PRELIMINARY AND FINAL MAJOR SITE PLAN
VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4
SITUATED IN
TOWNSHIP OF VERONA, ESSEX COUNTY, NEW JERSEY
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1
SITUATED IN
TOWNSHIP OF MONTCLAIR, ESSEX COUNTY, NEW JERSEY
1 SUNSET AVENUE, VERONA, NJ

PROPERTY OWNERS WITHIN 200'
TOWNSHIP OF VERONA
AS OF AUGUST 2021

TOWNSHIP OF VERONA

BLOCK	LOT	OWNER NAME & ADDRESS
202	4	1 CLAREMONT AVENUE LLC 83 ALEXANDER AVENUE MONTCLAIR, NJ 07043
203	24	RBM SPRING LAKE LLC 101 EAST BROADWAY HACKENSACK, NJ 07601
203	25	OUTDOOR SYSTEMS INC 185 US HIGHWAY 46 FAIRFIELD, NJ 07044
203	26	OUTDOOR SYSTEMS INC 185 US HIGHWAY 46 FAIRFIELD, NJ 07044
203	27	15 BLOOMFIELD AVE LLC 15 BLOOMFIELD AVENUE VERONA, NJ 07044
203	28	EASLEY, JACK HOPKINS 18 SUNSET AVENUE VERONA NJ 07044
203	29	CONROY, BRIAN & NAMARAT 24 SUNSET AVENUE VERONA, NJ 07044
203	30	MCKEOWN, THOMAS J. & SUSAN 28 SUNSET AVENUE VERONA, NJ 07044
203	31	DAVILA, JOSEPH & ERICA 32 SUNSET AVENUE VERONA, NJ 07044
203	32	MISURO, ROBERT & LAURIE 36 SUNSET AVENUE VERONA, NJ 07044
203	33	RICE, JEFFREY & AMELIA 40 SUNSET AVENUE VERONA, NJ 07044
302	18	SCALZO, ROBERT & COLLEEN 45 SUNSET AVENUE VERONA, NJ 07044
302	19	FOSTER, LAURIE MCCOY & TIMOTHY 10 AFTERGLOW AVENUE VERONA, NJ 07044
302	20	HATFIELD, WILLIAM 14 AFTERGLOW AVENUE VERONA, NJ 07044
302	21	BORDMAN, AILEEN F. 16 AFTERGLOW AVENUE VERONA, NJ 07044
302	22	ANDRUZZI, LEONARD & JEANNE S. 20 AFTERGLOW AVENUE VERONA, NJ 07044
303	1	CONTE, ROBERT & ZINGARO, MARIA C. 23 AFTERGLOW AVENUE VERONA, NJ 07044
303	2	STUMPER, KENNETH & LORRAINE 21 AFTERGLOW AVENUE VERONA, NJ 07044
303	3	CALLAHAN, DANIEL 15 AFTERGLOW AVENUE VERONA, NJ 07044
303	5	CALLE, GIOVANNY 10 OVERLOOK PARK VERONA, NJ 07044
304	1	CALLE, GIOVANNY 10 OVERLOOK PARK, VERONA, NJ 07044
305	3	ANGUILLARE, MARK & ANNE 17 OVERLOOK PARK VERONA, NJ 07044
305	4	SCOTT, ALEXANDER J. 36 AFTERGLOW WAY MONTCLAIR, NJ 07042

PROPERTY OWNERS WITHIN 200'
TOWNSHIP OF MONTCLAIR
AS OF AUGUST 16, 2021

TOWNSHIP OF MONTCLAIR

BLOCK	LOT	OWNER NAME & ADDRESS
406	33	CORDILLERA PROFESSIONALS, LLC 403 CLAREMONT AVE MONTCLAIR, NJ 07042
407	1	CHIOVETTA, ANTONIO G EST OF 405 CLAREMONT AVE MONTCLAIR, NJ 07042
407	2	MANESS, FRANK S & MARY ROSE E 4 HIGHLAND AVE MONTCLAIR, NJ 07042
401	2	HAYNES, ALLEN & ALESSANDRA 15 ROCKLEDGE RD MONTCLAIR, NJ 07042
401	3	RAMAKRISHNAN, KIRTHI & DEVIDO, LARA 11 ROCKLEDGE RD MONTCLAIR, NJ 07042
302	17	BATTLESON, WENDY A 18 PARKHURST PL MONTCLAIR, NJ 07042
302	18	GREEN, MARK W & POPPELE, KRISTEN E 29 AFTERGLOW WAY MONTCLAIR, NJ 07042
302	20	ZBAR, LIS & MARGO W 33 AFTERGLOW WAY MONTCLAIR, NJ 07042
401	5	MONTCLAIR VILLAGE LLC 2029 MORRIS AVE UNION, NJ 07083
403	1	TOWNSHIP OF MONTCLAIR 205 CLAREMONT AVE MONTCLAIR, NJ 07042
406	1	MOED, EDWARD & PAMELA J 9 ROCKLEDGE RD MONTCLAIR, NJ 07042
407	3	LOPEZ, EDUARDO & ROMA TORRE 16 ROCKLEDGE RD MONTCLAIR, NJ 07042
407	4	DELP, TIM & MOLLY V 10 ROCKLEDGE ROAD MONTCLAIR, NJ 07042
401	3	SCOTT, ALEXANDER J C 36 AFTERGLOW WAY MONTCLAIR, NJ 07042
401	4	NEWLANDS, LESLIE A & CAROL A 10 OVERLOOK PARK VERONA, NJ 07044
407	26	DORCHESTER CONDO c/o CAMBRIDGE MGMT 238 UNION BLVD TOTOWA, NJ 07512
302	19	PIZARRO–FERRANTE, MARI 31 AFTERGLOW WAY MONTCLAIR, NJ 07042
302	21	ZELTZER, ZACHARY 35 AFTERGLOW WAY MONTCLAIR, NJ 07042
401	6	KVAL PROPERTIES, LLC 17 EMERSON RD MORRIS PLAINS, NJ 07950

UTILITY CONTACTS

TOWNSHIP OF VERONA

NEW JERSEY BELL TELEPHONE CO.
ATTN: CORPORATE SECRETARY
540 BROAD STREET ROOM 1005
NEWARK, NJ 07101

AMERICAN TELEPHONE & TELEGRAPH CO.
ATTN:KARL GROSSMANN
50 PATRICIA DRIVE
FLANDERS, NJ 07836

PUBLIC SERVICE ELECTRIC & GAS CO.
ATTN: MANAGER CORPORATE PROPERTIES
80 PARK PLACE, T6B
NEWARK, NJ 07102

PASSAIC VALLEY WATER COMMISSION
ATTN: CORPORATE SECRETARY
1525 MAIN AVENUE
CLIFTON, NJ 07011

MCI
ATTN: JOHN SCOCCOLA
10 MARCELLA AVE.
WEST ORANGE, NJ 07052

COMCAST CABLE
800 RAHWAY AVENUE
UNION, NEW JERSEY 07083

TOWNSHIP OF MONTCLAIR

ESSEX COUNTY PLANNING BOARD
900 BLOOMFIELD AVENUE
VERONA, NJ 07044

PSE&G
MANAGER – CORPORATE PROPERTIES
80 PARK PLAZA, T6B
NEWARK, NJ 07102

VERIZON
ONE VERIZON WAY
BASKING RIDGE, NJ 07920

COMCAST CABLE
CONSTRUCTION DEPARTMENT
800 RAHWAY AVENUE
UNION, NJ 07083

TOWNSHIP OF VERONA
600 BLOOMFIELD AVENUE
VERONA, NJ 07044

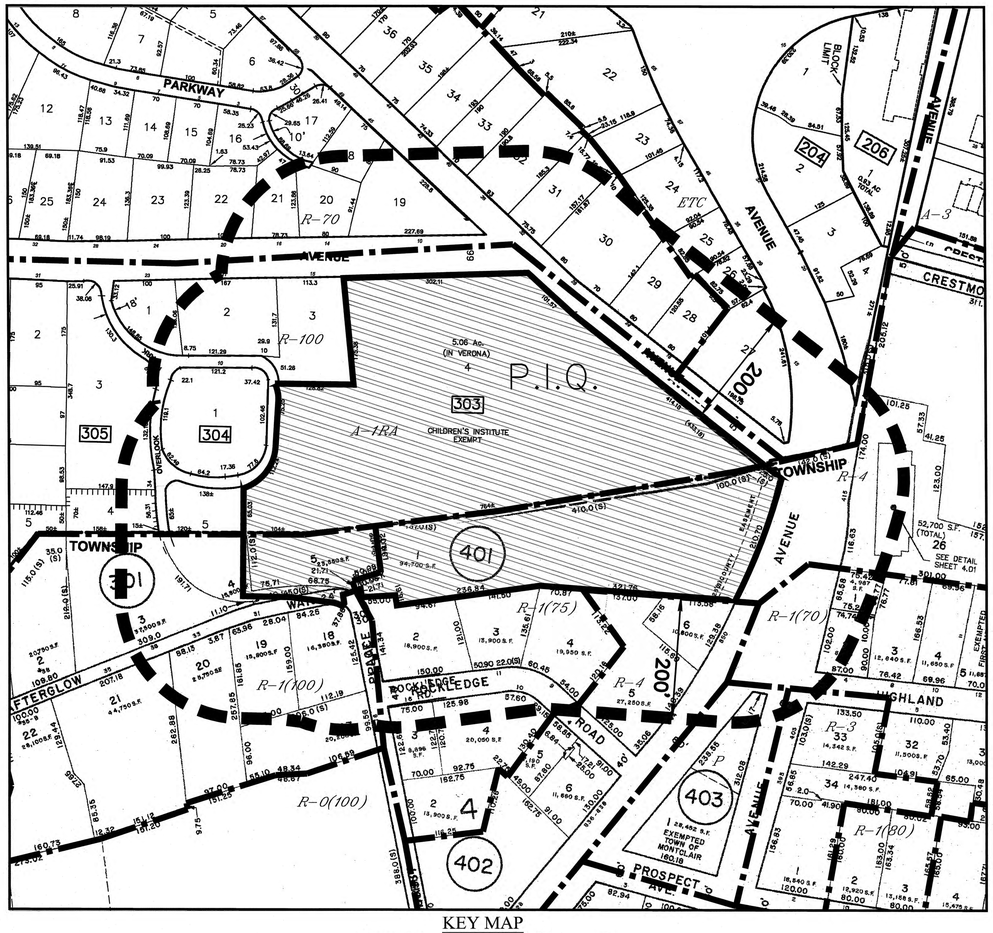
INDEX OF SHEETS

No.	Description	Plan Date
1.	TITLE SHEET	ORIGINAL SUBMISSION
2.	OVERALL EXISTING CONDITIONS PLAN	ORIGINAL SUBMISSION
3.	DEMOLITION PLAN	ORIGINAL SUBMISSION
4.	TREE LOCATION AND REMOVAL PLAN	ORIGINAL SUBMISSION
5.	GEOMETRY PLAN	ORIGINAL SUBMISSION
6.	GRADING AND DRAINAGE PLAN	ORIGINAL SUBMISSION
7.	UTILITY PLAN	ORIGINAL SUBMISSION
8.	PROFILES	ORIGINAL SUBMISSION
9.	LIGHTING PLAN	ORIGINAL SUBMISSION
10.	SOIL EROSION AND SEDIMENT CONTROL PLAN	ORIGINAL SUBMISSION
11.	SOIL EROSION AND SEDIMENT CONTROL DETAILS	ORIGINAL SUBMISSION
12.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION
13.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION
14.	CONSTRUCTION DETAILS	ORIGINAL SUBMISSION
15.	STEEP SLOPES PLAN	ORIGINAL SUBMISSION

REFERENCE MERIDIAN N.J.S.P.C.S. NAD 1983

LEGEND

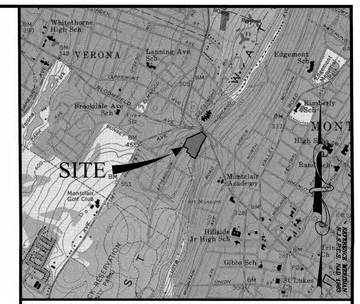
- BOUNDARY LINE
- LOT LINE
- 4 — LOT NUMBER
- 874 (874) — BLOCK NUMBER
- ZONE BOUNDARY
- A-1RA — ZONE DESIGNATION
- 200' ADJOINER LINE
- P.I.Q. — PROPERTY IN QUESTION
- PROJECT LOCATION



KEY MAP

100 75 50 25 0 100 200 300

GRAPHIC SCALE
1 inch=100 feet



LOCATION MAP
USGS QUAD MAPS- ORANGE

2000 1000 0 2000 4000 6000

GRAPHIC SCALE
1 inch = 2,000 feet

NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
2. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED 'BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR, ESSEX COUNTY, NEW JERSEY', PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. THE PROPOSED BUILDING IS TO BE LOCATED WITHIN THE TOWNSHIP OF VERONA AND THESE SITE PLANS ARE BEING PREPARED IN ACCORDANCE WITH THE TOWNSHIP OF VERONA'S SUNSET AVENUE REDEVELOPMENT PLAN (ZONE A–1RA).
6. THIS PROJECT PROPOSED THE CONSTRUCTION OF ONE (1) RESIDENTIAL BUILDING WHICH CONSISTS OF 200 RESIDENTIAL UNITS, AMENITY SPACE, AN OFF–STREET PARKING GARAGE AND ASSOCIATED INFRASTRUCTURE. THE PROPOSED USE IS PERMITTED WITHIN THE SUNSET AVENUE REDEVELOPMENT PLAN.
7. REFER TO ARCHITECTURAL PLANS FOR FINAL BUILDING ELEVATIONS, FLOOR PLANS, EXTERIOR BUILDING AND SITE ID SIGNAGE, AND UTILITY CONNECTIONS.
8. REFER TO LANDSCAPE ARCHITECTURAL PLANS BY LINDA TYCHER & ASSOCIATES, INC. FOR FINAL LANDSCAPE/HARDSCAPE DESIGNS AND COURTYARD AREA GRADING AND DRAINAGE.
9. 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.
10. PLANS ARE NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE SIGNED PROFESSIONAL.
11. CENTER OF SITE COORDINATES: 725,069.8 N, 567,063.4 E NJ STATE PLANE COORDINATES.
12. THESE PLANS HAVE BEEN PREPARED FOR THE PURPOSE OF PRELIMINARY AND 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 CONDITIONS OF THE APPROVALS HAVE BEEN SATISFIED.
13. NO WETLANDS OR WETLAND TRANSITION AREAS EXIST ON–SITE. MATRIX NEW WORLD HAS REVIEWED NJDEP GIS MAPPING AND INSPECTED THE SITE TO CONFIRM.
14. APPLICANT
VERONA SUNSET URBAN RENEWAL, LLC
16 MICROLAB ROAD, SUITE A
LIVINGSTON, NJ 07039
15. OWNER
SPECTRUM360
1 SUNSET AVENUE
VERONA, NJ 07044

BULK STANDARDS FOR SUNSET AVENUE REDEVELOPMENT PLAN (ZONE A-1RA)				
PRINCIPAL BUILDING	REQUIRED	EXISTING	PROPOSED	VARIANCE (Y/N)
MIN. LOT AREA (FULL SITE)	5.0 ACRES	7.98 ACRES	7.98 ACRES	N
MIN. LOT AREA (VERONA– LOT 4)	5.0 ACRES	5.06 ACRES PER TAX MAPS	5.06 ACRES PER TAX MAPS	N
MIN. SETBACK TO PRINCIPAL STRUCTURE				
FRONT YARD	50 FEET	247.7 FEET	51.0 FEET	N
SIDE YARD (ANY SIDE)	50 FEET	142.8 FEET	51.8 FEET	N
REAR YARD	50 FEET	87.3 FEET	58.7 FEET	N
MUNICIPAL BOUNDARY*	0 FEET	NA	1.0 FEET	N
MAX. RESIDENTIAL DENSITY/ACRE	NA	NA	NA	N
MAX. DWELLING UNITS/ACRE	NA	NA	NA	N
MAX. DWELLING UNITS	200 UNITS	NA	200 UNITS	N
MAX. (IMPROVED) LOT COVERAGE (FULL SITE)	75%	27.95%	40.64%	N
MAX. (IMPROVED) LOT COVERAGE (VERONA LOT 4)	75%	≤ 75%	64.09%	N
MAX. BUILDING HEIGHT**	60 FEET	≤ 60 FEET	SECTION 1 = 43.75 FEET SECTION 2 = 46.08 FEET SECTION 3 = 60.00 FEET	N
MIN. LANDSCAPE BUFFER	30 FEET	NA	≥ 30 FEET	N
MAX. SIGN SURFACE AREA (PER REDEVELOPMENT PLAN)	28 SF PER SIDE (52 SF TOTAL)	NA	26 SF AND 4 SF	N
MAX. NUMBER OF SIGNS PER LOCATION (PER VERONA ZONING § 150–7.9.U.)	2 SIGNS PER LOCATION	NA	1 WALL MOUNTED SIGN AND 1 DIRECTORY SIGN	N

* NO SETBACK IS REQUIRED FROM A MUNICIPAL BOUNDARY.
** HEIGHT–BUILDING SHALL BE DEFINED AS THE VERTICAL DISTANCE MEASURED FROM THE AVERAGE GROUND ELEVATION OF THE FINISHED BUILT OUT GRADE (AFTER BUILDING CONSTRUCTION) AT THE BUILDING LINE AROUND THE MECHANICAL EQUIPMENT–INCLUDING, HVAC, PARAPET WALL (WHICH SHALL NOT BE HIGHER THAN 48 INCHES AND SHALL NOT BE BUILD WHEN A PITCHED ROOF IS BEING PROPOSED), ELEVATOR TOWER AND FLAGPOLE.

DESIGN WAIVER REQUESTED:

1. FROM TOWNSHIP OF VERONA CHECK LIST FOR SITE PLAN APPLICATION ITEM H19. TO ALLOW FOR SITE PLAN SHEET SIZE OF 30"X42".

PARKING REQUIREMENTS (PER SUNSET AVENUE REDEVELOPMENT PLAN)				
UNIT TYPE	NUMBER OF UNITS	STANDARD	SPACES REQUIRED	SPACES PROPOSED
ONE BEDROOM	92	1.9 SPACES/UNIT	175	
TWO BEDROOM	105	1.9 SPACES/UNIT	200	
THREE BEDROOM	3	1.9 SPACES/UNIT	6	
TOTAL	200		381	382

PARKING REQUIREMENT NOTES:

1. THE PARKING REQUIREMENT IS MET FOR BOTH THE SUNSET AVENUE REDEVELOPMENT PLAN AND PER THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (REQUIRED 381.9 PER RSIS).
2. 8 ADA ACCESSIBLE SPACES REQUIRED PER ADA STANDARDS (FOR PARKING GARAGE 300–400 SPACES TOTAL SPACES ARE 8 SPACES). WITHIN THE GARAGE, 8 ADA SPACES ARE PROPOSED, WITH 2 VAN ACCESSIBLE SPACES.
3. THERE ARE A TOTAL OF 373 SPACES BEING PROPOSED WITHIN THE PARKING GARAGE AND ANOTHER 9 SPACES BEING PROVIDED VIA SURFACE PARKING. THERE IS 1 ADA SPACE WITHIN THE SURFACE PARKING LOT WHICH IS VAN ACCESSIBLE.
4. PER NEW JERSEY STATE DCA MODEL STATEWIDE MUNICIPAL EV ORDINANCE, THIS PROJECT IS PROPOSING THAT 15% (58 SPACES) OF THE PARKING STALLS WITHIN THE PARKING DECK WILL HAVE EV CHARGING STATIONS PROVIDED TO THE RESIDENTS. AS PER THE EV ORDINANCE, THE DEVELOPER SHALL INSTALL EVSE IN AT LEAST ONE–THIRD OF THE 15 PERCENT OF MAKE–READY PARKING SPACES; WITHIN THREE YEARS FOLLOWING THE DATE OF THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, INSTALL EVSE IN AN ADDITIONAL ONE–THIRD OF THE ORIGINAL 15 PERCENT OF MAKE–READY PARKING SPACES; AND WITHIN SIX YEARS FOLLOWING THE DATE OF THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, INSTALL EVSE IN THE FINAL ONE–THIRD OF THE ORIGINAL 15 PERCENT OF MAKE–READY PARKING SPACES.

APPROVED BY THE
TOWNSHIP OF VERONA
PLANNING BOARD

CHAIRPERSON DATE

BOARD SECRETARY DATE

PLANNING BOARD ENGINEER DATE

TOWNSHIP CLERK DATE

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

REVISIONS

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:

DESIGNED BY: AK
REVIEWED BY: AK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04651600
12/14/21
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Certified NJBE
Tel: 732-568-2999
Fax: 973-240-1818
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27963500

TITLE SHEET

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 -
TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: AS SHOWN

SHEET 1 OF 15

Plotted: 12/13/2021 8:25 AM, By: Chris Russo
© MATRIXNEWORLD\Matrix LDS\Jobs\BNE Real Estate Group\19-720 - Verona Site\Dwg\Plot Sheets\01-Title.dwg\01-Title



LEGEND

BOUNDARY LINE	x 56.00	SPOT ELEVATION	USHALB	SOIL TYPE
BLOCK LINE	G 56.00	BOTTOM OF CURB		SOIL BOUNDARY
EXISTING ROW	TC 105.17	TOP OF CURB	SB-1	SOIL BORING
LOT LINE	GR 104.50	GRATE ELEVATION	TP-1	TEST PIT
CURB LINE (Face of Curb)		GENERAL SIGN	UK	UNKNOWN VALVE
DEPRESSED CURB (Depressed Curb)		STREET SIGN		DECIDUOUS TREE
EDGE OF PAVEMENT	MB	MAIL BOX		EVERGREEN TREE
FENCE		FIRE HYDRANT		
STORM DRAIN	W	WATER VALVE		
SANITARY SEWER	WM	WATER METER		
GUIDE RAIL		MONITOR WELL		
UNDERGROUND ELECTRIC LINE	G	GAS VALVE		
OVER HEAD WIRE	GM	GAS METER		
UNDERGROUND TELEPHONE	CO	SANITARY CLEAN OUT		
UNDERGROUND CABLE TELEVISION		SANITARY MANHOLE		
GAS LINE		STORM DRAINAGE INLET		
WATER LINE		STORM DRAINAGE MANHOLE		
TREE LINE		UTILITY POLE		
CONTOURS MINOR		GUY ANCHOR		
CONTOURS MAJOR		LIGHT POLE		
		SINGLE HEAD LAMP		

GRAPHIC SCALE
1 inch=40 feet
(40 30 20 10 0 40 80 120)

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

SURVEY MAP REFERENCES:

1. "SURVEY OF PROPERTY SITUATED IN THE BOROUGH OF VERONA AND THE TOWN OF MONTCLAIR, ESSEX COUNTY, NEW JERSEY. DESCRIBED AS LOT 4 BLOCK 13 ON THE TAX MAP OF VERONA, N.J. AND LOTS 5 BLOCK 301 & LOT 1 BLOCK 401 ON THE TAX MAP OF MONTCLAIR, N.J. ALSO KNOWN AS No. 1 SUNSET AVENUE", PREPARED BY DECKER & CORIELL, INC., DATED OCTOBER 15, 2000.
2. "THE CHILDREN'S INSTITUTE SITUATED IN TOWNSHIP OF VERONA/TOWNSHIP OF MONTCLAIR ESSEX COUNTY, NEW JERSEY EXISTING CONDITIONS MAP", PREPARED BY HENDERSON AND BODWELL, L.L.P CONSULTING ENGINEERS, DATED MAY 24, 2006 , LAST REVISED JANUARY 29, 2007.

OVERALL EXISTING CONDITIONS NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
2. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED 'BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR ESSEX COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. 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.
7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES THAT CONSTRUCTION OF THE WORK UNDER THIS PLAN WILL PASS THROUGH AREAS WHERE THEIR SERVICES EXIST. NOTIFICATION TO THE UTILITIES MUST BE MADE IN A SUFFICIENT AMOUNT OF TIME IN ADVANCE (MIN. 72 HOURS) PRIOR TO START OF ANY CONSTRUCTION WORK IN THE AFFECTED AREAS.
8. ALL UTILITY SERVICES TO EXISTING RESIDENTIAL AND COMMERCIAL BUILDINGS ADJACENT TO THE PROJECT, THAT ARE TO REMAIN, WILL BE MAINTAINED DURING SITE CONSTRUCTION UNTIL THE REPLACEMENT UTILITIES ARE FULLY OPERATIONAL AND ACCEPTED BY THE APPROPRIATE AUTHORITY. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO THE BUILDING OWNERS OF ANY TEMPORARY INTERRUPTIONS OF SERVICES. TEMPORARY INTERRUPTIONS MAY BE NEEDED TO CONNECT THE EXISTING SERVICES TO THE NEWLY CONSTRUCTED UTILITIES AND TO TEST THE NEW UTILITIES.
9. 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 AND TO PROVIDE PERIMETER CHAIN LINK FENCING (MIN. 6' HIGH) AND SILT FENCING (MIN. 3' HIGH) FOR THE DURATION OF THE DEMOLITION PROJECT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CONSTRUCTION ENTRANCE WITH A SOIL DECONTAMINATION STATION AND MAINTAINING SITE SECURITY. AN APPROVED SOIL EROSION & SEDIMENT CONTROL PLAN WILL BE PROVIDED UPON REQUEST.

