

PRELIMINARY AND FINAL SITE PLAN

212, 214 & 216 ERNSTON ROAD TAX LOTS 23, 24, 25 & 28, BLOCK 444.04 BOROUGH OF SAYREVILLE MIDDLESEX COUNTY, NEW JERSEY

200 FEET OWNERS LIST - SAYREVILLE			
BLOCK LOT	PROPERTY LOCATION	PROPERTY OWNER & ADDRESS	
444.04 10	7 LOUIS STREET	MICHAEL A. BRAINE 7 LOUIS STREET PARLIN, NJ 08859	
444.04 11	9 LOUIS STREET	EVELYN A. CIAK 9 LOUIS STREET PARLIN, NJ 08859	
444.04 12	11 LOUIS STREET	JOSEPH & MARY ELLEN KLIMUSZKO 11 LOUIS STREET PARLIN, NJ 08859	
444.04 13	13 LOUIS STREET	JOHN C. & MARIE SABINE 13 LOUIS STREET PARLIN, NJ 08859	
444.04 14	15 LOUIS STREET	GERALD UVARI AND KIMBERLY UVARI 15 LOUIS STREET PARLIN, NJ 08859	
444.04 15	17 LOUIS STREET	BERNARD LOPPEZ 17 LOUIS STREET PARLIN, NJ 08859	
444.04 16	19 LOUIS STREET	SHARON M. JULIANO 19 LOUIS STREET PARLIN, NJ 08859	
444.04 17	17 CENTER AVENUE	CASEY A. SCHEID 17 CENTER AVENUE PARLIN, NJ 08859	
444.04 18	38 STONEHENGE DRIVE	ELLSBURY, LLC 38 STONEHENGE DRIVE OCEAN, NJ 07712	
444.04 19	9 CENTER AVENUE	OLSON MORRIS AND CARMEN LAMOURT 9 CENTER AVENUE PARLIN, NJ 08859	
444.04 20	7 CENTER AVENUE	JOHNATHAN P. MAROTTI AND JOHN MAROTTI AND MARILYN MAROTTI 7 CENTER AVENUE PARLIN, NJ 08859	
444.04 21	9 CENTER AVENUE	FRANK P. MATT 9 CENTER AVENUE PARLIN, NJ 08859	
444.04 22	218 ERNSTON ROAD	JOHN T. SCHULTZ 218 ERNSTON ROAD PARLIN, NJ 08859	
444.04 26	167 MAIN STREET	BOROUGH OF SAYREVILLE 167 MAIN STREET SAYREVILLE, NJ 08872	
444.04 27	210 ERNSTON ROAD	BLANKE ZWISLOCKI 210 ERNSTON ROAD PARLIN, NJ 08859	
444.05 4	24 LOUIS STREET	SORANA OLIVARES AND OLBERT PITRE 24 LOUIS STREET PARLIN, NJ 08859	
444.05 5	22 LOUIS STREET	CARMELLA A. HUGHES 22 LOUIS STREET PARLIN, NJ 08859	
444.05 6	20 LOUIS STREET	TNA INVESTORS, LLC 20 LOUIS STREET PARLIN, NJ 08859	
444.05 7	18 LOUIS STREET	RICHARD J. & MARIE PANKANN 18 LOUIS STREET PARLIN, NJ 08859	
444.05 8	16 LOUIS STREET	ADELIN P. PIERRE - ESTATE 16 LOUIS STREET PARLIN, NJ 08859	
444.05 9	14 LOUIS STREET	GREGORY JAMES GORDANO 14 LOUIS STREET PARLIN, NJ 08859	
444.05 10	12 LOUIS STREET	JOSEPH L. & JONIA CAMPBELL 12 LOUIS STREET PARLIN, NJ 08859	
444.05 11	10 LOUIS STREET	DANIEL & SANDRA CLEARY 10 LOUIS STREET PARLIN, NJ 08859	
444.05 12	8 LOUIS STREET	ROSSI & CARMEL ST LOUIS 8 LOUIS STREET PARLIN, NJ 08859	
444.05 13	6 LOUIS STREET	MICHAEL & KIMBERLY BARONE 6 LOUIS STREET PARLIN, NJ 08859	
444.05 14	4 LOUIS STREET	SHAHAB SHAIR 4 LOUIS STREET PARLIN, NJ 08859	
444.07 29	8 CENTER AVENUE	TED & MARY ANN ONUA 8 CENTER AVENUE PARLIN, NJ 08859	
444.07 30	10 CENTER AVENUE	ANTHONY A. AFRIE AND JOYCE AFRIE 10 CENTER AVENUE PARLIN, NJ 08859	
444.07 31	12 CENTER AVENUE	JAMES KOLMANSPERGER & CANDICE BOEHLER KOLMANSPERGER 12 CENTER AVENUE PARLIN, NJ 08859	
444.07 32	14 CENTER AVENUE	JULIA KODKA 14 CENTER AVENUE PARLIN, NJ 08859	
444.07 33	16 CENTER AVENUE	LEO F. & DONNA FOWLER 16 CENTER AVENUE PARLIN, NJ 08859	

PARKING ANALYSIS			
Description	Required	Proposed	Comment
Prayer hall			
1 Space for each 3 seats (321 seats)	107 Spaces	107 Spaces	Conforming
Indoor recreational			
1 Space for 4,511,000 sf (13,045 sf)	59 Spaces	0 Spaces	Non-Conforming
Office			
1 Space for 250 sf (706 sf)	3 Spaces	0 Space	Non-Conforming
School			
1 Space for 2 students (105 students)	53 Spaces	0 Spaces	Non-Conforming
Assembly area			
1 Space for 250 sf (6,905 sf)	28 Spaces	0 Spaces	Non-Conforming
Max. Total Required	200 Spaces	107 Spaces	Non-Conforming
Loading Requirements			
One (1) for the first twenty-five thousand (25,000) square feet of gross building floor area plus one (1) additional space for each additional fifteen thousand (15,000) square feet of gross building area. A minimum of one (1) space shall be provided per b	3 Spaces	None	Non-Conforming
* Not used at the same time of using the assembly.			

OWNER

SHAMEER PROPERTIES, LLC
104 MARKET STREET
NEWARK, NJ 07102

APPLICANT:

MASJID SADAR & COMMUNITY CENTER
216 ERNSTON ROAD
PARLIN, NJ 08859

APPROVED BY PLANNING BOARD - BOROUGH OF SAYREVILLE

BOARD SECRETARY:

DATE:

BOARD CHAIRMAN:

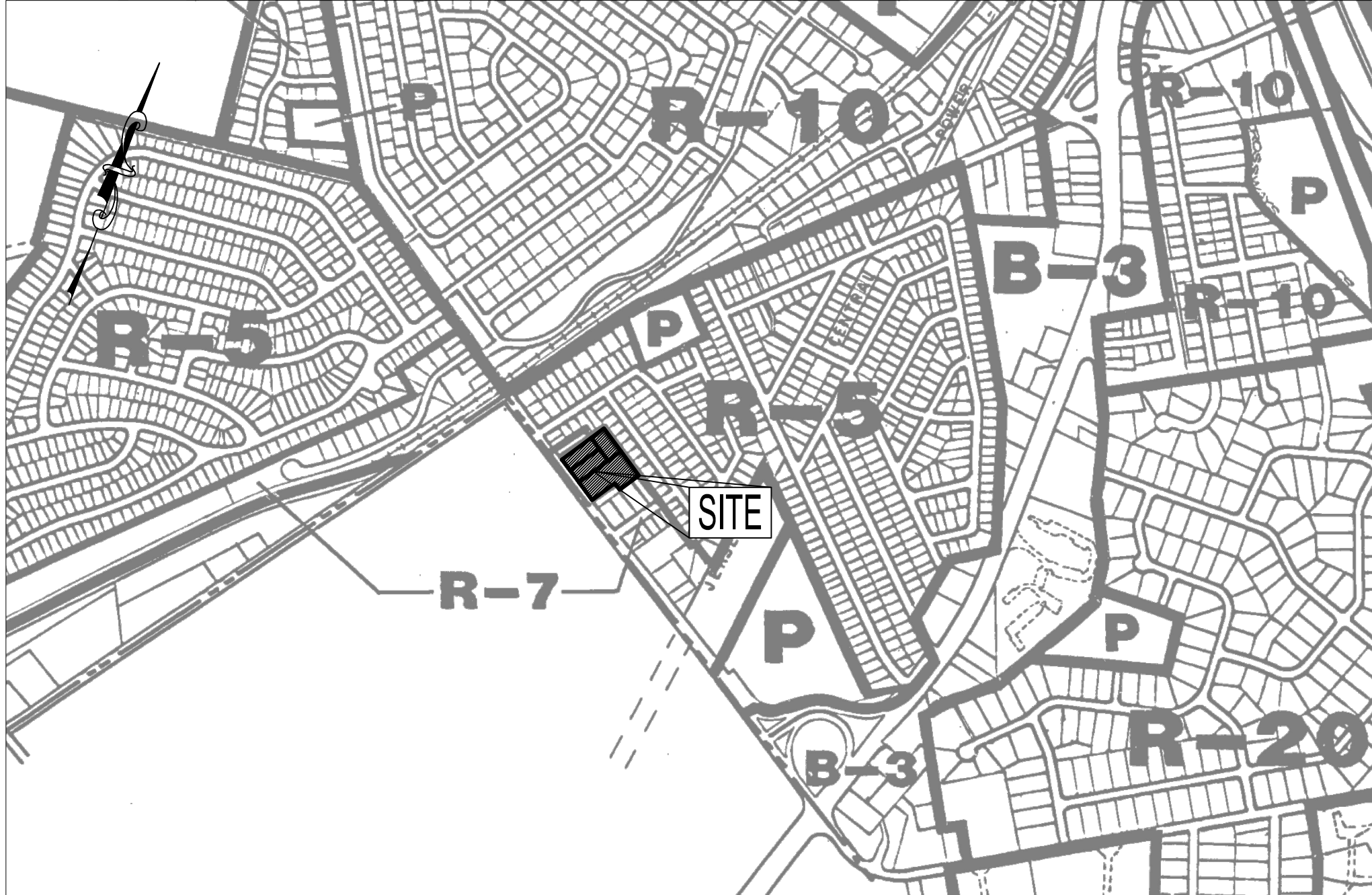
DATE:

BOARD ENGINEER:

DATE:

200 FEET OWNERS LIST - OLD BRIDGE			
BLOCK LOT	PROPERTY LOCATION	PROPERTY OWNER & ADDRESS	
9000.11 1	316 ERNSTON RD	CURRENT OWNER 1031 HWY 18 UNIT 1 EAST BRUNSWICK, NJ 08816	
9000.17 1	330 ERNSTON RD	CURRENT OWNER 41 DORCHESTER DR EAST BRUNSWICK, NJ 08816	
9000.17 2	332 ERNSTON RD	CURRENT OWNER 104 MARKET ST NEWARK, NJ 07102	
9000.17 32	4 RUTGERS RD	CURRENT OWNER 4 RUTGERS RD PARLIN, NJ 08859	
9000.17 33	314 ERNSTON RD	CURRENT OWNER 314 ERNSTON RD PARLIN, NJ 08859	
9000.17 34	318 ERNSTON RD	CURRENT OWNER 318 ERNSTON RD PARLIN, NJ 08859	
9000.17 35	322 ERNSTON RD	CURRENT OWNER 4 HANSEN PL MIDDLETOWN, NJ 07748	
9000.17 36	326 ERNSTON RD	CURRENT OWNER 107 VALLEY DR WORMSVILLE, NJ 07751	
9000.17 37	328 ERNSTON RD	CURRENT OWNER 267 FOURTH ST SOUTH AMBOY, NJ 08879	
UTILITIES			
OLD BRIDGE MUNICIPAL UTILITIES AUTHORITY			
NEW JERSEY NATURAL GAS CO.			
FIRE80			
VERIZON			
CABLEVISION OF RARITAN VALLEY			
JP&K EXTERNAL AFFAIRS			
15 THROCKMORTON LANE OLD BRIDGE, NJ 08857 ATTN: MICHAEL BOY PO BOX 1464 WALL, NJ 07794 ATTN: JOHN WYCKOFF (MANAGER) 150 HOWE LANE NEW BRUNSWICK, NJ 08901 ATTN: RAY BOYD 1775 WEST MAIN STREET FREDRICKS, NJ 07738 ATTN: BRYAN DEPAUL 275 CENTINARA AVENUE, CN 0885 PISCATAWAY, NJ 08854-0885 ATTN: JANIE PNEKERS 1345 ENGLISH TOWN ROAD OLD BRIDGE, NJ 08857 ATTN: TRIL EASLEY			

SIGN ANALYSIS (CHURCHES)				
BLOCK 444.04 - 212, 214 & 216 ERNSTON ROAD - BOROUGH OF SAYREVILLE				
Permanent Signs - Institutional Uses				
Description	Required	Existing	Proposed	Comment
Max. Size	8 sq. ft.	-	N/A	Not Applicable
Max. Height	6 ft.	-	N/A	Not Applicable
Max. No.	1	-	N/A	Not Applicable
Min. Setback	-	-	N/A	Not Applicable
Permit Required	Yes	-	N/A	Not Applicable
Illumination Permitted	Yes	-	N/A	Not Applicable
Notes	-	-	-	-
Max. Size	24 sq. ft.	-	14.5 sq. ft.	Conforming
Max. Height	6 ft.	-	6 ft.	Conforming
Max. No.	1 for each street frontage	-	1	Conforming
Min. Setback	1/2 of required front yard setback	-	12.5 ft. (V)	Variance is Required
Permit Required	Yes	-	Yes	Conforming
Illumination Permitted	Yes	-	Yes	Conforming
Notes	-	-	-	-
Max. Size	2 sq. ft.	-	N/A	Not Applicable
Max. Height	2 ft.	-	N/A	Not Applicable
Max. No.	-	-	N/A	Not Applicable
Min. Setback	1/2 of required front yard setback	-	N/A	Not Applicable
Permit Required	Yes	-	N/A	Not Applicable
Illumination Permitted	No	-	N/A	Not Applicable
Notes	-	-	-	-



ZONING/ 200' RADIUS MAP

SCALE: ±1"=800'

SCHEDULE OF GENERAL ZONING REQUIREMENTS (ZONE R-7, RESIDENTIAL DISTRICT)				
BLOCK 444.04 BOROUGH OF SAYREVILLE - MIDDLESEX COUNTY				
Regulation	General	Existing	Proposed	Comment
		Lots 23, 24, 25 & 28	Lots 23, 24, 25 & 28	
Principal Uses	Detached Single-Family Dwellings	Detached Single-Family Dwellings	N/A	Not Applicable
Conditional Uses	Houses of Worship	N/A	Houses of Worship	Conforming
Min. Lot Area	1 Acre	2.49 Acres	2.49 Acres	Conforming
Min. Lot Width	100 ft.	312.50 ft.	312.50 ft.	Conforming
Min. Lot Depth	100 ft.	323.48 ft.	323.48 ft.	Conforming
Min. Front Yard	50 ft.	17.0 ft. (e)	113.16 ft.	Conforming
Min. One Side Yard	25 ft.	11.8 ft. (e)	50.00 ft.	Conforming
Min. Total Sides Yards	50 ft.	32.10 ft. (e)	100.00 ft.	Conforming
Min. Rear	50 ft.	258.0 ft.	50.00 ft.	Conforming
Max. Building Height Feet/Stories (Building)	40 ft./3 Sty.*	≤40 ft./2 1/2 Sty.	40 ft./3 Sty.*	Conforming
Max. Building Height Feet/Stories (Minaret)	40 ft./3 Sty.*	N/A	62.08 ft.	Conforming
Max. Building Coverage	25%	6.43%	21.27%	Conforming
Max. Impervious Coverage	45%	21.47%	44.84%	Conforming

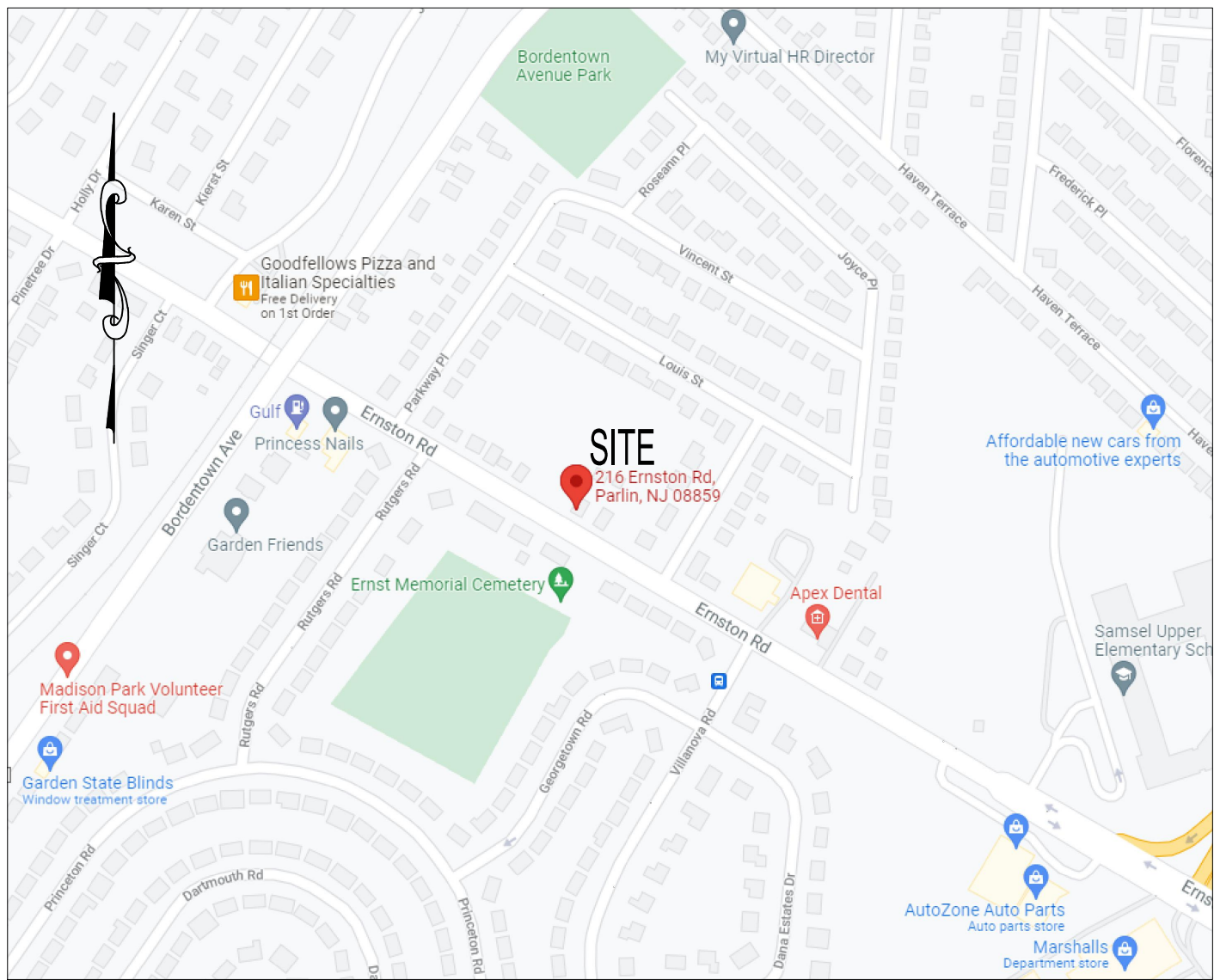
Notes:

* 26-82.5 Height Exceptions.

a. Appurtenances Attached to Principal Structures. Church spires, belfries, domes or antennas attached to buildings, penthouses (not for human occupancy), chimneys, ventilators, skylights, water tanks, bulkheads and necessary mechanical appurtenances usually carried above roof level shall not be considered when determining the height of the building, and are not subject to height limitations, except that such features shall not exceed twenty (20%) percent of total roof area and shall not exceed a height such as is necessary to accomplish the purpose for which it is intended to serve.

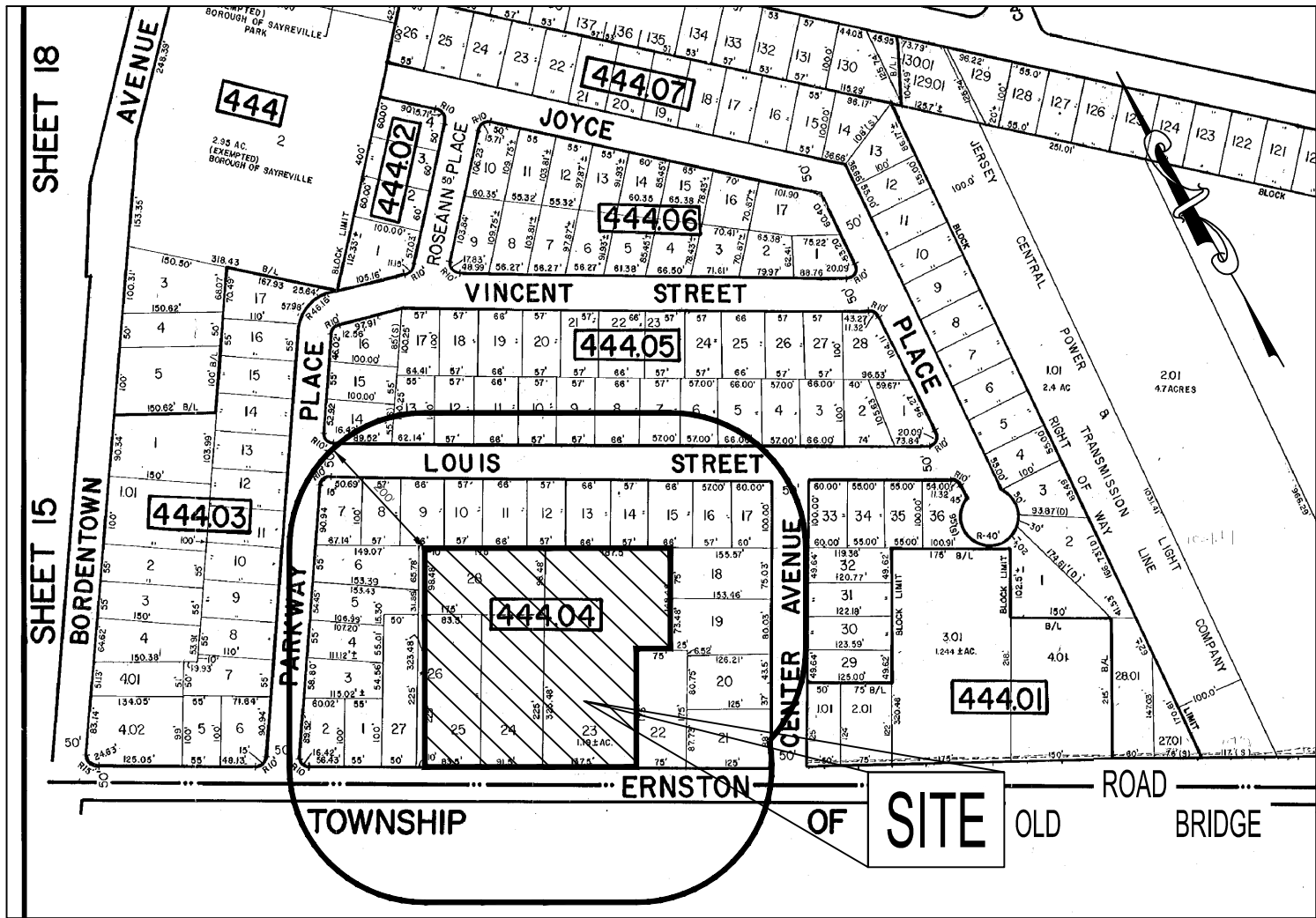
** b. Freestanding Non-Commercial Accessory Structures. Water towers, radio and television antennas and flagpoles which are erected as freestanding structures may be erected to a height which can be demonstrated to the Board is necessary to accomplish their intended function. Federally licensed amateur radio facilities shall be subject to Federal Communications Commission rules (47 CFR, Part 97) which govern the height of licensed amateur operator radio antennas. The height of the tower or antennae shall conform with U.S. Federal Communications Commission Regulations governing licensed amateur radio operators and, if required, Federal Aviation Administration (F.A.A.) notification and F.C.C. approval. All freestanding non-commercial accessory structures shall not be located within any required front, side or rear yard setback areas and shall be subject to the structural provisions of the New Jersey Uniform Construction Code.

(e) Pre-existing Nonconformity	N/A - Denotes Not Applicable
(V) Variance is Required	NA - Denotes Not Available



SITE MAP

SCALE: ±1"=150'



200' TAX MAP

SCALE: 1"= ± 250'

DESIGN VARIANCES AND WAIVER SCHEDULE			
Lots 23, 24, 25 & 28, BLOCK 444.04 - 212, 214 & 216 ERNSTON ROAD - BOROUGH OF SAYREVILLE			
Code Regulation	Required	Proposed	Comment
26-82.1 Accessory Structures and Uses.	3. Accessory structures in all zone districts shall be at least ten (10') feet from any other structure on the same lot, excluding patios.	Minaret 7.14 ft. from principal building (V)	Variance is Required
26-96.1 Guidelines.	a. Roof Form. All roofs on one (1) and two (2) story principal buildings in residential districts should be pitched. Flat roofs shall not be permitted.	Proposed flat roof (V)	Variance is Required
26-98.1 Off-Street Parking.	b. Standards for Off-Street Parking Areas.	Proposed parking located in required front yard setback area	Variance is Required
26-98.1 Off-Street Parking.	c. Other Design Criteria.	Proposed parking located in required front yard setback area	Variance is Required

SHEET	INDEX OF DRAWINGS	ISSUED	REVISED
1	COVER SHEET	02/04/22	04/07/25
2	DEMOLITION PLAN	02/04/22	06/13/23
3	SITE DEVELOPMENT PLAN BASEMENT	02/03/23	04/07/25
4	SITE DEVELOPMENT PLAN FIRST FLOOR	02/04/22	04/07/25
5	GRADING PLAN BASEMENT	02/03/23	04/07/25
6	GRADING PLAN FIRST FLOOR	02/04/22	04/07/25
7	UTILITY PLAN BASEMENT	02/03/23	04/07/25
8	UTILITY PLAN FIRST FLOOR	02/04/22	04/07/25
9	TRAFFIC CIRCULATION PLAN BASEMENT	02/03/23	04/07/25
10	TRAFFIC CIRCULATION PLAN BASEMENT	02/03/23	04/07/25
11	LANDSCAPE PLAN	02/04/22	04/07/25
12	LIGHTING PLAN BASEMENT	02/03/23	04/07/25
13	LIGHTING PLAN FIRST FLOOR	02/04/22	04/07/25
14	GENERAL CONSTRUCTION NOTES	02/04/22	02/03/23
15	CONSTRUCTION DETAILS	02/04/22	02/03/23
16	CONSTRUCTION DETAILS	02/04/22	02/03/23
17	CONSTRUCTION DETAILS	02/04/22	02/03/23
18	CONSTRUCTION DETAILS	02/04/22	06/13/23
19	CONSTRUCTION DETAILS	02/04/22	06/13/23
20	SOIL EROSION AND SEDIMENT CONTROL PLAN	02/04/22	04/07/25
21	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	02/04/22	02/03/23
22	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	02/04/22	02/03/23
23	SOIL MANAGEMENT AND PREPARATION PLAN	02/03/23	04/07/25

ADNAN A. KHAN, P.E., C.M.E.
PROFESSIONAL ENGINEER
DATE: 12/20/21
DESIGNED BY: AK
DATE: 12/20/21
APPROVED BY: AK
DATE: 04/07/25

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New Jersey Certificate of Authorization No.: 24GA28118400
Pennsylvania Certificate of Authority No.: 3771354

TAX LOTS 23, 24, 25 & 28
212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY

COVER SHEET

JOB NUMBER:
21-1009

SCALE: AS SHOWN

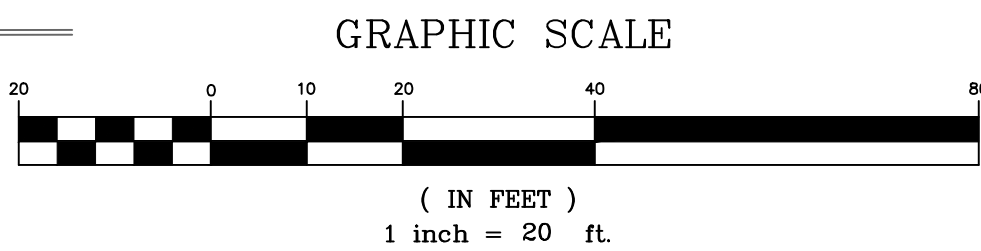
C-01
SHEET 1 OF 19

LIST OF APPROVALS/ PERMIT REQUIRED

Permit	Agency/ Authority
Zoning Board of Adjustment	Borough of Sayreville
Soil Removal or Fill Placement	Borough of Sayreville
Tree Removal	Borough of Sayreville
Soil Erosion and Sediment Control Permit	Borough of Sayreville
Construction Permit	Borough of Sayreville
Road Opening Permit	Middlesex County
Construction Activity SWDA	NJDEP

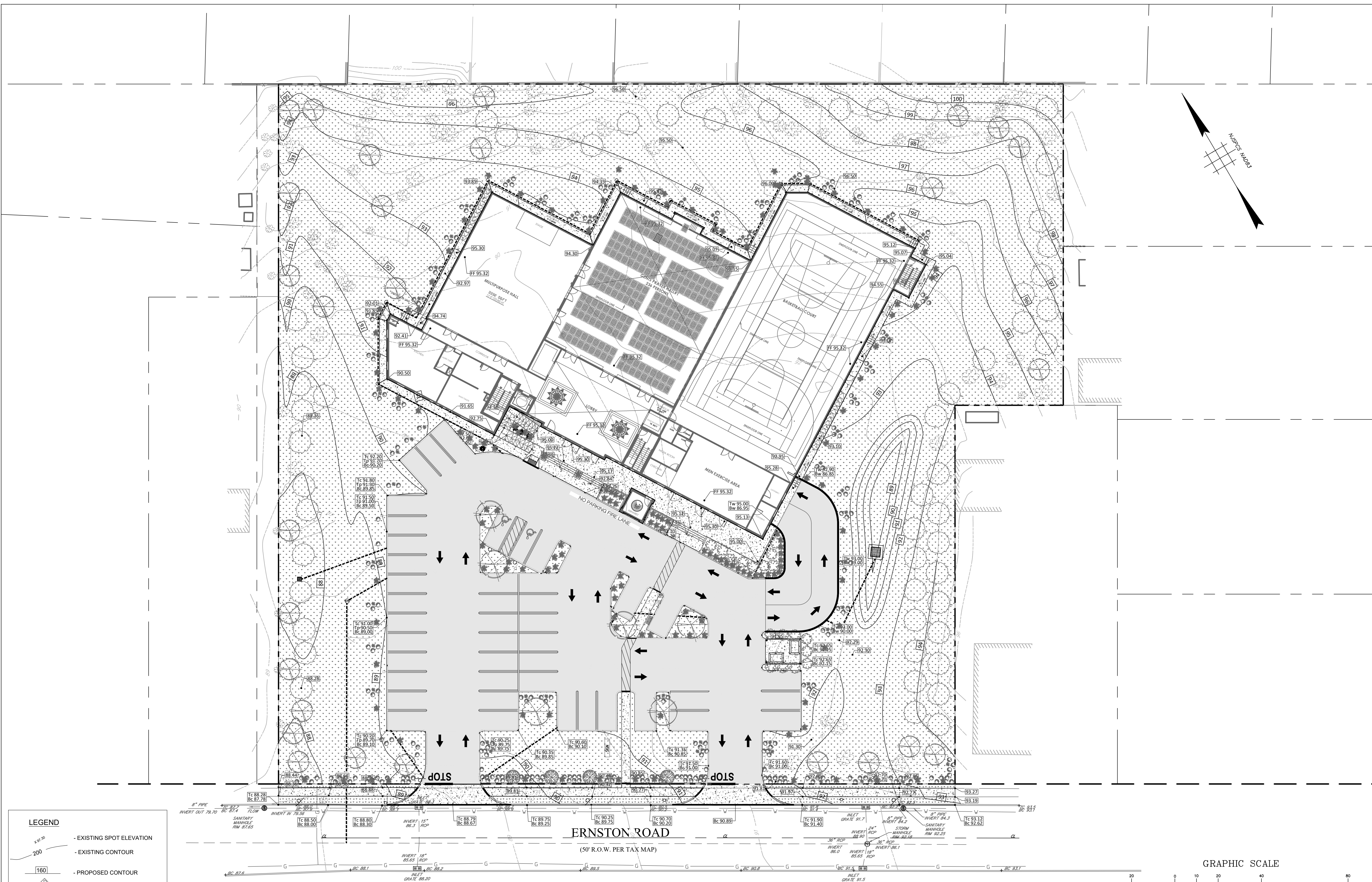
GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.



