CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED HEREON, WHICH PROPERTY IS LOCATED WITHIN THE SUBDIVISION REGULATION JURISDICTION OF CURRITUCK COUNTY, THAT I HEREBY FREELY ADOPT THIS PLAT OF SUBDIVISION AND IRREVOCABLY DEDICATE TO PUBLIC USE ALL AREAS SHOWN ON THIS PLAT AS EASEMENTS EXCEPT THOSE SPECIFICALLY INDICATED AS PRIVATE AND THAT I WILL MAINTAIN ALL SUCH AREAS UNTIL THE OFFER OF DEDICATION IS ACCEPTED BY THE APPROPRIATE PUBLIC AUTHORITY, OR A PRIVATE ROAD MAINTENANCE AGREEMENT IS EXECUTED BY ALL PROPERTY OWNERS IN THIS SUBDIVISION. ALL PROPERTY SHOWN ON THIS PLAT AS DEDICATED FOR A PUBLIC USE SHALL BE DEEMED TO BE DEDICATED FOR ANY OTHER PUBLIC USE AUTHORIZED BY LAW WHEN SUCH USE IS APPROVED BY THE APPROPRIATE PUBLIC AUTHORITY IN THE PUBLIC INTEREST.

DATE _____ OWNER _____

NOTARY CERTIFICATE

I, _____, A NOTARY PUBLIC OF _____ COUNTY, NORTH CAROLINA, DO HEREBY CERTIFY THAT _____ PERSONALLY APPEARED BEFORE ME THIS DATE AND ACKNOWLEDGED THE DUE EXECUTION OF THE FOREGOING CERTIFICATE.

WITNESS MY HAND AND OFFICIAL SEAL THIS _____ DAY OF _____, 20_____.

NOTARY PUBLIC

MY COMMISSION EXPIRES : _____

SURVEYORS CERTIFICATE

I, C. Robert Moore III, certify that this plat was drawn under my supervision from an actual survey made under my supervision from P.C. E, SL. 135; that the error of closure as calculated by latitudes and departures is 1:10,000 +, that the boundaries not actually surveyed are shown as broken lines plotted from information found in P.C. E, SL. 135, and that this plat was prepared in accordance with G.S. 47–30, as amended.

This survey creates a subdivision of land within an area of a County which has an ordinance that regulates subdivisions of land.

Witness my hand and seal this____day of_____, 20___.

P.L.S. _____ L–4184

REVIEW OFFICER CERTIFICATION
STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

I, _____, REVIEW OFFICER OF CURRITUCK COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

DATE _____ REVIEW OFFICER _____

ENGINEER CERTIFICATE FOR PRIVATE STREETS

I HEREBY CERTIFY THAT THE PRIVATE STREETS SHOWN ON THIS PLAT ARE INTENDED FOR PRIVATE USE AND WILL REMAIN UNDER CONTROL, MAINTENANCE AND RESPONSIBILITY OF THE DEVELOPER AND/OR A HOMEOWNER'S ASSOCIATION AND THAT THEY HAVE BEEN COMPLETED IN ACCORDANCE WITH AT LEAST THE MINIMUM SPECIFICATIONS AND STANDARDS OF THE STATE DEPARTMENT OF TRANSPORTATION.

DATE _____ LICENSED ENGINEER _____

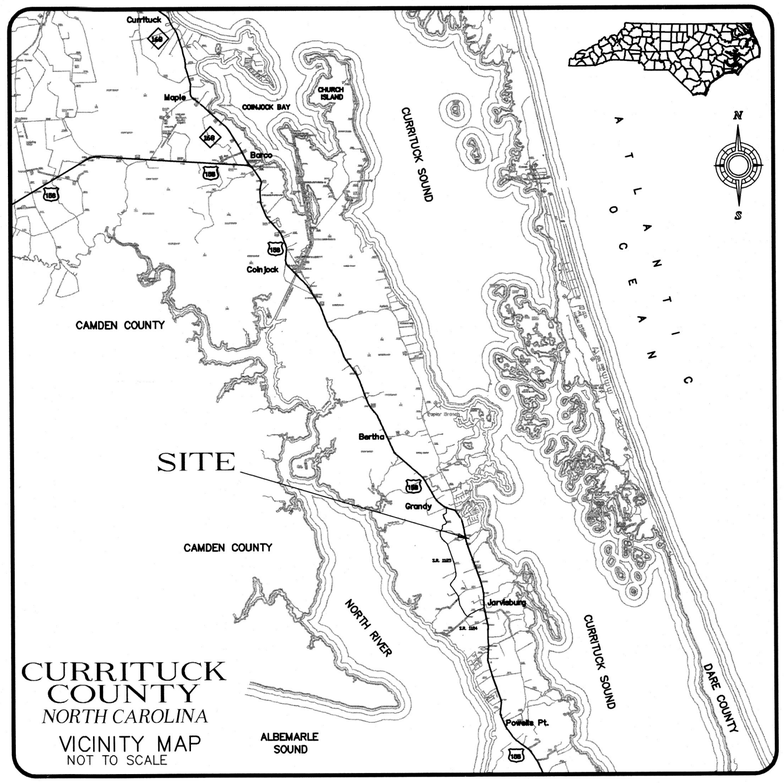
ENGINEER CERTIFICATE OF STORMWATER IMPROVEMENTS

IN THE SUBDIVISION ENTITLED WATERSIDE VILLAGES, STORMWATER DRAINAGE IMPROVEMENTS HAVE BEEN INSTALLED ACCORDING TO PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP, AND APPROVED BY THE CURRITUCK COUNTY PLANNING BOARD. CURRITUCK COUNTY ASSUMES NO RESPONSIBILITY FOR THE DESIGN, MAINTENANCE OR THE GUARANTEED PERFORMANCE OF THE STORM WATER DRAINAGE IMPROVEMENTS AND THEIR EFFECTS.

REGISTERED LAND SURVEYOR/CIVIL ENGINEER _____

REGISTRATION NUMBER _____ DATE _____

STORMWATER MANAGEMENT SYSTEMS SHALL BE MAINTAINED BY THE WATERSIDE VILLAGES PROPERTY OWNERS ASSOCIATION.



LEGEND

- ECM = EXISTING CONCRETE MONUMENT
- SIR = SET IRON ROD
- EIR = EXISTING IRON ROD
- EIP = EXISTING IRON PIPE
- = TELEPHONE PEDESTAL
- WV = WATER VALVE
- = FIRE HYDRANT
- M.B.L. = MAXIMUM BUILDING LIMIT
- NTS = NOT TO SCALE
- R/W = RIGHT OF WAY
- EOP = EDGE OF PAVEMENT
- ℄ = CENTERLINE
- P.C. = PLAT CABINET
- D.B. = DEED BOOK
- SL = SLIDE
- SQ.FT. = SQUARE FEET
- = LOT LINE
- = R/W LINE
- = PHASE LINE
- = SEWER LINE – M.H.
- = WATER LINE
- = TRAIL/BIKE PATH
- = EOP W/CURB
- = SIDEWALK
- = STORM INLET
- = FIRM ZONE LINE
- = SOIL BOUNDARY
- = STOP SIGN
- = EXISTING POWER POLE

PAD/F.F. ELEVATION SCHEDULE

LOT #	PAD ELEVATION	FFE
13-16	14.5'	14.67'
9-12,17	14.0'	14.17'
1-8, 18-28 42-43, 47-50	13.0'	13.17'
29-41, 44-46 51-53, 66-67	12.0'	12.17'
54-59, 68-72 76-77	11.5'	11.67'
60-62, 78	10.5'	10. 67'
63-65, 79-80 131-134	10.0'	10.17'
128-130, 132	9.5'	9.67'
83,125-127,132	9.0'	9.17'
81,90,124	8.5'	8.67'
82,84,89,93 121-123,144	8.0'	8.17'
85-88,91-92,94-95 100,11,119 138-143	7.5'	7.67'
96,101,102,106-108 110,117-118 136,148	7.0'	7.17'
109,114-116,135, 137,145-147	6.5'	6.67'
103-105,112-113	6.0'	6.17'

NOTES:

1) NO RECOVERABLE NCGS MONUMENTS WITHIN 2000' OF THE SUBJECT PROPERTIES SHOWN HEREON.
2) AREA DETERMINED BY COORDINATE METHOD.
3) IRON PINS AT ALL LOT CORNERS UNLESS OTHERWISE NOTED HEREON.
4) FEMA DATA: FIRM 370078 0355 E (MAY 05, 2003), CURRITUCK COUNTY, NORTH CAROLINA ZONE X, ZONE AE(6'), ZONE AE(7'), AND ZONE AE(8'). (FLOOD ZONES SUBJECT TO CHANGE BY FEMA)
5) RECORDED REFERENCES:
   DB 202, PG 151 DB 204, PG 199
   DB 203, PG 55 DB 207, PG 892
   DB 203, PG 367 DB 392, PG 355
   DB 124, PG 256, DB 118, PG 494
   DB 327, PG 98 PC E, SL 131
6) THE SUBJECT PROPERTY SHOWN HEREON IS ENCUMBERED BY EASEMENTS AND AGREEMENTS FOR ELECTRIC, TELEPHONE, AND RIGHTS OF WAYS AS RECORDED IN:
   DB 51, PG 255 DB 179, PG 207
   DB 66, PG 204 DB 125, PG 395
   DB 211, PG 65
7) THE SUBJECT PROPERTIES SHOWN HEREON ARE SUBJECT TO RESTRICTIVE COVENANTS AS RECORDED IN DB 210, PG 625, & DB 278, PG 127.
8) THE SUBJECT PROPERTIES SHOWN HEREON ARE SUBJECT TO "NON–DISTURBANCE AGREEMENT AS RECORDED IN DB 328, PG 136.
9) THE CURRITUCK SOUND NATURAL WATER BOUNDARY IS SUBJECT TO CHANGE BY NATURAL CAUSES. AREA DESIGNATED AS "CEMETARY" WAS ESTABLISHED BASED ON INFORMATION CONTAINED ON AN UNRECORDED PLAT OF SURVEY ENTITLED "YOGI BEAR'S JELLYSTONE PARK CAMP RESORTS" AS PREPARED BY W.C. OWEN, NCPLS L–3216 AND BEING DATED 8/25/00 WHICH PLAT MAKES REFERENCE TO AN ADDITIONAL UNRECORDED PLAT OF SURVEY ENTITLED "DeBAUM ACRES" AS PREPARED BY ELMO WILLIAMS, DATED 12/16/79.
10) SUBJECT TO TITLE SEARCH AND TO ANY AND/OR ALL RIGHTS OF WAYS, ENFORCEABLE RESTRICTIONS, AND/OR EASEMENTS OF RECORD WHETHER SHOWN HEREON OR NOT.
11) UNDERGROUND UTILITIES, IF ANY, WERE NOT LOCATED BY THIS SURVEY.
12) AREA IN R/W = 8.10 ACRES
    LINEAR FEET OF PROPOSED 22' ROADWAY: 7,058.14 FEET
    LINEAR FEET OF PROPOSED 26' ROADWAY: 2,668.17 FEET
13) OPEN SPACE CALCULATION = 11.40 ACRES
14) TOTAL LOT AREA = 16.738 ACRES
    MINIMUM LOT SIZE: 5,200.00 SQ.FT.
    TOTAL NUMBER OF LOTS: 148 LOTS – 10 CONDOMINIUMS IN 1 BUILDING
    TOTAL SITE AREA: 71.23 ACRES
15) A 6' EASEMENT FOR UTILITIES AND DRAINAGE ALONG SIDE LOT LINES AND A 15' EASEMENT FOR UTILITIES AND DRAINAGE ALONG THE FRONT AND REAR LOT LINES IS HEREBY ESTABLISHED.
16) PROPERTY ON THIS PLAT MAY CONTAIN 404 WETLANDS AND MAY REQUIRE U.S. ARMY CORP. OF ENGINEERS FILL PERMITS PRIOR TO DEVELOPMENT.
17) USE OF LAND WITHIN A FLOODWAY OR FLOODPLAIN IS SUBSTANTIALLY RESTRICTED BY ARTICLE 16 OF THE CURRITUCK UNIFIED DEVELOPMENT ORDINANCE.
18) CAMA MINOR PERMITS ARE REQUIRED FOR ANY DEVELOPMENT ACTIVITIES WITHIN THE ESTUARINE SHORELINE AEC. THIS AFFECTS LOTS 107–111. NON–WATER DEPENDENT STRUCTURES ARE PROHIBITED WITHIN 30' CAMA BUFFER AREAS (LOTS 108–111)
19) OPEN SPACE, PONDS AND DRAINAGE FACILITIES REQUIRED TO BE PROVIDED BY THE DEVELOPER IN ACCORDANCE WITH THIS ORDINANCE SHALL NOT BE DEDICATED TO THE PUBLIC EXCEPT UPON WRITTEN ACCEPTANCE BY THE COUNTY, BUT SHALL REMAIN UNDER THE OWNERSHIP AND CONTROL OF THE DEVELOPER (OR HIS SUCCESSOR), A HOMEOWNERS ASSOCIATION OR SIMILAR ORGANIZATION THAT SATIFIES THE CRITERIA ESTABLISHED IN THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

General Notes:

Applicant / Property Owner
WATERSIDE VILLAGES AT CURRITUCK
VOC, L.L.C.
P.O. Box 147
HARBINGER, N.C. 27941
252–453–0254

Engineer
Bissell Professional Group
Mark S. Bissell, P.E.
P.O. Box 1068
Kitty Hawk, N.C. 27949
(252) 261–3266
fax: (252) 261–1760
email: mark@bissellprofessionalgroup.com

PLANNING

SISKA AURAND
-landscape architecture
-master planning
-site design
523 West 24th Street
Norfolk, Virginia 23517
757.627.1407
e-mail: doug@siskaaurand.com

Subject Property
A 71.23 AC. TRACT OF LAND, LOCATED IN POPLAR BRANCH TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA, AS DESCRIBED IN D.B. 0392 PG. 0355, CURRITUCK COUNTY REGISTRY
PIN NO 0108–000–022A–0000, 0108–000–0020–0000 AND 0108–000–0021–0000

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
3512 North Croatan Highway
P.O. Box 1068
Kitty Hawk, North Carolina 27949
(252) 261–3266
(252) 261–1760 FAX
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINARY PLAT PHASES 1-6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	8-04	NOTES 15-19	
2	5-05	LOTS 97-101 AND 141-144	QMW

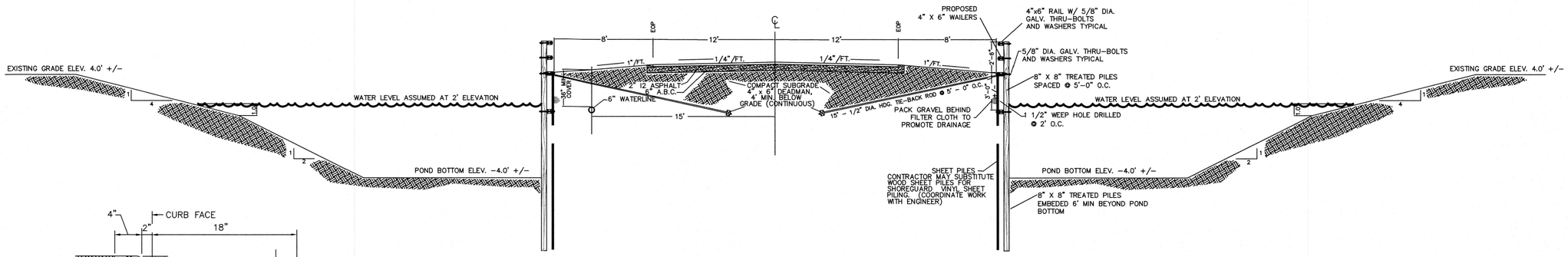
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 7–15–04	SCALE: none
DESIGNED: BPG	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG

SHEET: 1 OF 10

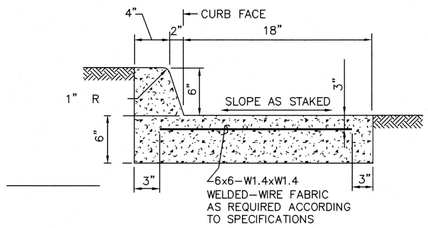
CAD FILE: 4018COVER

PROJECT NO: 4018

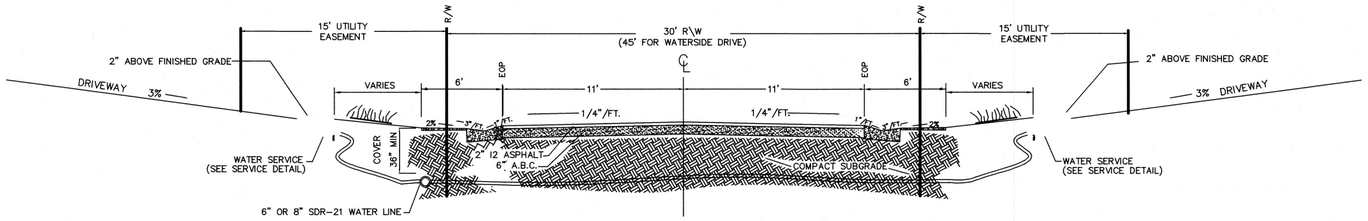


SECTION AT POND CROSSING
NOT TO SCALE

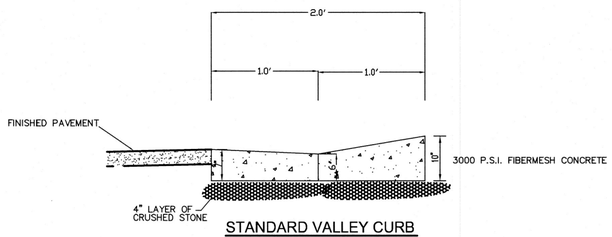
THIS SECTION IS TO BE UTILIZED AT THE POND CROSSING AT THE ENTERANCE OF WATERSIDE VILLAGES OF CURRITUCK



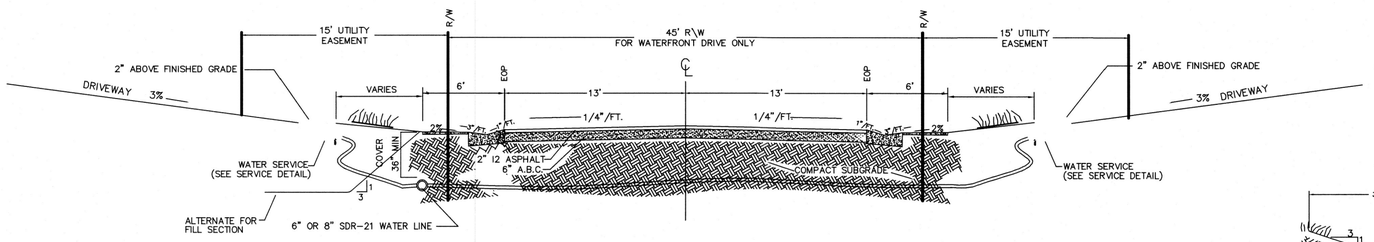
STANDARD CURB -- USED AT THE GUARD SHACK ISLAND
NOT TO SCALE



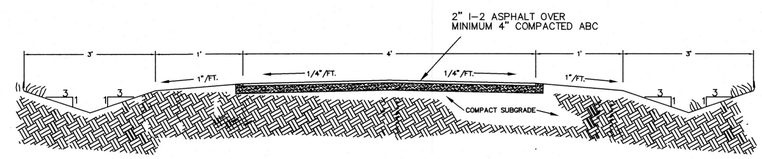
TYPICAL ROADWAY CROSS SECTION - 30' R/W
NOT TO SCALE



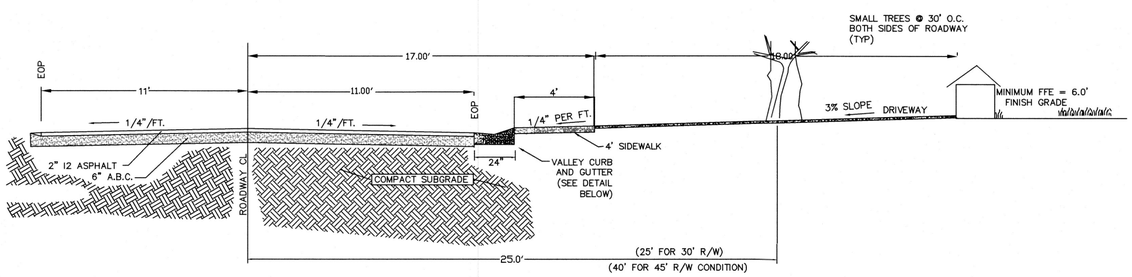
STANDARD VALLEY CURB
NOT TO SCALE



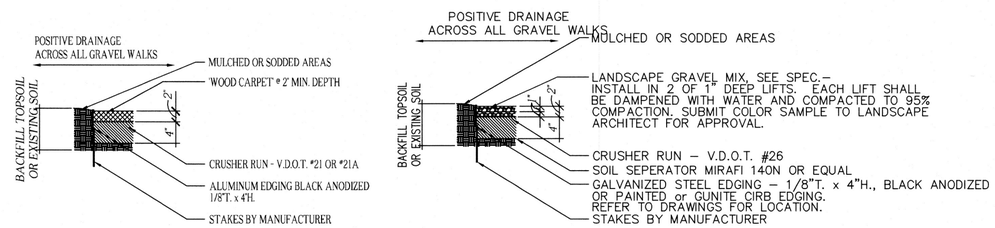
TYPICAL ROADWAY CROSS SECTION - 45' R/W
NOT TO SCALE



SECTION THRU TRAIL
NOT TO SCALE



TYPICAL CURB-SIDEWALK CROSS SECTION
NOT TO SCALE



ALTERNATE SECTION FOR TYPICAL TRAIL
NOT TO SCALE

Bissell Professional Group
3512 North Croatan Highway
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Kitty Hawk, North Carolina 27949
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
STREET SECTIONS
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINARY PLAT PHASES 1-6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	12/04	REVISE TRAIL DETAIL	QMW
2	5/05	LOTS 97-101 AND LOTS 141-144	QMW

"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 7-15-04	SCALE: AS NOTED
DESIGNED:	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG
SHEET: 2 OF 10	
CAD FILE: 401801P1	
PROJECT NO: 4018	

LEGEND

ECM = EXISTING CONCRETE MONUMENT
SIR = SET IRON ROD
EIR = EXISTING IRON ROD
EIP = EXISTING IRON PIPE
= TELEPHONE PEDESTAL
WV = WATER VALVE
= FIRE HYDRANT
M.B.L. = MAXIMUM BUILDING LIMIT
NTS = NOT TO SCALE
R/W = RIGHT OF WAY
EOP = EDGE OF PAVEMENT
℄ = CENTERLINE
P.C. = PLAT CABINET
D.B. = DEED BOOK
SL = SLIDE
SQ.FT. = SQUARE FEET

= LOT LINE
= R/W LINE
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= SEWER LINE – M.H.
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= STORM INLET
= FIRM ZONE LINE
= SOIL BOUNDARY
= STOP SIGN

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P.O. Box 1068
Kitty Hawk, North Carolina 27949
(252) 261-2365
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

AMENDED PRELIMINARY PLAT PHASES 1–6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	5-05	LOTS 97-101 AND 141-144	QMW

"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 7-15-04	SCALE: 1"=50'
DESIGNED:	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG

SHEET: 3 OF 10

CAD FILE: 401801P1

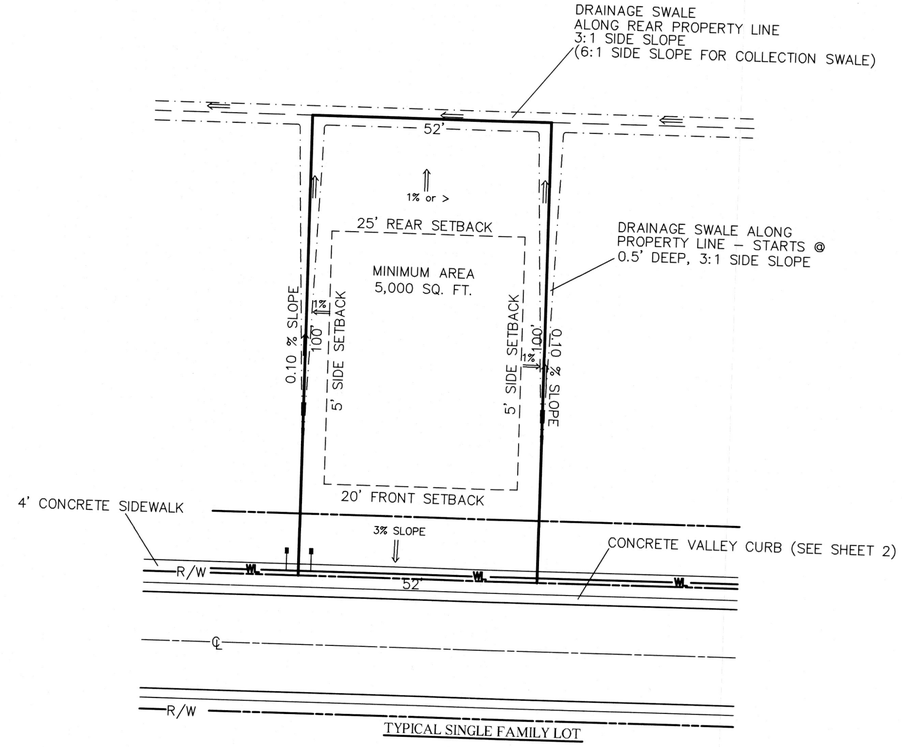
PROJECT NO: 4018

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	47.10'	40.44'	N 10°25'28" E	107°56'28"
C2	25.00'	39.27'	35.36'	S 88°32'52" E	90°00'13"
C3	60.00'	21.43'	21.32'	N 73°16'48" E	20°27'51"
C4	60.00'	39.42'	38.71'	S 77°40'05" E	37°38'22"
C5	60.00'	27.42'	27.18'	S 45°45'29" E	26°10'52"
C6	60.00'	35.35'	34.84'	S 15°47'29" E	33°45'08"
C7	60.00'	56.85'	54.75'	N 28°13'40" E	54°17'10"
C8	60.00'	62.28'	59.52'	N 85°06'25" E	59°28'21"
C9	60.00'	24.39'	24.22'	S 53°30'38" E	23°17'33"
C10	25.00'	40.01'	35.87'	S 87°42'25" E	91°41'07"
C11	25.00'	39.27'	35.35'	N 01°27'07" E	89°59'47"
C12	25.00'	31.44'	29.41'	S 79°34'32" E	72°03'32"
C13	392.50'	127.48'	126.92'	N 55°05'24" E	18°36'35"
C14	25.00'	25.65'	24.54'	S 86°13'01" E	58°46'35"
C15	25.00'	5.80'	5.78'	S 50°11'15" E	13°16'57"
C16	25.00'	15.21'	14.98'	S 26°06'42" E	34°52'07"
C17	25.00'	22.91'	22.11'	N 17°34'21" E	52°29'59"
C18	12.50'	19.63'	17.68'	N 88°49'20" E	90°00'00"
C19	12.50'	19.63'	17.68'	S 01°10'40" E	90°00'00"
C20	25.00'	40.42'	36.16'	S 89°51'43" E	92°37'54"
C21	25.00'	47.10'	40.44'	N 10°25'28" E	107°56'28"
C22	437.50'	142.10'	141.48'	N 55°05'24" E	18°36'35"
C23	25.00'	38.41'	34.74'	N 89°48'13" E	88°02'13"
C24	25.00'	39.27'	35.36'	S 01°10'40" E	90°00'00"
C25	25.00'	39.27'	35.36'	N 88°49'20" E	90°00'00"
C26	25.00'	40.13'	35.96'	S 00°11'47" E	91°57'47"
C27	25.00'	35.76'	32.79'	N 86°46'02" E	81°57'52"
C28	25.00'	2.65'	2.65'	S 49°12'51" E	06°04'22"
C29	25.00'	4.10'	4.10'	S 41°28'27" E	09°24'27"
C30	25.00'	35.17'	32.34'	N 03°31'48" E	80°36'03"
C31	12.50'	19.63'	17.68'	N 88°49'20" E	90°00'00"
C32	12.50'	19.64'	17.68'	S 01°10'25" E	90°00'30"
C33	25.00'	39.27'	35.35'	N 88°49'35" E	89°59'30"
C34	25.00'	40.13'	35.96'	S 00°11'47" E	91°57'47"
C35	25.00'	38.41'	34.74'	N 89°48'13" E	88°02'13"
C36	25.00'	39.27'	35.36'	S 01°10'25" E	90°00'30"
C37	12.50'	19.63'	17.68'	N 88°49'20" E	90°00'00"
C38	12.50'	19.63'	17.68'	S 01°10'40" E	90°00'00"
C39	25.00'	39.27'	35.35'	N 88°49'35" E	89°59'30"
C40	25.00'	40.13'	35.96'	S 00°11'47" E	91°57'47"
C41	322.50'	92.84'	92.52'	N 37°32'18" E	16°29'38"
C42	25.00'	45.61'	39.54'	N 81°33'24" E	104°31'52"
C43	25.00'	2.50'	2.50'	S 43°18'40" E	05°43'59"
C44	25.00'	36.77'	33.54'	N 01°41'20" E	84°16'01"
C45	25.00'	39.27'	35.36'	N 88°49'20" E	90°00'00"
C46	25.00'	32.51'	30.27'	S 08°55'21" E	74°30'39"
C47	447.50'	42.55'	42.53'	N 31°03'24" E	05°26'51"
C48	25.00'	43.65'	38.31'	N 83°48'05" E	100°02'30"
C49	25.00'	39.27'	35.36'	S 01°10'40" E	90°00'00"
C50	25.00'	39.27'	35.36'	N 88°49'20" E	90°00'00"
C51	52.50'	82.47'	74.25'	N 88°49'18" E	90°00'05"
C52	22.50'	35.34'	31.82'	N 88°49'18" E	90°00'05"
C53	277.50'	112.79'	112.02'	N 34°08'28" E	23°17'18"
C54	492.50'	96.99'	96.83'	N 28°08'19" E	11°17'01"
C55	25.00'	33.74'	31.24'	S 04°52'58" E	77°19'36"
C56	25.00'	34.89'	32.13'	S 06°11'55" E	79°57'30"
C57	25.00'	44.80'	39.04'	N 85°07'02" E	102°40'24"
C58	25.00'	43.68'	38.33'	N 83°49'55" E	100°06'12"
C59	25.00'	33.74'	31.24'	S 04°52'58" E	77°19'36"
C60	25.00'	44.80'	39.04'	N 85°07'02" E	102°40'24"
C61	25.00'	34.86'	32.10'	S 06°10'05" E	79°53'48"
C62	25.00'	39.32'	35.39'	N 88°49'41" E	90°06'41"
C63	25.00'	39.22'	35.32'	S 01°10'19" E	89°53'19"
C64	52.50'	82.46'	74.24'	S 01°10'25" E	89°59'21"
C65	22.50'	35.34'	31.82'	S 01°10'25" E	89°59'21"
C66	25.00'	43.65'	38.31'	N 83°48'05" E	100°02'30"
C67	25.00'	33.74'	31.24'	S 04°52'58" E	77°19'36"
C68	25.00'	44.80'	39.04'	N 85°07'02" E	102°40'24"
C69	25.00'	34.89'	32.13'	S 06°11'55" E	79°57'30"
C70	25.00'	39.25'	35.34'	S 01°12'10" E	89°57'00"
C71	25.00'	39.29'	35.37'	N 88°47'50" E	90°03'00"
C72	25.00'	0.55'	0.55'	N 44°26'53" E	01°15'06"
C73	25.00'	38.72'	34.97'	N 89°26'53" E	88°44'54"
C74	25.00'	36.84'	33.60'	N 85°59'29" E	84°26'19"
C75	25.00'	2.45'	2.45'	S 48°59'01" E	05°36'41"
C76	25.00'	37.63'	34.17'	S 00°25'49" E	86°13'54"
C77	25.00'	1.64'	1.64'	N 44°34'05" E	03°45'53"
C78	25.00'	32.71'	30.42'	N 83°55'48" E	74°57'34"
C79	25.00'	6.56'	6.55'	S 51°04'05" E	15°02'39"
C80	25.00'	32.69'	30.41'	N 08°59'07" E	74°55'47"
C81	25.00'	6.57'	6.56'	S 36°00'46" E	15°04'00"
C82	25.00'	6.58'	6.56'	S 51°05'08" E	15°04'44"
C83	25.00'	32.69'	30.41'	N 83°54'46" E	74°55'29"
C84	25.00'	32.68'	30.40'	N 09°00'10" E	74°53'42"
C85	25.00'	6.59'	6.57'	S 35°59'44" E	15°06'05"
C86	25.00'	39.27'	35.36'	S 88°32'53" E	90°00'13"
C86	392.50'	117.54'	117.10'	N 55°48'56" E	17°09'31"
C87	392.50'	9.94'	9.94'	N 46°30'39" E	01°27'04"
C88	25.00'	38.56'	34.85'	S 10°24'22" E	88°22'24"
C89	25.00'	39.98'	35.86'	N 79°35'47" E	91°37'56"
C90	25.00'	38.56'	34.85'	S 10°24'13" E	88°22'04"
C91	25.00'	8.15'	8.12'	N 34°25'48" E	18°41'03"
C92	25.00'	31.07'	29.11'	S 10°30'51" E	71°12'16"

LINE	BEARING	DISTANCE
L1	N 46°27'01" E	1.50'
L2	N 00°10'05" W	13.24'
L3	N 00°10'05" W	57.33'
L4	N 73°23'54" E	40.13'
L5	S 46°27'01" W	5.52'
L6	S 72°22'11" E	5.12'
L7	N 46°10'40" W	8.35'
L8	S 43°49'20" W	25.02'
L9	N 43°49'20" E	25.02'
L10	N 46°10'40" W	6.69'
L11	N 43°49'20" E	4.00'
L12	N 64°23'42" E	24.81'
L13	N 46°10'40" W	8.35'
L14	S 43°49'20" W	25.02'
L15	N 43°49'20" E	25.02'
L16	N 46°10'40" W	6.69'
L17	S 46°10'40" E	8.35'
L18	N 43°49'20" E	25.02'
L19	S 43°49'20" W	25.02'
L20	S 46°10'40" E	6.69'
L21	S 72°28'01" E	40.44'
L22	N 33°46'50" E	13.42'
L23	S 56°13'10" E	30.00'
L24	S 33°46'50" W	15.70'
L25	S 54°35'15" E	13.18'

LEGEND

ECM = EXISTING CONCRETE MONUMENT
SIR = SET IRON ROD
EIR = EXISTING IRON ROD
EIP = EXISTING IRON PIPE
= TELEPHONE PEDESTAL
WV = WATER VALVE
= FIRE HYDRANT
M.B.L. = MAXIMUM BUILDING LIMIT
NTS = NOT TO SCALE
R/W = RIGHT OF WAY
EOP = EDGE OF PAVEMENT
℄ = CENTERLINE
P.C. = PLAT CABINET
D.B. = DEED BOOK
SL = SLIDE
SQ.FT. = SQUARE FEET
= LOT LINE
= R/W LINE
= PHASE LINE
= SEWER LINE – M.H.
= WATER LINE
= TRAIL/BIKE PATH
= EOP W/CURB
= SIDEWALK
= STORM INLET
= FIRM ZONE LINE
= SOIL BOUNDARY
= STOP SIGN
= EXISTING POWER POLE



TYPICAL LOT PLAN 3

NOT TO SCALE PLAN VIEW

MAXIMUM LOT COVERAGE : 60%

Bissell Professional Group
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Kitty Hawk, North Carolina 27949
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FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINAY PLAT PHASES 1-6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	5-16	LOTS 97-101 AND 141-144	QMW

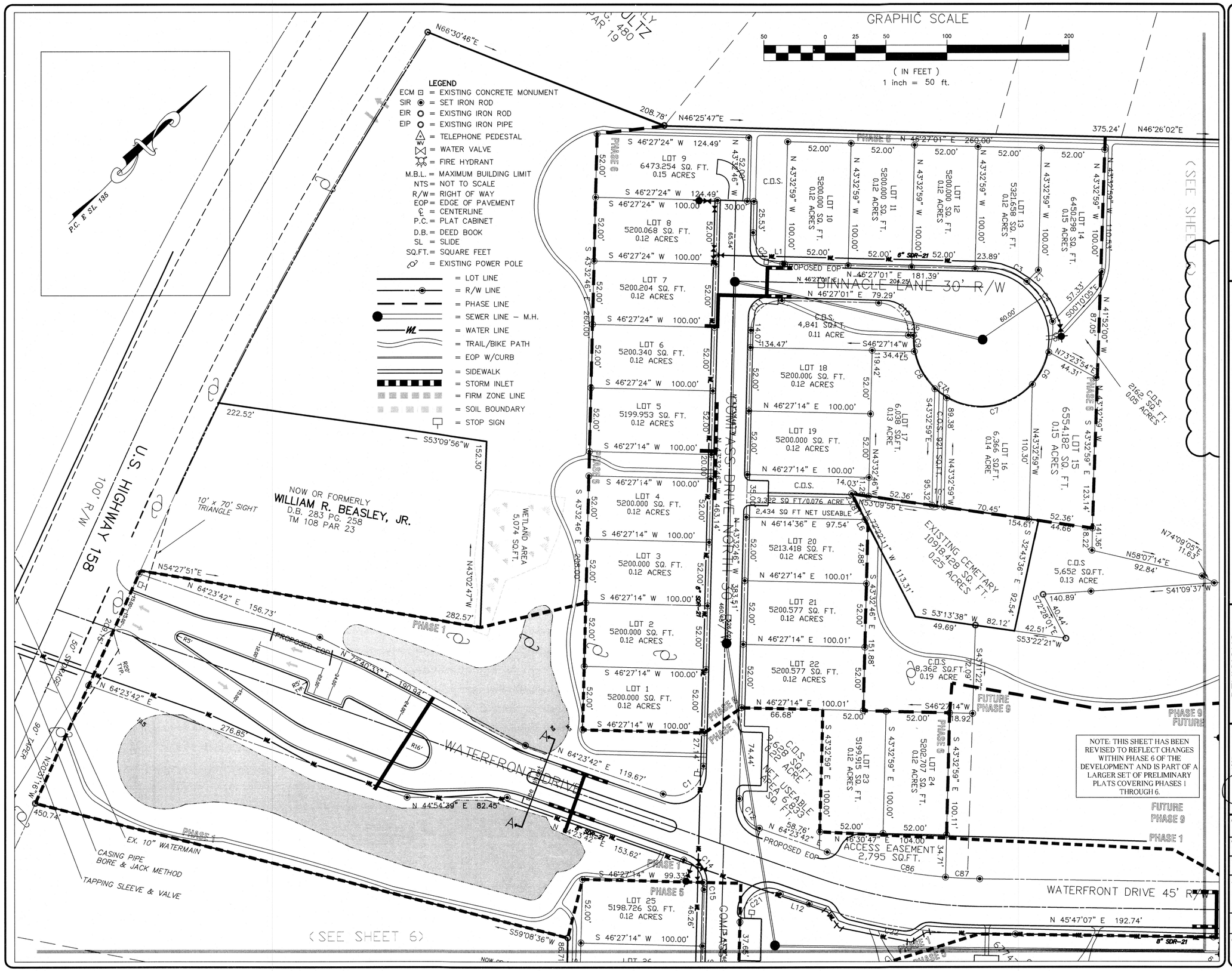
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION"

DATE: 7-15-04	SCALE: 1"=50'
DESIGNED:	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG

SHEET: 4 OF 10

CAD FILE: 401801P1

PROJECT NO: 4018



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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINARY PLAT PHASES 1-6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	5-05	LOTS 97-101 AND 141-144	QMW
2	2-06	LOTS 1-9/17	DMK

"PRELIMINARY" NOT FOR RECORDATION OR CONSTRUCTION

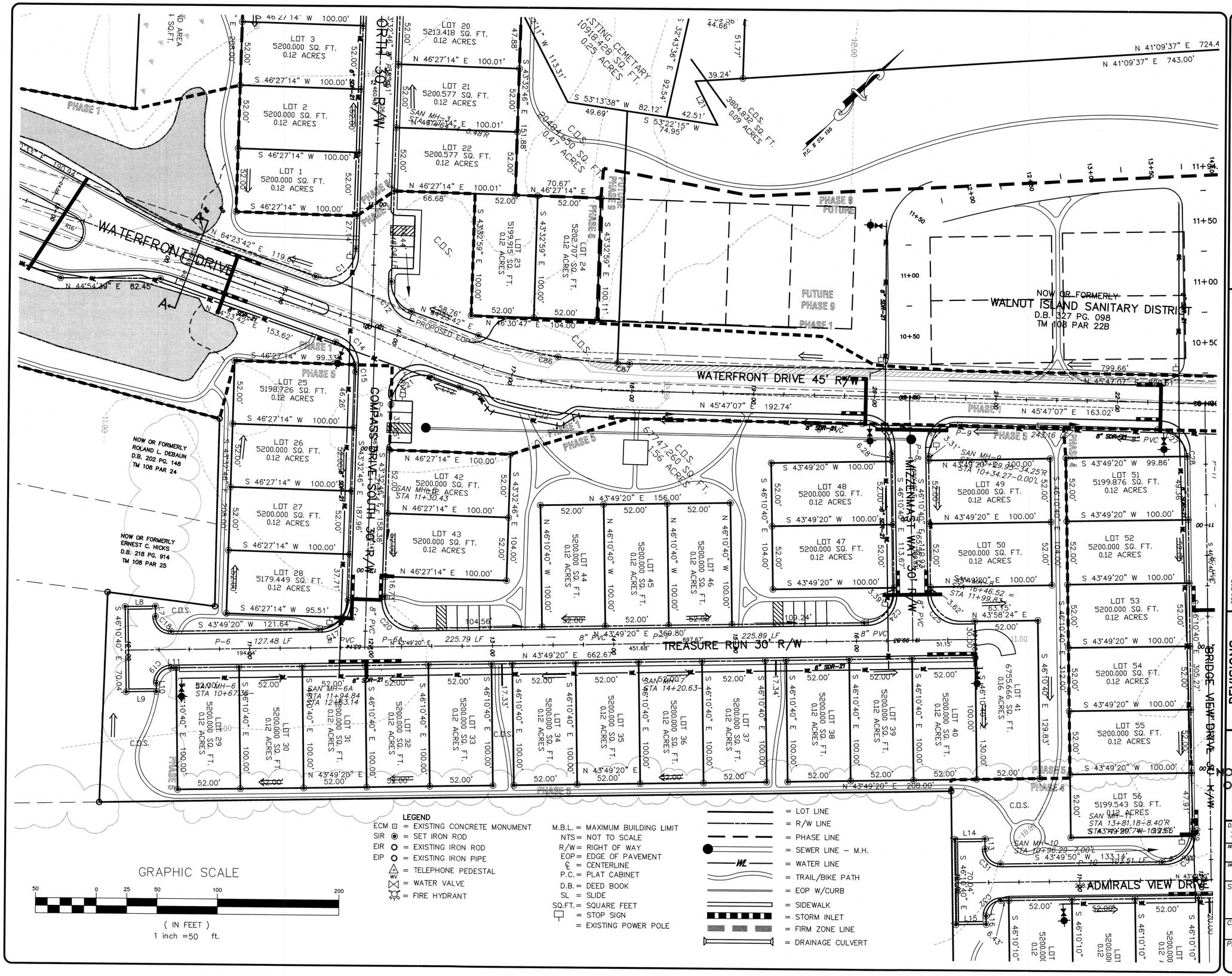
NORTH CAROLINA PROFESSIONAL SEAL L-4586 LAND SURVEYOR WESLEY BIGGINS
7/15/04

DATE: 7-15-04	SCALE: 1"=50'
DESIGNED:	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG

SHEET: 5 OF 10

CAD FILE: 401801P1

PROJECT NO: 4018


WATERFRONT DRIVE 45' R/W
WATERFRONT DRIVE
TREASURE RUN 30' R/W
ADMIRALS VIEW DRIVE
BRIDGE VIEW DRIVE 30' R/W
NORTH 30' R/W
SOUTH 30' R/W
NOW OR FORMERLY
WALNUT ISLAND SANITARY DISTRICT
D.B. 327 PG. 098
TM 108 PAR 22B
NOW OR FORMERLY
ROLAND L. DEBAUN
D.B. 202 PG. 148
TM 108 PAR 24
NOW OR FORMERLY
ERNEST C. HICKS
D.B. 218 PG. 914
TM 108 PAR 25
PHASE 1
PHASE 5
PHASE 6
PHASE 8
PHASE 9
FUTURE PHASE 9
PHASE 9 FUTURE
C.O.S.
LOT 1 5200.000 SQ. FT. 0.12 ACRES
LOT 2 5200.000 SQ. FT. 0.12 ACRES
LOT 3 5200.000 SQ. FT. 0.12 ACRES
LOT 20 5213.418 SQ. FT. 0.12 ACRES
LOT 21 5200.577 SQ. FT. 0.12 ACRES
LOT 22 5200.577 SQ. FT. 0.12 ACRES
LOT 23 5199.915 SQ. FT. 0.12 ACRES
LOT 24 5202.707 SQ. FT. 0.12 ACRES
LOT 25 5198.726 SQ. FT. 0.12 ACRES
LOT 26 5200.000 SQ. FT. 0.12 ACRES
LOT 27 5200.000 SQ. FT. 0.12 ACRES
LOT 28 5179.449 SQ. FT. 0.12 ACRES
LOT 29 5200.000 SQ. FT. 0.12 ACRES
LOT 30 5200.000 SQ. FT. 0.12 ACRES
LOT 31 5200.000 SQ. FT. 0.12 ACRES
LOT 32 5200.000 SQ. FT. 0.12 ACRES
LOT 33 5200.000 SQ. FT. 0.12 ACRES
LOT 34 5200.000 SQ. FT. 0.12 ACRES
LOT 35 5200.000 SQ. FT. 0.12 ACRES
LOT 36 5200.000 SQ. FT. 0.12 ACRES
LOT 37 5200.000 SQ. FT. 0.12 ACRES
LOT 38 5200.000 SQ. FT. 0.12 ACRES
LOT 39 5200.000 SQ. FT. 0.12 ACRES
LOT 40 5200.000 SQ. FT. 0.12 ACRES
LOT 41 6755.666 SQ. FT. 0.16 ACRES
LOT 42 5200.000 SQ. FT. 0.12 ACRES
LOT 43 5200.000 SQ. FT. 0.12 ACRES
LOT 44 5200.000 SQ. FT. 0.12 ACRES
LOT 45 5200.000 SQ. FT. 0.12 ACRES
LOT 46 5200.000 SQ. FT. 0.12 ACRES
LOT 47 5200.000 SQ. FT. 0.12 ACRES
LOT 48 5200.000 SQ. FT. 0.12 ACRES
LOT 49 5200.000 SQ. FT. 0.12 ACRES
LOT 50 5200.000 SQ. FT. 0.12 ACRES
LOT 51 5199.876 SQ. FT. 0.12 ACRES
LOT 52 5200.000 SQ. FT. 0.12 ACRES
LOT 53 5200.000 SQ. FT. 0.12 ACRES
LOT 54 5200.000 SQ. FT. 0.12 ACRES
LOT 55 5200.000 SQ. FT. 0.12 ACRES
LOT 56 5199.543 SQ. FT. 0.12 ACRES
EXISTING CEMETERY 1091.428 SQ. FT. 0.25 ACRES
C.O.S. 2049.550 SQ. FT. 0.47 ACRES
C.O.S. 3804.832 SQ. FT. 0.09 ACRES
C.O.S. 6747.260 SQ. FT. 1.56 ACRES
N 41°09'37" E 724.4
N 41°09'37" E 743.00'
N 45°47'07" E 192.74'
N 45°47'07" E 163.02'
N 43°49'20" E 156.00'
N 43°49'20" E 662.67'
N 43°49'20" E 200.00'
S 43°49'20" W 121.64'
S 43°49'20" W 99.86'
S 43°49'50" W 133.14'
P-6 127.48 LF
P-6A 225.79 LF
P-8 225.89 LF
P-9 243.16
P-10 103.51 LF
SAN MH-6 STA 10+67.36
SAN MH-6A STA 11+94.84 STA 12+53.14
SAN MH-7 STA 14+20.63
SAN MH-8 STA 10+29.93-34.25'R STA 10+34.27-0.00'L
SAN MH-9 STA 16+46.52 STA 11+99.83
SAN MH-10 STA 10+96.29 7.00'L
SAN MH-11 STA 13+81.18-8.40'R STA 13+49.20'-11.25'L
PROPOSED EOP
MIZZENMAST WAY 30' R/W
BISSELL PROFESSIONAL GROUP
Bissell Professional Group
3512 North Croatan Highway
P.O. Box 1068
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINARY PLAT PHASES 1-6
REVISIONS
NO. DATE DESCRIPTION BY
1 5-05 ADD 141-144 QMW
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."
DATE: 7-15-04
SCALE: 1"=50'
DESIGNED:
CHECKED: CRM
DRAWN: QMW
APPROVED: BPG
SHEET: 6 OF 10
CAD FILE: 401801P1
PROJECT NO: 4018
LEGEND
ECM = EXISTING CONCRETE MONUMENT
SIR = SET IRON ROD
EIR = EXISTING IRON ROD
EIP = EXISTING IRON PIPE
= TELEPHONE PEDESTAL
= WATER VALVE
= FIRE HYDRANT
M.B.L. = MAXIMUM BUILDING LIMIT
NTS = NOT TO SCALE
R/W = RIGHT OF WAY
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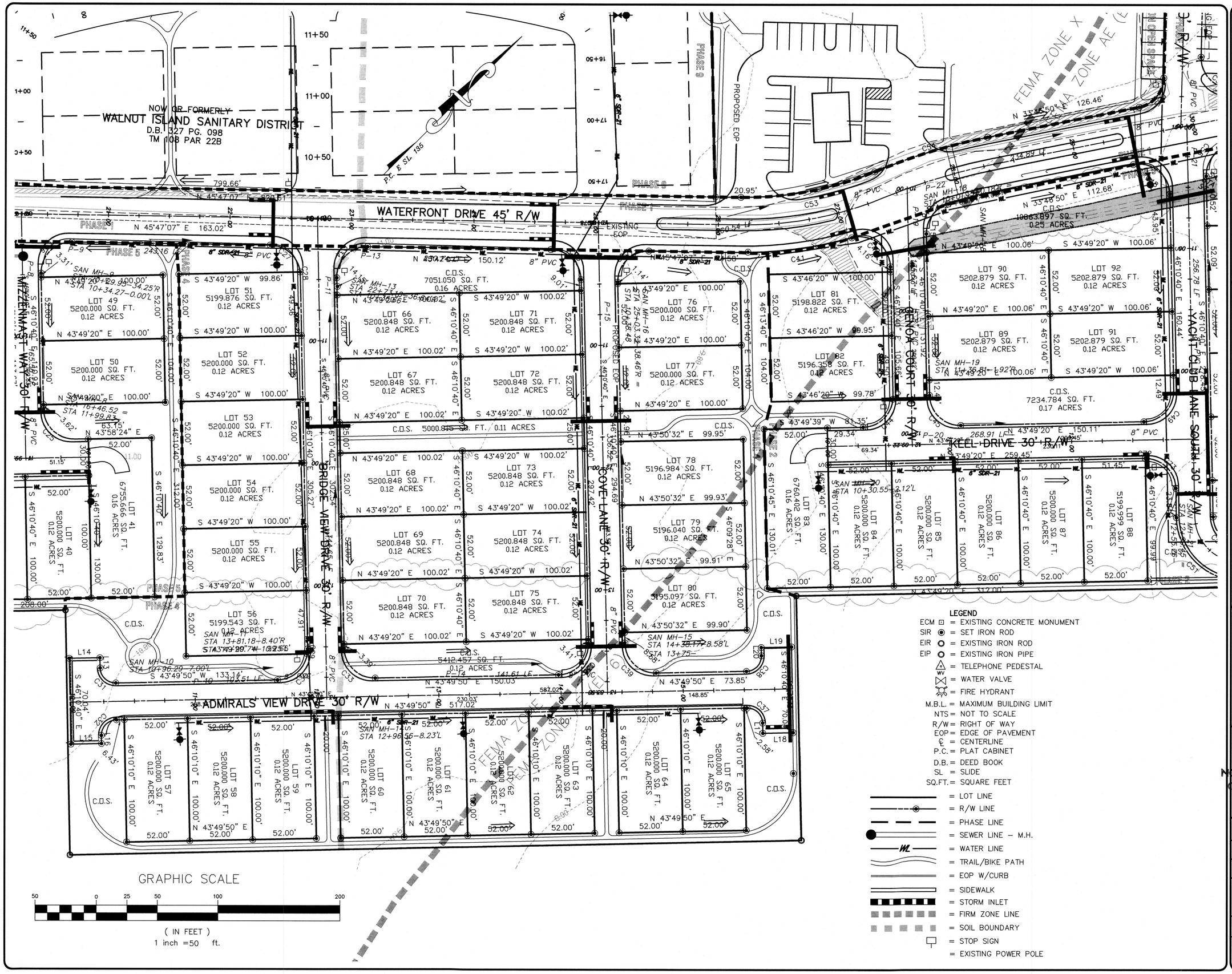
= EXISTING POWER POLE
= LOT LINE
= R/W LINE
= PHASE LINE
= SEWER LINE – M.H.
= WATER LINE
= TRAIL/BIKE PATH
= EOP W/CURB
= SIDEWALK
= STORM INLET
= FIRM ZONE LINE
= DRAINAGE CULVERT
GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch =50 ft.