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:
	REVISIONS				

DESIGNED BY: GK
REVIEWED BY: GK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

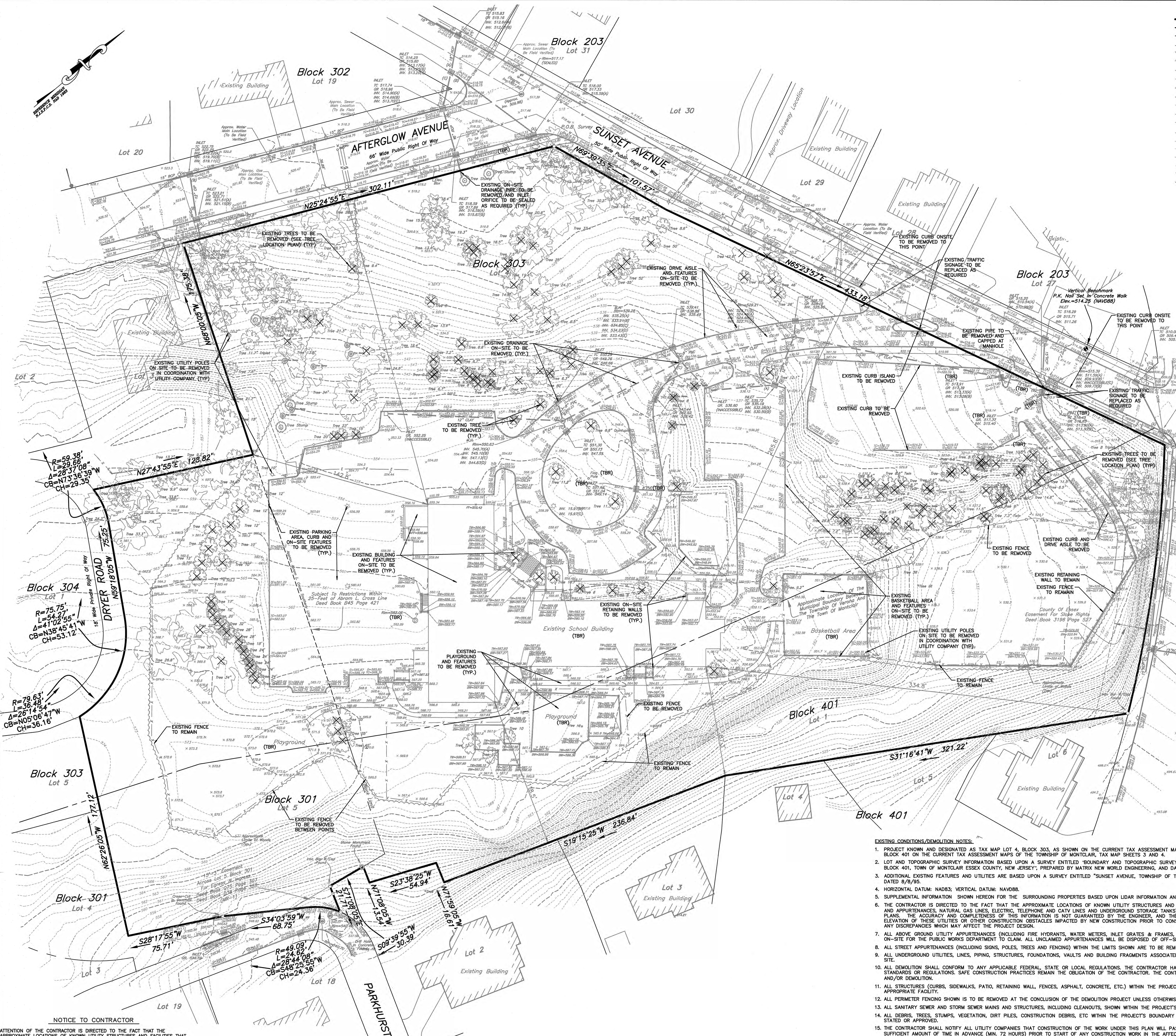
MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Certified WBE
Tel: 732-588-2999
Fax: 973-240-1818
www.matrixneworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27962300

OVERALL EXISTING CONDITIONS PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: 1" = 40'

Plotted: 12/13/2021 8:26 AM, By: Chris Russo
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LEGEND

- BOUNDARY LINE
- BLOCK LINE
- EXISTING ROW
- LOT LINE
- CURB LINE (Face of Curb)
- DEPRESSED CURB (Depressed Curb)
- EDGE OF PAVEMENT
- FENCE
- STORM DRAIN
- SANITARY SEWER
- GUIDE RAIL
- UNDERGROUND ELECTRIC LINE
- OVER HEAD WIRE
- UNDERGROUND TELEPHONE
- UNDERGROUND CABLE TELEVISION
- GAS LINE
- WATER LINE
- TREE LINE
- CONTOURS MINOR
- CONTOURS MAJOR
- x 56.00 SPOT ELEVATION
- G 56.00 BOTTOM OF CURB
- TC 105.17 TOP OF CURB
- GR 104.50 GRATE ELEVATION
- GENERAL SIGN
- STREET SIGN
- MB MAIL BOX
- FIRE HYDRANT
- W WATER VALVE
- WM WATER METER
- MONITOR WELL
- G GAS VALVE
- GM GAS METER
- CO SANITARY CLEAN OUT
- S SANITARY MANHOLE
- STORM DRAINAGE INLET
- D STORM DRAINAGE MANHOLE
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SINGLE HEAD LAMP
- UK UNKNOWN VALVE
- DECIDUOUS TREE
- EVERGREEN TREE
- PROPOSED CAPPED UTILITY
- (TBR) TO BE REMOVED
- X TREE TO BE REMOVED

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

EXISTING CONDITIONS/DEMOLITION NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
2. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED 'BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR ESSEX COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. 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.
7. ALL ABOVE GROUND UTILITY APPURTENANCES (INCLUDING FIRE HYDRANTS, WATER METERS, INLET GRATES & FRAMES, MANHOLE COVERS & FRAMES) WITHIN THE PROJECT'S BOUNDARY ARE TO BE REMOVED AND PLACED ON-SITE FOR THE PUBLIC WORKS DEPARTMENT TO CLAIM. ALL UNCLAIMED APPURTENANCES WILL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT AN APPROPRIATE DISPOSAL FACILITY.
8. ALL STREET APPURTENANCES (INCLUDING SIGNS, POLES, TREES AND FENCING) WITHIN THE LIMITS SHOWN ARE TO BE REMOVED AND DISPOSED OFF-SITE UNLESS OTHERWISE NOTED.
9. 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.
10. ALL DEMOLITION SHALL CONFORM TO ANY APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND WILL 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 ABANDONMENT AND/OR DEMOLITION.
11. ALL STRUCTURES (CURBS, SIDEWALKS, PATIO, RETAINING WALL, FENCES, ASPHALT, CONCRETE, ETC.) WITHIN THE PROJECT'S BOUNDARY WITHIN THE TOWNSHIP OF VERONA SHALL BE REMOVED AND DISPOSED OFF-SITE AT AN APPROPRIATE FACILITY.
12. ALL PERIMETER FENCING SHOWN IS TO BE REMOVED AT THE CONCLUSION OF THE DEMOLITION PROJECT UNLESS OTHERWISE STATED.
13. ALL SANITARY SEWER AND STORM SEWER MAINS AND STRUCTURES, INCLUDING CLEANOUTS, SHOWN WITHIN THE PROJECT'S BOUNDARY SHALL BE REMOVED AND DISPOSED OF OFF-SITE AT AN APPROPRIATE DISPOSAL FACILITY.
14. ALL DEBRIS, TREES, STUMPS, VEGETATION, DIRT PILES, CONSTRUCTION DEBRIS, ETC WITHIN THE PROJECT'S BOUNDARY SHALL BE REMOVED AS PART OF THIS PROJECT AND BE DISPOSED OF OFF-SITE UNLESS OTHERWISE STATED OR APPROVED.
15. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES THAT CONSTRUCTION OF THE WORK UNDER THIS PLAN WILL PASS THROUGH AREAS WHERE THEIR SERVICES EXIST. NOTIFICATION TO THE UTILITIES MUST BE MADE IN A SUFFICIENT AMOUNT OF TIME IN ADVANCE (MIN. 72 HOURS) PRIOR TO START OF ANY CONSTRUCTION WORK IN THE AFFECTED AREAS.
16. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR BACKFILL AND COMPACTION CERTIFICATION.
17. ALL UTILITY SERVICES TO EXISTING RESIDENTIAL AND COMMERCIAL BUILDINGS ADJACENT TO THE PROJECT, THAT ARE TO REMAIN, WILL BE MAINTAINED DURING SITE CONSTRUCTION UNTIL THE REPLACEMENT UTILITIES ARE FULLY OPERATIONAL AND ACCEPTED BY THE APPROPRIATE AUTHORITY. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE TO THE BUILDING OWNERS OF ANY TEMPORARY INTERRUPTIONS OF SERVICES. TEMPORARY INTERRUPTIONS MAY BE NEEDED TO CONNECT THE EXISTING SERVICES TO THE NEWLY CONSTRUCTED UTILITIES AND TO TEST THE NEW UTILITIES.
18. 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 AND TO PROVIDE PERIMETER CHAIN LINK FENCING (MIN. 6' HIGH) AND SILT FENCING (MIN. 3' HIGH) FOR THE DURATION OF THE DEMOLITION PROJECT. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CONSTRUCTION ENTRANCE WITH A SOIL DECONTAMINATION STATION AND MAINTAINING SITE SECURITY. AN APPROVED SOIL EROSION & SEDIMENT CONTROL PLAN WILL BE PROVIDED UPON REQUEST.
19. ALL SUITABLE MATERIAL SHALL BE CRUSHED AND STOCKPILED ON SITE. MATERIAL SHALL BE SEPARATED FROM SITE BY STOCKPILING ON 3MM CLEAR PLASTIC. MATERIAL TO BE CRUSHED TO SPECIFICATION PROVIDED BY GEOTECHNICAL ENGINEER FOR STRUCTURAL FILL.

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:

REVISIONS

DESIGNED BY: CTK
REVIEWED BY: CTK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

MATRIX NEW WORLD
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NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27962300

DEMOLITION PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER:	19-720
DATE:	12/10/21
SCALE:	1" = 30'

Plotted: 12/13/2021 8:28 AM, By: Chris Russo
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Date: 08/11/2021

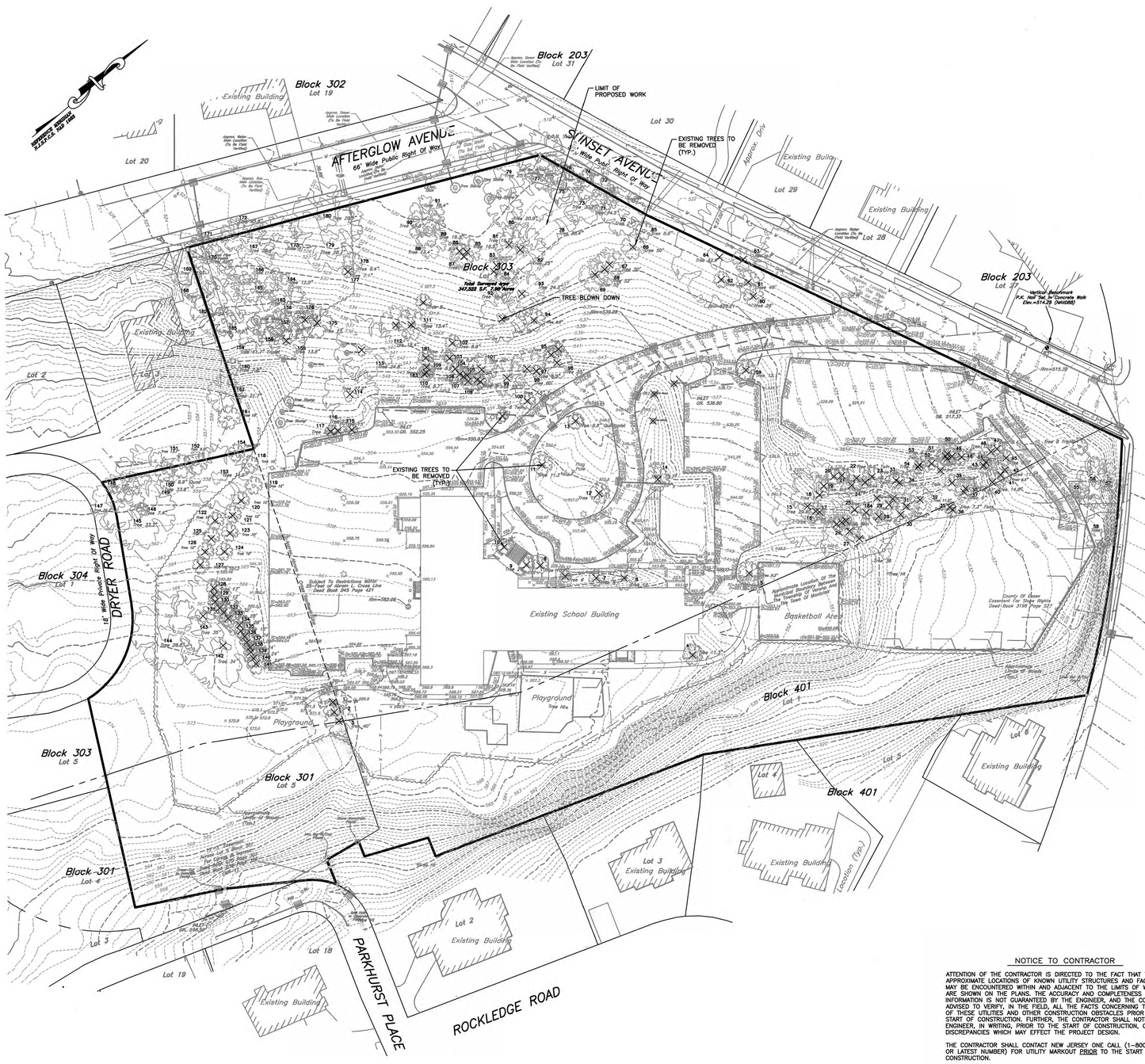
TREE NUMBER	CALIPER	HEIGHT	SPECIES	TREE TO REMAIN OR REMOVED	NUMBER OF TREES TO BE REPLACED	CALIPER OF TREE TO BE REPLACED IN INCHES
1		35'	Hemlock	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
2		35'	Hemlock	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
3		40'	Hemlock	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
4	11.3"		Pear	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
5	9.2"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
6	15"		Flowering Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
7	11.5"		Flowering Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
8	10.7"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
9		26'	Blue Spruce	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
10		26'	Blue Spruce	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
11	11.2"		Crimson King Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
12	11.3"		Crimson King Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
13	6.8"		Magnolia	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
14	15.7"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
15	29.8"		White Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
16	7.2"		Norway Maple Triple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
17	7.2"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
18	27"		White Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
19	6.3"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
20	8.4"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
21		26'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
22	8.6"		Norway Maple twin	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
23	8.7"		Norway Maple twin	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
24	11.6"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
25	6.6"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
26	9.3"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
27	28.2"		Red Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
28	6.2"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
29	6.7"		Red Oak	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
30	8.1"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
31	10"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
32	11.5"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
33	7.2"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
34	9.1"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
35	6.7"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
36	7.3"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
37	9"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
38	8.7"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
39	6.8"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
40	14.8"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
41	6.5"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
42	11.5"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
43	7.4"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
44	6"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
45	8.2"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
46	10.5"		Little Leaf Linden	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
47	6.4"		Hackberry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
48	6.3"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
49	7.8"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
50	13"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
51	8.7"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
52	6.3"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
53	6.5"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
54	10.5"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
55	31.8"		Pin Oak	TO REMAIN	0	N/A
56	16.9"		Pin Oak	TO REMAIN	0	N/A
57	22.9"		Red Oak	TO REMAIN	0	N/A
58	10.7"		Honey Locust	TO REMAIN	0	N/A
59	12.1"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
60		26'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
61		46'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
62		32'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
63	10.2"		Norway Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
64	42.6"		Red Oak Twin	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
65	8.6"		Green Ash	TO REMAIN	0	N/A
66		50'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
67		50'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
68		52'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
69		55'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
70	24"		Red Oak	TO REMAIN	0	N/A
71	14.5"		Dead Ash	TO REMAIN	0	N/A
72	19.5"		Red Oak	TO REMAIN	0	N/A
73	30.2"		Red Oak	TO REMAIN	0	N/A
74	8.1"		Elm	TO REMAIN	0	N/A
75	20.6"		Red Oak	TO REMAIN	0	N/A
76	12.7"		Red Oak	TO REMAIN	0	N/A
77	24.8"		Green Ash	TO REMAIN	0	N/A
78	33.4"		Red Oak	TO REMAIN	0	N/A
79	25.7"		Red Maple	TO REMAIN	0	N/A
80	20.8"		Red Oak	TO REMAIN	0	N/A
81	19.7"		Red Maple	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
82	25"		Red Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
83	7.5"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
84	11.4"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
85	16.5"		Red Maple	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
86	8.4"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
87	12.9"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
88	13.4"		Red Maple	TO REMAIN	0	N/A
89	19.3"		Red Maple	TO REMAIN	0	N/A
90	15.8"		Red Maple	TO REMAIN	0	N/A
91	18.4"		Red Oak	TO REMAIN	0	N/A
92	14.8"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
93	24.3"		Red Maple	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
94	6.5"		Dogwood	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
95	7.2"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
96		55'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
97	6.3"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
98		60'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
99		55'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
100	7.5"		Flowering Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
101		40'	Scrub Pine	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
102	8.8"		Box Elder	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
103	6.7"		Box Elder	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
104	6.3"		Black Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
105	7.8"		Honey Locust	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
106	9.3"		Box Elder	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
107	8"		Black Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
108	6"		Black Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
109	8.6"		Black Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
110	6.7"		Box Elder	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
111	13.4"		White Ash	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
112	19.4"		Red Oak	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
113	24.8"		White Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
114	27.2"		White Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
115		23'	White Pine	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
116		23'	White Pine	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
117		20'	White Pine	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
118		10'	Norway Spruce	TO REMAIN	0	N/A
119		12'	Norway Spruce	TO REMAIN	0	N/A
120		12'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
121		12'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
122		10'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
123		10'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
124		10'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
125		12'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
126		12'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
127		10'	Norway Spruce	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
128		17'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
129		12'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
130		20'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
131		23'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
132		32'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
133		28'	Hemlock	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
134		28'	Hemlock	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
135		18'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
136		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
137		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
138		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
139		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
140		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
141		24'	Hemlock	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
142	34"		Gikgo	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
143	35"		Pin Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
144	26.8"		Gikgo	TO REMAIN	0	N/A
145	33.3"		Red Oak	TO REMAIN	0	N/A
146	7.4"		Green Ash	TO REMAIN	0	N/A
147	24.3"		White Oak	TO REMAIN	0	N/A
148	15"		Sugar Maple	TO REMAIN	0	N/A
149	33.8"		White Oak	TO REMAIN	0	N/A
150	9.9"		Red Maple	TO REMAIN	0	N/A
151	13.7"		Catalpa	TO REMAIN	0	N/A
152	9.2"		Norway Maple	TO REMAIN	0	N/A
153	34.6"		Red Oak	TO REMAIN	0	N/A
154	9.4"		Catalpa	TO REMAIN	0	N/A
155	13.8"		Green Ash	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
156	25.6"		Red Oak	TO REMAIN	0	N/A
157	8.7"		Sugar Maple	TO REMAIN	0	N/A
158	11.3"		Sugar Maple	TO REMAIN	0	N/A
159	11.7"		Red Maple	TO REMAIN	0	N/A
160	7.6"		Japanese Maple	TO REMAIN	0	N/A
161		15'	Yew	TO REMAIN	0	N/A
162	21.7"		Red Oak	TO REMAIN	0	N/A
163	21.6"		Chestnut Oak	TO REMAIN	0	N/A
164	11.2"		Red Maple	TO REMAIN	0	N/A
165	11.7"		Red Oak	TO REMAIN	0	N/A
166	11.6"		Red Maple	TO REMAIN	0	N/A
167	28.4"		Red Oak	TO REMAIN	0	N/A
168	23.6"		White Oak	TO REMAIN	0	N/A
169	22.9"		Chestnut Oak	TO REMAIN	0	N/A
170	6.9"		Chestnut Oak	TO REMAIN	0	N/A
171	13.3"		Red Oak	TO REMAIN	0	N/A
172	25.8"		White Oak	TO REMAIN	0	N/A
173	16.8"		Pignut Hickory	TO REMAIN	0	N/A
174	10.1"		Sugar Maple	TO REMAIN	0	N/A
175	21.3"		Chestnut Oak	TBR	2	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
176	26.8"		Red Oak	TBR	4	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
177	7.1"		Black Cherry	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
178	9.4"		Little Leaf Linden	TO REMAIN	0	N/A
179	28.7"		Red Oak	TO REMAIN	0	N/A
180	28.5"		Red Oak	TO REMAIN	0	N/A
181	7.2"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
182	24"		Red Oak	TO REMAIN	0	N/A
183	9.3"		Box Elder	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
184	6.3"		Red Maple	TBR	1	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
185	10.2"		Sugar Maple	TO REMAIN	0	N/A
				Total Trees Required To Be Replaced	184	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
				Total Flowering Trees To Be Planted At 2.5" Cal.	58	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
				Total Shade Trees To Be Planted At 3" Cal.	35	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
				Total Evergreen Trees To Be Planted At 8'-10' HT.	128	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer
				Total Trees Proposed on Landscape Plans	221	2" to 2 1/2" CAL Deciduous Tree or 5' HT. Conifer

TREE LOCATION AND REMOVAL NOTES:

1. TREE INVENTORY WAS PERFORMED BY MATRIX NEW WORLD ENGINEERING, LAND SURVEYING AND LANDSCAPE ARCHITECTURE, P.C. ON AUGUST 8TH AND 9TH, 2021.
2. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
3. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR, ESSEX COUNTY, NEW JERSEY"; PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
4. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
5. 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.
6. ONLY THE PLANTINGS/TREES SHOWN AS TO BE REMOVED WITHIN THIS PLAN SET SHALL BE REMOVED AND DISPOSED OF PER APPLICABLE REGULATIONS. IF ANY ADDITIONAL PLANTINGS/TREES ARE REQUIRED TO BE REMOVED DURING CONSTRUCTION, THE ENGINEER SHALL BE CONSULTED.
7. TREE PROTECTION TO BE INSTALLED PER LATEST HUDSON–ESSEX–PASSAIC SOIL EROSION AND SEDIMENT CONTROL STANDARD DETAILS.

LEGEND

- BOUNDARY LINE
- BLOCK LINE
- EXISTING ROW
- LOT LINE
- Face of Curb
- Depressed Curb
- CURB LINE
- DEPRESSED CURB
- EDGE OF PAVEMENT
- FENCE
- STORM DRAIN
- SANITARY SEWER
- GUIDE RAIL
- UNDERGROUND ELECTRIC LINE
- OVER HEAD WIRE
- UNDERGROUND TELEPHONE
- UNDERGROUND CABLE TELEVISION
- GAS LINE
- WATER LINE
- TREE LINE
- CONTOURS MINOR
- CONTOURS MAJOR
- LIMIT OF WORK
- SPOT ELEVATION
- BOTTOM OF CURB
- TOP OF CURB
- GRATE ELEVATION
- GENERAL SIGN
- STREET SIGN
- MAIL BOX
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- MONITOR WELL
- GAS VALVE
- GAS METER
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- STORM DRAINAGE INLET
- STORM DRAINAGE MANHOLE
- UTILITY POLE
- USHALB SOIL TYPE
- SOIL BOUNDARY
- SB-1 SOIL BORING
- TP-1 TEST PIT
- UNKNOWN VALVE
- TREE LESS THAN 6"
- EVERGREEN TREE
- PROPOSED CAPPED UTILITY
- (TBR) TO BE REMOVED
- GUY ANCHOR
- LIGHT POLE
- SINGLE HEAD LAMP
- TREE LESS THAN 6" TO BE REMOVED
- INVENTORIED TREE TO BE REMOVED
- INVENTORIED TREE
- TREE STUMP



TREE REMOVAL AND REPLACEMENT CALCULATIONS PER SECTION 493-26-A TREE REPLACEMENT	
CALIPER OF DECIDUOUS TREE	NUMBER OF TREE REPLACEMENTS AT 2" TO 2½" CAL
6" BUT LESS THAN 16" CAL.	1
16" BUT LESS THAN 24" CAL.	2
24" OR GREATER	4
HEIGHT OF EVERGREEN TREE	NUMBER OF TREE REPLACEMENTS AT 5' HT.
10' AND UNDER 25' IN HEIGHT	1
25' IN HEIGHT AND OVER	2

PROPOSED TREE REMOVAL AND REPLACEMENT CALCULATIONS TREES AT 2" TO 2½" CAL. DECIDUOUS TREE OR 5' HT. CONIFER	
TOTAL REQUIRED REPLACEMENT TREES AT 2" TO 2½" CAL. DECIDUOUS TREE OR 5' HT. CONIFER	**184**
TOTAL TREES TO BE INSTALLED PER LANDSCAPE PLAN	**TOTAL PROPOSED TREES: 203** TOTAL DECIDUOUS TREES TO BE INSTALLED AT 2" TO 2½" CAL (35) TOTAL DECIDUOUS TREES TO BE INSTALLED AT 3" CAL. (55) TOTAL CONIFER TREES TO BE INSTALLED AT 8'-10' HT. (113)
TOTAL TREES REQUIRED - TOTAL TREES TO BE INSTALLED =	**19 (SURPLUS)**

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

40 30 20 10 0 40 80 120

GRAPHIC SCALE
1 inch=40 feet

NO.	DESCRIPTION REVISIONS	DATE:	DES.:	REV.:	REL.:

DESIGNED BY: DB
REVIEWED BY:
RELEASED BY: WDR

WILLIAM D. REIMER, L.L.A.
PROFESSIONAL LANDSCAPE ARCHITECT
NEW JERSEY LICENSE NO. 21AS00061200

12/14/21
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Tel: 732-588-2599
Fax: 973-240-1818
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27982500

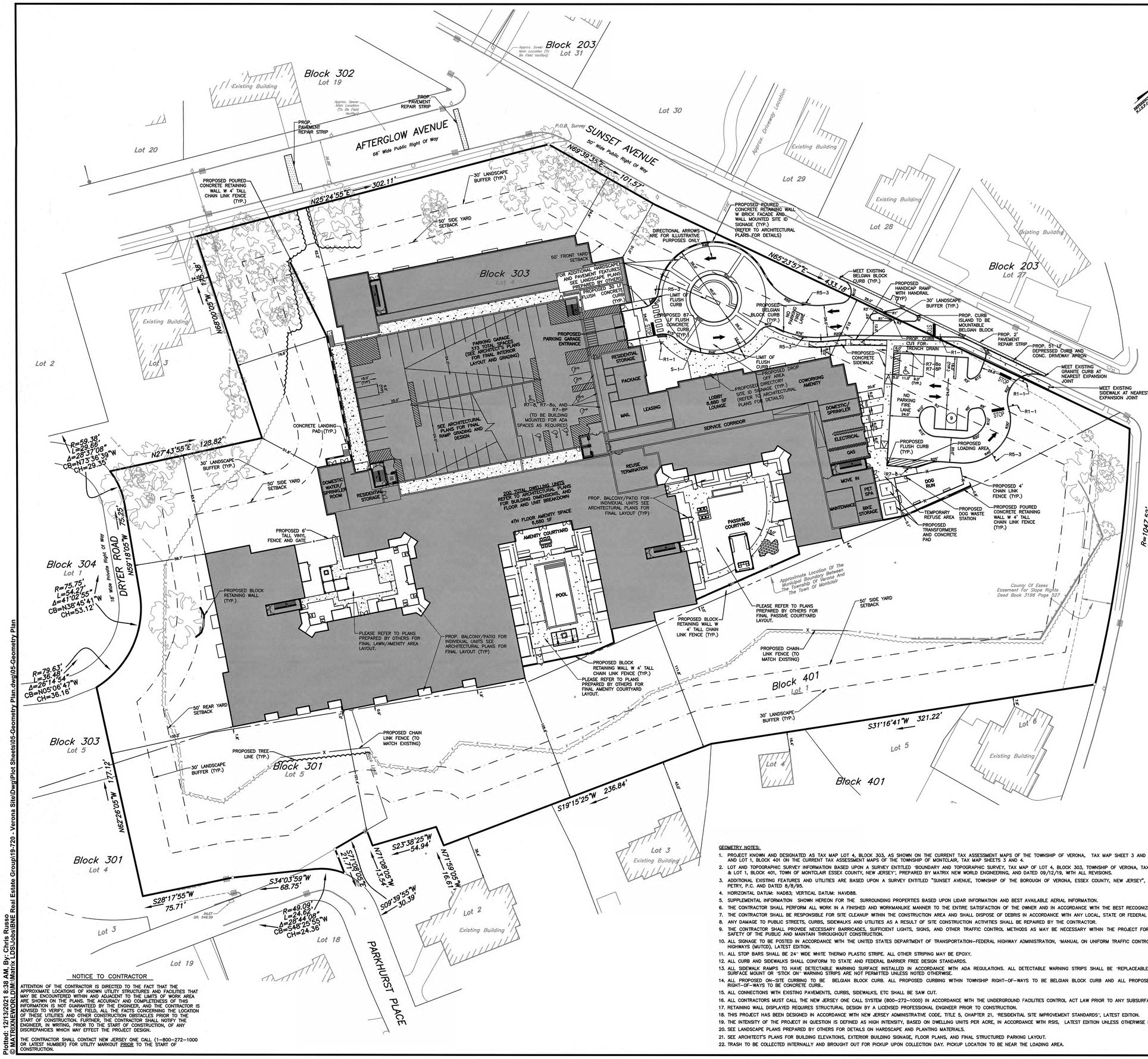
TREE LOCATION AND REMOVAL PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER:19-720
DATE: 12/10/21
SCALE: 1" = 40'

SHEET 4 OF 15

Plotted: 12/14/2021 9:18 AM, By: Dakota Broseau
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LEGEND

EXISTING	PROPOSED
BOUNDARY LINE	
LOT LINE	
SETBACK LINE	
CURB LINE	
DEPRESSED CURB	
EDGE OF PAVEMENT	
PAINT LINE	
CONCRETE	
FENCE	
GUIDE RAIL	
PARKING COUNT	
RETAINING WALL/BULKHEAD	
CURB RADIUS	R10'
HANDICAP RAMP (TYPE)	HCR#
POST SIGN	

EASEMENTS: DRAINAGE, SEWER, SIGHT, SLOPE, UTILITY, WATER, ACCESS

GEOMETRY NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
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3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. 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.
7. 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.
8. ANY DAMAGE TO PUBLIC STREETS, CURBS, SIDEWALKS AND UTILITIES AS A RESULT OF SITE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR.
9. 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.
10. 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.
11. ALL STOP BARS SHALL BE 24" WIDE WHITE THERMO PLASTIC STRIPE. ALL OTHER STRIPING MAY BE EPOXY.
12. ALL CURB AND SIDEWALKS SHALL CONFORM TO STATE AND FEDERAL BARRIER FREE DESIGN STANDARDS.
13. ALL SIDEWALK RAMPS 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.
14. ALL PROPOSED ON–SITE CURBING TO BE BELGIAN BLOCK CURB. ALL PROPOSED CURBING WITHIN TOWNSHIP RIGHT–OF–WAYS TO BE BELGIAN BLOCK CURB AND ALL PROPOSED CURBING WITHIN COUNTY RIGHT–OF–WAYS TO BE CONCRETE CURB.
15. ALL CONNECTIONS WITH EXISTING PAVEMENTS, CURBS, SIDEWALKS, ETC SHALL BE SAW CUT.
16. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (800–272–1000) IN ACCORDANCE WITH THE UNDERGROUND FACILITIES CONTROL ACT LAW PRIOR TO ANY SUBSURFACE ACTIVITY.
17. RETAINING WALL DISPLAYED REQUIRES STRUCTURAL DESIGN BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
18. THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH NEW JERSEY ADMINISTRATIVE CODE, TITLE 5, CHAPTER 21, "RESIDENTIAL SITE IMPROVEMENT STANDARDS", LATEST EDITION.
19. THE INTENSITY OF THE PROJECT IN QUESTION IS DEFINED AS HIGH INTENSITY, BASED ON DWELLING UNITS PER ACRE, IN ACCORDANCE WITH RSIS, LATEST EDITION UNLESS OTHERWISE NOTED.
20. SEE LANDSCAPE PLANS PREPARED BY OTHERS FOR DETAILS ON HARDSCAPE AND PLANTING MATERIALS.
21. SEE ARCHITECT'S PLANS FOR BUILDING ELEVATIONS, EXTERIOR BUILDING SIGNAGE, FLOOR PLANS, AND FINAL STRUCTURED PARKING LAYOUT.
22. TRASH TO BE COLLECTED INTERNALLY AND BROUGHT OUT FOR PICKUP UPON COLLECTION DAY. PICKUP LOCATION TO BE NEAR THE LOADING AREA.