SHEET 3 OF 19

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New Jersey Certificate of Authorization No.: 24GA/28118400
Pennsylvania Certificate of Authority No.: 37711354



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft

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

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PROP. SANITARY MANHOLE
INV. = 81.74

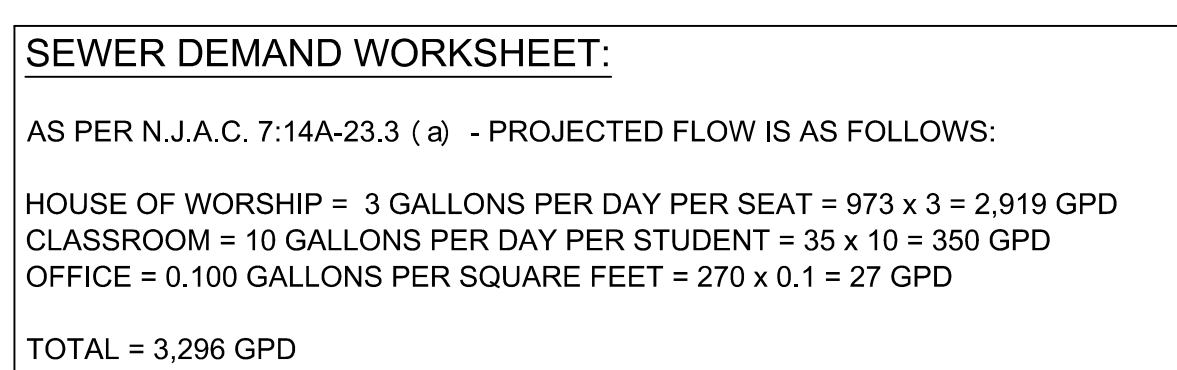
PROP. SANITARY MANHOLE
INV. = 82.08

PROP. SIAMESE CONNECTION
(REFER TO MEP PLANS FOR FINAL LOCATION)

UTILITY LINES TO BE SET AT LEAST 7 FT. BELOW
PROPOSED GRADE TO AVOID CONFLICTS WITH
STORM SEWER PIPE

PROP. FIRE HYDRANT
(BY OTHERS)

INV. = 81.01 (SEWER PIPE)
INV. = 85.22 (STORM PIPE)



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Pennsylvania Certificate of Authority No.: 37711354

MIDDLESEX COUNTY NOTE:

"A Stormwater Maintenance Agreement will be filed which sets forth documentation that any proposed drainage system and any and all stormwater (drainage swales/detention/retention/recharge facilities) will be adequately maintained in accordance with the standards of Middlesex County. Refer to the paragraph in the Stormwater Maintenance Agreement entitled 'Right of County of Middlesex to Maintain Drainage Basins'. Conditions that affect non-County facilities should be reviewed and approved by the appropriate jurisdictional agency."

CONTRACTOR TO LOCATE AND FIELD VERIFY EXISTING WATER, GAS AND SEWER LINES PRIOR TO ANY CONSTRUCTION ACTIVITY ON-SITE.

PROP. 6" PVC ROOF HEADER PIPE.
REFER TO ARCH. PLANS FRO FINAL
LOCATION
(TYP)

PROP. 465 LF, 15" RCP PIPE FROM
ROOF HEADER SYSTEM
(0.89% SLOPE)

PROP. CLEAN OUT (TYP)
PROP. CULTEC RECHARGER 360HD
160 CHAMBERS TOTAL
VOLUME : 9,533 CF
INV. 85.00

PROP. 6 LF, 36" RCP MANIFOLD PIPE
(0% SLOPE)

PROP. TYPE "B" INLET (B)
TG = 91.49
INV. = 86.76

PROP. 49 LF, 12" RCP PIPE
(SLOPE @ 0.5%)

PROP. YARD INLET WITH PURE FILTER
TG = 87.03
INV. = 85.25

PROP. OUTLET CONTROL STRUCTURE
TG =±90.90
INV. (in) =85.00
INV. (out)=85.00 (6" Orifice)
INV. (out)=86.14 (2-10" Orifices)
INV. (out)=88.45 (Weir)
INV. (out)=84.90 (21" PIPE)

PROP. 38 LF, 12" RCP PIPE
(SLOPE @ 2%)

PROP. 58 LF, 12" RCP PIPE
(SLOPE @ 1%)

PROP. TYPE "B" INLET (D)
TG = 90.10
INV. = 86.58

PROP. TYPE "B" INLET (A)
TG = 89.70
INV. = 86.90

PROP. 29 LF, 12" RCP PIPE
(SLOPE @ 0.10%)

PROP. TRENCH DRAIN (TD-3)
TG =± 86.90
INV. = 85.98

PROP. 44 LF, 8" HDPE PIPE
(SLOPE @ 1.05%)

PROP. OUTLET CONTROL STRUCTURE
TG =±92.00
INV. (in) =89.00
INV. (out)=89.50 (2.5" Orifice)
INV. (out)=90.25 (3" Orifice)
INV. (out)=91.25 (Weir)
INV. (out)=91.95 (Riser)
INV. (out)=89.00 (12" PIPE)

PROP. 99 LF, 12" RCP PIPE

PROP. KRAKEN FILTER
143 - 10" CARTRIDGES
TG =±91.56
INV. (out)=85.01
INV. (in)= 85.51

PROP. CLEAN OUT
INV. 88.00

PROP. 6"Ø STORM MANHOLE
TG =±92.50
INV. = 85.52

PROP. 48 LF, 15" RCP PIPE
(SLOPE @ 1%)

PROP. TYPE "B" INLET (C)
TG = 91.45
INV. = 86.00

PROP. 74 LF, 12" RCP PIPE
(SLOPE @ 1%)

PROP. TRENCH DRAIN (TD-2)
TG =± 90.95
INV. = 85.26

PROP. 138 LF, 21" RCP
DISCHARGE PIPE
(SLOPE @ 0.38%)
INV. (out) 84.37 (VIF)

PROP. 45 LF, 12" RCP PIPE
(SLOPE @ 0.50%)
PROP. TRENCH DRAIN (TD-1)
TG =± 89.10
NV (in). = 86.87
INV (out). = 86.81

PROP. ABOVE GROUND BASIN
TOP ELEV. = 92.00
BOTTOM ELEV. = 89.00
INV. = 89.00
TOTAL VOL. = 3,265 CF

MAINTENANCE OF UNDERGROUND STORM FACILITIES:

UNDERGROUND STORM SYSTEM - The underground drainage system, including all pipes, manholes, catch basins, inlets and appurtenances must be inspected for clogging and excessive debris and sediment accumulation at least annually as well as after every storm exceeding 2 inches of rainfall. Sediment removal should take place when all runoff has drained from the conveyance network and the systems are reasonably dry. Disposal of debris, trash, sediment, and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations.

All structural components must be inspected for cracking, subsidence, breaching, wearing, and deterioration at least annually. The condition of surrounding and above lying materials shall be inspected for evidence of potential failures or deterioration.

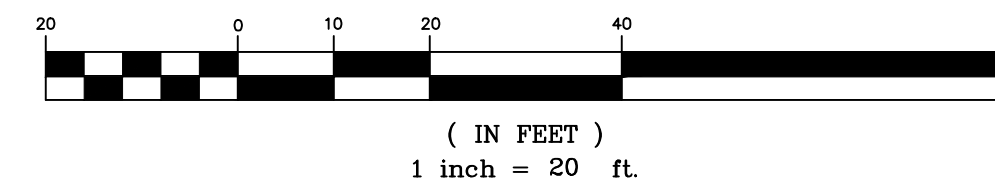
Two people will be needed to perform routine maintenance of the conveyance systems. The routine equipment to be utilized for the maintenance tasks include a jet vacuum vehicle, shovels, lighting equipment and a wheel barrel or truck for the hauling off of debris. No manufacturer's instructions or user manuals are available for maintenance of these components. Maintenance would only take place in the adjacent components of the system, i.e. the catch basins, pipes, and other units outside the seepage pit system. Water, mosquito control chemicals, and concrete repair materials may also be required depending on the condition of the structure.

RESPONSIBLE PARTY FOR ALL STORM STRUCTURE MAINTENANCE
See maintenance agreement for information regarding responsible parties for all storm structure maintenance.

LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION

GRAPHIC SCALE



TAX LOTS 23, 24, 25 & 28 BLOCK 444.04

212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY

UTILITY PLAN
FIRST FLOOR

JOB NUMBER:
21-1009

SCALE: AS SHOWN

C-08
SHEET 8 OF 19

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

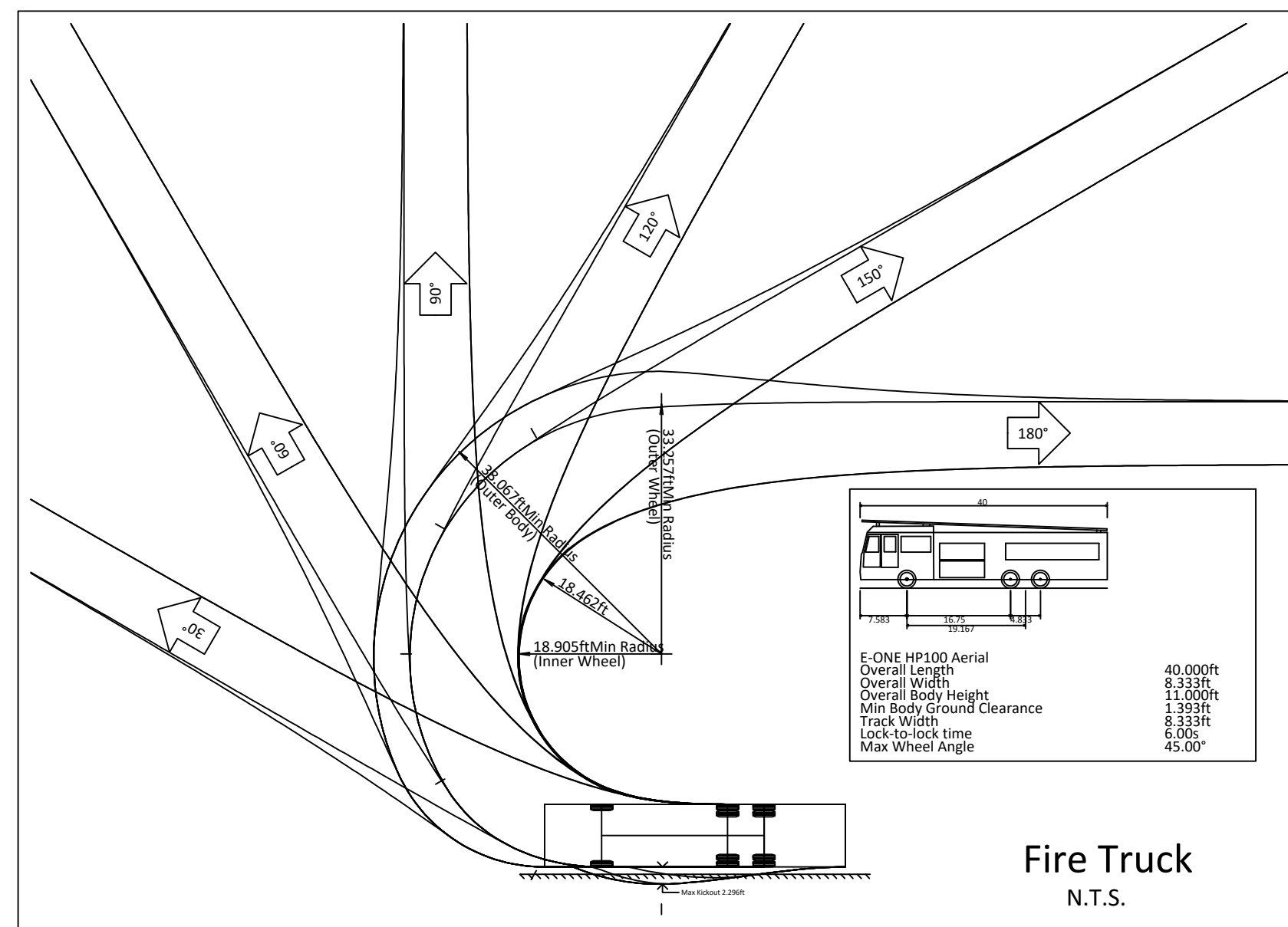
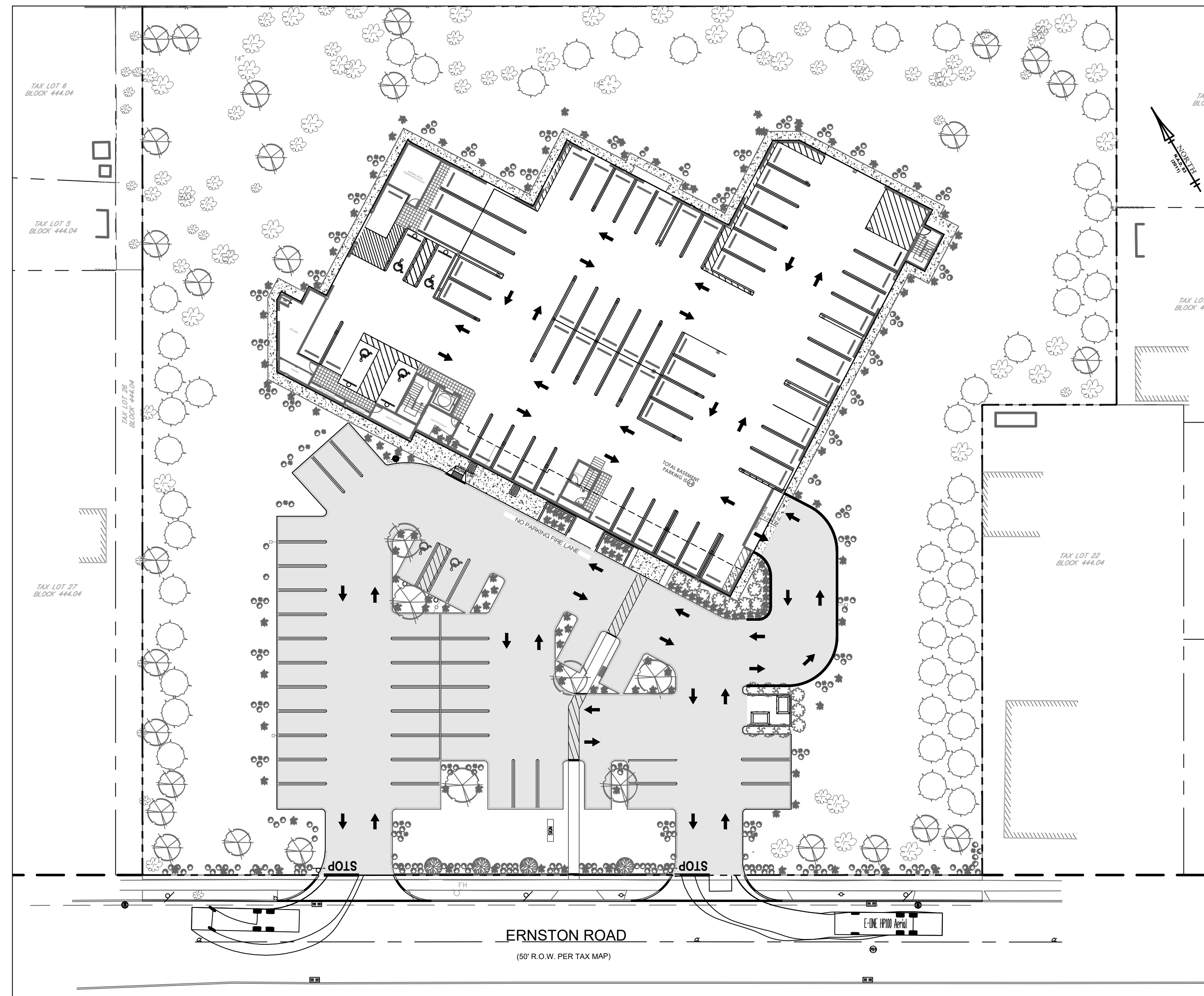
DATE: 04/07/25
P.A. LICENSE NO. 49063E
M.D. LICENSE NO. 41803

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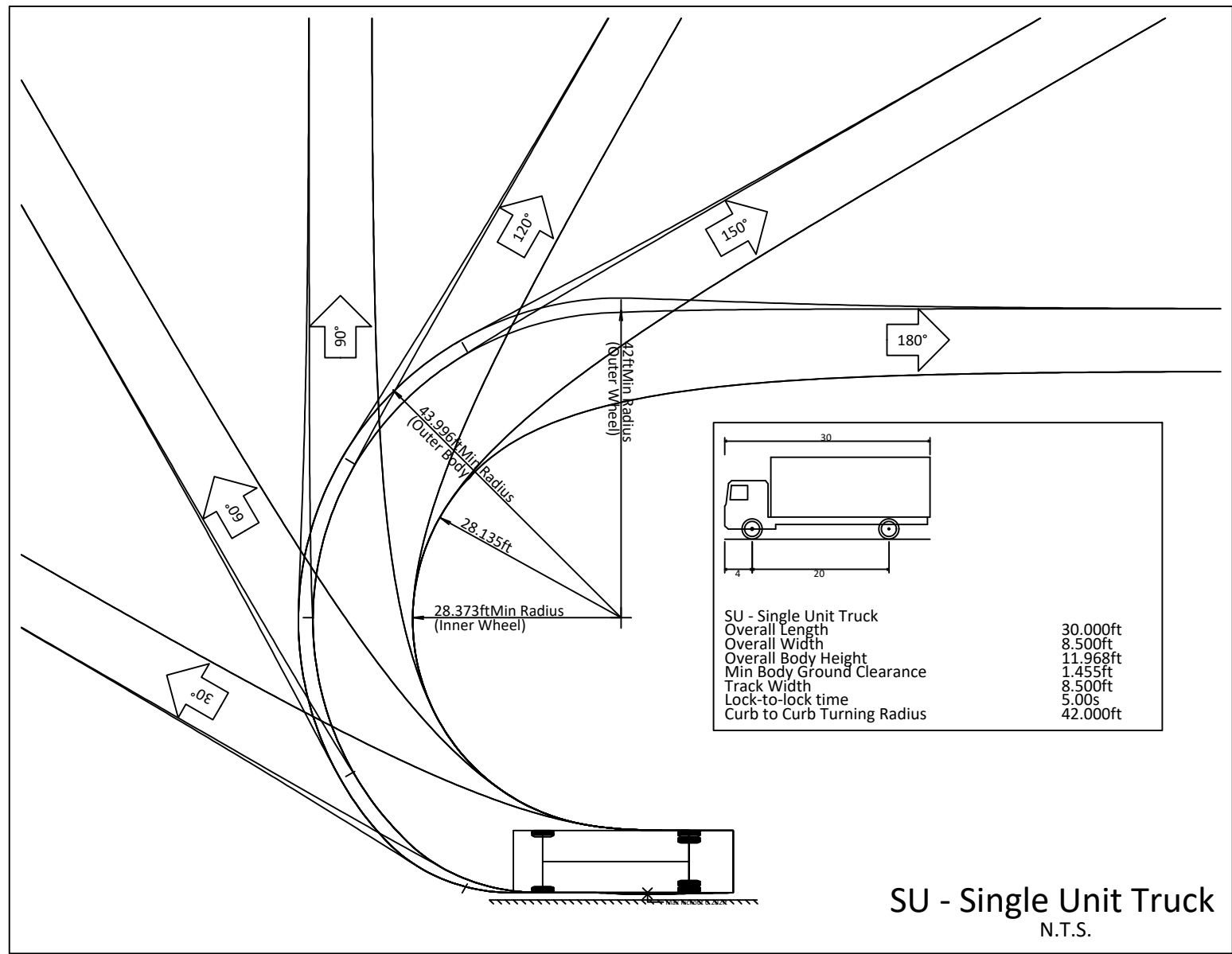
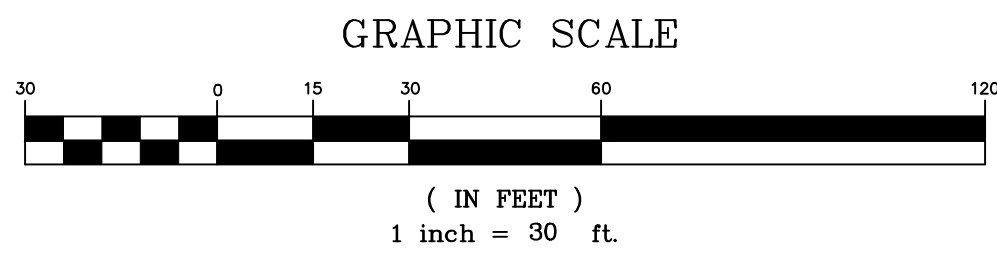
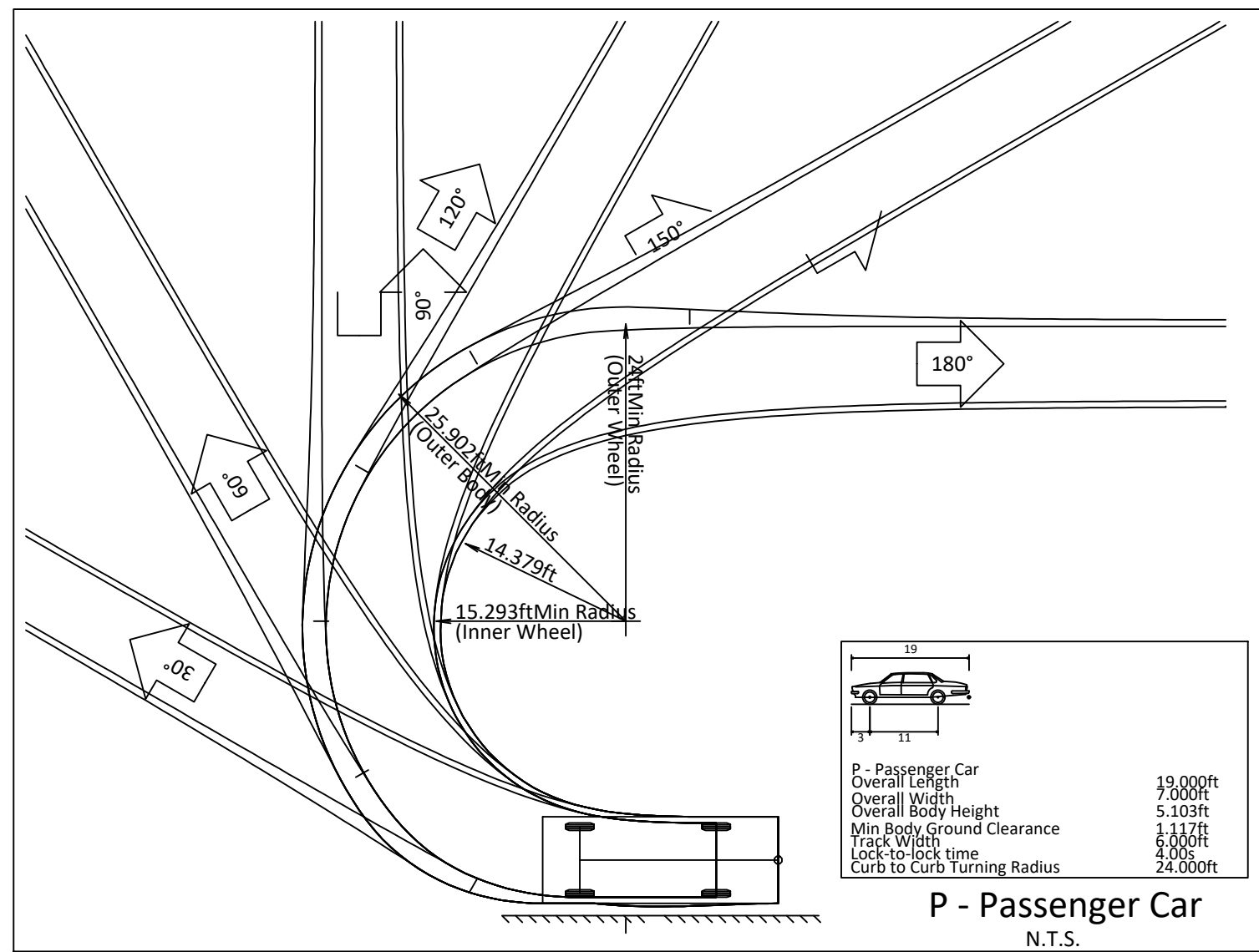
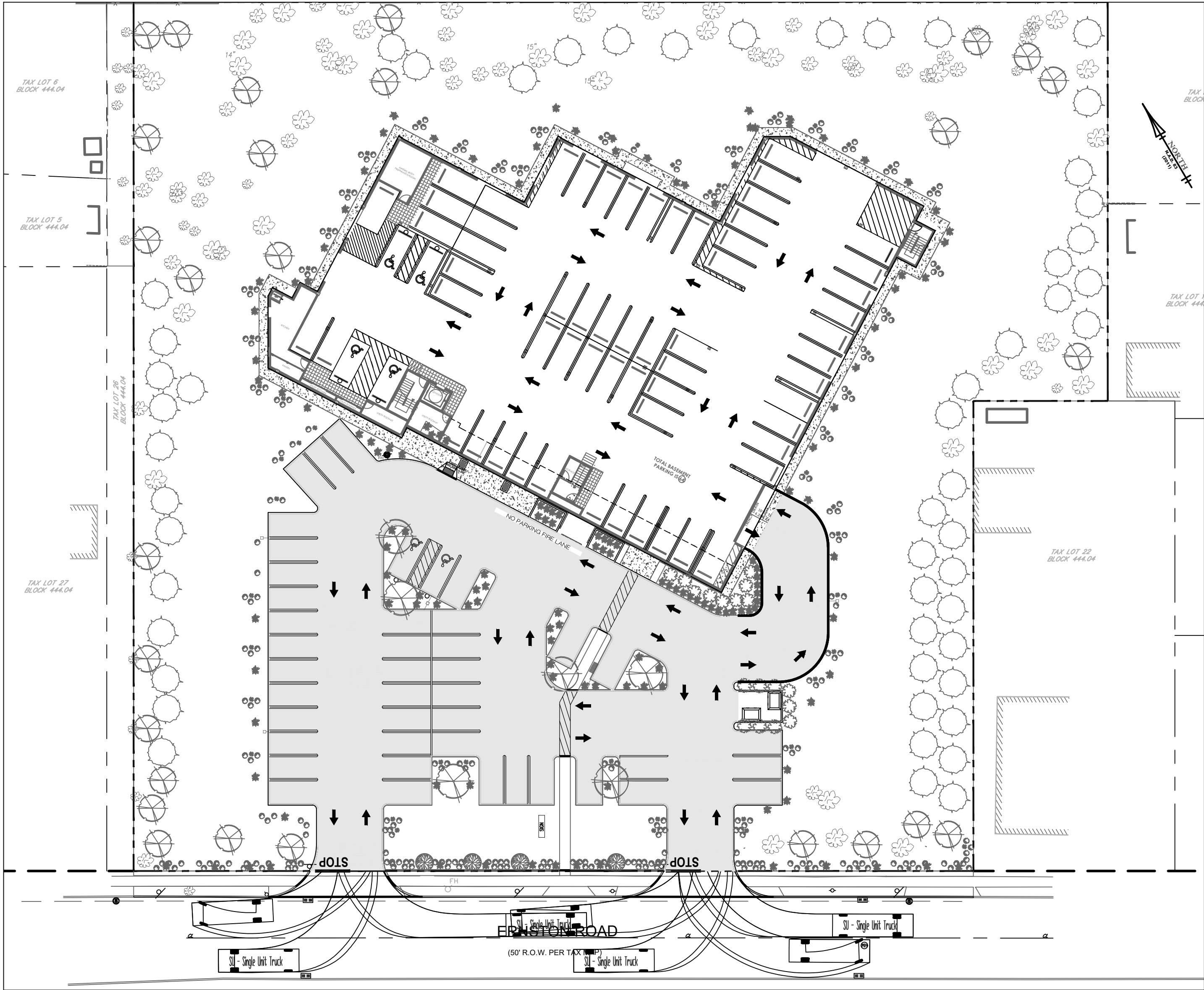
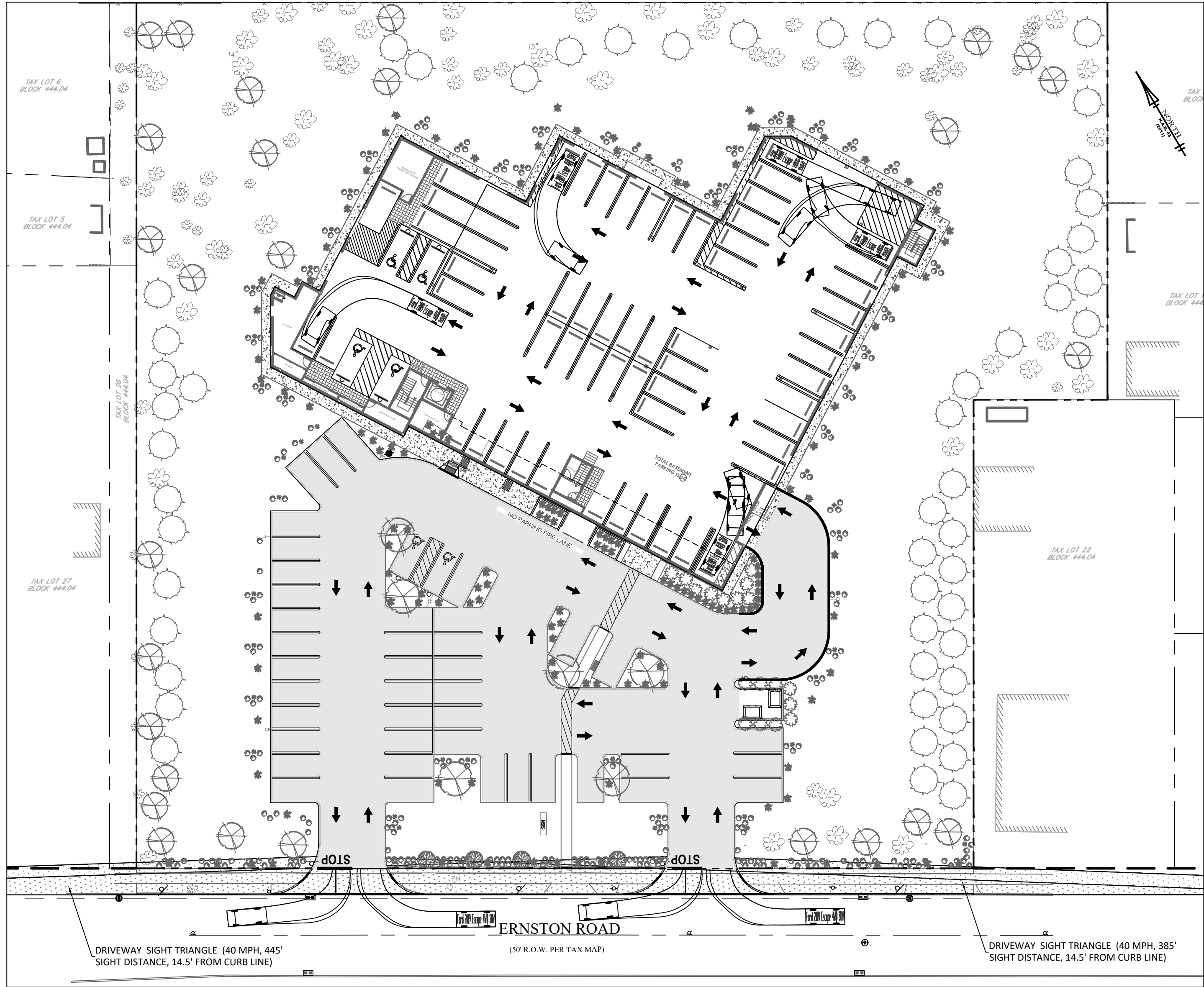
DRAWN BY: LF
DATE: 12/20/21
DESIGNED BY: AK
DATE: 12/20/21
APPROVED BY: AK
DATE: 04/07/25

