Admininstrative Site Plan StorageMax Town of Zebulon

SHEET

C0

LS1

LS2

LS3

ES101

ES001

D2

EC1

EC3

EC4

Wake County, North Carolina Project 1098359 SUP - 2023 -02

DESCRIPTION

Cover Sheet

Site Plan - Overall

Existing Conditions Survey

Site Plan - Enlarged North

Site Plan - Enlarged South

Grading Plan - Enlarged North

Grading Plan - Enlarged South

Utility Plan - Enlarged North

Utilitiy Plan - Enlarged South\

Shepard School - Plan and Profile

Shepard School - Cross-Sections

Shepard School - Widening and Striping

Grading Plan - Overall

Utility Plan - Overall

Planting Plan - North

Planting Plan - South

Site Photometric Plan

Standard Site Details

BMP Bioretention Detail

NCDOT Roadway Details

Erosion Control Details

Erosion Control Details

NCGO1 Requirements

Architectural

Water and Sanitary Sewer Details

Phase 1 - Erosion Control Plan

Phase 2 - Erosion Control Plan

Phase 3 - Erosion Control Plan

Phase 4 - Erosion Control Plan

Stormwater Details

Exterior Lighting Cut Sheets

Planting Details

Existing Conditions & Tree Survey

VICINITY MAP

Scale 1" 300'

SITE ADDRESS: **CURRENT USE:** PROPOSED USE: SITE AREA (GROSS): ROW DED. SHEPARD SCHOOL: **ROW DED. PROCTOR** SITE AREA (NET): **ZONING DISTRICT FUTURE LAND USE:** PROPOSED BUILDING SIZE: **BUILDING HEIGHT (MAX):** MAX LOT COVERAGE (ALLOWED) - HC: MAX LOT COVERAGE (PROVIDED) - HC: **BUILDING SETBACKS:**

PARKING (REQUIRED: 1 SPACE / 5000 sf): PARKING (PROVIDED): LATITUDE: LONGITUDE:

BIKE PARKING (REQUIRED) BIKE PARKING (PROVIDED) WATERSHED: RIVER BASIN:

DENUDED AREA ON SITE

DENUDED AREA ROW:

DENUDED AREA TOTAL

OPEN SPACE (PASSIVE) SUMMARY SELF STORAGE FACILITY

901 PROCTOR STREET, ZEBULON NC

6.50 ac (283,140 sf)

6.15 ac (267,894 sf)

92,000 sf

80% (5.20 ac)

55% (3.60 ac)

0', 5' (SIDE)

25' (REAR)

21 SPACES'

35.840297

-78.315683

1 per Bldg

NEUSE

03020203

MOCCASIN CREEK

258,310.80 SF (5.93 AC)

27,878.40 SF (.64 AC)

286,076 SF (6.57 AC)

106,000/5000 = 21 SPACES

0.29 ac (12,756 sf)

0.06 ac (2,569 sf)

REQUIRED: 3% X 6.5 AC = .19AC PROVIDED: BIORETENTION AREA WITH PEDESTRAIN ACCESS .72 AC / 6.6 AC = 11% OPEN AREA AT THE BMP TO COMPLY WITH HC (HEAVY COMMERCIAL UDO 5.7.5 SUBURBAN COMMERCIAL

PUBLIC IMPROVEMENT QUANTITIES

PHASE NUMBER(S)	PHASE 1
NUMBER OF LOT (Ś)	1
LOT NUMBERS BY PHASE	1
NUMBER OF UNITS	1
LIVABLE OF UNITS	0
OPEN SPACE (YES/NO)	YES
NUMBER OF OPEN SPACE LOTS	0
PUBLIC WATER (LF)	0
PUBLIC 8" PVC SEWER	0
WATER SERVICE STUBS	1
WATER SERVICE ABANDONED	1
SEWER SERVICE STUBS (NEW)	0
SEWER SERVICE REMOVED	0

	NEW LEGEND	EXISTING
DRAINAGE STRUCTURE		
SANITARY SEWER MANHOLE	<u>(\$)</u>	(<u>\$</u>)
SANITARY SEWER CLEANOUT	C.O.	C.O.
WATER VALVE	\otimes	\otimes
FIRE HYDRANT	₩	\$\footnote{\pi_0}
OVERHEAD UTILITY LINE	——————————————————————————————————————	хон
UNDERGROUND ELECTRIC LINE	Е	xe
UNDERGROUND TELECOM/DATA LINE	TD	XTD
FIBER OPTIC CABLE	F0	XFO
GAS LINE	G	XG
STORM DRAINAGE PIPE	SD	XSD
SANITARY SEWER LINE	SS	XSS
WATER LINE	——————————————————————————————————————	xw
SURFACE ELEVATION CONTOUR	100	400
SURFACE SPOT ELEVATION	356.44	x 356.44
CLEARING LIMIT/TREE LINE		
LIMIT OF DISTURBANCE		
ELECTRICAL TRANSFORMER PAD	T	Т
TOWNHOME PARKING (NUMBER)	71	



PROJECT INFORMATION:

PROJECT:

OVERLAY:

FLOOD ZONE:

OWNER / DEVELOPER: SHEPARD SCHOOL, LLC 2700 GRESHAM LAKE RD. RALEIGH, NC 27615 CONTACT: **ALLEN MASSEY** (919) 604-0505 EMAIL: STORIT@AOL.COM **ENGINEER:** KEITH P. GETTLE. PE GETTLE ENGINEERING AND DESIGN, PLLC LICENSE: P-2538 3616 WAXWING CT. WAKE FOREST, NC 27587 PHONE: (919) 210-3934 **EMAIL**: KPGETTLE@GMAIL.COM SURVEYOR: CAWTHORNE MOSS AND PANCIERA P.C. 333 SOUTH WHITE STREET

STORAGE MAX COMMERCIAL

NO FLOOD HAZARDS AREAS PER FEMA FIRM 3720270600K

PHONE: (919) 556- 3148

GENERAL NOTES

- 1. BOUNDARY AND TOPO INFORMATION TAKEN FROM CAWTHORNE, MOSS & PANCIERA, P.C., SURVEYING, TITLED TOPOGRAPHIC SURVEY FOR STORAGE MAX LLC, DATED DECEMBER 22, 2022.
- 2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES & SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS ACTIVITIES. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO DIGGING.

PLLC

Design,

Gettle Engineering and

| KPG | KPG

- 3. ALL CONSTRUCTION WILL BE IN STRICT CONFORMANCE TO THE TOWN OF ZEBULON. CITY OF RALEIGH. WAKE COUNTY AND NCDOT STANDARDS AND SPECIFICATIONS.
- 4. NO CHANGES MAY BE MADE TO THE APPROVED DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE ISSUING AUTHORITY.
- 5. THE PARCEL IS NOT LOCATED WITHIN A FLOOD ZONE AS NOTED PER FEMA MAP 372020600J, DATED MAY 2, 2006.
- 6. BUILDING AND ENTRANCE SIGNAGE TO COMPLY WITH THE TOWN OF ZEBULON UDO SECTION 5.11
- 7. EMERGENCY COMMUNICTION WITHIN THE BUILDINGS, AND ON SITE, SHALL BE EVALUATED DURING DETAILED SITE PLAN DEVELOPMENT: DETERMINATION IF BIDIRECTIONAL REPEATERS ARE REQUIRED.
- 8. ROAD WORK ON SHEPARD AND PROCTOR STREETS TO BE CONSISTENT WITH THE TRANSPORTATION PLAN IMPROVEMENTS. SHEPARD IS PROPOSED TO HAVE A 4 LANE DIVIDED ROADWAY, AND PROCTOR ST. TO HAVE A 2 LANE DIVIDED ROADWAY. THE PROJECT IS RESPONSIBILE FOR $\frac{1}{2}$ OF ROADWAY IMPROVEMENTS AND THE CENTER MEDIAN WILL BE CONSIDERED FEE-IN-LEU
- 9. SOLID WASTE DISPOSAL TO BE PROVIDED BY A ROLL TYPE REFUSE BIN AND STORED AT THE OFFICE BUILDING. THE CONTAINER TO BE ROLLED OUT TO PROCTOR STREET ON SCHEDULED DATES OF WASTE PICKUP.





CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State,

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval

City of Raleigh Review Officer

098359) Cover

Admininstrative Site Plan StorageMax Town of Zebulon

SHEET

C0

LS1

LS2

LS3

ES101

ES001

D2

EC1

EC3

EC4

Wake County, North Carolina Project 1098359 SUP - 2023 -02

DESCRIPTION

Cover Sheet

Site Plan - Overall

Existing Conditions Survey

Site Plan - Enlarged North

Site Plan - Enlarged South

Grading Plan - Enlarged North

Grading Plan - Enlarged South

Utility Plan - Enlarged North

Utilitiy Plan - Enlarged South\

Shepard School - Plan and Profile

Shepard School - Cross-Sections

Shepard School - Widening and Striping

Grading Plan - Overall

Utility Plan - Overall

Planting Plan - North

Planting Plan - South

Site Photometric Plan

Standard Site Details

BMP Bioretention Detail

NCDOT Roadway Details

Erosion Control Details

Erosion Control Details

NCGO1 Requirements

Architectural

Water and Sanitary Sewer Details

Phase 1 - Erosion Control Plan

Phase 2 - Erosion Control Plan

Phase 3 - Erosion Control Plan

Phase 4 - Erosion Control Plan

Stormwater Details

Exterior Lighting Cut Sheets

Planting Details

Existing Conditions & Tree Survey

VICINITY MAP

Scale 1" 300'

SITE ADDRESS: **CURRENT USE:** PROPOSED USE: SITE AREA (GROSS): ROW DED. SHEPARD SCHOOL: **ROW DED. PROCTOR** SITE AREA (NET): **ZONING DISTRICT FUTURE LAND USE:** PROPOSED BUILDING SIZE: **BUILDING HEIGHT (MAX):** MAX LOT COVERAGE (ALLOWED) - HC: MAX LOT COVERAGE (PROVIDED) - HC: **BUILDING SETBACKS:**

PARKING (REQUIRED: 1 SPACE / 5000 sf): PARKING (PROVIDED): LATITUDE: LONGITUDE:

BIKE PARKING (REQUIRED) BIKE PARKING (PROVIDED) WATERSHED: RIVER BASIN:

DENUDED AREA ON SITE

DENUDED AREA ROW:

DENUDED AREA TOTAL

OPEN SPACE (PASSIVE) SUMMARY SELF STORAGE FACILITY

901 PROCTOR STREET, ZEBULON NC

6.50 ac (283,140 sf)

6.15 ac (267,894 sf)

92,000 sf

80% (5.20 ac)

55% (3.60 ac)

0', 5' (SIDE)

25' (REAR)

21 SPACES'

35.840297

-78.315683

1 per Bldg

NEUSE

03020203

MOCCASIN CREEK

258,310.80 SF (5.93 AC)

27,878.40 SF (.64 AC)

286,076 SF (6.57 AC)

106,000/5000 = 21 SPACES

0.29 ac (12,756 sf)

0.06 ac (2,569 sf)

REQUIRED: 3% X 6.5 AC = .19AC PROVIDED: BIORETENTION AREA WITH PEDESTRAIN ACCESS .72 AC / 6.6 AC = 11% OPEN AREA AT THE BMP TO COMPLY WITH HC (HEAVY COMMERCIAL UDO 5.7.5 SUBURBAN COMMERCIAL

PUBLIC IMPROVEMENT QUANTITIES

PHASE NUMBER(S)	PHASE 1
NUMBER OF LOT (Ś)	1
LOT NUMBERS BY PHASE	1
NUMBER OF UNITS	1
LIVABLE OF UNITS	0
OPEN SPACE (YES/NO)	YES
NUMBER OF OPEN SPACE LOTS	0
PUBLIC WATER (LF)	0
PUBLIC 8" PVC SEWER	0
WATER SERVICE STUBS	1
WATER SERVICE ABANDONED	1
SEWER SERVICE STUBS (NEW)	0
SEWER SERVICE REMOVED	0

	NEW LEGEND	EXISTING
DRAINAGE STRUCTURE		
SANITARY SEWER MANHOLE	<u>(\$)</u>	(<u>\$</u>)
SANITARY SEWER CLEANOUT	C.O.	C.O.
WATER VALVE	\otimes	\otimes
FIRE HYDRANT	₩	\$\footnote{\pi_0}
OVERHEAD UTILITY LINE	——————————————————————————————————————	хон
UNDERGROUND ELECTRIC LINE	Е	xe
UNDERGROUND TELECOM/DATA LINE	TD	XTD
FIBER OPTIC CABLE	F0	XFO
GAS LINE	G	XG
STORM DRAINAGE PIPE	SD	XSD
SANITARY SEWER LINE	SS	XSS
WATER LINE	——————————————————————————————————————	xw
SURFACE ELEVATION CONTOUR	100	400
SURFACE SPOT ELEVATION	356.44	x 356.44
CLEARING LIMIT/TREE LINE		
LIMIT OF DISTURBANCE		
ELECTRICAL TRANSFORMER PAD	T	Т
TOWNHOME PARKING (NUMBER)	71	



PROJECT INFORMATION:

PROJECT:

OVERLAY:

FLOOD ZONE:

OWNER / DEVELOPER: SHEPARD SCHOOL, LLC 2700 GRESHAM LAKE RD. RALEIGH, NC 27615 CONTACT: **ALLEN MASSEY** (919) 604-0505 EMAIL: STORIT@AOL.COM **ENGINEER:** KEITH P. GETTLE. PE GETTLE ENGINEERING AND DESIGN, PLLC LICENSE: P-2538 3616 WAXWING CT. WAKE FOREST, NC 27587 PHONE: (919) 210-3934 **EMAIL**: KPGETTLE@GMAIL.COM SURVEYOR: CAWTHORNE MOSS AND PANCIERA P.C. 333 SOUTH WHITE STREET

STORAGE MAX COMMERCIAL

NO FLOOD HAZARDS AREAS PER FEMA FIRM 3720270600K

PHONE: (919) 556- 3148

GENERAL NOTES

- 1. BOUNDARY AND TOPO INFORMATION TAKEN FROM CAWTHORNE, MOSS & PANCIERA, P.C., SURVEYING, TITLED TOPOGRAPHIC SURVEY FOR STORAGE MAX LLC, DATED DECEMBER 22, 2022.
- 2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES & SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS ACTIVITIES. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO DIGGING.

PLLC

Design,

Gettle Engineering and

| KPG | KPG

- 3. ALL CONSTRUCTION WILL BE IN STRICT CONFORMANCE TO THE TOWN OF ZEBULON. CITY OF RALEIGH. WAKE COUNTY AND NCDOT STANDARDS AND SPECIFICATIONS.
- 4. NO CHANGES MAY BE MADE TO THE APPROVED DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE ISSUING AUTHORITY.
- 5. THE PARCEL IS NOT LOCATED WITHIN A FLOOD ZONE AS NOTED PER FEMA MAP 372020600J, DATED MAY 2, 2006.
- 6. BUILDING AND ENTRANCE SIGNAGE TO COMPLY WITH THE TOWN OF ZEBULON UDO SECTION 5.11
- 7. EMERGENCY COMMUNICTION WITHIN THE BUILDINGS, AND ON SITE, SHALL BE EVALUATED DURING DETAILED SITE PLAN DEVELOPMENT: DETERMINATION IF BIDIRECTIONAL REPEATERS ARE REQUIRED.
- 8. ROAD WORK ON SHEPARD AND PROCTOR STREETS TO BE CONSISTENT WITH THE TRANSPORTATION PLAN IMPROVEMENTS. SHEPARD IS PROPOSED TO HAVE A 4 LANE DIVIDED ROADWAY, AND PROCTOR ST. TO HAVE A 2 LANE DIVIDED ROADWAY. THE PROJECT IS RESPONSIBILE FOR $\frac{1}{2}$ OF ROADWAY IMPROVEMENTS AND THE CENTER MEDIAN WILL BE CONSIDERED FEE-IN-LEU
- 9. SOLID WASTE DISPOSAL TO BE PROVIDED BY A ROLL TYPE REFUSE BIN AND STORED AT THE OFFICE BUILDING. THE CONTAINER TO BE ROLLED OUT TO PROCTOR STREET ON SCHEDULED DATES OF WASTE PICKUP.





CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State,

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval

City of Raleigh Review Officer

098359) Cover

Invelope ID: 5A80626A-DEB3-4661-93DA-7EAFB86E636E

I, L. JORDAN PARKER, JR. CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERMEON FROM AN ACTUAL GLOBAL POSITIONING BYSTEM (GPS) SURVEY MADE UNDER MY SUFERVISION AND THE FOLLOWING INFORMSTION WAS USED TO PERFORM THE SPS/GNSS SURVEY THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION SHOWN IN THE REFERENCES, THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS GREATER THAN 1:10004; THIS SURVEY IS NOT TO BE RECORDED WITHOUT THE WRITTEN CONSENT OF

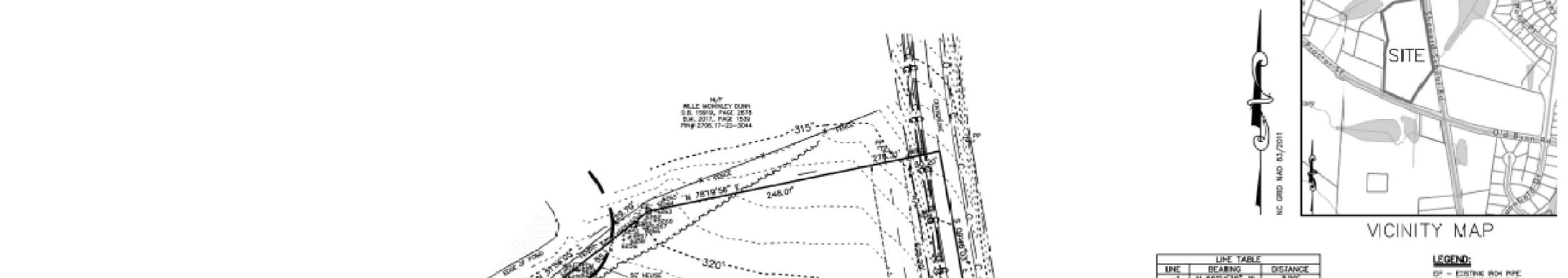
CLASS OF SURVEY AA.

POSTIONAL MODURACY: HORIZONTAL 0.05 US SURVEY FILT.

TYPE OF GPS FIELD PROCEDURE: REAL TIME KINEMATICS

DATES 0				
DATUM/	EP00m	:NAB 8362011 201	0.00	
PUBLISH	ED /Fix	ED CONTROL JSE-1	RALEICH EDT CORS	ARP
	y	Comments and the second	AT: 25'45 V9.50795	
		_		o#
		_	ONO: 78'3-1'44, 3944	5
		GEOD12B		
		D FACTORS: <u>1.00008</u>	4156820年	
UNITS: U	S SUP	VEY FOOT		
THIS	13TH	DAY_OFDEX	<u>SEMBER</u> ALD, 20	02:3.
	- Boss	Inquired by:		
	Large	y Jordan Parker	her.	
	Tayle is	d Operation I to con-	120	
		CTREAMING	L 468	5.
DOMES	rocine:	AL LAND SURMEYOR		
E 35-81 B		AL DAND SUN CION	CODINE IN	AMERICA.
		TREE SPECIES	& SIZENIN.) TABI	E
Poir	nt.	Northing	Easting	Description
617		761085.096	2202522.318	SWEET GUM-2W
300			2202022.018	
617		7610.31.959	2202555.727	SWEET GUM-22
617	18	761224,588	2202568,487	OAK-8
617		761215.556	2202573,439	BRADFORD PEAF-5
618		T612/04.683	2202566.320	0AK-13
618		761214.357	2202566.790	CHERRY-9
618	12	761216.192	2202564.746	CEDAR-8
618	.3	761191,027	2202568.571	CEDAR-8
618		761193.251	2202574.966	CEDAR-10
			2202575.734	
618		761181.372		PRIVET-4X3
618	- 10	761176.629	2202573.424	PRIVET-4
618	17	76116/3.094	2202581.026	SWEET GUM-7
618	13	761164.004	2202575,940	EWEET GLM-9
618	19	761128,653	2202563.736	OHINABERRY-E
619		781138.190	2202564.997	SWEET CUM-802
100 100 100				
619		761145.007	2202581.485	BRADFORD PEAR:-7
619	2	7611+3.652	2202585,004	OHN/ABERRY-E
619	3	761143.153	2202580.C59	CHINABERRY-=
619	-4-	761252.153	2202572.561	CHERRY-4
619		761243.903	2202578.908	CHNABERRY-4=2
100.10.40				71 11 11 11 11 11 11 11
619		761272.803	2202570.594	ELM-4
619	7	761267.256	2202567.289	OAK-7
619	8	761265.382	2202579.248	OHIN/ABERRY-E
619	FQ	761306.987	2202569.211	OAK-21
620		761317.252	2202569.247	SWEET CUM-8=2
		761320.654	2202569.341	OAK-7
620				
620		761327.774	2202569.191	CHERRY-6
620	13	7613:24,010	2202570.176	CHERRY-5
620	14	761327,886	12/02575,451	BR#DFORD PEAR-10
	_		2202574,394	PINE-4
620		761323,600		
620		7613.32.153	1202567.391	OAK-4
620	17	761340.4=9	2202572.910	0.AK-11
620		761345.4=4	2202569.1132	0.AK-11
620	. 100	761343.307	2202568.635	GEDAR-4
621		7613:53.158	2202570,671	CEDAR-4
621	11	761355.9=5	2202568,262	SWEET GLM-9
621	2	761355,480	2202573,304	OAK-8
521		761361.833	2202569.043	CEDAR-5
621		761367,997	3202572.061	QAK-11
		1013년 71년 7 		THE RESERVE TO THE RE
621		761373,555	2202575.169	OAK-5
40.73.4	-87	261777.620	内の内の言葉を 使ぎま	DONDECOD DEAD &

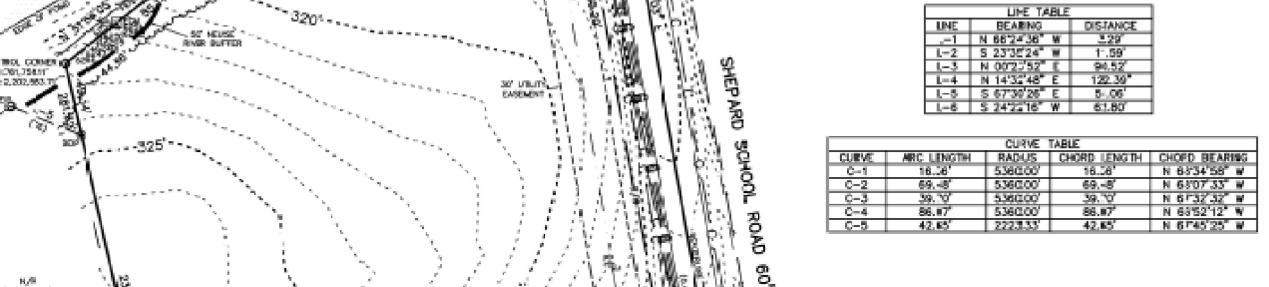




TOTAL AREA - 7.169 AC.

LESS R/W - 0.416 AC., NET AREA - 6.753 AC.

GRAVES(S)



EIP — EZISTINIG IRON PIPE EIS — EZISTINIG IRON BAR BEP — BENT IRON PIPE BCB - BENT IRON BAT CB - CINCRETE MONIMENT GPK - DISTING PK NAIL, SPK - SET PK NAIL, NP - NCW IRON PPE SET R/W - BIGHT OF MAY CATV - CABLE TV BOX EB - ELECTRIC BOX TBL - TILEPHIONE PEDESTAL TEL - TILEPHIONE PEDESIM
PF - PRIMER POLE
OM. - CVERHEAD LINE
LP - LIDHT POLE
MA - WATER METER
MY - WATER METER
MY - WATER MALVE
CE - SEMER OLEAN-OUT
CC - CONCRETE
CE - CATCH SASIS
MH - MANHOLE
FR - FIRE HYDRAMT
RTW - RETAINING MALL

PLL

Design,

ettle

Ö

Engineering and I
3616 Waxwing Court,
'ake Forest, North Carolina 2
210-3934 Firm Licens

- 2 K K 4 7 9 8 8 0.00

D.B.T. DISC (FELD LICATED)

- THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF RESORD PRIOR TO THE DATE OF THIS PLAT.
- UNDERGROUND UTLITIES HAVE BEEN MARKED OR LOCATED FOR THIS PLAT BY OC MAPPING SERVICE, NC.
- 3. AL. BEARINGS AND DISTANCES ARE
- HORIZONTAL GROUND MEASUREMENTS: 4. AL. ELEVATIONS ARE EASED ON NAVD 88-
- AL_ CONTOURS ARE A" 1" INTERVALS HIGHLIGHTED EVERY 5".
- THERE IS NO NOSS MONUMENT WITHIN 2000' OF THIS PROPERTY.
- NORTH BOTATION WAS OBTAINED VIA NC-VRS

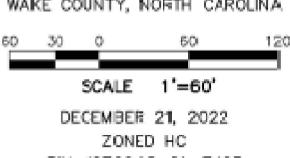
LIME TYPE LEGEND

	REWSION BOX					
NO.	DATE	DESCRIPTION				
,	2/6/23	ADCED WM LOCATION AND REVISED UTILITY LINE ALONG SHEPARD SCHOOL RD				
2	12/14/23	ADDED POND BUFFER/BUFFER ZONES AND ITEMS FROM B.M. 2023. PG. 1507/OWNER UPDATE				

TOPOGRAPHIC SURVEY FOR

STORAGE MAX

901 PROCTOR STREET OWNER: SHEPARD SCHOOL, LLC REF: D.B. 19275, PAGE 2208 TOWN OF ZEBULON LITTLE RIVER TOWNSHIP WAKE COUNTY, NORTH CAROLINA



PIN #2706.18-21-7463

PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148

ions Survey (1098359)

Existing Come (10) StorageMax (10) 901 Proctor St

Project No. 23001

Dwg No.

TREE SPECIES & SIZE(IN.) TABLE Point Northing Easting Description 6174 761085.096 2202622.318 SWEET GUM-26	LINE TABLE LINE BEARING DISTANCE			LINE TYPE LEGEND ———————————————————————————————————
6175 761031.969 2202655.727 SWEET GUM-22 6178 761224.598 2202568.487 OAK-8 6179 761215.566 2202573.439 BRADFORD PEAR-5 6180 761204.663 2202566.320 OAK-13 6181 761214.357 2202566.790 CHERRY-9	L-2 S 67'30'26" E 51.06' EIB - E BEIP - BEIB - CM - CI EPK - E	XISTING IRON PIPE XISTING IRON BAR BENT IRON PIPE BENT IRON BAR DNCRETE MONUMENT EXISTING PK NAIL		
6182 761216.192 2202564.746 CEDAR-8 6183 761191.087 2202568.571 CEDAR-8 6184 761193.251 2202574.966 CEDAR-10 6185 761181.372 2202575.734 PRIVET-4X3 6186 761176.699 2202573.424 PRIVET-4 6187 761163.074 2202581.026 SWEET GUM-7	NIP — N R/W — I CATV — EB — EL TEL — T	SET PK NAIL EW IRON PIPE SET RIGHT OF WAY CABLE TV BOX ECTRIC BOX ELEPHONE PEDESTAL	REAL PROPERTY OF THE PROPERTY	——E———E———————————————————————————————
6188 761164.004 2202575.940 SWEET GUM-9 6189 761128.633 2202563.736 CHINABERRY-6 6190 761136.190 2202564.997 SWEET GUM-8X2 6191 761145.027 2202581.485 BRADFORD PEAR-7 6192 761143.632 2202585.004 CHINABERRY-8	OHL — (LP — LI(WM — W WV — W CO — Si	OWER POLE OVERHEAD LINE GHT POLE VATER METER ATER VALVE EWER CLEAN-OUT	BEAR 30	
6193 761143.133 2202580.059 CHINABERRY-4 6194 761252.133 2202572.561 CHERRY-4 6195 761243.993 2202578.908 CHINABERRY-4X2 6196 761272.803 2202570.394 ELM-4 6197 761267.266 2202567.289 OAK-7	CC — CC CB — C MH — M FH — FI RTW — I	ONCRETE ATCH BASIN WILLIE MCKINI EX DUNIN		
6198 761265.382 2202579.248 CHINABERRY-6 6199 761306.967 2202569.211 OAK-21 6200 761317.252 2202569.247 SWEET GUM-8X2 6201 761320.654 2202569.341 OAK-7 6202 761327.774 2202569.191 CHERRY-6	— D.0	D. I. DISC (FIELD LOCATED)		
6203 761324.010 2202570.176 CHERRY-5 6204 761327.806 2202575.451 BRADFORD PEAR-10 6205 761323.600 2202574.394 PINE-4 6206 761332.163 2202567.391 OAK-4 6207 761340.449 2202572.910 OAK-11 6208 761345.444 2202569.132 OAK-11		6065 5004		
6208 761345.444 2202569.132 OAK-11 6209 761343.307 2202568.635 CEDAR-4 6210 761353.158 2202570.671 CEDAR-4 6211 761355.945 2202568.262 SWEET GUM-9 6212 761355.480 2202573.304 OAK-8 6213 761361.833 2202569.043 CEDAR-5		\$\\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	30. Author	
6214 761367.997 2202572.061 OAK-11 6215 761373.555 2202575.169 OAK-5 6216 761373.510 2202573.973 BRADFORD PEAR-8 6217 761383.379 2202574.540 CEDAR-8 6218 761388.348 2202577.079 CHERRY-7		The state of the s	WITH LOCAL UTLITY PROVIDERS	
6219 761390.696 2202575.970 CEDAR-8 6220 761393.644 2202576.358 CEDAR-9 6221 761405.925 2202584.009 SWEET GUM-13X3 6222 761410.462 2202581.325 CHERRY-10 6223 761409.734 2202584.910 CEDAR-7 6224 761423.846 2202584.696 CHERRY-4		10 10 10 10 10 10 10 10 10 10 10 10 10 1		THE REPORT OF THE PARTY OF THE
6224 761423.646 2202584.696 CHERRY-4 6225 761438.719 2202589.790 CHERRY-8 6226 761435.986 2202590.244 SWEET GUM-8 6227 761429.364 2202589.024 SWEET GUM-11 6228 761428.331 2202586.395 SWEET GUM-8 6229 761435.469 2202595.321 BRADFORD PEAR-4		EIP CONTROL CORNER CONTROL TO THE CONTROL CORNER CONTROL CORNER CONTROL TO THE CONTROL CORNER CONTROL TO THE CONTROL CORNER CORNER CORNER CORNER CORNER CORNER CORNER CORNE	-320,	
6230 761453.836 2202593.164 OAK-8 6231 761454.539 2202594.369 OAK-27 6232 761462.670 2202595.652 OAK-18 6233 761467.122 2202594.529 OAK-7 6234 761485.052 2202596.549 SWEET GUM-8		BEIP		
6235 761492.602 2202593.089 SWEET GUM-6 6236 761494.097 2202592.909 CEDAR-5 6237 761503.809 2202590.908 CEDAR-7 6238 761507.456 2202590.338 CHERRY-5 6239 761512.563 2202590.286 SWEET GUM-7 6240 761525.066 2202587.000 OAK-18				
6241 761527.229 2202586.513 SWEET GUM-4 6242 761529.155 2202586.475 CEDAR-6 6243 761540.840 2202584.408 BRADFORD PEAR-7 6244 761542.150 2202583.434 OAK-6 6245 761534.401 2202583.939 SWEET GUM-8		N/F (CEMETERY) WAKEFIELD MISSIONARY BAPTIST CHURCH, INC. D.B. 17738, PAGE 1250		
6246 761758.972 2202544.218 OAK-9 6247 761760.783 2202552.404 OAK-7 6248 761764.823 2202555.858 OAK-4 6249 761764.804 2202558.175 SWEET GUM-5 6250 761768.543 2202558.236 OAK-5 6251 761775.244 2202570.541 OAK-4	/ 	B.M. 2015, PAGE 2171 PIN# 2706.17-21-4682 HC Zoning B.M. 2015, PAGE 2171 F62.45 HC Zoning B.M. 2015, PAGE 2171 F62.45 F62.39 F62.39 F62.39 F62.39 F62.39 F62.39 F62.39	TOTAL AREA — 7.391 AC. LESS R/W — 0.590 AC. NET AREA — 6.801 AC.	30' UTILITY EASEMENT STORM PIPE (BURIED)
6252 761775.351 2202568.119 CHINABERRY-7X2 6253 761774.528 2202564.391 OAK-4 6254 761801.910 2202600.836 OAK-5 6255 761808.215 2202611.799 CHINABERRY-11 6256 761803.777 2202611.937 CHINABERRY-19		FENCE COLPROPER EIROS	EAST OF PROPERTY CORNER	APPARENT DO T. ENSEMENT APPARENT DO T. ENSEME
6257 761807.115 2202618.437 CHINABERRY-7 6258 761805.711 2202616.515 CHINABERRY-4 6259 761816.433 2202623.170 OAK-11 6260 761819.156 2202622.737 OAK-8 6261 761816.162 2202619.452 OAK-4 6262 761822.666 2202632.380 OAK-12		GRAVESIO)	#6230 146236 146224	HIS WALL STREET ON THE STREET OF THE STREET
6263 761831.660 2202641.175 CHINABERRY-12X3 6264 761837.183 2202643.970 CHINABERRY-11X2 6265 761839.450 2202647.234 CHINABERRY-11X3 6266 761814.819 2202631.253 CHINABERRY-10 6267 761816.300 2202635.425 CHINABERRY-5		R.W.	16220 16220 16220 16220 16220 16220	Company Compan
6268 761822.055 2202641.536 CHINABERRY-5	 	N/F UNKNOWN PIN# 2706.17-21-4423 R2 Zoning	EIROP # 6207 6209 # 6207 6209 # 6207	20 ZONE 30' ZONE 1
		FENCE CORNER IS O,6' EAST OF PROPERTY LINE	6503 #6500 6503 #6500	RIPARIAN BURENT OF OF BANK
	<u></u>		EIPO 6194 6194 6194	
		N/F WAKEFIELD BAPTIST CHU D.B. 1041, PAGE 224 B.M. 2004, PAGE 124	4 61811 +6180 14 (105(2)	310-
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	PIN# 2706.17-21-3250 R2 Zoning	CE CROSSES AT OPERTY LINE AT OPERTY LINE AT 6188 OPERTY LINE AT 6189 GOVERNO OPERTY LINE AT 6191	N/F RM HIGH 2 DARRYL ROBERT HIGH 2 DARRYL ROBE 1682 3 D.B. 16886, PAGE 16933 D.B. 16886, PAGE 16933 PINH 2706.18-21-9033
	SS CENTER OF WAY AND THE STATE OF THE STATE	Th	(61954 6195)	PPARENT D.O.T. EASEMENT DELLO LOCATED) DELLO RECORDS FOUND
	CENTERLINE SS		NA VENTAL STATE OF THE PARTY OF	LP STORM PIPE IBURIED O(0.174 AC)
		CENTE	COM	N 122.53' → N 68°11′06" W
			— — PROCTOR (S.R.	STREET 60' PUBLIC RW #2320)

DEMOLITION NOTES

- 1. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES. (1) NOTIFY OWNER NOT LESS THAN ONE WEEK IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS. (2) DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING OWNER WRITTEN PERMISSION. (3) COORDINATE ALL UTILITY RELOCATION
- 2. SUBSURFACE FEATURES ARE SHOWN IN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UTILITY
- OF CONSTRUCTION.
- DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.