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

GRAPHIC SCALE 1 inch=30 feet (30 20 10 0 30 60 90)

NO.	REVISIONS	DESCRIPTION	DATE:	DES.:	REV.:	REL.:

DESIGNED BY: LMT
REVIEWED BY: GF
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021 DATE

MATRIXNEWORLD
Engineering Progress
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www.matrixnewworld.com
Certified WBE
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27982300

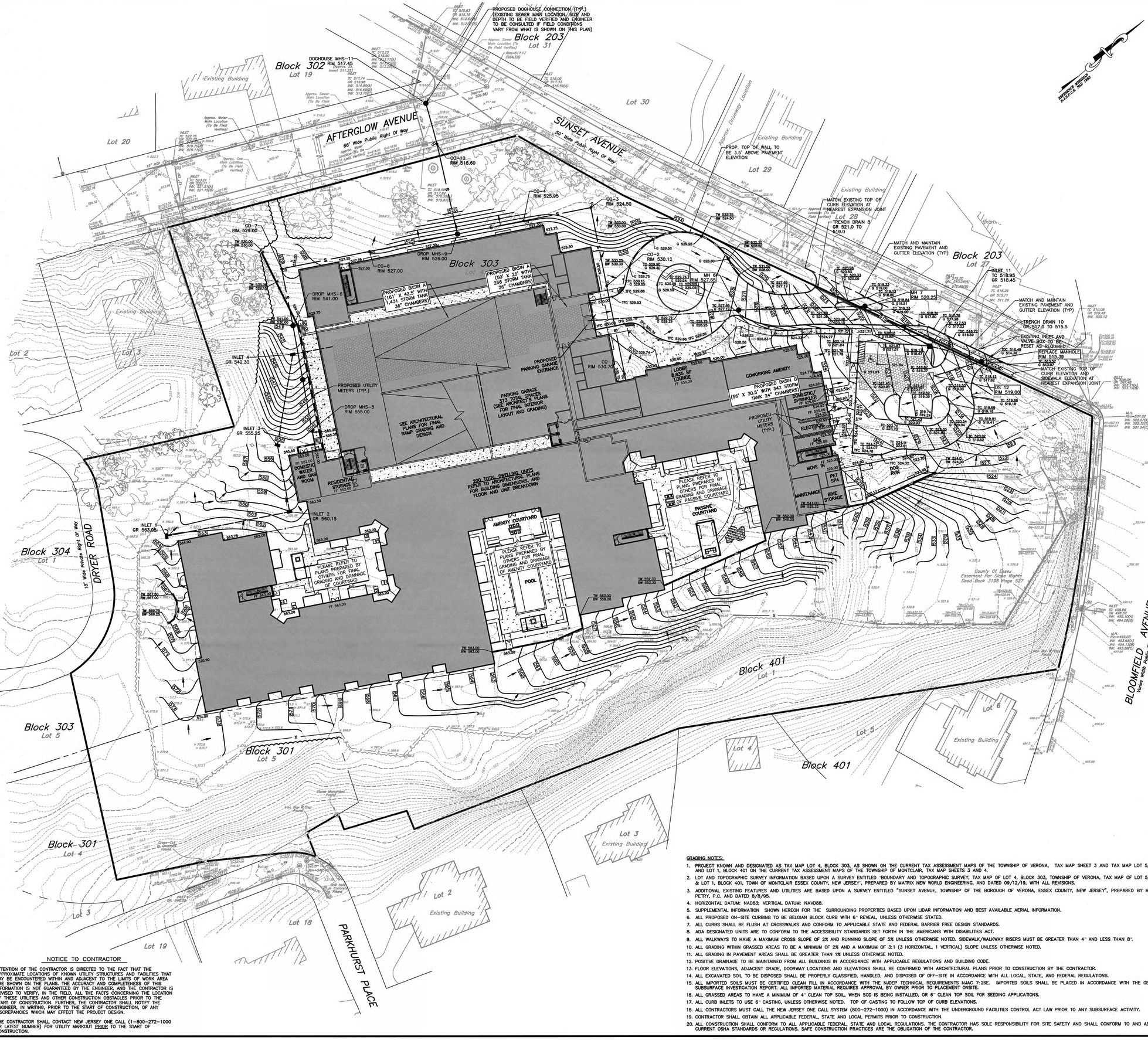
GEOMETRY PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: 1" = 30'

SHEET 5 OF 15

Plotted: 12/13/2021 8:38 AM, By: Chris Russo
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LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	LOT LINE	
	SETBACK LINE	
	CURB LINE	
	DEPRESSED CURB	
	EDGE OF PAVEMENT	
	PAINT LINE	
	CONCRETE	
x x	FENCE	x
	GUIDE RAIL	
	RETAINING WALL/BULKHEAD	
	TREE LINE	
	CONTOURS MINOR	2'
	CONTOURS MAJOR	10'
x 56.00	SPOT ELEVATION	x 56.00
	HIGH POINT ELEVATION	x HP 56.50
	LOW POINT ELEVATION	x LP 55.50
G 56.00	GUTTER ELEVATION	G 56.00
TC 105.17	TOP OF CURB ELEVATION	TC 105.17
GR 104.50	GRATE ELEVATION	GR 104.50
RIM 100.00	RIM ELEVATION	RIM 100.00
TW 100.00	TOP OF WALL	TW 100.00
BW 98.00	BOTTOM OF WALL	BW 98.00
BB 95.00	BOTTOM OF BLOCK	BB 95.00
FF 98.00	FINISHED FLOOR ELEV.	FF 95.00
GF 95.00	GARAGE FLOOR ELEV	GF 95.00
	DRAINAGE FLOW DIRECTION	
	STORM DRAIN	

EXISTING		PROPOSED
	INLET	
	DOUBLE INLETS	
	RECONSTRUCT INLET	
	RESET INLET	
	MANHOLE	
WM	RECONSTRUCT MANHOLE	WM
	RESET MANHOLE	
CO	CLEANOUT	CO
DS	DOWNSPOUT	DS
	ROOF DOWNSPOUT	GM
	SANITARY SEWER	S
	SANITARY CLEANOUT	CO
W	WATER MAIN	W
	WATER VALVE	
	WATER VALVE RESET	W
	WATER METER	
	FIRE HYDRANT	
G	GAS MAIN	G
	GAS VALVE	
	GAS VALVE RESET	G
	GAS METER	
T	TELEPHONE	T
CATV	CABLE TELEVISION	CATV
E	ELECTRIC CONDUIT	E
OH	OVER HEAD WIRE	OH
	UTILITY POLE	
	GUY ANCHOR	

GRADING NOTES:

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4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. ALL PROPOSED ON–SITE CURBING TO BE BELGIAN BLOCK CURB WITH 6" REVEAL, UNLESS OTHERWISE STATED.
7. ALL CURBS SHALL BE FLUSH AT CROSSWALKS AND CONFORM TO APPLICABLE STATE AND FEDERAL BARRIER FREE DESIGN STANDARDS.
8. ADA DESIGNATED UNITS ARE TO CONFORM TO THE ACCESSIBILITY STANDARDS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT.
9. ALL WALKWAYS TO HAVE A MAXIMUM CROSS SLOPE OF 2% AND RUNNING SLOPE OF 5% UNLESS OTHERWISE NOTED. SIDEWALK/WALKWAY RISERS MUST BE GREATER THAN 4" AND LESS THAN 8".
10. ALL GRADING WITHIN GRASSED AREAS TO BE A MINIMUM OF 2% AND A MAXIMUM OF 3:1 (3 HORIZONTAL, 1 VERTICAL) SLOPE UNLESS OTHERWISE NOTED.
11. ALL GRADING IN PAVEMENT AREAS SHALL BE GREATER THAN 1% UNLESS OTHERWISE NOTED.
12. POSITIVE DRAINAGE TO BE MAINTAINED FROM ALL BUILDINGS IN ACCORDANCE WITH APPLICABLE REGULATIONS AND BUILDING CODE.
13. FLOOR ELEVATIONS, ADJACENT GRADE, DOORWAY LOCATIONS AND ELEVATIONS SHALL BE CONFIRMED WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
14. 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.
15. ALL IMPORTED SOILS MUST BE CERTIFIED CLEAN FILL IN ACCORDANCE WITH THE NJDEP TECHNICAL REQUIREMENTS NJAC 7:26E. IMPORTED SOILS SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL SUBSURFACE INVESTIGATION REPORT. ALL IMPORTED MATERIAL REQUIRES APPROVAL BY OWNER PRIOR TO PLACEMENT ONSITE.
16. 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.
17. ALL CURB INLETS TO USE 6" CASTING, UNLESS OTHERWISE NOTED. TOP OF CASTING TO FOLLOW TOP OF CURB ELEVATIONS.
18. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (800–272–1000) IN ACCORDANCE WITH THE UNDERGROUND FACILITIES CONTROL ACT LAW PRIOR TO ANY SUBSURFACE ACTIVITY.
19. CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.
20. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND SHALL CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES ARE THE OBLIGATION OF THE CONTRACTOR.

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

GRAPHIC SCALE
30 20 10 0 30 60 90
1 inch=30 feet

NO.	DESCRIPTION	DATE	DES.	REV.	REL.
	REVISIONS				

DESIGNED BY: CJK
REVIEWED BY: CJK
RELEASED BY: STMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/10/21
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
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Certified WBE
Tel: 732-588-2999
Fax: 973-240-1818
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION NO. 24GA27982300

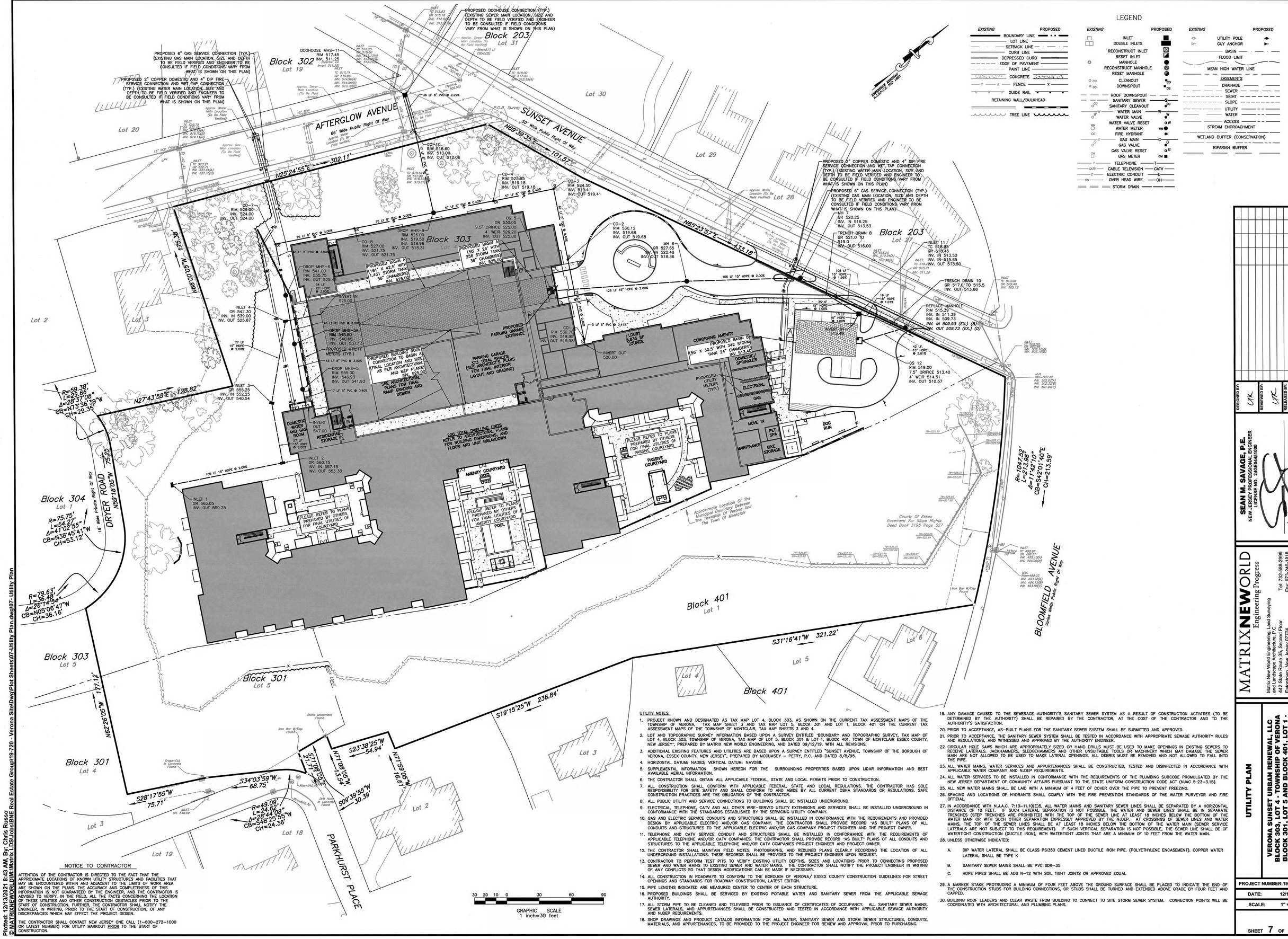
GRADING AND DRAINAGE PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: 1" = 30'

SHEET 6 OF 15

Plotted: 12/14/2021 10:59 AM, By: Chris Russo
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UTILITY NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
2. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR ESSEX COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS PRIOR TO CONSTRUCTION.
7. ALL CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR SITE SAFETY AND SHALL CONFORM TO AND ABIDE BY ALL CURRENT OSHA STANDARDS OR REGULATIONS. SAFE CONSTRUCTION PRACTICES ARE THE OBLIGATION OF THE CONTRACTOR.
8. ALL PUBLIC UTILITY AND SERVICE CONNECTIONS TO BUILDINGS SHALL BE INSTALLED UNDERGROUND.
9. ELECTRICAL, TELEPHONE, CATV AND ALL OTHER WIRE-SERVED UTILITY EXTENSIONS AND SERVICES SHALL BE INSTALLED UNDERGROUND IN CONFORMANCE WITH THE STANDARDS ESTABLISHED BY THE SERVICING UTILITY COMPANY.
10. GAS AND ELECTRIC SERVICE CONDUITS AND STRUCTURES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND PROVIDED DESIGN BY APPLICABLE ELECTRIC AND/OR GAS COMPANY. THE CONTRACTOR SHALL PROVIDE RECORD "AS BUILT" PLANS OF ALL CONDUITS AND STRUCTURES TO THE APPLICABLE ELECTRIC AND/OR GAS COMPANY PROJECT ENGINEER AND THE PROJECT OWNER.
11. TELEPHONE AND CATV SERVICE CONDUIT AND STRUCTURES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF APPLICABLE TELEPHONE AND/OR CATV COMPANIES. THE CONTRACTOR SHALL PROVIDE RECORD "AS BUILT" PLANS OF ALL CONDUITS AND STRUCTURES TO THE APPLICABLE TELEPHONE AND/OR CATV COMPANIES PROJECT ENGINEER AND PROJECT OWNER.
12. THE CONTRACTOR SHALL MAINTAIN FIELD NOTES, PHOTOGRAPHS, AND REDLINED PLANS CLEARLY RECORDING THE LOCATION OF ALL UNDERGROUND INSTALLATIONS. THESE RECORDS SHALL BE PROVIDED TO THE PROJECT ENGINEER UPON REQUEST.
13. CONTRACTOR TO PERFORM TEST PITS TO VERIFY EXISTING UTILITY DEPTHS, SIZES AND LOCATIONS PRIOR TO CONNECTING PROPOSED SEWER AND WATER MAINS TO EXISTING SEWER AND WATER MAINS. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ANY CONFLICTS SO THAT DESIGN MODIFICATIONS CAN BE MADE IF NECESSARY.
14. ALL CONSTRUCTION IN ROADWAYS TO CONFORM TO THE BOROUGH OF VERONA/ ESSEX COUNTY CONSTRUCTION GUIDELINES FOR STREET OPENINGS AND STANDARDS FOR ROADWAY CONSTRUCTION, LATEST EDITION.
15. PIPE LENGTHS INDICATED ARE MEASURED CENTER TO CENTER OF EACH STRUCTURE.
16. PROPOSED BUILDINGS SHALL BE SERVICED BY EXISTING POTABLE WATER AND SANITARY SEWER FROM THE APPLICABLE SEWAGE AUTHORITY.
17. ALL STORM PIPE TO BE CLEANED AND TELEVISED PRIOR TO ISSUANCE OF CERTIFICATES OF OCCUPANCY. ALL SANITARY SEWER MAINS, SEWER LATERALS, AND APPURTENANCES SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH APPLICABLE SEWAGE AUTHORITY AND NJDEP REQUIREMENTS.
18. SHOP DRAWINGS AND PRODUCT CATALOG INFORMATION FOR ALL WATER, SANITARY SEWER AND STORM SEWER STRUCTURES, CONDUITS, MATERIALS, AND APPURTENANCES, TO BE PROVIDED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PURCHASING.
19. ANY DAMAGE CAUSED TO THE SEWERAGE AUTHORITY'S SANITARY SEWER SYSTEM AS A RESULT OF CONSTRUCTION ACTIVITIES (TO BE DETERMINED BY THE AUTHORITY) SHALL BE REPAIRED BY THE CONTRACTOR, AT THE COST OF THE CONTRACTOR AND TO THE AUTHORITY'S SATISFACTION.
20. PRIOR TO ACCEPTANCE, AS-BUILT PLANS FOR THE SANITARY SEWER SYSTEM SHALL BE SUBMITTED AND APPROVED.
21. PRIOR TO ACCEPTANCE, THE SANITARY SEWER SYSTEM SHALL BE TESTED IN ACCORDANCE WITH APPROPRIATE SEWAGE AUTHORITY RULES AND REGULATIONS, AND WITNESSED AND APPROVED BY THE AUTHORITY ENGINEER.
22. CIRCULAR HOLE SAWS WHICH ARE APPROPRIATELY SIZED OR HAND DRILLS MUST BE USED TO MAKE OPENINGS IN EXISTING SEWERS TO RECEIVE LATERALS. JACKHAMMERS, SLEDGEHAMMERS AND OTHER UNSUITABLE TOOLS OR MACHINERY WHICH MAY DAMAGE THE SEWER MAIN ARE NOT ALLOWED TO BE USED TO MAKE LATERAL OPENINGS. ALL DEBRIS MUST BE REMOVED AND NOT ALLOWED TO FALL INTO THE PIPE.
23. ALL WATER MAINS, WATER SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED, TESTED AND DISINFECTED IN ACCORDANCE WITH APPLICABLE WATER COMPANY AND NJDEP REQUIREMENTS.
24. ALL WATER SERVICES TO BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF THE PLUMBING SUBCODE PROMULGATED BY THE NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS PURSUANT TO THE STATE UNIFORM CONSTRUCTION CODE ACT (NJAC 5:23-3.15).
25. ALL NEW WATER MAINS SHALL BE LAID WITH A MINIMUM OF 4 FEET OF COVER OVER THE PIPE TO PREVENT FREEZING.
26. SPACING AND LOCATIONS OF HYDRANTS SHALL COMPLY WITH THE FIRE PREVENTION STANDARDS OF THE WATER PURVEYOR AND FIRE OFFICIAL.
27. IN ACCORDANCE WITH N.J.A.C. 7:10-11.10(E)5, ALL WATER MAINS AND SANITARY SEWER LINES SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 10 FEET. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN OR WITH SUCH OTHER SEPARATION EXPRESSLY APPROVED BY THE NJDEP. AT CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER LINE SHALL BE OF WATERTIGHT CONSTRUCTION (DUCTILE IRON), WITH WATERTIGHT JOINTS THAT ARE A MINIMUM OF 10 FEET FROM THE WATER MAIN.
28. UNLESS OTHERWISE INDICATED:
    A. DIP WATER LATERAL SHALL BE CLASS PSI350 CEMENT LINED DUCTILE IRON PIPE. (POLYETHYLENE ENCASEMENT). COPPER WATER LATERAL SHALL BE TYPE K
    B. SANITARY SEWER MAINS SHALL BE PVC SDR-35
    C. HDPE PIPES SHALL BE ADS N-12 WITH SOIL TIGHT JOINTS OR APPROVED EQUAL
29. A MARKER STAKE PROTRUDING A MINIMUM OF FOUR FEET ABOVE THE GROUND SURFACE SHALL BE PLACED TO INDICATE THE END OF THE CONSTRUCTION STUBS FOR BUILDING CONNECTIONS, OR STUBS SHALL BE TURNED AND EXTENDED ABOVE GRADE BY FOUR FEET AND CAPPED.
30. BUILDING ROOF LEADERS AND CLEAR WASTE FROM BUILDING TO CONNECT TO SITE STORM SEWER SYSTEM. CONNECTION POINTS WILL BE COORDINATED WITH ARCHITECTURAL AND PLUMBING PLANS.

NO.	DESCRIPTION REVISIONS	DATE:	DES.:	REV.:	REL.:

DESIGNED BY: CJK
REVIEWED BY: JJK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/13/21
DATE

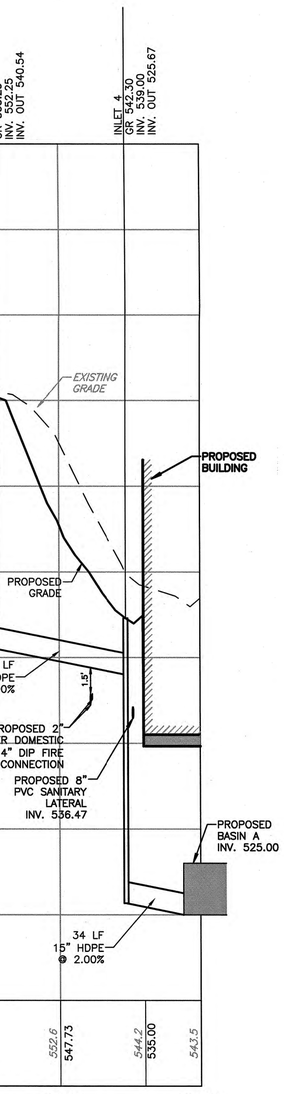
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UTILITY PLAN

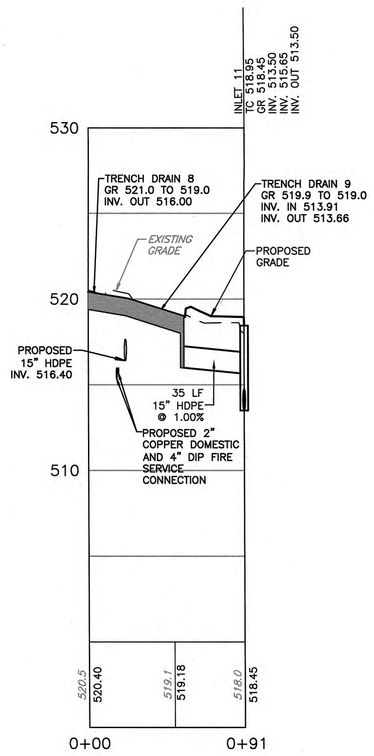
VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 -
TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: 1" = 30'
SHEET 7 OF 15

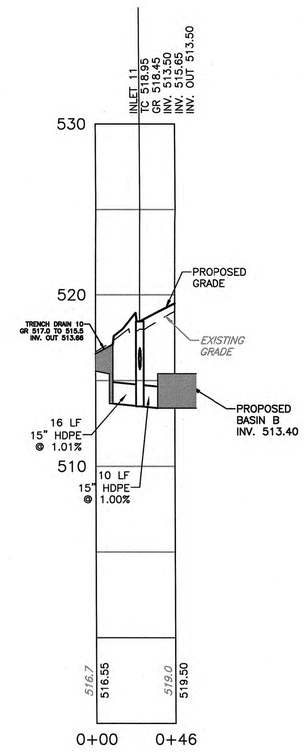
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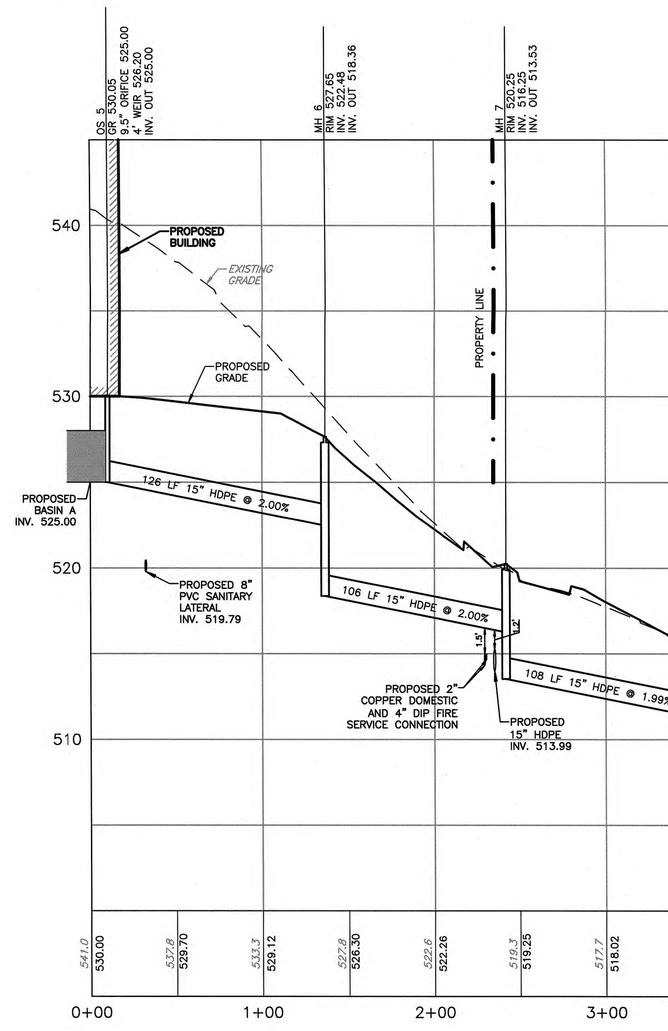
BASIN A