3 PER TRC & BOARD MEETING COMMENTS
04/07/25 EC AK
2 PER ENGINEERING REVIEW
06/12/23 LF AK
1 PER REVIEW COMMENTS
02/03/23 LF AK
1 REVISIONS
DATE: BY: APE
04/07/25



TAX LOTS 23, 24, 25 & 28		BLOCK 444.04	
212, 214 & 216 ERNSTON ROAD			
BOROUGH OF SAYREVILLE			
MIDDLESEX COUNTY, NEW JERSEY			
TRAFFIC CIRCULATION PLAN			
BASEMENT			
JOB NUMBER: 21-1009			
SCALE: AS SHOWN			
C-09			
SHEET 9 OF 19			

 AWZ ENGINEERING, INC. ENGINEERS • SCIENTISTS • CONSULTANTS Main Office: 150 River Road, Suite B3, Montville, NJ 07045 Pennsylvania Office: Scranton, PA 18504 Tel: 973-588-7080 Fax: 973-588-7079 www.awzengineering.com e-mail: info@awzengineering.com New Jersey Certificate of Authorization No.: 24GA28118400 Pennsylvania Certificate of Authority No.: 3771354		ADNAN A. KHAN, P.E., C.M.E. PROFESSIONAL ENGINEER  P.A. LICENSE NO. 39812 M.D. LICENSE NO. 14865 N.J. LICENSE NO. 066455 DATE: 04/07/25		DRAWN BY EC/LF DATE: 12/20/21																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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TAX LOTS 23, 24, 25 & 28 BLOCK 444.04
212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY
TRAFFIC CIRCULATION PLAN
BASEMENT

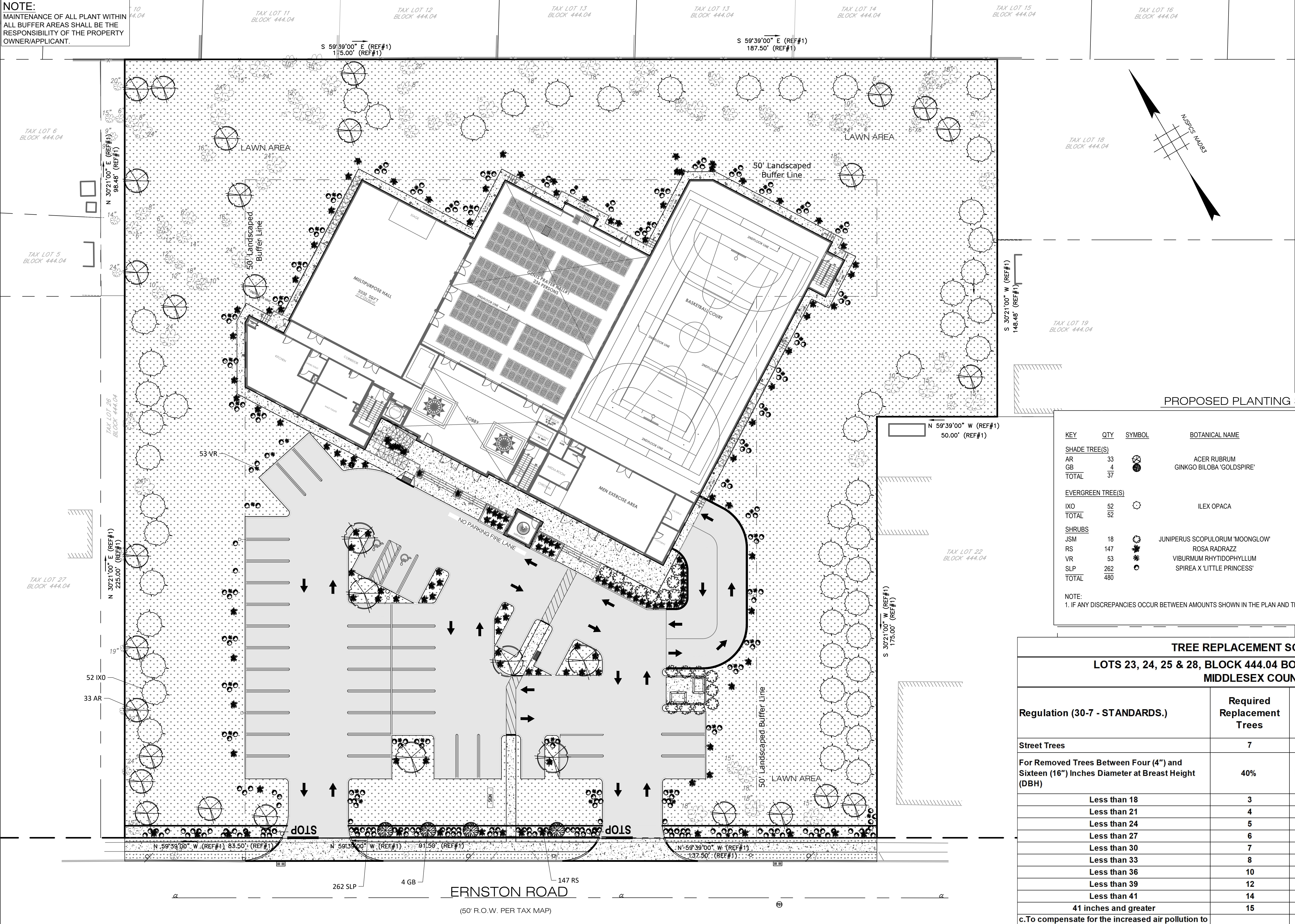
JOB NUMBER:
21-1009
SCALE: AS SHOWN
C-10
SHEET 10 OF 19

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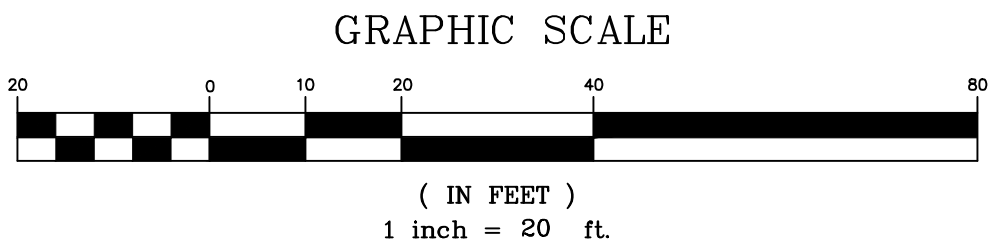
ADNAN A. KHAN, P.E., C.M.E.
PROFESSIONAL ENGINEER
DATE: 04/07/25
P.A. LICENSE NO. 4963E
N.Y. LICENSE NO. 086435 M.D. LICENSE NO. 41803

DATE	BY	REVISIONS
04/07/25	AK	1
10/25/23	LF	2
06/19/23	AK	3
04/07/25	EC	4
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04/07/25	AK	97
04/07/25	AK	98
04/07/25	AK	99
04/07/25	AK	100

NOTE:
MAINTENANCE OF ALL PLANT WITHIN
ALL BUFFER AREAS SHALL BE THE
RESPONSIBILITY OF THE PROPERTY
OWNER/APPLICANT.



PERCENTAGE OF REQUIRED LANDSCAPE:		
REGULATION	REQUIREMENT	PROPOSED
10% OF PROPOSED PARKING AREAS	2,021.71 SF	2,187.63 SF
20% OF LOT	21,702.3 SF	59,880.13 SF
5% OF LOT NEAR RIGHT OF WAY	5,425.58 SF	6,265.87 SF



PROPOSED PLANTING SCHEDULE

KEY	QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHADE TREE(S)						
AR	33		ACER RUBRUM	RED MAPLE	3-4" CAL.	B+B
GB	4		GINKGO BILOBA 'GOLDSPIRE'	GOLDSPIRE	3-4" CAL.	B+B
TOTAL	37					
EVERGREEN TREE(S)						
IXO	52		ILEX OPACA	AMERICAN HOLLY	9-10'	B+B
TOTAL	52					
SHRUBS						
JSM	18		JUNIPERUS SCOPULORUM 'MOONGLOW'	MOONGLOW JUNIPER	3-4' HT	B+B
RS	147		ROSA RADRAZZ	KNOCKOUT ROSE	18-24"	2 GAL.
VR	53		VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	36-42" HT	B+B
SLP	262		SPIREA X 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	24" HT	1 GAL.
TOTAL	480					

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

TREE REPLACEMENT SCHEDULE

LOTS 23, 24, 25 & 28, BLOCK 444.04 BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY

Regulation (30-7 - STANDARDS.)	Required Replacement Trees	Removed	Required Number of replacement trees of three (3") inches DBH or greater
Street Trees	7	-	7
For Removed Trees Between Four (4") and Sixteen (16") Inches Diameter at Breast Height (DBH)	40%	50% (14 trees of 28)	6
Less than 18	3	N/A	N/A
Less than 21	4	5	20
Less than 24	5	3	15
Less than 27	6	4	24
Less than 30	7	1	7
Less than 33	8	1	8
Less than 36	10	N/A	N/A
Less than 39	12	N/A	N/A
Less than 41	14	N/A	N/A
41 inches and greater	15	N/A	N/A
c.To compensate for the increased air pollution to be generated from a residential, commercial or industrial site as a result of vehicular uses, the development plan shall include the addition of one (1) tree per every two (2) parking spaces. (109 Spaces)	55	-	55
TOTAL		42	142

Notes:
Approximately 37, 3" -4" caliper replacement trees are proposed for the site. Total deficit = 105 trees.

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

DESIGNED BY
DATE: 12/20/21
AK

PER TRC & BOARD MEETING COMMENTS
04/07/25
EC

PER COUNTY REVIEW
10/27/23
LF

PER ENGINEERING REVIEW
06/12/23
EC

PER REVIEW COMMENTS
03/03/23
EC

REVISIONS
DATE: BY: APE
04/07/25

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TAX LOTS 23, 24, 25 & 28 BLOCK 444.04

212, 214 & 216 ERNSTON ROAD

BOROUGH OF SAYREVILLE

MIDDLESEX COUNTY, NEW JERSEY

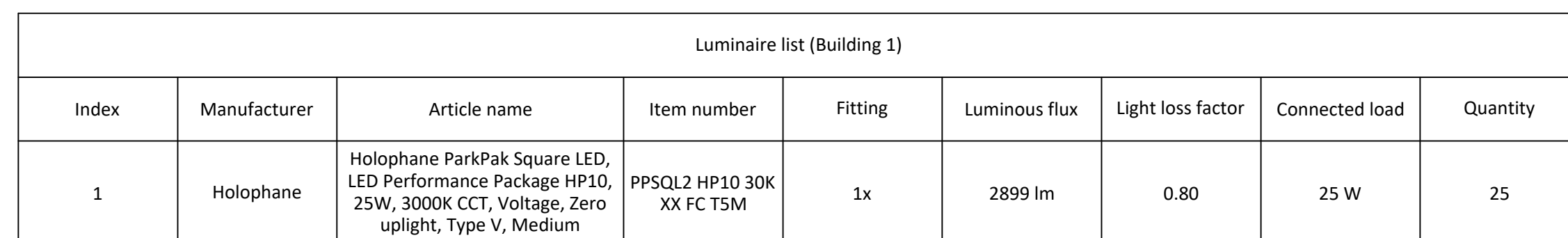
LANDSCAPE PLAN

JOB NUMBER:
21-1009

SCALE: AS SHOWN

C-11
SHEET 11 OF 19

THIS PLAN TO BE USED FOR LANDSCAPING PURPOSE ONLY



**TAX LOTS 23, 24, 25 & 28 BLOCK 444.04
212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY**

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

Adnan A. Khan 040725

 DATE


P.A. LICENSE NO. 39812 P.A. LICENSE NO. 45052
 N.Y. LICENSE NO. 060435 N.Y. LICENSE NO. 41869

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www.awzengineering.com e-mail: info@awzengineering.com
New Jersey Certificate of Authorization No.: 246CA28118400
Pennsylvania Certificate of Authority No.: 3771334

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

 04/07/25
DATE

N.J. LICENSE NO. 39812 P.A. LICENSE NO. 45062
N.Y. LICENSE NO. 06045 M.D. LICENSE NO. 41863

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TAX LOTS 23, 24, 25 & 28 BLOCK 444.04
212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY

LIGHTING PLAN
FIRST FLOOR

JOB NUMBER:
21-1009

SCALE: AS SHOWN

C-13

SHEET 13 OF 19

GENERAL NOTES:

1. PARCEL IS KNOWN AS TAX LOTS 23, 24, 25 & 28, IN BLOCK 444.04 AS SHOWN ON THE TAX MAPS OF THE BOROUGH OF SAYREVILLE.
2. AREA OF PARCEL = 108,511.50 S.F. OR 2.49 ACRES.
3. PARCEL IS LOCATED ENTIRELY IN THE R-7 (RESIDENTIAL) DISTRICT AS SHOWN ON THE ZONING MAP OF THE BOROUGH OF SAYREVILLE
4. IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL, AND MAY HAVE BEEN ALTERED.
5. THIS IS A SITE DEVELOPMENT PLAN AND NOT A SURVEY. DO NOT SCALE DRAWINGS FOR LOCATIONS OF ADJACENT STRUCTURES AND SURROUNDING PHYSICAL CONDITIONS. THESE ITEMS MAY BE SCHEMATIC ONLY EXCEPT WHERE DIMENSIONS ARE SHOWN THERETO.
6. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE SHOWN HEREON.
7. ELEVATIONS AND CONTOURS SHOWN ON THIS PLAN ARE BASED ON THE SURVEY PERFORMED AND PROVIDED BY FOUAD AIT ARAB, P.L.S., DATED 01/15/23, AND ARE BASED ON NAVD 88 DATUM.
8. PROPOSED BUILDING FOOTPRINT AS PER THE ARCHITECTURAL PLANS PREPARED AND PROVIDED BY VISION DESIGN FOR LIFE OF MONMOUTH JC, NJ, DATED 10/11/21 AND UPDATED JANUARY 2023, RECEIVED AS DIGITAL FILE.
9. UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY AND COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL UTILITY INFORMATION TO HIS SATISFACTION PRIOR TO COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL PERFORM TEST PITS WHERE EXISTING UTILITIES ARE TO BE CROSSED. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS MAY BE REQUIRED TO AVOID CONFLICTS.
10. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER ARE TO BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES' STANDARDS. ALL THE EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE. ANY CROSSING LESS THAN ONE FOOT CLEAR TO BE SUPPORTED WITH A SADDLE (CONCRETE OR SAND) AS NOTED.
11. ALL SEWER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM POTABLE WATER LINES AND/OR AT LEAST 18 INCHES BELOW POTABLE WATER LINES AND IN SEPARATE TRENCHES.
12. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND. DESIGN AND INSTALLATION OF WATER, ELECTRIC, GAS, TELEPHONE AND CABLE TO BE PROVIDED BY RESPECTIVE UTILITY COMPANIES.
13. WATER AND GAS SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS SHALL BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE. UTILITY CONNECTIONS SHALL COMPLY WITH THE COUNTY/MUNICIPAL ROAD OPENING PERMIT REQUIREMENTS.
14. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEAN OUTS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.
15. SITE GRADING AND UTILITY WORK ARE TO BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO EXISTING VEGETATION AND TREES. ALL AREAS NOT AFFECTED BY CONSTRUCTION ARE TO REMAIN NATURAL AND UNDISTURBED.
16. PAVEMENT SHALL BE SAW CUT IN STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS SHALL BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
17. LOCATION OF PROPOSED ROOF DRAINS ARE APPROXIMATE AND SHALL BE COORDINATED WITH THE PROJECT ARCHITECT PRIOR TO CONSTRUCTION. ALL PROPOSED ROOF LEADERS TO BE DISCHARGED AWAY FROM THE FOUNDATION AND ADJACENT PROPERTIES.
18. NO ON-SITE SOIL TESTING AND GROUNDWATER ASSESSMENT HAS BEEN PERFORMED ON THIS PROJECT BY THE DESIGN ENGINEER. IT SHALL BE THE OWNERS AND/OR CONTRACTORS RESPONSIBILITY TO CONDUCT SOIL TESTING AND GROUNDWATER ELEVATION DETERMINATION TO CONFIRM APPLICABILITY OF PROPOSED IMPROVEMENTS. CONSTRUCT ABILITY OF THE PROPOSED FINISHED GRADES AND CONSTRUCTION TECHNIQUES WITH RESPECT TO SUBSURFACE SOIL AND GROUNDWATER CONDITIONS.
19. COMPACTING IN FILL AREAS BENEATH ALL PROPOSED UTILITIES AND STRUCTURES SHOULD MEET ALL MANUFACTURERS AND MUNICIPAL REQUIREMENTS AND BE EQUAL TO THE MINIMUM 95% MODIFIED PROCTOR DENSITY.
20. THIS SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND THE DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
21. ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION FOR SITE IMPROVEMENTS SHOWN HEREON SHALL BE PERFORMED IN STRICT CONFORMANCE WITH:

• NJDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", A CURRENTLY AMENDED. CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

• CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

• "RESIDENTIAL SITE IMPROVEMENT STANDARDS", N.J. ADMINISTRATIVE CODE TITLE 5, CHAPTER 21, AS CURRENTLY AMENDED.

• STANDARDS AND/OR CONDITIONS OF ANY OTHER GOVERNING BODIES HAVING JURISDICTION.

22. CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES. APPLICABLE SAFETY CODES SHALL MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS AND ADDITIONS THERETO OF THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S "OCCUPATIONAL SAFETY AND HEALTH STANDARDS" (OSHA); "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION" OF THE STATE OF NEW JERSEY, DEPARTMENT OF LABOR AND INDUSTRY, BUREAU OF ENGINEERING AND SAFETY; "CONSTRUCTION SAFETY CODE", AND "MAINTENANCE, CONSTRUCTION AND DEMOLITION," AND "BUILDING CODE".

23. CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL ALSO BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCING OF CONSTRUCTION OPERATIONS. UNDER NO CIRCUMSTANCES SHOULD THE INFORMATION PROVIDED HERE BE INTERPRETED TO MEAN THAT AWZ ENGINEERING, INC. IS ASSUMING RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY OR THE CONTRACTOR'S ACTIVITIES; SUCH RESPONSIBILITY IS NOT BEING IMPLIED AND SHOULD NOT BE INFERRED.

24. THE CLIENT IS RESPONSIBLE FOR OBTAINING ANY APPROVALS FROM THE NEW JERSEY DEPARTMENT OF TRANSPORTATION (NJDOT), IF REQUIRED.

25. THE EXISTING BUILDING, DRIVEWAY, AND OTHER STRUCTURES TO BE RAZED AND MATERIALS SHOULD BE REMOVED FROM SITE AND PROPERLY DISPOSED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

26. ALL PROPOSED TRAFFIC CONTROL SIGNS AND STRIPING SHALL CONFORM IN FACE DESIGN AND CONSTRUCTION TO THE SPECIFICATIONS FOUND IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), U.S.D.O.T., FEDERAL HIGHWAY ADMINISTRATION. SPECIFICALLY, REGULATORY & WARNING SIGNS SHALL BE FABRICATED OF FLAT ALUMINUM SHEETS AND SHALL BE COVERED WITH DIAMOND GRADE REFLECTIVE SHEETING, SERIES 4000 TYPE XI DESIGNATION PER ASTM.

27. ALL PROPOSED HANDICAP PARKING SPACES, RAMPS, AND SIDEWALKS SHALL BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND WITH THE NJ BARRIER FREE REQUIREMENTS.

28. STRUCTURAL CALCULATION FOR ANY OVERSIZED DRAINAGE STRUCTURE AND THE OUTLET STRUCTURE SHOULD BE PROVIDED TO THE BOROUGH ENGINEER PRIOR TO CONSTRUCTION.

29. IN ACCORDANCE WITH THE BOROUGH ORDINANCE, ALL STORM DRAIN PIPES SHALL BE REINFORCED CONCRETE PIPE CLASS IV.
- CONSTRUCTION NOTES
1. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.

2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.

3. THE FILL MATERIAL, PLACEMENT OF FILL, COMPACTION REQUIREMENTS, AND THE COMPACTION TESTING REQUIREMENTS ARE DEFINED IN THE PROJECT SOILS REPORT. IF THERE IS NO PROJECT SOILS REPORT, THE FOLLOWING SHALL BE USED AS A GUIDE FOR PLACEMENT AND COMPACTION OF FILL FOR ALL AREAS TO BE FILLED: ALL AREAS TO BE FILLED SHALL BE "PROOF ROLLED" PRIOR TO BRINGING THE AREA UP TO THE FINISHED GRADES. DURING THE "PROOF ROLLING," THE GEOTECHNICAL ENGINEER OF RECORD WILL DETERMINE SOFT, YIELDING OR UNSUITABLE MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACEMENT WITH SUITABLE MATERIALS. MATERIAL SHALL BE FREE OF FROZEN OR ORGANIC MATERIAL AND STONES LARGER THAN 2 INCHES. UNLESS PRE-APPROVED BY THE GEOTECHNICAL ENGINEER, THE DISTURBED AREAS SHALL BE FILLED TO THE DRAWINGS GRADES. THE BACK FILL MATERIALS SHALL BE PLACED IN NON-COMPACTED LIFTS OF NO MORE THAN 8" THICK, UNLESS PRE-APPROVED BY THE ENGINEER. ALL FILL UNDER THE BUILDING PAD/FOUNDATION AREA, PAVED AREAS, CONCRETE PADS, OR SIDEWALKS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. A COMPACTION TEST REPORT SHALL BE PREPARED AND SUBMITTED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS PERFORMED. THE SOILS REPORT SHALL VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD/FOUNDATION AREA, PAVED AREAS, CONCRETE PADS, OR SIDEWALKS HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND GUIDELINE RECOMMENDATIONS SET FORTH.

4. MOISTURE CONTENT AT THE TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED IN THE STATE OF WORK BEING PERFORMED, CERTIFYING THAT THE SOILS WITHIN THE AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS.

5. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND TANKS, PIPES, VALVES, ETC., IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.

6. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

7. SOLID WASTE TO BE DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL EXCAVATED UNSUITABLE MATERIAL MUST BE TRANSPORTED TO AN APPROVED DISPOSAL LOCATION.

8. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.

9. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND IT SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.

10. ALL CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAYS UNLESS SPECIFIED OTHERWISE. ALL CONCRETE AT/OR WITHIN 6" OF FINISHED GRADE SHALL BE AIR ENTRAINED, CONFORMING TO A.S.T.M. C260.

11. THE CONTRACTOR IS RESPONSIBLE FOR ALL INSPECTIONS, TESTING AND LAB ANALYSES. THE CONTRACTOR SHALL ALSO COORDINATE ALL INSPECTIONS, TESTING, AND LAB ANALYSES WITH THE APPROPRIATE LOCAL, STATE, AND/OR FEDERAL AUTHORITY.

12. NO DEMOLITION DEBRIS, CUT VEGETATION, CONSTRUCTION DEBRIS OR ANY OTHER WASTE IS TO BE BURIED ON SITE. ALL WASTE, DEBRIS, LITTER, ETC. MUST BE PROPERLY REMOVED AND DISPOSED OFF SITE. PROPER WASTE DISPOSAL DOCUMENTATION SHALL BE SUBMITTED TO THE ENGINEER.

13. EXISTING TOPSOIL ON SITE IS TO BE PROTECTED. NO TOPSOIL IS TO BE SOLD OR REMOVED FROM THE SITE OR USED AS SPOIL UNLESS APPLICATION IS MADE TO THE APPLICABLE AGENCY/BOARD AND APPROVAL GRANTED.

14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ANY ADDITIONAL SOIL EROSION & SEDIMENT CONTROL MEASURES AS REQUESTED BY THE GOVERNING SOIL CONSERVATION DISTRICT.

15. TOP SOILING & SEEDING WILL BE PLACED IN THE AREAS DISTURBED DURING CONSTRUCTION AND / OR AS DIRECTED BY THE ENGINEER.

16. THE CONTRACTOR IS RESPONSIBLE FOR LEVELING THE ROADWAY WITH MIX I-5, PRIOR TO THE FINAL SURFACE COURSE. THE ROADWAYS WILL NOT BE LEVELED DURING THE FINAL SURFACE COURSE.

17. TRENCHES OR AREAS EXCAVATED ARE TO BE BACK FILLED WITH SUITABLE MATERIAL AND TOPPED WITH QUARRY PROCESS STONE AT THE END OF EACH WORKING DAY AND PAVED AT THE END OF THE WORK WEEK. TRENCHES LEFT OPEN OVERNIGHT MUST BE BARRICADED WITH ADEQUATE LIGHTING.

18. ANY MATERIAL THAT MAY BE DISTURBED DURING THE REMOVAL AND REPLACEMENT TO EXISTING CURBING AND SIDEWALKS, MUST BE RETURNED TO ITS ORIGINAL CONDITION.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAPERING PROPOSED WORK TO MEET EXISTING CONDITIONS IN A UNIFORM MANNER.

20. SITE CONTRACTOR TO VERIFY SITE SURVEY FOR LOCATION OF WALL.

21. ON-SITE CONTRACTOR TO CHECK THE SURVEY BOUNDARY LINE FOR LOCATING WALLS.

22. ALL EXISTING IMPROVEMENTS (INCLUDING BUT NOT LIMITED TO CURB, PAVEMENT, SIDEWALK) SHALL BE INSPECTED PRIOR TO THE START OF CONSTRUCTION BY THE BOROUGH ENGINEER AND APPLICANT. ANY EXISTING IMPROVEMENT SHALL BE REPAIRED OR REMOVED/REPLACED AS DIRECTED BY THE BOROUGH ENGINEER.
- GRADING NOTES
1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH HEREIN.

2. COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. THE MATERIAL FROM DEMOLITION SHALL NOT BE USED AS FILL MATERIAL.

3. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR MUST ENSURE 0.75% SLOPE AGAINST ALL ISLANDS GUTTERS, CURBS AND 1.0% ON ALL CONCRETE SURFACES, AND 1-1/2% MIN. ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY EFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING. IMMEDIATELY, PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SOLELY AT THE CONTRACTOR'S OWN RISK.

4. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MIN. OF 0.75% GUTTER GRADE ALONG CURB FACE. ENGINEER TO APPROVE FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION.

5. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIAL. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD) .

6. IN CASE OF DISCREPANCIES BETWEEN PLANS, THE SITE PLAN WILL SUPERSEDE IN ALL CASES. NOTIFY ENGINEER OF RECORD OF ANY CONFLICT.

7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF FINISHED GRADES AT THE BUILDING EXTERIOR WITH THE ARCHITECT. ANY DISCREPANCIES WITH THE GRADING PLAN SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING PRIOR TO PLACEMENT OF FILL.

8. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.

9. SITE GRADING AND UTILITY WORK ARE TO BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO EXISTING VEGETATION AND TREES. ALL AREAS NOT AFFECTED BY CONSTRUCTION ARE TO REMAIN NATURAL AND UNDISTURBED.
- UTILITY NOTES:
1. LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2. ALL UTILITIES AND SERVICES INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO COST TO THE OWNER.

3. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.

4. ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.

5. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE AS PER THE REQUIREMENTS PROVIDED BY THE APPLICABLE UTILITY COMPANY.

