

PITTSBORO WARD

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

DURHAM, NORTH CAROLINA STAKE

OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312



EarthCentric Engineering, Inc.
 LICENSE #C-2698
 204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com

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 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
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 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312

COVER SHEET

MICHAEL R. McLEOD
 ARCHITECT, PA
 72 SOUTH END COURT,
 HAMPSTEAD VILLAGE
 HAMPSTEAD, NORTH CAROLINA
 PHONE: (910) 270-9778
 FAX: (910) 270-9461

REV.	DATE	DESCRIPTION
1	05/12/15	PER TOWN COMMENTS

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: N/A
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: CPK
 PROJECT NO: 13-008
 DRAWING NAME: 13-008 REVIEW

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 SHEET NO.
C1.0
 REVIEW

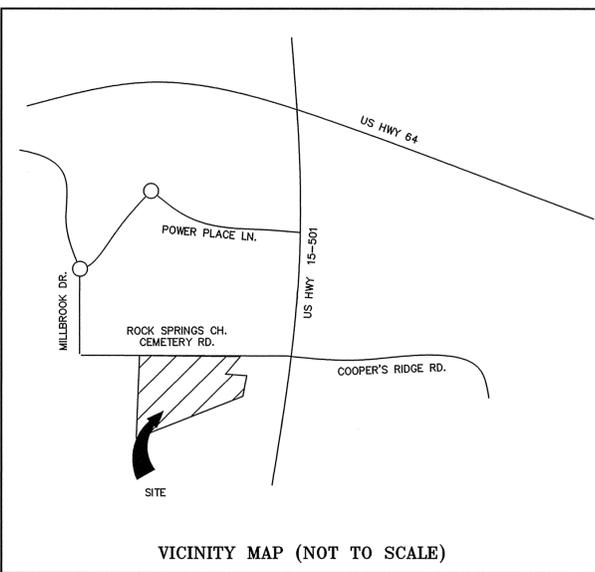
GENERAL NOTES

- EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY DATA SUPPLIED BY R.S. JONES AND ASSOCIATES, INC.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL MEASURES FOR ALL WORK W/IN PUBLIC R/W PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND THE N.C. SUPPLEMENT TO THE MUTCD, AND LOCAL CITY INSPECTORS DIRECTION.
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GRADING & STORM DRAINAGE NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL CONSTRUCTION STANDARDS, SPECIFICATIONS, AND PROCEDURES AND THE NODENR'S SEDIMENTATION AND EROSION CONTROL STANDARDS, SPECS., AND PROCEDURES.
- CONTRACTOR SHALL VERIFY THAT ALL APPLICABLE STATE AND LOCAL PERMITS REQUIRED FOR THE COMMENCEMENT OF GRADING OPERATIONS HAVE BEEN OBTAINED PRIOR TO START OF GRADING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF DEMOLITION AND/OR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO REMAIN DURING ALL CONSTRUCTION ACTIVITIES.
- ALL STORMWATER MANAGEMENT FACILITIES SHALL BE DESIGNED AND CONSTRUCTED TO MEET ALL STATE AND LOCAL REQUIREMENTS, INCLUDING 2007 STATE STANDARDS AND POSTED UPDATES FOR WATER QUALITY AND DETENTION FACILITIES.
- EROSION CONTROL MEASURES SHALL BE PROVIDED AS NEEDED TO PROTECT ADJACENT PROPERTIES.
- CONTRACTOR SHALL PROVIDE ALL STAKING, FLAGGING AND/OR FENCING NECESSARY TO PROVIDE PROPER PROTECTION OF THE STREAM BUFFER.



LEGEND

	NEW	EXISTING
PROPERTY LINE	---	---
EASEMENT	---	---
SETBACK	---	---
RIGHT-OF-WAY	---	---
CENTERLINES	---	---
CURB & GUTTER	---	---
EDGE OF PAVEMENT	---	---
SIDEWALK	---	---
CREEK	---	---
STRUCTURE NO.	①	
CATCH BASIN	■	□
YARD INLET	⊙	□
STORM DRAINAGE JUNCTION BOX	⊙	□
CURB INLET	⊙	⊙
SANITARY SEWER MANHOLE	⊙	⊙
SANITARY SEWER CLEANOUT	⊙	⊙
METER BOX	⊙	⊙
VALVE	⊙	⊙
FIRE HYDRANT	⊙	⊙
FIRE DEPARTMENT CONNECTION	⊙	⊙
LIGHT POLE	⊙	⊙
UTILITY POLE AND GUY WIRE	⊙	⊙
CABLE TV LINE	TV	XTV
ELECTRIC	E	XE
FIBER OPTIC CABLE	FO	XFO
GAS LINE	G	XG
OVERHEAD UTILITY LINE	OH	XOH
SANITARY SEWER	SS	XSS
STORM DRAIN PIPE	SD	XSD
TELEPHONE	T	XT
WATER LINE	W	XW
GRADE CONTOUR	400	400
FINISHED GRADE SPOT ELEVATION	356.44	356.44
CLEARING LIMIT/TREE LINE	---	---
LIMITS OF DISTURBANCE	---	---
DITCH OR SWALE FLOWLINE	---	---
TREE PROTECTION FENCE	---	---
SILT FENCE	---	---
FENCE	X	X
RIP RAP APRON	---	---
CHECK DAM	---	---
SEDIMENT FENCE OUTLET	---	---
INLET PROTECTION	---	---
WHEELCHAIR RAMP	---	---
ELECTRICAL TRANSFORMER	---	---
	EIP EXISTING IRON PIPE	○
	EIR EXISTING IRON ROD	●
	NIR NEW IRON ROD	⊙
	NS PK NAIL SET	X
	CP COMPUTED POINT R/W	⊗

PROJECT DATA

PIN / PARCEL#	9742-95-3103 / 90131
DEED:	BK:1756 PG:808-810 YR:2014
PLAT:	BK: 2014 PG:0177
AREA	5.02 ACRES (0.32 AC IN R/W)
ZONE	R-12 (MED. DENSITY RESIDENTIAL)
FEMA MAP	3710974200J, DATED 02-02-2007
FLOODPLAIN?	NOT LOCATED IN HAZARD AREA
SOILS	GaB (GEORGEVILLE, GROUP B)
WATERSHED	WS-IV PA, JORDAN LAKE
MAX. HEIGHT	35'
PRO. HEIGHT	32.5' TO STEEPLE BASE
BUILDING AREA	12,135 SF BASED ON FOOTPRINT
SETBACKS	30' FRONT / 10' SIDE / 25' REAR
SEATING	250 SEATS IN CHAPEL
PARKING REQUIREMENT	1 SPACE PER 4 SEATS = 63 MINIMUM SPACES

CALL BEFORE YOU DIG... IT'S THE LAW.
 CALL N.C. ONE-CALL(1-800-632-4949)
 FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST
 2 WORKING DAYS PRIOR TO BEGINNING GRADING OR TRENCHING.
 NORTH CAROLINA GENERAL STATUTE 87-102

OWNER / DEVELOPER:
 CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, A UTAH CORPORATION SOLE
 50 E N TEMPLE STREET
 SALT LAKE CITY, UT 84150

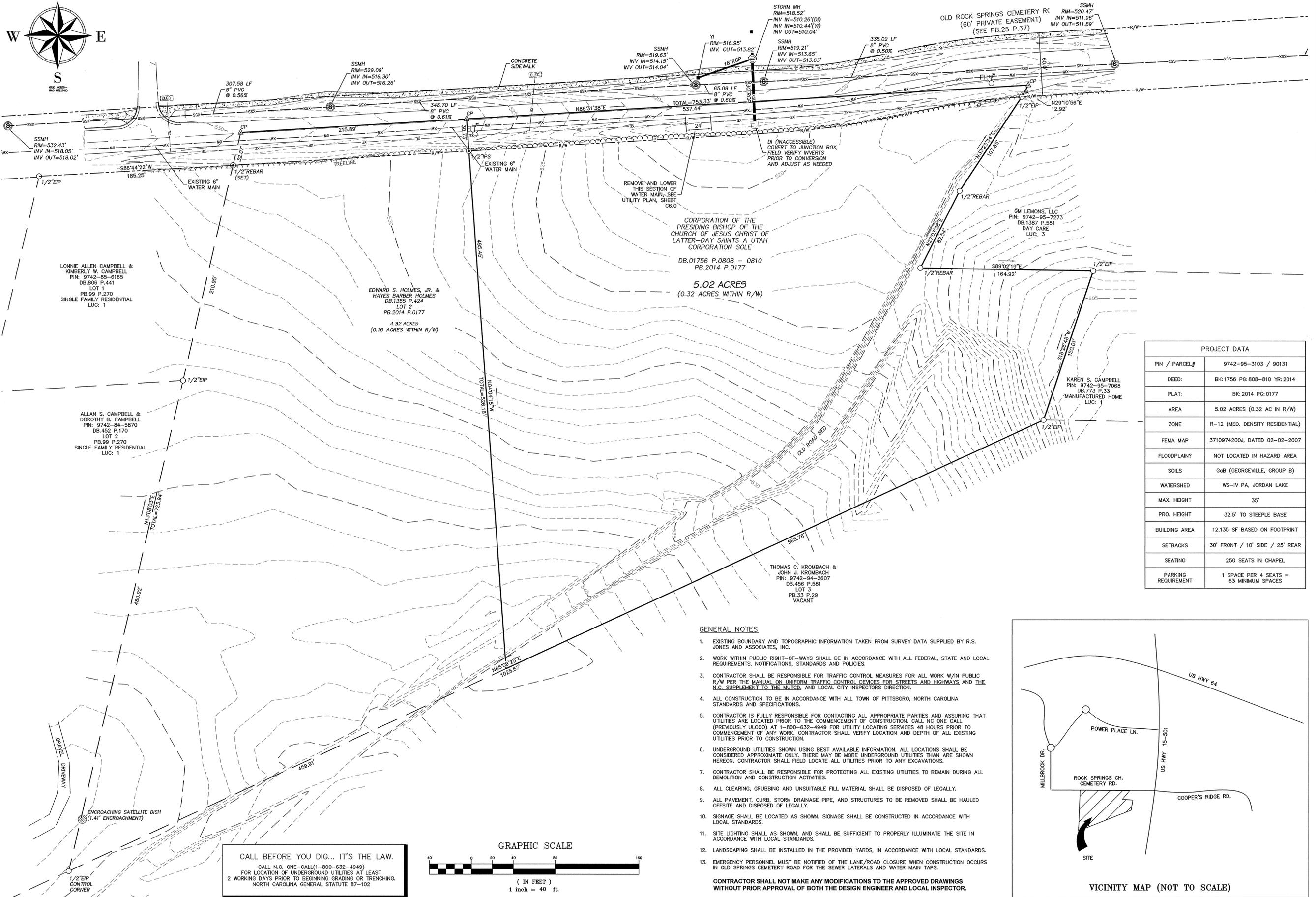
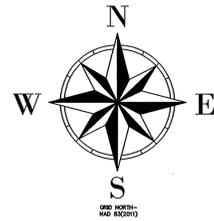
OWNER'S AGENT:
 BRYANT BAKER
 4422 COMMONWEALTH AVE
 CHARLOTTE, NC 28205
 PHONE: (704) 400-1517
 FAX: (704) 567-9611
 BAKERBA@LDSCHURCH.ORG

SURVEYOR:
 BOBBY JONES (L-3939)
 R.S. JONES & ASSOC., INC. (C-2565)
 201 WEST CLAY STREET
 MEBANE, NC 27302
 PHONE: (919) 563-3623
 FAX: (919) 563-0086

ENGINEER:
 CHARLES P. KOCH P.E.
 EARTHCENTRIC ENGINEERING, INC.
 204 WEST CLAY STREET
 MEBANE, NC 27302
 PHONE: (919) 563-9041
 FAX: (919) 304-3234
 PHIL.KOCH@EARTHCENTRIC.COM

ARCHITECT:
 MICHAEL R. McLEOD,
 ARCHITECT, PA
 13 A HAMPSTEAD VILLAGE
 HAMPSTEAD, NC 28443
 PHONE: (910) 270-9778
 FAX: (910) 270-9461
 MIKE@MCLEODARCHITECTPA.COM

APPROVAL STAMP

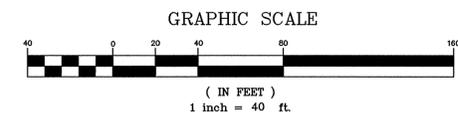


GENERAL NOTES

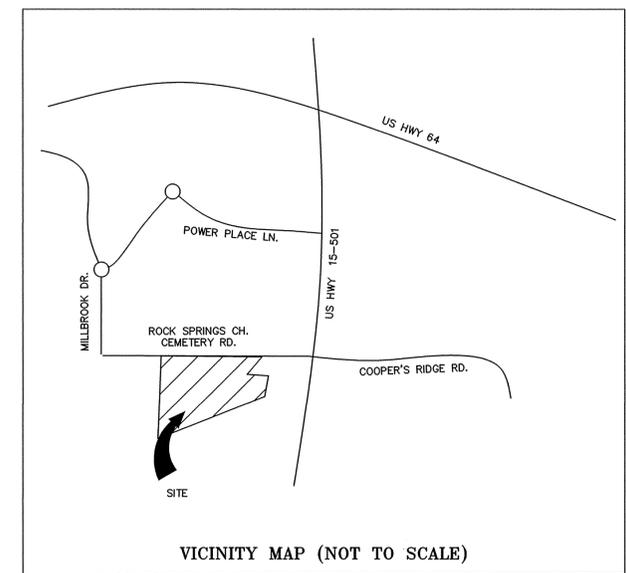
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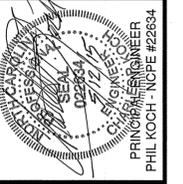
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FEMA MAP	37109742004, DATED 02-02-2007
FLOODPLAIN?	NOT LOCATED IN HAZARD AREA
SOILS	G6B (GEORGEVILLE, GROUP B)
WATERSHED	WS-IV PA, JORDAN LAKE
MAX. HEIGHT	35'
PRO. HEIGHT	32.5' TO STEEPLE BASE
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EXISTING CONDITIONS & DEMOLITION PLAN

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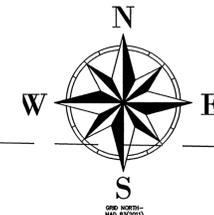
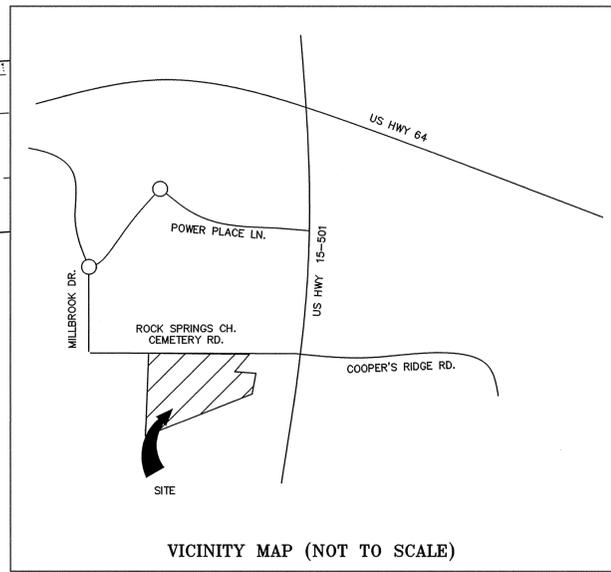
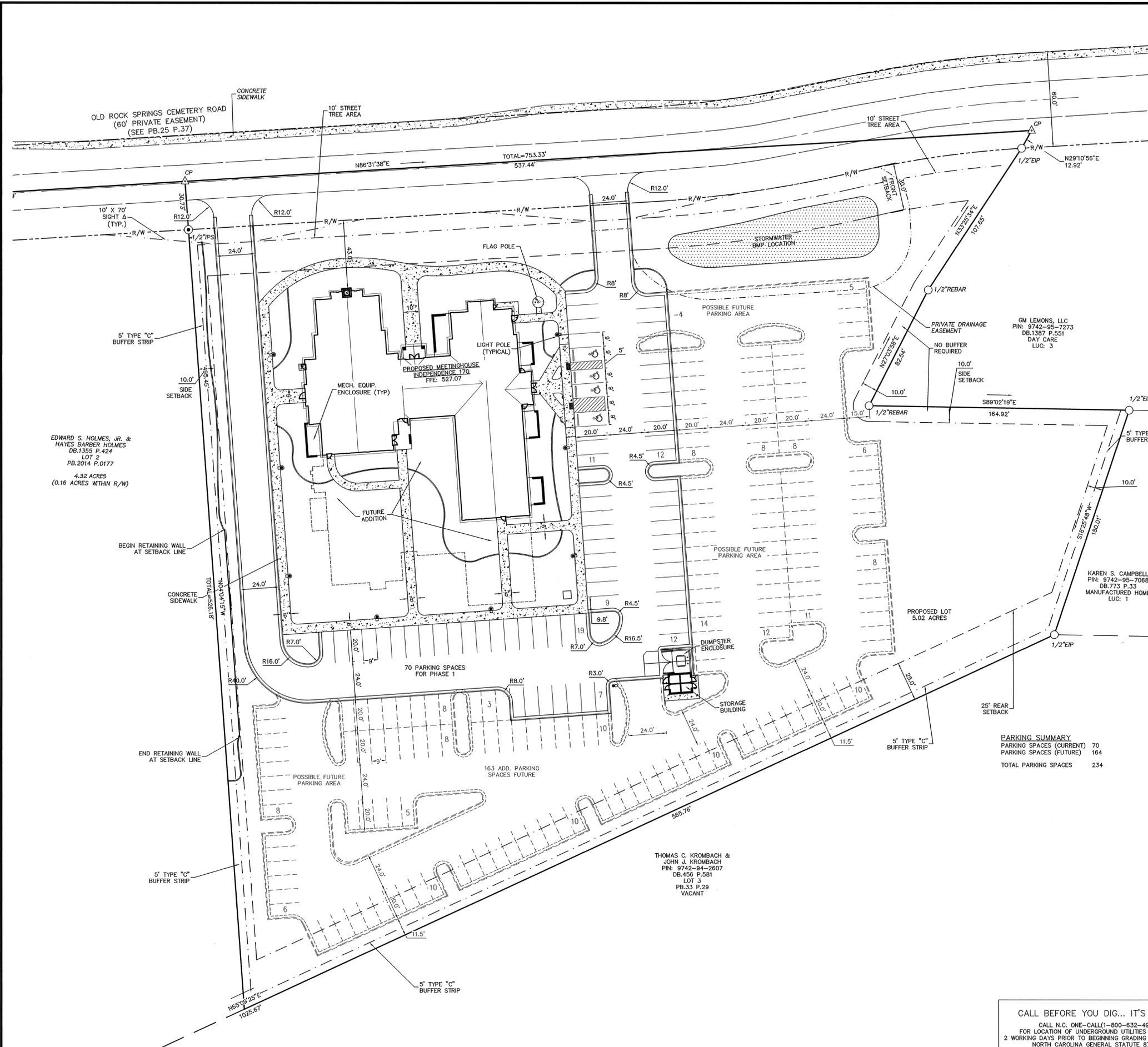
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1	05/12/15	FEET TOWN COMMENTS	CFK

DATE: APRIL 13, 2015
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EDWARD S. HOLMES, JR. &
HAYES BARBER HOLMES
DB.1355 P.424
LOT 2
PB.2014 P.0177
4.32 ACRES
(0.16 ACRES WITHIN R/W)

