

PRELIMINARY AND FINAL SITE PLAN FOR BLOCK 484 LOT 19.01 201 WALNUT AVENUE TOWNSHIP OF CRANFORD UNION COUNTY, NEW JERSEY

GENERAL NOTES:

- THE SUBJECT PROPERTY IS KNOWN AND DESIGNATED AS BLOCK 484, LOT 19.01 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE TOWNSHIP OF CRANFORD, SHEET NO. 107 AND IS SITUATED IN THE "D-T" (DOWNTOWN TRANSITION) ZONING DISTRICT, AND WITHIN SUBDISTRICT 2 OF THE SOUTH AVENUE & CHESTNUT AVENUE REDEVELOPMENT PLAN. THE SUBJECT PROPERTY CONTAINS A TOTAL OF 36,875 SF, ±0.847 ACRES.
- OWNER & APPLICANT:**
201 WALNUT AVE LLC
C/O BRANDON K. BOFFARD, ESQ.
55 BLEEKER STREET, 2ND FLOOR
MILBURN, NEW JERSEY 07041
I HEREBY CERTIFY THAT I AM THE OWNER OF RECORD OF THE PLAN HEREIN DEPICTED AND THAT I CONCUR WITH THE PLAN.

OWNER, 201 WALNUT AVE LLC
EXISTING USE: MIXED COMMERCIAL USE
PROPOSED USE: MULTI-FAMILY

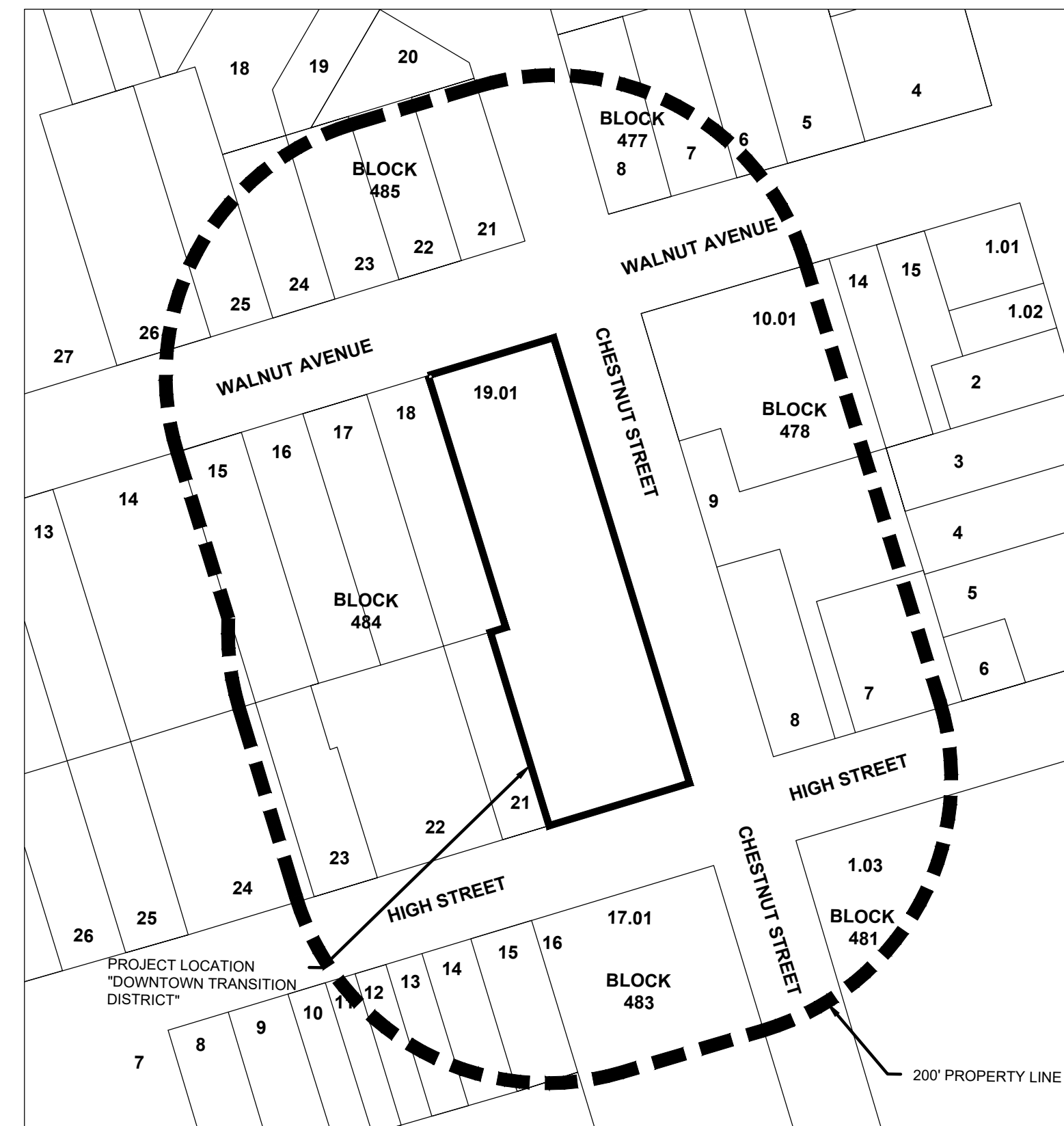
- BASE MAP INFORMATION WAS OBTAINED FROM THE FOLLOWING SOURCES:
 - TOPOGRAPHIC INFORMATION TAKEN FROM A PLAN ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR LOT 19.01, BLOCK 484 SITUATED IN THE TOWNSHIP OF CRANFORD, UNION COUNTY, NEW JERSEY" PREPARED BY DYKSTRA WALKER DESIGN GROUP.
 - ARCHITECTURAL FOOTPRINTS OBTAINED FROM A PLAN ENTITLED "RESIDENTIAL DEVELOPMENT 201 WALNUT AVENUE CRANFORD, NEW JERSEY" PREPARED BY BLACKBIRD GROUP ARCHITECTS, LLC, DATED OCTOBER 28, 2020
 - THE APPLICANT PROPOSES TO CONSTRUCT THIRTY FOUR (34) MARKET-RATE RESIDENTIAL UNITS TWO (2) COAH UNITS, AND THREE (3) SPECIAL NEEDS HOUSING UNITS.

	PERMITTED:	EXISTING:	PROPOSED:
MINIMUM LOT REQUIREMENTS			
MINIMUM LOT AREA	0.75 ACRES	0.85 ACRES	0.85 ACRES
PRINCIPAL BUILDING REQUIREMENTS			
MINIMUM FRONT YARD	10 FT. FROM CURB LINE	64.0 FT.	16.6± FT. (CHESTNUT AVE.)
MINIMUM SIDE YARD	9 FT. FROM CURB	206.6 FT. (HIGH STREET) 31.1 FT. (WALNUT AVE.)	21.6± FT. (HIGH STREET) 30.4± FT. (WALNUT AVE.)
MINIMUM REAR YARD	10 FT. BETWEEN BUILDINGS OR 15 FT. BETWEEN CURB OR PROPERTY LINE	9.8± FT.*	16.3± FT.
MAXIMUM BUILDING HEIGHT (MEASURED FROM GRADE PLANE)	45 FT. / 3 STORIES	±10 FT.	LESS THAN 45 FT. / 3 STORIES
MAXIMUM BUILDING COVERAGE	90%	3.4%	31.8% (GROUND FLOOR) 70.1% (ENTIRE BUILDING)
MAXIMUM LOT COVERAGE	95%	51.8%	87.06%

- * EXISTING VARIANCE
- OFF-STREET PARKING REQUIREMENTS - USE: DWELLING, MULTI-FAMILY (NONE REQUIRED FOR SPECIAL NEEDS HOUSING UNITS)

REQUIRED:	PROVIDED:
1.4 SPACES PER UNIT X 36 UNITS = 50.4 OR 51 SPACES AT LEAST 15% TO BE ELECTRIC VEHICLE MAKE-READY PARKING SPACES = 7.65 OR 8.	53 PARKING SPACES 2 ADA PARKING SPACES +2 STREET PARKING ON CHESTNUT AVE. TOTAL 57 PARKING SPACES, INCLUDING TO ELECTRIC VEHICLE MAKE-READY PARKING SPACES, +5 EV READY PARKING SPACE CREDIT
 - 1,547 SF OF PRIVATELY-OWNED PUBLIC OPEN SPACE HAS BEEN PROVIDED BETWEEN SUBDISTRICT 1 AND 2
 - ALL PROPOSED UTILITIES OTHER THAN ELECTRIC SERVICE SHALL BE INSTALLED UNDERGROUND.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWNSHIP OF CRANFORD DESIGN STANDARDS AND DETAILS.
 - TRASH AND RECYCLING DISPOSAL SHALL BE IN ACCORDANCE WITH THE TOWNSHIP OF CRANFORD DEPARTMENT OF PUBLIC UTILITIES REQUIREMENTS.
 - THIS SET OF PLANS HAS BEEN PREPARED FOR THE 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 ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION".
 - ALL DESIGN FEATURES DEPICTED HEREON WERE BASED ON CONSTRAINTS AND REGULATIONS IN EFFECT AT THE TIME OF PREPARATION AND INITIAL PRESENTATION OF THIS PLAN. ALL CURRENT DEVELOPMENT CONSTRAINTS SHOULD BE INVESTIGATED PRIOR TO COMMENCEMENT OF ANY ACTIVITY BASED ON THIS PLAN.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES FOR GAS, ELECTRIC, PHONE AND CABLE TV SERVICE LOCATIONS. LOCATION OF UTILITIES AS SHOWN ON THESE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND IS NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR IS TO CONTACT UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE EXACT LOCATION. THE CONTRACTOR SHALL USE THE UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS PRIOR TO PERFORMING ANY CONSTRUCTION. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES ASSOCIATED WITH THE UTILITIES. ALL REPAIRS SHALL BE TO THE SATISFACTION OF THE AGENCIES GOVERNING THOSE UTILITIES.
 - ANY CONFLICTS ENCOUNTERED WITH EXISTING UTILITIES MUST BE ADDRESSED. COORDINATE RELOCATION WITH RESPECTIVE UTILITY COMPANY.
 - ANY IMPORTED FILL SHALL MEET THE DEFINITION OF CLEAN FILL, PURSUANT TO THE TECHNICAL REQUIREMENTS FOR SITE REMEDIATION (NAJAC 7:26E-1.8).
 - THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY AREA THAT HE/SHE DISTURBED BEYOND THE PROPERTY LIMITS TO ITS ORIGINAL CONDITION.
 - CONTRACTOR TO PROVIDE NECESSARY FOUNDATION DRAINS AND WATER-PROOFING AROUND FOUNDATION, INCLUDING BUT NOT LIMITED TO ELEVATOR PITS. COORDINATE WITH ARCHITECT AS REQUIRED.
 - TEST PIT EXCAVATION WAS PERFORMED BY FRENCH AND PARRELLO ASSOCIATES ON JANUARY 27, 2021. THE ELEVATION OF THE ESTIMATED SEASONAL HIGH WATER TABLE WAS ESTIMATED TO BE 57.5 AS INDICATED ON THE SOIL BORING LOG SHEET.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY ROAD OPENING PERMITS THAT MAY BE REQUIRED FOR THE INSTALLATION OF NEW UTILITY SERVICES OR DRIVEWAY OPENINGS.
 - REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND PERMIT FOR REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES.
 - NO SOIL SHALL BE REMOVED FROM THE SITE WITHOUT WRITTEN APPROVAL FROM THE TOWNSHIP ENGINEER.

SHEET INDEX			
SHEET NUMBER	SHEET TITLE	DATE	REVISION DATE
1	COVER SHEET	1/29/2021	09/08/2022
2	EXISTING CONDITIONS PLAN	1/29/2021	09/08/2022
3	SITE PLAN	1/29/2021	09/08/2022
4	GRADING AND DRAINAGE PLAN	1/29/2021	09/08/2022
5	SOIL EROSION AND SEDIMENT CONTROL PLAN	1/29/2021	09/08/2022
6	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	1/29/2021	09/08/2022
7	LANDSCAPING PLAN	1/29/2021	09/08/2022
8	LANDSCAPING NOTES AND DETAILS	1/29/2021	09/08/2022
9	LIGHTING PLAN	1/29/2021	09/08/2022
10	CONSTRUCTION DETAILS	1/29/2021	09/08/2022
11	CONSTRUCTION DETAILS	1/29/2021	09/08/2022
12	CONSTRUCTION DETAILS	1/29/2021	09/08/2022



KEY MAP
NOT TO SCALE

PROPERTY OWNERS WITHIN 200 FEET OF SUBJECT PROPERTY (BLOCK 484 LOT 19.01):
PROPERTY OWNERS WITHIN 200 FEET OF BLOCK 484 LOT 19.01, LIST HAS BEEN PREPARED BY BRYAN FLINN, ASSESSOR - TOWNSHIP OF CRANFORD DATED MARCH 21, 2022

BLOCK	LOT	PROPERTY OWNER	PROPERTY LOCATION
478	08	CRP Cong. of Jehovahs Wlt. 77 Chestnut Street Cranford, New Jersey 07016	77 Chestnut Street
478	07	St Marks Ame Church 34 High Street Cranford, New Jersey 07016	34 High Street
485	23	Lee, Brian and Melissa G. 206 Walnut Avenue Cranford, New Jersey 07016	206 Walnut Avenue
484	16	Capace, Victoria G. & Harkin, Thomas 209 Walnut Avenue Cranford, New Jersey 07016	209 Walnut Avenue
484	22	First Baptist Church of Cranford 100 High Street Cranford, New Jersey 07016	100 High Street
477	08	Pignone, Charles and Carol R. 347 New Providence Road Mountainside, New Jersey 07092	120 Walnut Avenue
477	06	116 Walnut Avenue, LLC. 206 Avenue F Matamoras, Pennsylvania 18336	116 Walnut Avenue
484	21	First Baptist Church of Cranford 100 High Street Cranford, New Jersey 07016	98 High Street
484	18	Mazza, Barry and Elizabeth 202 Walnut Avenue Cranford, New Jersey 07016	205 Walnut Avenue
478	10.01	DB Walnut Ave LLC. 55 Bleeker Street, 2nd Floor Milburn, New Jersey 07041	109 Walnut Avenue
477	07	Cohen: Yvette Revocable Trust 186 Temple Avenue Boynton Beach, Florida 33436	118 Walnut Avenue
478	09	Union County Economic Dev. Corp 75 Chestnut Street Cranford, New Jersey 07016	75 Chestnut Street
484	23	106 HSC LLC PO Box 253 Short Hills, New Jersey 07078	106 High Street
484	17	Corigliano Homes, LLC. 6 Milbrook Drive Toms River, New Jersey 08757	207 Walnut Avenue
485	25	Oglethorpe: Annmarie Buontempo 1512 Holston Drive Savannah, Georgia 31406	210 Walnut Avenue
485	26	Kirkman: Kent Randolph 212 Walnut Avenue Cranford, New Jersey 07016	212 Walnut Avenue
484	15	Della Serra: Aspina 441 Manor Avenue Cranford, New Jersey 07016	211 Walnut Avenue
485	24	Banic, Ljubo 204 Hawthorne Drive Clark, New Jersey 07066	208 Walnut Avenue
485	22	Callahan, Jill & Galati, Marie 204 Walnut Avenue Cranford, New Jersey 07016	204 Walnut Avenue
485	21	Renna: Joseph and Tina 202 Walnut Avenue Cranford, New Jersey 07016	202 Walnut Avenue

PUBLIC UTILITIES AND/OR CABLE COMPANY WITHIN 200 FEET OF SUBJECT PROPERTIES:

Verizon
Executive Offices
Attn: Corporate Secretary
1 Verizon Way
Basking Ridge, New Jersey 07920

Elizabeth Gas Company
Engineering Department
520 Green Lane
Union, New Jersey 07083

PSE&C Company
Manager - Corporate Properties
50 Park Plaza, 16B
Newark, New Jersey 07101

Comcast Cablevision
C/O - Corporation Trust Co.
820 Bear Tavern Road
West Trenton, New Jersey 08628

New Jersey American Water, Inc.
Attn: GIS Supervisor
1025 Laurel Oak Road
Voorhees, New Jersey 08628

Rahway Valley Sewerage Authority
Attn: Chief Engineering
1050 East Hazlewood Avenue
Rahway, New Jersey 07065

I HAVE CAREFULLY EXAMINED THIS MAP AND FIND IT CONFORMS TO THE PROVISIONS OF THE MAP FILING LAW AND MUNICIPAL ORDINANCES AND REQUIREMENTS THERETO

TOWNSHIP ENGINEER (AFFIX SEAL)

DATE

THIS APPLICATION NO. _____ IS APPROVED BY THE CRANFORD TOWNSHIP PLANNING BOARD AS A MAJOR DEVELOPMENT

CHAIRPERSON

DATE

SECRETARY

DATE

No.	Date	Revision	Revised By	Checked By
8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING		BF
7	08/10/2022	REVISED PER TOWNSHIP COMPLETENESS REVIEW		BF
6	07/05/2022	REVISED SANITARY SEWER PROFILE	SP	BF
5	04/25/2022	REVISED PER UNION COUNTY COMMENTS DATED JAN. 6, 2022	SP	MS
4	12/08/2021	REVISED PER UNION COUNTY COMMENTS	SP	MS
3	11/01/2021	REVISED BUILDING FOOTPRINT	SP	MS
2	4/30/2021	REVISED PER NUDEP COMMENTS	MS	BF
1	4/28/2021	REVISED PER NUDEP COMMENTS	SP	MS

SCALE IN FEET



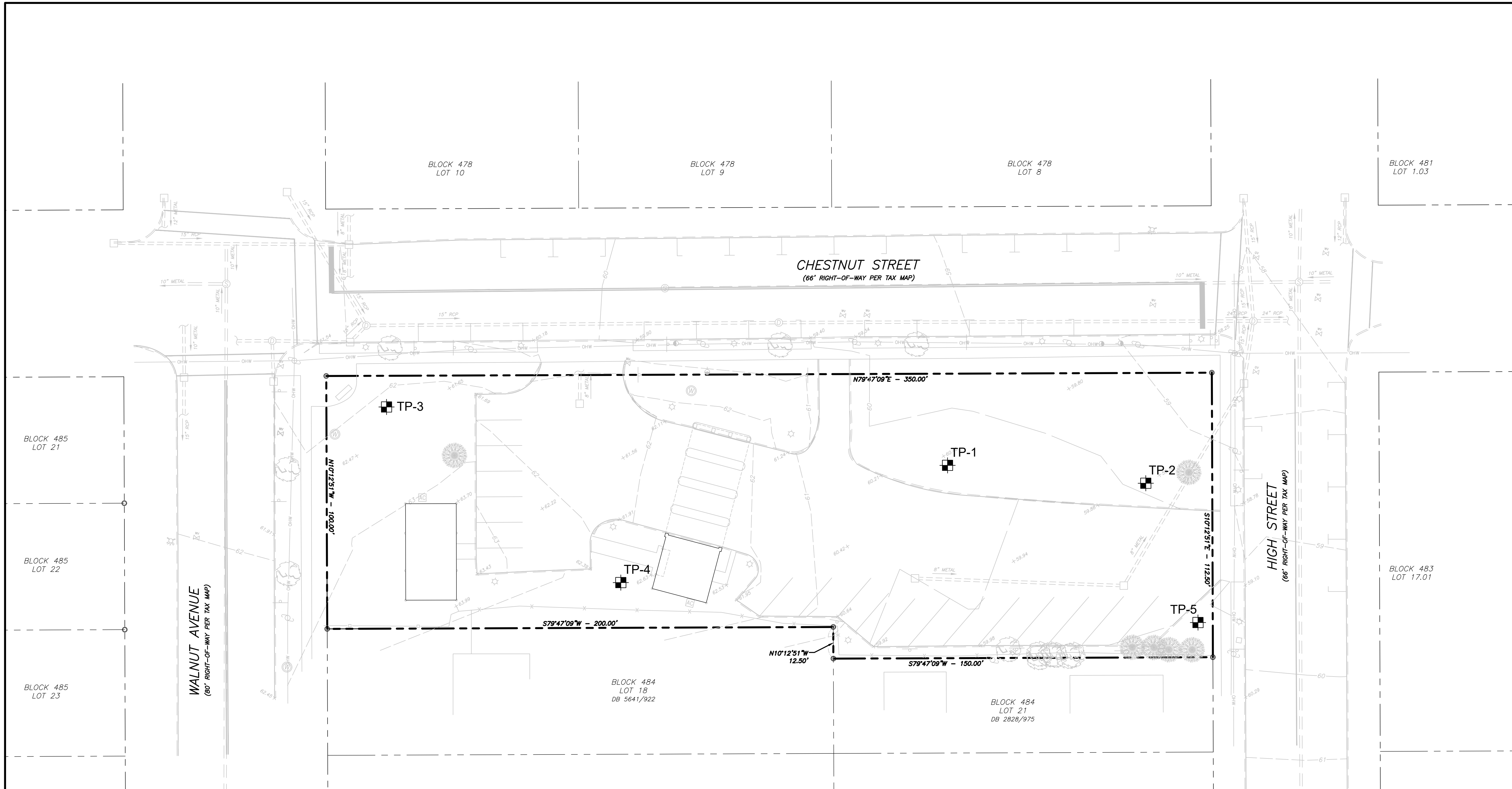
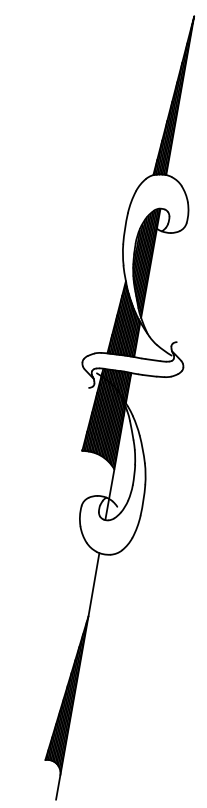
New Jersey • New York • Pennsylvania • Georgia

BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

COVER SHEET FOR PRELIMINARY AND FINAL SITE PLAN FOR 201 WALNUT AVENUE BLOCK 484 LOT 19.01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
1/29/2021	KDW	AS SHOWN	16377.001
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
KDW	BF		1 of 12

NJDEP ELECTRONIC APPROVAL STAMP



GENERAL NOTES:

1. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE DEMOLITION PROJECT. ALL PERSONNEL WORKING OR VISITING THE SITE SHALL BE PROVIDED A PROJECT SAFETY BRIEFING. THE CONTRACTOR SHALL DESIGNATE A TRAINED, RESPONSIBLE INDIVIDUAL FOR ALL SAFETY RELATED ITEMS. THIS PERSON SHALL HAVE THE AUTHORITY TO SUSPEND WORK SHOULD AN UNSAFE CONDITION BE ENCOUNTERED.
2. THE CONTRACTOR SHALL ERECT AND MAINTAIN FENCING AROUND THE PERIMETER OF THE WORK AREAS. AN EIGHT FOOT HIGH CHAIN LINK FENCE SHALL BE USED. DURING THE DEMOLITION OPERATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE PERIMETER FENCING, LOCATED ALONG THE LIMITS OF EACH DESIGNATED DEMOLITION AREA AND SHALL REPLACE ANY DAMAGED SECTIONS TO THE SATISFACTION OF THE OWNER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY OFFICE TRAILERS, ON-SITE DECONTAMINATION AREAS, DISPOSAL CONTAINERS AND ALL OTHER ITEMS AS MAY BE REQUIRED TO PERFORM HIS ACTIVITIES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL NECESSARY PERMITS AND LICENSES REQUIRED TO CARRY OUT HIS WORK IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL REGULATIONS AND AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS AND ALL CODES, RULES AND REGULATIONS OF HEALTH, PUBLIC OR OTHER AUTHORITY CONTROLLING OR LIMITING THE METHODS, MATERIAL TO BE USED, OR THE ACTIONS OF THOSE EMPLOYED IN WORK OF THIS KIND. ALL WORK, LABOR OR MATERIAL NECESSARY TO COMPLY WITH THESE LAWS, CODES, RULES AND REGULATIONS SHALL BE PERFORMED AND FURNISHED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS/HER ACTIVITIES WITHIN THE LIMITS OF THE PROJECT SITE. ROAD PAVEMENT REPLACEMENT AND ALL OTHER RESTORATION WORK WITHIN THE CITY OF PATERSON RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS OF THE CITY ENGINEER.
5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK AND ADJACENT STRUCTURES FROM DAMAGE BY WATER DURING ALL STAGES OF HIS/HER ACTIVITIES.

UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION OR CONSTRUCTION ACTIVITIES TO DETERMINE THE EXACT LOCATIONS AS NECESSARY AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. UTILITY LOCATIONS SHOWN ON THESE PLANS ARE FROM ABOVE-GROUND OBSERVATIONS AND FROM RECORD INFORMATION PROVIDED BY THE UTILITY COMPANIES. IN ADDITION, THE LOCATION AND TYPE OF THE EXISTING UTILITIES SHOWN ON THESE PLANS IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE. THE CONTRACTOR SHALL USE THE EXISTING UTILITY LOCATIONS SHOWN AS AN AID IN DETERMINING EXACT LOCATIONS. THE CONTRACTOR MUST CONTACT THE "ONE CALL SYSTEM" AT 1-800-272-1000 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION AND/OR CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, SCHEDULING AND ALL COSTS REQUIRED TO CAP, DISCONNECT AND REMOVE THE UTILITIES. IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY AGENCY OR THE AUTHORITY HAVING JURISDICTION. IN ADDITION, IF ANY EXISTING IMPROVEMENTS LOCATED WITHIN THE BOROUGH RIGHT-OF-WAY ARE DISTURBED BY THE CONTRACTOR OR THE UTILITY COMPANIES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE IMPROVEMENTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE BOROUGH ENGINEER. THE CONTRACTOR SHALL CALL THE PSE&G DEMOLITION CENTER AT 1-800-817-3366 TO SCHEDULE THE INDIVIDUAL METER REMOVAL AND CUTTING OF SERVICE LINES FOR EACH STRUCTURE THAT IS TO BE DEMOLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY THE BOROUGH OF SAYREVILLE BUILDING BUREAU FOR THIS WORK, INCLUDING LETTERS FROM THE WATER, GAS AND ELECTRICAL COMPANIES, WHICH INDICATES ALL UTILITIES TO BE REMOVED ARE CLEARED FOR DEMOLITION AND/OR EXCAVATION.
3. IF ANY UTILITY FACILITIES, INCLUDING DISTRIBUTION MAINS OR SERVICES FOR ADJACENT PROPERTIES, ARE DISRUPTED OR DAMAGED DURING THE CONSTRUCTION WORK ASSOCIATED WITH THIS PROJECT, THEN THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE UTILITY FACILITIES BY THE END OF THE WORKING DAY AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS INCURRED TO REMOVE OR TEMPORARILY SUPPORT.
4. ANY UTILITY POLE AND/OR GUY ANCHORS THAT MAY BE IN CONFLICT WITH HIS ACTIVITIES. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXISTING FACILITIES FROM THESE POLES, INCLUDING ALL LIGHTS, ELECTRICAL LINES, TELEPHONE LINES, CABLE LINES AND ALL ELSE AS REQUIRED TO REMOVE THE UTILITY POLES OR GUY ANCHORS. THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR THE REMOVAL OF ANY EXISTING FACILITIES THAT ARE NOT PRIVATELY OWNED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION, INSTALLATION AND SUPPLY OF ANY UTILITY SERVICES REQUIRED FOR THIS PROJECT, INCLUDING TEMPORARY POWER AND TELEPHONE SERVICES. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THIS PROJECT.

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE TO INSURE THE SAFE, ORDERLY AND EXPEDITIOUS CIRCULATION OF VEHICULAR AND PEDESTRIAN TRAFFIC FLOW AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 12 FEET WIDE TRAVEL LANE FOR EACH DIRECTION OF TRAFFIC FLOW ALONG THE ADJACENT ROADWAYS, AT ALL TIMES DURING HIS/HER CONSTRUCTION ACTIVITIES, TO ALLOW LOCAL AND EMERGENCY TRAFFIC ACCESS.
2. WATCHMEN AND FLAGMEN SHALL BE EMPLOYED BY THE CONTRACTOR FOR THE PROTECTION OF ANY EQUIPMENT ENTERING, LEAVING OR CROSSING ACTIVE TRAFFIC LANES, OR AS MAY BE REQUIRED FOR ROUTING OF ANY TRAFFIC AROUND OR THROUGH THE CONSTRUCTION. WATCHMEN AND FLAGMEN WILL BE EMPLOYED BY THE CONTRACTOR AT HIS OWN EXPENSE.
3. BEFORE BEGINNING WORK ON ANY STAGE OF THE PROJECT, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WARNING SIGNS, BARRICADES, TRAFFIC GUIDES, LIGHTS, SAFETY CONES AND OTHER DEVICES AS NECESSARY TO PROTECT THE PUBLIC DURING THAT PHASE OF HIS OPERATIONS. IN ADDITION, THE CONTRACTOR MUST NOTIFY ANY TENANTS OR PROPERTY OWNERS AT LEAST ONE WEEK PRIOR TO ANY ACTIVITIES THAT MAY EFFECT EXISTING OFF-STREET PARKING AND/OR THE FLOW OF TRAFFIC.
4. ALL NECESSARY REGULATORY AND WARNING SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LAST REVISED AND SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

LEGEND

□ TP-# TEST PIT LOCATION

8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING			BF
7	08/10/2022	REVISED PER TOWNSHIP COMPLETENESS REVIEW			BF
6	07/05/2022	REVISED SANITARY SEWER PROFILE			SP
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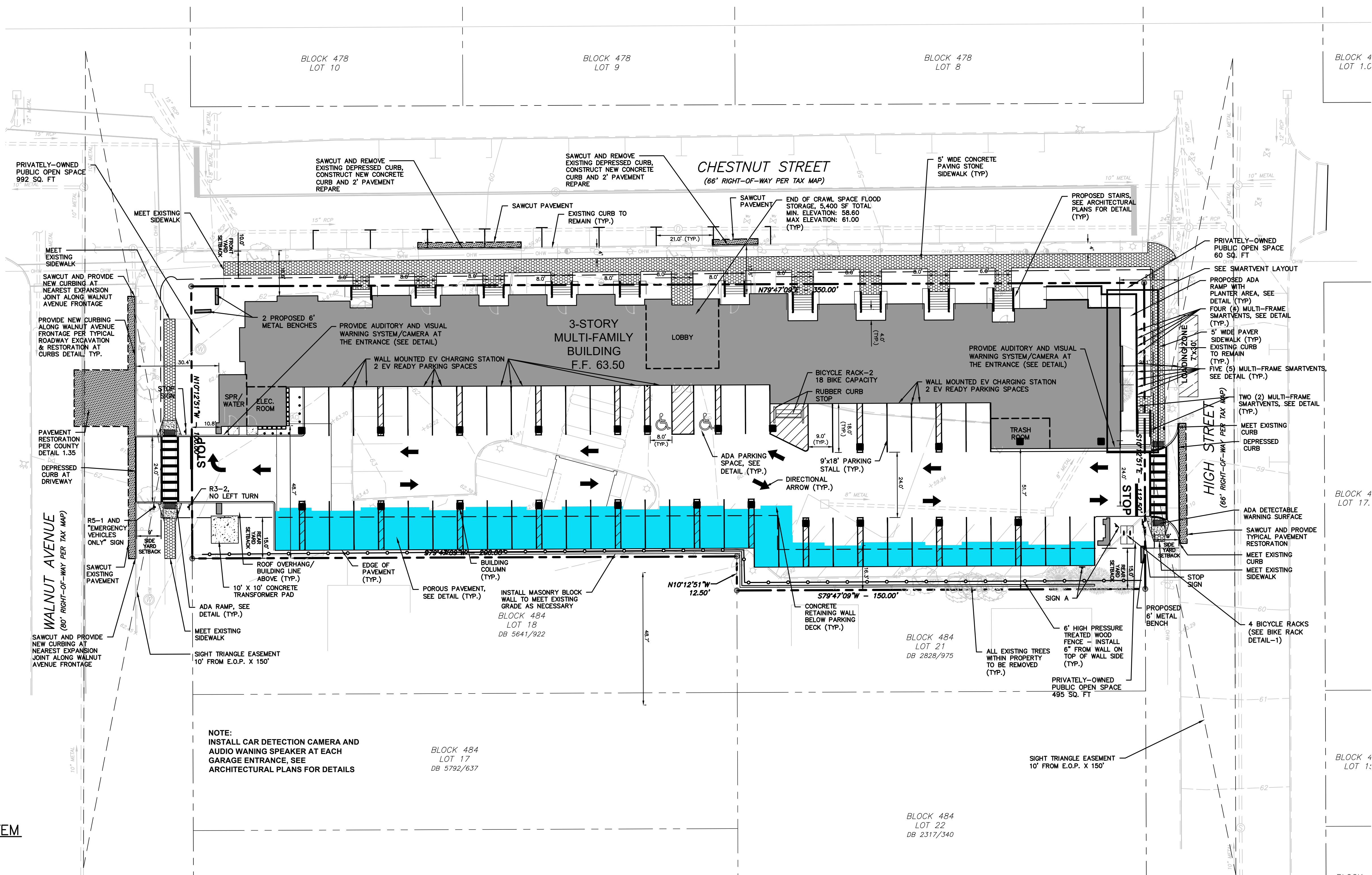
BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

