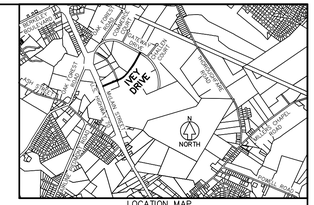
LEGEND	EXISTING	PROPOSED
WATER LINE	W	
SANITARY SEWER LINE	S	S
OVERHEAD ELECTRICAL LINE	OE	
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
DROP INLET	▣	▣
CATCH BASIN	▣	■
HYDRANT		
VALVE	⋈	⋈
CONTOUR	100	
TOP OF CURB ELEVATION		TC: 100.00
SOIL STABILIZATION IN 7 DAYS		
COIR FIBER BAFFLES		
TEMPORARY SEDIMENT FENCE AT LIMIT OF DISTURBANCE		LOD/SF
TEMPORARY DIVERSION DITCH		LOD
LIMIT OF DISTURBANCE		TD
TEMPORARY HARDWARE CLOTH & GRAVEL INLET PROTECTION		
SILT BAG		SB
TEMPORARY RIP RAP CHECK DAM		

DRAWING INDEX



LOCATION MAP

DEACON JONES KIA
THE THREE J'S, INC.
PROPERTY
DEED BOOK 3486 PAGE 241
TRACT A
PLAT CABINET O SLIDE 81-J
TRACT A

THE THREE J'S, INC.
PROPERTY
DEED BOOK 3580 PAGE 70
PLAT CABINET P SLIDE 30-G
TRACT 5

WAYNE COUNTY DEVELOPMENT ALLIANCE, INC.
PROPERTY
DEED BOOK 3280 PAGE 376

HARRY & MOLLIE, LLC
PROPERTY
DEED BOOK 2811 PAGE 413

AAR MANUFACTURING, INC.
DEED BOOK 2417 PAGE 147
PLAT CABINET L SLIDE 37-E
LOT NO. 19

COUNTY OF WAYNE
PROPERTY PAGE 867
DEED BOOK 1381 PAGE 413
PLAT CABINET L SLIDE 38-A
LOT NO. 18

50' EXISTING DUKE ENERGY
PIEDMONT NATURAL GAS EASEMENT
BOOK 3618 PAGE 288

50' DUKE ENERGY
PIEDMONT NATURAL GAS EASEMENT
BOOK 3618 PAGE 288

EXISTING DUKE ENERGY
PIEDMONT NATURAL GAS EASEMENT
50'

EXISTING DUKE ENERGY
PIEDMONT NATURAL GAS EASEMENT
PLAT CABINET L SLIDE 38-B

EXISTING DITCH
EXISTING NON-JURISDICTIONAL DITCH
EXISTING HOUSE
PROPERTY LINE
IVEY DRIVE
HARRY IVEY DRIVE
N.C.S.R. NO. 1728 (MCLAIN STREET)
N.C.S.R. NO. 1803 (COMMERCIAL DRIVE)
U. S. HIGHWAY NO. 70
R/W 60'
R/W 70'
20'
50'

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

STORMWATER NOTES:

ONE HALF OF PROPOSED IMPERVIOUS AREA FOR IVEY DRIVE ROAD CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE FUTURE PROPERTY OWNER FRONTING THE PROPOSED ROAD. THE IMPERVIOUS AREA SHALL BE INCLUDED IN EACH INDIVIDUAL LOT'S STORMWATER PLAN.

PROPOSED IMPERVIOUS AREA FOR IVEY DRIVE CONSTRUCTION = 1.84 ACRES

TEMPORARY IMPERVIOUS AREA FOR TWO SHELL BUILDINGS ON WAYNE COUNTY DEVELOPMENT ALLIANCE PROPERTY = 1.20 ACRES

1.84 + 1.20 = 3.04 ACRES
3.04 ACRES / 34.33 ACRES x 100% = 8.86% < 15%
(STORMWATER DESIGN NOT REQUIRED)

NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	REVISIONS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION, ADD WATER LINE AT INTERSECTIO	4-28-2023

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www.kornegaysep.com (919) 735-5886 Fax:(919) 580-9053

PROFESSIONAL ENGINEER SEAL 16813 NORTH CAROLINA

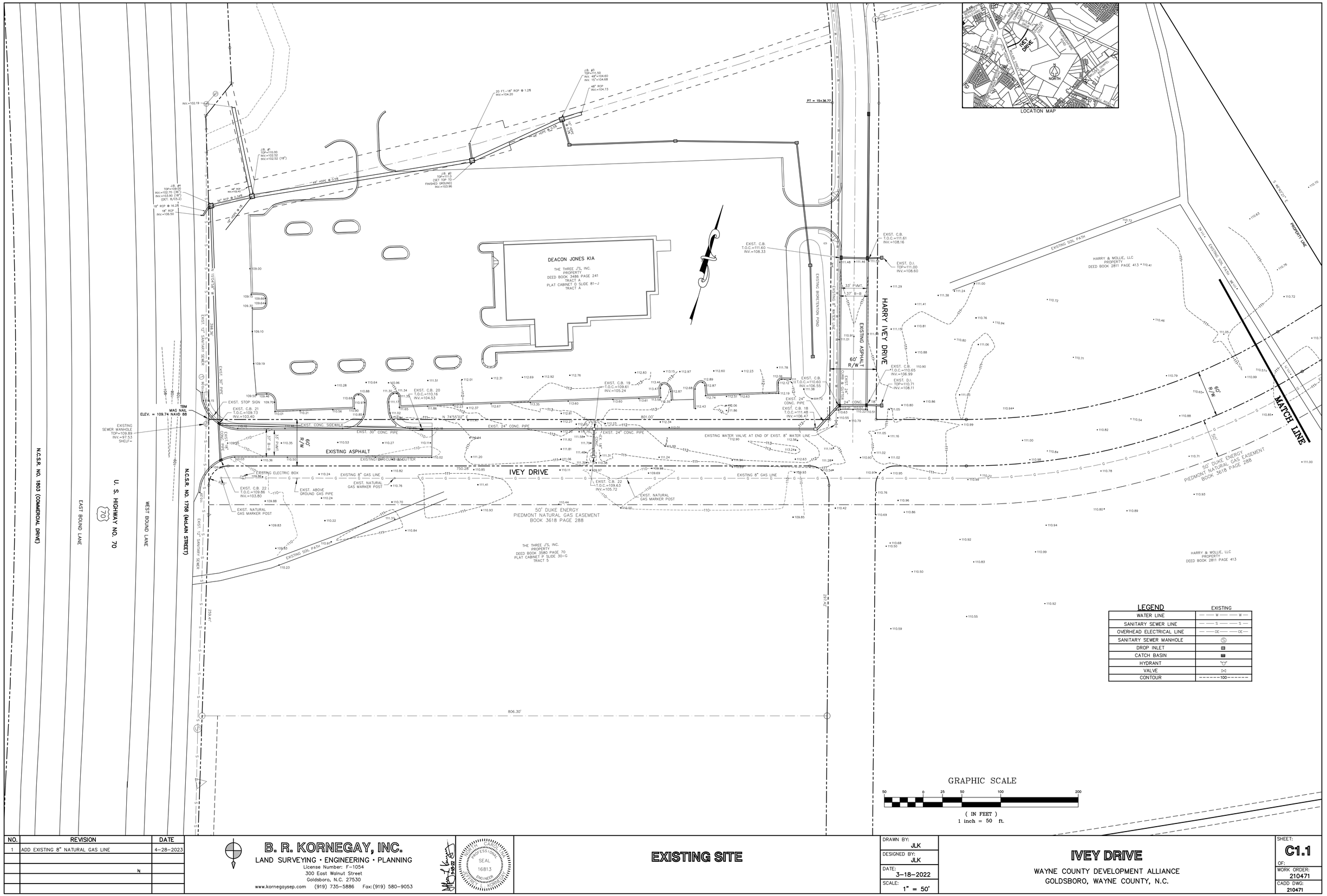
SITE PLAN

DRAWN BY:	JLK
DESIGNED BY:	JLK
DATE:	3-18-2022
SCALE:	1" = 100'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET:	C1.0
OF:	
WORK ORDER:	210471
CADD DWG:	210471



LEGEND	EXISTING
WATER LINE	— W — W —
SANITARY SEWER LINE	— S — S —
OVERHEAD ELECTRICAL LINE	— OE — OE —
SANITARY SEWER MANHOLE	Ⓢ
DROP INLET	▣
CATCH BASIN	▣
HYDRANT	
VALVE	⋈
CONTOUR	100

NO.	REVISION	DATE
1	ADD EXISTING 8" NATURAL GAS LINE	4-28-2023

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SEAL 16813 REGISTERED PROFESSIONAL ENGINEER NORTH CAROLINA

EXISTING SITE

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.1
OF:
WORK ORDER: 210471
CADD DWG: 210471

NO.	REVISION	DATE
1	ADD EXISTING 8" NATURAL GAS LINE	4-28-2023

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SEAL 16813

EXISTING SITE

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.2
OF:
WORK ORDER: 210471
CADD DWG: 210471

HARRY & MOLLIE, LLC 1344

DISTURBED AREA = 10.0 ACRES

NO CONSTRUCTION TRAFFIC ALLOWED ON HARRY IVEY DRIVE

MATCH LINE

LEGEND

	EXISTING	PROPOSED
WATER LINE	W W	
SANITARY SEWER LINE	S S	S S
OVERHEAD ELECTRICAL LINE	OE OE	
SANITARY SEWER MANHOLE	S	S
DROP INLET		
CATCH BASIN		
HYDRANT		
VALVE		
CONTOUR	100	
TOP OF CURB ELEVATION		TC:100.00
SOIL STABILIZATION IN 7 DAYS		
COIR FIBER BAFFLES		X X X X X X X X
TEMPORARY SEDIMENT FENCE AT LIMIT OF DISTURBANCE		LOD/SF
TEMPORARY DIVERSION DITCH		LOD
LIMIT OF DISTURBANCE		TD
TEMPORARY HARDWARE CLOTH & GRAVEL INLET PROTECTION		
SILT BAG		SB
TEMPORARY RIP RAP CHECK DAM		

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	ADD RIP RAP APRON LENGTHS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION	4-28-2023

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NORTH CAROLINA PROFESSIONAL SEAL 16813 ENGINEER JOSEPH L. KORNEGAY

EROSION CONTROL PLAN

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.3
OF:
WORK ORDER: 210471
CADD DWG: 210471

SITE NOTES:

- (A) 10 FT. TRANSITION TO EXISTING 24" CURB
- (B) PROPOSED NCDOT STANDARD STOP SIGN
- (C) PROPOSED NCDOT STANDARD STOP BAR
- (D) PROPOSED HANDICAP RAMP

Curve number: 1
Curve Detail Information

PC Sta:	10+27.89	PT Sta:	14+67.19
Radius:	800.00	Length:	439.298
Spiral in:	0.00	TS Sta:	10+27.89
Spiral out:	0.00	ST Sta:	14+67.19
Method:	A	Direction:	Left arc
Beginning:	10+27.89	Ending:	14+67.19
E value:	0.04	Rollover:	0.06

