

PRELIMINARY AND FINAL SITE PLAN

219-227 BROAD STREET TAX LOTS 1 & 5, BLOCK 516 TOWNSHIP OF BLOOMFIELD ESSEX COUNTY, NEW JERSEY

BLK	LOT	PROPERTY LOCATION	PROPERTY OWNER & ADDRESS
511	100	246 BROAD ST	NORFOLK SOUTHERN RR CORP 3 COMMERCIAL PLACE NORFOLK, VA 23510
512	15	190 STATE STREET	BLOOMFIELD COLUMBIAN CLUB LAZAR
512	18	236 BROAD STREET	190 STATE STREET BLOOMFIELD, NJ 07003
513	31	202 BROAD STREET	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	205-218 BROAD ST	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 1A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 2A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 3A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 4A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 5A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 6A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 7A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 8A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 9A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 10A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 11A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 12A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 13A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 14A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 15A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	206 BROAD STREET APT 16A	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 1B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 2B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 3B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 4B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 5B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 6B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 7B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 8B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 9B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 10B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 11B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 12B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 13B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 14B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 15B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003
513	34	219 BROAD STREET APT 16B	236 BROAD STREET LLC BLOOMFIELD, NJ 07003

BLK	LOT	PROPERTY LOCATION	PROPERTY OWNER & ADDRESS
513	34	206 BROAD STREET	BLOOMBRIDGE CONDO ASSN C/O BALUNGO
513	34	206 BROAD STREET	G 13
513	34	206 BROAD STREET	G 12, 15, 22
513	34	218 BROAD STREET	36 PARKWAY WEST BLOOMFIELD NJ 07003
513	37	224 BROAD STREET	36 PARKWAY WEST BLOOMFIELD NJ 07003
513	40	230 BROAD STREET	218 BROAD ST UNIT 9 BLOOMFIELD NJ 07003
514	7	249 BROAD STREET	224 BROAD LLC 388 BROAD ST BLOOMFIELD NJ 07003
515	1	77 MAPLE STREET	230 BROAD STREET LLC 230 BROAD ST BLOOMFIELD NJ 07005
515	2	68 MAPLE STREET	230 BROAD STREET LLC 230 BROAD ST BLOOMFIELD NJ 07005
515	4	62 MAPLE STREET	552 FRANKLIN AVENUE MUTLEY NJ 07105
515	5	60 MAPLE STREET	EGITY INVESTMENTS CAPITAL CORP 78 CLINTON ROAD FARREED, NJ 07004
515	6	58 MAPLE STREET	7 FREDERICK PL WEST CALDWELL NJ 07000
515	50	235 BROAD ST	12 LIBERTY STREET BLOOMFIELD NJ 07003
516	5	219-221 BROAD STREET	BARRILLARI, S O + PISCATORE, A 8 MAPLE STREET BLOOMFIELD NJ 07003
516	7	71 NEW STREET	VERONA, NJ 07044
516	8	69 NEW STREET	OTRYLE, MARTIN & JUDITH ANNE 43 WOODLAND AVE VERONA, NJ 07044
516	10	63 NEW STREET	3 COMMERCIAL PLACE NORFOLK, VA 23510
516	11	59 NEW STREET	ROBSON, DONALD JR & ANNA 219 221 BROAD ST BLOOMFIELD NJ 07003
517	1	207 BROAD STREET	MARCHETTI, RAUL J 71 NEW STREET BLOOMFIELD NJ 07003
517	2	181 BROAD STREET	ESTRINE, MELISSA 69 NEW ST BLOOMFIELD NJ 07003
517	4	199 BROAD STREET	HERBERT, KYLE 59 NEW STREET BLOOMFIELD NJ 07003
517	15	337 BELLEVILLE AVENUE	BARTMAN, IRENA 207 BROAD ST BLOOMFIELD NJ 07003
517	17	309 BELLEVILLE AVENUE	TOWNSHIP OF BLOOMFIELD MUNICIPAL PLAZA BLOOMFIELD NJ 07003
517	35	52 NEW STREET	296 LIBERTY LLC + 199 BROAD ST LLC 199 BROAD STREET BLOOMFIELD NJ 07003
517	36	54 NEW STREET	VAN TASSEL REAL ESTATE, LLC 337 BELLEVILLE AVE, LLC BLOOMFIELD NJ 07003
517	37	56 NEW STREET	583 RIDGEWOOD AVE GLEN RIDGE, NJ 07025
517	38	60 NEW STREET	WALTERS, MATTHEW J & MARCEAU CORINN 52 NEW ST BLOOMFIELD NJ 07003
517	40	64 NEW STREET (RD)	SMITH, OWEN A 54 NEW STREET BLOOMFIELD NJ 07003

THE FOLLOWING COMPANIES MUST ALSO BE NOTIFIED

TOWNSHIP OF BLOOMFIELD	TOWNSHIP OF BLOOMFIELD
MUNICIPAL CLERK	SUB. CABLE/COMCAST
1 MUNICIPAL PLAZA	600 WILSON AVENUE
BLOOMFIELD, NJ 07003	UNION, NJ 07083
WITNESS	WITNESS
MANAGER - CORPORATION PROPERTIES	PO BOX 152206
80 PARK PLAZA T40	IRVING, TX 75015
NEW JERSEY TORBROCK AUTHORITY	PASSAIC VALLEY SERVICE COMMISSION
177 E SADDLE RIVER RD#303	600 WILSON AVENUE
SADDLE RIVER, NJ 07083	UNION, NJ 07083
WOODBOROUGH, NJ 07095	COUNTY OF ESSEX
PASSAIC VALLEY WATER COMMISSION	COUNTY CLERK
1525 MAIN AVENUE	HALL OF RECORDS
CLINTON, NJ 07015	465 DR MARTIN LUTHER KING, JR. BLVD
PO BOX 270	NEWARK, NJ 07102
CITY OF NEWARK WATER BUREAU	NORFOLK SOUTHERN RR CORPORATION
1204 WOODSIDE AVENUE	3 COMMERCIAL PLACE
LITTLE FALLS, NJ 07424	NORFOLK, VA 23510
NORTH JERSEY DIST WATER SUPPLY COMM	TRANS CONTINENTAL GAS PIPELINES
74 BIRNWOOD AVENUE	PO BOX 240
WANANQUE, NJ 07085	TULSA, OK 74102

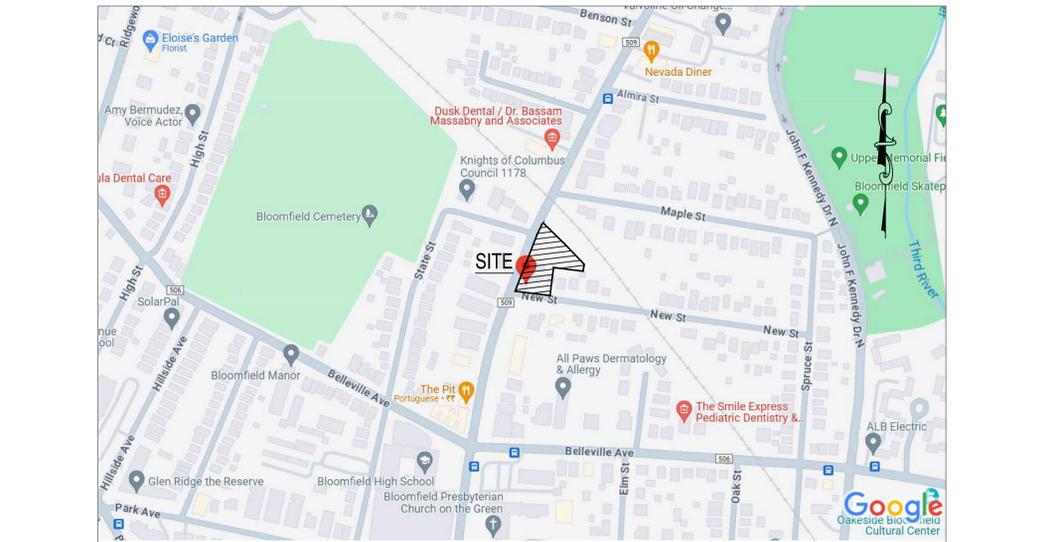
PARKING ANALYSIS			
Description	Required	Proposed	Comment
Residential Uses			
Mid-Rise Apartment (RSIS):			
1.8 Spaces per 1 Bedroom Unit - (14 Unit)	25.2 Spaces	26 Spaces	Conforming
2.0 Spaces per 2 Bedroom Unit - (16 Unit)	32 Spaces	32 Spaces	Conforming
Guest Parking	None	None	Conforming
Total (Before EV Credit)	57.2 Spaces	58 Spaces	Conforming
Electric Vehicle Charging Station			
15% of Required Parking Spaces (57.2 Spaces)	9 Spaces	10 Spaces	Conforming
EV Credit - 10% of Required Parking Spaces*	5.72 Spaces*	5.72 Spaces*	Conforming
Total Parking (With Credits)	52 Spaces	58 Spaces	Conforming

Loading Requirements**			
Principal Building Size (square feet)	Required	Proposed	Comment
Up to 20,000	1 Space	None	Non Conforming
20,000 to 50,000	2 Spaces	NA	Not Applicable
Each additional 100,000	One additional space	NA	Not Applicable

* Each EV-ready space will count as two spaces towards minimum parking requirements for a maximum reduction of 10% of the total number of parking spaces required.

** In any building or building group or part thereof hereafter erected and having a gross floor area of 10,000 square feet or more of nonresidential space, there shall be provided and maintained on the same zone lot with such building, off-street loading berths.

SITE MAP SCALE: 1" = ±300'

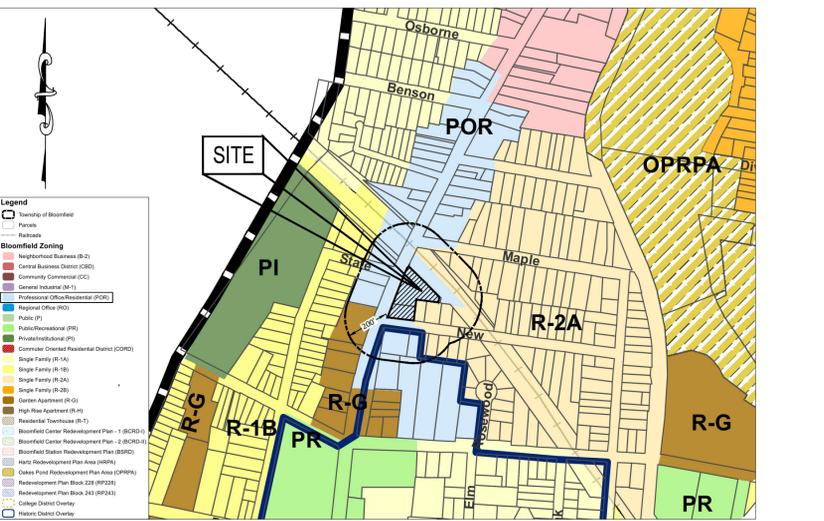


SCHEDULE OF GENERAL ZONING REQUIREMENTS PROFESSIONAL OFFICE/RESIDENTIAL (PO/R) BLOCK 516 - 219-227 BROAD STREET - TOWNSHIP OF BLOOMFIELD

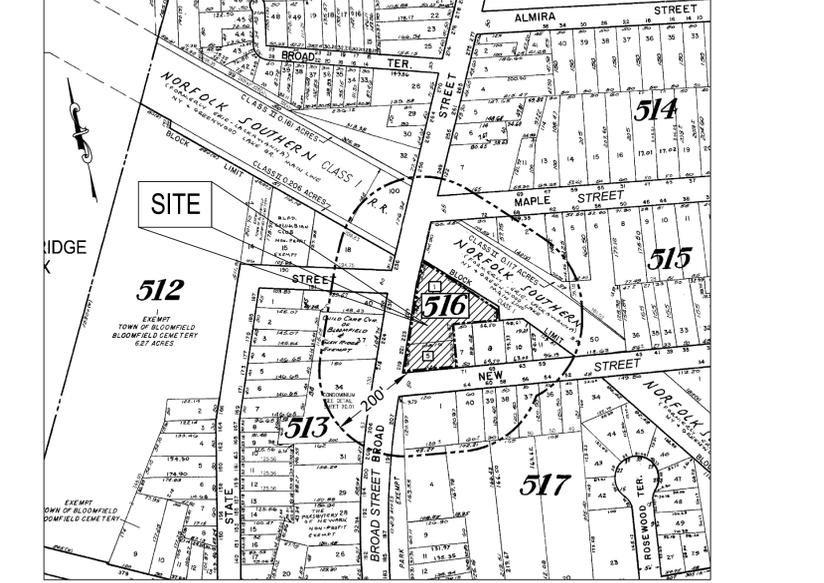
Regulation	Requirements	Existing Lots 1 & 5	Proposed Lots 1 & 5	Comment
Principal Permitted Uses	Single-Family Detached Residences, Two-Family Detached Residences, Garden Apartments, Offices, Professional Offices, Public Uses, Places of Worship, Public Utilities, Educational Institutions, Public Parks, Banks, Parking Areas.	Commercial Building (Auto Parts/Repair) (e)	Mid-rise Multifamily apartment buildings (V)	Variance is Required
Min. Lot Area	10,000 sf	29,290.60 sf	29,290.60 sf	Conforming
Min. Lot Width	100 ft.	118.55 ft.	118.55 ft.	Conforming
Min. Front Yard	25 ft. Excluding Front Yard Parking	0.90 ft. (e)	9.34 ft. along Broad St. (V); 15.40 ft. along New St. (V)	Variance is Required
Min. Rear Yard	30 ft.	30.6 ft.	9.85 ft. (V)	Variance is Required
Max. Side Yard	10 ft.	11.70 ft.	18.12 ft.	Conforming
Max. Side Yard (Accessory Building)	10 ft.	5.40 ft. (e)	N/A	Not Applicable
Max. Rear Yard (Accessory Building)	10 ft.	N/A	N/A	Not Applicable
Max. Building Coverage	35%	23.46%	45.69% (V)	Variance is Required
Max. Lot Coverage	70%	82.71% (e)	77.64% (V)	Variance is Required
Max. Floor Area Ratio	0.60	0.25	1.39 (V)	Variance is Required
Max. Building Height	40 ft.	< 40 ft.	44.00 ft. (V)	Variance is Required

APPROVED BY ZONING BOARD OF ADJUSTMENT - TOWNSHIP OF BLOOMFIELD

BOARD SECRETARY:	DATE:
BOARD CHAIRPERSON:	DATE:
BOARD ENGINEER:	DATE:



ZONING MAP SCALE: 1" = ±400'



200' TAX MAP SCALE: 1" = ±200'

DESIGN WAIVER/ VARIANCE SCHEDULE BLOCK 516 - 219-227 BROAD STREET - TOWNSHIP OF BLOOMFIELD		
Code Regulation	Required	Proposed
O. Off-street parking. (11) Sidewalks in parking areas.	Sidewalks shall be required between parking areas and principal structures, along aisles and driveways and wherever pedestrian traffic occurs. They shall have a minimum of four feet of passable width and shall be raised a maximum of six inches above the parking area, except when crossing streets or driveways. Guardrails and wheel stops permanently anchored to the ground shall be provided in appropriate locations. Parked vehicles shall not overhang or extend over sidewalk areas, unless an additional sidewalk width of two feet is provided to accommodate such overhang.	No sidewalk and curb is proposed in the parking areas
O. Off-street parking. (12) Landscaping, paving and drainage for parking areas.	(d) Parking areas, loading areas and driveways, except for one- or two-family residences, shall be curbed with granite block and paved.	No curb is proposed in the parking areas

SHEET	TITLE	ISSUED	REVISED
1	COVER SHEET	07/11/24	06/17/25
2	DEMOLITION PLAN	07/11/24	
3	SITE DEVELOPMENT PLAN	07/11/24	06/17/25
4	GRAADING PLAN	07/11/24	06/17/25
5	UTILITY PLAN	07/11/24	06/17/25
6	SITE LIGHTING PLAN	07/11/24	06/17/25
7	CIRCULATION PLAN	07/11/24	06/17/25
8	CONSTRUCTION DETAILS	07/11/24	
9	CONSTRUCTION DETAILS	07/11/24	
10	SOIL EROSION AND SEDIMENT CONTROL PLAN	07/11/24	06/17/25
11	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	07/11/24	

**TAX LOTS 1 & 5
219-227 BROAD STREET
TOWNSHIP OF BLOOMFIELD
ESSEX COUNTY, NEW JERSEY**

COVER SHEET

JOB NUMBER: 24-0401

SCALE: AS SHOWN

C-01

SHEET 1 OF 10

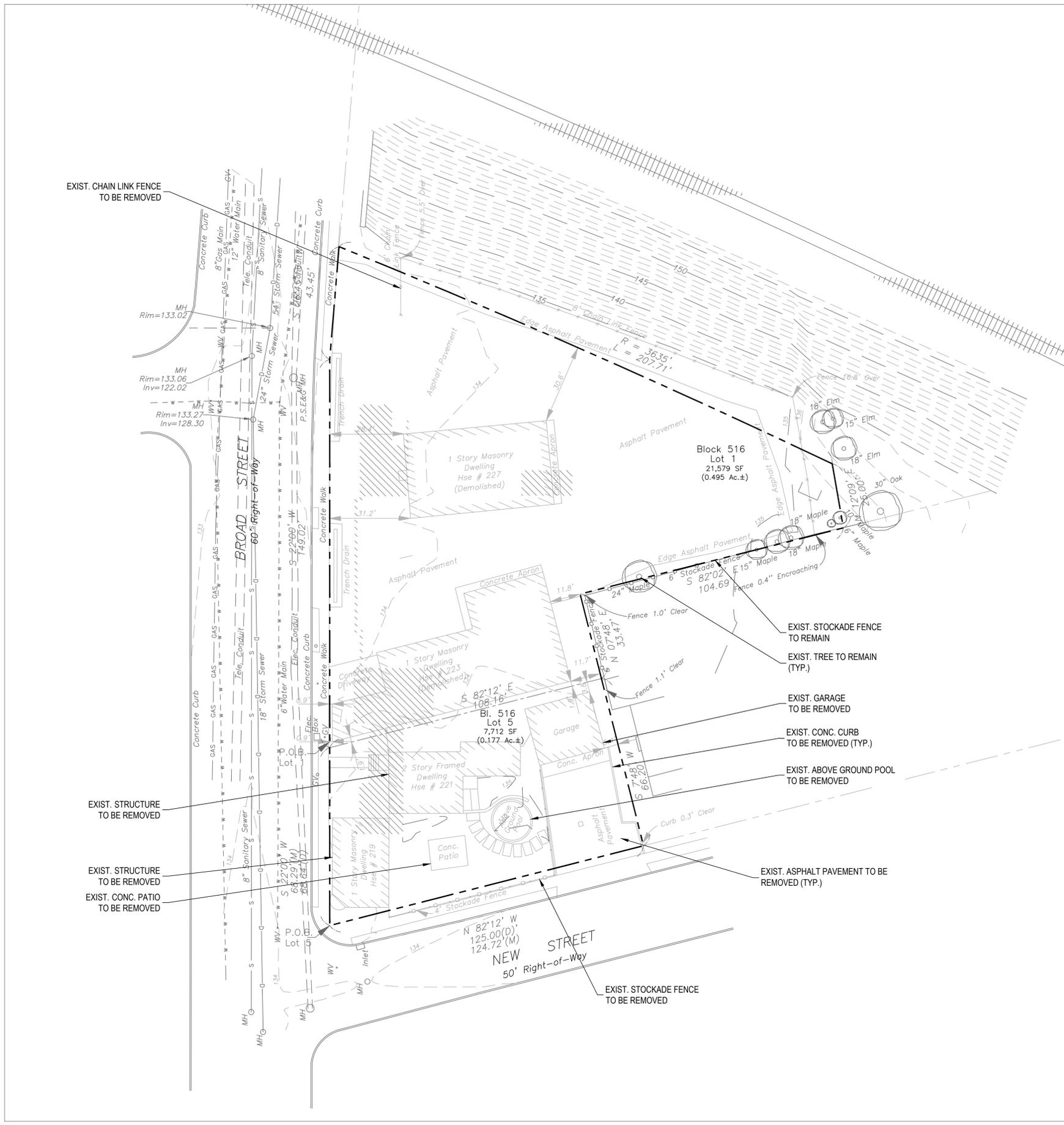
ADNAN A. KHAN, P.E., C.M.E.
PROFESSIONAL ENGINEER
DATE: 06/04/24
DESIGNED BY: AK
DATE: 06/04/24
APPROVED BY: AK
DATE: 06/17/25

AWZ ENGINEERING, INC.
ENGINEERS • SCIENTISTS • CONSULTANTS
Main Office: 150 River Road, Suite B3, Montville, NJ 07045
Pennsylvania Office: Scranton, PA 18504
Tel: 973-588-7080 Fax: 973-588-7079
www.awzengineering.com e-mail: info@awzengineering.com
New Jersey Certificate of Authorization No.: 24GA28118400
Pennsylvania Certificate of Authority No.: 3711354

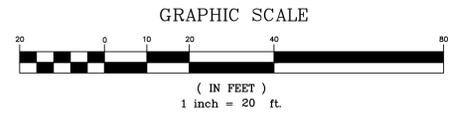
PER BOARD MEETING COMMENTS
1 PER BOARD PROFESSIONALS COMMENTS
DATE: 06/17/25
REVISIONS
DATE: 06/17/25
BY: AK
NO.

EXIST. CHAIN LINK FENCE TO BE REMOVED

EXIST. STRUCTURE TO BE REMOVED
 EXIST. STRUCTURE TO BE REMOVED
 EXIST. CONC. PATIO TO BE REMOVED



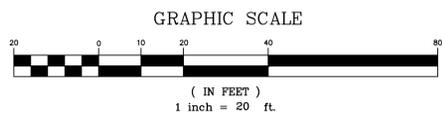
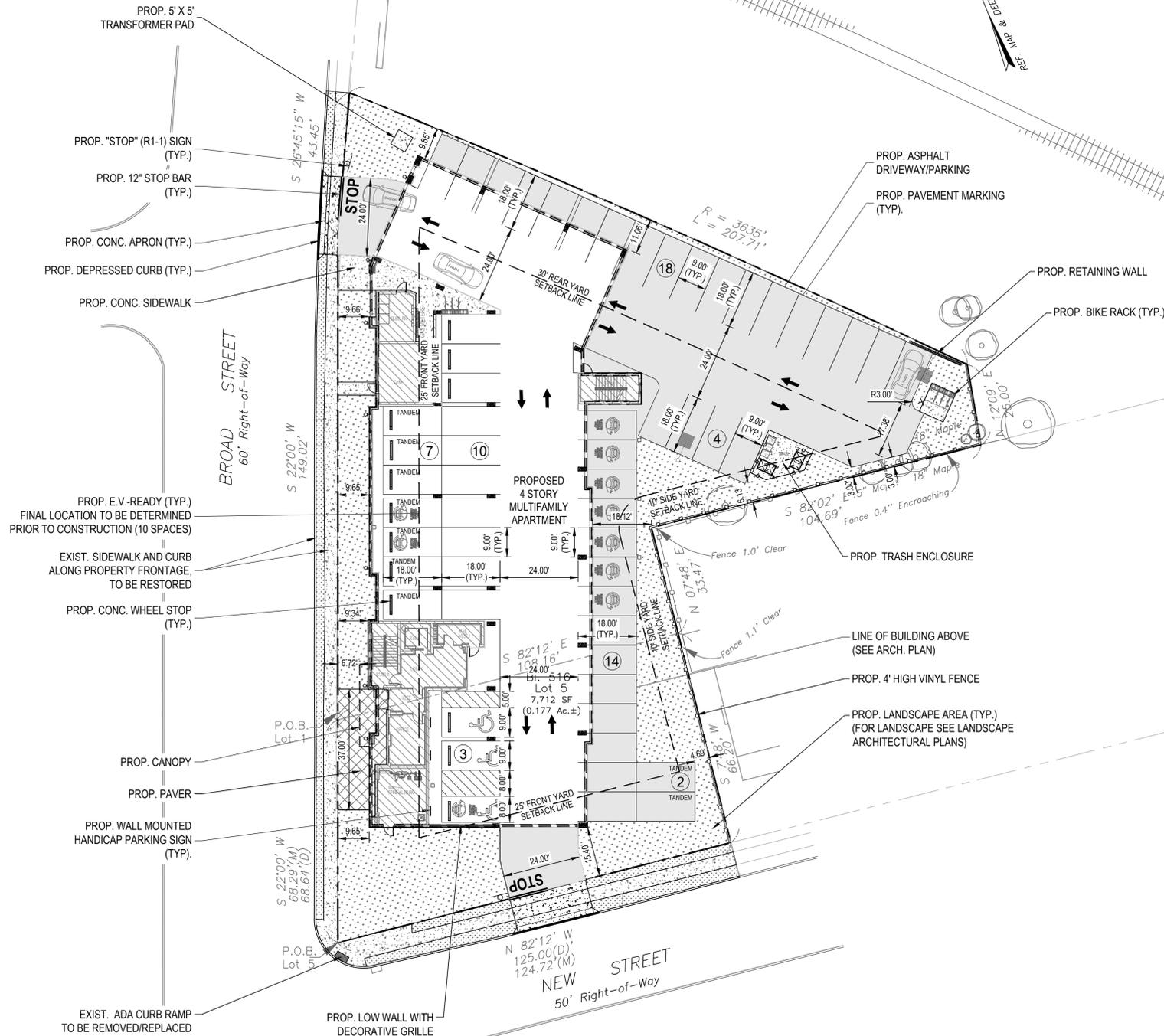
SURVEY NOTE:
 ALL SITE FEATURES, ELEVATIONS AND CONTOURS SHOWN ON THIS PLAN ARE BASED ON THE SURVEY PERFORMED AND PROVIDED BY EIC GROUP LLC OF FAIRFIELD, NJ 07004, DATED 04/02/2024.



LEGEND

	TBR	- TO BE REMOVED
		- EXISTING SPOT ELEVATION
		- EXISTING CONTOUR

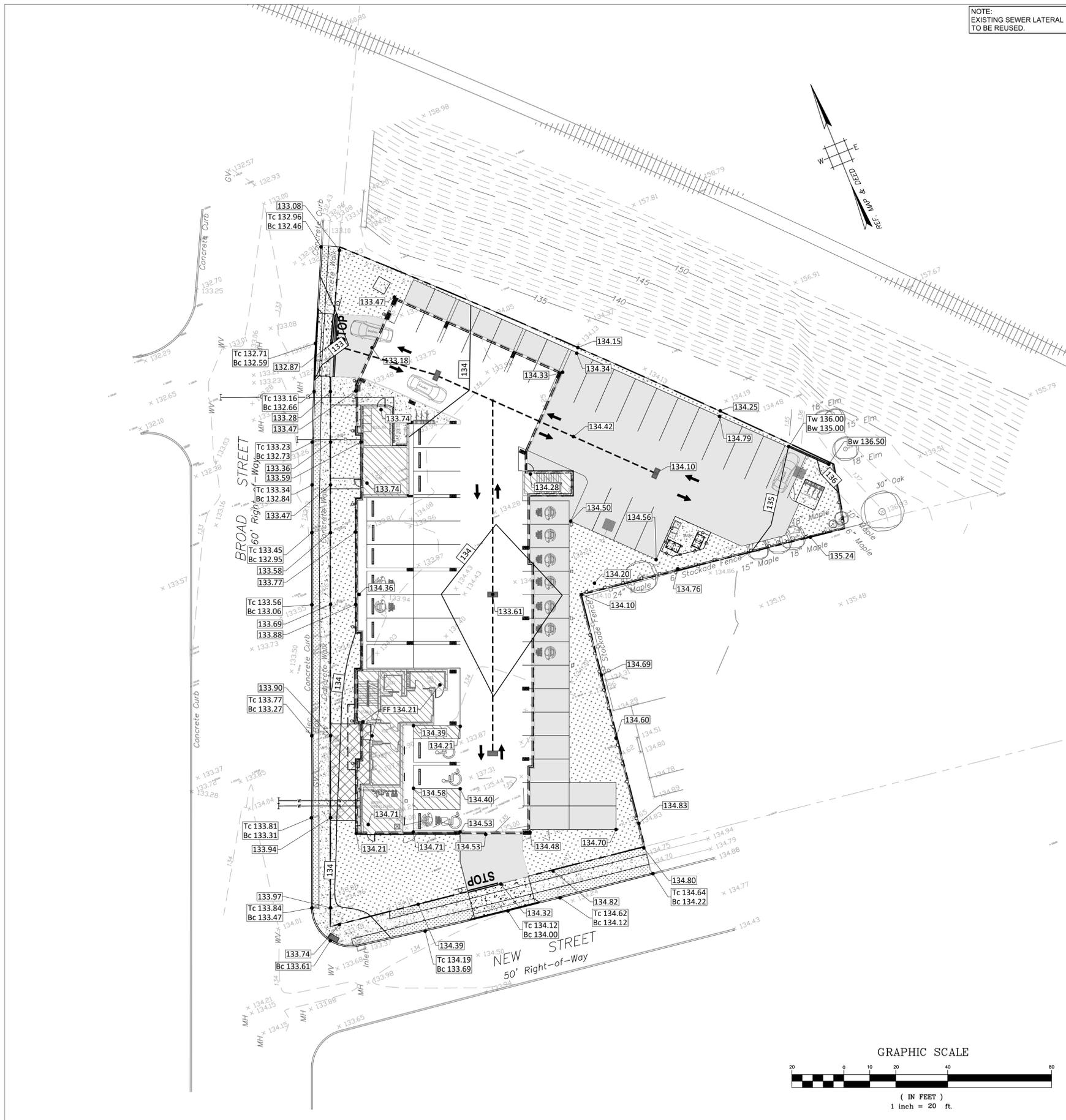
AWZ ENGINEERING, INC. ENGINEERS • SCIENTISTS • CONSULTANTS	ADNAN A. KHAN, P.E., C.M.E. PROFESSIONAL ENGINEER N.J. LICENSE NO. 39812 P.A. LICENSE NO. 4965E N.Y. LICENSE NO. 08645 M.D. LICENSE NO. 41893	BLOCK 516 TAX LOTS 1 & 5 219-227 BROAD STREET TOWNSHIP OF BLOOMFIELD ESSEX COUNTY, NEW JERSEY DEMOLITION PLAN	JOB NUMBER: 24-0401 SCALE: AS SHOWN C-02 SHEET 2 OF 10	DRAWN BY: CE DATE: 06/04/24 DESIGNED BY: AK DATE: 06/04/24 APPROVED BY: AK DATE: 06/17/25 REVISIONS: NO. NO. DATE BY: APE <small>© 2024, AWZ Engineering, Inc. All Rights Reserved. This drawing or portion thereof is the property of AWZ Engineering, Inc. and is not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the written permission of AWZ Engineering, Inc.</small>
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GENERAL NOTES:

- PARCEL IS KNOWN AS TAX LOTS 1 & 5 IN BLOCK 516 AS SHOWN ON THE TAX MAPS OF THE TOWNSHIP OF BLOOMFIELD.
- AREA OF PARCEL = 29,290.60 S.F. OR 0.672 ACRES.
- PARCEL IS LOCATED ENTIRELY IN THE POR (PROFESSIONAL OFFICE/RESIDENTIAL) DISTRICT AS SHOWN ON THE ZONING MAP OF THE TOWNSHIP OF BLOOMFIELD.
- IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL, AND MAY HAVE BEEN ALTERED.
- THIS IS A LOT DEVELOPMENT PLAN AND NOT A SURVEY. DO NOT SCALE DRAWINGS FOR LOCATIONS OF ADJACENT STRUCTURES AND SURROUNDING PHYSICAL CONDITIONS. THESE ITEMS MAY BE SCHEMATIC ONLY EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
- THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE SHOWN HEREON.
- ELEVATIONS AND CONTOURS SHOWN ON THIS PLAN ARE BASED ON THE SURVEY PERFORMED AND PROVIDED BY EIC GROUP LLC OF FAIRFIELD, NJ 07004, DATED 04/02/2024.
- PROPOSED DWELLING FOOT PRINT AND SITE LAYOUT SHOWN HERE ARE AS PER THE ARCHITECTURAL PLANS PREPARED BY MISTRY DESIGN OF BUDD LAKE, NJ 07828, RECEIVED AS DIGITAL FILE.
- THE CONTRACTOR SHALL VERIFY ALL UTILITY INFORMATION TO HIS SATISFACTION PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL PERFORM TEST PITS WHERE EXISTING UTILITIES ARE TO BE CROSSED. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS MAY BE REQUIRED TO AVOID CONFLICTS.
- ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER ARE TO BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL THE EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE. ANY CROSSING LESS THAN ONE FOOT CLEAR TO BE SUPPORTED WITH A SADDLE (CONCRETE OR SAND) AS NOTED.
- ALL SEWER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM POTABLE WATER LINES AND/OR AT LEAST 18 INCHES BELOW POTABLE WATER LINES AND IN SEPARATE TRENCHES.
- ALL UTILITIES SHALL BE INSTALLED UNDERGROUND. DESIGN AND INSTALLATION OF WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TO BE PROVIDED BY RESPECTIVE UTILITY COMPANIES.
- UTILITY CONNECTIONS SHALL COMPLY WITH THE COUNTY/MUNICIPAL ROAD OPENING PERMIT REQUIREMENTS.
- SITE GRADING AND UTILITY WORK ARE TO BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO EXISTING VEGETATION AND TREES. ALL AREAS NOT AFFECTED BY CONSTRUCTION ARE TO REMAIN NATURAL AND UNDISTURBED.
- LOCATION OF PROPOSED ROOF DRAINS ARE APPROXIMATE AND SHALL BE COORDINATED WITH THE PROJECT ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED ROOF LEADERS TO BE DISCHARGED AT GRADE TO SPLASH PADS AWAY FROM THE FOUNDATION AND ADJACENT PROPERTIES.
- NO DETERMINATION WAS MADE AS TO THE PRESENCE OR NONEXISTENCE OF WETLANDS AND/OR HAZARDOUS MATERIALS. THE CLIENT SHOULD PURSUE THESE MATTERS AS ITEMS SEPARATE AND APART FROM THESE PLANS.
- NO ON-SITE SOIL TESTING AND GROUNDWATER ASSESSMENT HAS BEEN PERFORMED ON THIS PROJECT BY THE DESIGN ENGINEER. IT SHALL BE THE OWNERS AND/OR CONTRACTORS RESPONSIBILITY TO CONDUCT SOIL TESTING AND GROUNDWATER ELEVATION DETERMINATION TO CONFIRM APPLICABILITY OF PROPOSED IMPROVEMENTS. CONSTRUCT ABILITY OF THE PROPOSED FINISHED GRADES AND CONSTRUCTION TECHNIQUES WITH RESPECT TO SUBSURFACE SOIL AND GROUNDWATER CONDITIONS.
- THIS SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND THE DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
- ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION FOR SITE IMPROVEMENTS SHOWN HEREON SHALL BE PERFORMED IN STRICT CONFORMANCE WITH:
 - NJDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", A CURRENTLY AMENDED.
 - CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
 - CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
 - "RESIDENTIAL SITE IMPROVEMENT STANDARDS", N.J. ADMINISTRATIVE CODE TITLE 5, CHAPTER 21, AS CURRENTLY AMENDED.
 - STANDARDS AND/OR CONDITIONS OF ANY OTHER GOVERNING BODIES HAVING JURISDICTION.
- CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES. APPLICABLE SAFETY CODES SHALL MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS AND ADDITIONS THERETO OF THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S "OCCUPATIONAL SAFETY AND HEALTH STANDARDS" (OSHA); "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" OF THE STATE OF NEW JERSEY, DEPARTMENT OF LABOR AND INDUSTRY, BUREAU OF ENGINEERING AND SAFETY; "CONSTRUCTION SAFETY CODE", AND "MAINTENANCE, CONSTRUCTION AND DEMOLITION," AND "BUILDING CODE
- CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL ALSO BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCING OF CONSTRUCTION OPERATIONS. UNDER NO CIRCUMSTANCES SHOULD THE INFORMATION PROVIDED HERE BE INTERPRETED TO MEAN THAT AMZ ENGINEERING, INC. IS ASSUMING RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY OR THE CONTRACTOR'S ACTIVITIES; SUCH RESPONSIBILITY IS NOT BEING IMPLIED AND SHOULD NOT BE INFERRED.
- THE EXISTING BUILDING, DRIVEWAY, AND OTHER STRUCTURES TO BE RAZED AND MATERIALS SHOULD BE REMOVED FROM SITE AND PROPERLY DISPOSED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- ALL REQUIRED SOIL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO ANY SITE DISTURBANCE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ANY ADDITIONAL SOIL EROSION & SEDIMENT CONTROL MEASURES AS REQUESTED BY THE GOVERNING SOIL CONSERVATION DISTRICT.
- TOP SOILING & SEEDING SHALL BE PLACED IN THE AREAS DISTURBED DURING CONSTRUCTION AND / OR AS DIRECTED BY THE ENGINEER.

DRAWN BY CE	DATE:	06/04/24	DESIGNED BY AK	DATE:	06/04/24	APPROVED BY AK	DATE:	06/17/25	PER BOARD MEETING COMMENTS	06/17/25	EC	AK
	DATE:	06/04/24		DATE:	06/04/24		DATE:	06/17/25		09/04/24	EC	AK
<p>ADNAN A. KHAN, P.E., C.M.E. PROFESSIONAL ENGINEER</p> <p><i>Adnan A. Khan</i> DATE: 06/17/25 P.A. LICENSE NO. 49652 N.J. LICENSE NO. 39812 M.D. LICENSE NO. 41803 N.Y. LICENSE NO. 08645</p>												
<p>AMZ ENGINEERING, INC. ENGINEERS • SCIENTISTS • CONSULTANTS Main Office: 150 River Road, Suite B3, Montville, NJ 07045 Pennsylvania Office: Scranton, PA 18504 Tel: 973-588-7080 Fax: 973-588-7079 www.amzengineering.com e-mail: info@amzengineering.com New Jersey Certificate of Authorization No.: 24GA28118400 Pennsylvania Certificate of Authority No.: 3771354</p>												
<p>TAX LOTS 1 & 5 BLOCK 516</p> <p>219-227 BROAD STREET</p> <p>TOWNSHIP OF BLOOMFIELD</p> <p>ESSEX COUNTY, NEW JERSEY</p> <p>SITE DEVELOPMENT PLAN</p>												
<p>JOB NUMBER: 24-0401</p> <p>SCALE: AS SHOWN</p> <p>C-03</p> <p>SHEET 3 OF 10</p>												



NOTE:
EXISTING SEWER LATERAL
TO BE REUSED.

COVERAGE CALCULATIONS		
Block 516, Lots 1 & 5		
DESCRIPTION	EXISTING	PROPOSED
Lot Area	29,290.60	29,290.60
1 Story Masonry Dwelling HSE #219	735.56	0.00
2 Story Framed Dwelling HSE #221	969.59	0.00
1 Story Masonry Dwelling HSE #223 (Demolished)	2,792.90	0.00
1 Story Masonry Dwelling HSE #227 (Demolished)	1,795.34	0.00
Garage	578.28	0.00
Proposed Building Ground Floor	0.00	2,162.17
Proposed Building Above	0.00	13,382.70
Total Building	6,871.66	2,162.17
Landing and Steps	45.85	0.00
Concrete Pad	0.00	280.51
Concrete Patio	166.00	0.00
Concrete Driveway	292.41	0.00
Concrete Curb	41.69	0.00
Concrete	1,141.53	573.49
Above Ground Pool	201.69	0.00
Low Wall with Decorative Grille	0.00	9.68
Wall	0.00	11.33
Total Concrete	1,889.17	875.01
Paver	0.00	513.02
Asphalt Pavement	15,465.71	19,190.47
Green Area/Dirt	5,064.06	6,549.93
TOTAL	29,290.60	29,290.60
Pervious	5,064.06	6,549.93
Impervious	24,226.54	22,740.67
Lot Coverage	82.71%	77.64%
Building Coverage (Building Above)	23.46%	45.69%

BUILDING HEIGHT CALCULATIONS

- EXISTING AVERAGE GRADE = 134.04'
- BUILDING HEIGHT FROM FINISHED FLOOR = 43.83'
- FINISHED FLOOR = 134.21'
- DIFFERENCE BETWEEN FINISHED FLOOR AND AVERAGE FINISHED GRADE = 134.21' - 134.04' = 0.17'
- BUILDING HEIGHT = 0.17' + 43.83' = 44.00'

EXISTING AND PROPOSED COVERAGE AREAS FOR STORMWATER DESIGN CALCULATIONS:

EXISTING CONDITIONS:
 TOTAL LOT AREA = 29,290.60 SF
 IMPERVIOUS = 24,226.54 SF
 PERVIOUS = 5,064.06 SF

PROPOSED CONDITIONS:
 TOTAL LOT AREA = 29,290.60 SF
 IMPERVIOUS = 22,740.67 SF
 PERVIOUS = 6,549.93 SF

UNDER THE PROPOSED CONDITIONS, THE IMPERVIOUS COVERAGE FOR THE ENTIRE SITE HAS DECREASED BY 5.07% (1,485.87 SF.). THEREFORE, NO STORMWATER MANAGEMENT IS REQUIRED FOR THE PROJECT.

SURVEY NOTE:
 ALL SITE FEATURES, ELEVATIONS AND CONTOURS SHOWN ON THIS PLAN ARE BASED ON THE SURVEY PERFORMED AND PROVIDED BY EIC GROUP LLC OF FAIRFIELD, NJ 07004, DATED 04/02/2024.

NOTE:
 BASED ON THE FEMA FLOOD INSURANCE RATE MAP (NO. 34013C0112G, DATED 04/03/2020) THE PROJECT SITE IS ENTIRELY OUTSIDE THE SPECIAL FLOOD HAZARD AREA.

