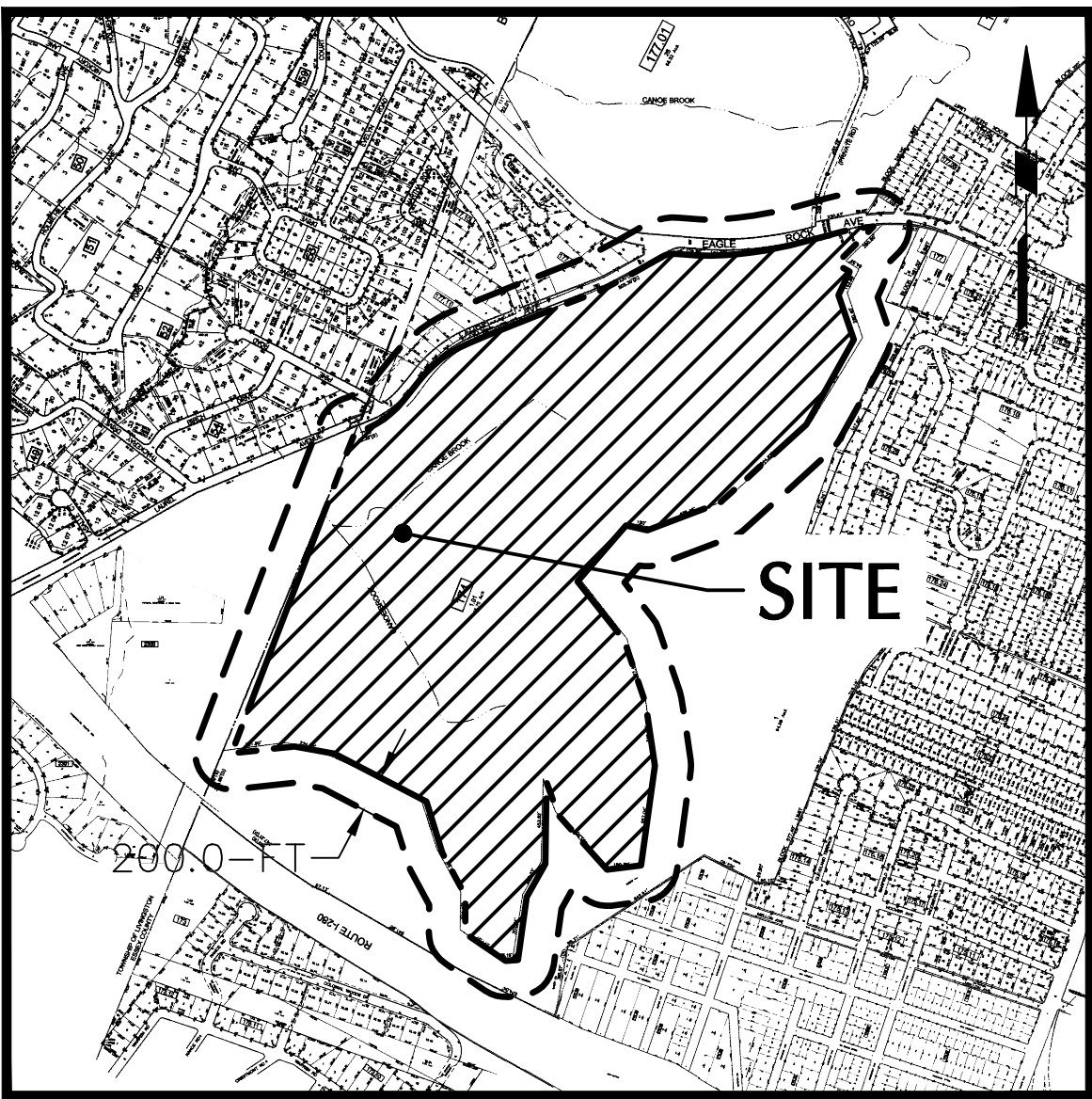


CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE
IMPROVEMENTS
PRELIMINARY & FINAL MAJOR SITE PLANS
BLOCK No. 174, LOT No. 1.01
WEST ORANGE TOWNSHIP, ESSEX COUNTY, NEW JERSEY

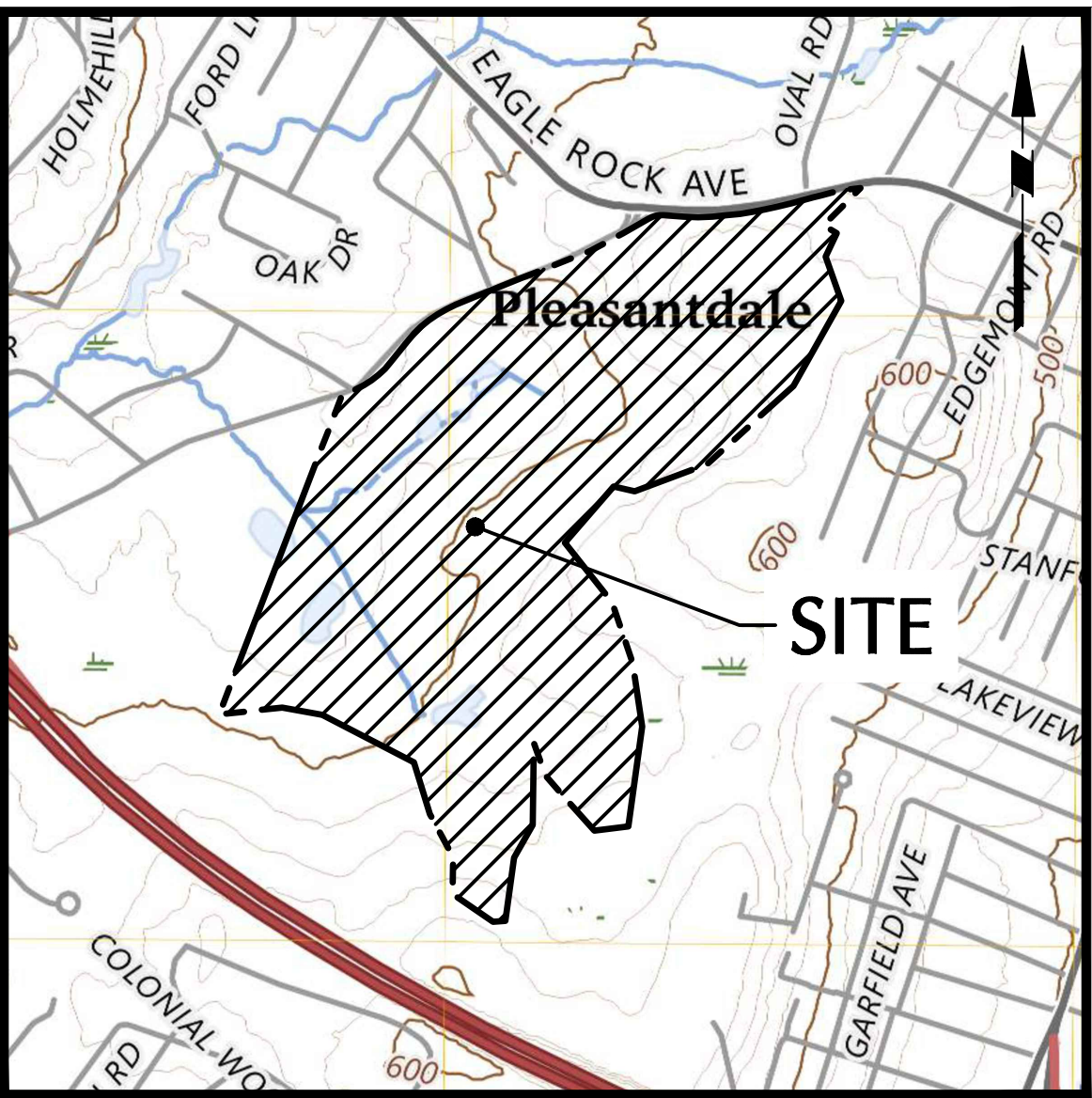
PROJECT INFORMATION & CONTACTS	
PROJECT LOCATION:	750 EAGLE ROCK AVENUE BLOCK No. 174, LOT No. 1.01 TOWNSHIP OF WEST ORANGE ESSEX COUNTY, NEW JERSEY 07052
OWNER / APPLICANT:	CRESTMONT COUNTRY CLUB, INC. 750 EAGLE ROCK AVENUE WEST ORANGE, NEW JERSEY 07052 (973) 731-2060
CONTACT:	DANA CANCELLARO
SITE/CIVIL ENGINEER,	LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, LLC
LANDSCAPE ARCHITECT,	300 KIMBALL DRIVE
TRAFFIC ENGINEER, SURVEYOR,	PARSIPPANY, NJ 07054
GEOTECHNICAL ENGINEER:	(973) 560-4900
CONTACT:	JOHN COTE, P.E., ASSOCIATE PRINCIPAL

UTILITY AND REGULATORY AGENCY CONTACT LIST	
TOWNSHIP OF WEST ORANGE DEPARTMENT OF PLANNING & DEVELOPMENT 66 MAIN STREET ROOM 214 WEST ORANGE, NJ 07052	WATER SERVICE NEW JERSEY AMERICAN WATER 167 JOHN F KENNEDY PARKWAY SHORT HILLS, NJ 07078
ESSEX COUNTY PLANNING BOARD 900 BLOOMFIELD AVENUE VERONA, NJ 07044	ELECTRIC & GAS SERVICE PUBLIC SERVICE ELECTRIC & GAS COMPANY (PSE&G) 80 PARK PLAZA NEWARK, NJ 07102
HUDSON ESSEX PASSAIC SOIL CONSERVATION DISTRICT 80 ORCHARD STREET BLOOMFIELD, NJ 07003	TELEPHONE SERVICE VERIZON 540 BROAD STREET NEWARK, NJ 07101
SANITARY SEWER TOWNSHIP OF WEST ORANGE DEPARTMENT OF PUBLIC WORKS SEWER DIVISION 25 LAKESIDE AVENUE WEST ORANGE, NJ 07052	CABLE SERVICE COMCAST CABLEVISION 800 RAHWAY AVENUE UNION, NJ 07083
SANITARY SEWER TREATMENT JOINT MEETING OF ESSEX AND UNION COUNTIES 500 SOUTH FIRST STREET ELIZABETH, NJ 07202	



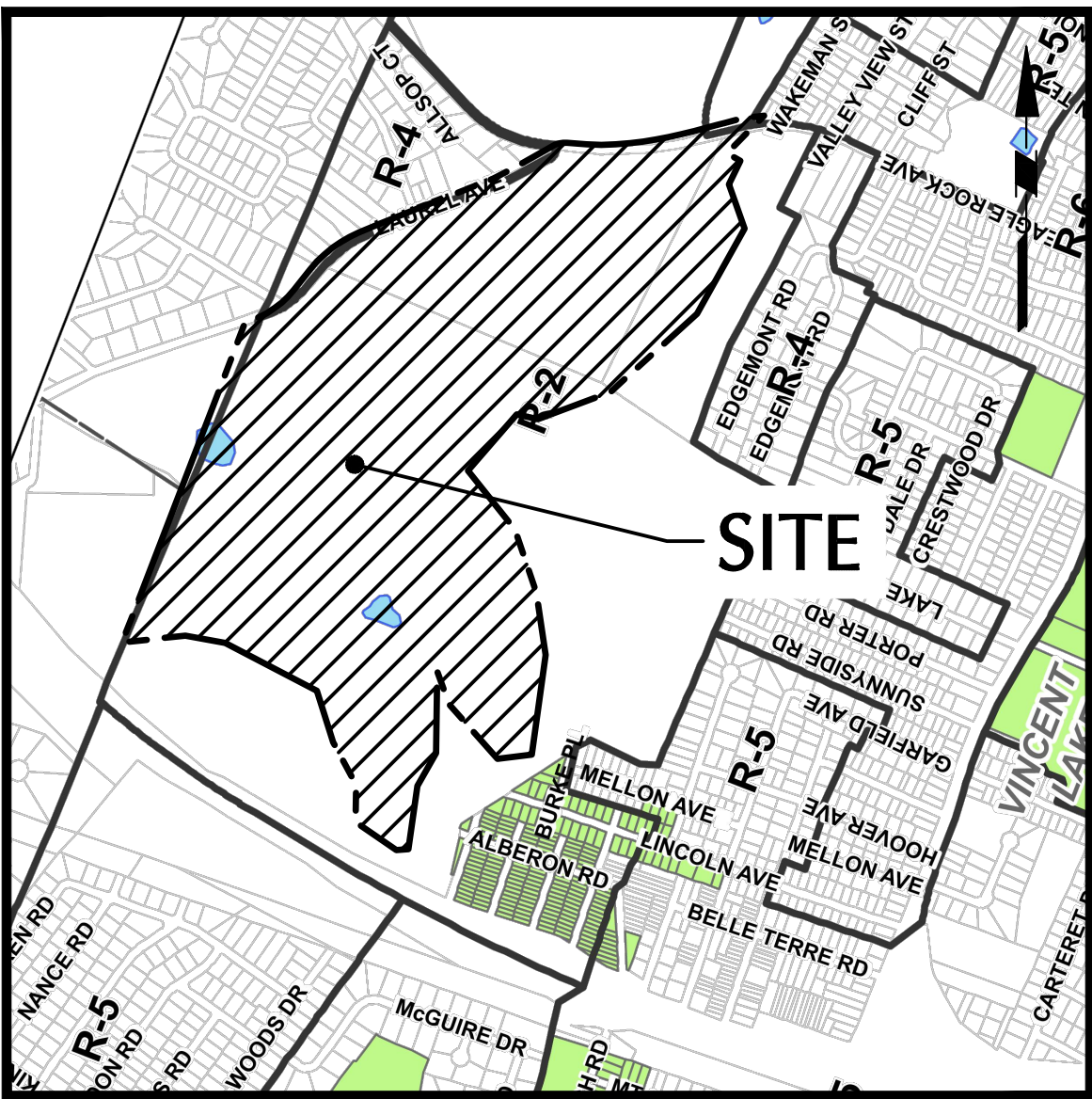
MAP REFERENCED: WEST ORANGE TOWNSHIP, NEW JERSEY TAX MAP SHEET 114, 118, 119, 120, 121, 122, 123, 124, 125, 126 LAST REVISED JUNE 2011, & BOUROUGH OF ROSELAND, NEW JERSEY TAX MAP SHEET 8 REVISED SEPTEMBER 2005 & LIVINGSTON TOWNSHIP, NEW JERSEY TAX MAP SHEET 23 REVISED APRIL 1993

TAX MAP
SCALE: 1" = 1000'



MAP REFERENCED: CALDWELL, NJ U.S.G.S. QUADRANGLE MAP, DATED 2023

LOCATION MAP
SCALE: 1" = 1,000'



MAP REFERENCED: WEST ORANGE TOWNSHIP ZONING MAP, LAST REVISED NOVEMBER 2020.

ZONING MAP
SCALE: 1" = 1,000'

DRAWING LIST (BOUND SEPARATELY)					
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	DRAWING SCALE	DATE	REVISION DATE
1	LP200	COVER SHEET	AS SHOWN	2/12/2026	-
2	LP201	TREE RESTORATION PLAN I	AS SHOWN	2/12/2026	-
3	LP202	TREE RESTORATION PLAN II	AS SHOWN	2/12/2026	-
4	LP501	LANDSCAPE NOTES & DETAILS	N.T.S.	2/12/2026	-

DRAWING LIST (BOUND SEPARATELY)					
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	DRAWING SCALE	DATE	REVISION DATE
1	VT101	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 200'	2/11/2026	-
2	VT102	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 80'	2/11/2026	-
3	VT103	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 30'	2/11/2026	-
4	VT104	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 30'	2/11/2026	-
5	VT105	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 30'	2/11/2026	-
6	VT106	RIGHT OF WAY & PARTIAL SITE SURVEY	1" = 30'	2/11/2026	-

APPROVED BY THE ESSEX COUNTY PLANNING BOARD		APPROVED BY THE WEST ORANGE TOWNSHIP PLANNING BOARD	
SIGNATURE	CHAIRMAN	SIGNATURE	CHAIRMAN
DATE		DATE	
SIGNATURE	SECRETARY	SIGNATURE	SECRETARY
DATE		DATE	
SIGNATURE	ENGINEER	SIGNATURE	ENGINEER
DATE		DATE	

DRAWING LIST					
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	DRAWING SCALE	DATE	REVISION DATE
1	GI001	COVER SHEET	AS SHOWN	2/12/2026	-
2	GI101	PROJECT INFORMATION	AS SHOWN	2/12/2026	-
3	CD101	PARTIAL DEMOLITION PLAN	1" = 30'	2/12/2026	-
4	CD102	PARTIAL DEMOLITION PLAN	1" = 30'	2/12/2026	-
5	CS100	OVERALL SITE PLAN	1" = 200'	2/12/2026	-
6	CS101	PARTIAL SITE PLAN	1" = 30'	2/12/2026	-
7	CS102	PARTIAL SITE PLAN	1" = 30'	2/12/2026	-
8	CS200	DRIVEWAY PROFILE & CROSS SECTION	AS SHOWN	2/12/2026	-
9	CS501	SITE DETAILS	N.T.S.	2/12/2026	-
10	CP101	PARTIAL FIRE TRUCK CIRCULATION PLAN	1" = 30'	2/12/2026	-
11	CP102	PARTIAL FIRE TRUCK CIRCULATION PLAN	1" = 30'	2/12/2026	-
12	CG101	PARTIAL GRADING PLAN	1" = 30'	2/12/2026	-
13	CG102	PARTIAL GRADING PLAN	1" = 30'	2/12/2026	-
14	CG103	PARTIAL DRAINAGE PLAN	1" = 30'	2/12/2026	-
15	CG104	PARTIAL DRAINAGE PLAN	1" = 30'	2/12/2026	-
16	CG201	DRAINAGE PROFILES	AS SHOWN	2/12/2026	-
17	CG202	DRAINAGE PROFILES	AS SHOWN	2/12/2026	-
18	CG203	DRAINAGE PROFILES	AS SHOWN	2/12/2026	-
19	CG204	DRAINAGE PROFILES	AS SHOWN	2/12/2026	-
20	CG205	DRAINAGE PROFILES	AS SHOWN	2/12/2026	-
21	CG501	DRAINAGE DETAILS	N.T.S.	2/12/2026	-
22	CG502	DRAINAGE DETAILS	N.T.S.	2/12/2026	-
23	CU101	PARTIAL UTILITY PLAN	1" = 30'	2/12/2026	-
24	CU102	PARTIAL UTILITY PLAN	1" = 30'	2/12/2026	-
25	CE101	PARTIAL SOIL EROSION & SEDIMENT CONTROL PLAN	1" = 30'	2/12/2026	-
26	CE102	PARTIAL SOIL EROSION & SEDIMENT CONTROL PLAN	1" = 30'	2/12/2026	-
27	CE501	SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS	N.T.S.	2/12/2026	-
28	CE502	SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS	N.T.S.	2/12/2026	-
29	LD101	PARTIAL TREE REMOVAL PLAN 1	1" = 30'	2/12/2026	-
30	LD102	PARTIAL TREE REMOVAL PLAN 2	1" = 30'	2/12/2026	-
31	LP101	PARTIAL LANDSCAPE PLAN	1" = 30'	2/12/2026	-
32	LP102	PARTIAL LANDSCAPE PLAN	1" = 30'	2/12/2026	-
33	LP501	LANDSCAPE DETAILS	N.T.S.	2/12/2026	-
34	LL101	PARTIAL LIGHTING PLAN	1" = 30'	2/12/2026	-
35	LL102	PARTIAL LIGHTING PLAN	1" = 30'	2/12/2026	-
36	LL501	LIGHTING DETAILS	N.T.S.	2/12/2026	-

GENERAL SITE NOTES:

- THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
- THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKE NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS; CORRELATE CONDITIONS WITH THE DRAWINGS; AND, RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
- THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUEST FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
- INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
- THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

OWNER/APPLICANT CERTIFICATION		
THE UNDERSIGNED INDIVIDUAL IS AN AUTHORIZED AGENT WITH LEGAL AUTHORITY TO CERTIFY ON BEHALF OF THE OWNER/APPLICANT ENTITY: CRESTMONT COUNTRY CLUB, INC.		
NAME	PRINT NAME	DATE
SWORN AND SUBSCRIBED TO BEFORE ME THIS _____ DAY OF _____, 2026.		
NOTARY PUBLIC OF THE STATE OF NEW JERSEY		DATE

CALL BEFORE YOU DIG TO LOCATE UNDERGROUND UTILITIES
1 (800) 272-1000
FOR FREE MARKOUTS TO LOCATE UNDERGROUND UTILITIES
CALL AT LEAST 3 DAYS PRIOR TO GROUND DISTURBANCE



CALL BEFORE YOU DIG

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS		
SIGNATURE	JOHN COTE	2/12/2026
PROFESSIONAL ENGINEER NJ Lic. No.	24GE03705800	DATE SIGNED

LANGAN	
Langan Engineering and Environmental Services, LLC	
300 Kimball Drive Parsippany, NJ 07054	
T: 973.560.4900	F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400	

Project	CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS BLOCK No. 174, LOT No. 1.01 TOWNSHIP OF WEST ORANGE
ESSEX COUNTY	NEW JERSEY
Drawing Title	

COVER SHEET	
Project No.	Drawing No.
101049802	GI001
Date	FEBRUARY 12, 2026
Drawn By	JS
Checked By	MV
Sheet 1 of 36	

WEST ORANGE 200' PROPERTY OWNERS LIST						
BLOCK	LOT	PROPERTY ADDRESS	OWNER	OWNER ADDRESS	CITY / STATE / ZIP	
174	1	EAGLE ROCK AVENUE	TOWNSHIP OF WEST ORANGE	66 MAIN STREET	WEST ORANGE, NJ 07052	
174	1.01	750 EAGLE ROCK AVENUE	CRESTMONT COUNTRY CLUB	750 EAGLE ROCK AVENUE	WEST ORANGE, NJ 07052	
175.06	1	LINCOLN AVENUE	TOWNSHIP OF WEST ORANGE	66 MAIN STREET	WEST ORANGE, NJ 07052	
175.06	2	LINCOLN AVENUE	TOWNSHIP OF WEST ORANGE	66 MAIN STREET	WEST ORANGE, NJ 07052	
175.06	5	BURKE PLACE	TOWNSHIP OF WEST ORANGE	66 MAIN STREET	WEST ORANGE, NJ 07052	
175.06	6	BURKE PLACE	TOWNSHIP OF WEST ORANGE	66 MAIN STREET	WEST ORANGE, NJ 07052	
177.01	25	EAGLE ROCK AVENUE	ESSEX FIELDS COUNTRY CLUB	219 DEVON ROAD	ESSEX FELLS, NJ 07021	
177.02	15.01	23 LAUREL AVENUE	SUN KING PRIVATE LIMITED	23 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.02	15.02	31 LAUREL AVENUE	EMMR LIMITED PARTNERSHIP	196 DEVON ROAD	ESSEX FELLS, NJ 07021	
177.02	15.03	29 LAUREL AVENUE	BUTKOV, NIKOLAS	29 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.02	15.04	3 BARTON DRIVE	LI, HAIBING, & PEI LIU	3 BARTON DRIVE	WEST ORANGE, NJ 07052	
177.02	18	7 LAUREL AVENUE	MARTINEZ, ANABEL	7 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.02	19	1 LAUREL AVENUE	EMMR LIMITED PARTNERSHIP % ELI CORI	196 DEVON ROAD	ESSEX FELLS, NJ 07021	
177.03	1	753 EAGLE ROCK AVENUE	MEJIA, TELESFORO & CARMELA	753 EAGLE ROCK AVENUE	WEST ORANGE, NJ 07052	
177.03	3	21 WAKEMAN STREET	SMERALDO, PETER & KIM	21 WAKEMAN STREET	WEST ORANGE, NJ 07052	
177.05	1	22 WAKEMAN STREET	PATEL, KETULKUMAR H. & TUENABEN K.	22 WAKEMAN STREET	WEST ORANGE, NJ 07052	
177.11	1	4 BARTON DRIVE	KOUASSI, ALAIN J. & ALICIA T.	4 BARTON DRIVE	WEST ORANGE, NJ 07052	
177.11	2	2 AHERN WAY	ALAS, DEVIRN & MELANIE	2 AHERN WAY	WEST ORANGE, NJ 07052	
177.11	6	41 LAUREL AVENUE	MORANA, JOSEPH EXECUTOR	41 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	7	49 LAUREL AVENUE	CERPA, MARIBEL & OBLITAS, AURORA	49 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	10	59-61 LAUREL AVENUE	BHANDARI,VINIL+PREMKUMAR,VANDANA	59-61 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	11	55 LAUREL AVENUE	KAY, JILLIAN ALYN	55 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	11.01	57 LAUREL AVENUE	HARRIS, PAUL JR & MUNFORD, LORETTA	57 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	12	51 LAUREL AVENUE	GRABOWSKI, PAUL L & JEANNINE	51 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.11	13	45 LAUREL AVENUE	KELLY, JERRY DAVID & ALEXANDRA	45 LAUREL AVENUE	WEST ORANGE, NJ 07052	
177.12	60	757 EAGLE ROCK AVENUE	PLEASANTDALE CHATEAU & CONFER. INC.	757 EAGLE ROCK AVENUE	WEST ORANGE, NJ 07052	

LIVINGSTON 200' PROPERTY OWNERS LIST					
BLOCK	LOT	PROPERTY ADDRESS	OWNER	OWNER ADDRESS	CITY / STATE / ZIP
2300	7	LAUREL AVENUE	CRESTMONT COUNTRY CLUB	P. O. BOX 358	WEST ORANGE, NJ 07052
2300	7	LAUREL AVENUE	SS NICHOLAS, CONSTANCE & HELEN G.O.C	80 LAUREL AVENUE	ROSELAND, NJ 07068

ROSELAND 200' PROPERTY OWNERS LIST					
BLOCK	LOT	PROPERTY ADDRESS	OWNER	OWNER ADDRESS	CITY / STATE / ZIP
49	53	4 PINE ROAD	LANCIA, NICHOLAS JR	4 PINE ROAD	ROSELAND, NJ 07068
54	7	67 LAUREL AVENUE	AMIRATA, HEIDI B.	67 LAUREL AVENUE	ROSELAND, NJ 07068
54	8	63 LAUREL AVENUE	MANUSIS, MICHAEL & FLORINA B	63 LAUREL AVENUE	ROSELAND, NJ 07068
55	1	78 LAUREL AVENUE	CRESTMONT COUNTRY CLUB	750 EAGLE ROCK AVENUE	WEST ORANGE, NJ 07052

<

REQUIRED PARKING CALCULATIONS			
Use	Area (SF)	Required Parking Rate	Required Parking Spaces
Golf Club House	31,500	1 space per 45 SF of gross floor area	700
Total Required Parking Spaces =			700

Notes:

1. Parking requirements referenced from Township of West Orange Zoning Code Section 25-12.2 b.1.
2. The permitted principal use of the golf club house is considered to be a private club for the purpose of calculating the required number of parking spaces. In accordance with Chapter 25-12.2 b.1 Parking Schedule II: Parking Requirements for Nonresidential uses, a private club requires 1 parking space for each 45 square feet of gross floor area.
3. The Township of West Orange Zoning Board approved set of plans titled "Preliminary & Final Site Plan Prepared for Modular Housing, Crestmont Country Club, Block 174 Lot 1 01 Situated in West Orange Township, Essex County, New Jersey," dated last revised December 9, 2024, prepared by Van Cleef Engineering Associates, LLC, indicated that the existing club house has a gross floor area of approximately 31,500 square feet.

ADA PARKING CALCULATIONS					
Use	Total Provided Parking Spaces	Total Required ADA Parking Spaces	Required Van Accessible Parking Spaces	Total Provided ADA Parking Spaces	Provided Van Accessible Parking Spaces
Residential	288	7	2	10	4
Notes: 1. In accordance with federal ADA guidelines, for parking lots with a total of 201-300 parking spaces, a total of 7 parking spaces shall be made ADA accessible, with a minimum of 2 of the required ADA parking spaces being van accessible. 2. There are no proposed ADA parking spaces as part of this site plan application; the provided ADA parking spaces are existing to remain.					

ELECTRIC VEHICLE (EV) PARKING CALCULATIONS					
Use	New Parking Spaces	Total Required Make-Ready EV Parking Spaces ¹	Total Proposed EV Parking Spaces	Total Number of EV Parking Spaces Provided ²	Condition
Golf Club House	32	1	2	4	C

Notes:

- In accordance with Chapter 25-12.6.d.2.a), each application involving a non-residential use parking lot shall install at least one make-ready EV parking space if there will be 50 or fewer off-street parking spaces.
- The total required number of EV parking spaces is based upon the total number of new parking spaces provided on the property. There are 256 existing parking spaces and there are a total of 288 parking spaces in the proposed post-construction condition.
- There are 2 existing EV parking spaces on the property which were constructed as part of the Township of West Orange Zoning Board approved set of plans titled "Preliminary Site Plan Prepared for Modular Housing, Crestmont Country Club, Block 174 Lot 1.01 Situated in West Orange Township, Essex County, New Jersey," dated last revised December 9, 2024, prepared by Van Cleet Engineering Associates, LLC, and which are proposed to remain.