6. PROPER CONSTRUCTION OF THE PROPOSED DETENTION BASINS SHALL BE CERTIFIED BY THE APPLICANT'S ENGINEER PRIOR TO FINAL APPROVAL BY THE TOWNSHIP.

7. THE APPLICANT SHALL BE RESPONSIBLE FOR ALL SERVICE LINES ON THIS PROPERTY.

8. THE WATER SERVICE LINES TO THE BUILDINGS SHALL BE MADE OF COPPER.

9. IF THE WATER CURB-BOX VALVE IS IN THE GRASS, THEN A STREET VALVE RISER AND COVER SHALL BE INSTALLED WITH 12-INCH CONCRETE SQUARE PAD AROUND IT FOR MOWER PROTECTION.

10. BALL VALVES SHALL BE INSTALLED ON BOTH SIDES OF THE WATER METERS.

11. ALL SERVICE LINE TAPS SHALL USE A STAINLESS STEEL TAPPING SLEEVE.

12. ALL DISTRIBUTION MATERIALS SHALL MEET THE TOWNSHIP SPECS.

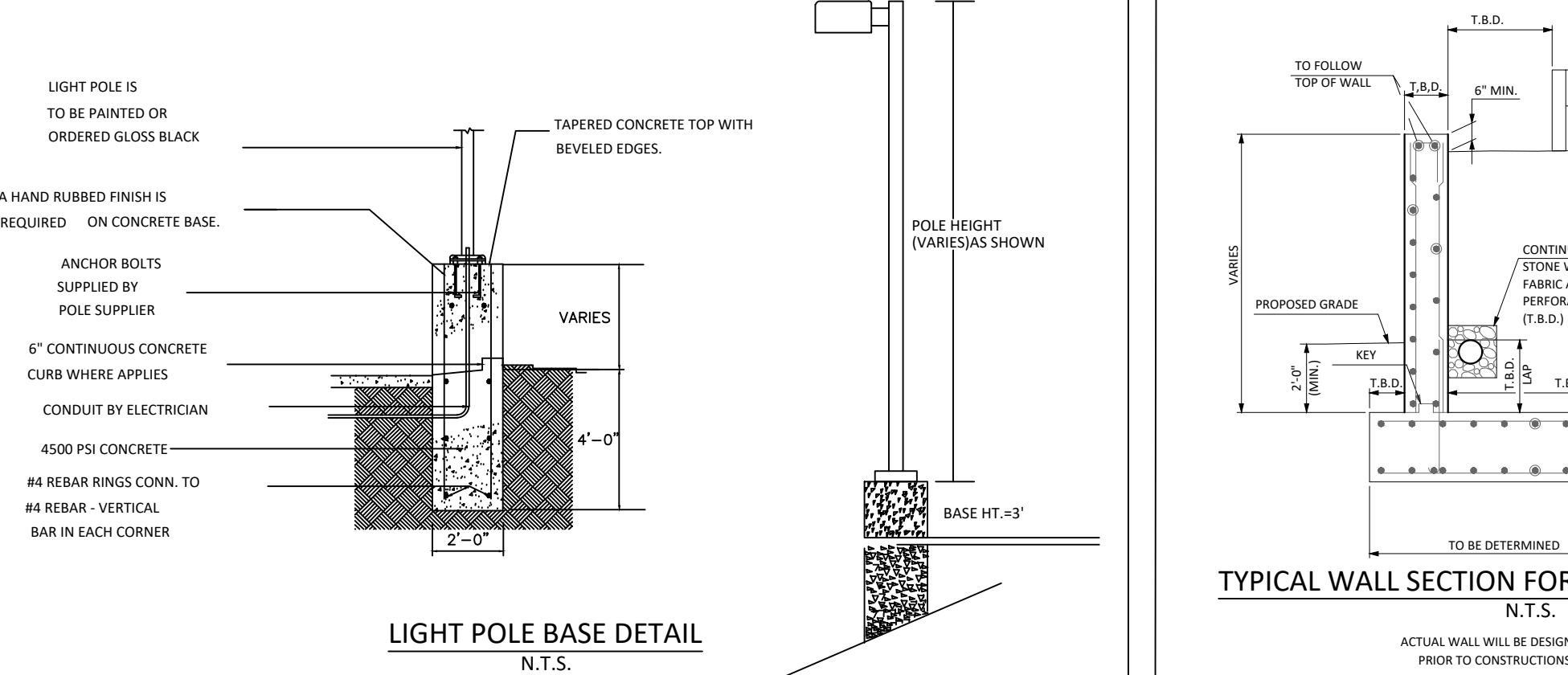
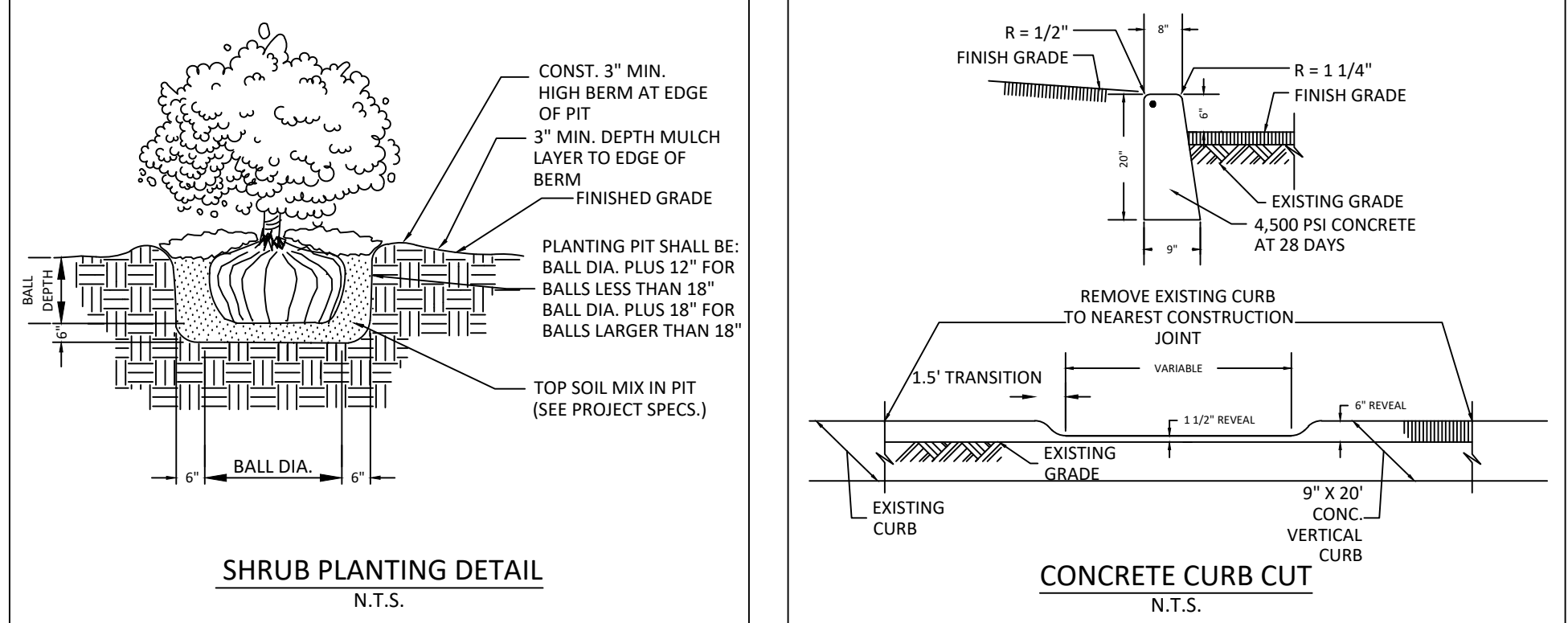
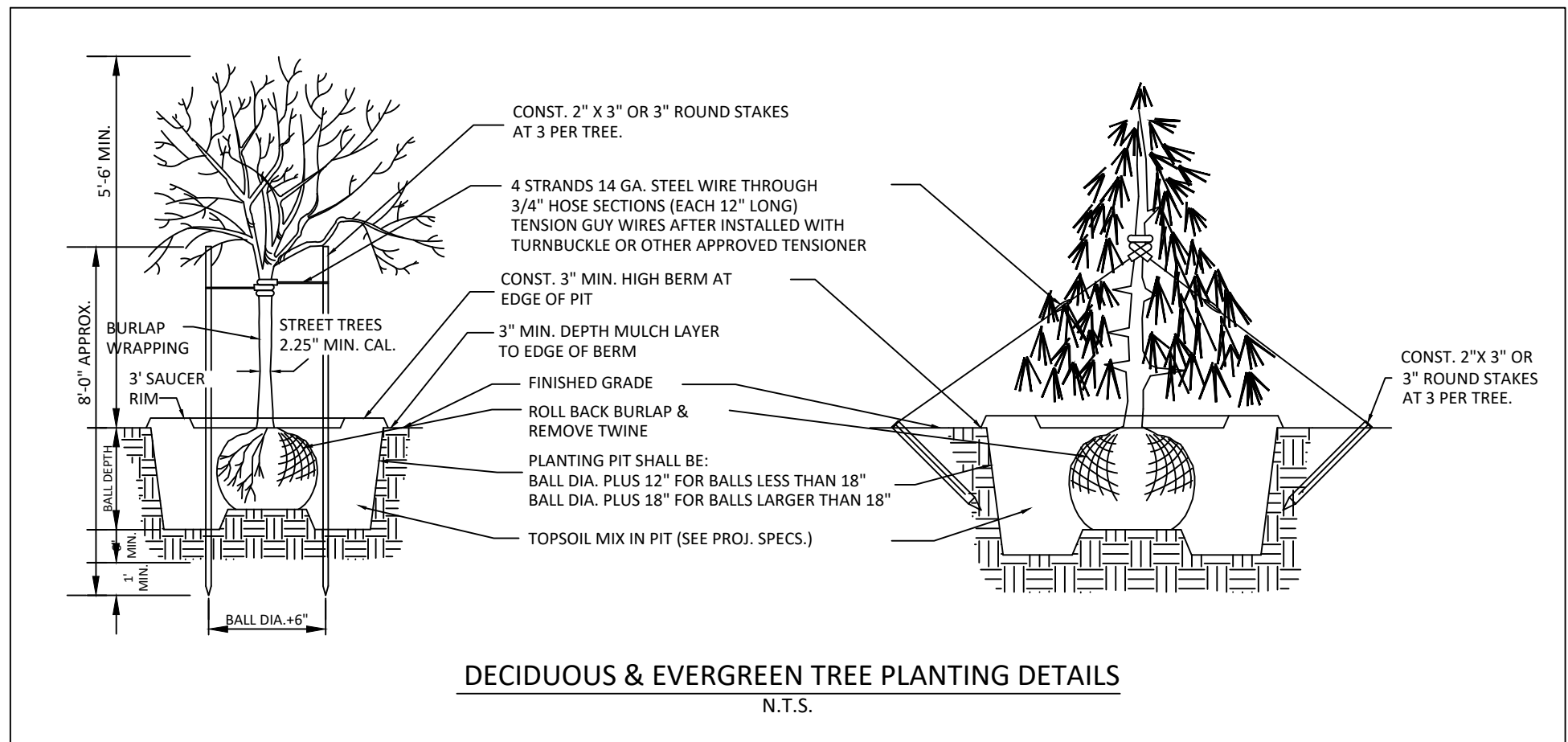
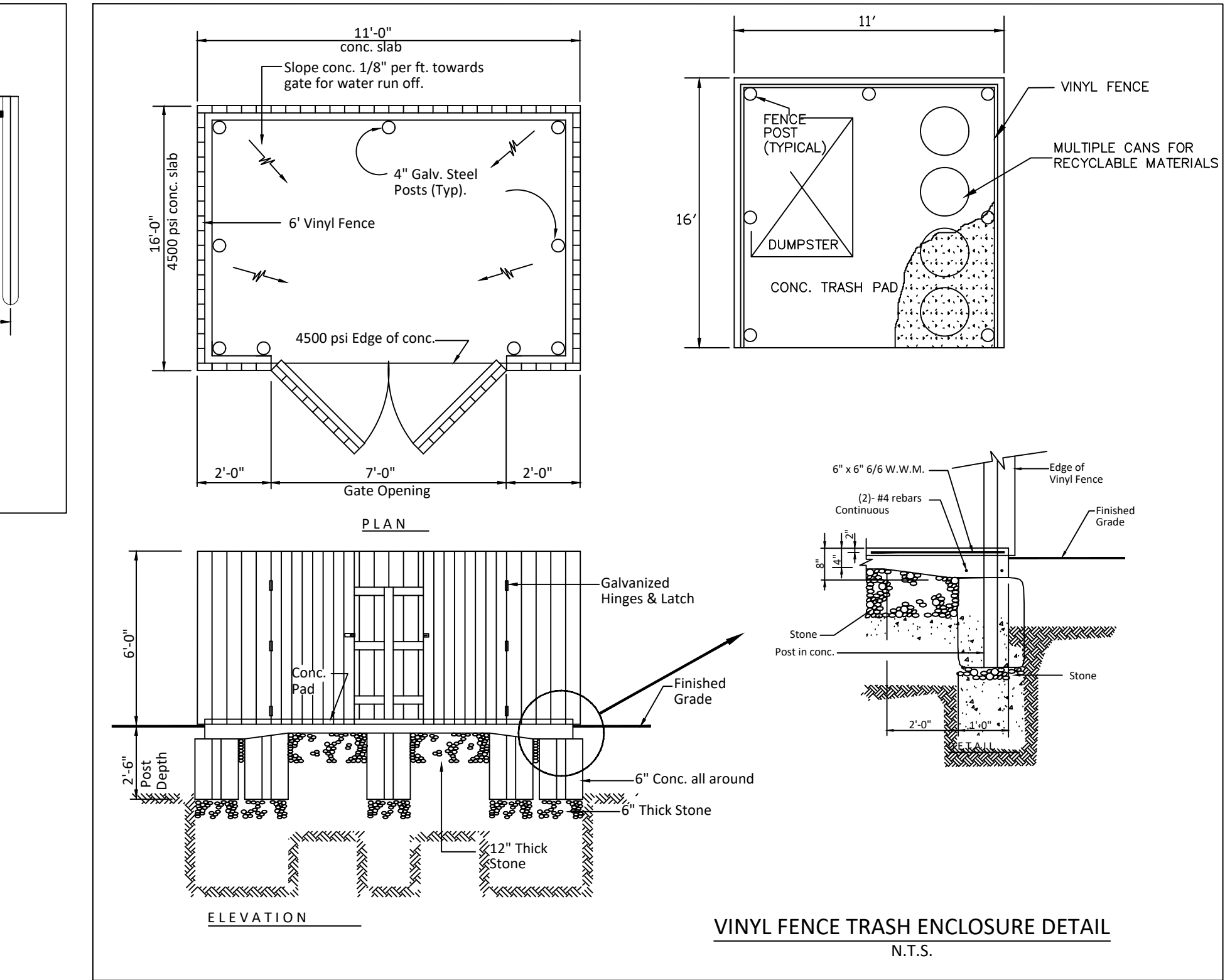
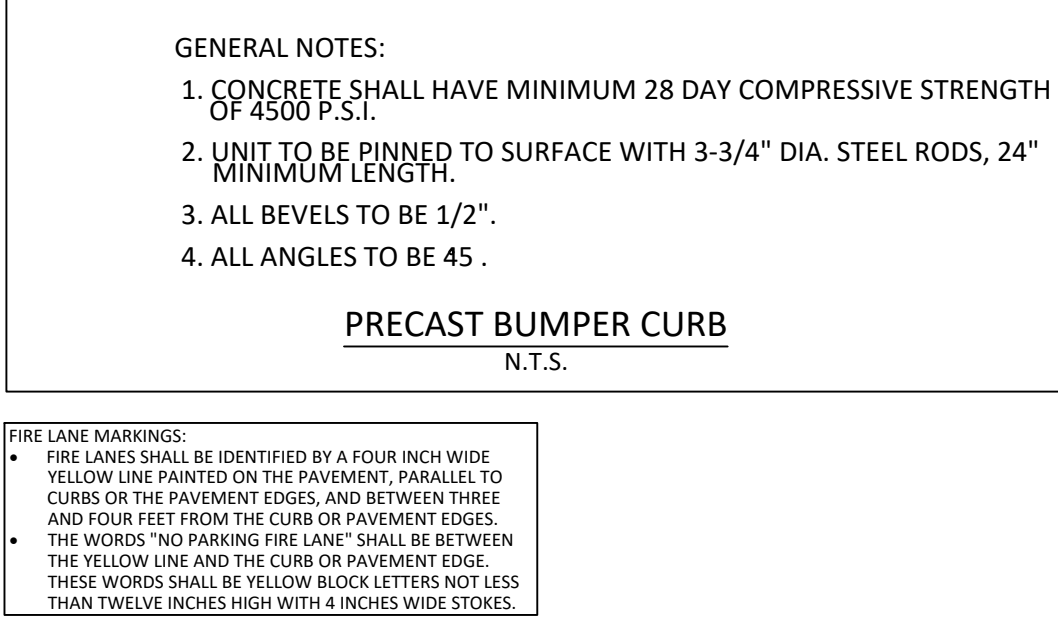
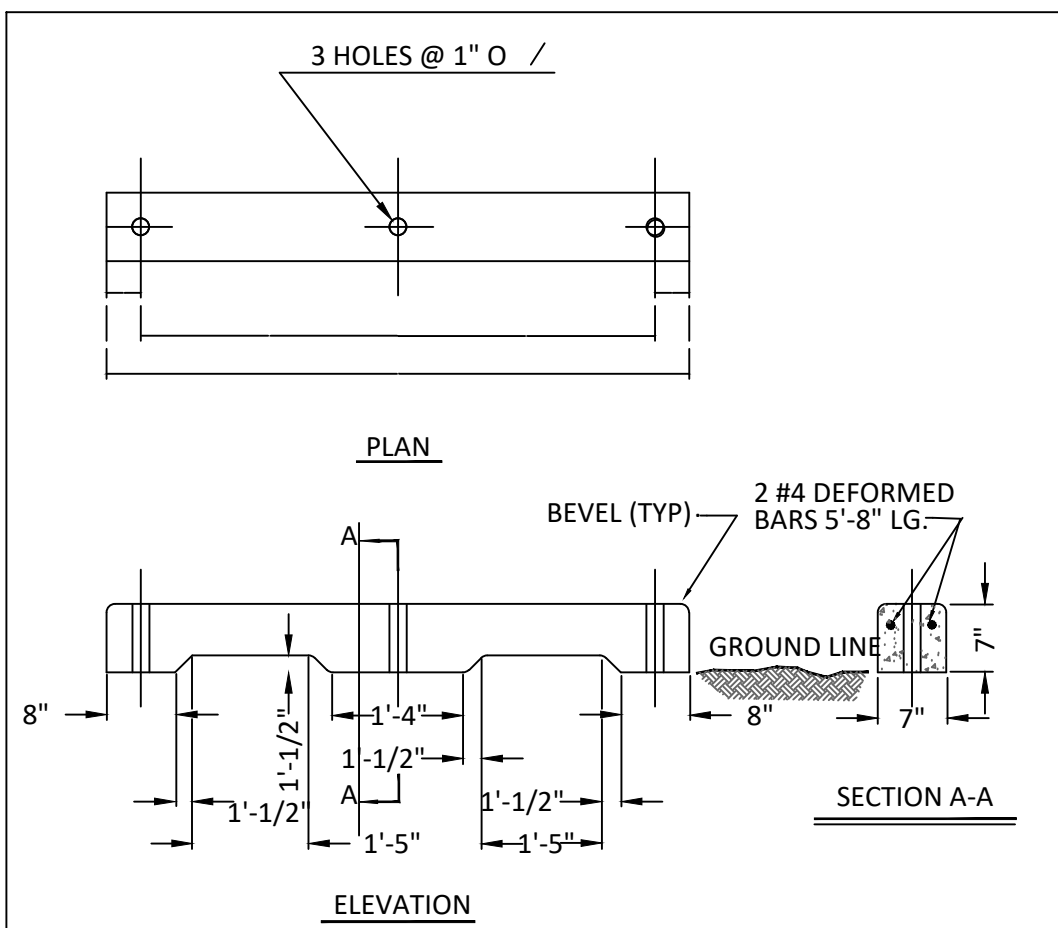
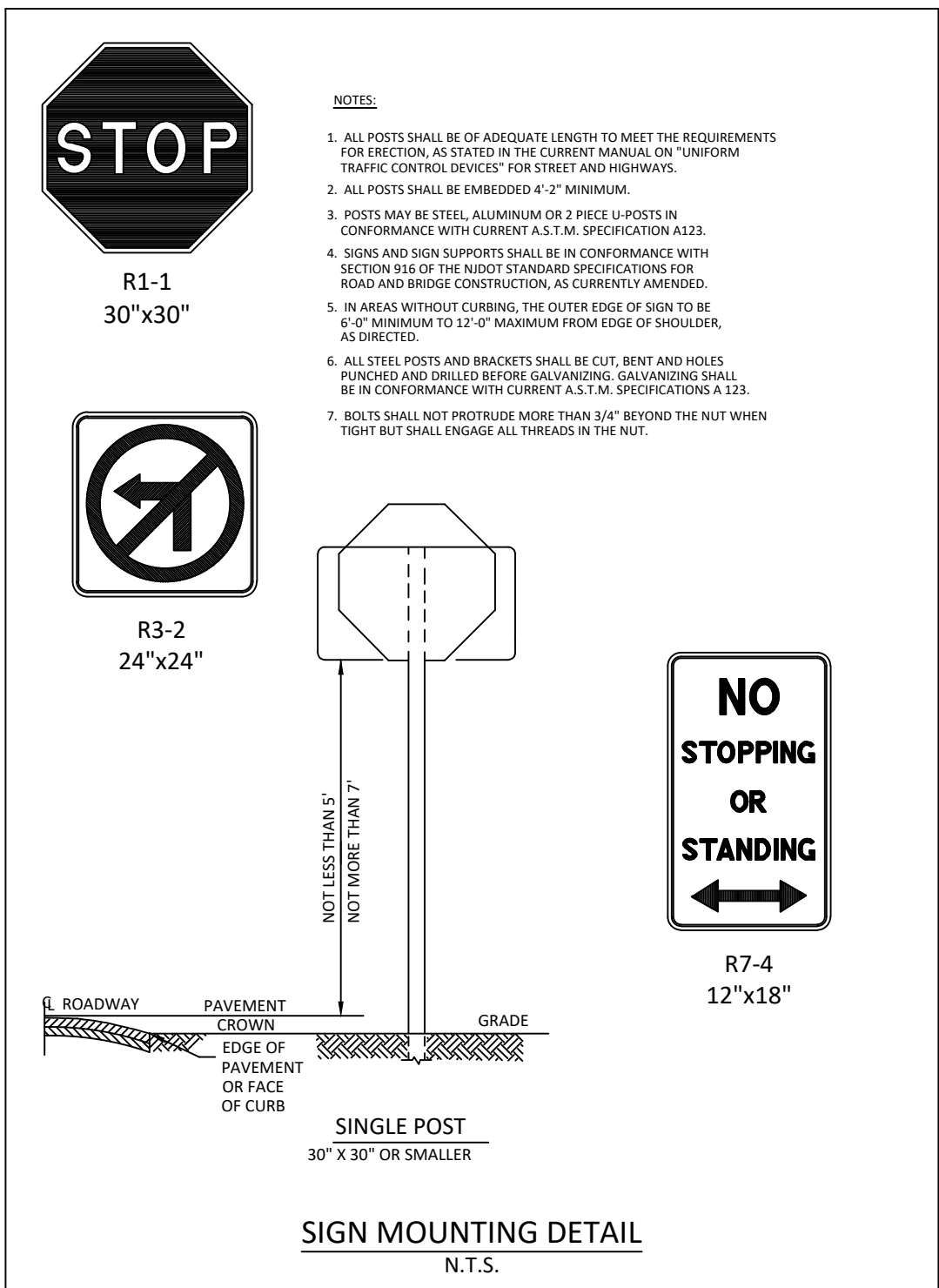
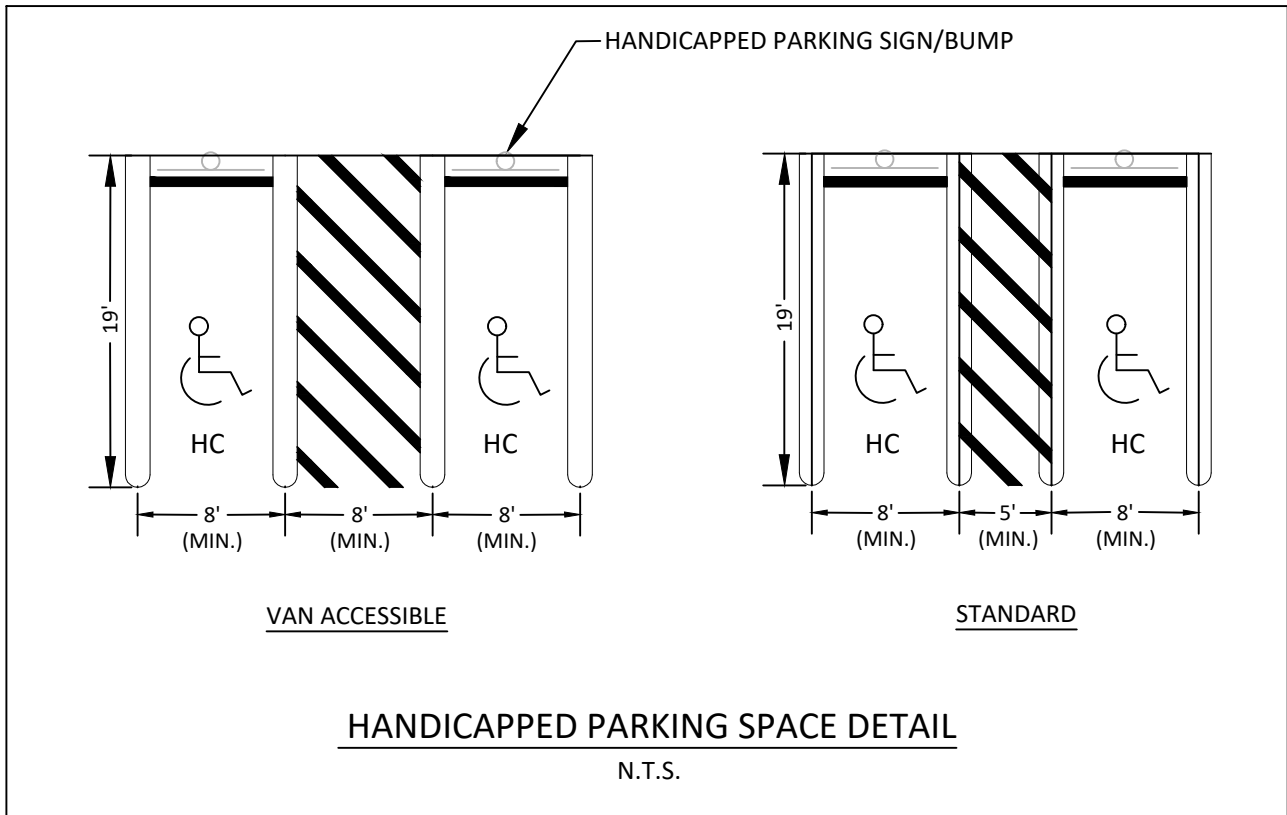
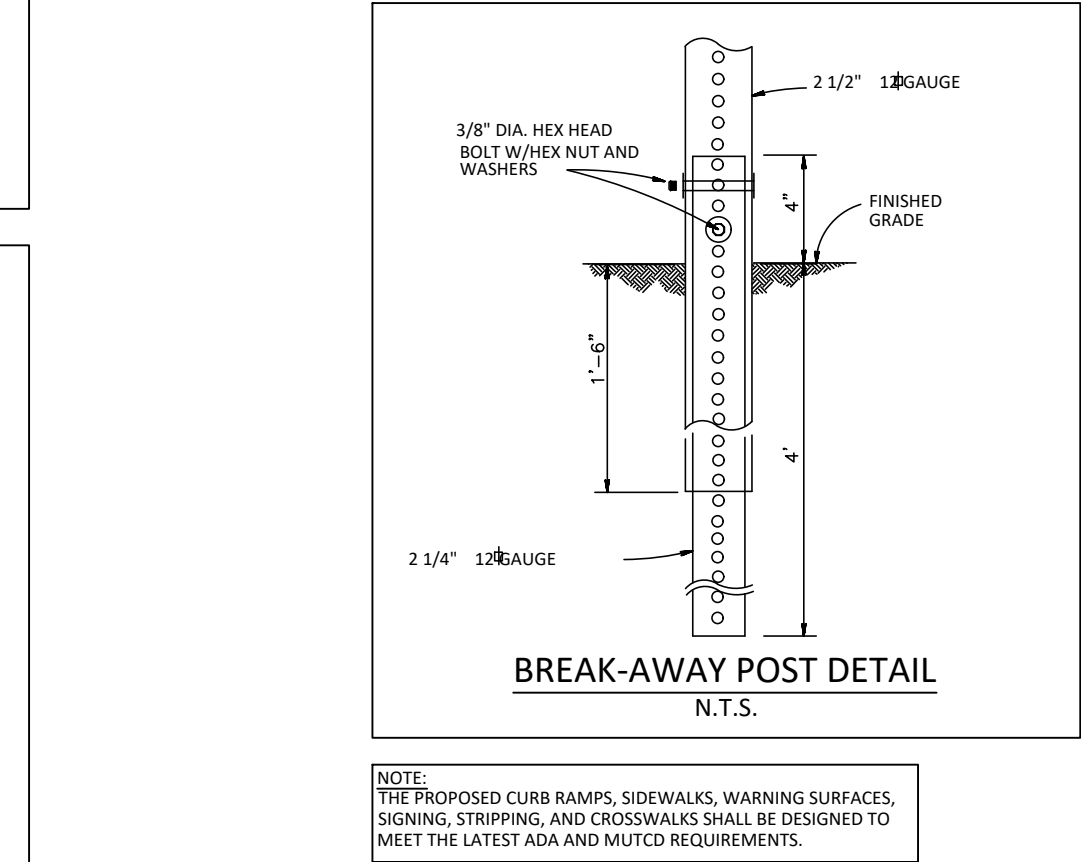
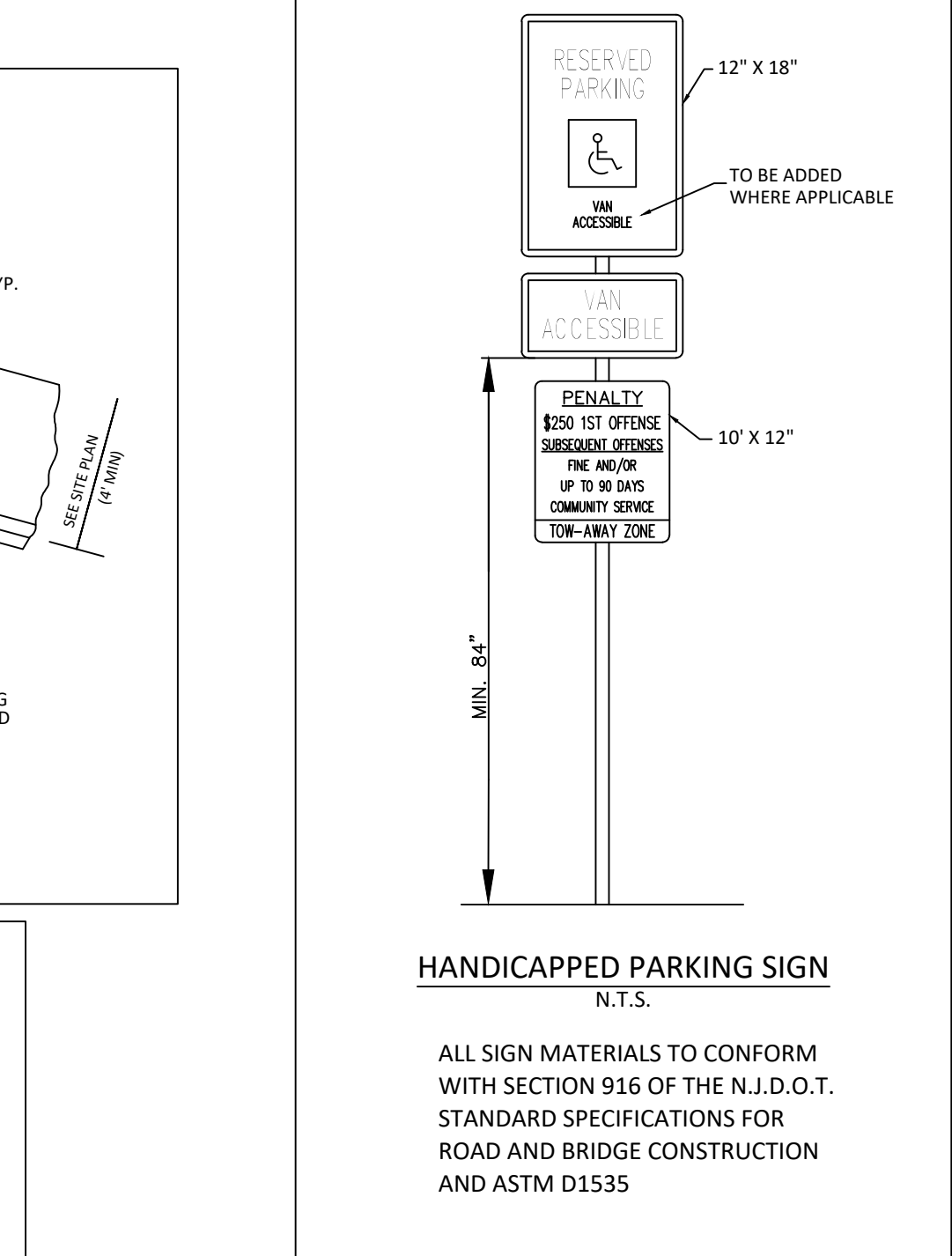
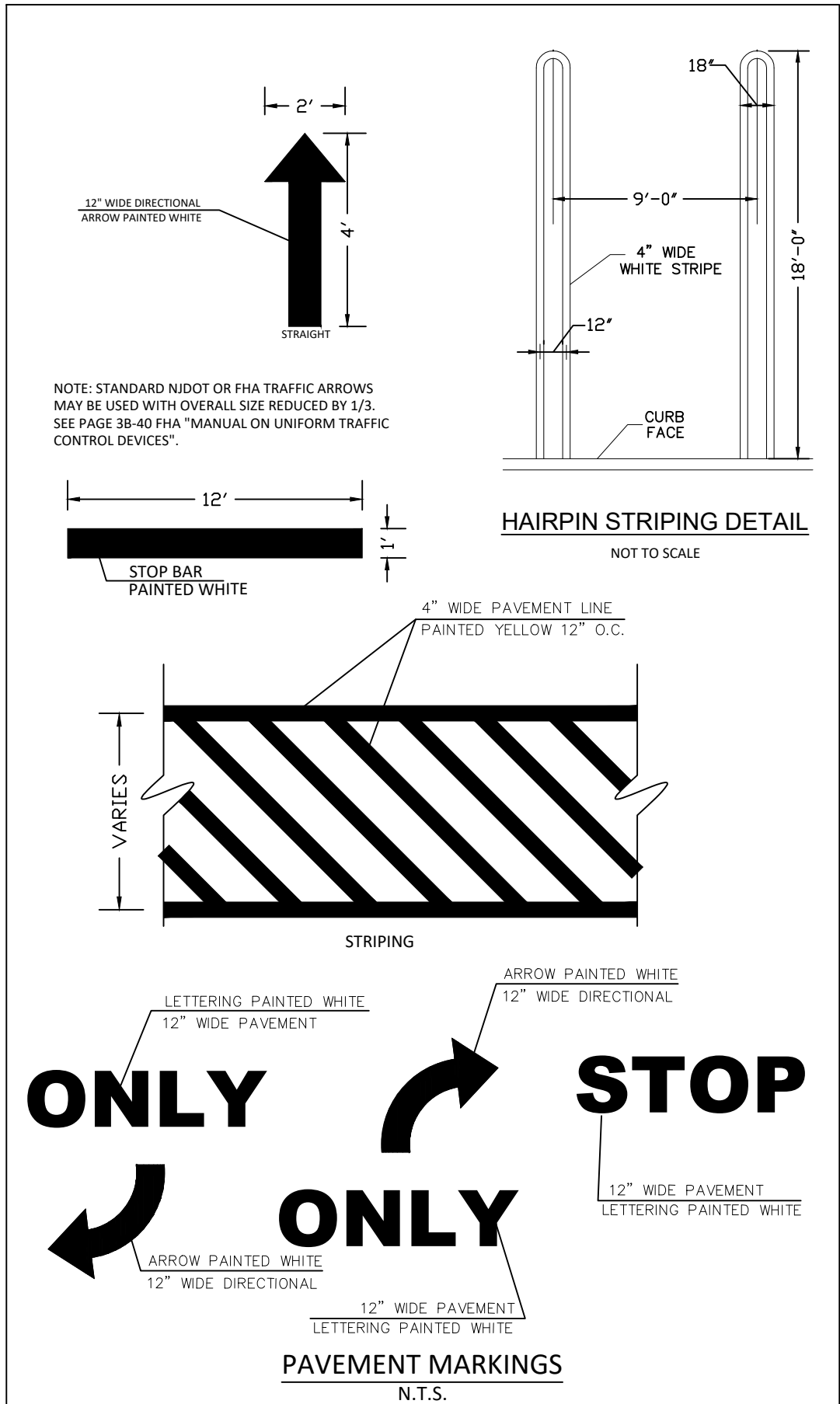
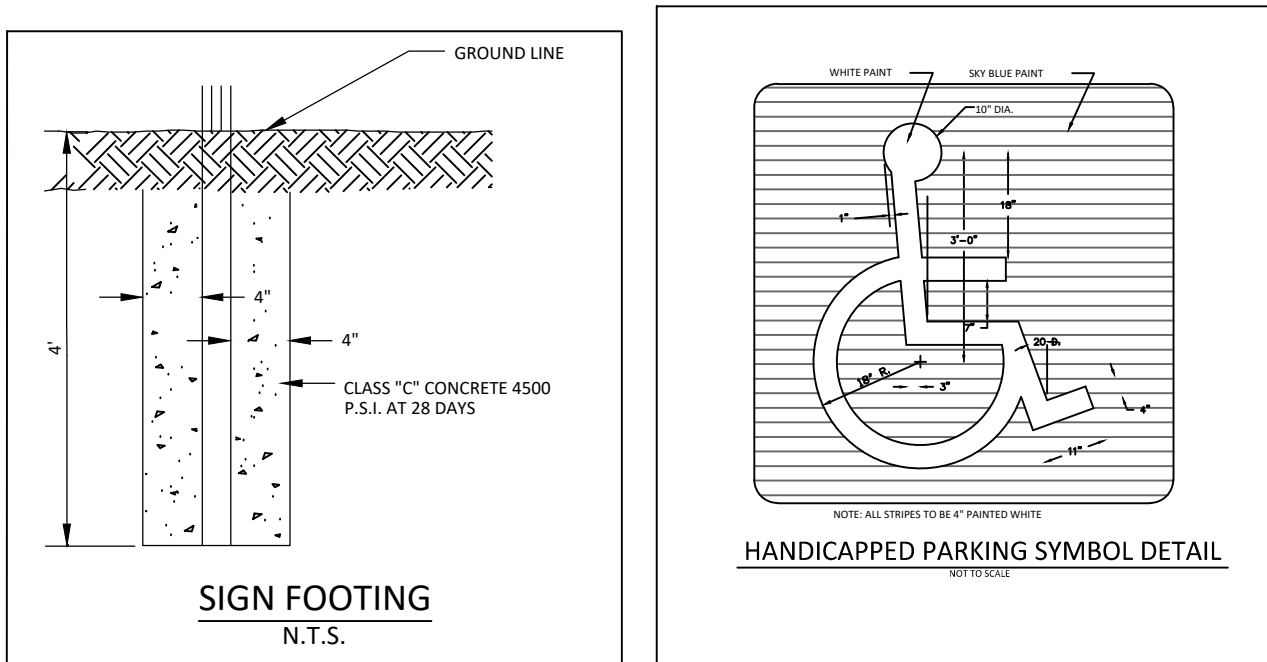
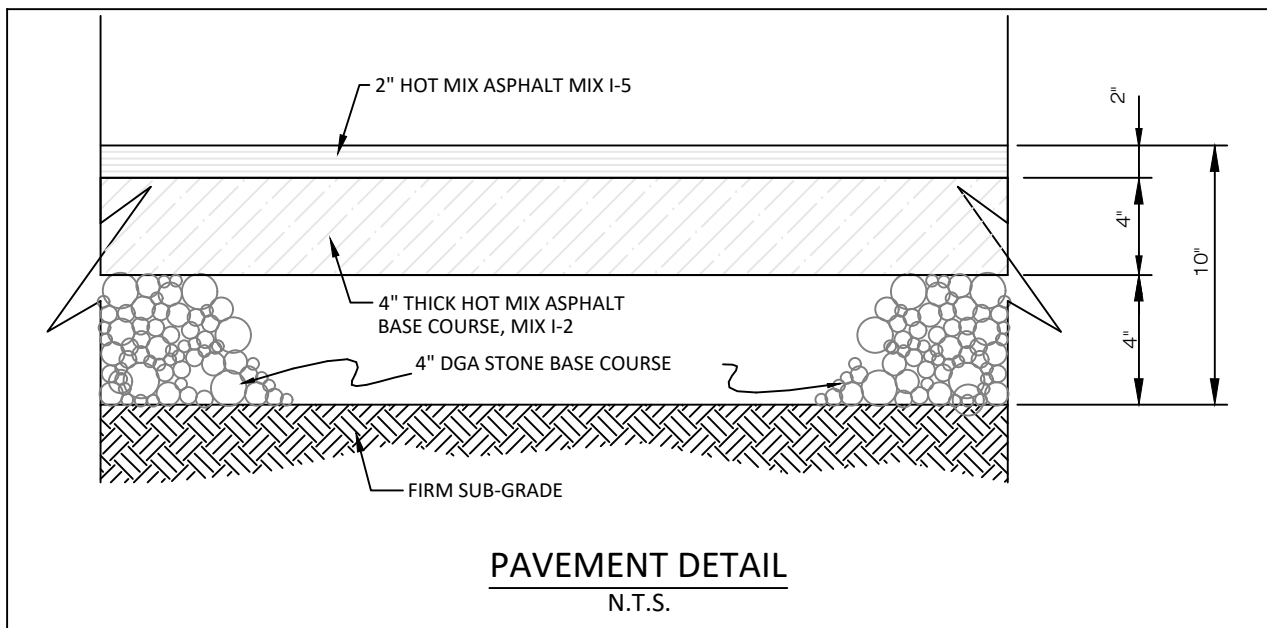
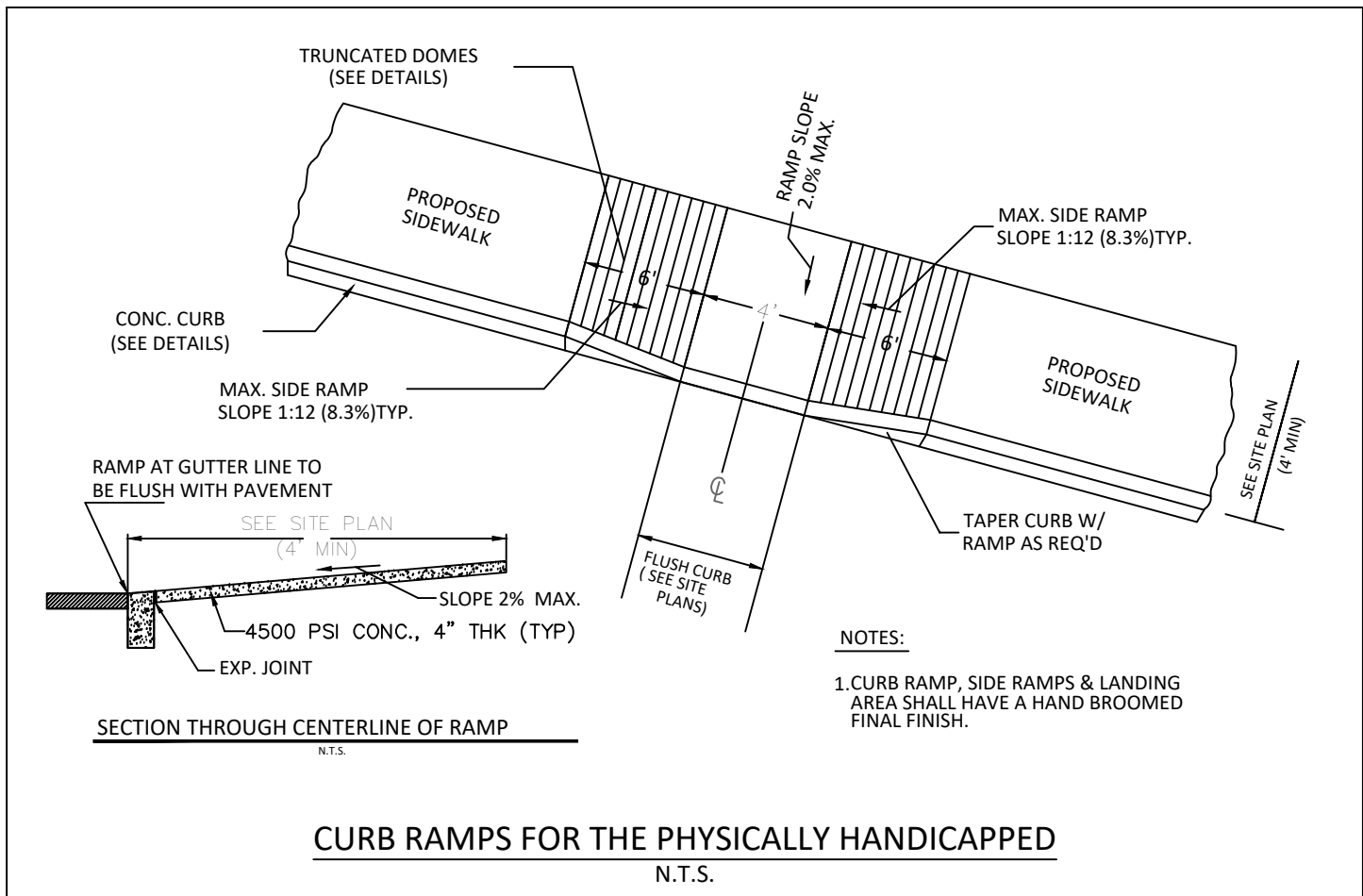
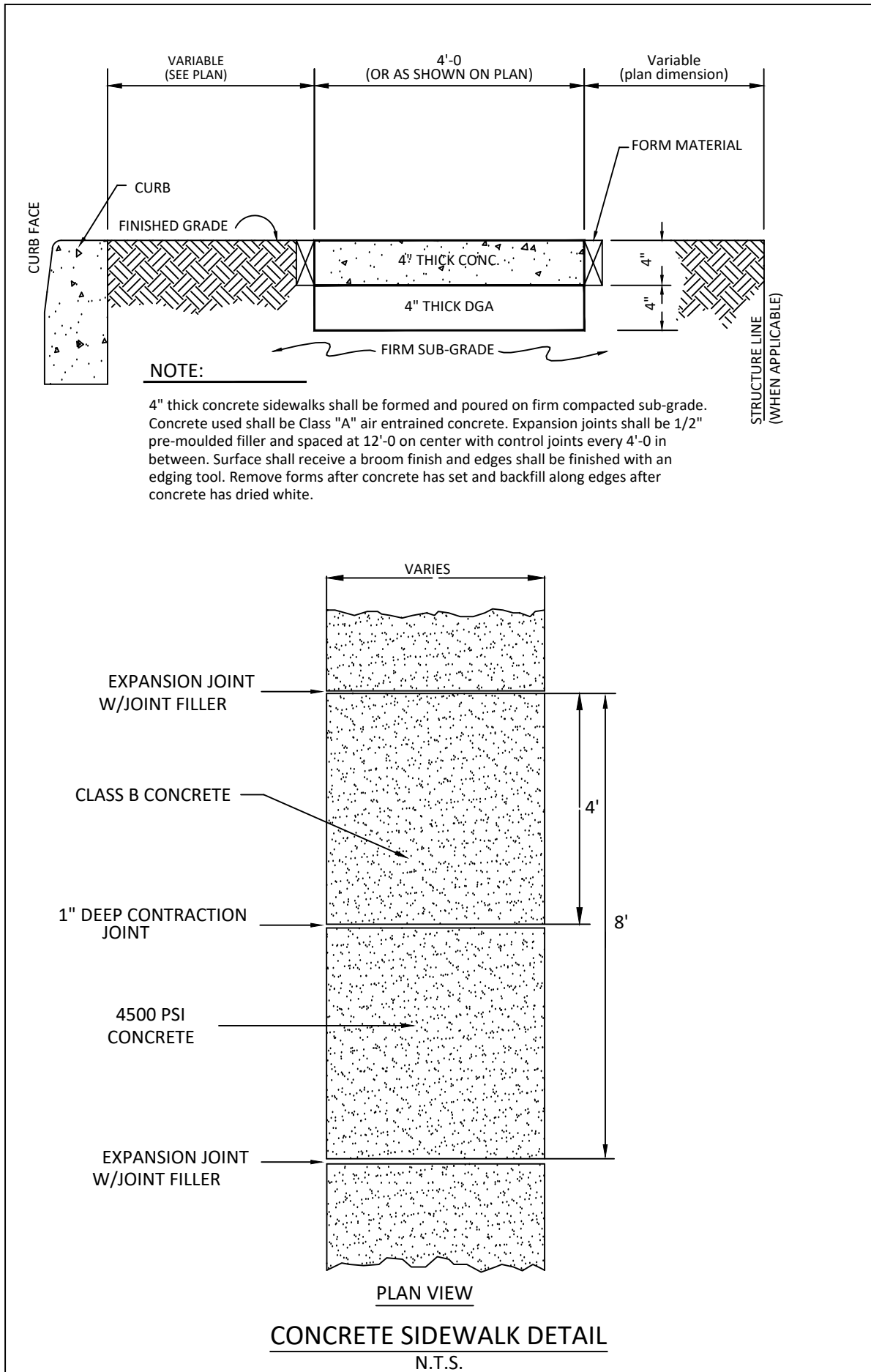
13. IF EXCAVATING IS TO BE DONE ON DUNHAM'S CORNER ROAD TO TIE INTO UNDERGROUND UTILITIES OR INSTALLING CURBING, A ROAD-OPENING PERMIT WILL BE REQUIRED.

