PRELIMINARY & FINAL SITE PLAN
FOR
PARKING LOT EXPANSION

BLOCK 3301, LOTS 8 & 12
TAX MAP SHEET #33
3405 HIGHWAY ROUTE 33 & 3454 WEST BANGS AVENUE
TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NJ

200' PROPERTY OWNERS LIST

NEPTUNE TWP — 8/2/2024 — PAGE 1 OF 1

BLOCK LOT QUAL	PROPERTY LOCATION ADDITIONAL LOT	OWNER ADDRESS CITY, STATE	ZIP CODE
3001 1	3502 W BANGS AVE	MOLE HILL INN, LLC 3502 WEST BANGS AVENUE NEPTUNE, NJ	07753
3001 2	3424 HIGHWAY 33	GCAC LLC PO BOX 550 NEPTUNE, NJ	07754
3001 3	OLD CORLIES AVE	HAMILTON UNITED METHODIST CHURCH 858 OLD CORLIES AVENUE NEPTUNE, NJ	07753
3101 2	3455 W BANGS AVE	HOLY INNOCENTS CHURCH 3455 W BANGS AVE NEPTUNE, NJ	07753
3301 7	3403 HIGHWAY 33	FTPA STORAGE NEPTUNE LLC 780 THIRD AVE, 33 RD FLOOR NEW YORK, NY	10017
3301 8	3403 HIGHWAY 33	3405 STATE HIGHWAY 33 CONDO 25 NEPTUNE NEPTUNE, NJ	07753
3301 8 C01	3403 HIGHWAY 33 UNIT #1	MORGAN MEDICAL PROPERTIES LLC 3405 HIGHWAY UNIT #1 NEPTUNE, NJ	07753
3301 8 C02	3403 HIGHWAY 33 UNIT#2	MORGAN MEDICAL PROPERTIES LLC 3405 HIGHWAY UNIT #2 NEPTUNE, NJ	07753
3301 9	3425 HIGHWAY 33	FIRST MECHANICAL, LLC 18 AMHERST DRIVE BAYVILLE, NJ	08721
3301 10	3458 W BANGS AVE	COYNE, GERALD T 3458 W BANDS AVENUE NEPTUNE, NJ	07753
3301 11	3456 W BANGS AVE	NEPTUNE INTERNAL MEDICINE 3456 W BANGS AVE NEPTUNE, NJ	07753
3301 12	3454 W BANGS AVE	MORGAN PARKING, LLC 3405 HIGHWAY 33 NEPTUNE, NJ	07753
3301 13	3452 W BANGS AVE	MORAN, MELISSA L & O'LEARY, JOHN P 3452 HIGHWAY 33 NEPTUNE, NJ	07753
3301 14	4 RANDI WAY	POLK, ROBERT & DARLENE 4 RANDI WAY NEPTUNE, NJ	07753
3301 15	6 RANDI WAY	HEIDEL, DOUGLAS & EILEEN ANN 6 RANDI WAY NEPTUNE, NJ	07753
3301 16	8 RANDI WAY	RUSHING, PETER C JR & LINDA M & MOORE-BO 8 RANDI WAY NEPTUNE, NJ	07753
3301 17	8 CINDY LANE	JONES, EMANUEL J JR & CUNNINGHAM, R 8 CINDY LANE NEPTUNE, NJ	07753
3301 18	10 CINDY LANE	GELL., PETER & FLORENCE 10 CINDY LANE NEPTUNE, NJ	07753
3301 22	7 RANDI WAY	EGBERT, MARGARET 7 RANDI WAY NEPTUNE, NJ	07753
3301 23	5 RANDI WAY	KAPP, CLAYTON & VANLOENEN, AMANDA 5 RANDI WAY NEPTUNE, NJ	07753
3301 24	3 RANDI WAY	PIERSON, STEFANIE 3 RANDI WAY NEPTUNE, NJ	07753
3301 25	1 RANDI WAY	VIRTGAYM, DANIEL & KELLY 1 RANDI WAY NEPTUNE, NJ	07753

UTILITIES

UTL.	SERVICE PROVIDER	SERVICE PROVIDER ADDRESS CITY, STATE	ZIP CODE
WATER	NEW JERSEY-AMERICAN WATER COMPANY, INC.	DONNA SHORT GIS SUPERVISOR 1025 LAUREL OAK ROAD VOORHESS, NJ	08043
GAS	NEW JERSEY NATURAL GAS COMPANY	RIGHT OF WAY DEPARTMENT 1415 WYCKOFF ROAD WALL TWP, NJ	07719
PHONE	VERIZON	LEGAL DEPARTMENT, 17TH FLOOR 540 BROAD STREET NEWARK, NJ	07102
ELEC.	JERSEY CENTRAL POWER & LIGHT COMPANY	LAND USE MATTERS 300 MADISON AVENUE MORRISTOWN, NJ	07960
TV	MONMOUTH CABLEVISION	LAND USE MATTERS 1501 18TH AVENUE WALL TWP, NJ	07719

GENERAL NOTES

1. SUBJECT PROPERTY

   TAX MAP 33: BLOCK 3301, LOTS 8 & 12, 3405 HIGHWAY ROUTE 33 & 3454 WEST BANGS AVENUE, TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NEW JERSEY

2. PURPOSE OF THIS PLAN SET

   THIS PLAN SET HAS BEEN PREPARED FOR THE PURPOSE OF PRELIMINARY/FINAL SITE PLAN MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THE PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL FINAL APPROVALS HAVE BEEN OBTAINED AND ALL THE CONDITIONS OF THE APPROVALS HAVE BEEN SATISFIED.

3. SURVEY DATA

   SURVEY INFORMATION CONTAINED HEREON IS BASED ON A FIELD SURVEY PERFORMED BY INSITE SURVEYING, LLC. ENTITLED "BOUNDARY & TOPOGRAPHIC SURVEY OF BLOCK 3301, LOT 12 3454 WEST BANGS AVENUE & BLOCK 3301, LOT 8 3405 N.J. STATE HWY ROUTE 33, TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NEW JERSEY" DATED 08/26/24.

   HORIZONTAL DATUM: NAD83 VERTICAL DATUM: NAVD88

4. BASE FLOOD ELEVATION

   ACCORDING TO FEMA'S EFFECTIVE FIRM ENTITLED "FIRM - FLOOD INSURANCE RATE MAP (FIRM), MONMOUTH COUNTY, NEW JERSEY (ALL JURISDICTIONS)," COMMUNITY PANEL #0329G, DATED 06/15/2022, THE SITE IS LOCATED IN ZONE X. THE FEMA MAP REFERENCES THE NAVD88 VERTICAL DATUM.

5. FRESHWATER/COASTAL WETLANDS AND STREAMS

   THERE ARE NO FRESHWATER/COASTAL WETLANDS OR STREAMS RECORDED ON SITE.

6. UNDERGROUND UTILITIES NOTIFICATION

   FOR ANY EXCAVATION IN NEW JERSEY, THE CONTRACTOR MUST CALL NEW JERSEY ONE CALL SERVICE AT 1-800-272-1000 FOR A MARKOUT REQUEST NO LESS THAN THREE (3) WORKING DAYS PRIOR TO STARTING ANY EXCAVATION.

7. VERIFICATION OF UTILITIES

   THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES (INCLUDING BUT NOT LIMITED TO SANITARY SEWERS, STORM SEWERS, POTABLE WATER LINES AND APPURTENANCES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CATV LINES AND UNDERGROUND STORAGE TANKS) THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF THE WORK ARE SHOWN ON THE PLANS. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED BY THE ENGINEER, AND THE CONTRACTOR IS ADVISED TO VERIFY IN THE FIELD ALL THE FACTS CONCERNING THE LOCATION AND ELEVATION OF THESE UTILITIES OR OTHER CONSTRUCTION OBSTACLES IMPACTED BY NEW CONSTRUCTION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROJECT DESIGN.

8. SPECIFICATIONS

   UNLESS OTHERWISE NOTED HEREON, ALL SITE WORK SHALL BE CARRIED OUT IN CONFORMANCE WITH THE PROVISIONS OF THE "NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

9. CONSTRUCTION REQUIREMENTS

   a. ALL CONSTRUCTION AND DEMOLITION SHALL CONFORM WITH ANY APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY WAYS, MEANS AND METHODS OF CONSTRUCTION, AND SHALL CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES REMAIN THE OBLIGATION OF THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.

   b. THE CONTRACTOR SHALL PERFORM ALL WORK IN A FINISHED AND WORKMANLIKE MANNER TO THE ENTIRE SATISFACTION OF THE OWNER AND IN ACCORDANCE WITH THE BEST RECOGNIZED TRADE PRACTICES.

   c. THE CONTRACTOR SHALL PROVIDE NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY WITHIN THE PROJECT FOR THE PROTECTION AND THE SAFETY OF THE PUBLIC AND MAINTAIN THROUGHOUT CONSTRUCTION.

   d. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE CLEANUP WITHIN THE CONSTRUCTION AREA AND SHALL DISPOSE OF DEBRIS IN ACCORDANCE WITH ANY LOCAL, STATE OR FEDERAL REGULATIONS.

   e. ANY DAMAGE TO PUBLIC STREETS, CURBS, SIDEWALKS AND UTILITIES AS A RESULT OF SITE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR.

11. CONSTRUCTION PERMITS/INSPECTIONS

    CONTRACTOR RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS INCLUDING ROAD OPENING PERMITS, PREPARATION OF TRAFFIC CONTROL PLANS, INSTALLATION AND MAINTENANCE OF TRAFFIC CONTROL AND COORDINATION OF ALL INSPECTIONS REQUIRED BY THE MUNICIPALITY, COUNTY OF MONMOUTH, NJ AMERICAN WATER – COASTAL NORTH, NEPTUNE TOWNSHIP SEWER AUTHORITY, AND ANY OTHER APPLICABLE AGENCY HAVING JURISDICTION OVER THE PROJECT.

12. ADA COMPLIANCE

    a. ALL SITE IMPROVEMENTS LOCATED ON THE PRIVATE PROPERTY SHALL BE IN COMPLIANCE WITH THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, STANDARDS FOR PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES: TITLE III.

    b. ALL SITE IMPROVEMENTS LOCATED WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN COMPLIANCE WITH THE CURRENT PUBLIC RIGHTS-OF-WAY ACCESS ADVISORY COMMITTEE GUIDELINES.

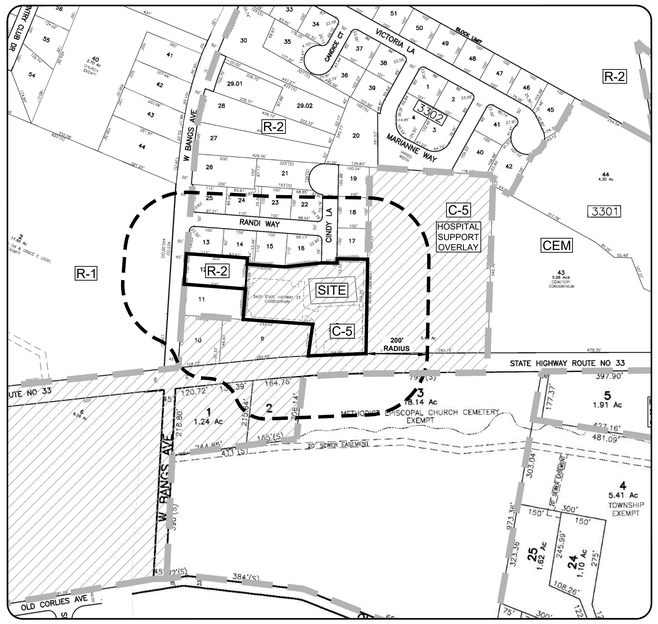
13. STORMWATER POLLUTION PREVENTION PLAN

    a. SOIL EROSION PLANS HAVE BEEN PREPARED TO ADDRESS EROSION AND SEDIMENT CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) AT TIME OF DESIGN. ALL OTHER COMPONENTS OF THE SPPP AND GENERAL STORMWATER PERMIT NO. NJ6008823 TO BE RESPONSIBILITY OF THE DEVELOPER AND/OR SITE CONTRACTOR.

    b. CONTRACTOR/DEVELOPER MUST PREPARE AND FOLLOW A STORMWATER POLLUTION PREVENTION PLAN FOR THE DURATION OF THE PROJECT.

14. OVERALL CONSTRUCTION DOCUMENTS

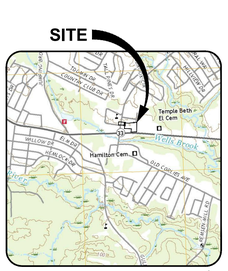
    THIS PLAN SET CONSISTS OF MULTIPLE SHEETS. INDIVIDUAL PAGES SHALL NOT BE UTILIZED FOR CONSTRUCTION ON THEIR OWN AS NOTES AND INFORMATION PROVIDED ON OTHER SHEETS MAY IMPACT WORK REQUIREMENTS. CONTRACTOR SHALL REVIEW AND UTILIZE ENTIRE PLAN SET FOR CONSTRUCTION.



TAX AND ZONING MAP — **ZONE**

C-5 - ROUTE 33W COMMERCIAL (HOSPITAL SUPPORT OVERLAY)
R-2 - LOW DENSITY SINGLE-FAMILY RESIDENTIAL (HOSPITAL SUPPORT OVERLAY)

100 0 100 200
SCALE: 1" = 100'

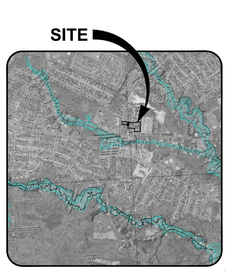


USGS MAP

2000 0 2000 4000
SCALE: 1" = 2000'

LOCATION MAP

2000 0 2000 4000
SCALE: 1" = 2000'



FEMA EFFECTIVE FLOOD MAP

2000 0 2000 4000
SCALE: 1" = 2000'

ZONING COMPLIANCE CHART (ONLY FOR LOT 12)

ZONING DISTRICT: R-2 LOW DENSITY RESIDENTIAL ZONE DISTRICT
PROPOSED USE: COMMERICAL PARKING LOT IN RESIDENTIAL ZONE (USE VARIANCE)

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
ZONING SCH. B	MIN. LOT AREA (SF)	10,000	20,000	NO CHANGE	YES
	MAX.DENSITY RATIO (D.U. PER ACRE)	4.3	N/A	N/A	N/A
	MIN. LOT WIDTH (FT)	100	100	NO CHANGE	YES
	MIN. LOT FRONTAGE (FT)	100	100	NO CHANGE	YES
	MIN. LOT DEPTH (FT)	100	200	NO CHANGE	YES
	FRONT YARD SETBACK (FT)	25	N/A	25	YES
	SIDE YARD SETBACK (FT)	10	N/A	10	YES
	COMBINDED SIDE YARD SETBACK (FT)	25	N/A	25	YES
	REAR YARD SETBACK (FT)	30	N/A	30.0	YES
	MAX. BUILDING COVER PERCENTAGE (%)	30	N/A	N/A	N/A
	MAX. TOTAL LOT COVER PERCENTAGE (%)	40	16% (3,374 SF / 20,000 SF)	50% (10,149 SF / 20,000 SF) NET INCREASE: 6,775 SF (0.16 AC)	NO (V)
	MAX. NUMBER OF STORIES	3	N/A	NO CHANGE	N/A
	MAX. BUILDING HEIGHT (FT)	35	N/A	NO CHANGE	N/A
	MIN. IMPROVABLE AREA (M.I.A. SF)	2,400	10,875	NO CHANGE	YES

(N) EXISTING NON-CONFORMITY — (I) IMPROVED CONDITION — N/A - NOT APPLICABLE
(E) EXISTING VARIANCE — (X) VARIANCE/NON-CONFORMITY ELIMINATED — N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE — (W) PROPOSED WAIVER

ZONING COMPLIANCE CHART (FOR BOTH LOTS)