Transition In

Runout:	41.50	Station:	9+03.39
Runoff:	83.00	Start sta:	9+44.89
% Runoff:	100.00	End sta:	10+27.89

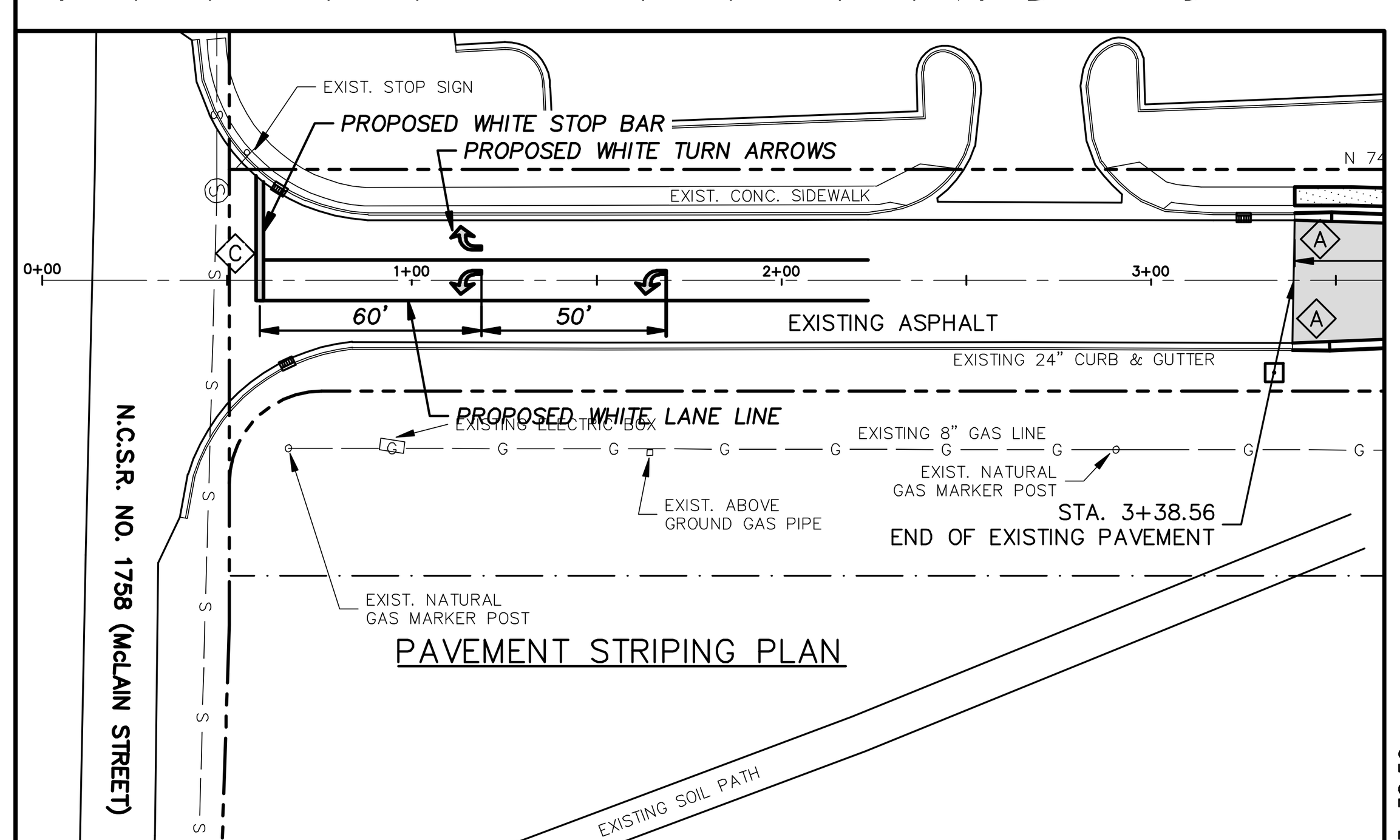
Transition Out

Runout:	41.50	Station:	15+91.69
Runoff:	83.00	Start sta:	14+67.19
% Runoff:	100.00	End sta:	15+50.19

R=800.00
L=466.41
Tan=240.04
Δ=33°24'15"
V=40 MPH
SE=4%
RUNOFF=83 FT.
RUNOUT=41.5 FT.

LEGEND

	EXISTING	PROPOSED
WATER LINE	— W —	
SANITARY SEWER LINE	— S —	—S—
OVERHEAD ELECTRICAL LINE	— OE —	
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
DROP INLET	▫	▪
CATCH BASIN	▫	▪
HYDRANT		
VALVE	⋈	⋈
CONTOUR	---100---	
TOP OF CURB ELEVATION		TC:100.00



PAVEMENT STRIPING PLAN

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

EACH PRIME CONTRACTOR PERFORMING EXCAVATIONS OR UNDERGROUND WORK SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY EXISTING UTILITIES IN THE AREA OF THEIR WORK. NOTIFY THE UTILITY LOCATOR SERVICE BY DIALING 811 AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION IN ORDER THAT EXISTING UTILITIES IN THE AREA MAY BE FLAGGED AND STAKED.

NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	REVISE DI 1 & DI 2 TOP ELEV./REMOVE DI 8 AT C.B. 18 ADD STOP SIGNS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION, ADD WATER LINE AT INTERSECTION	4-28-2023

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SEAL 16813

IVEY DRIVE

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.4
OF:
WORK ORDER: 210471
CADD DWG: 210471

HARRY & MOLLIE, LLC
1344

SITE NOTES:

- (A) 10 FT. TRANSITION TO EXISTING 24" CURB
- (B) PROPOSED NCDOT STANDARD STOP SIGN
- (C) PROPOSED NCDOT STANDARD STOP BAR
- (D) PROPOSED HANDICAP RAMP

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

Curve number: 2
Curve Detail Information

PC Sta:	20+14.42	PT Sta:	22+80.52
Radius:	2000.00	Length:	266.098
Spiral in:	0.00	TS Sta:	20+14.42
Spiral out:	0.00	ST Sta:	22+80.52
Method:	A	Direction:	Left arc
Beginning:	20+14.42	Ending:	22+80.52
E value:	0.04	Rollover:	0.06

Transition In

Runout:	41.50	Station:	18+89.92
Runoff:	83.00	Start sta:	19+31.42
% Runoff:	100.00	End sta:	20+14.42

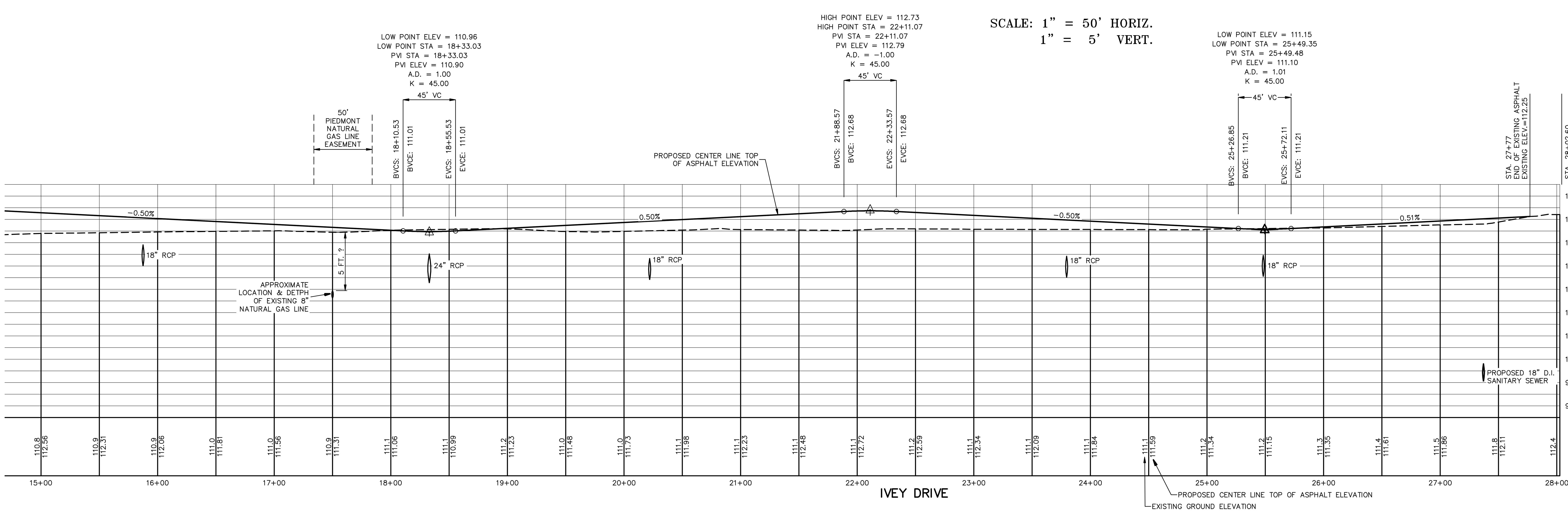
Transition Out

Runout:	41.50	Station:	24+05.02
Runoff:	83.00	Start sta:	22+80.52
% Runoff:	100.00	End sta:	23+63.52

LEGEND

	EXISTING	PROPOSED
WATER LINE	— W —	
SANITARY SEWER LINE	— S —	—S—
OVERHEAD ELECTRICAL LINE	— OE —	
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
DROP INLET	⊠	⊠
CATCH BASIN	▭	▬
HYDRANT		
VALVE	⋈	⋈
CONTOUR	----100----	
TOP OF CURB ELEVATION		●—TC:100.00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	REVISE STORM PIPE B/W CB 7 & CB 9 TO 24" ADD STOP SIGNS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION	4-28-2023

