

# PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR EWING PROPERTIES, LLC LOTS: 9 AND 10 BLOCK: 141 1602 PENNINGTON ROAD TOWNSHIP OF EWING, COUNTY OF MERCER, NEW JERSEY

ENGINEER:  
MICHAEL GALANTE PE  
76 ARGYLE AVENUE  
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APPLICANT/OWNER  
EWING PROPERTIES, LLC  
1602 PENNINGTON ROAD  
EWING, NJ 08618

*M.A.*  
DATE: 6-7-2020  
MICHAEL D. GALANTE  
NJ PROFESSIONAL ENGINEER LIC. No. PE 48374

MG ENGINEERING  
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CERTIFICATE OF AUTHORIZATION #  
24GA28279000

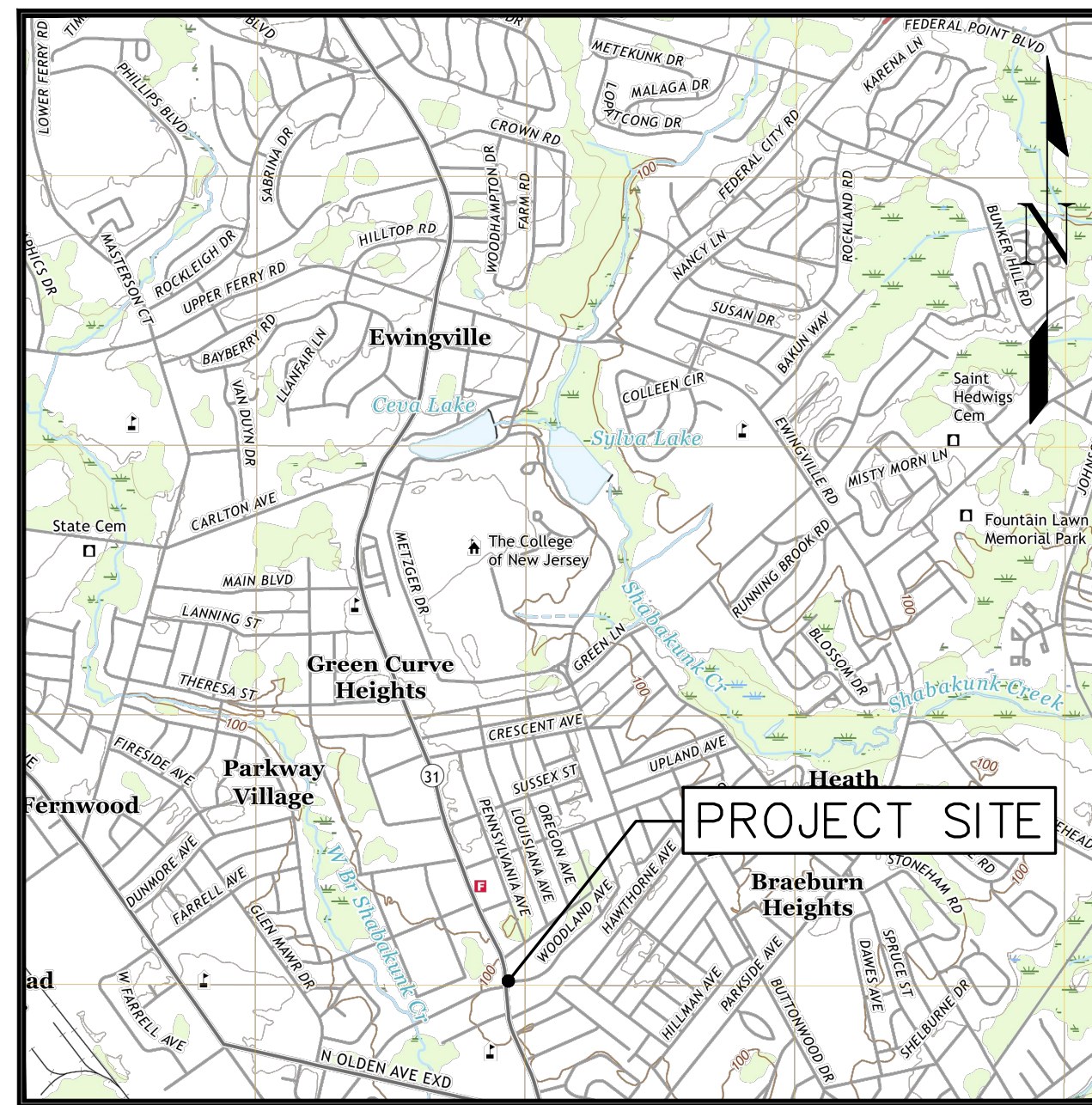
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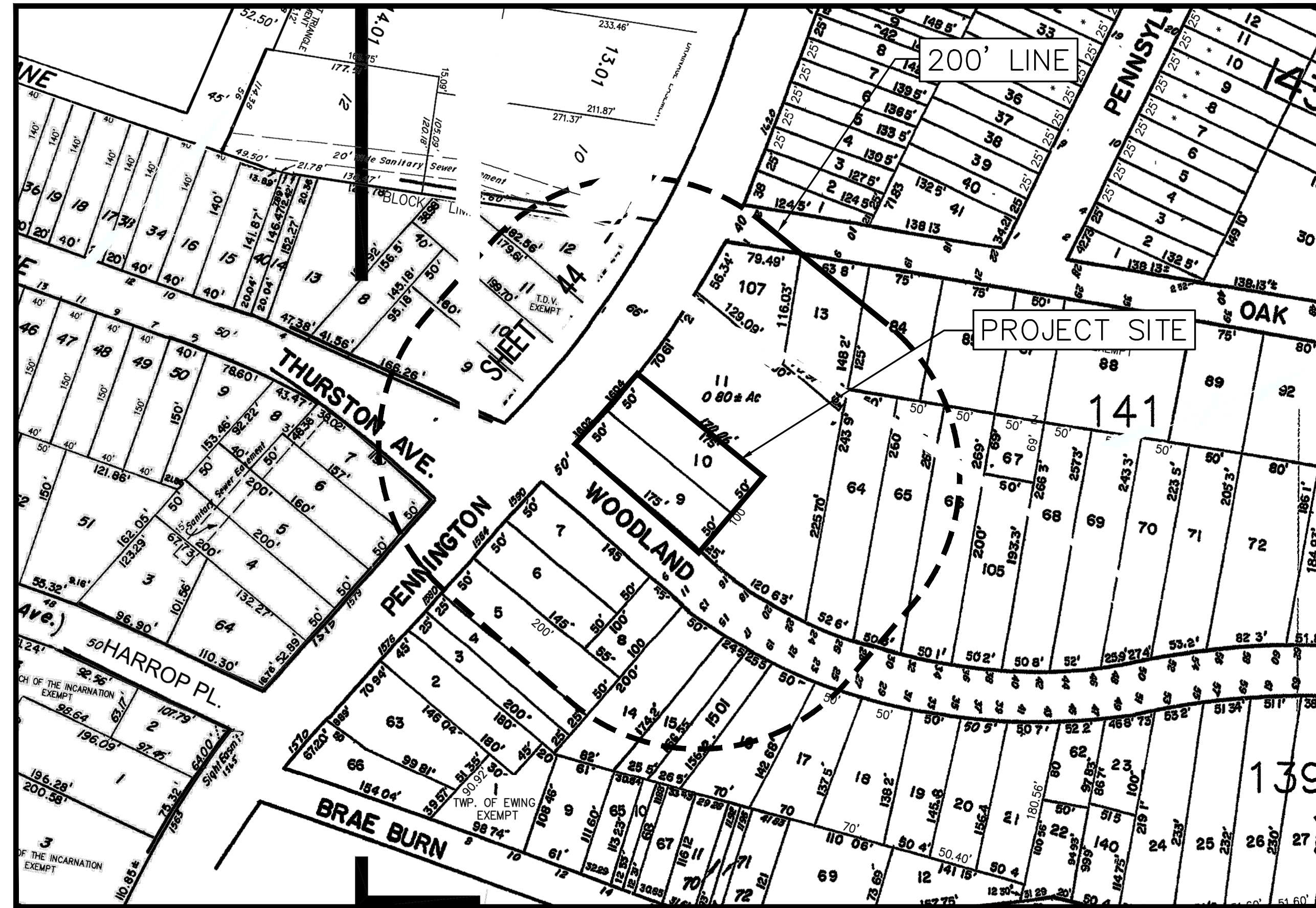
NO.	REVISION	DATE	BY
1	REV. PER. LAND DEVELOPMENT SUBMISSION	11/7/20	MDCG

COVER SHEET  
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR  
EWING PROPERTIES, LLC  
SECTION 15, BLOCK 141, LOTS 9 AND 10  
TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY: MDCG	DESIGN BY: MDCG	CHECKED BY: MDCG	SCALE: AS NOTED
DATE: MARCH 2020	SHEET No.: 1		
JOB No.: 2018-601			



KEY MAP  
SCALE: 1"=2000'



TAX MAP  
SCALE: 1" = 100'



AERIAL MAP  
SCALE: N.T.S.

## 200' PROPERTY OWNERS LIST

BLOCK	LOT	OWNER	ADDRESS	CITY, STATE	ZIP
275	9	JENNINGS, LEE CHARLES	1595 PENNINGTON ROAD	EWING, NJ	08618
275	11	EWING PROPERTIES, LLC	1602 PENNINGTON ROAD	EWING, NJ	08618
275	12	EGGERT, LOUIS W. JR.	56 FLORENCE AVENUE	EWING, NJ	08618
276	6	FRIEDMAN, LEE A.	1583 PENNINGTON ROAD	EWING, NJ	08618
276	7	GUY, MARY	1585 PENNINGTON ROAD	EWING, NJ	08618
139	4	PITCHER, BARBARA & MARJORIE PESSOLA	1580 PENNINGTON ROAD	EWING, NJ	08618
139	6	1584-1586 PENNINGTON ROAD, LLC	8 LOUELLEN STREET	HOPEWELL, NJ	08525
139	7	MCEADY, JACQUELINE	208 GREENRIDGE ROAD	VOORHEES, NJ	08043 1258
139	8	JONES, DAVID W.	9 WOODLAND AVENUE	EWING, NJ	08638
139	14	YORKER, VALERIE L.	316 PARK AVENUE	HIGHTSTOWN, NJ	08520
139	15	PCJ REAL ESTATE, LLC	4 ROYAL OAKS COURT	MONROE, NJ	08831
139	1501	DEOROCKI, DEBORAH ANN	19 WOODLAND AVENUE	EWING, NJ	08638
139	17	PARAS DEVELOPMENT, LLC	28 MARIPOSA PLACE	OLD BRIDGE, NJ	08857
141	9	EWING PROPERTIES, LLC	1602 PENNINGTON ROAD	EWING, NJ	08618
141	11	BELL ATLANTIC C/O DUFF & PHELPS	P.O. BOX 2749	ADDISON, TX	75001
141	13	GONZALEZ, MOISES	9 OAK LANE	EWING, NJ	08638
141	64	FOGAL, BARRY L.	26 WOODLAND AVENUE	EWING, NJ	08638
141	65	MARABLE WANDA & WILLIAMS LEONARD K	30 WOODLAND AVENUE	EWING, NJ	08638
141	66	ROTH, ALEXANDER & ALYSSA	101 NORTH STREET, APT 1	JERSEY CITY, NJ	07307
141	84	TISDALE LEONARD & BERTA	19 OAK LANE	EWING, NJ	08638
141	85	ROBINSON, LARRY L.	21 OAK LANE	EWING, NJ	08638
141	107	WEST INVESTMENTS, LLC	1612 PENNINGTON ROAD	EWING, NJ	08618
274	10	SANOCCI, ELIZABETH	5435 BROOKSIDE COURT	DOYLESTOWN, PA	18902

## AGENCIES TO BE CONTACTED

SUNOCO PIPELINE L.P. (RIGHT OF WAY DEPT.), MONTELLA COMPLEX	525 FRITZTOWN ROAD	SINKING SPRING, PA	19608
PSE&G Co. ATTN: MANAGER CORPORATE PROPERTIES	80 PARK PLAZA, T6B	NEWARK, NJ	07102
D&R CANAL COMMISSION	33 RISLER STREET P.O. BOX 539	STOCKTON, NJ	08559
MERCER COUNTY PLANNING BOARD MCDCADE ADMINISTRATION BUILDING	640 SOUTH BROAD STREET P.O. BOX 8068	TRENTON, NJ	08650
NJ DEPARTMENT OF TRANSPORTATION C/O COMMISSIONER-OFFICER OF MAJOR ACCESS	1035 PARKWAY AVENUE CN 600	TRENTON, NJ	08625

I HAVE CAREFULLY EXAMINED THIS MAP AND TO THE BEST OF MY KNOWLEDGE AND BELIEF FIND IT CONFORMS WITH THE PROVISIONS OF "THE MAP FILING LAW," RESOLUTION OF APPROVAL AND APPLICABLE MUNICIPAL ORDINANCES AND REQUIREMENTS.  
ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

I HEREBY CERTIFY THAT THIS MAP HAS BEEN APPROVED BY THE ZONING BOARD OF THE TOWNSHIP OF EWING WHICH IS THE PROPER AUTHORITY TO APPROVE THIS PLAN.  
ZONING BOARD CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

I HEREBY CERTIFY THAT THIS MAP HAS BEEN APPROVED BY THE ZONING BOARD OF THE TOWNSHIP OF EWING WHICH IS THE PROPER AUTHORITY TO APPROVE THIS PLAN.  
ZONING BOARD SECRETARY \_\_\_\_\_ DATE \_\_\_\_\_

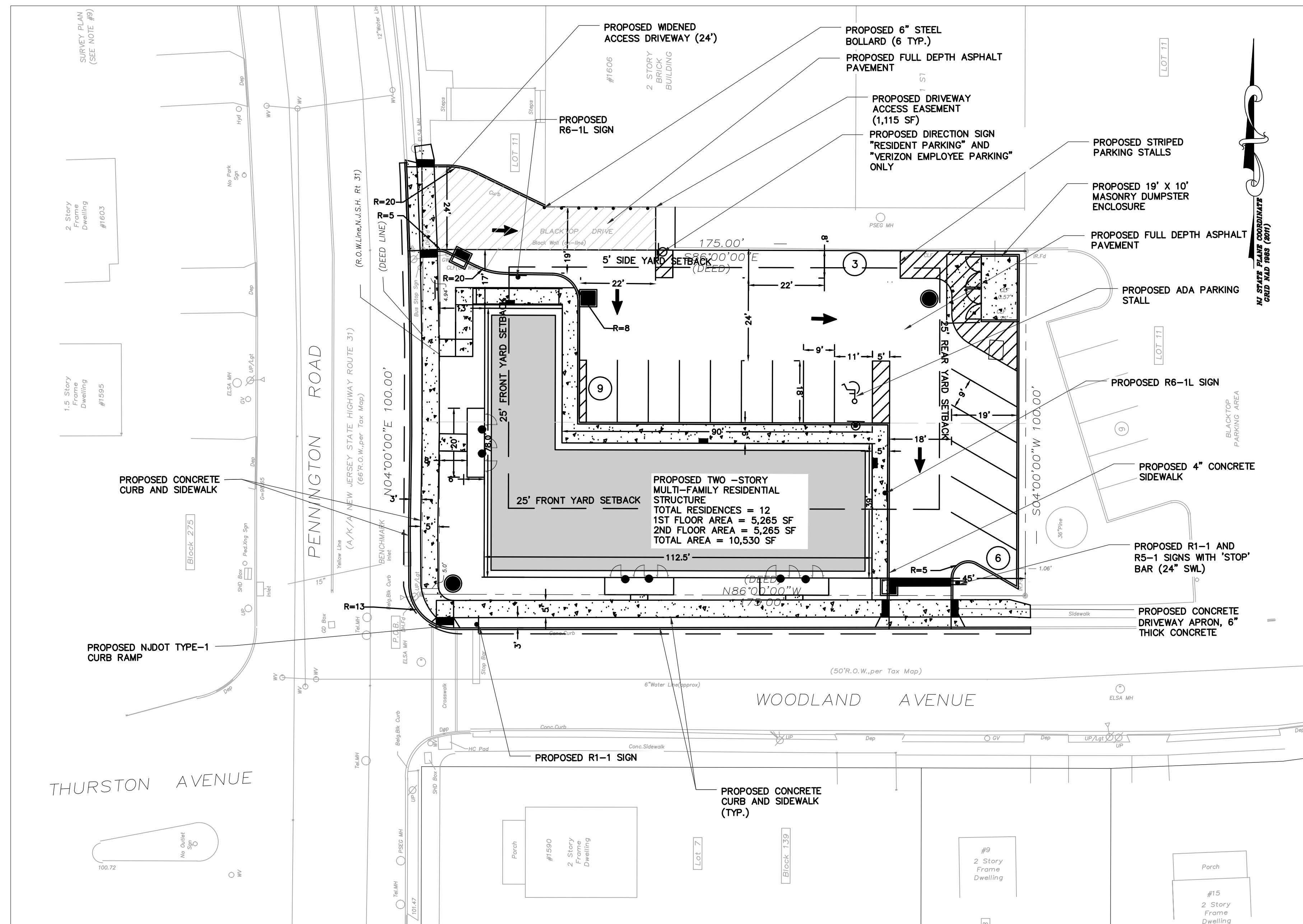
PREPARED BY  
**MG ENGINEERING ASSOCIATES, LLC**  
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SHEET NO.	DESCRIPTION
1	COVER SHEET
2	DEMOLITION PLAN
3	PROPOSED SITE PLAN
4	GRADING & UTILITY PLAN
5	LIGHTING PLAN
6	LANDSCAPE PLAN
7	EROSION AND SEDIMENT CONTROL & SOIL RESTORATION PLAN
8	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
9 & 10	CONSTRUCTION DETAILS
1 OF 1	TRUCK TURNING PLAN
1	BOUNDARY AND TOPOGRAPHY PLAN (BY OTHERS)

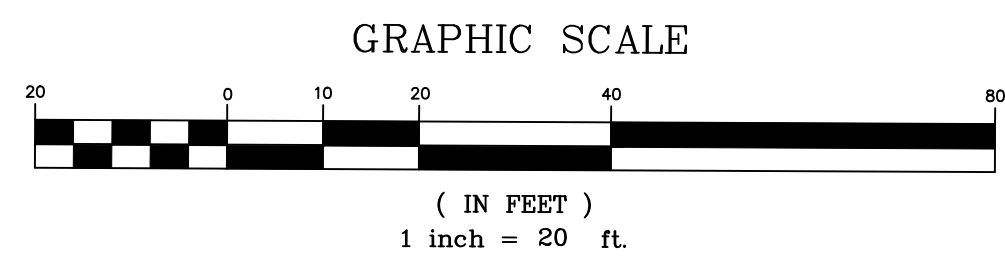


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PLAN  
SCALE: 1" = 20'



ZONING NOTES:

- THIS PLAN HAS BE PREPARED BASED ON REFERENCED INCLUDING:  
 PLAN OF SURVEY  
 HARRIS SURVEYING, INC.  
 26 MAIN STREET  
 ROBBINSVILLE, NJ 08691  
 PROJECT # 140436  
 DATED: 10/2/2014
- OWNER: EWING PROPERTIES, LLC  
 1602 PENNINGTON ROAD  
 EWING, NJ 08618
- APPLICANT: EWING PROPERTIES, LLC  
 1602 PENNINGTON ROAD  
 EWING, NJ 08618
- PROPERTY DATA: 1602 PENNINGTON ROAD  
 TOWNSHIP OF EWING, MERCER COUNTY, NJ  
 BLOCK 141, LOTS 9 & 10
- ZONING: B-N (BUSINESS NEIGHBORHOOD)  
 PROPOSED USE: MULTI-FAMILY RESIDENTIAL STRUCTURE (V)

6. BULK TABLE

ZONE REQUIREMENT	REQUIRED	PROPOSED
MIN. LOT AREA (CORNER LOT)	7,500 SF	17,000 SF
MIN. LOT WIDTH (CORNER LOT)	75'	100'
MIN. FRONT YARD	25'	0' (V)
MIN. SIDE YARD	5'	17'
MIN. REAR YARD	5'	44'
MAX. BUILDING HEIGHT	2-1/2 STORIES/35'	2 STORIES/32'
MAX. GROSS FLOOR AREA	2,400 SF	10,530 SF (V)
MAX. IMPERVIOUS COVERAGE	75%	89.5% (15,220 SF) (V)

\* WHEN ABUTTING THE RESIDENTIAL DISTRICT, THE REAR AND SIDE YARD REQUIREMENTS SHALL CONFORM TO REQUIREMENTS OF THE ADJACENT RESIDENTIAL DISTRICT.