14. ALL WATER FITTINGS, NUTS AND BOLTS ARE TO BE STAINLESS STEEL.

15. TO THE MAXIMUM EXTENT FEASIBLE, ALL STORMWATER CONTROL MEASURES SHALL BE CONSTRUCTED PRIOR TO BEGINNING OTHER LAND DISTURBANCE ACTIVITIES.
- TAX LOTS 23, 24, 25 & 28
- BLOCK 444.04
- 212, 214 & 216 ERNSTON ROAD
- BOROUGH OF SAYREVILLE
- MIDDLESEX COUNTY, NEW JERSEY
- GENERAL CONSTRUCTION NOTES
- JOB NUMBER:
21-1009

SCALE: AS SHOWN
- C-14

SHEET 14 OF 19
- ADNAN A. KHAN, P.E., C.M.E.
- PROFESSIONAL ENGINEER
- DATE: 04/07/25
- N.J. LICENSE NO. 39812
- P.A. LICENSE NO. 480632
- N.Y. LICENSE NO. 086435
- M.D. LICENSE NO. 41863
- AWZ ENGINEERING, INC.
- ENGINEERS • SCIENTISTS • CONSULTANTS
- Main Office: 150 River Road, Suite B3, Montville, NJ 07045
- Pennsylvania Office: Scranton, PA 18504
- Tel: 973-588-7080 Fax: 973-588-7079
- www.awzengineering.com e-mail: info@awzengineering.com
- New Jersey Certificate of Authorization No.: 24GA28118400
- Pennsylvania Certificate of Authority No.: 3771354
- DRAWN BY
- DATE: 12/20/21
- DESIGNED BY
- DATE: 12/20/21
- APPROVED BY
- DATE: 02/09/23
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PROFESSIONAL ENGINEER

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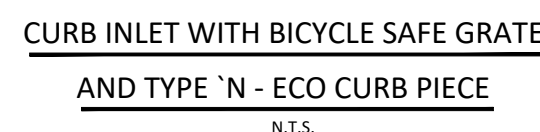
CONSTRUCTION DETAILS

JOB NUMBER: 21-1009
SCALE: AS SHOWN

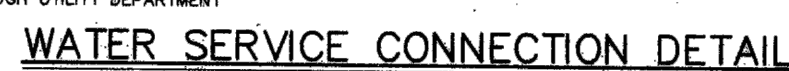
C-15
SHEET 15 OF 19



1. CLEAN MAT(S) WITH RUBBING ALCOHOL AND LET DRY. LAY MAT(S) FLAT, AWAY FROM THE ACTUAL FINAL PLACEMENT. (IF NECESSARY, BEND THEM SLIGHTLY TO MAKE THEM FLAT.
2. CLEAN THE SURFACE USING A PRESSURE WASH OF AT LEAST 2,500 PSI. IF THERE IS GUM OR OTHER CONTAMINANTS ON THE SURFACE, CLEAN WITH A WIRE BRUSH. ALTERNATIVELY, NEW GUMCURE WILL REQUIRE ONLY A CITRIC CLEANER APPLICATION. AGITATE WITH A DECK BRUSH, RINSE OFF THOROUGHLY AND DRY THOROUGHLY.
3. PLACE MAT(S) ONTO THE APPLICATION SURFACE.
4. MASK OFF AREA AROUND THE MAT(S) WITH A GOOD-QUALITY DUCT TAPE (THE DUCT TAPE BONDS BETTER TO THE CONCRETE THAN REGULAR MASKING TAPE.
5. REMOVE THE MAT(S) FROM THE WORKING AREA, REMEMBERING THE EXACT POSITION THEY WERE IN.
6. PLACE THE ADHESIVE IN THE CAULK GUN. CUT OFF $\frac{3}{8}$ " TO $\frac{1}{2}$ " OF THE PLASTIC TIP AND PIERCE THE INNER SEAL OF THE CAULK TUBE.
7. SQUEEZE OUT A LARGE BEAD OF ADHESIVE ON THE HALF OF THE SURFACE.
8. USING A SERRATED TROWEL, SPREAD THE ADHESIVE TO COVER THE ENTIRE MASKED-OFF SURFACE (PAYING PARTICULAR ATTENTION TO MAKING SURE THAT THE PERIMETER OF THE ADHESIVE IS COVERED RIGHT UP TO THE TAP-EDGED EGGS). A 1-1/4 TUBE COVERS A SQUARE FEET.
9. CAREFULLY PLACE THE MAT(S) BACK IN THEIR ORIGINAL POSITION ON THE SURFACE. MAKING SURE THAT THEY ARE NOT OVERLAPPING THE DUCT TAPE.
10. LAY A SMALL, FLAT BOARD (1 SQUARE FOOT OR SMALLER) ON THE TOP OF THE DOMES AND PRESS DOWN FIRMLY. MOVE THE BOARD AROUND, MAKING SURE THAT ALL AREAS OF EACH MAT HAVE BEEN PRESSED DOWN. IF ANY OF THE BOARD OR ANOTHER BOARD TO PRESS DOWN ALL AREAS IN BETWEEN THE DOMES. WORK FROM THE CENTER OUT AND PAY PARTICULAR ATTENTION TO PRESSING DOWN ALL AREAS AROUND THE OUTSIDE PERIMETER.
11. REMOVE ANY EXCESS ADHESIVE WITH A RAG WET WITH XYLENE. IF NEED BE, DURABAK CAN LATER BE USED FOR TOUCH-UP WITH A SMALL BRUSH.
12. LET ADHESIVE DRY FOR AT LEAST 6 HOURS BEFORE ALLOWING FOOT TRAFFIC.



N.T.S.



- 1) MAX SLAB LENGTH
TO BE 10'
- 2) PROVIDE 1/2" PREMOLDED
ASPHALT IMPREGNATED
EXPANSION JOINTS EVRY
20'



<p>TAX LOTS 23, 24, 25 & 28</p> <p>BLOCK 444.04</p> <p>212, 214 & 216 ERNSTON ROAD</p> <p>BOROUGH OF SAYREVILLE</p> <p>MIDDLESEX COUNTY, NEW JERSEY</p>	<p>CONSTRUCTION DETAILS</p>	<p>JOB NUMBER:</p> <p>21-1009</p>		<p>SCALE: AS SHOWN</p>		<p>C-16</p>		<p>SHEET 16 OF 19</p>	
		<p>AWZ ENGINEERING, INC.</p> <p>ENGINEERS • SCIENTISTS • CONSULTANTS</p> <p>Main Office: 150 River Road, Suite B3, Montville, NJ 07045 Pennsylvania Office: Scranton, PA 18504 Tel: 973-588-7080 Fax: 973-588-7079 www.awzengineering.com e-mail: info@awzengineering.com New Jersey Certificate of Authorization No.: 24GA28118400 Pennsylvania Certificate of Authority No.: 37711354</p>		<p>ADNAN A. KHAN, P.E., C.M.E.</p> <p>PROFESSIONAL ENGINEER</p> <p><i>Adnan A. Khan</i> 04/07/25 DATE</p>		<p>DRAWN BY</p> <p>LF</p> <p>DATE</p> <p>12/20/21</p> <p>DESIGNED BY</p> <p>AK</p> <p>DATE</p> <p>12/22/21</p> <p>APPROVED BY</p> <p>AK</p>		<p>NO.</p> <p>REVISIONS</p> <p>DATE</p> <p>BY:</p> <p>APR:</p>	

CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS

GENERAL
CULTEC RECHARGER® 360HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - A. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
3. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
5. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
6. THE CHAMBER SHALL BE ARCHED IN SHAPE.
7. THE CHAMBER SHALL BE OPEN-BOTTOMED.
8. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
9. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 36 INCHES (915 mm) TALL, 60 INCHES (1525 mm) WIDE AND 50 INCHES (1275 mm) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 360HD SHALL BE 3.67 FEET (1.12 m).
10. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
11. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCH (250mm) HDPE OR 12 INCH (300mm) PVC.
12. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
13. THE NOMINAL STORAGE VOLUME OF THE RECHARGER® 360HD CHAMBER SHALL BE 10.0 FT³ / FT (328 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER® 360HD SHALL BE 36.66 FT³ / UNIT (1,038 m³ / UNIT) - WITHOUT STONE.
14. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
15. THE RECHARGER® 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
16. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
17. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 m).

1. THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
3. THE END CAP SHALL BE ARCHED IN SHAPE.
4. THE END CAP SHALL BE OPEN-BOTTOMED.
5. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
6. THE END CAP SHALL HAVE 5 CORRUGATIONS.
7. THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 36.5 INCHES (927 mm) TALL, 60 INCHES (1525 mm) WIDE AND 16 INCHES (406 mm) LONG. WHEN JOINED WITH A RECHARGER 360HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 16 INCHES (406 mm).
8. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT³ / FT (0.48 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 8.46 FT³ / UNIT (0.183 m³ / UNIT) - WITHOUT STONE.
9. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
10. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES
11. THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

1. THE CULTEC RECHARGER® 360HD CHAMBER MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
2. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
3. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.
4. THE FEED CONNECTOR SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
5. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
6. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/S) PER ASTM D4491 TESTING METHOD.
14. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.
15. THE RECHARGER® 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
16. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
17. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 m).

1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - A. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

GENERAL NOTES

PIPE	A	B
6" [150 mm]	26.00" [660 mm]	0.75" [20 mm]
8" [200 mm]	24.00" [600 mm]	1.00" [25 mm]
10" [250 mm]	21.00" [525 mm]	1.25" [32 mm]
12" [300 mm]	18.00" [450 mm]	1.75" [45 mm]
15" [375 mm]	15.00" [375 mm]	2.00" [50 mm]
18" [450 mm]	12.00" [300 mm]	2.25" [58 mm]
24" [600 mm]	6.00" [150 mm]	2.50" [64 mm]

*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. 30" (750 mm) SMOOTH-WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.

CULTEC RECHARGER 360HD TYPICAL PIPE INVERTS

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL
CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 360HD STORMWATER CHAMBERS.

