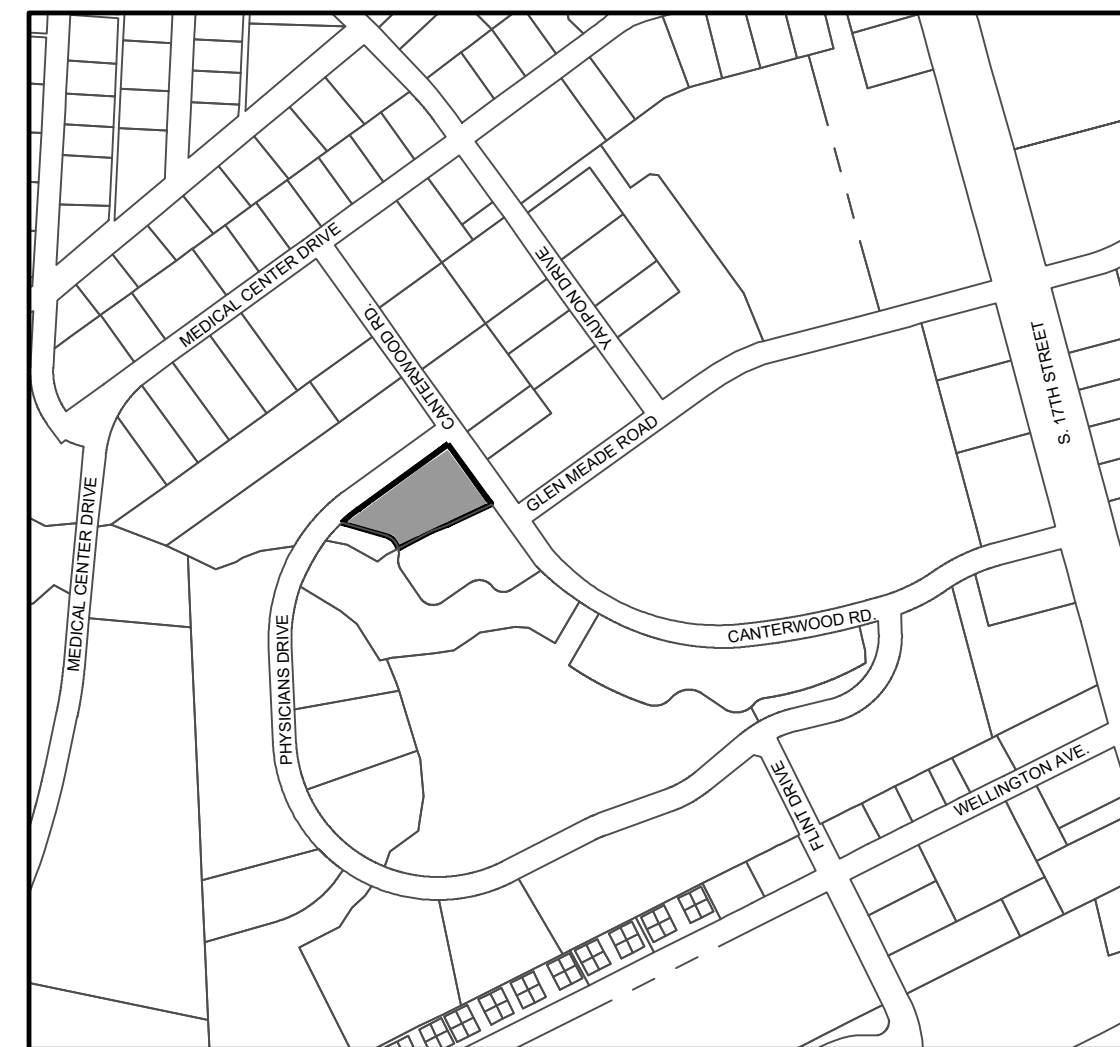


KIDDIE ACADEMY

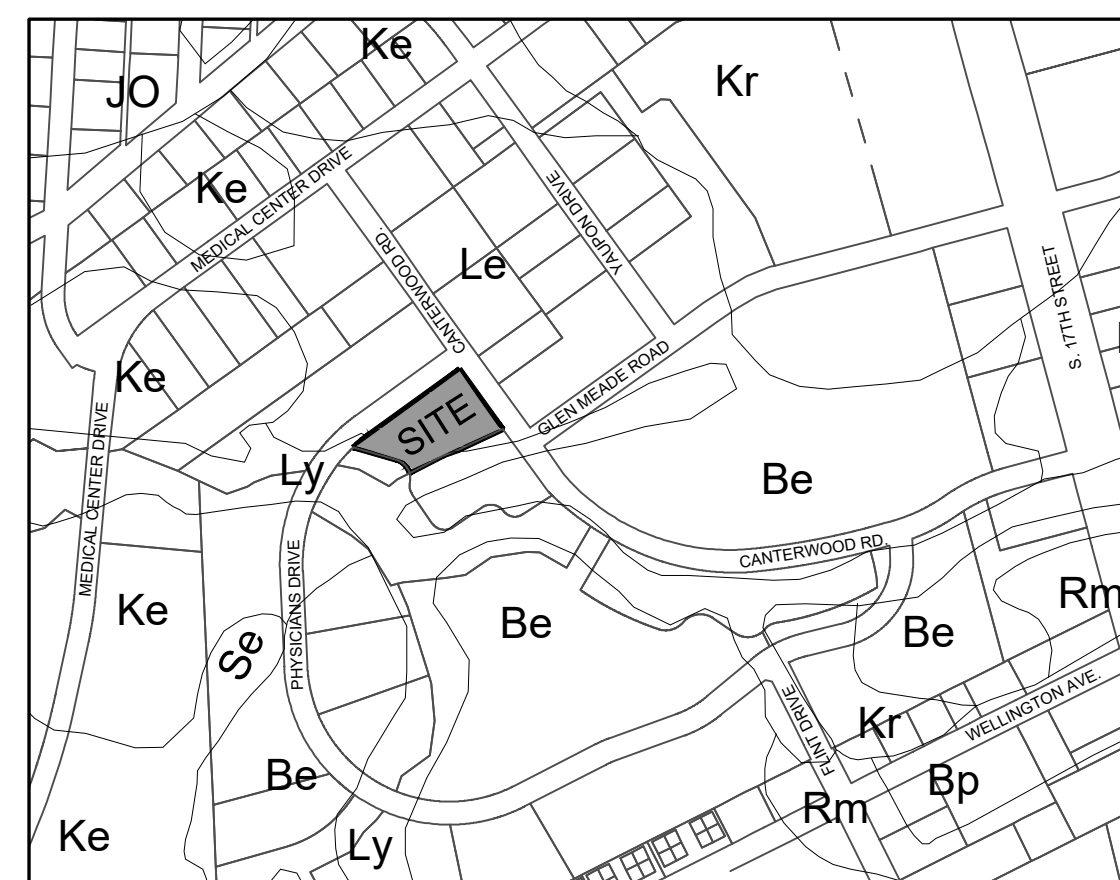
2310 CANTERWOOD DRIVE WILMINGTON, NORTH CAROLINA 28401

CIVIL DESIGN DRAWINGS

FEBRUARY 2019



LOCATION MAP
SCALE: 1"=500'



SOILS MAP
SCALE: 1"=500'

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

CONTACT THESE UTILITIES

CITY OF WILMINGTON PLANNING & DEVELOPMENT
ATTN: BRIAN CHAMBERS, PLANNER
PH: 910-342-2782

ATTN: ZONING INSPECTIONS
PH: 910-254-0900

PIEDMONT NATURAL GAS
ATTN: CATHY PLEASANT
PH: 910-251-2827

EMERGENCY DIAL 911
POLICE - FIRE - RESCUE
ATTN: CITY OF WILMINGTON FIRE & LIFE SAFETY
PH: 910-343-0696

CAPE FEAR PUBLIC UTILITY AUTHORITY (WATER & SEWER)
ENGINEERING/INSPECTIONS
PH: 910-332-6560

OPERATIONS/MAINTENANCE
PH: 910-322-6550

DUKE ENERGY
DISTRIBUTION CONSTRUCTION SERVICE
DEP CSC PH: 1-800-452-2777

TRANSMISSION AGENT
BILL WILDER
PH: 910-772-4903

AT&T/BELL SOUTH
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)
PH: 910-341-0741

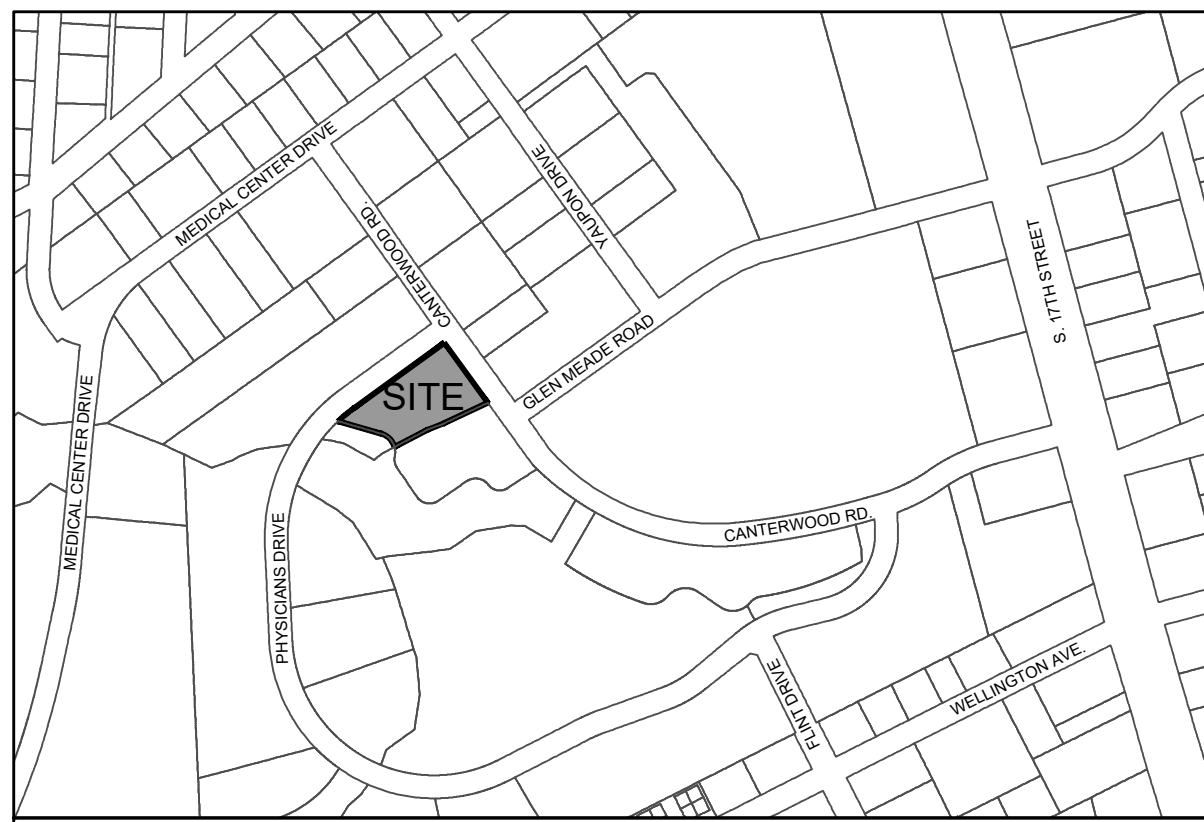
ATTN: JAMES BATSON, ENGINEERING
PH: 910-341-1621

SPECTRUM
GENERAL PH: 800-892-4357

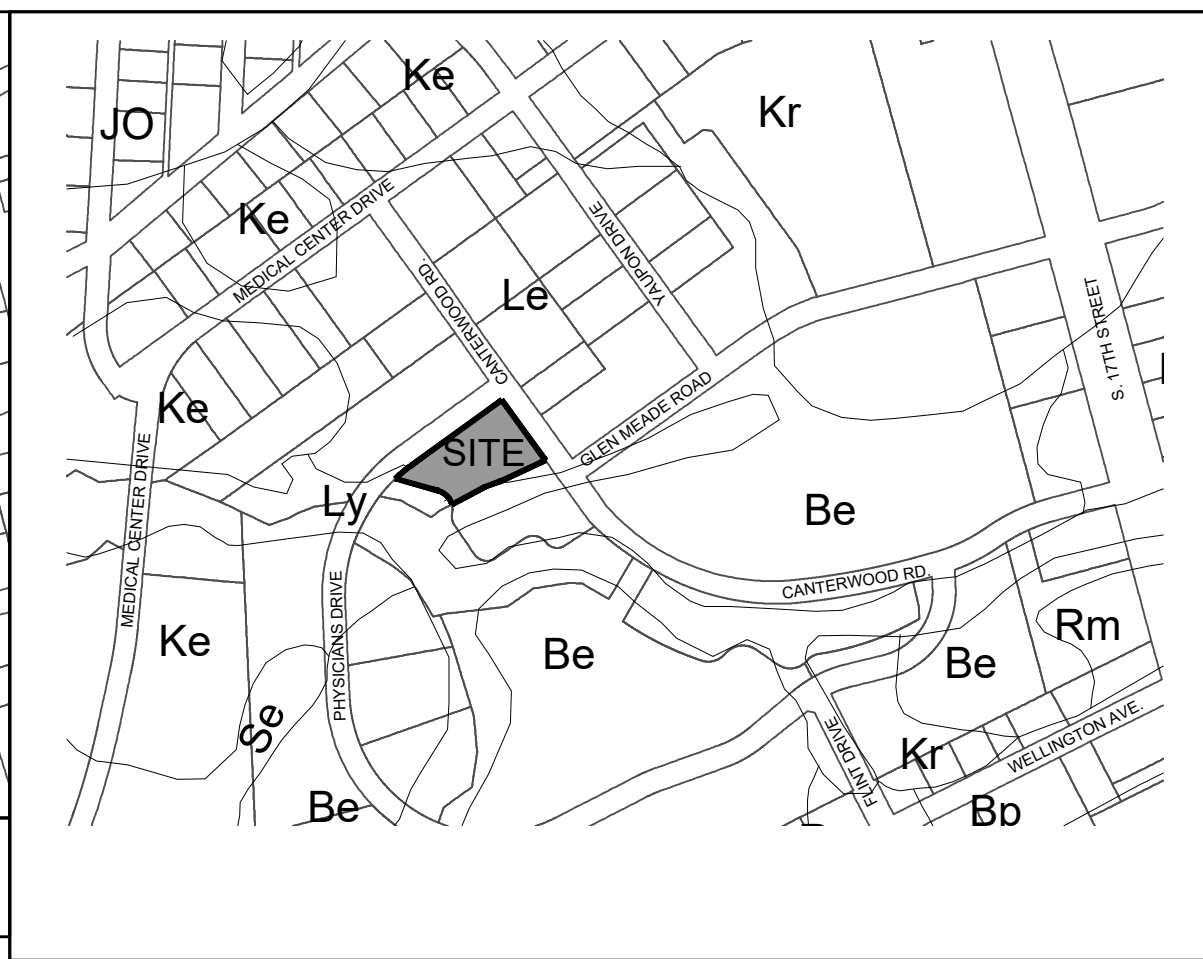


FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

KIDDIE ACADEMY		
PROJECT # 18291.PE	OCTOBER 2018	
SHEET INDEX		
SHEET NUMBER	SHEET TITLE	
C-0.0	COVER SHEET	
C-1.0	GENERAL NOTES	
C-1.1	SITE INVENTORY PLAN	
C-2.0	SITE PLAN & TREE REMOVAL PLAN	
C-3.0 - C-3.1	EROSION CONTROL PLAN	
C-4.0	GRADING & DRAINAGE PLAN	
C-5.0 - 5.5	DETAILS	
L-1.0	LANDSCAPE PLAN	
PROJECT CONSULTANTS		
APPLICANT ETOILE LEARNING DEVELOPMENT, LLC 7407 DARIUS DRIVE WILMINGTON, NC 28411	ENGINEER/LAND PLANNER/LANDSCAPE ARCHITECT PARAMOUNTE ENGINEERING, INC. 122 CINEMA DRIVE WILMINGTON, NC 28403 CONTACT: JEREMY BLAIR, PE (910) 791-6707	SURVEYOR PARAMOUNTE ENGINEERING, INC. 122 CINEMA DRIVE WILMINGTON, NC 28403 CHRIS GAGNE, PLS (910) 791-6707
<p>For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.</p> <p>NCDENR PWSS WATER PERMIT #: _____ WATER CAPACITY: _____ GPD DWQ SEWER PERMIT #: _____ SEWER CAPACITY: _____ GPD SEWER SHED # AND PLANT: _____ SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)</p>		<p>Approved Construction Plan</p> <p>Name _____ Date _____</p> <p>Planning _____ Traffic _____ Fire _____</p> <p>Sealed and Approved by: _____ Professional Engineer WILMINGTON, NORTH CAROLINA Public Services • Engineering Division APPROVED STORMWATER MANAGEMENT PLAN Date: _____ Permit # _____ Signed: _____</p>
<p>PREPARED BY:</p> <p style="text-align: center;">PARAMOUNTE ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License #: C-2846</p>		<p style="text-align: center;">2/1/2019</p>



LOCATION MAP
SCALE: 1"=500'

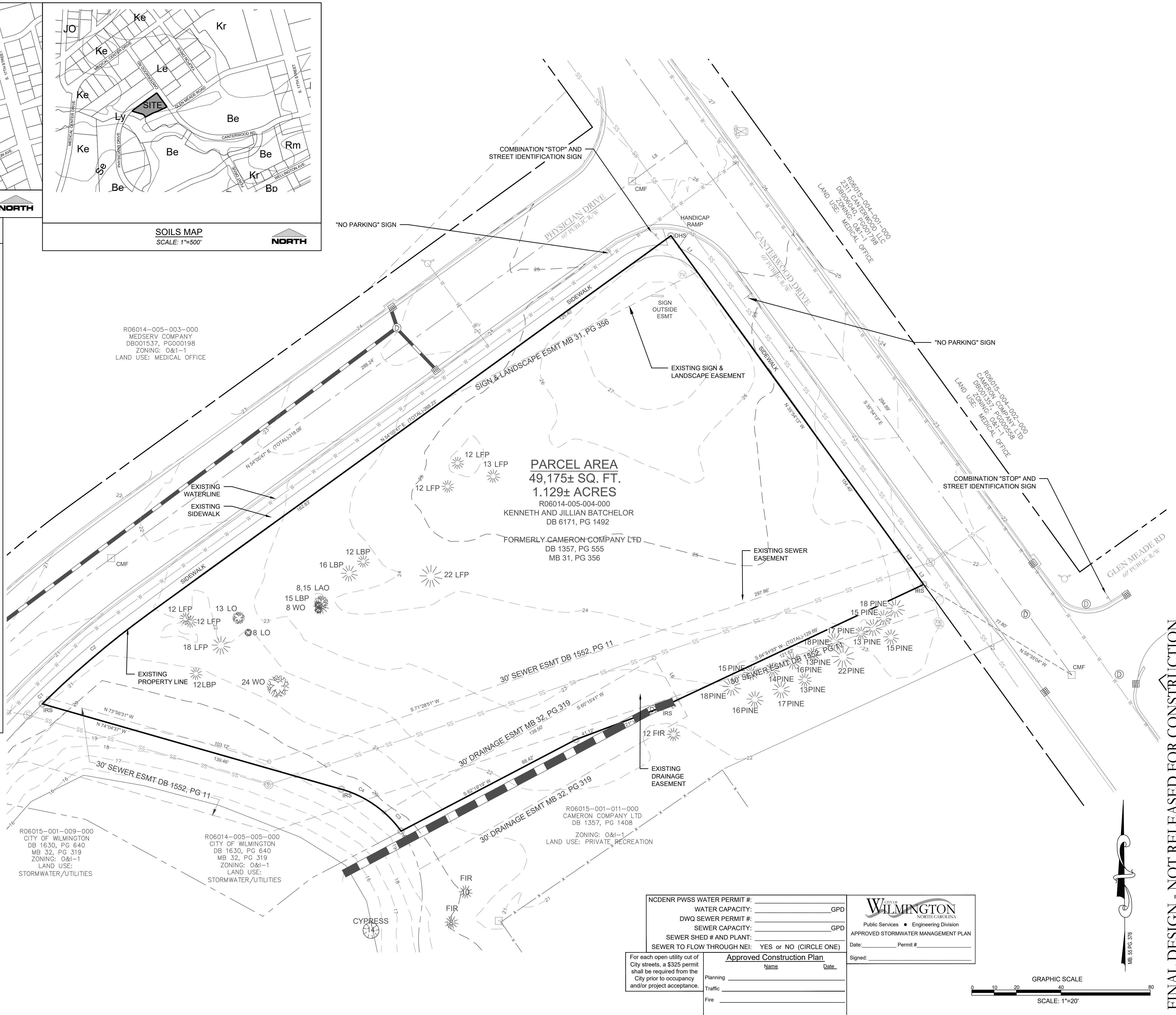


SOILS MAP
SCALE: 1"=500'



SITE INVENTORY DATA

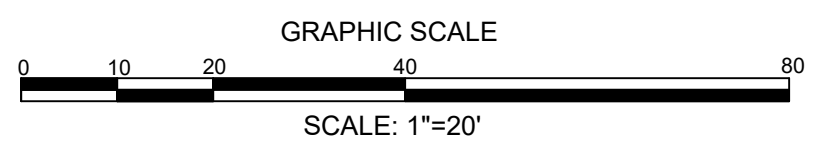
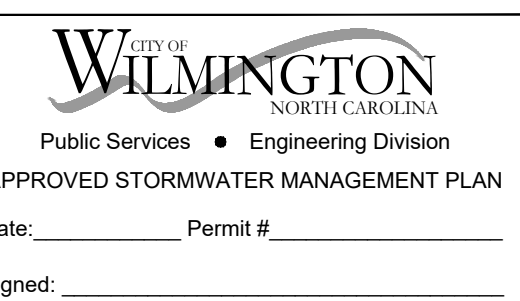
1. PREPARER OF THE PLAN: PARAMOUNTE ENGINEERING
122 CINEMA DRIVE
WILMINGTON, NC 28403
2. APPLICANT NAME: ETOILE LEARNING DEVELOPMENT, LLC
7407 DARIUS DRIVE
WILMINGTON, NC 28411
3. SITE ADDRESS: 2310 CANTERWOOD DRIVE
WILMINGTON, NC 28401
4. PROPERTY OWNER: KENNETH & JILLIAN BATCHELOR
FORMERLY CAMERON COMPANY, LTD.
5. DEVELOPER: KIDDIE ACADEMY
6. PROPERTY BOUNDARY: SEE PLAN
TAX PARCEL IDENTIFICATION #: R06014-005-004-000
RECORDED DEED BOOK: BK 006171 PG 001492
TOTAL SITE AREA: 1.129 ACRES OR 49175 SF
7. ZONING: O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
CURRENT LAND USE: VACANT, UNDEVELOPED LAND
8. ADJACENT PROPERTY INFORMATION (OWNER AND ZONING): SEE PLAN
9. VICINITY MAP: SEE MAP ABOVE
10. TOPOGRAPHY: SEE PLAN
11. 100 YEAR FLOOD PLAIN BOUNDARY: THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3125, MAP NUMBER 312600 J, DATED APRIL 3, 2006
12. LOCATION OF EXISTING DITCHES, CREEKS, AND STREAMS: SEE PLAN
13. SOILS: LEON SAND (LE)
LYNN HAVEN FINE SAND (LY)
(SEE SOILS MAP ABOVE)
14. CAMA AEC & ASSOCIATED SETBACKS: N/A
15. CAMA LAND USE CLASSIFICATION: URBAN
16. CONSERVATION RESOURCES: NONE
17. LOCAL, STATE, OR FEDERAL HISTORIC OR ARCHAEOLOGICAL SITE: N/A
18. LOCATION OF CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS: N/A
19. SQUARE FOOTAGE OF FORESTED AREA, HABITAT, AND DOMINANT SPECIES: N/A
20. SECTION 404 WETLANDS AND SECTION 10 WATERS: N/A
21. PROTECTED SPECIES OR HABITAT: N/A
22. THOROUGHFARES, BIKE ROUTES, SIDEWALKS, TRANSIT FACILITIES (EXISTING OR PROPOSED): N/A
23. TREE INVENTORY: SEE C-2.0 SITE PLAN



NC DENR PWSS WATER PERMIT # _____
 WATER CAPACITY: _____ GPD
 DWQ SEWER PERMIT # _____
 SEWER CAPACITY: _____ GPD
 SEWER SHED # AND PLANT: _____
 SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

Approved Construction Plan
 Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

1)	REVISED PER CITY COMMENTS	10/16/18
----	---------------------------	----------

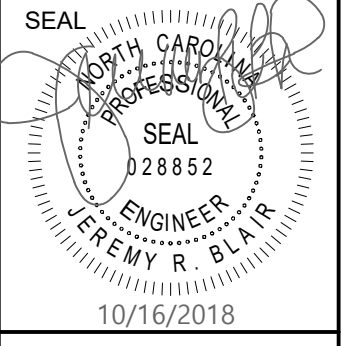
CLIENT INFORMATION:
 Eroile Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

PARAMOUNTE
 ENGINEERING, INC.
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6700 (F)
 NC License #: C-2846

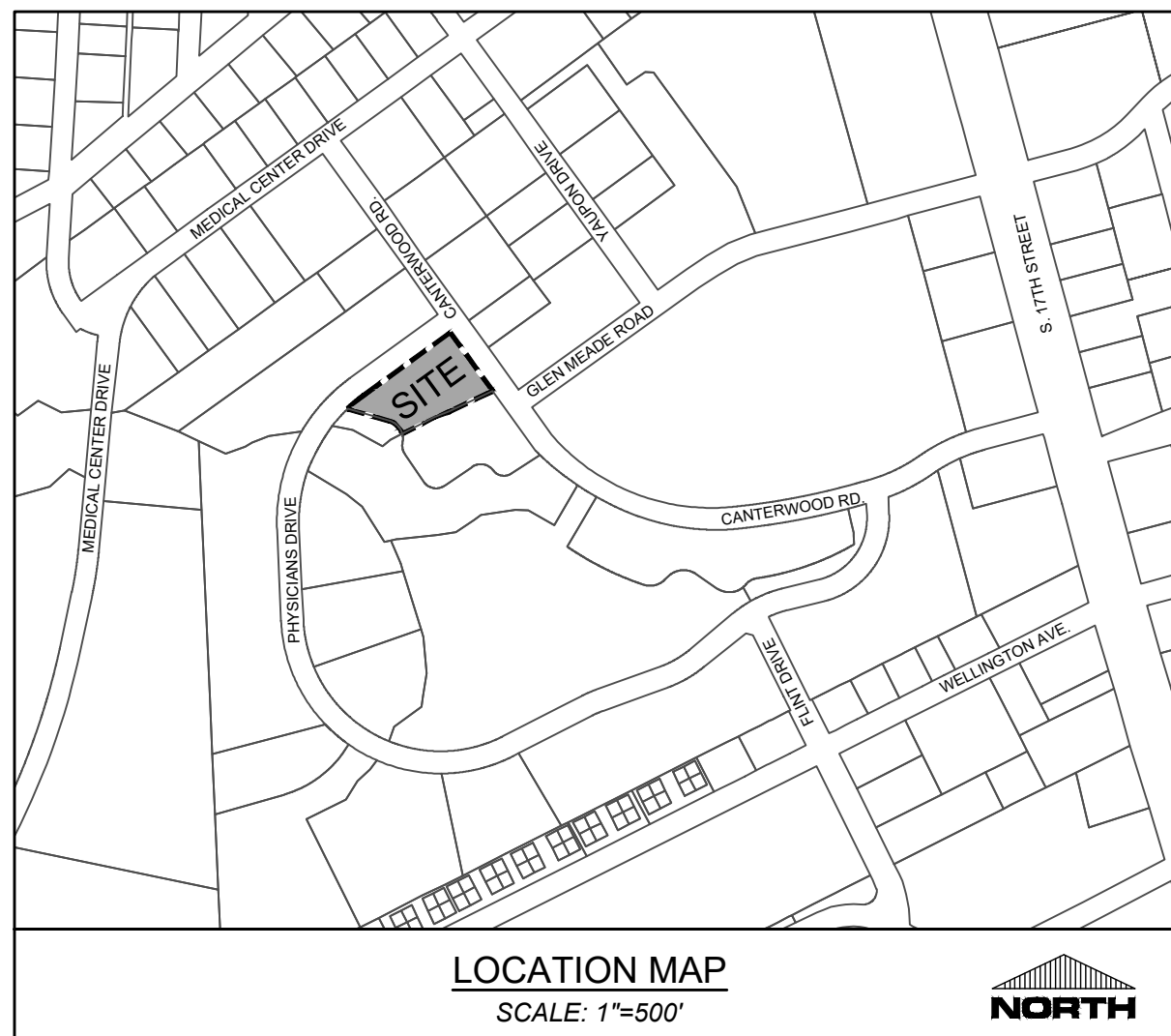
SITE INVENTORY PLAN
 KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

PROJECT STATUS:
 CONCEPTUAL LAYOUT: _____
 FINAL DESIGN: _____
 RELEASED FOR CONSTRUCTION: _____

DRAWING INFORMATION:
 DATE: 07/11/18
 SCALE: 1"=20'
 DRAWN BY: JRB
 CHECKED: _____



C-1.1
 PEI JOB#: 18291.PE



LOCATION MAP
SCALE: 1"=500'

SITE INFORMATION
OWNER INFORMATION: ETOILE LEARNING DEVELOPMENT, LLC
PROJECT ADDRESS: 2310 CANTERWOOD DRIVE WILMINGTON, NC 28401

TAX PARCEL IDENTIFICATION #: R06014-005-004-000
RECORDED DEED BOOK: BK 001357 PG 000558
CURRENT ZONING: O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
EXISTING USE: VACANT LAND
PROPOSED USE: DAY CARE (CHILD)
TOTAL SITE AREA: 1.129 ACRES OR 49175 SF

FLOOD INFORMATION: THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3126, MAP NUMBER 3720312600 J, DATED APRIL 3, 2006