7. ACCESSORY STRUCTURE REQUIREMENTS

- ACCESSORY BUILDINGS SHALL BE SETBACK A MINIMUM OF 5' TO THE SIDE LOT LINE.
- ACCESSORY BUILDINGS SHALL BE SETBACK A MINIMUM OF 5' TO THE REAR LOT LINE.
- ACCESSORY BUILDINGS SHALL BE ONE STORY AND A MAXIMUM OF 15' HIGH.

8. ADDITIONAL REQUIREMENTS

- SEPARATION FROM PUBLIC STREETS. ALONG EACH STREET LINE, AS DEFINED BOUNDING THE DISTRICT A TEN-FOOT STRIP SHALL BE PROVIDED, SUITABLY LANDSCAPED EXCEPT FOR NECESSARY SIDEWALKS AND ACCESSWAYS. (V)
- SCREENING OR BUFFER STRIP. ALONG EACH SIDE AND REAR PROPERTY LINE WHICH ADJOINS A RESIDENTIAL DISTRICT IN THE TOWNSHIP OR A SIMILAR DISTRICT IN AN ADJOINING MUNICIPALITY, A SCREEN OR BUFFER PLANTING STRIP SHALL BE PROVIDED CONSISTING OF MASSES EVERGREENS AND SHRUBS OF SUCH SPECIES AND SIZE AS WILL PRODUCE AN EFFECTIVE SCREEN AT THE TIME OF PLANTING. THE WIDTH OF THE PLANTED SCREEN SHALL BE 25'. (V)
- ENTRANCES AND EXITS. ALL ENTRANCES AND EXITS UPON A PUBLIC STREET SHALL NOT BE LOCATED WITHIN 50 FEET OF ANY STREET INTERSECTION, THE DISTANCE IS TO BE MEASURED FROM THE INTERSECTION OF THE RIGHT-OF-WAY LINES AT THE CORNER AFFECTED AND THE CLOSEST POINT OF SUCH PROPOSED DRIVEWAY. NO ENTRANCE OR EXIT, AT THE CURBLINE ONLY, SHALL BE CLOSER THAN FIVE FEET FROM A SIDE LOT LINE. (V)
- LOADING DOCKS AND SERVICE AREAS. NO LOADING DOCK OR SERVICE AREA MAY BE ON ANY STREET FRONTAGE.
- OUTDOOR STORAGE AREAS - NO USE OR ACCESSORY USE SHALL BE CONSTRUCTED TO PERMIT THE KEEPING OF ARTICLES, EQUIPMENT, GOODS OR MATERIALS IN THE OPEN, EXPOSED TO PUBLIC VIEW, ADJACENT RESIDENCES OR A RESIDENTIAL DISTRICT. WHEN NECESSARY TO STORE OR KEEP SUCH GOODS OR MATERIALS IN THE OPEN, THE AREA SHALL BE FENCED WITH A SCREEN OR BUFFER PLANTING STRIP AND SITUATED NO CLOSER THAN 50' TO A RESIDENTIAL DISTRICT LINE. (V)

9. PARKING REQUIREMENTS:

- REQUIRED PARKING STALL SIZE: 9' X 20' FOR 90° PARKING EXCEPT 9' X 18' WITH OVERHANG. 9' X 18' PROPOSED WITH 2' OVERHANG
- AT THE DISCRETION OF THE BOARD, UP TO 30% OF REQUIRED PARKING SPACES MAY BE DESIGNED FOR COMPACT CAR USE. SUCH SPACES SHALL NOT BE LESS THAN 8' WIDE NOR LESS THAN 17' DEEP. DEPTH MAY BE REDUCED TO 16' WITH 2' OVERHANG.
- INTERIOR DRIVEWAYS: 24' WIDE FOR 90° PARKING  
 18' WIDE FOR 60° PARKING  
 14' WIDE FOR 30° OR 45° PARKING
- REQUIRED PARKING STALLS (DWELLING UNITS): 2 SPACES REQUIRED FOR EACH DWELLING UNIT  
 PROPOSED PARKING STALLS = 12 DWELLING UNITS X 2 SPACES PER UNIT = 24 PARKING SPACES  
 24 SPACES REQUIRED; 18 PROPOSED (V)

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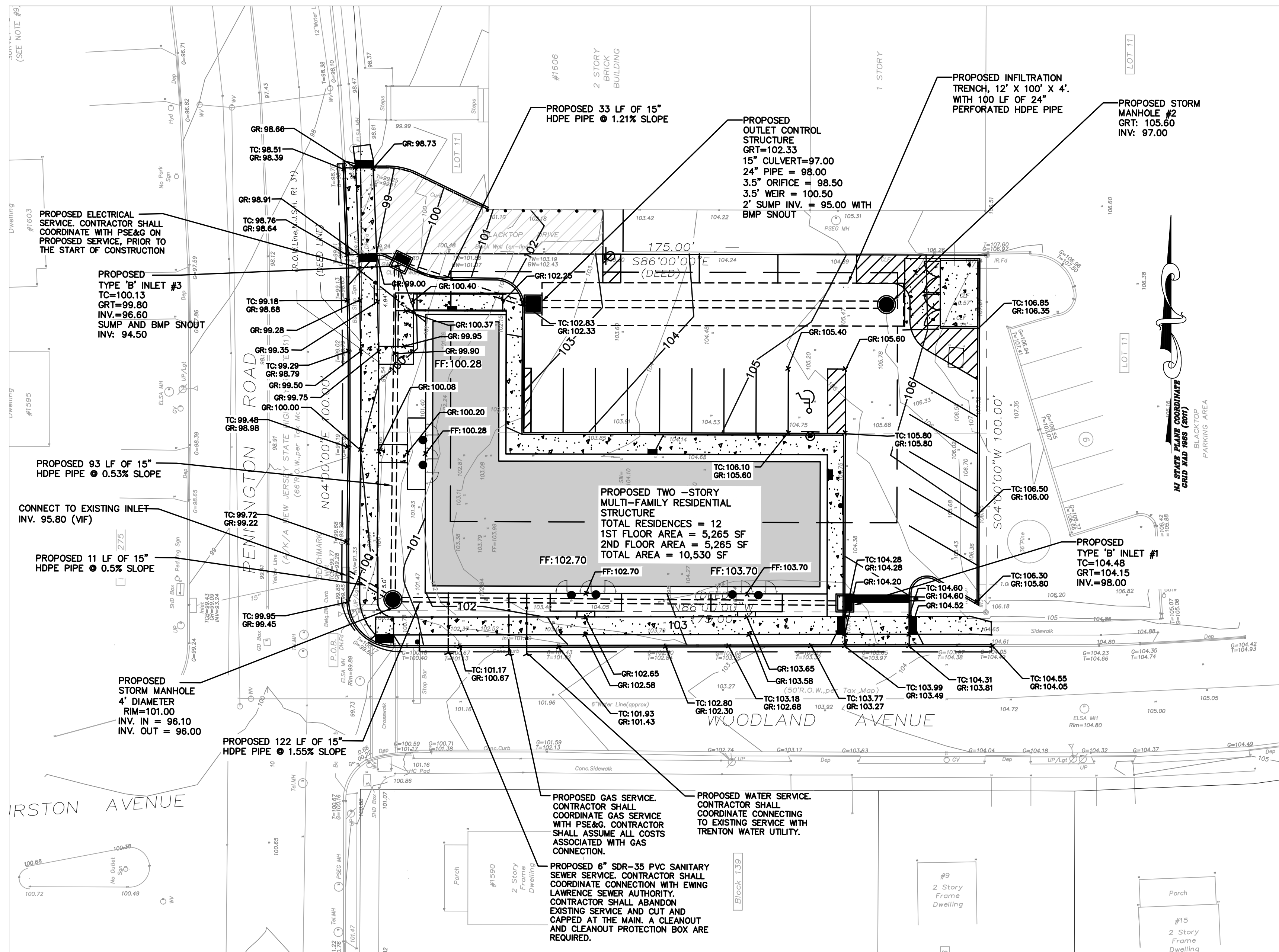
REV.	DATE	BY	CHK
1	11/7/20	MDC	MDC

SITE PLAN  
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR  
EWING PROPERTIES, LLC  
SECTION 15, BLOCK 141, LOTS 9 AND 10  
TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY: MDC	DESIGN BY: MDC	CHECKED BY: MDC	SCALE: 1"=20'
DATE: JUNE 2020	SHEET No.: 3		
JOB No.: 2018-601			



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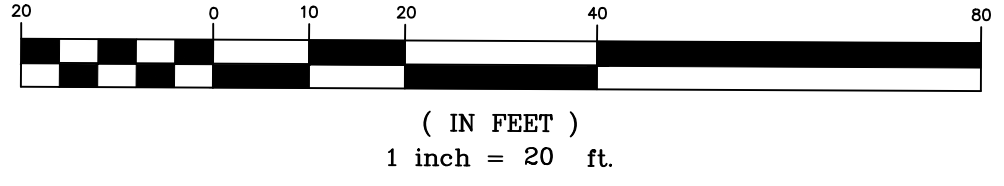


KEY  
→ DRAINAGE FLOW ARROW



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GRAPHIC SCALE



**GRADING NOTES**

- CONTRACTOR SHALL MAINTAIN A MAX. 2.0% CROSS SLOPE AND 5.0% FORWARD SLOPE IN ALL ADA AREAS. ADA PARKING STALLS AND PATH SHALL MAINTAIN A MAX. 2.0% SLOPE IN ALL DIRECTIONS.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND APPLICABLE REPORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS. ALL UNSUITABLE MATERIALS SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE AND BACKFILL MATERIALS SHALL CONSIST OF CONTROLLED DENSE GRADED AGGREGATE. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUB-GRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS IN THE SOILS REPORT.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MIN. SLOPE AGAINST ALL ISLAND GUTTERS, CURBS AND 1.0% ON ALL CONCRETE SURFACES, AND 1-1/2% MIN. ON ASPHALT TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE AT THE CONTRACTORS OWN RISK.
- SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL THAT IS COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY THE MODIFIED PROCTOR METHOD).
- CONTRACTOR SHALL SUBMIT CURB CUT SHEETS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. IF CURB CUT SHEETS ARE NOT SUBMITTED, CONTRACTOR IS PROCEEDING AT THEIR OWN RISK.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILTS UNLESS OTHERWISE DIRECTED WITHIN THE CONTRACT.
- REFER TO SITE PLAN AND GENERAL NOTES FOR ADDITIONAL DETAILS.

**UTILITY NOTES**

- LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINT (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY UTILITY "ONE CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE AND WITHIN ANY R.O.W. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. IF A CONFLICT EXISTS WITH THE SITE PLAN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- WATER SERVICE MATERIALS SHALL BE SPECIFIED BY LOCAL UTILITY COMPANY. CONTRACTORS PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
- THE MINIMUM DOMESTIC WATER SERVICE SIZE SHALL BE 1 INCH.
- SEWER MAINS SHALL BE SEPARATED FROM WATER MAIN BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. WHERE THIS IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE WATER MAIN. ALL SEWER MAINS SHALL BE SDR-35 PVC PIPE UNLESS OTHERWISE NOTED.
- ALL SEWER PIPE INSTALLED WITH LESS THAN 3 FEET OF COVER, GREATER THAN 20 FEET OF COVER OR WITHIN 18 INCHES OF A WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE. ALL DUCTILE IRON SEWER PIPE SHALL BE CL.52.
- ALL SEWER AND WATER UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL UTILITY COMPANIES RULES AND REGULATIONS.
- ROOF LEADER COLLECTION PIPING SHALL BE COORDINATED WITH ARCHITECTURAL PLANS PRIOR TO INSTALLATION.
- MANUFACTURED REINFORCED CONCRETE STORM PIPE AND HDPE PIPE SHALL CONFORM TO NJDOT STANDARD SPECIFICATIONS. SUBMITTALS SHALL BE PROVIDED FOR REVIEW AND APPROVAL.
- ALL UTILITIES WILL BE THE RESPONSIBILITY OF THE APPLICANT.

**ADA NOTE**

- CONTRACTOR SHALL MAINTAIN A MAX. 2.0% SLOPE IN ANY DIRECTION IN ALL ADA AREAS. CONTRACTOR SHALL MAINTAIN A MAX. 2.0% CROSS SLOPE ON ALL SIDEWALK AND ASPHALT CROSSWALK AREAS AND A MAX 5.0% FORWARD SLOPE.
- ALL SIDEWALK LANDING AND TURNING AREAS SHALL BE A MAX. 2.0% GRADE. IN EVERY DIRECTION.

**ROOF LEADER INSTALLATION NOTES**

- CONTRACTOR SHALL VERIFY ELEVATION OF EXISTING UTILITIES AND COORDINATE WITH ENGINEER ANY CONFLICTS THAT MAY EXIST.

**WATER SERVICE NOTES**

- THE PROJECT PROPOSES TO INSTALL A NEW WATER SERVICE AND UTILIZE THE EXISTING CONNECTION. PRIOR TO THE START OF CONSTRUCTION, PROPOSED WATER CONNECTION SHALL BE COORDINATED WITH TRENTON WATER UTILITY AND CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, FOR THE PROPOSED WATER CONNECTION.

**SEWER SERVICE NOTES**

- THE PROJECT PROPOSES TO CONNECT INTO THE EXISTING SANITARY SEWER MAIN LOCATED ALONG WEST UPPER FERRY ROAD AND UTILIZE THE EXISTING SEWER CONNECTION AS INDICATED ON THE PLAN. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE EWING LAWRENCE SEWER AUTHORITY AND OBTAIN NECESSARY PERMITS FOR THE PROPOSED CONNECTION.

**GAS AND ELECTRIC SERVICE NOTES**

- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE GAS AND ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE WITH PSE&G FOR THE PROPOSED ELECTRIC SERVICE AND GAS SERVICE.

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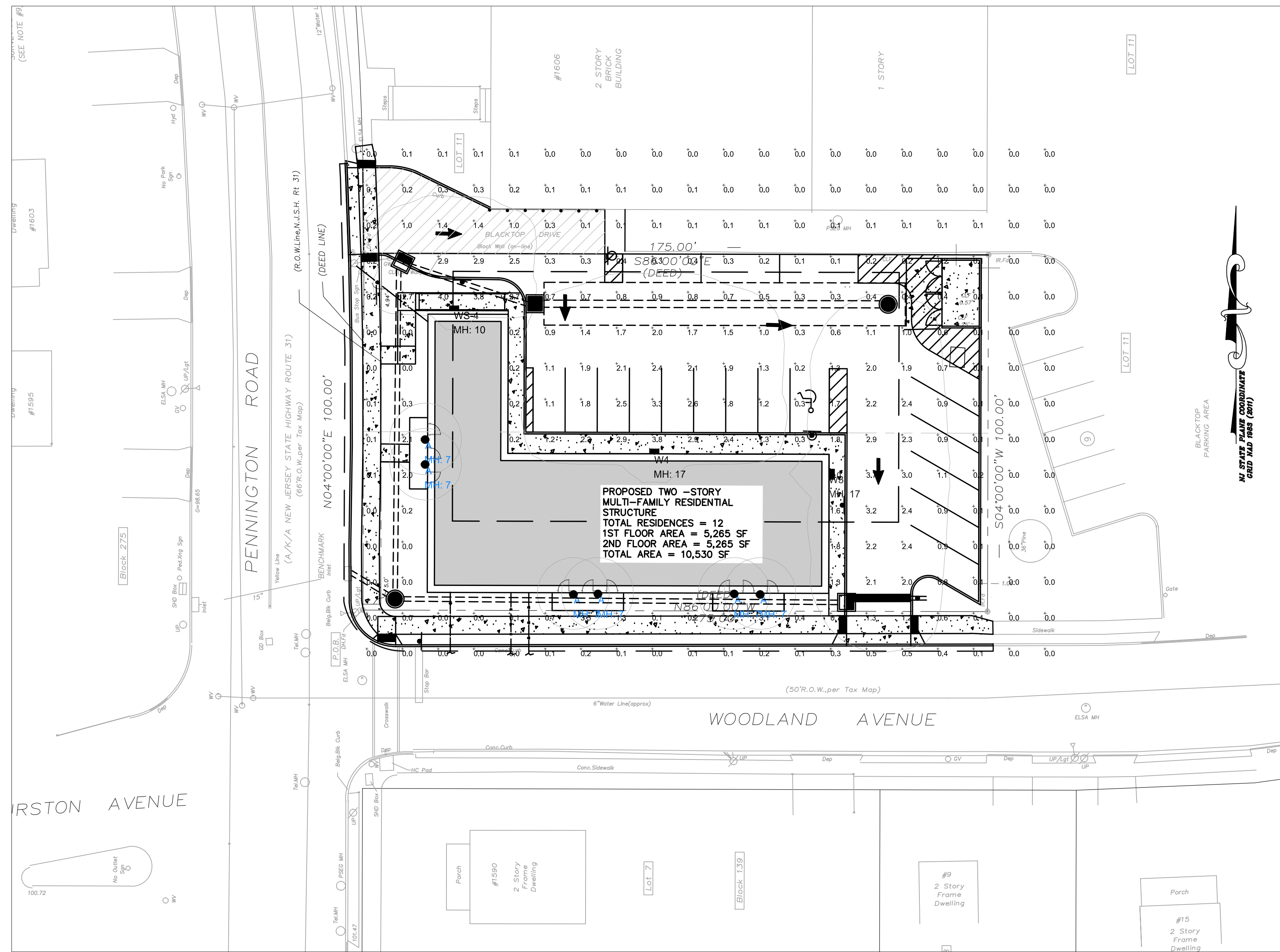
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REV.	PER.	LAND DEVELOPMENT	SUBMISSION	11/7/20	MDG	BY:
1						MDG

GRADING AND UTILITY PLAN  
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR EWING PROPERTIES, LLC SECTION 15, BLOCK 141, LOTS 9 AND 10 TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY: MDG	DESIGN BY: MDG	CHECKED BY: MDG	SCALE: 1"=20'
DATE: JUNE 2020	JOB No.: 2018-601		SHEET No.: 4



PLAN  
 SCALE: 1" = 20'

Symbol	Qty	Fixture Type	Fixture Description	Manufacturer	Catalog Number	LLF	Total Watts	Delivered Lumens	Photometric File Name
○	6	A	LED CYLINDER WALL SCONCE - DOWNLIGHT, NOM 4IN DIA	YAC Lighting	FM-W9100	0.900	17.6	924	FM-W9100.IES
■	1	W3	LED WALL MOUNT - TYPE 3 OPTIC, FLAT LENS, NOM 7900 LUMENS	HUBBELL OUTDOOR	TRP2-32L-70-4K7-3	0.900	67	7927	TRP2-32L-70-4K7-3.IES
■	1	W4	LED WALL MOUNT - TYPE 4 OPTIC, FLAT LENS, NOM 7700 LUMENS	HUBBELL OUTDOOR	TRP2-24L-70-4K7-4	0.900	70.6	7709	TRP2-24L-70-4K7-4.IES
■	1	WS-4	LED WALL MOUNT - TYPE 4 OPTIC, FLAT LENS, NOM 3600 LUMENS	HUBBELL OUTDOOR	TRP2-24L-30-4K7-4	0.900	27.9	3647	TRP2-24L-30-4K7-4.IES

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CALC POINTS TO ZERO	illuminance	Fc	0.72	4.0	0.0	N.A.	N.A.
FRONT PORCH	illuminance	Fc	5.55	7.7	2.9	1.91	2.66
PARKING	illuminance	Fc	1.23	3.7	0.1	12.30	37.00
WALKWAY INSIDE	illuminance	Fc	1.78	5.1	0.0	N.A.	N.A.

