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PRELIMINARY AND FINAL SITE PLAN

FOR

108-126 SOUTH AVENUE EAST

32 HIGH STREET & 2 CHESTNUT STREET

BLOCK 478, LOTS 2, 3, 4, 5, AND 6

BLOCK 483, LOT 18, AND 17.01

TOWNSHIP OF CRANFORD

UNION COUNTY, NEW JERSEY

GENERAL NOTES:

- THE SUBJECT PROPERTY IS KNOWN AND DESIGNATED AS BLOCK 478, LOTS 2, 3, 4, 5, 6, AND BLOCK 483, LOTS 18 AND 17.01 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAP OF THE TOWNSHIP OF CRANFORD, SHEET NOS. 105 AND 106 AND IS SITUATED IN THE "D-C" (DOWNTOWN CORE) ZONING DISTRICT, AND WITHIN SUBDISTRICT 1 OF THE SOUTH AVENUE & CHESTNUT STREET REDEVELOPMENT PLAN. THE SUBJECT PROPERTY CONTAINS A TOTAL OF 35,080 SF, ±0.81 ACRES.
- PROPERTY OWNERS*/CO-APPLICANT: (*SEE OWNERS LIST)
IRON ORE PROPERTIES LLC,
C/O PROPERTY OWNERS
55 BLEEKER STREET, 2ND FLOOR
MILBURN, NEW JERSEY 07041

CO-APPLICANT, IRON ORE PROPERTIES LLC

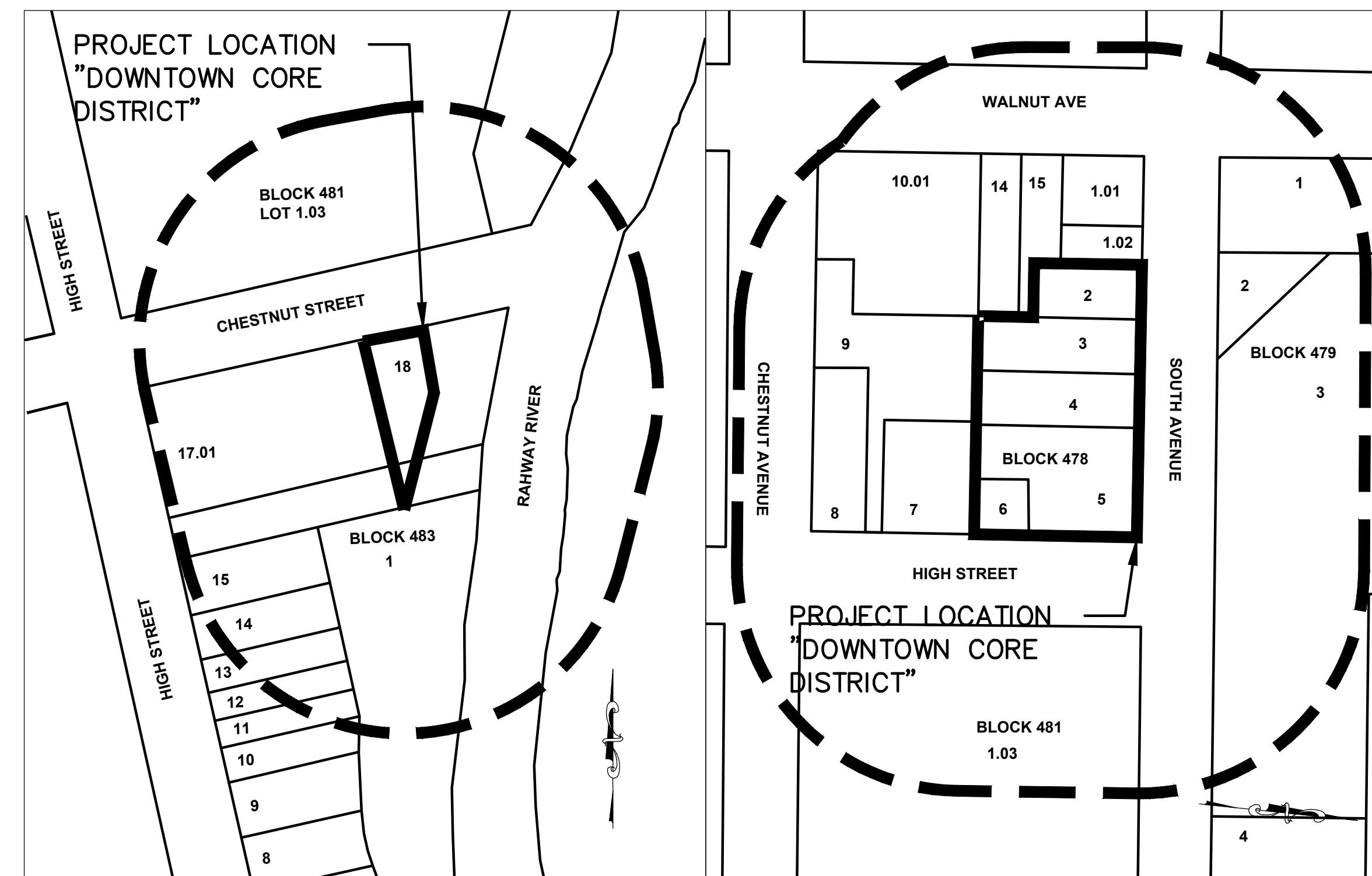
- EXISTING USE: MIXED USE
PROPOSED USE: NO CHANGE
- BASE MAP INFORMATION WAS OBTAINED FROM THE FOLLOWING SOURCES:
 - TOPOGRAPHIC INFORMATION TAKEN FROM A PLAN ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR LOTS 2, 3, 4, 5, AND 6 BLOCK 478 SITUATED IN TOWNSHIP OF CRANFORD, UNION COUNTY, NEW JERSEY" PREPARED BY BUTLER SURVEYING AND MAPPING, INC.
 - "TOPOGRAPHIC SURVEY TAX LOT 18 BLOCK 483 2 CHESTNUT STREET, BOROUGH OF CRANFORD, UNION COUNTY, NEW JERSEY" PREPARED BY BUTLER SURVEYING AND MAPPING, INC., LAST REVISED 11/07/2022
- AREA AND BULK ZONE REQUIREMENTS FOR SUBDISTRICT 1 OF THE SOUTH AVENUE & CHESTNUT STREET REDEVELOPMENT PLAN WITHIN THE D-T "DOWNTOWN TRANSITION DISTRICT"

	PERMITTED:	EXISTING:	PROPOSED:
MINIMUM LOT REQUIREMENTS			
MINIMUM LOT AREA	0.75 ACRES	0.803	0.803
PRINCIPAL BUILDING REQUIREMENTS			
MINIMUM FRONT YARD	9 FT. FROM FACE OF CURB	9.5 FT.	9.8 FT.
MINIMUM SIDE YARD	10 FT. FROM CURB, OTHERWISE 0	12.6 FT.	13.4 FT.
MINIMUM REAR YARD	9 FT. BETWEEN BUILDINGS OR 5 FT. BETWEEN PROPERTY LINE AND BUILDING FACADE	9.5 FT.	9 FT. 10 FT. BETWEEN PROPERTY LINE AND BUILDING FACADE
MAXIMUM BUILDING HEIGHT	55 FT. / 4 STORIES	2 1/2 STORIES	LESS THAN 55 FT. / 4 STORIES
MAXIMUM BUILDING COVERAGE	90%	29.6%	75.8%
MAXIMUM LOT COVERAGE	96%	96.0%	96.0%

- OFF-STREET PARKING REQUIREMENTS - USE: DWELLING, MULTI-FAMILY

REQUIRED	PROVIDED
1.4 SPACES PER UNIT X 55 UNITS = 77 AT LEAST 15% TO BE ELECTRIC VEHICLE MAKE-READY PARKING SPACES = 11.55 OR 12.	57 PARKING SPACES ON-SITE INCLUDING 2 ADA PARKING SPACES 20 PARKING SPACES +9 NET SPACES AT 2 CHESTNUT STREET +6 STREET PARKING SPACES ON CHESTNUT STREET. +3 STREET PARKING SPACES ON SOUTH AVENUE EAST +2 STREET PARKING SPACES ON HIGH STREET TOTAL 77 PARKING SPACES, INCLUDING 12 ELECTRIC VEHICLE MAKE-READY PARKING SPACES 10% CREDIT FOR PROVIDING ELECTRIC VEHICLE SPACES = 7

- 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 (NJAC 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. COORDINATE WITH ARCHITECT AS REQUIRED.
- 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 FOR REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE. NO MATERIAL IS TO BE STORED ON TOWNSHIP PROPERTY UNLESS PRIOR APPROVAL IS OBTAINED FROM THE TOWNSHIP ENGINEER. UNDER NO CIRCUMSTANCES CAN THE CONTRACTOR PLACE EXCESSIVE MATERIAL WITHIN TOWNSHIP-OWNED PROPERTY. ANY SOIL DISTURBANCE SHALL BE DONE AS SET FORTH BY SUBSECTION 351.



KEY MAP
NOT TO SCALE

PROPERTY OWNERS WITHIN 200'

Depau, Nancy
103 High Street
Cranford, New Jersey 07016

Di Tullio & La Corte Associates
102-108 Walnut Avenue
Cranford, New Jersey 07016

REGULATORY BODIES AND UTILITY PROVIDERS

Township of Cranford - Construction Official
8 Springfield Avenue
Cranford, New Jersey 07016

Mintelli, Paul & Judy
109 High Street
Cranford, New Jersey 07016

IOP Cranford 100 South LLC
55 Bleeker Street 2nd floor
Millburn, New Jersey 07041

Township of Cranford - Planning Board
8 Springfield Avenue
Cranford, New Jersey 07016

Union County Court House
Elizabeth, New Jersey 07207

116 Walnut Avenue, LLC
206 Avenue F
Matamoras, PA 18336

Union County Planning Board
10 Elizabethtown Plaza
Elizabeth, New Jersey 07202

Riverfront Developers, LLC
820 Morris Turnpike
Short Hills, New Jersey 07078

East Coast Cranford Crossing, LLC
PO Box 182585 Mail Stop #3
Columbus, Ohio 43218

Somerset Union Soil Conservation Dist.
308 Milltown Road
Bridgewater, New Jersey 08801

Rennie, Kimberly A
101 High Street
Cranford, New Jersey 07016

DB Walnut Ave, LLC
55 Bleeker Street, 2nd Floor
Millburn, New Jersey 07041

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

Curtis, Vera
107 High Street
Cranford, New Jersey 07016

Union County Economic Dev. Corp
76 Chestnut Street
Cranford, New Jersey 07016

NJAW- GIS Supervisor
1025 Laurel Oak Road
Voorhees, New Jersey 08043

Titre, Shenwin & Nivine
105 High Street
Cranford, New Jersey 07016

EFRUS JED
114 Orchard Street
Cranford, New Jersey 07015

Verizon - Executive Offices
Corporate Secretary
One Verizon Way
Basking Ridge, New Jersey 07920

Smith Cleveland C
111 High Street
Cranford, New Jersey 07016

Sunkin Properties, LLC
PO Bo 636
Inlet, New York 13360

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

Township of Cranford
8 Springfield Avenue
Cranford, New Jersey 07016

O V A Realty
206 Stoughton Avenue
Cranford, New Jersey 07016

PSE&G - Manager Corp. Properties
80 Park Plaza T6B
Newark, New Jersey 07101

CRFD Cong of Jehovahs Wit.
77 Chestnut Street
Cranford, New Jersey 07016

St. Mark AME Church
34 High Street
Cranford, New Jersey 07016

Rahway Valley Sewerage Authority
Chief Engineer
1050 East Hazelwood Avenue
Rahway, New Jersey 07065

109 South Avenue, LLC
206 Avenue F
Matamoras, PA 18336

Junior League of Eliz & Cranford Inc.
110 Walnut Avenue
Cranford, New Jersey 07016

Union County Div Parks & Recreation
Admin Bldg/Elizabethtown Plaza
Elizabeth, New Jersey 07207

NJ Transit Corp.
PO Bo 10009
Newark, New Jersey 07101

***OWNERS LIST**

EXHIBIT A			
Property Address	Block	Lot	Owner
108 South Avenue E	478	2	108 South Ave E LLC
112 South Avenue E	478	3	112 South Avenue E LLC
118 South Avenue E	478	4	Boffard Holdings LLC
122-126 South Avenue E	478	5	VIBO Holdings LLC
32 High Street	478	6	Boffard Holdings LLC
2 Chestnut Street	483	18	2 Chestnut St LLC
41 High Street	483	17.01	Township of Cranford

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

CHAIRPERSON _____

TOWNSHIP ENGINEER (AFFIX SEAL) _____

DATE _____

SECRETARY _____

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
04	02/21/2023	Revise per DRC Meeting		BF
03	01/26/2023	Revised per Completeness Review dated 01/20/2023		
02	11/07/2022	Revised for Township Submission	MS	BF
01	05/20/2021	Revised per NJDEP Comments	SP	BF

SCALE IN FEET

FPA
FRENCH & PARRELLO
ASSOCIATES

New Jersey • New York • Pennsylvania • Georgia

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

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

COVER SHEET
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
MIXED USE DEVELOPMENT
BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
2/19/2021	WGS	AS SHOWN	16753.001
DRAWN BY:	CHECKED BY:	FIELD BOOK:	SHEET:
WGS	BF		1 of 15

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NJDEP ELECTRONIC APPROVAL STAMP

GENERAL NOTES:

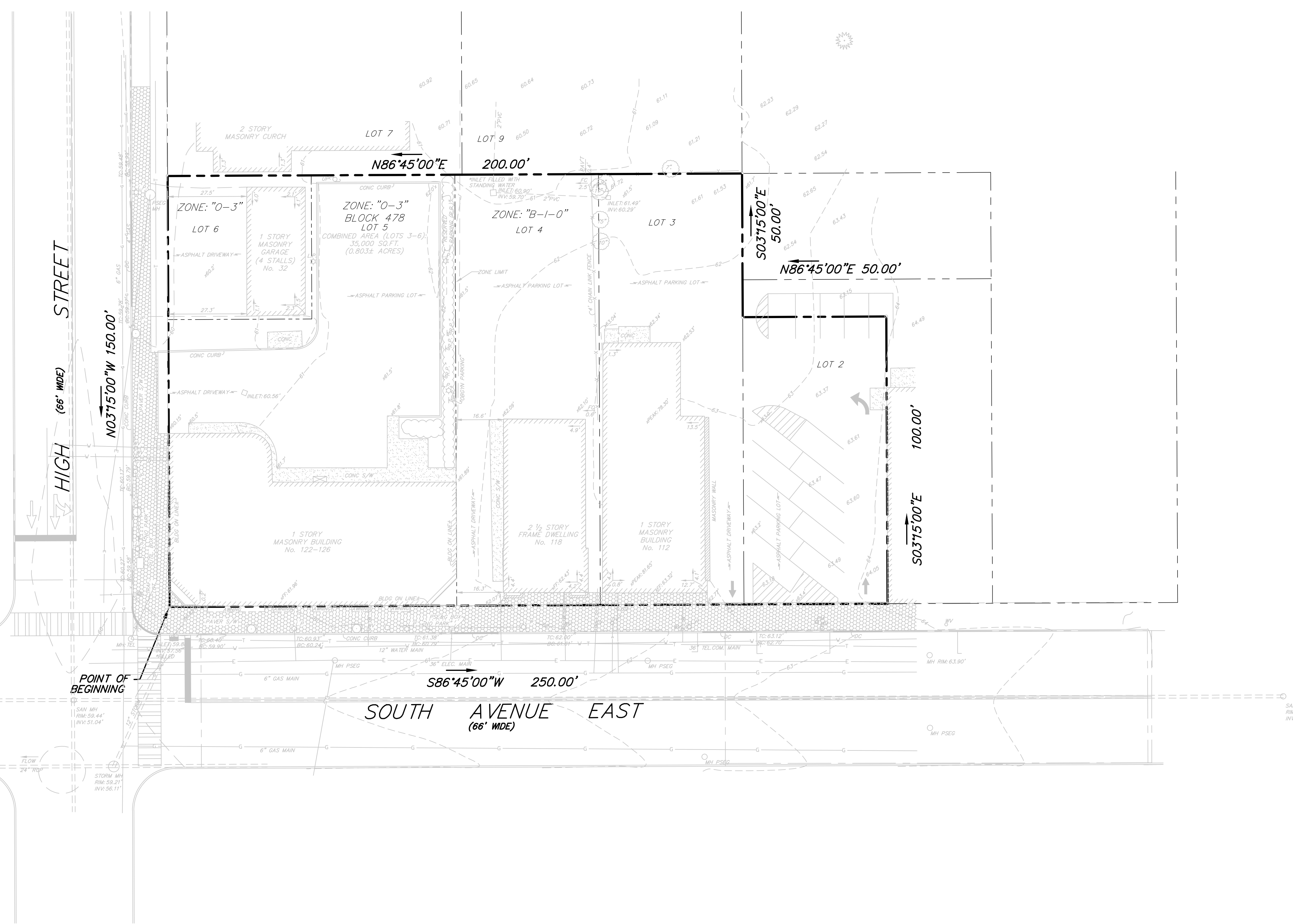
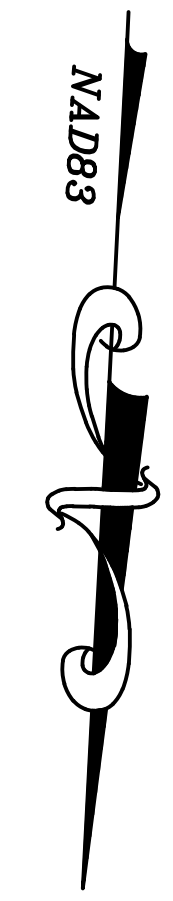
1. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR FOR THE DURATION OF THE DEMOLITION PROJECT. ALL PERSONNEL WORKING OR VISITING THE SITE SHALL BE PROVIDED A PROJECT SAFETY BRIEFING. THE CONTRACTOR SHALL DESIGNATE A TRAINED, RESPONSIBLE INDIVIDUAL FOR ALL SAFETY RELATED ITEMS. THIS PERSON SHALL HAVE 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.
6. 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 SERVICE 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 AFFECT 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.



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FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
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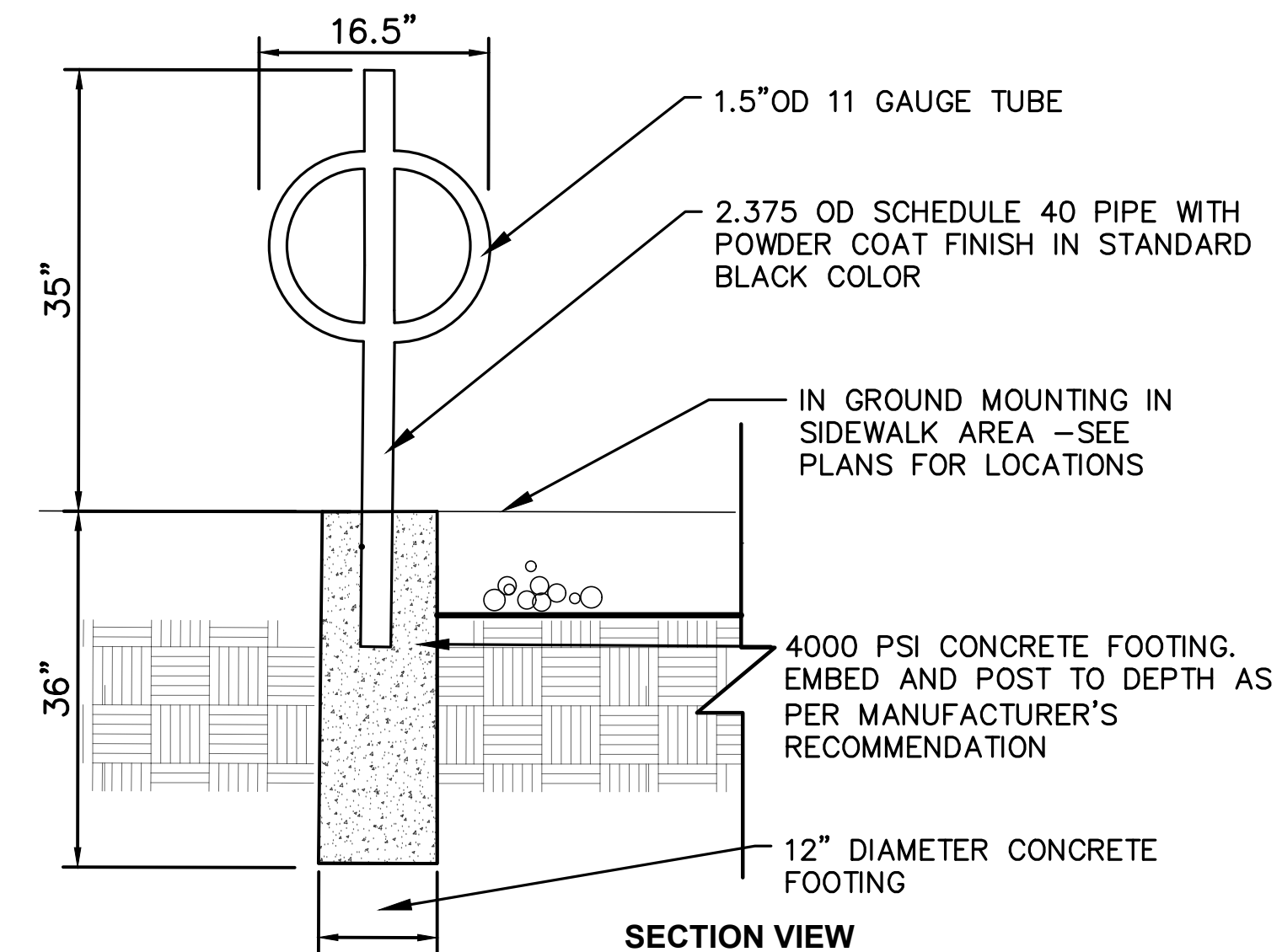
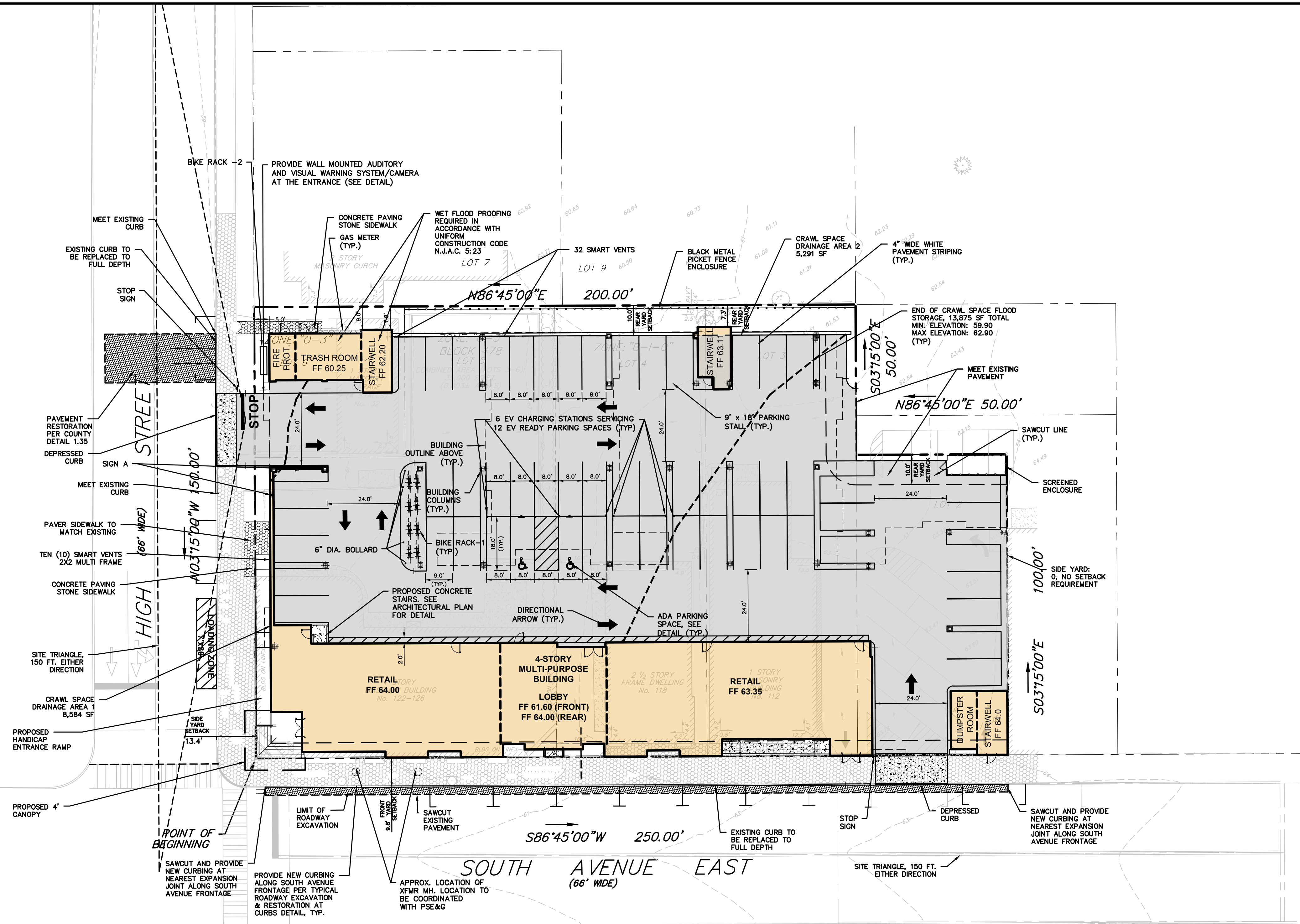
BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

EXISTING CONDITIONS PLAN FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT

BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01

TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE: 2/19/2021	DESIGNED BY: MS	SCALE: 1" = 20'	PROJECT NUMBER: 16753.001
DRAWN BY: MS	CHECKED BY: BF	FIELD BOOK	SHEET: 2 of 15



NOTES:

1. 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
2. FINISH SHALL BE POWDER COAT IN STANDARD BLACK COLOR.
3. BIKE RACKS SHALL BE INSTALLED USING THE IN GROUND MOUNT OPTION IN LOCATIONS AS SHOWN ON THE PLAN.
4. LOCATIONS OF BIKE RACKS SHALL BE FIELD ADJUSTED AS REQUIRED BY THE PROJECT PROFESSIONAL PRIOR TO INSTALLATION

BIKE RACK DETAIL-1
NOT TO SCALE

FLOOD VENT CALCULATIONS:

