

PRELIMINARY AND FINAL SITE PLAN

FOR

405 ROUTE 9, LLC

PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU

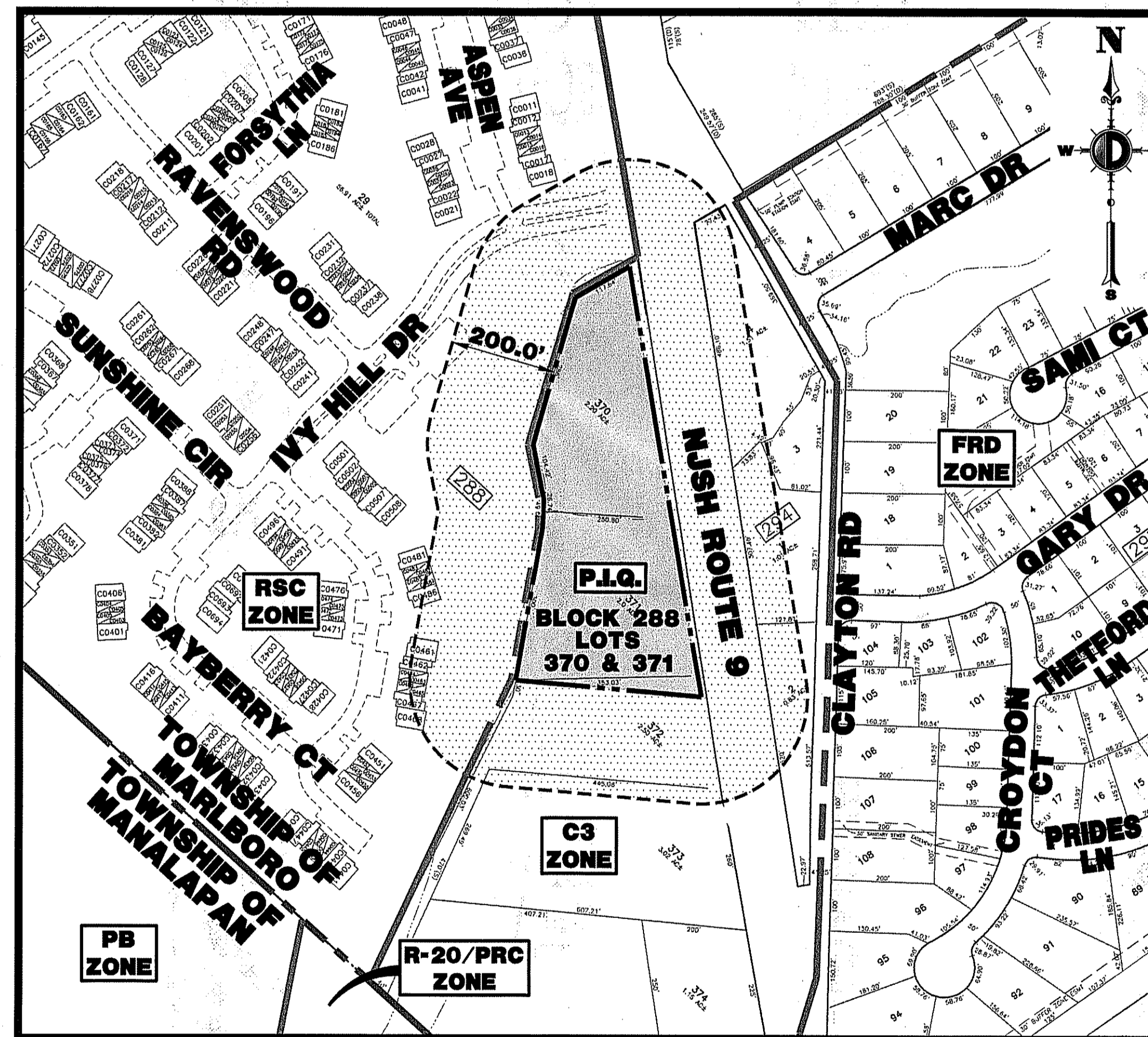
BLOCK 288, LOTS 370 & 371; TAX MAP SHEET #117 - LATEST REV. DATED 02/2007
 405 NJSH ROUTE 9
 TOWNSHIP OF MARLBORO
 MONMOUTH COUNTY, NEW JERSEY

200' PROPERTY OWNERS LIST

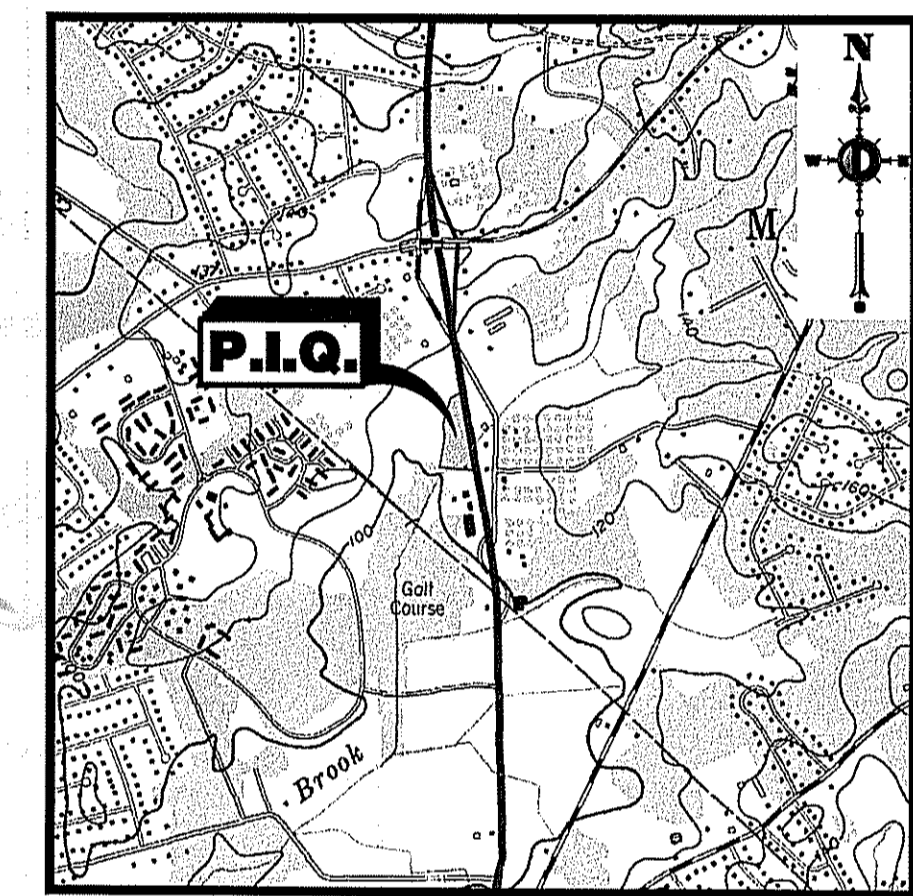
PROPERTY OWNER	BLOCK	LOT
MARLBORO GREENS LTD. PARTNERSHIP PO BOX 8831 BRIDGEWATER, NJ 08807	288	29
AREC 22, LLC 2727 NORTH CENTRAL AVENUE PHOENIX, AZ 85004	288	372.01, 373
US HOLDINGS, LLC 301 DORN DRIVE SIRINGSBURY, NJ 07702	294	1
430 RT 9 REALTY LLC 145 JOHANNA LANE STATEN ISLAND, NY 10309	394	2
CLAYTON, STANLEY E & PAMELA S 18 CLAYTON ROAD ENGLISHTOWN, NJ 07726	294	3
FESTA, FRANK J. JR. PO BOX 97 SCOTCH PLAINS, NJ 07076	294	4

ALSO TO BE NOTICED:

- W.M.U.A.
103 PENSION ROAD
ENGLISHTOWN, NJ 07726
ATTN: KATHY LEATHERMAN
- MARLBORO TOWNSHIP WATER UTILITY
1979 TOWNSHIP ROAD
MARLBORO, NJ 07746
- GORDONS CORNER WATER UTILITY
27 WANDERBURG ROAD
MARLBORO, NJ 07746
- NJ NATURAL GAS COMPANY
1415 WYCOFF ROAD
WALL, NJ 07719
ATTN: FRANK GRAF
- CABLEVISION OF MONMOUTH
40 ONE STREET
TRITON FALLS, NJ 07753
- VERIZON NEW JERSEY INC
789 WAYSIDE ROAD
NEPTUNE, NJ 07753
- JERSEY CENTRAL POWER AND LIGHT COMPANY
331 NEWMAN SPRINGS ROAD
SUITE 305, BUILDING 3
RED BANK, NJ 07070
ATTN: JOY BOSTICK
- STATE OF NJ DEPARTMENT OF TRANSPORTATION
100 DANIELS WAY
FREEHOLD, NJ 07728



AREA MAP
1" = 200'



KEY MAP
1" = 2000'

DRAWING INDEX

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ZONING BOARD OF ADJUSTMENT APPROVAL

APPROVED AT THE ZONING BOARD OF ADJUSTMENT OF THE TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

CHAIRPERSON	DATE
SECRETARY	DATE
BOARD ENGINEER	DATE

PREPARED BY
DYNAMIC ENGINEERING CONSULTANTS, P.C.
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 LAKE COMO, NJ 07719
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TITLE: COVER SHEET

PROJECT: **405 ROUTE 9, LLC**
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NJSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001
 DATE: 12/15/2020

DRAWN BY: KAJ
 DESIGNED BY: RTO
 CHECKED BY: JEH

SCALE: (H) AS SHOWN
 SHEET No: **1** OF 22

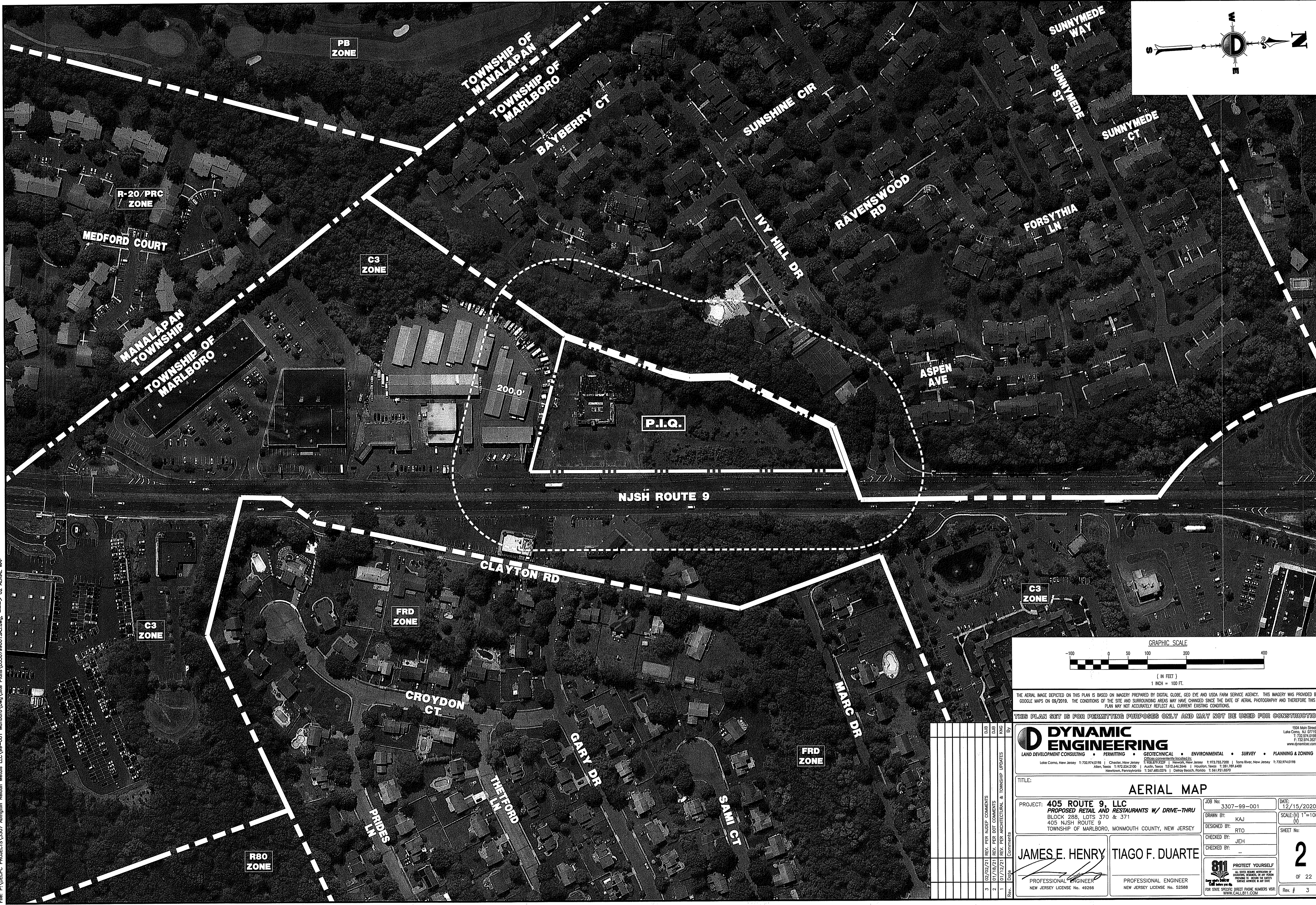
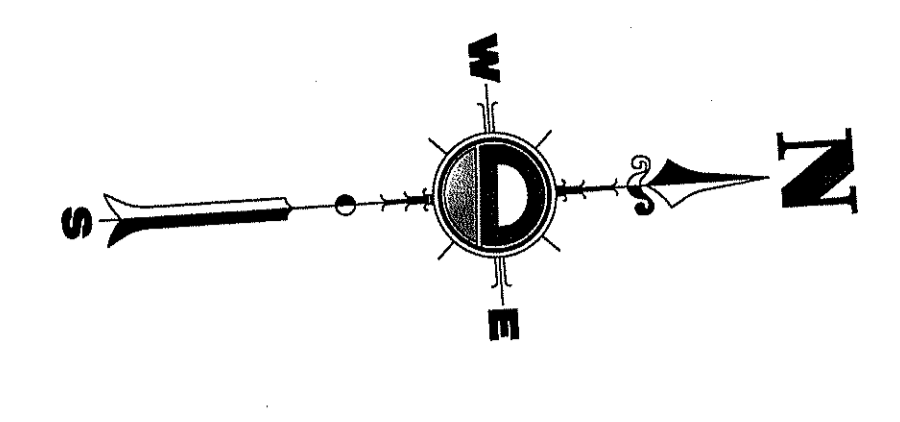
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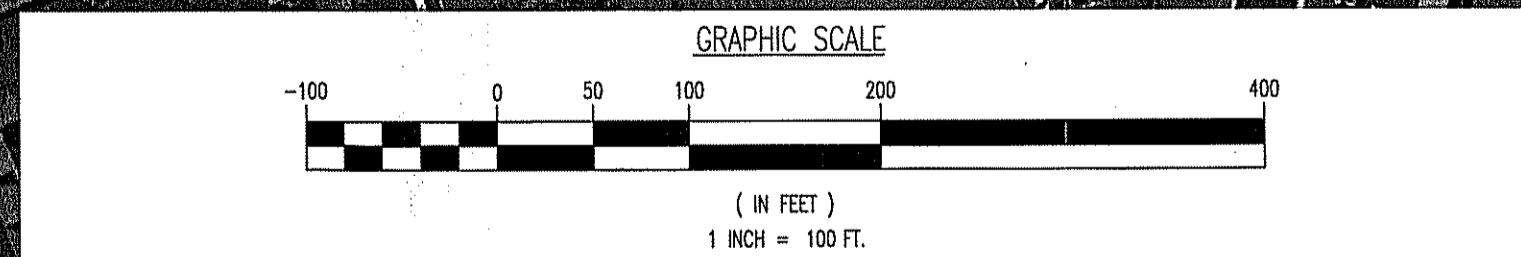
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P:\02\09\21 - 10:35 AM - Product Ver: 24.0a (LMS Tech) - Site Plan\0330799001\0330799001.dwg -> 01 COVER SHEET
 P:\02\09\21 - 10:35 AM - Product Ver: 24.0a (LMS Tech) - Site Plan\0330799001\0330799001.dwg -> 01 COVER SHEET



Plotset: 02/08/21 - 10:36 AM, By: dbyrd
 File: P:\DEPC PROJECTS\3307 Abington Road\ Metals\3307 Marlboro Dwg\Site Plans\330799001SA3.dwg, ---> 02 AERIAL MAP



THE AERIAL IMAGE DEPICTED ON THIS PLAN IS BASED ON IMAGERY PREPARED BY DIGITAL GLOBE, GEO EYE AND USDA FARM SERVICE AGENCY. THIS IMAGERY WAS PROVIDED BY GOOGLE MAPS ON 05/2019. THE CONDITIONS OF THE SITE AND SURROUNDING AREAS MAY HAVE CHANGED SINCE THE DATE OF AERIAL PHOTOGRAPHY AND THEREFORE THIS PLAN MAY NOT ACCURATELY REFLECT ALL CURRENT EXISTING CONDITIONS.

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 Newtown, Pennsylvania | 1:247.485.0276 | Delray Beach, Florida | 1:561.921.0270

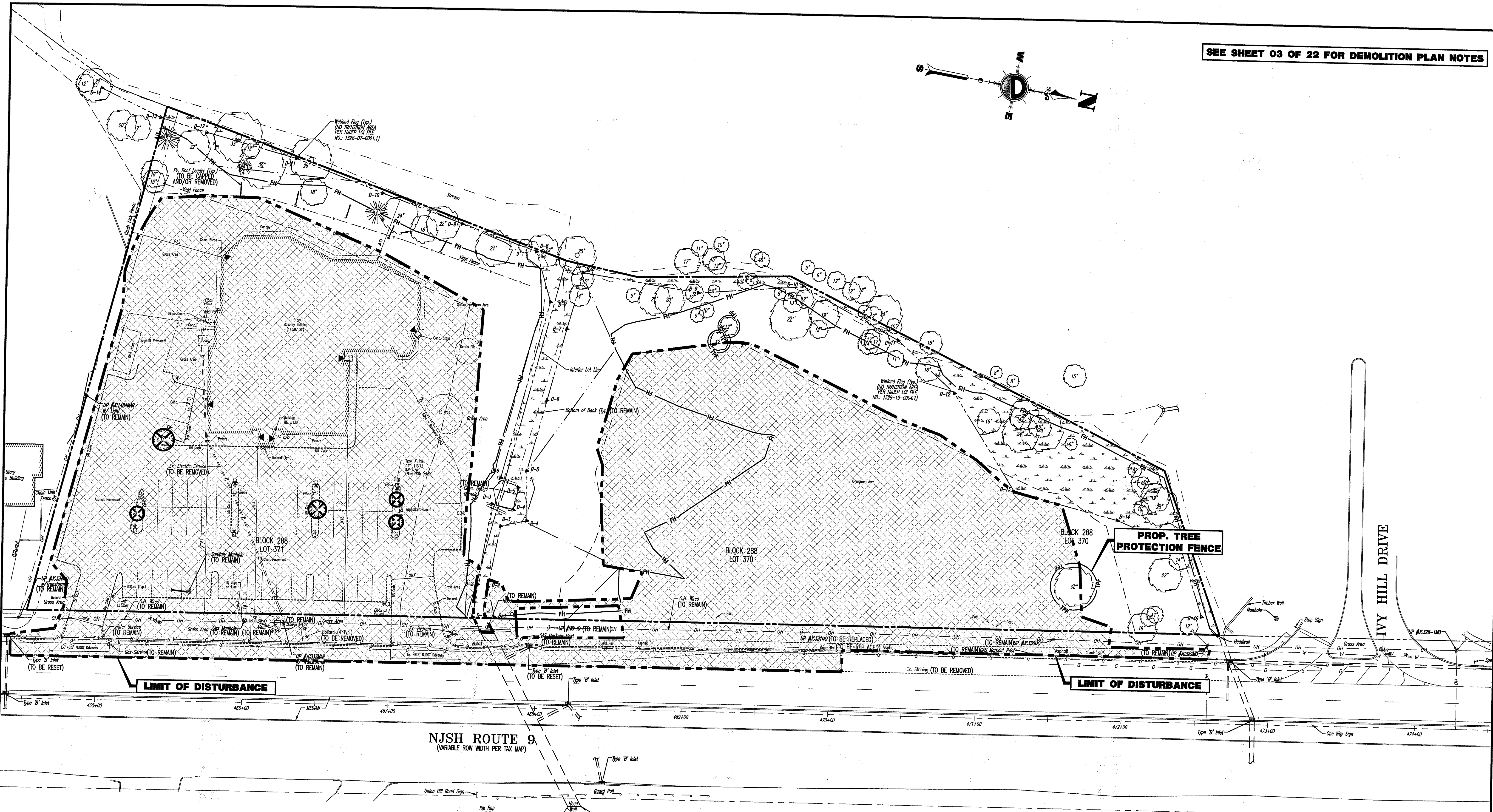
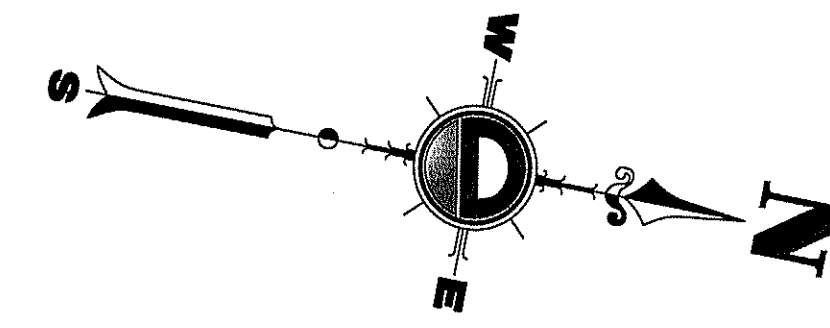
TITLE: AERIAL MAP
 PROJECT: **405 ROUTE 9, LLC**
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NUSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001
 DATE: 12/15/2020
 DRAWN BY: KAJ
 SCALE: (H) 1"=100'
 (V)
 SHEET No: **2**
 OF 22
 Rev. # 3

JAMES E. HENRY
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE No. 49266

TIAGO F. DUARTE
 PROFESSIONAL ENGINEER
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CALIPER	# OF TREES REMOVED	MULTIPLICATION FACTOR	# OF REPLACEMENT TREES REQUIRED	UNIT FEE	TOTAL FEE
ONE GREATER THAN FOUR (4) AND UP TO TWELVE (12)	5	1	5 X 1 = 5	\$240.00	\$1,200.00
ONE GREATER THAN TWELVE (12) AND UP TO EIGHTEEN (18)	N/A	2	N/A	\$440.00	N/A
ONE GREATER THAN EIGHTEEN (18) AND UP TO TWENTY FOUR (24)	N/A	2	N/A	\$840.00	N/A
ONE GREATER THAN TWENTY FOUR (24)	N/A	4	N/A	\$1,680.00	N/A
TOTAL	5	-	5	-	\$1,200.00

FIVE (5) TOTAL REPLACEMENT TREES WITH A CALIPER OF 2 TO 2 1/2 ARE REQUIRED, WHEREAS 12 REPLACEMENT TREES ARE PROPOSED.

DEMOLITION PLAN LEGEND

- PROPOSED LIMIT OF DISTURBANCE LINE
- - - PROPOSED TREE PROTECTION FENCE LINE
- EXISTING IMPROVEMENTS TO BE REMOVED UNLESS OTHERWISE NOTED
- TREES TO REMAIN
- ⊗ TREES TO BE REMOVED
- ⊙ TREES TO BE TRANSPLANTED/RELOCATED

GRAPHIC SCALE
 (IN FEET)
 1 INCH = 30 FT.

REV.	DATE	BY	DESCRIPTION
3	02/02/21	REV.	PER NUISANCE COMMENTS
2	01/19/21	REV.	PER NUISANCE COMMENTS
1	01/12/21	REV.	PER ARCHITECTURAL & TOWNSHIP UPDATES

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TITLE: DEMOLITION & TREE MANAGEMENT PLAN

PROJECT: 405 ROUTE 9, LLC
 PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NJSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001 DATE: 12/15/2020
 DRAWN BY: RAU SCALE: (H) 1"=30'
 DESIGNED BY: RTO (V)
 CHECKED BY: JEH SHEET No:
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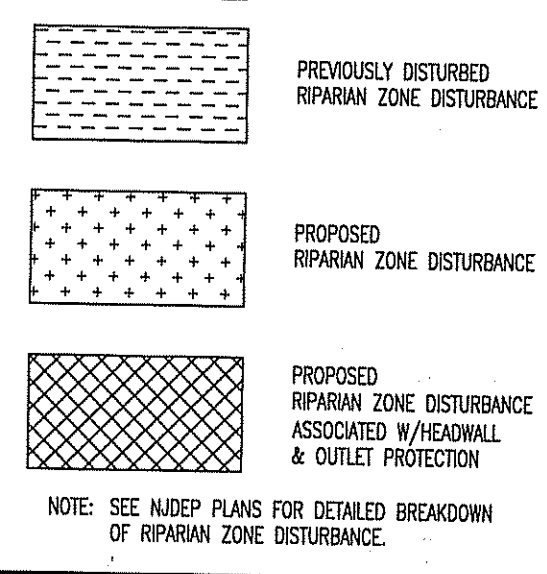
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Product: 02/09/21 - 10:36 AM By: aboyd, File: F:\USGRC PROJECTS\3307_Abington Reiden Metals LLC\99-001 Marlboro\DWG\Site Plans\AD330799001SP3.dwg -> 04 DEMOLITION & TREE MANAGEMENT PLAN

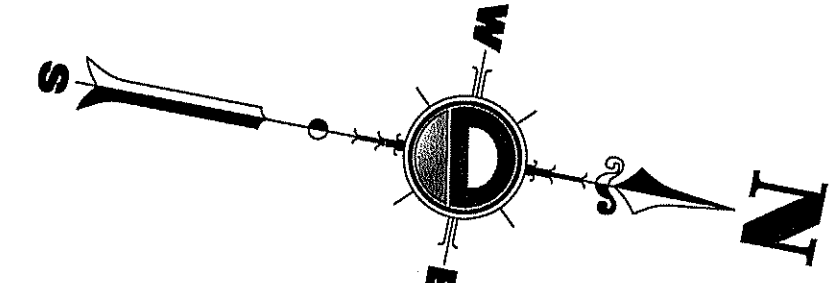
LEGEND



SEE SHEET 03 OF 22 FOR COMPLETE SITE PLAN NOTES

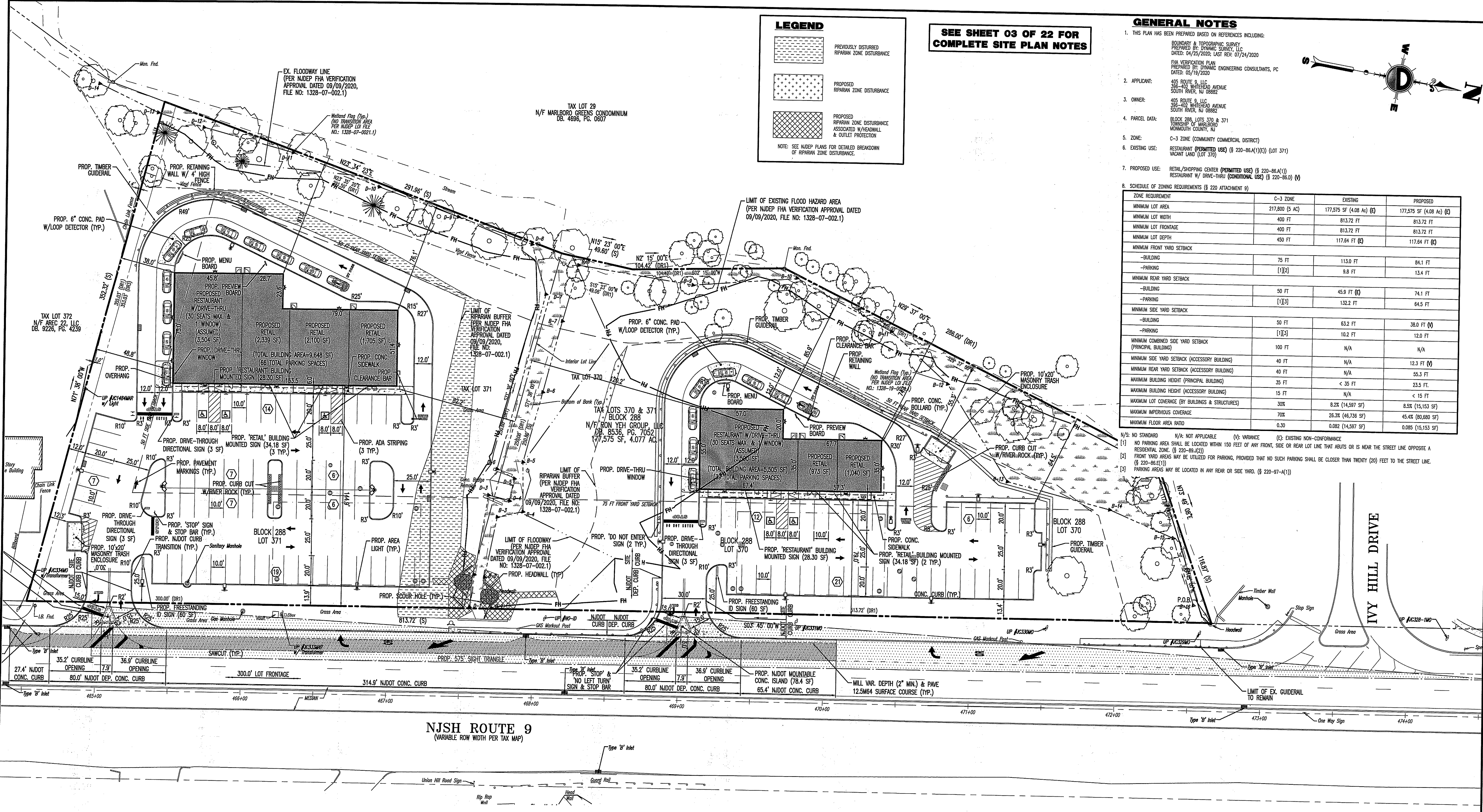
GENERAL NOTES

- THIS PLAN HAS BEEN PREPARED BASED ON REFERENCES INCLUDING:
 BOUNDARY & TOPOGRAPHIC SURVEY PREPARED BY: DYNAMIC SURVEY, LLC DATED: 04/25/2020; LAST REV: 07/24/2020
 FLOOD HAZARD VERIFICATION PLAN PREPARED BY: DYNAMIC ENGINEERING CONSULTANTS, PC DATED: 05/19/2020
- APPLICANT: 405 ROUTE 9, LLC 3002 WHITEHEAD AVENUE SOUTH RIVER, NJ 08882
- OWNER: 405 ROUTE 9, LLC 3002 WHITEHEAD AVENUE SOUTH RIVER, NJ 08882
- PARCEL DATA: BLOCK 288, LOTS 370 & 371 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NJ
- ZONE: C-3 ZONE (COMMUNITY COMMERCIAL DISTRICT)
- EXISTING USE: RESTAURANT (PERMITTED USE) (§ 220-86.1)(1)(C) (LOT 371) VACANT LAND (LOT 370)
- PROPOSED USE: RETAIL/SHOPPING CENTER (PERMITTED USE) (§ 220-86.1)(1) RESTAURANT W/ DRIVE-THRU (CONDITIONAL USE) (§ 220-86.0)
- SCHEDULE OF ZONING REQUIREMENTS (§ 220 ATTACHMENT 9)



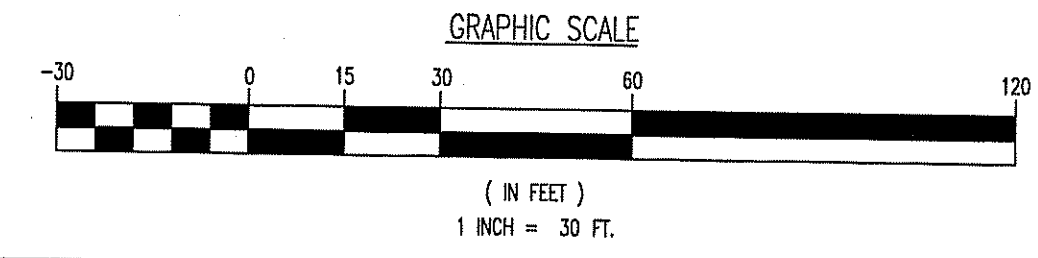
ZONE REQUIREMENT	C-3 ZONE	EXISTING	PROPOSED
MINIMUM LOT AREA	217,800 (5 AC)	177,575 SF (4.08 AC) (E)	177,575 SF (4.08 AC) (E)
MINIMUM LOT WIDTH	400 FT	813.72 FT	813.72 FT
MINIMUM LOT FRONTAGE	400 FT	813.72 FT	813.72 FT
MINIMUM LOT DEPTH	450 FT	117.84 FT (E)	117.84 FT (E)
MINIMUM FRONT YARD SETBACK			
-BUILDING	75 FT	113.0 FT	84.1 FT
-PARKING	(1)(2)	9.8 FT	13.4 FT
MINIMUM REAR YARD SETBACK			
-BUILDING	50 FT	45.9 FT (E)	74.1 FT
-PARKING	(1)(3)	132.2 FT	64.5 FT
MINIMUM SIDE YARD SETBACK			
-BUILDING	50 FT	63.2 FT	38.0 FT (V)
-PARKING	(1)(3)	10.2 FT	12.0 FT
MINIMUM COMBINED SIDE YARD SETBACK (PRINCIPAL BUILDING)	100 FT	N/A	N/A
MINIMUM SIDE YARD SETBACK (ACCESSORY BUILDING)	40 FT	N/A	12.3 FT (V)
MINIMUM REAR YARD SETBACK (ACCESSORY BUILDING)	40 FT	N/A	55.3 FT
MAXIMUM BUILDING HEIGHT (PRINCIPAL BUILDING)	35 FT	< 35 FT	23.5 FT.
MAXIMUM BUILDING HEIGHT (ACCESSORY BUILDING)	15 FT	N/A	< 15 FT
MAXIMUM LOT COVERAGE (BY BUILDINGS & STRUCTURES)	30%	8.2% (14,597 SF)	8.5% (15,153 SF)
MAXIMUM IMPERVIOUS COVERAGE	70%	26.3% (46,736 SF)	45.4% (80,680 SF)
MAXIMUM FLOOR AREA RATIO	0.30	0.082 (14,597 SF)	0.085 (15,153 SF)

N/S: NO STANDARD N/A: NOT APPLICABLE (V): VARIANCE (E): EXISTING NON-CONFORMANCE
 (1) NO PARKING AREA SHALL BE LOCATED WITHIN 150 FEET OF ANY FRONT, SIDE OR REAR LOT LINE THAT ABUTS OR IS NEAR THE STREET LINE OPPOSITE A RESIDENTIAL ZONE. (§ 220-86.1)(2))
 (2) FRONT YARD AREAS MAY BE UTILIZED FOR PARKING, PROVIDED THAT NO SUCH PARKING SHALL BE CLOSER THAN TWENTY (20) FEET TO THE STREET LINE. (§ 220-86.1)(1))
 (3) PARKING AREAS MAY BE LOCATED IN ANY REAR OR SIDE YARD. (§ 220-97-1(1))



SEE SHEET 17 OF 22 FOR SIGNAGE TABLE & DETAILS

SEE NJDOT PLANS FOR IMPROVEMENTS WITHIN THE NJDOT RIGHT-OF-WAY



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 T: 973.755.7200 | Weehawken, NJ 07087

TITLE: **SITE PLAN**

PROJECT: **405 ROUTE 9, LLC PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU**
 BLOCK 288, LOTS 370 & 371
 405 NJSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

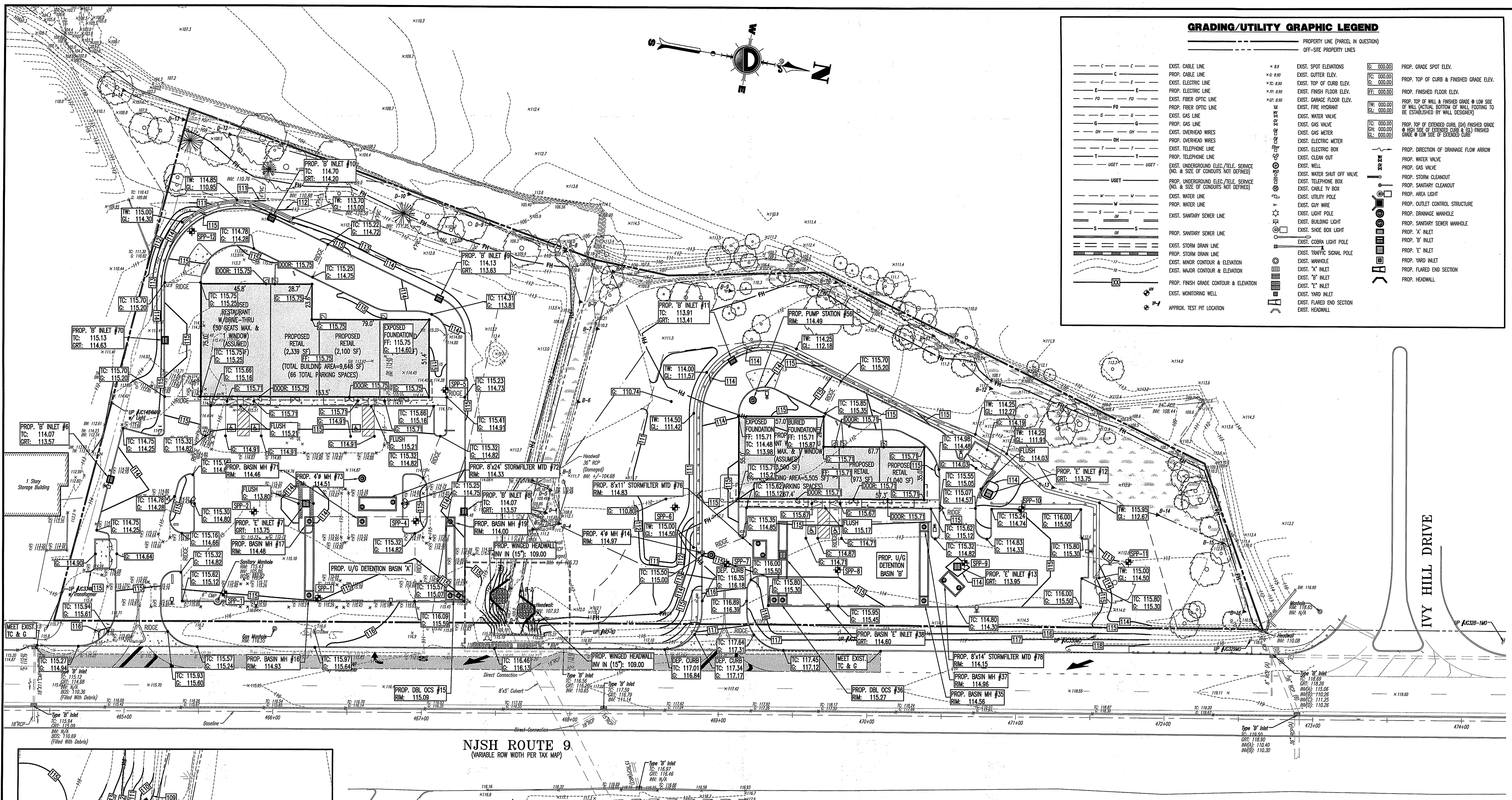
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JAMES E. HENRY **TIAGO F. DUARTE**
 PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 49266
 PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 52568

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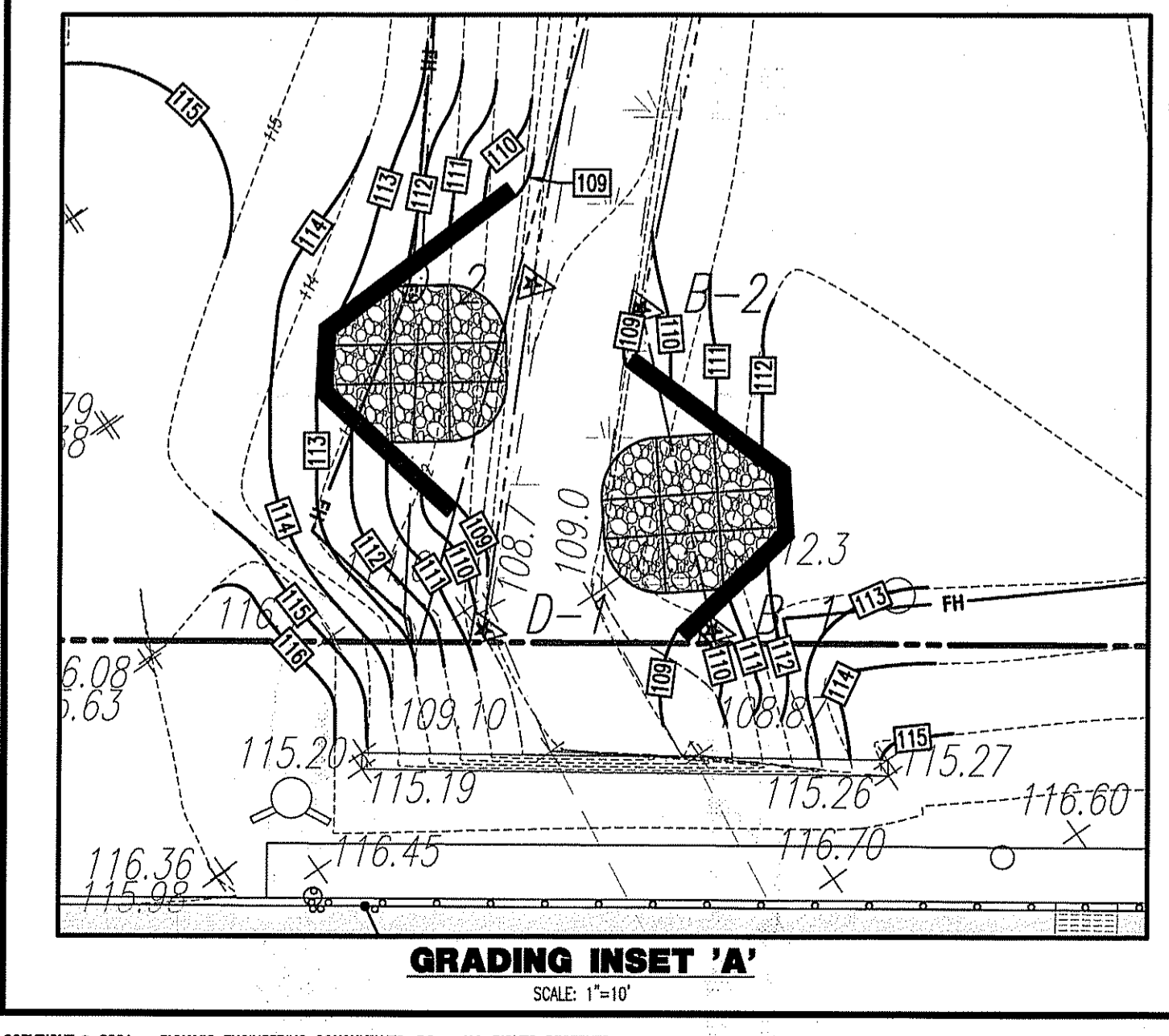
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Plotset: 02/09/21 - 10:37 AM, By: aboyd, File: F:\DEPC\PROJECTS\3307_Ablington Reldan Metals LLC\99-001 Marlboro\Site\Site Plans\0330799001\SXS.dwg, 05 SITE PLAN

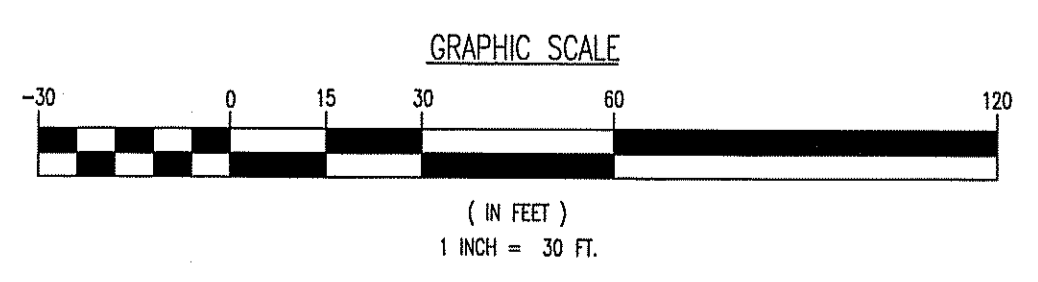


GRADING/UTILITY GRAPHIC LEGEND

---	PROPERTY LINE (PARCEL IN QUESTION)	---	EXIST. SPOT ELEVATIONS	---	PROP. GRADE SPOT ELEV.
---	OFF-SITE PROPERTY LINES	---	EXIST. GUTTER ELEV.	---	PROP. TOP OF CURB & FINISHED GRADE ELEV.
---	EXIST. CABLE LINE	---	EXIST. TOP OF CURB ELEV.	---	PROP. FINISHED FLOOR ELEV.
---	PROP. CABLE LINE	---	EXIST. FINISH FLOOR ELEV.	---	PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
---	EXIST. ELECTRIC LINE	---	EXIST. GARAGE FLOOR ELEV.	---	PROP. TOP OF EXTENDED CURB, (H) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (L) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
---	PROP. ELECTRIC LINE	---	EXIST. FIRE HYDRANT	---	PROP. DIRECTION OF DRAINAGE FLOW ARROW
---	EXIST. FIBER OPTIC LINE	---	EXIST. WATER VALVE	---	PROP. WATER VALVE
---	PROP. FIBER OPTIC LINE	---	EXIST. GAS VALVE	---	PROP. GAS VALVE
---	EXIST. GAS LINE	---	EXIST. GAS METER	---	PROP. STORM CLEANOUT
---	PROP. GAS LINE	---	EXIST. ELECTRIC METER	---	PROP. SANITARY CLEANOUT
---	EXIST. OVERHEAD WIRES	---	EXIST. ELECTRIC BOX	---	PROP. AREA LIGHT
---	PROP. OVERHEAD WIRES	---	EXIST. CLEAN OUT	---	PROP. OUTLET CONTROL STRUCTURE
---	EXIST. TELEPHONE LINE	---	EXIST. WELL	---	PROP. DRAINAGE MANHOLE
---	PROP. TELEPHONE LINE	---	EXIST. WATER SHUT OFF VALVE	---	PROP. SANITARY SEWER MANHOLE
---	EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	---	EXIST. TELEPHONE BOX	---	PROP. 'A' INLET
---	PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	---	EXIST. CABLE TV BOX	---	PROP. 'B' INLET
---	EXIST. WATER LINE	---	EXIST. UTILITY POLE	---	PROP. 'E' INLET
---	PROP. WATER LINE	---	EXIST. GUY WIRE	---	PROP. YARD INLET
---	EXIST. SANITARY SEWER LINE	---	EXIST. LIGHT POLE	---	PROP. FLARED END SECTION
---	PROP. SANITARY SEWER LINE	---	EXIST. BUILDING LIGHT	---	PROP. HEADWALL
---	EXIST. STORM DRAIN LINE	---	EXIST. SHOE BOX LIGHT	---	
---	PROP. STORM DRAIN LINE	---	EXIST. COBRA LIGHT POLE	---	
---	EXIST. MAJOR CONTOUR & ELEVATION	---	EXIST. TRAFFIC SIGNAL POLE	---	
---	PROP. FINISH GRADE CONTOUR & ELEVATION	---	EXIST. MANHOLE	---	
---	EXIST. MONITORING WELL	---	EXIST. 'A' INLET	---	
---	APPROX. TEST PIT LOCATION	---	EXIST. 'B' INLET	---	
---		---	EXIST. 'E' INLET	---	
---		---	EXIST. YARD INLET	---	
---		---	EXIST. FLARED END SECTION	---	
---		---	EXIST. HEADWALL	---	