EXISTING CONDITIONS PLAN FOR PRELIMINARY AND FINAL SITE PLAN FOR 201 WALNUT AVENUE BLOCK 484 LOT 19.01

TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE: 1/29/2021	DESIGNED BY: XXX	SCALE: 1" = 20'	PROJECT NUMBER: 16377.001
DRAWN BY: XXX	CHECKED BY: BF	FIELD BOOK	SHEET: 2 of 12

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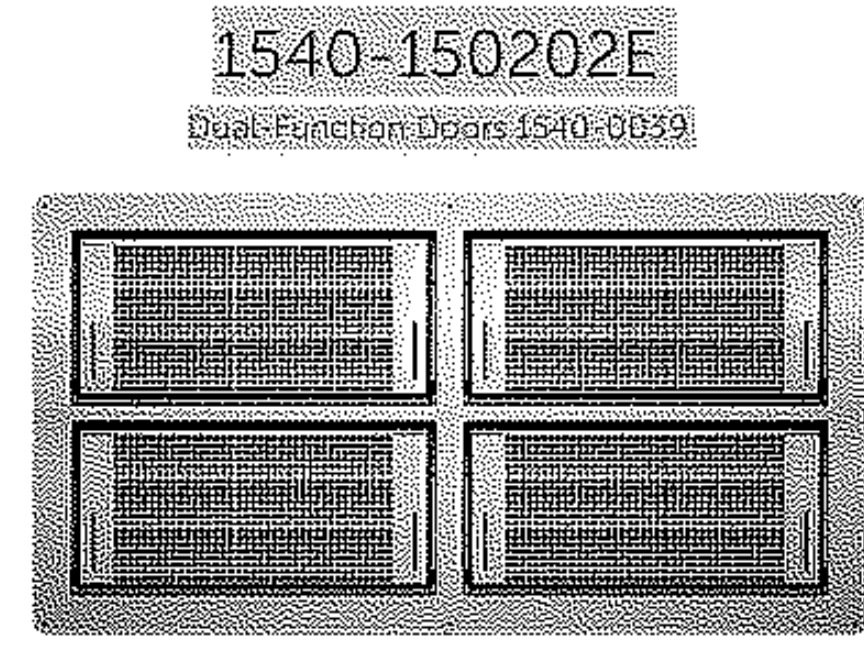
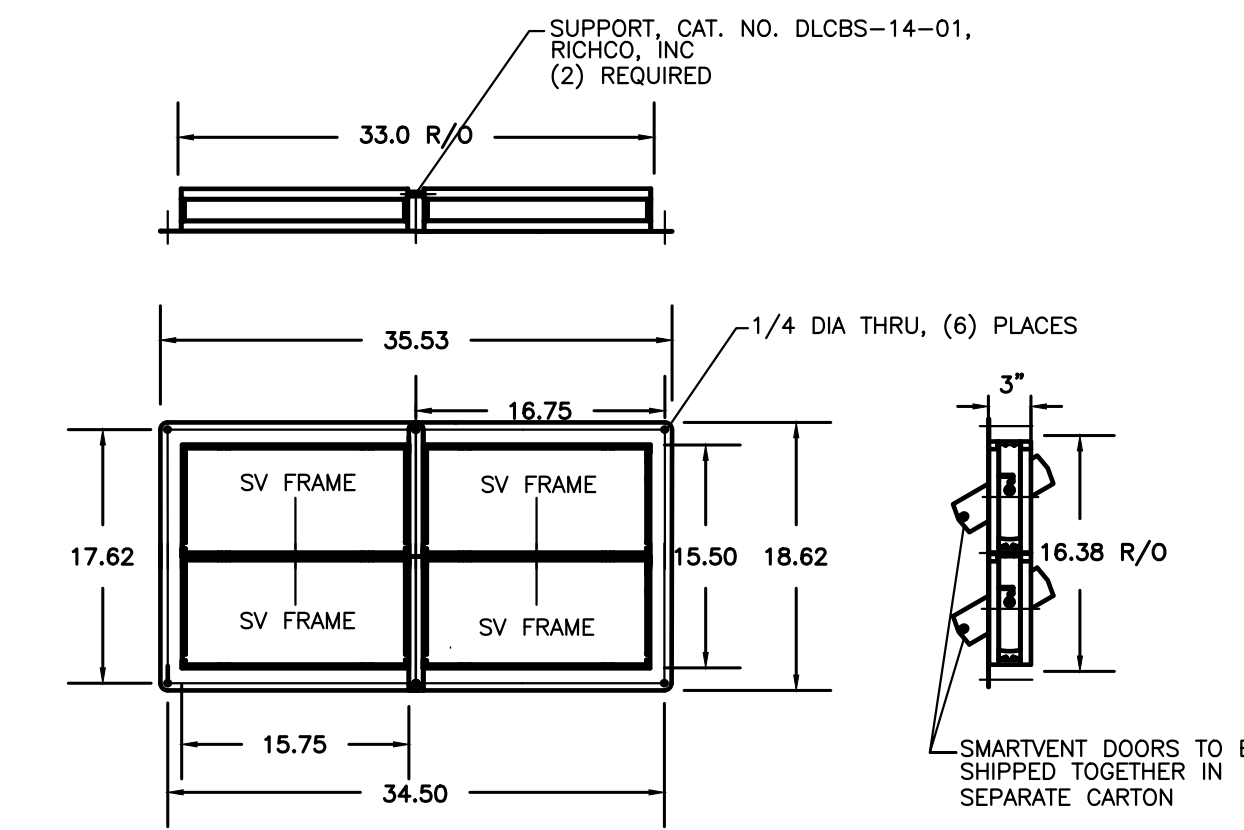


NJDEP ELECTRONIC APPROVAL STAMP

CAR COMING KIT



CAR WARNING KIT
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 CAR-COMING-SIGN OR APPROVED EQUAL
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 NOT TO SCALE

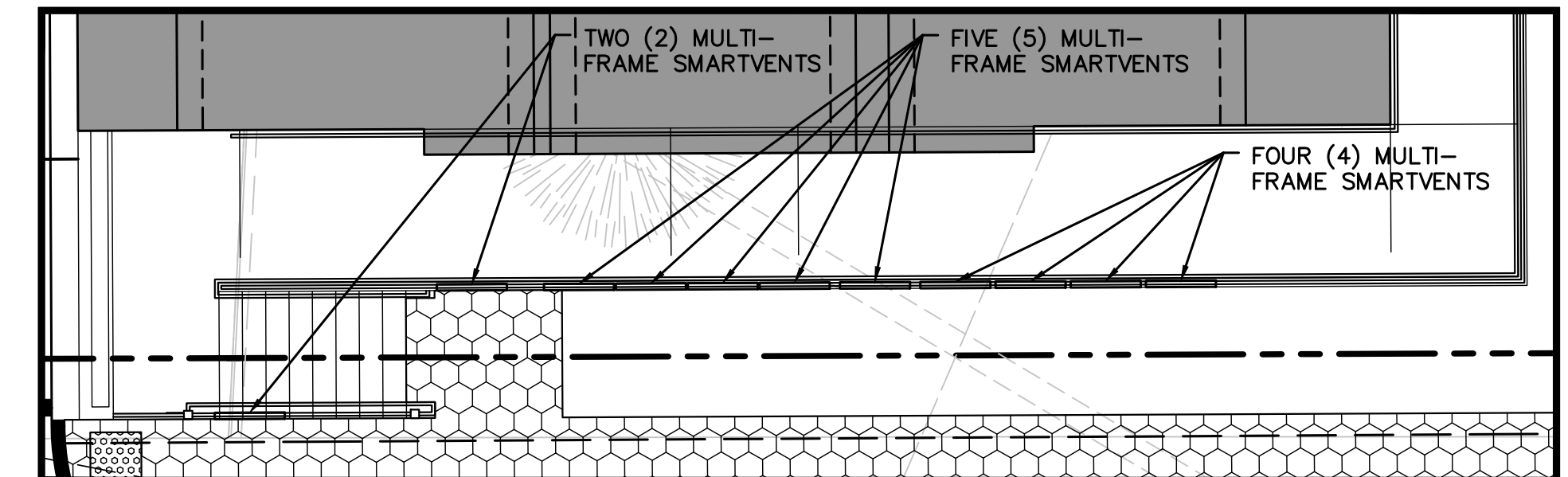


FLOOD VENTS
SMART VENT 2x2 MULTI-FRAME
 NOT TO SCALE

FLOOD VENT CALCULATIONS:
 CRAWL SPACE FLOOD STORAGE AREA: 8,577 SF
 SMART VENT 2X2 MULTI-FRAME CAPACITY: 800 SF; 11 PROPOSED
 FLOOD COVERAGE PROVIDED: 8,800 SF

NOTE:
 1. NO BASEMENT IS PROPOSED
 2. TRASH ROOM IS PROVIDED INSIDE THE PROPOSED BUILDING

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SMARTVENT LAYOUT
 SCALE: 1" = 6'



BAHRAM FARZANEH, PE, PP
 PROFESSIONAL ENGINEER, N.J. LIC. No. 246E03454800

SITE PLAN
 FOR
PRELIMINARY AND FINAL SITE PLAN
 FOR
201 WALNUT AVENUE
BLOCK 484 LOT 19.01
 TOWNSHIP OF CRAMFORD
 UNION COUNTY NEW JERSEY

DATE: 1/29/2021	DESIGNED BY: MS	SCALE: 1" = 20'	PROJECT NUMBER: 16377.001
DRAWN BY:	CHECKED BY: BF	FIELD BOOK	SHEET: 3 of 12

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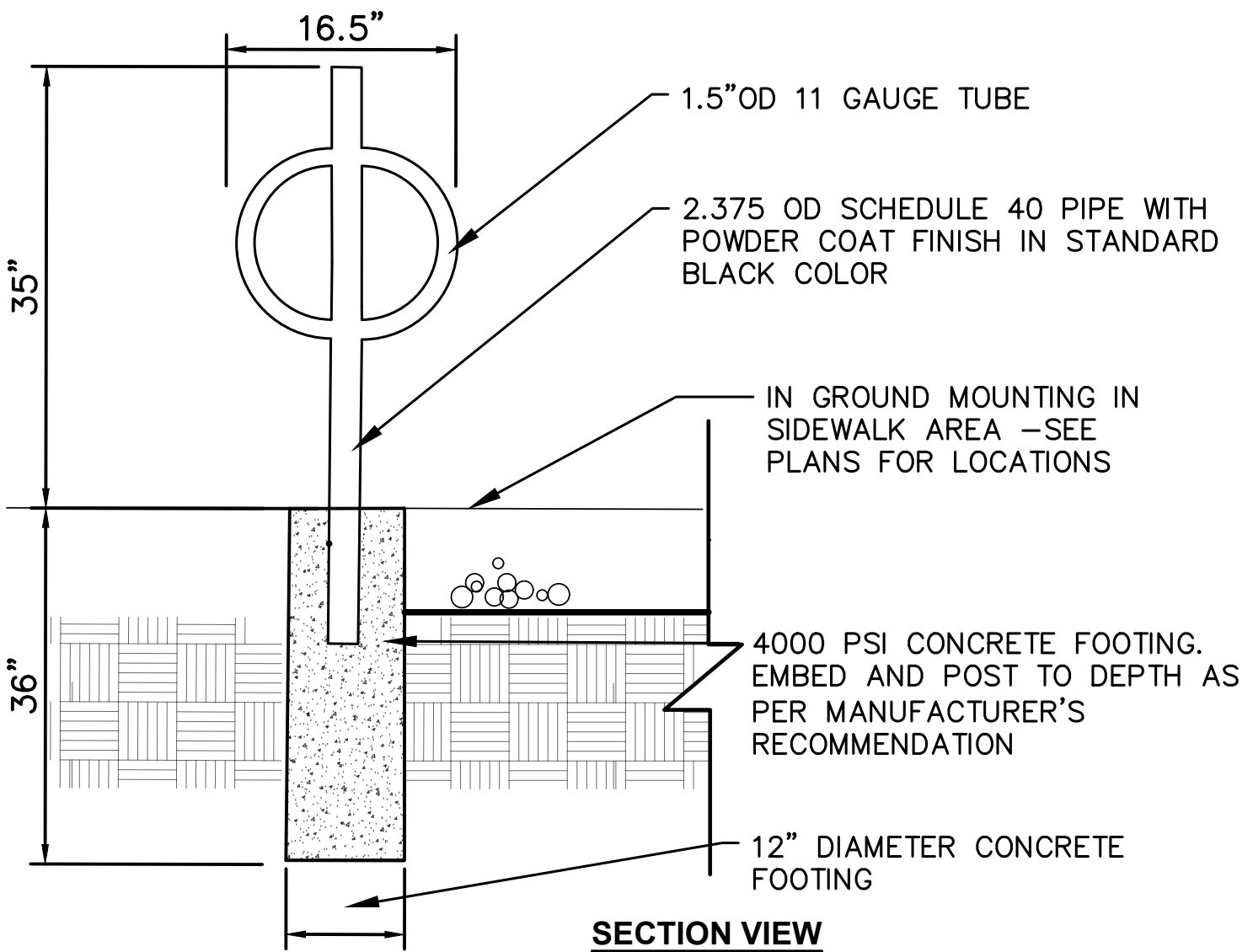
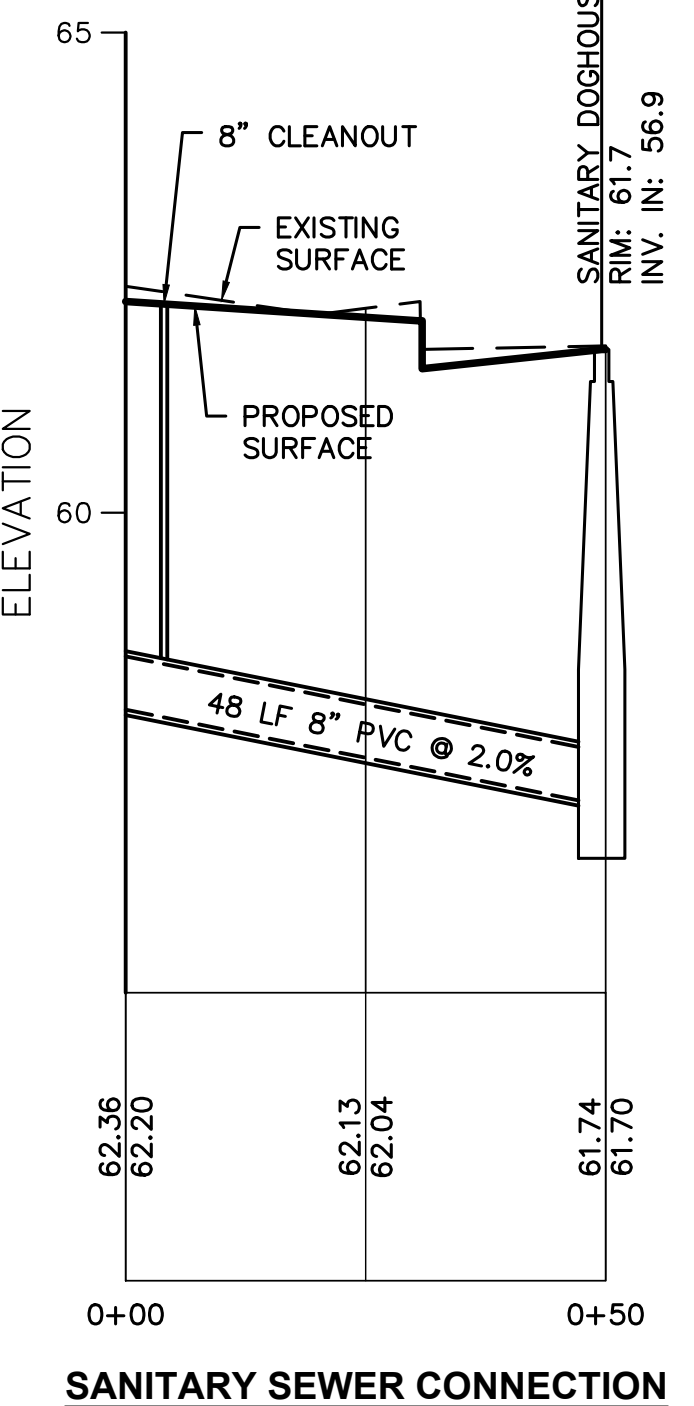
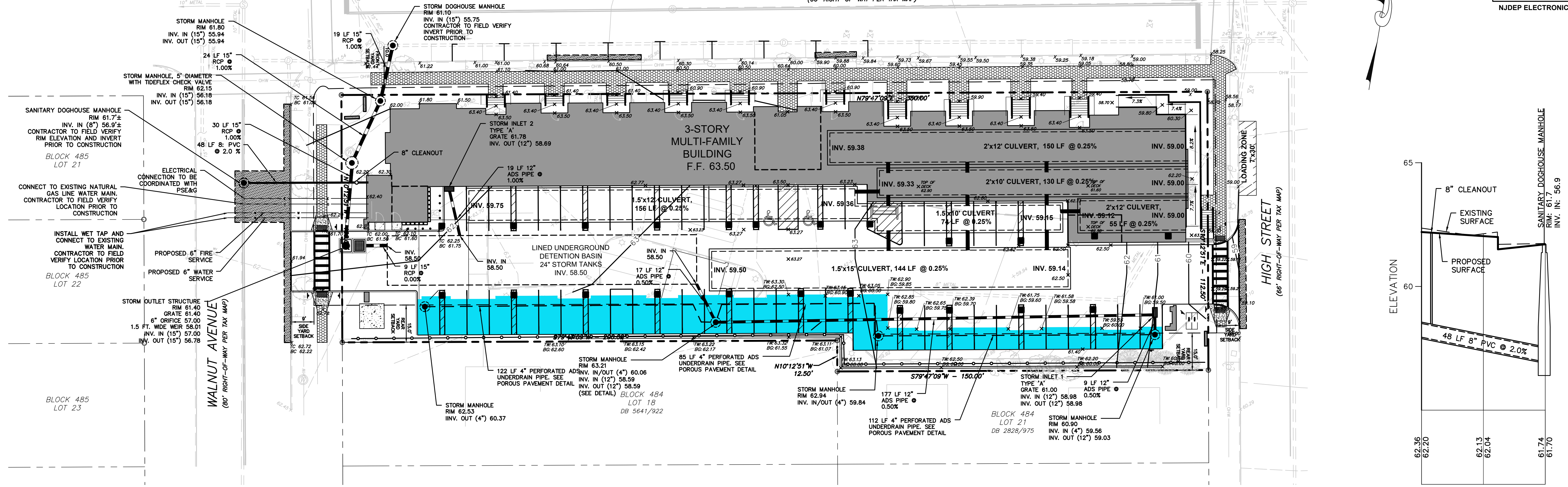
BLOCK 478
LOT 10

BLOCK 478
LOT 9

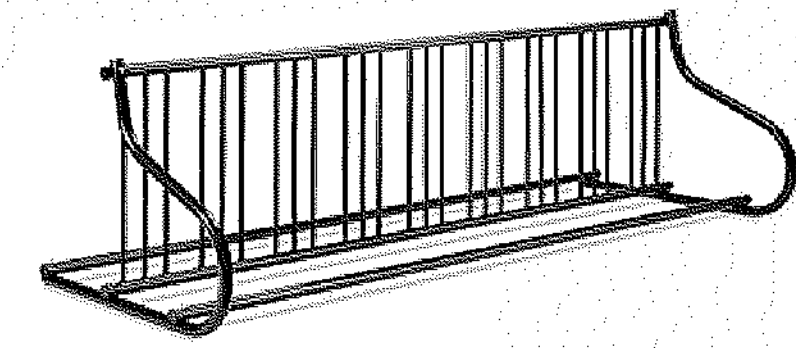
BLOCK 478
LOT 8

CHESTNUT STREET
(66' RIGHT-OF-WAY PER TAX MAP)

NJDEP ELECTRONIC APPROVAL STAMP



Double-Sided Grid Bike Rack - 18 Bike Capacity, Black



Everybody's biking! Secures bikes, deters theft. For commuter stations, libraries, schools.

- Sturdy 14-gauge construction, attractive powder coating.
- Rust-resistant.
- Mounting hardware included.



6" TRAFFIC SAFETY STORE® RUBBER PARKING BLOCK

- NOTES:**
- 2-BIKE HITCH POST STEEL BIKE RACK SHALL BE MANUFACTURED BY DERO, A PLAYCORE COMPANY, MINNEAPOLIS, MN OR APPROVED EQUAL (WWW.DERO.COM) CONTACT: BEN CRAMER 1-917-463-3769
 - FINISH SHALL BE POWDER COAT IN STANDARD BLACK COLOR.
 - BIKE RACKS SHALL BE INSTALLED USING THE IN GROUND MOUNT OPTION IN LOCATIONS AS SHOWN ON THE PLAN.
 - LOCATIONS OF BIKE RACKS SHALL BE FIELD ADJUSTED AS REQUIRED BY THE PROJECT PROFESSIONAL PRIOR TO INSTALLATION

BIKE RACK DETAIL-1
NOT TO SCALE

- NOTES:**
- BIKE RACK SHALL BE MANUFACTURED BY ULINE OR APPROVED EQUAL (WWW.ULINE.COM) 1-800-295-5510
 - FINISH SHALL BE POWDER COAT IN STANDARD BLACK COLOR.
 - BIKE RACKS SHALL BE INSTALLED USING THE IN GROUND MOUNT OPTION IN LOCATIONS AS SHOWN ON THE PLAN.
 - LOCATIONS OF BIKE RACKS SHALL BE FIELD ADJUSTED AS REQUIRED BY THE PROJECT PROFESSIONAL PRIOR TO INSTALLATION

BIKE RACK DETAIL-2
NOT TO SCALE

NOTE: NO BASEMENT IS PROPOSED

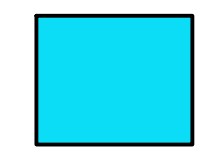
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8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING		BF
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1	4/28/2021	REVISED PER NJDEP COMMENTS	SP	MS



BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, N.J. LIC. NO. 24GE03454800

----- BASIN SIZE REQUIRED: 2,500 SF
 BASIN SIZE PROVIDED: 2,800 SF

LEGEND



----- PROPOSED GROUND CONTOURS
 [Blue Square] POROUS PAVEMENT

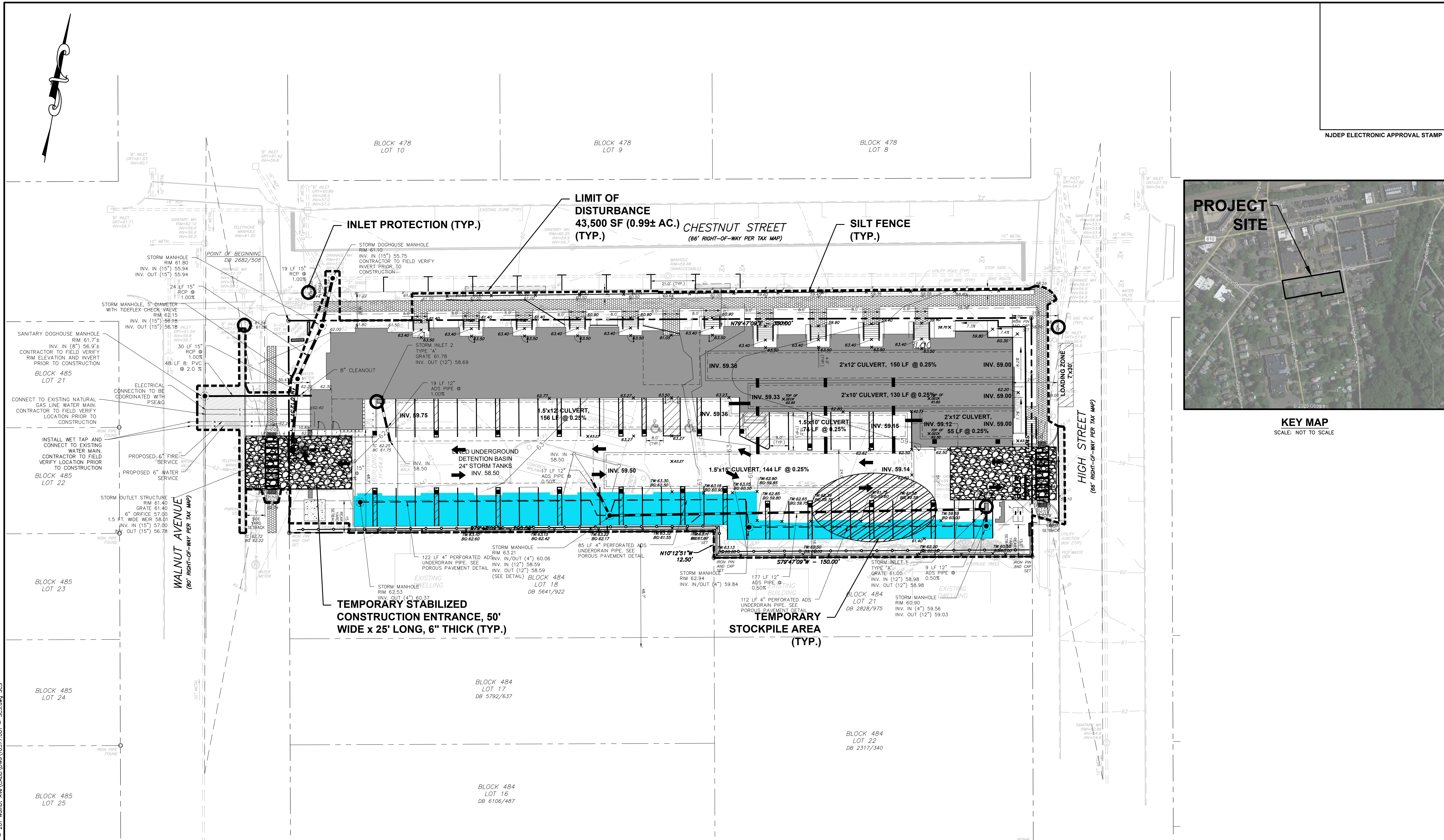
GRADING AND DRAINAGE PLAN
 FOR
PRELIMINARY AND FINAL SITE PLAN
 FOR
201 WALNUT AVENUE
 BLOCK 484 LOT 19.01
 TOWNSHIP OF CRANFORD
 UNION COUNTY NEW JERSEY

DATE: 1/29/2021	DESIGNED BY: MS	SCALE: 1" = 20'	PROJECT NUMBER: 16377.001
DRAWN BY: MS	CHECKED BY: BF	FIELD BOOK	SHEET: 4 of 12

C:\16\16300\16377 - 201 Walnut Ave\CADD\DWG\16377_001 - SP.dwg OR



KEY MAP
SCALE: NOT TO SCALE



TOTAL DISTURBANCE AREA
AREA = 43,545 SF ± (0.99 AC ±)

THIS PLAN IS USED FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY.

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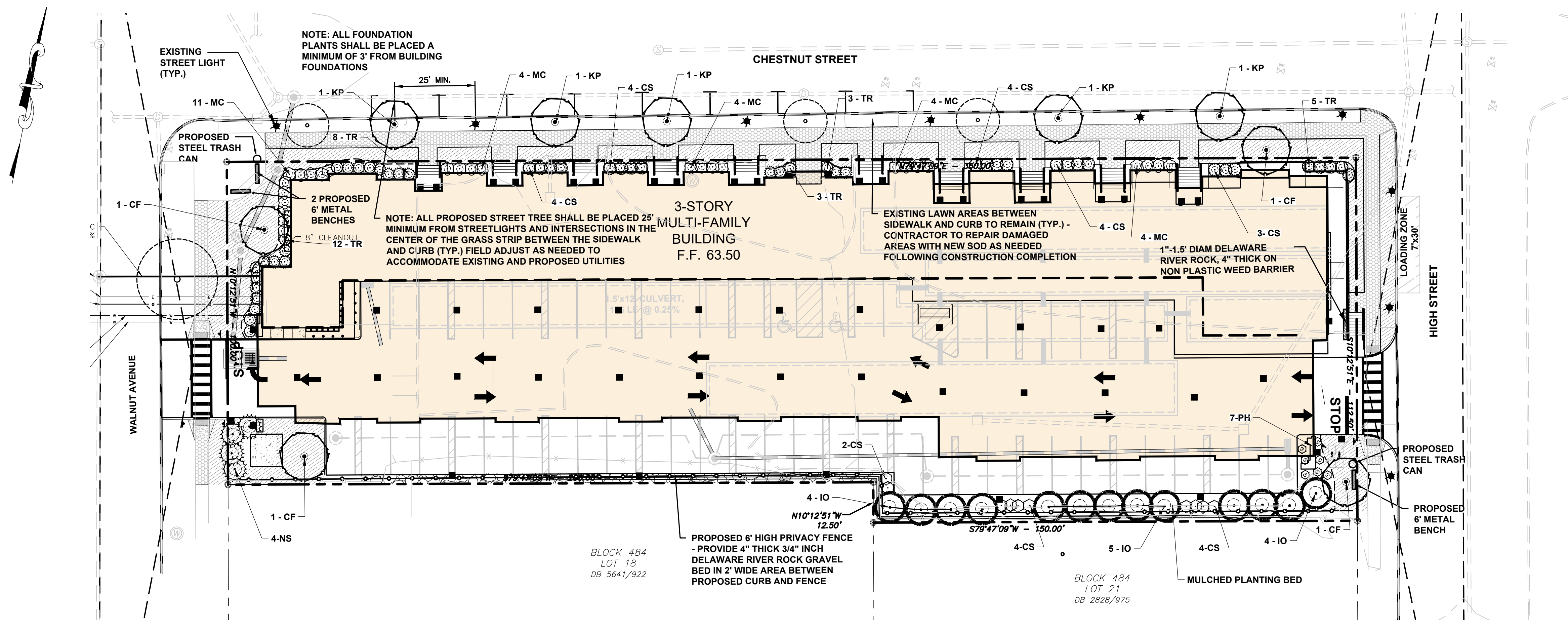


BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. NO. 24GE03454800

SOIL EROSION AND SEDIMENT CONTROL PLAN
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
201 WALNUT AVENUE
BLOCK 484 LOT 19-01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
1/29/2021	KDW	1" = 20'	16377.001
	CHECKED BY:	FIELD BOOK	SHEET:
	KDW	BF	5 of 12

NJDEP ELECTRONIC APPROVAL STAMP



LEGEND

- SODDED LAWN (TYP.)
 - PROPOSED LIGHT FIXTURE
 - EXISTING STREET LIGHT FIXTURE
 - EXISTING TREE TO REMAIN
 - PROPOSED PLANT MATERIAL
- APPROXIMATE INSTALLED SIZE
APPROXIMATE SIZE AT 15 TO 20 YRS GROWTH

