & REVISE DRIVE
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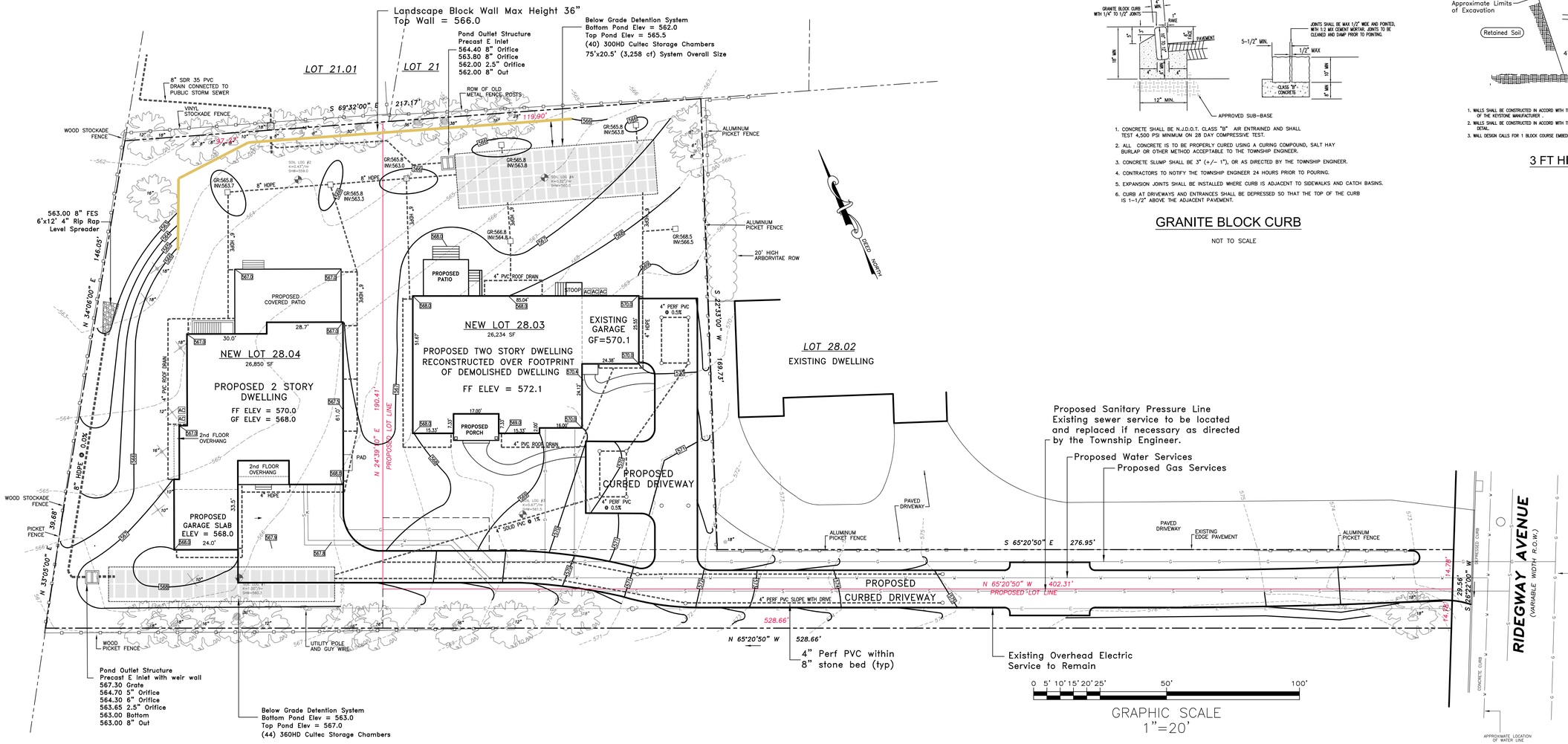
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PROPOSED CONDTION PLOT PLAN
15 RIDGEWAY AVENUE
LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
SITUATED IN THE
TOWNSHIP OF WEST ORANGE,
ESSEX COUNTY, NJ

SCALE: 1"=20'	ORDER: E-11156	3 / 7
DATE: 11-25-2025	FILE: 29906	

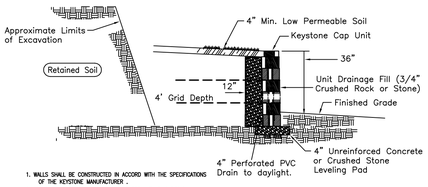
GRADING AND UTILITY PLAN



1. CONCRETE SHALL BE N.J.D.O.T. CLASS "B" AIR ENTRAINED AND SHALL TEST 4,500 PSI MINIMUM ON 28 DAY COMPRESSIVE TEST.
2. ALL CONCRETE IS TO BE PROPERLY CURED USING A CURING COMPOUND, SALT HAY BURLAP OR OTHER METHOD ACCEPTABLE TO THE TOWNSHIP ENGINEER.
3. CONCRETE SLUMP SHALL BE 3" (+/- 1"), OR AS DIRECTED BY THE TOWNSHIP ENGINEER.
4. CONTRACTORS TO NOTIFY THE TOWNSHIP ENGINEER 24 HOURS PRIOR TO POURING.
5. EXPANSION JOINTS SHALL BE INSTALLED WHERE CURB IS ADJACENT TO SIDEWALKS AND CATCH BASINS.
6. CURB AT DRIVEWAYS AND ENTRANCES SHALL BE DEPRESSED SO THAT THE TOP OF THE CURB IS 1-1/2" ABOVE THE ADJACENT PAVEMENT.