CRAWL SPACE FLOOD STORAGE AREA: 13,875 SF
 SMART VENT CAPACITY: 200 SF
 SMART VENT 2X2 MULTI-FRAME CAPACITY: 800 SF

USE 46 SINGLE VENTS X 200 SF +
 6-2X2 MULTI-FRAME VENTS X 800 SF
 = 14,000 SF > 13,875 SF OK

NOTE: NO BASEMENT IS PROPOSED

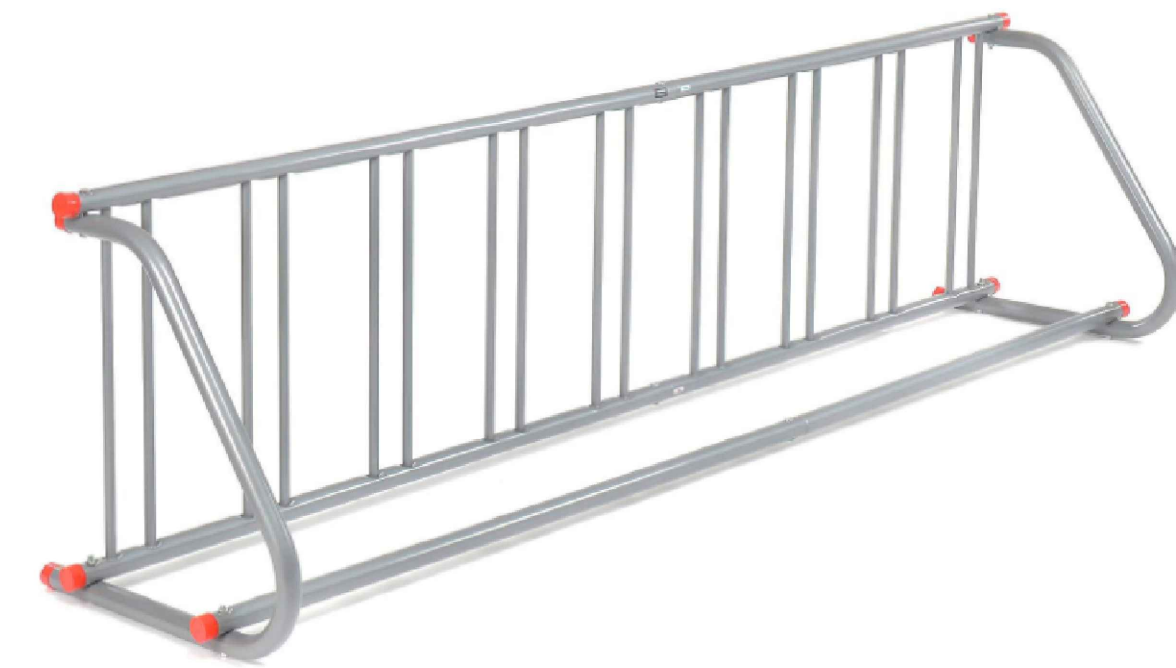
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BAHRAM FARZANEH, PE, PP
 PROFESSIONAL ENGINEER, NJ LIC. NO. 24GE03454800

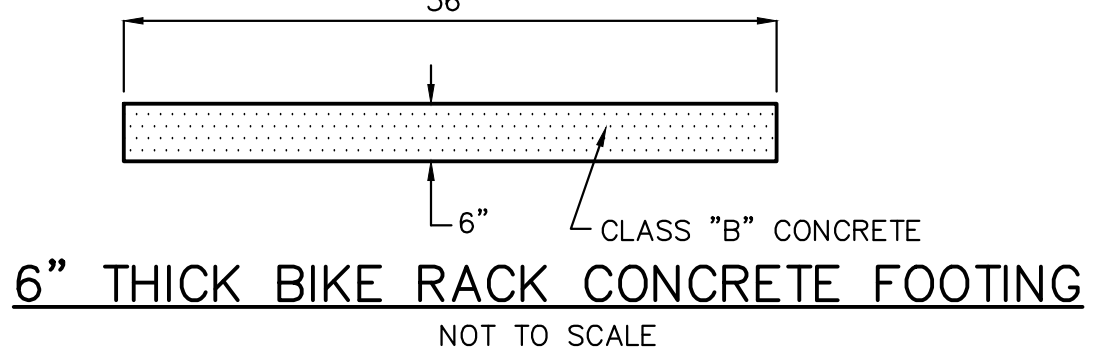
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
2/19/2021	BF	1" = 20'	16753.001
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SP	BF		3 of 15

SITE PLAN - TRACT 1
 FOR
PRELIMINARY AND FINAL SITE PLAN
 FOR
MIXED USE DEVELOPMENT
 BLOCK 478, LOTS 2, 3, 4, 5, AND 6
 BLOCK 483, LOT 18, AND 17.01
 TOWNSHIP OF CRANFORD
 UNION COUNTY NEW JERSEY



BIKE RACK - 2 DETAIL
NOT TO SCALE

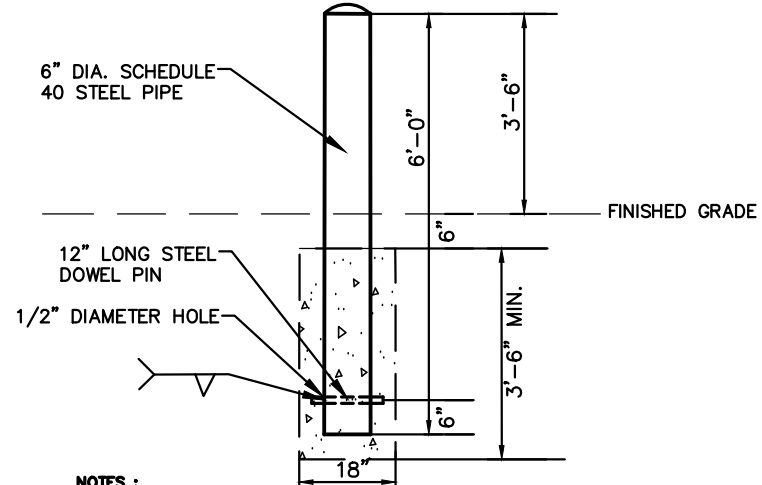
1. BIKE RACK SHALL BE MANUFACTURED BY GLOBAL INDUSTRIES OR APPROVED EQUAL (WWW.GLOBALINDUSTRIES.COM) 1-888-978-7759
2. FINISH SHALL BE POWDER COAT IN STANDARD BLACK COLOR.
3. BIKE RACKS SHALL BE INSTALLED USING THE IN GROUND MOUNT OPTION IN LOCATIONS AS SHOWN ON THE PLAN.
4. LOCATIONS OF BIKE RACKS SHALL BE FIELD ADJUSTED AS REQUIRED BY THE PROJECT PROFESSIONAL PRIOR TO INSTALLATION
5. BIKE RACK TO BE ANCHORED TO 6" THICK CONCRETE FOOTING



CAR COMING KIT
 Wall Mount • 40" X 10" • 2-sided
 PIN: CC400BY-KIT-DL



CAR WARNING KIT
 HTTPS://PASSSIGNS.COM/WARNING-SIGNS/
 CAR-COMING-SIGN OR APPROVED EQUAL
AUDIO VISUAL WARNING SYSTEM
 NOT TO SCALE

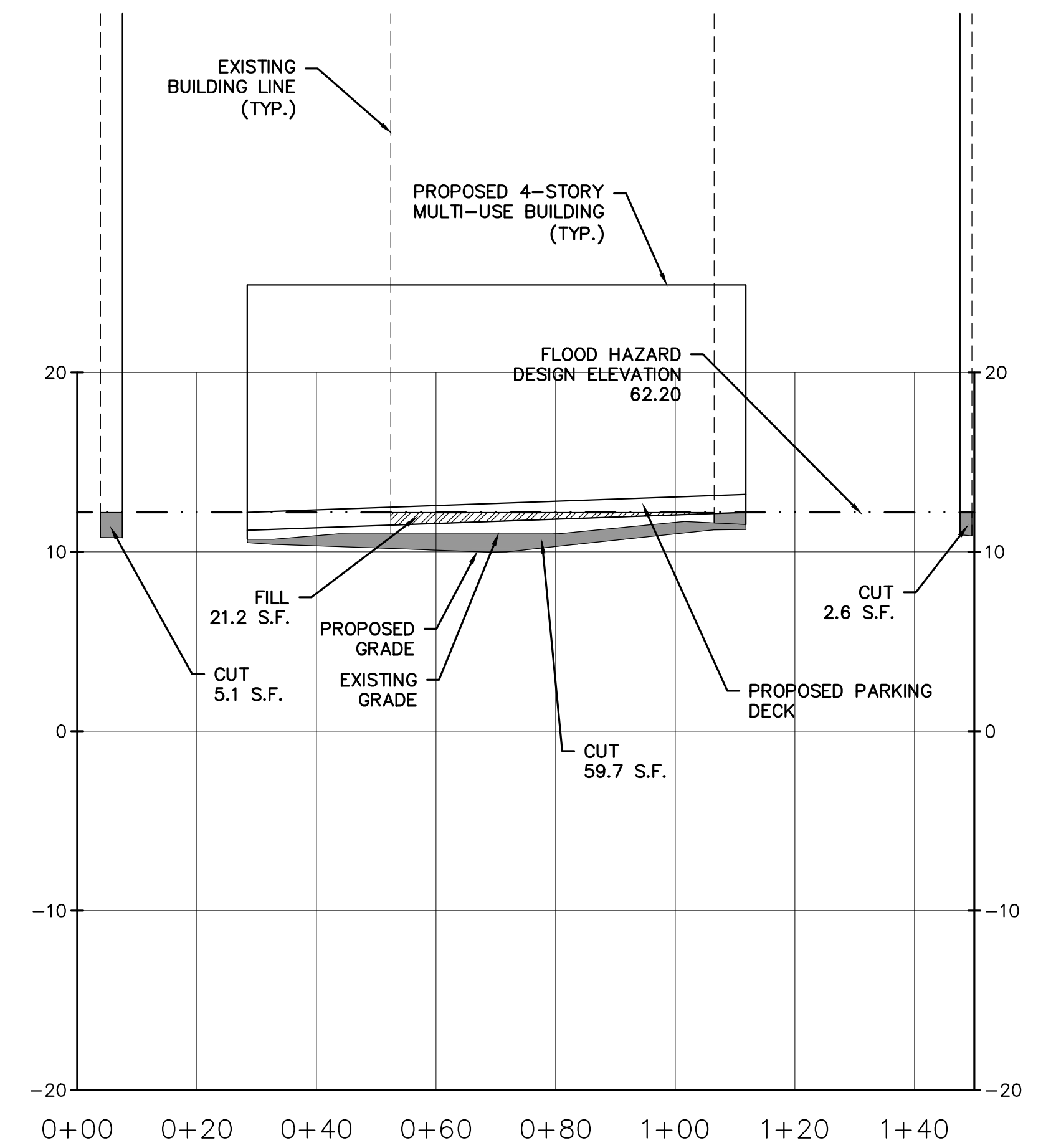
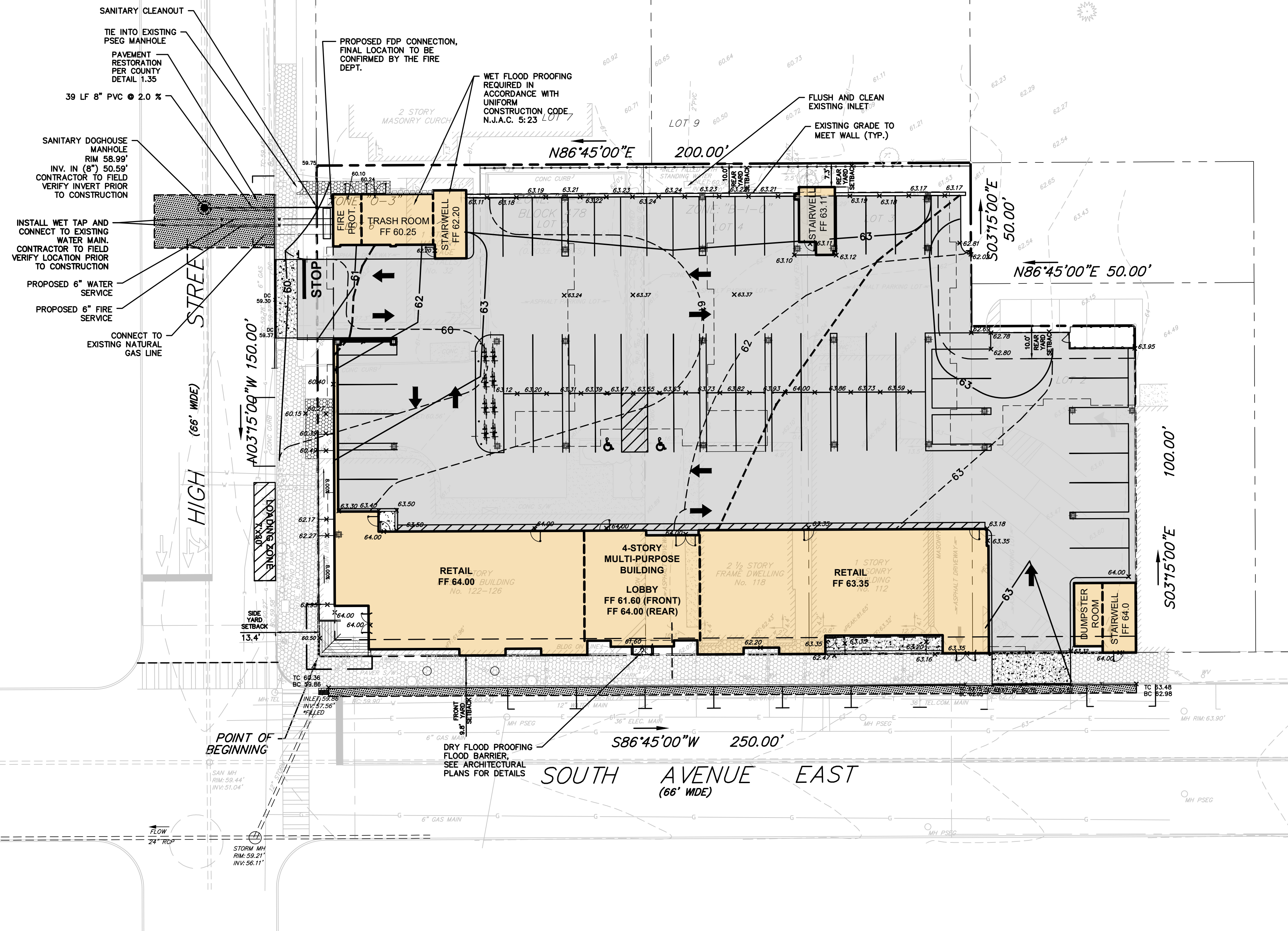


- NOTES:
1. CUSTOM FABRICATED UTILITY PIPE BOLLARD CONSISTING OF LENGTH OF 6" DIA. SCHEDULE 40 STEEL PIPE. PROVIDE AT PARKING LOT AND SERVICE AREA ONLY.
 2. PROVIDE STEEL PIPES 6'-0" LONG OVERALL, WITH TWO 3" DIA. HOLES DRILLED 4" UP FROM THE BOTTOM TO ACCEPT A 1/2" LONG STEEL DOWEL PIN WELDED TO PIPE WALLS.
 3. EXPOSED PORTION OF BOLLARD SHALL BE 3'-0" ABOVE ADJACENT FINISH GRADE.
 4. FILL PIPE COMPLETELY WITH CONCRETE AFTER INSTALLATION.
 5. DO NOT CONCRETE SURFACE ABOVE THE TOP OF THE PIPE. FINISH NEATLY TO PREVENT WATER INFILTRATION.
 6. PROVIDE 10" DIA. 3'-0" DEEP CONCRETE FOOTING AT EACH UTILITY BOLLARD LOCATION. RECESS FOOTING TOP A MINIMUM OF 4" BELOW ADJACENT CONCRETE SIDEWALK OR ASPHALT SURFACES.
 7. APPLY 500 GALVANIZING AND TWO FULL WET SHOP APPLIED COATS OF METAL PRIMER TO INSIDE AND OUTSIDE SURFACES AND ALL EDGES OF PIPED AFTER FABRICATION.
 8. PRIMER BASES OF DESIGN: HYPERLON 6000000 GALVANIZED METAL PRIMER.
 9. APPLY TWO COATS OF OIL-BASED EXTERIOR GLOSS ENAMEL AFTER INSTALLATION AND CONCRETE FINISH.
 10. TOP COAT COLOR: FEDERAL SAFETY YELLOW. ALL LOCATIONS EXCEPT AT HANDICAP PARKING SIGN LOCATIONS WHERE YELLOW TO BE BLUE.

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NJDEP ELECTRONIC APPROVAL STAMP



TYPICAL SECTION THROUGH SITE - CRAWL SPACE FLOOD STORAGE

LEGEND

- PROPOSED CRAWL SPACE/ FLOOD STORAGE CONTOURS
- PROPOSED PARKING DECK CONTOURS

NOTE: NO BASEMENT IS PROPOSED

No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
03	01/26/2023	Revised per Completeness Review dated 01/20/2023		
02	11/07/2022	Revised for Township Submission	MS	BF
01	05/20/2021	Revised per NJDEP Comments	SP	BF



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

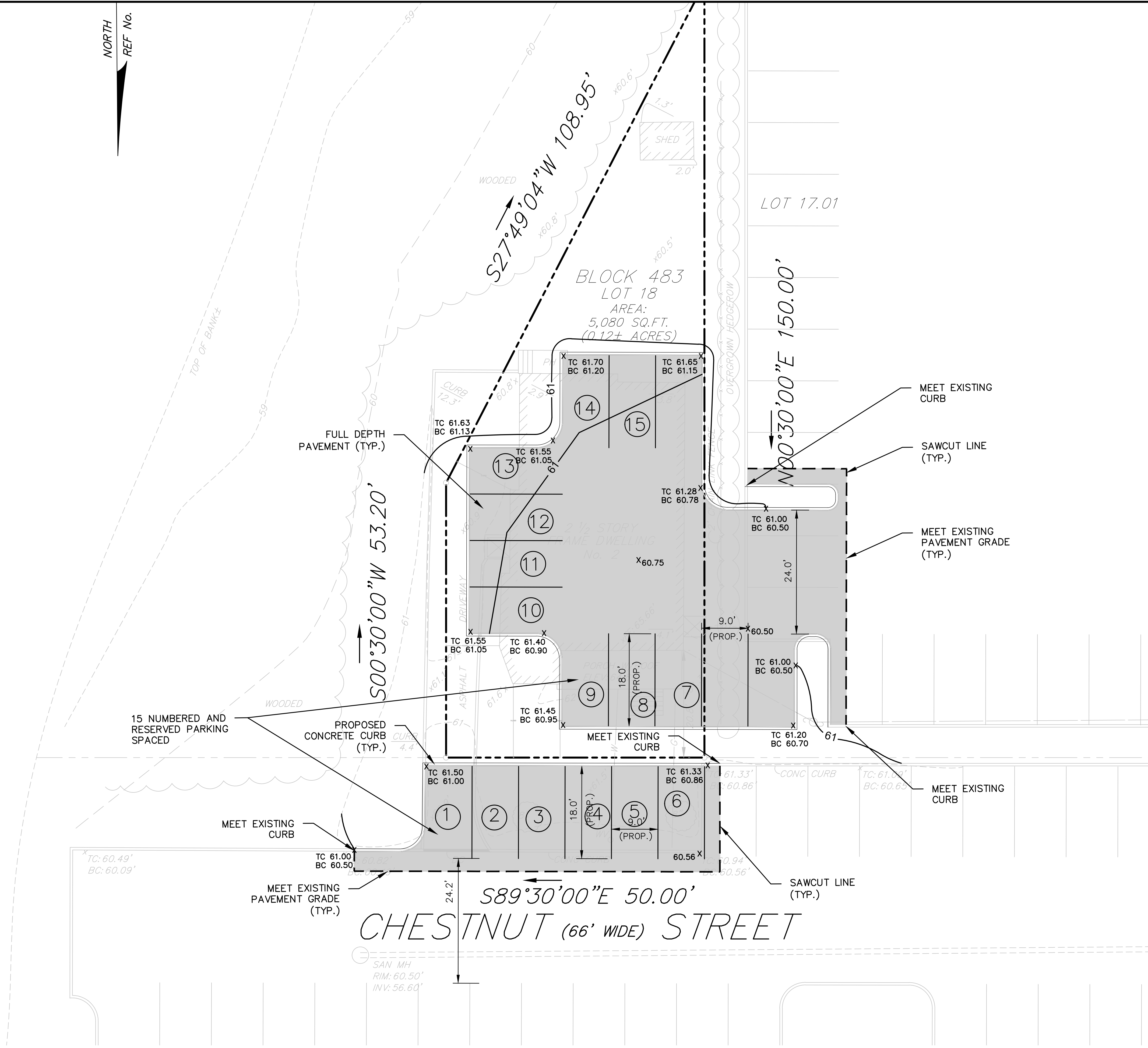
GRADING AND DRAINAGE PLAN - TRACT 1
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
MIXED USE DEVELOPMENT
BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE: 2/19/2021
DESIGNED BY: BF
DRAWN BY: SP
CHECKED BY: BF
SCALE: 1" = 20'
FIELD BOOK
PROJECT NUMBER: 16753.001
SHEET: 4 of 15

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NORTH
REF No.

NJDEP ELECTRONIC APPROVAL STAMP



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No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
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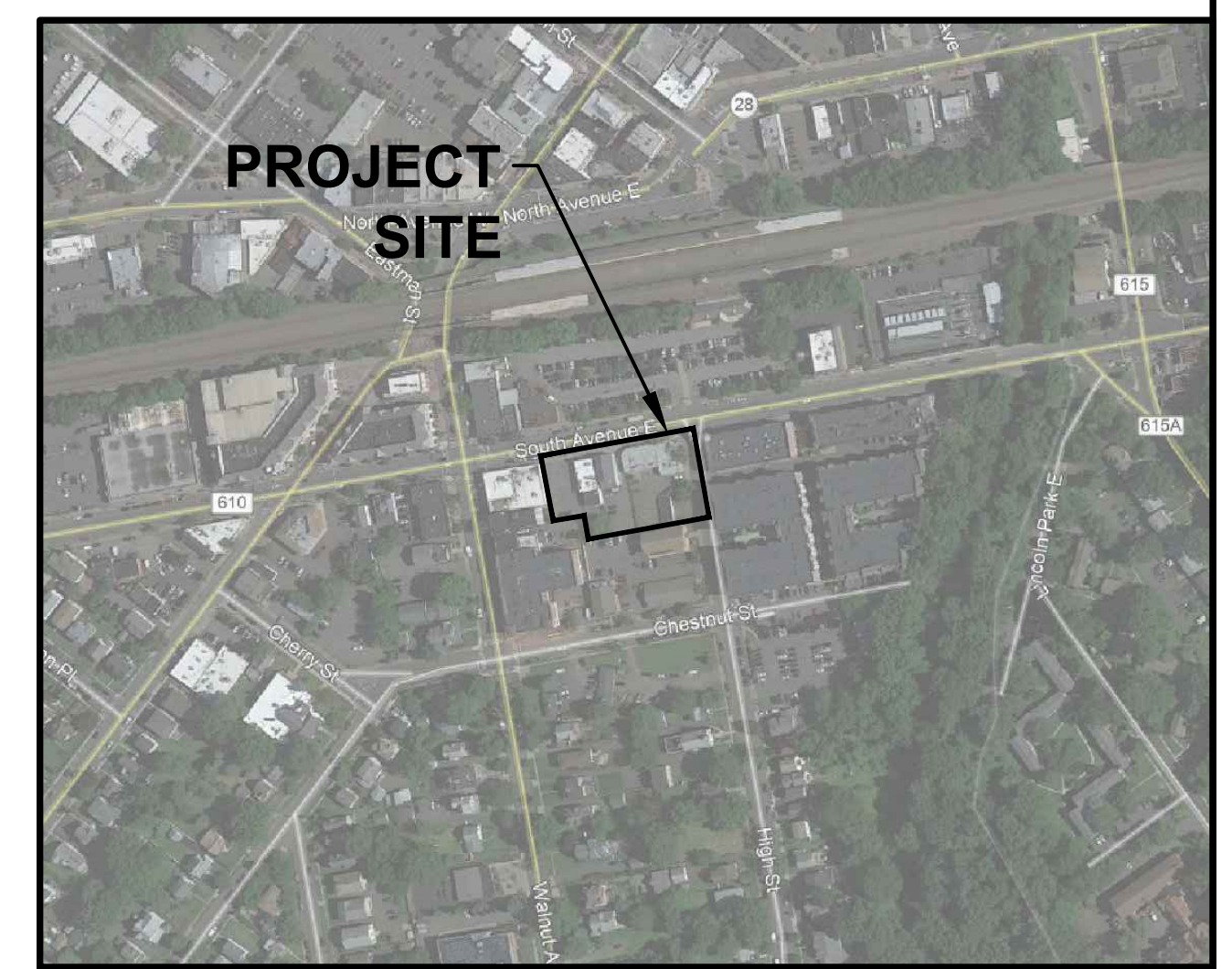
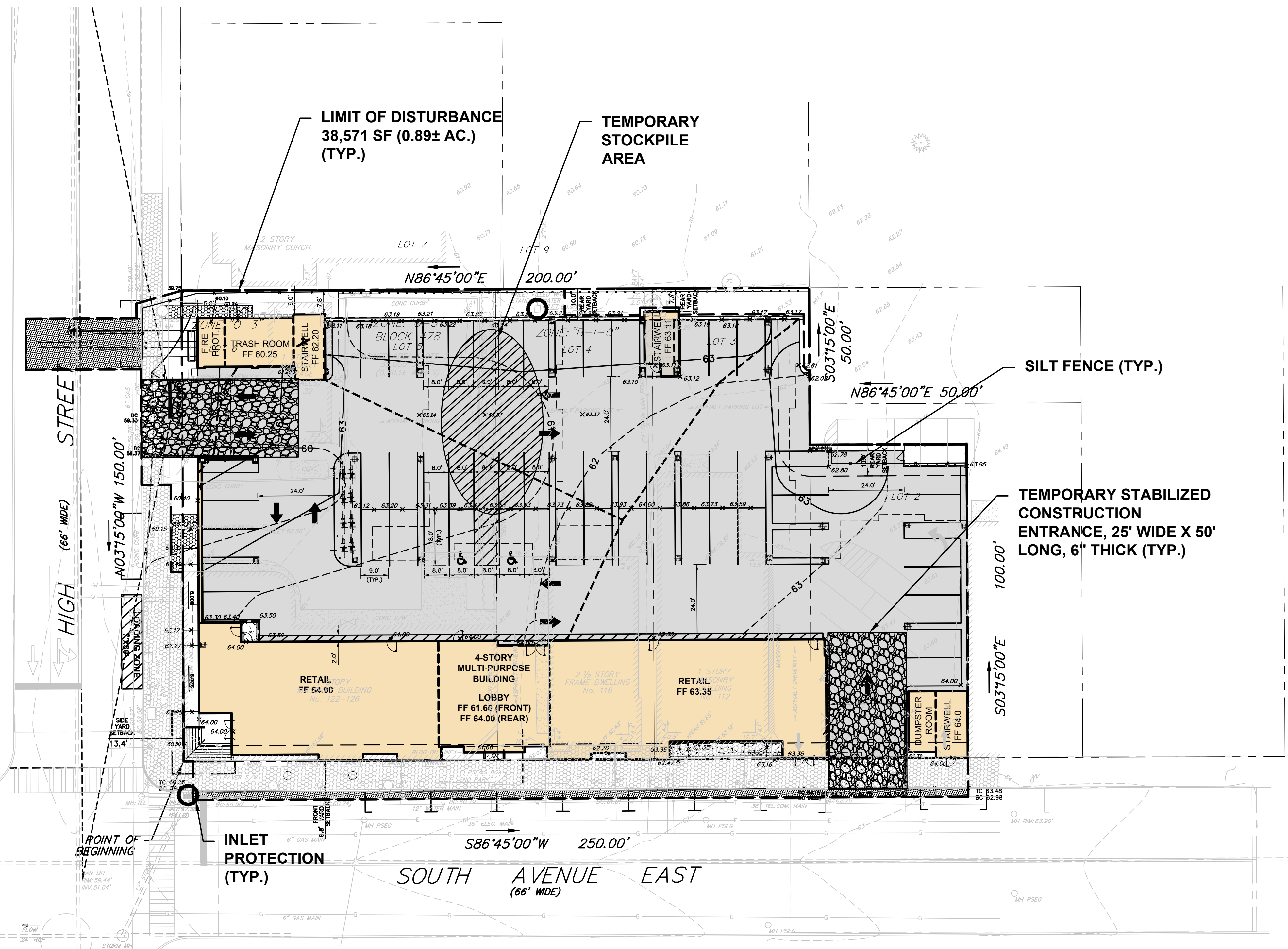
BAHRAM FARZANEH, PE, PP
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE03454800

SITE AND GRADING PLAN - TRACT 2
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
MIXED USE DEVELOPMENT
BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

DATE: 2/19/2021	DESIGNED BY: BF	SCALE: 1" = 10'	PROJECT NUMBER: 16753.001
DRAWN BY: MS	CHECKED BY: BF	FIELD BOOK	SHEET: 5 of 15

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NJDEP ELECTRONIC APPROVAL STAMP



PROJECT SITE

KEY MAP
SCALE: NOT TO SCALE

TOTAL DISTURBANCE AREA
AREA = 38,878 SF ± (0.89 AC ±)

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

SOIL EROSION AND SEDIMENT CONTROL PLAN (1) FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY			
DATE: 2/19/2021	DESIGNED BY: BF	SCALE: 1" = 20'	PROJECT NUMBER: 16753.001
DRAWN BY: SP	CHECKED BY: BF	FIELD BOOK	SHEET: 6 of 15

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SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING.
3. PERMANENT VEGETATION SHALL BE SEED OR SOODED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING...