LEGEND

- ECM = EXISTING CONCRETE MONUMENT
- SIR = SET IRON ROD
- EIR = EXISTING IRON ROD
- EIP = EXISTING IRON PIPE
- = TELEPHONE PEDESTAL
- WV = WATER VALVE
- = FIRE HYDRANT
- M.B.L. = MAXIMUM BUILDING LIMIT
- NTS = NOT TO SCALE
- R/W = RIGHT OF WAY
- EOP = EDGE OF PAVEMENT
- ℄ = CENTERLINE
- P.C. = PLAT CABINET
- D.B. = DEED BOOK
- SL = SLIDE
- SQ.FT. = SQUARE FEET
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- = SOIL BOUNDARY
- = STOP SIGN
- = EXISTING POWER POLE

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Kitty Hawk, North Carolina 27949
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

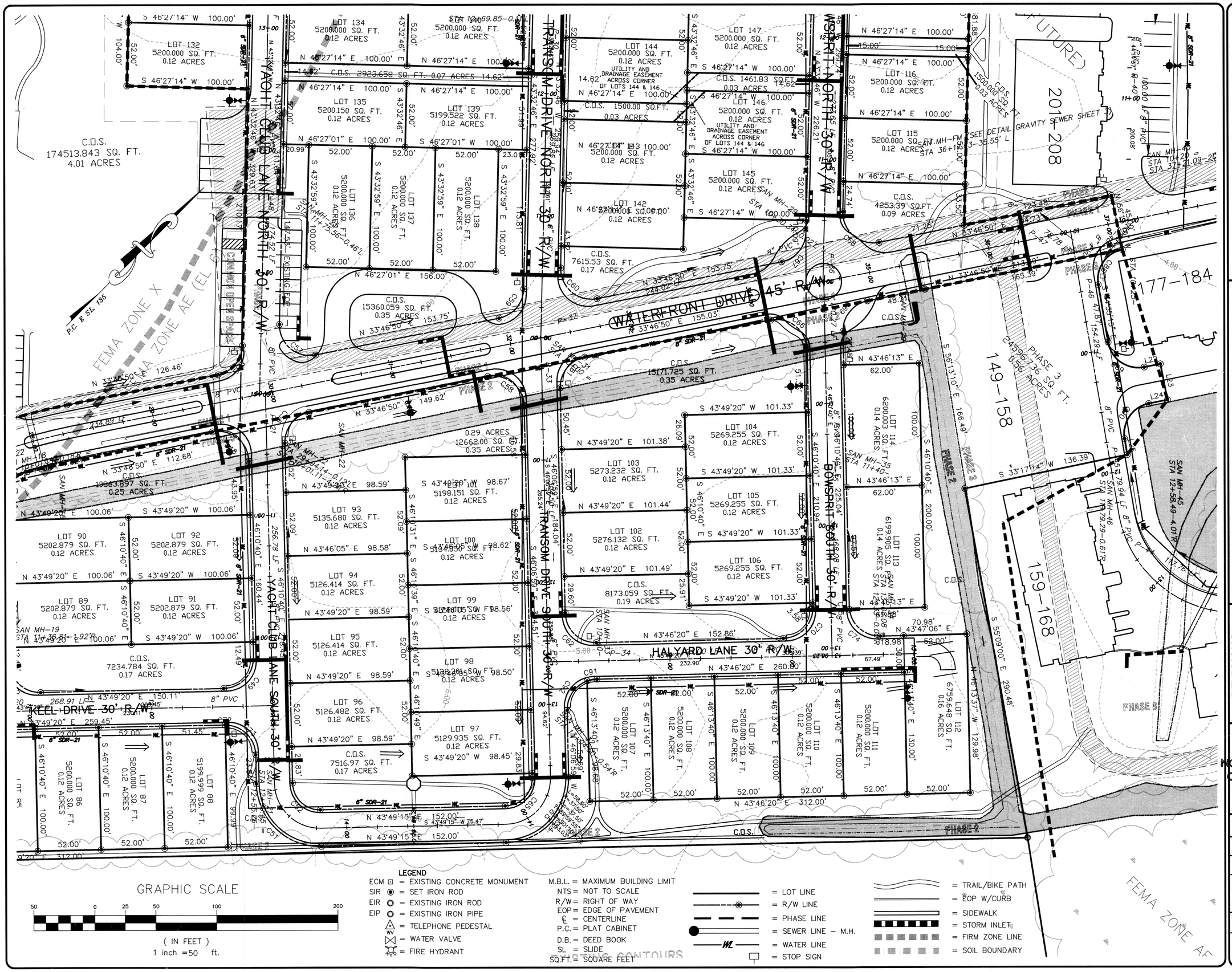
AMENDED PRELIMINARY PLAT PHASES 1-6

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	5-05	LOTS 97-101 AND 141-144	QMW

"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 7-15-04	SCALE: 1"=50'
DESIGNED:	CHECKED: CRM
DRAWN: QMW	APPROVED: BPG
SHEET: 7 OF 10	
CAD FILE: 401801P1	
PROJECT NO: 4018	



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

ECM ⊡ = EXISTING CONCRETE MONUMENT
SIR ◉ = SET IRON ROD
EIR ○ = EXISTING IRON ROD
EIP ○ = EXISTING IRON PIPE
△ = TELEPHONE PEDESTAL
⋈ = WATER VALVE
☼ = FIRE HYDRANT

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—— = LOT LINE
—●— = R/W LINE
— — = PHASE LINE
●—— = SEWER LINE – M.H.
—WL— = WATER LINE
☐ = STOP SIGN

= TRAIL/BIKE PATH
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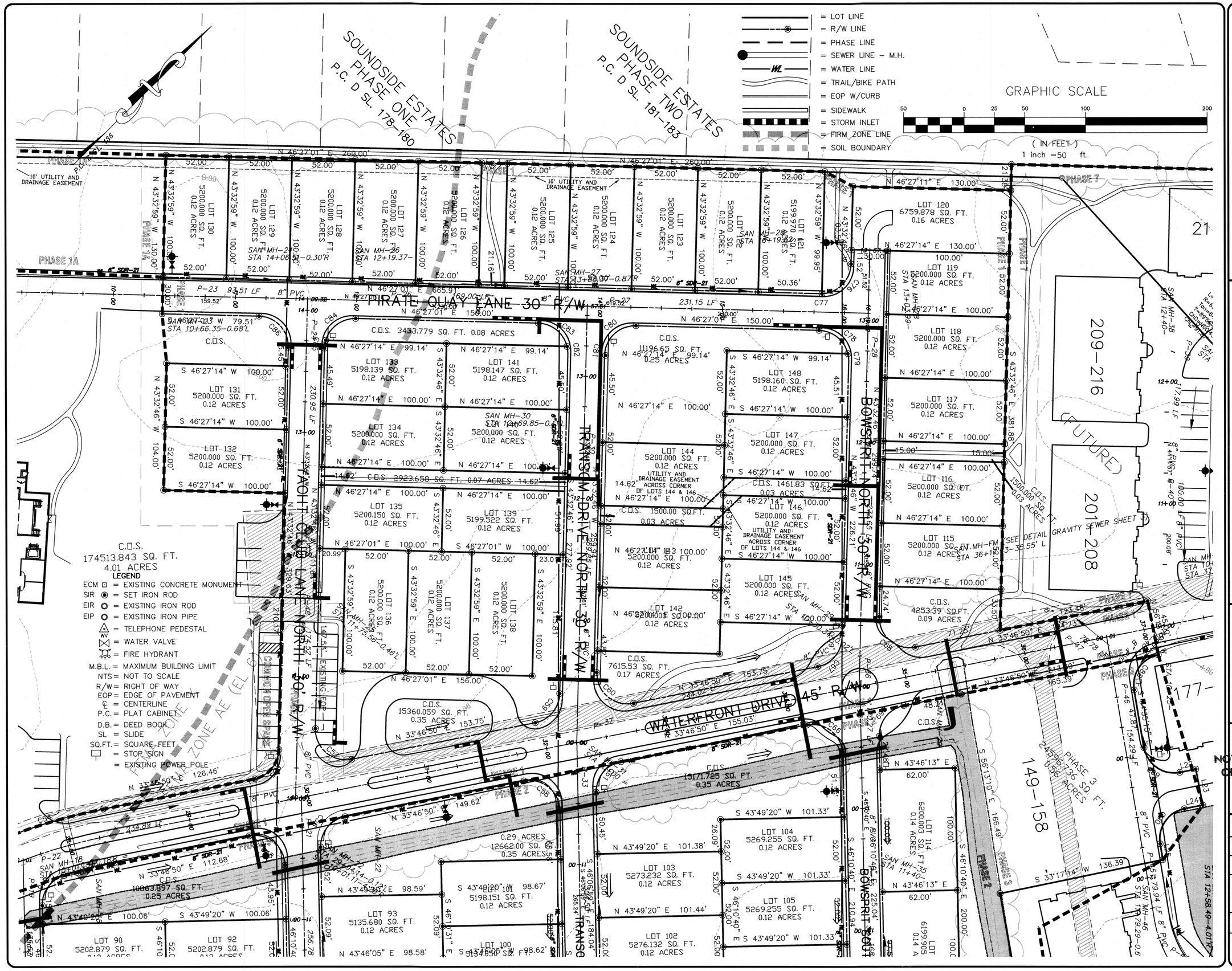
SHEET: 8 OF 10

CAD FILE: 401801P1

PROJECT NO: 4018



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WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

AMENDED PRELIMINARY PLAT PHASES 1-6

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SHEET: 9 OF 10	
CAD FILE: 401801P1	
PROJECT NO: 4018	

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch =50 ft.

LEGEND

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= TRAIL/BIKE PATH
= EOP W/CURB
= SIDEWALK
= STORM INLET
= FIRM ZONE LINE
= SOIL BOUNDARY

WASTEWATER TREATMENT SITE
261710.949 SQ. FT.
6.01 ACRES

120,000 GPD
WASTEWATER TREATMENT
PLANT

20' X 40' UTILITY/MAINTENANCE BUILDING

8,000 GAL PUMP TANK

P.C. E SL. 135

NOW OR FORMERLY
WALNUT ISLAND SANITARY DISTRICT
D.B. 1327 PG. 098
TM 008 PAR 22B

WATERFRONT DRIVE 45' R/W

PHASE 1A
PHASE 1
PHASE 5
PHASE 6
PHASE 9
FUTURE PHASE 9
PHASE 9 FUTURE

N 41°09'37" E 724.40'
N 41°09'37" E 743.00'
N 40°36'37" W 245.70'
N 49°09'04"E 62.72'
N 46°11'53" W 283.45'
N 45°47'07" E 163.02'
N 45°47'07" W 192.74'
N 45°47'07" E 799.66'

LOT 12 5200.000 SQ. FT. 0.12 ACRES
LOT 13 5321.656 SQ. FT. 0.12 ACRES
LOT 14 6450.298 SQ. FT. 0.15 ACRES
LOT 15 6554.182 SQ. FT. 0.15 ACRES
LOT 16 6579.417 SQ. FT. 0.11 ACRES
LOT 17 4811.296 SQ. FT.
LOT 48 5200.000 SQ. FT. 0.12 ACRES
LOT 49 5200.000 SQ. FT. 0.12 ACRES
LOT 51

C.O.S. 2107.972 SQ. FT. 0.05 ACRES
C.O.S. 3804.832 SQ. FT. 0.09 ACRES

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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
AMENDED PRELIMINAY PLAT PHASES 1-6

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SHEET: 10 OF 10	
CAD FILE: 401801P1	
PROJECT NO: 4018	

AMENDED SKETCH PLAN

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

AMENDED 5/24/2005

General Notes

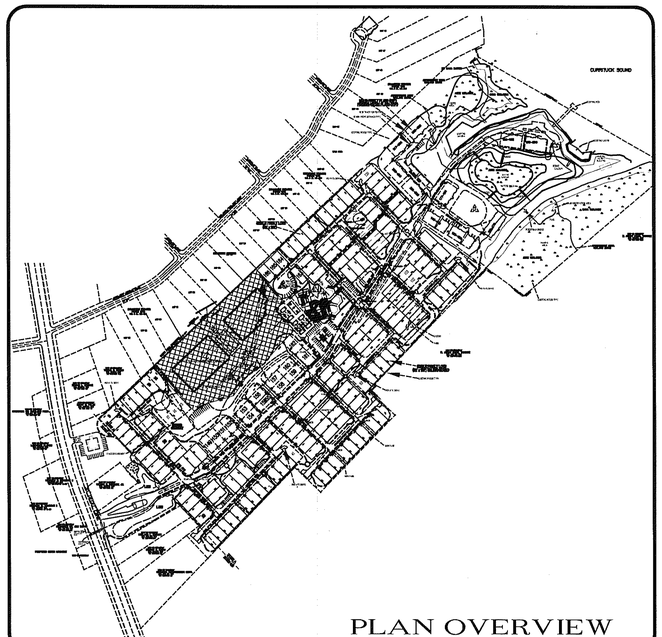
Applicant / Property Owner
WATERSIDE VILLAGES AT CURRITUCK
VOC, L.L.C.
P.O. Box 147
HARBINGER, N.C. 27941
252-453-0254

Engineer
Bissell Professional Group
Mark S. Bissell, P.E.
P.O. Box 1068
Kitty Hawk, N.C. 27949
(252) 261-3266
fax: (252) 261-1760
email: mark@bissellprofessionalgroup.com

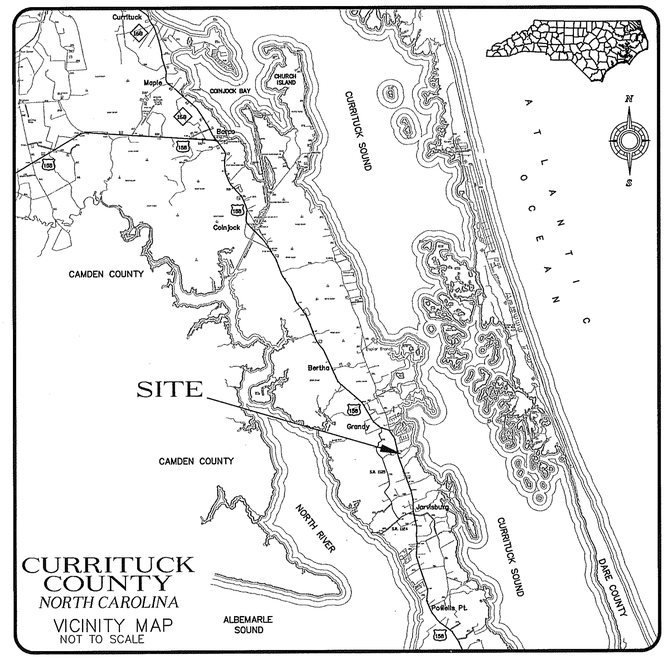
PLANNING

SISKA AURAND
-landscape architecture
-master planning
-site design
523 West 24th Street
Norfolk, Virginia 23517
757.627.1407
e-mail: doug@siskaaurand.com

Subject Property
A 77.03 AC. +/- TRACT OF LAND, LOCATED IN POPLAR BRANCH TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA, AS DESCRIBED IN D.B. 0392 PG. 0355, CURRITUCK COUNTY REGISTRY
PIN NO 0108-000-022A-0000, 0108-000-0020-0000, 0108-000-0021-0000 AND 0108-000-022B-0000



PLAN OVERVIEW



CURRITUCK COUNTY
NORTH CAROLINA
VICINITY MAP
NOT TO SCALE

SHEET INDEX

SHEET	*DESCRIPTION*
1	COVER SHEET AND PHASING PLAN
2	SKETCH PLAN – WEST
3	SKETCH PLAN –EAST
4	UTILITY PLAN – WEST
5	UTILITY PLAN –EAST
6	OPEN SPACE SUMMARY
7	PHASING PLAN

PRELIMINARY PLAN FOR REVIEW ONLY
NOT RELEASED FOR CONSTRUCTION

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
4417 North Croatan Highway
P.O. Box 1068
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Engineers, Planners, Surveyors and Environmental Specialists

PROJECT: WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
COVER SHEET AND DEVELOPMENT DATA

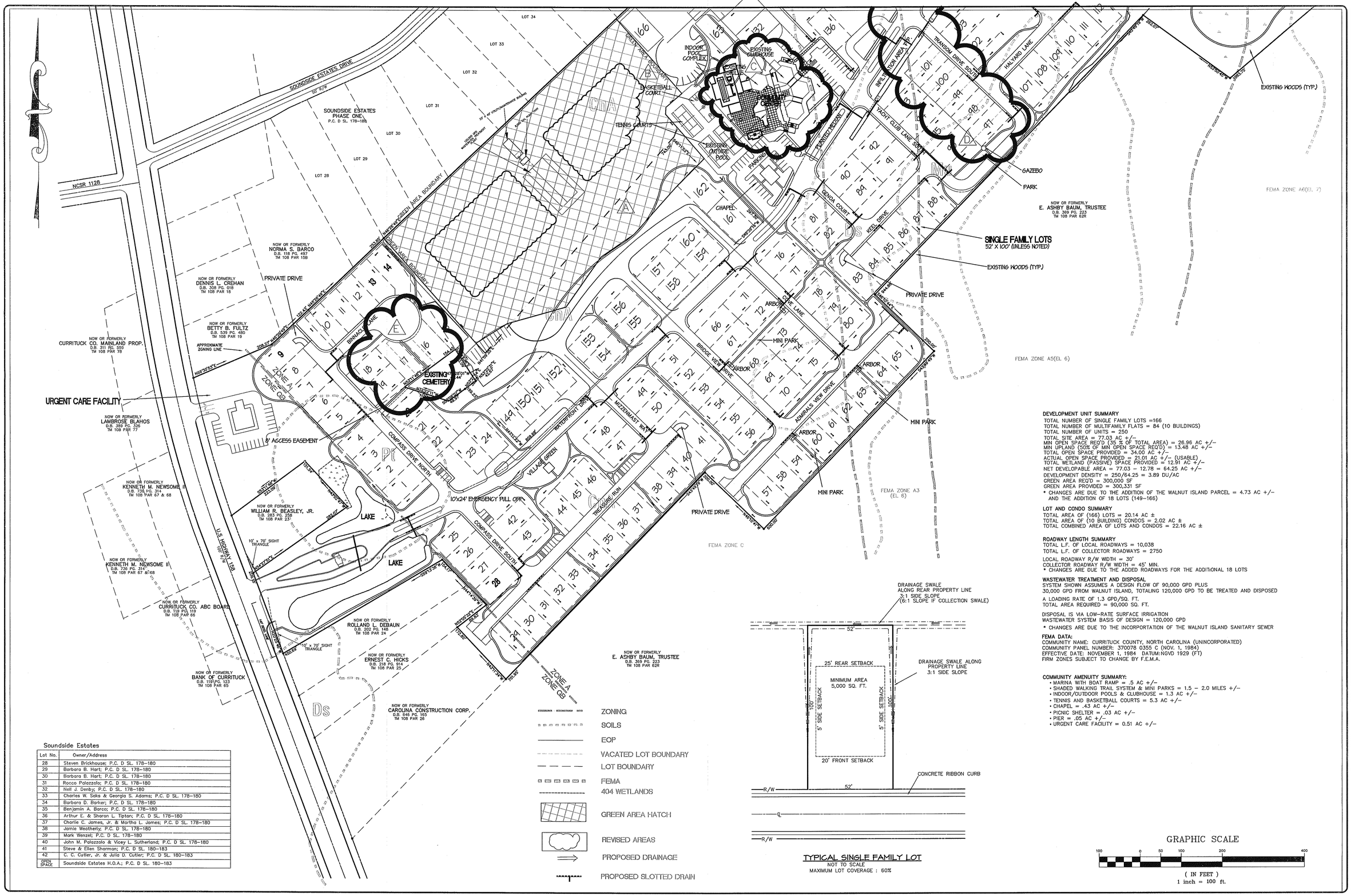
REVISIONS

NO.	DATE	DESCRIPTION	BY

"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION"

DATE: 6/17/04	SCALE: 1"=100'plt
DESIGNED: BPG	CHECKED: MSB
DRAWN: TMS	APPROVED: MSB

SHEET: 1 OF 7
CAD FILE: 401801S1.AMNDED
PROJECT NO: 4018



Soundside Estates	
Lot No.	Owner/Address
28	Steven Brickhouse; P.C. D SL. 178-180
29	Barbara B. Hart; P.C. D SL. 178-180
30	Barbara B. Hart; P.C. D SL. 178-180
31	Rocco Palazzolo; P.C. D SL. 178-180
32	Neil J. Denby; P.C. D SL. 178-180
33	Charles W. Saks & Georgia S. Adams; P.C. D SL. 178-180
34	Barbara D. Barker; P.C. D SL. 178-180
35	Benjamin A. Barco; P.C. D SL. 178-180
36	Arthur E. & Sharon L. Tipton; P.C. D SL. 178-180
37	Charlie C. James, Jr. & Martha L. James; P.C. D SL. 178-180
38	Jamie Weatherly; P.C. D SL. 178-180
39	Mark Wenzel; P.C. D SL. 178-180
40	John M. Palazzolo & Vicey L. Sutherland; P.C. D SL. 178-180
41	Steve & Ellen Sharman; P.C. D SL. 180-183
42	C. C. Cutler, Jr. & Julia D. Cutler; P.C. D SL. 180-183
OPEN SPACE	Soundside Estates H.O.A.; P.C. D SL. 180-183

ZONING
SOILS
EOP
VACATED LOT BOUNDARY
LOT BOUNDARY
FEMA
404 WETLANDS
GREEN AREA HATCH
REVISED AREAS
PROPOSED DRAINAGE
PROPOSED SLOTTED DRAIN

TYPICAL SINGLE FAMILY LOT
NOT TO SCALE
MAXIMUM LOT COVERAGE : 60%

DEVELOPMENT UNIT SUMMARY
TOTAL NUMBER OF SINGLE FAMILY LOTS =166
TOTAL NUMBER OF MULTIFAMILY FLATS = 84 (10 BUILDINGS)
TOTAL NUMBER OF UNITS = 250
TOTAL SITE AREA = 77.03 AC +/-
MIN OPEN SPACE REQ'D (35 % OF TOTAL AREA) = 26.96 AC +/-
MIN UPLAND (50% OF MIN OPEN SPACE REQ'D) = 13.48 AC +/-
TOTAL OPEN SPACE PROVIDED = 34.00 AC +/-
ACTUAL OPEN SPACE PROVIDED = 21.01 AC +/- (USABLE)
TOTAL WETLAND (PASSIVE) SPACE PROVIDED = 12.91 AC +/-
NET DEVELOPABLE AREA = 77.03 – 12.78 = 64.25 AC +/-
DEVELOPMENT DENSITY = 250/64.25 = 3.89 DU/AC
GREEN AREA REQ'D = 300,000 SF
GREEN AREA PROVIDED = 300,331 SF
* CHANGES ARE DUE TO THE ADDITION OF THE WALNUT ISLAND PARCEL = 4.73 AC +/- AND THE ADDITION OF 18 LOTS (149–166)

LOT AND CONDO SUMMARY
TOTAL AREA OF (166) LOTS = 20.14 AC ±
TOTAL AREA OF (10 BUILDING) CONDOS = 2.02 AC ±
TOTAL COMBINED AREA OF LOTS AND CONDOS = 22.16 AC ±

ROADWAY LENGTH SUMMARY
TOTAL L.F. OF LOCAL ROADWAYS = 10,038
TOTAL L.F. OF COLLECTOR ROADWAYS = 2750

LOCAL ROADWAY R/W WIDTH = 30'
COLLECTOR ROADWAY R/W WIDTH = 45' MIN.
* CHANGES ARE DUE TO THE ADDED ROADWAYS FOR THE ADDITIONAL 18 LOTS

WASTEWATER TREATMENT AND DISPOSAL
SYSTEM SHOWN ASSUMES A DESIGN FLOW OF 90,000 GPD PLUS 30,000 GPD FROM WALNUT ISLAND, TOTALING 120,000 GPD TO BE TREATED AND DISPOSED

A LOADING RATE OF 1.3 GPD/SQ. FT.
TOTAL AREA REQUIRED = 90,000 SQ. FT.

DISPOSAL IS VIA LOW-RATE SURFACE IRRIGATION
WASTEWATER SYSTEM BASIS OF DESIGN = 120,000 GPD
* CHANGES ARE DUE TO THE INCORPORTATION OF THE WALNUT ISLAND SANITARY SEWER

FEMA DATA:
COMMUNITY NAME: CURRITUCK COUNTY, NORTH CAROLINA (UNINCORPORATED)
COMMUNITY PANEL NUMBER: 370078 0355 C (NOV. 1, 1984)
EFFECTIVE DATE: NOVEMBER 1, 1984 DATUM:NGVD 1929 (FT)
FIRM ZONES SUBJECT TO CHANGE BY F.E.M.A.

COMMUNITY AMENUITY SUMMARY:
- MARINA WITH BOAT RAMP = .5 AC +/-
- SHADED WALKING TRAIL SYSTEM & MINI PARKS = 1.5 – 2.0 MILES +/-
- INDOOR/OUTDOOR POOLS & CLUBHOUSE = 1.3 AC +/-
- TENNIS AND BASKETBALL COURTS = 5.3 AC +/-
- CHAPEL = .43 AC +/-
- PICNIC SHELTER = .03 AC +/-
- PIER = .05 AC +/-
- URGENT CARE FACILITY = 0.51 AC +/-

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

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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA
AMENDED SKETCH PLAN

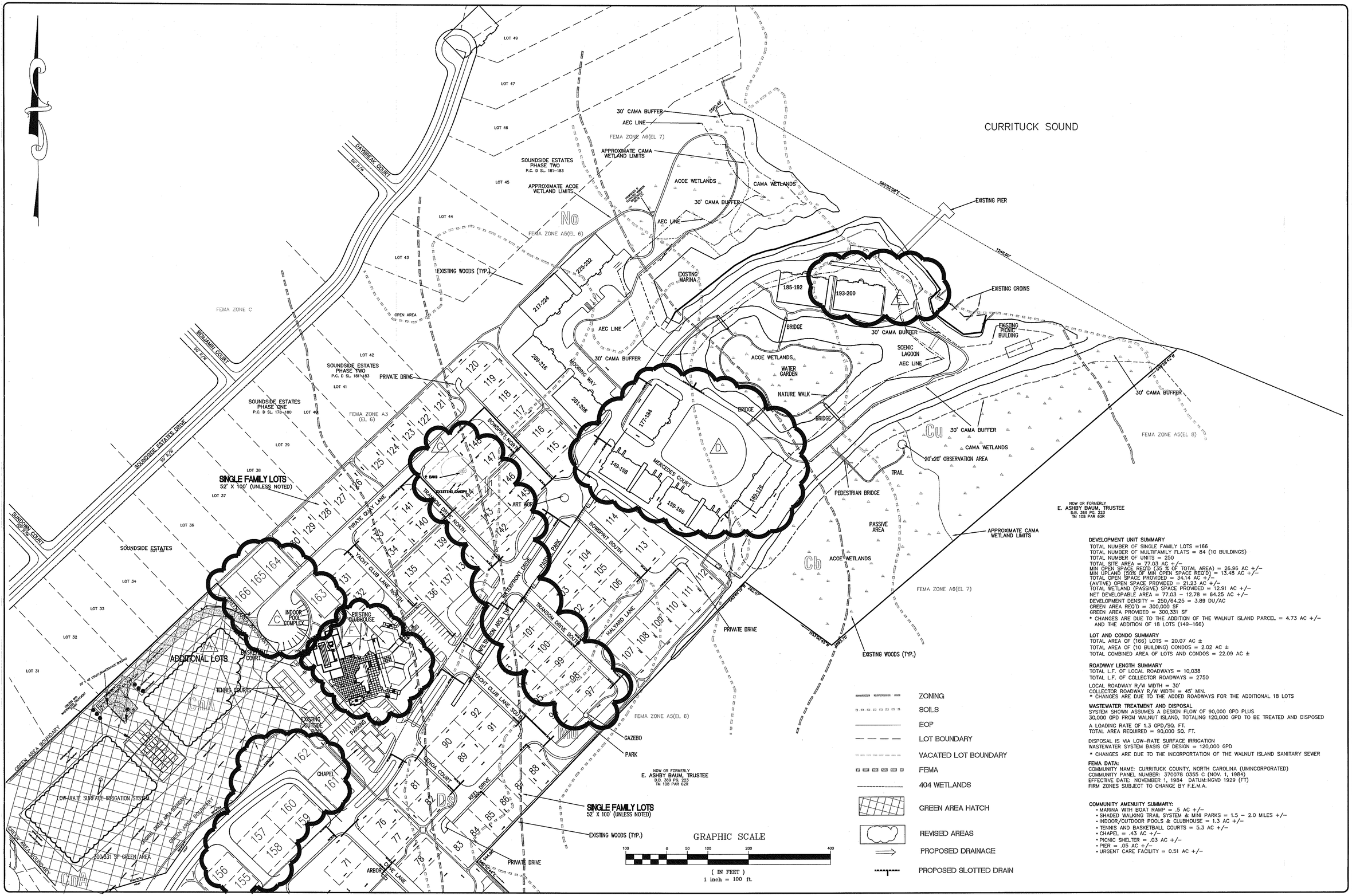
REVISIONS

NO	DATE	DESCRIPTION	BY
1	7/15	ADDED LOTS 149-166	TBS
2	7/15	INCREASED GREEN AREA	TMS
3	7/15	REVISED LOT LAYOUT	TMS
4	8/29/05	LOT RECONFIGURATION	DMK
5	7/27/06	LOT 1 REA 1 RECONFIGURATION	DMK

SEAL: MICHAEL SCOTT BISSELL, PROFESSIONAL SURVEYOR, L-4000, NORTH CAROLINA

DATE: 6/17/04	SCALE: 1"=100'plt
DESIGNED: BPG	CHECKED: MSB
DRAWN: TMS	APPROVED: MSB

SHEET: 2 OF 7
CAD FILE: 407801S2.AMDED
PROJECT NO: 4018



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GREEN AREA PROVIDED = 300,331 SF
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LOT AND CONDO SUMMARY
TOTAL AREA OF (166) LOTS = 20.07 AC ±
TOTAL AREA OF (10 BUILDING) CONDOS = 2.02 AC ±
TOTAL COMBINED AREA OF LOTS AND CONDOS = 22.09 AC ±

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- TENNIS AND BASKETBALL COURTS = 5.3 AC +/-
- CHAPEL = .43 AC +/-
- PICNIC SHELTER = .03 AC +/-
- PIER = .05 AC +/-
- URGENT CARE FACILITY = 0.51 AC +/-

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Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA

AMENDED SKETCH PLAN

REVISIONS

NO.	DATE	DESCRIPTION	BY
A	7/2/03	ADDED LOTS 23-24, 148-166	TMS
B	7/2/03	REDUCED CONDOS & ROADS	TMS
C	7/2/03	REDUCED CONDOS & ROADS	TMS
D	7/2/03	ADDED 2 TRIO-A-TRIPLEX	TMS
E	7/2/03	ADDED WALNUT ISLAND	TMS
F	7/2/03	ADDED WALNUT ISLAND	TMS
G	6/2/04	LOT BEGINNERATION	TMS

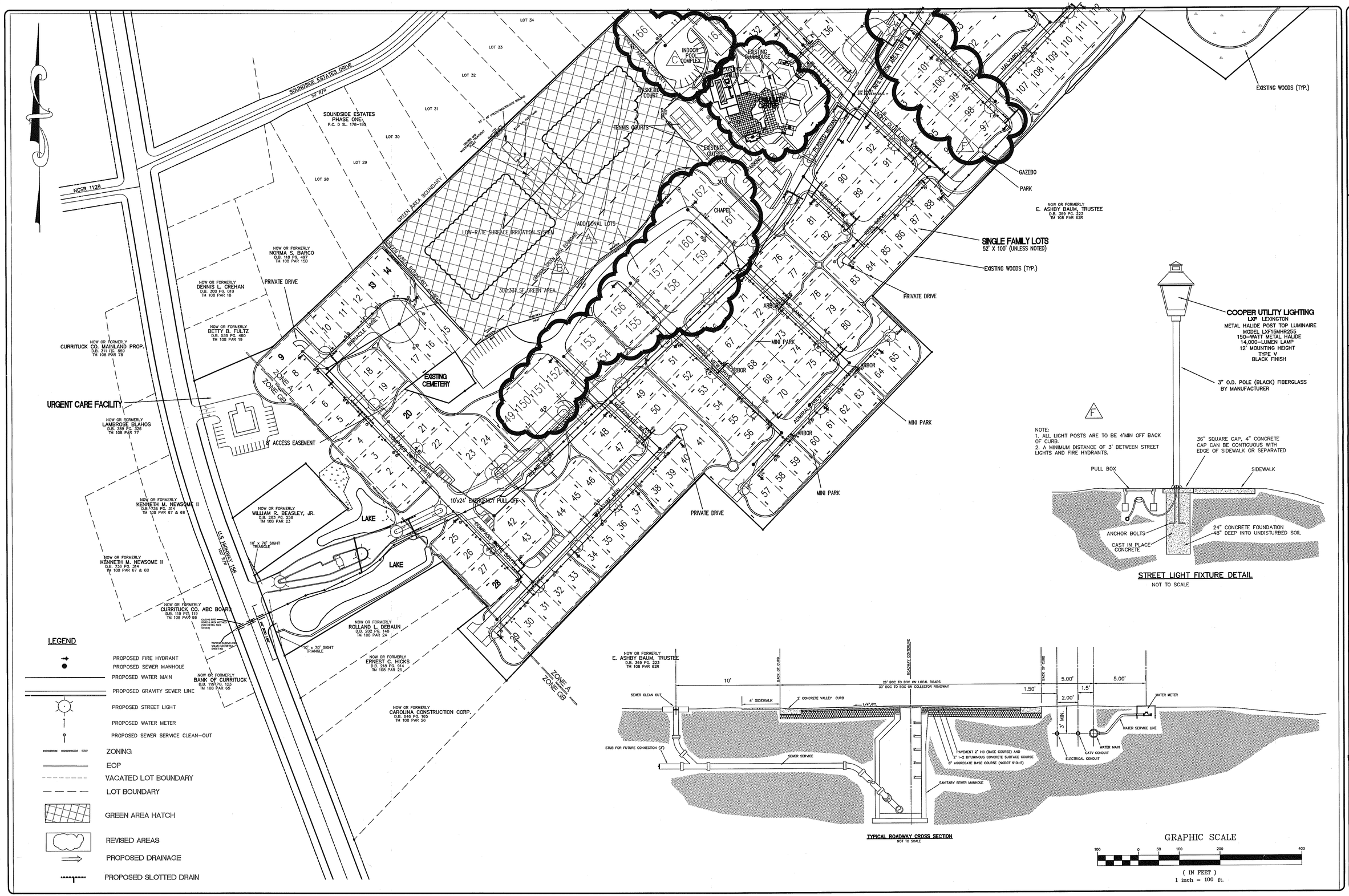
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 6/17/04	SCALE: 1"=100'/plt
DESIGNED: BPG	CHECKED: MSB
DRAWN: TMS	APPROVED: MSB

SHEET: 3 OF 7

CAD FILE: 4018015S3.AMNED

PROJECT NO: 4018



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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA

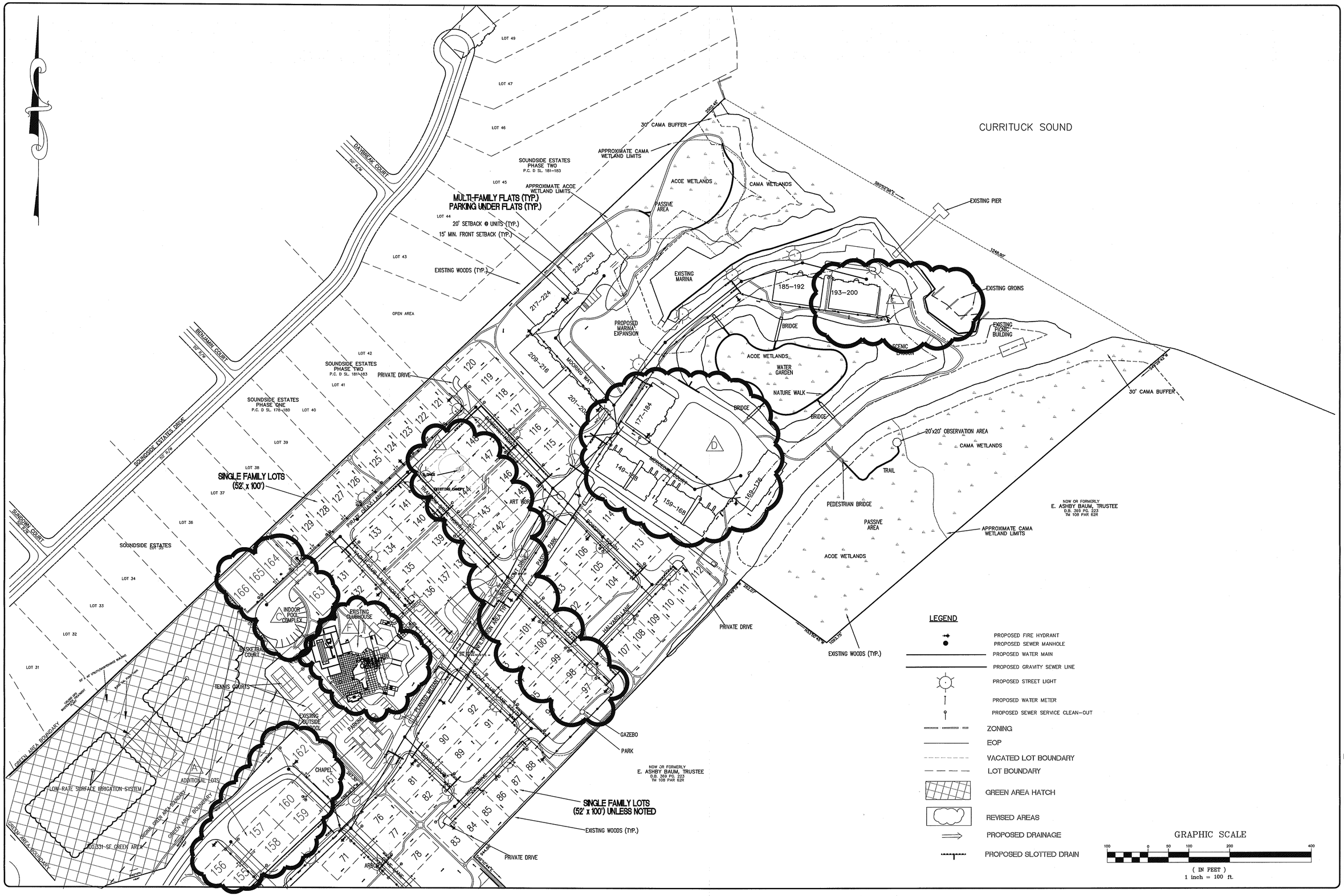
UTILITY PLAN

REVISIONS

NO	DATE	DESCRIPTION	BY
A	7/16	ADDED 749-188	TMS
B	7/16	INCREASED GREEN AREA	TMS
C	7/16	ADDED PULL-OF-SAC	TMS
D	8/16	ADDED CURB	DMK
E	8/16	CHANGES TO CLUB HOUSE	DMK
F	9/16	LOT RECONFIGURATION	DMK

"PRELIMINARY, NOT FOR RECORDATION, OR CONSTRUCTION."

DATE: 6/17/04	SCALE: 1"=100'plt
DESIGNED: BPG	CHECKED: MSB
DRAWN: TMS	APPROVED: MSB
SHEET: 4 OF 7	
CAD FILE: 401801S4.AMDED	
PROJECT NO: 4018	



BISSELL PROFESSIONAL GROUP
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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA

UTILITY PLAN

REVISIONS

NO	DATE	DESCRIPTION	BY
A	7/7/04	ADDRESS COMMENTS	TMS
B	7/7/04	ADDED LOTS 23-24, 149-168	TMS
C	7/7/04	REVISED CONDOS & ROADS	MSB
D	7/7/04	REVISED LOTS	MSB
E	7/7/04	ADDED LINES & GROUND	TMS
F	7/7/04	REVISED LOT 23 & ADDED LOTS	TMS
G	8/9/04	LOT RECONFIGURATION	MSB

"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION"

DATE: 6/17/04	SCALE: 1"=100'plt
DESIGNED: BPG	CHECKED: MSB
DRAWN: TMS	APPROVED: MSB

SHEET: 5 OF 7

CAD FILE: 401801S5.AMNED

PROJECT NO: 4018

OPEN SPACE SUMMARY:

TOTAL SITE AREA = 77.03 AC. +/-

MNIMUM OPEN SPACE REQUIRED = 26.96 AC. +/-
(BASED ON 35% OF TOTAL SITE AREA)

MINIMUM UPLAND (ACTIVE) OPEN SPACE REQUIRED = 13.48 AC+/-
(BASED ON 50% OF REQURIED MMINIMUM OPEN SPACE)

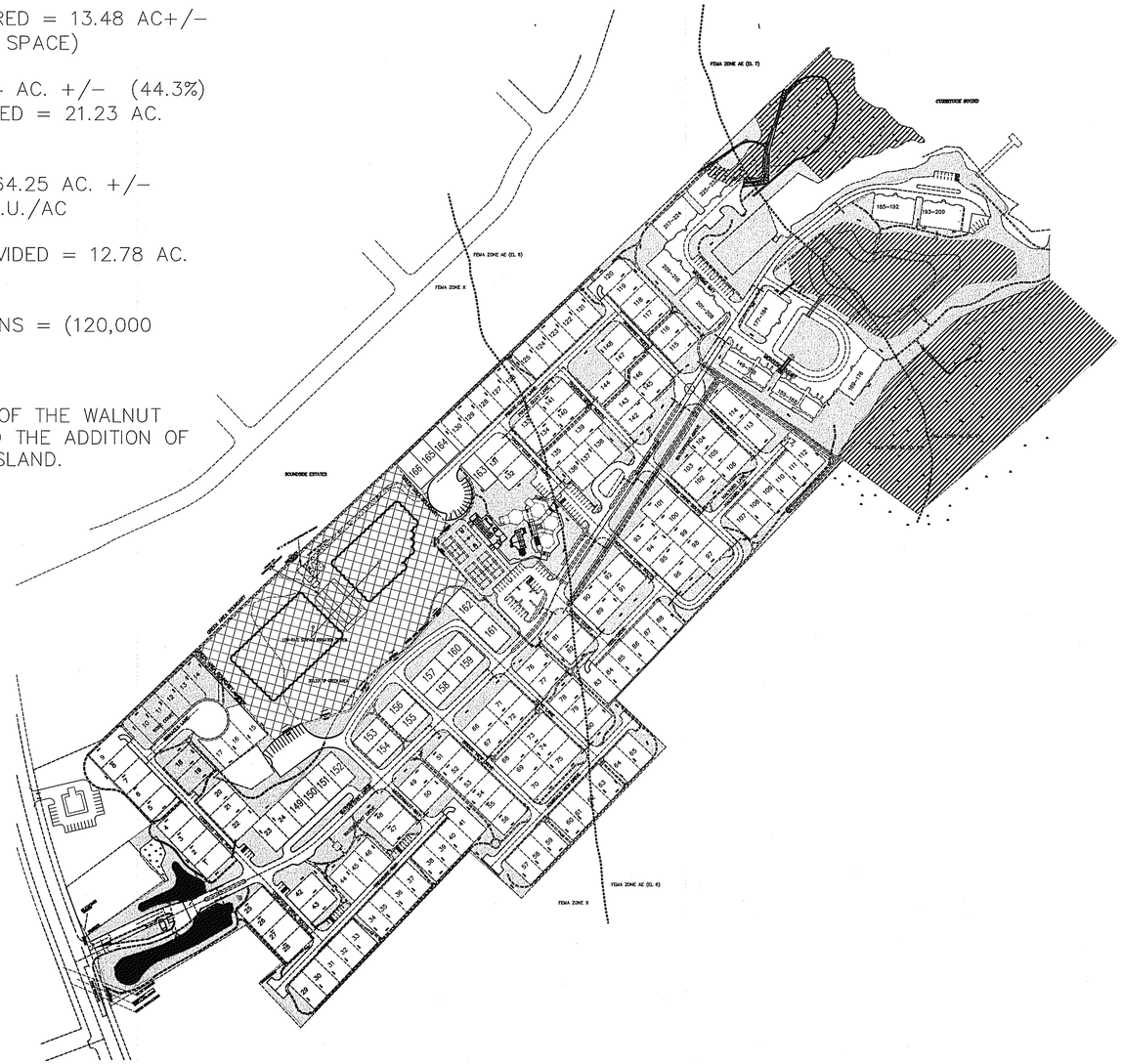
ACTUAL TOTAL OPEN SPACE PROVIDED = 34.14 AC. +/- (44.3%)
ACTUAL UPLAND (ACTIVE) OPEN SPACE PROVIDED = 21.23 AC. +/-

NET DEVELOPABLE AREA = 77.03 - 12.78 = 64.25 AC. +/-
DEVELOPMENT DENSITY = 250/64.25 = 3.89 D.U./AC

ACTUAL PASSIVE (WETLAND) OPEN SPACE PROVIDED = 12.78 AC. +/-

GREEN AREA REQUIRED= 2500 SF/1000 GALLONS = (120,000 GPD)(2.5) = 300,000 SF
GREEN AREA SUPPLIED = 300,331 SF

* CHANGES RESULTED IN THE INCORPORATION OF THE WALNUT ISLAND SANITARY SEWER DISTRICT PARCEL AND THE ADDITION OF THE DAILY WASTEWATER FLOW FROM WALNUT ISLAND.