ZONING DISTRICT: C-5 ROUTE 33 WEST COMMERCIAL ZONE DISTRICT
PROPOSED USE: COMMERICAL

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
ZONING SCH. B	MIN. LOT AREA (SF)	50,000	113,389	NO CHANGE	YES
	MAX.DENSITY RATIO (D.U. PER ACRE)	N/A	N/A	N/A	N/A
	MIN. LOT WIDTH (FT)	200	180 (E)	NO CHANGE	NO (E)
	MIN. LOT FRONTAGE (FT)	200	184.95 (E)	NO CHANGE	NO (E)
	MIN. LOT DEPTH (FT)	250	280	NO CHANGE	YES
	FRONT YARD SETBACK (FT)	40	168.4	NO CHANGE	YES
	SIDE YARD SETBACK (FT)	30	29.8 (E)	NO CHANGE	NO (E)
	COMBINDED SIDE YARD SETBACK (FT)	60	233.43	NO CHANGE	YES
	REAR YARD SETBACK (FT)	40	40.9	NO CHANGE	YES
	MAX. BUILDING COVER PERCENTAGE (%)	30	11% (12,632 SF / 113,389 SF)	11% (12,632 SF / 113,389 SF) NET INCREASE: 0 SF	N/A
	MAX. TOTAL LOT COVER PERCENTAGE (%)	65	49% (55,816 SF / 113,389 SF)	55% (62,896 SF / 113,389 SF) NET INCREASE: 7,080 SF	YES
	MAX. NUMBER OF STORIES	2	2	NO CHANGE	YES
	MAX. BUILDING HEIGHT (FT)	30	26	NO CHANGE	YES
	MIN. IMPROVABLE AREA (M.I.A. SF)	19,500	49,790	NO CHANGE	YES

(N) EXISTING NON-CONFORMITY — (I) IMPROVED CONDITION — N/A - NOT APPLICABLE
(E) EXISTING VARIANCE — (X) VARIANCE/NON-CONFORMITY ELIMINATED — N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE — (W) PROPOSED WAIVER

PARKING COMPLIANCE CHART

PROPOSED USE: MEDICAL OFFICE WITH PARKING LOT EXTENSION

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
TABLE 4.2	MIN. OFF-STREET PARKING SPACES OFFICE (24,898 SF) + 192 (BASEMENT OFFICE) 25,090 SF [GROSS AREA]	1 SPACE PER 300 SF OF GROSS FLOOR AREA 25,090 ÷ 300 = 84 SPACES	87 PARKING SPACES (INCLUDES 5 ADA SPACES)	EXISTING = 87 SPACES REMOVED = 1 SPACE **ADDITIONAL = 26 SPACES** (TOTAL OF 113 SPACES)	NO (1)

(N) EXISTING NON-CONFORMITY — (I) IMPROVED CONDITION — N/A - NOT APPLICABLE
(E) EXISTING VARIANCE — (X) VARIANCE/NON-CONFORMITY ELIMINATED — N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE — (W) PROPOSED WAIVER

(1) IN NO CASE SHALL THE PROVIDED PARKING FOR NON-RESIDENTIAL USES EXCEED THESE MINIMUM REQUIREMENTS BY MORE THAN 20% (101 SPACES).

SIGNS COMPLIANCE CHART

FREESTANDING TYPE B SIGN*

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
LAND DEV. ORDINANCE 416.07A	SIZE (MAX)	48 SF	32 SF	32 SF	YES
	HEIGHT (MAX)	15 FT	6 FT	6 FT	YES
	QUANTITY (MAX)	1 SIGN PER FRONTAGE	1 SIGN PER FRONTAGE	1 SIGN PER FRONTAGE	YES
	HORIZ. SIGN DIMENSION (MAX)	10 FT	8 FT	8 FT	YES
	SETBACK (MIN)	10 FT	20 FT (FROM EX NJDOT. ROW)	10 FT (FROM EX. ROW)	YES

* - VARIANCE REQUESTED FOR SIGN WITHIN RESIDENTIAL ZONE.

INDEX OF SHEETS:

SHEET #:	SHEET TITLE:	INITIAL RELEASE:	REV. DATE:
C100	TITLE SHEET	01/22/25	01/22/25
C200	EXISTING CONDITIONS, TREE REMOVAL & SITE PREPARATION PLAN	01/22/25	01/22/25
C300	OVERALL SITE LAYOUT PLAN	01/22/25	01/22/25
C301	SITE LAYOUT PLAN	01/22/25	01/22/25
C400	GRADING & DRAINAGE PLAN	01/22/25	01/22/25
C500	LANDSCAPING & LIGHTING PLAN	01/22/25	01/22/25
C501	LANDSCAPING & LIGHTING NOTES & DETAILS	01/22/25	01/22/25
C800	CONSTRUCTION DETAILS & NOTES	01/22/25	01/22/25
C900	SOIL EROSION & SEDIMENT CONTROL PLAN	01/22/25	01/22/25
C901	SOIL EROSION & SEDIMENT CONTROL NOTES AND DETAILS	01/22/25	01/22/25

ZONING BOARD APPROVAL

APPROVED BY THE ZONING BOARD OF ADJUSTMENT OF NEPTUNE TOWNSHIP
ON _____ RESOLUTION #_____

BOARD CHAIRPERSON — DATE
BOARD SECRETARY — DATE
BOARD ENGINEER — DATE

PROJECT INFORMATION

PROJECT NAME:
PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

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

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

CAUTION: IF THIS DOCUMENT DOES NOT CONTAIN THE SIGNATURE AND RAISED SEAL OF THE PROFESSIONAL, IT IS NOT AN ORIGINAL OR TRUE COPY.

ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
NJPE LIC. NO. 47123

REVISIONS

Rev. #	Date	Comment

0 01/22/25 INITIAL RELEASE

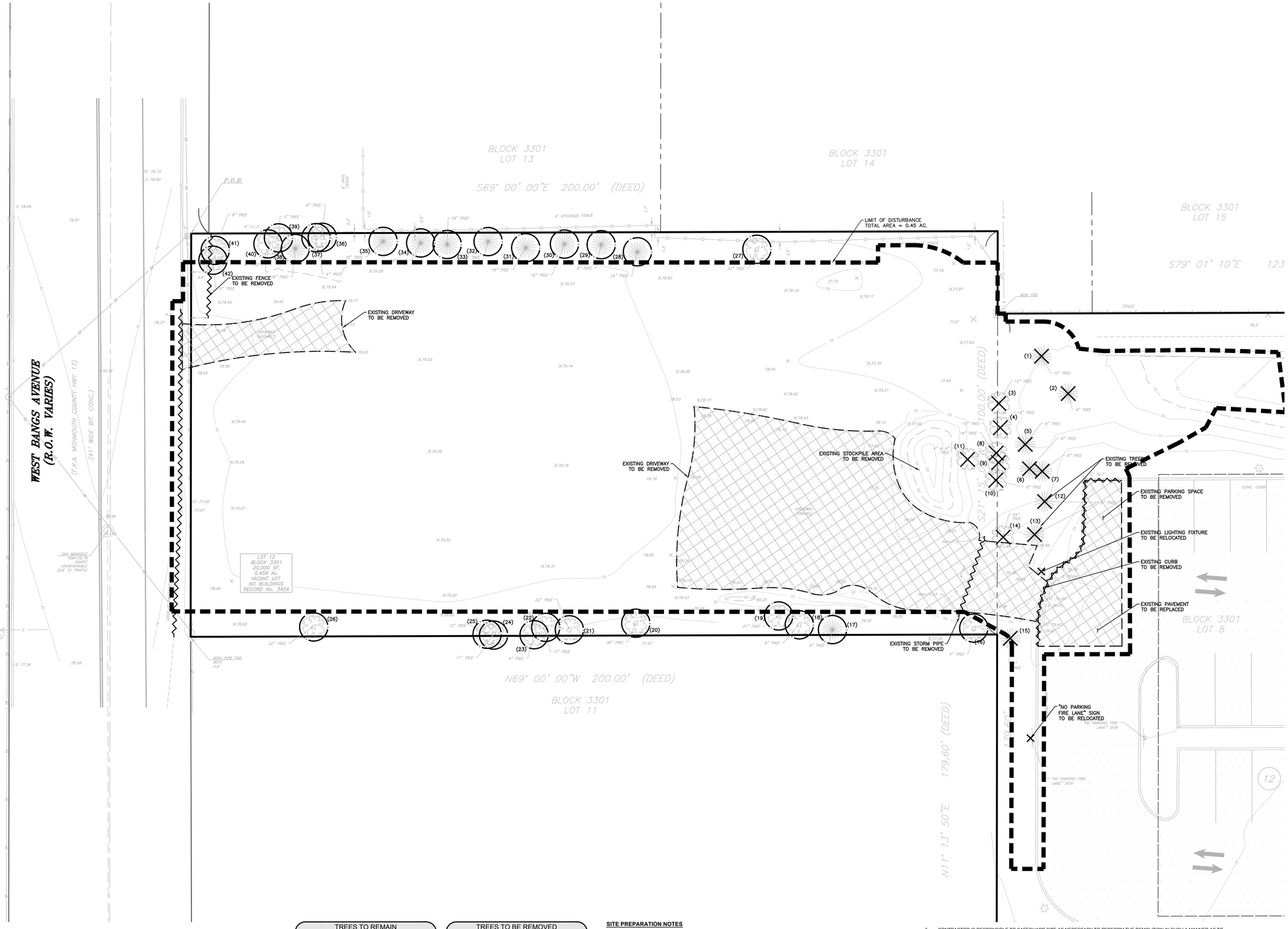
SCALE: AS SHOWN — DESIGNED BY: ES
DATE: 01/22/25 — DRAWN BY: ES
JOB #: 24-2348-01 — CHECKED BY: AJG
NOT FOR CONSTRUCTION
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
TITLE SHEET

SHEET NO:
C100



TREES TO REMAIN		
TREE ID	TREE TYPE	TREE SIZE (IN)
16	DECIDUOUS	4
17	EVERGREEN	6
18	DECIDUOUS	8
19	DECIDUOUS	21
20	DECIDUOUS	36
21	DECIDUOUS	22
22	DECIDUOUS	13
23	DECIDUOUS	9
24	DECIDUOUS	11
25	DECIDUOUS	12
26	DECIDUOUS	22
27	DECIDUOUS	33
28	EVERGREEN	24
29	EVERGREEN	8
30	EVERGREEN	18
31	EVERGREEN	18
32	EVERGREEN	19
33	EVERGREEN	18
34	EVERGREEN	18
35	EVERGREEN	18
36	DECIDUOUS	8
37	DECIDUOUS	6
38	EVERGREEN	18
39	DECIDUOUS	5
40	DECIDUOUS	6
41	DECIDUOUS	8
42	DECIDUOUS	5
TOTAL TREES TO REMAIN = 27 TREES		

TREES TO BE REMOVED		
TREE ID	TREE TYPE	TREE SIZE (IN)
1	EVERGREEN	10
2	EVERGREEN	8
3	DECIDUOUS	12
4	DECIDUOUS	14
5	EVERGREEN	8
6	EVERGREEN	8
7	EVERGREEN	8
8	DECIDUOUS	10
9	DECIDUOUS	18
10	DECIDUOUS	8
11	DECIDUOUS	6
12	EVERGREEN	8
13	EVERGREEN	8
14	DECIDUOUS	24
15	EVERGREEN	9
TOTAL TREES TO BE REMOVED = 15 TREES		

SITE PREPARATION NOTES

1. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
   a. ENSURE COPIES OF ALL PERMITS AND APPROVALS ARE ON SITE FOR REVIEW.
   b. THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO SITE DISTURBANCE.
   c. ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE, SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   d. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
   e. FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENT AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
   f. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
   g. A COMPLETE INSPECTION FOR CONTAMINANTS, BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND/OR STRUCTURES TO BE REMOVED SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF BY A FEDERALLY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS, OR OTHER REFERENCED OR IMPLIED HEREIN IS SOLELY THE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.
   h. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISIONS. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO INSURE PUBLIC AND CONTRACTOR SAFETY.
   i. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE.
2. IN ABSENCE OF SPECIFIC SPECIFICATION, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S GEOTECHNICAL ENGINEER.
3. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINES, WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
4. USE DUST CONTROL MEASURES TO LIMIT THE AMOUNT OF AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR TO WITHIN FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
5. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
6. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
7. ALL UTILITY CONNECTIONS TO ADJACENT BUILDINGS MUST STAY ACTIVE DURING CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE TO ENSURE SHUT OFF, DISCONNECT, AND/OR CAPPING OF ALL UTILITIES TO THE SITE INCLUDING, BUT NOT LIMITED TO, WATER, SEWER, ELECTRIC, CABLE, TELEPHONE, ETC. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL UTILITY SHUT OFFS AND LETTERS, OBTAINING ALL PERMITS TO COMPLETE ALL PHASES OF THE PROJECT.
9. ALL STREET APPURTENANCES (INCLUDING SIGNS, POLES, TREES & FENCING) WITHIN THE LIMITS SHOWN ARE TO BE REMOVED AND DISPOSED OFF-SITE UNLESS OTHERWISE NOTED.
10. EXISTING LIGHTING AND UTILITY POLE REMOVALS ARE TO BE PERFORMED BY THE APPROPRIATE UTILITY COMPANY.
11. ALL UNDERGROUND UTILITIES, LINES, PIPING, STRUCTURES, FOUNDATIONS, VAULTS AND BUILDING FRAGMENTS ASSOCIATED WITH FORMER BUILDINGS, WITHIN THE PROJECT BOUNDARY, ARE TO BE REMOVED AND DISPOSED OFF SITE.
12. ALL STRUCTURES (CURBS, SIDEWALKS, PATIO, RETAINING WALL, FENCES, ASPHALT, CONCRETE, ETC.) WITHIN THE PROJECT'S BOUNDARY SHALL BE REMOVED AND DISPOSED OFF-SITE AT AN APPROPRIATE FACILITY.
13. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OFFSITE IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES, ORDINANCES, AND LAWS.
14. BUILDING DEMOLITION SHALL INCLUDE THE FULL REMOVAL OF THE FLOOR SLAB, FOUNDATIONS AND ANY UTILITIES UNDER THE SLAB. THE CONTRACTOR SHALL BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH THE IMPORTED FILL AND SOIL COMPACTION REQUIREMENTS PROVIDED UNDER THE GRADING NOTES

LEGEND

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

PROJECT INFORMATION

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PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
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TOWNSHIP OF NEPTUNE, NJ 07753

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TRAFFIC ENGINEER:
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ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
N.J.P.E. LIC. NO. 47123

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DATE: 01/22/25 DRAWN BY: ES
JOB # 24-2348-01 CHECKED BY: AJG
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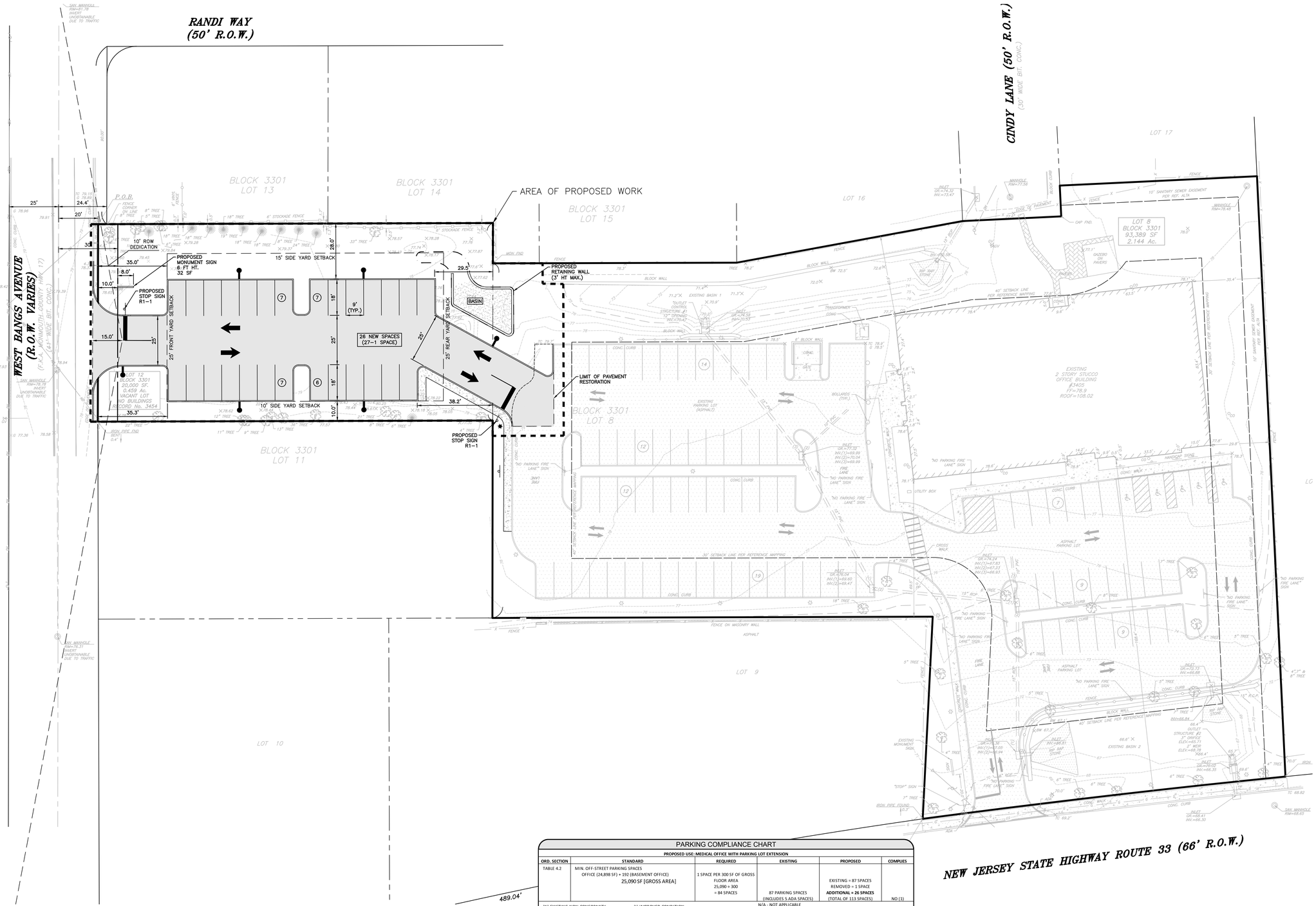
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
EXISTING CONDITIONS, TREE REMOVAL & SITE PREPARATION PLAN