- 8. ALL ELEVATIONS ARE BASED ON NAVD 88
- 9. ALL CONTOURS ARE AT 1' INTERVALS HIGHLIGHTED EVERY 5'.

- WITH APPROPRIATE UTILITY PROVIDER.
- LOCATIONS AND DEPTHS.
- 3. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT
- 4. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR OR REPLACE ANY
- 5. THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF RECORD PRIOR TO THE DATE OF THIS PLAT.
- 6. UNDERGROUND UTILITIES HAVE BEEN MARKED OR LOCATED FOR THIS PLAT BY GC MAPPING SERVICE, INC.
- 7. ALL BEARINGS AND DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS
- 10. THERE IS NO NCGS MONUMENT WITHIN 2000' OF THIS PROPERTY.
- 11. NORTH ROTATION WAS OBTAINED VIA NC-VRS.

Design, and Court, Settle Engineering a 3616 Waxwing C Wake Forest, North Cal (919) 210-3934 Firm Gettle

KPG BY BY BY BY



Existing Conditions / Tree Survey StorageMax (1098359) 901 Proctor Street Zebulon, Wake County, North Carolina

SITE NOTES

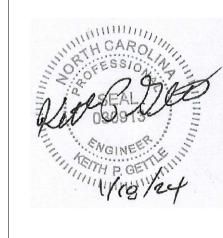
- WHERE NEW CURB AND GUTTER IS INSTALLED IN A PUBLIC STREET RIGHT-OF-WAY, USE 30" CURB AND GUTTER. IN OTHER LOCATIONS, USE 24" CURB AND GUTTER.
- ALL CURB DIMENSIONS ARE MEASURED TO BACK OF CURB, AND ALL CURB RADII ARE 3 FEET, UNLESS INDICATED OTHERWISE.
- USE REVERSE-PITCH CURB AND GUTTER WHERE ADJACENT PAVEMENT SLOPES AWAY FROM CURB, AND STANDARD-PITCH CURB AND GUTTER ELSEWHERE, UNLESS OTHERWISE NOTED. PROVIDE POSITIVE DRAINAGE ALONG AND FROM ALL GUTTERS.
- 4. ALL SITE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE INDICATED.
- ALL BASE AND PAVING WORK SHALL COMPLY WITH LOCAL STANDARDS. INDICATED PAVEMENT THICKNESSES REFER TO COMPACTED THICKNESS.
- INSTALL ALL PAVEMENT WITH POSITIVE SURFACE DRAINAGE.
- 7. ALL HANDICAPPED PARKING SPACES, AISLES, RAMPS, SIGNAGE, PAVEMENT MARKINGS, CROSSWALKS, AND ACCESSIBLE ROUTES SHALL MEET APPLICABLE REQUIREMENTS OF THE NORTH CAROLINA ACCESSIBILITY CODE.
- ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL HAVE AN R7-8 AND R7-8D SIGN. ALL SIGNS FOR VAN ACCESSIBLE SPACES SHALL ALSO INCLUDE A "VAN ACCESSIBLE" SIGN.
- CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
- TIE-INS TO EXISTING PAVEMENT, CURBS, WALKS, ETC. SHALL BE MADE WITH NEAT EDGES AND SMOOTH, GRADUAL TRANSITIONS THAT ARE SAFE, FUNCTIONAL, DURABLE, AND VISUALLY ACCEPTABLE TO THE OWNER AND REVIEW AUTHORITIES.
- 11. BUILDING SIZE, CONFIGURATION, ARCHITECTURAL ELEMENTS, UTILITY STUBS, AND OTHER BUILDING FEATURES SHOWN ON THESE DRAWINGS ARE TAKEN FROM INFORMATION PROVIDED BY OTHERS. BUILDING LINES SHOWN GENERALLY REPRESENT THE EXTERIOR FACE OF THE BUILDING, BUT SHOULD NOT BE USED FOR BUILDING STAKING OR CONSTRUCTION. REFER TO BUILDING PLANS FOR ACTUAL BUILDING DIMENSIONS, DOOR LOCATIONS, COLUMN AND FOOTING LOCATIONS, WALL THICKNESSES, OVERHANGS, ROOF LINES, AND OTHER FEATURES. CONTRACTOR SHALL COORDINATE UTILITY AND DRAINAGE LOCATIONS, ELEVATIONS, MATERIALS, AND SIZES WITH INFORMATION SHOWN ON THE BUILDING DRAWINGS; AND SHALL VERIFY THAT BUILDING ELEMENTS WILL NOT ENCROACH INTO REQUIRED SETBACKS.

OPEN SPACE (PASSIVE) SUMMARY

REQUIRED: 3% X 6.5 AC = .19AC PROVIDED: BIORETENTION AREA WITH PEDESTRAIN ACCESS .72 AC / 6.6 AC = 11% OPEN AREA AT THE BMP TO COMPLY WITH UDO 5.7.5

PLLC Design, Engineering and 3616 Gettle

01-05-2 DATE DATE DATE DATE DATE - 0 m m 4 m 0 m 0/00



verall Site

Project No. 23001

Dwg No.

SITE NOTES

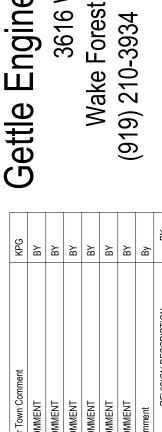
- 1. WHERE NEW CURB AND GUTTER IS INSTALLED IN A PUBLIC STREET RIGHT-OF-WAY, USE 30" CURB AND GUTTER. IN OTHER LOCATIONS, USE 24" CURB AND GUTTER.
- 2. ALL CURB DIMENSIONS ARE MEASURED TO BACK OF CURB, AND ALL CURB RADII ARE 3 FEET, UNLESS INDICATED OTHERWISE.
- 3. USE REVERSE-PITCH CURB AND GUTTER WHERE ADJACENT PAVEMENT SLOPES AWAY FROM CURB, AND STANDARD-PITCH CURB AND GUTTER ELSEWHERE, UNLESS OTHERWISE NOTED. PROVIDE POSITIVE DRAINAGE ALONG AND FROM ALL GUTTERS.
- 4. ALL SITE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE INDICATED.
- 5. ALL BASE AND PAVING WORK SHALL COMPLY WITH LOCAL STANDARDS. INDICATED PAVEMENT THICKNESSES REFER TO COMPACTED THICKNESS.
- . INSTALL ALL PAVEMENT WITH POSITIVE SURFACE DRAINAGE.
- ALL HANDICAPPED PARKING SPACES, AISLES, RAMPS, SIGNAGE, PAVEMENT MARKINGS, CROSSWALKS, AND ACCESSIBLE ROUTES SHALL MEET APPLICABLE REQUIREMENTS OF THE NORTH CAROLINA ACCESSIBILITY CODE.
- 3. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL HAVE AN R7-8 AND R7-8D SIGN. ALL SIGNS FOR VAN ACCESSIBLE SPACES SHALL ALSO INCLUDE A "VAN ACCESSIBLE" SIGN.
- 9. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
- 10. TIE-INS TO EXISTING PAVEMENT, CURBS, WALKS, ETC. SHALL BE MADE WITH NEAT EDGES AND SMOOTH, GRADUAL TRANSITIONS THAT ARE SAFE, FUNCTIONAL, DURABLE, AND VISUALLY ACCEPTABLE TO THE OWNER AND REVIEW AUTHORITIES.
- 11. BUILDING SIZE, CONFIGURATION, ARCHITECTURAL ELEMENTS, UTILITY STUBS, AND OTHER BUILDING FEATURES SHOWN ON THESE DRAWINGS ARE TAKEN FROM INFORMATION PROVIDED BY OTHERS. BUILDING LINES SHOWN GENERALLY REPRESENT THE EXTERIOR FACE OF THE BUILDING, BUT SHOULD NOT BE USED FOR BUILDING STAKING OR CONSTRUCTION. REFER TO BUILDING PLANS FOR ACTUAL BUILDING DIMENSIONS, DOOR LOCATIONS, COLUMN AND FOOTING LOCATIONS, WALL THICKNESSES, OVERHANGS, ROOF LINES, AND OTHER FEATURES. CONTRACTOR SHALL COORDINATE UTILITY AND DRAINAGE LOCATIONS, ELEVATIONS, MATERIALS, AND SIZES WITH INFORMATION SHOWN ON THE BUILDING DRAWINGS; AND SHALL VERIFY THAT BUILDING ELEMENTS WILL NOT ENCROACH INTO REQUIRED SETBACKS.
- 12. PAVEMENT TO BE STNADARD DUTY IN PARKING AREAS AND HEAVY DUTY IN DRIVE AISLES (SEE DETAIL).
- 13. CURB AND GUTTER TO BE 24" STANDARD ON SITE AND 30" STANDARD IN RIGHT OF WAY UNLESS OTHERWISE NOTED (SEE DETAIL).

GRAPHIC SCALE 1"=30'

Gettle Engineering and Design, PLL

27: se

 \circ





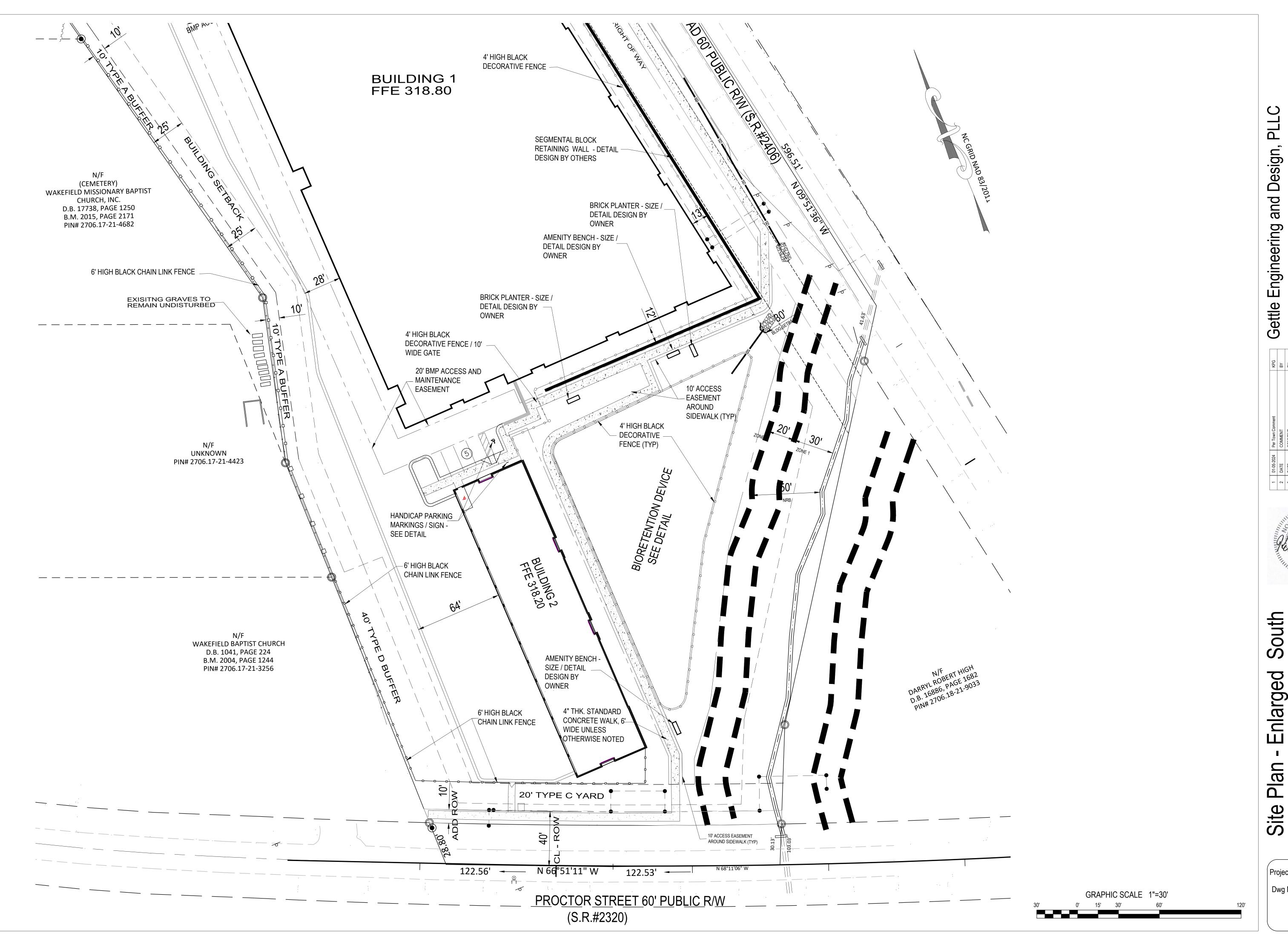
01-05DATE
DATE
DATE
DATE
DATE
DATE
DATE

Site Plan - Enlarged North StorageMax (1098359) 901 Proctor Street Zebulon, Wake County, North Carolina

Project No. 23001

Dwg No.

Site Plan - E StorageN



Gettle Engineering and Design, P
3616 Waxwing Court,
Wake Forest, North Carolina 27587
(919) 210-3934 Firm License P-2538

e Plan - Enlarged South StorageMax (1098359) 901 Proctor Street bulon, Wake County, North Carolina

Drainet No. 2200

GENERAL GRADING AND STORM DRAINAGE SPECIFICATIONS

EXISTING CONDITIONS

INFORMATION ABOUT EXISTING UNDERGROUND FACILITIES AND SUBSURFACE CONDITIONS INDICATED ON THESE DRAWINGS IS NOT BASED ON AN EXHAUSTIVE INVESTIGATION OF SUCH FACILITIES OR CONDITIONS, AND THE ENGINEER MAKES NO WARRANTY TO ANY PARTY REGARDING THEM. EXISTING UTILITY LINE LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE, AND ACTUAL UTILITIES AND CONDITIONS MAY DIFFER FROM THOSE INDICATED. IF DIFFERING UTILITIES OR CONDITIONS EXIST, THEY MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT WORK, AND MAY IMPACT THE PROJECT SCOPE AND TIME REQUIREMENTS.

PROTECTION AND SAFETY

- * PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY.
- * CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS FOR PROTECTION OF ALL EXISTING UTILITIES AND SITE FEATURES WHICH ARE INTENDED TO REMAIN IN SERVICE OR IN PLACE.
- * CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
- * CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY PROGRAMS AND MEASURES ON THE PROJECT SITE OR OTHERWISE RELATING TO THE PROJECT WORK, AND SHALL COMPLY WITH ALL SAFETY CODES AND REGULATIONS APPLICABLE THERETO, FOR THE PROTECTION OF WORKERS, VISITORS, AND THE GENERAL PUBLIC.

COMPLIANCE

* ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS AND REQUIREMENTS OF THE CITY OF RALEIGH, TOWN OF ZEBULON, WAKE COUNTY SEDIMENTATION AND EROSION CONTROL OFFICE, AND THE N.C. STATE BUILDING CODES.

NOTIFICATIONS

- * NOTIFY THE ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR
- RESUMING ANY STORM DRAINAGE OR STORMWATER IMPOUNDMENT BASIN WORK.

 * NOTIFY THE APPLICABLE LOCAL GOVERNMENT AUTHORITIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO BEGINNING ANY WORK.
- * NOTIFY THE GEOTECHNICAL ENGINEER AND TESTING SERVICE AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING ANY GRADING OR STORMWATER IMPOUNDMENT BASIN WORK.

QUALITY CONTROL

- * ALL EARTHWORK OPERATIONS, INCLUDING TOPSOIL STRIPPING, STOCKPILING, EXCAVATION, FILLING, COMPACTING, TRENCHING, BACKFILLING, RETAINING WALLS, AND FINE-GRADING, SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER, WHO SHALL VERIFY THE SUITABILITY OF SOIL MATERIALS, MONITOR EARTHWORK ACTIVITIES, DIRECT AND OBSERVE PROOFROLLING, AND PROVIDE COMPACTION AND STABILITY TESTING DURING THE PROGRESS OF THE
- * NO SOIL SHALL BE PLACED IN A PERMANENT LOCATION UNLESS IT HAS BEEN APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE INTENDED USE AND LOCATION.
- * PRIOR TO PLACEMENT OF ANY FILL, THE SUBGRADE OR PREVIOUS LIFT OF FILL SHALL BE SUCCESSFULLY TESTED OR OTHERWISE APPROVED, AND DETERMINED TO BE READY FOR SUBSEQUENT WORK.
- * PRIOR TO PLACEMENT OF ANY AGGREGATE, PAVING, SLABS, STRUCTURES, FOOTINGS, PIPING, OR OTHER WORK, SUBGRADES AND OTHER BEARING SURFACES SHALL BE SUCCESSFULLY TESTED OR OTHERWISE APPROVED, AND DETERMINED TO BE READY FOR SUBSEQUENT WORK.
- CONTRACTOR SHALL ALLOW AND PARTICIPATE IN SOIL TESTING ACTIVITIES, INCLUDING ACTIVE COORDINATION WITH THE GEOTECHNICAL ENGINEER AND FURNISHING PROOFROLLING EQUIPMENT, MATERIALS, AND MANPOWER AS NEEDED.

CLEARING & GRUBBING

- * ALL VEGETATIVE MATERIAL DISLOCATED BY CLEARING AND GRUBBING ACTIVITIES SHALL BE COMPLETELY REMOVED FROM THE PROJECT SITE AND LEGALLY DISPOSED. NO ONSITE BURNING OF CLEARING WASTE SHALL OCCUR.
- ALL PAVEMENT, CURB, PIPE, STRUCTURES AND OTHER PHYSICAL SITE FEATURES THAT ARE INDICATED OR REQUIRED TO BE REMOVED SHALL BE LEGALLY DISPOSED IN AN OFFSITE LOCATION.

GRADING

- STRUCTURAL FILL IS DEFINED AS SOIL CLASSIFIED AS SM, SC, ML, AND CL, FREE OF
 VEGETATIVE MATTER, DEBRIS OR OTHER UNSUITABLE MATTER, FREE OF ROCKS LARGER
 THAN 3 INCHES IN ANY DIMENSION, CAPABLE OF BEING COMPACTED TO THE REQUIRED
 DENSITY, AND WHICH HAS BEEN APPROVED FOR USE BY THE GEOTECHNICAL ENGINEER.
 OTHER SOIL NOT MEETING THE DEFINITION FOR STRUCTURAL FILL MAY BE APPROVED BY
- OTHER SOIL NOT MEETING THE DEFINITION FOR STRUCTURAL FILL MAY BE APPROVED BY THE GEOTECHNICAL ENGINEER FOR USE UNDER LIMITED CONDITIONS OR IN LIMITED AREAS.
- STRUCTURAL FILL SHALL GENERALLY BE PLACED AND COMPACTED WHEN THE SOIL'S MOISTURE CONTENT IS WITHIN 4 PERCENTAGE POINTS OF THE SOIL'S OPTIMUM MOISTURE CONTENT, IN LIFTS NOT TO EXCEED 8 INCHES LOOSE THICKNESS. THE IN-PLACE COMPACTED DENSITY SHALL BE AT LEAST 90 PCF. TIGHTER SPECIFICATIONS MAY BE REQUIRED FOR CERTAIN AREAS, SOIL TYPES, OR COMPACTION METHODS.
- STRUCTURAL ZONES SHALL INCLUDE ALL AREAS SUBJECT TO DIRECT BEARING PRESSURE PLUS 10 FEET HORIZONTAL PLUS A 1:1 DOWNWARD SLOPE IN ANY AREAS OF FILL.
- ALL SOIL UNDER PAVEMENTS, BUILDINGS, AND WALKWAYS, OR IN STRUCTURAL ZONES
 ASSOCIATED WITH THESE AREAS SHALL BE APPROVED IN-SITU SOIL OR STRUCTURAL FILL,
 COMPACTED TO AT LEAST 95% OF THE SOIL'S MAXIMUM DRY DENSITY (MDD) PER ASTM
 D-698. TIGHTER REQUIREMENTS MAY APPLY FOR CERTAIN AREAS.
- IN THE BUILDING AREA, THE REQUIRED DENSITY OF FILL SHALL BE 100% MDD, EXCEPT THE TOP 12 INCHES OF FILL SHALL BE AT LEAST 98% MDD. WHERE THE BUILDING WILL BE PLACED ON IN-SITU SOIL, THE SOIL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND COMPACTED TO AT LEAST 98% MDD.
- ALL EXCESS OR UNSUITABLE SOIL SHALL BE LEGALLY DISPOSED IN AN OFFSITE OR APPROVED ONSITE LOCATION.
- WHERE LANDSCAPED OR YARD AREAS ABUT EXTERIOR BUILDING WALLS, FINISHED
 GROUND ELEVATIONS ADJACENT TO THE WALL SHALL BE AT LEAST 3 INCHES BELOW THE
 FINISHED FLOOR ELEVATION, AND SHALL SLOPE AWAY FROM THE BUILDING WITH POSITIVE
 DRAINAGE

TRENCHING AND BACKFILLING

- WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 6 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE BEDDING.
- WHERE THE DESIGNED TRENCH BOTTOM CONSISTS OF UNSTABLE BEARING SOIL, UNDERCUT TRENCH BOTTOM AND REPLACE UNDERCUT MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- BACKFILL SOIL SHALL BE STRUCTURAL FILL, PLACED AND COMPACTED IN ACCORDANCE WITH REQUIREMENTS FOR THE SPECIFIC AREA OF WORK, WITHOUT DAMAGING OR DISPLACING PIPE OR STRUCTURES

STORM DRAINAGE SYSTEM

- * STORM DRAINAGE STRUCTURES SHALL CONFORM TO ZEBULON AND NCDOT STANDARDS, AND MAY BE CONSTRUCTED OF EITHER SOLID MASONRY OR PRE-CAST CONCRETE.

 "KNOCK-OUT" TYPE PRE-CAST STRUCTURES SHALL NOT BE USED WHERE THE DESIGNED PIPE CONFIGURATION WOULD REQUIRE REMOVAL OF STRUCTURAL CORNERS OR ALTERATION OF DESIGNED PIPE ENTRY ANGLES.
- * STORM DRAINAGE PIPE LENGTHS SHOWN ARE APPROXIMATE, AS MEASURED FROM THE CENTER OF DRAINAGE STRUCTURES, AND TO THE END OF ANY FLARED END SECTION (FES), AS APPLICABLE.
- * CONTRACTOR SHALL VERIFY AND COORDINATE EXACT POSITIONING OF STORM DRAINAGE PIPING AND STRUCTURES, AND SHALL MAKE ADJUSTMENTS AS NEEDED TO PROVIDE PROPER CONNECTIONS, STRUCTURE LOCATIONS, ORIENTATIONS, DIMENSIONS, ELEVATIONS, FRAME PLACEMENT, AND SURFACE DRAINAGE. REFER TO STORM DRAINAGE STRUCTURE DETAILS FOR DIMENSIONS, OFFSETS, CLEARANCES, SETBACKS FROM CURB, AND OTHER REQUIREMENTS. MODIFY STRUCTURES AS NEEDED TO ACCOMMODATE LARGE-DIAMETER PIPING, MULTIPLE PIPE PENETRATIONS, AND PIPE CONNECTION ANGLES.
- * STORM DRAINAGE PIPING SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS III, CONFORMING TO ASTM C76, UNLESS OTHERWISE SPECIFIED. ALL JOINTS SHALL BE FULLY SEALED USING PREFORMED FLEXIBLE BUTYL RUBBER SEALING COMPOUND.

SURFACE DRAINAGE

- * ALL SPOT ELEVATIONS SHOWN ARE FINISHED SURFACE ELEVATIONS. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER ELEVATION CONTOURS. ALL ELEVATIONS SHOWN ON CURB AND GUTTER REFER TO TOP OF CURB, UNLESS OTHERWISE INDICATED.
- * ALL FINISHED PAVEMENT AND YARD SURFACES SHALL BE FINE-GRADED AND FINISHED TO HAVE POSITIVE SURFACE DRAINAGE TO A FREE-FLOWING DRAINAGE OUTLET, WITH NO
- * USE REVERSE-PITCH CURB AND GUTTER WHERE ADJACENT PAVEMENT SLOPES AWAY FROM CURB, AND STANDARD-PITCH CURB AND GUTTER ELSEWHERE, UNLESS OTHERWISE
- NOTED. PROVIDE POSITIVE DRAINAGE ALONG AND FROM ALL GUTTERS.

 * TIE-INS TO EXISTING PAVEMENT, CURBS, WALKS, ETC. SHALL BE MADE WITH NEAT EDGES AND SMOOTH, GRADUAL TRANSITIONS THAT ARE SAFE, FUNCTIONAL, DURABLE, AND VISUALLY ACCEPTABLE TO THE OWNER AND REVIEW AUTHORITIES.

ACCESSIBILITY

- FINISHED WALKWAY ELEVATIONS ABUTTING EXTERIOR DOORWAY THRESHOLDS SHALL BE ONE-FOURTH INCH BELOW THE ADJOINING FINISHED FLOOR ELEVATION. EXTERIOR PADS AND WALKWAYS SHALL SLOPE AWAY FROM THE BUILDING AT A SLOPE NO LESS THAN 1.0% AND NO GREATER THAN 2.0%. SIDEWALKS, CROSSWALKS, AND OTHER WALKWAYS SHALL NOT EXCEED 2.0% CROSS-SLOPE.
- NO PORTION OF ANY HANDICAP ACCESSIBLE ROUTE SHALL EXCEED 2.0% CROSS-SLOPE OR 5.0% LONGITUDINAL SLOPE.
- NO PORTION OF ANY HANDICAP PARKING SPACE OR ADJOINING ACCESS AISLE SHALL EXCEED 2.0% SLOPE IN ANY DIRECTION.

BMP NOTES

• SEE THE DETAIL SHEET FOR SPECIFICS REGARDING THE BIORETENTION DEVICE.

NOTES

1. SEE SHEETS C6 AND C7 FOR STORM DRAIN SCHEDULE.

GRAPHIC SCALE 1"=50'
0' 25' 50' 100' 200'

Gettle Engineering and D

BY

BY

BY

BY

Wake Forest, North Carolina 27

BY

Wake Forest, North Carolina 27

BY

(919) 210-3934 Firm License

 Δ

esig

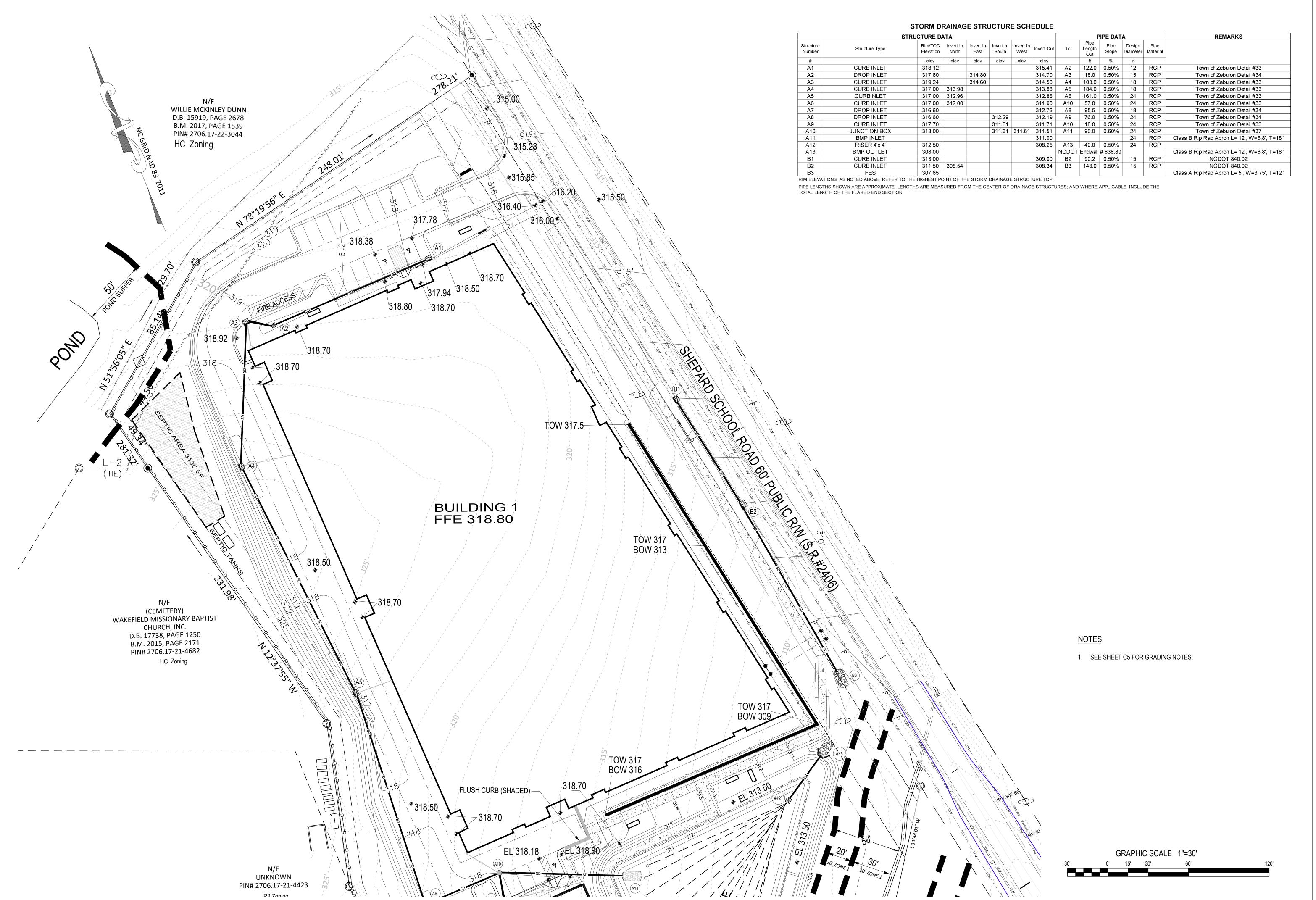


Grading Overall torageMax (1098359) 901 Proctor Street

Project No. 23001

Dwg No.

C5



PLLC and Design, Gettle Engineering a 3616 Waxwing C Wake Forest, North Car (919) 210-3934 Firm I

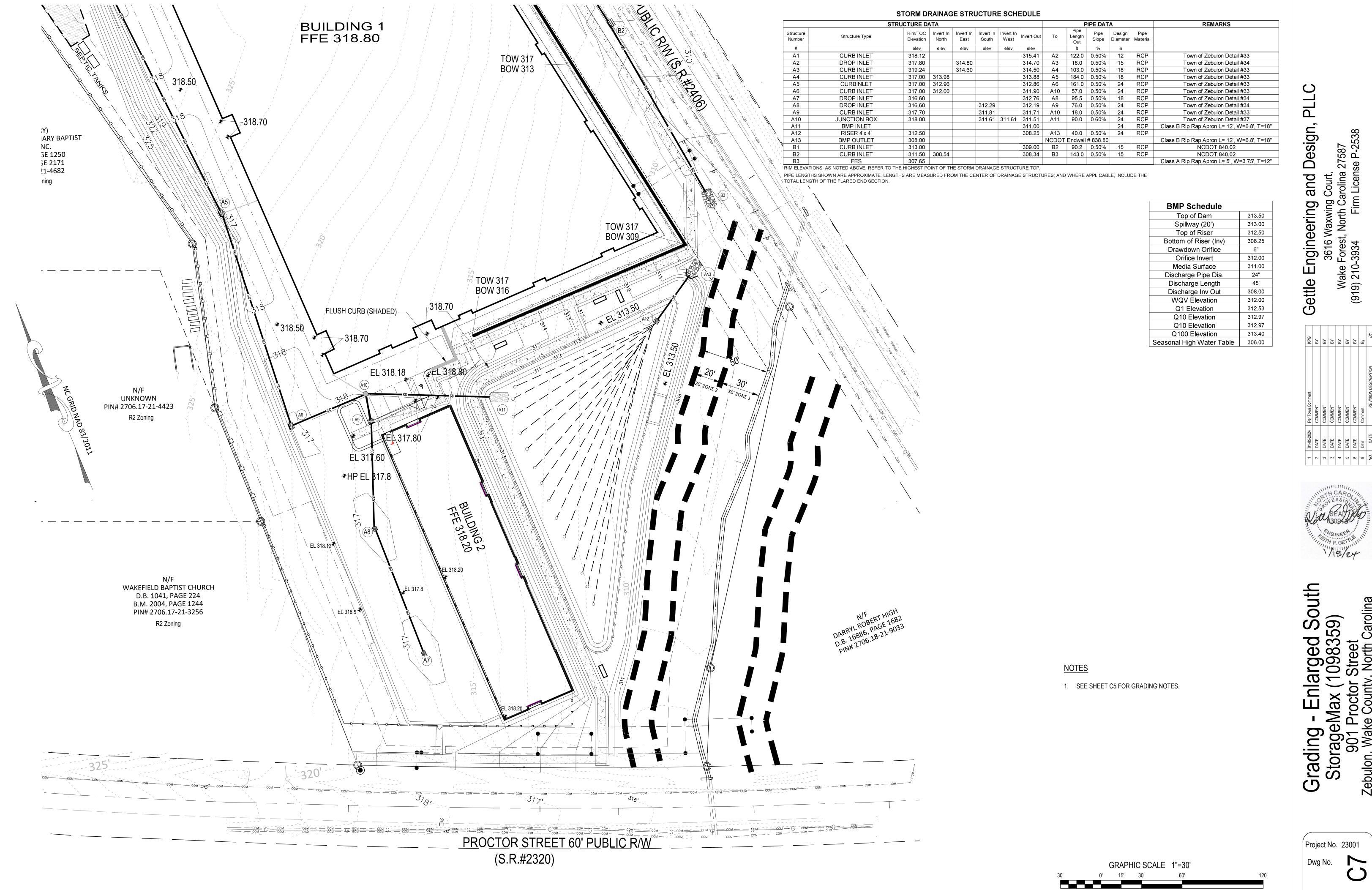
- 7 K K 4 G 8 8 0



Enlarged North 1ax (1098359) StorageMax (10 901 Proctor Si Zebulon, Wake County, N Grading

Project No. 23001

9 Dwg No.



PLLC Design, Gettle

Settle Engineering and I 3616 Waxwing Court, Wake Forest, North Carolina 2 (919) 210-3934 Firm License

Enlarged South Aax (1098359) StorageMax (901 Procto Zebulon, Wake Coun Grading

Project No. 23001

Dwg No.

UTILITY SPECIFICATIONS

INFORMATION ABOUT EXISTING UNDERGROUND FACILITIES AND SUBSURFACE CONDITIONS INDICATED ON THESE DRAWINGS IS NOT BASED ON AN EXHAUSTIVE INVESTIGATION OF SUCH FACILITIES OR CONDITIONS, AND THE ENGINEER MAKES NO WARRANTY TO ANY PARTY REGARDING THEM. EXISTING UTILITY LINE LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE, AND ACTUAL UTILITIES AND CONDITIONS MAY DIFFER FROM THOSE INDICATED. IF DIFFERING UTILITIES OR CONDITIONS EXIST, THEY MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT WORK, AND MAY IMPACT THE PROJECT SCOPE AND TIME REQUIREMENTS.

- PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY
- CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS FOR PROTECTION OF ALL EXISTING UTILITIES AND SITE FEATURES WHICH ARE INTENDED TO REMAIN IN SERVICE OR IN PLACE. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF
- PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS. THE N.C. SUPPLEMENT TO THE MUTCD. ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY PROGRAMS AND MEASURES ON THE
- PROJECT SITE OR OTHERWISE RELATING TO THE PROJECT WORK, AND SHALL COMPLY WITH ALL SAFETY CODES AND REGULATIONS APPLICABLE THERETO, FOR THE PROTECTION OF WORKERS, VISITORS, AND THE GENERAL PUBLIC.

- COMPLIANCE
 * ALL WATER SYSTEM AND SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 1 REQUIREMENTS OF THE CITY OF RALEIGH, INCLUDING THE LATEST EDITION OF CONSTRUCTION STANDARDS AND SPECIFICATIONS, CONSTRUCTION DETAILS, POLICIES AND PROCEDURES, AND FIELD DIRECTIVES BY THE UTILITY INSPECTOR.
- 2 REGULATIONS OF NCDENR-DIVISION OF WATER QUALITY, INCLUDING NCAC 2T REGULATIONS AND MINIMUM DESIGN CRITERIA FOR THE PERMITTING OF GRAVITY SEWERS. 3 REGULATIONS OF NCDENR-PUBLIC WATER SUPPLY, RULES GOVERNING PUBLIC WATER SYSTEMS.
- 4 STREET RIGHT-OF-WAY ENCROACHMENT PERMIT REQUIREMENTS, AS APPLICABLE. 5 OSHA REQUIREMENTS RELATED TO SAFETY.

6 REQUIREMENTS OF THE N.C PLUMBING CODE.

- NOTIFICATIONS

 * NOTIFY THE ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING WATERLINE OR SANITARY SEWER WORK. THE ENGINEER MUST OBSERVE CONNECTIONS, INSTALLATION, BACKFILLING, AND TESTING WORK, IN ORDER TO PROVIDE NECESSARY PROJECT CERTIFICATIONS AND CLOSE-OUT DOCUMENTS.
- NOTIFY THE APPLICABLE UTILITY AND ROADWAY AUTHORITIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO BEGINNING UTILITY WORK.
- NOTIFY THE GEOTECHNICAL ENGINEER AND TESTING SERVICE AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING TRENCHING OR BACKFILLING WORK.

- TRENCHING AND BACKFILLING

 * WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 6 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE
- WHERE THE DESIGNED TRENCH BOTTOM CONSISTS OF UNSUITABLE BEARING SOIL, UNDERCUT TRENCH BOTTOM AND REPLACE UNDERCUT MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S
- BACKFILL SOIL SHALL BE SUITABLE MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. * BACKFILL SOIL SHALL BE PLACED IN LOOSE LIFTS OF 8 INCH MAXIMUM THICKNESS AND COMPACTED TO 98% OF THE SOIL'S MAXIMUM DRY DENSITY. WITHOUT DAMAGING OR DISPLACING PIPE.

PIPING, FITTINGS, GASKETS, AND OTHER MATERIALS SHALL BE KEPT CLEAN WHILE BEING STORED AND DURING CONSTRUCTION ACTIVITIES. PIPE BUNDLES SHALL BE STORED ON FLAT SURFACES WITH UNIFORM SUPPORT, AND PROTECTED FROM PROLONGED EXPOSURE TO SUNLIGHT WITH A COVERING ALLOWING AIR FLOW UNDERNEATH. GASKETS SHALL NOT BE EXPOSED TO OIL, GREASE, OZONE, EXCESSIVE HEAT OR DIRECT SUNLIGHT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR STORAGE AND HANDLING OF ALL MATERIALS.

INSTALL MARKING TAPE OR TRACER WIRE OVER UTILITY LINES AS REQUIRED BY THE LOCAL UTILITY

- WATER SYSTEM
 * PROVIDE ALL WATER SYSTEM MATERIALS IN ACCORDANCE WITH LOCAL WATER AUTHORITY
- INSTALL WATERLINES TO PROVIDE 36" COVER TO FINISHED GRADE. UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER AND INSPECTOR.
- ALL WATERLINE BENDS, CROSSES, TEES, AND ENDS SHALL BE RESTRAINED USING CONCRETE BLOCKING OR A MECHANICAL JOINT WEDGE-ACTION RESTRAINT SYSTEM RATED FOR 350 PSI.
- DO NOT OPERATE WATER SYSTEM VALVES WITHOUT PERMISSION OF THE WATER AUTHORITY. CONTRACTOR SHALL COORDINATE EXACT FIRE HYDRANT, WATER METER, AND BACKFLOW PREVENTER LOCATIONS WITH WATER AUTHORITY INSPECTOR PRIOR TO INSTALLATION.

BACKFLOW PREVENTER ASSEMBLIES AND ENCLOSURES SHALL CONFORM TO ALL LOCAL WATER AUTHORITY REQUIREMENTS, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE INITIAL TESTING AND CERTIFICATIONS AS REQUIRED FOR ACCEPTANCE.

WATER MAINS SHALL BE INSTALLED AND MADE OPERATIONAL AS SOON AS PRACTICAL TO PROVIDE ACTIVE FIRE HYDRANT SERVICE DURING BUILDING CONSTRUCTION.

COORDINATE TYPE AND LOCATION OF HYDRANTS, FIRE DEPARTMENT CONNECTIONS, AND OTHER FIRE PROTECTION SYSTEM COMPONENTS WITH LOCAL FIRE CODE OFFICIAL PRIOR TO INSTALLATION. UTILITY SPECIFICATIONS (cont.)

- SANITARY SEWER MAIN PIPING SHALL BE DUCTILE IRON PIPE PER AWWA C151, PRESSURE CLASS 350, WITH INTERIOR EPOXY LINING AND EXTERIOR BITUMINOUS SEAL. JOINTS SHALL BE PUSH-ON TYPE WITH
- SANITARY SEWER MAIN PIPING SHALL BE PVC PIPE PER ASTM D3034, SDR 35. JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER ASTM F477.
- SANITARY SEWER MAINS SHALL BE INSTALLED WITH 36 INCHES MINIMUM COVER TO FINISHED GRADE, EXCEPT AS OTHERWISE SPECIFIED.
- SANITARY SEWER SERVICE LINES AND CLEANOUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE N.C. PLUMBING CODE, AND HAVE 24 INCHES MINIMUM COVER TO FINISHED GRADE. SERVICE LINES SHALL MAINTAIN MAXIMUM SERVICE DEPTH USING A 2.1% SLOPE UNLESS OTHERWISE SPECIFIED. SERVICE PIPE AND FITTINGS WITHIN PUBLIC STREET RIGHTS-OF-WAY SHALL BE CAST IRON WITH
- GASKETED JOINTS, AND IN OTHER AREAS SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS, EXCEPT ALL CLEANOUTS SHALL BE FITTED WITH THREADED BRONZE PLUGS. SERVICE LINE CLEANOUTS IN VEHICULAR AREAS SHALL BE TRAFFIC BEARING CLEANOUTS.

FOR CONNECTIONS TO EXISTING UTILITY AND DRAINAGE LINES, CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE AND MATERIAL, AND PROVIDE APPROPRIATE CONNECTION FITTINGS. ANY CONNECTION TO EXISTING UTILITES, OR ANY UTILITY SERVICE INTERRUPTION, SHALL BE FIRST COORDINATED WITH THE GOVERNING UTILITY AUTHORITY, AND PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THAT AUTHORITY.

- THE GEOTECHNICAL ENGINEER SHALL PROVIDE MATERIAL AND DENSITY TESTING DURING THE COURSE OF THE WORK. PRIOR TO PLACEMENT OF ANY BASE OR PAVEMENT, CONTRACTOR SHALL PROVIDE PROOF-ROLLING OF ALL TRENCH AREAS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. PRIOR TO ANY SANITARY SEWER OR WATER SYSTEM IMPROVEMENTS BEING PLACED INTO SERVICE: CONTRACTOR SHALL SUCCESSFULLY TEST ALL WATER MAINS FOR WATER LEAKAGE AND WATER QUALITY
- 2 CONTRACTOR SHALL SUCCESSFULLY TEST ALL SANITARY SEWER MAINS FOR DEFLECTION AND LEAKAGE, AND TEST ALL SANITARY MANHOLES FOR LEAKAGE, IN ACCORDANCE WITH CITY OF RALEIGH AND NCDENR REQUIREMENTS
- 3 CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF INSTALLED SANITARY SEWER MAINS AND PROVIDE DOCUMENTATION PER LOCAL REQUIREMENTS. 4 CONTRACTOR SHALL PROVIDE TO ENGINEER A SET OF MARKED UP DRAWINGS SHOWING UTILITY CHANGES, DIMENSIONAL ADJUSTMENTS, DISCOVERED SUBSURFACE UTILITIES, AND OTHER AS-BUILT
- CONTRACTOR SHALL PROVIDE DOCUMENTATION OF ALL TESTING RESULTS TO ENGINEER. ALL IMPROVEMENTS SHALL PASS FINAL INSPECTION BY ENGINEER AND THE UTILITY AUTHORITY.

ENGINEER SHALL SUBMIT ALL CERTIFICATIONS AND OTHER CLOSE-OUT DOCUMENTS TO APPLICABLE LOCAL AND STATE AUTHORITIES.

IN ACCORDANCE WITH CITY OF RALIEGH AND NCDENR REQUIREMENTS.

CONTRACTOR SHALL PROVIDE PRIMARY COORDINATION WITH UTILITY SERVICE PROVIDERS FOR

BUILDING UTILITY SERVICES. THIS WORK SHALL INCLUDE MAKING APPLICATIONS FOR SERVICE, COORDINATING AND SCHEDULING WORK BY OTHERS, VERIFYING ROUTINGS AND EQUIPMENT LOCATIONS, FURNISHING AND INSTALLING CONDUIT AND PADS, AND RELATED WORK AS NEEDED. CONTRACTOR SHALL PROVIDE PROPER RESTORATION AND CLEAN-UP OF ALL AREAS DISTURBED BY UTILITY CONSTRUCTION.

STANDARD UTILITY NOTES:

- 1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
- 2. Utility separation requirements: a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well
- b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside
- c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline
- d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
- e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-
- f) All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required 3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction
- 4. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property
- 5. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department
- 6. 3.0' minimum cover is required on all water mains & sewer forcemains. 4.0' minimum cover is required on all reuse
- 7. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure
- 8. Install 3/4" copper* water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure
- 9. Install 4" PVC* sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum
- 10. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole
- 11. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction
- 12. NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction
- 13. Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC / Bldg Permit. Contact (919) 996-4516 or fog@raleighnc.gov for more information
- 14. Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. A Certificate of Compliance shall also be obtained from the RW Cross-Connection Coordinator for each device prior to issuance of a UC / Bldg Permit. Contact (919) 996-5923 or cross.connection@raleighnc.gov for more information

귑 esign, Ŏ and

ettle

Ũ

Engineering and 3616 Waxwing (ake Forest, North Caston 210-3934 Firm



1. SEE SHEETS C6 AND C7 FOR STORM DRAIN SCHEDULE.

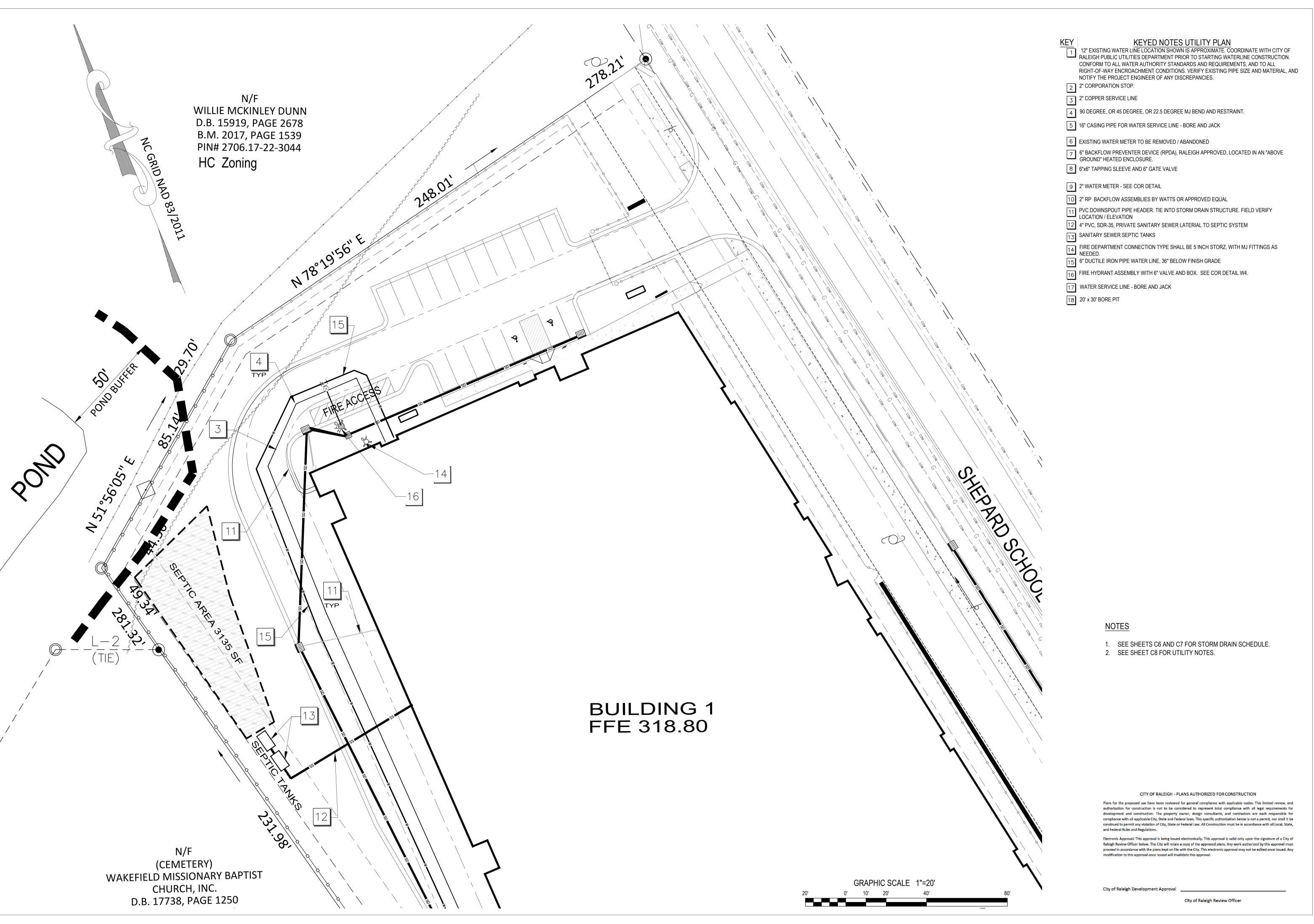
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations.

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval

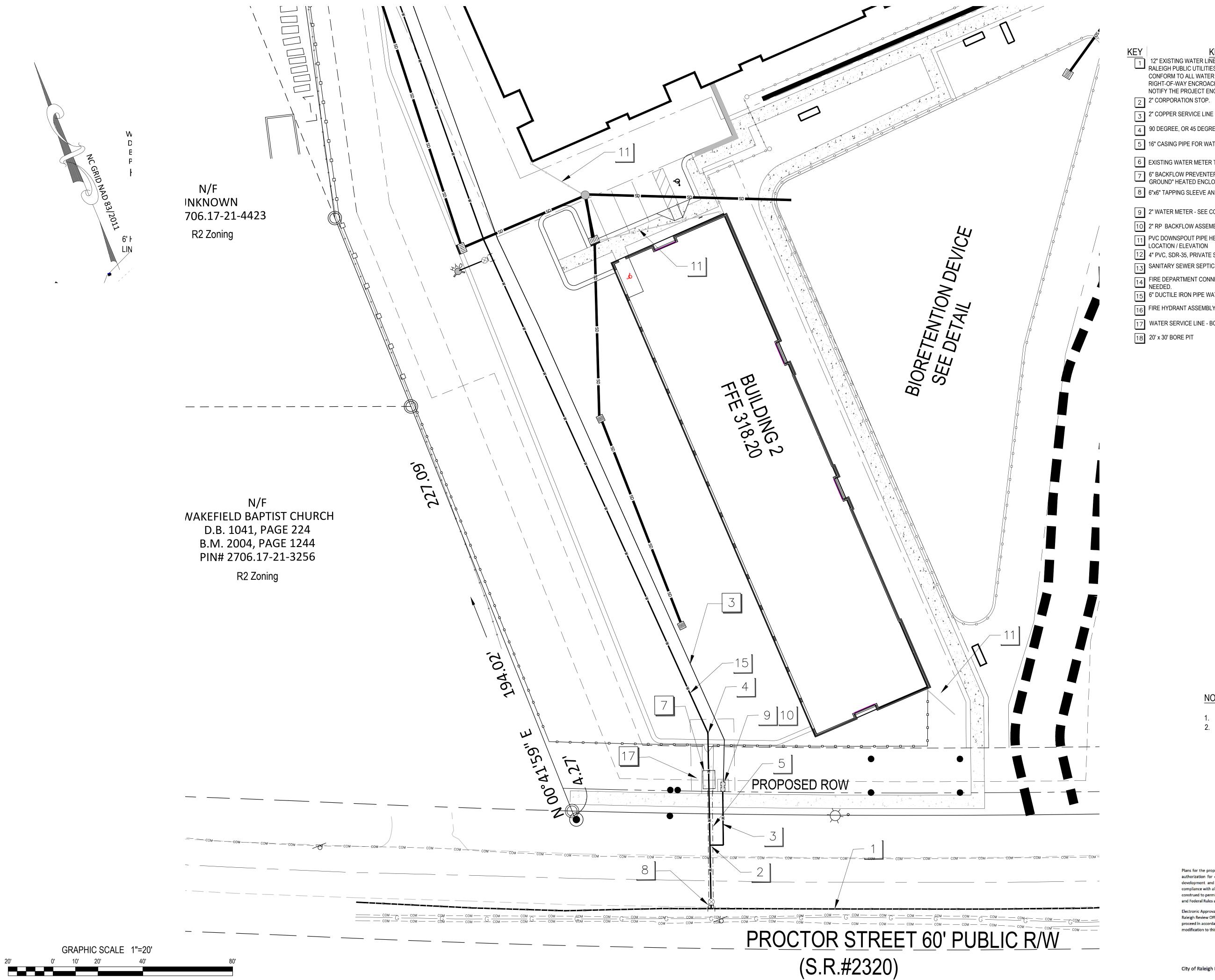
City of Raleigh Review Officer



Gettle Engineering and Design, PLLC

3616 Waxwing Court,
Wake Forest, North Carolina 2758

1 01-05-2024 Per Tr
2 DATE COMM
3 DATE COMM
3 DATE COMM
5 DATE COMM
6 DATE COMM
6 DATE COMM



KEYED NOTES UTILITY PLAN

12" EXISTING WATER LINE LOCATION SHOWN IS APPROXIMATE. COORDINATE WITH CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO STARTING WATERLINE CONSTRUCTION. CONFORM TO ALL WATER AUTHORITY STANDARDS AND REQUIREMENTS, AND TO ALL RIGHT-OF-WAY ENCROACHMENT CONDITIONS. VERIFY EXISTING PIPE SIZE AND MATERIAL, AND NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES.

2" CORPORATION STOP.

90 DEGREE, OR 45 DEGREE, OR 22.5 DEGREE MJ BEND AND RESTRAINT.

5 16" CASING PIPE FOR WATER SERVICE LINE - BORE AND JACK

6 EXISTING WATER METER TO BE REMOVED / ABANDONED

6" BACKFLOW PREVENTER DEVICE (RPDA), RALEIGH APPROVED, LOCATED IN AN "ABOVE GROUND" HEATED ENCLOSURE.

8 6"x6" TAPPING SLEEVE AND 6" GATE VALVE

9 2" WATER METER - SEE COR DETAIL

10 2" RP BACKFLOW ASSEMBLIES BY WATTS OR APPROVED EQUAL

PVC DOWNSPOUT PIPE HEADER. TIE INTO STORM DRAIN STRUCTURE. FIELD VERIFY LOCATION / ELEVATION

12 4" PVC, SDR-35, PRIVATE SANITARY SEWER LATERIAL TO SEPTIC SYSTEM

13 SANITARY SEWER SEPTIC TANKS

FIRE DEPARTMENT CONNECTION TYPE SHALL BE 5 INCH STORZ, WITH MJ FITTINGS AS NEEDED.

6" DUCTILE IRON PIPE WATER LINE, 36" BELOW FINISH GRADE

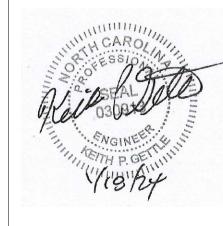
16 FIRE HYDRANT ASSEMBLY WITH 6" VALVE AND BOX. SEE COR DETAIL W4.

17 WATER SERVICE LINE - BORE AND JACK

18 20' x 30' BORE PIT

Gettle Engineering and Design,

PLLC



South Enlarged ax (1098359)

Utility P. Stor

<u>NOTES</u>

1. SEE SHEETS C6 AND C7 FOR STORM DRAIN SCHEDULE.

2. SEE SHEET C8 FOR UTILITY NOTES.

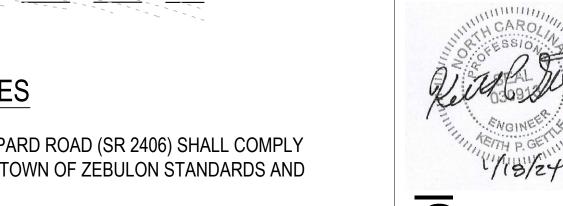
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State,

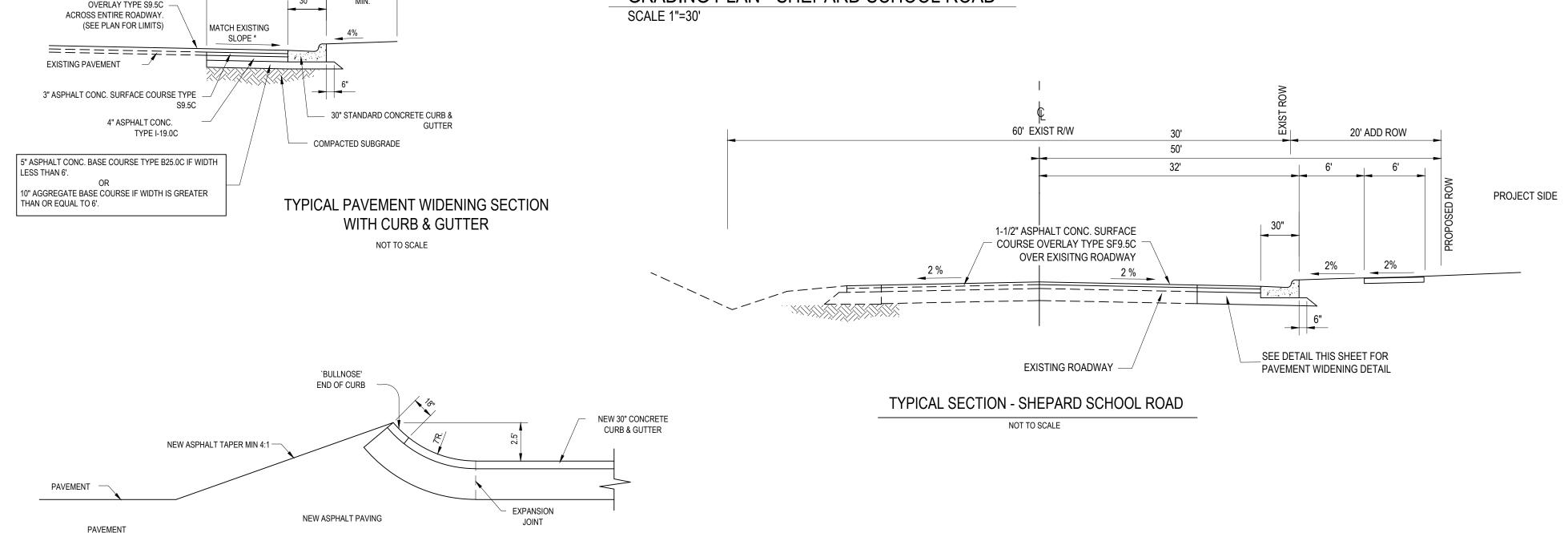
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval

City of Raleigh Review Officer



- WITH NCDOT AND TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.
- 2. SEE SHEET D5 FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- 4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST NCDOT SPECIFICATIONS, DETAILS, AND PERMIT REQUIREMENTS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL MEASURES FOR ALL WORK WITHIN PUBLIC R/W PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE SUPPLEMENT TO THE THE MUTCD AND LOCAL INSPECTORS DIRECTION.
- 6. ALL PERMANENT PAVEMENT MARKINGS AND STRIPING WITHIN SHEPARD ROAD RIGHT-OF-WAY SHALL BE THERMOPLASTIC IN ACCORDANCE WITH THE LATEST EDITION OF NCDOT SPECIFICATIONS SECTION 1205. ALL ONSITE MARKINGS AND STRIPING SHALL BE RETROREFLECTIVE PAINT.
- 7. ALL DIMENSIONS TO PAVEMENT MARKING LINES ARE TO THE CENTER OF SINGLE LINES OR TO THE CENTER BETWEEN DOUBLE LINES.
- 8. THE CONTRACTOR SHALL VERIFY ALL LANE MARKINGS WITH NCDOT PRIOR TO INSTALLATION.



END OF CURB FLARE DETAIL

NOT TO SCALE

KEY

2 4" THICK CONCRETE 6' WIDE SIDEWALK

8 EXISTING PAVEMENT EDGE MARKING

4 TIE INTO EXISTING PAVEMENT - 25' MILL LIMITS WITH A BUTT JOINT

6 FLARE OUT END OF CURB AND TAPER ASPHALT TO BACK OF CURB. SEE DETAIL

7 1.5" THICK BITUMINOUS PAVEMENT OVERLAY, NCDOT TYPE SF9.5C. OVER ENTIRE ROADWAY SEE TYPICAL SECTION.

9 TYPE 3 OBJECT MARKER (OM3-R). SEE NCDOT DETAIL 1264.01

EDGE OF PAVEMENT - ASPHALT TAPER RATIO MIN 4:1

12 NCDOT / TOWN OF ZEBULON 10'x70' SIGHT TRIANGLE

13 STORM DRAINAGE SYSTEM - SEE SCHEDULE

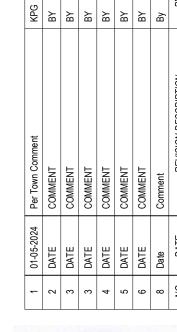
NCDOT TYPE I STANDARD HANDICAP ACCESS RAMP - SEE DETAIL

5 4" THERMOPLASTIC PAVEMENT MARKING - SEE NCDOT DETAIL 1205.09

3 EXISTING EDGE OF PAVEMENT

School Shepard Scholax (1098359)
Foctor Street
County, North Carolina StorageN 901 Pr bulon, Wake Widen Road

Gettle Engineering and Design,

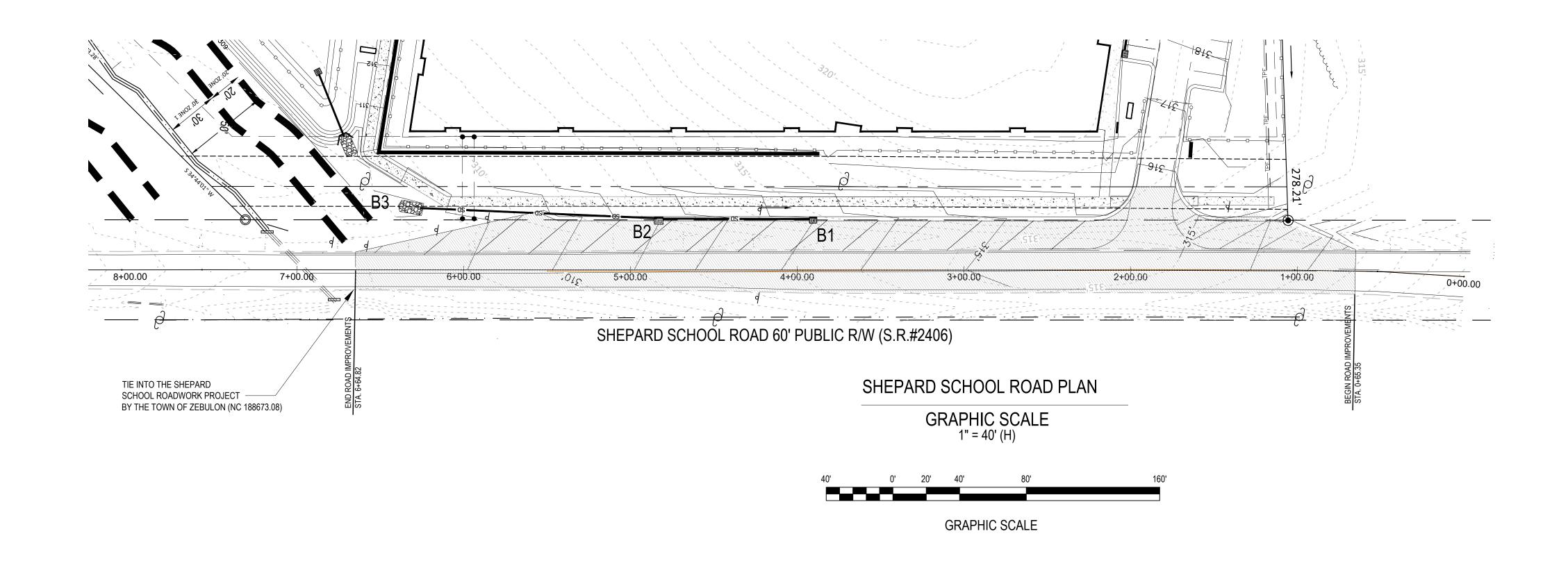




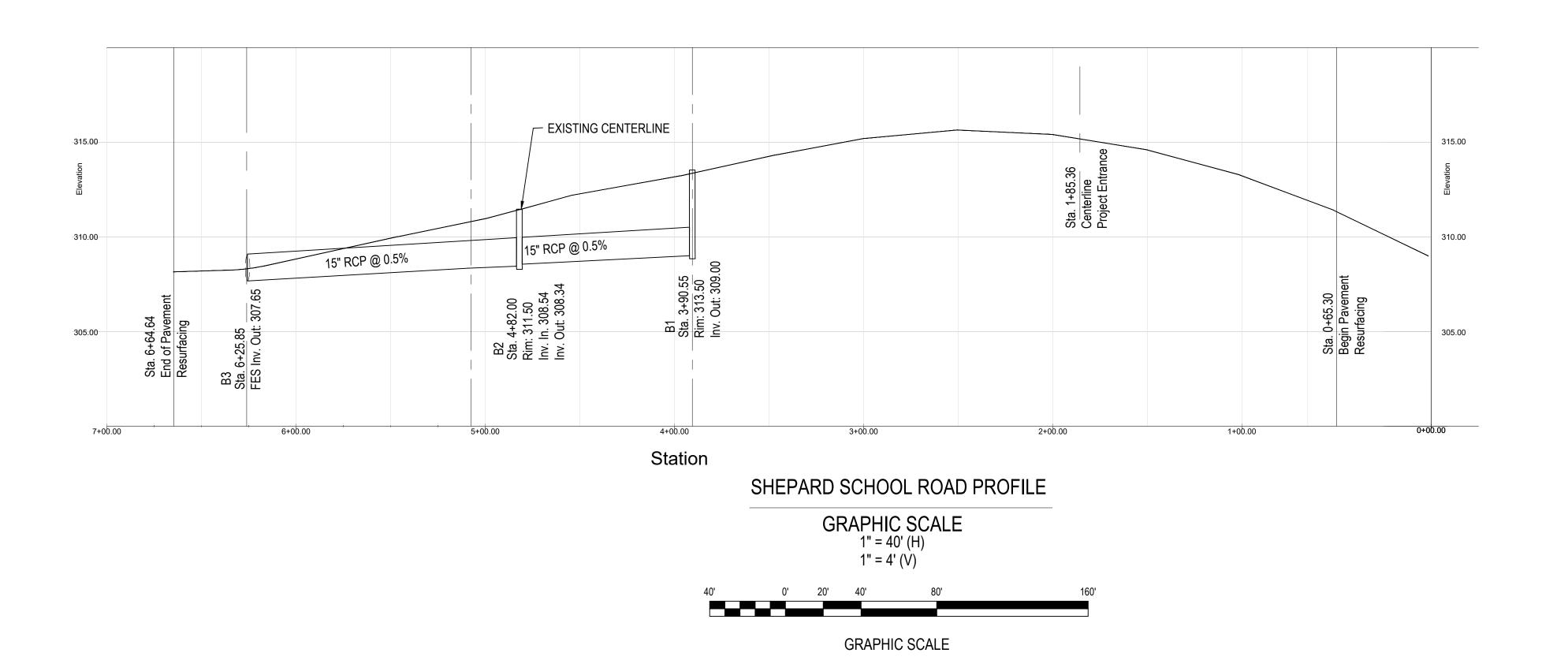
2. SEE SHEET D5 FOR TRAFFIC CONTROL DURING CONSTRUCTION.

SPECIFICATIONS.

- 4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST NCDOT SPECIFICATIONS, DETAILS, AND PERMIT REQUIREMENTS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL MEASURES FOR ALL WORK WITHIN PUBLIC R/W PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE SUPPLEMENT TO THE THE MUTCD AND LOCAL INSPECTORS DIRECTION.
- 6. ALL PERMANENT PAVEMENT MARKINGS AND STRIPING WITHIN SHEPARD ROAD RIGHT-OF-WAY SHALL BE THERMOPLASTIC IN ACCORDANCE WITH THE LATEST EDITION OF NCDOT SPECIFICATIONS SECTION 1205. ALL ONSITE MARKINGS AND STRIPING SHALL BE RETROREFLECTIVE PAINT.
- 7. ALL DIMENSIONS TO PAVEMENT MARKING LINES ARE TO THE CENTER OF SINGLE LINES OR TO THE CENTER BETWEEN DOUBLE LINES.
- 8. THE CONTRACTOR SHALL VERIFY ALL LANE MARKINGS WITH NCDOT PRIOR TO INSTALLATION.