DENOTES OPEN SPACE

DENOTES ACOE JURISDICTIONAL OPEN SPACE

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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

OPEN SPACE SUMMARY SHEET-AMENDED

REVISIONS

NO.	DATE	DESCRIPTION	BY
A	7/9/05	GREEN SPACE UPDATE PER LOT CHANGE	TMC

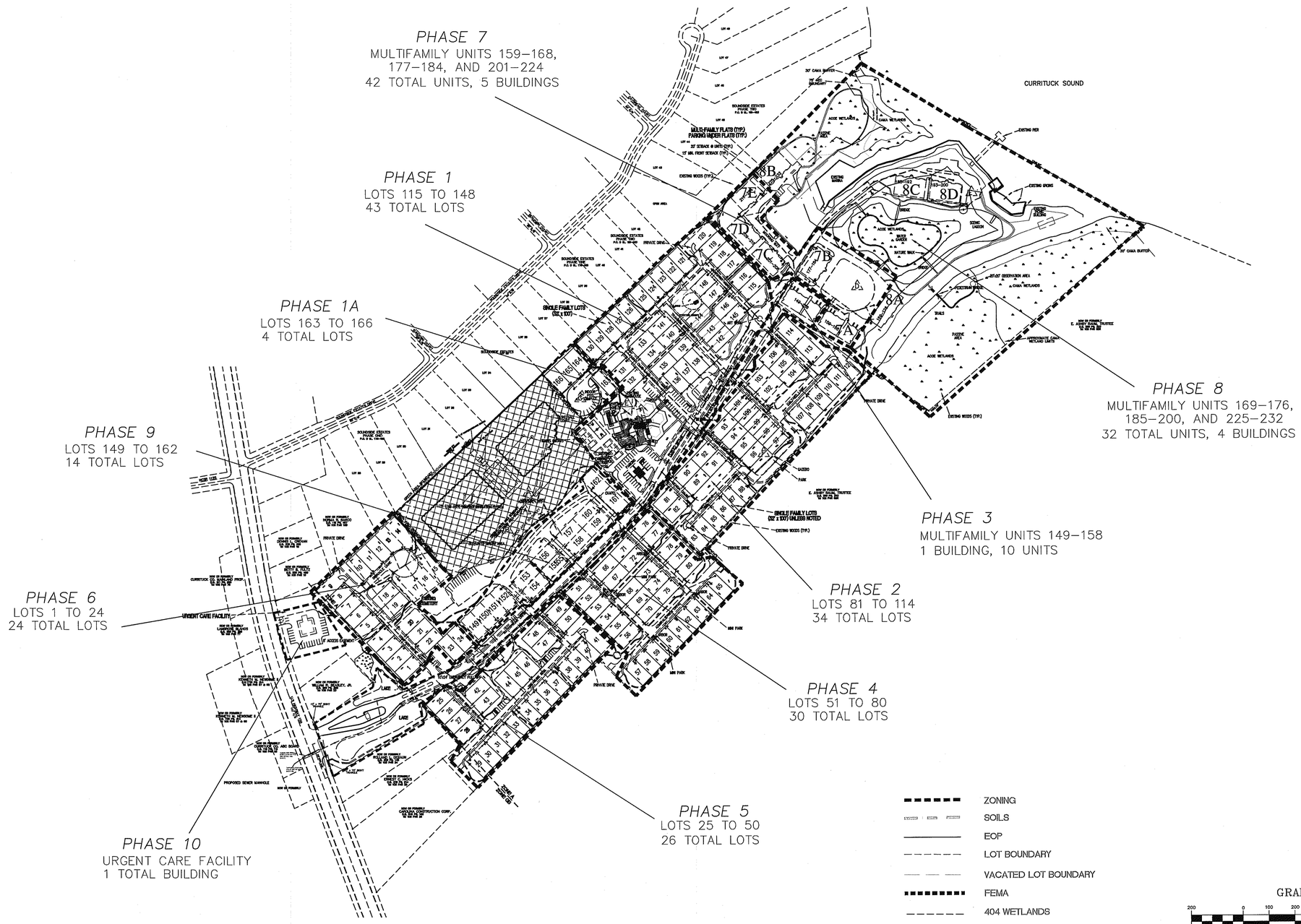
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION."

DATE: 7/18/04	SCALE: 1"=200'
DESIGNED: BPG	CHECKED: TSM
DRAWN: TMS	APPROVED: MSB

SHEET: 6 OF 7

CAD FILE: 401801S6A.AMND

PROJECT NO: 4018



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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
PHASING PLAN SHEET

REVISIONS

NO.	DATE	DESCRIPTION	BY

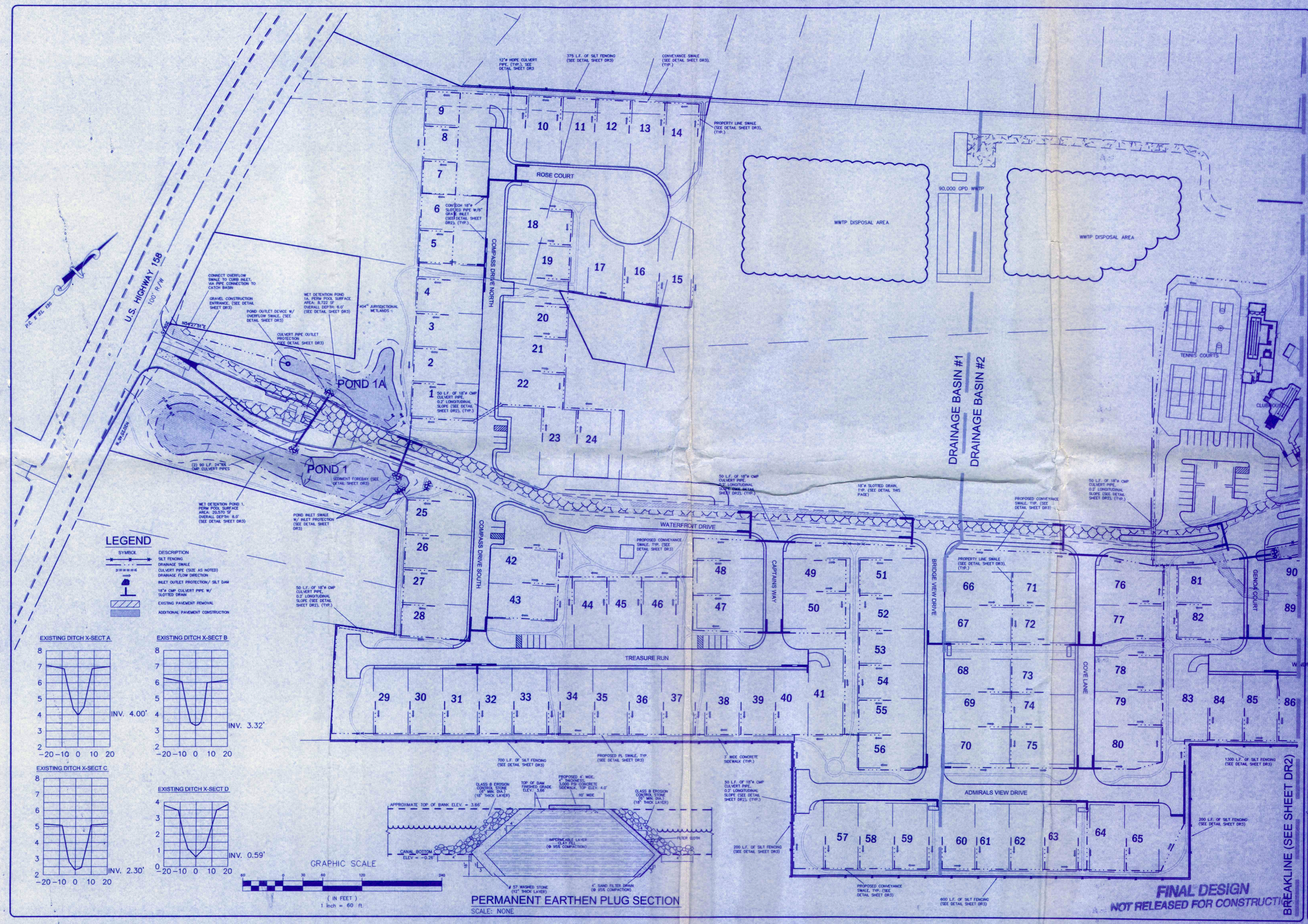
"PRELIMINARY, NOT FOR RECORDATION OR CONSTRUCTION"

DATE: 5/06/05	SCALE: 1"=200'
DESIGNED: BPG	CHECKED: TSM
DRAWN: DMK	APPROVED: MSB

SHEET: 7 OF 7

CAD FILE: 401801S6APHASE

PROJECT NO: 4018



FINAL DESIGN
NOT RELEASED FOR CONSTRUCTION

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29 128

STORMWATER MANAGEMENT

130

131

WATERSIDE VILLAGES

POPLAR BRANCH TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA

92

DRAINAGE INFRASTRUCTURE IMPROVEMENTS

91

88

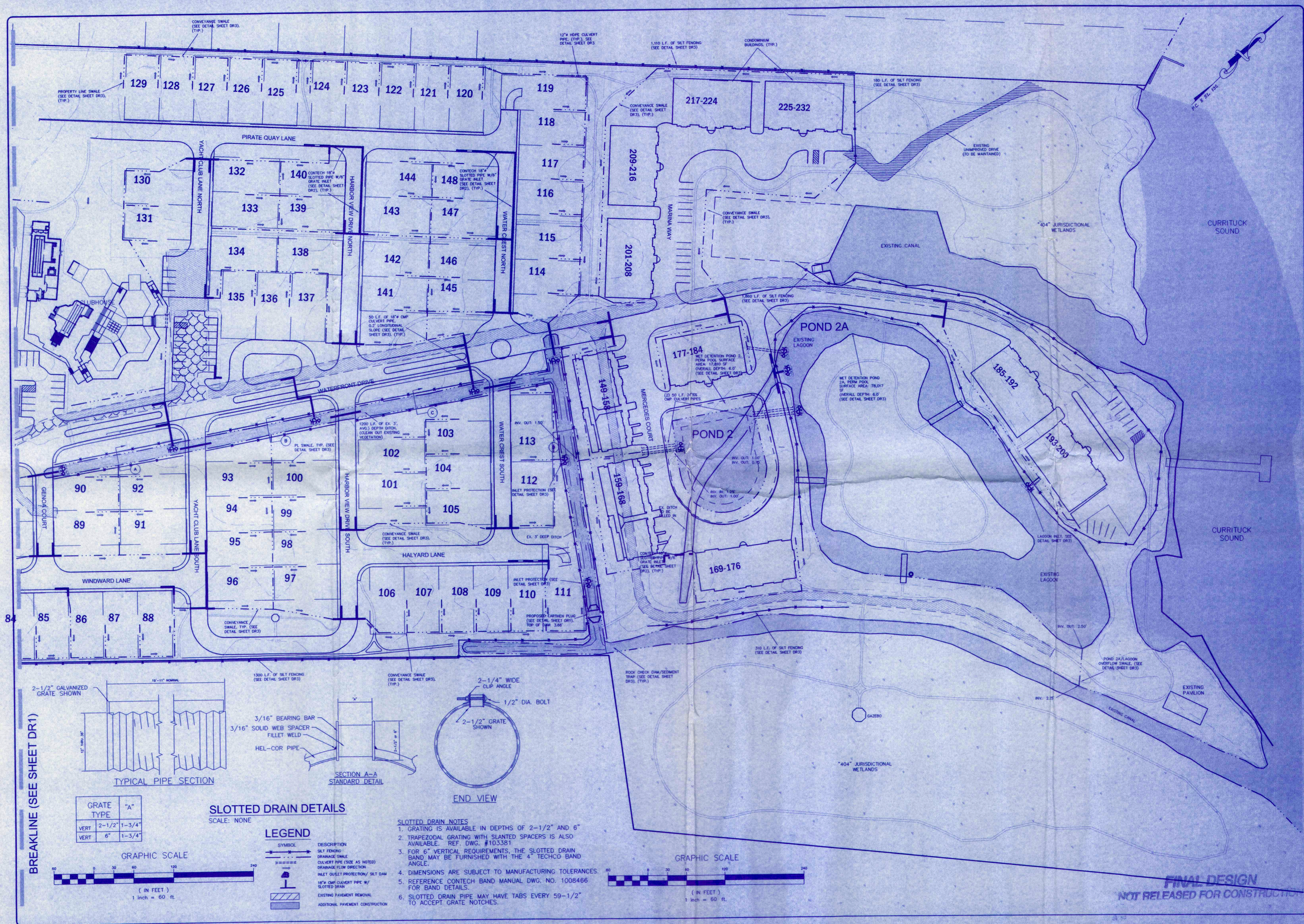
NO.	DATE	BY	REVISIONS DESCRIPTION
1	7-22-04	TMC	ADDRESSED TMC COMMENTS

DATE: 5-4-04	SCALE: 1"=60'
DESIGNED: BPG	CHECKED: MSB
DRAWN: DMR	REVIEWED: MSB

SHEET: DR1 OF 3

CAD FILE: 4018BASE

PROJECT NO: 4018



GRATE TYPE	"A"
VERT 2-1/2"	1-3/4"
VERT 6"	1-3/4"

SLOTTED DRAIN DETAILS

SCALE: NONE

SLOTTED DRAIN NOTES

1. GRATING IS AVAILABLE IN DEPTHS OF 2-1/2" AND 6"
2. TRAPEZODAL GRATING WITH SLANTED SPACERS IS ALSO AVAILABLE. REF. DWG. #103381
3. FOR 6" VERTICAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH THE 4" TECHCO BAND ANGLE.
4. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
5. REFERENCE CONTECH BAND MANUAL DWG. NO. 1008466 FOR BAND DETAILS.
6. SLOTTED DRAIN PIPE MAY HAVE TABS EVERY 59-1/2" TO ACCEPT GRATE NOTCHES.

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Firm License # C-0260
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Fuquay-Varina, North Carolina 27549
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FAX (252) 201-1980
Engineers, Planners, Surveyors and Environmental Specialists

STORMWATER MANAGEMENT

PROJECT: WATERSIDE VILLAGES
POPLAR BRANCH TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA

DRAINAGE INFRASTRUCTURE IMPROVEMENTS

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	7-25-04	AUDIT/SUBD. DWG. COMMENTS	DMR

DATE: 5/4/03
SCALE: 1"=60'
DESIGNED: BPG
CHECKED: MSB
DRAWN: DMR
APPROVED: BPG
SHEET: DR2 OF 3
CAD FILE: 4018BASE
PROJECT NO: 4018

GENERAL PROJECT NOTES:

1. PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK
   POPLAR BRANCH TOWNSHIP, CURRITUCK COUNTY, NORTH CAROLINA
2. DEVELOPER: VCC, LLC
   P.O. BOX 147
   HARBINGER, NC 27941
3. PROJECT DESCRIPTION: HIGH-DENSITY RESIDENTIAL DEVELOPMENT
4. NEAREST RECEIVING STREAM: CURRITUCK SOUND
5. CLASSIFICATION: SC
6. PROJECT AREA TABULATION:

TOTAL PROJECT AREA:	75.62 AC.
POND EXCAVATION AREA:	3.00 AC.
WWTP DISTURBANCE AREA , (W/ ROAD IMPROVEMENTS):	2.50 AC.
R/W DISTURBANCE AREA:	9.15 AC.
RESIDENTIAL LOT GRADING AREA:	14.19 AC.
MISCELLANEOUS DISTURBED AREA :	3.0 AC.
TOTAL DISTURBED AREA :	31.81 AC.

NOTE:
ALL AREAS CALCULATED BY COMPUTING THE DISTURBED ACREAGE WITHIN THE GRADING LIMITS BOUNDARY.

SEDIMENTATION AND EROSION CONTROL NOTES:

A. NARRATIVE AND SITE DATA

The project will consist of the construction of utility, parking and drainage infrastructure improvements to service the proposed WATERSIDE VILLAGES Residential Development / Wastewater Treatment Facility Development that is to be located on the northern boundary, in Poplar Branch Township, Currituck County, North Carolina.

The proposed developmental activities are as follows;
a) Construction of 148) 7,500 s.f.(avg.) single family residential homesites
b) Construction of 10 condominium buildings recreational lake.
c) Construction of a 90,000 gpd wastewater treatment facility and associative infrastructure to service the proposed development.
d) Construction of approximately 9.14 ac. of proposed asphalt access roadway with asphalt ingress/egress drives.
Construction of approximately 0.74 ac. of concrete sidewalks and pathways

Site soils are mainly composed of Conetoe sandy loams & Dragston fine sandy loams. These soils are described as nearly level, moderately to poorly drained surface soils (as per the Currituck County Soil Survey Manual dated 1992). The soils typically found on this tract are sandy loams generally located on low ridges and drainageways along the Currituck & Albemarle Sounds. The seasonal high water table is estimated to be located approximately 1.5 to 2.0 feet below the existing ground surface. (this based on water table conditions observed from field investigations).

NOTE:
MATERIAL EXCAVATED FROM THE PROPOSED PONDS/LAGOON WILL BE DISPERSED ENTIRELY ON-SITE FOR THE SOLE PURPOSE OF INCREASING THE BASE ELEVATIONS OF THE PROPOSED RESIDENTIAL LOTS.

C. STABILIZATION AND LANDSCAPING: FINAL SLOPES IN ALL GRADED AREAS SHALL NOT EXCEED 3:1 ALL SEEDING AND SODDING SHALL BE IN PLACE WITHIN 30 DAYS OF LAND DISTURBANCE AND/OR PROJECT COMPLETION.
   1. FERTILIZER: APPLY 3,000 LB/ACRE GROUND AGRICULTURE LIMESTONE AND 5-- LB./ACRE 10-10-10 FERTILZER. TOP DRESS WITH 50 LB./ACRE NITROGEN
   2. MULCH: APPLY 4,000 LB./ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL
   3. SEEDING:
      a. TEMPORARY VEGETATION: IF TEMPORARY SEEDING OCCURS DURING WINTER, EARLY SPRING, OR FALL, APPLY 120 LB./ ACRE RYE GRAIN. IF TEMPORARY SEEDING OCCURS DURING SUMMER, APPLY 40 LB./ACRE GERMAN MILLET/BERMUDA MIXTURE. TEMPORARY VEGETATION MUST BE APPLIED WITHIN 30 DAYS OF LAND DISTURBING ACTIVITY.
      b. PERMANENT VEGETATION: APPLY COASTAL MIX CONSISTING OF 50 LB./PENSACOLA BAHIAGRASS, AND 10 LB./ACRE GERMAN MILLET. APPLY PERMANENT SEEDING BETWEEN APRIL 1, AND JULY 15. REFERTILIZE THE FOLLOWING APRIL WITH 50 LB./ACRE NITROGEN.
      c. SODDING: (IF REQUIRED) PERMANENT VEGETATION - SELECT COMPATIBLE SPECIES TO PERMANENT SEEDED TYPE; INSTALL WITH LONGEST DIMENSION PERPENDICULAR TO THE SLOPE AND STAPLE IF NECESSARY; ROLL SOD IMMEDIATELY AND WATER TO 4"

D. MAINTENANCE:
   1. CHECK TEMPORARY EROSION CONTROL DEVICES AFTER EACH SIGNIFICANT RAINFALL AND/OR BI-WEEKLY. REPAIR AND REMOVE SEDIMENT BUILD-UP AS NECESSARY.
   2. CHECK STABILIZED AREAS AFTER EACH SIGNIFICANT RAINFALL EVENT. RILLS AND GULLIES MUST BE REPAIRS, RE-SEEDED AND MULCHED AS SOON AS POSSIBLE. TEMPORARY DIVERSIONS MAY BE NECESSARY UNTIL NEW PLANTS DEVELOP.
   BARE SPOTS MUST BE RE-LIMED, FERTILIZED, MULCHED AND RESEEDED AS PROMPTLY AS POSSIBLE. YEARLY REFERTILIZATION MAY BE REQUIRED TO MAINTAIN PRODUCTIVE STANDS.
   3. PERFORM ROUTINE MAINTENANCE (INCLUDING MOWING AND CLEANING OF ROADWAY SWALE) ONCE FINAL STABILIZATION HAS OCCURRED.

E. NOTE:
THE INTENT OF THIS PLAN IS TO:
-- MINIMIZE THE EXTENT AND DURATION OF DISTURBED SOIL EXPOSURE.
-- PROTECT DISTURBED AREAS FROM STORMWATER RUNOFF.
-- STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
-- MAINTAIN LOW RUNOFF VELOCITIES (AND PROTECT AREAS WHERE THIS IS NOT POSSIBLE).
-- RETAIN SEDIMENT ON SITE WITH SILT FENCING AND SILT DAMS.

THIS PLAN REPRESENTS MINIMUM SEDIMENTATION AND EROSION CONTROL MEASURES. ADDITIONAL MEASURES AND DEVICES MAY BE REQUIRED AS CONSTRUCTION PROCEEDS.

CONSTRUCTION SEQUENCE SCHEDULE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
Construction Access– Construction entrance, construction routes, equipment parking areas	First land-disturbing activity–Stabilize bare areas immediately with gravel & temporary vegetation as construction takes place.
Sediment Traps & Barriers Basin traps, sediment fences, & outlet protection	Install principal basins after construction site is accessed. Install additional traps and barriers as needed during grading.
Runoff Control– Diversions, perimeter dikes, water bars, and outlet protection	Install key practices after principal sediments traps and before land grading. Install additional runoff-control conveyance measures during grading.
Runoff Conveyance System– Stabiles streambanks, storm drains, channels, inlet & outlet protection, slope drains	Where necessary, stabilize streambanks as early as possible. Install principal runoff conveyance system with runoff-control measures. Install remainder of system after grading.
Land Clearing & Grading– Site preparation– cutting, filling & grading, sediment traps, barriers, diversions, drains, surface roughening	Begin major clearing and grading after principal & key runoff-control measures area installed. Clear borrow & disposal areas as needed. Install additional control measures as grading progresses. Mark trees & buffer areas for preservation.
Surface Stabilization– Temporary & permanent seeding, mulching, sodding, riprap.	Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or complete.
Building Construction– Buildings, utilities, paving.	Install necessary erosion & sedimentation control practices as work takes place.
Landscaping & Final Stabilization– Topsoiling, trees & shrubs, permanent seeding, mulching, sodding, riprap	Stabilize all open areas, including borrow & spoil areas. Remove & stabilize all temporary control measures.

LAND GRADING CONSTRUCTION SPECIFICATIONS

1. Construct & maintain all erosion & sedimentation control practices & measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.

4. Clear & grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of fills.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.

7. Do not incorporate frozen material or soft, mucky, or highly compressible materials into fill slopes.

8. Do not place fill on a frozen foundation, due to possible subsidence and slippage.

9. Keep diversions and other water conveyance measures free of sediment during all phases of development.

10. Handle seeps or springs encountered during construction in accordance with approved methods.

11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 30 working days or longer.

12. Provide adequate protection from erosion for all topsoil stockpiles, borrow areas, and spoil areas.

MAINTENANCE
Periodically check all graded areas & the supporting erosion & sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversions and other water-disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small-eroded areas before they become significant gullies is an essential part of an effective erosion & sedimentation control plan.

PERMANENT SEEDING

The purpose of permanent seeding is to reduce erosion and decrease sediment yield from disturbed areas, and to permanently stabilize such areas in a manner that is economical, adapts to site conditions, and allows selection of the most appropriate plant materials. These areas must be seeded or planted within 30 working days or 120 calender days after final grade is reached, unless temporary stabilization is applied.

PERMANENT SEEDING SPECIFICATIONS
Seeding Recommendations for Summer
SEEDING DATES– April to July
SEEDING MIXTURE

Species	Rate
Common bermudagrass	10/1,000 sf (sprigs) 1–2 lb/1,000 sf (seed)

SEEDING NOTES–
1. Sprig or sod. Moisture is essential during initial establishment. Sod must be kept watered for 2–3weeks, but can be planted earlier or later than sprigs.

Soil Amendments–
Apply lime and fertilizer according to soil tests or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10–10–10 fertilizer, or 50 lb/acre nitrogen from turf-type slow-release fertilizer. Add 25–50 lb/acre nitrogen at 2–3 week intervals through midsummer.

Sprigging–
Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.

Furrows should be 4–6 inches deep and 2 feet apart. Place sprigs about 2 ft. apart in a row with one end at or above ground level.

Broadcast at rates shown above, and press sprigs into the top 1/2–2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.

Mulch–
Do not mulch.

Maintenance–
Water as needed and mow to 3/4 to 1–inch height. Topdress with 40 lb/acre nitrogen in April, 50 lb in May, 50 lb in June, 50 lb in July, and 25 lb in August.

TEMPORARY SEEDING

The purpose of temporary seeding is to temporarily stabilize denuded areas that will not be brought to final grade for a period of more than 30 working days

TEMPORARY SEEDING SPECIFICATIONS
Seeding Recommendations for Late Winter & Early Spring
SEEDING DATES– December 1 to April 15
SEEDING MIXTURE

Species	Rate (lb/acre)
Rye	120
Annual Lespedeza (Kobe)	50

*Omit annual lespedeza when duration of temporary cover is not to extend beyond June

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, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Summer
SEEDING DATES– April 15 to August 15
SEEDING MIXTURE

Species	Rate (lb/acre)
German Millet	40

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, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Fall
SEEDING DATES– August 15 to December 30
SEEDING MIXTURE

Species	Rate (lb/acre)
Rye	120

Soil Amendments–
Follow recommendations of 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 ld/acre Kobe lespedeza in late February or Early March.

SODDING

The purpose of permanent seeding is to prevent erosion and damage from sediment and runoff by stabilizing the soil surface with permanent vegetationfor the purpose of:
–the provision of immediate vegetative cover in critical areas
–to stabilize disturbed areas with a suitable plant material that cannot be established by seed.
–to stabilize drainageways & channels and other areas of concentrated flow where flow velocities will not exceed that specified grass lining.

SODDING SPECIFICATIONS
Sod Quality
–Sod should be machine cut at a uniform depth of 1/2–2 inches
–Sod should not have been cut in excessively wet or dry weather.
–Sections of sod should be standard size as determined by the supplier, uniform, and untorn.
–Sections of sod should be strong enough to support their own weight and retain their size and shape when lifted by one end.
–Harvest, delivery, and installation of sod should take place within a period of 36 hours.

Soil Amendments–
Apply lime and fertilizer according to soil tests or apply 2 tons/acre of pulverized agricultural limestone and 1,000 lb/acre 10–10–10 fertilizer in the fall, or 5–10–10 in spring.

Prior to laying sod, clear the soil surface of trash, debris, roots, branches, stones, and clods larger than 2 inches in diameter. Fill or level low spots in order to avoid standing water. Rake or harrow the site to achieve a smooth and level final grade. Complete soil preparation by rolling or cultipacking to firm soil.

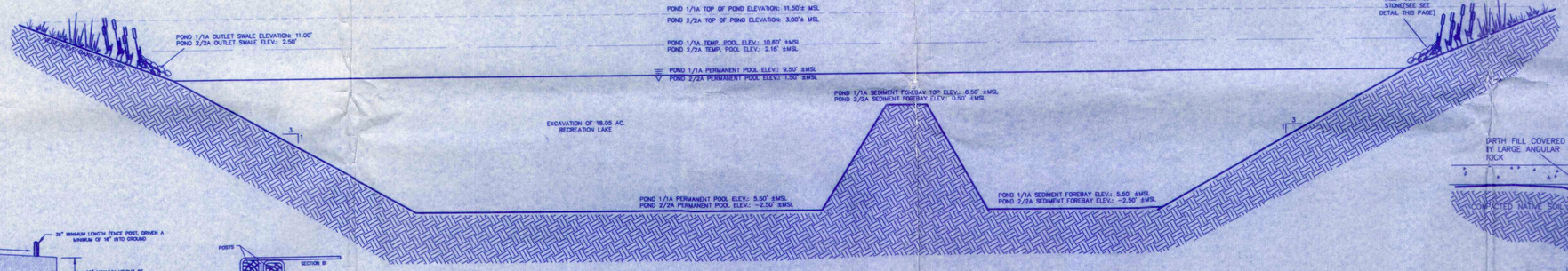
Sod Installation–
1. Moistening the sod after it is unrolled helps maintain viability. Store in shade during installation.
2. Rake the soil surface to break the crust just before laying sod. During the summer, lightly irrigate the soil, immediately before laying sod to cool the soil and reduce root burning & dieback.
3. Do not sod on grave, frozen soils, or soils that have been treated recently with sterilants or herbicides.
4. Lay the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other. Stagger strips in a brick–like pattern. Be sure that the sod is not stretched or overlapped and that all joints are butted tightly to prevent voids. Use a knife or sharp spade to trim and fit irregular shaped areas.
5. Install strips of sod with their longest dimension perpindicular to the slope. On slopes of 3:1 or greater, or wherever erosion may be a problem, secure sod with pegs or staples.
6. As sodding of clearly defined areas is completed, roll sod to provide good contact between roots and soil.
7. After rolling, irrigate until the soil is wet 4 inches below the sod.
8. Keep sodded areas moist to a depth of 4 inches until the grass takes root. This can be determined by tugging on the sod.
9. Mowing should not be attempted until the sod is firmly rooted, usually 2–3 weeks.

Sodded Waterways
1. Prepare soil as described above.
2. Lay sod strips perpindicular to the direction of flow, with the lateral joints staggered in a brick–like pattern. Butt edges tightly together.

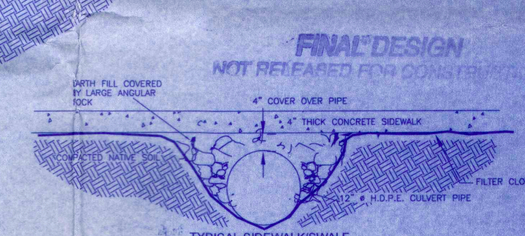
Maintenance–
After the first week, water as necessary to maintain adequate moisture in the root zone & prevent dormancy of the sod.

Do not remove more than one–third of the shoot in any one mowing. Grass height should be maintained between 2–3 inches unless otherwise specified.

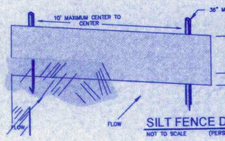
After first growing season, established sod requires fertilization, and may also require lime. Follow soil test recommendations.



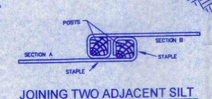
TYPICAL POND CROSS SECTION
NOT TO SCALE



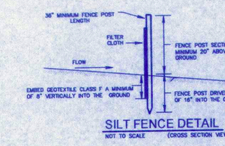
TYPICAL SIDEWALK/SWALE CROSSING SECTION
NOT TO SCALE (LOCATIONS AS DENOTED ON PLAN)



SILT FENCE DETAIL
NOT TO SCALE (PERSPECTIVE VIEW)



JOINING TWO ADJACENT SILT FENCE SECTIONS
NOT TO SCALE (TOP VIEW)



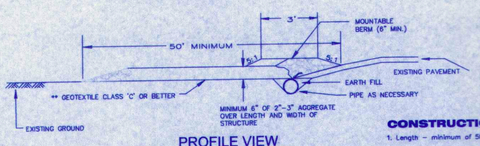
SILT FENCE DETAIL
NOT TO SCALE (CROSS SECTION VIEW)

Construction Specifications

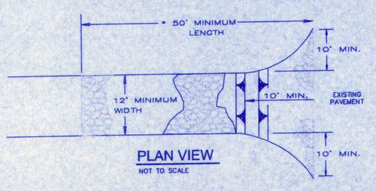
1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) oak, or 1 1/4" diameter (minimum) round and shall be of good quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75 % (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. SFI Fence shall be inspected after each rainfall event and maintained when bulging occur or when sediment accumulation reached 30% of the fabric height.



PROFILE VIEW
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. Length – minimum of 50' (*30' for single residence lot).

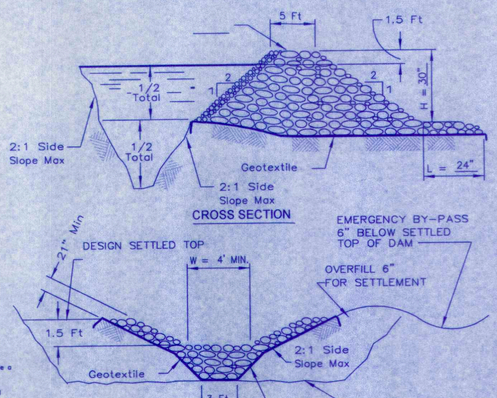
2. Width – 12' minimum, should be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over its length and width of the entrance.

5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



STONE SECTION

NOTES:
1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The stone fill shall be constructed using CLASS B EROSION CONTROL STONE. A 1'layer of NCDOT #57 stone should be placed on the inside face to reduce the flow rate.
3. The geotextile shall meet the geotextile CLASS F requirements

ROCK CHECK DAM/SEDIMENT TRAP DETAIL
NOT TO SCALE (LOCATIONS AS DENOTED ON PLAN)

CONSTRUCTION SPECIFICATIONS:

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 DIPOSAL 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 THE SOIL.
– PLACE THE FILTER FABRIC BETWEEN THE RIPRAP AND SOIL. EXTEND THE FABRIC ACROSS THE SPILLWAY FOUNDATION AND SIDES TO THE TOP OF THE DAM OR:
– EXCAVATE THE KEYWAY TRENCH ALONG THE CENTERLINE OF THE SPILLWAY FOUNDATION EXTENDING UP THE SIDES TO THE HEIGHT OF THE DAM. THE TRENCH SHOULD BE AT LEAST 2 FT. DEEP AND 2 FT. 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 FT. AND A MAXIMUM SIDE SLOPE 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 OVERFILLED 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.

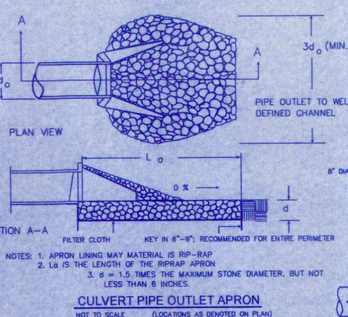
8. MATERIAL USED IN THE STONE SECTION SHOULD BE A WELL-GRADED MIXTURE OF STONE WITH A d50 SIZE OF 9 INCHES(CLASS B EROSION CONTROL STONE IS RECOMMENDED) AND A MAXIMUM STONE SIZE OF 14 INCHES. THE STONE MAY BE MACHINE PLACED AND THE SMALLER STONES WORKED INTO THE VOIDS OF THE LARGER STONES. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER-RESISTANT.

9. 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 OUTLET STREAM.

10. DIRECT EMERGENCY BYPASS TO NATURAL, STABLE AREAS. LOCATE BYPASS SO THAT FLOW WILL NOT DAMAGE THE EMBANKMENT.

11. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION.

12. SHOW THE DISTANCE FROM THE TOP OF THE SPILLWAY TO THE SEDIMENT CLEANOUT LEVELL (ONE-HALF THE DESIGN DEPTH) ON THE PLANS AND MARK IT IN THE FIELD.



NOTES: 1. APRON LINING MAY MATERIAL IS RIP-RAP
2. La IS THE LENGTH OF THE RIPRAP APRON
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

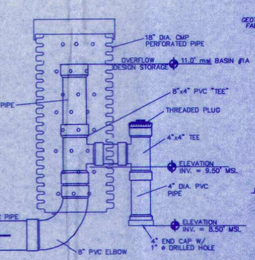
CULVERT PIPE OUTLET APRON
NOT TO SCALE (LOCATIONS AS DENOTED ON PLAN)

CONSTRUCTION SPECIFICATIONS

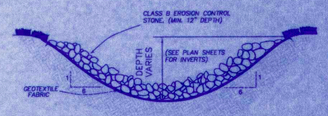
1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. FILL AND COMPACT, TO NATURAL GROUND LEVEL OR ABOVE, ALL DITCHES AND GULLIES THAT WILL BE CROSSED BY MACHINERY.
2. DISK THE BASE OF THE DIKE BEFORE PLACING FILL.
3. ENSURE THAT THE CONSTRUCTED CROSS SECTION MEETS ALL OF THE DESIGN REQUIREMENTS.
4. COMPACT THE DIKE BY TRACKING WITH CONSTRUCTION EQUIPMENT. TO USE THE MOST
5. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT AFTER IT HAS BEEN COMPACTED.
6. LEAVE SUFFICIENT AREA ALONG THE DIKE TO PERMIT MACHINE RE-GRADING AND CLEAN-OUT.
7. IMMEDIATELY SEED AND MULCH THE DIKE AFTER ITS CONSTRUCTION AND STABILIZE THE FLOW PORTION IN ACCORDANCE WITH DESIGN REQUIREMENTS.

MAINTENANCE

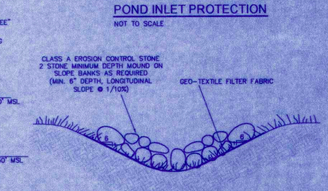
PERIODICALLY INSPECT THE TEMPORARY DIVERSIONS FOR WEAR AND AFTER EVERY HEAVY RAINFALL FOR EROSION DAMAGE IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIKE. CHECK OUTLET AREAS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN PERMANENT ROAD DRAINAGE IS ESTABLISHED AND THE AREA ABOVE THE TEMPORARY DIVERSIONS IS PERMANENTLY STABILIZED, REMOVE THE DIKE AND FILL THE CHANNEL TO BLEND WITH THE NATURAL GROUND, AND APPROPRIATELY STABILIZE THE DISTURBED AREAS.



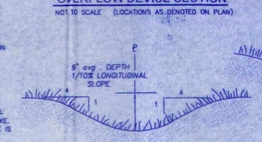
POND 1A DRAWDOWN OVERFLOW DEVICE SECTION
NOT TO SCALE (LOCATIONS AS DENOTED ON PLAN)



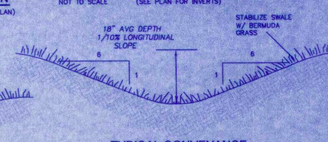
POND INLET PROTECTION
NOT TO SCALE



POND/LAGOON OVERFLOW SWALE SECTION
NOT TO SCALE (SEE PLAN FOR INVERTS)



TYPICAL P SWALE
NOT TO SCALE



TYPICAL CONVEYANCE SWALE SECTION
NOT TO SCALE (LOCATIONS AS DENOTED ON PLAN)

BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists
Firm Licenses: Engineering C-0205 Surveying C-0205
Firm Licenses: Engineering C-0205 Surveying C-0205

STORMWATER MANAGEMENT
E & S CONTROL DETAILS

WATERSIDE VILLAGES
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
DRAINAGE INFRASTRUCTURE IMPROVEMENTS

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	7-15-04	DMR	ADDRESSED DWQ DRAINAGE COMMENTS

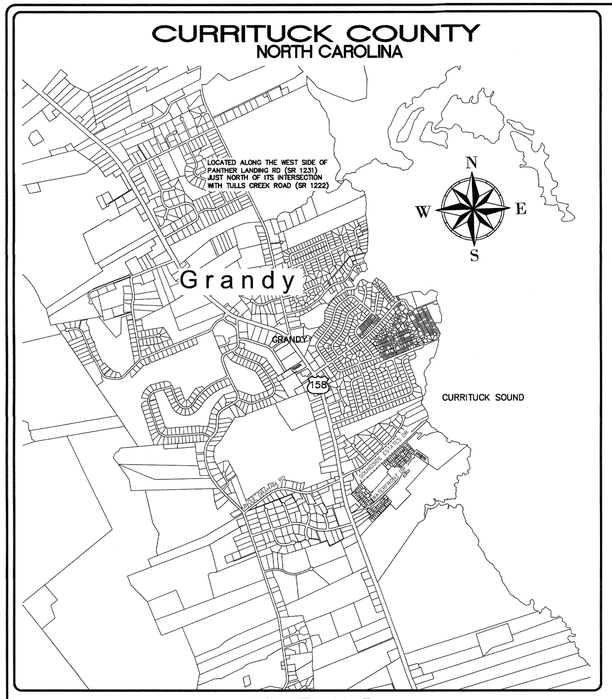
DATE: 5-4-04
SCALE: AS NOTED
DESIGNED: BPG
DRAWN: DMR
REVIEWED: DMR
APPROVED: MSB
SHEET: DR3 OF 3
CAD FILE: 401800DR3
PROJECT NO. 4018

CONSTRUCTION DRAWINGS FOR

WATERSIDE VILLAGES OF CURRITUCK

PHASES 2 & 4

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA



VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES:

1. PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK – PHASES 2 & 4
2. OWNER/APPLICANT: WSV HOLDINGS, LLC
   P.O. BOX 90
   KILL DEVIL HILLS, NC 27948
3. PROPERTY DATA:
   PARCEL ID#: 0108-000-022J-0000
   PRIMARY ADDRESS: WATERFRONT DRIVE, GRANDY, NC
   RECORDED REFERENCES: D.B. 1316, PG. 208; P.C. M, SL. 153
   PROPERTY ZONING: AG – SINGLE FAMILY MAINLAND
4. F.I.R.M. DATA:
   ZONES X, SHADED X AND AE (4') PER F.E.M.A. F.I.R.M. MAP NUMBER 3721803200 K, EFFECTIVE DATE DECEMBER 21, 2018. USE OF LAND WITHIN A FLOODWAY OR FLOOD PLAIN IS SUBSTANTIALLY RESTRICTED BY CHAPTER 7 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.
5. EXISTING CONDITION INFORMATION BASED ON A COMBINATION OF THE FOLLOWING:
   - FIELD SURVEY DATA OBTAINED BY BISSELL PROFESSIONAL GROUP
   - FIELD TOPOGRAPHIC SURVEY DATA BY BISSELL PROFESSIONAL GROUP
   - ELEVATIONS ARE REFERENCED TO NAVD 1988 VERTICAL DATUM.
7. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
8. A 10' EASEMENT ALONG REAR AND SIDE PROPERTY LINES AND 15' EASEMENT ALONG FRONT AND CORNER SIDE PROPERTY LINES SHALL BE ESTABLISHED FOR INSTALLATION AND MAINTENANCE OF UTILITIES AND DRAINAGE.
9. A 25' EASEMENT ALONG FRONT AND CORNER SIDE PROPERTY LINES SHALL BE ESTABLISHED FOR PLANTING AND MAINTENANCE OF STREET TREES.
10. A NON-EXCLUSIVE DRAINAGE EASEMENT SHALL BE DEDICATED ACROSS ALL OPEN SPACE AREAS. A 25' DRAINAGE EASEMENT SHALL BE DEDICATED FROM THE TOP OF BANK OF ALL DITCHES DRAINING 5 OR MORE ACRES, WHICH MAY EXTEND BEYOND DEDICATED OPEN SPACE AREAS ONTO SOME LOTS, AS SHOWN.
11. PROPOSED DWELLINGS SHALL NOT BE LARGER THAN 4,800 SQ.FT. AMD/OR GREATER THAN TWO STORES IN ORDER TO COMPLY WITH ISO GUIDELINES.

DEVELOPMENT NOTES:

1. DEVELOPMENT AREA SUMMARY:

PHASE AREA:	12.67 AC±. (INCL EX LOTS 92 & 93)
LOT AREA:	7.90 AC.
R/W AREA:	1.90 AC.
COMMON AREA:	2.87 AC.
# OF PROPOSED LOTS:	64
MINIMUM LOT AREA:	5,200 SQ. FT.

2. ROADWAY SUMMARY:

PROPOSED RIGHT-OF-WAY WIDTH:	30 FT.
PROPOSED PAVED ROADWAY WIDTH:	26 FT. (BOC TO BOC)
TOTAL LINEAR FEET OF ROADWAY:	2,960 L.F.±

3. TOTAL PROPOSED DISTURBED AREA: 14.0 AC.

THE FOLLOWING PERMITS ARE REQUIRED PRIOR TO PROJECT CONSTRUCTION:

PERMIT	AGENCY	REFERENCE NUMBER	DATE OF ISSUANCE
SEDIMENTATION AND EROSION CONTROL PERMIT	N.C.D.E.Q. – DIVISION OF LAND RESOURCES		
STORMWATER MANAGEMENT HIGH DENSITY PERMIT	N.C.D.E.Q – DIVISION OF LAND RESOURCES	SW7040511	3/9/2018
WATERLINE EXTENSION AUTHORIZATION TO CONSTRUCT	N.C.D.E.Q – PUBLIC WATER SUPPLY	SERIAL NO. 04-00519	8/4/2004
CURRITUCK COUNTY SPECIAL USE PERMIT	CURRITUCK COUNTY BOARD OF COMMISSIONERS		10/5/2004
WASTEWATER COLLECTION FAST TRACT PERMIT	NCDEQ – DIVISION OF WATER RESOURCES	WQ0024044	6/24/2004

STORMWATER CERTIFICATE

I, _____, OWNER/AGENT HEREBY CERTIFY THE INFORMATION INCLUDED ON THIS AND ATTACHED PAGES IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

ON THE PLAN ENTITLED, WATERSIDE VILLAGES AT CURRITUCK CONSTRUCTION DRAWINGS FOR PHASES 2 & 4 – GRADING, DRAINAGE AND EROSION CONTROL PLAN, STORMWATER DRAINAGE IMPROVEMENTS SHALL BE INSTALLED ACCORDING TO THESE PLANS AND SPECIFICATIONS AND APPROVED BY CURRITUCK COUNTY. YEARLY INSPECTIONS ARE REQUIRED AS PART OF THE STORMWATER PLAN. THE OWNER IS RESPONSIBLE FOR ALL MAINTENANCE REQUIRED. CURRITUCK COUNTY ASSUMES NO RESPONSIBILITY FOR THE DESIGN, MAINTENANCE, OR PERFORMANCE OF THE STORMWATER IMPROVEMENTS.

_____ DATE

_____ OWNER/AGENT

North Carolina One-Call Center Inc.

811 Know what's below Call before you dig.

FINAL DESIGN
NOT RELEASED FOR CONSTRUCTION

SURVEY LEGEND

SCM	SET CONCRETE MONUMENT
ECM	EXISTING CONCRETE MONUMENT
SIR	SET IRON ROD
EIR	EXISTING IRON ROD
EIP	EXISTING IRON PIPE
CP	CALCULATED POINT
M.B.L.	MAXIMUM BUILDING LIMIT
N.T.S.	NOT TO SCALE
P.C.	PLAT CABINET
D.B.	DEED BOOK
SL.	SLIDE
SF	SQUARE FEET
AC	ACRES

LEGEND

	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	ADJOINING PROPERTY LINE
	EXISTING DITCH CENTERLINE
	EXISTING/PROP DITCH TOP OF BANK
	PROPOSED SWALE W/ FLOW ARROW
	PROPOSED SWALE HIGH POINT
	EXISTING DITCH TO BE FILLED
	EXISTING WETLANDS
	EXISTING 404 BOUNDARY
	30' UNDISTURBED BUFFER (COUNTY)
6	EXISTING GRADE CONTOUR
6	PROPOSED GRADE CONTOUR
•0.00	PROPOSED SPOT GRADE
	EXISTING CULVERT
	PROPOSED CULVERT
	PROPOSED SIDEWALK

EROSION CONTROL LEGEND

	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED SILT FENCE
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED TEMPORARY CHECK DAM

UTILITY LEGEND

12WL 12WL	EXISTING WATER LINE
WL WL	PROPOSED WATER LINE (SIZE AS NOTED)
	PROPOSED FIRE HYDRANT ASSEMBLY
	PROPOSED WATER SERVICE
	PROPOSED VALVE
	PROPOSED BLOW-OFF ASSEMBLY

PROFILE LEGEND

	EXISTING GRADE @ ROAD C/L
	PROPOSED GRADE @ ROAD C/L
WL WL	PROPOSED WATER LINE (SIZE AS NOTED)
	PROPOSED HYDRANT ASSEMBLY
	PROPOSED GATE VALVE

NOTE:
EXISTING SITE INFORMATION DESCRIBED HEREON IS BELIEVED TO BE ACCURATE, HOWEVER, BPG INC. MAKES NO WARRANTY AS TO THE ACCURACY. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THIS INFORMATION BEFORE RELYING ON IT. THE CONTENT OF THESE DOCUMENTS MAY ALSO INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. IF SUCH CONDITIONS EXIST, THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER PRIOR TO PROCEEDING WITH THE SCHEDULED WORK AND MAY CONTINUE AFTER AN AUTHORIZATION TO PROCEED HAS BEEN GRANTED.