SHEET NO.
C200



PARKING COMPLIANCE CHART

PROPOSED USE: MEDICAL OFFICE WITH PARKING LOT EXTENSION

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
TABLE 4.2	MIN. OFF-STREET PARKING SPACES OFFICE (24,898 SF) + 192 (BASEMENT OFFICE) 25,090 SF [GROSS AREA]	1 SPACE PER 300 SF OF GROSS FLOOR AREA 25,090 ÷ 300 = 84 SPACES	87 PARKING SPACES (INCLUDES 5 ADA SPACES)	EXISTING = 87 SPACES REMOVED = 1 SPACE **ADDITIONAL = 26 SPACES** (TOTAL OF 113 SPACES)	NO (1)

(N) EXISTING NON-CONFORMITY (I) IMPROVED CONDITION N/A - NOT APPLICABLE
(E) EXISTING VARIANCE (X) VARIANCE/NON-CONFORMITY ELIMINATED N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE (W) PROPOSED WAIVER

(1) IN NO CASE SHALL THE PROVIDED PARKING FOR NON-RESIDENTIAL USES EXCEED THESE MINIMUM REQUIREMENTS BY MORE THAN 20% (101 SPACES).

ZONING COMPLIANCE CHART (FOR BOTH LOTS)

ZONING DISTRICT: C-5 ROUTE 33 WEST COMMERCIAL ZONE DISTRICT
PROPOSED USE: COMMERICAL

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
ZONING SCH. B	MIN. LOT AREA (SF)	50,000	113,389	NO CHANGE	YES
	MAX.DENSITY RATIO (D.U. PER ACRE)	N/A	N/A	N/A	N/A
	MIN. LOT WIDTH (FT)	200	180 (E)	NO CHANGE	NO (E)
	MIN. LOT FRONTAGE (FT)	200	184.95 (E)	NO CHANGE	NO (E)
	MIN. LOT DEPTH (FT)	250	280	NO CHANGE	YES
	FRONT YARD SETBACK (FT)	40	168.4	NO CHANGE	YES
	SIDE YARD SETBACK (FT)	30	29.8 (E)	NO CHANGE	NO (E)
	COMBINDED SIDE YARD SETBACK (FT)	60	233.43	NO CHANGE	YES
	REAR YARD SETBACK (FT)	40	40.9	NO CHANGE	YES
	MAX. BUILDING COVER PERCENTAGE (%)	30	11% (12,632 SF / 113,389 SF)	11% (12,632 SF / 113,389 SF) NET INCREASE: 0 SF	N/A
	MAX. TOTAL LOT COVER PERCENTAGE (%)	65	49% (55,816 SF / 113,389 SF)	55% (62,896 SF / 113,389 SF) NET INCREASE: 7,080 SF	YES
	MAX. NUMBER OF STORIES	2	2	NO CHANGE	YES
	MAX. BUILDING HEIGHT (FT)	30	26	NO CHANGE	YES
	MIN. IMPROVABLE AREA (M.I.A. SF)	19,500	49,790	NO CHANGE	YES

(N) EXISTING NON-CONFORMITY (I) IMPROVED CONDITION N/A - NOT APPLICABLE
(E) EXISTING VARIANCE (X) VARIANCE/NON-CONFORMITY ELIMINATED N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE (W) PROPOSED WAIVER

ZONING COMPLIANCE CHART (ONLY FOR LOT 12)

ZONING DISTRICT: R-2 LOW DENSITY RESIDENTIAL ZONE DISTRICT
PROPOSED USE: COMMERICAL PARKING LOT IN RESIDENTIAL ZONE (USE VARIANCE)

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
ZONING SCH. B	MIN. LOT AREA (SF)	10,000	20,000	NO CHANGE	YES
	MAX.DENSITY RATIO (D.U. PER ACRE)	4.3	N/A	N/A	N/A
	MIN. LOT WIDTH (FT)	100	100	NO CHANGE	YES
	MIN. LOT FRONTAGE (FT)	100	100	NO CHANGE	YES
	MIN. LOT DEPTH (FT)	100	200	NO CHANGE	YES
	FRONT YARD SETBACK (FT)	25	N/A	25	YES
	SIDE YARD SETBACK (FT)	10	N/A	10	YES
	COMBINDED SIDE YARD SETBACK (FT)	25	N/A	25	YES
	REAR YARD SETBACK (FT)	30	N/A	30.0	YES
	MAX. BUILDING COVER PERCENTAGE (%)	30	N/A	N/A	N/A
	MAX. TOTAL LOT COVER PERCENTAGE (%)	40	16% (3,374 SF / 20,000 SF)	50% (10,149 SF / 20,000 SF) NET INCREASE: 6,775 SF (0.16 AC)	NO (V)
	MAX. NUMBER OF STORIES	3	N/A	NO CHANGE	N/A
	MAX. BUILDING HEIGHT (FT)	35	N/A	NO CHANGE	N/A
	MIN. IMPROVABLE AREA (M.I.A. SF)	2,400	10,875	NO CHANGE	YES

(N) EXISTING NON-CONFORMITY (I) IMPROVED CONDITION N/A - NOT APPLICABLE
(E) EXISTING VARIANCE (X) VARIANCE/NON-CONFORMITY ELIMINATED N/S - NOT SPECIFIED
(V) PROPOSED VARIANCE (W) PROPOSED WAIVER

SIGNS COMPLIANCE CHART

FREESTANDING TYPE B SIGN*

ORD. SECTION	STANDARD	REQUIRED	EXISTING	PROPOSED	COMPLIES
LAND DEV. ORDINANCE 416.07A	SIZE (MAX)	48 SF	32 SF	32 SF	YES
	HEIGHT (MAX)	15 FT	6 FT	6 FT	YES
	QUANTITY (MAX)	1 SIGN PER FRONTAGE	1 SIGN PER FRONTAGE	1 SIGN PER FRONTAGE	YES
	HORIZ. SIGN DIMENSION (MAX)	10 FT	8 FT	8 FT	YES
	SETBACK (MIN)	10 FT	20 FT (FROM EX. NJDOT ROW)	10 FT (FROM EX. ROW)	YES

* - VARIANCE REQUESTED FOR SIGN WITHIN RESIDENTIAL ZONE.

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR LINE	80
+46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G	GAS	GAS
W	WATER	WTR
	INLET	
	STORM	
	SANITARY MAIN	
	SANITARY LATERAL	
OH	OVERHEAD WIRE	O/H
E	ELECTRIC	E
T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
	FENCE	
	LIGHT FIXTURE	
	TEST PIT LOCATION	TP-1
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

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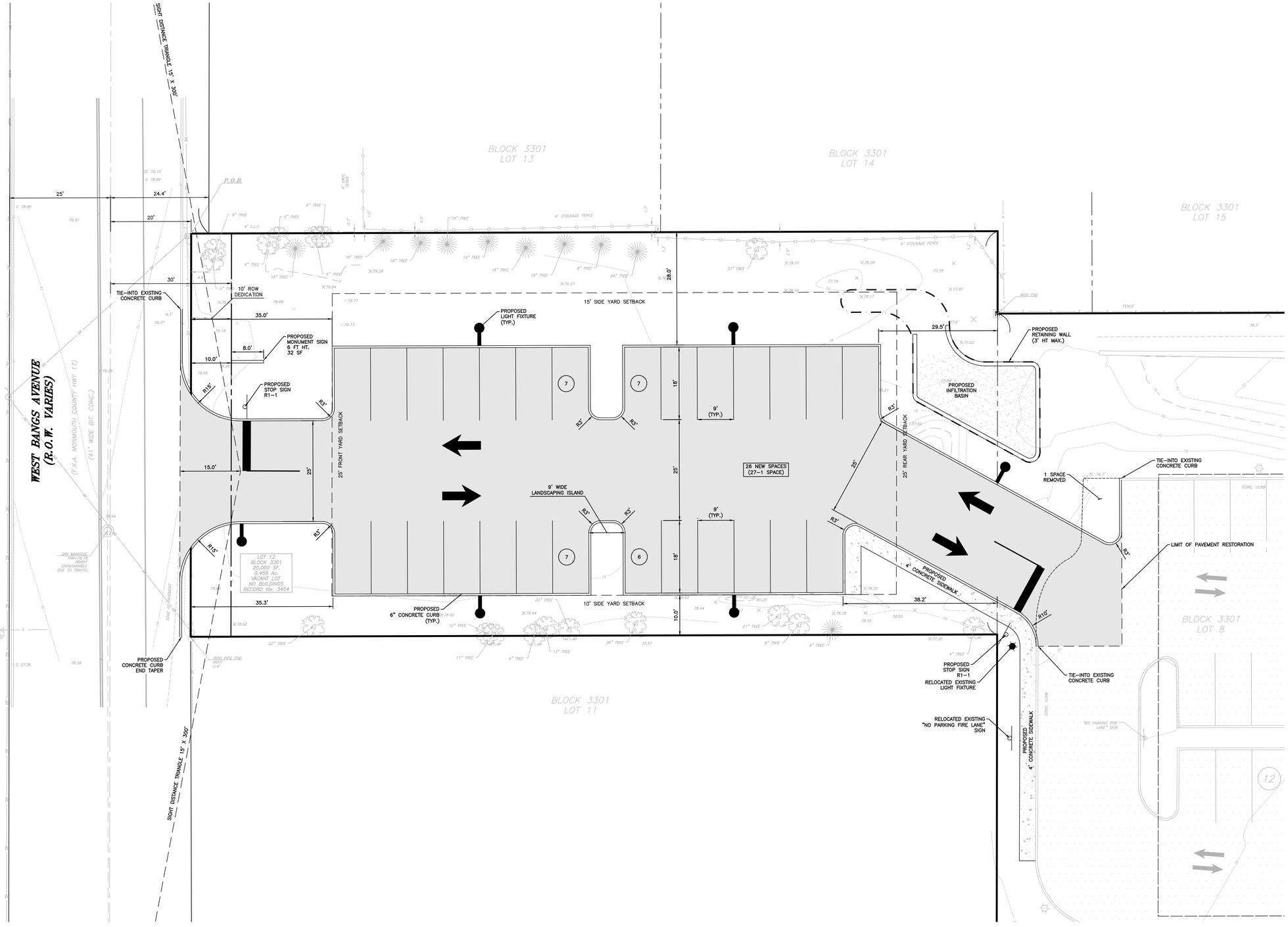
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:

OVERALL SITE LAYOUT PLAN

SHEET NO.

C300



SITE

LOCATION MAP

2000 0 2000 4000

SCALE: 1" = 2000'

10 0 10 20

SCALE: 1" = 10'

SITE LAYOUT NOTES

1. ALL SIGNAGE TO BE POSTED IN ACCORDANCE WITH THE UNITED STATES DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS (MUTCD), LATEST EDITION.
2. ALL STOP BARS SHALL BE 24" WIDE WHITE THERMO PLASTIC STRIPE. ALL OTHER STRIPING MAY BE EPOXY.
3. ALL CURB AND SIDEWALKS SHALL CONFORM TO STATE AND FEDERAL BARRIER FREE DESIGN STANDARDS.
4. ALL SIDEWALK RAMPS MARKED HCR TO HAVE DETECTABLE WARNING SURFACE INSTALLED IN ACCORDANCE WITH ADA REGULATIONS. ALL DETECTABLE WARNING STRIPS SHALL BE "REPLACEABLE WET-SET" OR EQUIVALENT. SURFACE MOUNT OR "STICK ON" WARNING STRIPS ARE NOT PERMITTED UNLESS NOTED OTHERWISE.
5. ALL PROPOSED ON-SITE CURBING TO BE (VERTICAL CONCRETE CURBING, BELGIUM BLOCK, MOUNTABLE CONCRETE). ALL PROPOSED CURBING WITHIN MUNICIPAL OR COUNTY RIGHT-OF-WAYS TO BE VERTICAL CONCRETE CURBING.
6. ALL CONNECTIONS WITH EXISTING PAVEMENTS, CURBS, SIDEWALKS, ETC SHALL BE SAW CUT.
7. RETAINING WALLS REQUIRE STRUCTURAL DESIGN BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
8. SIDEWALK/WALKWAY RISERS MUST BE GREATER THAN 4" AND LESS THAN 8".
9. SEE LANDSCAPE PLANS FOR DETAILS ON HARDSCAPE AND PLANTING MATERIALS.
10. THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH NEW JERSEY ADMINISTRATIVE CODE, TITLE 5, CHAPTER 21, "RESIDENTIAL SITE IMPROVEMENT STANDARDS".

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR LINE	80
+46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G	GAS	GAS
W	WATER	WTR
	INLET	
	STORM	D
	SANITARY MAIN	S
	SANITARY LATERAL	
OH	OVERHEAD WIRE	O/H
E	ELECTRIC	E
T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
	FENCE	
	LIGHT FIXTURE	
	TEST PIT LOCATION	
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

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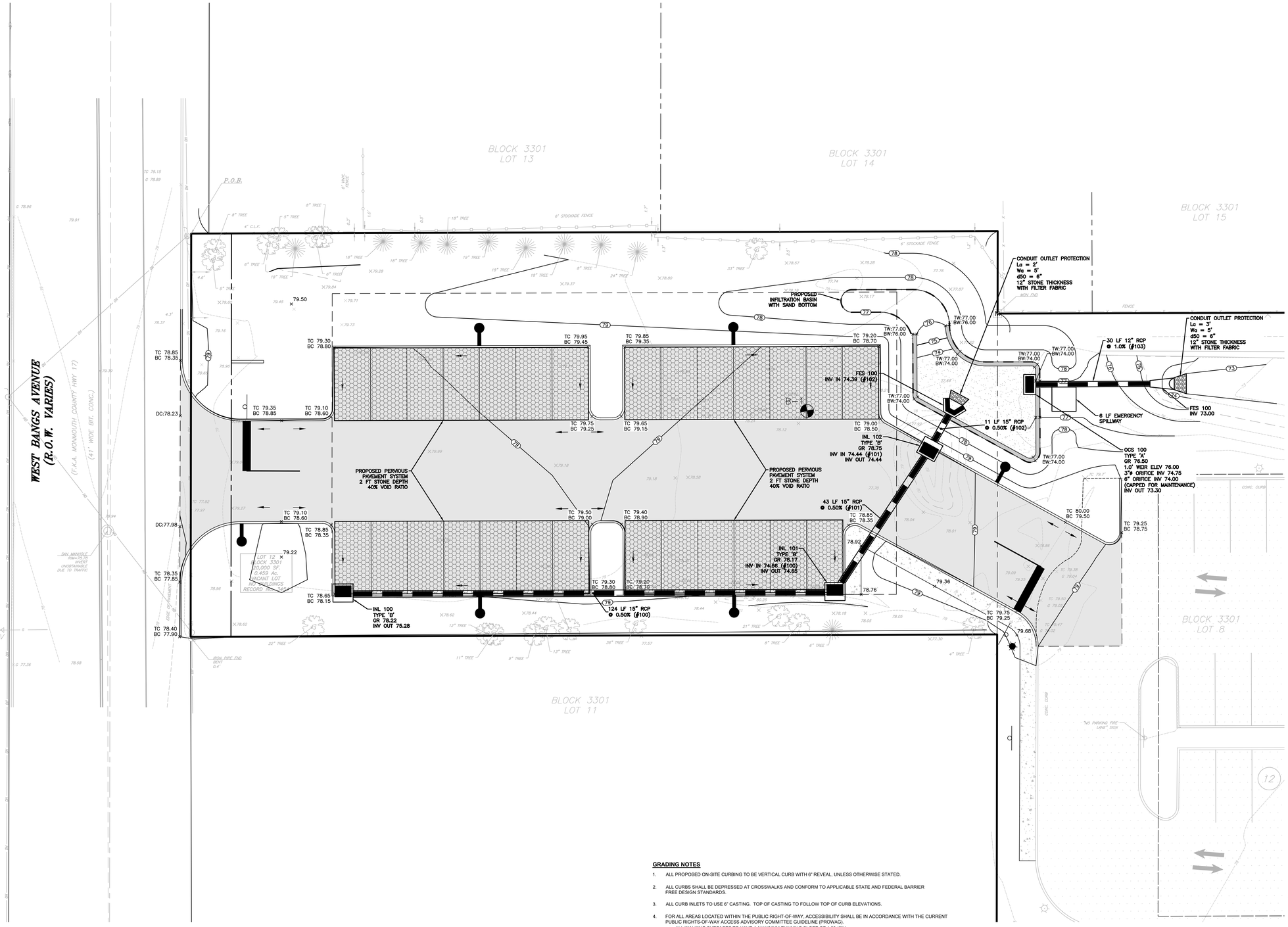
SHEET TITLE:
SITE LAYOUT PLAN