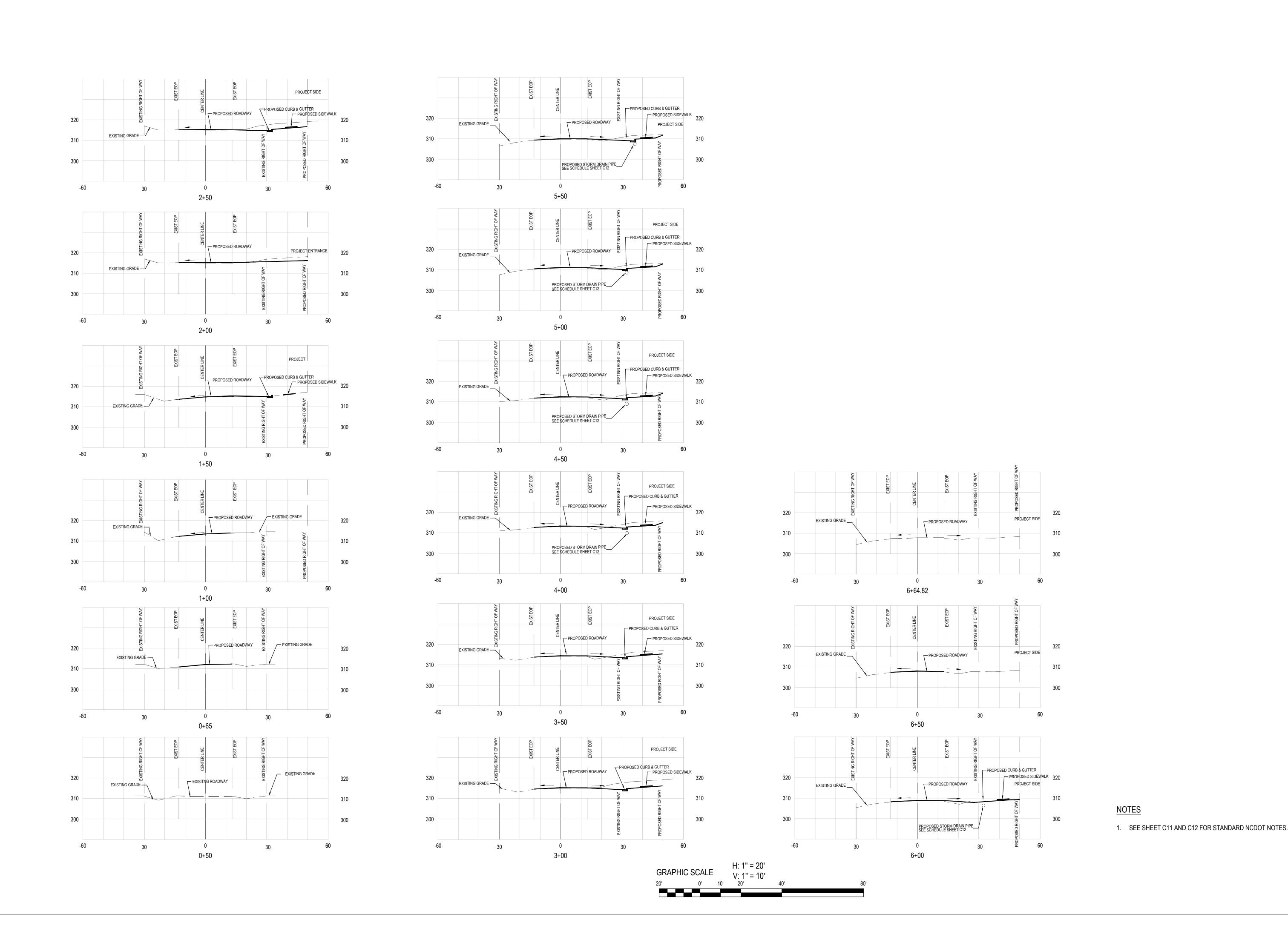


NC GRID NAD 83/2011



Profile **ං**ර

1098359) Street , North Carolina Plan Schoo Stor Shepard



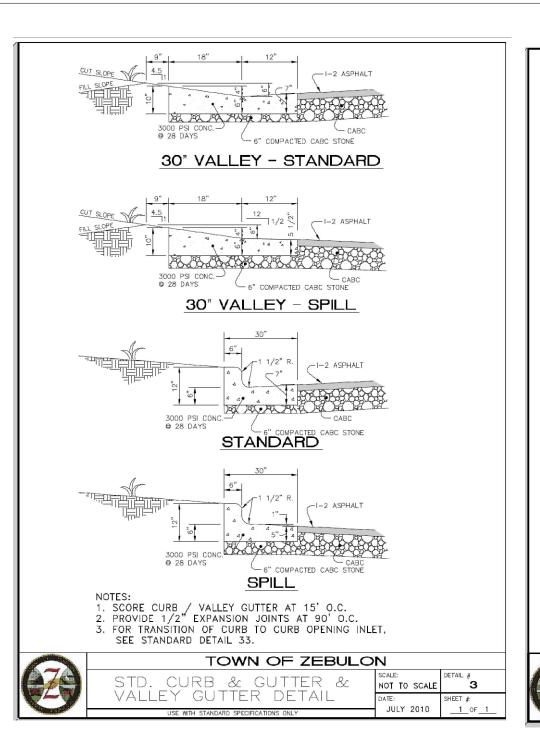
PLLC Gettle Engineering and Design, P 3616 Waxwing Court, Wake Forest, North Carolina 27587 (919) 210-3934 Firm License P-2538

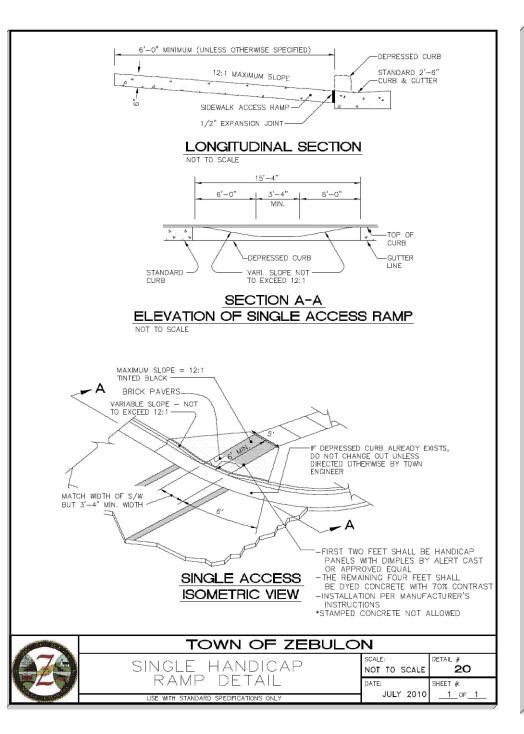


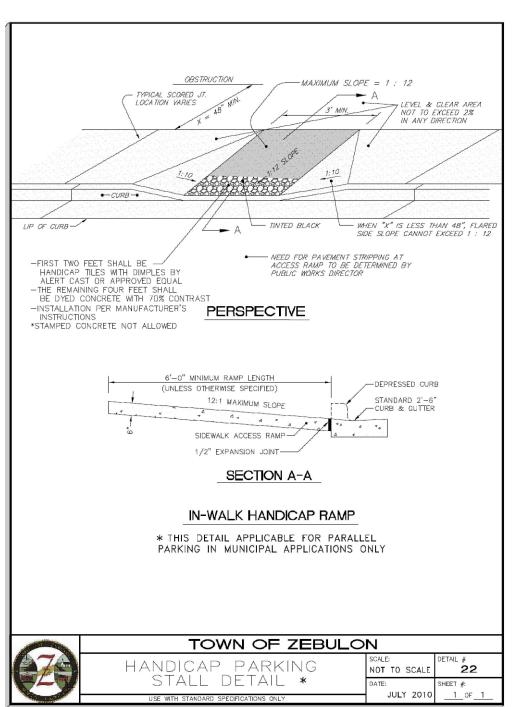


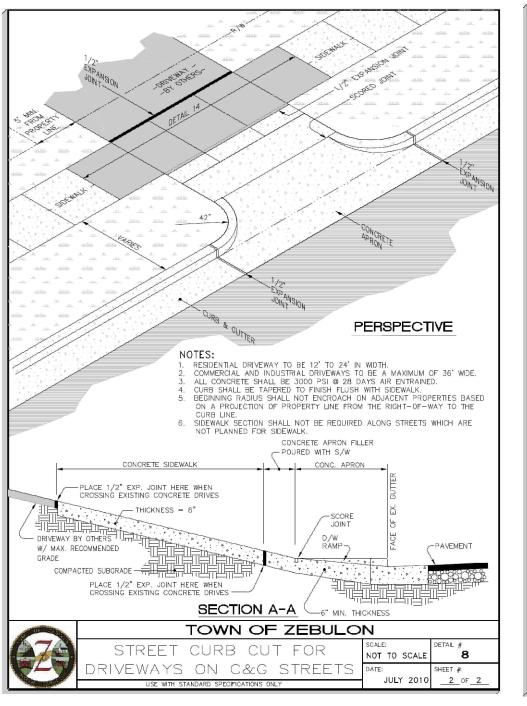
- Cross-Sections (1098359) tor Street anty, North Carolina

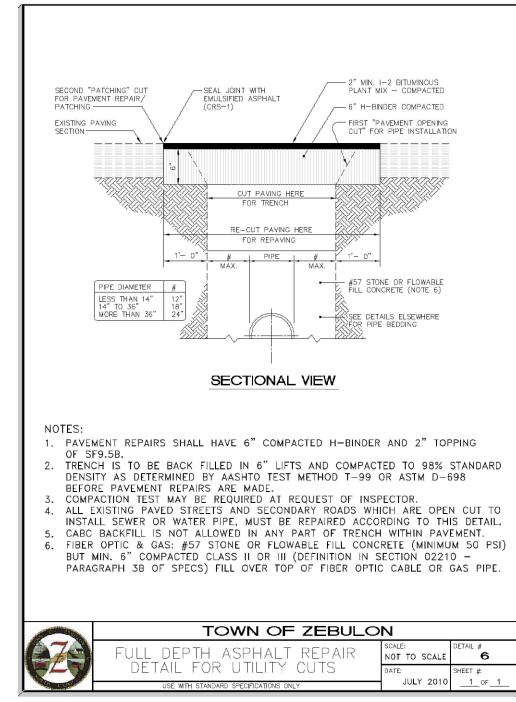
Shepard School - Cro StorageMax (10 901 Proctor St Zebulon, Wake County, N

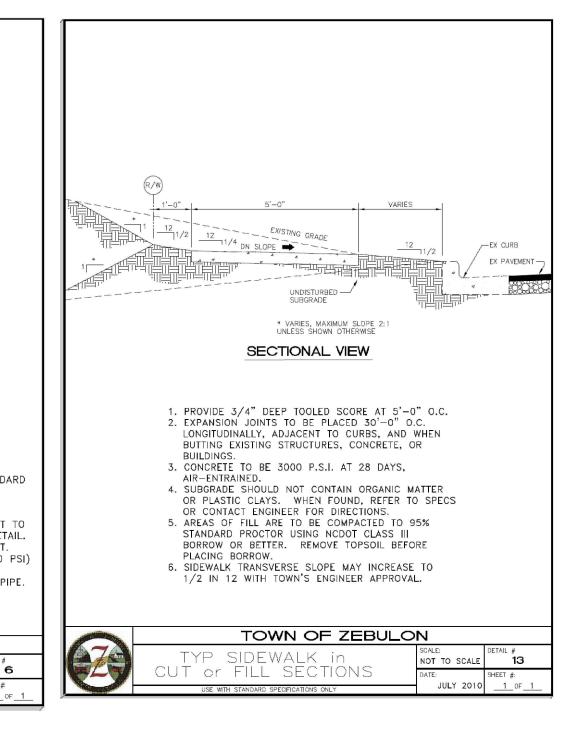


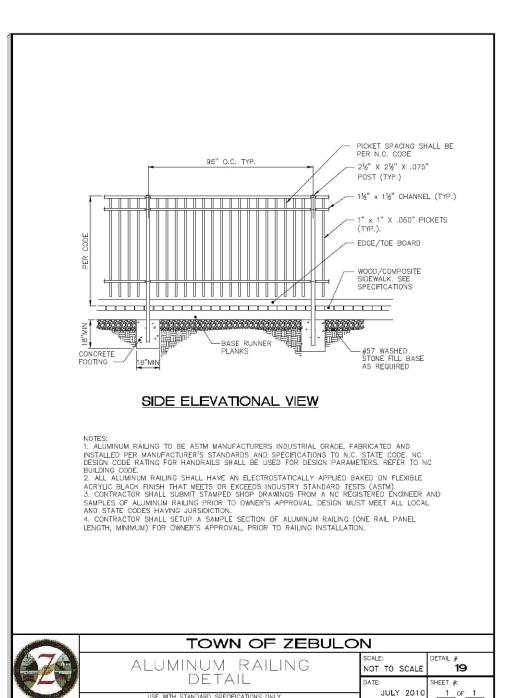


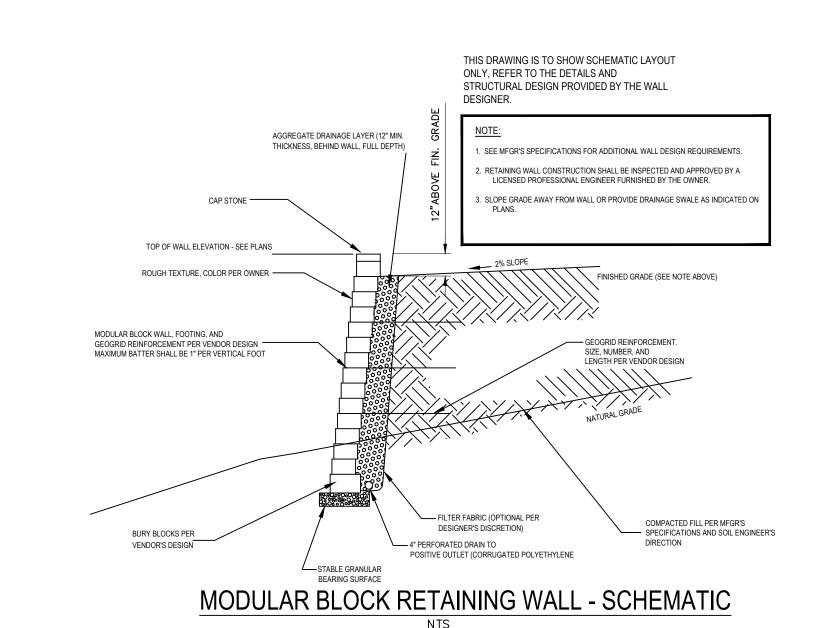


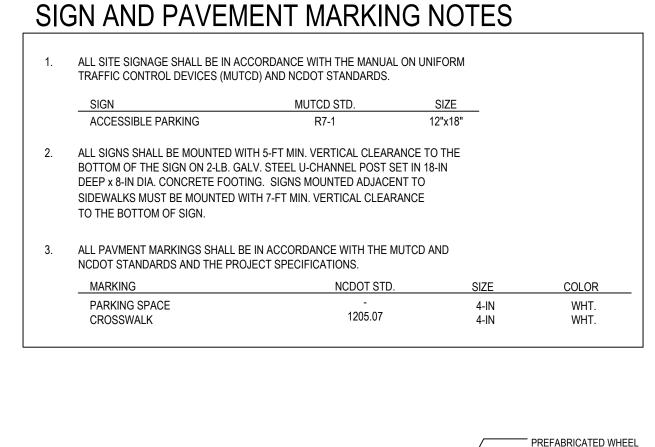


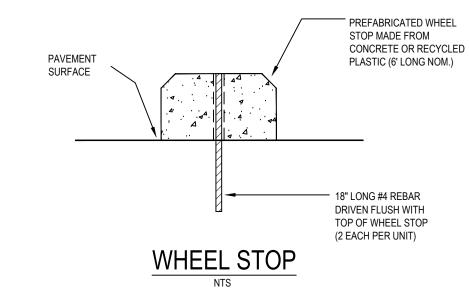


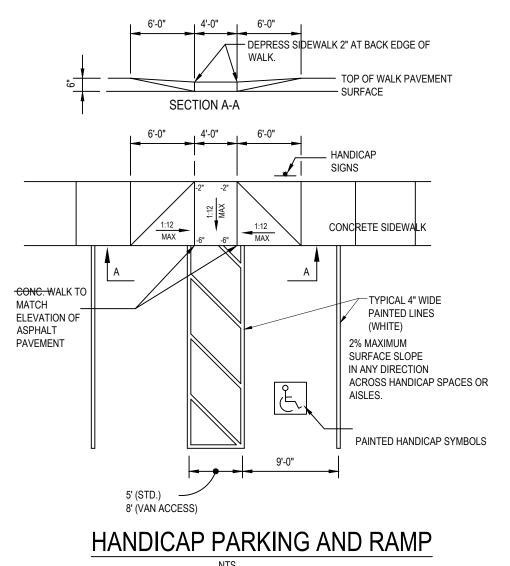


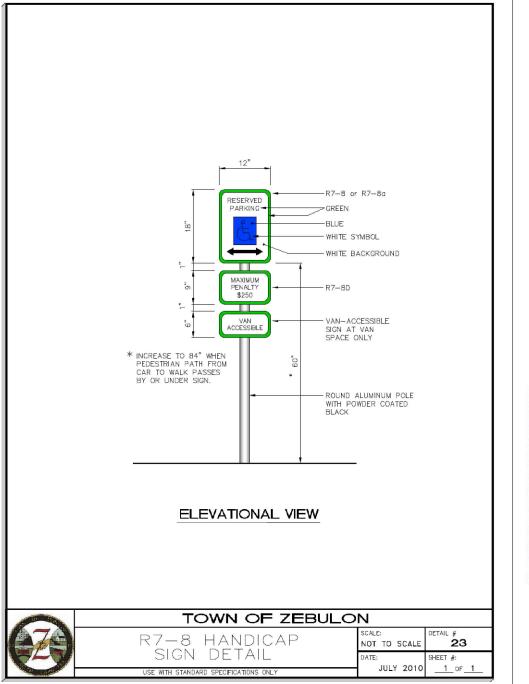


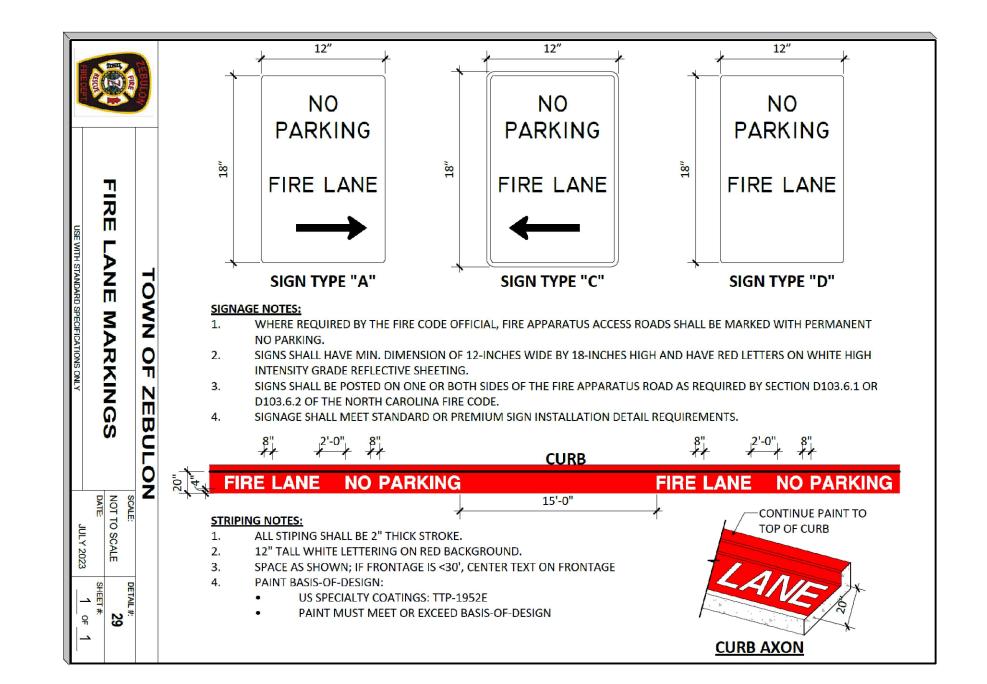


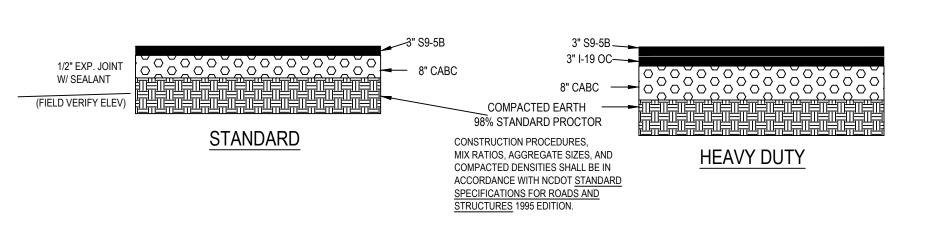






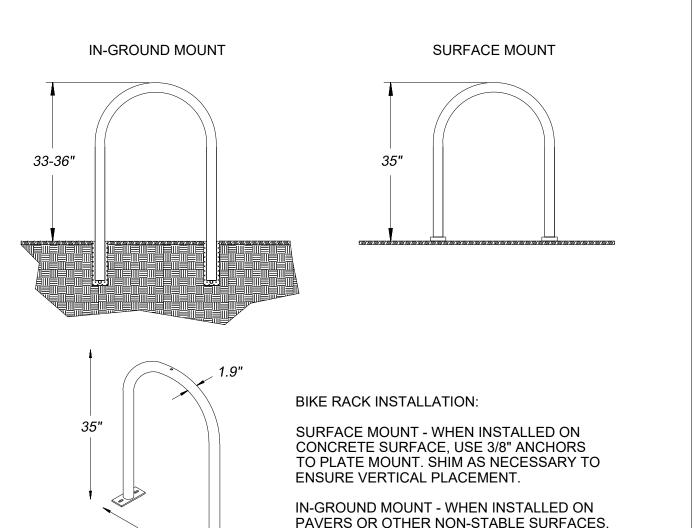






ONSITE PAVEMENT DETAIL

NTS



EMBED INTO BASE. CORE HOLES NO LESS

THAN 3" IN DIAMETER AND 10" DEEP.

STANDARD BIKE RACK

Standard Site Details
StorageMax (1098359)
901 Proctor Street
Zebulon, Wake County, North Caroli

Project No. 23001

Dwg No.