GM LEMONS, LLC
PIN: 9742-95-7273
DB.1387 P.551
DAY CARE
LUC: 3

KAREN S. CAMPBELL
PIN: 9742-95-7068
DB.773 P.33
MANUFACTURED HOME
LUC: 1

THOMAS C. KROMBACH &
JOHN J. KROMBACH
PIN: 9742-94-2607
DB.456 P.581
LOT 3
PB.33 P.29
VACANT

PARKING SUMMARY

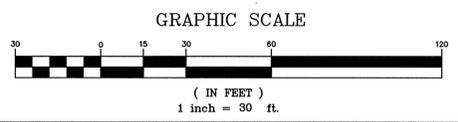
PARKING SPACES (CURRENT)	70
PARKING SPACES (FUTURE)	164
TOTAL PARKING SPACES	234

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SITE PLAN

MICHAEL R. McLEOD
ARCHITECT, PA

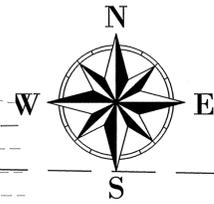
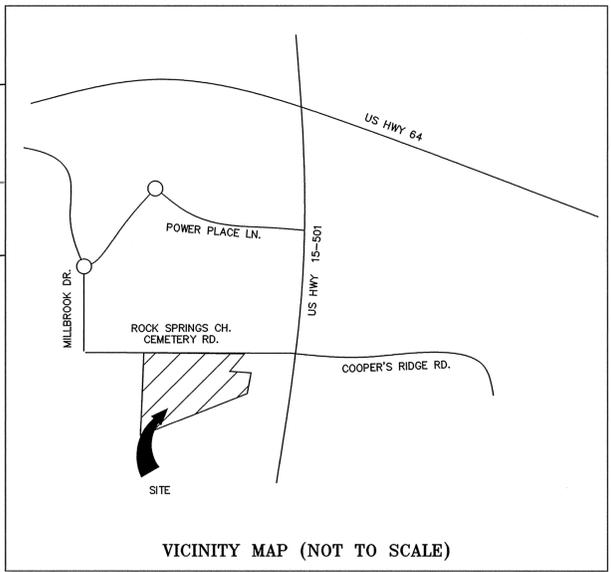
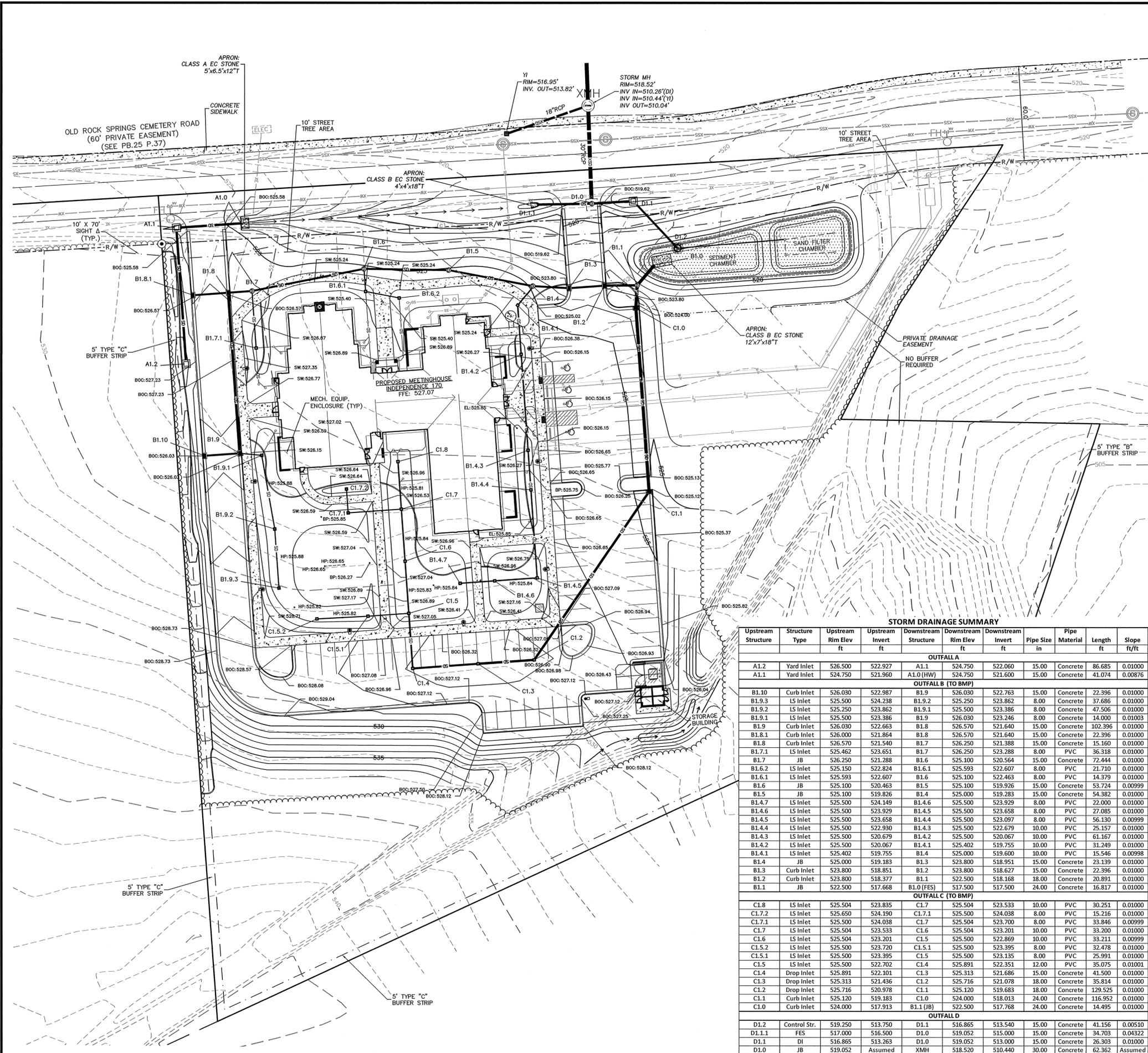
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STORM DRAINAGE SUMMARY

Upstream Structure	Structure Type	Upstream Rim Elev ft	Upstream Invert ft	Downstream Structure	Downstream Rim Elev ft	Downstream Invert ft	Pipe Size in	Pipe Material	Length ft	Slope ft/ft
OUTFALL A										
A1.2	Yard Inlet	526.500	522.927	A1.1	524.750	522.060	15.00	Concrete	86.685	0.01000
A1.1	Yard Inlet	524.750	521.960	A1.0 (HW)	524.750	521.600	15.00	Concrete	41.074	0.00876
OUTFALL B (TO BMP)										
B1.10	Curb Inlet	526.030	522.987	B1.9	526.030	522.763	15.00	Concrete	22.396	0.01000
B1.9.3	LS Inlet	525.500	524.238	B1.9.2	525.250	523.862	8.00	Concrete	37.686	0.01000
B1.9.2	LS Inlet	525.250	523.862	B1.9.1	525.500	523.386	8.00	Concrete	47.506	0.01000
B1.9.1	LS Inlet	525.500	523.386	B1.9	526.030	523.246	8.00	Concrete	14.000	0.01003
B1.9	Curb Inlet	526.030	522.663	B1.8	526.570	521.640	15.00	Concrete	102.396	0.01000
B1.8.1	Curb Inlet	526.030	521.864	B1.8	526.570	521.640	15.00	Concrete	22.396	0.01000
B1.8	Curb Inlet	526.570	521.540	B1.7	526.250	521.388	15.00	Concrete	15.160	0.01000
B1.7.1	LS Inlet	525.462	523.651	B1.7	526.250	523.288	8.00	PVC	36.318	0.01000
B1.7	JB	526.250	521.288	B1.6	525.100	520.564	15.00	Concrete	72.444	0.01000
B1.6.2	LS Inlet	525.150	522.824	B1.6.1	525.593	522.607	8.00	PVC	21.710	0.01000
B1.6.1	LS Inlet	525.593	522.607	B1.6	525.100	522.463	8.00	PVC	14.379	0.01000
B1.6	JB	525.100	520.463	B1.5	525.100	519.926	15.00	Concrete	53.724	0.00999
B1.5	JB	525.100	519.826	B1.4	525.000	519.283	15.00	Concrete	54.382	0.01000
B1.4.7	LS Inlet	525.500	524.149	B1.4.6	525.500	523.929	8.00	PVC	22.000	0.01000
B1.4.6	LS Inlet	525.500	523.929	B1.4.5	525.500	523.658	8.00	PVC	27.085	0.01000
B1.4.5	LS Inlet	525.500	523.658	B1.4.4	525.500	523.097	8.00	PVC	56.130	0.00999
B1.4.4	LS Inlet	525.500	522.930	B1.4.3	525.500	522.679	10.00	PVC	25.157	0.01000
B1.4.3	LS Inlet	525.500	520.679	B1.4.2	525.500	520.067	10.00	PVC	61.167	0.01000
B1.4.2	LS Inlet	525.500	520.067	B1.4.1	525.402	519.755	10.00	PVC	31.249	0.01000
B1.4.1	LS Inlet	525.402	519.755	B1.4	525.000	519.600	10.00	PVC	15.546	0.00998
B1.4	JB	525.000	519.183	B1.3	523.800	518.951	15.00	Concrete	23.139	0.01000
B1.3	Curb Inlet	523.800	518.851	B1.2	523.800	518.627	15.00	Concrete	22.396	0.01000
B1.2	Curb Inlet	523.800	518.377	B1.1	522.500	518.168	18.00	Concrete	20.891	0.01000
B1.1	JB	522.500	517.668	B1.0 (FES)	517.500	517.500	24.00	Concrete	16.817	0.01000
OUTFALL C (TO BMP)										
C1.8	LS Inlet	525.504	523.835	C1.7	525.504	523.533	10.00	PVC	30.251	0.01000
C1.7.2	LS Inlet	525.650	524.190	C1.7.1	525.500	524.038	8.00	PVC	15.216	0.01000
C1.7.1	LS Inlet	525.500	524.038	C1.7	525.504	523.700	8.00	PVC	33.846	0.00999
C1.7	LS Inlet	525.504	523.533	C1.6	525.504	523.201	10.00	PVC	33.300	0.01000
C1.6	LS Inlet	525.504	523.201	C1.5	525.500	522.869	10.00	PVC	33.211	0.00999
C1.5.2	LS Inlet	525.500	523.720	C1.5.1	525.500	523.395	8.00	PVC	32.478	0.01000
C1.5.1	LS Inlet	525.500	523.395	C1.5	525.500	523.135	8.00	PVC	25.991	0.01000
C1.5	LS Inlet	525.500	522.702	C1.4	525.891	522.351	12.00	PVC	35.075	0.01001
C1.4	Drop Inlet	525.891	522.101	C1.3	525.313	521.686	15.00	Concrete	41.500	0.01000
C1.3	Drop Inlet	525.313	521.436	C1.2	525.716	521.078	18.00	Concrete	35.814	0.01000
C1.2	Drop Inlet	525.716	520.978	C1.1	525.120	519.683	18.00	Concrete	129.525	0.01000
C1.1	Curb Inlet	525.120	519.183	C1.0	524.000	518.013	24.00	Concrete	116.952	0.01000
C1.0	Curb Inlet	524.000	517.913	B1.1 (JB)	522.500	517.768	24.00	Concrete	14.495	0.01000
OUTFALL D										
D1.2	Control Str.	519.250	513.750	D1.1	516.865	513.540	15.00	Concrete	41.156	0.00510
D1.1.1	FES	517.000	516.500	D1.0	519.052	515.000	15.00	Concrete	34.703	0.04322
D1.1	DI	516.865	513.263	D1.0	519.052	513.000	15.00	Concrete	26.303	0.01000
D1.0	JB	519.052	Assumed	XMH	518.520	510.440	30.00	Concrete	62.362	Assumed

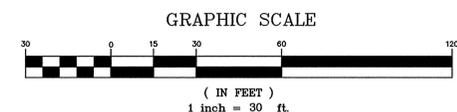
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 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



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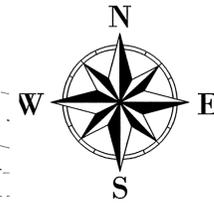
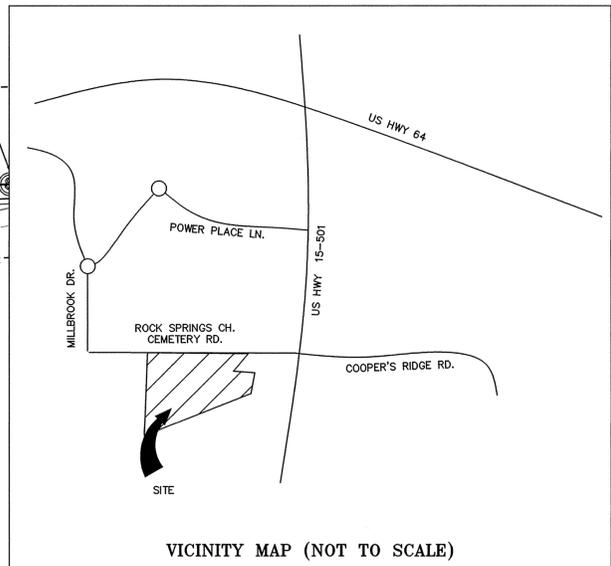
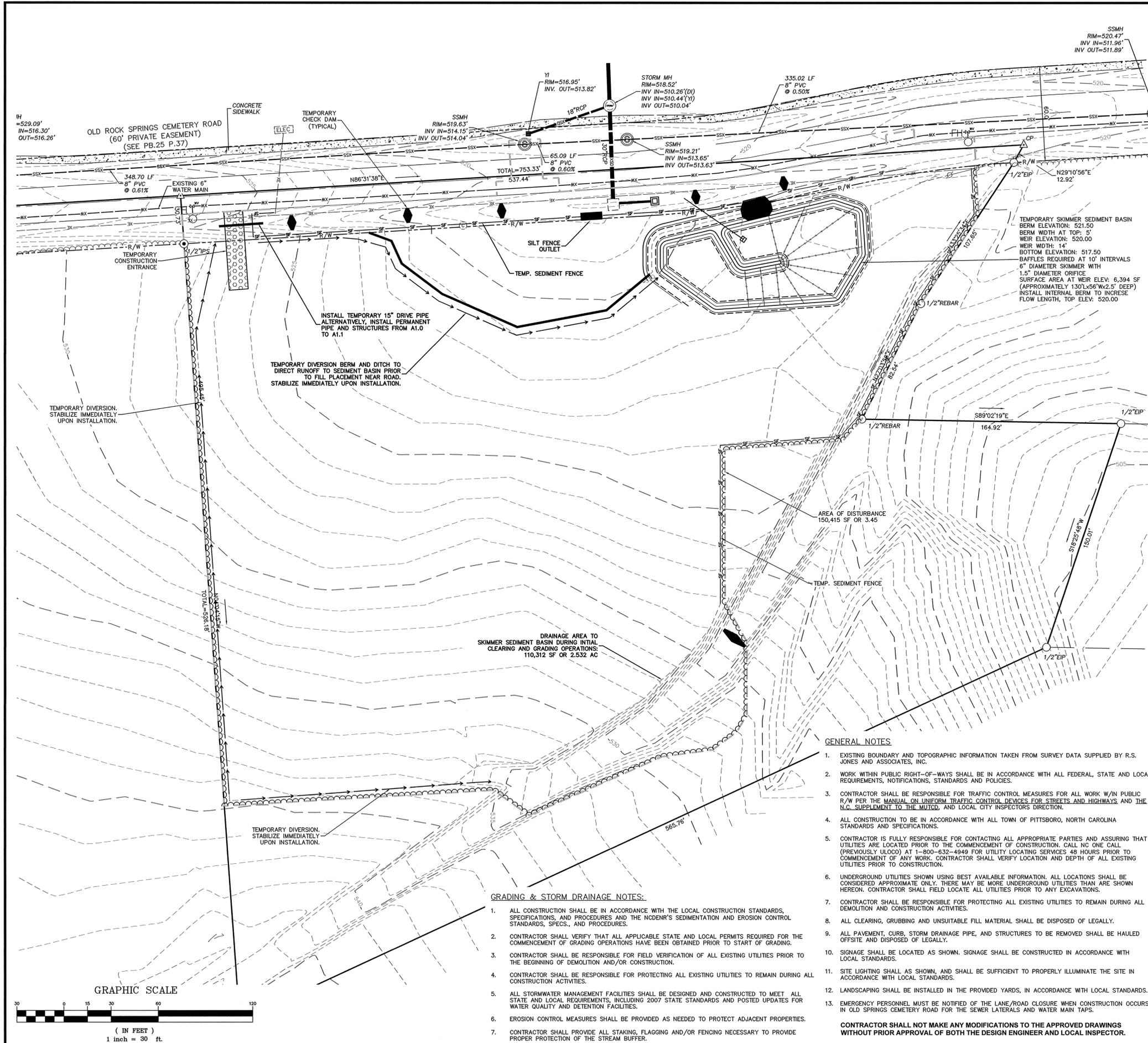
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REV. DATE DESCRIPTION BY
 1 05/12/15 PER TOWN COMMENTS CPK

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: CPK
 PROJECT NO.: 13-008
 DRAWING NAME: 13-008 REVIEW

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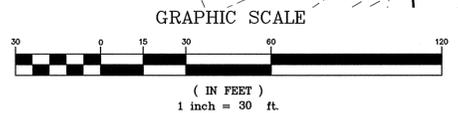


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CREEK	---	---
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YARD INLET	⊠	⊠
STORM DRAINAGE JUNCTION BOX	⊠	⊠
CURB INLET	⊠	⊠
SANITARY SEWER MANHOLE	⊠	⊠
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Phil Koch - NCPE #22834

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**EROSION CONTROL PLAN:
 INITIAL MEASURES**