SHEET NO.
C301



SOIL LOG & INTERPRETATION

MUNICIPALITY TOWNSHIP OF NEPTUNE
3454 WEST BANGS AVENUE

1. LOG NUMBER #1 — METHOD (CHECK ONE): (_) PROFILE PIT (X) BORING
2. SOIL LOG — DATE LOG CONDUCTED 10/02/2014
   - DEPTH (IN) / TOP - BOTTOM — MUNSELL COLOR NAME & SYMBOL; ESTIMATED TEXTURAL CLASS; ESTIMATED VOLUME % COARSE FRAGMENT, IF PRESENT; STRUCTURE; MOIST OR DRY CONSISTENCE; MATTING - ABUNDANCE, SIZE & CONTRAST, IF PRESENT.
   - 0" - 4" — DARK BROWN (10YR 3/3) SANDY LOAM; WEAK, SUBANGULAR BLOCKY, FRIABLE
   - 4" - 37" — BROWN (10YR 5/3) SAND; SINGLE GRAIN; LOOSE
   - 37" - 84" — YELLOWISH BROWN (10YR 5/4) FINE SAND; SINGLE GRAIN, LOOSE
   - 84" - 129" — BROWNISH YELLOW (10 YR 6/8) MEDIUM AND COURSE SAND; SINGLE GRAIN, LOOSE; 10%
   - 129" - 145" — YELLOW (10YR 7/6) GRAVELY MEDIUM AND COARSE SAND; SINGLE GRAIN, LOOSE
3. GROUNDWATER OBSERVATION
   (X) SEEPAGE - INDICATE DEPTH NOT ENCOUNTERED
   (X) PIT BORING FLOODED - DEPTH ARE 1.0 HOURS NOT ENCOUNTERED
4. SOIL LIMITING ZONES (CHECK APPROPRIATE CATEGORIES):
   (_) FRACTURED ROCK SUBSTRATUM - DEPTH TO TOP _____ (_) MASSIVE ROCK SUBSTRATUM - DEPTH TO TOP
   (_) EXCESSIVE COARSE HORIZON - DEPTH TOP TO BOTTOM (_) EXCESSIVELY COARSE SUBSTRATUM - DEPTH TO TOP
   (_) HYDRAULICALLY RESTRICTIVE HORIZON - DEPTH TOP TO BOTTOM ____
   (_) HYDRAULICALLY RESTRICTIVE SUBSTRATUM - DEPTH TOP TO BOTTOM
   (_) PERCHED ZONE OF SATURATION - DEPTH TOP TO BOTTOM ____
   (X) REGIONAL ZONE OF SATURATION - DEPTH TO TOP > 145"

GRADING NOTES

1. ALL PROPOSED ON-SITE CURBING TO BE VERTICAL CURB WITH 6" REVEAL, UNLESS OTHERWISE STATED.
2. ALL CURBS SHALL BE DEPRESSED AT CROSSWALKS AND CONFORM TO APPLICABLE STATE AND FEDERAL BARRIER FREE DESIGN STANDARDS.
3. ALL CURB INLETS TO USE 6" CASTING. TOP OF CASTING TO FOLLOW TOP OF CURB ELEVATIONS.
4. FOR ALL AREAS LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY, ACCESSIBILITY SHALL BE IN ACCORDANCE WITH THE CURRENT PUBLIC RIGHTS-OF-WAY ACCESS ADVISORY COMMITTEE GUIDELINE (PROWAG).
   a. ALL WALKING SURFACES TO HAVE A MAXIMUM RUNNING SLOPE OF 1:20 (5%).
   b. ALL WALKING SURFACES GREATER THAN 1:20 (5%) WILL REQUIRE HANDRAILS.
   c. RAMP RUNS SHALL HAVE A MAXIMUM CROSS SLOPE OF 1:12 (8.3%).
   d. ALL WALKING SURFACES TO HAVE A MAXIMUM CROSS SLOPE OF 1:48 (2%).
   e. ALL CROSSWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 1:48 (2%).
5. ALL GRADING WITHIN GRASSED AREAS TO BE A MINIMUM OF 2% AND A MAXIMUM OF 3:1 SLOPE UNLESS OTHERWISE NOTED.
6. POSITIVE DRAINAGE TO BE MAINTAINED FROM ALL BUILDINGS IN ACCORDANCE WITH APPLICABLE REGULATIONS AND BUILDING CODE.
7. FLOOR ELEVATIONS, ADJACENT GRADE, DOORWAY LOCATIONS AND ELEVATIONS SHALL BE CONFIRMED WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
8. ALL EXCAVATED SOIL TO BE DISPOSED SHALL BE PROPERLY CLASSIFIED, HANDLED, AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
9. ALL GRASSED AREAS TO HAVE A MINIMUM OF 4" CLEAN TOP SOIL, WHEN SOD IS BEING INSTALLED, OR 6" CLEAN TOP SOIL FOR SEEDING APPLICATIONS.
10. ALL IMPORTED SOILS MUST BE CERTIFIED CLEAN FILL IN ACCORDANCE WITH THE NJDEP "ALTERNATIVE AND CLEAN FILL GUIDANCE FOR SRP SITES", LATEST EDITION. IMPORTED SOILS SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT. ALL IMPORTED MATERIAL REQUIRES APPROVAL BY OWNER PRIOR TO PLACEMENT ONSITE.
11. ANY IMPORTED MATERIAL PLACED AS STRUCTURAL FILL OR BACKFILL TO RESTORE DESIGN GRADES SHOULD CONSIST OF CLEAN, RELATIVELY WELL GRADED SAND OR GRAVEL WITH A MAXIMUM PARTICLE SIZE OF THREE INCHES AND FIVE PERCENT TO TEN PERCENT OF MATERIAL FINER THAN A #200 SIEVE. SILTS, CLAY, AND SILTY OR CLAYEY SANDS AND GRAVELS WITH HIGHER PERCENTAGE OF FINES AND WITH A LIQUID LIMIT LESS THAN 40 AND A PLASTICITY INDEX LESS THAN 20 MAY BE CONSIDERED SUBJECT TO THE OWNER'S APPROVAL, PROVIDED THAT THE REQUIRED MOISTURE CONTEXT AND COMPACTION CONTROLS ARE MET. THE MATERIAL SHOULD BE FREE OF CLAY LUMPS, ORGANICS, AND DELETERIOUS MATERIAL. ANY IMPORTED STRUCTURAL FILL MATERIAL SHOULD BE APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO DELIVERY TO THE SITE.
12. SOIL COMPACTION AND PLACEMENT REQUIREMENTS: ALL FILL AND BACKFILL SHOULD BE PLACES IN MAXIMUM NINE-INCH LOOSE LIFTS AND COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 1557 (MODIFIED PROCTOR).

DRAINAGE NOTES

1. PIPE LENGTHS INDICATED ARE MEASURED CENTER TO CENTER OF EACH STRUCTURE.
2. SHOP DRAWINGS AND PRODUCT CATALOG INFORMATION FOR ALL DRAINAGE STRUCTURES, CONDUITS, MATERIALS, AND APPURTENANCES, TO BE PROVIDED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PURCHASING.
3. UNLESS OTHERWISE INDICATED:
   a. RCP SHALL BE CLASS 3 WALL, BELL AND SPIGOT TYPE WITH O-RING GASKETS, UNLESS OTHERWISE NOTED.
   b. HDPE PIPES SHALL BE ADS HP WITH WATER TIGHT JOINTS OR APPROVED EQUAL.
   c. STORM SEWER PVC PIPES SHALL BE SCHEDULE 80 WITHIN PAVED AREAS AND SCHEDULE 40 IN LANDSCAPED AREAS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE PIPES TO BE CLEANED AND TELEVISED PRIOR TO ISSUANCE OF CERTIFICATES OF OCCUPANCY.

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR LINE	
+46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G G	GAS	GAS
W W	WATER	WTR
	INLET	
	STORM	
	SANITARY MAIN	
	SANITARY LATERAL	
OH	OVERHEAD WIRE	O/H
E E	ELECTRIC	E
T T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
	FENCE	
	LIGHT FIXTURE	
	TEST PIT LOCATION	TP1
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

PROJECT INFORMATION

PROJECT NAME:

PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

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InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
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165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
732-531-7100 (Ph) 732-531-7344 (Fax)
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ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
N.J.P.E LIC. NO. 47123

REVISIONS

Rev #	Date	Comment
0	01/22/25	INITIAL RELEASE

SCALE: AS SHOWN	DESIGNED BY: ES
DATE: 01/22/25	DRAWN BY: ES
JOB # 24-2348-01	CHECKED BY: AJG

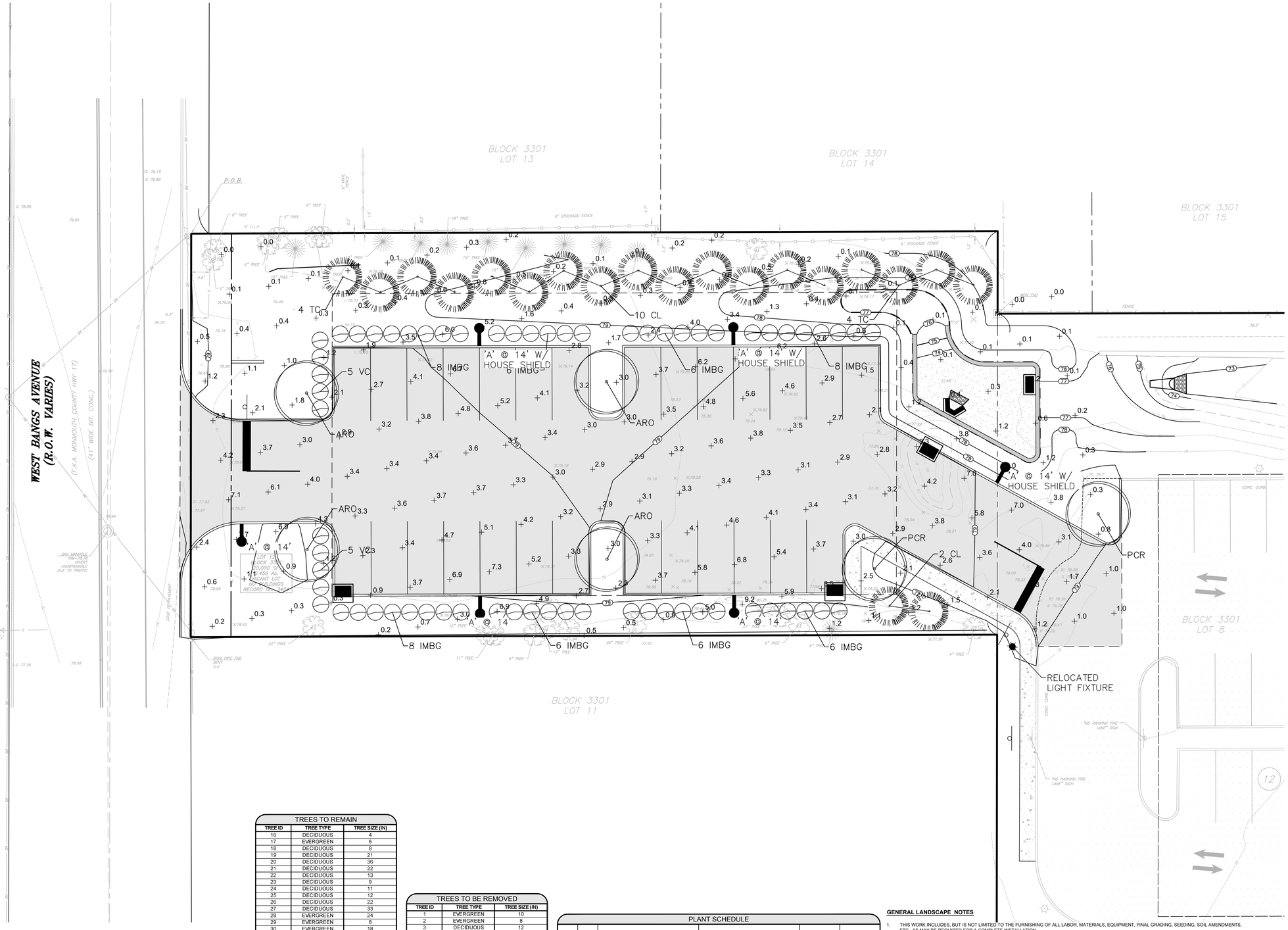
NOT FOR CONSTRUCTION
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NO.
C400



TREES TO REMAIN

TREE ID	TREE TYPE	TREE SIZE (IN)
16	DECIDUOUS	4
17	EVERGREEN	6
18	DECIDUOUS	8
19	DECIDUOUS	21
20	DECIDUOUS	36
21	DECIDUOUS	22
22	DECIDUOUS	13
23	DECIDUOUS	9
24	DECIDUOUS	11
25	DECIDUOUS	12
26	DECIDUOUS	22
27	DECIDUOUS	33
28	EVERGREEN	24
29	EVERGREEN	8
30	EVERGREEN	18
31	EVERGREEN	18
32	EVERGREEN	19
33	EVERGREEN	18
34	EVERGREEN	18
35	EVERGREEN	18
36	DECIDUOUS	8
37	DECIDUOUS	6
38	EVERGREEN	18
39	DECIDUOUS	5
40	DECIDUOUS	6
41	DECIDUOUS	8
42	DECIDUOUS	5

TOTAL TREES TO REMAIN = 27 TREES

TREES TO BE REMOVED

TREE ID	TREE TYPE	TREE SIZE (IN)
1	EVERGREEN	10
2	EVERGREEN	8
3	DECIDUOUS	12
4	DECIDUOUS	14
5	EVERGREEN	8
6	EVERGREEN	8
7	EVERGREEN	8
8	DECIDUOUS	10
9	DECIDUOUS	18
10	DECIDUOUS	8
11	DECIDUOUS	6
12	EVERGREEN	8
13	EVERGREEN	8
14	DECIDUOUS	24
15	EVERGREEN	9

TOTAL TREES TO BE REMOVED = 15 TREES

PLANT SCHEDULE

LABEL	QTY	BOTANICAL NAME	COMMON NAME	HEIGHT	CAL.
SHADE TREES					
ARO*	4	ACER RUBRUM "OCTOBER GLORY"	OCTOBER GLORY MAPLE	10'-12' HT	3"
PCR*	2	PYRUS CALLERYANA "REDSPIRE"	REDSPIRE CALLERY PEAR	10'-12' HT	3"
EVERGREEN TREES					
CL*	12	CUPRESSOCYPARIS LEYANDII	LEYLAND CYPRESS	8' HT MIN.	2" - 2½"
TC*	8	TSUSA CANADENSIS	CANADIAN HEMLOCK	8' HT MIN.	2" - 2½"
SHRUBS					
IMBG	54	ILEX X MERSEVAE "BLUE GIRL"	BLUE GIRL HOLLY	3-4' HT	
VC	10	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	18-24" HT	

*- TOTAL REPLACEMENT TREES PROPOSED = 26 TREES (6 OF THE 26 TREES HAVE A CALIPER OF 3")