ACID SOILS NOTES

- IN ORDER TO PROVIDE SUITABLE CONDITIONS FOR GROWTH AND VEGETATION AND TO PREVENT THE ACIDIFYING OF DRAINAGE WATER IN THOSE AREAS UNDERLAIN WITH ACID FORMATIONS WITH A pH BELOW 4.0 THE FOLLOWING REQUIREMENT SHALL BE MET:
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.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

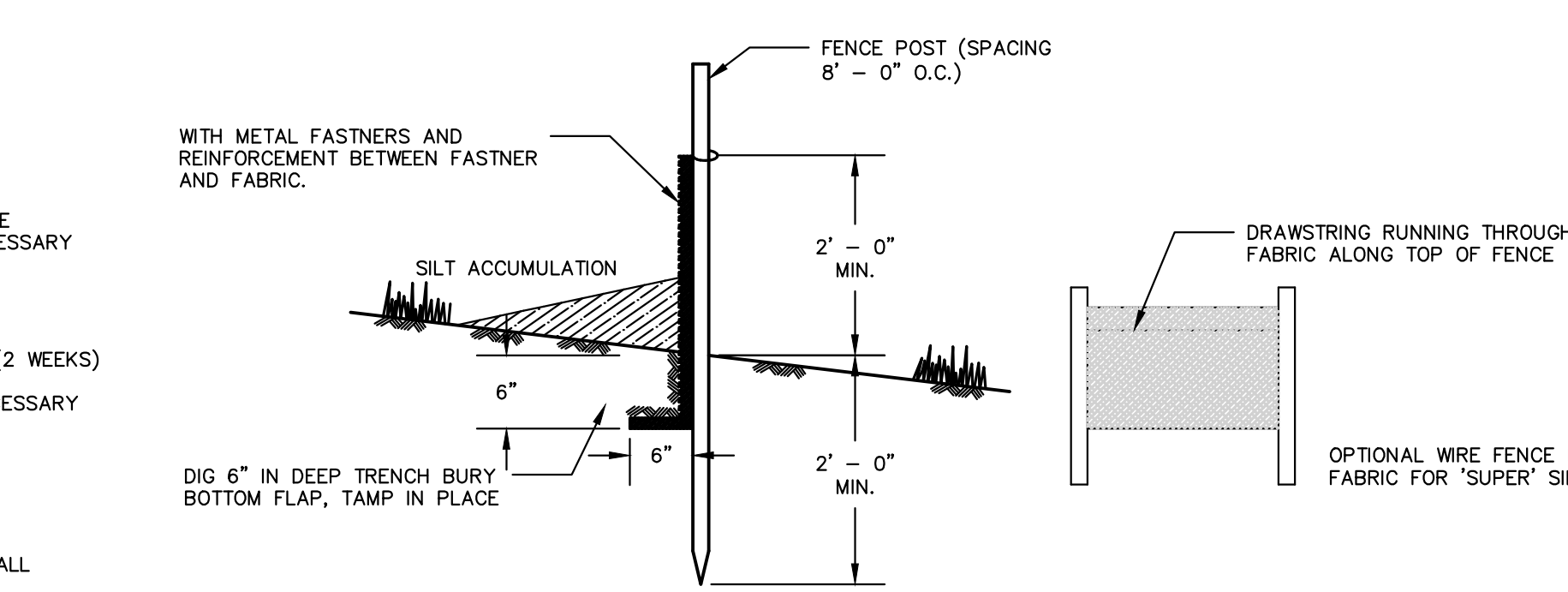
- 1. SITE PREPARATION
A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOILING APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
C. TOPSOIL SHOULD BE HANDLED ONLY WHEN ITS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE...

3. SEEDING

- A. PERMANENT SEEDING SHALL CONSISTING OF THE FOLLOWING MIXES OR APPROVED EQUAL - ACCEPTABLE SEEDING DATES ARE BETWEEN MARCH 1 THRU APRIL 30 AND OPTIMAL SEEDING DATES ARE AUGUST 15 THRU OCTOBER 15:
HARD FESCUE 4.0#/1,000 S.F.
PERENNIAL RYEGRASS 1.0#/1,000 S.F.
KENTUCKY BLUEGRASS 1.0#/1,000 S.F.
PLEASE NOTE THAT OTHER SEED MIXTURES CAN BE USED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

4. MULCHING

- MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS REQUIREMENT.
A. STRAW OR HAY, UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1 1/2 TO 2 TONS ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET)...



SILT FENCE
NOT TO SCALE

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

- 1. SITE PREPARATION
A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION...

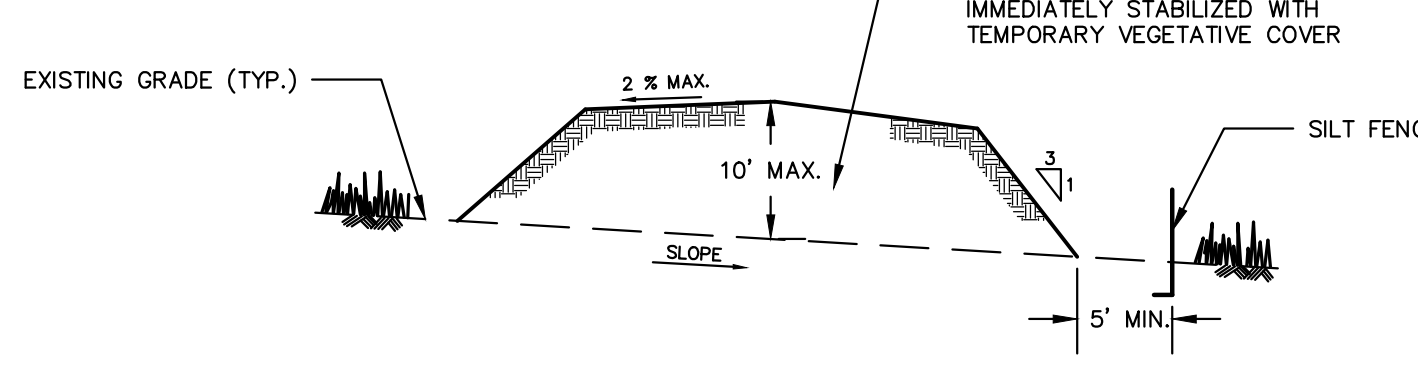
3. SEEDING

- A. TEMPORARY SEEDING SHALL CONSISTING OF THE FOLLOWING SEED SELECTIONS OR APPROVED EQUAL:
COOL SEASON GRASSES
SPRING OATS 2.0#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH
WINTER CEREAL RYE 2.8#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH
WARM SEASON GRASSES
PEARL MILLET 0.5#/1,000 S.F. WITH OPTIMUM SEED DEPTH OF 1.0 INCH
PLEASE NOTE THAT OTHER SEED SELECTIONS CAN BE USED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

STABILIZATION WITH MULCH

METHODS AND MATERIALS

- 1. SITE PREPARATION
A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.
2. PROTECTIVE MATERIALS
A. UN-ROTTED SMALL-GRAIN STRAW, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL...



- NOTES:
1. TOPSOIL STOCKPILES TO BE PLACED AS DETERMINED IN THE FIELD.
2. STOCKPILE NOT TO BE PLACED IN AREA WITH CONCENTRATED FLOW, WETLANDS, EXTREME SLOPE OR WITHIN 100' OF A NATURAL STREAM.

TEMPORARY STOCKPILE
NOT TO SCALE

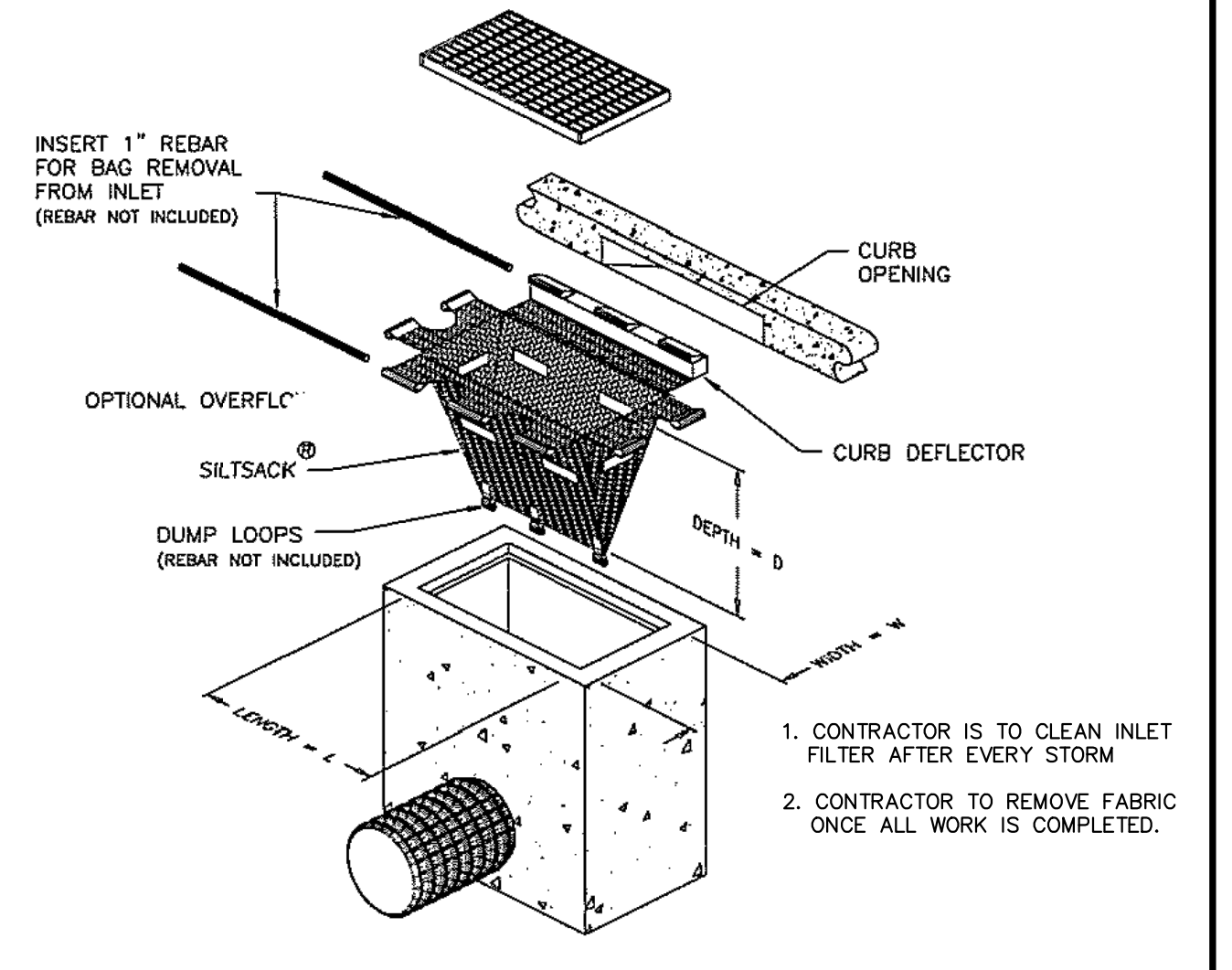
Table with columns: No., Date, Revision, Description, Revised By, Checked By. Includes entries for DRC Meeting, Completeness Review, and Township Submission.

FPA FRENCH & PARRELLO ASSOCIATES logo and contact information: 1800 Route 34, Suite 101, Wall, New Jersey 07719.

SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT. BLOCK 478, LOTS 2, 3, 4, 5, AND 6. BLOCK 483, LOT 18, 19, AND 17.01.

BAHRAM FARZANEH, PE, PP PROFESSIONAL ENGINEER, NJ LIC. NO. 24GE0345800. DATE: 2/19/2021. DESIGNED BY: BF. SCALE: AS SHOWN. PROJECT NUMBER: 16753.001.

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INLET PROTECTION DETAIL
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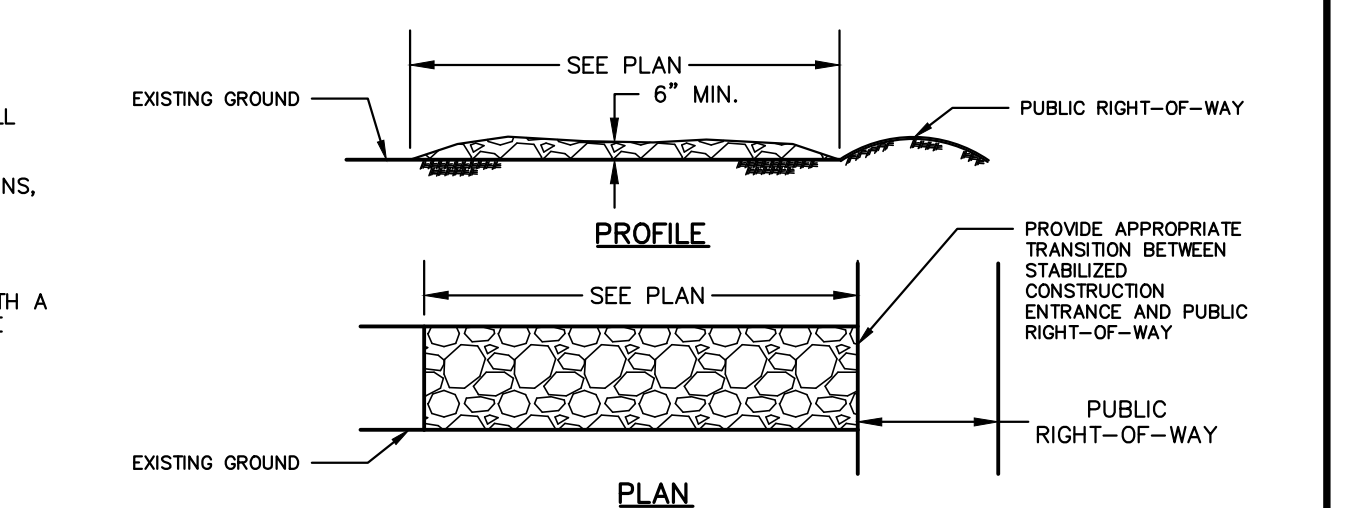
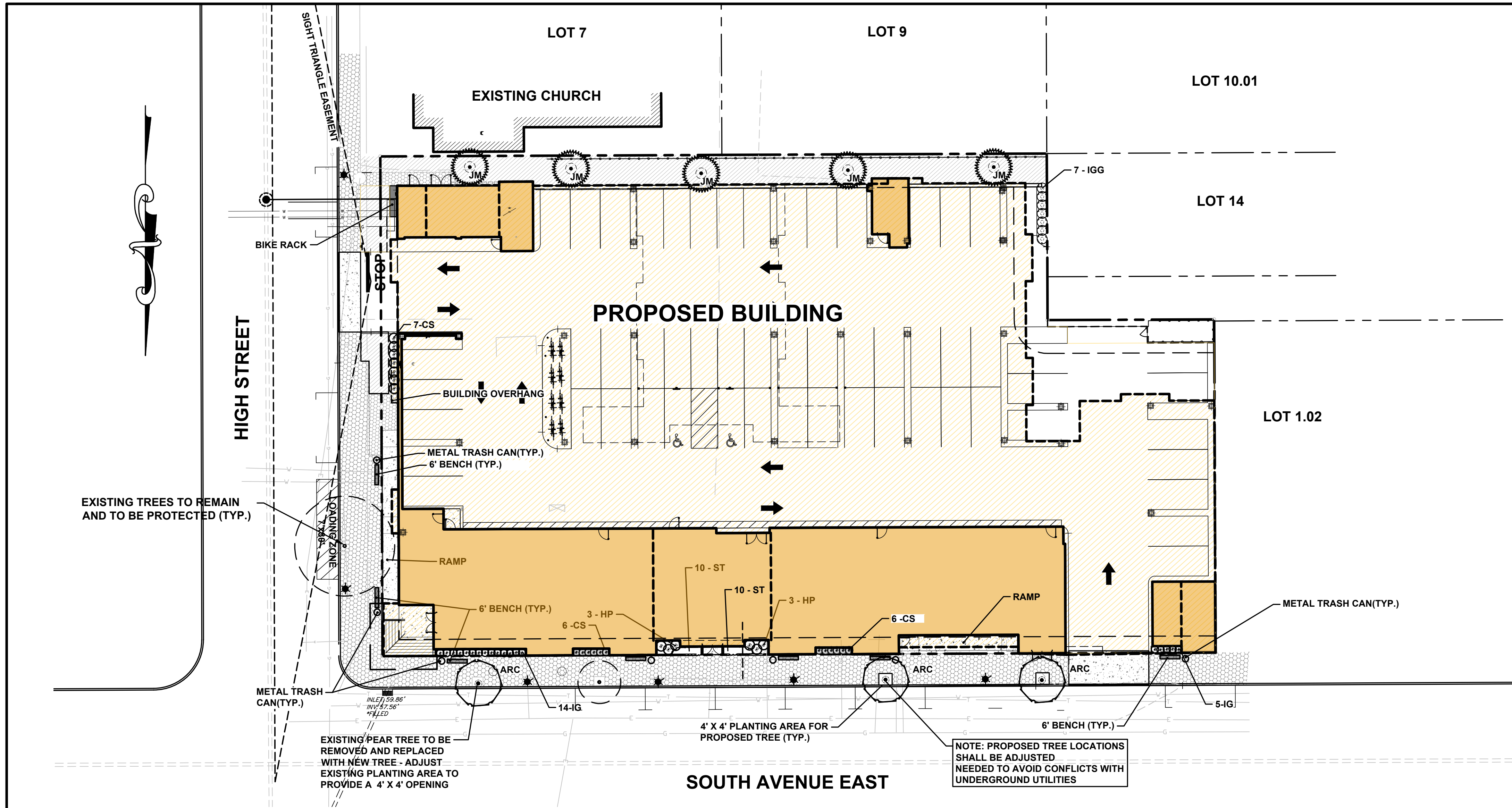


Table with columns: PERCENT SLOPE OF ROADWAY, LENGTH OF STONE REQUIRED, COURSE GRAINED SOILS, FINE GRAINED SOILS. Includes rows for 0 to 2% slope and 2% to 5% slope.

- NOTES:
1. STONE SIZE - USE ASTM C-33, SIZE NO. 2 (2 1/4 TO 1 1/2 IN.) OR 3 (2 TO 1 1/4 IN.). USE CLEAN CRUSHED ANGULAR STONES. CRUSHED CONCRETE OF SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.
2. LENGTH - 50 FEET MINIMUM WHERE SOILS ARE COURSE GRAINED (SAND OR GRAVEL), OR 100 FEET MINIMUM WHERE SOILS ARE FINE GRAINED (CLAYS OR SILTS)...

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



LEGEND

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

NJDEP ELECTRONIC APPROVAL STAMP

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 CONFORMANCE 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 BEAR THE SAME RELATION 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 FRABLE, 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 TIE 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 CROUCH APART. GUY WIRES TO SECOND BRANCH (MINIMUM ONE-THIRD HEIGHT OF TREE), USE THREE GUY 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 VOLCANOES 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 19-6-4 (50% ORGANIC) COMPOSITION, APPLIED AT 3 L.B. 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.
28. ALL TREE "GATOR" IRRIGATION BAGS SHALL BE MAINTAINED FOR SIX MONTHS AND THEN REMOVED.

PLANT LIST

TREES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
ARC	N*	3	ACER RUBRUM COLUMNARE "ARMSTRONG"	ARMSTRONG COLUMNAR RED MAPLE	3" CAL.	B&B	40' HEIGHT, 15' SPREAD	COLUMNAR VERSION OF RED MAPLE, SINGLE TRUNK ONLY
JM	N#&	5	JUNIPERUS SCOPULORUM "MOONGLOW"	MOONGLOW JUNIPER	8'-10' HEIGHT	B&B	20' HEIGHT, 8'-10' SPREAD	BLUE GREEN FOLIAGE, EVERGREEN, NARROW HABIT
SHRUBS AND PERENNIALS AND GRASSES	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
CS	N*	8	ARONIA MELANOCARPA LOW SCAPE MOUND	LOW SCAPE MOUND CHOKEBERRY	8' HEIGHT	1 GALLON CONT	18"-24" HEIGHT AND SPREAD	COMPACT DECIDUOUS SHRUB, WHITE FLOWERS IN SPRING
HP	N&	6	HYDRANGEA QUERCIFOLIA "RUBY SLIPPERS"	RUBY SLIPPERS OAKLEAF HYDRANGEA	1.5' HT.	3 GALLON CONT	3'-4' HEIGHT AND SPREAD	DECIDUOUS SHRUB, WHITE FLOWERS SUMMER
IG	N#&	19	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	2'-3' HEIGHT	B & B	4' HEIGHT AND SPREAD	EVERGREEN SHRUB, COMPACT FORM
IGG	N#&	18	ILEX GLABRA	INKBERRY HOLLY	2'-3' HEIGHT	B & B	6"-8" HEIGHT AND SPREAD	EVERGREEN SHRUB
ST	N#&	20	SEDUM TERNATUM	THREE LEAF STONECROP	2" HEIGHT	1 GAL. CONT.	6"-8" HEIGHT AND SPREAD	SUCCULENT TRAILING GROUNDCOVER, WHITE FLOWERS, JUNE

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://NJAES.RUTGERS.EDU)

SODDING SPECIFICATIONS

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. THE SODDING WILL BE IN ACCORDANCE WITH UNION 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 SEED CO. (ERNSTSEED.COM) ATHLETIC FIELD MIXTURE #ERNMX-106 OR APPROVED EQUAL. SOD SHALL BE INSTALLED DURING THE GROWING SEASON ONLY.
- 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.

LANDSCAPE PLAN UTILITY NOTE:

DO NOT INSTALL PROPOSED PLANT MATERIAL DIRECTLY ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST MATERIAL AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.

THIS PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY.

No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
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01	05/20/2021	Revised per NJDEP Comments	SP	BF



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

LANDSCAPING PLAN - TRACT 1
 FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT
 BLOCK 478, LOTS 2, 3, 4, 5, AND 6
 BLOCK 483, LOT 18, AND LOT 10.1
 TOWNSHIP OF CRANFORD
 UNION COUNTY NEW JERSEY

DATE: 2/19/2021
 DESIGNED BY: SRB
 DRAWN BY: SRB

SCALE: 1"=20'
 CHECKED BY: BF
 FIELD BOOK

PROJECT NUMBER: 16753.001
 SHEET: 9 of 15

C:\Bk\16700\16753 - South Avenue East, Cranford\CADD\DWG\16753.001 - LA.dwg LA

NJDEP ELECTRONIC APPROVAL STAMP

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 BEAR THE SAME RELATION 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. 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.
10. CUT AND LOOSEN SISAL HEMP CHOKIE TIE AROUND SHRUBS. 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.
11. 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.
12. PLANTS PLANTED IN ROWS SHALL BE MATCHED SPECIMENS AND BE UNIFORM IN SIZE AND FORM.
13. 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.
14. 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.
15. 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 GRASSSED AREAS. MULCH SHALL BE FINE GRADED FOR A PLEASING APPEARANCE. THE USE OF MARBLE OR PINE BARK CHIPS IS PROHIBITED. MULCH VOLCANOES ARE NOT PERMITTED.
16. 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.
17. 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.
18. THE CONTRACTOR SHALL REMOVE ALL DAMAGED BRANCHES AND NURSERY TAGS AT THE TIME OF INSTALLATION.
19. 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.
20. 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.
21. ALL GROUPED SHRUBS SHALL BE MULCHED TOGETHER TO FORM ONE CONTINUOUS PLANTING BED.
22. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR PERIOD OF ONE YEAR FROM THE TIME OF PLANTING.