PLANTING NOTES

1. THE LANDSCAPE PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY. THE CONTRACTOR SHOULD EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR EXACT LOCATIONS OF UTILITIES, DRAINS, ETC., AND NOTIFY THE OWNER ABOUT ANY DISCREPANCIES BEFORE STARTING WORK.
2. ALL PLANTING SHALL BE IN CONFORMANCE WITH THE AMERICAN NURSERYMEN'S ASSOCIATION STANDARDS, CURRENT EDITION. ALL PLANT MATERIALS USED SHALL BE TRUE TO NAME AND SIZE IN CONFORMITY WITH THE CURRENT EDITION OF THE AMERICAN STANDARD OF NURSERY STOCK AND SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUN SCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTION. ALL PLANTS SHALL BE NURSERY GROWN. ALL PLANT MATERIAL SHALL BE TAGGED AT THE NURSERY SOURCE AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOLS RELATED TO THE EXECUTION OF THIS CONTRACT.
4. EXCAVATION NEAR EXISTING UTILITIES TO BE CAREFULLY PERFORMED BY HAND.
5. ALL PLANT MATERIAL SHALL BE PLANTED TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT THE NURSERY. ALL PLANT MATERIAL SHALL BE PLANTED SO THAT THE TOP OF THE ROOTBALL IS NO HIGHER OR LOWER THAN THE EXISTING/FINISHED GRADE DEPENDENT UPON SOIL CONDITIONS.
6. IN THE EVENT THAT PLANTING DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE LANDSCAPING PLAN SHALL GOVERN. THE USE AND PLANTING OF BARE ROOT MATERIAL SHALL BE PROHIBITED.
7. ANY SUBSTITUTIONS OF PLANT MATERIAL WITH REGARDS TO SIZE, SPECIES, VARIETY, ETC., SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
8. PLANTS SHALL ONLY BE INSTALLED WHEN THE SOIL IS FROST FREE.
9. UNDER NO CIRCUMSTANCES SHOULD THE MAIN LEADER OF A DECIDUOUS OR EVERGREEN TREE BE TOPPED. DECIDUOUS TREES SHALL BE PRUNED BY REMOVAL OF 1/3 OF THE INTERIOR BRANCHING STRUCTURE WITHOUT ALTERING THE ORIGINAL BRANCHING FORM OF THE TREE.
10. ALL DISTURBED AREAS, NOT BEING PLANTED, SHALL BE TOPSOILED 4" THICK, FERTILIZED, SEEDED, AND MULCHED WITH APPROVED MULCH. TOPSOIL SHALL BE NATURAL FRIABLE, FERTILE SOIL CHARACTERISTIC OF PRODUCTIVE SOIL IN THE VICINITY. IT SHALL BE FREE OF LUMPS OF CLAY, STONES, ROOTS, AND OTHER FOREIGN MATTER.
11. CUT AND LOOSEN SISAL HEMP CHOKE THE AROUND TREE TRUNK. ALL PLASTIC MATERIAL SHALL NOT BE PERMITTED. ALL WIRE BASKETS AND PLASTIC LINERS OF CONTAINER GROWN TREES AND SHRUBS MUST BE COMPLETELY REMOVED. NO CONTAINER GROWN MATERIAL WILL BE ACCEPTED IF IT IS ROOT BOUND AND NOT ROOT PRUNED. THE USE OF NYLON TWINE ON ROOT BALLS IS PROHIBITED.
12. THE DEPTH OF PLANT PITS SHALL BE INCREASED BY 12" THROUGH THE ADDITION OF LOOSE AGGREGATE (3/4" TO 1 1/2" DIAMETER) WHEREVER POOR DRAINAGE OCCURS OR WHERE DIRECTED BY THE OWNER.
13. GUY WIRES SHALL BE LOCATED SO THAT THEY WILL NOT PULL CROTCH APART. GUY WIRES TO SECOND BRANCH (MINIMUM ONE-THIRD HEIGHT OF TREE). USE THREE GUY'S PER TREE UNLESS OTHERWISE INDICATED. ALL TREE STAKES, GUY WIRES, TREE WRAPPING AND SAUCERS SHALL BE REMOVED AFTER ONE GROWING SEASON.
14. PLANTS PLANTED IN ROWS SHALL BE MATCHED SPECIMENS AND BE UNIFORM IN SIZE AND FORM.
15. IN THE EVENT THAT EXISTING VEGETATION IS REMOVED BEYOND THE CLEARING LIMITS SHOWN ON THE PLANS, ADDITIONAL PLANTING MUST BE PROVIDED AS APPROVED BY THE TOWNSHIP AND AT NO COST TO THE OWNER.
16. PLANTING BACKFILL MIXTURE SHALL CONSIST OF ONE PART TOPSOIL, ONE PART NATIVE SOIL AND ONE PART PEAT MOSS. NOTE THAT PLANTING MIXTURE MAY CHANGE BASED UPON SOIL CONDITIONS.
17. MULCH, 4" IN DEPTH, SHALL BE TREATED SHREDDED HARDWOOD BARK NOT EXCEEDING 2" IN GREATEST DIMENSION. MULCH SHALL BE INSTALLED WITH A MAXIMUM OF ONE (1) INCH WITHIN ONE (1) FOOT ON THE TREE'S ROOT FLARE. A NON-PLASTIC WEED RETARDANT BARRIER SHALL BE USED IN ALL NON GRASSED AREAS. MULCH SHALL BE FINE GRADED FOR A PLEASING APPEARANCE. THE USE OF MARBLE OR PINE BARK CHIPS IS PROHIBITED. MULCH VOLCANOS ARE NOT PERMITTED.
18. ALL PLANT MATERIAL SHALL BE GIVEN A MINIMUM OF 5 GALLONS OF WATER AT THE TIME OF INSTALLATION AND SHALL BE WATERED AT INTERVALS DURING ESTABLISHMENT TO ENSURE ADAPTATION TO THE SITE. PRIOR TO THE INSTALLATION OF THE PLANT MATERIAL, THE CONTRACTOR SHALL FILL EACH PLANTING PIT WITH WATER AND ALLOW IT TO FULLY PERCOLATE INTO THE GROUND PRIOR TO PLACEMENT OF THE PLANT. THE CONTRACTOR SHALL NOTIFY EITHER THE OWNER OR PROJECT LANDSCAPE ARCHITECT OF ANY PERCOLATION PROBLEMS PRIOR TO INSTALLATION.
19. PREFERRED PLANTING TIME PERIODS ARE FROM SEPTEMBER 1 TO NOVEMBER 30 OR MARCH 20 TO MAY 31. NO PLANTING SHALL BE EXECUTED DURING ABNORMALLY HOT WEATHER NOR WHEN THE GROUND IS FROZEN.
20. THE CONTRACTOR SHALL REMOVE ALL DAMAGED BRANCHES AND NURSERY TAGS AT THE TIME OF INSTALLATION.
21. ALL TURF SHALL RECEIVE FERTILIZER CONSISTING OF 10-6-4 (50% ORGANIC) COMPOSITION, APPLIED AT 3 LB. PER 100 SQ. FT. SLOW RELEASE FERTILIZER TABLETS OR PACKETS OF 20-10-5 COMPOSITION SHALL BE ADDED TO ALL PLANTING PITS AT THE FOLLOWING RATIOS: 1 PER SHRUB, 2 PER DECIDUOUS OR EVERGREEN TREES UP TO 2" IN CALIPER AND 3 FOR DECIDUOUS AND EVERGREEN TREES ABOVE 2" IN CALIPER.
22. EACH TREE THAT IS PLANTED MUST BE TAGGED WITH A DURABLE LABEL BEARING THE GENUS, SPECIES, VARIETY, PLANT PATENT NUMBER (IF APPLICABLE) AND CULTURAL REQUIREMENTS AND MUST BE INSPECTED PRIOR TO REMOVAL.
23. ALL GROUPED SHRUBS SHALL BE MULCHED TOGETHER TO FORM ONE CONTINUOUS PLANTING BED.
24. CONTRACTOR TO BE RESPONSIBLE FOR SODDING AREAS BEING DISTURBED BY CONSTRUCTION. SOD TO BE IN ACCORDANCE WITH SOIL CONSERVATION DISTRICT'S STANDARDS.
25. ALL TREES FOUR (4) FEET OR GREATER IN HEIGHT SHALL BE STAKED PER TOWNSHIP DESIGN STANDARDS.
26. ALL PLANT RELOCATIONS SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
27. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR PERIOD OF ONE YEAR FROM THE TIME OF PLANTING.

PLANT LIST

DECIDUOUS TREES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
CF	N#	4	CORNUS FLORIDA	FLOWERING DOGWOOD	3" CAL.	B&B	15'-25' HEIGHT AND SPREAD	WHITE FLOWERS. SPRING
KP	N#	5	KOELREUTERIA PANICULATA	GOLDEN RAINTREE	3" CAL.	B&B	20'-25' HEIGHT AND SPREAD	YELLOW FLOWERS. SUMMER
EVERGREEN TREES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
IO	&	13	ILEX X NELLIE R. STEVENS	NELLIE R. STEVENS HOLLY	8' HT.	B&B	15'-20' HEIGHT, 8'-10' SPREAD	RED BERRIES IN WINTER
SHRUBS AND PERENNIALS AND GRASSES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
CS	N#	29	CORNUS SERICEA	RED TWIG DOGWOOD	3' HEIGHT	B&B	3'-5' HEIGHT AND SPREAD	RED TWIGS IN WINTER
MC	N#	27	BUXUS SEMPERVIRENS 'DEE RUNK'	DEE RUNK BOXWOOD	2'-3' HEIGHT	B & B	5'-6' HEIGHT AND SPREAD	EVERGREEN SHRUB
NS	#&	7	ILEX X NELLIE STEVENS	NELLIE STEVENS HOLLY	5' HEIGHT	1 GALLON CONT	2'-3' HEIGHT AND SPREAD	ORNAMENTAL GRASS
PH	#&	7	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN DRAWF FOUNTAIN GRASS	1' HEIGHT	1 GALLON CONT	2'-3' HEIGHT AND SPREAD	ORNAMENTAL GRASS
TR	N	31	TAXUS BACCATA REPANDENS	DWARF ENGLISH YEW	1.5' HT.	3 GALLON CONT	4'-6' HEIGHT AND SPREAD	EVERGREEN SOFT NEEDLE FOLIAGE

KEY:
 N = NATIVE PLANT OF NORTH AMERICA * = SPRING INSTALLATION ONLY
 & = SALT SPRAY TOLERANT # = SELDOM OR RARELY DAMAGED BY DEER AS PER RUTGERS AG AGENCY (HTTP://NAES.RUTGERS.EDU)

SODDING SPECIFICATIONS

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. THE SODDING WILL BE IN ACCORDANCE WITH BERGEN COUNTY SOIL CONSERVATION DISTRICT STANDARDS. SPECIFIC SEED TYPES SHALL BE USED AS FOLLOWS:

- A. ALL DISTURBED AREAS SHALL BE SODDED AS SHOWN ON THE LANDSCAPE PLAN WITH ERNST ATHLETIC FIELD MIXTURE OR APPROVED EQUAL. SEED SHALL BE APPLIED AT A RATE OF 170 LBS/ACRE BETWEEN THE PERIODS OF EITHER 4/1 TO 5/31 OR 8/15 TO 10/16.
- B. SLOPED AREAS 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURE AN EROSION CONTROL MATTING BY BONTERRA AMERICA, PINELANDS NURSERIES, COLUMBUS, NJ, MODEL # CS2 OR APPROVED EQUAL.

THIS PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY.

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20 0 20 40
SCALE IN FEET

FPA
FRENCH & PARRELLO
 ASSOCIATES

Corporate Office:
 1800 Route 34, Suite 101
 Wall, New Jersey 07719
 732.312.9800
 FPAengineers.com

New Jersey • New York • Pennsylvania • Georgia

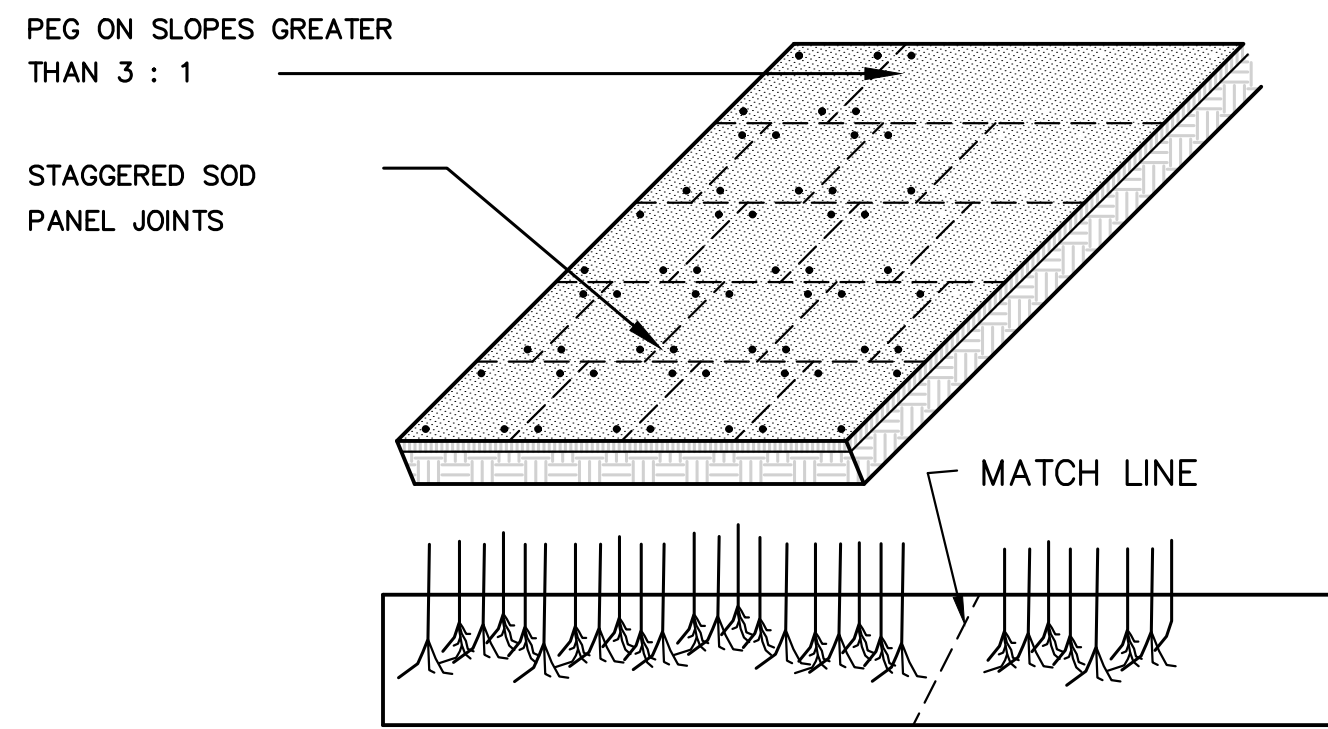
SARAH REBAR BISAHA, LLA, PP
 LICENSED LANDSCAPE ARCHITECT NJ LIC NO AS000639

LANDSCAPING PLAN
 FOR
PRELIMINARY AND FINAL SITE PLAN
 FOR
201 WALNUT AVENUE
BLOCK 484 LOT 19.01
 TOWNSHIP OF CRANFORD
 UNION COUNTY NEW JERSEY

DATE: 1/29/2021
 DESIGNED BY: JB
 SCALE: 1"=20'
 PROJECT NUMBER: 16377.001

DRAWN BY: JB
 CHECKED BY: BF
 FIELD BOOK
 SHEET: 7 of 12

C:\BKA\16300\16377 - 201 Walnut Ave\CAD\DWG\16377.001 - LA.dwg LA PLAN



NOTES :

- CULTIVATED SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
- APPLY FERTILIZER AT THE RATE OF 500 POUNDS PER ACRE USING 10-20-10 RATIO OR AS DETERMINED BY SOIL TESTING.
- SUPPLY PULVERIZED DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE OR AS DETERMINED BY SOIL TESTING.
- APPLY 300 POUNDS 38-0-0 PER ACRE IN LIEU OF TOP DRESSING OR AS DETERMINED BY SOIL TESTING.
- PLACE SOD STRIPS ON THE CONTOUR STARTING AT THE BOTTOM.
- PLACE SOD WITH SNUG EVEN JOINTS THAT ARE STAGGERED.
- ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT.
- ON SLOPES GREATER THAN 3 TO 1 SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 OF AN INCH).
- ANCHOR SOD IN WATER CARRYING CHANNELS WITH HEAVY JUTE OR PLASTIC NETTING.
- SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH THE SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.

SOD INSTALLATION DETAIL

NOT TO SCALE

NOTES:

- ALL TREES UNDER 3" IN CALIPER SHALL BE STAKED ALL TREES 3" IN CALIPER AND GREATER SHALL BE GUYED
- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE
- SET STAKES VERTICAL AND AT SAME HEIGHT
- REMOVE ALL WIRE BASKETS PRIOR TO BACKFILLING THE PLANTING PIT.
- ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.

STAKES TO BE SET 2/3RDS UP TREE OR JUST AT FIRST BRANCHES SEE TREE STAKING AND GUYING DETAIL

20 GALLON TREE GATOR SLOW RELEASE WATERING BAG MODEL #98183 OR APPROVED EQUAL PROVIDE ONE BAG PER INSTALLED TREE FOR TREES LESS THAN 4" IN CALIPER, PROVIDE TWO PER TREE FOR LARGER SIZES

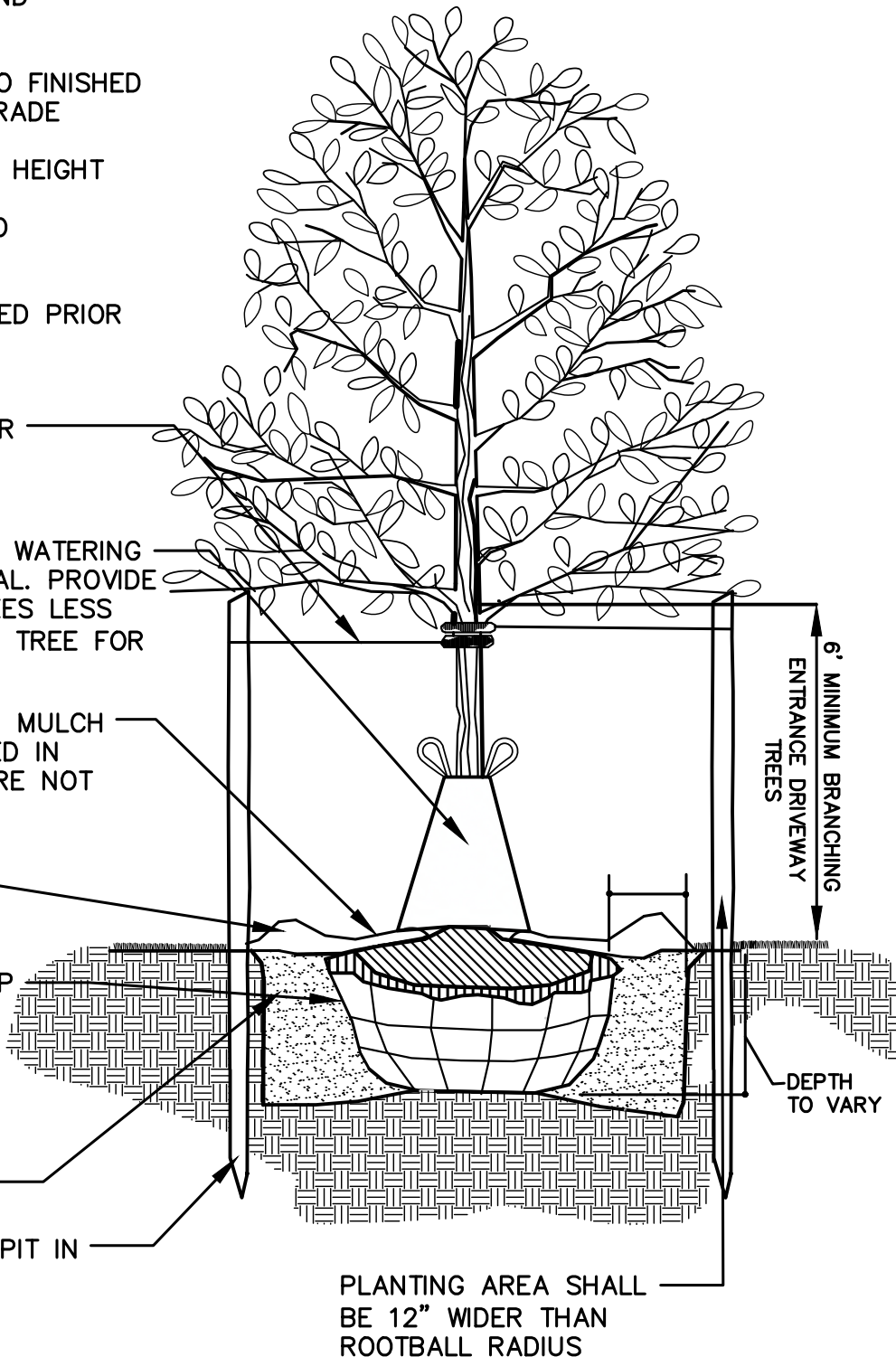
4" SHREDDED HARDWOOD MULCH-- KEEP MULCH AWAY FROM ROOT COLLAR AS DESCRIBED IN PLANTING NOTES. MULCH VOLCANOES ARE NOT PERMITTED

6" SOIL MOUND FOR FOR WATER RETENTION

REMOVE ALL PLASTIC MATERIAL, BURLAP SYNTHETIC BURLAP, STRING OR CONTAINERS FROM TOP 1/3 RD OF ROOTBALL AT THE TIME OF PLANTING

BACKFILL AUGMENTED WITH TOPSOIL

STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED GROUND



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

NOTES:

- ALL EVERGREEN TREES TO BE STAKED AND/OR GUYED AS SPECIFIED IN THE DETAIL AND THE PLANTING NOTES
- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE
- NEVER CUT LEADERS.
- PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES. SEE TREE PRUNING DETAIL.
- STAKES SHALL BE WHITE OR RED CEDAR, OAK, OR LOCUST TREATED WITH ACCEPTABLE WOOD PRESERVATIVE

SET 2 STAKES OR GUYS 1/2 TO 2/3rd's UP HEIGHT OF TREE. SEE TREE STAKING AND GUYING DETAIL

4" OF MULCH KEEP MULCH AWAY FROM ROOT COLLAR (SEE PLANTING NOTES FOR MATERIAL TYPES) MULCH VOLCANOES ARE NOT PERMITTED

MOUND MULCH 6 INCHES HIGH TO FORM SAUCER

REMOVE ALL PLASTIC MATERIAL SYNTHETIC BURLAP AND STRING OR CONTAINERS TO BE REMOVED AT THE TIME OF PLANTING

PLANTING MIXTURE AS SPECIFIED IN PLANTING NOTES

FERTILIZER TABLET/PACKET (2 OR 3)

SCARIFY TO 4" DEPTH AND RECOMPACT

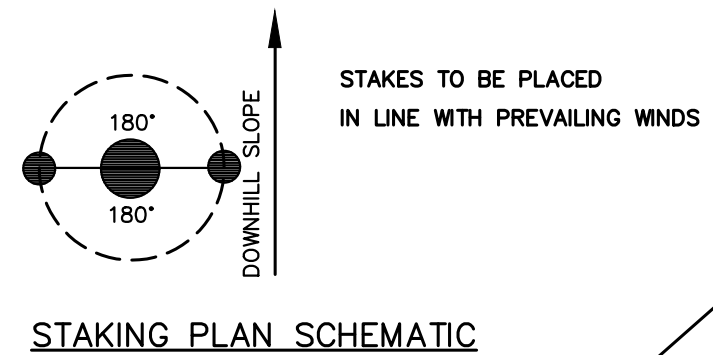
STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED GROUND

ROOTBALL ON UNDISTURBED SOIL

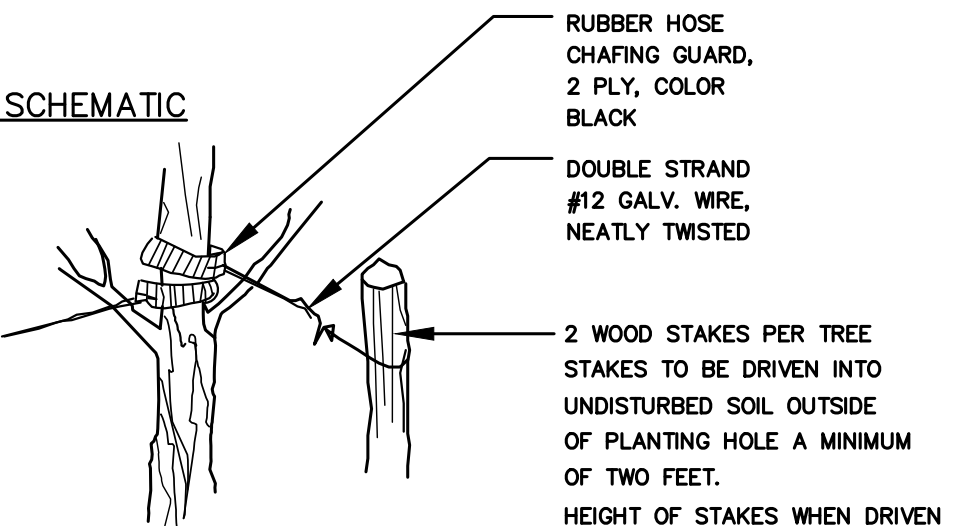
NOTE: ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE



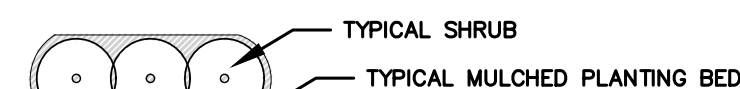
STAKING PLAN SCHEMATIC



STAKING DETAIL

TREE STAKING DETAIL

NOT TO SCALE



NOTE: CONTRACTOR TO PROVIDE A MULCHED PLANTING BED FOR SHRUBS GROUPED TOGETHER. MULCHED BEDS MAY VARY IN SHAPE AND SIZE TO CONFORM WITH SHRUB LAYOUT.

TYPICAL PLANTING BED PLAN VIEW

MAINTAIN SAME GROUND LINE AS IN THE NURSERY

THIN BRANCHES AND FOLIAGE (NOT ALL BRANCH TIPS) BY 1/3, RETAINING NORMAL PLANT SHAPE (EXCEPT EVERGREEN MATERIAL)

SET ROOT COLLAR AT FINISHED GRADE

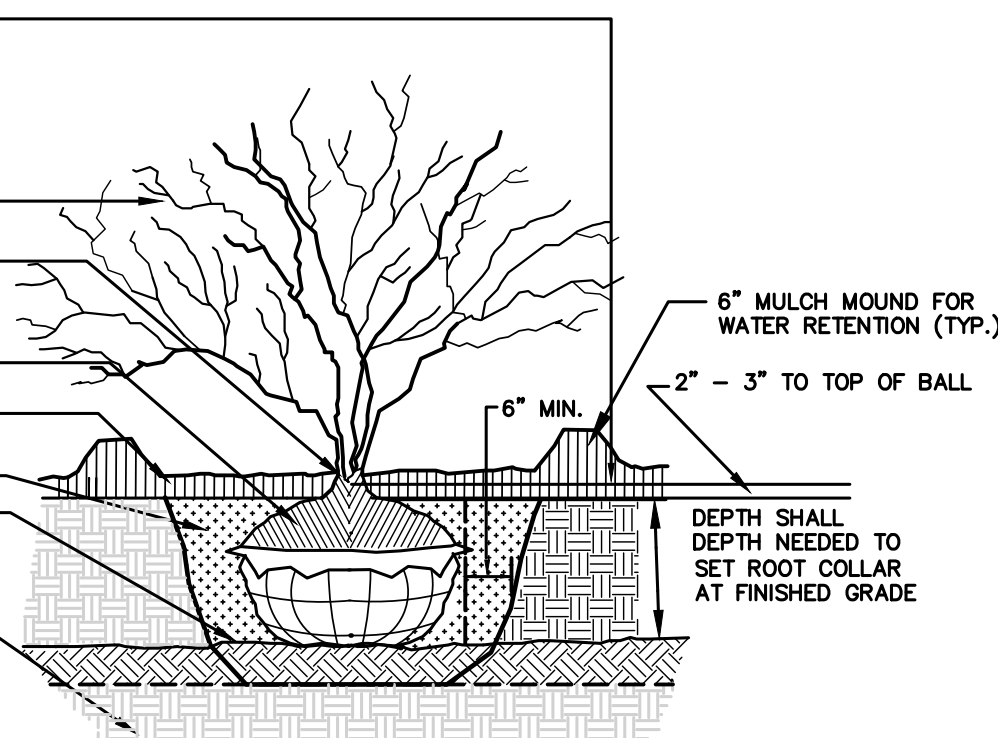
REMOVE ALL PLASTIC MATERIAL SYNTHETIC BURLAP AND STRING OR CONTAINERS TO BE REMOVED AT THE TIME OF PLANTING

4" OF MULCH KEEP MULCH AWAY FROM ROOT COLLAR

BACKFILL AUGMENTED WITH TOPSOIL

SCARIFY TO 4" DEPTH AND RECOMPACT

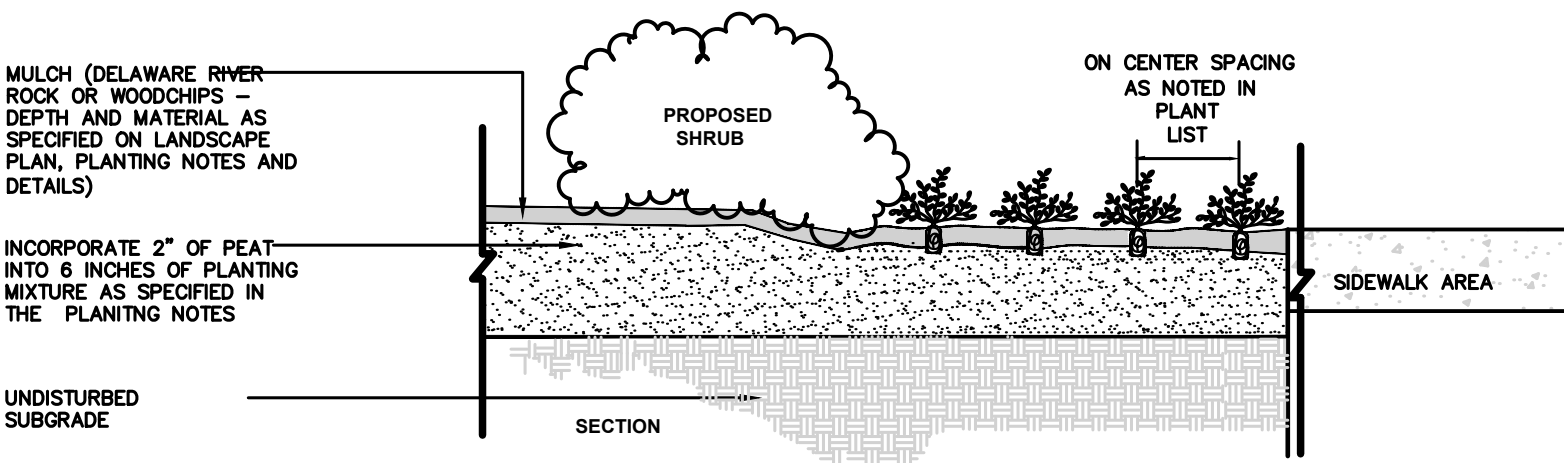
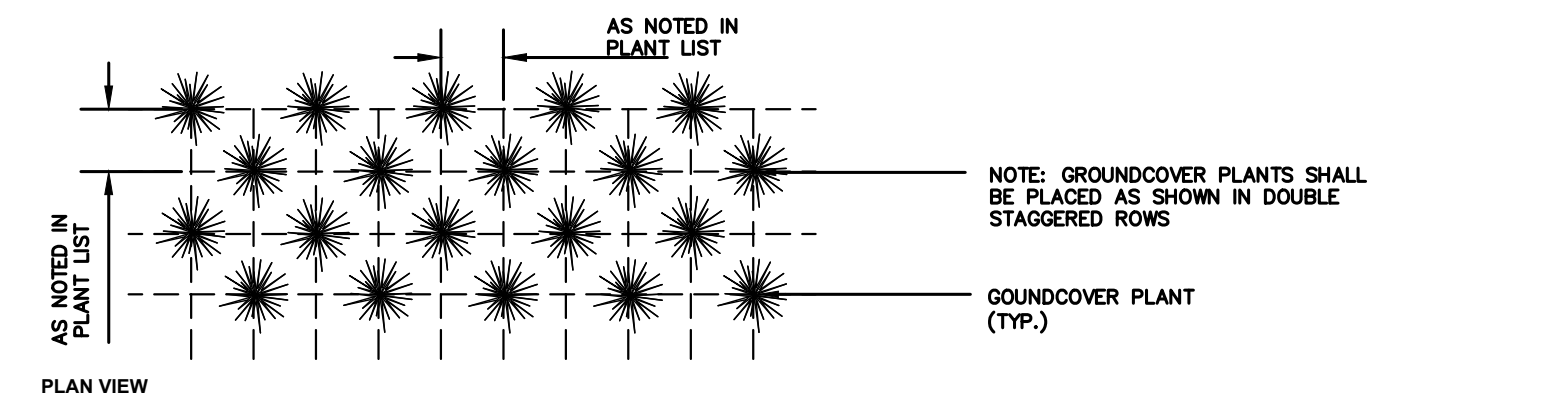
COMPACTED SUBGRADE



NOTE: DO NOT PRUNE EVERGREEN SHRUBS EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES

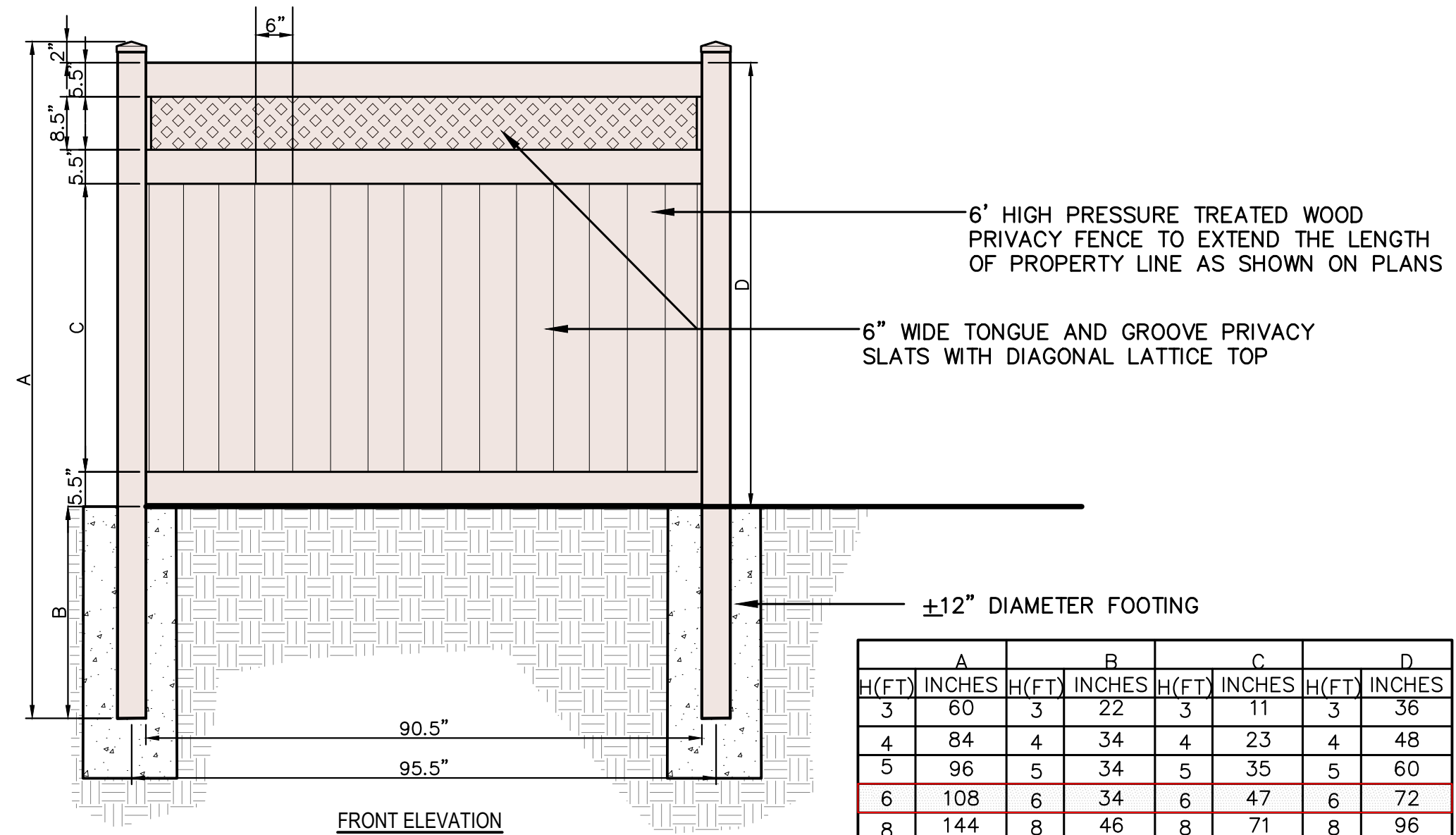
SHRUB PLANTING DETAIL

NOT TO SCALE



GROUND COVER PLANTING DETAIL

NOT TO SCALE



6" WOOD PRIVACY FENCE DETAIL

NOT TO SCALE

NOTES:

- FENCE SHALL BE 6' HIGH AND CONSTRUCTED OF PRESSURE TREATED WOOD
- CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SHOP DRAWINGS FOR FENCE AND FOOTING REVIEW AND APPROVAL

	A	B	C	D	
H(FT)	INCHES	H(FT)	INCHES	H(FT)	INCHES
3	60	3	22	3	36
4	84	4	34	4	48
5	96	5	34	5	60
6	108	6	34	6	72
8	144	8	46	8	96
10	168	10	46	10	120



METAL BENCH DETAIL

NOT TO SCALE

NOTES:

- 6' LONG METAL BENCH SHALL BE MANUFACTURED BY THE BENCH FACTORY, TREETOPPRODUCTS.COM, (866) 275-0823
- STEEL BENCH MODEL 22K2046 WITH HORIZONTAL CEDAR COLOR SLATS.
- BENCH SHALL HAVE PREDRILLED MOUNTING HOLES FOR SURFACE MOUNT.