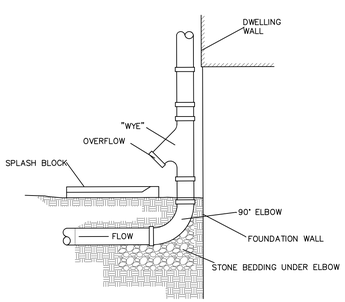
GRANITE BLOCK CURB

NOT TO SCALE



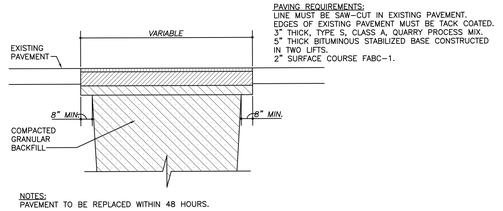
1. WALLS SHALL BE CONSTRUCTED IN ACCORD WITH THE SPECIFICATIONS OF THE KEYSTONE MANUFACTURER.
2. WALLS SHALL BE CONSTRUCTED IN ACCORD WITH THIS DESIGN DETAIL.
3. WALL DESIGN CALLS FOR 1 BLOCK COURSE EMBEDMENT.

3 FT HIGH LANDSCAPE BLOCK WALL



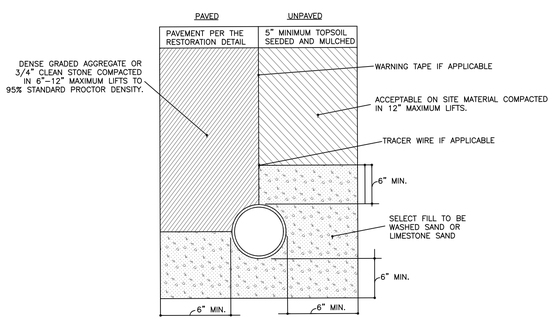
ROOF LEADER CONNECTION

NOT TO SCALE



ROADWAY BACKFILL & PAVEMENT RESTORATION

NOT TO SCALE



GAS AND WATER UTILITY TRENCH DETAIL

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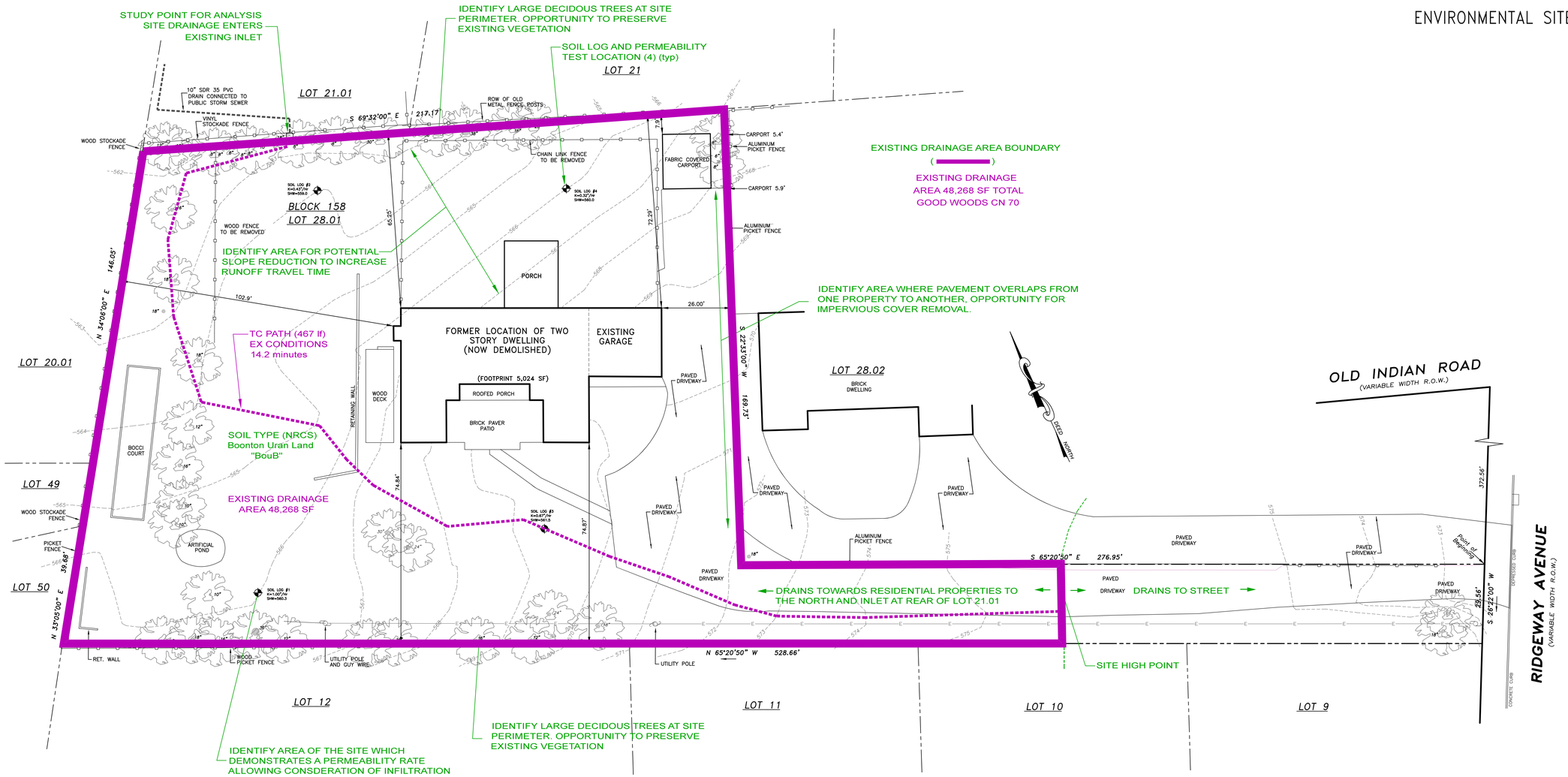
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GRADING AND UTILITY PLAN
15 RIDGEWAY AVENUE
LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
SITUATED IN THE
TOWNSHIP OF WEST ORANGE,
ESSEX COUNTY, NJ