TRENCH DRAIN 8 TO INLET 11

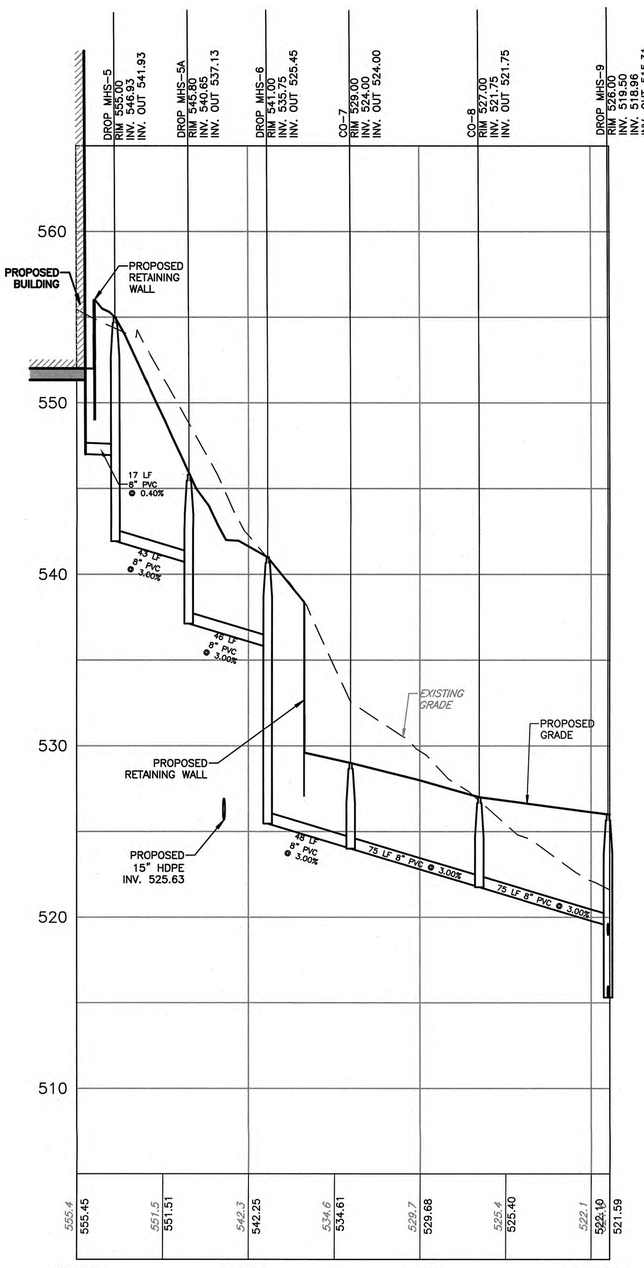


TRENCH DRAIN 10 TO BASIN B

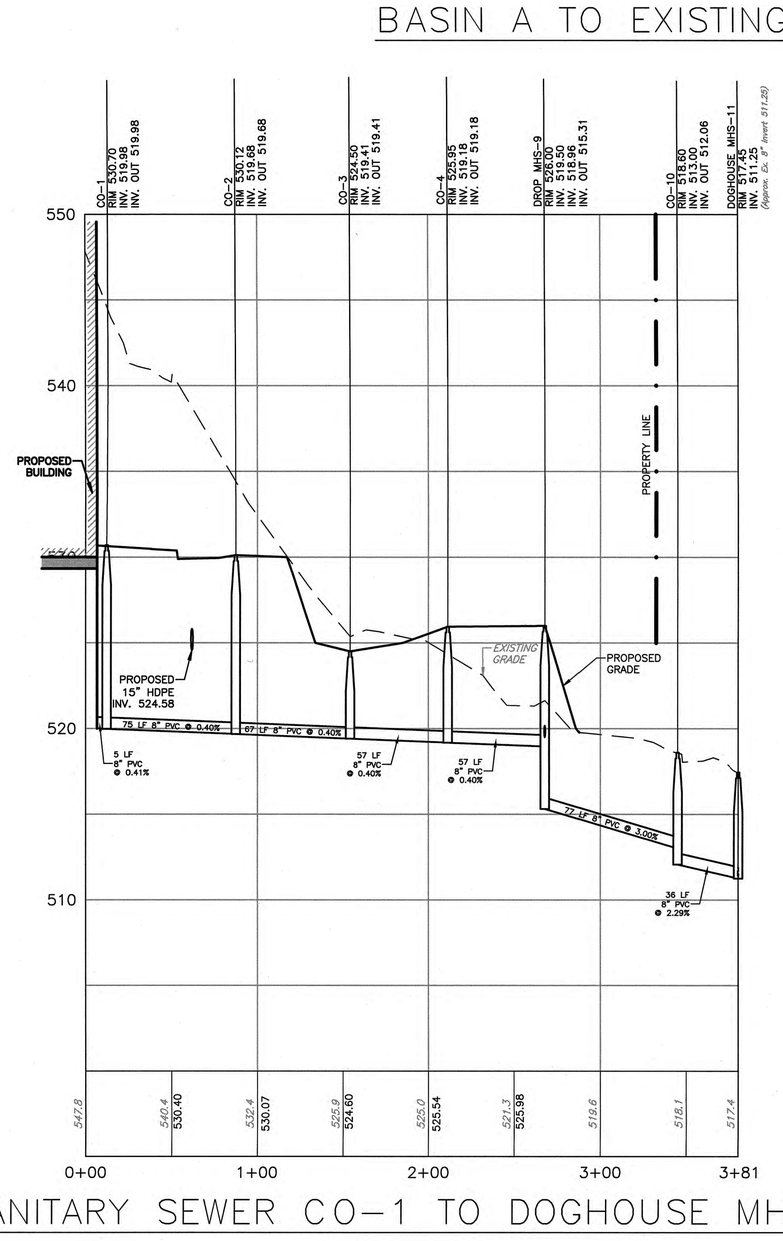


BASIN A TO EXISTING MANHOL

B TO EXISTING MANHOLE



SANITARY SEWER DROP MHS-5 TO DROP MHS-9



SANITARY SEWER CO-1 TO DOGHOUSE MH-11

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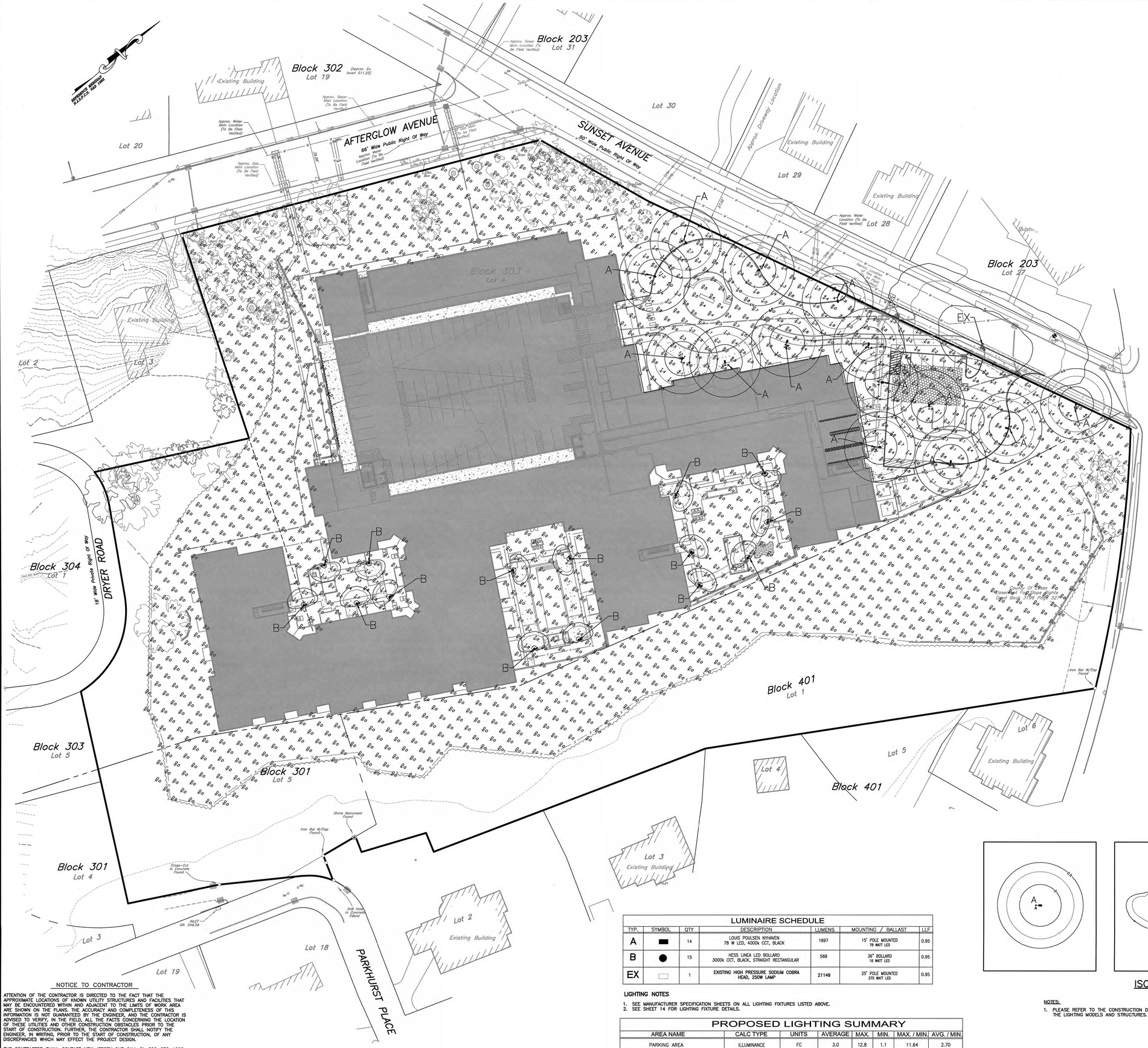
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LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	LOT LINE	
	SETBACK LINE	
	CURB LINE	
	DEPRESSED CURB	
	EDGE OF PAVEMENT	
	PAINT LINE	
	CONCRETE	
x x	FENCE	x
	GUIDE RAIL	
	RETAINING WALL/BULKHEAD	
	TREE LINE	
	CONTOURS	
	MINOR	2x
5	MAJOR	50
x 56.00	SPOT ELEVATION	x 56.00
	HIGH POINT ELEVATION	x HP 56.50
	LOW POINT ELEVATION	x LP 55.50
G 56.00	GUTTER ELEVATION	G 56.00
TC 105.17	TOP OF CURB ELEVATION	TC 105.17
GR 104.50	GRATE ELEVATION	GR 104.50
RIM 100.00	RIM ELEVATION	RIM 100.00
TW 100.00	TOP OF WALL	TW 100.00
BW 98.00	BOTTOM OF WALL	BW 98.00
BB 95.00	BOTTOM OF BLOCK	BB 95.00
FF 98.00	FINISHED FLOOR ELEV.	FF 95.00
GF 95.00	GARAGE FLOOR ELEV	GF 95.00
	DRAINAGE FLOW DIRECTION	
	STORM DRAIN	

EXISTING		PROPOSED
	INLET	
	DOUBLE INLETS	
	RECONSTRUCT INLET	
	RESET INLET	
	MANHOLE	
WM	RECONSTRUCT MANHOLE	WM
	RESET MANHOLE	
CO	CLEANOUT	CO
DS	DOWNSPOUT	DS
	ROOF DOWNSPOUT	GR
	SANITARY SEWER	S
CO	SANITARY CLEANOUT	CO
W	WATER MAIN	W
	WATER VALVE	W
	WATER VALVE RESET	W
	WATER METER	
	FIRE HYDRANT	
G	GAS MAIN	G
	GAS VALVE	G
	GAS VALVE RESET	G
	GAS METER	
T	TELEPHONE	T
CATV	CABLE TELEVISION	CATV
E	ELECTRIC CONDUIT	E
OH	OVER HEAD WIRE	OH
	UTILITY POLE	
	GUY ANCHOR	

NOTICE TO CONTRACTOR

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THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

LUMINAIRE SCHEDULE

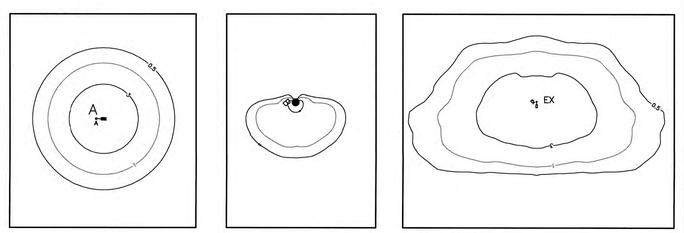
TYP.	SYMBOL	QTY	DESCRIPTION	LUMENS	MOUNTING / BALLAST	LLF
A	■	14	LOUIS POULSEN NYHAVEN 78 W LED, 4000k CCT, BLACK	1697	15' POLE MOUNTED 78 WATT LED	0.95
B	●	15	HESS LINEA LED BOLLARD 3000k CCT, BLACK, STRAIGHT RECTANGULAR	568	36" BOLLARD 16 WATT LED	0.95
EX	□	1	EXISTING HIGH PRESSURE SODIUM COBRA HEAD, 250W LAMP	21149	25' POLE MOUNTED 275 WATT LED	0.95

LIGHTING NOTES

1. SEE MANUFACTURER SPECIFICATION SHEETS ON ALL LIGHTING FIXTURES LISTED ABOVE.
2. SEE SHEET 14 FOR LIGHTING FIXTURE DETAILS.

PROPOSED LIGHTING SUMMARY

AREA NAME	CALC TYPE	UNITS	AVERAGE	MAX.	MIN.	MAX. / MIN.	AVG. / MIN.
PARKING AREA	ILLUMINANCE	FC	3.0	12.8	1.1	11.64	2.70



ISOLUX PATTERNS
NOT TO SCALE

NOTES:
1. PLEASE REFER TO THE CONSTRUCTION DETAILS SHEETS FOR THE DETAILS AND SPECIFICATIONS FOR THE LIGHTING MODELS AND STRUCTURES.

30 20 10 0 30 60 90
GRAPHIC SCALE
1 inch=30 feet

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:
	REVISIONS				

DESIGNED BY: MK
REVIEWED BY: MK
RELEASED BY: SM.S

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/10/21
DATE

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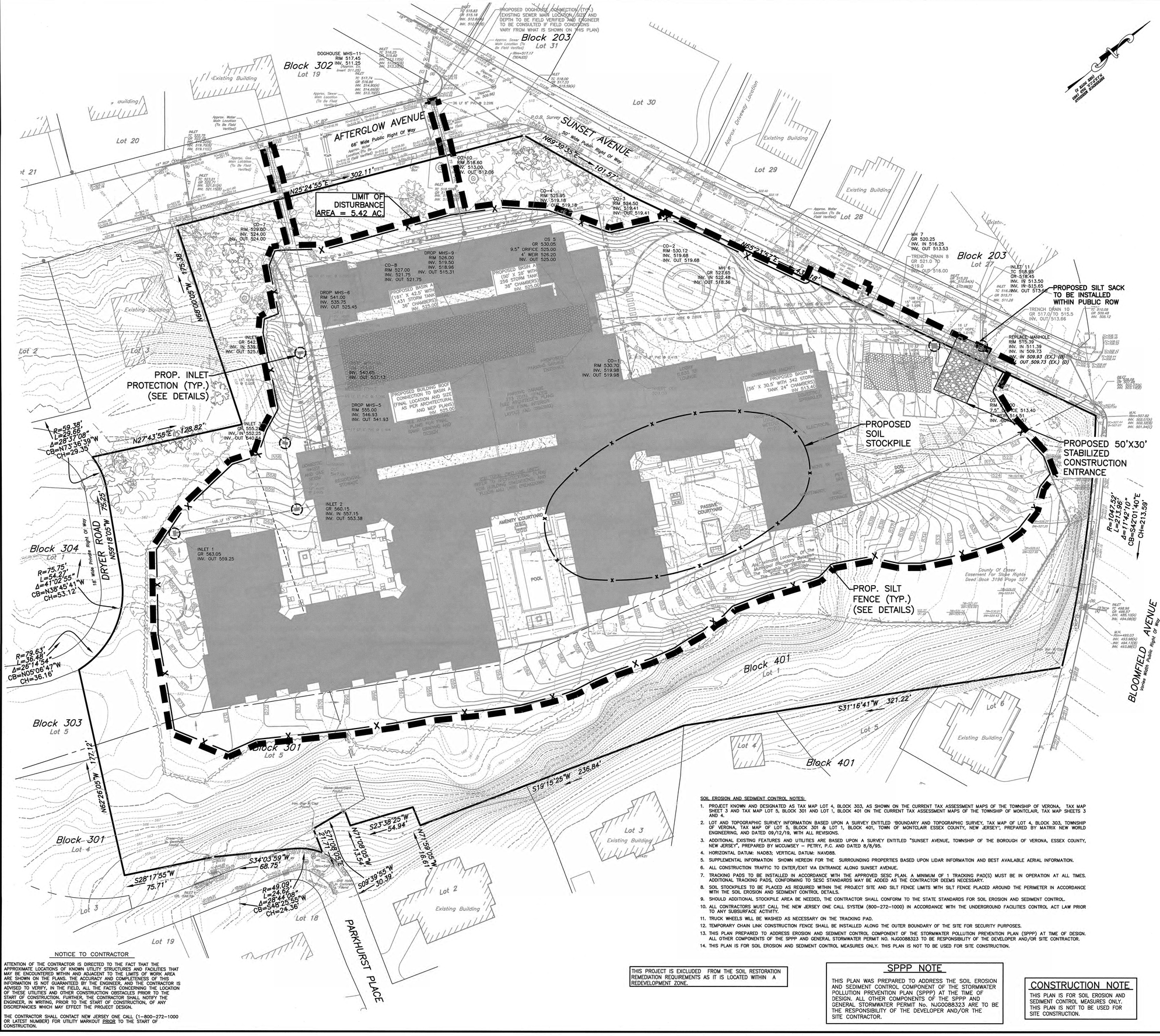
LIGHTING PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER:19-720
DATE: 12/10/21
SCALE: 1" = 30'

SHEET 9 OF 15

Plotted: 12/13/2021 8:44 AM, By: Chris Russo
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LEGEND

EXISTING		PROPOSED
	BOUNDARY LINE	
	LOT LINE	
	SETBACK LINE	
	CURB LINE	
	DEPRESSED CURB	
	EDGE OF PAVEMENT	
	PAINT LINE	
	CONCRETE	
X X	FENCE	X
	GUIDE RAIL	
	RETAINING WALL/BULKHEAD	
	TREE LINE	
	CONTOURS	
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	DRAINAGE FLOW DIRECTION	
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	INLET	
	DOUBLE INLETS	
	RECONSTRUCT INLET	
	RESET INLET	

EXISTING		PROPOSED
	MANHOLE	
	RECONSTRUCT MANHOLE	
	RESET MANHOLE	
	HEADWALL	
	FLARED END SECTION	
CO	CLEANOUT	CO
DS	DOWNSPOUT	DS
W	WATER MAIN	W
WV	WATER VALVE	WV
WVR	WATER VALVE RESET	WVR
WM	WATER METER	WM
FH	FIRE HYDRANT	FH
G	GAS MAIN	G
GV	GAS VALVE	GV
GVR	GAS VALVE RESET	GVR
GM	GAS METER	GM
	UTILITY POLE	
	GUY ANCHOR	
	LIMIT OF DISTURBANCE	
X X	SILT FENCE	X
	INLET PROTECTION	
	CONSTRUCTION ENTRANCE	
	PROPOSED TREE PROTECTION	

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:
	REVISIONS				

DESIGNED BY: CK
REVIEWED BY: CJ
RELEASED BY: SMS

SOIL EROSION AND SEDIMENT CONTROL PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: 1" = 30'
SHEET 10 OF 15

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/10/21 DATE

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Tel: 732-588-2999
Fax: 973-240-1818
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27982300

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
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3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.
6. ALL CONSTRUCTION TRAFFIC TO ENTER/EXIT VIA ENTRANCE ALONG SUNSET AVENUE.
7. TRACKING PADS TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED SESC PLAN. A MINIMUM OF 1 TRACKING PAD(S) MUST BE IN OPERATION AT ALL TIMES. ADDITIONAL TRACKING PADS, CONFORMING TO SESC STANDARDS MAY BE ADDED AS THE CONTRACTOR DEEMS NECESSARY.
8. 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.
9. SHOULD ADDITIONAL STOCKPILE AREA BE NEEDED, THE CONTRACTOR SHALL CONFORM TO THE STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
10. ALL CONTRACTORS MUST CALL THE NEW JERSEY ONE CALL SYSTEM (800–272–1000) IN ACCORDANCE WITH THE UNDERGROUND FACILITIES CONTROL ACT LAW PRIOR TO ANY SUBSURFACE ACTIVITY.
11. TRUCK WHEELS WILL BE WASHED AS NECESSARY ON THE TRACKING PAD.
12. TEMPORARY CHAIN LINK CONSTRUCTION FENCE SHALL BE INSTALLED ALONG THE OUTER BOUNDARY OF THE SITE FOR SECURITY PURPOSES.
13. 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.
14. THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES ONLY. THIS PLAN IS NOT TO BE USED FOR SITE CONSTRUCTION.

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1–800–272–1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

THIS PROJECT IS EXCLUDED FROM THE SOIL RESTORATION REMEDIATION REQUIREMENTS AS IT IS LOCATED WITHIN A REDEVELOPMENT ZONE.

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. ALL OTHER COMPONENTS OF THE SPPP AND GENERAL STORMWATER PERMIT No. NJG0088323 ARE TO BE THE RESPONSIBILITY OF THE DEVELOPER AND/OR THE SITE CONTRACTOR.

CONSTRUCTION NOTE

THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES ONLY. THIS PLAN IS NOT TO BE USED FOR SITE CONSTRUCTION.

30 20 10 0 30 60 90
GRAPHIC SCALE
1 inch=30 feet

Plotted: 12/14/2021 11:00 AM, By: Chris Russo
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HUDSON–ESSEX–PASSAIC SOIL CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE "NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7th EDITION LAST REVISED DECEMBER 2017. THESE MEASURES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ALL SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN FOURTEEN (14) DAYS, AND NOT UNDER ACTIVE CONSTRUCTION, WILL BE TEMPORARILY SEEDED AND HAY MULCHED OR OTHERWISE PROVIDED WITH VEGETATIVE COVER. THIS TEMPORARY COVER SHALL BE MAINTAINED UNTIL SUCH TIME WHEREBY PERMANENT RESTABILIZATION IS ESTABLISHED.
3. SEEDING DATES: THE FOLLOWING SEEDING DATES ARE RECOMMENDED TO BEST ESTABLISH PERMANENT VEGETATIVE COVER WITHIN MOST LOCATIONS IN THE HEPSCD: SPRING 3/1–5/15 FALL 8/15–10/1.
4. SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED.
5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS AND PROTECTION SHALL REMAIN UNTIL PERMANENT STABILIZATION HAS BEEN ESTABLISHED. STORM DRAINAGE OUTLET POINTS SHALL BE PROTECTED AS REQUIRED BEFORE THEY BECOME FUNCTIONAL.
6. MULCH MATERIALS SHALL BE UN–ROTTED SMALL GRAIN STRAW APPLIED AT A RATE OF 70–90 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
7. ALL EROSION CONTROL DEVICES SHALL BE PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR. ANY DAMAGE INCURRED BY EROSION SHALL BE RECTIFIED IMMEDIATELY.
8. THE HUDSON–ESSEX–PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES. FAX (862) 333–4507. EMAIL: INFORMATION@HEPSCD.ORG.
9. THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT–OF–COMPLIANCE PRIOR TO APPLYING FOR THE CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY, NJ–DCA OR ANY OTHER CONTROLLING AGENCY. CONTACT THE DISTRICT AT 862–333–4505 TO REQUEST A FINAL INSPECTION, GIVING ADVANCED NOTICE UPON COMPLETION OF THE RESTABILIZATION MEASURES. A PERFORMANCE DEPOSIT MAY BE POSTED WITH THE DISTRICT WHEN WINTER WEATHER OR SNOW COVER PROHIBITS THE PROPER APPLICATION OF SEED, MULCH, FERTILIZER OR HYDRO–SEED.
10. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES. DO NOT UTILIZE A FIRE OR GARDEN HOSE TO CLEAN ROADS UNLESS THE RUNOFF IS DIRECTED TO A PROPERLY DESIGNED AND FUNCTIONING SEDIMENT BASIN. WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAINS SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER USING REMOVABLE PUMPING STATIONS, SUMP PITS, PORTABLE SEDIMENTATION TANKS AND/OR SILT CONTROL BAGS.
11. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TOPSOIL PRIOR TO RE–SEEDING, SODDING OR PLANTING. A DEPTH OF 5.0 INCHES, FIRMED IN PLACE, IS REQUIRED, AS PER THE STANDARDS FOR TOPSOILING AND LAND GRADING, LAST REVISED DECEMBER 2017.
12. ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL.
13. A CRUSHED STONE WHEEL CLEANING TRACKING–PAD IS TO BE INSTALLED AT ALL SITE EXITS USING 2–1/2 – 1" CRUSHED ANGULAR STONE (ASTM 2 OR 3) TO A MINIMUM LENGTH OF 50 FEET AND A MINIMUM DEPTH OF 6". ALL DRIVEWAYS MUST BE PROVIDED WITH CRUSHED STONE UNTIL PAVING IS COMPLETE.
14. STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES. THESE "SPECIAL" MEASURES SHALL BE DESIGNED BY THE APPLICANT'S ENGINEER AND BE APPROVED BY THE SOIL CONSERVATION DISTRICT.
15. THE HUDSON–ESSEX–PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED, IN WRITING, FOR THE SALE OF ANY PORTION OF THE PROJECT OR FOR THE SALE OF INDIVIDUAL LOTS. NEW OWNERS' INFORMATION SHALL BE PROVIDED. ADDITIONAL MEASURES DEEMED NECESSARY BY DISTRICT OFFICIALS SHALL BE IMPLEMENTED AS CONDITIONS WARRANT.

STANDARD FOR STORM SEWER INLET PROTECTION

DEFINITION

A TEMPORARY BARRIER AND SETTLING FACILITY INSTALLED AT A STORM SEWER INLET.

PURPOSE

THE PURPOSE OF STORM SEWER INLET PROTECTION IS TO INTERCEPT AND RETAIN SEDIMENT, THUS PREVENTING THE ENTRANCE OF SEDIMENT INTO THE STORM SEWER SYSTEM.

CONDITIONS WHERE PRACTICE APPLIES

1. CONTRIBUTING DRAINAGE AREA IS 3 ACRES OR LESS.
2. A STORM SEWER OR THE OUTLET CHANNEL OF A STORM SEWER NEEDS PROTECTION FROM SEDIMENT.
3. TRAFFIC WILL NOT DESTROY OR CAUSE CONSTANT MAINTENANCE OF THE STORM SEWER INLET PROTECTION
4. A TRAFFIC HAZARD WILL NOT BE CREATED.
5. A FLOODING PROBLEM WILL NOT BE CREATED.

WATER QUALITY ENHANCEMENT

THE PRIMARY BENEFIT TO WATER QUALITY IS REMOVAL OF SEDIMENT FROM STORMWATER RUNOFF PRIOR TO ENTERING THE STORM SEWER SYSTEM. AS AN ADDED BENEFIT, OTHER FLOATABLE DEBRIS, SUCH AS VEGETATIVE MATTER AND LITTER MAY ALSO BE FILTERED OUT OF THE RUNOFF.

DESIGN CRITERIA

THE FOLLOWING APPLIES TO ALL METHODS OF STORM SEWER INLET PROTECTION:

1. MUST SLOW THE STORM WATER, PROVIDE THE COARSE SEDIMENT PARTICLES A CHANCE TO SETTLE, AND PROVIDE AN AREA TO RETAIN THE PARTICLES THAT HAVE SETTLED.
2. IN ALL CASES, THE INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET. PROVISION MUST BE MADE TO ALLOW STORMWATER TO OVERFLOW OR BYPASS FILTER
3. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.

INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

STANDARD FOR DUST CONTROL

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON–SITE AND OFF–SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES AND RESTRICTIONS.

PLANNING CRITERIA

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES – SEE STANDARD OF STABILIZATION WITH MULCHES SHOWN HEREON.

VEGETATIVE COVER – SEE STANDARD FOR: TEMPORARY VEGETATIVE COVER SHOWN HEREON, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION SHOWN HEREON, AND PERMANENT STABILIZATION WITH SOD PER CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, CURRENT EDITION.

SPRAY–ON ADHESIVES – ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS) KEEP TRAFFIC OFF THESE AREAS.

DUST CONTROL MATERIALS

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GAL/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) – SPRAY ON POLYACRYLAMIDE (PAM) – DRY SPREAD	Apply according to manufacturer's instructions. May also be used as an additive to sediment basins to flocculate and precipitate suspended colloids. See Sediment Basin standard, Current Edition: Standards for Soil Erosion and Sediment Control in New Jersey.		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL–TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING–TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING – SITE IS SPRINKLED UNTIL SURFACE IS WET.

BARRIERS – SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE – SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE EROSION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.

STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

CONSTRUCTION SEQUENCE

EXACT TIMING FOR DEVELOPMENT OF THIS PROJECT IS NOT KNOWN AT THIS TIME. HOWEVER, IT IS ANTICIPATED THAT CONSTRUCTION WILL COMMENCE IN SPRING 2022 AND WILL PROCEED IMMEDIATELY AND CONTINUOUSLY ONCE THE REQUIRED APPROVALS ARE SECURED. ITEMS AND DURATIONS OF CONSTRUCTION WILL OCCUR APPROXIMATELY AS FOLLOWS:

PHASE	DURATION
1. TEMPORARY SOIL EROSION FACILITIES	IMMEDIATELY
2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE	IMMEDIATELY
3. INSTALL SILT FENCE	IMMEDIATELY
4. INSTALL INLET PROTECTION ON EXISTING INLETS	IMMEDIATELY
5. ROUGH CLEARING AND GRADING	2 WEEKS
6. EXISTING SIDEWALK AND CURB REMOVAL	1 WEEK
7. EXISTING UTILITY REMOVALS/CAPPING	1 WEEK
8. EXISTING BUILDING DEMOLITION	3 WEEKS
9. TEMPORARY SEEDING	IMMEDIATELY*
10. SLOPE & EMBANKMENT PROTECTION	IMMEDIATELY
11. SANITARY SEWER INSTALLATION	1 WEEK
12. WATER INSTALLATION	1 WEEK
13. STORM SEWER INSTALLATION	2 WEEKS
14. INLET PROTECTION	IMMEDIATELY
15. PUBLIC UTILITY INSTALLATIONS	2 WEEKS
16. CURB & SIDEWALK INSTALLATION	1 WEEK
17. PAVEMENT SUB–BASE	1 WEEK
18. MAINTENANCE OF TEMPORARY EROSION CONTROL MEASURES	CONTINUOUSLY
19. CONSTRUCTION OF THE BUILDING	8 MONTHS
20. UNIFORMLY APPLY TOPSOIL TO AN AVERAGE DEPTH OF 5", MIN. OF 4", FIRMED IN PLACE.	1 WEEK
21. FINAL SEEDING AND LANDSCAPING	2 WEEKS
22. FINAL PAVEMENT COURSE	1 WEEK

*TEMPORARY SEEDING SHALL ALSO BE PERFORMED WHEN NECESSARY IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

SPPP REQUIRED INSPECTIONS AND REPORTS

ROUTINE INSPECTIONS

A. THE PERMITTEE SHALL CONDUCT AND DOCUMENT ROUTINE INSPECTIONS OF THE FACILITY TO IDENTIFY AREAS CONTRIBUTING TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT AND EVALUATE WHETHER THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) IDENTIFIED UNDER e.1 OF THE 5G3–CONSTRUCTION ACTIVITY STORMWATER (GP) PART 1 NARRATIVE REQUIREMENTS, INCLUDING THIS SOIL EROSION AND SEDIMENT CONTROL PLAN IS BEING PROPERLY IMPLEMENTED AND MAINTAINED, OR WHETHER ADDITIONAL MEASURES ARE NEEDED TO IMPLEMENT THE SPPP. (ROUTINE INSPECTIONS MINIMUM WEEKLY).

HIGH ACID PRODUCING SOILS WITH A pH OF 4 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A RATE OF 6 TONS PER ACRE (OR 275 POUNDS PER 1.000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5 OR MORE EXCEPT AS FOLLOWS:

OTHER RECORD–KEEPING REQUIREMENTS

THE CONTRACTOR SHALL KEEP THE FOLLOWING RECORDS RELATED TO CONSTRUCTION ACTIVITIES AT THE SITE:
- DATES WHEN MAJOR GRADING ACTIVITIES OCCUR AND THE AREAS WHICH WERE GRADED
- DATES AND DETAILS CONCERNING THE INSTALLATION OF STRUCTURAL CONTROLS
- DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA
- DATES WHEN AN AREA IS STABILIZED, EITHER TEMPORARILY OR PERMANENTLY
- DATES OF RAINFALL AND THE AMOUNT OF RAINFALL
- DATES AND DESCRIPTIONS OF THE CHARACTER AND AMOUNT OF ANY SPILLS OF HAZARDOUS MATERIALS
- RECORDS OF REPORTS FILED WITH REGULATORY AGENCIES IF REPORTABLE QUANTITIES OF HAZARDOUS MATERIALS SPILLED
- A VISIBLE SIGN SHALL BE POSTED ON THE SITE TO IDENTIFY THE LOCATION OF SPPP

ANNUAL REPORTS AND CERTIFICATIONS.

A. THE PERMITTEE SHALL PREPARE AN ANNUAL REPORT SUMMARIZING EACH INSPECTION PERFORMED UNDER 1.A., ABOVE. THIS REPORT SHALL BE ACCOMPANIED BY AN ANNUAL CERTIFICATION, ON A FORM PROVIDED BY THE NJDEP THAT THE FACILITY IS IN COMPLIANCE WITH ITS SPPP AND THIS PERMIT, EXCEPT THAT IF THERE ARE ANY INCIDENTS OF NONCOMPLIANCE, THOSE INCIDENTS SHALL BE IDENTIFIED IN THE CERTIFICATION. IF THERE ARE INCIDENTS OF NONCOMPLIANCE, THE REPORT SHALL IDENTIFY THE STEPS BEING TAKEN TO REMEDY THE NONCOMPLIANCE AND TO PREVENT SUCH INCIDENTS FROM RECURRING. THE REPORT AND CERTIFICATION SHALL BE SIGNED AND DATED BY THE PERMITTEE IN ACCORDANCE WITH N.J.A.C. 7:14A–4.9. AND SHALL BE MAINTAINED FOR A PERIOD OF AT LEAST FIVE YEARS ALONG WITH COPIES OF ALL INSPECTION REPORTS AND RECORD KEEPING. THIS PERIOD MAY BE EXTENDED BY WRITTEN REQUEST FROM THE DEPARTMENT AT ANY TIME (SEE N.J.A.C. 7:14A–6.6)

REPORTS OF NONCOMPLIANCE

A. ALL INSTANCES OF NONCOMPLIANCE NOT REPORTED UNDER N.J.A.C. 7:140A–6.10 SHALL BE REPORTED TO THE DEPARTMENT ANNUALLY.

NOTIFICATION OF COMPLETION

A. THE SOIL CONSERVATION DISTRICT WILL PROVIDE THE DEPARTMENT A COPY OF THE REPORT OF COMPLIANCE ISSUED UNDER N.J.A.C. 2:90–1 FOR COMPLETED CONSTRUCTION ACTIVITIES, EXCEPT SINGLE FAMILY HOME CONSTRUCTION UNDER B. BELOW. THE REPORT OF COMPLIANCE SHALL SERVE AS THE NOTIFICATION OF COMPLETION.

B. THE BUILDER OF A SINGLE FAMILY HOME THAT IS AUTHORIZED UNDER THIS PERMIT, BUT NOT WITHIN THE DEFINITION OF "PROJECT" AT N.J.S.A. 4:24–41G, SHALL SEND A COPY OF THE FINAL CERTIFICATE OF OCCUPANCY TO THE SOIL CONSERVATION DISTRICT. THE SOIL CONSERVATION DISTRICT WILL PROVIDE A COPY OF THE FINAL CERTIFICATION OF OCCUPANCY TO THE DEPARTMENT, WHICH WILL SERVE AS NOTIFICATION OF COMPLETION.

C. THE DOT SHALL PROVIDE WRITTEN NOTIFICATION TO THE DEPARTMENT WHEN DOT CERTIFIED PROJECTS ARE COMPLETED.

MITIGATION NOTES FOR ACIDIC SOIL

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOIL MATERIAL TO BE EXPOSED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID PRODUCING SOIL.
5. HIGH ACID PRODUCING SOILS WITH A pH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT A RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1.000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5.0 OR MORE EXCEPT AS FOLLOWS:
   A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A pH OF 5 OR MORE.
   B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES AND OTHERS TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON–VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID PRODUCING SOILS FROM, AROUND OR OFF THE SITE.
8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE, (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING) MONITORING SHOULD CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

STANDARD FOR TOPSOILING

DEFINITION

TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

GROWTH AND ESTABLISHMENT OF VIGOROUS VEGETATIVE COVER IS FACILITATED BY TOPSOIL, PREVENTING SOIL LOSS BY WIND AND RAIN OFFSITE AND INTO STREAMS AND OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

TOPSOIL SHALL BE USED WHERE SOILS ARE TO BE DISTURBED AND WILL BE REVEGETATED.

METHODS AND MATERIALS

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). TOPSOIL HAULED IN FROM OFFSITE SHOULD 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 SHOULD 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 A DEPTH OF 5 INCHES, FIRMED IN PLACE IS REQUIRED. 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).
C. 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 TEST SUCH AS THOSE REQUIRED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP)

(THIS IS FOR CONSTRUCTION WASTE ONLY)

1. THE CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE SPPP CONSISTS OF THE REQUIREMENT IN 2., 3., AND 4. BELOW. THESE REQUIREMENTS BECOME OPERATIVE ON MARCH 3, 2004 AND APPLY TO CONSTRUCTION ACTIVITIES THAT COMMENCE ON OR AFTER MARCH 3, 2004. ANY NEW CONSTRUCTION ACTIVITY FOR WHICH AN RFA IS SUBMITTED ON OR AFTER MARCH 3, 2004 OR WHICH WILL RECEIVE AUTOMATIC RENEWAL OR AUTHORIZATION UNDER THIS PERMIT AFTER MARCH 3, 2004 ALSO SHALL COMPLY WITH THESE REQUIREMENTS.
2. MATERIAL MANAGEMENT TO PREVENT OR REDUCE WASTE – ANY PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI–FREEZE, PAINTS AND PAINT THINNERS, CLEANING SOLVENTS AND ACIDS, DETERGENTS, CHEMICAL ADDITIVES, AND CONCRETE CURING COMPOUNDS SHALL BE STORED IN CONTAINERS IN A DRY COVERED AREA. MANUFACTURERS' RECOMMENDED APPLICATION RATES, USES, AND METHODS SHALL BE STRICTLY FOLLOWED TO THE EXTENT NECESSARY TO PREVENT OR MINIMIZE THE PRESENCE OF WASTE FROM SUCH MATERIALS IN THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT (THE PRECEDING SENTENCE DOES NOT APPLY TO ANY MANUFACTURERS' RECOMMENDATIONS ABOUT FERTILIZER OR OTHER MATERIAL THAT CONFLICT WITH THE EROSION AND SEDIMENT CONTROL COMPONENT OF THE FACILITY'S SPPP.)
3. WASTE HANDLING – THE FOLLOWING REQUIREMENTS APPLY ONLY TO CONSTRUCTION SITE WASTE THAT HAS THE POTENTIAL TO BE TRANSPORTED BY THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT. THE HANDLING AT THE CONSTRUCTION SITE OF WASTE BUILDING MATERIAL AND RUBBLE AND OTHER CONSTRUCTION SITE WASTES, INCLUDING LITTER AND HAZARDOUS AND SANITARY WASTES, SHALL CONFORM WITH THE STATE SOLID WASTE MANAGEMENT ACT, N.J.S.A. 13:1E– ET SEQ., AND ITS IMPLEMENTING RULES AT N.J.A.C. 7:26, 7:26A, AND 7:26G, THE NEW JERSEY PESTICIDE CONTROL CODE AT N.J.A.C. 7:30, THE STATE LITTER STATUTE N.J.S.A. 13:1e–99.3); AND OSHA REQUIREMENTS FOR SANITATION AT 29 C.F.R., 1926 (EXCEPT WHERE SUCH CONFORMANCE IS NOT RELEVANT TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT). CONSTRUCTION SITES SHALL HAVE ONE OR MORE DESIGNATED WASTE COLLECTION AREAS ONSITE OR ADJACENT TO THE SITE, AND AN ADEQUATE NUMBER OF CONTAINERS (WITH LIDS OR COVERS) FOR WASTE. WASTE SHALL BE COLLECTED FROM SUCH CONTAINERS BEFORE THEY OVERFLOW, AND SPILLS AT SUCH CONTAINERS SHALL BE CLEANED UP IMMEDIATELY.
   A. CONSTRUCTION SITE WASTES INCLUDE BUT ARE NOT LIMITED TO:
   I. "CONSTRUCTION AND DEMOLITION WASTE", AS DEFINED IN N.J.A.C. 7:7:26–1.4 AS FOLLOWS: "WASTE BUILDING MATERIAL AND RUBBLE RESULTING FROM CONSTRUCTION, REMODELING, REPAIR, AND DEMOLITION OPERATIONS ON HOUSES, COMMERCIAL BUILDINGS, PAVEMENTS AND OTHER STRUCTURES. THE FOLLOWING MATERIALS MAY BE FOUND IN CONSTRUCTION AND DEMOLITION WASTE: TREATED AND UNTREATED WOOD SCRAP; TREE PARTS, TREE STUMPS AND BRUSH; CONCRETE, ASPHALT, BRICKS, BLOCKS AND OTHER MASONRY; PLASTER AND WALLBOARD; ROOFING MATERIALS; CORRUGATED CARDBOARD AND MISCELLANEOUS PAPER; FERROUS AND NON–FERROUS METAL; NON–ASBESTOS BUILDING INSULATION; PLASTIC SCRAP; DIRT; CARPETS AND PADDING, GLASS (WINDOW AND DOOR); AND OTHER MISCELLANEOUS MATERIALS; BUT SHALL NOT INCLUDE OTHER SOLID WASTE TYPES."
   II. ANY WASTE BUILDING MATERIAL AND RUBBLE RESULTING FROM SUCH OPERATIONS THAT IS HAZARDOUS FOR PURPOSES OF N.J.A.C 7:26G (THE HAZARDOUS WASTE RULES).
   III. DISCARDED (INCLUDING SPILLED) PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI–FREEZE, PAINTS AND PAINT THINNERS, PAINT CHIPS AND SANDBLASTING GRITS, CLEANING SOLVENTS, ACIDS FOR CLEANING MASONRY SURFACES, DETERGENTS, CHEMICAL ADDITIVES USED FOR SOIL STABILIZATION (E.G. CALCIUM CHLORIDE), AND CONCRETE CURING COMPOUNDS.
   IV. OTHER "LITTER" AS DEFINED AT N.J.S.A. 13:1E–215.D AS FOLLOWS: "ANY USED OR UNCONSUMED SUBSTANCE OR WASTE MATERIAL WHICH HAS BEEN DISCARDED WHETHER MADE OF ALUMINUM, GLASS, PLASTIC, RUBBER, PAPER, OR OTHER NATURAL OR SYNTHETIC MATERIAL, OR ANY COMBINATION THEREOF, INCLUDING, BUT NOT LIMITED TO, ANY BOTTLE, JAR OR CAN, OR ANY TOP, CAP OR DETACHABLE TAB OF ANY BOTTLE, JAR OR CAN, ANY UNLIGHTED CIGARETTE, CIGAR, MATCH OR ANY FLAMING OR GLOWING MATERIAL OR ANY GARBAGE, TRASH, REFUSE, DEBRIS, RUBBISH, GRASS CLIPPINGS OR OTHER LAWN OR GARDEN WASTE, NEWSPAPERS, MAGAZINES, CLASS, METAL, PLASTIC OR PAPER CONTAINERS OR OTHER PACKAGING OR CONSTRUCTION MATERIAL, BUT DOES NOT INCLUDE THE WASTE OF THE PRIMARY PROCESSES OF MINOR OR OTHER EXTRACTION PROCESSES, LOGGING, SAWMILLING, FARMING OR MANUFACTURING."
   V. SANITARY SEWAGE AND SEPTAGE.
   VI. CONTAMINATED SOILS ENCOUNTERED OR DISCOVERED DURING EARTHMOVING ACTIVITIES OR DURING THE CLEANUP OF A LEAK OR DISCHARGE OF A HAZARDOUS SUBSTANCE.
   B. CONCRETE TRUCK WASHOUT – CONCRETE TRUCK WASHOUT ONSITE IS PROHIBITED OUTSIDE DESIGNATED AREAS. DESIGNATED WASHOUT AREAS SHALL BE LINED AND BERMED TO PREVENT DISCHARGES TO SURFACE AND GROUND WATER. HARDENED CONCRETE FROM CONCRETE TRUCK WASHOUT SHALL BE REMOVED AND PROPERLY DISPOSED OF.
   C. SANITARY SEWAGE/SEPTAGE DISPOSAL – DISCHARGES OF RAW SANITARY SEWAGE OR SEPTAGE ONSITE ARE STRICTLY PROHIBITED. ADEQUATE FACILITIES WITH PROPER DISPOSAL SHALL BE PROVIDED AND MAINTAINED ONSITE OR ADJACENT TO THE SITE FOR ALL WORKERS AND OTHER SANITARY NEEDS.
4. SPILLS: DISCHARGE OF HAZARDOUS SUBSTANCES,
   A. SPILL KITS SHALL BE AVAILABLE ONSITE OR ADJACENT TO THE SITE FOR ANY MATERIALS THAT ARE LISTED IN 2 ABOVE AND USED OR APPLIED ONSITE. ALL SPILLS OF SUCH MATERIAL SHALL BE CONTAINED AND CLEANED UP IMMEDIATELY. CLEANED UP MATERIALS SHALL BE PROPERLY DISPOSED OF.
   B. DISCHARGES OF HAZARDOUS SUBSTANCES (AS DEFINED IN N.J.A.C. 7:1E–1.6) IN CONSTRUCTION SITE WASTES ARE SUBJECT TO THE PROVISIONS OF THE SPILL COMPENSATION AND CONTROL ACT, NJAC 58:10–23.11 ET SEQ., AND OF DEPARTMENT RULES FOR DISCHARGE OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES AT NJAC 7:1E. NO DISCHARGE OF HAZARDOUS SUBSTANCES RESULTING FROM AN ONSITE SPILL SHALL BE DEEMED TO BE "PURSUANT TO AND IN COMPLIANCE WITH (THIS) PERMIT" WITHIN THE MEANS OF THE SPILL COMPENSATION AND CONTROL ACT AT NJSA 58;10–2311C.
   C. RELEASES IN EXCESS OF REPORTABLE QUANTITIES (RQ) ESTABLISHED UNDER 40 C.F.R. 110, 117 AND 302 THAT OCCUR WITHIN A 24–HOUR PERIOD MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800–424–8802)

STANDARD FOR STABILIZATION WITH MULCH ONLY

DEFINITION

STABILIZING EXPOSED SOILS WITH NON–VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS.

PURPOSE

TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION–RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

METHODS AND MATERIALS

1. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
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.

2. PROTECTIVE MATERIALS

A. UNROTTED SMALL–GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE INSPECTOR CANNOT SEE THE GROUND BELOW THE MULCH.
B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
C. WOOD–FIBER OR PAPER–FIBER MULCH AT A RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER OR HYDROMULCHING.
D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON OR PLASTIC, MAY BE USED.
E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WAS THEM INTO AN INLET AND PLUG IT.
F. GRAVEL, CRUSHED STONE OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C–33) IS RECOMMENDED.

3. MULCH ANCHORING

MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

A. 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.
B. MULCH NETTINGS – STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
C. CRIMPER MULCH ANCHORING COULTER TOOL – A TRACTOR–DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.
D. LIQUID MULCH–BINDERS
1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
2. USE ONE OF THE FOLLOWING:
A. ORGANIC AND VEGETABLE BASED BINDERS – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHTO–TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.
B. 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 AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

RIPRAP SPECIFICATIONS

RIPRAP GRADATION

THE RIPRAP SHALL BE COMPOSED OF WELL–GRADED MIXTURE SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE d50 SIZE AS DETERMINED FROM THE DESIGN PROCEDURE. A WELL–GRADED MIXTURE AS USED HEREIN IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE d50 SIZE. THE d75 SHOULD BE 1.25 TIMES THE d50 AND THE d15 SHOULD BE 0.5 TIMES THE d50 SIZE.

THE DESIGNER, AFTER DETERMINING THE RIPRAP SIZE THAT WILL BE STABLE UNDER THE FLOW CONDITION, SHALL CONSIDER THAT SIZE TO BE A MINIMUM SIZE AND THEN, BASED ON RIPRAP GRADATIONS ACTUALLY AVAILABLE IN THE AREA SELECT THE SIZE OR SIZES THAT EQUAL OR EXCEED THE MINIMUM SIZE. THE POSSIBILITY OF VANDALISM SHALL BE CONSIDERED BY THE DESIGNER IN SELECTING A RIPRAP SIZE.

GEOTEXTILE FABRIC SHALL MEET THE U.S. ARMY CORPS OF ENGINEERS GUIDE SPECS, CW02215–86, FOR STRENGTH. RIPRAP THAT IS 12" AND LARGER SHALL NOT BE DUMPED DIRECTLY ONTO SYNTHETIC FILTER CLOTH UNLESS THE MANUFACTURER RECOMMENDS SUCH USE OF THE CLOTH. OTHERWISE, A 4" MINIMUM THICKNESS BLANKET OF GRAVEL SHALL BE PLACED DIRECTLY ON THE FILTER CLOTH BY HAND OR BY THE BUCKET OF THE EQUIPMENT.

STONE FOR RIPRAP SHALL CONSIST OF FIELD STONE OR QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE STONE SHALL BE HARD AND ANGULAR AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING. THE SPECIFIC GRAVITY ON THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.

RUBBLE CONCRETE MAY BE USED, PROVIDED IT HAS A DENSITY OF AT LEAST 150 POUNDS PER CUBIC FOOT, AND OTHERWISE MEETS THE REQUIREMENTS OF THIS STANDARD.

STANDARD FOR LAND GRADING

DEFINITION

RESHAPING THE GROUND SURFACE BY GRADING TO PLANNED ELEVATIONS WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.

PURPOSE

THE PRACTICE IS FOR ONE OR MORE OF THE FOLLOWING: PROVIDE MORE SUITABLE SITES FOR LAND DEVELOPMENT; IMPROVE SURFACE DRAINAGE AND CONTROL EROSION.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE WHERE GRADING TO PLANNED ELEVATIONS IS PRACTICAL AND IT IS DETERMINED THAT GRADING IS NEEDED. GRADING THAT INVOLVES THE DISTURBANCE OF VEGETATION OVER LARGE AREAS SHALL BE AVOIDED. IT MAY BE NECESSARY TO PROVIDE FOR TEMPORARY STABILIZATION OF LARGE AREAS.

WATER QUALITY ENHANCEMENT

PROPER GRADING OF DISTURBED SITES WILL PROTECT AGAINST SOIL LOSS FROM EROSION, ENHANCE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER AND HELP TO PROPERLY MANAGE STORMWATER RUNOFF ALL OF WHICH WILL REDUCE OFF SITE DISCHARGE OF POLLUTANTS.

PLANNING CRITERIA

THE GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE TOPOGRAPHIC SURVEYS AND INVESTIGATIONS. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILL AND FINISH ELEVATION OF THE SURFACES TO BE GRADED. THE PLAN SHOULD ALSO INCLUDE AUXILIARY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOPE STABILIZATION, EROSION CONTROL AND DRAINAGE. FACILITIES SUCH AS WATERWAYS, DITCHES, DIVERSIONS, GRADE STABILIZATION STRUCTURES, RETAINING WALLS AND SUBSURFACE DRAINS SHOULD BE INCLUDED WHERE NECESSARY.
EROSION CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARD CONTAINED HEREIN.
THE DEVELOPMENT AND ESTABLISHMENT OF THE PLAN SHALL INCLUDE THE FOLLOWING:

1. THE CUT FACE OF EARTH EXCAVATIONS AND FILLS SHALL BE NO STEEPER THAN THE SAFE ANGLE OF REPOSE FOR THE MATERIALS ENCOUNTERED AND FLAT ENOUGH FOR PROPER MAINTENANCE.
2. THE PERMANENTLY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR OTHERWISE PROTECTED FROM EROSION.
3. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
4. SUBSURFACE DRAINAGE IS TO BE PROVIDED IN AREAS HAVING A HIGH WATER TABLE, TO INTERCEPT SEEPAGE THAT WOULD ADVERSELY AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS OR CREATE UNDESIRABLE WETNESS. SEE STANDARD FOR SUBSURFACE DRAINAGE,
5. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
6. FILL SHALL NOT BE PLACED ADJACENT TO THE BANK OF A STREAM OR CHANNEL, UNLESS PROVISIONS ARE MADE TO PROTECT THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY JULY 1999 HYDRAULIC, BIOLOGICAL, AESTHETIC AND OTHER ENVIRONMENTAL FUNCTIONS OF THE STREAM.

SOIL MANAGEMENT AND PREPARATION

SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
THIS SECTION OF THIS STANDARD ADDRESSES THE POTENTIAL FOR EXCESSIVE SOIL COMPACTION IN LIGHT OF THE INTENDED LAND USE, TESTING FOR EXCESSIVE SOIL COMPACTION WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED AND MITIGATION OF EXCESSIVE SOIL COMPACTION WHEN APPROPRIATE.
DUE TO USE OR SETTING, CERTAIN DISTURBED AREAS WILL NOT REQUIRE COMPACTION REMEDIATION INCLUDING, BUT NOT LIMITED TO THE
FOLLOWING:

1. WITHIN 20 FEET OF BUILDING FOUNDATIONS WITH BASEMENTS, 12 FEET FROM SLAB OR CRAWL SPACE CONSTRUCTION.
2. WHERE SOILS OR GRAVEL SURFACES WILL BE REQUIRED TO SUPPORT POST–CONSTRUCTION VEHICULAR TRAFFIC LOADS SUCH AS ROADS, PARKING LOTS AND DRIVEWAYS (INCLUDING GRAVEL SURFACES), BICYCLE PATHS OR PEDESTRIAN WALKWAYS (SIDEWALKS ETC)
3. AIRPORTS, RAILWAYS OR OTHER TRANSPORTATION FACILITIES
4. AREAS REQUIRING INDUSTRY OR GOVERNMENT SPECIFIED SOIL DESIGNS, INCLUDING GOLF COURSES, LANDFILLS, WETLAND RESTORATION, SEPTIC DISPOSAL FIELDS, WET/LINED PONDS, ETC.
5. AREAS GOVERNED OR REGULATED BY OTHER LOCAL, STATE OR FEDERAL REGULATIONS WHICH DICTATE SOIL CONDITIONS.
6. BROWNFIELDS (CAPPED USES), URBAN REDEVELOPMENT AREAS, IN–FILL AREAS, RECYCLING YARDS, JUNK YARDS, AND QUARRIES
7. SLOPES DETERMINED TO BE INAPPROPRIATE FOR SAFE OPERATION OF EQUIPMENT
8. PORTIONS OF A SITE WHERE NO HEAVY EQUIPMENT TRAVEL OR OTHER DISTURBANCE HAS TAKEN PLACE
9. AREAS RECEIVING TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARD.
10. WHERE THE AREA AVAILABLE FOR REMEDIATION PRACTICES IS 500 SQUARE FEET OR LESS IN SIZE.
11. LOCATIONS CONTAINING SHALLOW (CLOSE TO THE SURFACE) BEDROCK CONDITIONS.

AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION SHALL BE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.