LIGHT SCHEDULE

SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	NUMBER LAMPS	LUMENS PER LAMP	WATTAGE	HEIGHT
	A	6	GARDCO	GL18-4-80LA-4853-NW	POLE MOUNTED LED AREA LIGHT WITH TYPE 4 DISTRIBUTION	1	10092	80	14'

SCHEDULE OF LIGHTING REQUIREMENTS (§ 511)

ORD.SECTION	STANDARD	REQUIRED	PROPOSED	COMPLIES
511.G.	MIN. ILLUMINATION FOR SURFACE PARKING (FC) LOW ACTIVITY - VEHICULAR TRAFFIC	0.5	1.0	YES
511.G.2	MAX. LIGHTING CONTROLS (FC) RATIO OF AVERAGE ILLUMINATION TO MINIMUM ILLUMINATION RATIO OF MAXIMUM ILLUMINATION TO MINIMUM ILLUMINATION	4:1 10:1	2.2:1 9.2:1	YES YES

REPLACEMENT TREE CALCULATION (PER TABLE 5.11)

REPLACEMENT TREE CALCULATION (PER TABLE 5.11)

TREE TO BE REMOVED: CALIPER	NUMBER OF TREES TO BE REMOVED	REQUIRED REPLACEMENT TREE(S) PER REMOVED TREES	NUMBER OF REPLACEMENT TREES	COST PER UNIT REPLACEMENT	TOTAL COST
GREATER THAN 6" & UP TO 12"	12	1 (2 - 2.5" CAL.)	12	$240	$2,880
GREATER THAN 12" & UP TO 18"	2	3 (2 - 2.5" CAL.)	6	$660	$1,320
GREATER THAN 18" & UP TO 24"	1	6 (3" CAL.)	6	$2,440	$2,440
GREATER THAN 24"	0	8 (3" CAL.)	0	$3,680	$0
TOTAL TREES TO BE REMOVED	15	TOTAL REPLACEMENT TREES REQUIRED	24 (6 TREES MUST HAVE 3" CAL.)	TOTAL REPLACEMENT COST	$6,640

GENERAL LANDSCAPE NOTES

1. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, FINAL GRADING, SEEDING, SOIL AMENDMENTS, ETC., AS MAY BE REQUIRED FOR A COMPLETE INSTALLATION.
2. AN AGRONOMIC SOILS REPORT SHALL BE PREPARED BY THE OWNER AND FURNISHED TO THE CONTRACTOR, AND ALL RECOMMENDATIONS FROM SUCH REPORT SHALL BE INCORPORATED BY THE CONTRACTOR INTO INSTALLATION OF ALL PLANTING AREAS.
3. QUANTITIES SHOWN IN PLANT LISTS ARE FOR CONVENIENCE ONLY, PLANS SHALL GOVERN.
4. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED OF ANY DISCREPANCIES IN PLANT LOCATIONS OR INSUFFICIENT PLANT QUANTITIES DUE TO DIFFERENCES IN PLAN AND ACTUAL FIELD CONDITIONS.
5. ALL TREE AND SHRUB MATERIAL SPECIFIED MUST MEET STANDARD INDUSTRY SPECIFICATIONS FOR THE CONTAINER SIZE INDICATED. DOWNSIZING OR SUBSTITUTION OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF UNDERSIGNED WILL NOT BE ALLOWED.
6. ALL LANDSCAPE AREAS SHALL BE GRADED TO A SMOOTH EVEN SURFACE PRIOR TO ANY PLANT INSTALLATION. ALL PLANT MATERIALS SHALL BE INSTALLED USING GOOD HORTICULTURAL PRACTICES IN ACCORDANCE WITH THE PLANS AND DETAILS.
7. TREES SHALL NOT BE PLANTED CLOSER THAN FOUR (4) FEET FROM ANY WALKWAY OR PUBLIC SIDEWALK EXCEPT WHERE TREE WELLS OR PARKWAYS ARE PROVIDED IN THE SIDEWALK AREA. ALL TREES PLANTED WITHIN FIVE (5) FEET OF WALKS OR PUBLIC UTILITIES SHALL RECEIVE DEEP ROOT BARRIERS
8. TREE LOCATIONS SHOWN ON PLAN MAY REQUIRE ADJUSTMENT IN THE FIELD. WHENEVER FEASIBLE, TREES SHOULD BE PLANTED A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREETLIGHTS, HYDRANTS, AND OUT OF DRAINAGE FLOW LINES. SHOULD THIS NOT BE POSSIBLE, CONTACT THE UNDERSIGNED FOR DECISION ON PLACEMENT.
9. ALL TREES IN TURF AREAS SHALL HAVE 12" MIN. CLR. CIRCUMFERENCE AROUND THE TRUNK BASE. PROVIDE 3" MIN. THK. MULCH AT BASE OF TRUNK.
10. GROUNDCOVER TYPE SHOWN SHALL BE PLANTED IN ALL SHRUB AREAS AS SPECIFIED ON PLANS. GROUNDCOVER SHALL BE PLANTED AT 18" ON-CENTER UNIFORM TRIANGULAR SPACING, AND SHALL BE CONTINUOUS UNDER ALL TREE AND SHRUB MASSES AS SHOWN ON PLAN.
11. MATURE PLANTINGS SHALL NOT INTERFERE WITH UTILITIES AND TRAFFIC SIGHT LINES.
12. REFER TO PLANTING DETAILS SHEET FOR ADDITIONAL INFORMATION.
13. ALL TURF AREAS ARE TO BE SODDED WITH AN APPROVED GRASS MIXTURE.
14. ALL TURF AREAS AND PLANTING AREAS ARE TO IRRIGATED. THE CONTRACTOR IS TO PROVIDE A DETAILED IRRIGATION PLAN AND GAIN TOWNSHIP APPROVAL PRIOR TO INSTALLATION.
15. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A 1-YEAR PERIOD FROM THE RELEASE OF THE PERFORMANCE BOND. THE CONTRACTOR, AT NO COST TO THE OWNER, SHALL REPLACE ANY MATERIAL THAT FAILS TO GROW THROUGH THE SPECIFIED MAINTENANCE AND GUARUNTEE PERIOD.
16. SEE LANDSCAPING NOTES AND DETAIL SHEET FOR ADDITIONAL PLANTING NOTES.

LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	CONTOUR LINE	80
+46.80	SPOT ELEVATION	+46.80
	BUILDING	
	WALL	
G	GAS	GAS
W	WATER	WTR
	INLET	
	STORM	D
	SANITARY MAIN	S
	SANITARY LATERAL	S
OH	OVERHEAD WIRE	O/H
E	ELECTRIC	E
T	TELEPHONE	TEL
	UTILITY POLE	
	HYDRANT	
	SIGN POST	
	FENCE	
	LIGHT FIXTURE	
	TEST PIT LOCATION	
	GRADE FLOW ARROW	
	SWALE CENTER LINE	

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PARKING LOT EXPANSION

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3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
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TOWNSHIP OF NEPTUNE, NJ 07753

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TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

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165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
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ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
N.J.P.E. LIC. NO. 47123

REVISIONS

Rev.#	Date	Comment
0	01/22/25	INITIAL RELEASE

SCALE: AS SHOWN | DESIGNED BY: ES
DATE: 01/22/25 | DRAWN BY: ES
JOB # 24-2348-01 | CHECKED BY: AJG
NOT FOR CONSTRUCTION | APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
LANDSCAPING & LIGHTING PLAN

SHEET NO.
C500

GENERAL SITE PLANTING

THE OWNER SHALL HAVE A SOIL ANALYSIS MADE AFTER COMPLETION OF THE ROUGH GRADING. THE CONTRACTOR SHALL INCORPORATE ALL SOIL AMENDMENTS AND FERTILIZERS DESCRIBED HEREIN. THE SOIL PREPARATION SPECIFIED BELOW SHALL BE ADJUSTED ACCORDING TO THE ANALYSIS, FOLLOWING APPROVAL FROM THE UNDERSIGNED.

A. WEED CONTROL FOR LAWN, SHRUB & GROUND COVER AREAS (EXCEPT SLOPES)
1. REMOVE ALL EXISTING WEEDS FROM SURFACE AND DISPOSE OFFSITE.
2. IRRIGATION IS TO BE INSTALLED WHERE NOTED ON PLAN ACCORDING TO SHOP DRAWINGS.
3. FERTILIZE ALL SHRUB/GROUND COVER AREAS. APPLY 10LBS. OF 16-20-0 COMMERCIAL FERTILIZER PER 1,000 SQ. FT. OR AS DIRECTED BY SOILS REPORT.
4. WATER ALL SHRUB/GROUND COVER AREAS FOR THREE (3) WEEKS TO GERMINATE WEED SEEDS. APPLY WATER AT LOW RATE TO AVOID EROSION.
5. LICENSED APPLICATOR SHALL APPLY SYSTEMIC WEED KILLER TO ALL PLANTING AREAS PER MANUFACTURER'S SPECIFICATIONS.

B. TOPSOIL PRESERVATION
TOPSOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON ALL REGARDED SURFACES. AT LEAST THREE (3) INCHES OF EVEN COVER SHALL BE PROVIDED TO ALL DISTRIBUTED AREAS OF THE DEVELOPMENT AND SHALL BE STABILIZED BY SEEDING OR PLANTING. IF EXCESS TOPSOIL REMAINS, THE THICKNESS SHALL BE INCREASED. IF ADDITIONAL IS REQUIRED, THE DEVELOPER SHALL PROVIDE IT. REMOVAL OF EXCESS TOPSOIL SHALL ONLY BE PERMITTED IN ACCORDANCE WITH A PLAN APPROVED BY THE MUNICIPAL AGENCY.

C. SOIL PREPARATION & FINAL GRADING
1. ALL STUMPS AND OTHER TREE PARTS, LITTER, BRUSH, WEEDS, EXCESS OR SCRAP BUILDING MATERIALS, OR OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF. NO TREE STUMPS, PORTIONS OF TREE TRUNKS OR LIMBS SHALL BE BURIED ANYWHERE IN THE DEVELOPMENT. ALL DEAD OR DYING TREES, STANDING OR FALLEN, SHALL BE REMOVED FROM THE SITE.
2. ROUGH GRADE: SITE TO BE RECEIVED BY LANDSCAPE CONTRACTOR, TO WITHIN 1/10 FOOT PLUS OR MINUS, BY OWNER BASED UPON GRADING PLAN.
3. FINAL GRADE: FINAL GRADE TO CONSIST OF GRADING, RAKING AND HAND WORK NECESSARY TO ACHIEVE DESIRED CONTOUR AND FLOW LINE PATTERNS RESULTING IN EVENLY FINISHED SURFACES FREE OF DEBRIS AND LITTER.
4. SPREAD OVER ALL LAWN, SHRUB AND GROUND COVER AREAS, AMENDMENTS AND FERTILIZER PRESCRIBED IN SOILS REPORT. THOROUGHLY MIX INTO SOIL TO DEPTH OF 6" OR MORE AND FINE GRADE. CONTRACTOR TO IMPORT SOIL NECESSARY TO ATTAIN DESIGN GRADES AND BERMS, ALL IMPORTED SOIL SHALL BE FREE OF WEEDS AND DEBRIS AND HAVE BALANCED PH., SMOOTH AND EVEN GRADING FOR PROPER DRAINAGE. FINAL GRADE SHALL BE 1" BELOW WALK/TOP OF CURB. REMOVE FROM THE SITE ALL STONES OVER 2" IN SIZE.

D. PLANTING
PLANT TREES, SHRUBS AND GROUND COVER AS CALLED FOR WHERE INDICATED ON PLANTING PLAN AND AS DETAILED ON PLANTING DETAIL SHEET.
1. GROUND COVER - FLATS AND/OR CUTTINGS:
ALL PLANT MATERIALS SPECIFIED AS PLUGS OR FLAT STOCK ON PLANTING PLAN SHALL REMAIN IN THE FLATS UNTIL TIME OF TRANSPLANTING. THE FLAT SOIL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT SOIL DOES NOT FALL APART WHEN LIFTING PLANT FROM FLAT. GROUND COVER PLANTS SHALL NOT BE ALLOWED TO DRY OUT BEFORE OR DURING PLANTING. ROOTS SHALL NOT BE EXPOSED TO THE AIR EXCEPT WHILE ACTUALLY BEING PLANTED. WILTED PLANTS WILL NOT BE ACCEPTED, AT THE TIME OF PLANTING, THE SOIL AROUND EACH PLANT SHALL BE FIRMED SUFFICIENTLY TO FORCE OUT AIR POCKETS. PLANTS TO BE PLANTED IN TRIANGULAR SPACING AS SPECIFIED O.C. (ON CENTER). ALL CUTTINGS SHALL BE MINIMUM OF 6" LONG. WATER IMMEDIATELY AFTER EACH PLANTING UNTIL ONE INCH OF WATER PENETRATION IS OBTAINED. CARE SHALL BE EXERCISED AT ALL TIMES TO PROTECT THE PLANTS AFTER PLANTING. ANY DAMAGE TO PLANTS BY TRAMPLING OR OTHER OPERATIONS OF THIS CONTRACT SHALL BE REPAIRED IMMEDIATELY.
2. SHRUBS:
PLANT ALL CONTAINER GROWN PLANTS IN PLANTING PITS AS DIRECTED ON TREE AND SHRUB PLANTING AND STAKING DETAIL. THOROUGHLY MIX BACKFILL ACCORDING TO TREE AND SHRUB PLANTING AND STAKING DETAIL. CONTRACTOR SHALL CONSTRUCT BASINS AROUND ALL TREES; BASINS SHALL NOT EXCEED TOP OF ROOT BALL CROWN.
3. TREES:
ALL TREES SHALL HAVE A CALIPER OF TWO AND ONE-HALF (2 ½) INCHES OR SPECIFIED CALIPER IN PLANTING SCHEDULE AND THEY SHALL BE NURSERY GROWN, OF SUBSTANTIALLY UNIFORM SIZE AND SHAPE, AND HAVE STRAIGHT TRUNKS. TREES SHALL BE PROPERLY PLANTED AND STAKED ACCORDING TO TREE AND SHRUB PLANTING AND STAKING EVERGREEN PLANTING & STAKING DETAIL AND PROVISION MADE BY THE APPLICANT FOR REGULAR WATERING AND MAINTENANCE UNTIL THEY ARE ESTABLISHED. THE APPLICANT SHALL REPLACE DEAD OR DYING TREES DURING THE NEXT PLANTING SEASON.
4. TOP DRESSING:
TOP DRESS ALL GROUND COVER AND SHRUB AREAS WITH 2" THICK LAYER OF OGC (ORGANIC GROUND COVER) AS SPECIFIED ON PLANTING PLAN.

E. SOD
1. AREAS SHALL HAVE A SMOOTH CONTINUAL GRADE BETWEEN EXISTING OF FIXED CONTROLS, SUCH AS: WALKS, CURBS, CATCH BASINS. ROLL, SCARIFY, RAKE AND LEVEL AS NECESSARY TO OBTAIN TRUE, EVEN SOIL STRUCTURE.
2. APPLY FERTILIZERS AS SPECIFIED BY SOIL ANALYSIS TO DEPTH OF 6".
3. SOD SHALL BE INSTALLED THE SAME DAY AS IT IS DELIVERED. SOD SHALL NOT BE LEFT ON PALLETS IN THE HOT SUN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO SOD NOT INSTALLED ON DAY OF DELIVERY.
4. UNROLL SOD CAREFULLY AND PLACE IN STAGGERED PATTERN OF STRIPS. SOD SHALL BE INSTALLED AGAINST ADJACENT STRIPS TO ELIMINATE JOINTS AND EDGES.
5. FOLLOWING INSTALLATION, SOD SHALL BE IRRIGATED THOROUGHLY TO PROVIDE MOISTURE PENETRATION TO AT LEAST 6" INTO PREPARED SOIL.
6. ALL SOD SHALL BE HANDLED AND LAID IN A HIGH STANDARD OF WORKMANSHIP MANNER. ALL ENDS, JOINTS, AND CUTS SHALL FIT TIGHTLY SO THAT THERE ARE NO VOIDS. THE FINAL APPEARANCE SHALL BE ONE OF A CONTINUOUS LAWN. SECTIONS OF SOD LESS THAN 18" LONG OR 9" WIDE SHALL NOT BE USED.
7. NO SOD AREA WILL BE ACCEPTED UNTIL APPROVED BY AUTHORITY HAVING JURISDICTION OR THE UNDERSIGNED, AS REQUIRED.