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS



SIGNATURE John Cote DATE SIGNED 2/12/2026
 JOHN COTE
 PROFESSIONAL ENGINEER NJ Lic. No.
 24GE03705800

LANGAN
Langan Engineering and
Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

**CRESTMONT COUNTRY
CLUB & EAGLE ROCK AVE
IMPROVEMENTS**

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY **NEW JERSEY**

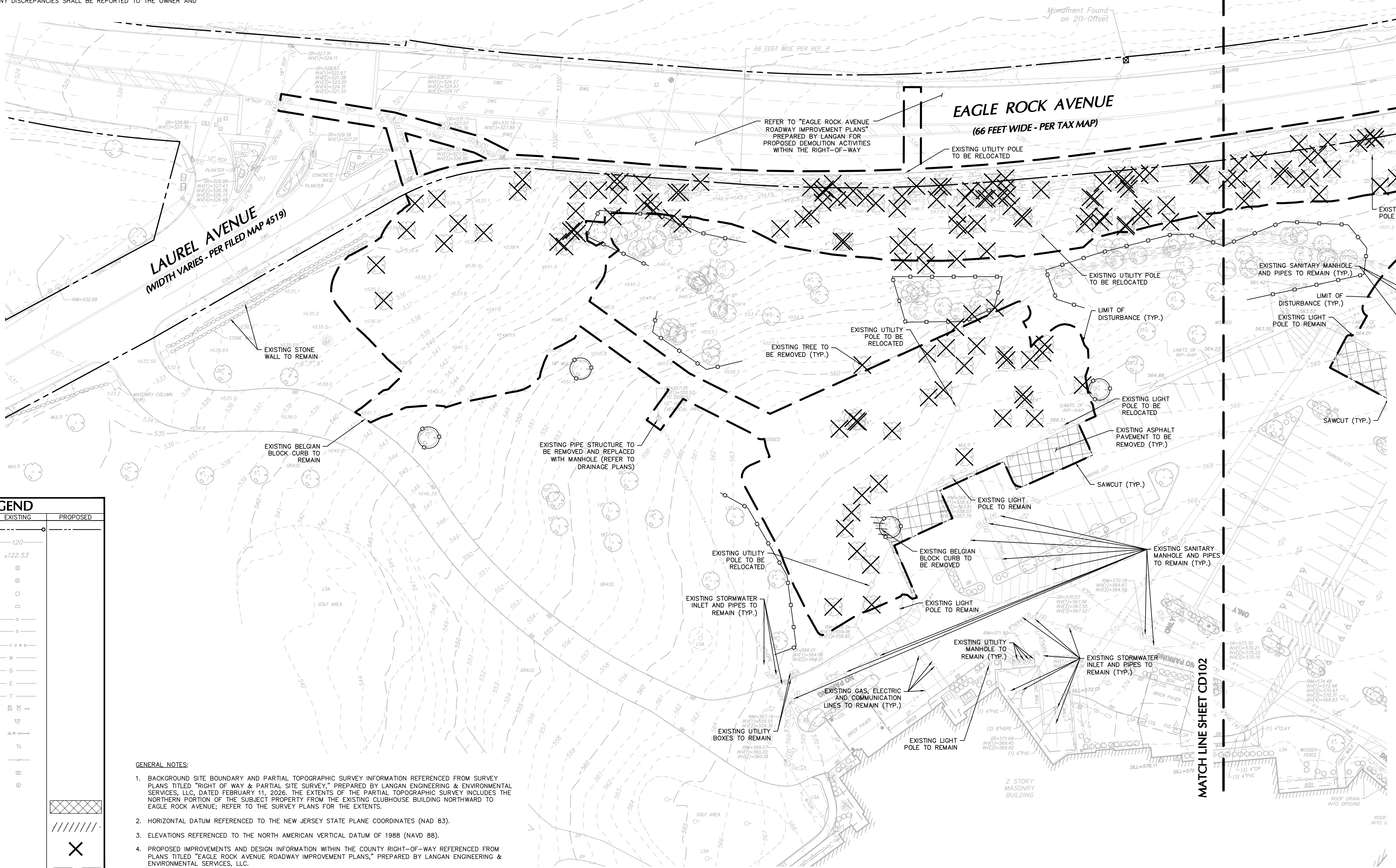
Drawing Title

PROJECT INFORMATION	
Project No. 101049802	Drawing No. GL101
Date FEBRUARY 12, 2026	
Drawn By JS	
Checked By MJV	
Sheet 2 of 36	

DEMOLITION NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABOR, MATERIALS, EQUIPMENT, SUPERVISION, COORDINATION EFFORTS, PERMITTING COSTS, CERTIFICATE COSTS, SERVICES, FILING FEES, TESTING COSTS, SECURITY, INSURANCE AND ALL OTHER ASSOCIATED OR RELATED ITEMS REQUIRED TO COMPLETE THE SCOPE OF WORK DESCRIBED IN THIS SECTION.
- INSTALL AND MAINTAIN A TEMPORARY EIGHT-FOOT HIGH CHAIN-LINK FENCE WITH ENTRANCE GATES AT LOCATIONS INDICATED IN CONJUNCTION WITH EXISTING PERIMETER SECURITY (I.E. MASONRY WALLS, CHAIN-LINK FENCE, ETC.), AS REQUIRED TO PROPERLY AND SAFELY SECURE THE DEMOLITION OPERATION AND IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
- INSTALL AND MAINTAIN ROADWAY CONSTRUCTION SIGNAGE AND ASSOCIATED TRAFFIC MEASURES.
- INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING THE ADJACENT ROADWAYS DUE TO DEMOLITION RELATED DEBRIS, DUST AND SEDIMENT AS NECESSARY OR AS DIRECTED BY THE OWNER OR OWNER'S ENGINEER.
- IMPLEMENT ALL SAFETY MEASURES AND ANY OTHER MEASURES DEEMED NECESSARY OR REQUIRED BY GOVERNING AUTHORITIES TO PROTECT FROM HARM OR DAMAGE ADJACENT AND ON-SITE PERSONS, PROPERTY, BUILDINGS, HOMES, BUSINESSES, FACILITIES AND UTILITIES.
- REMOVE AND LEGALLY DISPOSE OF ALL CONTENTS OF THE STRUCTURES TO BE DEMOLISHED UNDER THIS CONTRACT, INCLUDING, BUT NOT NECESSARILY LIMITED TO: FURNISHINGS, MECHANICAL EQUIPMENT, PLUMBING FIXTURES, FURNITURE, CABINETS, AND SUCH.
- PURGE, EVACUATE AND PROPERLY DISPOSE OF ALL RESIDUAL OILS, GASES, ETC. FROM THE MECHANICAL AND PLUMBING SYSTEMS AND ALL OTHER SIMILAR SYSTEMS OF THE STRUCTURES TO BE DEMOLISHED UNDER THIS CONTRACT IN ACCORDANCE WITH NJDEP AND LOCAL REQUIREMENTS.
- DISCONNECT AND CAP/TERMINATE ALL UTILITY SERVICES, E.G. WATER, SEWER, GAS, ELECTRIC, TELEPHONE, ETC., IN ACCORDANCE WITH ALL LOCAL REGULATIONS AND UTILITY SERVICE COMPANY REQUIREMENTS. WHERE NECESSARY, THE WORK SHALL INCLUDE THE RESTORATION OF PAVEMENT AND CURBING IMPACTED BY UTILITY REMOVAL AND DEMOLITION WORK. ALL EXISTING UTILITIES SHALL BE FIELD-VERIFIED AND ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND OWNER'S ENGINEER.

- OBTAIN AND PAY FOR TEMPORARY UTILITY (WATER, ELECTRIC, TELEPHONE) AND OTHER SERVICES NECESSARY FOR PROPER EXECUTION OF THE DEMOLITION WORK.
- REMOVE AND LEGALLY DISPOSE OF OFF-SITE HAZARDOUS MATERIALS (LIGHTING/TRANSFORMER BALLASTS, FLUORESCENT LIGHTS, ETC.) FROM THE STRUCTURES TO BE DEMOLISHED.
- REMOVE AND DISPOSE OF OFF-SITE ALL EXISTING SITE FEATURES, INCLUDING BUT NOT LIMITED TO ALL FENCING, GATES, WALLS, STAIRWAYS, RAILINGS, AND FREE-STANDING ITEMS (E.G. BOLLARDS, SIGNS, SIGN POSTS, WALLS, ETC.) WITHIN SITE AREAS, EXCEPT THOSE INDICATED TO REMAIN ON THE CONTRACT DRAWINGS.
- COMPLETELY DEMOLISH AND RECYCLE, TO THE GREATEST EXTENT POSSIBLE, ALL UNCONTAMINATED CONCRETE/MASONRY DEBRIS GENERATED FROM THE STRUCTURES TO BE DEMOLISHED.
- CONCRETE AND MASONRY STRUCTURES MATERIALS NOT SUSPECTED TO CONTAIN CONTAMINANTS AT CONCENTRATIONS EXCEEDING NJDEP REMEDIATION STANDARDS SHALL BE DEMOLISHED, CRUSHED AND SCREENED IN ORDER TO BE USED AS BACKFILL MATERIAL, AS DETAILED IN THE SPECIFICATIONS, PROVIDED THE MATERIAL IS ENVIRONMENTALLY ACCEPTABLE.
- DEMOLISH AND COMPLETELY REMOVE ALL UTILITIES WITHIN THE PROPERTY LIMITS INCLUDING STORM SEWER LINES, TELEPHONE, ELECTRIC, GAS, DOMESTIC WATER SERVICE AND SANITARY SEWER LINES AND APPURTENANCES INCLUDING BUT NOT LIMITED TO PITS, SANITARY MANHOLES, PIPING, ETC., EXCEPT THOSE INDICATED TO REMAIN ON THE CONTRACT DRAWINGS.
- DEMOLISH AND REMOVE ALL UNDERGROUND OBSTRUCTIONS INDICATED ON THE CONTRACT AND REFERENCE DRAWINGS.
- SECURE THE WORK SITE FOR THE DURATION OF THE PROJECT ON AND AROUND-THE-CLOCK BASIS TO PREVENT UNAUTHORIZED ENTRY INTO THE SITE.
- PROVIDE THE REQUIRED INSPECTION, TESTING AND PROGRESS REPORTS TO THE OWNER.



LEGEND		
	EXISTING	PROPOSED
PROPERTY LINE/ROW	—	—
CONTOUR	120	
SPOT ELEVATION	x122.53	
STORM MANHOLE	⊙	
SANITARY MANHOLE	⊙	
COMBINED MANHOLE	⊙	
CATCH BASIN	□	
STORM SEWER	—	
SANITARY SEWER	—	
COMBINED SEWER	—	
WATER MAIN	—	
GAS MAIN	—	
ELECTRIC CONDUIT	—	
TELEPHONE CONDUIT	—	
VALVE	⊕	
FIRE HYDRANT	⊕	
LIGHT POLE	⊕	
UTILITY POLE	⊕	
OVERHEAD WIRE	—	
JUNCTION BOX	⊕	
ELECTRIC MANHOLE	⊕	
LIMITS OF BUILDING, PAVEMENT AND SIDEWALK REMOVAL	XXXXXX	
REMOVAL OF LINEAR FEATURE	//////	
REMOVAL OF TREE	X	
LIMIT OF DISTURBANCE	---	
TREE PROTECTION FENCE	—○—	

GENERAL NOTES:

- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
- HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

SIGNATURE	JOHN COTE	2/12/2026
PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800		

LANGAN

Langan Engineering and Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

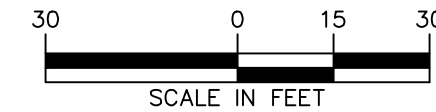
CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

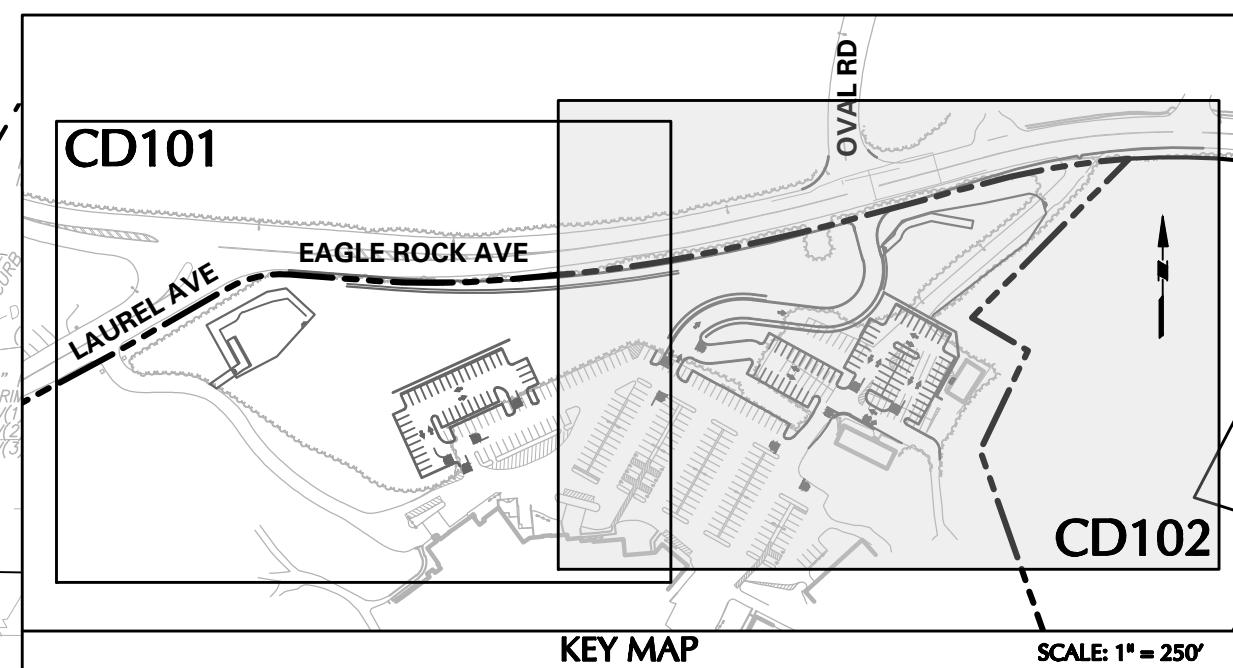
ESSEX COUNTY NEW JERSEY

Drawing Title

PARTIAL DEMOLITION PLAN

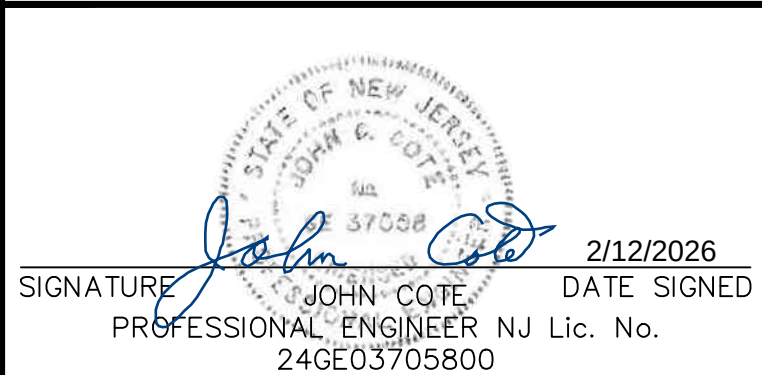
Project No.	Drawing No.
101049802	CD101
Date	
FEBRUARY 12, 2026	
Drawn By	
YA	
Checked By	
MV	
Sheet 3 of 36	





-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS



LANGAN

Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com

NJ Certificate of Authorization No. 24GA27996400

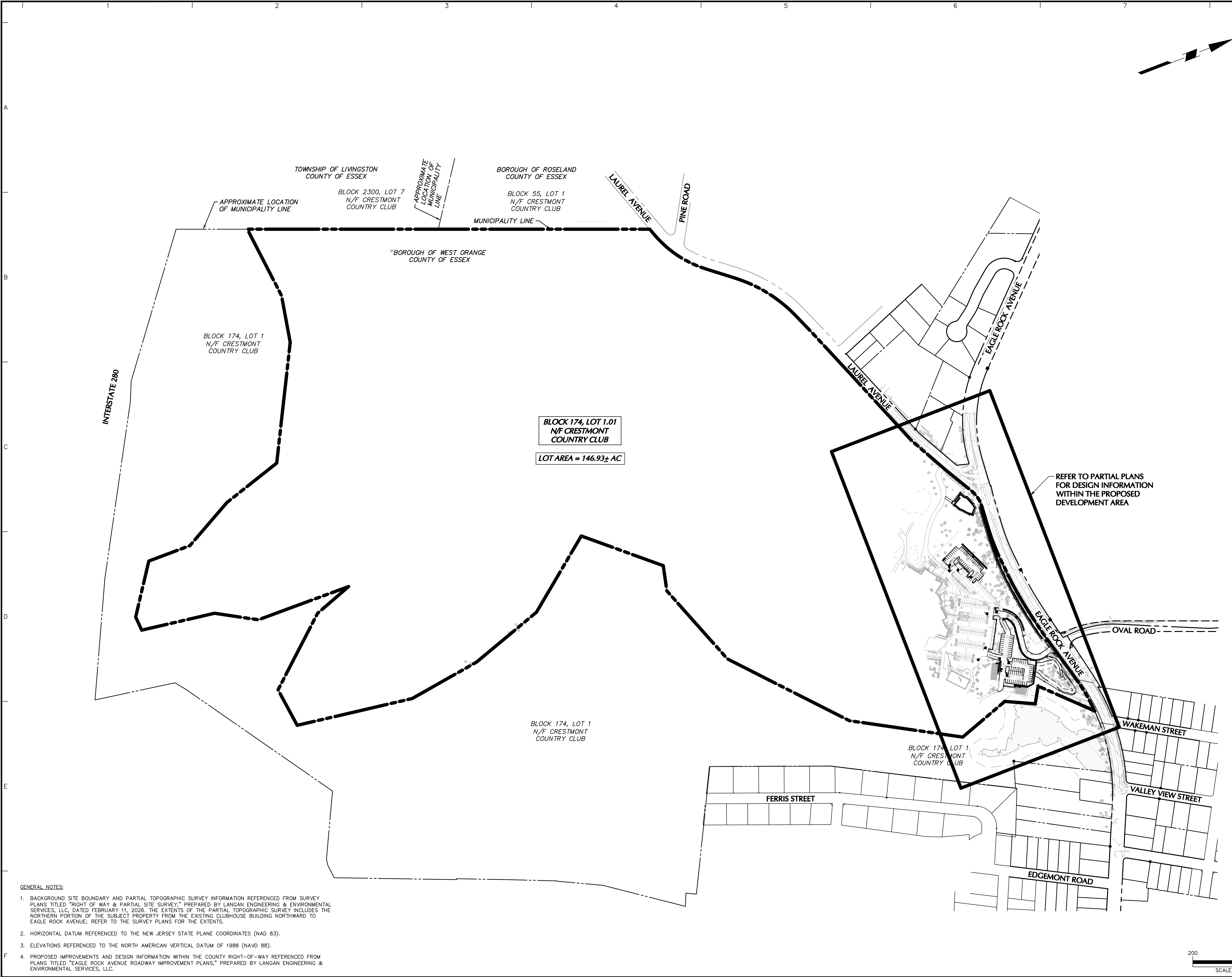
Project

**CRESTMONT COUNTRY
CLUB & EAGLE ROCK AVE
IMPROVEMENTS**

**BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE**

PARTIAL DEMOLITION PLAN

Project No.	Drawing No. CD102
101049802	
Date	
FEBRUARY 12, 2026	
Drawn By	CD102
YA	
Checked By	
MJV	Sheet 4 of 36



GENERAL NOTES:

- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
- HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

LEGEND	
EXISTING	PROPOSED
PROPERTY LINE/ROW	
BUILDING LINE	
SETBACK LINE	
CURB LINE	
ADA ACCESSIBLE RAMP	
ADA SYMBOL	
TRAFFIC SIGN	
SIGN DESIGNATION	
PARKING ROW COUNT	
PARKING COUNT	
SUB-TOTAL	
DIRECTION ARROW	
STOP BAR	
RETAINING WALL	
FENCE	
GUIDE RAIL	
CROSSWALK (STRIPING)	
CONCRETE SIDEWALK	
MANHOLE	
CATCH BASIN	
FIRE HYDRANT	
LIGHT POLE	
TREE	

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

STATE OF NEW JERSEY
JANUARY 11, 2026
SIGNATURE: *John Cote* DATE SIGNED: 2/12/2026
PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

LANGAN
Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

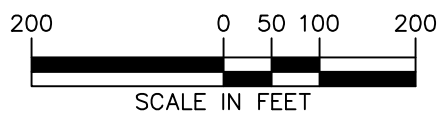
Project

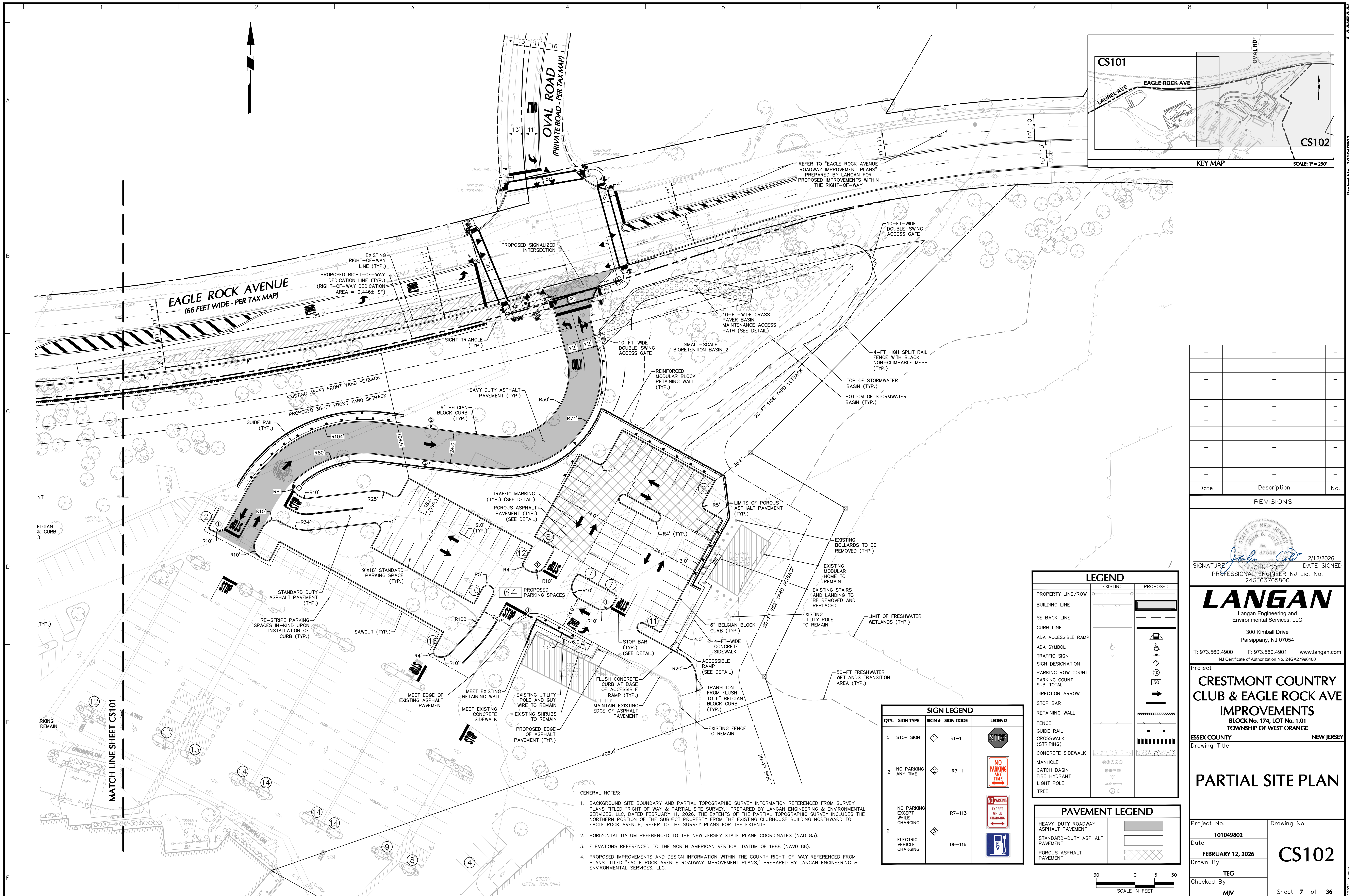
CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

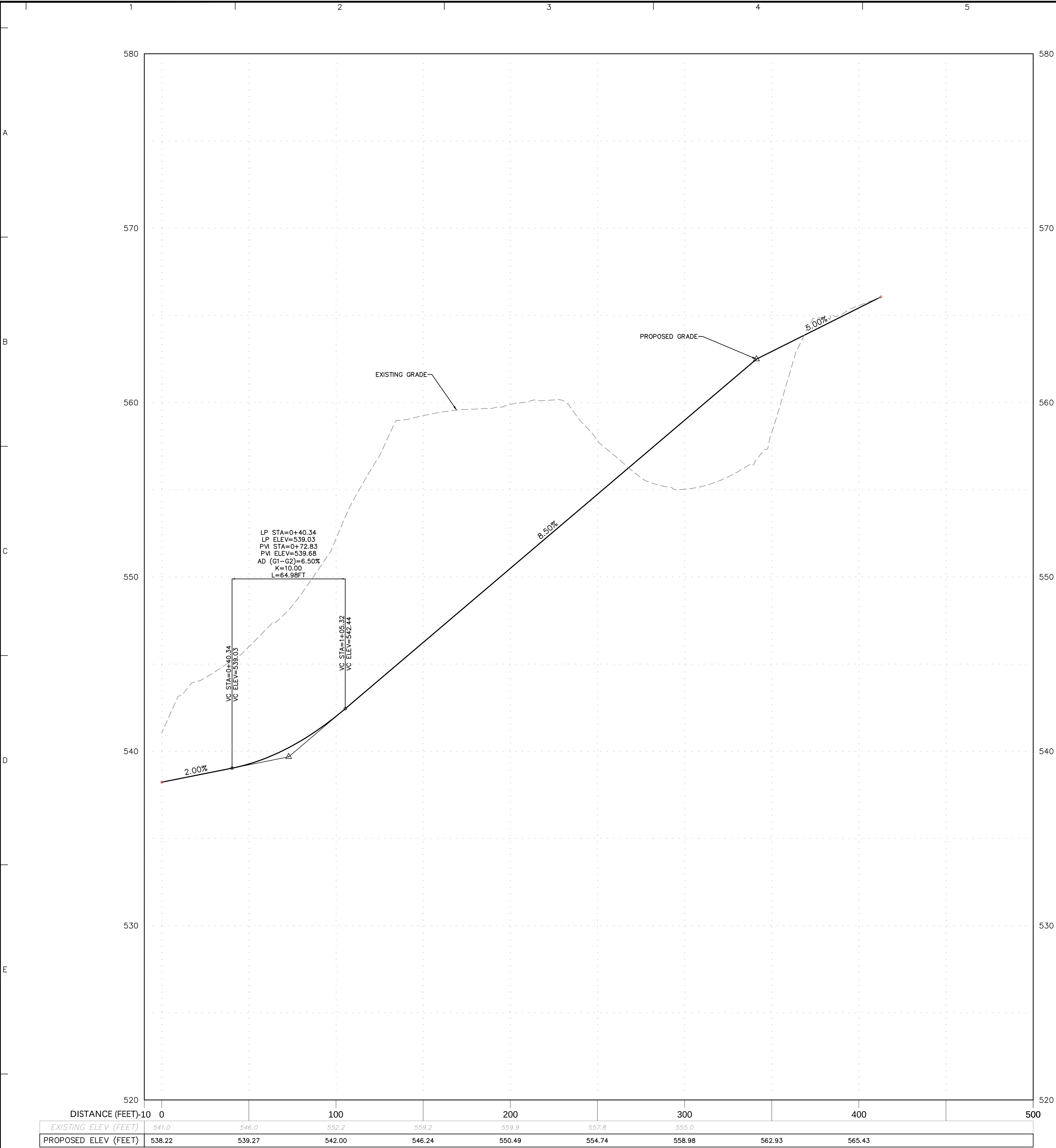
ESSEX COUNTY NEW JERSEY
Drawing Title

OVERALL SITE PLAN

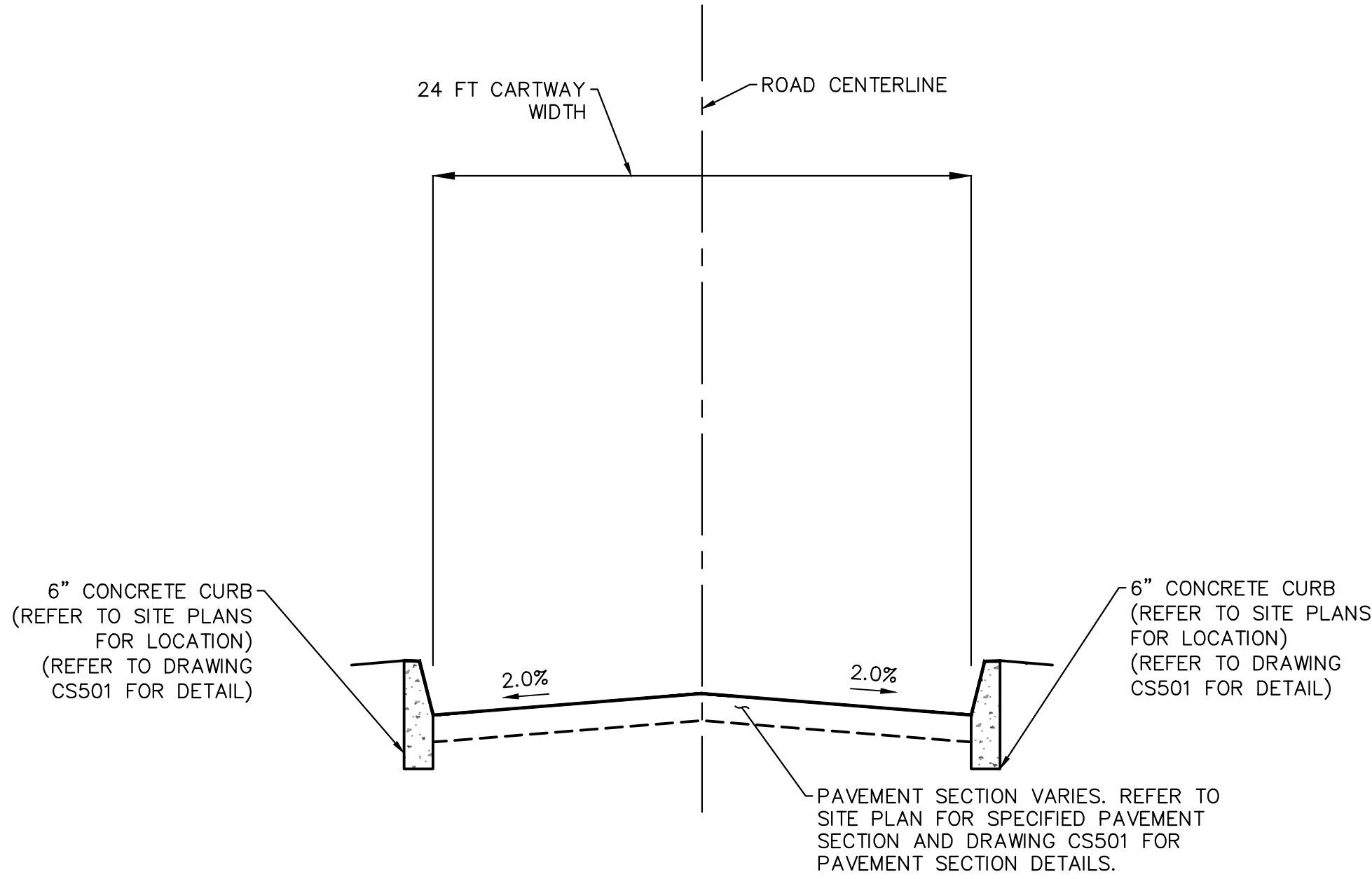
Project No.	Drawing No.
101049802	CS100
Date	Drawn By
FEBRUARY 12, 2026	TEG
Checked By	MJV
	Sheet 5 of 36







DRIVEWAY PROFILE



DRIVEWAY CROSS SECTION
SCALE: N.T.S.