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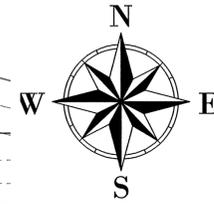
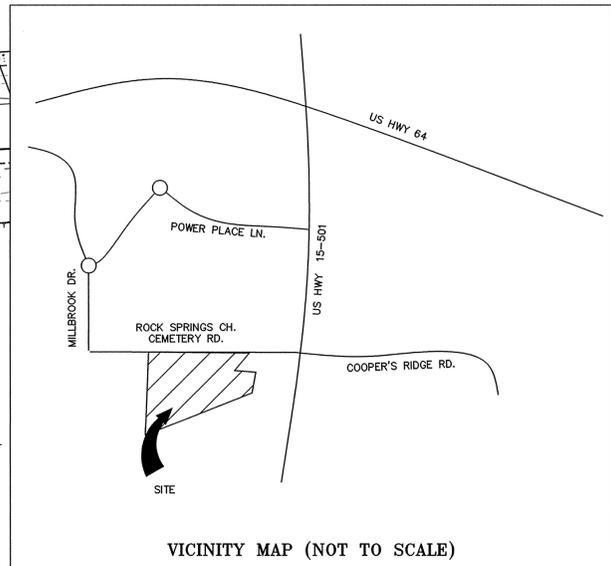
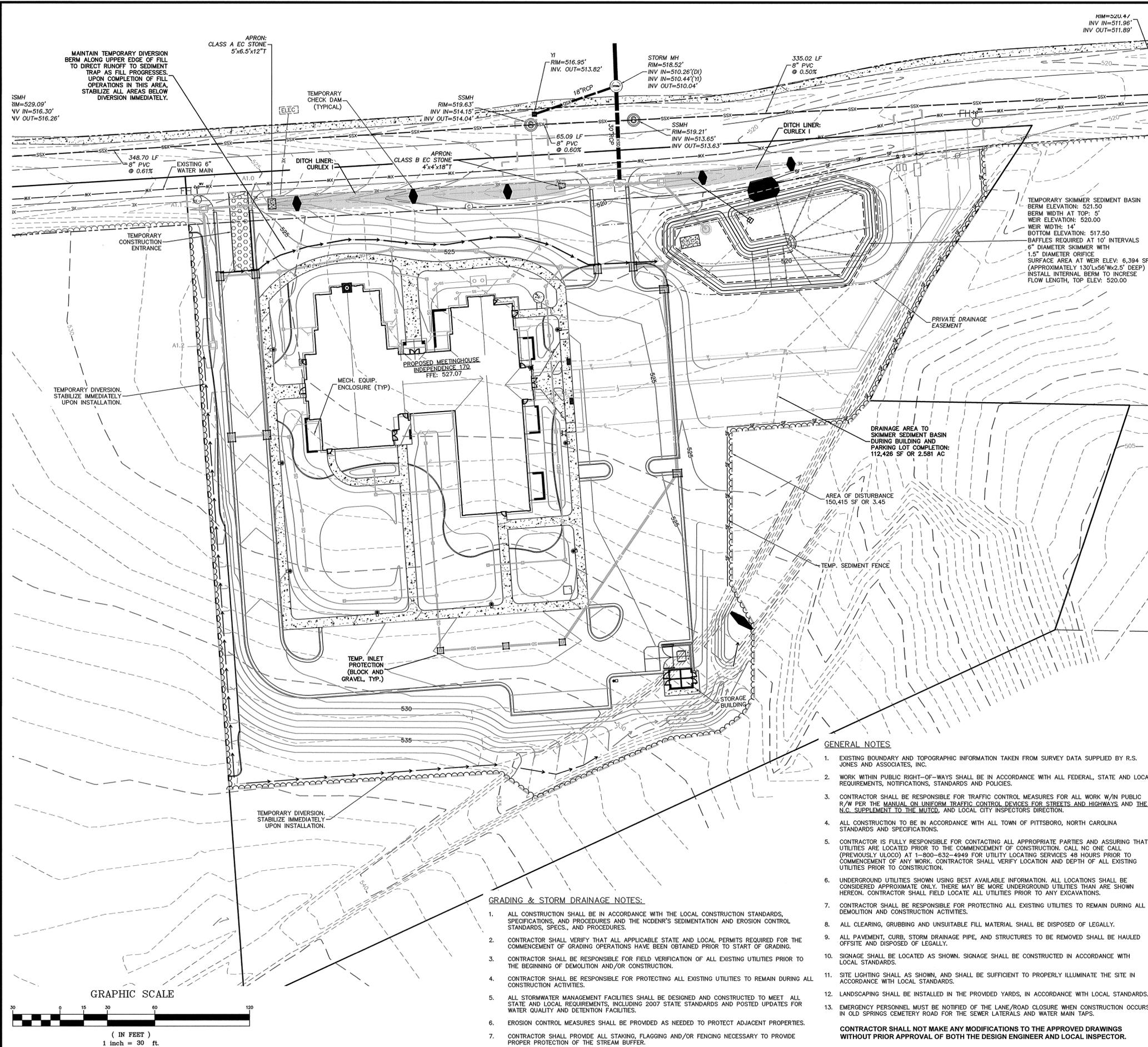
REV.	DATE	DESCRIPTION	BY
1	05/12/15	PER TOWN COMMENTS	CPK

DATE: APRIL 13, 2015
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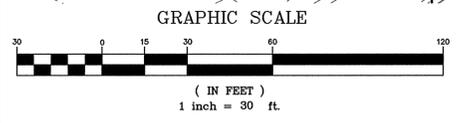


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CATCH BASIN	①	□
YARD INLET	■	□
STORM DRAINAGE JUNCTION BOX	⊗	□
CURB INLET	⊙	□
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 - ALL STORMWATER MANAGEMENT FACILITIES SHALL BE DESIGNED AND CONSTRUCTED TO MEET ALL STATE AND LOCAL REQUIREMENTS, INCLUDING 2007 STATE STANDARDS AND POSTED UPDATES FOR WATER QUALITY AND DETENTION FACILITIES.
 - EROSION CONTROL MEASURES SHALL BE PROVIDED AS NEEDED TO PROTECT ADJACENT PROPERTIES.
 - CONTRACTOR SHALL PROVIDE ALL STAKING, FLAGGING AND/OR FENCING NECESSARY TO PROVIDE PROPER PROTECTION OF THE STREAM BUFFER.



EarthCentric Engineering, Inc.
 LICENSE #C-2693
 204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM, NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312

**EROSION CONTROL PLAN:
 FINAL PHASE**

MICHAEL R. McLEOD
 ARCHITECT, PA
 72 SOUTH END COURT,
 HAMPSTEAD VILLAGE,
 HAMPSTEAD, NORTH CAROLINA
 PHONE (910) 270-9778
 FAX (910) 270-9461

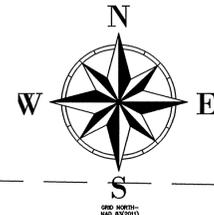
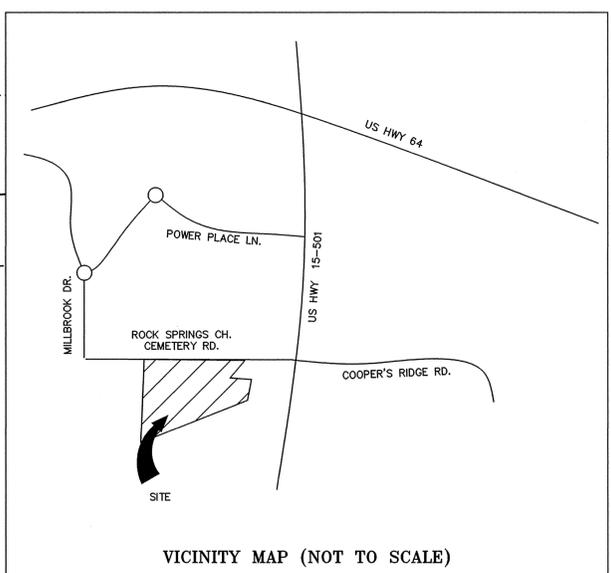
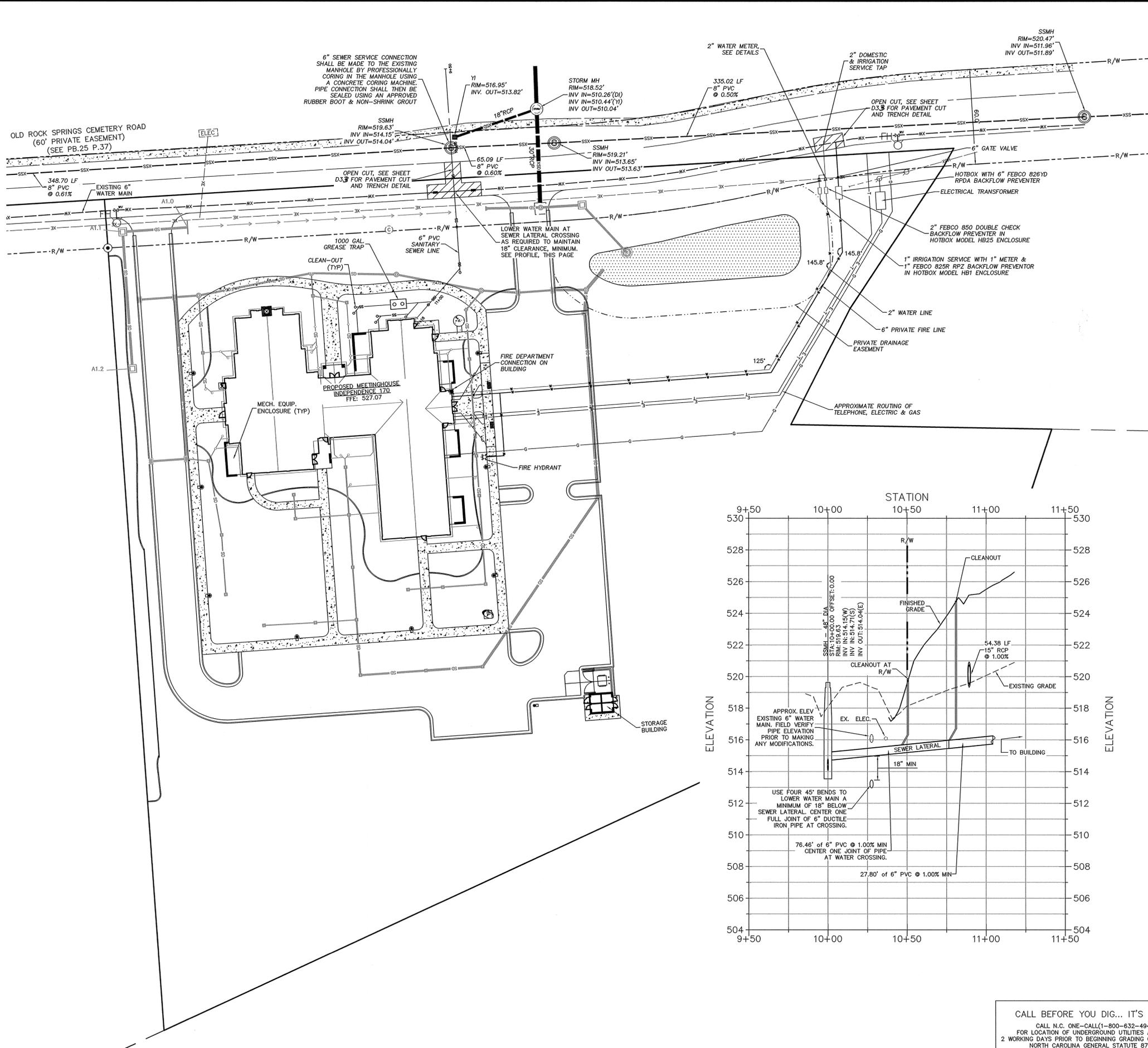
REV.	DATE	DESCRIPTION	BY	CHK
1	05/12/15	PER TOWN COMMENTS	CPK	

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=4'
 PROJECT MANAGER: MRA
 DRAWN BY: CPK
 PROJECT NO.: 13-008
 DRAWING NAME: 13-008 REVIEW

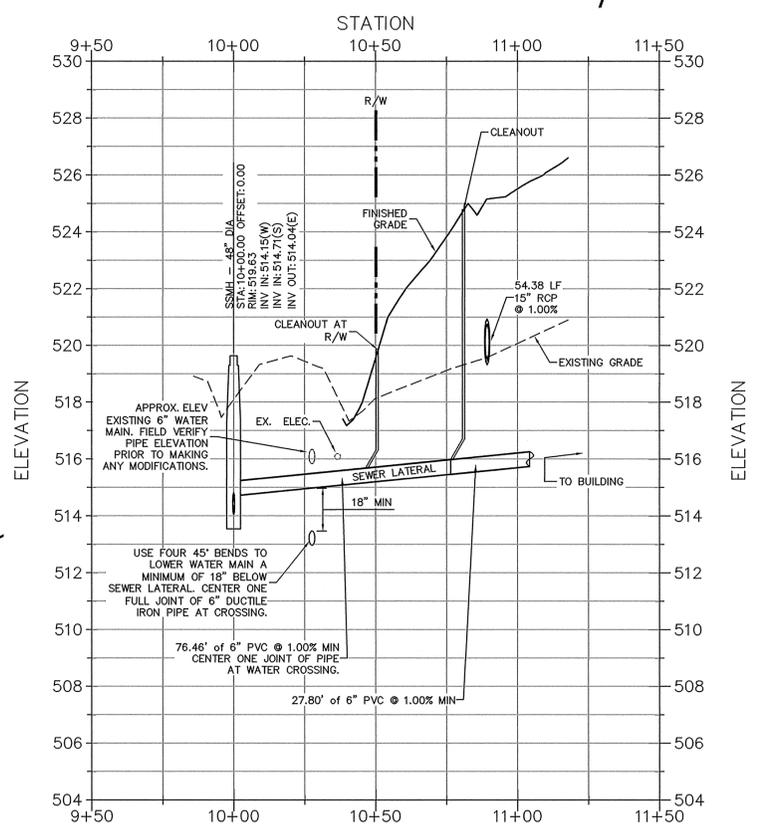
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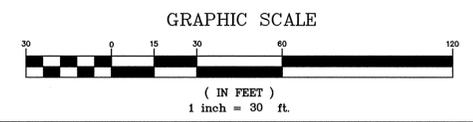
PROJECT DATA	
PIN / PARCEL#	9742-95-3103 / 90131
DEED:	BK:1756 PG:808-810 YR:2014
PLAT:	BK:2014 PG:0177
AREA	5.02 ACRES (0.32 AC IN R/W)
ZONE	R-12 (MED. DENSITY RESIDENTIAL)
FEMA MAP	3710974200A, DATED 02-02-2007
FLOODPLAIN?	NOT LOCATED IN HAZARD AREA
SOILS	G6B (GEORGEVILLE, GROUP B)
WATERSHED	WS-IV PA, JORDAN LAKE
MAX. HEIGHT	35'
PRO. HEIGHT	32.5' TO STEEPLE BASE
BUILDING AREA	12,135 SF BASED ON FOOTPRINT
SETBACKS	30' FRONT / 10' SIDE / 25' REAR
SEATING	250 SEATS IN CHAPEL
PARKING REQUIREMENT	1 SPACE PER 4 SEATS = 63 MINIMUM SPACES



- GENERAL NOTES**
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 2 WORKING DAYS PRIOR TO BEGINNING GRADING OR TRENCHING.
 NORTH CAROLINA GENERAL STATUTE 87-102



EarthCentric Engineering, Inc.
 LICENSE #C-2688
 204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM, NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312

UTILITY PLAN

MICHAEL R. McLEOD ARCHITECT, PA
 72 SOUTH END COURT,
 HAMPSHIRE VILLAGE
 HAMPSHIRE, NORTH CAROLINA
 PHONE (919) 270-9776
 FAX (919) 270-9461

REV.	DATE	DESCRIPTION
1	05/12/15	PER TOWN COMMENTS

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CJK
 DRAWN BY: CJK
 PROJECT NO.: 13-008
 DRAWING NAME: 13-008 REVIEW

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SHEET NO.
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 REVIEW



FEATURES & SPECIFICATIONS

INTENDED USE - Ideal for parking areas, street lighting, walkways and car lots.
CONSTRUCTION - Rugged die cast, soft corner aluminum housing with 17° non-reflective interior.
FRONT STANDARD FINISH - Available in clear, white, black, and other colors.

Table with 2 columns: Catalog Number, Room. Includes a drawing of the KAD fixture.



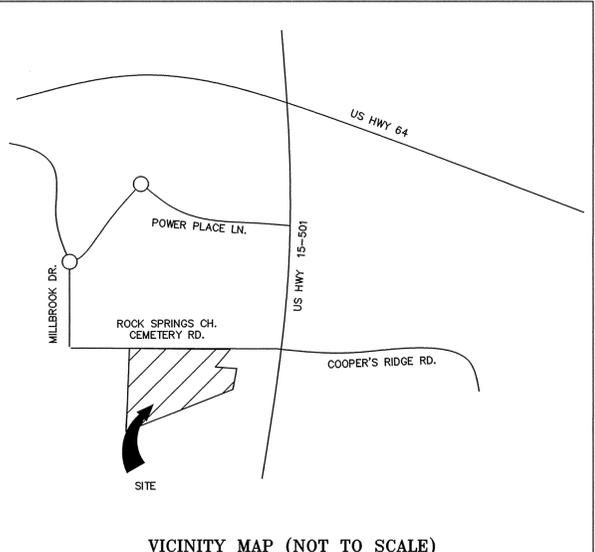
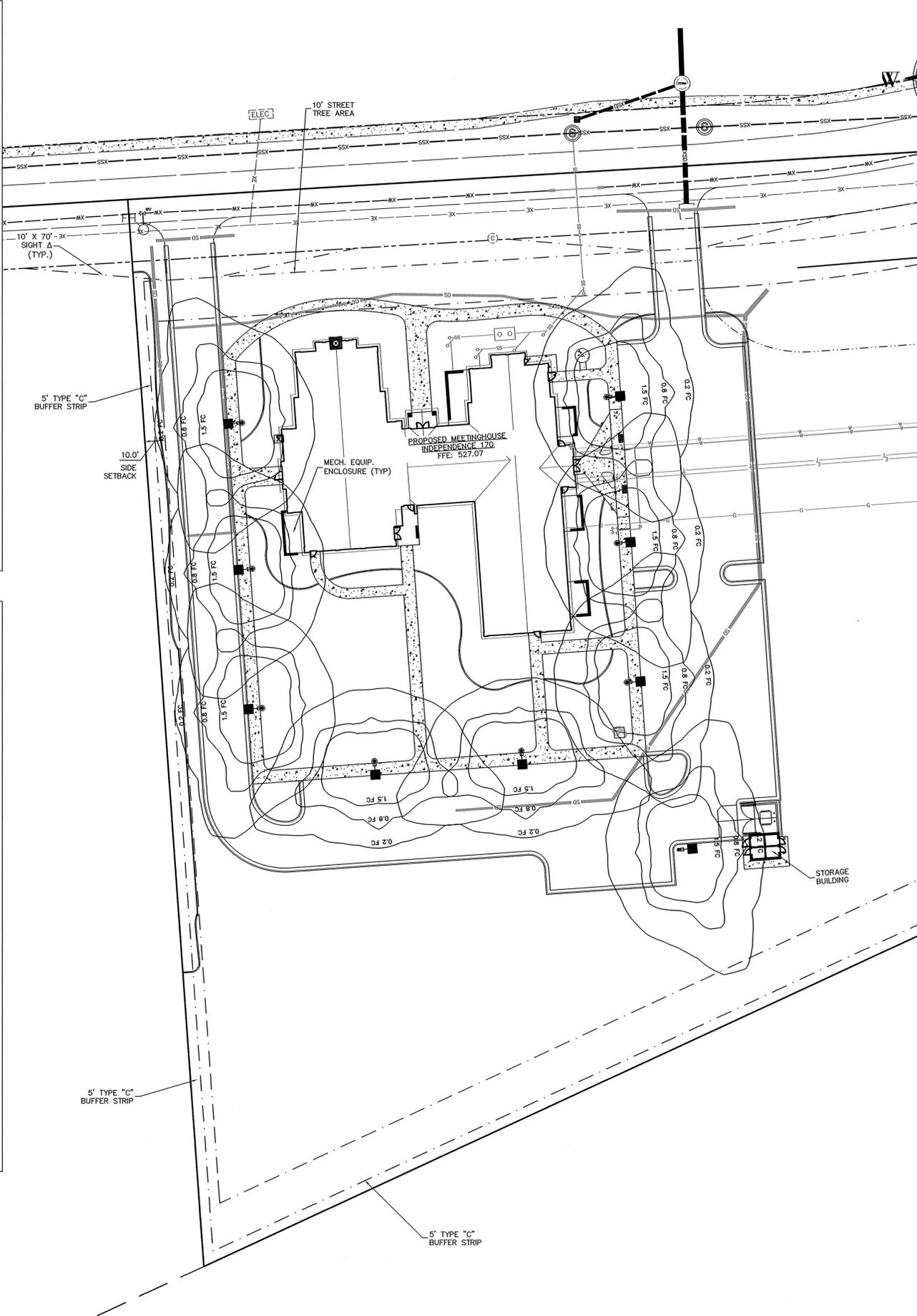
Table with 2 columns: Specifications, Mounting. Lists technical details like Voltage, Ballast, and Mounting options.

ORDERING INFORMATION

Table with columns: Series, Wattage, High, Medium, Low, Distribution, Standard reflectors, High performance reflectors, Voltage, Ballast, Mounting, Arm length.

Table with columns: Options, Notes, Accessories. Lists various options like Single face, Double face, and accessories like Lens, Lamp.

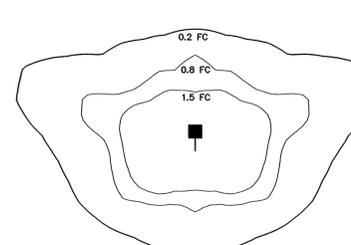
Table with columns: Notes, Accessories. Contains detailed notes and accessory lists.