METAL TRASH RECEPTACLE DETAIL

NOT TO SCALE

NOTES:

- TRASH RECEPTACLES SHALL BE OUTDOOR SLATTED STEEL TRASH CAN WITH FLAT LID, 36 GALLON, BLACK, AS MANUFACTURED BY GLOBAL INDUSTRIAL™ MODEL 237726BK. COLOR TO BE BRONZE OR AS PER OWNER'S SELECTION FROM FULL RANGE OF STANDARD COLORS PROVIDED BY THE MANUFACTURER.

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2	4/30/2021	REVISED PER NJDEP COMMENTS	MS	BF
1	4/28/2021	REVISED PER NJDEP COMMENTS	SP	MS

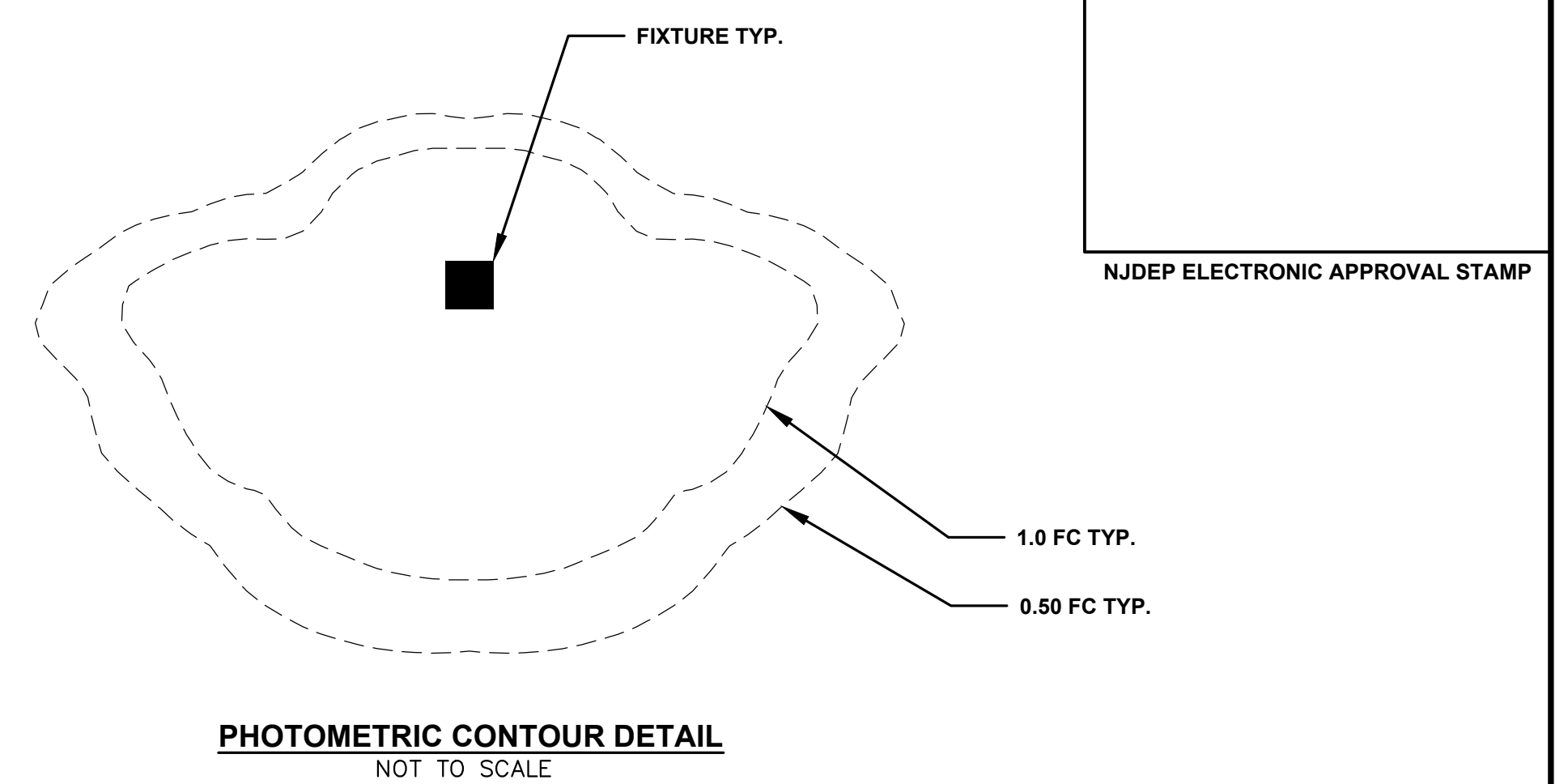
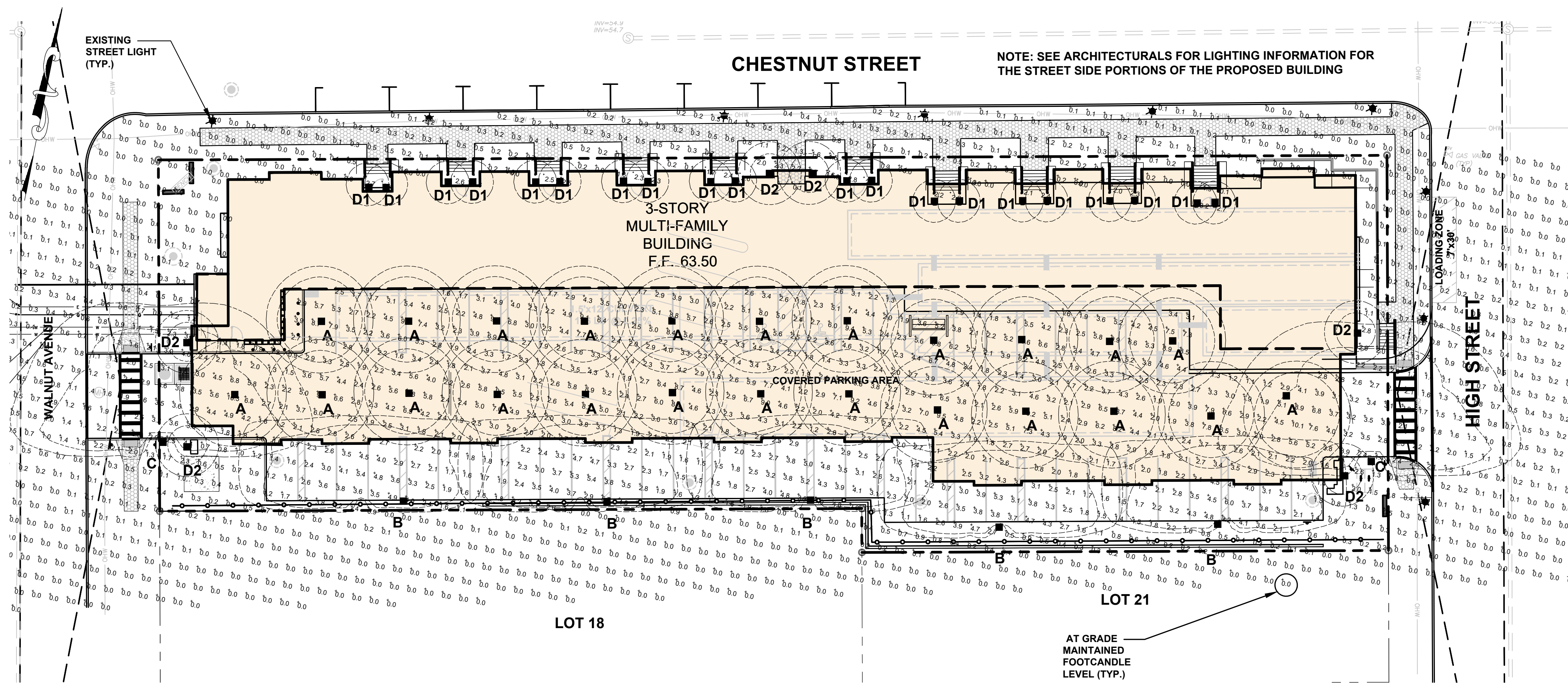
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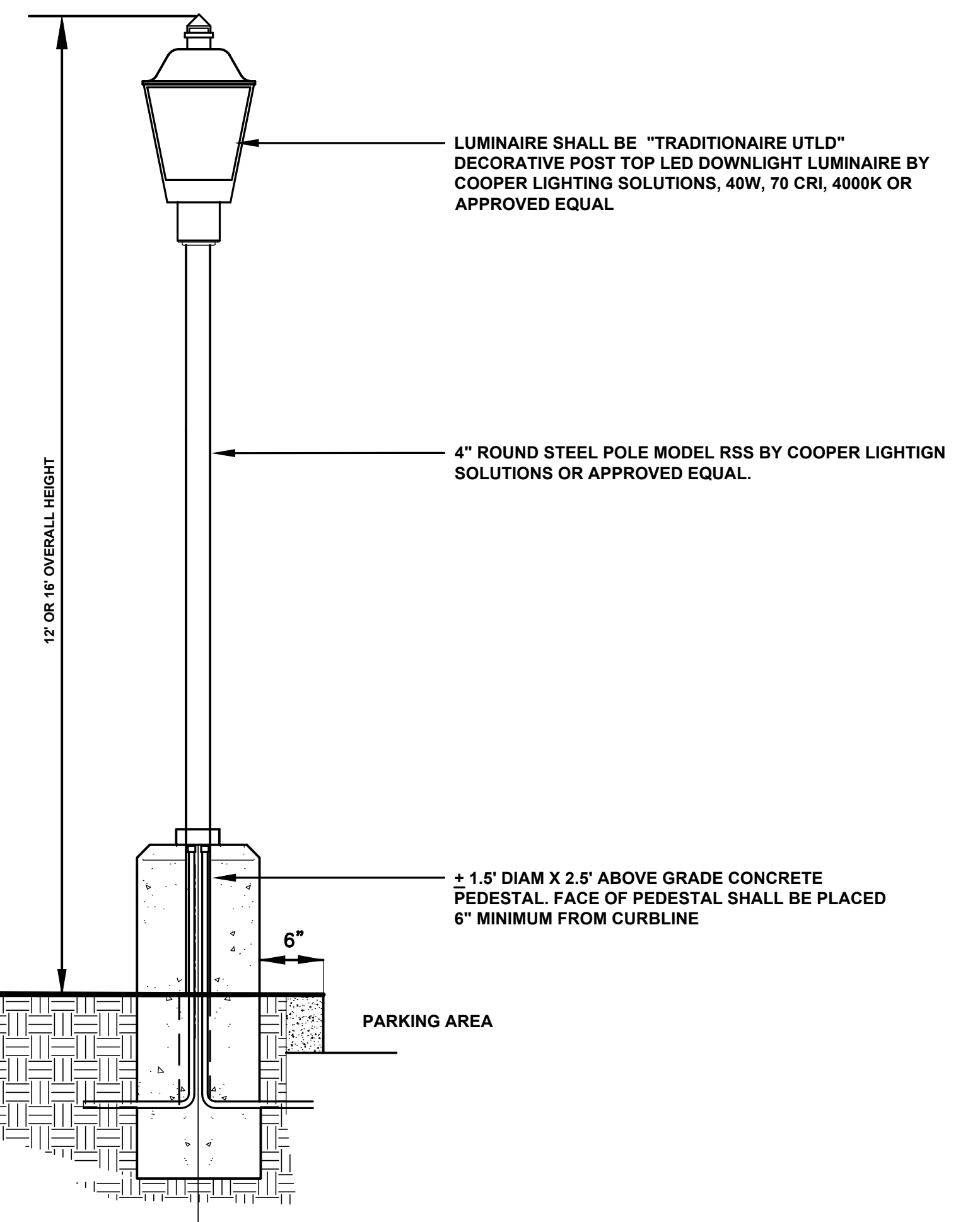
SARAH REBAR BISAHA, LLA, PP
LICENSED LANDSCAPE ARCHITECT NJ LIC NO AS000639

LANDSCAPING NOTES AND DETAILS FOR PRELIMINARY AND FINAL SITE PLAN FOR 201 WALNUT AVENUE BLOCK 484 LOT 19.01
TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
1/29/2021	JB		16377.001
DRAWN BY:	CHECKED BY:	FIELD BOOK:	SHEET:
JB	BF		8 of 12



PHOTOMETRIC CONTOUR DETAIL
NOT TO SCALE



POLE MOUNTED LIGHT FIXTURE DETAIL (FIXTURES B,C)
NOT TO SCALE

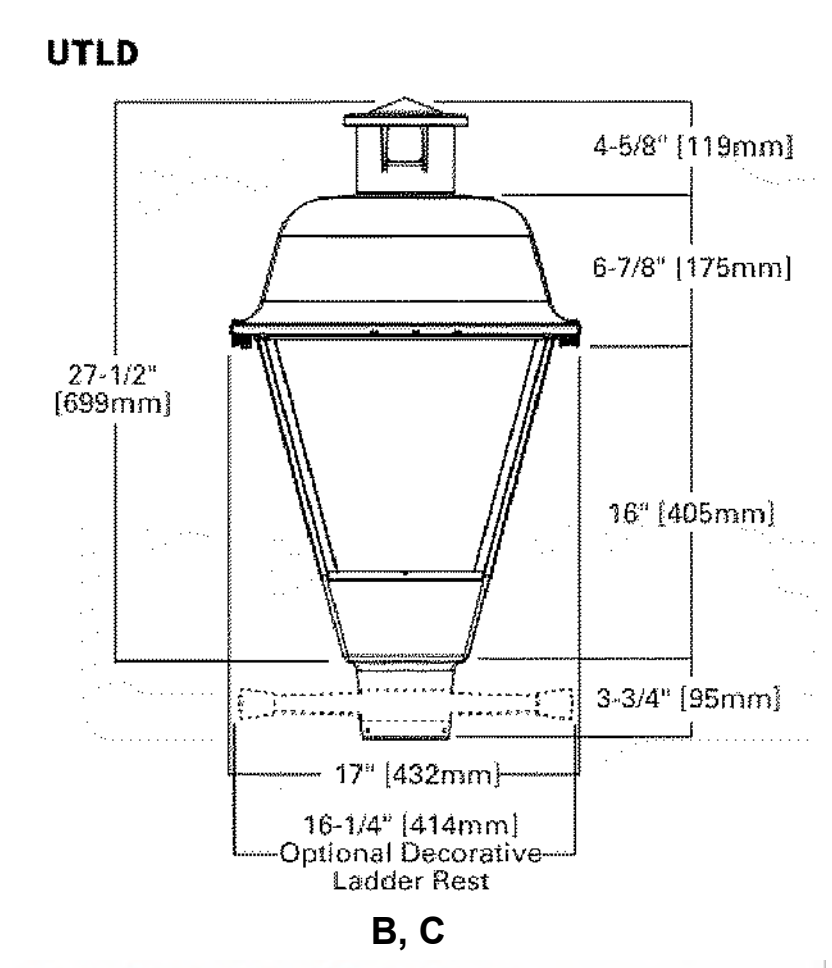
Luminaire Schedule			
Symbol	Label	Description	
■	A	BARRON #SCP-S-20-LG-VS-4K-WH-CEILING FIXTURE AT + 9' MOUNTING HEIGHT	Arr. Watts: 20.49, Arr. Lumens: 2352, LLF: 0.900
■	B	STREETWORKS #UTLD-PA1-40-740-U-SL3-COLOR-HSS-OPTIONS + 10' POLE, 12' OVERALL MOUNTING HEIGHT	Arr. Watts: 40, Arr. Lumens: 4194, LLF: 0.900
■	C	STREETWORKS #UTLD-PA1-60-740-U-T4W-COLOR-HSS-OPTIONS + 14' POLE, 16' MOUNTING HEIGHT OVERALL	Arr. Watts: 64, Arr. Lumens: 5671, LLF: 0.900
■	D1	GENERATION BRANDS #OL2201BB + 9w A19 LED LAMP	Arr. Watts: 9.13, Arr. Lumens: 912, LLF: 0.900
■	D2	GENERATION BRANDS #OL2202BB + 15w A19 LED LAMP	Arr. Watts: 15, Arr. Lumens: 1784, LLF: 0.900

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Area	Illuminance	Fc	1.3	10.3	0.0	N.A.	N.A.
Chestnut Sidewalk	Illuminance	Fc	0.2	2.7	0.0	N.A.	N.A.
Front Porches	Illuminance	Fc	1.8	3.4	0.0	N.A.	N.A.
Drive Lane	Illuminance	Fc	3.4	10.3	1.1	3.1	9.4
Parking Area	Illuminance	Fc	3.4	10.3	0.7	4.9	14.7

- NOTES:
- FIXTURES ARE CALCULATED WITH 0.90 LIGHT LOSS FACTOR. LIGHT LEVELS WILL BE 10% HIGHER THAN SHOWN WHEN FIRST INSTALLED.
 - FIXTURES ARE DIMMABLE WITH 0-10V CONTROLS



WALL MOUNTED LIGHT FIXTURE DETAIL (FIXTURES D1, D2)
NOT TO SCALE



LIGHTING NOTES

- DO NOT INSTALL PROPOSED LIGHTS ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST LIGHTS AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.
- ALL POLE MOUNTED FIXTURES SHALL HAVE 2'-6" CONCRETE PEDESTALS.
- SEE ARCHITECTURAL PLANS FOR PROPOSED STREET SIDE LIGHTING.
- LIGHTING LEVELS SHOWN ON THIS PLAN DO INCLUDE ANY CONTRIBUTIONS FROM EXISTING STREET LIGHT FIXTURES.
- LIGHTS SHALL BE EQUIPPED WITH OCCUPANCY/DAYLIGHT SENSORS WITH A TIMER SYSTEM OVERRIDE OPTION.



CEILING MOUNTED LIGHT FIXTURE DETAIL (FIXTURE A)
NOT TO SCALE

CEILING MOUNTED LIGHTS SHALL BE MANUFACTURED BY BARRON LIGHTING GROUP (WWW.BARRONLTG.COM) OR APPROVED EQUAL, MODEL SPC-S, TRACE LIGHT
LED LIGHT SOURCE

No.	Date	Revision	Checked By
8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING	BF
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BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. NO. 24GE03454800

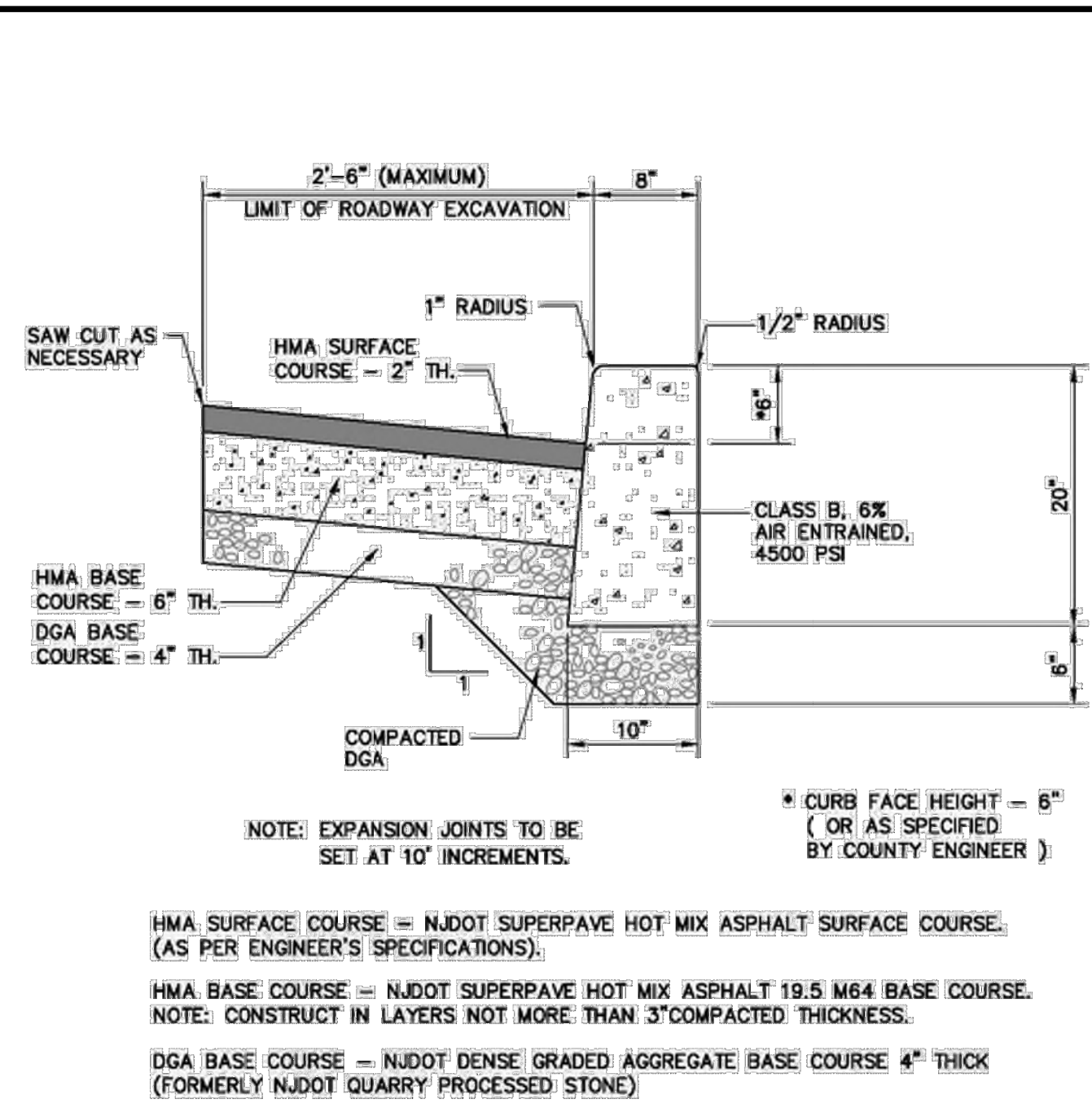
LIGHTING PLAN FOR PRELIMINARY AND FINAL SITE PLAN FOR 201 WALNUT AVENUE BLOCK 484 LOT 19.01
TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY

DATE: 1/29/2021
DESIGNED BY: SRB
CHECKED BY: SRB

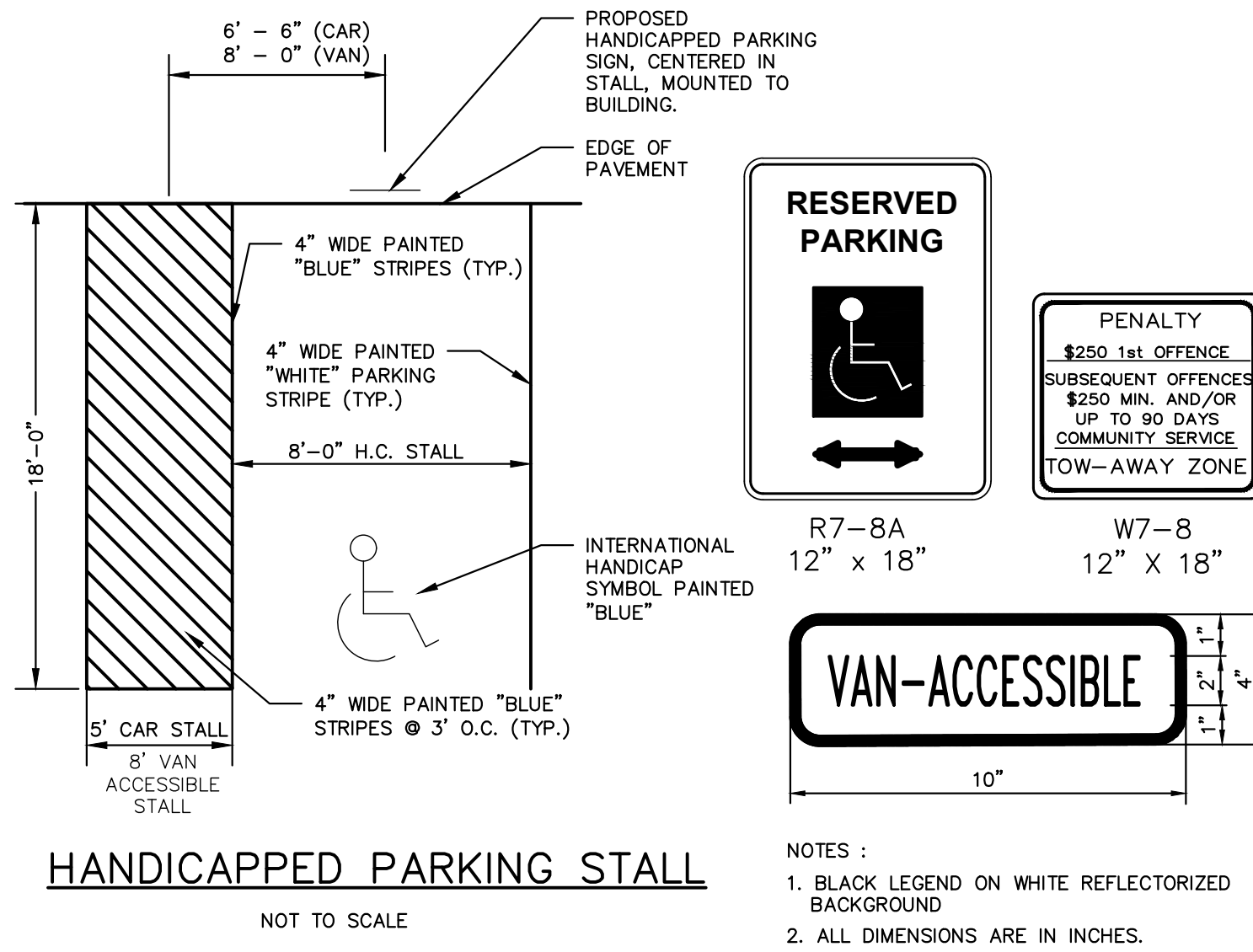
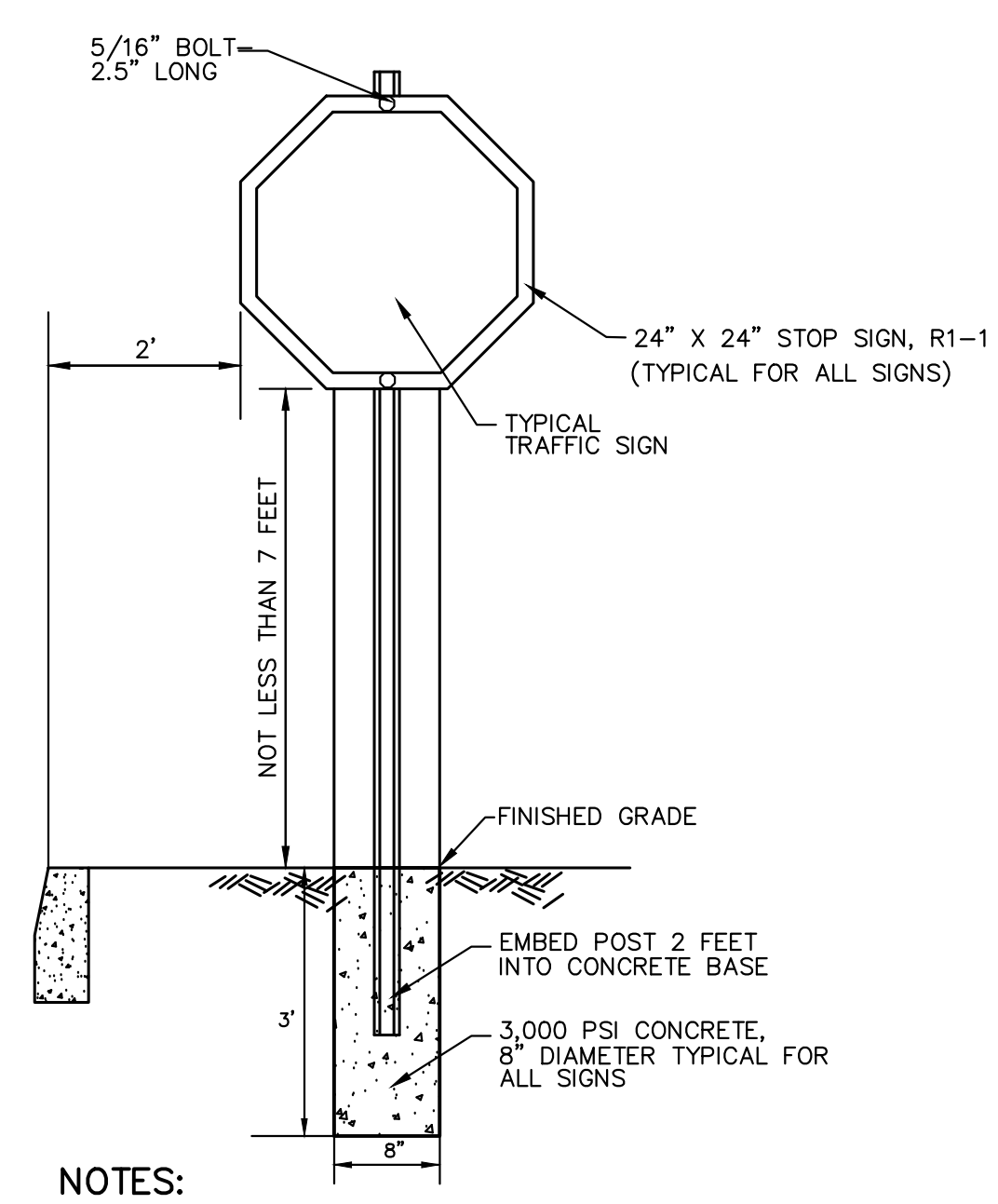
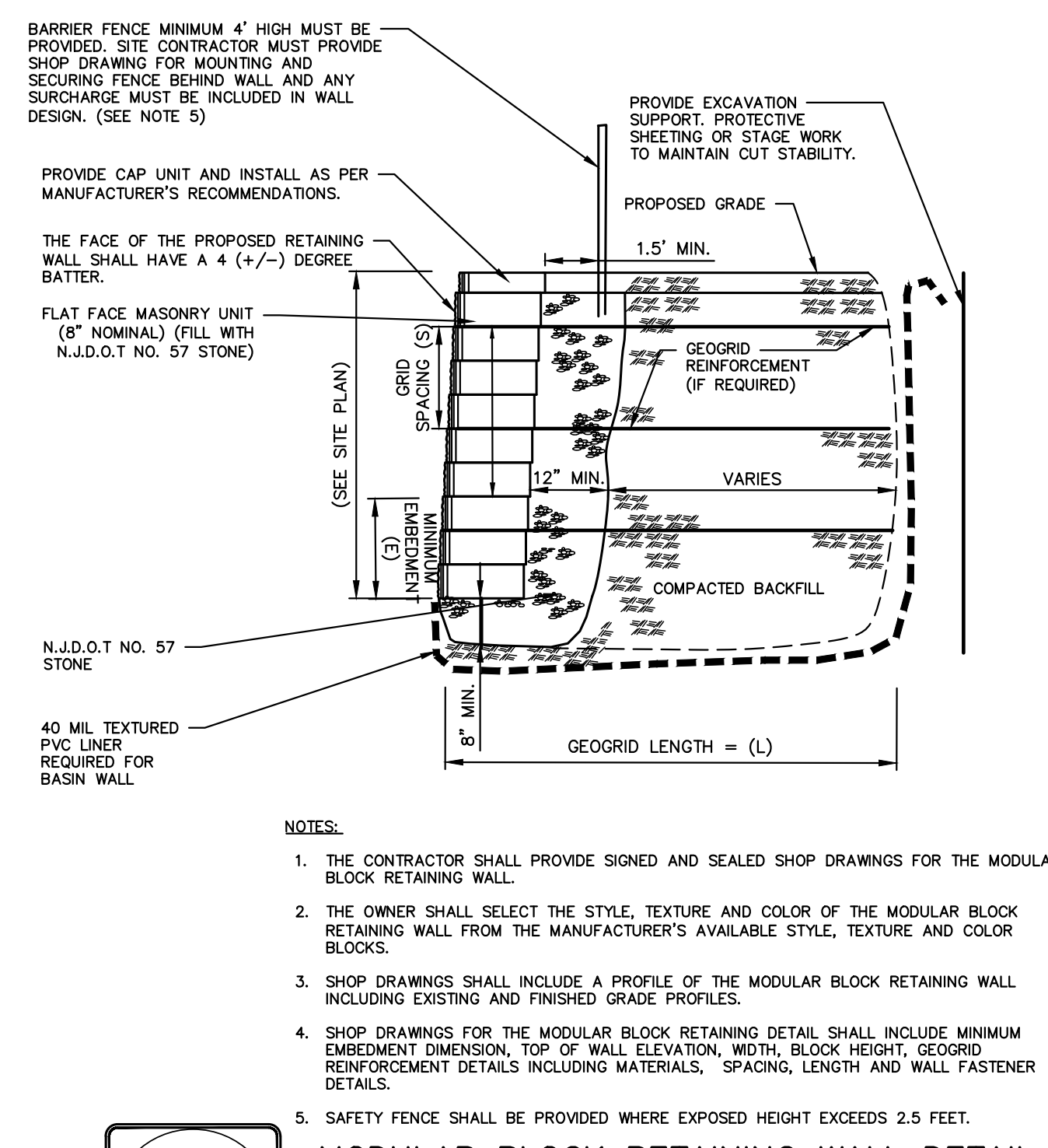
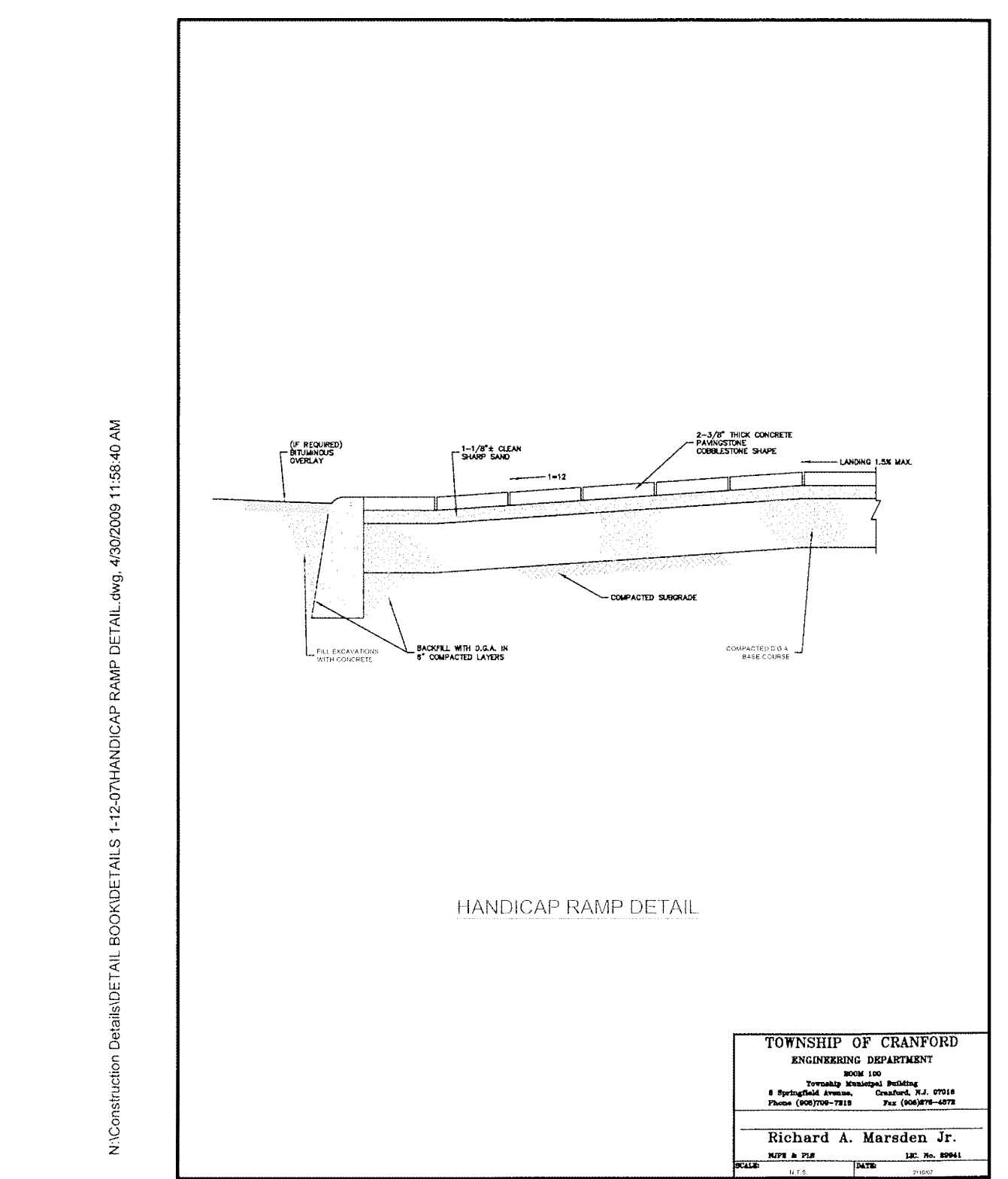
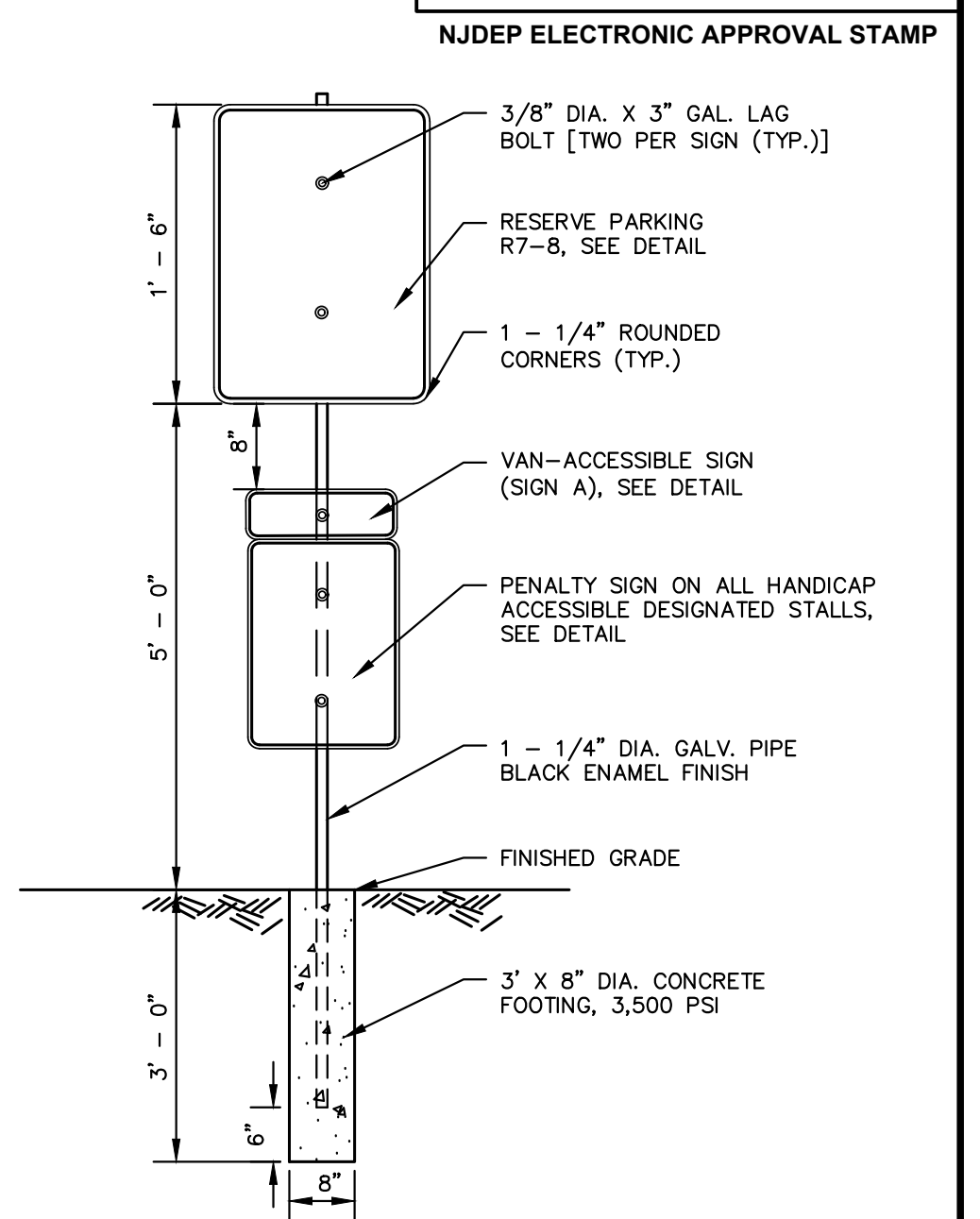
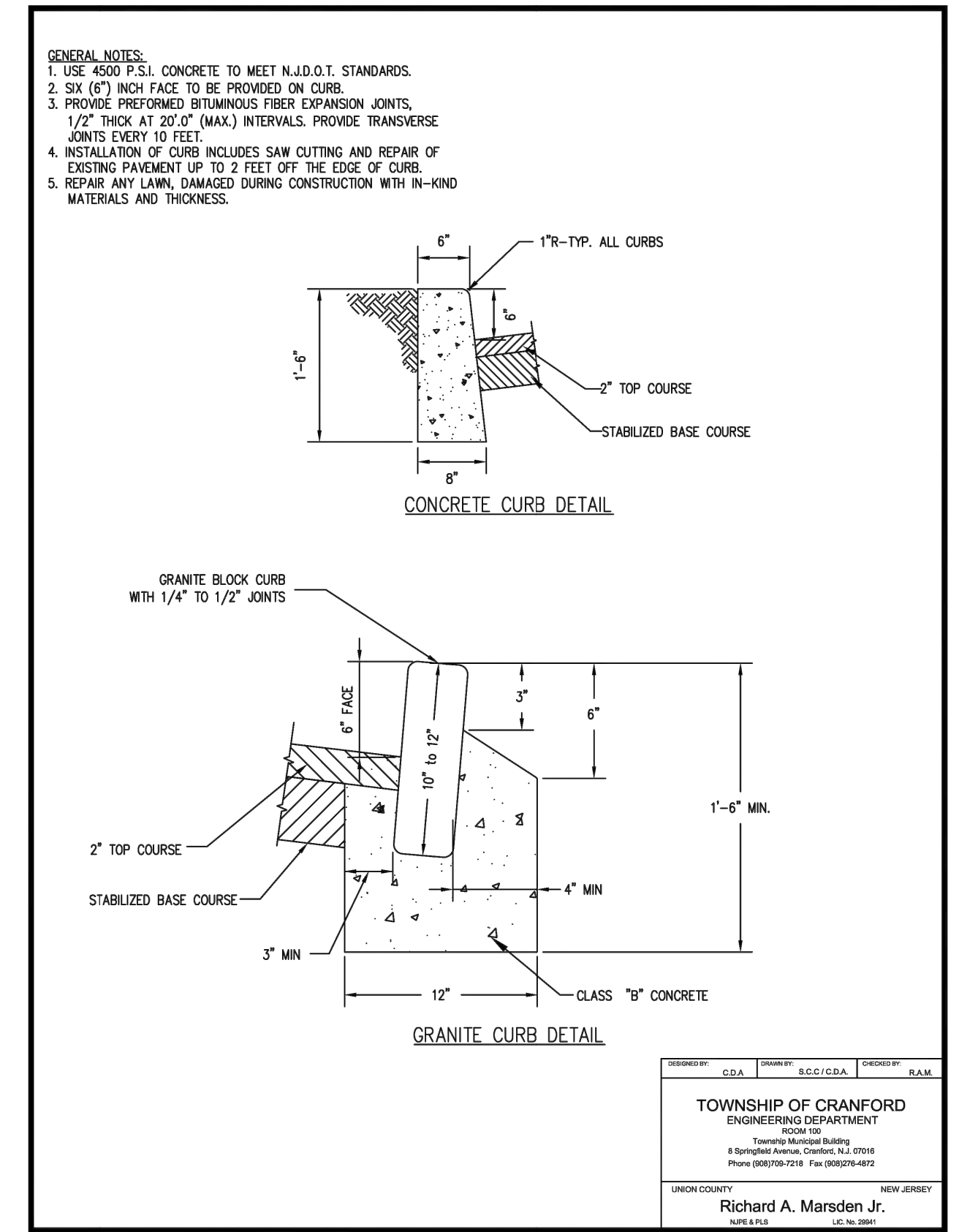
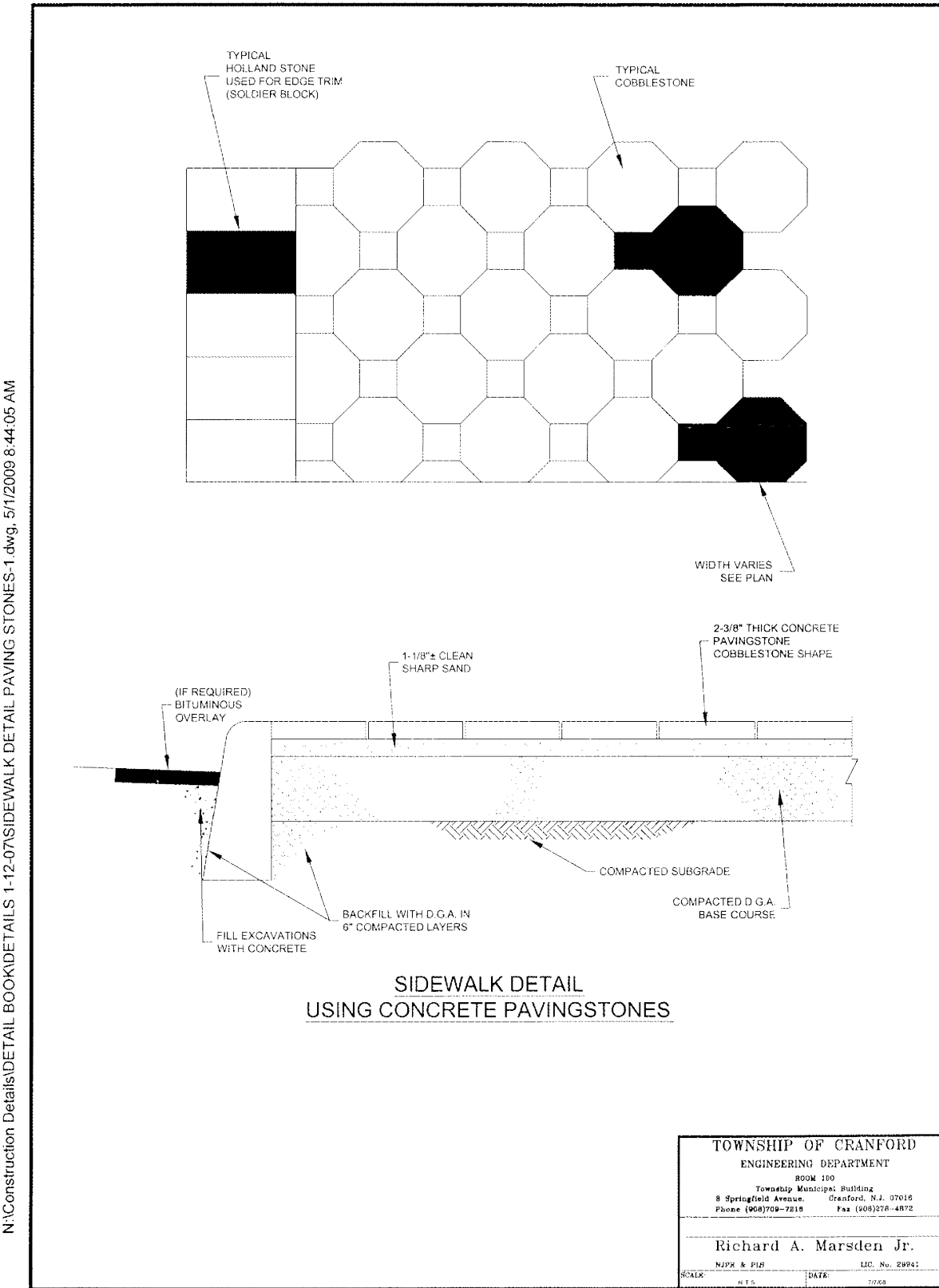
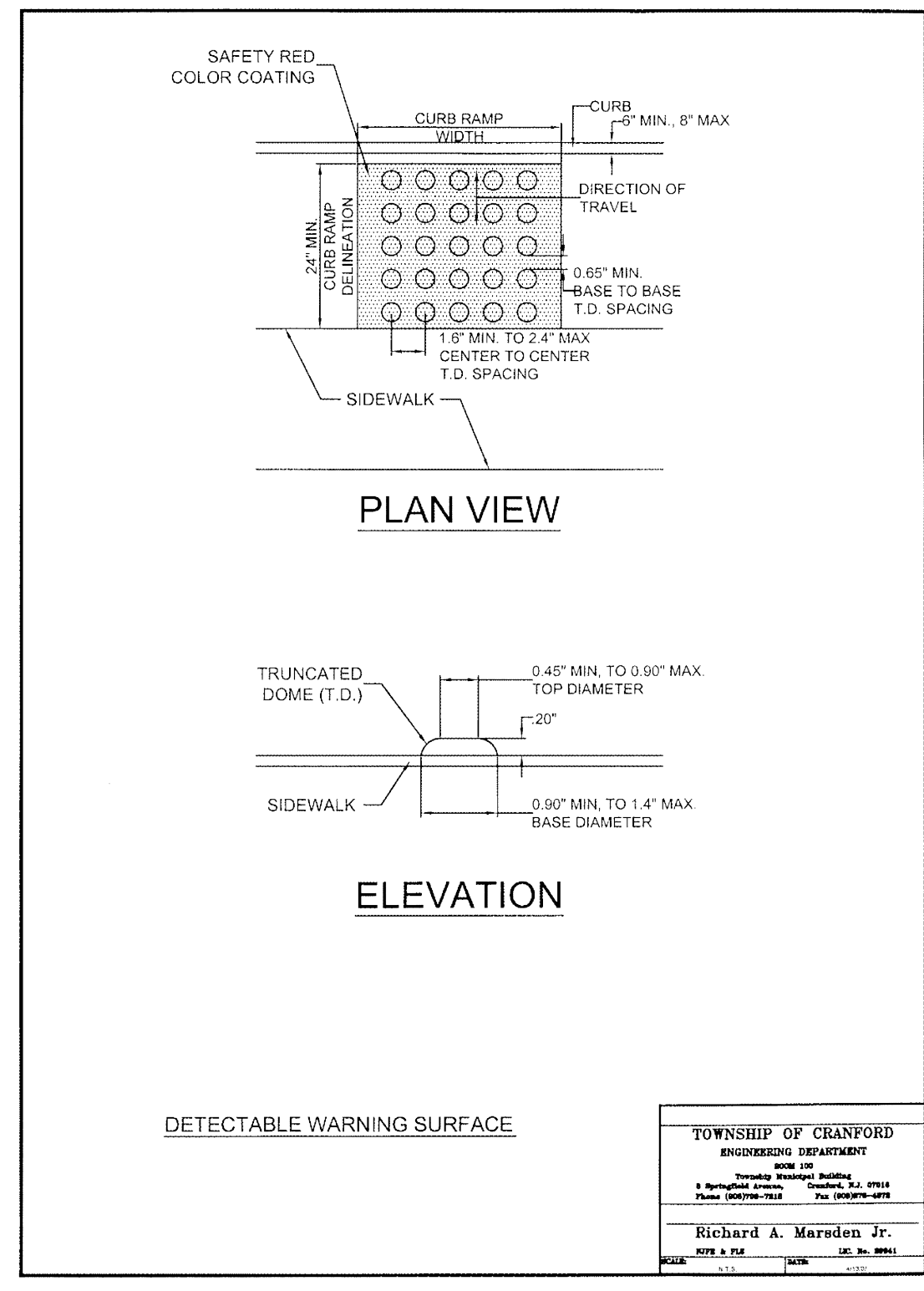
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FIELD BOOK