CAMA LAND USE CLASSIFICATION: URBAN
CONSERVATION DISTRICT: NONE

DIMENSIONAL REQUIREMENTS
O&I-1: OFFICE AND INSTITUTIONAL, DISTRICT 1
- MINIMUM LOT AREA: 1,500 SF
- MINIMUM LOT WIDTH: 80'
- MAXIMUM LOT COVERAGE: 40%
- MINIMUM FRONT SETBACK: 20'
- MINIMUM REAR SETBACK: 10'
- MINIMUM INTERIOR SIDE SETBACK: 20'
- MINIMUM CORNER LOT SIDE SETBACK: 45'
- MAXIMUM BUILDING HEIGHT: 45'

BUILDING SETBACKS:	REQUIRED	PROVIDED
FRONT SETBACK	20'	89'
SIDE SETBACK	20'	20'
INTERIOR SIDE YARD SETBACK	10'	53.84'
REAR SETBACK	20'	71.43'
CORNER SETBACK	20'	20'

IMPERVIOUS INFORMATION
EXISTING IMPERVIOUS AREA: 0 SF

PROPOSED IMPERVIOUS AREA	8,490 SF
TOTAL BUILDING (FOOTPRINT)	15,775 SF
ON-SITE PARKING & DRIVEWAYS	3,892 SF
ON-SITE SIDEWALKS	2,270 SF
MISC. IMPERVIOUS (PLAYGROUND)	6,454 SF
FUTURE IMPERVIOUS	36,881 SF
TOTAL PROPOSED IMP. AREA	75%

BUILDING INFORMATION
CONSTRUCTION TYPE: V-B (OCCUPANCY TYPE B - BUSINESS)
NUMBER OF PROPOSED BUILDINGS: 1
PROPOSED BUILDING SF (FOOTPRINT): 8,489 SF
BLDG SF 1ST FLOOR: 8,489 SF
BLDG SF 2ND FLOOR: 4,271 SF
TOTAL BUILDING SF: 12,760 SF
MAX. HEIGHT: 45'
LOT COVERAGE: 17.3% (PROPOSED)

SITE PARKING
PARKING SPACES REQUIRED:
(1 PER 8 PARTICIPANTS MIN., MAX. IS 150% OF MIN., DAY CARE)
227 PARTICIPANTS (CHILDREN) / 8 SPACES: 28 SPACES REQUIRED (MIN.)
28 SPACES (MIN.) X 1.5: 42 SPACES ALLOWED (MAX.)
PARKING SPACES PROVIDED: 34 SPACES PROVIDED

HANDICAP PARKING REQUIRED: 2 SPACES
HANDICAP PARKING PROVIDED: 2 SPACES

PLAYGROUND AREA
PLAYGROUND AREA REQUIRED:
(75 SF PER CHILD FOR AT LEAST ONE-HALF OF THE TOTAL NUMBER FOR WHICH THE CENTER IS LICENSED)
227 CHILDREN x 0.5 x 75 SF: 8,513 SF REQUIRED
8,532 SF PROVIDED

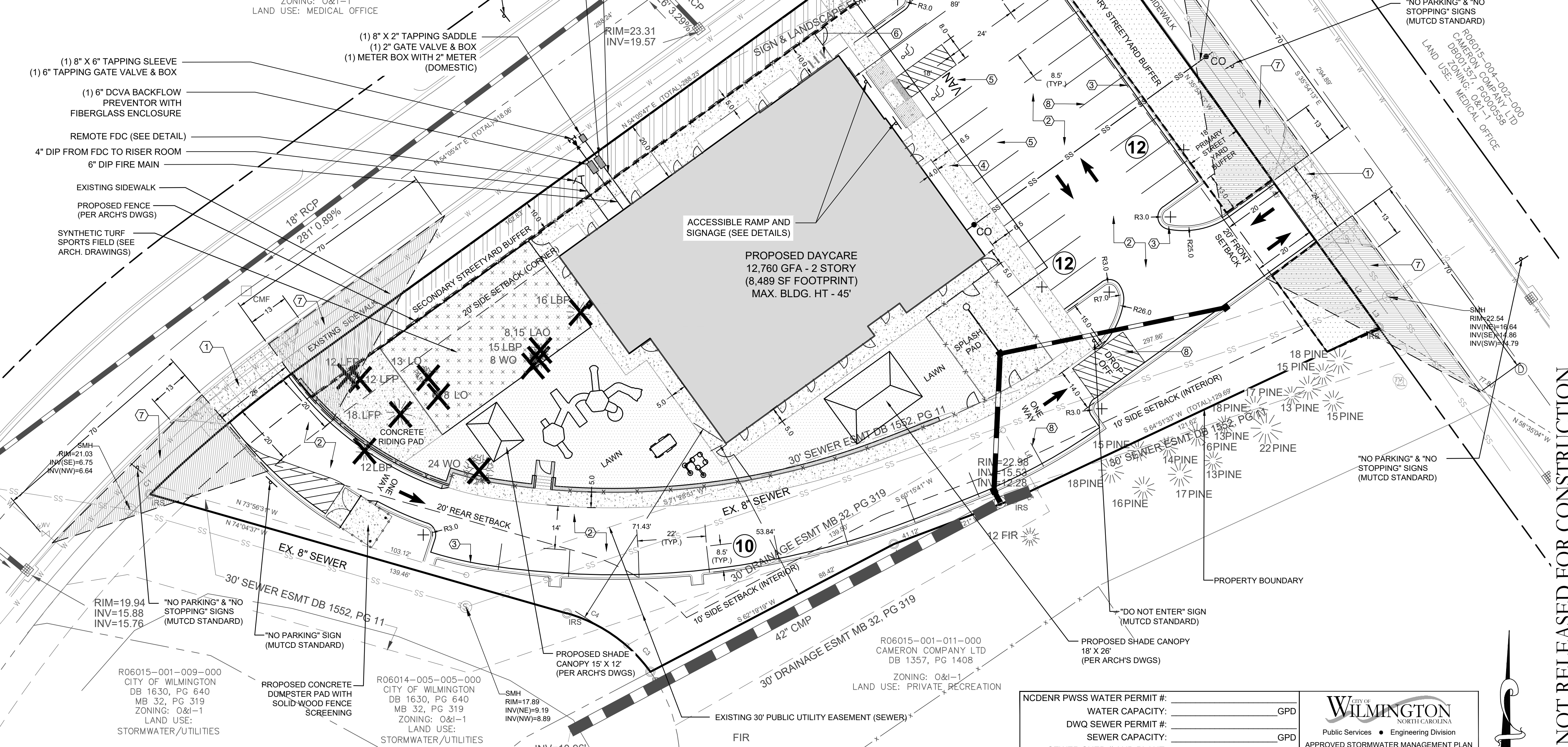
LANDSCAPE CALCULATIONS
SEE SHEET L-1.0 LANDSCAPE PLAN FOR CALCULATIONS

WATER AND SEWER DEMANDS
WATER: 0 GPD (CURRENT USE)
WATER: 6,800 GPD (PROPOSED USE)
SEWER: 0 GPD (CURRENT USE)
SEWER: 6,800 GPD (PROPOSED USE)

Kiddie Academy Tree Removal & Required Mitigation									
Qty. of Trees	Caliper Inches*	Individual Trunk Calipers AND Individual Cluster	Tree Common Name	City Tree Type Classification	Total Cal. Inches to be Removed	% Mitigation	Significant	Essential Site Improvements	Total Qty. of Mitigation Trees Required
1	8	8	WO (WATER OAK)	hardwood	8	100%			3
1	24	24	WO (WATER OAK)	hardwood	24	100%	yes		16
1	23	23	LAO (LAUREL OAK)	hardwood	23	100%			8
1	8	8	LO (LIVE OAK)	hardwood	8	100%			3
1	13	13	LO (LIVE OAK)	hardwood	13	100%			4
2	12	12	LFP (LONGLEAF PINE)	conifer	24	100%			8
2	12	12	LFP (LONGLEAF PINE)	conifer	24	100%			8
1	13	13	LFP (LONGLEAF PINE)	conifer	13	100%			4
1	16	16	LFP (LONGLEAF PINE)	conifer	16	100%			6
1	22	22	LFP (LONGLEAF PINE)	conifer	22	100%			7
Total Category 1 Significant & Regulated Mitigation Trees Required:									67
Total Category 1 Regulated Trees To be Removed with Essential Site Improvements:									0

Category 3 (50% Mitigation)									
Qty. of Trees	Caliper Inches*	Individual Trunk Calipers AND Individual Cluster	Tree Common Name	City Tree Type Classification	Total Cal. Inches to be Removed	% Mitigation	Significant	Essential Site Improvements	Total Qty. of Mitigation Trees Required
2	12	12	LBP (LOBLOLLY)	conifer	24	50%			4
1	15	15	LBP (LOBLOLLY)	conifer	15	50%			3
1	16	16	LBP (LOBLOLLY)	conifer	16	50%			3
Total Category 3 Significant & Regulated Mitigation Trees Required:									10
Total Category 3 Regulated Trees To be Removed with Essential Site Improvements:									0

Total Qty. of Trees to be Removed (essential site improvements):	0
Total Qty. of Significant & Regulated Tree Mitigation:	77
Total Tree Credits:	0
Total Qty. of Mitigation Trees Required on Site (or Pay In Lieu Equivalent):	77

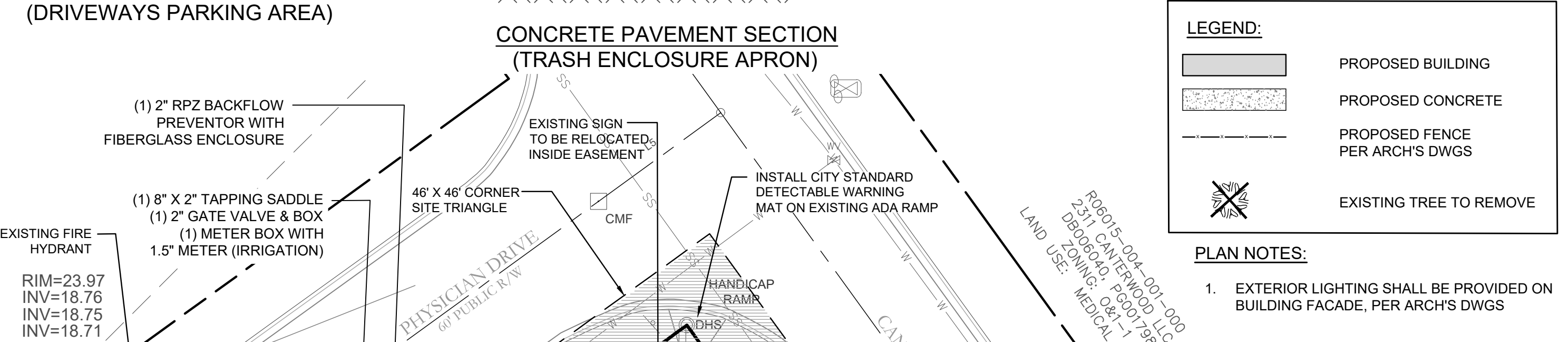
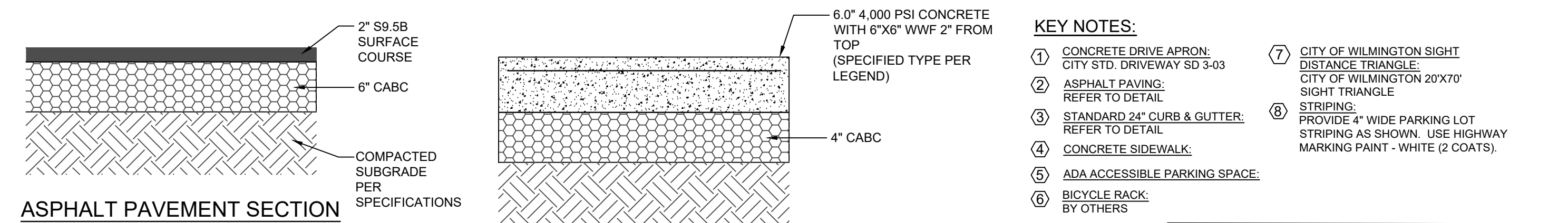


FIRE AND LIFE SAFETY NOTES:

- CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- A HYDRANT MUST BE WITHIN 150' OF THE FDC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE).
- FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696.
- ALL ISOLATION VALVES WITHIN THE "HOT BOX" MUST BE ELECTRICALLY SUPERVISED.

GENERAL NOTES:

- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
- CONTRACTOR SHALL REFER TO LANDSCAPE PLAN FOR SPECIFIC TREE REMOVAL AND OTHER LANDSCAPING DETAILS.
- A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. CONTACT 341-5888 FOR MORE DETAILS.
- CONTRACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.



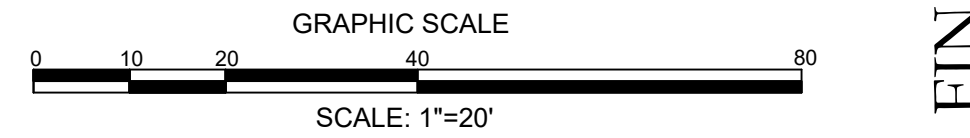
NCDENR PWSS WATER PERMIT #: _____ GPD
WATER CAPACITY: _____ GPD
DWQ SEWER PERMIT #: _____ GPD
SEWER CAPACITY: _____ GPD
SEWER SHED # AND PLANT: _____
SEWER TO FLOW THROUGH NEI: YES OR NO (CIRCLE ONE)

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____

City of WILMINGTON, NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



REVISIONS:

NO.	DATE	DESCRIPTION
1	10/16/19	REVISED PER CITY COMMENTS
2	11/15/19	REVISED PER CITY COMMENTS & NEW BLDG FOOTPRINT
3	12/10/19	REV. TREE MITIGATION CALC'S PER CITY COMMENTS
4	02/01/20	REV. TREE MITIGATION CALC'S PER CITY COMMENTS

CLIENT INFORMATION:
Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNT ENGINEERING, P.C.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6766 (F)
NC License #: C-2846

SITE PLAN & TREE REMOVAL PLAN
KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

PROJECT STATUS:
CONCEPTUAL LAYOUT: _____
FINAL DESIGN LAYOUT: _____
FINAL DESIGN FOR CONSTRUCTION: _____

DRAWING INFORMATION:
DATE: 2/11/2020
SCALE: 1"=20'
JOB NO: 18291.PE
DRAWN: JRB/AMW
CHECKED: _____

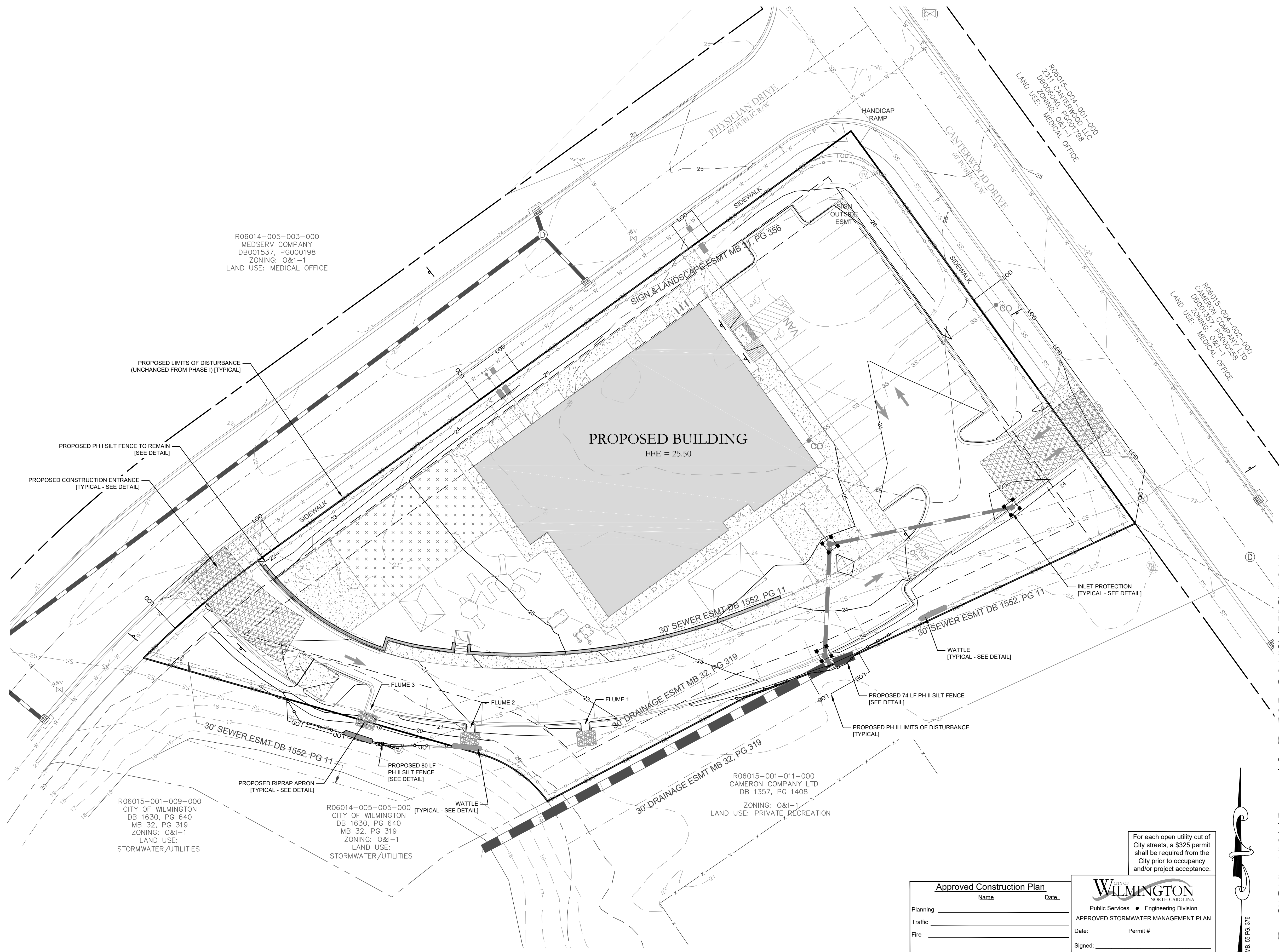
SEAL: JERRY R. BLANKENHORN, ENGINEER, No. 28852, State of North Carolina, Exp. 12/31/2021

PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



Know what's below.
Call before you dig.



R06014-005-003-000
MEDSERV COMPANY
DB001537, PG000198
ZONING: O&I-1
LAND USE: MEDICAL OFFICE

PROPOSED LIMITS OF DISTURBANCE
(UNCHANGED FROM PHASE I) [TYPICAL]

PROPOSED PH I SILT FENCE TO REMAIN
[SEE DETAIL]

PROPOSED CONSTRUCTION ENTRANCE
[TYPICAL - SEE DETAIL]

PROPOSED BUILDING
FFE = 25.50

30' SEWER ESMT DB 1552, PG 11

30' DRAINAGE ESMT MB 32, PG 319

WATTLE [TYPICAL - SEE DETAIL]

PROPOSED 74 LF PH II SILT FENCE
[SEE DETAIL]

PROPOSED PH II LIMITS OF DISTURBANCE
[TYPICAL]

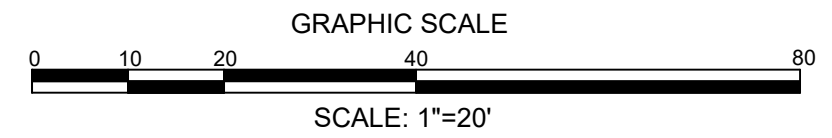
R06015-001-009-000
CITY OF WILMINGTON
DB 1630, PG 640
MB 32, PG 319
ZONING: O&I-1
LAND USE:
STORMWATER/UTILITIES

R06014-005-005-000
CITY OF WILMINGTON
DB 1630, PG 640
MB 32, PG 319
ZONING: O&I-1
LAND USE:
STORMWATER/UTILITIES

R06015-001-011-000
CAMERON COMPANY LTD
DB 1357, PG 1408
ZONING: O&I-1
LAND USE: PRIVATE, RECREATION

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____
Signed: _____

Seal of the City of Wilmington, North Carolina, Engineering Division, Approved Stormwater Management Plan, Date: 1/14/2019, Permit #: _____



For each open utility cut of
City streets, a \$325 permit
shall be required from the
City prior to occupancy
and/or project acceptance.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

Table with 2 columns: REVISIONS, DATE. Row 1: 1. REVISIONS PER STATE STORMWATER REQUIREMENTS, 01.14.19

CLIENT INFORMATION:
Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNTE
ENGINEERING, P.L.L.C.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
N.C. License #: C-2846

EROSION CONTROL PLAN
PHASE II
KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

Table with 2 columns: PROJECT STATUS, DRAWING INFORMATION. PROJECT STATUS: PRELIMINARY LAYOUT, FINAL DESIGN, RELEASED FOR CONSTRUCTION. DRAWING INFORMATION: DATE: 7/28/2019, SCALE: 1"=20', DRAWN: JRE, CHECKED: JBL

Professional Engineer Seal for Jeremy R. Blain, No. 28882, dated 1/14/2019.

C-3.1
PEI JOB#: 18291.PE

STORM SCHEDULE:

Upstream Node	Downstream Node	Diameter (in)	Upstream Invert	Downstream Invert	Pipe Length (ft)	Slope (%)	Upstream Rim Elev	Downstream Rim Elev	Pipe Material
CB-101	EX MH	18	18.03	18.00	6	0.50	23.48	22.98	RCP III
DI-101	CB-101	18	18.24	18.03	42	0.50	24.93	23.48	RCP III
CB-102	DI-101	15	18.61	18.24	74	0.50	22.80	24.93	RCP III
RD-103	DI-101	10	20.00	19.81	18	1.01	25.25	24.93	HDPE

ROOF DRAIN NOTE:

- 1.) ALL BUILDING ROOF DRAINS SHALL BE COLLECTED BY HEADER PIPES AND ROUTED TO STRUCTURE RD-103 FOR FURTHER CONVEYANCE TO THE EXISTING OFFSITE STORMWATER POND.

NOTES:

- 1.) SEE GENERAL NOTES SHEET (C-1.0) FOR GRADING, DRAINAGE AND EROSION CONTROL NOTES AND DETAILS FOR MORE INFORMATION.
- 2.) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF WILMINGTON AND NEW HANOVER COUNTY STANDARDS AND SPECIFICATIONS.
- 3.) GEOTECHNICAL TESTING SHALL BE PERFORMED ON-SITE. A GEOTECHNICAL ENGINEER SHALL BE CONSULTED TO CONFIRM SUITABILITY OF SUBGRADE MATERIAL AND PROPER COMPACTION IN FILL AREAS.

ASPHALT AREA NOTE:

- 1.) SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

BUILDING PAD NOTE:

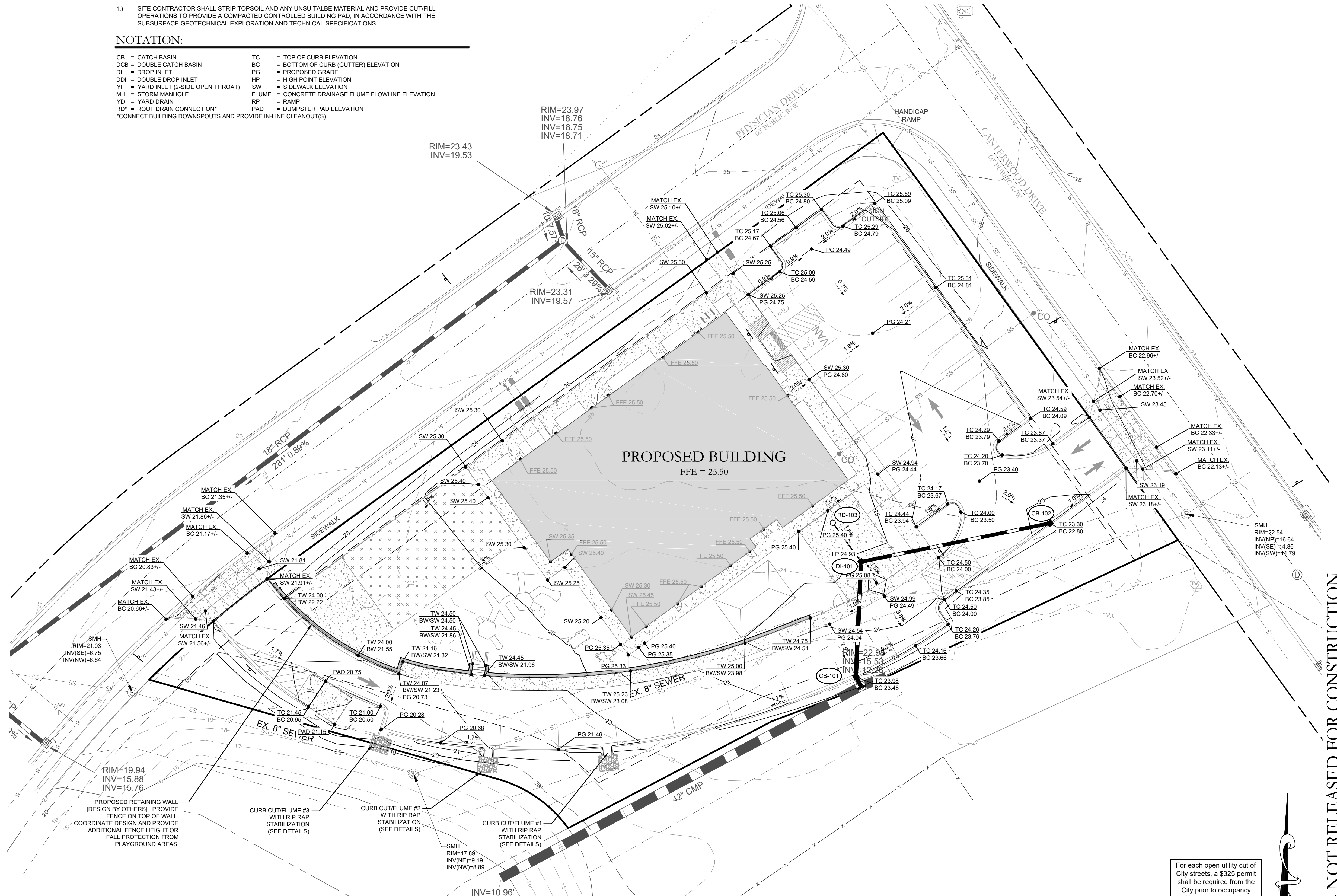
- 1.) SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND TECHNICAL SPECIFICATIONS.

NOTATION:

CB = CATCH BASIN	TC = TOP OF CURB ELEVATION
DCB = DOUBLE CATCH BASIN	BC = BOTTOM OF CURB (GUTTER) ELEVATION
DI = DROP INLET	PG = PROPOSED GRADE
DDI = DOUBLE DROP INLET	HP = HIGH POINT ELEVATION
YI = YARD INLET (2-SIDE OPEN THROAT)	SW = SIDEWALK ELEVATION
MH = STORM MANHOLE	FLUME = CONCRETE DRAINAGE FLUME FLOWLINE ELEVATION
YD = YARD DRAIN	RP = RAMP
RD* = ROOF DRAIN CONNECTION*	PAD = DUMPSTER PAD ELEVATION
*CONNECT BUILDING DOWNSPOUTS AND PROVIDE IN-LINE CLEANOUT(S).	

DRAINAGE NOTES:

- 1.) DRAINAGE EASEMENT AND STORMWATER SYSTEM MAINTENANCE IS THE RESPONSIBILITY OF THE DEVELOPER OR HOA, INCLUDING PONDS, PIPES, AND INFILTRATION BASINS AND TRENCHES.
- 2.) ALL IMPERVIOUS MUST DRAIN TO THE DESIGNED STORMWATER SYSTEM, PER THE APPROVED PLANS.
- 3.) NO OBSTRUCTIONS ARE ALLOWED IN DRAINAGE EASEMENTS, INCLUDING FENCES.
- 4.) ALL STORM DRAINAGE STRUCTURES SHALL MEET NCDOT STANDARDS AND SPECIFICATIONS AND SHALL BE TRAFFIC RATED FOR H-20 LOADS AT A MINIMUM.
- 5.) ALL CATCH BASIN (CB) RIM ELEVATIONS AND YARD INLET (YI) THROAT ELEVATIONS ARE LISTED AS THE "GUTTER OF FLOWLINE ELEVATION" WITHIN THE CURB SECTION. THE CONTRACTOR SHALL MAINTAIN A UNIFORM EDGE OF PAVEMENT (EOP) WHEN PLACING THE STORM INLETS WITHIN THE CURB-LINE (SEE "CURB TRANSITION" DETAIL) FOR CATCH BASINS WITHIN A TRANSITION FROM 24" STANDARD CURB & GUTTER. THE RIM ELEVATION GIVEN IS 1 INCH BELOW EOP.
- 6.) MANHOLE RIM ELEVATION SHOWN ABOVE IS FLUSH WITH PROPOSED GRADE. CONTRACTOR SHALL PROVIDE 6" CLEARANCE ABOVE PROPOSED GRADE WHEN PLACED IN A GRASS/PERVIOUS AREA; AND A FLUSH CONDITION WITH PROPOSED PAVEMENT OR IMPERVIOUS COVER.
- 7.) PROPOSED BUILDINGS SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM.
- 8.) CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY AREAS TO MATCH PROPOSED GRADES.
- 9.) THE CONTRACTOR SHALL USE EITHER RCP (CL. III UNLESS OTHERWISE NOTED) OR HDPE PIPE FOR THE STORM DRAINAGE SYSTEM. IF THE CONTRACTOR CHOOSES TO USE HDPE PIPE, IT SHALL BE ADS N-12 WT STORM PIPE OR APPROVED EQUAL AND SHALL BE INSTALLED TO MANUFACTURER SPECIFICATIONS. IN ADDITION, THE CONTRACTOR SHALL BE SURE TO PROVIDE CONCRETE COLLARS AROUND EACH F.E.S. TO PREVENT FLOATATION IF HDPE PIPE IS CHOSEN.