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS

SIGNATURE

DATE SIGNED

JOHN COTE

2/12/2026

PROFESSIONAL ENGINEER

NJ Lic. No. 24GE03705800

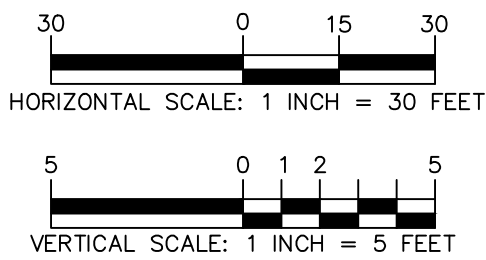
LANGAN
Langan Engineering and
Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

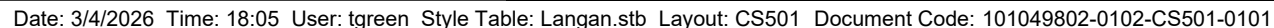
Project
CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

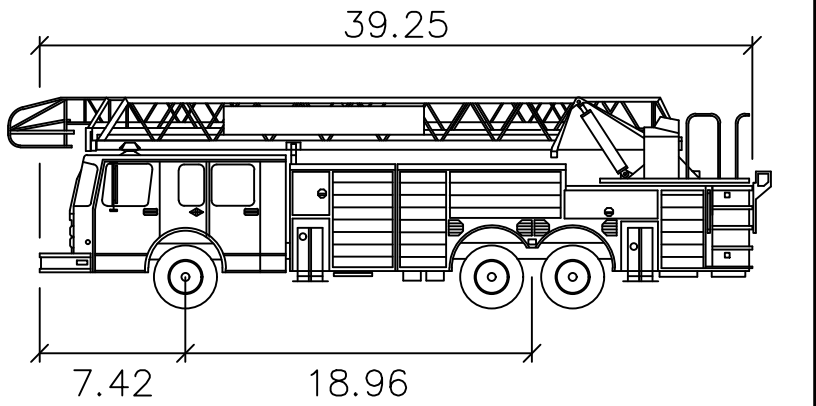
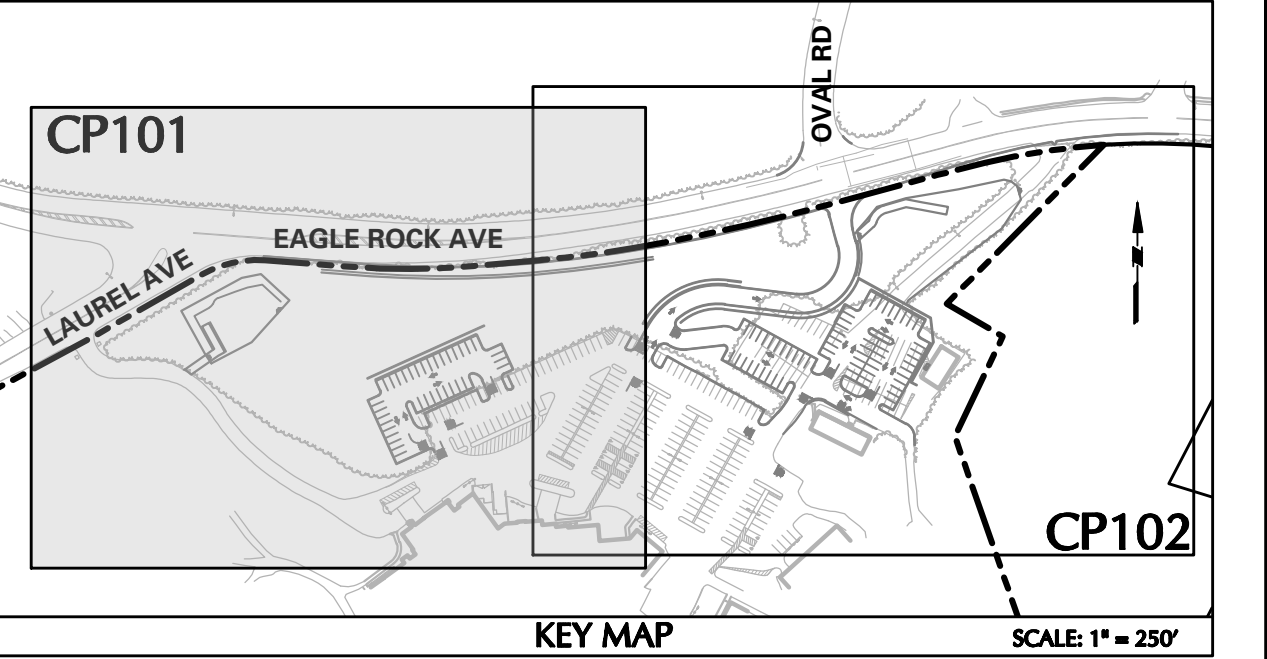
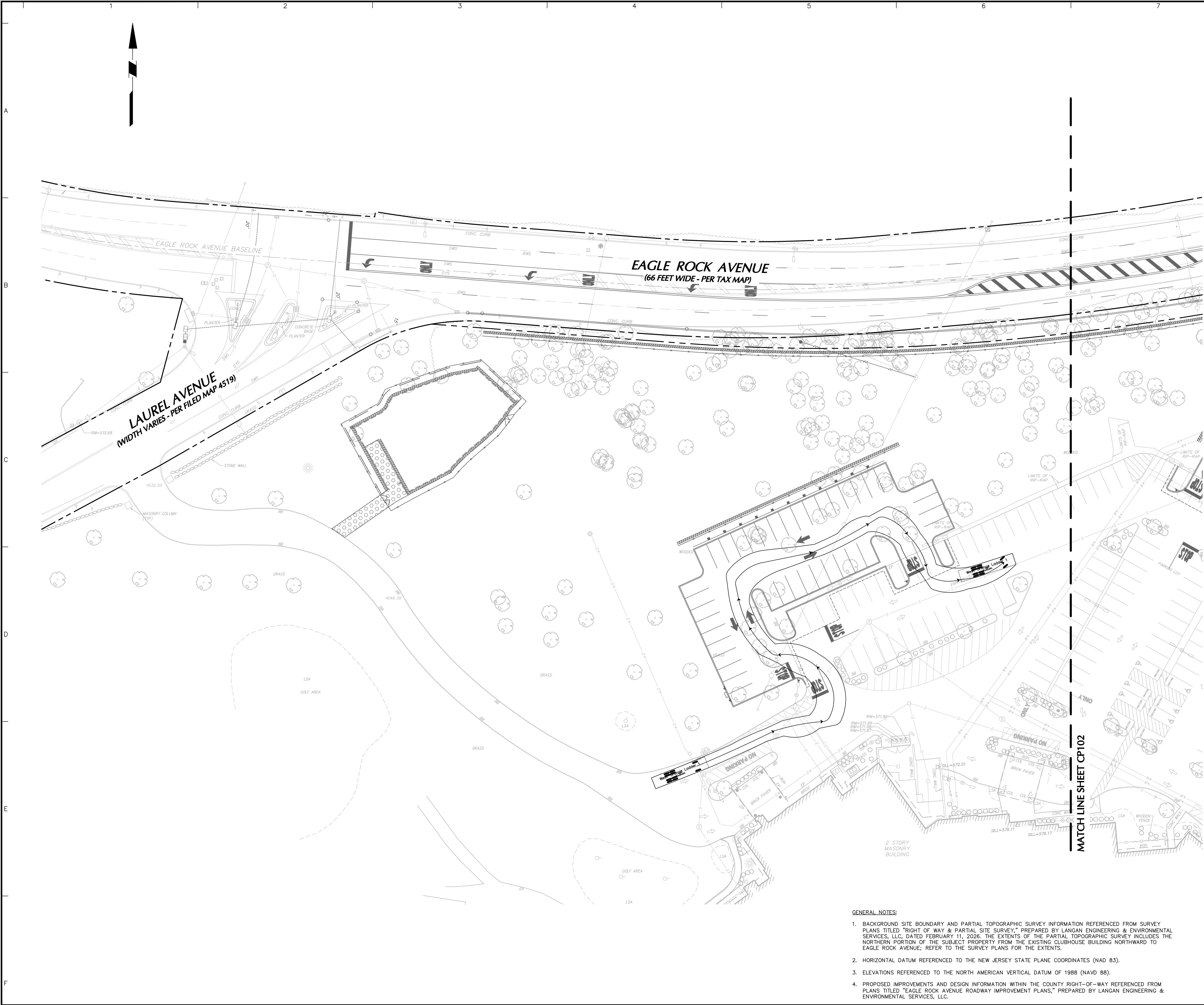
ESSEX COUNTY NEW JERSEY
Drawing Title

DRIVEWAY PROFILE & CROSS SECTION

Project No. 101049802	Drawing No.
Date FEBRUARY 12, 2026	CS200
Drawn By YA	
Checked By MJV	
Sheet 8 of 36	







West Orange Ladder 1	
	feet
Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

STATE OF NEW JERSEY
JUL 24 2026
SIGNATURE: *John Cote* DATE SIGNED: 2/12/2026
PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

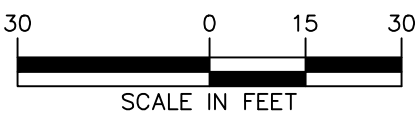
LANGAN
Langan Engineering and Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

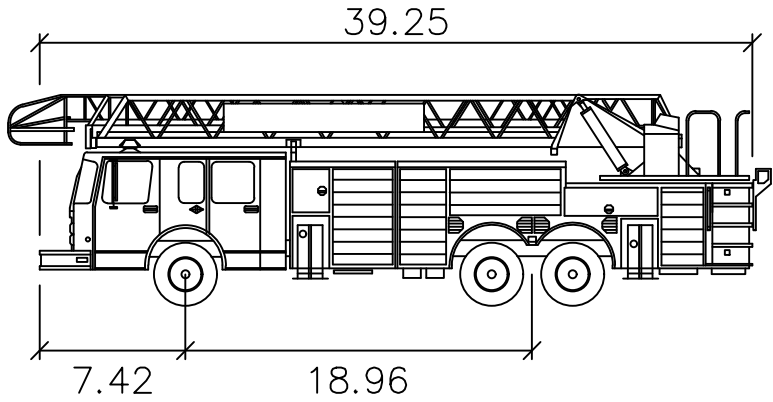
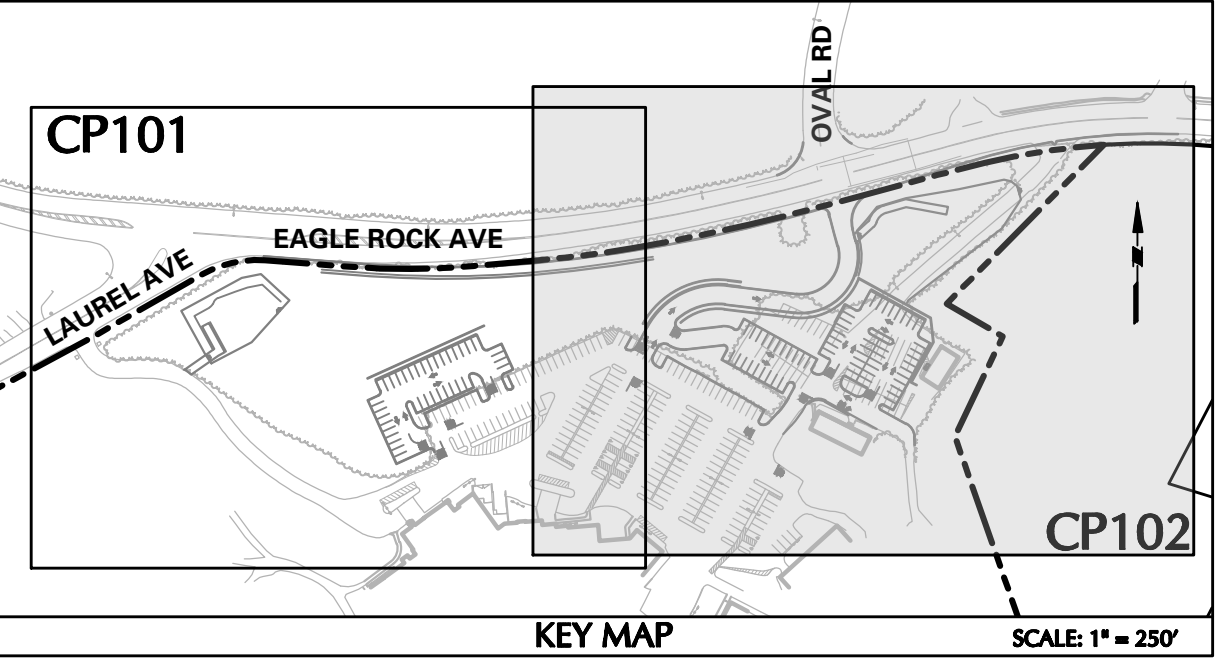
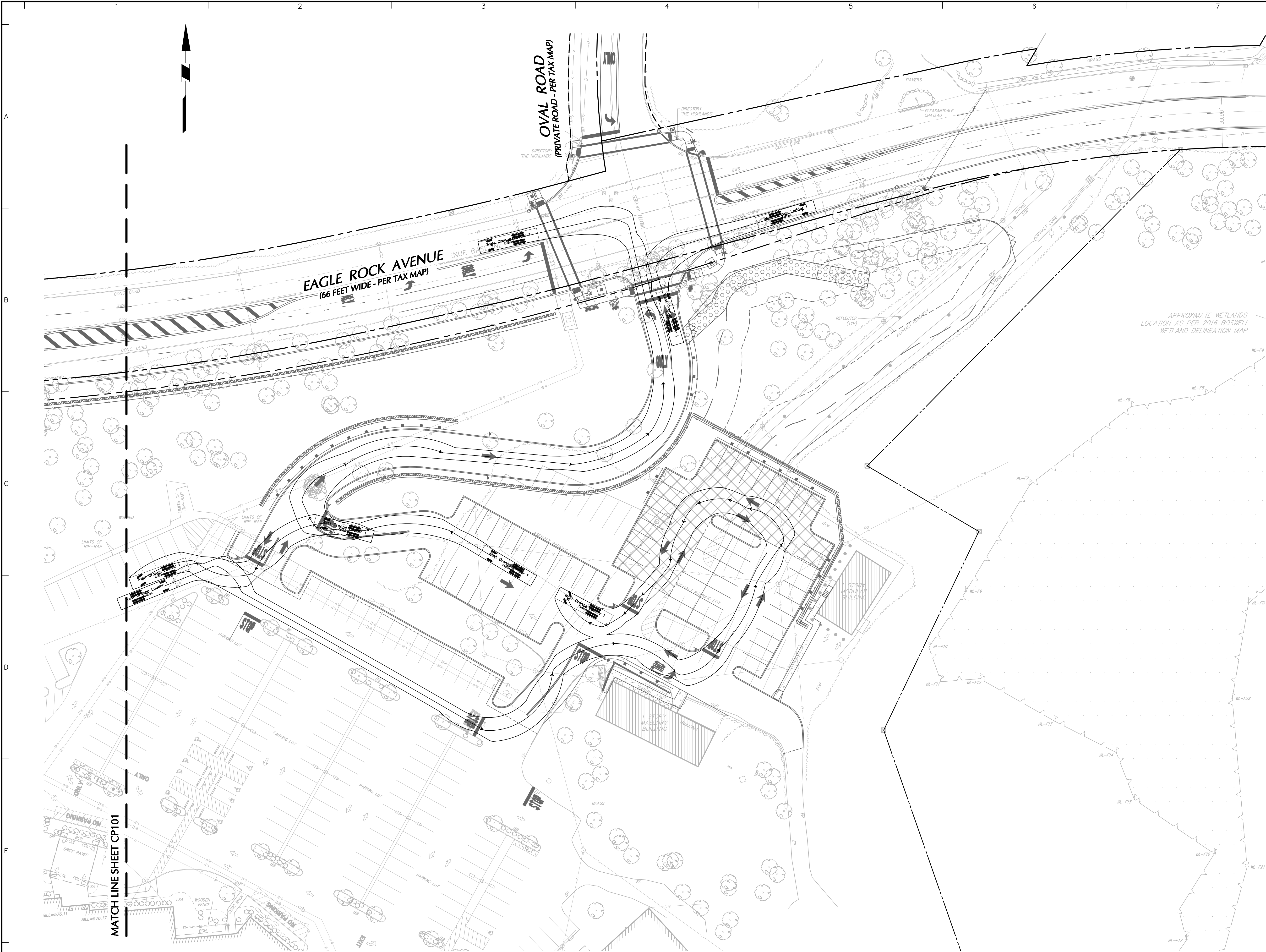
Project
CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY
Drawing Title
PARTIAL FIRE TRUCK CIRCULATION PLAN

Project No. 101049802	Drawing No. CP101
Date FEBRUARY 12, 2026	
Drawn By YA	
Checked By MJV	Sheet 10 of 36

- GENERAL NOTES:
- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
 - HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
 - ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 - PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.





West Orange Ladder 1

Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

SIGNATURE: *John Cote* DATE SIGNED: 2/12/2026

PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

LANGAN

Langan Engineering and Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

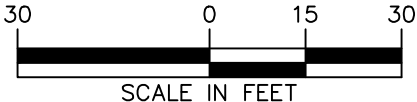
ESSEX COUNTY NEW JERSEY

Drawing Title

PARTIAL FIRE TRUCK CIRCULATION PLAN

Project No.	Drawing No.
101049802	CP102
Date	FEBRUARY 12, 2026
Drawn By	YA
Checked By	MJV
Sheet 11 of 36	

- GENERAL NOTES:
- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
 - HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
 - ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 - PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

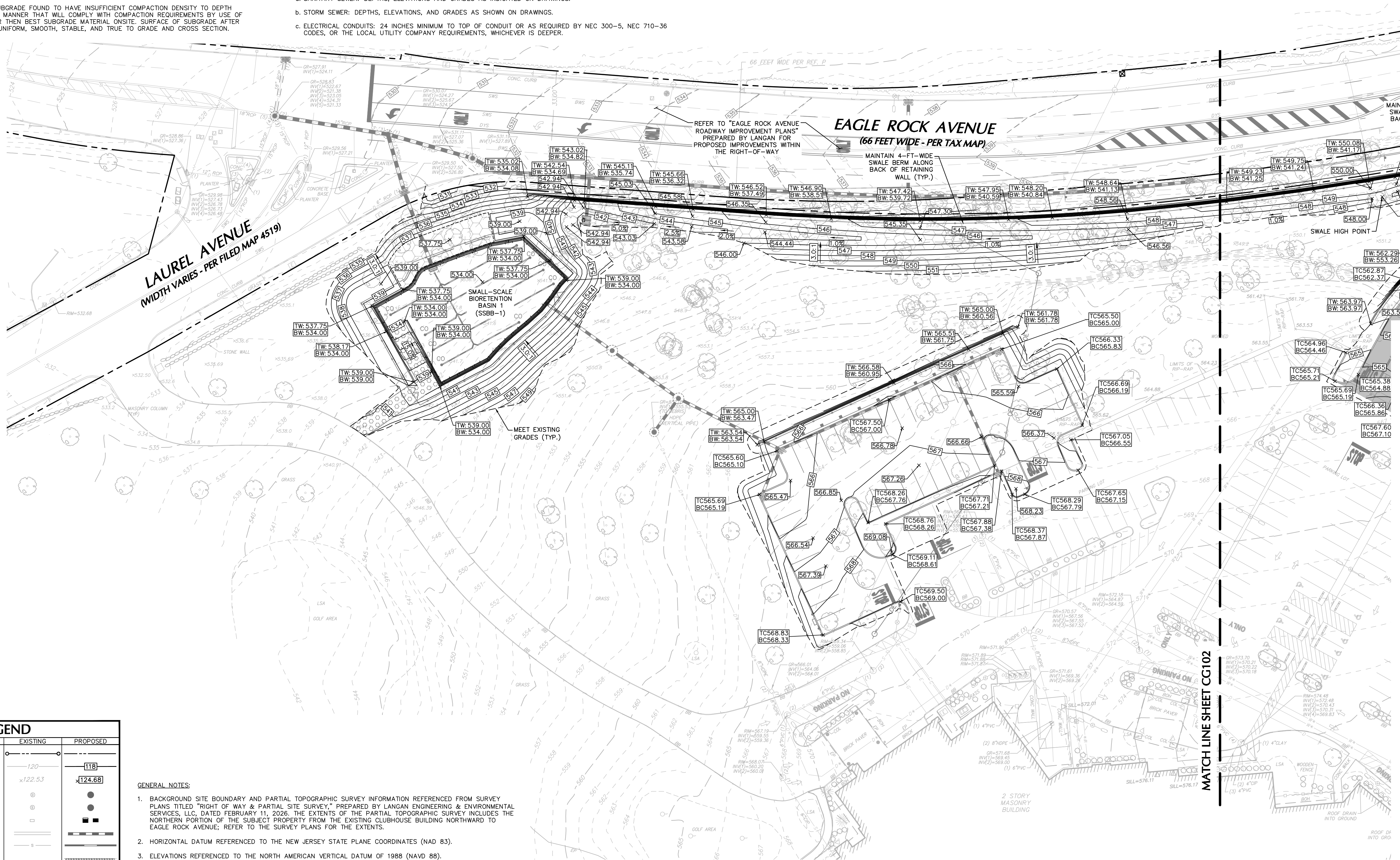
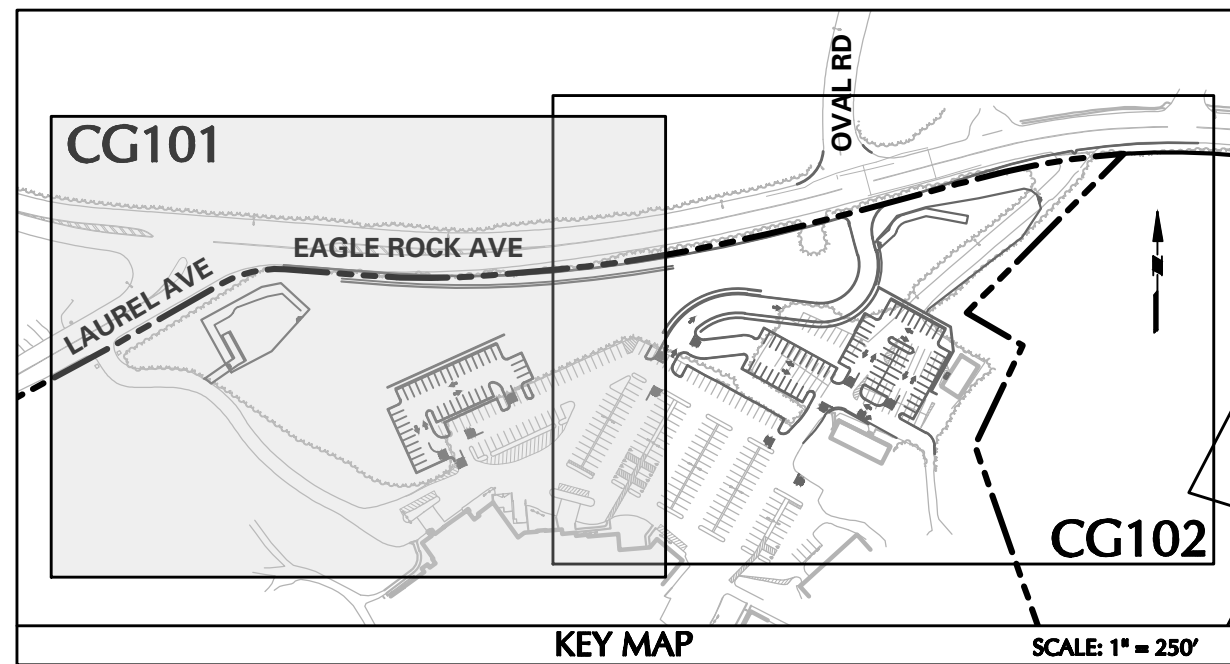


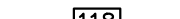
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
3. PVC = POLYVINYL CHLORIDE PIPE
HDPE = HIGH DENSITY POLYETHYLENE PIPE
RCP = REINFORCED CONCRETE PIPE
4. STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.
5. COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA GIVEN ELSEWHERE:

FILL AREA	PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	98%
SIDEWALKS	95%
LANDSCAPE AREAS	90%
TRENCH BACKFILL	95%
6. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
7. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIALS EQUAL TO OR BETTER THE BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.

FILL AREA	PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	98%
SIDEWALKS	95%
LANDSCAPE AREAS	90%
TRENCH BACKFILL	95%

- ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.
9. THE CONTRACTOR SHALL REVIEW THE STORM DRAINAGE CONNECTIONS TO THE INLETS, MANHOLES, ETC. AND PROVIDE THE APPROPRIATE BOX SIZE, MANHOLES SIZE, TOP PIECES, ETC. AS NECESSARY TO ACCOMMODATE THE PROPOSED INLET AND OUTLET PIPES.
10. CONTRACTOR TO PROVIDE A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE OWNER'S ENGINEER FOR EACH CATCH BASIN, MANHOLE, AND OTHER PRECAST STORM STRUCTURES DETAILING STRUCTURE DIMENSIONS, LOCATION OF STEPS, PIPE CONNECTIONS AND OPENINGS, AND RIM/GRADE/INVERT ELEVATIONS. A SHOP DRAWING, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY, SHALL BE PROVIDED FOR EACH TYPE OF PRECAST CONCRETE STRUCTURE THAT DETAILS THE STRUCTURAL DESIGN. ALL PRECAST STRUCTURES AND FRAMES/GRADES SHALL MEET H-20 TRAFFIC LOADING REQUIREMENTS. CATCH BASINS, MANHOLES, AND DRAINAGE SYSTEM SHALL BE CONSTRUCTED IN A MANNER THAT WILL PREVENT FLOATION DUE TO GROUNDWATER. CONTRACTOR SHALL SUBMIT METHODOLOGY AND SUPPORTING BUOYANCY CALCULATIONS PREPARED BY AND SIGNED/SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY FOR ANTI-FLOATION OF THE STORM STRUCTURES IF THEY ARE TO BE LOCATED WITHIN THE GROUNDWATER TABLE.
11. THE CONTRACTOR SHALL PROVIDE A RETAINING WALL DESIGN FOR EACH PROPOSED WALL PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY. THE OWNER'S ENGINEER PRIOR TO INSTALLATION, THE CONTRACTOR AND THE RETAINING WALL DESIGNER SHALL SPECIFICALLY NOTE ANY EXISTING OR PROPOSED STRUCTURES THAT ARE LOCATED IN OR NEAR THE WALL (INLETS, LIGHT POLES, FENCES, STORM PIPES, UTILITIES, GUIDE RAILS, AND OTHER FEATURES) AND SHALL COORDINATE DESIGN AND INSTALLATION OF RETAINING WALL SUCH THAT THE FEATURES ARE ACCOMMODATED IN THE DESIGN AS APPROPRIATE.
12. PIPE LENGTHS PROVIDED ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
13. CONTRACTOR SHALL CLEAR EXISTING STORM PIPES OF ANY DEBRIS OR SEDIMENT.
14. TRENCH DEPTH REQUIREMENTS MEASURED FROM FINISHED GRADE OR PAVED SURFACE SHALL MEET THE FOLLOWING REQUIREMENTS OR APPLICABLE CODES AND ORDINANCES:
- a. SANITARY SEWER: DEPTHS, ELEVATIONS AND GRADES AS INDICATED ON DRAWINGS.
 - b. STORM SEWER: DEPTHS, ELEVATIONS, AND GRADES AS SHOWN ON DRAWINGS.
 - c. ELECTRICAL CONDUITS: 24 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY NEC 300-5, NEC 710-36 CODES, OR THE LOCAL UTILITY COMPANY REQUIREMENTS, WHICHEVER IS DEEPER.
- d. TV CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
- e. TELEPHONE CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
- f. GAS MAINS AND SERVICE: 30 INCHES MINIMUM TO TOP OF PIPE, OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
15. SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
16. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM IF ANY SPECIFIC SITEWORK ITEM DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.
17. PROPOSED SIDEWALKS SHALL BE CONSTRUCTED WITH CROSS-SLOPES THAT DO NOT EXCEED 1.5%.
18. PROPOSED RCP PIPE IS TO BE CLASS V PIPE.
19. ALL PIPE WITH A BURIAL DEPTH OF 20 FEET OR GREATER SHALL BE SMOOTH INTERIOR CORRUGATED METAL PIPE.



	EXISTING	PROPOSED
PROPERTY LINE/ROW		
CONTOUR		
SPOT ELEVATION		
STORM MANHOLE		
SANITARY MANHOLE		
CATCH BASIN		
STORM SEWER		
SANITARY SEWER		
RETAINING WALL		
ROOF DRAIN / UNDERDRAIN		

1. BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY, FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
2. HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
3. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTRY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

STATE OF NEW JERSEY
JOHN COTE
1/12
37058

John Cote 2/12/2006

SIGNATURE JOHN COTE DATE SIGNED
PROFESSIONAL ENGINEER NJ Lic. No.
24GE03705800

LANGAN

Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
arsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY

CRESTMONT COUNTRY

CLUB & FAGLE ROCK AVE

IMPROVEMENTS

IMPROVEMENTS

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY

ESSEX COUNTY	NEW JERSEY
Drawing Title	

Drawing Title

PARTIAL GRADING

PARTIAL GRADING

PLAN

PLAIN

Project No.	Drawing No.
-------------	-------------

101049802	
-----------	--

Date _____

FEBRUARY 12, 2026 CG101

Drawn By

TEG	
-----	--

Checked By	
------------	--

MIV Sheet 12 of 36

File: Langan.stb Layout: CG101 Document Code: 101049802-0102-CG101-0102

Date: 3/4/2026 Time: 18:10 User: tgreen Style Table: Langan.stb Layout: CG101 Document Code: 101049802-0102-CG101-0102

CG101

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE/ROW		
CONTOUR		
SPOT ELEVATION		
STORM MANHOLE		
SANITARY MANHOLE		
CATCH BASIN		
STORM SEWER		
SANITARY SEWER		
RETAINING WALL		
ROOF DRAIN/UNDERDRAIN		
TURF REINFORCEMENT LINER		
POROUS ASPHALT PAVEMENT		

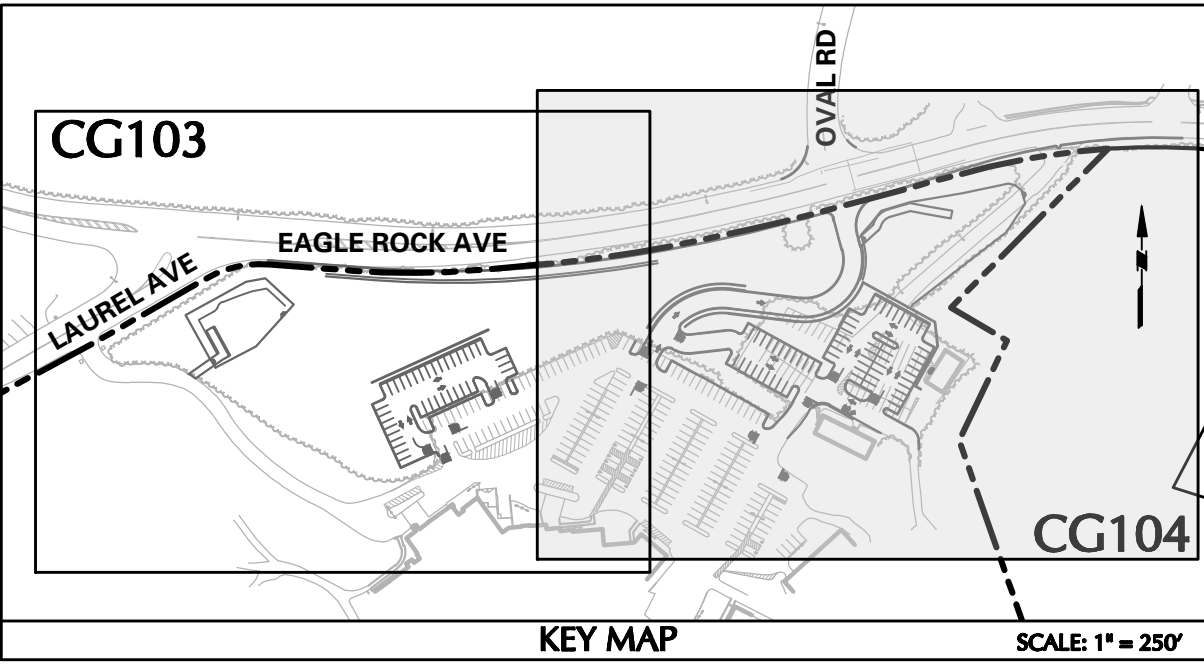
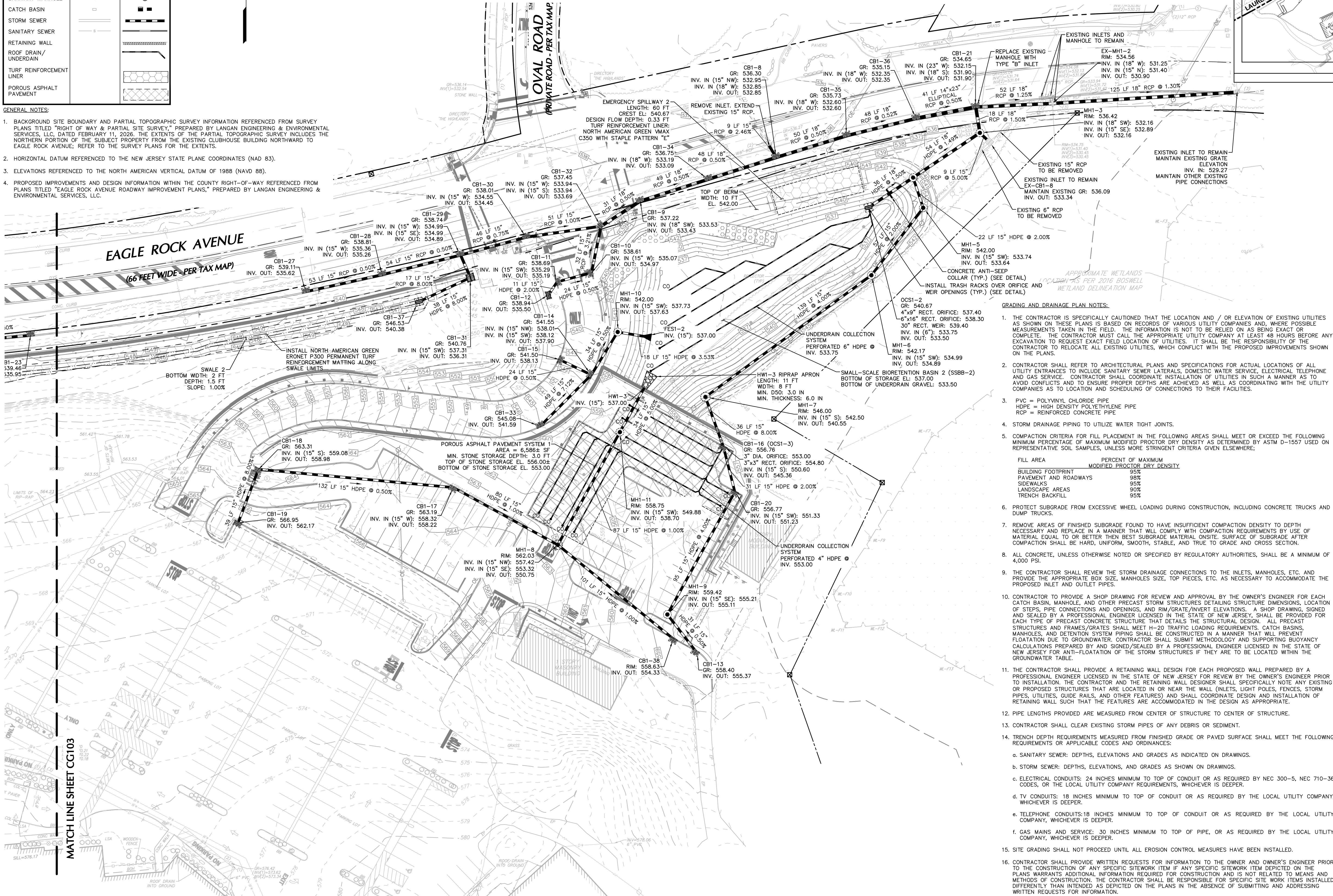
GENERAL NOTES:

1. BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.

2. HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).

3. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

4. PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.



- GRADING AND DRAINAGE PLAN NOTES:
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES, WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

2. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC WATER SERVICE, ELECTRICAL TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE UTILITY COMPANIES AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.