PLANT LIST

SHRUBS	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER TYPE	MATURE SIZE	REMARKS
IG	N#&	28	ILEX GLABRA	INKBERRY HOLLY	2'-3' HEIGHT	B & B	6'-8' HEIGHT AND SPREAD	EVERGREEN SHRUB

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://NJAES.RUTGERS.EDU)

SOD NOTES:

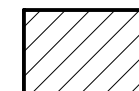


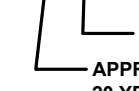

THE CONTRACTOR WILL BE RESPONSIBLE FOR RE-ESTABLISHING ALL AREAS DISTURBED BY CONSTRUCTION. SEEDING WILL BE DONE IN ACCORDANCE WITH UNION COUNTY SOIL CONSERVATION DISTRICT STANDARDS. SPECIFIC SEED TYPES SHALL BE USED AS FOLLOWS:

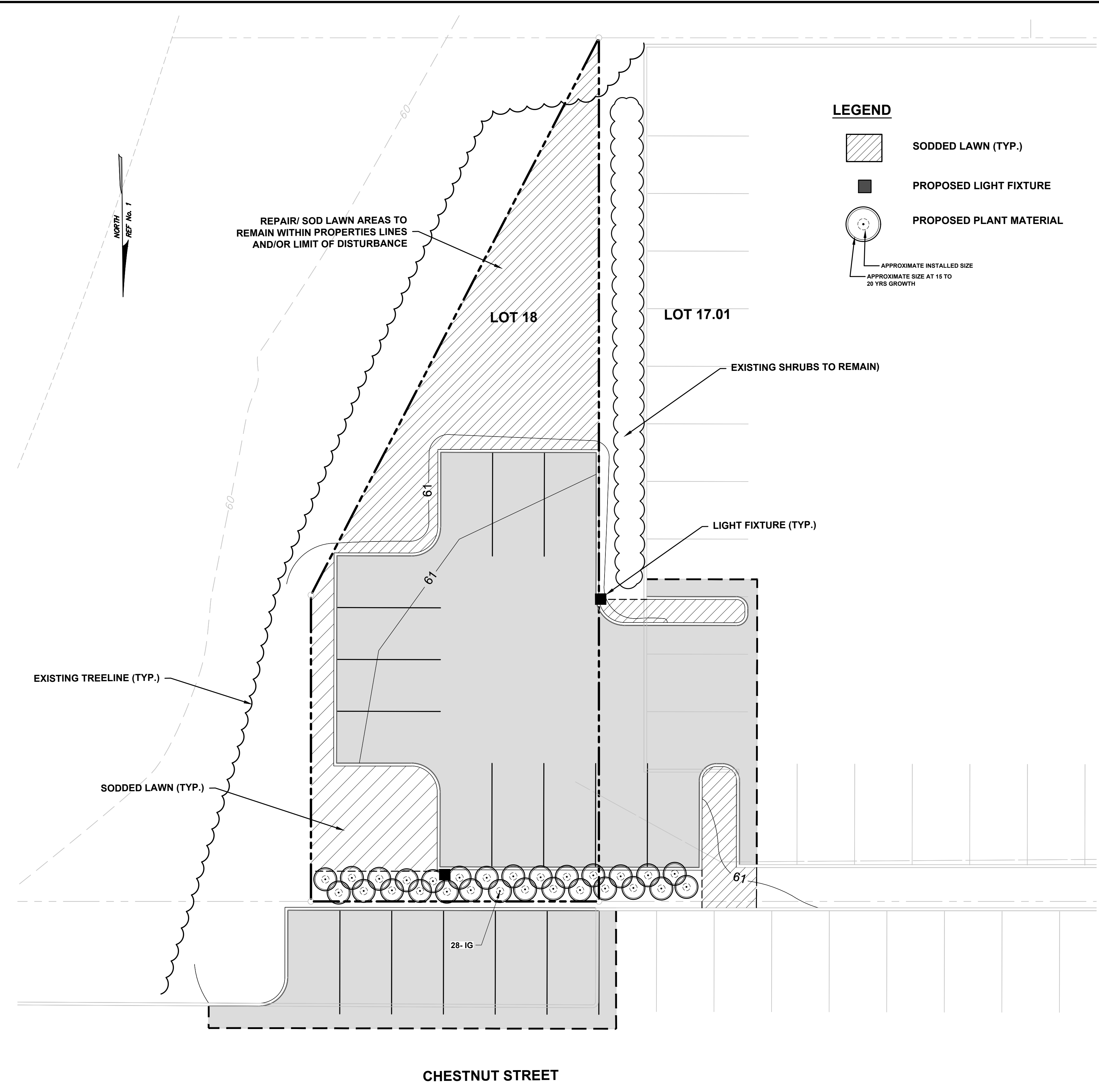
- ALL DISTURBED AREAS SHALL BE SODDED AS SHOWN ON THE LANDSCAPE PLAN WITH ERNST SEED CO. (ERNSTSEED.COM) ATHLETIC FIELD MIXTURE #ERNMX-106 OR APPROVED EQUAL. SOD SHALL BE INSTALLED DURING THE GROWING SEASON ONLY.
- SLOPED AREAS 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURE AN EROSION CONTROL MATTING BY BONTERRA AMERICA, PINELANDS NURSERIES, COLUMBUS, NJ, MODEL # CS2 OR APPROVED EQUAL.

LANDSCAPE PLAN UTILITY NOTE:

DO NOT INSTALL PROPOSED PLANT MATERIAL DIRECTLY ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST MATERIAL AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.

LEGEND

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



THIS PLAN SHALL BE USED FOR LANDSCAPING PURPOSES ONLY.

No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
03	01/26/2023	Revised per Completeness Review dated 01/20/2023		
02	11/07/2022	Revised for Township Submission	MS	BF
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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 MIXED USE DEVELOPMENT BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY			
DATE: 2/19/2021	DESIGNED BY: JB	SCALE: 1" = 10'	PROJECT NUMBER: 16753.001
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G:\16K\16700\16753 - South Avenue East, Cranford\CAD\DWG\16753.001 - LA - SMALL SITE.dwg la-small



METAL BENCH DETAIL

NOT TO SCALE

NOTES:

- 6' LONG METAL BENCH SHALL BE MANUFACTURED THOMAS STEELE, (THOMAS-STEEL.COM) MODEL "CARNIVAL", 6 FT BENCH #CRB-6 WITH BACK AND ARMS
- POWDER COATED COLOR FINISH TO BE SELECTED BY OWNER FROM STANDARD AVAILABLE COLORS
- BENCH SHALL HAVE PREDRILLED MOUNTING HOLES FOR SURFACE MOUNT



METAL TRASH RECEPTACLE DETAIL

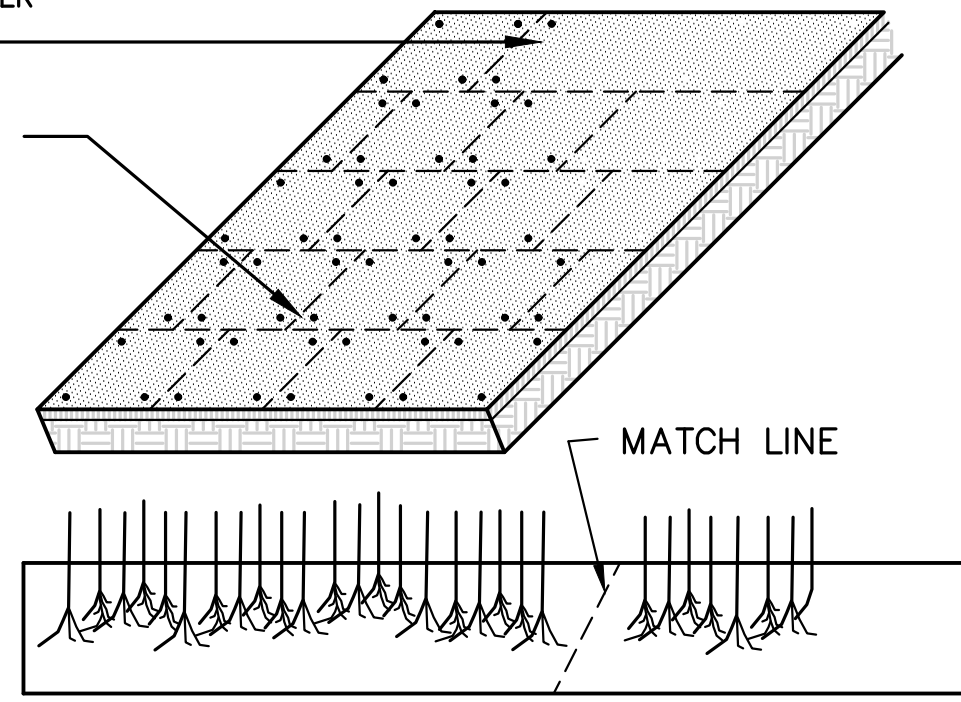
NOT TO SCALE

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.

PEG ON SLOPES GREATER THAN 3 : 1

STAGGERED SOD PANEL JOINTS



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 (6 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.

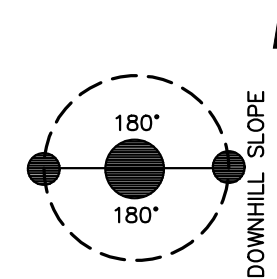
SOD INSTALLATION DETAIL

NOT TO SCALE

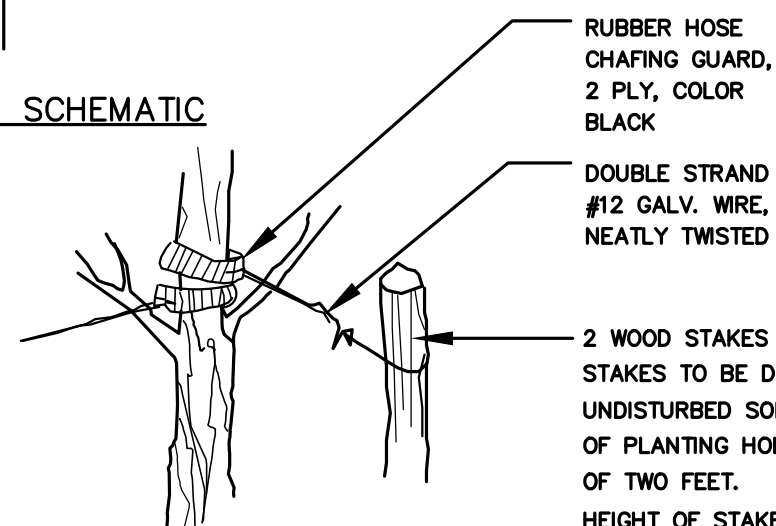
SODDING SPECIFICATIONS

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:

- 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.
- 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.



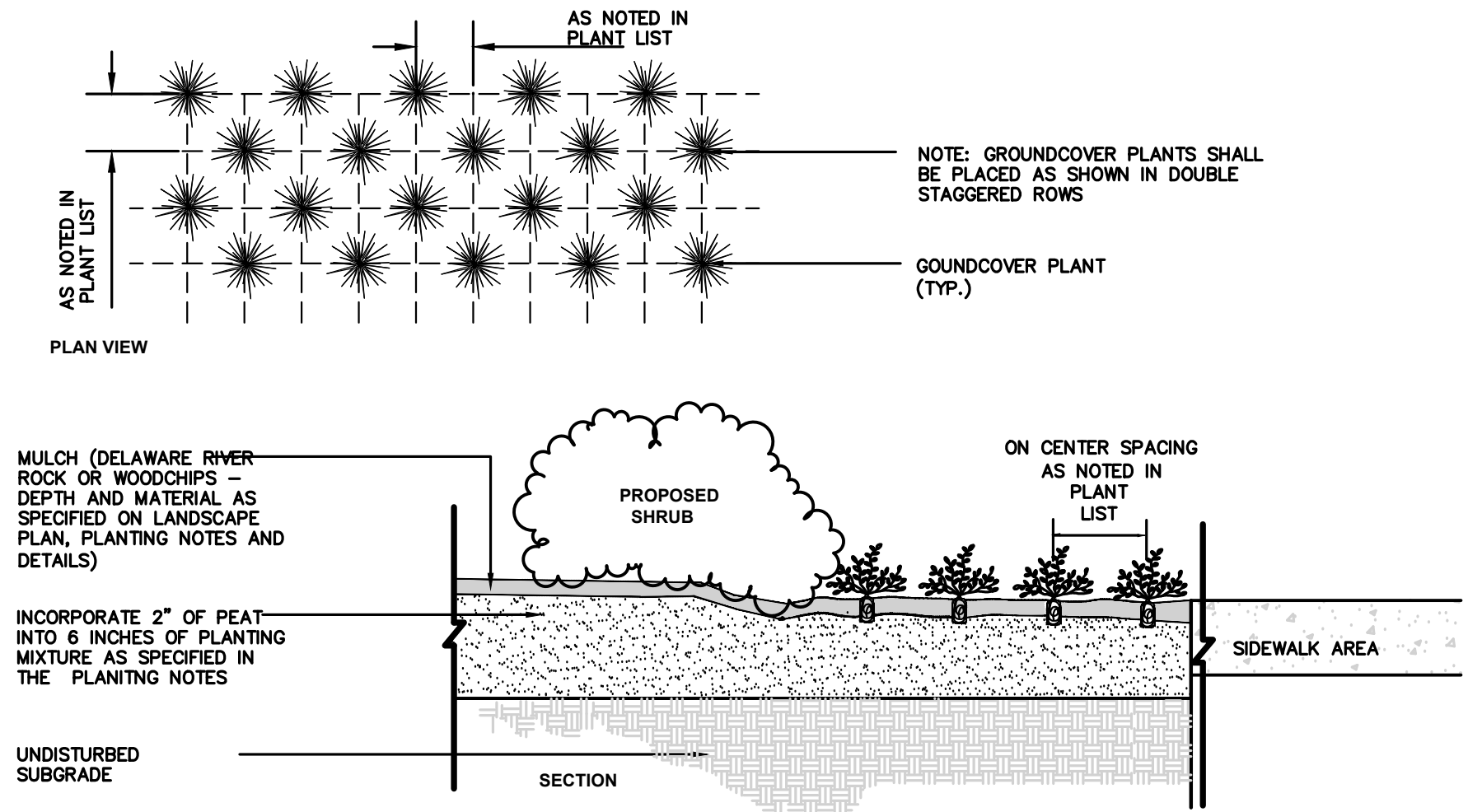
STAKING PLAN SCHEMATIC



STAKING DETAIL

TREE STAKING DETAIL

NOT TO SCALE



GROUNDCOVER PLANTING 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- BAGS TO BE REMOVED AFTER 6 MONTHS

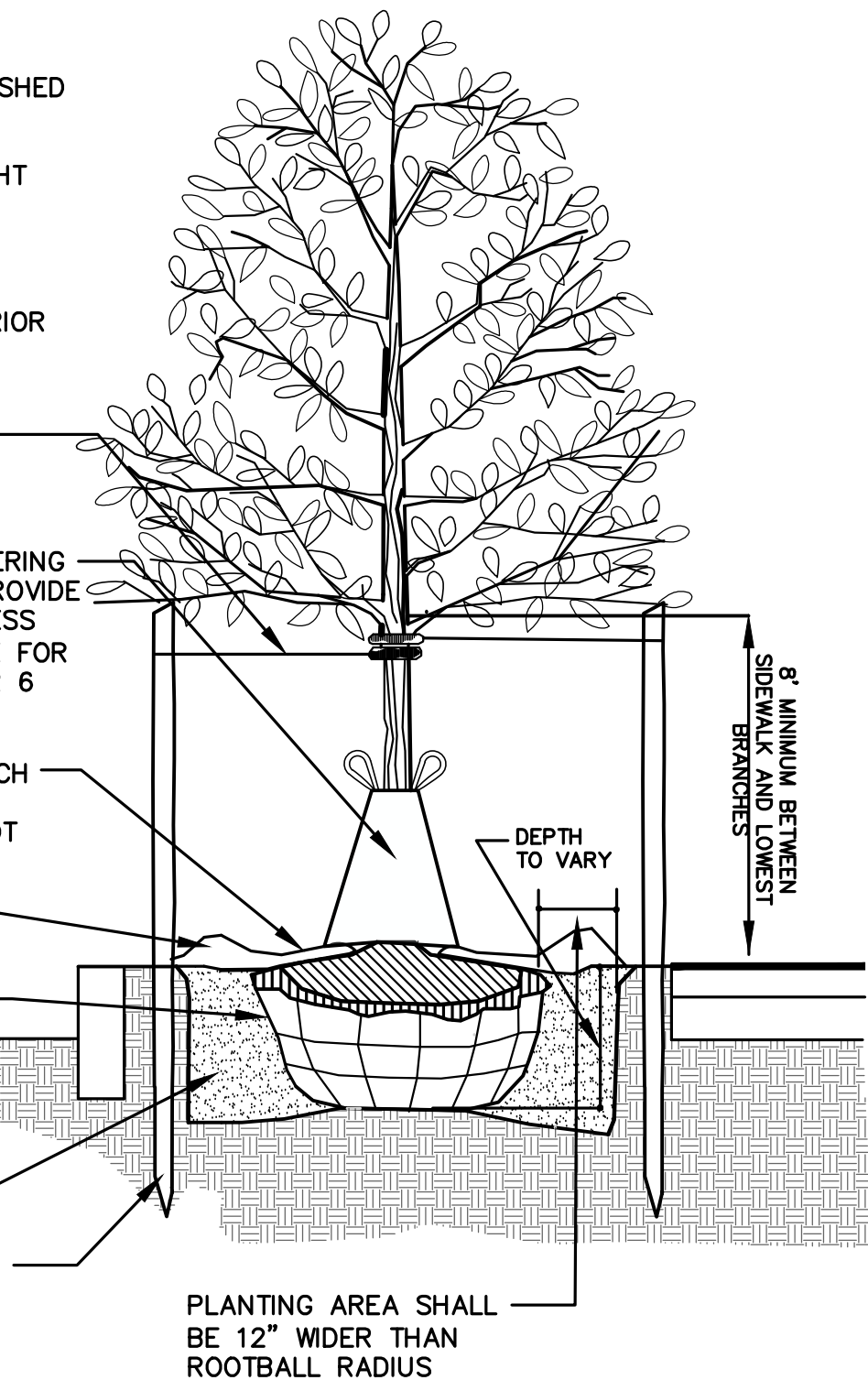
4" SHREDDED HARDWOOD MULCH- KEEP MULCH AWAY FROM ROOT COLLAR AS DESCRIBED IN PLANTING NOTES. MULCH VOLCANOES ARE NOT PERMITTED

6" SOIL MOUND FOR FOR WATER RETENTION

REMOVE ALL PLASTIC MATERIAL, BURLAP SYNTHETIC BURLAP, STRING OR CONTAINERS AT THE TIME OF PLANTING

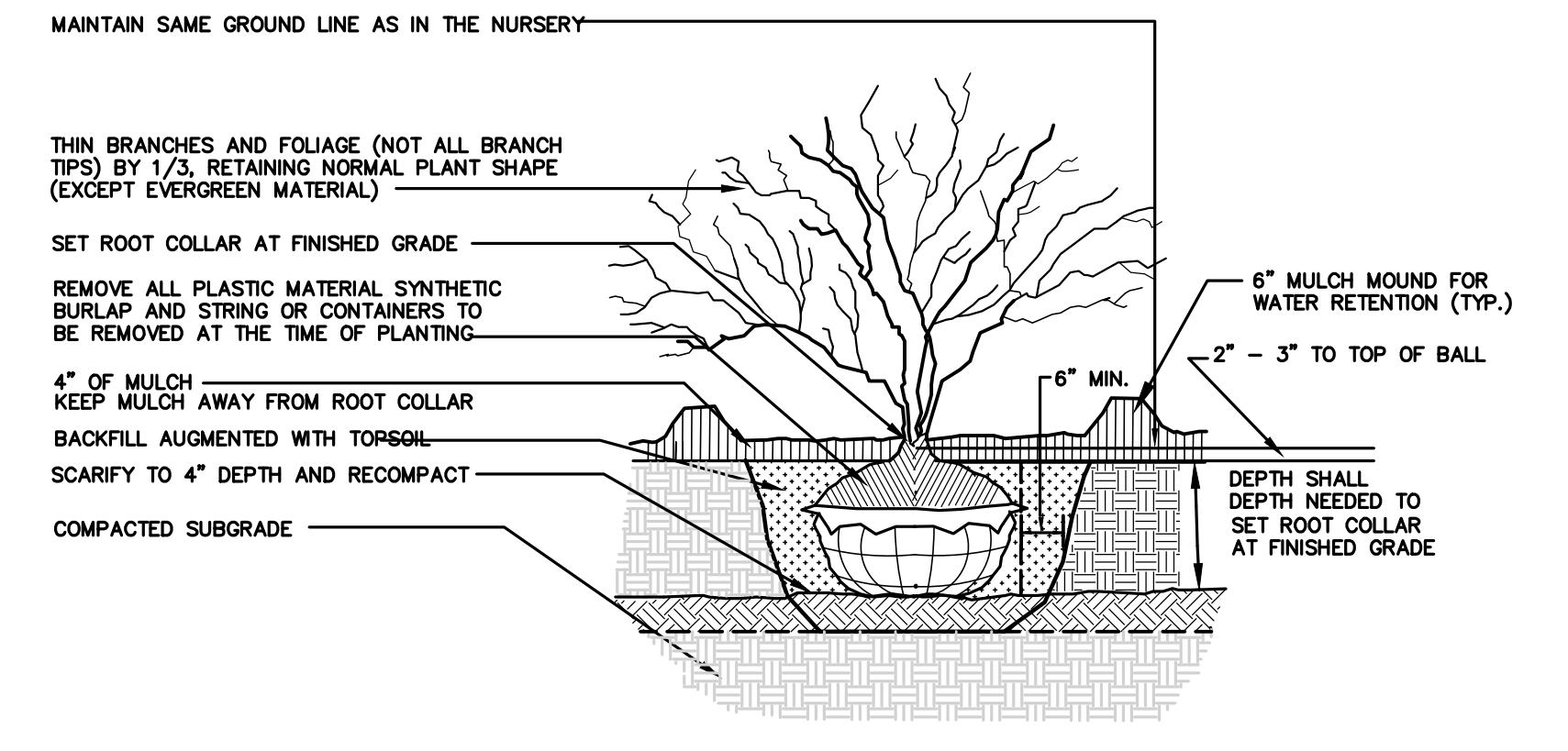
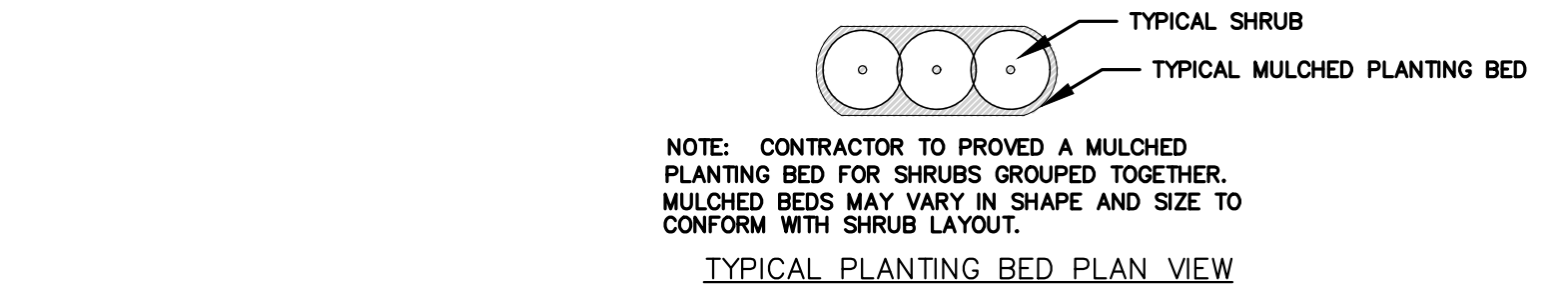
BACKFILL AUGMENTED WITH TOPSOIL

STAKES TO EXTEND 18" BELOW TREE PIT IN UNDISTURBED GROUND



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

C:\16K\16700\16753 - South Avenue East, Cranford\CADD\DWG\16753.001 - LA.dwg LA NOTES

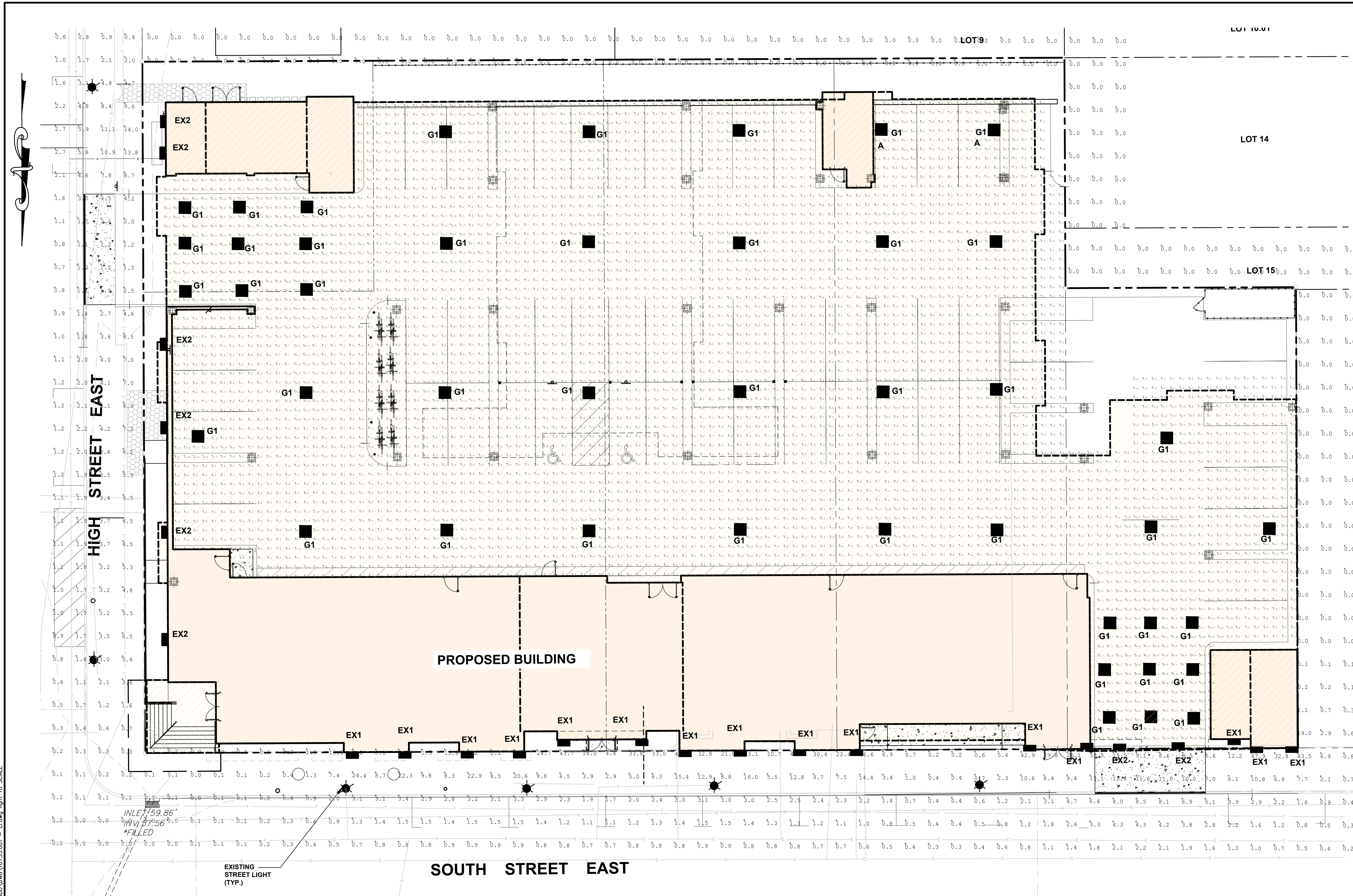
NJDEP ELECTRONIC APPROVAL STAMP

No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
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SARAH REBAR BISAHA, LLA, PP
LICENSED LANDSCAPE ARCHITECT NJ LIC NO AS000639

LANDSCAPING DETAILS FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT			
BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY			
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
2/19/2021	SRB		16753.001
DRAWN BY:	CHECKED BY:	FIELD BOOK:	SHEET:
SRB	BF		11 of 15



NJDEP ELECTRONIC APPROVAL STAMP



T219LED
BI-DIRECTIONAL LED CYLINDER WALL LUMINAIRE
EX-1 BI-DIRECTIONAL CYLINDER (BUILDING FACADES)
NOT TO SCALE



EX-2 SCONCE (OVER RAMPS)
NOT TO SCALE



G-1 GARAGE CEILING MOUNTED FIXTURES
NOT TO SCALE

LIGHTING NOTES

1. LIGHTING LEVELS SHOWN ON THIS PLAN DO NOT INCLUDE ANY CONTRIBUTIONS FROM EXISTING STREET LIGHT FIXTURES.
2. FIXTURES ARE CALCULATED WITH 0.9 LIGHT LOSS FACTOR. INITIAL FC LEVELS WILL BE APPROXIMATELY 10% HIGHER.
3. FIXTURES ARE DIMMABLE WITH 0-10V CONTROLS.