NJSH ROUTE 9
(VARIABLE ROW WIDTH PER TAX MAP)



SEE SHEET 03 OF 22 FOR GRADING PLAN NOTES

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TITLE: **GRADING PLAN**

PROJECT: **405 ROUTE 9, LLC**
BLOCK 288, LOTS 370 & 371
405 NJSH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

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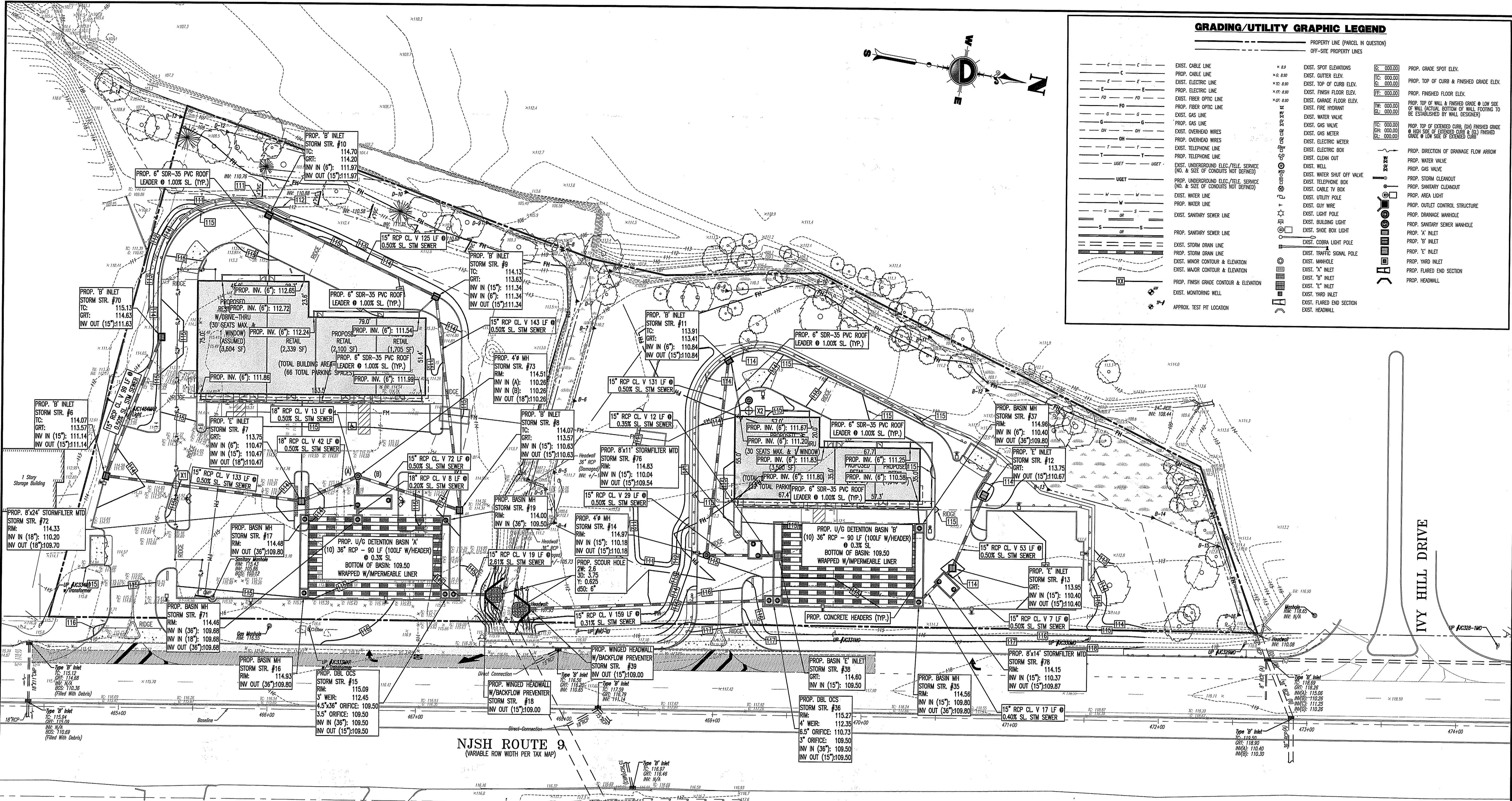
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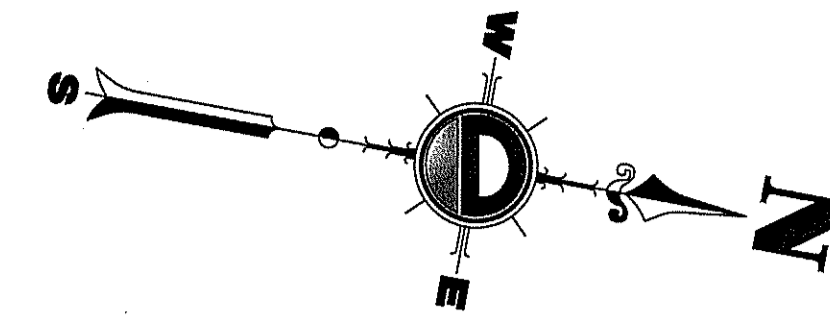
Rev. # 3

Plot No. 02/08/21 - 10:57 AM By: djboyd Product Ver: 24.0a (LMS Tech)
 File: P:\DECS\PROJECTS\3307-99-001 Marlboro (Long) Site Plan\030799001(S)C.dwg - 03 GRADING PLAN



GRADING/UTILITY GRAPHIC LEGEND

---	EXIST. CABLE LINE	✕ 8.9	EXIST. SPOT ELEVATIONS	○ 0.00.00	PROP. GRADE SPOT ELEV.
---	PROP. CABLE LINE	✕ 6.80	EXIST. GUTTER ELEV.	○ 0.00.00	PROP. TOP OF CURB & FINISHED GRADE ELEV.
---	EXIST. ELECTRIC LINE	✕ 10.80	EXIST. TOP OF CURB ELEV.	○ 0.00.00	PROP. FINISHED FLOOR ELEV.
---	PROP. ELECTRIC LINE	✕ 17.80	EXIST. FINISH FLOOR ELEV.	○ 0.00.00	PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
---	EXIST. FIBER OPTIC LINE	✕ 0.80	EXIST. GARAGE FLOOR ELEV.	○ 0.00.00	PROP. TOP OF WALL & FINISHED GRADE @ HIGH SIDE OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER
---	PROP. FIBER OPTIC LINE	✕ 0.80	EXIST. FIRE HYDRANT	○ 0.00.00	PROP. TOP OF EXTENDED CURB (G) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (S) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
---	EXIST. GAS LINE	✕ 0.80	EXIST. WATER VALVE	○ 0.00.00	PROP. DIRECTION OF DRAINAGE FLOW ARROW
---	PROP. GAS LINE	✕ 0.80	EXIST. GAS VALVE	○ 0.00.00	PROP. WATER VALVE
---	EXIST. OVERHEAD WIRES	✕ 0.80	EXIST. GAS METER	○ 0.00.00	PROP. GAS VALVE
---	PROP. OVERHEAD WIRES	✕ 0.80	EXIST. ELECTRIC METER	○ 0.00.00	PROP. STORM CLEANOUT
---	EXIST. TELEPHONE LINE	✕ 0.80	EXIST. ELECTRIC BOX	○ 0.00.00	PROP. SANITARY CLEANOUT
---	PROP. TELEPHONE LINE	✕ 0.80	EXIST. CLEAN OUT	○ 0.00.00	PROP. AREA LIGHT
---	EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	✕ 0.80	EXIST. WATER SHUT OFF VALVE	○ 0.00.00	PROP. OUTLET CONTROL STRUCTURE
---	PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	✕ 0.80	EXIST. TELEPHONE BOX	○ 0.00.00	PROP. DRAINAGE MANHOLE
---	EXIST. WATER LINE	✕ 0.80	EXIST. CABLE TV BOX	○ 0.00.00	PROP. SANITARY SEWER MANHOLE
---	PROP. WATER LINE	✕ 0.80	EXIST. UTILITY POLE	○ 0.00.00	PROP. 'A' INLET
---	EXIST. SANITARY SEWER LINE	✕ 0.80	EXIST. GUY WIRE	○ 0.00.00	PROP. 'B' INLET
---	PROP. SANITARY SEWER LINE	✕ 0.80	EXIST. LIGHT POLE	○ 0.00.00	PROP. 'C' INLET
---	EXIST. STORM DRAIN LINE	✕ 0.80	EXIST. BUILDING LIGHT	○ 0.00.00	PROP. FLARED END SECTION
---	PROP. STORM DRAIN LINE	✕ 0.80	EXIST. SHOE BOX LIGHT	○ 0.00.00	PROP. HEADWALL
---	EXIST. MINOR CONTOUR & ELEVATION	✕ 0.80	EXIST. COBRA LIGHT POLE	○ 0.00.00	
---	PROP. FINISH GRADE CONTOUR & ELEVATION	✕ 0.80	EXIST. MANHOLE	○ 0.00.00	
---	EXIST. MONITORING WELL	✕ 0.80	EXIST. 'A' INLET	○ 0.00.00	
---	APPROX. TEST PIT LOCATION	✕ 0.80	EXIST. 'B' INLET	○ 0.00.00	
---		✕ 0.80	EXIST. 'C' INLET	○ 0.00.00	
---		✕ 0.80	EXIST. YARD INLET	○ 0.00.00	
---		✕ 0.80	EXIST. FLARED END SECTION	○ 0.00.00	
---		✕ 0.80	EXIST. HEADWALL	○ 0.00.00	



PIPE CROSSINGS

PIPE CROSSING X1 15" RCP: BOP: 110.71 4.0" PVC: TOP: 108.83 SEPARATION: 1.93'	PIPE CROSSING X2 6.0" PVC: BOP: 111.20 4.0" PVC: TOP: 108.70 SEPARATION: 2.50'
--	---

NOTE: WHERE CLEARANCE IS LESS THAN 1.5', PIPES ARE TO BE ENCASED IN CONCRETE.

GRAPHIC SCALE

(IN FEET)
1 INCH = 30 FT.

DRAINAGE PLAN

PROJECT: 405 ROUTE 9, LLC
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
405 NUSH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

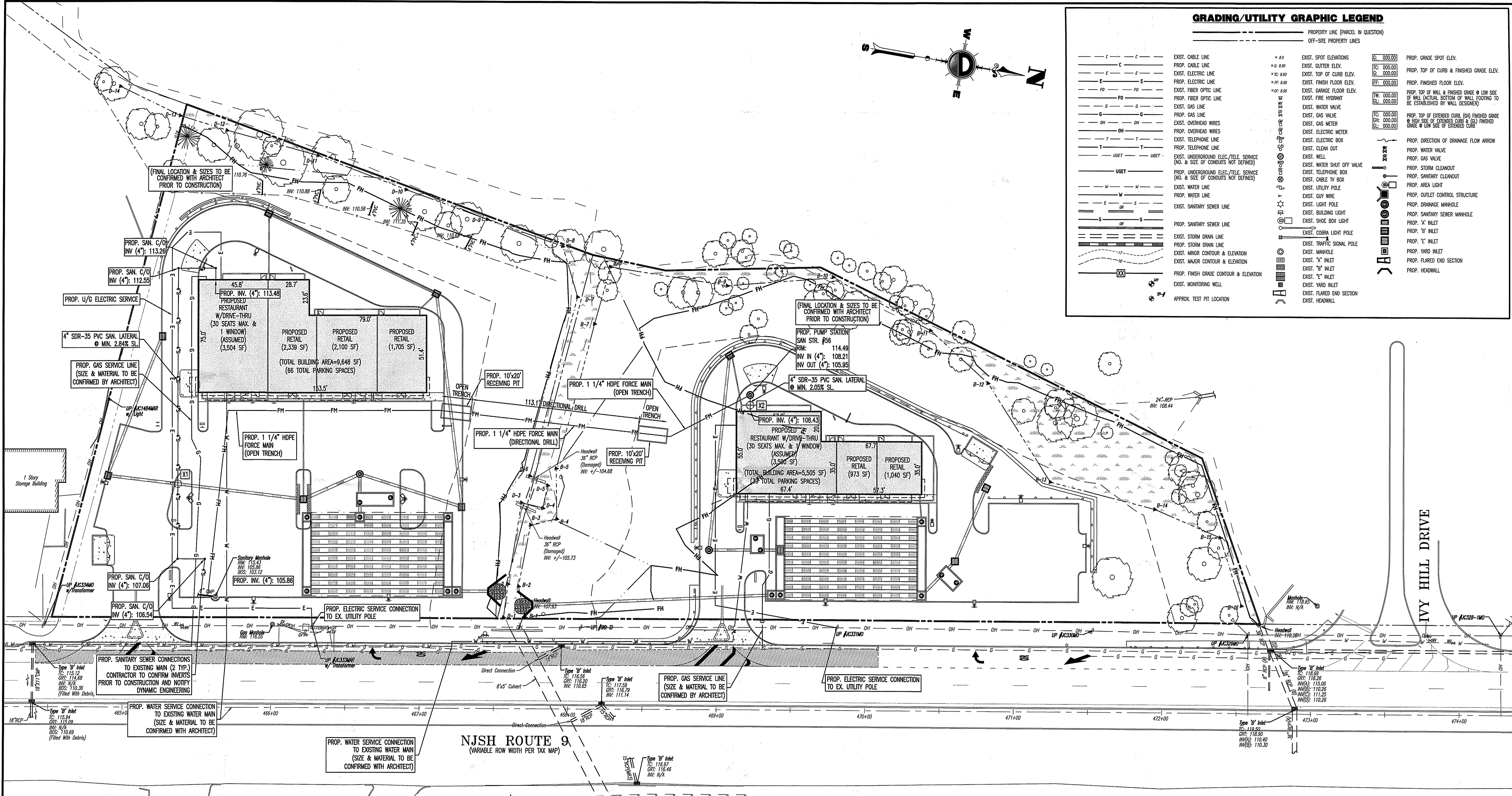
JAMES E. HENRY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 49266

TIAGO F. DUARTE
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 52588

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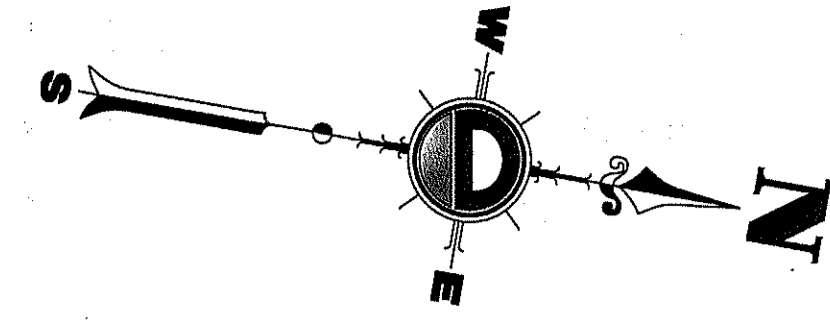
DATE: 12/15/2020	SHEET No: 7 OF 22
JOB No: 3307-99-001	SCALE: (H) 1"=30'
DRAWN BY: DJB	CHECKED BY: JEJ
DESIGNED BY: RTO	DATE: 12/15/2020

Product Ver: 24.0s (LUS Tech)
 File: P:\DEPC PROJECTS\3307 Abington Releas Metals LLC\99-001 Marlboro\DWG Site Plans\03307990015C3.dwg, --> 07 DRAINAGE PLAN
 Picked: 02/08/21 - 10:38 AM, By: dboyd,
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GRADING/UTILITY GRAPHIC LEGEND

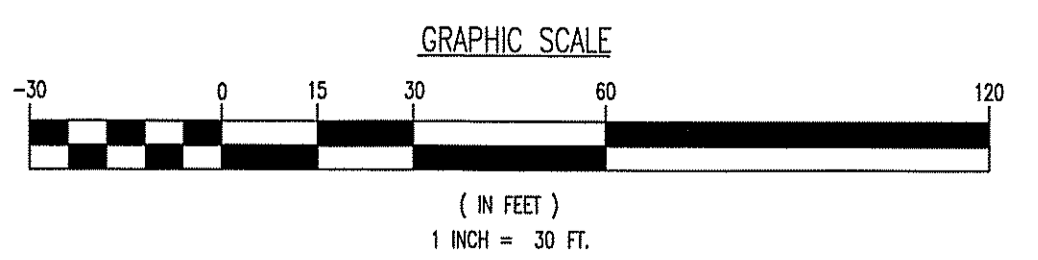
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---	OFF-SITE PROPERTY LINES	---	EXIST. GUTTER ELEV.	○	PROP. TOP OF CURB & FINISHED GRADE ELEV.
---	EXIST. CABLE LINE	---	EXIST. FINISH FLOOR ELEV.	○	PROP. FINISHED FLOOR ELEV.
---	PROP. CABLE LINE	---	EXIST. FINISH GRADE @ LOW SIDE OF WALL	○	PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
---	EXIST. ELECTRIC LINE	---	EXIST. FIRE HYDRANT	○	PROP. TOP OF EXTENDED CURB (90) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (60) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
---	PROP. FIBER OPTIC LINE	---	EXIST. WATER VALVE	○	PROP. DIRECTION OF DRAINAGE FLOW ARROW
---	EXIST. FIBER OPTIC LINE	---	EXIST. GAS VALVE	○	PROP. WATER VALVE
---	EXIST. GAS LINE	---	EXIST. GAS METER	○	PROP. GAS VALVE
---	PROP. GAS LINE	---	EXIST. ELECTRIC METER	○	PROP. STORM CLEANOUT
---	EXIST. OVERHEAD WIRES	---	EXIST. CLEAN OUT	○	PROP. SANITARY CLEANOUT
---	PROP. OVERHEAD WIRES	---	EXIST. WELL	○	PROP. AREA LIGHT
---	EXIST. TELEPHONE LINE	---	EXIST. WATER SHUT OFF VALVE	○	PROP. OUTLET CONTROL STRUCTURE
---	PROP. TELEPHONE LINE	---	EXIST. TELEPHONE BOX	○	PROP. DRAINAGE MANHOLE
---	EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	---	EXIST. CABLE TV BOX	○	PROP. SANITARY SEWER MANHOLE
---	PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	---	EXIST. UTILITY POLE	○	PROP. 'A' INLET
---	EXIST. WATER LINE	---	EXIST. GUY WIRE	○	PROP. 'B' INLET
---	PROP. WATER LINE	---	EXIST. LIGHT POLE	○	PROP. 'C' INLET
---	EXIST. SANITARY SEWER LINE	---	EXIST. BUILDING LIGHT	○	PROP. YARD INLET
---	PROP. SANITARY SEWER LINE	---	EXIST. SHOE BOX LIGHT	○	PROP. FLARED END SECTION
---	EXIST. STORM DRAIN LINE	---	EXIST. COBRA LIGHT POLE	○	PROP. HEADWALL
---	PROP. STORM DRAIN LINE	---	EXIST. TRAFFIC SIGNAL POLE	○	
---	EXIST. MINOR CONTOUR & ELEVATION	---	EXIST. MANHOLE	○	
---	EXIST. MAJOR CONTOUR & ELEVATION	---	EXIST. 'M' INLET	○	
---	PROP. FINISH GRADE CONTOUR & ELEVATION	---	EXIST. 'B' INLET	○	
---	EXIST. MONITORING WELL	---	EXIST. 'C' INLET	○	
---	APPROX. TEST PIT LOCATION	---	EXIST. YARD INLET	○	
---		---	EXIST. FLARED END SECTION	○	
---		---	EXIST. HEADWALL	○	



PIPE CROSSINGS

PIPE CROSSING X1 15" RCP: BOR: 110.71 4.0" PVC: TOP: 108.83 SEPARATION: 1.93'	PIPE CROSSING X2 6.0" PVC: BOR: 111.20 4.0" PVC: TOP: 108.70 SEPARATION: 2.50'
--	---

NOTE: WHERE CLEARANCE IS LESS THAN 1.5', PIPES ARE TO BE ENCASED IN CONCRETE.



SEE SHEET 03 OF 22 FOR UTILITY PLAN NOTES

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UTILITY PLAN

PROJECT: 405 ROUTE 9, LLC
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU.
BLOCK 288, LOTS 370 & 371
405 NJSH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001 DATE: 12/15/2020
DRAWN BY: RAU SCALE: (H) 1"=30'
DESIGNED BY: RTO (V)
CHECKED BY: JEH SHEET No:
CHECKED BY: JEH

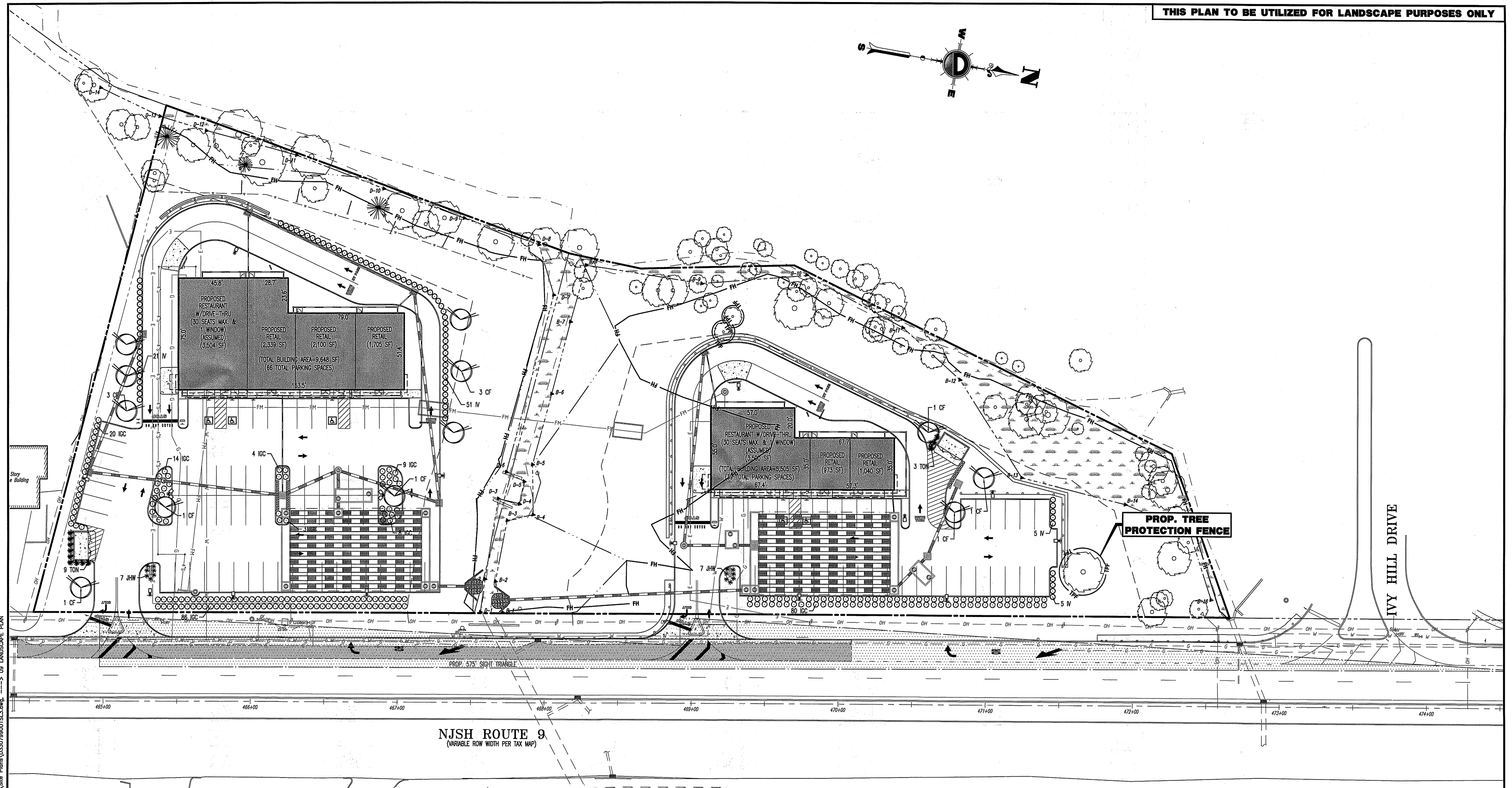
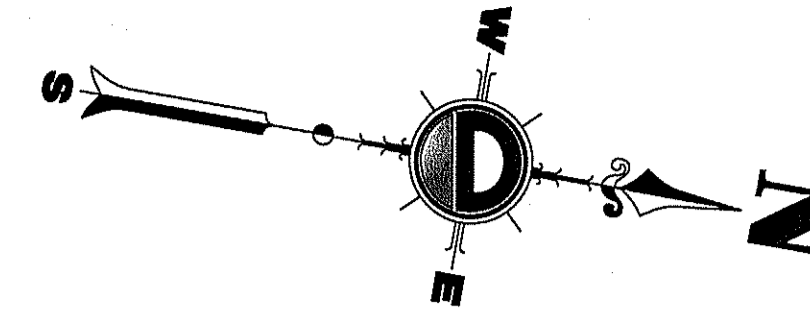
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8 OF 22
Rev. # 3

Plotted: 02/09/21 10:38 AM By: sbowd Product Ver: 24.06 (LMS Tech) Site: P:\Discs\Products\3307 Arlington Region_Media_LLC\99-001 Marlboro\Ung\Site Plan\030799001\SUB.dwg --> 03 UTILITY PLAN

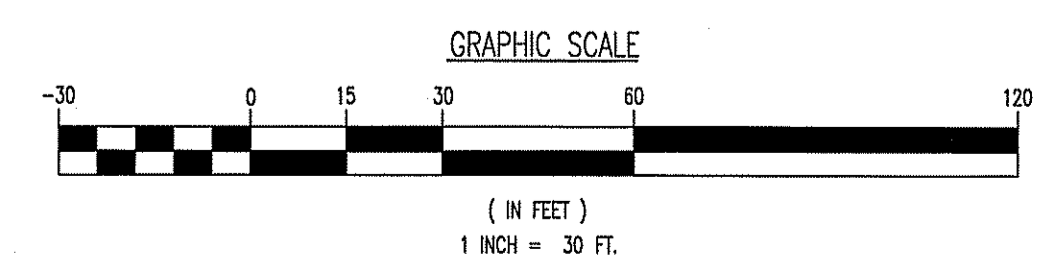


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NJSH ROUTE 9
(VARIABLE ROW WIDTH PER TAX MAP)

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
ORNAMENTAL TREES(S)					
CF	12	CORNUS FLORIDA	WHITE FLOWERING DOGWOOD	2-2 1/2" CAL.	B+B
EVERGREEN SHRUB(S)					
ICG	224	ILEX GLABRA COMPACTA	DWARF INKBERRY HOLLY	24-30"	#5 CAN
TON	12	THUJA OCCIDENTALIS 'NIGRA'	DARK AMERICAN ARBORVITAE	5-6'	B+B
DECIDUOUS SHRUB(S)					
W	82	ITEA VIRGINICA 'HENRY'S GARNET'	GARNET SWEETSPIRE	24-30"	#5 CAN
GROUND COVER					
JHW	14	JUNPERUS HORIZONTALIS 'WILTON'	WILTON'S BLUE RUG JUNPER	15-18" SPRD	#3 CAN

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



SEE SHEET 16 OF 22 FOR LANDSCAPE DETAILS

SEE SHEET 03 OF 22 FOR LANDSCAPE NOTES & SPECIFICATIONS

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TITLE: **LANDSCAPE PLAN**

PROJECT: **405 ROUTE 9, LLC
 PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NUSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY**

JOB NO.: 3307-99-001 DATE: 12/15/2020

DRAWN BY: KNG SCALE: (H) 1"=30'
 DESIGNED BY: RTO (V)

CHECKED BY: JEH SHEET NO: **9**

CHECKED BY: _____ OF 22

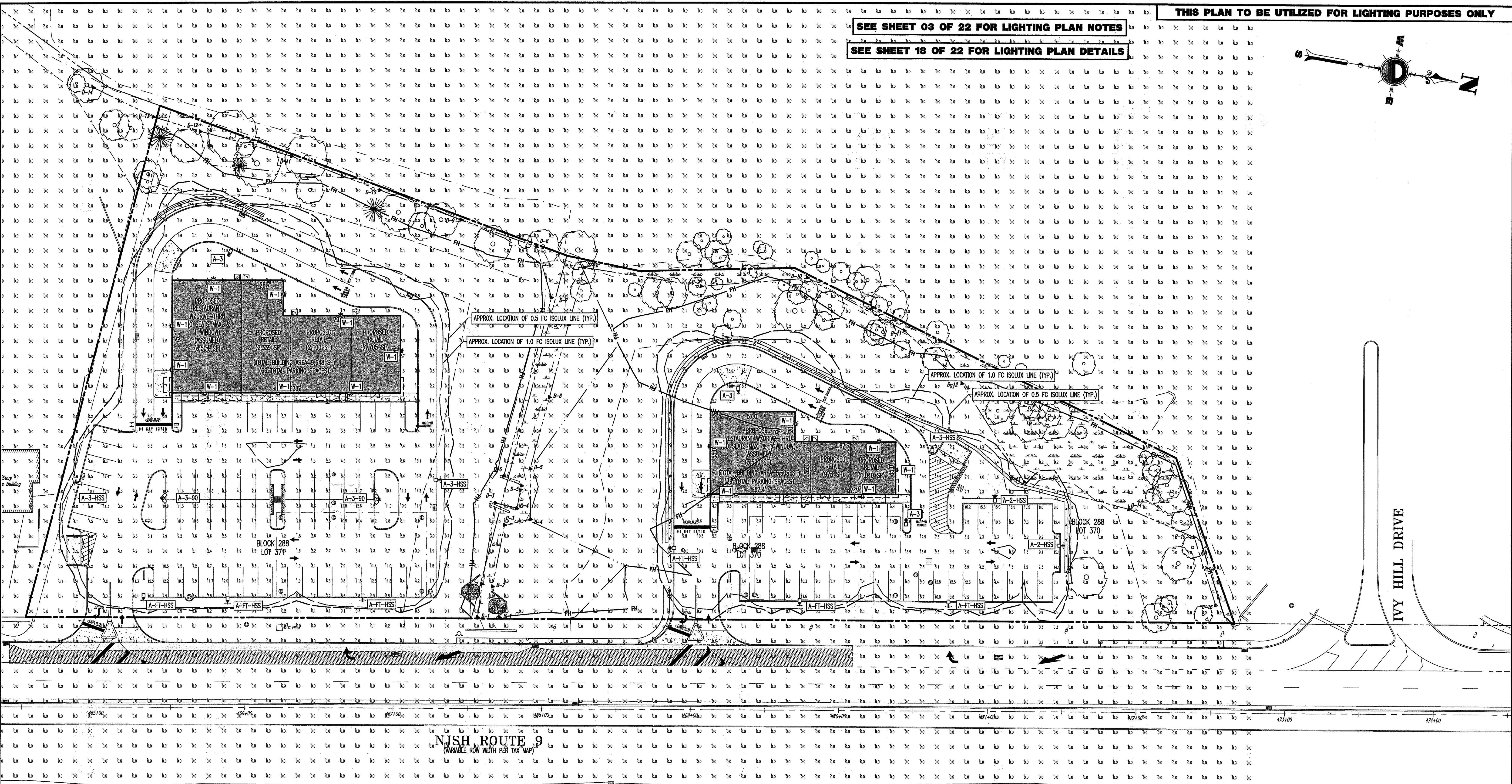
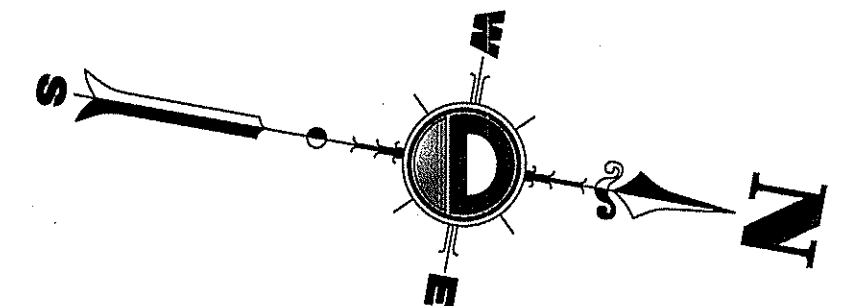
JAMES E. HENRY **TIAGO F. DUARTE**

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SEE SHEET 03 OF 22 FOR LIGHTING PLAN NOTES

SEE SHEET 18 OF 22 FOR LIGHTING PLAN DETAILS



Plotfile: 02/08/21 - 10:39 AM By: dboyd Product: Ver: 24.0a (LMS Tech) File: F:\DEPC PROJECTS\3307 Marlboro.Dwg Site Plans\0330799001S3.dwg --> 10 LIGHTING PLAN

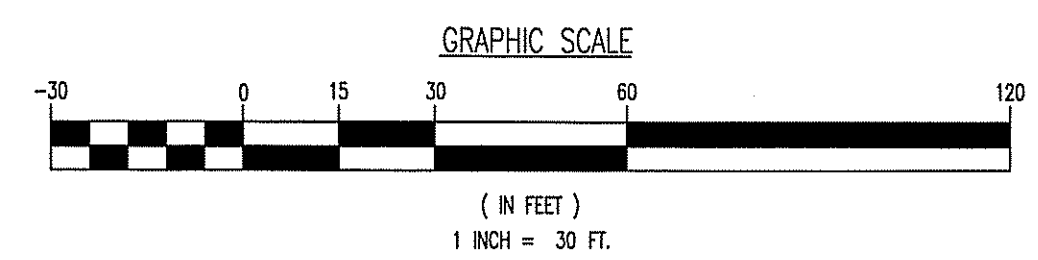
LIGHTING LUMINAIRE SCHEDULE

SYMBOL	QUANTITY	LABEL	WATTAGE	MOUNTING HEIGHT	ARRANGEMENT	LIGHT LOSS FACTOR	MANUFACTURER	DESCRIPTION	IES FILE
	15	W-1	44.7	15 FT	SINGLE	1.000	LSI INDUSTRIES, INC.	WALL MOUNTED LIGHT	XWM-3-LED-08L-40
	6	A-3-HSS	187	15 FT	SINGLE	1.000	LSI INDUSTRIES, INC.	TYPE 3 AREA LIGHT WITH SHIELD	MRM-LED-24L-SIL-3-27-70CRI-L
	2	A-2-HSS	187	15 FT	SINGLE	1.000	LSI INDUSTRIES, INC.	TYPE 2 AREA LIGHT WITH SHIELD	MRM-LED-24L-SIL-2-30-70CRI-L
	3	A-FT-HSS	187	15 FT	SINGLE	1.000	LSI INDUSTRIES, INC.	FORWARD THROW AREA LIGHT WITH SHIELD	MRM-LED-24L-SIL-FT-30-70CRI-L
	3	A-3	187	15 FT	SINGLE	1.000	LSI INDUSTRIES, INC.	TYPE 3 AREA LIGHT	MRM-LED-24L-SIL-3-30-70CRI
	2	A-3-90	187	20 FT	2 @ 90 DEGREES	1.000	LSI INDUSTRIES, INC.	2 TYPE 3 AREA LIGHTS @ 90 DEGREES	MRM-LED-24L-SIL-3-30-70CRI

ISO CURVES ARE MAINTAINED AND SHOWN AT 0.5 AND 1.0 FC.
 (FM) - FLUSH MOUNT FOUNDATION (PFS) - PESTICIDE FOUNDATION
 THE CALCULATIONS SHOWN WERE MADE UTILIZING ACCEPTED PROCEDURES OF THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA. VARIATIONS IN LAMP OUTPUT, BALLAST OUTPUT, LINE VOLTAGE, DIRT DEPRECIATION, AND OTHER FACTORS MAY AFFECT ACTUAL RESULTS. UNLESS OTHERWISE STATED, ALL RESULTS ARE MAINTAINED VALUES, UTILIZING ACCEPTED LIGHT LOSS FACTORS (LLF).

STATISTICAL AREA SUMMARY

LABEL	AVERAGE	MAXIMUM	MINIMUM	AVG./MIN.	MAX./MIN.	DESCRIPTION
PARKING LOT 370	5.40	16.1	0.5	10.80	32.30	PARKING AREA WITHIN LOT 370
PARKING LOT 371	5.36	14.3	0.1	53.60	143.00	PARKING AREA WITHIN LOT 371
PIQ	2.23	16.1	0.0	N/A	N/A	PROPERTY IN QUESTION



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 Allen, Texas T: 972.434.2100 | Austin, Texas T: 512.444.2644 | Houston, Texas T: 281.789.4400
 New Orleans, Louisiana T: 504.885.0212 | Delray Beach, Florida T: 561.921.0070

TITLE: **LIGHTING PLAN**

PROJECT: **405 ROUTE 9, LLC
 PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NUSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY**

JOB NO: 3307-99-001 DATE: 12/15/2020
 DRAWN BY: GMC SCALE: (H) 1"=20'
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 CHECKED BY: JEH SHEET NO:
 CHECKED BY: _____

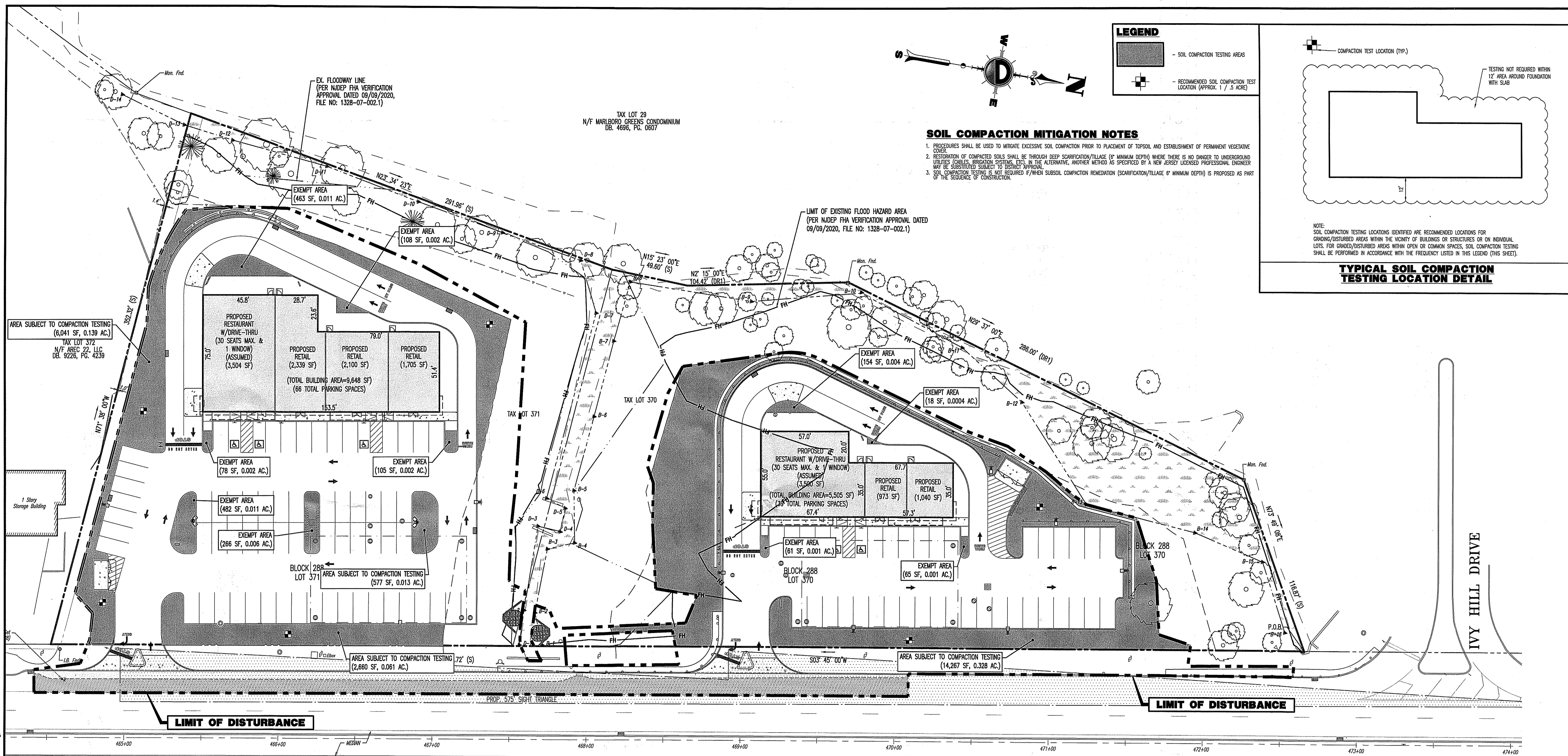
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Rev. # 3

Product Ver: 24.0a (LMS Tech)
 File: P:\DEPC PROJECTS\5307 Marlboro (Orig)\Site Plans\0330799001SM3.dwg, 11 SOIL MANAGEMENT AND PREPARATION PLAN
 Plotted: 02/09/21 - 10:40 AM, By: dboyd,
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Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

- Subgrade soils prior to the application of topsoil (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
- Areas of the site which are subject to compaction testing and/or mitigation are graphically denoted on the certified soil erosion control plan.
- Compaction testing locations are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
- In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

- Probing Wire Test (see detail)
- Hand-held Penetrometer Test (see detail)
- Tube Bulk Density Test (licensed professional engineer required)
- Nuclear Density Test (licensed professional engineer required)