SOIL COMPACTION REMEDIATION OR TESTING TO PROVE REMEDIATION IS NOT NECESSARY WILL BE REQUIRED IN AREAS WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED THAT ARE NOT OTHERWISE EXEMPTED ABOVE. TESTING METHOD SHALL BE SELECTED,
AND SOIL COMPACTION TESTING SHALL BE PERFORMED BY, THE CONTRACTOR OR OTHER PROJECT OWNER'S REPRESENTATIVE (E.G. ENGINEER). A MINIMUM OF TWO (2) TESTS SHALL BE PERFORMED FOR PROJECTS WITH AN OVERALL LIMIT OF DISTURBANCE OF UP TO ONE (1) ACRE AND AT A RATE OF TWO (2) TESTS PER ACRE OF THE OVERALL LIMIT OF DISTURBANCE FOR LARGER AREAS WHICH SHALL BE EVENLY DISTRIBUTED OVER THE AREA OF DISTURBANCE SUBJECT TO TESTING. TESTS SHALL BE PERFORMED IN AREAS REPRESENTATIVE OF THE CONSTRUCTION ACTIVITY PREVAILING IN THE AREA. IN THE EVENT THIS TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE TESTING METHOD, THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM COMPACTION MITIGATION OVER THE ENTIRE DISTURBED AREA (EXCLUDING EXEMPT AREAS) OR TO PERFORM ADDITIONAL TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION.
SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

SOIL TEST METHOD OPTIONS

1. PROBING WIRE TEST METHOD
THIS TEST SHALL BE CONDUCTED WITH A FIRM WIRE (15–1/2 GAUGE STEEL WIRE – E.G. SURVEY MARKER FLAG, STRAIGHT WIRE STOCK, ETC.), 18 TO 21 INCHES IN LENGTH, WITH 6" INCHES FROM ONE END VISIBLY MARKED ON THE WIRE. CONDUCT WIRE FLAG TEST BY HOLDING THE WIRE FLAG NEAR THE FLAG END AND PUSH IT VERTICALLY INTO THE SOIL AT SEVERAL DIFFERENT LOCATIONS IN THE FIELD TO THE LESSER OF A 6 INCH DEPTH OR THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. RECORD THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. THE WIRE SHOULD PENETRATE WITHOUT BENDING OR DEFORMING AT LEAST 6" INTO THE GROUND BY HAND, WITHOUT THE USE OF TOOLS. IF PENETRATION FAILS AND AN OBSTRUCTION IS SUSPECTED (ROCKS, ROOT, DEBRIS, ETC.) THE TEST CAN BE REPEATED IN THE SAME GENERAL AREA. IF THE TEST IS SUCCESSFUL THE SOIL IS NOT EXCESSIVELY COMPACTED. IF THE WIRE IS DIFFICULT TO INSERT (WIRE BENDS OR DEFORMS PRIOR TO REACHING 6 INCHES IN DEPTH) THE SOIL MAY BE EXCESSIVELY COMPACTED AND COMPACTION MITIGATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNER'S DISCRETION.
2. HANDHELD SOIL PENETROMETER TEST METHOD
THIS TEST SHALL BE CONDUCTED BASED ON THE STANDARD OPERATION PROCEDURE (SOP) #RCE2010–001, PREPARED BY THE RUTGERS COOPERATIVE EXTENSION, IMPLEMENTED JUNE 1, 2010, LAST REVISED FEBRUARY 28, 2011. A RESULT OF LESS THAN OR EQUAL TO 300 PSI SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN 300 PSI THE SOIL MAY BE EXCESSIVELY COMPACTED AND COMPACTION MITIGATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNER'S DISCRETION.
3. TUBE BULK DENSITY TEST METHOD
THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER UTILIZING ONLY UNDISTURBED SAMPLES (RECONSTITUTION OF THE SAMPLE NOT PERMITTED) COLLECTED UTILIZING THE PROCEDURE FOR SOIL BULK DENSITY TESTS AS DESCRIBED IN THE USDA NRCS SOIL QUALITY TEST KIT GUIDE, SECTION 1–4, JULY 2001. WHEN THE
TEXTURE OF THE SOIL TO BE TESTED IS A SAND OR LOAMY SAND AND LACK OF SOIL COHESION OR THE PRESENCE OF LARGE AMOUNTS OF COARSE FRAGMENTS, ROOTS OR WORM CHANNELS PREVENT THE TAKING OF UNDISTURBED SAMPLES, THIS TEST
SHALL NOT BE USED. WHERE THE RESULTS OF REPLICATE TESTS DIFFER BY MORE THAN TEN PERCENT (10%), THE SAMPLES SHALL BE EXAMINED
FOR THE FOLLOWING DEFECTS:
i. CRACKS, WORM CHANNELS, LARGE ROOT CHANNELS OR POOR SOIL TUBE CONTACT WITHIN THE SAMPLES;
ii. LARGE PIECES OF GRAVEL, ROOTS OR OTHER FOREIGN OBJECTS
iii. SMEARING OR COMPACTION OF THE UPPER OR LOWER SURFACE OF THE SAMPLES

IF ANY OF THE DEFECTS DESCRIBED IN 3 (I–III) ABOVE ARE FOUND, THE DEFECTIVE CORE(S) SHALL BE DISCARDED AND THE TEST REPEATED USING A NEW REPLICATE SAMPLE FOR EACH DEFECTIVE REPLICATE SAMPLE. THE BULK DENSITY (DEFINED AS THE WEIGHT OF DRY SOIL PER VOLUME) RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19–1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION MITIGATION IS REQUIRED.
4. NUCLEAR DENSITY TEST METHOD
THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER AND CONDUCTED BY A NUCLEAR GAUGE CERTIFIED INSPECTOR PURSUANT TO ASTM D6938 . THE BULK DENSITY MEASUREMENT RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19–1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION MITIGATION IS REQUIRED.

MAXIMUM DRY BULK DENSITIES (GRAMS/CUBIC CENTIMETER) BY SOIL TYPE

SOIL TYPE /TEXTURE	BULK DENSITY (g/cc)
COARSE, MEDIUM AND FINE SANDS AND LOAMY SANDS	1.80
VERY FINE SAND AND LOAMY VERY FINE SAND	1.77
SANDY LOAM	.75
LOAM, SANDY CLAY LOAM	1.70
CLAY LOAM	1.65
SANDY CLAY	1.60
SILT, SILT LOAM	1.55
SILTY CLAY LOAM	1.50
SILTY CLAY	1.45
CLAY	1.40

STANDARD FOR LAND GRADING (CONT.)

SOURCE: USDA NATURAL RESOURCE CONSERVATION SERVICE, SOIL QUALITY INFORMATION SHEET, SOIL QUALITY RESOURCE CONCERNS: COMPACTION, APRIL 1996

5. ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

PROCEDURE FOR SOIL COMPACTION MITIGATION

IF SUBGRADE SOILS ARE DETERMINED TO BE EXCESSIVELY COMPACTED BY TESTING, AS IDENTIFIED ABOVE, PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) OR IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

INSTALLATION REQUIREMENTS

TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR
AFFECT THE PLANNED STABILITY OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE PLAN.
TOPSOIL IS TO BE STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISH GRADING OF ALL EXPOSED AREAS REQUIRING TOPSOIL. SEE STANDARD FOR TOPSOILING, PG. 8–1.
FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
ALL STRUCTURAL FILLS SHALL BE COMPACTED AS DETERMINED BY STRUCTURAL ENGINEERING REQUIREMENTS FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESSIVE SATURATION.
ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION. SEE STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4–1.
TREES TO BE RETAINED SHALL BE PROTECTED IF NECESSARY IN ACCORDANCE WITH THE STANDARD FOR TREE PROTECTION DURING
CONSTRUCTION, PG. 9–1.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

MATERIALS AND METHODS

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 THE CURRENT 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 WOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTIONS. 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 SAMPLER 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 USING 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 STANDARDS FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG, 1–1.

3. SEEDING

A. SELECT SEED FROM RECOMMENDATIONS IN TABLE 7–2.

SEED SELECTION	SEEDING RATE (POUNDS)		OPTIMUM SEEDING DATE	OPTIMUM SEEDING DEPTH (INCHES)
	PER ACRE	PER 1000 S.F.	ZONE 6b	
PERENNIAL RYEGRASS	100	1.0	3/1–5/15 8/15–10/01	0.5

B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDLINGS, 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 COURSE TEXTURED SOILS.
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 STABILIZATION WITH MULCH ONLY SHOWN HEREON) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO BE 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 FOOD SEED–TO–SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON THE 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 IN COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL–GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1–1/2 TO 2 TONS PER ACRE, (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH–BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER–BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FIND 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 PER 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 N A CROS–CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTING. 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 MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
4. LIQUID MULCH BINDERS – MAY BE USED TO ANCHOR HAY OR STRAW MULCH.

a. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

b. USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS.

(2) SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS 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–MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE 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, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60–75 POUNDS PER 1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWNS OR RENOVATION AREAS, SEEDED AREAS WHERE WEED–SEED FREE MUCH IS DESIRED OR ON SITE WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

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

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

MATERIALS AND METHODS

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 THE CURRENT STANDARDS 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 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–STABLIZATION 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 COOPERATIVE 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 USING 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 SOIL 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 LEES OR CONTAINING IRON SULFIDES 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. SELECT A MIXTURE FROM TABLE 4–2 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. 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 SELECTION	SEEDING RATE (POUNDS)		OPTIMUM SEEDING DATE	MAINTENANCE LEVEL
	PER ACRE	PER 1000 S.F.	ZONE 6b	
HARD FESCUE	45	.1	8/15–10/15	B–D

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 COVER WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.
2. WARM–SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 85° F AND ABOVE. SEE TABLE 4–2 MIXTURES 1–7. PLANTING RATES FOR WARM–SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
3. COOL–SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°. MANY GRASSES BECOME ACTIVE AT 65° F. SEE TABLE 4–2, 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 SEEDLINGS, 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 COURSE TEXTURED SOILS.
B. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE FOOD SEED–TO–SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON THE SITE WILL BE MAXIMIZED.
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 STABILIZATION WITH MULCH ONLY SHOWN HEREON) 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 BE SOIL CONTACT OCCURS,THERE IS A REDUCED SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

3. 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 IN COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY. UNROTTED SMALL–GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1–1/2 TO 2 TONS PER ACRE, (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH–BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER–BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION – SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 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 N A CROS–CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTING – 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 MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

1. LIQUID MULCH BINDERS – MAY BE USED TO ANCHOR HAY OR STRAW MULCH.

a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

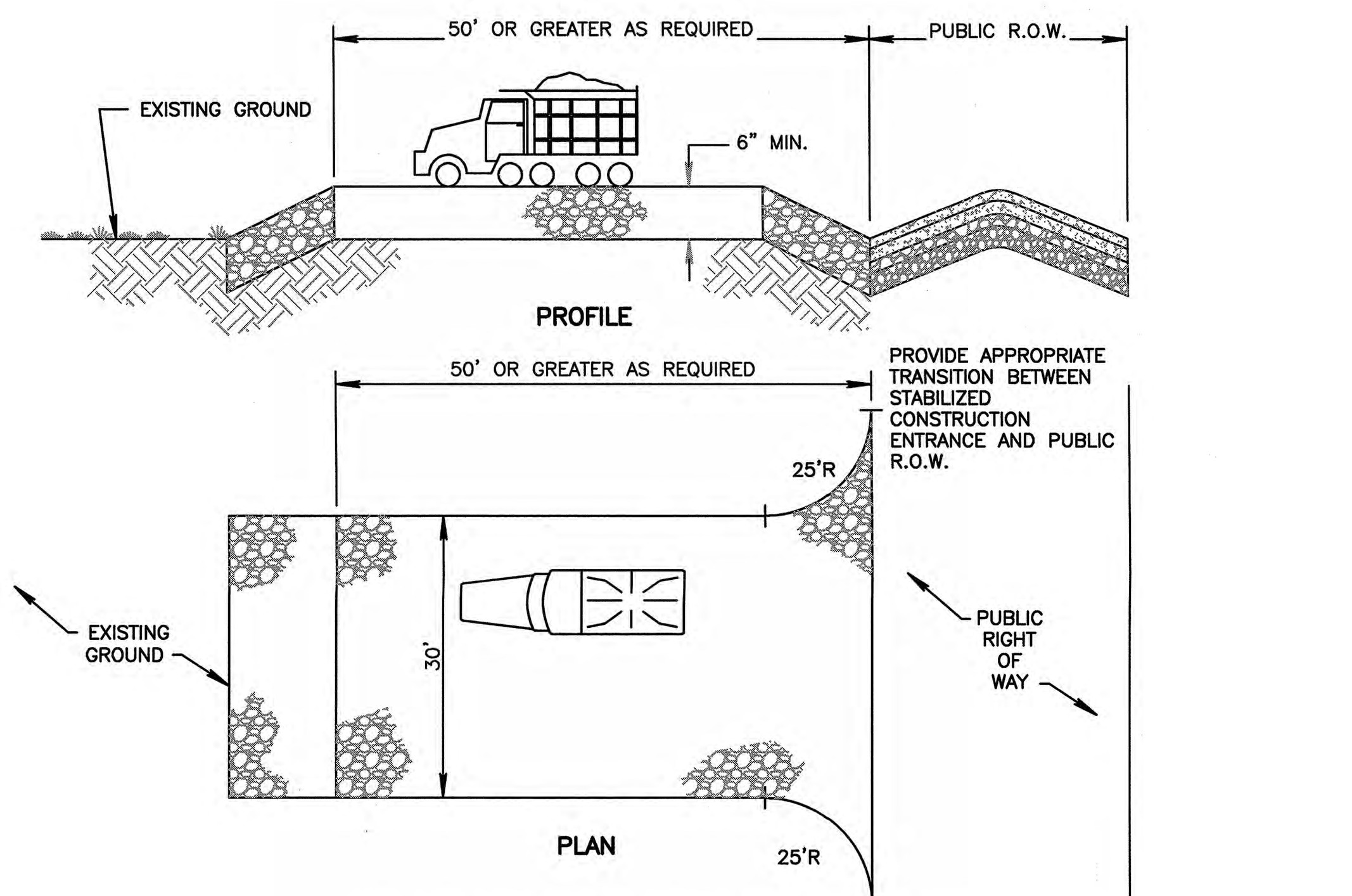
b) USE ONE OF THE FOLLOWING:

1. ORGANIC AND VEGETABLE BASED BINDERS – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIAL WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
2. SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION OF MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS 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–MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.
C. PELLETIZED MULCH – COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO–POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60–75 POUNDS PER 1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWNS OR RENOVATION AREAS, SEEDED AREAS WHERE WEED–SEED FREE MUCH IS DESIRED OR ON SITE 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. IRRIGATION (WHERE FEASIBLE)
IF SOIL MOISTURE IS DEFICIENT TO SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.
2. TOPDRESSING
SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A – SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW–UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10–10–10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.
3. 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 4–2 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.



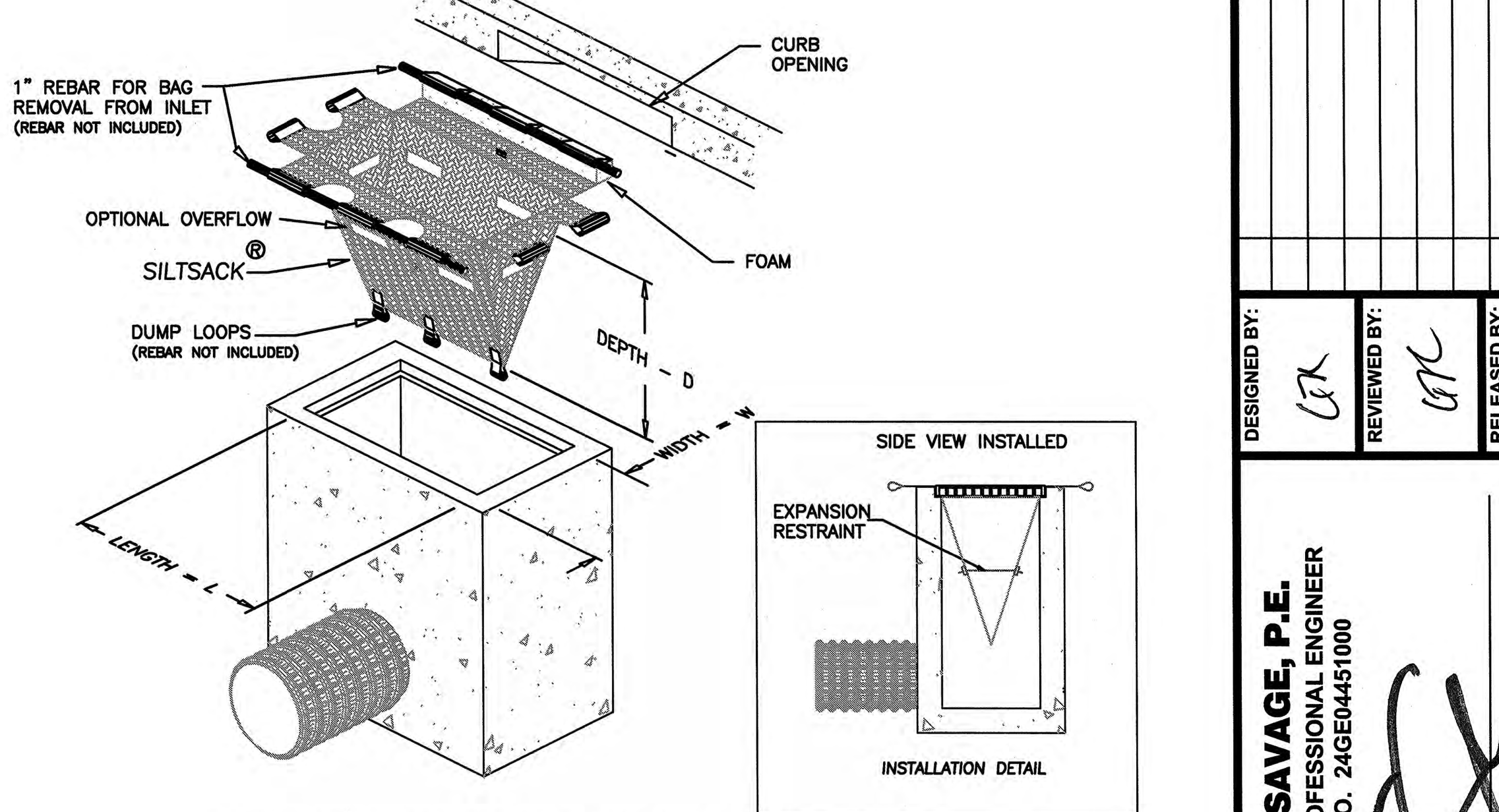
1"–2 1/2" CLEAN CRUSHED ANGULAR STONE SHALL BE USED

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT.	100 FT.
2 TO 5%	100 FT.	200 FT.
>5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX I–2[1]	

[1] AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

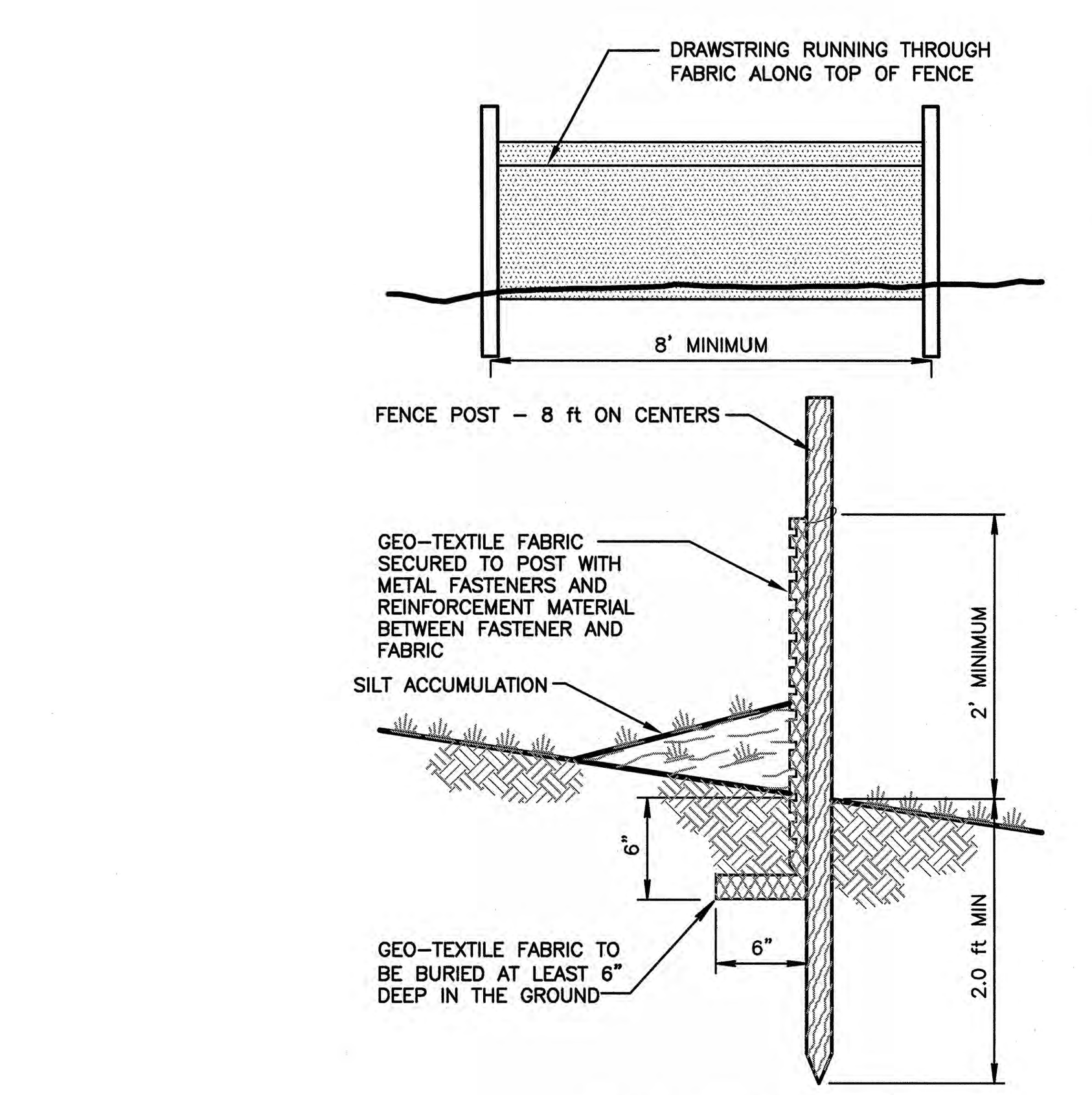
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



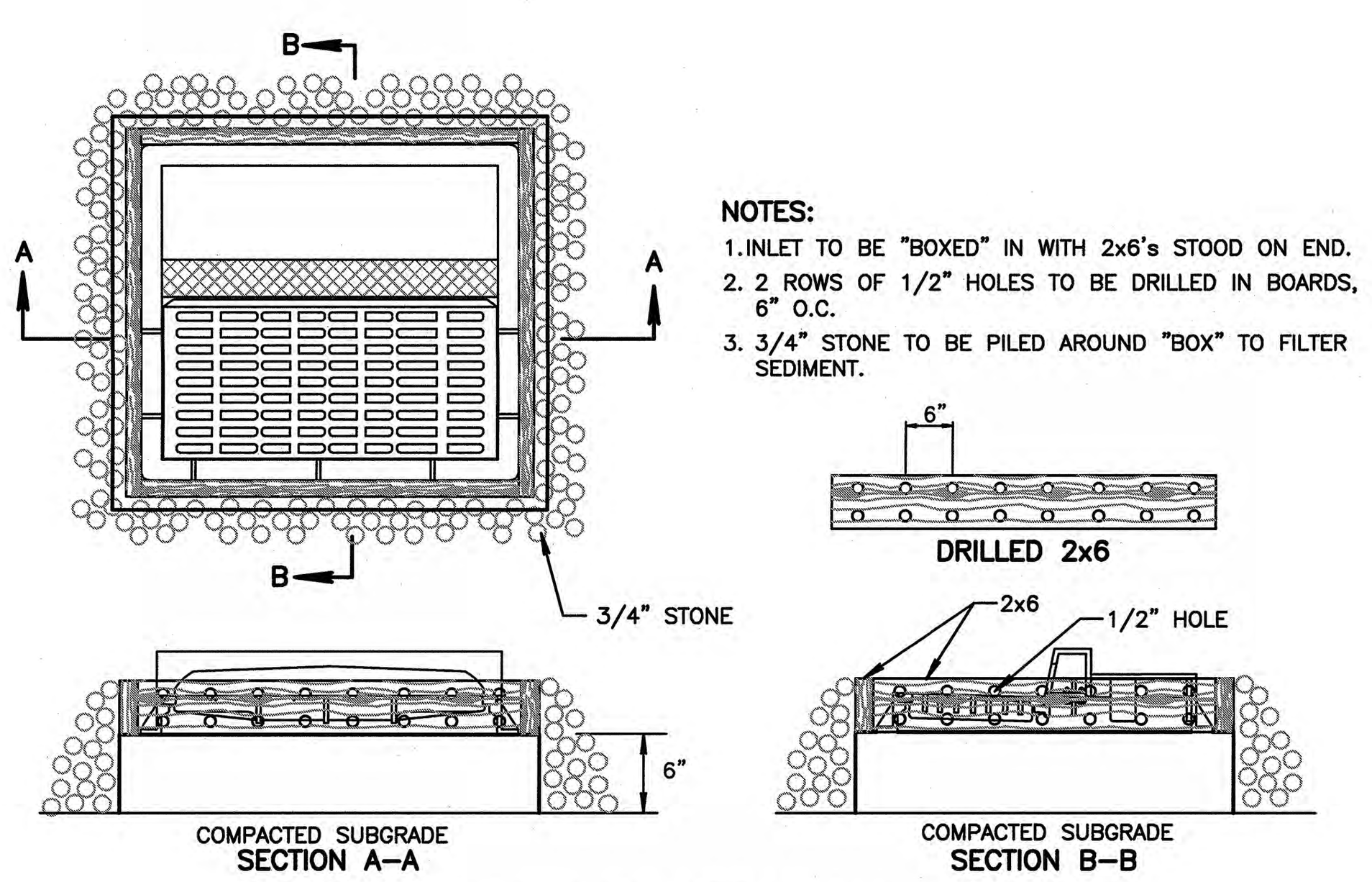
SILTSACK INLET PROTECTION DETAIL

NOT TO SCALE



SILT FENCE

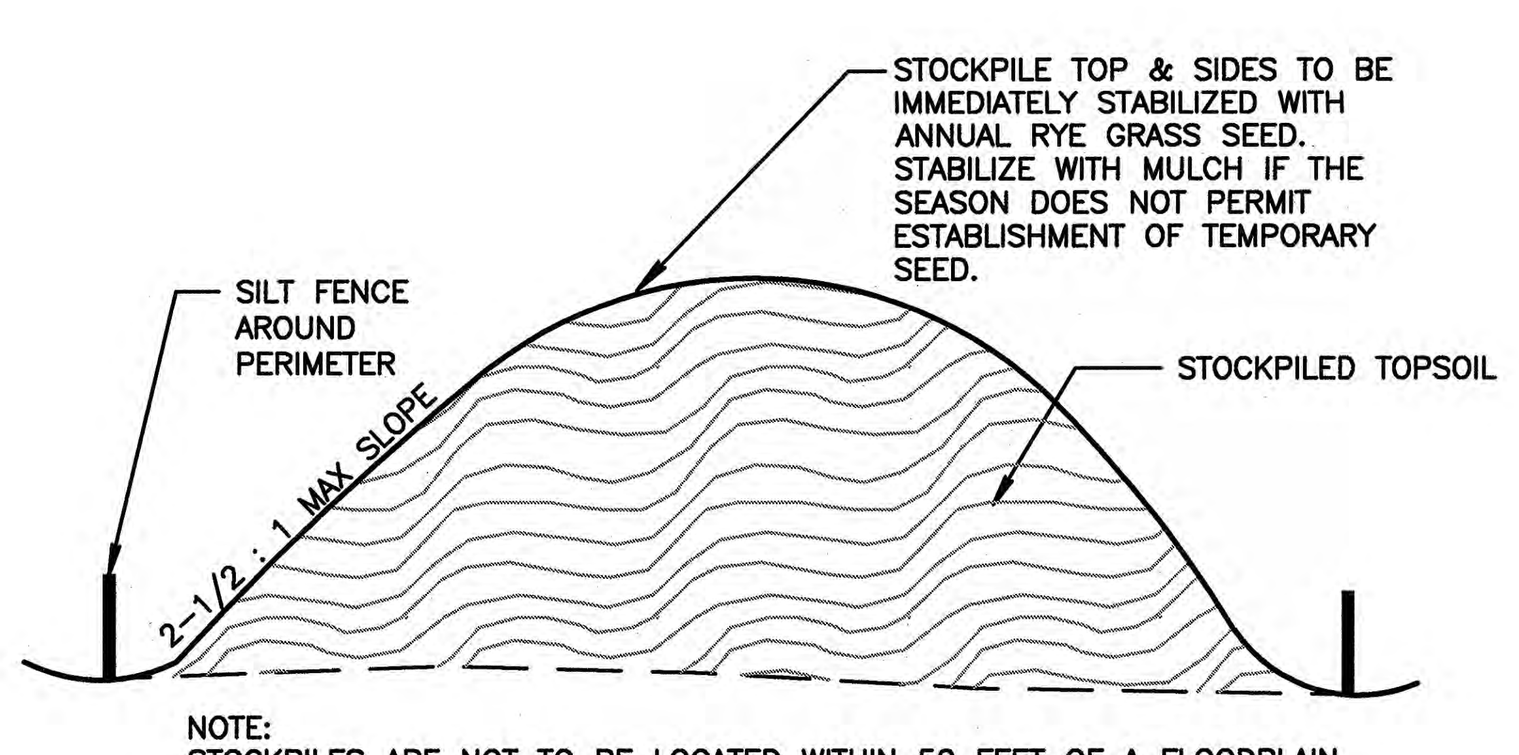
NOT TO SCALE



NOTES:
1. INLET TO BE "BOXED" IN WITH 2x6's STOOD ON END.
2. 2 ROWS OF 1/2" HOLES TO BE DRILLED IN BOARDS, 6" O.C.
3. 3/4" STONE TO BE PILED AROUND "BOX" TO FILTER SEDIMENT.

INLET PROTECTION

NOT TO SCALE



NOTE:
STOCKPILES ARE NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY. THE BASE OF ALL STOCKPILES TO BE PROTECTED BY A STRAW BALE BARRIER OR SILT FENCE.