Luminaire Schedule									
SYMBOL	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
■	8	EX-2	Single	Type 3 Wall Sconce	PIL_SHIELD_PLUS 070442	0.950	3072	27	216
■	15	EX-1	Single	Dir Ind Wall Cylinder	T219LED-BL-30-30-XXX-40-G2	0.950	5782	57.8	867
■	44	G1	Single	LED GARAGE LIGHT	STONCO - GCR60-SCT-G1-SM-5-10-BZ-	0.780	5977	37.4159	1646.3

Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min		
BUILDING EXTERIOR_Planar	ILLUMINANCE	Fc	3.09	49.3	0.0	N.A.	N.A.		
GARAGE_Floor	ILLUMINANCE	Fc	8.79	40.8	1.3	6.76	31.38		

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SCALE IN FEET

FPA
FRENCH & PARRELLO ASSOCIATES
New Jersey • New York • Pennsylvania • Georgia

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

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

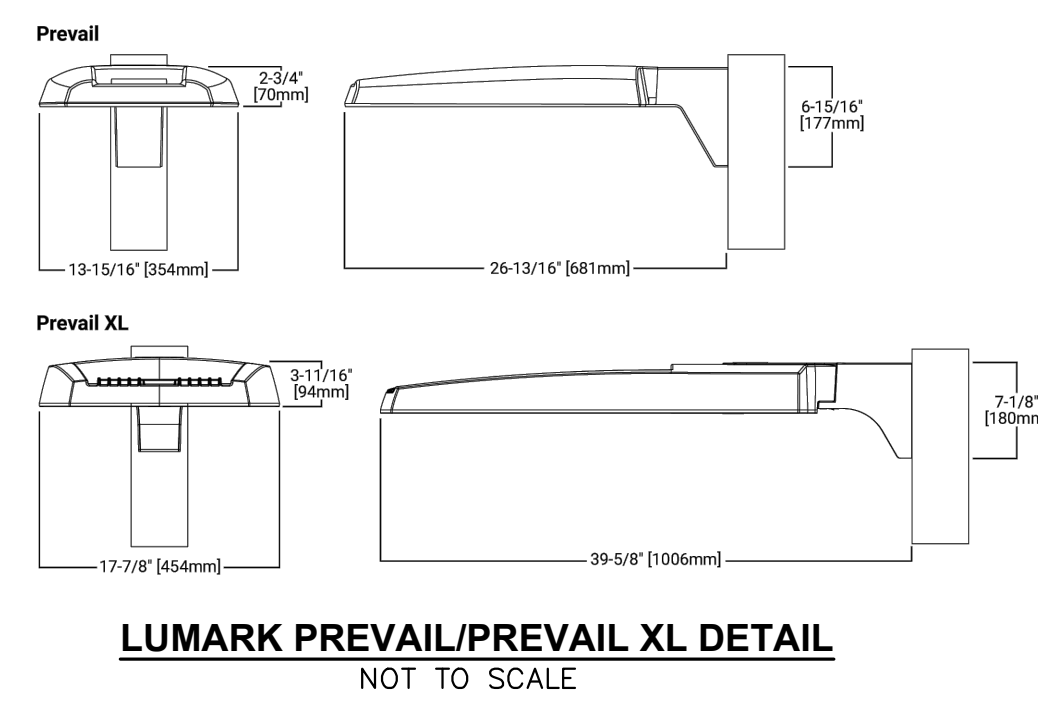
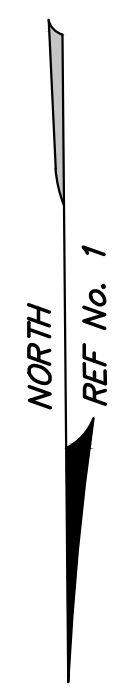
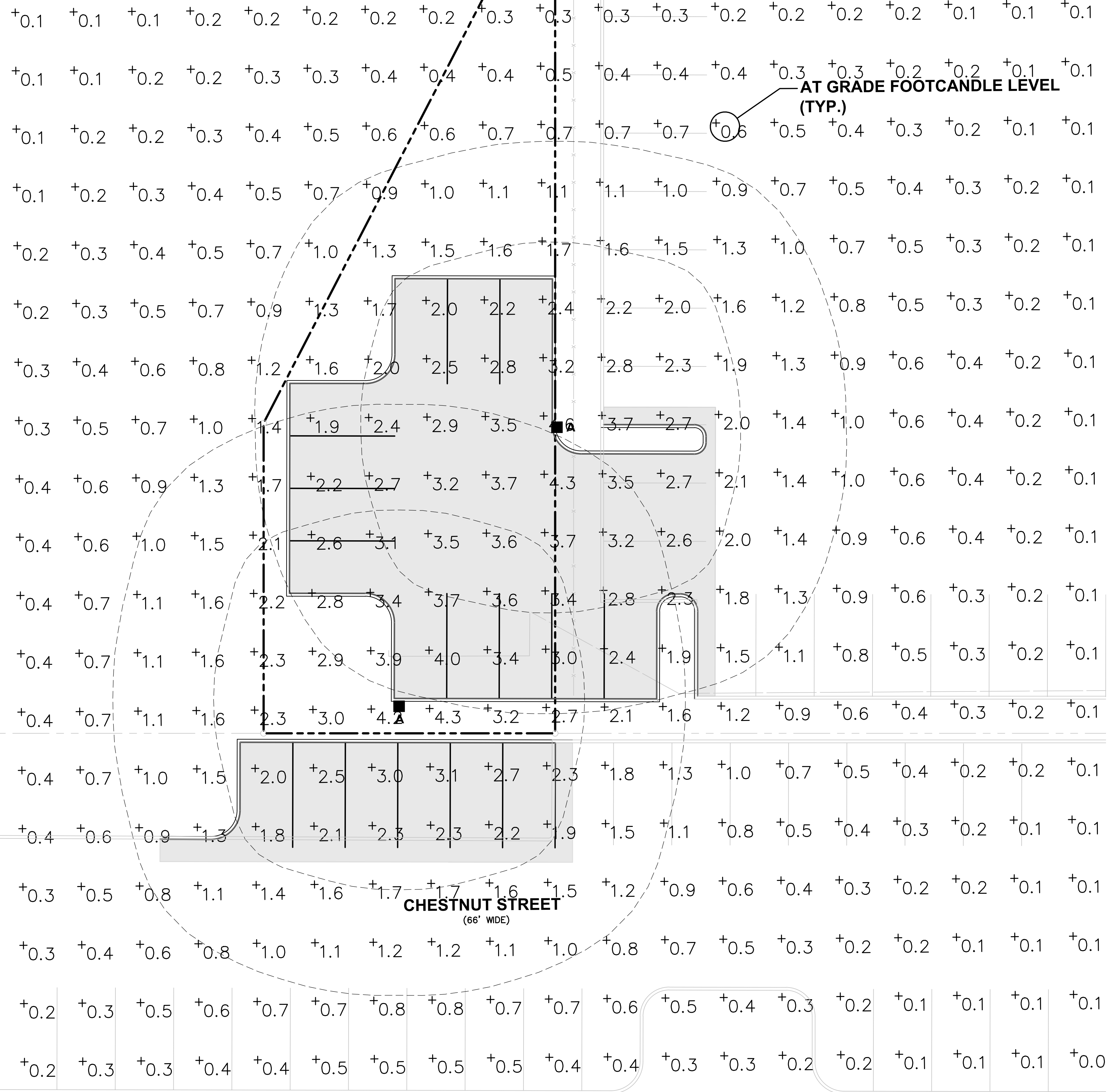
LIGHTING PLAN - TRACT 1
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
MIXED USE DEVELOPMENT
BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01
TOWNSHIP OF CRANFORD
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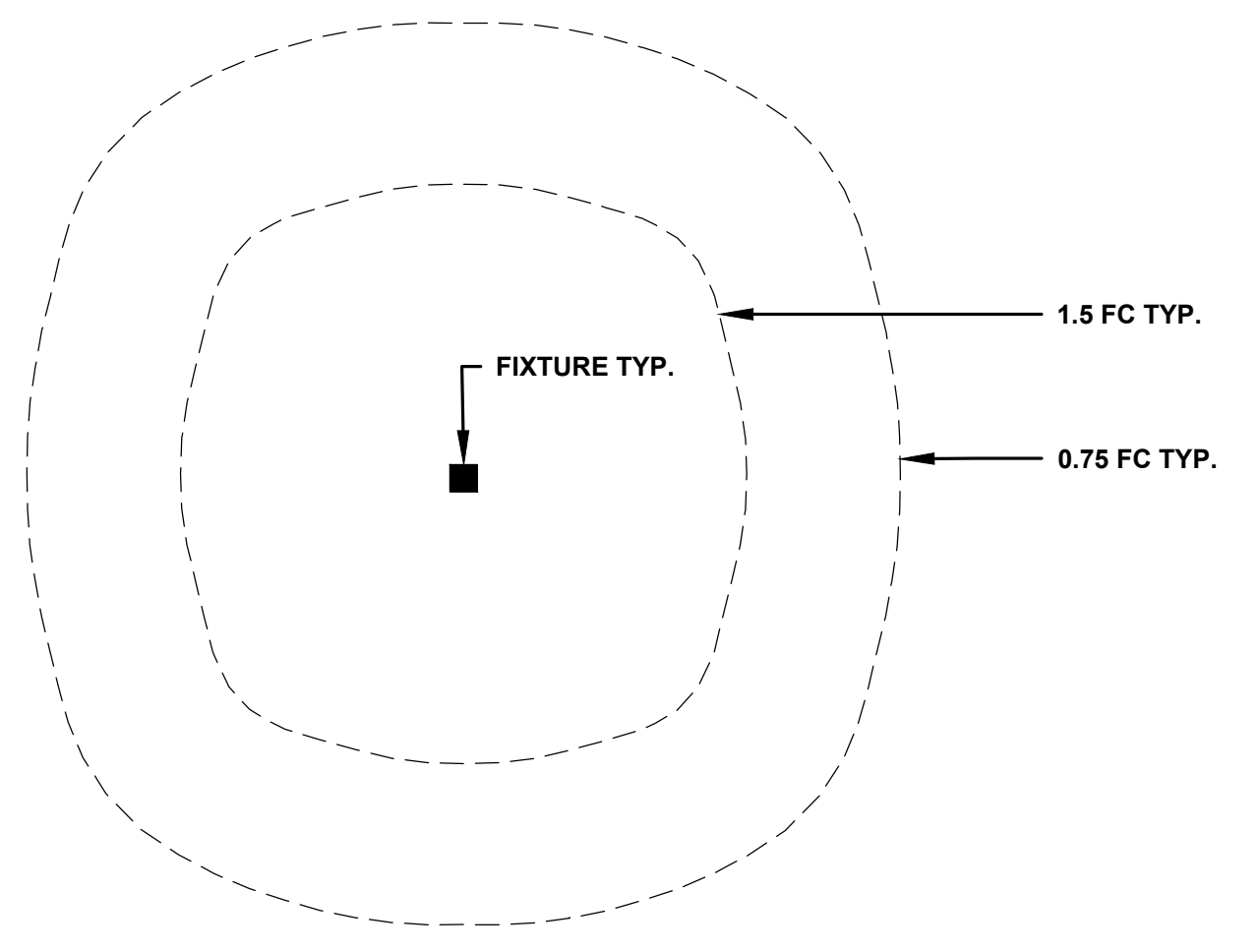
SCALE: 1" = 20'
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SHEET: 12 of 15

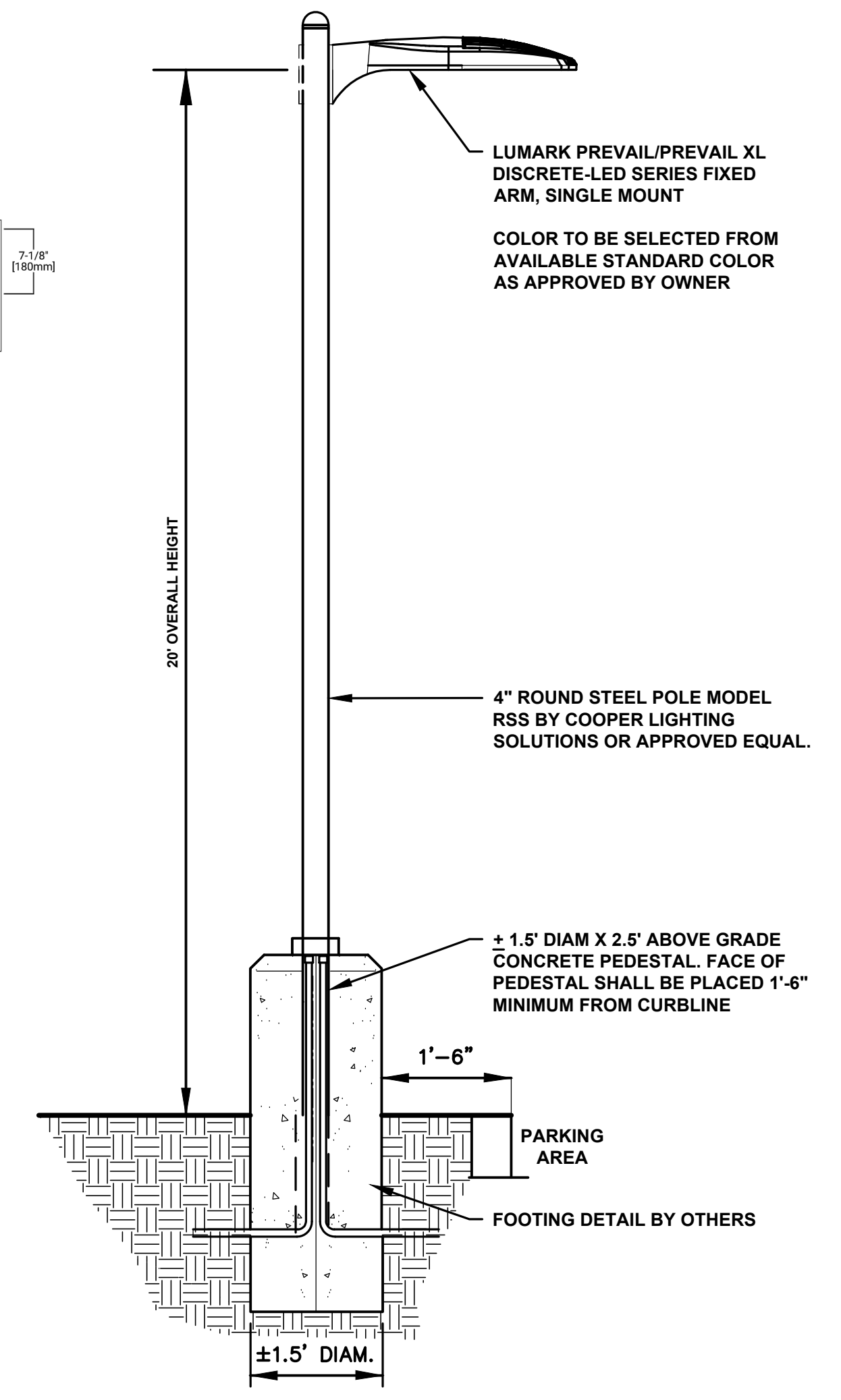
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LUMARK PREVAIL/PREVAIL XL DETAIL
NOT TO SCALE



PHOTOMETRIC CONTOUR DETAIL
NOT TO SCALE



POLE MOUNTED LIGHT FIXTURE DETAIL
NOT TO SCALE

NJDEP ELECTRONIC APPROVAL STAMP

Luminaire Schedule			Arr. Watts	Arr. Lum. Lumens	LLF
Symbol	Label	Description			
■	A	LUMARK #PRV-PA2B-740-U-5WQ 20' OVERALL HEIGHT, INCLUDES 2'-6" CONCRETE PEDESTAL	151	20332	1.000

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking Lot Within Property Lines	Illuminance	Fc	2.9	4.6	1.8	1.6	2.6

- SCHEDULE NOTES:
- 1) FIXTURE IS CALCULATED WITH 0.9 LLF. INITIAL FC LEVELS WILL BE APPROXIMATELY 10% HIGHER, THEN SLOWLY DECREASE OVER TIME IN ACCORDANCE WITH TM-21 AND L70 DATA PUBLISHED ON FIXTURE CUTSHEET.
 - 2) FIXTURE IS DIMMABLE WITH 0-10V CONTROLS.

LIGHTING NOTES

1. 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.
2. ALL POLE MOUNTED FIXTURES SHALL HAVE 2'-6" CONCRETE PEDESTALS.
3. LIGHTING LEVELS SHOWN ON THIS PLAN DO INCLUDE ANY CONTRIBUTIONS FROM EXISTING STREET AND/OR PARKING LOT LIGHT FIXTURES.