BISSELL PROFESSIONAL GROUP
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

COVER SHEET, DEVELOPMENT NOTES & SITE LOCATION

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042639 ENGINEER M. KLEBITZ

DATE: 9-26-22	SCALE: N/A
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 1 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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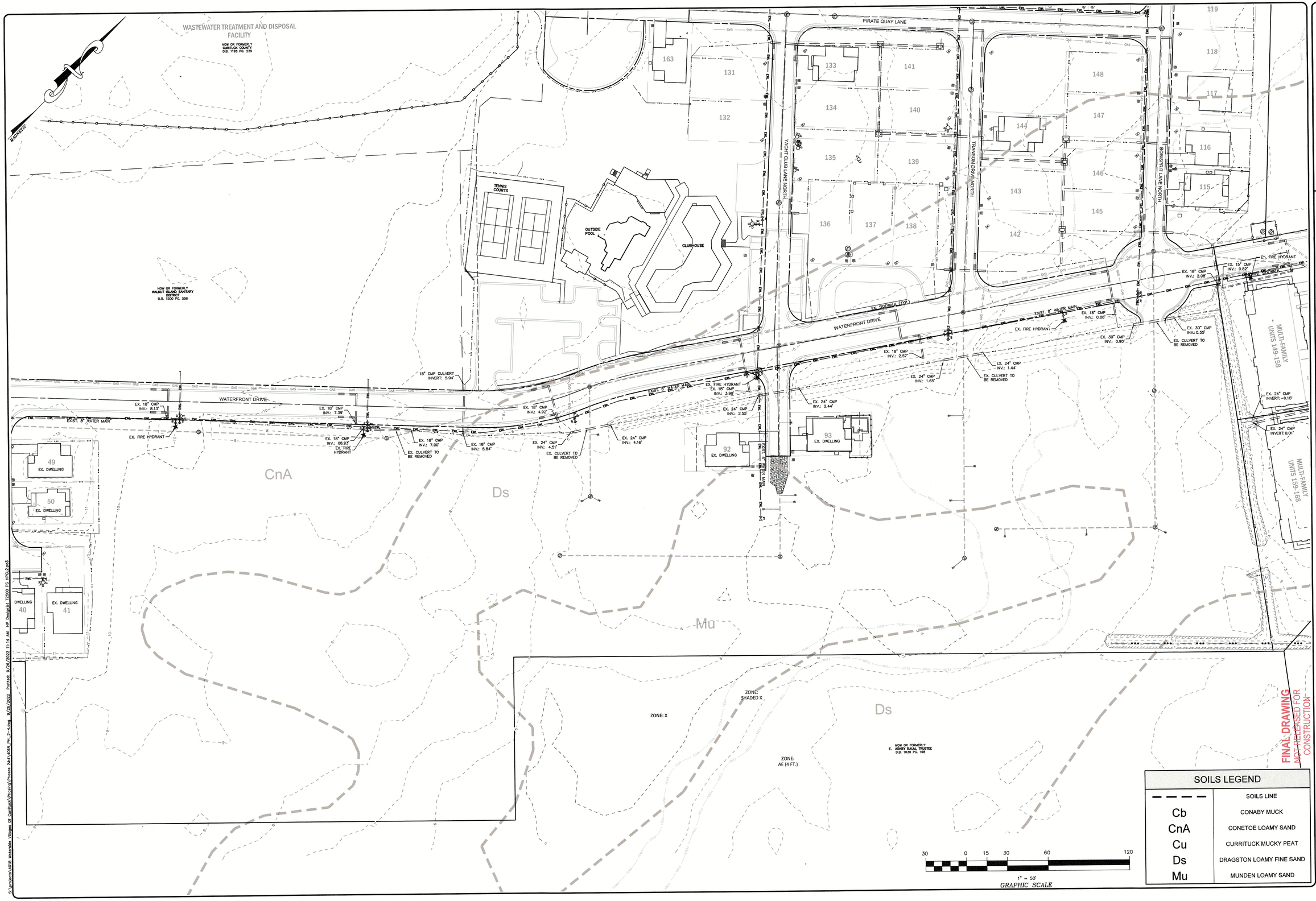

SOILS LEGEND

— — — —	SOILS LINE
Cb	CONABY MUCK
CnA	CONETOE LOAMY SAND
Cu	CURRITUCK MUCKY PEAT
Ds	DRAGSTON LOAMY FINE SAND
Mu	MUNDEN LOAMY SAND

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EXISTING FEATURES MAP AND DEMOLITION PLAN

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042639 ENGINEER DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 50'
DESIGNED: BPG	CHECKED: MSB
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SHEET: 2 OF 23	
CAD FILE: 4018_PH_2-4	
PROJECT NO: 4018	

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DEVELOPMENT OVERVIEW PLAN

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO	DATE	DESCRIPTION	BY

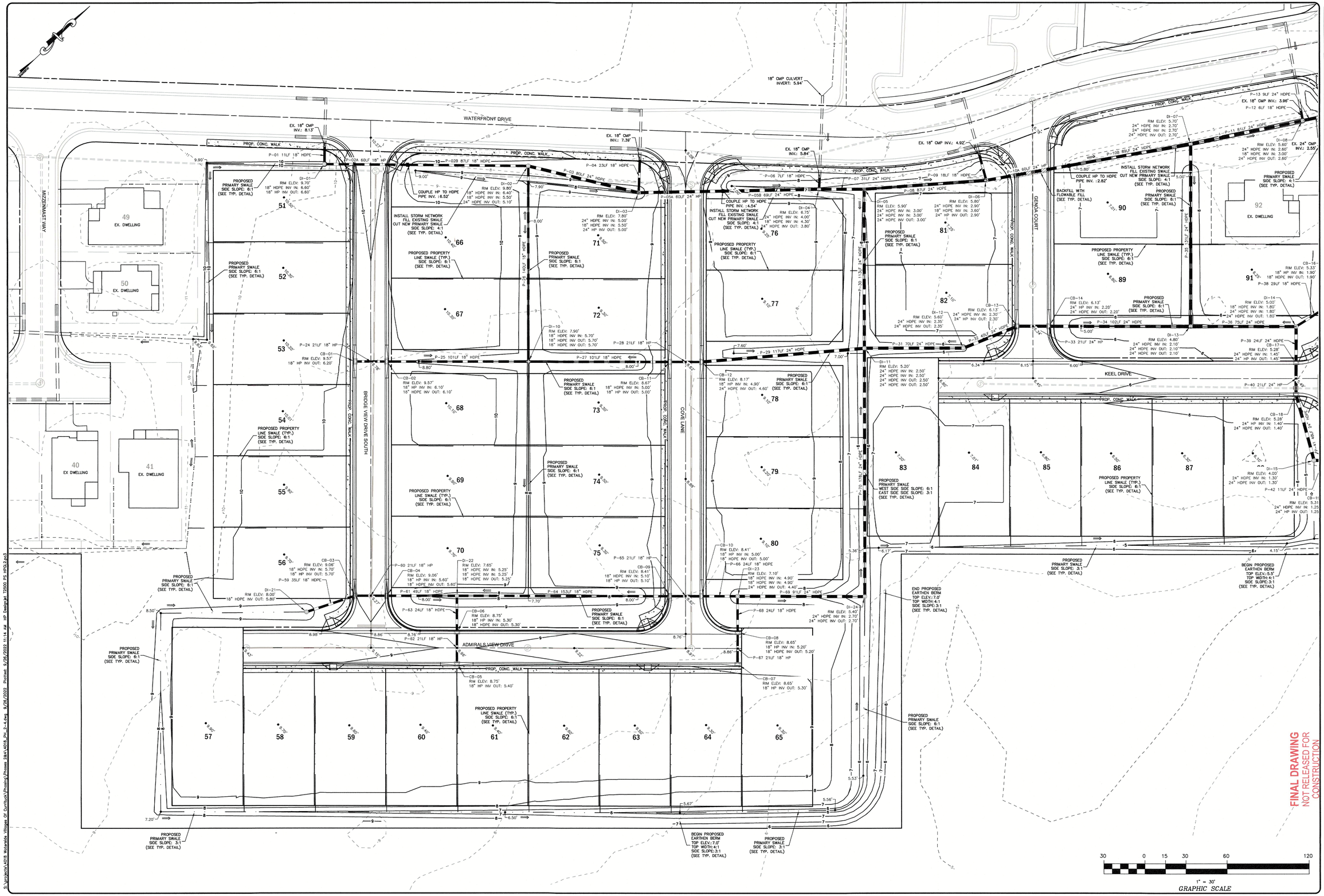
NORTH CAROLINA PROFESSIONAL SEAL 042699 ENGINEER MARK S. BISSELL
9-26-22

DATE: 9-26-22	SCALE: 1" = 100'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 3 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018



FINAL DRAWING
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GRADING, DRAINAGE AND STORMWATER MANAGEMENT PLAN

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 42636 ENGINEER MARK S. BISSELL
9-26-22

DATE: 9-26-22	SCALE: 1" = 30'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 4 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

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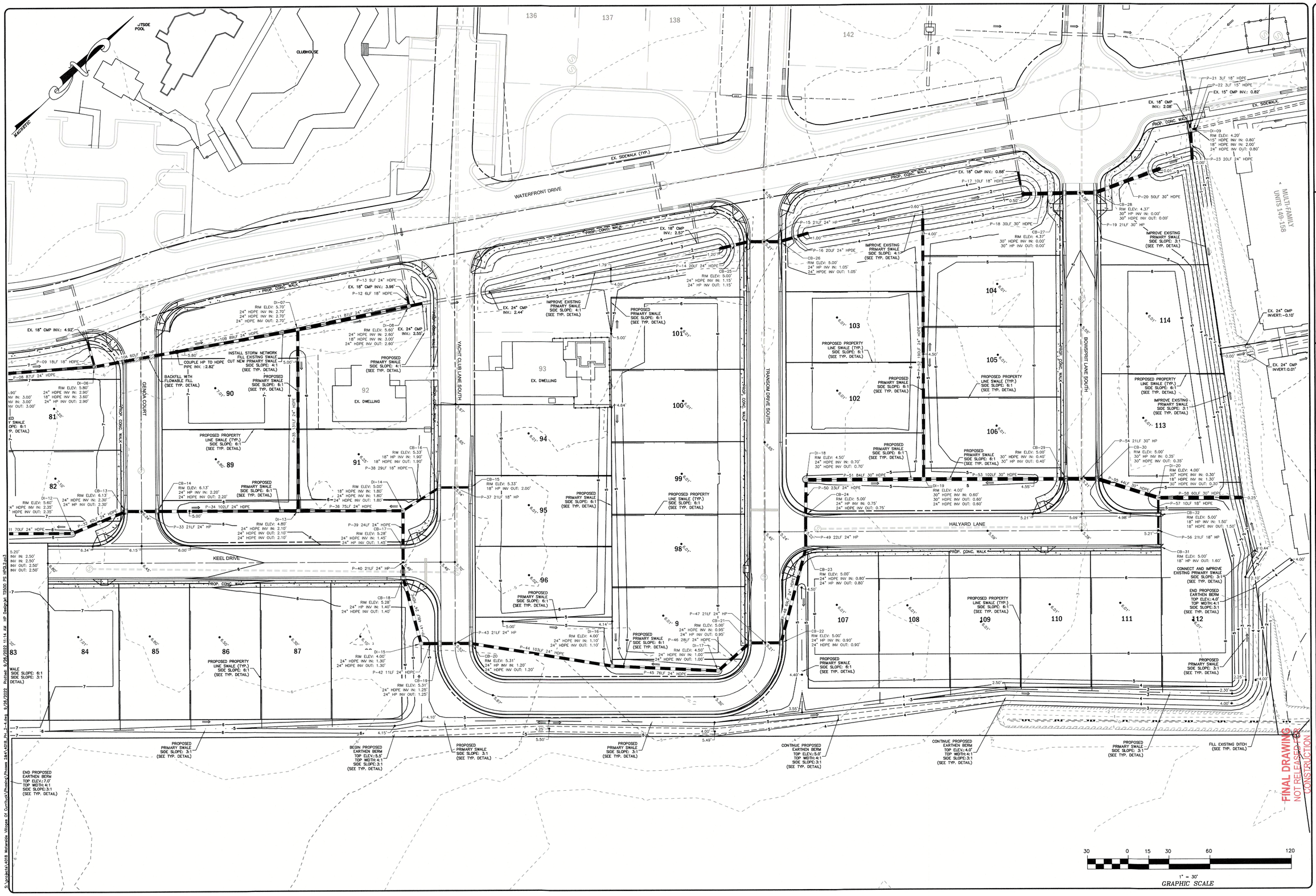

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GRADING, DRAINAGE AND STORMWATER MANAGEMENT PLAN

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 21299 ENGINEER DAVID M. KLEBITZ

DATE: 9-26-22	SCALE: 1" = 30'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 5 OF 23

CAD FILE: 4018_PH_2-4

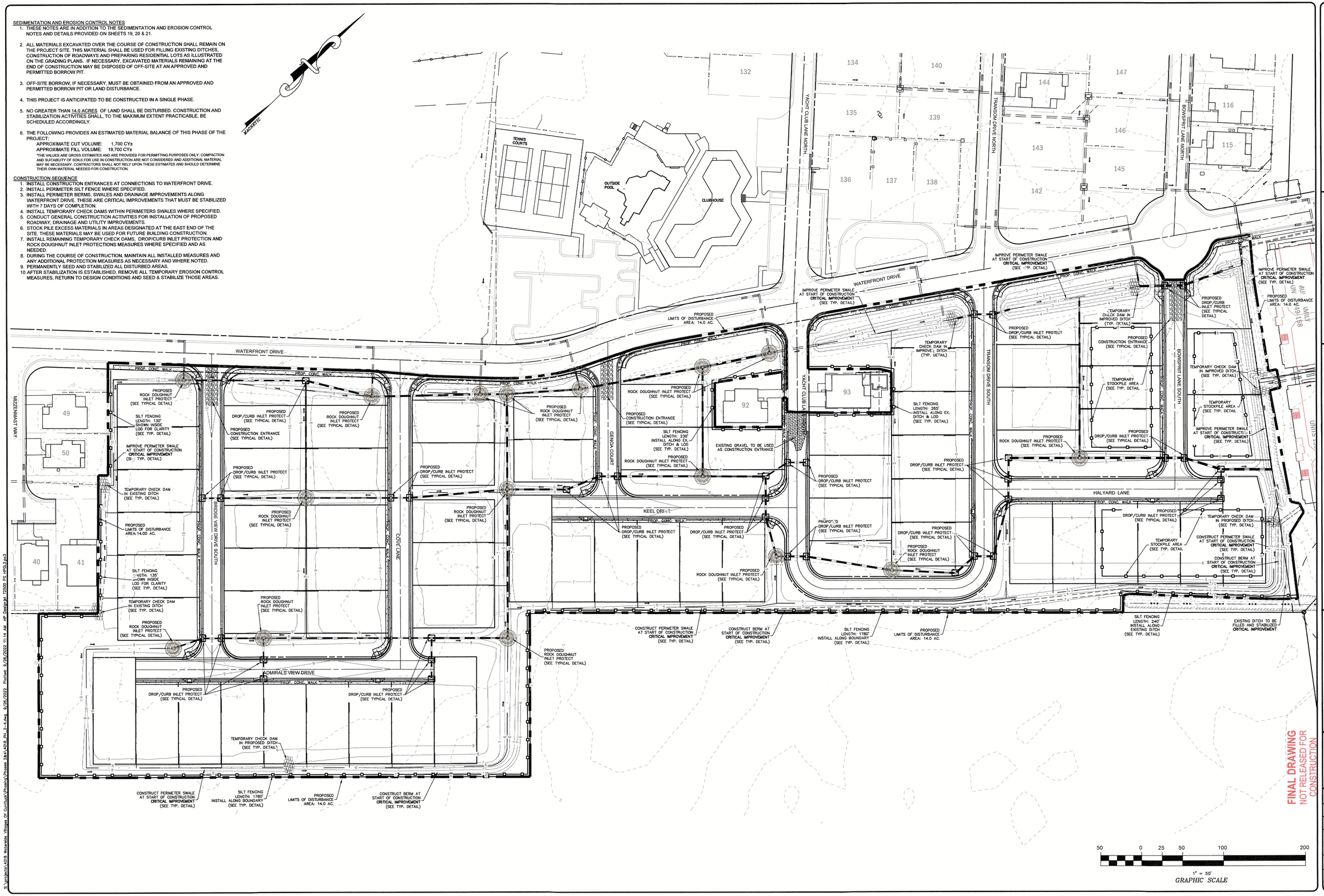
PROJECT NO: 4018

SEDIMENTATION AND EROSION CONTROL NOTES

1. THESE NOTES ARE IN ADDITION TO THE SEDIMENTATION AND EROSION CONTROL NOTES AND DETAILS PROVIDED ON SHEETS 19, 20 & 21.
2. ALL MATERIALS EXCAVATED OVER THE COURSE OF CONSTRUCTION SHALL REMAIN ON THE PROJECT SITE. THIS MATERIAL SHALL BE USED FOR FILLING EXISTING DITCHES, CONSTRUCTION OF ROADWAYS AND PREPARING RESIDENTIAL LOTS AS ILLUSTRATED ON THE GRADING PLANS. IF NECESSARY, EXCAVATED MATERIALS REMAINING AT THE END OF CONSTRUCTION MAY BE DISPOSED OF OFF-SITE AT AN APPROVED AND PERMITTED BORROW PIT.
3. OFF-SITE BORROW, IF NECESSARY, MUST BE OBTAINED FROM AN APPROVED AND PERMITTED BORROW PIT OR LAND DISTURBANCE.
4. THIS PROJECT IS ANTICIPATED TO BE CONSTRUCTED IN A SINGLE PHASE.
5. NO GREATER THAN 14.0 ACRES OF LAND SHALL BE DISTURBED. CONSTRUCTION AND STABILIZATION ACTIVITIES SHALL, TO THE MAXIMUM EXTENT PRACTICABLE, BE SCHEDULED ACCORDINGLY.
6. THE FOLLOWING PROVIDES AN ESTIMATED MATERIAL BALANCE OF THIS PHASE OF THE PROJECT:
   APPROXIMATE CUT VOLUME: 1,700 CY±
   APPROXIMATE FILL VOLUME: 19,700 CY±
   *THE VALUES ARE GROSS ESTIMATES AND ARE PROVIDED FOR PERMITTING PURPOSES ONLY. COMPACTION AND SUITABILITY OF SOILS FOR USE IN CONSTRUCTION ARE NOT CONSIDERED AND ADDITIONAL MATERIAL MAY BE NECESSARY. CONTRACTORS SHALL NOT RELY UPON THESE ESTIMATES AND SHOULD DETERMINE THEIR OWN MATERIAL NEEDED FOR CONSTRUCTION.

CONSTRUCTION SEQUENCE

1. INSTALL CONSTRUCTION ENTRANCES AT CONNECTIONS TO WATERFRONT DRIVE.
2. INSTALL PERIMETER SILT FENCE WHERE SPECIFIED.
3. INSTALL PERIMETER BERMS, SWALES AND DRAINAGE IMPROVEMENTS ALONG WATERFRONT DRIVE. THESE ARE CRITICAL IMPROVEMENTS THAT MUST BE STABILIZED WITH 7 DAYS OF COMPLETION.
4. INSTALL TEMPORARY CHECK DAMS WITHIN PERIMETERS SWALES WHERE SPECIFIED.
5. CONDUCT GENERAL CONSTRUCTION ACTIVITIES FOR INSTALLATION OF PROPOSED ROADWAY, DRAINAGE AND UTILITY IMPROVEMENTS.
6. STOCK PILE EXCESS MATERIALS IN AREAS DESIGNATED AT THE EAST END OF THE SITE. THESE MATERIALS MAY BE USED FOR FUTURE BUILDING CONSTRUCTION.
7. INSTALL REMAINING TEMPORARY CHECK DAMS, DROP/CURB INLET PROTECTION AND ROCK DOUGHNUT INLET PROTECTIONS MEASURES WHERE SPECIFIED AND AS NEEDED.
8. DURING THE COURSE OF CONSTRUCTION, MAINTAIN ALL INSTALLED MEASURES AND ANY ADDITIONAL PROTECTION MEASURES AS NECESSARY AND WHERE NOTED.
9. PERMANENTLY SEED AND STABILIZED ALL DISTURBED AREAS.
10. AFTER STABILIZATION IS ESTABLISHED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, RETURN TO DESIGN CONDITIONS AND SEED & STABILIZE THOSE AREAS.



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EROSION & SEDIMENT CONTROL PLAN & SEQUENCE

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

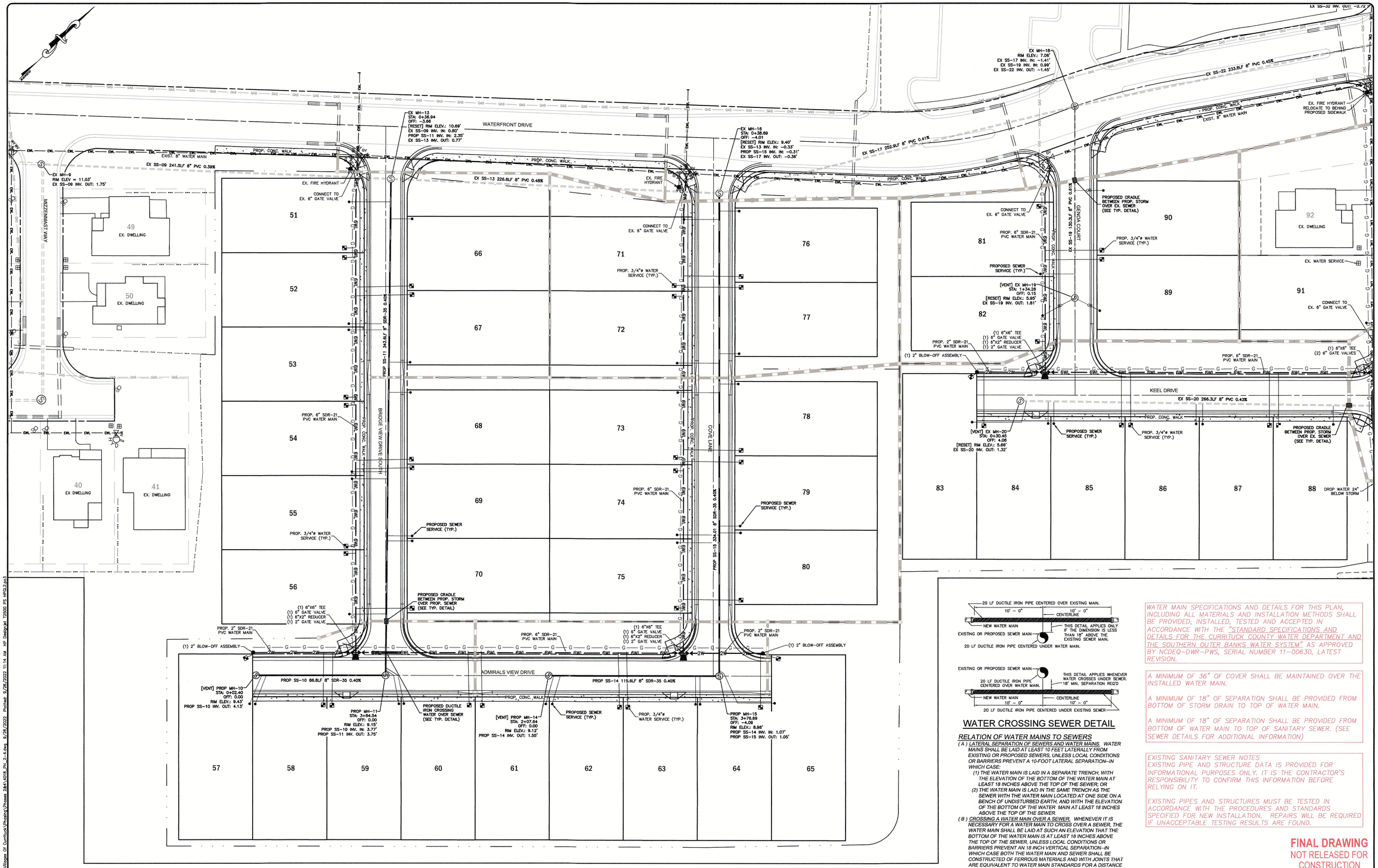
NORTH CAROLINA PROFESSIONAL SEAL 042258 ENGINEER DAVID M. KLEBITZ 9-26-22

DATE: 9-26-22	SCALE: 1" = 50'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 6 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018



WATER CROSSING SEWER DETAIL

RELATION OF WATER MAINS TO SEWERS

(A) LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION–IN WHICH CASE:

(1) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR

(2) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

(B) CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION–IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.

(C) CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

WATER MAIN SPECIFICATIONS AND DETAILS FOR THIS PLAN, INCLUDING ALL MATERIALS AND INSTALLATION METHODS SHALL BE PROVIDED, INSTALLED, TESTED AND ACCEPTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS AND DETAILS FOR THE CURRITUCK COUNTY WATER DEPARTMENT AND THE SOUTHERN OUTER BANKS WATER SYSTEM" AS APPROVED BY NCDEQ–DWR–PWS, SERIAL NUMBER 11–0063O, LATEST REVISION.

A MINIMUM OF 36" OF COVER SHALL BE MAINTAINED OVER THE INSTALLED WATER MAIN.

A MINIMUM OF 18" OF SEPARATION SHALL BE PROVIDED FROM BOTTOM OF STORM DRAIN TO TOP OF WATER MAIN.

A MINIMUM OF 18" OF SEPARATION SHALL BE PROVIDED FROM BOTTOM OF WATER MAIN TO TOP OF SANITARY SEWER. (SEE SEWER DETAILS FOR ADDITIONAL INFORMATION)

EXISTING SANITARY SEWER NOTES
EXISTING PIPE AND STRUCTURE DATA IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THIS INFORMATION BEFORE RELYING ON IT.

EXISTING PIPES AND STRUCTURES MUST BE TESTED IN ACCORDANCE WITH THE PROCEDURES AND STANDARDS SPECIFIED FOR NEW INSTALLATION. REPAIRS WILL BE REQUIRED IF UNACCEPTABLE TESTING RESULTS ARE FOUND.

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

30 0 15 30 60 120
1" = 30'
GRAPHIC SCALE

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WASTEWATER COLLECTION & WATER MAIN EXTENSION PLAN

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042639 ENGINEER DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 30'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 7 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

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WATER CROSSING SEWER DETAIL

RELATION OF WATER MAINS TO SEWERS

(A) LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION–IN WHICH CASE:

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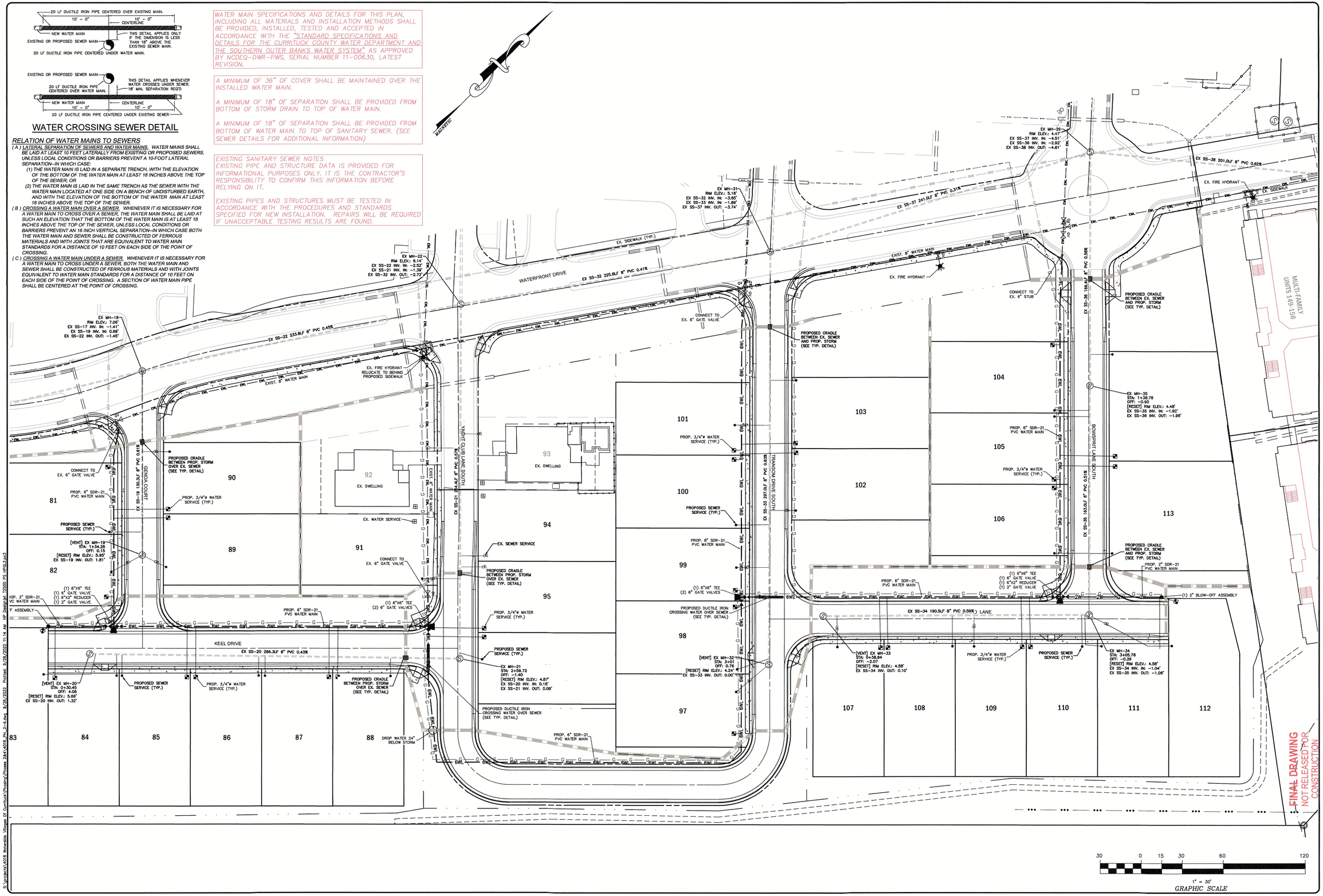

FINAL DRAWING
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WASTEWATER COLLECTION & WATER MAIN EXTENSION PLAN

CURRITUCK
NORTH CAROLINA

PHASES 2 & 4

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

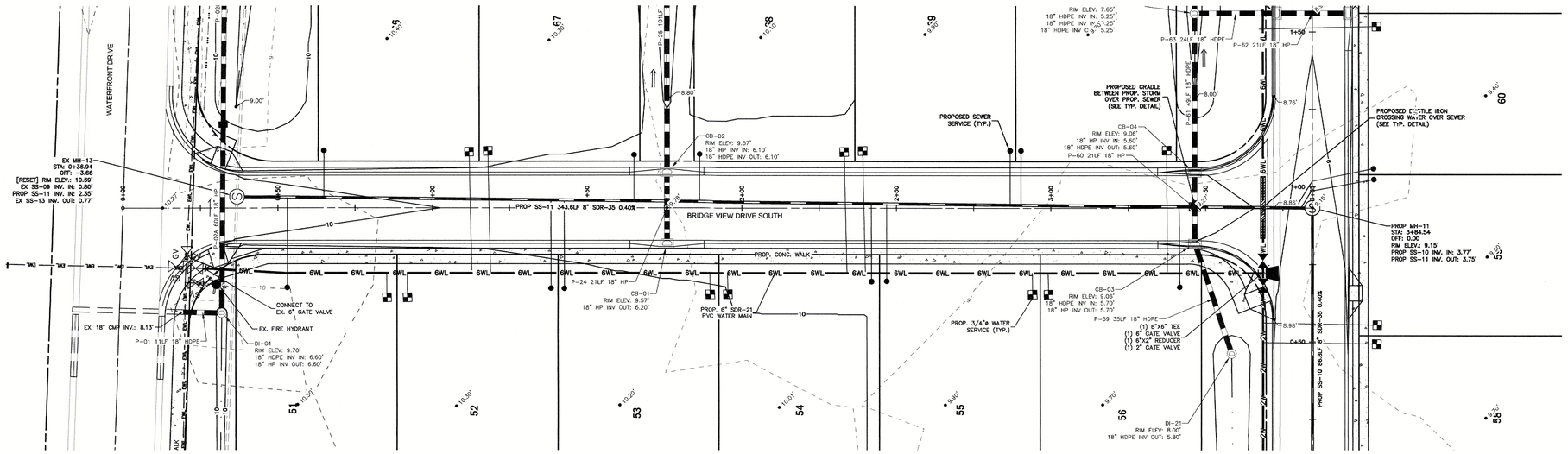
NORTH CAROLINA PROFESSIONAL SEAL 042201 ENGINEER DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 30'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 8 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018



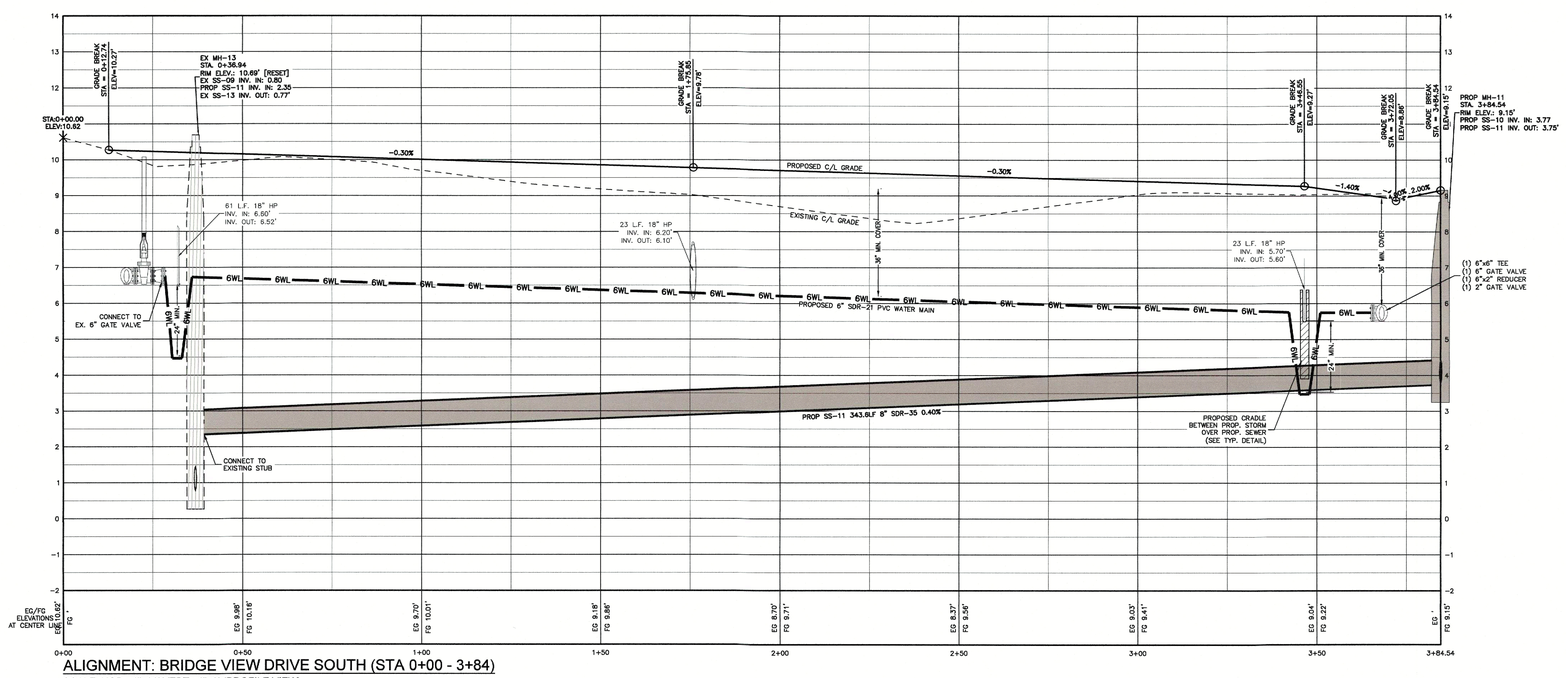
ALIGNMENT: BRIDGE VIEW DRIVE SOUTH (STA 0+00 - 3+84)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: BRIDGE VIEW DRIVE SOUTH (STA 0+00 - 3+84)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

BISSELL
Bissell Professional Group
Firm License # C-856
Firm License # C-856
3101 Poplar Woods Drive
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

BRIDGE VIEW DRIVE SOUTH

PLAN & PROFILE (STATION 0+00 - 3+84)

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

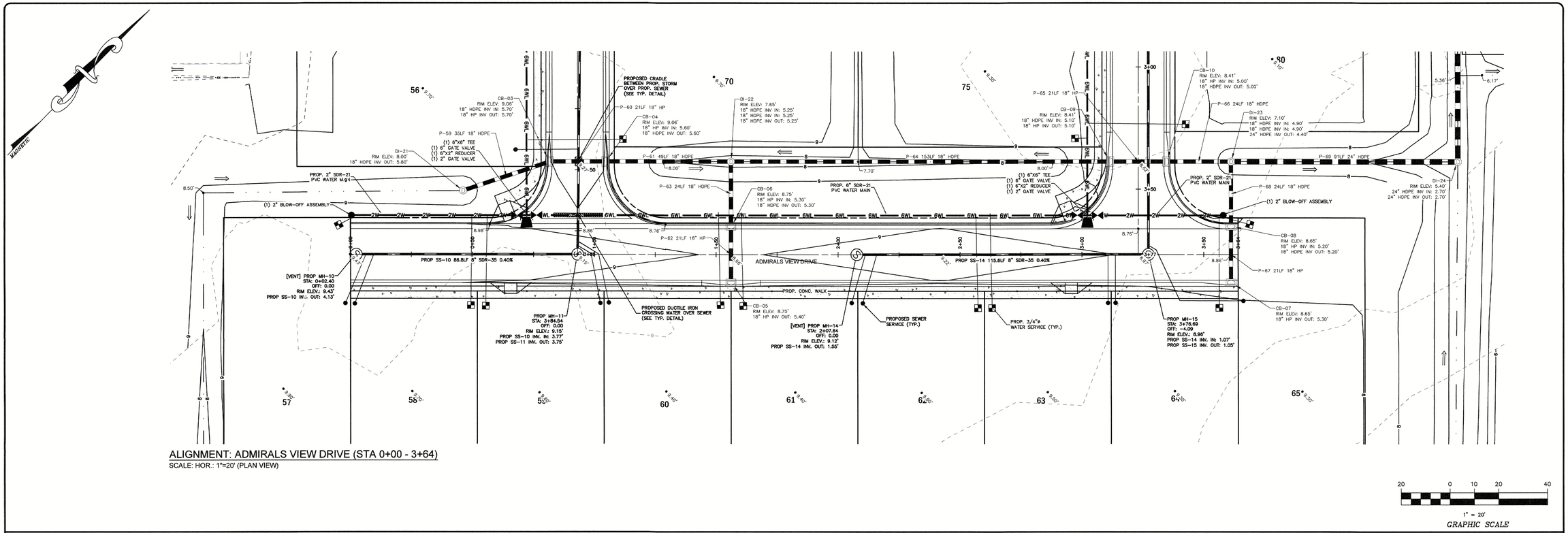
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039 DAVID M. KLEBITZ 9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 9 OF 23

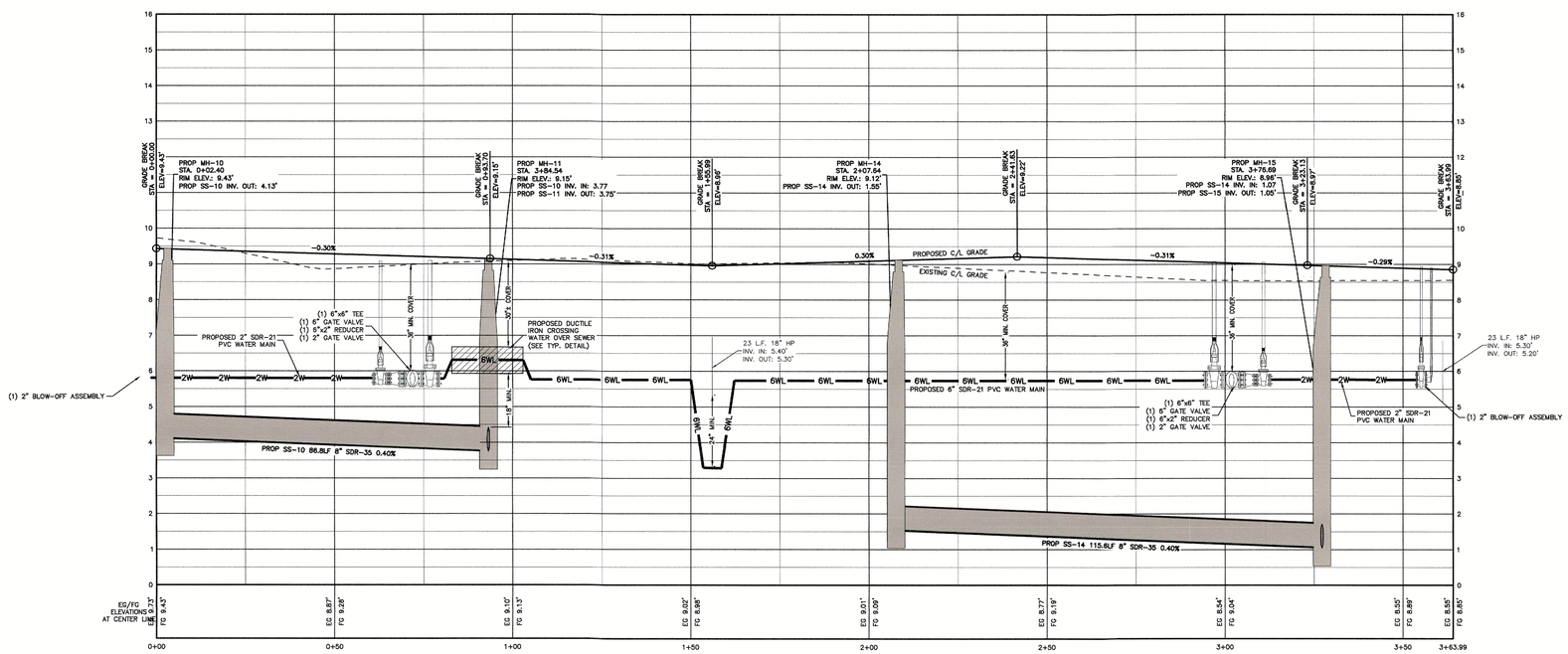
CAD FILE: 4018_PH_2-4

PROJECT NO: 4018



ALIGNMENT: ADMIRALS VIEW DRIVE (STA 0+00 - 3+64)

SCALE: HOR.: 1"=20' (PLAN VIEW)



ALIGNMENT: ADMIRALS VIEW DRIVE (STA 0+00 - 3+64)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-856
Firm License # C-1056
P.O. Box 1018
6313 Tower Court
Poplar Branch, North Carolina 27949
(252) 453-3033
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

ADMIRALS VIEW DRIVE

PLAN & PROFILE (STATION 0+00 - 3+64)

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 19639 ENGINEER DAVID K. KLEBITZ 9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 10 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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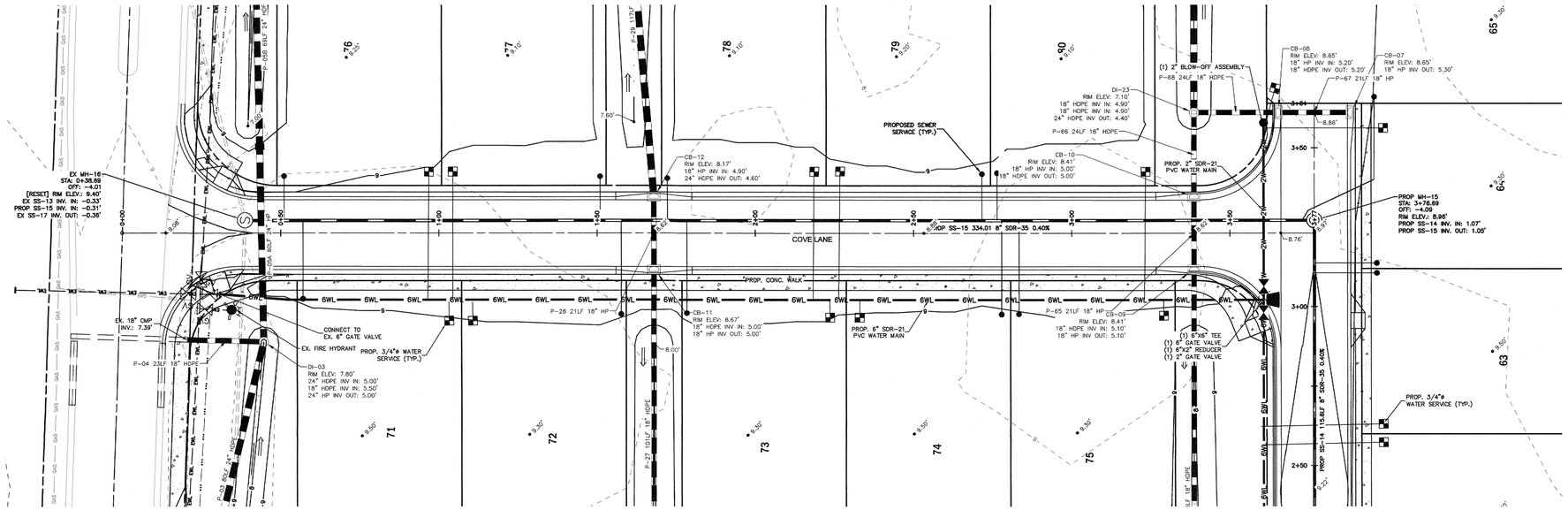
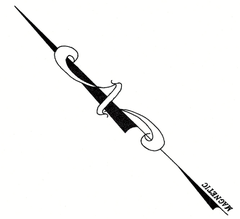


ALIGNMENT: COVE LANE (STA 0+00 - 3+77)

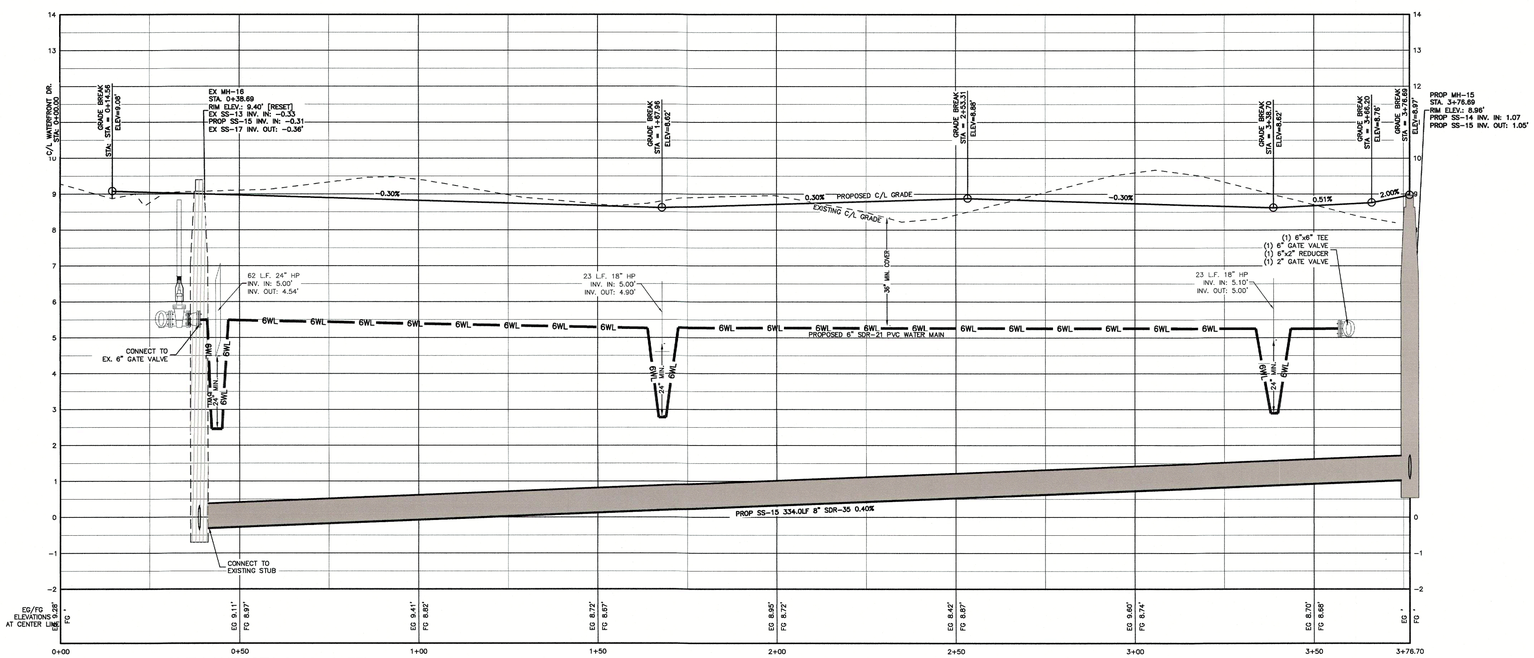
SCALE: HOR.: 1"=20' (PLAN VIEW)



20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: COVE LANE (STA 0+00 - 3+77)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1085
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

COVE LANE

PLAN & PROFILE (STATION 0+00 - 3+77)

PROJECT

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER DAVID M. KLEBITZ

9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 11 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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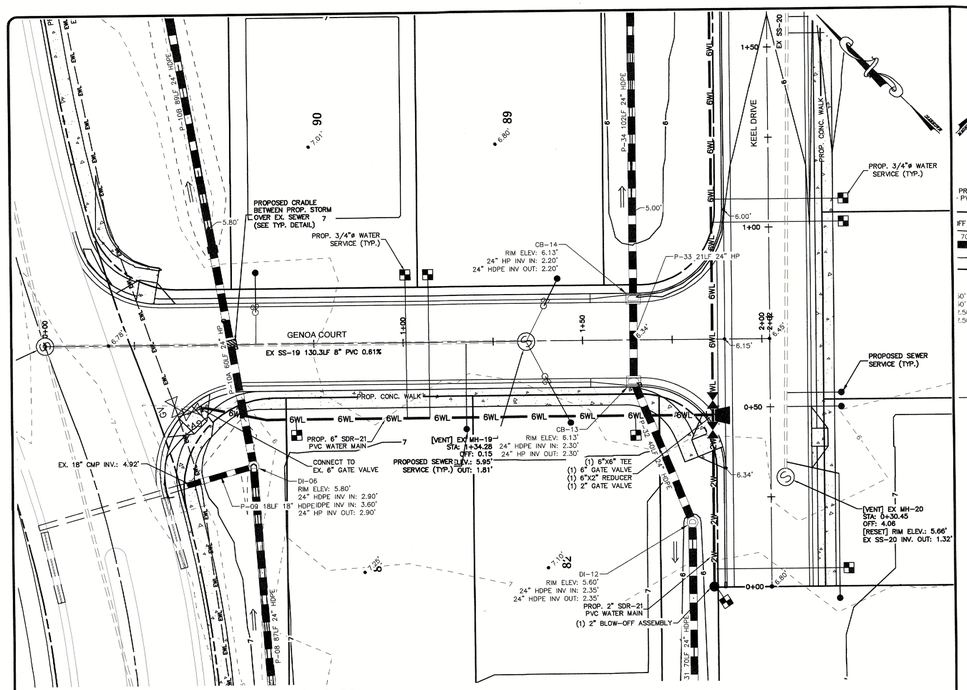


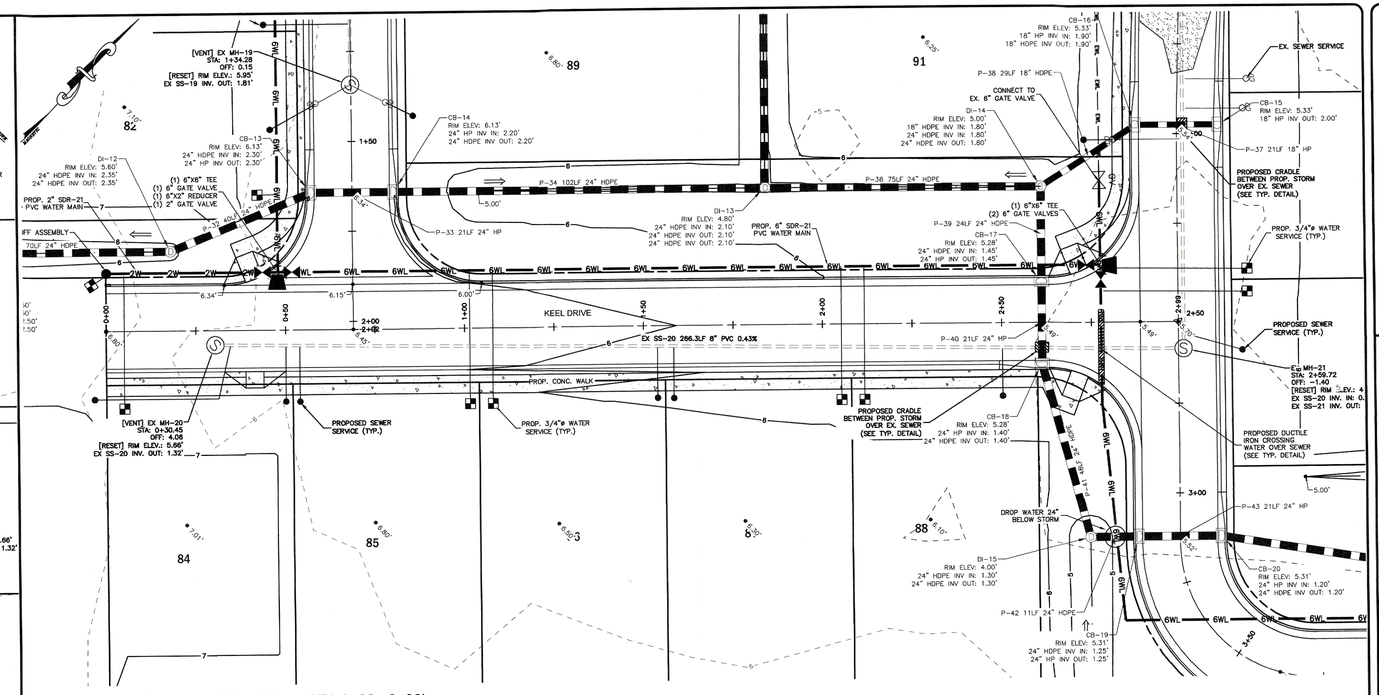
ALIGNMENT: GENOA COURT (STA 0+00 - 2+02)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