SCALE: 1"=20'	ORDER: E-11156	4 / 7
DATE: 11-25-2025	FILE: 29906	

ENVIRONMENTAL SITE ANALYSIS AND MAP



SITE DESCRIPTION AND ENVIRONMENTAL ANALYSIS

The project site is an existing flag lot with a stem portion containing the driveway which fronts on Ridgeway Avenue The 1.219 acre property was developed with a single family dwelling with attached garage, covered parking or storage area, retaining walls, bocci court and koi pond. The property is located within an existing residential neighborhood. The existing home is served by public utilities which are located within the bed of Ridgeway Avenue.

A small portion of the property (approximately 3,000 sf) drains overland from a highpoint on the driveway stem towards Ridgeway Avenue. The remainder of the site drains overland from South to the North towards the rear of Lot 21.01 at which point runoff from the site is collected by an existing inlet and piped through Lot 21.01 to the Township storm sewer system. No existing stormwater management facilities were found on the site.

There are no protected steep slopes on the site; slopes on the property are predominantly between 1.5% and 8%.

The soils on the site are silt loam to loamy sand noted as BouB Boonton Urban Land within hydrologic soil type "C", with a seasonal water table depth exceeding 80" in depth and a moderately low to moderately high infiltration rate of the most restrictive soil layer of 0.06 to 0.20 in/hr (USDA NRCS Soil Survey).

On site soils testing revealed a depth to seasonal high water varying from 5' to 7.5' with an infiltration rate varying from 0.32"/hr to 1.00"/hr.

The vegetation on the site is predominantly well established lawn, with a number of large deciduous trees located predominantly along the exterior boundary of the site with a lesser concentration within the site interior.

A review of the NJ Geoweb site along with a site inspection by the engineer did not reveal any indications of wetlands, springs, seeps, intermittent or perennial streams or waterways or presence of protected species which might impact the development of the site.

FACTORS CONSTRAINING DEVELOPMENT

The on site soils testing consisting of four soil logs determined that the soils to the south of the property have an infiltration rate above 0.5"/hr which is the minimum allowable for stormwater management facilities which are infiltration based systems. The area to the north demonstrated infiltration rates below the minimum allowed for infiltration based systems.

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ENVIRONMENTAL SITE ANALYSIS AND MAP

15 RIDGEWAY AVENUE

LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
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PROPOSED CONDITIONS STUDY

LAND USE PLANNING AND SOURCE CONTROL PLAN & STORMWATER MANAGEMENT FACILITIES MAP

STUDY POINT FOR ANALYSIS

PRE DEVELOPED
Q 2yr = 0.90 cfs
Q 10yr = 2.24 cfs
Q 100yr= 5.34 cfs
Q P 2yr = 1.34 cfs
Q P 10yr = 3.11 cfs
Q P 100 yr = 7.53 cfs

DEVELOPED
Q 2yr = 0.42 cfs
Q 10yr = 1.35 cfs
Q 100yr= 4.18 cfs
Q P 2yr = 0.64 cfs
Q P 10yr = 2.12 cfs
Q P 100 yr = 5.85 cfs

- Post development runoff is reduced for all design storms from what would have occurred if the site was undeveloped and wooded. No credit taken in the analysis for existing impervious to remain.

EXISTING DRAINAGE AREA BOUNDARY
( )

EXISTING DRAINAGE
AREA 48,268 SF TOTAL

DEED NORTH

10" SDR 35 PVC DRAIN CONNECTED TO PUBLIC STORM SEWER

MAX OUTFLOW
Q = 1.08 cfs
563.00 8" FES
6'x12' 4" Rip Rap Level Spreader

BYPASS AREA DIRECT TO INLET
7,274 SF

TC PATH
BYPASS TO INLET
231' @ 2.6%
SHEET FLOW
24.1 MIN.