**LIGHTING NOTES**

- THIS PLAN SHALL BE UTILIZED FOR LIGHTING PURPOSES ONLY. CONTRACTOR SHALL REFER TO ELECTRICAL ENGINEERING DRAWINGS FOR CIRCUITRY DESIGN AND SPECIFICATIONS.
- ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH A COMPLETE LIGHTING DESIGN FOR REVIEW AND APPROVAL.
- WRITTEN APPROVAL IS REQUIRED FROM MG ENGINEERING ASSOCIATES FOR AND SUBSTITUTIONS ARE MODIFICATIONS TO THE APPROVED LIGHTING PLAN.

**GRAPHIC SCALE**



( IN FEET )  
 1 inch = 20 ft.

Multi-Unit Residential Lighting

Job Name: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Part #: \_\_\_\_\_  
 Notes: \_\_\_\_\_

**LLFH102**  
**LLFH103**  
**Caged Wall Mounts**  
 Composite Resin Wall Mount in Two Sizes with Decorative Cage. Available in Three Finishes and Two Light Sources.

**Light Source:**  
 • LE800-120V/13W/80CRI/1140LM@3K, 1280LM@4K/TRIAC  
 • H160- Requires one 60W Max E26 Base Lamp. (Not Included)

**Notes:**  
**Construction:** Composite Resin Construction makes for no rust or corrosion.  
**Listing:** UL Listed for Wet Locations

**Notable Options:**  
 • Optional Photocell (120V Only)  
 • The LLFH102 and LLFH103 are Energy Star Rated when fitted with the LE800 Light Source  
 • Matching Post Top LLFH203  
 • H160 requires a MOQ of 50 Pieces  
 • Made in the USA  
 • LED Operating Temperature -40°C to +40°C

**Warranty/Certifications:**  
 • 5 Year Warranty on LE800  
 • 1 Year Warranty H160 Version.

**Dimensions:**

PART #	LIGHT SOURCE	CCT (LED ONLY)	FINISH	DIFFUSER	OPTION
LLFH102	LE800*	W-30K C-40K	B-Black W-White BZ-Bronze	F-Glass Frosted	P-Photocell (120V Only) LWE-LW Series LWEI-LWE Series
LLFH103	H160				

**Recommended Dimmers**

LE Series	Lutron
Lutron 6851-LW, Lutron DVA-153P, Lutron DV250P-WH, Lutron SKYLAIRK 8-60P	Lutron LED515P-WH, Lutron SKYLAIRK 8-60P
Lutron PL66-16Z, Lutron 6871, Lutron DCS60A-16Z, Lutron DVCL-153P, Lutron DVA-VCL-153P	Lutron PL66-16Z, Lutron 6871, Lutron DCS60A-16Z, Lutron DVCL-153P, Lutron DVA-VCL-153P

Office: 201-430-3000 Fax: 201-288-5604  
 www.lumencia.com

Specifications subject to change without prior notice.  
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**GEOPAK Series 2**  
 SIZE 2 - TRP2/OSP2/RD2

**FEATURES**

- Mid sized architectural wallpacs in three stylish shapes
- Capable of replacing up to 400w HID luminaires
- Type I, II and IV distributions for a wide variety of applications
- Integral battery backup options
- Control capabilities offer additional energy saving options
- Zero uplight distributions

**CONTROL TECHNOLOGY**

SiteSign™

**SPECIFICATIONS**

**CONSTRUCTION**

- Die-cast aluminum housing and door
- Seven powder coat standard finishes, plus custom color options

**OPTICS**

- 24 or 32 high power LEDs deliver up to 7,900 lumens
- Up to 146 lumens per watt
- Different lenses offer a variety of distribution patterns - Type I, II and IV (forward throw)
- 3000K - 70 CRI, 4000K - 70 CRI and 5000K - 70 CRI CCT options

**INSTALLATION**

- Quick-mount adapter with gasket seal provides easy installation to wall or to recessed junction box (if square junction box). Fixture attaches by two Allen-head nylon fasteners for longer resistance
- Black box accessory available for surface junction application

**ELECTRICAL**

- Optional Dual Drivers & Dual Power Feeds for 50, 70 and 90 watt versions
- Power factor > 90%
- THD (Total Harmonic Distortion) < 20%
- Ambient operating temperature -40°C to 40°C
- 20kA surge protection (optional)
- Automatically takes fixture off-line when device is consumed

**ELECTRICAL (CONTINUED)**

- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Includes a long-life Lithium Ion Phosphate battery with optional battery heater for cold temperature application
- Utilizes 4 LEDs in emergency mode with 650 lumens. Each of the 4 LEDs in emergency are designed to function independently in the unlikely event of a single LED malfunction
- Spectrum self-testing self diagnostic electronics are included standard
- Independent dedicated driver and LED array for battery/emergency mode operation

**CONTROLS**

- Drivers are 0-10V dimming standard
- Universal button photocell for dusk to dawn energy savings
- Photocell and occupancy sensor options available for complete control and dimming control

**IN ADDITION, GEOPAK SIZE 2 CAN BE SPECIFIED WITH SITE-SIGN™ WIRELESS CONTROL SYSTEM FOR STRUCTURE IN ENERGY AND MAINTENANCE COST WHILE OPTIMIZING LIGHT QUALITY 24/7. SEE ORDERING INFORMATION OR VISIT WWW.HUBBELLLIGHTING.COM/SITESIGN FOR MORE DETAILS**

**CERTIFICATIONS**

- IP65 Ingress Housing
- DesignLights Consortium (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Zero uplight IES, dark sky neighbor friendly
- Drivers IP66 and RoHS compliant
- This product qualifies as both (1) a "domestic construction material" per FAR 25.225-9 and (2) a "domestic construction material" per FAR 25.225-11. Buy American Construction Materials under Trade Agreements effective 06/03/2020. See Buy American Solutions

**WARRANTY**

- 5 year limited warranty
- See UL Standard Warranty for additional information

**KEY DATA**

Lumen Range	3,200-15,000
Wattage Range	25-87
Efficiency Range (LPW)	102-146
Fixture Projected Life (Hours)	L70-60K
Weights lbs. (kg)	16-18 (7.3-8.2)

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 76 ARGYLE AVENUE  
 BLACKWOOD, N.J. 08012  
 PHONE: 1-856-404-0540

APPLICANT/OWNER  
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 1602 PENNINGTON ROAD  
 EWING, NJ 08618

DATE: 6-7-2020  
 MICHAEL D. GALANTE  
 NJ PROFESSIONAL ENGINEER LIC. No. PE 48374

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 CERTIFICATE OF AUTHORIZATION # 24GA28279000

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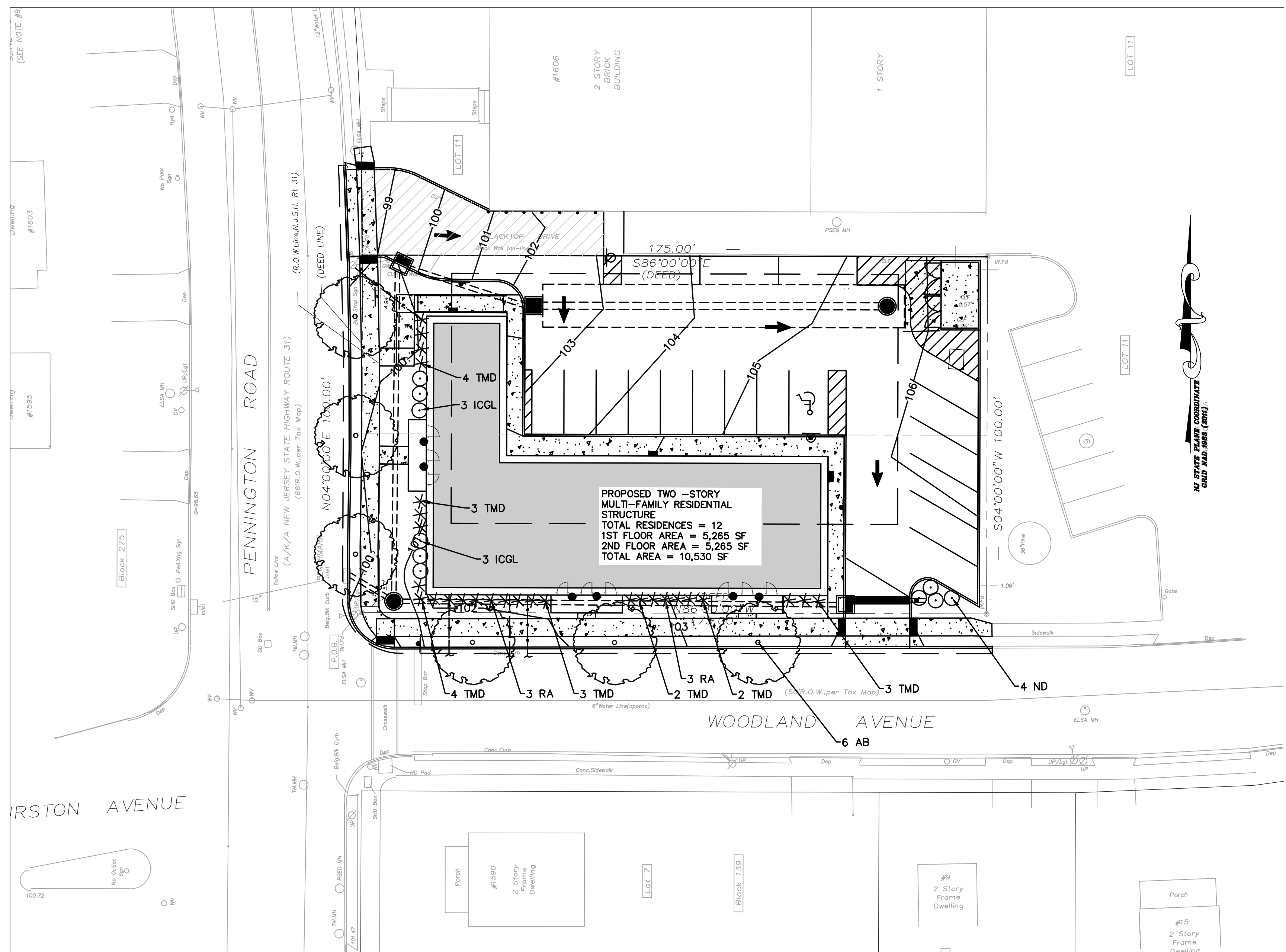
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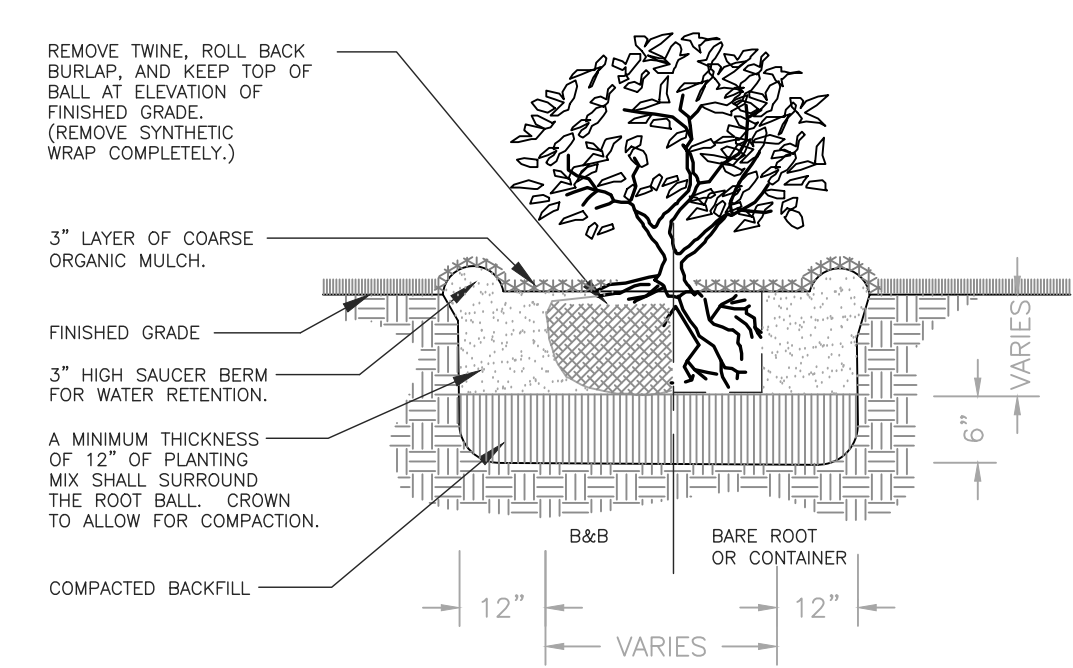
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LIGHTING PLAN  
 PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR  
 EWING PROPERTIES, LLC  
 SECTION 15, BLOCK 141, LOTS 9 AND 10  
 TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

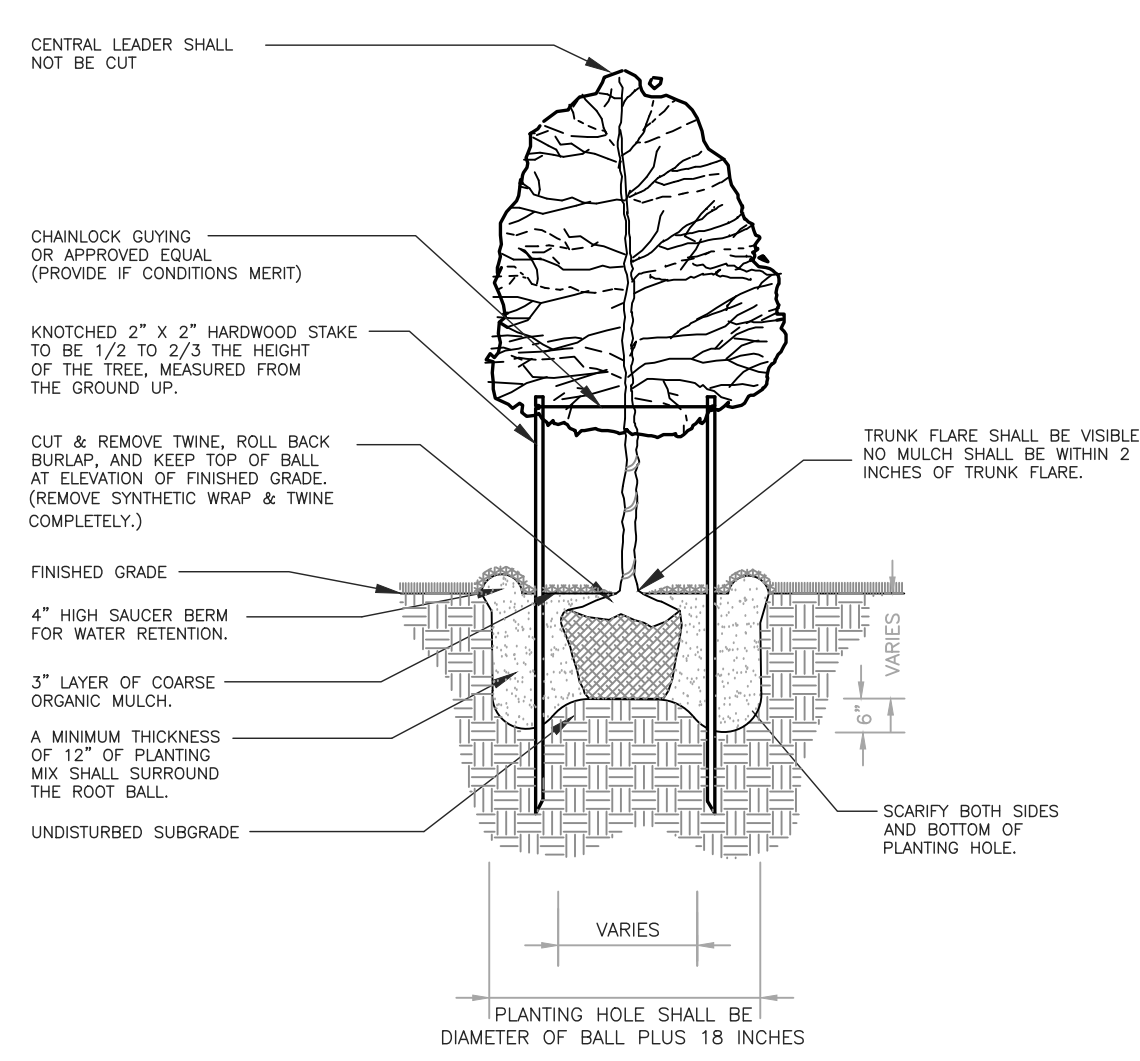
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DATE: JUNE 2020	SHEET No. 5		
JOB No. 2018-601			