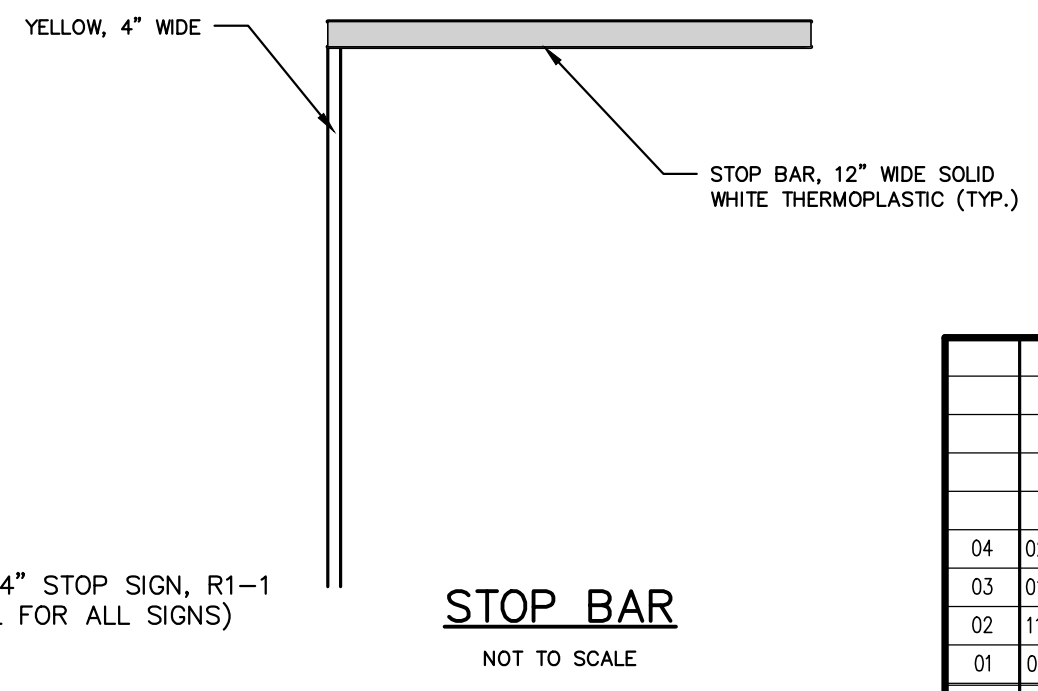
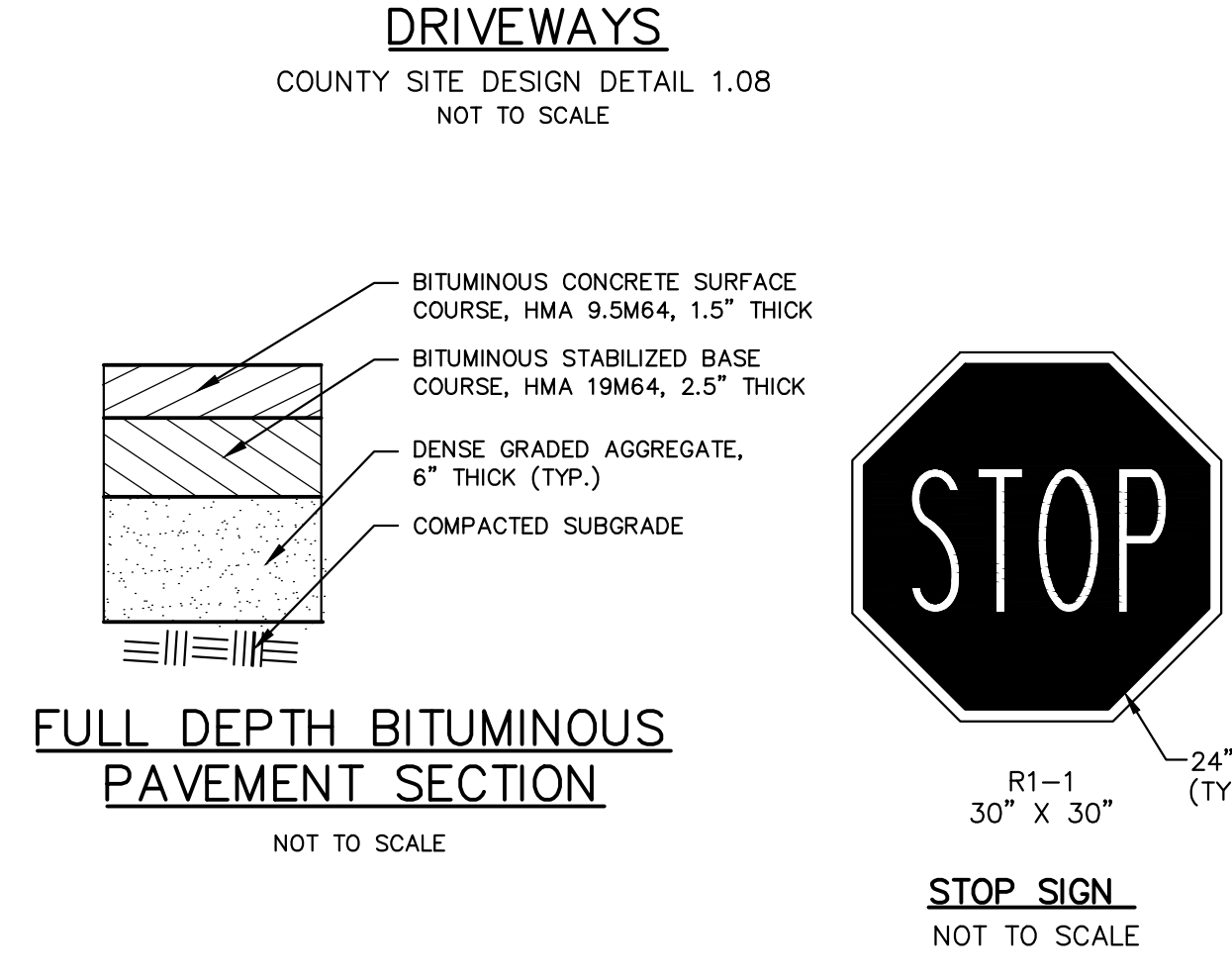
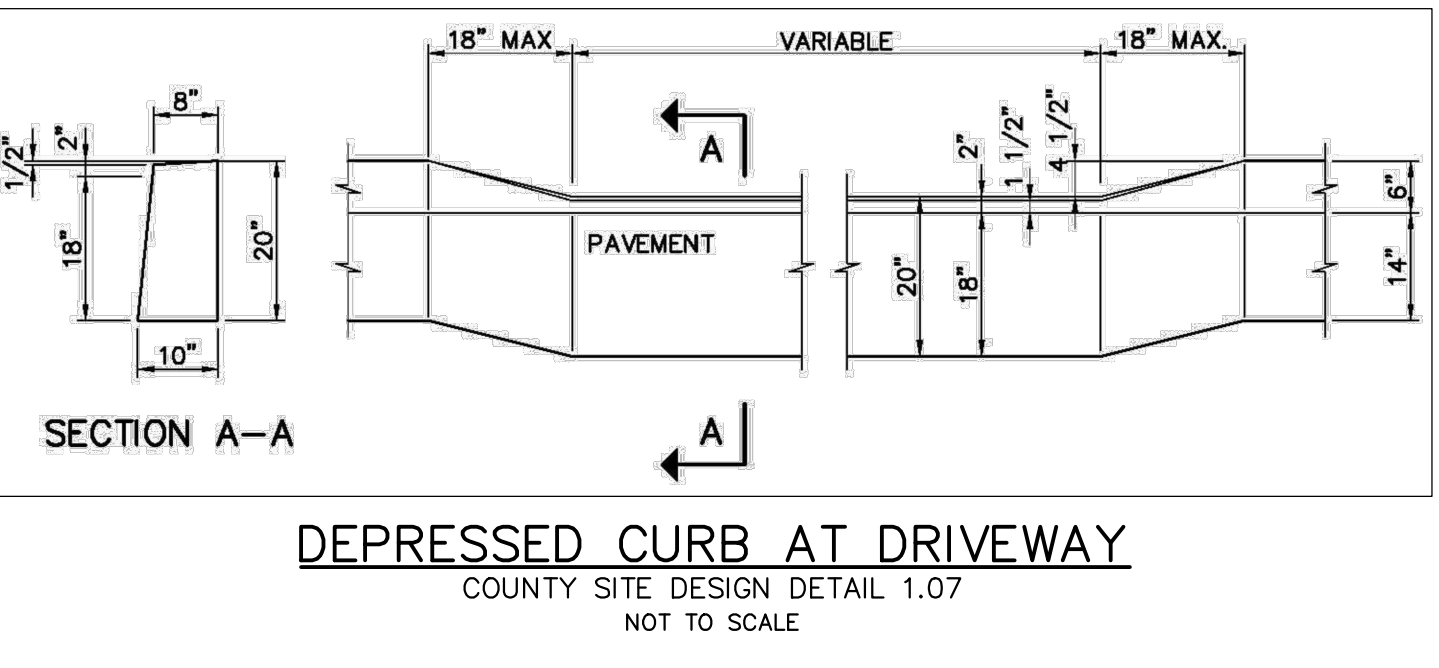
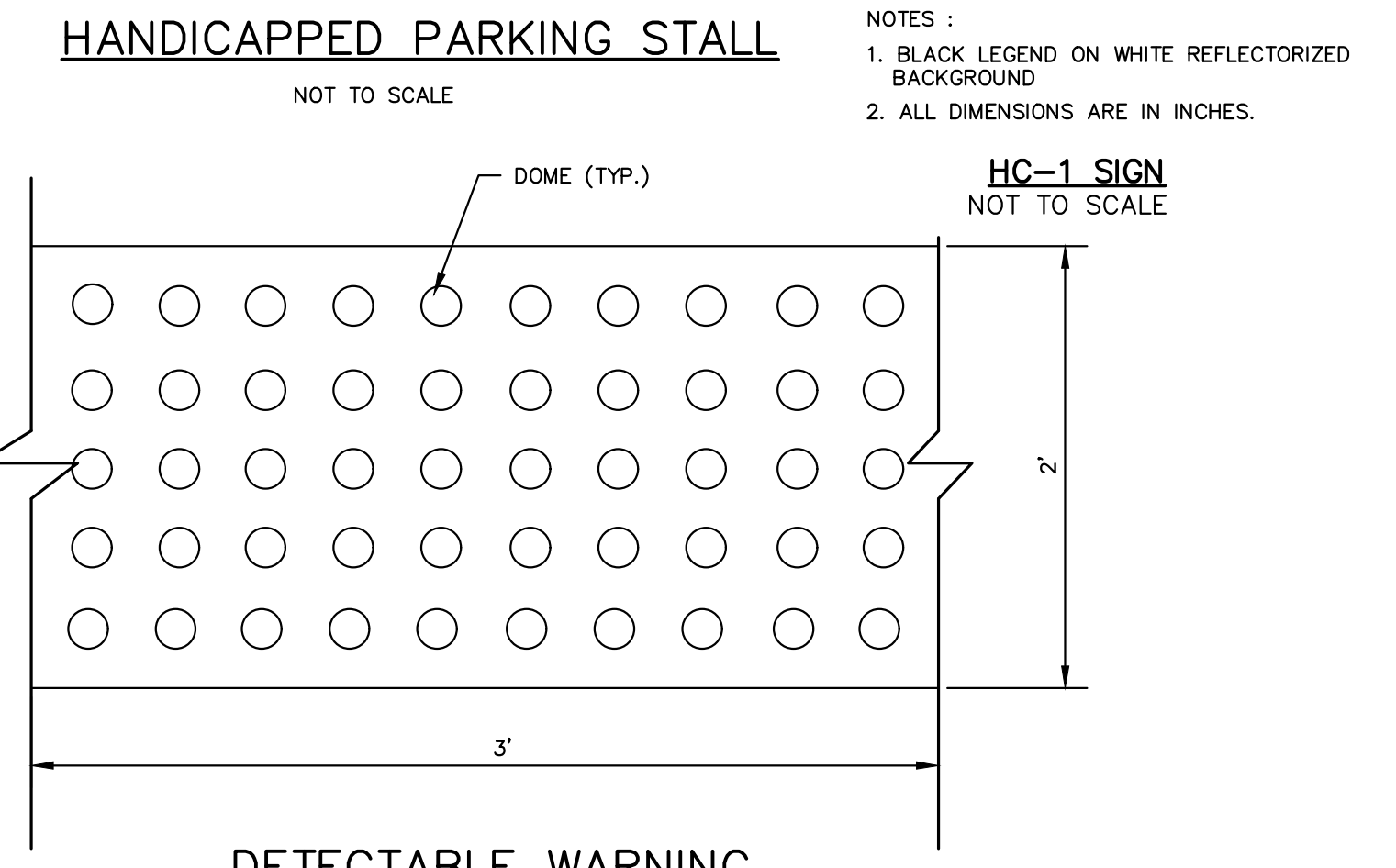
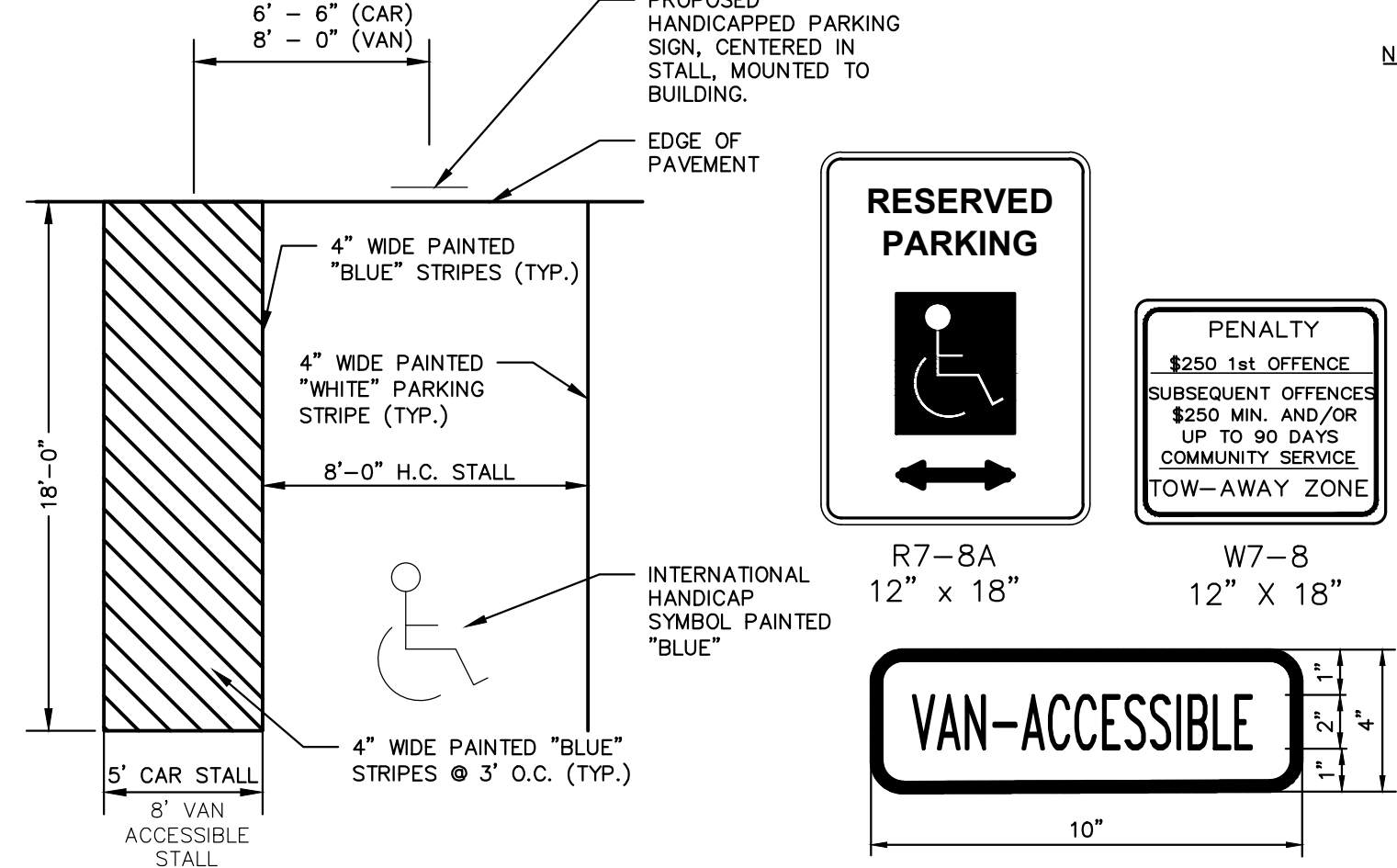
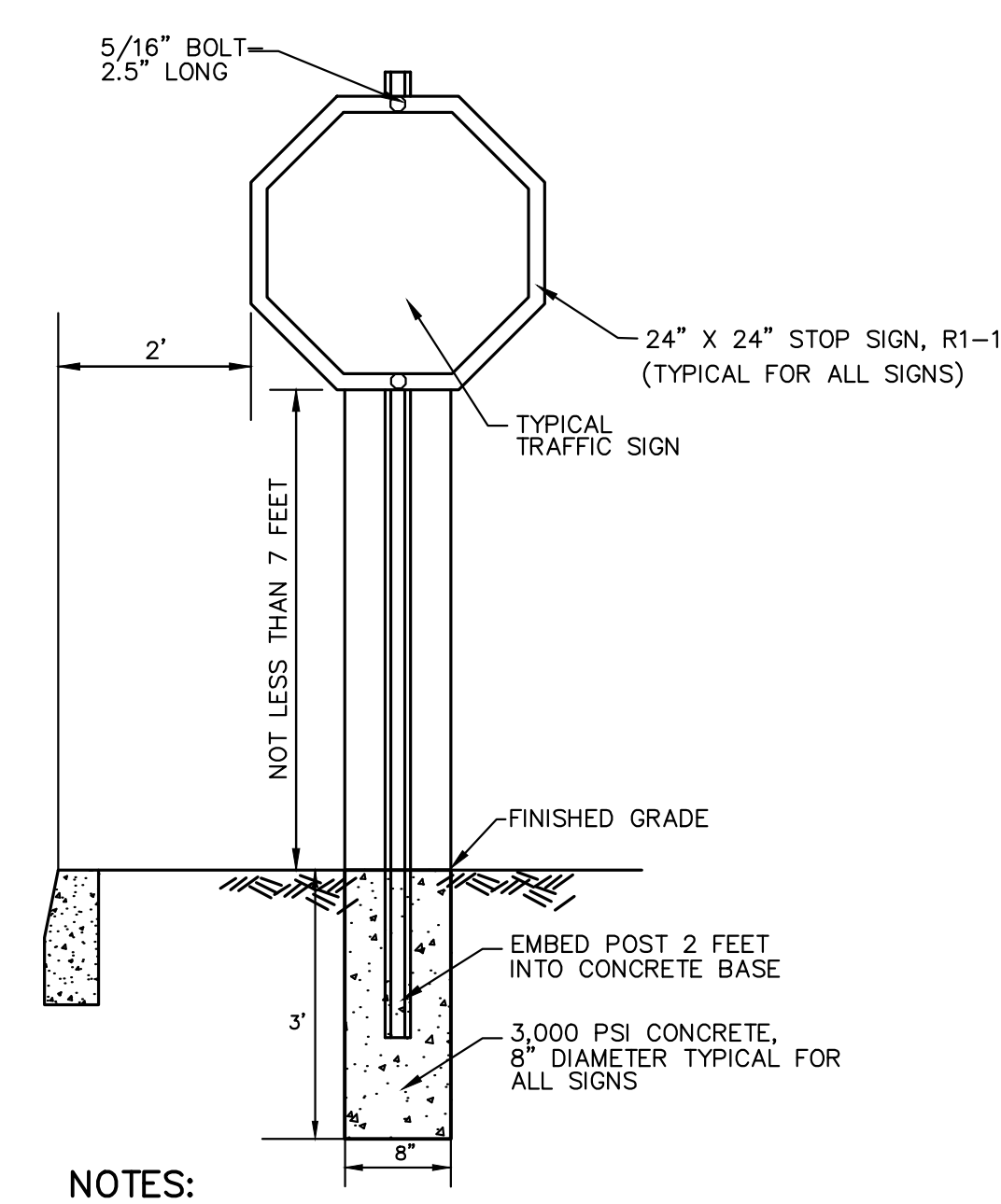
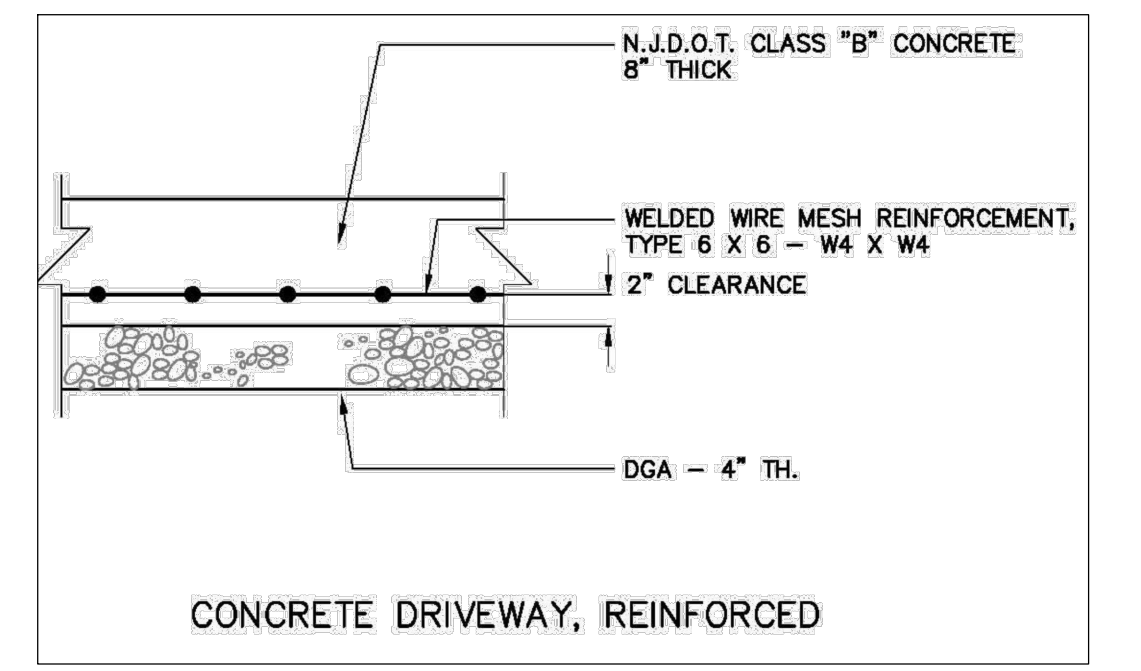
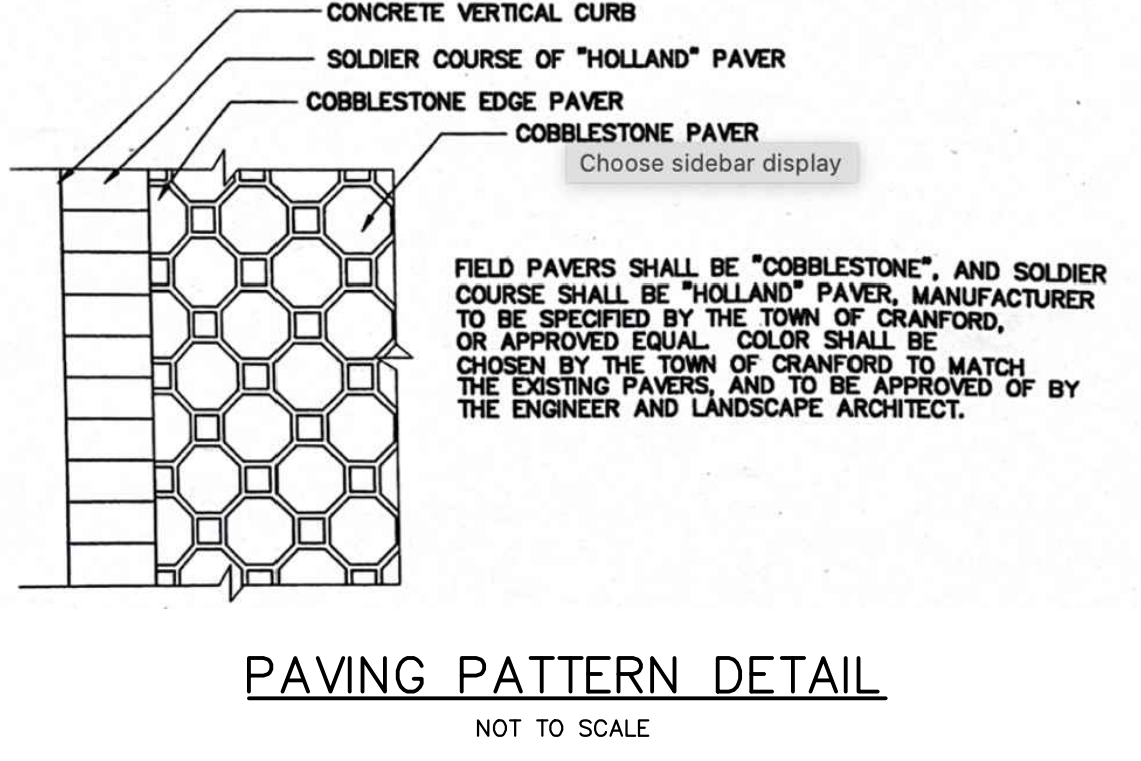
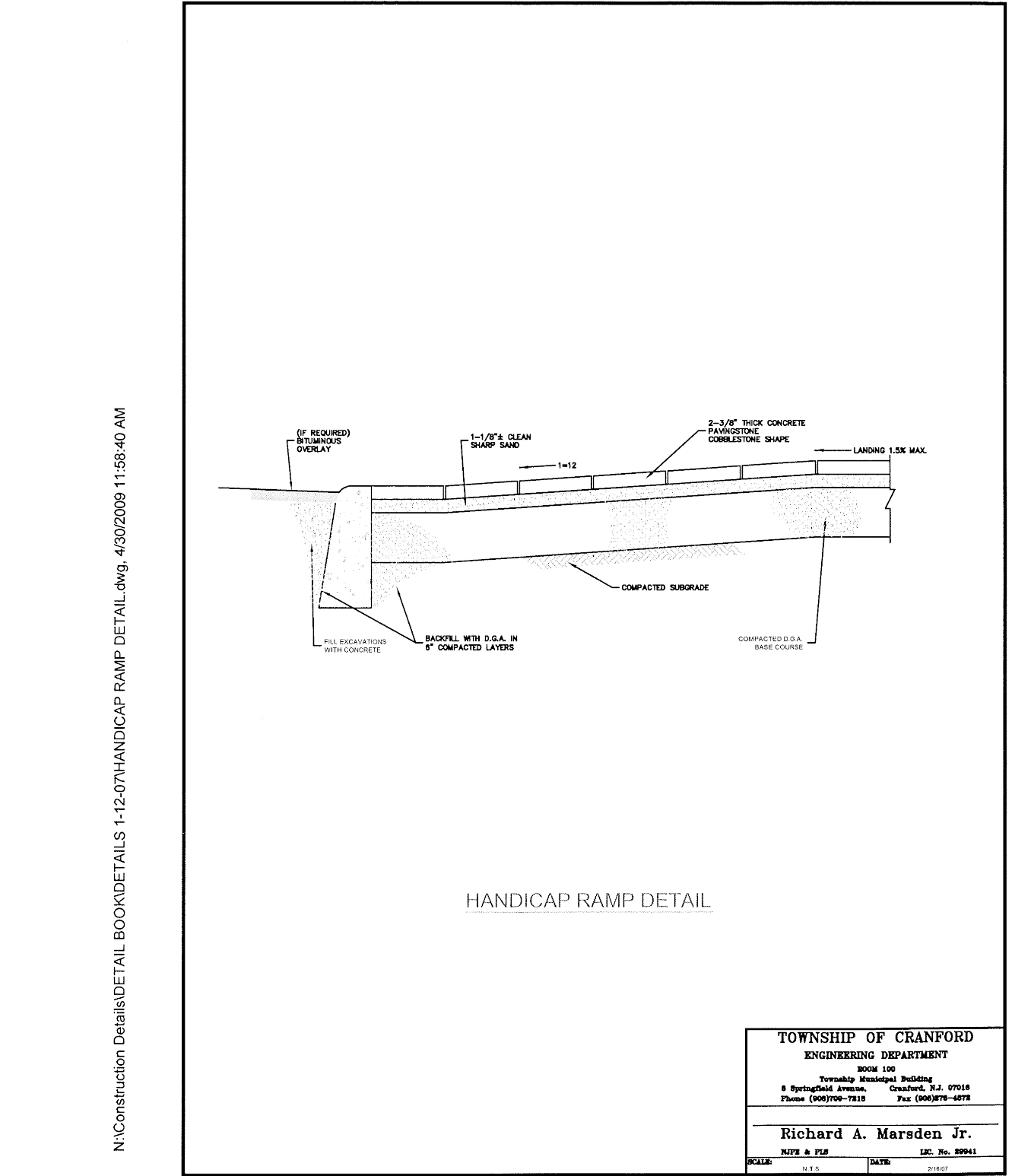
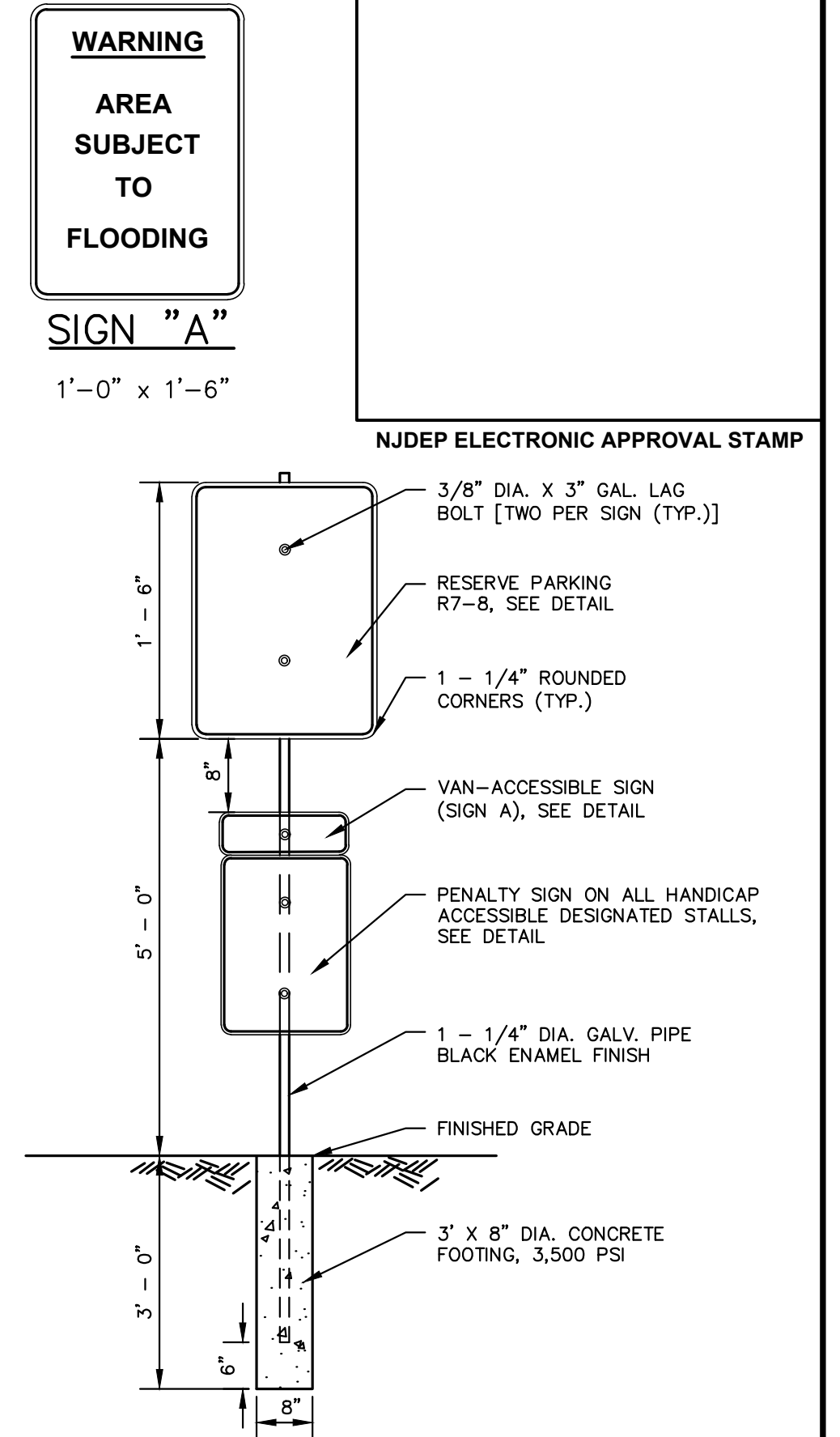
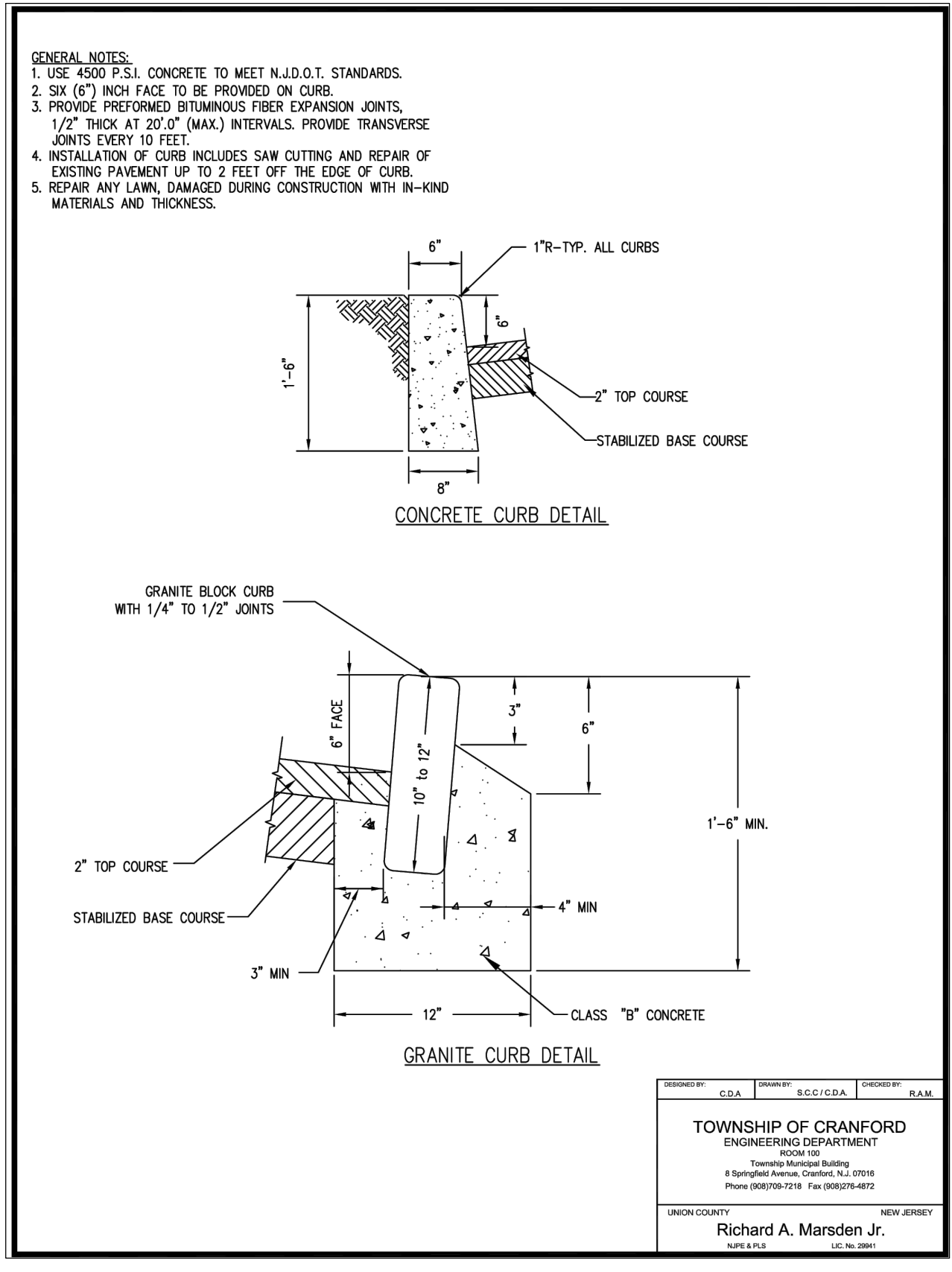
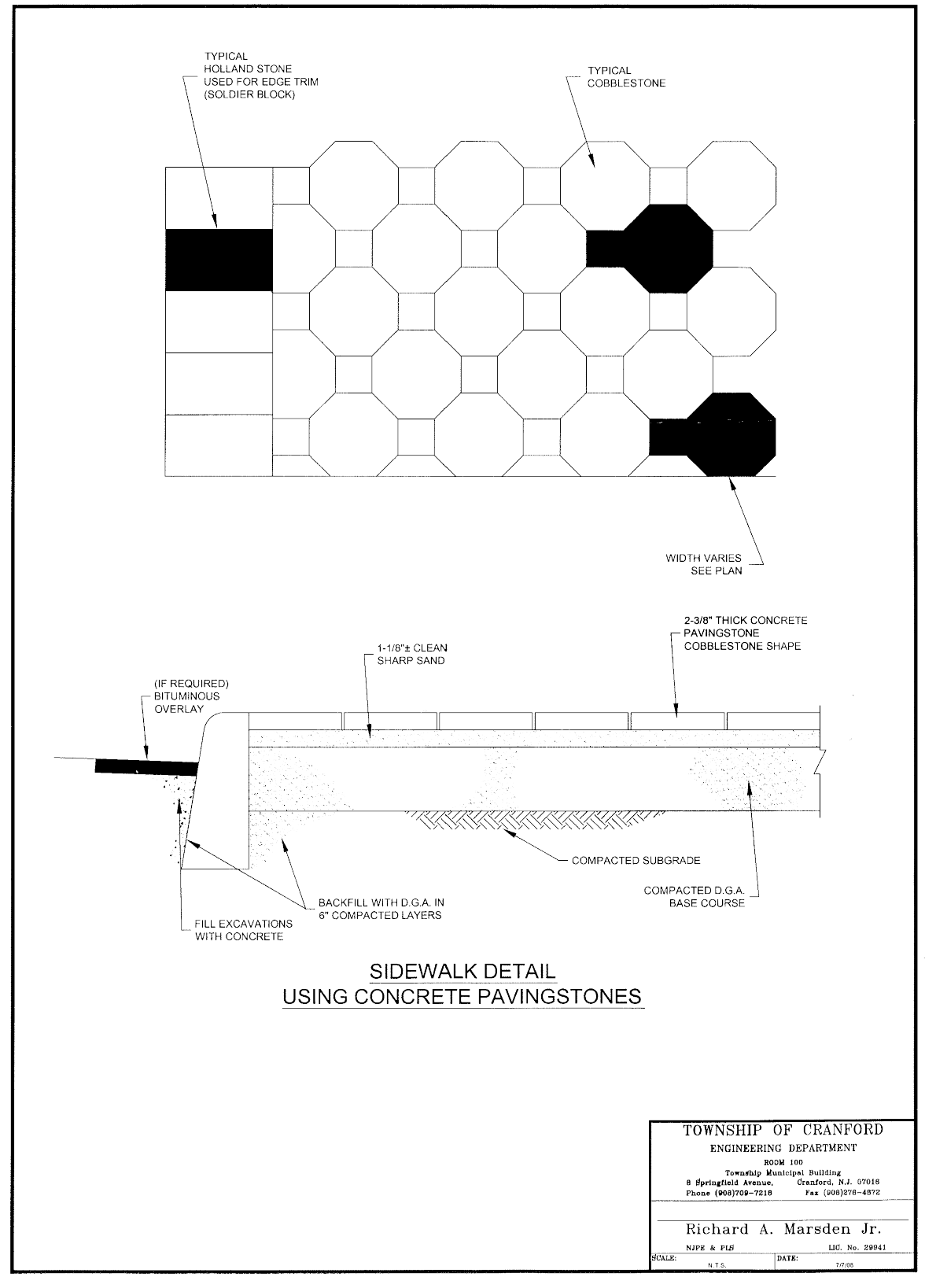
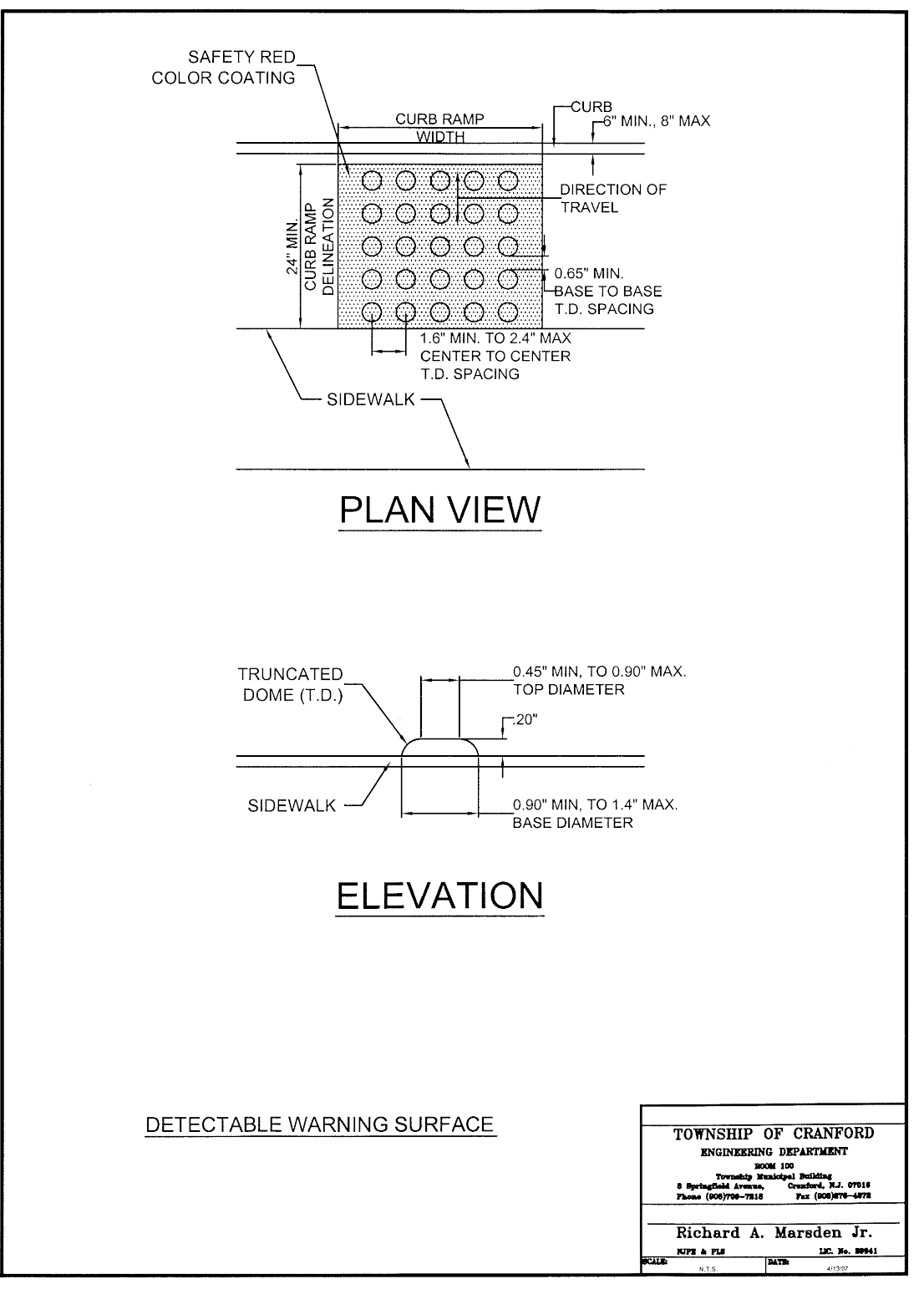
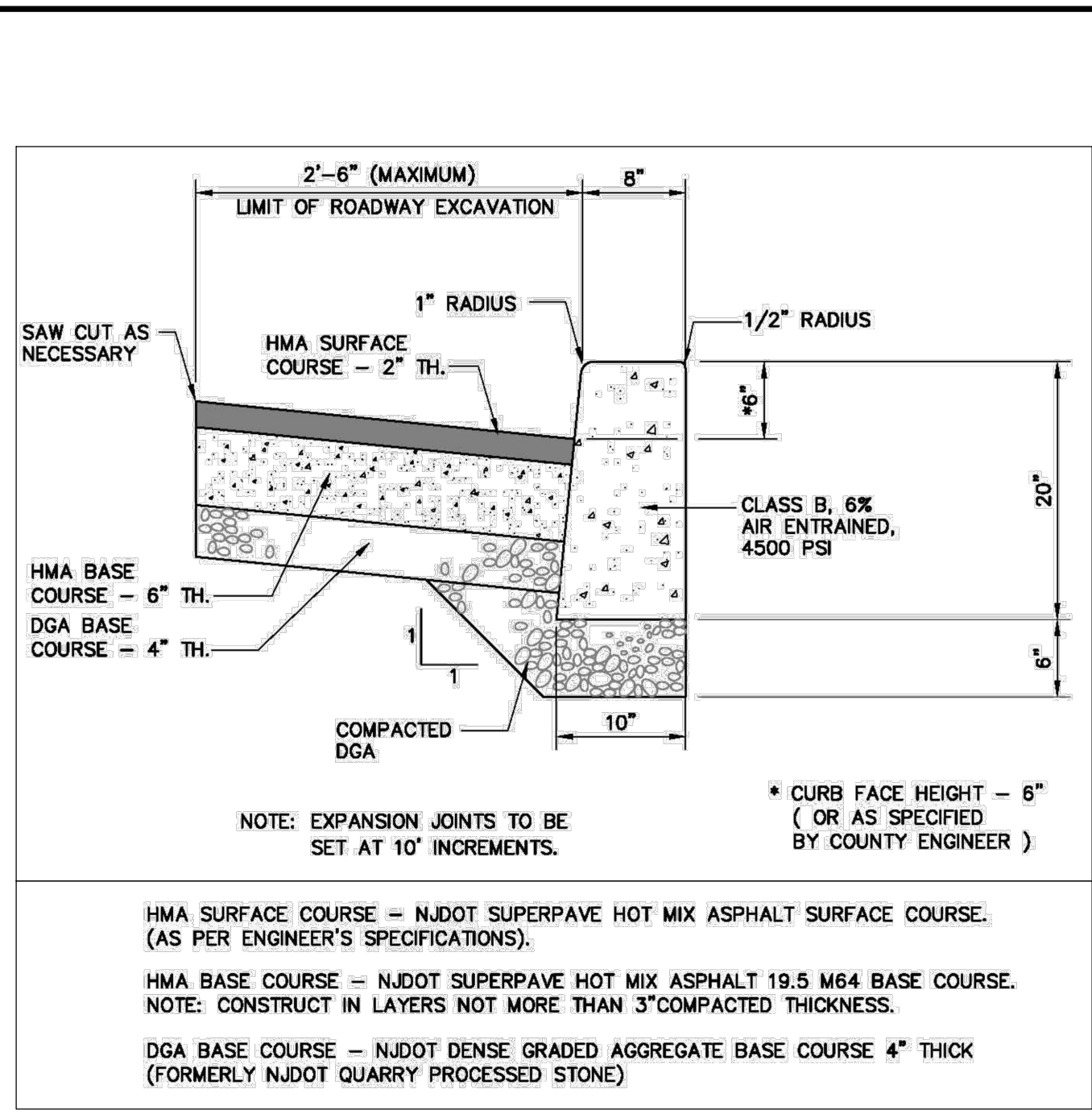
No.	Date	Revision	Revised By	Checked By
04	02/21/2023	Revise per DRC Meeting		BF
03	01/26/2023	Revised per Completeness Review dated 01/20/2023		
02	11/07/2022	Revised for Township Submission	MS	BF
01	05/20/2021	Revised per NJDEP Comments	SP	BF