PROJECT NUMBER: 16377.001
SHEET: 9 of 12

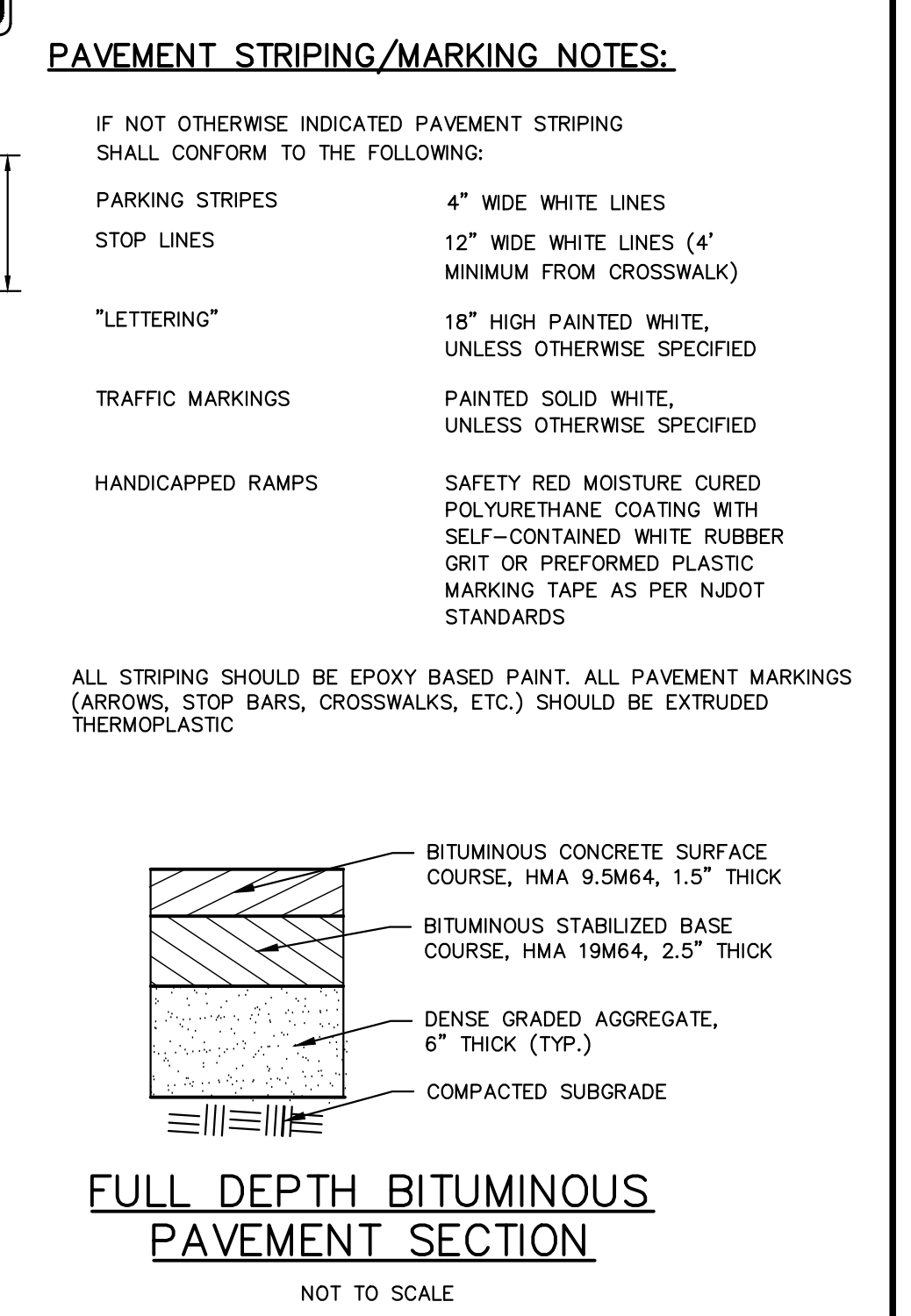
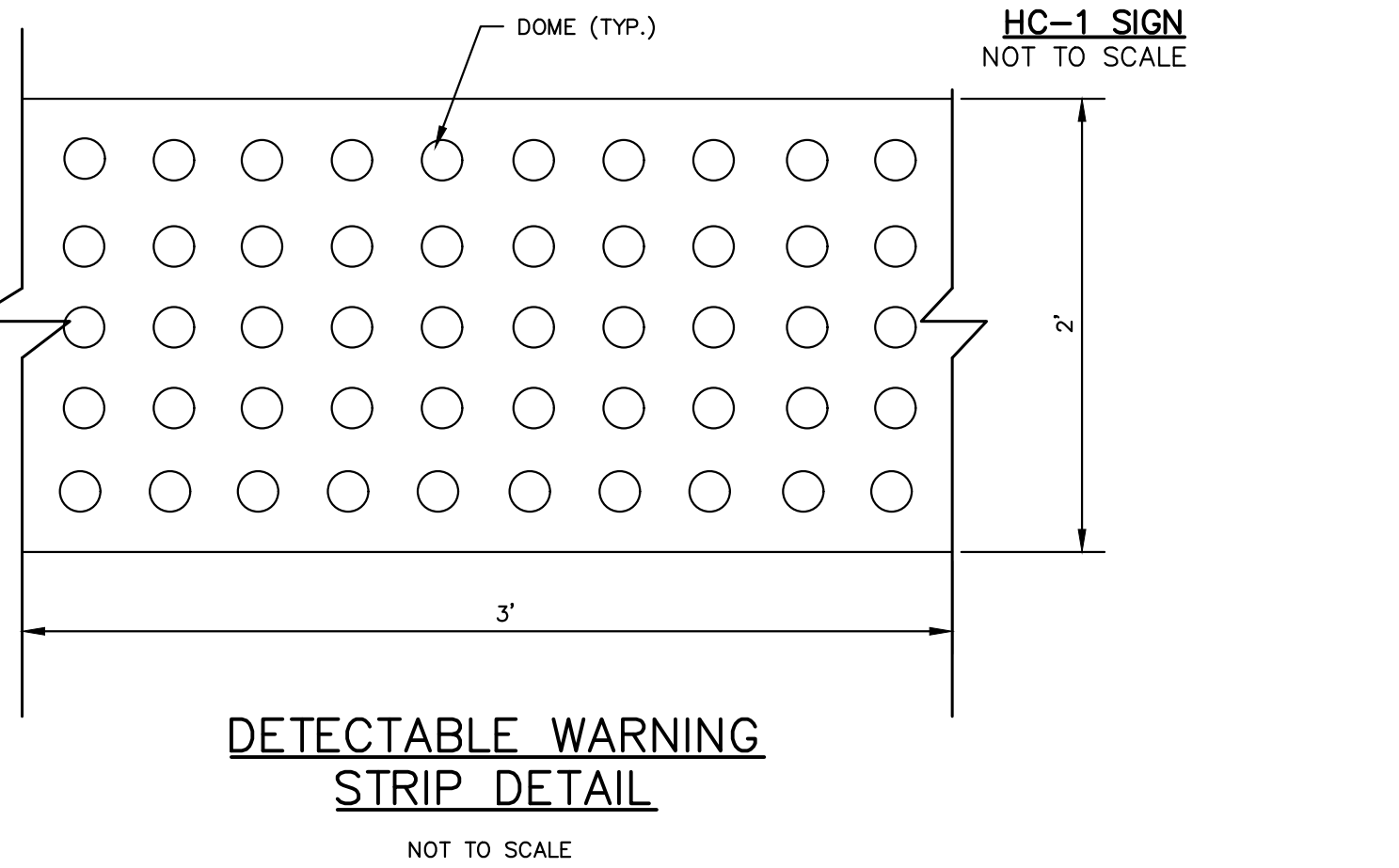
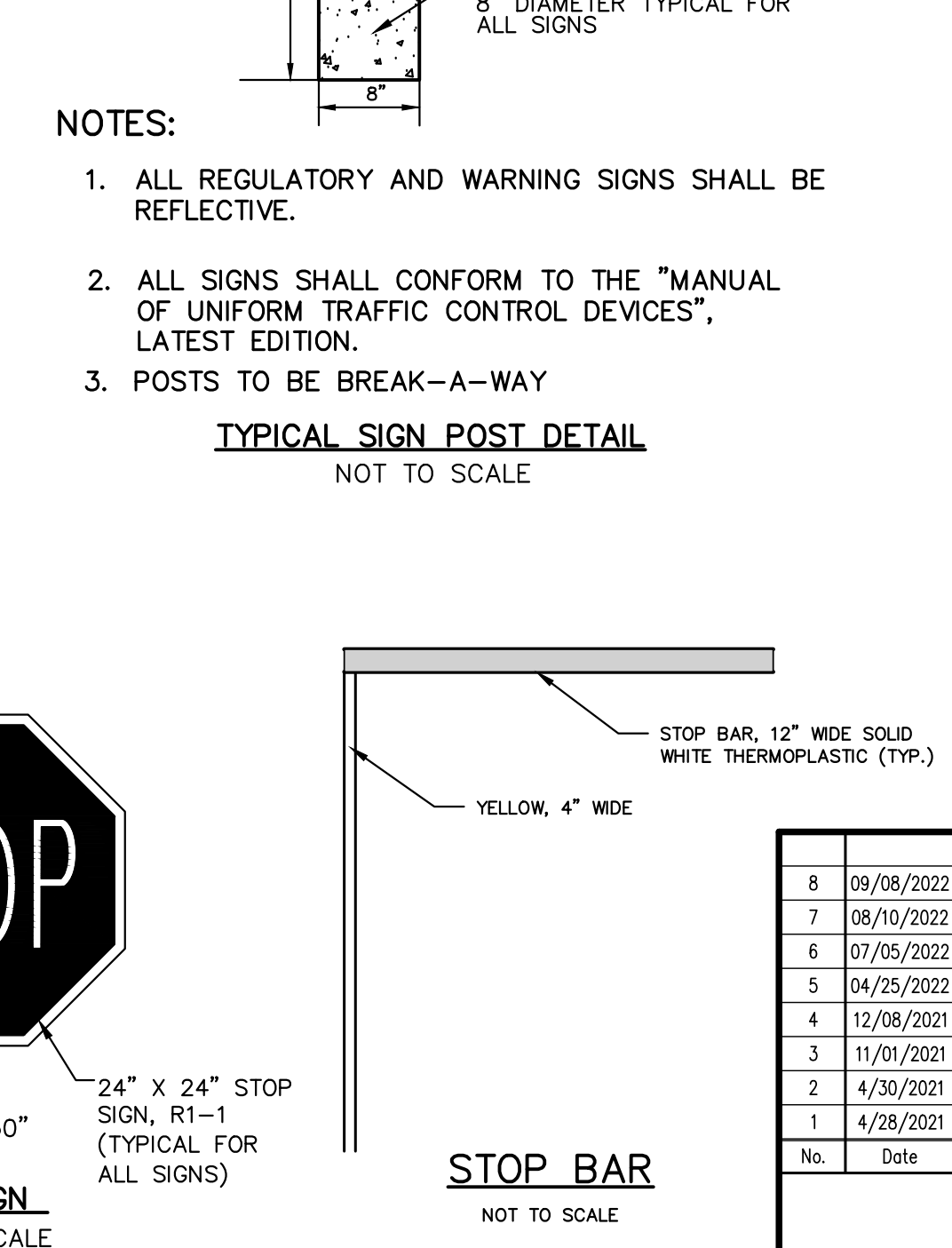
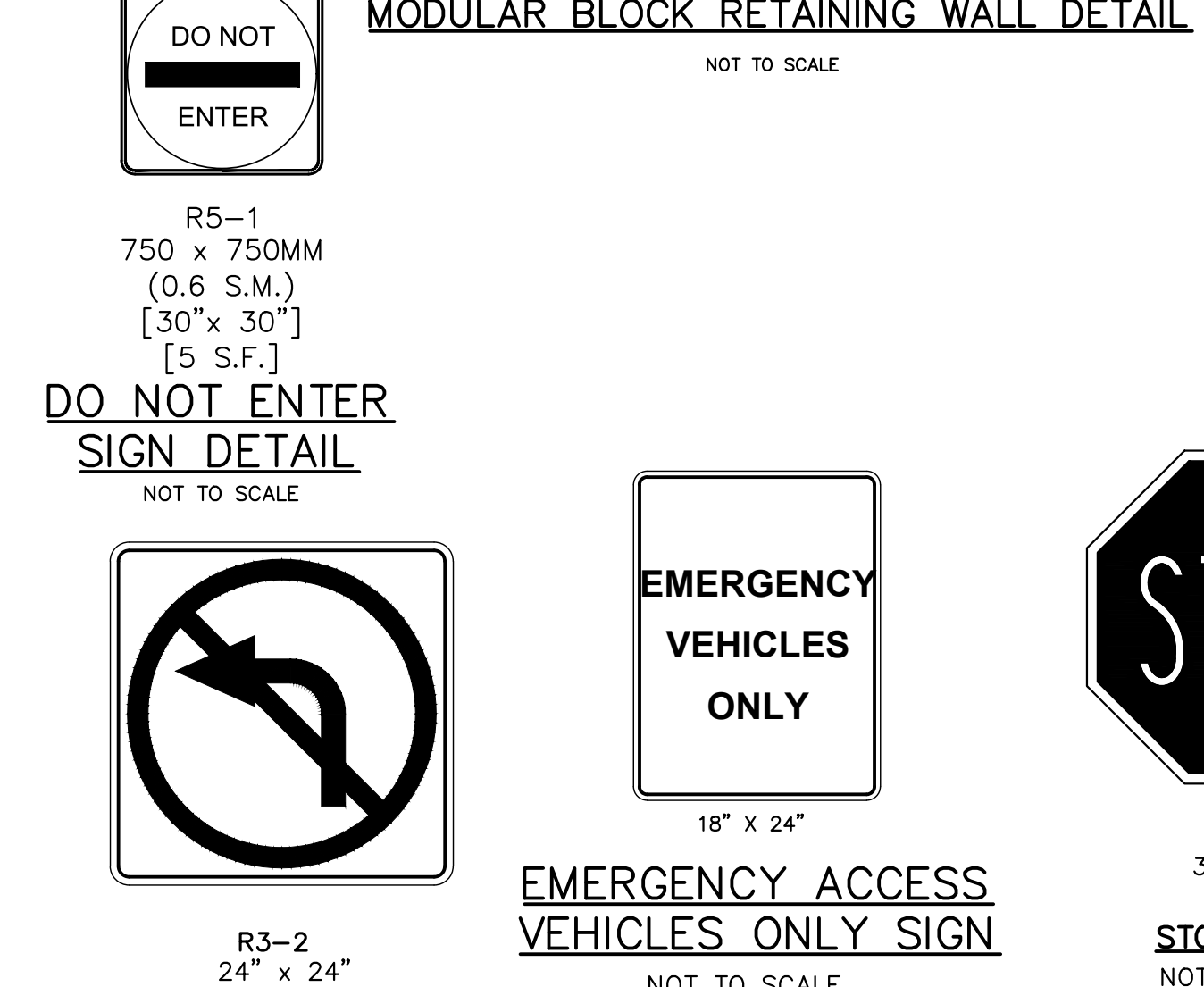
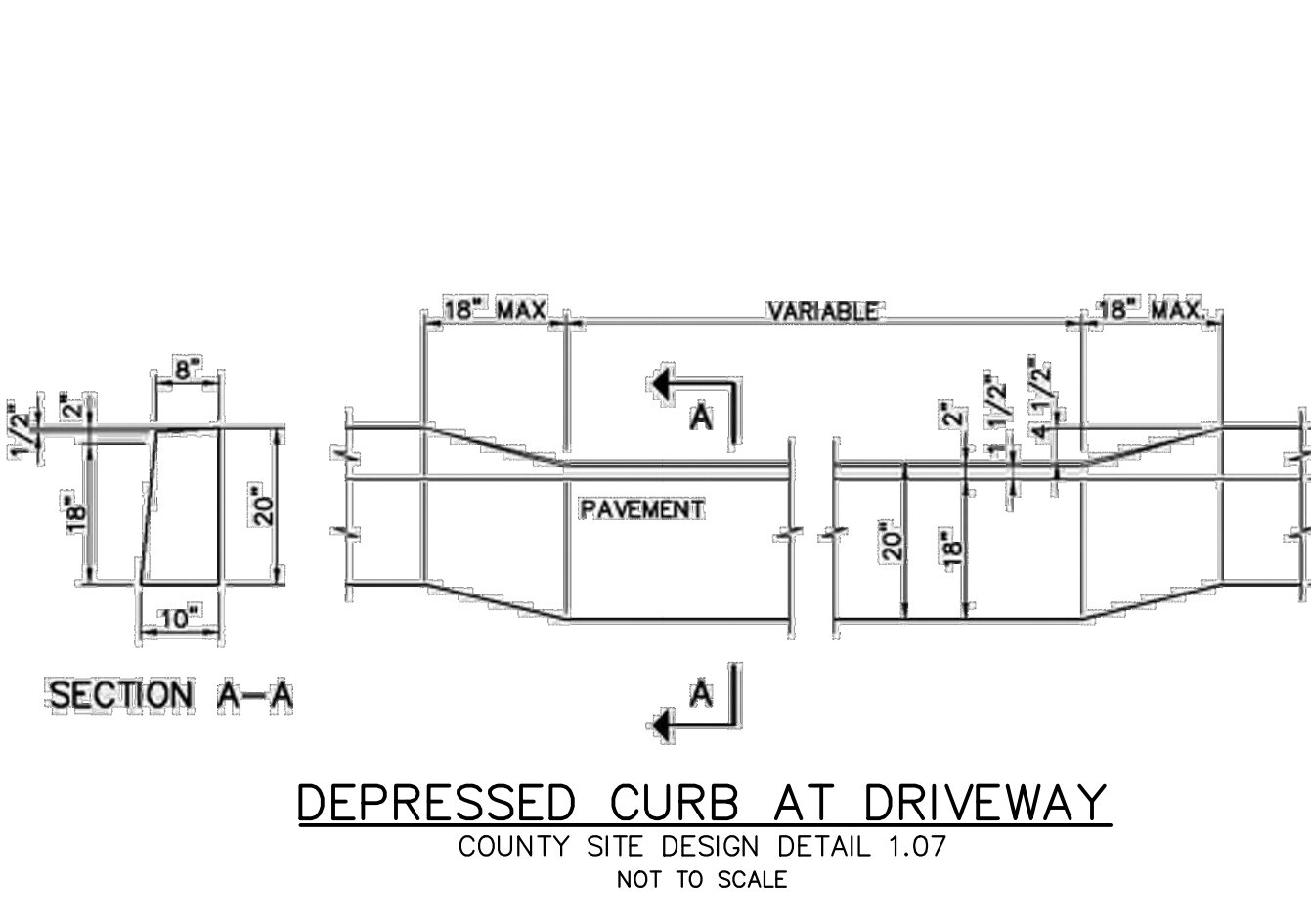
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TYPICAL ROADWAY EXCAVATION & RESTORATION AT CURBS
 COUNTY SITE DESIGN DETAIL 1.02
 NOT TO SCALE



ADA COMPLIANT PARKING SIGN AND SIGN POST DETAIL
 NOT TO SCALE



C:\BKV\16300\16377 - 201 Walnut Ave\CAD\DWG\16377.001 - CD.dwg CD 1
 N:\Construction\Detail\BOOKDETAILS\112-07\HANDICAP RAMP DETAIL.dwg 4/20/2009 11:56:40 AM
 N:\Construction\Detail\BOOKDETAILS\112-07\SIDEWALK DETAIL PAVING STONES.dwg 5/12/2009 8:44:05 AM
 N:\Construction\Detail\BOOKDETAILS\112-07\DETECTABLE WARNING SURFACE.dwg 4/20/2009 11:57:27 AM

- NOTES:**
1. THE CONTRACTOR SHALL PROVIDE SIGNED AND SEALED SHOP DRAWINGS FOR THE MODULAR BLOCK RETAINING WALL.
 2. THE OWNER SHALL SELECT THE STYLE, TEXTURE AND COLOR OF THE MODULAR BLOCK RETAINING WALL FROM THE MANUFACTURER'S AVAILABLE STYLE, TEXTURE AND COLOR BLOCKS.
 3. SHOP DRAWINGS SHALL INCLUDE A PROFILE OF THE MODULAR BLOCK RETAINING WALL INCLUDING EXISTING AND FINISHED GRADE PROFILES.
 4. SHOP DRAWINGS FOR THE MODULAR BLOCK RETAINING DETAIL SHALL INCLUDE MINIMUM EMBEDMENT DIMENSION, TOP OF WALL ELEVATION, WIDTH, BLOCK HEIGHT, GEGRID REINFORCEMENT DETAILS INCLUDING MATERIALS, SPACING, LENGTH AND WALL FASTENER DETAILS.
 5. SAFETY FENCE SHALL BE PROVIDED WHERE EXPOSED HEIGHT EXCEEDS 2.5 FEET.

- NOTES:**
1. ALL REGULATORY AND WARNING SIGNS SHALL BE REFLECTIVE.
 2. ALL SIGNS SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
 3. POSTS TO BE BREAK-A-WAY

- NOTES:**
1. BLACK LEGEND ON WHITE REFLECTORIZED BACKGROUND
 2. ALL DIMENSIONS ARE IN INCHES.

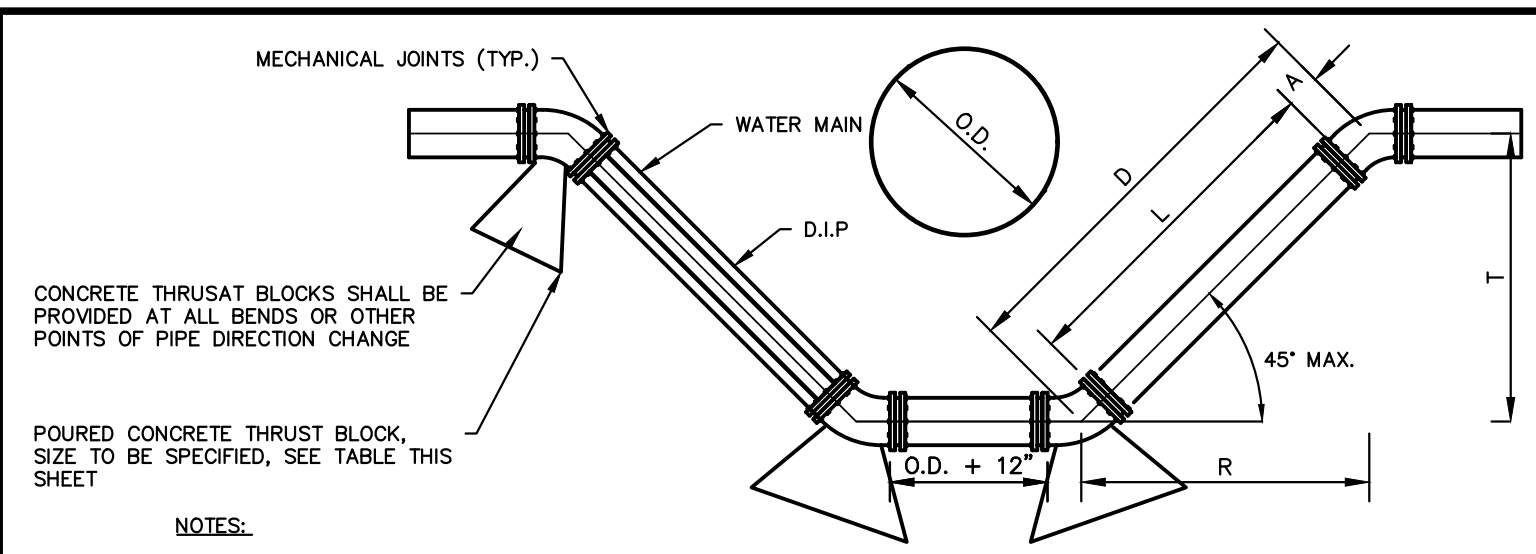
No.	Date	Revision	Revised By	Checked By
8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING		BF
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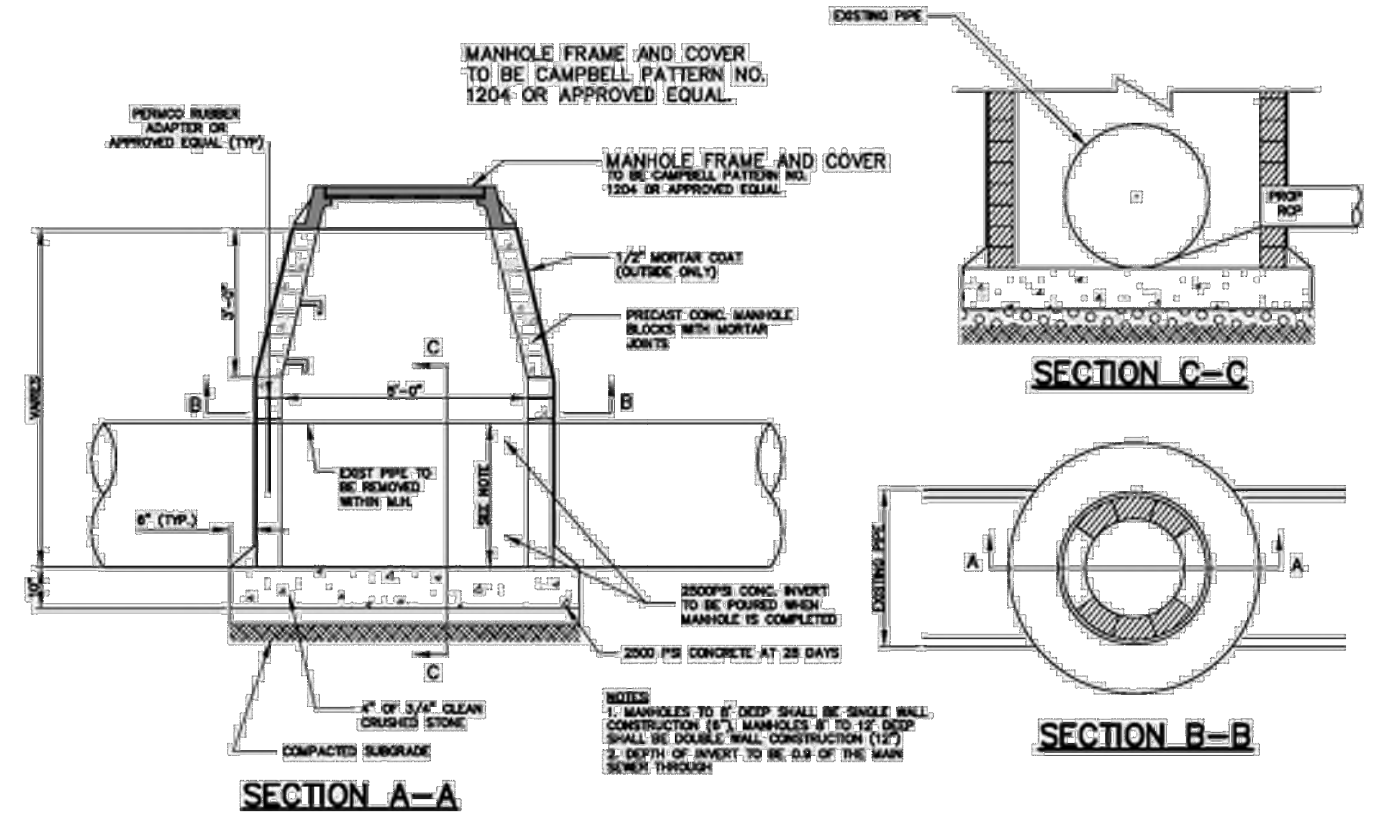
BAHRAM FARZANEH, PE, PP
 PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
1/29/2021	KDW	AS SHOWN	16377.001
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
KDW	BF		10 of 12



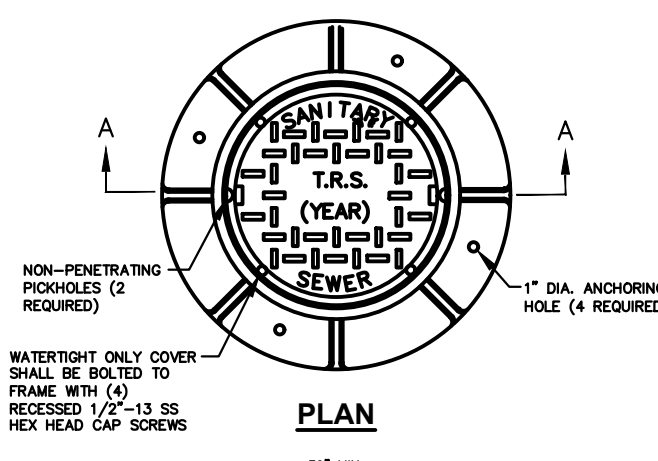
ANGLE	"D" EQUALS	"R" EQUALS	"L" EQUALS
45°	Tx1.414	Tx1.000	D-2A
22 1/2°	Tx2.414	Tx2.414	D-2A
11 1/4°	Tx5.126	Tx5.027	D-2A

LOOPING WATER MAIN DETAIL



DOG HOUSE MANHOLE DETAIL

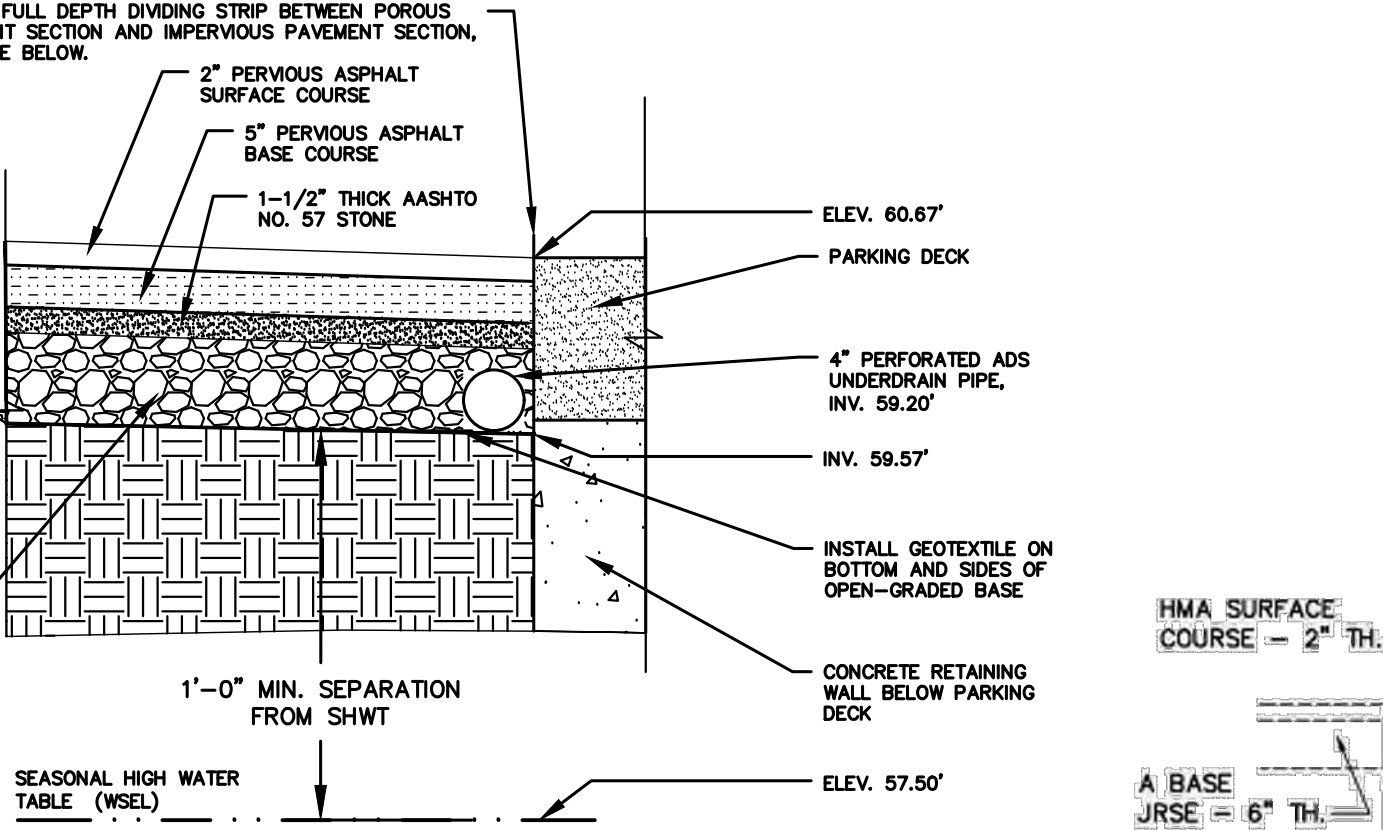
COUNTY SITE DESIGN DETAIL 1.31
NOT TO SCALE



SANITARY SEWER STANDARD PIPE BEDDING FOR PVC PIPE DETAIL

NOT TO SCALE

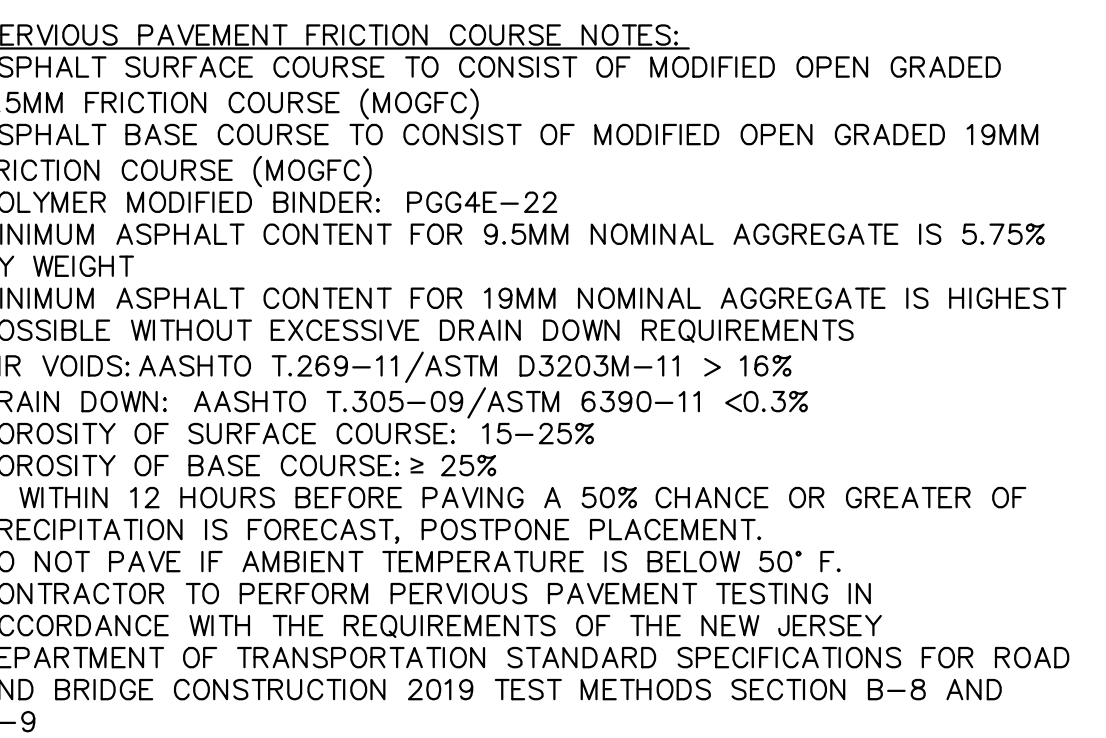
PRECAST STORM MANHOLE



PRECAST STORM MANHOLE

NOT TO SCALE

POROUS PAVEMENT DETAIL

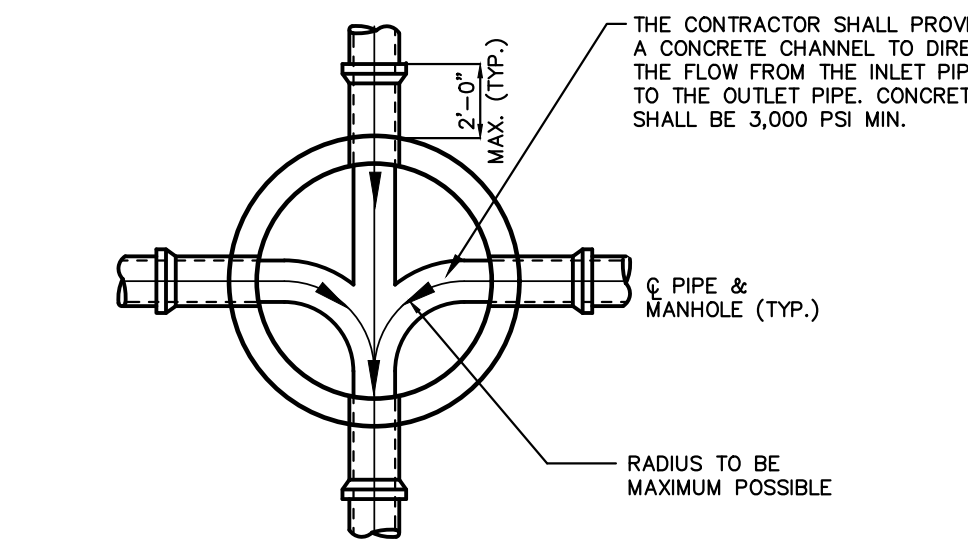


POROUS PAVEMENT DETAIL

NOT TO SCALE

MANHOLE NOTES

- GENERAL NOTES:
 - SHORTS SHALL BE USED AT MANHOLES
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS, WHERE POSSIBLE
 - ALL CONSTRUCTION SHALL MEET STANDARD SPECIFICATION, THE LATEST REVISION
- PRECAST CONCRETE MANHOLE (ASTM-476)
 - WHERE 5' AND 6' I.D. BASES ARE USED A TAPER SECTION CONNECTING BASE SECTION AND RISER SHALL BE REQUIRED AND SHALL HAVE A THICKNESS AS SHOWN. THE BASE SECTION AND RISER ALLOW FOR AT LEAST 6 FOOT MINIMUM VERTICAL CLEARANCE IN THE SCHEDULE.
 - BASES TO BE AS SHOWN IN THE SCHEDULE.
- BRICK OR CONCRETE BLOCK MANHOLE (NOT SHOWN)
 - BRICK OR CONCRETE BLOCK MANHOLES MUST BE APPROVED BY THE AUTHORITY ENGINEER
 - SHOP DRAWINGS MUST BE SUBMITTED FOR ALL DETAILS.
- WORK AT EXISTING MANHOLE
 - THE CONTRACTOR SHALL CUT INTO THE MANHOLE AND COMPLETE THE CONNECTION USING A SUITABLE ADAPTOR AS REQUIRED AND APPROVED BY THE AUTHORITY/ENGINEER.
 - THE CONTRACTOR SHALL NOT INTERFERE WITH ANY EXISTING SEWERAGE SERVICE DURING THE PERIOD OF CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTION TO KEEP DEBRIS OUT OF THE MANHOLE.



TYPICAL CHANNELING OF MANHOLE BOTTOM

NOT TO SCALE

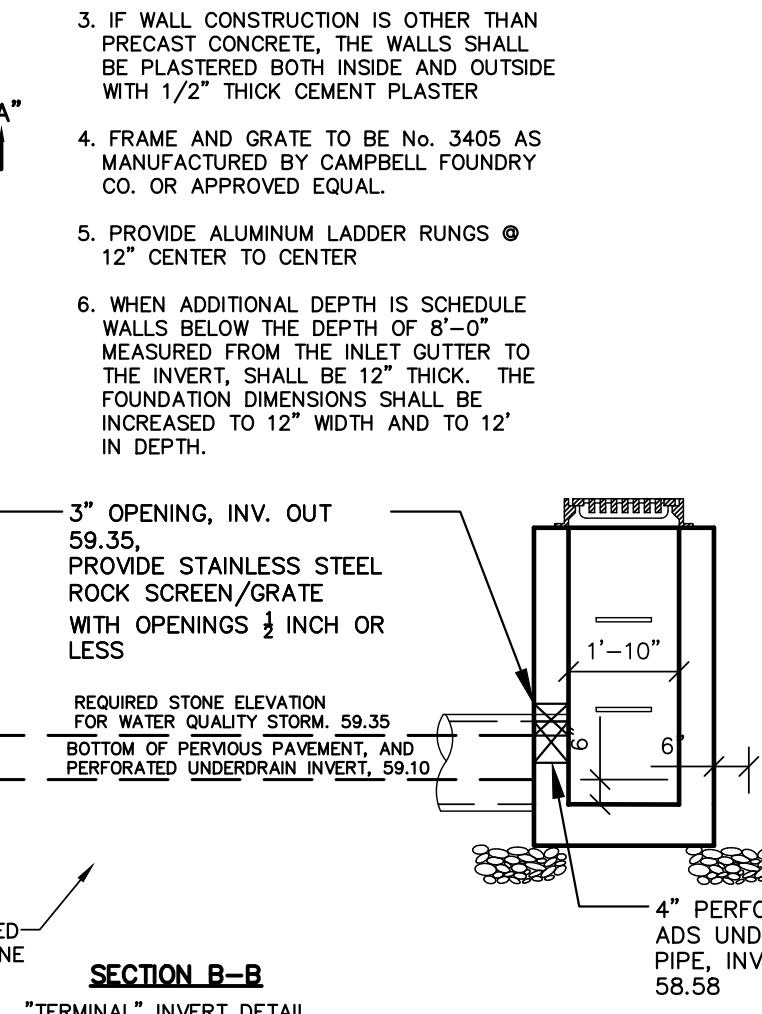
TRENCH EXCAVATION AND BACKFILL NOTES

- THE MAXIMUM DRY DENSITIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM DESIGNATION D1557. THE MINIMUM PERCENTAGE OF COMPACTION TO BE ACHIEVED BY THE CONTRACTOR IN THE VARIOUS ZONES IS AS FOLLOWS:

PIPE EMBEDMENT ZONE:	ALL	LOCATION	INITIAL COMPACTION
SURFACE ZONE:	ALL	ALL	95%
TRENCH BACKFILL ZONE:	ALL	ALL	90%
PIPE EMBEDMENT ZONE:	ALL	ALL	95%

 THE MINIMUM COMPACTION IN EMBANKMENTS SHALL BE 90%.
- THE PIPE EMBEDMENT ZONE WIDTH AND THE MAXIMUM TRENCH WIDTH SHALL NOT EXCEED THE PERMISSIBLE WIDTHS SHOWN. IF THE PERMISSIBLE WIDTH IS EXCEEDED, THE PIPE SHALL BE INSTALLED IN A HIGHER CLASS BEDDING THAN SHOWN ON THE DRAWINGS OR THE SPECIFIED PIPE SHALL BE REPLACED WITH PIPE OF GREATER CRUSHING STRENGTH OR BOTH, TO ACHIEVE SUITABLE CONDITIONS.
- SUITABLE MATERIAL FROM EXCAVATIONS SHALL BE FREE FROM OBJECTIONABLE QUANTITIES OF ORGANIC MATTER, CLAYS, TREES, STUMPS, FROZEN MATERIAL, RUBBLE, REFUSE, CINDERS, ROCK AND OTHER MATERIALS CONSIDERED DELETERIOUS BY THE AUTHORITY AND SHALL NOT HAVE FINES IN EXCESS OF 10 PERCENT PASSING THE NO. 200 SIEVE NOR STONE OR GRAVEL LARGER THAN 2 INCHES.
- BACKFILL TO BE MECHANICALLY COMPACTED IN TWELVE INCH LIFTS TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR MUST COMPLY WITH ALL STATE AND FEDERAL CONFINED SPACE RULES, AND ALL APPLICABLE O.S.H.A. REQUIREMENTS.