PLAN  
SCALE: 1" = 20'



SHRUB PLANTING DETAIL  
NOT TO SCALE



SHADE TREE PLANTING DETAIL  
NOT TO SCALE

PLANTING NOTES:

- A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF QUANTITIES, SIZES, AND OTHER REQUIREMENTS IS SHOWN ON THE PLANT LIST. IN THE EVENT THAT DISCREPANCIES OCCUR BETWEEN THE QUANTITIES OF PLANTS INDICATED IN THE PLANT LIST AND THOSE INDICATED ON THE PLAN, THE PLANT QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
- NO SUBSTITUTIONS SHALL BE ACCEPTED, EXCEPT WITH WRITTEN PERMISSION OF THE DESIGN.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL DEVELOPED BRANCHES AND ESTABLISHED ROOT SYSTEMS. THEY SHALL BE FREE FROM DEFECTS, DISFIGURING KNOTS, BARK ABRASIONS, INJURIES FROM SUNSCALD, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTIONS. ALL PLANT MATERIAL INSTALLED BETWEEN OCTOBER 15 AND MARCH 15 SHALL BE THOROUGHLY WETTED WITH AN ANTI-TRANSPIRANT UPON DELIVERY OF THE MATERIAL TO THE SITE.
- QUALITY AND SIZE OF PLANT, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1) AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. THE TRANSPLANTING AND PLANTING OF TREES AND SHRUBS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "ANSI A300 PART 6: TREE, SHRUB, AND OTHER WOODY PLANT MAINTENANCE-STANDARD PRACTICES (TRANSPLANTING)."
- CONTRACTOR IS RESPONSIBLE FOR PLANTING IN ACCORDANCE WITH APPROVED PLANS.
- DECIDUOUS AND EVERGREEN TREES SHALL BE FIELD ADJUSTED TO MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET FROM ANY OVERHEAD UTILITY WIRES AND/OR UNDERGROUND UTILITIES.
- DECIDUOUS AND EVERGREEN TREES SHALL BE PLANTED AT LEAST TWO (2) FEET FROM ANY CURBING, PAVING, OR SIDEWALK. WHENEVER POSSIBLE THIS DIMENSION SHOULD BE INCREASED TO FOUR (4) FEET. ALL PLANTINGS, EXCEPT GROUND COVERS, SHOULD BE PLANTED AT LEAST TWO (2) FEET FROM ANY BUILDING AND FIVE (5) FEET FROM ABOVE AND BELOW GROUND UTILITIES.
- PLANTING MIXTURE SHALL CONSIST OF 70% EXISTING SOIL FROM THE PLANTING SITE AND 30% HUMUS OR MUSHROOM SOIL. PRIOR TO USING EXISTING TOPSOIL, REMOVE ALL FOREIGN DEBRIS AND ALL ROCKS OR STONES LARGER THAN 2 INCHES. EACH CUBIC YARD SHALL BE ADDED AND INCORPORATED BY THOROUGHLY MIXING, FOUR POUNDS OF COMMERCIAL FERTILIZER HAVING AN ANALYSIS OF 6-6-6.
- ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHERPROOF LABELS AND SECURELY ATTACHED THERETO BEFORE DELIVERY TO THE PROJECT SITE.
- ALL PLANT BEDS SHALL BE MULCHED WITH THREE (3) INCHES OF DOUBLE SHREDDED HARDWOOD BARK MULCH OR OTHER MATERIAL APPROVED BY THE OWNER OR ENGINEER. THE LIMIT OF THE MULCH FOR TREES SHALL EXTEND 12 INCHES BEYOND THE PLANTING HOLE, AND FOR SHRUBS AND BEDS, THE ENTIRE SHRUB OR BED AREAS AS INDICATED ON THE PLAN OR APPROVED IN THE FIELD. NO MULCH SHALL BE PLACED WITHIN THREE (3) INCHES OF THE TRUNK OR TRUNK FLARE. NO SEPARATE PAYMENT SHALL BE MADE FOR MULCH, BUT THE COST SHALL BE INCLUDED IN VARIOUS ITEMS OF THE PROPOSAL.
- ALL PLANTING BEDS SHALL BE ROTOTILLED TO A DEPTH OF TEN (10) INCHES PRIOR TO ANY PLANTING. ALL STONES, WIRE, CONCRETE AND UNSUITABLE MATERIALS SHALL BE REMOVED. ALL SHRUB PLANTINGS SHALL BE INSTALLED IN MULCHED PLANTING BEDS EXTENDING AT LEAST TWO (2) FEET FROM THE PLANTS OR AS INDICATED ON THE APPROVED PLANS.
- CONTRACTOR SHALL GUARANTEE PLANT MATERIAL FOR 1 YEAR. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING PLANT MATERIAL. ONCE PLANTING MATERIAL IS ESTABLISHED AND ACCEPTED, THE OWNER WILL BE RESPONSIBLE FOR CONTINUAL MAINTENANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE EXCAVATING. ANY RELOCATED PLANT MATERIALS SHALL BE COORDINATED WITH THE ENGINEER.
- PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED INCLUDING ALL LABOR, MATERIALS, PLANTS, AND EQUIPMENT, INCIDENTALS AND CLEAN UP.
- CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF THE PLANT MATERIAL.
- PLANT MATERIALS SHALL BE PLANTED ON THE DAY OF DELIVERY. ALL PLANT MATERIALS SHALL REMAIN PROTECTED IF IT IS NOT PLANTED WITHIN DAY OF DELIVERY, BUT SHALL NOT EXCEED TWO (2) DAY PERIOD AFTER DELIVERY.
- PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTABLE LOCAL PRACTICE.
- ALL NON-BIODEGRADABLE ROOT WRAPPINGS (INCLUDING WIRE BASKETS) ARE TO BE REMOVED COMPLETELY BEFORE PLANTING.
- EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. SHEARS ARE TO BE STERILIZED BETWEEN TREES.
- ALL INJURED ROOTS SHALL BE PRUNED BEFORE PLANTING, AND OBVIOUS GIRDLING ROOTS REMOVED, PRUNED OR EXTENDED AS APPROPRIATE. PRUNE BRANCHES THAT CROSS. THE MAIN LEADER OF DECIDUOUS TREES SHOULD NOT BE CUT BACK. LONG SIDE BRANCHES MUST BE SHORTENED.
- TREES ARE TO BE SUPPORTED IMMEDIATELY AFTER PLANTING. TREES SIX (6) INCHES AND OVER IN CALIPER SHALL BE GUYED. SMALLER TREES SHALL BE STAKED. GUYING WIRES AND STAKES SHALL BE AS INDICATED.
- UNLESS OTHERWISE NOTED, ALL DECIDUOUS AND EVERGREEN TREES SHALL HAVE A SINGLE TRUNK.
- DECIDUOUS AND EVERGREEN TREES WHICH ARE B&B SHALL BE DRUM LACED IN LIEU OF WIRE BASKETS.

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
AB	TRIDENT MAPLE	ACER BUERGERIANUM	6	3-1/2" CAL. MIN.	B&B 'SHADE TREE'
ICH	ILEX CRENATA 'HELLER'	HELLERI JAPANESE HOLLY	6	15-18"	#3 CAN EVERGREEN SHRUB
TM	TAXUS X MEDIA 'DENSIFORMIS'	DENSE SPREADING YEW	21	24-30"	#3 CAN EVERGREEN SHRUB
RA	RHUS AROMATICA 'GROW LOW'	GROW-LOW FRAGRANT SUMAC	6	24-30"	#3 CAN EVERGREEN SHRUB
ND	NANDINA DOMESTICA 'NANA'	HEAVENLY BAMBOO	4	24-30"	#3 CAN EVERGREEN SHRUB

- NOTES:
- ALL EXTERIOR GROUND AREAS NOT OCCUPIED BY BUILDINGS, STRUCTURES AND PAVING (EXCEPT AREAS INDICATED TO BE UNDISTURBED AND PLANTING BEDS) SHALL BE LAWN AREAS.

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APPLICANT/OWNER  
EWING PROPERTIES, LLC  
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EWING, NJ 08618

DATE: 6-7-2020  
MICHAEL D. GALANTE  
NJ PROFESSIONAL ENGINEER LIC. NO. PE 48374

MG ENGINEERING ASSOCIATES, LLC  
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CERTIFICATE OF AUTHORIZATION # 24GA28279000

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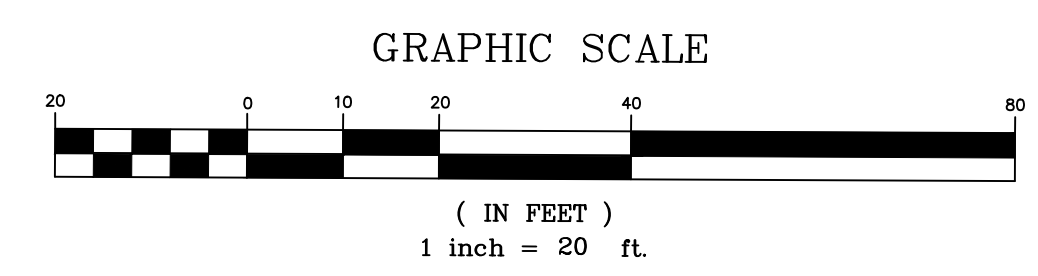
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1	REV. PER. LAND DEVELOPMENT SUBMISSION		11/7/20	MDC		

LANDSCAPE PLAN  
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR  
EWING PROPERTIES, LLC  
SECTION 15, BLOCK 141, LOTS 9 AND 10  
TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY: MDC DESIGN BY: MDC CHECKED BY: MDC SCALE: 1"=20'  
DATE: JUNE 2020 SHEET No.: 6  
JOB No.: 2018-601



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# MERCER COUNTY SOIL SEDIMENT AND CONTROL GENERAL NOTES

1. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING LAND DISTURBANCE ACTIVITY. NOTICE MAY BE MAILED, FAXED OR EMAILED TO: M.C.S.D. 590 HUGHES DRIVE, HAMILTON SQUARE, NJ 08690 PHONE: 609-586-9603 FAX: 609-586-1117 EMAIL: PAULSMERCER@AOL.COM
2. IF APPLICABLE TO THIS PROJECT, THE OWNER SHOULD BE AWARE OF HIS OR HER OBLIGATION TO FILE FOR A NJ PDES CONSTRUCTION ACTIVITY STORMWATER 563 PERMIT (NJ00083333) VIA THE NJPDES ONLINE PERMITTING SYSTEM (WWW.NJDES.PEER.GOV) AND TO MAINTAIN THE ASSOCIATED BEST MANAGEMENT PRACTICES AND STORMWATER POLLUTION PREVENTION PLAN SELF-INSPECTION LOGBOOK ON-SITE AT ALL TIMES. THIS PERMIT MUST BE FILED PRIOR TO THE START OF SOIL DISTURBANCE. THE ONLINE APPLICATION PROCESS WILL REQUIRE ENTRY OF AN SCD CERTIFICATION CODE WHICH IS PROVIDED BY THE SOIL CONSERVATION DISTRICT UPON CERTIFICATION OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
3. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTURBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AS OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTIONARY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE MORE RESTRICTIVE PERMIT REQUIREMENTS SHALL BE FOLLOWED.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 1/2" TO 2 1/2" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE, WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE WIDTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE. THE TRACKING PAD SHALL BE CONSTRUCTED WITHIN THE DISTURBED AREA. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF THE EGRESS IS TO A COUNTY ROAD, THEN A 20 FT. LONG PAVED TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND THE STONE ACCESS PAD.
9. A SUB-BASE COURSE SHALL BE APPLIED FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS RELATED TO DETENTION BASINS, SWALES AND THE SEQUENCE OF CONSTRUCTION HAVE BEEN MET.
10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS VEGETATIVE COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H:1V SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES, ROADWAY EMBANKMENTS, EROSION SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING.
11. ANY STEEP SLOPES (I.E. SLOPES GREATER THAN 3:1) RECEIVING PIPELINE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.
12. PERMANENT VEGETATION SHALL BE SEEDING OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS AND ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDING AREAS. SAVE ALL TAGS AND/OR BAGS USED FOR SEED, LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT MIXTURES AND RATES MEET THE STANDARDS.
13. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE COVER, SHALL BE COVERED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION SHALL HAVE TO BE EMPLOYED.
14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL ROUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING, COMPACTED SURFACES SHOULD BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
15. PRIOR TO SEEDING, TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED. THIS SHALL INCLUDE RAKING OF THE TOPSOIL AND REMOVAL OF DEBRIS AND STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION.
16. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE BURIED WITH LIMESTONE IN ACCORDANCE WITH THE STANDARD. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF 12" OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS, OR IS LOCATED ON A SLOPE, THEN THE AREA SHALL BE COVERED WITH A MINIMUM OF 24" OF SOIL HAVING A PH OF 5 OR MORE.
17. MULCHING IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROCS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL ROC, OR THE COMPLETION OF WORK IN A GIVEN AREA.
18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED-TO-SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF THE SEEDING OPERATION, HAND-APPLIED MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS. THE USE OF HYDROMULCH ON SLOPED AREAS IS DISCOURAGED.
19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING THE LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED.
20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION, AND FOR EMPLOYING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION DISTRICT.
21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
22. ALL DETENTION / RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUDING OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SURFACES. PERMANENT STABILIZATION INCLUDES, BUT MAY NOT BE LIMITED TO: TOPSOIL, SEED, STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING AREAS. AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION.
23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITH PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.
24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATIONS, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER. IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE SURFACE.
25. ALL SWALES OR CHANNELS THAT WILL RECEIVE RUNOFF FROM PAVED SURFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT. IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.
26. N.J.A.C. 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF COMPLIANCE BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS MUST BE COMPLETED BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

# SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REDUCE SOIL EROSION AND SEDIMENT CONTROL RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL. IF THE SEASON PROHIBITS SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE GLOUCESTER COUNTY SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO EXISTING EROSION CONTROL STRUCTURES OR TO THE STABILIZED PAD FOR STABILIZED CONSTRUCTION ACCESS.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. ALL CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS TO MAINTAIN EROSION CONTROL ACCESS TO THE STABILIZED PAD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2-1/2" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL GATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC. (SEE DETAIL). THE BASIN MUST BE DEWATERED TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.
16. N.J.A.C. 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
17. MULCHING IS REQUIRED ON ALL SEEDING AREAS TO ENSURE ANCHORING OF SEEDS AND TO PROMOTE EARLIER VEGETATION COVER.
18. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
19. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
20. THE GLOUCESTER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITY.
21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZATION SHALL BE WITH STRAW MULCH FOR PROTECTION. IF THE STOCKPILE DOES NOT PERMIT THE APPLICATION AND INSTALLATION OF TEMPORARY SEEDING, ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE GLOUCESTER COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
24. METHODS FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A PH OF 4 OR LESS.
25. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
27. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
28. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS OF THE PROPOSED SITE.
29. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
30. ALL VEGETATIVE MATERIALS SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMAN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.
31. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPING PLAN.
32. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

## TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION
  - A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
  - B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
  - C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER OF UNDERGROUND UTILITIES.
2. SEEDBED PREPARATION
  - A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS. SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT A RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF EQUIVALENT. MULCH SHALL BE APPLIED AT A RATE OF 1500 POUNDS PER ACRE OR 3 TONS PER ACRE. MULCH TESTING INDICATES OTHERWISE, APPLY LIMESTONE AT A RATE OF 1 LB/1000 SQ FT PERENNIAL RYEGRASS. 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, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
  - C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AS ABOVE.
  - D. SOILS HIGH ON SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS.
3. SEEDING
  - A. SEE TEMPORARY SEED MIXTURE FOR SPECIES AND APPLICATION RATES.
  - B. APPLY SEED UNIFORMLY BY HAND, CYCLOPS(CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. MULCH SHALL NOT BE INCLUDED IN A HYDRO-SEEDER TANK WITH SEED. SEED SHALL BE INCORPORATED INTO THE SOIL BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4" INCH DEEPER ON COURSE TEXTURED SOIL.
  - C. AFTER SEEDING, FIRING THE SOIL SHALL BE PERFORMED WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE.
  - D. MULCHING IS REQUIRED ON ALL SEEDING.
4. MULCHING
  - A. STRAW OR HAY, UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT A RATE OF 1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER OR ADHESIVE AGENT, THE RATE OF APPLICATION MUST BE DOUBLE THE LOWER RATE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.
  - B. SPREAD 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 90 POUNDS WITHIN EACH SECTION.
  - C. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
    1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    2. MULCH NETTING - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTING TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
    3. CRUMPER(MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
    4. LIQUID MULCH BINDERS - ORGANIC AND VEGETABLE BINDERS - NATURALLY OCCURRING, POWDER BASED HYDROLYZED MATERIALS MIXED WITH WATER FORMULATED GELS WHICH ARE APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM A MEMBRANED NETWORKS OF

WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER.

- D. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

## TEMPORARY SEEDING MIXTURE

THIS SEEDING MIXTURE IS COMPOSED OF A SINGLE SPECIES WHICH GERMINATES QUICKLY IN ORDER TO REDUCE SOIL EROSION UNTIL A PERMANENT VEGETATIVE COVER CAN BE COVER ESTABLISHED. A MIXTURE OF EQUAL QUALITY MAY BE SUBSTITUTED IF APPROVED BY OUR OFFICE.

APPLICATION RATE	COMMON NAME	LB/1000 SQ FT
1	PERENNIAL RYE GRASS	45

RECOMMENDED SEEDING PERIODS ARE FEBRUARY 15-MAY 1 AND AUGUST 15-OCTOBER 15. SUMMER SEEDING SHALL BE PERFORMED ONLY IF ADEQUATE IRRIGATION IS PROVIDED TO ENSURE SUCCESSFUL GERMINATION.

## PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION
  - A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
  - 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 SHALL BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNTESTED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
  - D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
2. SEEDBED PREPARATION
  - A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF EQUIVALENT WITH 50X WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ON-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ON-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 DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
  - C. HIGH ACID PRODUCING SOILS: SOILS HAVING A PH OF 4 OR LESS 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.
3. SEEDING
  - A. GRASS SHALL BE APPLIED IN ACCORDANCE WITH TABLE ON THIS SHEET.
  - B. APPLY SEED UNIFORMLY BY HAND, CYCLOPS(CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. MULCH SHALL NOT BE INCLUDED IN A HYDRO-SEEDER TANK WITH SEED. EXCEPT FOR DRILLED, HYDROSEEDER OR CULTIPACKED SEEDING, 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 SOIL.
  - C. AFTER SEEDING, FIRING THE SOIL SHALL BE PERFORMED WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE.
  - D. MULCHING IS REQUIRED ON ALL SEEDING.
4. MULCHING
  - A. STRAW OR HAY, UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT A RATE OF 1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER OR ADHESIVE AGENT, THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.
  - B. APPLICATION: SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 90% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
  - C. ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
    1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    2. MULCH NETTING - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTING TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
    3. CRUMPER(MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
    4. LIQUID MULCH BINDERS MAY BE USED.
5. IRRIGATION
  - A. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE PERFORMED IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.
6. TOP DRESSING \*
  - A. SEEDING WILL REQUIRE AN APPLICATION OF FERTILIZER SUCH AS 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.
  - B. FALL SEEDING WILL REQUIRE THE ABOVE BETWEEN MARCH 15 AND MAY 1.
  - C. MIXTURES DOMINATED BY WEEDING LOVEGRASS OR LEGUMES MAY NOT NEED TOPDRESSING.
    - \* IF SLOW RELEASE NITROGEN FERTILIZER (300 POUNDS 38-0-0 PER ACRE OR EQUIVALENT) IS USED IN ADDITION TO SUGGESTED FERTILIZER, THIS FOLLOW-UP OF TOP DRESSING IS NOT MANDATORY.