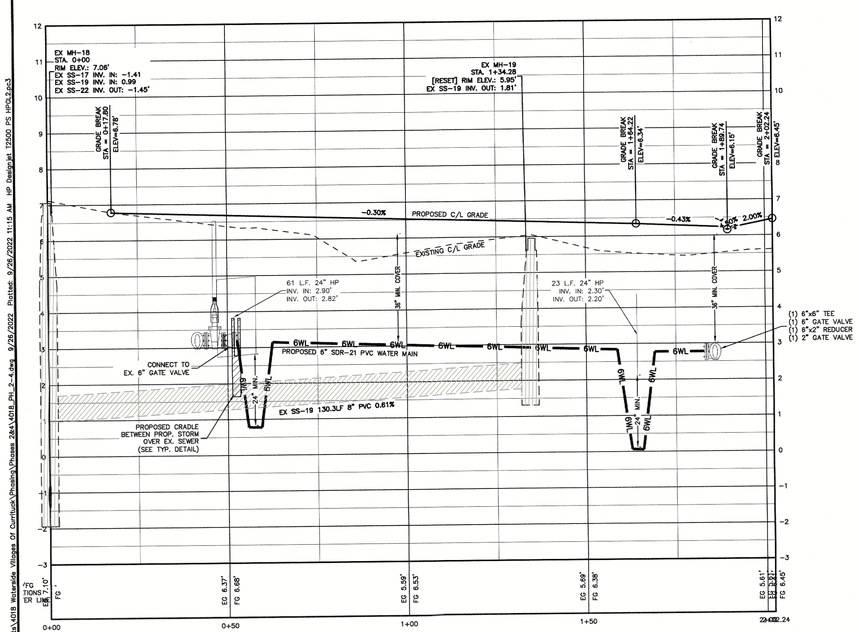
ALIGNMENT: KEEL DRIVE (STA 0+00 - 2+99)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

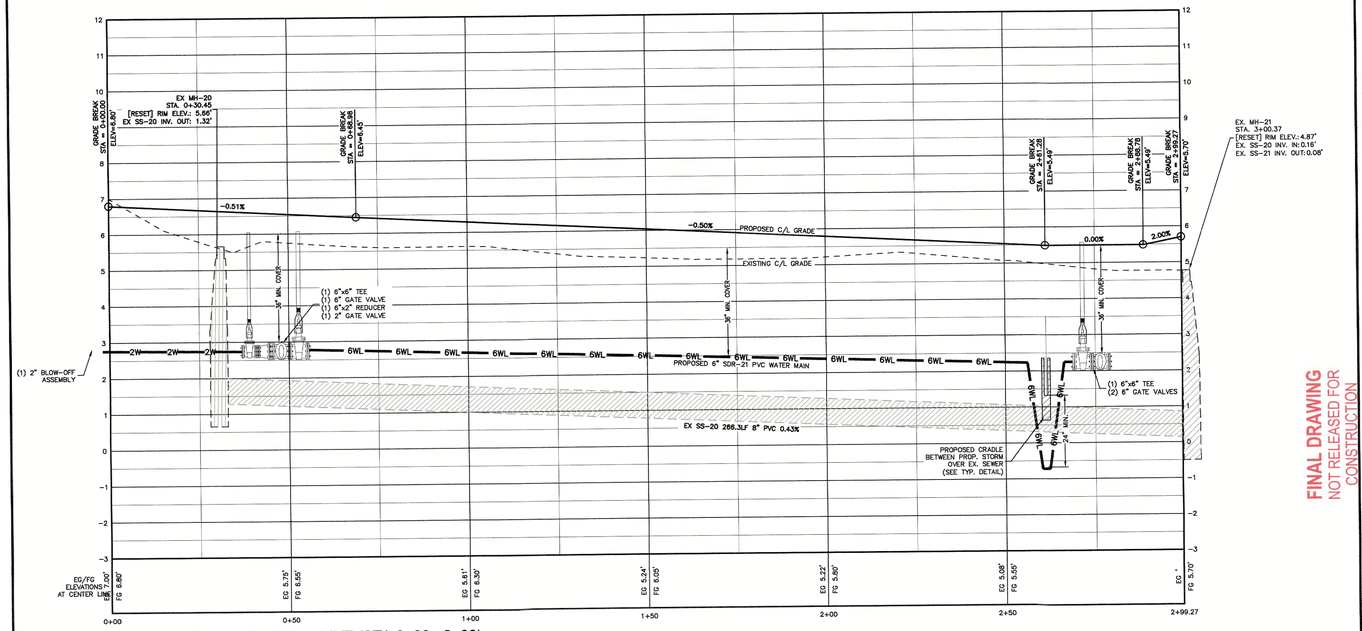
1" = 20'

GRAPHIC SCALE



ALIGNMENT: COVE LANE (STA 0+00 - 2+02

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)



ALIGNMENT: KEEL DRIVE (STA 0+00 - 2+99)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-605
Wake Forest Crossroads Highway
P.O. Box 1368
Zebulon, North Carolina 27597
(252) 264-7001
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

GENOA COURT & KEEL DRIVE
PLANS & PROFILES

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 20080 ENGINEER DAVID M. KLEBITZ 9-26-22

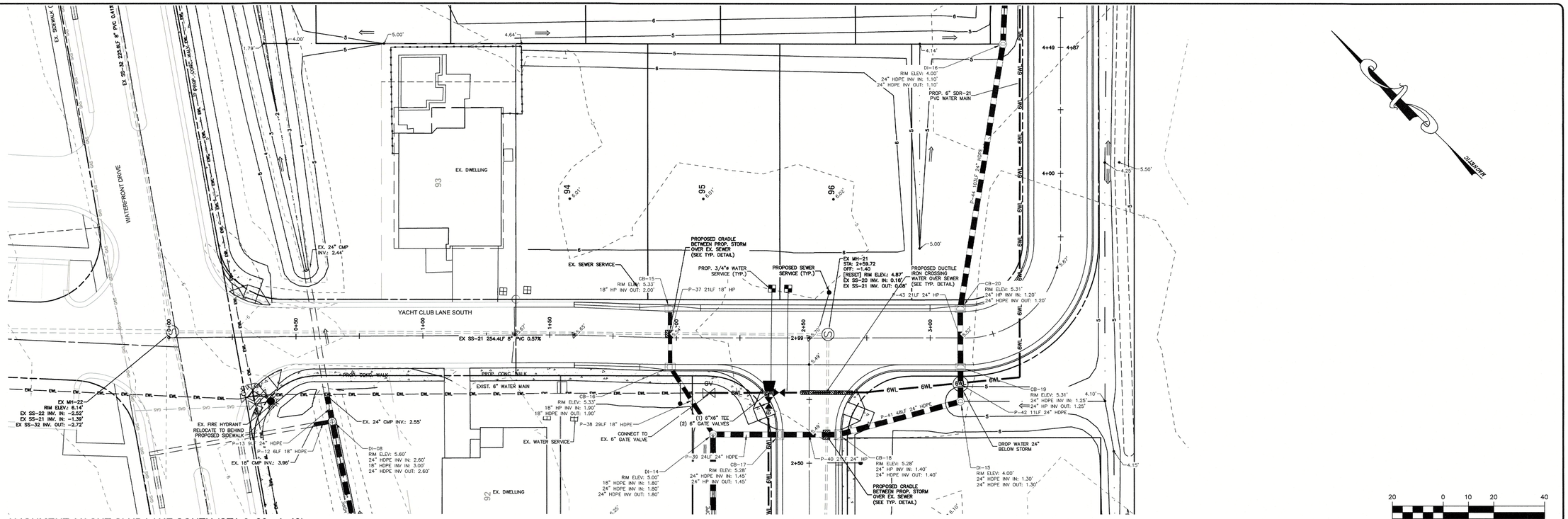
DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 12 OF 23

CAD FILE: 4018_PH_2-4

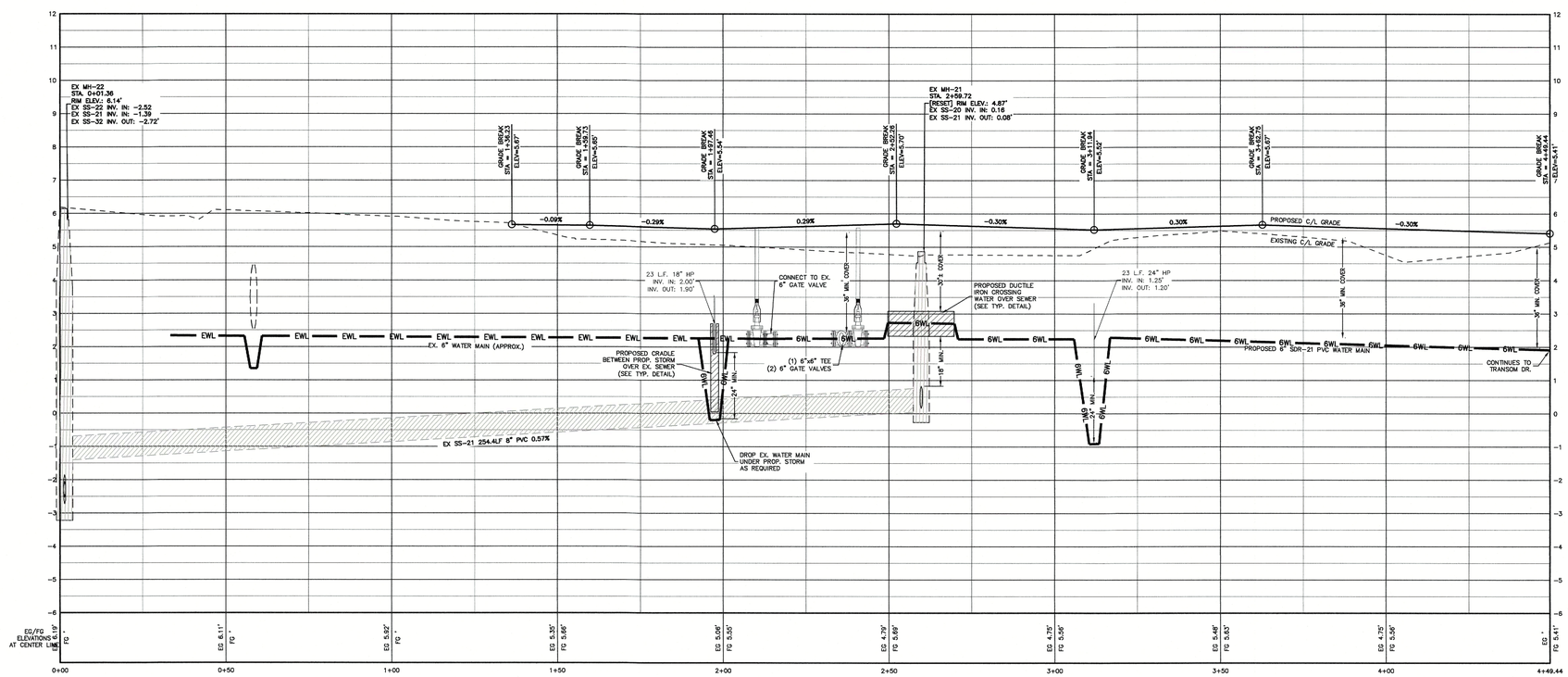
PROJECT NO: 4018

S:\projects\4018 Waterside Villages Of Currituck\Phase\Phase 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:15 AM HP Designjet T2500 PS HPGL2.pc3



ALIGNMENT: YACHT CLUB LANE SOUTH (STA 0+00 - 4+49)

SCALE: HOR.: 1"=20' (PLAN VIEW)



ALIGNMENT: YACHT CLUB LANE SOUTH (STA 0+00 - 4+49)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

BISSELL PROFESSIONAL GROUP
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1707
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

YACHT CLUB LANE SOUTH

PLAN & PROFILE (STATION 0+00 - 4+49)

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 026861 ENGINEER DAVID M KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 13 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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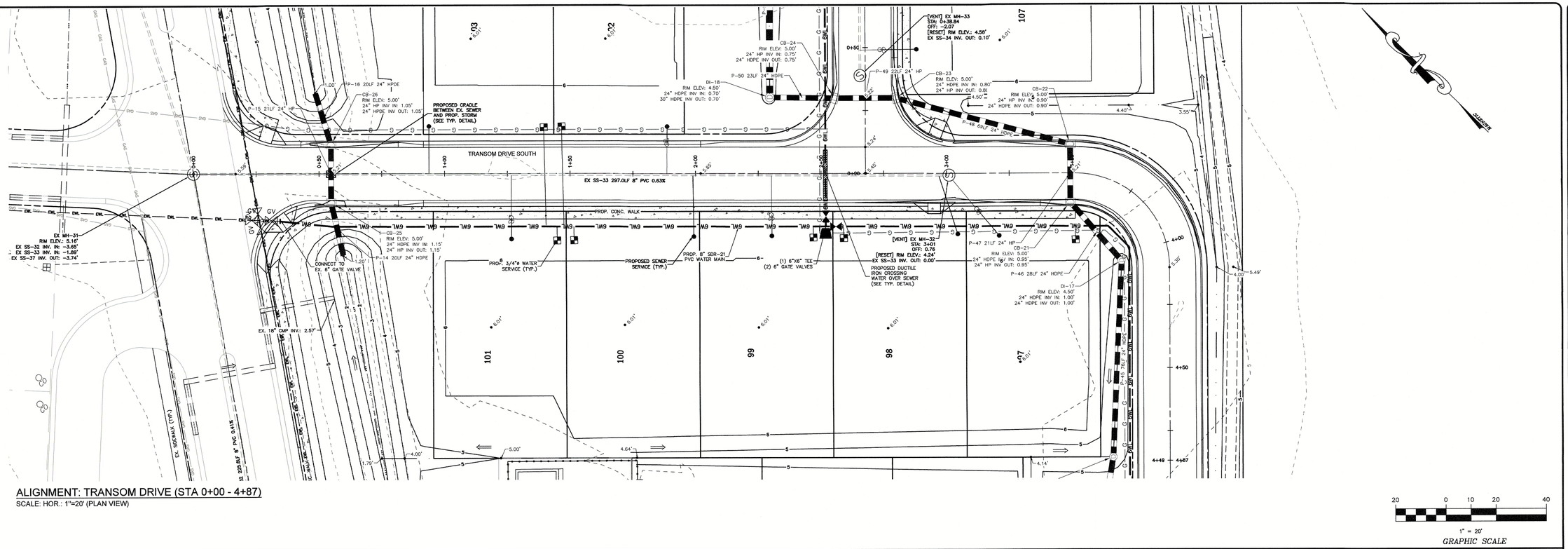


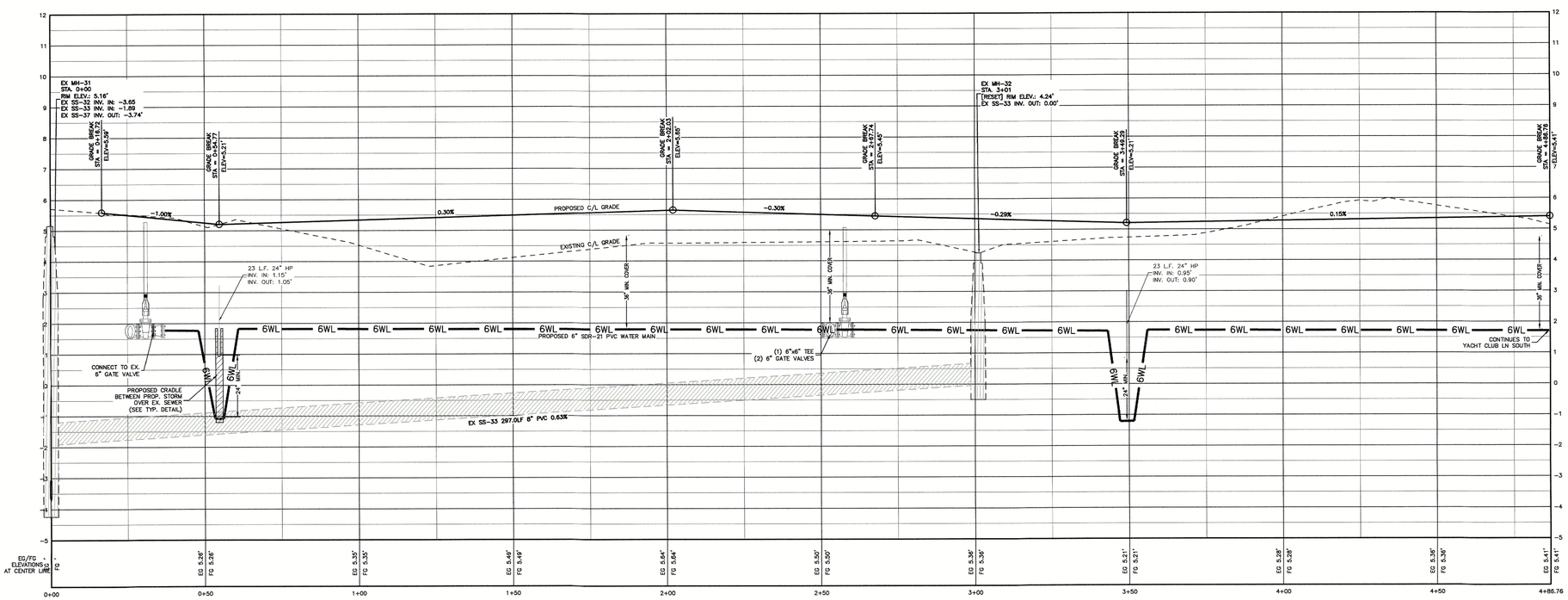
ALIGNMENT: TRANSOM DRIVE (STA 0+00 - 4+87)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: TRANSOM DRIVE (STA 0+00 - 4+87)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-056
3301 Benson Drive, Suite 101
Raleigh, North Carolina 27609
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

TRANSOM DRIVE SOUTH

PLAN & PROFILE (STATION 0+00 - 4+87)

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 024 ENGINEER DAVID M. KLEBITZ

9-26-22

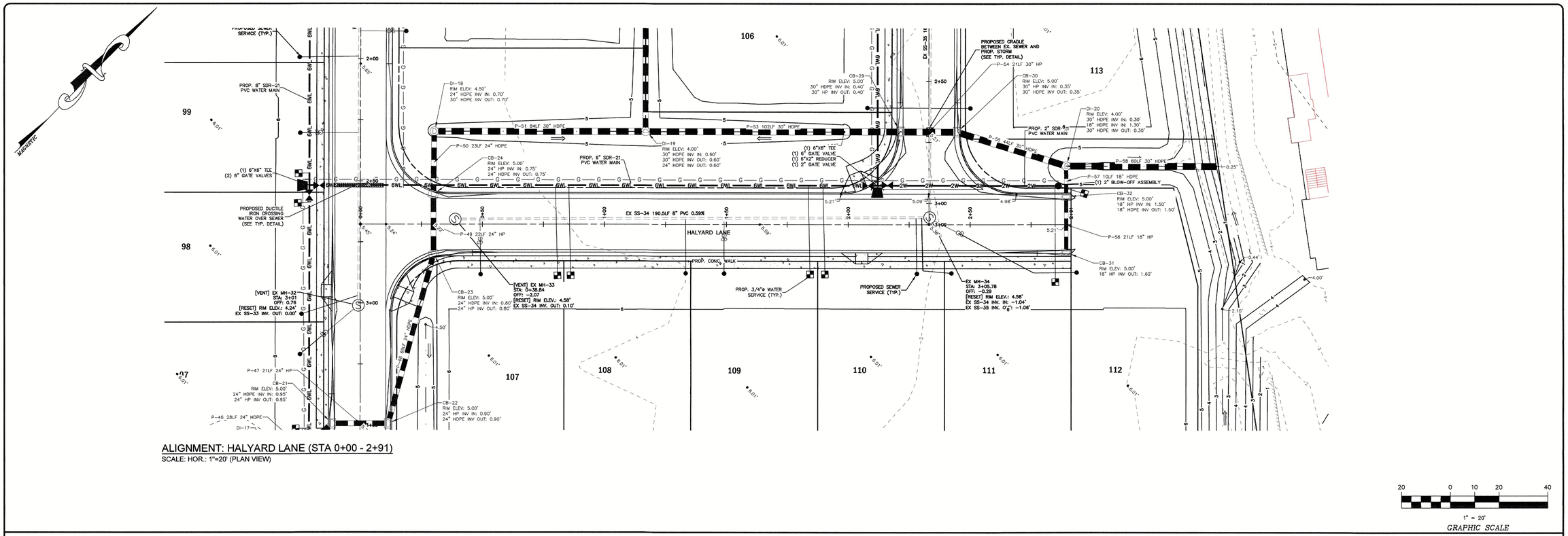
DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 14 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phases 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:15 AM HP Designjet T2500 PS HPGL2.pc3



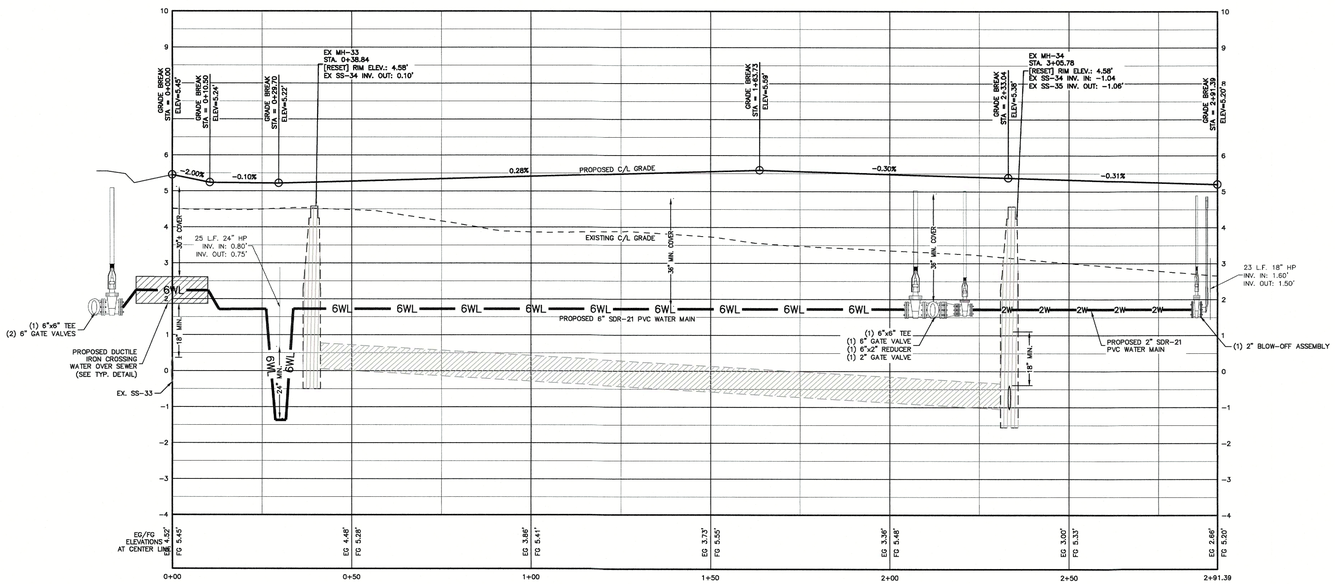
ALIGNMENT: HALYARD LANE (STA 0+00 - 2+91)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: HALYARD LANE (STA 0+00 - 2+91)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-0910
3512 North Croatan Highway
P.O. Box 390
Kitty Hawk, North Carolina 27949
(252) 261-3300
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

HALYARD LANE
PLAN & PROFILE (STATION 0+00 - 2+91)

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 039 ENGINEER DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 15 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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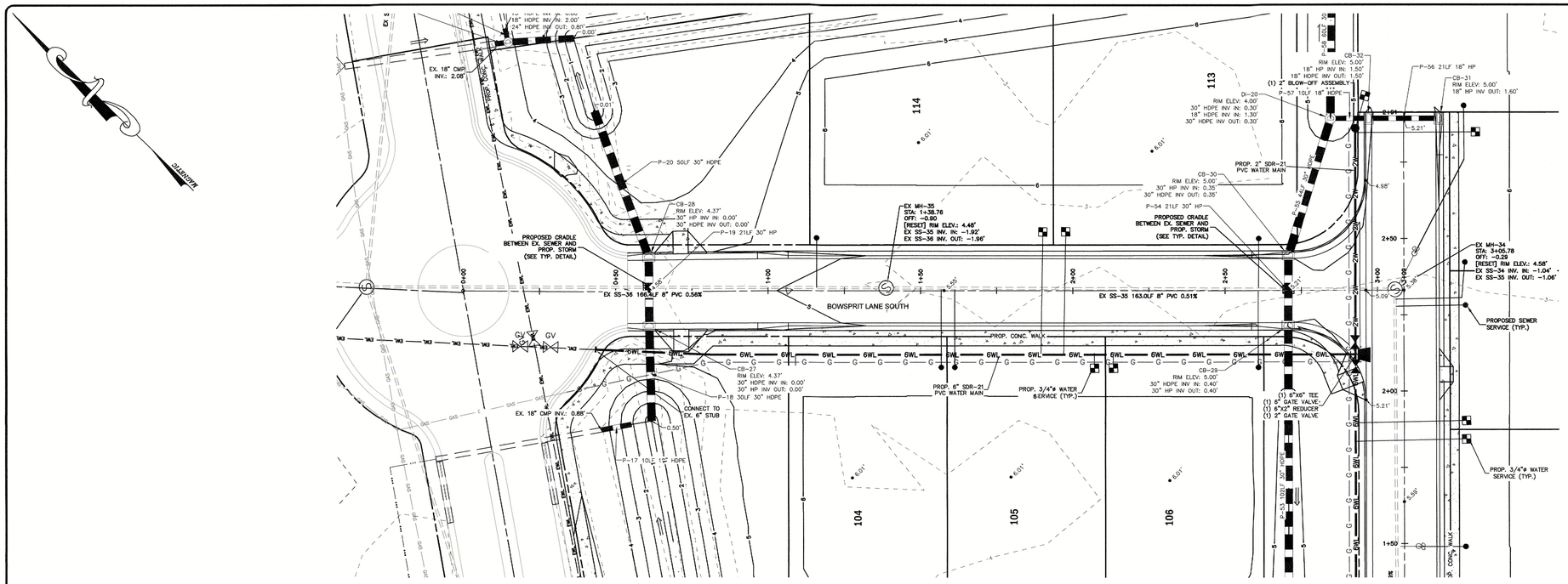


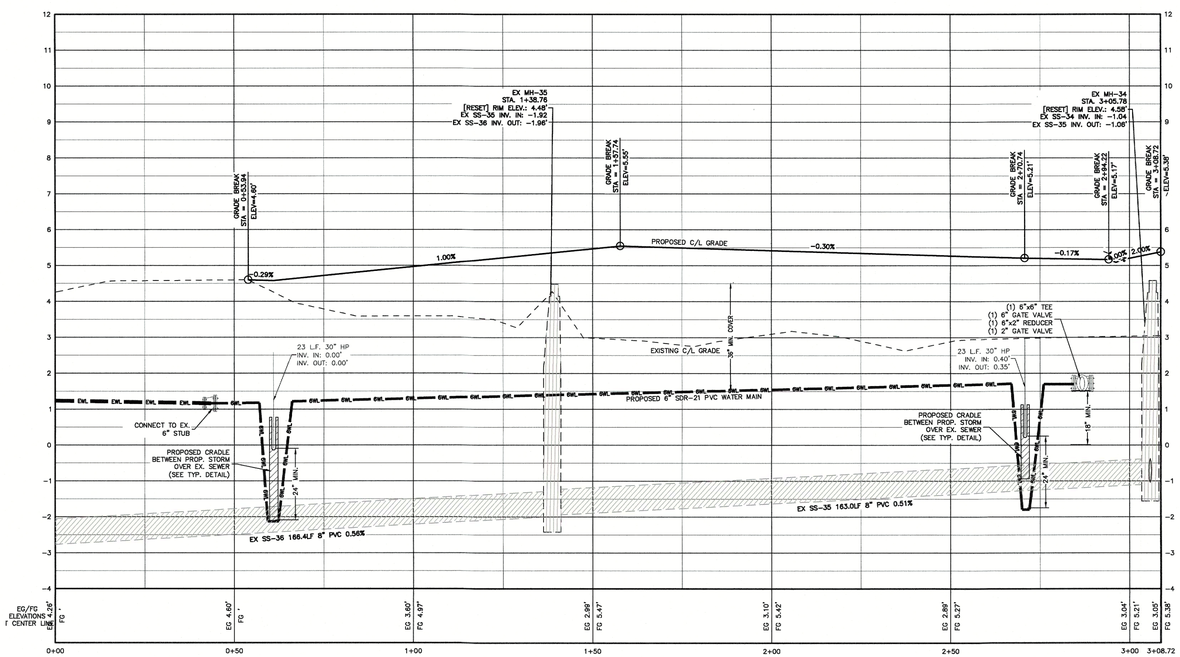
ALIGNMENT: BOWSPIRIT LANE SOUTH (STA 0+00 - 3+09)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: BOWSPIRIT LANE SOUTH (STA 0+00 - 3+09)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

BISSELL PROFESSIONAL GROUP
Firm License # C-856
Firm License # C-856
2828 Croasdaile Village Drive
P.O. Box 11085
Durham, North Carolina 27949
(919) 489-1395
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

BOWSPIRIT LANE SOUTH

PLAN & PROFILE (STATION 0+00 - 3+09)

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042 ENGINEER DAVID K KLEBITZ

9-26-22

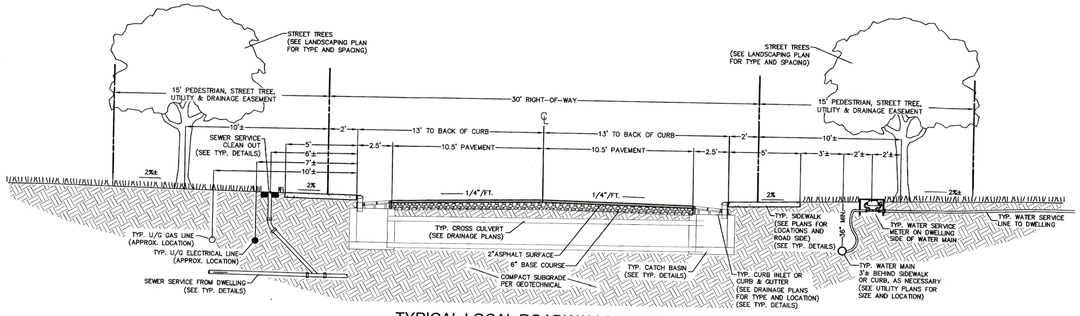
DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

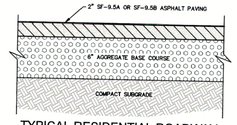
SHEET: 16 OF 23

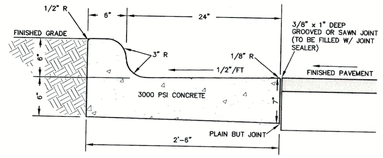
CAD FILE: 4018_PH_2-4

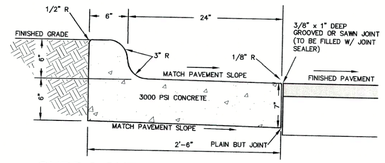
PROJECT NO: 4018

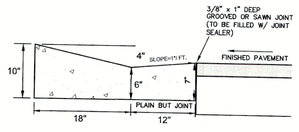
S:\projects\4018 Waterside Villages Of Currituck\Phase\Phases 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:15 AM HP Designjet T2500 PS HPGL2.pc3

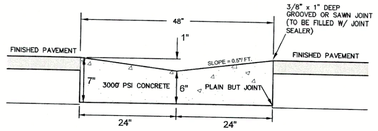


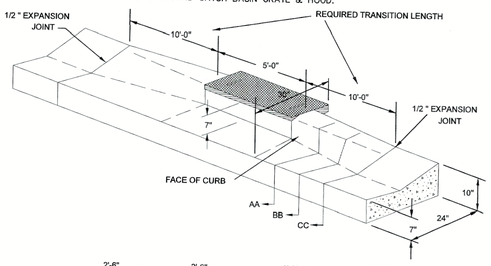


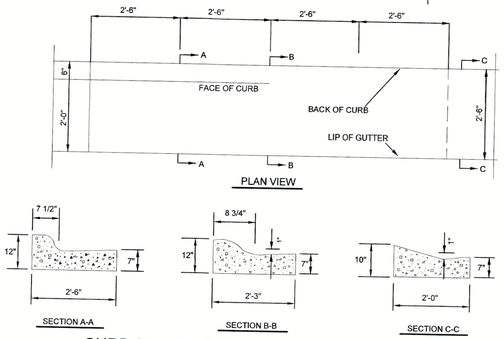


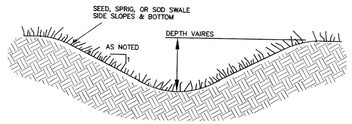


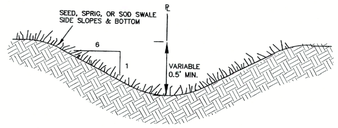


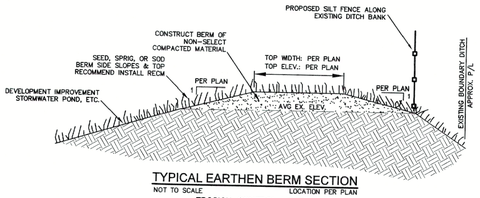


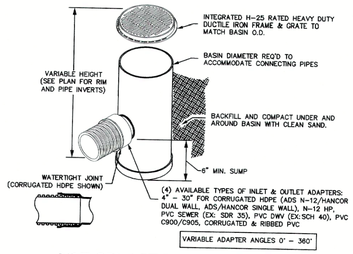


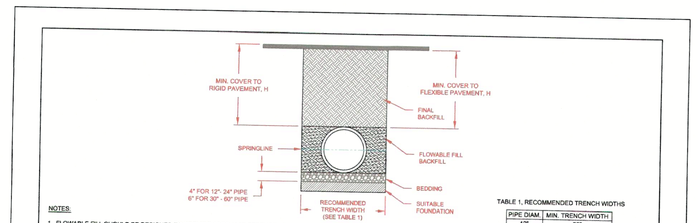












TYPICAL LOCAL ROADWAY SECTION

SCALE: 1" = 5'   SECTION VIEW

TYPICAL RESIDENTIAL ROADWAY PAVEMENT SECTION

NOT TO SCALE

NOTE:
PAVING SHALL CONSIST OF FINE GRADING THE SPECIFIED PARKING & DRIVE AREAS AND INSTALLING 2" SF-9.5A OR SF-9.5B ASPHALT CONCRETE SURFACE COURSE IN CONJUNCTION WITH A 6" AGGREGATE BASE COURSE. THE SOIL SUBGRADE BENEATH PAVEMENTS SHALL BE COMPACTED TO AT LEAST 95% OF ASTM D 698 PRIOR TO ANY PLACEMENT OF SUBBASE FILL OR STONE BASE COURSE. ALL SITE PREPARATION AND THE DESIGN AND CONSTRUCTION OF ALL FOUNDATIONS, GROUND SLABS, AND PAVEMENTS SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS PROVIDED BY A GEOTECHNICAL ENGINEER.

CURB & GUTTER COLLECTION SECTION

NOT TO SCALE   NCDOT STD 846.01

CURB & GUTTER DUMP SECTION

NOT TO SCALE   NCDOT STD 846.01

CURB & GUTTER VALLEY SECTION

NOT TO SCALE

VALLEY GUTTER SECTION

NOT TO SCALE

CURB & GUTTER TRANSITION SECTION

GENERAL CURB & GUTTER NOTES:
1. PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
2. JOINT SPACING MAY BE ALTERED IF REQUIRED BY ENGINEER.
3. CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1-1/2" DEEP.
4. FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"X6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
5. SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

TYPICAL PRIMARY SWALE SECTION

NOT TO SCALE   SLOPE PER INVERTS ON PLAN

SWALES AROUND PERIMETER SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF COMPLETION.

TYPICAL PROPERTY LINE SWALE SECTION

NOT TO SCALE   MIN. LONGITUDINAL SLOPE: 0.10%

TYPICAL EARTHEN BERM SECTION

NOT TO SCALE   LOCATION PER PLAN

EROSION CONTROL NOTE:

PERMANENTLY STABILIZED WITHIN 7 DAYS OF COMPLETION.

(4) AVAILABLE TYPES OF INLET & OUTLET ADAPTERS: 4" - 30" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL), N-12 HP, PVC SEWER (EX: SDR 35), PVC DWV (EX:SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

VARIABLE ADAPTER ANGLES 0° - 360°

NYLOPLAST DRAIN BASIN DETAIL

NOT TO SCALE   LOCATION AS NOTED

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
5. ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

STORM STRUCTURE SPECIFICATIONS

BOX
CATCH BASIN DRAINAGE STRUCTURES SHALL BE TRAFFIC BEARING PRECAST CONCRETE PER LATEST NCDOT STD. 840.46.
CATCH BASIN FRAME, GRATE & HOOD SHALL BE LATEST NCDOT 840.03.
(SEE DETAILS PROVIDED THIS SET)

CYLINDER
DROP INLET DRAINAGE STRUCTURES SHALL BE NYLOPLAST DRAIN BASINS AS MANUFACTURED BY ADS, OR APPROVED EQUAL. MINIMUM BASIN DIAMETER SHALL BE 30 INCHES. LARGER DIAMETERS MAY BE NEEDED TO ACCOMMODATE LARGER CONNECTING PIPES, AS DETERMINED BY MANUFACTURER/SUPPLIER.
(SEE DETAILS PROVIDED THIS SET)

NOTES:
1. FLOWABLE FILL SHOULD BE DESIGNED TO PROVIDE ADEQUATE STRENGTH TO CARRY ALL LIVE AND DEAD LOADING BUT ALLOW FOR ANY FUTURE EXCAVATION. TYPICAL 28 DAY COMPRESSIVE STRENGTHS RANGE BETWEEN 50 AND 100 PSI. MIX SHOULD BE OF A CONSISTENCY THAT COMPLETELY FILLS SPACE BETWEEN PIPE AND TRENCH WALLS.
2. IF TRENCH IS EXCAVATED IN ROCK OR HIGH-BEARING STRENGTH SOILS, TRENCH WIDTHS FOR 24"- 60" DIA. MAY BE REDUCED, FROM VALUES IN TABLE 1, TO THE PIPE OD PLUS 12".
3. FLOWABLE FILL SHOULD NOT BE PLACED WHEN TEMPERATURES ARE BELOW 40°F, AGAINST FROZEN TRENCH MATERIAL OR WHEN APPRECIABLE PRECIPITATION IS FORECASTED DURING PLACEMENT.
4. PRECAUTIONS SHALL BE TAKEN TO PREVENT FLOTATION. ANCHORING SYSTEM AND/OR INCREMENTAL LIFTS SHOULD BE UTILIZED TO ENSURE PIPE REMAINS ON GRADE. REFER TO TECHNICAL NOTE 5.02, FLOWABLE FILL FOR THERMOPLASTIC PIPE, FOR EXAMPLES OF ANCHOR TYPES AND INCREMENTAL LIFT RECOMMENDATIONS.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" DIAMETER PIPE (300mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED.
7. FINAL BACKFILL: FINAL BACKFILL SHALL NOT BE PLACED UNTIL A PENETROMETER READING OF AT LEAST 500 PSI PER ASTM C403 IS MEASURED, THE CRITERIA OF ASTM D 6024 ARE MET, OR OTHER MEANS APPROVED BY THE ENGINEER TO DETERMINE SUITABILITY FOR LOAD APPLICATION ARE SATISFIED.
8. MINIMUM COVER: MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. SHALLOWER COVER MAY BE POSSIBLE AND IS CONTINGENT UPON THE MIX BEING DESIGNED TO CARRY THE ANTICIPATED VEHICULAR LOADS, INCLUDING IMPACTING FORCES.

TABLE 1, RECOMMENDED TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	22" (559mm)
15" (375mm)	27" (686mm)
18" (450mm)	33" (838mm)
21" (525mm)	37" (940mm)
24" (600mm)	42" (1067mm)
30" (750mm)	51" (1295mm)
36" (900mm)	59" (1499mm)
42" (1050mm)	66" (1676mm)
48" (1200mm)	74" (1880mm)
54" (1350mm)	82" (2083mm)
60" (1500mm)	90" (2286mm)

TRENCH INSTALLATION DETAIL (FLOWABLE FILL)
DRAWING NUMBER STD-101G
4640 TRUEMAN BLVD. HILLIARD, OHIO 43026

FLOWABLE FILL PIPE INSTALLATION DETAIL

STORM SEWER STRUCTURE TABLE

NAME	DETAILS	PIPES IN	PIPES OUT
CB-01	Box RIM ELEV.: 9.57' SUMP ELEV.: 6.20' HEIGHT: 3.37'		P-24, 18" INV.: 6.20'
CB-02	Box RIM ELEV.: 9.57' SUMP ELEV.: 6.10' HEIGHT: 3.47'	P-24, 18" INV.: 6.10'	P-25, 18" INV.: 6.10'
CB-03	Box RIM ELEV.: 9.06' SUMP ELEV.: 5.64' HEIGHT: 3.42'	P-59, 18" INV.: 5.70'	P-60, 18" INV.: 5.70'
CB-04	Box RIM ELEV.: 9.06' SUMP ELEV.: 5.60' HEIGHT: 3.46'	P-60, 18" INV.: 5.60'	P-61, 18" INV.: 5.60'
CB-05	Box RIM ELEV.: 8.75' SUMP ELEV.: 5.40' HEIGHT: 3.35'		P-62, 18" INV.: 5.40'
CB-06	Box RIM ELEV.: 8.75' SUMP ELEV.: 5.30' HEIGHT: 3.45'	P-62, 18" INV.: 5.30'	P-63, 18" INV.: 5.30'
CB-07	Box RIM ELEV.: 8.65' SUMP ELEV.: 5.30' HEIGHT: 3.35'		P-67, 18" INV.: 5.30'
CB-08	Box RIM ELEV.: 8.65' SUMP ELEV.: 5.20' HEIGHT: 3.45'	P-67, 18" INV.: 5.20'	P-68, 18" INV.: 5.20'
CB-09	Box RIM ELEV.: 8.41' SUMP ELEV.: 5.10' HEIGHT: 3.31'	P-64, 18" INV.: 5.10'	P-65, 18" INV.: 5.10'
CB-10	Box RIM ELEV.: 8.41' SUMP ELEV.: 5.00' HEIGHT: 3.41'	P-65, 18" INV.: 5.00'	P-66, 18" INV.: 5.00'
CB-11	Box RIM ELEV.: 8.67' SUMP ELEV.: 5.11' HEIGHT: 3.56'	P-27, 18" INV.: 5.00'	P-28, 18" INV.: 5.00'
CB-12	Box RIM ELEV.: 8.17' SUMP ELEV.: 4.61' HEIGHT: 3.56'	P-28, 18" INV.: 4.90'	P-29, 24" INV.: 4.60'
CB-13	Box RIM ELEV.: 6.13' SUMP ELEV.: 2.30' HEIGHT: 3.83'	P-32, 24" INV.: 2.30'	P-33, 24" INV.: 2.30'
CB-14	Box RIM ELEV.: 6.13' SUMP ELEV.: 2.20' HEIGHT: 3.93'	P-33, 24" INV.: 2.20'	P-34, 24" INV.: 2.20'
CB-15	Box RIM ELEV.: 5.33' SUMP ELEV.: 2.00' HEIGHT: 3.33'		P-37, 18" INV.: 2.00'
CB-16	Box RIM ELEV.: 5.33' SUMP ELEV.: 1.90' HEIGHT: 3.43'	P-37, 18" INV.: 1.90'	P-38, 18" INV.: 1.90'
CB-17	Box RIM ELEV.: 5.28' SUMP ELEV.: 1.45' HEIGHT: 3.83'	P-39, 24" INV.: 1.45'	P-40, 24" INV.: 1.45'
CB-18	Box RIM ELEV.: 5.28' SUMP ELEV.: 1.40' HEIGHT: 3.88'	P-40, 24" INV.: 1.40'	P-41, 24" INV.: 1.40'
CB-19	Box RIM ELEV.: 5.31' SUMP ELEV.: 1.25' HEIGHT: 4.06'	P-42, 24" INV.: 1.25'	P-43, 24" INV.: 1.25'

STORM SEWER STRUCTURE TABLE

NAME	DETAILS	PIPES IN	PIPES OUT
CB-20	Box RIM ELEV.: 5.31' SUMP ELEV.: 1.20' HEIGHT: 4.11'	P-43, 24" INV.: 1.20'	P-44, 24" INV.: 1.20'
CB-21	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.95' HEIGHT: 4.05'	P-46, 24" INV.: 0.95'	P-47, 24" INV.: 0.95'
CB-22	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.90' HEIGHT: 4.10'	P-47, 24" INV.: 0.90'	P-48, 24" INV.: 0.90'
CB-23	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.80' HEIGHT: 4.20'	P-48, 24" INV.: 0.80'	P-49, 24" INV.: 0.80'
CB-24	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.75' HEIGHT: 4.25'	P-49, 24" INV.: 0.75'	P-50, 24" INV.: 0.75'
CB-25	Box RIM ELEV.: 5.00' SUMP ELEV.: 1.15' HEIGHT: 3.85'	P-14, 24" INV.: 1.15'	P-15, 24" INV.: 1.15'
CB-26	Box RIM ELEV.: 5.00' SUMP ELEV.: 1.05' HEIGHT: 3.95'	P-15, 24" INV.: 1.05'	P-16, 24" INV.: 1.05'
CB-27	Box RIM ELEV.: 4.37' SUMP ELEV.: 0.00' HEIGHT: 4.37'	P-18, 30" INV.: 0.00'	P-19, 30" INV.: 0.00'
CB-28	Box RIM ELEV.: 4.37' SUMP ELEV.: 0.00' HEIGHT: 4.37'	P-19, 30" INV.: 0.00'	P-20, 30" INV.: 0.00'
CB-29	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.40' HEIGHT: 4.60'	P-53, 30" INV.: 0.40'	P-54, 30" INV.: 0.40'
CB-30	Box RIM ELEV.: 5.00' SUMP ELEV.: 0.35' HEIGHT: 4.65'	P-54, 30" INV.: 0.35'	P-55, 30" INV.: 0.35'
CB-31	Box RIM ELEV.: 5.00' SUMP ELEV.: 1.60' HEIGHT: 3.40'		P-56, 18" INV.: 1.60'
CB-32	Box RIM ELEV.: 5.00' SUMP ELEV.: 1.50' HEIGHT: 3.50'	P-56, 18" INV.: 1.50'	P-57, 18" INV.: 1.50'
DI-01	Cylinder RIM ELEV.: 9.70' SUMP ELEV.: -4.78' HEIGHT: 14.48'	P-01, 18" INV.: 6.60'	P-02A, 18" INV.: 6.60'
DI-02	Cylinder RIM ELEV.: 9.80' SUMP ELEV.: 5.10' HEIGHT: 4.70'	P-02B, 18" INV.: 6.40' P-26, 18" INV.: 5.50'	P-03, 24" INV.: 5.10'
DI-03	Cylinder RIM ELEV.: 7.80' SUMP ELEV.: 5.00' HEIGHT: 2.80'	P-03, 24" INV.: 5.00' P-04, 18" INV.: 5.50'	P-05A, 24" INV.: 5.00'
DI-04	Cylinder RIM ELEV.: 6.75' SUMP ELEV.: 3.80' HEIGHT: 2.95'	P-05B, 24" INV.: 4.00' P-06, 18" INV.: 4.30'	P-07, 24" INV.: 3.80'
DI-05	Cylinder RIM ELEV.: 5.90' SUMP ELEV.: 3.00' HEIGHT: 2.90'	P-07, 24" INV.: 3.00' P-30, 24" INV.: 3.00'	P-08, 24" INV.: 3.00'
DI-06	Cylinder RIM ELEV.: 5.80' SUMP ELEV.: 2.90' HEIGHT: 2.90'	P-08, 24" INV.: 2.90' P-09, 18" INV.: 3.60'	P-10A, 24" INV.: 2.90'

STORM SEWER STRUCTURE TABLE

NAME	DETAILS	PIPES IN	PIPES OUT
DI-07	Cylinder RIM ELEV.: 5.70' SUMP ELEV.: 2.70' HEIGHT: 3.00'	P-10B, 24" INV.: 2.70' P-35, 24" INV.: 2.70'	P-11, 24" INV.: 2.70'
DI-08	Cylinder RIM ELEV.: 5.60' SUMP ELEV.: 2.60' HEIGHT: 3.00'	P-11, 24" INV.: 2.60' P-12, 18" INV.: 3.00'	P-13, 24" INV.: 2.60'
DI-09	Cylinder RIM ELEV.: 4.20' SUMP ELEV.: 0.80' HEIGHT: 3.40'	P-22, 15" INV.: 0.80' P-21, 18" INV.: 2.00'	P-23, 24" INV.: 0.80'
DI-10	Cylinder RIM ELEV.: 7.90' SUMP ELEV.: 5.70' HEIGHT: 2.20'	P-25, 18" INV.: 5.70'	P-27, 18" INV.: 5.70' P-26, 18" INV.: 5.70'
DI-11	Cylinder RIM ELEV.: 5.20' SUMP ELEV.: 2.50' HEIGHT: 2.70'	P-29, 24" INV.: 2.50' P-70, 24" INV.: 2.50'	P-30, 24" INV.: 2.50' P-31, 24" INV.: 2.50'
DI-12	Cylinder RIM ELEV.: 5.60' SUMP ELEV.: 2.35' HEIGHT: 3.25'	P-31, 24" INV.: 2.35'	P-32, 24" INV.: 2.35'
DI-13	Cylinder RIM ELEV.: 4.80' SUMP ELEV.: 2.10' HEIGHT: 2.70'	P-34, 24" INV.: 2.10'	P-36, 24" INV.: 2.10' P-35, 24" INV.: 2.10'
DI-14	Cylinder RIM ELEV.: 5.00' SUMP ELEV.: 1.80' HEIGHT: 3.20'	P-38, 18" INV.: 1.80' P-36, 24" INV.: 1.80'	P-39, 24" INV.: 1.80'
DI-15	Cylinder RIM ELEV.: 4.00' SUMP ELEV.: 1.30' HEIGHT: 2.70'	P-41, 24" INV.: 1.30'	P-42, 24" INV.: 1.30'
DI-16	Cylinder RIM ELEV.: 4.00' SUMP ELEV.: 1.10' HEIGHT: 2.90'	P-44, 24" INV.: 1.10'	P-45, 24" INV.: 1.10'
DI-17	Cylinder RIM ELEV.: 4.50' SUMP ELEV.: 1.00' HEIGHT: 3.50'	P-45, 24" INV.: 1.00'	P-46, 24" INV.: 1.00'
DI-18	Cylinder RIM ELEV.: 4.50' SUMP ELEV.: 0.70' HEIGHT: 3.80'	P-50, 24" INV.: 0.70'	P-51, 30" INV.: 0.70'
DI-19	Cylinder RIM ELEV.: 4.00' SUMP ELEV.: 0.60' HEIGHT: 3.40'	P-51, 30" INV.: 0.60'	P-53, 30" INV.: 0.60' P-52, 24" INV.: 0.60'
DI-20	Cylinder RIM ELEV.: 4.00' SUMP ELEV.: -4.63' HEIGHT: 8.63'	P-55, 30" INV.: 0.30' P-57, 18" INV.: 1.30'	P-58, 30" INV.: 0.30'
DI-21	Cylinder RIM ELEV.: 8.00' SUMP ELEV.: 5.80' HEIGHT: 2.20'		P-59, 18" INV.: 5.80'
DI-22	Cylinder RIM ELEV.: 7.65' SUMP ELEV.: 5.25' HEIGHT: 2.40'	P-61, 18" INV.: 5.25' P-63, 18" INV.: 5.25'	P-64, 18" INV.: 5.25'
DI-23	Cylinder RIM ELEV.: 7.10' SUMP ELEV.: 4.40' HEIGHT: 2.70'	P-66, 18" INV.: 4.90' P-68, 18" INV.: 4.90'	P-69, 24" INV.: 4.40'
DI-24	Cylinder RIM ELEV.: 5.40' SUMP ELEV.: 2.70' HEIGHT: 2.70'	P-69, 24" INV.: 2.70'	P-70, 24" INV.: 2.70'

STORM PIPE SPECIFICATIONS

HDPE
PIPE SHALL BE HIGH-DENSITY POLYETHYLENE, DUAL WALL, CORRUGATED EXTERIOR, SMOOTH INTERIOR, WATER TIGHT JOINT, INSTALLED PER LATEST NCDOT STD. 300.01 FOR FLEXIBLE PIPE.
(ADS N-12 WT IB, OR APPROVED EQUAL)

HP
PIPE SHALL BE POLYPROPYLENE, DUAL WALL, CORRUGATED EXTERIOR, SMOOTH INTERIOR, WATER TIGHT JOINT, INSTALLED PER LATEST NCDOT STD. 300.01 FOR FLEXIBLE PIPE.
(ADS HP STORM, OR APPROVED EQUAL)

RCP
PIPE SHALL BE RIGID REINFORCED CONCRETE CLASS IV AND INSTALLED PER LATEST NCDOT STD. 300.01 FOR RIGID PIPE.