STORM INLET 1. TYPE "A"



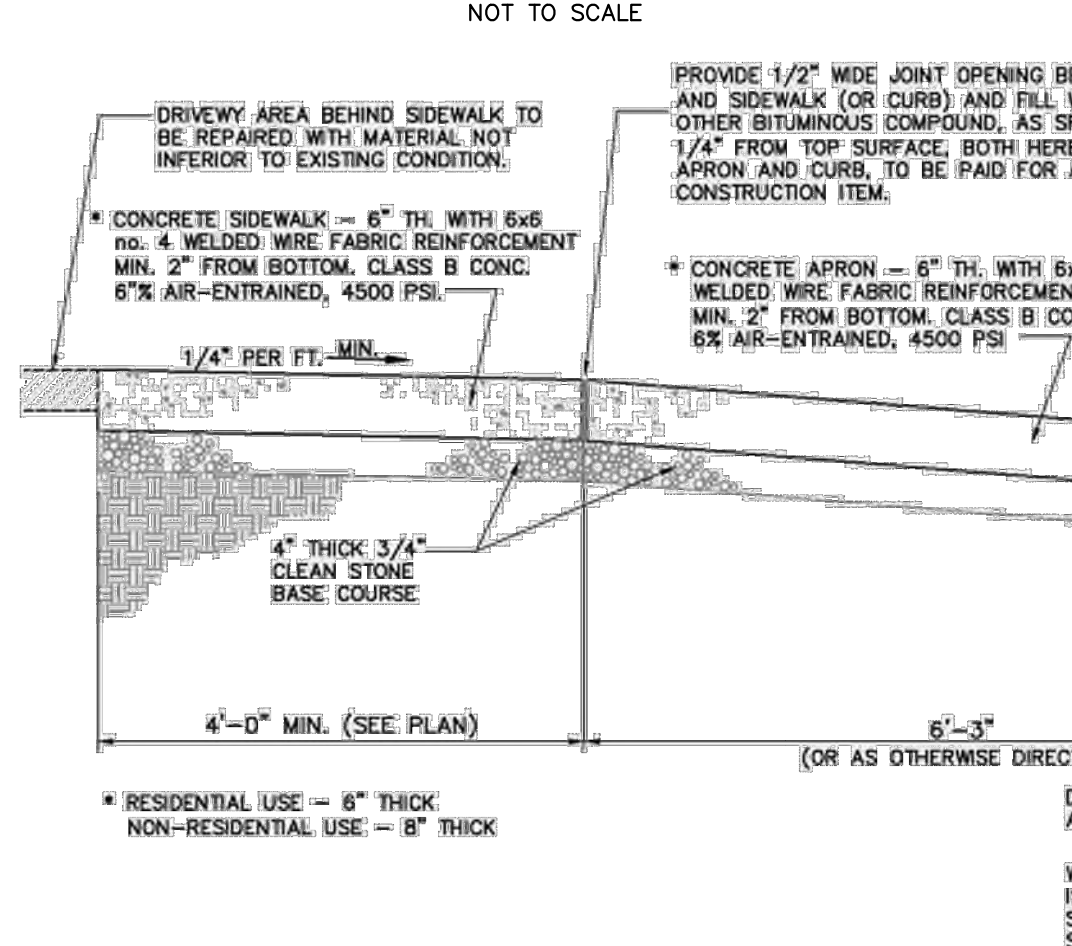
STORM INLET 1. TYPE "A"

NOT TO SCALE

CONCRETE DRIVEWAY, REINFORCED

DRIVEWAYS
COUNTY SITE DESIGN DETAIL 1.08
NOT TO SCALE

PIPE FOR ROOF LEADER TIE-IN

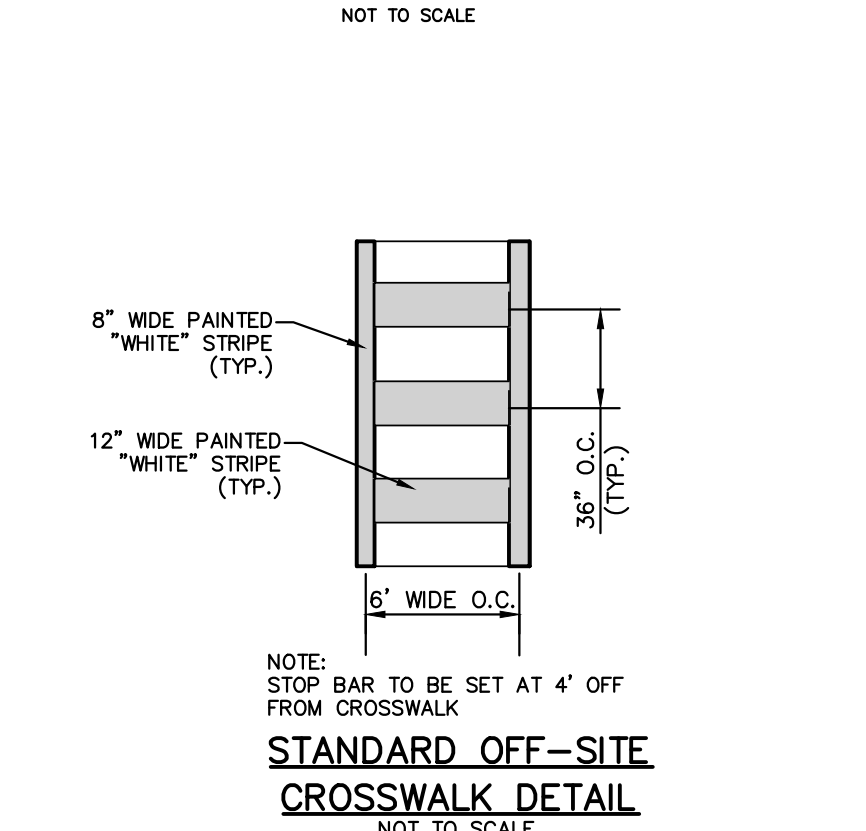


CONCRETE DRIVEWAY APRON TYPICAL SECTION

COUNTY SITE DESIGN DETAIL 1.09
NOT TO SCALE

- NOTES:
 - STANDARD MANHOLE FRAME AND COVER SHALL BE PATTERN NO. 1202B W/ FLOW-SEAL COVER AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. WATER TIGHT MANHOLE FRAME & COVER SHALL BE PATTERN 1202B - MODIFIED AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.
 - MANHOLE FRAMES AND COVERS TO BE HEAVY DUTY, CONFORMING TO A.S.T.M. SPECIFICATION A-45 CLASS 30-8 WITHOUT SHOP COAT OF ASPHALT PITCH, AND SHALL BE DESIGNED FOR AASHTO HS20-44 HIGHWAY LOADING.
 - IN EASEMENTS AND REMOTE AREAS, WATER TIGHT COVERS AND FRAMES MUST BE PROVIDED.

SANITARY SEWER STANDARD OR WATER TIGHT SANITARY MANHOLE FRAME & COVER DETAIL

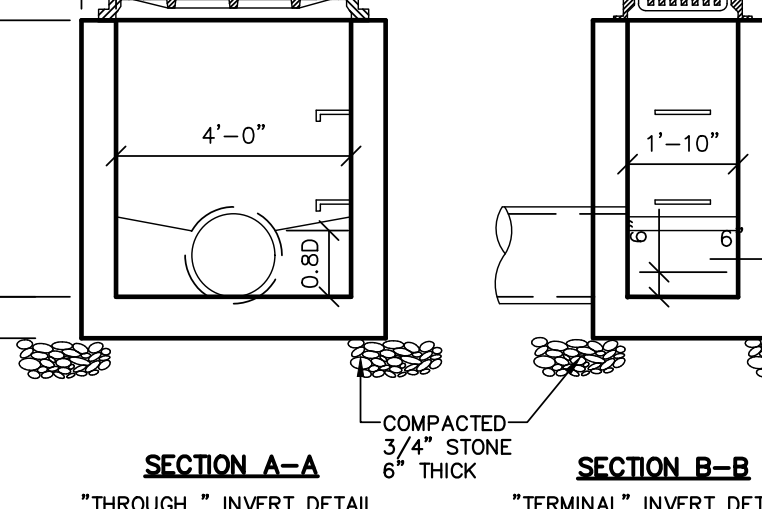


STANDARD OFF-SITE CROSSWALK DETAIL

NOT TO SCALE

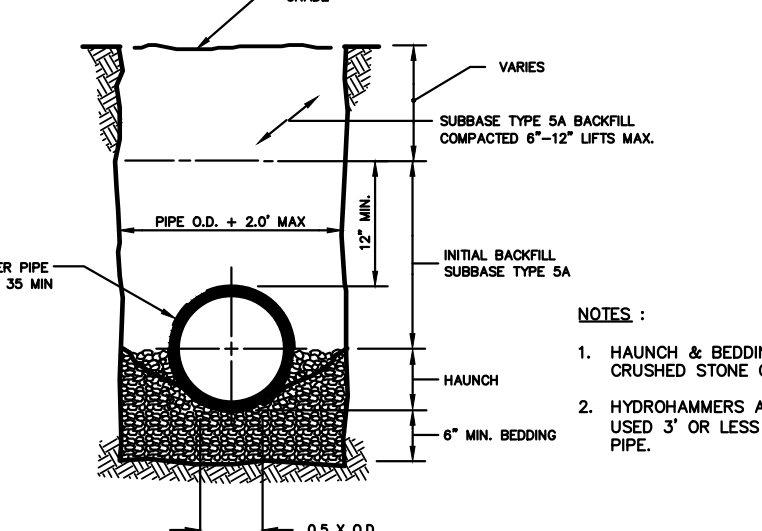
GENERAL NOTES:

- FOOTING TO BE N.J.D.O.T., CLASS "C"
- INVERT TO BE CLASS "C"
- IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
- FRAME AND GRATE TO BE NO. 3405 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.
- PROVIDE ALUMINUM LADDER RUNGS Ø 12" CENTER TO CENTER
- WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.



TYPE "A" INLET

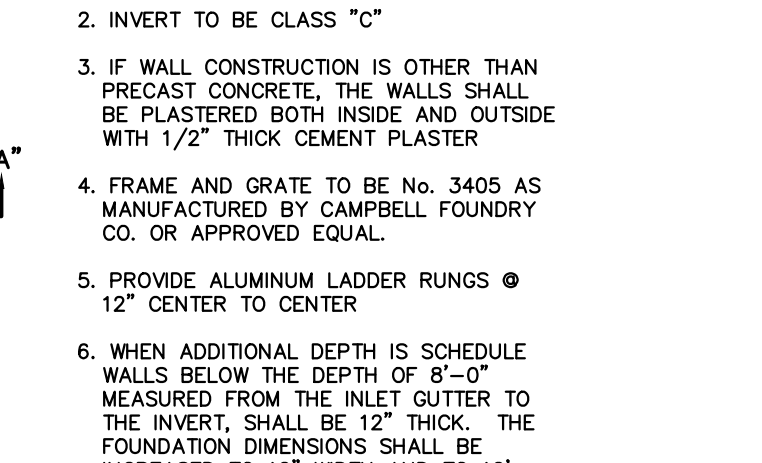
WITH BICYCLE GRATE



SANITARY SEWER STANDARD PIPE BEDDING FOR PVC PIPE DETAIL

NOT TO SCALE

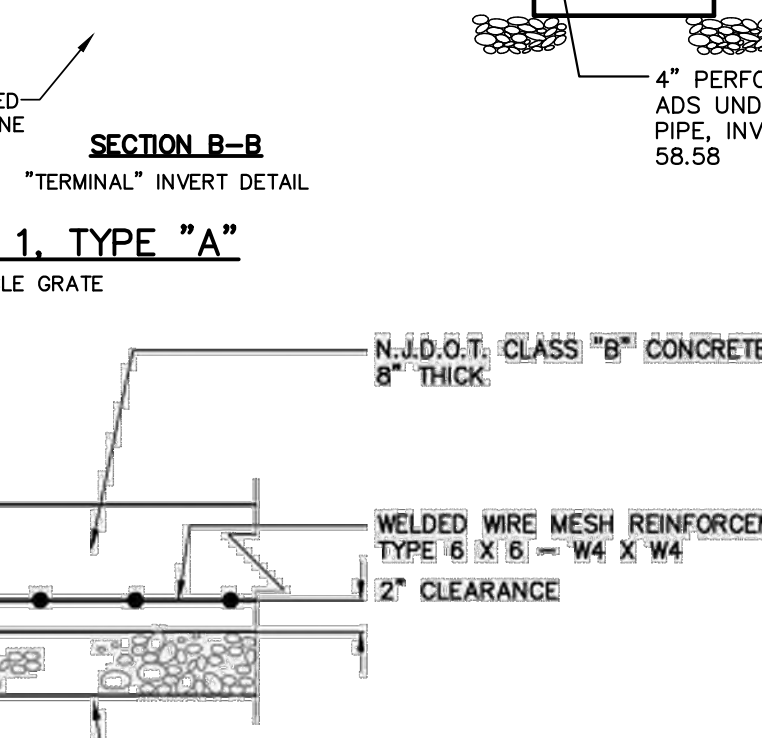
PRECAST STORM MANHOLE



PRECAST STORM MANHOLE

NOT TO SCALE

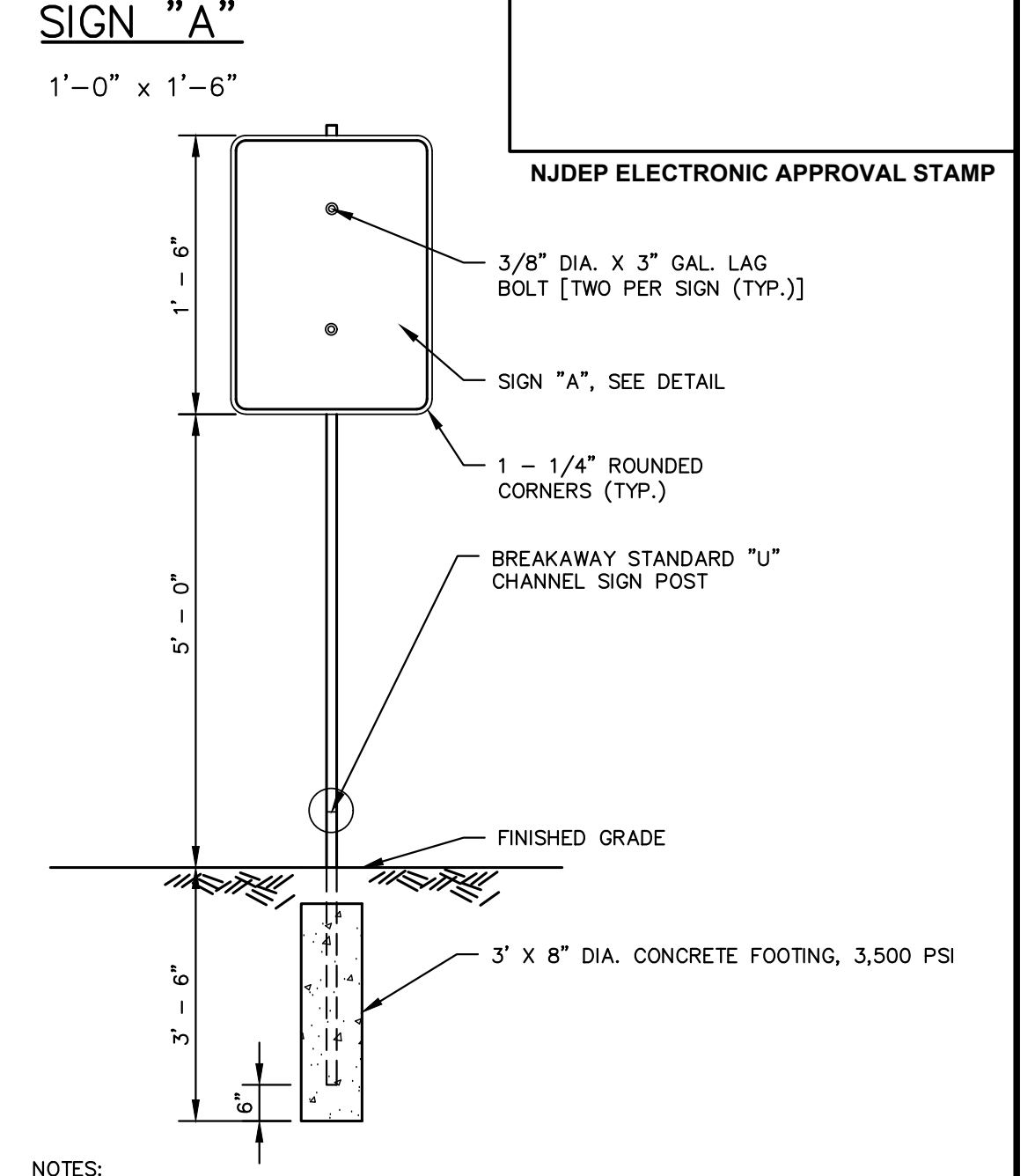
POROUS PAVEMENT DETAIL



POROUS PAVEMENT DETAIL

NOT TO SCALE

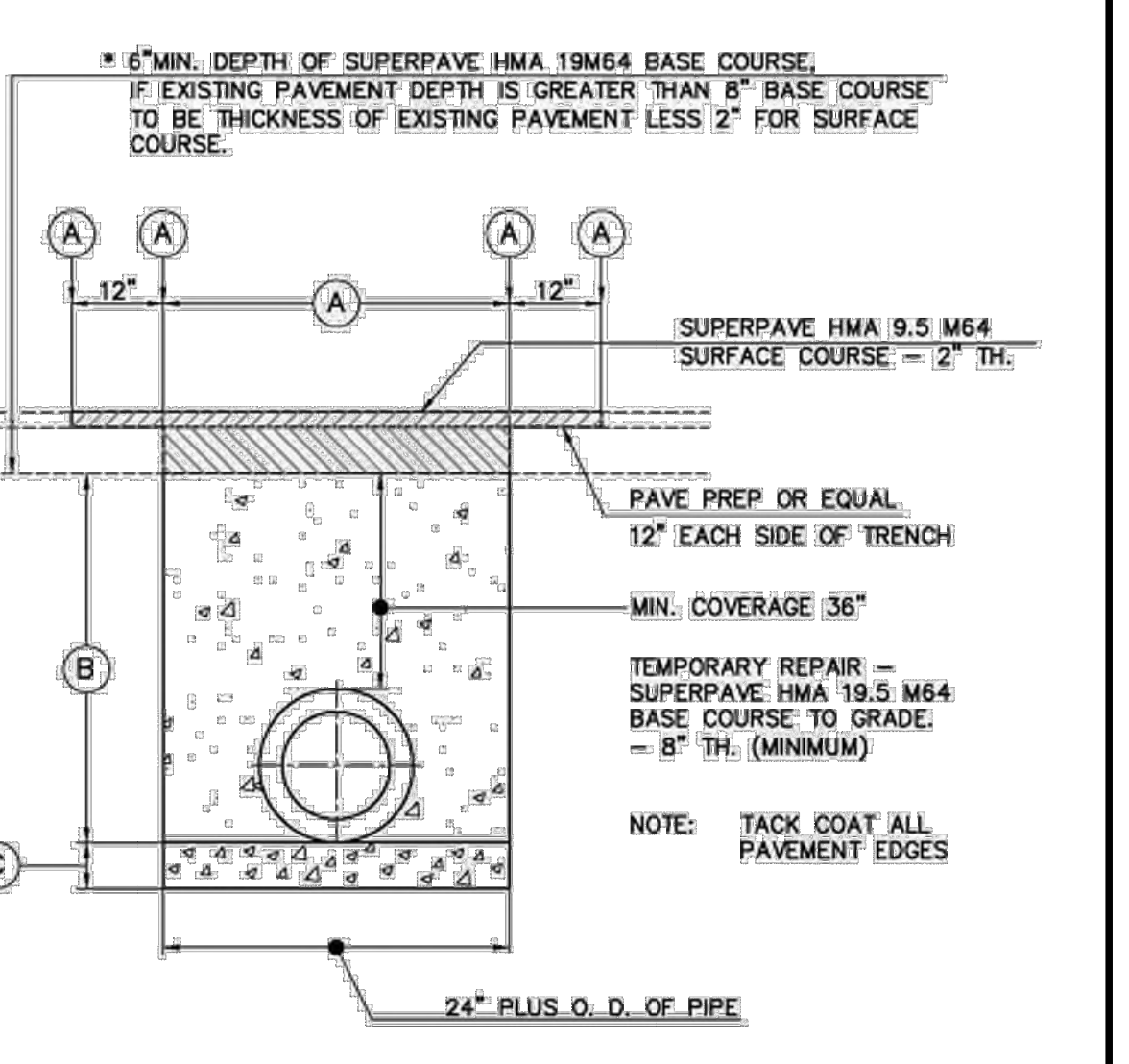
WARNING
AREA SUBJECT TO FLOODING
SIGN "A"



SIGN "A" POST DETAIL

NOT TO SCALE

SIGN "A" POST DETAIL



HOT MIX ASPHALT PAVEMENT TRENCH RESTORATION

COUNTY SITE DESIGN DETAIL 1.35
NOT TO SCALE

No.	Date	Revision	Revised By	Checked By
8	09/08/2022	REVISED PER TOWNSHIP DRC MEETING		BF
7	08/10/2022	REVISED PER TOWNSHIP COMPLETENESS REVIEW		BF
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FPAengineers.com

BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. NO. 24GE03454800

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
1/29/2021	KDW	AS SHOWN	16377.001
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
KDW	BF		11 of 12

C:\BKV\6300\16377 - 201 Walnut Ave\CAD\DWG\16377.001 - CD.dwg CD 2

GENERAL CONDITIONS

- REVIEW INSTALLATION PROCEDURES AND COORDINATE THE INSTALLATION WITH OTHER CONSTRUCTION ACTIVITIES, SUCH AS GRADING, EXCAVATION, UTILITIES, CONSTRUCTION ACCESS, EROSION CONTROL, ETC.
- ENGINEER DRAWINGS SUPERSEDE ALL PROVIDED DOCUMENTATION, AS THE INFORMATION FURNISHED IN THIS DOCUMENT IS BASED ON A TYPICAL INSTALLATION.
- WHEN INSTALLED BASED ON BRENTWOOD'S SITE PREPARATION AND INSTALLATION INSTRUCTIONS OR SIMILAR, A STORMTANK→SYSTEM CAN SUPPORT AN HS-25 LOAD.
- COORDINATE THE INSTALLATION WITH MANUFACTURER'S REPRESENTATIVE/DISTRIBUTOR TO BE ON-SITE TO REVIEW START UP PROCEDURES AND INSTALLATION INSTRUCTIONS.
- COMPONENTS SHALL BE UNLOADED, HANDLED AND STORED IN AN AREA PROTECTED FROM TRAFFIC AND IN A MANNER TO PREVENT DAMAGE.
- ASSEMBLED MODULES MAY BE WALKED ON, BUT VEHICULAR TRAFFIC IS PROHIBITED UNTIL BACKFILLED PER MANUFACTURER'S REQUIREMENTS. PROTECT THE INSTALLATION AGAINST DAMAGE WITH HIGHLY VISIBLE CONSTRUCTION TAPE, FENCING, OR OTHER MEANS UNTIL CONSTRUCTION IS COMPLETE.
- ENSURE ALL CONSTRUCTION OCCURS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS AND SAFETY REQUIREMENTS.
- EXTRA CARE AND CAUTION SHOULD BE TAKEN WHEN TEMPERATURES ARE AT OR BELOW 40° F (4.4° C).

1.0 STORMTANK→ASSEMBLY
STORMTANK→MODULES:
 STORMTANK→MODULES ARE DELIVERED TO THE SITE AS PALLETIZED COMPONENTS REQUIRING SIMPLE ASSEMBLY. NO SPECIAL EQUIPMENT, TOOLS OR BONDING AGENTS ARE REQUIRED; ONLY A RUBBER MALLETT. A SINGLE WORKER CAN TYPICALLY ASSEMBLE A MODULE IN TWO MINUTES.

ASSEMBLY INSTRUCTIONS:

- PLACE A PLATEN ON A FIRM, LEVEL SURFACE AND INSERT THE EIGHT (8) COLUMNS INTO THE PLATEN RECEIVER CUPS. FIRMLY TAP EACH COLUMN WITH A RUBBER MALLETT TO ENSURE THE COLUMN IS SEATED.
- PLACE A SECOND PLATEN ON A FIRM, LEVEL SURFACE. FLIP THE PREVIOUSLY ASSEMBLED COMPONENTS UPSIDE DOWN ONTO THE SECOND PLATEN, ALIGNING THE COLUMNS INTO THE PLATEN RECEIVER CUPS.
- ONCE ALIGNED, SEAT THE TOP ASSEMBLY BY ALTERNATING TAPS, WITH A RUBBER MALLETT AT EACH STRUCTURAL COLUMN UNTIL ALL COLUMNS ARE FIRMLY SEATED.

SIDE PANELS

- IF SIDE PANELS ARE REQUIRED, FIRMLY TAP THE TOP PLATEN UPWARD TO RAISE THE TOP PLATEN. INSERT THE SIDE PANEL INTO THE BOTTOM PLATEN.
- ALIGN THE TOP OF THE SIDE PANEL WITH THE TOP PLATEN AND FIRMLY SEAT THE TOP PLATEN UTILIZING A RUBBER MALLETT.

GENERAL NOTES:

- REMOVE PACKAGING MATERIAL AND CHECK FOR ANY DAMAGE. REPORT ANY DAMAGED COMPONENTS TO A STORMTANK→DISTRIBUTOR OR BRENTWOOD PERSONNEL.
- STORMTANK→COMPONENTS ARE BACKED BY ONE YEAR WARRANTY, WHEN INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

2.0 BASIN EXCAVATION

STAKE OUT AND EXCAVATE TO ELEVATIONS PER APPROVED PLANS. EXCAVATION REQUIREMENTS:

- SUB-GRADE EXCAVATION MUST BE A MINIMUM OF 6" (152 MM) BELOW DESIGNED STORMTANK→MODULE INVERT.
- THE EXCAVATION SHOULD EXTEND A MINIMUM OF 12" (305 MM) BEYOND THE STORMTANK→DIMENSIONS IN EACH LENGTH AND WIDTH (AN ADDITIONAL 24" [610 MM] IN TOTAL LENGTH AND TOTAL WIDTH) TO ALLOW FOR ADEQUATE PLACEMENT OF SIDE BACKFILL MATERIAL.
- REMOVE OBJECTIONABLE MATERIAL ENCOUNTERED WITHIN THE EXCAVATION, INCLUDING PROTRUDING MATERIAL FROM THE WALLS.
- FURNISH, INSTALL, MONITOR AND MAINTAIN EXCAVATION SUPPORT (E.G., SHORING, BRACING, TRENCH BOXES, ETC.) AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS AND SAFETY REQUIREMENTS.

3.0 SUB-GRADE REQUIREMENTS

- SUB-GRADE SHALL BE UNFROZEN, LEVEL (PLUS OR MINUS 1%), AND FREE OF LUMPS OR DEBRIS WITH NO STANDING WATER, MUD OR MUCK. DO NOT USE MATERIALS NOR MIX WITH MATERIALS THAT ARE FROZEN AND/OR COATED WITH ICE OR FROST.
- UNSTABLE, UNSUITABLE AND/OR COMPROMISED AREAS SHOULD BE BROUGHT TO THE ENGINEER'S ATTENTION AND MITIGATING EFFORTS DETERMINED PRIOR TO COMPACTING THE SUB-GRADE.
- SUB-GRADE MUST BE COMPACTED TO 95% STANDARD PROCTOR DENSITY OR AS APPROVED BY THE ENGINEER OF RECORD. IF CODE REQUIREMENTS RESTRICT SUBGRADE COMPACTION, IT IS THE REQUIREMENT OF THE GEOTECHNICAL ENGINEER TO VERIFY THAT THE BEARING CAPACITY AND SETTLEMENT CRITERIA FOR SUPPORT OF THE SYSTEM ARE MET.

4.0 LEVELING BED INSTALLATION

- INSTALL GEOTEXTILE FABRIC AND/OR LINER MATERIAL, AS SPECIFIED.
- AFTER THE GEOTEXTILE IS SECURED, PLACE A MINIMUM 6" (152 MM) LEVELING BED.
 - MATERIAL SHOULD BE A 3/4" (19 MM) ANGULAR STONE MEETING APPENDIX B - ACCEPTABLE FILL MATERIAL.
 - MATERIAL SHOULD BE RAKED FREE OF VOIDS, LUMPS, DEBRIS, SHARP OBJECTS AND PLATE VIBRATED TO A LEVEL WITH A MAXIMUM 1% SLOPE.
- CORRECT ANY UNSATISFACTORY CONDITIONS.

5.0 STORMTANK→MODULE PLACEMENT

- INSTALL GEOTEXTILE FABRIC AND/OR LINER MATERIAL, AS SPECIFIED.
- MARK THE FOOTPRINT OF THE MODULES FOR PLACEMENT.
 - ENSURE MODULE PERIMETER OUTLINE IS SQUARE OR SIMILAR PRIOR TO MODULE PLACEMENT.
 - CARE SHOULD BE TAKEN TO NOTE ANY CONNECTIONS, PORTS OR OTHER IRREGULAR UNITS TO BE PLACED.
- INSTALL THE INDIVIDUAL MODULES BY HAND, AS DETAIL BELOW.
 - THE MODULES SHOULD BE INSTALLED AS SHOWN IN THE STORMTANK→SUBMITTAL DRAWINGS WITH THE SHORT SIDE OF PERIMETER MODULES FACING OUTWARD, EXCEPT AS OTHERWISE REQUIRED.
 - MAKE SURE THE TOP/BOTTOM PLATENS ARE IN ALIGNMENT IN ALL DIRECTIONS TO WITHIN A MAXIMUM 1/4" (6.4 MM).
 - FOR DOUBLE STACK CONFIGURATIONS:

- INSTALL THE BOTTOM MODULE FIRST. DO NOT INTERMIX VARIOUS MODULE HEIGHTS ACROSS LAYERS. BACKFILLING PRIOR TO PROCEEDING TO SECOND LAYER IS OPTIONAL.
- INSERT STACKING PINS (2 PER MODULE) INTO THE TOP PLATEN OF THE BOTTOM MODULE.
- PLACE THE UPPER MODULE DIRECTLY ON TOP OF THE BOTTOM MODULE IN THE SAME DIRECTION, MAKING SURE TO ENGAGE THE PINS.