GENERAL SLOPE PLANTING

A. PLANTING PREPARATION
1. SLOPE TEXTURING
a. CUT SLOPES: THESE SURFACES SHALL BE ROUGHENED IN A HORIZONTAL DIRECTION FOLLOWING THE CONTOUR OF THE SLOPE. THE ROUGHENED TEXTURE SHALL BE MADE BY HAND RAKING OR SIMILAR MECHANICAL MEANS.
b. FILL SLOPES: THESE SURFACES SHALL BE COMPACTED AND FINISHED AND ALSO ROUGHENED IN A HORIZONTAL DIRECTION FOLLOWING THE CONTOUR OF THE SLOPE. THE ROUGHENED TEXTURE SHALL BE MADE BY HAND RAKING OR SIMILAR MECHANICAL MEANS.
2. WEED ERADICATION
a. MANUALLY REMOVE EXISTING VEGETATION WHERE NOTED ON PLAN AND DISPOSE OFFSITE.
b. FERTILIZE ALL PLANTING AREAS BASED UPON SOIL ANALYSIS. BEGIN WATERING PROCESS TO ACTIVATE FERTILIZER AND ADDITIVE CHEMICALS.
c. WATER ALL PLANTING AREAS THOROUGHLY FOR A PERIOD OF TWO (2) CONSECUTIVE WEEKS. THE UNDERSIGNED SHALL APPROVE SPECIFIC WATERING DURATION AND FREQUENCY DESIGNED TO GERMINATE ALL RESIDUAL WEED SEEDS.
d. IF PERENNIAL WEEDS APPEAR, DISCONTINUE WATERING PROCESS FOR TWO (2) DAYS, THEN APPLY RECOMMENDED HERBICIDE BY LICENSED APPLICATOR.IF ANNUAL WEEDS APPEAR, USE STRAIGHT CONTACT HERBICIDE AS PER THE LICENSED APPLICATOR'S RECOMMENDATIONS. NO WATER SHALL BE APPLIED FOR A MINIMUM OF FOUR (4) DAYS FOLLOWING APPLICATION CONTACT WEED KILLER.
e. ALLOW SUFFICIENT PERIOD OF TIME TO INSURE THAT ALL WEEDS ARE DEAD.
f. WATER ALL PLANTING AREAS THOROUGHLY FOR A PERIOD OF THREE (3) WEEKS. A SHORTER WATERING PERIOD MAY BE PERMISSIBLE AT THE DISCRETION OF THE UNDERSIGNED AND/OR THE PEST CONTROL ADVISOR. DISCONTINUE WATERING FOR ONE (1) DAY PRIOR TO THE SECOND APPLICATION OF THE HERBICIDE. RE-APPLY A STRAIGHT CONTACT WEED KILLER, AS PER THE PEST CONTROL ADVISOR'S RECOMMENDATIONS. FOR EFFECTIVE WEED ERADICATION, ALLOW A MINIMUM OF FOUR (4) DAYS WITHOUT IRRIGATION.RO
g. REMOVE ALL DESICCATED WEEDS FROM SLOPES.

B. PLANTING
PLANT TREES AND SHRUBS AS INDICATED ON PLANTING PLAN AND AS DETAILED ON PLANTING DETAIL SHEET. SUBSTITUTIONS OF PLANTS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY THE UNDERSIGNED. INSTALL ALL CONTAINER GROWN PLANTS ACCORDING TO TREE AND SHRUB PLANTING AND STAKING DETAIL. THOROUGHLY MIX THE SPECIFIED MATERIALS FOUND IN THE SOIL ANALYSIS AND THOSE SPECIFIED IN THE PLANTING DETAIL SHEET WITH THE SITE SOIL PRIOR TO BACKFILLING OF PLANTING PITS.

GENERAL LANDSCAPING NOTES

A. CLEAN-UP
AFTER ALL INSTALLATION OPERATIONS HAVE BEEN COMPLETED, REMOVE ALL RUBBISH, EXCESS SOIL, EMPTY PLANT CONTAINERS AND TRASH FROM THE SITE DAILY. ALL SCARS, RUTS AND OTHER MARKS IN THE AREA CAUSED BY THIS WORK SHALL BE REPAIRED AND THE GROUND LEFT IN A NEAT, ORDERLY CONDITION. LEAVE SITE IN BROOM-CLEAN CONDITION AT THE END OF EACH DAY.

B. MAINTENANCE
1. DURING INSTALLATION, THE CONTRACTOR SHALL MAINTAIN A SUFFICIENT NUMBER OF LABORERS AND ADEQUATE EQUIPMENT TO PERFORM THE WORK HEREIN SPECIFIED. PLANT MAINTENANCE SHALL CONSIST OF WATERING, WEEDING, CARING OF PLANTS, INCLUDING GROUND COVERS, SHRUBS, VINES AND TREES, EDGING AND MOWING LAWNS, FERTILIZING, CONTROL OF PESTS AND DISEASES, AND MAINTAINING WALKS FREE OF DEBRIS AND DIRT. UPON COMPLETION OF EACH AREA, THE CONTRACTOR, THE UNDERSIGNED, THE OWNER, ALONG WITH THE OWNER'S MAINTENANCE REPRESENTATIVE SHALL CONDUCT AN INSPECTION OF COMPLETED AREA. AT THIS TIME, A LIST OF CORRECTIONS, IF ANY, SHALL BE MADE. ALL CORRECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. AFTER ALL WORK HAS BEEN COMPLETED, INSPECTED AND ACCEPTED, ALL AREAS WILL BE MAINTAINED FOR A PERIOD OF NINETY (90) CALENDAR DAYS OR AS LONG AS IS NECESSARY TO ESTABLISH THRIVING TREES, SHRUBS, TURF AND GROUND COVER WITHOUT BARE SPOTS.
3. KEEP ALL AREAS WEED-FREE, ADEQUATELY WATERED AND NEATLY CULTIVATED FOR THE NINETY (90) PERIOD. REMOVE ALL DEBRIS FROM SITE AND KEEP THE ENTIRE SITE BROOM-CLEAN. TURF AREAS ARE TO BE MOWED WEEKLY.
4. RE-SEED ALL BARE SPOTS IN TURF AREAS AT TWO (2) WEEK INTERVALS AND MAINTAIN UNTIL AN EVEN STAND OF TURF IS OBTAINED. RE-SEED ALL SLOPE AREAS THAT FAIL TO GERMINATE EVENLY. REPAIR ALL ERODED SURFACES AT NO COST TO THE OWNER.
5. DAMAGE TO ANY PLANTED AREA SHALL BE REPAIRED IMMEDIATELY. DEPRESSIONS CAUSED BY VEHICLES OR FOOT TRAFFIC SHALL BE FILLED WITH TOPSOIL, LEVELED AND REPLANTED.
6. THE PROJECT SHALL BE SO CARED FOR THAT A NEAT, CLEAN CONDITION WILL BE PRESENTED AT ALL TIMES TO THE SATISFACTION OF THE OWNER AND THE UNDERSIGNED. THE LANDSCAPE CONTRACTOR SHALL BE EXPECTED TO MAKE A MINIMUM OF ONE (1) VISIT PER WEEK FOR MAINTENANCE PURPOSES DURING THE MAINTENANCE PERIOD (90 DAYS).
7. AT THE END OF THE MAINTENANCE PERIOD, ALL AREAS THAT HAVE BEEN PLANTED SHALL BE FERTILIZED WITH COMMERCIAL FERTILIZER. ANALYSIS AND RATE OF APPLICATION SHALL BE PER THE SOILS REPORT.
8. THE CONTRACTOR SHALL REQUEST A FINAL SITE VISIT SEVEN (7) DAYS PRIOR TO THE END OF THE MAINTENANCE PERIOD (90 DAYS). THIS REQUEST SHALL BE WRITTEN AND DIRECTED TO THE OWNER AND THE UNDERSIGNED. UPON WRITTEN ACCEPTANCE OF THE PROJECT BY THE OWNER AND THE UNDERSIGNED, THE CONTRACTOR SHALL BE RELIEVED OF ANY FURTHER MAINTENANCE.

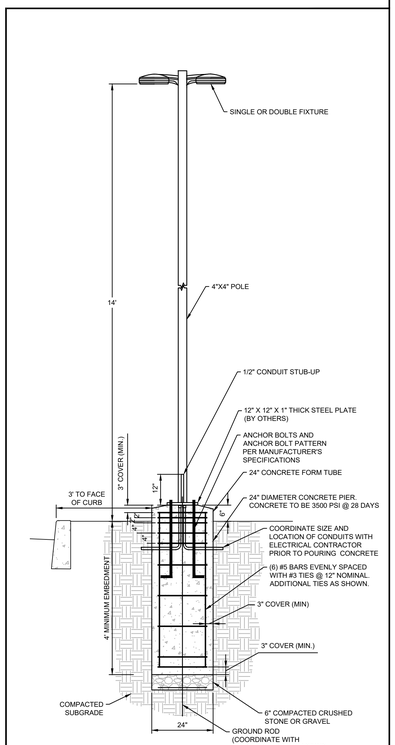
C. GUARANTEE
ALL TURF, GROUND COVER AND SHRUBS SHALL BE GUARANTEED TO LIVE AND GROW THROUGH THE FIRST GROWING SEASON. TREES SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR. THE CONTRACTOR, AT NO COST TO THE OWNER, SHALL REPLACE ANY MATERIAL THAT FAILS TO GROW THROUGH THE SPECIFIED MAINTENANCE AND GUARANTEED.

D. INSPECTION DURING CONSTRUCTION
1. OBSERVATION VISITS SPECIFIED HEREIN SHALL BE MADE BY THE UNDERSIGNED OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL REQUEST OBSERVATION AT LEAST TWO (2) WORKING DAYS IN ADVANCE OF THE TIME THAT THE OBSERVATION IS REQUESTED. A
2. OBSERVATION VISITS ARE SUGGESTED FOR THE FOLLOWING PARTS OF THE WORK:
a. UPON COMPLETION OF GRADING AND SOIL CONDITIONING PRIOR TO PLANTING.
b. WHEN TREES ARE SPOTTED FOR PLANTING, BUT PRIOR TO WHEN PLANTING HOLES ARE EXCAVATED.
c. WRITTEN ACCEPTANCE OF THE PROJECT TO RELEASE THE CONTRACTOR FROM FURTHER MAINTENANCE SHALL OCCUR AFTER FINAL OBSERVATION WITH THE OWNER OR HIS REPRESENTATIVE AT THE END OF THE MAINTENANCE PERIOD.

E. VERIFICATION OF DIMENSIONS
ALL SCALED DIMENSIONS ARE APPROXIMATE. PRIOR TO PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND QUANTITIES, AND SHALL IMMEDIATELY NOTIFY THE UNDERSIGNED OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS AND ACTUAL CONDITIONS. NO WORK SHALL BE DONE IN ANY AREA WHERE THERE IS SUCH A DISCREPANCY UNTIL APPROVAL FOR SAME HAS BEEN GIVEN BY THE UNDERSIGNED.

F. UTILITIES
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY CONSTRUCTION, SO THAT PROPER PRECAUTIONS MAY BE TAKEN NOT TO DAMAGE SUCH LINES AND PLANT LOCATIONS. PROMPTLY NOTIFY THE UNDERSIGNED TO ARRANGE FOR RELOCATIONS OF UTILITIES OR PLANTING LOCATIONS. FAILURE TO FOLLOW THIS PROCEDURE PLACES UPON THE CONTRACTOR THE RESPONSIBILITY FOR, AT HIS OWN EXPENSE, MAKING ANY AND ALL REPAIRS FOR DAMAGES RESULTING FROM HIS WORK.

G. EXISTING TREES
CONTRACTOR IS TO TAKE CARE IN PRESERVING ANY EXISTING TREES GREATER THAN OR EQUAL TO 6" ON THE SITE. DAMAGE OR LOSS OF THESE TREES WILL RESULT IN REPLACEMENT OF EQUAL SIZE BY THE LANDSCAPE CONTRACTOR.

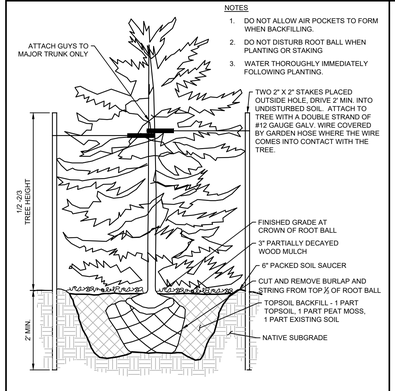


NOTE

POLE <18' = 4' FOOTING DEPTH
POLE >18' = 5' FOOTING DEPTH

14' LIGHT POLE DETAIL (LANDSCAPED AREAS)

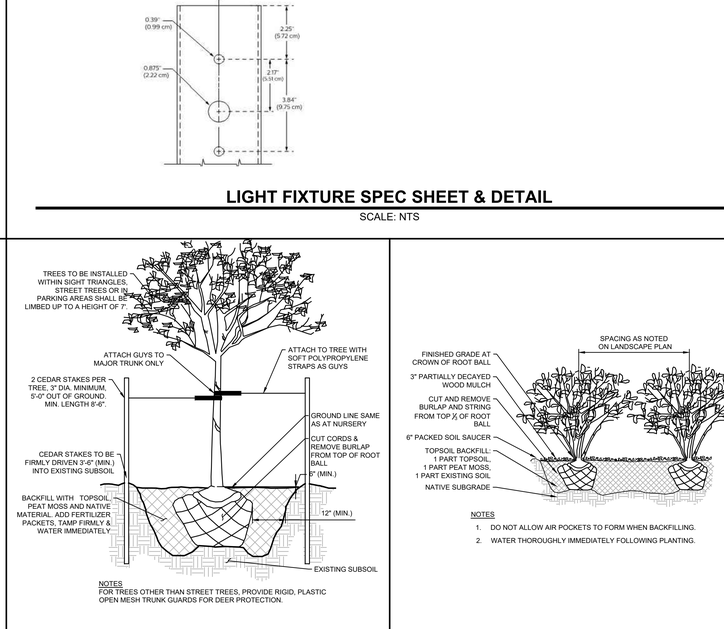
SCALE: NTS



NOTES
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
2. DO NOT DISTURB ROOT BALL WHEN PLANTING OR STAKING
3. WATER THOROUGHLY IMMEDIATELY FOLLOWING PLANTING.

EVERGREEN PLANTING DETAIL

SCALE: NTS



LIGHT FIXTURE SPEC SHEET & DETAIL

SCALE: NTS

NOTES
FOR TREES OTHER THAN STREET TREES, PROVIDE RIGID, PLASTIC OPEN MESH TRUNK GUARDS FOR DEER PROTECTION.

TREE PLANTING & STAKING DETAIL

SCALE: NTS

NOTES
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
2. WATER THOROUGHLY IMMEDIATELY FOLLOWING PLANTING.

SHRUB PLANTING

SCALE: NTS

PROJECT INFORMATION

PROJECT NAME:

PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

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(at least 3 days prior to excavation)

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200

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

165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401

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

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

ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
N.J.P.E LIC. NO. 47123

REVISIONS

Rev. #	Date	Comment
0	01/22/25	INITIAL RELEASE

SCALE: AS SHOWN | DESIGNED BY: ES
DATE: 01/22/25 | DRAWN BY: ES
JOB # 24-2348-01 | CHECKED BY: AJG
NOT FOR CONSTRUCTION
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

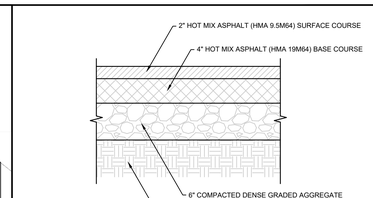
DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
LANDSCAPING & LIGHTING NOTES & DETAILS

SHEET NO.
C501

SIGN DETAIL

(SIGN INFORMATION BY OTHERS)

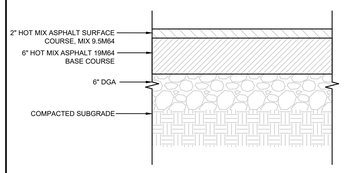


NOTES

1. ALL SUBGRADE SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER AASHTO T-180 OR ASTM D-1557. FILL PLACEMENT AS NEEDED SHALL BE PLACED IN ACCORDANCE WITH GEOTECHNICAL REPORT. SUBGRADE CONDITIONS AND COMPACTION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF DENSE GRADED AGGREGATE.
2. BASE COURSE SHALL BE COMPACTED TO 98% MAXIMUM DRY DENSITY PER AASHTO T-180 OR ASTM D-1557. DENSE GRADED AGGREGATE COURSE SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY PER AASHTO T-180 OR ASTM D-1557.
3. THE GRANULAR BASE SHALL BE DENSE GRADED AGGREGATE CONFORMING TO SUBSECTION 901.08 OR SOIL AGGREGATE DESIGNATED I-5 CONFORMING TO SUBSECTION 901.09 AND SHOWN ON TABLE 901-2 OF THE NJ DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1989) OR APPROVED BY GEOTECHNICAL ENGINEER.