 Own Comment
 KPG
 Gettle Engineering &

 MENT
 BY
 3616 Waxwing (

 MENT
 BY
 Wake Forest, North Ca

 MENT
 BY
 (919) 210-3934
 Firm

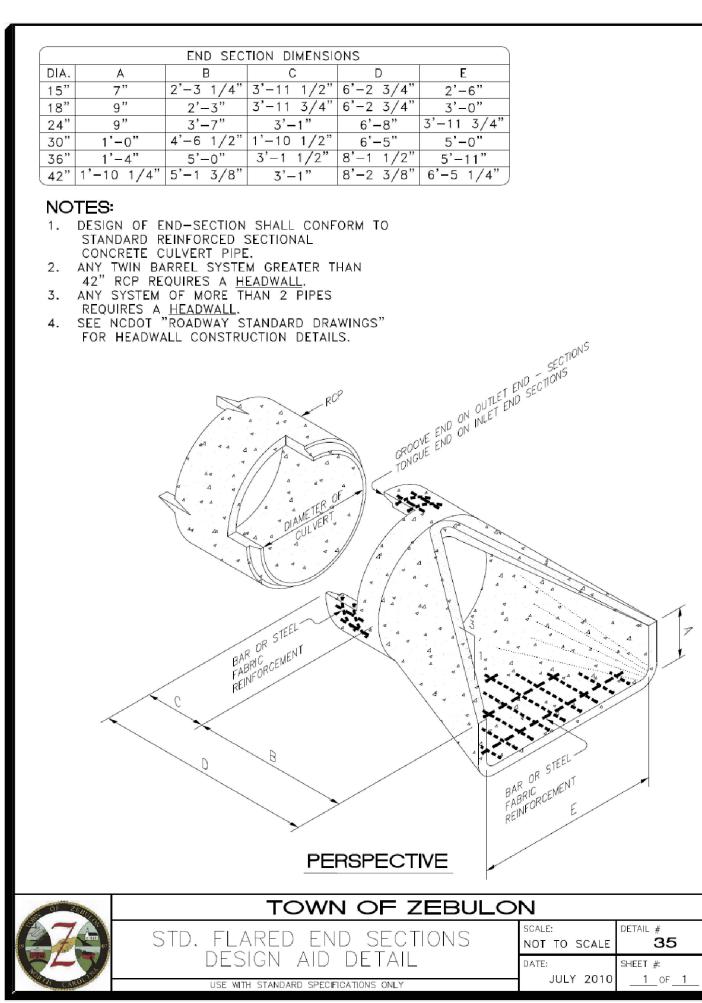
PLL

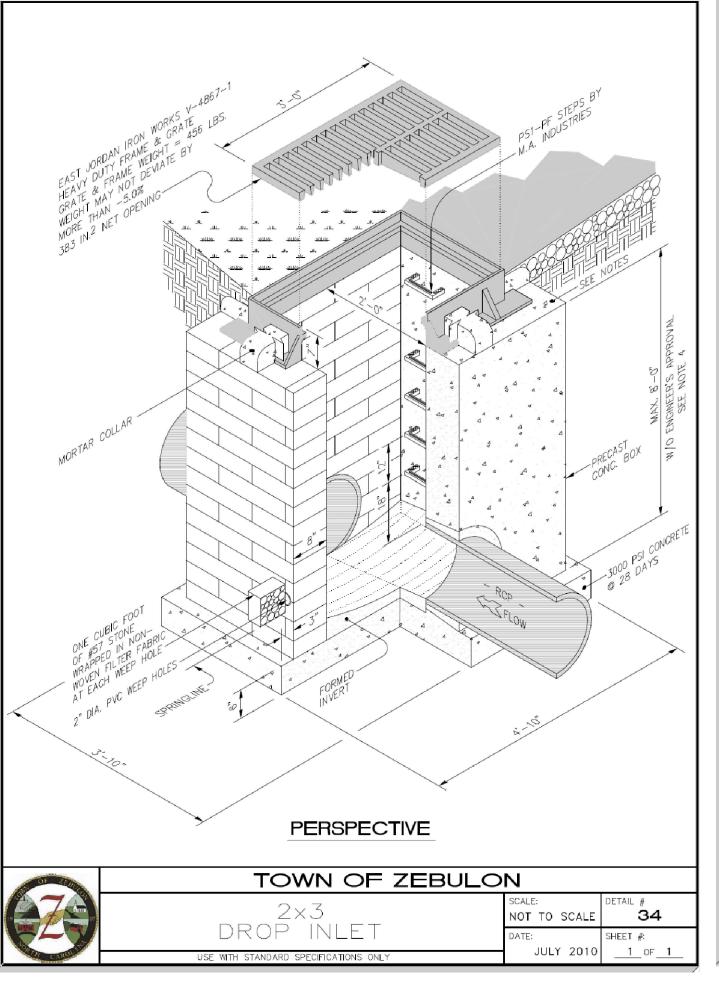
Design,

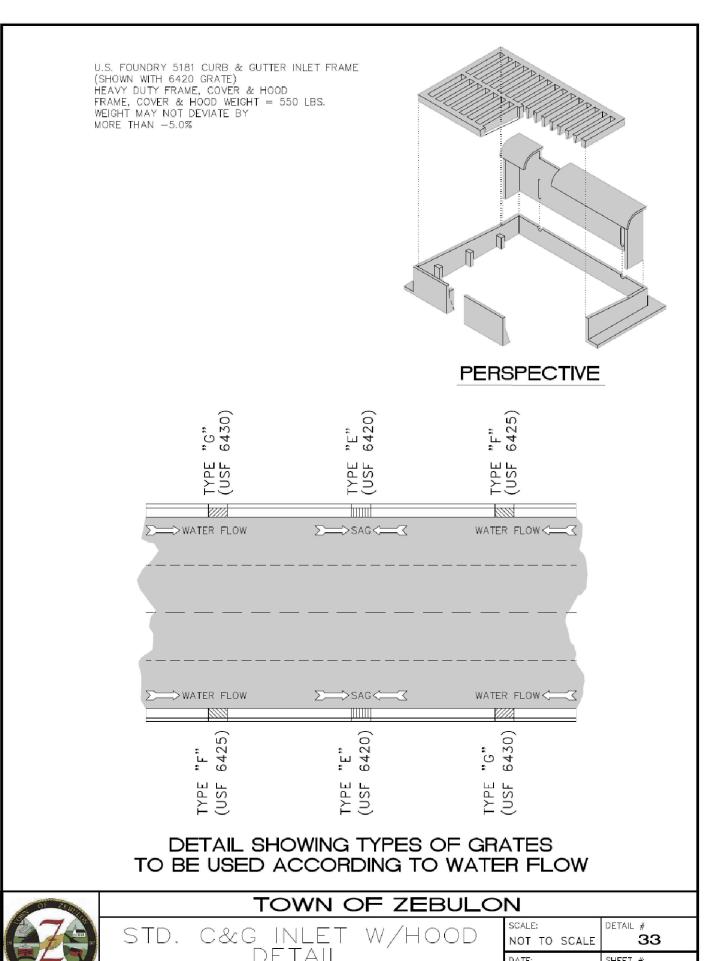
and

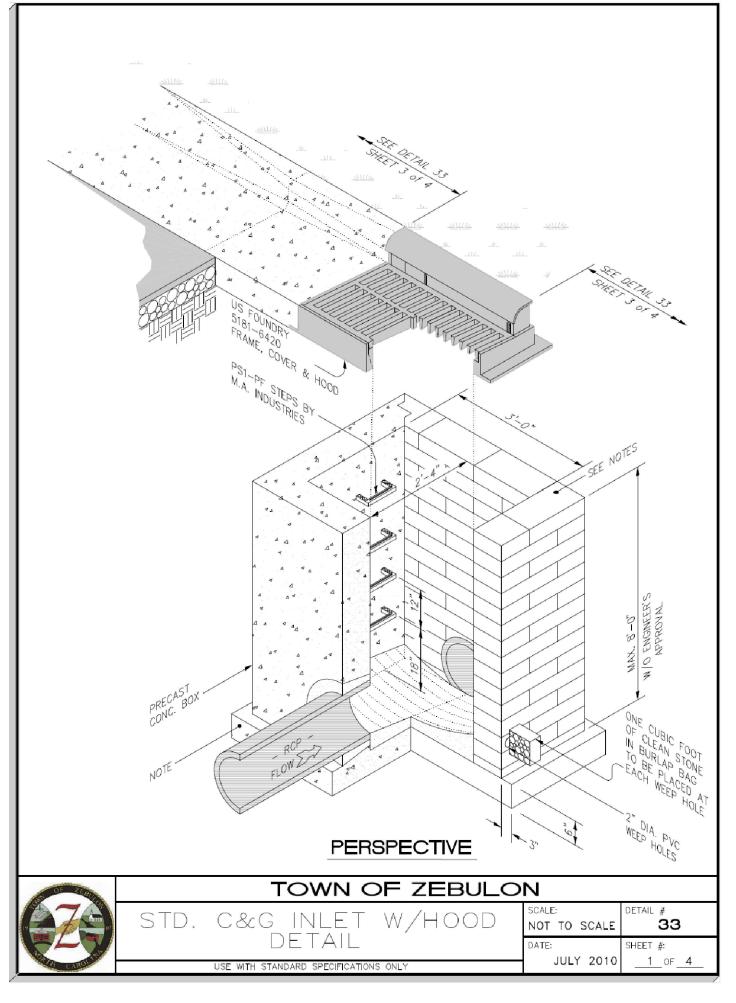
27

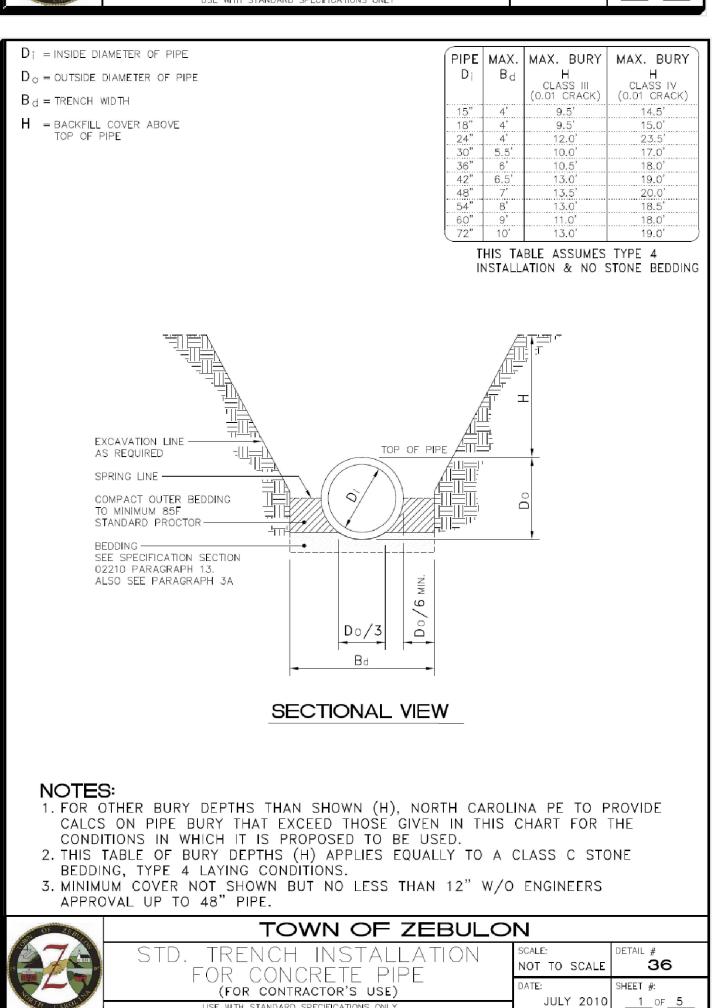
 $\boldsymbol{\sigma}$

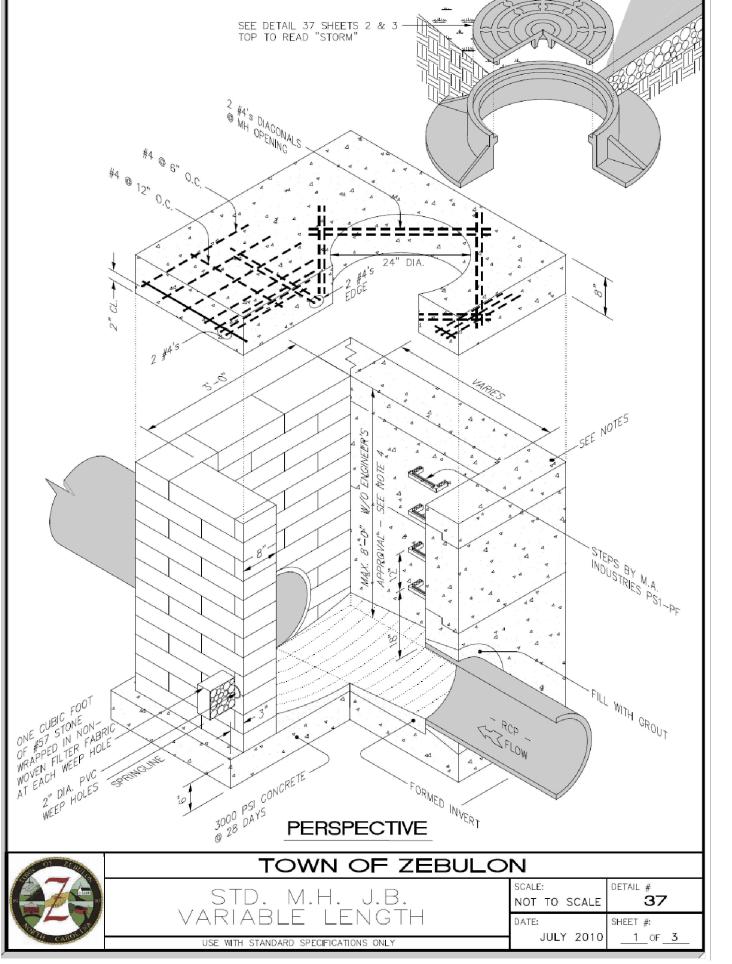


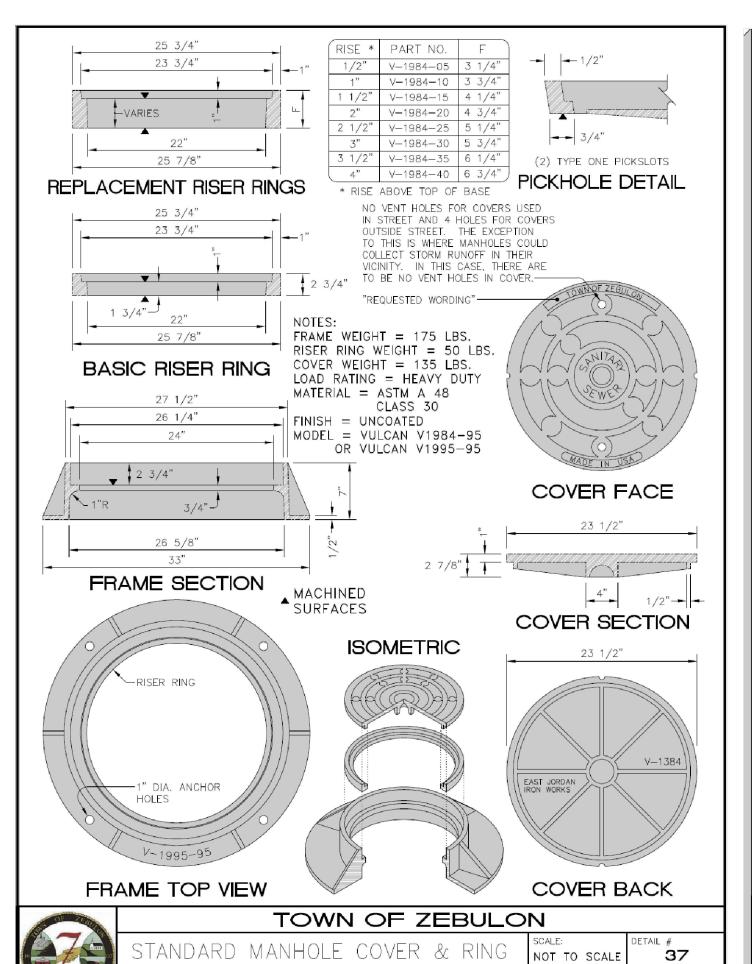


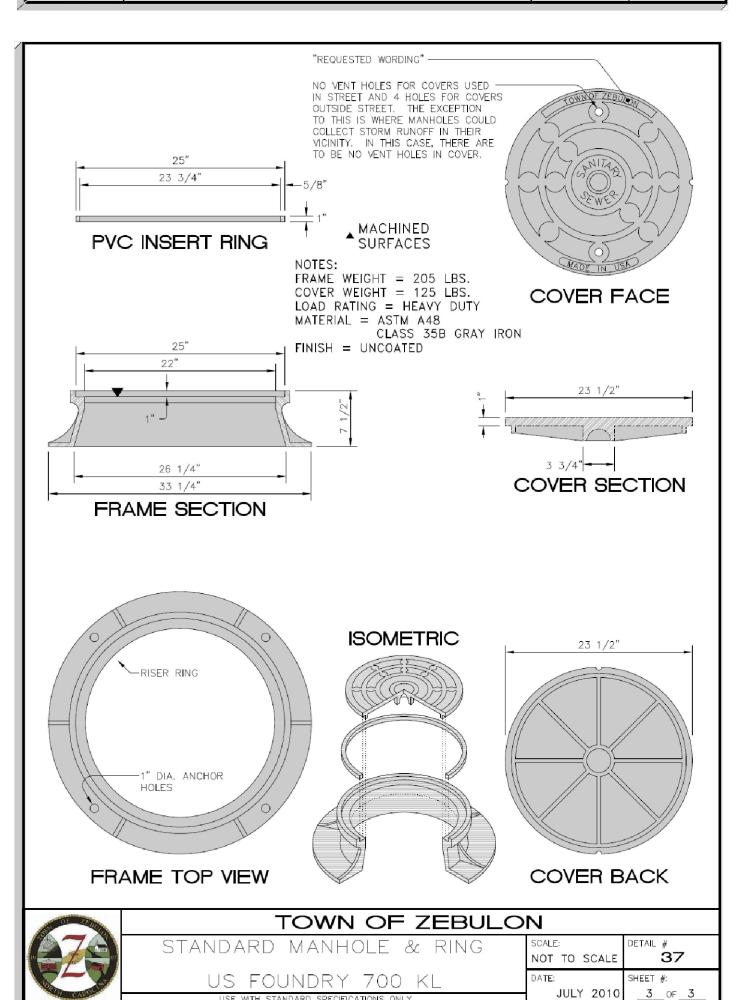


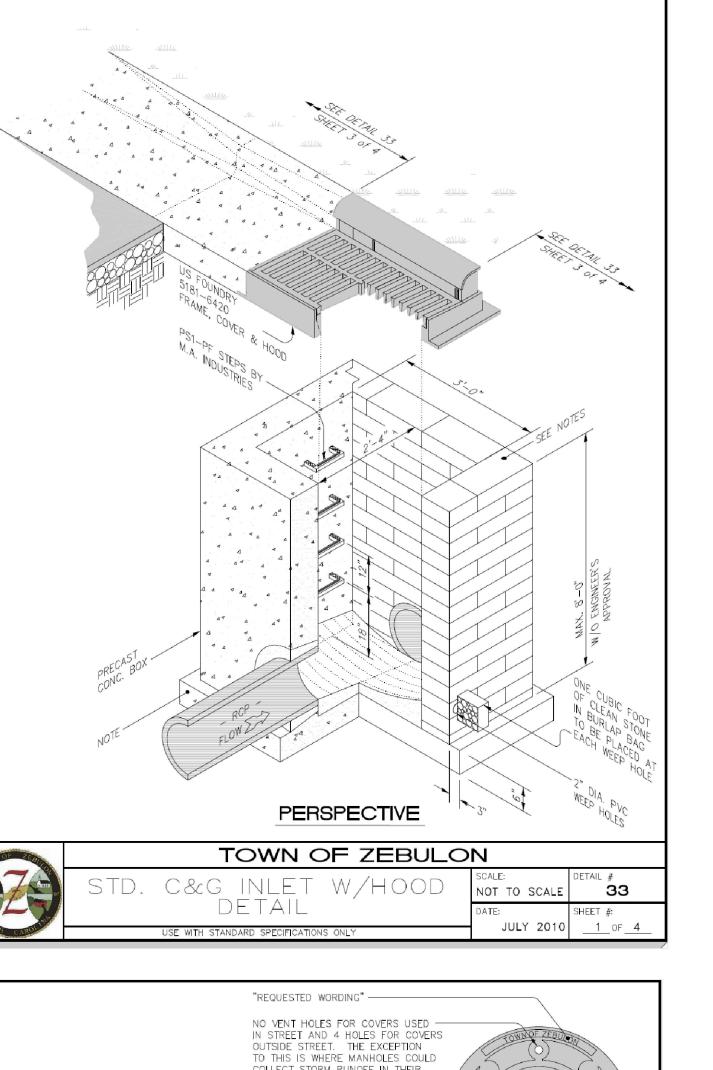


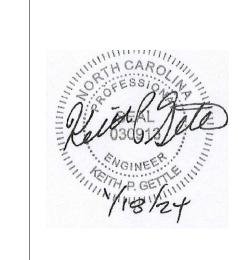












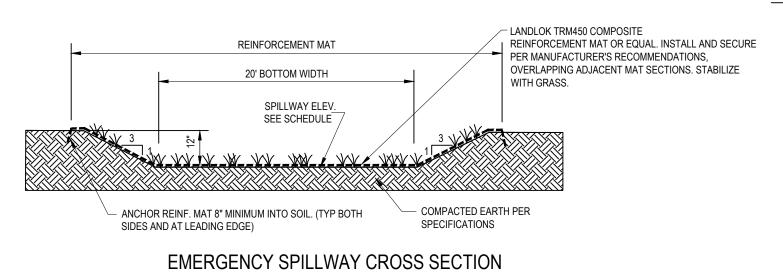
PLL

Design,

Engineering and

Gettle

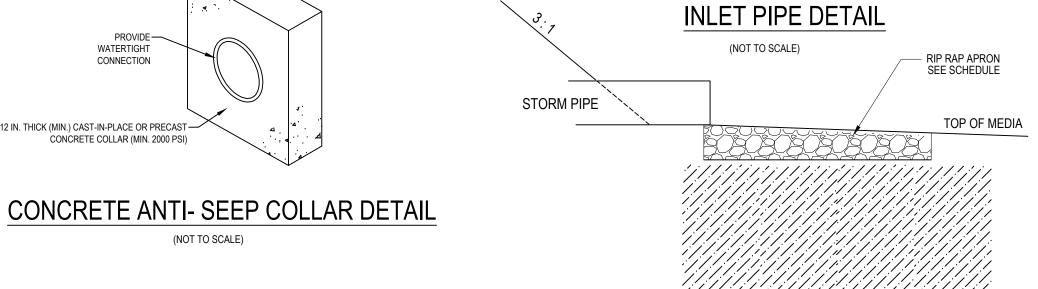
Details (1098359) r Street ty, North Carolina Stormwater D
StorageMax (10
901 Proctor S
bulon, Wake County, Zebulon,



NTS

PROVIDE-WATERTIGHT CONNECTION

12 IN. THICK (MIN.) CAST-IN-PLACE OR PRECAST -CONCRETE COLLAR (MIN. 2000 PSI)



Engineering EMERGENCY SPILIW SEE SCHEDULE ettle Ú (NV. 308.80 VINV. 308.80 NV. 308.80

PRECAST ENDWALL - NCDOT # 838.80

OR APPROVED EQUAL

4'x4' RISER WITH TRASH RACK-

INV., 308.35

4" SCHEDULE 40 PVC

UNDERDRAIN WITH-

CLEANOUTS- TOTAL

OF 14

PLAN VIEW BIORETENTION DEVICE

BIORETENTION FACILITY OPERATION AND MAINTENANCE:

- * WATERING: WATERING SHOULD NOT BE REQUIRED AFTER GRASS / LANDSCAPING IS ESTABLISHED. HOWEVER. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
- * EROSION CONTROL: INSPECT FLOW ENTRANCES, PONDING AREA, AND SURFACE OVERFLOW AREAS PERIODICALLY. REPLACE MATERIAL WHERE EROSION HAS OCCURRED. IF SEDIMENT IS DEPOSITED, DETERMINE THE SOURCE, REMOVE EXCESS DEPOSITS, AND CORRECT THE PROBLEM.
- * VEGETATION: ROUTINE MAINTENANCE WILL BE NECESSARY TO ENSURE THAT THE VEGETATION IS HEALTHY AND TO REMOVE ANY WEEDS.
- * NUTRIENTS AND PESTICIDES: NUTRIENTS AND PESTICIDES SHOULD NOT BE REQUIRED. IF NECESSARY, USE SPARINGLY.
- * SOIL MEDIA: THE SOIL MEDIA SHOULD NOT NEED REPLACING. IF PROBLEMS OCCUR IN THE SOIL MEDIA, CONSULT A SOIL SPECIALIST.

BIORETENTION FACILITY NOTES:

- * A 3 -FOOT DEEP, HOMOGENOUS SOIL MIXTURE OF 85 TO 88 PERCENT CONSTRUCTION SAND, 8 TO 12 PERCENT FINES (SILT AND CLAY), AND 3 TO 5 PERCENT ORGANIC MATTER SHALL BE USED. SOIL MEDIA SHOULD BE SENT TO THE NCDA LABS TO BE ANALYZED. P-INDEX FOR THESE SOIL MEDIA SHOULD RANGE BETWEEN 10 AND 30. THE INFILTRATION RATE OF THE SOIL SHALL BE BETWEEN 3.85 AND 6 IN/HR. SOIL CHARACTERISTICS SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER.
- * THE BIORETENTION FACILITY SHALL BE PLANTED AS SHOWN ON THE LANDSCAPE PLAN.
- * ALL CONSTRUCTION, MONITORING, AND MAINTENANCE GUIDELINES IN THE NCDWQ STORM WATER BMP MANUAL SHALL BE FOLLOWED.

BIORETENTION GENERAL NOTES:

OUTLET STRUCTURE AND PIPING

• THE RISER STRUCTURE SHALL CONSIST OF PRECAST CONCRETE BASE AND RISER SECTIONS OF THE TYPE AND DIMENSIONS SHOWN. SQUARE OR RECTANGULAR SECTIONS SHALL BE SOLID-WALL CATCH BASIN TYPE STRUCTURES. AND APPROVED FOR USE BY NCDOT. ALL RISER JOINTS SHALL BE SEALED WATERTIGHT USING FLEXIBLE BUTYL RUBBER JOINT MATERIAL, RUBBER GASKETS, OR OTHER SUITABLE MATERIAL. ALL PIPE CONNECTIONS TO THE RISER SHALL BE MADE WITH A WATER TIGHT FLEXIBLE CONNECTOR BOOT PER ASTM

CONCRETE

 CONCRETE WORK SHALL CONFORM TO PROJECT CONCRETE SPECIFICATIONS.

FLOWABLE FILL

 FLOWABLE FILL SHALL CONSIST OF A MIXTURE OF PORTLAND CEMENT, AGGREGATE NOT GREATER THAN 3/8 INCH DIAMETER, WATER, AND OTHER APPROVED COMPONENTS, WITH A MINIMUM PH OF 4.0, AND A 28-DAY COMPRESSIVE STRENGTH OF AT LEAST 150 PSI. THE MIXTURE SHALL BE SUFFICIENTLY FLOWABLE TO BE SELF-LEVELING, FILLING ALL VOIDS UNDER THE PIPE AND PIPE HAUNCHES WITHOUT REQUIRING VIBRATION.

FINAL SURFACE STABILIZATION

• STABILIZE ALL SURFACES OF THE EMBANKMENT, SPILLWAY, SLOPES, SPOIL AND BORROW AREAS THAT ARE NOT COVERED BY OTHER SPECIFIED MATERIALS WITH GRASS IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

BIORETENTION NOTES (CONT):

• ALL DRAINAGE AREAS TO A BIORETENTION FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF AMENDED SOILS, MULCH OR PLANTINGS.

(NOT TO SCALE)

BIORETENTION PLANTING SOIL MEDIA SPECIFICATIONS:

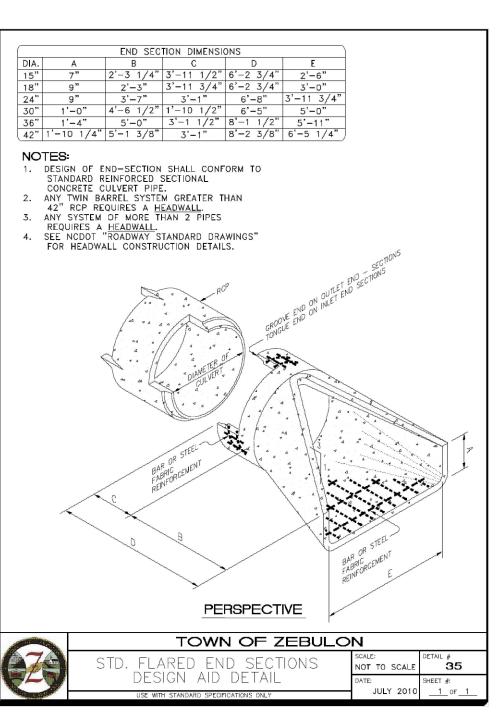
- THE PLANTING SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN ONE-HALF INCH IN DIAMETER. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, JOHNSON GRASS, QUACK GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADA THISTLE, OR OTHER NOXIOUS WEEDS.
- PLANTING MIX FOR BIORETENTION CELL UNIFORM SOIL MIXTURE FREE OF STUMPS, STONES, OR LARGE ROOTS, CONTAINING THE FOLLOWING TYPES AND RATIOS (BY WEIGHT) OF COMPONENTS:

85-88%% SAND (ASTM C-33) 8%-10% FINE SOIL MATERIAL (INCLUDES BOTH SILT OR CLAY) 3%-5% ORGANICS / PINE BARK MULCH

 SOIL SHALL HAVE A HYDRAULIC CONDUCTIVITY OF BETWEEN 1 IN/HR AND 6 IN/HR, WITH A 2 IN/HR RATE BEING OPTIMAL.

PHOSPHOROUS INDEX SHALL BE BETWEEN 10 AND 30

- GRADING CLEARING, STRIPPING, EXCAVATION, FILLING, TRENCHING, BACKFILLING, COMPACTION, AND FINE-GRADING WORK SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF PROJECT SPECIFICATIONS.
- UNDERDRAIN GRAVEL CLEAN, HARD, ANGULAR GRAVEL CONFORMING TO NCDOT DESIGNATION # 57 OR # 8 AS APPROPRIATE.
- GEOFILTER FABRIC NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE WITH 135 LBS. PUNCTURE STRENGTH (ASTM D-4833); 220 LBS. TENSILE STRENGTH (ASTM D-4632); AND APPARENT OPENING SIZE OF U.S. STD. #80 SIEVE (ASTM D-4751).
- UNDERDRAIN PIPING NOMINAL 4" DIAMETER SCHEDULE 40 PVC, WITH 3/8" DIAMETER PERFORATIONS SPACED EQUALLY AROUND THE FULL PIPE PERIMETER. CLEANOUT PIPE AND FITTINGS SHALL BE SOLVENT-WELDED SCHEDULE 40 PVC PER THE DETAIL SHOWN AND EXTEND AT LEAST 8" ABOVE THE MULCH LAYER. MINIMUM 1 CLEANOUT PER 1000 SQUARE FEET OF SURFACE AREA OF THE DEVICE.



OUTLET PIPE DETAIL (NOT TO SCALE)

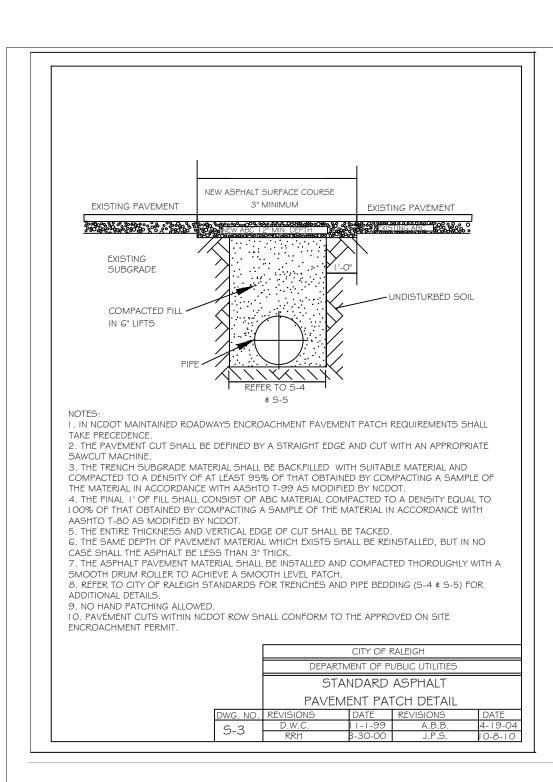
HDPE STRUCTURAL PLASTIC OR APPROVED EQUAL FIELD VERIFY RISER SIZE PRIOR TO FABRICATION TRASH RACK ASSY **TOP VIEW** (NOT TO SCALE) (NOT TO SCALE) STORMRAX TRASH RACK BY PLASTIC SOLUTIONS INC. TOP OF RISER SEE SCHEDULI PEAKED ROOF TRASH RACK (NOT TO SCALE)

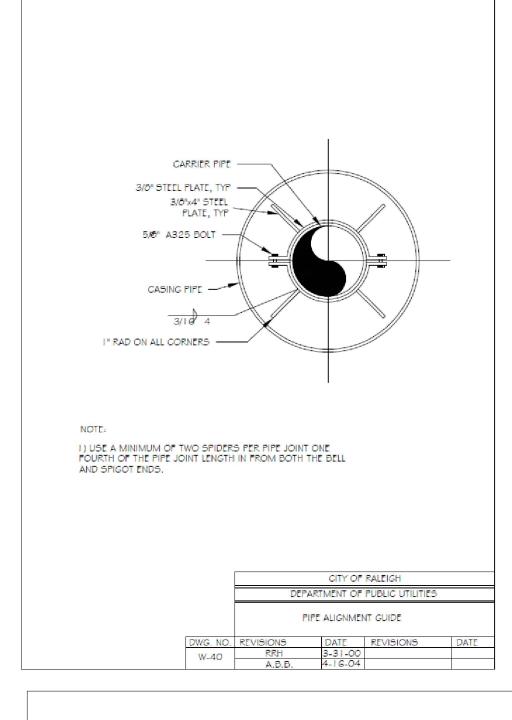
Top of Dam Spillway (20') Top of Riser Bottom of Riser (Inv) Drawdown Orifice Orifice Invert Media Surface Discharge Pipe Dia. Discharge Length	313.50 313.00 312.50 308.25 6" 312.00 311.00 24"
Top of Riser Bottom of Riser (Inv) Drawdown Orifice Orifice Invert Media Surface Discharge Pipe Dia.	312.50 308.25 6" 312.00 311.00
Bottom of Riser (Inv) Drawdown Orifice Orifice Invert Media Surface Discharge Pipe Dia.	308.25 6" 312.00 311.00
Drawdown Orifice Orifice Invert Media Surface Discharge Pipe Dia.	6" 312.00 311.00
Orifice Invert Media Surface Discharge Pipe Dia.	312.00 311.00
Media Surface Discharge Pipe Dia.	311.00
Discharge Pipe Dia.	
• .	24"
Discharge Length	
	45'
Discharge Inv Out	308.00
WQV Elevation	312.00
Q1 Elevation	312.53
Q10 Elevation	312.97
Q10 Elevation	312.97
Q100 Elevation	313.40
Seasonal High Water Table	306.00

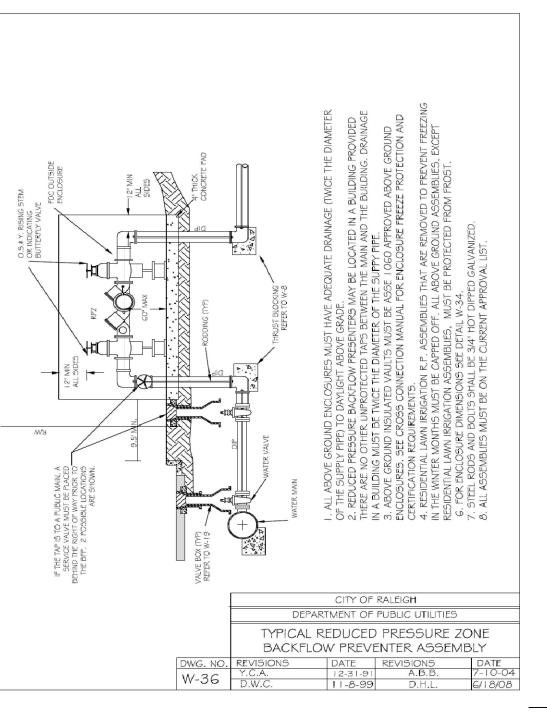
Design,

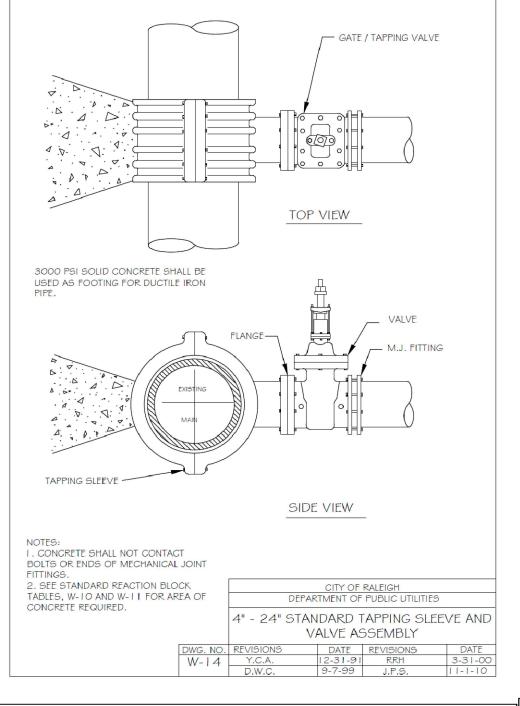
and

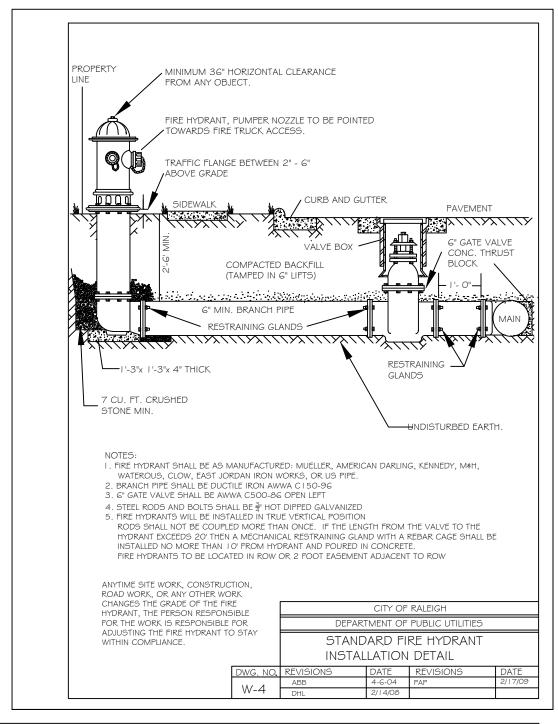
eta| 59) n D 983 Bioretention orageMax (1098 octor Sounty, StorageMe 901 Pro Jon, Wake C BMP

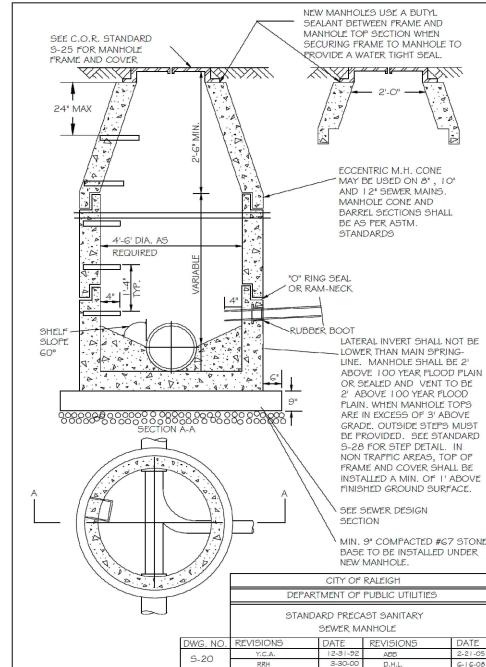


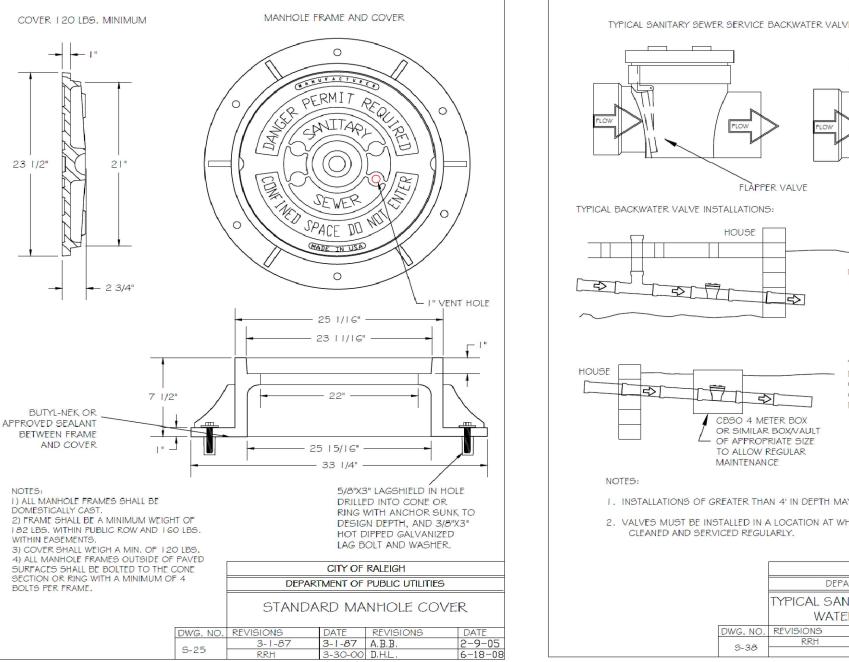


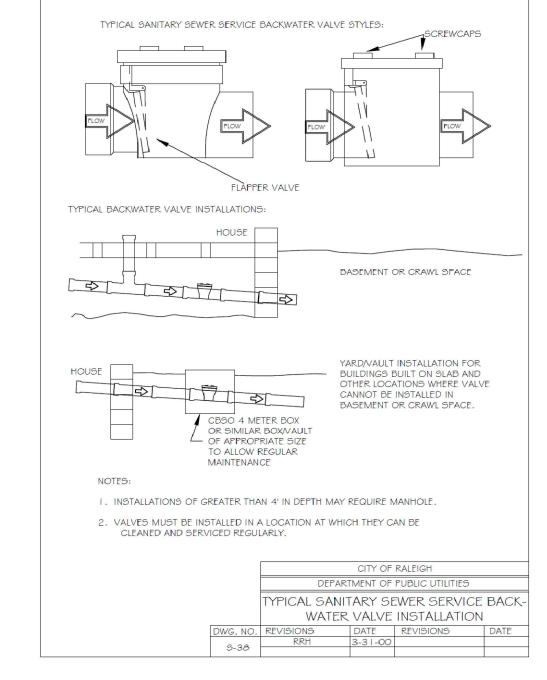


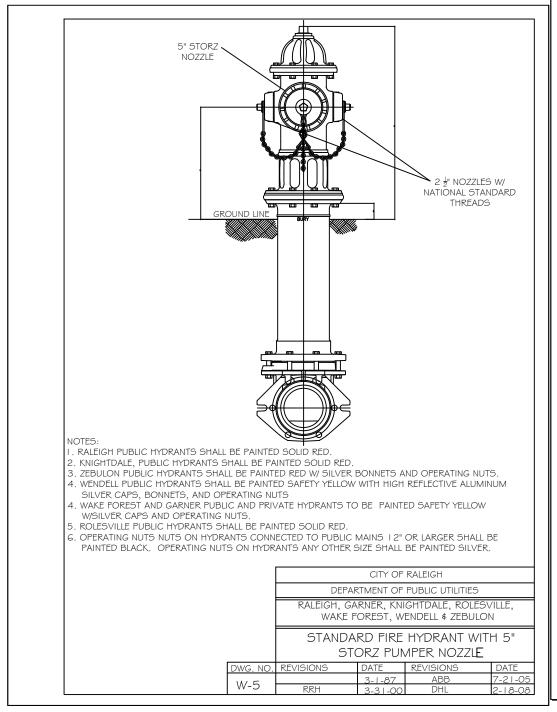


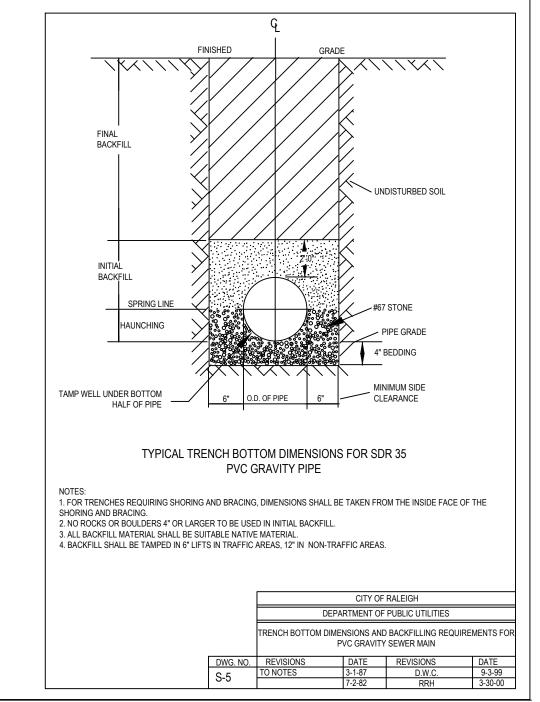


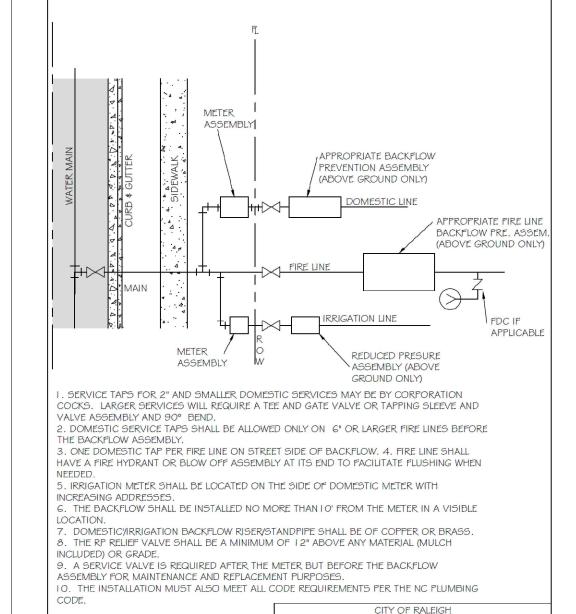












DEPARTMENT OF PUBLIC UTILITIES

FIRE, DOMESTIC & IRRIGATION

OPTIONS SCHEMATIC

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Works Department at (919) 996-2409, and the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations.