SEWER DEMAND WORKSHEET:
 AS PER N.J.A.C. 7:14A-23.3(a) - PROJECTED FLOW CRITERIA FOR THE PROPOSED USE IS AS FOLLOWS:

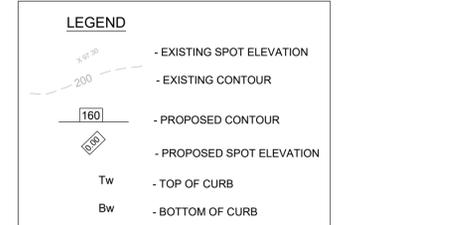
- ONE-BEDROOM UNIT = 150 GALLONS PER DAY PER UNIT = 150 x 14 = 2,100 GPD
- TWO-BEDROOM UNIT = 225 GALLONS PER DAY PER UNIT = 225 x 16 = 3,600 GPD

TOTAL PROJECTED SEWER FLOW = 5,700 GPD

WATER DEMAND WORKSHEET:
 PER N.J.A.C. 7:10-11.5 (f), FOR RESIDENTIAL DEVELOPMENT THE AVERAGE DAILY WATER DEMAND SHALL BE IN ACCORDANCE WITH THE NJDCA -RSIS STANDARDS (N.J.A.C. 5:21-5.2, TABLE 5.1. FOR LOW AND MID-RISE APARTMENTS, THE WATER DEMAND IS AS FOLLOWS:

- 1 BEDROOM UNIT = 95 GALLONS PER DAY (GPD)/UNIT = 95x14 = 1,330 GPD
- 2 BEDROOM UNIT = 140 GALLONS PER DAY (GPD)/UNIT = 140x16 = 2,240 GPD

TOTAL PROJECTED WATER DEMAND = 3,570 GPD



- GRADING AND UTILITY NOTES:**
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH HEREIN.
 - COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. THE MATERIAL FROM DEMOLITION SHALL NOT BE USED AS FILL MATERIAL.
 - PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED.
 - SUB-BASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIAL. SHOULD SUB-BASE BE DEEMED UNSUITABLE, SUB-BASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
 - THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF FINISHED GRADES AT THE BUILDING EXTERIOR WITH THE ARCHITECT. ANY DISCREPANCIES WITH THE GRADING PLAN SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING PRIOR TO PLACEMENT OF FILL.
 - ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
 - CONSTRUCTION EQUIPMENT ENTRANCE AND/OR STORAGE OF MATERIAL, SUPPLIES OR STOCKPILING WITHIN THE FOOTPRINT OF THE PROPOSED STORMWATER INFILTRATION SYSTEM IS PROHIBITED.
 - CONTRACTOR SHALL COORDINATE THE EXACT UTILITY LOCATIONS WITH THE ARCHITECT AND MEP ENGINEER PRIOR TO START OF THE WORK.
 - THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL THE DIRECTIVES FROM THE DIVISION OF WATER/SEWER UTILITY WITH REGARDS TO THE WATER AND SEWER CONNECTIONS.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DISCONNECT ANY EXISTING UNUSED WATER SERVICE(S) AT THE MAIN.
 - NO UTILITY METERS SHALL BE LOCATED AT ANY STREET EXPOSURE OF THE BUILDING. THE LOCATION OF ALL THE EXTERIOR METERS SHALL BE COORDINATED WITH THE PROJECT ARCHITECT PRIOR TO INSTALLATION.
 - THE MINIMUM COVER REQUIREMENTS FOR SEWER UTILITIES SHALL BE MAINTAINED. 3.5 FT FOR NON-VEHICULAR TRAFFIC AND 6 FT FOR VEHICULAR TRAFFIC.
 - IN CASE OF ANY STORMWATER RUNOFF DRAINAGE PROBLEMS OCCURRING ON THE PROPERTY AND/OR NEIGHBORING PROPERTIES, IT WILL BE THE OWNERS RESPONSIBILITY TO REMEDY THE DRAINAGE ISSUE.
 - UTILITIES MUST BE METERED WHERE THEY COME INTO ANY PROPOSED NEW, RECONSTRUCTED OR REHABILITATED STRUCTURE.
 - ALL EXISTING UTILITIES TO BE REUSED WHERE POSSIBLE.
 - THE APPLICANT/DEVELOPER MUST COMPLY WITH ALL DIRECTIVES FROM THE DEPARTMENT OF WATER & SEWER UTILITY.
 - A STREET AND/OR SIDEWALK OCCUPANCY PERMIT MUST BE OBTAINED FROM THE DIVISION OF TRAFFIC AND SIGNALS PRIOR TO ANY CONSTRUCTION IN OR OCCUPANCY OF THE PUBLIC RIGHT-OF-WAY.

TAX LOTS 1 & 5

ADNAN A. KHAN, P.E., C.M.E.
 PROFESSIONAL ENGINEER

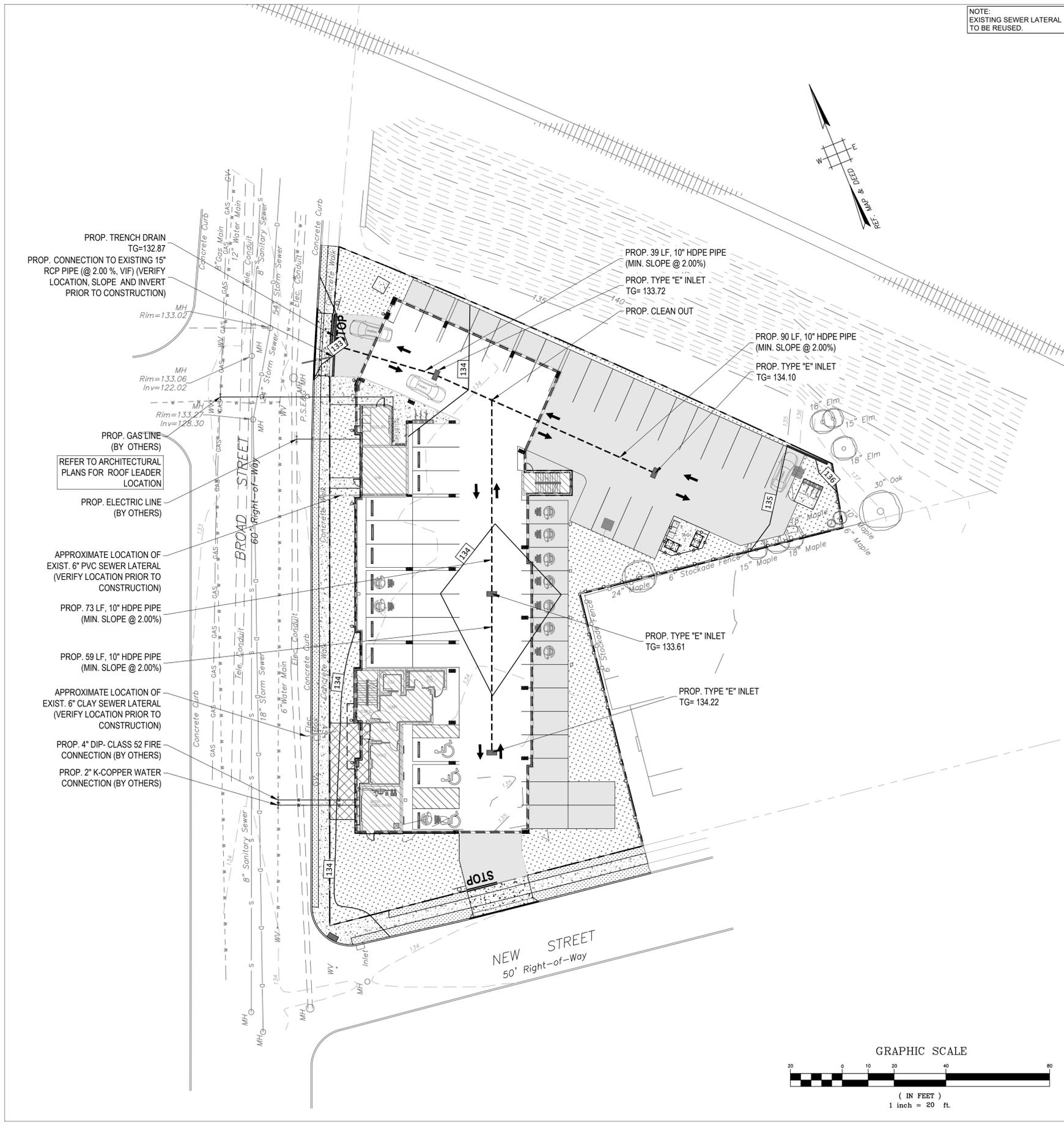
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 www.awzengineering.com e-mail: info@awzengineering.com
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 Pennsylvania Certificate of Authority No.: 3771354

DRAWN BY: CE
DATE: 06/04/24
DESIGNED BY: AK
DATE: 06/04/24
APPROVED BY: AK
DATE: 06/17/25

REVISIONS

NO.	DATE	DESCRIPTION
1	06/17/25	PER BOARD MEETING COMMENTS

JOB NUMBER: 24-0401
SCALE: AS SHOWN
C-04
SHEET 4 OF 10



Pipe Calc. - Rev2 NJ-Bloomfield 100-yr Duration=10 min, Inten=6.48 in/hr
Prepared by Darshan Katarmal Printed 6/17/2025
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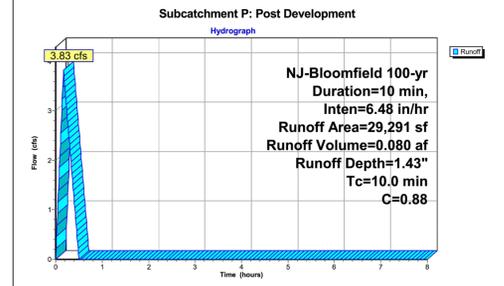
Summary for Subcatchment P: Post Development

Runoff = 3.83 cfs @ 0.17 hrs, Volume= 0.080 af, Depth= 1.43"
Routed to Reach P2: 10" Pipe /15" Pipe

Runoff by Rational method, Rise/Fall=1.02,0.0xTc, Time Span= 0.00-8.00 hrs, dt= 0.01 hrs
NJ-Bloomfield 100-yr Duration=10 min, Inten=6.48 in/hr

Area (sf)	C	Description
22,741	0.59	Impervious Area
6,550	0.51	Pervious Area
29,291	0.88	Weighted Average
6,550	22.36%	Pervious Area
22,741	77.64%	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Minimum Used



Pipe Calc. - Rev2 NJ-Bloomfield 100-yr Duration=10 min, Inten=6.48 in/hr
Prepared by Darshan Katarmal Printed 6/17/2025
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Summary for Reach P1: 15" Pipe

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.672 ac, 77.64% Impervious, Inflow Depth = 1.43" for 100-yr event
Inflow = 3.83 cfs @ 0.17 hrs, Volume= 0.080 af
Outflow = 3.82 cfs @ 0.17 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-8.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.05 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 6.28 fps, Avg. Travel Time= 0.0 min

Peak Storage= 7 cf @ 0.17 hrs
Average Depth at Peak Storage= 0.51', Surface Width= 1.23'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 15.0' Slope= 0.0200 /'
Inlet Invert= 126.12', Outlet Invert= 125.62'



Pipe Calc. - Rev2 NJ-Bloomfield 100-yr Duration=10 min, Inten=6.48 in/hr
Prepared by Darshan Katarmal Printed 6/17/2025
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Summary for Reach P2: 10" Pipe

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.672 ac, 77.64% Impervious, Inflow Depth = 1.43" for 100-yr event
Inflow = 3.83 cfs @ 0.17 hrs, Volume= 0.080 af
Outflow = 3.77 cfs @ 0.18 hrs, Volume= 0.080 af, Atten= 2%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-8.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.39 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 4.54 fps, Avg. Travel Time= 0.7 min

Peak Storage= 87 cf @ 0.18 hrs
Average Depth at Peak Storage= 0.64', Surface Width= 0.70'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.03 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 194.0' Slope= 0.0200 /'
Inlet Invert= 130.00', Outlet Invert= 126.12'



TAX LOTS 1 & 5
BLOCK 516
219-227 BROAD STREET
TOWNSHIP OF BLOOMFIELD
ESSEX COUNTY, NEW JERSEY

UTILITY PLAN

JOB NUMBER:
24-0401

SCALE: AS SHOWN

C-05
SHEET 5 OF 10

ADNAN A. KHAN, P.E., C.M.E.
PROFESSIONAL ENGINEER
DATE: 06/17/25
DESIGNED BY: AK
DATE: 06/17/25
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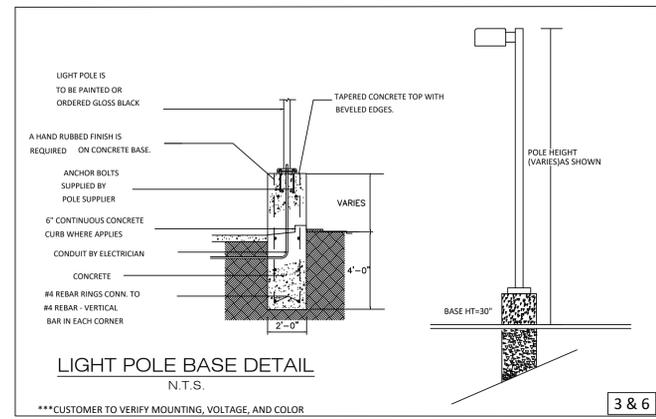
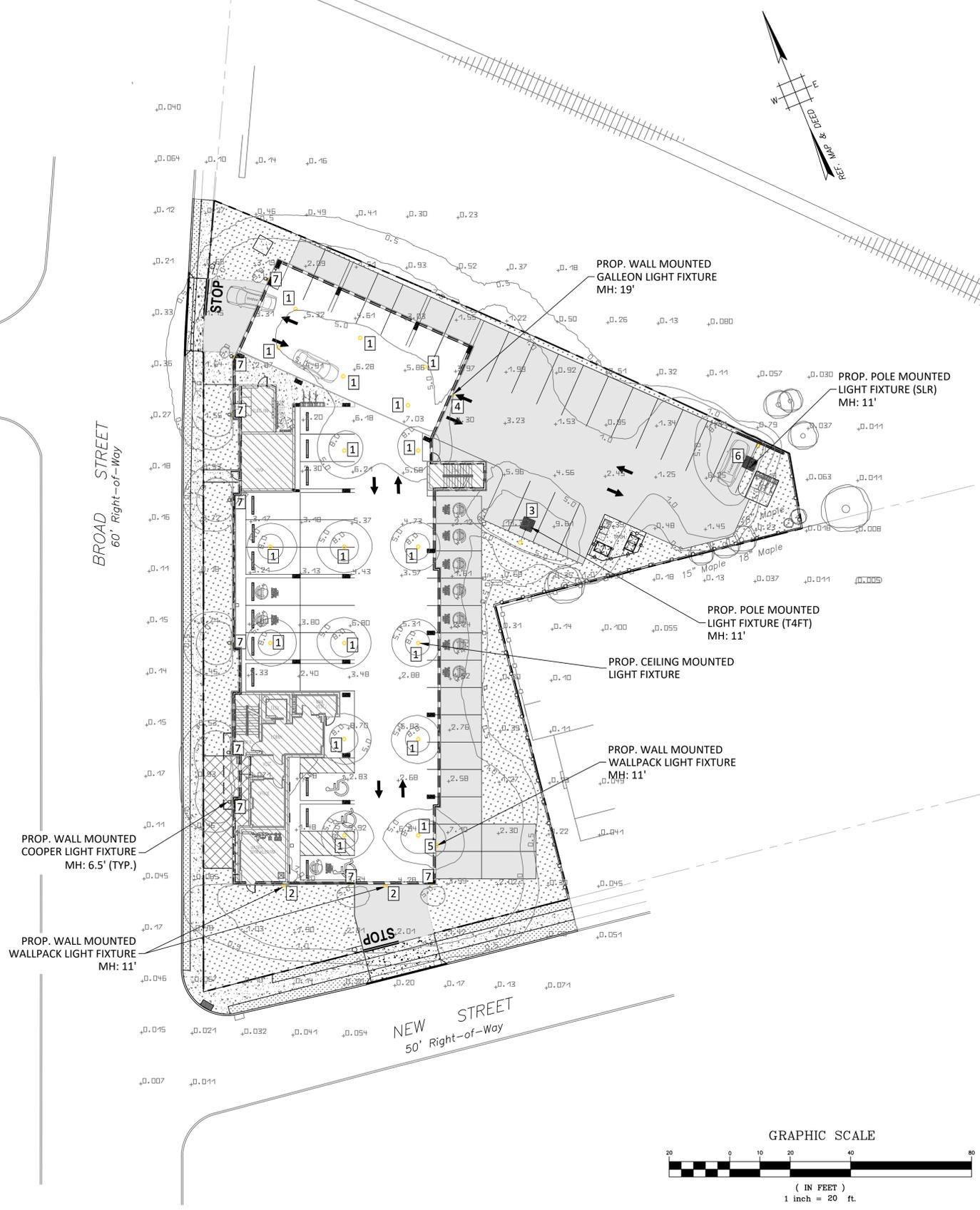
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PER BOARD MEETING COMMENTS
PER BOARD PROFESSIONALS COMMENTS

DATE: 06/17/25
DATE: 06/17/25

THIS PLAN TO BE USED FOR LIGHTING PURPOSE ONLY.