GENERAL NOTES

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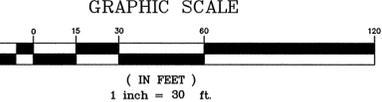


PROPOSED LIGHT FIXTURES (9 FA. SINGLE)

MANUFACTURER: LITHONIA LIGHTING
CATALOG NUMBER: KAD150S-R3-TB
IESNA91
[TEST] 1192042101
[TESTDATE] 1/31/2008
[ISSUEDATE] 9/4/2008

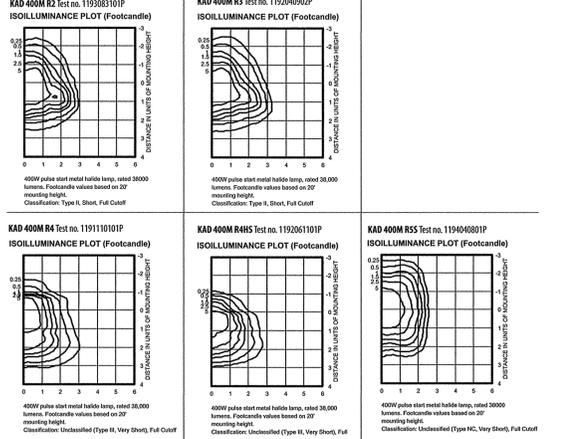
PROJECT DATA table with columns: PIN / PARCEL#, DEED, PLAT, AREA, ZONE, FEMA MAP, FLOODPLAIN?, SOILS, WATERSHED, MAX. HEIGHT, PRO. HEIGHT, BUILDING AREA, SETBACKS, SEATING, PARKING REQUIREMENT.

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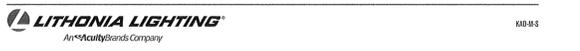


KAD Metal Halide, Arm-mounted Soft Square Cutoff

Coefficient of Utilization Initial Footcandle



Mounting Height Correction Factor
[Existing Mounting Height / New Mounting Height]^2 = Correction Factor



000000 One Lithonia Way, Dayton, GA 30024 Phone: 770-922-8000 Fax: 770-918-1200 www.lithonia.com

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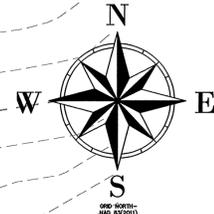
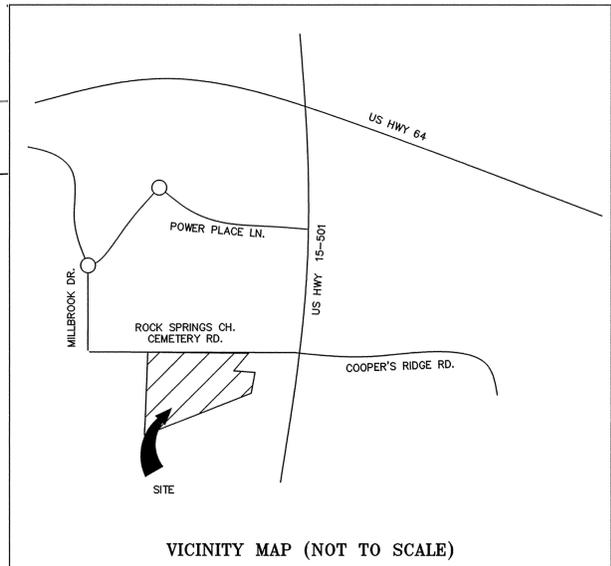
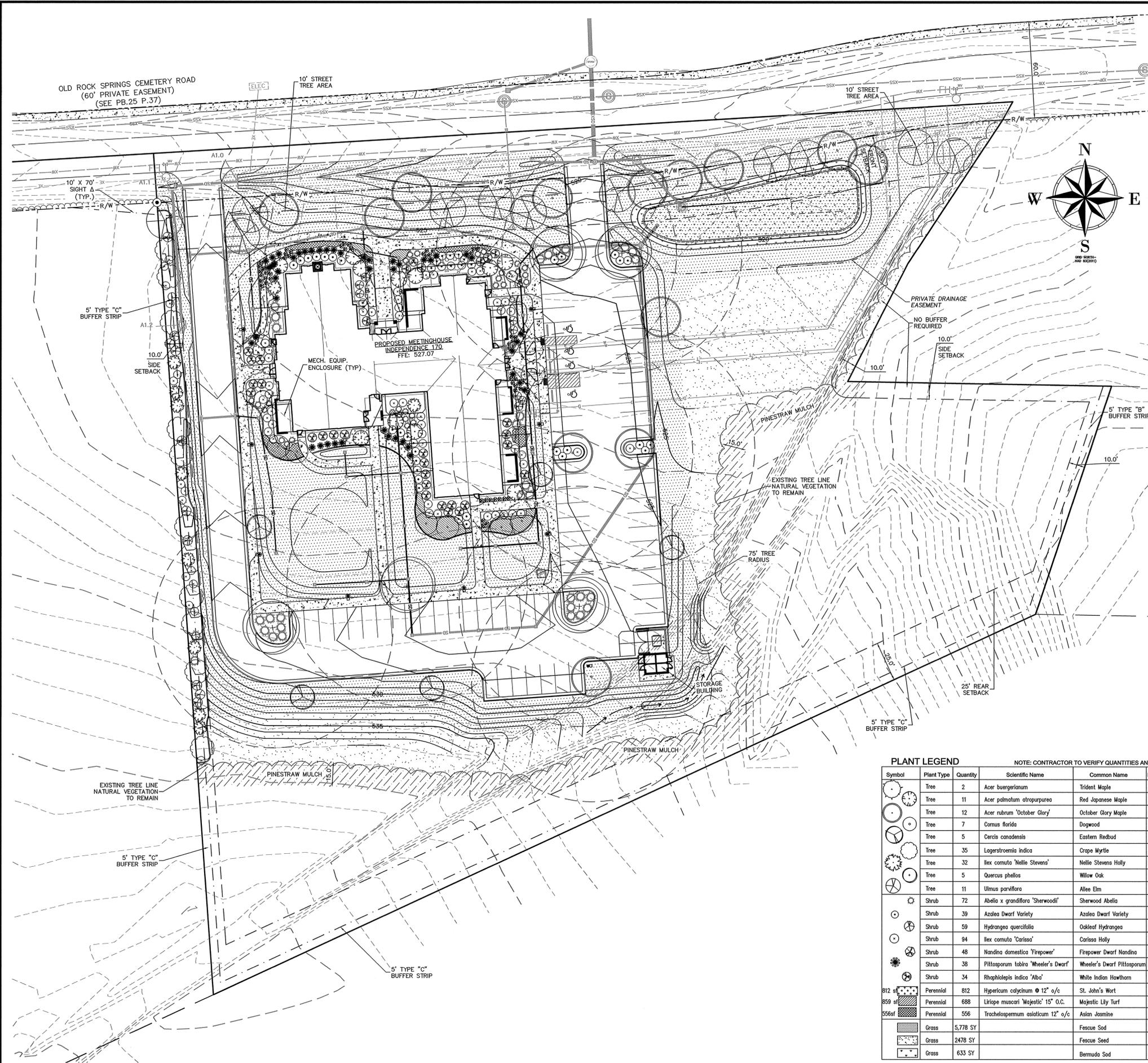
PITTSBORO WARD LIGHTING PLAN. THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS, DURHAM, NORTH CAROLINA STAKE, OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312.

MICHAEL R. McLEOD ARCHITECT, PA. 72 SOUTH END COURT, HAMPSHIRE VILLAGE, HAMPSHIRE, NORTH CAROLINA. PHONE (910) 270-9778. FAX (910) 270-9461.

Table with columns: REV., DATE, DESCRIPTION, BY, COMMENTS. Includes revision history for the lighting plan.

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SHEET NO. C7.0. REVIEW



GENERAL NOTES

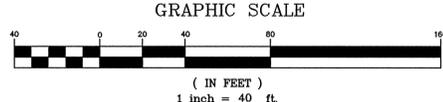
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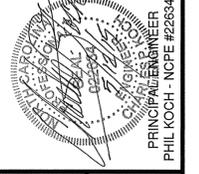
PROJECT DATA	
PIN / PARCEL#	9742-95-3103 / 90131
DEED:	BK: 1756 PG: 808-810 YR: 2014
PLAT:	BK: 2014 PG: 0177
AREA	5.02 ACRES (0.32 AC IN R/W)
ZONE	R-12 (MED. DENSITY RESIDENTIAL)
FEMA MAP	37109742004, DATED 02-02-2007
FLOODPLAIN?	NOT LOCATED IN HAZARD AREA
SOILS	G0B (GEORGEVILLE, GROUP B)
WATERSHED	WS-IV PA, JORDAN LAKE
MAX. HEIGHT	35'
PRO. HEIGHT	32.5' TO STEEPLE BASE
BUILDING AREA	12,135 SF BASED ON FOOTPRINT
SETBACKS	30' FRONT / 10' SIDE / 25' REAR
SEATING	250 SEATS IN CHAPEL
PARKING REQUIREMENT	1 SPACE PER 4 SEATS = 63 MINIMUM SPACES

PLANT LEGEND NOTE: CONTRACTOR TO VERIFY QUANTITIES AND PROVIDE AS SHOWN ON PLAN

Symbol	Plant Type	Quantity	Scientific Name	Common Name	Planting Size	Height	Width
	Tree	2	<i>Acer buergerianum</i>	Trident Maple	2" Cal.	8'	5'
	Tree	11	<i>Acer palmatum atropurpurea</i>	Red Japanese Maple	B & B	6'	5'
	Tree	12	<i>Acer rubrum 'October Glory'</i>	October Glory Maple	2" Cal.	10'	5'
	Tree	7	<i>Cornus florida</i>	Dogwood	B & B	6'	4'
	Tree	5	<i>Cercis canadensis</i>	Eastern Redbud	#15	8'	5'
	Tree	35	<i>Lagerstroemia indica</i>	Crape Myrtle	#15 Multi	7'	5'
	Tree	32	<i>Ilex cornuta 'Nellie Stevens'</i>	Nellie Stevens Holly	B & B	6'	4'
	Tree	5	<i>Quercus phellos</i>	Willow Oak	2" Cal.	10'	5'
	Tree	11	<i>Ulmus parviflora</i>	Allee Elm	2" Cal.	10'	
	Shrub	72	<i>Abelia x grandiflora 'Sherwood'</i>	Sherwood Abelia	#5	15"	24"
	Shrub	39	<i>Azalea Dwarf Variety</i>	Azalea Dwarf Variety	B & B	18"	18"
	Shrub	59	<i>Hydrangea quercifolia</i>	Oakleaf Hydrangea	#3	12"	18"
	Shrub	94	<i>Ilex cornuta 'Carissa'</i>	Carissa Holly	#3	15"	15"
	Shrub	48	<i>Nandina domestica 'Firepower'</i>	Firepower Dwarf Nandina	#2	12"	12"
	Shrub	38	<i>Pittosporum tobira 'Wheeler's Dwarf'</i>	Wheeler's Dwarf Pittosporum	#3	12"	12"
	Shrub	34	<i>Rhaphiolepis indica 'Alba'</i>	White Indian Hawthorn	#3	15"	15"
	Perennial	812	<i>Hypericum calycinum</i> #12" o/c	St. John's Wort	4" pot	4"	4"
	Perennial	688	<i>Liriope muscari 'Majestic'</i> 15" o.c.	Majestic Lily Turf	#1	10"	8"
	Perennial	556	<i>Trochetospermum asiaticum</i> 12" o/c	Asian Jasmine	4" pot	4"	4"
	Grass	5,778 SY		Fescue Sod			
	Grass	2478 SY		Fescue Seed			
	Grass	633 SY		Bermuda Sod			



EarthCentric Engineering, Inc.
 LICENCE #C-2638
 204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
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 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312
LANDSCAPE PLAN

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REV.	DATE	DESCRIPTION	BY	CHK
1	05/12/15	PER TOWN COMMENTS	CPK	

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: 1"=40'
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: CPK
 PROJECT NO.: 13-008
 DRAWING NAME: 13-008 REVIEW

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 NORTH CAROLINA GENERAL STATUTE 87-102

SHEET NO.
C8.0
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PERMANENT SEEDING SCHEDULE:

SEEDING MIXTURE:	
SPECIES	RATE (LB/AC)
TALL FESCUE	80
SERICA LESPEDEZA	20
KOBE LESPEDEZA	10

- SEEDING NOTES:**
- AFTER AUGUST 15, USE UNSCARIFIED SERICEA SEED.
 - WHERE PERIODIC MOWING IS PLANNED OR A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE LESPEDEZA TO 40 LB/ACRE.
 - TO EXTEND SPRING SEEDING DATES INTO JUNE, ADD 15 LB/ACRE HULLED BERMUDA GRASS. HOWEVER, AFTER MID-APRIL IT IS PREFERABLE TO SEED TEMPORARY COVER.

NURSE PLANTS:
BETWEEN MAY 1 AND AUG. 15, ADD 10 LB/ACRE GERMAN MILLET OF 15 LB/ACRE SUDAN GRASS. PRIOR TO MAY 1 OR AFTER AUG. 15 ADD 40 LB/ACRE RYE (GRAIN).

SEEDING DATES:	BEST	POSSIBLE
FALL:	AUG. 25 - SEPT. 15	AUG. 20 - OCT. 25
LATE WINTER:	FEB. 15 - MAR. 21	FEB. 1 - APR. 15

FALL IS BEST FOR TALL FESCUE AND LATE WINTER FOR LESPEDEZAS.

SOIL AMENDMENTS:
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER, EXCEPT, APPLY NO FERTILIZER TO AREAS WITHIN THE NEUSE RIVER RIPARIAN BUFFERS.

MULCH:
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

TEMPORARY SEEDING SCHEDULES

TABLE 6-10A: TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE:	
SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SEEDING DATES:
MOUNTAINS - ABOVE 2500 FT: FEB. 15 - MAY 15
BELOW 2500 FT: FEB. 1 - MAY 1
PIEDMONT - JAN. 1 - MAY 1
COASTAL PLAIN - DEC. 1 - APR. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TABLE 6.10B TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE:	
SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDAN GRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

SEEDING DATES:
MOUNTAINS - MAY 15 - AUG. 15
PIEDMONT - MAY 1 - AUG. 15
COASTAL PLAIN - APR. 15 - AUG. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE:
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TABLE 6.10C TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE:	
SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

SEEDING DATES:
MOUNTAINS - AUG. 15 - DEC. 15
COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 30

SOIL AMENDMENTS:
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

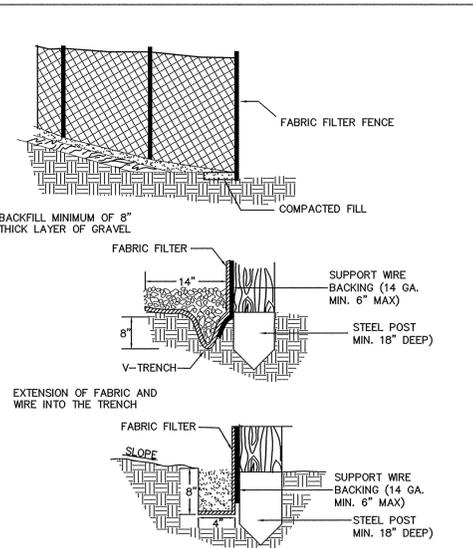
MAINTENANCE:
REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVER-SEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

STABILIZATION TIME TABLE

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERMITTER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HWQ) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES > 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERMITTERS & HOW ZONES

EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE." (SECTION II.B(2)(b))

NOTE: GROUNDCOVER MUST BE ESTABLISHED IN ACCORDANCE WITH NPDES CONSTRUCTION STORMWATER GENERAL PERMIT NCG010000 AND PERMANENT GROUNDCOVER MUST BE ESTABLISHED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.



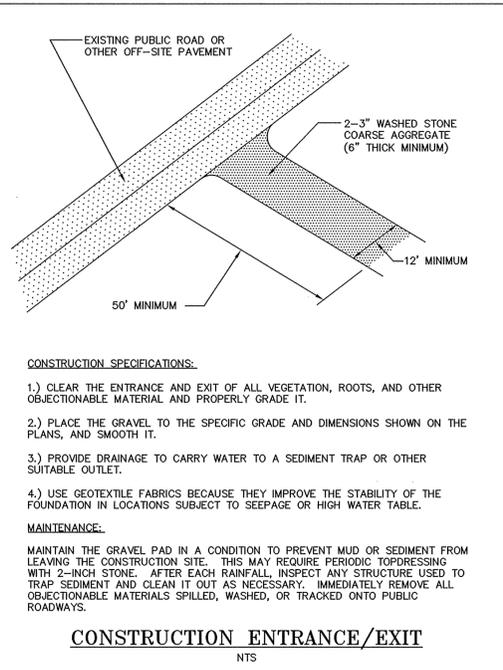
CONSTRUCTION SPECIFICATIONS:

- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
- ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 18 INCHES ABOVE THE GROUND SURFACE.
- CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A STEEL SUPPORT POST (1.33 LBS./LINEAR FT) WITH OVERLAP TO THE NEXT POST.
- SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY WIRE STAPLES AT LEAST 1 INCH LONG, OR WIRES. EXTEND THE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.
- WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 18 INCHES.
- EXTRA STRENGTH FILTER FABRIC WITH 6 FT POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. STAPLE OR WIRE THE FILTER FABRIC DIRECTLY TO THE POSTS.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- BACKFILL THE TRENCH WITH COMPACTED SOIL OR GRAVEL PLACED OVER THE FILTER FABRIC.
- DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

MAINTENANCE:

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY.
REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE

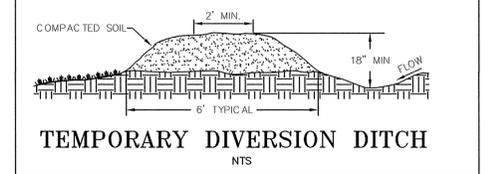


CONSTRUCTION SPECIFICATIONS:

- CLEAR THE ENTRANCE AND EXIT OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
- PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
- USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE THE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

MAINTENANCE:

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

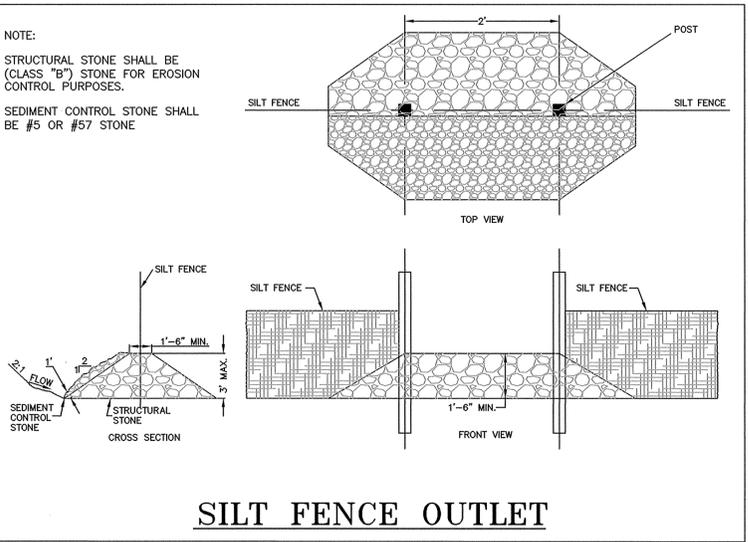


CONSTRUCTION SPECIFICATIONS:

- REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
- ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
- ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENTS.
- PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
- VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION. INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL.

MAINTENANCE:

IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.