YARDS TO BASIN
18,819 SF

ROOF WEST TO REAR BASIN
5,018 SF

TC PATH
ROOF TO BASIN
0.4 MINUTES (PIPE FLOW)
150 LF @ 2%

TC PATH
YARDS TO BASIN SHEET FLOW 24.7 MIN.
214' @ 2.1%

ROOF EAST TO REAR BASIN
3,867 SF

TC PATH
ROOF TO BASIN
0.4 MINUTES (PIPE FLOW)
150 LF @ 2%

AREA INTO THE PERMEABLE PAVEMENT AND DIRECTED TO INFILTRATION BASIN

TC PATH FOR PERMEABLE PAVEMENT TO INFILTRATION (TRAVEL THROUGH PERFORATED PIPE AND/OR STONE BEDDING
0.4 MINUTES (PIPE FLOW)

SITE HIGH POINT

LOT 21 — Landscape Block Wall Max Height 36" Top Wall = 566.0

LOT 21.01 — S 69°32'00" E 217.17'

LOT 28.02 — EXISTING DWELLING

PROPOSED 2 STORY DWELLING
FF ELEV = 570.0
GF ELEV = 568.0

PROPOSED GARAGE SLAB ELEV = 568.0

PROPOSED COVERED PATIO

PROPOSED PATIO

PROPOSED PORCH

PROPOSED 2nd FLOOR OVERHANG

PROPOSED LOT LINE — N 34°09'10" E 190.41'

N 34°09'00" E 146.05'

S 34°27'00" W 169.73'

N 33°05'00" W 39.68'

S 65°20'50" E 276.95'

N 65°20'50" W 402.31'

N 65°20'50" W 528.66'

PAVED DRIVEWAY

EXISTING EDGE PAVEMENT

PROPOSED 12' WIDE WITH 16' FLARES CONCRETE DRIVEWAY

RIDGEWAY AVENUE (VARIABLE WIDTH R.O.W.)

APPROXIMATE LOCATION OF GAS LINE

APPROXIMATE LOCATION OF WATER LINE

S 28°22'00" W 29.56'

CONCRETE CURB

DEPRESSED CURB

WOOD STOCKADE FENCE

VINYL STOCKADE FENCE

PICKET FENCE

WOOD PICKET FENCE

ALUMINUM PICKET FENCE

20' HIGH ARBORVITAE ROW

UTILITY POLE AND GUY WIRE

SOIL LOG #1 EL=571.00 K=1.00"/hr SHW=560.3

SOIL LOG #2 EL=570.00 K=0.33"/hr SHW=560.0

SOIL LOG #3 EL=567.00 K=0.877"/hr SHW=561.5

0 5' 10' 15' 20' 25' 50' 100'

GRAPHIC SCALE
1"=20'

MAJOR STORMWATER DESIGN JUSTIFICATION/DESCRIPTION

This report has been prepared to demonstrate that the runoff from the proposed improvements to the site, which result in an increase of impervious coverage, is properly mitigated in accord with the requirements for a NJ DEP major stormwater project, and will pose no negative impact to any surrounding downstream properties.

To ensure that the design complies with the requirements and goals of the Township Stormwater Ordinance a detailed analysis of the site condition was performed. A soils evaluator tested various areas of the site to identify both seasonal high water levels and the ability of the soil to infiltrate runoff. Additionally areas allowing for use of low impact development were identified; including potential preservation of large deciduous trees, lessening the slope of surfaces and elongation of drainage paths. This study focused the design on the area of the site which would allow for use of infiltration.

Two stormwater management basins were designed for the project. The first, known as the "Front Yard Basin", a small scale sub–surface extended infiltration basin (a system allowing for infiltration and controlled release) was chosen as the green infrastructure BMP to provide infiltration and recharge as well as reduction of runoff quantity. The basin is located at the area of the site where the soils evaluation determined an acceptable infiltration rate for design (A factor of safety was applied to the analysis by utilizing ½ of the measured infiltration rate in all calculations).

The 'Front Yard Basin" works in conjunction with the proposed permeable pavement, another green infrastructure BMP, which is specified for all driveway surfaces. When rainfall from the Water Quality Storm is filtered by passing through the permeable pavement, conveyed to the basin and infiltrated, the system is rated for 80% total suspended solids reduction providing water quality treatment for the site. Runoff entering the permeable pavement shall be collected within a stone bed below the pavement. It is proposed to allow runoff to travel through the stone bed (supplemented by a series of perforated pipes) and enter the infiltration basin.

The second basin, known as the "Rear Yard Basin", collects runoff from roof surfaces, lawn areas, sidewalks and patios. As these surfaces are not subject to vehicle traffic provision of water quality treatment for this runoff is not required. The "Rear Yard Basin" is located at an area where the measured infiltration rate is less than 1"/hr, therefore although some infiltration will occur, it is not considered within the routing of the basin.

The basins shall be shared systems, accepting runoff from both lots, therefore easements allowing for common use and maintenance shall be established. Operations and maintenance requirements and responsibilities shall be filed with the record owner deeds.