FOR PROPOSED SITE LANDSCAPING, SEE LANDSCAPE ARCHITECTURAL PLANS



PROPOSED LIGHT FIXTURES
NO TO SCALE

VC PG LED Parking Garage
Specifications: Diameter: 19", Height: 3.75", Weight: 18 lbs. Callout 1.

GWC - GALLEON - COOPER Callout 4.

HOLOPHANE HLWPC2 Wallpack Full Cutoff LED. Callout 2 & 5.

COOPER Lighting Solutions. Callout 7.

Luminaire list (Site 1)								
Index	Manufacturer	Article name	Item number	Fitting	Luminous flux	Maintenance factor	Connected load	Quantity
1	Lithonia Lighting	VC PG LED WITH P1 - PERFORMANCE PACKAGE, 3000K, TSE OPTIC TYPE, UP-LIGHT 2 PACKAGE	VC PG LED P1 30K TSE MVOLT UPL2	1x	4253 lm	0.80	34.9 W	18
2	Holophane	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Type II Medium	HLWPC2 P10 30K XX T2M	1x	2887 lm	0.80	28 W	2
3	Cooper Lighting	GALLEON AREA AND ROADWAY LUMINAIRE (3) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDES EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD	GLEON-SA3C-73 0-U-T4FT-HSS	48x	13966 lm	0.80	166 W	1
4	Cooper Lighting	GALLEON WALL LUMINAIRE (1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDES AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD	GWC-SA1C-830-U-T4FT-HSS	16x	4262 lm	0.80	58 W	1
5	Holophane	Wallpack Full Cutoff LED, LED Performance Package P10, 3000 series CCT, Voltage, Forward Throw Medium	HLWPC2 P20 30K XX TFTM	1x	5440 lm	0.80	47 W	1
6	Cooper Lighting	GALLEON AREA AND ROADWAY LUMINAIRE (2) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDES EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD	GLEON-SA2C-73 0-U-SLR-HSS	32x	9767 lm	0.80	113 W	1
7	Cooper Lighting	31" 674 SERIES LUMINOUS WALL SCNCE	674-WP-31-L3/8 30	56x 3000K CCT, 80 CRI LEDES	1636 lm	0.80	21.2 W	9

- PLANTING AND LANDSCAPING NOTES:**
- ALL PLANTS SHALL BE HEALTHY OR NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS. QUALITY AND SIZE OF PLANT MATERIAL SHALL CONFORM TO THE AMERICAN SOCIETY OF NURSERYMEN STANDARDS, LATEST EDITION GRADING CODE OF NURSERY STOCK AND BE OF NUMBER ONE GRADE.
 - POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE ENGINEER BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED. ANY SUBSTITUTIONS ARE TO BE APPROVED BY THE ENGINEER.
 - PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH WIDTH TWICE THE DIAMETER OF ROOT BALL AND 6" DEEPER THAN THE LENGTH OF ROOT BALL. EACH PLANT PIT SHALL BE BACKFILLED WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
 - ORGANIC TOPSOIL FROM NATURES CHOICE CORP -1 800 637 4140
 - 3 CUBIC FEET/PLANTING PIT FOR SHADE OR EVERGREEN TREES
 - 1 CUBIC FOOT FOR SHRUBS
 - IMMEDIATELY AFTER PLANTING, STAKE ALL TREES IF NECESSARY TO PREVENT DAMAGE FROM WIND (LODGE-POLE STAKES LENGTH AS REQUIRED) . FASTEN TREES TO UPPER END OF STAKE IN AT LEAST TWO (2) PLACES USING HOSE TYPE TIES.
 - WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
 - ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
 - ALL PLANTING SHALL BE MAINTAINED OR REPLACED IF NECESSARY BY THE CONTRACTOR FOR AT LEAST TWO GROWING SEASONS
 - ALL PROPOSED PLANTINGS ALONG THE ACCESS DRIVEWAYS SHALL BE KEPT TO A MATURE HEIGHT OF NO GREATER THAN THIRTY (30) INCHES AND THE SHADE TREES BRANCHES TRIMMED UP TO A HEIGHT OF 7, MEASURED FROM THE DRIVEWAY PAVEMENT .
- LIGHTING NOTES:**
- LIGHT POLE MOUNTING HEIGHT FOR THE PROPOSED FIXTURES ARE 13 FEET FROM PROPOSED FINISH GRADE AS SHOWN ON THE PLAN.
 - THE LED LIGHTING THROUGHOUT THE SITE SHOULD BE DIRECTED DOWNWARD ONLY.
 - ALL LIGHT FIXTURES SHALL BE SHIELD TO AVOID ANY SPILLAGE ONTO ADJOINING PROPERTIES.
 - LIGHT FIXTURES LOCATIONS TO BE VERIFIED IN FIELD.
 - CUSTOMER TO VERIFY FINAL MOUNTING, VOLTAGE AND COLOR.