FEED CONNECTOR PARAMETERS

1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS

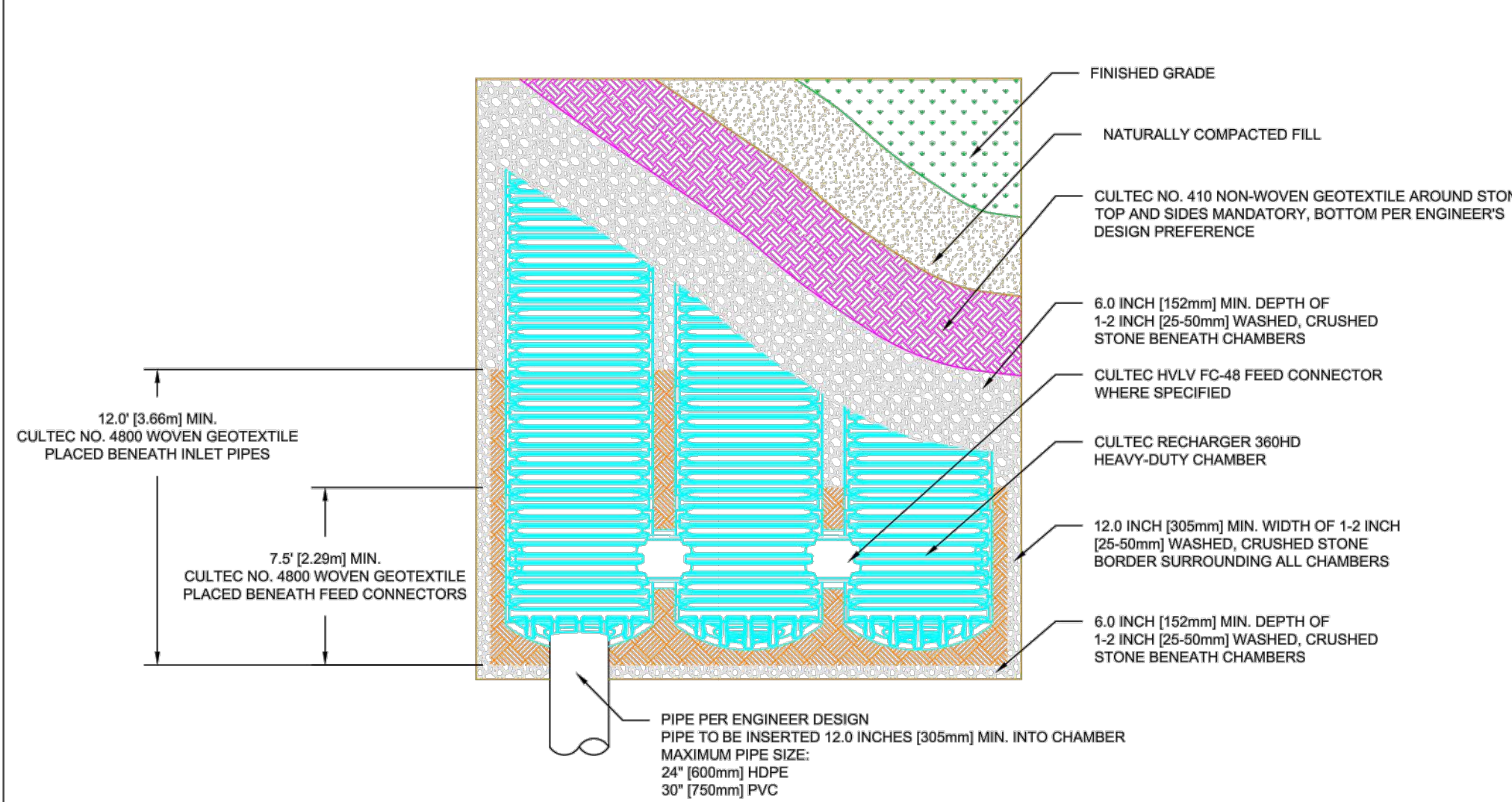
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/S) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC NO. 4800™ WOVEN GEOTEXTILE

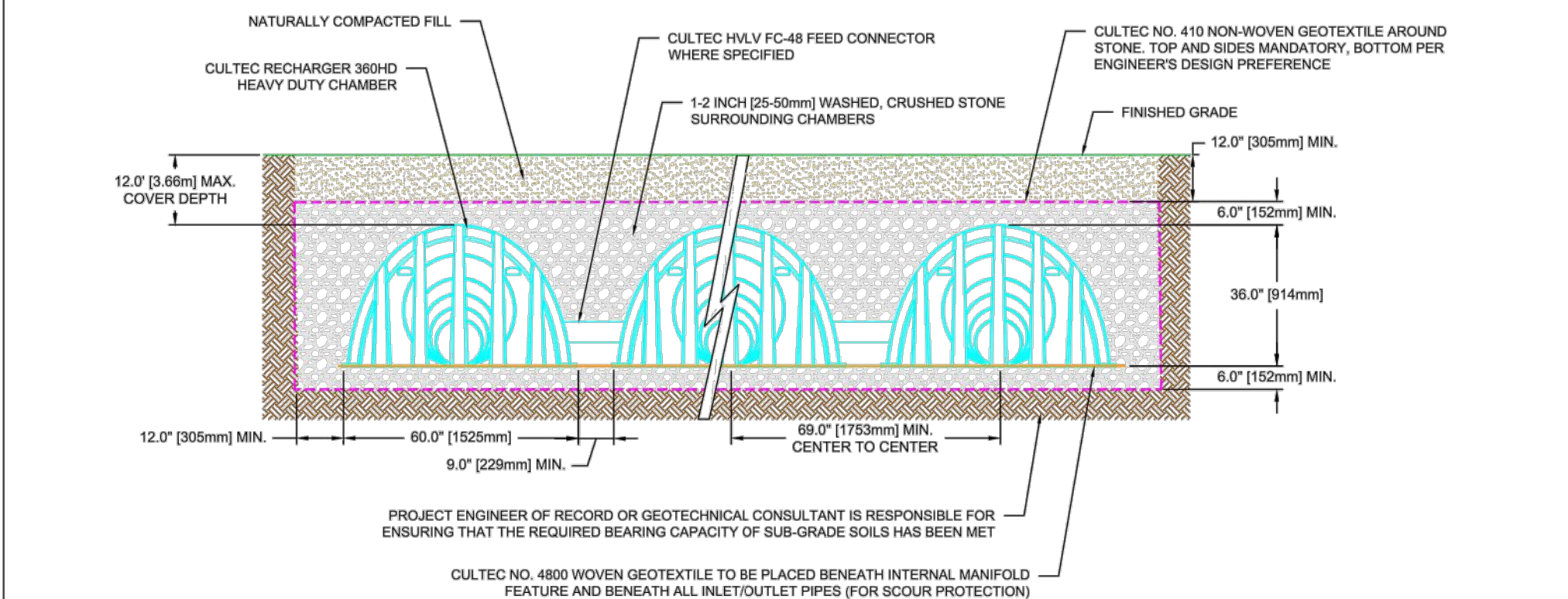
CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,095 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2,740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM D4491 TESTING METHOD.
14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.



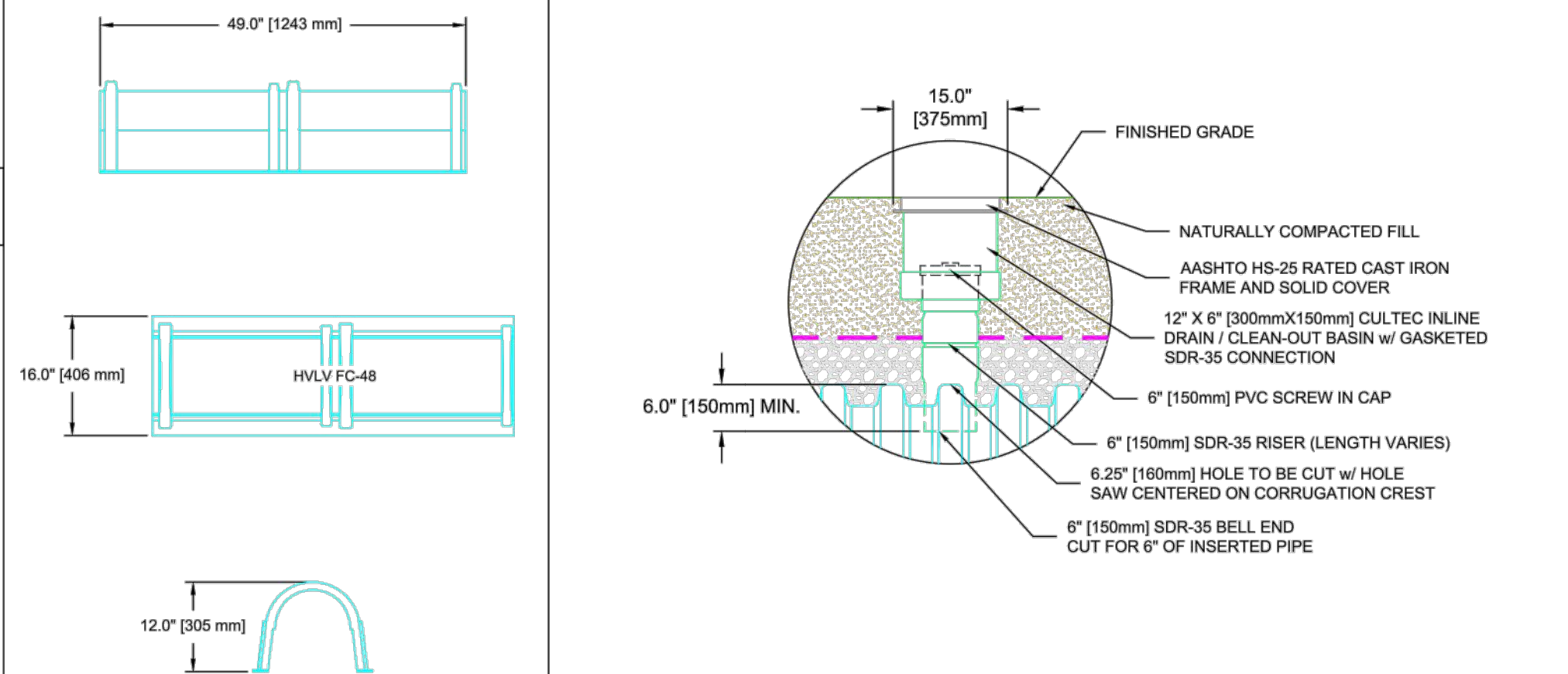
CULTEC RECHARGER 360HD HEAVY DUTY PLAN VIEW



NOTES:

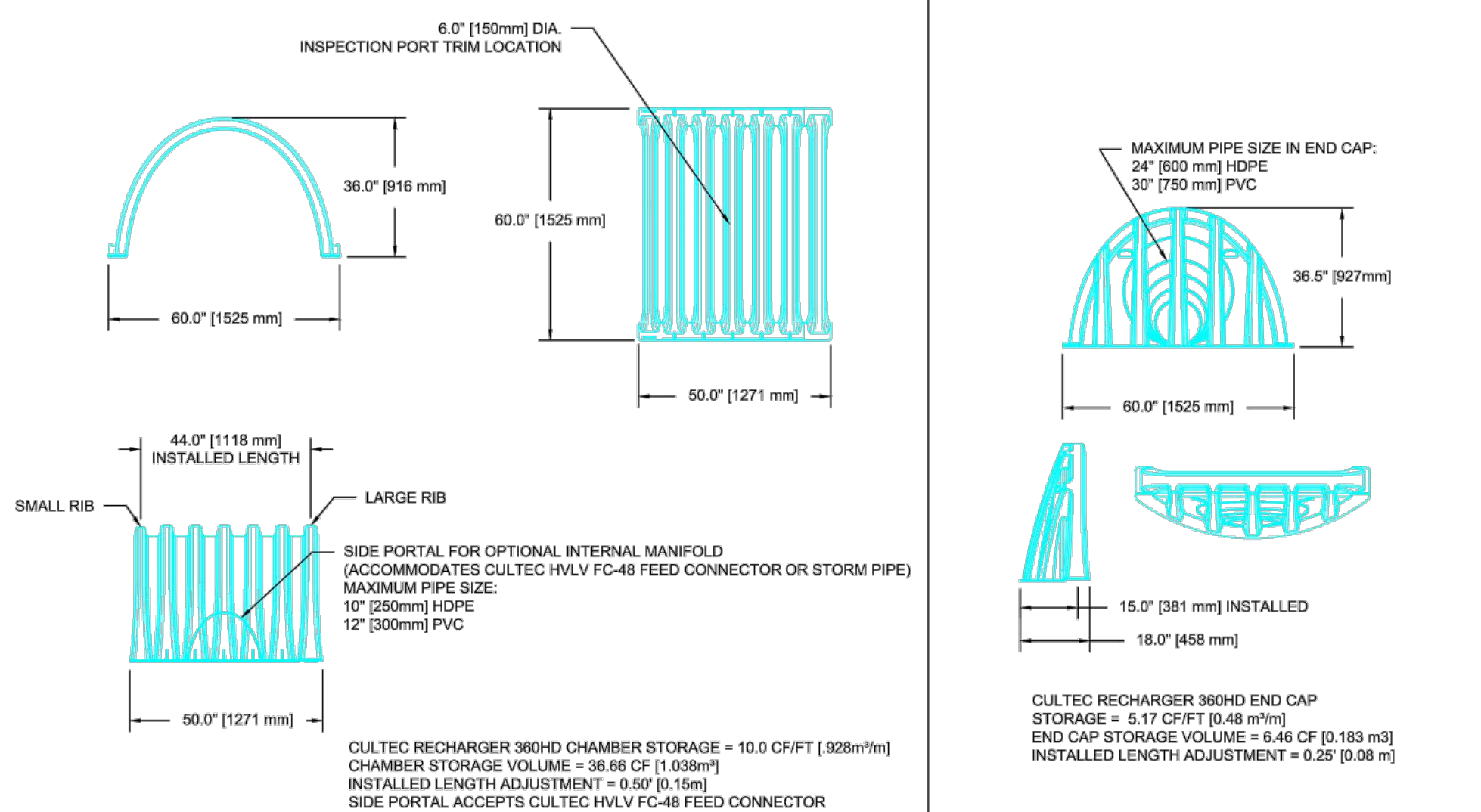
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - A. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

CULTEC RECHARGER 360HD HEAVY DUTY CROSS SECTION

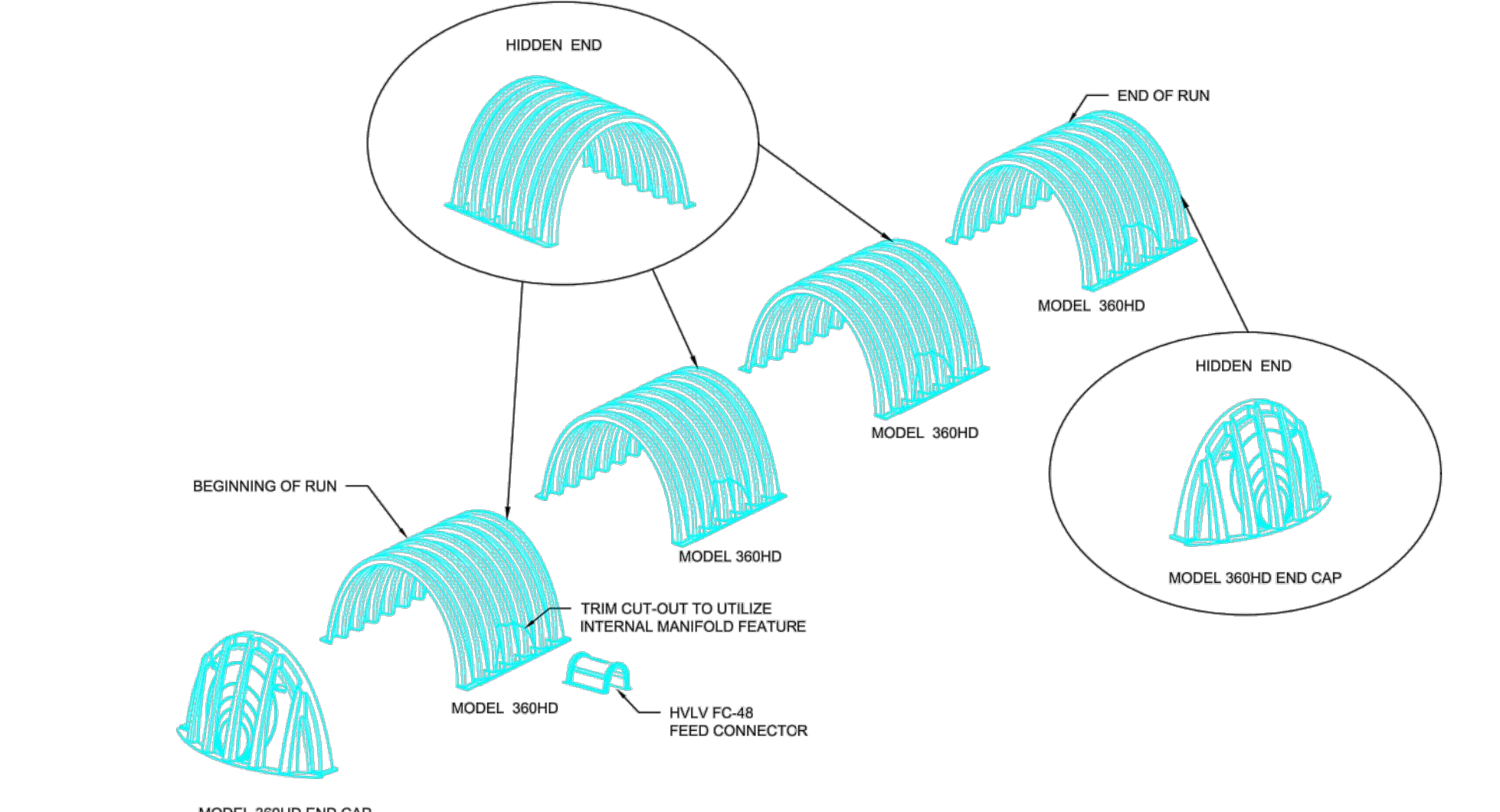


CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW

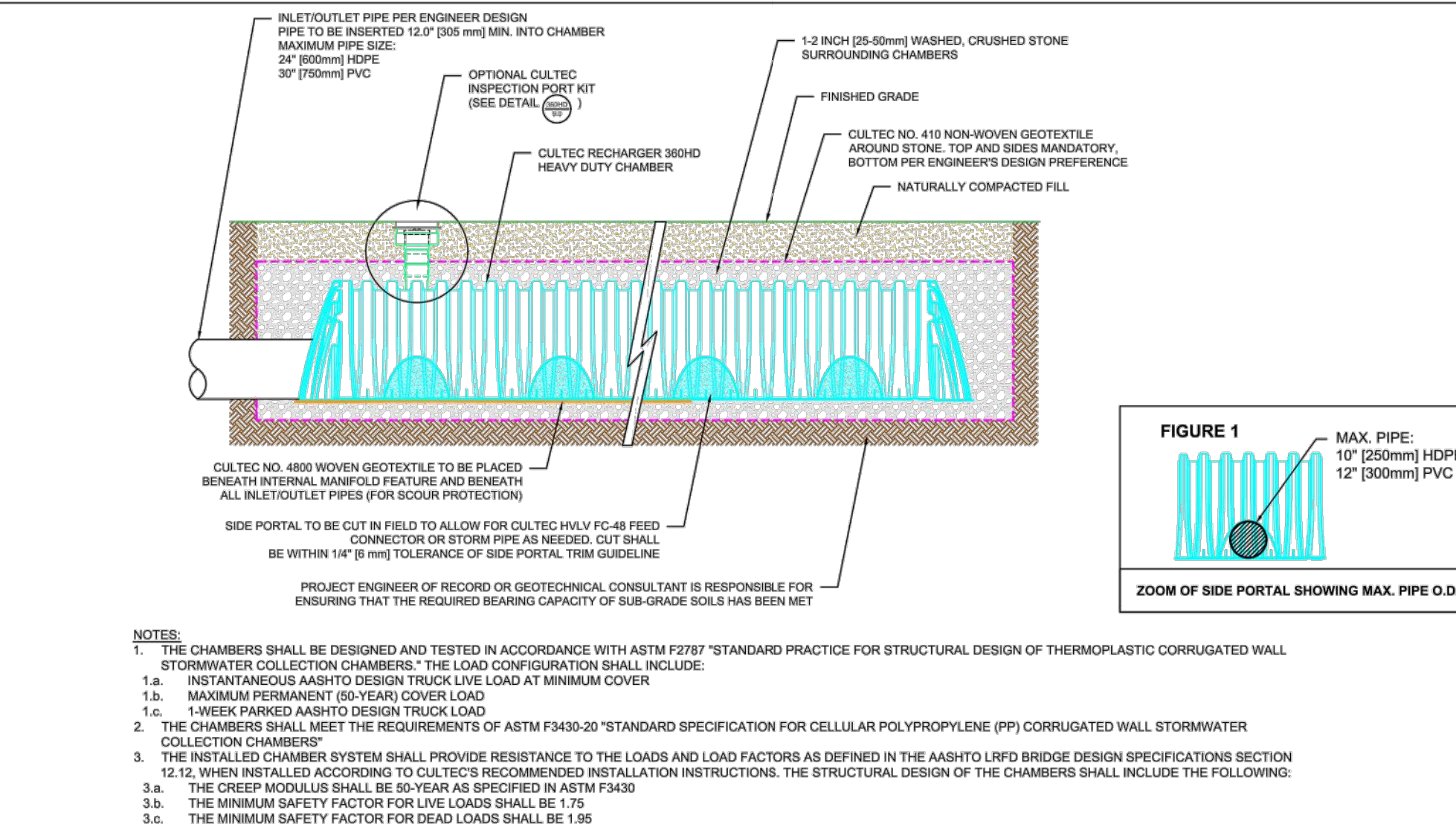
CULTEC INSPECTION PORT - ZOOM DETAIL



CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW



CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK



CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL

TAX LOTS 23, 24, 25 & 28 BLOCK 444.04

212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY

JOB NUMBER:
21-1009

SCALE: AS SHOWN

C-17
SHEET 17 OF 19

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

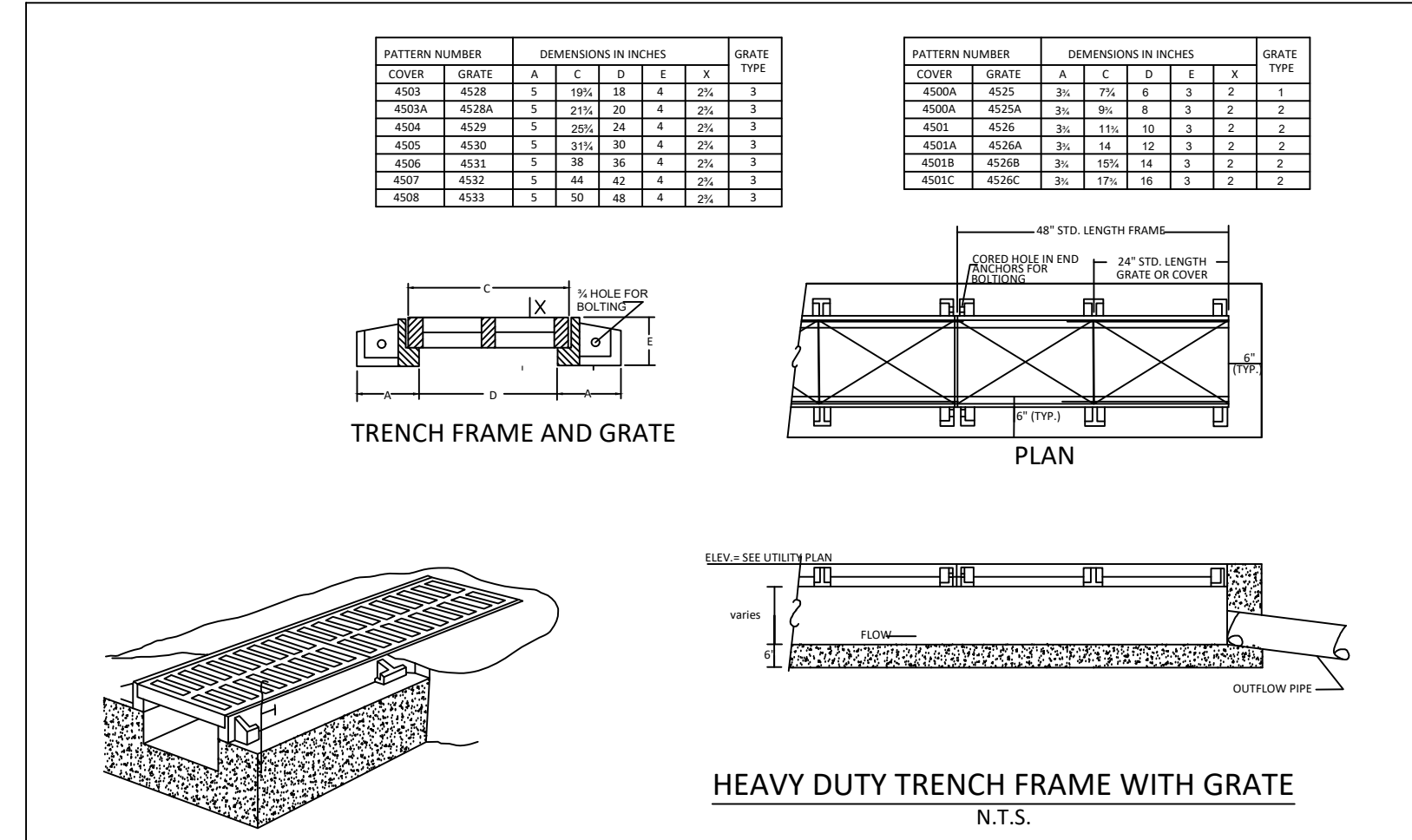
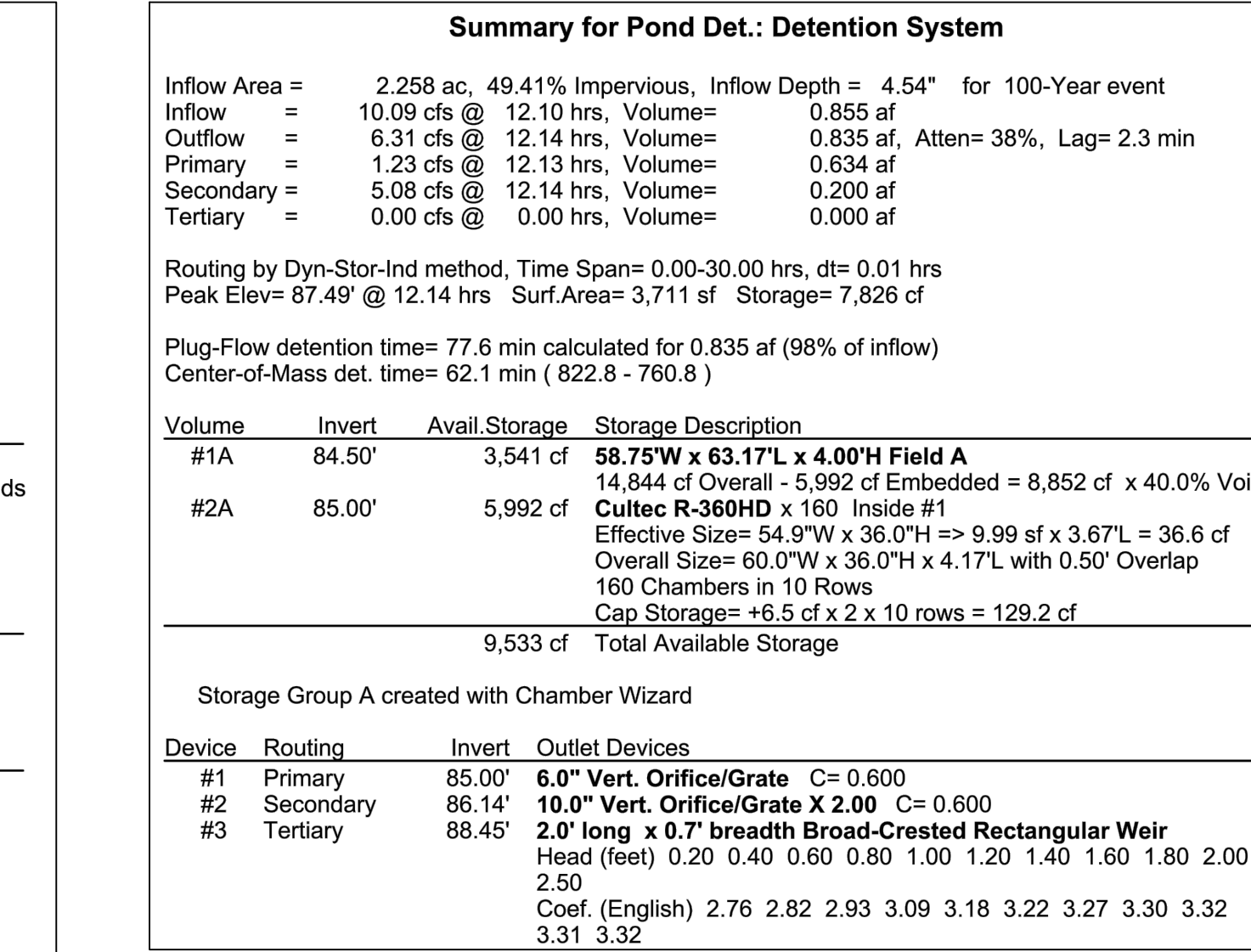
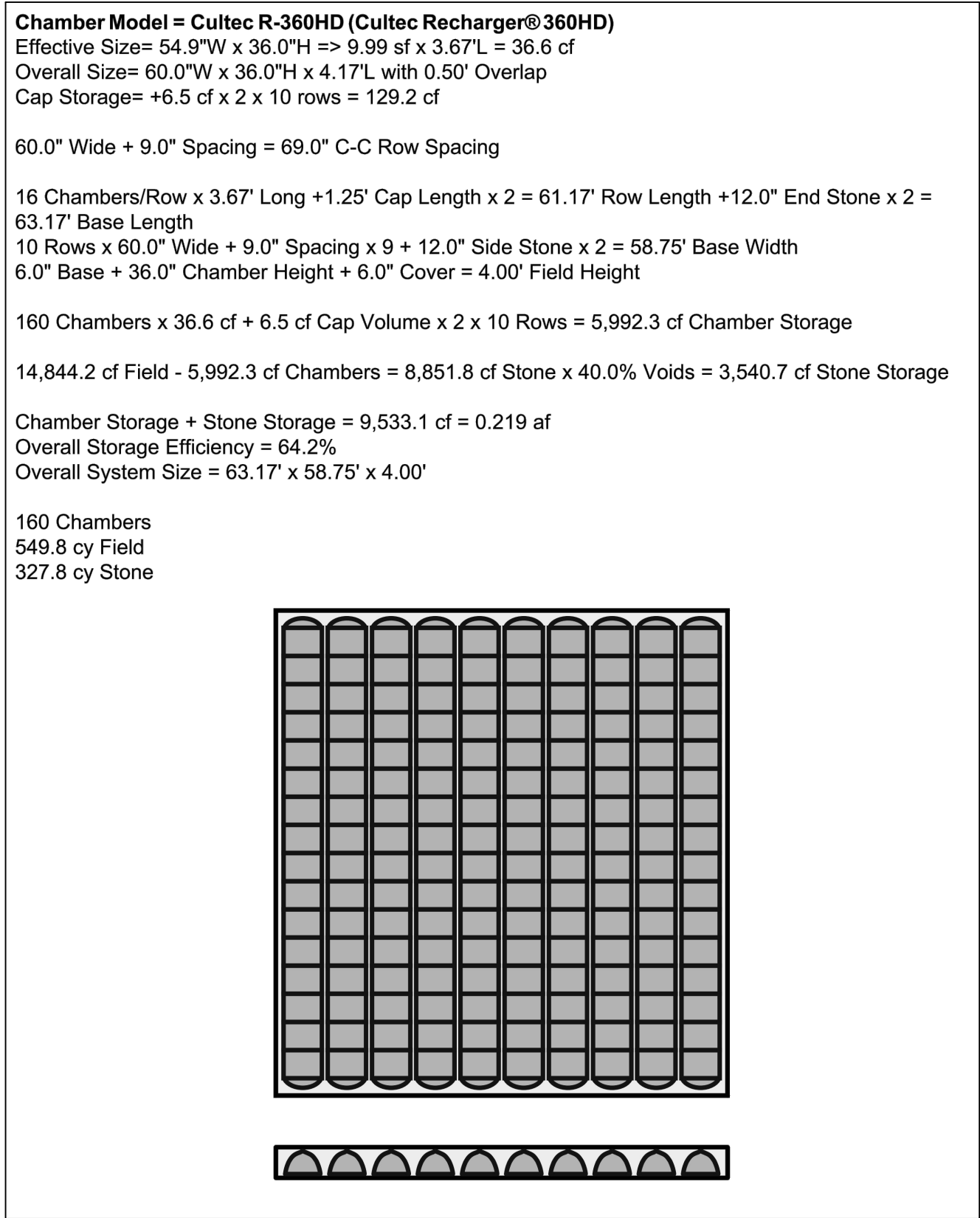
AWZ ENGINEERING, INC.
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Pennsylvania Office: Scranton, PA 18504
Tel: 973-588-7080 Fax: 973-588-7079
www.awzengineering.com email: info@awzengineering.com
New Jersey Certificate of Authorization No.: 24GA28118400
Pennsylvania Certificate of Authority No.: 3771354