3. PVC = POLYVINYL CHLORIDE PIPE
HDPE = HIGH DENSITY POLYETHYLENE PIPE
RCP = REINFORCED CONCRETE PIPE

4. STORM DRAINAGE PIPING TO UTILIZE WATER TIGHT JOINTS.

5. COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA GIVEN ELSEWHERE:

FILL AREA	PERCENT OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	98%
SIDEWALKS	95%
LANDSCAPE AREAS	90%
TRENCH BACKFILL	95%

6. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.

7. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THEN BEST SUBGRADE MATERIAL ON-SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS SECTION.

8. ALL CONCRETE, UNLESS OTHERWISE NOTED OR SPECIFIED BY REGULATORY AUTHORITIES, SHALL BE A MINIMUM OF 4,000 PSI.

9. THE CONTRACTOR SHALL REVIEW THE STORM DRAINAGE CONNECTIONS TO THE INLETS, MANHOLES, ETC. AND PROVIDE THE APPROPRIATE BOX SIZE, MANHOLES SIZE, TOP PIECES, ETC. AS NECESSARY TO ACCOMMODATE THE PROPOSED INLET AND OUTLET PIPES.

10. CONTRACTOR TO PROVIDE A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE OWNER'S ENGINEER FOR EACH CATCH BASIN, MANHOLE, AND OTHER PRECAST STORM STRUCTURES DETAILING STRUCTURE DIMENSIONS, LOCATION OF STEPS, PIPE CONNECTIONS AND OPENINGS, AND RIM/GRATE/INVERT ELEVATIONS. A SHOP DRAWING, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY, SHALL BE PROVIDED FOR EACH TYPE OF PRECAST CONCRETE STRUCTURE THAT DETAILS THE STRUCTURAL DESIGN. ALL PRECAST STRUCTURES AND FRAMES/GRATES SHALL MEET H-20 TRAFFIC LOADING REQUIREMENTS, CATCH BASINS, MANHOLES, AND DETENTION SYSTEM PIPING SHALL BE CONSTRUCTED IN A MANNER THAT WILL PREVENT FLOATION DUE TO GROUNDWATER. CONTRACTOR SHALL SUBMIT METHODOLOGY AND SUPPORTING BUOYANCY CALCULATIONS PREPARED BY AND SIGNED/SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY FOR ANTI-FLOATION OF THE STORM STRUCTURES IF THEY ARE TO BE LOCATED WITHIN THE GROUNDWATER TABLE.

11. THE CONTRACTOR SHALL PROVIDE A RETAINING WALL DESIGN FOR EACH PROPOSED WALL PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY FOR REVIEW BY THE OWNER'S ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR AND THE RETAINING WALL DESIGNER SHALL SPECIFICALLY NOTE ANY EXISTING OR PROPOSED STRUCTURES THAT ARE LOCATED IN OR NEAR THE WALL (INLETS, LIGHT POLES, FENCES, STORM PIPES, UTILITIES, GUIDE RAILS, AND OTHER FEATURES) AND SHALL COORDINATE DESIGN AND INSTALLATION OF RETAINING WALL SUCH THAT THE FEATURES ARE ACCOMMODATED IN THE DESIGN AS APPROPRIATE.

12. PIPE LENGTHS PROVIDED ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

13. CONTRACTOR SHALL CLEAR EXISTING STORM PIPES OF ANY DEBRIS OR SEDIMENT.

14. TRENCH DEPTH REQUIREMENTS MEASURED FROM FINISHED GRADE OR PAVED SURFACE SHALL MEET THE FOLLOWING REQUIREMENTS OR APPLICABLE CODES AND ORDINANCES:

a. SANITARY SEWER: DEPTHS, ELEVATIONS AND GRADES AS INDICATED ON DRAWINGS.
b. STORM SEWER: DEPTHS, ELEVATIONS, AND GRADES AS SHOWN ON DRAWINGS.
c. ELECTRICAL CONDUITS: 24 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY NEC 300-5, NEC 710-36 CODES, OR THE LOCAL UTILITY COMPANY REQUIREMENTS, WHICHEVER IS DEEPER.
d. TV CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
e. TELEPHONE CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
f. GAS MAINS AND SERVICE: 30 INCHES MINIMUM TO TOP OF PIPE, OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.

15. SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

16. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS FOR INFORMATION TO THE OWNER AND OWNER'S ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM IF ANY SPECIFIC SITEWORK IS DEPICTED ON THE PLANS WARRANTS ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION AND IS NOT RELATED TO MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIFIC SITE WORK ITEMS INSTALLED DIFFERENTLY THAN INTENDED AS DEPICTED ON THE PLANS IN THE ABSENCE OF SUBMITTING AND ADDRESSING WRITTEN REQUESTS FOR INFORMATION.

17. PROPOSED SIDEWALKS SHALL BE CONSTRUCTED WITH CROSS-SLOPES THAT DO NOT EXCEED 1.5%.

18. PROPOSED RCP PIPE IS TO BE CLASS V PIPE.

19. ALL PIPE WITH A BURIAL DEPTH OF 20 FEET OR GREATER SHALL BE SMOOTH INTERIOR CORRUGATED METAL PIPE.

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS

STATE OF NEW JERSEY
JANUARY 11, 2026
31058

SIGNATURE:
DATE SIGNED: 2/12/2026
PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

LANGAN
Langan Engineering and Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

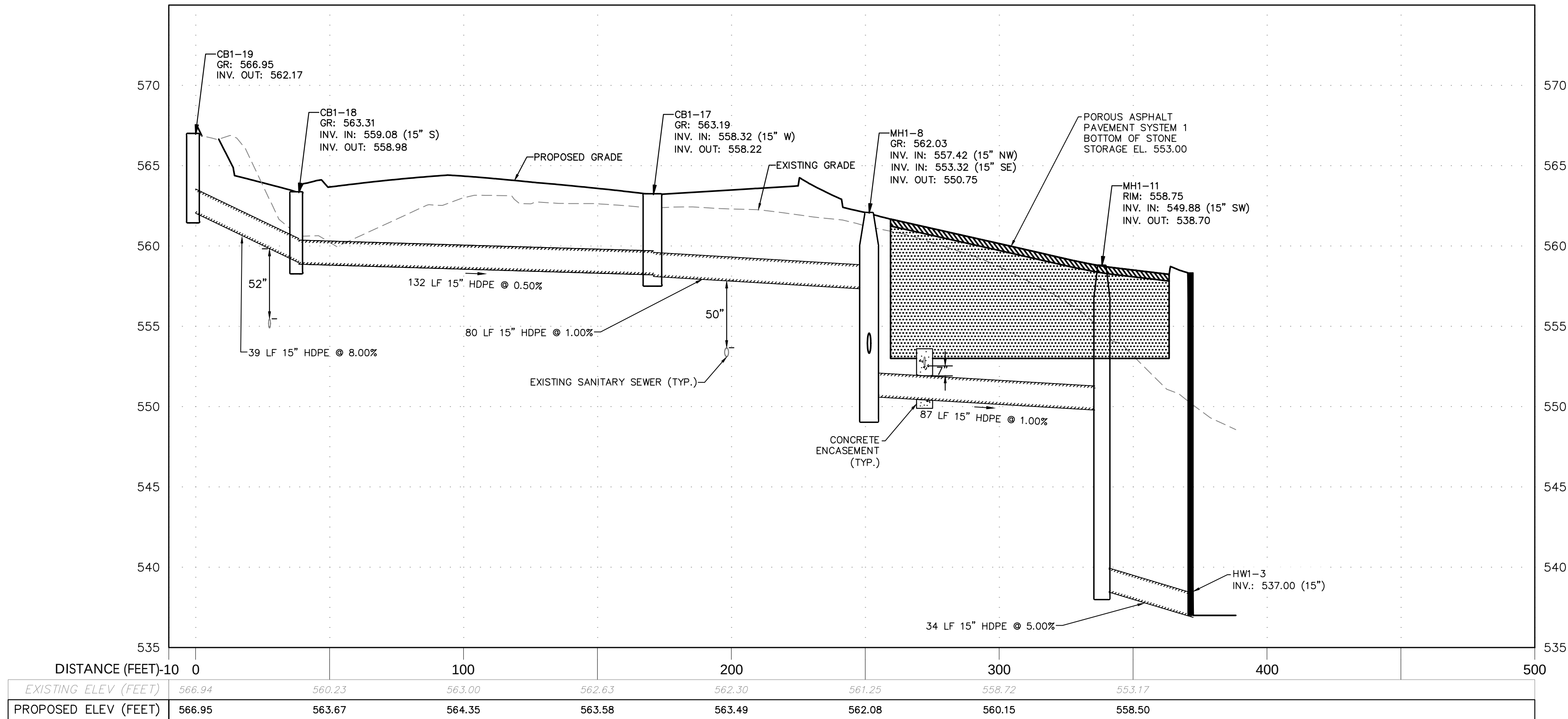
ESSEX COUNTY

Drawing Title

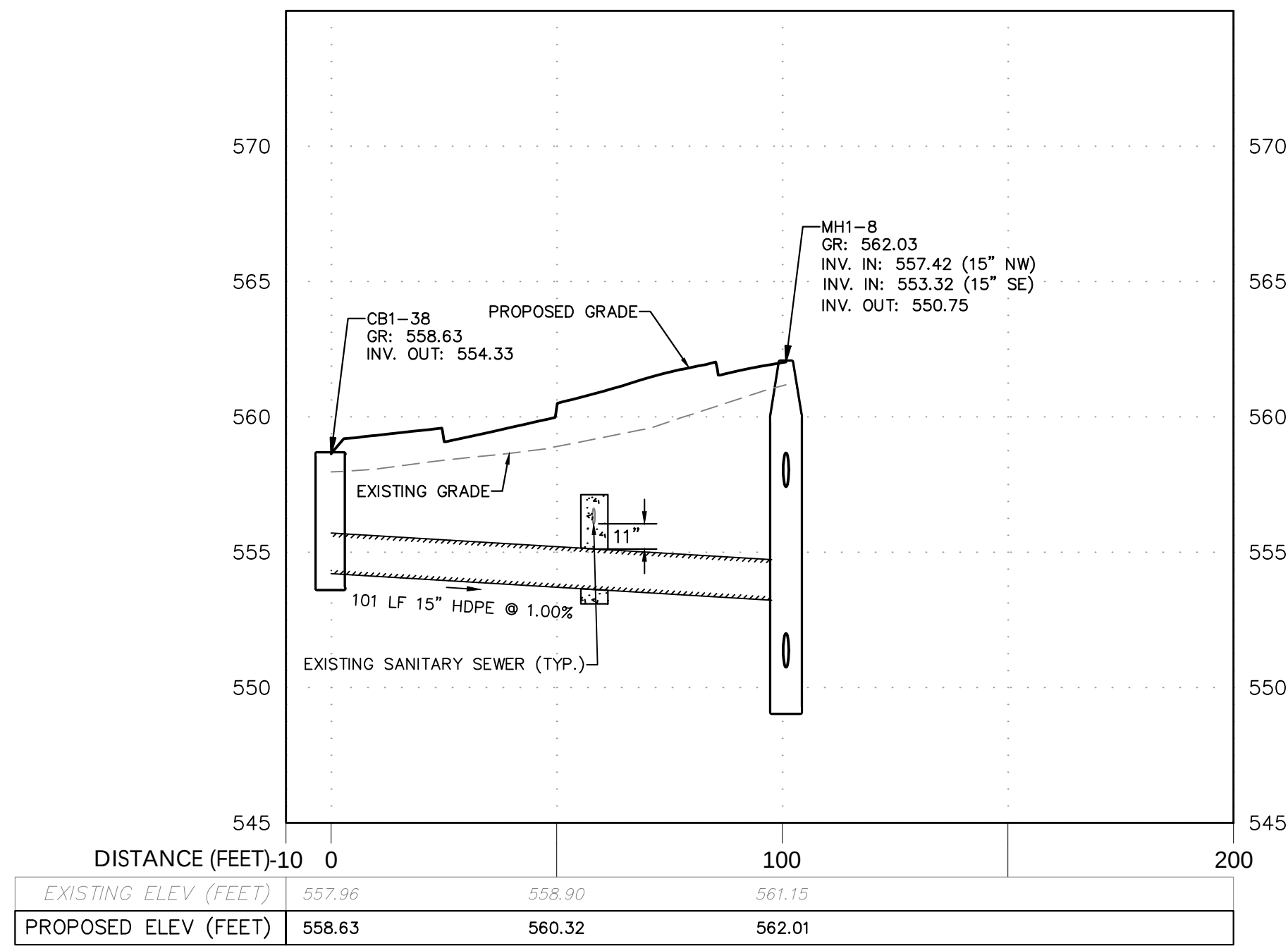
PARTIAL DRAINAGE PLAN

Project No. 101049802
Date FEBRUARY 12, 2026
Drawn By TEG
Checked By MVV

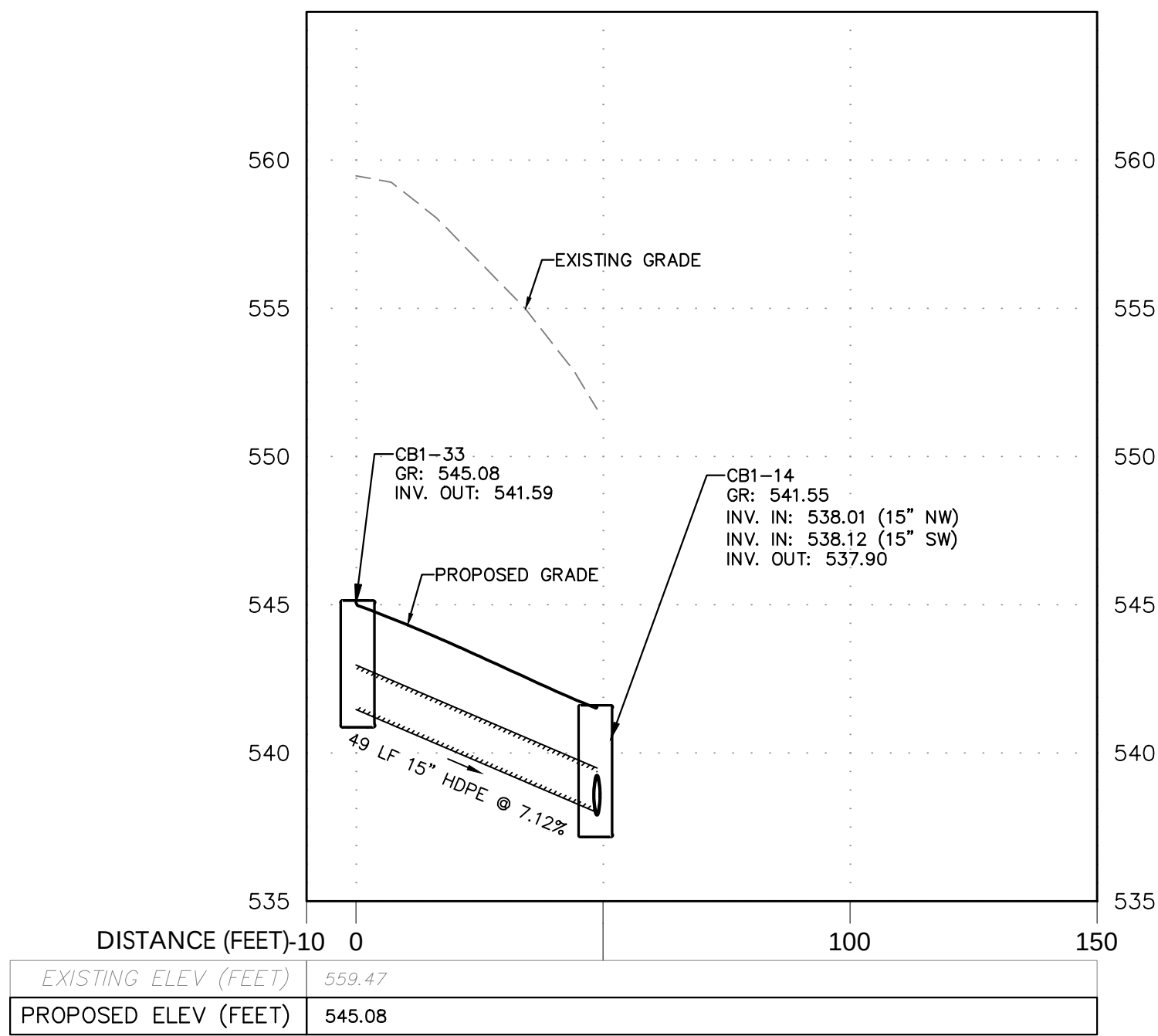
Drawing No. CG104
Sheet 15 of 36



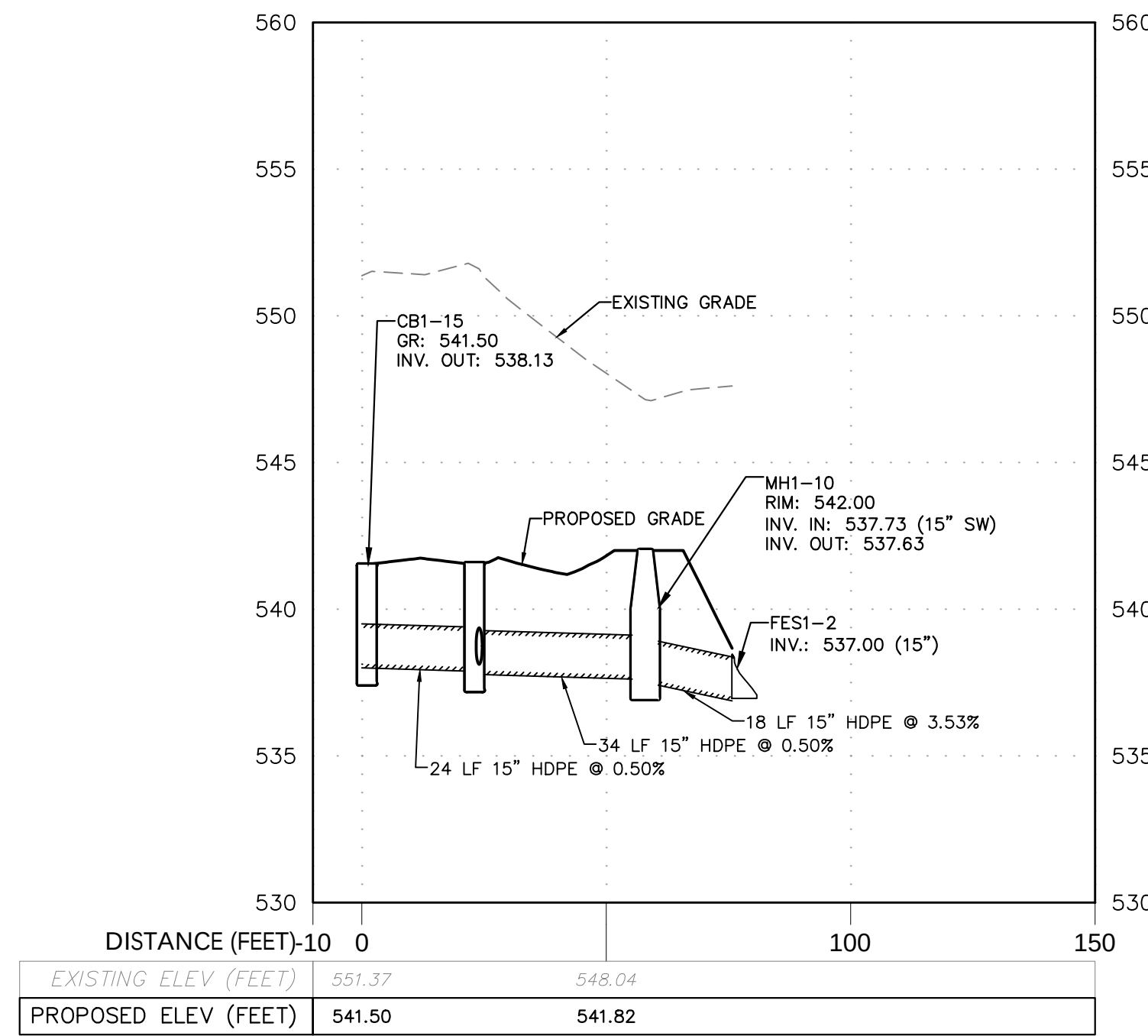
CB1-19 TO HW1-3



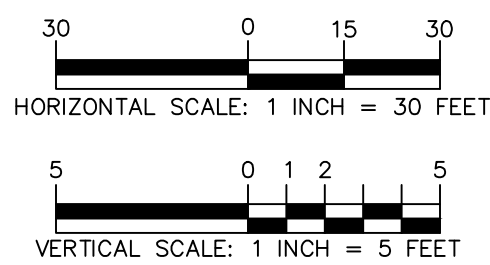
CB1-38 TO MH1-8



CB1-33 TO CB1-14



CB1-15 TO FES1-2



-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS

2/12/2026

SIGNATURE: *John Cote* DATE SIGNED

PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

Langan Engineering and Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS

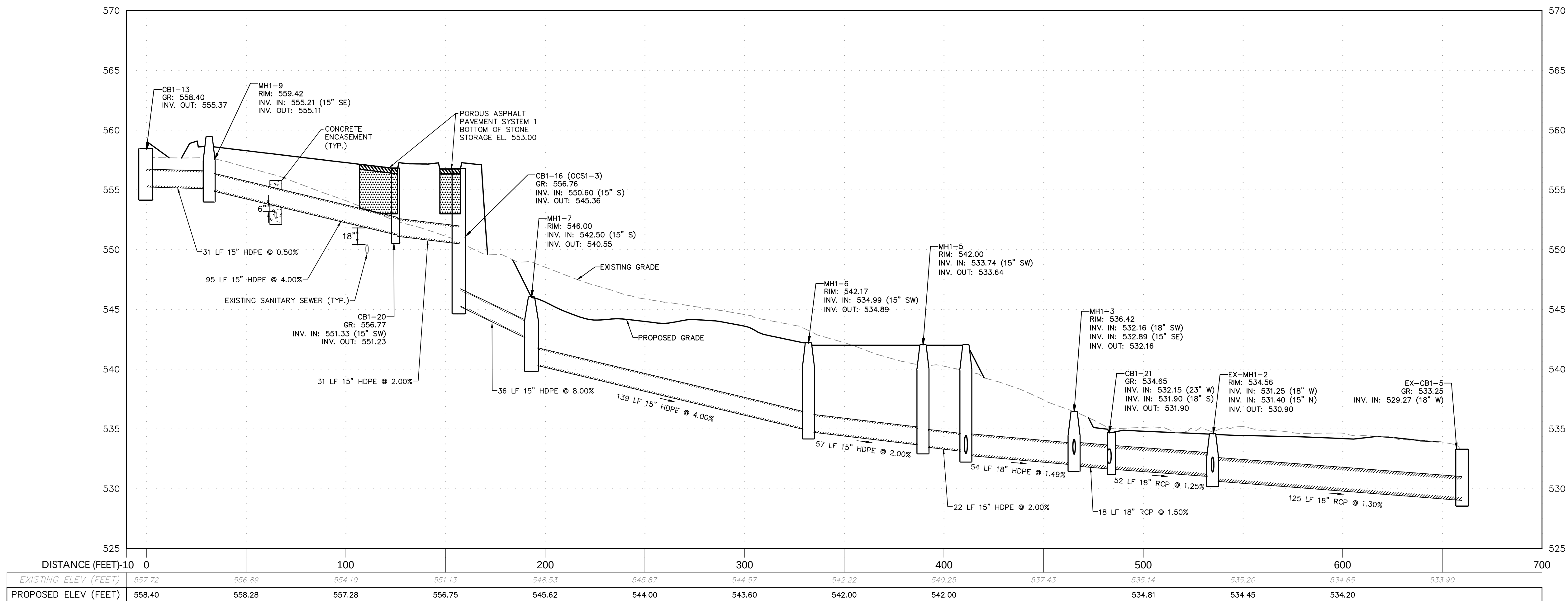
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY

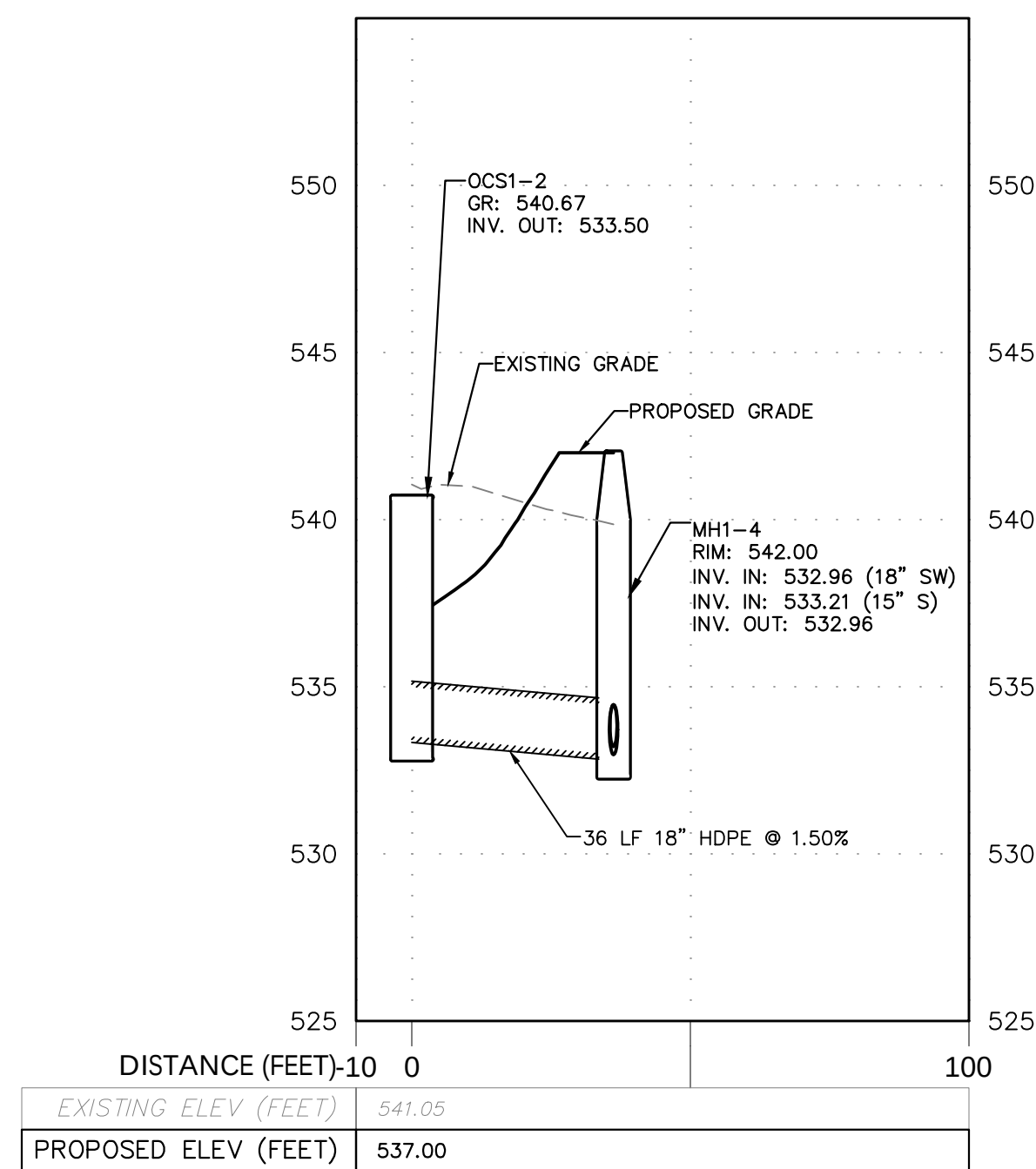
Drawing Title

STORM PROFILES

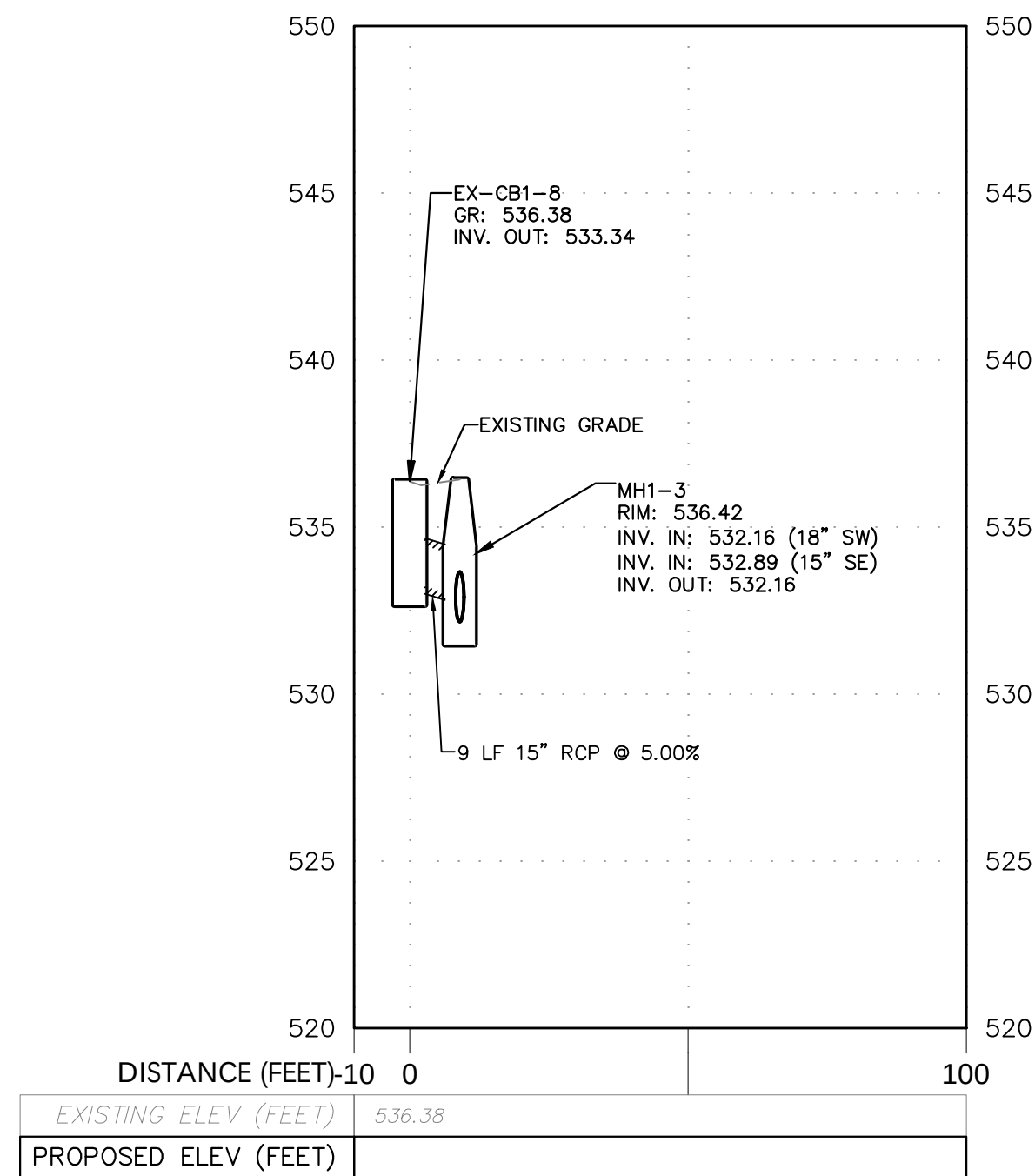
Project No. 101049802	Drawing No. CG203
Date FEBRUARY 12, 2026	
Drawn By YA	
Checked By MV	



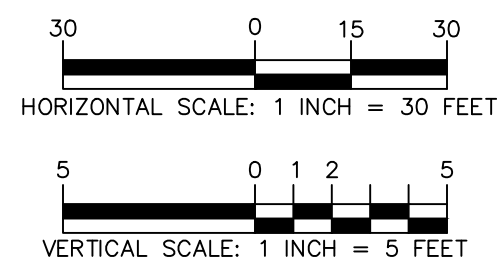
CB1-13 TO EX-CB1-5



OCS1-2 TO MH1-4



EX-CB1-8 TO MH1-3



-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.