Approved Construction Plan

Name: _____ Date: _____

Planning _____

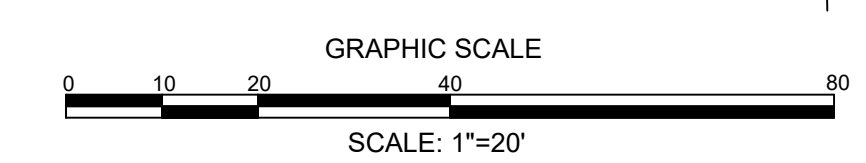
Traffic _____

Fire _____

City of Wilmington
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



REVISIONS:

1) REVISED PER NCDOT SWM COMMENTS	8/23/18
2) REVISED PER CITY COMMENTS	10/10/18
3) REV. PER CITY COMMENTS & NEW BLDG FOOTPRINT	01/14/19

CLIENT INFORMATION:

Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNT ENGINEERING, P.C.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
N.C. License #: C-2846

GRADING & DRAINAGE PLAN

KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

PROJECT STATUS

DESIGN: _____

PRELIMINARY LAYOUT: _____

FINAL DESIGN: _____

RELEASED FOR CONSTRUCTION: _____

DRAWING INFORMATION

DATE: 01/14/19

SCALE: 1"=20'

DRAWN: _____

CHECKED: _____

SEAL

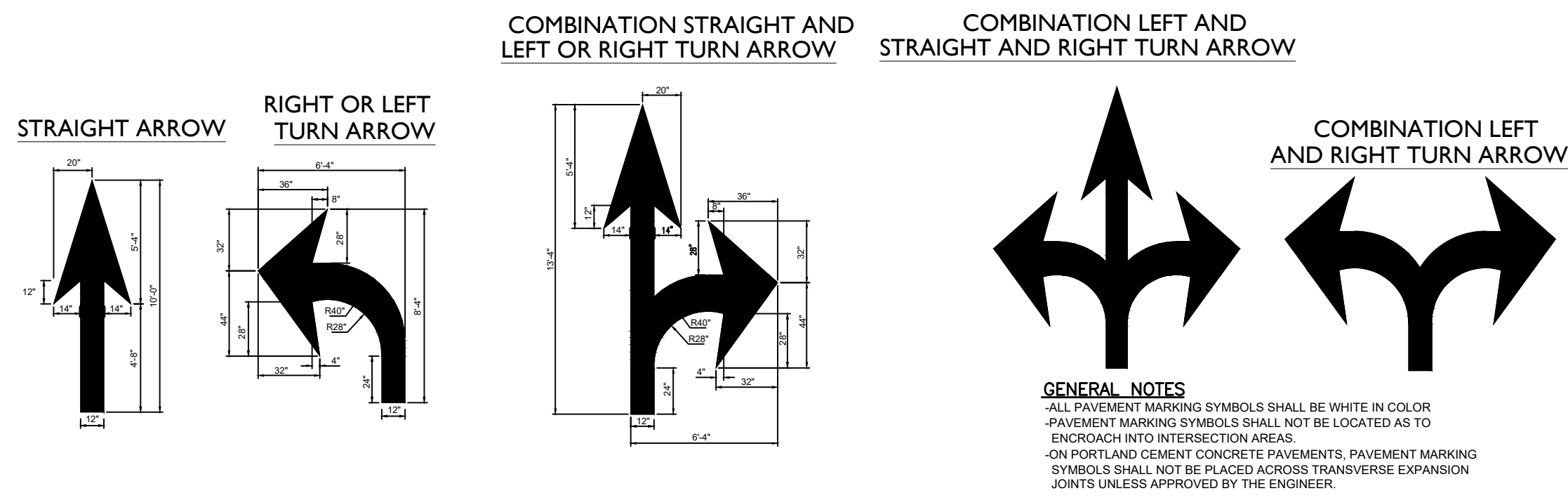
J. REMY BILAL
Professional Engineer
No. 28852
01/14/19

C-4.0

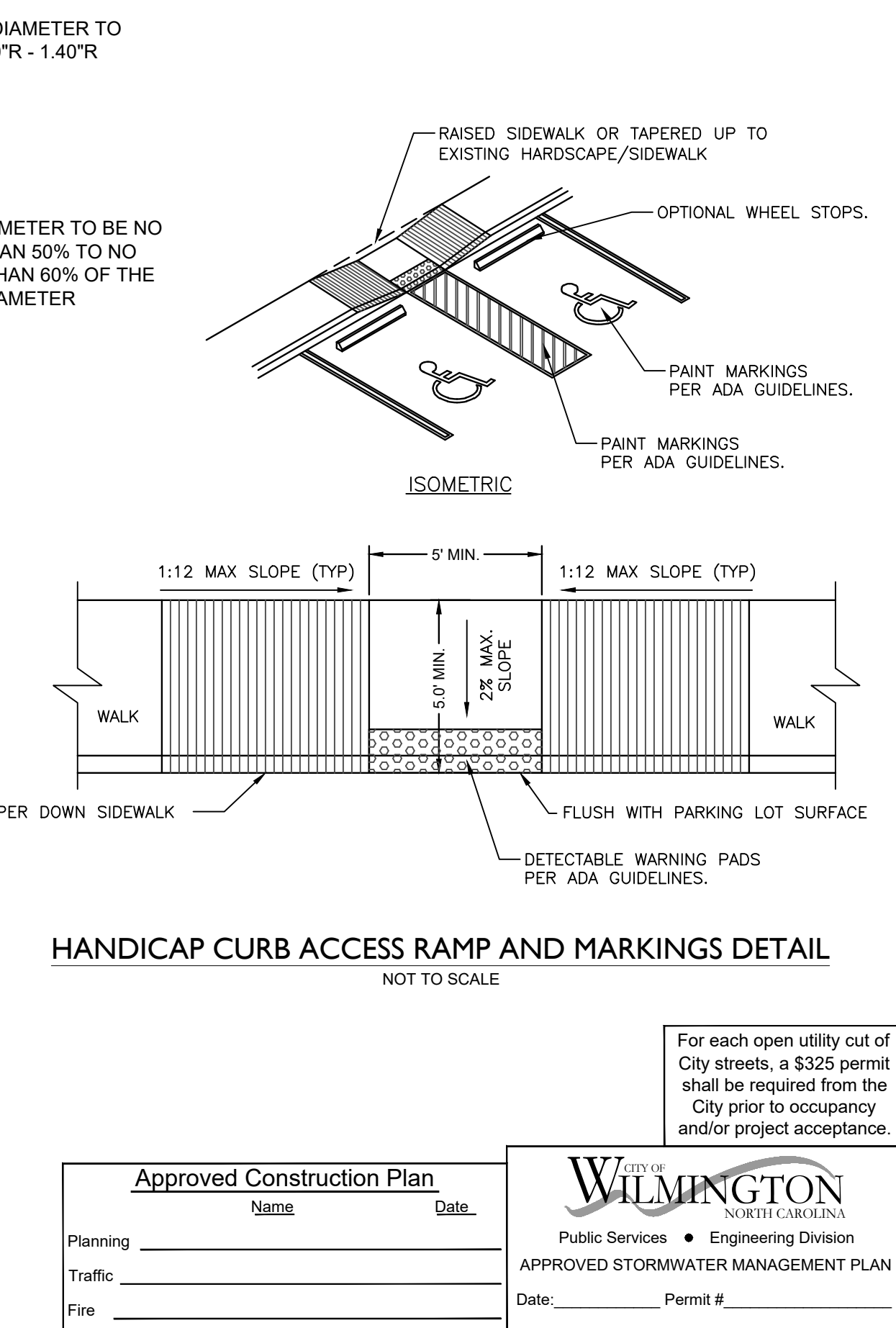
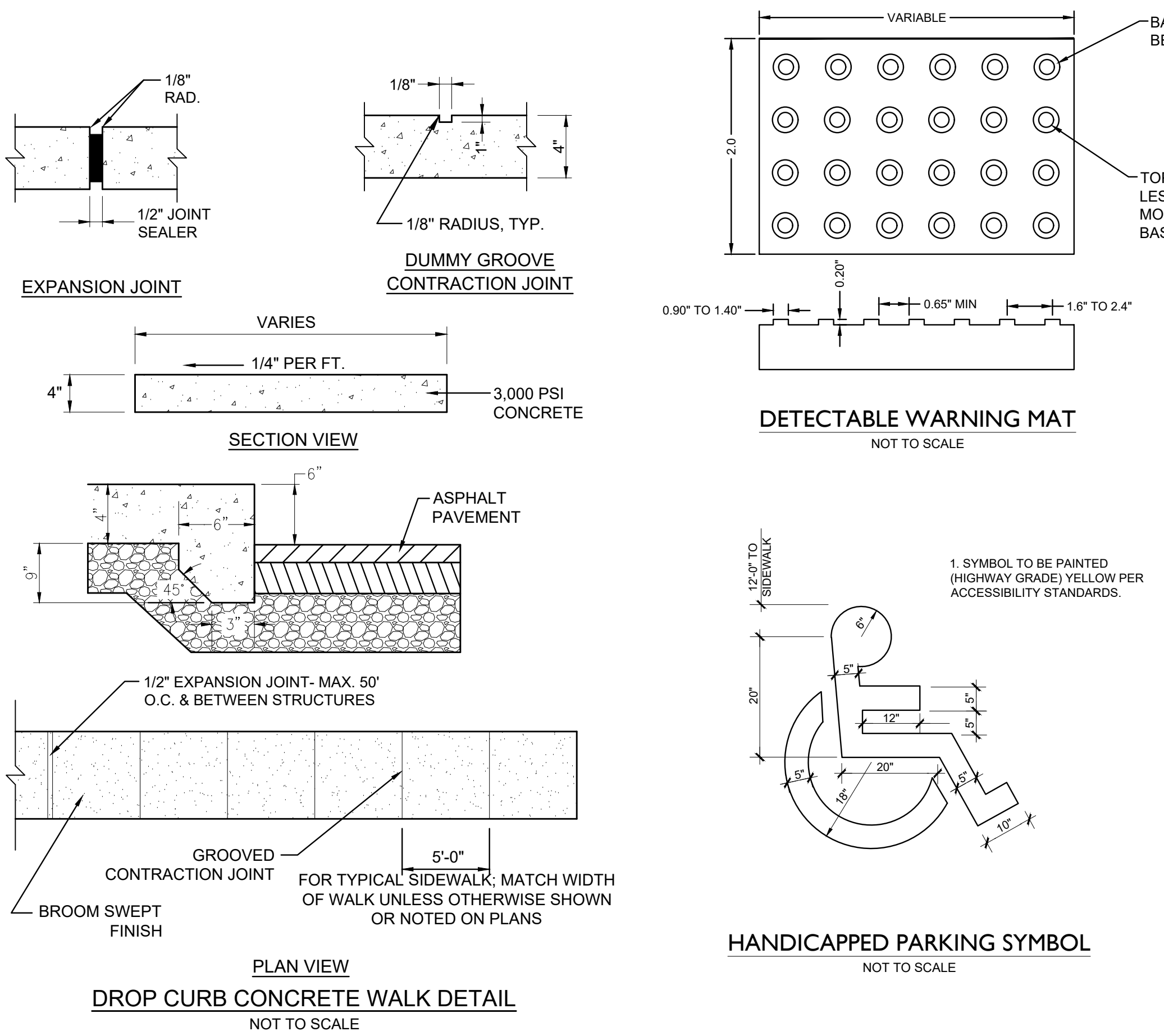
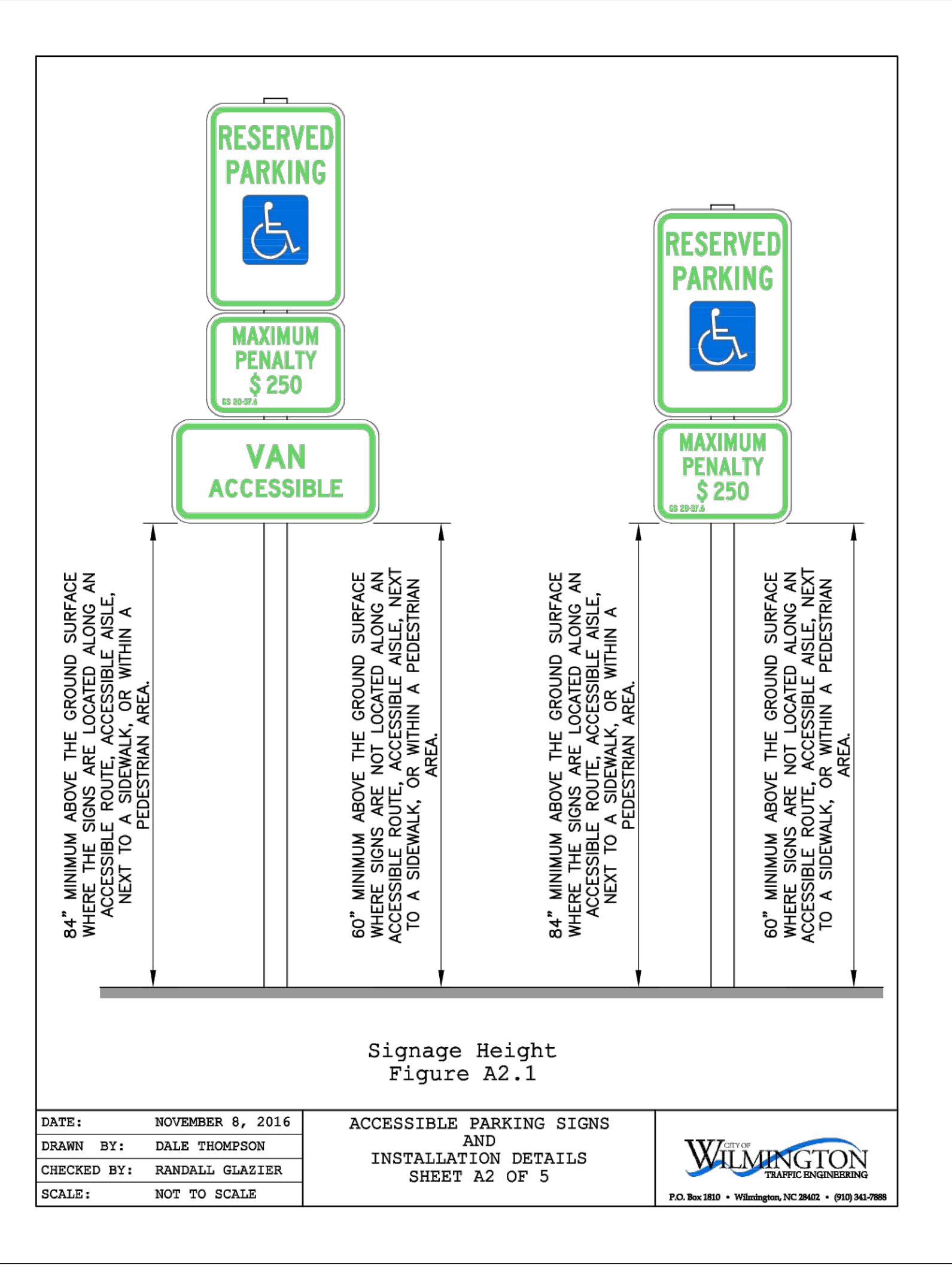
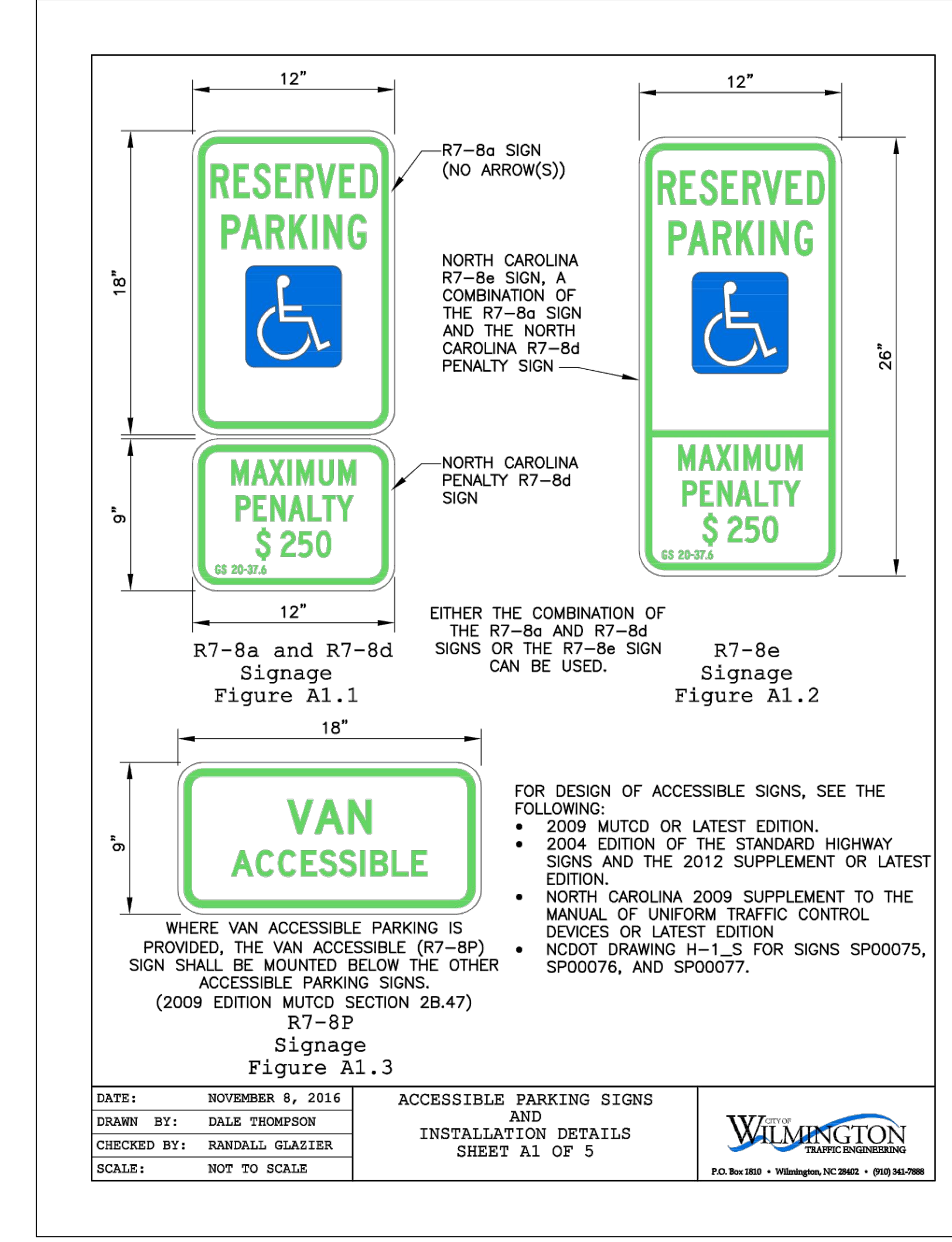
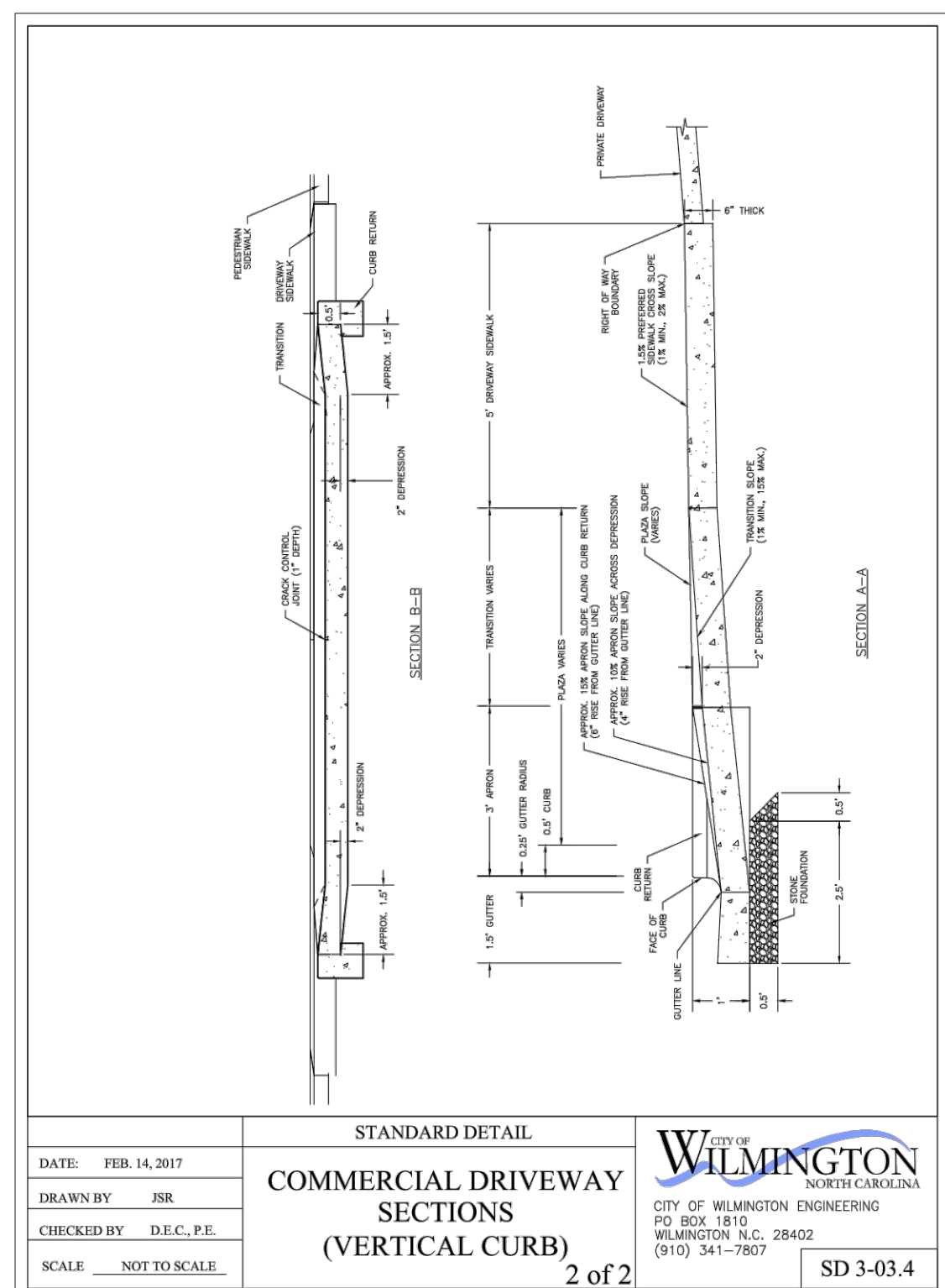
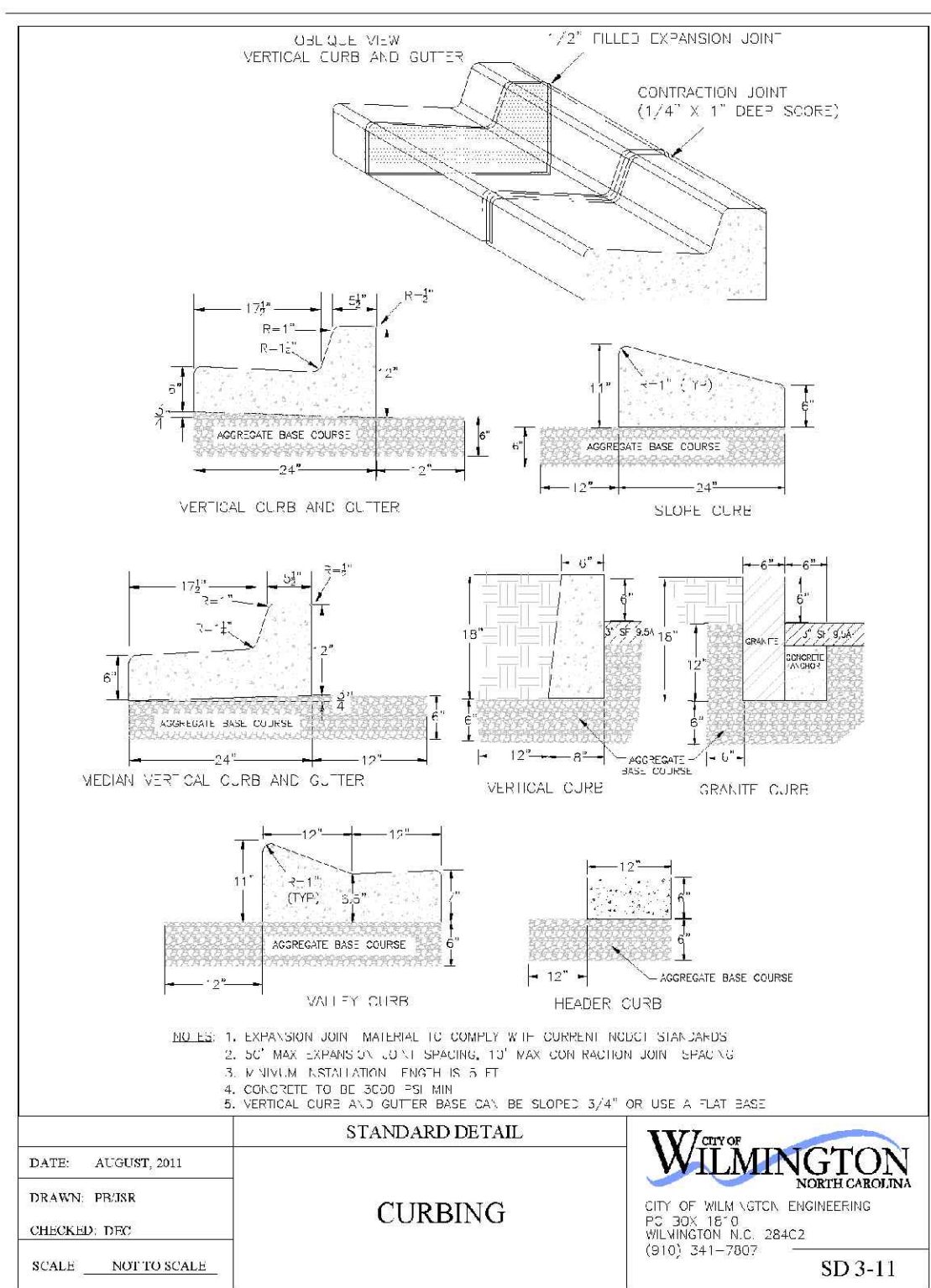
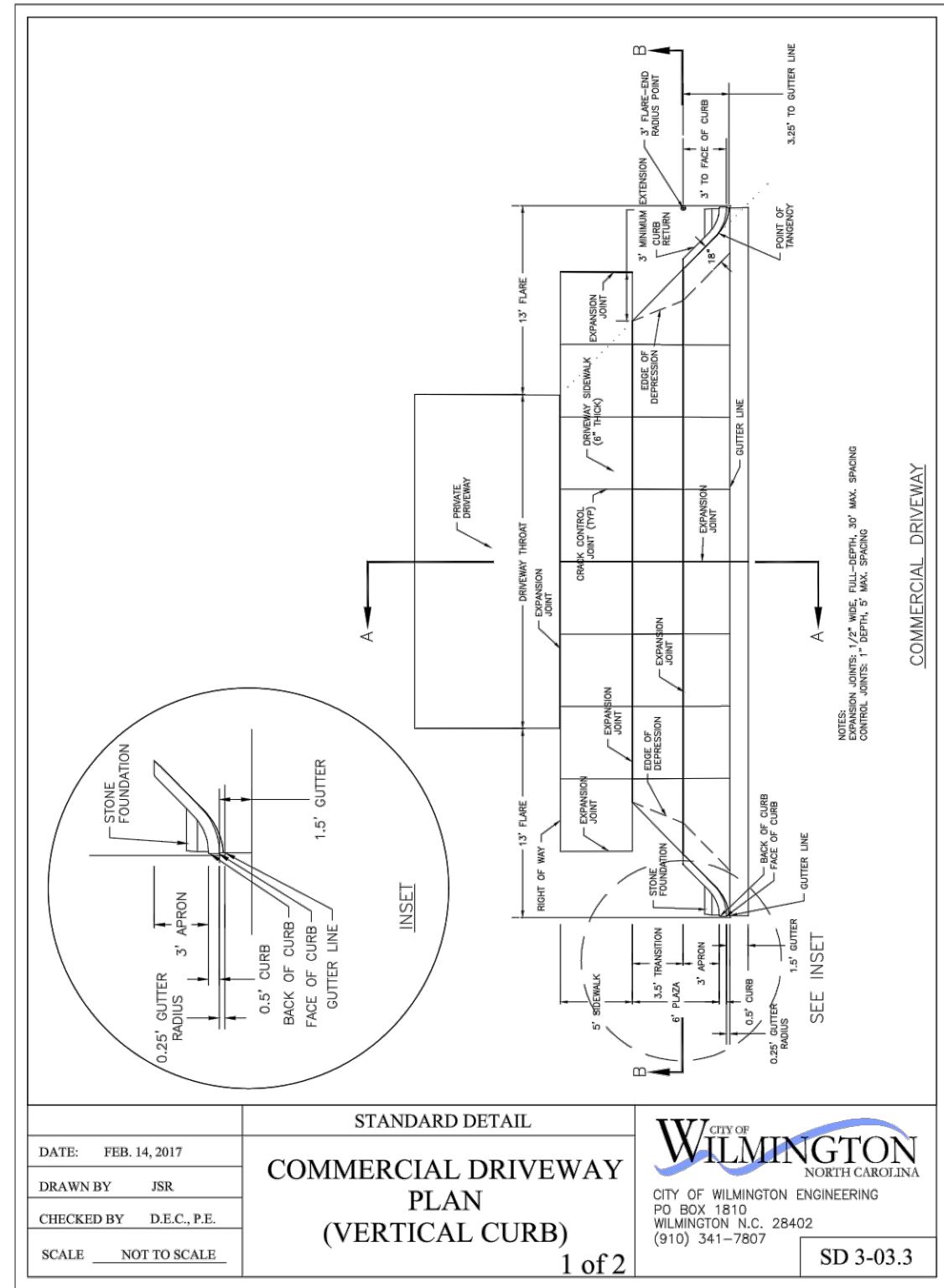
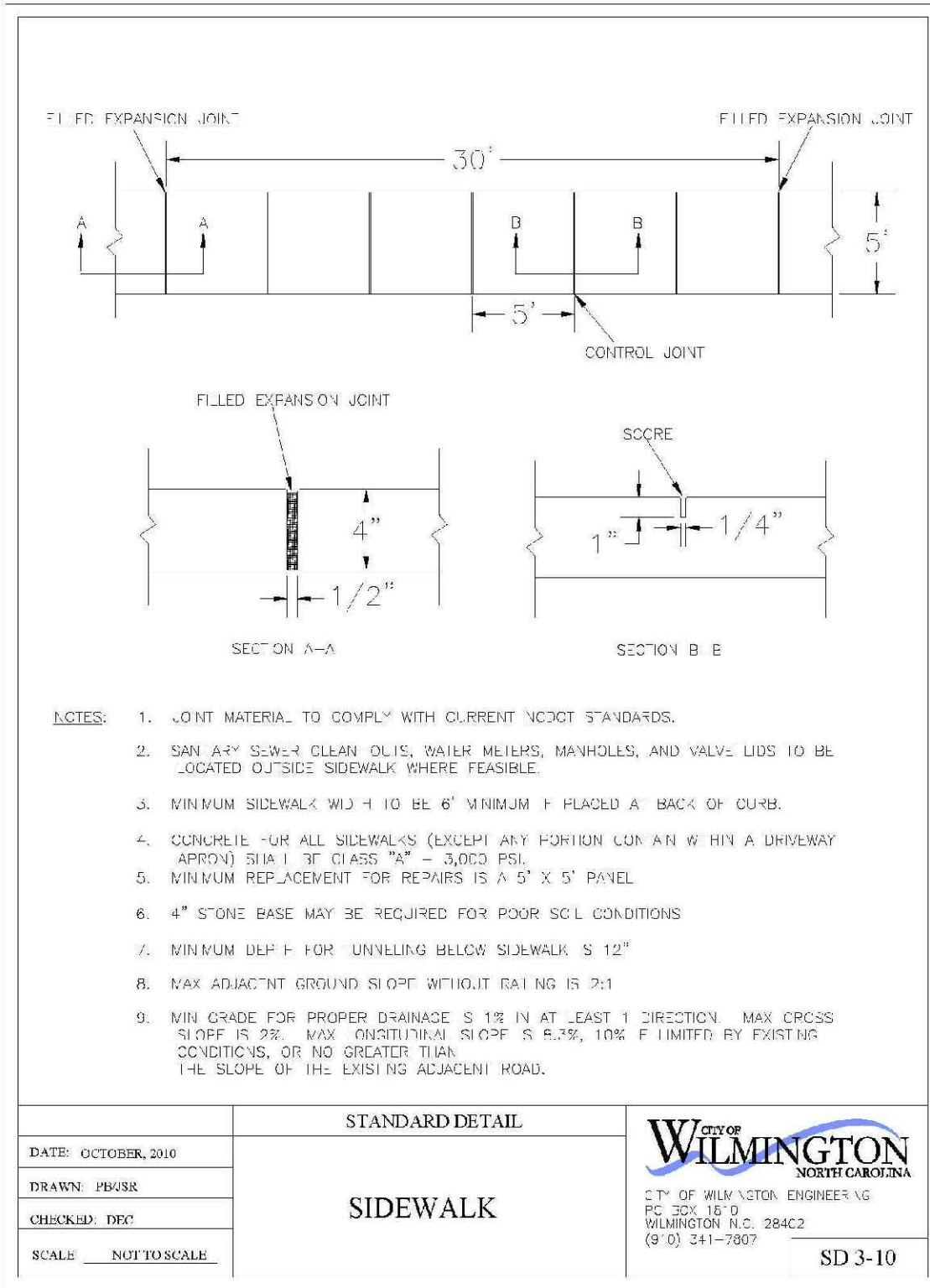
PEI JOB#: 18291.PE