SILT FENCE OUTLET

PROJECT INFORMATION

PROJECT DESCRIPTION:
THE PURPOSE OF THE PROJECT IS TO CONSTRUCT A NEW CHURCH FACILITY ON A 5.02 ACRE LOT. THE SITE IS LOCATED IN PITTSBORO ON OLD ROCK SPRING CEMETERY ROAD (SEE VICINITY MAP) AND IS FURTHER IDENTIFIED AS PIN# 9742-95-1002.

SITE DESCRIPTION:
THE SITE IS CURRENTLY A 5.02 ACRE, WOODED SITE OF WHICH 0.32 ACRES IS LOCATED IN THE ROW OF OLD ROCK SPRING CEMETERY ROAD. THE SITE SLOPES DOWNWARD FROM A HIGH POINT LOCATED IN THE SOUTHWEST CORNER OF THE SITE NORTHWARD TO AN OUTFALL AT OLD ROCK SPRING CEMETERY ROAD AND A LOW POINT LOCATED ON THE EASTERN EDGE OF THE SITE. SLOPES ARE IN THE 3 - 5% RANGE.

ADJACENT PROPERTY:
LAND USE IN THE VICINITY IS MOSTLY LARGE ACRE SINGLE FAMILY HOME AND UNDEVELOPED TRACTS.

NARRATIVE

PLANNED EROSION AND SEDIMENTATION CONTROL PRACTICES
CONSTRUCTION ENTRANCE/EXIT:
A CONSTRUCTION ENTRANCE/EXIT IS PROVIDED AT THE ACCESS POINT TO THE SITE TO REDUCE SEDIMENTATION DEPOSIT ON THE EXISTING ROADWAY.

SEDIMENT FENCE:
SEDIMENT FENCE WILL BE CONSTRUCTED ALONG THE DOWNSTREAM PERIMETER OF THE DISTURBED AREA. SILT FENCE OUTLETS ARE LOCATED AT THE LOW POINTS IN THE SEDIMENT FENCE WHERE NECESSARY AND WHERE SEDIMENT FENCE WRAPS BELOW THE BERMS OF SEDIMENT TRAPS.

SKIMMER SEDIMENT TRAP:
A SKIMMER SEDIMENT TRAP IS LOCATED AT THE NORTHEAST CORNER OF THE SITE TO FILTER RUNOFF PRIOR TO RELEASE TO THE EXISTING STORM SYSTEM.

DIVERSION DITCHES/BERMS:
DIVERSION DITCHES AND BERMS ARE LOCATED AS NECESSARY TO DIRECT SEDIMENT LADEN RUNOFF TO FILTERING DEVICES OR DIRECT CLEAN RUNOFF AROUND THE AREAS OF DISTURBANCE.

CHECK DAMS/DITCH LINERS:
CHECK DAMS ARE PROVIDED ALONG THE PERMANENT ROADWAY DITCHES IN ORDER TO REDUCE EROSION VELOCITIES IN THE DITCHES. UPON FINAL GRADING, CHECK DAMS WILL BE REMOVED AND REPLACED WITH THE TEMPORARY DITCH LINERS NOTED ON THE PLANS.

TEMPORARY/PERMANENT SEEDING:
TEMPORARY AND PERMANENT SEEDING ARE REQUIRED IN ACCORDANCE WITH THE STABILIZATION TIME TABLE PROVIDED ON THIS SHEET.

INLET/OUTLET PROTECTION:
RIP RAP APRONS ARE SPECIFIED AT ALL OUTLET LOCATIONS TO DISSIPATE FLOWS ENTERING/EXITING THE STORM DRAINAGE SYSTEM.

CONSTRUCTION SCHEDULE

- OBTAIN ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.
- HOLD PRECONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.
- INSTALL CONSTRUCTION ENTRANCE AND TEMPORARY DRIVE PIPES.
- CLEAR SITE AS NECESSARY TO INSTALL PERIMETER MEASURES, CHECK DAMS AND SKIMMER SEDIMENT TRAP.
- COMPLETE SITE CLEARING AND STRIPPING.
- MASS GRADE SITE. MAINTAIN DIVERSIONS ALONG UPPER EDGE OF FILL TO DIRECT SEDIMENT LADEN RUNOFF TO SKIMMER SEDIMENT TRAP.
- ROUGH GRADE PARKING FACILITY AND BUILDING PAD.
- FINE GRADE FOR FOUNDATIONS AND BUILDING SLAB. BEGIN BUILDING CONSTRUCTION.
- INSTALL STORM DISTRIBUTION SYSTEM, EXCLUDING LANDSCAPE AND ROOF DRAINS. INSTALL INLET PROTECTION IMMEDIATELY UPON COMPLETION OF EACH INLET.
- INSTALL SANITARY SEWER SERVICE AND WATER DISTRIBUTION SYSTEM.
- INSTALL REMAINING UTILITY SERVICE LINES.
- FINE GRADE SUBGRADE FOR SIDEWALKS, CURB, AND BASE.
- INSTALL CURB AND SIDEWALKS.
- INSTALL AGGREGATE BASE COURSES.
- PAVE ENTRANCE AND PARKING AREA.
- COMPLETE BUILDING CONSTRUCTION.
- INSTALL ROOF DRAINS AND LANDSCAPE DRAINS.
- INSTALL REMAINING SIDEWALKS AND LANDSCAPE MOW STRIPS.
- INSTALL LANDSCAPING. STABILIZE ALL DISTURBED AREAS AND CONSTRUCT APRONS.
- ONCE ALL UPSTREAM AREAS HAVE BEEN STABILIZED & BUILDING IS COMPLETE, REMOVE SKIMMER SEDIMENT TRAP AND CONSTRUCT PERMANENT BMP. INSTALL CONTROL STRUCTURE, BARREL, AND APRON AS NOTED AND STABILIZE AREAS IMMEDIATELY.
- INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES WEEKLY AND AFTER RAINFALL EVENTS. MAKE NEEDED REPAIRS IMMEDIATELY.
- AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.

MAINTENANCE PLAN

- CHECK ALL EROSION AND SEDIMENT CONTROL PRACTICES FOR STABILITY AND OPERATION FOLLOWING EVERY RAINFALL PRODUCING RUNOFF BUT IN NO CASE LESS THAN ONCE EVERY WEEK. MAKE ANY NEEDED REPAIRS IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED. FOLLOW ALL APPLICABLE REQUIREMENTS OF NPDES PHASE II PERMIT.
- REMOVE SEDIMENT FROM BEHIND SILT FENCE OUTLETS AND STONE FILTERS WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. CLEAN OR REPLACE GRAVEL ON OUTLETS WHEN THE WATER POOLS AND IS NO LONGER DRAINING PROPERLY.
- SEED AND STABILIZE ALL DISTURBED AREAS WITHIN 15 DAYS OF THE COMPLETION OF ANY PHASE OF GRADING OR AS INDICATED BY THE STABILIZATION SCHEDULE NOTED. FERTILIZE ALL SEEDED AREAS, RESEED AS NECESSARY, AND MULCH ACCORDING TO THE SEEDING SCHEDULE TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

NPDES PERMIT REQUIREMENTS

THIS PROJECT IS SUBJECT TO THE REQUIREMENTS OF NPDES PERMIT FOR CONSTRUCTION ACTIVITIES (PERMIT NO. NCG010000). THE ITEMS NOTED ARE SOME OF THE OBLIGATIONS ASSOCIATED WITH THE NPDES PERMIT PROCESS.

CONTROLS FOR STORMWATER DISCHARGES:

- THE PERMITTEE SHALL IMPLEMENT THE SOIL AND EROSION CONTROL PLAN, WHICH HAS BEEN APPROVED BY THE APPROVAL AUTHORITY. THE APPROVED PLAN IS CONSIDERED A REQUIREMENT OR CONDITION OF NPDES PERMIT. DEVIATION FROM THE APPROVED PLAN, OR APPROVED AMENDMENT TO THE PLAN, SHALL CONSTITUTE A VIOLATION OF THE TERMS AND CONDITIONS OF THIS GENERAL PERMIT EXCEPT THAT DEVIATION FROM THE APPROVED PLAN WILL BE ALLOWED TO CORRECT AN EMERGENCY SITUATION WHERE SEDIMENTS ARE BEING DISCHARGED OFF THE SITE, EVEN THOUGH THE APPROVED PLAN IS IN EFFECT. SUCH A DEVIATION FROM THE APPROVED PLAN SHALL BE NOTED ON THE APPROVED PLAN MAINTAINED AT THE JOB SITE. A SIGNED COPY OF THE APPROVED PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
 - EQUIPMENT UTILIZED DURING THE CONSTRUCTION ACTIVITY ON A SITE MUST BE OPERATED AND MAINTAINED IN A MANNER AS TO PREVENT THE POTENTIAL OR ACTUAL POLLUTION OF THE SURFACE OR GROUND WATERS OF THE STATE, FUELS, LUBRICANTS, COOLANTS, AND HYDRAULIC FLUIDS, OR ANY OTHER PETROLEUM PRODUCTS, SHALL NOT BE DISCHARGED ONTO THE GROUND OR INTO SURFACE WATERS. SPENT FLUIDS SHALL BE DISPOSED OF IN A MANNER SO AS NOT TO ENTER THE WATERS, SURFACE OR GROUND, OF THE STATE AND IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL DISPOSAL REGULATIONS. ANY SPILLED FLUIDS SHALL BE CLEANED UP TO THE EXTENT PRACTICABLE AND DISPOSED OF IN A MANNER SO AS NOT TO ALLOW THEIR ENTRY INTO THE WATERS, SURFACE OR GROUND, OF THE STATE.
 - HERBICIDE, PESTICIDE, AND FERTILIZER USAGE DURING THE CONSTRUCTION ACTIVITY SHALL BE RESTRICTED TO THOSE MATERIALS APPROVED BY EPA AND SHALL BE IN ACCORDANCE WITH LABEL RESTRICTIONS.
 - ALL WASTES COMPOSED OF BUILDING MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH NORTH CAROLINA GENERAL STATUTES.
 - THE PERMITTEE SHALL REPORT TO THE CENTRAL OFFICE OR THE APPROPRIATE REGIONAL OFFICE ANY NONCOMPLIANCE WHICH MAY ENDANGER HEALTH OR THE ENVIRONMENT. ANY INFORMATION SHALL BE PROVIDED ORALLY WITHIN 24 HOURS FROM THE TIME THE PERMITTEE BECAME AWARE OF THE CIRCUMSTANCES. A WRITTEN SUBMISSION SHALL ALSO BE PROVIDED WITHIN 5 DAYS OF THE TIME THE PERMITTEE BECAME AWARE OF THE CIRCUMSTANCES.
- THE WRITTEN SUBMISSION SHALL CONTAIN 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 IT IS EXPECTED TO CONTINUE; AND STEPS TAKEN OR PLANNED TO REDUCE, ELIMINATE, AND PREVENT REOCCURRENCE OF THE NONCOMPLIANCE (SEE SPECIFIC PERMIT REQUIREMENTS FOR REPORTING INFORMATION).

MINIMUM MONITORING AND REPORTING REQUIREMENTS

MINIMUM MONITORING AND REPORTING REQUIREMENTS ARE AS FOLLOWS UNLESS OTHERWISE APPROVED IN WRITING BY THE DIRECTOR OF THE DIVISION OF ENVIRONMENTAL MANAGEMENT.

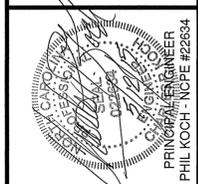
- ALL SEDIMENTATION AND EROSION CONTROL FACILITIES SHALL BE INSPECTED BY OR UNDER THE DIRECTION OF THE PERMITTEE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD.
- STORMWATER RUNOFF DISCHARGES SHALL BE INSPECTED BY OBSERVATION FOR STORMWATER DISCHARGE CHARACTERISTICS AS DEFINED BELOW AT THE ABOVE FREQUENCY TO EVALUATE THE EFFECTIVENESS OF THE POLLUTION CONTROL FACILITIES OR PRACTICES. IF ANY VISIBLE OFF-SITE SEDIMENTATION IS LEAVING THE SITE, CORRECTIVE ACTION SHALL BE TAKEN TO REDUCE THE DISCHARGE OF SEDIMENTS.

Stormwater Discharge Characteristics	Monitoring Type	Monitoring Location?
Color	SDO	
Odor	SDO	
Clarity	SDO	
Floating Solids	SDO	
Suspended Solids	SDO	
Foam	SDO	
Oil Sheen	SDO	
Other obvious indicators of stormwater pollution	SDO	

- FOOTNOTES:**
- MONITORING TYPE: THE MONITORING REQUIRES A QUALITATIVE OBSERVATION OF EACH STORMWATER OUTFALL. NO ANALYTICAL TESTING OR SAMPLING IS REQUIRED.
 - SAMPLE LOCATION: STORMWATER DISCHARGE OUTFALL (SDO)
 - THE OPERATOR SHALL KEEP A RECORD OF INSPECTIONS. VISIBLE SEDIMENTATION FOUND OFF THE SITE SHALL BE RECORDED WITH A BRIEF EXPLANATION AS TO THE MEASURES TAKEN TO PREVENT FUTURE RELEASES AS WELL AS ANY MEASURES TAKEN TO CLEAN UP THE SEDIMENT THAT HAS LEFT THE SITE. THIS RECORD SHALL BE MADE AVAILABLE TO DEM OR AUTHORIZED AGENT UPON REQUEST. REPORTS SHALL BE MAINTAINED ONSITE AT ALL TIMES.
 - PERMITTEE SHALL AT ALL TIMES PROVIDE THE OPERATION AND MAINTENANCE NECESSARY TO OPERATE THE PERMITTED STORMWATER CONTROLS AT OPTIMUM EFFICIENCY.

EarthCentric Engineering, Inc.

204 W. Clay Street
Mebane, NC 27302
Phone: (919) 563-9041
Fax: (919) 304-3234
E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
DURHAM NORTH CAROLINA STAKE
OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

EROSION CONTROL DETAILS

MICHAEL R. McLEOD
ARCHITECT, PA

72 SOUTH END COURT
HAMPSHIRE VILLAGE
HAMPSTEAD, NORTH CAROLINA
PHONE (910) 270-9778
FAX (910) 270-9461

REV.	DATE	DESCRIPTION
1	05/27/15	PER TOWN COMMENTS

DATE: APRIL 13, 2015
HORIZONTAL SCALE: N/A
VERTICAL SCALE: N/A
PROJECT MANAGER: CMK
DRAWN BY: SCSS
PROJECT NO.: 13-008
DRAWING NAME: 13-008 DETAILS

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EarthCentric Engineering, Inc.
 204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



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 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312

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MICHAEL R. McLEOD
 ARCHITECT, PA

72 SOUTH END COURT
 HAMPSTEAD VILLAGE
 HAMPSTEAD, NORTH CAROLINA
 PHONE (910) 270-9778
 FAX (910) 270-9461

REV.	DATE	DESCRIPTION	BY
1	05/12/15	PER TOWN COMMENTS	CPK

DATE:	APRIL 13, 2015
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
PROJECT MANAGER:	CPK
DRAWN BY:	SCS
PROJECT NO.:	13-008
DRAWING NAME:	13-008 DETAILS

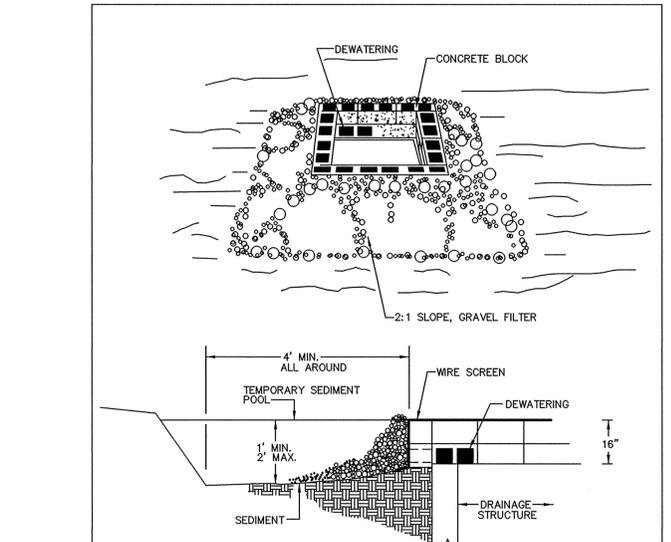
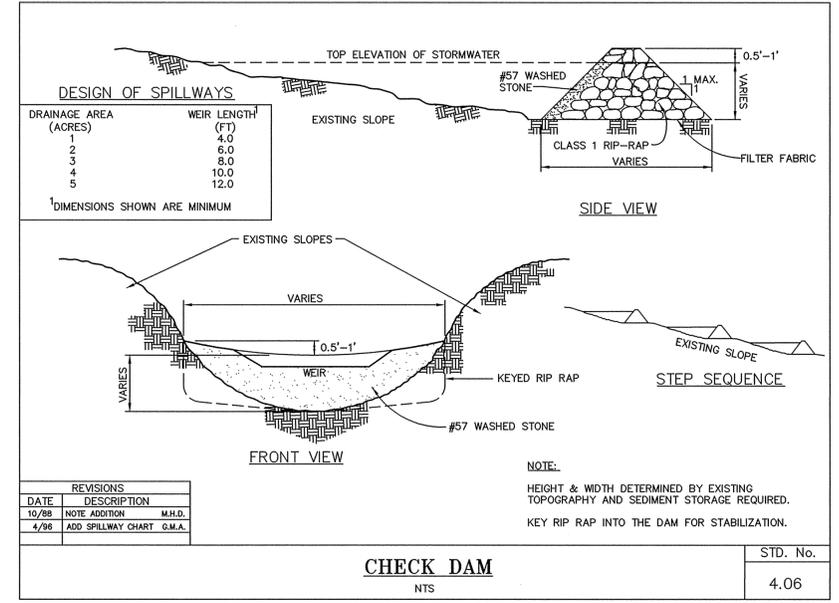
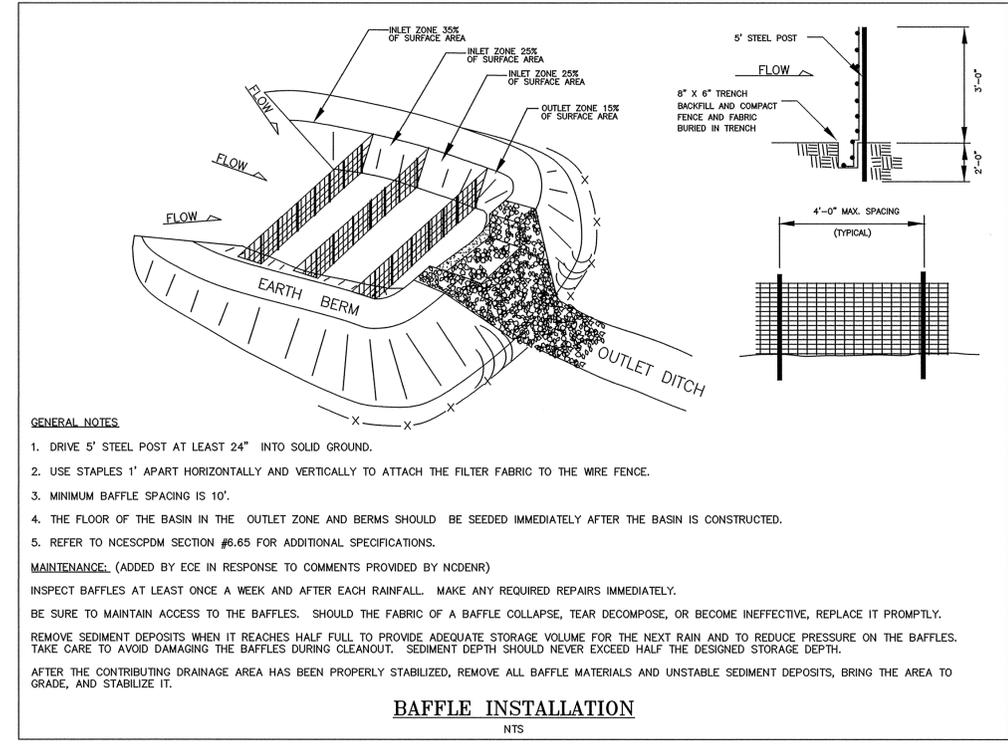
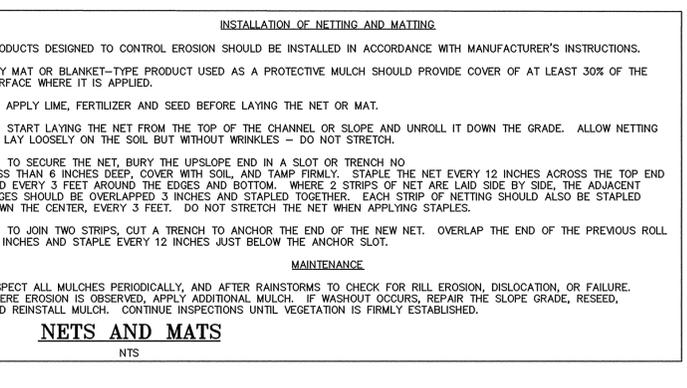
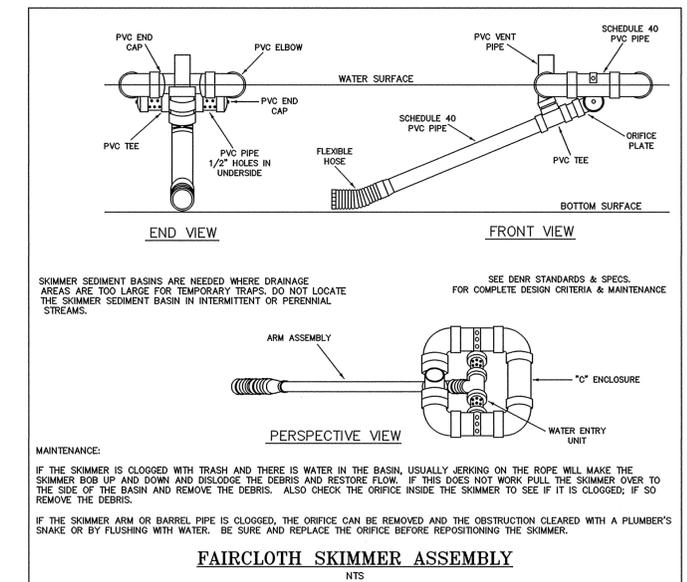
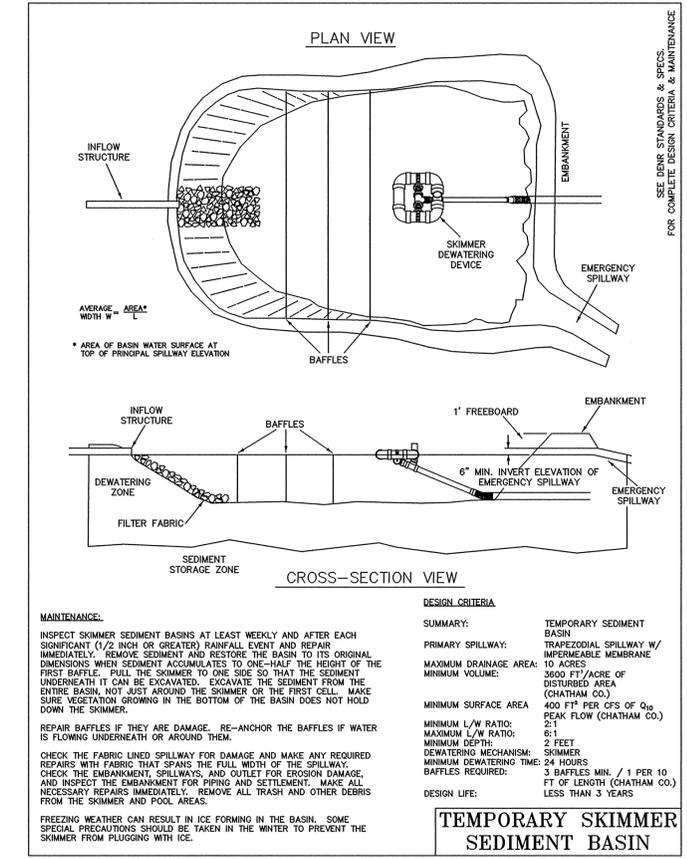
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CONSTRUCTION SPECIFICATIONS