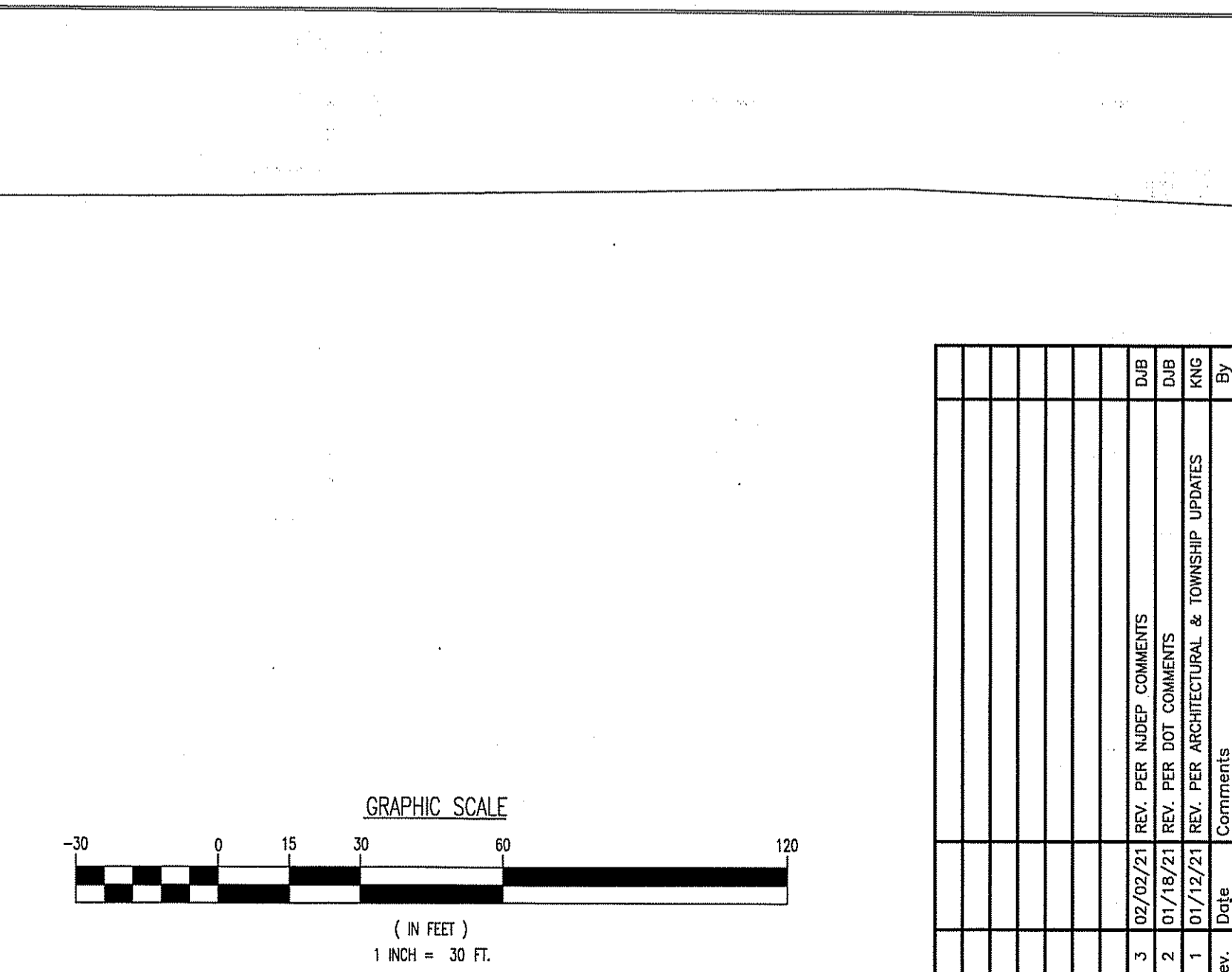
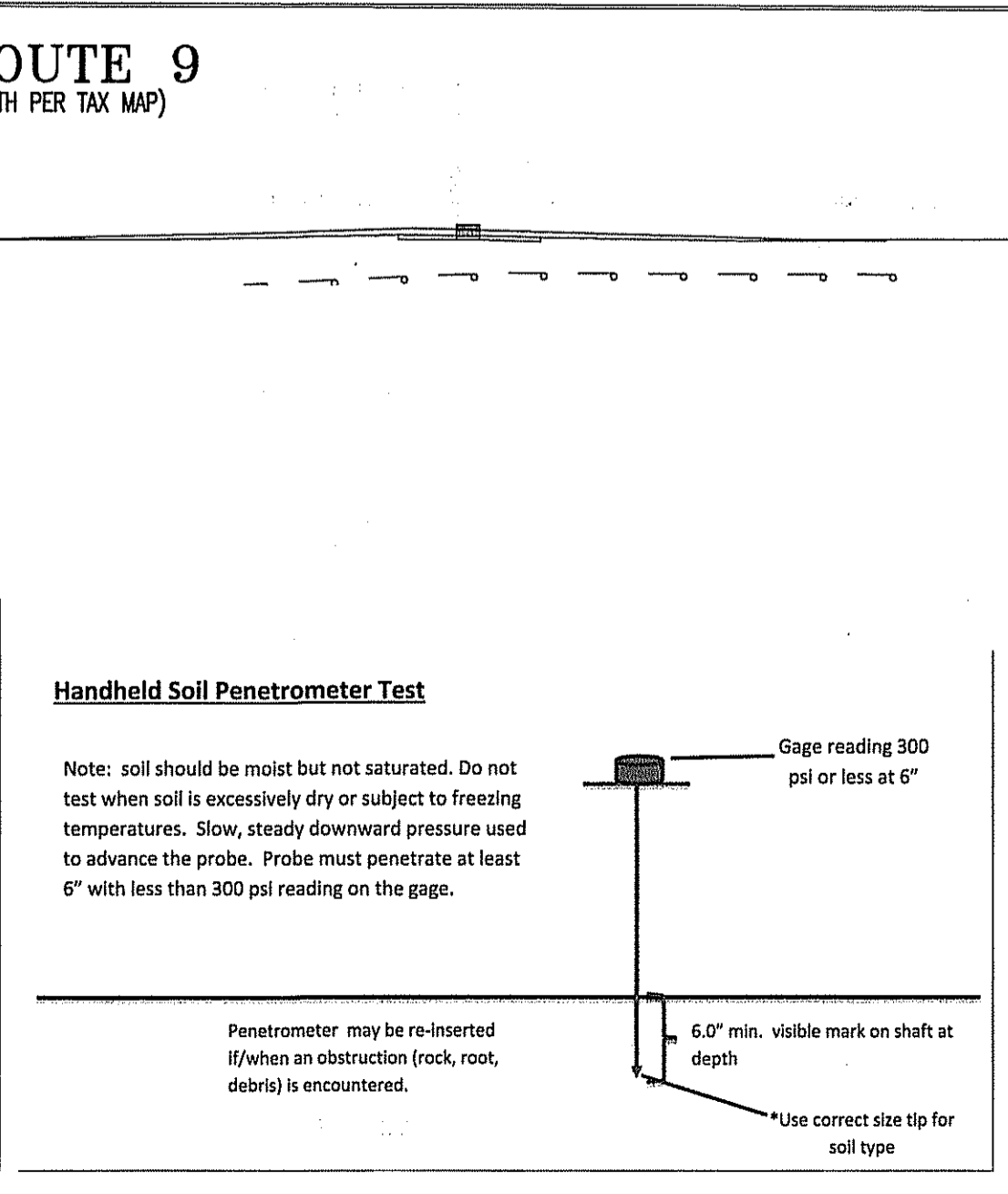
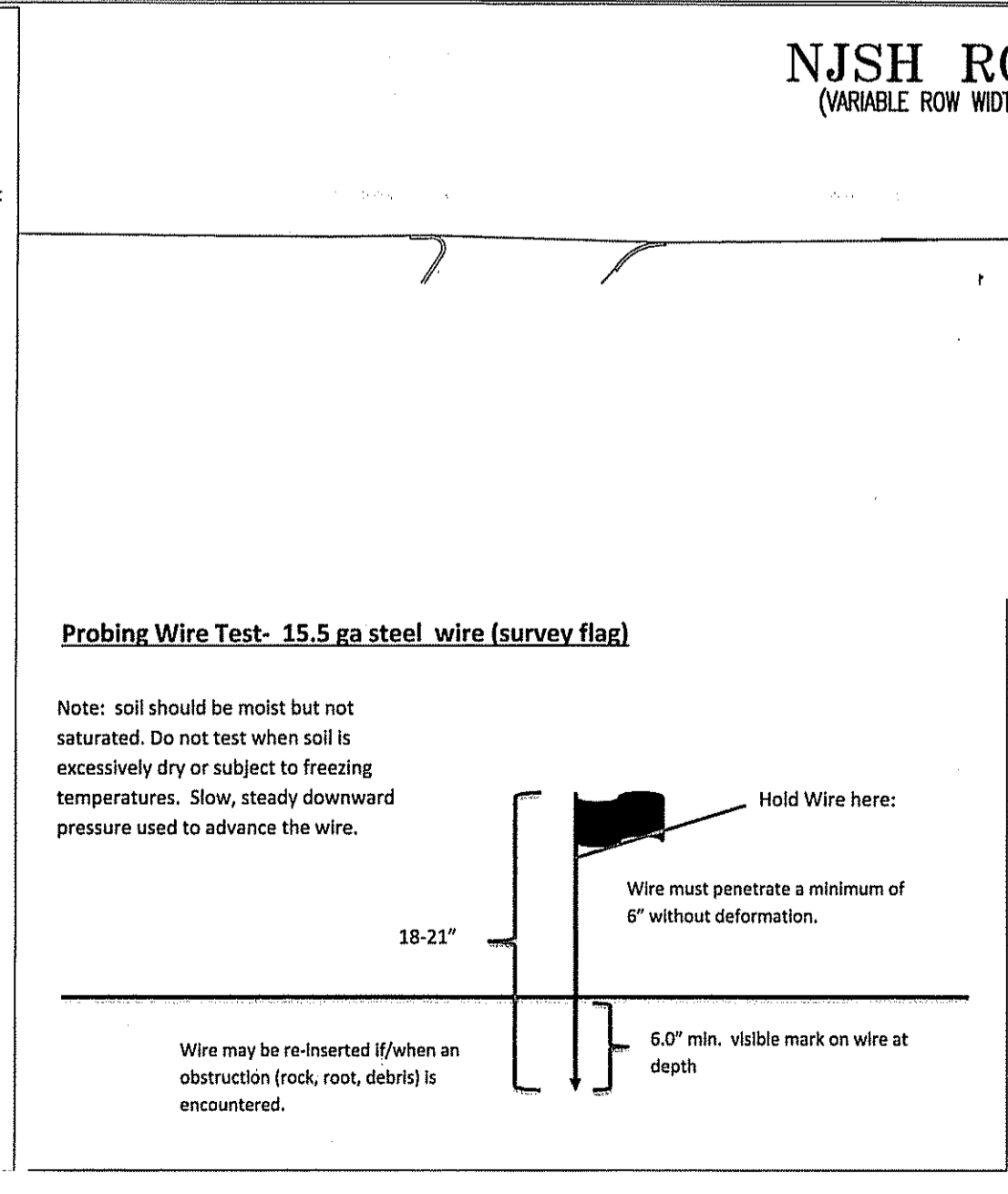
Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

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.

Procedures for Soil Compaction Mitigation

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.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer may be substituted subject to District Approval.



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TITLE: SOIL MANAGEMENT AND PREPARATION PLAN

PROJECT: 405 ROUTE 9, LLC
 PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NJS ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

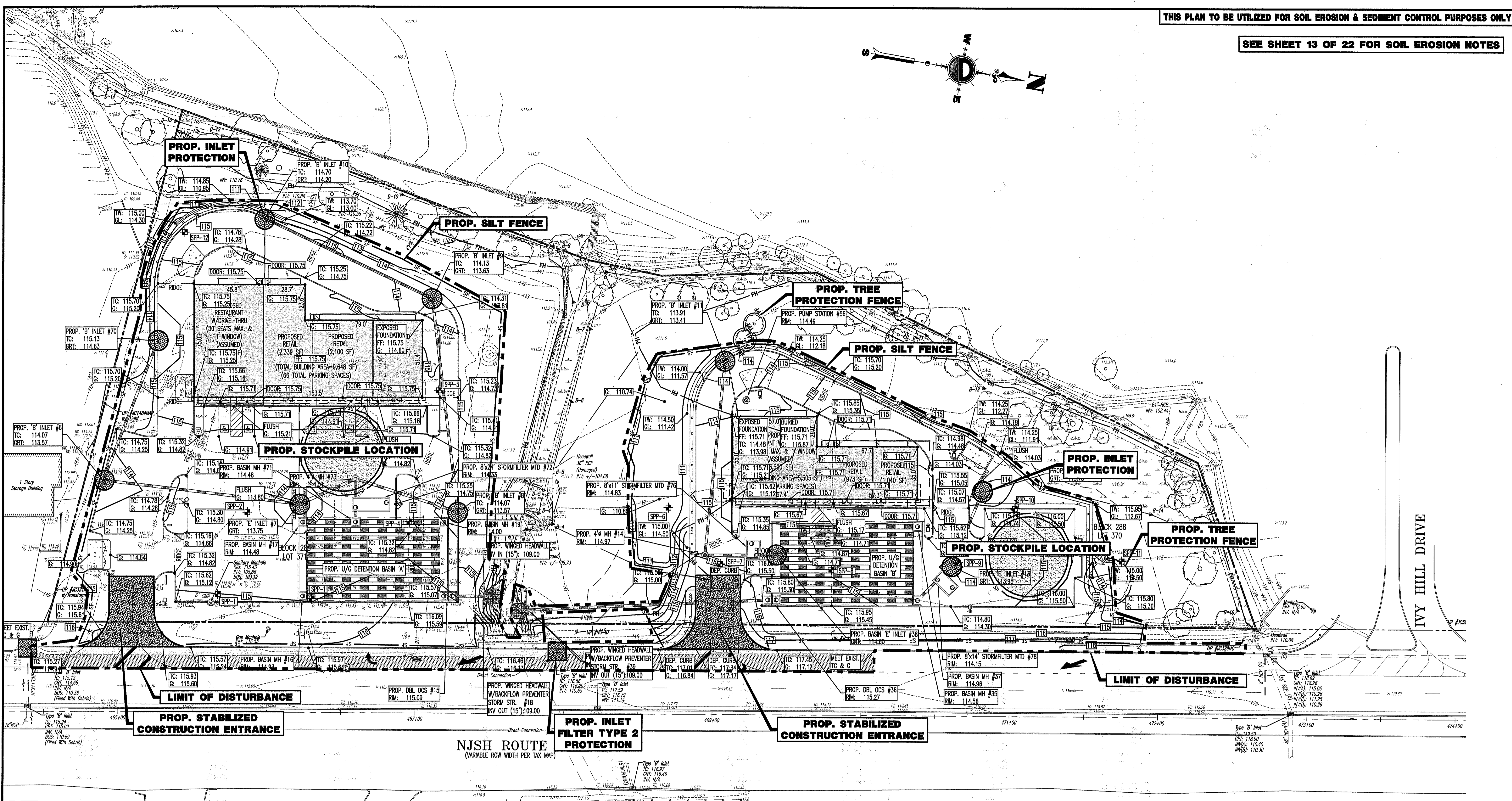
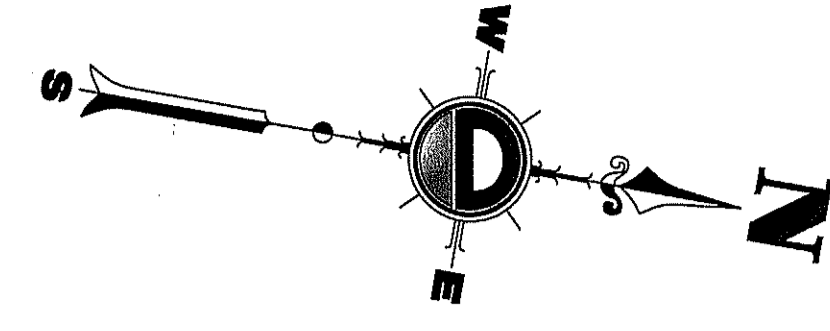
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11 OF 22
 Rev. # 3



Product No: 24-04 (LMS Tech)
Date: 12/15/2020
Site: 405 NASH ROUTE 9, LLC - MARLBORO, NJ
12 SOIL EROSION & SEDIMENT CONTROL PLAN

PROP. STABILIZED CONSTRUCTION ENTRANCE

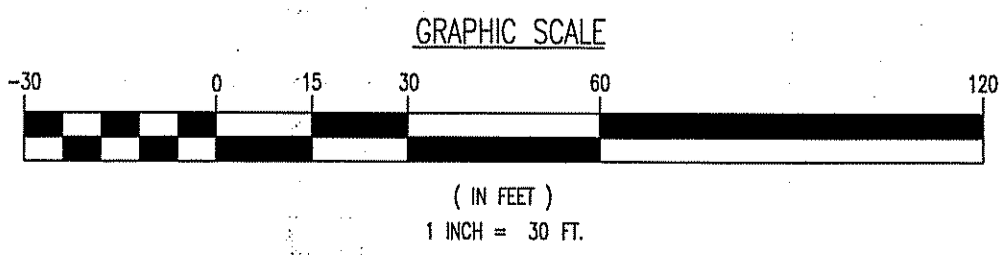
PROP. INLET FILTER TYPE 2 PROTECTION

PROP. STABILIZED CONSTRUCTION ENTRANCE

EROSION CONTROL LEGEND

- PROP. LIMIT OF DISTURBANCE LINE
- PROP. SILT FENCE LINE
- PROP. TREE PROTECTION FENCE LINE
- PROP. INLET FILTER
- PROP. HYALINE SEDIMENT BARRIER

LIMIT OF DISTURBANCE = 135,321 SF. (3.107 Ac.)



THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

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TITLE: SOIL EROSION & SEDIMENT CONTROL PLAN

PROJECT: 405 ROUTE 9, LLC
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
405 NASH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001
DATE: 12/15/2020
SCALE: (H) 1"=30'
(V) N/A
SHEET No: 12 OF 22

DESIGNED BY: RAU
CHECKED BY: JEH

JAMES E. HENRY PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 49286

TIAGO F. DUARTE PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 52598

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**FREEHOLD SOIL CONSERVATION DISTRICT
SOIL EROSION AND SEDIMENT CONTROL NOTES**

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A. 42:27-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-OR-Lot OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SEVEN (7) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER. THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, OR ANCHOR WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEED OR SOODED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATION STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATION GROWTH SHALL BE REMOVED OR TREATED IN SUCH A MANNER THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATION GROWTH. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT VEGETATION STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS./1,000 SQ. FT. OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 1" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 2" WHERE TREES OR SHRUBS ARE TO BE PLANTED WITHIN THE 10' TO 12' TOLERANCE.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DRAINAGE IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DRAINAGE OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DRAINAGE METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DRAINAGE SYSTEMS.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

**STABILIZATION SPECIFICATIONS
TEMPORARY SEEDING AND MULCHING:**

- SITE PREPARATION**
- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1.
 - B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
 - C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
- LIMESTONE** - LIMING RATE SHALL BE DETERMINED BY TESTING, BUT IN NO CASE SHALL BE LESS THAN 2 TONS/ACRE.
- FERTILIZER** - SOO LBS./ACRE OR 11 LBS./1000 SF OF 10-20-10 OR EQUIVALENT WITH SOO WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE.
- SEEDS**
- COOL SEASON:**
PERENNIAL RYE GRASS 100LBS/ACRE OR OTHER APPROVED SEEDS; PLANT BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1.
- WARM SEASON:**
PEARL MILLET AT 20 LBS./AC. OR OTHER APPROVED SEEDS;
PLANT BETWEEN MAY 15 AND AUGUST 15.
- MULCH** - UNROTTED SMALL GRASS STRAW, OR SALT HAY AT A RATE OF 1.5-2 TONS PER ACRE TO 90 LBS./1,000 SF TO BE APPLIED ACCORDING TO THE STATE STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, LIQUID MULCH BINDER, OR CRAMPER).

PERMANENT SEEDING:

- SITE PREPARATION**
- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
 - B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SURFACE SHALL BE PREPARED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
 - C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNLESS NOTED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE MIXED 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.
- SEEDING METHODS**
- SEEDING**
1. SELECT A MIXTURE FROM TABLE 4-3 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.
 2. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION UP TO 200 REPLICATION IN AREA. SEEDS 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 BOX VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDS AND AREAS MOWED ONCE.
 3. WARM-SEASON MIXTURES ARE GRASS AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 80 F AND ABOVE. SEE TABLE 4-3 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.
 4. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 80°F. WARM GRASSES BECOME ACTIVE AT 60°F. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.
- B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR MULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY BROADCASTING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE-TEXTURED SOIL.**
- C. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, REMOVE CAPILLARY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAINTAINED.**
- D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAWING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.**

- LIMESTONE** - LIMING RATE SHALL BE DETERMINED BY TESTING, BUT IN NO CASE SHALL BE LESS THAN 2 TONS/ACRE.
- FERTILIZER** - SOO LBS./ACRE OR 11 LBS./1000 SF OF 10-10-10 OR EQUIVALENT WITH SOO WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE.
- GENERAL SITE SEEDING MIX:**
- | | |
|-----------------------------------|----------------------|
| PA. FESCUE - 25 LBS./ACRE | 6.0 LBS./1000 SQ.FT. |
| KY. BLUEGRASS - 20 LBS./ACRE | 0.5 LBS./1000 SQ.FT. |
| PERENNIAL RYEGRASS - 20 LBS./ACRE | 0.5 LBS./1000 SQ.FT. |
- BASH SEEDING MIX:**
- | | |
|------------------------------------|----------------------|
| CREeping BENTGRASS - 45 LBS./ACRE | 1.0 LBS./1000 SQ.FT. |
| CREeping RED FESCUE - 45 LBS./ACRE | 1.0 LBS./1000 SQ.FT. |
| ADAMI SALTGRASS - 45 LBS./ACRE | 1.0 LBS./1000 SQ.FT. |
- PERMANENT STABILIZATION SPECIFICATIONS:**
- A. MULCHING MULCH MATERIALS TO BE UNROTTED SMALL GRASS STRAW, OR SALT HAY AT THE RATE OF 1.5 TO 2 TONS PER ACRE OR 70 TO 90 POUNDS PER 1,000 SQ. FT. EXCEPT THAT WHERE A CRAMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER, THE RATE OF APPLICATION IS 3 TONS PER ACRE.
 - B. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 80% OF SOIL SURFACE WILL BE COVERED.
 - C. MULCH ANCHORING TO BE DONE IMMEDIATELY AFTER PLACEMENT BY ONE OF THE FOLLOWING METHODS:
 - (1) PEG AND TWINE
 - (2) MULCH NETTING
 - (3) LIQUID MULCH-BINDERS
 - (4) CRAMPER (MULCH ANCHORING COULTER TOOL)

- STABILIZATION**
- PERMANENT EROSION RESISTANT GROUND COVER TO BE PROVIDED BETWEEN PANEL ROWS AND UNDER PANEL ROWS AS WELL AS OTHER DISTURBED AREAS. ESTABLISHING PERMANENT UNDER PANELS MAY BE DEFERRED DUE TO LACK OF SUN AND LIMITED PROTECTION. THOUGH SHOULD BE GIVEN TO ESTABLISHING VEGETATION GROUND COVER PRIOR TO PANEL CONSTRUCTION. INSTALLATION MAY BE FACILITATED BY PACKING THE GRASSING AND STABILIZATION SEQUENCE OF SUCCESSIVE PROJECT AREAS TO ALLOW SUFFICIENT TIME TO ALLOW VEGETATION TO BECOME ESTABLISHED PRIOR TO PANEL INSTALLATION.

STANDARD FOR STABILIZATION WITH MULCH ONLY

- A. UNROTTED SMALL-GRASS STRAW, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDER, OR NETTING. THE OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
- B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAYBE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
- C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
- D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAYBE USED.
- E. WOOD CHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED EXCEPT IN AREAS OF FLOWING WATER.
- F. GROUND CRUSHED STONE OR SLAG AT RATE OF 2 CUBIC YARDS PER 1,000 SQ. FT. AT DEPTH OF 3 INCHES.
- G. MULCH ANCHORING TO BE DONE IMMEDIATELY AFTER PLACEMENT BY ONE OF THE FOLLOWING METHODS:
 - (1) PEG AND TWINE
 - (2) MULCH NETTING
 - (3) LIQUID MULCH-BINDERS
 - (4) CRAMPER (MULCH ANCHORING COULTER TOOL)

**ACID SOIL MANAGEMENT NOTES
METHODS AND MATERIALS**

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 STORED 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 30 DAY S 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. MULCH 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 OR LESS, OR CONTAINING IRON SULFIDE, (INCLUDING BORROW FROM CUTS) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 6 TONS PER ACRE (OR 274 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:
 - 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 LATER LEACHING DAMAGES.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID PRODUCING SOILS SHOULD BE CLEANED AT THE END OF THE 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, SILT FENCE, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID PRODUCING SOILS FROM AROUND OR OFF THE SITE.
8. FLOWING BURIAL OR REMOVAL OF HIGH ACID PRODUCING SOIL, TOPSOILING AND SEED OF THE SITE. (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 7-1). PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG. 4-1 AND TOPSOILING, PG. 8-1) MONITORING SHOULD CONTINUE FOR APPROXIMATELY 6 TO 12 MONTHS TO ASSURE 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.
9. MONITORING OF AREAS WHERE HIGH ACID PRODUCING SOIL HAS BEEN PLACED OR BURIED SHOULD BE PERFORMED FOR AT LEAST 2 YEARS OR LONGER, IF PROBLEMS

STANDARD FOR PERMANENT STABILIZATION WITH SOD

- METHODS AND MATERIALS**
1. CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD, SPECIFY "CERTIFIED SOD," OR OTHER HIGH QUALITY CULTIVATED SOD.
 2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
 3. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING. (EXCLUDES TOP GROWTH).
 4. SOD SHOULD BE WORKABLE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
 5. FOR DRAUGHT SITES, A SOD OF KENTUCKY 31 TALL FESCUE AND BLUEGRASS IS PREFERRED OVER A STRAIGHT BLUEGRASS SOD.
 6. ONLY MOST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

- I. SITE PREPARATION**
- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, AND SOIL PREPARATION. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING, PAGE 4.1.1.
 - B. INSTALL NEEDED EROSION CONTROL PRACTICES AND FACILITIES, SUCH AS INTERCEPTOR DITCHES, DIKES AND TERRACES, EROSION STOPS, AND GRASS-SLITTING BASINS. SEE STANDARDS 4.2 THROUGH 4.16.

- II. SOIL PREPARATION**
- A. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS UNIVERSITY SOIL TESTING LABORATORY. SOIL SAMPLE MALERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE, OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH SOO WATER INSOLUBLE NITROGEN AND INCORPORATED INTO THE SURFACE 4" IN ADDITION, SOO POUNDS 39-0-0 PER ACRE OR EQUIVALENT OF SLOW RELEASE NITROGEN MAY BE USED IN LIEU OF TOP-DRESSING. APPLY LIMESTONE AS FOLLOWS:
- | SOIL TEXTURE | TONS/ACRE | LBS./1000 SQ. FT. |
|--|-----------|-------------------|
| CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL | 1 | 135 |
| SANDY LOAM, LOAM, SILT LOAM | 1 | 90 |
| LOAMY SAND, SAND | 1 | 45 |
- PULVERIZED DOLOMITE LIMESTONE IS PREFERRED FOR MOST SODS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

- B. WORK LINE 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, FINE SEEDBED IS PREPARED.
- C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO SOIL CONTACT AND REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
- D. INSPECT SITE JUST BEFORE LAYING, IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.

- III. 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 SOD IMMEDIATELY PRIOR TO LAYING.
 - B. PLACE SOD STRIPS WITH SUG, EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE 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 SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS.
 - D. ON SLOPES GREATER THAN 1 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 INCH WIDE).
 - E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY DUTY OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNELS.
 - F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.

- IV. TOP-DRESSING**
- IF SLOW RELEASE NITROGEN IS USED IN ADDITION TO SUGGESTED FERTILIZER, THEN A FOLLOW-UP OF TOP DRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP.
- TOP-DRESS WITH 10-10-10 OR EQUIVALENT AT 40 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.

STANDARD FOR DUST CONTROL

DEFINITION - THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE - TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON-AND OFF- SITE DAMAGE AND HEALTH HAZARDS, AND IMPROVE TRAFFIC FLOW.

WHERE APPLICABLE - THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES - SEE STANDARDS FOR STABILIZATION WITH MULCHES ONLY.

VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER, PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD.

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

	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT	7:1	COARSE SPRAY	1,200
EMULSION			
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300

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 FLOWING WITH ONE TYPE CHISEL-TYPE FLAILS SPACED ABOUT 12 INCHES APART, AND SPRING - TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

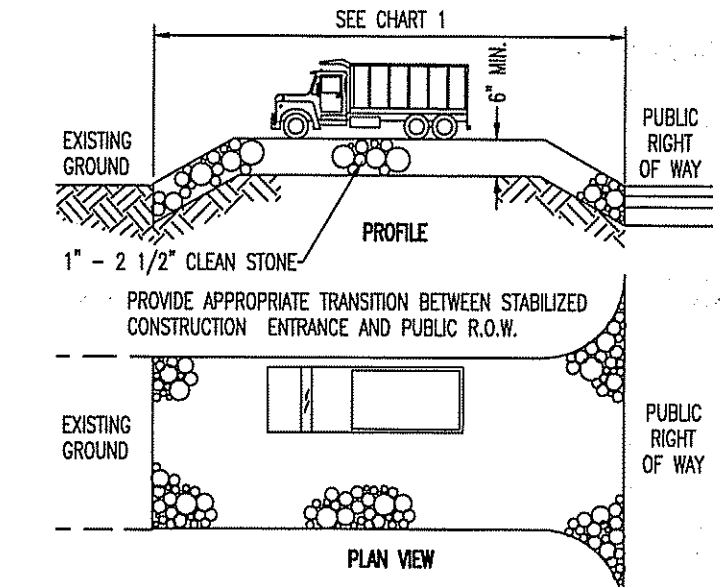
BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

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

STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SEQUENCE OF CONSTRUCTION:

- PHASE 1: INSTALL STONE ANTI-TRACKING PAD AND OTHER SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING DOWN SLOPE PERIMETER HAYBALES, SILT FENCING AND TREE PROTECTION FENCING. (1 WEEK)
- PHASE 2: CLEAR AND ROUGH GRADE FOR NEW BUILDING SITE AND OTHER STRUCTURES REQUIRING EXCAVATION. (2-3 WEEKS)
- PHASE 3: EXCAVATION, CONSTRUCTION, AND STABILIZATION OF DETENTION BASIN(S). EXCAVATE AND INSTALL UNDERGROUND PIPING AND DRAINAGE STRUCTURES. (1-2 WEEKS)
- PHASE 4: EXCAVATE FOR BUILDING FOUNDATION. (1-2 WEEKS)
- PHASE 5: COMPLETE BUILDING CONSTRUCTION. (2-3 MONTHS)
- PHASE 6: EXCAVATE AND INSTALL ON-SITE IMPROVEMENTS INCLUDING CURBING, UNDERGROUND PIPING, AND DRAINAGE STRUCTURES. (2-3 WEEKS)
- PHASE 7: FINAL GRADING ON SITE. (1-2 WEEKS)
- PHASE 8: INSTALL PAVING, CONCRETE, AND FINAL VEGETATION INCLUDING SEEDING AND LANDSCAPING. (1-2 WEEKS)
- PHASE 9: REMOVE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING DOWN SLOPE PERIMETER HAYBALES, SILT FENCING AND TREE PROTECTION FENCING. (1 WEEK)

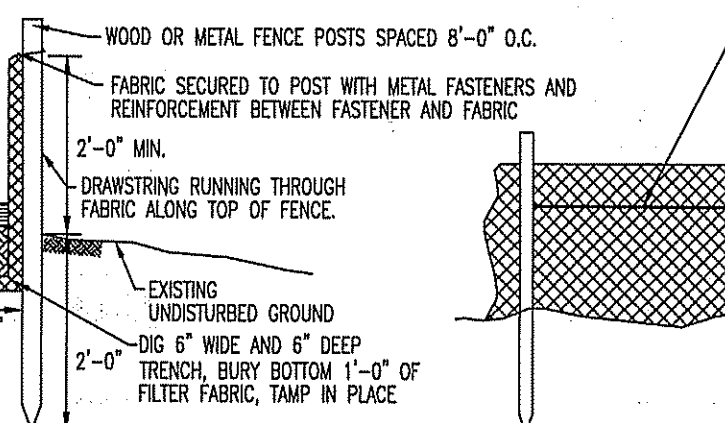


PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED
0 TO 2%	50 FT
2% TO 5%	100 FT
5% TO 10%	200 FT

NOTE: STONE SHALL BE CRUSHED AND STABILIZED WITH FINE FIBER COURSE (1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ENTRANCE

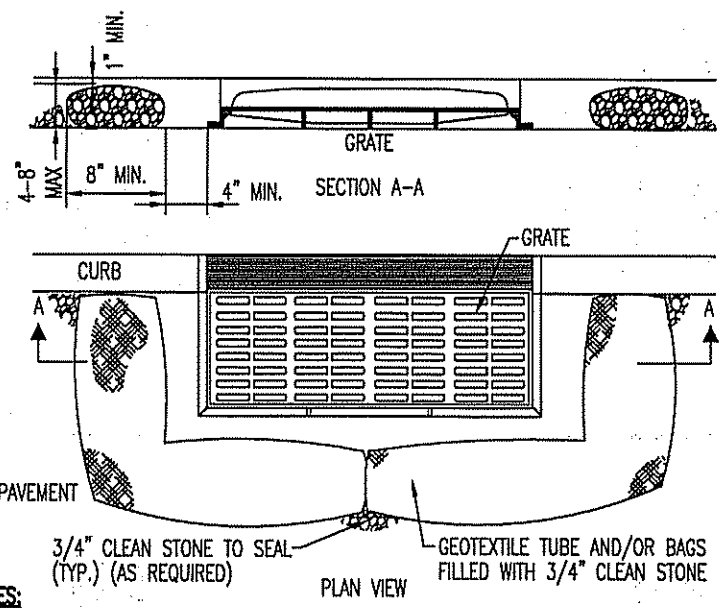
NOT TO SCALE



1. PLACE SILT FENCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. THE SLOPE OF THE LAND FOR A LEAST 30 FEET ADJACENT TO ANY SILT FENCE SHALL NOT EXCEED 5 PERCENT.
3. SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE THROUGH THE SIDES.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
5. SILT FENCE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE INSTRUCTED BY THE TOWNSHIP ENGINEER OR SOIL CONSERVATION DISTRICT.
6. THE BARRIER SHALL BE REMOVED WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.
7. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 1/2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD A MIN. DIAMETER THICKNESS OF 1 1/2 INCHES.
8. A METAL FENCE WITH A HOLE OR SMALLER OPENING AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADINGS IS EXPECTED.
9. A GEOTEXTILE FABRIC RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE GROUND. FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND HIGH STRENGTH REINFORCEMENT MATERIAL (Nylon WEBBING, BRIMMERS, WASHERS ETC.) PLACED BETWEEN THE FABRIC AND THE POSTS. THE FASTENING SYSTEM SHALL RESIST PULLING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE DETAIL

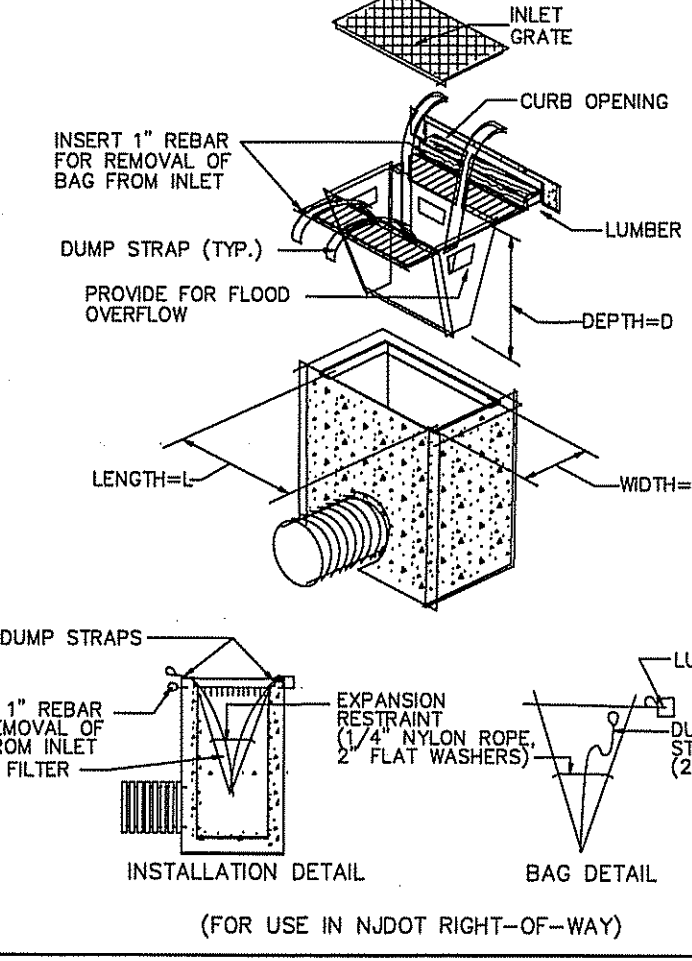
NOT TO SCALE



- NOTES:**
1. GEOTEXTILE TO BE NONW POLYPROPYLENE PRODUCT 117, BY SYNTHETIC INDUSTRIES INC. OR TERRAZO SC, BY HERRIC INC., OR APPROVED EQUAL.
 2. 3/4" CLEAN STONE COSE SHALL BE COMPLETELY CONTAINED WITHIN GEOTEXTILE. SEAMS SHALL BE SEWN OR CLOSED BY SUITABLE MECHANICAL MEANS TO PREVENT LEAKAGE OF STONE.
 3. WHERE NO CURB IS PRESENT, BARRIER SHALL COMPLETELY ENCLOSE THE BROWN INLET.
 4. INLET CURB OPENING IS TO BE KEPT CLEAR OF OBSTRUCTIONS AT ALL TIMES.
 5. THE PROTECTION FENCE WILL BE DESIGNED TO CAPTURE OR FILTER DEBRIS FROM THE INLET. 24 HOUR STORM DRAIN AND SHALL STAY OPEN UNDER ALL CONDITIONS.
 6. OTHER METHODS THAT ACCOMPLISH THE PURPOSES OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
 7. INSPECTIONS SHALL BE FREQUENT, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARDS THE INLET HAS BEEN STABILIZED.