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION



PAVEMENT MARKINGS
 ARROW SYMBOLS
 NOT TO SCALE



FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:
 1) REVISED PER CITY COMMENTS
 2) REVISED PER CITY COMMENTS

CLIENT INFORMATION:
 Eroto Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

PARAMOUNT ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (F) (910) 791-6700 (F)
 NC License #: C-2846

DETAILS
 KIDDIE ACADEMY
 2310 Canterbury Drive
 Wilmington, North Carolina 28401

PROJECT STATUS
 PRELIMINARY LAYOUT
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION
 DATE: 8/20/19
 SCALE: AS NOTED
 DRAWN: J.B.L.
 CHECKED: J.B.L.

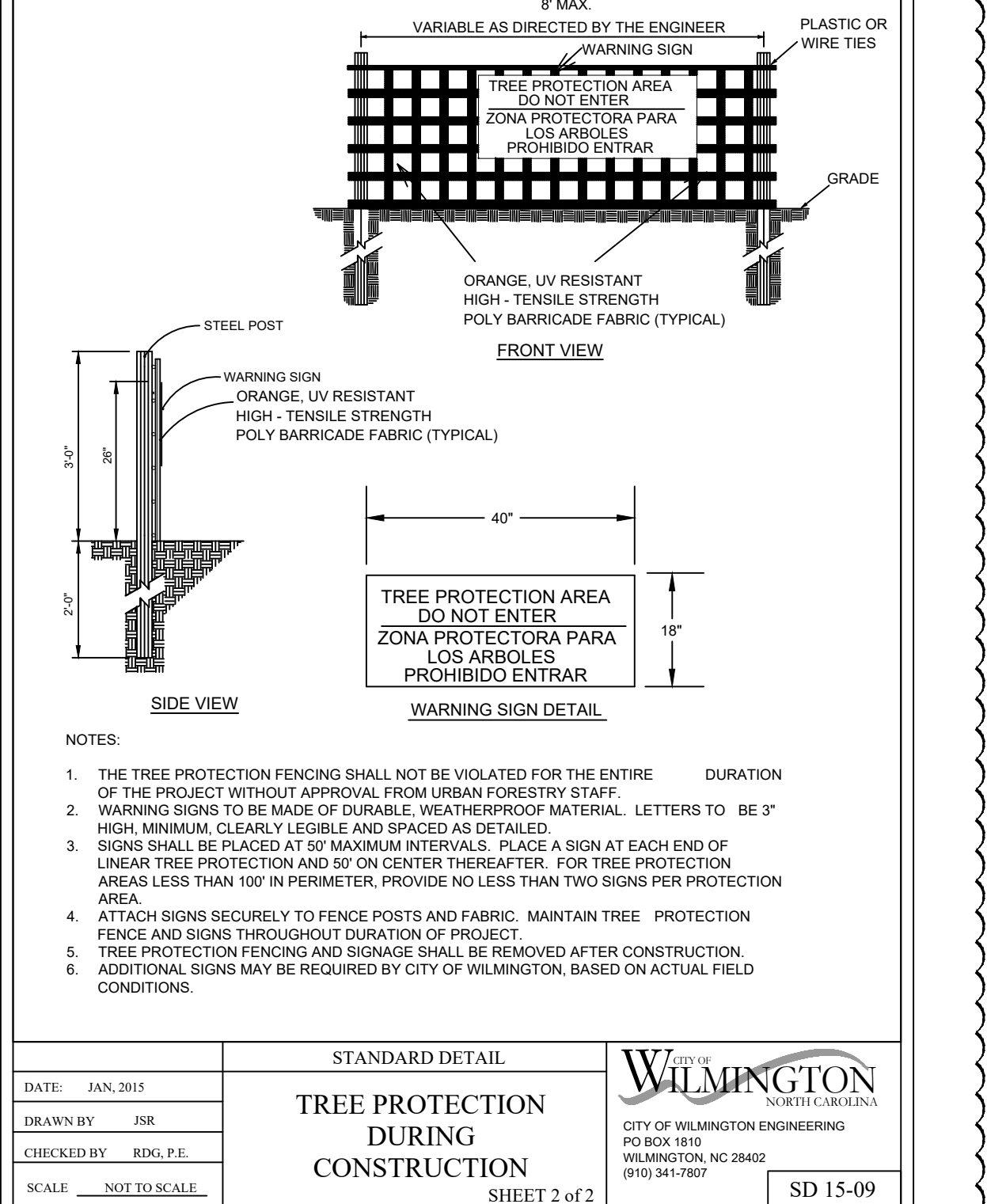
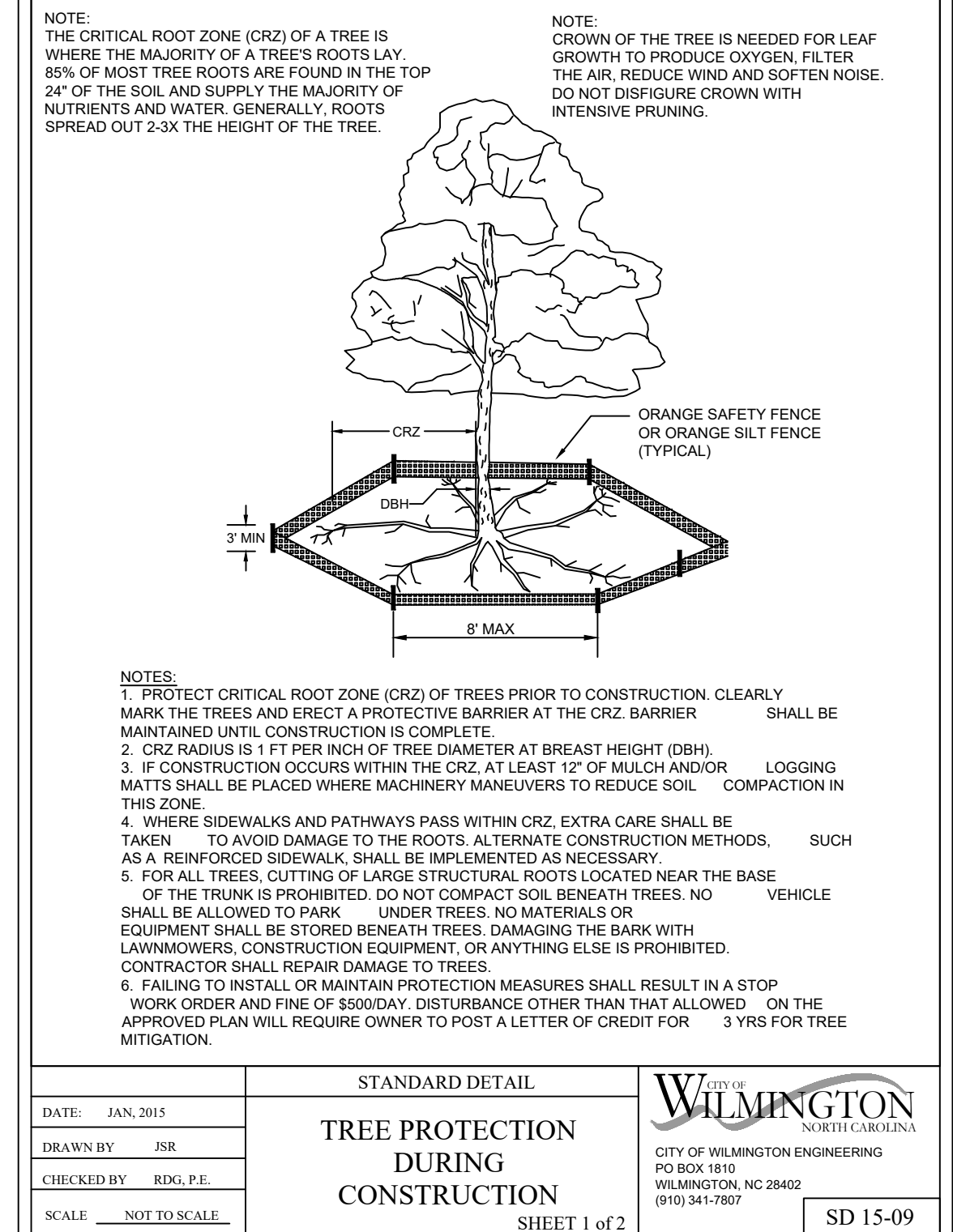
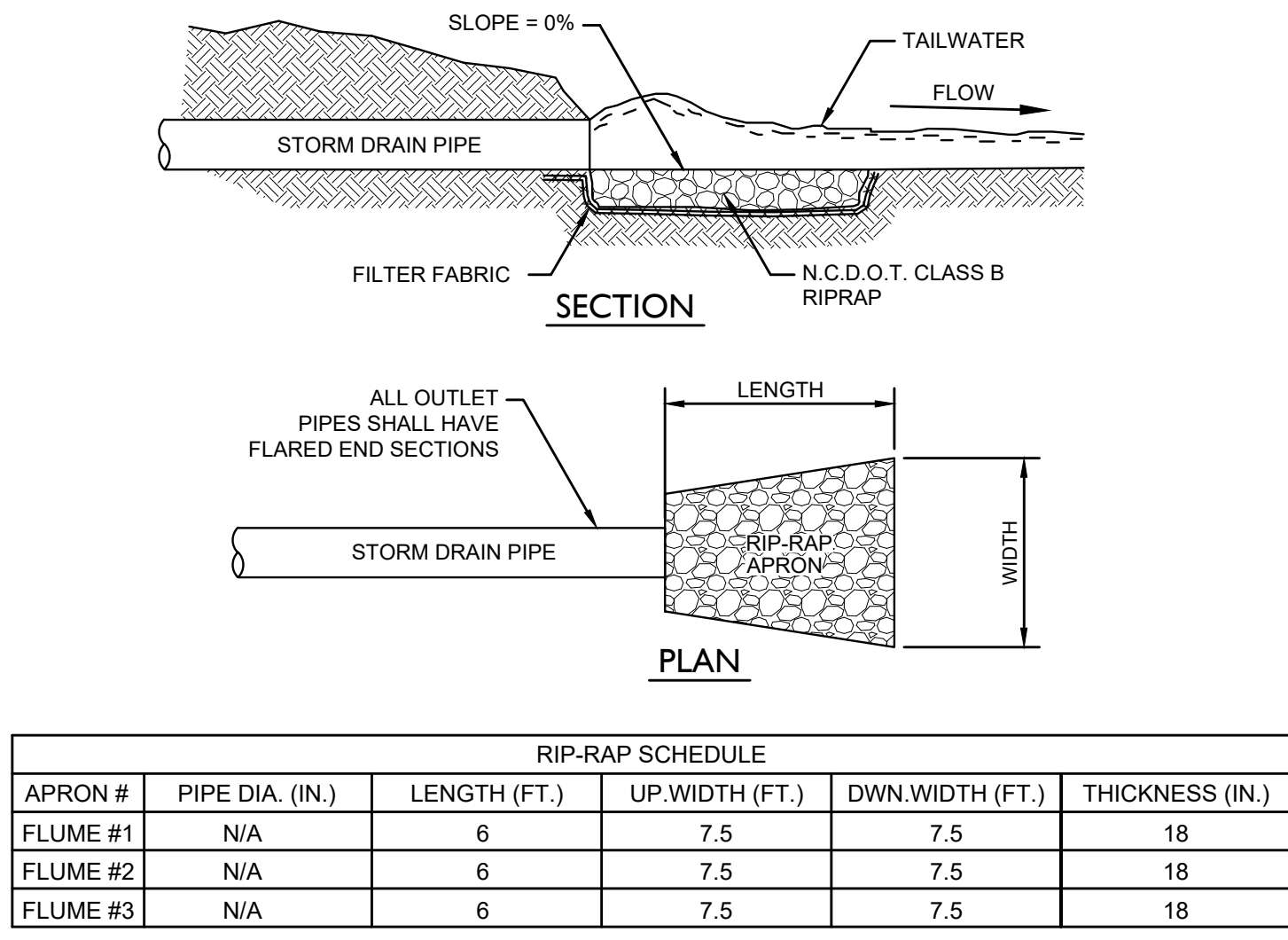
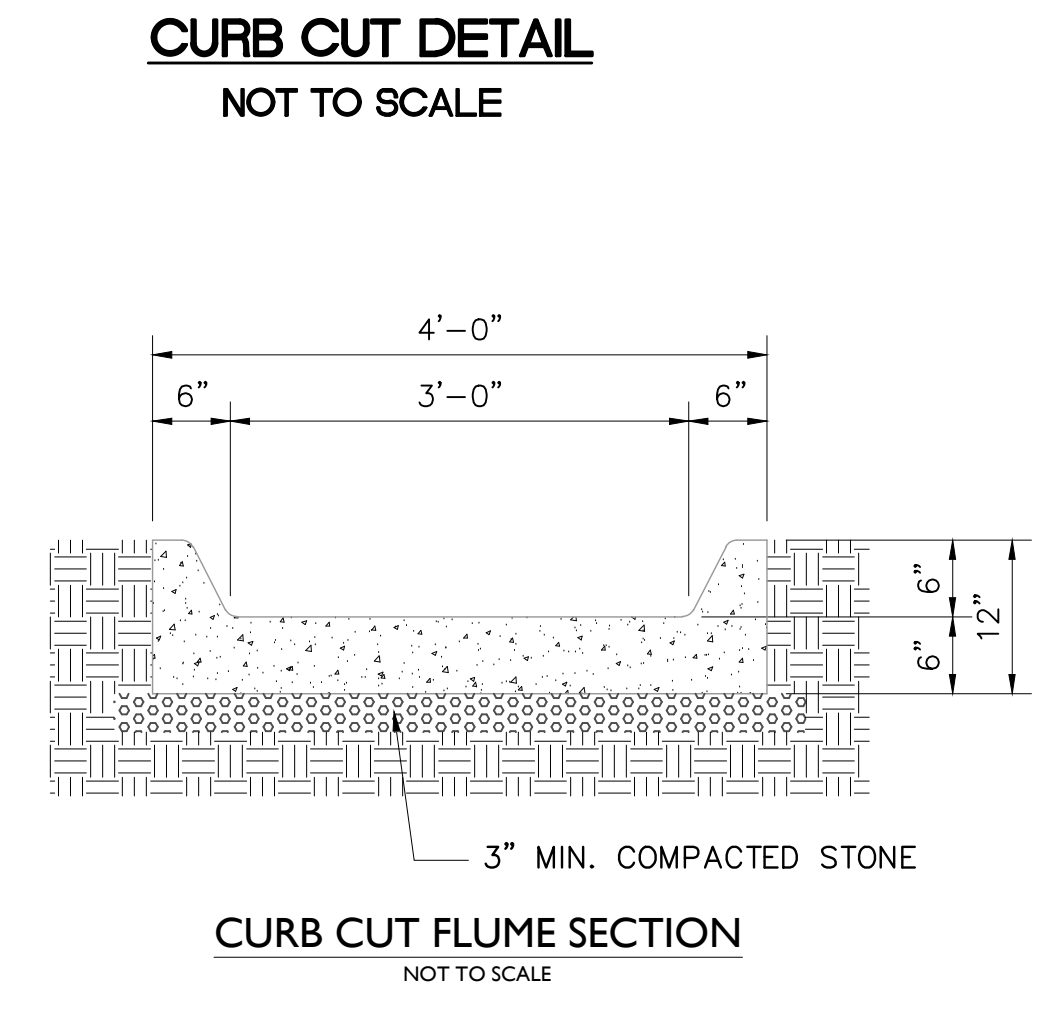
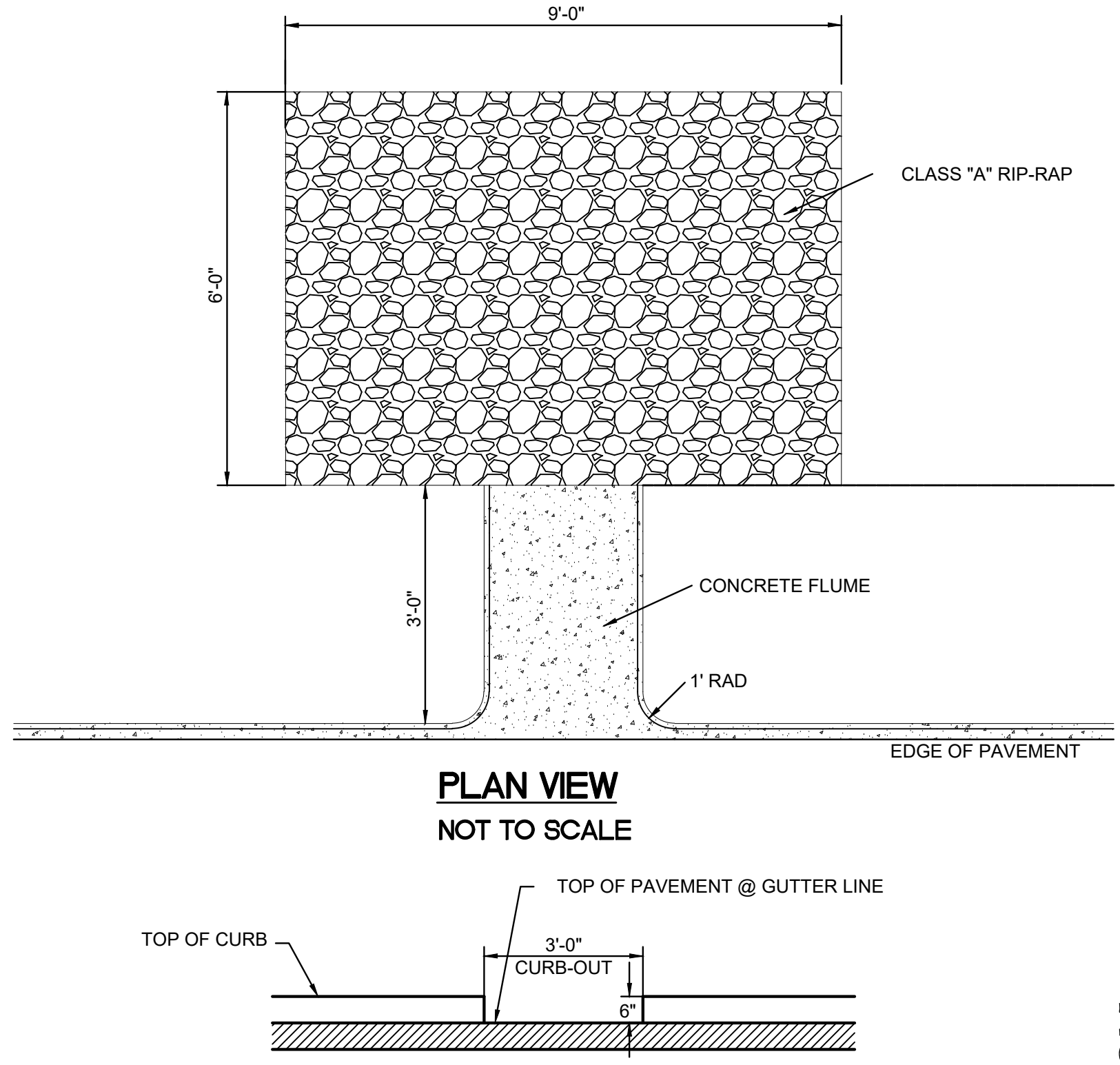
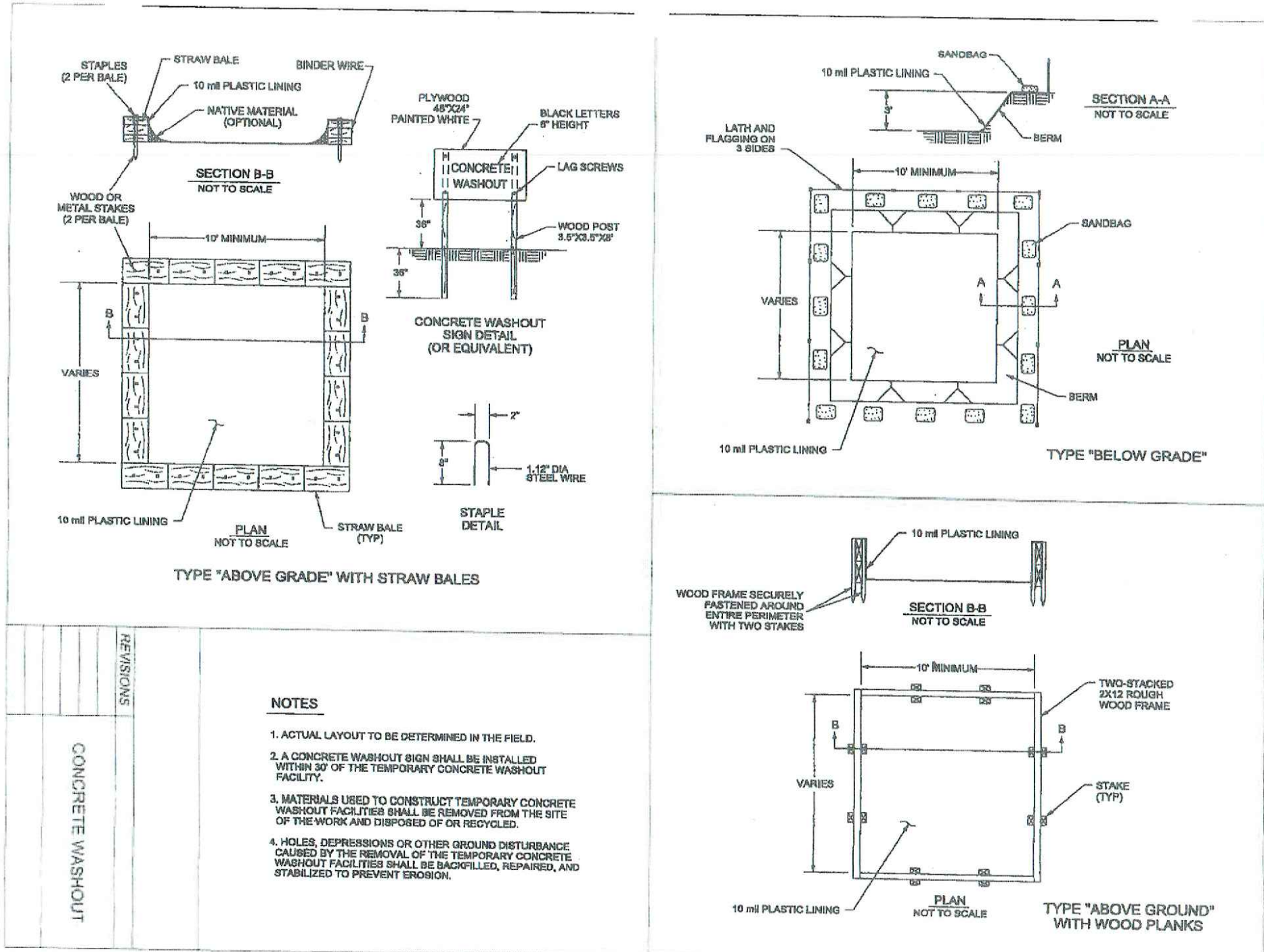
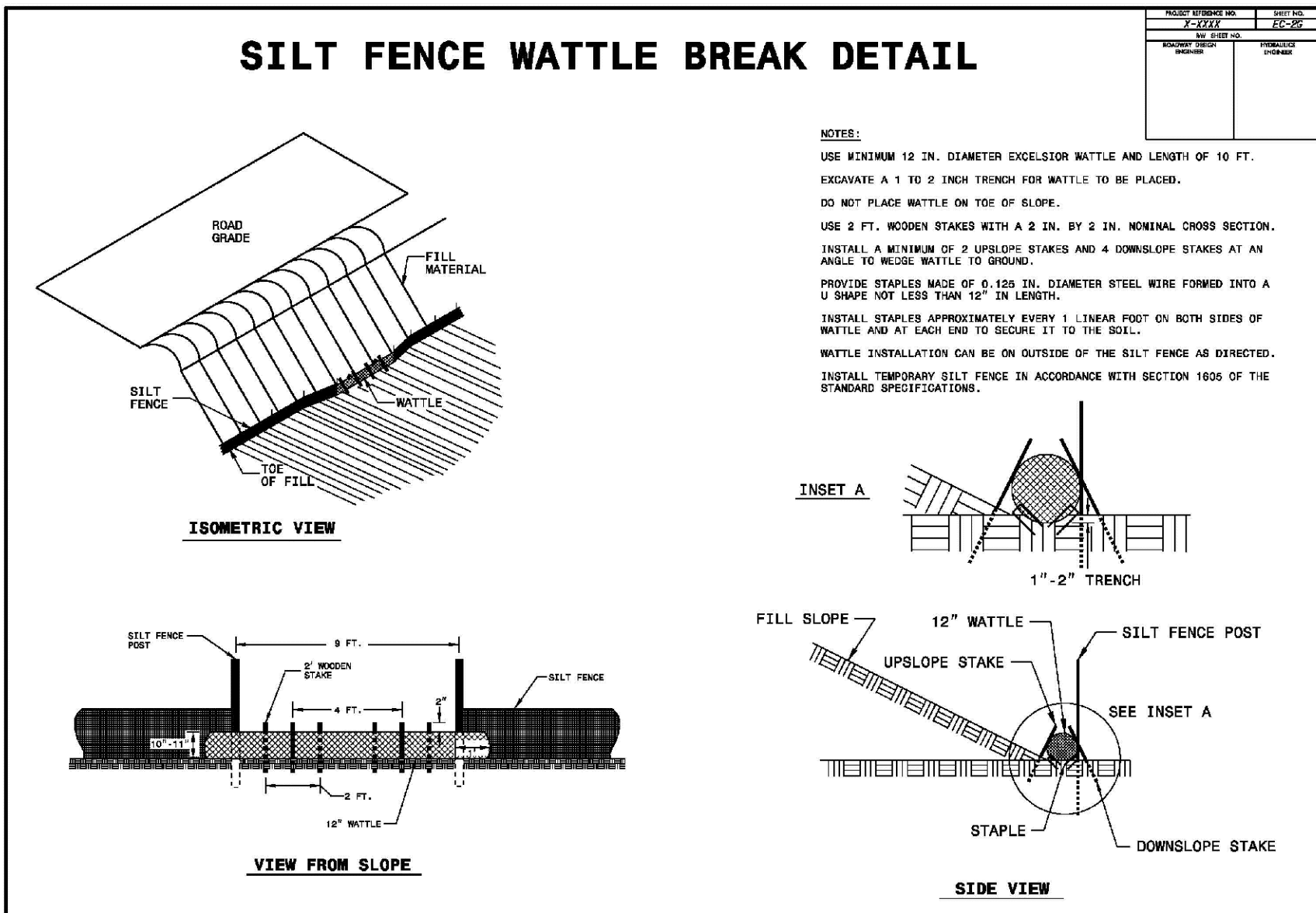
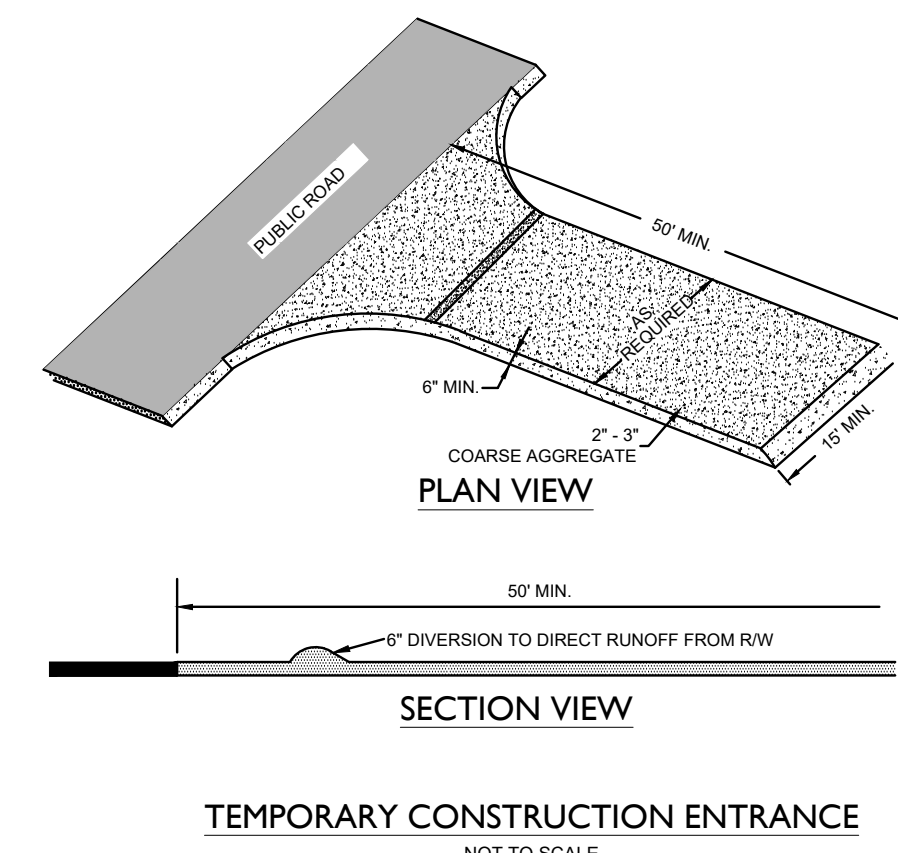
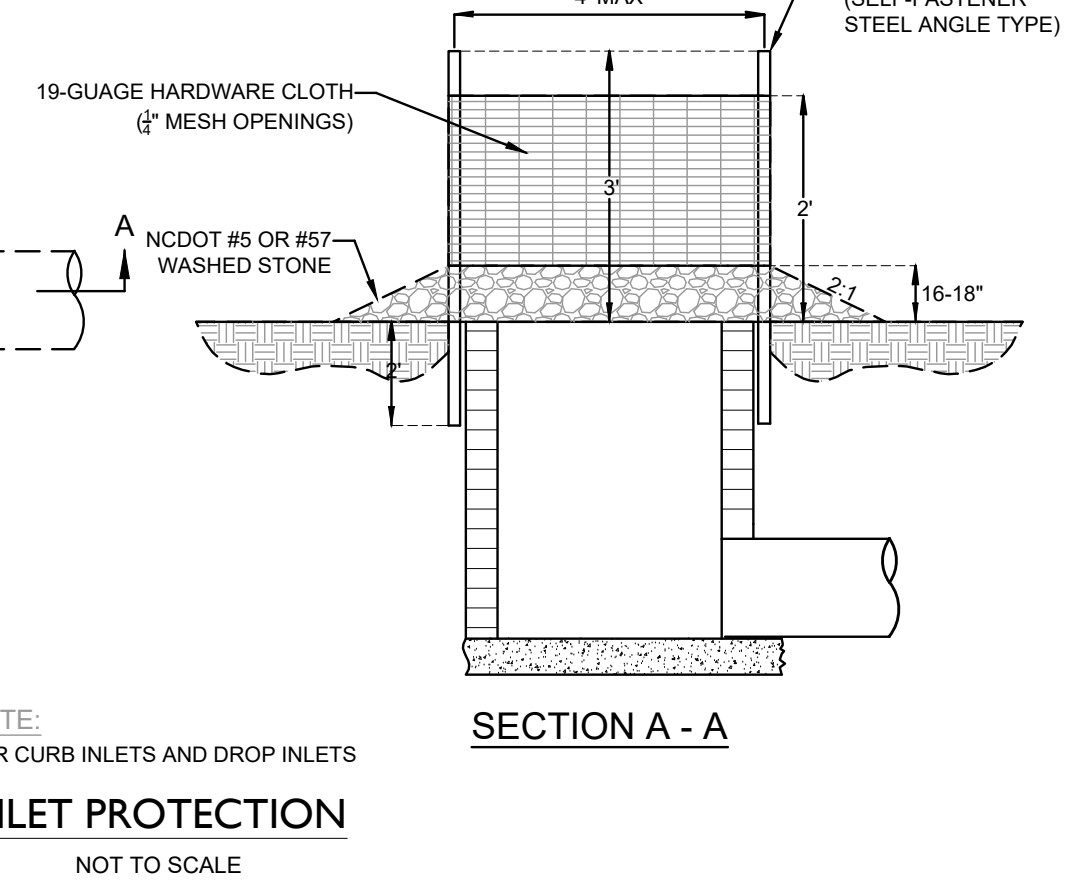
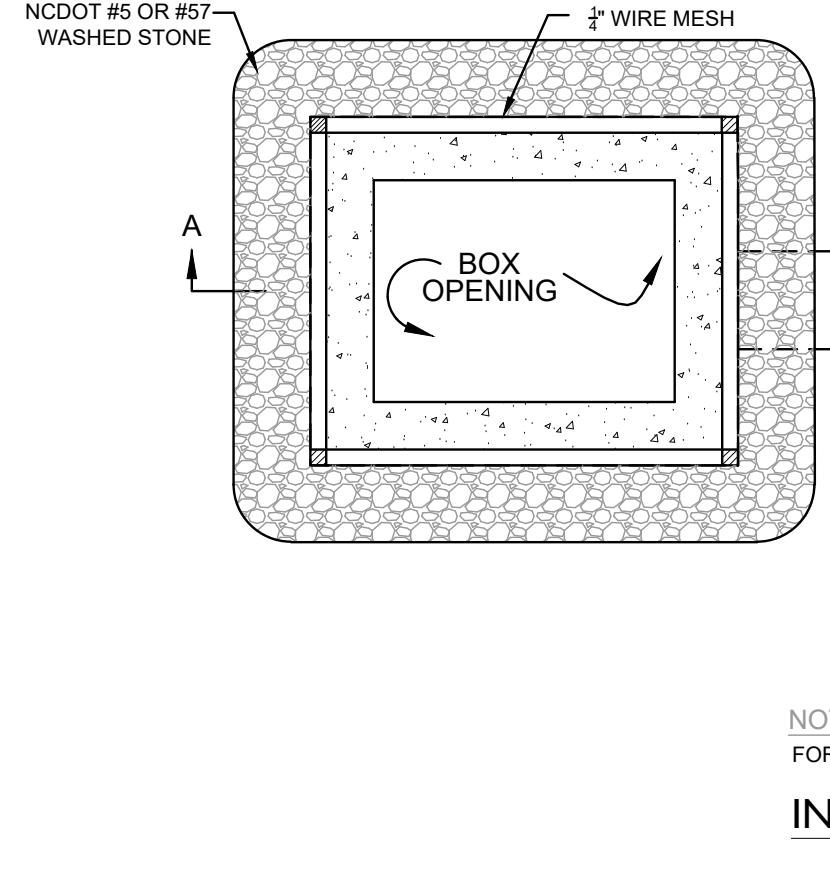
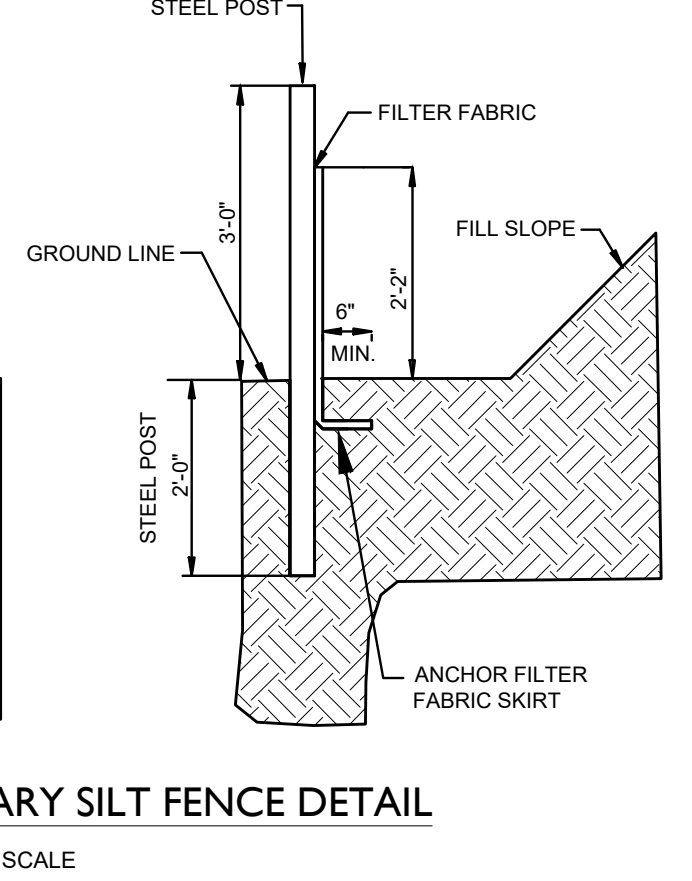
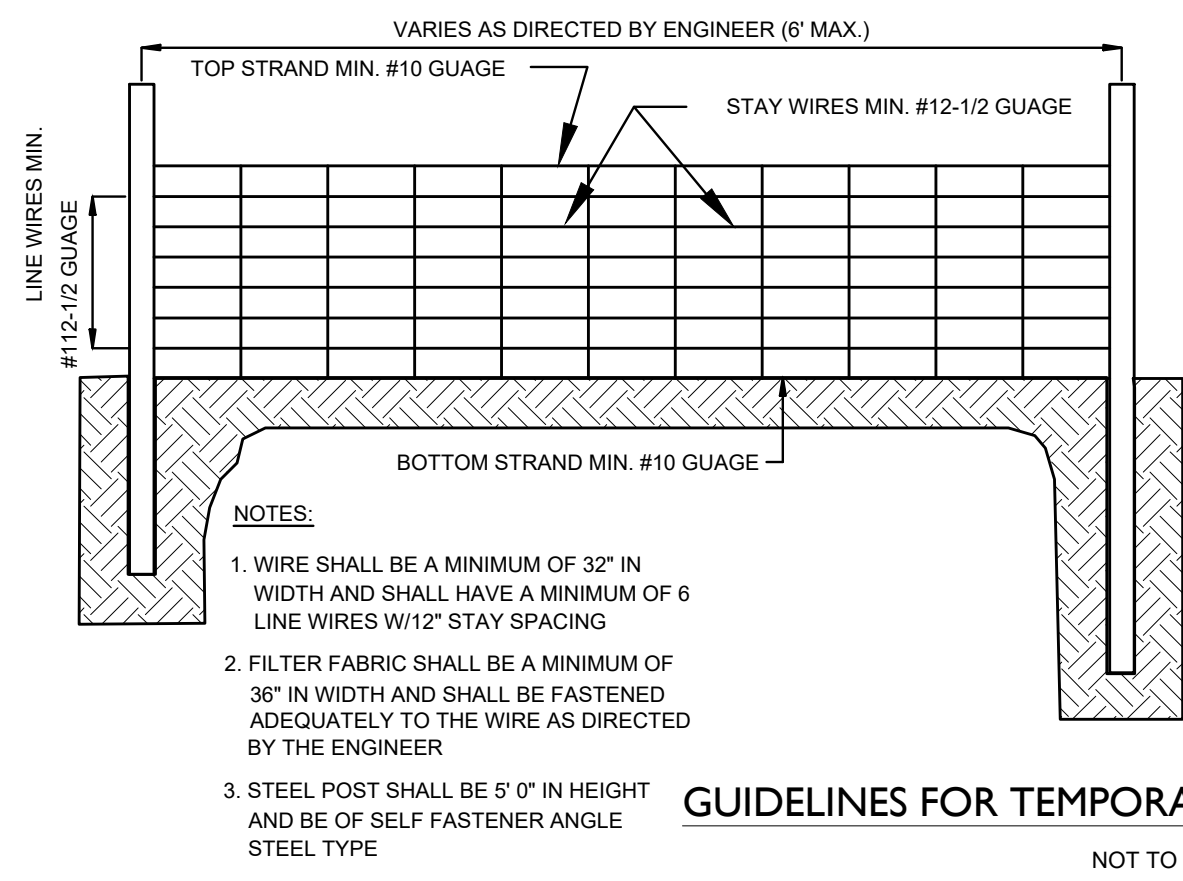
SEAL
 J. FREEMAN
 ENGINEER
 028852
 2/17/2019