The analysis shows that the runoff from the developed portion of the site directed towards the stormwater basins when combined with the runoff rate from the portions of the site which bypass the system, has been reduced to no more than 50% of the two year storm rate, 75% of the 10 year storm rate and 80% for the 100 year storm rate from what would have occurred if the design area were an undeveloped wooded lot.

Additionally, provisions for recharge and water quality have been provided and meet the requirements of the NJ DEP. The project also meets the requirements of the Township of West Orange Stormwater Ordinance with the exception of retaining the design "retention storm". The limitations of the sub–soil on the property will not allow for infiltration of this volume, which exceeds the NJ DEP requirements, and a waiver will be required. The proposed improvements provide a reduction in runoff rate from what occurs currently, provides water quality for motor vehicle surfaces where none is currently provided, and maintains 100% of the existing infiltration on the site, justifying the requested waiver.

LAND USE PLANNING DISCUSSION

The total area of land disturbance is 1.10 Acres

In accordance with the goals and standards of Chapter 25–29.3 through 25–29.5 of the West Orange Code this plan has been developed in the following manner.

The project construction shall conform to a Soil Erosion and Sediment Contol Plan, to be reviewed and approved by the Conservation District.

Green Infrastucture has been implemented into the design through use of permeable pavement systems which collect, store and direct runoff towards an infiltration basin, providing water quality, recharge and volume reduction.

Additionally low impact development measures are implemented throughout the unstudied portion of the project which will lessen the overall stormwater runoff from the site to a greater extent. The measures include; preservation of large decidous trees along the site perimeter, lessening of slopes in the rear yard of proposed homes and increasing drainage path routes in order to increase time of concentration.

TABLE OF BMP INFORMATION

BMP DESCRIPTION	BOTTOM ELEVATION	S.H.W. ELEVATION	INFILTRATION RATE "/HR
INFILTRATION BASIN	563.0	560.3	1.00
PERMABLE PAVEMENT	566.5	560.3/561.0	N/A

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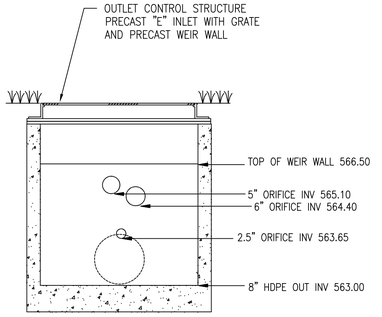
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LAND USE PLANNING AND SOURCE CONTROL
STORMWATER MANAGEMENT FACILITIES MAP
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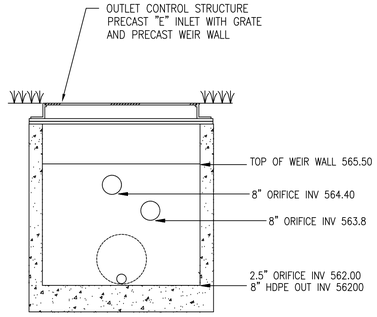
SCALE: 1"=20'	ORDER: E–11156
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6 / 7



OUTLET CONTROL STRUCTURE FRONT YARD

NOT TO SCALE



OUTLET CONTROL STRUCTURE REAR YARD

NOT TO SCALE

BASIN CONSTRUCTION NOTES:

1.) REFER TO SOILS INVESTIGATION REPORT FOR DATA REGARDING SOIL AND GROUNDWATER CONDITIONS IDENTIFIED AT THE SITE.

2.) NO EQUIPMENT OR CONSTRUCTION ACTIVITIES SHOULD BE PROGRESSED IN THE BASIN WHEN THE BOTTOM SOILS ARE SATURATED OR WET. THIS WILL PREVENT HYDRAULIC COMPACTION OF DEEPER INFILTRATION SOILS.

3.) AT NO TIME DURING THE SITE WORK SHALL A TRI-AXLE (OR TANDEM AXLE) TRUCK OR ARTICULATED RUBBER TIRE VEHICLE BE OPERATED IN THE FOOTPRINT OF THE BASIN. ALL WORK WITHIN THE BASIN SHALL BE PERFORMED BY LOW GROUND PRESSURE TRACK EQUIPMENT POSITIONED OUTSIDE OF THE BASIN BOTTOM AREA.

4.) BASIN CONSTRUCTION SHALL BE PROGRESSED IN A MANNER THAT REDUCES THE OVERALL COMPACTION OF THE BASIN BOTTOM AND PREVENTS EQUIPMENT FROM OPERATING ON CREATED SURFACES. THIS WILL REQUIRE THE EQUIPMENT TO "WORK IT'S WAY OUT" OF THE BASIN. IT IS STRONGLY ADVISED THAT ALL MASS EARTH MOVING OPERATIONS BE COMPLETED BY TRACK MOUNTED, LOW GROUND PRESSURE (LGP) EQUIPMENT, SUCH AS TRACK MOUNTED SKID-STEER LOADERS, SMALL (CAT D4 SIZED) DOZERS, TRACK LOADERS, AND TRACK MOUNTED EXCAVATORS.