REVISIONS

STATE OF NEW JERSEY
JANUARY 1, 2008
2/12/2026
SIGNATURE: JOHN COTE DATE SIGNED
PROFESSIONAL ENGINEER NJ Lic. No. 24GE03705800

LANGAN

Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

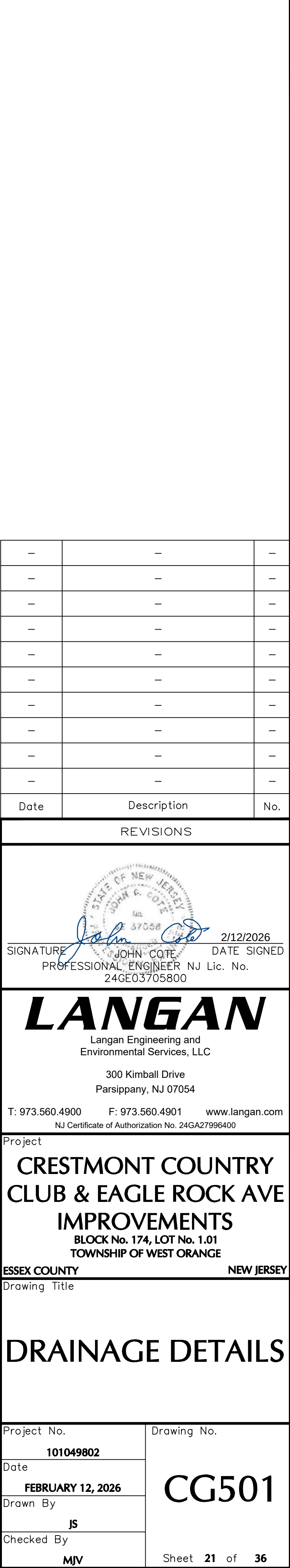
Project

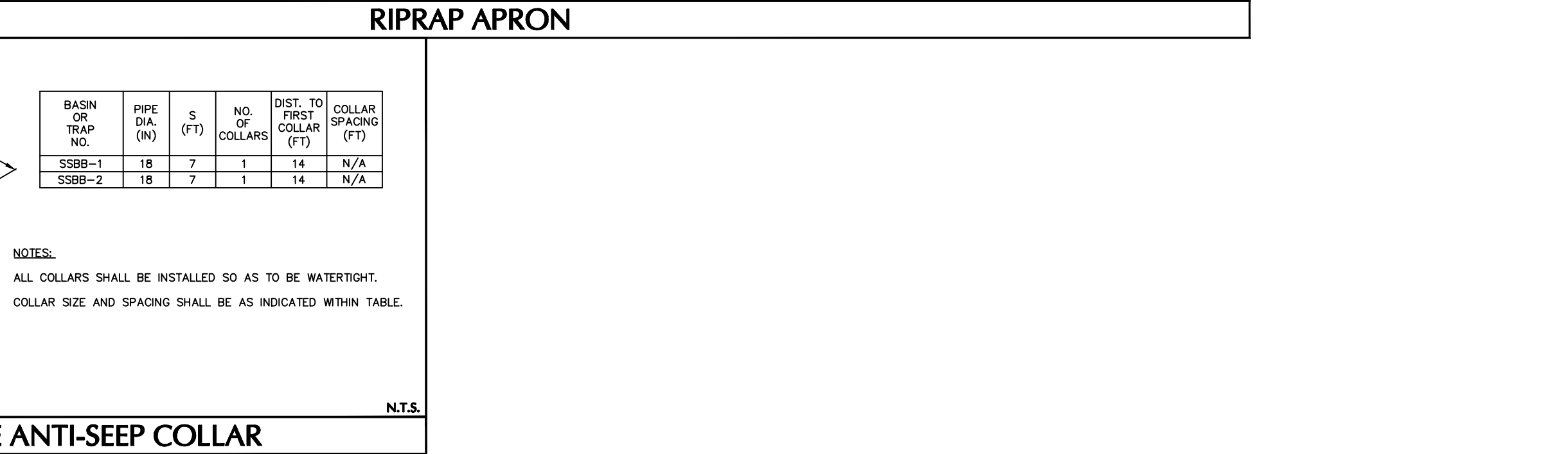
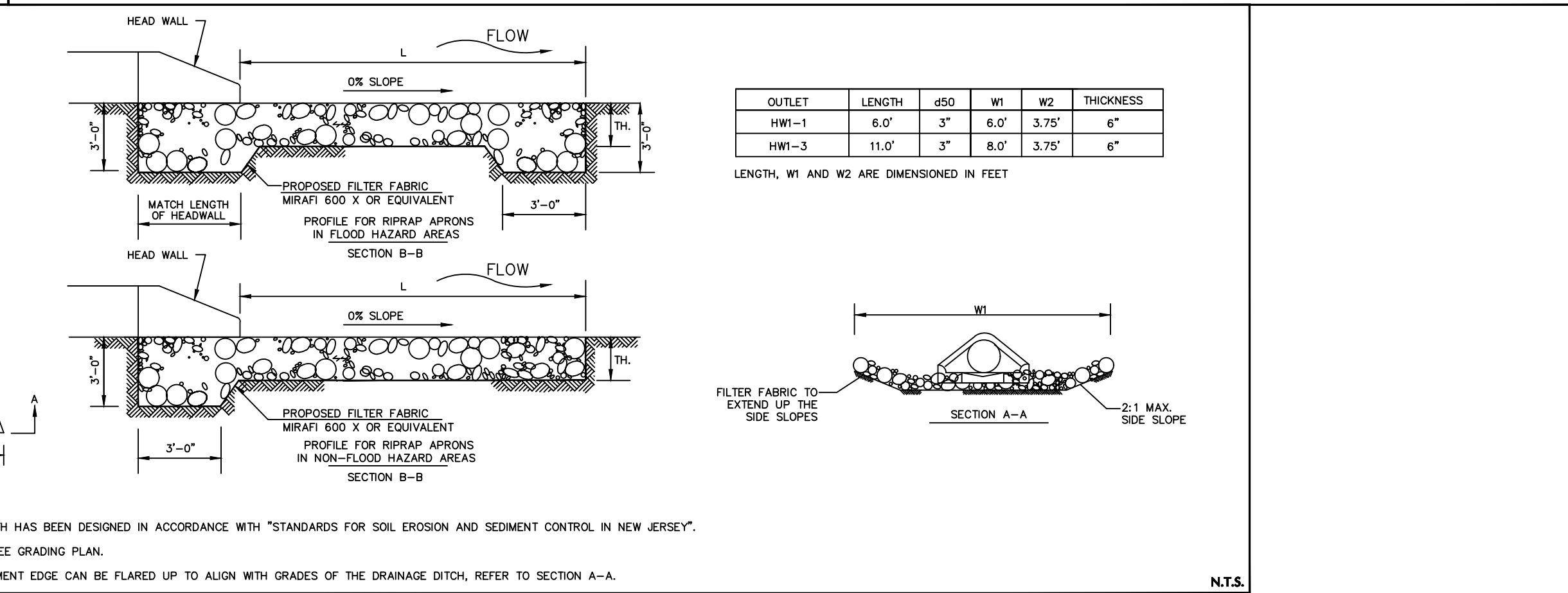
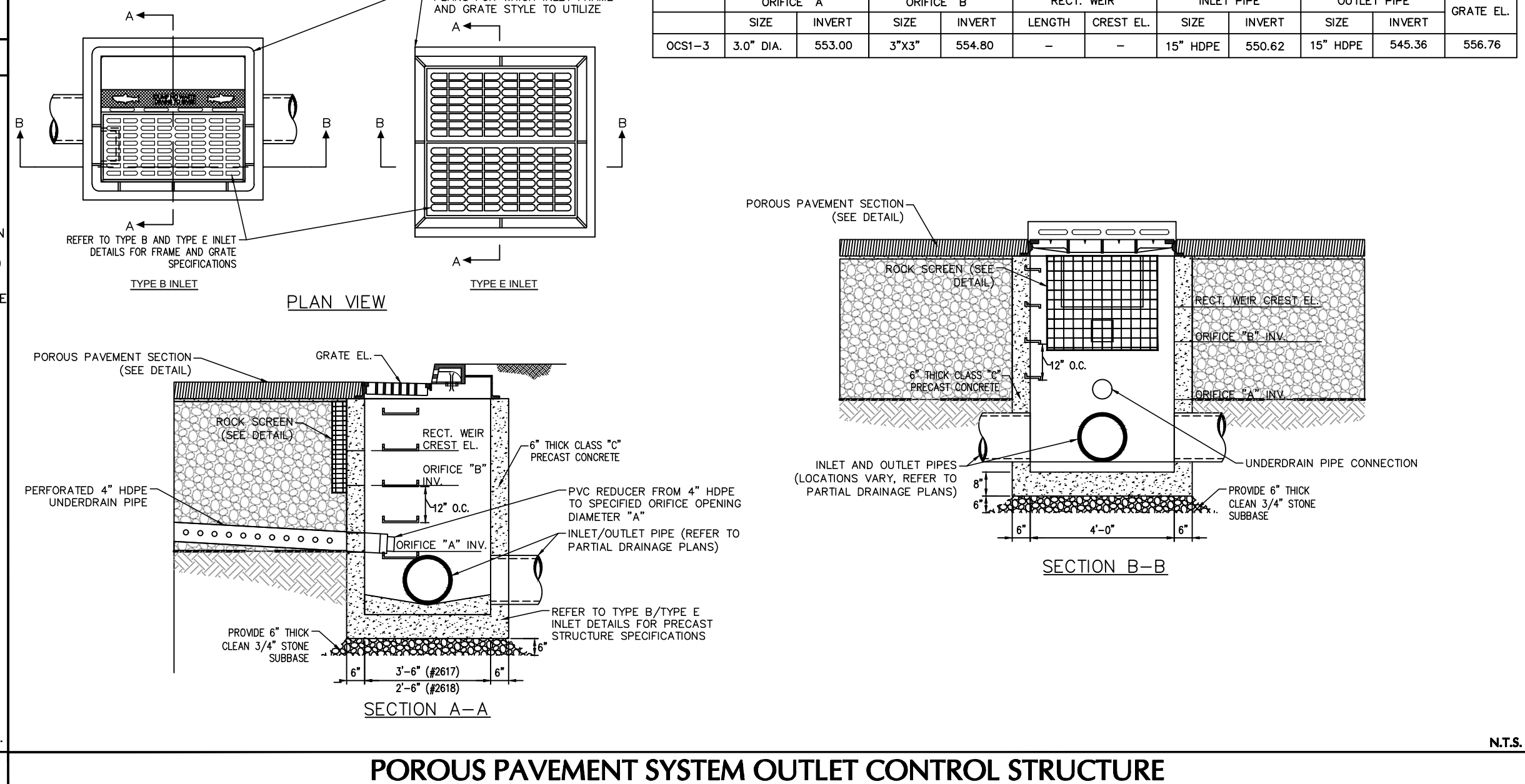
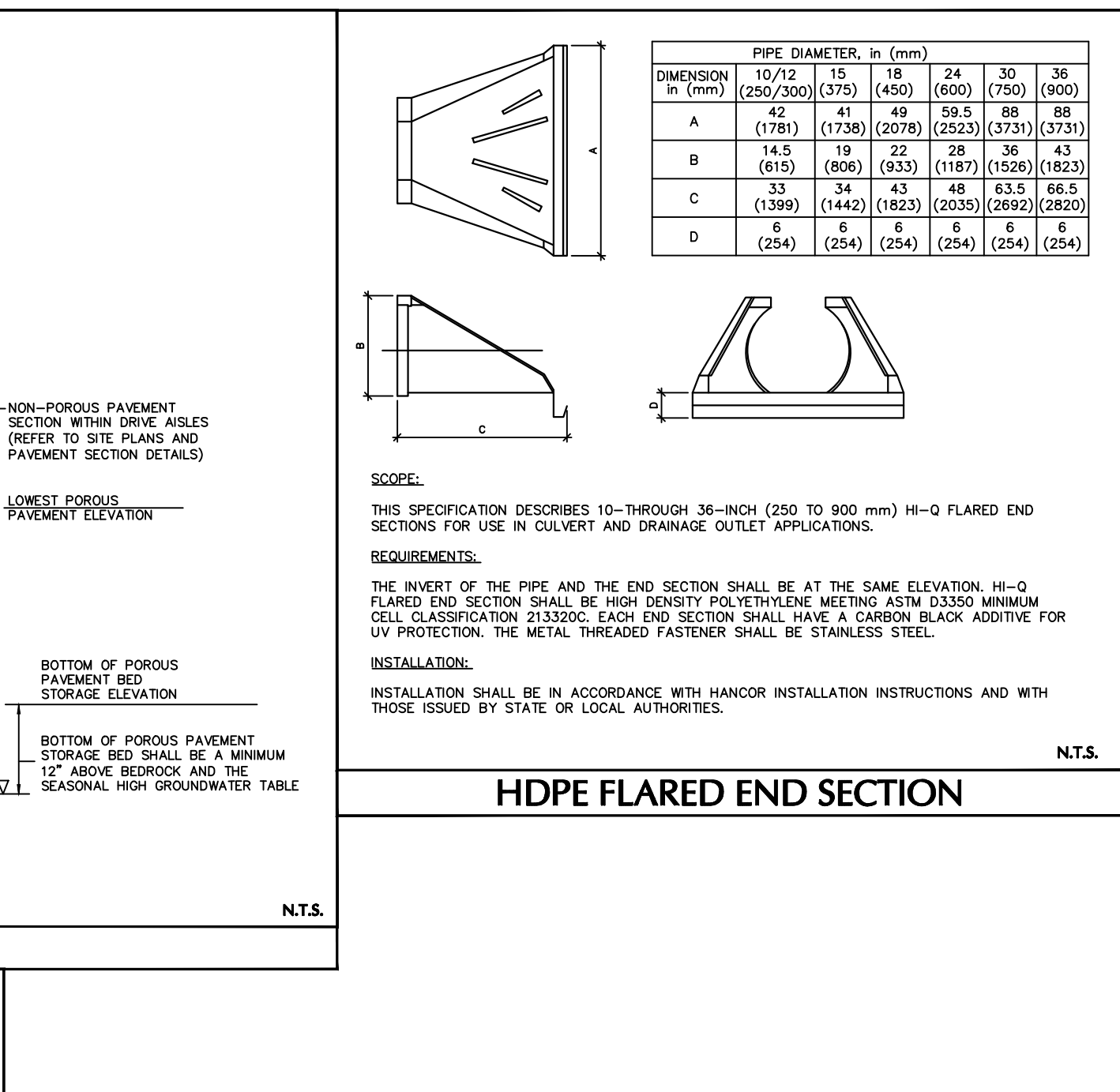
**CRESTMONT COUNTRY
CLUB & EAGLE ROCK AVE
IMPROVEMENTS**
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY
Drawing Title

STORM PROFILES

Project No. 101049802	Drawing No. CG205
Date FEBRUARY 12, 2026	
Drawn By YA	
Checked By MV	Sheet 20 of 36





SCOPE:

THIS SPECIFICATION DESCRIBES 10-THROUGH 36-INCH (250 TO 900 mm) HI-Q FLARED END SECTIONS FOR USE IN CULVERT AND DRAINAGE OUTLET APPLICATIONS.

SCOPE:

THIS SPECIFICATION DESCRIBES 10-THROUGH 36-INCH (250 TO 900 mm) HI-Q FLARED END SECTIONS TO BE USED IN CULVERT AND DRAINAGE OUTLET APPLICATIONS.

REQUIREMENTS:

THE INVERT OF THE PIPE AND THE END SECTION SHALL BE AT THE SAME ELEVATION. HI-Q FLARED END SECTION SHALL BE HIGH DENSITY POLYETHYLENE MEETING ASTM D3330 MINIMUM CELL CLASSIFICATION 213520C; EACH END SECTION SHALL HAVE A CARBON BLACK ADDITIVE UV PROTECTION. THE METAL THREADED FASTENER SHALL BE STAINLESS STEEL.

INSTALLATION:

INSTALLATION SHALL BE IN ACCORDANCE WITH HANCOCK INSTALLATION INSTRUCTIONS AND WITH THOSE ISSUED BY STATE OR LOCAL AUTHORITIES.

HDPE FLARED END SECTION

	ORIFICE "A"		ORIFICE "B"		RECT. WEIR		INLET PIPE		OUTLET PIPE		GRATE EL.
	SIZE	INVERT	SIZE	INVERT	LENGTH	CREST EL.	SIZE	INVERT	SIZE	INVERT	
OCS1-3	3.0" DIA.	553.00	3"x3"	554.80	-	-	15" HDPE	550.62	15" HDPE	545.36	556.76

[illegible]

Date	Description	No.
------	-------------	-----

REVISIONS



LANGAN
Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY

CRESTMONT COUNTRY

CLUB & FACIL ROCK AVE

IMPROVEMENTS

IMPROVEMENTS

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY

ESSEX COUNTY	NEW JERSEY
Drawing Title	

Drawing Title

DRAINAGE DETAILS

DISCLAIMER DETAILS

[illegible]

Project No.	Drawing No.
-------------	-------------

101049802	
-----------	--

Date _____

FEBRUARY 12, 2026 CG502

Drawn By

JS	
----	--

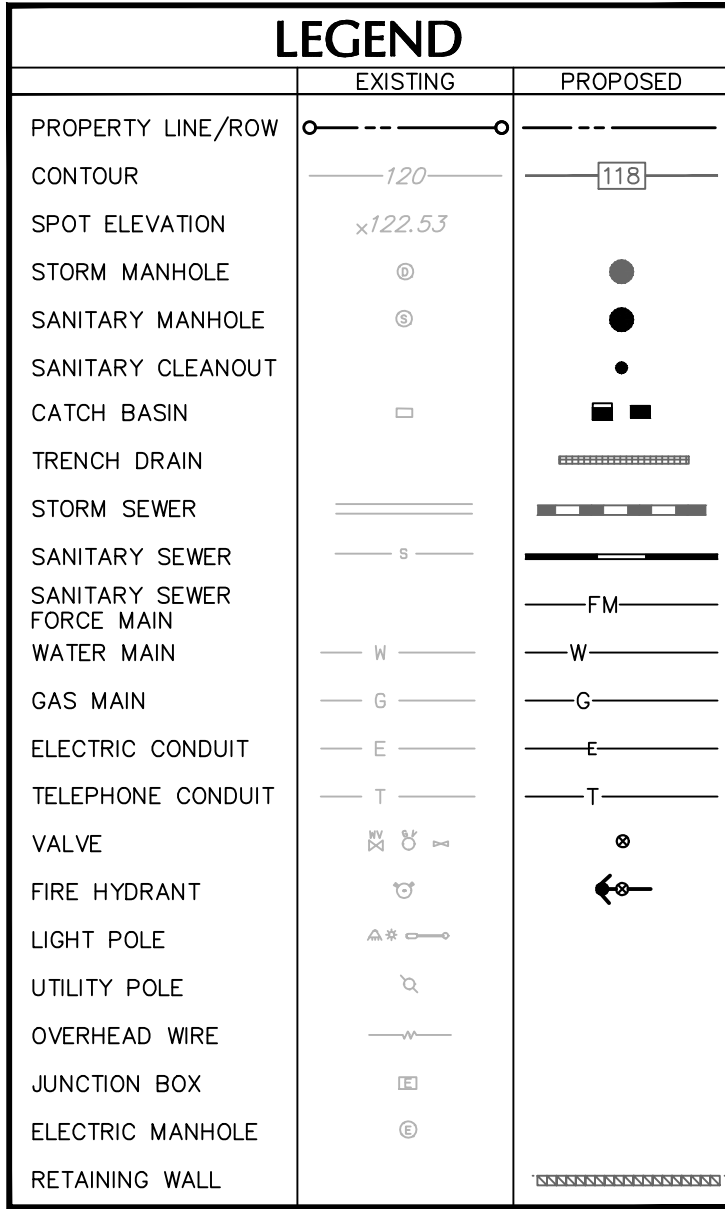
Checked By	
------------	--

MIV Sheet 22 of 36

File: Langan.stb Layout: CG502 Document Code: 101049802-0102-CG501-010

WATER NOTES:

1. ALL WATER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY.
2. ALL EXISTING WATER LATERALS SERVING THE EXISTING BUILDINGS OR REMAINING WITHIN THE SITE FROM FORMER BUILDINGS (TO BE DEMOLISHED) SHALL BE TERMINATED AT THE MAIN AND CURB SHUT-OFFS SHALL BE REMOVED. EXISTING WATER SERVICE LINES SHALL BE PHYSICALLY REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER PRIOR TO REMOVAL OF ANY WATER LINE.
3. THE CONTRACTOR MUST VERIFY THE LOCATION, SIZE, AND SERVICEABILITY OF THE EXISTING WATER MAINS PRIOR TO BEGINNING ANY SITE OR BUILDING CONSTRUCTION.
4. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER MAIN IS TEN FEET (10'). THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS EIGHTEEN INCHES (18"). CONCRETE PIPE ENCASEMENTS WILL BE REQUIRED WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED. LATERAL SEPARATION SHALL BE AS REQUIRED BY LOCAL CODE.
5. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, ELBOWS, PLUGS, AND FIRE HYDRANTS.
6. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 5'-0" FROM HYDRANT, AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
7. ALL GATE VALVES SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
8. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. BACKFLOW PREVENTION DEVICES FOR DOMESTIC AND FIRE SERVICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
10. ALL NEW WATER LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
11. ALL NEW WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.



-
- SCALE IN FEET

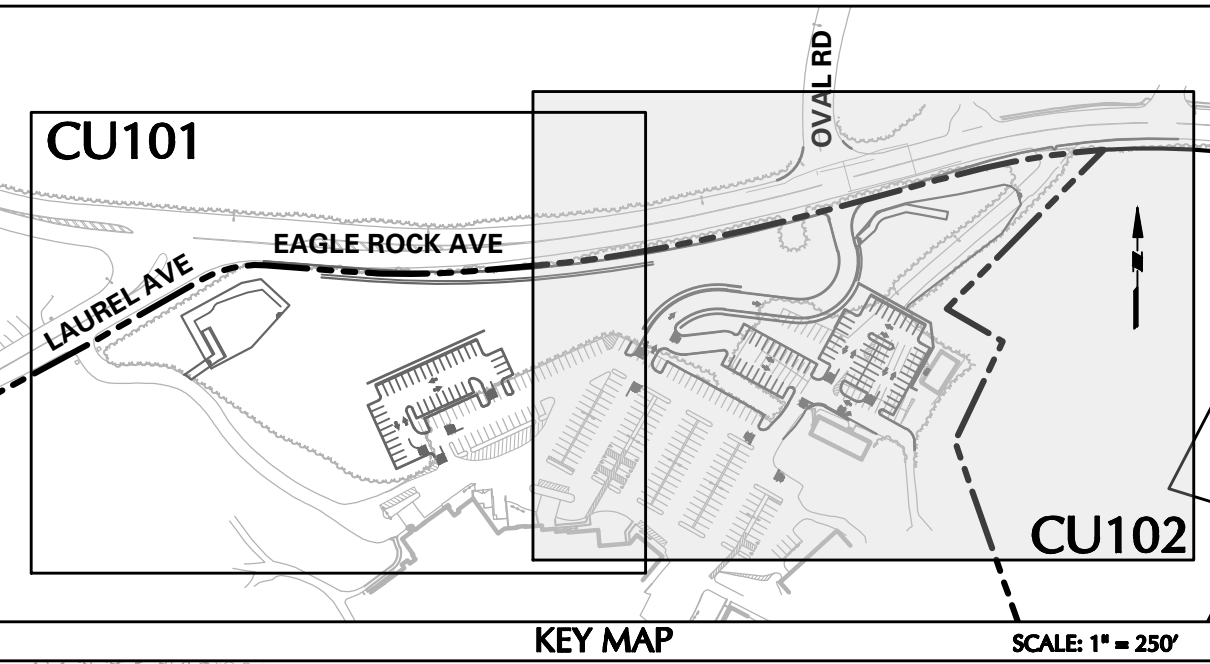
REVISIONS

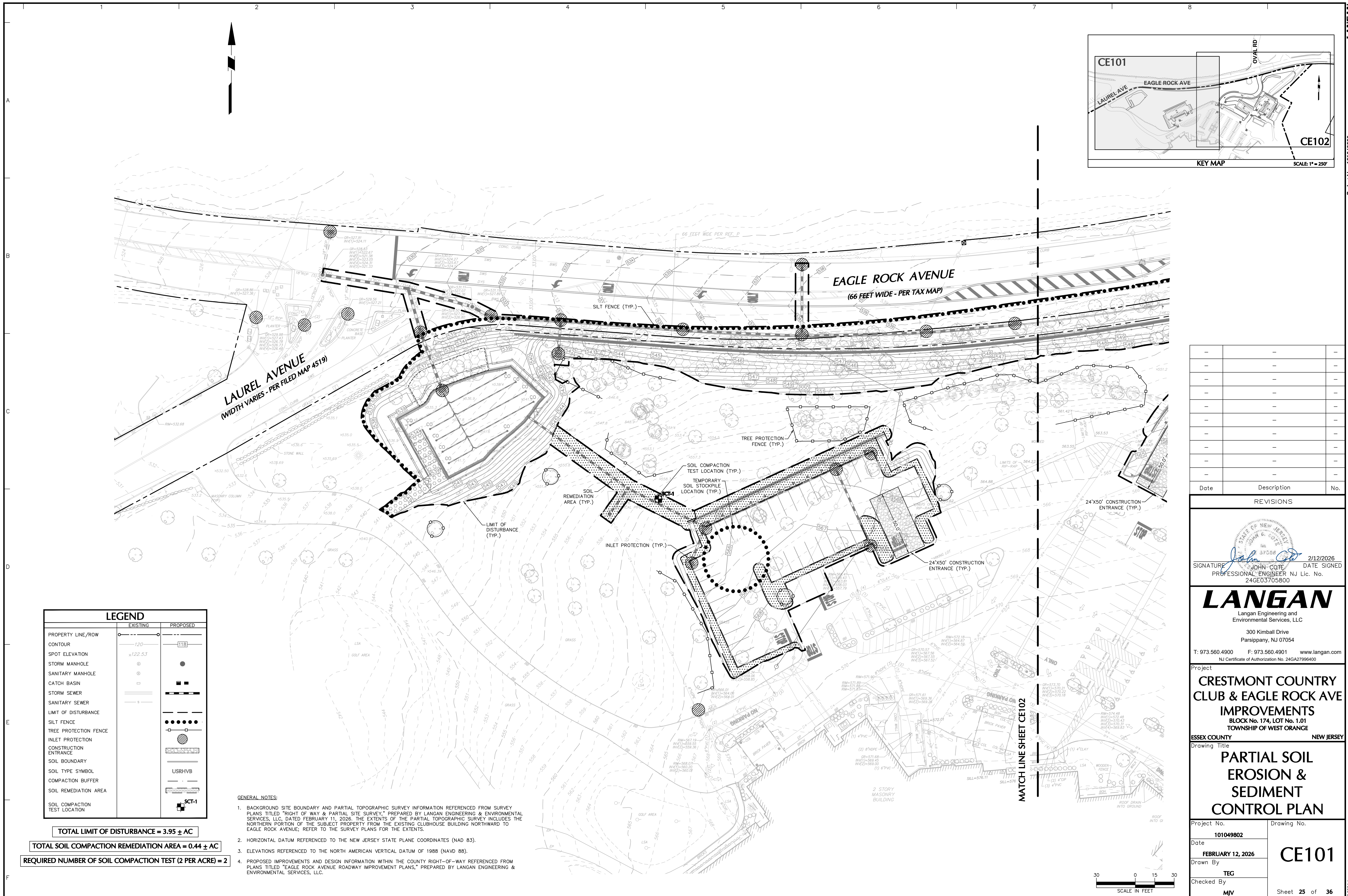
LANGAN

Project

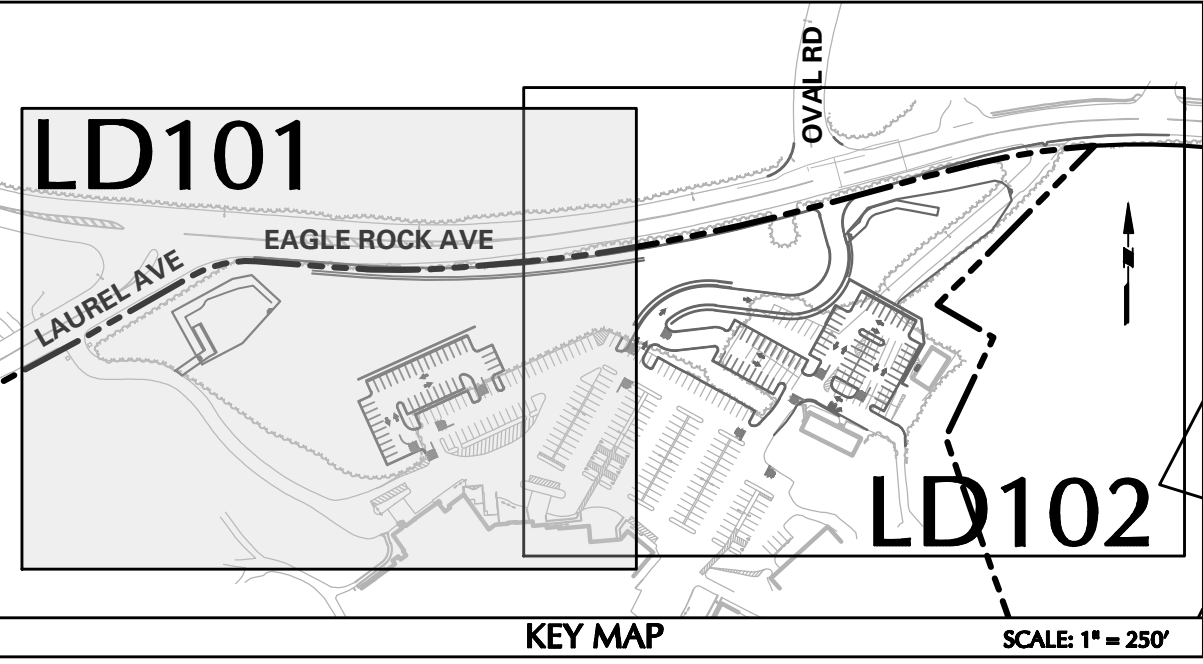
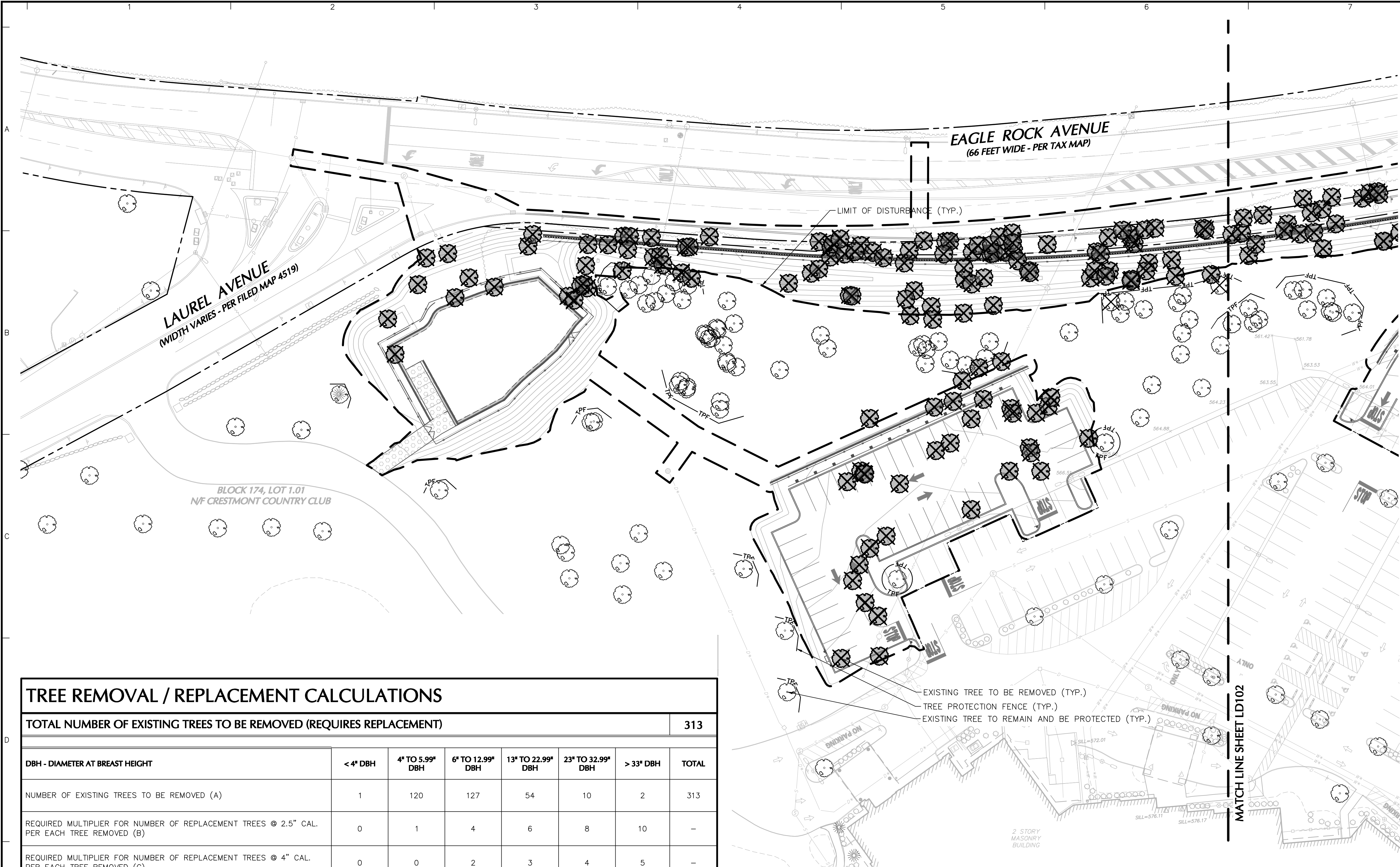
ESSEX COUNTY	NEW JERSEY
Drawing Title	