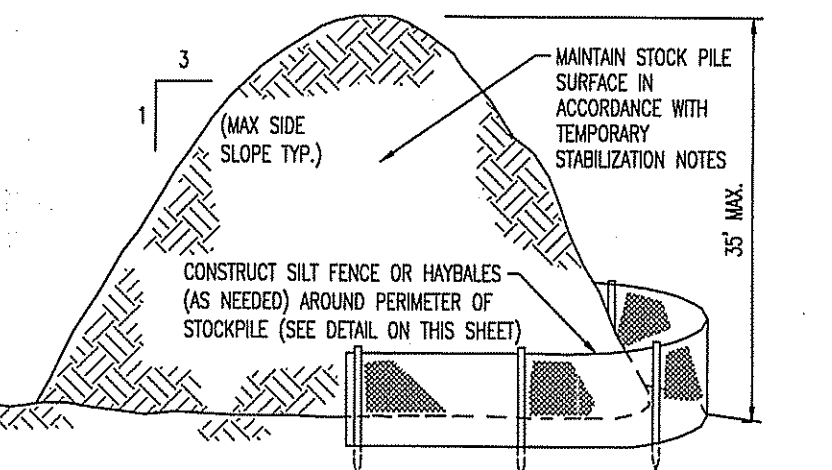
INLET FILTER DETAIL

NOT TO SCALE



INLET FILTER, TYPE 2

NOT TO SCALE

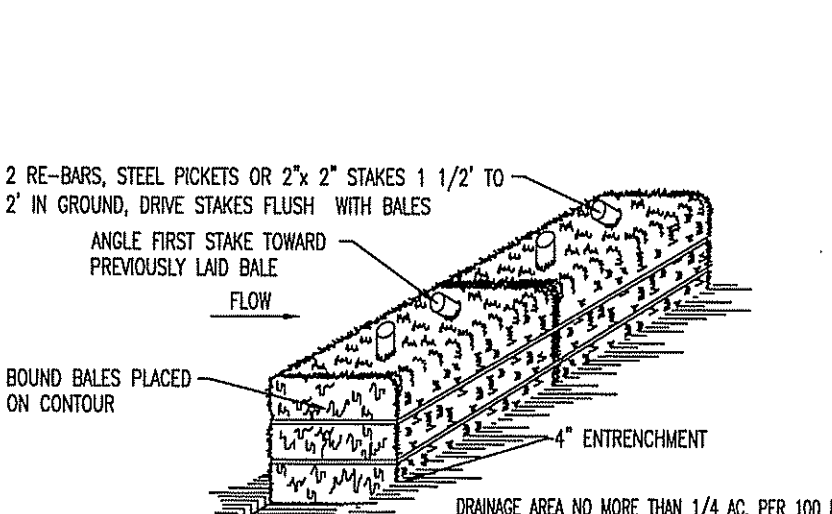


TEMPORARY STOCKPILE DETAIL

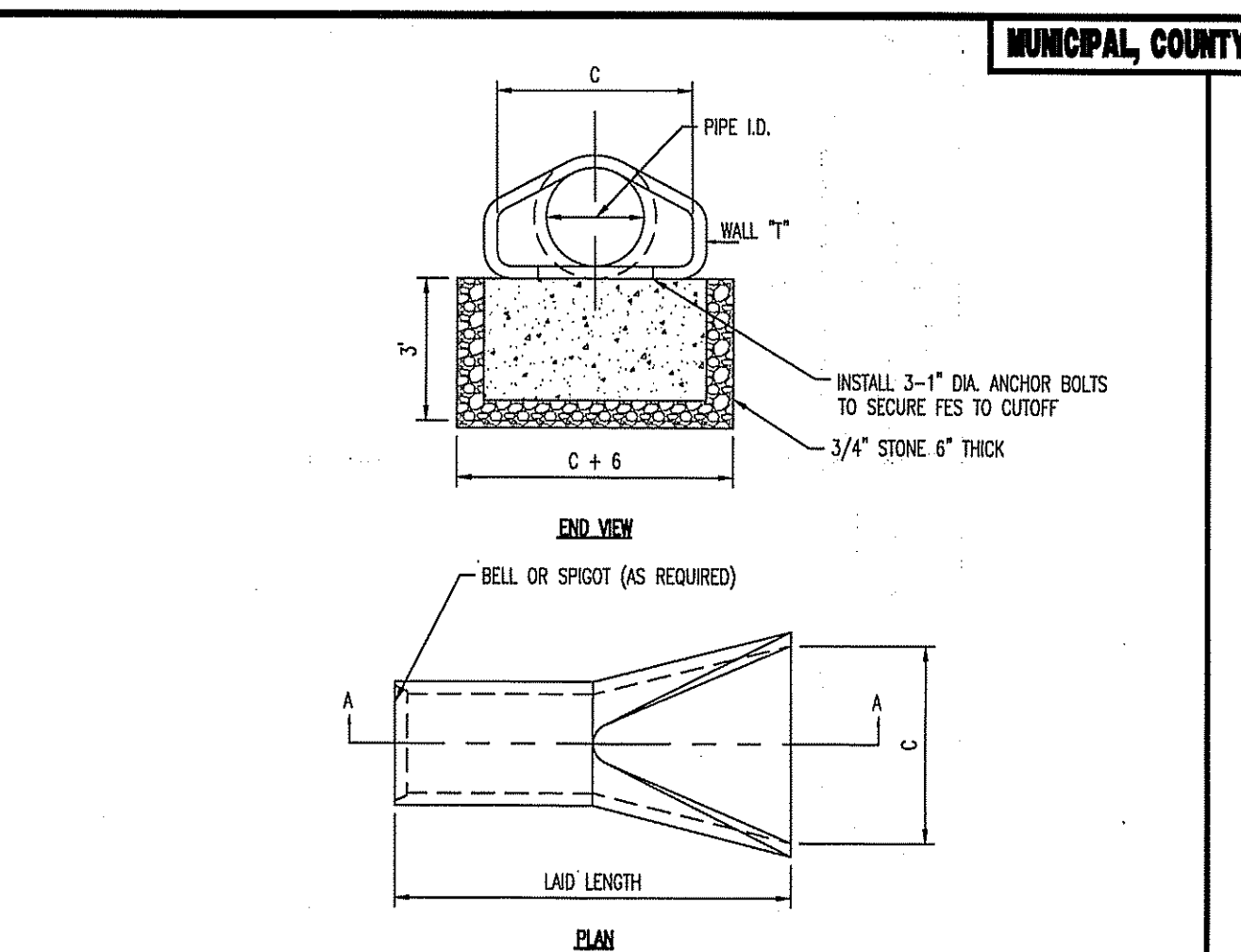
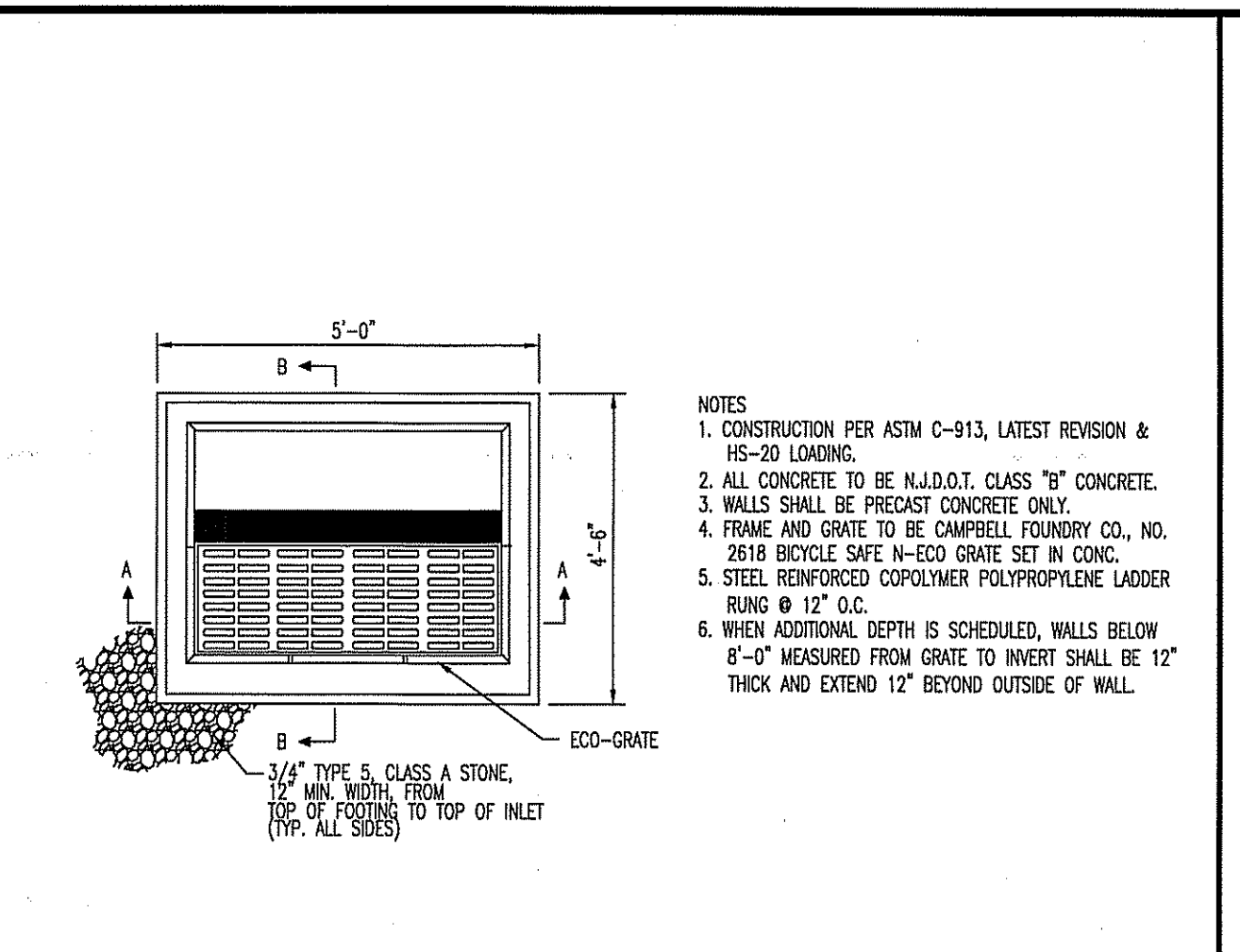
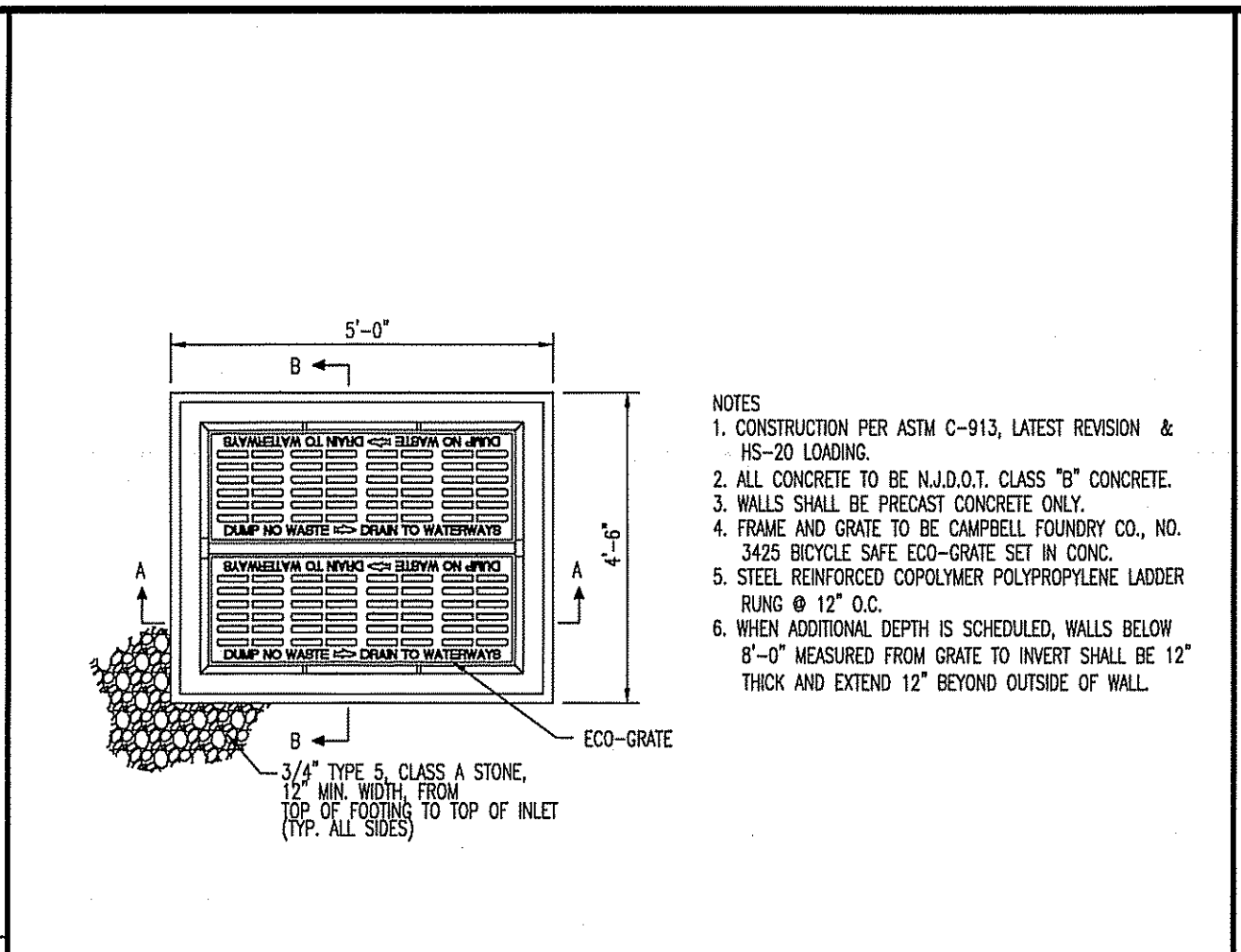
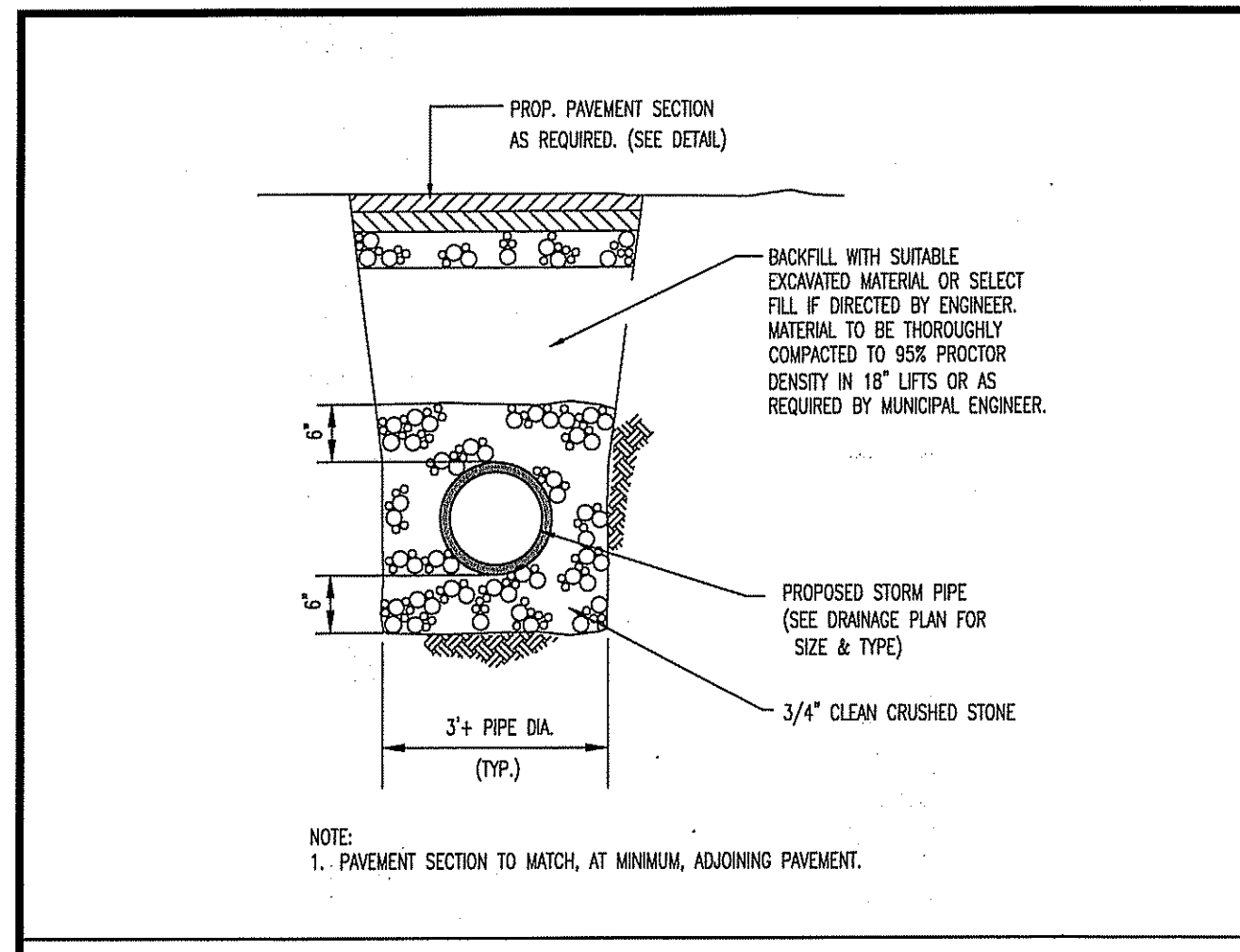
NOT TO SCALE

HAYBALE SEDIMENT BARRIER DETAIL

NOT TO SCALE



- NOTES:**
1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS THOROUGHLY BUTTING THE ADJACENT BALES.
 2. EACH BALE SHALL BE PLACED SO THE ENDWORKS ARE HORIZONTAL.
 - 3.



INSIDE DIA. IN.	A IN.	B IN.	C IN.	D IN.	E IN.	LAD LENGTH FT.	WEIGHT	WALL THICK. IN.
12	49	24	24	4	13	6.00	530	2
15	48	27	30	6	16	6.08	740	2 1/4
18	46	27	36	9	19	6.08	990	2 1/2
21	38	35	42	9	22	6.08	1280	2 3/4
24	30	44	48	9 1/2	25	6.17	1520	3
27	26	48	54	10 1/2	28	6.17	1930	3 1/4
30	20	54	60	12	31	6.17	2190	3 1/2
36	35	63	72	15	37	6.17	4100	4
42	35	63	72	21	43	6.17	5380	4 1/2
48	26	72	84	24	49	6.17	6550	5
54	35	65	90	27	55	6.33	8040	5 1/2
60	39	60	96	30	61	6.25	8750	6

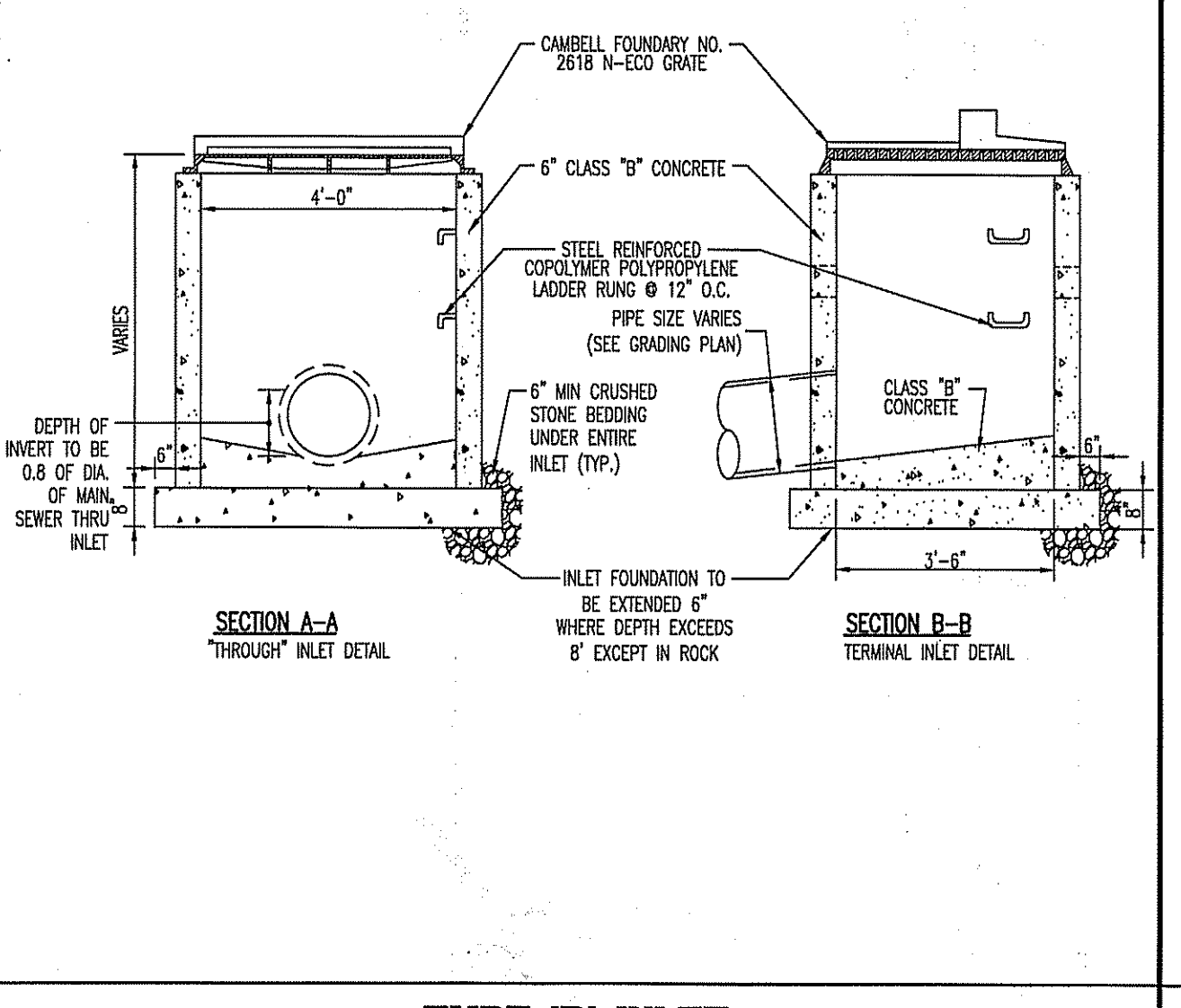
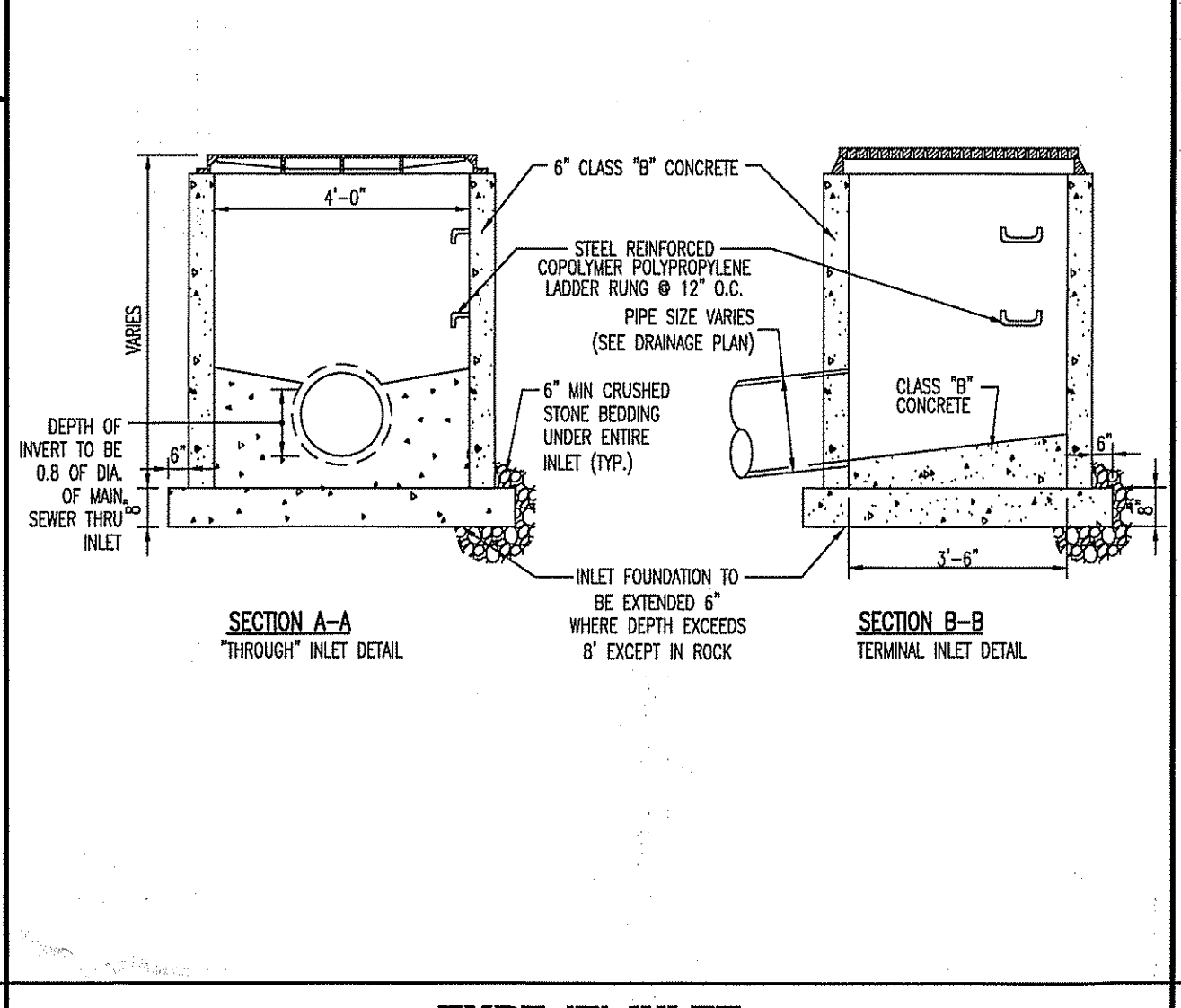
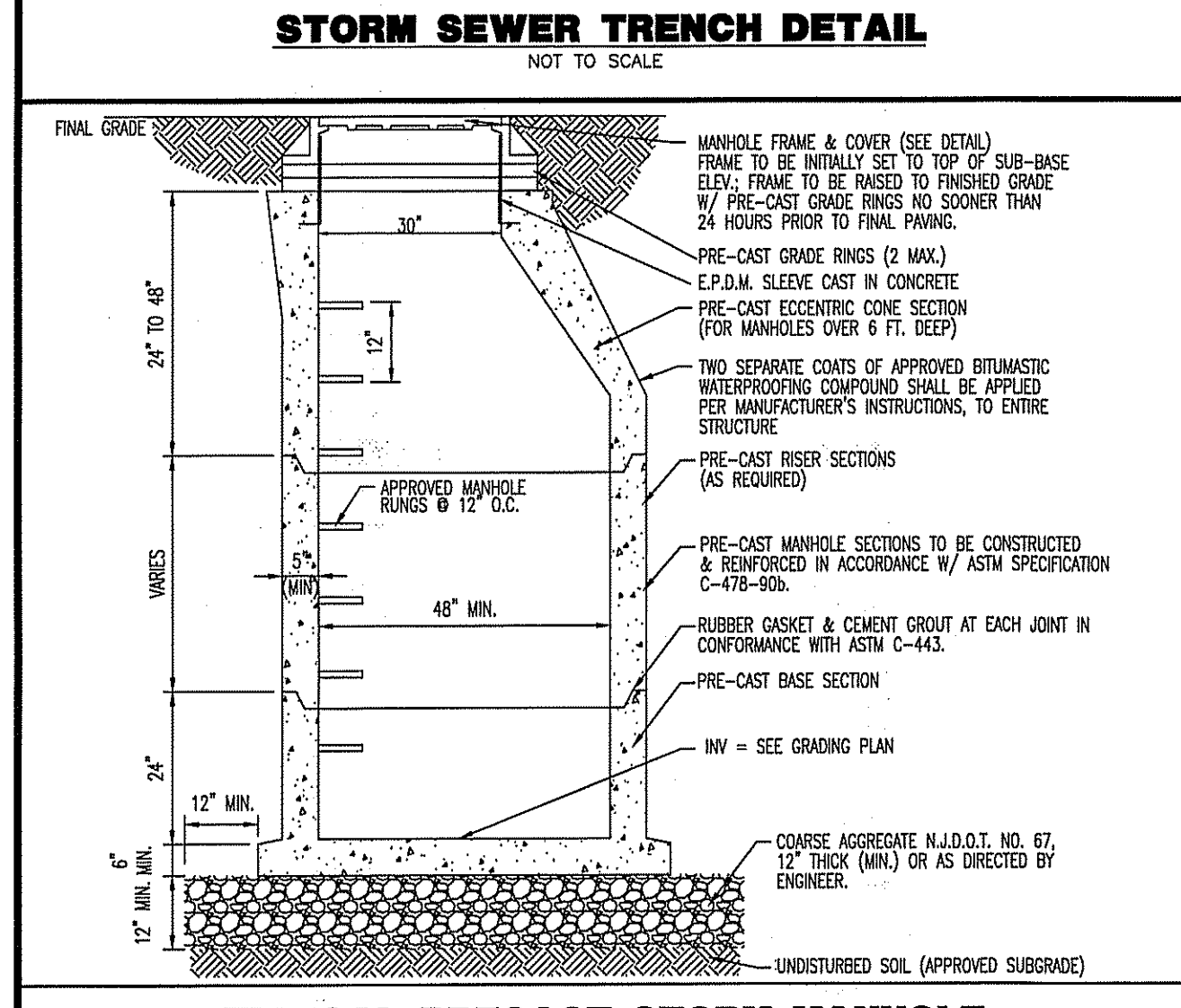
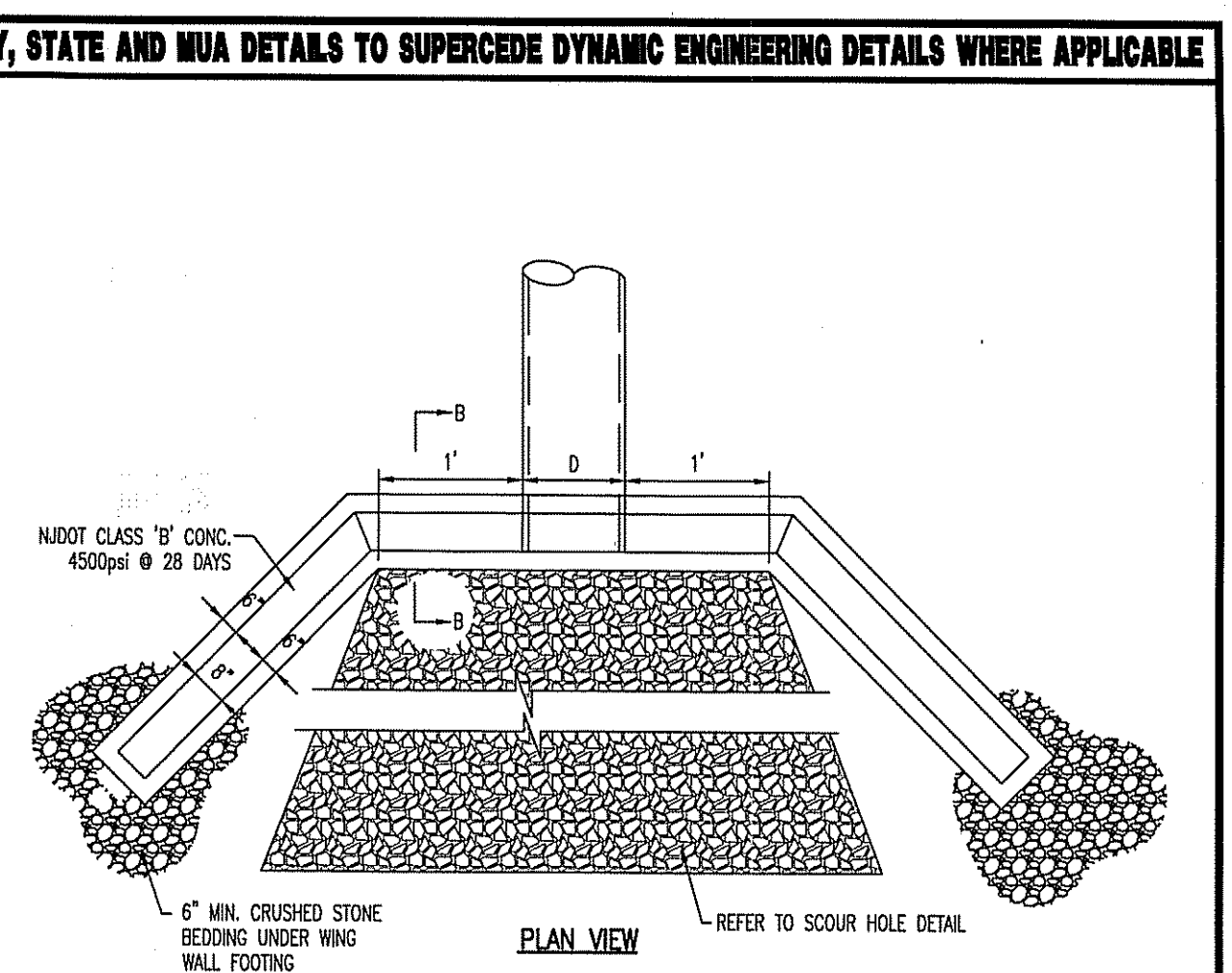
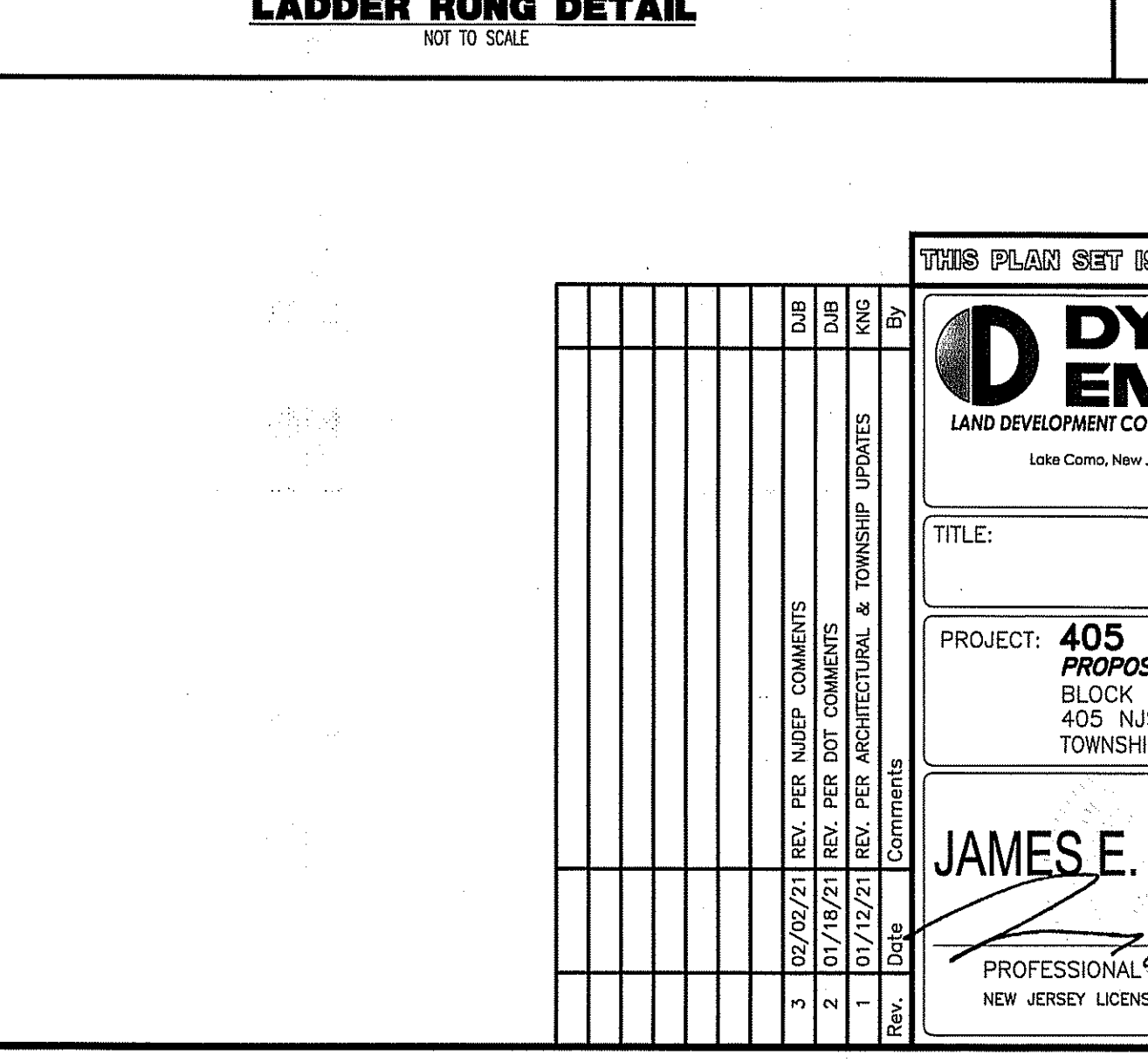
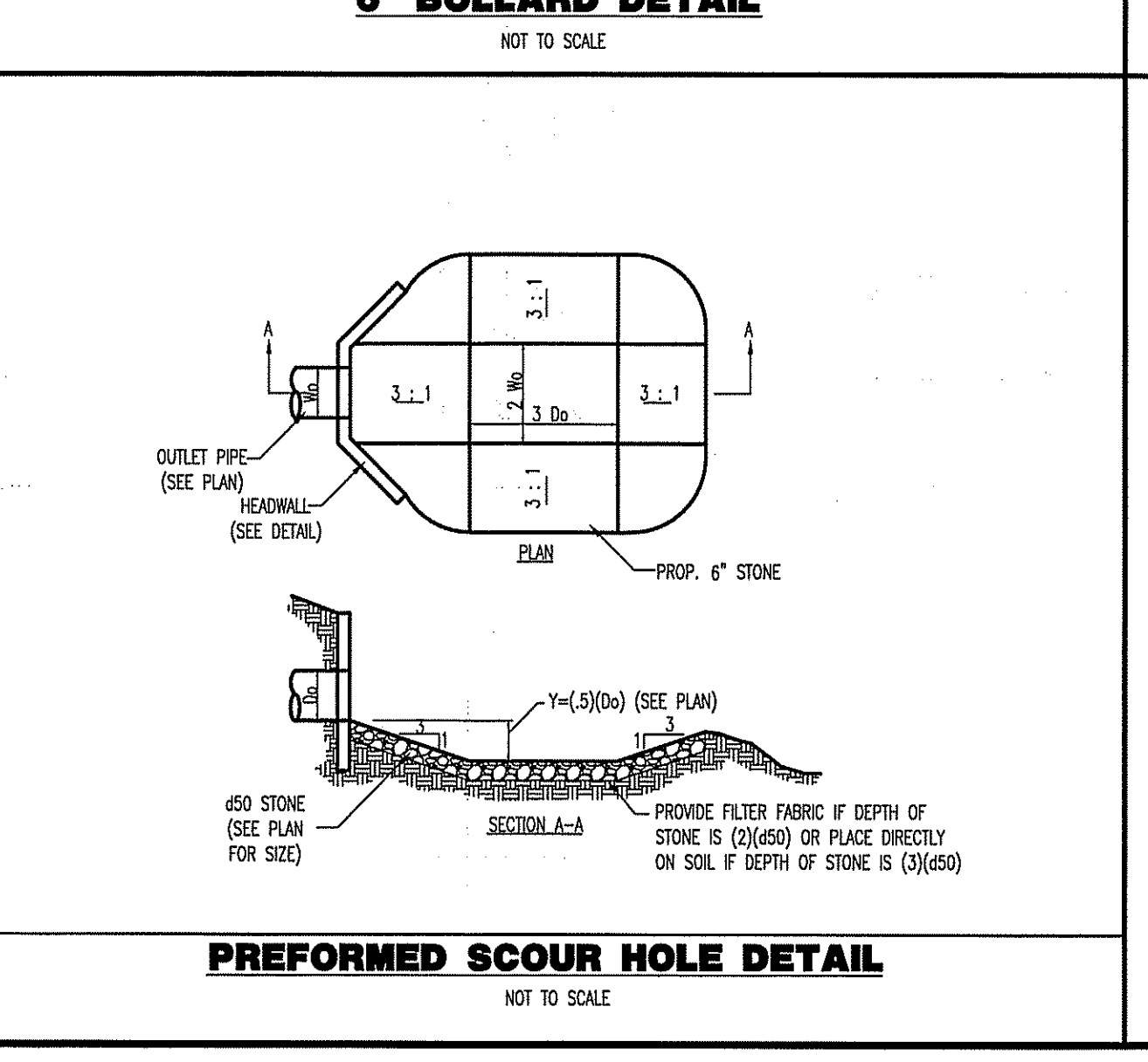
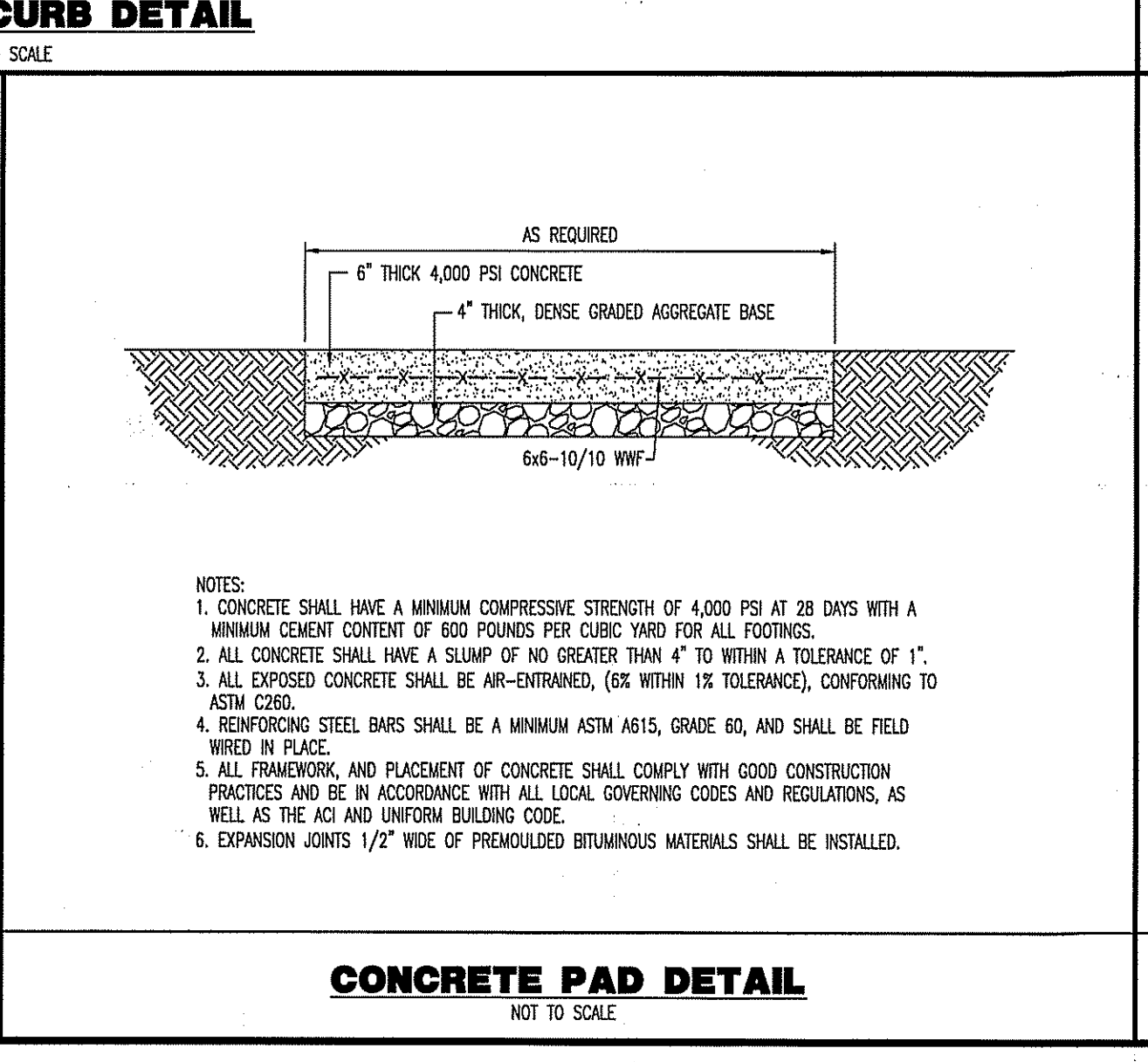
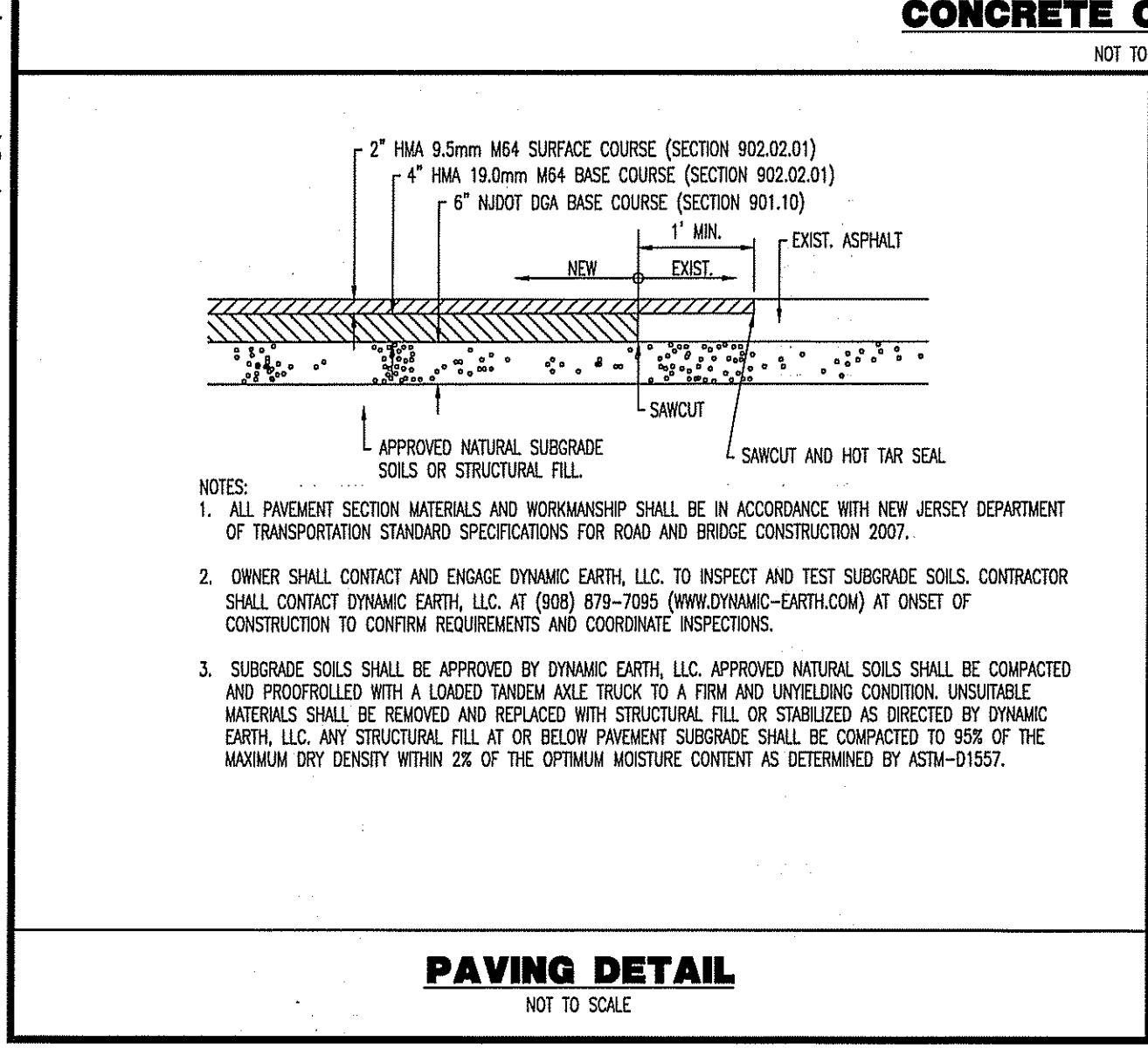
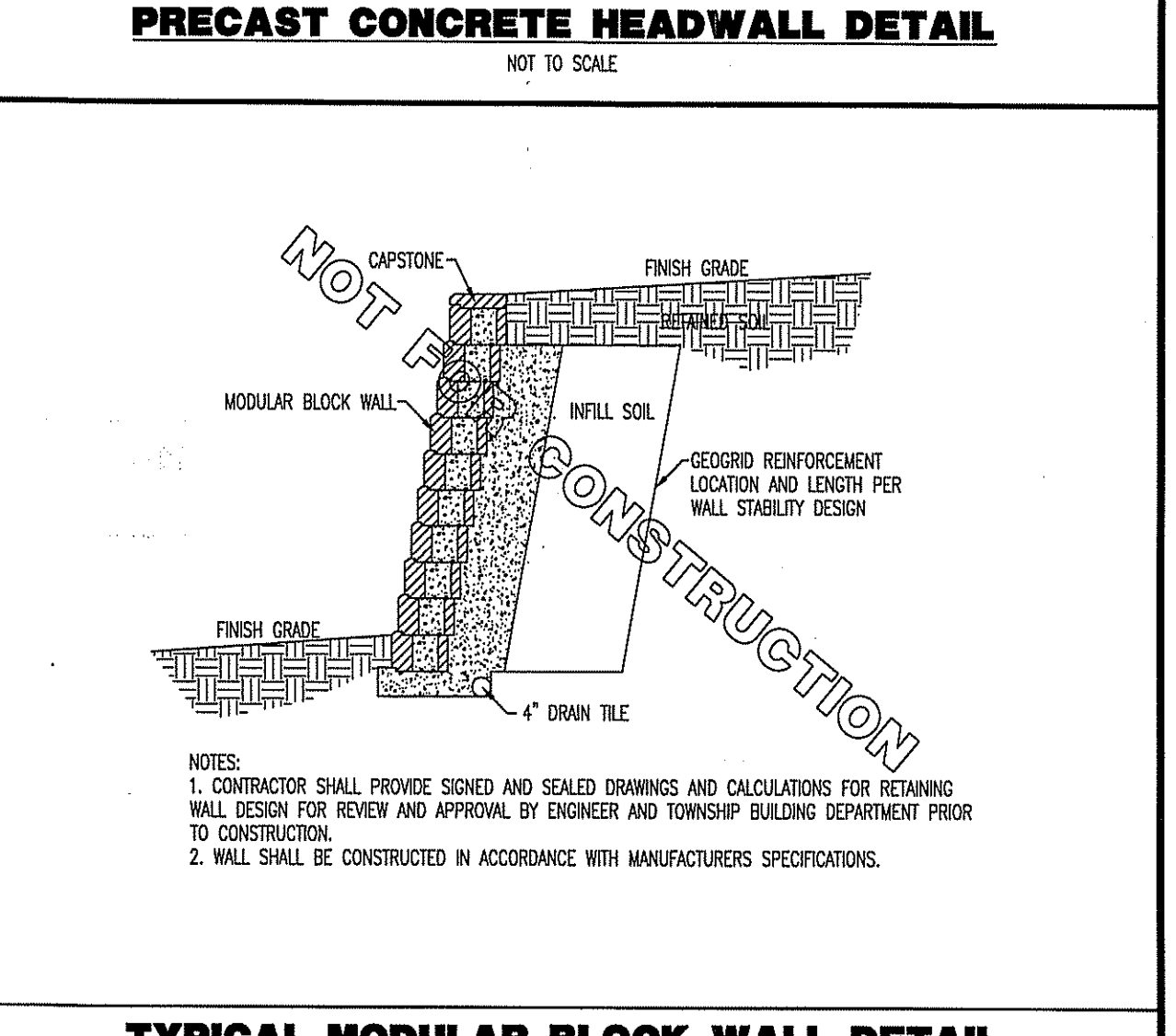
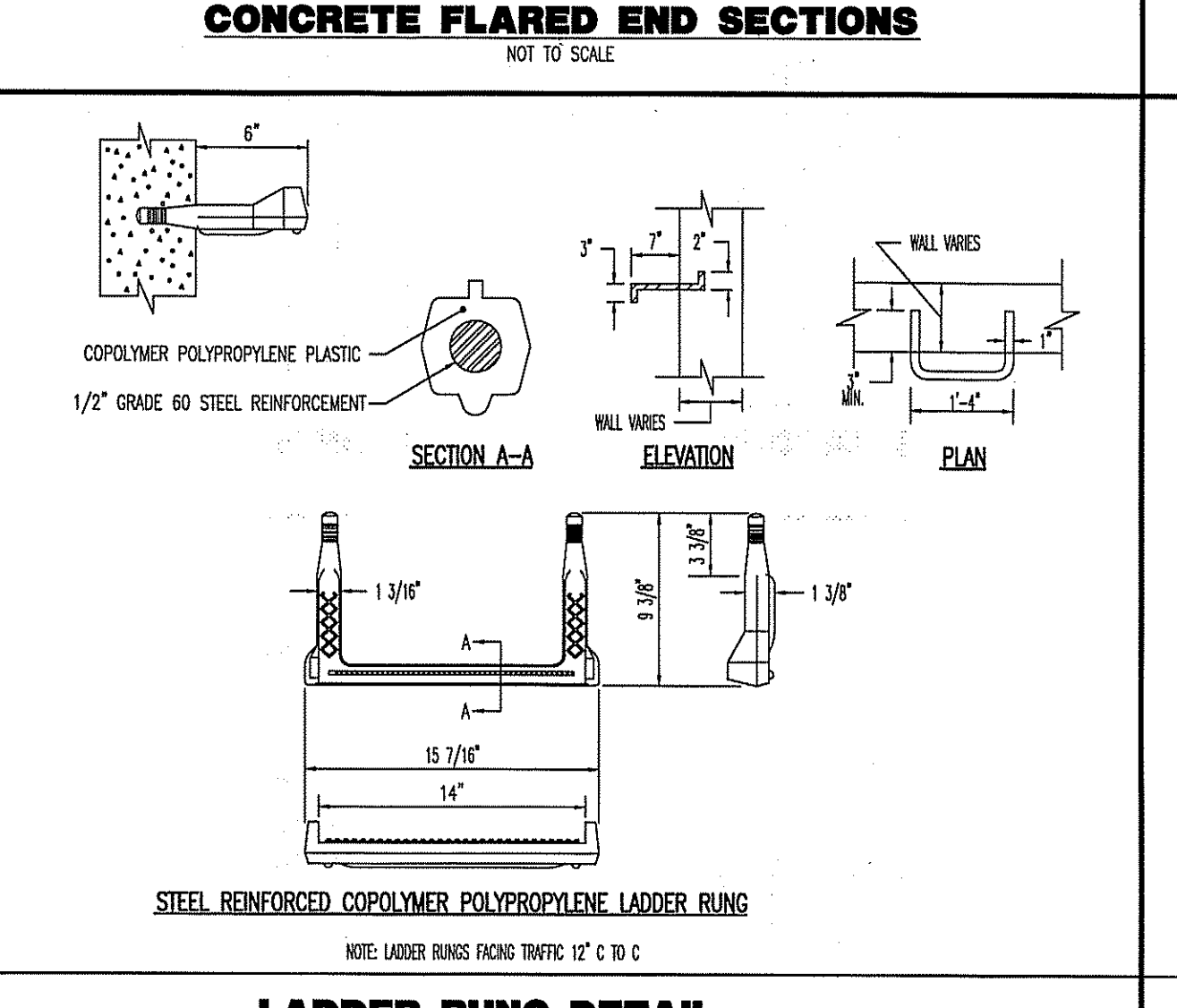
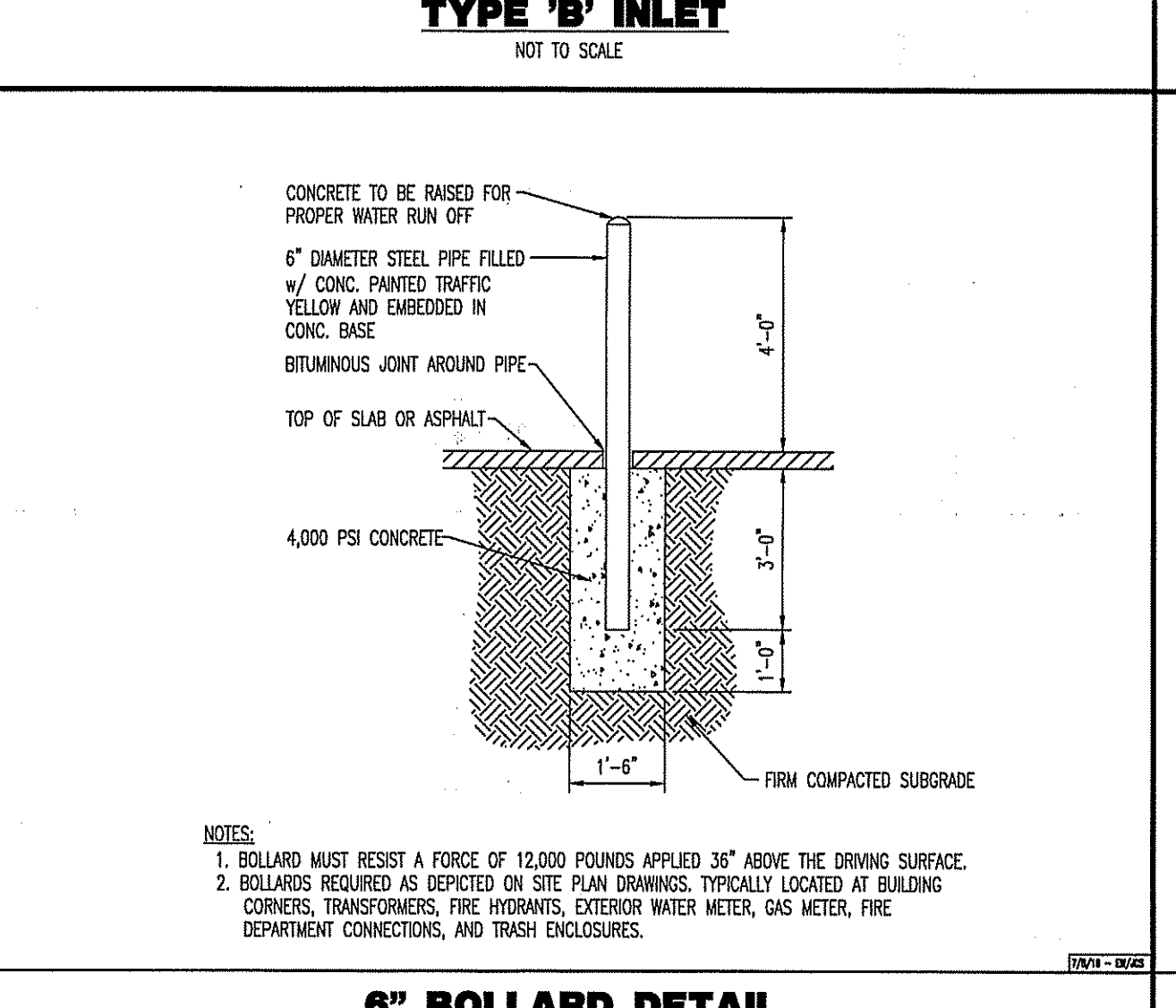
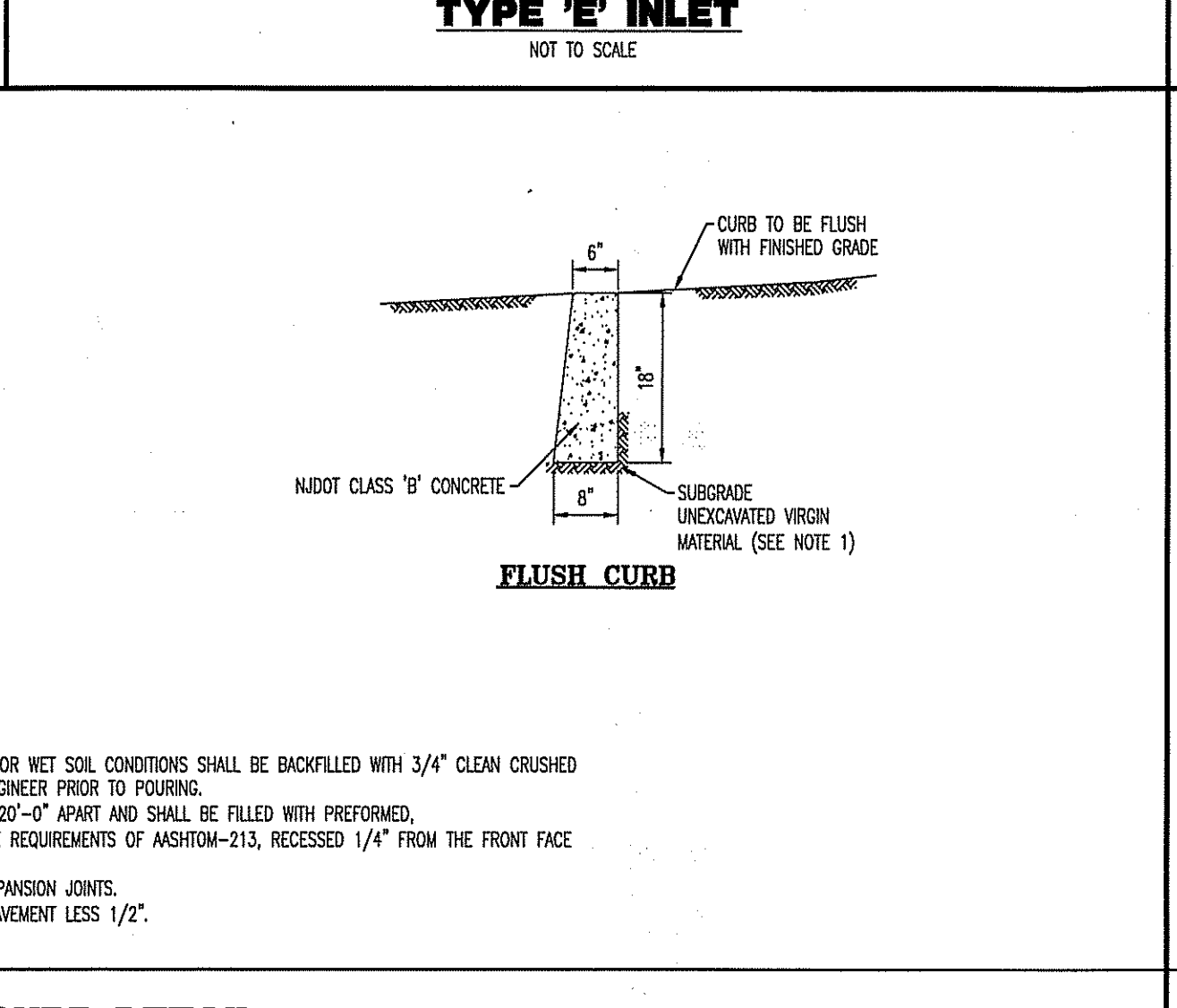
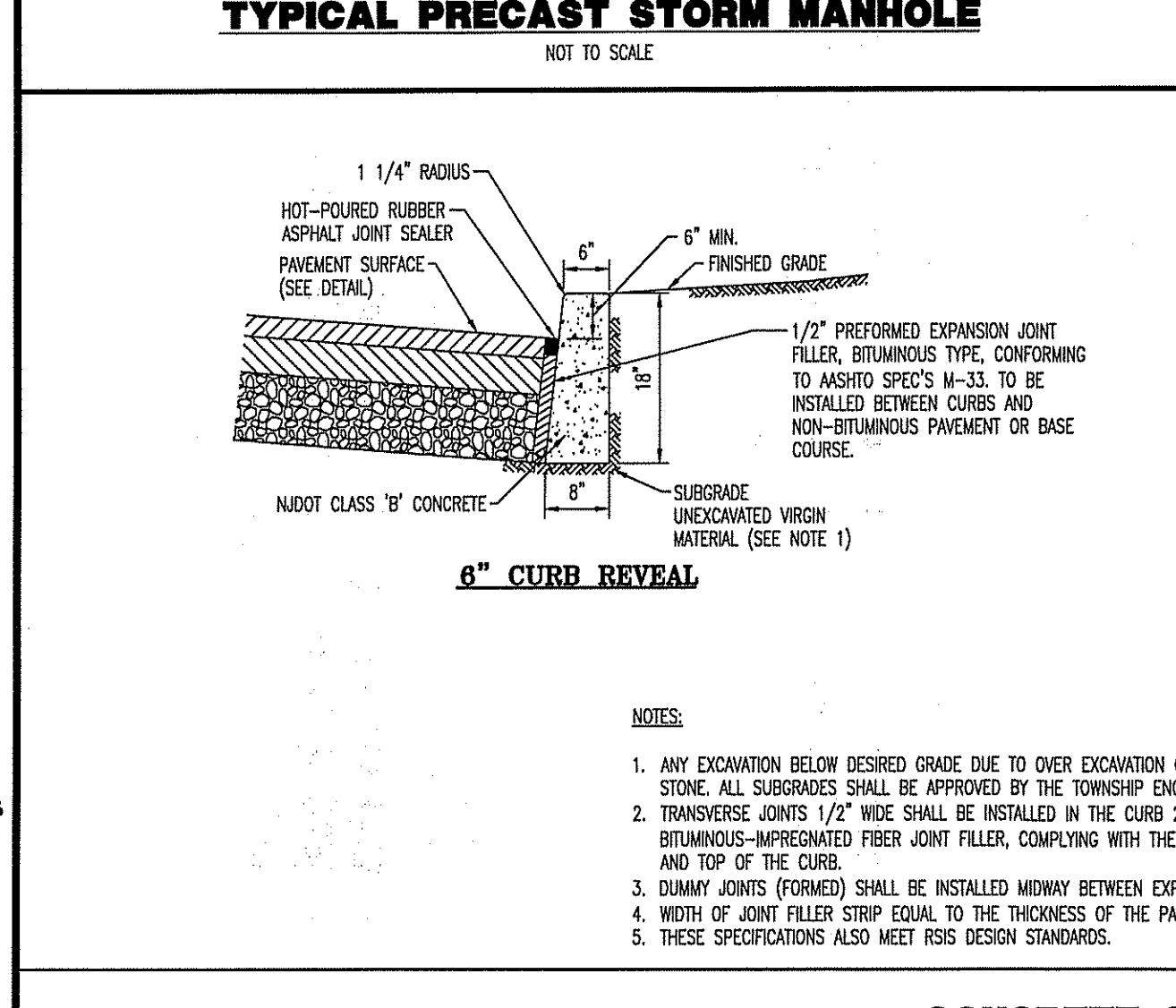
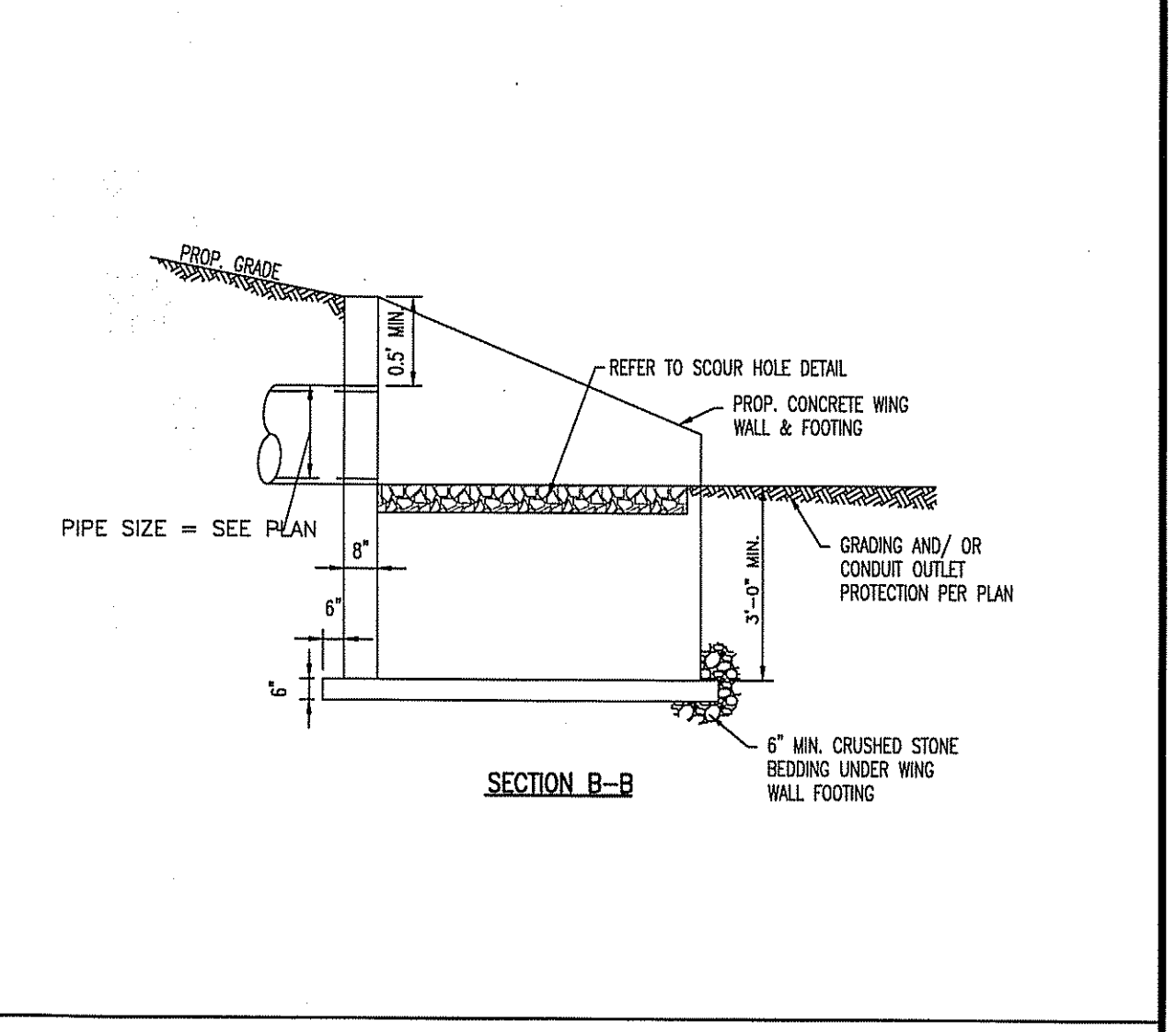