## PERMANENT STABILIZATION WITH SOD

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.
  - 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 SHALL BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNTESTED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
  - D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
2. SEEDBED PREPARATION
  - A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF EQUIVALENT WITH 50X WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ON-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ON-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 DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
  - C. HIGH ACID PRODUCING SOILS: SOILS HAVING A PH OF 4 OR LESS 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.
3. SEEDING
  - A. GRASS SHALL BE APPLIED IN ACCORDANCE WITH TABLE ON THIS SHEET.
  - B. APPLY SEED UNIFORMLY BY HAND, CYCLOPS(CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. MULCH SHALL NOT BE INCLUDED IN A HYDRO-SEEDER TANK WITH SEED. EXCEPT FOR DRILLED, HYDROSEEDER OR CULTIPACKED SEEDING, 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 SOIL.
  - C. AFTER SEEDING, FIRING THE SOIL SHALL BE PERFORMED WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE.
  - D. MULCHING IS REQUIRED ON ALL SEEDING.
4. MULCHING
  - A. STRAW OR HAY, UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT A RATE OF 1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER OR ADHESIVE AGENT, THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.
  - B. APPLICATION: SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 90% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
  - C. ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.
    1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
    2. MULCH NETTING - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTING TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
    3. CRUMPER(MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
    4. LIQUID MULCH BINDERS MAY BE USED.
5. IRRIGATION
  - A. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE PERFORMED IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.
6. TOP DRESSING \*
  - A. SEEDING WILL REQUIRE AN APPLICATION OF FERTILIZER SUCH AS 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.
  - B. FALL SEEDING WILL REQUIRE THE ABOVE BETWEEN MARCH 15 AND MAY 1.
  - C. MIXTURES DOMINATED BY WEEDING LOVEGRASS OR LEGUMES MAY NOT NEED TOPDRESSING.
    - \* IF SLOW RELEASE NITROGEN FERTILIZER (300 POUNDS 38-0-0 PER ACRE OR EQUIVALENT) IS USED IN ADDITION TO SUGGESTED FERTILIZER, THIS FOLLOW-UP OF TOP DRESSING IS NOT MANDATORY.

LIMESTONE* APPLICATION RATE BY SOIL TEXTURE		
SOIL TEXTURE	TONS/ACRE	LB/1000 SQ. FT.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

\* FULVIC ACID LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

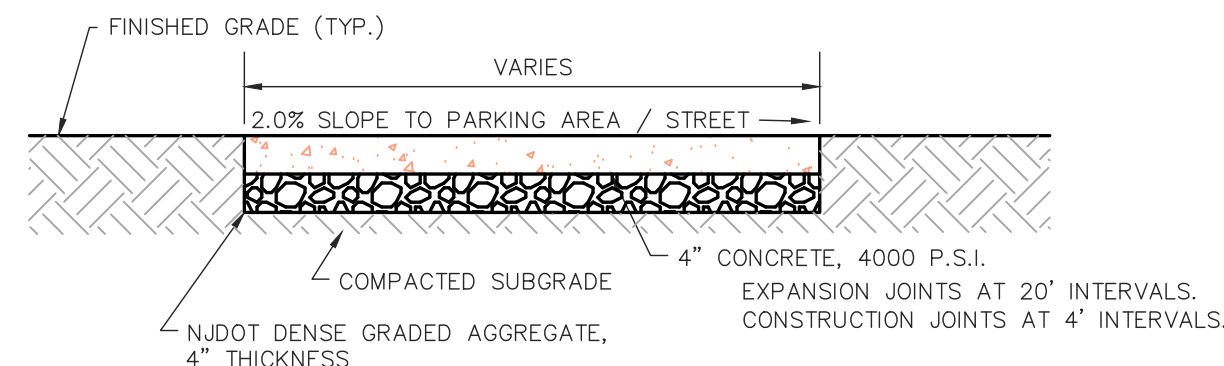
- WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.

- REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT AND REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIALS.

- INSPECT SITE JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRING IN ACCORDANCE WITH THE ABOVE.

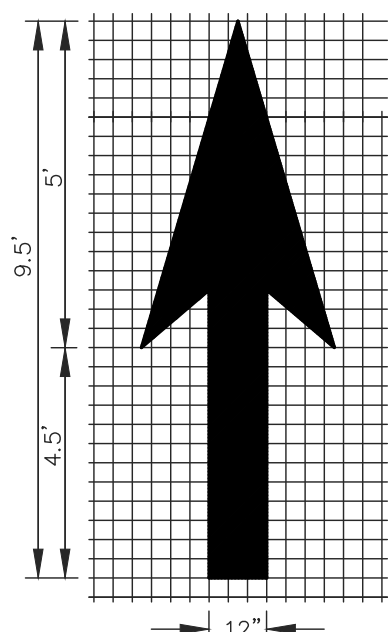
3. SOD PLACEMENT
  - A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
  - B. PLACE SOD STRIPS WITH SHIMS, EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES WIELD EROSION.
  - C. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS S SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF



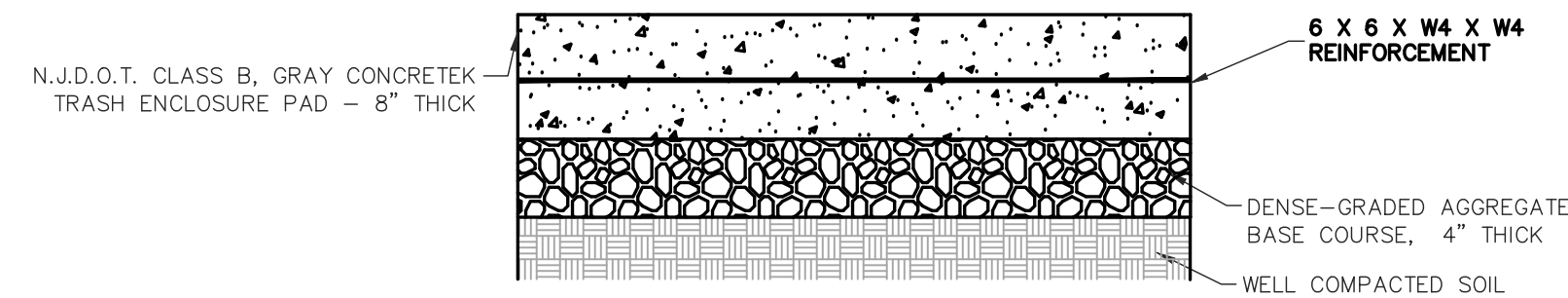


TYPICAL CONCRETE SIDEWALK DETAIL  
N.T.S.

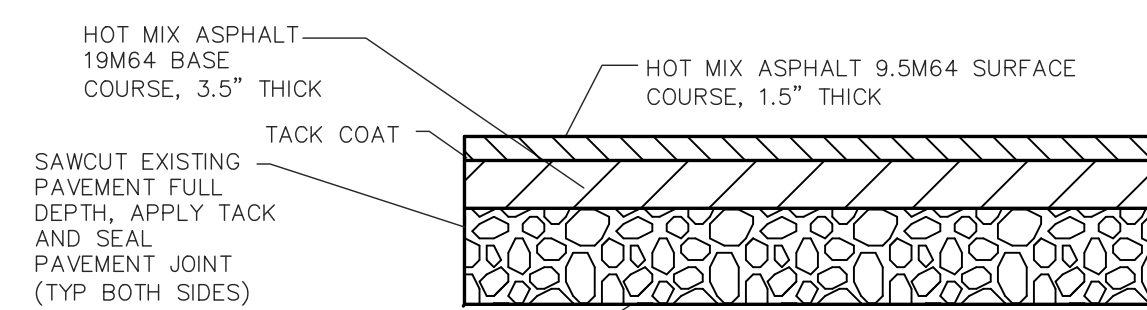
STRIPING AND TRAFFIC MARKING NOTES:  
ALL STRIPING (LONG-LIFE EPOXY RESIN) AND TRAFFIC MARKINGS (LONG-LIFE THERMOPLASTIC) SHALL CONFORM WITH N.J.D.O.T. STANDARD SPECIFICATIONS, LATEST REVISION.



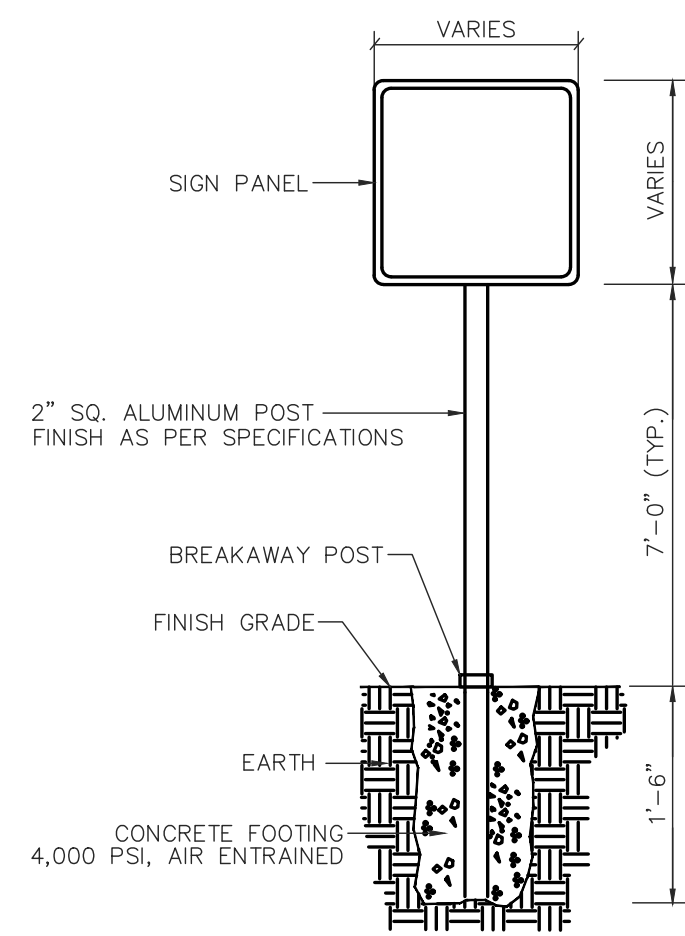
DIRECTIONAL ARROWS  
N.T.S.



REINFORCED CONCRETE PAD DETAIL  
N.T.S.

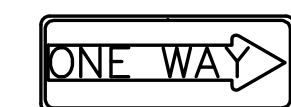


FULL DEPTH PAVEMENT DETAIL (PARKING LOT)  
N.T.S.

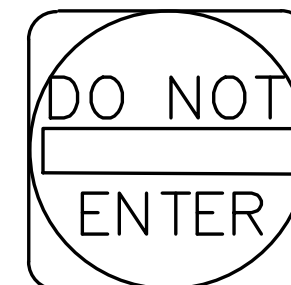


SIGN AND POST DETAIL  
N.T.S.

NOTE:  
1. ALL SIGN POSTS SHALL BE GALVANIZED BREAKAWAY STEEL "U" POST  
2. ALL SIGNS SHALL BE AS PER MUTCD CURRENT EDITION



(L or R)  
R6 - 1 [36" x 12"]



R5 - 1 [30" x 30"]



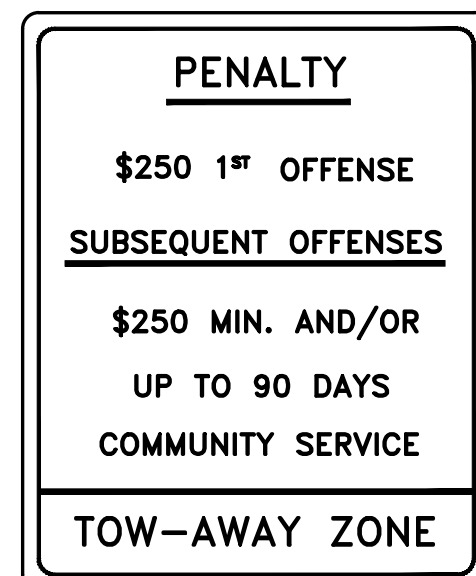
R1-1  
30"x30"

SIGN DETAILS  
N.T.S.



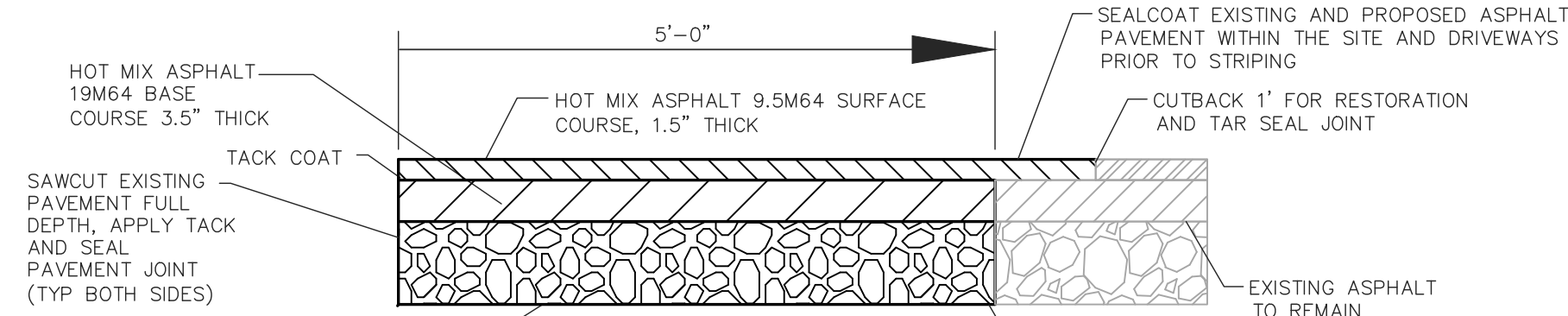
NOTES: 1. WHITE LEGEND ON BLUE REFLECTORIZED BACKGROUND.  
2. 6" x 12" SIGN  
3. TO BE INSTALLED WHEN NOTED ON PLANS

VAN ACCESSIBLE SIGN DETAIL  
N.T.S.

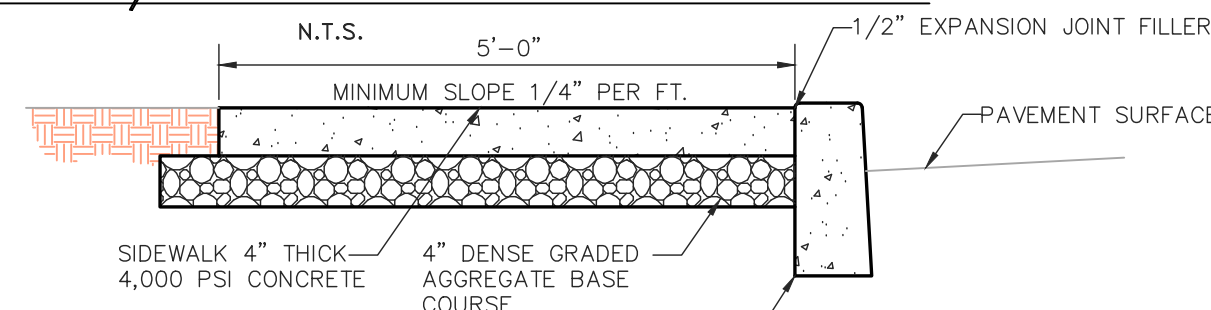


NOTES: 1. BLACK LEGEND ON WHITE REFLECTORIZED BACKGROUND.  
2. 10" x 12" SIGN

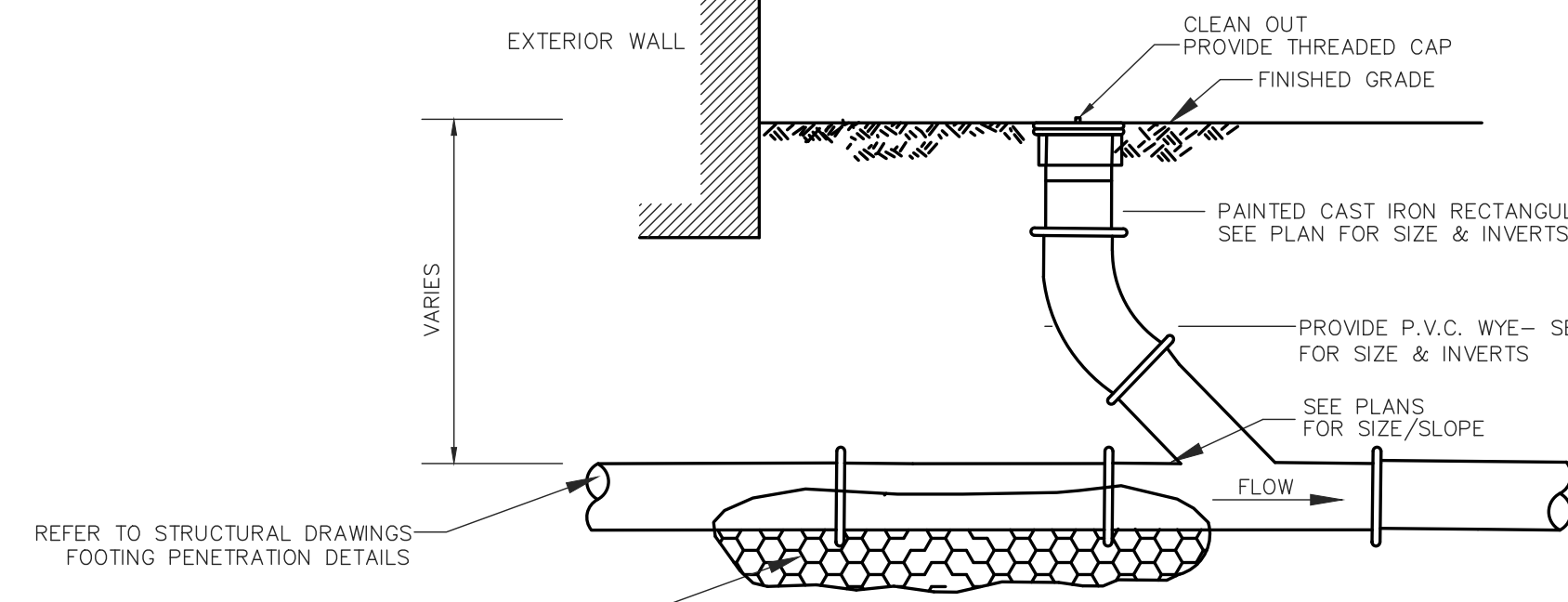
ADA PENALTY SIGN  
N.T.S.