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SEAL 16813

IVEY DRIVE

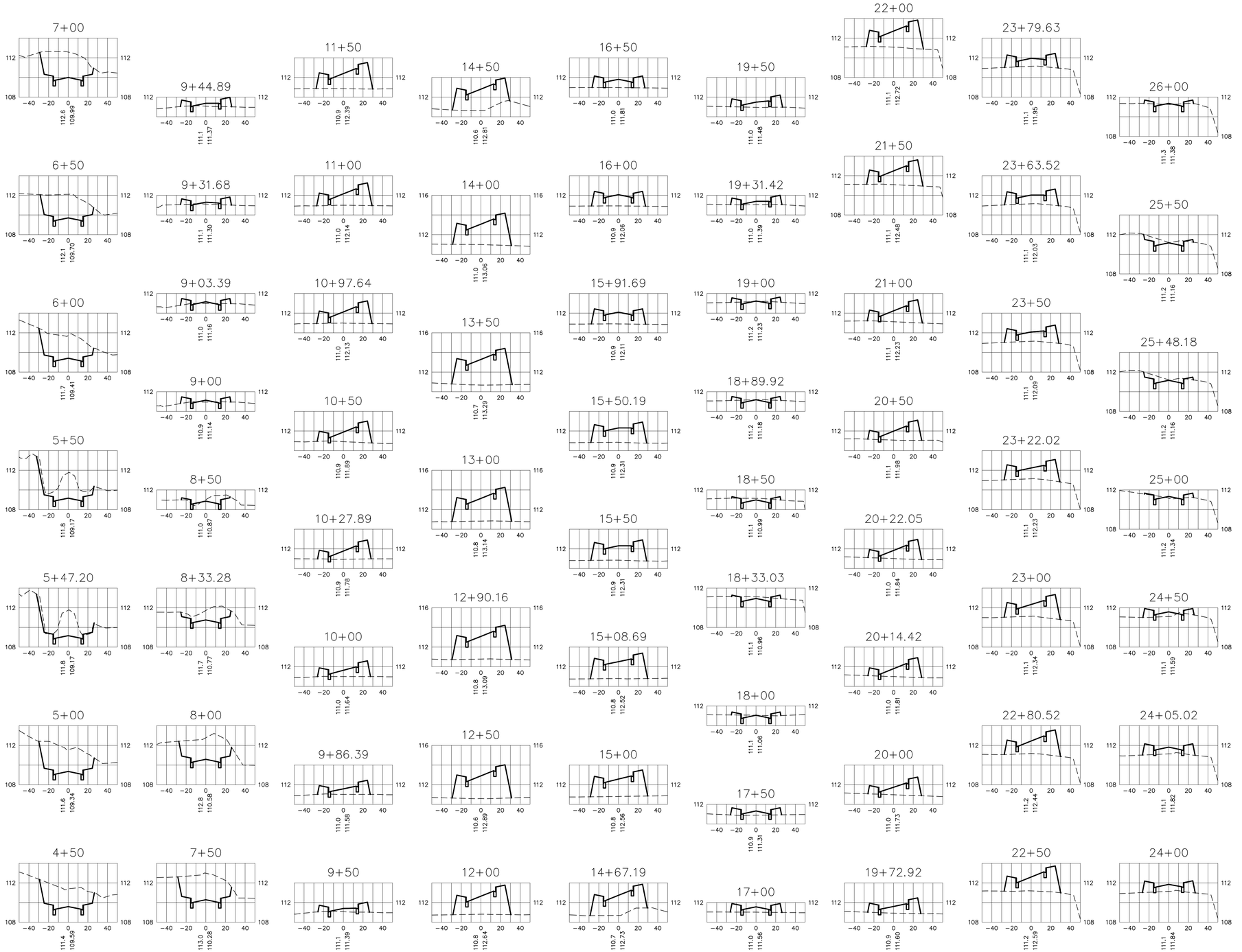
DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE & SANITARY SEWER
WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.5
OF:
WORK ORDER: 210471
CADD DWG: 210471

HARRY & MOLLIE, LLC 1344

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



FOR REVIEW ONLY
NOT FOR CONSTRUCTION

NO.	REVISION	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 16813 ENGINEER

IVEY DRIVE CROSS SECTIONS

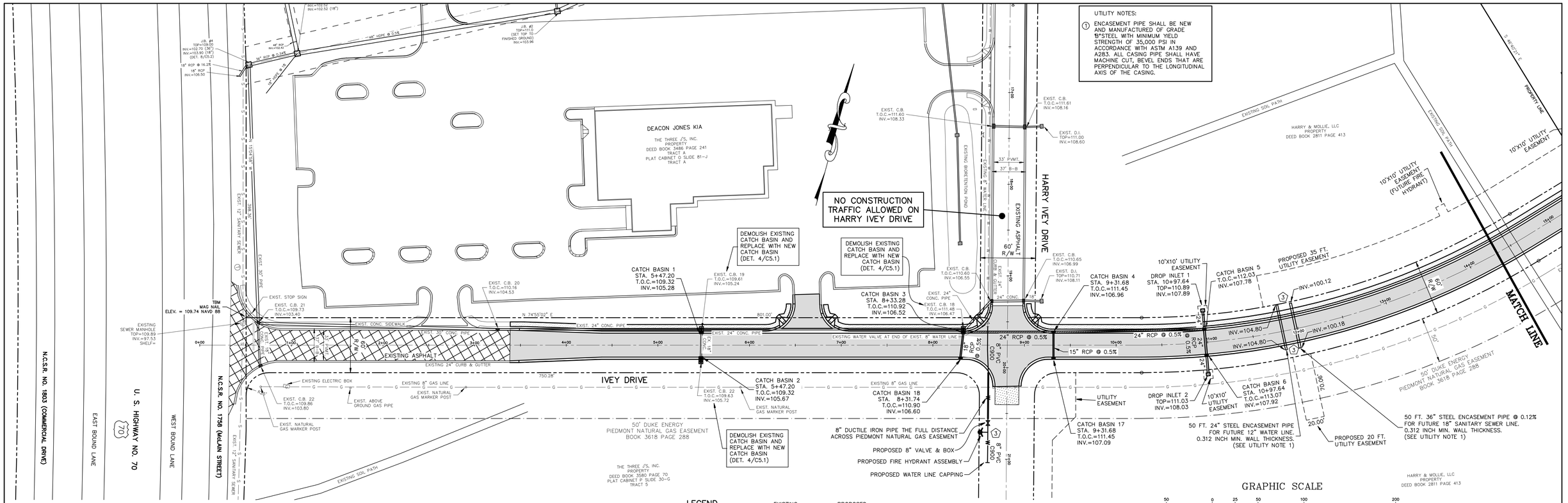
DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

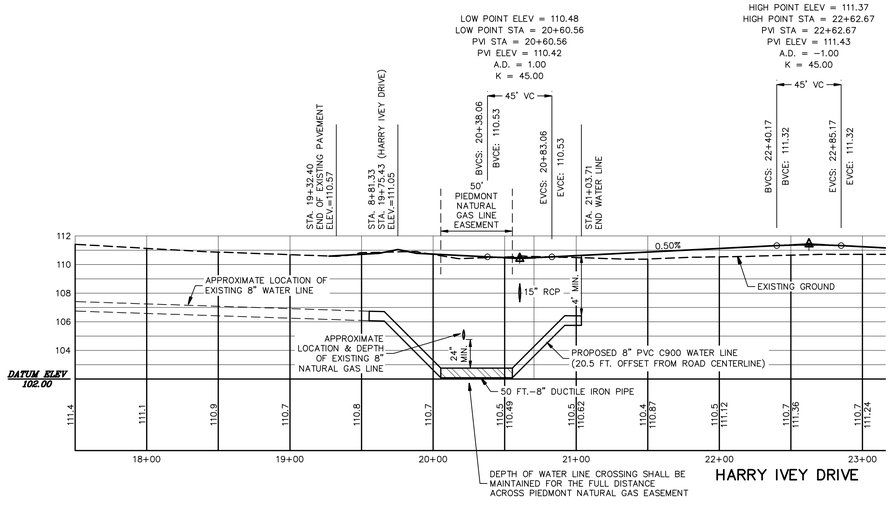
WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.6
OF:
WORK ORDER: 210471
CADD DWG: 210471

HARRY & MOLLIE, LLC



LEGEND	EXISTING	PROPOSED
WATER LINE	W W	
SANITARY SEWER LINE	S S	S S
OVERHEAD ELECTRICAL LINE	OE OE	
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
DROP INLET	▣	▣
CATCH BASIN	▣	■
HYDRANT		
VALVE	⋈	⋈
CONTOUR	100	
TOP OF CURB ELEVATION		TC: 100.00



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NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	REVISE DI 1 & DI 2 TOP ELEV./REMOVE DI 8 AT C.B. 18 ADD STOP SIGNS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION, ADD WATER LINE AT INTERSECTION	4-28-202

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CAROLINA PROFESSIONAL SEAL 16813 ENGINEER JOSEPH LEE KORNEGAY

UTILITY PLAN

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.7
OF:
WORK ORDER: 210471
CADD DWG: 210471

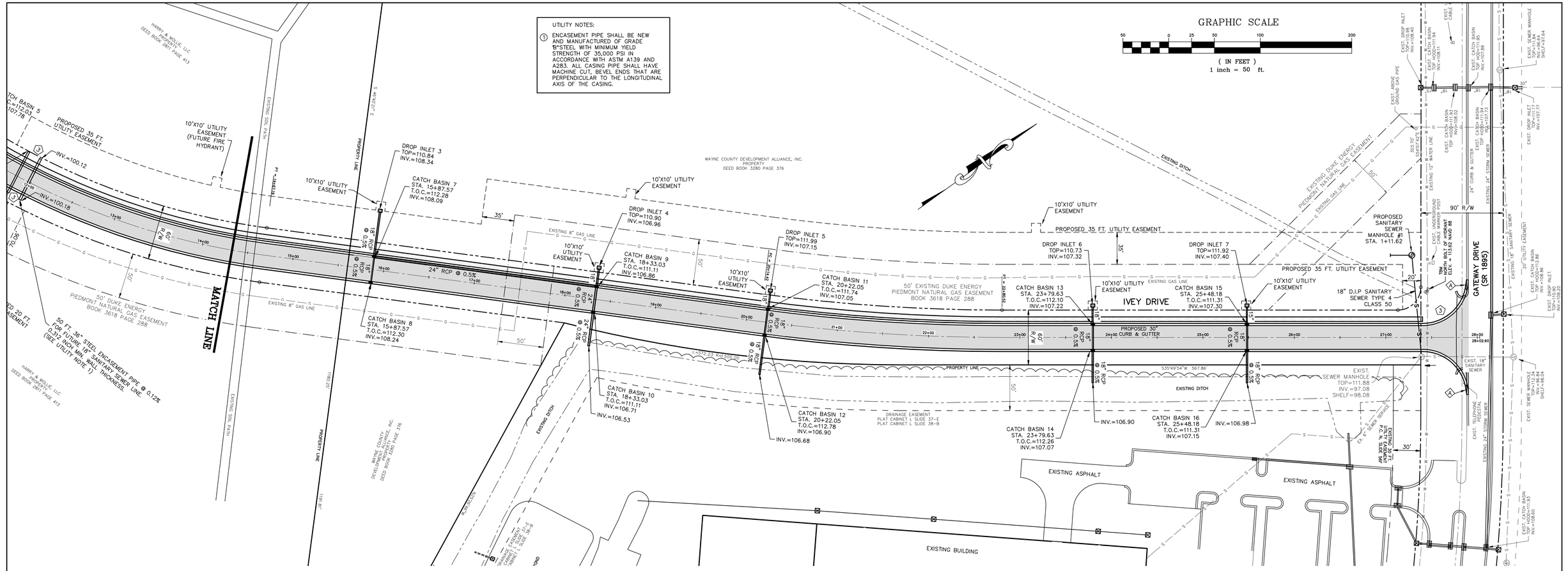
UTILITY NOTES:

(1) ENCASEMENT PIPE SHALL BE NEW AND MANUFACTURED OF GRADE B STEEL WITH MINIMUM YIELD STRENGTH OF 35,000 PSI IN ACCORDANCE WITH ASTM A139 AND A283. ALL CASING PIPE SHALL HAVE MACHINE CUT, BEVEL ENDS THAT ARE PERPENDICULAR TO THE LONGITUDINAL AXIS OF THE CASING.