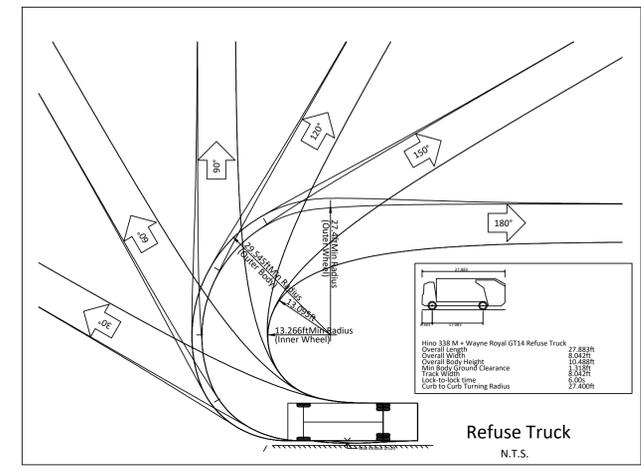
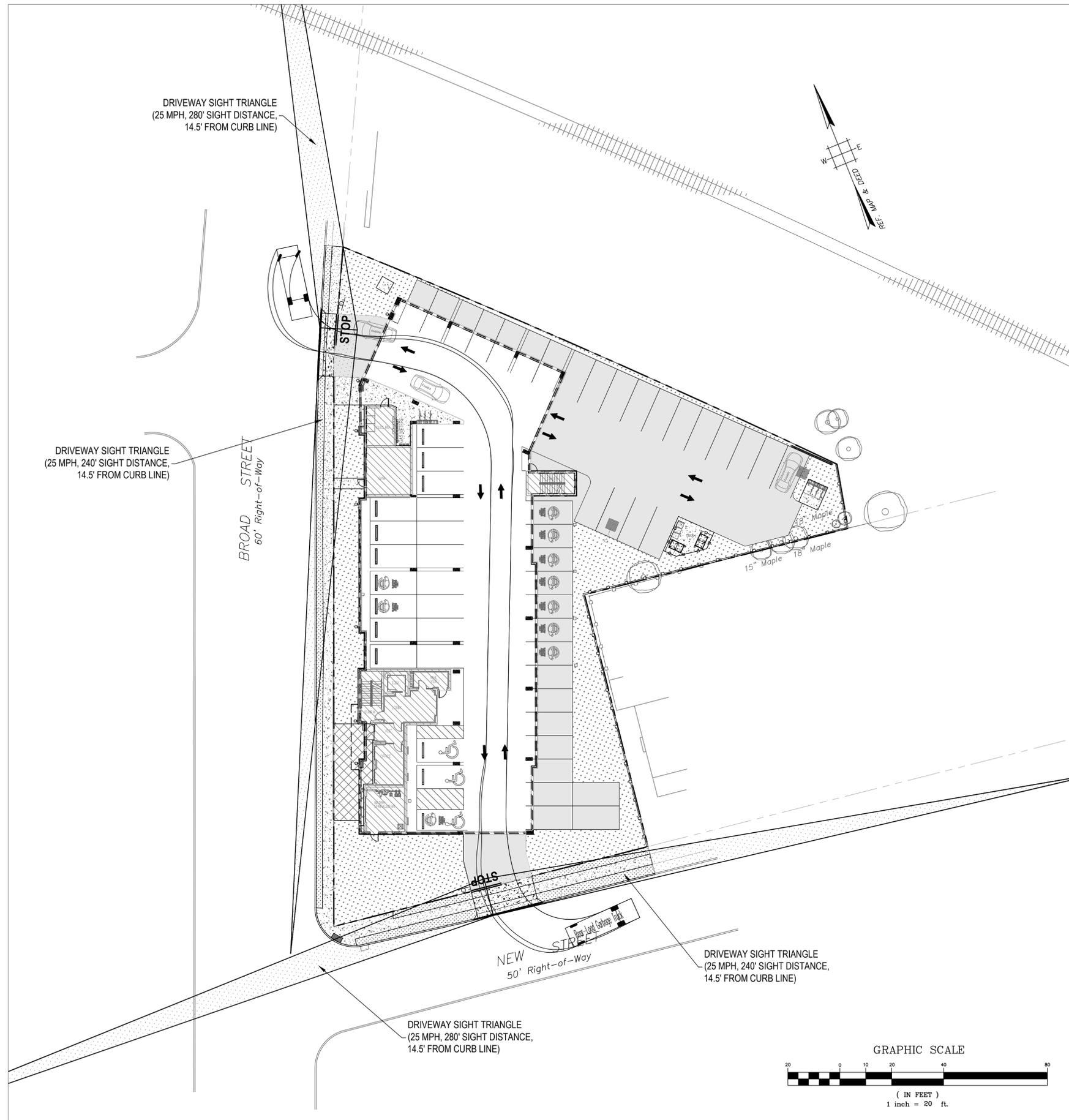
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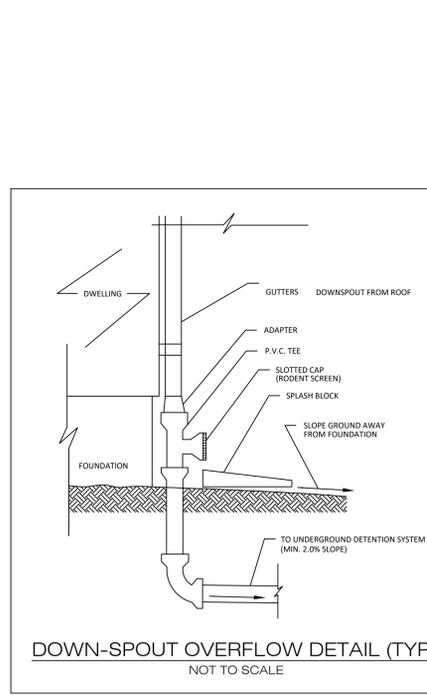
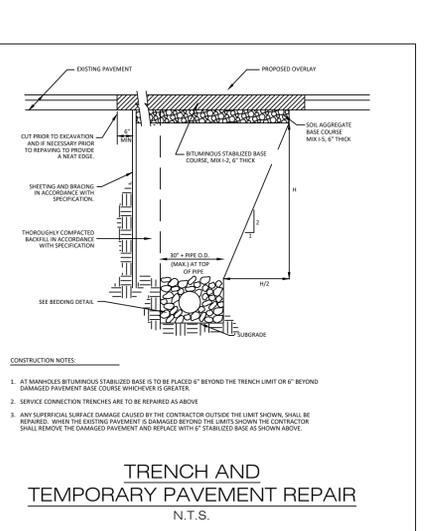
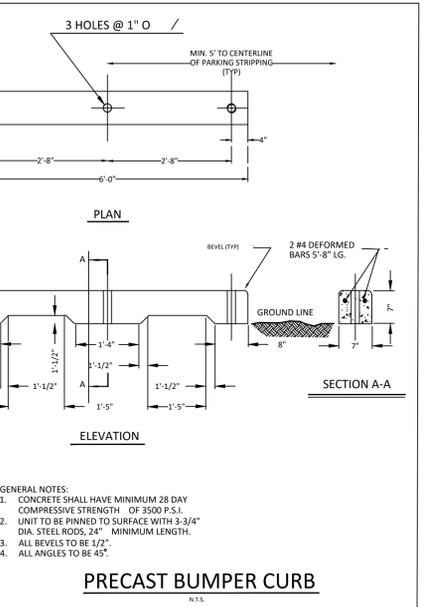
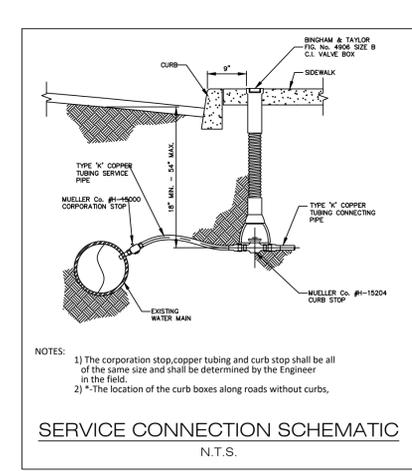
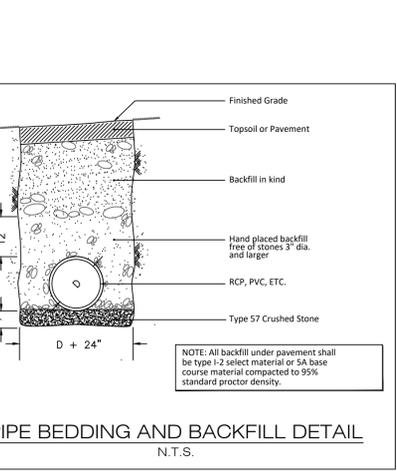
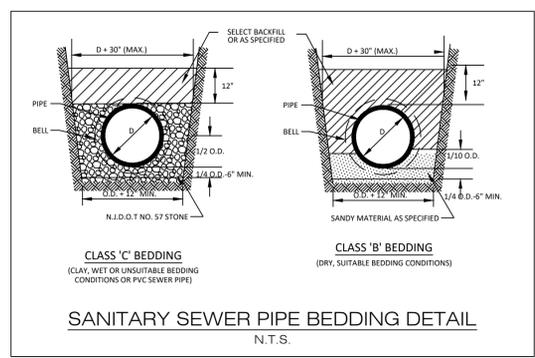
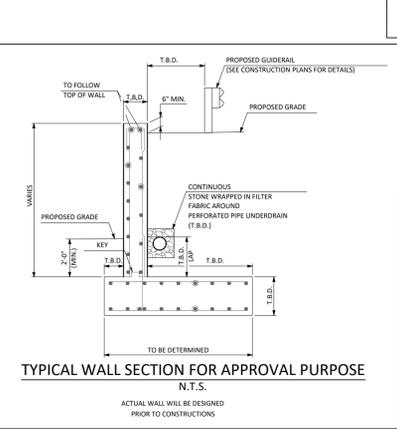
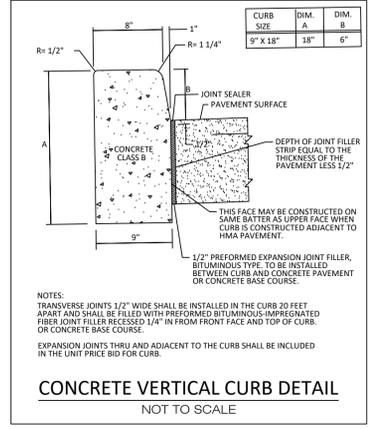
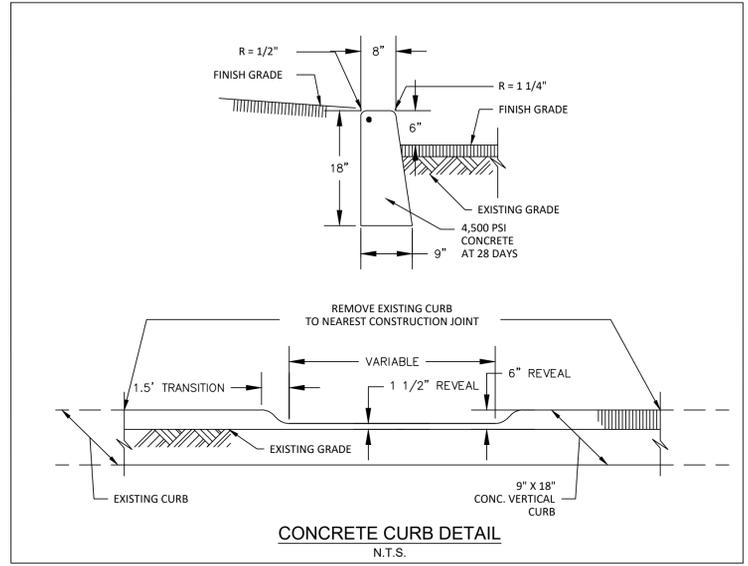
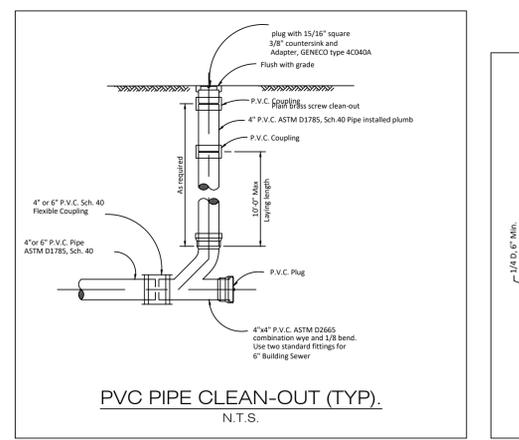
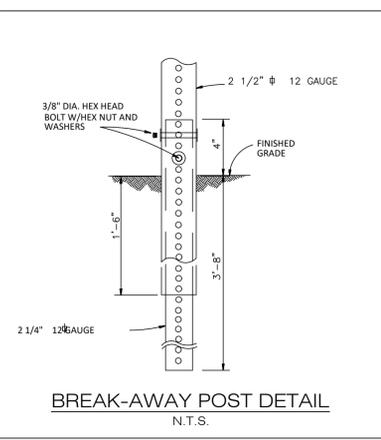
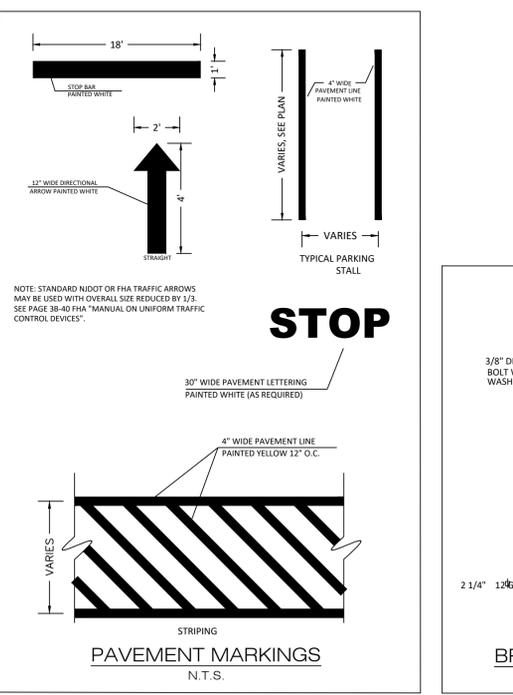
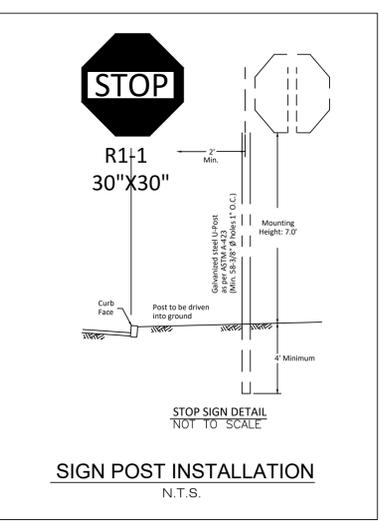
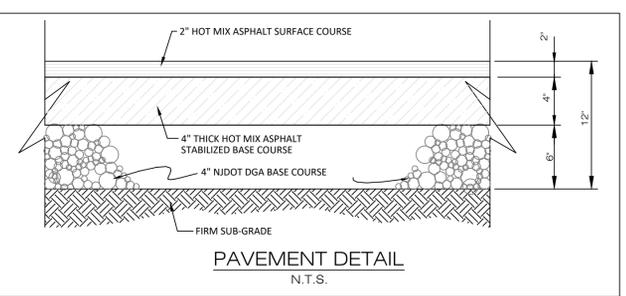
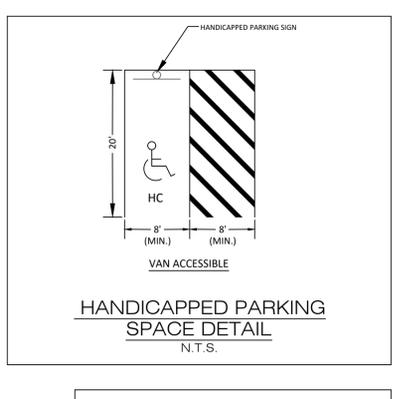
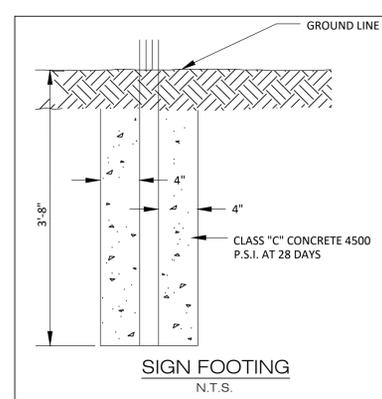
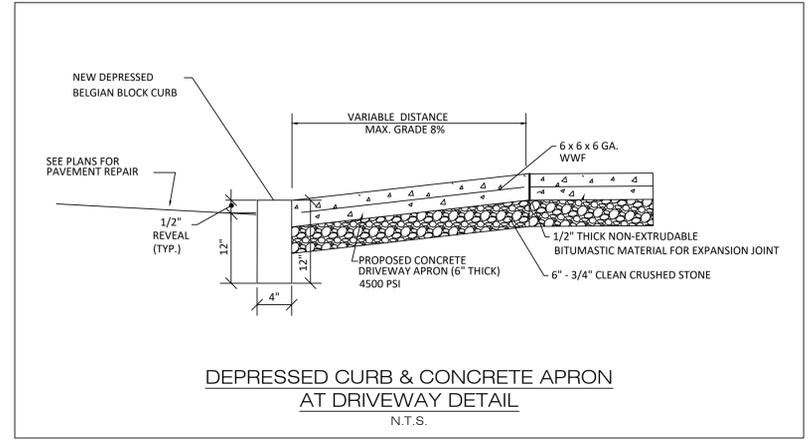
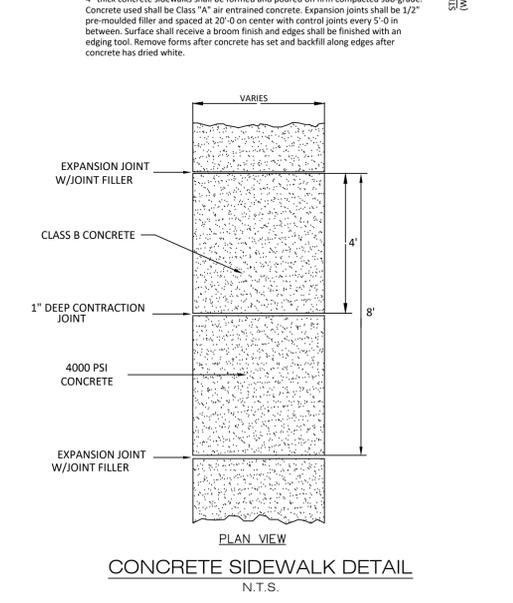
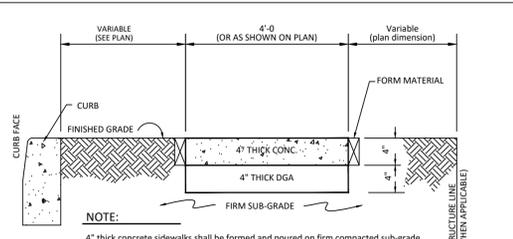
TAX LOTS 1 & 5
BLOCK 516
219-227 BROAD STREET
TOWNSHIP OF BLOOMFIELD
ESSEX COUNTY, NEW JERSEY

SITE LIGHTING PLAN

JOB NUMBER: 24-0401
SCALE: AS SHOWN
C-06
SHEET 6 OF 10



TAX LOTS 1 & 5 219-227 BROAD STREET TOWNSHIP OF BLOOMFIELD ESSEX COUNTY, NEW JERSEY		BLOCK 516 CIRCULATION PLAN	
AWZ ENGINEERING, INC. ENGINEERS • SCIENTISTS • CONSULTANTS Main Office: 150 River Road, Suite B3, Montville, NJ 07045 Pennsylvania Office: Scranton, PA 18504 Tel: 973-588-7080 Fax: 973-588-7079 www.awzengineering.com e-mail: info@awzengineering.com New Jersey Certificate of Authorization No.: 24GA28118400 Pennsylvania Certificate of Authority No.: 37171354		ADNAN A. KHAN, P.E., C.M.E. PROFESSIONAL ENGINEER <i>Adnan A. Khan</i> DATE: 06/17/25 P.A. LICENSE NO. 45965E N.Y. LICENSE NO. 08645 M.D. LICENSE NO. 41893	
DRAWN BY: CE DATE: 06/04/24	DESIGNED BY: AK DATE: 06/04/24	APPROVED BY: AK DATE: 06/17/25	PER BOARD MEETING COMMENTS: 1 REVISIONS: 06/17/25 DATE: BY: APE <small>© 2015, AWZ Engineering, Inc. All Rights Reserved. The copying or reuse of this document or portions thereof for other than the intended purpose of the project is prohibited without the written permission of AWZ Engineering, Inc. or its authorized personnel.</small>
JOB NUMBER: 24-0401		SCALE: AS SHOWN	
C-07 SHEET 7 OF 10			



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Pennsylvania Certificate of Authority No.: 3771354

BLOCK 516
TAX LOTS 1 & 5
219-227 BROAD STREET
TOWNSHIP OF BLOOMFIELD
ESSEX COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

JOB NUMBER:
24-0401

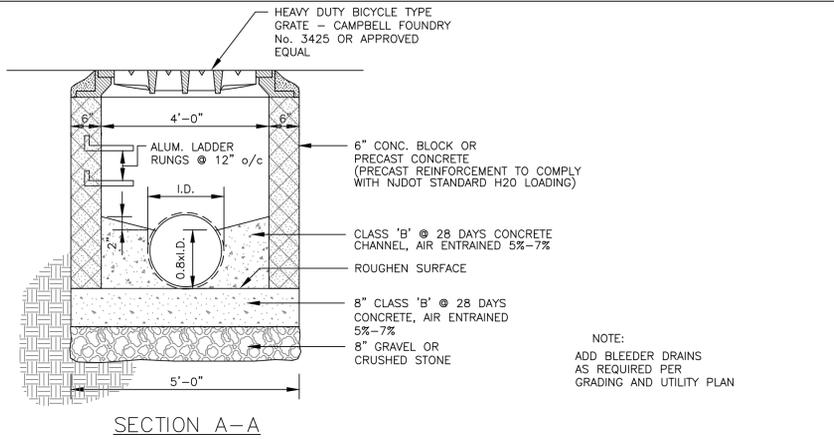
SCALE: AS SHOWN

C-08
SHEET 8 OF 10

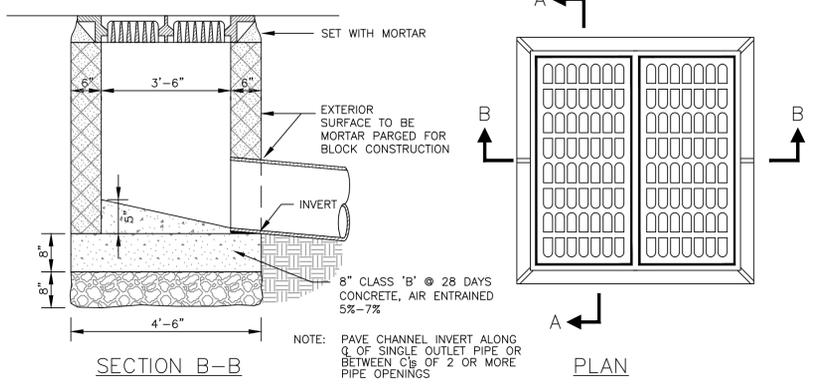
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REVISIONS