FULL DEPTH PAVEMENT/RESTORATION DETAIL  
N.T.S.

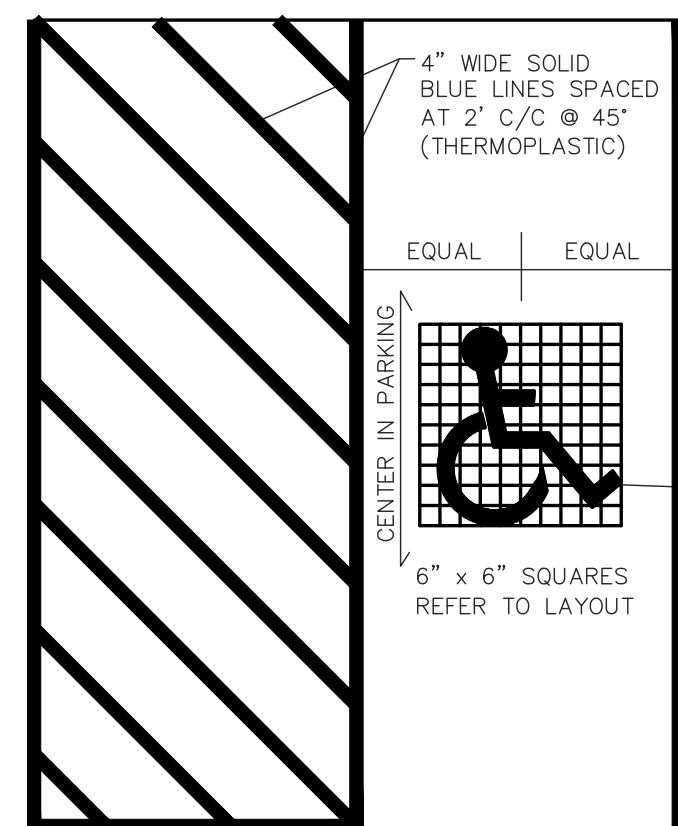


SIDEWALK AND VERTICAL CONCRETE CURB  
N.T.S.

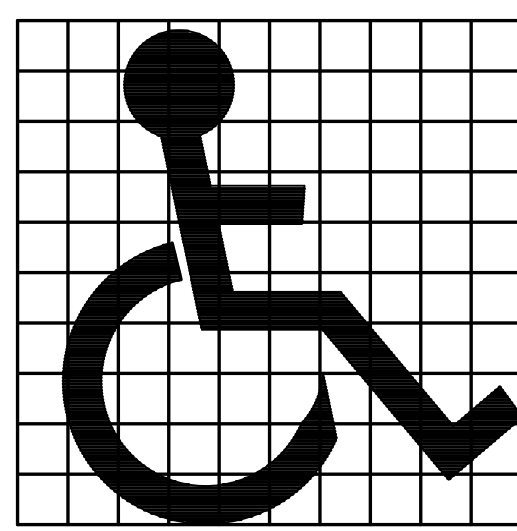


ROOF DRAIN AT BUILDING  
N.T.S.

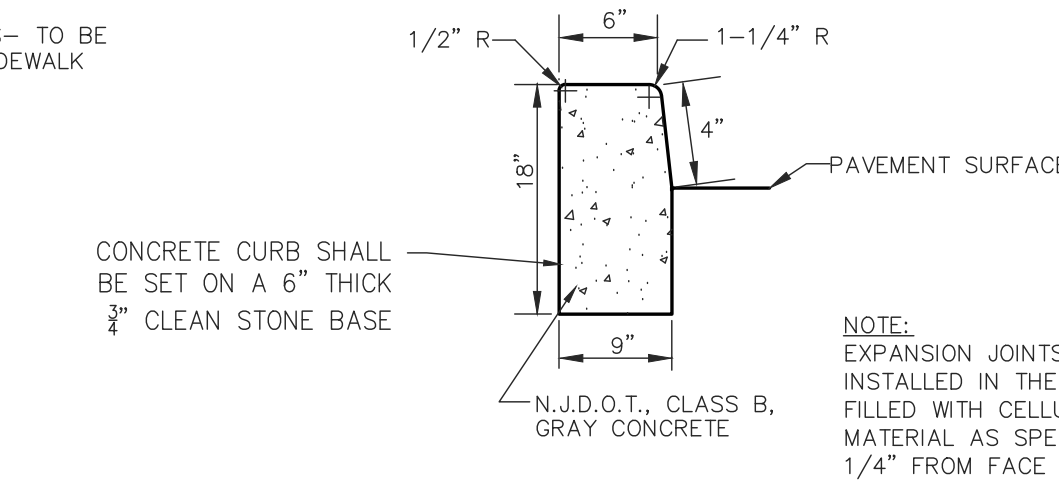
REFER TO STRUCTURAL DRAWINGS- FOOTING PENETRATION DETAILS



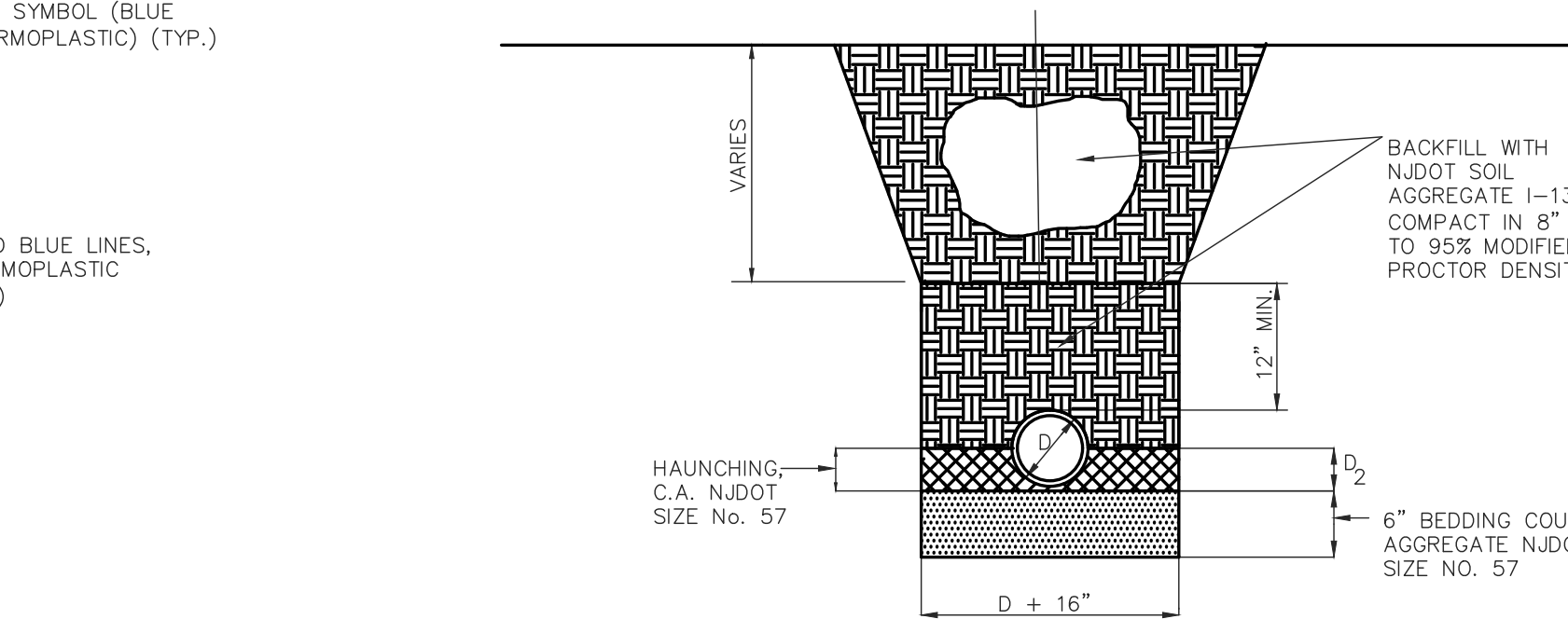
ADA PARKING DETAIL  
N.T.S.



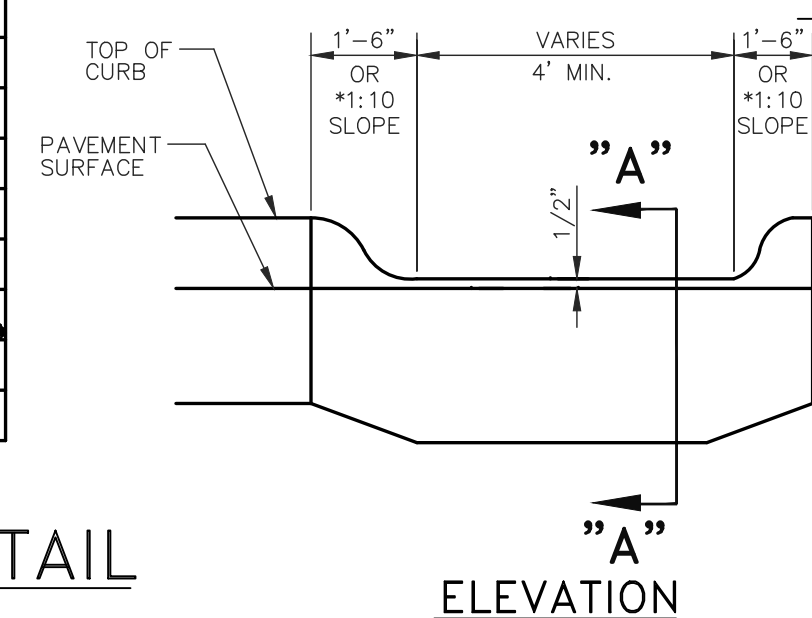
ADA SYMBOL DETAIL  
N.T.S.



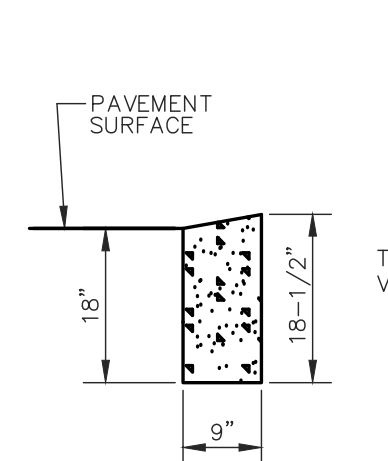
9" x 18" CONCRETE VERTICAL CURB  
N.T.S.



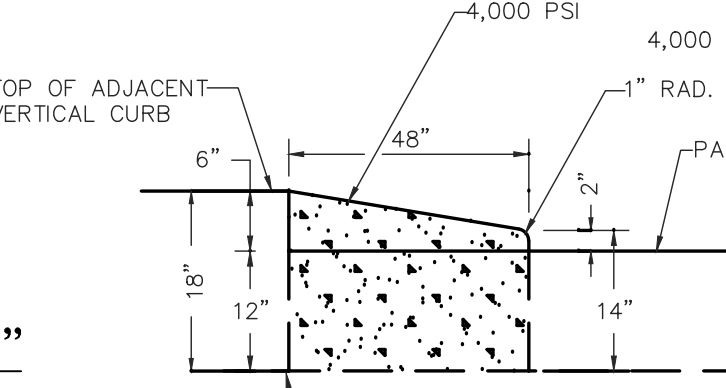
PVC/H.D.P.E PIPE TRENCH DETAIL  
N.T.S.



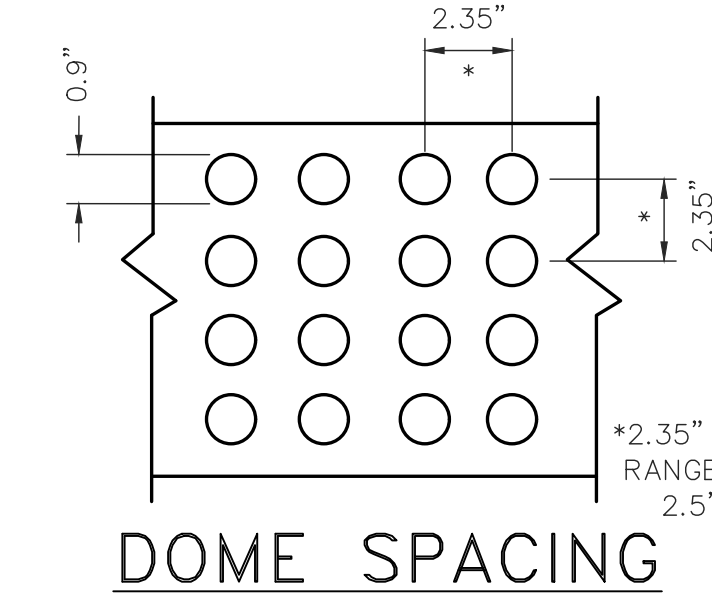
DEPRESSED CURB DETAIL  
N.T.S.



SECTION "A-A"

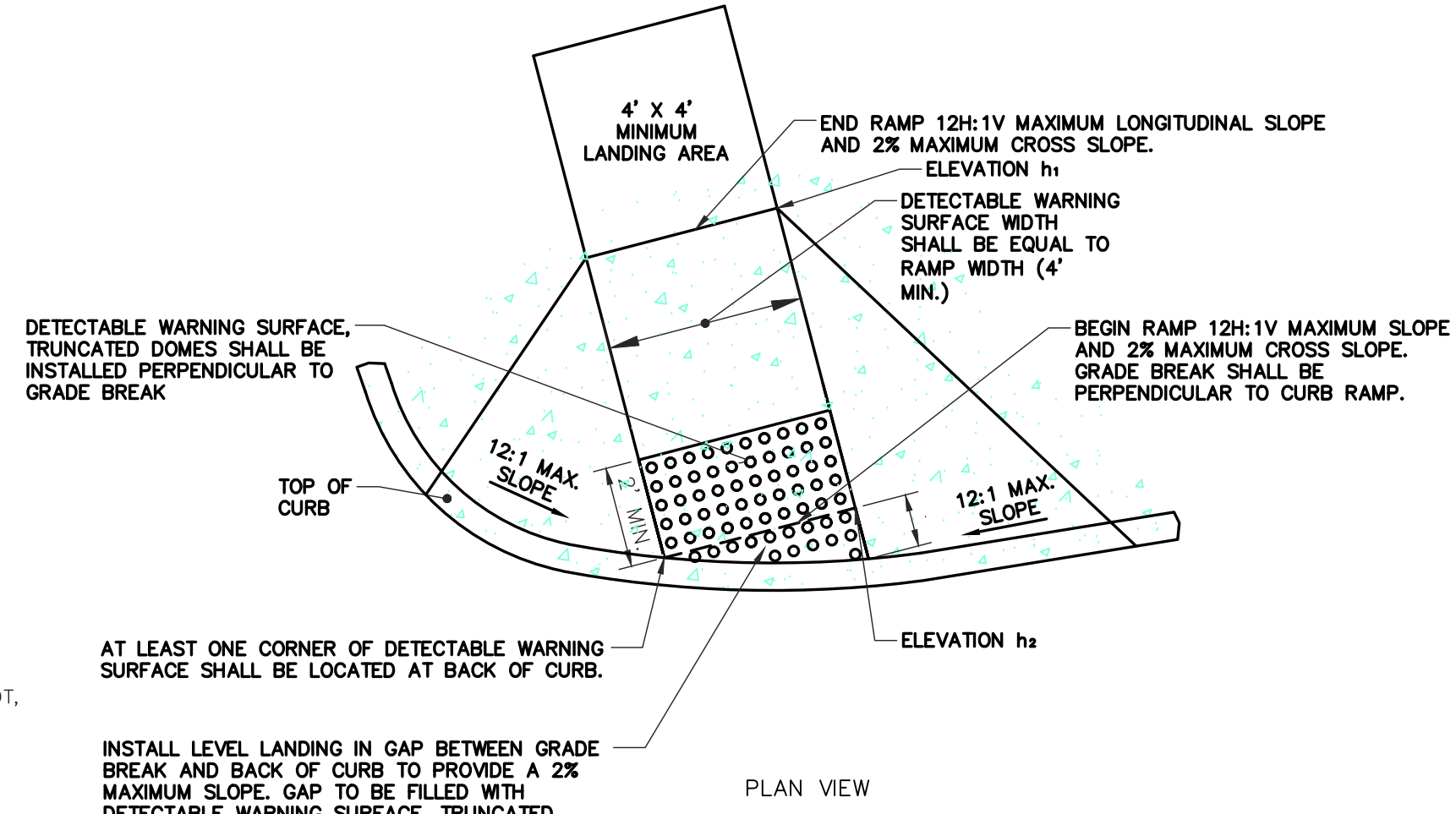


CURB TAPER DETAIL  
N.T.S.



DOME SECTION

DOME SPACING

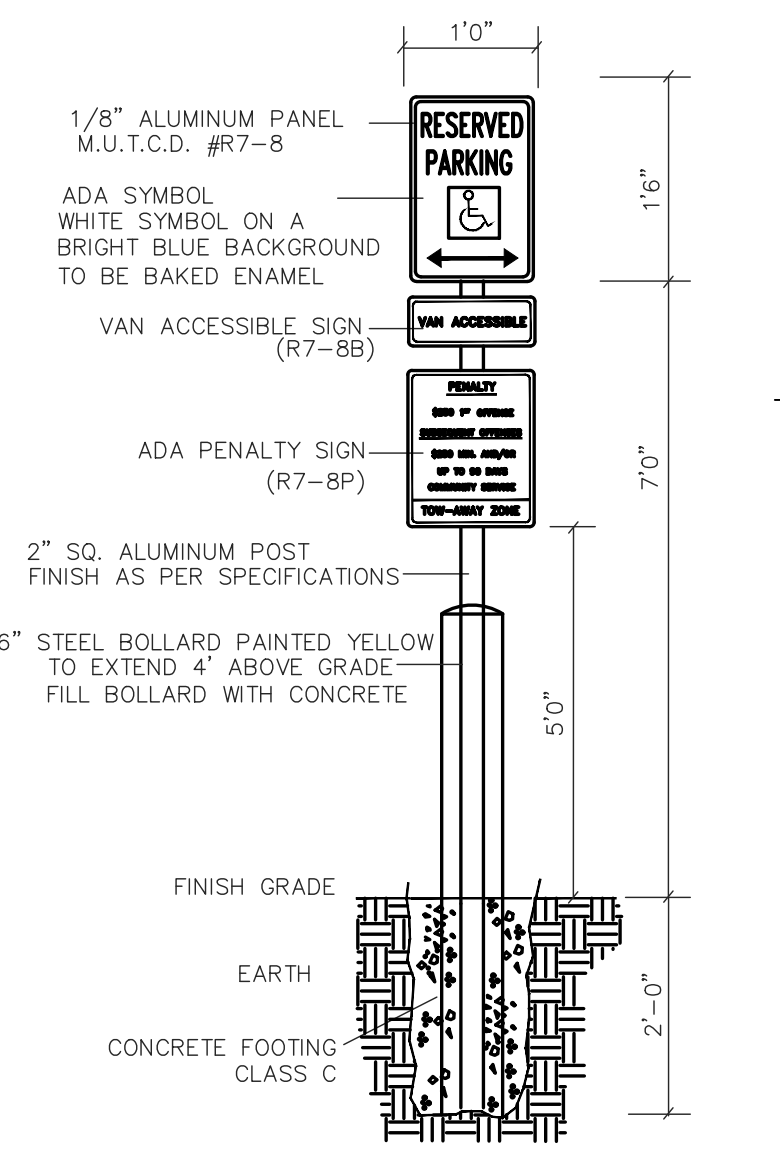


ADA CURB RAMP & DETECTABLE WARNING SURFACE GENERAL DETAIL (TYPE 1 RAMP)  
N.T.S.