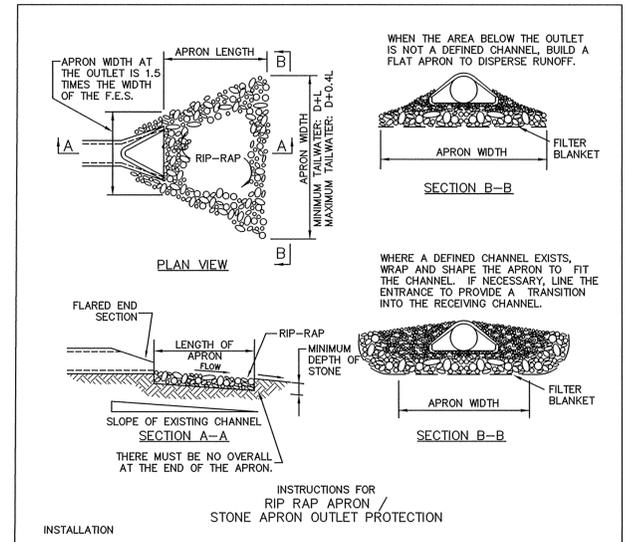
- LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2 X 4 WOOD STUDS THROUGH BLOCK OPENINGS.
- CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
- USE CLEAN GRAVEL, 3/4- TO 1/2-INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.
- IF ONLY STONE AND GRAVEL ARE USED, KEEP THE SLOPE TOWARD THE INLET NO STEEPER THAN 3:1. LEAVE A MINIMUM 1-FEET WIDE LEVEL STONE AREA BETWEEN THE STRUCTURE AND AROUND THE INLET TO PREVENT GRAVEL FROM ENTERING INLET. ON THE SLOPE TOWARD THE INLET, USE STONE 3 INCHES IN DIAMETER OR LARGER. ON THE SLOPE AWAY FROM THE INLET USE 1/2 - 3/4-INCH GRAVEL (NODOT #57 WASHED STONE) AT A MINIMUM THICKNESS OF 1 FT.

MAINTENANCE

INSPECT THE BARRIER AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED.

REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.

WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY, BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.



INSTRUCTIONS FOR RIP RAP APRON / STONE APRON OUTLET PROTECTION

- REFER TO THE PLANS FOR LOCATION, EXTENT, AND SPECIFICATIONS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER, ARCHITECT, OR RESPONSIBLE PERSONNEL ON THE SITE FOR ASSISTANCE. EROSION CONTROL PERSONNEL HAVE COPIES OF INSTRUCTIONS AND MAY HAVE PHOTOGRAPHS OR PROPERLY INSTALLED APRONS AS A AID TO INSTALLATION.
- IF THE STONE APRON IS NOT INSTALLED CORRECTLY THE FIRST TIME, IT WILL HAVE TO BE REBUILT.
- DETERMINE THE LOCATION ON THE GROUND TAKING INTO CONSIDERATION:
 - DECIDE HOW EQUIPMENT AND MATERIAL WILL REACH THE LOCATION TO CONSTRUCT THE APRON. DO NOT "PAINT YOURSELF INTO A CORNER" AND PLACE FILL, STRUCTURES, ETC. THAT COULD BLOCK ACCESS.
 - THE LOCATION OF THE APRON MUST BE SOLID GROUND. IT MAY BE NECESSARY TO EXCAVATE THE LOCATION TO REMOVE MUD AND THEN BACKFILL WITH GOOD MATERIAL. THIS IS NECESSARY SO THE STONE DOES NOT DISAPPEAR INTO THE MUD, WHICH WOULD REQUIRE MUCH MORE STONE TO COMPLETE THE APRON AND MAKE INSTALLATION DIFFICULT.
- CLEAR THE LOCATION OF THE APRON. LEAVE AS MUCH OF THE EXISTING VEGETATION AS POSSIBLE AROUND THE LOCATION TO HOLD THE SOIL IN PLACE AND REDUCE THE AREA THAT WILL HAVE TO BE STABILIZED AFTERWARD.
- EXCAVATE THE BOTTOM TO THE REQUIRED DEPTH TO ACCEPT THE STONE AND THE FILTER BLANKET. WHEN FINISHED, THE BOTTOM OF THE APRON MUST BE LEVEL WITH THE BOTTOM OF THE CHANNEL; THERE CANNOT BE AN OVERALL AT THE END OF THE APRON.
- PLACE THE FILTER BLANKET, AS SPECIFIED IN THE PLAN, OVER THE LOCATION AND UNDER THE LIP OF THE FLARED END SECTION.
- PLACE THE SPECIFIED STONE TO THE REQUIRED DIMENSIONS AND SHAPE IT TO THE CONFIGURATION SHOWN IN THE PLAN.
- STABILIZE THE AREA AROUND THE APRON THAT WAS DISTURBED DURING CONSTRUCTION. USE ADDITIONAL STONE OR VEGETATION, WHICHEVER IS APPROPRIATE FOR THE SITUATION.

MAINTENANCE

INSPECT THE RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF THE STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

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

ENGLISH STANDARD DRAWING FOR BRICK MANHOLE 12" THRU 36" PIPE

GENERAL NOTES:
MORTAR JOINTS 1/2" x 3/8" THICK. CONGAVE TOOL ALL EXPOSED JOINTS. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS TO CONSTRUCT THE BOTTOM SLAB. JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK ON 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF CLAY BRICK. IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN IN STD. NO. 840.00. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND. AT OTHER LOCATIONS CONSTRUCT A MINIMUM OF 9" ABOVE GROUND. PROVIDE MANHOLES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.

SECTION Y-Y
SECTION X-X
PLAN

PIPE DIA.	CO. YDS. CONCRETE	TOTAL BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)	CO. YDS. BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)
12"	0.550	0.330	0.020 0.032
15"	0.550	0.330	0.031 0.047
18"	0.550	0.330	0.044 0.065
24"	0.550	0.330	0.078 0.112
30"	0.550	0.330	0.122 0.170
36"	0.550	0.330	0.176 0.258

SHEET 1 OF 1
840.51

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

ENGLISH STANDARD DRAWING FOR TRAFFIC BEARING JUNCTION BOX FOR USE WITH PIPES 42" AND UNDER

GENERAL NOTES:
CONSTRUCT SECTION "A" 9" THICK AND SECTION "B" 12" THICK CONCRETE BRICK OR BLOCK ARE OPTIONAL. WALL CONSTRUCTION MATERIAL DESIGN WILL BE REQUIRED FOR APPROVAL. USE SINGLE MAT STEEL MAY BE USED IN LIEU OF HOOK BARS IN BASE SLAB.

PLAN OF TOP SLAB
PLAN OF BOTTOM SLAB
SECTION X-X
SECTION Y-Y

SHEET 1 OF 2
840.34

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

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

GENERAL NOTES:
MORTAR JOINTS 1/2" x 3/8" THICK. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB. DEDUCT FOR PIPES FROM TOTAL CO. YDS. OF BRICK MASONRY. USE #4 BAR DOUELS AT 12" CENTERS. PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. USE BRICK OR CONCRETE BLOCK WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND. AT OTHER LOCATIONS CONSTRUCT WITH PIPE CROWNS MATCHING. COVER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN
SECTION X-X
SECTION Y-Y
SECTION M-M

SHEET 1 OF 2
840.01

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

ENGLISH STANDARD DRAWING FOR BRICK JUNCTION BOX (WITH OPTIONAL MANHOLE) 12" THRU 66" PIPE

GENERAL NOTES:
CHAMFER ALL EXPOSED CORNERS 1". USE CLASS "B" CONCRETE THROUGHOUT. USE #4 BAR DOUELS AT 12" CENTERS. MORTAR JOINTS 1/2" x 3/8" THICK. CONGAVE TOOL ALL EXPOSED JOINTS. USE FORMS TO CONSTRUCT THE BOTTOM SLAB. JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK ON 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF CLAY BRICK. IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00. PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66. ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO REFLECT THE LOCATION OF THE MANHOLE (I.E. STANDARD BARS SHOWN AROUND OPENING IN TOP SLAB, ADDITIONAL VERTICAL REINFORCING BARS SHOWN, OPENING IN TOP SLAB). MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 18 FEET.

PLAN
SECTION X-X
SECTION Y-Y
OUTLET ELEVATION

PIPE DIA.	BOX DIMENSIONS			NO.	REINFORCEMENT BARS		CONC. CUBIC YDS.	BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)		MIN. WALL THICKNESS	C.S.	R.C.
	A	B	H		E	F		CU. YDS.	PER FT. OF PIPE			
12"	2'-0"	2'-0"	2'-3"	12	3'-1"	3'-4"	0.412	0.381	0.283	0.020	0.030	
15"	2'-0"	2'-0"	2'-6"	12	3'-1"	3'-4"	0.412	0.387	0.283	0.031	0.047	
18"	2'-0"	2'-0"	2'-9"	14	3'-2"	3'-4"	0.468	0.384	0.288	0.044	0.065	
24"	2'-0"	2'-0"	3'-3"	16	4'-1"	4'-4"	0.886	1.178	0.382	0.078	0.113	
30"	2'-0"	2'-0"	3'-9"	18	4'-9"	4'-8"	0.897	1.481	0.385	0.132	0.170	
36"	4'-0"	4'-0"	4'-3"	20	5'-1"	5'-4"	1.093	1.599	0.461	0.178	0.238	
42"	4'-0"	4'-0"	4'-9"	22	5'-9"	6'-0"	1.333	2.053	0.527	0.240	0.323	
48"	6'-0"	6'-0"	6'-3"	28	6'-9"	6'-8"	1.648	2.840	0.650	0.313	0.402	
54"	6'-0"	6'-0"	6'-9"	30	6'-11"	7'-2"	1.902	3.552	0.658	0.358	0.463	
60"	6'-0"	6'-0"	7'-3"	30	7'-7"	7'-10"	2.272	4.113	0.658	0.488	0.600	
66"	7'-0"	7'-0"	7'-9"	32	8'-2"	8'-5"	2.624	4.778	0.708	0.551	0.709	

SHEET 1 OF 1
840.32

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

ENGLISH STANDARD DRAWING FOR TRAFFIC BEARING JUNCTION BOX FOR USE WITH PIPES 42" AND UNDER

GENERAL NOTES:
USE STANDARD OR JUMBO BRICK FOR WALL CONSTRUCTION. SOLID CONCRETE BRICK OR BLOCK ARE OPTIONAL. WALL CONSTRUCTION MATERIAL PRECAST UNITS MADE OF CLASS "A" CONCRETE MAY BE USED IN LIEU OF BRICK MASONRY CONSTRUCTION. SUBMIT DESIGN OF PRECAST UNITS FOR APPROVAL PRIOR TO CONSTRUCTION. INCLUDE ALL ADJUSTMENTS TO WALLS, SLABS OR REINFORCING MATERIAL IN THE UNIT PRICE BID FOR EACH UNIT. INSTALL OPTIONAL MANHOLE IN POSITION AS DIRECTED BY THE ENGINEER. CUT OR HIND ALL BARS CROSSING THEIR OPENING TO ALLOW A MINIMUM CONCRETE COVERAGE. ENCLOSE THE OPENING WITH #4 BARS TIED TO THE REBAR MAT AND SET SO A MINIMUM OF 3" CONCRETE COVER IS ATTAINED. REFERENCE STD. NO. 840.54 FOR MANHOLE INFORMATION. PROVIDE JUNCTION BOXES WITH MANHOLES OVER 3'-6" IN DEPTH WITH STEPS PLACED ON 12" CENTERS. REFERENCE STD. NO. 840.66. SPACE DOWEL "C" BARS AT A MAXIMUM OF 12" CENTERS. MAXIMUM DEPTH OF THIS UNIT AS SHOWN IS 12". CONSTRUCT THE JUNCTION BOX IN ACCORDANCE WITH SECTIONS 830, 832, 834 AND 840 OF THE STANDARD SPECIFICATIONS.

PLAN OF TOP SLAB
PLAN OF BOTTOM SLAB
SECTION X-X
SECTION Y-Y

BAR	QTY.	SIZE	LENGTH	WEIGHT
A	8	#4	1'-0"	62.7
B	14	#4	1'-0"	80.3
C	28	#4	1'-0"	281.1
Y	14	#4	1'-11 1/2"	133.3
STEEL TOTAL WEIGHT				557.4
CONC. YDS. CLASS "A" CONC.				2.8
CONC. YDS. BRICK/CL. BK.				0.283
CONC. YDS. BRICK/CL. BK.				0.84

SHEET 2 OF 2
840.34

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

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

GENERAL NOTES:
MORTAR JOINTS 1/2" x 3/8" THICK. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB. DEDUCT FOR PIPES FROM TOTAL CO. YDS. OF BRICK MASONRY. USE #4 BAR DOUELS AT 12" CENTERS. PROVIDE ALL CATCH BASINS OVER 2'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. USE BRICK OR CONCRETE BLOCK WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND. AT OTHER LOCATIONS CONSTRUCT WITH PIPE CROWNS MATCHING. COVER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN
SECTION S-S
SECTION R-R
SECTION M-M

PIPE DIA.	BOX DIMENSIONS			NO.	REINFORCEMENT BARS		CONC. CUBIC YDS.	BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)		MIN. WALL THICKNESS	C.S.	R.C.
	A	B	H		E	F		CU. YDS.	PER FT. OF PIPE			
12"	2'-0"	2'-0"	2'-3"	12	3'-1"	3'-4"	0.412	0.381	0.283	0.020	0.030	
15"	2'-0"	2'-0"	2'-6"	12	3'-1"	3'-4"	0.412	0.387	0.283	0.031	0.047	
18"	2'-0"	2'-0"	2'-9"	14	3'-2"	3'-4"	0.468	0.384	0.288	0.044	0.065	
24"	2'-0"	2'-0"	3'-3"	16	4'-1"	4'-4"	0.886	1.178	0.382	0.078	0.113	
30"	2'-0"	2'-0"	3'-9"	18	4'-9"	4'-8"	0.897	1.481	0.385	0.132	0.170	
36"	4'-0"	4'-0"	4'-3"	20	5'-1"	5'-4"	1.093	1.599	0.461	0.178	0.238	
42"	4'-0"	4'-0"	4'-9"	22	5'-9"	6'-0"	1.333	2.053	0.527	0.240	0.323	
48"	6'-0"	6'-0"	6'-3"	28	6'-9"	6'-8"	1.648	2.840	0.650	0.313	0.402	
54"	6'-0"	6'-0"	6'-9"	30	6'-11"	7'-2"	1.902	3.552	0.658	0.358	0.463	

SHEET 2 OF 2
840.01

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

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

GENERAL NOTES:
CONSTRUCT THE JUNCTION BOX IN ACCORDANCE WITH SECTIONS 830, 832, 834 AND 840 OF THE STANDARD SPECIFICATIONS.