NO. DATE BY: APE
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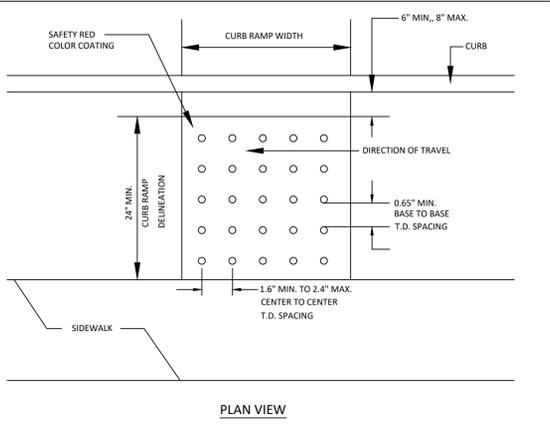
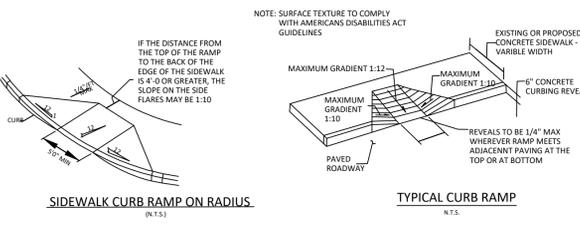
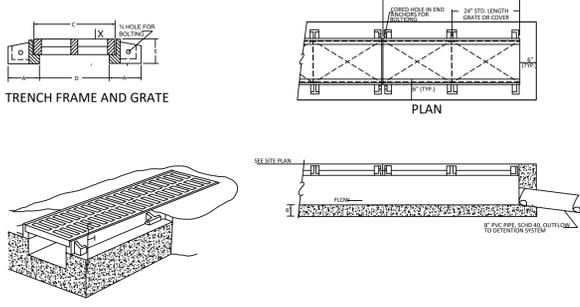


NOTE:
ADD BLEEDER DRAINS AS REQUIRED PER GRADING AND UTILITY PLAN



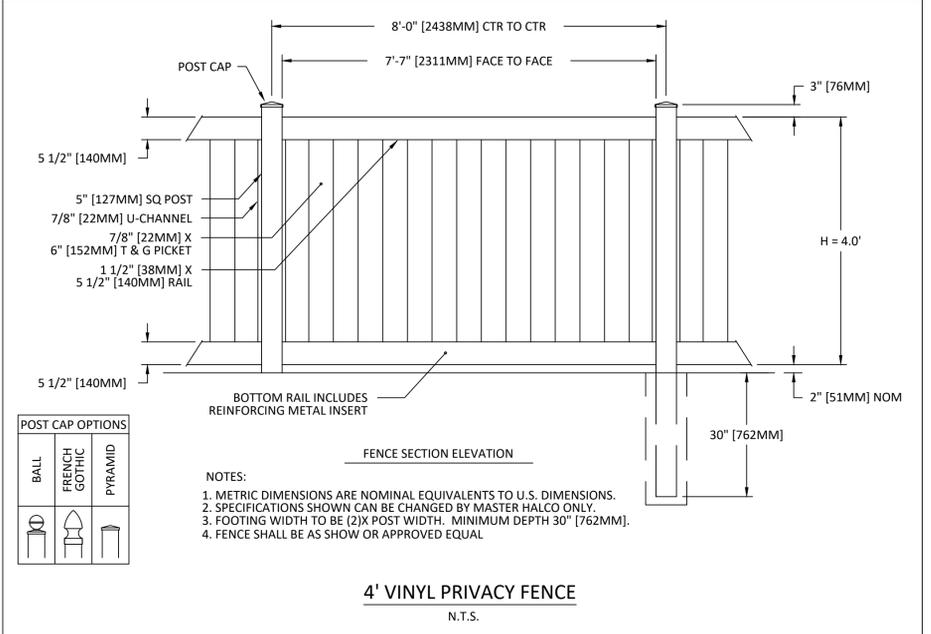
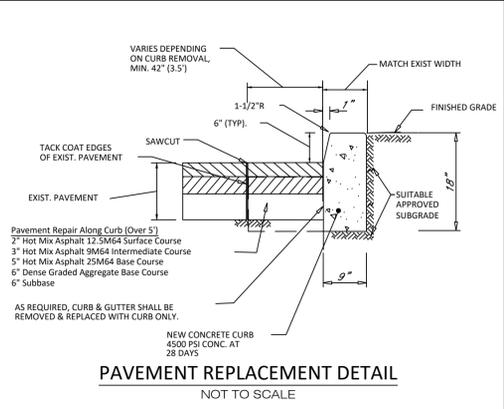
STORM INLET TYPE 'E' DETAIL
N.T.S.

PATTERN NUMBER	COVER	GRATE	4"	6"	8"	10"	12"	14"	16"	18"	20"	GRATE TYPE
4501	4528	5	19 1/2	18	8	2 1/2	3					
4504	4528	5	19 1/2	20	4	2 1/2	3					
4504	4528	5	19 1/2	24	4	2 1/2	3					
4505	4530	5	19 1/2	30	4	2 1/2	3					
4506	4530	5	19 1/2	36	4	2 1/2	3					
4507	4532	5	19 1/2	42	4	2 1/2	3					
4508	4533	5	19 1/2	48	4	2 1/2	3					



DETECTABLE WARNING SURFACE AT SIDEWALK RAMPS DETAIL

- DETECTABLE WARNING SURFACE APPLICATION INSTRUCTIONS
- CLEAN MAT(S) WITH RUBBING ALCOHOL AND LET DRY. LAY MAT(S) FLAT, AWAY FROM THE ACTUAL FINAL PLACEMENT. (IF NECESSARY, BEND THEM SLIGHTLY TO MAKE THEM LIE FLAT.)
 - CLEAN THE SURFACE USING A PRESSURE WASH OF AT LEAST 2,500 PSI. IF THERE IS GUM OR OTHER CONTAMINANTS ON THE SURFACE, CLEAN WITH A WIRE BRUSH. ALTERNATIVELY, NEW CONCRETE WILL REQUIRE ONLY A CITRIC CLEANER APPLICATION. AGITATE WITH A DECK BRUSH, RINSE OFF THOROUGHLY AND DRY THOROUGHLY.
 - PLACE MAT(S) ONTO THE APPLICATION SURFACE.
 - MASK OFF AREA AROUND THE MAT(S) WITH A GOOD-QUALITY DUCT TAPE (THE DUCT TAPE BONDS BETTER TO THE CONCRETE THAN REGULAR MASKING TAPE.)
 - REMOVE THE MAT(S) FROM THE WORKING AREA, REMEMBERING THE EXACT POSITION THEY WERE IN.
 - PLACE THE ADHESIVE IN THE CAULK GUN. CUT OFF 1/2" TO 3/4" OF THE PLASTIC TIP AND PIERCE THE INNER SEAL OF THE CAULK TUBE.
 - SQUEEZE OUT A LARGE BEAD OF ADHESIVE ON THE HALF OF THE SURFACE.
 - USING A SERRATED TROWEL, SPREAD THE ADHESIVE TO COVER THE ENTIRE MASKED-OFF SURFACE (PAYING PARTICULAR ATTENTION TO MAKING SURE THAT THE PERIMETER OF THE AREA IS COVERED RIGHT UP TO THE DUCT-TAPPED EDGES). A 1-1/4" TUBE COVERS 4 SQUARE FEET.
 - CAREFULLY PLACE THE MAT(S) BACK IN THEIR ORIGINAL POSITION ON THE SURFACE, MAKING SURE THAT THEY ARE NOT OVERLAPPING THE DUCT TAPE.
 - LAY A SMALL, FLAT BOARD (1 SQUARE FOOT OR SMALLER) ON THE TOP OF THE DOMES AND PRESS DOWN FIRMLY. MOVE THE BOARD AROUND, MAKING SURE THAT ALL AREAS OF EACH MAT HAVE BEEN PRESSED DOWN. USE THE END OF THE BOARD OR ANOTHER BOARD TO PRESS DOWN ALL AREAS IN BETWEEN THE DOMES. WORK FROM THE CENTER OUT AND PAY PARTICULAR ATTENTION TO PRESSING DOWN ALL AREAS AROUND THE OUTSIDE PERIMETER.
 - REMOVE ANY EXCESS ADHESIVE WITH A RAG WET WITH XYLENE. IF NEED BE, DURABAK CAN LATER BE USED FOR TOUCH-UP WITH A SMALL BRUSH.
 - LET ADHESIVE DRY FOR AT LEAST 6 HOURS BEFORE ALLOWING FOOT TRAFFIC.



POST CAP OPTIONS

BALL	FRENCH GOTHIC	PYRAMID

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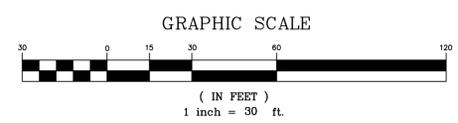
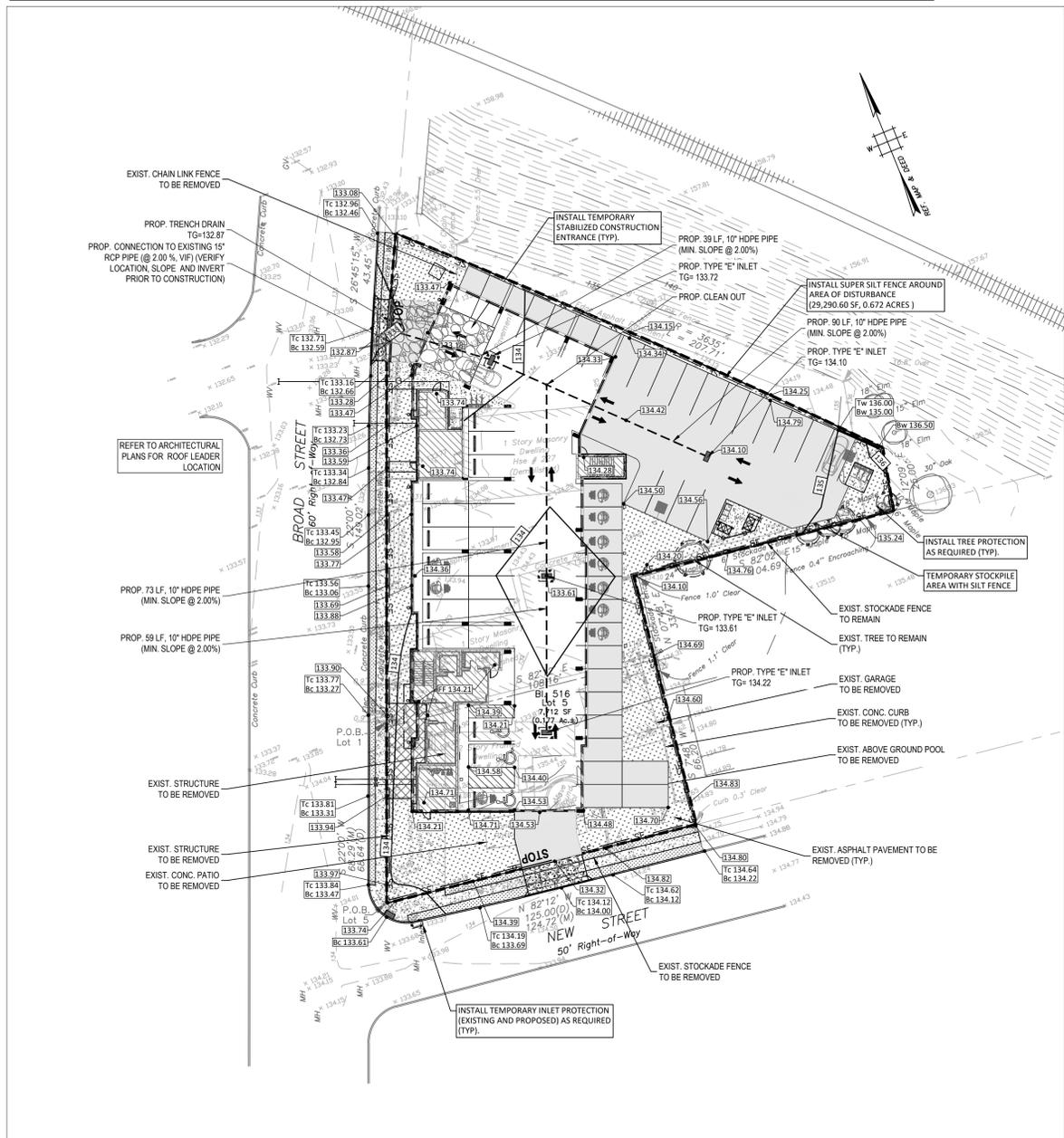
CONSTRUCTION DETAILS

JOB NUMBER:
24-0401

SCALE: AS SHOWN

C-09
SHEET 9 OF 10

THIS PLAN IS TO BE USED FOR SOIL EROSION CONTROL PURPOSES ONLY



LEGEND

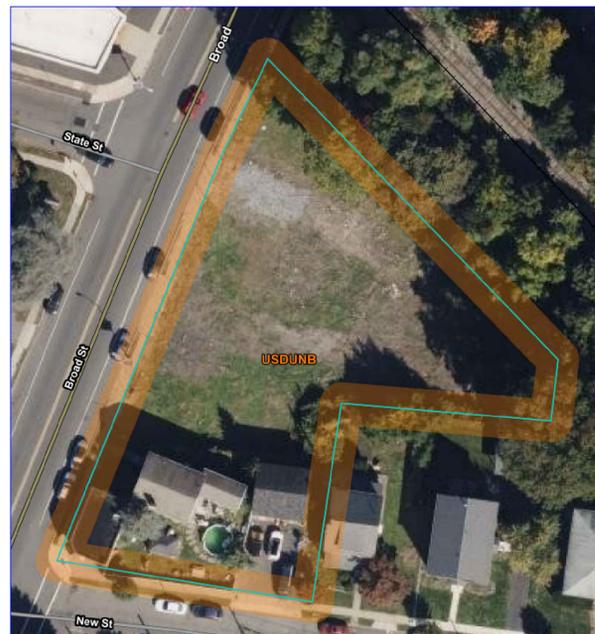
X	TBR	- TO BE REMOVED
-	-	- EXISTING SPOT ELEVATION
-	-	- EXISTING CONTOUR
-	-	- PROPOSED CONTOUR
-	-	- PROPOSED SPOT ELEVATION
Tc	-	- TOP OF CURB
Bc	-	- BOTTOM OF CURB

PROTECT YOURSELF
A PHONE CALL
CAN BE YOUR INSURANCE POLICY

WHAT YOU DON'T KNOW CAN HURT YOU.
THE STATE OF NEW JERSEY REQUIRES NOTIFICATION OF EXCAVATORS,
DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN THE STATE.