NOTES:

- ALL PEDESTRIAN ACCESS TO SIDEWALKS AND STREETS, INCLUDING CROSSWALKS, CURB RAMPS, STREET FURNISHINGS, PEDESTRIAN SIGNALS, PARKING AND OTHER COMPONENTS OF PEDESTRIAN ACCESS IN THE RIGHTS-OF-WAY ARE TO BE IN ACCORDANCE WITH THE CURRENT PUBLIC RIGHTS-OF-WAY GUIDELINES PROPOSED BY THE ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD (ACCESS BOARD). ADDITIONALLY, THE ADA RAMPS SHALL BE IN ACCORDANCE WITH THE 2010 ADA GUIDELINES.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER PRIOR TO INSTALLATION OF ADA RAMPS.
- GRADE BREAKS AT THE TOP AND BOTTOM OF THE CURB RAMP SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB. WHEN INSTALLING A CURB RAMP ON A CURB RADIUS, THE AREA BETWEEN THE GRADE BREAK AND THE BACK OF CURB SHALL MEET THE SLOPE REQUIREMENTS FOR LANDINGS AND PROVIDE ADEQUATE DRAINAGE TO PREVENT THE ACCUMULATION OF WATER OR DEBRIS ON OR AT THE BOTTOM OF THE RAMP. GRADE BREAKS SHALL NOT BE PERMITTED ON THE SURFACE OF CURB RAMPS, BLENDED TRANSITIONS, LANDINGS, AND GUTTER AREAS WITHIN THE PEDESTRIAN ACCESS ROUTE. SURFACE SLOPES THAT MEET AT GRADE BREAKS SHALL BE FLUSH. THE ROWS OF TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP AND THE LANDING.

H=CURB HEIGHT. VOID NJDOT DETAIL CD-606-1. H=h<sub>1</sub>-h<sub>2</sub>



ADA PARKING SIGN  
N.T.S.

NOTE:  
1. ALL SIGN POSTS SHALL BE GALVANIZED BREAKAWAY STEEL "U" POST  
2. ALL SIGNS SHALL BE AS PER MUTCD CURRENT EDITION

ENGINEER:  
MICHAEL GALANTE PE  
76 ARGYLE AVENUE  
BLACKWOOD, N.J. 08012  
PHONE: 1-856-404-0540

APPLICANT/OWNER  
EWING PROPERTIES, LLC  
1602 PENNINGTON ROAD  
EWING, NJ 08618

DATE: 6-7-2020  
MICHAEL D. GALANTE  
NJ PROFESSIONAL ENGINEER LIC. NO. PE 48374

MG ENGINEERING ASSOCIATES, LLC  
76 ARGYLE AVENUE  
BLACKWOOD, N.J. 08012  
PHONE: 1-856-404-0540  
WWW.MGEA-SOCIATES.COM  
CERTIFICATE OF AUTHORIZATION # 24GA28279000

FOR APPROVAL ONLY

ALL DOCUMENTS PREPARED BY MG ENGINEERING ASSOCIATES, LLC, ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT.

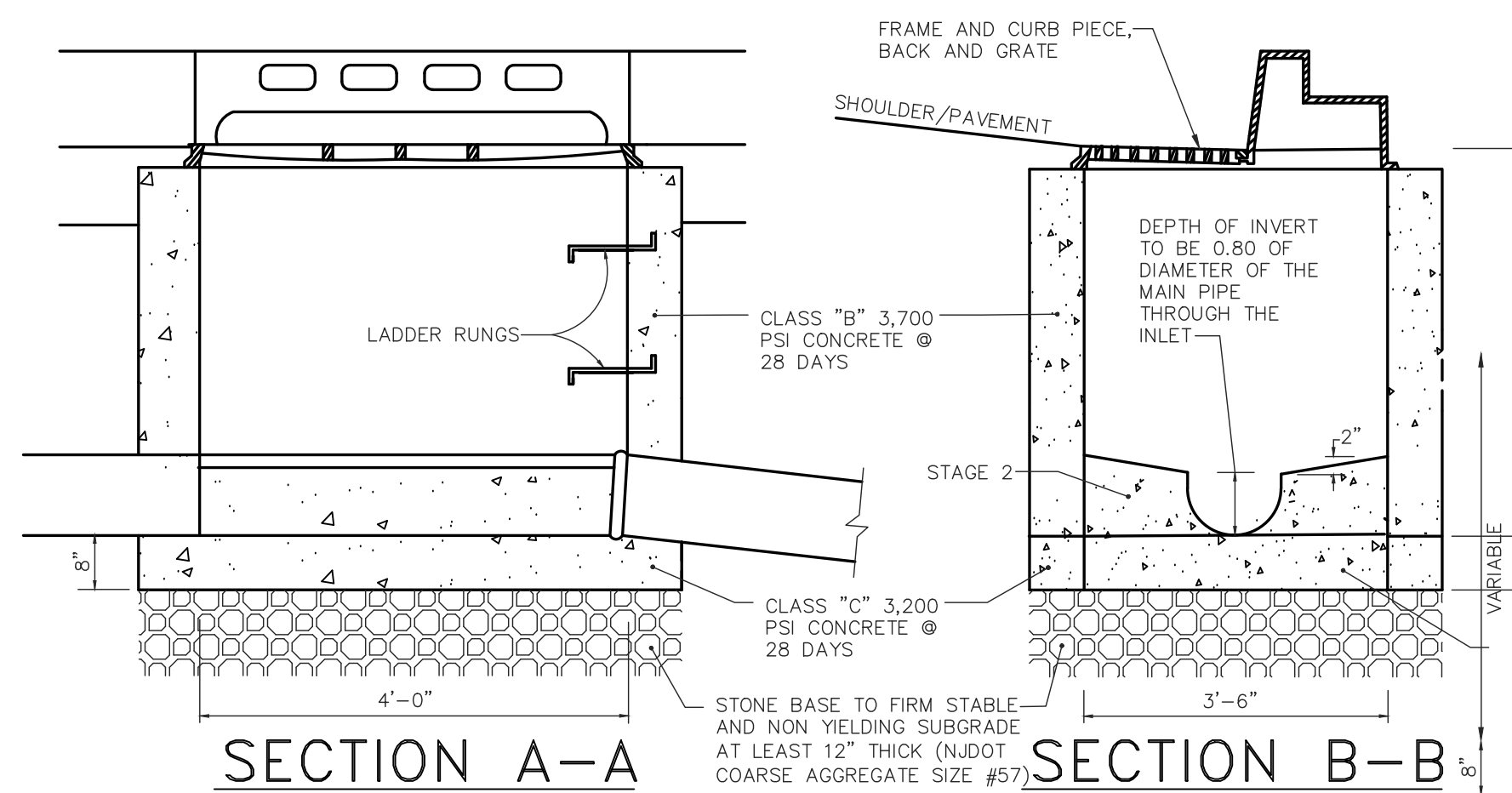
ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY MG ENGINEERING ASSOCIATES, LLC, FOR THE SPECIFIC PURPOSE INTENDED, WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO MG ENGINEERING ASSOCIATES, LLC, AND OWNER SHALL HOLD HARMLESS MG ENGINEERING ASSOCIATES, LLC FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

REV.	PER.	LAND DEVELOPMENT SUBMISSION	11/7/20	MDG	DATE	BY
1						

CONSTRUCTION DETAILS

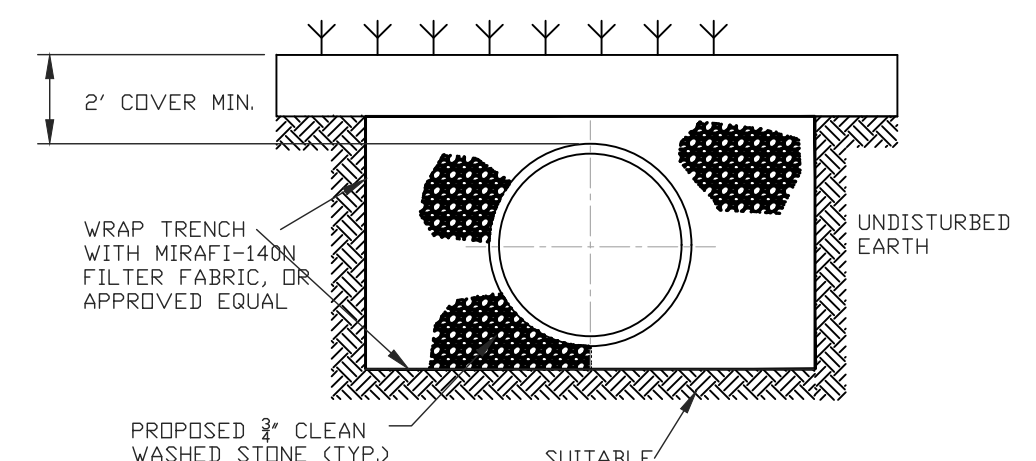
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR EWING PROPERTIES, LLC SECTION 15, BLOCK 141, LOTS 9 AND 10 TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY:	DESIGN BY:	CHECKED BY:	SCALE:
MDG	MDG	MDG	1"=20'
DATE:	JUNE 2020	SHEET No.:	9
JOB No.:	2018-601		

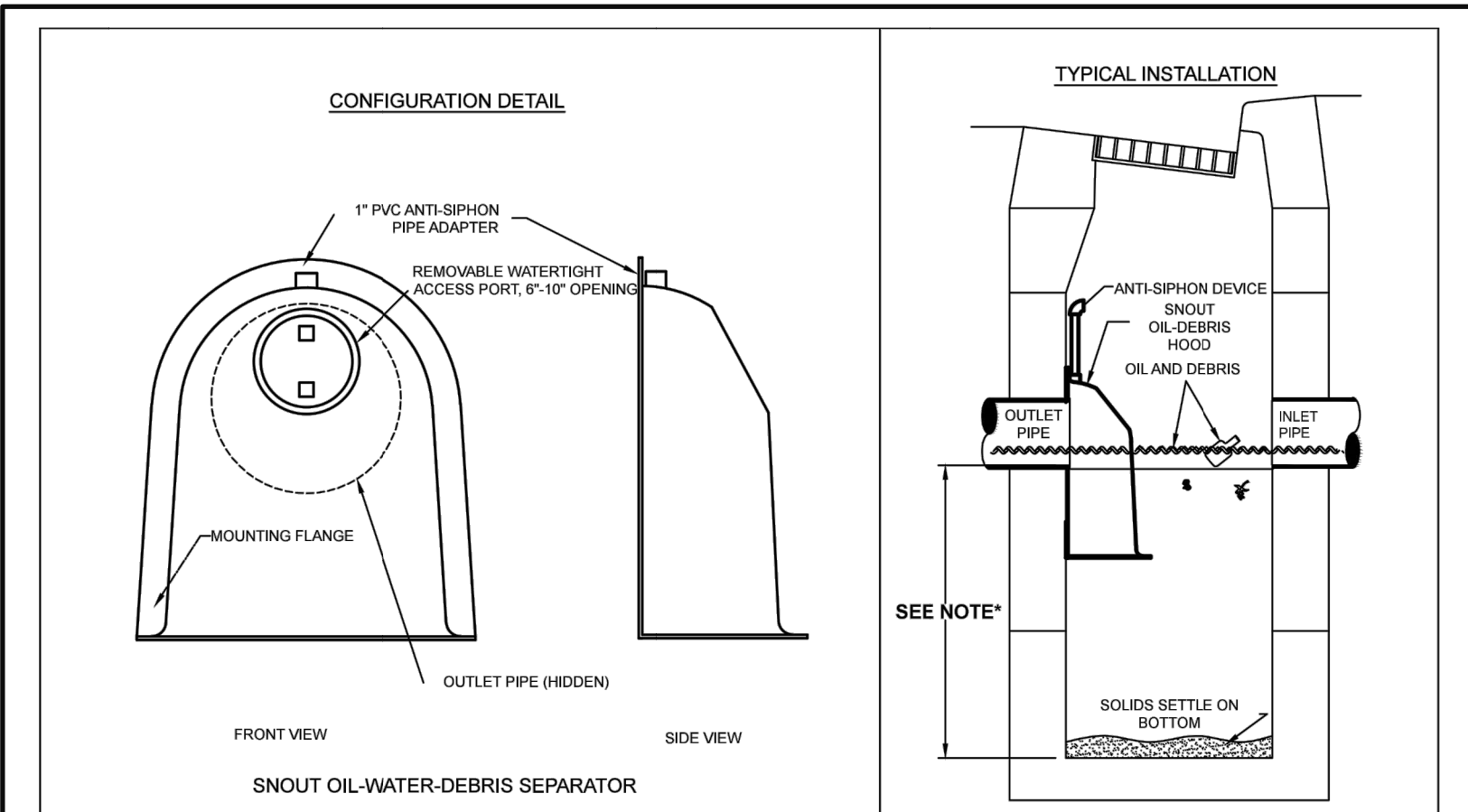


TYPE 'B' NJDOT INLET DETAIL

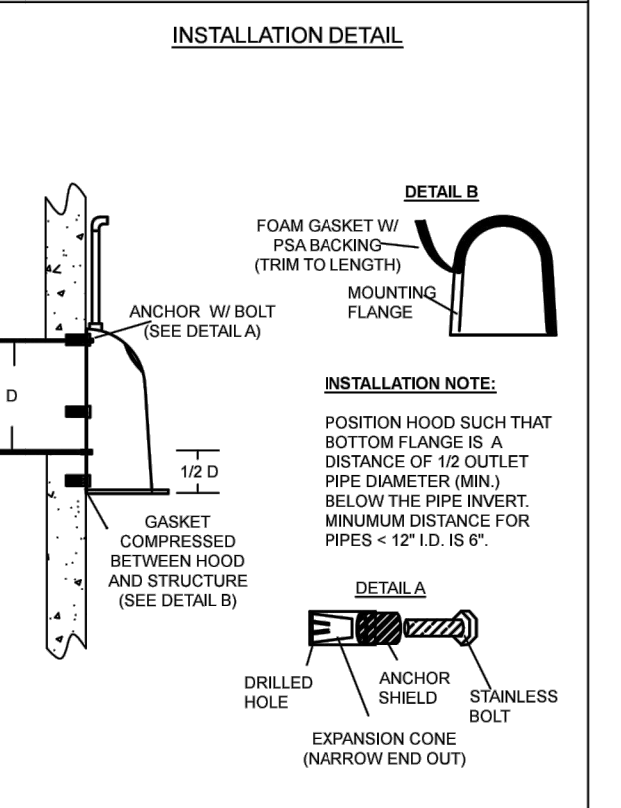
- NOTES:
- PROPOSED STONE MATERIAL SHALL BE INSTALLED AS PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
  - ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
  - MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
  - FILTER FABRIC: PROPOSED FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.
  - FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - BEDDING: PROPOSED STONE BEDDING AND BE 3/4\"/>