Project No. 101049802	Drawing No.
Date FEBRUARY 12, 2026	CU101
Drawn By TEG	
Checked By MJV	
Sheet 23 of 36	





	1	2	3	4	5	6	7	8
	SOIL EROSION AND SEDIMENT CONTROL NOTES		PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION		STABILIZATION WITH MULCH ONLY		REFER TO PERMANENT SEED MIX NOTES FOR ADDITIONAL PERMANENT SEEDING SPECIFICATIONS.	
A	1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7TH EDITION LAST REVISED JULY 2017, EFFECTIVE DECEMBER 2017. THESE MEASURES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.		PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY." THE FOLLOWING SEEDING SCHEDULE SHOULD BE USED FOR PERMANENT STABILIZATION:		NON-GROWING STABILIZATION MEASURES SHALL BE USED WHERE THE SEASON & OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED. THE FOLLOWING SCHEDULE SHALL BE USED FOR STABILIZATION MULCH:		1. MEADOW SEED MIX A (FOR USE AT BOTTOM OF BIORETENTION BASINS)	
	2. SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN 14 DAYS, AND NOT UNDER ACTIVE CONSTRUCTION, MAY BE REQUIRED TEMPORARILY MULCHED, AND SEEDED OR OTHERWISE PROVIDED WITH VEGETATIVE COVER AS PER APPENDIX AS THIS TEMPORARY COVER SHALL BE MAINTAINED UNTIL SUCH TIME WHEREBY PERMANENT RESTABILIZATION IS ESTABLISHED.		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 SHALL BE DONE IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING. B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH STANDARD FOR LAND GRADING. C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. APPLY TOPSOIL IN A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES. MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. REPEAT ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF THE RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. D. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES. E. MAINTAIN EROSION CONTROL MEASURES AS INDICATED ON THE "SOIL EROSION AND SEDIMENT CONTROL PLANS"		1. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING. B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH STANDARDS FOR LAND GRADING. C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. APPLY TOPSOIL IN A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES. MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. REPEAT ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF THE RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. D. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES. E. MAINTAIN EROSION CONTROL MEASURES AS INDICATED ON THE "SOIL EROSION AND SEDIMENT CONTROL PLANS"		2. MEADOW SEED MIX B (FOR USE ON INTERIOR SIDE SLOPES OF ALL STORMWATER BASINS)	
	3. SEEDING DATES: THE FOLLOWING SEEDING DATES ARE RECOMMENDED TO BEST ESTABLISH PERMANENT VEGETATIVE COVER WITHIN MOST LOCATIONS IN THE HEPSCD SPRING - 3/15/18 AND FALL - 8/15 - 10/1.		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. FERTILIZER SHALL BE APPLIED AT THE RATE OF 50 LBS PER ACRE OR 11 LBS/1,000 SF OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE A MINIMUM OF 4 INCHES. FIRMED IN PLACE IS REQUIRED. REPEAT ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF THE RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. B. WORK LINE AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL, TO A DEPTH OF 4" 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 MINIMUM OF 12 INCHES OF SOIL HAVING A pH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOIL.		3. MULCH ANCHORING A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER SQUARE FOOT AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED MATERIALS HAVE BEEN TESTED WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION. I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH. B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER. C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER. D. MULCH NETTING, SUCH AS PAPER, JUTE, EXCELSEOR, COTTON, OR PLASTIC, MAY BE USED. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT. F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 3 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.		3. BEGIN DEMOLITION OF EXISTING PAVEMENT, SITE FEATURES, UTILITY INFRASTRUCTURE, ETC. AS SPECIFIED ON THE DEMOLITION PLANS. EXISTING PAVEMENT MATERIAL IS TO BE CRUSHED AND STOCKPILED FOR RE-USE AS FILL MATERIAL, WHERE SUITABLE. AS GRADING OPERATIONS COMENCE, EXCAVATED SOIL IS TO BE STOCKPILED AND TEMPORARILY STABILIZED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DETAIL. (DURATION - 15 DAYS)	
B	4. SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.		3. SEEDING A. PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, IN NEW JERSEY. THE FOLLOWING SEEDING SCHEDULE SHOULD BE USED FOR PERMANENT SEEDING UNLESS OTHERWISE NOTED. REFER TO STORMWATER BASIN PERMANENT SEEDING NOTES: 1. APPLY TOPSOIL TO A MINIMUM DEPTH OF 6 INCHES. 2. FERTILIZER - 14 LBS/1,000 SF, 10-20-10 OR EQUIVALENT, WITH 50% WATER INSOLUBLE NITROGEN, WORKED INTO SOIL TO A DEPTH OF 4 INCHES. 3. SEED MIX TO BE APPLIED AT 220 LBS/ACRE. 3.1. 10% DEEPLUCE KENTUCKY BLUEGRASS 3.2. 25% DAKOTA TALL FESCUE 3.3. 25% TALL FESCUE 3.4. 40% FRONTIER PERENNIAL RYEGRASS 4. SEEDING DATES FOR THIS MIXTURE SHALL BE BETWEEN MARCH 1ST AND APRIL 30TH OR BETWEEN AUGUST 15TH AND OCTOBER 15TH.		4. ALL TREES WITHIN THE PROPOSED LIMIT OF DISTURBANCE AREA, UNLESS OTHERWISE INDICATED ON THE PLANS, SHALL BE CUT DOWN AND HAULED AWAY IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. TREE CLEARING SHALL PLACE AFTER APPROVAL BY A CERTIFIED TREE EXPERT AND IN COORDINATION WITH THE TOWNSHIP FORESTER. THE CLEARING OF UNDERLYING VEGETATION, STUMPING AND GRUBBING SHALL TAKE PLACE PRIOR TO MASS GRADING ACTIVITIES. (DURATION - 10 DAYS)		5. ALL TREES WITHIN THE PROPOSED LIMIT OF DISTURBANCE AREA, UNLESS OTHERWISE INDICATED ON THE PLANS, SHALL BE CUT DOWN AND HAULED AWAY IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. TREE CLEARING SHALL PLACE AFTER APPROVAL BY A CERTIFIED TREE EXPERT AND IN COORDINATION WITH THE TOWNSHIP FORESTER. THE CLEARING OF UNDERLYING VEGETATION, STUMPING AND GRUBBING SHALL TAKE PLACE PRIOR TO MASS GRADING ACTIVITIES. (DURATION - 10 DAYS)	
	5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS, AND PROTECTION SHALL REMAIN UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED. STORM DRAINAGE OUTLET POINTS SHALL BE PROTECTED AS REQUIRED BEFORE THEY BECOME FUNCTIONAL.		4. MULCHING MULCHING IS REQUIRED ON ALL SEEDING TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND PROMOTE FASTER AND EARLIER ESTABLISHMENT. A. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS/1,000 SF (11-1/2 TO 2 TONS PER ACRE). MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED DUE TO THE PRESENCE OF WEEED SEEDS. B. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. C. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. DRIVE 8 TO 10" WOODEN PEGS TO WITHIN 2" TO 3" OF THE SOIL SURFACE EVERY 4' IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.		6. BEGIN DEMOLITION OF EXISTING PAVEMENT, SITE FEATURES, UTILITY INFRASTRUCTURE, ETC. AS SPECIFIED ON THE DEMOLITION PLANS. EXISTING PAVEMENT MATERIAL IS TO BE CRUSHED AND STOCKPILED FOR RE-USE AS FILL MATERIAL, WHERE SUITABLE. AS GRADING OPERATIONS COMENCE, EXCAVATED SOIL IS TO BE STOCKPILED AND TEMPORARILY STABILIZED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DETAIL. (DURATION - 15 DAYS)		6. BEGIN DEMOLITION OF EXISTING PAVEMENT, SITE FEATURES, UTILITY INFRASTRUCTURE, ETC. AS SPECIFIED ON THE DEMOLITION PLANS. EXISTING PAVEMENT MATERIAL IS TO BE CRUSHED AND STOCKPILED FOR RE-USE AS FILL MATERIAL, WHERE SUITABLE. AS GRADING OPERATIONS COMENCE, EXCAVATED SOIL IS TO BE STOCKPILED AND TEMPORARILY STABILIZED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DETAIL. (DURATION - 15 DAYS)	
	6. MULCH MATERIALS SHALL BE UN-ROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.		5. IRRIGATION A. IF SOIL IS MOISTURE DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4" 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.		7. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHICH CAN BE COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)		7. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHICH CAN BE COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)	
C	7. THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT-OF-COMPLIANCE PRIOR TO APPLYING FOR THE CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY. NJ - DCA OR ANY OTHER CONTROLLING AGENCY. CONTACT THE DISTRICT AT 862-333-4506 TO REQUEST A FINAL INSPECTION, GIVING ADVANCED NOTICE UPON COMPLETION OF THE RESTABILIZATION MEASURES. A PERFORMANCE DEPOSIT MAY BE POSTED WITH THE DISTRICT WHEN WINTER WEATHER OR SNOW COVER PROHIBITS THE PROPER APPLICATION OF SEED, MULCH, FERTILIZER OR HYDRO-SEED.		6. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION A. THE QUALITY OF THE 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 80% 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 SEEDS SPECIES) AND MOVED ONCE. NOTE THIS DESIGNATION OF MOVED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.		8. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHEN THE TRENCH IS COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)		8. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHEN THE TRENCH IS COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)	
	8. THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT WILL BE NOTIFIED IN WRITING AT LEAST 72 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES. FAX - 9829-333-4507 OR EMAIL - INFORMATION@HEPSCD.ORG		6. MULCHING MULCHING IS REQUIRED ON ALL SEEDING TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND PROMOTE FASTER AND EARLIER ESTABLISHMENT. A. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS/1,000 SF (11-1/2 TO 2 TONS PER ACRE). MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED DUE TO THE PRESENCE OF WEEED SEEDS. B. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. C. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. DRIVE 8 TO 10" WOODEN PEGS TO WITHIN 2" TO 3" OF THE SOIL SURFACE EVERY 4' IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.		9. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHEN THE TRENCH IS COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)		9. CONSTRUCT UNDERGROUND UTILITIES CONCURRENTLY WITH GRADING OPERATIONS TO MINIMIZE CUTS. ON-SITE UTILITIES SHALL CONSIST OF GAS, ELECTRIC, TELEPHONE, CABLE, WATER AND SANITARY SEWER. ADVANCE TRENCH EXCAVATION SHALL BE LIMITED TO THE LENGTH OF PIPE WHEN THE TRENCH IS COMPLETED IN THE SAME DAY. IF NO FURTHER GRADING IS REQUIRED IN THE AREA OF THE COMPLETED UTILITY TRENCH THEN THE TRENCH SHALL BE GRADED TO FINISH SUB-GRADE ELEVATION AS SHOWN ON THE PLAN AND IMMEDIATELY THEREAFTER STABILIZED. (DURATION - 10 DAYS)	
	9. THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT-OF-COMPLIANCE PRIOR TO APPLYING FOR THE CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY. NJ - DCA OR ANY OTHER CONTROLLING AGENCY. CONTACT THE DISTRICT AT 862-333-4506 TO REQUEST A FINAL INSPECTION, GIVING ADVANCED NOTICE UPON COMPLETION OF THE RESTABILIZATION MEASURES. A PERFORMANCE DEPOSIT MAY BE POSTED WITH THE DISTRICT WHEN WINTER WEATHER OR SNOW COVER PROHIBITS THE PROPER APPLICATION OF SEED, MULCH, FERTILIZER OR HYDRO-SEED.		7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION A. THE QUALITY OF THE 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 80% 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 SEEDS SPECIES) AND MOVED ONCE. NOTE THIS DESIGNATION OF MOVED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.		10. PRIOR TO THE PLACEMENT OF TOPSOIL, CONDUCT SOIL COMPACTION TESTING AND REMEDIATE SUBSOIL (SCARIFICATION/TILLAGE TO A MINIMUM DEPTH OF 6") AS NECESSARY. (DURATION - 5 DAYS)		10. PRIOR TO THE PLACEMENT OF TOPSOIL, CONDUCT SOIL COMPACTION TESTING AND REMEDIATE SUBSOIL (SCARIFICATION/TILLAGE TO A MINIMUM DEPTH OF 6") AS NECESSARY. (DURATION - 5 DAYS)	
D	10. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. DO NOT UTILIZE A FIRE OR GARDEN HOSE TO CLEAN ROADS UNLESS THE RUNOFF IS DIRECTED TO A PROPERLY DESIGNED AND FUNCTIONING SEDIMENT BASIN. WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAINS SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER USING REMOVABLE PUMPING STATIONS, SUMP PITS, PORTABLE SEDIMENTATION TANKS AND/OR SILT CONTROL BAGS.		7. TOPDRESSING A. SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN 2A ABOVE. NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 7 LBS/1,000 SF (500 LBS/ACRE) EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.		11. COMPLETE FINAL SITE GRADING AND LANDSCAPE OF ALL APPROPRIATE AREAS AS INDICATED ON THE LANDSCAPE PLAN. STABILIZE WITH PERMANENT SEEDING. (DURATION - 20 DAYS)		11. COMPLETE FINAL SITE GRADING AND LANDSCAPE OF ALL APPROPRIATE AREAS AS INDICATED ON THE LANDSCAPE PLAN. STABILIZE WITH PERMANENT SEEDING. (DURATION - 20 DAYS)	
	11. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TOPSOIL PRIOR TO RE-SEEDING, SODDING OR PLANTING. A DEPTH OF 6 INCHES, FIRMED IN PLACE, IS REQUIRED, AS PER THE STANDARDS FOR TOPSOILING AND LAND GRADING, EFFECTIVE DECEMBER 2017.		8. MULCHING MULCHING IS REQUIRED ON ALL SEEDING TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND PROMOTE FASTER AND EARLIER ESTABLISHMENT. A. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY SHALL BE APPLIED AT A RATE OF 70 TO 90 LBS/1,000 SF (11-1/2 TO 2 TONS PER ACRE). MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED DUE TO THE PRESENCE OF WEEED SEEDS. B. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% OF THE SOIL SURFACE WILL BE COVERED. C. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. DRIVE 8 TO 10" WOODEN PEGS TO WITHIN 2" TO 3" OF THE SOIL SURFACE EVERY 4' IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.		12. CONTRACTOR TO JET CLEAN ALL SITE DRAINAGE STRUCTURES AND PIPES OF ANY SILT OR DEBRIS RESULTING FROM SITE CONSTRUCTION PRIOR TO FINAL TURNOVER. (DURATION - 3 DAYS)		12. CONTRACTOR TO JET CLEAN ALL SITE DRAINAGE STRUCTURES AND PIPES OF ANY SILT OR DEBRIS RESULTING FROM SITE CONSTRUCTION PRIOR TO FINAL TURNOVER. (DURATION - 3 DAYS)	
	12. ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL.		8. STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. THESE "SPECIAL" MEASURES SHALL BE DESIGNED BY THE APPLICANT'S ENGINEER AND BE APPROVED BY THE SOIL CONSERVATION DISTRICT.		13. NOTIFY THE HUDSON ESSEX PASSAIC SOIL CONSERVATION DISTRICT AT COMPLETION OF CONSTRUCTION (DURATION - 1 DAY)		13. NOTIFY THE HUDSON ESSEX PASSAIC SOIL CONSERVATION DISTRICT AT COMPLETION OF CONSTRUCTION (DURATION - 1 DAY)	
E	13. A CRUSHED STONE WHEEL CLEANING TRACKING-PAD IS TO BE INSTALLED AT ALL SITE EXITS USING 2 1/2" - 1" CRUSHED ANGULAR STONE (ASTM 2 OR 3) TO A MINIMUM LENGTH OF 50 FEET AND MINIMUM DEPTH OF 6". ALL DRIVEWAYS MUST BE PROVIDED WITH CRUSHED STONE UNTIL PAVING IS COMPLETE.		9. IRRIGATION A. IF SOIL IS MOISTURE DEFICIENT, AND MULCH IS NOT USED, SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4" 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.		14. ONCE ALL PERMANENT STABILIZATION MEASURES HAVE BEEN INSTALLED AND ARE ESTABLISHED, THE CONSTRUCTION ENTRANCE, SILT FENCE, FILTER SOCK, INLET PROTECTION, AND ALL OTHER TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED. ALL DISTURBED AREAS CAUSED BY THE REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES MUST BE IMMEDIATELY PERMANENTLY STABILIZED. (DURATION - VARIABLE)		14. ONCE ALL PERMANENT STABILIZATION MEASURES HAVE BEEN INSTALLED AND ARE ESTABLISHED, THE CONSTRUCTION ENTRANCE, SILT FENCE, FILTER SOCK, INLET PROTECTION, AND ALL OTHER TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED. ALL DISTURBED AREAS CAUSED BY THE REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES MUST BE IMMEDIATELY PERMANENTLY STABILIZED. (DURATION - VARIABLE)	
	14. STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. THESE "SPECIAL" MEASURES SHALL BE DESIGNED BY THE APPLICANT'S ENGINEER AND BE APPROVED BY THE SOIL CONSERVATION DISTRICT.		9. TOPDRESSING A. SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN 2A ABOVE. NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 7 LBS/1,000 SF (500 LBS/ACRE) EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.		15. CONSTRUCTION ENTRANCE, SILT FENCE, FILTER SOCK, INLET PROTECTION, AND ALL OTHER TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED. ALL DISTURBED AREAS CAUSED BY THE REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES MUST BE IMMEDIATELY PERMANENTLY STABILIZED. (DURATION - VARIABLE)		15. CONSTRUCTION ENTRANCE, SILT FENCE, FILTER SOCK, INLET PROTECTION, AND ALL OTHER TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED. ALL DISTURBED AREAS CAUSED BY THE REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES MUST BE IMMEDIATELY	



LEGEND	
	EXISTING TREE TO REMAIN AND BE PROTECTED
	EXISTING TREE TO BE REMOVED
	TREE PROTECTION FENCE
	LIMIT OF DISTURBANCE

TREE REMOVAL / REPLACEMENT CALCULATIONS							
TOTAL NUMBER OF EXISTING TREES TO BE REMOVED (REQUIRES REPLACEMENT)							313
DBH - DIAMETER AT BREAST HEIGHT	< 4" DBH	4" TO 5.99" DBH	6" TO 12.99" DBH	13" TO 22.99" DBH	23" TO 32.99" DBH	> 33" DBH	TOTAL
NUMBER OF EXISTING TREES TO BE REMOVED (A)	1	120	127	54	10	2	313
REQUIRED MULTIPLIER FOR NUMBER OF REPLACEMENT TREES @ 2.5" CAL. PER EACH TREE REMOVED (B)	0	1	4	6	8	10	—
REQUIRED MULTIPLIER FOR NUMBER OF REPLACEMENT TREES @ 4" CAL. PER EACH TREE REMOVED (C)	0	0	2	3	4	5	—
NUMBER OF REPLACEMENT TREES REQUIRED @ 2.5" CAL. (= A X B)	0	120	N/A — 4" CALIPER REPLACEMENT TREES IS SELECTED				120
NUMBER OF REPLACEMENT TREES REQUIRED @ 4" CAL. (= A X C)	0	0	254	162	40	10	466
TOTAL REPLACEMENT TREES REQUIRED AT MINIMUM 2.5" CALIPER SIZE							120
TOTAL REPLACEMENT TREES REQUIRED AT MINIMUM 4" CALIPER SIZE							466

- NOTES:
- ANY TREES WITH AN UNKNOWN DBH WERE ASSUMED AS > 33" FOR TREE REPLACEMENT CALCULATIONS.
 - REFER TO THE LANDSCAPE PLANS FOR TOTAL REPLACEMENT TREES PROPOSED ON-SITE WITHIN IMPROVEMENT AREAS.
 - REFER TO THE TREE RESTORATION PLANS (SUBMITTED IN A SEPARATE PLAN SET) FOR TOTAL REPLACEMENT TREES PROPOSED ON-SITE OUTSIDE THE IMPROVEMENT AREAS AND IN OFF-SITE LOCATIONS COORDINATED WITH THE TOWNSHIP FORESTER.
 - NO TREES MAY BE REMOVED UNTIL AFTER INSTALLATION OF STORMWATER RUNOFF CONTROLS ARE IN PLACE.

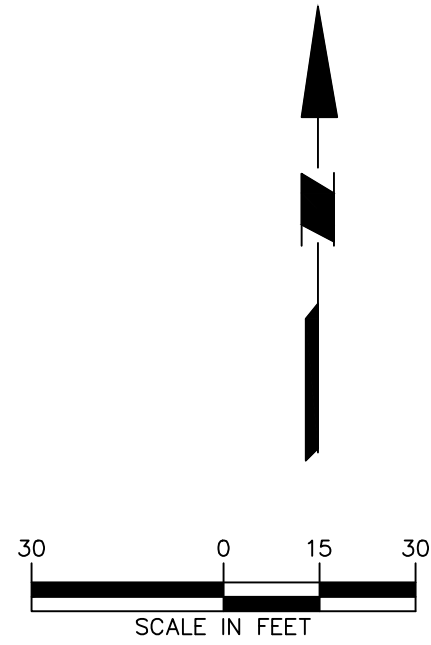
- NOTE(S):
- REFER TO SHEET LD102 FOR TREE REMOVAL & REPLACEMENT PLAN 2.
 - REFER TO THE TREE RESTORATION PLANS PROVIDED IN A SEPARATE APPLICATION FOR TOTAL REPLACEMENT TREE LOCATIONS PROPOSED ON-SITE AND OFF-SITE OUTSIDE THE LIMIT OF WORK.

TREE REPLACEMENT SUMMARY

TOTAL REPLACEMENT TREES REQUIRED	= 586 TREES (120+466)
SUBTOTAL REPLACEMENT TREES PROPOSED ON-SITE (REFER TO LANDSCAPE PLANS)	= 303 TREES
SUBTOTAL REPLACEMENT TREES PROPOSED ON-SITE (REFER TO TREE RESTORATION PLANS)	= 239 TREES
SUBTOTAL REPLACEMENT TREES PROPOSED OFF-SITE (SEE NOTE 3)	= 44 TREES
TOTAL REPLACEMENT TREES PROPOSED	= 586 TREES
TOTAL REPLACEMENT TREES UNABLE TO BE PLANTED (CONTRIBUTION TO TOWNSHIP TREE REPLACEMENT FUND)	= 0 TREES

- NOTES:
- TREE REMOVAL AND REPLACEMENT DESIGN AND CALCULATIONS SHALL BE AS REQUIRED PER THE TOWNSHIP OF WEST ORANGE, NJ ORDINANCE NO. 28 ARTICLE 1 — TREE PROTECTION, REMOVAL AND REPLACEMENT.
 - REFER TO THE LANDSCAPE PLANS AND TREE RESTORATION PLANS FOR THE PROPOSED SIZES, LOCATIONS, AND SPECIES OF REPLACEMENT TREES.
 - OF THE 586 REPLACEMENT TREES THAT ARE REQUIRED TO BE PLANTED, A TOTAL OF 542 TREES ARE PROPOSED TO BE PLANTED ON THE SUBJECT PROPERTY. REFER TO THE TREE RESTORATION PLANS FOR THE LOCATION OF THE PROPOSED REPLACEMENT TREES TO BE PLANTED IN OTHER AREAS OF THE SUBJECT PROPERTY OUTSIDE OF THE LIMITS OF THE PROPOSED PROJECT IMPROVEMENTS. THE APPLICANT WILL PLANT THE REMAINING 44 REPLACEMENT TREES ON ANOTHER PROPERTY LOCATED WITHIN THE TOWNSHIP UPON COORDINATION WITH THE TOWNSHIP FORESTER IN ACCORDANCE WITH SECTION 28-8.4.2 OF THE TREE PROTECTION, REMOVAL AND REPLACEMENT ORDINANCE OF THE TOWNSHIP OF WEST ORANGE. THEREFORE, THE APPLICANT WILL SATISFY THE TREE REPLACEMENT REQUIREMENT, AND NO WAIVER OR VARIANCE IS BEING SOUGHT.

- GENERAL NOTES:
- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
 - HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
 - ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 - PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.



—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

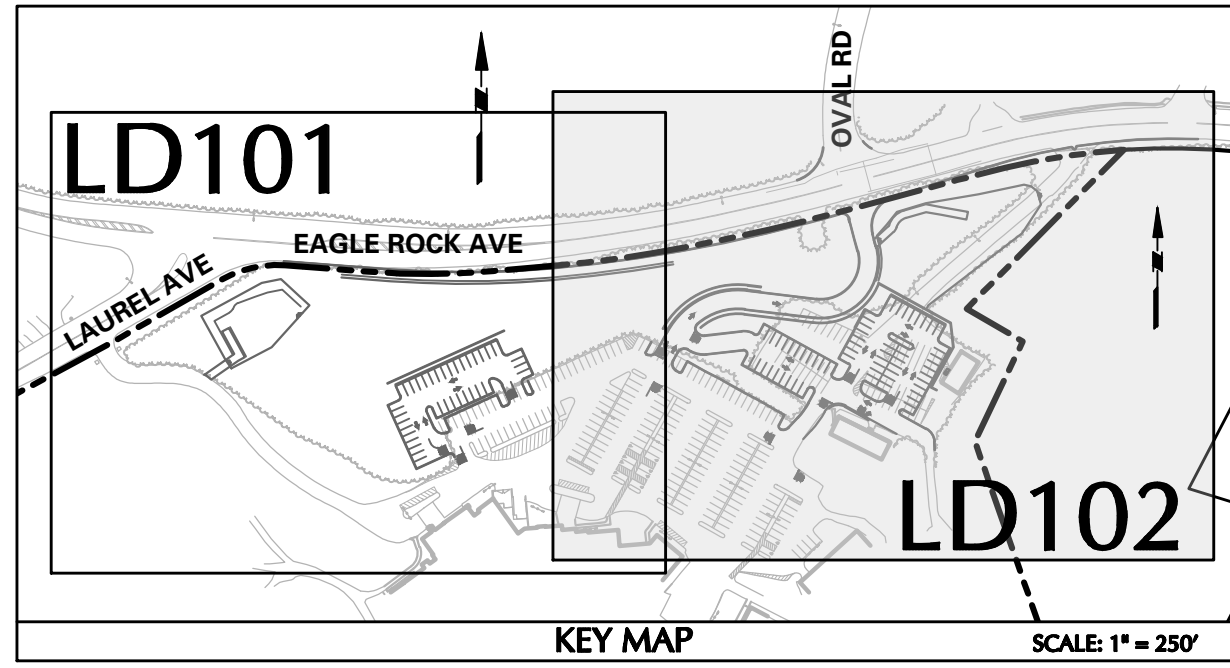
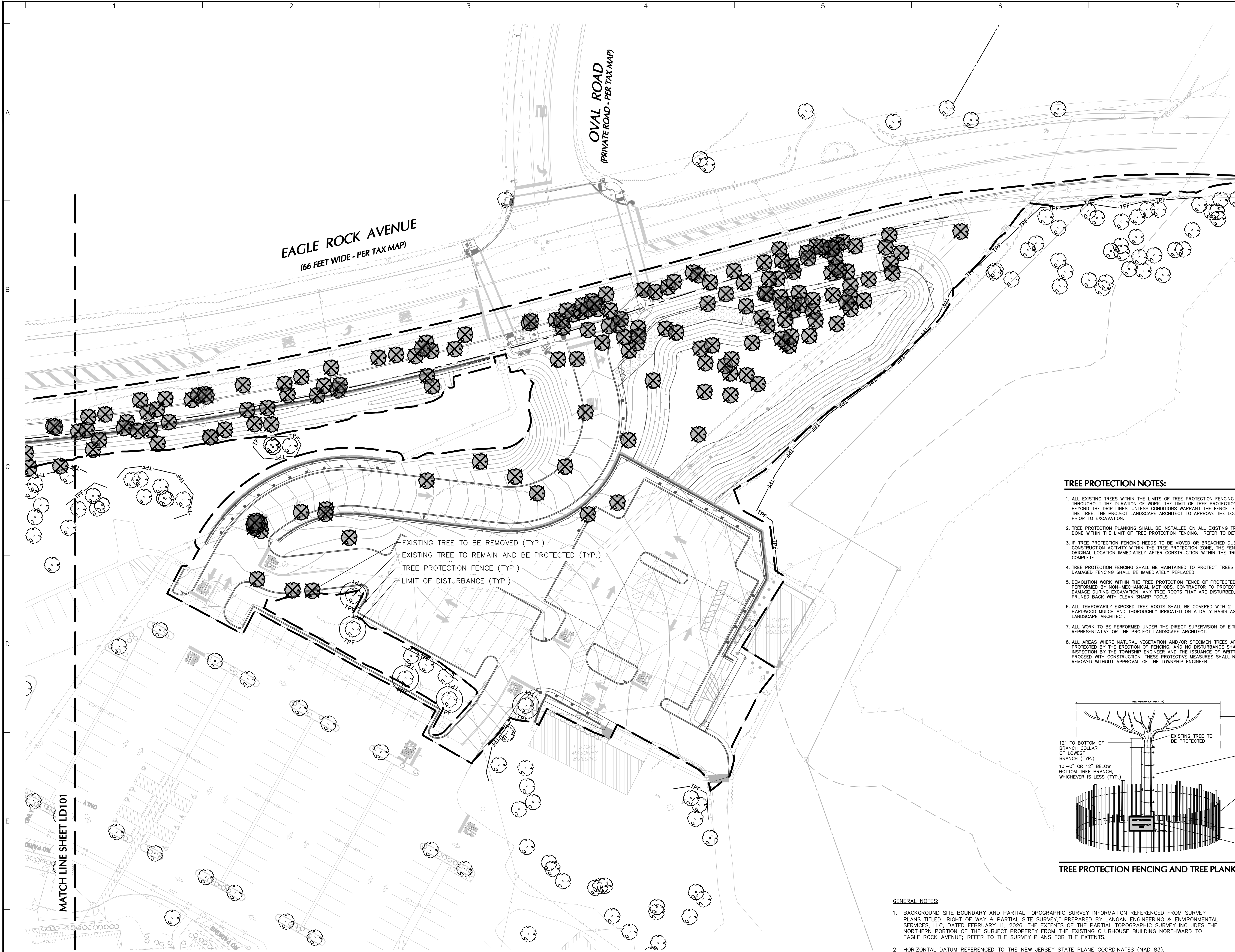
SIGNATURE: DATE SIGNED:
N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00097700

LANGAN
Langan Engineering and
Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project: **CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS**
BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY NEW JERSEY
Drawing Title

PARTIAL TREE REMOVAL PLAN

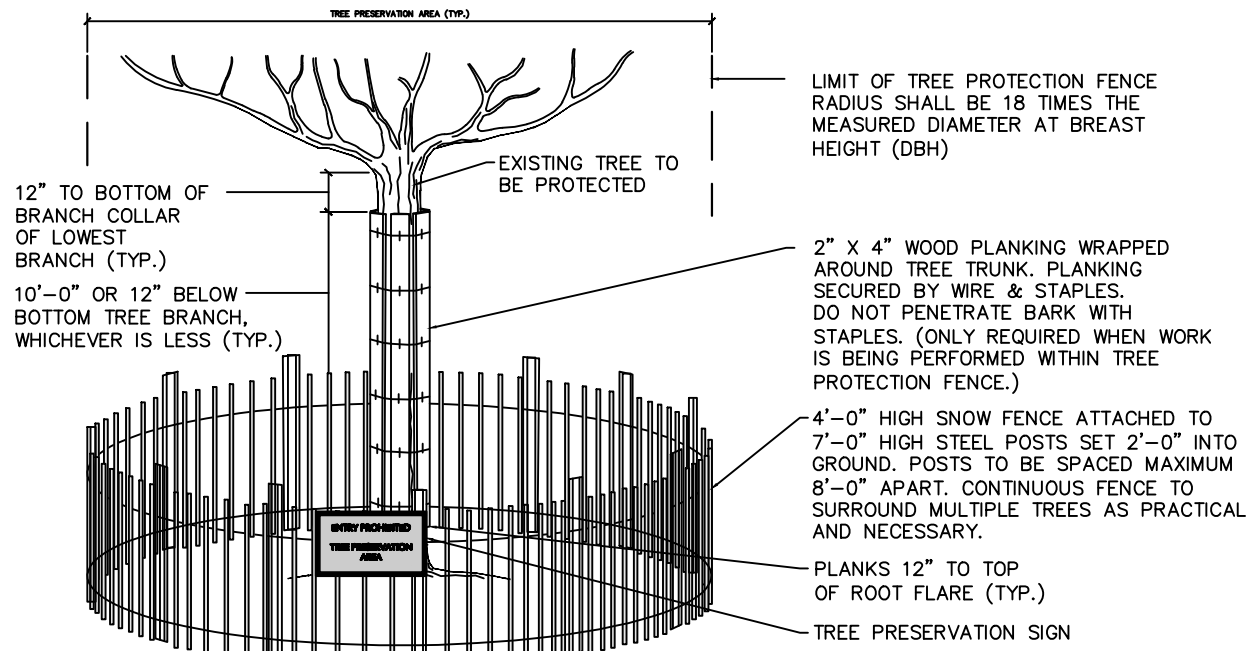
Project No.	Drawing No.
101049802	LD101
Date	Sheet 29 of 36
FEBRUARY 12, 2026	
Drawn By	
JD	
Checked By	
DB	



LEGEND	
	EXISTING TREE TO REMAIN AND BE PROTECTED
	EXISTING TREE TO BE REMOVED
	TPF TREE PROTECTION FENCE
	LIMIT OF DISTURBANCE

TREE PROTECTION NOTES:

- ALL EXISTING TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING SHALL BE PROTECTED THROUGHOUT THE DURATION OF WORK. THE LIMIT OF TREE PROTECTION FENCE SHALL BE 10 FT BEYOND THE DRIP LINES, UNLESS CONDITIONS WARRANT THE FENCE TO BE LOCATED CLOSER TO THE TREE. THE PROJECT LANDSCAPE ARCHITECT TO APPROVE THE LOCATION OF ALL FENCING PRIOR TO EXCAVATION.
- TREE PROTECTION PLANKING SHALL BE INSTALLED ON ALL EXISTING TREES WHERE WORK IS TO BE DONE WITHIN THE LIMIT OF TREE PROTECTION FENCING. REFER TO DETAIL ON THIS SHEET.
- IF TREE PROTECTION FENCING NEEDS TO BE MOVED OR BREACHED DUE TO TEMPORARY CONSTRUCTION ACTIVITY WITHIN THE TREE PROTECTION ZONE, THE FENCING WILL BE RESET TO ITS ORIGINAL LOCATION IMMEDIATELY AFTER CONSTRUCTION WITHIN THE TREE PROTECTION ZONE IS COMPLETE.
- TREE PROTECTION FENCING SHALL BE MAINTAINED TO PROTECT TREES AT ALL TIMES. ANY DAMAGED FENCING SHALL BE IMMEDIATELY REPLACED.
- DEMOLITION WORK WITHIN THE TREE PROTECTION FENCE OF PROTECTED TREES SHALL BE PERFORMED BY NON-MECHANICAL METHODS. CONTRACTOR TO PROTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN, OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS.
- ALL TEMPORARILY EXPOSED TREE ROOTS SHALL BE COVERED WITH 2 INCHES OF SHREDDED HARDWOOD MULCH AND THOROUGHLY IRRIGATED ON A DAILY BASIS AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
- ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE OR THE PROJECT LANDSCAPE ARCHITECT.
- ALL AREAS WHERE NATURAL VEGETATION AND/OR SPECIMEN TREES ARE TO REMAIN SHALL BE PROTECTED BY THE ERECTION OF FENCING, AND NO DISTURBANCE SHALL OCCUR PRIOR TO INSPECTION BY THE TOWNSHIP ENGINEER AND THE ISSUANCE OF WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION. THESE PROTECTIVE MEASURES SHALL NOT BE ALTERED OR REMOVED WITHOUT APPROVAL OF THE TOWNSHIP ENGINEER.