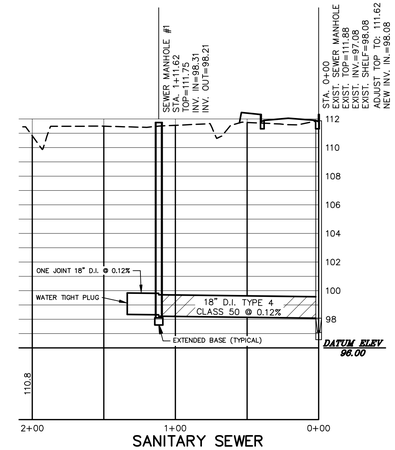
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



LEGEND	EXISTING	PROPOSED
WATER LINE	— W — W —	
SANITARY SEWER LINE	— S — S —	—S—S—
OVERHEAD ELECTRICAL LINE	— OE — OE —	
SANITARY SEWER MANHOLE	Ⓢ	Ⓢ
DROP INLET	▣	▣
CATCH BASIN	▤	■
HYDRANT		
VALVE	⋈	⋈
CONTOUR	------100------	
TOP OF CURB ELEVATION		●—TC: 100.00



SANITARY SEWER

NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITARY SEWER	12-7-2022
2	REVISE STORM PIPE B/W CB 7 & CB 9 TO 24" ADD STOP SIGNS	1-18-2023
3	ADD EXISTING 8" NATURAL GAS LINE, REVISE GATEWAY DRIVE INTERSECTION	4-28-2023

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SEAL 16813 ENGINEER

UTILITY PLAN

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: 1" = 50'

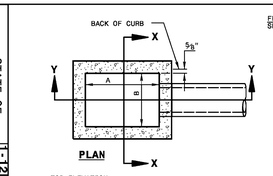
IVEY DRIVE & SANITARY SEWER

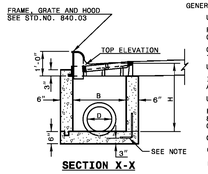
WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C1.8
OF:
WORK ORDER: 210471
CADD DWG: 210471

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

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





GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

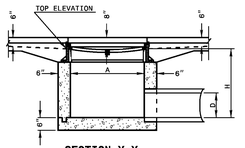
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

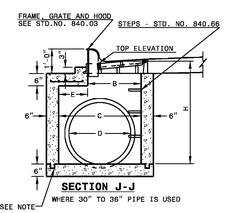
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

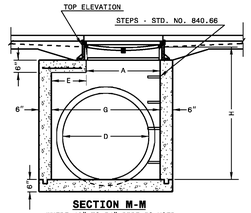
CONSTRUCT WITH PIPE CROWNS MATCHING.

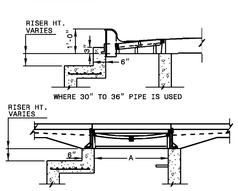
CHAMFER ALL EXPOSED CORNERS 1".

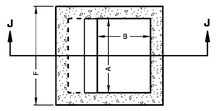
DRAWING NOT TO SCALE.

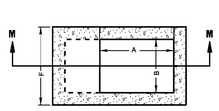








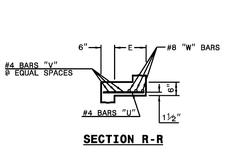


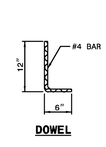


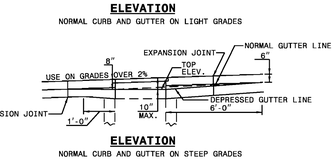
SHEET 1 OF 2
840.02

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

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







MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

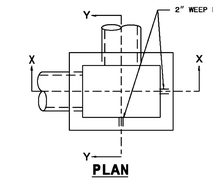
DIMENSIONS OF BOX & PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W			CU.YDS. CONC. IN BOX			DEDUCTIONS ONE PIPE	
PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOTAL LBS.	TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	0.235	0.772		0.015	0.026
15"	3'-0"	2'-2"			3'-0"										0.235	0.829		0.023	0.036
18"	3'-0"	2'-2"			3'-3"										0.235	0.887		0.033	0.049
24"	3'-0"	2'-2"			3'-9"										0.235	1.001		0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
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'-8"	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

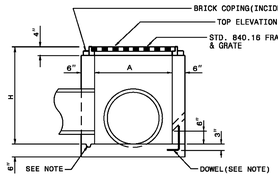
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

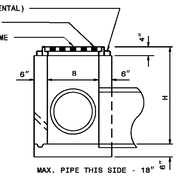
SHEET 2 OF 2
840.02

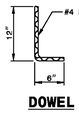
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

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









GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

CONSTRUCT WITH PIPE CROWNS MATCHING.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.

INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 1".

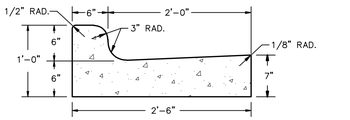
DRAWING NOT TO SCALE.

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE D	SPAN A	WIDTH B	MIN. HEIGHT H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"	/	/	2'-3"	/	/	0.648	0.023	0.036
18"	/	/	2'-6"	/	/	0.703	0.033	0.049
24"	/	/	3'-0"	/	/	0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

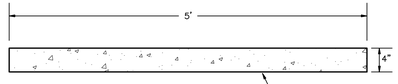
SHEET 1 OF 1
840.14

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE



1 C5.1 **30" NCDOT CURB & GUTTER**
(NOT TO SCALE)



2 C5.1 **CONCRETE SIDEWALK**
(NOT TO SCALE)

TRAVERSE EXPANSION JOINTS TO BE A MINIMUM OF 50 FEET.

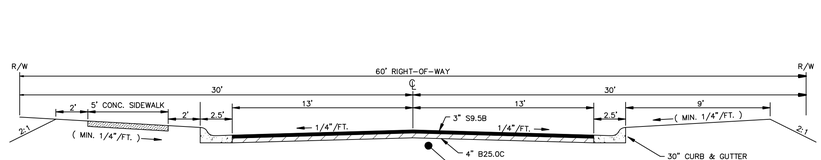
ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.

A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS AND STREET INTERSECTIONS.

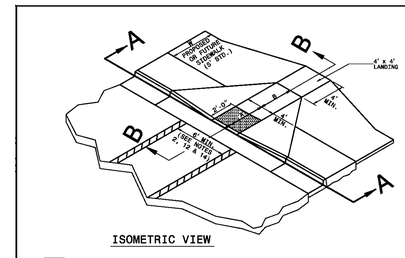
A CONTROL JOINT 1 INCH DEEP WITH 1/8 INCH RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT INTERVALS EQUIVALENT TO WIDTH OF SIDEWALK UNLESS OTHERWISE NOTED.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

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

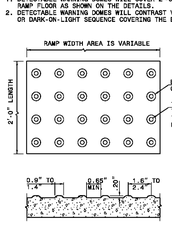


3 C5.1 **TYPICAL ROAD CROSS SECTION**
NTS



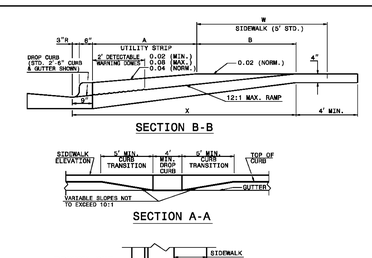
PAY LIMITS FOR CURB RAMP

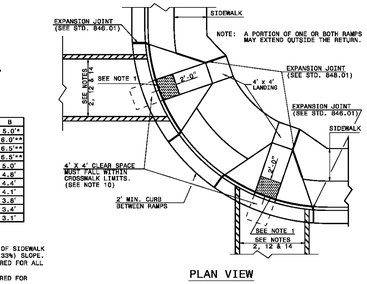
NOTES:
1. DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
2. DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



H	A	W=A+0"	X	B
5'	0.0	5.8'	5.8'	5.0'*
6'	0.0	6.8'	6.8'	6.0'**
7'	0.0	7.8'	7.3'	6.5'**
8'	0.0	8.8'	7.3'	6.5'**
5'	2.0	7.8'	7.8'	5.0'
5'	2.6'	8.3'	8.1'	4.6'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	9.4'	4.1'
5'	4.0'	9.8'	8.8'	3.8'
5'	4.3'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

B = X-(A+0")
B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.

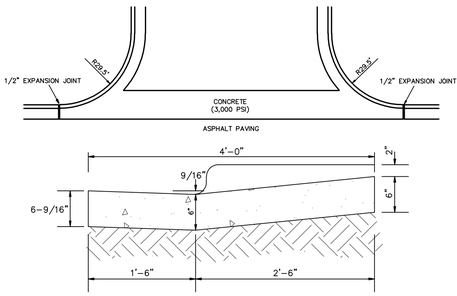




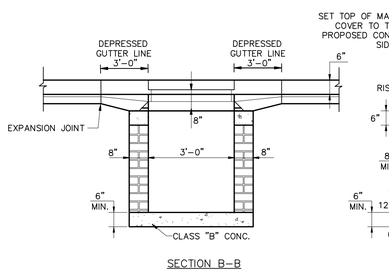
SHEET 1 OF 3
848.05

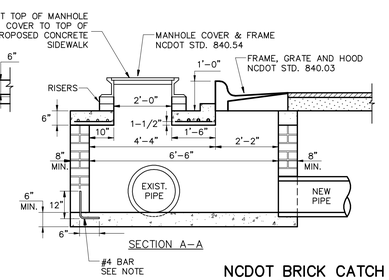
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-18

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

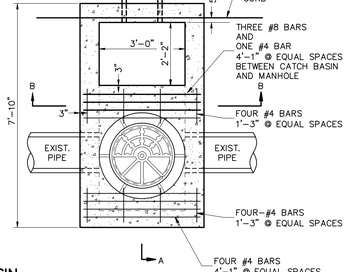


5 C5.1 **DRIVEWAY APRON**
(NOT TO SCALE)





4 C5.1 **NCDOT BRICK CATCH BASIN AT EXISTING CATCH BASINS**
(NCDOT STD. 840.02)
(NOT TO SCALE)



NOTES:
MORTAR JOINTS 1/2"+/- 1/8"THICK.

USE CLASS "B" CONCRETE THROUGHOUT.

USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.

DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.

USE #4 BAR DOWELS AT 12" CENTERS FOR ALL PIPE SIZES.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH NCDOT STD. DRAWING 840.66.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE NCDOT STANDARD SPECIFICATIONS.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON NCDOT STD. NO. 840.00.

FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.