TABLE WITH 9 COLUMNS: INSIDE DIA. IN., A IN., B IN., C IN., D IN., E IN., LAD LENGTH FT., WEIGHT, WALL THICK. IN.



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405 Nish Route 9 | Austin, Texas | 1-772-834-2100 | 405 Nish Route 9 | Houston, Texas | 1-281-789-6400
Newtown, Pennsylvania | 1-867-485-0276 | Delray Beach, Florida | 1-561-921-8570

TITLE: **CONSTRUCTION DETAILS**

PROJECT: **405 ROUTE 9, LLC PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU**
BLOCK 288, LOTS 370 & 371
405 NISH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB NO: 3307-99-001
DATE: 12/15/2020

DRAWN BY: DJB
SCALE: (H) AS SHOWN

DESIGNED BY: RTO
SHEET NO: 14 OF 22

CHECKED BY: JEH

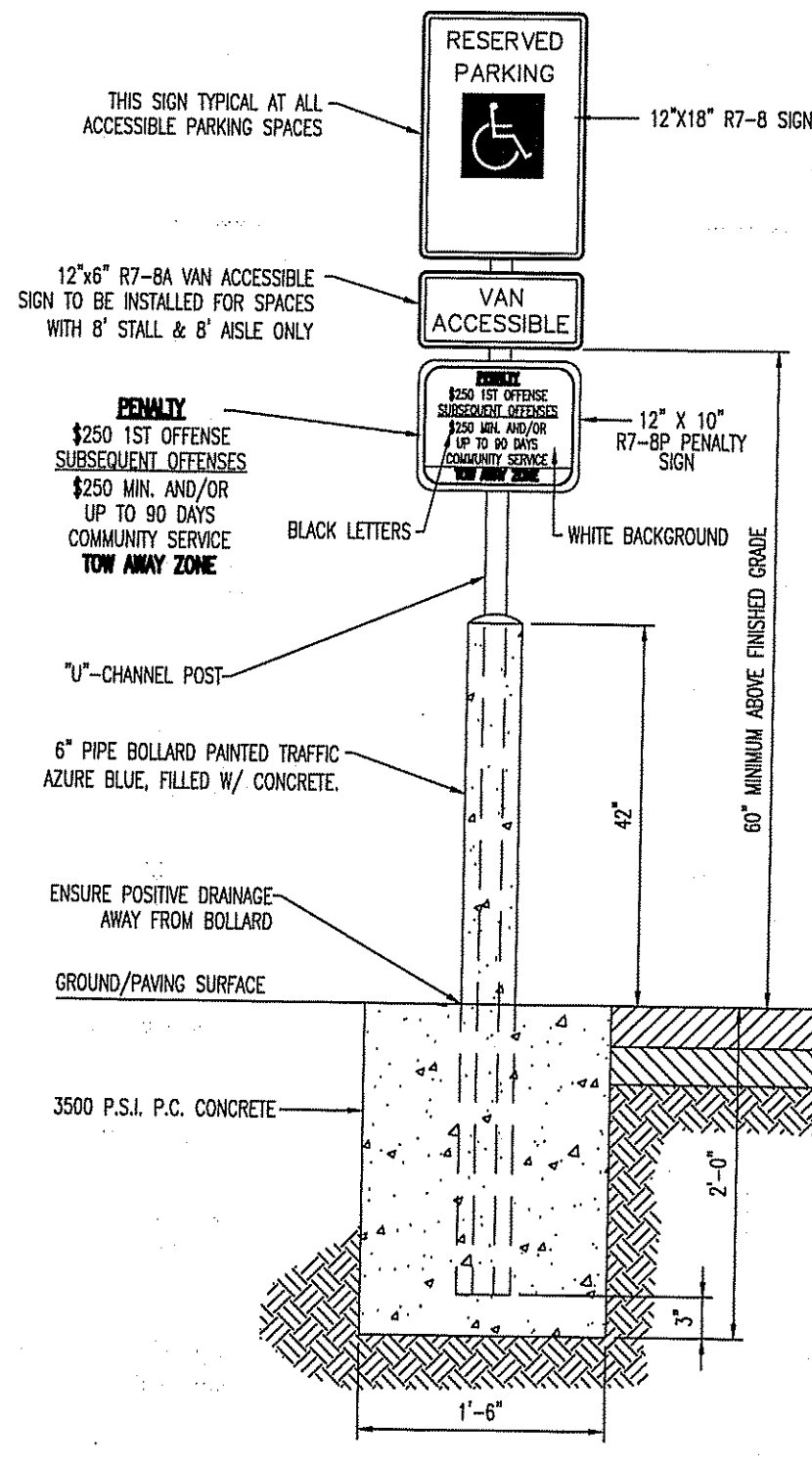
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PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 49256

CHECKED BY: TIAGO F. DUARTE
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 52588

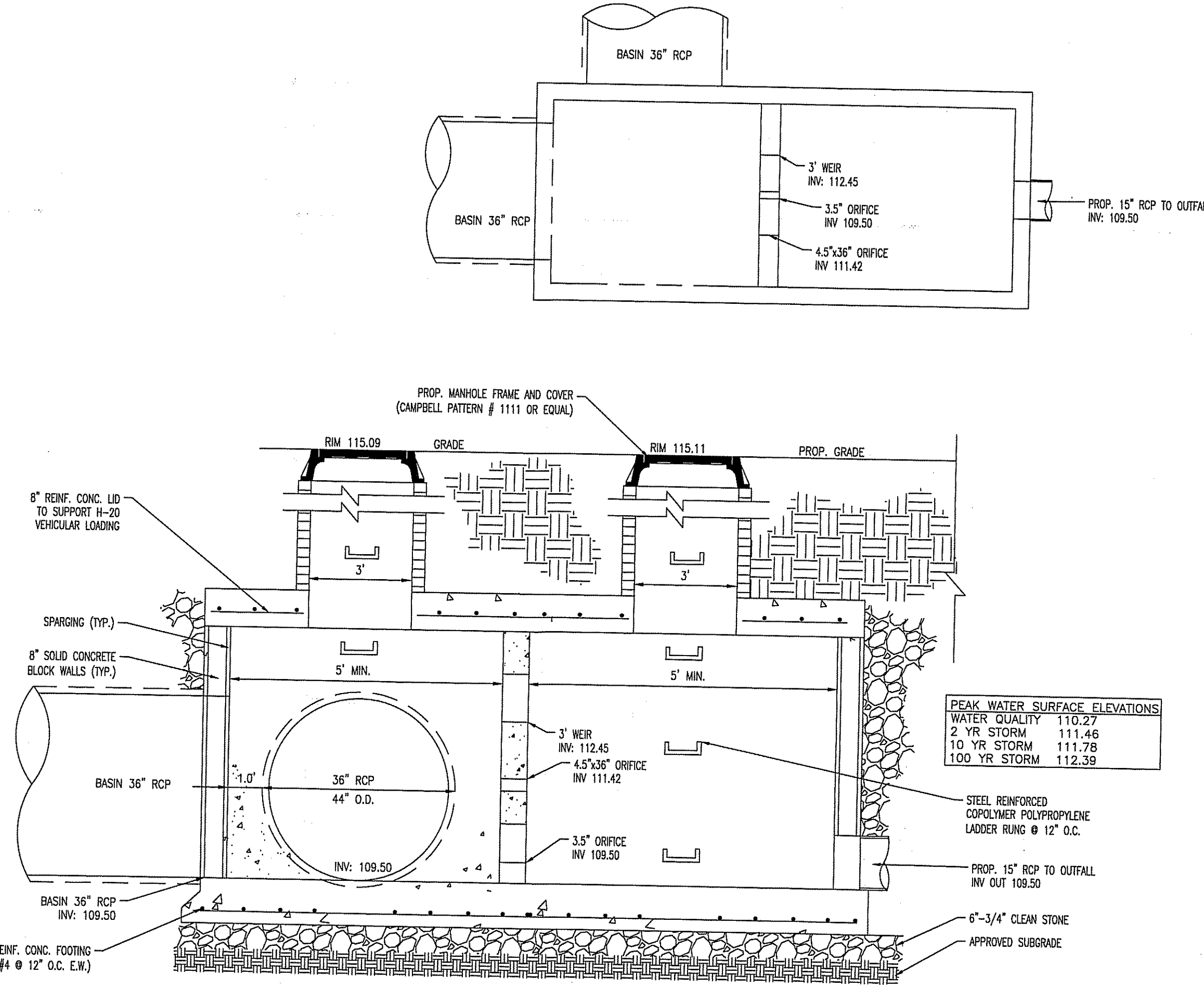
Rev. Log

3 02/09/21 REV. PER NADIR COMMENTS
2 07/07/21 REV. PER DOT COMMENTS
1 07/12/21 REV. PER ARCHITECTURAL & TOWNSHIP UPDATES

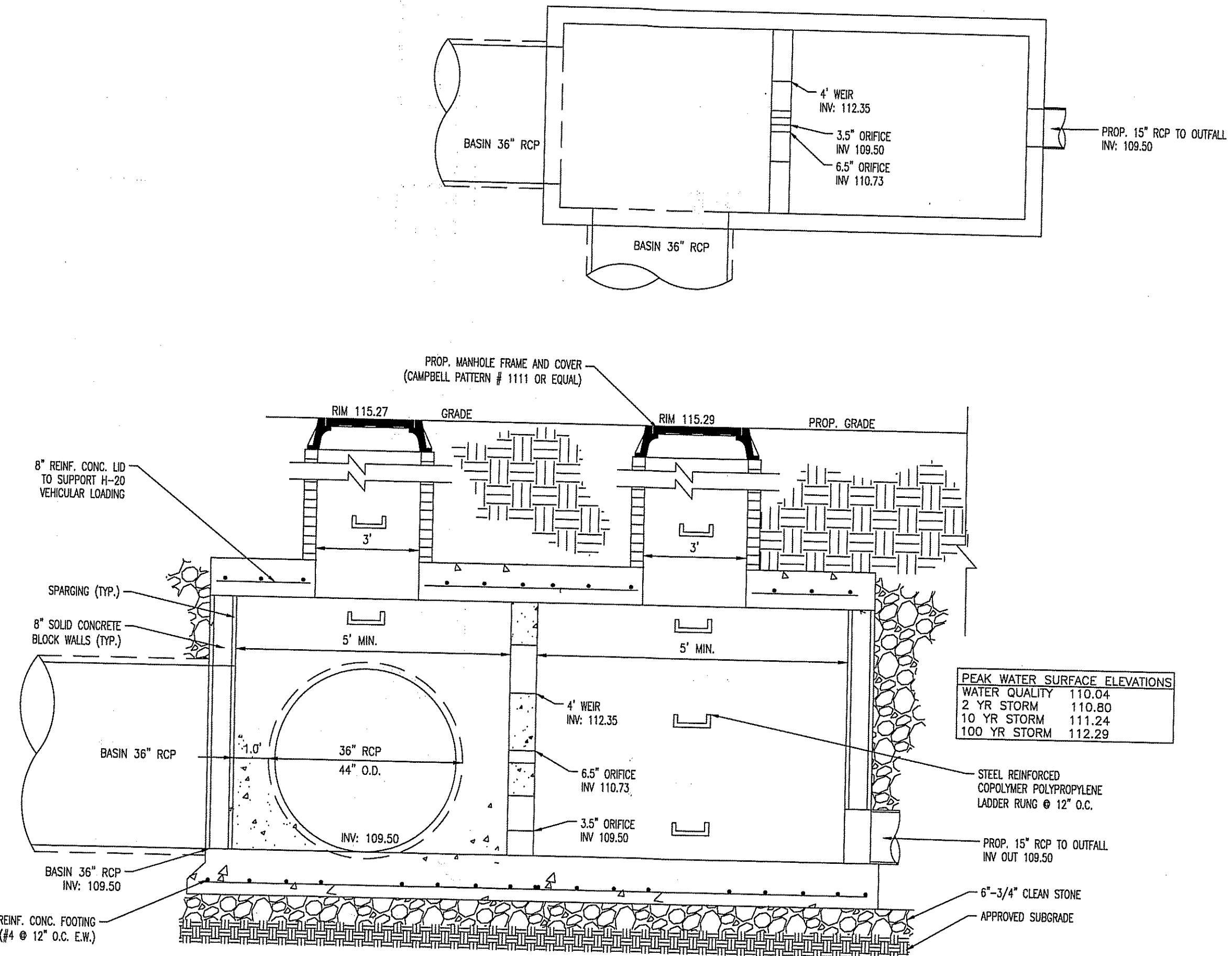
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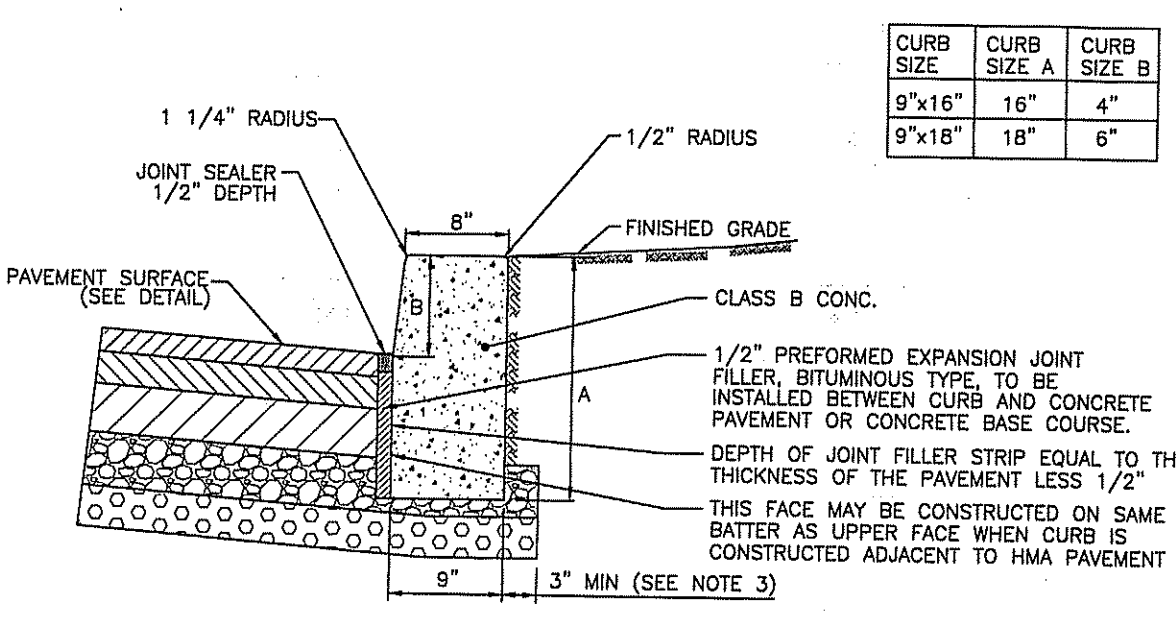
A.D.A. PARKING SIGN ON BOLLARD DETAIL
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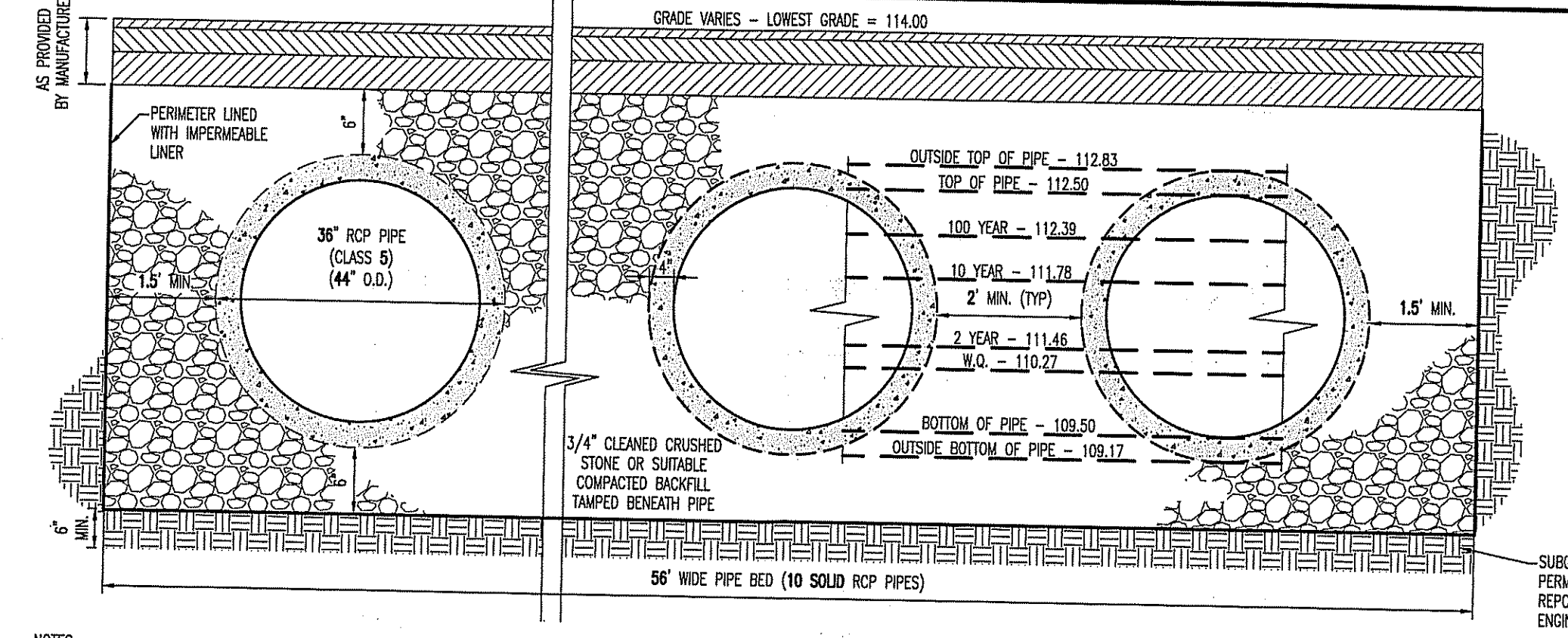
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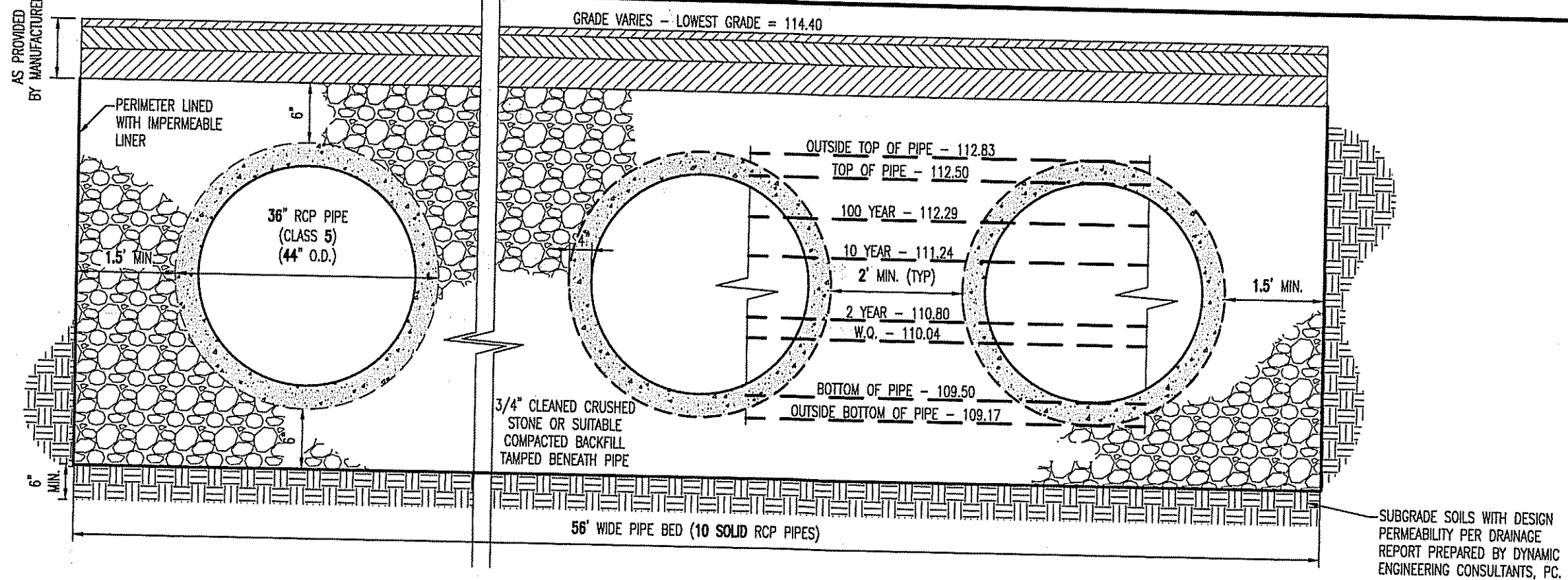
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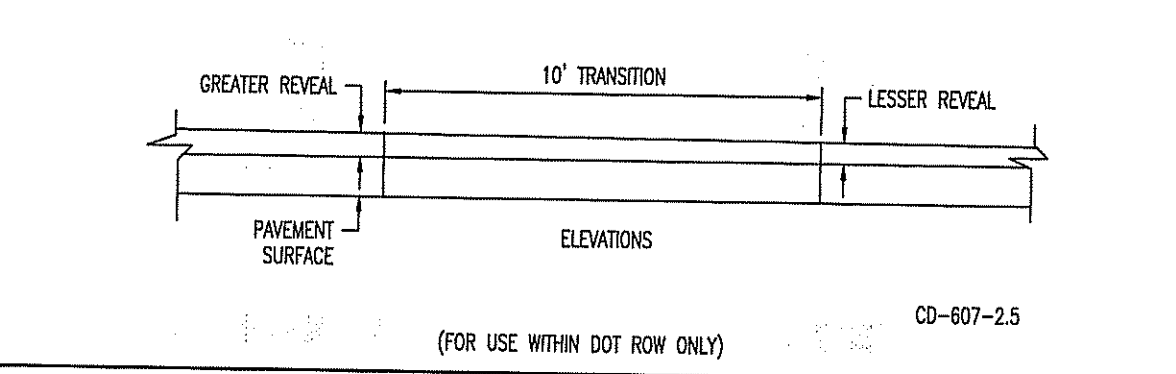
CONCRETE VERTICAL CURB DETAIL
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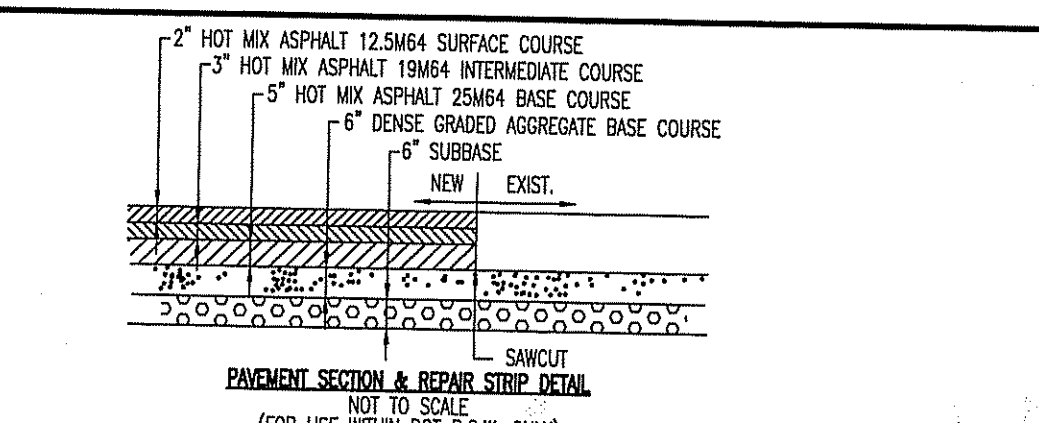
36" RCP SCHEMATIC UNDERGROUND BASIN 'A' DETAIL
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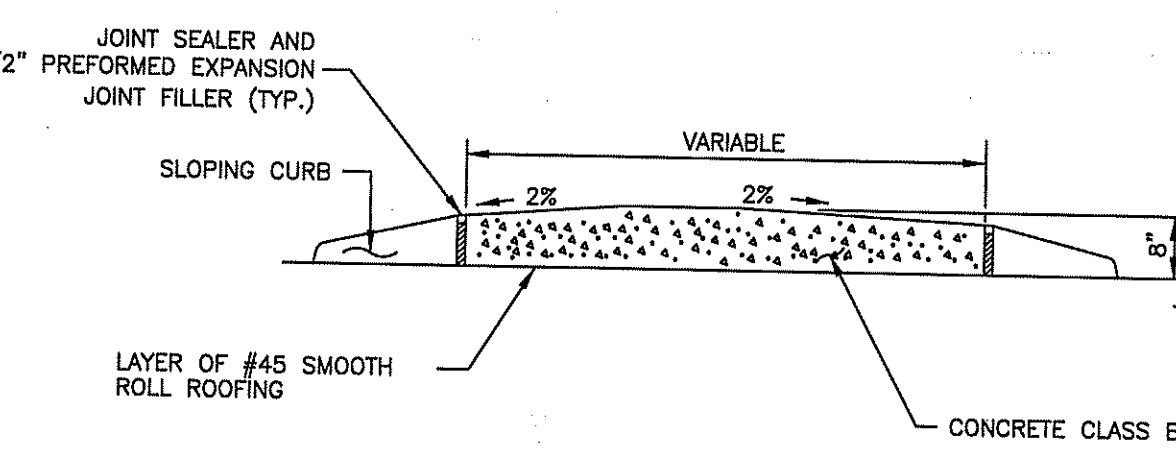
36" RCP SCHEMATIC UNDERGROUND BASIN 'B' DETAIL
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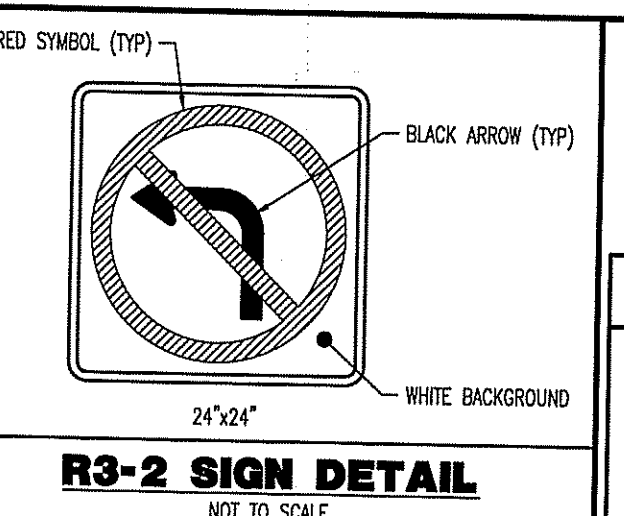
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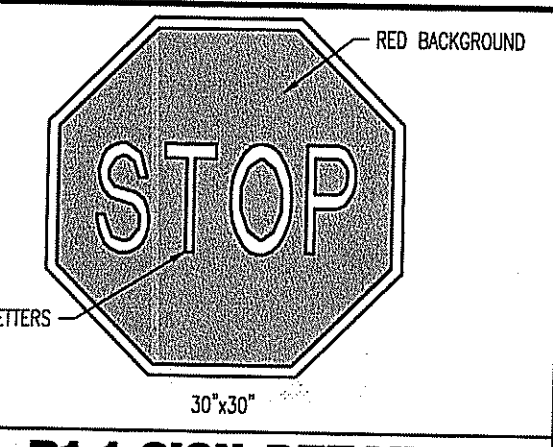
NJDOT PAVEMENT SECTION & REPAIR STRIP DETAIL
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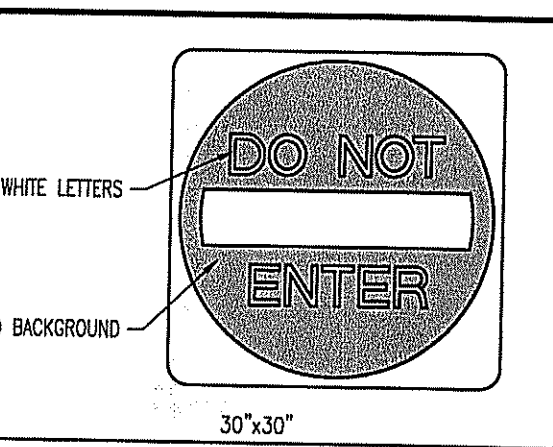
MOUNTABLE CONCRETE/WHITE CONCRETE ISLAND
NOT TO SCALE



R3-2 SIGN DETAIL
NOT TO SCALE



R1-1 SIGN DETAIL
NOT TO SCALE



R5-1 SIGN DETAIL
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CONSTRUCTION DETAILS

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PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
405 N.J. ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

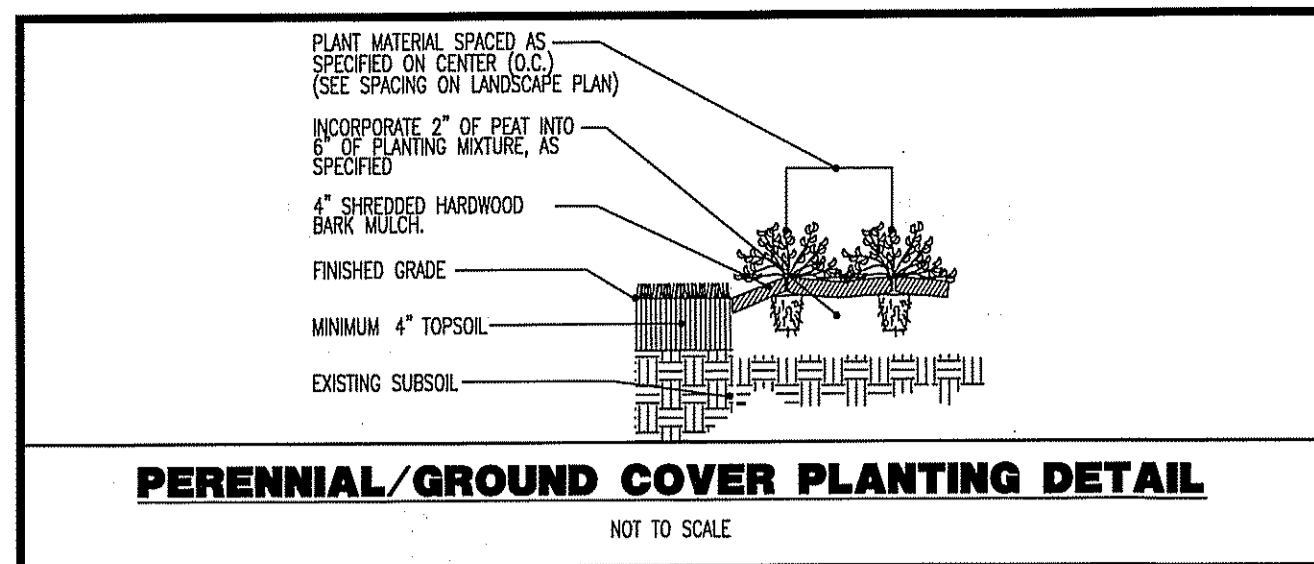
JOB No: 3307-99-001
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SCALE: (H) AS SHOWN
DESIGNED BY: RTO
CHECKED BY: JEH
SHEET No: 15 OF 22