SITE MAP
SCALE: 1" = ±300'



USDA WEB SOIL SURVEY MAP
N.T.S.

ACCORDING TO USDA WEB SOIL SURVEY, THE MAP UNIT SYMBOL FOR THE ENTIRE SITE IS "USDUNB" (URBAN LAND, DUNELLEN SUBSTRATUM - DUNELLEN COMPLEX, 0 TO 8 PERCENT SLOPES).

SOIL MANAGEMENT NOTE:
ACCORDING TO STATE OF NEW JERSEY LAND USE CLASSIFICATION SYSTEM, THE SITE IS UNDER URBAN REDEVELOPMENT AREA, LAND USE CODE 1,110. THEREFORE, THE PROPOSED PROJECT DOES NOT REQUIRE COMPACTION REMEDIATION, AS PER EXEMPTION #6 UNDER SOIL MANAGEMENT AND PREPARATION STANDARDS FOR SOIL AND SEDIMENT CONTROL IN NEW JERSEY.

SOIL EROSION AND SEDIMENT CONTROL NOTES FOR THE HUDSON, ESSEX & PASSAIC COUNTY SOIL CONSERVATION DISTRICT

- 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 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.
- ALL SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN 14 DAYS AND NOT UNDER ACTIVE CONSTRUCTION, WILL BE TEMPORARILY SEEDED AND HAY MULCHED OR OTHERWISE PROVIDED WITH VEGETATIVE COVER. THIS TEMPORARY COVER SHALL BE MAINTAINED UNTIL SUCH TIME WHEREBY PERMANENT RESTABILIZATION IS ESTABLISHED.
- SEEDING DATES:** THE FOLLOWING SEEDING DATES ARE BEST RECOMMENDED TO ESTABLISH PERMANENT VEGETATIVE COVER WITHIN MOST LOCATIONS IN THE HEPCSD: SPRING - 3/1-5/15 AND FALL - 8/15 - 10/1
- SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED
- 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.
- 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.
- ALL EROSION CONTROL DEVICES SHALL BE PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.
- THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT WILL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES. FAX - (862) 333-4507 OR EMAIL - INFORMATION@HEPCSD.ORG
- 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 862-333-4505 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.
- 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.
- ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TO SOIL PRIOR TO RE-SEEDING, SOIDDING OR PLANTING. A DEPTH OF 5 INCHES, FIRM IN PLACE, IS REQUIRED, AS PER THE STANDARDS FOR TOPSOILING AND LAND GRADING, LAST REVISED DECEMBER 2017.
- ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL.
- 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.
- 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.
- THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING, FOR THE SALE OF ANY PORTION OF THE PROJECT OR FOR THE SALE OF INDIVIDUAL LOTS. NEW OWNERS' INFORMATION SHALL BE PROVIDED. ADDITIONAL MEASURES DEEMED NECESSARY BY DISTRICT OFFICIALS SHALL BE IMPLEMENTED AS CONDITIONS WARRANT.

SEQUENCE OF CONSTRUCTION:

- INSTALL SEDIMENT BARRIER FENCE- DURATION OF PROJECT.
- STABILIZE CONSTRUCTION ENTRANCE- DURATION OF PROJECT.
- SITE PREPARATION- CLEAR AND GRUB- WEEK 1.
- GRADING TO SUB-GRADE ELEVATIONS- WEEK 2.
- SITE AND BUILDING CONSTRUCTION- WEEK 3 THRU WEEK 30.
- REMOVE SOIL EROSION AND SEDIMENT CONTROL MEASURES- END OF PROJECT.

DUST CONTROL NOTES

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST: MULCHES - SEE STANDARD FOR STABILIZATION WITH MULCHES ONLY (PG. 5-1) OF STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. NOTE: ALL PAGE REFERENCES ARE FOR ABOVE DOCUMENT DATED 7/99. VEGETATIVE COVER - SEE STANDARD FOR TEMPORARY VEGETATIVE COVER (PG. 7-1), PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (PG. 4-1), AND PERMANENT STABILIZATION WITH SOD (PG. 6-1) SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

TABLE 16-1: DUST CONTROL MATERIALS

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

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE.
CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.
BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE, DRY GRANULATES OF FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS, OR ACCUMULATION AROUND PLANTS.
STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

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TOWNSHIP OF BLOOMFIELD
ESSEX COUNTY, NEW JERSEY
SOIL EROSION AND SEDIMENT CONTROL PLAN

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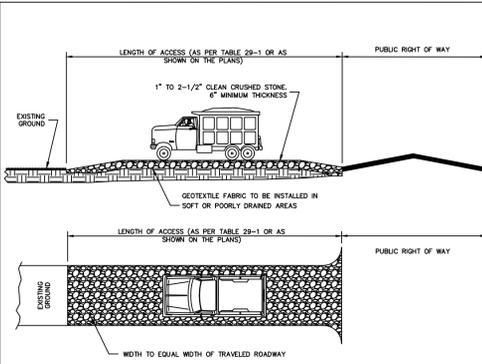
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JOB NUMBER:
24-0401

SCALE: AS SHOWN

S-01
SHEET 1 OF 2

THIS PLAN IS TO BE USED FOR SOIL EROSION CONTROL PURPOSES ONLY



PERCENT SLOPE OF ROADWAY	LENGTH OF STONE GRAINED SOILS	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT

NOTE: Entire surface stabilized with FABC base course per governing authority requirements.

- NOTES:**
- ALL INDIVIDUAL LOT INGRESS/EGRESS POINTS SHALL REQUIRE STABILIZED CONSTRUCTION ENTRANCE ACCESS.
 - PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
 - STONE SIZE SHALL BE ASTM C-33, SIZE NO. 2 OR 3, CRUSHED STONE.
 - THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN 4".
 - THE WIDTH AT THE EXISTING PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
 - THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE ROAD/PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL LAYER AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURE USED TO TRAP SEDIMENT.
 - ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
 - WHERE TRACKING OF SOIL ONTO ROADWAYS IS A CONTINUAL OCCURRENCE, ALL CONTRACTORS BOTH SITE AND DRILLING CONTRACTORS SHALL BE REQUIRED TO BROOD SWEEP THE ROADWAY AT 2 HOUR INTERVALS MINIMUM PRIOR TO LEAVING THE CONSTRUCTION SITE AT THE END OF THE DAY.

STABILIZED CONSTRUCTION ACCESS

PROPOSED SEQUENCE OF DEVELOPMENT	Week
Installation of all sediment and erosion control devices (including silt fences and stabilized construction access) prior to any major soil disturbances or in their proper sequence and maintenance until permanent protection is established.	1 Week
Site demolition, clearing, clear and remove all debris as necessary. All remaining vegetation to be properly protected and to remain in its natural state.	2 Weeks
General and preliminary grading of all pavement areas and storm water management basins.	2 Week
Layout and location of all proposed utilities.	1 Week
Construction of all proposed improvements and drainage facilities. Installation of all erosion control measures affected by said facilities such as inlet sediment barriers.	25 Weeks
Pavement subbase course to be applied immediately following preliminary grading and construction of improvements in order to stabilize pavement areas.	1 Week
Installation of all pavement base material.	1 Week
Final grading of all lot areas and basins including construction of all soil erosion control as necessary.	1 Week
Stabilization of all off pavement areas.	1 Week
Complete all landscaping and vegetative cover.	1 Week
Removal of all temporary sediment and erosion control devices.	upon completion

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Insect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg.

SEEDING

A. Select seed from recommendations in Table 7-2.

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	Per Acre	SEEDING RATE ¹ (lb/1000 Sq. Ft.)	OPTIMUM SEEDING DATE ² (Zone)			OPTIMUM SEEDING DEPTH (inches)
			Zone 5a, 6a	Zone 6b	Zone 7a, 7b	
COLD SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15-6/1	3/1-5/15	2/15-5/1	0.5
2. Spring oats	86	2.0	3/15-6/1	8/15-10/1	8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	110	1.0	3/15-6/1	3/1-5/15	2/15-5/1	0.5
5. Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0
WARM SEASON GRASSES						
6. Pearl Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	0.25

- Seeding rate for warm season grass, selections 5-7 shall be adjusted to reflect the amount of Pure Live Seed (PLS) as determined by a germination test. No adjustment is required for cool season grasses.
 - May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
 - Plant Hardiness Zone (see figure 7-1, pg. 7-4).
 - Twice the depth for sandy soils.
- B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, or cutspreader. Except for drilled, hydroseeded or cutspreader seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.
- C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.
- D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, improve capillarity, and improve seed emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

MULCHING

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

Straw or Hay. Unrotted small grain straw, hay free of seeds, or salt hay to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-silver (topdressing or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application. Spread mulch uniformly by hand or mechanically so that approximately 85% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

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

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

Liquid Mulch-Binders. May be used to anchor salt hay, hay or straw mulch.

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

Use one of the following:

- Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf-grass. Use of rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.
- Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

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

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

IRRIGATION (where feasible)

If soil moisture is deficient, and mulch is not used, supply new seedlings with adequate water (a minimum of 1/4 inch twice a day until vegetation is well established). This is especially true when seedlings are made in abnormally dry or hot weather or on droughty sites.

TOPDRESSING

Since soil organic matter content and slow fertilizer (water insoluble) are prescribed in Section 2A, Seeded Preparation in this Standard, no follow-up of topdressing is mandatory.

An exception may be made where gross nitrogen deficiency exists to the extent that turf furf may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

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

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

C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be applied with organic matter, as needed, in accordance with the STANDARD FOR TOPSOILING.

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

SEEDING PREPARATION

A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firm, according to soil test recommendations such as offered by Rutgers Co-operative Extension. Use 2 to 4 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium magnesium to grasses and legumes.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. High acid producing soils, soils having a pH of 4 or less or containing iron sulfide shall be covered with 5 minimum of 12 inches of soil having a pH of 5 or more before initiating seeded preparation. See Standard for Management of High Acid Producing Soils for specific requirements.

SEEDING

- Select a mixture from Table 4-3 or use mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seeding rates shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test data more than 12 months old unless retested.
- Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
- Warm season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85F and above. See Table 4-3, mixtures 1 to 7. Planting rates for warm season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
- Cool Season Mixtures are grasses and legumes which maximize growth at temperatures below 85F. Warm grasses become active at 65F. See Table 3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of Pure Live Seed is not required for cool season grasses.

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

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

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

MULCHING

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

Straw or Hay. Unrotted small grain straw, hay free of seeds, or salt hay to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-silver (topdressing or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application. Spread mulch uniformly by hand or mechanically so that approximately 85% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

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ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

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

TABLE 4-2 PERMANENT STABILIZATION MIXTURES FOR VARIOUS USES

Application	PLANTING MIXTURES BY SOIL DRAINAGE CLASS ¹ (see Table 4-3)		
	Excessively Drained	Moderately Well Drained	Somewhat Poorly to Poorly Drained
Residential/commercial lots	10, 12, 15	6, 10, 12, 13, 14, 15	16
Ditch and channel banks, dikes, berms, and dams	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17
Drainage ditches, swales, detention basins	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 16, 17
Filter Strips	12	11, 12	11, 12
Stormwater way, spillways	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11, 12
Recreation areas, athletic fields	5, 12, 15, 18	12, 13, 14, 15, 18	16
Special Problem Sites			
Sleep slope and banks, roadsides, borrow areas	2, 3, 6, 8	2, 3, 5, 7, 8, 9, 10, 15	2, 9, 10, 11, 12
Sand and gravel pits	1, 2, 3, 4, 6, 21	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8
Dredged material, spoilbanks, borrow areas	2, 3, 6, 20	2, 3, 6, 11	2, 8
Streambanks & shorelines ²	2, 8, 20, 21a	2, 8, 19b, 20, 21a, 21b	2, 8, 19a, 21a,b,c,d
Utility rights-of-way	3, 7, 18b	3, 7	8, 9, 17

- Refer to Soil Surveys for drainage class descriptions.
- Refer to Soil Engineering Standard for additional seed mixtures.
- Spillways only.
- See Appendix E for description of turf grasses and cultivars.

TABLE 4-3 PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES¹

SEED MIXTURE ²	PLANTING RATE ³ (lb/1000 Sq. Ft.)	PLANTING DATES				MAINTENANCE LEVEL ⁴	REMARKS
		O = Optimal Planting period		A = Acceptable Planting period			
		PLANT HARDINESS ZONES (see Figure 4-1)					
		Zone 5a, 6a	Zone 6b	Zone 7a, 7b			
WARM SEASON SEED MIXTURES							
1. A. FOR PINELANDS NATIONAL RESERVE SEE TABLE 4-3 FOR THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.							
1. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	15	.35					C-D
2. FESCUE PLUS PATIQUETTES PEA	20	.45					C-D
3. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	15	.35					C-D
4. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
5. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
6. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
7. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
8. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
9. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
10. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
11. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
12. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
13. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
14. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
15. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
16. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
17. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
18. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
19. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
20. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
21. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
22. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
23. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
24. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
25. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
26. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
27. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
28. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
29. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
30. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
31. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
32. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
33. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
34. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
35. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
36. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
37. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
38. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
39. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
40. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25					C-D
41. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	5	.10					C-D
42. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	4	.10					C-D
43. S. SWITCHGRASS AND PERENNIAL RYEGRASS PLUS OR FESCUE	10	.25</					