CONSTRUCT WITH PIPE CROWNS MATCHING. CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

NO.	REVISION	DATE
1	REPLACE DROP INLET DETAIL WITH 840.14	1-18-2023
1	ADD DRIVEWAY APRON DETAI	
		3

B. R. KORNEGAY, INC.
LAND SURVEYING • ENGINEERING • PLANNING
License Number: F-1054
300 East Walnut Street
Goldsboro, N.C. 27530
www.kornegaysep.com (919) 735-5886 Fax:(919) 580-9053

SEAL 16813 ENGINEER

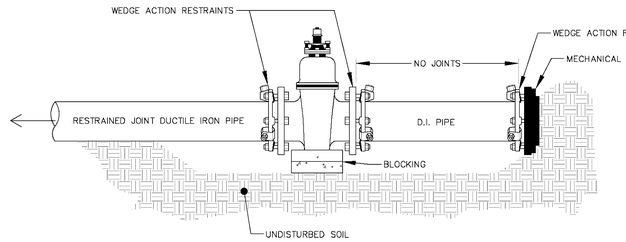
DETAILS

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: NTS

IVEY DRIVE
WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C5.1
OF:
WORK ORDER: 2102471
CADD DWG: 210471

HARRY & MOLLIE, LLC

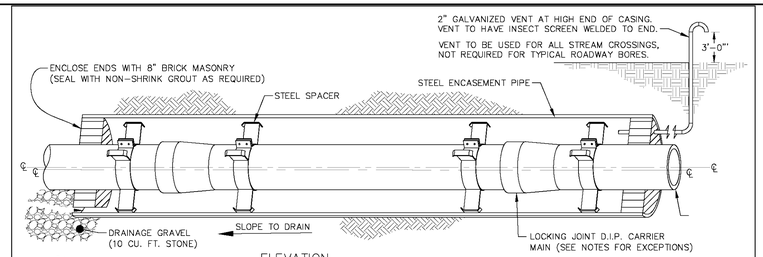


NOTES:
1. THIS DETAIL SHALL APPLY ONLY TO TEMPORARY CAPPING. PERMANENT DEAD END LINES TO BE IN ACCORDANCE WITH STANDARD DETAIL 06000.10.
2. REQUIRED RESTRAINT AWAY FROM THE DEAD END MAY BE MJ PIPE WITH WEDGE ACTION RESTRAINTS FOR PIPE ≤ 12 INCH DIAMETER.

EFFECTIVE: 12/01/18

STANDARD CAPPING DETAIL

DETAIL No. 06000.11 SHEET 1 OF 1

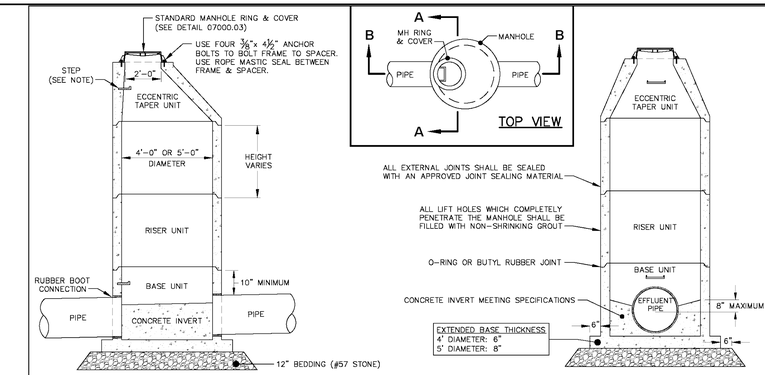


NOTES:
1. STEEL SPACERS SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
2. A MINIMUM SPACING OF 2 SPACERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED. 3 SPACERS ARE REQUIRED FOR CARRIER PIPE ? 36 INCHES.
3. THE SPACERS SHALL BE LOCATED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPACER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
4. FOR CASING SIZE SEE STANDARD SPECIFICATIONS.
5. RECLAIMED WATER LINE SHALL BE PVC WITH RESTRAINED JOINTS.

EFFECTIVE: 12/01/18

STANDARD STEEL ENCASEMENT AND CARRIER PIPE

DETAIL No. 03000.02 SHEET 1 OF 2

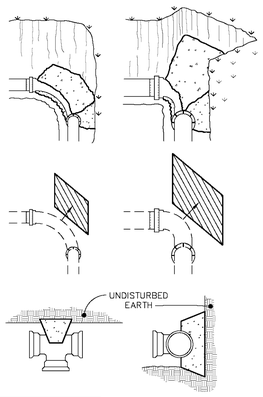


NOTES:
1. ALL MANHOLE CONNECTIONS SHALL BE PREFABRICATED OR CORED WITH A CONCRETE CORING MACHINE.
2. ALL MANHOLES SHALL BE VACUUM TESTED.
3. EXTENDED BASE REQUIRED FOR ALL MANHOLES WITH MORE THAN 12-FT DEPTH OF BURY.
4. PROVIDE A MINIMUM 0.1 FOOT IN-OUT DROP FOR STRAIGHT RUNS AND 0.2 FOOT IN-OUT DROP FOR ANGLE RUNS.
5. PROVIDE ONLY FIRST AND LAST STEP IN MANHOLE.

EFFECTIVE: 12/01/18

STANDARD PRECAST CONCRETE MANHOLE

DETAIL No. 08000.01 SHEET 1 OF 4



MINIMUM CONCRETE BLOCKING (C.Y.) *					
NOMINAL PIPE DIAMETER INCHES	TEES & DEAD ENDS	90° BEND	45° BEND	22½° BEND	11¼° BEND
4	⅓	⅓	⅓	⅓	⅓
6	⅓	⅓	⅓	⅓	⅓
8	⅓	½	⅓	⅓	⅓
10	⅔	¾	½	⅓	⅓
12	¾	1.0	⅔	⅓	⅓

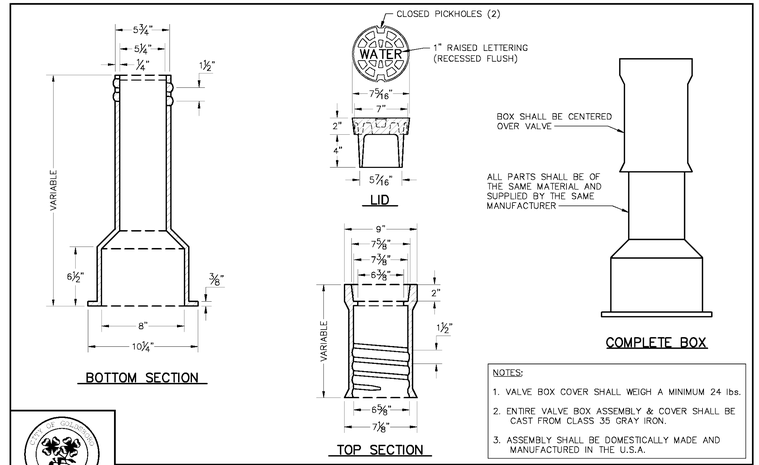
NOTES:
1. FITTING SHALL BE WRAPPED WITH A MINIMUM 4 MIL PLASTIC.
2. NO CONCRETE SHALL COVER BOLTS OR GLANDS.
3. PIPE DIAMETERS BEYOND 12 INCHES SHALL UTILIZE A PROFESSIONAL ENGINEER'S SEALED DESIGN CONSISTING OF RESTRAINED JOINT PIPE OR BLOCKING.

* CONCRETE SHALL BE 3,000 P.S.I. MIX.

EFFECTIVE: 12/01/18

STANDARD THRUST BLOCKING

DETAIL No. 06000.12 SHEET 1 OF 1

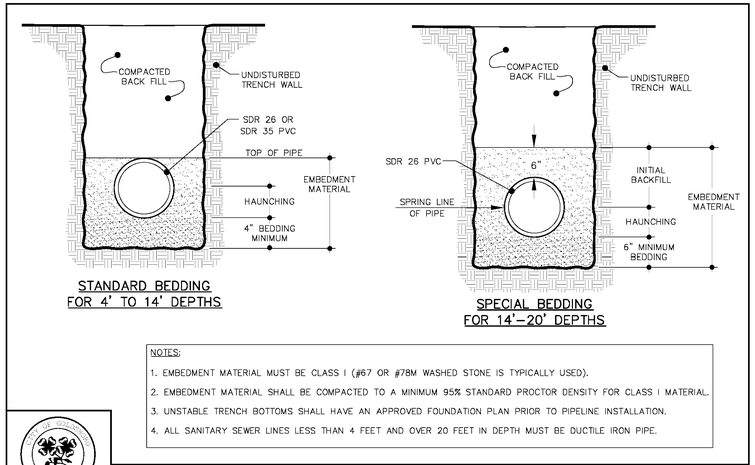


NOTES:
1. VALVE BOX COVER SHALL WEIGH A MINIMUM 24 lbs.
2. ENTIRE VALVE BOX ASSEMBLY & COVER SHALL BE CAST FROM CLASS 35 GRAY IRON.
3. ASSEMBLY SHALL BE DOMESTICALLY MADE AND MANUFACTURED IN THE U.S.A.

EFFECTIVE: 12/01/18

STANDARD WATER VALVE BOX

DETAIL No. 06000.07 SHEET 2 OF 3

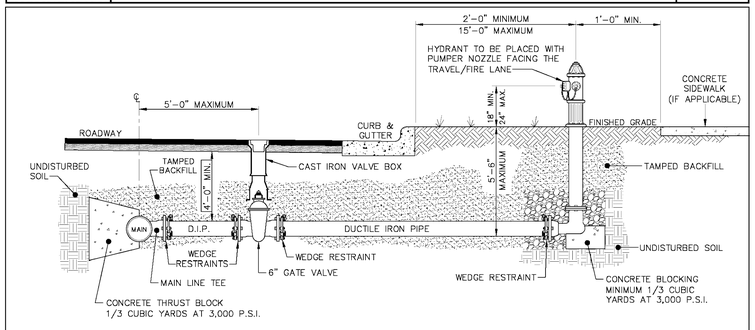


NOTES:
1. EMBEDMENT MATERIAL MUST BE CLASS I (#67 OR #78M WASHED STONE IS TYPICALLY USED).
2. EMBEDMENT MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY FOR CLASS I MATERIAL.
3. UNSTABLE TRENCH BOTTOMS SHALL HAVE AN APPROVED FOUNDATION PLAN PRIOR TO PIPELINE INSTALLATION.
4. ALL SANITARY SEWER LINES LESS THAN 4 FEET AND OVER 20 FEET IN DEPTH MUST BE DUCTILE IRON PIPE.

EFFECTIVE: 12/01/18

BEDDING FOR PVC SANITARY SEWER PIPE

DETAIL No. 08000.10 SHEET 1 OF 1

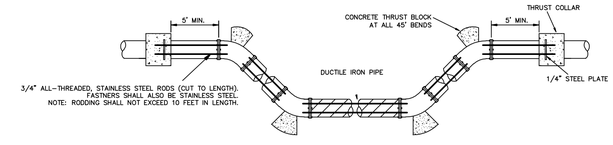


NOTES:
1. TOP OF BLOCKING TO BE 2 INCHES FROM HYDRANT WEEP HOLES.
2. IF HYDRANT IS LOCATED ON A DEPARTMENT OF TRANSPORTATION ROADWAY USE D.O.T. STANDARDS FOR LOCATION OF HYDRANT.
3. HYDRANT SHALL BE LOCATED FROM 2 TO 15 FEET FROM BACK OF CURB.
4. HYDRANT MAY BE LOCATED (AT LEAST 1 FOOT) BEHIND SIDEWALK WHEN IT CANNOT BE LOCATED INSIDE THE UTILITY STRIP.
5. HYDRANT SHALL BE INSTALLED AT LEAST 2 FEET BEYOND TOP SLOPE OF ANY DRAINAGE DITCHES. HYDRANT INSTALLATION WITHIN THE DITCH LINE OR SLOPE SHALL BE PROHIBITED.
6. STANDARD WEDGE ACTION RETAINER GLANDS MAY BE SUBSTITUTED WITH 3/4 INCH STAINLESS STEEL RODDING IN ORDER TO ACHIEVE CONTINUOUS RESTRAINT BETWEEN THE HYDRANT AND THE MAIN.