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

LIGHTING PLAN - TRACT 2 FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD UNION COUNTY, NEW JERSEY			
DATE: 2/19/2021	DESIGNED BY: BF	SCALE: 1:10	PROJECT NUMBER: 16753.001
DRAWN BY: DC	CHECKED BY: BF	FIELD BOOK	SHEET: 13 of 15

G:\16753\16753 - South Avenue East - Cranford\CAD\DWG\16753.001 - L - SMALL SITE.dwg (I-small)



- NOTES:
- ALL SIGNS TO CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
 - OUTSIDE EDGE OF CLOSEST TO ROADWAY SHALL BE A MINIMUM DISTANCE OF 2'
 - THE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OF ANY MATERIALS.

PAVEMENT STRIPING/MARKING NOTES:
THE FIRE LANE SHALL BE IDENTIFIED BY THE CONTRACTOR PAINTING THE CURB YELLOW AND/OR PROVIDING A YELLOW STRIPE, 4" WIDE, WITHIN THE ENTIRE ACCESS DRIVE, AFTER FINAL PAVEMENT WORK IS COMPLETE.
THE LETTERING "NO PARKING FIRE LANE" SHALL BE 18" HIGH PAINTED YELLOW AND CENTERED WITHIN THE DESIGNATED FIRE LANE AT THE SAME LOCATION AS SHOWN ON THE PLANS OR AS APPROVED BY THE FIRE OFFICIAL.

- IF NOT OTHERWISE INDICATED PAVEMENT STRIPING SHALL CONFORM TO THE FOLLOWING:
- | | |
|-----------------------|--|
| PARKING STRIPES | 4" WIDE WHITE LINES |
| LANE AND CENTER LINES | 4" WIDE WHITE LINES SPACED AS SHOWN |
| STOP LINES | 12" WIDE WHITE LINES (4" MINIMUM FROM CROSSWALK) |
| "LETTERING" | 18" HIGH PAINTED WHITE, UNLESS OTHERWISE SPECIFIED |
| TRAFFIC MARKINGS | PAINTED SOLID WHITE, UNLESS OTHERWISE SPECIFIED |
| HANDICAPPED RAMPS | SAFETY RED MOISTURE CURED POLYURETHANE COATING WITH SELF-CONTAINED WHITE RUBBER GRIT OR PREFORMED PLASTIC MARKING TAPE AS PER N.J.D.O.T. STANDARDS |
- ALL STRIPING SHOULD BE EPOXY BASED PAINT. ALL PAVEMENT MARKINGS (ARROWS, STOP BARS, CROSSWALKS, ETC.) SHOULD BE EXTRUDED THERMOPLASTIC

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FPA FRENCH & PARRELLO ASSOCIATES
Corporate Office: 1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

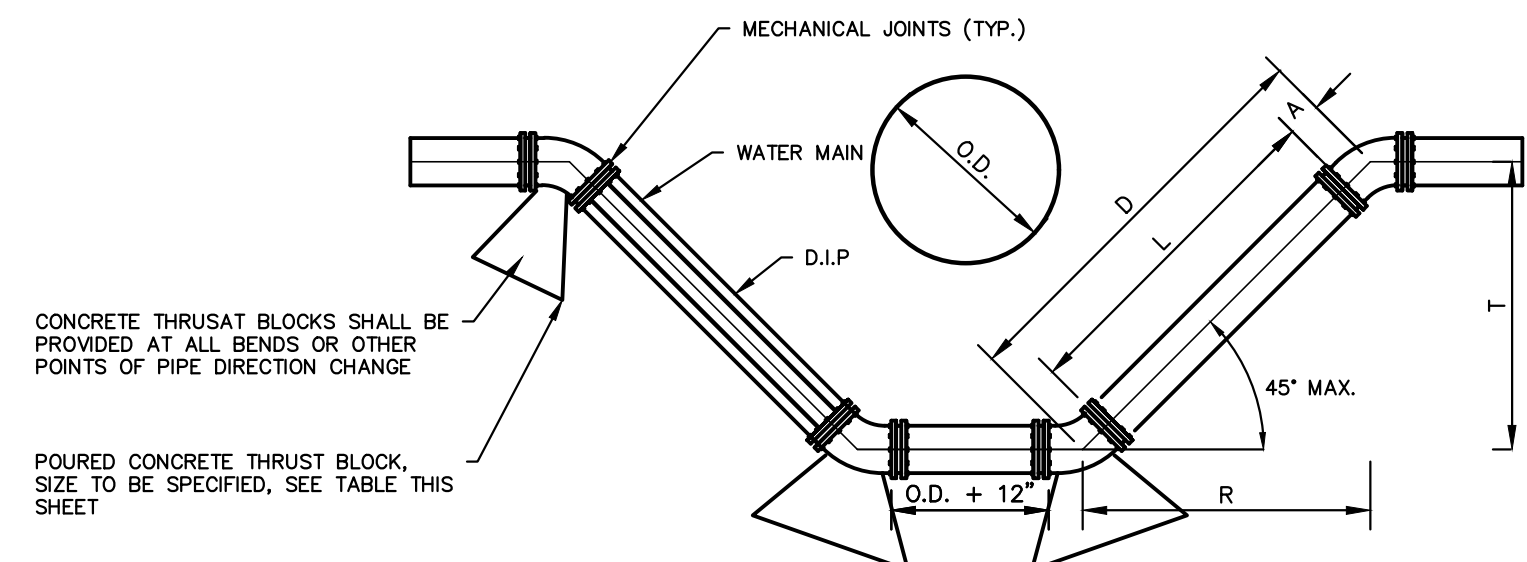
New Jersey • New York • Pennsylvania • Georgia

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

CONSTRUCTION DETAILS 1 FOR PRELIMINARY AND FINAL SITE PLAN FOR MIXED USE DEVELOPMENT BLOCK 478, LOTS 2, 3, 4, 5, AND 6 BLOCK 483, LOT 18, AND 17.01 TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY

DATE: 2/19/2021	DESIGNED BY: BF	SCALE: AS SHOWN	PROJECT NUMBER: 16753.001
DRAWN BY: WGS	CHECKED BY: BF	FIELD BOOK	SHEET: 14 of 15

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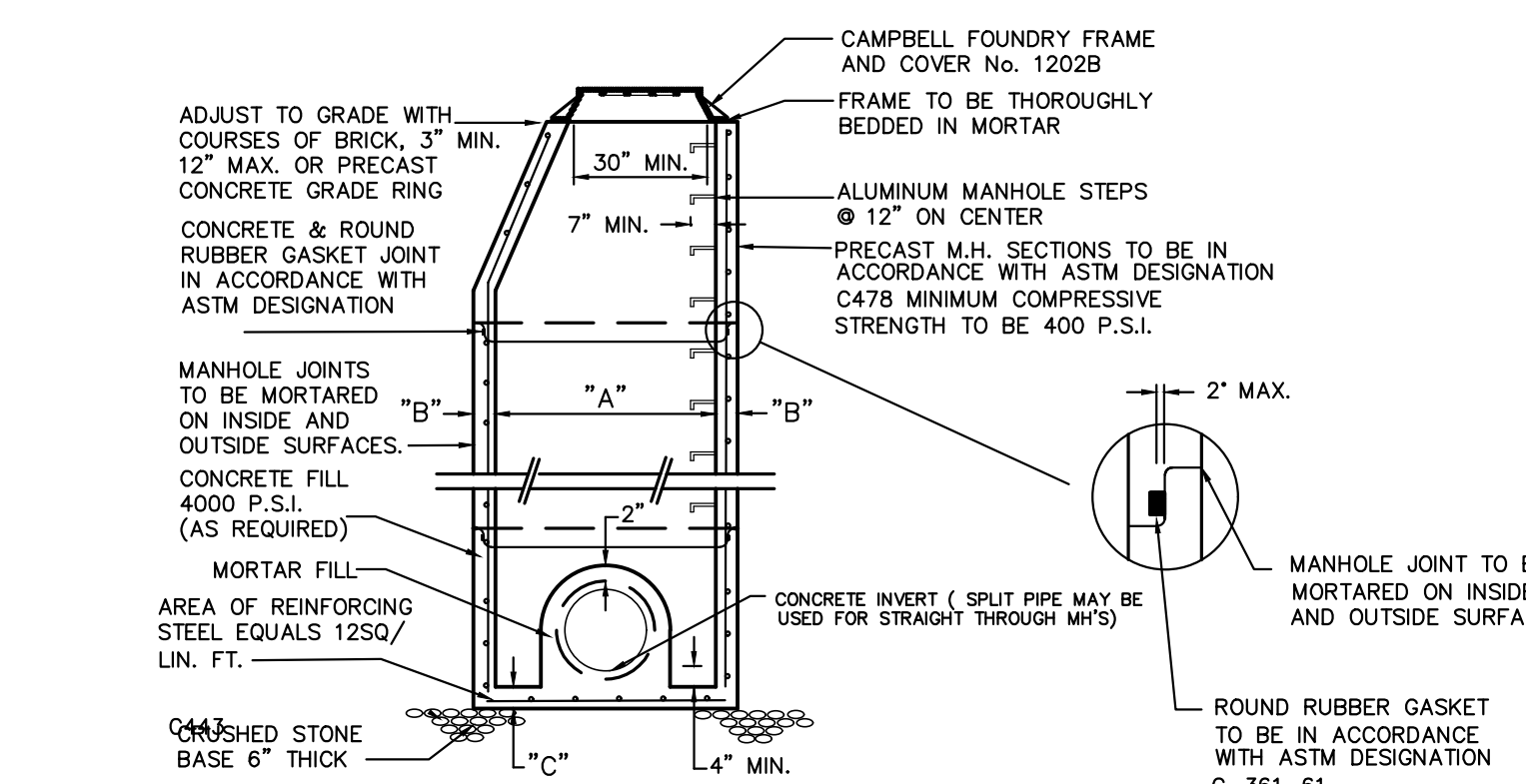


NOTES:

1. WATER MAIN MAY BE LOOPED ABOVE OBSTRUCTION, IF 3' MINIMUM COVER IS MAINTAINED ABOVE WATER MAIN
2. WATER MAIN MAY BE DUCTILE IRON CEMENT LINED PIPE ALL JOINTS SHALL BE MECHANICAL JOINT OR PUSH-ON AND ALL FITTINGS SHALL BE MECHANICAL JOINT CAST IRON
3. OFFSETS MAY BE SUBSTITUTED FOR A OR T UP TO 24" IF APPROVED BY THE ENGINEER
4. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE
5. MINIMUM CLEARANCE BETWEEN OBSTRUCTING PIPE AND WATER MAIN SHALL BE 18" MINIMUM CLEARANCE BETWEEN WATER MAIN AND OTHER OBSTRUCTIONS SHALL BE 6"
6. THE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS. DETAILS OF THE TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 100 P.S.I. WORKING PRESSURE

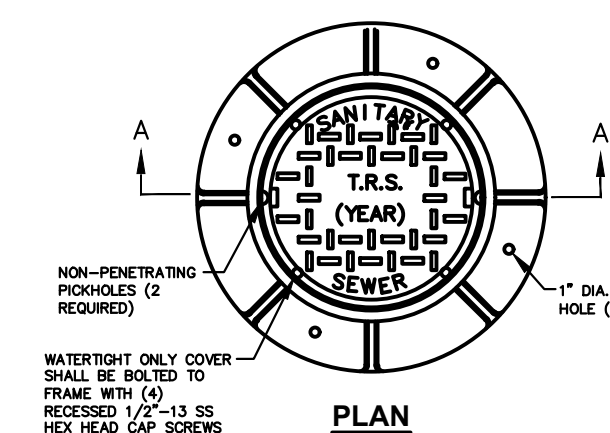
MECHANICAL JOINTS			
ANGLE	10" EQUALS	12" EQUALS	14" EQUALS
45°	Tx1.414	Tx1.000	D-2A
22 1/2°	Tx2.414	Tx2.414	D-2A
11 1/4°	Tx5.128	Tx5.027	D-2A

LOOPING WATER MAIN DETAIL
NOT TO SCALE



SECTION A-A

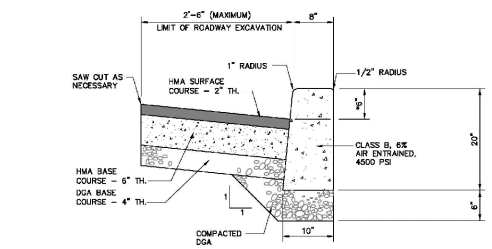
DOGHOUSE MANHOLE DETAIL



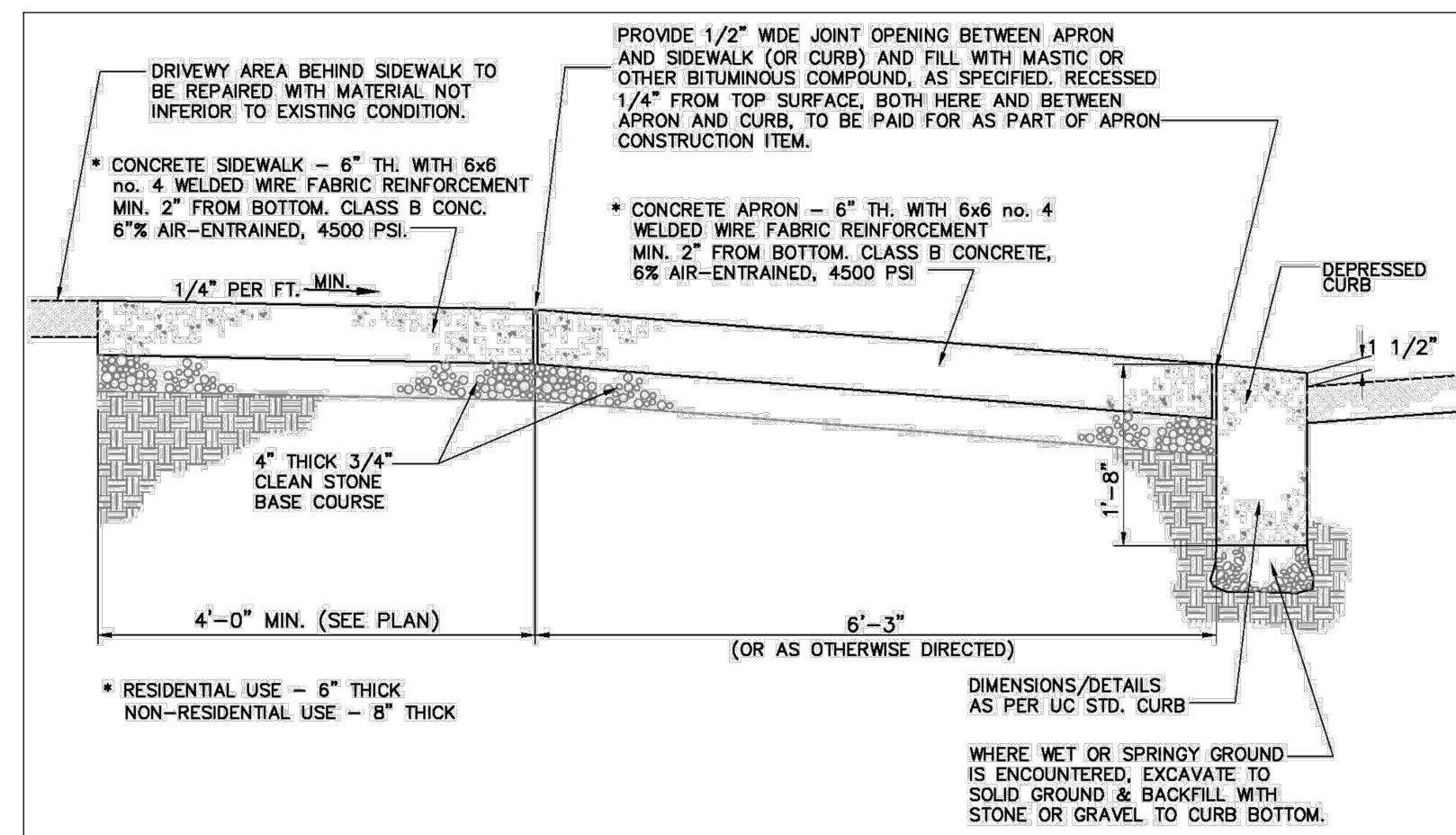
SECTION A-A

1. 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 - MORTARED AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.
2. MANHOLE FRAMES AND COVERS TO BE HEAVY DUTY, CONFORMING TO A.S.T.M. SPECIFICATION A-48 CLASS 30-B WITHOUT SHOP COAT OF ASPHALTIC PITCH, AND SHALL BE DESIGNED FOR ASHTO H20-44 HIGHWAY LOADING.
3. IN EASEMENTS AND REMOTE AREAS, WATER TIGHT COVERS AND FRAMES MUST BE PROVIDED.