SECTION G-G
PLAN OF FRAME
PLAN OF GRATING
SECTION H-H
SECTION E-E
SECTION F-F

SHEET 1 OF 1
840.16

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

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

GENERAL NOTES:
MORTAR JOINTS 1/2" x 3/8" THICK. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB. DEDUCT FOR PIPES FROM TOTAL CO. YDS. OF BRICK MASONRY. USE #4 BAR DOUELS AT 12" CENTERS. PROVIDE ALL DROP INLETS OVER 2'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. USE BRICK OR CONCRETE BLOCK WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND. AT OTHER LOCATIONS CONSTRUCT WITH PIPE CROWNS MATCHING. COVER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN
SECTION X-X
SECTION Y-Y

PIPE DIA.	BOX DIMENSIONS			NO.	REINFORCEMENT BARS		CONC. CUBIC YDS.	BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)		MIN. WALL THICKNESS	C.S.	R.C.
	A	B	H		E	F		CU. YDS.	PER FT. OF PIPE			
12"	2'-0"	2'-0"	2'-3"	12	3'-1"	3'-4"	0.412	0.381	0.283	0.020	0.030	
15"	2'-0"	2'-0"	2'-6"	12	3'-1"	3'-4"	0.412	0.387	0.283	0.031	0.047	
18"	2'-0"	2'-0"	2'-9"	14	3'-2"	3'-4"	0.468	0.384	0.288	0.044	0.065	
24"	2'-0"	2'-0"	3'-3"	16	4'-1"	4'-4"	0.886	1.178	0.382	0.078	0.113	
30"	2'-0"	2'-0"	3'-9"	18	4'-9"	4'-8"	0.897	1.481	0.385	0.132	0.170	

SHEET 1 OF 1
840.15

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

ENGLISH STANDARD DRAWING FOR BRICK DROP INLET 12" THRU 30" PIPE

GENERAL NOTES:
MORTAR JOINTS 1/2" x 3/8" THICK. USE CLASS "B" CONCRETE THROUGHOUT. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB. DEDUCT FOR PIPES FROM TOTAL CO. YDS. OF BRICK MASONRY. USE #4 BAR DOUELS AT 12" CENTERS. PROVIDE ALL DROP INLETS OVER 2'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66. USE BRICK OR CONCRETE BLOCK WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS. IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND. AT OTHER LOCATIONS CONSTRUCT WITH PIPE CROWNS MATCHING. COVER ALL EXPOSED CORNERS 1". DRAWING NOT TO SCALE.

PLAN
SECTION X-X
SECTION Y-Y

PIPE DIA.	BOX DIMENSIONS			NO.	REINFORCEMENT BARS		CONC. CUBIC YDS.	BRICK MASONRY PER FT. OF PIPE (CL. TO CL.)		MIN. WALL THICKNESS	C.S.	R.C.
	A	B	H		E	F		CU. YDS.	PER FT. OF PIPE			
12"	2'-0"	2'-0"	2'-3"	12	3'-1"	3'-4"	0.412	0.381	0.283	0.020	0.030	
15"	2'-0"	2'-0"	2'-6"	12	3'-1"	3'-4"	0.412	0.387	0.283	0.031	0.047	
18"	2'-0"	2'-0"	2'-9"	14	3'-2"	3'-4"	0.468	0.384	0.288	0.044	0.065	
24"	2'-0"	2'-0"	3'-3"	16	4'-1"	4'-4"	0.886	1.178	0.382	0.078	0.113	
30"	2'-0"	2'-0"	3'-9"	18	4'-9"	4'-8"	0.897	1.481	0.385	0.132	0.170	

SHEET 1 OF 1
840.15

EarthCentric Engineering, Inc.
204 W. Clay Street
Mebane, NC 27302
Phone: (919) 593-9041
Fax: (919) 304-3234
E-Mail: Phil.Koch@EarthCentric.com

INCORPORATED
PHIL KOCH - NCPE #22634
PRINCIPAL ENGINEER

PITTSBORO WARD
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
DURHAM NORTH CAROLINA STAKE
OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

STORM DRAINAGE DETAILS

MICHAEL R. McLEOD
ARCHITECT, PA

72 SOUTH END COURT
HAMPSTEAD VILLAGE
HAMPSTEAD, NORTH CAROLINA
PHONE: (910) 270-9778
FAX: (910) 270-9461

REV. DATE DESCRIPTION BY

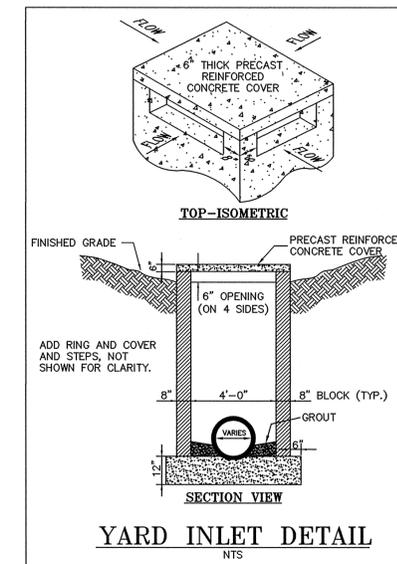
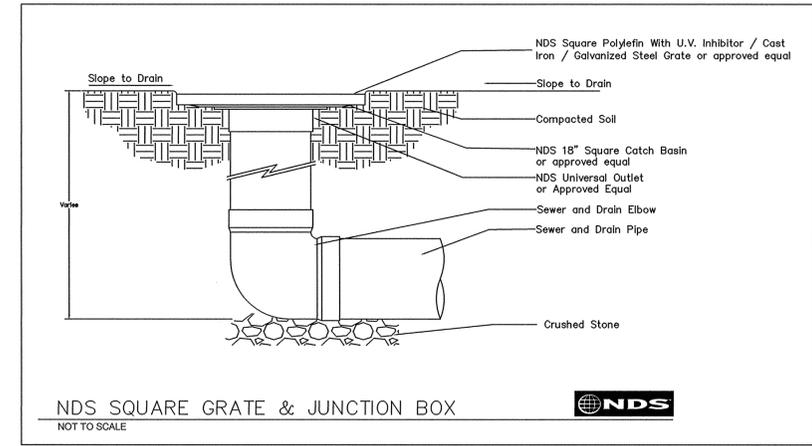
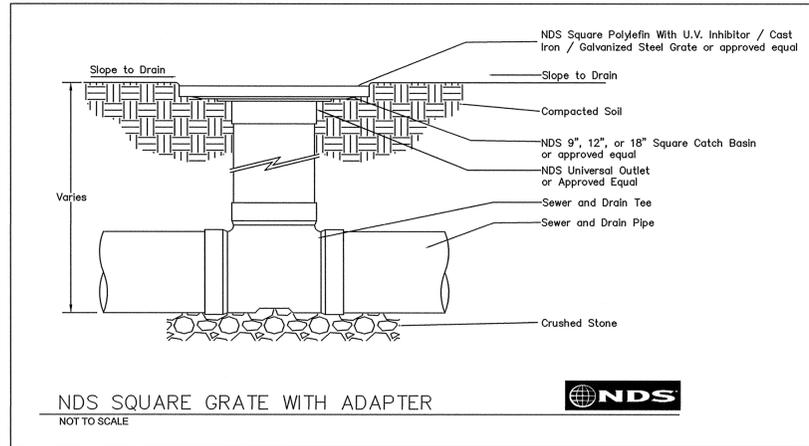
1 05/21/15 PER TOWN COMMENTS CRK

DATE: APRIL 13, 2015
HORIZONTAL SCALE: N/A
VERTICAL SCALE: N/A
PROJECT MANAGER: CRK
DRAWN BY: SCB
PROJECT NO.: 13-008
DRAWING NAME: 13-008 DETAILS

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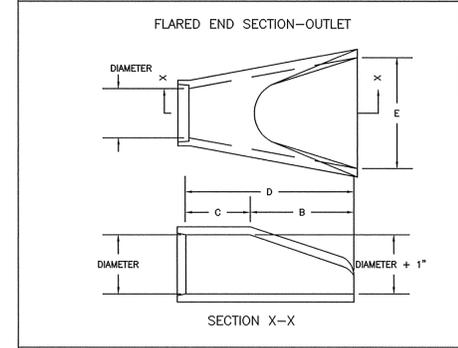
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SHEET NO.
D2.0
REVIEW



PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
36	4	3:1	63	34 3/4	97 3/4	72	5320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	26	98	84	7470
54	5 1/2	2.4:1	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13980

DIMENSIONS IN INCHES WEIGHT IN POUNDS



INLET & OUTLET FLARED END SECTIONS

REV.	DATE	DESCRIPTION	BY
1	05/27/15	PER TOWN COMMENTS	CPK

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: N/A
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: SCS
 PROJECT NO: 13-008
 DRAWING NAME: 13-008 DETAILS

EarthCentric Engineering, Inc.

204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com

PHIL KOCH - NCPE #22834
 PRINCIPAL ENGINEER

PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

STORM DRAINAGE DETAILS

MICHAEL R. McLEOD
 ARCHITECT, PA

72 SOUTH END COURT
 HAMPSTEAD VILLAGE
 HAMPSTEAD, NORTH CAROLINA
 PHONE (910) 270-9778
 FAX (910) 270-9461

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EarthCentric Engineering, Inc.

204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

STORMWATER MANAGEMENT DETAILS

MICHAEL R. McLEOD ARCHITECT, PA
 72 SOUTH END COURT
 HAMPSTEAD VILLAGE
 HAMPSTEAD, NORTH CAROLINA
 PHONE: (910) 270-9778
 FAX: (910) 270-9461

REV.	DATE	DESCRIPTION	BY
1	05/12/15	PER TOWN COMMENTS	CPK

DATE:	APRIL 13, 2015
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
PROJECT MANAGER:	CPK
DRAWN BY:	SCS
PROJECT NO.:	13-009
DRAWING NAME:	13-009 DETAILS

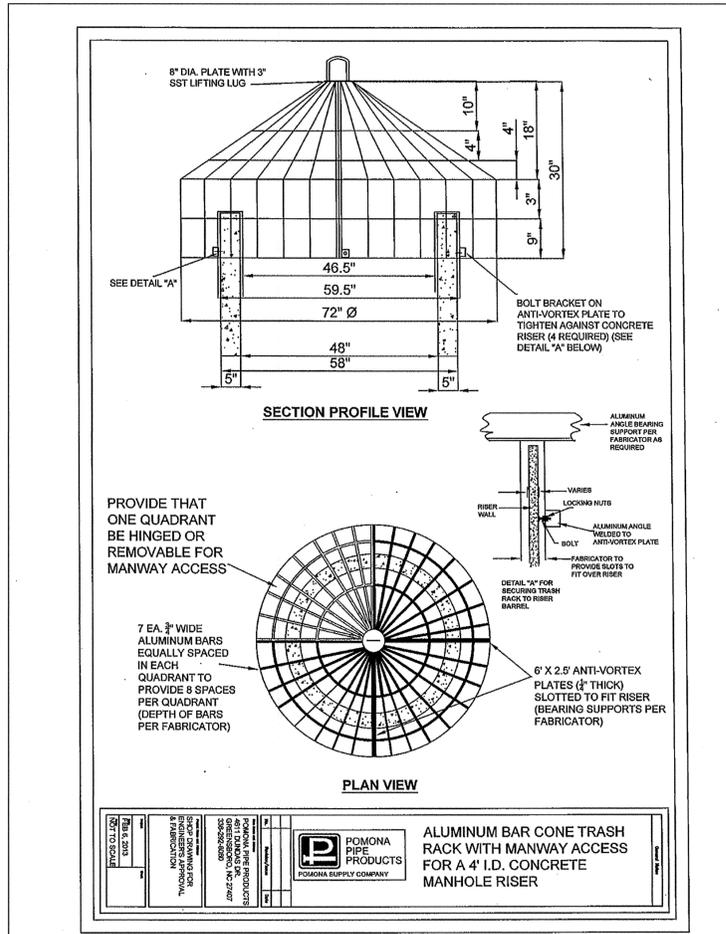
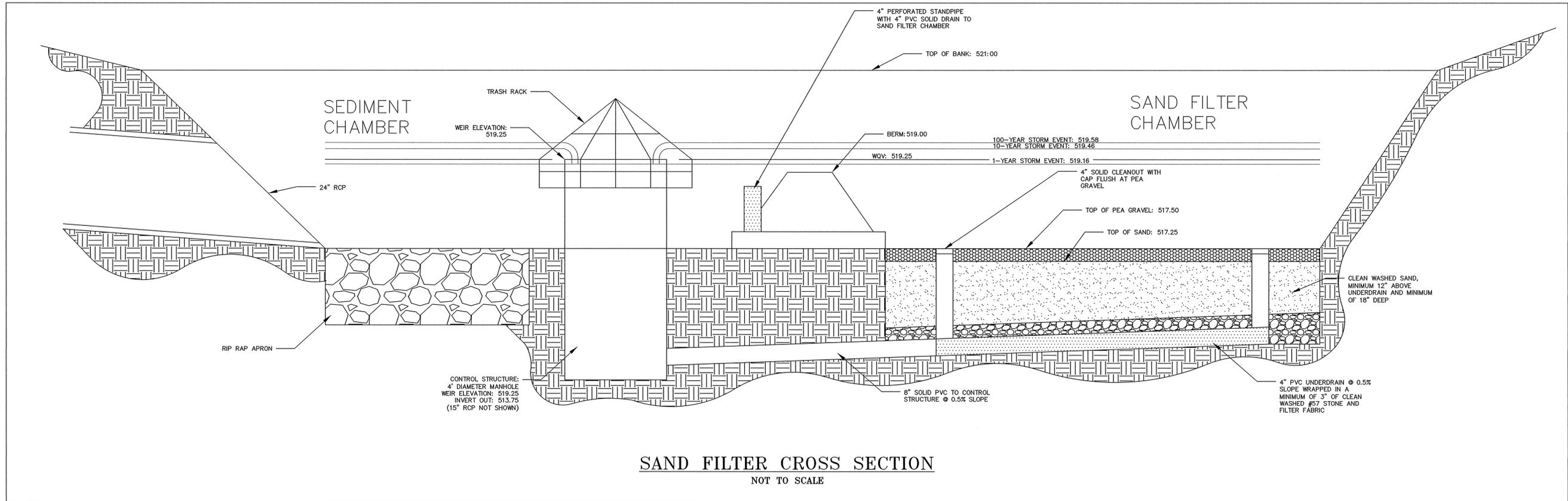
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SHEET NO.

D2.2

REVIEW



Permit Number: _____
 (to be provided by DWG)

Drainage Area Number: _____

Sand Filter Operation and Maintenance Agreement

I will keep a maintenance record on this BMP. This maintenance record will be kept in a log in a known set location. Any deficient BMP elements noted in the inspection will be corrected, repaired or replaced immediately. These deficiencies can affect the integrity of structures, safety of the public, and the removal efficiency of the BMP.

Important maintenance procedures:

- The drainage area will be carefully managed to reduce the sediment load to the sand filter.
- The sedimentation chamber or forebay will be cleaned out whenever sediment depth exceeds six inches.
- Once a year, sand media will be skimmed.
- The sand filter media will be replaced whenever it fails to function properly after maintenance.

The sand filter will be inspected quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County). Records of operation and maintenance will be kept in a known set location and will be available upon request.

Inspection activities shall be performed as follows. Any problems that are found shall be repaired immediately.

BMP element:	Potential problem:	How I will remediate the problem:
Entire BMP	Trash/debris is present.	Remove the trash/debris.
Perimeter of sand filter	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
	Vegetation is too short or too long.	Maintain vegetation at an appropriate height.
Forebay or pretreatment area	Sediment has accumulated to a depth of greater than six inches.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and stabilize or dispose of it in a location where it will not cause impacts to streams or the BMP.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.

Form SW401-Sand Filter O&M-Rev.4 2009Sept17 - mod Page 1 of 3

Permit Number: _____
 (to be provided by DWG)

Drainage Area Number: _____

BMP element:	Potential problem:	How I will remediate the problem:
Filter bed and underdrain collection system	Water is ponding on the surface for more than 24 hours after a storm.	Check to see if the collector system is clogged and flush if necessary. If water still ponds, remove the top few inches of filter bed media and replace. If water still ponds, then consult an expert.
Outlet device	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment offsite.
Receiving water	The outlet device is damaged	Repair or replace the outlet device.
	Erosion or other signs of damage have occurred at the outlet.	Contact the NC Division of Water Quality 401 Oversight Unit at 919-733-1786.

Form SW401-Sand Filter O&M-Rev.4 2009Sept17 - mod Page 2 of 3



EarthCentric Engineering, Inc.

204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

MICHAEL R. McLEOD
 ARCHITECT, PA
 72 SOUTH END COURT
 HAMPSHIRE VILLAGE
 HAMPSHIRE, NORTH CAROLINA
 PHONE (910) 270-9776
 FAX (910) 270-9461

REV.	DATE	DESCRIPTION	BY	CHK
1	05/12/15	PER TOWN COMMENTS	CPK	

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: N/A
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: SCS
 PROJECT NO.: 13-009
 DRAWING NAME: 13-009 DETAILS

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SHEET NO.

D3.0

REVIEW

90° ELBOW SECTION

NOMINAL DIAMETER UNDER 4"	A	B	C	TRENCH WIDTH
1 1/2"	1 1/2"	1 1/2"	1 1/2"	2'-0"
2"	2'-0"	1 1/2"	1 1/2"	2'-0"
3"	2'-0"	1 1/2"	1 1/2"	2'-0"
4"	2'-0"	1 1/2"	1 1/2"	2'-0"
6"	2'-0"	1 1/2"	1 1/2"	2'-0"
8"	2'-0"	1 1/2"	1 1/2"	2'-0"
10"	2'-0"	1 1/2"	1 1/2"	2'-0"
12"	2'-0"	1 1/2"	1 1/2"	2'-0"
14"	2'-0"	1 1/2"	1 1/2"	2'-0"
16"	2'-0"	1 1/2"	1 1/2"	2'-0"

NOTE: ALL CONCRETE BLOCKING SHALL BE FORMED TO INSURE ACCESSIBILITY TO FITTINGS AND POURED AGAINST UNDISTURBED EARTH. ALL CONCRETE BLOCKING TO BE CLASS B, 3000 P.S.I.

90 DEGREE ELBOWS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
16"	2'-0"	3'-8"	3'-0"	4'-0"
12"	2'-0"	2'-4"	2'-0"	3'-0"
8"	2'-0"	1'-8"	1'-4"	2'-0"
6"	2'-0"	1'-0"	1'-0"	2'-0"

45° & 22 1/2° BENDS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
16"	2'-0"	3'-8"	3'-0"	4'-0"
12"	2'-0"	2'-4"	2'-0"	3'-0"
8"	2'-0"	1'-8"	1'-4"	2'-0"
6"	2'-0"	1'-0"	1'-0"	2'-0"

REVISIONS

DATE	DESCRIPTION

THRUST BLOCKING

NOT TO SCALE

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 17

METER AND METER BOX INSTALLATION

REVISIONS

DATE	DESCRIPTION

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 12

PAVED AREA

UNPAVED AREA

REVISIONS

DATE	DESCRIPTION

VALVE BOX INSTALLATION

NOT TO SCALE

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 11

FIRE HYDRANT INSTALLATION ASSEMBLY

REVISIONS

DATE	DESCRIPTION

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 6

DOUBLE CHECK VALVE BACKFLOW ASSEMBLY

REVISIONS

DATE	DESCRIPTION

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 9

STANDARD VALVE BOX

REVISIONS

DATE	DESCRIPTION

TOWN OF PITTSBORO

STANDARD CONSTRUCTION DETAIL

STANDARD NO. 10

TAPPING SLEEVE AND VALVE ASSEMBLY

REVISIONS

DATE	DESCRIPTION

TOWN OF PITTSBORO

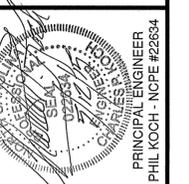
STANDARD CONSTRUCTION DETAIL

STANDARD NO. 7



EarthCentric Engineering, Inc.