EFFECTIVE: 12/01/18

STANDARD HYDRANT INSTALLATION FOR ROADS WITH CURB AND GUTTER

DETAIL No. 06000.05 SHEET 1 OF 2



1 C5.2 WATER MAIN VERTICAL BEND

(NOT TO SCALE)

GENERAL NOTES

1. ONCE INSTALLED AND TIGHT, THE STAINLESS STEEL RODS AND BOLTS SHALL BE COATED WITH TWO COATS OF BITUMINOUS BASE PAINT.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

NO.	REVISION	DATE
1	REMOVE PROPOSED WATER LINES & SANITAR SEWER	4-8-2022
2	ADD WATER LINE DETAILS	4-28-2023

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CARL W. LEWIS JR. PROFESSIONAL SEAL 16813 ENGINEER NORTH CAROLINA

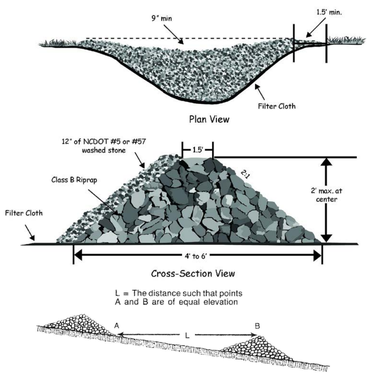
UTILITY DETAILS

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3-18-2022
SCALE: NTS

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C5.2
OF:
WORK ORDER: 2102471
CADD DWG: 210471



10 C5.3 RIP RAP CHECK DAM

(NOT TO SCALE)

1. Place stone to the lines and dimensions shown in the plan on a filter fabric foundation.
2. Keep the center stone section at least 9 inches below natural ground level where the dam abuts the channel banks.
3. Extend stone at least 1.5 feet beyond the ditch bank (Figure 6.83b) to keep water from cutting around the ends of the check dam.
4. Set spacing between dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper dam.
5. Protect the channel after the lowest check dam from heavy flow that could cause erosion.
6. Make sure that the channel reach above the most upstream dam is stable.
7. Ensure that other areas of the channel, such as culvert entrances below the check dams, are not subject to damage or blockage from displaced stones.

Maintenance:
Inspect check dams and channels at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Clean out sediment, straw, limbs, or other debris that could clog the channel when needed.

Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as, installing a protective riprap liner in that portion of the channel (Practice 6.31, Riprap-line and Paved Channels).

Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large flows from carrying sediment over the dam. Add stones to dams as needed to maintain design height and cross section.

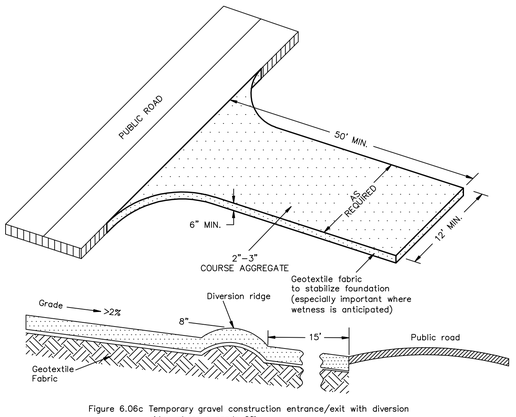


Figure 6.06c Temporary gravel construction entrance/exit with diversion ridge where exceeds 2%.

INSTALLATION:
AVOID CURVES IN PUBLIC ROADS AND STEEP SLOPES. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE AND CROWN FOUNDATION FOR POSITIVE DRAINAGE.

IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FT FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD (FIGURE 6.06c).

PLACE GEOTEXTILE FABRIC ON GRADED FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURACE SMOOTH AND SLOPED FOR DRAINAGE.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.

INSTALL PIPE UNDER PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

7 C5.3 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

(NOT TO SCALE)

Figure 6.20b Temporary gravel diversion dike for vehicle crossing (modified from Va SWCC).

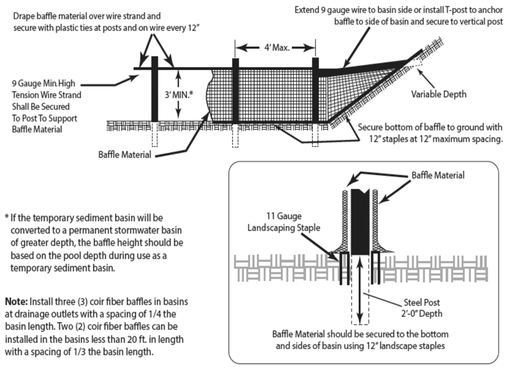
8 C5.3 TEMPORARY DIVERSION DITCH

SECT. 6.20, EROSION & SEDIMENT CONTROL
PLANNING & DESIGN MANUAL

1. Remove and properly dispose of all trees, brush, stumps, and other objectionable material.
2. Ensure that the minimum constructed cross section meets all design requirements.
3. Ensure that the top of the dike is not lower at any point than the design elevation plus the specified settlement.
4. Provide sufficient room around diversions to permit machine regrading and cleanout.
5. Vegetate the ridge immediately after construction, unless it will remain in place less than 30 working days.

side slope: 2:1 or flatter, 3:1 or flatter at points where cross
top width: 2 ft. minimum
freeboard: 0.3 ft. minimum
settlement: 10% pf total fill height minimum

Maintenance:
Inspect temporary diversions once a week and after every rainfall. 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.



MATERIALS
1. Use matting made of 100% coconut fiber (coir) twine woven into high strength matrix with the properties shown in Table 6.65a.
2. Staples should be made of 0.125 inch diameter new steel wire formed into a "U" shape not less than 12 inches in length with a throat of 1 inch in width. The staples anchor the porous baffles into the sides and bottom of the basin.
3. Ensure that steel posts for porous baffles are of a sufficient height to support baffles at desired height. Posts should be approximately 1–3/8" wide measured parallel to the fence, and have a minimum weight of 1.25 lbs/linear ft. The posts must be equipped with an anchor plate having a minimum area of 14.0 square inches and be of the self–fastener angle steel type to have a means of retaining wire and coir fiber mat in the desired position without displacement.
4. Use 9–gauge high tension wire for support wire.

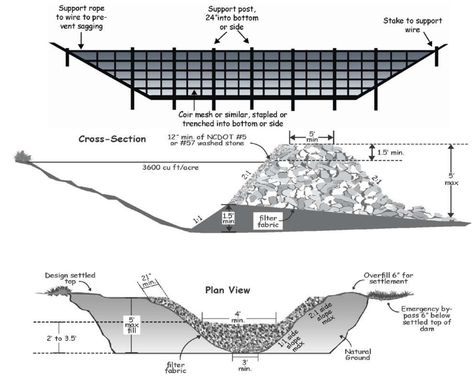
Coir Fiber Baffle Material Property Requirements:
Thickness 0.30 in. minimum
Tensile Strength ONet) 900 x 680 lb/tt minimum
Elonqation ONet) 69% x 34% maximum
Flow Velocity 10–12 ft/sec
Weight 20 oz/SY (680 aim²) minimum
Minimum Width 6.5 feet
Open Area 50% maximum

CONSTRUCTION
1. Grade the basin so that the bottom is level front to back and side to side.
2. Install the coir fiber baffles immediately upon excavation of the basins.
3. Install posts across the width of the sediment trap (Practice 6.62, Sediment Fence).
4. Steel posts should be driven to a depth of 24 inches and spaced a maximum of 4 feet apart. The top of the fabric should be a minimum of 6 inches higher than the invert of the spillway. Tops of baffles should be a minimum of 2 inches lower than the top of the earthen embankment.
5. Install at least three rows of baffles between the inlet and outlet discharge point. Basins less than 20 feet in length may use 2 baffles.
6. Attach a 9 gauge high tension wire strand to the steel posts at a height of 6 inches above the spillway elevation with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin will be converted to a permanent stormwater basin of a greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin.
7. Extend 9 gauge minimum high tension wire strand to side of basin or install steel T–posts to anchor baffle to side of basin and secure to vertical end posts as shown in Figure 6.65b.
8. Drape the coil' fiber mat over the wire strand mounted at a height of 6 inches above the spillway elevation. Secure the coil' fiber mat to the wire strand with plastic ties or wire fasten–'rs. Anchor the matting to the sides and floor of the basin with 12 inch wire staples. approximately 1 ft apart, along the bottom and side slopes of the basin.
9. Do not splice the fabric, but use a continuous piece across the basin
10. Adjustments may be required in the stapling requirements to tit individual site conditions.

Maintenance
– Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.
– Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.
– Remove sediment deposits when it reaches half full, to provide adequate storage volume for the next rain and to reduce pressure on the baffles.
– Take care to avoid damaging the baffles during cleanout, and replace if damaged during cleanout operations. Sediment depth should never exceed half the designed storage depth.
– After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.

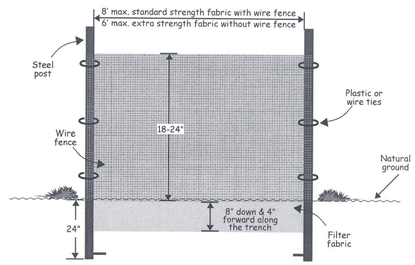
4 C5.3 POUROUS BAFFLES

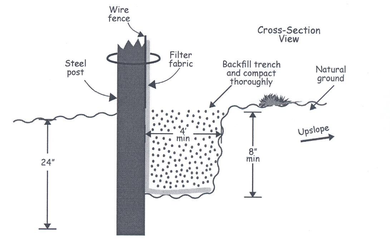
(NOT TO SCALE)



1 C5.3 TEMPORARY SEDIMENT TRAP

1. Clear, grub, and strip the area under the embankment of all vegetation and root mat. Remove all surface soil containing high amounts of organic matter, and stockpile or dispose of it properly. Haul all objectionable material to the designated disposal area.
2. Ensure that fill material for the embankment is free of roots, woody vegetation, organic matter, and other objectionable material. Place the fill in lifts not to exceed 9 inches, and machine compact it. Over fill the embankment 6 inches to allow for settlement.
3. Construct the outlet section in the embankment. Protect the connection between the riprap and the soil from piping by using filter fabric or a keyway cutoff trench between the riprap structure and soil.
   - Place the filter fabric between the riprap and the soil. Extend the fabric across the spillway foundation and sides to the top of the dam; or
   - Excavate a keyway trench along the center line of the spillway foundation extending up the sides to the height of the dam. The trench should be at least 2 feet deep and 2 feet wide with 1:1 side slopes.
4. Clear the pond area below the elevation of the crest of the spillway to facilitate sediment cleanout.
5. All cut and fill slopes should be 2:1 or flatter.
6. Ensure that the stone (drainage) section of the embankment has a minimum bottom width of 3 feet and maximum side slopes of 1:1 that extend to the bottom of the spillway section.
7. Construct the minimum finished stone spillway bottom width, as shown on the plans, with 2:1 side slopes extending to the top of the over filled embankment. Keep the thickness of the sides of the spillway outlet structure at a minimum of 21 inches. The weir must be level and constructed to grade to assure design capacity.
8. Material used in the stone section should be a well–graded mixture of stone with a d50 size of 9 inches (class B erosion control stone is recommended) and a maximum stone size of 14 inches. The stone may be machine placed and the smaller stones worked into the voids of the larger stones. The stone should be hard, angular, and highly weather–resistant.
9. Discharge inlet water into the basin in a manner to prevent erosion. Use temporary slope drains or diversions with outlet protection to divert sediment–laden water to the upper end of the pool area to improve basin trap efficiency (References: Runoff Control Measures and Outlet Protection).
10. Ensure that the stone spillway outlet section extends downstream past the toe of the embankment until stable conditions are reached and outlet velocity is acceptable for the receiving stream. Keep the edges of the stone outlet section flush with the surrounding ground, and shape the center to confine the outflow stream (References: Outlet Protection).
11. Direct emergency bypass to natural, stable areas. Locate bypass outlets so that flow will not damage the embankment.
12. Stabilize the embankment and all disturbed areas above the sediment pool and downstream from the trap immediately after construction (References: Surface Stabilization).
13. Show the distance from the top of the spillway to the sediment cleanout level (1/2 the design depth) on the plans and mark it in the field.
14. Install porous baffles as specified in Practice 6.65, Porous Baffles.