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan
 Name: _____ Date: _____
 Planning: _____
 Traffic: _____
 Fire: _____

WILMINGTON NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

C-5.0
 PEI JOB#: 18291.PE



REVISIONS:
1) REVISED PER NCDOT SWM COMMENTS
2) REVISED PER CITY COMMENTS

CLIENT INFORMATION:
Eroile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

PARAMOUNT ENGINEERING, P.C.
122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
N.C. License #: C-2846

DETAILS
KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

PROJECT STATUS
DATE: 8/23/18
SCALE: AS NOTED
DRAWN: JRM
CHECKED: JRM

DRAWING INFORMATION
DATE: 8/23/2018
SCALE: AS NOTED
DRAWN: JRM
CHECKED: JRM

SEAL
JERRY R. BLANK
ENGINEER
01/14/2019

Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____
Signed: _____

WILMINGTON NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____

C-5.1
PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 15" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.02.
 USE TYPE "C", "D", "E" AND "F" GRATES UNLESS OTHERWISE INDICATED.
 FOR 6" TO 12" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. OVER 12" TO 15" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CHAINS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWINGS NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 1 OF 2 840.02

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

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 CONSTRUCT WITH PIPE CHAINS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWINGS NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 2 OF 2 840.02

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 15" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.02.
 USE TYPE "C", "D", "E" AND "F" GRATES UNLESS OTHERWISE INDICATED.
 FOR 6" TO 12" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. OVER 12" TO 15" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CHAINS MATCHING.
 INSTALL 2" WEEDHOLE AS DIRECTED BY THE ENGINEER.
 INITIAL STONE GRADE OF A MINIMUM OF 1 CURB FOOT OF NO. 57 STONE IN A FORMER PAVED BOX OR HOP, AT EACH WEED HOLE OR AS DIRECTED BY THE ENGINEER. CHAMFER ALL EXPOSED CORNERS 1".
 INCREASE THE SIZE OF THE 6" OPENING TO 8" MAX. AS DIRECTED BY THE ENGINEER BY ADDING 2" TO THE WALL HEIGHT ABOVE THE TOP ELEVATION. ADJUST QUANTITIES ACCORDINGLY.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 1 OF 2 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 15" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
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 CONSTRUCT WITH PIPE CHAINS MATCHING.
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 DRAWINGS NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 2 OF 2 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
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 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
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 USE TYPE "C", "D", "E" AND "F" GRATES UNLESS OTHERWISE INDICATED.
 FOR 6" TO 12" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. OVER 12" TO 15" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CHAINS MATCHING.
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 DRAWINGS NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE

SHEET 1 OF 2 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWS.S 840.14 AND 840.15

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 15" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOMELS AT 12" CENTERS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.02.
 USE TYPE "C", "D", "E" AND "F" GRATES UNLESS OTHERWISE INDICATED.
 FOR 6" TO 12" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. OVER 12" TO 15" IN HEIGHT USE 6" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
 CONSTRUCT WITH PIPE CHAINS MATCHING.
 INSTALL 2" WEEDHOLE AS DIRECTED BY THE ENGINEER.
 INITIAL STONE GRADE OF A MINIMUM OF 1 CURB FOOT OF NO. 57 STONE IN A FORMER PAVED BOX OR HOP, AT EACH WEED HOLE OR AS DIRECTED BY THE ENGINEER. CHAMFER ALL EXPOSED CORNERS 1".
 DRAWINGS NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES FOR USE WITH STD. DWS.S 840.14 AND 840.15

SHEET 1 OF 1 840.16

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR STANDARD PIPE TRENCH DETAIL SD 1-07 NOT TO SCALE

GENERAL NOTES:
 EXISTING GROUND
 COMPACTED BACKFILL TO 95% MODIFIED PROCTOR IF UNDER PAVEMENT
 COMPACTED BACKFILL TO 80% MODIFIED PROCTOR
 SLOPE WALLS TO ANGLE OF REPOSE OF SOIL OR AS APPROVED BY THE ENGINEER
 COMPACTED PIPE EMBEDMENT TO 90% MODIFIED PROCTOR
 COMPACTED NO. 57 STONE
 PIPE WIDTH +24" TRENCH BOTTOM

ENGLISH STANDARD DRAWING FOR STANDARD PIPE TRENCH DETAIL SD 1-07 NOT TO SCALE

SHEET 1 OF 1 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR IN-LINE CLEANOUT NOT TO SCALE

GENERAL NOTES:
 FINISHED GRADE
 CLEAN OUT END CAP ADJUST GRADE PER FINISHED GRADE (PROVIDE CAST IRON BOX IN PAVED AREA)
 6" MIN.
 INJECTION MOLDED ST 45° BEND
 INJECTION MOLDED ST 45° WYE (OR INJECTION MOLDED TEE). SUBSTITUTE 45° BEND FOR END OF LINE CLEANOUT
 FINISHED GRADE
 DOWNSPOUT ADAPTER PER ARCHITECTURAL PLANS
 BUILDING FACE
 INSERT INJECTION MOLDED, GASKETED SPIGOT BY BELL REDUCER
 SNAP CONNECTION
 ADS HDPE N-12 HP STORM PIPE (SIZE TO MATCH ROOF DRAIN, 6" MIN.)
 INJECTION MOLDED ST TEE FITTING (SIZE BASED ON STORM DRAIN SCHEDULE)

ENGLISH STANDARD DRAWING FOR IN-LINE CLEANOUT NOT TO SCALE

SHEET 1 OF 1 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CURB TRANSITION DETAIL (24" STANDARD) NOT TO SCALE

GENERAL NOTES:
 FINISHED GRADE
 STAKEOUT REFERENCE POINT: EOP
 CURB INLET (STD. 840.03)
 STANDARD 24" CURB & GUTTER
 FORM GUTTER TO MATCH HOOD
 CONTRACTOR SHALL MAINTAIN EOP & TRANSITION THE GUTTER LINE FOR CURB INLET INSTALLATION
 TRANSITION FROM 24" STANDARD CURB & GUTTER TO MATCH CURB INLET INSTALLATION

ENGLISH STANDARD DRAWING FOR CURB TRANSITION DETAIL (24" STANDARD) NOT TO SCALE

SHEET 1 OF 1 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR ROOF DRAIN DETAIL WITH CLEANOUTS NOT TO SCALE

GENERAL NOTES:
 FINISHED GRADE
 CLEAN OUT END CAP ADJUST GRADE PER FINISHED GRADE (PROVIDE CAST IRON BOX IN PAVED AREA)
 6" MIN.
 INJECTION MOLDED ST 45° BEND
 INJECTION MOLDED ST 45° WYE (OR INJECTION MOLDED TEE). SUBSTITUTE 45° BEND FOR END OF LINE CLEANOUT
 FINISHED GRADE
 DOWNSPOUT ADAPTER PER ARCHITECTURAL PLANS
 BUILDING FACE
 INSERT INJECTION MOLDED, GASKETED SPIGOT BY BELL REDUCER
 SNAP CONNECTION
 ADS HDPE N-12 HP STORM PIPE (SIZE TO MATCH ROOF DRAIN, 6" MIN.)
 INJECTION MOLDED ST TEE FITTING (SIZE BASED ON STORM DRAIN SCHEDULE)

ENGLISH STANDARD DRAWING FOR ROOF DRAIN DETAIL WITH CLEANOUTS NOT TO SCALE

SHEET 1 OF 1 840.04

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR STANDARD PIPE TRENCH DETAIL SD 1-07 NOT TO SCALE

GENERAL NOTES:
 EXISTING GROUND
 COMPACTED BACKFILL TO 95% MODIFIED PROCTOR IF UNDER PAVEMENT
 COMPACTED BACKFILL TO 80% MODIFIED PROCTOR
 SLOPE WALLS TO ANGLE OF REPOSE OF SOIL OR AS APPROVED BY THE ENGINEER
 COMPACTED PIPE EMBEDMENT TO 90% MODIFIED PROCTOR
 COMPACTED NO. 57 STONE
 PIPE WIDTH +24" TRENCH BOTTOM

ENGLISH STANDARD DRAWING FOR STANDARD PIPE TRENCH DETAIL SD 1-07 NOT TO SCALE

SHEET 1 OF 1 840.04

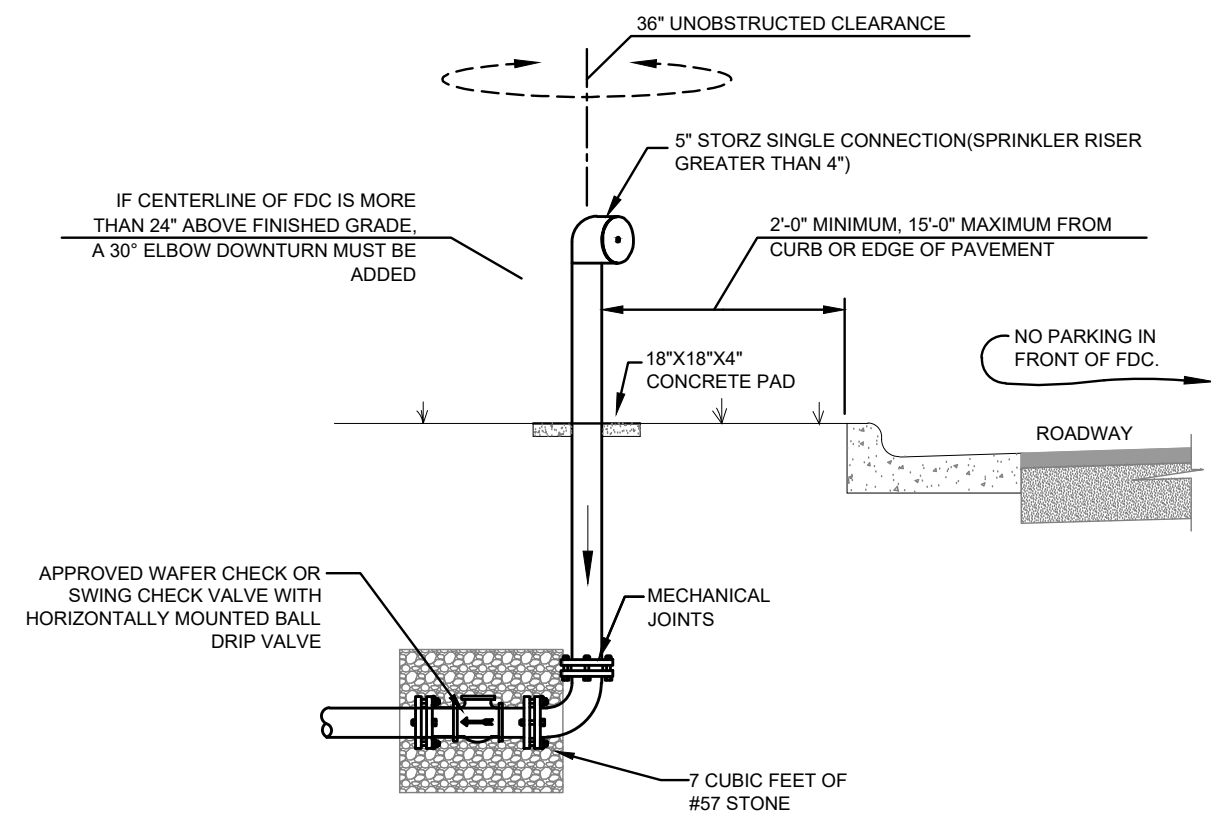
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR CURB TRANSITION DETAIL (24" STANDARD) NOT TO SCALE

GENERAL NOTES:
 FINISHED GRADE
 STAKEOUT REFERENCE POINT: EOP
 CURB INLET (STD. 840.03)
 STANDARD 24" CURB & GUTTER
 FORM GUTTER TO MATCH HOOD
 CONTRACTOR SHALL MAINTAIN EOP & TRANSITION THE GUTTER LINE FOR CURB INLET INSTALLATION
 TRANSITION FROM 24" STANDARD CURB & GUTTER TO MATCH CURB INLET INSTALLATION

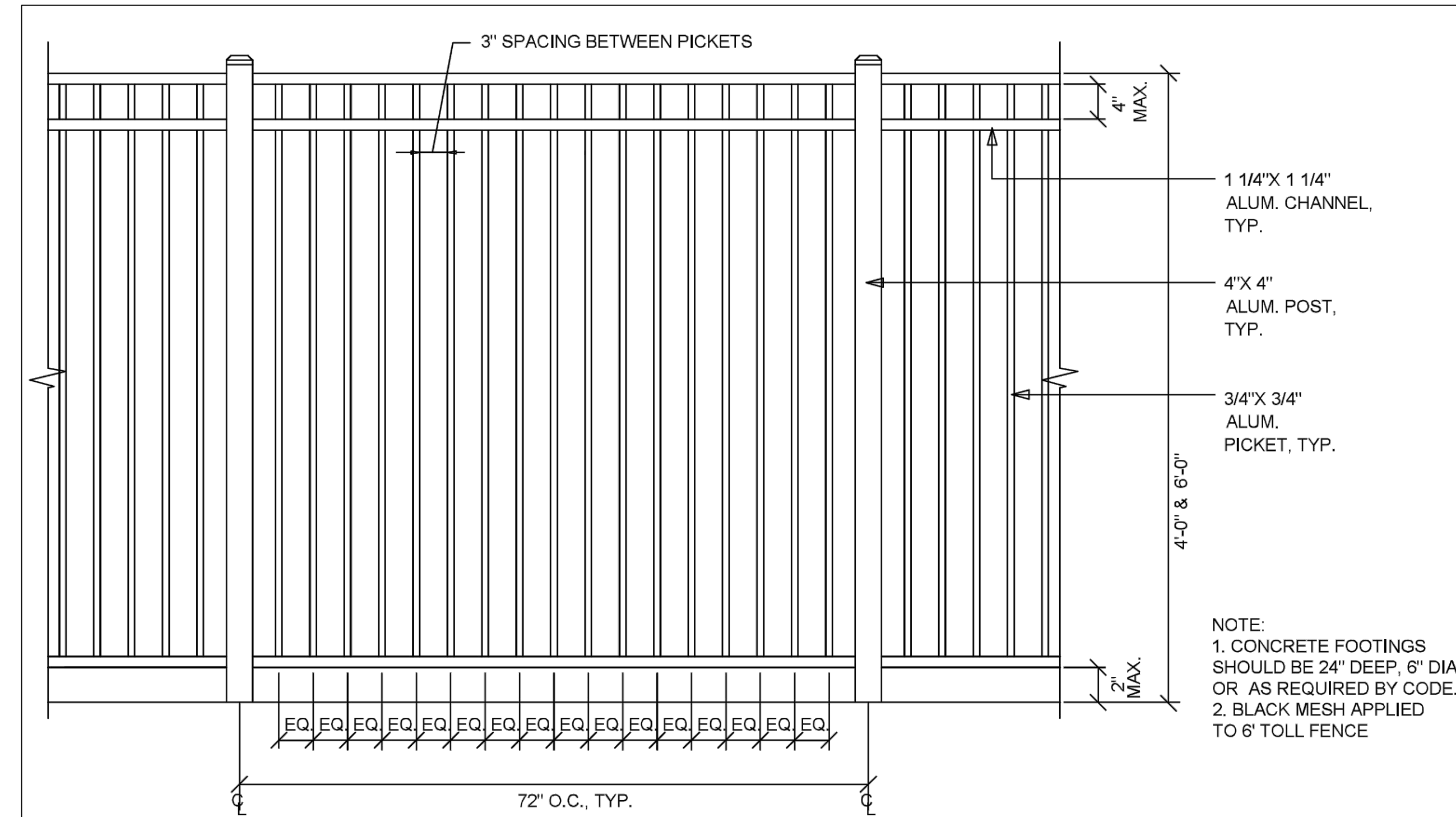
ENGLISH STANDARD DRAWING FOR CURB TRANSITION DETAIL (24" STANDARD) NOT TO SCALE

SHEET 1 OF 1 840.04



- NOTES:**
1. THE VALVE PIT SHALL BE SIZED TO ACCOMMODATE ALL PROPOSED EQUIPMENT.
 2. THERE SHALL BE NO SHUTOFF VALVE IN THE FIRE DEPT. CONNECTION PIPING (PER NFPA 13).
 3. ALL FITTINGS SHALL BE FLANGED.
 4. ALL PIPING SHALL BE STEEL OR DUCTILE IRON.
 5. SEE SITE PLANS FOR SIZES OF PIPES AND FITTINGS. SIAMASE CONNECTION TO BE IN ACCORDANCE WITH NFPA 13.
 6. PROVIDE DRAINAGE AWAY FROM STRUCTURE.
 7. A 2' MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE VAULT LID AND THE RISING STEM OF THE OS&Y VALVE IN THE FULLY OPEN POSITION.
 8. KNOX LOCKING PLUG SHALL BE PROVIDED ON THE FDC INLET.
 9. APPROVED WAFER CHECK OR SWING CHECK VALVE WITH HORIZONTALLY MOUNTED BALL DRIP VALVE.
 10. THE FDC SHALL BE CONNECTED TO THE PIPING SYSTEM LOCATED DOWNSTREAM OF THE POST INDICATOR VALVE.