- ONCE ALL PORTS OR OTHER PENETRATION OF THE STORMTANK→:
 - INSTALL PORTS/PENETRATIONS IN ACCORDANCE WITH THE APPROVED SUBMITTALS, CONTRACT DOCUMENTS AND MANUFACTURER'S RECOMMENDATIONS.
- UPON COMPLETION OF MODULE INSTALLATION, WRAP THE MODULES IN GEOTEXTILE FABRIC AND/OR LINER.
 - GEOTEXTILE FABRIC SHALL BE WRAPPED AND SECURED PER MANUFACTURER'S RECOMMENDATIONS.
 - SEAL ANY PORTS/PENETRATIONS PER MANUFACTURER'S REQUIREMENTS

GENERAL NOTES:

- IF DAMAGE OCCURS TO THE GEOTEXTILE FABRIC OR IMPERMEABLE LINER, REPAIR THE MATERIAL IN ACCORDANCE WITH THE GEOTEXTILE/LINER MANUFACTURER'S RECOMMENDATIONS.

6.0 SIDE BACKFILL

- INSPECT ALL GEOTEXTILE, ENSURING THAT NO VOIDS OR DAMAGE EXISTS, WHICH WILL ALLOW SEDIMENT INTO THE STORMTANK→SYSTEM.
- ADJUST THE STONE/SOIL INTERFACE GEOTEXTILE ALONG THE SIDE OF THE NATIVE SOIL TO ENSURE THE GEOTEXTILE IS TAUGHT TO THE NATIVE SOIL.
- ONCE THE GEOTEXTILE IS SECURED, BEGIN TO PLACE THE SIDE BACKFILL.
 - MATERIAL SHOULD BE A 3/4" (19 MM) ANGULAR STONE MEETING APPENDIX B - ACCEPTABLE FILL MATERIAL.
 - BACKFILL SIDES EVENLY AROUND THE PERIMETER WITHOUT EXCEEDING SINGLE 12" (305 MM) LIFTS.
 - PLACE MATERIAL UTILIZING AN EXCAVATOR, DOZER OR CONVEYOR BOOM
 - UTILIZE A PLATE VIBRATOR TO SETTLE THE STONE AND PROVIDE A UNIFORM DISTRIBUTION.

7.0 TOP BACKFILL (STONE)

- BEGIN TO PLACE THE TOP BACKFILL.
 - MATERIAL SHOULD BE A 3/4" (19 MM) ANGULAR STONE MEETING APPENDIX B - ACCEPTABLE FILL MATERIAL.
 - PLACE MATERIAL UTILIZING AN EXCAVATOR, DOZER OR CONVEYOR BOOM (APPENDIX C - MATERIAL PLACEMENT) AND USE A WALK-BEHIND PLATE VIBRATOR TO SETTLE THE STONE AND PROVIDE AN EVEN DISTRIBUTION.
 - DO NOT DRIVE ON THE MODULES WITHOUT A MINIMUM 12" (305 MM) COVER.
- UPON COMPLETION OF TOP BACKFILLING, WRAP THE SYSTEM IN GEOTEXTILE FABRIC AND/OR LINER PER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL METALLIC TAPE AROUND THE PERIMETER OF THE SYSTEM TO MARK THE AREA FOR FUTURE UTILITY DETECTION.

GENERAL NOTES:

- IF DAMAGE OCCURS TO THE GEOTEXTILE FABRIC OR IMPERMEABLE LINER, REPAIR THE MATERIAL IN ACCORDANCE WITH THE GEOTEXTILE/LINER MANUFACTURER'S RECOMMENDATIONS.

8.0 SUITABLE COMPACTABLE FILL
 FOLLOWING TOP BACKFILL PLACEMENT AND GEOTEXTILE FABRIC WRAPPING; COMPLETE THE INSTALLATION AS NOTED BELOW.

VEGETATED AREA

- PLACE FILL ONTO THE GEOTEXTILE.
 - MAXIMUM 12" (305 MM) LIFTS, COMPACTED WITH A VIBRATORY PLATE OR WALK BEHIND ROLLER TO A MINIMUM OF 90% STANDARD PROCTOR DENSITY.
 - THE MINIMUM TOP COVER TO FINISHED GRADE SHOULD NOT BE LESS THAN 24" (610 MM) AND THE MAXIMUM DEPTH FROM FINAL GRADE TO THE BOTTOM OF THE LOWEST MODULE SHOULD NOT EXCEED 11' (3.35 M).
- FINISH TO THE SURFACE AND COMPLETE WITH VEGETATIVE COVER.

IMPERVIOUS AREA

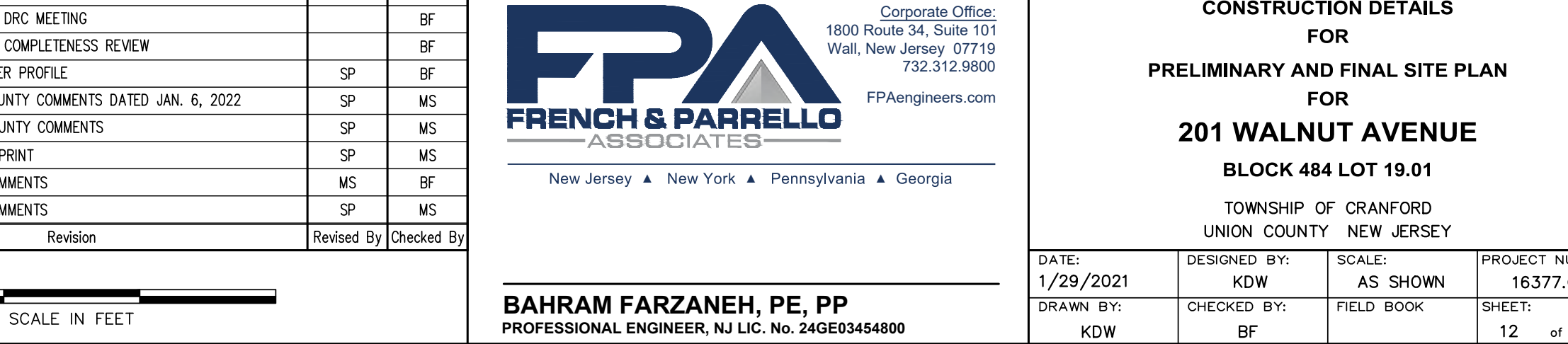
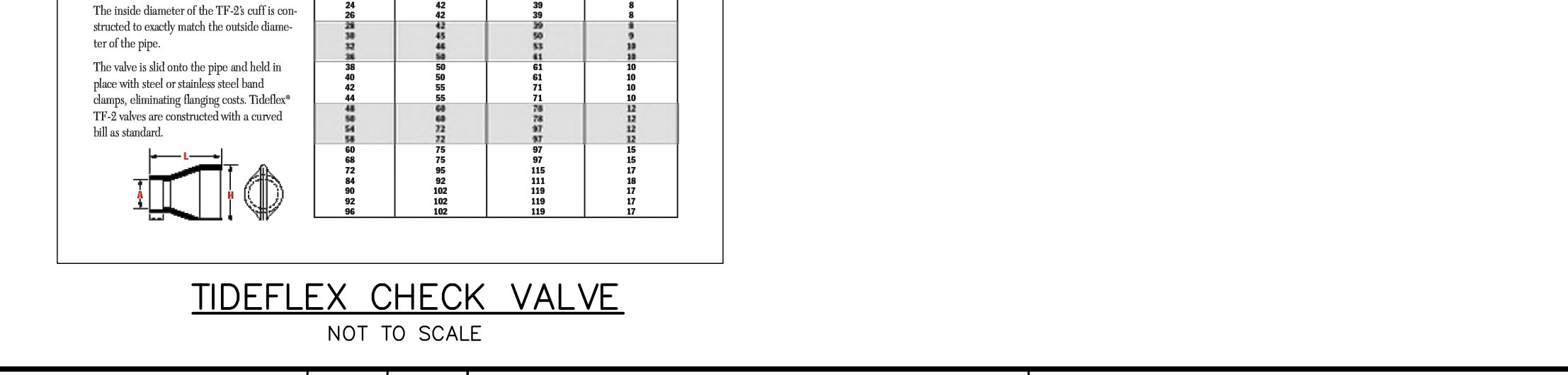
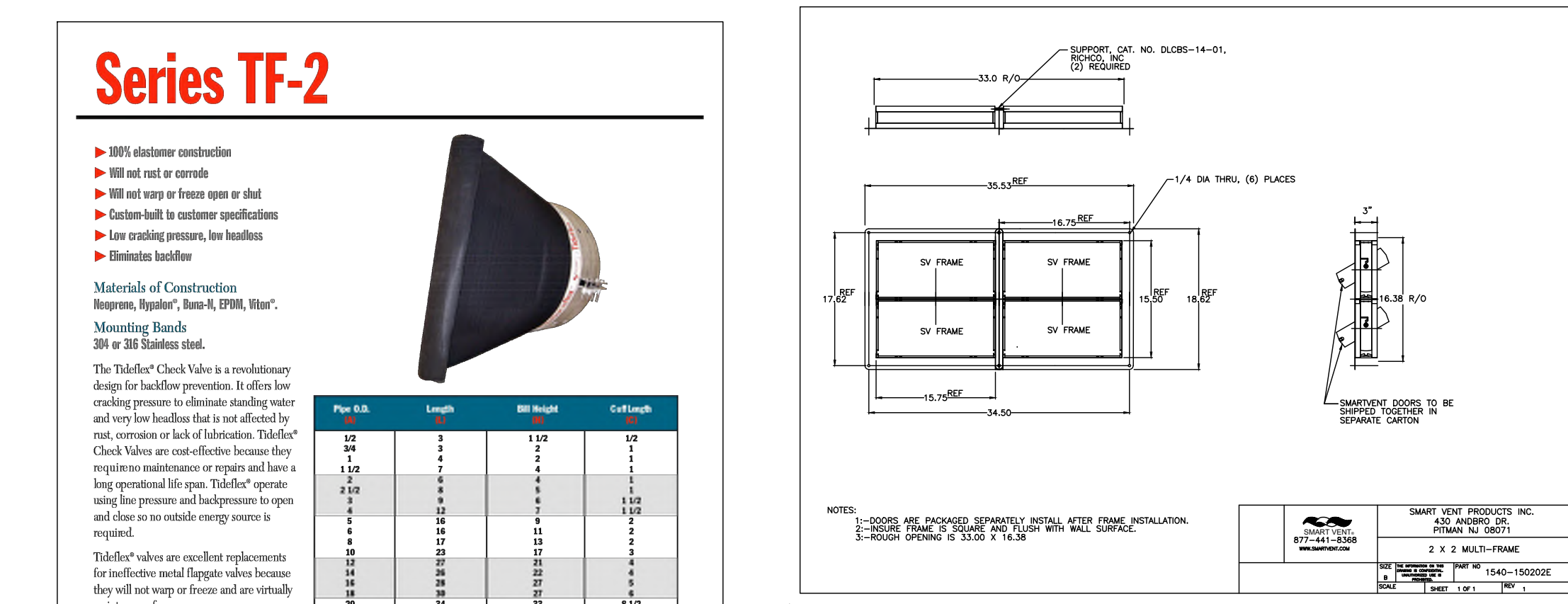
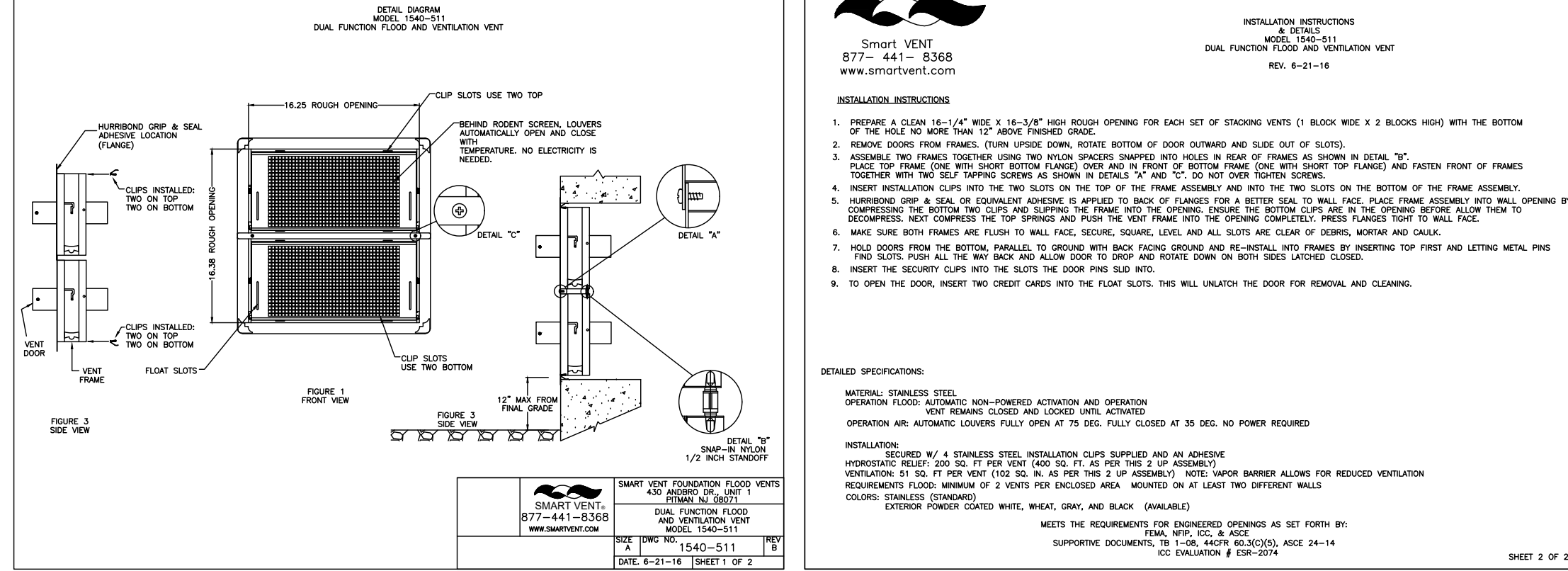
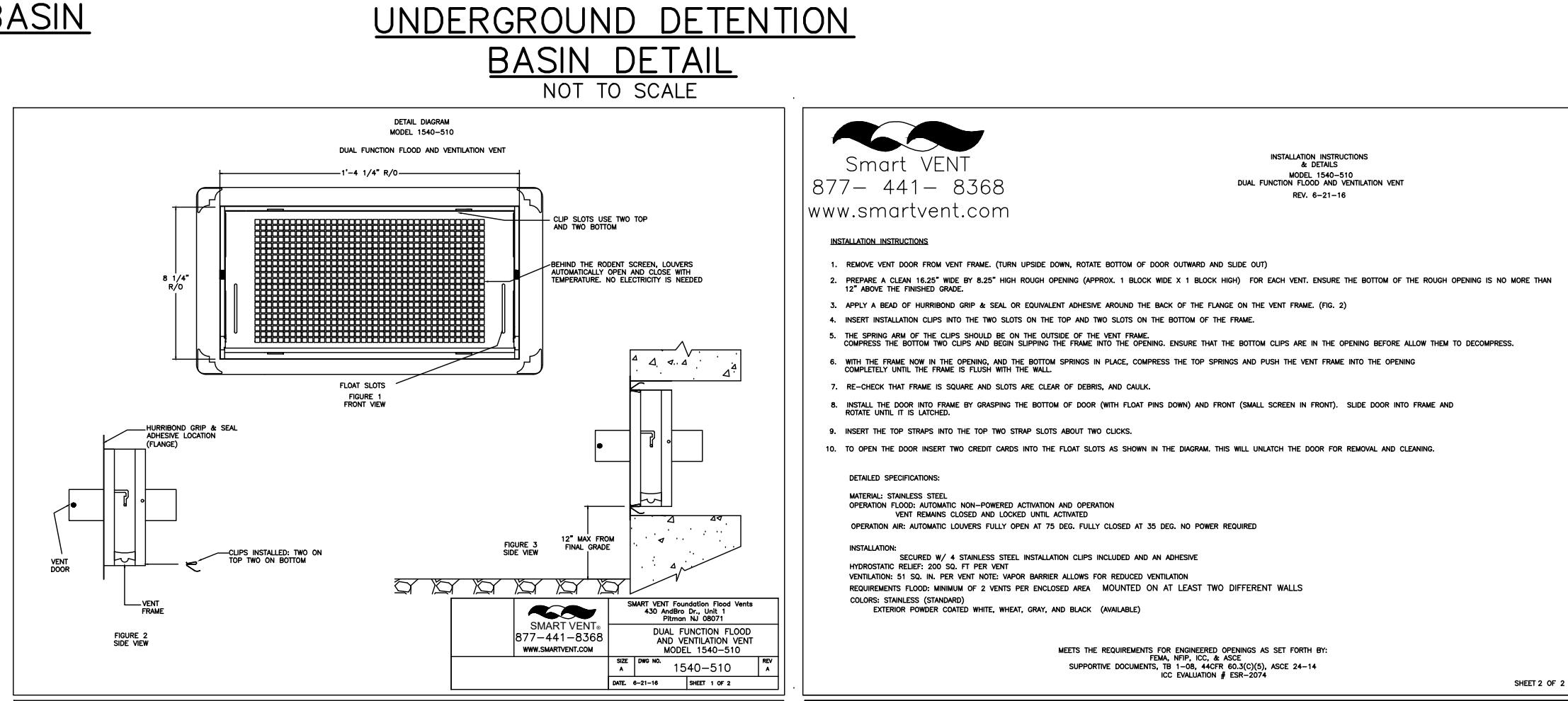
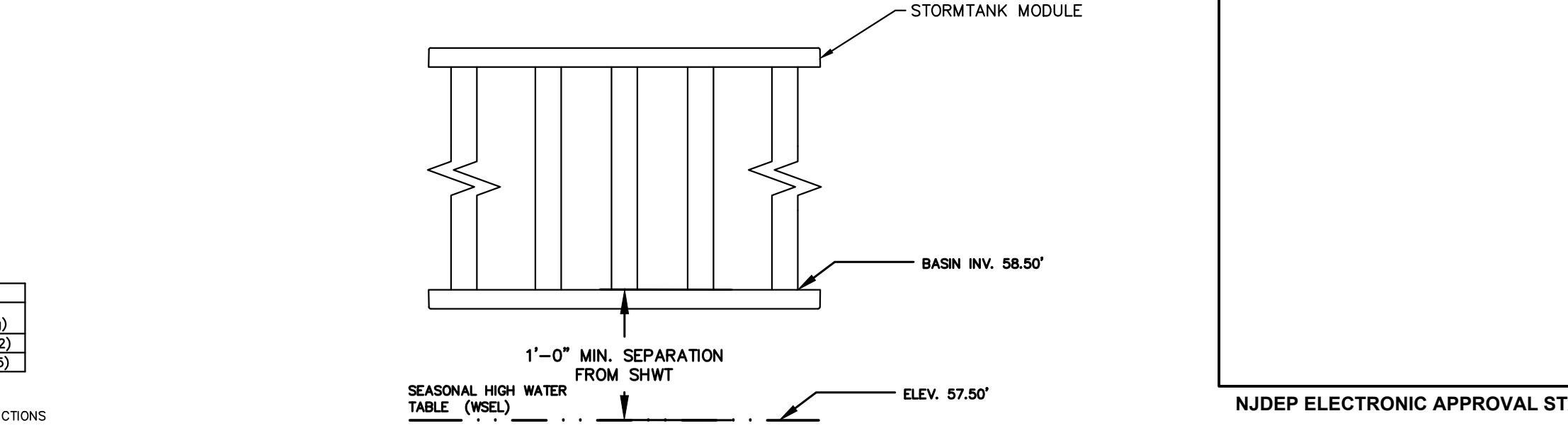
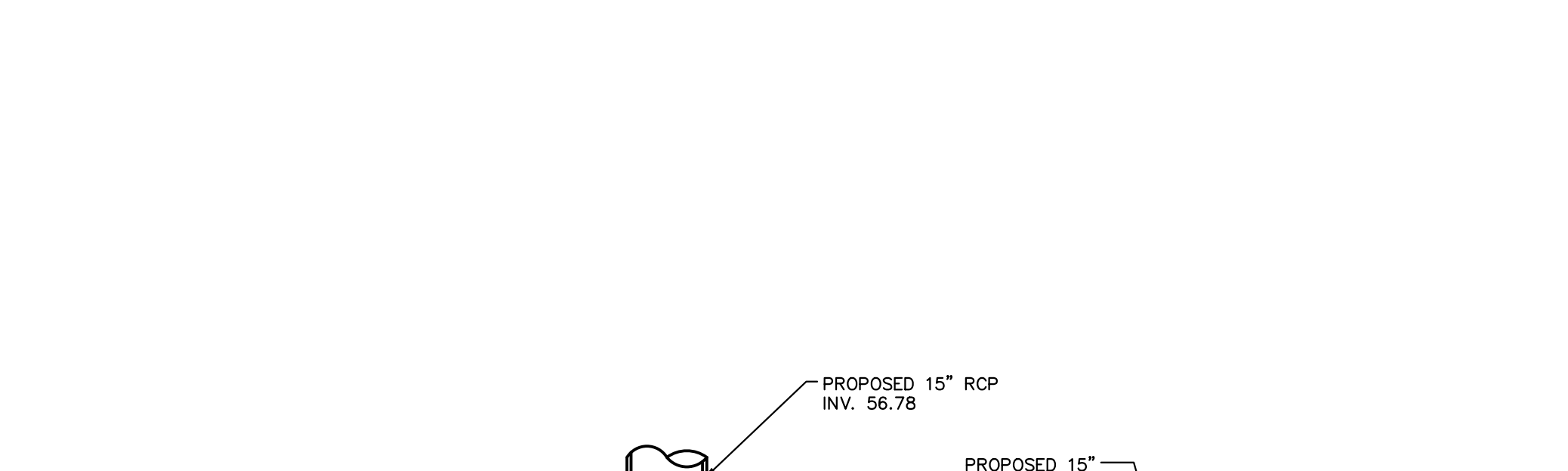
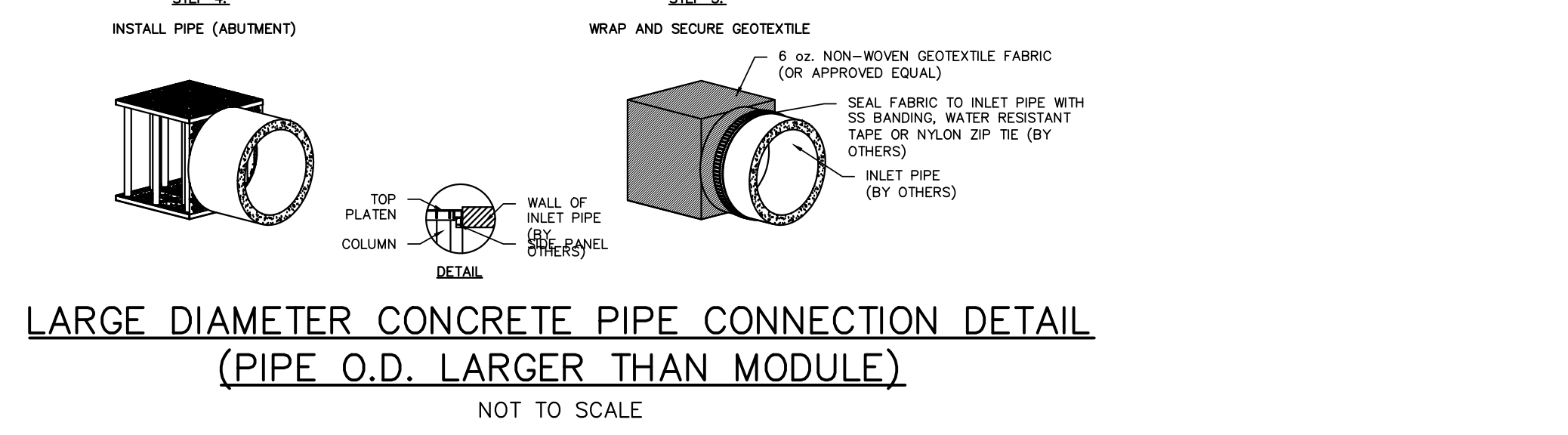
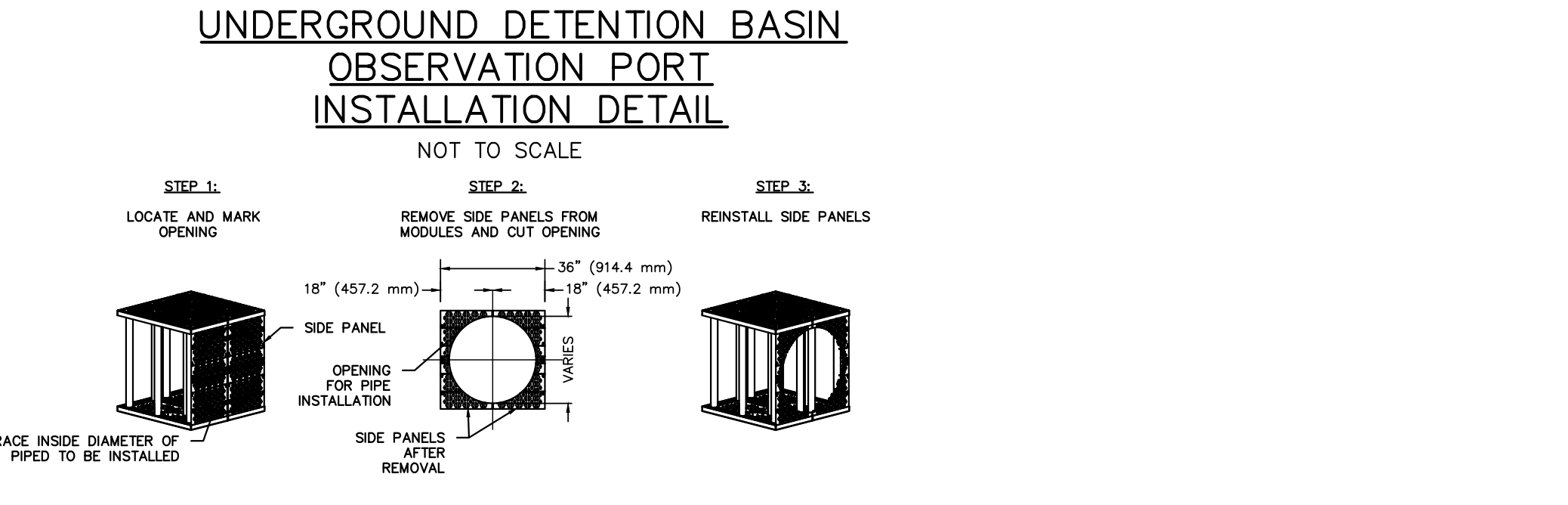
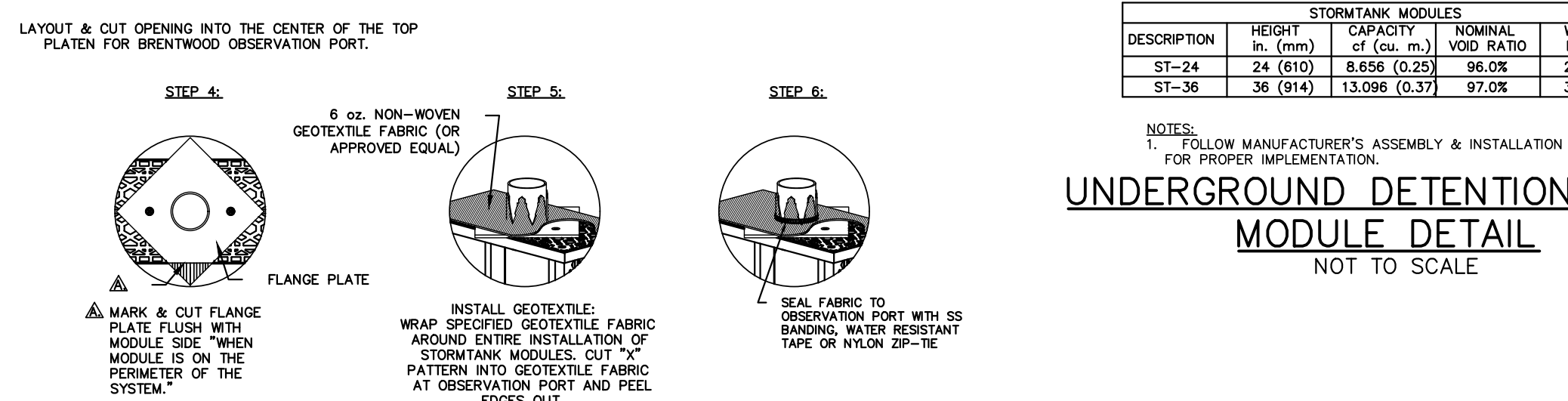
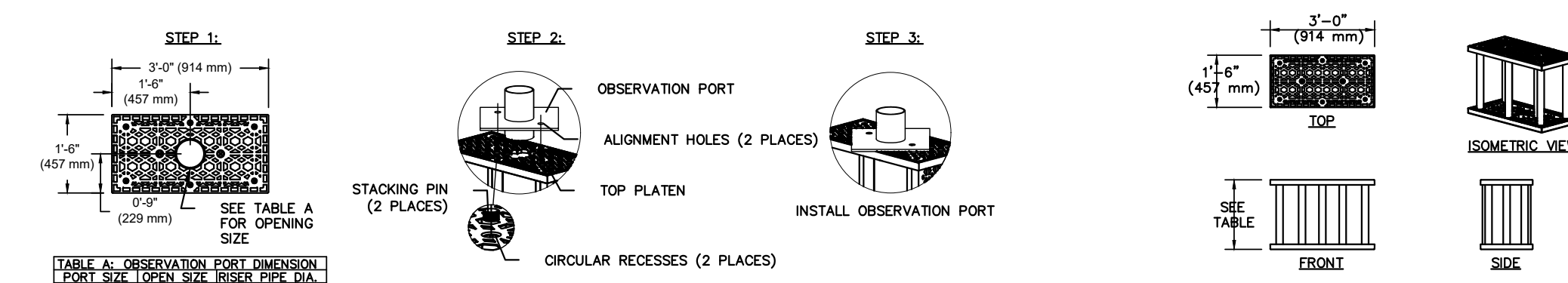
- PLACE FILL ONTO THE GEOTEXTILE.
 - MAXIMUM 12" (305 MM) LIFTS COMPACTED WITH A VIBRATORY PLATE OR WALK BEHIND ROLLER TO A MINIMUM 90% STANDARD PROCTOR DENSITY OR TO MEET THE ENGINEER OF RECORD'S SPECIFICATION.
 - SUB-BASE MATERIALS SHOULD BE REFERENCED BY THE APPROVED ENGINEERING DRAWINGS.
 - THE MINIMUM TOP COVER TO FINISHED GRADE SHOULD NOT BE LESS THAN 24" (610 MM) AND THE MAXIMUM DEPTH FROM FINAL GRADE TO THE BOTTOM OF THE LOWEST MODULE SHOULD NOT EXCEED 11' (3.35 M).

GENERAL NOTES:

- A VIBRATORY ROLLER MAY ONLY BE UTILIZED AFTER A MINIMUM 24" (610 MM) OF COMPACTED MATERIAL HAS BEEN INSTALLED OR FOR THE INSTALLATION OF THE ASPHALT WEARING COURSE.
- IF DAMAGE OCCURS TO THE GEOTEXTILE FABRIC, REPAIR THE MATERIAL IN ACCORDANCE WITH THE GEOTEXTILE MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES:

- FOOTING TO BE N.J.D.O.T., CLASS "C"
- INVERT TO BE CLASS "C"
- IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
- PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
- PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
- WHEN ADDITIONAL DEPTH IS SCHEDULED WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 1/2" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12" IN DEPTH.
- FRAME TO BE THOROUGHLY BEDDED IN MORTAR IN UNPAVED AREAS.
- ADJUST TO GRADE WITH COURSES OF BRICK (3 MAX) OR PRECAST CONCRETE GRADE RING.
- CONTRACTOR TO SUBMIT SHOP DRAWING TO DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
- STRUCTURE TOP TO BE REINFORCED CONCRETE DESIGNED FOR HS20 LOADING.



CONSTRUCTION DETAILS FOR PRELIMINARY AND FINAL SITE PLAN FOR 201 WALNUT AVENUE BLOCK 484 LOT 19.01 TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY

DATE: 1/29/2021 DESIGNED BY: KDW SCALE: AS SHOWN PROJECT NUMBER: 16377.001

DRAWN BY: KDW CHECKED BY: BF FIELD BOOK SHEET: 12 OF 12

BAHRAM FARZANEH, PE, PP PROFESSIONAL ENGINEER, NJ LIC. NO. 24G03454800

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