JAMES E. HENRY PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 49266

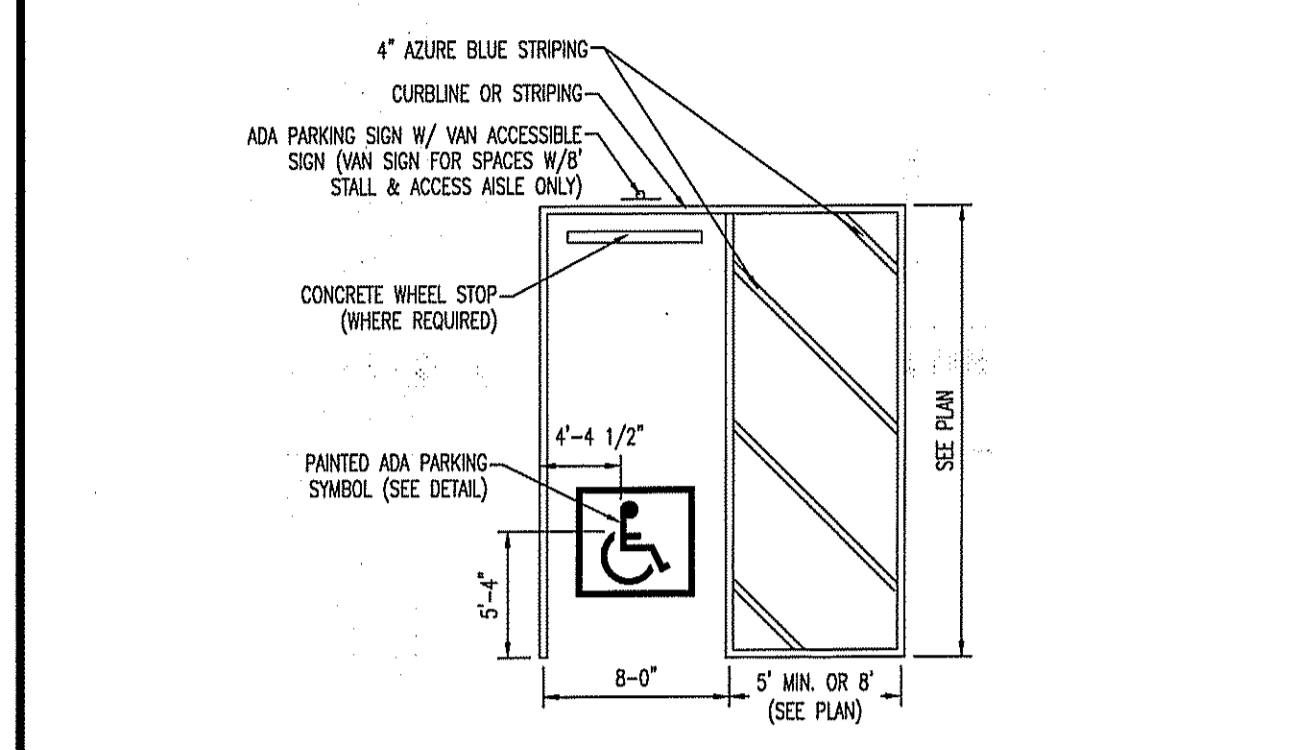
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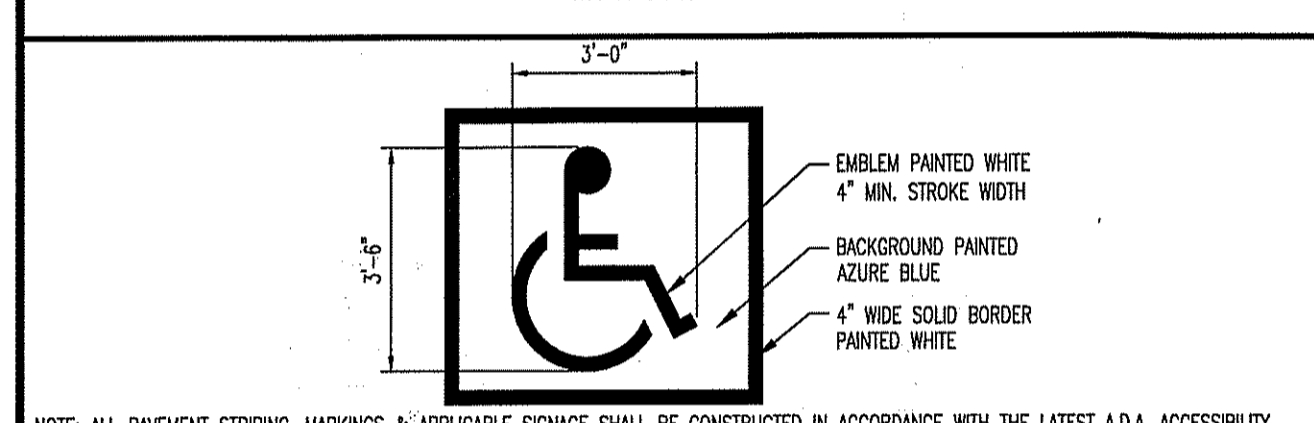


PERENNIAL/GROUND COVER PLANTING DETAIL
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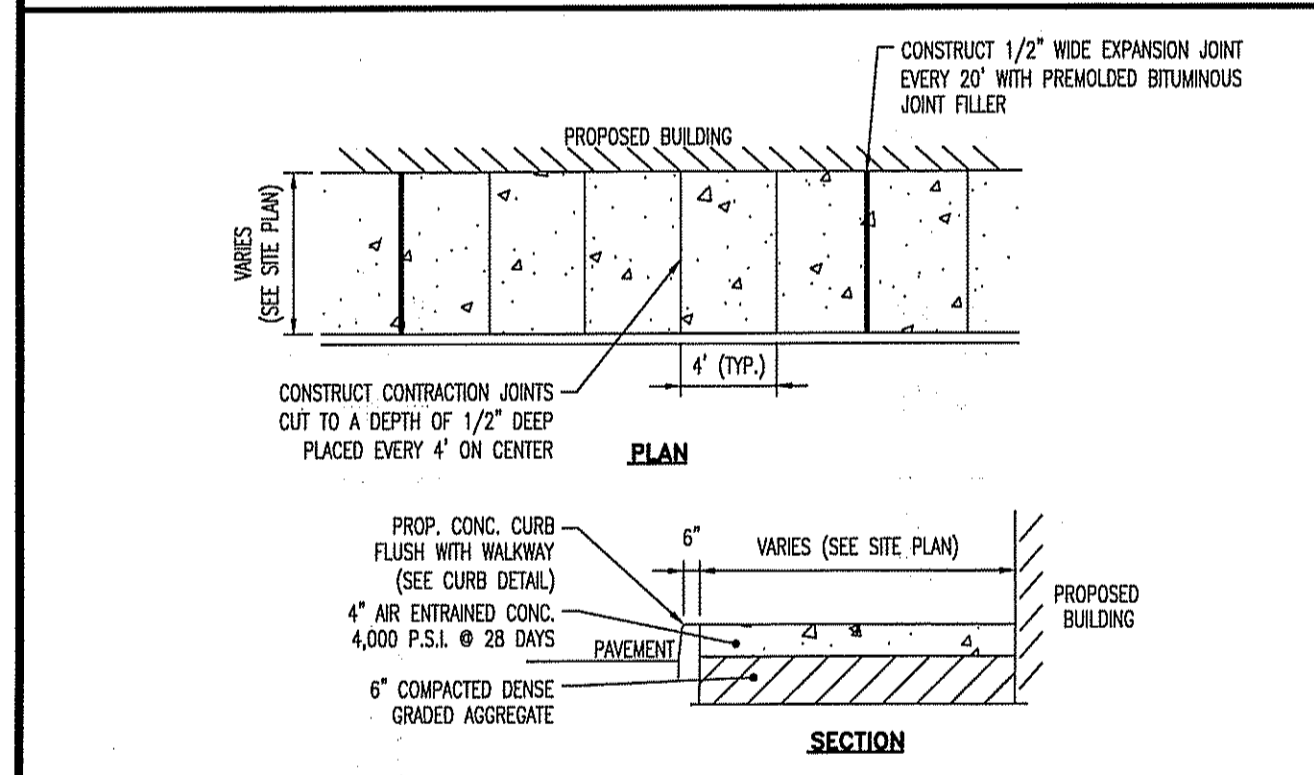
NOTES:
1. PAVEMENT STRIPING FOR ALL ADA PARKING SPACES SHALL BE PAINTED AZURE BLUE.
2. WHERE AN ADA PARKING STALL MEETS A STANDARD PARKING STALL, AN AZURE BLUE AND WHITE PAVEMENT STRIPE SHALL BE PAINTED.
3. ALL PAVEMENT STRIPING, MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADA ACCESSIBILITY GUIDELINES.

ADA STALL MARKINGS DETAIL
NOT TO SCALE



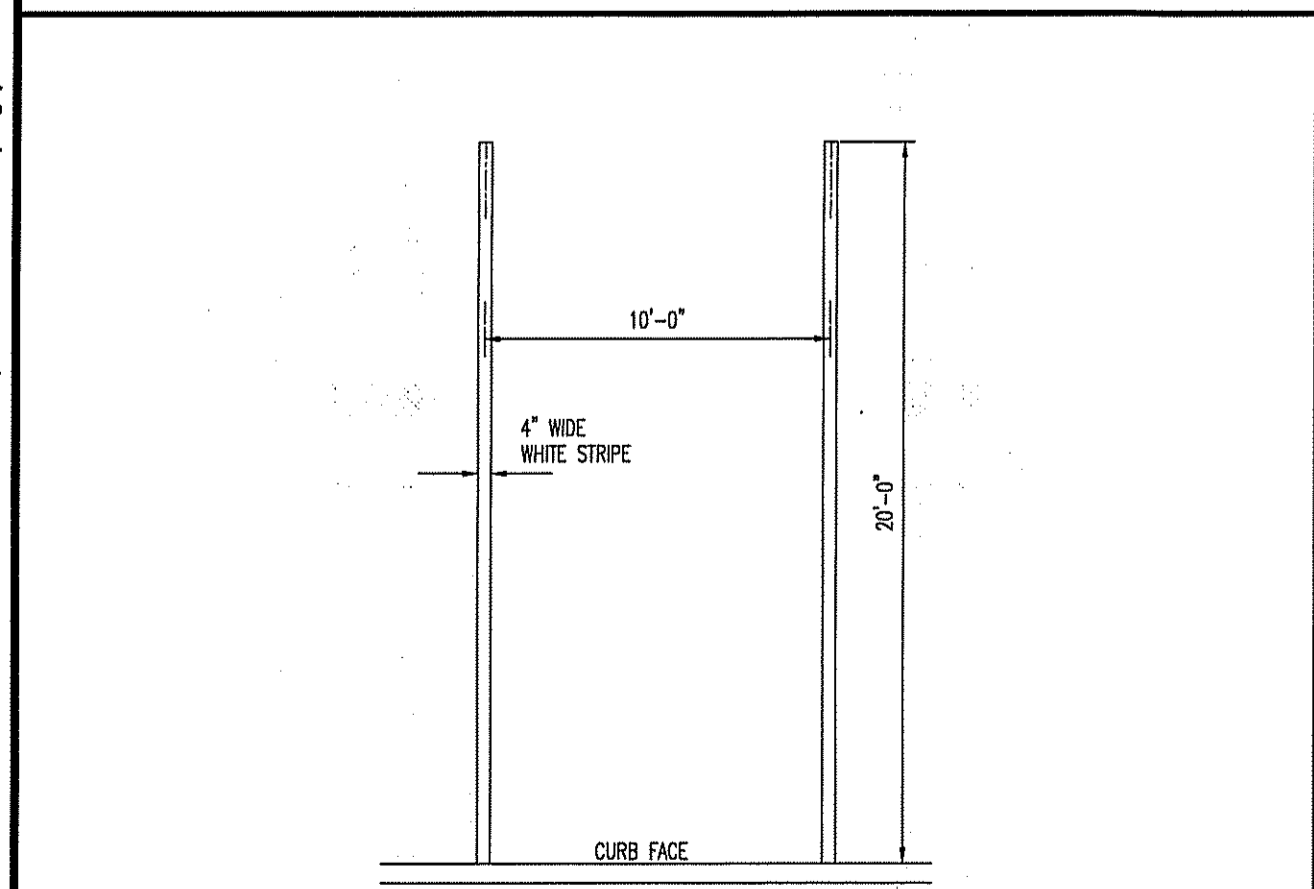
NOTE: ALL PAVEMENT STRIPING, MARKINGS & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

PAINTED A.D.A. PARKING SYMBOL DETAIL
NOT TO SCALE

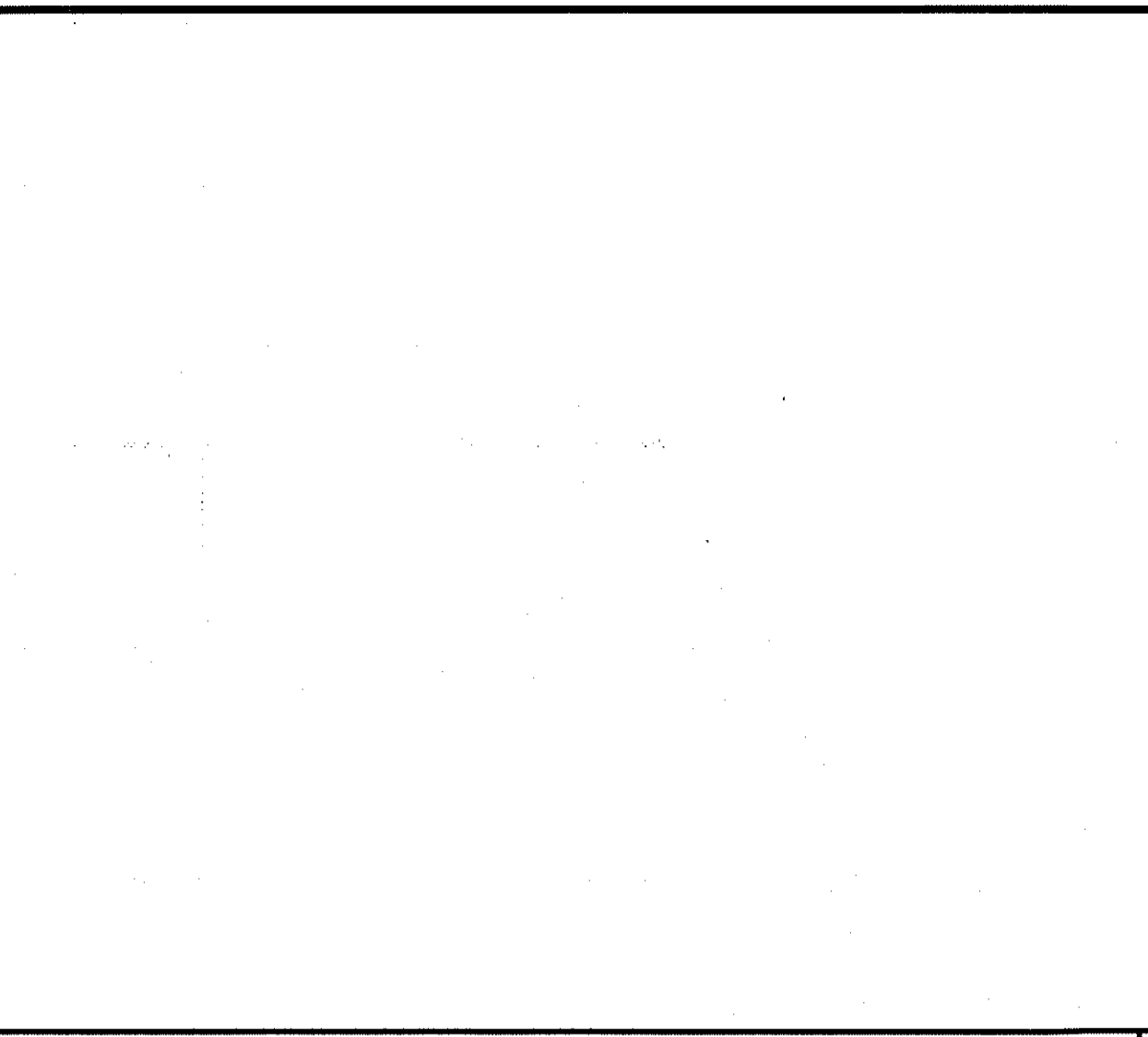


NOTE:
1. MAX. CROSS SLOPE 1/4\"/>

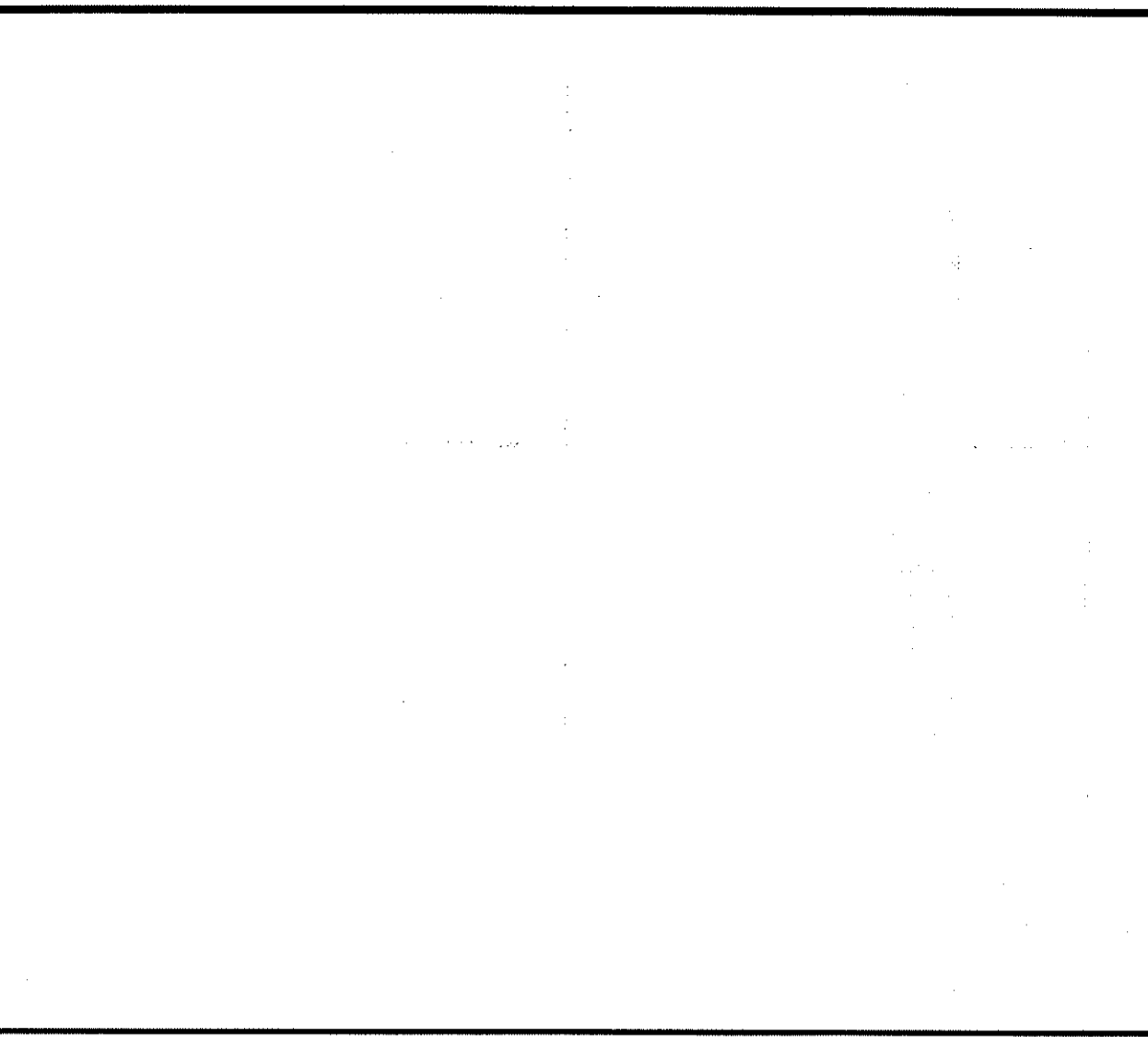
CURB AND WALK DETAIL AT BUILDING
NOT TO SCALE



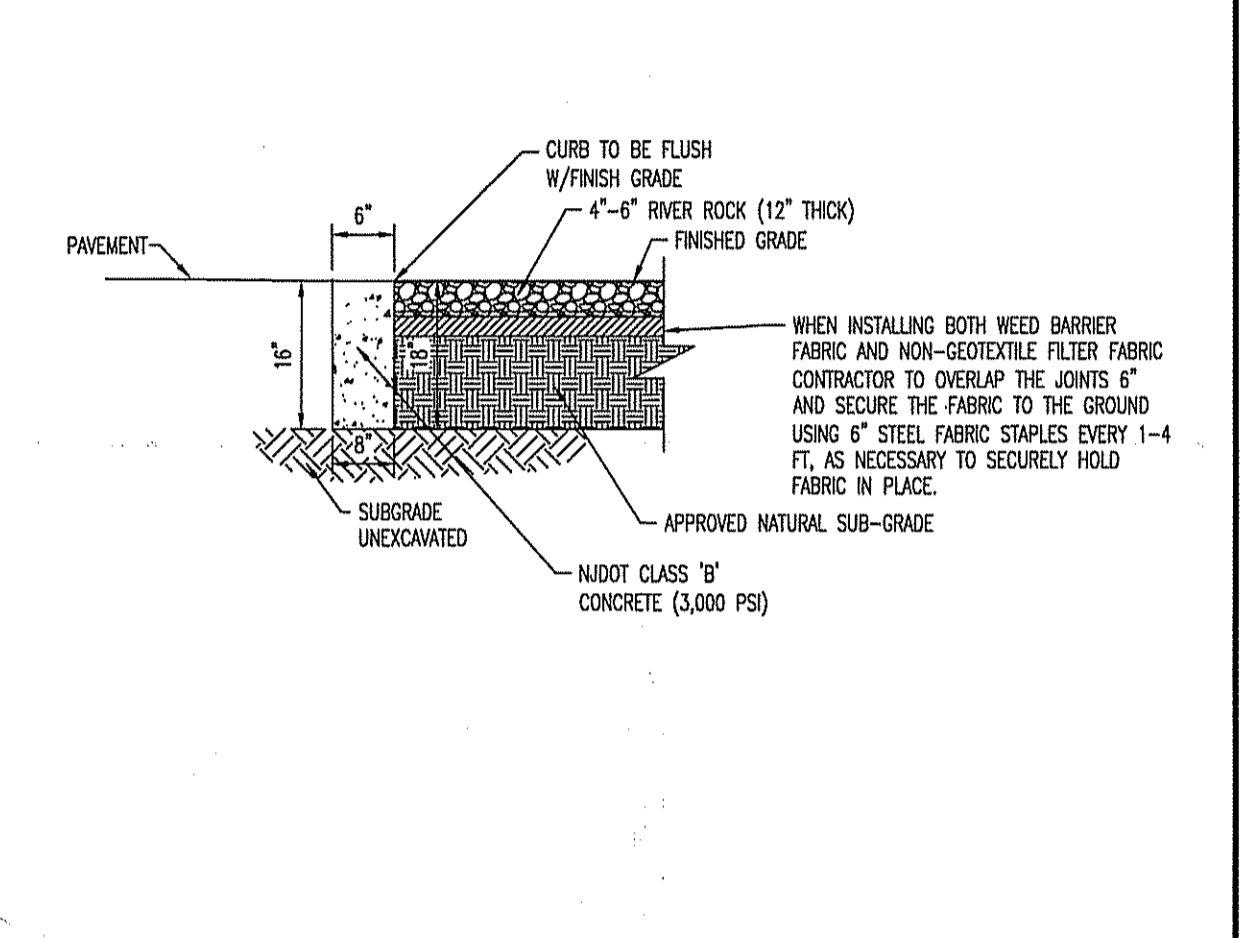
PARKING STALL STRIPING DETAIL
NOT TO SCALE



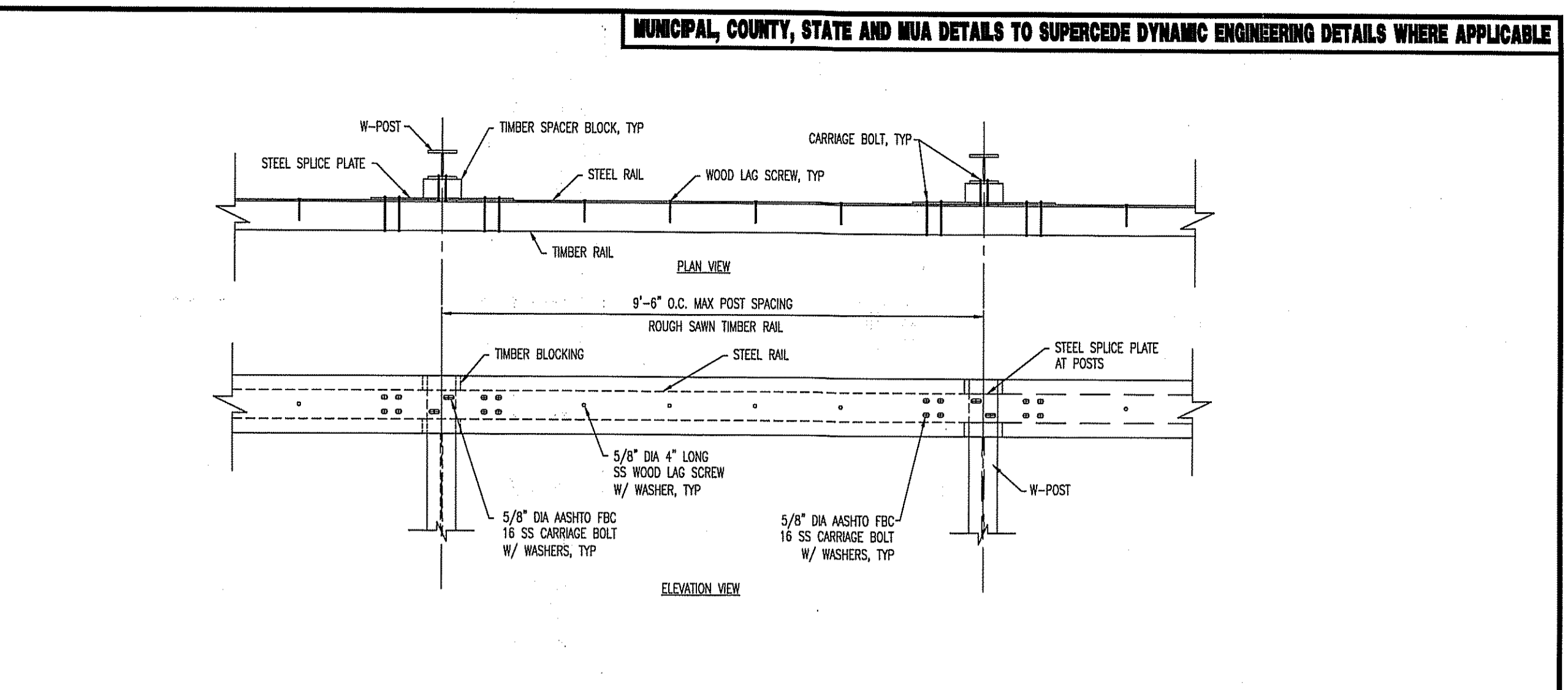
FLUSH CURB W/ RIVER ROCK DETAIL
NOT TO SCALE



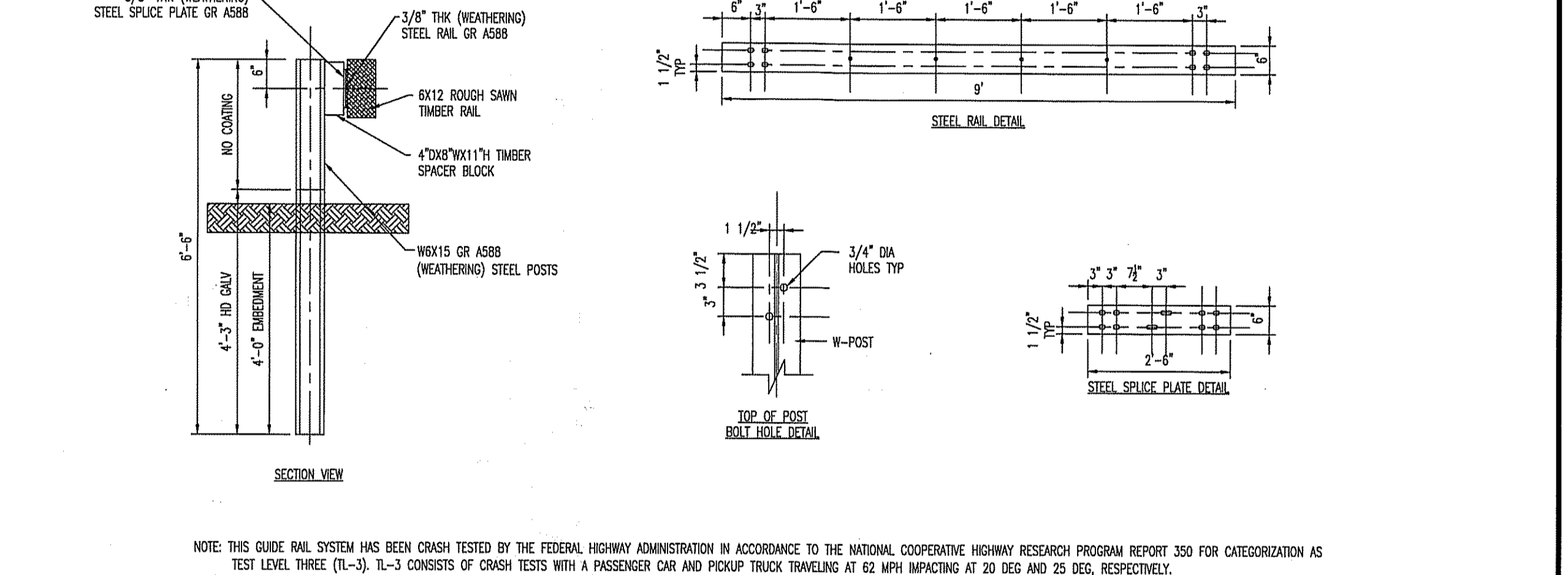
TYPICAL CURB CUT TAPER DETAIL
NOT TO SCALE



MASONRY TRASH/CHAIN LINK GATE ENCLOSURE DETAIL
NOT TO SCALE



AESTHETIC TIMBER GUIDERAIL DETAIL
NOT TO SCALE



DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL
NOT TO SCALE

Plotted: 02/08/21 - 10:40 AM. By: dboyd. File: P:\DCEPC PROJECTS\3307 Abington Reclaim Metals LLC\99-001 Marlboro\DWG\Site Plans\0330799001SD3.dwg. ---> 16 CONSTRUCTION DETAILS

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DATE: 12/15/2020
SCALE: (H) AS SHOWN
SHEET No: 16 OF 22
Rev. # 3

REV.	DATE	DESCRIPTION
1	02/08/21	REV. PER NADP COMMENTS
2	01/27/21	REV. PER DOT COMMENTS
3	01/27/21	REV. PER ARCHITECTURAL & TOWNSHIP UPDATES

JAMES E. HENRY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 49266

TIAGO F. DUARTE
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 52568

PROJECT: 405 ROUTE 9, LLC
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
405 NASH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

RESTAURANT

SIGN AREA: 28.43 SF

PROPOSED INTERNALLY ILLUMINATED RESTAURANT BUILDING MOUNTED SIGN (2 TYP.)

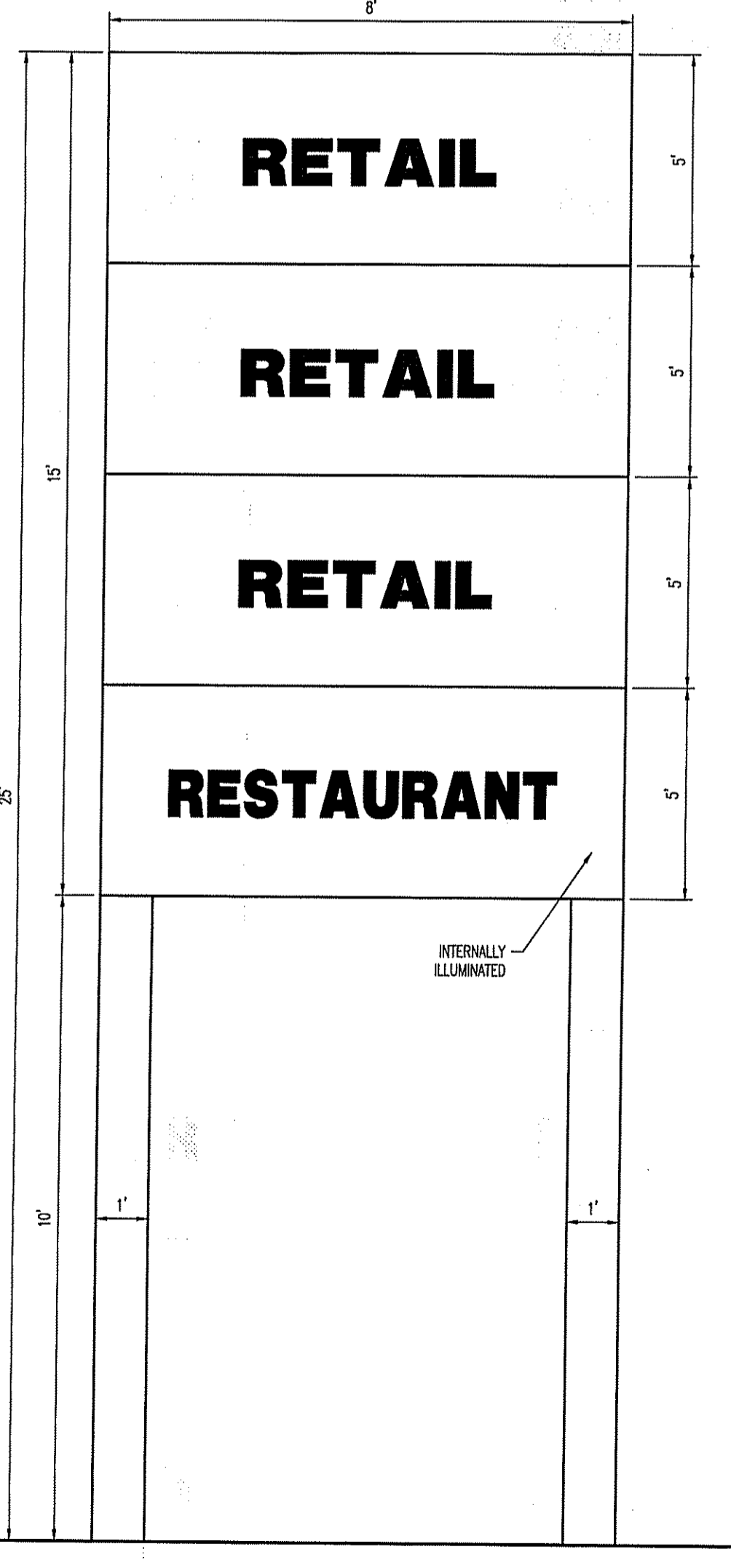
NOT TO SCALE

RETAIL SIGNAGE

SIGN AREA: 34.18 SF

PROPOSED INTERNALLY ILLUMINATED RETAIL BUILDING MOUNTED SIGN (5 TYP.)

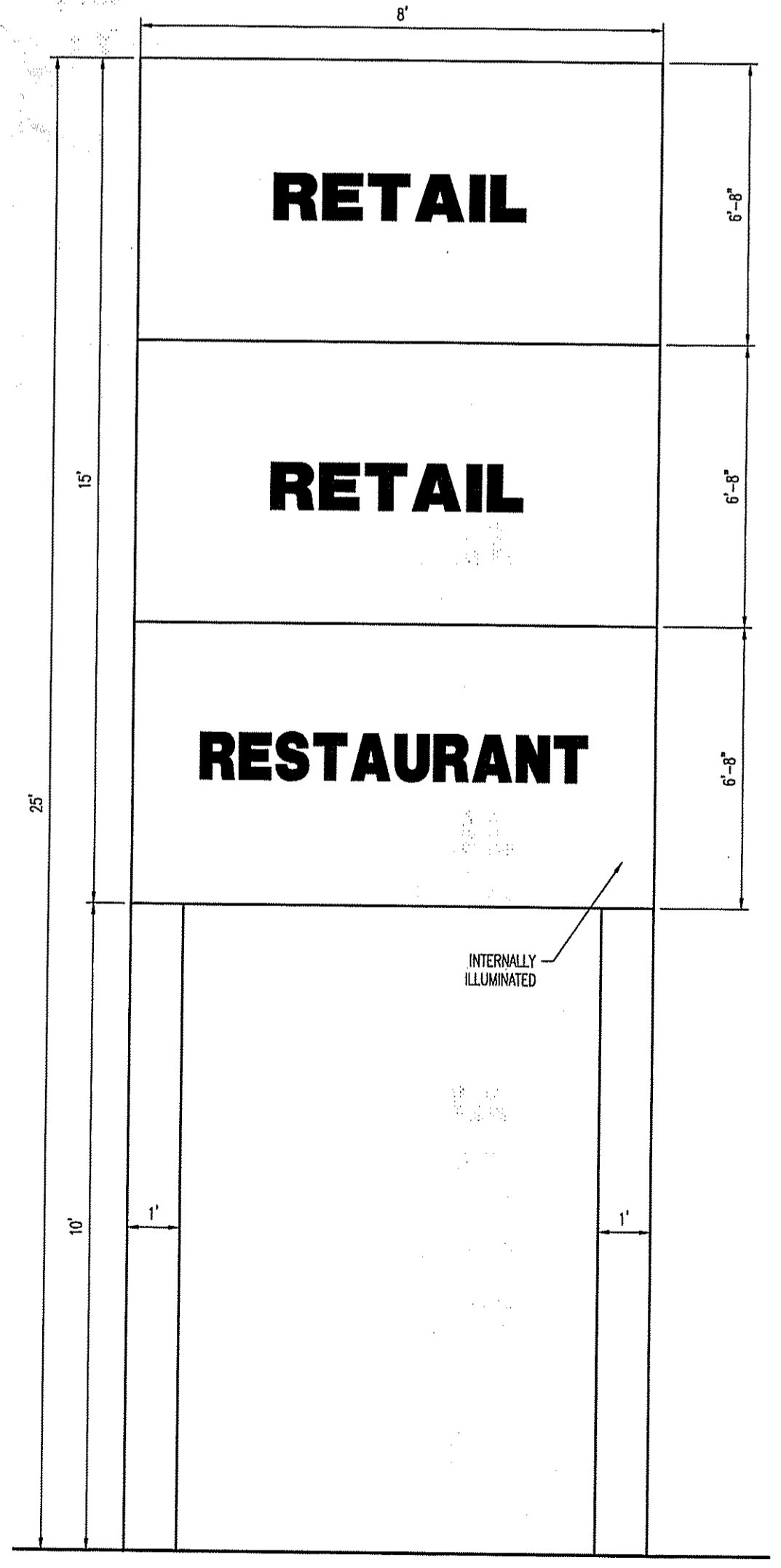
NOT TO SCALE



SIGN AREA: 140 SF
SIGN HEIGHT: 25 FT
(PROPOSED FOUNDATION BY OTHERS)

PROPOSED FREESTANDING SIGN (LOT 371)

NOT TO SCALE



SIGN AREA: 140 SF
SIGN HEIGHT: 25 FT
(PROPOSED FOUNDATION BY OTHERS)

PROPOSED FREESTANDING SIGN (LOT 370)