5.) TANDEM AXLE TRUCKS SHOULD NOT OPERATE ON THE BASIN BOTTOM FOR ANY REASON. THIS WILL REDUCE THE PROPENSITY FOR UNINTENDED COMPACTION OF SUBSOILS.

6.) EXISTING SOILS SHALL BE EXCVATED AS NOTED AND AS DETERMINED IN THE FIELD BY A QUALIFIED GEOTECHNICAL ENGINEER. EXCAVATION SHALL PROGRESS TO A DEPTH NECESSARY TO REMOVE CLAY LENSES/SOILS AND EXPOSE SUITABLE SOILS IDENTIFIED IN THE SOILS INVESTIGATION REPORT.

7.) GEOTEXTILE FABRIC SHALL NOT BE UTILIZED IN VEGTATED INFILTRATION FACILITIES, AS SUCH FABRICS COMMONLY CLOG AND INHIBIT INFILTRATION.

8.) PLANTINGS SHOULD BE INSTALLED WITHOUT EQUIPMENT WHEN POSSIBLE. IF ABSOLUTELY NECESSARY, MANUALLY OPERATED OR WALK-BEHIND UNITS SHOULD BE UTILIZED. HIGH PRESSURE PNEUMATIC TIRE EQUIPMENT SHALL NOT BE OPERATED ON THE BASIN BOTTOM DURING PLANT INSTALLATION. IF MAY BE FEASIBLE TO UTILIZE SKID-STEER LOADERS OR ALL TERRAIN VEHICLES EITHER PNEUMATIC TIRE OR PREFERABLY TRACK MOUNTED.

9.) BULK DENSITY AND HYDRAULIC CONDUCTIVITY OF THE SOILS BELOW THE BASIN SHALL BE TESTED BELOW THE BASIN IMMEDIATELY PRIOR TO THE INITIATION OF ACTIVITIES TO CONFIRM MATERIALS ARE GENERALLY CONDUCIVE TO INFILTRATION.

NOTES PERTAINING TO BASIN CONSTRUCTION:

A.) AFTER ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED ON THE PARCEL AND FINISHED GRADE HAS BEEN ESTABLISHED IN EACH INFILTRATION BASIN, REPLICATE POST-DEVELOPMENT FIELD PERMEABILITY TESTS SHALL BE CONDUCTED TO DETERMINE IF AS-BUILT SOIL PERMEABILITY RATES ARE CONSISTENT WITH DESIGN PERMEABILITY RATES. THE RESULTS OF SUCH TESTS SHALL BE SUBMITTED TO THE REVIEWING ENGINEER. IF THE RESULTS OF THE POST-DEVELOPMENT FIELD PERMEABILITY TESTS FAIL TO ACHIEVE THE MINIMUM REQUIRED DESIGN PERMEABILITY RATE, UTILIZING A FACTOR OF SAFETY OF TWO, THE INFILTRATION BASIN SHALL BE RENOVATED AND RE-TESTED UNTIL SUCH MINIMUM REQUIRED PERMEABILITY RATES ARE ACHIEVED.

B.) AFTER ALL CONSTRUCTION ACTIVITIES AND REQUIRED FIELD TESTING HAVE BEEN COMPLETED ON THE PARCEL, AS-BUILT PLANS, INCLUDING AS-BUILT ELEVATIONS OF ALL STORMWATER MANAGEMENT MEASURES SHALL BE SUBMITTED TO THE REVIEWING ENGINEER, BASED UPON THE ENGINEER'S REVIEW OF THE AS-BUILT PLANS, ALL CORRECTIONS OR REMEDIAL ACTIONS DEEMED BY THE MUNICIPAL ENGINEER TO BE NECESSARY DUE TO THE FAILURE TO COMPLY WITH DESIGN STANDARDS AND/OR FOR ANY REASON CONCERNING PUBLIC HEALTH AND SAFETY, SHALL BE COMPLETED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

C.) THE STORMWATER INFILTRATION BASIN SHALL NOT BE PLACED INTO OPERATION UNTIL ITS DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. INSTEAD, UPSTREAM RUN-OFF SHALL BE DIVERTED AROUND THE BASIN AND INTO SEPARATE, TEMPORARY STORMWATER MANAGEMENT FACILITIES AND SEDIMENT BASINS. SUCH TEMPORARY FACILITIES AND BASINS SHALL BE INSTALLED AND UTILIZED FOR STORMWATER MANAGEMENT AND SEDIMENT CONTROL UNTIL STABILIZATION IS ACHIEVED IN ACCORDANCE WITH N.J.A.C. 1:90, STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

D.) IF, FOR ENGINEERING, ENVIRONMENTAL OR SAFETY REASONS, TEMPORARY STORMWATER MANAGEMENT FACILITIES AND SEDIMENT BASINS CANNOT BE CONSTRUCTED ON THE PARCEL, THE STORMWATER INFILTRATION BASIN MAY BE PLACED INTO OPERATION PRIOR TO THE COMPLETE STABILIZATION OF ITS DRAINAGE AREA PROVIDED THAT THE BASIN'S BOTTOM DURING THIS PERIOD IS CONSTRUCTED AT A DEPTH OF AT LEAST TWO FEET HIGHER THAN ITS FINAL ELEVATION, WHEN THE DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED, ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASIN, WHICH SHALL THEN BE EXCAVATED TO ITS FINAL DESIGN ELEVATION.
   1. AMENDMENT OF BASIN SOILS SHOULD OCCUR ONLY AFTER ALL CONSTRUCTION WITHIN DRAINAGE AREA IS COMPLETED AND DRAINAGE AREA IS FULLY STABILIZED.