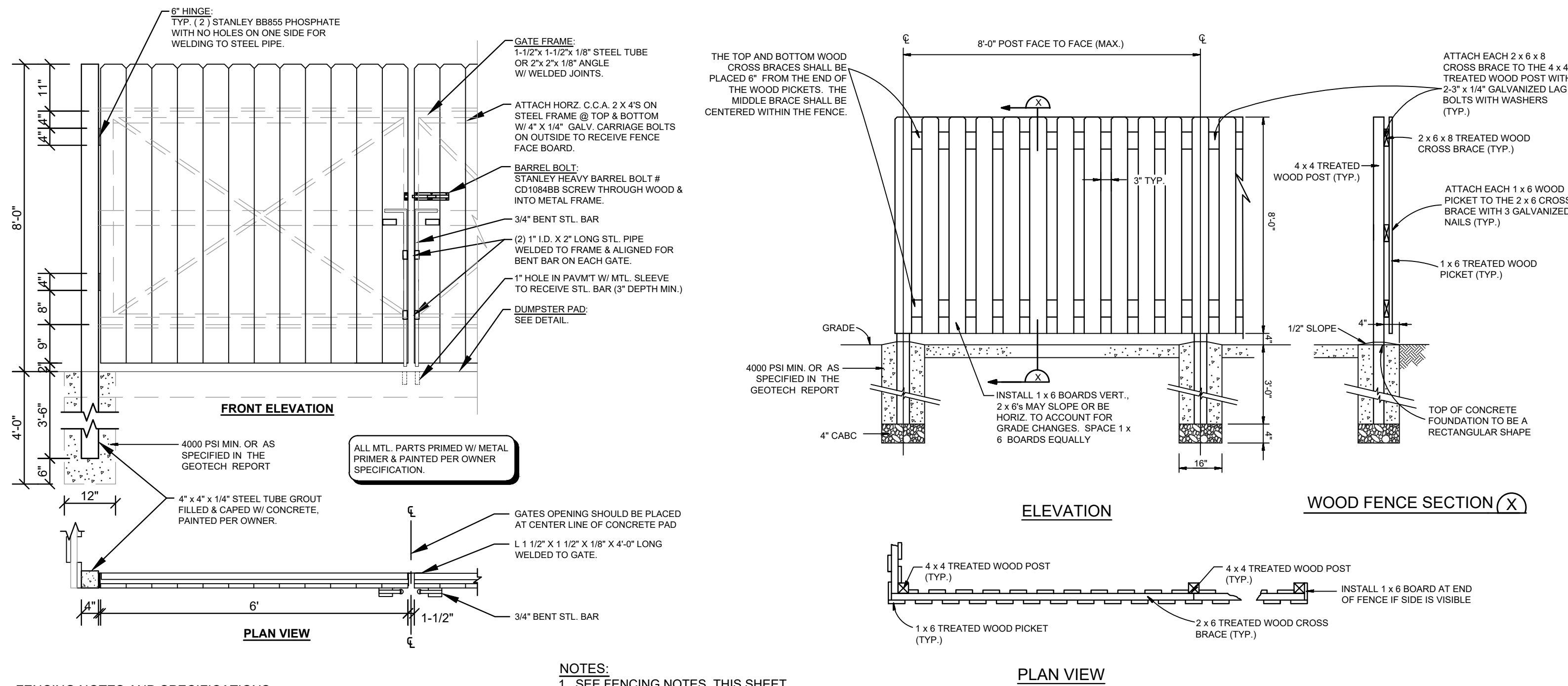
FREE STANDING FIRE DEPARTMENT CONNECTION
NOT TO SCALE



- NOTE:**
1. CONCRETE FOOTINGS SHOULD BE 24" DEEP, 6" DIA. OR AS REQUIRED BY CODE.
 2. BLACK MESH APPLIED TO 6' TOLL FENCE

THIS FENCING TAKEN FROM ARCHITECTURAL DETAILS FOR USE AROUND PLAYGROUND AND BUILDING

D5
3
FENCING
SCALE: NONE

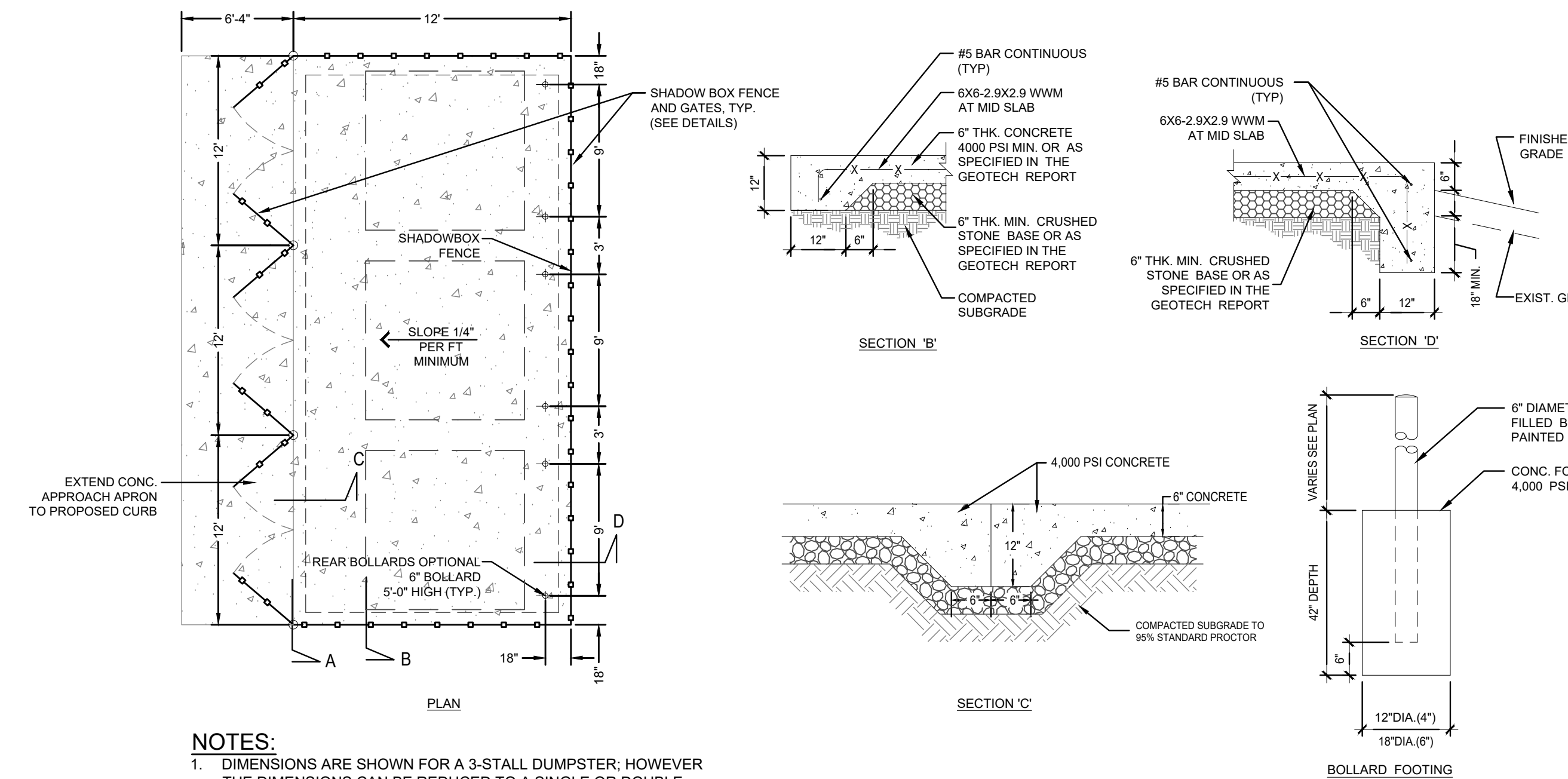


FENCING NOTES AND SPECIFICATIONS

1. SPECIFICATIONS FOR WOOD FENCES - THE FOLLOWING SPECIFICATIONS, DERIVED FROM ASTM F 537 AND STANDARD PRACTICE IN THE FENCE INDUSTRY, SHALL APPLY TO THE MATERIALS AND CONSTRUCTION OF WOOD FENCES:
 - (A) POSTS AND FRAMING - POST SPACING SHALL NOT EXCEED EIGHT FEET (8')
 - (B) ALL POST HOLES SHOULD BE A MINIMUM OF THIRTY INCHES (30") DEEP FOR FOUR FEET (4') HIGH FENCES AND THIRTY-SIX INCHES (36") DEEP FOR FENCES HIGHER THAN FOUR FEET (4') UP TO EIGHT FEET (8'). ALL TERMINAL, CORNER AND GATE POSTS SHOULD BE SET TO FORTY-TWO INCHES (42") DEEP.
 - (C) POST HOLES SHOULD BE AT LEAST FOUR INCHES (4") LARGER IN DIAMETER THAN THE LARGEST DIMENSION OF THE POST. ALL TERMINAL, CORNER AND GATE POSTS SHOULD BE SET IN CONCRETE.
 - (D) FENCES UP TO FIVE FEET (5') SHALL HAVE A MINIMUM OF TWO RAILS (STRINGERS) TOP AND BOTTOM. FENCES OVER FIVE FEET (5') SHALL HAVE A THIRD RAIL AT CENTER HEIGHT. STRINGERS SHALL BE 2X6 MINIMUM (NOMINAL).
 - (E) MATERIALS - ALL MATERIALS USED IN WOOD FENCING SHOULD BE EITHER (1) NATURALLY ROT-RESISTANT WOOD (SUCH AS CEDAR), (2) A WOOD PRESURE TREATED FOR ROT-RESISTANCE, OR (3) BE COATED THOROUGHLY WITH A PAINT OR PROTECTIVE COATING IMMEDIATELY ON ERECTION.
 - (F) FASTENERS - FASTENERS SHALL BE MADE OF A NON-RUSTING, NON-CORROSIVE MATERIAL, OR COATED TO RESIST RUSTING. NAILS SHALL BE LONG ENOUGH TO PENETRATE THE RECEIVING MEMBER TWICE THE THICKNESS OF THE THINNER MEMBER BUT NOT LESS THAN ONE AND ONE-HALF INCHES (1 1/2").
 - (G) COVER BOARDS SHALL BE 1/2" MINIMUM THICKNESS.
 - (H) SOLID WOOD FENCES SHOULD ALLOW FOR EXPANSION TO AVOID BUCKLING AS FOLLOWS: FOR WIDTHS 2 TO 4 INCHES, A ONE SIXTEENTH INCH (1/16") SPACE SHOULD BE PROVIDED; FOR WIDTHS 6 TO 8 INCHES, A MINIMUM SPACE OF ONE EIGHTH INCH (1/8") SHOULD BE PROVIDED.
 - (I) THE TOPS OF THE COVER BOARDS SHALL BE CUT AS DOG EAR (CORNERS CUT OFF AT 45 DEGREE ANGLES).

NOTES:
1. SEE FENCING NOTES, THIS SHEET.

SHADOW BOX FENCE AND GATE DETAILS
NOT TO SCALE



- NOTES:**
1. DIMENSIONS ARE SHOWN FOR A 3-STALL DUMPSTER; HOWEVER THE DIMENSIONS CAN BE REDUCED TO A SINGLE OR DOUBLE DUMPSTER.
 2. BOLLARDS ARE OPTIONAL DEPENDING ON OWNER'S PREFERENCE.
 3. ENCLOSURE SHALL BE SHADOWBOX FENCE. SEE DETAILS THIS SHEET.

DUMPSTER PAD AND ENCLOSURE DETAIL
NOT TO SCALE

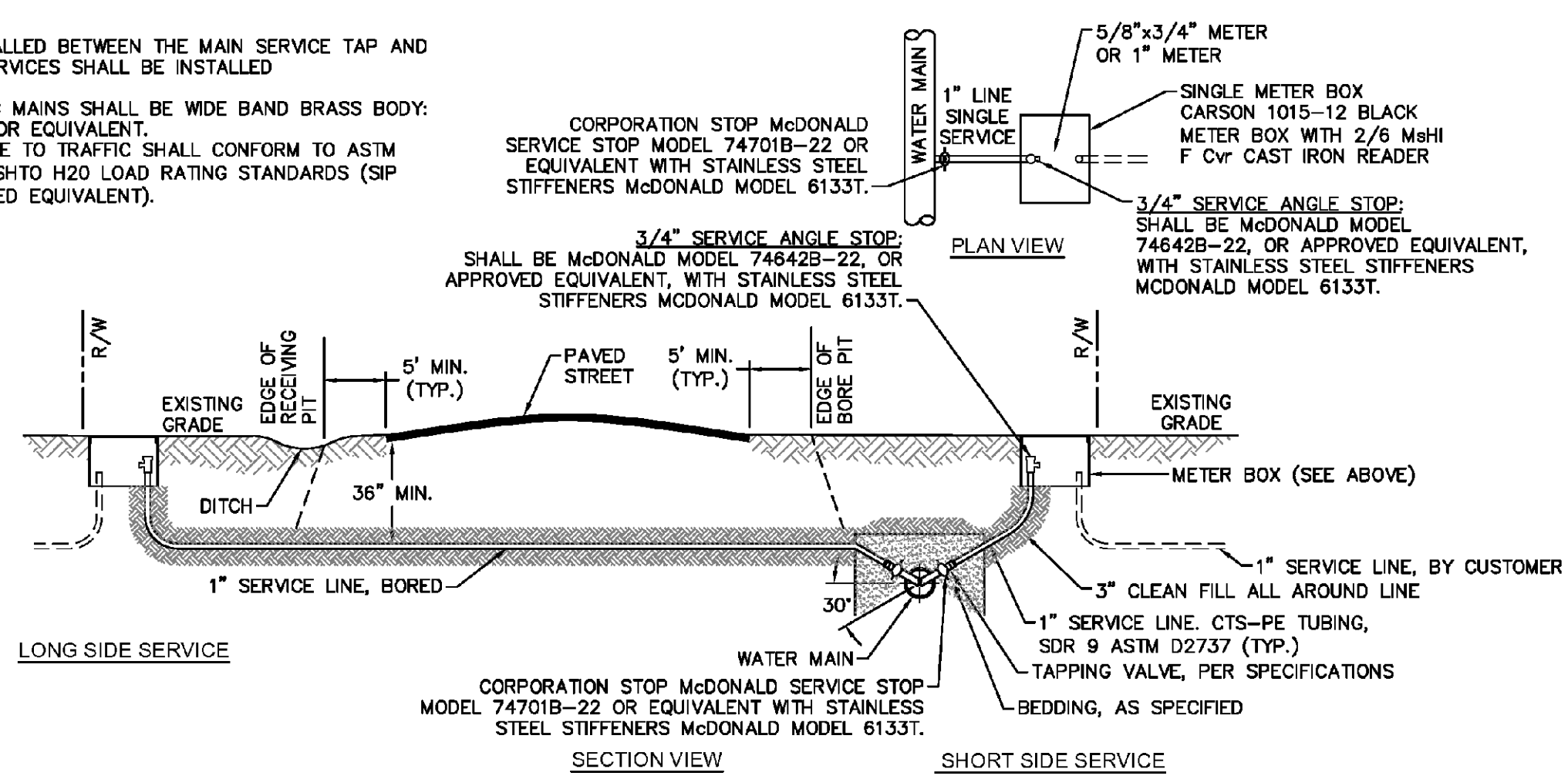
Approved Construction Plan	
Name	Date
Planning	
Traffic	
Fire	
Signed: _____	

Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____

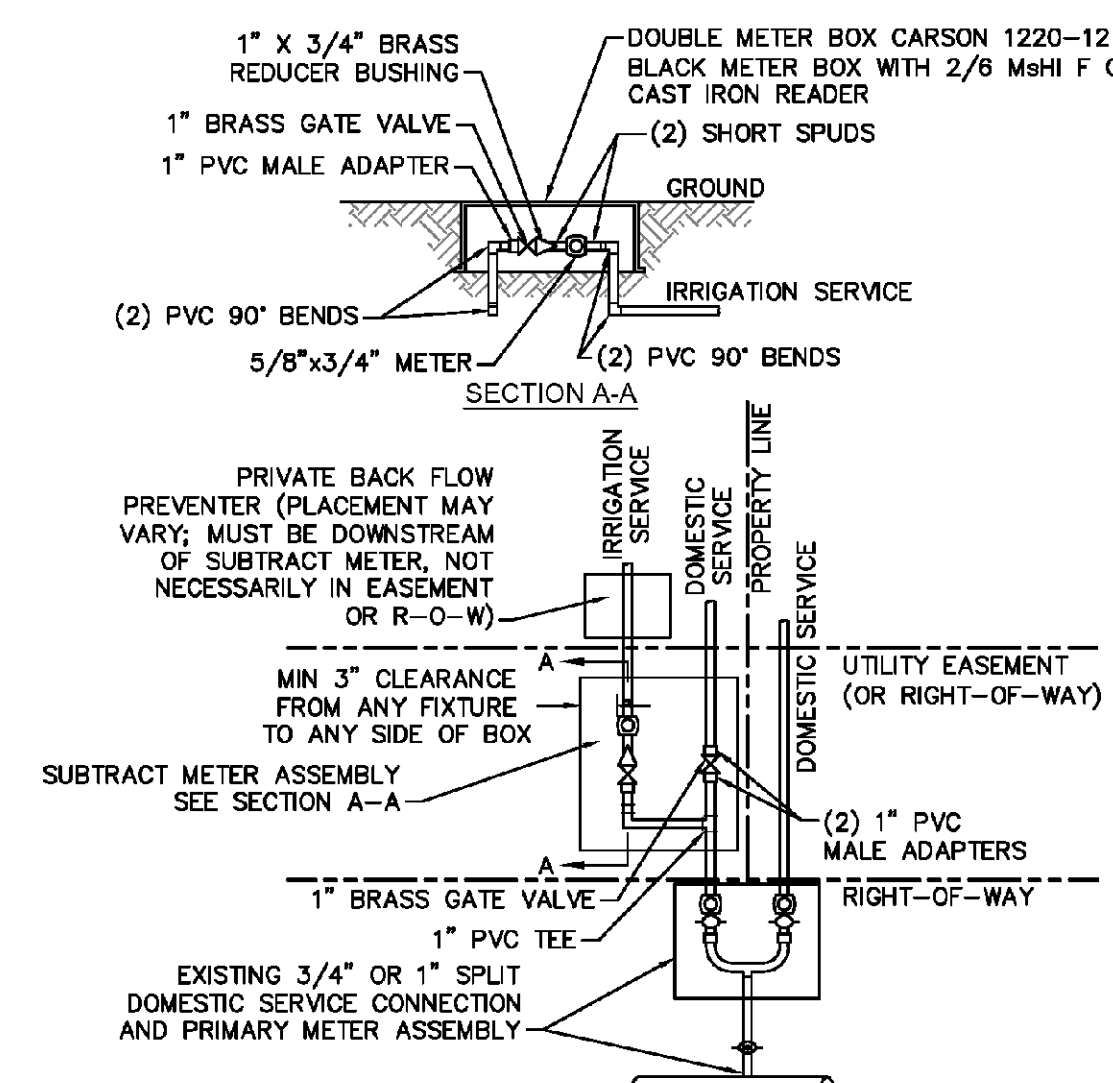
FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

<p>REVISIONS:</p> <p>1) REVISED PER CITY COMMENTS 10/16/18</p> <p>2) REVISED PER CITY COMMENTS 2/17/19</p>	<p>CLIENT INFORMATION:</p> <p>PARAMOUNT ENGINEERING, INC.</p> <p>122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) N.C. License #: C-2846</p>
<p>PROJECT STATUS</p> <p>PRELIMINARY LAYOUT: _____</p> <p>FINAL DESIGN: _____</p> <p>RELEASED FOR CONSTRUCTION: _____</p>	<p>DRAWING INFORMATION</p> <p>DATE: 8/22/2018</p> <p>SCALE: AS NOTED</p> <p>DRAWN: J. FREEMAN</p> <p>CHECKED: J. BLAIR</p>
<p>SEAL</p> <p><i>[Professional Engineer Seal]</i></p> <p>2/17/2019</p>	<p>PROJECT INFORMATION</p> <p>KIDDIE ACADEMY</p> <p>2310 Canterbury Drive Wilmington, North Carolina 28401</p>
<p>PEI JOB#: 18291.PE</p>	<p>C-5.3</p>

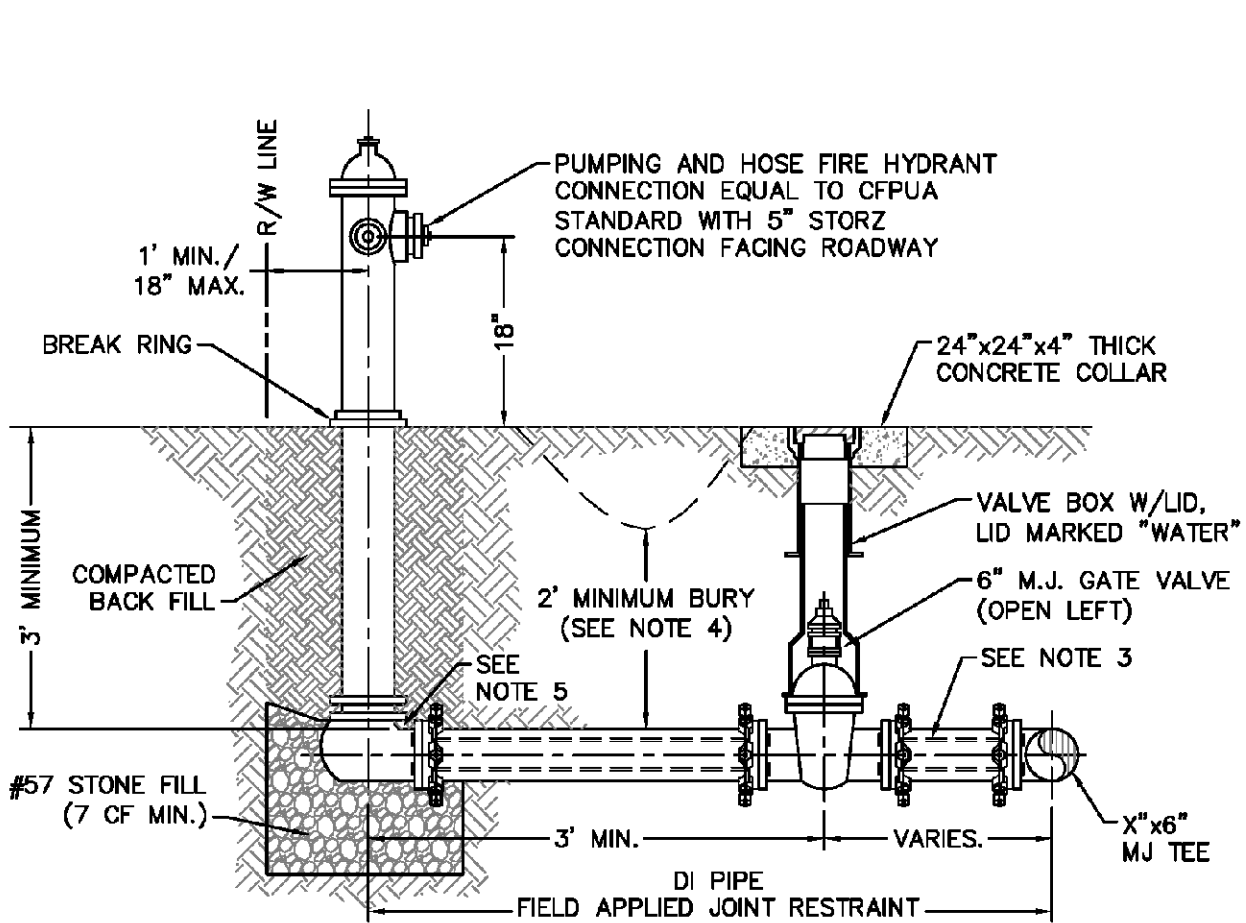
- NOTES:**
- NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: SADDLE McDONALD 3801 OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (SIP MODEL 4242, OR APPROVED EQUIVALENT).



WD-18 SINGLE SERVICE CONNECTION
NOT TO SCALE



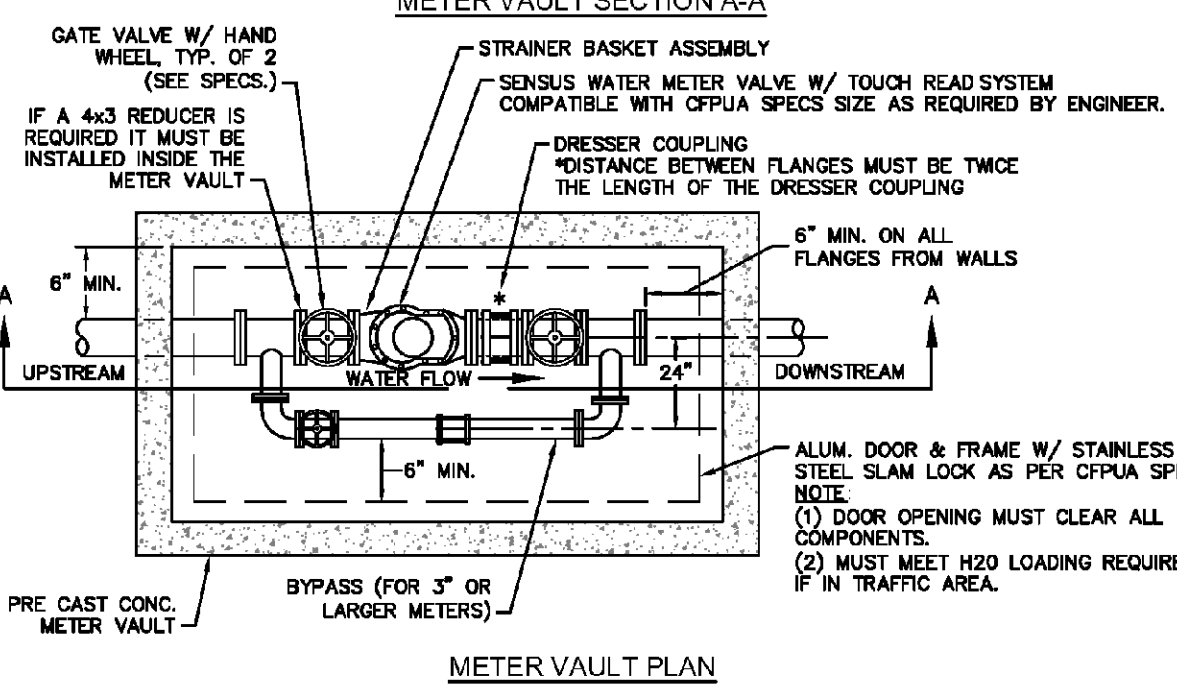
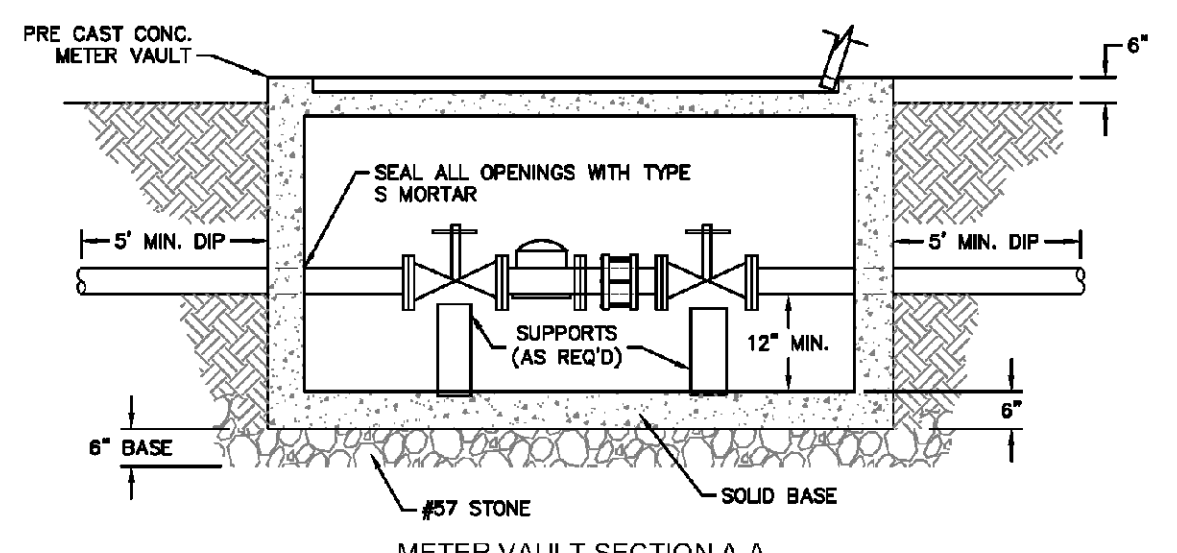
WD-8 DOUBLE SERVICE CONNECTION USING SUBTRACT METER
NOT TO SCALE