204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
 THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312

MICHAEL R. McLEOD
 ARCHITECT, PA
 72 SOUTH END COURT
 HAMPSHIRE VILLAGE
 HAMPSHIRE, NORTH CAROLINA
 PHONE (910) 270-9778
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REV.	DATE	DESCRIPTION	BY
1	05/12/15	PER TOWN COMMENTS	CPK

DATE:	APRIL 13, 2015
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
PROJECT MANAGER:	CPK
DRAWN BY:	SPS
PROJECT NO.:	13-008
DRAWING NAME:	13-008 DETAILS

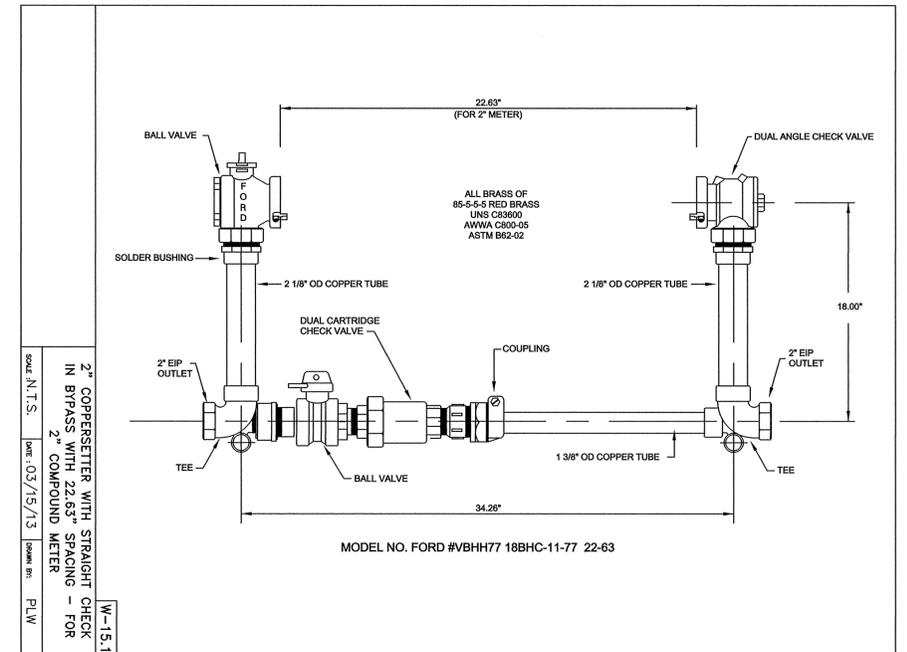
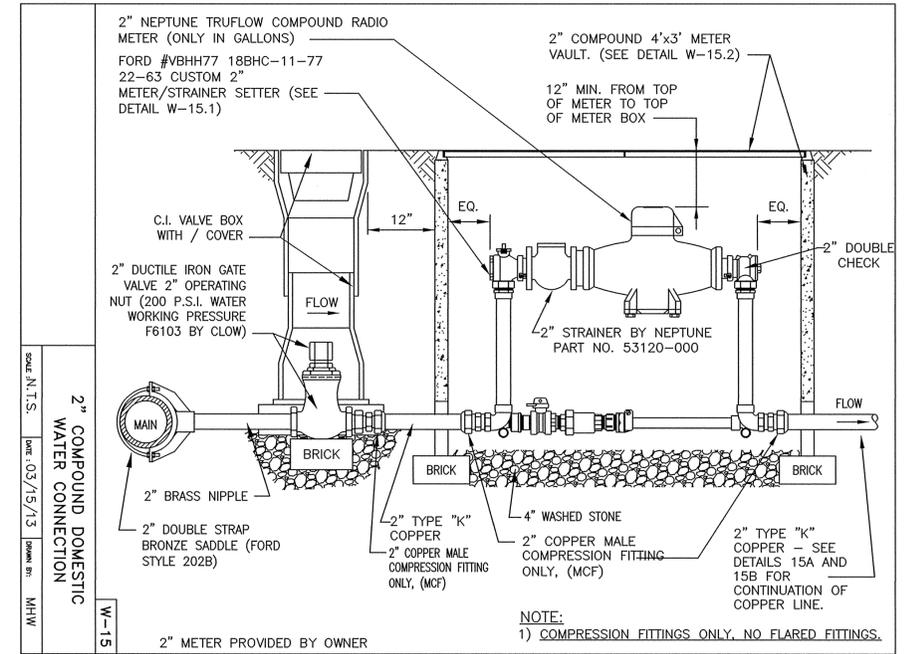
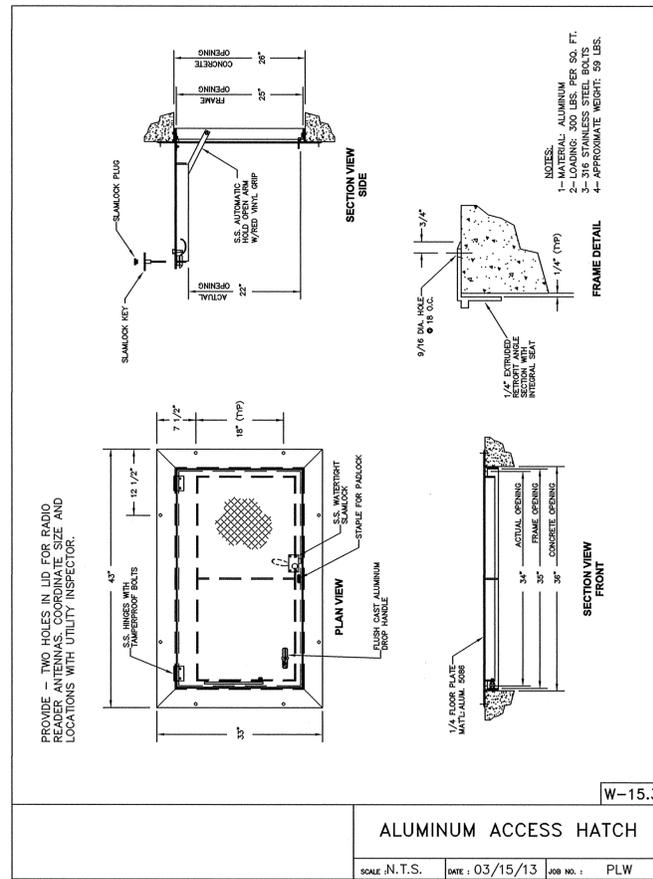
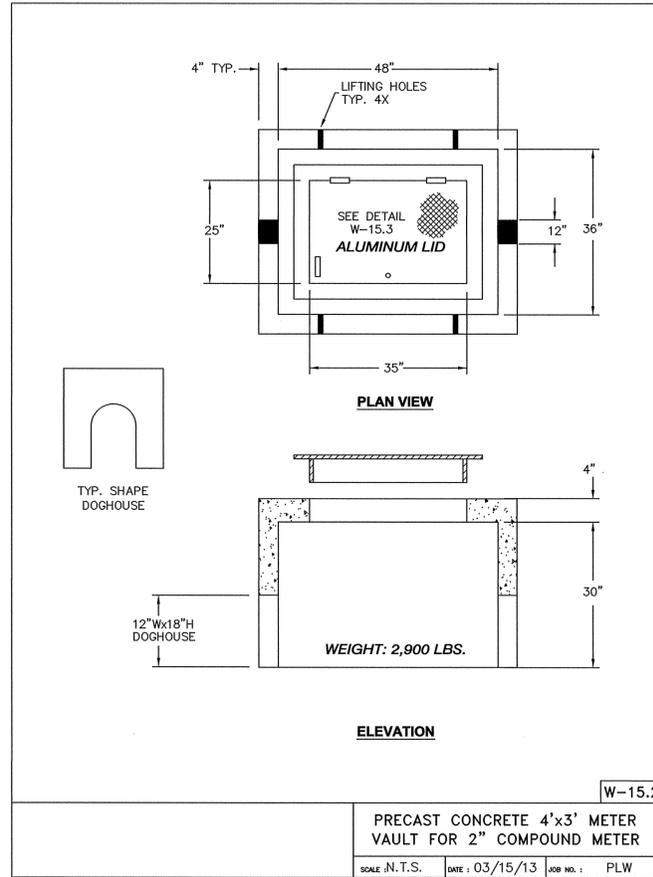
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SHEET NO.

D3.1

REVIEW



Hot Box® HBBFE-DY Enclosures

Specifications

- THE INTERNAL DIMENSIONS OF THIS MODEL ARE 125"L X 51"W X 67"H.
- RECOMMENDED SLAB SIZE IS 136" X 67" X 4" MINIMUM THICKNESS.
- HEATER TYPE (1) -1500W (1) -1500W.
- THE SHIPPING WEIGHT OF THIS UNIT IS 821 LBS.
- THIS UNIT BECOMES THE LBRE-DY WHEN ORDERED WITHOUT HEAT.

Hot Box® HB2S Enclosures

Specifications

- Recommended slab size is 59"L X 24"W X 4" minimum thickness.
- Heat is provided by a 30W, 120V, single phase heat trace cable.
- The internal dimensions of this model are 47"L X 17"W X 28"H.
- The shipping weight of this unit is 85 lbs.
- This unit is the LB2S model when ordered without heat.

Hot Box® HB1 Enclosures

Specifications

- Recommended slab size is 36"L X 22"W X 4" minimum thickness.
- Heat is provided by a 60W, 120V, single phase heat trace cable.
- The internal dimensions of this model are 27"L X 17"W X 23"H.
- The shipping weight of this unit is 35 lbs.
- This unit is the LB1 model when ordered without heat.

SPECIFICATION SHEET

Series 825Y

Reduced Pressure Zone Assemblies

Size: 1/2" - 2" (20mm - 50mm)

Specifications

- Ultimate mechanical protection of potable water, against hazards of cross-connection contamination.
- Meets all specifications of AWWA, ASSE, CSA and approved by the Foundation for Cross-connection Control and Hydraulic Research at the University of Southern California.
- Flow curve generated by the Foundation of Cross-Connection Control and Hydraulic Research at the University of Southern California.
- Modular relief valve for ease of maintenance.
- Simple Service procedures. All internal parts serviceable in line.
- Low head loss.
- Spring loaded "Y" type check valves.
- Internal relief valve pressure sensing passages.
- Replaceable seat rings on all sizes.
- End connection - NPT ANSI / ASME B1.20.1

Operation

In a flow condition the check valves are open with the pressure between the checks, called the zone, being maintained at least 5.0psi lower than the inlet pressure and the relief valve is maintained closed. Should abnormal conditions arise under no flow or reversal of flow, the differential relief valve will open and discharge to maintain the zone at least 2psi lower than the supply.

Typical Installation

Reduced pressure zone assemblies should be installed with minimum clearance of 12" (300mm) between relief valve discharge port and floor or grade. They must be installed where discharge will not be objectionable and can be positively drained away. They should be installed where easily accessible for testing and maintenance and must be protected from freezing. Thermal water expansion and/or water hammer downstream of the backflow preventer can cause excessive pressure. Excessive pressure situations should be eliminated to avoid possible damage to the system and assembly.

Refer to local codes for specific installation requirements. Some codes may prohibit vertical installation.

Job Name _____ **Contractor** _____
Job Location _____ **Approval** _____
Engineer _____ **Contractor's P.O. No.** _____
Approval _____ **Representative** _____

Capacity

Temperature - Pressure

Maximum working pressure: 175psi (12.1 bar)
 Hydrostatic test pressure: 350psi (24.1 bar)
 Temperature range: 32°F to 140°F (0°C to 60°C)

Materials

Main valve body: Bronze
 Relief valve body: Bronze
 Elastomers: Nitrile Seat Discs
 Diaphragms: Nitrile, fabric reinforced
 Springs: Stainless Steel

Approvals - Standards

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.
- AWWA C511 Conformance

Dimensions - Weights

Size: 1/2" - 2" (20 - 50mm)

SIZE (DN)		DIMENSIONS					WEIGHT		
In.	mm	A	B*	C	D	E	lbs.	kg.	
1/2	20	12	285	197	314	83	338	83	438
1	25	123	324	197	314	83	338	83	438
1 1/2	40	17	432	106	287	414	114	5	127
2	50	173	451	109	287	414	114	5	127

* B Dimension is less than A.

Side View

Top View

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SPECIFICATION SHEET

Series 850

Double Check Valve Assemblies

Size: 1/2" - 2" (15mm - 50mm)

Pressure - Temperature

Max. Working Pressure: 175psi (12.1 bar)
 Hydrostatic Test Press: 350psi (24.1 bar)
 Temperature Range: 32°F to 140°F (0°C to 60°C)

Materials

Valve Body: Bronze
 Elastomers: Silicone
 Springs: Stainless Steel

Models

- Wye - Strainer

Approvals - Standards

- ANSI/AWWA Conformance (C510-02)
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

Capacity

Typical Installation

12" (300mm) Minimum Clearance to Fixed Structure

Job Name _____ **Contractor** _____
Job Location _____ **Approval** _____
Engineer _____ **Contractor's P.O. No.** _____
Approval _____ **Representative** _____

Series 850 / Size: 1/2" - 2" (15mm - 50mm)

ITEM	DESCRIPTION	MATERIALS
1	Body	Bronze
1.2	Ballrace	Silicone
1.4	C-Ring	Silicone
2	Cover	Bronze
2.2	C-Ring	Silicone
3	Seat	Noryl®
3.1	O-Ring	Silicone
4	Flap	Noryl®
5	Seat Disc	Silicone
5.1	Disc Retainer	Noryl®
5.2	Post HD Screw	Stainless Steel
6	Spring	Stainless Steel
7	Guide	Noryl®
8	Retainer Spacer	Noryl®
9	Ball Valve (w/psi)	Bronze
9.1	Ball Valve	Bronze
11	Test Cock	Stainless Steel
21	Hex HD Cap screw	Stainless Steel
60	Identiflute Flute	Brass
61	Drive Screw Stick	Stainless Steel

Dimensions and Weights

Size: 1/2" - 2" (15 - 50mm)

SIZE (DN)		DIMENSIONS					WEIGHT	
In.	mm	A	B	C	D	E	lbs.	kg.
1/2	15	10	254	16	38	314	79	35
3/4	20	106	273	16	38	314	79	35
1	25	126	318	15	48	41	31	14
1 1/2	40	176	451	15	64	41	108	49
2	50	176	451	15	64	41	108	49

Note: Dimensions are nominal. Allowances must be made for normal manufacturing tolerances.

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SPECIFICATION SHEET

Series 826YD

Reduced Pressure Detector Assemblies

Size: 2 1/2" - 10" (65mm - 250mm)

Specifications

Reduced pressure detector assembly shall consist of a mainline reduced pressure configured backflow assembly in parallel with a reduced pressure by-pass assembly.

Flow curves shall be documented by independent laboratory testing.

Mainline valve bodies and covers shall be manufactured of ductile iron ASTM A538, Grade 65-12 and shall be flanged, ANSI B 16.1, Class 125, internal and external fusion epoxy coating.

The by-pass shall consist primarily of a bronze water meter in series with a bronze reduced pressure backflow preventer.

All low flow demands up to a minimum of 3 gpm (0.189 US) are to pass only through the by-pass meter and meter-size reduced pressure assembly and be accurately recorded. All flows above that of 3 gpm will pass through both the in-line reduced pressure assembly and by-pass without accurate registration by or damage to the meter.

Shutoff valves and testcocks shall be resilient seated with full flow characteristics and are to be considered integral to the assembly. The mainline shutoffs are also to be OS&Y, ULFM for fireline service.

Reduced pressure detector assemblies shall be rated 175psi CWMP (12.1 MPa), factory assembled and tested to assure proper mainline/ by-pass balance and cross over performance. Reduced pressure detector assemblies shall be FEBCO Series 826YD or prior approved equal.

Note: The gap drain is not designed to catch the maximum discharge possible from the relief valve. The installation of FEBCO air gap with the drain line terminating above a floor drain will handle any normal discharge or nuisance spitting through the relief valve. However, floor drain size may need to be designed to prevent water damage caused by a catastrophic failure condition. Do not reduce the size of the drain line from the air gap fitting.

Pressure - Temperature

Maximum Working Pressure: 175psi (12.1 bar)
 Hydrostatic Test Press: 350psi (24.1 bar)
 Temperature Range: 32°F to 140°F (0°C to 60°C)

Materials

Main Valve Body: Ductile iron grade 65-45-12 epoxy coated internal 10-20 mils
 Stainless Steel
 Trim: Bronze
 By-Pass Valve Body: Bronze
 By-Pass Meter: Totalling, 1 to 20 gpm, size 5/8" x 3/4"
 Main Valve Shutoffs: OS&Y, ULFM
 Elastomers: Nitrile and Nitrile/ fabric reinforced

Remote reading flow meters available.

Job Name _____ **Contractor** _____
Job Location _____ **Approval** _____
Engineer _____ **Contractor's P.O. No.** _____
Approval _____ **Representative** _____

Installation

The Reduced Pressure Detector Assembly should be installed horizontally with a suggested minimum clearance of 12" (300mm) between the assembly and the floor or grade. They must be installed where discharge from the relief valve will not be objectionable and can be positively drained away. They should be installed where easily accessible for testing and maintenance and must be protected from freezing. Thermal water expansion and/or water hammer downstream of the backflow preventer can cause excessive pressure. Excessive pressure situations should be eliminated to avoid possible damage to the system and assembly.

Capacity

Dimensions - Weights

Size: 2 1/2" - 10" (65 - 250mm)

SIZE (DN)		DIMENSIONS					WEIGHT	
In.	mm	A	B	C	D	E	lbs.	kg.
2 1/2	65	273	948	274	662	791	193	88
3	76	318	1061	291	651	816	216	98
4	100	396	1281	326	622	11	279	126
6	150	591	1818	396	681	14	259	117
8	200	691	1972	404	1172	18	407	185
10	250	841	2140	408	1478	22	569	258

Dimensions shown are nominal, allowance must be made for normal manufacturing tolerances.

FEBCO MODEL 826YD

Check Assembly

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EarthCentric Engineering, Inc.

204 W. Clay Street
 Mebane, NC 27302
 Phone: (919) 563-9041
 Fax: (919) 304-3234
 E-Mail: Phil.Koch@EarthCentric.com

INCORPORATED
ECE
 INCORPORATED

PRINCIPAL ENGINEER
 PHIL KOCH - NCP# #22634

PITTSBORO WARD

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 DURHAM NORTH CAROLINA STAKE
 OLD ROCK SPRING CEM. RD., PITTSBORO, NC 27312

MICHAEL R. McLEOD
 ARCHITECT, PA

72 SOUTH END COURT
 HAMPSIDE VILLAGE
 HAMPSIDE, NORTH CAROLINA
 PHONE: (919) 270-9778
 FAX: (919) 270-9461

UTILITY DETAILS
 WATER

REV. DATE DESCRIPTION PER TOWN COMMENTS

1 05/21/15

DATE: APRIL 13, 2015
 HORIZONTAL SCALE: N/A
 VERTICAL SCALE: N/A
 PROJECT MANAGER: CPK
 DRAWN BY: SCS
 PROJECT NO.: 13-009
 DRAWING NAME: 13-008 DETAILS

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SHEET NO.
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 REVIEW



EarthCentric Engineering, Inc.
204 W. Clay Street
Mebane, NC 27302
Phone: (919) 563-9041
Fax: (919) 304-3234
E-Mail: Phil.Koch@EarthCentric.com



PITTSBORO WARD
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
DURHAM NORTH CAROLINA STAKE
OLD ROCK SPRING CEM RD., PITTSBORO, NC 27312
SITE & PAVING
DETAILS

MICHAEL R. McLEOD
ARCHITECT, PA
72 SOUTH END COURT
HAMPSHIRE VILLAGE
HAMPSHIRE, NORTH CAROLINA
PHONE (910) 270-9778
FAX (910) 270-9461

REV.	DATE	DESCRIPTION
1	05/12/15	PER TOWN COMMENTS

DATE:	APRIL 13, 2015
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
PROJECT MANAGER:	CKK
DRAWN BY:	SCS
PROJECT NO.:	13-008
DRAWING NAME:	13-008 DETAILS

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REVIEW