1 C5.3 TEMPORARY SEDIMENT FENCE

SECT. 6.62, EROSION & SEDIMENT CONTROL
PLANNING & DESIGN MANUAL
(NOT TO SCALE)

1. Use a synthetic filter fabric of at least 95% by weight of polyolefins or polyester, which is certified by the manufacturer or supplier as conforming to the requirements in ASTM D 6461, which is shown in part in Table 6.62b. Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 120° F.

2. Ensure that posts for sediment fences are 1.33 lb/linear ft steel with a minimum length of 5 feet. Make sure that steel posts have projections to facilitate fastening the fabric.

3. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

CONSTRUCTION
1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.

2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure.)

3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.

4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have minimum 50 pound tensile strength.

5. 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 24 inches.

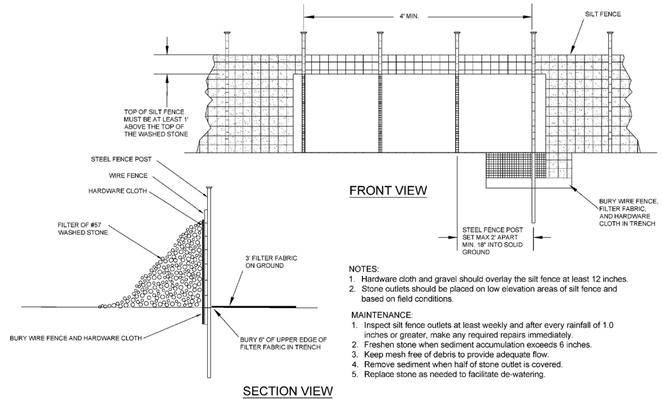
6. Extra strength filter fabric with 6 feet post spacing does not require wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have minimum 50 pound tensile strength.

7. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier (Figure 6.62a).

8. Place 12 inches of the fabric along the bottom and side of the trench.

9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfil is critical to silt fence performance.

10. Do not attach filter fabric to existing trees.

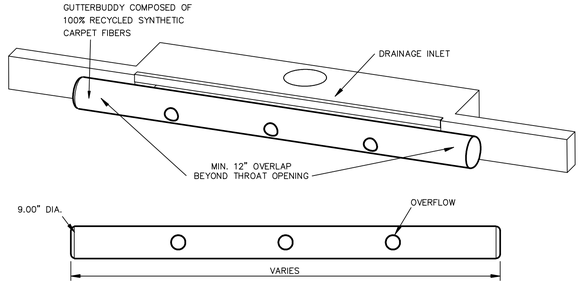


NOTES:
1. Hardware cloth and gravel should overlay the silt fence at least 12 inches.
2. Stone outlets should be placed on low elevation areas of silt fence and based on field conditions.

MAINTENANCE:
1. Inspect silt fence outlets at least weekly and after every rainfall of 1.0 inches or greater, make any required repairs immediately.
2. Freshen stone when sediment accumulation exceeds 6 inches.
3. Keep mesh free of debris to provide adequate flow.
4. Remove sediment when half of stone outlet is covered.
5. Replace stone as needed to facilitate de-watering.

9 C5.3 TEMPORARY SEDIMENT FENCE OUTLET

SECT. 6.62, EROSION AND SEDIMENT CONTROL
FIELD MANUAL
(NOT TO SCALE)



INSTALL IN FRONT OF THE CURB INLET OPENING. EACH END SHOULD OVERLAP THE CURB INLET APPROXIMATELY 12 INCHES.

THE GUTTERBUDDY SHOULD BE CLEANED IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND THE GUTTERBUDDY.

TO REMOVE, LIFT OUT OF THE OPENING.

PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. INSPECTION SHOULD BE ON A REGULAR BASIS AND IMMEDIATELY AFTER MAJOR RAIN EVENTS.

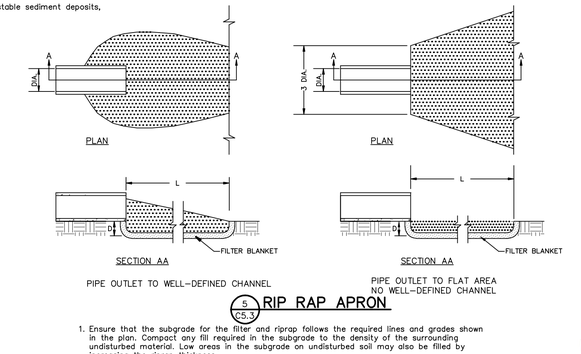
PLACE ON THE GROUND NEAR CURB INLET. OPEN WEIGHT FLAP AND INSERT AGGREGATE OR OTHER WEIGHTING MATERIAL, CLOSE FLAP.

PLACE UNIT IN CURB INELT SO WEIGHTED FLAP HANGS DOWN IN CURB INLET HOLDING IT FIRMLY IN PLACE.

CENTER UNIT SO 1 FOOT EXTENDS BEYOND EACH END OF CURB INLET.

6 C5.3 GUTTER BUDDY

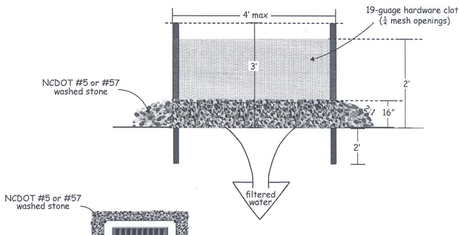
(NOT TO SCALE)



5 C5.3 RIP RAP APRON

1. Ensure that the subgrade for the filter and riprap follows the required lines and grades shown in the plan. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece of filter cloth over the damaged area. All connecting joints should overlap so the top layer is above the downstream layer a minimum of 1 foot. If the damage is extensive, replacethe entire filter cloth.
4. Riprap may be placed by equipment, but take care to avoid damaging the filter.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter.
6. Riprap may be field stone or rough quarry stone. It should be hard, angular, highly weather–resistant and well graded.
7. Construct the apron on zero grade with no overfill at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of the apron.
9. Immediately after construction, stabilize all disturbed areas with vegetation (Practices 6.10, Temporary Seeding, and 6.11, Permanent Seeding).

Maintenance
Inspect 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 stones have been dislodged. Immediately make all needed repairs to prevent further damage



1. Uniformly grade a shallow depression approaching the inlet.

2. Drive 5–foot steel posts 2 feet into the ground surrounding the inlet. Space posts evenly around the perimeter of the inlet, a maximum of 4 feet apart.

3. Surround the posts with wire mesh hardware cloth. Secure the wire mesh to the steel posts at the top, middle, and bottom. Placing a 2–foot flap of the wire mesh under the gravel for anchoring is recommended.

4. Place clean gravel (NC DOT #5 or #57 stone) on a 2:1 slope with a height of 16 inches around the wire, and smooth to an even grade.

5. Once the contributing drainage area has been stabilized, remove accumulated sediment, and establish final grading elevations.

2 C5.3 TEMPORARY FABRIC DROP INLET PROTECTION

SECT. 6.51, EROSION & SEDIMENT CONTROL
PLANNING & DESIGN MANUAL
(NOT TO SCALE)

NO.	REVISION	DATE

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CAROLINA PROFESSIONAL ENGINEER SEAL 16813 ENGINEER

EROSION CONTROL DETAILS

DRAWN BY: JLK
DESIGNED BY: JLK
DATE: 3–18–2022
SCALE: NTS

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET: C5.3
OF:
WORK ORDER: 2102471
CADD DWG: 210471

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 delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Required Ground Stabilization Timeframes: Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 30 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

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 Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. **Maintain vehicles and equipment to prevent discharge of fluids.**
2. **Provide drip pans under any stored equipment.**
3. **Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.**
4. **Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).**
5. **Remove leaking vehicles and construction equipment from service until the problem has been corrected.**
6. **Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.**

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. **Never bury or burn waste. Place litter and debris in approved waste containers.**
2. **Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.**
3. **Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.**
4. **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 or provide secondary containment. 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. Clean up immediately if containers overflow.**
8. **Dispose waste off-site at an approved disposal facility.**
9. **On business days, clean up and dispose of waste in designated waste containers.**

PAINT AND OTHER LIQUID WASTE

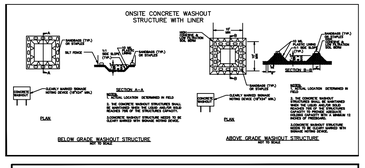
1. **Do not dump paint and other liquid waste into storm drains, streams or wetlands.**
2. **Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.**
3. **Contain liquid wastes in a controlled area.**
4. **Containment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

PORTABLE TOILETS

1. **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.**
2. **Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.**
3. **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.**

EARTHEN STOCKPILE MANAGEMENT

1. **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 available.**
2. **Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.**
3. **Provide stable stone access point when feasible.**
4. **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.**



CONCRETE WASHOUTS

1. **Do not discharge concrete or cement slurry from the site.**
2. **Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.**
3. **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 lot perimeter silt fence.**
4. **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.**
5. **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.**
6. **Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, Install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.**
7. **Locate washouts in an easily accessible area, on level ground and Install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.**
8. **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.**
9. **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

1. **Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.**
2. **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.**
3. **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.**

HAZARDOUS AND TOXIC WASTE

1. **Create designated hazardous waste collection areas on-site.**
2. **Place hazardous waste containers under cover or In secondary containment.**
3. **Do not store hazardous chemicals, drums or bagged materials directly on the ground.**

PART III 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 equal to or 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:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for these un-attended days (and this will determine if a site Inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved 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	1. Identification of the measures Inspected, 2. Date and time of the Inspection, 3. Name of the person performing the Inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective 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	1. Identification of the discharge outfalls Inspected, 2. Date and time of the Inspection, 3. Name of the person performing the Inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective 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 a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective 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 visible has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required Timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain Inspection resets the required 7 calendar day Inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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 kept on site and available for Inspection at all times during normal business hours.