STOCKPILE AREA

NOT TO SCALE

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:

REVISIONS

DESIGNED BY: GK
REVIEWED BY: GK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

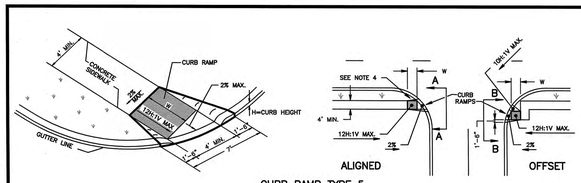
MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Certified WBE
Tel: 732-588-2999
Fax: 973-240-1818
www.matrixneworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27962300

SOIL EROSION AND SEDIMENT CONTROL DETAILS

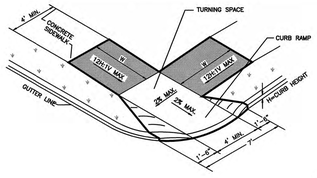
VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: AS SHOWN

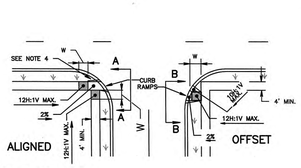
Plotted: 12/13/2021 8:51 AM, By: Chris Russo
© MATRIXNEWORLD\M:\Matrix LDS\Jobs\BNE Real Estate Group\19-720 - Verona Site\Dwg\Plot Sheets\11- SESC Details.dwg\11- SESC Details

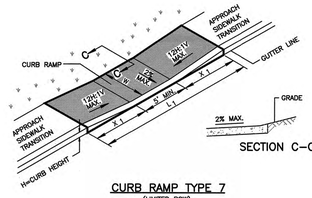


CURB RAMP TYPE 5



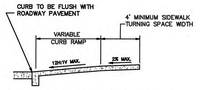
CURB RAMP TYPE 6



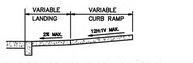


CURB RAMP TYPE 7
(LIMITED ROW)
(SEE NOTE 7)

SECTION C-C



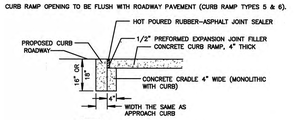
SECTION THROUGH CURB RAMPS 1 THROUGH 4



SECTION THROUGH CURB RAMPS 5 THROUGH 6



NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).

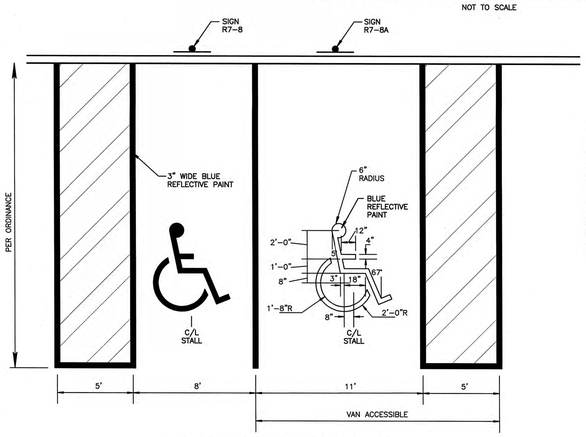


NOTES:
1. ALL FULL CURB DEPRESSIONS SHALL BE CONSTRUCTED OF CONCRETE, REGARDLESS OF THE CURB TYPE THROUGHOUT THE PROJECT.

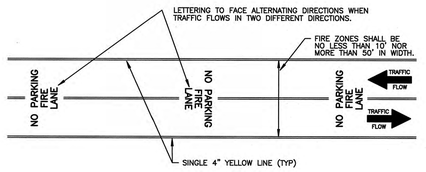
DROPPED CURB AND CRADLE

NOTES:
1. KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
2. FOR DIMENSIONS SEE NJDOT CONSTRUCTION DETAILS CD 606-1B AND CD 606-1C.
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT, A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7.
8. CROSSWALKS MAY BE MARKED OR UNMARKED. SEE PLANS.
9. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
10. THE 12H:1V MAXIMUM SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 12H:1V MAXIMUM SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.
11. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.

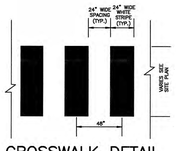
NJDOT PUBLIC SIDEWALK AND CURB RAMP
NOT TO SCALE



HANDICAP PARKING STALLS
NOT TO SCALE

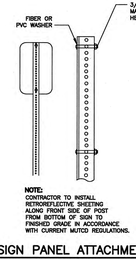


PAVEMENT MARKINGS FOR PARKING RESTRICTIONS
NOT TO SCALE

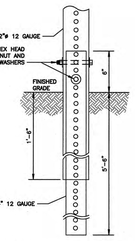


CROSSWALK DETAIL
NOT TO SCALE

1. ALL CROSSWALK SIGNAGE SHOULD BE IN ACCORDANCE WITH THE CURRENT MUTCD STANDARDS.



SIGN PANEL ATTACHMENT
NOT TO SCALE



BREAKAWAY SIGN POST
NOT TO SCALE



R1-1
30"x 30"
(6.25 S.F.)



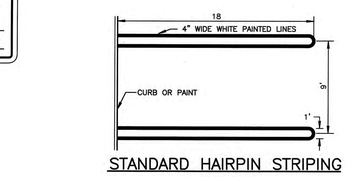
R7-6
12"X18"
(1.5 S.F.)



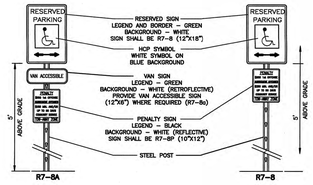
S-1
18" X 24"
(3 S.F.)



R5-3
12" X 18"
(1.5 S.F.)

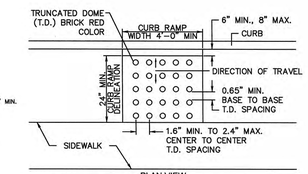


STANDARD HAIRPIN STRIPING
NOT TO SCALE

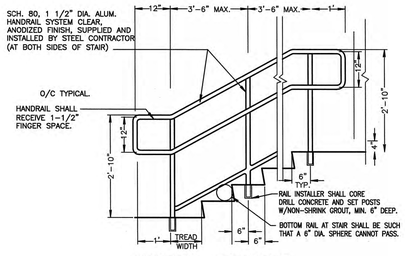


GENERAL NOTES:
1. ALL SIGNS SHALL BE MINIMUM 18 GUAGE STEEL WITH BAKED ON ENAMEL FINISH. PROVIDE WITH PRE-PUNCHED MOUNTING HOLES.
2. POSTS: 2" STEEL U-CHANNEL BREAKAWAY POST
3. SIGNS AND POSTS SHALL BE IN ACCORDANCE WITH LOCAL ORDINANCES.

HANDICAP PARKING SIGNS AND POSTS
NOT TO SCALE

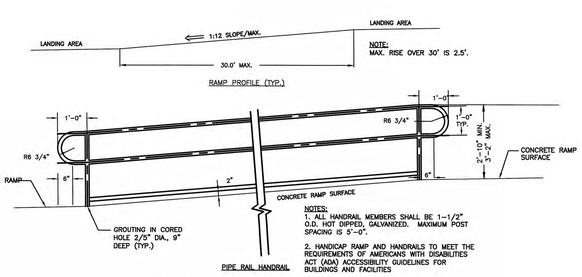


DETECTABLE WARNING SURFACE
NOT TO SCALE



HANDRAIL ASSEMBLY
NOT TO SCALE

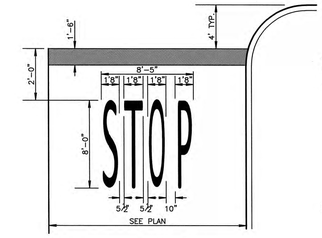
NOTE:
1. HANDRAIL ONLY ASSEMBLY ALLOWABLE WHERE VERTICAL DROP IS LESS THAN 30".
2. REFER TO ARCHITECTURAL PLAN FOR FINAL DESIGN ON ALL HANDRAILS



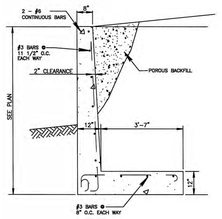
NOTES:
1. ALL HANDRAIL MEMBERS SHALL BE 1-1/2" O.D. HOT DIPPED, GALVANIZED. MAXIMUM POST SPACING IS 5'-0".
2. HANDICAP RAMP AND HANDRAILS TO MEET THE REQUIREMENTS OF AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES

ACCESSIBLE RAMP WITH HANDRAIL
NOT TO SCALE

NOTE:
1. HANDRAIL ONLY ASSEMBLY ALLOWABLE WHERE VERTICAL DROP IS LESS THAN 30".
2. REFER TO ARCHITECTURAL PLAN FOR FINAL DESIGN ON ALL HANDRAILS

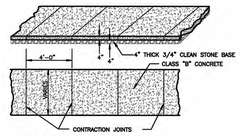


PAVEMENT MARKINGS
NOT TO SCALE



POURED CONCRETE RETAINING WALL
NOT TO SCALE

NOTE:
1. REINFORCEMENT AND DIMENSIONS AS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY. FINAL WALL DESIGN TO BE DESIGNED BY STRUCTURAL ENGINEER.
2. SHOP DRAWINGS FOR THE POURED CONCRETE RETAINING WALLS SHALL BE SUBMITTED TO THE ENGINEER ON RECORD..



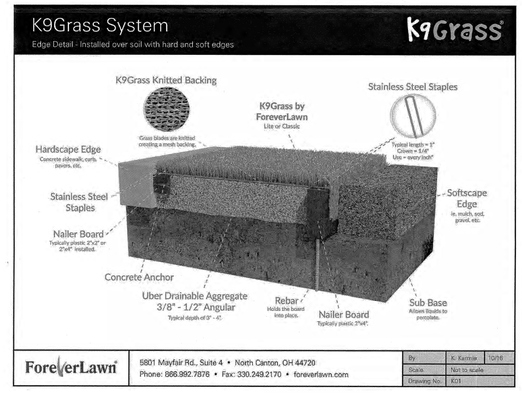
NOTES:
1. PRESTORED BITUMINOUS EXPANSION JOINTS,1/2" THICK SHALL BE INSTALLED EVERY 20 FEET, CONTRACTION JOINTS SHALL BE INSTALLED EVERY 4 FEET.
2. CONCRETE SHALL BE CLASS "B" PORTLAND CEMENT HAVING A 28 DAY STRENGTH OF 4000 PSI.
3. HANDICAP RAMPS SHALL HAVE A LIGHT BROOM FINISH WITH THE STRIATIONS PERPENDICULAR TO TRAFFIC.

CONCRETE SIDEWALK
NOT TO SCALE

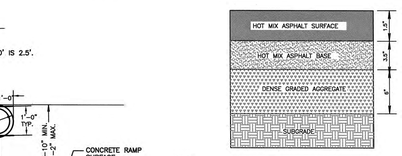


DOG WASTE STATION DETAIL
NOT TO SCALE

NOTES:
1. DOG WASTE STATION TO BE SENTRY DOG WASTE STATION AS PRODUCED BY TERRA BOUND SOLUTIONS OR APPROVED EQUAL.

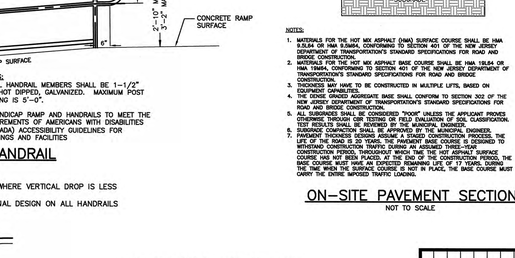


DOG PARK SURFACE DETAIL
NOT TO SCALE



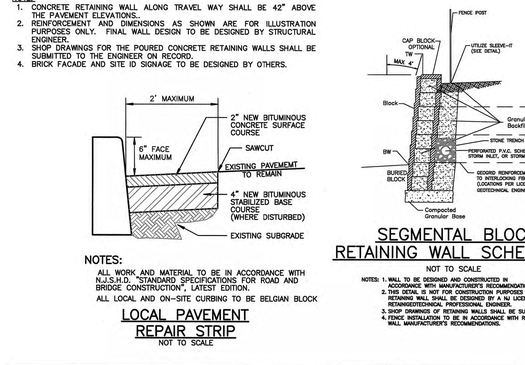
NOTES:
1. MATERIALS FOR THE HOT MIX ASPHALT (HMA) SURFACE COURSE SHALL BE HMA 9.5M 64 OR HMA 9.5M64, CONFORMING TO SECTION 401 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. MATERIALS FOR THE HOT MIX ASPHALT BASE COURSE SHALL BE HMA 19M64 OR HMA 25M64, CONFORMING TO SECTION 401 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. THICKNESS MAY HAVE TO BE CONSTRUCTED IN MULTIPLE LIFTS, BASED ON EQUIPMENT CAPABILITIES.
4. THE COMPACTED AGGREGATE BASE SHALL CONFORM TO SECTION 302 OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. ALL SUBGRADES SHALL BE CONSIDERED "POOR" UNLESS THE APPLICANT PROVES OTHERWISE THROUGH CBR TESTING OR FIELD EVALUATION OF SOIL CLASSIFICATION. TEST RESULTS SHALL BE REVIEWED BY THE MUNICIPAL ENGINEER.
6. ALL CONSTRUCTION SHALL BE INSPECTED BY THE MUNICIPAL ENGINEER.
7. PAVEMENT THICKNESS DESIGNS ASSUME A STAGED CONSTRUCTION PROCESS. THE LIFE OF THE ROAD IS 20 YEARS. THE PAVEMENT BASE COURSE IS DESIGNED TO WITHSTAND CONSTRUCTION TRAFFIC DURING AN ASSUMED THREE-YEAR PERIOD. IF THE FINAL SURFACE COURSE IS NOT PLACED AT THE END OF THE THREE-YEAR PERIOD, THE BASE COURSE MUST HAVE AN EXPECTED REMAINING LIFE OF 17 YEARS. DURING THE TIME WHEN THE SURFACE COURSE IS NOT IN PLACE, THE BASE COURSE MUST CARRY THE ENTIRE IMPOSED TRAFFIC LOADING.

ON-SITE PAVEMENT SECTION
NOT TO SCALE



NOTE: PROVIDE CONTROL JOINTS AT 12' MAX SPACING AND EXPANSION JOINTS AT 24' MAX SPACING.

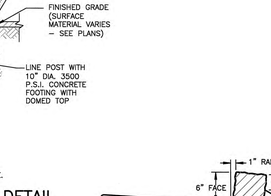
ELECTRIC TRANSFORMER CONCRETE PAD
NOT TO SCALE



*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE-IT™ 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK - UP TO 8-FT, PRIVACY - UP TO 6-FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.

SLEEVE-IT
FOR MORE INFORMATION CONTACT: STRATA-SYSTEMS INC. 1-800-680-7700 strata@geogrid.com
DATE: 10/10/2007 | SCALE: NTS | DRWG NO. SLEEVE-IT™ 1224R SECTION

SLEEVE-IT FENCE SYSTEM
NOT TO SCALE



POURED CONCRETE RETAINING WALL FOR ACCESS CIRCLE
NOT TO SCALE

NOTE:
1. CONCRETE RETAINING WALL ALONG TRAVEL WAY SHALL BE 42" ABOVE THE PAVEMENT ELEVATIONS.
2. REINFORCEMENT AND DIMENSIONS AS SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY. FINAL WALL DESIGN TO BE DESIGNED BY STRUCTURAL ENGINEER.
3. SHOP DRAWINGS FOR THE POURED CONCRETE RETAINING WALLS SHALL BE SUBMITTED TO THE ENGINEER ON RECORD.
4. BRICK FACADE AND SITE ID SIGNAGE TO BE DESIGNED BY OTHERS.

NOTES:
ALL WORK AND MATERIAL TO BE IN ACCORDANCE WITH N.J.S.H.D. "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.
ALL LOCAL AND ON-SITE CURBING TO BE BELGIAN BLOCK

LOCAL PAVEMENT REPAIR STRIP
NOT TO SCALE

SEGMENTAL BLOCK RETAINING WALL SCHEMATIC
NOT TO SCALE

NOTES: 1. WALL TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. THIS DETAIL IS NOT FOR CONSTRUCTION PURPOSES AND THE RETAINING WALL SHALL BE DESIGNED BY A NJ LICENSED RETAININGGEOTECHNICAL PROFESSIONAL ENGINEER.
3. SHOP DRAWINGS OF RETAINING WALLS SHALL BE SUBMITTED
4. FENCE INSTALLATION TO BE IN ACCORDANCE WITH RETAINING WALL MANUFACTURER'S RECOMMENDATIONS.

NO.	DESCRIPTION REVISIONS	DATE:	DES.:	REV.:	REL.:

DESIGNED BY: CL
REVIEWED BY: MK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Certificate of Authorization No. 24GA27992300
Tel: 732-588-2869
Fax: 973-240-1618
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27992300

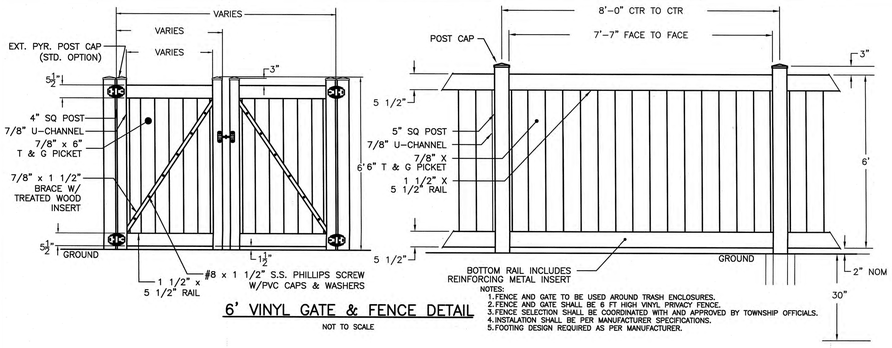
CONSTRUCTION DETAILS

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER:19-720
DATE: 12/10/21
SCALE: AS SHOWN

SHEET 12 OF 15

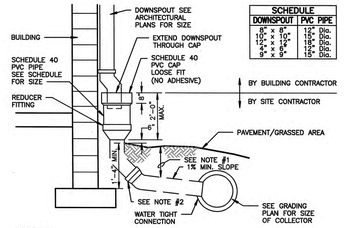
Plotted: 12/13/2021 8:52 AM, By: Chris Russo
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6' VINYL GATE & FENCE DETAIL

NOT TO SCALE

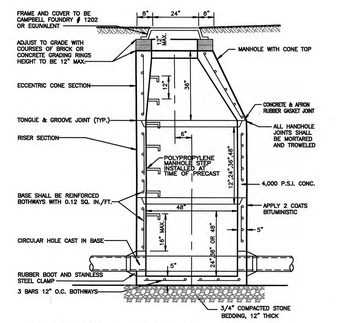
NOTES:
1. FENCE AND GATE TO BE USED AROUND TRASH ENCLOSURES.
2. FENCE AND GATE SHALL BE 6 FT HIGH VINYL PRIVACY FENCE.
3. FENCE SELECTION SHALL BE COORDINATED WITH AND APPROVED BY TOWNSHIP OFFICIALS.
4. INSTALATION SHALL BE PER MANUFACTURER SPECIFICATIONS.
5. FOOTING DESIGN REQUIRED AS PER MANUFACTURER.



NOTES:
1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
3. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE CAP. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR EXTENDING DOWNSPOUT THROUGH CAP.
4. INSTALL PIPES CLEAR OF PORCHES, BOLLARDS, AND OTHER BUILDING APPURTENANCES.

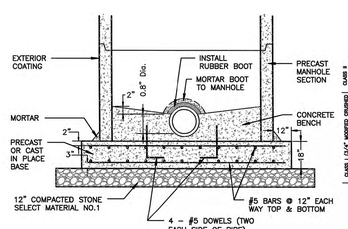
EXTERIOR DOWNSPOUT COLLECTOR

NOT TO SCALE



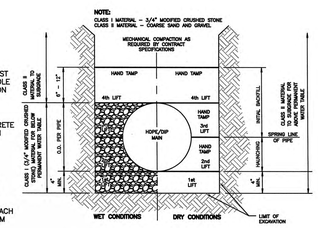
PRECAST REINFORCED CONCRETE MANHOLE ASSEMBLY–SANITARY SEWER

NOT TO SCALE



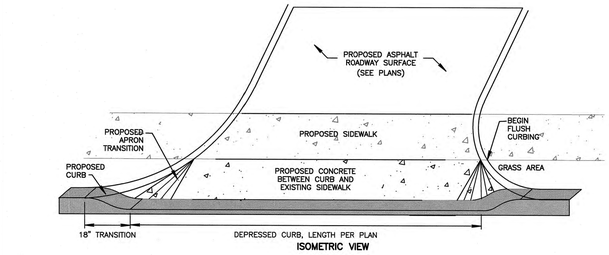
DOGHOUSE MANHOLE

NOT TO SCALE

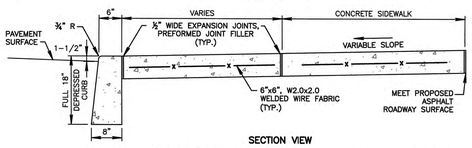


DIP/HDPE BEDDING DETAIL

NOT TO SCALE



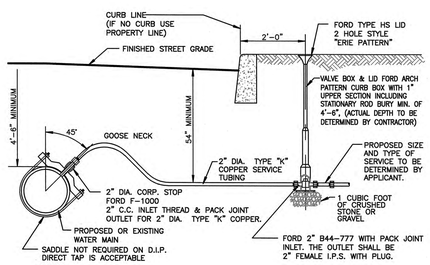
ISOMETRIC VIEW



SECTION VIEW

CONCRETE DRIVEWAY APRON & CURB SECTION

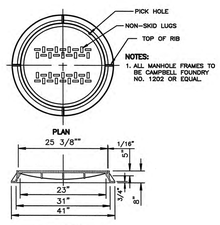
NOT TO SCALE



NOTE:
1. FOR USE WITH INSIDE WATER METER AND OUTSIDE REMOTE INSTALLATIONS
2. FINAL WATER SERVICE CONNECTION TO BE IN ACCORDANCE WITH WATER COMPANY REGULATIONS.

WATER SERVICE CONNECTION

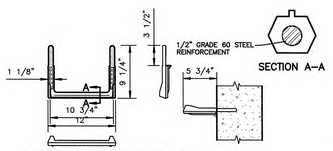
NOT TO SCALE



NOTES:
1. ALL MANHOLE FRAMES TO BE CAMPBELL FOUNDRY NO. 1202 OR EQUAL.

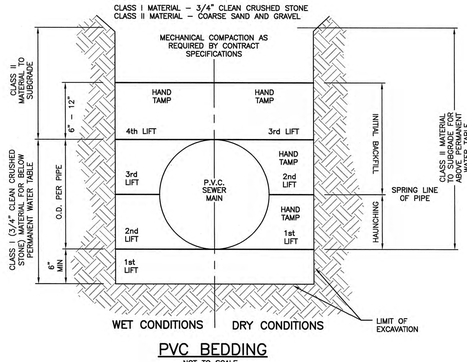
MANHOLE FRAME AND COVER

NOT TO SCALE



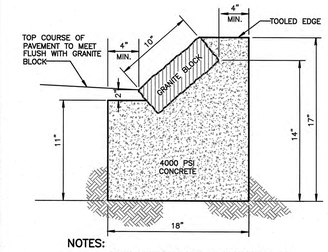
POLYPROPYLENE MANHOLE STEPS

NOT TO SCALE



PVC BEDDING

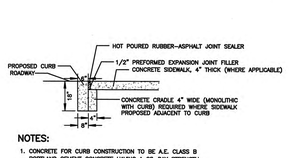
NOT TO SCALE



NOTES:
1. CURB FOOTING MUST BE PLACED ON UNDISTURBED SOIL OR COMPACTED SUBGRADE.
2. ALL JOINTS MUST BE COMPLETELY CLEAN BEFORE GROUTING.

MOUNTABLE BELGIAN BLOCK CURB

NOT TO SCALE



NOTES:
1. CONCRETE FOR CURB CONSTRUCTION TO BE A.E. CLASS B PORTLAND CEMENT CONCRETE HAVING A 28–DAY STRENGTH OF 4,000 P.S.I.
1/2" THICK PREFORMED BITUMINOUS JOINT FILLER SHALL BE USED TO CONSTRUCT EXPANSION JOINTS AT 20' O.C.
CONSTRUCTION JOINTS SHALL BE CONSTRUCTED AT 20' O.C. AND OFFSET 10' O.C. FROM EXPANSION JOINTS

FLUSH CONCRETE CURB

NOT TO SCALE



DIAMETER OF PIPE	0° TO 22–1/2° BEND	23° TO 45° BEND	45° TO 90° BEND	TEE CONNECTION	PLUG
	A	A	A	A	A
6"	1.1	2.1	4.0	2.9	2.9
8"	2.0	3.7	7.1	5.0	5.0
10"	3.1	5.8	11.1	7.9	7.9
12"	4.4	8.4	16.0	11.3	11.3

A = CONTACT BEARING AREA OF THRUST BLOCK WITH EARTH, IN SQUARE FEET

NOTES:
1. BEARING AREAS ARE BASED ON AN INTERNAL PIPE PRESSURE OF UP TO 200 PSI AND UNDISTURBED SOIL WITH A BEARING CAPACITY OF 2000 PSF. FOR A GREATER INTERNAL PRESSURE OR A LESSER SOIL BEARING CAPACITY, THESE AREAS SHALL BE INCREASED ACCORDINGLY.
2. ALL CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED OF NJDOT CLASS C CONCRETE.
3. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
4. WIDTH OF THRUST BLOCK SHALL BE TWICE THE HEIGHT WHERE PRACTICAL.

TABLE OF THRUST BLOCKS FOR HORIZONTAL BENDS FOR PRESSURES UP TO 200 P.S.I.

NOT TO SCALE

PLAN VIEW

TYPICAL THRUST BLOCK CONSTRUCTION

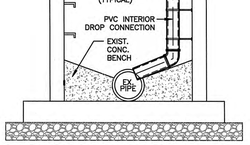
NOTES:
1. SIZE AND BEARING AREA FOR THRUST BLOCKS SHALL CONFORM TO CURRENT STANDARDS AS SHOWN IN THRUST BLOCK SCHEDULE.
2. CONCRETE FOR THRUST BLOCKS TO BE N.J.D.O.T. CLASS "B".
3. THE CONTRACTOR SHALL FURNISH AND INSTALL TAPPING SLEEVES WITH COMPATABLE TAPPING VALVES.
4. POURED CONCRETE THRUST BLOCK SIZE TO BE SPECIFIED (SEE DETAIL FOR SCHEDULE)

PLAN

ELEVATION

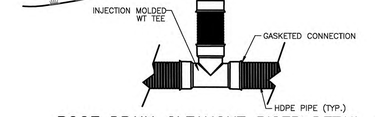
TAPPING VALVE AND SLEEVE WET TAP ASSEMBLY

NOT TO SCALE



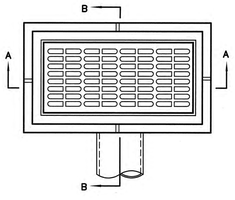
INTERIOR DROP MANHOLE CONNECTION

NOT TO SCALE

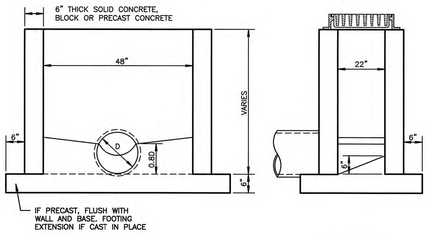


NOTES:
1. INJECTION MOLDED FITTINGS ARE AVAILABLE IN TEES, WYES, REDUCERS, 45° BENDS AND BELL/BELL COUPLERS.
2. WATERTIGHT (WT) JOINTS SHOWN. SOIL–TIGHT (ST) FITTINGS ARE ALSO AVAILABLE.
3. CLEANOUTS SHALL BE INSTALLED PER ADS SPECIFICATIONS.

ROOF DRAIN CLEANOUT RISER DETAIL

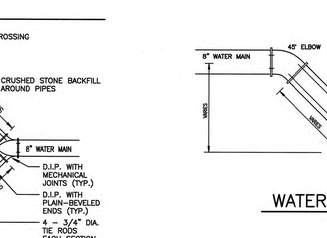


GENERAL NOTES:
1. FOOTER TO BE NJDOT CLASS "B" CONCRETE.
2. INVERT TO BE CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE NO. 3405 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
5. PROVIDE 3/4" DIAMETER POLY–PROPYLENE LADDER RUNGS 12" ON CENTER.
6. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH AT 8'–0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. INLETS 10 AND 12 TO HAVE A WALL THICKNESS OF 12".