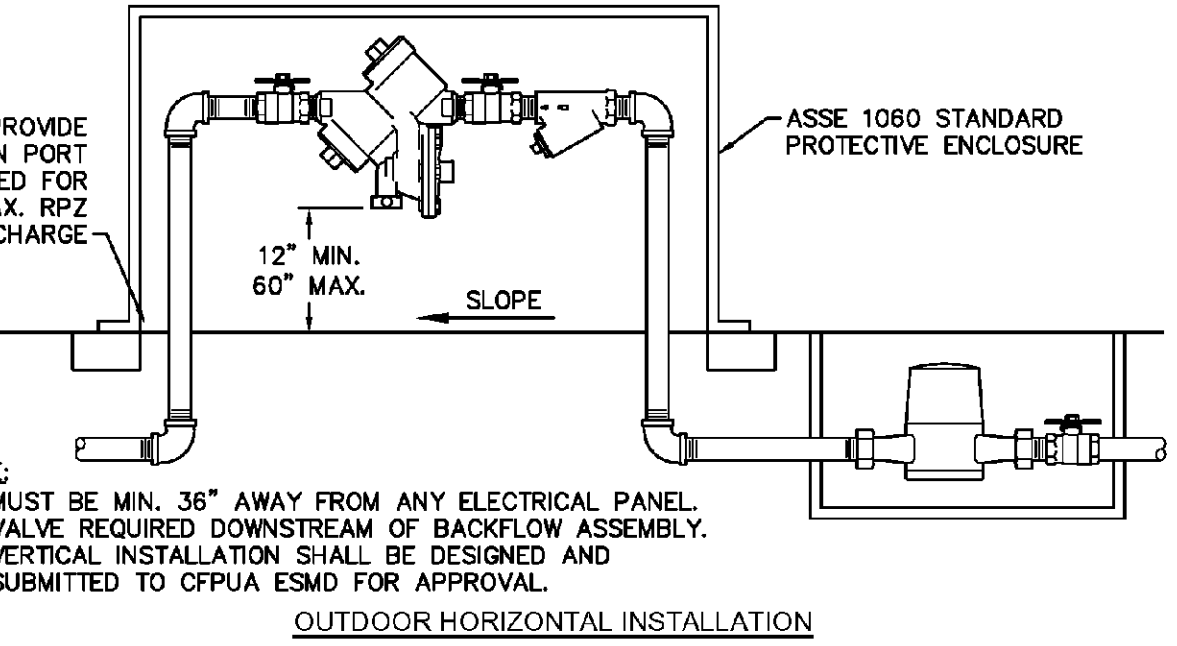
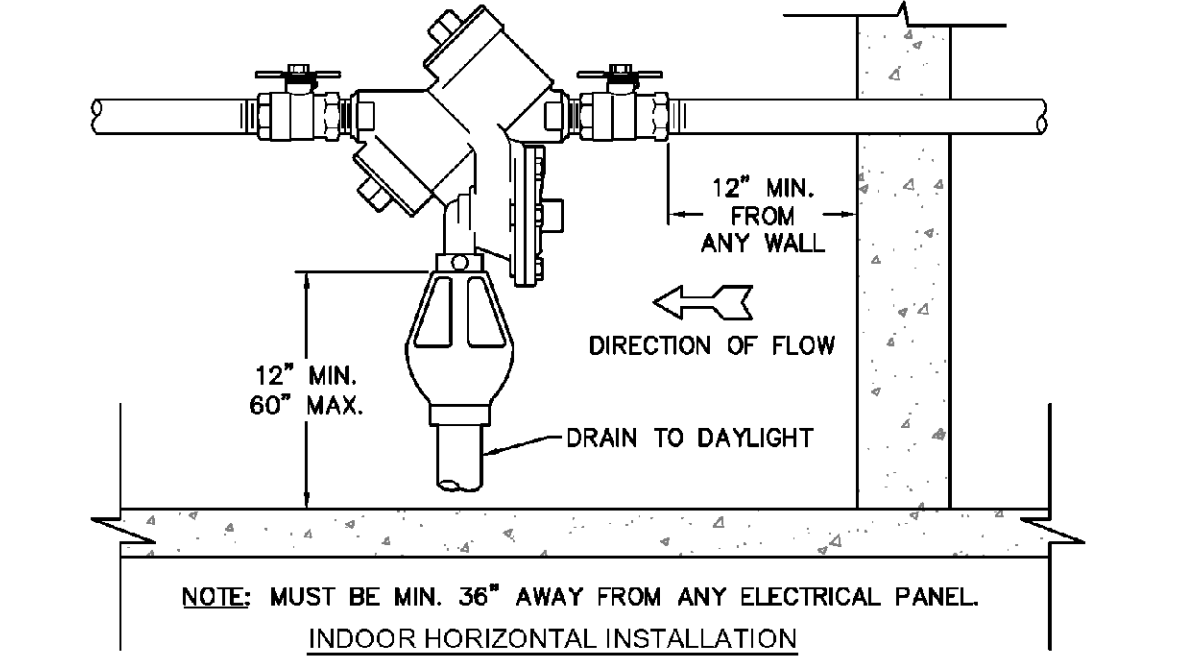
WD-10 FIRE HYDRANT ASSEMBLY
NOT TO SCALE

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:**
- SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
 - WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
 - ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
 - MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
 - NO FLEXIBLE COUPLINGS SHALL BE USED.
 - ALL STAINLESS STEEL FASTENERS SHALL BE 316.
 - CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

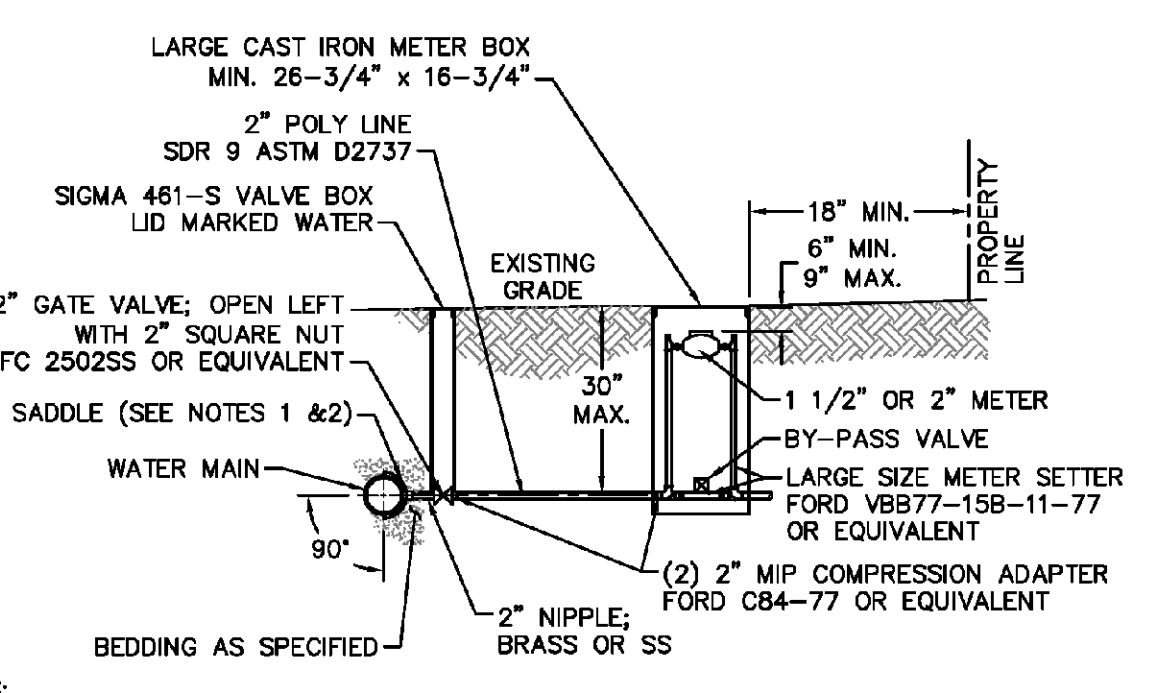
WD-19 STANDARD NOTES
(REQUIRED ON ALL PLAN AND PROFILE SHEETS)



WD-1 WATER METER VAULT
NOT TO SCALE

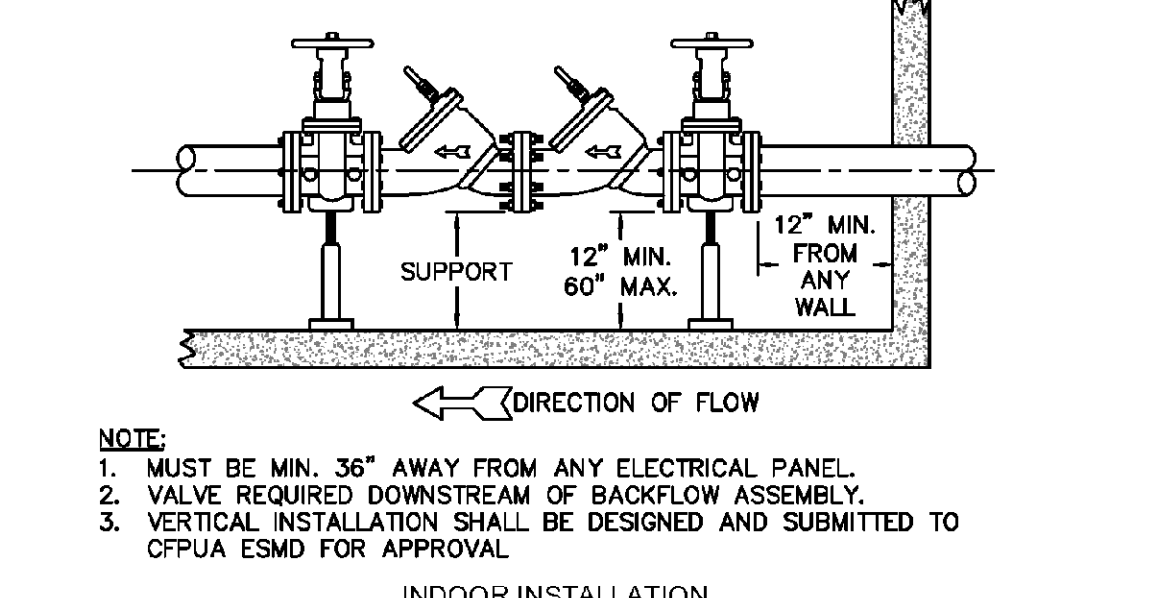
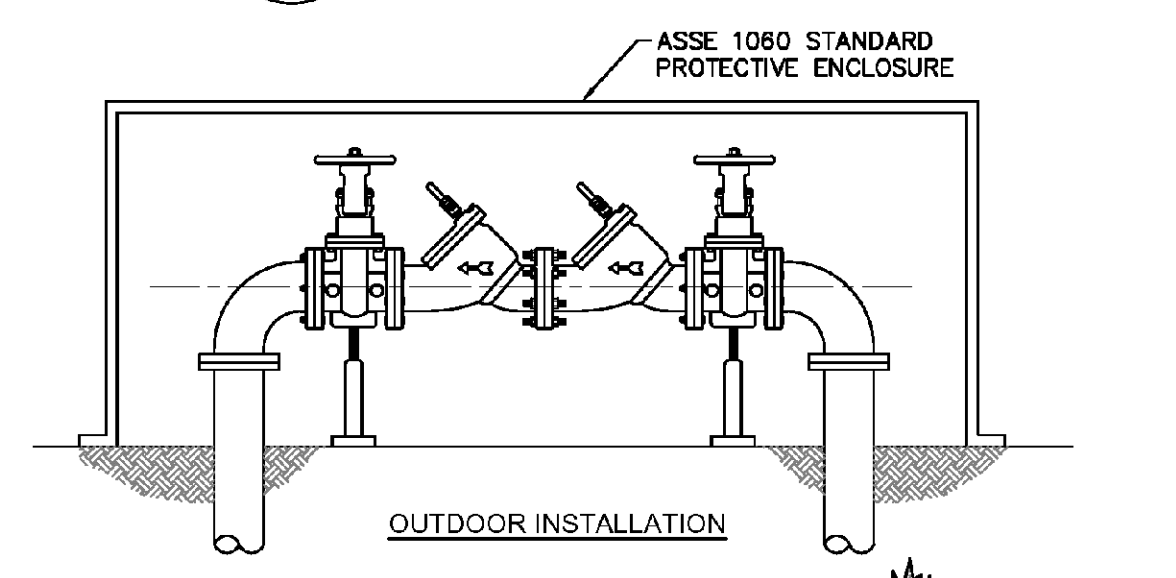


WD-12 REDUCED PRESSURE PRINCIPLE ASSEMBLY
NOT TO SCALE



- NOTES:**
- ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
 - SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY: McDONALD 3800, FORD S90 (DOUBLE STRAP) OR EQUIVALENT.
 - METER BOXES SUSCEPTIBLE TO TRAFFIC SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS (OLDCASTLE PRECAST MODEL B1730 OR APPROVED EQUIVALENT).
 - METER BOXES SUSCEPTIBLE TO INCIDENTAL, NON-DELIBERATE TRAFFIC SHALL CONFORM TO ANSI/SCTE 77 TIER 15 LOAD RATING STANDARDS (SYNERTECH MODEL DUO 17x30 OR APPROVED EQUIVALENT).
 - NON-TRAFFIC METER BOXES SHALL BE SIGMA MB2203 OR APPROVED EQUIVALENT.
 - 3\"/>

WD-11 LARGE METER
NOT TO SCALE



WD-7 DOUBLE CHECK VALVE ASSEMBLY
NOT TO SCALE

- GENERAL NOTES:**
- NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
 - THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
 - THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
 - THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).
- THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04**

CFPUA WATER DISTRIBUTION SYSTEM

REV.	DESCRIPTION:	DATE:
1	Single Service Connection, Double Service Connection, and Large Meter Revised	10/26/12
2	Single Service Connection and Fire Hydrant Details Revised	7/23/13
3	Fire Hydrant Detail Revised	01/03/14
4	Revised Fire Hydrant Assembly To Show 5\"/>	

STANDARD DETAILS

DATE: 1/9/12
SCALE: N/A
DRAWN BY: CFPUA
CHECKED BY: CFPUA
PROJECT NO.:

SHEET NO. WSD-1

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

Approved Construction Plan

Name: _____ Date: _____

Planning: _____
Traffic: _____
Fire: _____

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
Signed: _____



C-5.4

PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:

PARAMOUNT ENGINEERING

Etoile Learning Development, LLC
7407 Darius Drive
Wilmington, NC 28411

122 Cinema Drive
Wilmington, North Carolina 28403
(910) 791-6707 (O) (910) 791-6700 (F)
NC License #: C-2846

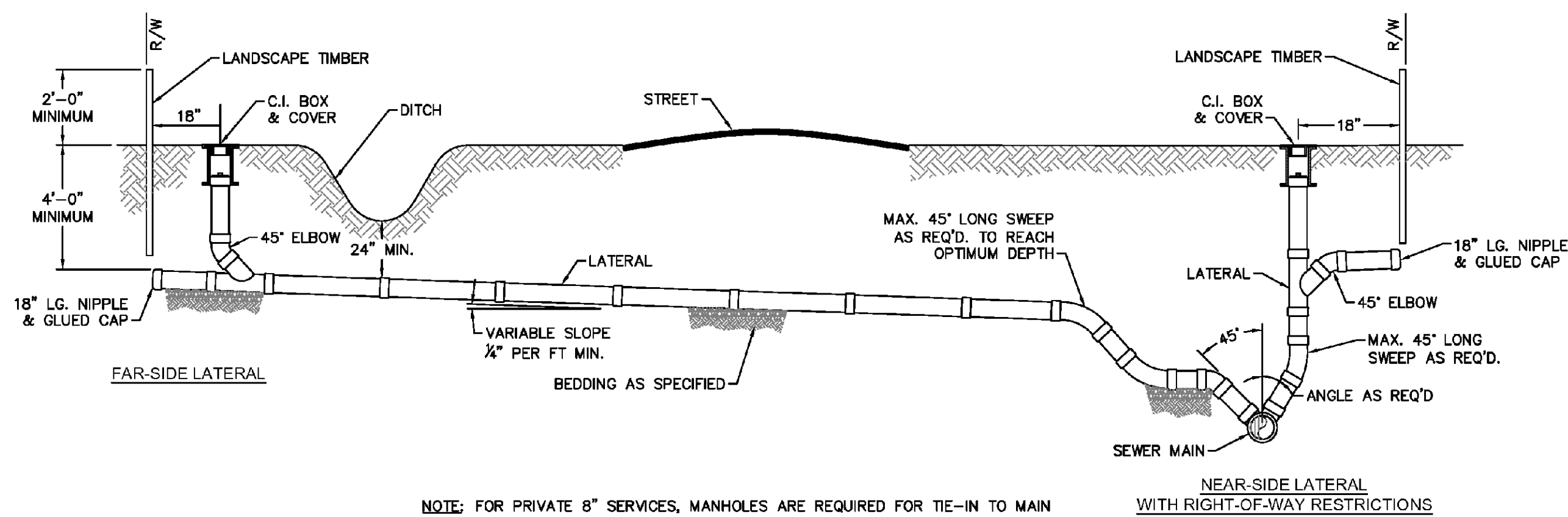
DETAILS

KIDDIE ACADEMY
2310 Canterwood Drive
Wilmington, North Carolina 28401

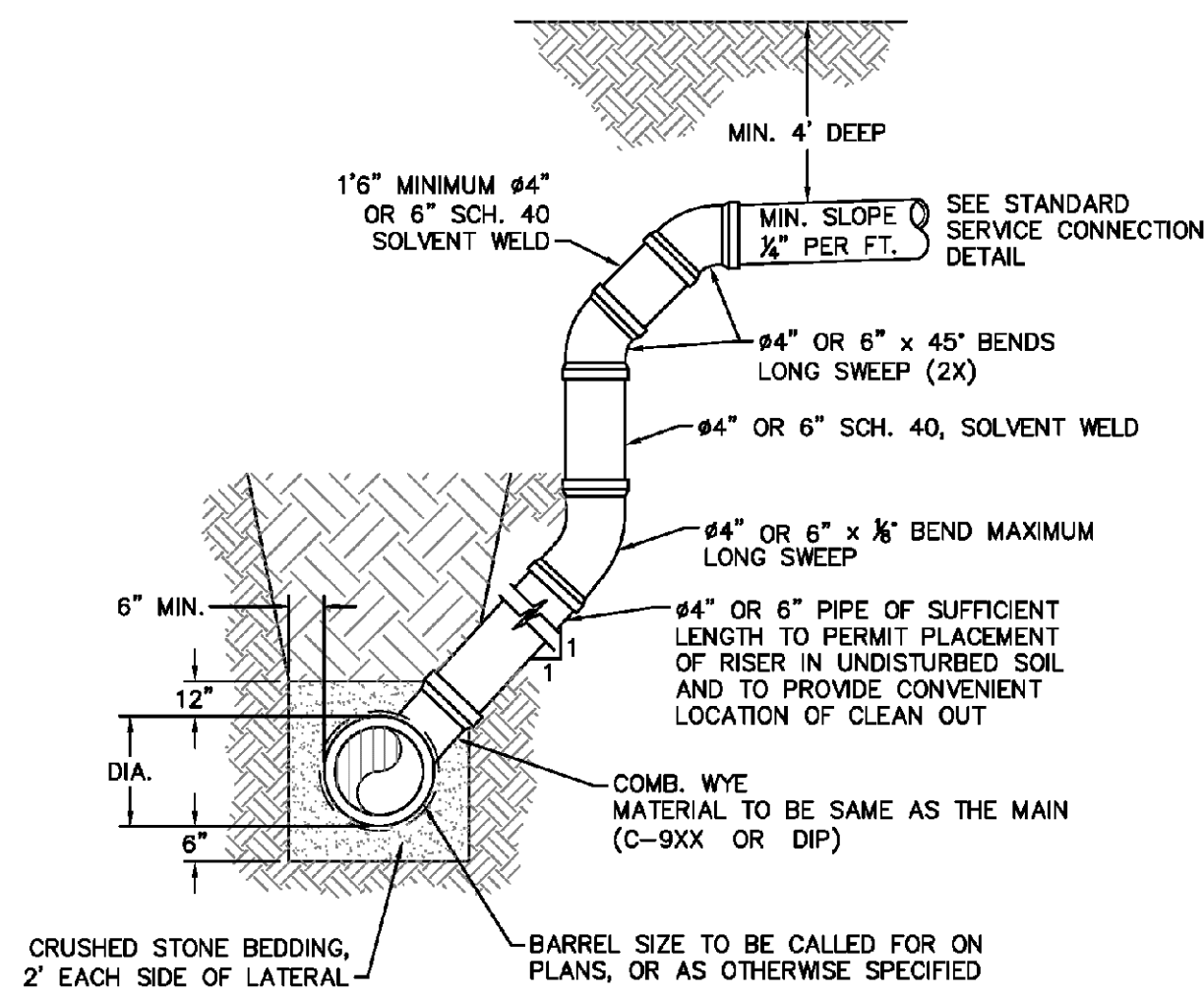
PROJECT STATUS:
PRELIMINARY LAYOUT:
FINAL DESIGN:
RELEASED FOR CONSTRUCTION:

DRAWING INFORMATION:
DATE: 8/22/2018
SCALE: AS NOTED
DRAWN: J. FREMY
CHECKED: J. FREMY

PEI JOB#: 18291.PE

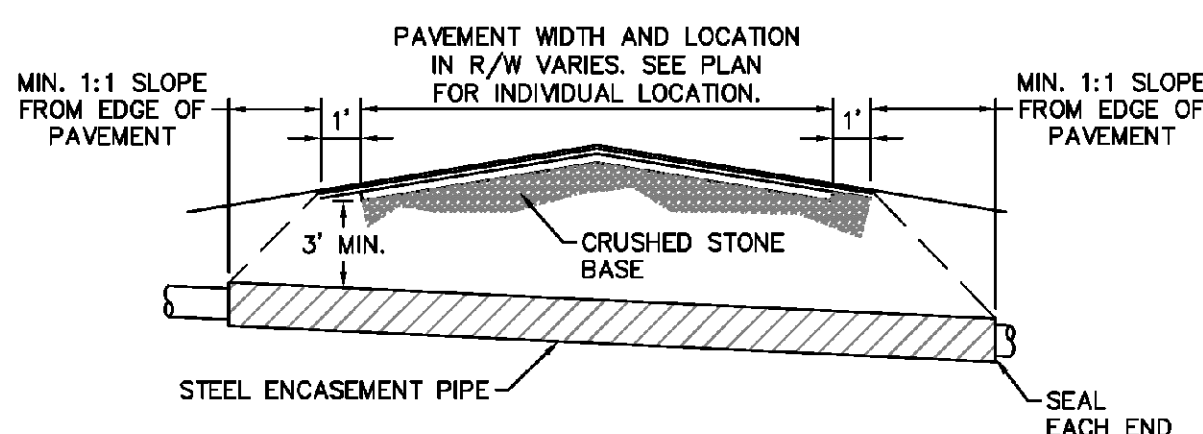


NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN
SD-19 STANDARD SERVICE CONNECTION TO SANITARY SEWER
 NOT TO SCALE



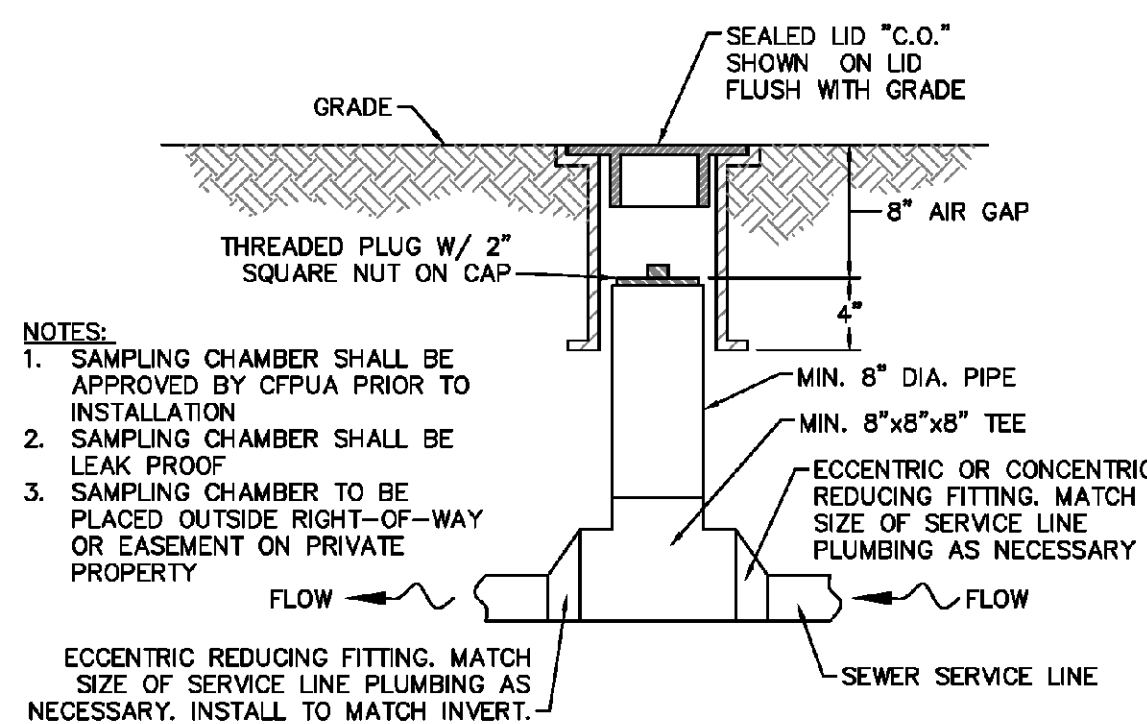
- NOTES:
 1. SPECIAL CARE SHALL BE TAKEN DURING BACKFILL OPERATIONS. THE RISER SHALL BE PLUMB AND TRUE AT ALL TIMES, AND REST ON FIRM, STABLE FOUNDATION.
 2. FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN.

MAIN DEPTH GREATER THAN 8 FT
SD-12 DEEP SERVICE LATERAL
 NOT TO SCALE



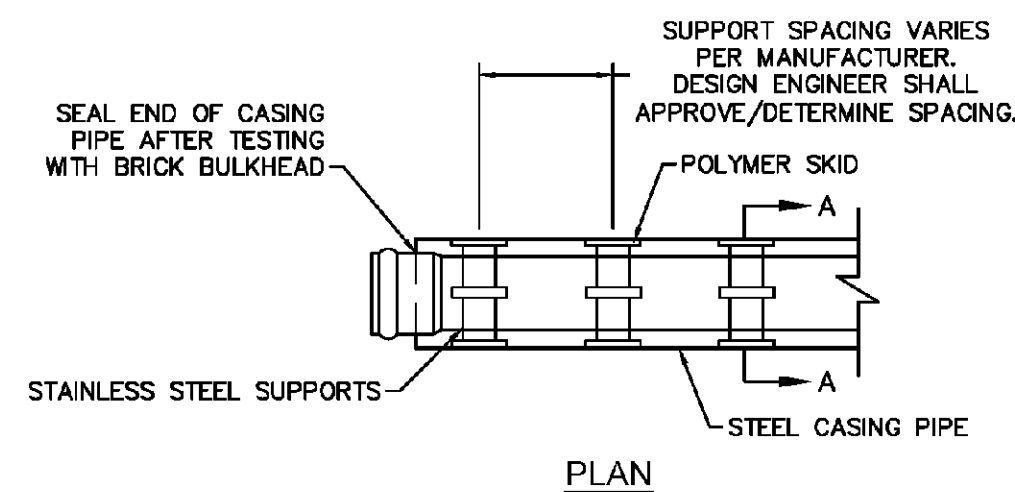
- NOTES:
 1. CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
 2. TRACER WIRE SHALL BE CONTINUED THROUGH CASING.

SD-16 TYPICAL BORING/ JACKING DETAIL
 NOT TO SCALE

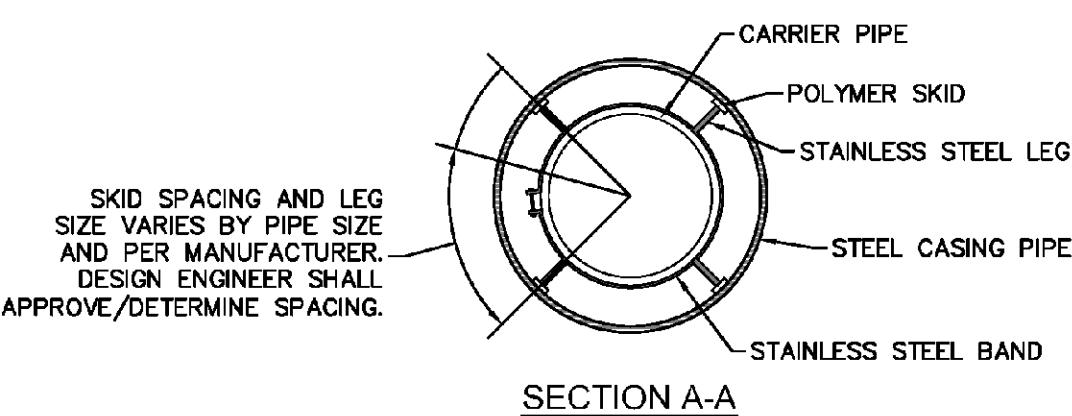


- NOTES:
 1. SAMPLING CHAMBER SHALL BE APPROVED BY CFPUA PRIOR TO INSTALLATION.
 2. SAMPLING CHAMBER SHALL BE LEAK PROOF.
 3. SAMPLING CHAMBER TO BE PLACED OUTSIDE RIGHT-OF-WAY OR EASEMENT ON PRIVATE PROPERTY.
 ECCENTRIC REDUCING FITTING. MATCH SIZE OF SERVICE LINE PLUMBING AS NECESSARY. INSTALL TO MATCH INVERT.