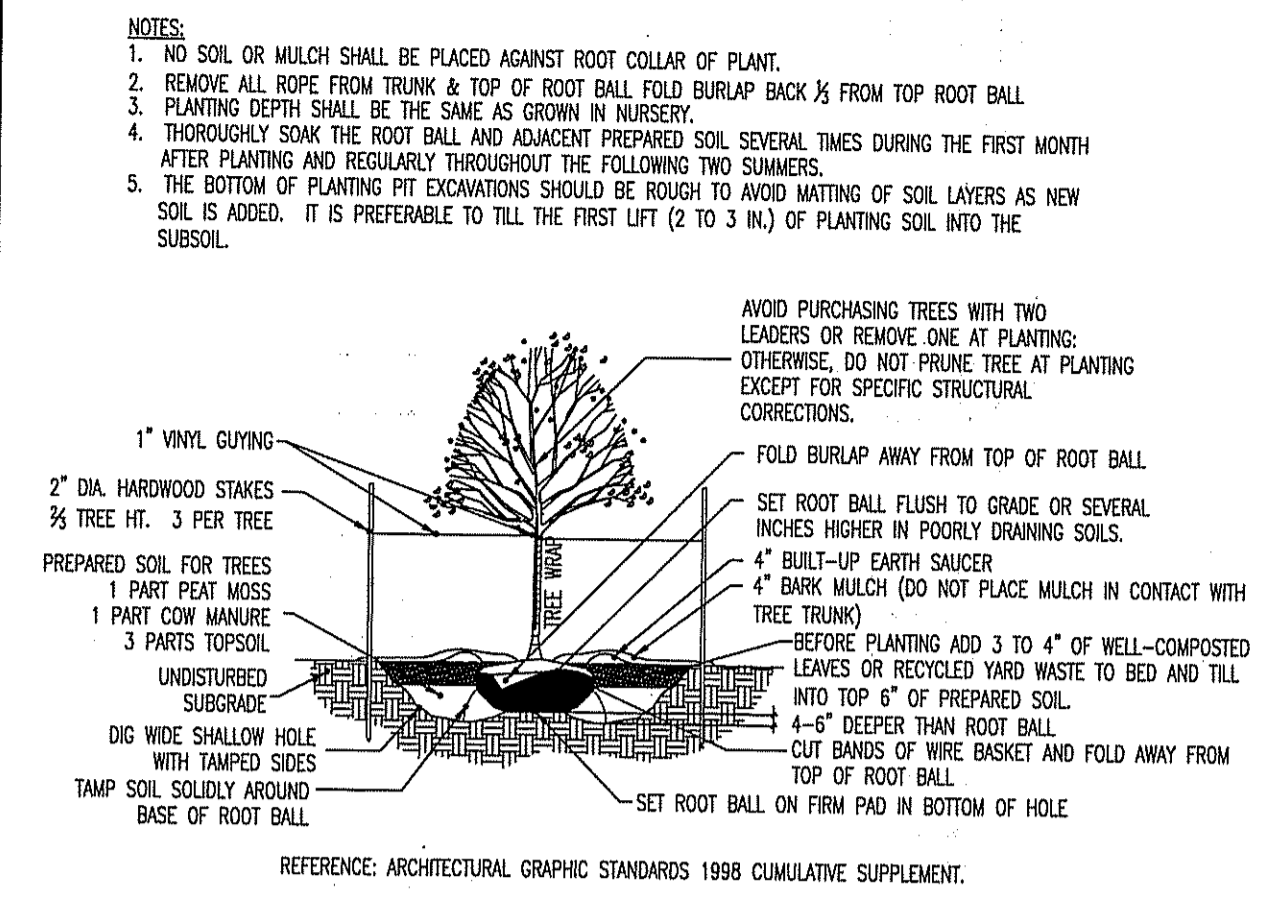
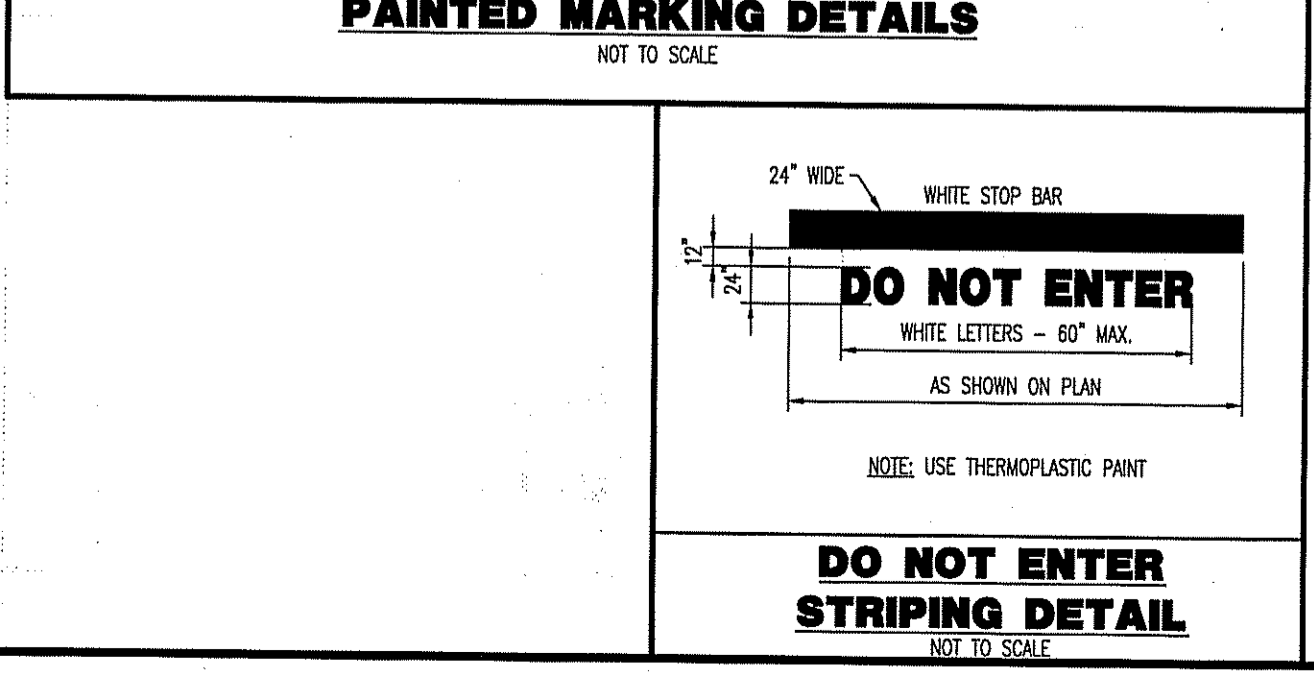
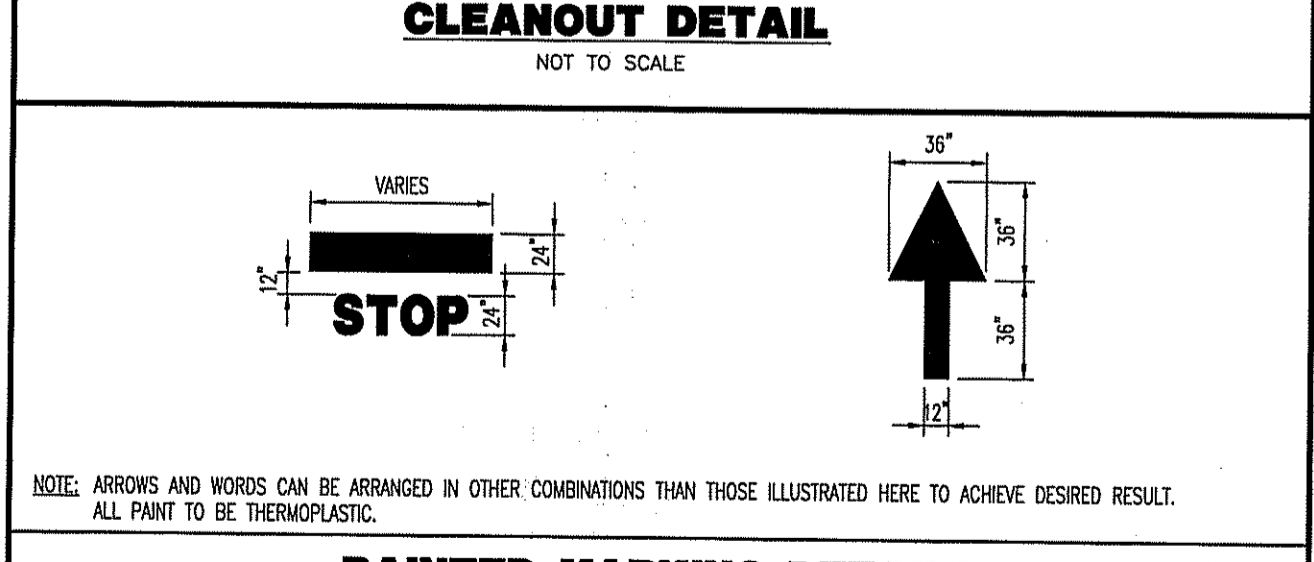
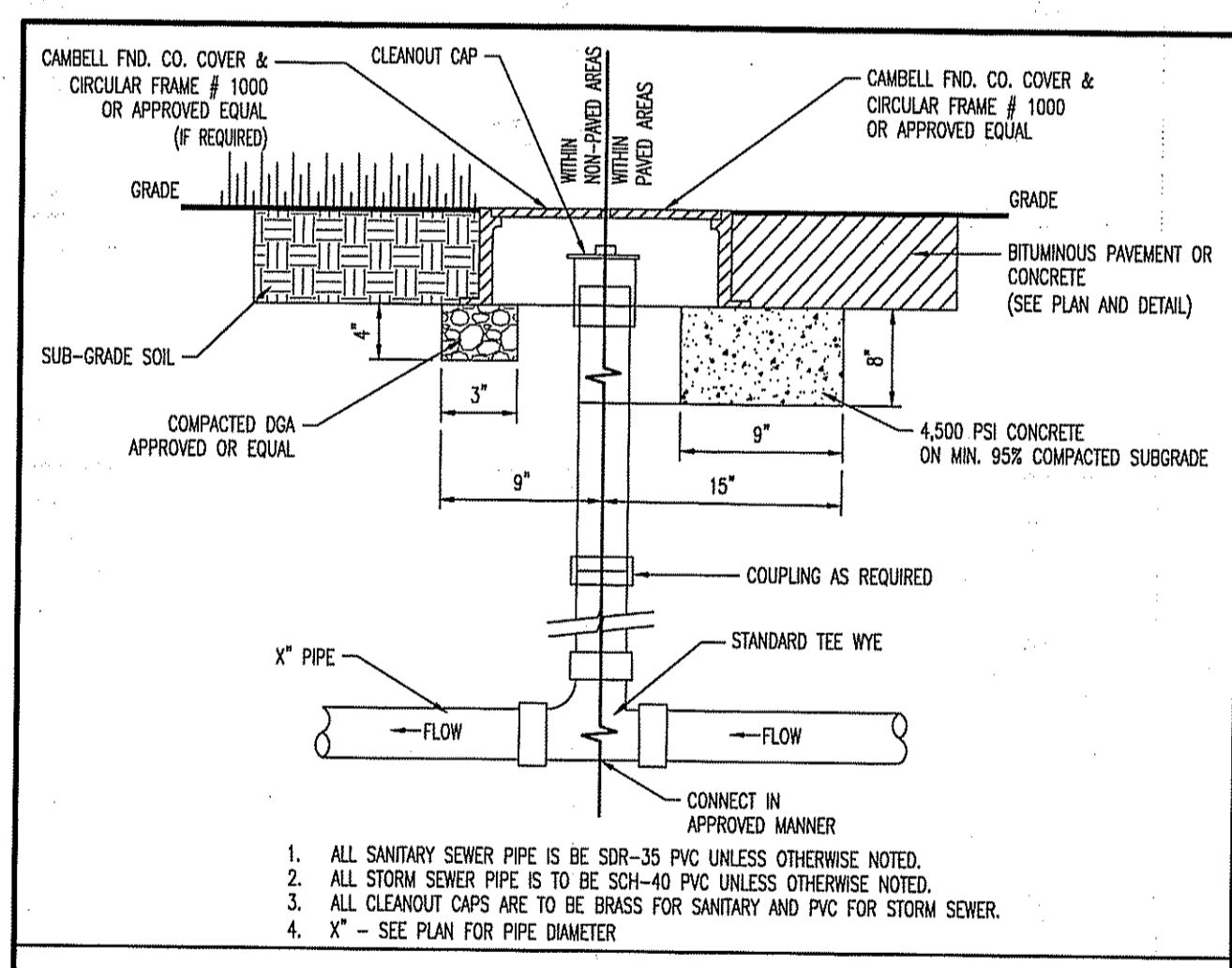
NOT TO SCALE

SIGNAGE TABLE

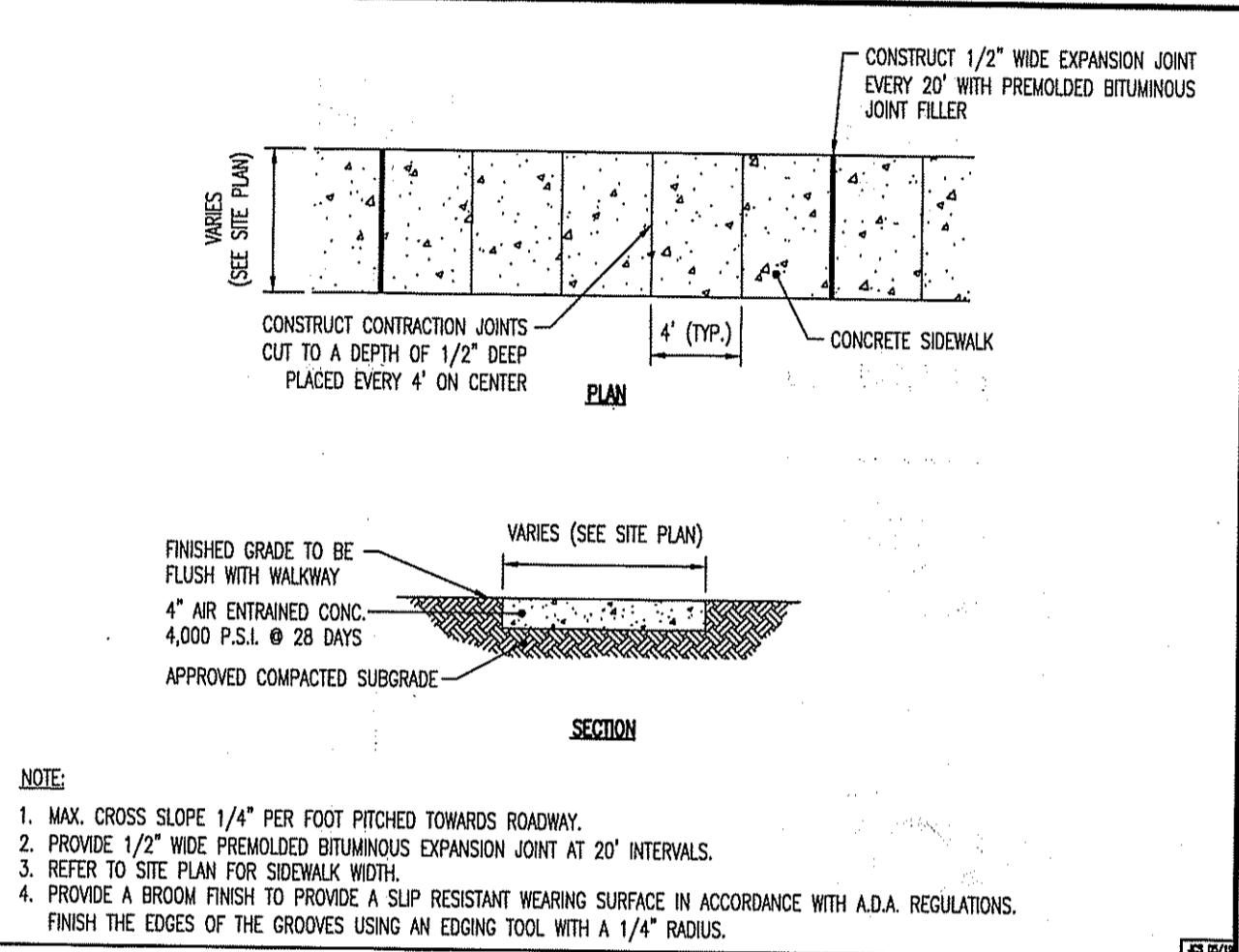
SIGN	REQUIREMENTS (C-3 ZONE)	PROPOSED
FREESTANDING	NUMBER OF SIGNS:	TWO (2) [1]
	SIGN AREA:	140 SF/EACH
	MAXIMUM SIGN HEIGHT:	25 FT/EACH
	MINIMUM SIGN SETBACK:	25 FT [2]
	NUMBER OF FACADE SIGNS:	ONE (1) OR MORE
BUILDING MOUNTED	NUMBER OF SIGNS:	SEVEN (7)
	SIGN AREAS (LOT 371):	RESTAURANT SIGN: 28.30 SF RETAIL SIGNS: 34.18 SF/EACH (3 TOTAL)
	TOTAL SIGN AREA (LOT 371):	130.84 SF
	SIGN AREAS (LOT 370):	RESTAURANT SIGN: 28.30 SF RETAIL SIGNS: 34.18 SF/EACH (2 TOTAL)
	TOTAL SIGN AREA (LOT 370):	96.66 SF
DIRECTIONAL	NUMBER OF SIGNS:	THREE (3)
	MAXIMUM SIGN AREA:	3 SF/EACH

N/S: NO STANDARD N/A: NOT APPLICABLE (E): EXISTING NON-CONFORMANCE (V): VARIANCE

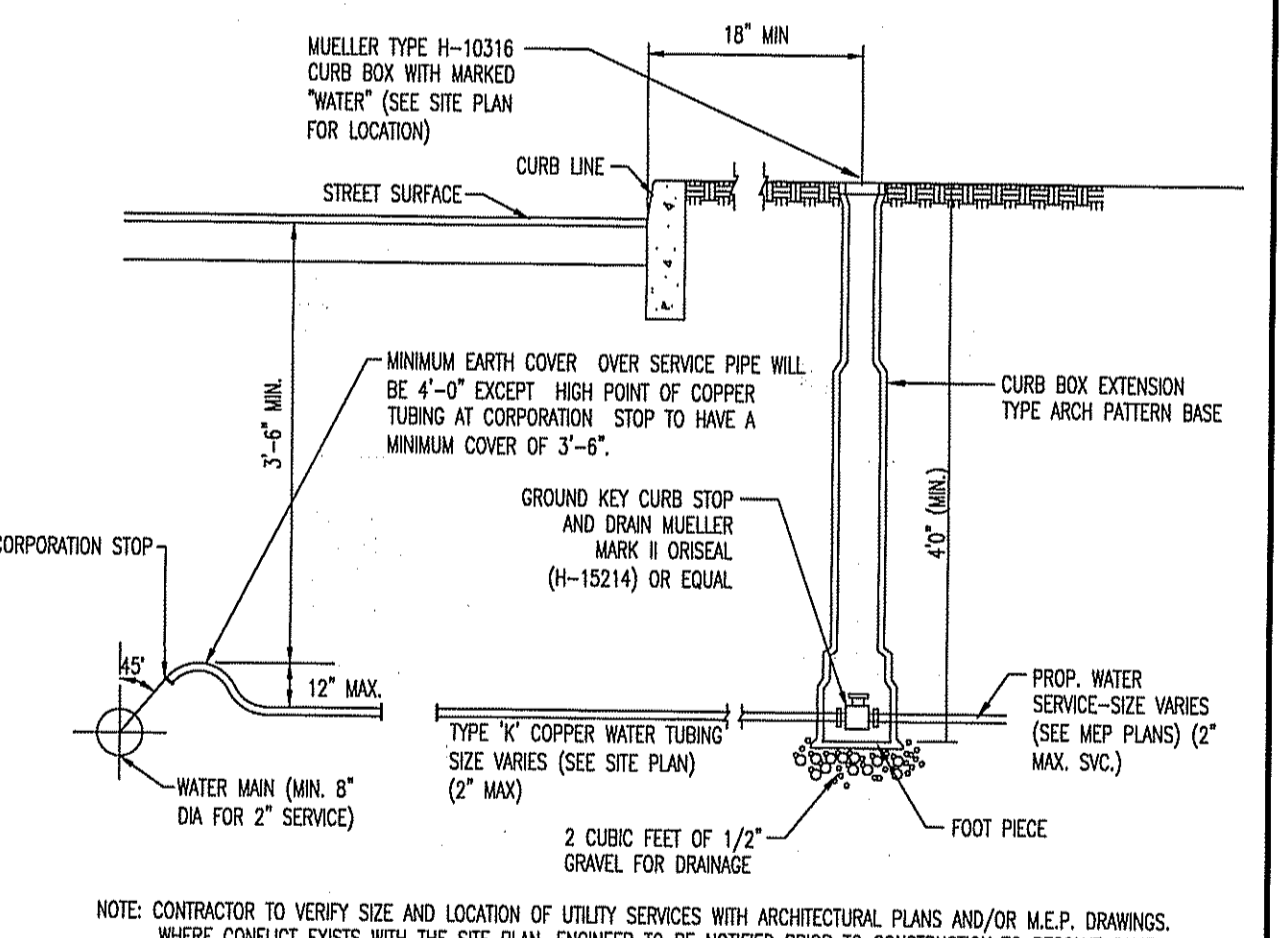
[1] COMMERCIAL USES WITH STREET FRONTAGE IN EXCESS OF 400 FEET MAY ERECT TWO FREESTANDING SIGNS.
 [2] NO PART OF ANY SIGN SHALL BE LOCATED CLOSER TO ANY LOT LINE THAN 10 FEET OR A DISTANCE EQUAL TO THE HEIGHT OF THE SIGN, WHICHEVER IS GREATER, EXCEPT FOR TRAFFIC SIGNS.
 [3] THE AREA OF A SIGN SHALL INCLUDE EVERY PART OF THE SIGN, INCLUDING MOLDINGS, FRAMES, POSTS, PYLONS, OR OTHER SUPPORTING STRUCTURES.



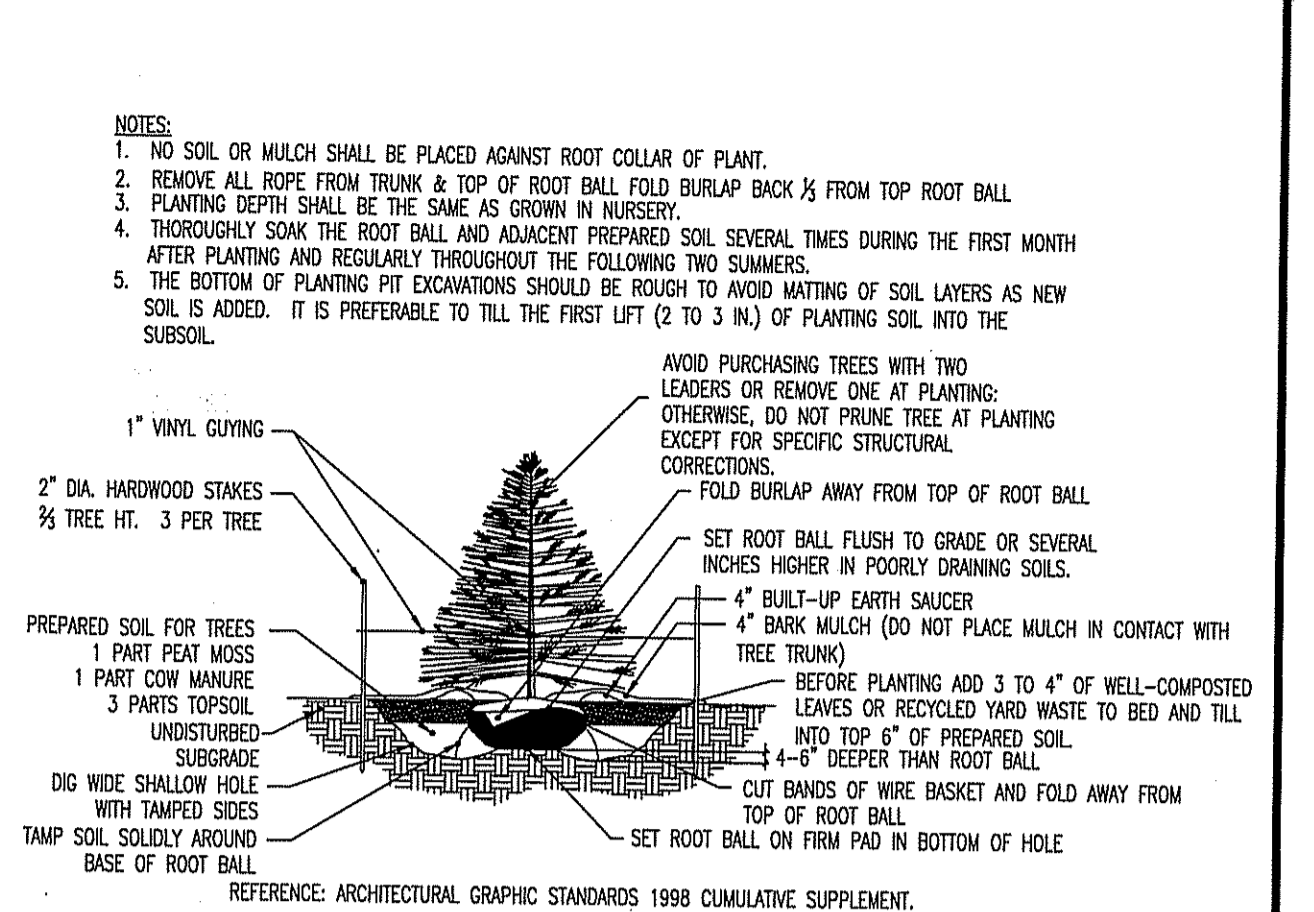
DECIDUOUS TREE PLANTING DETAIL



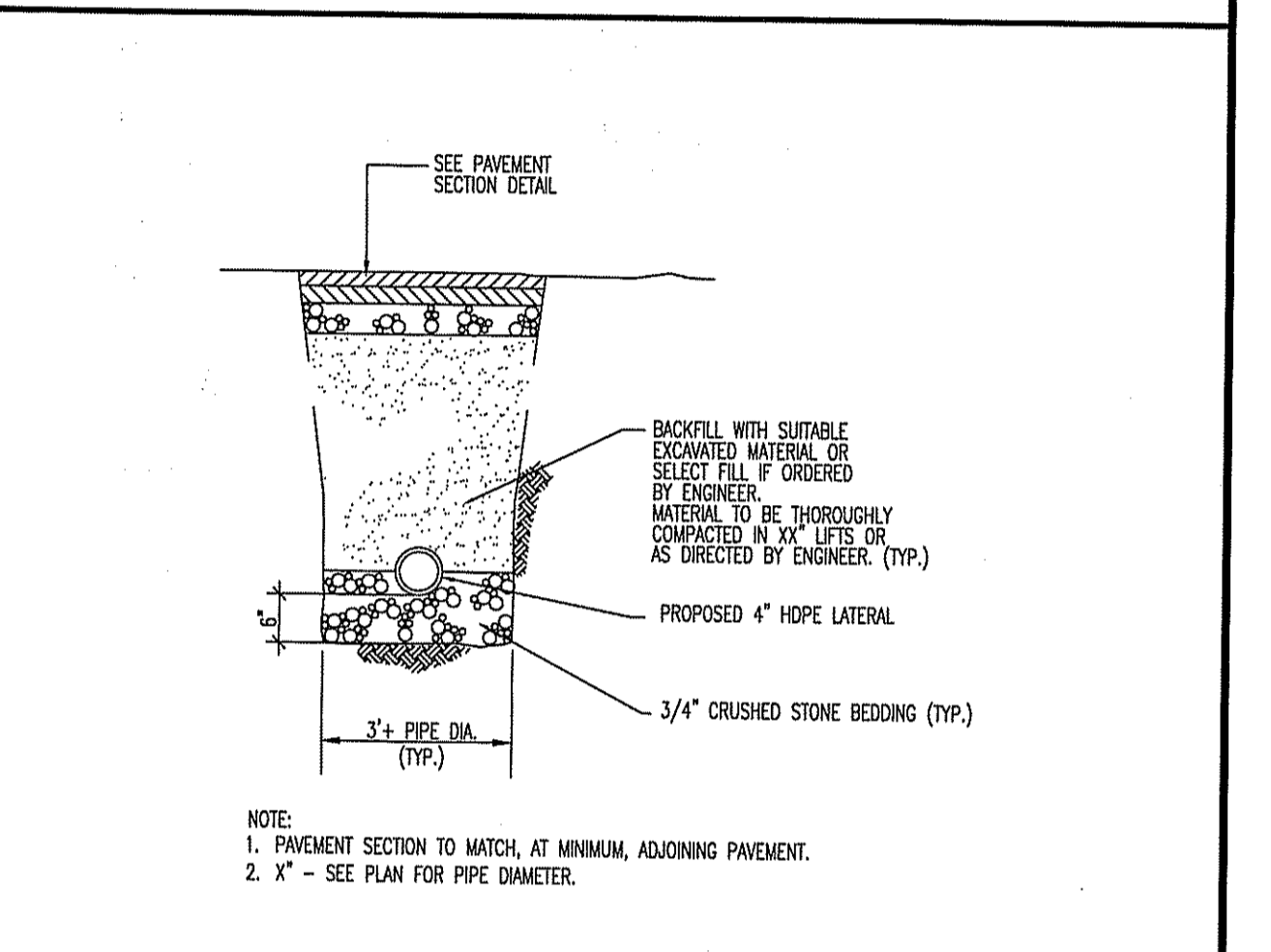
SIDWALK DETAIL



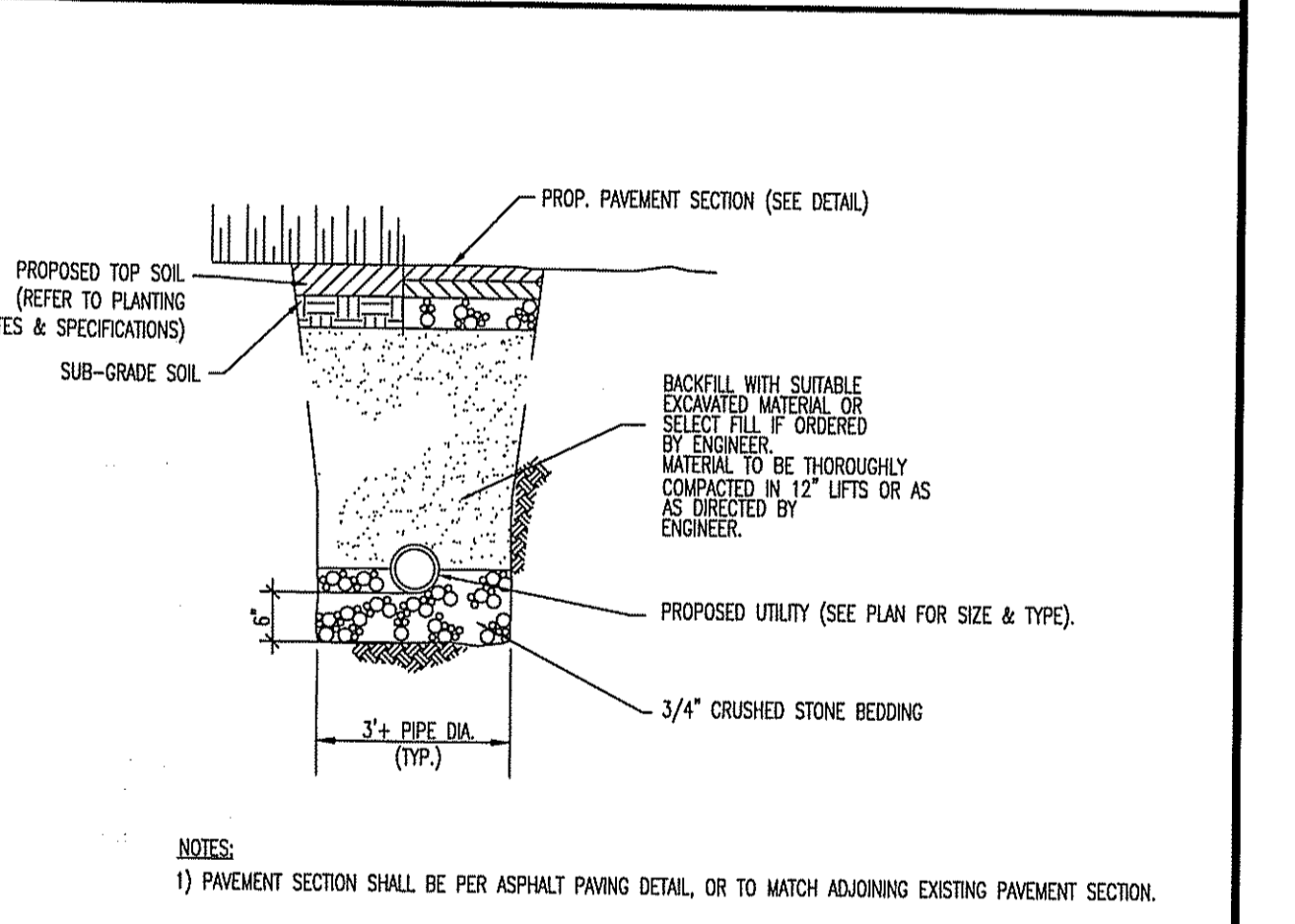
WATER SERVICE CONNECTION



EVERGREEN TREE PLANTING DETAIL



SANITARY SEWER TRENCH DETAIL



UTILITY SERVICE TRENCH DETAIL

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TITLE: **CONSTRUCTION DETAILS**

PROJECT: **405 ROUTE 9 LLC
 PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
 BLOCK 288, LOTS 370 & 371
 405 NUSH ROUTE 9
 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY**

JOB No: 3307-99-001
 DATE: 12/15/2020
 DRAWN BY: KNG
 SCALE: (N) AS SHOWN
 DESIGNED BY: RTO
 SHEET No: 17
 CHECKED BY: JEH
 OF 22

JAMES E. HENRY
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE No. 49266

TIAGO F. DUARTE
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE No. 52588

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Project: 02/08/21 - 10x40 AM. Br. dbyd. Product: Var. 24.0p. (LMS Tech) File: P:\DECPC PROJECTS\3307 Abrington Belton_Marble LLC-99-001_Marble02\Long Site Plan\330799001SD3.dwg. 17 CONSTRUCTION DETAILS

Catalog #: Project:
Prepared By: Date:



Mirada Medium - MRM Outdoor LED Area Light

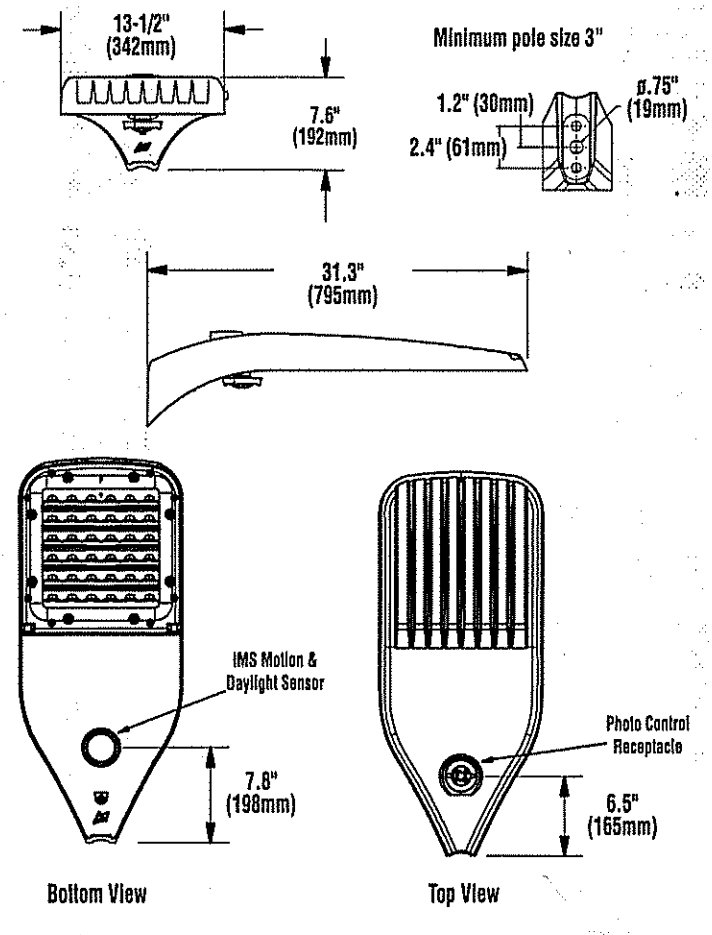
The Mirada's sleek design makes it perfectly-suited for architectural & commercial applications, while its cost-effective die-cast aluminum housing makes its acquisition cost very competitive. The Mirada offers high performance factory-rotatable silicone optics, 5 standard CCTs, 42,000+ delivered lumens, and is available with Integral Airlink™ Wireless Controls.

Features & Specifications

- Optical System**
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
 - Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT and FTA.
 - Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
 - Zero uplight.
 - Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak Intensity at 610nm.
 - Minimum CRI of 70.
 - Integral Louver (L) option available for improved back-light control without sacrificing street side performance. See page 5 for more details.
- Electrical**
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
 - 0-10V dimming (10% - 100%) standard.
 - Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
 - L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
 - Total harmonic distortion: <20%
 - Operating temperature: -40°C to +50°C (-40°F to +122°F), 42L lumen package rated to +40°C.
 - Power factor: >.90
 - Input power stays constant over life.
 - Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2)
 - High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
 - Terminal block provided accepts up to 10ga wire.
 - Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.



Product Dimensions



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Mirada Medium - MRM Outdoor LED Area Light

Poles & Brackets

LSI offers a full line of poles and brackets to complete your lighting assembly. Our USA manufacturing facility has the same high quality standards for our poles and brackets as we do our lighting fixtures.

Steel Square Pole
14'-39"

Steel Round Pole
10'-30"

Steel Tapered Pole
20'-39"

BKA UMB CLR
The 3G rated Universal Mounting Bracket (UMB) allows for seamless integration of LSI luminaires onto existing or new construction poles. The UMB bracket was designed specifically for square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5"-5".

BKA-XMA-XALM-CLR
The Mirada Slip Fitter is a aesthetically pleasing 3G rated die cast aluminum adapter. Designed specifically to mount the MRM onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Mirada Slip Fitter allows for leveling via integrated steps to adjust the luminaire +/- 3 Degrees.

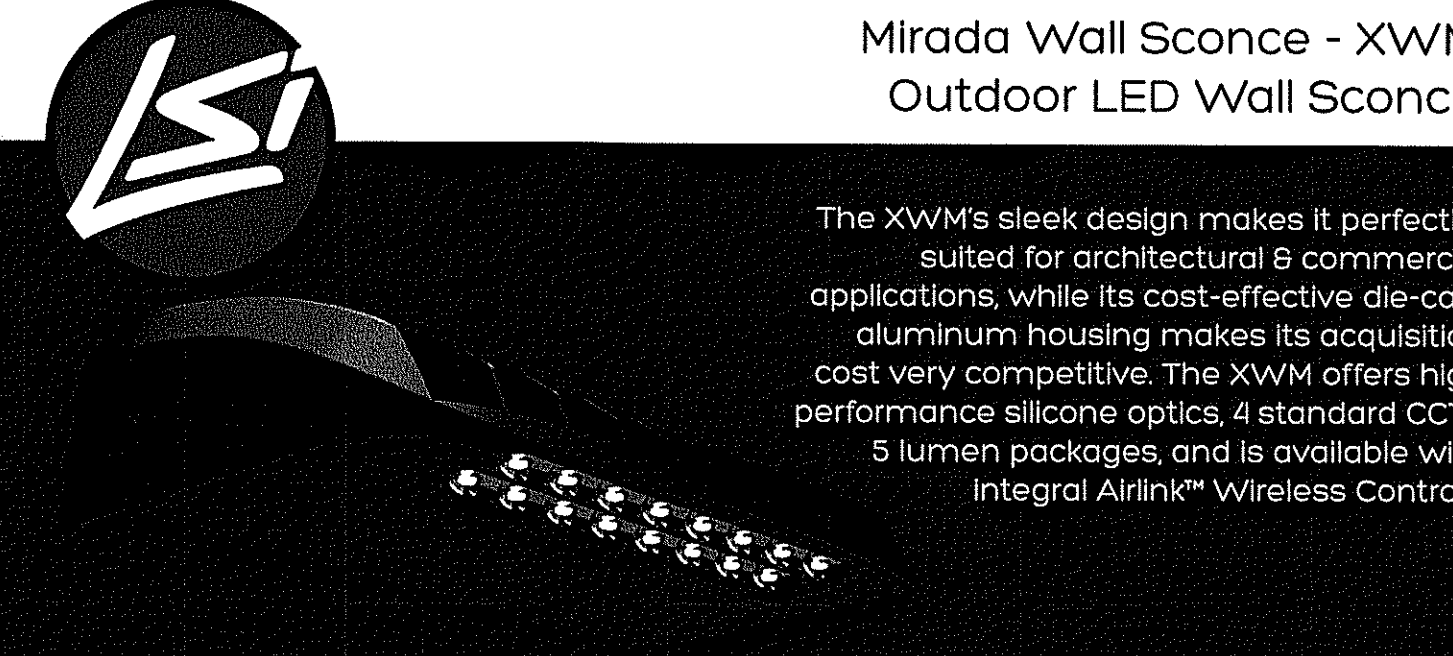
BKA ASF CLR
The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Adjustable Slip Fitter can be rotated 48° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQMH CLR
The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's 3" or 5" standard bolt patterns.

BKS PQM15 CLR
The Pole Quick Mount Bracket allows for preset 15° up tilt of LSI luminaires for greater throw of light and increased vertical illumination as well as fast installation onto poles with LSI's 3" or 5" bolt pattern.

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Catalog #: Project:
Prepared By: Date:



Mirada Wall Sconce - XWM Outdoor LED Wall Sconce

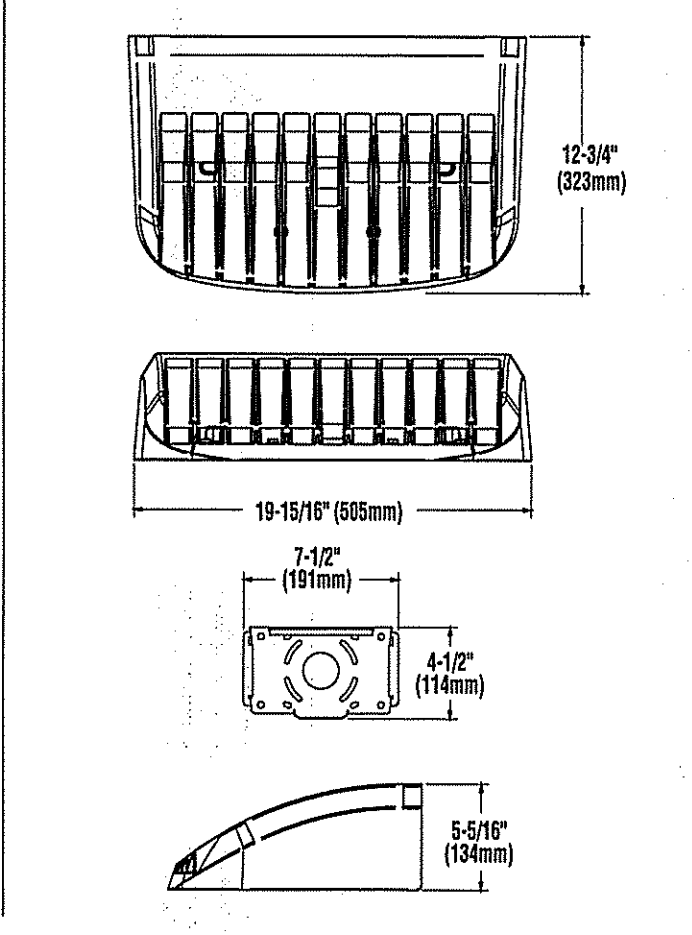
The XWM's sleek design makes it perfectly-suited for architectural & commercial applications, while its cost-effective die-cast aluminum housing makes its acquisition cost very competitive. The XWM offers high performance silicone optics, 4 standard CCTs, 5 lumen packages, and is available with Integral Airlink™ Wireless Controls.

Features & Specifications

- Optical System**
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP65 rated sealed optical chamber in 1 component.
 - Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, and Forward Throw (FT).
 - Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
 - Zero uplight.
 - Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377.
 - Minimum CRI of 70.
- Electrical**
- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
 - 0-10V dimming (10% - 100%) standard.
 - Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
 - L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2)
 - Total harmonic distortion: <20%
 - Operating temperature: -40°C to +50°C (-40°F to +122°F).
 - Power factor: >.90
 - Input power stays constant over life.
 - Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
 - High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
 - Terminal block provided accepts up to 10ga wire.
 - Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
 - Optional 120v-277v integral emergency battery pack is available. The 90-minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. Operating temperature for standard battery backup: -20°C to +50°C (-32°F to +122°F), Cold Weather battery backup: -20°C to +50°C (-4°F to +122°F).



Product Dimensions



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Mirada Wall Sconce - XWM Outdoor LED Wall Sconce

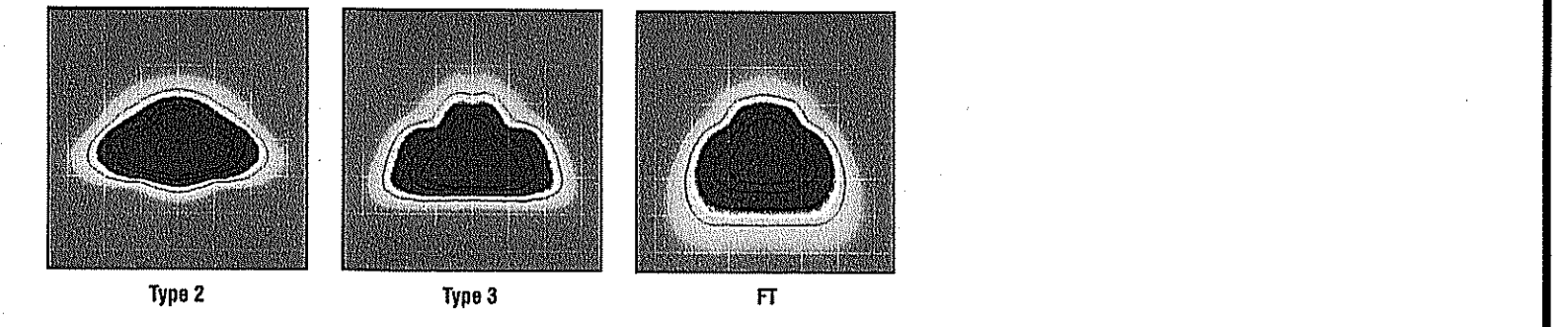
Performance (Cont.)

Lumen Package	Orientation	CCT	2700K		3000K		4000K		5000K		Wattage	
			Delivered Lumens	Efficiency	Delivered Lumens	Efficiency	Delivered Lumens	Efficiency	Delivered Lumens	Efficiency		
03L	2	70	2703	120	81-U0-G1	2822	125	81-U0-G1	3038	137	81-U0-G1	22.6
	3	70	2792	122	81-U0-G1	2873	127	81-U0-G1	3144	139	81-U0-G1	
	FT	70	2718	120	81-U0-G1	2838	126	81-U0-G1	3105	137	81-U0-G1	
04L	2	70	3546	120	81-U0-G1	3702	125	81-U0-G1	4051	137	81-U0-G1	29.5
	3	70	3610	122	81-U0-G1	3769	128	81-U0-G1	4124	140	81-U0-G1	
	FT	70	3565	121	81-U0-G1	3722	126	81-U0-G1	4073	138	81-U0-G1	
05L	2	70	5274	118	82-U0-G2	5506	123	82-U0-G2	6025	135	82-U0-G2	44.7
	3	70	5389	120	81-U0-G1	5606	125	81-U0-G1	6134	137	81-U0-G2	
	FT	70	5303	119	81-U0-G2	5538	124	81-U0-G2	6058	136	81-U0-G2	
06L	2	70	6995	113	82-U0-G2	7304	118	82-U0-G2	7995	129	82-U0-G2	62.0
	3	70	7123	115	81-U0-G2	7437	120	81-U0-G2	8138	131	82-U0-G2	
	FT	70	7035	113	81-U0-G2	7345	118	82-U0-G2	8037	130	82-U0-G2	
12L	2	70	10516	103	82-U0-G2	10979	107	83-U0-G3	12014	118	83-U0-G3	102.2
	3	70	10707	105	82-U0-G2	11178	109	82-U0-G2	12232	120	82-U0-G2	
	FT	70	10574	103	82-U0-G3	11049	108	82-U0-G3	12080	118	82-U0-G3	

*LED Chips are frequently updated therefore values are nominal.

Photometrics

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Mirada Wall Sconce (XWM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.

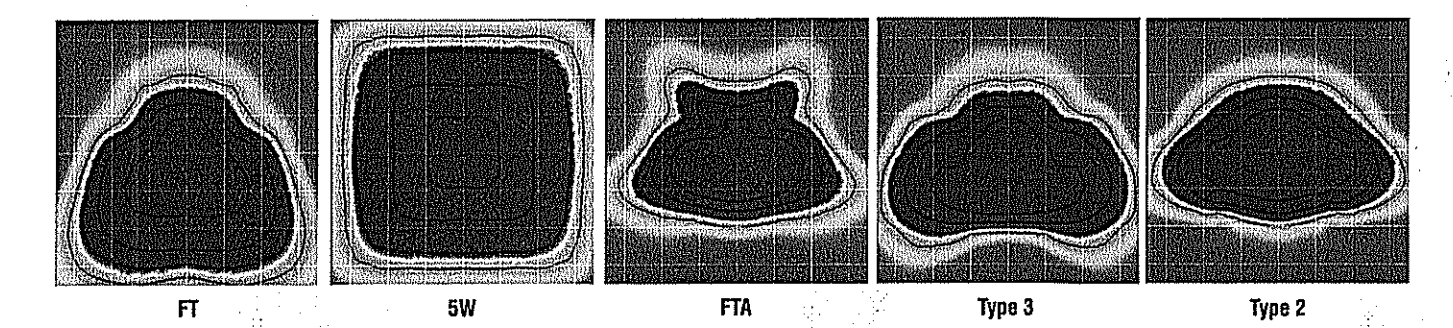


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Mirada Medium - MRM Outdoor LED Area Light

Performance (Cont.)