STORM SEWER PIPE TABLE

NAME	SIZE	LENGTH	MATERIAL	PIPE INV. IN	PIPE INV. OUT
P-01	18"	11'	HDPE	8.13'	6.60'
P-02A	18"	60'	HP	6.60'	6.52'
P-02B	18"	87'	HDPE	6.52'	6.40'
P-03	24"	80'	HDPE	5.10'	5.00'
P-04	18"	23'	HDPE	7.39'	5.50'
P-05A	24"	60'	HP	5.00'	4.54'
P-05B	24"	69'	HDPE	4.54'	4.00'
P-06	18"	7'	HDPE	5.84'	4.30'
P-07	24"	31'	HDPE	3.80'	3.00'
P-08	24"	87'	HDPE	3.00'	2.90'
P-09	18"	18'	HDPE	4.92'	3.60'
P-10A	24"	60'	HP	2.90'	2.82'
P-10B	24"	89'	HDPE	2.82'	2.70'
P-11	24"	81'	HDPE	2.70'	2.60'
P-12	18"	6'	HDPE	3.96'	3.00'
P-13	24"	9'	HDPE	2.60'	2.55'
P-14	24"	20'	HDPE	1.20'	1.15'
P-15	24"	21'	HP	1.15'	1.05'
P-16	24"	20'	HPDE	1.05'	1.00'
P-17	18"	10'	HDPE	0.88'	0.80'
P-18	30"	30'	HDPE	0.50'	0.00'
P-19	30"	21'	HP	0.00'	0.00'
P-20	30"	50'	HDPE	0.00'	0.00'
P-21	18"	3'	HDPE	2.08'	2.00'
P-22	15"	3'	HDPE	0.82'	0.80'
P-23	24"	20'	HDPE	0.80'	0.00'
P-24	18"	21'	HP	6.20'	6.10'
P-25	18"	101'	HDPE	6.10'	5.70'
P-26	18"	140'	HDPE	5.70'	5.50'
P-27	18"	101'	HDPE	5.70'	5.00'
P-28	18"	21'	HP	5.00'	4.90'
P-29	24"	117'	HDPE	4.60'	2.50'
P-30	24"	113'	HDPE	2.50'	3.00'
P-31	24"	70'	HDPE	2.50'	2.35'
P-32	24"	40'	HDPE	2.35'	2.30'
P-33	24"	21'	HP	2.30'	2.20'
P-34	24"	102'	HDPE	2.20'	2.10'
P-35	24"	131'	HDPE	2.10'	2.70'
P-36	24"	75'	HDPE	2.10'	1.80'
P-37	18"	21'	HP	2.00'	1.90'

STORM SEWER PIPE TABLE

NAME	SIZE	LENGTH	MATERIAL	PIPE INV. IN	PIPE INV. OUT
P-38	18"	29'	HDPE	1.90'	1.80'
P-39	24"	24'	HDPE	1.80'	1.45'
P-40	24"	21'	HP	1.45'	1.40'
P-41	24"	48'	HDPE	1.40'	1.30'
P-42	24"	11'	HDPE	1.30'	1.25'
P-43	24"	21'	HP	1.25'	1.20'
P-44	24"	103'	HDPE	1.20'	1.10'
P-45	24"	76'	HDPE	1.10'	1.00'
P-46	24"	28'	HDPE	1.00'	0.95'
P-47	24"	21'	HP	0.95'	0.90'
P-48	24"	69'	HDPE	0.90'	0.80'
P-49	24"	22'	HP	0.80'	0.75'
P-50	24"	23'	HDPE	0.75'	0.70'
P-51	30"	84'	HDPE	0.70'	0.60'
P-52	24"	190'	HDPE	0.60'	0.60'
P-53	30"	102'	HDPE	0.60'	0.40'
P-54	30"	21'	HP	0.40'	0.35'
P-55	30"	44'	HDPE	0.35'	0.30'
P-56	18"	21'	HP	1.60'	1.50'
P-57	18"	10'	HDPE	1.50'	1.30'
P-58	30"	60'	HDPE	0.30'	0.25'
P-59	18"	35'	HDPE	5.80'	5.70'
P-60	18"	21'	HP	5.70'	5.60'
P-61	18"	49'	HDPE	5.60'	5.25'
P-62	18"	21'	HP	5.40'	5.30'
P-63	18"	24'	HDPE	5.30'	5.25'
P-64	18"	153'	HDPE	5.25'	5.10'
P-65	18"	21'	HP	5.10'	5.00'
P-66	18"	24'	HDPE	5.00'	4.90'
P-67	18"	21'	HP	5.30'	5.20'
P-68	18"	24'	HDPE	5.20'	4.90'
P-69	24"	91'	HDPE	4.40'	2.70'
P-70	24"	178'	HDPE	2.70'	2.50'
P-EX-01	18"	60'	CMP	6.93'	7.00'
P-EX-02	24"	51'	CMP	4.51'	4.16'
P-EX-03	24"	51'	CMP	2.55'	2.44'
P-EX-04	24"	50'	CMP	1.65'	1.44'
P-EX-05	30"	50'	CMP	0.90'	0.55'

FINAL DRAWING
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Kitty Hawk, North Carolina 27949
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BISSELL
Engineers, Planners, Surveyors and Environmental Specialists

ROADWAY, DRAINAGE & MISC.
CONSTRUCTION DETAILS

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PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP   CURRITUCK COUNTY   NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

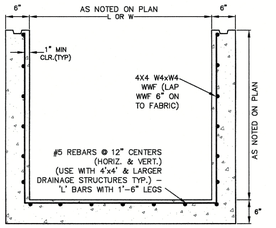
REVISIONS

NO.	DATE	DESCRIPTION	BY

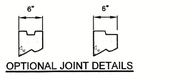
DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG
SHEET: 17 OF 23	
CAD FILE: 4018_PH_2-4	
PROJECT NO: 4018	

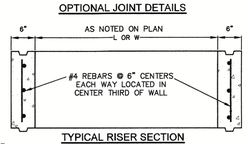
S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phases 2&4\4018_PH_2-4.dwg 9/28/2022 11:16 AM HP DesignJet T2500 PS HPGL2.pc3



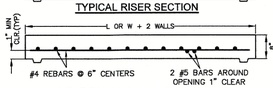
BASE UNIT SECTION A-A



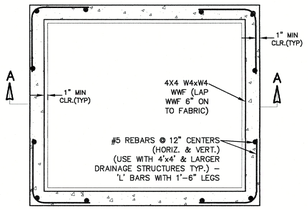
OPTIONAL JOINT DETAILS



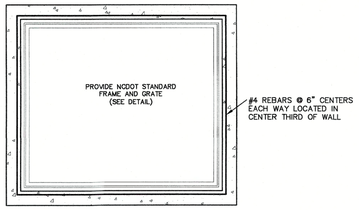
TYPICAL RISER SECTION



TYPICAL TOP SLAB SECTION



PLAN VIEW OF BASE UNIT



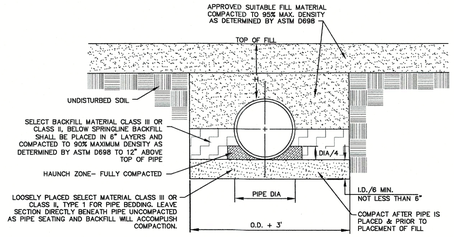
PLAN VIEW OF RISER UNIT

PRECAST DRAINAGE STRUCTURE GENERAL NOTES

1. DESIGN SHALL CONFORM TO LATEST NCDOT 840.46 SPECIFICATIONS FOR "TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE".
2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000PSI.
3. USE ASTM A615 GRADE 60 REINFORCING STEEL. USE ASTM A185 WELDED WIRE FABRIC WWF.
4. LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB TO 15'
5. PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704
6. ORIENT STRUCTURES SO THAT CORNERS WILL NOT BE CUT OR MODIFIED UNLESS ALLOWED BY DETAIL
7. PRECAST ALL ELEMENTS TO MEET ASTM C913
8. FRAME AND GRADE HEIGHT MAY BE ADJUSTED IN ACCORDANCE WITH STANDARD 840.25
9. PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS 12" ON CENTERS PER 840.66
10. WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR IF THE SAME MIN. AREA OF STEEL IS PROVIDED.
11. SEAL JOINTS WITH AN APPROVED SEALANT (SECTION 840 OF NCDOT STANDARD SPECIFICATIONS)
12. LIMIT MAXIMUM STRUCTURE SIZES INSIDE CLEAR DIMENSIONS TO 6'-" X 6'-0"
13. THE OUTSIDE PIPE DIAMETER PLUS 2" IS MINIMUM STRUCTURE SIZE OR THE OPENING REQUIRED FOR FRAME AND GRATE, WHICHEVER IS GREATER.
14. ANY DEVIATIONS FROM THE APPROVED PLAN & SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

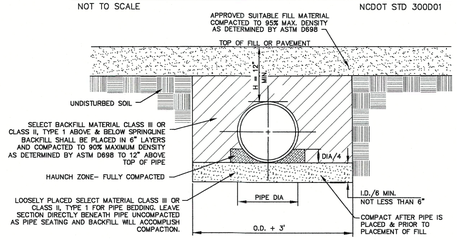
STANDARD TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

NOT TO SCALE — NCDOT STD 840.46



STANDARD RIGID PIPE INSTALLATION DETAIL

NOT TO SCALE — NCDOT STD 300D01

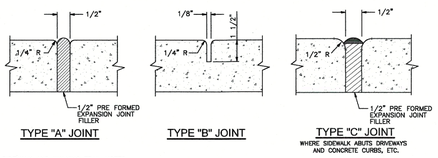


STANDARD FLEXIBLE PIPE INSTALLATION DETAIL

NOT TO SCALE — (ALL PROPOSED H.D.P.E. PIPING SHALL BE DOUBLE WALL ADS N-12 TYPE OR APPROVED EQUAL) — NCDOT STD 300D01

GENERAL PIPE INSTALLATION NOTES:

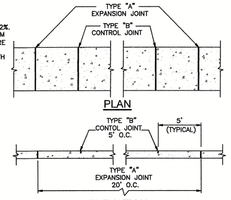
1. ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", CHAPTER XVII OF TITLE 29, CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON THE JOB AT ALL TIMES AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO ACT UPON ALL PERTINENT MATTERS OF THE WORK.
2. DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
3. THE PIPE CULVERT INSTALLATION SHALL BE INSTALLED IN ACCORDANCE WITH NCDOT TYPICAL STANDARD DETAIL 300D01.
   I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
   O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
   H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT OR THE BOTTOM OF THE PAVEMENT STRUCTURE AT THAT POINT.

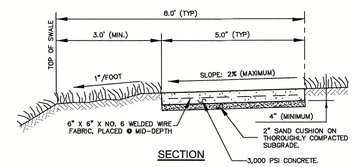


SIDEWALK AND WALKING TRAIL NOTES:

1. WALKS SHALL HAVE A 4 INCH MINIMUM THICKNESS.
2. CONCRETE SHALL BE A MINIMUM OF 3,000 PSI.
3. WALKS SHALL HAVE A 5 FOOT MINIMUM WIDTH.
4. CROSS SLOPE SHALL BE LIMITED TO A MAXIMUM OF 2%.
5. LONGITUDINAL SLOPE SHALL BE LIMITED TO A MAXIMUM OF 1:20 (5%) EXCEPT WHERE ACCESIBILTY RAMPS ARE PROVIDED AS NOTED.
6. ALL SIDEWALKS AND TRAILS SHALL BE COMPLIANT WITH THE LATEST HANDICAP ACCESSIBILITY REQUIREMENTS.

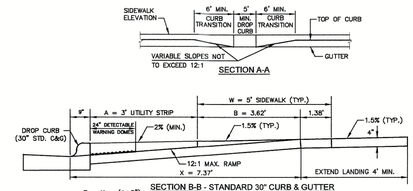
TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"A"	20' CENTER TO CENTER ON SIDEWALKS, P.C. AND P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS, DRIVEWAYS, AND SIMILAR STRUCTURES.
"B"	5' CENTER TO CENTER ON SIDEWALKS.



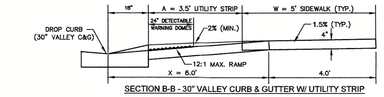


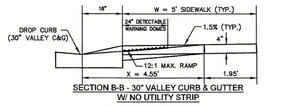
TYP. CONCRETE SIDEWALK DETAIL

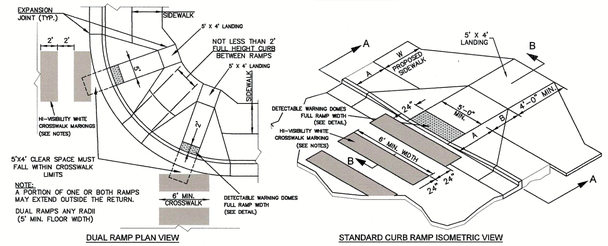
NOT TO SCALE



B = X – (A+9")
B = DISTANCE FROM FONT 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.







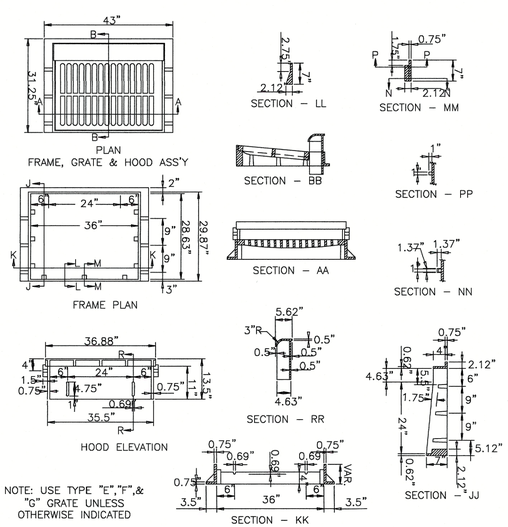
NOTE:
A PORTION OF ONE OR BOTH RAMPS MAY EXTEND OUTSIDE THE RETURN.

ACCESSIBLE RAMP GENERAL NOTES: [NCDOT STD. DETAIL 848.05]

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DRAWINGS OR AS DIRECTED BY THE ENGINEER. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT AND LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A MIN. 4'X4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SETBACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO PROJECT DRAWINGS FOR STOP BAR LOCATIONS, IF PROVIDED, OR AS DIRECTED BY THE ENGINEER..
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE, OR AS SPECIFIED ON PLANS.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% (12:1 H:V) MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. WHERE REQUIRED, CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MIN. OF 4'X4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'X5' WITH A MAXIMUM SLOPE OF 2% IN AN DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGHOUT THE ISLAND
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'X5' LANDING AT THE TOP OF A RAMP, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A $\frac{1}{2}$" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS.

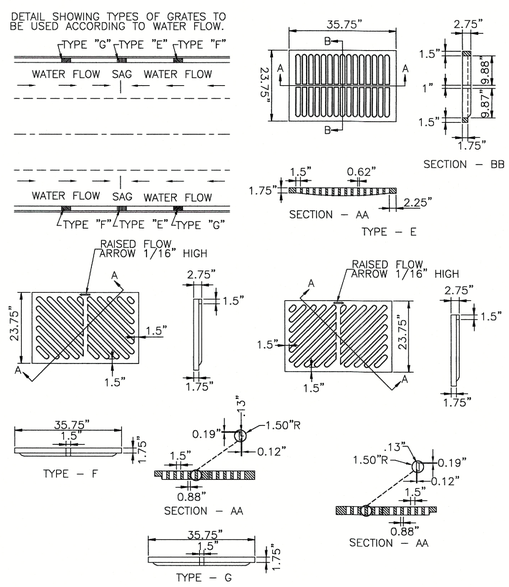
PEDESTRIAN CROSSWALK GENERAL NOTES: [NCDOT STD. DETAIL 1205.07]

1. USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
2. THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DRAWINGS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DRAWINGS OR AS DIRECTED BY THE ENGINEER..
3. THE STANDARD CROSSWALK IS THE TWO WHITE 8" MIN. TRANSVERSE LINES WITH A 6' MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" MAX. WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES. SEE DETAIL. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE OR AS SPECIFIED ON THE PROJECT DRAWINGS. CURB RAMPS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING AN FLARES.
4. STOP BARS (IF PROVIDED) SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.
5. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
6. BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4'X4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.
7. SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. SEE DETAIL.
8. CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS.



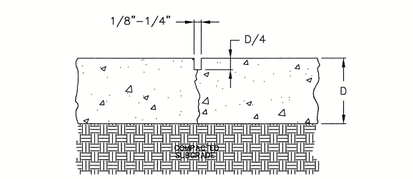
CATCH BASIN FRAME,GRATE & HOOD DETAIL

NOT TO SCALE — NCDOT STD 840.03



CATCH BASIN GRATE DETAIL

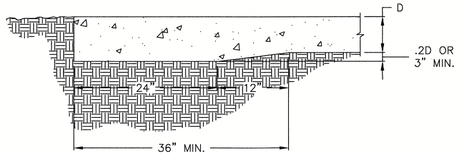
NOT TO SCALE — NCDOT STD 840.03B



CONVENTIONAL CONCRETE CONTROL JOINT DETAIL

NOT TO SCALE — SECTION VIEW

NOTES:
MINIMUM PAVEMENT THICKNESS (D) = 6" W/6x6–W2.9 x W2.9 WWF
REINFORCEMENT, PLACE 2" BELOW TOP OF SLAB
UNDOWELED TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR PRE–MOLDED. DO NOT DOWEL PAVEMENTS LESS THAN 7" THICK.

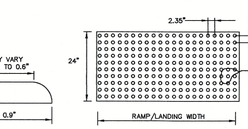


CONVENTIONAL CONCRETE THICKENED EDGE DETAIL

NOT TO SCALE — SECTION VIEW

CONVENTIONAL CONCRETE SPECIFICATIONS:

1. USE ACI CERTIFIED FLATWORK FINISHER
2. USE ACI 330R–01 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS
3. USE ACI 330.1–94 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS
4. ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS.
5. IF SUBGRADE SOILS ARE FOUND BY THE CONTRACTOR TO BE UNSUITABLE, TESTING AND PREPARATION RECOMMENDATIONS BY A GEOTECHNICAL ENGINEER MUST BE PROVIDED PRIOR TO CONCRETE PLACEMENT.
6. IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES, PLANT
   ROOT OR OTHER FOREIGN MATERIAL GREATER THAN $1\frac{1}{2}$" IN DIAMETER IN ORDER TO ACHIEVE
   ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.
7. KEEP ALL JOINTS CONTINUOUS WITH A MAXIMUM JOINT SPACING OF 10 FT.
8. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF PLACEMENT;
   A. SIDEWALK–SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH
   B. PAVEMENT–MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. T=4 INCH SPACING AT 10'x10')
9. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER–BASED CURING COMPOUND OR VISQUEEN AND BURLAP



TRUNCATED DOME DETECTABLE WARNING DETAIL

NOT TO SCALE

DETECTABLE WARNING GENERAL NOTES

1. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES MANUFACTURED BY "COTE–L INDUSTRIES, INC.". CALLED "SAFTI–TRAX", WITH POLYURETHANE COATING "DURABAK", OR APPROVED EQUAL. APPLIED ON SMOOTH (NON–GROOVED) CLEAN CONCRETE RAMP, AND SHALL CONFORM TO THE DETAILS IN THE PLANS AND IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
2. ALL DETECTABLE WARNING AREAS SHALL START AT BACK OF CURB, 24 INCHES IN DEPTH AND COVER THE COMPLETE WIDTH OF THE RAMP AREA 48 INCHES MIN..
3. 70% VISUAL CONTRAST IS REQUIRED. THE COLOR SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING MATERIAL, AS SPECIFIED ON THE PLANS. COLOR TO BE DETERMINED BY THE CITY STAFF, SAFETY YELLOW IS THE DEFAULT COLOR.
4. THE SMOOTH AND CLEAN CONCRETE UNDER DETECTABLE WARNING DEVICE AREA SHALL BE INCLUDED IN THE COST OF THE CONCRETE CURB RAMP. THE COST OF FURNISHING AND INSTALLING THE DETECTABLE WARNING DEVICE SHALL BE INCLUDED SEPARATELY AS "DETECTABLE WARNING DEVICE" PER SQUARE FOOT OR AS OUTLINED IN THE SPECIFICATIONS.
5. DETECTABLE WARNING SURFACE:
   APPLIED A COATING OF "DURABAK" SLIP–RESISTANT POLYURETHANE COATING TO THE SMOOTH, CLEAN CONCRETE SURFACE. ON TOP OF THE POLYURETHANE COATING APPLY TRUNCATED DOMES FROM A "SAFTY–TRAX" CONTACT SHEET. ON TOP OF THE TRUNCATED DOMES AND INITIAL POLYURETHANE COATING PLACE THREE ADDITIONAL COATS OF "DURABAK" POLYURETHANE COATING. COLOR TO BE DETERMINED BY CITY STAFF OR AS SPECIFIED ON THE PLANS. SAFETY YELLOW IS A DEFAULT COLOR.
6. ALL RAMPS AND DETECTABLE WARNING SHALL BE ALIGNED IN THE DIRECTION OF PEDESTRIAN TRAVEL AND DIRECTED TOWARD RAMP ON THE OPPOSITE SIDE OF STREET.

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C–906
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Kitty Hawk, North Carolina 27949
(252) 261–3300
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

SIDEWALK, DRAINAGE & MISC. CONSTRUCTION DETAILS

PROJECT: WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042639 ENGINEER DAVID W. KLEBITZ — 9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 18 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

S:\projects\4018 Waterside Villages Of Currituck\Phase4\Phases 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:16 AM HP Designjet T2500 PS HPGL2.pc3

GENERAL PROJECT NOTES:

1. PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK - PHASES 2 & 4
   GRANDY, CURRITUCK COUNTY, NORTH CAROLINA
2. DEVELOPER: WSV HOLDINGS, LLC
   P.O. BOX 90
   KILL DEVIL HILLS, NC 27948
3. PROJECT DESCRIPTION: PLANNED DEVELOPMENT RESIDENTIAL SUBDIVISION
4. NEAREST RECEIVING STREAM: DOWDYS BAY - INDEX NUMBER: 30-1-15
5. STREAM CLASSIFICATION: SC; RIVER BASIN: PASQUOTANK
6. PROJECT AREA TABULATION:

TOTAL PROPERTY AREA :	13.65 AC.
PROPOSED DISTURBED AREA :	14.00 AC.

AREA CALCULATION NOTE:
All areas have been calculated utilizing properties within the Autocad software.

MATERIAL BALANCE NOTE:
All excavated material occurring during the course of construction shall remain on-site for roadway construction and lot grading. See SCHEDULE OF LAND DISTURBING ACTIVTIES provided on Sheet 5 of this set for an estimated cut fill material balance for the project.

WETLAND NOTE:
There are no 404 jurisdictional wetlands designated in the area of proposed construction

STABILIZATION NOTE:
The angle of graded slopes and fills shall be no greater than the angle that can be retained by vegetative cover or other adequate erosion control devices or structures.
In any event, all disturbed areas left exposed will, WITHIN 14 CALENDAR DAYS OF COMPLETION of any phase of grading, be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion.
Additionally, certain critical areas as identified on the plan, such as, but not limited to, perimeter dikes, swales, slopes steeper than 3:1, and areas located within High Quality Water Zones, must be temporarily or permanetly stabilized WITHIN 7 CALENDAR DAYS OF COMPLETION of any phase of grading in these areas.
A permanent ground cover for all disturbed areas must be provided WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (whichever is shorter) following completion of construction or development.

CONSTRUCTION SEQUENCE SCHEDULE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
Construction Access– Construction entrance, construction routes, equipment parking areas	First land-disturbing activity–Stabilize bare areas immediately with gravel & temporary vegetation as construction takes place.
Sediment Traps & Barriers Basin traps, sediment fences, & outlet protection	Install principal basins after construction site is accessed. Install additional traps and barriers as needed during grading.
Runoff Control– Diversions, perimeter dikes, water bars, and outlet protection	Install key practices after principal sediments traps and before land grading. Install additional runoff-control conveyance measures during grading.
Runoff Conveyance System– Stabiles stream banks, storm drains, channels, inlet & outlet protection, slope drains	Where necessary, stabilize stream banks as early as possible. Install principal runoff conveyance system with runoff-control measures. Install remainder of system after grading.
Land Clearing & Grading– Site preparation– cutting, filling & grading, sediment traps, barriers, diversions, drains, surface roughening	Begin major clearing and grading after principal & key runoff-control measures area installed. Clear borrow & disposal areas as needed. Install additional control measures as grading progresses. Mark trees & buffer areas for preservation.
Surface Stabilization– Temporary & permanent seeding, mulching, sodding, rip rap.	Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or complete.
Building Construction– Buildings, utilities, paving.	Install necessary erosion & sedimentation control practices as work takes place.
Landscaping & Final Stabilization– Topsoiling, trees & shrubs, permanent seeding, mulching, sodding, rip rap	Stabilize all open areas, including borrow & spoil areas. Remove & stablize all temporary control measures.

LAND GRADING CONSTRUCTION SPECIFICATIONS

1. Construct & maintain all erosion & sedimentation control practices & measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.

4. Clear & grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of fill.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.

7. Do not incorporate frozen material or soft, mucky, or highly compressible materials into fill slopes.

8. Do not place fill on a frozen foundation, due to possible subsidence and slippage.

9. Keep diversions and other water conveyance measures free of sediment during all phases of development.

10. Handle seeps or springs encountered during construction in accordance with approved methods.

11. Following completion of any phase of grading, provide a groundcover (temporary or permanent) on all exposed slopes within 14 calendar days, or 7 calendar days in critical areas identified on the plan; and, a permanent groundcover for all disturbed areas within 15 working days or 90 calendar days (whichever is shorter) following completion of construction or development.

12. Provide adequate protection from erosion for all topsoil stockpiles, borrow areas, and spoil areas.

MAINTENANCE
Periodically check all graded areas & the supporting erosion & sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversions and other water–disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small–eroded areas before they become significant gullies is an essential part of an effective erosion & sedimentation control plan.

PERMANENT SEEDING

The purpose of permanent seeding is to reduce erosion and decrease sediment yield from disturbed areas, and to permanently stabilize such areas in a manner that is economical, adapts to site conditions, and allows selection of the most appropriate plant materials. These areas must be seeded or planted within 15 working days or 90 calendar days after final grade is reached, unless temporary stabilization is applied.

PERMANENT SEEDING SPECIFICATIONS

Seeding Recommendations for Summer
SEEDING DATES – April to July
SEEDING MIXTURE

Species	Rate
Common bermudagrass	10/1,000 sf (sprigs) 1–2 lb/1,000 sf (seed) SOD (See Sodding Notes)

Seeding Recommendations for Early Fall through Early Spring
SEEDING DATES – August to March (early fall and spring recommended)

Species	Rate
Kentucky 31 Tall Fescue	6 lb/1,000 sf (broadcast seed)

SEEDING NOTES–
1. Sprig or sod. Moisture is essential during initial establishment. Sod must be kept watered for 2–3weeks, but can be planted earlier or later than sprigs.

Soil Amendments–
It is highly recommended that soils be tested and amended as found necessary. If a sois are not tested follow these recommendations:
Apply 3,000 lb/acre of ground agricultural limestone and 500 lb/acre of 10–10–10 starter fertilizer, or 50 lb/acre nitrogen from turf–type slow–release fertilizer. Add 25–50 lb/acre nitrogen at 2–3 week intervals through midsummer.

Sprigging–
Plant sprigs in furrows with a tractor–drawn transplanter, or broadcast by hand. (Not recommended for Tall Fescue)

Furrows should be 4–6 inches deep and 2 feet apart. Place sprigs about 2 ft. apart in a row with one end at or above ground level.

Broadcast at rates shown above, and press sprigs into the top 1/2–2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.

Mulch–
Do not mulch Bermuda Grass. For Tall Fesuce seed, 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–
Water as needed. Mow bermuda to 3/4 to 1–inch height and tall fescue to 2.5 – 3.5 inch height. Topdress bermuda with 40 lb/acre nitrogen in April, 50 lb in May, 50 lb in June, 50 lb in July, and 25 lb in August. Top dress tall fescue in mid September,again in November and February with turf–grade 3–1–2 or 4–1–2 ratio turf–grade fertilizer. Fertilize with 1 lb of actual nitrogen per 1,000 sf. Do not fertilze tall fescue between Mid March and Early September.

TEMPORARY SEEDING

The purpose of temporary seeding is to temporarily stabilize denuded areas that will not be brought to final grade or permanently seeded for a period of more than 14 calendar days, or 7 days in critical areas indentified on the plan.

TEMPORARY SEEDING SPECIFICATIONS

Seeding Recommendations for Late Winter & Early Spring
SEEDING DATES– December 1 to April 15
SEEDING MIXTURE

Species	Rate (lb/acre)
Winter Rye (grain)	120 (Annual Ryegrass shall not be used)
Annual Lespedeza (Kobe)	50

*Omit Annual Lespedeza when duration of temporary cover is not to extend beyond June

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, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Summer
SEEDING DATES– April 15 to August 15
SEEDING MIXTURE

Species	Rate (lb/acre)
German Millet	40

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, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Fall
SEEDING DATES– August 15 to December 30
SEEDING MIXTURE

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

Soil Amendments–
Follow recommendations of 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 ld/acre Kobe Lespedeza in late February or Early March.

SODDING

The purpose of permanent seeding is to prevent erosion and damage from sediment and runoff by stabilizing the soil surface with permanent vegetation for the purpose of:
–the provision of immediate vegetative cover in critical areas
–to stabilize disturbed areas with a suitable plant material that cannot be established by seed.
–to stabilize drainage ways & channels and other areas of concentrated flow where flow velocities will not exceed that specified grass lining.

SODDING SPECIFICATIONS
Sod Quality
–Sod should be machine cut at a uniform depth of 1/2–2 inches
–Sod should not have been cut in excessively wet or dry weather.
–Sections of sod should be standard size as determined by the supplier, uniform, and untorn.
–Sections of sod should be strong enough to support their own weight and retain their size and shape when lifted by one end.
–Harvest, delivery, and installation of sod should take place within a period of 36 hours.

Soil Amendments–
Apply lime and fertilizer according to soil tests or apply 2 tons/acre of pulverized agricultural limestone and 1,000 lb/acre 10–10–10 fertilizer in the fall, or 5–10–10 in spring.

Prior to laying sod, clear the soil surface of trash, debris, roots, branches, stones, and clods larger than 2 inches in diameter. Fill or level low spots in order to avoid standing water. Rake or harrow the site to achieve a smooth and level final grade. Complete soil preparation by rolling or cultipacking to firm soil.

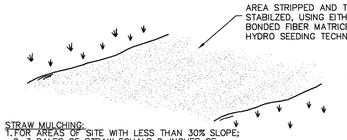
Sod Installation–
1. Moistening the sod after it is unrolled helps maintain viability. Store in shade during installation.
2. Rake the soil surface to break the crust just before laying sod. During the summer, lightly irrigate the soil, immediately before laying sod to cool the soil and reduce root burning & dieback.
3. Do not sod on grave, frozen soils, or soils that have been treated recently with sterilants or herbicides.
4. Lay the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other. Stagger strips in a brick–like pattern. Be sure that the sod is not stretched or overlapped and that all joints are butted tightly to prevent voids. Use a knife or sharp spade to trim and fit irregular shaped areas.
5. Install strips of sod with their longest dimension perpindicular to the slope. On slopes of 3:1 or greater, or wherever erosion may be a problem, secure sod with pegs or staples.
6. As sodding of clearly defined areas is completed, roll sod to provide good contact between roots and soil.
7. After rolling, irrigate until the soil is wet 4 inches below the sod.
8. Keep sodded areas moist to a depth of 4 inches until the grass takes root. This can be determined by tugging on the sod.
9. Mowing should not be attempted until the sod is firmly rooted, usually 2–3 weeks.

Sodded Waterways
1. Prepare soil as described above.
2. Lay sod strips perpindicular to the direction of flow, with the lateral joints staggered in a brick–like pattern. Butt edges tightly together.

Maintenance–
After the first week, water as necessary to maintain adequate moisture in the root zone & prevent dormancy of the sod.

Do not remove more than one–third of the shoot in any one mowing. Grass height should be maintained between 2–3 inches unless otherwise specified.

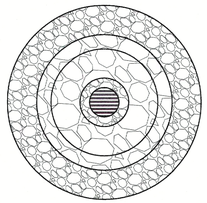
After first growing season, established sod requires fertilization, and may also require lime. Follow soil test recommendations.



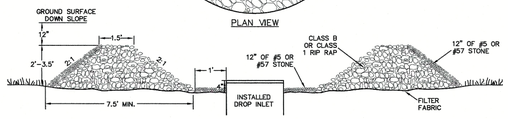
STRAW MULCHING:
1. FOR AREAS OF SITE WITH LESS THAN 30% SLOPE; 2–3 BALES OF STRAW EQUALS 2–INCHES OF STRAW MULCH OVER 1000 SQARE FEET.
2. MULCH SHALL BE WEED FREE STRAW.

TO PROVIDE TEMPORARY SOIL STABILIZATION BY PLANTING GRASSES AND LEGUMES TO AREAS THAT WOULD REMAIN BARE FOR MORE THAN 14 CALENDAR DAYS, OR 7 DAYS IN INDENTIFIED CRITICAL AREAS, WHERE PERMANENT COVER IS NOT NECESSARY OR APPROPRIATE.

LAND DISTURBANCE & STABILIZATION DETAIL
NOT TO SCALE



PLAN VIEW

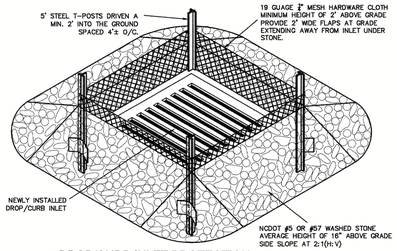


SECTION VIEW

ROCK DOUGHNUT INLET PROTECTION
NOT TO SCALE

INLET PROTECTION SPECIFICATIONS:
INSPECT AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE DEBRIS FROM MESH AND REPLACE STONES AS NEEDED.

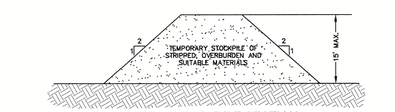
REMOVE ONCE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



DROP/CURB INLET PROTECTION
NOT TO SCALE — ISOMETRIC VIEW

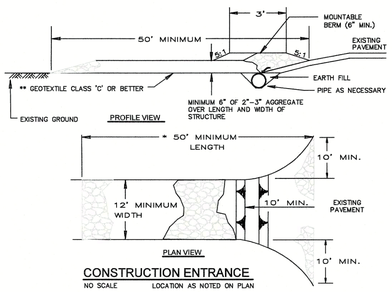
INLET PROTECTION SPECIFICATIONS:
INSPECT AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE DEBRIS FROM MESH AND REPLACE STONES AS NEEDED.

REMOVE ONCE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



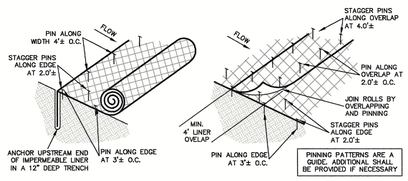
TYPICAL STOCKPILE SECTION
NOT TO SCALE — SECTION VIEW

STOCKPILES HAVING 2:1 SIDE SLOPES ARE CONSIDERED CRITICAL AREAS. SEE STABILIZATION NOTES FOR TEMPORARY AND PERMANENT STABILIZATION REQUIREMENTS. LEVEL GRADE AREA AND STABLIZE AT COMPLETION

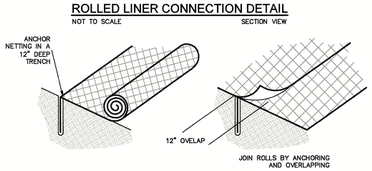


CONSTRUCTION ENTRANCE
NO SCALE — LOCATION AS NOTED ON PLAN

CONSTRUCTION ENTRANCE SPECIFICATIONS
1. Length – minimum of 50' (*30' for single residence lot).
2. Width – 12' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water – all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location – A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

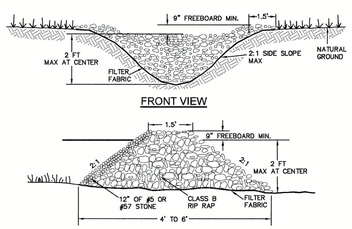


ROLLED LINER CONNECTION DETAIL
NOT TO SCALE — SECTION VIEW



ROLLED EROSION CONTROL MATTING DETAIL
NO SCALE — LOCATION AS NOTED ON PLAN

ROLLED EROSION CONTROL MATTING (R.E.C.M.) SPECIFICATIONS:
1. All areas identified on these plans as requiring an erosion control matting shall be lined with a protective covering to minimize erosion and protect seed until permanent vegetation is established.
2. Covering shall be composed of a bio or photo degradable material to minimize long term environmental impacts.
3. Mulching with straw or other organic materials can be utilized only when it will not impede the establishment of permanent vegetation. Mulches must be properly anchored which may be difficult in some environments. An example is straw mulch with jute netting stapled or pinned in place.
4. Pre–manufactured rolled erosion control products (RECP) are highly recommended for this application. RECP's shall be installed according to manufacturer specifications for channel linings. An example is a woven straw or wooden fiber Excelsior matting.



TEMPORARY STONE CHECK DAM CONSTRUCTION
NOT TO SCALE — LOCATIONS AS NOTED ON PLAN

TEMPORARY STONE CHECK DAM CONSTRUCTION SPECIFICATIONS:
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 DISPOSAL OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA.

2. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.

3. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.

4. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.

5. ALL CUT AND FILL SLOPES SHOULD BE 2:1 OR FLATTER.

6. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.

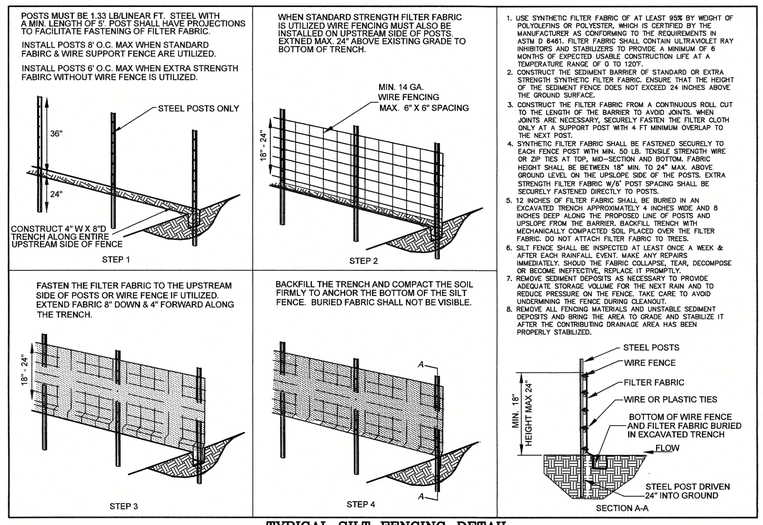
7. MATERIAL USED IN THE STONE SECTION SHOULD BE A WELL–GRADED MIXTURE OF STONE WITH A d50 SIZE OF 9 INCHES(CLASS B EROSION CONTROL STONE IS RECOMMENDED) AND A MAXIMUM STONE SIZE OF 14 INCHES. THE STONE MAY BE MACHINE PLACED AND THE SMALLER STONES WORKED INTO THE VOIDS OF THE LARGER STONES. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER–RESISTANT.

8. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION.

9. 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 OF TEMPORARY STONE CHECK DAMS:
INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS WHEN NEEDED.

REMOVE SEDIMENT ACCUMULATION 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.



TYPICAL SILT FENCING DETAIL
NOT TO SCALE — LOCATION AS NOTED ON PLAN

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-0149
Firm License # C-0149 Highway
P.O. Box 1088
Grandy, North Carolina 27949
(252) 261-3266
(252) 261-1760
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

EROSION AND SEDIMENT CONTROL NOTES & DETAILS

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP — CURRITUCK COUNTY — NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 19635 ENGINEER DAVID M. BISSELL 9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 19 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phases 2&4\4018_Ph_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:16 AM HP Designjet T2500 PS HPGL2.pc3

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

Required Ground Stabilization Timeframes

Site Area Description	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 90 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.

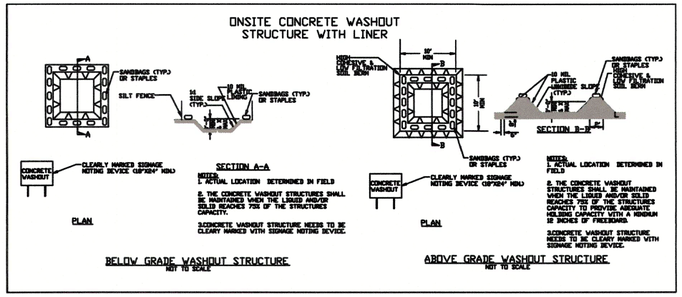
PORTABLE TOILETS

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.

NORTH CAROLINA *Environmental Quality*



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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

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BISSELL PROFESSIONAL GROUP
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NCG01 - GROUND STABILIZATION & MATERIALS HANDLING

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042449 ENGINEER DAVID K. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 20 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

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 those un-attended days (anc 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 (SDCs)	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 stream 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 inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous 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 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.

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.

NORTH CAROLINA *Environmental Quality*

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

NCG01 - SELF INSPECTION, RECORDKEEPING & REPORTING

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 049[illegible] ENGINEER DAVID W. KLESITE
9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 21 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

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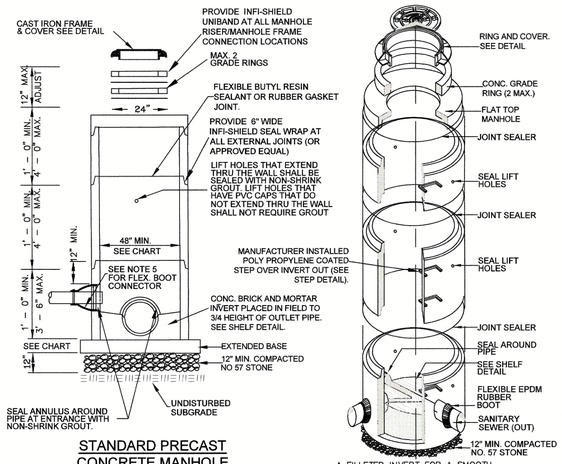


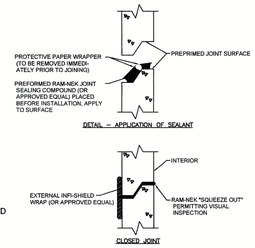
STANDARD PRECAST CONCRETE MANHOLE

NOT TO SCALE (ALL MH SHALL HAVE EX. BASES)

A FILLETED INVERT FOR A SMOOTH TRANSITION OF FLOW BETWEEN INLET & OUTLET PIPE SHALL BE PROVIDED.

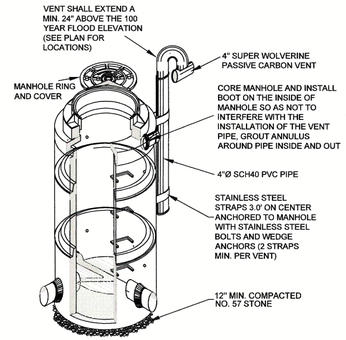
NOTES:

1. PRECAST REINFORCED CONCRETE MANHOLES SHALL BE IN ACCORDANCE WITH ASTM C-478
2. MIN. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI.
3. ALL MANHOLES SHALL HAVE MIN. 6" EXTENDED BASE.
4. FLEXIBLE BUTYL RESIN JOINT SEALANT SHALL BE IN ACCORDANCE W/ ASTM C990. RUBBER GASKET JOINTS SHALL BE IN ACCORDANCE W/ASTM C-443.
5. FLEXIBLE EPDM RUBBER BOOT CONNECTORS SHALL BE IN ACCORDANCE W/ ASTM C923. INSTALLED BY MANUFACTURER W/STAIN- LESS STEEL COMPRESSION RING AND TAKE-UP CLAMP. CONNECTION TO MAIN SHALL BE BY CONTRACTOR WITH STAINLESS STEEL PIPE CLAMP.
6. MORTAR SHALL BE QUICK SETTING, NON-SHRINK GROUT MIXED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. MANHOLE STEPS SHALL BE IN ACCORDANCE WITH ASTM C478 AND OSHA REGULATIONS ALIGN W/INVERT OUT.
8. PREFORMED MANHOLE INVERTS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE PROJECT ENGINEER. STANDING WATER IN INVERT OF MANHOLE IS NOT ACCEPTABLE.
9. ALL MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE (VACUUM) TEST PRIOR TO BACKFILL.