E.) TO AVOID COMPACTING AN INFILTRATION BASIN'S SUBGRADE SOILS, NO HEAVY EQUIPMENT SUCH AS BACK-HOES, DUMP TRUCKS OR BULLDOZERS SHALL BE PERMITTED TO OPERATE WITHIN THE FOOTPRINT OF THE STORMWATER INFILTRATION BASIN. ALL EXCAVATION REQUIRED TO CONSTRUCT A STORMWATER INFILTRATION BASIN SHALL BE PERFORMED BY EQUIPMENT PLACED OUTSIDE THE BASIN. IF THIS IS NOT POSSIBLE, THE SOILS WITHIN THE EXCAVATED AREA SHALL BE RENOVATED AND TILLED AFTER CONSTRUCTION IS COMPLETED. EARTHWORK ASSOCIATED WITH STORMWATER INFILTRATION BASIN CONSTRUCTION, INCLUDING EXCAVATION, GRADING, CUTTING OR FILLING, SHALL NOT BE PERFORMED WHEN SOIL MOISTURE CONTENT IS ABOVE THE LOWER PLASTIC LIMIT.
   1. DEEP SCARIFICATION OF UNDERLYING SOILS IS NOTED ON PLANS.

F.) PRIOR TO CONSTRUCTION, THE AREA TO BE USED FOR THE INFILTRATION BASINS SHALL BE CORDONED OFF TO PREVENT CONSTRUCTION EQUIPMENT AND STOCKPILED MATERIALS FROM COMPACTING SUBSOILS. DURING BASIN CONSTRUCTION, THE SAME PRECAUTIONS SHALL BE TAKEN TO PREVENT BOTH SUBGRADE SOIL COMPACTION AND SEDIMENT CONTAMINATION.

PRE-BASIN CONSTRUCTION SOIL TESTING NOTES:

1.) ONCE BASINS ARE EXCAVATED TO BOTTOM ELEVATION AND PRIOR TO RESTORATION, A MINIMUM OF ONE (1) TEST PIT AND PERMEABILITY TEST IN EACH STORMWATER BMP AND TWO (2) TEST PITS AND PERMEABILITY TESTS IN EACH BASIN AREA SHALL BE PERFORMED OF THE EXISTING UNDERLYING SAND LAYER AND OF REPLACEMENT SOILS TO DEMONSTRATE COMPLIANCE WITH THE DESIGN REQUIREMENTS AND CONFORM DEPTH TO SEASONAL HIGH GROUNDWATER. RESULTS SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE DESIGN ENGINEER.

POST-CONSTRUCTION SOIL TESTING NOTES:

1.) UPON STABILIZATION OF THE BASIN AND ITS DRAINAGE AREA, A MINIMUM OF ONE (1) POST CONSTRUCTION IN-SITU INFILTRATION TEST IN EACH STORMWATER BMP AND TWO (2) IN EACH BASIN SHALL BE PERFORMED IN THE PLANTING BED SOIL IN ACCORDANCE WITH THE N.J. STORMWATER BMP MANUAL, APPENDIX E (LATEST REVISIONS) TO VERIFY THE INFILTRATION RATE OF THE CONSTRUCTED BASIN AND COMPLIANCE WITH THE DESIGN CRITERIA. RESULTS SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE DESIGN ENGINEER.

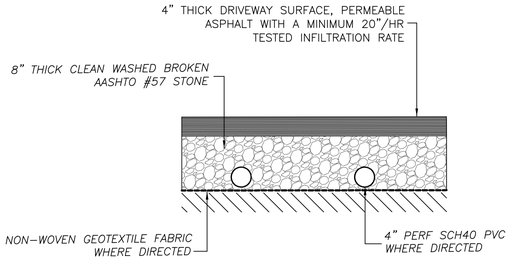
2.) COPIES OF SOIL AND INFILTRATION TESTING SHALL BE PROVIDED TO ENGINEER TO CONFIRM ADEQUATE INFILTRATION CAPABILITY FOLLOWING CONSTRUCTION AND ADEQUATE BASIN CONSTRUCTION.

STORMWATER CONSTRUCTION CERTIFICATION NOTE:

A CERTIFICATION BY A LICENSED PROFESSIONAL ENGINEER IS REQUIRED, PRIOR TO FINAL RELEASE OF CERTIFICATE OF OCCUPANCY (C.O), STATING THAT ALL STORMWATER MANAGEMENT FACILITIES HAVE BEEN CONSTRUCTED AND ARE OPERATING AS DESIGNED. THE CERTIFICATION SHALL BE ACCOMMODATED BY AS-BUILT PERMEABILITY TEST RESULTS. THE CERTIFICATION SHALL CERTIFY THAT BASINS HAVE BEEN CONSTRUCTED ACCORDING TO APPROVED DESIGN, NOTE ANY APPROVED DEVIATIONS, AND THAT BASINS HAVE BEEN PROPERLY CLEANED AFTER 90 % OF PROJECT COMPLETION.