TYPE "A" INLET

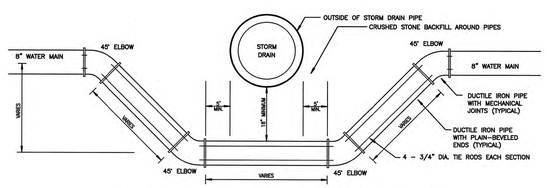
NOT TO SCALE



NOTES:
1. AT CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT). IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER LINE SHALL BE OF WATERTIGHT CONSTRUCTION, DUCTILE IRON WITH MECHANICAL JOINTS, THAT EXTEND A MINIMUM OF 10 FEET FROM THE WATER MAIN ON EACH SIDE (7:10–11.10(C)5).
2. THRUST BLOCKS REQUIRED FOR ALL BENDS AND FITTINGS.

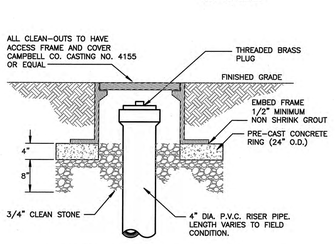
WATER MAIN – SANITARY SEWER CROSSING

NOT TO SCALE



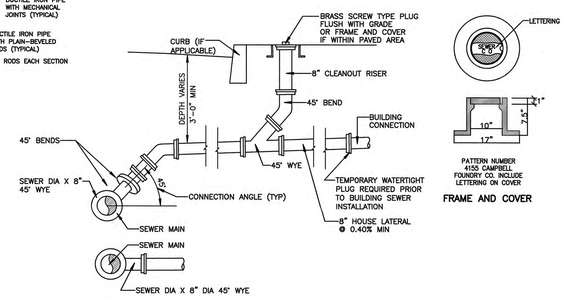
WATER MAIN – STORM DRAIN CROSSING

NOT TO SCALE



SANITARY SEWER CLEAN–OUT FRAME AND COVER

NOT TO SCALE



ALTERNATE CONNECTION (WHERE APPROVED BY ENGINEER)

PATTERN NUMBER 4155 CAMPBELL FOUNDRY CO. INCLUDE LETTERING ON COVER

FRAME AND COVER

NOTES:
1. PROVIDE SANITARY SEWER CLEAN–OUT EVERY 75 FT.
2. ALL FITTINGS SHALL BE STANDARD FOR TYPE OF PIPE USED AND INSTALLATION SHALL BE WATERTIGHT.
3. FOR PIPE BEDDING DETAILS SEE BEDDING DETAILS.
4. SEE SANITARY SEWER PROFILE FOR PIPE SIZES AND SLOPES.
5. ALL SANITARY LATERAL PIPING TO BE 8" PVC UNLESS OTHERWISE NOTED ON PLANS.
6. TEE–WYE MAY BE SUBMITTED FOR COMBINATION WYE WITH 45° BEND.
7. USE FRAME AND COVER WHEN CLEAN OUT LOCATED WITHIN PAVED AREAS.

STANDARD SANITARY LATERAL

NOT TO SCALE

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:
	REVISIONS				

DESIGNED BY: CJL
REVIEWED BY: CJL
RELEASED BY: SMS

SEAN M. SAVAGE P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

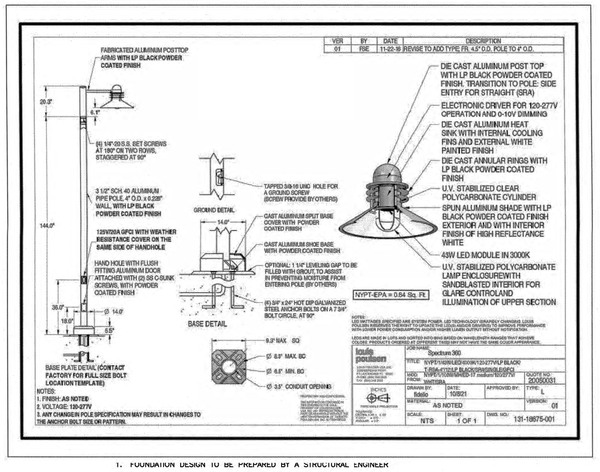
MATRIXNEWORLD
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Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Red Bank, New Jersey 07724
Tel: 732-568-2999
Fax: 973-240-1818
www.matrixnewworld.com
Certified WBE
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27992300

CONSTRUCTION DETAILS

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
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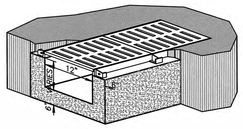
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1. FOUNDATION DESIGN TO BE PREPARED BY A STRUCTURAL ENGINEER

LIGHT FIXTURE "A" DETAIL

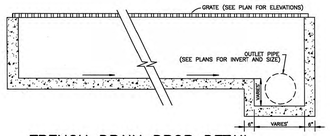
NOT TO SCALE



NOTES:
1. HEAVY DUTY TRENCH COVERS/GRATES ARE DESIGNED FOR AASHTO HS20-44 HIGHWAY LOADS.
2. CAMPBELL FOUNDRY COMPANY GRATE NO. 4528.
3. USE COVER NO. 4503 WHERE NEEDED.
4. 48" STANDARD FRAME LENGTH, 24" STANDARD COVER/GRATE LENGTH.
5. CONCRETE FOR CHANNEL CONSTRUCTION TO BE AIR ENTRAINED CLASS 'B' PORTLAND CEMENT HAVING A 28-DAY STRENGTH OF 4,000 P.S.I.
6. TRANSVERSE EXPANSION JOINTS SHALL BE CONSTRUCTED 20' ON CENTERS USING 1/2" THICK PREFORMED BITUMINOUS JOINT FILLER.
7. TRANSVERSE GROOVES (CONSTRUCTION JOINTS) SHALL BE STRUCK MIDWAY BETWEEN EXPANSION JOINTS.

TRENCH DRAIN HEAVY DUTY

NOT TO SCALE



TRENCH DRAIN DROP DETAIL

NOT TO SCALE

.hess

LINEA LED Specification

The simple linear form of LINEA combined with LED illumination provides a synergy of form and function. High-power LEDs provide a wide asymmetric distribution while generating no light above ninety degrees horizontal. Bollard housing and shaft are single-piece and finished in finely textured paint. All hardware is stainless steel.



Model	Lamp	Color temperature	Volt	Mounting	Pole	Finish	Option
LMxxx	LED - Standard output HP|LED - High output	WW - 3000K	UNV - 120-277V	A - Single Mount B - Twin Mount	xxSRA - 3" Straight Rectangular	SG - Silver Grey DG - Dark Grey CG - Graphite Grey BLK - Matte Black BRZ - Dark Bronze CC - Custom RAL Color	DIM - 0-10VDC Dimming EF - External Flange N - None

Ordering Information

Specifications are subject to change without notification

HessAmerica > Products > Lighting Products > Illuminating Rolland > LINEA
https://www.hessamerica.com/Products/Lighting/Illuminating_Rolland/LINEA__/

Page 1

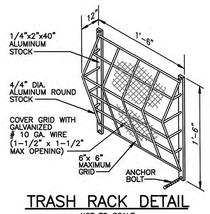
LIGHT FIXTURE "B" DETAIL

NOT TO SCALE

NAME	HEIGHT (mm)	CAPACITY (ft^3)	VOID RATIO	NOMINAL WEIGHT (kg)
ST-18	18" (457)	6.44 cf (0.18)	95.00%	22.70 lbs. (10)
ST-24	24" (610)	8.66 cf (0.25)	96.00%	26.30 lbs. (12)
ST-30	30" (762)	10.88 cf (0.31)	96.00%	29.50 lbs. (13)
ST-33	33" (838)	11.99 cf (0.34)	96.00%	29.82 lbs. (13.5)
ST-36	36" (914)	13.10 cf (0.37)	97.00%	33.10 lbs. (15)

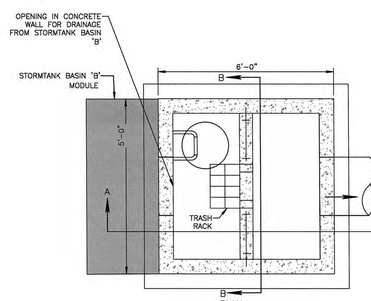
STORMTANK MODULE

NOT TO SCALE

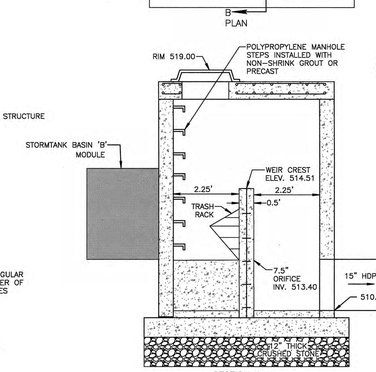


TRASH RACK DETAIL

NOT TO SCALE

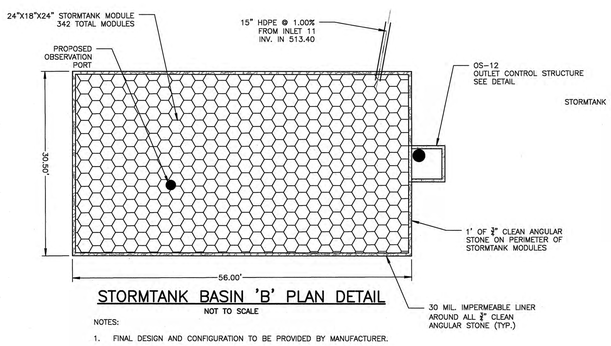


GENERAL NOTES:
1. FOOTER TO BE NJSHD CLASS "D" CONCRETE.
2. INVERT TO BE CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE NO. 1202 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
5. PROVIDE 3/4" DIAMETER POLY- PROPYLENE LADDER RUNGS 12" O.C.
6. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH AT 8'-0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. SHOP DRAWINGS TO BE PROVIDED FOR APPROVAL OF ENGINEER
8. TRASH RACKS TO BE HOT DIPPED GALVANIZED NO. 3 STEEL REBARS 12" THICK. WITH 1/2" STEEL ANGLE FRAME WITH 3/8" LEAD ANCHOR BOLTS.
9. 1'-6" WIDE X 1'-6" HIGH ORIFICE TRASH RACK 1-1/2" X 1-1/2" O.C.
10. FINAL DESIGN OF REINFORCEMENT TO BE COMPLETED BY STRUCTURAL ENGINEER OR MANUFACTURER PER APPLICABLE LOADING REGULATIONS.



OUTLET CONTROL STRUCTURE "OS-12"

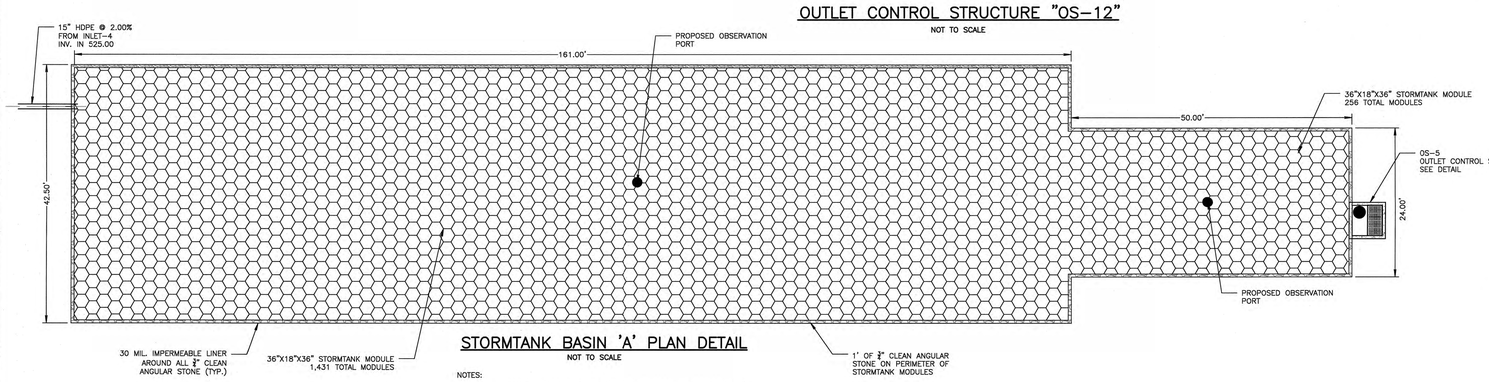
NOT TO SCALE



STORMTANK BASIN 'B' PLAN DETAIL

NOT TO SCALE

NOTES:
1. FINAL DESIGN AND CONFIGURATION TO BE PROVIDED BY MANUFACTURER.



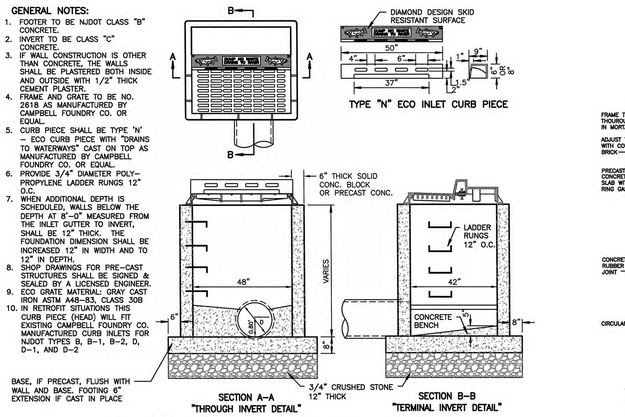
STORMTANK BASIN 'A' PLAN DETAIL

NOT TO SCALE

NOTES:
1. FINAL DESIGN AND CONFIGURATION TO BE PROVIDED BY MANUFACTURER.

OUTLET CONTROL STRUCTURE "OS-5"

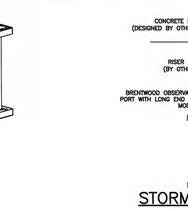
NOT TO SCALE



BASE, IF PRECAST, FLUSH WITH WALL AND BASE. FOOTING 6" EXTENSION IF CAST IN PLACE

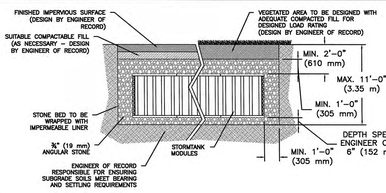
TYPE "B" INLET WITH 'N' ECO CURB PIECE

NOT TO SCALE



STORMTANK OBSERVATION PORT DETAIL

NOT TO SCALE



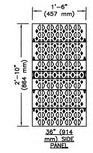
STORMTANK MODULE CROSS-SECTION DETAIL

NOT TO SCALE

STORMTANK MODULE DETAIL

NOT TO SCALE

STORMTANK NOTES:
1. STORMTANK MODULES TO BE PROVIDED BY BRENTWOOD INDUSTRIES, OR APPROVED EQUAL.
2. ALL STORMTANK INFORMATION SHOWN HEREON IS A SCHEMATIC FOR INFORMATIONAL PURPOSES ONLY. FINAL DESIGN SHALL BE PROVIDED BY BRENTWOOD INDUSTRIES.
3. REFERENCE CURRENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR PROPER ASSEMBLY AND INSTALLATION PRACTICES.



36" STORMTANK SIDE PANEL DETAIL

NOT TO SCALE

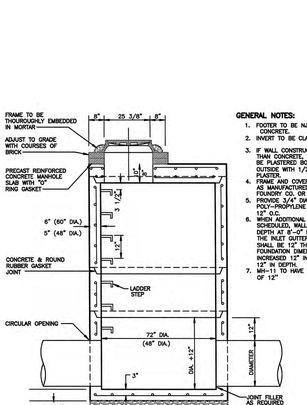


24" STORMTANK SIDE PANEL DETAIL

NOT TO SCALE

STORMTANK SIDE PANEL NOTES:
1. REFERENCE CURRENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR PROPER ASSEMBLY AND INSTALLATION PRACTICES.
2. SIDE PANELS REQUIRED AROUND THE PERIMETER OF THE INSTALLATION ONLY, UNLESS OTHERWISE NOTED.
3. ALL HEIGHTS TO BE CUT FROM A 36" PANEL AT THE PRE-SCRIBED LOCATIONS.

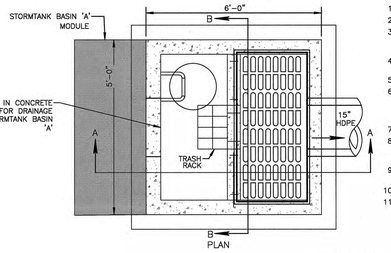
GENERAL NOTES:
1. FOOTER TO BE NJDOT CLASS "B" CONCRETE.
2. INVERT TO BE CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE NO. 2618 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
5. CURB PIECE SHALL BE TYPE 'N' - ECO CURB PIECE WITH "DRAINS TO WATERWAYS" CAST ON TOP AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
6. PROVIDE 3/4" DIAMETER POLY-PROPYLENE LADDER RUNGS 12" O.C.
7. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH AT 8'-0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
8. SHOP DRAWINGS FOR PRE-CAST STRUCTURES SHALL BE SIGNED & SEALED BY A LICENSED ENGINEER.
9. ECO GRATE MATERIAL: GRAY CAST IRON ASTM A48-83, CLASS 30B
10. IN RETROFIT SITUATIONS THIS CURB PIECE (HEAD) WILL FIT EXISTING CAMPBELL FOUNDRY CO. MANUFACTURED CURB INLETS FOR NJDOT TYPES B, B-1, B-2, D, D-1, AND D-2



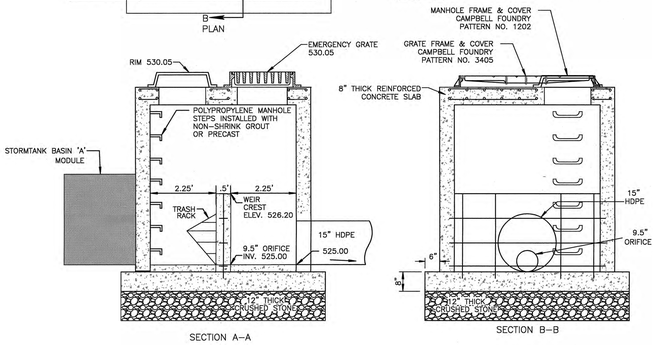
GENERAL NOTES:
1. FOOTER TO BE NJDOT CLASS "B" CONCRETE.
2. INVERT TO BE CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND COVER TO BE NO. 1202 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
5. PROVIDE 3/4" DIAMETER POLY-PROPYLENE LADDER RUNGS 12" O.C.
6. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH AT 8'-0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. WALL THICKNESS OF 12" TO HAVE WALL THICKNESS OF 12"

SLAB TOP MANHOLE 48" - 72" BASE-STORM SEWER

NOT TO SCALE



GENERAL NOTES:
1. FOOTER TO BE NJSHD CLASS "D" CONCRETE.
2. INVERT TO BE CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION IS OTHER THAN CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. FRAME AND GRATE TO BE NO. 1202 AND NO. 3405 RESPECTIVELY, AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR EQUAL.
5. PROVIDE 3/4" DIAMETER POLY- PROPYLENE LADDER RUNGS 12" O.C.
6. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW THE DEPTH AT 8'-0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. SHOP DRAWINGS TO BE PROVIDED FOR APPROVAL OF ENGINEER
8. TRASH RACKS TO BE HOT DIPPED GALVANIZED NO. 3 STEEL REBARS 12" THICK. WITH 1/2" STEEL ANGLE FRAME WITH 3/8" LEAD ANCHOR BOLTS.
9. 1 - 6' WIDE X 2' HIGH ORIFICE PLATE TRASH RACK 1-1/2" X 1-1/2" O.C.
10. 1 - 3' WIDE X 14" WEIR TRASH RACK 6" X 6" O.C.
11. TAPER 6' WIDE TRIANGULAR CONCRETE LOW FLOW CHANNEL TO ORIFICE PLATE



OUTLET CONTROL STRUCTURE 'OS-5'

NOT TO SCALE

NO.	DESCRIPTION	DATE:	DES.:	REV.:	REL.:
	REVISIONS				

DESIGNED BY: CAK
REVIEWED BY: CAK
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/14/2021
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, LLC
40 Cook Avenue, 2nd Floor
Eatontown, New Jersey 07724
Tel: 732-588-2999
Fax: 973-240-1818
www.matrixnewworld.com
Certified WBE
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27992300

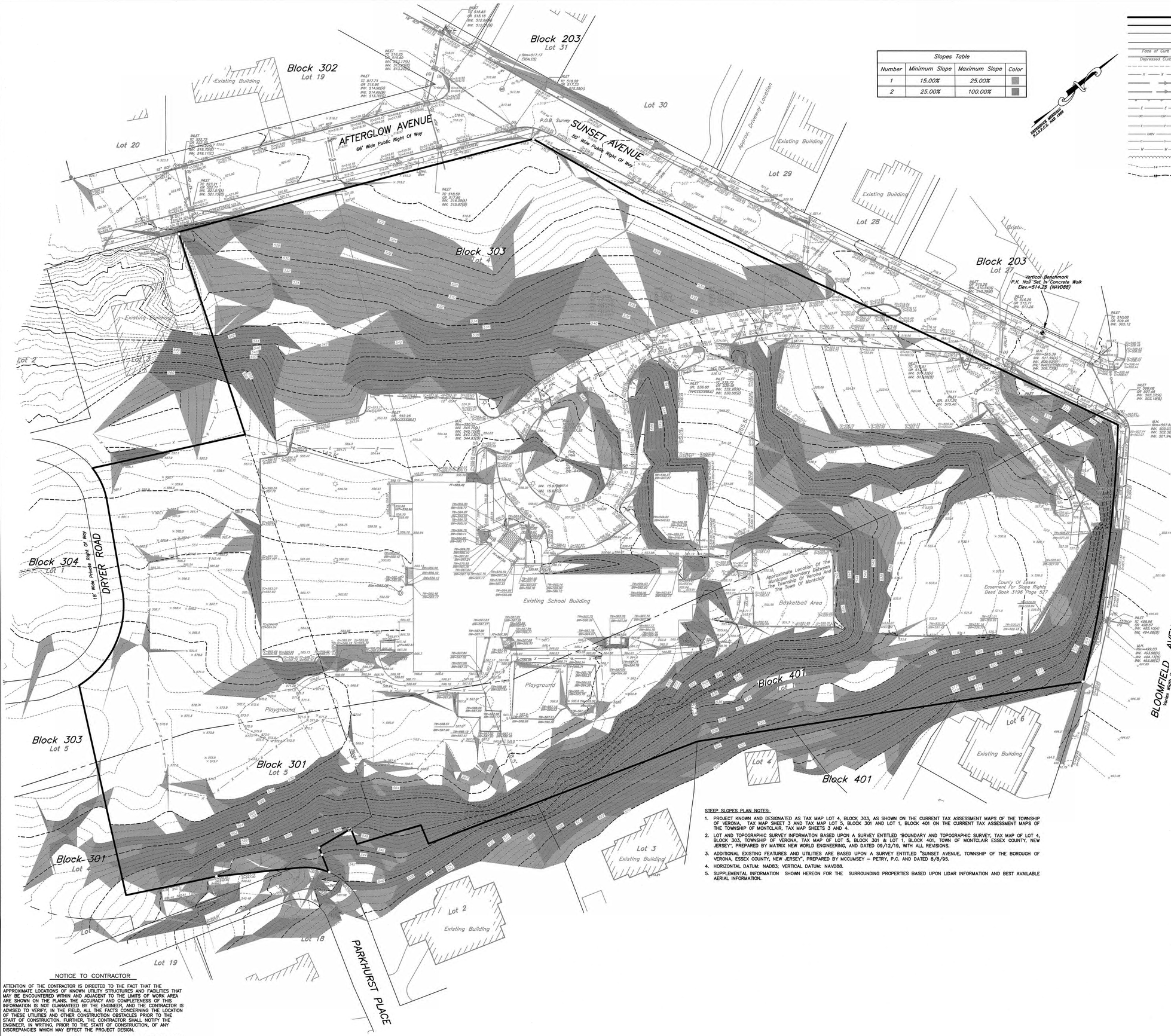
CONSTRUCTION DETAILS

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER: 19-720
DATE: 12/10/21
SCALE: AS SHOWN

SHEET 14 OF 15

Plotted: 12/13/2021 8:55 AM, By: Chris Russo
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Slopes Table			
Number	Minimum Slope	Maximum Slope	Color
1	15.00%	25.00%	
2	25.00%	100.00%	

LEGEND

BOUNDARY LINE	SPOT ELEVATION
BLOCK LINE	BOTTOM OF CURB
EXISTING ROW	TOP OF CURB
LOT LINE	GRATE ELEVATION
CURB LINE	GENERAL SIGN
DEPRESSED CURB	STREET SIGN
EDGE OF PAVEMENT	MAIL BOX
FENCE	FIRE HYDRANT
STORM DRAIN	WATER VALVE
SANITARY SEWER	WATER METER
GUIDE RAIL	MONITOR WELL
UNDERGROUND ELECTRIC LINE	GAS VALVE
OVER HEAD WIRE	GAS METER
UNDERGROUND TELEPHONE	SANITARY CLEAN OUT
UNDERGROUND CABLE TELEVISION	SANITARY MANHOLE
GAS LINE	STORM DRAINAGE INLET
WATER LINE	STORM DRAINAGE MANHOLE
TREE LINE	UTILITY POLE
CONTOURS MINOR	GUY ANCHOR
CONTOURS MAJOR	LIGHT POLE
	SINGLE HEAD LAMP
	UNKNOWN VALVE

STEEP SLOPES PLAN NOTES:

1. PROJECT KNOWN AND DESIGNATED AS TAX MAP LOT 4, BLOCK 303, AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF VERONA, TAX MAP SHEET 3 AND TAX MAP LOT 5, BLOCK 301 AND LOT 1, BLOCK 401 ON THE CURRENT TAX ASSESSMENT MAPS OF THE TOWNSHIP OF MONTCLAIR, TAX MAP SHEETS 3 AND 4.
2. LOT AND TOPOGRAPHIC SURVEY INFORMATION BASED UPON A SURVEY ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, TAX MAP OF LOT 4, BLOCK 303, TOWNSHIP OF VERONA, TAX MAP OF LOT 5, BLOCK 301 & LOT 1, BLOCK 401, TOWN OF MONTCLAIR ESSEX COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD ENGINEERING, AND DATED 09/12/19, WITH ALL REVISIONS.
3. ADDITIONAL EXISTING FEATURES AND UTILITIES ARE BASED UPON A SURVEY ENTITLED "SUNSET AVENUE, TOWNSHIP OF THE BOROUGH OF VERONA, ESSEX COUNTY, NEW JERSEY", PREPARED BY MCCUMSEY – PETRY, P.C. AND DATED 8/8/95.
4. HORIZONTAL DATUM: NAD83; VERTICAL DATUM: NAVD88.
5. SUPPLEMENTAL INFORMATION SHOWN HEREON FOR THE SURROUNDING PROPERTIES BASED UPON LIDAR INFORMATION AND BEST AVAILABLE AERIAL INFORMATION.

NOTICE TO CONTRACTOR

ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE FACT THAT THE APPROXIMATE LOCATIONS OF KNOWN UTILITY STRUCTURES AND FACILITIES THAT MAY BE ENCOUNTERED WITHIN AND ADJACENT TO THE LIMITS OF WORK AREA 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 OF THESE UTILITIES AND OTHER CONSTRUCTION OBSTACLES PRIOR TO THE START OF CONSTRUCTION. FURTHER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY DISCREPANCIES WHICH MAY EFFECT THE PROJECT DESIGN.

THE CONTRACTOR SHALL CONTACT NEW JERSEY ONE CALL (1-800-272-1000 OR LATEST NUMBER) FOR UTILITY MARKOUT PRIOR TO THE START OF CONSTRUCTION.

30 20 10 0 30 60 90

GRAPHIC SCALE
1 inch=30 feet

NO.	DESCRIPTION	DATE:	DES.:	REF.:	REL.:
	REVISIONS				

DESIGNED BY: CK
REVIEWED BY: CTC
RELEASED BY: SMS

SEAN M. SAVAGE, P.E.
NEW JERSEY PROFESSIONAL ENGINEER
LICENSE NO. 24GE04451000
12/10/2021
DATE

MATRIXNEWORLD
Engineering Progress
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
442 State Route 35, Second Floor
Eatontown, New Jersey 07724
Tel: 732-868-2899
Fax: 973-240-1618
www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27962300

STEEP SLOPES PLAN

VERONA SUNSET URBAN RENEWAL, LLC
BLOCK 303, LOT 4 - TOWNSHIP OF VERONA
BLOCK 301, LOT 5 AND BLOCK 401, LOT 1 - TOWNSHIP OF MONTCLAIR
ESSEX COUNTY, NEW JERSEY

PROJECT NUMBER:19-720
DATE: 12/10/21
SCALE: 1" = 30'
SHEET 15 OF 15

Plotted: 12/13/2021 8:56 AM, By: Chris Russo
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