Item to Document	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 to be Kept on Site

In addition to the E&SC plan documents above, the following Items shall be kept on the site and available for Inspection 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 twelve months. 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.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all Inspection records shall be maintained for a period of three years after project completion and made available upon request . [40 CFR 122.41]

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these Items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described In Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described In Item (c) above is disposed of in a manner that does not cause deposition of sediment Into waters of the United States.

PART III 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).**

(c) 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.

(d) Anticipated bypasses and unanticipated bypasses.

(e) 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 Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	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 sediment-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(l)(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(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING — EFFECTIVE: 04/01/19

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING — EFFECTIVE: 04/01/19

TEMPORARY SEEDING SCHEDULE

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
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
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING SCHEDULE

Seeding mixture

Species	Rate (lb/acre)
German millet	40

Seeding dates
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
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING SCHEDULE

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Coastal Plain and Piedmont: Aug. 15 – Dec. 30

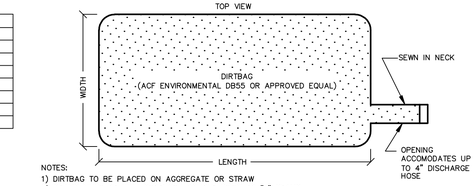
Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10–10–10 fertilizer

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, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain).

DB55 FABRIC PROPERTIES		
PROPERTY	TEST METHOD	MARV
TENSILE STRENGTH	ASTM D-4632	205 LBS
ELONGATION	ASTM D-4632	50%
CBR PUNCTURE	ASTM D-6241	525 LBS
UV RESISTANCE	ASTM D-4355	70%
AOS	ASTM D-4751	80 US SIEVE
PERMITTIVITY	ASTM D-4491	1.4 SEC-1
FLOW RATE	ASTM D-4491	90 GPM/SF

1. THE SKIMMER BASIN SHALL BE DEWATARED USING AN APPROVED SILT BAG BEFORE REMOVAL OF THE SKIMMER BASIN.
2. AN APPROPRIATE SIZED SILT BAG SHALL BE USED TO COMPLETELY DEWATER THE SKIMMER BASIN.
3. THE SILT BAG MUST BE MONITORED AT ALL TIMES DURING USE TO PREVENT OVER-FILLING AND RUPTURE.
4. PLACE SILT BAG ON AGGREGATE, STRAW BALES, OR OTHER POROUS SURFACES.
5. SILT BAG IS FULL WHEN IT CAN NO LONGER EFFICIENTLY PASS WATER AT A REASONABLE RATE.
6. REMOVE SILT BAG AFTER THE SKIMMER BASIN HAS COMPLETELY DEWATERED.



NOTES:
1) DIRTBAG TO BE PLACED ON AGGREGATE OR STRAW
2) SEAMS MUST BE HIGH STRENGTH DOUBLE STITCHED "J" SEAMS
3) SEAM MUST BE TESTED UNDER ASTM D-4884. ACF TEST RESULTS AVAILABLE UPON REQUEST

1 / C5.4 SILT BAG
(NOT TO SCALE)

PERMANENT SEEDING SCHEDULE

Seeding mixture

Species	Rate (lb/acre)
Tall fescue	80
Pensacola Bahiagrass	50
Sericea lespedeza	30
Kobe lespedeza	10

Seeding notes
1. From Sept. 1 – Mar. 1, use unscarified sericea seed.
2. On poorly drained sites omit sericea and increase Kobe to 30 lb/acre.
3. Where a neat appearance is desired, omit sericea and increase Kobe to 40 lb/acre.

Nurse plants
Between Apr. 15 and Aug. 15, add 10 lb/acre German millet or 15 lb/acre Sudangrass. Prior to May 1 or after Aug. 15, add 25 lb/acre rye (grain).

Seeding dates

	Best	Possible
Early spring:	Feb. 15 – Mar. 20	Feb. 15 – Apr. 30
Fall:	Sept. 1 – Sept. 30	Sept. 1 – Oct. 31

Soil Amendments
Apply lime and fertilizer according to soil tests, or apply 3,000–5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10–10–10 fertilizer.

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 set nearly straight can be used as a mulch anchoring too.

Maintenance
If growth is less than fully adequate, refertilize in the second year, according to soil tests or topdress with 500 lb/acre 10–10–10 fertilizer. Mow as needed when sericea is omitted from the mixture. Reseed, fertilize, and mulch damaged areas immediately.

coastal plain – 1CP

Complete grading before preparing seedbeds, and install all necessary erosion control practices such as, dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion hazard. If soils become compacted during grading, loosen them to a depth of 6–8 inches using a ripper, harrow, or chisel plow.

SEEDBED PREPARATION

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well-pulverized, loose, and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

Liming

Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1-1/2 tons/acre on coarse-textured soils and 2–3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4–6 inches of soil. Soils with a pH of 6 or higher need not be limed.

Fertilizer

Base application rates on soil tests. When these are not possible, apply a 10–10–10 grade fertilizer at 700–1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4–6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

Surface roughening

If recent tillage operations have resulted in a loose surface, additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Groove or furrow slopes steeper than 3:1 on the contour before seeding (Practice 6.03, Surface Roughening).

EROSION CONTROL NOTES:

1. *Buffer zone, sufficient to restrain visible sedimentation within the 25% of the width closest to the land disturbance, must be provided and maintained between the land-disturbing activity and any adjacent property or watercourse;*
2. *New or affected cut or filled slopes must be at an angle that can be retained by vegetative cover, AND must be provided with a ground cover sufficient to restrain erosion within 21 calendar days of completion of any phase (rough or final) of grading (RYE GRASS IS NOT in the APPROVED seeding specifications NOR is it an ACCEPTABLE substitute for the providing of a temporary ground cover).*
3. *The CERTIFICATE OF PLAN APPROVAL must be posted at the primary entrance to the job site and remain until the site is permanently stabilized;*
4. *Unless a temporary, manufactured, lining material has been specified, a clean straw mulch must be applied, at the minimum rate of 2 tons/acre, to all seeded areas. The mulch must cover at least 75% of the seeded area after it is either tacked, with an acceptable tacking material, or crimped in place;*
5. *A permanent ground cover, sufficient restrain erosion, must be provided within the shorter of 15 working or 90 calendar days (if in a High Quality Zone, the shorter of 15 working or 60 calendar days) after completion of construction or development on any portion of the tract (RYE GRASS IS NOT in the APPROVED seeding specifications NOR is it an ACCEPTABLE substitute for the providing of a nurse cover for the permanent grass cover).*

GROUND STABILIZATION
Required Ground Stabilization Timeframes

Site Area Description	Stabilization within this many calendar days after ceasing land disturbance	Timeframe variations
Perimeter dikes, swales, ditches and 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 2:1, 14 days are allowed.
Slopes 3:1 to 4:1	14 days	–7 days for slopes greater than 50' in length and with slopes steeper than 4:1. –7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones. –10 days for Falls Lake Watershed.
Areas with slopes flatter than 4:1	14 days	–7 days for perimeter dikes, swale, ditches, perimeter slopes and HQW Zones –10 days for Falls Lake Watershed unless there is zero slope.

No earthen material is to be brought on or removed from the site, until the off-site borrow and/or disposal sites are identified as part of the erosion control plan. If an off-site borrow and/or disposal site is to be utilized, prior to the start of construction, submit the name and identification number (E&SP # or Mine Permit #).

CONSTRUCTION SEQUENCE

1. OBTAIN GRADING PERMIT.
2. CONTACT THE DEMLR WASHINGTON REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING LAND DISTURBING ACTIVITY.
3. CONSTRUCT GRAVEL CONSTRUCTION ENTRANCE AND SEDIMENT FENCES.
4. CONSTRUCT TEMPORARY SEDIMENT TRAP AS SHOWN ON PLANS.
5. GRADE BUILDING PAD AND CONSTRUCT GRAVEL DRIVE AND LAYDOWN AREA..
6. AN APPROVED SILT BAG SHALL BE USED TO DEWATER THE SKIMMER SEDIMENT TRAP BEFORE REMOVAL OF THE SKIMMER SEDIMENT TRAP. SKIMMER BAG SHALL BE PUMPED FROM THE SURFACE AND THE FINAL CELL OF THE SKIMMER BASIN.
7. REMOVE SEDIMENT TRAP AFTER ALL CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED. ALL SEDIMENT SHALL BE REMOVED FROM TEMPORARY SEDIMENT TRAP.
8. PROVIDE A GROUNDCOVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN THE REQUIRED TIME AS LISTED IN THE "GROUND STABILIZATION" TABLE.
9. REMOVE ALL TEMPORARY EROSION CONTROL DEVICES AFTER ALL DISTURBED AREAS ARE STABILIZED.
10. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE AND LAND DISTURBING ACTIVITIES OCCUR.* THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E–NOI) FORM AT DEQ.NC.GOV/NCG01. PLEASE NOTE, THE E–NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS HAVE BEEN APPROVED. A COPY OF THE E&SC PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION.
11. WHEN THE PROJECT IS COMPLETE, THE PERMITTEE SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT DEQ.NC.GOV/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E–NOT). A $100 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E–NOT HAS BEEN FILLED OUT.
12. PER NPDES REQUIREMENTS, A RAIN GAUGE, SELF–INSPECTIONS RECORDS, PERMIT, AND S&E PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTION. IT IS RECOMMENDED THAT THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF PROJECT.* (NCG01 PART III SECTIONS A AND B, 15A NCAC 04B .0131)
13. THE CONTRACTOR SHALL CONDUCT SELF–INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES AND COMPETE THE FOLLOWING COMBINED SELF–INSPECTION FORM FOUND ON THE DEMLR WEBSITE HTTPS://FILES.NC.GOV/NCDEQ/ENERGY%20MINERAL%20AND%20LAND%20RESOURCES/STORMWATER/NPDES%20GENERAL%20PERMITS/DEMLR–CSW–MONITORING–FORM–REV.–AUGUST–8–2019.PDF . TWELVE MONTHS OF COMPLETE INSPECTION FORMS SHALL BE KEPT ON–SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS RECOMMENDED A COPY BE KEPT IN A PERMITS BOX. (GS 113A–54.1 (E), 15A NCAC 04B.0131, NCG01 PART III SECTIONS A AND B)
14. SELF–INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF GREATER THAN 1 INCH. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DESIGNED. ALL ESC MEASURES SHALL BE MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS ON THIS PLAN. A RAIN GAUGE SHALL BE INSTALLED AT THE PROJECT SITE FOR MONITORING.

NO.	REVISION	DATE

B. R. KORNEGAY, INC.
LAND SURVEYING • ENGINEERING • PLANNING
License Number: F–1054
300 East Walnut Street
Goldsboro, N.C. 27530
www.kornegaysep.com (919) 735–5886 Fax:(919) 580–9053

PROFESSIONAL ENGINEER SEAL 16813 ENGINEER

EROSION CONTROL DETAILS

DRAWN BY:	JLK
DESIGNED BY:	JLK
DATE:	3–18–2022
SCALE:	NTS

IVEY DRIVE

WAYNE COUNTY DEVELOPMENT ALLIANCE
GOLDSBORO, WAYNE COUNTY, N.C.

SHEET:	C5.4
OF:	
WORK ORDER:	210471
CADD DWG:	210471

HARRY & MOLLIE, LLC