STORMWATER AS-BUILT NOTE:

PRIOR TO FINAL RELEASE OF CERTIFICATE OF OCCUPANCY (C.O), THE CONTRACTOR/DEVELOPER APPLICANT SHALL PROVIDE AN AS-BUILT PLAN OF ALL STORMWATER MANAGEMENT BASINS, THE AS-BUILT PLAN SHALL INCLUDE, BUT NOT LIMITED TO, BASIN BOTTOM ELEVATION, BASIN BERM ELEVATION AT 25 FOOT INTERVALS, INVERTS, AND OUTLET STRUCTURES.

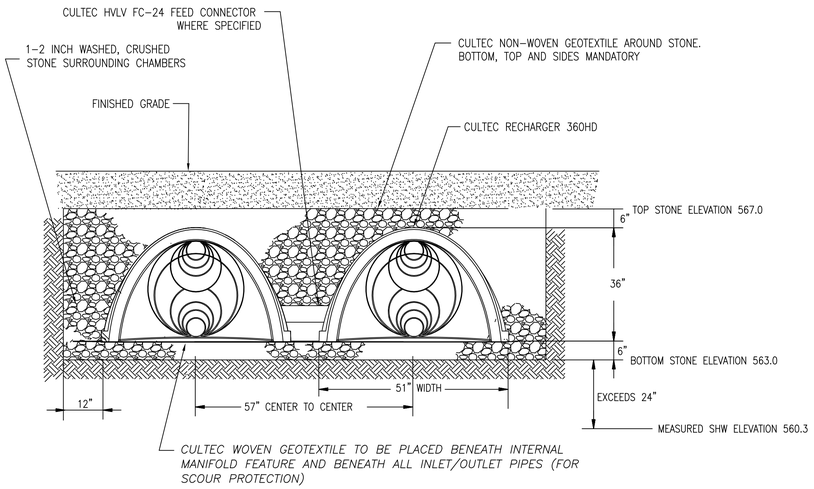


GREEN INFRASTRUCTURE PERMEABLE PAVEMENT

NOT TO SCALE

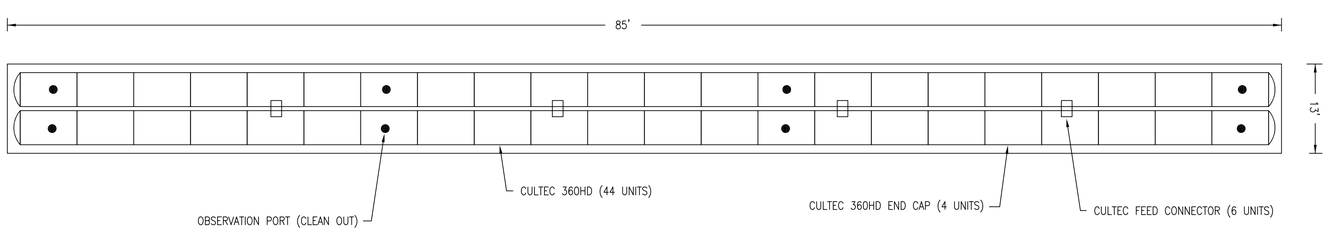
1. Bottom of stone slope shall be set to follow the slope of pavement above in order to allow runoff to travel through stone towards the infiltration basin.
2. 4" PVC SCH 40 pipe shall be included where shown on the grading and utility plan, pipe shall be perforated within the stone bed and solid outside of stone bed.

   It may be necessary to increase the depth of stone in certain areas in order to accommodate the increasing depth of sloping 4" PVC.
3. The stone bed shall be underlain with geotextile fabric. In areas where pavement is above the infiltration basin fabric shall not be used and the stone bedding under the pavement shall extend down to meet the stone at the top of the basin to allow transfer of runoff.



CULTEC RECHARGER 360HD CROSS SECTION

NOT TO SCALE



CULTEC SMALL SCALE BELOW GRADE INFILTRATION BASIN - PLAN VIEW - FRONT YARD SYSTEM

NOT TO SCALE

Revision Table:
4) 11-19-26 ELIMINATE REAR YARD VARIANCE & REVISE DRIVE
3) 5-26-26 STORMWATER
2) TOWNSHIP ZONING/ENGINEERING REVIEW 04-13-26
1) UPDATE FOR NEW HOUSE PLAN 01-06-2026
0) INITIAL ISSUE 11-25-2025

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STORMWATER MANAGEMENT DETAILS AND NOTES

15 RIDGEWAY AVENUE

LOT 28.01 IN BLOCK 158
(TAX MAP SHEET NO. 91)
SITUATED IN THE
TOWNSHIP OF WEST ORANGE,
ESSEX COUNTY, NJ

SCALE: 1"=20'	ORDER: E-11156	7/7
DATE: 11-25-2025	FILE: 29906	