CONSTRUCTION DETAILS

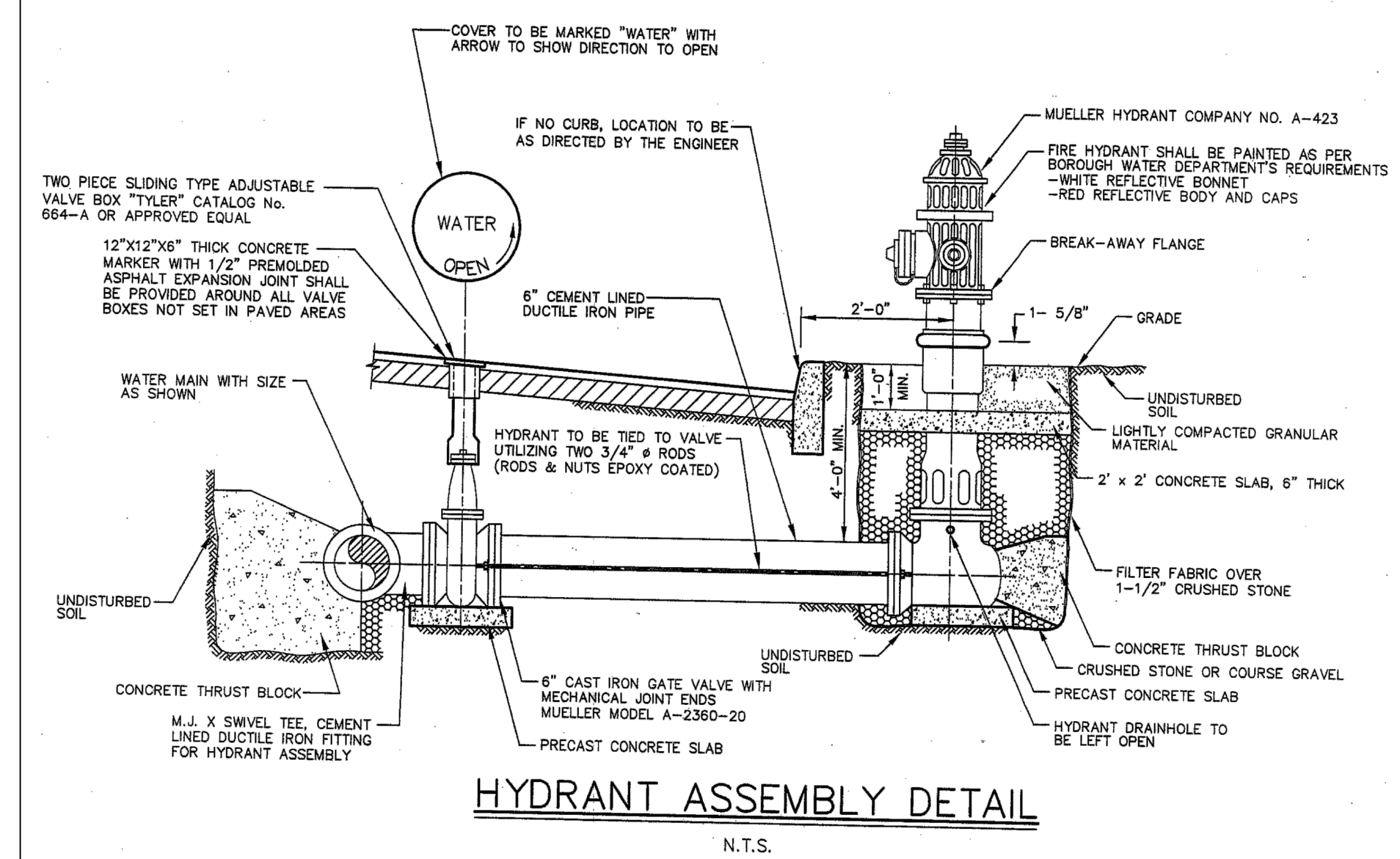
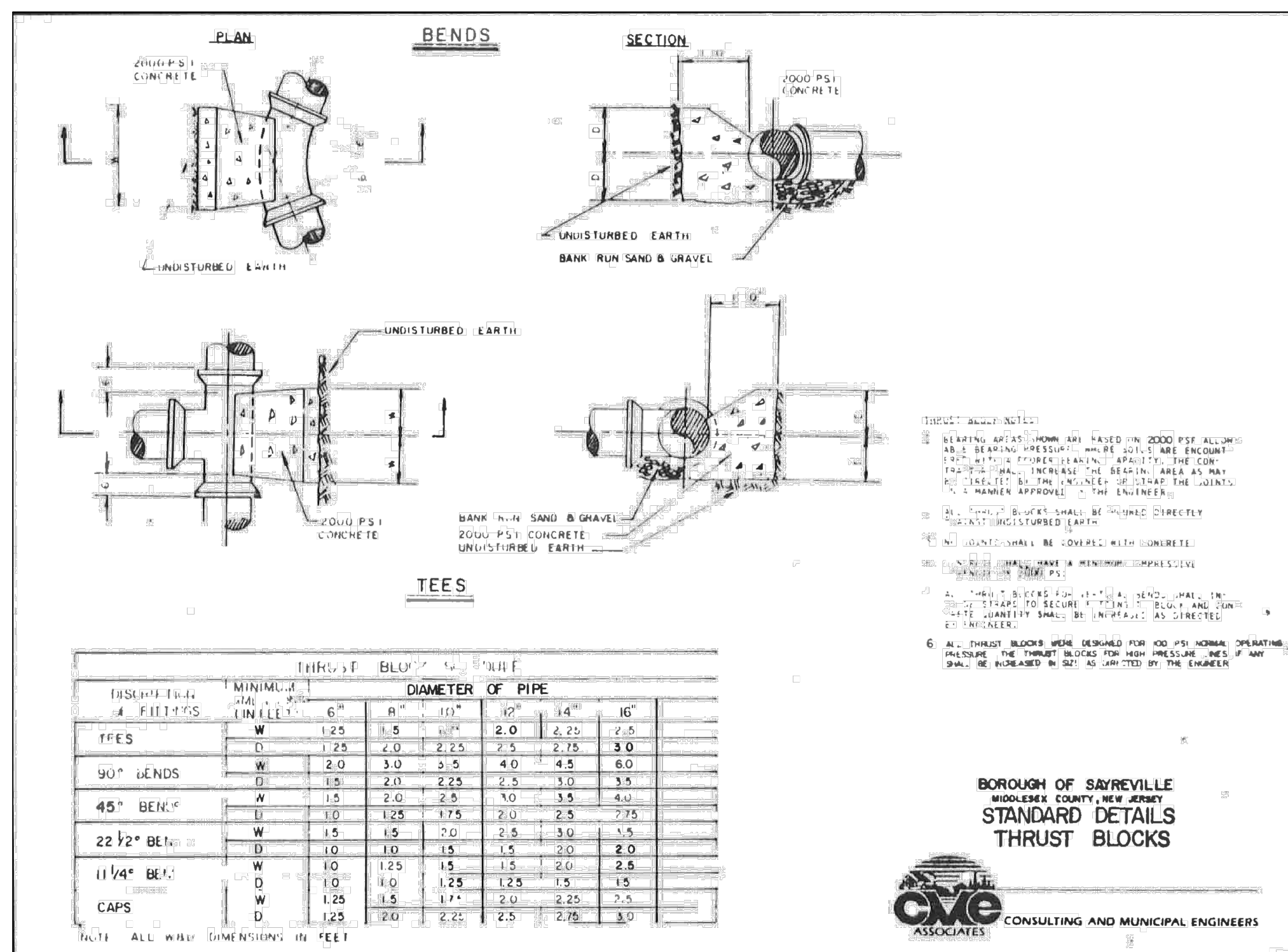
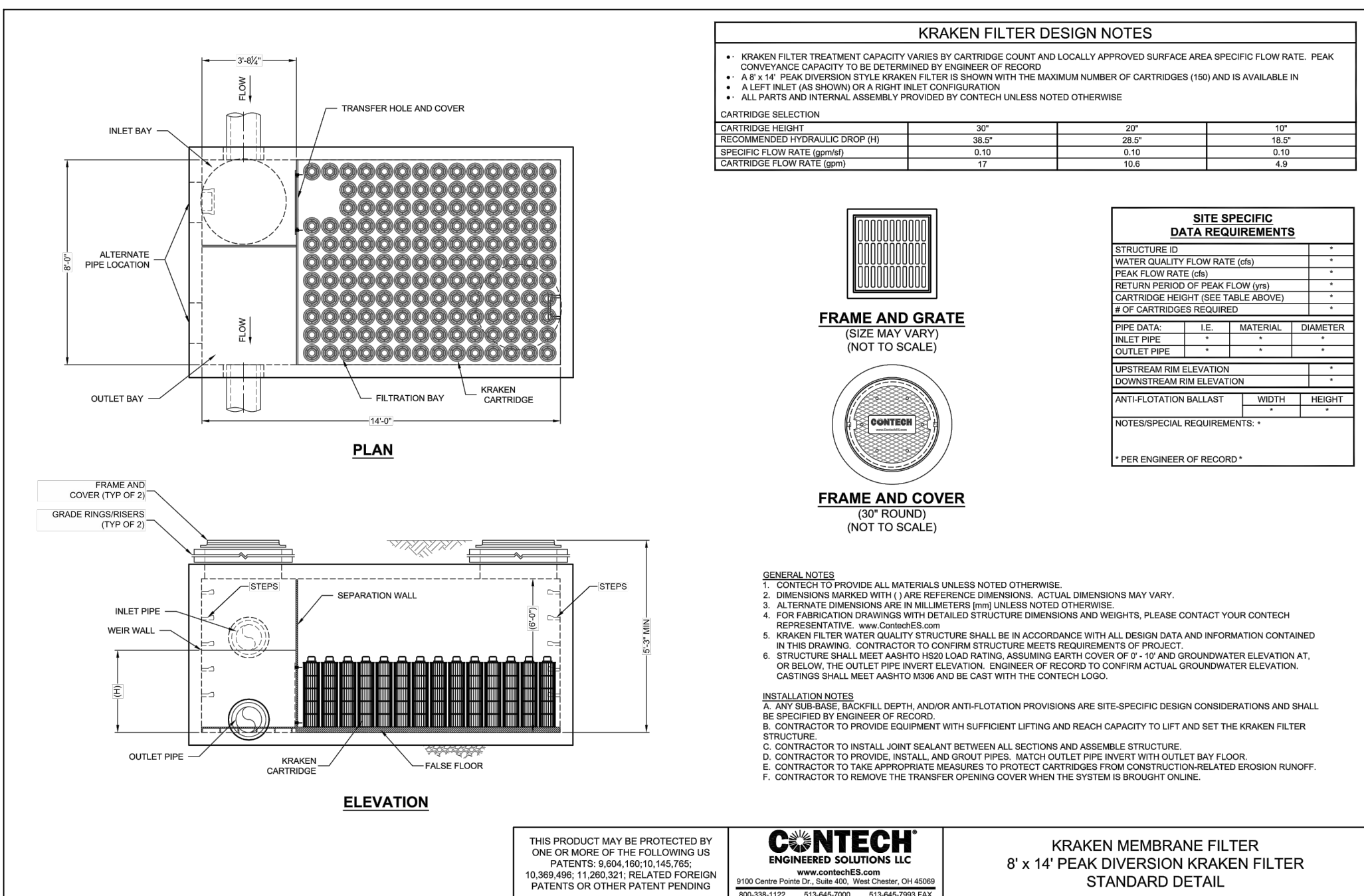
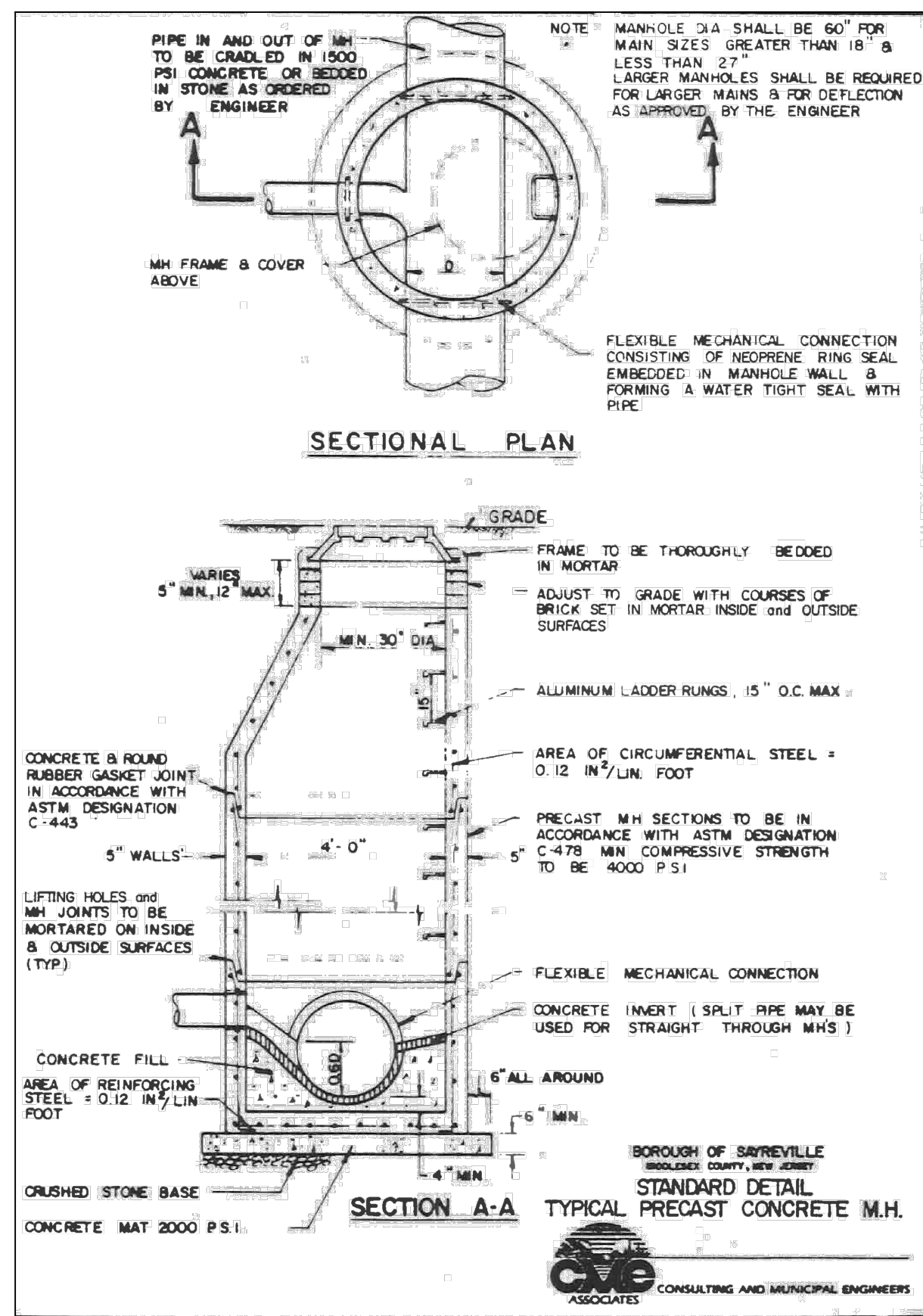
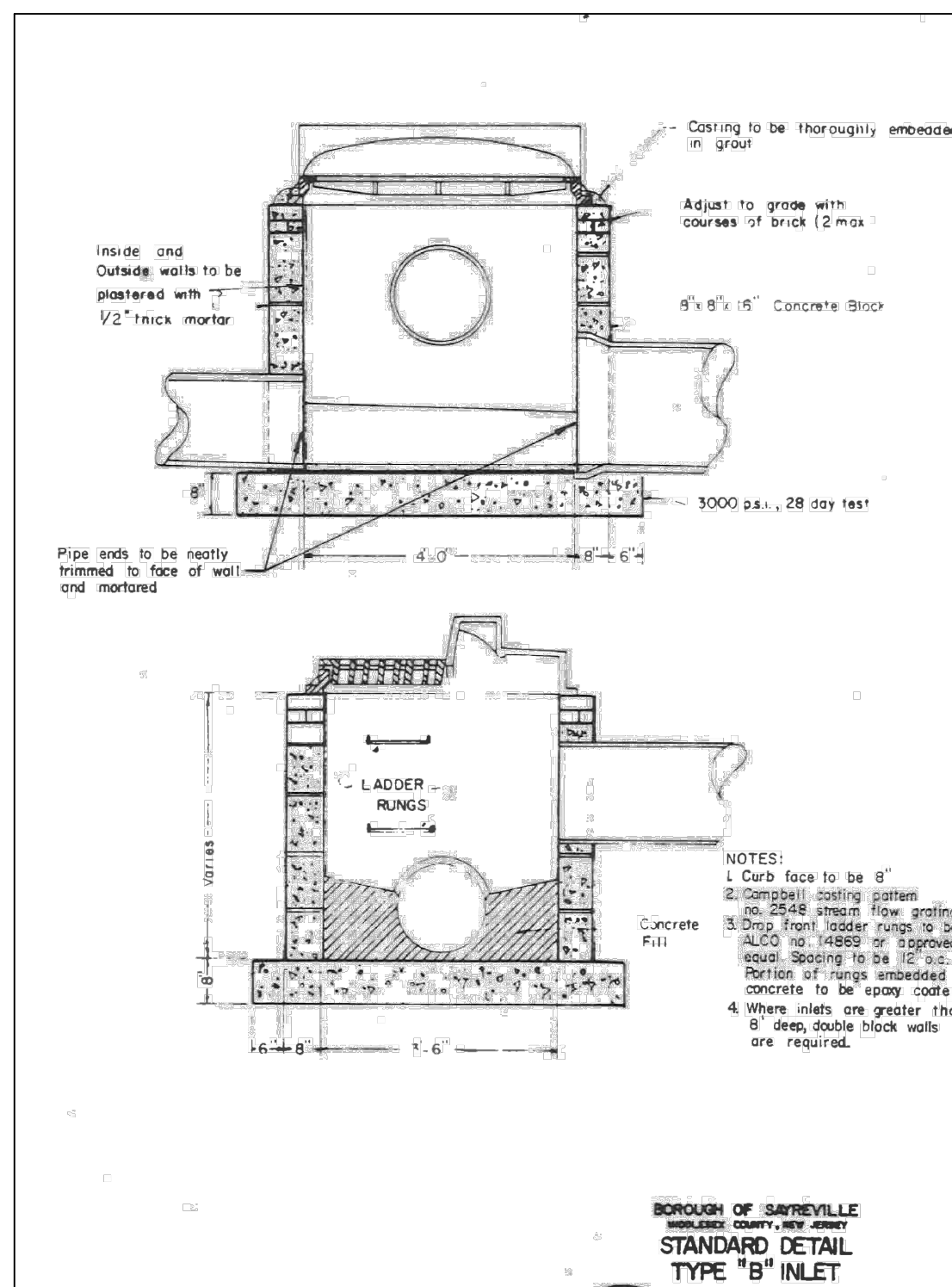
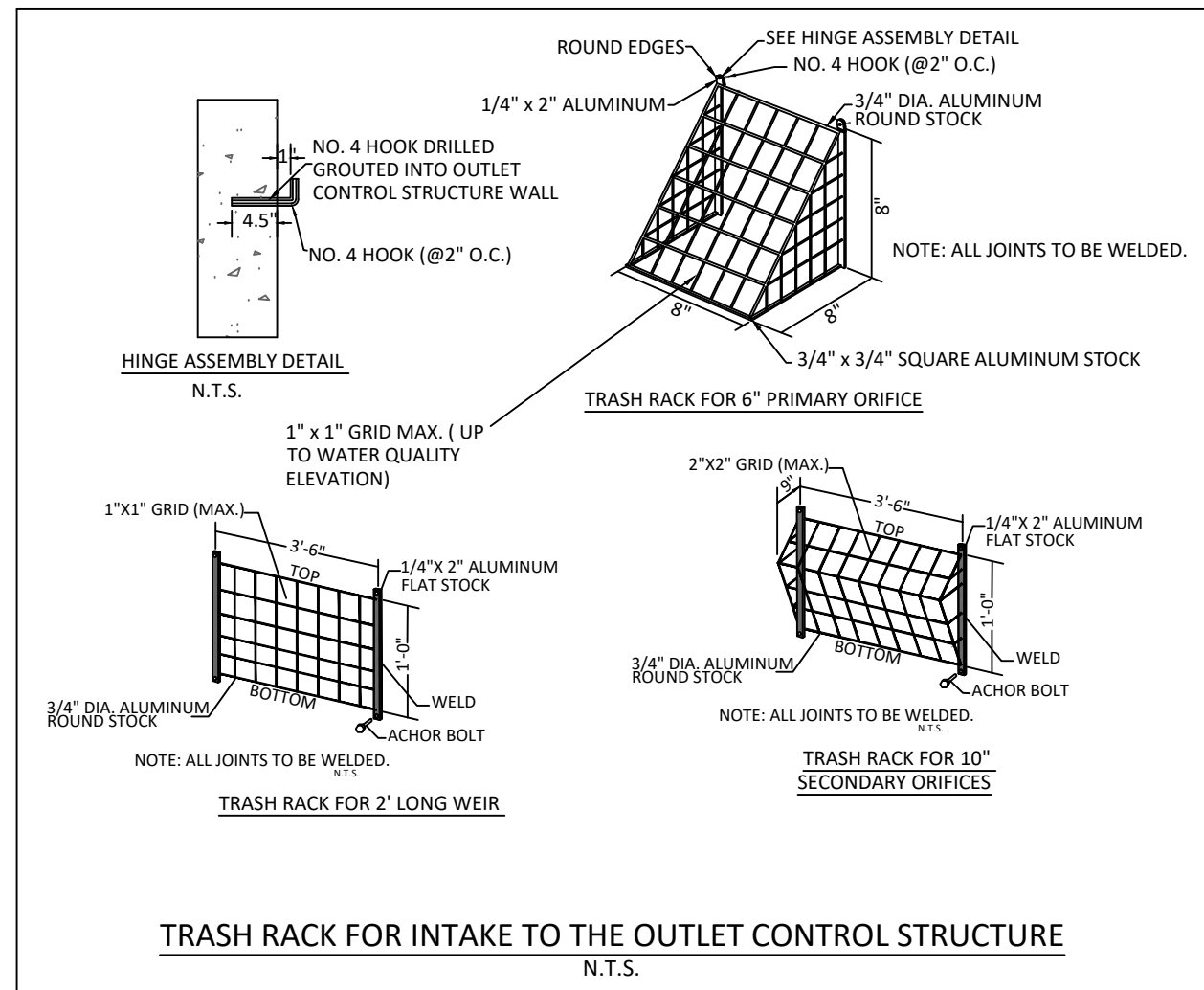
JOB NUMBER:
21-1009

SCALE: AS SHOWN

C-17
SHEET 17 OF 19



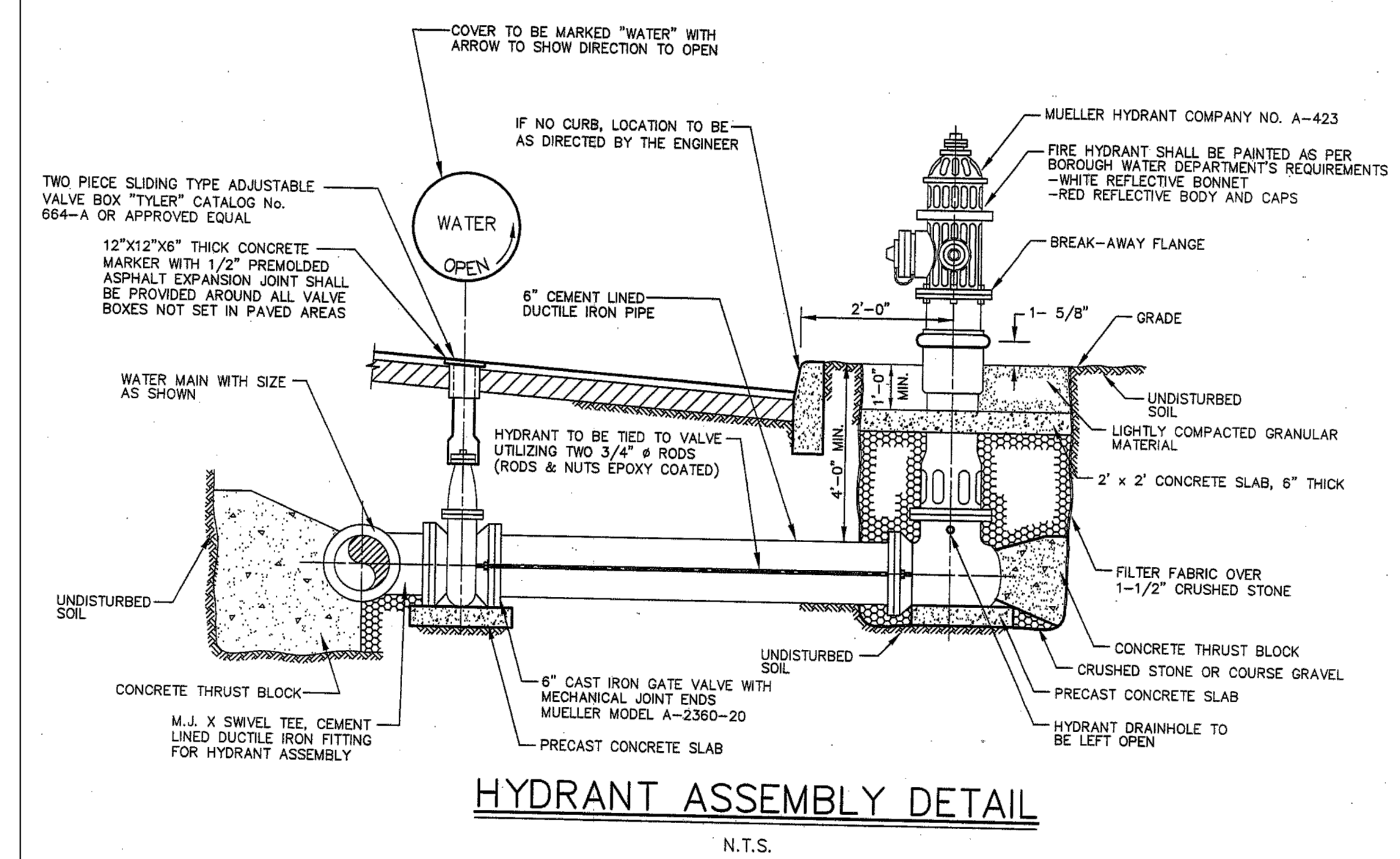
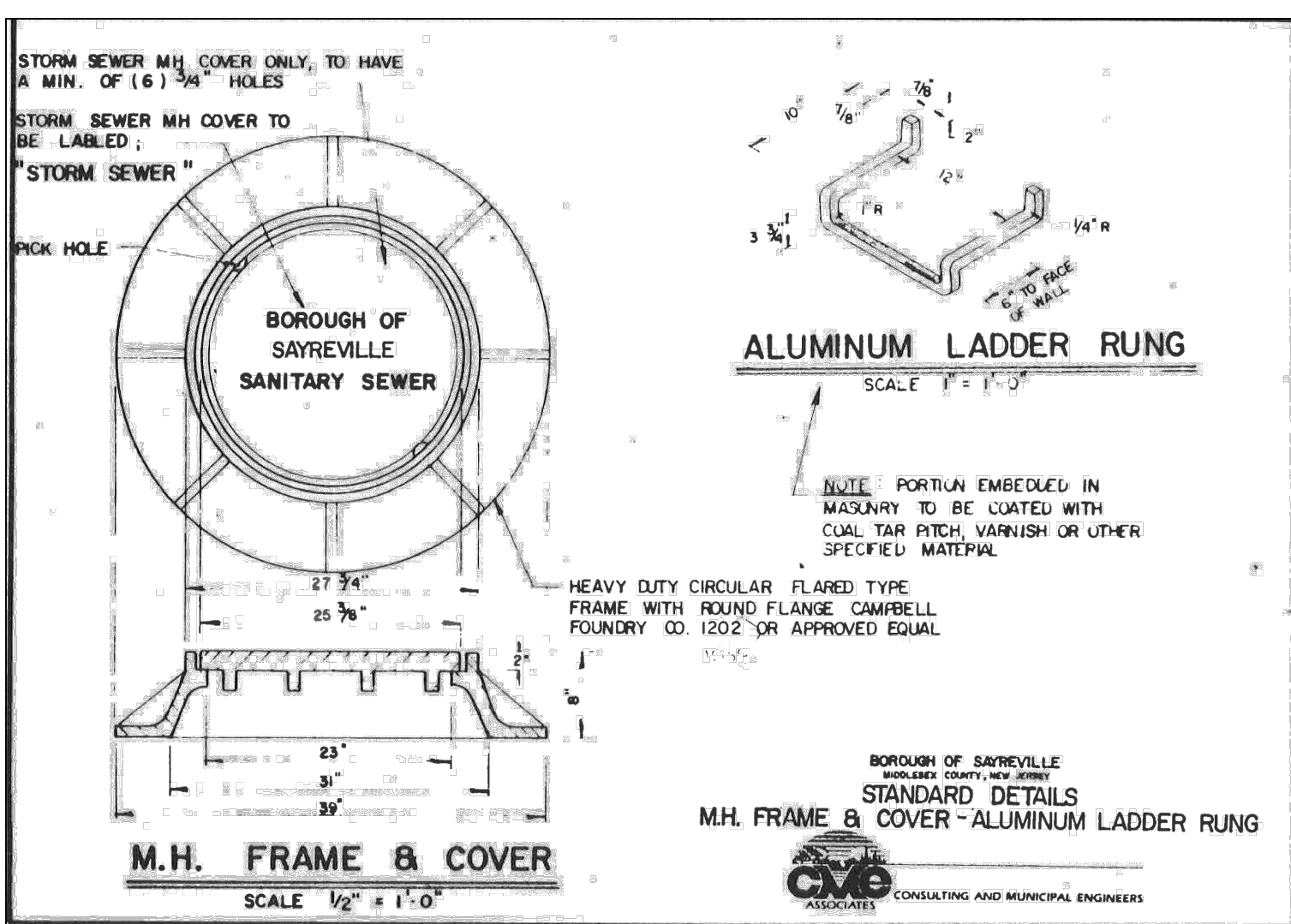
Cut/Fill Summary						
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
SITE WORK	1.000	1.000	105854.6 Sq. Ft.	1075.41 Cu. Yd.	3512.01 Cu. Yd.	2436.60 Cu. Yd.<Fill>
CULTEC			3774.99 Sq. Ft.	559.26 Cu. Yd.	0 Cu. Yd.	559.26 Cu. Yd.<Cut>
TOTALS			109629.59 Sq. Ft.	1634.67 Cu. Yd.	3512.01 Cu. Yd.	1877.34 Cu. Yd.<Fill>
* THE ABOVE CALCULATIONS DO NOT INCLUDE SOIL REMOVAL (CUT) FROM BASEMENT/FOUNDATION AREA.						