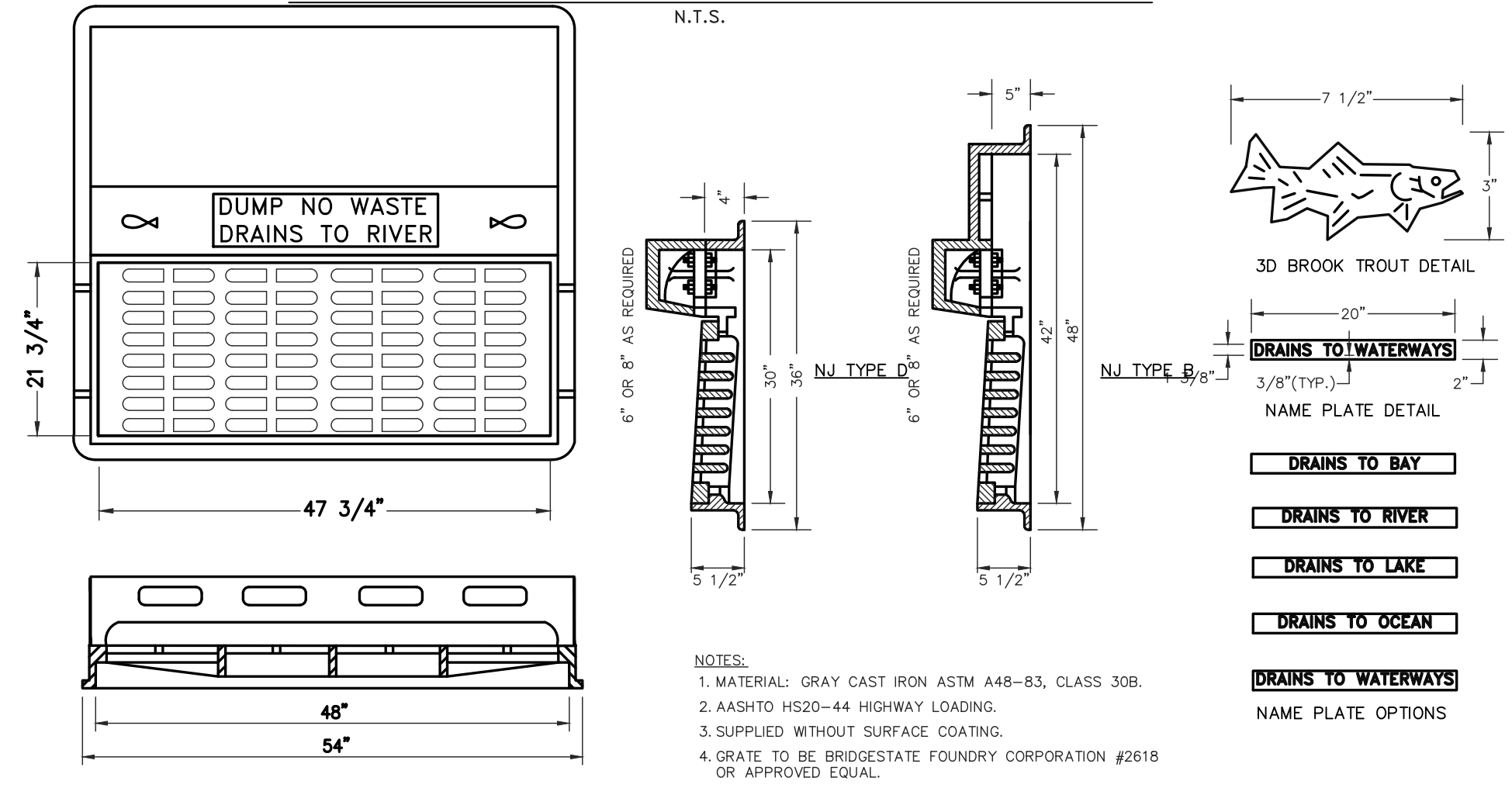
UNDERGROUND INFILTRATION TRENCH DETAIL



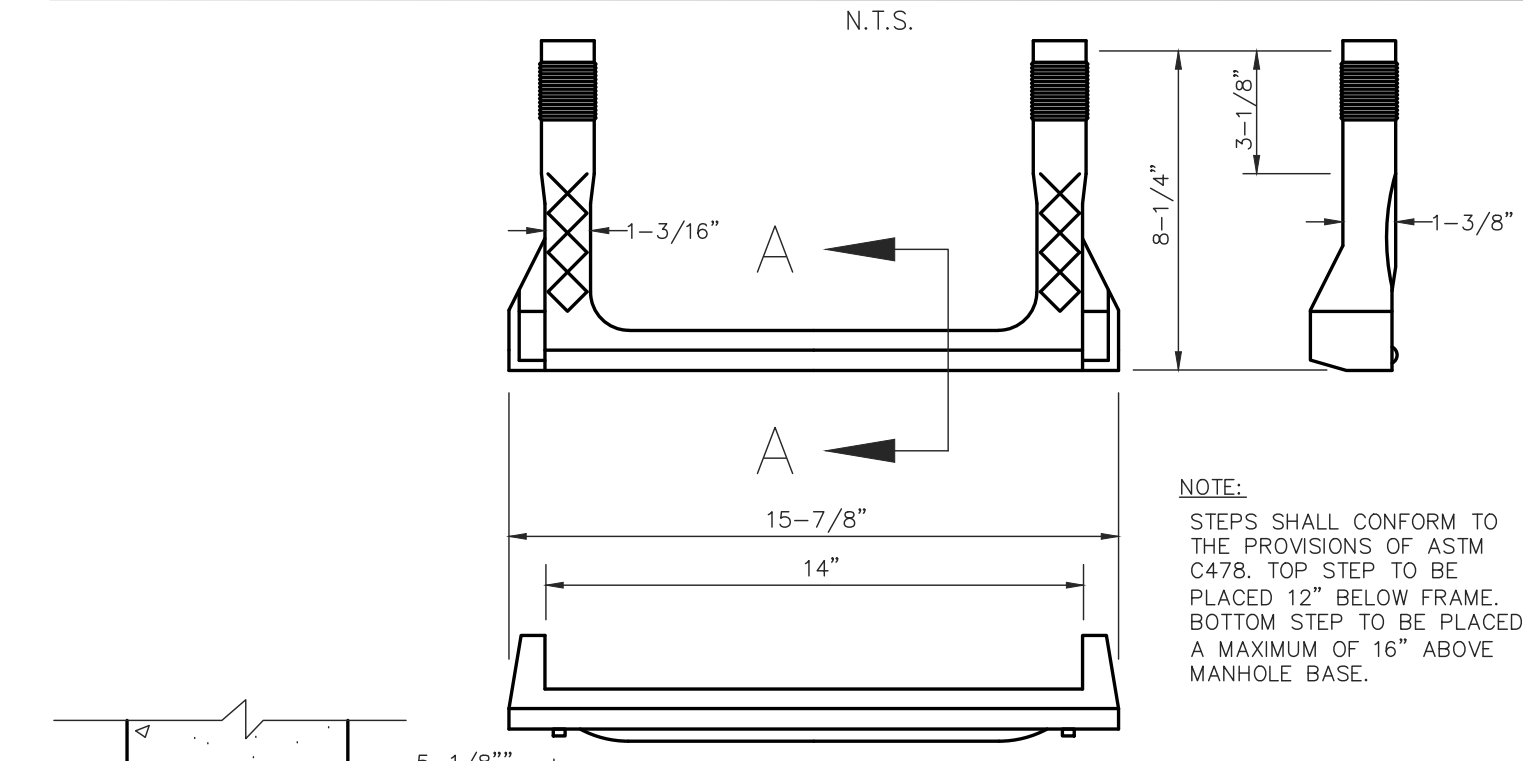
- NOTES:
- ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 9 MATHEWS DRIVE, UNIT A1-A2, EAST HADDAM, CT 06423. TOLL FREE: (800) 504-8008 OR (888) 434-0277, FAX: (877) 434-3197. WEB SITE: WWW.BMPINC.COM OR PRE-APPROVED EQUAL.
  - ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125\"/>



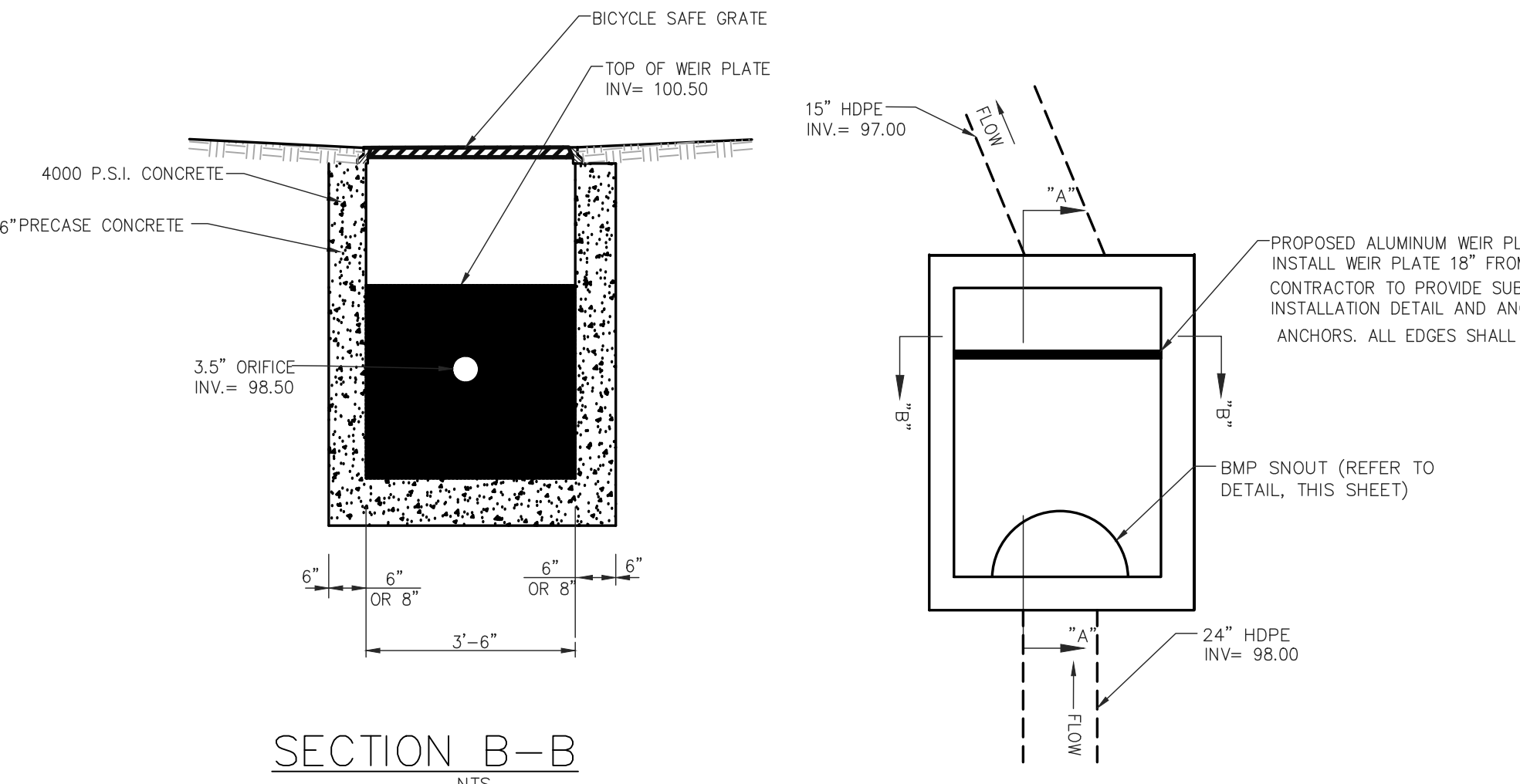
DESCRIPTION	DATE	SCALE
OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/18	NONE
DRAWING NUMBER	SP-SN	



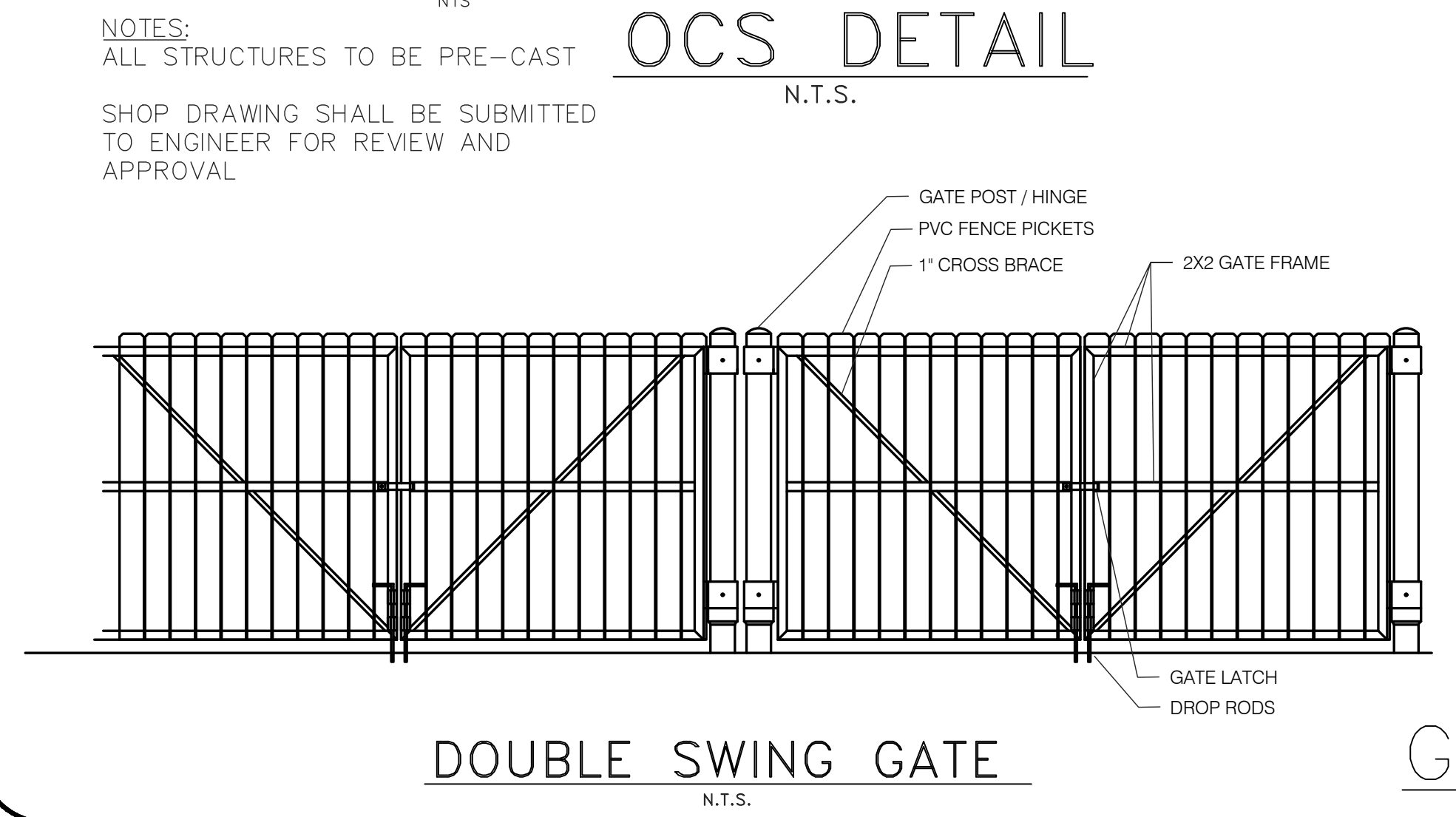
TYPE 'B' BICYCLE SAFE GRATE & TYPE 'N-ECO' CURB PIECE



COPOLYMER POLYPROPYLENE PLASTIC STEEL REINFORCED MANHOLE STEP



OCS DETAIL

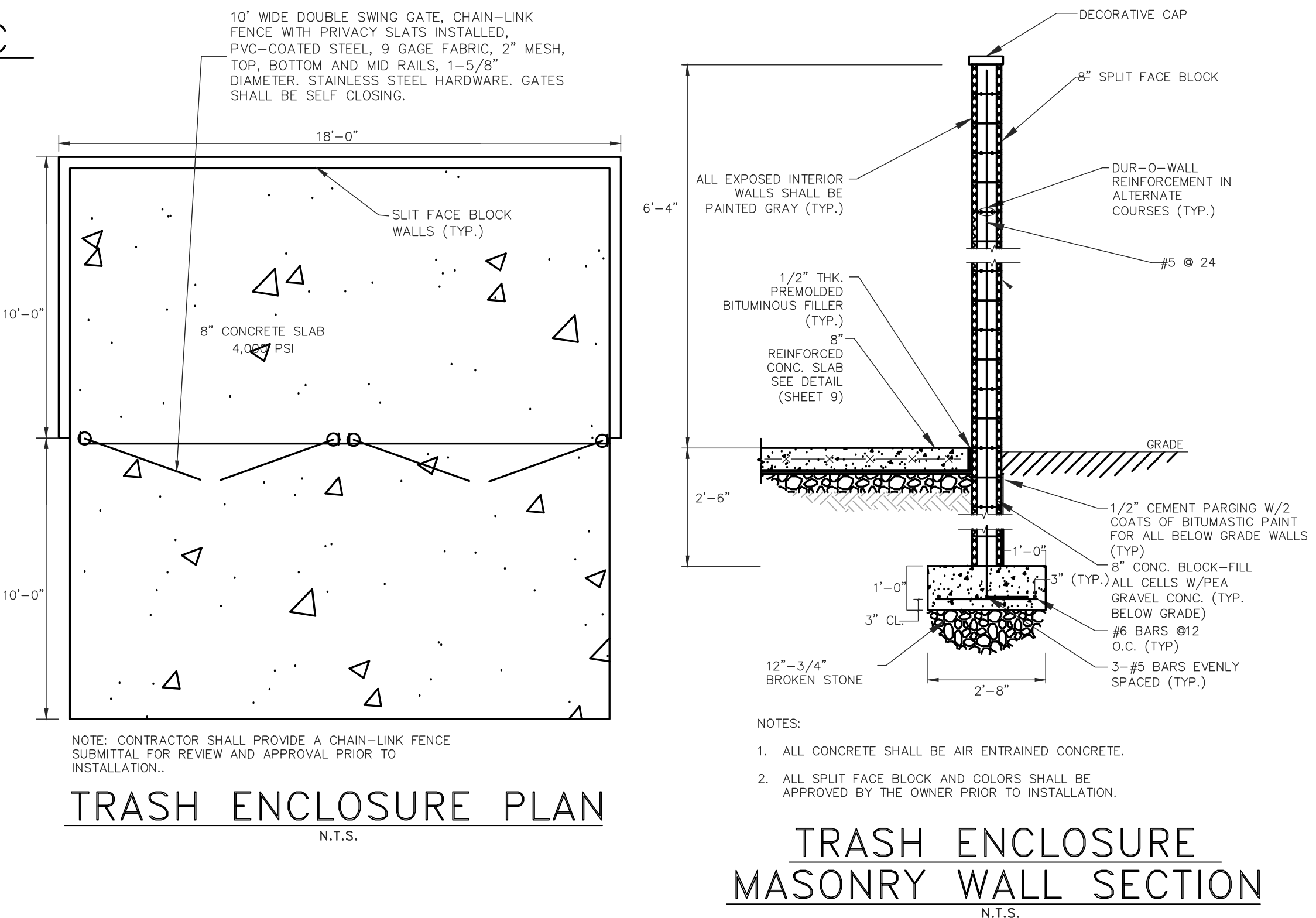


DOUBLE SWING GATE

GATE POST DETAIL

WATER QUALITY SNOUT

- MAINTENANCE NOTES
- MONTHLY MONITORING FOR THE FIRST YEAR OF A NEW INSTALLATION AFTER THE SITE HAS BEEN STABILIZED.
  - MEASUREMENTS SHOULD BE TAKEN AFTER EACH RAIN EVENT OF 0.5 INCHES OR MORE, OR MONTHLY, AS DETERMINED BY LOCAL WEATHER CONDITIONS.
  - SEDIMENT DEPTH SHALL BE CHECKED DURING EACH INSPECTION.
  - SCHEDULE CLEANING BASED UPON SOLIDS COLLECTED IN THE INLET SUMP. STRUCTURE SHALL BE CLEANED WHEN SUMP IS HALF FULL.
  - CLEAN STRUCTURE IF AN ACCIDENT OR SPILL OCCURS.
  - ALL WASTE SHALL BE COLLECTED AND HANDLED AT AN APPROVED DISPOSAL FACILITY.
  - MAINTENANCE OF THE SNOUT HOOD SHALL BE CONDUCTED DURING AN ANNUAL INSPECTION OF THE ANTI-SIPHON VENT, OR A GENTLE RODDING WITH A FLEXIBLE WIRE. OPENING AND CLOSING THE HATCH ONCE A YEAR IS RECOMMENDED.



TRASH ENCLOSURE PLAN

TRASH ENCLOSURE MASONRY WALL SECTION

ENGINEER:  
MICHAEL GALANTE PE  
76 ARGYLE AVENUE  
BLACKWOOD, N.J. 08012  
PHONE: 1-856-404-0540

APPLICANT/OWNER  
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1602 PENNINGTON ROAD  
EWING, NJ 08618

DATE: 6-7-2020  
MICHAEL D. GALANTE  
NJ PROFESSIONAL ENGINEER LIC. NO. PE 48374

MG ENGINEERING ASSOCIATES, LLC  
76 ARGYLE AVENUE  
BLACKWOOD, N.J. 08012  
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WWW.MGEAASSOCIATES.COM  
CERTIFICATE OF AUTHORIZATION # 24GA28279000

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REV.	DATE	BY	CHK
1	11/7/20	MDG	MDG

CONSTRUCTION DETAILS

PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT FOR EWING PROPERTIES, LLC SECTION 15, BLOCK 141, LOTS 9 AND 10 TOWNSHIP OF EWING, MERCER COUNTY, NEW JERSEY

DRAWN BY: MDC DESIGN BY: MDC CHECKED BY: MDC SCALE: 1"=20'  
DATE: JUNE 2020 SHEET No.: 10  
JOB No.: 2018-601