SANITARY SEWER STANDARD OR WATERTIGHT SANITARY MANHOLE FRAME & COVER DETAIL
NOT TO SCALE

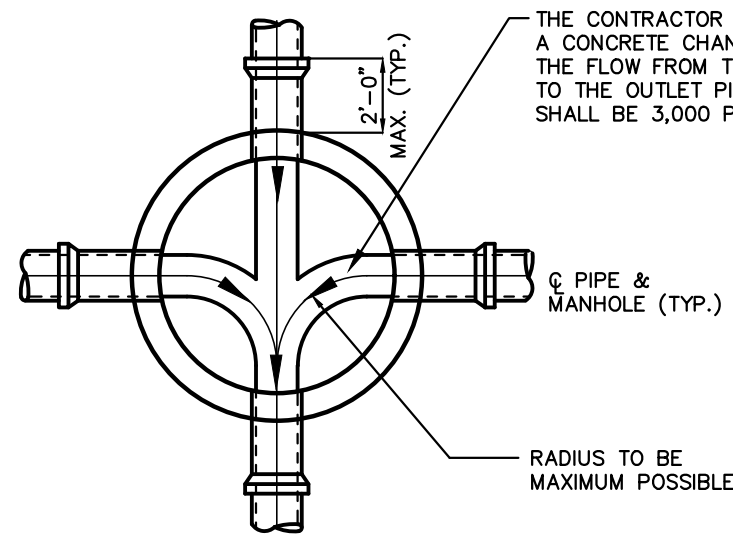


CONCRETE DRIVEWAY APRON TYPICAL SECTION
COUNTY SITE DESIGN DETAIL 1.09
NOT TO SCALE



MANHOLE NOTES

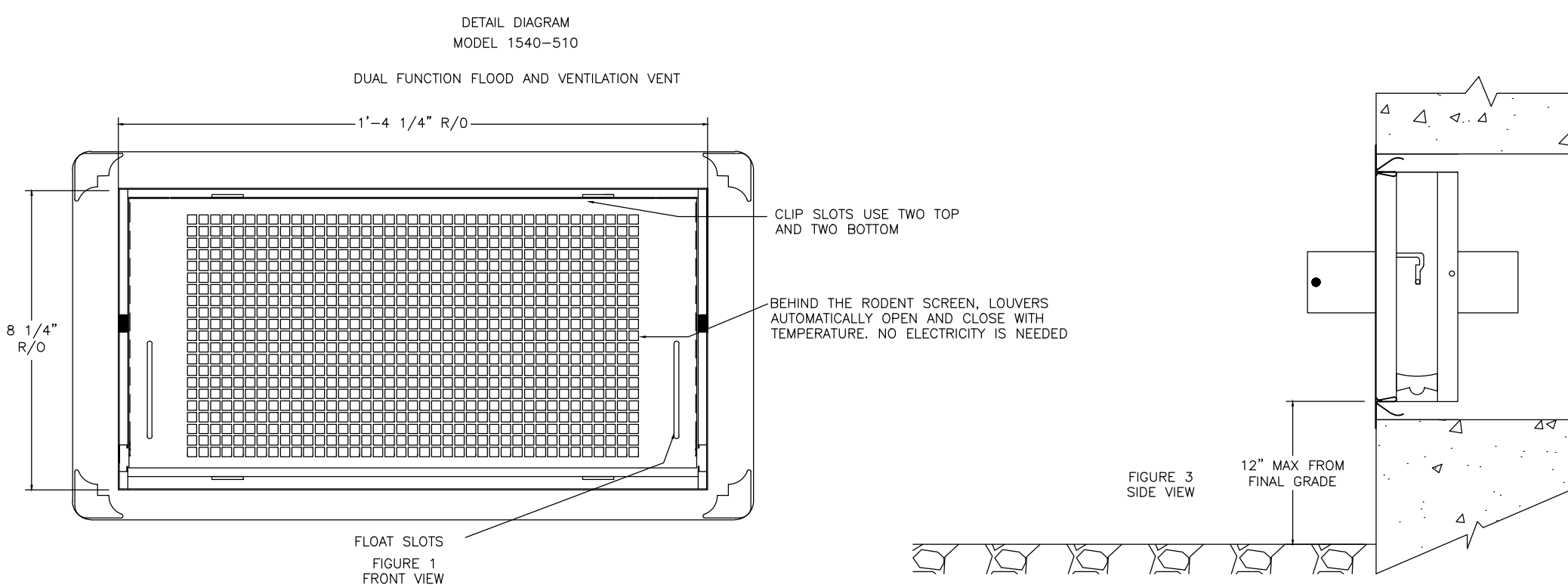
- GENERAL**
1. SHORTS SHALL BE USED AT MANHOLES
 2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS, WHERE POSSIBLE
 3. ALL CONSTRUCTION SHALL MEET STANDARD SPECIFICATION, THE LATEST REVISION
- PRECAST CONCRETE MANHOLE (ASTM-478)**
1. WHERE 6" AND 6' I.D. BASES ARE USED A TAPER 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.
 2. BASES TO BE AS SHOWN IN THE SCHEDULE.
- BRICK OR CONCRETE BLOCK MANHOLE (NOT SHOWN)**
1. BRICK OR CONCRETE BLOCK MANHOLES MUST BE APPROVED BY THE AUTHORITY ENGINEER
 2. SHOP DRAWING MUST BE SUBMITTED FOR ALL DETAILS.
- WORK AT EXISTING MANHOLE**
1. THE CONTRACTOR SHALL CUT INTO THE MANHOLE AND COMPLETE THE CONNECTION USING A SUITABLE ADAPTOR AS REQUIRED AND APPROVED BY THE AUTHORITY/ENGINEER.
 2. 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.



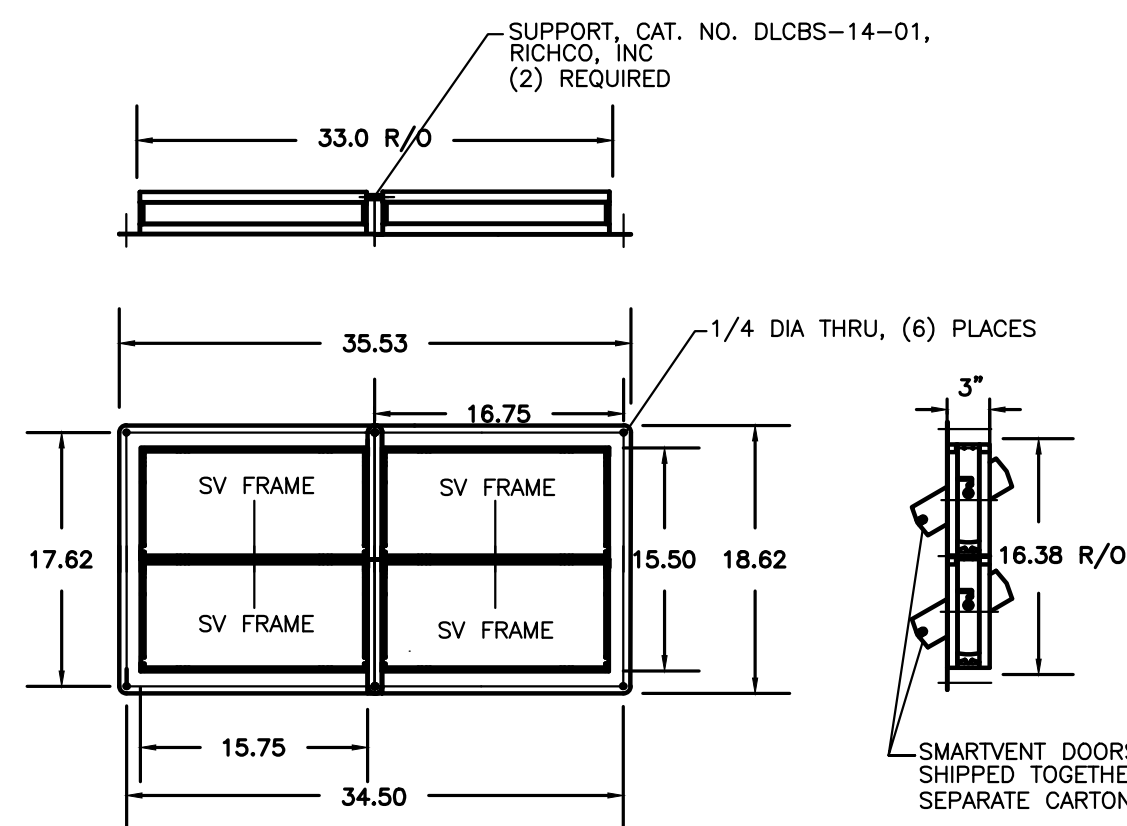
TYPICAL CHANNELING OF MANHOLE BOTTOM
NOT TO SCALE

TRENCH EXCAVATION AND BACKFILL NOTES

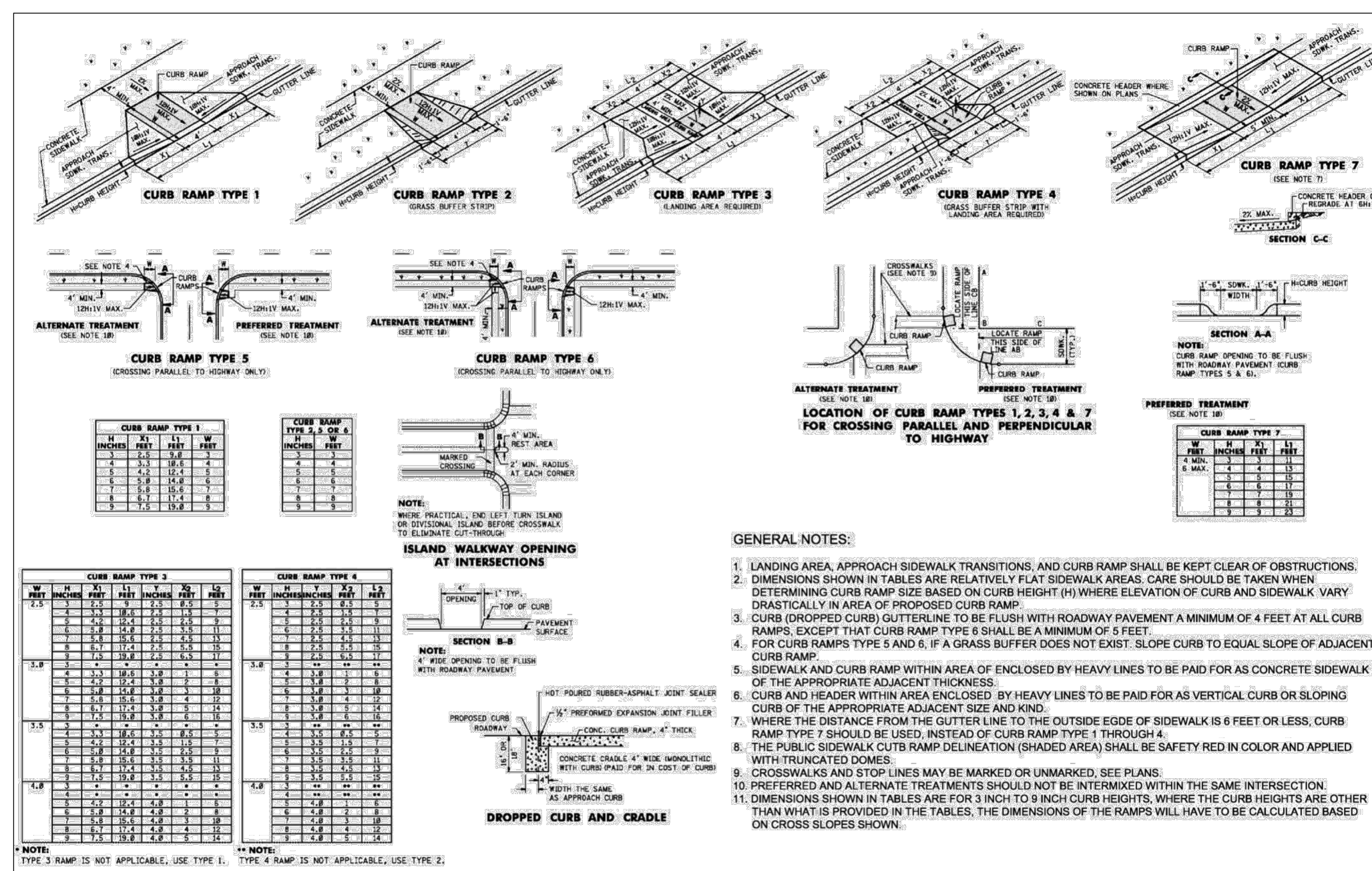
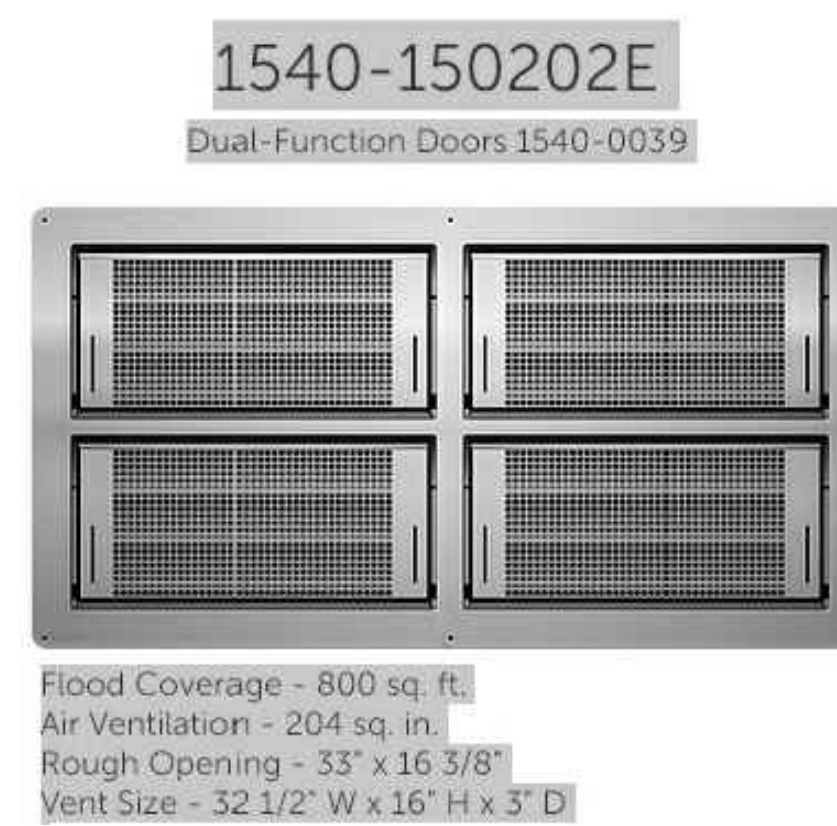
1. THE MAXIMUM DRY DENSITIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM DESIGNATION D1557. THE MINIMUM PERCENTAGE OF COMPACTION TO BE ACHIEVED BY THE CONTRACTOR IN THE VARIOUS ZONES IS AS FOLLOWS:
SURFACE ZONE: ALL 95%
TRENCH BACKFILL ZONE: PIPE EMBEDMENT ZONE: 90%
PIPE EMBEDMENT ZONE: 95%
THE MINIMUM COMPACTION IN EMBANKMENTS SHALL BE 90%
2. 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
3. SUITABLE MATERIAL FROM EXCAVATIONS SHALL BE FREE FROM OBSTRUCTIVE QUANTITIES OF ORGANIC MATTER, CLAYS, TREES, STUMPS, FROZEN MATERIAL, RUBBLE, REFUSE, CONCRETS, 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.
4. BACKFILL TO BE MECHANICALLY COMPACTED IN TWELVE INCH LIFTS TO THE SATISFACTION OF THE ENGINEER.
5. THE CONTRACTOR MUST COMPLY WITH ALL STATE AND FEDERAL CONFINED SPACE RULES, AND ALL APPLICABLE O.S.H.A. REQUIREMENTS.



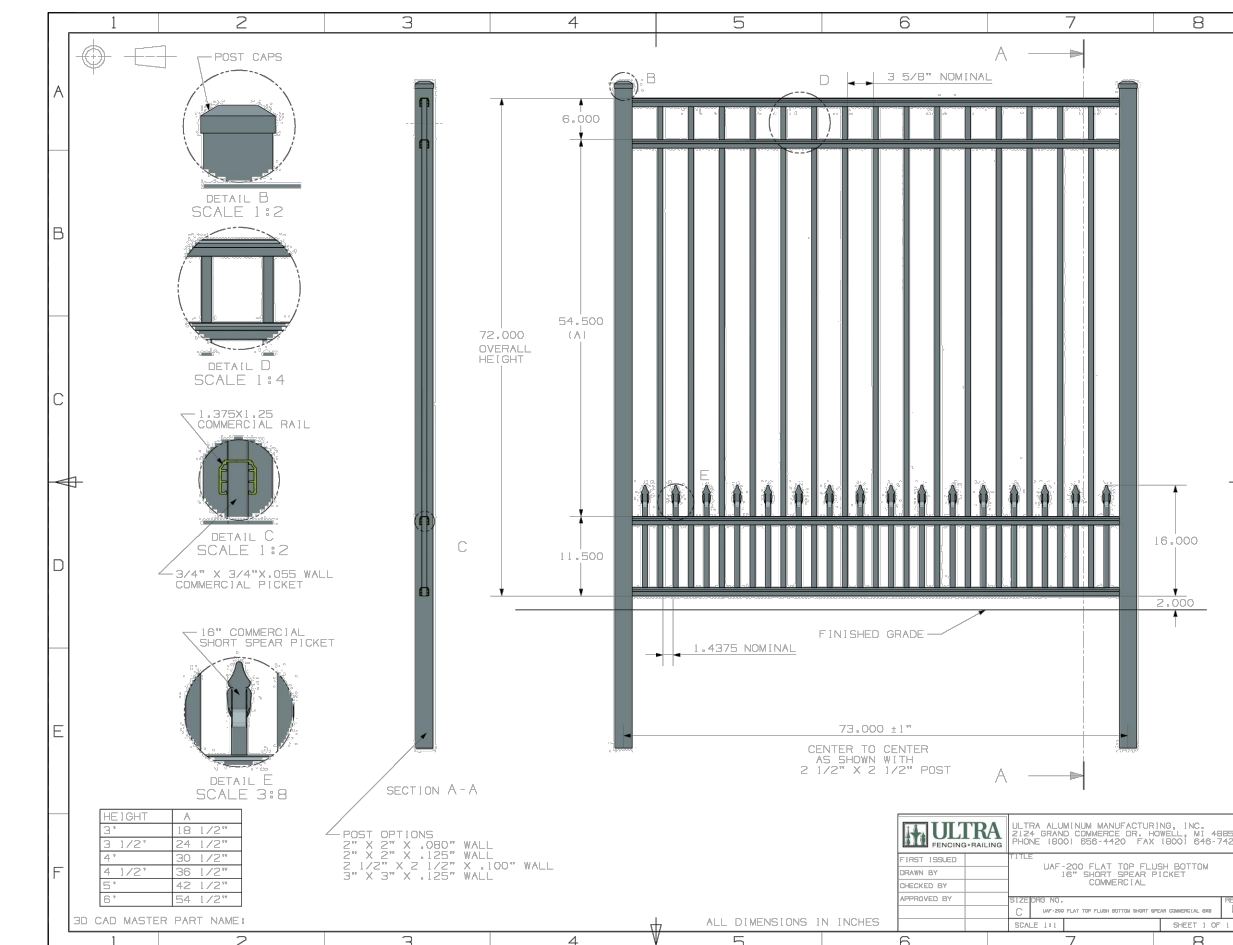
FLOOD VENTS SMART VENT
NOT TO SCALE



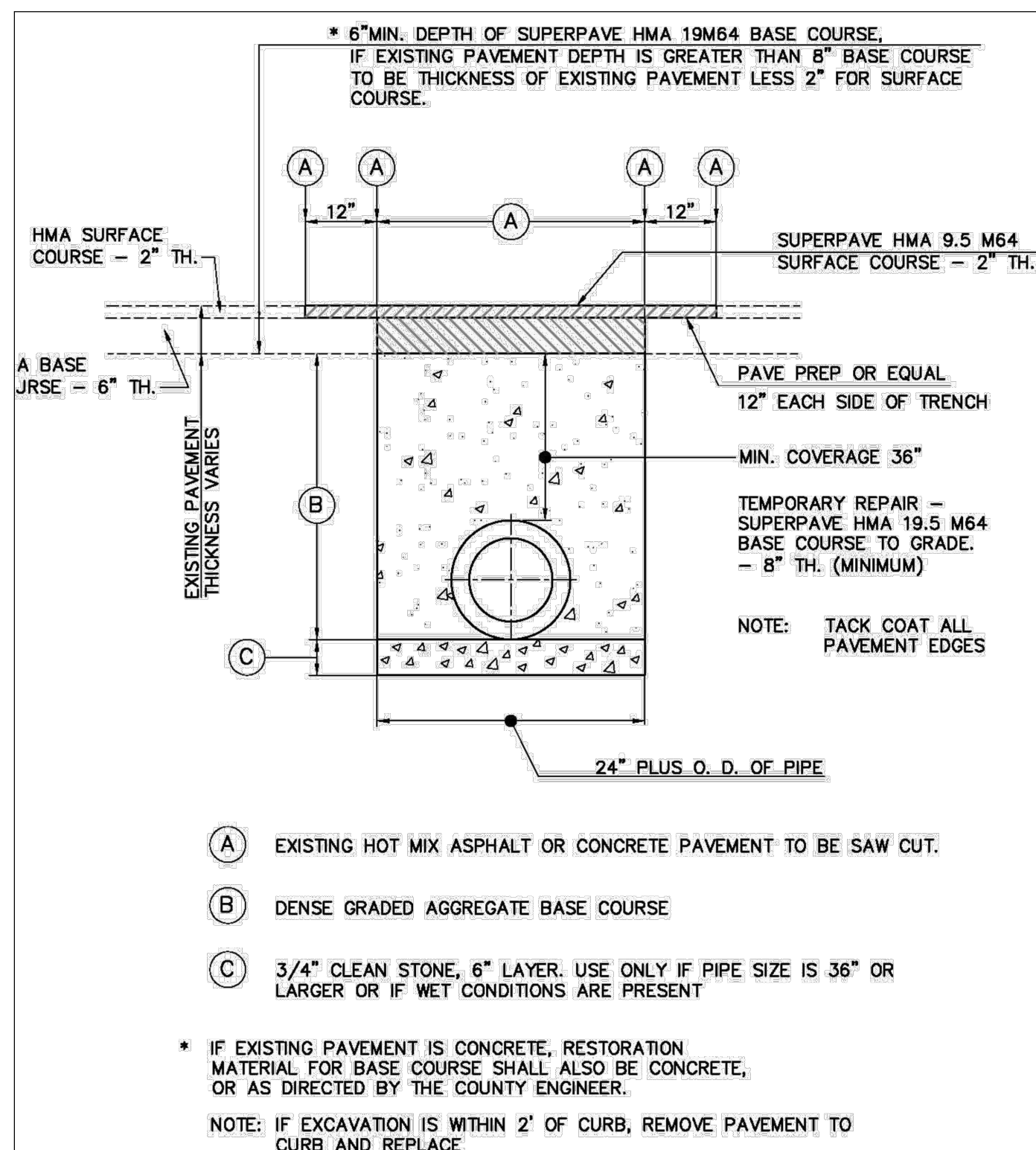
FLOOD VENTS SMART VENT 2x2 MULTI-FRAME
NOT TO SCALE



PUBLIC SIDEWALK AND CURB RAMPS
COUNTY SITE DESIGN DETAIL 1.42
NOT TO SCALE



BLACK METAL PICKET FENCE DETAIL
NOT TO SCALE



HOT MIX ASPHALT PAVEMENT TRENCH RESTORATION
COUNTY SITE DESIGN DETAIL 1.35
NOT TO SCALE

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CONSTRUCTION DETAILS 2
FOR
PRELIMINARY AND FINAL SITE PLAN
FOR
MIXED USE DEVELOPMENT
BLOCK 478, LOTS 2, 3, 4, 5, AND 6
BLOCK 483, LOT 18, AND 17.01
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

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