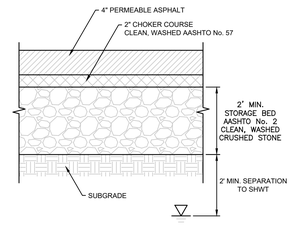
HMA PAVEMENT SECTION

SCALE: NTS



MONMOUTH COUNTY PAVEMENT SECTION

SCALE: NTS



PERMEABLE PAVEMENT SPECIFICATIONS

1. THE POROSITY OF THE PERMEABLE ASPHALT SURFACE COURSE MUST BE 15-25%.
2. THE BINDER USED IN THE SURFACE COURSE MUST BE PERFORMANCE GRADED FOR THE TYPE OF USE; THEREFORE, THE ASPHALT PLANT MUST ALSO BE ADVISED OF THE TYPE OF SURFACE COURSE SPECIFIED IN ORDER TO USE THE CORRECT BINDER AS IT HAS BEEN SHOWN TO MINIMIZE SCUFFING CAUSED BY AUTOMOBILES WITH POWER STEERING.
3. THE POROSITY OF ANY PERMEABLE ASPHALT BASE COURSE MUST BE LESS THAN OR EQUAL TO 25%.
4. MINIMUM AIR TEMPERATURE FOR PAVING IS 50 DEGREES.
5. INSTALLATION OF PERMEABLE ASPHALT REQUIRES DIFFERENT TEMPERATURE GUIDELINES THAN THOSE OF IMPERVIOUS ASPHALT:
   - 5.1. ASPHALT BASE COURSE: 200-245 DEGREES
   - 5.2. FINISH ROLLING BASE COURSE: 140-150 DEGREES
   - 5.3. ASPHALT SURFACE COURSE: 200-220 DEGREES
   - 5.4. FINISH ROLLING SURFACE COURSE: 110-140 DEGREES
6. VEHICULAR USE IS PROHIBITED FOR AT LEAST 48 HOURS ONCE THE PAVEMENT INSTALLATION IS COMPLETE.
7. THE MINIMUM CHOKER COURSE THICKNESS IS 2 INCHES.
8. STORAGE BED AGGREGATE MUST BE CLEAN, WASHED, AND OPEN-GRADED AASHTO No. 2 CRUSHED STONE.

CHOKER COURSE SPECIFICATIONS

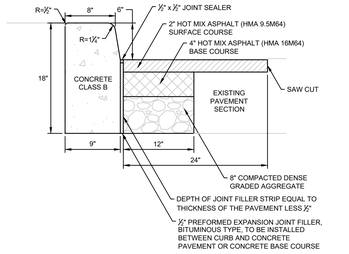
1. THE CHOKER COURSE MUST CONSIST OF CLEAN, WASHED, AASHTO No. 57 CRUSHED STONE WHOSE THICKNESS IS APPROPRIATE FOR THE SURFACE COURSE DESIGNED AND DESIGN LOAD CONDITIONS.

STORAGE BED SPECIFICATIONS

1. STORAGE BED AGGREGATE MUST BE PLACED IN 6 INCH LOOSE LIFTS AND COMPACTED USING PLATE COMPACTORS. THE MAXIMUM RECOMMENDED LOOSE
2. NO STANDING WATER MAY REMAIN IN THE STORAGE BED 72 HOURS AFTER A RAIN EVENT IN ORDER TO ALLOW FOR SUFFICIENT STORAGE FOR THE NEXT RAIN EVENT. STORAGE TIMES IN EXCESS OF 72 HOURS MAY RENDER THE SYSTEM INEFFECTIVE AND MAY RESULT IN ANAEROBIC CONDITIONS, ODOR, AND BOTH WATER QUALITY AND MOSQUITO BREEDING ISSUES.

PERVIOUS PAVING SYSTEM

SCALE: NTS

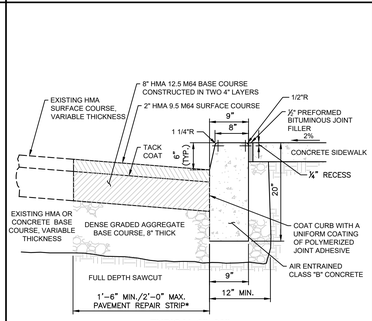


NOTES

1. CONCRETE TO BE NJDOT CLASS 'B' (AIR ENTRAINED).
2. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED ½" FROM THE FRONT FACE AND TOP OF THE CURB.
3. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.

CONCRETE VERTICAL CURB

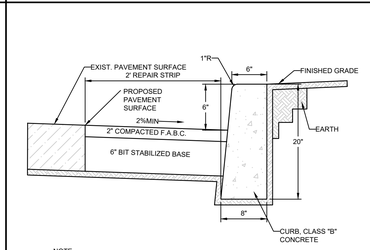
SCALE: NTS



TYPICAL 9"x20"

VERTICAL CONCRETE CURBING/PAVEMENT REPAIR

SCALE: NTS

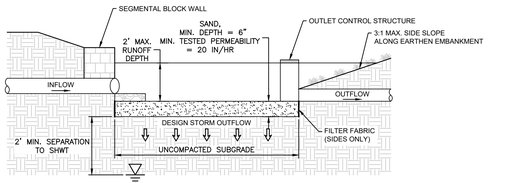


NOTE

1. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLER WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF A.A.S.H.O. SPEC. M-213, RECESSED ½" IN FROM FRONT FACE AND TOP OF CURB.
2. THE ALIGNMENT AND GRADE OF CURBING IS TO BE DETERMINED BY THAT ESTABLISHED OR EXISTING IN THE AREA AND SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.

CURB AND PAVEMENT DETAIL (MONMOUTH COUNTY)

SCALE: NTS

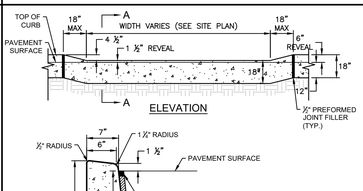


NOTES

1. GEOMETRY
   - 1.1. THE MAXIMUM INTERIOR SLOPE FOR AN EARTHEN DAM, EMBANKMENT OR BERM IS 3:1.
   - 1.2. THE VERTICAL DISTANCE BETWEEN THE UPPER SURFACE OF THE BASIN BOTTOM AND THE WQDS WATER SURFACE ELEVATION MUST BE NO GREATER THAN 2 FEET. THIS DISTANCE IS ALSO REFERRED TO AS THE MAXIMUM DEPTH OF STORMWATER RUNOFF TO BE INFILTRATED.
2. SAND LAYER
   - 2.1. TO ENSURE THAT THE DESIGN PERMEABILITY RATE IS MAINTAINED OVER TIME, A SAND LAYER IS REQUIRED AT THE BOTTOM OF EVERY SURFACE TYPE OF SMALL-SCALE INFILTRATION BASIN.
   - 2.2. THE MINIMUM DEPTH IS 6 INCHES.
   - 2.3. THE SAND MUST MEET ALL THE SPECIFICATIONS FOR CLEAN, MEDIUM-AGGREGATE CONCRETE SAND IN ACCORDANCE WITH AASHTO M-6 OR ASTM C-33, AS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.
   - 2.4. THE MAXIMUM PERCENTAGE OF FINES IS 15%.
   - 2.5. THE MINIMUM TESTED PERMEABILITY RATE IS 20 IN/HR.
   - 2.6. THE USE OF TOPSOIL AND VEGETATION IS PROHIBITED.
   - 2.7. FILTER FABRIC IS REQUIRED ALONG THE SIDES OF THE SMALL-SCALE INFILTRATION BASIN TO PREVENT THE MIGRATION OF FINE PARTICLES FROM THE SURROUNDING SOIL; FILTER FABRIC MAY NOT BE USED ALONG THE BOTTOM OF THE BASIN BECAUSE IT MAY RESULT IN A LOSS OF PERMEABILITY.

SMALL-SCALE SURFACE INFILTRATION BASIN

SCALE: NTS

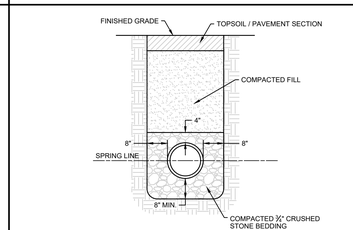


NOTES

1. CONCRETE TO BE NJDOT CLASS 'B' (AIR ENTRAINED).
2. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED ½" FROM THE FRONT FACE AND TOP OF THE CURB.
3. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.
4. DEPTH OF JOINT FILLER STRIP SHALL BE EQUAL TO THE THICKNESS OF THE PAVEMENT LESS ½".

CONCRETE DEPRESSED CURB

SCALE: NTS

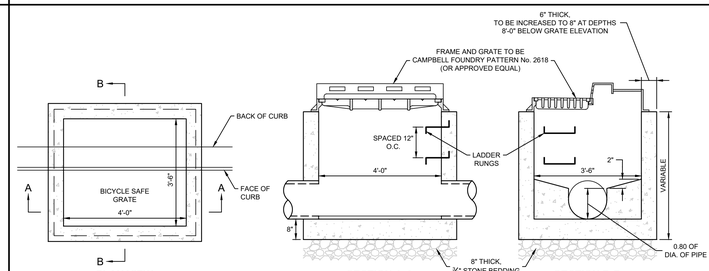


NOTES

1. AN 8" THICK LAYER OF ½" CLEAN STONE SHALL BE PLACED BELOW THE PROPOSED DRAINAGE PIPE UP TO THE SPRING LINE OF THE PIPE TO PROVIDE A UNIFORM BED FOR SUPPORT.
2. BACKFILL MATERIALS AROUND THE SIDES AND OVER THE TOP OF THE PIPE FOR A DISTANCE OF AT LEAST 8 INCHES SHOULD CONSIST OF THE APPROVED PORTIONS AND COMPACTED BY HAND. ALL BACKFILL MATERIAL SHALL BE FREE OF STUMPS, BRUSH, WEEDS, ROOTS, RUBBISH, WOOD, AND OTHER MATERIALS THAT MAY DECAY. ABOVE THIS LEVEL, CONTROLLED COMPACTED FILL SHOULD BE PLACED TO ATTAIN THE FINAL DESIGN GRADES.
3. ANY IMPORTED FILL MATERIAL REQUIRED TO COMPLETE THE BACKFILL OPERATIONS SHOULD CONSIST OF RELATIVELY WELL-GRADED GRANULAR SOILS CONTAINING LESS THAN 15% BY WEIGHT PASSING A U.S. STANDARD No. 200 SIEVE AND HAVING A MAXIMUM PARTICLE SIZE OF 3 INCHES. ALL BACKFILL SHOULD BE PLACED IN 8 INCH LOOSE LIFTS AND COMPACTED USING VIBRATORY COMPACTION EQUIPMENT TO AT LEAST 92% OF ITS DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST PROCEDURE. IN ADDITION, UPPER 3 FEET OF BACKFILL BELOW ROADWAYS, SIDEWALKS, AND OTHER STRUCTURAL AREAS SHOULD BE COMPACTED WITH A HEAVY VIBRATING DRUM COMPACTOR TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST PROCEDURE.

PIPE TRENCH INSTALLATION

SCALE: NTS



NOTES

1. FOOTER TO BE NJDOT CLASS 'D' CONCRETE.
2. INVERT TO BE CLASS 'C' CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, BOTH INSIDE AND OUTSIDE WALLS SHALL BE PLASTERED WITH ½" THICK CEMENT PLASTER.

INLET TYPE B

SCALE: NTS

"STOP" SIGN
R1-1

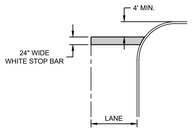
SIGN SCHEDULE

SCALE: NTS

TYPICAL PARKING STALL

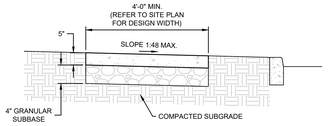
PARKING STALL STRIPING

SCALE: NTS



STOP BAR PAVEMENT MARKING

SCALE: NTS

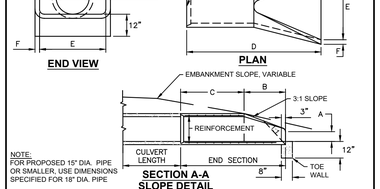


NOTES

1. ALL CONCRETE SHALL CONFORM TO NJ STATE HIGHWAY DEPARTMENT SPECIFICATIONS CLASS "B", AIR-ENTRAINED, 4,500 PSI MINIMUM AT 28 DAYS. ALL CONCRETE WORK SHALL HAVE A WOOD FLOAT AND TRANSVERSE BROOM FINISH. BROOMING SHALL BE DONE BEFORE INITIAL SET USING A STEEL OR BARN BROOM. ALL JOINTS AND EDGES SHALL BE TOOLED AND ROUNDED.
2. INADEQUATE SUBBASE AND FORMWORK MAY BE REJECTED BY THE TOWN ENGINEER OR HIS/HER REPRESENTATIVE PRIOR TO POURING.
3. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO 2007 NJDOT STANDARD SPECIFICATIONS.
4. WHEN SIDEWALK ABUTS CURB OR SIDEWALK, ½" THICK NON-EXTRUDABLE, FIBROUS, BITUMASTIC EXPANSION JOINTS ARE REQUIRED.

CONCRETE SIDEWALK

SCALE: NTS



NOTE:
FOR PROPOSED 15" DIA. PIPE OR SMALLER, USE DIMENSIONS SPECIFIED FOR 18" DIA. PIPE.

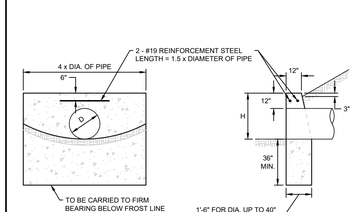
SECTION A-A
SLOPE DETAIL

TABLE A - DIMENSIONS FOR END SECTION FOR CONCRETE PIPE

DIAM	A	B	C	D	E	F	R
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2 1/2"	7 1/2"
21"	9"	3'-0"	3'-1"	6'-1"	3'-6"	2 3/4"	8"
24"	9.5"	3'-7.5"	2'-6"	6'-1.5"	4'-0"	3"	8"
27"	10.5"	4'-0"	2'-1.5"	6'-1.5"	4'-6"	3 1/4"	9"
30"	12"	4'-6"	1'-7.75"	6'-1.75"	5'-0"	3 1/2"	8"
33"	13.5"	4'-10.5"	3'-1.5"	8'-0"	5'-6"	3 3/4"	9"
36"	15"	5'-3"	2'-9"	8'-0"	6'-0"	4"	10"
42"	21"	5'-3"	2'-9"	8'-0"	6'-6"	4 1/2"	11"
48"	24"	6'-0"	2'-0"	8'-0"	7'-0"	5"	12"

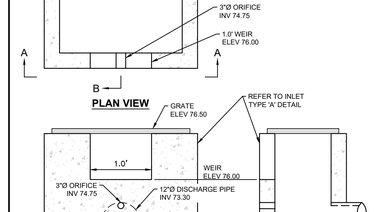
CONCRETE END SECTION

SCALE: NTS



CONCRETE HEADWALL

SCALE: NTS



OUTLET CONTROL STRUCTURE

SCALE: NTS

PROJECT INFORMATION

PROJECT NAME:

PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

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(at least 3 days prior to excavation)

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1955 ROUTE 34, SUITE 1A, WALL, NJ 07719
165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
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ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
N.J.P.E LIC. NO. 47123

REVISIONS

Rev. #	Date	Comment

0	01/22/25	INITIAL RELEASE	
SCALE:	AS SHOWN	DESIGNED BY:	ES
DATE:	01/22/25	DRAWN BY:	ES
JOB #	24-2348-01	CHECKED BY:	AJG

NOT FOR CONSTRUCTION

APPROVED BY:

FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

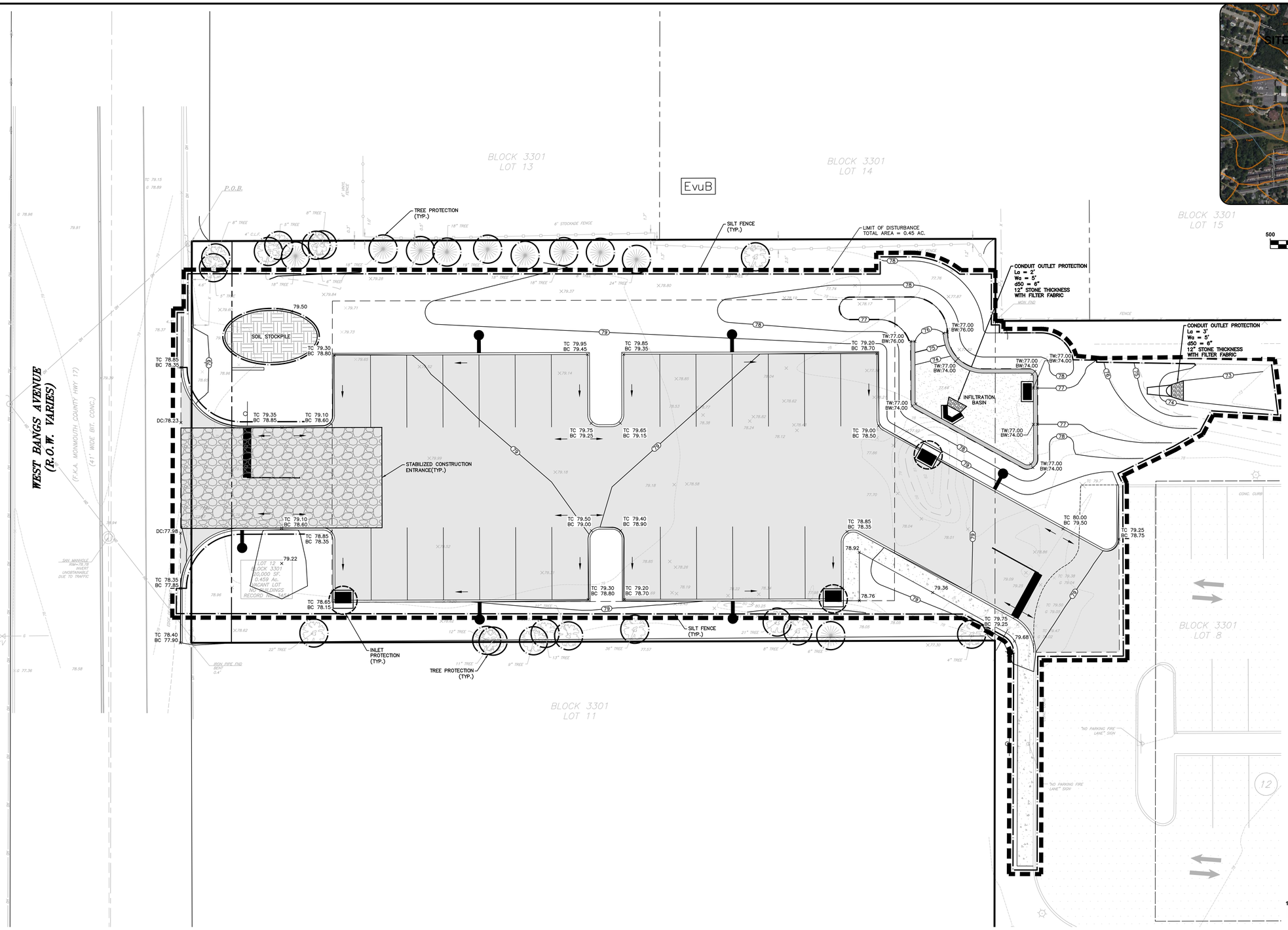
SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NO:
C800

SOIL MAP

500 0 500 1000

SCALE: 1" = 500'



10 0 10 20

SCALE: 1" = 10'

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. TRACKING PADS TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED SESC PLAN. A MINIMUM OF 1 TRACKING PAD MUST BE IN OPERATION AT ALL TIMES. ADDITIONAL TRACKING PADS, CONFORMING TO SESC STANDARDS MAY BE ADDED AS THE CONTRACTOR DEEMS NECESSARY.
2. SOIL STOCKPILES TO BE PLACED AS REQUIRED WITHIN THE PROJECT SITE AND SILT FENCE LIMITS WITH SILT FENCE PLACED AROUND THE PERIMETER IN ACCORDANCE WITH THE SOIL EROSION AND SEDIMENT CONTROL DETAILS.
3. SHOULD ADDITIONAL STOCKPILE AREA BE NEEDED, THE CONTRACTOR SHALL CONFORM TO THE STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
4. THIS PLAN PREPARED TO ADDRESS EROSION AND SEDIMENT CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) AT TIME OF DESIGN. ALL OTHER COMPONENTS OF THE SPPP AND GENERAL STORMWATER PERMIT NO. NJG0088323 TO BE RESPONSIBILITY OF THE DEVELOPER AND/OR SITE CONTRACTOR.
5. THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES ONLY. THIS PLAN IS NOT TO BE USED FOR SITE CONSTRUCTION

SOIL DESIGNATION LEGEND

MAP UNIT SYMBOL	MAP UNIT NAME	RATING
EvuB	EVESBORO - URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	A

SOIL EROSION LEGEND

LIMIT OF DISTURBANCE
SILT FENCE
INLET PROTECTION
STABILIZED CONSTRUCTION ENTRANCE
PROPOSED TREE PROTECTION

CONSTRUCTION / SPPP NOTE

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

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

TOTAL LIMIT OF DISTURBANCE = 0.45 AC

LEGEND

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

PROJECT INFORMATION

PROJECT NAME:

PARKING LOT EXPANSION

PROJECT LOCATION:
BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:
MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

INSITE ENGINEERING, LLC SINCE 2003

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

InSite Engineering, LLC
CERTIFICATE OF AUTHORIZATION: 24GA28083200
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165 CHESTNUT STREET, SUITE 200, ALLENDALE, NJ 07401
20 N. MAIN STREET, SUITE 2B, MANAHAWKIN, NJ 08050
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ANDREW J. GROVER, P.E.
PROFESSIONAL ENGINEER
NJPE LIC. NO. 47123

REVISIONS

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SCALE: AS SHOWN | DESIGNED BY: ES
DATE: 01/22/25 | DRAWN BY: ES
JOB # 24-2348-01 | CHECKED BY: AJG
NOT FOR CONSTRUCTION
APPROVED BY:
FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NO:
C900

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO STATE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION
   - A) GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1.
   - B) INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
   - C) IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
2. SEEDBED PREPARATION
   - A) APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. LIMING RATES SHALL BE ESTABLISHED VIA SOIL TESTING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
   - B) WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   - C) INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED IN ACCORDANCE WITH THE ABOVE.
   - D) SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1.
3. SEEDING
   - A) TEMPORARY VEGETATIVE SEEDING COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1 POUND PER 1,000 SF (100 LBS/AC) WITH AN OPTIMUM SEED DEPTH OF 0.5" (TWICE THE DEPTH IF SANDY SOILS), IN ACCORDANCE WITH TABLE 7-2, PAGE 7-3.

     *SEEDING DATES: 2/15-5/1 AND 8/15-10/15
   - B) CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
   - C) HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION IV MULCHING) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
   - D) AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
4. MULCHING

   MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.
   - A) STRAW OR HAY. UNNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

     APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

     ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
     - (1) PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
     - (2) MULCH NETTINGS. STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
     - (3) CRIMPER (MULCH ANCHORING TOOL). A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
     - (4) LIQUID MULCH-BINDERS. - MAY BE USED TO ANCHOR HAY OR STRAW MULCH.
       - a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
       - b. USE ONE OF THE FOLLOWING:
         - I. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
         - II. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

           NOTE: ALL NAMES GIVE ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A COMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.
   - B) WOOD-FIBER OR PAPER-FIBER MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 PONDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   - C) PELLETIZED MULCH. COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORMA MULCH MAT. PELLETIZED MULCH SHALL BE APPLIES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS./1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEE FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

     APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

1. SITE PREPARATION
   - A) GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
   - B) IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
   - C) TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
   - D) INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
2. SEEDBED PREPARATION
   - A) UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
   - B) WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   - C) HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.
3. SEEDING
   - A) SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.

SEED MIXTURE	PLANTING RATE LBS/1,000 (LBS/ACRE)
HARD FESCUE AND/OR STRONG CREEPING RED FESCUE	4 (175)
PERENNIAL RYEGRASS	1 (45)
KENTUCKY BLUEGRASS	1 (45)

*ACCEPTABLE SEEDING DATES: 2/1-4/30 AND 5/1-8/14**

*OPTIMAL SEEDING DATES: 8/15-10/30

**SUMMER SEEDING SHALL ONLY BE CONDUCTED WHEN SITE IS IRRIGATED

   - (1) SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.
   - (2) WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85O F AND ABOVE. SEE TABLE 4-3 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
   - (3) COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85OF. MANY GRASSES BECOME ACTIVE AT 65OF. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.
   - B) CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.
   - C) AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.
   - D) HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.
4. MULCHING

   MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.
   - A) STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

     APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION. ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
     - (1) PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
     - (2) MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
     - (3) CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
     - (4) LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.
       - a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
       - b. USE ONE OF THE FOLLOWING:
         - I. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
         - II. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

           NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.
   - B) WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY JANUARY 2014 GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
   - C) PELLETIZED MULCH-COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAYECTI CONTAIN CO-POLYMERS, TACKIFIERS,FERTILIZERS,AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO AW SEEDED AREA AND WATERED, FORM A MULCHMAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIERAGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEEDBED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.
5. IRRIGATION (WHERE FEASIBLE)

   IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.
6. TOP DRESSING

   SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED INSECTION 2A-SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOP DRESSING IS MANDATORY. AN EXCEPTION MAYBE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOP DRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.
7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

   THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCEIS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING AREPORT OF COMPLIANCEFROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

CONSTRUCTION SEQUENCE

EXACT TIMING FOR DEVELOPMENT OF THIS PROJECT IS NOT KNOWN AT THIS TIME.. HOWEVER, IT IS ANTICIPATED THAT CONSTRUCTION WILL COMMENCE IN THE FALL OF 2023 AND WILL PROCEED IMMEDIATELY AND CONTINUOUSLY ONCE THE REQUIRED APPROVALS ARE SECURED. ITEMS AND DURATIONS OF CONSTRUCTION WILL OCCUR APPROXIMATELY AS FOLLOWS: PHASE DURATION

PHASE	DURATION
1. INSTALL TEMPORARY SOIL EROSION FACILITIES (CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, INSTALL SILT FENCE, INSTALL TREE PROTECTION FENCING)	IMMEDIATELY
2. SITE DEMOLITION	1 WEEK
3. ROUGH CLEARING AND GRADING	1 WEEK
4. TEMPORARY SEEDING	IMMEDIATELY
8. CURB AND SIDEWALK CONSTRUCTION	1 WEEK
9. PAVEMENT SUB-BASE	1 WEEK
10. INSTALL STORAGE UNITS	2 WEEKS
11. MAINTENANCE OF TEMPORARY EROSION CONTROL MEASURES	CONTINUOUSLY
13. FINAL PAVEMENT COURSE	1 WEEK
14. FINAL CONSTRUCTION/STABILIZATION OF SITE	1 WEEK

*TEMPORARY SEEDING SHALL ALSO BE PERFORMED WHEN NECESSARY IN ACCORDANCE WITH NOTE NO. 5 OF THE SOIL EROSION AND SEDIMENT CONTROL NOTES.

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. THE PROPERTY OWNERS SHALL ASSUME THIS RESPONSIBILITY AFTER CONSTRUCTION IS COMPLETED AND CERTIFICATES OF OCCUPANCY ARE ISSUED.
2. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.
3. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ROADWAYS CLEAN AT ALL TIMES. ANY SEDIMENT SPILLED OR TRACKED ON THE ROADWAY WILL BE CLEANED UP IMMEDIATELY, OR AT MINIMUM, BY THE END OF EACH WORK DAY.
4. DUST GENERATION SHALL BE CONTROLLED ON A CONSTANT BASIS BY WETTING THE SURFACE AND/OR APPLICATION OF CALCIUM CHLORIDE.
5. STEEP SLOPES SHALL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR SUITABLE EQUAL. (SEE ANCHORING NOTES & NOTE NO. 6 OF SOIL EROSION & SEDIMENT CONTROL NOTES.)
6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON INDIVIDUAL SITES SHALL APPLY TO ANY SUBSEQUENT OWNERS.

1. MATERIALS
   - A. TOPSOIL SHOULD BE FRIABLE, LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.
   - B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.
2. STRIPPING AND STOCKPILING
   - A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
   - B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   - C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.
   - D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
   - E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
   - F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG.7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.
3. SITE PREPARATION
   - A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE.
   - B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.
   - C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
   - D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.
   - E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
4. APPLYING TOPSOIL
   - A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).
   - B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC.. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1). PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE-APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

MAINTENANCE NOTES
1. SEDIMENT SHALL BE REMOVED FROM THE UPSTREAM FACE OF THE BARRIER WHEN IT HAS REACHED A DEPTH OF 1/2 THE BARRIER HEIGHT.
2. REPAIR OR REPLACE BARRIER (FABRIC, POSTS, BALES, ETC.) WHEN DAMAGED.
3. BARRIERS SHALL BE INSPECTED DAILY FOR SIGNS OF DETERIORATION AND SEDIMENT REMOVAL.

1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 360 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE GEOTEXTILE.
3. DRIVE BOTH POSTS 12 INCHES INTO THE GROUND AND BURY FLAP.

ATTACHING TWO SILT FENCES

SILT FENCE

SCALE: NTS

ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).
1. MEASURE THE DHB (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF A TREE) IN INCHES.
2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

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

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

TREE ROOT PROTECTION

SCALE: NTS

TREE PROTECTION FENCING

SCALE: NTS

TABLE 27-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0-2%	50 FT	100 FT
2-5%	100 FT	200 FT
>5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COARSE, MIX I-2	

NOTES
1. STONE SIZE - USE ASTM C-33, SIZE No. 2 (2-1/2 TO 1-1/2 IN) OR 3 (2 TO 1 IN). USE CLEAN CRUSHED ANGULAR STONE.
2. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING STABILIZED CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION ENTRANCE

SCALE: NTS

NOTES
1. STOCKPILES SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
2. STOCKPILES ARE TO BE STABILIZED WITH TEMPORARY VEGETATIVE COVER. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.
3. REPAIR OR REPLACE SILT FENCE WHEN DAMAGED.
4. IF SILT FENCE MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE SILT FENCE BY THE END OF THE WORK DAY.

TEMPORARY STOCKPILE

SCALE: NTS

NOTE
1. SEE PLAN FOR DIMENSIONS.

RIP-RAP APRON

SCALE: NTS

NOTES
1. ROUTINE INSPECTIONS OF THE INLET PROTECTION IS REQUIRED TO MONITOR ACCUMULATED SEDIMENT LEVELS AND TO PREVENT "PONDING" AROUND STORM DRAINS.
2. EMPTY AND REUSE THE SILTSACK FOR THE LIFT OF THE CONSTRUCTION PROJECT.

INLET PROTECTION (SILTSACK)

SCALE: NTS

PROJECT INFORMATION

PROJECT NAME:

PARKING LOT EXPANSION

PROJECT LOCATION:

BLOCK 3301, LOT 8 & 12
3405 HIGHWAY ROUTE 33
3454 W. BANGS AVE. (CR17)
TOWNSHIP OF NEPTUNE
MONMOUTH COUNTY, NJ

OWNER:

MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT:

MORGAN MEDICAL PROPERTIES, LLC
3405 HIGHWAY ROUTE 33 2ND FLOOR
TOWNSHIP OF NEPTUNE, NJ 07753

APPLICANT'S PROFESSIONALS

SURVEYOR:
INSITE SURVEYING, LLC
1955 ROUTE 34, SUITE 1A
WALL, NJ 07719

TRAFFIC ENGINEER:
DYNAMIC TRAFFIC
1904 MAIN STREET
LAKE COMO, NJ 07719

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PROFESSIONAL ENGINEER
NJPE LIC. NO. 47123

REVISIONS

Rev.#	Date	Comment
0	01/22/25	INITIAL RELEASE

SCALE: AS SHOWN DESIGNED BY: ES
DATE: 01/22/25 DRAWN BY: ES
JOB #: 24-2348-01 CHECKED BY: AJG
☒ NOT FOR CONSTRUCTION
APPROVED BY:
☐ FOR CONSTRUCTION

PLAN INFORMATION

DRAWING TITLE:
PRELIMINARY AND FINAL SITE PLAN

SHEET TITLE:
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NO:
C901