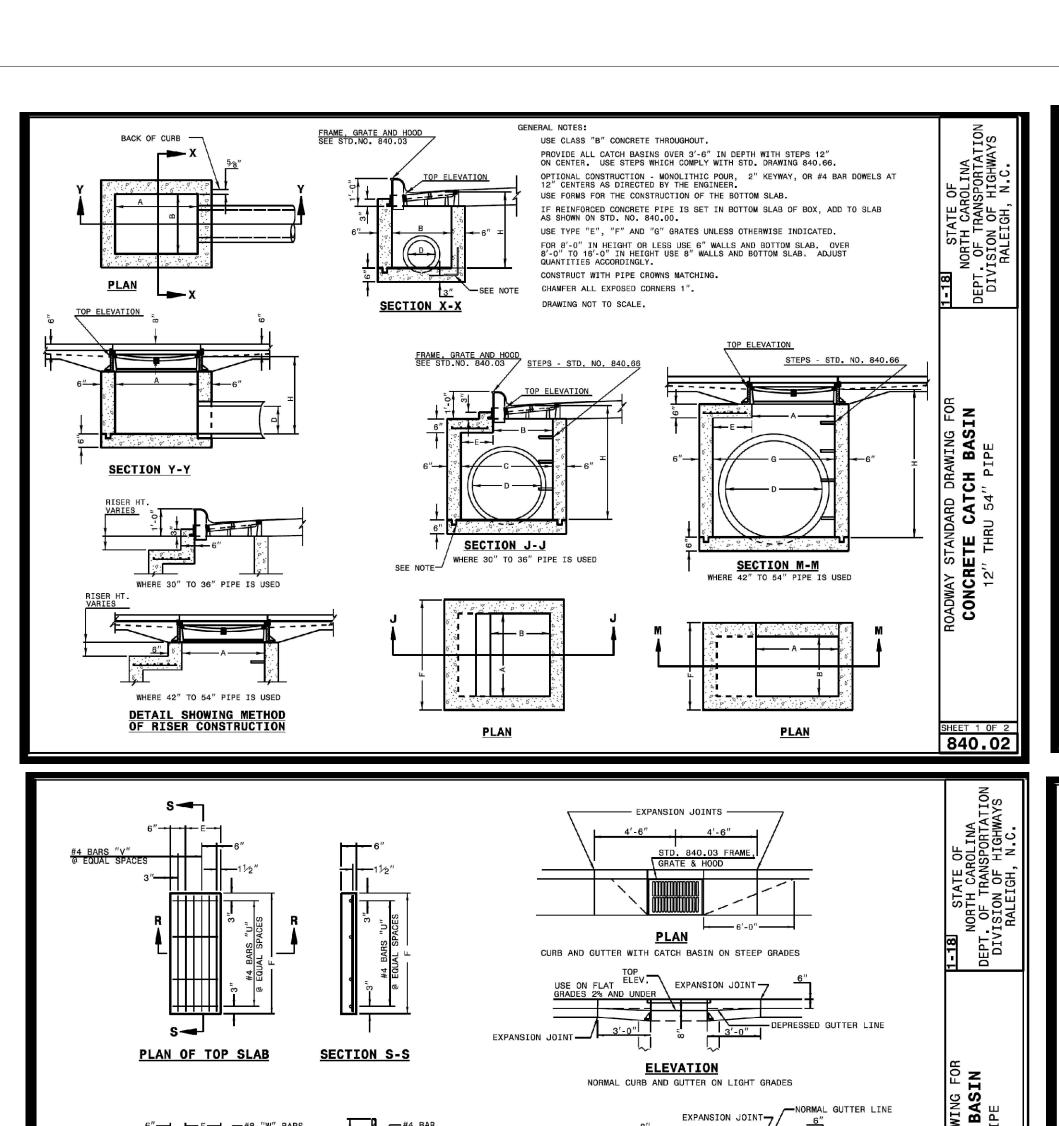
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

ity of Raleigh Development Approval	

City of Raleigh Review Officer

Design, Engineering and 3616 W Forest, 3934 ettle Ü

Sewer Details ax (1098359) 10983 Street ', North (S $\boldsymbol{\sigma}$ and Water Stor Zebulon,



SECTION R-R

W C W B W A

GENERAL NOTES FOR FLAGGING OPERATIONS
- REFER TO RSD. 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.

2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.

REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.

- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.

- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD. 1101.11, SHEET 2).

6- DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.

- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD. 1180.01 FOR SKINNY DRUM REQUIREMENTS.

REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.

O- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.

12" 3'-0" 2'-2" -- -- 2'-9" -- -- -- -- -- -- -- -- -- -- 0.235 0.772 0

36" 3'-0" 2'-2" 3'-10" 4'-9" 1'-8" 4'-0" 4 1'-11" 3 3'-9" 3 3'-9" 43 0.161 0.358 1,714 0.132 0.178 42" 3'-0" 2'-2" 4'-5" 5'-3" 1'-5" 3'-2" 4 1'-8" 2 2'-11" 3 2'-11" 32 0.112 0.318 1.738 0.180 0.243 48" 3'-0" 2'-2" 5'-0" 5'-9" 2'-0" 3'-2" 4 2'-3" 3 2'-11" 3 2'-11" 35 0.145 0.352 2.052 0.235 0.317 54" 3'-0" 2'-2" 5'-7" 6'-3" 2'-7" 3'-2" 4 2'-10" 5 2'-11" 3 2'-11" 41 0.180 0.386 2.387 0.297 0.401

WORK AREA

INSET FOR 2-LANE ROADWAYS WITH 2-WAY TURN LANE

<u>ELEVATION</u>

4

11- IF VEHICLE QUEUES WILL REACH WITHIN 15' OF EITHER SIDE OF ACTIVE RAILROAD TRACKS, PROVIDE A UNIFORMED LAW ENFORCEMENT OFFICER OR FLAGGER TO PREVENT VEHICLES FROM STOPPING WITHIN THE GRADE CROSSING, PROVIDE OFFICER OR FLAGGER EVEN IF AUTOMATIC WARNING MEASURES ALREADY EXIST.

2- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.

■ FLAGGER

DIRECTION OF TRAFFIC FLOW

▲ CONE

4- MOUNT SIGN G20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.

GENERAL NOTES FOR PILOT CAR OPERATIONS
1- USE PILOT CARS WHEN DIRECTED BY THE ENGINEER.

3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.

5- DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

6- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

DOWN STREAM

DOWN STREAM

BUFFER TAPER

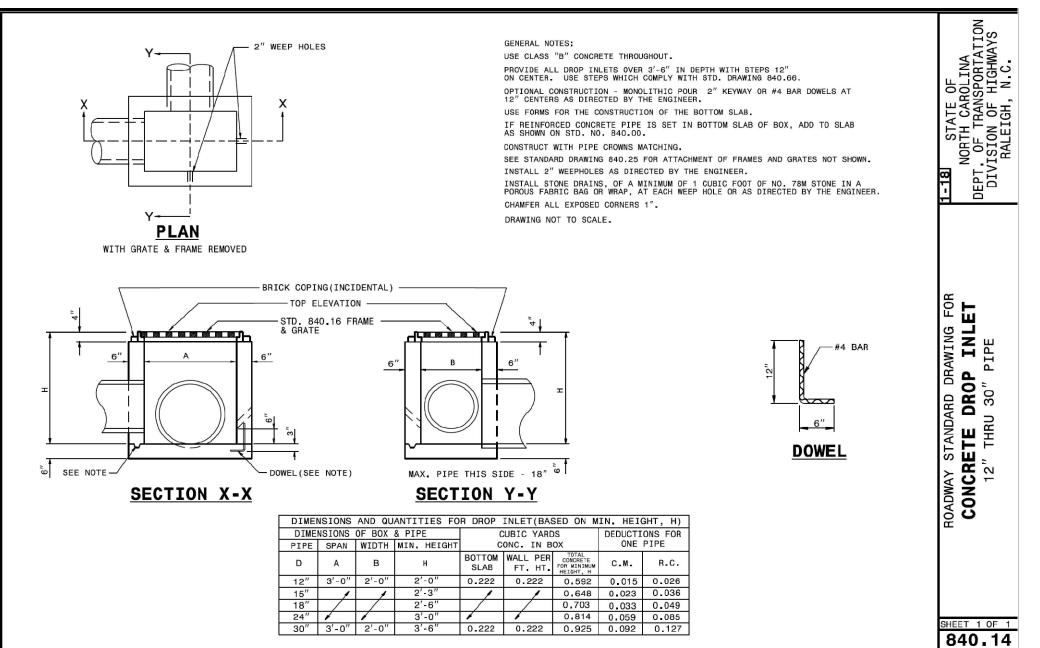
BUFFER TAPER

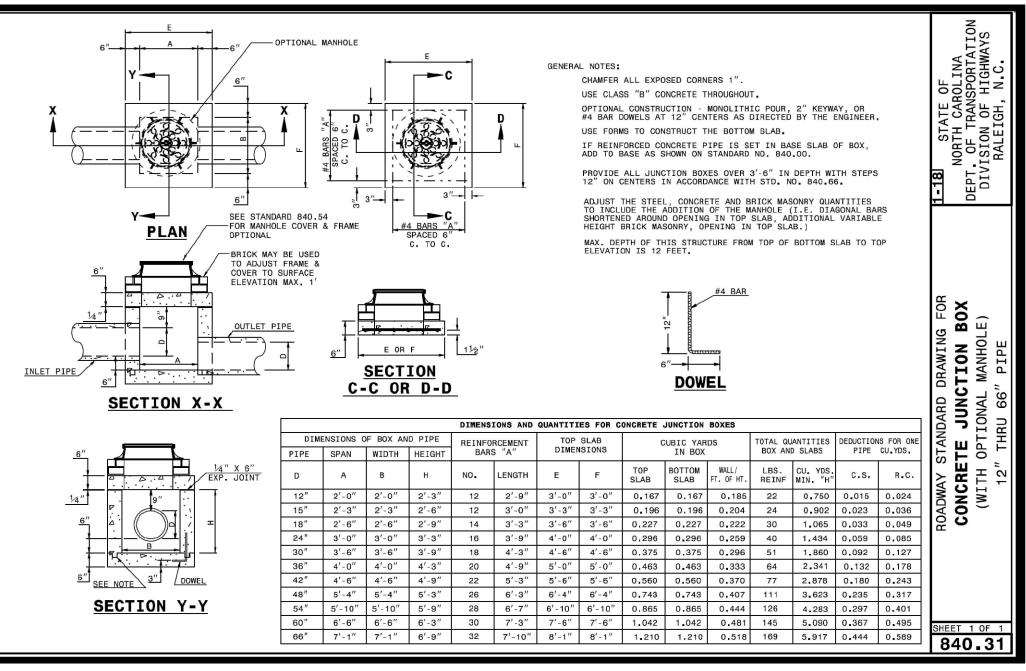
NORMAL CURB AND GUTTER ON STEEP GRADES

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

DRAWING CLOSU

SHEET 1 OF 14



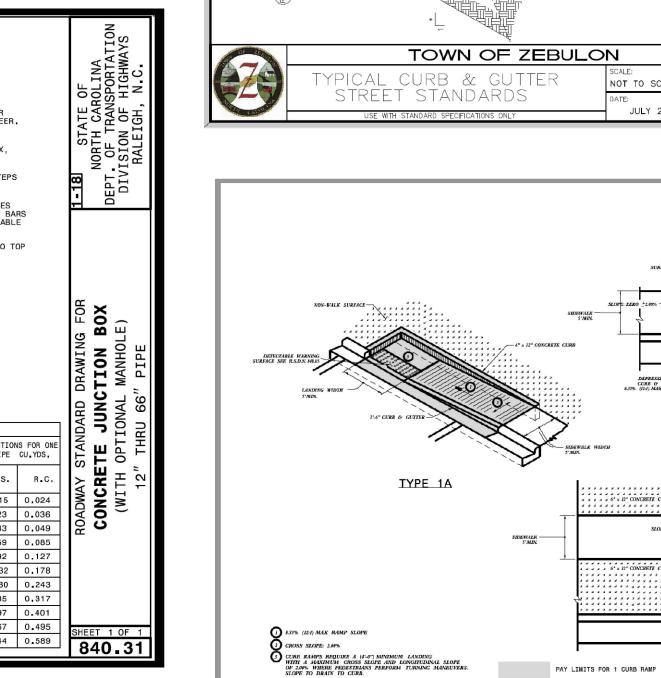


4.5 | #5 @ 8" | 4.00/5.00 | 6.50/8.50 | 3.25/4.00 | 7.00/9.25 | 13.50/15.75

5.0 #5 @ 8" 4.50/5.00 7.00/8.50 3.25/4.00 7.25/9.25 13.75/15.75

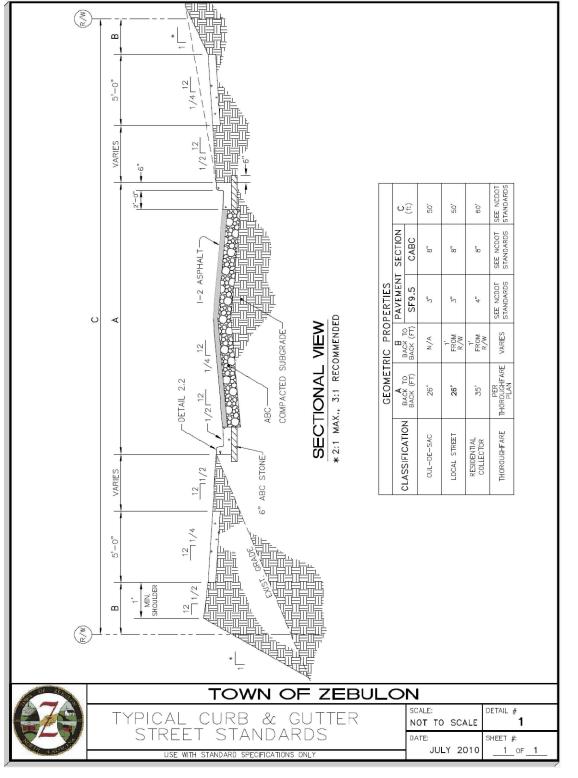
5.5 #5 @ 8" | 4.50/5.00 | 7.50/8.50 | 3.25/4.00 | 7.25/9.25 | 14.00/15.75

6.0 #5 @ 8" 4.50/5.00 7.50/8.50 3.25/4.00 7.75/9.25 14.75/16.75



Щ

SHEET 1 OF 1 838 - 80



6" x 12" CONCRETE CURB

TYPE 1

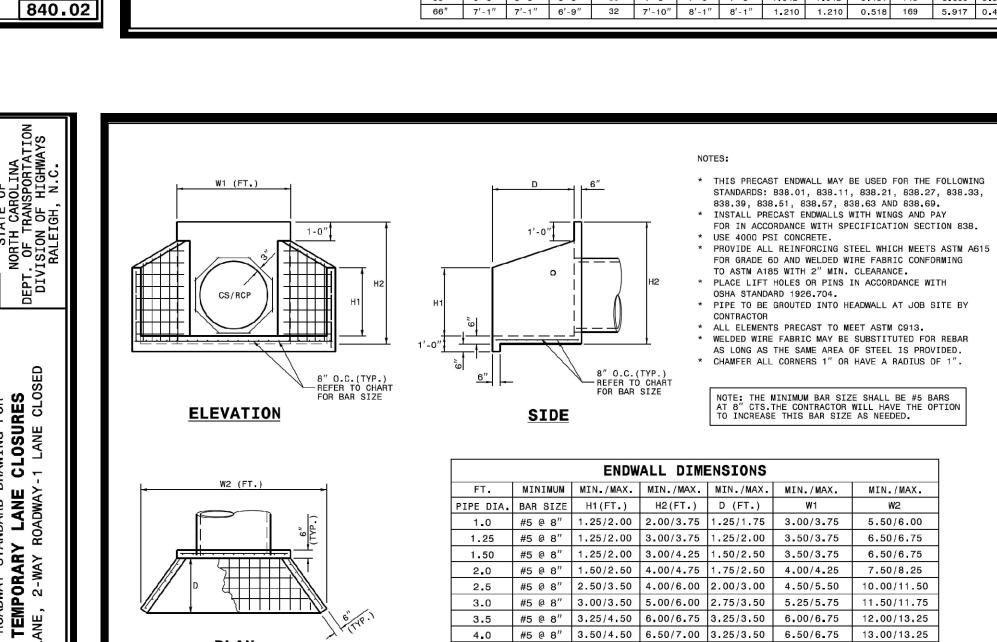
CURB RAMP DETAIL

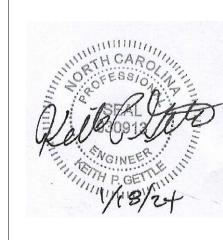
" " DETECTABLE WARNING -SURFACE SEE R.S.D.N. 848.45

6" x 12" CONCRETE CURB —

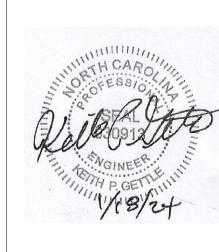
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

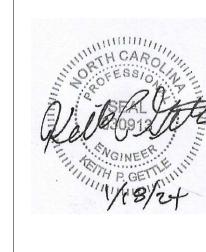
DETECTABLE WARNING -SURFACE SEE R.S.D.N. 848.05





- 2 8 8 4 5 9 8 <u>S</u>





PLL

Design,

Engineering and

ettle

Ü

3616

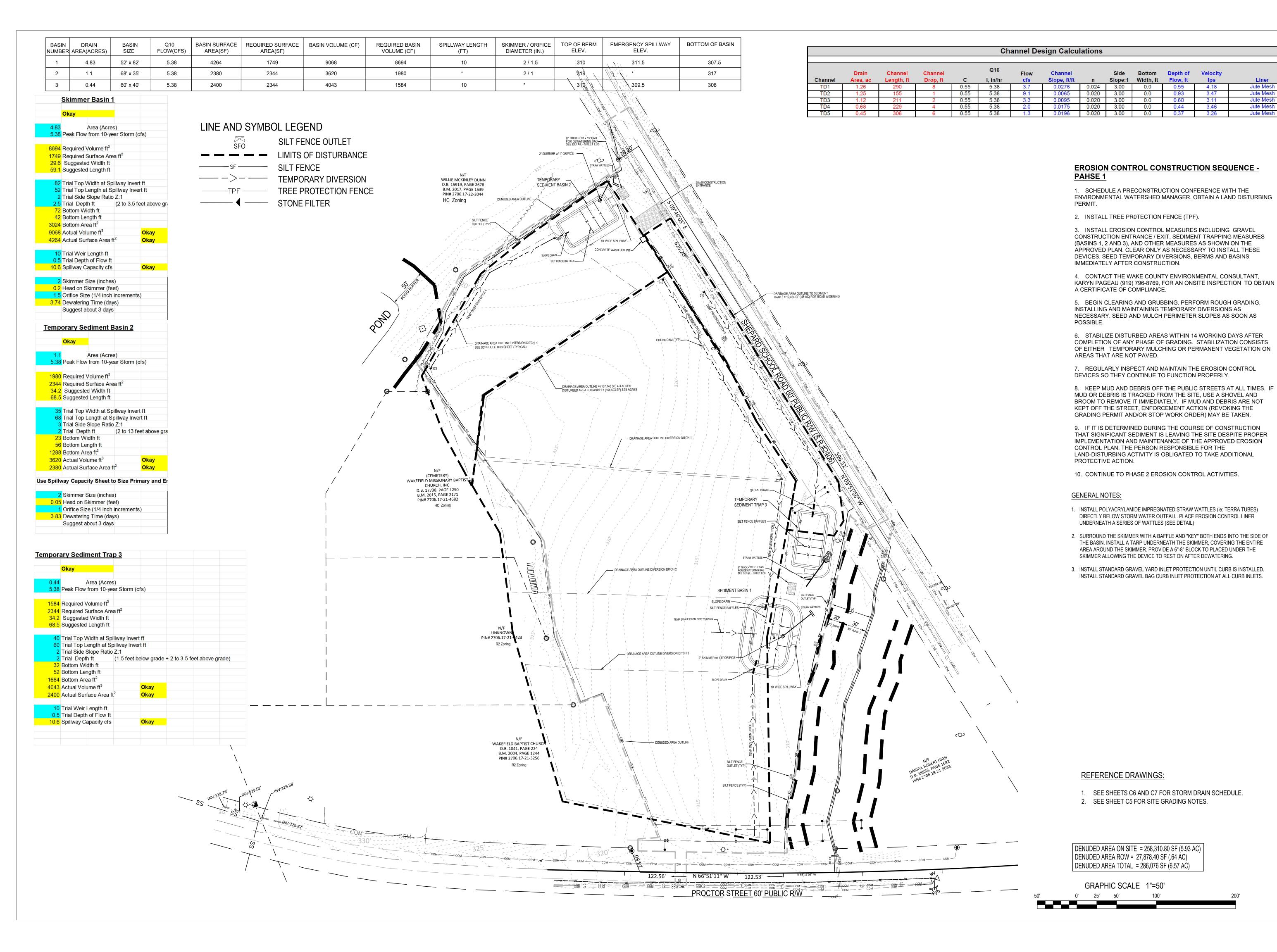
27

NCDOT Roadway Details StorageMax (1098359) 901 Proctor Street Zebulon, Wake County, North Carolina

Project No. 23001 Dwg No.

Zebulon,





Jute Mesh

Jute Mesh

Jute Mesh Jute Mesh

Jute Mesh

Design, and Engineering 616

/ake | 210-

ettle

Ŏ



Control Plan 59) 98 Erosion ge **1**0 Phase

- 1. INSTALL THE STORM DRAINAGE SYSTEM AND INLET
- 2. INSTALL SANITARY SEWER SYSTEM SEPTIC FIELD /

PLLC

Design,

and

Engineering

Gettle

3616

- 4. STABILIZE DISTURBED AREAS WITHIN 14 WORKING DAYS AFTER COMPLETION OF ANY PHASE OF GRADING.
- 5. REGULARLY INSPECT AND MAINTAIN THE EROSION
- IMMEDIATELY. IF MUD AND DEBRIS ARE NOT KEPT OFF THE STREET, ENFORCEMENT ACTION (REVOKING THE GRADING PERMIT AND/OR STOP WORK ORDER) MAY BE
- LEAVING THE SITE DESPITE PROPER IMPLEMENTATION CONTROL PLAN, THE PERSON RESPONSIBLE FOR THE

Control Plan (1098359) Phase 2 -Stor

Project No. 23001

Dwg No.

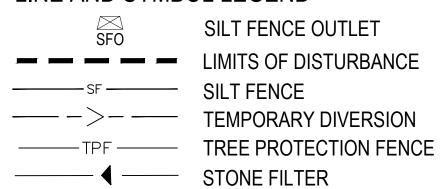
CONSTRUCTION SEQUENCE - PHASE 3

- 1. CONSTRUCT CONCRETE CURB IN ROADWAYS AND PARKING LOT. PLACE AND COMPACT STONE IN THE ROADWAYS AND PARKING LOT. REMOVE THE GRAVEL ENTRACE.
- 2. INSTALL SILT BAGS AT CURB AND DROP INLETS.
- 3. COMPLETE FINE GRADING AND STABILIZE DISTURBED AREAS AS SOON AS
- 4. ONCE THE SITE IS STABILIZED AND APPROVAL FROM STORMWATER INSPECTIONS TO SCHEDULE THE REMOVAL OF THE SEDIMENT BASINS (SEE NOTES BELOW). DEWATER SEDIMENT BASIN USING A SILT BAG AND MUCK OUT REMAINING SEDIMENT.
- 5. BEGIN INSTALLATION OF THE BMP, RISER AND DISCHARGE PIPE TO INCLUDE RIPRAP APRON. CONTACT PROJECT ENGINEER TO INSPECT DURING INSTALLATION PROCESS. SURVEY INVERT ELEVATIONS FOR AS-BUILT INFORMATION REQUIRED BY THE TOWN OF ZEBULON AND WAKE COUNTY.
- 6. GRADE ANY REMAINING AREAS TO FINAL GRADE. UPON COMPLETION THE GROUND COVER SHALL BE PROVIDED AS FOLLOWS: A. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER
- INSTALLATION. B. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 30 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING. C. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) DAYS.
- D. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY E. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN FOURTEEN (14) CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.
- 7. ONCE THE BMP INSTALLATION IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, THE SITE IS STABILIZED, CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT, KARYN PAGEAU AT (919) 796-8769, TO SCHEDULE A STORMWATER INSPECTION.

REQUIRED WAKE COUNTY BASIN REMOVAL SEQUENCE

- 1. SCHEDULE A SITE MEETING WITH THE WAKE COUNTY ENVIRONMENTAL, KARYN PAGEAU AT (919) 796-8769, TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- 2. CONTACT NCDEQ RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&SC JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A)REASON FOR CONVERSION, B)BASIN #, C)DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01.(KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
- 3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- 4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- 6. WHEN SITE IS FULLY STABILIZED, CALL WAKE COUNTY ENVIRONMENTAL CONSULTANT, JEEVAN NEUPANE AT (919) 819-8907, FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE.

LINE AND SYMBOL LEGEND



REFERENCE DRAWINGS:

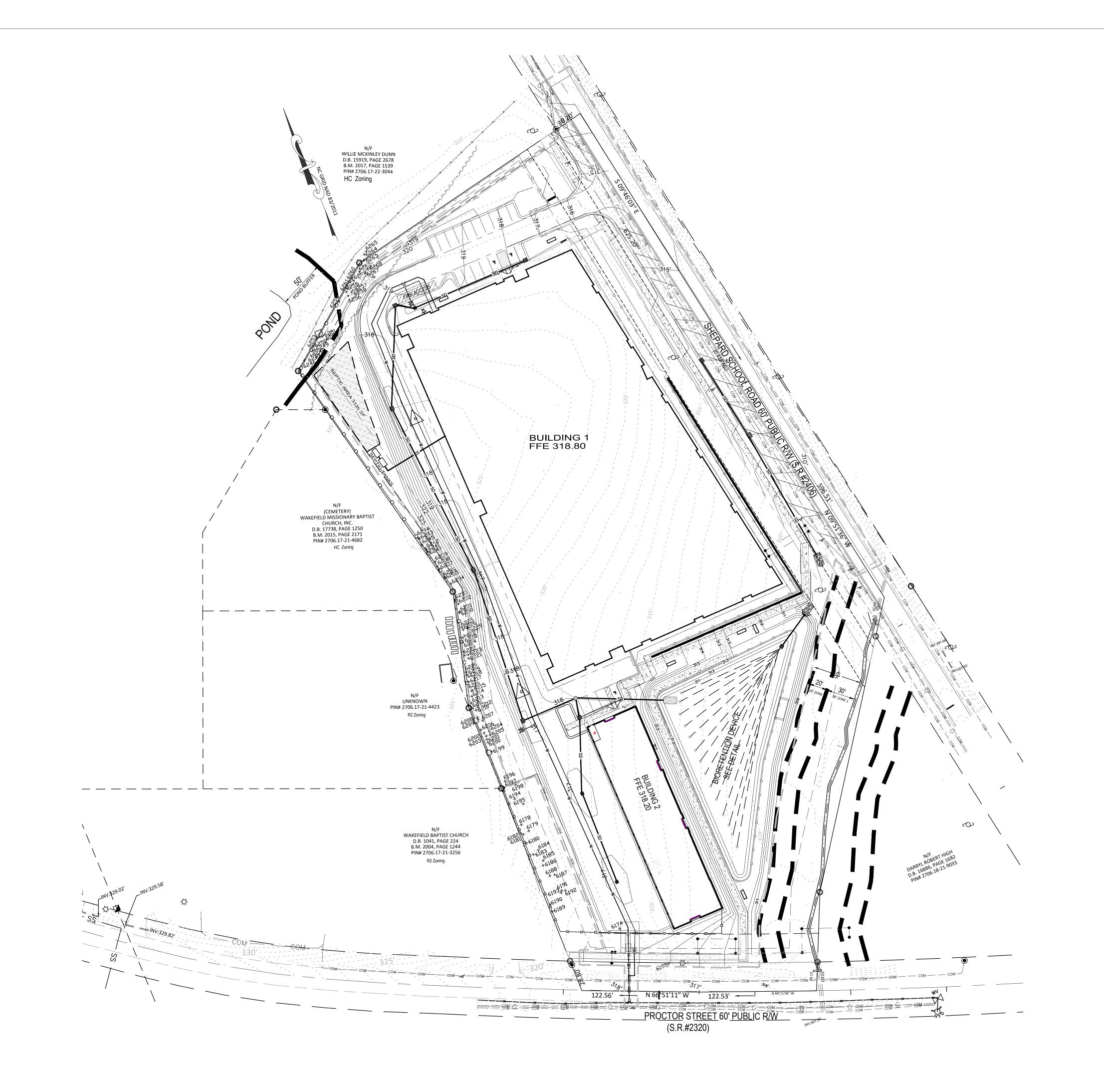
- 1. SEE SHEET C6 AND C7 FOR STORM DRAIN SCHEDULE.
- 2. SEE SHEET C5 FOR DETAILED SITE GRADING NOTES. 3. SEE SHHETS C8, C9 AND C10 FOR THE UTILITY PLAN.
- 4. SEE SHEET D3 FOR BMP DETAILS.

GRAPHIC SCALE 1"=50'

Design, and Engineering 3616 V Forest, -3934 Gettle

PLL

Plan \Im Phase 3



CONSTRUCTION SEQUENCE - PHASE 4

1. ENSURE THE SITE IS COMPLIANT WITH THE NCG01 SELF INSPECTION AND GROUND STABILIZATION AND MATERIAL HANDLING.

2. FOR ALL AREAS OF MODERATE AND / OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) DAYS.

3. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.

4. REMOVE SILT FENCE AND TREE PROTECTION FENCING WHEN GRADING ACTIVITIES ARE COMPLETE AND THE PROJECT SITE IS STABLIIZED.

5. ONCE THE BMP INSTALLATION IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, THE SITE IS STABILIZED, CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT KARYN PAGEAU AT (919) 796-8769 TO SCHEDULE A STORMWATER FINAL INSPECTION. BMP CERTIFICATIONS AND AS-BUILT PLANS MUST BE PROVIDED TO WAKE COUNTY / TOWN OF ZEBULON PRIOR TO FINAL PLATTING.

6. ONCE THE STORMWATER FINAL INSPECTION IS APPROVED, CLOSE THE GRADING PERMIT AND OBTAIN A CERTIFICATE OF COMPLETION.

NPDES NOTES

1. THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000.

2. THIS PAGE CAN BE APPROVED BY THE CITY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.

3. THIS PAGE OF THE APPROVED PLANS IS ENFORCEABLE EXCLUSIVELY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.

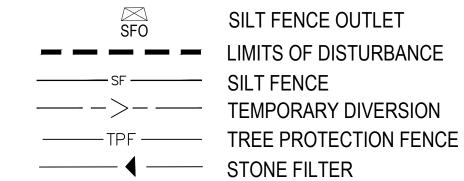
4. THE CITY / COUNTY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT A PART OF THE APPROVED PLANS FOR PURPOSES OF ENFORCEMENT ACTION UNDER THE CITY / COUNTY CODE.

5. DOCUMENTATION REQUIRED UNDER THE SITE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY SHALL BE SUBMITTED TO WAKE COUNTY.

NPDES GROUND STABILIZATION SCHEDULE

111 000	01100110		1001120022
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS	APPLICABLE AREA ON THIS SITE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED	NONE
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH	AS SHOWN
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)	REMAINDER OF SITE

LINE AND SYMBOL LEGEND



REFERENCE DRAWINGS:

- SEE SHEET C6 AND C7 FOR STORM DRAIN SCHEDULE.
- SEE SHEET C5 FOR DETAILED SITE GRADING NOTES.
- 3. SEE SHHETS C8, C9 AND C10 FOR THE UTILITY PLAN.