TREE PROTECTION FENCING AND TREE PLANKING

GENERAL NOTES:

- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
- HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

- NOTE(S):
- REFER TO SHEET LD102 FOR TREE REMOVAL & REPLACEMENT PLAN 2.
 - REFER TO THE TREE RESTORATION PLANS PROVIDED IN A SEPARATE APPLICATION FOR TOTAL REPLACEMENT TREE LOCATIONS PROPOSED ON-SITE AND OFF-SITE OUTSIDE THE LIMIT OF WORK.

—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—
Date	Description	No.

REVISIONS

SIGNATURE: *Daniel Badgley* DATE: *2/12/2026* SIGNED: *DA*

N.J. LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00097700

LANGAN
Langan Engineering and Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project

CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS

BLOCK No. 174, LOT No. 1.01
TOWNSHIP OF WEST ORANGE

ESSEX COUNTY NEW JERSEY
Drawing Title

PARTIAL TREE REMOVAL PLAN

Project No. 101049802	Drawing No. LD102
Date FEBRUARY 12, 2026	
Drawn By JD	
Checked By DB	Sheet 30 of 36

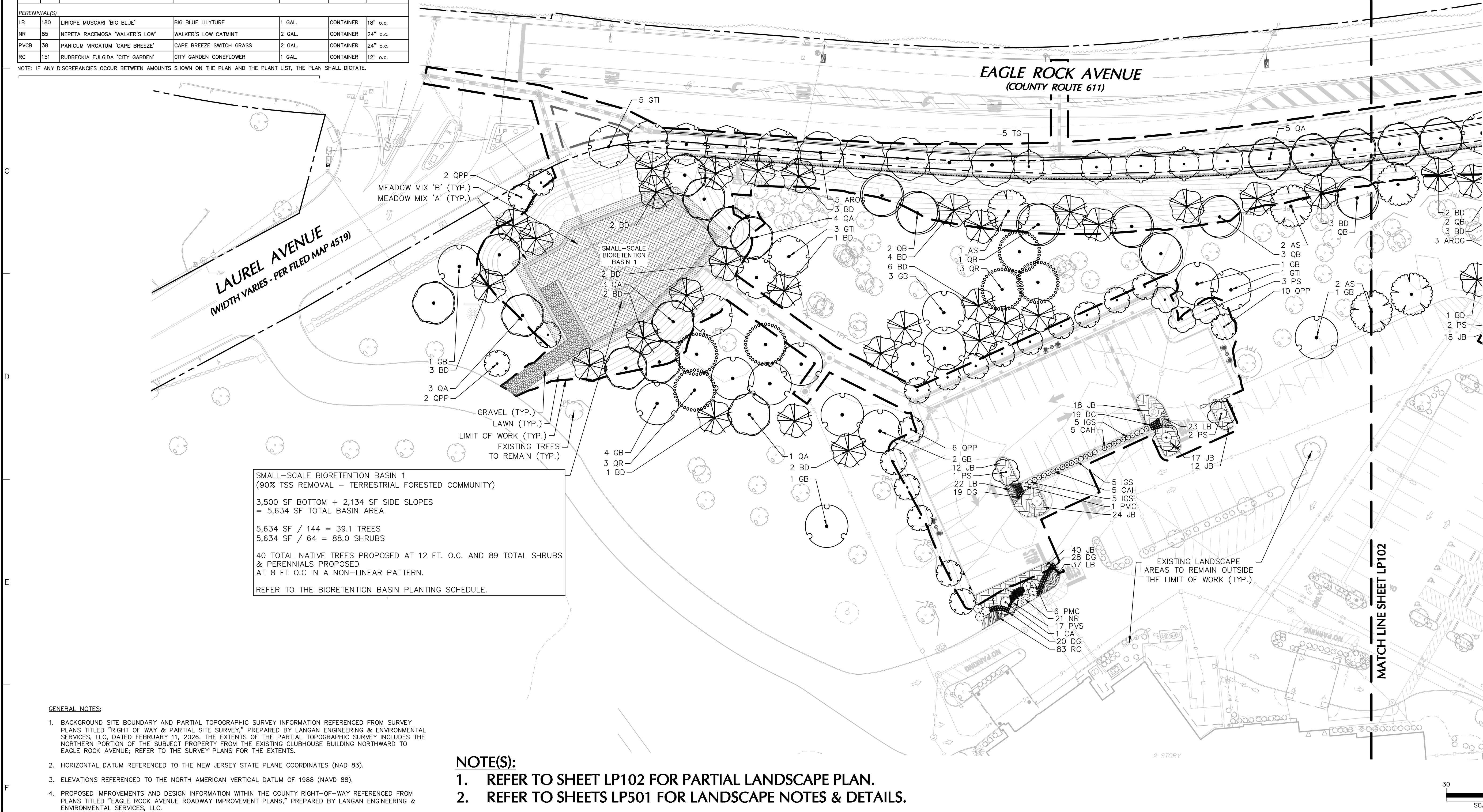
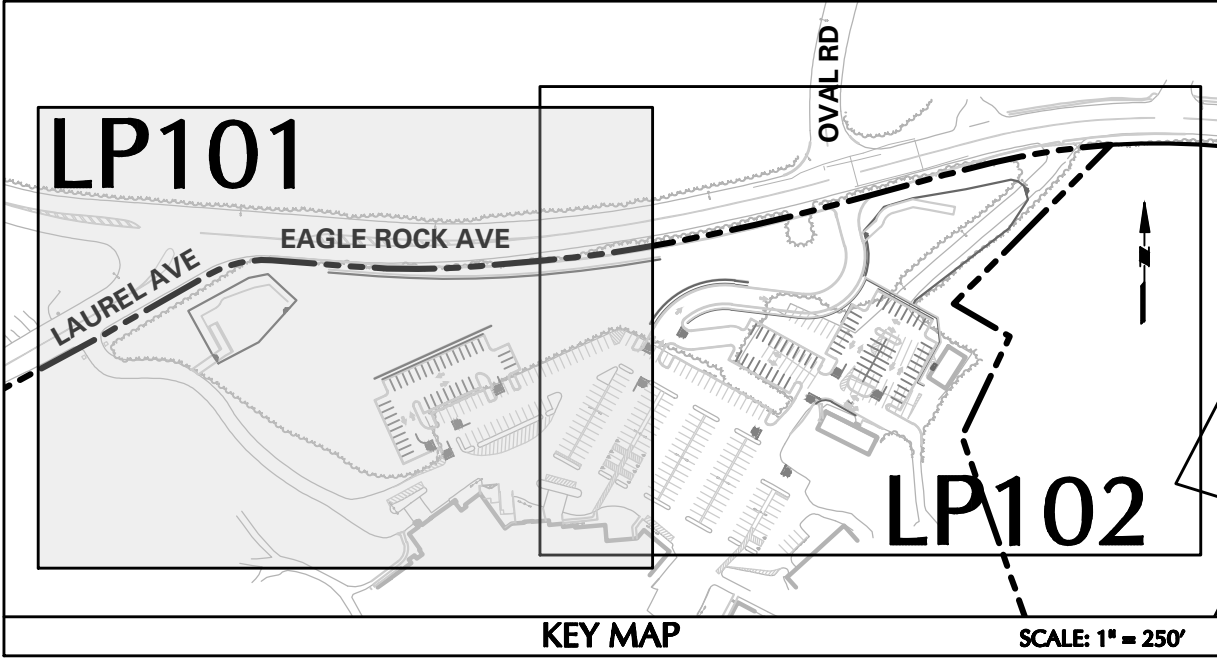
PLANT SCHEDULE ON-SITE IMPROVEMENT AREA						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
ARA	31	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	2 1/2-3" CAL.	B&B	
AROG	12	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	4-4 1/2" CAL.	B&B	
AS	24	ACER SACCHARUM	SUGAR MAPLE	4-4 1/2" CAL.	B&B	
BD	50	BETULA NIGRA 'BNMT'	DURA HEAT®RIVER BIRCH	4-4 1/2" CAL.	B&B	
GB	31	QINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	4-4 1/2" CAL.	B&B	
GTI	18	GLEDITSIA TRIACANTHOS F. INERMIS	THORNLESS HONEY LOCUST	4-4 1/2" CAL.	B&B	
QA	18	QUERCUS ACUTISSIMA	SAWTOOTH OAK	4-4 1/2" CAL.	B&B	
QB	14	QUERCUS BICOLOR	SWAMP WHITE OAK	4-4 1/2" CAL.	B&B	
QPP	41	QUERCUS PALUSTRIS 'PRINGREEN'	GREEN PILLAR®PIN OAK	2 1/2-3" CAL.	B&B	
QR	11	QUERCUS RUBRA	NORTHERN RED OAK	4-4 1/2" CAL.	B&B	
TG	27	TILIA CORDATA 'GREENSPIRE'	GREENSPITE LITTLELEAF LINDEN	2 1/2-3" CAL.	B&B	
ORNAMENTAL TREE(S)						
CA	13	CERUS CANADENSIS 'ACE OF HEARTS'	ACE OF HEARTS EASTERN REDBUD	2 1/2-3" CAL.	B&B	SINGLE STEM
PS	13	PRUNUS SERRULATA	JAPANESE FLOWERING CHERRY	2 1/2-3" CAL.	B&B	SINGLE STEM
EVERGREEN TREE(S)						
JVT	25	JUNIPERUS VIRGINIANA 'TAYLOR'	TAYLOR EASTERN REDCEDAR	6-7" HT.	B&B	
DECIDUOUS SHRUB(S)						
CAH	50	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	24-36" HT.	CONTAINER	
EVERGREEN SHRUB(S)						
IGS	60	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	18-24" HT.	CONTAINER	
PMC	13	PINUS MUGO 'COMPACTA'	DWARF MUGO PINE	30-36" HT.	CONTAINER	
VRC	4	VIBURNUM RHYTIDOPHYLLUM 'CREE'	LEATHERLEAF VIBURNUM	24-36" HT.	CONTAINER	
ORNAMENTAL GRASS(ES)						
DG	137	DESCHAMPSIA CESPIIOSA 'GOLDTAU'	GOLD DEW TUFTED HAIR GRASS	2 GAL.	CONTAINER	
PVS	90	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	2 GAL.	CONTAINER	
GROUND COVER SHRUB(S)						
JB	353	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	18-24" SPRD.	CONTAINER	36" o.c.
PERENNIAL(S)						
LB	180	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	1 GAL.	CONTAINER	18" o.c.
NR	85	NEPETA RACEMOSA 'WALKER'S LOW'	WALKER'S LOW CATMINT	2 GAL.	CONTAINER	24" o.c.
PVCB	38	PANICUM VIRGATUM 'CAPE BREEZE'	CAPE BREEZE SWITCH GRASS	2 GAL.	CONTAINER	24" o.c.
RC	151	RUDBECKIA FULGIDA 'CITY GARDEN'	CITY GARDEN CONEFLOWER	1 GAL.	CONTAINER	12" o.c.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

PLANT SCHEDULE - SMALL-SCALE BIORETENTION BASIN 1					
QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
DECIDUOUS TREE(S)					
14	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	WHIPS (APPROX. 1/2" CAL.)	-	APPROX. 4-5' HIGH
13	AMELANCHIER CANADENSIS	MULTI-STEM SHADBLOW SERVICEBERRY	WHIPS (APPROX. 1/2" CAL.)	-	APPROX. 4-5' HIGH
13	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	WHIPS (APPROX. 1/2" CAL.)	-	APPROX. 4-5' HIGH
EVERGREEN SHRUB(S)					
12	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	24-30"	#3 CAN	-
11	ILEX GLABRA COMPACTA	DWARF INKBERRY HOLLY	24-30"	#3 CAN	-
11	LINDERA BENZON	NORTHERN SPICEBUSH	30-36"	#5 CAN	-
11	MORELLA PENSYLVANICA	NORTHERN BAYBERRY	30-36"	#5 CAN	-
PERENNIAL(S)					
11	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	1 GAL.	CONTAINER	spaced @ 36" o.c.
11	COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM COREOPSIS	2 GAL.	CONTAINER	spaced @ 36" o.c.
11	ECHINACEA PURPUREA	PURPLE CONEFLOWER	2 GAL.	CONTAINER	spaced @ 36" o.c.
11	IRIS SIBERICA 'CAESAR'S BROTHER'	CAESAR'S BROTHER SIBERIAN IRIS	2 GAL.	CONTAINER	spaced @ 36" o.c.

PLANT SCHEDULE - SMALL-SCALE BIORETENTION BASIN 2					
QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
ORNAMENTAL GRASS(ES)					
20	AGROSTIS GIGANTEA	RED TOP	2 GAL.	CONTAINER	spaced @ 36" o.c.
20	AGROSTIS PALUSTRIS	CREEPING BENTGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
20	CALAMAGROSTIS CANADENSIS	CANADA BLUEJOINT	2 GAL.	CONTAINER	spaced @ 36" o.c.
20	CINNA ARUNDINACEA	WOOD REEDGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	DICANTHELIUM CLANDESTINUM	DEERTONGUE	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	ELYMUS VIRGINICUS VA./RIPARIUS	RIPARIAN WILDRYE	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	PANICUM VIRGATUM	SWITCHGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	POA TRIVIALIS	ROUGH BLUEGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	POA PALUSTRIS	FOWL SALTGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	PUCCONELLIA DISTANS	ALKALI SALTGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.
19	TRIPSACUM DACTYLOIDES	EASTERN GAMAGRASS	2 GAL.	CONTAINER	spaced @ 36" o.c.

WEST ORANGE, NEW JERSEY - ORDINANCE COMPLIANCE CHART			
SECTION	REQUIREMENT	PROPOSED	COMPLIANCE
§ 25-12. 1. o.	LANDSCAPED PLANS SHALL BE SUBMITTED FOR DETAILED PLANTING WITHIN THE PARKING AREA. IN PARKING AREAS WITH 30 OR MORE PARKING SPACES, THERE SHALL BE A MINIMUM OF ONE TREE PLUS GROUND LEVEL PLANTING FOR EACH 10 PARKING SPACES, WHICH MAY BE PROVIDED WITHIN AND/OR ON THE PERIMETER OF THE PARKING AREA. THE MAXIMUM LENGTH OF A SINGLE ROW OF PARKING SPACES SHALL BE 20 SPACES. AT WHICH POINT A LANDSCAPED AREA WITH A MINIMUM WIDTH OF EIGHT FEET SHALL BE PROVIDED.	AT PARKING AREAS (WITHIN LIMIT OF WORK): 103 PARKING SPACES / 10 = 10.3 = 11 TREES REQUIRED 11 TREES PROPOSED	COMPLIES
§ 28-4. e. 8.	ALL PARKING LOT OWNERS SHALL MAINTAIN TREES IN COMPLIANCE WITH TOWNSHIP CODE SUBSECTION 25-12.1o AND SHALL CREATE 50% SHADE IN PARKING LOTS WITHIN TWENTY FIVE (25) YEARS.	REFER TO PLANTING SCHEDULE.	COMPLIES
§ 28-8. c. 1. 2.	REPLACEMENT TREE TO BE A MINIMUM OF 6- FEET TALL.	REFER TO PLANTING SCHEDULE.	COMPLIES



SMALL-SCALE BIORETENTION BASIN 1
(90% TSS REMOVAL - TERRESTRIAL FORESTED COMMUNITY)

3,500 SF BOTTOM + 2,134 SF SIDE SLOPES
= 5,634 SF TOTAL BASIN AREA

5,634 SF / 144 = 39.1 TREES
5,634 SF / 64 = 88.0 SHRUBS

40 TOTAL NATIVE TREES PROPOSED AT 12 FT. O.C. AND 89 TOTAL SHRUBS & PERENNIALS PROPOSED AT 8 FT O.C IN A NON-LINEAR PATTERN.

REFER TO THE BIORETENTION BASIN PLANTING SCHEDULE.

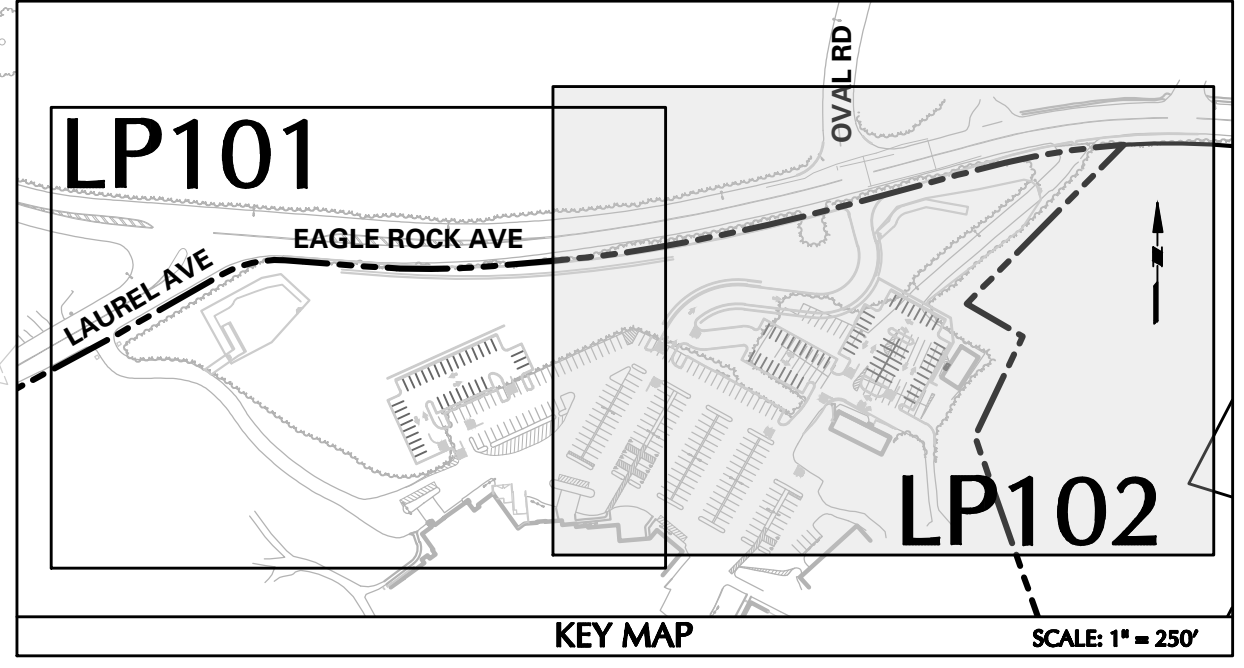
GENERAL NOTES:

- BACKGROUND SITE BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY INFORMATION REFERENCED FROM SURVEY PLANS TITLED "RIGHT OF WAY & PARTIAL SITE SURVEY," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC, DATED FEBRUARY 11, 2026. THE EXTENTS OF THE PARTIAL TOPOGRAPHIC SURVEY INCLUDES THE NORTHERN PORTION OF THE SUBJECT PROPERTY FROM THE EXISTING CLUBHOUSE BUILDING NORTHWARD TO EAGLE ROCK AVENUE; REFER TO THE SURVEY PLANS FOR THE EXTENTS.
- HORIZONTAL DATUM REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATES (NAD 83).
- ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- PROPOSED IMPROVEMENTS AND DESIGN INFORMATION WITHIN THE COUNTY RIGHT-OF-WAY REFERENCED FROM PLANS TITLED "EAGLE ROCK AVENUE ROADWAY IMPROVEMENT PLANS," PREPARED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, LLC.

NOTE(S):

- REFER TO SHEET LP102 FOR PARTIAL LANDSCAPE PLAN.
- REFER TO SHEETS LP501 FOR LANDSCAPE NOTES & DETAILS.

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
Date	Description	No.
REVISIONS		
SIGNATURE	DANIEL BADGLEY	DATE SIGNED
LANGAN Langan Engineering and Environmental Services, LLC 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com NJ Certificate of Authorization No. 24GA27996400		
Project CRESTMONT COUNTRY CLUB & EAGLE ROCK AVE IMPROVEMENTS BLOCK No. 174, LOT No. 1.01 TOWNSHIP OF WEST ORANGE		
ESSEX COUNTY NEW JERSEY Drawing Title PARTIAL LANDSCAPE PLAN I		
Project No. 101049802	Drawing No. LP101	
Date FEBRUARY 12, 2026	Drawn By LCZ	
Checked By DB	Sheet 31 of 36	



REVISIONS

LANGAN

Langan Engineering and
Environmental Services, LLC

300 Kimball Drive
Parsippany, NJ 07054

T: 973.560.4900 F: 973.560.4901 www.langan.com

NJ Certificate of Authorization No. 246A27996400

ESSEX COUNTY NEW JERSEY

File: Langan.stb Layout: LP102 Document Code: 101049802-0102-LP101-0102

GENERAL LANDSCAPE PLANTING NOTES

1. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1962 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
2. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
3. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMS AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS' ORIGINAL GRADE BEFORE DIGGING. PLANTS OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR, AND HABIT. THE LANDSCAPE ARCHITECT SHALL HAVE THE RIGHT TO REJECT ANY MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES. ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD HEAVILY MEET ALL REQUIREMENTS SPECIFIED. ANY TREE THAT LOSES THE MAIN LEADER SHALL BE REPLACED.
4. THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
5. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND SUBGRADE DRAINAGE OR PERCOLATION CHARACTERISTICS, WHETHER THE SUBGRADE SOILS ARE EXISTING TO REMAIN OR IMPORTED AND PLACED. CONTRACTOR TO ENSURE POSITIVE VERTICAL DRAINAGE THROUGHOUT PLANTED AREAS. DISCREPANCIES SHALL BE ADDRESSED WITH THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PURCHASING PLANT MATERIALS.
6. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE FINISH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
7. ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 - JUNE 15 OR SEPTEMBER 1 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.
8. ALL FENCE AND GUIDE RAIL INSTALLATIONS SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF CONSTRUCTION. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
10. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA (2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD (3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
11. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROPOSAL FOR NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
12. LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
13. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEMS, INJURIES, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME. DURING PROTECTIVE WORK, THE CONTRACTOR SHALL REMOVE DEFECTIVE MATERIAL IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
14. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, MISSING, 25% OR MORE DEAD, WHICH DO NOT DEVELOP FROM PLANTING STOCK, THAT APPEARS UNHEALTHY OR UNSOUND, AND/OR HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES DEAD, OR REJECTED FOR ANY OTHER REASON, PRIOR TO SUBSTITUTION, SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING PER SPECIFICATIONS TO MAINTAIN HEALTHY PLANT CONDITIONS.
16. DELIVERY, STORAGE, AND HANDLING:
 - A. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING HEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETRIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
 - B. TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BING-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
 - C. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL PLANTS ARE TO BE WRAPPED AND BUNDLING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE PLANT AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
 - D. THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
 - E. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNDESIRABLE DEBRIS. ALL THE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY GULLIES AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
 - F. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
19. CONTRACTOR'S GUARANTEE: ALL PLANTINGS AND PLANTING AREAS SHALL BE PERMANENTLY MAINTAINED. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND VIGOROUS GROWING CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, PRUNING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE DURATION OF THE GUARANTEED PERIOD. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
20. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
21. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24- HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH. CONTRACTOR SHALL CONFIRM WATER SAVING WITH OWNER PRIOR TO BID AND INCLUDE ALTERNATE MEANS OF WATERING IF NECESSARY.
22. ON-SITE WATER SHALL BE FURNISHED BY THE CONTRACTOR. HOSE AND OTHER WATERING EQUIPMENT SHALL BE FURNISHED BY THE CONTRACTOR.
23. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/2 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
24. TREES MAY BE STAKED AT THE LANDSCAPE CONTRACTOR'S DISCRETION, IF REQUIRED BY ORDNANCE, IF LOCATED ON A SLOPE 3:1 OR GREATER, OR IF THE SITE IS LOCATED IN A HIGH WIND ZONE. CURRENT HORTICULTURAL PRACTICE DOES NOT RECOMMEND STAKING TREES EXCEPT IN CONDITIONS WHERE TREES ARE SUBJECT TO BLOW DOWNING DUE TO WEATHER CONDITIONS, HEAVY PREVAILING WINDS, OR A HIGH RATIO OF TOP GROWTH TO ROOT BALL. IF STAKING IS DEEMED NECESSARY BY CONTRACTOR, STAKES AND GUYS SHOULD BE LOCATED AND FLAGGED IN A MANNER TO PREVENT TRIPPING HAZARDS. WIRES OR GUYS SHALL BE LOCATED AND COVERED SO AS NOT TO PULL OR DAMAGE BRANCHES AND SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD.
25. ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH FROM A LOCAL SOURCE HARVESTED IN A SUSTAINABLE MANNER THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST. MULCH SHALL BE A FERROUS SHREDDED HARDWOOD MULCH. MULCH SHOULD NOT BE PILED UP AGAINST THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK. FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN, THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
27. LANDSCAPE LIST VISTS TO BE PERFORMED BY THE PROJECT LANDSCAPE ARCHITECT. IF UNDER CONTRACT FOR SUCH WORK, WILL NOT BE SCHEDULED UNTIL CONFIRMATION IS RECEIVED THAT ALL PROPOSED LANDSCAPE ITEMS HAVE BEEN INSTALLED, OR DISCREPANCIES NOTED IN THE PRIOR PUNCH LIST REPORT HAVE BEEN CORRECTED. THE PUNCH LIST SITE VISIT WILL THEN BE PERFORMED WITHIN 10 BUSINESS DAYS.
28. CONTRACTOR SHALL ASSESS THE NEED FOR DEEP PROTECTION ON SITE. IF DEEMED NECESSARY, SHADE AND ORNAMENTAL TREES SHALL BE PROTECTED THROUGHOUT WINTER WITH SPIRAL WRAP TREE GUARDS, OR APPROVED, EQUAL PROTECTION LENGTH TO BE FROM BELOW THE LOWEST BRANCH AND DOWN TO WITHIN A FEW INCHES OF THE GROUND. THE GUARDS CAN BE REMOVED IN SPRING AND SAVED FOR RE-INSTALLATION DURING FOLLOWING WINTERS AS PART OF A MAINTENANCE PROGRAM.
29. ALL SLOPES 3:1 OR GREATER AND ALL SIDE SLOPES OF BASINS SHALL REQUIRE AN EROSION CONTROL BLANKET. ERORET 2010 BY NORTH AMERICAN GREEN, OR APPROVED EQUAL.

PLANTING SOIL SPECIFICATIONS

1. PLANTING SOIL, ALTERNATELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, STONES, TRASH AND STONES OVER 1/2" DIA., IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.
2. **PLANTING SOIL:**
 - A. REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL SPECIFICATIONS. CRITERIA IN THIS SPECIFICATION THROUGH TESTING: CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOIL, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING. THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANTS AND SPECIFICATIONS.
 - B. SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BODIES, MARSHES OR CONTAMINATED SITES.
 - C. AT A MINIMUM, PLANTING SOIL MEETING THESE SPECIFICATIONS MAY BE OBTAINED FROM WECARE DENALI, P-888-325-1522, NATURCYCLE, P-315-707-8950, OR APPROVED EQUAL.
3. CONTRACTOR SHALL TEST SOILS AND FURNISH SAMPLES UPON REQUEST. PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER. MATERIAL COMPOSITE MANUFACTURER'S CERTIFIED ANALYSIS, AND THE WEIGHT OF THE MATERIALS. SOIL OR AMENDMENT MATERIALS SHALL BE STORED ON SITE TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND SHALL BE PROTECTED FROM INTRUSION OF CONTAMINANTS AND EROSION. AFTER MIXING, SOIL MATERIALS SHALL BE COVERED WITH A TARPULIN UNTIL TIME OF ACTUAL USE.
4. ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE ARCHITECT. PRIOR TO DELIVERY, BEFORE INSTALLATION, THE CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING INDICATES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT. FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.