Pure basin and curb inlet filters are the preferred choice for permanent inlet protection and stormwater runoff control.

Constructed of versatile stainless steel, Pure inlet filters will fit any drainage structure and are available with site-specific filter bags providing various levels of filtration.

Applications	Features
<ul style="list-style-type: none">• Car washes• Commercial• Loading ramps• Industrial	<ul style="list-style-type: none">• Gas stations• Parking lots• Dock drains• Maintenance
Features	Features
<ul style="list-style-type: none">• Custom stainless steel frames are configured to fit into any drainage structure• Flow and bypass rates meet specific inlet requirements• Filter bags target site specific removal of trash, leaves, small particles, oil and grease• Works below grade with bypass to drain area if bag is full• Installs quickly and maintained with removal tool	<ul style="list-style-type: none">• Stainless steel frame provides extended service life• Replaceable filter bags handle loads with a safety factor of five• Meets stringent removal requirements:<ul style="list-style-type: none">-FX bags target ~80% removal efficiency of street sweep-size particles-PC/PC+ bags have been tested to 99% TSS removal of 0K-110 US Silica Sand and 90% TPH (total petroleum hydrocarbon) removal



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

Adnan A. Khan
04/07/25
DATE

DRAWN BY	DATE:	DESIGNED BY	DATE:	APPROVED BY	DATE:
LF	12/20/21	AK	12/20/21		
<div style="display: flex; justify-content: space-between;"> <div> <p>2 PER ENGINEERING REVIEW</p> <p>1 PER REVIEW COMMENTS</p> </div> <div> <p>REVISIONS</p> <p>NO</p> </div> <div> <p>06/13/23</p> <p>02/02/23</p> </div> <div> <p>LF</p> <p>LF</p> </div> <div> <p>AK</p> <p>AK</p> </div> <div> <p>AK</p> <p>APR</p> </div> </div>					

N.J. LICENSE NO. 359812 P.A. LICENSE NO. 45052E

N.Y. LICENSE NO. 066625 M.D. LICENSE NO. 14860

NOTES: 1. The Engineer is not responsible for the design of the structure shown on this drawing. The design is the responsibility of the client. The Engineer is responsible for the design of the structure shown on this drawing. The design is the responsibility of the client. The Engineer is responsible for the design of the structure shown on this drawing. The design is the responsibility of the client.

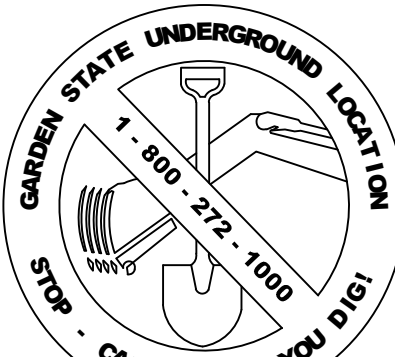
AWZ ENGINEERING, INC.
ENGINEERS • SCIENTISTS • CONSULTANTS
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www.awzengineering.com e-mail: info@awzengineering.com
New Jersey Certificate of Authorization No.: 24AG-28118400
Pennsylvania Certificate of Authority No.: 37713

**TAX LOTS 23, 24, 25 & 28 BLOCK 444.04
212, 214 & 216 ERNSTON ROAD
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY**

CONSTRUCTION DETAILS

JOB NUMBER: 21-1009
SCALE: AS SHOWN
C-19 SHEET 19 OF 19

PROTECT YOURSELF
A PHONE CALL
CAN BE YOUR INSURANCE POLICY



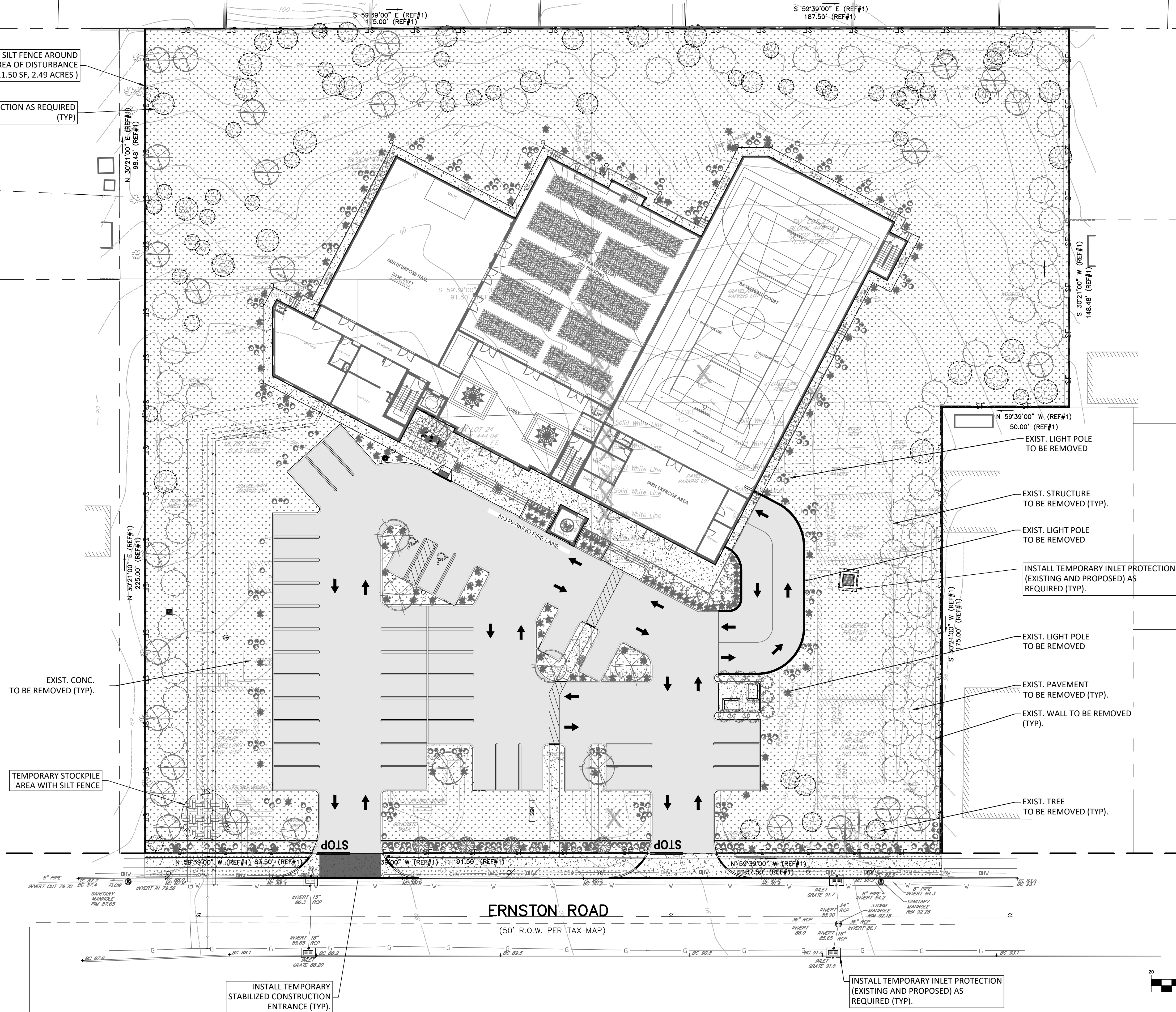
WHAT YOU DON'T KNOW CAN HURT YOU
THE STATE OF NEW JERSEY REQUIRES NOTIFICATION OF EXCAVATORS,
DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN THE STATE.

LEGEND:

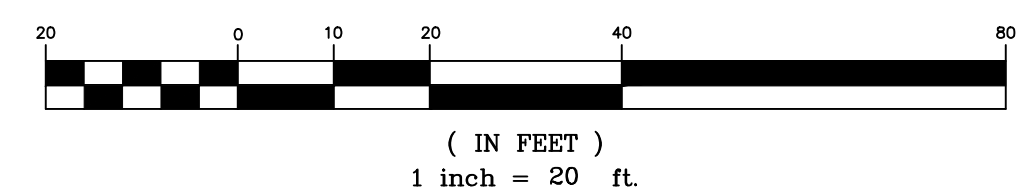
X TBR - TO BE REMOVED

LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION



GRAPHIC SCALE



EC					
DATE:	12/26/21				
DESIGNED BY:	AK				
DATE:	12/26/21				
2.	PER TEC & BOARD MEETING COMMENTS	04/07/25	EC	AK	
1.	PER ENGINEERING REVIEW	06/17/23	LF		
NO.	REVIEWS	DATE:	BY:	APR:	
AK					
DATE:	04/07/25				

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

04/07/25
DATE

N.J. LICENSE NO. 39812 P.A. LICENSE NO. 45052E
N.Y. LICENSE NO. 086435 M.D. LICENSE NO. 41803



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New Jersey Certificate of Authorization No.: 24GA28118400
Pennsylvania Certificate of Authority No.: 3771354

212, 214 & 216 ERNSTON ROAD

ERN

**BLOCK 44
N ROAD**

**BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY, NEW JERSEY**

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SOIL EROSION AND SEDIMENT

CONTROL PLAN

JOB NUMBER:
21-1009

SALE: AS SHOWN

S-01

SHEET 1 OF 4

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

A. SITE PREPARATION

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

B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

2. PROTECTIVE MATERIALS

A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING IT DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.

B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.

C. WOOD-FIBER OR PAPER-FIBER MULCH AT 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, MAY BE USED.

E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.

F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.

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

A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

C. CRIMPER MULCH ANCHORING COULTER TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

D. LIQUID MULCH-BINDERS

STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS

STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS

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 STOCKPILED, HIGH ACID-PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHEN 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 THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.
5. HIGH ACID-PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREGGED SEDIMENT) SHALL BE ULTIMATELY PLANTED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:
 - A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OF 5 OR MORE.
 - B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE UTILIZED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.
8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), **MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS** TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

1. MATERIALS

A. TOPSOIL SHALL BE FRIABLE, LOAMY2, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY MORE THAN 0.5 MILLIMOHS PER CENTIMETER, MORE THAN 0.5 MILLIMOHS MAY DESICcate SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

2. STRIPPING AND STOCKPILING

A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.

B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.

C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.

D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.

E. TOPSOIL SUBSTITUTE SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.

F. TOPSOIL SUBSTITUTE SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG.7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

3. SITE PREPARATION

A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE

B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.

C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.

D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.

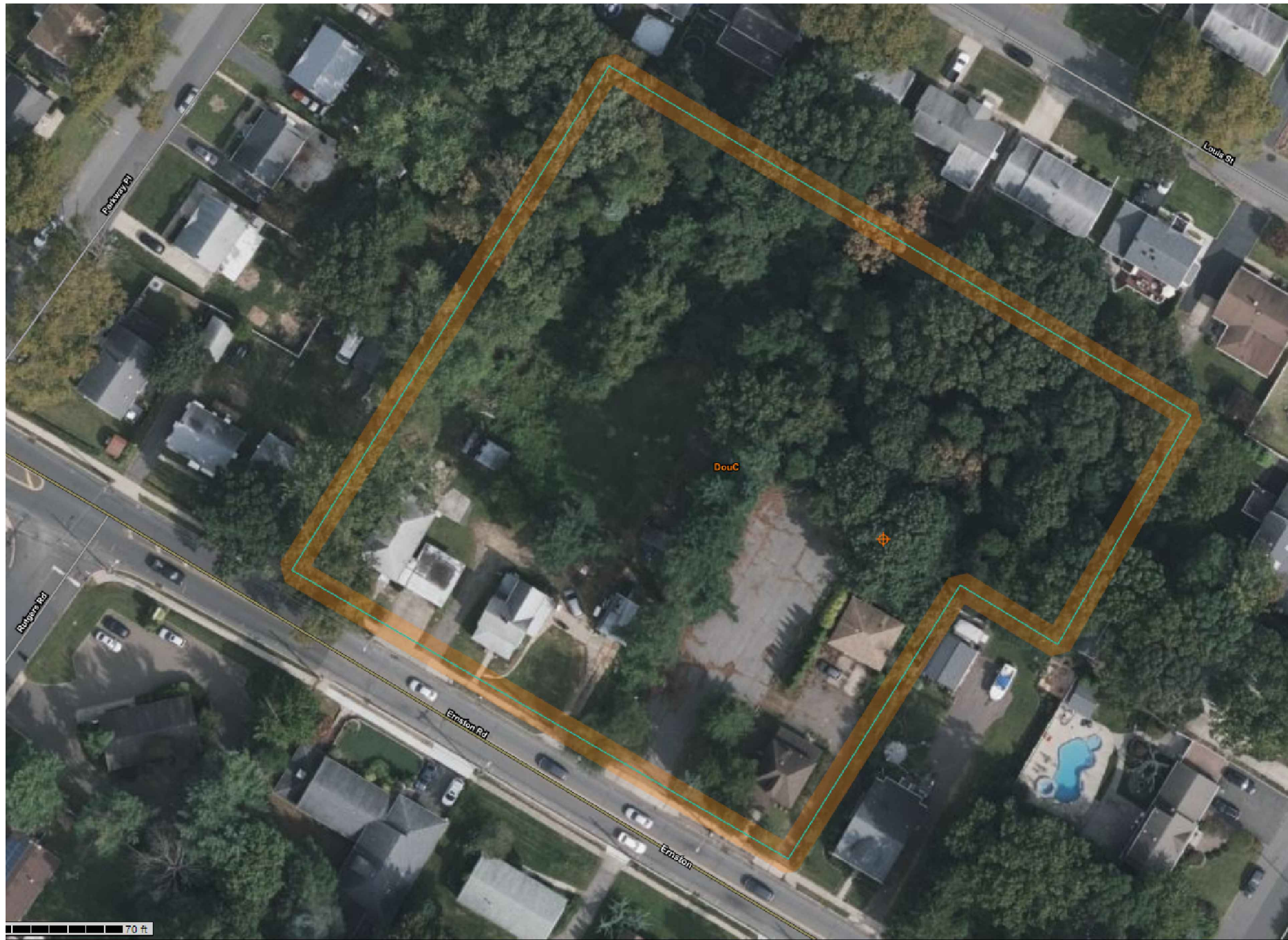
E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

4. APPLYING TOPSOIL

DUST CONTROL NOTES

TABLE 16-1: DUST CONTROL MATERIALS

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



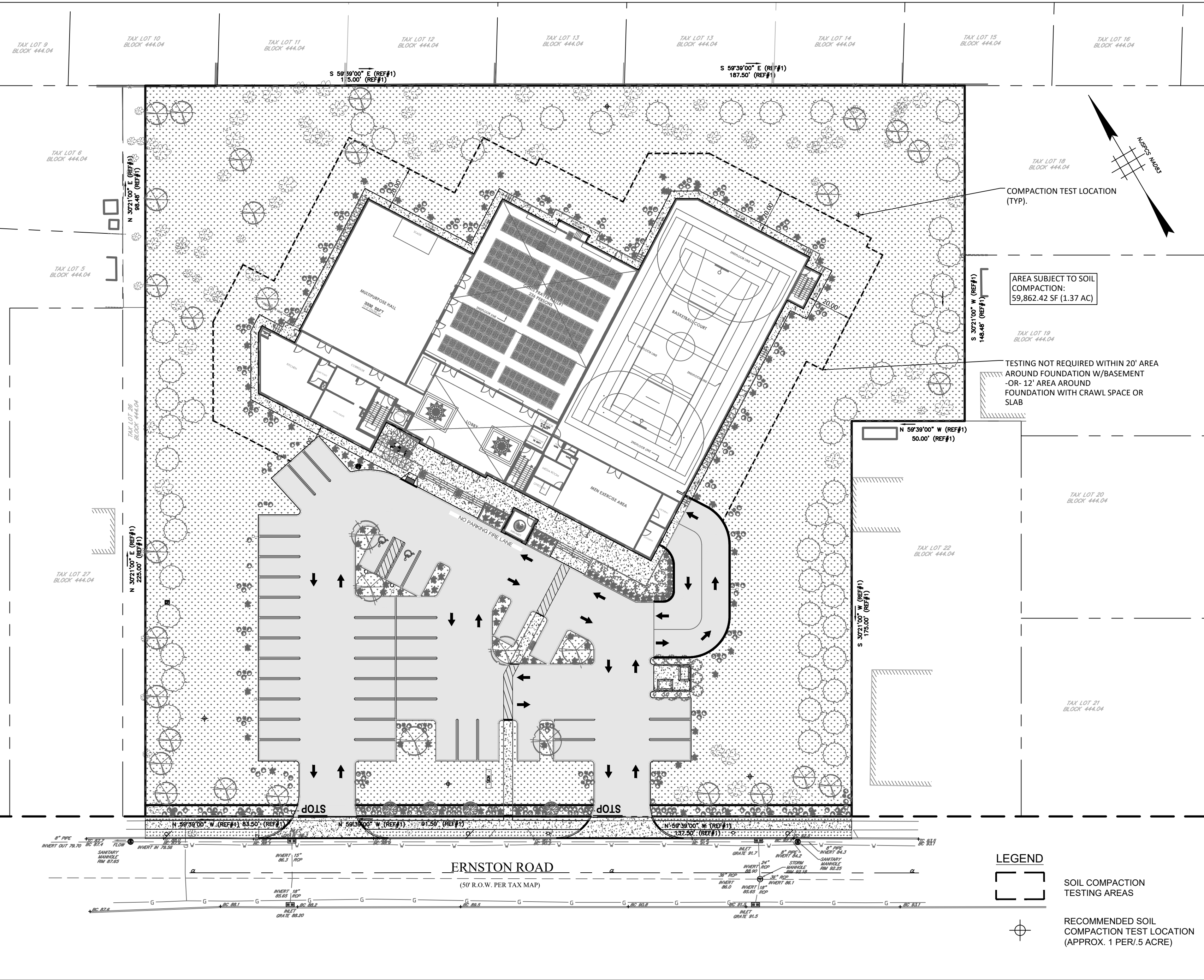
N.T.S.

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



SCALE: $\pm 1" = 150'$

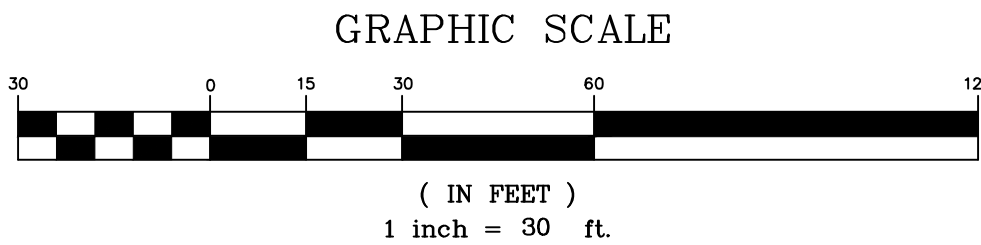
<p>TAX LOTS 23, 24, 25 & 28 BLOCK 444.04</p> <p>212, 214 & 216 EYNSTON ROAD</p> <p>BOROUGH OF SAYREVILLE</p> <p>MIDDLESEX COUNTY, NEW JERSEY</p> <p>SOIL EROSION AND SEDIMENT</p> <p>CONTROL PLAN</p>	<p>JOB NUMBER:</p> <p>21-1009</p>	<p>SCALE: AS SHOWN</p>	<p>S-02</p>	<p>SHEET 2 OF 4</p>
	<p>AWZ ENGINEERING, INC.</p> <p>ENGINEERS • SCIENTISTS • CONSULTANTS</p> <p>Main Office: 150 River Road, Suite B3, Monville, NJ 07045</p> <p>Pennsylvania Office: Scranton, PA 18504</p> <p>Tel: 973-588-7080 Fax: 973-588-7079</p> <p>www.awzengineering.com e-mail: info@awzengineering.com</p> <p>New Jersey Certificate of Authorization No.: 246CA28118400</p> <p>Pennsylvania Certificate of Authorization No.: 3771354</p>			
	<p>ADNAN A. KHAN, P.E., C.M.E.</p> <p>PROFESSIONAL ENGINEER</p> <p><i>Adnan A. Khan</i></p> <p>640725 DATE</p>			
	<p>DRAWN BY</p> <p>EC</p>	<p>DESIGNED BY</p> <p>AK</p>	<p>APPROVED BY</p> <p>12/09/21</p>	<p>NO.</p> <p>REVISIONS</p> <p>DATE</p> <p>BY</p> <p>APR.</p>



PROTECT YOURSELF
A PHONE CALL
CAN BE YOUR INSURANCE POLICY



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



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

SOIL DE-COMPACTION AND TESTING REQUIREMENTS

A. SOIL COMPACTION TESTING REQUIREMENTS CONTROL NOTES

- 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. LOCATION ID'S SHALL BE USED TO COMPLETE 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 EXCESSIVELY COMPACTED AREAS WOULD REQUIRED COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

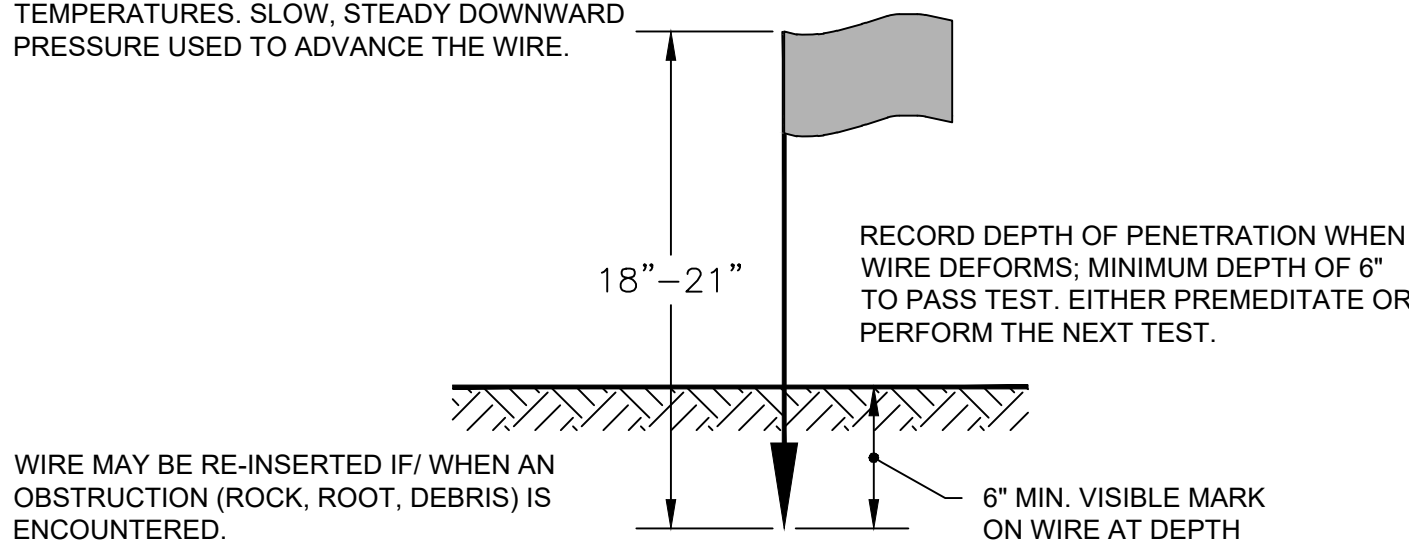
B. COMPACTION TESTING METHODS

- 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.
- DETAILED REQUIREMENTS FOR EACH COMPACTION TESTING METHOD CAN BE FOUND IN SECTION 19 "STANDARD FOR LAND GRADING" OF THE NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, LAST EDITION.
- SOIL COMPACTION TESTING IS NOT REQUIRED IF/ WHEN SUBSOIL REMEDIATION (SCARIFICATION/ TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

C. PROCEDURES FOR SOIL COMPACTION MITIGATION

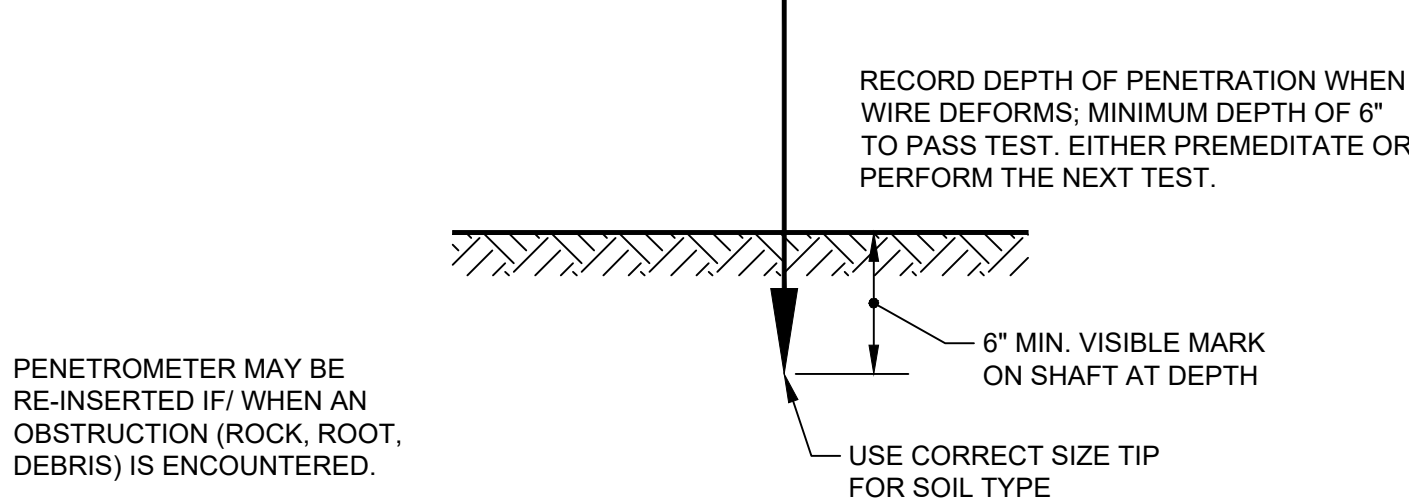
- PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATION COVER.
- RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/ TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLE, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.



PROBING WIRE TEST
15.5 GA STEEL WIRE (SURVEY FLAG)
N.T.S.

NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. MEASURE DEPTH WHEN GAGE READING REACHES 300 PSI OR DEPTH OF 6".



HANDHELD SOIL PENETROMETER TEST
N.T.S.

STANDARD FOR TOPSOILING

DEFINITION

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

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

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

WHERE APPLICABLE

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

METHODS AND MATERIALS

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

* FRIABLE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOILS TEXTS.
** LOAMY MEANS TEXTURE GROUPS CONSISTING OF COARSE LOAMY SANDS, SANDY LOAM, FINE LOAM, AND VERY FINE SANDY LOAM, LOAM, SILT LOAM, CLAY LOAM, SANDY CLAY LOAM AND SILTY CLAY LOAM TEXTURES AND HAVING LESS THAN 35% COARSE FRAGMENTS (PARTICLES LESS THAN 2mm IN SIZE) AS DEFINED IN THE GLOSSARY OF SOIL SCIENCE TERMS, 1996, SOIL SCIENCE SOCIETY OF AMERICA.

DRAWN BY IF DATE: 12/20/21		DESIGNED BY AK DATE: 12/20/21		APPROVED BY AK DATE: 04/07/25		REVISIONS NO. DATE: 04/07/25		BY: EC		APR: AK	
ADNAN A. KHAN, P.E., C.M.E. PROFESSIONAL ENGINEER DATE: 04/07/25 P.A. LICENSE NO. 49063 N.J. LICENSE NO. 39812 M.D. LICENSE NO. 41803											
AWZ ENGINEERING, INC. ENGINEERS • SCIENTISTS • CONSULTANTS Main Office: 150 River Road, Suite B3, Montville, NJ 07045 Pennsylvania Office: Scranton, PA 18504 Tel: 973-588-7080 Fax: 973-588-7079 www.awzengineering.com e-mail: info@awzengineering.com New Jersey Certificate of Authorization No.: 24GA28118400 Pennsylvania Certificate of Authority No.: 3771354											
TAX LOTS 23, 24, 25 & 28 BLOCK 444.04 212, 214 & 216 ERNSTON ROAD BOROUGH OF SAYREVILLE MIDDLESEX COUNTY, NEW JERSEY SOIL MANAGEMENT AND PREPARATION PLAN											
JOB NUMBER: 21-1009											
SCALE: AS SHOWN											
S-04 SHEET 4 OF 4											