4. SEE SHEET D3 FOR BMP DETAILS.

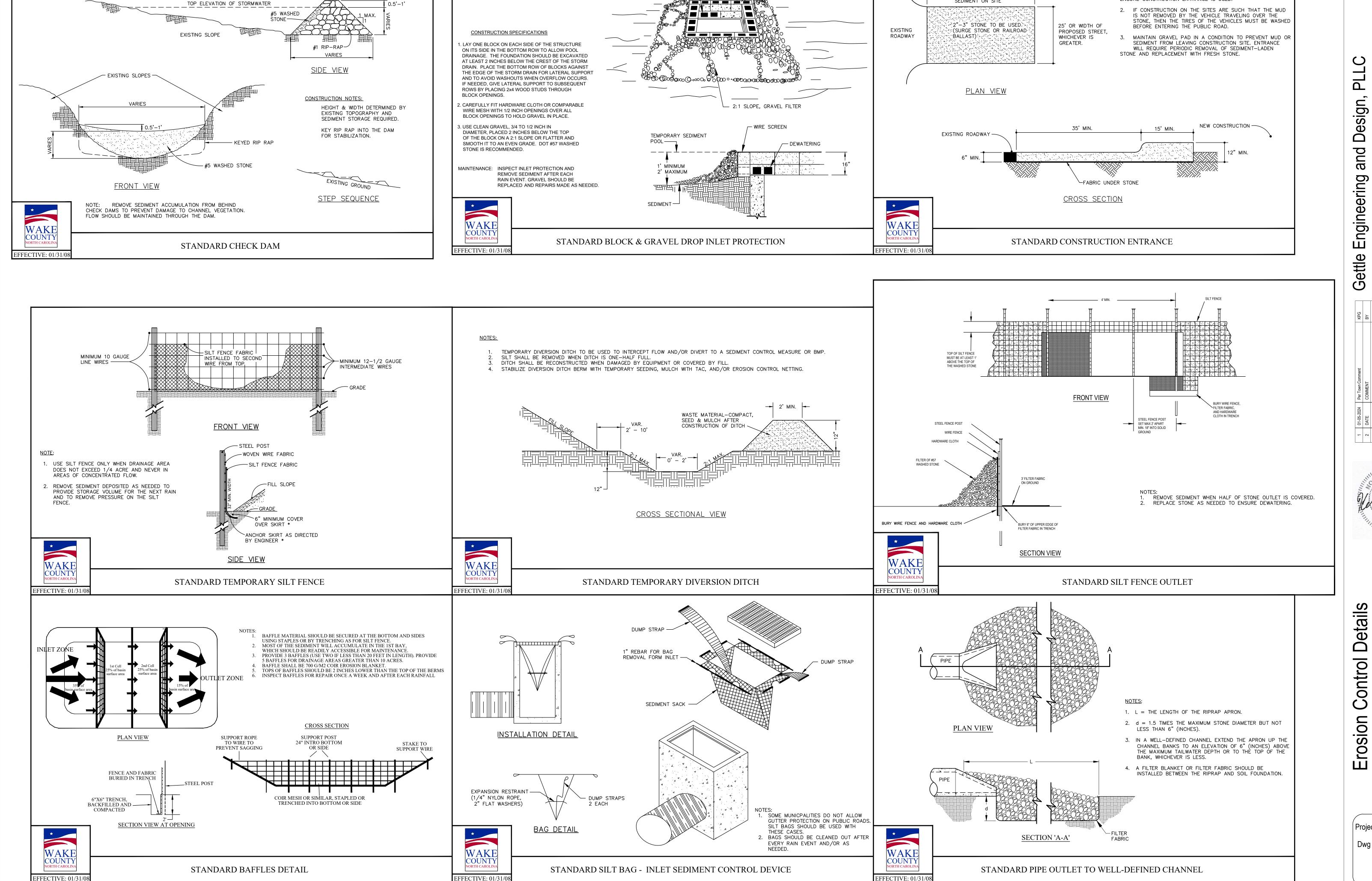
Control Plan Phase 4 Stor

Project No. 23001

GRAPHIC SCALE 1"=50'

Design, Engineering and Gettle

PLLC



- DEWATERING

- CONCRETE BLOCK

BUT SUFFICIENT TO KEEP

SEDIMENT ON SITE

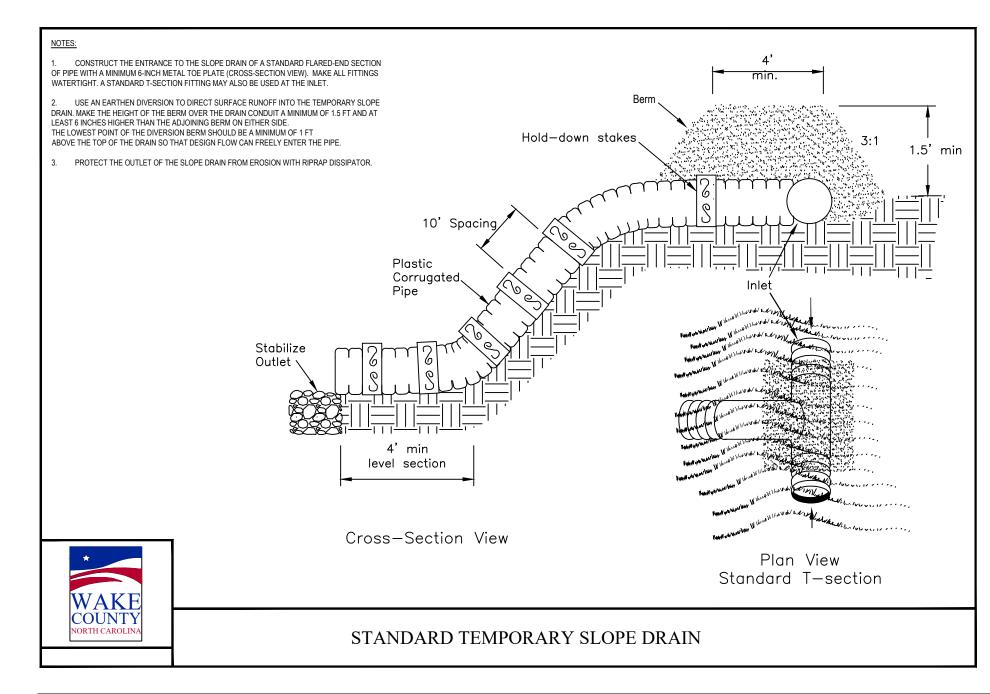
27

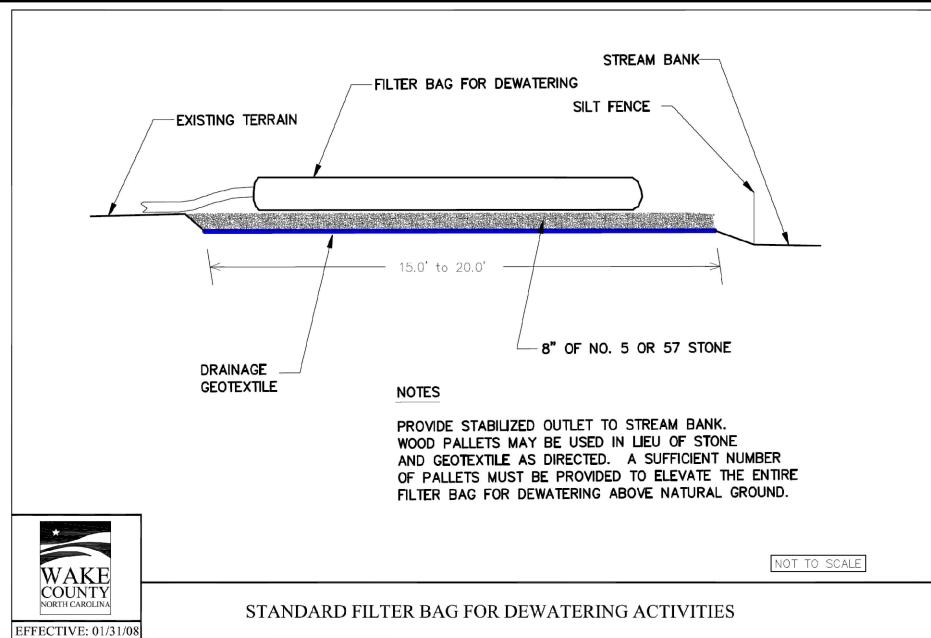
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO

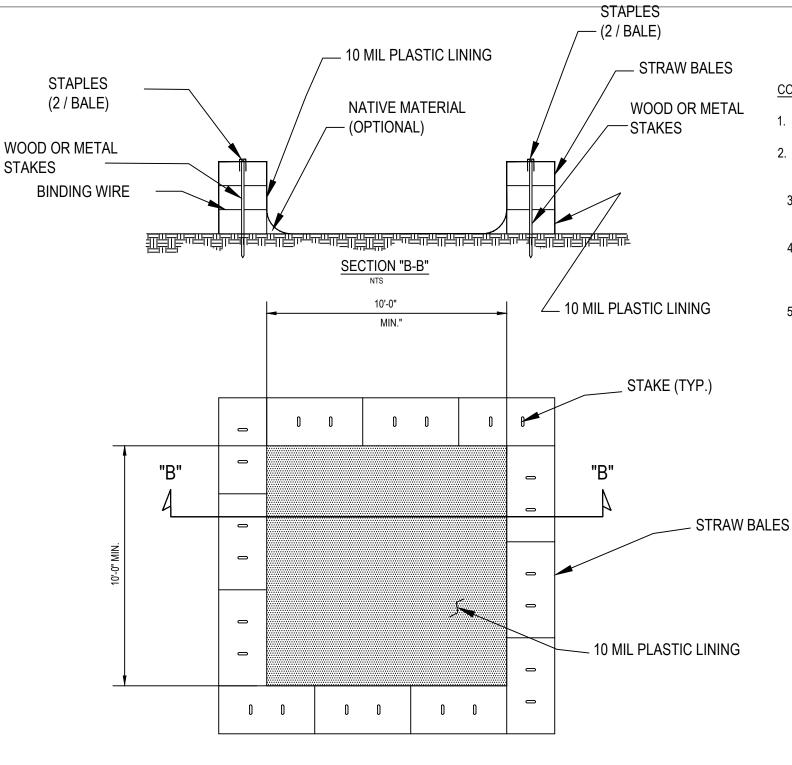
ENSURE CONSTRUCTION ENTRANCE IS USED.

Engineering a 3616 Waxwing C ake Forest, North Cal 210-3934 Firm

098359) **Details** StorageMa 901 Pro bulon, Wake C







TEMPORARY CONCRETE WASHOUT AREA

CONCRETE WASH OUT AREA NOTES

- ACTUAL LAYOUT DETERMINED IN THE FIELD SEE EC1 PLAN FOR LOCATION.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE FACILITY.
- 3. LOCATE THE WASHOUT AREA AT LEAST 50-FEET FROM SENSITIVE AREAS SUCH
- AS STORM DRAINS, OPEN DITCHES OR WATER BODIES, INCLUDING WETLANDS.
- 4. THE PLASTIC LINING MATERIAL SHOULD BE A MIN OF 10 MIL. POLYETHLENE MATERIAL AND FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT MAY COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
- 5. WHEN THE FACILITY IS NO LONGER REQUIRED THE HARDENED CONCRETE SLURRIES AND LIQUIDS SHALL BE PROPERLY DISPOSED OF OFF-SITE. MATERIAL USED TO CONSTRUCT THE FACILITY SHALL BE PROPERLY DISPOSED OF OFF-SITE. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY FACILITY SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE

SEEDBED PREPARATION:

SEEDING

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE. 2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM. 4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE MIXTURE BELOW). 5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP. 6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING. 7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.

8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING

9. CONSULT ENGINEER OR LANDSCAPE ARCHITECT ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS

ASPHALT EMULSION AT 300 GALS/ACRE

MIXTURE:

ANCHOR:

AGRICULTURAL LIMESTONE: 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS) FERTILIZER: 1,000 LBS/ACRE - 10-10-10 SUPERPHOSPHATE: 500 LBS/ACRE - 20% ANALYSIS 2 TONS/ACRE - SMALL GRAIN STRAW

SEEDING SCHEDULE

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1):

<u>PLANTING RATE</u> 300 LBS/ACRE DATE I YPE AUG 15 - NOV 1 TALL FESCUE NOV 1 - MAR 1 TALL FESCUE & ABRUZZI RYE 300 LBS/ACRE

MAR 1 - APR 15 TALL FESCUE 300 LBS/ACRE APR 15-JUN 30 HULLED COMMON BERMUDAGRASS 25 LBS/ACRE

JUL 1- AUG 15 TALL FESCUE AND BROWNTOP MILLET 125 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MILLET); OR SORGHUM-SUDAN HYBRIDS*** 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)

FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 TO 2:1):

NOV 1 - MAR 1AND ABRUZZI RYE

MAR 1 - JUN 1 SERICEA LESPEDEZA (SCARIFIED) AND 50 LBS/ACRE (SERICEA LESPEDEZA);

USE THE FOLLOWING COMBINATIONS: MAR 1 - APR 15 ADD TALL FESCUE 120 LBS/ACRE MAR 1 - JUN 30 OR ADD HULLED COMMON BERMUDAGRASS

TALL FESCUE AND BROWNTOP MULLET 120 LBS/ACRE (TALL FESCUE); OR SORGHUM-SUDAN HYBRIDS*** 35 LBS/ACRE (BROWNTOP MULLET);

SERICEA LESPEDEZA (UNHULLED - 70 LBS/ACRE (SERICEA LESPEDEZA); UNSCARIFIED) AND TALL FESCUE 120 LBS/ACRE (TALL FESCUE) 25 LBS/ACRE

CONSULT ENGINEER OR LANDSCAPE ARCHITECT FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

4

Design,

and

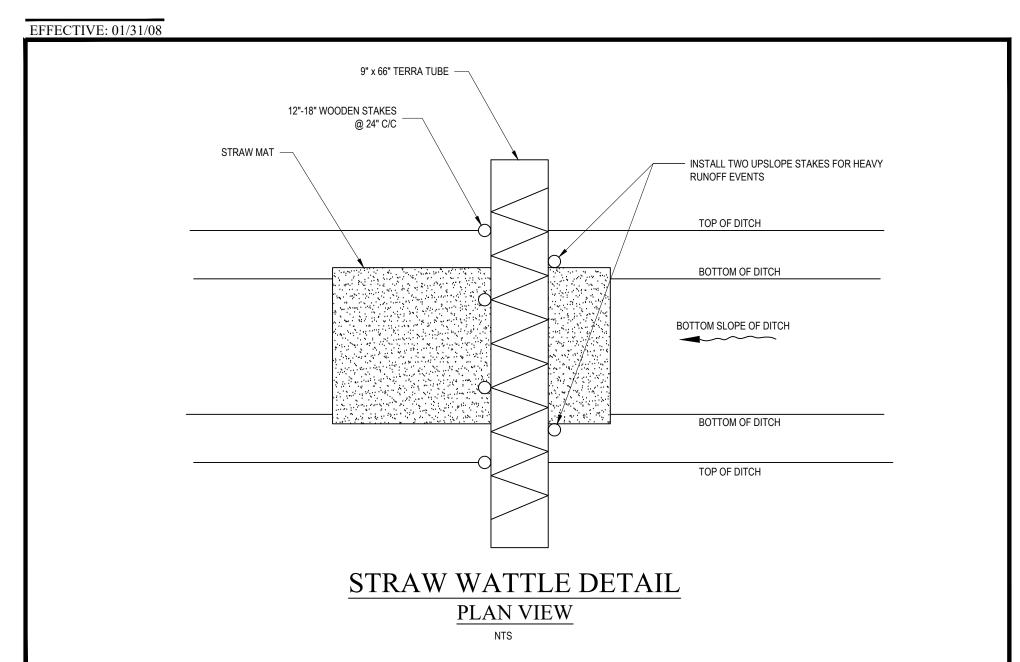
Engineering

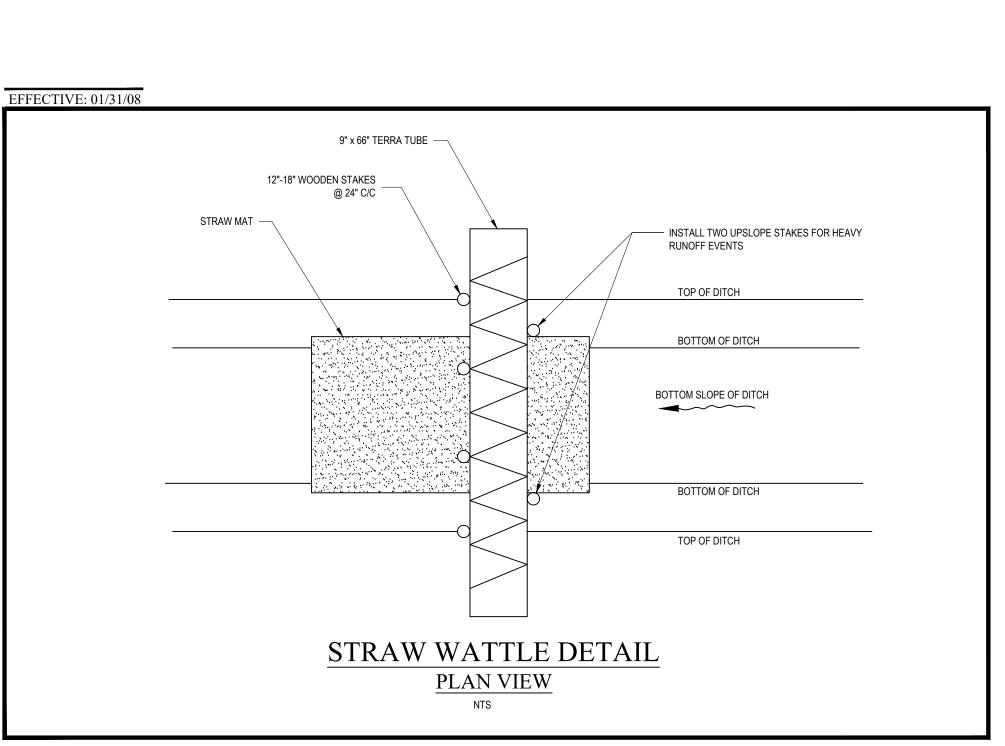
ettle

(

3616 W Forest, 3934

Control Details JeMax (1098359) Erosion





GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the elegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

Temporary and Permanent Groundcover*

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2011)					
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS			
Perimeter dikes, swales, ditches, slopes	7 days	None			
High Quality Water (HQW) Zones	7 days	None			
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.			
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.			
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zone			

*-For Falls Lake watershed, in disturbed areas where grading activities are incomplete, provide temporary groundcover no later than seven (7) days for slopes steeper than 3:1; ten (10) days for slopes equal to or flatter than 3:1; fourteen (14) days for areas with no slope.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

- Temporary grass seed covered with straw or Permanent grass seed covered with straw or
- other mulches and tackifiers other mulches and tackifiers Hydroseeding Geotextile fabrics such as permanent soil
- Hydroseeding temporary grass seed Shrubs or other permanent plantings covered Appropriately applied straw or other mulch
- Plastic sheeting with mulch Uniform and evenly distributed ground cover Structural methods such as concrete, asphalt

or retaining walls

POLYACRYLAMIDES (PAMS) AND FLOCCULANT Select flocculants that are appropriate for the soils being exposed during

- construction, selecting from the NC DWR List of Approved PAMS/Flocculants. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures. Apply flocculants at the concentrations specified in the NC DWR List of Approved
- PAMS/Flocculants and in accordance with the manufacturer's instructions. Provide ponding area for containment of treated Stormwater before discharging
- 5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.



EQUIPMENT AND VEHICLE MAINTENANCE

Maintain vehicles and equipment to prevent discharge of fluids. Provide drip pans under any stored equipment.

to a recycling or disposal center that handles these materials.

- Identify leaks and repair as soon as feasible, or remove leaking equipment from the
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem

Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products

- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE Never bury or burn waste. Place litter and debris in approved waste containers. 2. Provide a sufficient number of waste containers on site to manage the quantity of waste produced.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland. 5. Cover waste containers at the end of each workday and before storm events. Repair
- or replace damaged waste containers.
- 6. Anchor all lightweight items in waste containers during times of high winds. 7. Empty waste containers as needed to prevent overflow.

Dispose waste off-site at an approved disposal facility.

PAINT AND OTHER LIQUID WASTE

- Do not dump paint and other liquid waste into storm drains, streams or wetlands. Locate paint washouts at least 50 feet away from storm drain inlets and surface
- waters unless no other alternatives are reasonably available. Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place
- on a gravel pad and surround with sand bags. Provide staking or anchoring of portable toilets during periods of high winds or in high
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

CCHORETE CLEARLY MARKED SIGNAGE NOTING DEVICE (18'X24" MIN.) 3,CONCRETE WASHOUT STRUCTURE NEEDS TO B CLEARY MARKED WITH SIGNAGE NOTING DEVICE

CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility. Manage washout from mortar mixers in accordance with the above item and in
- addition place the mixer and associated materials on impervious barrier and within
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for
- review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail. Do not use concrete washouts for dewatering or storing defective curb or sidewalk
- sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it
- install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow. Locate washouts in an easily accessible area, on level ground and install a stone

can be shown that no other alternatives are reasonably available. At a minimum,

- entrance pad in front of the washout. Additional controls may be required by the Install at least one sign directing concrete trucks to the washout within the project
- limits. Post signage on the washout itself to identify this location. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural

components when no longer functional. When utilizing alternative or proprietary

products, follow manufacturer's instructions. 10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

Store and apply herbicides, pesticides and rodenticides in accordance with label

- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.

4. Do not stockpile these materials onsite.

IAZARDOUS AND TOXIC WASTE Create designated hazardous waste collection areas on-site.

Place hazardous waste containers under cover or in secondary containment. 3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 03/01/19

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include [40 CFR 122.41]:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made duri weekend or holiday periods, and no individual-day rainf information is available, record the cumulative ra measurement for those un-attended days (and this widetermine if a site inspection is needed). Days on which rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring deviapproved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	 Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, Corrective actions taken, and Date of actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	 Identification of the discharge outfalls inspected, Date and time of the inspection, Name of the person performing the inspection, Evidence of indicators of stormwater pollution such a oil sheen, floating or suspended solids or discoloratio Indication of visible sediment leaving the site, Actions taken to correct/prevent sedimentation, and Date of actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment the has left the site limits, 2. Date of actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidit from the construction activity, then a record of the following shall be made: 1. Evidence and actions taken to reduce sediment contributions, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.

SELF-INSPECTION, RECORDKEEPING AND REPORTING

Documentation Requirements

SECTION B: RECORDKEEPING 1. E&SC Plan Documentation

Item to Document

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner

item to bocument	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This general permit as well as the certificate of coverage, after it is received.
- (b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request [40 CFR 122.41]

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING 1. Occurrences that must be reported

Permittees shall report the following occurrences: (a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or They are within 100 feet of surface waters (regardless of volume).
- (a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref. 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (b) Anticipated bypasses and unanticipated bypasses.
- (c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Reporting Timeframes (After Discovery) and Other Requirements

(a) Visible sediment deposition in a stream or wetland	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sedimen related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	 Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41[](7)]	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(1)(6). Division staff may waive the requirement for a written report on a

case-by-case basis.

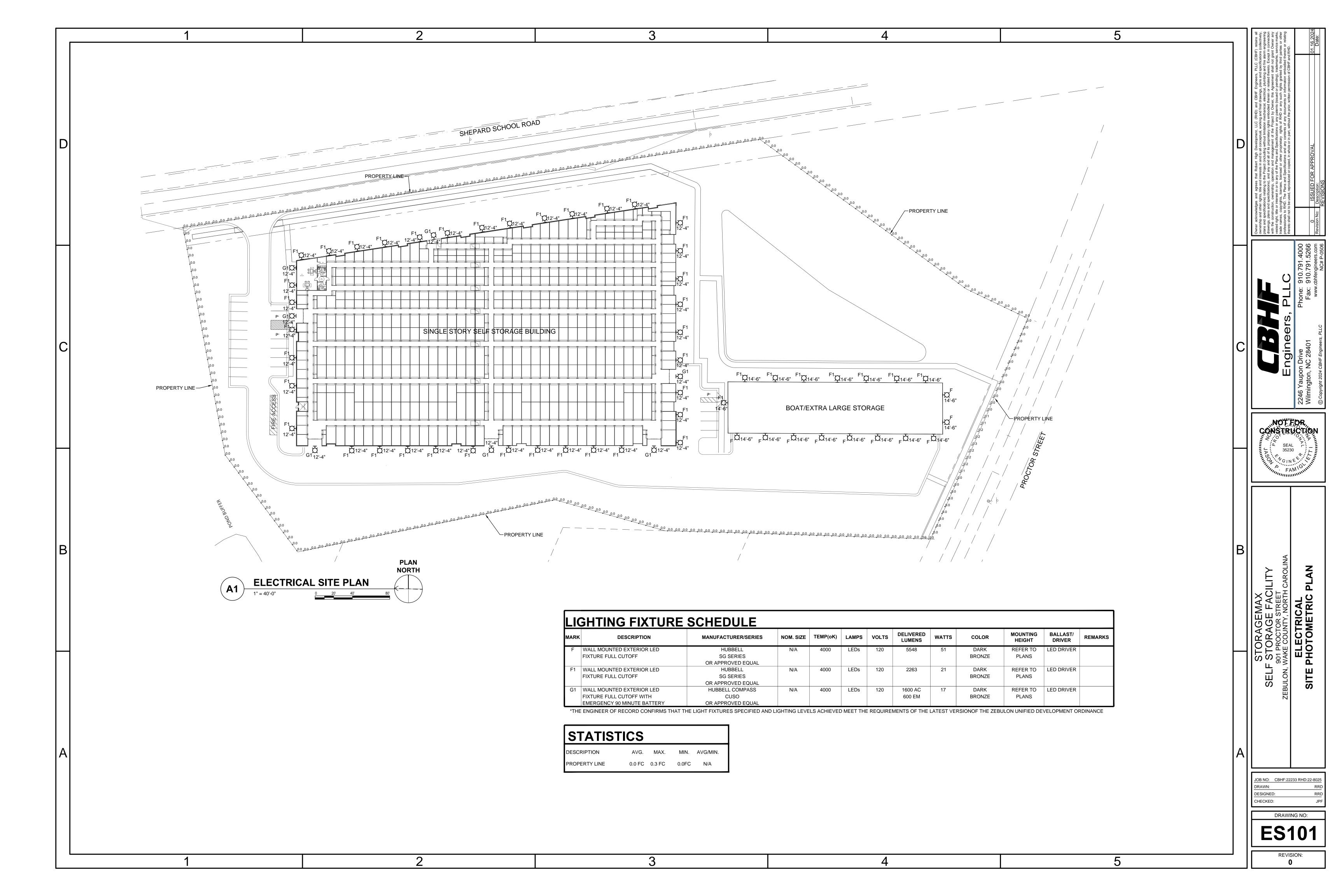


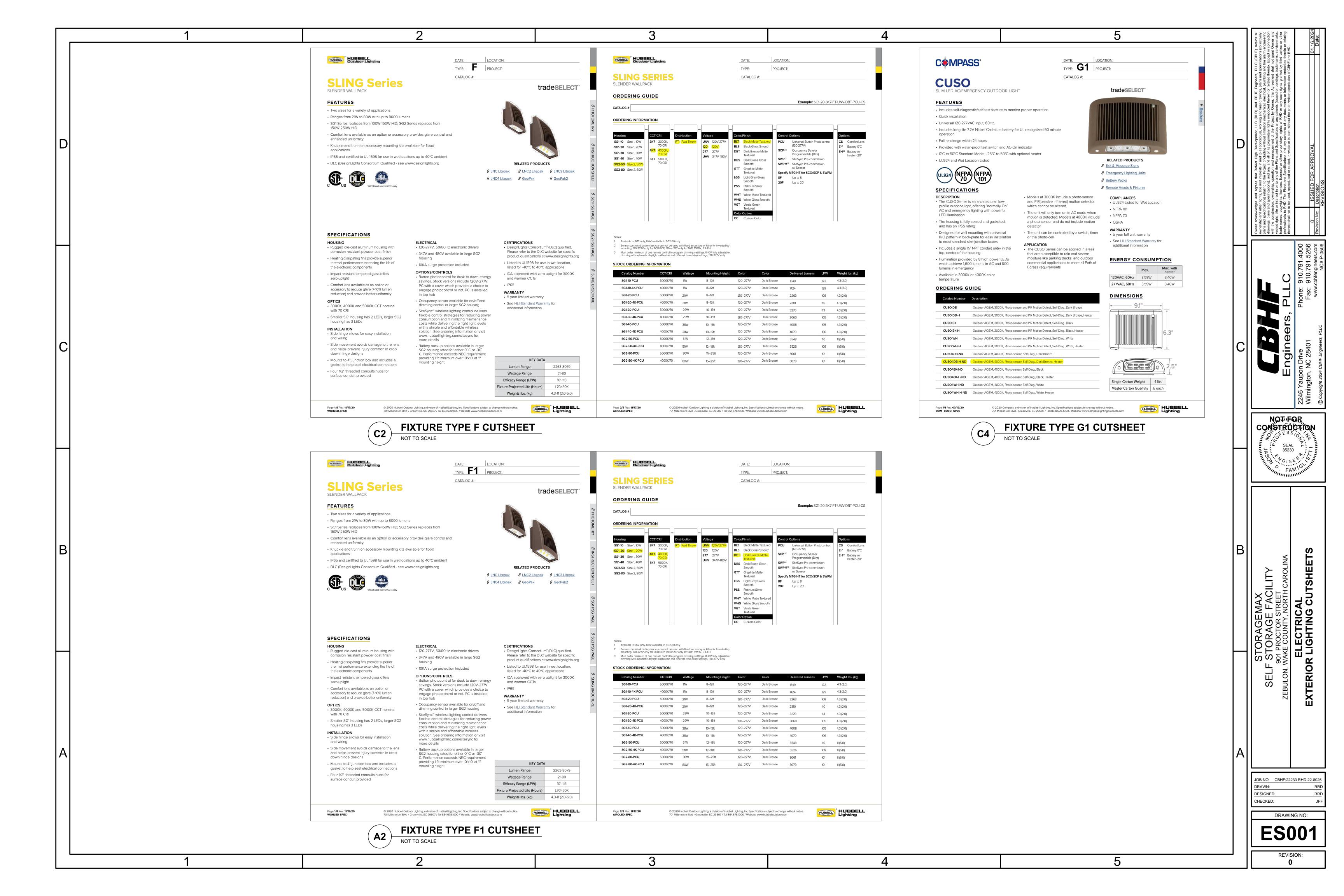
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

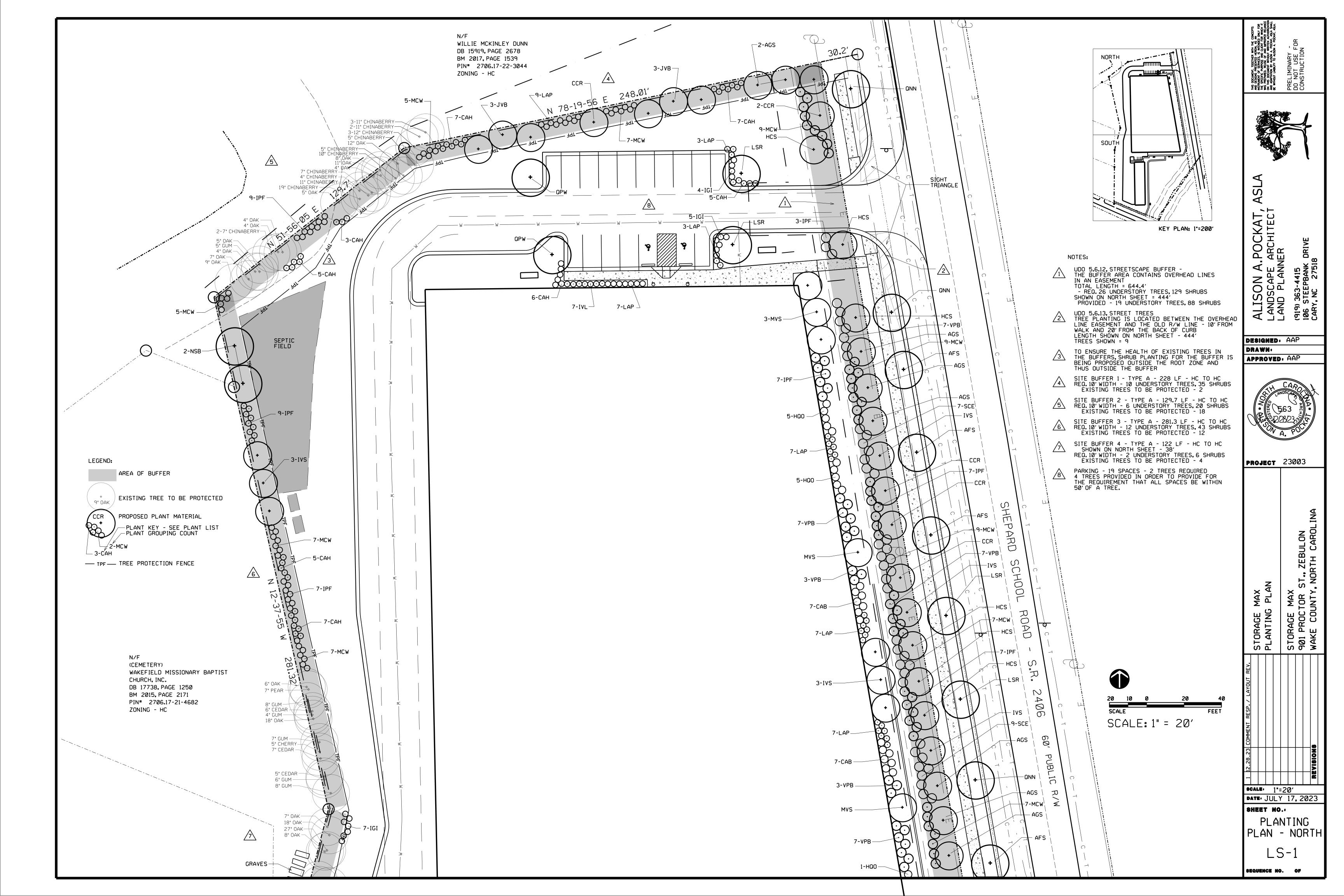
EFFECTIVE: 03/01/19

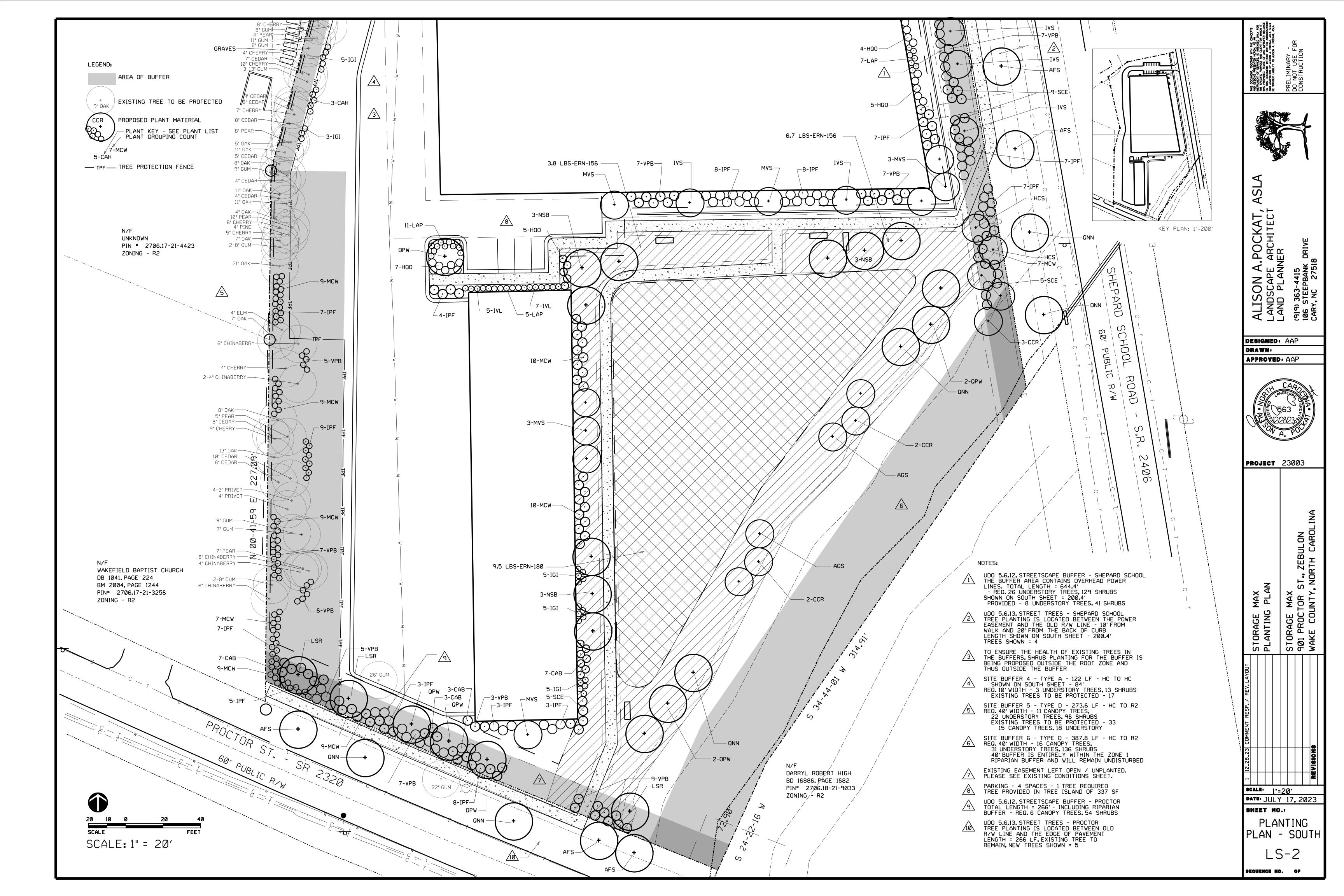
PL Engineering and Design, 3616 Waxwing Court, lke Forest, North Carolina 27587 3616 V orest, 3934 Gettle

REQUIREMENTS geMax (1098359) NCG01









KEY	COUNT	PLANT NAME	SIZE & SPR.	SPACING	FOLIAGE
AFS	9	ACER FLORIDANUM, SOUTHERN SUGAR MAPLE	2.5"B&B, 8'HT	20′	DEC
LSR	7	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA', FRUITLESS SWEETGUM	2.5"B&B, 8'HT	20′	DEC
NSB	11	NYSSA SYLVATICA, BLACK GUM	2.5"B&B, 8''HT	20′	DEC
QNN	9	QUERCUS NUTTALLI, NUTTAL OAK	2.5"B&B, 8'HT	20′	DEC
QPW	10	QUERCUS PHELLOS, WILLOW OAK	2.5"B&B, 8'HT	20'	DEC
AGS	10	AMELANCHIER GRANDIFLORA, SERVICEBERRY	1.5"CAL, 6'HT	15′	DEC
CCR	13	CERCIS CANADENSIS, REDBUD	1.5"CAL, 6'HT	15′	DEC
HCS	8	HALESIA CAROLINA, SILVERBELL	1.5"CAL, 6'HT	15′	DEC
IVS	14	ILEX VOMITORIA 'SHADOW'S FEMALE', YAUPON HOLLY	6'HT, CONT.	15′	EVER
JBV	6	JUNIPERUS VIRGINIANA 'BURKII', BURKII CEDAR	6'HT, CONT.	15′	EVER
MVS	14	MAGNOLIA VIRGINIANA 'AUSTRALIS', SWEET BAY	6'HT, CONT.	15′	EVER

PLANT LIST - SHRUB PLANTING

				0/C	
KEY	COUNT	PLANT NAME	SIZE & SPR.	SPACING*	FOLIAGE
IDE	105	ILLICIUM DADVIELODUM (EODECT CDEEN) ANICE	2001 241117	2 /5/	EVED.
IPF	135	ILLICIUM PARVIFLORUM 'FOREST GREEN', ANISE	3GAL,24"HT	3/5′	EVER
MCW	151	MYRICA CERIFERA, WAX MYRTLE	3GAL,24"HT	3/5′	EVER
SCE	35	SAMBUCUS CANADENSIS, ELDERBERRY	3GAL,24"HT	5′	DEC
VPB	97	VIBURNUM PRUNIFOLIUM, BLACKHAW	3GAL,24"HT	3/5′	EVER
CAB	27	CALLICARPA AMERICANA 'ATROPURPUREA', BEAUTYBERRY	3GAL,24"HT	4/5′	DEC
HQO	32	HYDRANGEA QUERCIFOLIA 'ALICE', OAKLEAF HYDRANGEA	3GAL,18"HT	4′	DEC
CAH	48	CLETHRA ALNIFOLIA 'HUMMINGBIRD', CLETHRA	3GAL,18"HT	3′	DEC
IGI	39	ILEX GLABRA 'SHAMROCK', INKBERRY	3GAL,24"HT	3′	EVER
IVL	19	ITEA VIRGINICA 'LITTLE HENRY', SWEETSPIRE	3GAL,18"HT	3′	DEC
LAP	66	LEUCOTHOE POPULIFOLIA, FLORIDA LEUCOTHOE	3GAL,15"HT	3′	EVER
ERN-1	56 10 . 5	ERNST CONSERVATION SEED MIX - ERNMX-156	BY POUND	25 LBS/A0	CRE
ERN-1		ERNST CONSERVATION SEED MIX - ERNMX-180-2	BY POUND	0.5 LB/1,0	

NOTE: ALL PLANT MATERIAL SPECIFIED IS CONSIDERED TO BE A LOCAL NC NATIVE WITH THE FOLLOWING EXCEPTIONS:

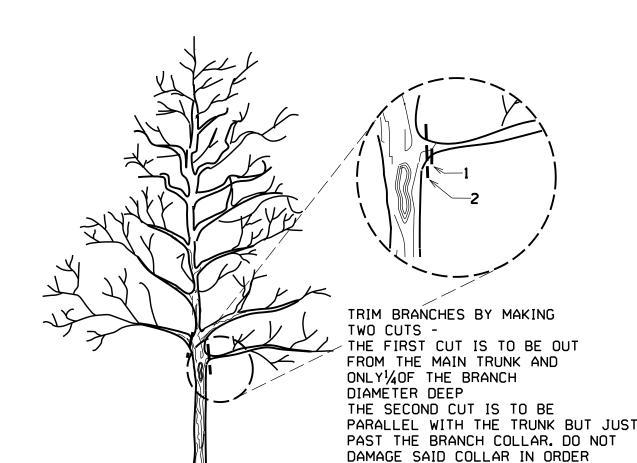
LSR, AGS, IVS, MVS - ARE HYBRIDS OF NATIVE PLANT MATERIAL

CCR, JBV, HQO, CAH, IPF - ARE CULTIVARS OF NATIVE PLANT MATERIAL

* O/C SPACING LISTED X/Y REFERS TO BUFFER USE / STREETSCAPE USE

CONTRACTOR IS TO ENSURE THAT ALL PLANT COUNTS ARE CORRECT BEFORE INSTALLATION.