- THE FOLLOWING TESTING SHOULD BE PERFORMED AND RESULTS GIVEN TO THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY, BEFORE INSTALLATION.
- A. WHERE A PERMANENT IRRIGATION SYSTEM IS PLANNED:
 - a. PARTICLE SIZE ANALYSIS - SANDY LOAM, 60%-70% SAND, 25%-40% SILT, AND 5%-15% CLAY.
 - b. GRAVEL CONTENT (2mm): LESS THAN 10%.
 - c. FERTILITY ANALYSIS: pH (6.0-6.8), SOLUBLE SALTS (0.2 to 1.0 mmho/cm), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND MAGNESIUM (1:1, 2.5-26 N NATIVE SOILS, UP TO 10% IN AMENDED SOILS).
 - d. TOXIC SUBSTANCE ANALYSIS.
 - e. MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED.
 - f. NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #10 SIEVE.
 - B. WHERE NO PERMANENT IRRIGATION IS PLANNED:
 - a. PARTICLE SIZE ANALYSIS - LOAM, 40%-60% SAND, 25%-60% SILT, AND 5%-20% CLAY.
 - b. GRAVEL CONTENT (2mm): LESS THAN 10%.
 - c. FERTILITY ANALYSIS: pH (6.0-6.8), SOLUBLE SALTS (0.2 to 1.0 mmho/cm), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND MAGNESIUM (1:1, 2.5-26 N NATIVE SOILS, UP TO 10% IN AMENDED SOILS).
 - d. TOXIC SUBSTANCE ANALYSIS.
 - e. MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED.
 - f. NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #10 SIEVE.
 - C. SOILS FOR BASKING (BIO-RETENTION, INTERLUM, ETC.) AND BOWLSHALLS SHALL BE TESTED FOR COMPLIANCE WITH THE CIVIL ENGINEERING SPECIFICATIONS, OR OTHERWISE THE BEST MANAGEMENT PRACTICES MANUAL FOR THE RESPECTIVE STATE IN WHICH THE PROJECT IS LOCATED.
- IF SOIL AMENDMENT FOR PLANT MATERIAL:**
- A. IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR FERTILIZER. NEED NOT BE USED IF SOIL ORGANIC CONTENT IS 5% OR GREATER. IF SOIL IS COMPOSTED, PH RANGE OF 6-8, MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE, SOLUBLE SALTS LESS THAN 0.5 MM HG/CM, MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL.
 - B. ORGANIC MATTER AS A SOIL AMENDMENT: LEAF MOULD WITH 60-90% ORGANIC CONTENT BY WEIGHT, SHREDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YR. SHOULD BE FREE OF DEBRIS, STONES OVER 1/2" DIA.
 - C. SOIL IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL AND TOPSOIL SHOULD BE FRIABLE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH.
 - D. AMENDMENTS FOR BACK FILL IN TREE AND SHRUB PITS:
 - a. GROUND LIMESTONE (WITH A MIN. OF 88% OF CALCIUM AND MAGNESIUM CARBONATES) USED PENDING RESULTS OF SOIL ANALYSIS.
 - b. ADJUST PH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER PH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 88% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE 100% PASSING TO THE 10 MESH SIEVE, MINIMUM 90% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE.
 - E. MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR CYPRESS. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
 - F. MODIFY EXTREMELY SANDY SOILS (MORE THAN 80% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

- A. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2% OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES).
- B. **CLEAN SOIL FILL IN LANDSCAPE AREAS:**
 - a. LANDSCAPE FILL MATERIAL, BELOW PLANTING SOILS, SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5-7.
- C. **SOIL PLACEMENT:**
 - a. CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, TWELVE INCHES (12") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUNDCOVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS.
 - b. CONTRACTOR TO COMPACT SUBSOILS TO A MINIMUM DEPTH OF 6 INCHES. THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOIL INTO THE SUBSOIL PRIOR TO PLACING PLANTING SOIL AT THE DEPTHS INDICATED ABOVE. PLANTING SOIL SHALL BE PLACED IN 12-18" LIFTS AND WATERED THOROUGHLY BEFORE INSTALLING NEXT LIFT. REPEAT UNTIL DEPTHS AND FINISH GRADES HAVE BEEN ACHIEVED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.
 - c. PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL MOUND REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS.
- D. **SOIL CONDITIONS:**
 - a. ADJUST PH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER PH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 88% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE 100% PASSING TO THE 10 MESH SIEVE, MINIMUM 90% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE.
 - b. ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
- E. **SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):**
 - a. THOROUGHLY TILL ORGANIC MATERIAL (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC WATTE AMENDMENT.
 - b. MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR CYPRESS. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
 - c. MODIFY EXTREMELY SANDY SOILS (MORE THAN 80% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

LANDSCAPE MAINTENANCE NOTES

1. **MAINTENANCE OPERATIONS BEFORE APPROVAL:**
 - A. PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED. THE CONTRACTOR SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
 - B. CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WIRE RINGS OR SAUCERS, MAINTAINING TREES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
 - C. CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
2. **MAINTENANCE DURING CONSTRUCTION:**
 - A. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED UNTIL PROVISIONAL ACCEPTANCE. AFTER ALL LAWN PLANTING IS COMPLETED, CARE SHALL BE RESET TO PROPER GRADE AND POSITION, PLANTING SAUCERS RESTORED AND DEAD PLANTS AND WIRES SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
 - B. IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
 - C. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST. PLANTS THAT ARE TO BE REPLACED SHALL BE REPLACED AS SOON AS POSSIBLE. THE CONTRACTOR, REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
 - D. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
 - E. AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REMOVED DURING THIS PERIOD SHALL BE REPLACED BY THE CONTRACTOR. LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.

- A. BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
- B. WATER TO KEEP SURFACE SOIL MOIST, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING, MOW TO 2 1/2 - 3 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO KEEP GRASS FROM EXCEEDING 3 1/2 INCHES. WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.

LAWN SEED MIX

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1/2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATE AT 120 POUNDS PER ACRE:

10% DEEPBLUE KENTUCKY BLUEGRASS	25% DAKOTA TALL FESCUE
25% TALL FESCUE	10% FRONTIER PERENNIAL RYEGRASS
4. SEEDING DATES FOR THIS MIXTURE SHALL BE BETWEEN MARCH 15TH TO MAY 15TH OR SEPT 1ST TO OCTOBER 30TH.
5. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO ORGATE SEEDING AREA UNTIL A STAND OF COVER IS ESTABLISHED AND FOUND ACCEPTABLE TO THE OWNER. SEE LAWN WATERING SCHEDULE NOTES.

LAWN WATERING SCHEDULE (seed)

- THE FOLLOWING WATERING SCHEDULE COVERS ROUGHLY 8 WEEKS TO ESTABLISH A HEALTHY STAND OF GRASS FROM SEED. THE CONTRACTOR SHALL BE OBLIGATED TO ENSURE A HEALTHY STAND OF GRASS AT THE END OF THE MAINTENANCE/BOND PERIOD. ANY BARE OR DEAD AREAS IN THE LAWN SHALL BE PREPARED, RESEEDED AND REESTABLISHED PRIOR TO THE END OF THE MAINTENANCE/BOND PERIOD AND TO THE SATISFACTION OF THE PROJECT LANDSCAPE ARCHITECT AND THE OWNER.
- IMPORTANT ASPECTS TO ATTAINING AND SUSTAINING A HEALTHY STAND OF GRASS ARE THE INSTALLATION OF TOPSOIL, SEED BED PREPARATION, ATTAINING OPTIMAL PH FOR THE INTENDED PLANT SPECIES, FERTILIZING, MULCH COVERING, AND SUFFICIENT WATERING PER THESE NOTES AND/OR PROJECT SPECIFICATIONS.
1. SEEDING SHALL BE DONE DURING THE SEASONS SPECIFIED IN THE LAWN SEED MIX NOTES AND/OR PROJECT SPECIFICATIONS.
 2. AFTER THE SEEDBED IS PREPARED, SEED IS INSTALLED, AND MULCH IS APPLIED, WATER LIGHTLY TO KEEP THE TOP 2 INCHES OF SOIL CONSISTENTLY MOIST, NOT SATURATED. AT 1" TIME SHOULD WATER BE APPLIED TO THE POINT OF RUNOFF OR THE DISPLACEMENT OF SEED.
 3. DEPENDING ON SOIL TEMPERATURES, IT MAY TAKE SEVERAL WEEKS FOR GERMINATION TO OCCUR. DIFFERENT SPECIES WITHIN THE MIX GERMINATE AT DIFFERENT TIMES AND THEREFORE CONTRACTOR SHOULD CONTINUE THE LIGHT WATERING AS DESCRIBED ABOVE, UNTIL THERE IS AT LEAST 2 INCHES OF GROWTH THROUGHOUT.
 4. AT THIS POINT, WATERING FREQUENCY MAY BE REDUCED TO EVERY 3 TO 5 DAYS. WATER SHALL BE APPLIED TO MET A 6 INCH MINIMUM SOIL DEPTH TO PROMOTE HEALTHY DEEP ROOTS.
 5. BEGIN MOWING ONCE PER WEEK AFTER THE GRASS HAS REACHED 3 INCHES HEIGHT. MOW TO A HEIGHT OF NO LESS THAN 2-3 INCHES. AFTER 2 TO 3 WEEKS OF MOWING, WATER FREQUENTLY ENOUGH TO KEEP THE TOP 2 INCHES OF SOIL CONSISTENTLY MOIST, NOT SATURATED. AT 1" TIME SHOULD WATER BE APPLIED TO THE POINT OF RUNOFF OR THE DISPLACEMENT OF SEED.

1. ALL SHRUBS TO BE SET PLUM.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

MEADOW SEED MIX:

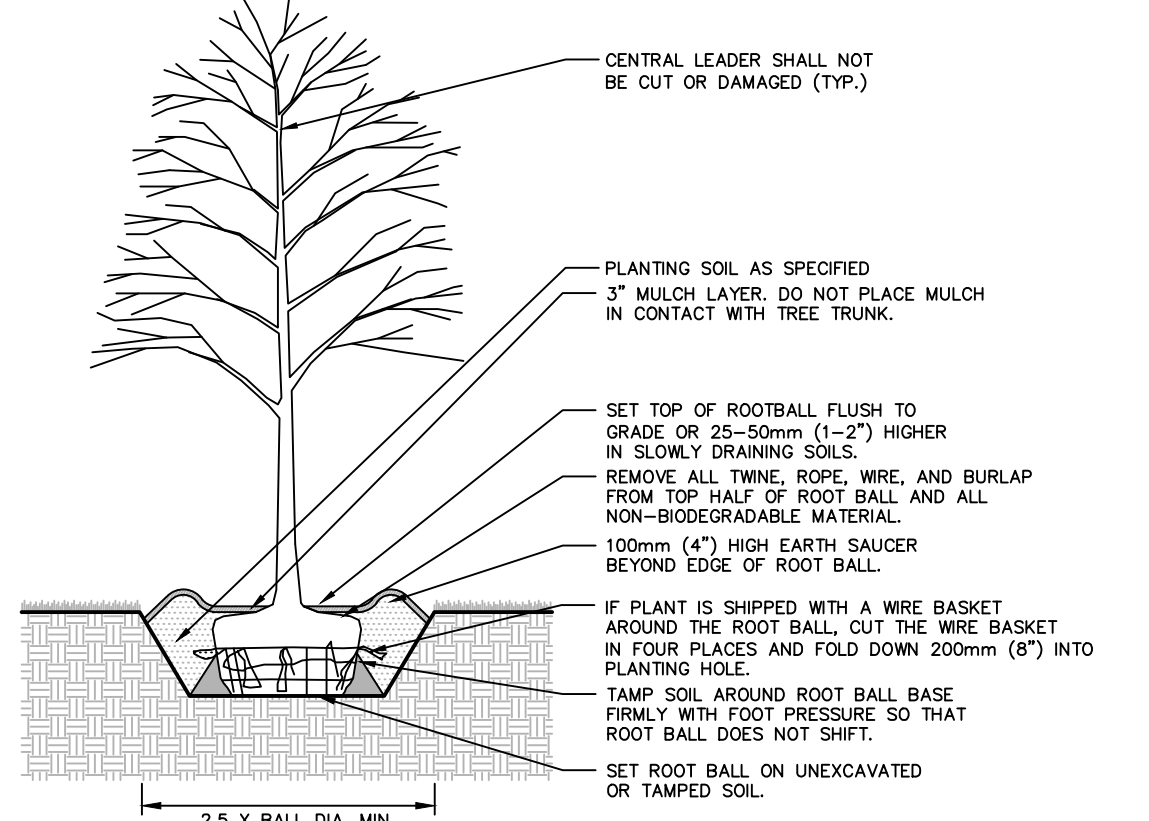
- MEADOW SEED MIX A, ERNST SEED MIX ERMAX-156 "LOW-GROWING MUDFLOWER/GRASS MIX"
- | | |
|-----------------------|--------------------|
| FESTUCA OVINA | SHEEP FESCUE |
| ANILUM MULTIFLORUM | ANNUAL RYEGRASS |
| ANTHOXANTHUM ODORATUM | SWEET VERNAL GRASS |
| BLUE ORCHY | BLUE ORCHY |
| DAME'S ROCKET | DAME'S ROCKET |
| PARTRIDGE PEAT | PARTRIDGE PEAT |
| WHITE YARROW | WHITE YARROW |
| OX EYE DAISY | OX EYE DAISY |
| MOZZER PHEASANT | MOZZER PHEASANT |
| VERBENA HASTATA | VERBENA HASTATA |
| SCILLA LUTRELLA | SCILLA LUTRELLA |
| SPIKED GAYFEATHER | SPIKED GAYFEATHER |
- NOTES:
1. SEED AT A RATE OF 20 LBS./ACRE OF 100% PURE LIVE SEED.
 2. FOR SPRING SEEDING, APPLY A NURSE CROP OF OATS AT A RATE OF 20 LBS./ ACRE.
 3. FOR FALL SEEDING, APPLY A NURSE CROP OF BARLEY AT A RATE OF 20 LBS./ ACRE.

- MEADOW SEED MIX B, ERNST SEED MIX ERMAX-127 "RETENTION BASIN MUDFLOW MIX"
- | | |
|-------------------------|-----------------------------|
| PANICUM GLANDSTEDTII | TOGOA |
| CAREX VULPIDOEA | PA ECOTYPE |
| ELYMUS VIRGINICUS | MADISON-NY ECOTYPE |
| CAREX LURIDA | PA ECOTYPE |
| CAREX SOPORALIA | PA ECOTYPE |
| VERBENA HASTATA | PA ECOTYPE |
| JUNCUS EFFUSUS | JUNCUS EFFUSUS |
| OVINE SUNFLOWER | PA ECOTYPE |
| AUTUMN BENTGRASS | ALBANY PINE BUSH-NY ECOTYPE |
| SWAMP MILFORD | PA ECOTYPE |
| WOLFGRASS | PA ECOTYPE |
| LAURE LEAVED ASTER | PA ECOTYPE |
| NEW ENGLAND ASTER | PA ECOTYPE |
| ASTER NOVAE-ANGLIAE | PA ECOTYPE |
| ASTER PUNCTATUS | PA ECOTYPE |
| ASTER SPICATUS | PA ECOTYPE |
| GREAT BLUE LOBELIA | PA ECOTYPE |
| WETLAND WATER HORSEHOLD | PA ECOTYPE |
| LYCOPUS AMERICANUS | PA ECOTYPE |
| MINILUS RIVINUS | PA ECOTYPE |
- NOTES:
1. APPLY SEED AT THE RATES RECOMMENDED BY THE SEED SUPPLIER.
 2. SEED WITH NURSE CROP(S) SPECIES AS RECOMMENDED BY THE SEED SUPPLIER FOR THE INTENDED USE, USDA ZONE, AND SEEDING DATES.

- GENERAL SEEDING NOTES:
1. FINAL SEED MIXTURES, RATES & SPECIES TO BE DETERMINED BASED ON SOIL REVIEW.
 2. SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 1).
 3. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
 4. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL, WHERE APPLICABLE.
 5. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION. SOIL TO REMAIN CONTINUOUSLY MOIST FOR THE TOP 4 INCHES OF TOPSOIL. DO NOT SATURATE.

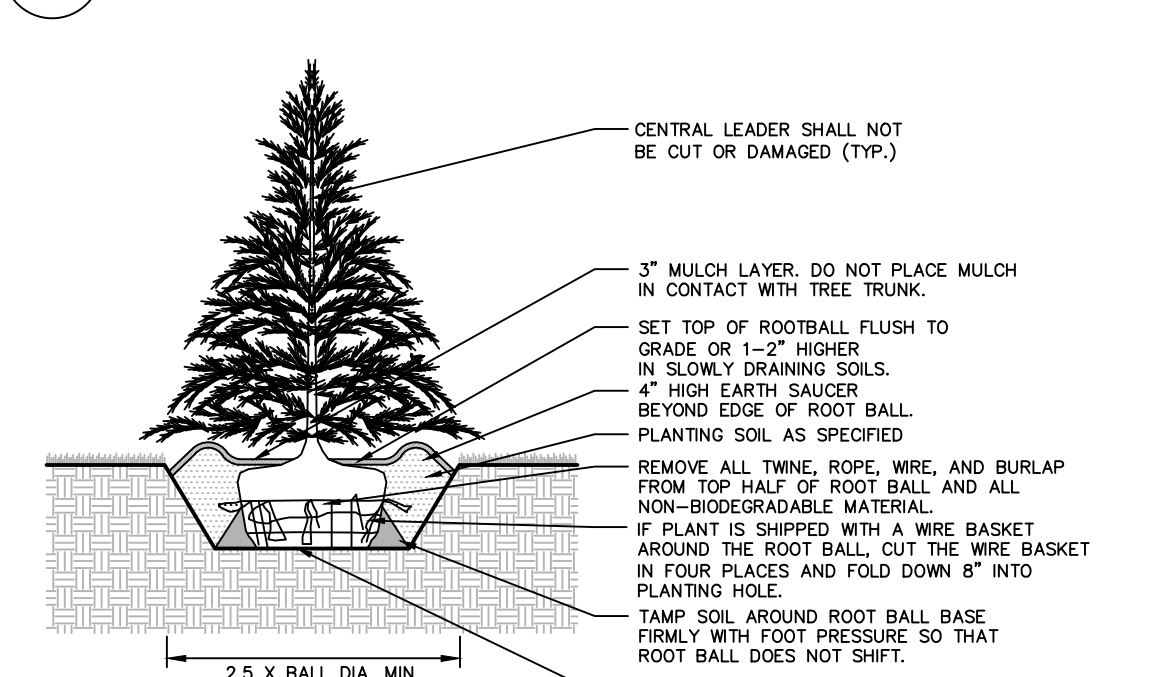
WEED CONTROL / MAINTENANCE

1. DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 8"-10". DO NOT MOW CLOSE, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
2. AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.
3. MOW IN WETLAND AND WETLAND TRANSITION AREAS DURING DRIER SITE CONDITIONS WHEN SOIL DISTURBANCE WILL NOT OCCUR. MAINTENANCE FOR WETLAND AND WETLAND TRANSITION AREAS SHALL OCCUR DURING LATE SUMMER (JULY 15 - AUGUST 15) WHEN THE WATER TABLE IS USUALLY AT ITS LOWEST POINT OF THE YEAR. DO NOT MOW IN WETLAND OR WETLAND TRANSITION AREAS AFTER ESTABLISHMENT OF MEADOW MIX.



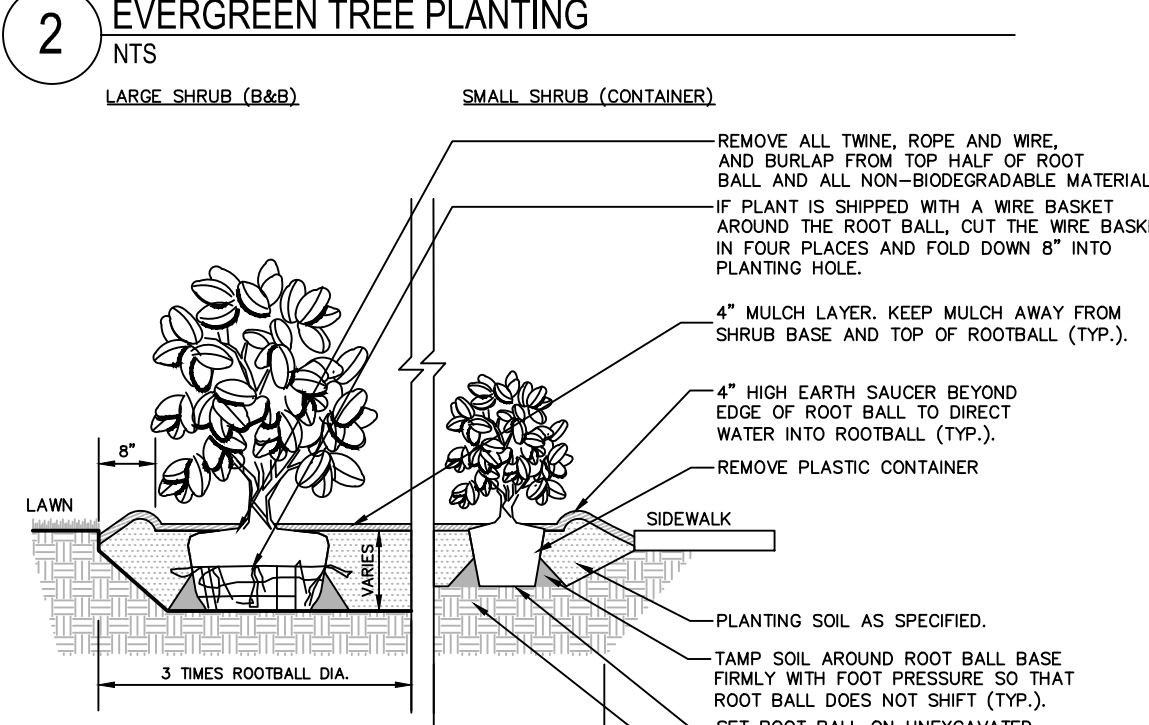
1 DECIDUOUS TREE PLANTING

NTS



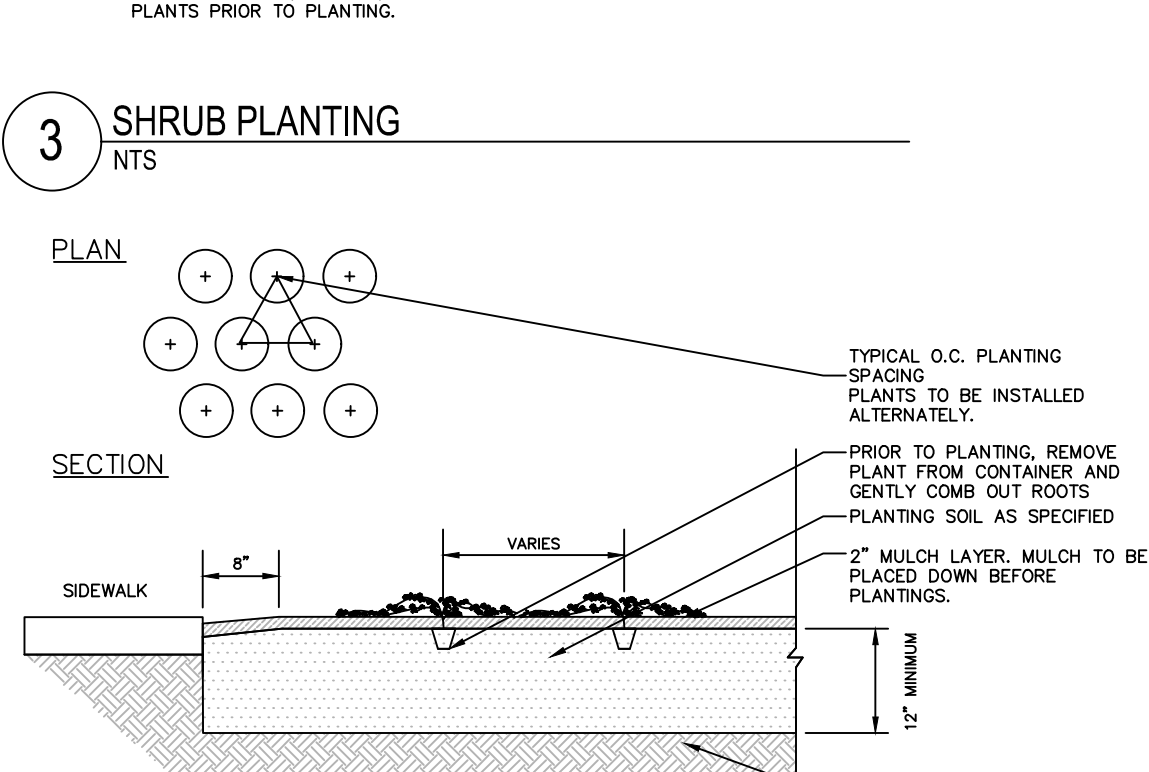
2 EVERGREEN TREE PLANTING

NTS



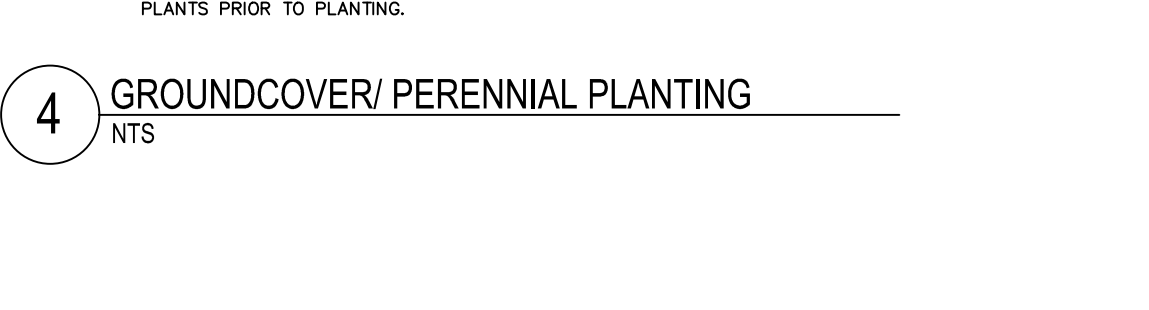
3 SHRUB PLANTING

NTS



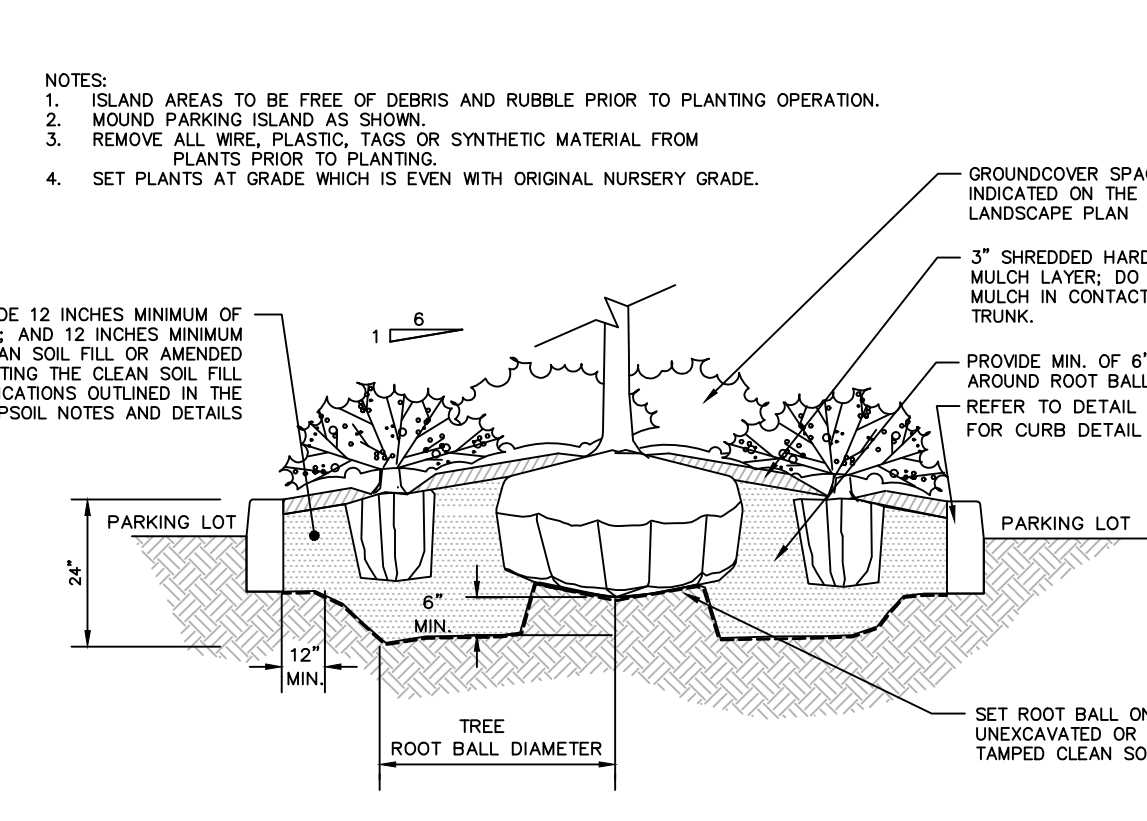
4 GROUNDCOVER/PERENNIAL PLANTING

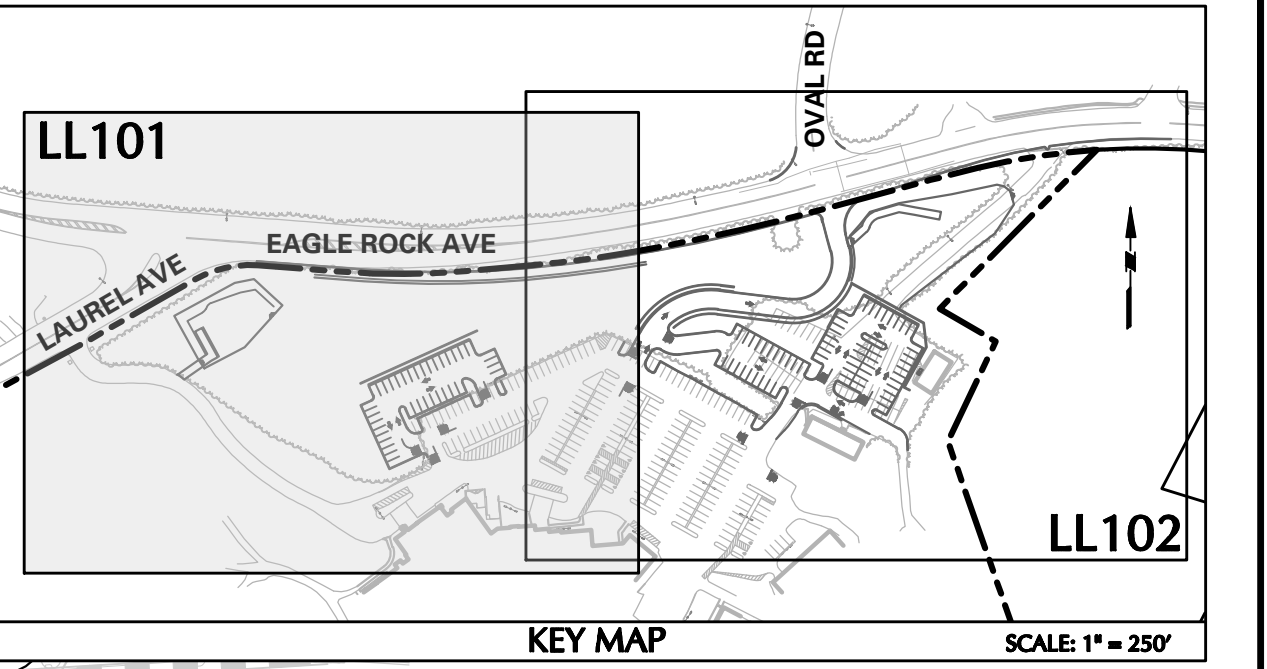
NTS



5 PLANTING SOIL

NTS





REVISIONS

LANGAN
Langan Engineering and
Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

ESSEX COUNTY	NEW JERSEY
Drawing Title	

Project No.	Drawing No. LL102
101049802	
Date	
FEBRUARY 12, 2026	
Drawn By	
AM/LL	
Checked By	
MF/DB	Sheet 35 of 36

Project No. 101049802	Drawing No. LL102
Date FEBRUARY 12, 2026	
Drawn By AM/LL	
Checked By MF/DB	
Sheet 35 of 36	

MI/DB		MI/DB	MI/DB	MI/DB
0.1	0.1430000	0.1	0.1430000	0.1