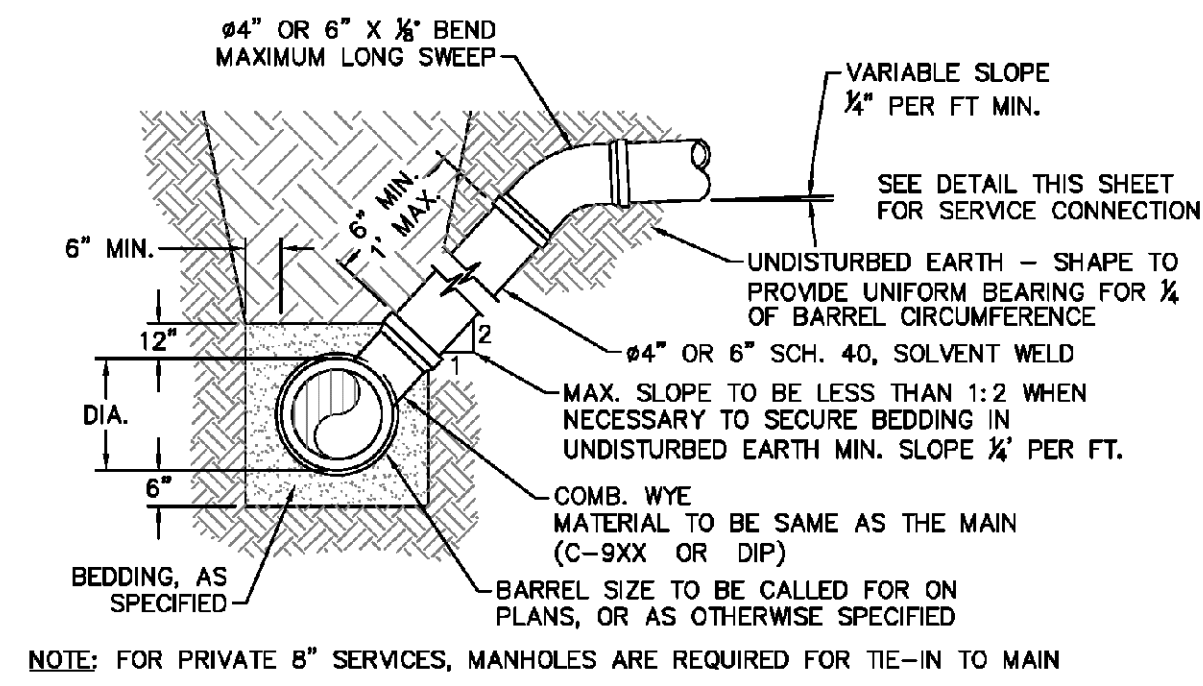
SD-13 SAMPLING CHAMBER
 NOT TO SCALE



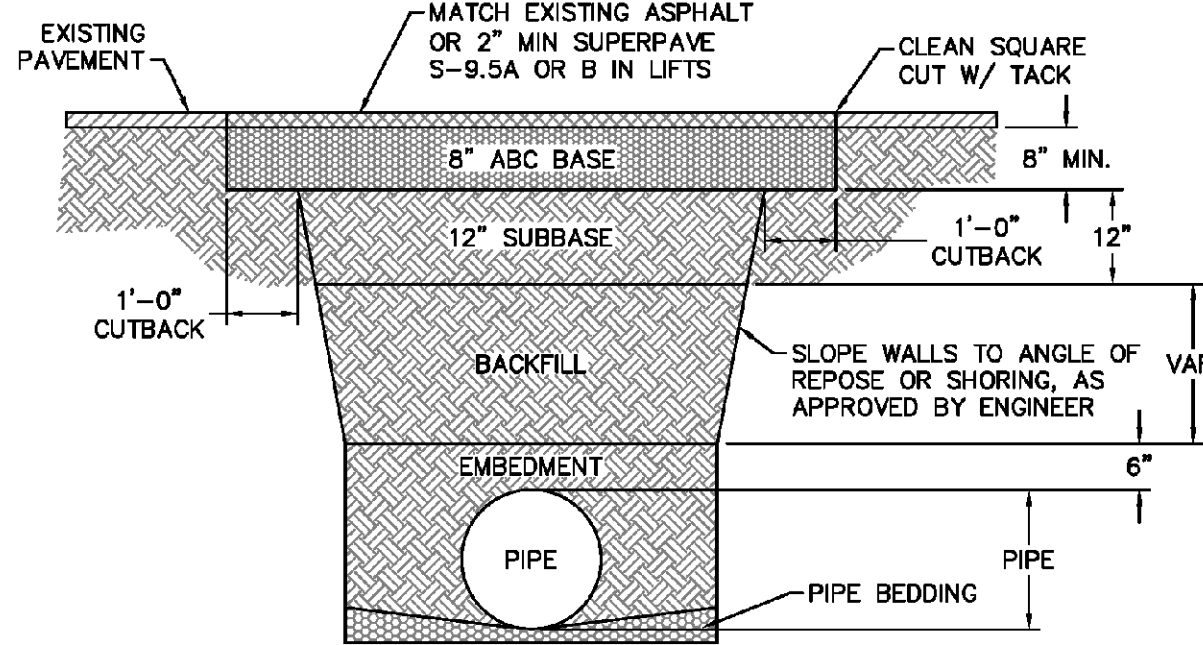
- NOTE: PIPE SUPPORT TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SUPPORTS MAY BE USED AS ALTERNATIVE. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.



SD-17 PIPE CASING SUPPORT DETAIL
 NOT TO SCALE



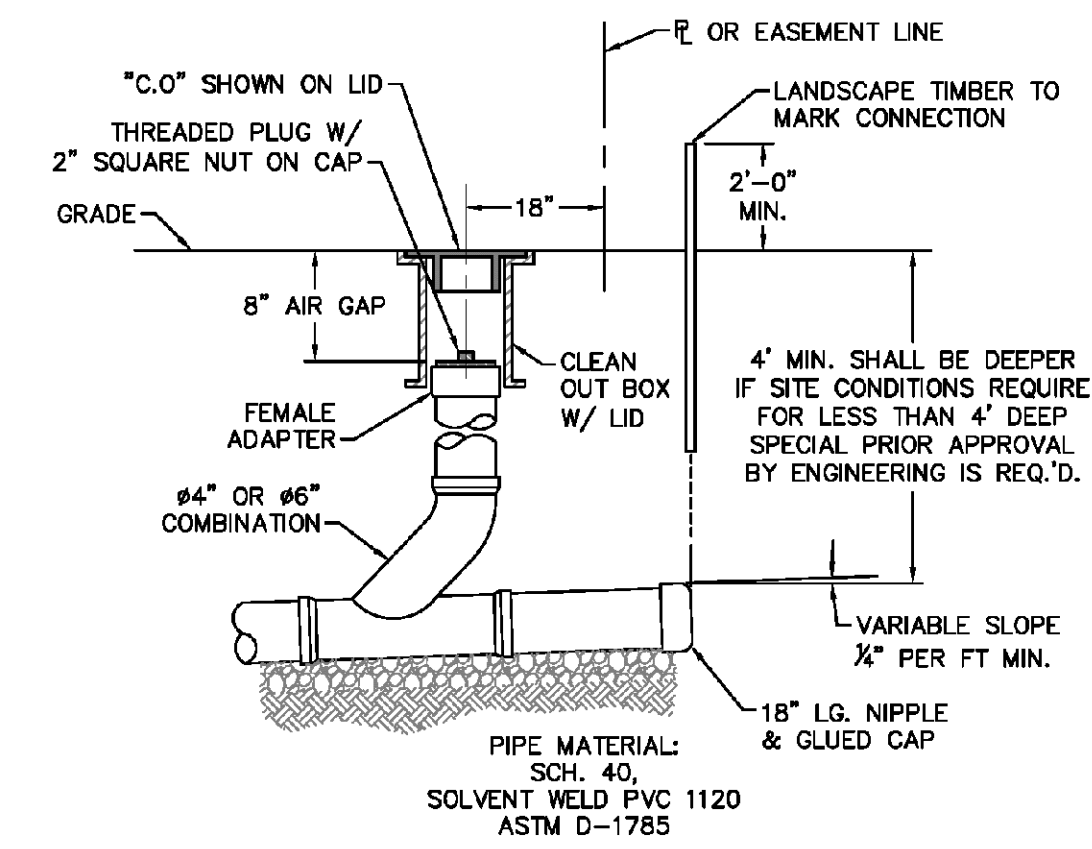
NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN
 MAIN DEPTH LESS THAN 8 FT
SD-10 STANDARD SERVICE LATERAL
 NOT TO SCALE



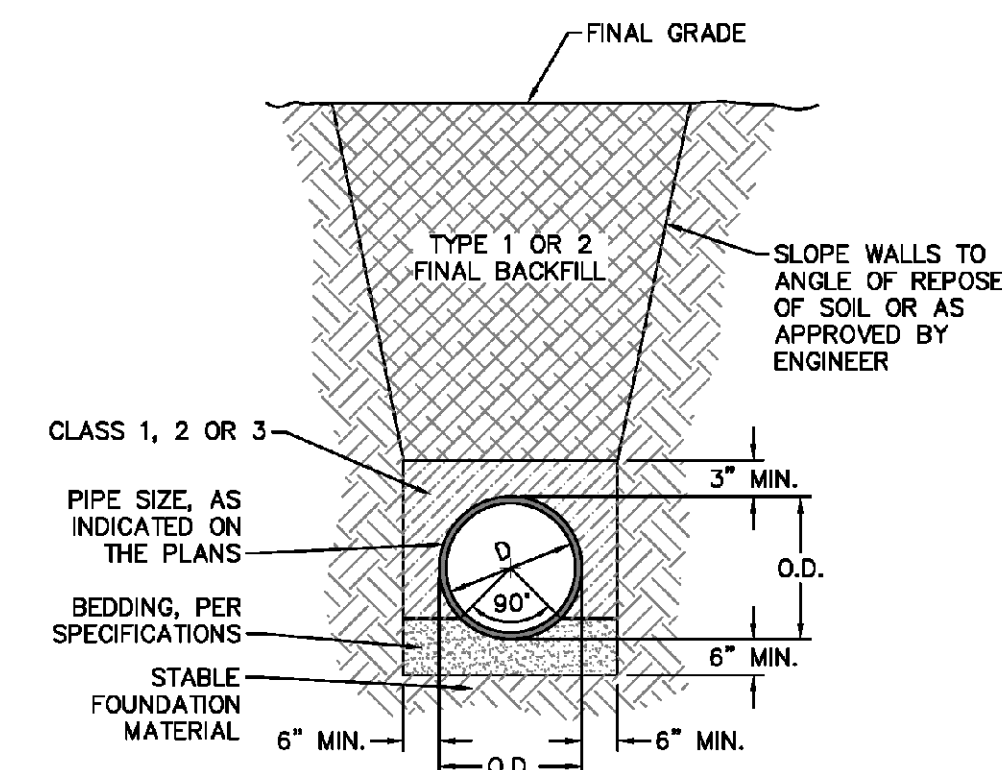
- NOTES:
 1. BACKFILL SHALL BE SUITABLE MATERIAL THAT IS FREE FROM HEAVY CLAY, GUMBOS, DEBRIS, ORGANICS AND LITTLE TO NO EXCESSIVE MOISTURE.
 2. SELECT BACKFILL MAY BE SUBSTITUTED OR REQUIRED BY CITY TO ACHIEVE COMPACTION, (I.E. #57, ABC, CRUSHED LIMESTONE, CLEAN SAND, FLOWABLE FILL, ETC).
 3. 8-INCH OF ABC BASE MATERIAL SHALL BE USED ON CITY STREETS.
 4. BACKFILL AND BASE MATERIALS SHALL BE COMPACTED 12" MINIMUM LIFTS.
 5. SOIL SHALL BE COMPACTED BY A MECHANIZED TAMPER (I.E. JUMPING JACK), HOWEVER, VIBRATORY ROLLERS > 18" WIDTH MAY BE USED FOR LARGER EXCAVATIONS. THE PLATE TAMP METHOD SHALL NOT BE USED.
 6. ALL APPROVED CASTINGS SHALL BE SET FLUSH TO GRADE AND SUPPORTED IF APPLICABLE.
 7. ABC BASE AND SUBBASE COMPACTED TO 98% AND BACKFILL AND EMBEDMENT COMPACTED TO 90% AS DETERMINED BY THE MODIFIED PROCTOR AASHTO METHOD T-99.
 8. 1-FOOT CUTBACKS OF ASPHALT SHALL BE PREPARED ON UNDISTURBED SOIL. MINIMUM ASPHALT DENSITY IS 90%.

(FOR PRIVATE ROADS AND PAVED AREAS: CONTRACTOR TO MEET MIN. REQUIREMENTS AS DEFINED BY RIGHT-OF-WAY OWNER FOR PUBLIC ROAD REPAIRS)

SD-14 PAVEMENT REPAIR WHERE PIPE INSTALLED
 NOT TO SCALE



NOTE: FOR PRIVATE 8" SERVICES, MANHOLES ARE REQUIRED FOR TIE-IN TO MAIN
SD-11 SERVICE CONNECTION AND CLEAN-OUT
 NOT TO SCALE



SD-15 TYPICAL TRENCH DETAIL
 NOT TO SCALE

- GENERAL NOTES:
 1. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE-WAY.
 2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE ANY CONSTRUCTION BEGINS.
 3. THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES WHILE CONSTRUCTION IS IN PROGRESS.
 4. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS.
 5. THE CONTRACTOR IS RESPONSIBLE FOR LAY DOWN AND STOCKPILE AREAS (TO ARRANGE AND ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS).

THE DETAILS SHOWN HEREON SUPERCEDE CFPUA WRITTEN TECHNICAL SPECIFICATIONS VERSIONS 1.00 - 1.04

REV:	DESCRIPTION:	DATE:
1	SAMPLING CHAMBER REVISED	10/26/12

CFPUA SANITARY SEWER

STANDARD DETAILS

CAPE FEAR PUBLIC UTILITY AUTHORITY
 235 GOVERNMENT CENTER DRIVE
 WILMINGTON, NC 28403
 OFFICE: (910)332-6560

DATE: 8/22/2018
 SCALE: AS NOTED
 DRAWN: JREMY BILLY
 CHECKED: JREMY BILLY

SHEET NO:
SSD-2

Approved Construction Plan

Name: _____ Date: _____

Planning: _____
 Traffic: _____
 Fire: _____

Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION

REVISIONS:

CLIENT INFORMATION:
 Eroto Learning Development, LLC
 7407 Darius Drive
 Wilmington, NC 28411

PARAMOUNT ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6700 (F)
 NC License #: C-2846

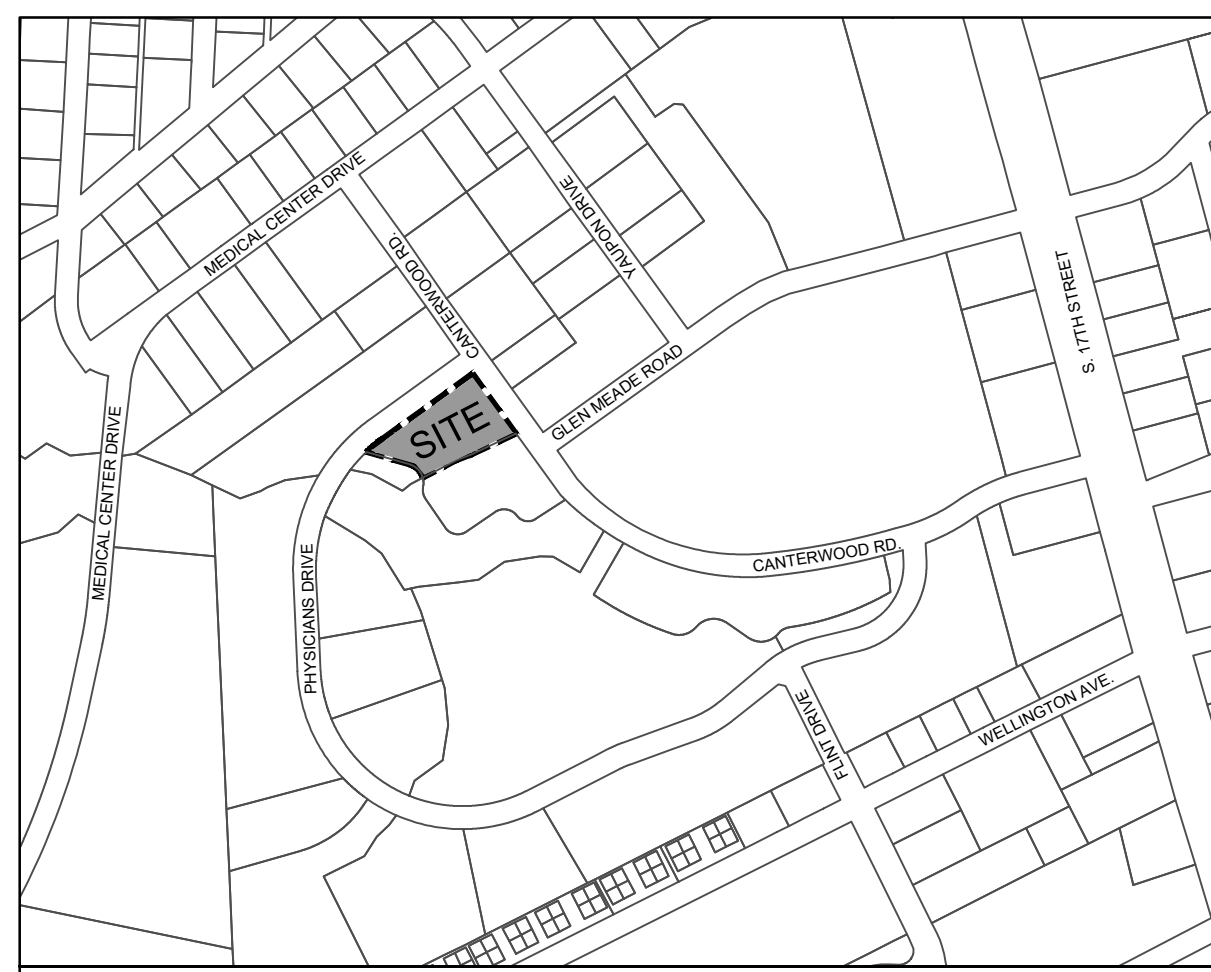
DETAILS
 KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

PROJECT STATUS
 PRELIMINARY LAYOUT
 FINAL DESIGN
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION
 DATE: 8/22/2018
 SCALE: AS NOTED
 AS NOTED
 DRAWN: JREMY BILLY
 CHECKED: JREMY BILLY

SEAL
 JREMY BILLY
 ENGINEER
 28852
 08/22/2018

C-5.5
 PEI JOB#: 18291.PE



SITE INFORMATION
OWNER INFORMATION: KIDDIE ACADEMY
 3415 BOX HILL CORPORATE CENTER DR.
 ABINGDON, MD 21009

PROJECT ADDRESS: 2310 CANTERWOOD DRIVE
 WILMINGTON, NC 28401

TAX PARCEL IDENTIFICATION #: R06014-005-004-000
RECORDED DEED BOOK: BK 001357 PG 000558
CURRENT ZONING: O&I-1 - OFFICE & INDUSTRIAL DISTRICT 1
VACANT LAND: DAY CARE (CHILD)
PROPOSED USE: 1.129 ACRES OR 49175 SF
TOTAL SITE AREA:

FLOOD INFORMATION: THIS PARCEL IS LOCATED IN FLOOD ZONE X, WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD PANEL 3126, MAP NUMBER 3720312600 J, DATED APRIL 3, 2006

CAMA LAND USE CLASSIFICATION: URBAN
CONSERVATION DISTRICT: POCOSIN

LANDSCAPE CALCULATIONS:

STREET YARD LANDSCAPING - Sec. 18-477

Canterwood Drive (Primary) 163.52 LF - 24' Drive = 139.52 LF * 18 = 2,511.36 SF	REQ'D 2,511.36 SF	PROV 2845.17 SF
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2,682.36 SF * 15% = 402.35 SF Allowable Sidewalk
 Total Sidewalk in Provided Street Yard Area = 17.65 SF (0.6%)
 *17.65 sf of sidewalk in Primary Street Yard is existing City sidewalk

2,511.36 SF / 600 SF = 4.18	1 CANOPY / 600 SF	4.18	5
	6 SHRUBS / 600 SF	25.11	26

Physicians Drive (Secondary) 351.70 LF - 12' Drive = 339.7 LF * 9 = 3,057.3 SF	REQ'D 3,057.3 SF	PROV 3,194.32 SF
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3,235.05 SF * 15% = 485.25 SF Allowable Sidewalk
 Total Sidewalk in Provided Street Yard Area = 139.09 SF (4.5%)
 *87.91 sf of sidewalk in Secondary Street Yard is existing City sidewalk

3,057.3 SF / 600 SF = 5.09	1 CANOPY / 600 SF	5.09	6
	6 SHRUBS / 600 SF	30.57	31

PARKING LOT LANDSCAPING

Interior Area Landscaping - Sec. 18-481
 Parking facilities landscaping for the O&I Districts shall provide Interior Shading requirements based on the amount of impervious surface provided.

Impervious Surface Provided = 15,108 SF
 25% Interior Shading Required, per table provided in Section 18-481(i)

15,108 SF * 25% SHADING (See Plan for Tree Shade and SF Calculations)	REQ'D 3,777 SF	PROV 4,949 SF
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PARKING AREA SCREENING - Sec. 18-483
 3' H x 5' W Buffer Provided as Required

FOUNDATION PLANTINGS - Sec. 18-490 80 LF * 28.6 FT HGT = 2,288 SF * 0.12	REQ'D 274.6 SF	PROV 301.0 SF
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BUFFER YARDS - Sec. 18. 18-503
 None Required - Project not adjacent to Residential Use

OVERALL SITE TREE PLANTING REQUIREMENTS 1.129 AC * (15) 2.5" TREES / AC = 16.94	REQ'D 17	PROV 17
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LEGEND:

- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED FENCE PER ARCH'S DWGS
- EXISTING TREE TO REMOVE
- TREE SHADE SF CALCULATION (PER TREE)
- FOUNDATION PLANTING SF CALCULATION (PER PLANTER AREA)

- LANDSCAPE NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
 - ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
 - NO TREE, OTHER THAN THOSE SHOWN ON APPROVED PLANS FOR REMOVAL WITH THESE PLANS AND/OR TREE REMOVAL PERMIT PLANS, SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
 - ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
 - PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED BY THE SOIL TESTING LABORATORY, THIRD PARTY, RECOGNIZED BY THE STATE DEPARTMENT OF AGRICULTURE OR AS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
 - ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.
 - THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.

- THE CONTRACTOR SHALL PREPARE ALL SEEDED OR SODDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN RAKED AND ROLLED TO ACCEPT THE SOD/SEED. ALL SOD/SEED AREAS MUST BE IRRIGATED OR HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDED AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELLED GROUND.
- IRRIGATION SHALL BE DESIGNED AND INSTALLED BY A LICENSED IRRIGATION CONTRACTOR IN THE STATE OF NORTH CAROLINA.
- THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE IF IRRIGATION HAS NOT BEEN INSTALLED AT THE TIME OF SUBSTANTIAL COMPLETION. ALL MATERIAL INCLUDING SOD AND SEEDS AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
- ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDED.
- ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT DISTANCE FROM 30' TO 10'.
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.

PLAN NOTES:

- EXTERIOR LIGHTING SHALL BE PROVIDED ON BUILDING FACADE, PER ARCH'S DWGS

NC DENR PWSS WATER PERMIT #: _____ GPD
 WATER CAPACITY: _____ GPD
 DWQ SEWER PERMIT #: _____
 SEWER CAPACITY: _____ GPD
 SEWER TO FLOW THROUGH NEI: YES or NO (CIRCLE ONE)

Approved Construction Plan
 Name: _____ Date: _____
 Planning: _____
 Traffic: _____
 Fire: _____

Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

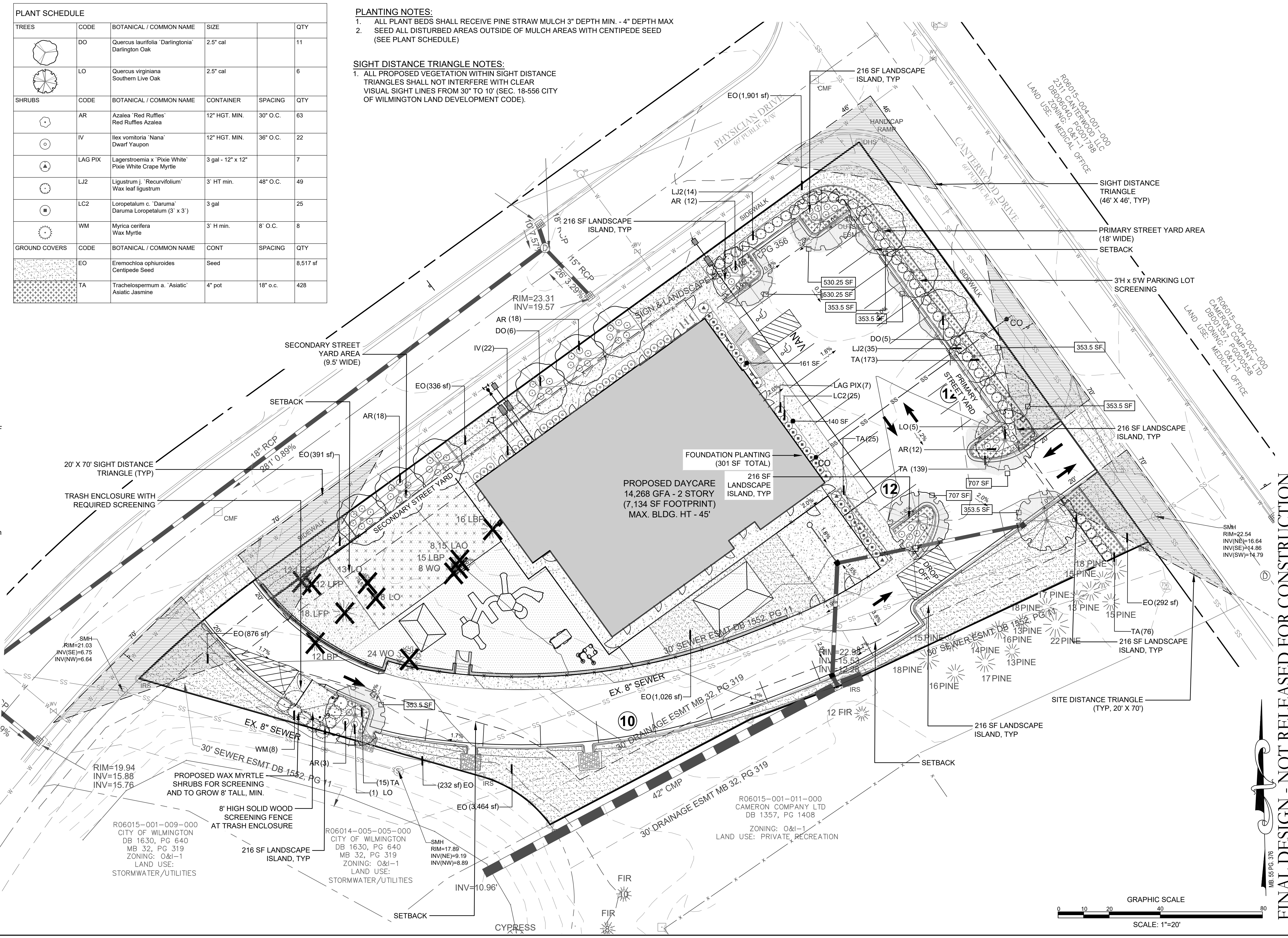
For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	QTY	
	DO	Quercus laurifolia 'Darlingtonia' Darlington Oak	2.5" cal	11	
	LO	Quercus virginiana Southern Live Oak	2.5" cal	6	
SHRUBS	CODE	BOTANICAL / COMMON NAME	CONTAINER	SPACING	QTY
	AR	Azalea 'Red Ruffles' Red Ruffles Azalea	12" HGT. MIN.	30" O.C.	63
	IV	Ilex vomitoria 'Nana' Dwarf Yaupon	12" HGT. MIN.	36" O.C.	22
	LAG PIX	Lagerstroemia x 'Pixie White' Pixie White Crape Myrtle	3 gal - 12" x 12"		7
	LJ2	Ligustrum j. 'Recurvifolium' Wax leaf ligustrum	3" HT min.	48" O.C.	49
	LC2	Loropetalum c. 'Daruma' Daruma Loropetalum (3' x 3')	3 gal		25
	WM	Myrica cerifera Wax Myrtle	3" H min.	8" O.C.	8
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT	SPACING	QTY
	EO	Eremochloa ophiuroides Centipede Seed	Seed		8,517 sf
	TA	Trachelospermum a. 'Asiatic' Asiatic Jasmine	4" pot	18" o.c.	428

- PLANTING NOTES:**
- ALL PLANT BEDS SHALL RECEIVE PINE STRAW MULCH 3" DEPTH MIN. - 4" DEPTH MAX
 - SEED ALL DISTURBED AREAS OUTSIDE OF MULCH AREAS WITH CENTIPEDE SEED (SEE PLANT SCHEDULE)

- SIGHT DISTANCE TRIANGLE NOTES:**
- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30' TO 10' (SEC. 18-556 CITY OF WILMINGTON LAND DEVELOPMENT CODE).



REVISIONS:

1) REVISED PER CITY COMMENTS	10/06/18
2) REV. PER CITY COMMENTS & NEW BLDG FOOTPRINT	07/07/19
3) REV. TREE MITIGATION CALCS PER CITY COMMENTS	07/15/19
4) REV. PER CITY COMMENTS (TRC PLAN REVIEW #2)	05/07/19

CLIENT INFORMATION:
PARAMOUNTE ENGINEERING
 122 Cinema Drive
 Wilmington, North Carolina 28403
 (910) 791-6707 (O) (910) 791-6700 (F)
 NC License #: C-2846

LANDSCAPE PLAN
KIDDIE ACADEMY
 2310 Canterwood Drive
 Wilmington, North Carolina 28401

PROJECT STATUS:
 PRELIMINARY LAYOUT
 FINAL DESIGN
 RELEASED FOR CONSTRUCTION

DRAWING INFORMATION:
 DATE: 7/11/2019
 SCALE: 1"=20'
 DRAWN: AE/AN
 CHECKED: JSC

SEAL: NORTH CAROLINA 1823 02/01/19 LEOH H. ENGEBRE

L-1.0
 PEI JOB#: 18291.PE

FINAL DESIGN - NOT RELEASED FOR CONSTRUCTION