TO ALLOW FOR THE WOUND TO HEAL



TREE PRUNING

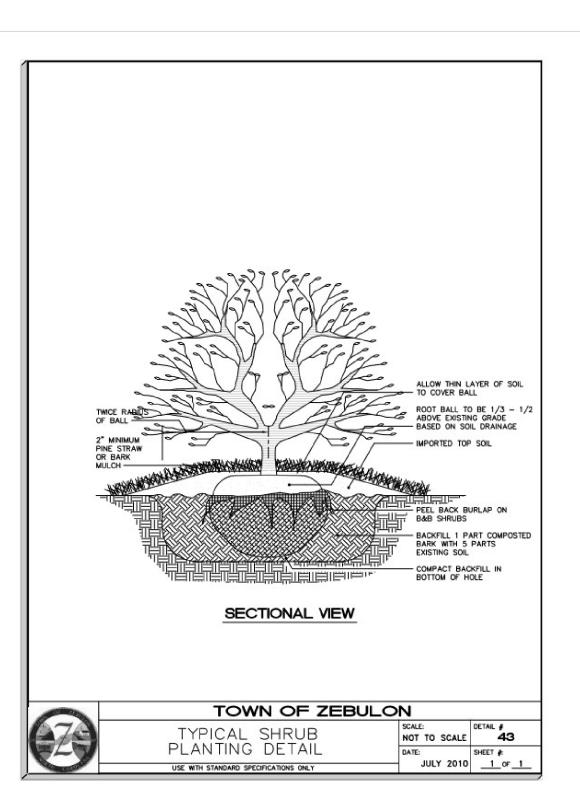
MAINTENANCE NOTES:

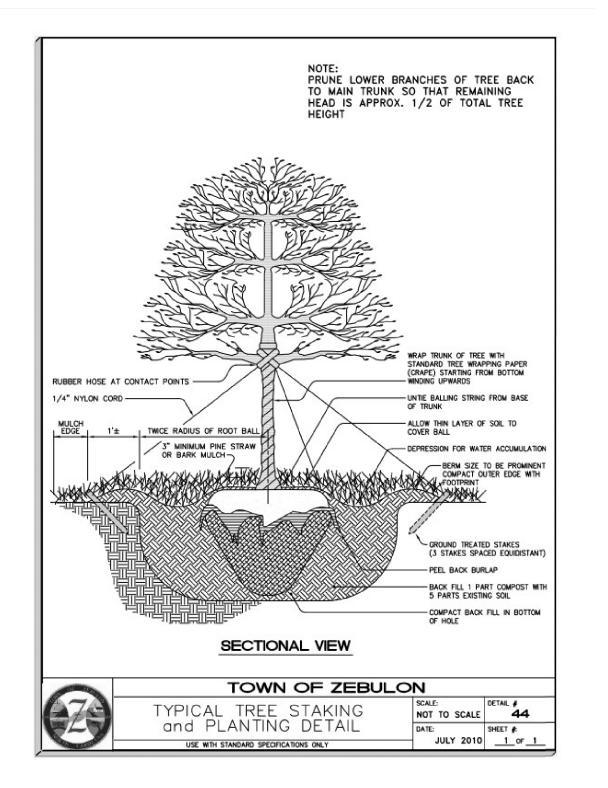
1. FERTILIZE TREES TWICE PER YEAR - EARLY SPRING WITH HIGH NITROGEN FERTILIZER (A RATIO OF 4-1-1 OR MULTIPLES THEREOF), AND EARLY FALL WITH HIGH POTASSIUM AND PHOPHOROUS FERTILIZER (A RATIO OF 1-4-4 OR MULTIPLES THEREOF). ENSURE THAT FERTILIZER IS WATERED IN. REMOVE STAKES SIX MONTHS AFTER TREES ARE PLANTED.

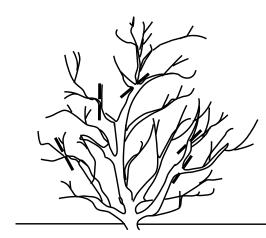
0/0

- 2. PRUNING / TRIMMING OF SHRUBS SHOULD BE DONE IN EARLY SPRING JUST PRIOR TO LEAFFING OUT. HEAD LIMBS WITH EXCESSIVE HEIGHT REMOVE LIMB BACK TO THE CROTCH IN THE MAIN STEM. DO NOT HEDGE! REMOVE ALL DEAD WOOD OR BRANCHES.
- 3. HAND WEED UNLESS WEED NUMBERS BECOME EXCESSIVE. TREAT EXCESSIVE BROADLEAF WEEDS WITH AN APPLICATION OF 2.4-D AS DIRECTED ON PACKAGE. TREAT EXCESSIVE WEED GRASS PROBLEMS WITH ROUNDUP.
- 4. MINOR PEST INFESTATIONS CAN GO UNTREATED. EXCESSIVE INSECT AND GRUB INFESTATIONS NEED TO BE TREATED AS DIAGNOSED WITH AN APPROPRIATE PESTICIDE. EXCESSIVE FUNGAL INFESTATIONS NEED TO BE TREATED IN TWO TO THREE SUCESSIVE TREATMENTS OVER A PERIOD OF TWO TO THREE WEEKS WITH AN APPROPRIATE FUNGICIDE.
- 5. PROVIDE A HALF INCH ANNUAL APPLICATION OF YARD WASTE COMPOST TO ALL LAWN AND BEDDED AREAS IN THE EARLY SPRING. RAKE OUT EVENLY BUT DO NOT TILL IN. FERTILIZE GRASS IN EARLY FALL WITH A RATIO OF 4-3-1 OR MULTIPLES THEREOF.
- 6. REFURBISH MULCH TWICE PER YEAR SPRING AND FALL. DO NOT EXCEED 2" OF MULCH AND COMPOST COMBINED AT ANY ONE TIME.
- 7. MOWING OF GRASS SHOULD BE DONE AS NEEDED. GENERALLY HYBRID BERMUDA GRASS SHOULD BE MOWN EVERY 5-7 DAYS AT A HEIGHT OF 1".
- 8. EVALUATE SOIL PH AND IRON LEVELS ANNUALLY. APPLY AMMENDMENTS AS NEEDED ACCORDING TO SOIL ANALYSIS.
- 9. PROTECT EXISTING PLANTINGS AVOID EXCESSIVE TRAFFIC INTO THE ZONE OF THE EXISTING PLANT MATERIAL.
- 10. MOW BIORETENTION SEEDED AREAS AND WILDFLOWER SEEDED AREAS ONCE A YEAR IN EARLY SPRING TO A HEIGHT OF 6 8. DO NOT MOW WITH A LAWN MOWER.

NOTE: FAILURE TO MAINTAIN ALL PLANTINGS IN ACCORDANCE WITH THIS PLAN MAY CONSTITUTE A VIOLATION OF THE LAND DEVELOPMENT ORDANCE AND MAY RESULT IN FINES.







TRIM SHRUBS BY HEADING BACK -TRIM BACK TO A CROTCH IN THE BRANCHING WITH A CUT FLUSH TO THE REMAINING STEM DO NOT HEDGE!

SHRUB PRUNING

PLANT NOTES

1. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE DETERMINED AND VERIFIED IN THE FIELD BY THE LANDSCAPE CONTRACTOR. PLANTINGS SHALL BE ADJUSTED TO AVOID CONFLICT WITH SAID UTILITIES AND WITH SITE FEATURES LIKE WALLS AND PAVING.

2. SUBSOIL CONDITIONS AND SUBSURFACE DRAINAGE REQUIREMENTS OF ALL PLANT MATERIALS SHALL BE DETERMINED IN THE FIELD BY THE LANDSCAPE CONTRACTOR.

3. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO THE NEW GRADE THAT THEY BORE TO THE PREVIOUS GRADE.

4. THE LANDSCAPE CONTRACTOR SHALL STAKE THE LOCATION OF ALL TREES AND SHRUBS AND CHECK FOR CORRECT SPACING PRIOR TO PLANTING.

5. ALL PLANT MATERIALS ARE AS STATED. NO SUBSTITUTIONS WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT.

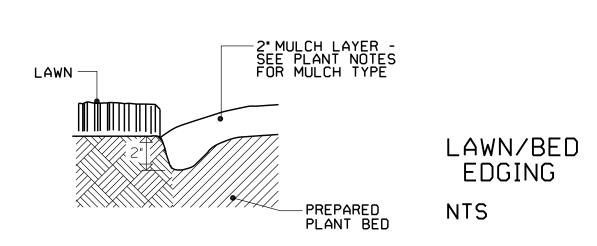
6. ALL NYLON OR POLYESTER TREATED BURLAP AND SYNTHETIC ROPING SHALL BE REMOVED ENTIRELY PRIOR TO PLANTING. ALL WIRES. ROPES AND HOSES USED TO STAKE THE TREES SHALL BE REMOVED NO LATER THAN 18 MONTHS AFTER PLANTING.

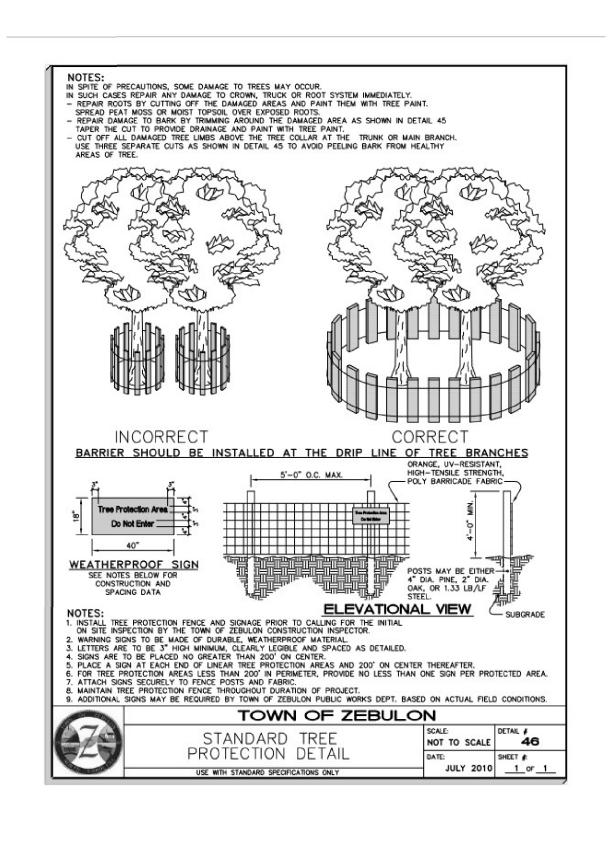
7. IN AREAS TO BE GRASSED, FINISH GRADE AND RAKE SOIL SURFACE. APPLY A 2" LAYER OF LEAF OR COMPARABLE COMPOST AND TILL TO A DEPTH OF 6 INCHES. SEED WITH HULLED PRINCESS 77 HYBRID BERMUDAGRASS OR LIKE HYBRID BERMUDA AT A RATE OF 2- 4 LBS OF SEED PER 1000 SQUARE FEET. THE OPTIMUM SEEDING TIME IS APRIL 1 - JUNE 1. IF PLANTING AFTER JUNE 1. CONTACT THE LANDSCAPE ARCHITECT FOR GRASSING ALTERNATIVES. ALL SEED SHALL BE CERTIFIED (BLUETAG) MEETING ALL STANDARDS OF PURITY AS REQUIRED BY THE U.S.D.A. FERTILIZER SHALL BE APPLIED TO ALL AREAS TO BE GRASSED AT A RATE OF 40 LBS PER 1,000 SQ. FT. WITH A FORMULA OF 2-8-8 OR SIMILAR COMBINATION. COVER ALL SEED WITH CLEAN GRAIN STRAW MULCH.

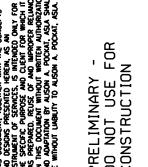
8. THE OPTIMUM PLANTING SEASON IS OCTOBER 1 - MARCH 31 UNLESS AN ALTERNATIVE WATER SOURCE CAN BE PROVIDED. ALL PLANTS ARE TO MEET OR EXCEED THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS FOR THE SIZES SPECIFIED. ONE WEEK PRIOR TO PLANTING, BEDDED AREAS ARE TO BE WATERED AND TREATED WITH ROUNDUP, FINALE OR AN EQUALLY EFFECTIVE COMPLETE HERBICIDE. BEDS SHALL BE TILLED TO A DEPTH OF 6" AND AMENDED WITH A 2" LAYER OF LEAF OR COMPARABLE COMPOST MATERIAL ALONG WITH 0-8-8 FERTILIZER (AT A RATE OF 25 LBS PER 5,000 SQ. FT.) AND DOLOMITIC LIME (AT A RATE OF 10 LBS PER 5,000 SQ. FT.). THESE RATES ARE TO BE ADJUSTED AS PER SOIL TESTING RESULTS AS NEEDED. ALL BEDS SHALL BE MULCHED WITH A 2" THICK LAYER OF TRIPLE SHREDDED HARDWOOD MULCH. PLANTS SHALL BE WATERED THOROUGHLY IMMEDIATELY UPON INSTALLATION.

9. ALL BARE AREAS OF SOIL NOT SPECIFIED FOR PLANT MATERIAL IN BEDS OR SEED MIXES ARE TO BE GRASSED. ALL SOIL SURFACES ARE TO BE COVERED WITH PLANTS, MULCH, BUILDING OR PAVING. LEAVE NO SOIL BARE. ALL PLANTINGS SHALL BE BEDDED AND MULCHED. 10. THE CONTRACTOR SHALL PROVIDE AN 18 MONTH GUARANTEE ON ALL PLANT MATERIAL AND WORK.

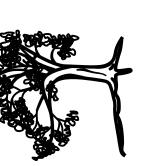
11. SEED MIXES AVAILABLE FROM ERNST CONSERVATION SEEDS - 1-800-873-3321.











S \triangleleft

ALISON A.POCKAT, LANDSCAPE ARCHITECT LAND PLANNER (919)

DESIGNED: AAP DRAWN: APPROVED: AAP

PROJECT 23003

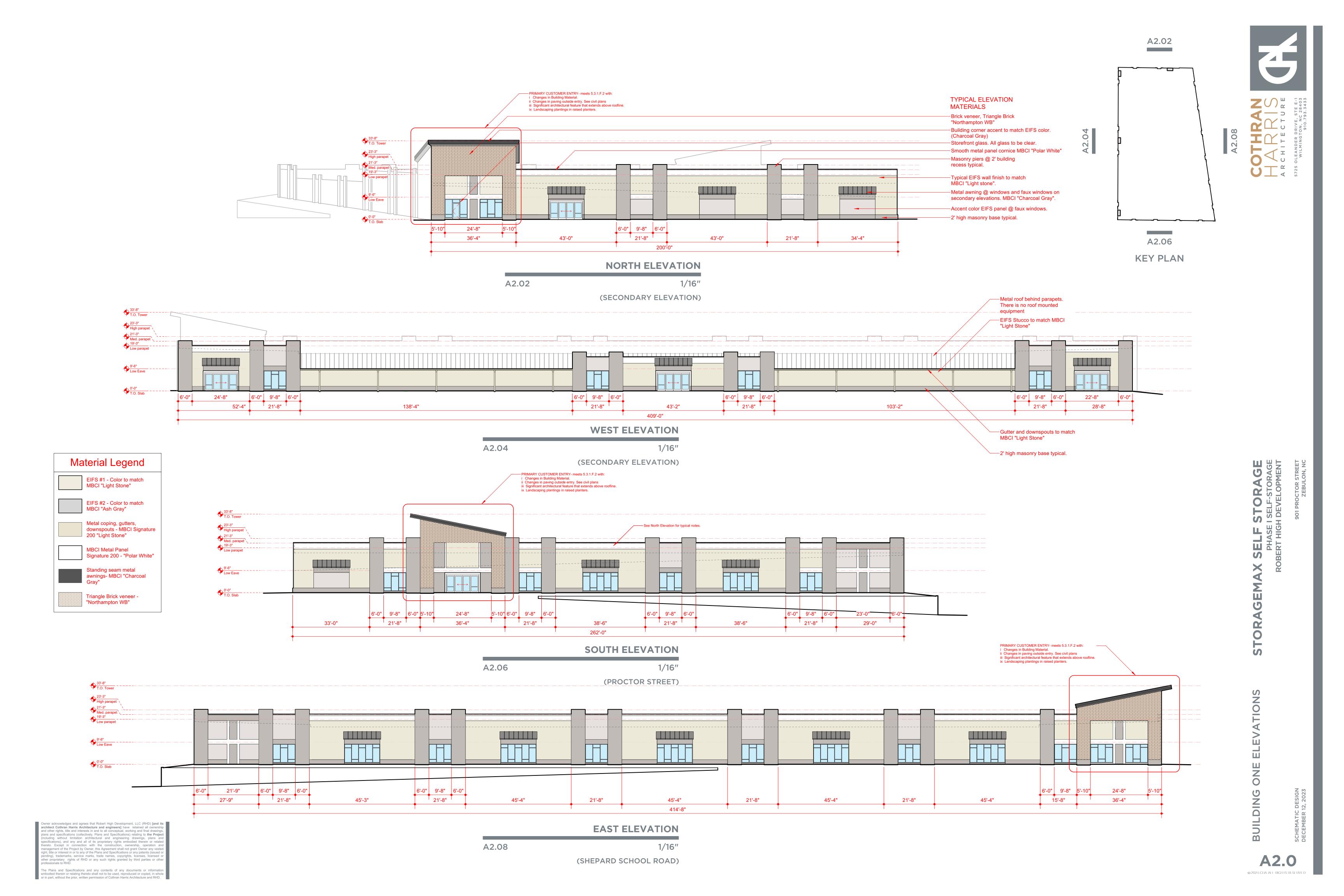
AIL DE AND S MAA TOR ORAGE STORAGE 901 PROC⁻ WAKE COL STI PL

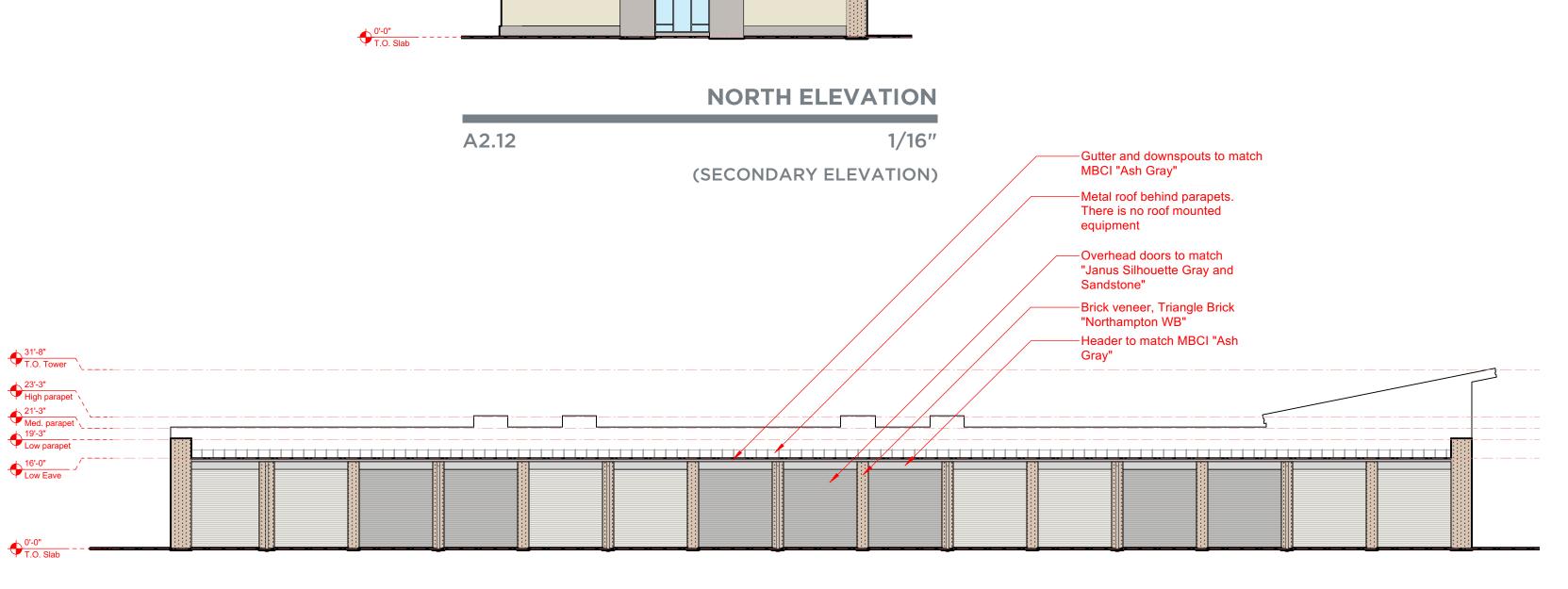
scale: 1'=20' DATE: JULY 17, 2023

SHEET NO .: PLANTING DETAILS

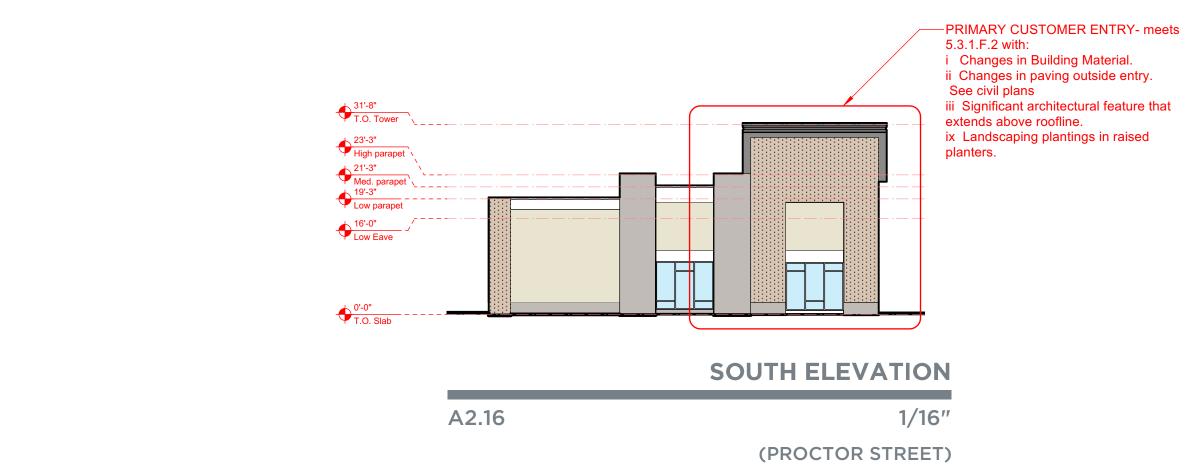
LS-3

SEQUENCE NO. OF





WEST ELEVATION A2.14 1/16" (TERTIARY ELEVATION)



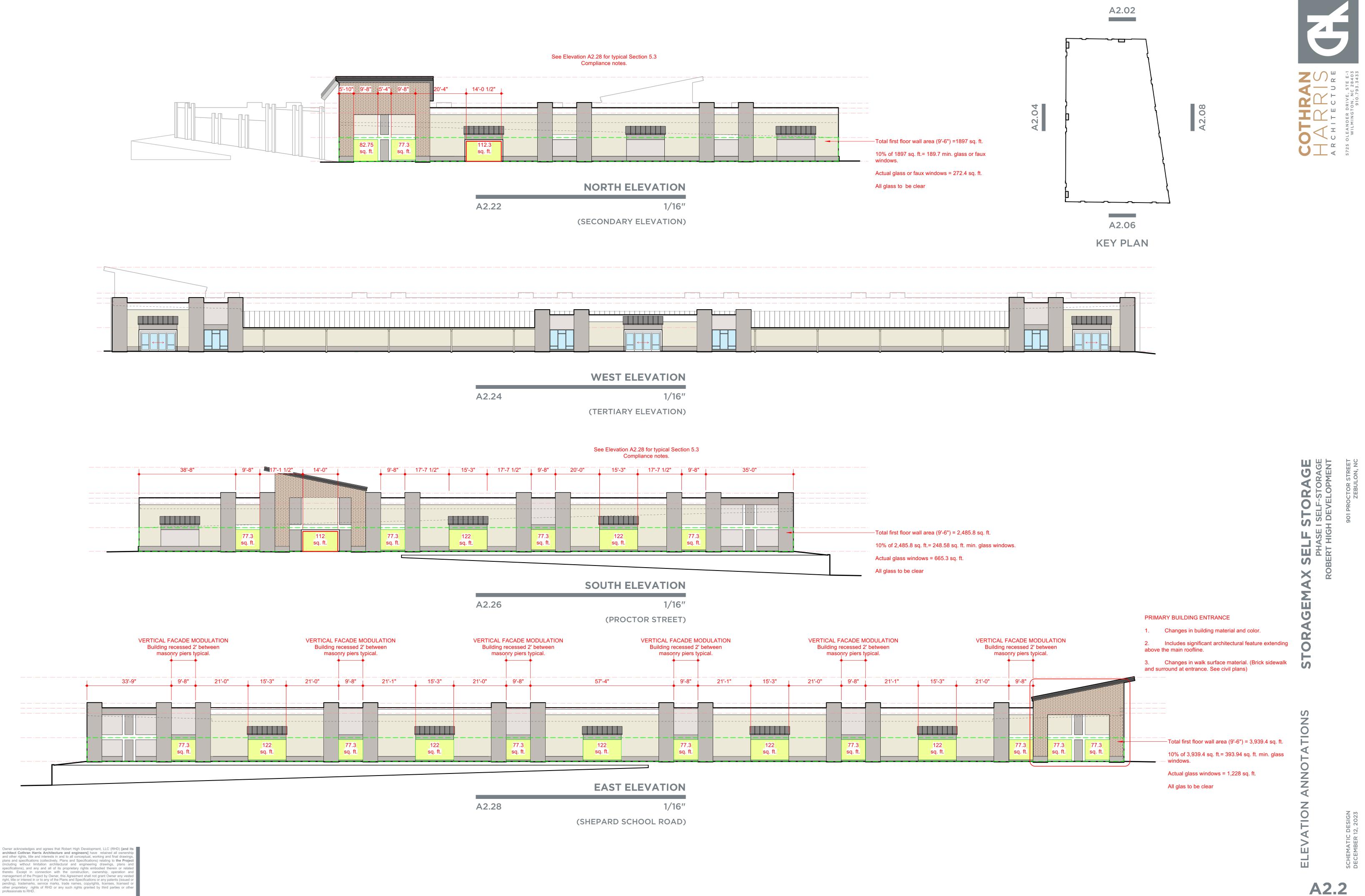


A2.18 1/16" (SHEPARD SCHOOL ROAD)

Owner acknowledges and agrees that Robert High Development, LLC (RHD) [and its architect Cothran Harris Architecture and engineers] have retained all ownership and other rights, title and interests in and to all conceptual, working and final drawings, plans and specifications (collectively, Plans and Specifications) relating to the Project (including without limitation architectural and engineering drawings, plans and specifications), and any and all of its proprietary rights embodied therein or related thereto. Except in connection with the construction, ownership, operation and management of the Project by Owner, this Agreement shall not grant Owner any vested right, title or interest in or to any of the Plans and Specifications or any patents (issued or pending), trademarks, service marks, trade names, copyrights, licenses, licensed or other proprietary rights of RHD or any such rights granted by third parties or other professionals to RHD.

SELF STORAGE
PHASE I SELF-STORAGE
OBERT HIGH DEVELOPMENT
901 PROCTOR STREET
ZEBULON, NC

STORAGEMAX



The Plans and Specifications and any contents of any documents or information embodied therein or relating thereto shall not to be used, reproduced or copied, in whole or in part, without the prior, written permission of Cothran Harris Architecture and RHD.

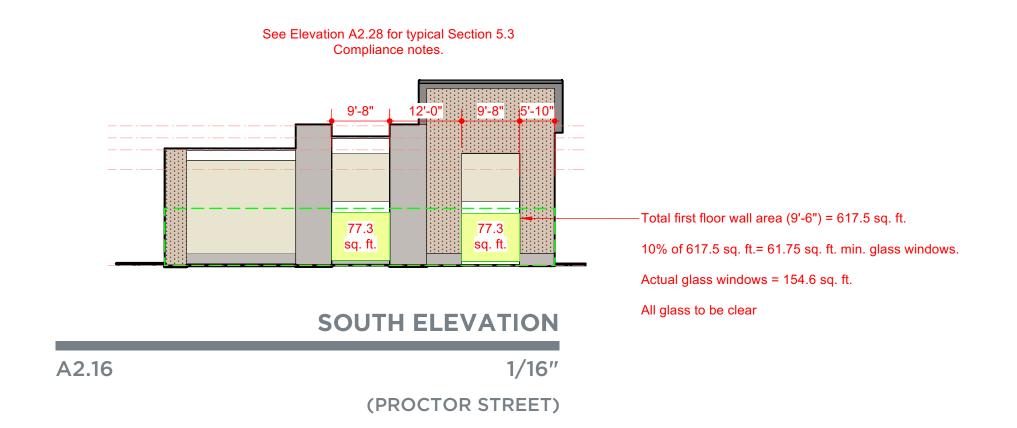
© 2023 CHA ALL RIGHTS RESERVED

KEY PLAN

Total first floor wall area (9'-6") = 614.3 sq. ft. 10% of 614.3 sq. ft.= 61.43 sq. ft. min. glass windows. Actual glass windows = 77.3 sq. ft. All glass to be clear NORTH ELEVATION A2.12 1/16"

(TERTIARY ELEVATION)

WEST ELEVATION A2.14 1/16" (TERTIARY ELEVATION)



See Elevation A2.28 for typical Section 5.3 Compliance notes. 9'-8" 55'-4" 59'-7" Total first floor wall area (9'-6") = 2,185 sq. ft. 10% of 2,185 sq. ft.= 218.5 sq. ft. min. glass 5'-10" 9'-8" 5'-6" 9'-6" Actual glass windows = 309.3 sq. ft. **EAST ELEVATION** All glass to be clear A2.18 1/16"

(SHEPARD SCHOOL ROAD)

Owner acknowledges and agrees that Robert High Development, LLC (RHD) [and its architect Cothran Harris Architecture and engineers] have retained all ownership and other rights, title and interests in and to all conceptual, working and final drawings, plans and specifications (collectively, Plans and Specifications) relating to the Project (including without limitation architectural and engineering drawings, plans and specifications), and any and all of its proprietary rights embodied therein or related thereto. Except in connection with the construction, ownership, operation and management of the Project by Owner, this Agreement shall not grant Owner any vested right, title or interest in or to any of the Plans and Specifications or any patents (issued or pending), trademarks, service marks, trade names, copyrights, licenses, licensed or other proprietary rights of RHD or any such rights granted by third parties or other professionals to RHD. The Plans and Specifications and any contents of any documents or information embodied therein or relating thereto shall not to be used, reproduced or copied, in whole or in part, without the prior, written permission of Cothran Harris Architecture and RHD.

ELEVATION ANNOTATIONS

SELF STORAGE
PHASE I SELF-STORAGE
OBERT HIGH DEVELOPMENT
901 PROCTOR STREET
ZEBULON, NC STORAGEMAX