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Mirada (MRM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



Ordering Guide

TYPICAL ORDER EXAMPLE: **MRM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package*	Light Output	Distribution	Orientation†	Voltage	Driver
MRM Mirada	LED	7L - 7,000 lms 8L - 8,000 lms 12L - 12,000 lms 16L - 16,000 lms 24L - 24,000 lms 36L - 36,000 lms 38L - 38,000 lms 42L - 42,000 lms	SIL - Silicone	2 - Type 2 3 - Type 3 5W - Type 5 Wide FT - Forward Throw FTA - Forward Throw Automotive	(Blank) - Standard L - Optics rotated left 90 R - Optics rotated right 90	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DM - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Controls (Chassis One)	Finish	Options
50 - 5,000 CCT 40 - 4,000 CCT 30 - 3,000 CCT 27 - 2,700 CCT	70CRI - 70 CRI	(Blank) - None ALS0 - Airlink Synapse Control System* ALS0H - Airlink Synapse Control System Host / Satellite* ALS0S1 - Airlink Synapse Control System with 8-12' Motion Sensor* ALS0S2 - Airlink Synapse Control System Host / Satellite with 8-12' Motion Sensor** ALS0S3 - Airlink Synapse Control System with 10-20' Motion Sensor* ALS0S4 - Airlink Synapse Control System Host / Satellite with 10-20' Motion Sensor** ALS0S5 - Airlink Synapse Control System with 20-40' Motion Sensor* ALS0S6 - Airlink Synapse Control System Host / Satellite with 20-40' Motion Sensor**	BRZ - Bronze BLK - Black OPF - Graphite MSV - Metallic Silver WHT - White PLP - Platinum Plus SVD - Satin Verde Green	(Blank) - None IL - Integral Louver HSS*

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AREA LIGHT DETAILS

NOT TO SCALE

WALL MOUNTED LIGHT DETAILS

NOT TO SCALE

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CONSTRUCTION DETAILS

PROJECT: **405 ROUTE 9, LLC**
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001
DATE: 12/15/2020
SCALE: (H) NOT TO SCALE
SHEET No: 18 OF 22

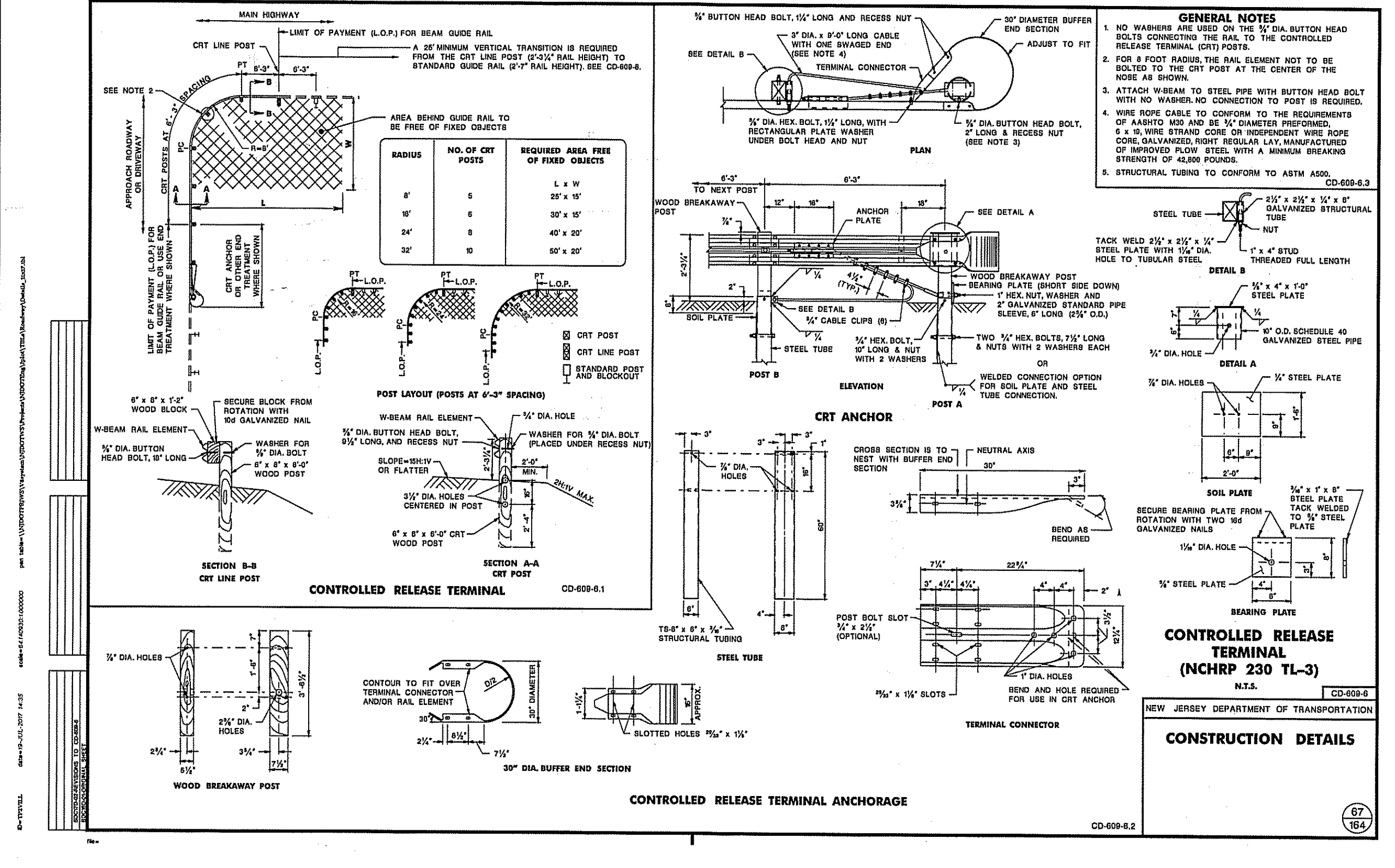
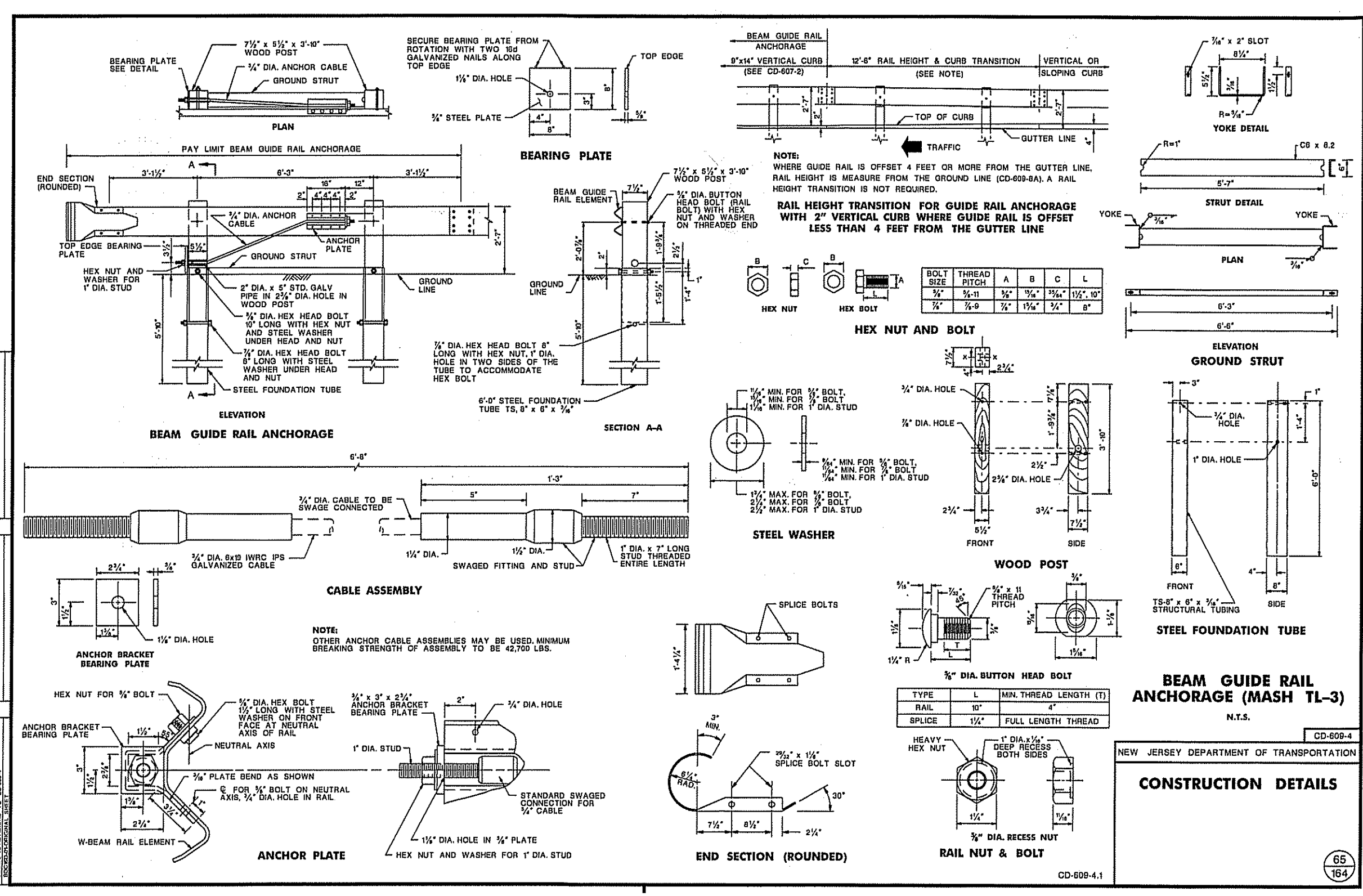
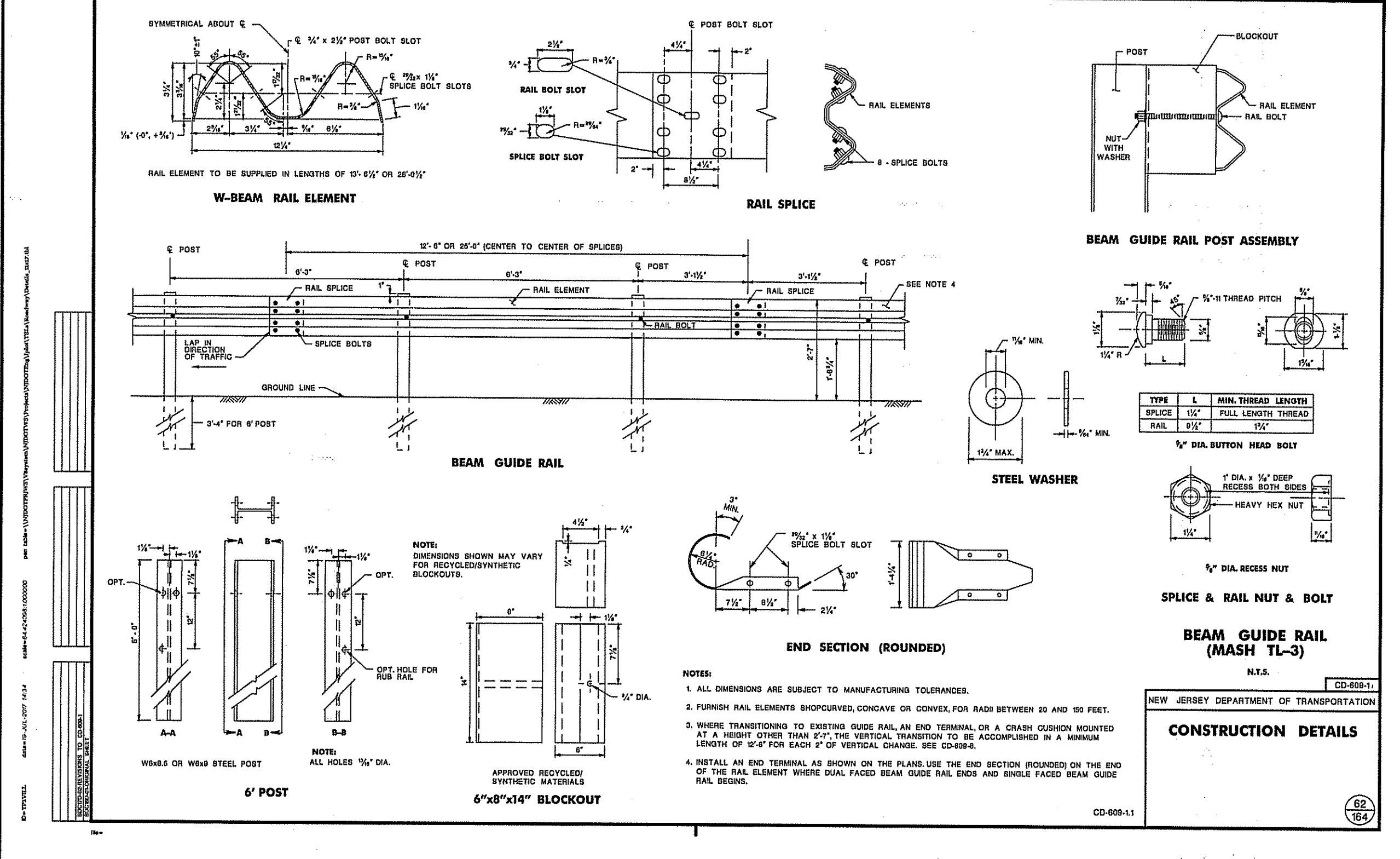
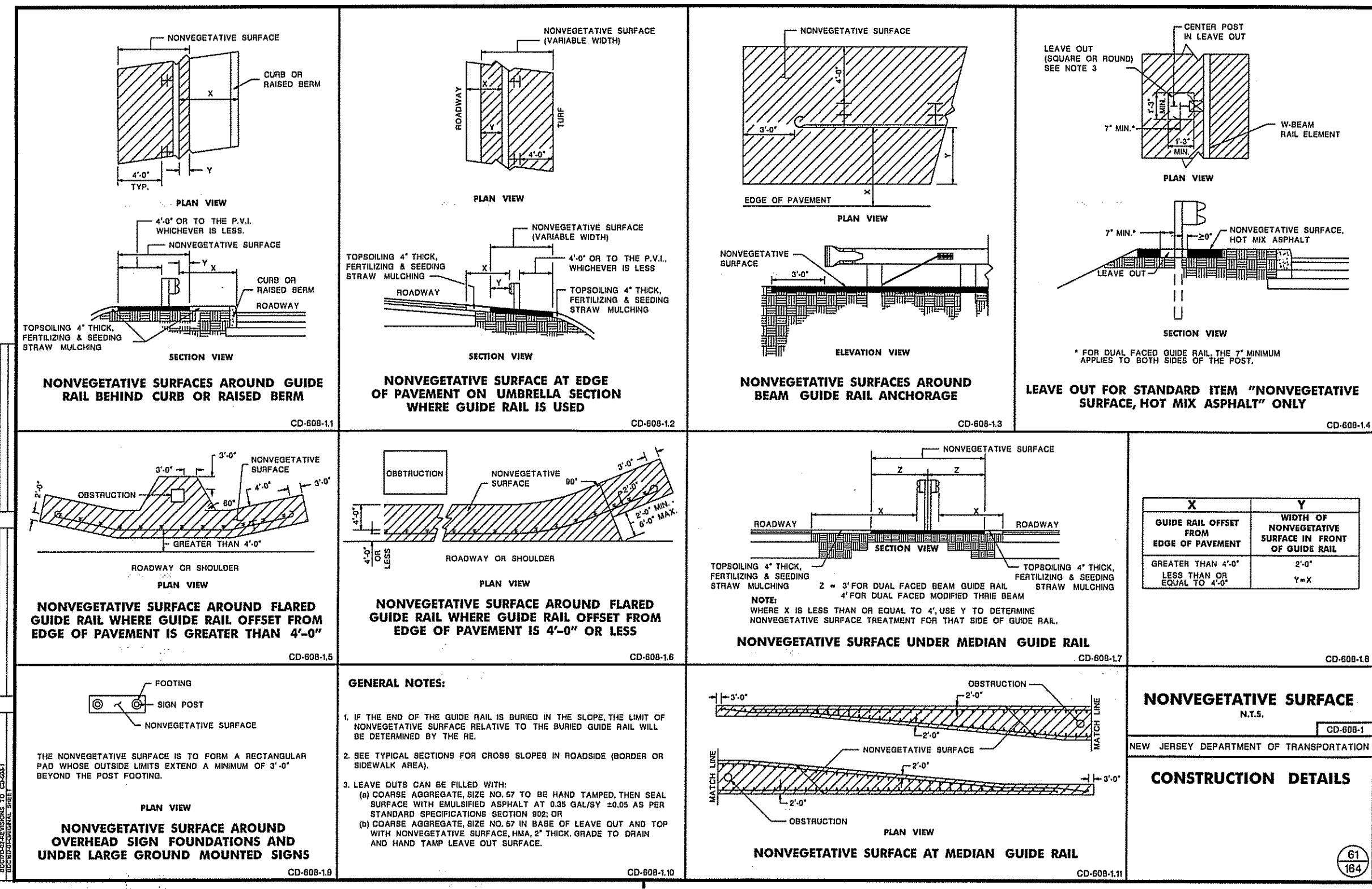
DESIGNED BY: GMC
CHECKED BY: JEH

JAMES E. HENRY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 49266

TIAGO F. DUARTE
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 52588

Rev. # 3

Plot: 02/08/21 11:10 AM By: dboyd, File: P:\352PC-Products\3507-Religion-Restau-Mirada\0330799001\SDS.dwg, 18 CONSTRUCTION DETAILS



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NJDOT GUIDE RAIL
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TITLE: **CONSTRUCTION DETAILS**

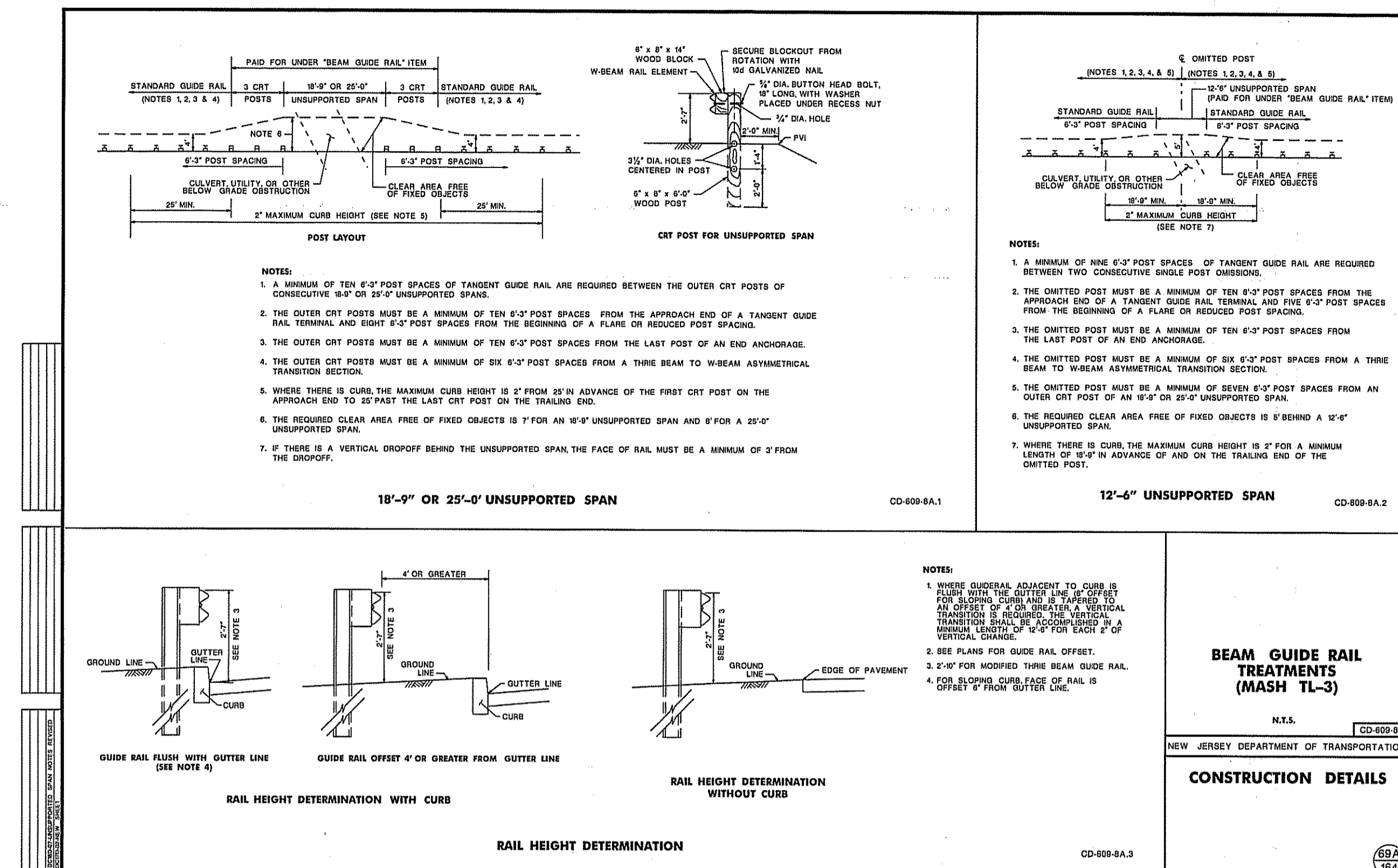
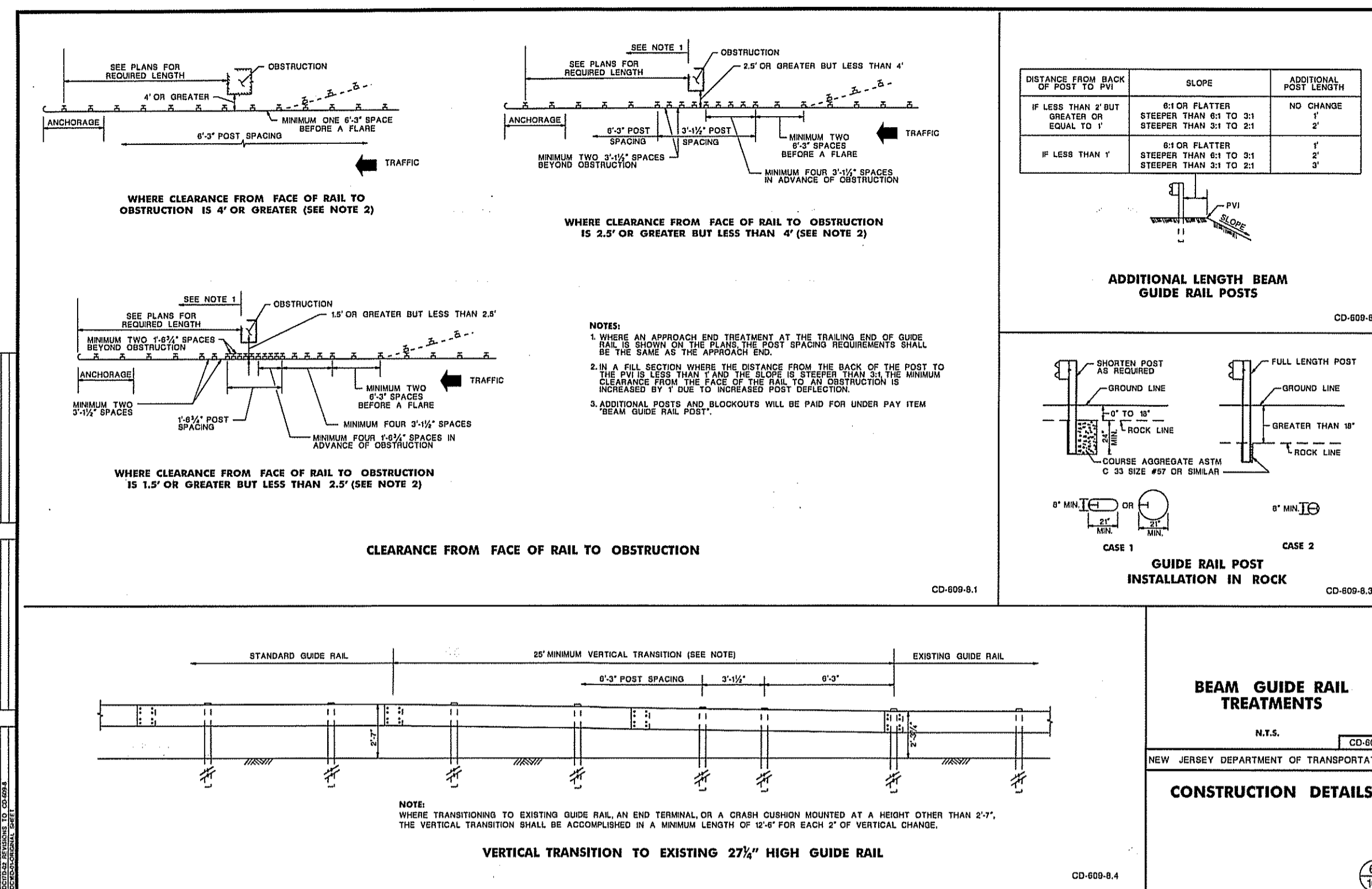
PROJECT: **405 ROUTE 9, LLC**
PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU
BLOCK 288, LOTS 370 & 371
405 NUSH ROUTE 9
TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY

JOB No: 3307-99-001 DATE: 12/15/2020
DRAWN BY: DJB SCALE: (H) NOT TO SCALE
DESIGNED BY: RTQ SHEET No: 19 OF 22
CHECKED BY: JEH
CHECKED BY: TIAGO F. DUARTE

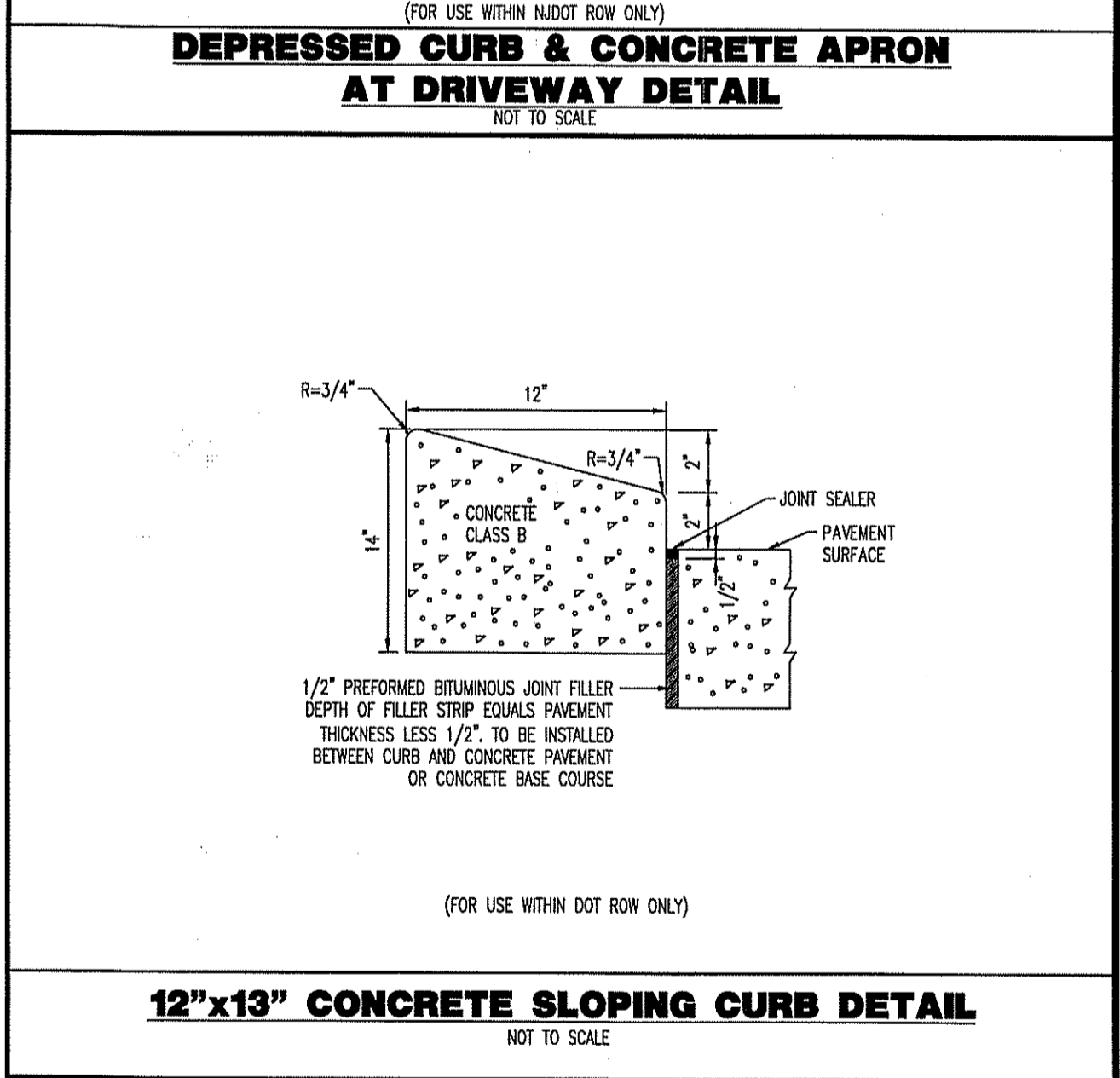
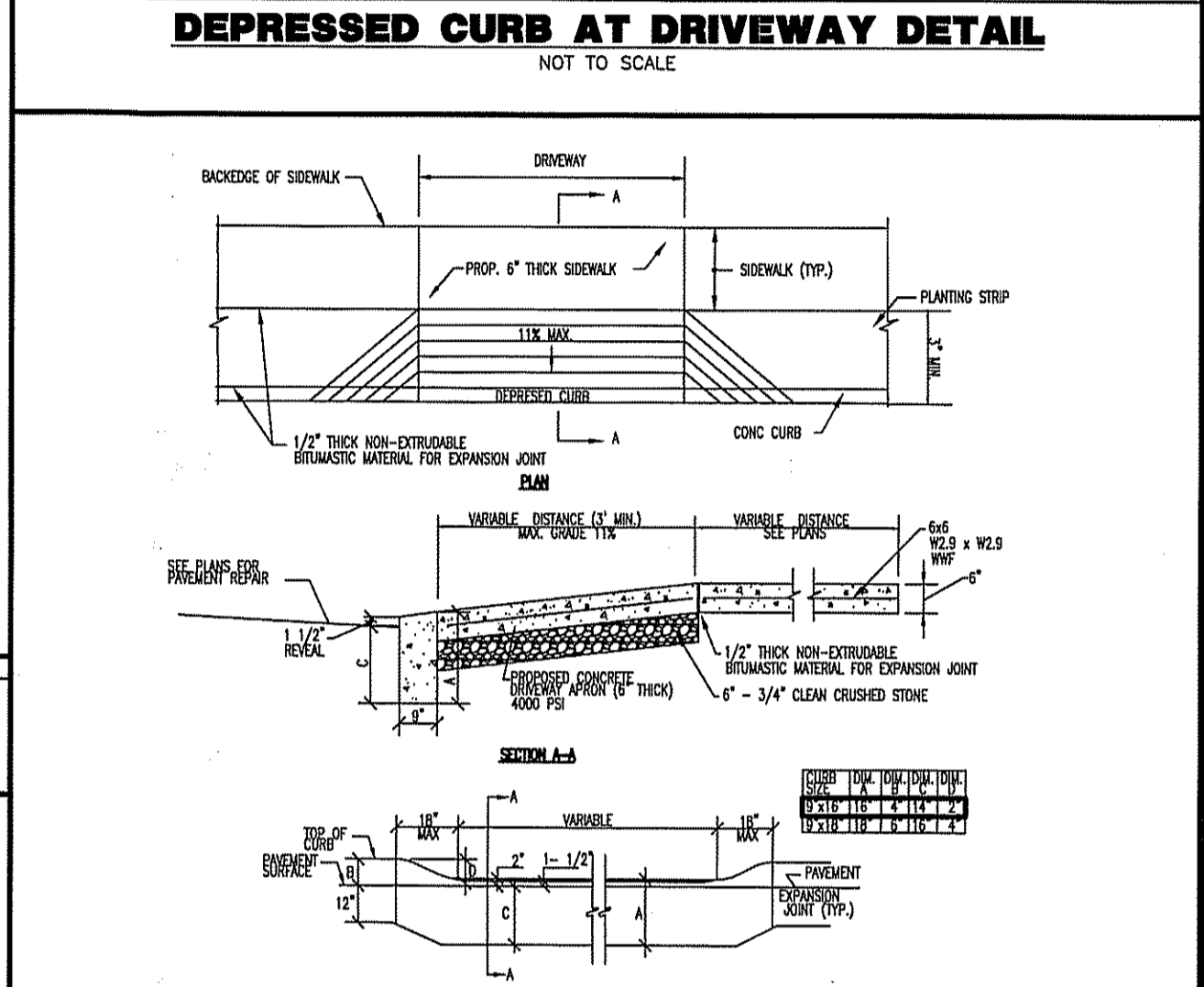
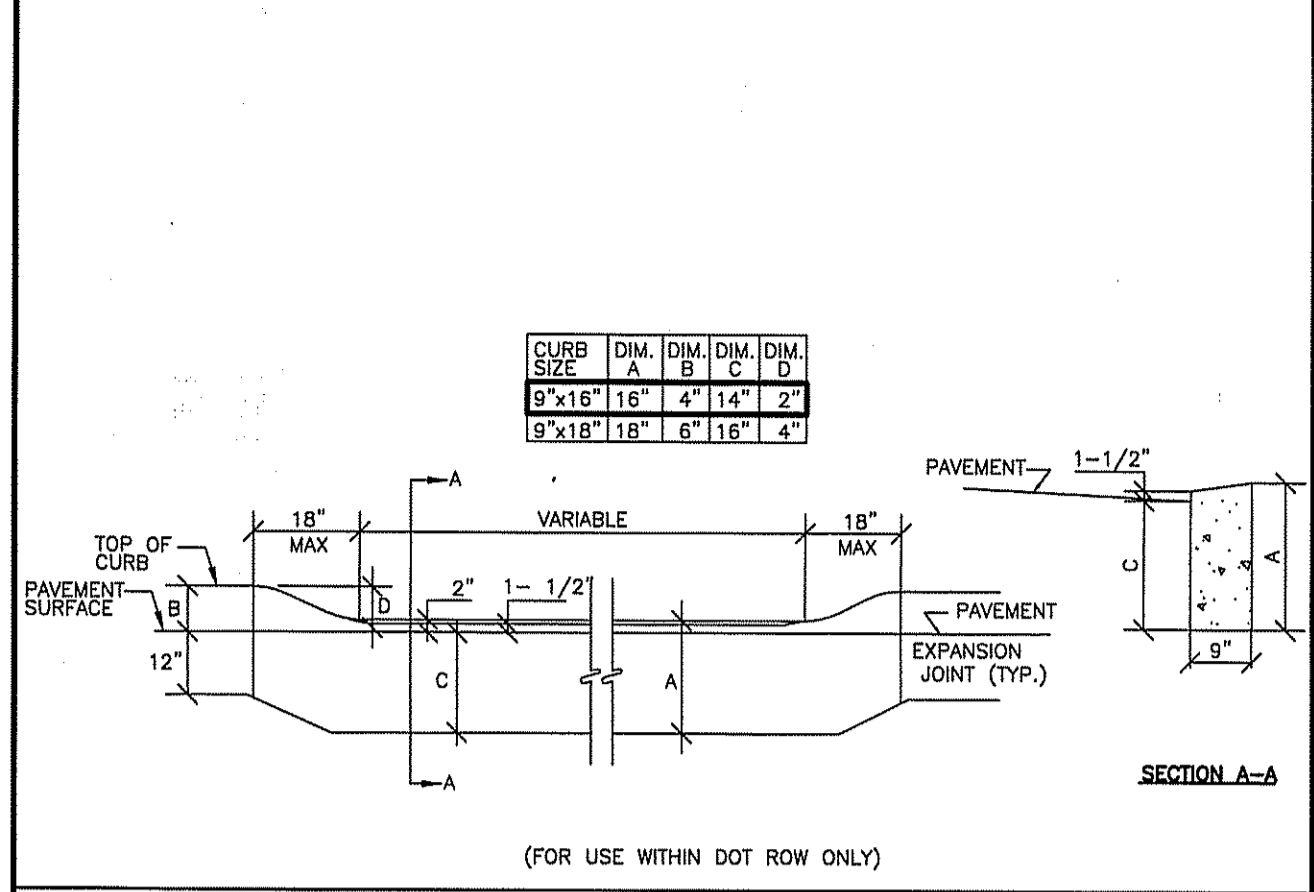
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NEW JERSEY LICENSE No. 49286

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Plotfile: 02/08/21 - 10:41 AM, By: dbyrd, Product: Ver: 24.0s (LMS Tech), File: F:\BECPC PROJECTS\3307 Abington Rd\Main\330799001_SDS.dwg, Date: 02/08/21, Time: 10:41 AM, User: dbyrd, Project: 3307 Abington Rd, Sheet: 20 CONSTRUCTION DETAILS

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BLOCK 288, LOTS 370 & 371
405 NJSH ROUTE 9
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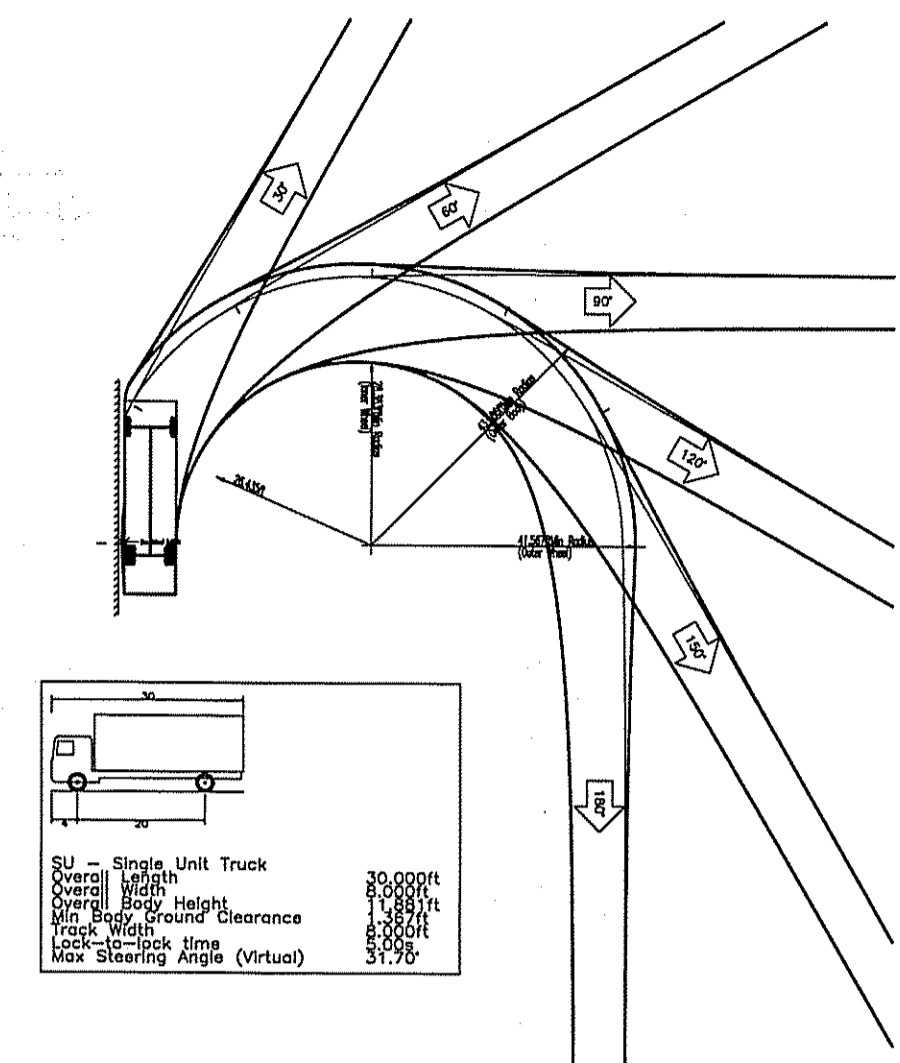
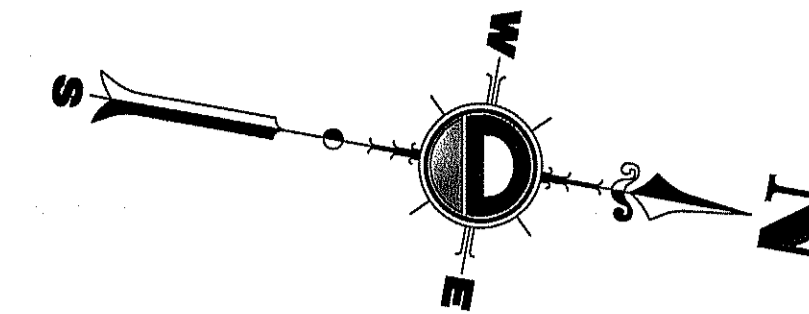
JOB No: 3307-99-001
DATE: 12/15/2020
SCALE: (H) NOT TO SCALE (V) SCALE

SHEET No: **20**
OF 22
Rev. # 3

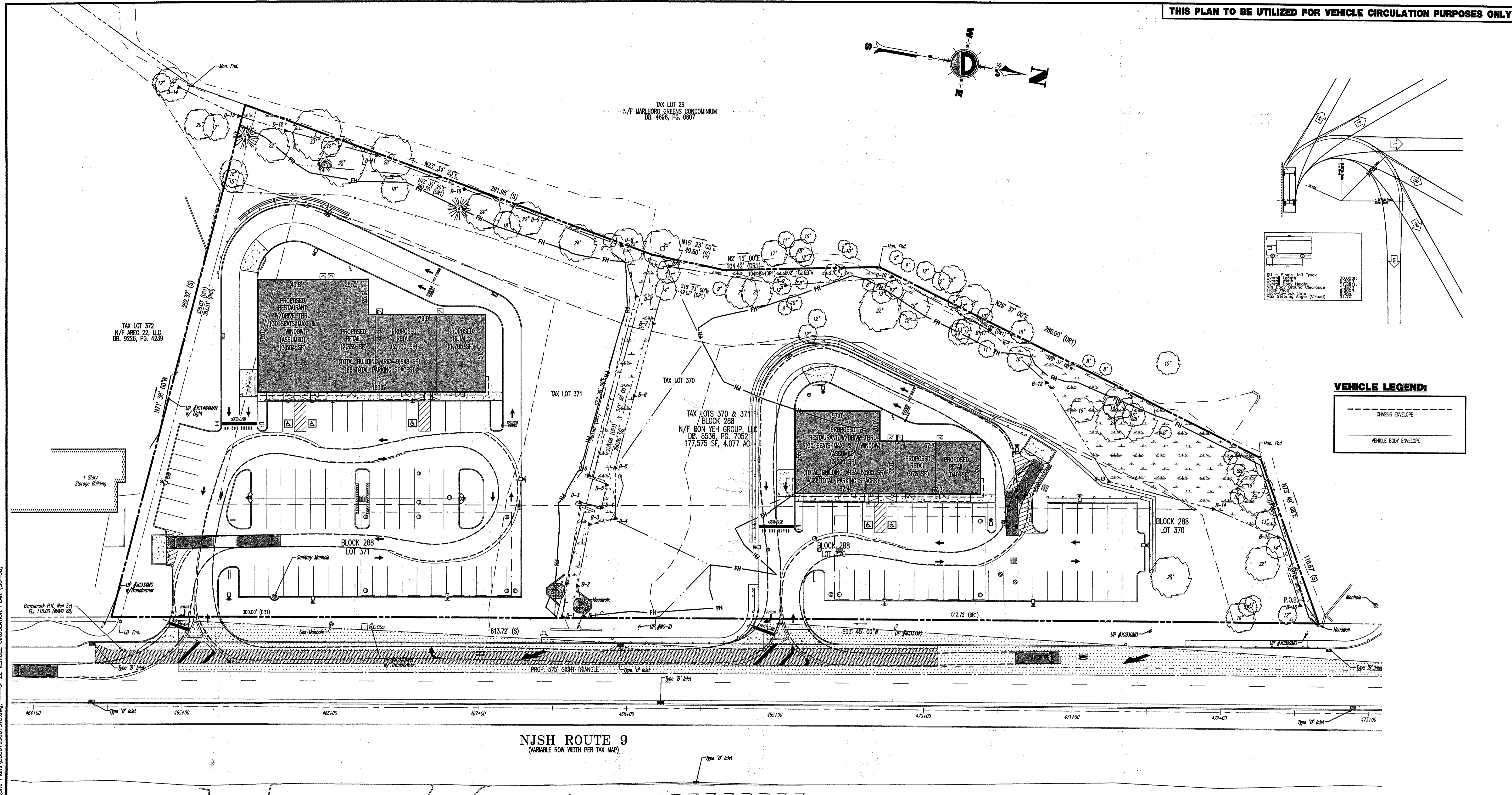
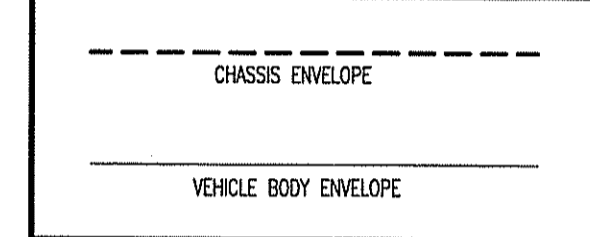
Rev.	Date	Comments
1	02/02/21	REV. PER NADP COMMENTS
2	01/19/21	REV. PER DOT COMMENTS
3	01/12/21	REV. PER ARCHITECTURAL & TOWNSHIP UPDATES

JAMES E. HENRY
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 49286

TIAGO F. DUARTE
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 52988



VEHICLE LEGEND:



NJSH ROUTE 9
(VARIABLE ROW WIDTH PER TAX MAP)

Plotted: 02/08/21 - 10:41 AM, By: eboyd, Product Ver: 24.0s (LMS Tech), File: P:\BECPC PROJECTS\3307 Abington Reiken Malais LLC\99-001 Marlboro.Dwg, Site Plans\0330799001\SU-30.dwg, 22 VEHICLE CIRCULATION PLAN (SU-30)

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<p>TITLE: VEHICLE CIRCULATION PLAN (SU-30)</p>	
<p>PROJECT: 405 ROUTE 9, LLC PROPOSED RETAIL AND RESTAURANTS W/ DRIVE-THRU BLOCK 288, LOTS 370 & 371 405 NASH ROUTE 9 TOWNSHIP OF MARLBORO, MONMOUTH COUNTY, NEW JERSEY</p>	
<p>JOB No: 3307-99-001</p>	<p>DATE: 12/15/2020</p>
<p>DRAWN BY: DJB</p>	<p>SCALE: (H) 1"=30'</p>
<p>DESIGNED BY: RTO</p>	<p>SHEET No:</p>
<p>CHECKED BY: JEJ</p>	<p>22</p>
<p>CHECKED BY:</p>	<p>OF 22</p>
<p>JAMES E. HENRY PROFESSIONAL ENGINEER NEW JERSEY LICENSE No. 49266</p>	<p>TIAGO F. DUARTE PROFESSIONAL ENGINEER NEW JERSEY LICENSE No. 52568</p>
<p>Rev. Date</p>	<p>Comments</p>
<p>3 02/02/21 REV. PER NUBEP COMMENTS</p>	
<p>2 01/19/21 REV. PER DOT COMMENTS</p>	
<p>1 01/12/21 REV. PER ARCHITECTURAL & TOWNSHIP UPDATES</p>	