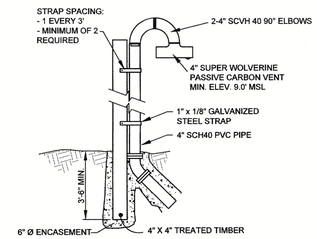
JOINT SEAL DETAIL

NOT TO SCALE



STANDARD PRECAST CONCRETE MANHOLE WITH VENT PIPING

NOT TO SCALE

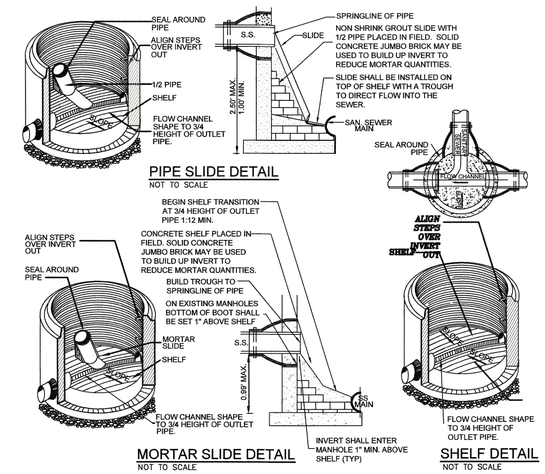


VENT PIPING DETAIL

NOT TO SCALE

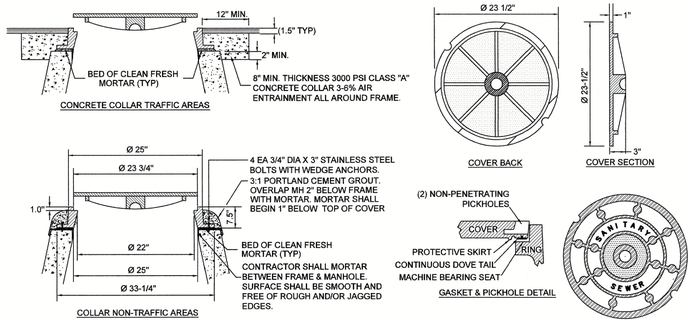
NOTES:

1. VENT PIPE OPENING IN PRECAST CONCRETE MANHOLE WALL SHALL BE CORED WITH A CONCRETE CORING MACHINE.
2. LOCATION OF VENT PIPE SHALL BE AS DIRECTED BY THE CONSTRUCTION INSPECTOR WITH WATERTIGHT RING AND COVER VENT TOP TO BE ELEVATED AT LEAST 12" ABOVE THE 100 YEAR FLOOD PLAIN ELEVATION.
3. PASSIVE CARBON VENT FILTERS SHALL ONLY BE INSTALLED ON LIFT STATIONS AND MANHOLES WITH VENT PIPING. (SEE VENTED MANHOLE SCHEDULE)



MORTAR AND PIPE SLIDE NOTES:

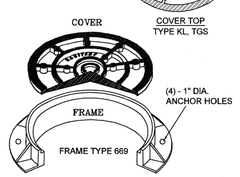
1. MORTAR SLIDE SHALL BE USED FOR LESS THAN 1 FOOT SEPARATION BETWEEN INVERT OUT & INVERT OF INCOMING PIPE.
2. PIPE SLIDE REQ'D WHERE VERTICAL SEPARATION BETWEEN PIPE INVERTS IS GREATER THAN 1' AND LESS THAN, OR EQUAL TO 2.5'.
3. OUTSIDE DROP STRUCTURE REQUIRED WHERE VERTICAL SEPARATION BETWEEN INVERTS EXCEEDS 2.50'. SEE OUTSIDE DROP MANHOLE DETAIL.
4. VERIFY SLIDE INSTALLATION WITH PROJECT COORDINATOR PRIOR TO CONSTRUCTION.
5. MANHOLE AND CONNECTIONS SHALL BE IN ACCORDANCE WITH STANDARD MANHOLE DETAIL.
6. BRICK USED FOR INVERT AND SHELF CONSTRUCTION SHALL BE NCDOT STANDARD CONCRETE JUMBO BRICK. MEETING ASTM C55 GRADE S-II EXCEPT ABSORPTION LESS THAN 10 LBS/CU FT.
7. MANHOLES GREATER THAN 12' IN DEPTH SHALL HAVE MIN. 6" EXTENDED BASE.
8. THE MINIMUM SLOPE ACROSS THE INVERT OF THE MANHOLE SHALL BE 2% UNLESS OTHERWISE APPROVED BY ENGINEER
9. SEE STANDARD MANHOLE DETAIL FOR ADDITIONAL REQUIREMENTS.
10. DROP AND / OR SLIDE REQUIREMENTS SHALL APPLY TO ALL LATERALS ENTERING MANHOLES AS OUTLINED IN NOTES 1, 2 & 3. NO MORE THAN 4. FOUR INCH LATERALS OR 3, SIX INCH LATERALS SHALL ENTER A 4' DIAMETER TERMINAL MANHOLE. NO MORE THAN 2 LATERALS (REGARDLESS OF SIZE) SHALL ENTER ALL OTHER 4' DIAMETER MANHOLES. ALL LATERALS SHALL HAVE AN INDIVIDUAL TROUGH. 5' DIAMETER MANHOLES SHALL BE USED IF THE ABOVE CONDITIONS ARE NOT MET. THE INVERT OF THE LATERAL SHALL BE A MINIMUM OF 1" ABOVE THE SHELF.

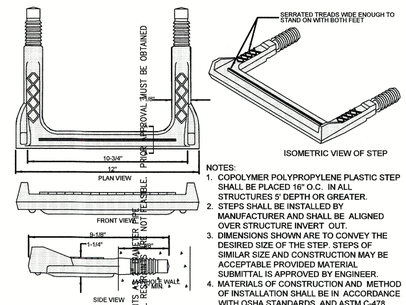


STANDARD MANHOLE RING AND COVER

NOTES: NOT TO SCALE (TO BE USED ON ALL MANHOLES)

1. MANHOLE FRAME AND COVER SHALL BE MADE OF GRAY CAST IRON CONFORMING TO ASTM-A48 CLASS 35B, MANUFACTURED BY SAME MANUFACTURER. ALL CASTINGS SHALL CONFORM TO THE SHAPE AND DIMENSIONS SHOWN. THEY SHALL BE CLEAN AND PERFECT, WITHOUT BLOW OR SAND HOLES OR DEFECTS OF ANY KIND, TENDING TO IMPAIR THEIR STRENGTH. NO PLUGGING OR STOPPING OF DEFECTIVE HOLES WILL BE PERMITTED.
2. CASTINGS SHALL BE UNPAINTED AND SHALL HAVE THE LETTERS "SANITARY SEWER" CAST INTO COVER. LETTERS SHALL BE RAISED AND CLEARLY VISIBLE.
3. MANHOLE RING AND COVER SHALL WITHSTAND H-20 VEHICULAR TRAFFIC LOADING CONDITIONS.
4. MINIMUM AVERAGE WEIGHT: PLUS OR MINUS 5% RING 190 LBS., COVER 125 LBS, UNIT 315 LBS.
5. COVERS SHALL HAVE (2) NON-PENETRATING PICKHOLES.
6. A T-GASKET SHALL BE PROVIDED BETWEEN COVER AND RING SEAT.
7. RING AND COVER SHALL BE US FOUNDRY & MFG. CORP RING MODEL 669 & COVER MODEL KL, TGS (ALTERNATES SHALL BE APPROVED BEFORE INSTALLATION)



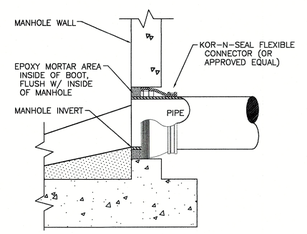


NOTES:

1. COPOLYMER POLYPROPYLENE PLASTIC STEP SHALL BE PLACED 16" O.C. IN ALL STRUCTURES 5' DEPTH OR GREATER.
2. STEPS SHALL BE INSTALLED BY MANUFACTURER AND SHALL BE ALIGNED OVER STRUCTURE INVERT OUT.
3. DIMENSIONS SHOWN ARE TO CONVEY THE DESIRED SIZE OF THE STEP. STEPS OF SIMILAR SIZE AND CONSTRUCTION MAY BE ACCEPTABLE PROVIDED MATERIAL SUBMITTAL IS APPROVED BY ENGINEER.
4. MATERIALS OF CONSTRUCTION AND METHOD OF INSTALLATION SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND ASTM C-478.

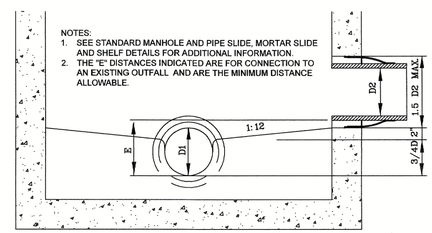
MANHOLE STEP DETAIL

NOT TO SCALE



FLEXIBLE MANHOLE CONNECTION DETAIL

NOT TO SCALE



NOTES:

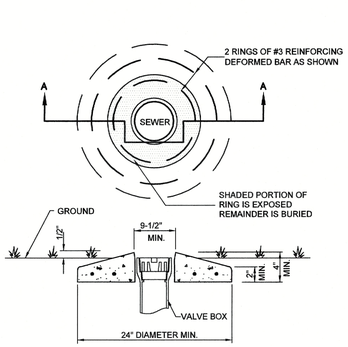
1. SEE STANDARD MANHOLE AND PIPE SLIDE, MORTAR SLIDE AND SHELF DETAILS FOR ADDITIONAL INFORMATION.
2. THE "E" DISTANCES INDICATED ARE FOR CONNECTION TO AN EXISTING OUTFALL AND ARE THE MINIMUM DISTANCE ALLOWABLE.

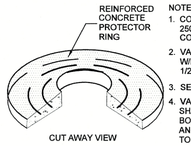
1. TO FIND "E" ENTER CHART AT LEFT WITH EFFLUENT PIPE SIZE AND ENTER PIPE AT TOP WITH INFLUENT PIPE SIZE. "E" DISTANCE IS POINT OF CONVERGENCE OF COLUMN AND ROW.
2. WHERE A 5' MH IS REQUIRED ADD 1/2" TO "E" DISTANCE TO ACCOUNT FOR THE ADDITIONAL 6" OF SHELF SLOPE.

		D2					
		4"	6"	8"	12"	15"	18"	24"
D1	8	9.00	9.50	10.00	–	–	–	–
	12	11.00	11.50	12.00	13.00	–	–	–
	15	14.25	14.75	15.25	16.25	17.00	–	–
	18	16.50	17.00	17.50	18.50	19.25	20.00	–
	24	21.00	21.50	22.00	23.00	23.75	24.50*	26.00

MANHOLE CONNECTION GUIDE

NOT TO SCALE



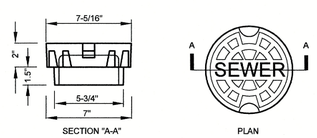


NOTES:

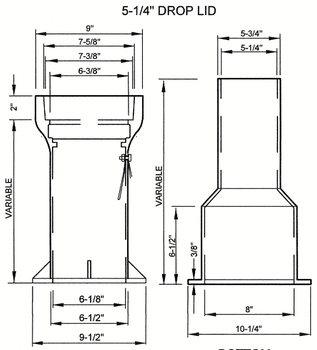
1. CONCRETE PROTECTOR RING SHALL BE 2500 P.S.I. PRECAST REINFORCED CONCRETE
2. VALVE BOX SHALL BE AT GRADE W/PROTECTOR RING EXTENDING 1/2" ABOVE GRADE
3. SEE GATE VALVE AND BOX DETAIL
4. VALVE BOX PROTECTOR RINGS SHALL BE INSTALLED AROUND VALVE BOX IN UNPAVED NON-TRAFFIC AREAS. AND SHALL NOT CREATE A HINDERANCE TO MOWING OPERATIONS.

VALVE BOX PROTECTOR RING DETAIL

SCALE: NONE

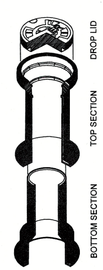


5-1/4" DROP LID



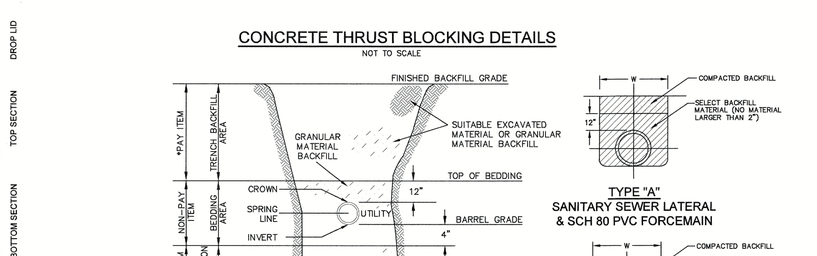
VALVE BOX DETAIL

SCALE: NONE



VALVE BOX NOTES:

1. SHALL BE 3 PART SLIP-TYPE MANUFACTURED BY ALABAMA PIPE CO., CHAPMAN VALVE CO., COLOMBIAN IRON WORKS, R.D. WOOD CO. OR APPROVED EQUAL.
2. SHALL CLOSE GRAINED CAST IRON SLIP-TYPE VALVE BOX WITH A MINIMUM THICKNESS OF 3/16".
3. SHALL HAVE RAISED LETTERS "SEWER" CAST INTO COVER.
4. SHALL ACCOMMODATE 4" THRU 12" VALVES.
5. SHALL HAVE 3/8" HOLE DRILLED IN TOP SECTION THRU WHICH A 1/4" X 1-1/2" GALVANIZED BOLT SHALL BE USED TO SECURE A 12GA. THIN TRACER WIRE FOR NON-FERROUS PIPE. A 1/2" WASHER SHALL BE USED BETWEEN NUT AND INSIDE OF BOX. TIGHTEN HAND TIGHT.
6. SCREW TYPE VALVE BOXES ARE NOT ACCEPTABLE.
7. DIMENSIONS ARE FOR INFORMATION ONLY AND VARY BASED UPON THE MANUFACTURER.



NOTES:

1. ALL SEWER SERVICE PIPE SHALL HAVE TYPE "A" BEDDING
2. CHANGES IN PIPE BEDDING CLASSIFICATION SHALL ONLY BE MADE AT MANHOLES.
3. DUCTILE IRON FORCE MAIN SHALL HAVE TYPE "A" BEDDING.

NOTE: THE SAME REQUIREMENTS WHERE RECIPROCAL FITTINGS ARE USED

1. THE INDICATED AREA OF CONCRETE THRUST BLOCKING SHALL ONLY BE USED WHERE FROM ENGINEER PRIOR TO USING THRUST BLOCKING

PIPE	AREA AGAINST UNDISTURBED SOIL	
2"	1'-0"	x 1'-0"
4"	1'-0"	x 1'-0"
6"	1'-3"	x 1'-3"
8"	1'-6"	x 1'-6"
10"	2'-0"	x 2'-0"
12"	2'-3"	x 2'-3"

PIPE	AREA AGAINST UNDISTURBED SOIL	
2"	1'-0"	x 1'-0"
4"	1'-0"	x 1'-0"
6"	1'-3"	x 1'-3"
8"	1'-6"	x 1'-6"
10"	2'-0"	x 2'-0"
12"	2'-3"	x 2'-3"

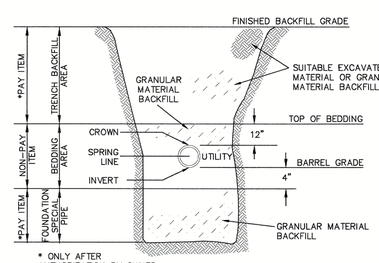
PIPE	AREA AGAINST UNDISTURBED SOIL	
2"	1'-0"	x 1'-0"
4"	1'-0"	x 1'-0"
6"	1'-0"	x 1'-0"
8"	1'-2"	x 1'-2"
10"	1'-6"	x 1'-6"
12"	1'-8"	x 1'-8"

PIPE	AREA AGAINST UNDISTURBED SOIL	
2"	1'-0"	x 1'-0"
4"	1'-0"	x 1'-2"
6"	1'-6"	x 1'-6"
8"	1'-9"	x 1'-9"
10"	2'-0"	x 2'-0"
12"	2'-8"	x 2'-8"

PIPE	AREA AGAINST UNDISTURBED SOIL	
2"	1'-0"	x 1'-0"
4"	1'-0"	x 1'-2"
6"	1'-6"	x 1'-6"
8"	1'-9"	x 1'-9"
10"	2'-0"	x 2'-0"
12"	2'-8"	x 2'-8"

CONCRETE THRUST BLOCKING DETAILS

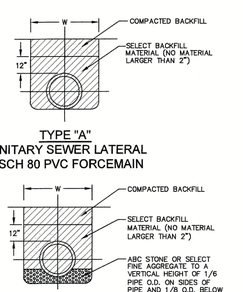
NOT TO SCALE



* ONLY AFTER AUTHORIZATION BY OWNER

FORCE MAIN & GRAVITY SEWER SERVICE TRENCH DETAIL

NOT TO SCALE



TYPE "A"
SANITARY SEWER LATERAL & SCH 80 PVC FORCEMAIN

TYPE "C"
D.I.P. FORCEMAIN

1. EMBEDMENT MATERIALS, CLASSES I, II, OR III AS DESCRIBED IN ASTM D 2321, SHALL BE USED FOR BEDDING FOR BEDDING, HAUNCHING AND INITIAL BACKFILL AND CAREFULLY COMPACTED FOR ALL FLEXIBLE PIPE.
2. BEDDING CLASSES A, B, C OR CRUSHED STONE AS DESCRIBED IN ASTM C 12 SHALL BE USED AND CAREFULLY COMPACTED FOR ALL RIGID PIPE.
3. ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", CHAPTER XVII OF TITLE 29, CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON THE JOB AT ALL TIMES AND SHALL EMPLOY A PROFESSIONAL ENGINEER TO ACT UPON ALL PERTINENT MATTERS OF THE WORK.

GRAVITY SANITARY SEWER PIPE SCHEDULE			
PIPE MATERIAL	PIPE SIZE INCHES	BEDDING TYPE FOR DEPTH OF COVER SHOWN	
		TYPE "B"	TYPE "C"
PVC	8"	0 – 24"	N/A
PVC	15"	0 – 24"	N/A
DIP	8"	N/A	ALL DEPTHS
DIP	16"	N/A	ALL DEPTHS

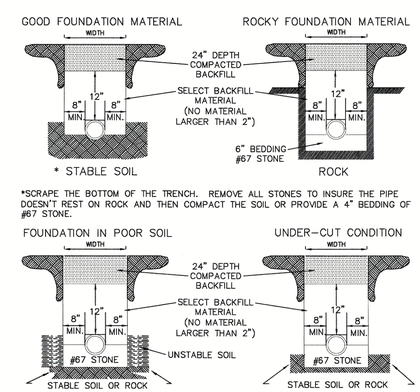
NOTES:

1. ALL SEWER SERVICE PIPE SHALL HAVE TYPE "A" BEDDING
2. CHANGES IN PIPE BEDDING CLASSIFICATION SHALL ONLY BE MADE AT MANHOLES.
3. DUCTILE IRON FORCE MAIN SHALL HAVE TYPE "A" BEDDING.

TRENCH EXCAVATION LIMITS		
INTERNAL DIAMETER OF PIPE	WIDTH OF TRENCH	
	MAX.	MIN.
4"–6"	NO LIMIT	2'–0"
8"–10"	NO LIMIT	2'–2"
12"	3'–9"	O.D.+2'
14"–15"	4'–2"	O.D.+2'
18"	4'–4"	O.D.+2'
20"	4'–8"	O.D.+2'
24"	4'–11"	O.D.+2'
30"	5'–8"	O.D.+2'
36"	6'–0"	O.D.+2'

W = TRENCH WIDTH AT TOP OF PIPE
S = PAVEMENT REPLACEMENT WIDTH
(S = W + 3'–0")

MAIN OR LATERAL MIN SLOPE
4" @ 2.00% MIN.
6" @ 0.67% MIN./MAIN
6" @ 2.00% MIN./LATERAL
8" @ 0.40% MIN.
12" @ 0.22% MIN.
15" @ 0.15% MIN.
18" @ 0.12% MIN.



*SCRAPE THE BOTTOM OF THE TRENCH. REMOVE ALL STONES TO INSURE THE PIPE DOESN'T REST ON ROCK AND THEN COMPACT THE SOIL OR PROVIDE A 4" BEDDING OF #67 STONE.

TYPICAL SEWER PIPE INSTALLATION & BEDDING

NOT TO SCALE

NOTES:

1. NO ROCKS SHALL BE ALLOWED WITHIN 24" OF THE WATER LINES.
2. NO ROCKS LARGER THAN 6" IN ANY DIMENSION SHALL BE ALLOWED ABOVE THE INITIAL BACKFILL.
3. THE INITIAL BACKFILL SHALL BE PLACED AND COMPACTED IN 6" LIFTS.
4. NO ORGANIC OR FROZEN MATERIAL OR DEBRIS SHALL BE ALLOWED IN THE TRENCH.
5. BELL HOLES SHALL BE DUG OUT IN ALL CASES.

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

Bissell Professional Group
Firm License # C-356
Firm Name Change Pending
P.O. Box 1088
Cary, North Carolina 27512
(919) 481-1925
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

WASTEWATER COLLECTION
TYP. CONSTRUCTION DETAILS

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER DAVID M. KLEBITZ 9-28-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG
SHEET: 22 OF 23	
CAD FILE: 4018_PH_2-4	
PROJECT NO: 4018	

ORDER OF PRECENDENCE GENERAL NOTES/TECHNICAL SPECIFICATIONS

1. THE NOTES CONTAINED HEREIN ARE INTENDED TO SUPPLEMENT THE TECHNICAL SPECIFICATIONS AND PROVIDE EASY REFERENCE FOR THE CONTRACTOR. IN NO CASE SHALL THESE NOTES VOID ANY PART, SECTION OR REQUIREMENT OUTLINED IN THE TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENTS. IF CONFLICTS OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS AND THE NOTES CONTAINED HEREIN, THE TECHNICAL SPECIFICATIONS SHALL SUPERSEDE.

2. CONTRACTOR IS CHARGED WITH PERFORMING SITE INVESTIGATIONS TO ASCERTAIN EXISTING SITE CONDITIONS. PHOTOGRAPHIC DOCUMENTATION OF PRE-EXISTING CONSTRUCTION CONDITIONS WILL BE CONDUCTED BY THE ENGINEER FOR DETERMINATION OF COMPLIANCE WITH CONDITIONS NOTED HEREON.

GENERAL NOTES

1. ACCESS TO SITES SHALL BE BY PUBLIC RIGHT-OF-WAYS AND UTILITY EASEMENTS. OTHER ACCESS LOCATIONS REQUIRED SHALL BE SECURED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. SUPPLEMENTAL EROSION CONTROL MEASURES SHALL BE REQUIRED TO INCLUDE CONSTRUCTION ENTRANCES, SILT FENCING, RESTORATION, ETC. ADDITIONAL MEASURES SHALL BE INCLUDED AS PART OF A SUPPLEMENTAL EROSION CONTROL PLAN PREPARED BY THE CONTRACTOR.

2. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE CONSTRUCTION STAGING AREA AT HIS EXPENSE.

3. THE CONTRACTOR IS EXPECTED AND REQUIRED TO COOPERATE WITH THE PROPERTY OWNERS AFFECTED BY THE WORK. MAIL ADJOINING PROPERTY OWNER LETTERS TO EFFECTED PROPERTY OWNERS NOTIFYING THEM THAT WORK WILL BE OCCURRING WITHIN THE AREAS ADJOINING THEIR PROPERTIES. THIS LETTER SHALL GIVE PROPERTY OWNERS A MINIMUM OF 14 DAYS WRITTEN NOTICE PRIOR TO COMMENCEMENT OF CONSTRUCTION FOR REMOVAL OF ANY PERSONAL ITEMS FROM THE RIGHT- OF-WAY. THE LETTER OUTLINES THE EXTENT OF THE WORK TO BE PERFORMED TO INCLUDE DRIVEWAY DISRUPTIONS.

4. CONTRACTOR SHALL MAINTAIN A NEAT AND CLEAN JOB-SITE TO INCLUDE STAGING/STORAGE AREAS AS FOLLOWS:
   - PERFORM DUST CONTROL BY WATERING DAILY OR AS DIRECTED BY THE ENGINEER AND/OR CURRITUCK COUNTY.
   - SWEEP STREETS A MINIMUM OF ONCE WEEKLY (FRIDAY) OR AS DIRECTED BY THE ENGINEER AND/OR CURRITUCK COUNTY.
   - BLADE, LEVEL AND RE-COMPACT ALL EXPOSED TRENCHES WEEKLY (OR AS DIRECTED BY THE ENGINEER) TO PRODUCE A SMOOTH "RIDE".
   - PERFORM DAILY CLEAN-UP OF ALL DIRT, DEBRIS AND SCRAP MATERIALS.
   - REMOVE EXCESS EQUIPMENT, MATERIALS, TOOLS, ETC. NOT NEEDED.
   - ANY DRIVEWAY REMOVALS MUST HAVE A TEMPORARY SURFACE INSTALLED WITHIN THE SAME DAY AS REMOVAL. APPROVED SURFACES MAY CONSIST OF EITHER ABC OR MILLINGS.

   THE WORK WITHIN RIGHT OF WAY AREAS MUST BE KEPT IN AN ORDERLY AND NEAT FASHION. NO MATERIAL (SOILS, GRAVEL OR OTHER PROJECT FILL) CAN BE PLACED DIRECTLY ON ANY STREET SURFACE WITHOUT MATTING BEING PUT DOWN FIRST. ANY DAMAGE TO ANY ROAD SURFACE FROM CONSTRUCTION ACTIVITIES MUST BE REPAIRED AT OWNERS EXPENSE.

5. EXCESS SUITABLE SOIL EXCAVATED DURING CONSTRUCTION SHALL BE STOCKPILED FOR USE ON THE PROJECT OR DISPOSED OF OFF-SITE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOT BE ALLOWED TO STOCKPILE MATERIALS OR EXCESS MATERIALS IN THE STREET RIGHT-OF-WAYS AT ANY TIME. THE CONTRACTOR SHALL PROVIDE A SUFFICIENT AND SUITABLE STOCKPILE AREA AND LOCATION AT THE CONTRACTOR'S EXPENSE.

6. CONTRACTOR SHALL PROVIDE MEASURES DURING CONSTRUCTION TO SECURE THE SITE AND EXCAVATION FROM THE GENERAL PUBLIC AND COMPLY WITH ALL OSHA REGULATIONS. JOB SITE SAFETY IS THE EXCLUSIVE AND SOLE RESPONSIBILITY OF THE CONTRACTOR. OPEN EXCAVATION LEFT UNATTENDED OR OVER NIGHT IS NOT ACCEPTABLE AND SHALL BE FILLED IMMEDIATELY.

7. CONTRACTOR SHALL REPAIR OR REPLACE DRIVES DISTURBED BY CONSTRUCTION TO EXISTING OR BETTER CONDITIONS. NO SEPARATE PAYMENT UNLESS OTHERWISE INDICATED.

8. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING WHERE FENCES ARE REMOVED FOR CONSTRUCTION. CONTRACTOR SHALL COORDINATE FENCE REMOVAL OR REINSTALLATION WITH INDIVIDUAL PROPERTY OWNERS PRIOR TO REMOVAL. CONTRACTOR SHALL REINSTALL ALL SHEDS, FENCES, ETC. TO AS GOOD OR BETTER THAN EXISTING CONDITIONS UNLESS OTHERWISE INDICATED. (NO SEPARATE PAYMENT).

9. CONTRACTOR SHALL REPLACE ALL DISTURBED MAILBOXES, SIGNS, ETC. DISTURBED DURING CONSTRUCTION WITHIN 24 HOURS OF DISTURBANCE. PERMANENT ROAD SIGNAGE DISTURBED SHALL BE REPLACED IMMEDIATELY AND IF NECESSARY ROADWAY SIGNS SHALL BE TEMPORARILY INSTALLED IN A LOCATION CONSISTENT WITH THE NCMUTCD TO PROVIDE CONTINUOUS TRAFFIC AWARENESS OF ROADWAY CONDITIONS. (NO SEPARATE PAYMENT).

10. CONTRACTOR SHALL PROVIDE SECURITY FENCING, SECURITY GUARD, AND ANY AND ALL OTHER MEASURES CONTRACTOR DEEMS NECESSARY TO PROTECT EQUIPMENT AND MATERIALS STORED ON THE PROJECT. (NO SEPARATE PAYMENT).

11. WHERE CONTRACTOR CEASES WORK OPERATIONS FOR A 72 HOUR PERIOD OR LONGER, SUCH AS HOLIDAYS, ETC., THE FOLLOWING SHALL BE ACCOMPLISHED PRIOR TO THE WORK STOPPAGE.
    A. CONTRACTOR SHALL STORE ALL EQUIPMENT IN THE CONTRACTOR STAGING AREA OR OFF SITE.
    B. THE CONTRACTOR SHALL SWEEP ALL STREETS, PERFORM GENERAL CLEANUP AND SHALL PERFORM MAINTENANCE ON ALL EXPOSED PATCHES.

12. CONTRACTOR SHALL SCHEDULE WORK AND MATERIAL DELIVERIES SO THAT STORED MATERIAL QUANTITIES ON THE JOB SITE SHALL BE MINIMIZED.

13. CONTRACTOR SHALL STORE ALL MATERIALS IN THE CONTRACTOR STAGING AREA 72 HOURS PRIOR TO INCORPORATING INTO THE WORK TO REDUCE OBSTRUCTIONS TO TRAFFIC AND INCONVENIENCE TO RESIDENTS. WHERE UTILITIES ARE BEING CONSTRUCTED IN EASEMENTS OUT OF TRAFFIC AREAS CONTRACTOR MAY STORE MATERIALS AHEAD OF CONSTRUCTION FOR A DISTANCE NOT GREATER THAN 1800 FEET UNLESS APPROVED OTHERWISE BY THE ENGINEER.

14. CLEARING AND GRUBBING SHALL BE RESTRICTED TO PERMANENT EASEMENTS ONLY. CONTRACTOR SHALL LIMIT TREE/BUSH CLEARING IN THE TEMPORARY EASEMENTS, BETWEEN HOUSES AND ALONG PROPERTY LINES TO ONLY ABSOLUTELY NECESSARY FOR CONSTRUCTION.

RELATION OF WATER MAINS TO SEWERS

(A) LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION--IN WHICH CASE:
(1) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR
(2) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

(B) CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION--IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.

(C) CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

CONSTRUCTION SEQUENCE NOTES

1. PRIOR TO COMMENCEMENT OF ANY WORK WITHIN EASEMENTS OR RIGHTS-OF-WAYS THE CONTRACTOR IS REQUIRED TO NOTIFY CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH GS 87-102. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. NO SEPARATE PAYMENT. EXISTING UTILITIES SHOWN ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED (I.E. TELEPHONE, GAS, CABLE, ETC.).

2. THE CONTRACTOR SHALL DIG UP EACH UTILITY WHICH MAY CONFLICT WITH CONSTRUCTION 14 DAYS IN ADVANCE TO VERIFY LOCATIONS (HORIZONTALLY AND VERTICALLY) TO ALLOW THE ENGINEER AN OPPORTUNITY TO ADJUST THE DESIGN TO AVOID CONFLICTS (NO SEPARATE PAYMENT).

3. ALL SANITARY SEWER & WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE NCDENR-DWQ & NCDENR-PWS. STORM DRAINAGE, STREET CONSTRUCTION AND PAVING SHALL BE IN ACCORDANCE WITH THE N.C.D.O.T.

4. UTILITY SERVICES TO INDIVIDUAL PROPERTIES ARE NOT SHOWN IN THE PROFILES FOR SIMPLICITY OF THE DRAWINGS. SERVICES MAY INCLUDE WATER LATERALS, TELEPHONE, ELECTRIC, CABLE, GAS, ETC.

5. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES AND SIGNS AND/OR UTILITIES IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS DURING THE UTILITY MAIN INSTALLATION AND STREET CONSTRUCTION. (NO SEPARATE PAYMENT).

6. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR UTILITY CROSSINGS AND REPAIR DAMAGES DUE TO CONSTRUCTION TO THE SATISFACTION OF THE UTILITY INVOLVED AT NO ADDITIONAL EXPENSE TO THE OWNER. UNDERGROUND ELECTRICAL CROSSINGS SHALL BE CROSSED IN ACCORDANCE WITH THE NEC AND TECHNICAL SPECIFICATION SECTION UNDERGROUND ELECTRICAL CROSSING

7. WHERE DEEMED NECESSARY BY THE ENGINEER THAT A SUBSURFACE DRAINAGE SYSTEM IS REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, TIE-IN'S TO EXISTING DRAINAGE STRUCTURES AND ALL OTHER INCIDENTALS NECESSARY TO PROVIDE COMPLETE INSTALLATION. IMPROPERLY INSTALLED AND NON-FUNCTIONING DRAINAGE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING FRENCH DRAINAGE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AND OR REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.

8. STORM DRAINAGE REPAIRS BY CONTRACTOR DUE TO CONSTRUCTION DAMAGE AND JOINTS EXPOSED DURING CONSTRUCTION SHALL BE INSPECTED BY THE OWNER PRIOR TO BACKFILLING.

9. CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIAL AND PERFORM ALL WORK REQUIRED FOR INSTALLATION OF SEWER LINES, MANHOLES AND APPURTENANCES AS OUTLINED ON DRAWINGS AND ON SPECIFICATIONS, ALL OF WHICH BECOME PART OF THE CONTRACT DOCUMENTS.

10. ALL CONSTRUCTION OF SANITARY SEWER MAINS AND APPURTENANCES IN THE COLLECTION SYSTEMS SHALL BE IN STRICT ACCORDANCE WITH PLANS AND SPECIFICATIONS PREPARED AS PART OF THE CONTRACT DOCUMENTS AND AS APPROVED BY THE BPG, INC. ENGINEER. ALL MATERIALS SHALL BE NEW AND UNUSED. PRIOR TO CONSTRUCTION OF THE APPROVED SANITARY SEWER, CONTRACTOR SHALL PROVIDE FIELD STAKEOUT INCLUDING ADEQUATE LINE AND GRADE STAKES IN ORDER THAT SANITARY SEWER AND APPURTENANCES MAY BE CONSTRUCTED IN ACCORDANCE WITH CONTRACT DRAWINGS.

11. A PRECONSTRUCTION CONFERENCE SHALL BE HELD AT THE COMPLETION OF THE FIELD STAKEOUT WITH THE ENGINEEER AN HIS/HER REPRESENTATIVE, CURRITUCK COUNTY REPRESENTATIVE, NCDENR REPRESENTATIVE, AND ANY REQUISITE UTILITY REPRESENTATIVES THAT WILL REQUIRE COORDINATION WITH DURING THE COURSE OF CONSTRUCTION. A MINIMUM OF 2 DAYS NOTICE SHALL BE GIVEN FOR MEETING REPRESENTATIVES.

12. PREPARE PHOTOGRAPHIC DOCUMENTATION OF PRE-EXISTING CONDITIONS OF THE PROJECTED CONSTRUCTION ROUTE PRIOR TO COMMENCING WORK.

13. IF ANY DEVIATION IS CONTEMPLATED IN LOCATION OR LINE GRADE OF ANY SEWER, STRUCTURE OR APPURTENANCE AS SHOWN ON THE CONTRACT DRAWINGS, A REVISION OF THE DRAWINGS SHOWING THE PROPOSED DEVIATION SHALL BE SUBMITTED TO THE BPG, INC. ENGINEER FOR REVIEW AND APPROVAL BEFORE ANY CHANGES ARE CONSTRUCTED. MINOR FIELD CHANGES MAY BE MADE WITH APPROVAL OF BPG, INC. APPOINTED FIELD INSPECTOR. SHOULD CONTRACTOR DISCOVER AND/OR DAMAGE ANY UNDERGROUND UTILITY FACILITIES, WHICH ARE NOT SHOWN ON DRAWINGS AND/OR MARKED ON THE GROUND, CONTRACTOR SHALL PROMPTLY NOTIFY UTILITY OWNER AND OWNER'S PROJECT REPRESENTATIVE. RELOCATION OF ANY UTILITIES SHALL BE APPROVED AND COORDINATED WITH THE APPROPRIATE UTILITY OWNER.

14. EXCAVATION SHALL CONFORM TO THE LINES AND GRADES SHOWN ON THE PLANS. THE WIDTH OF EXCAVATION FOR TRENCHES SHALL BE A MINIMUM OF 24". EXCAVATION SHALL NOT BE CARRIED BELOW THE ESTABLISHED GRADES AND ANY EXCAVATION BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH SUITABLE, THOROUGHLY COMPACTED GRANULAR BEDDING MATERIAL. CONTRACTOR SHALL INSTALL ALL SHEETING, BRACING, AND SHORING NECESSARY TO PERFORM THE WORK, TO PROTECT EXISTING STRUCTURES AND ALL EXCAVATIONS AS REQUIRED UNDER NORTH CAROLINA OSHA REGULATIONS. COMPLIANCE WITH PROVISIONS OF THE OVERHEAD HIGH VOLTAGE LINE SAFETY ACT IS REQUIRED.

15. DEWATERING EQUIPMENT SHALL BE SIZED TO MAINTAIN THE TRENCH IN A SATISFACTORY DEWATERED CONDITION SUITABLE FOR PIPE LAYING AND BACKFILLING. PIPE LAYING WILL BE PERMITTED ONLY WHERE THE DEPTH OF WATER IS MAINTAINED BELOW THE BEDDING MATERIAL. BEDDING MATERIAL SHALL NOT BE PLACED ON UNSTABLE TRENCH MATERIAL.

16. NOT MORE THAN ONE HUNDRED FIFTY FEET (150') OF TRENCH SHALL BE OPENED IN ADVANCE OF THE COMPLETED PIPE LAYING. TRENCH WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. EXCAVATION AT MANHOLES AND SIMILAR STRUCTURES SHALL PROVIDE A MINIMUM CLEARANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTER SURFACE OF THE STRUCTURE AND THE EMBANKMENT OR SHEETING.

17. WHEREVER FOUNDATION MATERIAL IS UNSUITABLE, IT SHALL BE EXCAVATED UNTIL A STABLE FOUNDATION IS ACHIEVED. GRANULAR MATERIAL, #67 STONE PER ASTM C 12, SHALL THEN BE PLACED IN SIX INCH (6") LAYERS AND COMPACTED UNTIL THE TRENCH BOTTOM HAS BEEN STABILIZED. STANDARD GRANULAR PIPE BEDDING MATERIAL SHALL BE PLACED IN ACCORDANCE WITH ASTM D 2321 FOR PVC PIPE AND ASTM C 12 FOR DIP.

18. ALL GRAVITY SEWER MAINS, SERVICE LATERALS AND FORCE MAINS SHALL HAVE A MINIMUM COVER OF THREE FEET (3') AS MEASURED FROM TOP OF PIPE TO FINISH GRADE. THE BPG, INC. ENGINEER MAY REQUIRE ADDITIONAL COVER AS NEEDED FOR PIPE PROTECTION. SEWERS, WHICH HAVE A DEPTH OF COVER LESS THAN THREE FEET (3'), SHALL BE APPROVED AND INSTALLED AS PER BPG, INC. ENGINEER'S WRITTEN INSTRUCTIONS.

19. PIPE SHALL BE LAID TRUE TO LINE AND GRADE WITH BELLS UPSTREAM AND SHALL BE JOINTED TOGETHER SUCH THAT THE COMPLETED PIPE WILL HAVE A SMOOTH INVERT. PIPE SHALL BE PUSHED HOME BY HAND. THE USE OF EQUIPMENT (I.E. BACKHOE) SHALL NOT BE PERMITTED. CUTTING OF PIPE SHALL BE PERFORMED BY SAWING. STANDARD BEDDING SHALL BE SHAPED TO THE CURVATURE OF BOTH THE BELL AND BARREL OF THE PIPE. THE TRENCH SHALL BE KEPT FREE OF WATER WHILE THE WORK IS IN PROGRESS. THE ENDS OF THE PIPE SHALL BE CLEANED SO THAT PROPER JOINTS CAN BE MADE. AS THE WORK PROGRESSES, THE INTERIOR OF THE PIPE SHALL BE CLEARED OF DIRT, CEMENT, OR OTHER DELETERIOUS MATERIAL.

20. EXCEPT AS REQUIRED FOR USE OF A LASER LEVEL, EXPOSED END OF ALL PIPE AND FITTINGS SHALL BE FULLY CLOSED TO PREVENT EARTH, WATER OR OTHER SUBSTANCES FROM ENTERING PIPE. TRENCH SHALL BE COMPLETELY BACKFILLED AT END OF EACH WORKDAY. WHEN NEW PIPE IS TIED INTO AN EXISTING MANHOLE, NEW PIPE SHALL BE PLUGGED WITH A STANDARD SEWER PLUG AND SHALL REMAIN PLUGGED UNTIL ALL NEW LINE(S) THAT WILL FLOW TO EXISTING MANHOLE HAVE BEEN COMPLETED, TESTED, AND ACCEPTED.

21. BACKFILL SHALL BEGIN AT THE TOP OF THE STANDARD GRANULAR BEDDING AND SHALL BE PLACED IN SIX INCH (6") LAYERS FOR THE INITIAL ONE FOOT OVER THE PIPE AND SHALL BE THOROUGHLY TAMPED TO NINETY-FIVE PERCENT (95%) OF THE MAXIMUM THEORETICAL COMPACTION DENSITY AS DETERMINED BY A STANDARD PROCTOR ON THE MATERIAL. REMAINDER OF THE BACKFILL SHALL BE IN TWO FOOT (2') LAYERS PROPERLY TAMPED.

22. COMPLETION: BEFORE CONNECTING TO AN ACTIVE SYSTEM, THE LEAKAGE TESTS SHALL PROMPTLY FOLLOW INSTALLATION OF WASTEWATER PIPE INCLUDING SERVICES AND KEPT WITHIN A MAXIMUM OF 1000 FEET BEHIND THE WASTEWATER PIPE LAYING OPERATION.

23. CONTRACTOR SHALL FURNISH WEIRS, STAND PIPES, PIPE PLUGS, WATER, PRESSURE GAUGES, STOP WATCHES, AIR COMPRESSOR, VACUUM PUMP, HOSE AND SUCH MATERIALS AND ASSISTANCE AS REQUIRED TO PERFORM THESE TESTS. ALL ACCEPTANCE TESTS SHALL BE CONDUCTED BY CONTRACTOR IN THE PRESENCE OF A BPG, INC. APPOINTED INSPECTOR.

24. ACCEPTANCE TESTS SHALL NOT BE MADE UNTIL SANITARY SEWER, MANHOLES AND PROPOSED SEWER SERVICE CONNECTIONS, AS SHOWN ON THE APPROVED SEWER PLANS, HAVE BEEN INSTALLED, THE SEWER TRENCHES (INCLUDING MANHOLES AND CLEANOUT STACKS) BACKFILLED AND COMPACTED TO FINISHED SUB-GRADE.

25. CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR MAINTAINING SEWER FLOWS DURING PROJECT TO INCLUDE ANY REQUIRED BY-PASS PUMPING OF WASTEWATER BETWEEN MANHOLES DURING INSTALLATION OF SEWER LINES AND/OR MANHOLES. BY-PASS PUMPING SYSTEM SHALL PROVIDE CONTINUOUS FULL CONVEYANCE AND CONTAINMENT OF WASTEWATER PRESENT DURING THE WORK AND SHALL NOT SURCHARGE THE UPSTREAM PUMP STATION BY MORE THAN TWO (2) FEET ABOVE THE NORMAL EFFLUENT LEVELS.

26. ONCE ACCEPTANCE AND START OF THE COLLECTION SYSTEM HAS BEEN RECIEVED, THE CONTRACTOR SHALL PROCEED WITH THE ABANDONMENT PROCEDURES OF THE EXISTING WASTEWATER COLLECTION SYSTEM AS DESCRIBED HEREON.

27. THE NOTES CONTAINED HEREIN ARE INTENDED TO SUPPLEMENT THE TECHNICAL SPECIFICATIONS AND PROVIDE EASY REFERENCE FOR THE CONTRACTOR. IN NO CASE SHALL THESE NOTES VOID ANY PART, SECTION OR REQUIREMENT OUTLINED IN THE TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENTS.

TRENCH DEWATERING DURING SEWER LINE INSTALLATION

1. ALL GROUND WATER WHICH MAY BE FOUND IN THE TRENCHES AND ANY WATER WHICH MAY GET INTO THEM FROM ANY CAUSE WHATSOEVER SHALL BE PUMPED OR BAILED OUT SO THAT THE TRENCH SHALL BE DRY DURING THE PIPE LAYING PERIOD. NO WATER SHALL BE PERMITTED TO REACH CONCRETE UNTIL IT HAS SET SUFFICIENTLY. ALL WATER PUMPED FROM THE TRENCHES SHALL BE DISPOSED OF IN A MANNER SATISFACTORY TO THE OWNER. CONTRACTOR SHALL PROVIDE AT LEAST TWO (2) PUMPS FOR EACH TRENCH OPENED IN WET GROUND AND AT THE SAME TIME, HE SHALL HAVE ONE (1) PUMP IN RESERVE.

2. IF, DURING ANY TIME THAT CONTRACTOR IS PERMITTED TO LAY PIPE IN A TRENCH CONTAINING UNAVOIDABLE TRENCH WATER AND CONSTRUCTION IS INTERRUPTED FOR ANY REASON, THE OPEN ENDS OF PIPE SHALL BE CLOSED BY WATERTIGHT PLUGS OR CAPS, OR OTHER MEANS APPROVED BY THE OWNER. IN ANY CASE, SUCH PROTECTION SHALL BE PROVIDED WHEN WORK IS SUSPENDED OVERNIGHT OR ON WEEKENDS AND HOLIDAYS, REGARDLESS OF THE CONDITION OF THE TRENCH WITH RESPECT TO WATER AT THE TIME THAT THE WORK IS SUSPENDED

3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL STRUCTURES, INCLUDING PIPES AND MANHOLES, AGAINST ANY TENDENCY TO FLOAT UNDER CONDITIONS OF HIGH WATER, WHETHER DUE TO HIGH GROUND WATER OR FLOOD CONDITIONS ON THE PROJECT SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE WHATEVER STEPS MAY BE REQUIRED, INCLUDING THE INSTALLATION AND OPERATION OF PUMPS AND PUMPING SYSTEMS, WELL POINTS OR RELIEF DEVICES, TO PREVENT ANY STRUCTURE FROM FLOATING DURING CONSTRUCTION.

4. COST OF THE NECESSARY PUMPS, WELL POINTS OR OTHER APPURTENANCES REQUIRED TO PREVENT FLOTATION SHALL BE INCLUDED IN THE UNIT PRICES BID IN THE PROPOSAL FOR THE VARIOUS BID ITEMS, AND NO EXTRA COMPENSATION SHALL BE ALLOWED FOR SUCH WORK. ANY DAMAGE WHICH MAY OCCUR TO ANY PART OF THE WORK AS THE RESULT OF THE FLOTATION EFFECT OF GROUND OR FLOOD WATERS SHALL BE REPAIRED IN A MANNER FULLY SATISFACTORY TO THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.

5. CONTRACTOR SHALL PROVIDE AND PLACE ALL NECESSARY FLUMES OR OTHER CHANNELS OF ADEQUATE SIZE TO CARRY TEMPORARILY ALL STREAMS, BROOKS, STORMWATER OR OTHER WATER, WHICH MAY FLOW ALONG OR ACROSS THE LINES OF THE PIPE LINE. ALL FLUMES OR CHANNELS THUS UTILIZED SHALL BE TIGHT SO AS TO PREVENT LEAKAGE INTO THE TRENCHES. WATER PUMPED FROM TRENCHES SHALL BE LED TO NATURAL WATERCOURSES. EXISTING SEWERS SHALL NOT BE EMPLOYED AS A DRAIN FOR THE REMOVAL OF DEWATERING WASTES.

GENERAL NOTES SANITARY SEWER UTILITY

1. CLEANOUT ELEVATIONS AND/OR LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER WHEN NECESSARY. CLEANOUT STACK TOP ELEVATION IS DETERMINED BY INTERPOLATING FIELD DATA AND MAY NOT BE EXACT. CLEANOUT ELEVATION TOP SHALL BE SET IN ACCORDANCE WITH THE TYPICAL DETAIL DESCRIBED HEREON. (NO SEPARATE PAYMENT).

2. WHERE SANITARY SEWER MAINS ARE TO BE CONSTRUCTED WITHIN 20' OF EXISTING RESIDENCES SPECIAL CONSIDERATION SHALL BE GIVEN TO MINIMIZE UNDERMINING OR OTHERWISE DISTURBING EXISTING RESIDENCES ADJACENT TO THE SEWER MAIN. THE CONTRACTOR SHALL USE A RUBBER TIRED BACK HOE AND NO MECHANICAL COMPACTION EQUIPMENT IN THESE AREAS. THE TRENCH SHALL BE SHORED ADEQUATELY TO PREVENT ANY SLOTHING OF THE SIDE SLOPES. SUITABLE BACK FILL SHALL BE PLACED IN THE TRENCH. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR REPAIR OF STRUCTURES, FOUNDATIONS, FOOTINGS, ETC. DAMAGED DUE TO CONSTRUCTION.

3. SANITARY SEWER MANHOLE DEFLECTION ANGLE'S ARE 180 DEGREES UNLESS NOTED OTHERWISE. ALL INVERT ELEVATIONS ARE SHOWN TO THE MANHOLE CENTERLINE.

UTILITY GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF ANY WORK WITHIN EASEMENTS OR RIGHTS-OF-WAYS THE CONTRACTOR IS REQUIRED TO NOTIFY CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH GS 87-102. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. NO SEPARATE PAYMENT. EXISTING UTILITIES SHOWN ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED (i.e. TELEPHONE, GAS, CABLE, ETC.).

2. THE CONTRACTOR SHALL DIG UP EACH UTILITY WHICH MAY CONFLICT WITH CONSTRUCTION 14 DAYS IN ADVANCE TO VERIFY LOCATIONS (HORIZONTALLY AND VERTICALLY) TO ALLOW THE ENGINEER AN OPPORTUNITY TO ADJUST THE DESIGN TO AVOID CONFLICTS (NO SEPARATE PAYMENT).

3. ALL SANITARY SEWER & WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE NCDENR-DWQ & NCDENR-PWS. STORM DRAINAGE, STREET CONSTRUCTION AND PAVING SHALL BE IN ACCORDANCE WITH THE N.C.D.O.T.

4. UTILITY SERVICES TO INDIVIDUAL PROPERTIES ARE NOT SHOWN IN THE PROFILES FOR SIMPLICITY OF THE DRAWINGS. SERVICES MAY INCLUDE WATER LATERALS, TELEPHONE, ELECTRIC, CABLE, GAS, ETC.

5. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES AND SIGNS AND/OR UTILITIES IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS DURING THE UTILITY MAIN INSTALLATION AND STREET CONSTRUCTION. (NO SEPARATE PAYMENT).

6. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR UTILITY CROSSINGS AND REPAIR DAMAGES DUE TO CONSTRUCTION TO THE SATISFACTION OF THE UTILITY INVOLVED AT NO ADDITIONAL EXPENSE TO THE OWNER. UNDERGROUND ELECTRICAL CROSSINGS SHALL BE CROSSED IN ACCORDANCE WITH THE NEC AND TECHNICAL SPECIFICATION SECTION UNDERGROUND ELECTRICAL CROSSING

7. WHERE DEEMED NECESSARY BY THE ENGINEER THAT A SUBSURFACE DRAINAGE SYSTEM IS REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, TIE-IN'S TO EXISTING DRAINAGE STRUCTURES AND ALL OTHER INCIDENTALS NECESSARY TO PROVIDE COMPLETE INSTALLATION IN ACCORDANCE WITH CITY OF FAYETTEVILLE STANDARDS. IMPROPERLY INSTALLED AND NON-FUNCTIONING DRAINAGE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING FRENCH DRAINAGE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AND OR REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.

8. ANY DRIVEWAY CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE EITHER REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE. FILTER FABRIC CLOTH SHALL BE PLACED OVER EITHER CULVERT ENDS DURING THE COURSE OF CONSTRUCTION. ALL EX. DRAINAGE INFRASTRUCTURE WILL BE RETURNED TO PRE-EXISTING CONDITIONS PRIOR TO FINAL PROJECT APPROVALS.

SEWER SERVICE LATERAL NOTES

1. CONTRACTOR SHALL MAKE UP STACK AND SUBMIT TO ENGINEER FOR APPROVAL AND SHALL SUBMIT TAPPING SADDLE IF USED TO ENGINEER FOR APPROVAL.
2. HOLE IN SANITARY SEWER MAIN MUST BE CUT WITH SHELL CUTTER. NO HAMMER TAPS ALLOWED.
3. LATERAL SHALL CONFORM TO ASTM SPECS. D-3034 SDR-35 UNLESS OTHERWISE INDICATED AS DUCTILE IRON.
4. ALL PIPE AND FITTINGS SHALL BE 4" OR 6" UNLESS OTHERWISE SPECIFIED.
5. ALL D.I. PIPE SHALL HAVE AN INTERIOR LINING OF CERAMIC EPOXY OR FUSED CALCIUM ALUMINATE CEMENT WITH FUSED CALCIUM ALLUMINATE AGGREGATES. THE ENTIRE D.I. LATERAL SHALL BE COMPRISED OF D.I. PIPE AND MECHANICAL JOINT FITTINGS.
6. ALL CONNECTIONS SHALL HAVE RUBBER GASKET SEALS INSTALLED.
7. THE CONTRACTOR SHALL USE SDR 35 P.V.C. WYE FOR CONNECTION TO SDR 35 P.V.C. PIPE OR DI TEE FOR CONNECTION TO DUCTILE IRON PIPE. PVC WYE SHALL BE ONE PIECE MOLDED OR FABRICATED.
8. INSTALLATION OTHER THAN AS SHOWN MUST BE ENGINEER APPROVED
9. TAPPING PROCESS SHOWN SHALL BE USED FOR ALL SANITARY SEWER MAINS.
10. SLOPE AND DEPTH OF THE SERVICE LATERAL SHALL BE DETERMINED BY THE TOPOGRAPHY OF THE LOT AS APPROVED BY THE ENGINEER OR AS INDICATED ON THE DRAWINGS.
11. SLOPE OF LATERALS SHALL CONFORM TO 1/4" PER FOOT MIN. FOR 4" PIPE AND 1/8" PER FOOT MIN. FOR 6" PIPE. MAXIMUM CLEAN OUT SPACING FOR 4" PIPE IS 75', 100' FOR 6" PIPE
12. ENTIRE SEWER LATERAL ASSEMBLY SHALL BE AIR TESTED CONCURRENTLY WITH SEWER MAIN.
13. INDIVIDUAL LATERALS SHALL BE CLEANED AND FLUSHED PRIOR TO FLUSHING SANITARY SEWER MAINS.
14. LATERAL SHALL NOT BE BACK-FILLED UNTIL INSPECTED BY THE PROJECT ENGINEER OR HIS REPRESENTATIVE.
15. WYE CONNECTIONS SHALL NOT BE USED TO TIE LATERALS INTO A MANHOLE, UNLESS OTHERWISE APPROVED BY ENGINEER.
16. IF BENDS ARE APPROVED BY THE PROJECT ENGINEER, STONE BEDDING IS REQUIRED TO BE INSTALLED FROM UNDISTURBED SOIL TO BOTTOM OF BEND.
17. PVC COMBINATION SHALL BE 2 PIECE TEE-WYE, GASKETED, SDR35, AS MANUFACTURED BY HARCO, GPK OR APPROVED EQUAL.

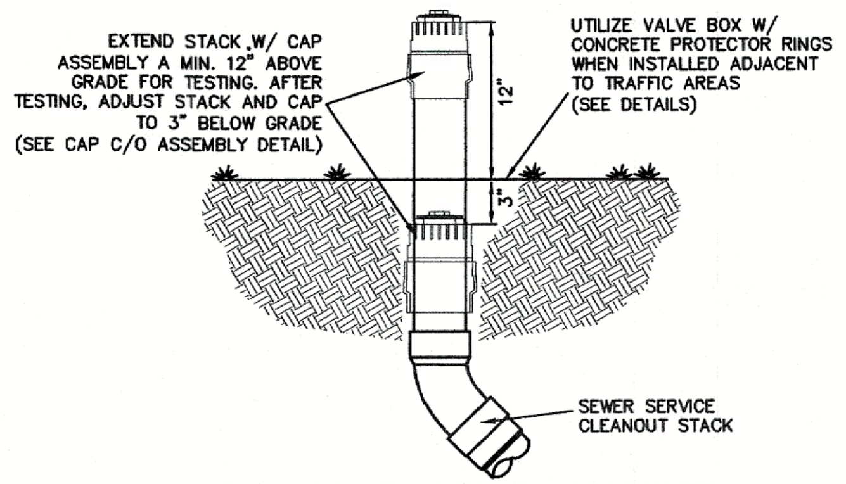
SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT
EX MH-9	RIM ELEV.: 11.03' SUMP ELEV.:1.75' HEIGHT: 9.28'		EX SS-09, 8" INV OUT:1.75
EX MH-13	RIM ELEV.: 10.69' SUMP ELEV.:0.77' HEIGHT: 9.92'	EX SS-09, 8" INV IN:0.80 PROP SS-11, 8" INV IN:2.35	EX SS-13, 8" INV OUT:0.77
EX MH-16	RIM ELEV.: 9.40' SUMP ELEV.:-0.20' HEIGHT: 9.60'	EX SS-13, 8" INV IN:-0.33 PROP SS-15, 8" INV IN:-0.31	EX SS-17, 8" INV OUT:-0.36
EX MH-18	RIM ELEV.: 7.06' SUMP ELEV.:-1.44' HEIGHT: 8.50'	EX SS-17, 8" INV IN:-1.41 EX SS-19, 8" INV IN:0.99	EX SS-22, 8" INV OUT:-1.45
EX MH-19	RIM ELEV.: 5.95' SUMP ELEV.:1.81' HEIGHT: 4.14'		EX SS-19, 8" INV OUT:1.81
EX MH-20	RIM ELEV.: 5.66' SUMP ELEV.:1.15' HEIGHT: 4.51'		EX SS-20, 8" INV OUT:1.32
EX MH-21	RIM ELEV.: 4.87' SUMP ELEV.:0.23' HEIGHT: 4.64'	EX SS-20, 8" INV IN:0.16	EX SS-21, 8" INV OUT:0.08
EX MH-22	RIM ELEV.: 6.14' SUMP ELEV.:-2.72' HEIGHT: 8.86'	EX SS-22, 8" INV IN:-2.52 EX SS-21, 8" INV IN:-1.39	EX SS-32, 8" INV OUT:-2.72
EX MH-29	RIM ELEV.: 4.47' SUMP ELEV.:-4.71' HEIGHT: 9.18'	EX SS-37, 8" INV IN:-4.51 EX SS-36, 8" INV IN:-2.92	EX SS-38, 8" INV OUT:-4.61
EX MH-31	RIM ELEV.: 5.16' SUMP ELEV.:-3.74' HEIGHT: 8.90'	EX SS-32, 8" INV IN:-3.65 EX SS-33, 8" INV IN:-1.89	EX SS-37, 8" INV OUT:-3.74
EX MH-32	RIM ELEV.: 4.24' SUMP ELEV.:0.00' HEIGHT: 4.24'		EX SS-33, 8" INV OUT:0.00
EX MH-33	RIM ELEV.: 4.58' SUMP ELEV.:0.00' HEIGHT: 4.58'		EX SS-34, 8" INV OUT:0.10
EX MH-34	RIM ELEV.: 4.58' SUMP ELEV.:-1.06' HEIGHT: 5.64'	EX SS-34, 8" INV IN:-1.04	EX SS-35, 8" INV OUT:-1.06
EX MH-35	RIM ELEV.: 4.48' SUMP ELEV.:-1.92' HEIGHT: 6.40'	EX SS-35, 8" INV IN:-1.92	EX SS-36, 8" INV OUT:-1.96
PROP MH-10	RIM ELEV.: 9.43' SUMP ELEV.:4.13' HEIGHT: 5.30'		PROP SS-10, 8" INV OUT:4.13
PROP MH-11	RIM ELEV.: 9.15' SUMP ELEV.:3.75' HEIGHT: 5.40'	PROP SS-10, 8" INV IN:3.77	PROP SS-11, 8" INV OUT:3.75
PROP MH-14	RIM ELEV.: 9.12' SUMP ELEV.:1.55' HEIGHT: 7.57'		PROP SS-14, 8" INV OUT:1.55
PROP MH-15	RIM ELEV.: 8.96' SUMP ELEV.:1.05' HEIGHT: 7.91'	PROP SS-14, 8" INV IN:1.07	PROP SS-15, 8" INV OUT:1.05

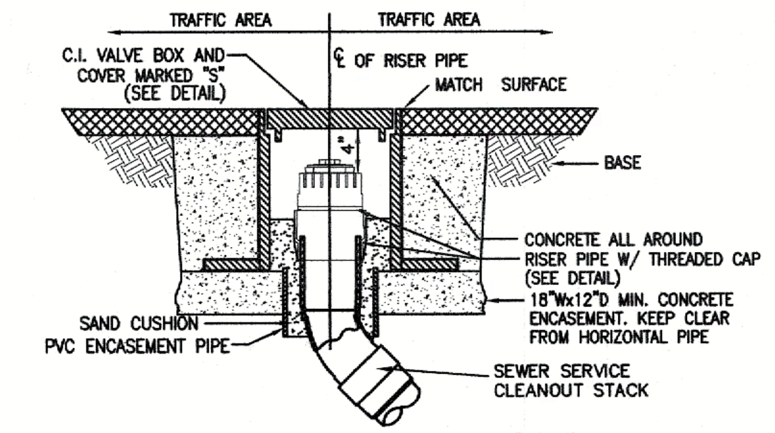
TABLE NOTES
1. PROPOSED PIPE AND STRUCTURE DATA IS HIGHLIGHTED FOR CLARITY.
2. EXISTING PIPE AND STRUCTURE DATA IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THIS INFORMATION BEFORE RELYING ON IT.
3. EXISTING PIPES AND STRUCTURES MUST BE TESTED IN ACCORDANCE WITH THE PROCEDURES AND STANDARDS SPECIFIED FOR NEW INSTALLATION. REPAIRS WILL BE REQUIRED IF UNACCEPTABLE TESTING RESULTS ARE FOUND.

SANITARY SEWER PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
EX SS-09	8"	241.52'	0.39%	PVC
EX SS-13	8"	226.61'	0.48%	PVC
EX SS-17	8"	252.93'	0.41%	PVC
EX SS-19	8"	130.29'	0.61%	PVC
EX SS-20	8"	266.25'	0.43%	PVC
EX SS-21	8"	254.37'	0.57%	PVC
EX SS-22	8"	233.81'	0.45%	PVC
EX SS-32	8"	225.56'	0.41%	PVC
EX SS-33	8"	297.00'	0.63%	PVC
EX SS-34	8"	190.50'	0.59%	PVC
EX SS-35	8"	163.02'	0.51%	PVC
EX SS-36	8"	166.42'	0.56%	PVC
EX SS-37	8"	240.97'	0.31%	PVC
EX SS-38	8"	200.99'	0.62%	PVC
PROP SS-10	8"	86.79'	0.40%	SDR-35
PROP SS-11	8"	343.61'	0.40%	SDR-35
PROP SS-14	8"	115.58'	0.40%	SDR-35
PROP SS-15	8"	334.01'	0.40%	SDR-35



SEWER SERVICE CLEANOUT
NOT TO SCALE (FOR NON-TRAFFIC AREAS)



SEWER SERVICE CLEANOUT
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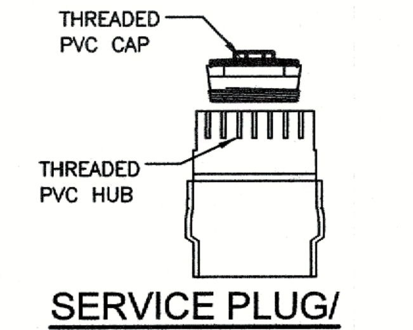
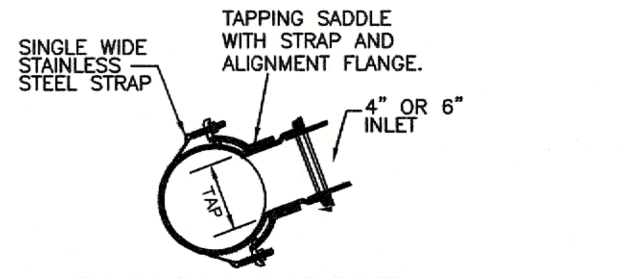
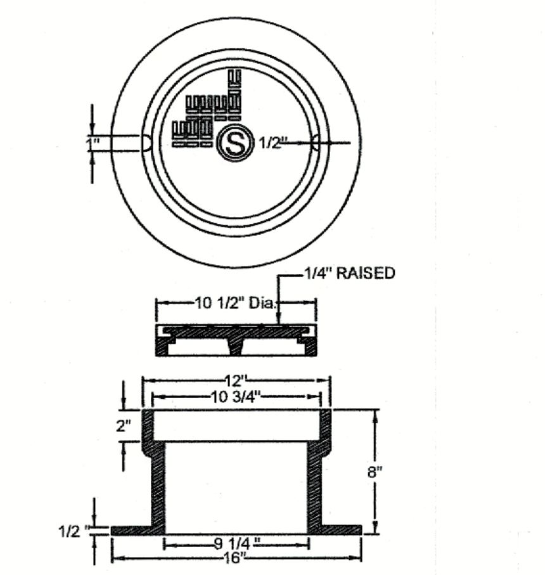


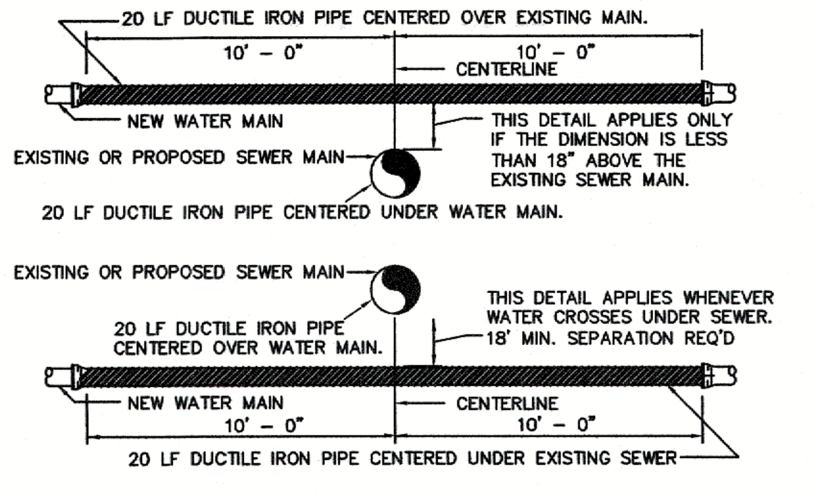
SERVICE PLUG/ C/O CAP ASSEMBLY
NOT TO SCALE
SEE CLEANOUT COVER ASSEMBLY DETAIL FOR USE IN TRAFFIC AREAS



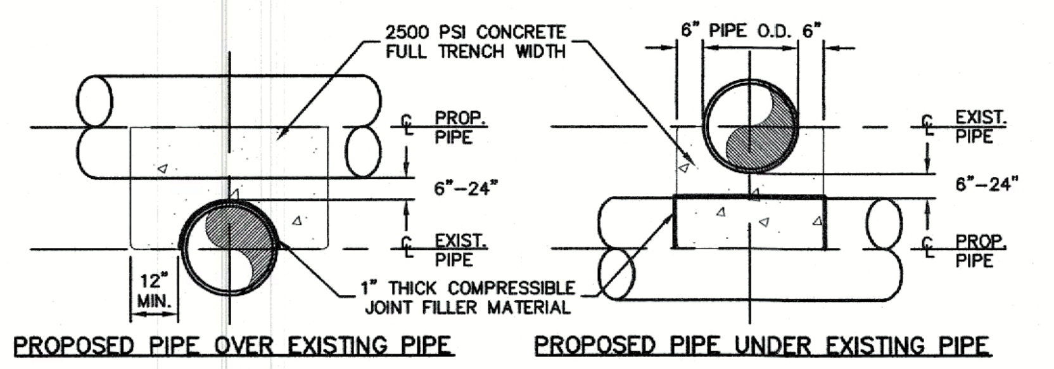
TAPPING SADDLE
(OPTIONAL)
NOTE: TAP SHALL BE 4 1/2" FOR 4" LATERAL, AND SHALL BE 6 1/2" FOR 6" LATERAL.



CLEANOUT COVER ASSEMBLY
NOT TO SCALE (FOR TRAFFIC AREAS)

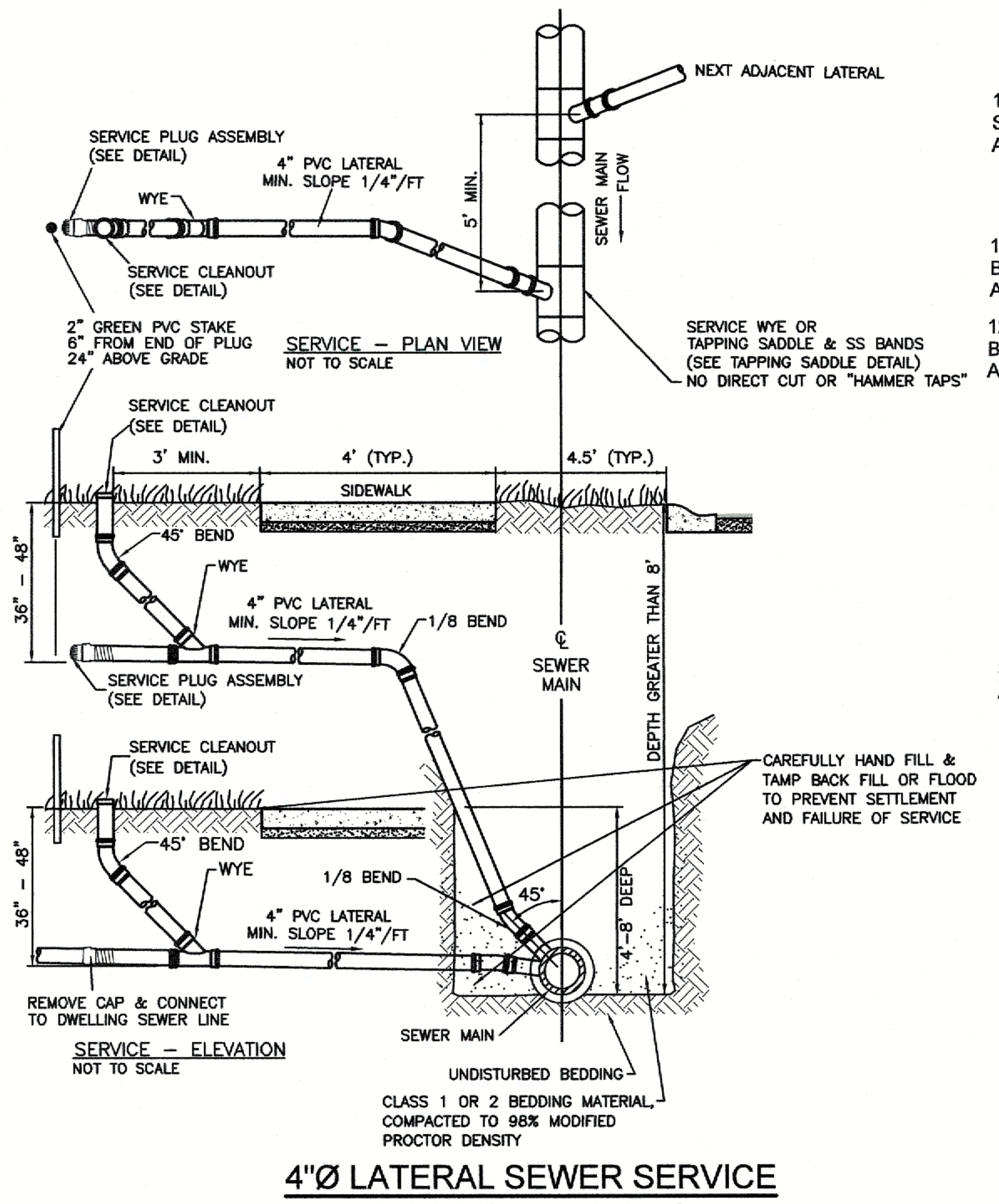


WATER CROSSING SEWER DETAIL
NOT TO SCALE

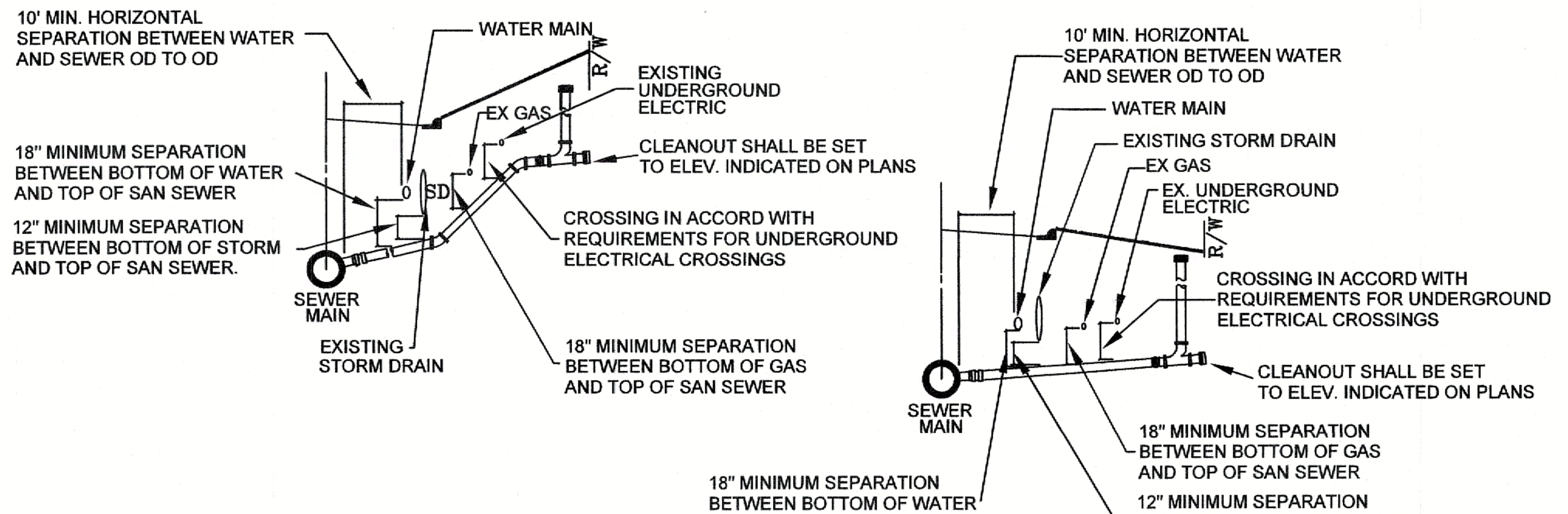


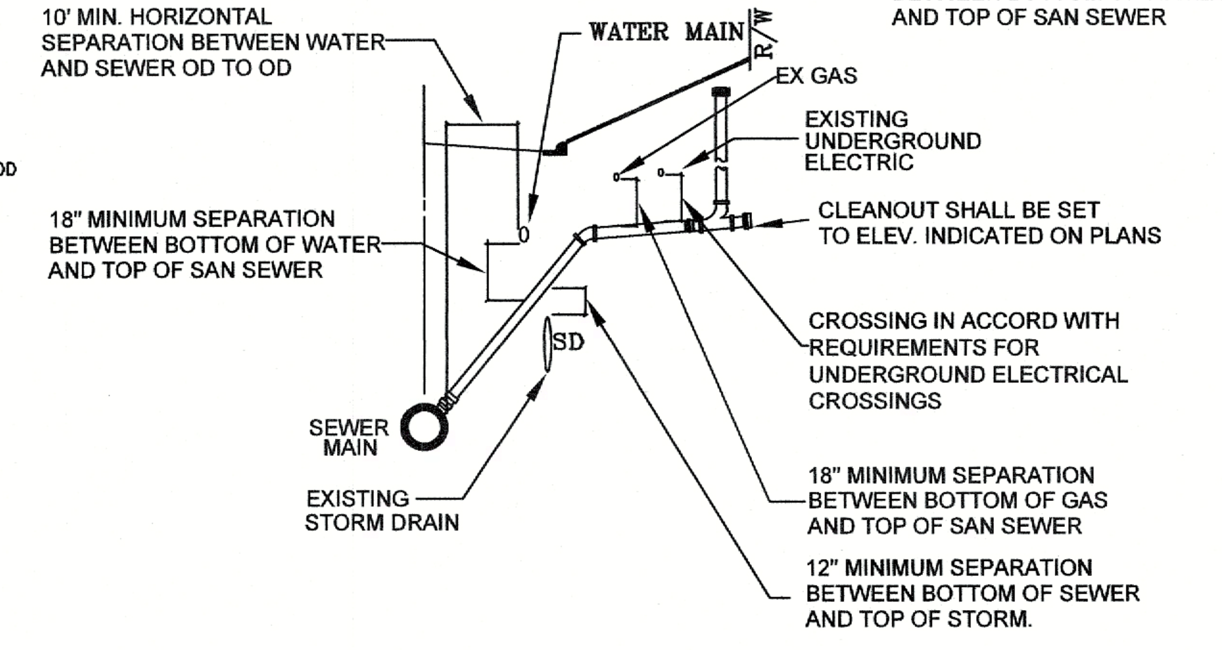
NOTE:
NO ENCASEMENT REQUIRED WHEN GREATER THAN 24" SEPARATION

CONCRETE CRADLE CROSSING DETAIL
NOT TO SCALE



4"Ø LATERAL SEWER SERVICE CONNECTION DETAIL
NOT TO SCALE LOCATIONS AS NOTED





1. ALL VERTICAL AND HORIZONTAL SEPARATION SHALL BE IN ACCORDANCE WITH STATE REGULATIONS.
2. THE SKETCHES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY.
3. THE CONTRACTOR SHALL BE REQUIRED TO VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY AT EACH CROSSING PRIOR TO CONSTRUCTION OF LATERAL TO INSURE PROPER CLEARANCES ARE MAINTAINED.
4. ALL PIPE BEND LOCATIONS AND MAX. NUMBER OF BENDS INSTALLED ON LATERALS SHALL BE APPROVED BY THE PROJECT COORDINATOR PRIOR TO INSTALLATION OF BEND OR EXTENDING THE LATERAL FROM THE MAIN.
5. ALL REQUIREMENTS FOR SEWER LATERAL NOTES AND DETAILS SHALL BE APPLICABLE.
6. REFER TO UNDERGROUND ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION WHEN CROSSING UNDERGROUND ELECTRICAL FACILITIES.

SEWER SERVICE LATERAL UTILITY CONFLICT SEPARATION REQUIREMENTS
NOT TO SCALE

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

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WASTEWATER COLLECTION TYP.
CONSTRUCTION DETAILS & TABLES

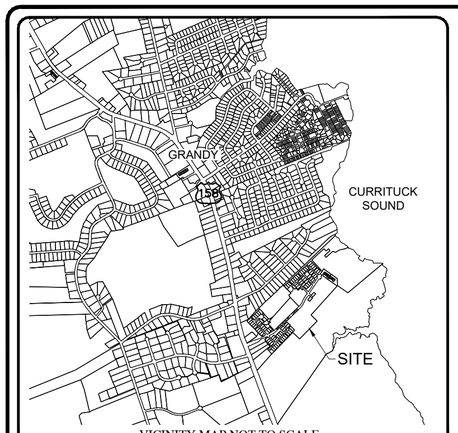
PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS			
NO.	DATE	DESCRIPTION	BY

SEAL 042639
DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: AS NOTED
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG
SHEET: 23 OF 23	
CAD FILE: 4018_PH_2-4	
PROJECT NO: 4018	

S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phases 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:16 AM HP DesignJet T2500 PS HPGL2.pc3



VICINITY MAP NOT TO SCALE

WATERSIDE VILLAGES OF CURRITUCK

RESIDENTIAL SUBDIVISION
PHASE 2
FINAL PLAT
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY
NORTH CAROLINA

OWNERSHIP AND DEDICATION CERTIFICATE
I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED HEREON, WHICH PROPERTY IS LOCATED WITHIN THE SUBDIVISION REGULATION JURISDICTION OF CURRITUCK COUNTY, THAT I HEREBY FREELY ADOPT THIS PLAT OF SUBDIVISION AND DEDICATE TO PUBLIC USE ALL AREA SHOWN ON THIS PLAT AS STREETS, UTILITIES, ALLEYS, WALKS, RECREATION AND PARKS, OPEN SPACE AND EASEMENTS, EXCEPT THOSE SPECIFICALLY INDICATED AS PRIVATE AND THAT I WILL MAINTAIN ALL SUCH AREAS UNTIL THE OFFER OF DEDICATION IS ACCEPTED BY THE APPROPRIATE PUBLIC AUTHORITY OR HOME OWNERS' ASSOCIATION. ALL PROPERTY SHOWN ON THIS PLAT AS DEDICATED FOR A PUBLIC USE SHALL BE DEEMED TO BE DEDICATED FOR ANY OTHER PUBLIC USE AUTHORIZED BY LAW WHEN SUCH USE IS APPROVED BY THE APPROPRIATE PUBLIC AUTHORITY IN THE PUBLIC INTEREST.

_____
DATE

_____
OWNER

I,_____, A NOTARY PUBLIC OF _____ COUNTY, NORTH CAROLINA, DO HEREBY CERTIFY THAT _____ PERSONALLY APPEARED BEFORE ME THIS DATE AND ACKNOWLEDGED THE DUE EXECUTION OF THE FOREGOING CERTIFICATE.

WITNESS MY HAND AND OFFICIAL SEAL THIS _____DAY OF ,_____ 2024.

_____ _____ _____
NOTARY PUBLIC MY COMMISSION EXPIRES

REVIEW OFFICER CERTIFICATE
STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

I,_____, REVIEW OFFICER OF CURRITUCK COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

_____ _____
DATE REVIEW OFFICER

ENGINEER CERTIFICATE FOR PRIVATE STREETS
I HEREBY CERTIFY THAT THE PRIVATE STREETS SHOWN ON THIS PLAT ARE INTENDED FOR PRIVATE USE AND WILL REMAIN UNDER CONTROL, MAINTENANCE AND RESPONSIBILITY OF THE DEVELOPER AND/OR A HOMEOWNER'S ASSOCIATION AND THAT THEY HAVE BEEN COMPLETED IN ACCORDANCE WITH AT LEAST THE MINIMUM SPECIFICATIONS AND STANDARDS OF THE STATE DEPARTMENT OF TRANSPORTATION.

_____
DATE

_____
LICENSED ENGINEER

ENGINEER CERTIFICATE OF STORM WATER IMPROVEMENTS
IN THE SUBDIVISION ENTITLED WATERSIDE VILLAGES, STORMWATER DRAINAGE IMPROVEMENTS HAVE BEEN INSTALLED IN SUBSTANTIAL CONFORMANCE WITH PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP, AND APPROVED BY THE CURRITUCK COUNTY PLANNING BOARD. CURRITUCK COUNTY ASSUMES NO RESPONSIBILITY FOR THE DESIGN, MAINTENANCE OR THE GUARANTEED PERFORMANCE OF THE STORM WATER DRAINAGE IMPROVEMENTS AND THEIR EFFECTS.

_____
REGISTERED LAND SURVEYOR/CIVIL ENGINEER

_____
DATE

_____
REGISTRATION NUMBER

STORMWATER MANAGEMENT SYSTEMS SHALL BE MAINTAINED BY THE WATERSIDE VILLAGES PROPERTY OWNERS ASSOCIATION.

GENERAL NOTES:

1) PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK

2) APPLICANT: WSV HOLDINGS, LLC
OWNER: WSV HOLDINGS, LLC

3) PROPERTY DATA:
PARCEL ID NO: 0108-000-022J-0000
PRIMARY ADDRESS: WATERFRONT DRIVE
GRANDY, NC

4) VERTICAL DATUM IS NAVD 88

5) IRON PINS AT ALL LOT CORNERS UNLESS OTHERWISE NOTED HEREON.

6) PROPERTY ZONING: AG

7) FIRM DATA:
SUBJECT PROPERTY IS LOCATED IN F.I.R.M. ZONE "X" AS SHOWN. REFERENCE F.I.R.M PANEL # 3720992100K, EFFECTIVE DATE: DECEMBER 21, 2018. (SUBJECT TO CHANGE BY F.EM.A.)

8) RECORDED REFERENCES:
DB 202, PG 151 DB 204, PG 199
DB 203, PG 55 DB 207, PG 892
DB 203, PG 367 DB 392, PG 355
DB 124, PG 256, DB 118, PG 494
DB 327, PG 98 PC E, SL 131
DB 1710, PG 174 PC M, SL 153
DB 1741, PG 818

9) THE SUBJECT PROPERTY SHOWN HEREON IS ENCUMBERED BY EASEMENTS AND AGREEMENTS FOR ELECTRIC AND TELEPHONE RIGHTS OF WAYS AS RECORDED IN:
DB 51, PG 255 DB 179, PG 207
DB 66, PG 204 DB 125, PG 395
DB 211, PG 65

10) THE CURRITUCK SOUND NATURAL WATER BOUNDARY IS SUBJECT TO CHANGE BY NATURAL CAUSES.

11) SUBJECT TO TITLE SEARCH AND TO ANY AND/OR ALL RIGHTS OF WAYS, ENFORCEABLE RESTRICTIONS, AND/OR EASEMENTS OF RECORD WHETHER SHOWN HEREON OR NOT.

12) UNDERGROUND UTILITIES, IF ANY, WERE NOT LOCATED BY THIS SURVEY.

13) TOTAL SITE AREA: 13.680 ACRES; (PHASE 2 AREA: 7.961 ACRES)

14) AREA IN R/W PHASE 2: 1.236 ACRES
LINEAR FEET OF PROPOSED 30' ROADWAY PHASE 2: 2,034.71 FEET

15) OPEN SPACE IN PHASE 2: 2.392 ACRES

16) TOTAL LOT AREA PHASE 2: 3.991 ACRES

17) PORTION OF YACHT CLUB LANE SOUTH AND LOTS 92 AND 93 PREVIOUSLY DEDICATED: 0.342 ACRES (P.C. O, SL. 188 & P.C. M, SL. 153)

18) MINIMUM LOT SIZE: 5,200.00 SQ.FT.
TOTAL NUMBER OF LOTS PHASE 2: 32 LOTS

19) A 6' EASEMENT FOR UTILITIES AND DRAINAGE ALONG SIDE LOT LINES AND A 15' EASEMENT FOR UTILITIES AND DRAINAGE ALONG THE FRONT AND REAR LOT LINES IS HEREBY ESTABLISHED.

20) USE OF LAND WITHIN A FLOODWAY OR FLOODPLAIN IS SUBSTANTIALLY RESTRICTED BY ARTICLE 16 OF THE CURRITUCK UNIFIED DEVELOPMENT ORDINANCE.

21) CAMA MINOR PERMITS ARE REQUIRED FOR ANY DEVELOPMENT ACTIVITIES WITHIN THE ESTUARINE SHORELINE AEC. OPEN SPACE, PONDS AND DRAINAGE FACILITIES REQUIRED TO BE PROVIDED BY THE DEVELOPER IN ACCORDANCE WITH THIS ORDINANCE SHALL NOT BE DEDICATED TO PUBLIC USE AND SHALL REMAIN UNDER THE OWNERSHIP AND CONTROL OF THE DEVELOPER (OR HIS SUCCESSOR) OR THE ASSOCIATION OF OWNERS OF PROPERTY SHOWN ON THIS SUBDIVISION PLAT THAT SATISFIES THE CRITERIA ESTABLISHED IN THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

22) ALL PARCELS AND OTHER AREAS IDENTIFIED AS "COMMON AREA" ARE LIMITED TO THE USE AND ENJOYMENT BY THE OWNERS OF LOTS AND ARE NOT FOR PUBLIC USE. NO PARCELS OR AREAS ON THIS SUBDIVISION PLAT ARE OFFERED TO PUBLIC USE, EXCEPT AS SPECIFICALLY DESIGNATED, AND THE RECORDING OF THE SUBDIVISION PLAT DOES NOT CONSTITUTE AN OFFER OF DEDICATION TO PUBLIC USE OF ANY PROPERTY SHOWN HEREON EXCEPT THAT PROPERTY SPECIFICALLY DESIGNATED AS "PUBLIC."

TABLE OF CONTENTS

LEGEND	
	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	ADJOINING PROPERTY LINE
	SHORELINE
	EXISTING CONCRETE MONUMENT
	SET IRON ROD
	EXISTING IRON ROD
	EXISTING IRON PIPE
100	STREET ADDRESS
N.T.S.	NOT TO SCALE
P.C.	PLAT CABINET
D.B.	DEED BOOK
SL	SLIDE
(T)	TOTAL
(COMP)	COMPUTED PHASE LINE
SF / SQ.FT.	SQUARE FEET
AC	ACRES

APPROVAL CERTIFICATE
I HEREBY CERTIFY THAT THE SUBDIVISION SHOWN ON THIS PLAT IS IN ALL RESPECTS IN COMPLIANCE WITH THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE AND, THEREFORE, THIS PLAT HAS BEEN APPROVED BY THE CURRITUCK COUNTY TECHNICAL REVIEW COMMITTEE AND SIGNED BY THE ADMINISTRATOR, SUBJECT TO ITS BEING RECORDED IN THE CURRITUCK COUNTY REGISTRY WITHIN 90 DAYS OF THE DATE BELOW.

_____ _____.
DATE ADMINISTRATOR

SURVEY AND ACCURACY CERTIFICATE
I, MICHAEL D. BARR, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED AND DESCRIPTION RECORDED IN BOOKS REFERENCED); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOKS REFERENCED; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THIS IS TO CERTIFY THAT THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.

WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 10TH DAY OF DECEMBER, A.D., 2024.

DocuSigned by:
_____ L-1756
SIGNATURE
C6DA34EC9CBF428...

REQUIRED IMPROVEMENTS CERTIFICATE
I HEREBY CERTIFY THAT ALL OF THE IMPROVEMENTS REQUIRED BY THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE HAVE BEEN INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP, AND THAT SAID IMPROVEMENTS COMPLY WITH CURRITUCK COUNTY SPECIFICATIONS, EXCEPT THAT A PERFORMANCE GUARANTEE HAS BEEN POSTED WITH CURRITUCK COUNTY GUARANTEEING THAT ALL REMAINING IMPROVEMENTS MUST BE COMPLETED BY THE 10TH DAY OF DECEMBER, 2026 ACCORDING TO THE PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP. REMAINING IMPROVEMENTS INCLUDE:

- PAVEMENT MARKINGS
- SIDEWALKS
- STREET TREES
- BUFFER TREES
- STREET LIGHTS

12/10/2024
DATE

DocuSigned by:
C6DA34EC9CBF428...
REGISTERED LAND SURVEYOR/ENGINEER
L-1756

_____
REGISTRATION NUMBER

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
PHASE 2
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
FINAL SUBDIVISION PLAT

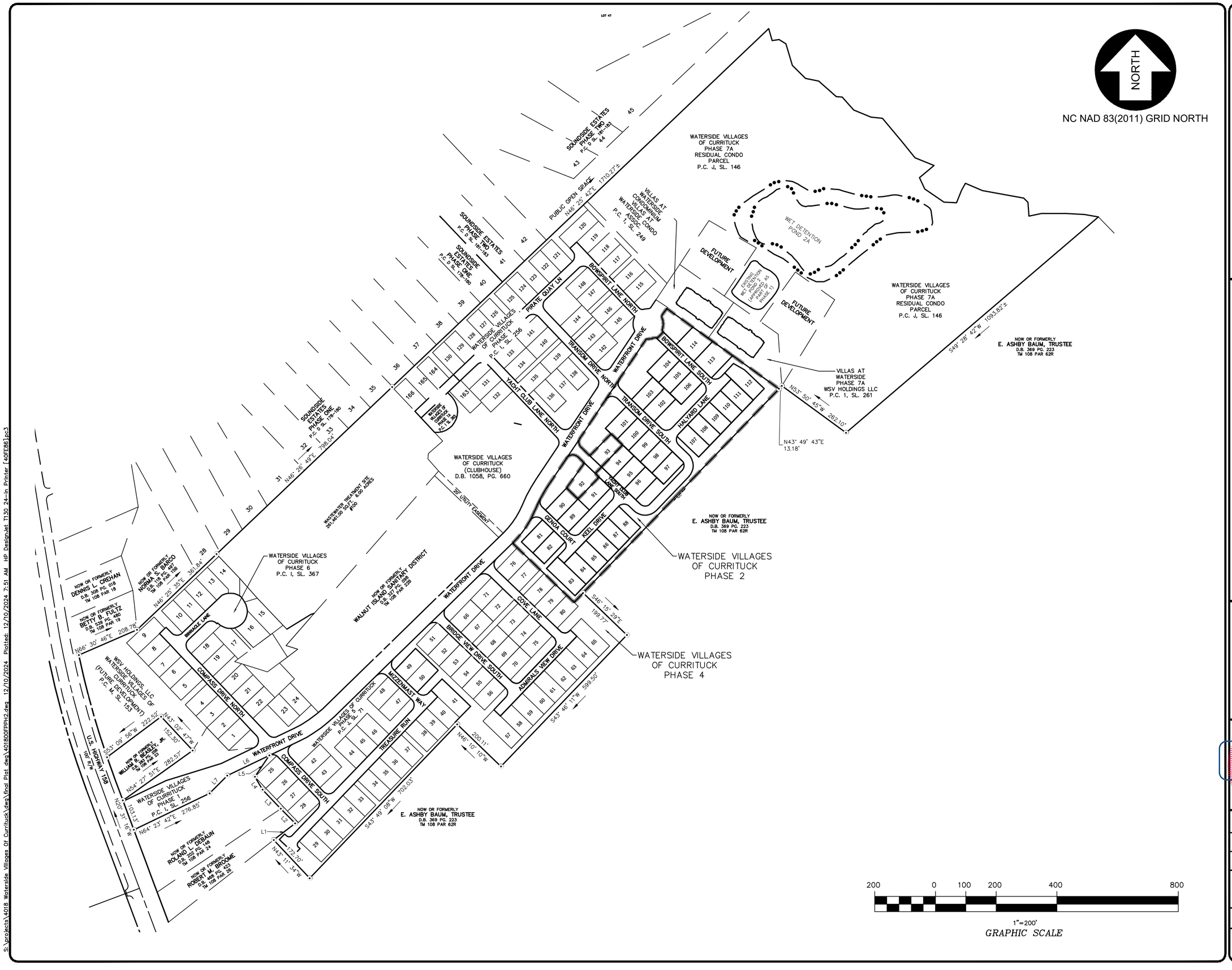
REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL D. BARR

DATE: 06-20-24	SCALE: AS SHOWN
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 1 OF 4
CAD FILE: 401800FPPH2
PROJECT NO: 4018



Bissell Professional Group
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES

PHASE 2

POPLAR BRANCH

CURRITUCK COUNTY NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL A. KERR

DocuSigned by:
C6DA84EC9CBE428...
12/12/24

DATE: 06-20-24	SCALE: 1" = 200'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 2 OF 4

CAD FILE: 401800FPPH2

PROJECT NO: 4018

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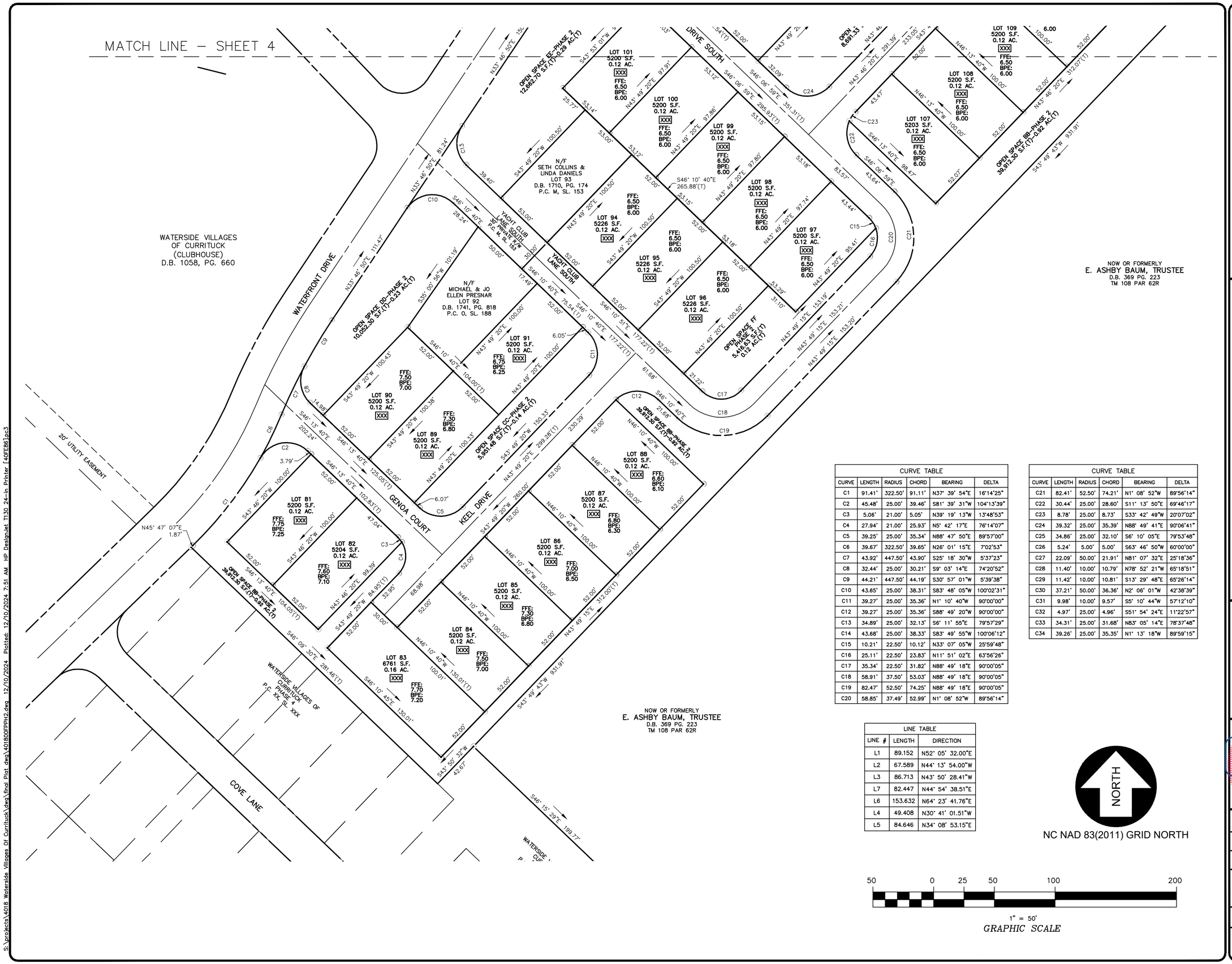


CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	91.41'	322.50'	91.11'	N37° 39' 54"E	16°14'25"
C2	45.48'	25.00'	39.46'	S81° 39' 31"W	104°13'39"
C3	5.06'	21.00'	5.05'	N39° 19' 13"W	13°48'53"
C4	27.94'	21.00'	25.93'	N5° 42' 17"E	76°14'07"
C5	39.25'	25.00'	35.34'	N88° 47' 50"E	89°57'00"
C6	39.67'	322.50'	39.65'	N26° 01' 15"E	7°02'53"
C7	43.92'	447.50'	43.90'	S25° 18' 30"W	5°37'23"
C8	32.44'	25.00'	30.21'	S9° 03' 14"E	74°20'52"
C9	44.21'	447.50'	44.19'	S30° 57' 01"W	5°39'38"
C10	43.65'	25.00'	38.31'	S83° 48' 05"W	100°02'31"
C11	39.27'	25.00'	35.36'	N1° 10' 40"W	90°00'00"
C12	39.27'	25.00'	35.36'	S88° 49' 20"W	90°00'00"
C13	34.89'	25.00'	32.13'	S6° 11' 55"E	79°57'29"
C14	43.68'	25.00'	38.33'	S83° 49' 55"W	100°06'12"
C15	10.21'	22.50'	10.12'	N33° 07' 05"W	25°59'48"
C16	25.11'	22.50'	23.83'	N11° 51' 02"E	63°56'26"
C17	35.34'	22.50'	31.82'	N88° 49' 18"E	90°00'05"
C18	58.91'	37.50'	53.03'	N88° 49' 18"E	90°00'05"
C19	82.47'	52.50'	74.25'	N88° 49' 18"E	90°00'05"
C20	58.85'	37.49'	52.99'	N1° 08' 52"W	89°56'14"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C21	82.41'	52.50'	74.21'	N1° 08' 52"W	89°56'14"
C22	30.44'	25.00'	28.60'	S11° 13' 50"E	69°46'17"
C23	8.78'	25.00'	8.73'	S33° 42' 49"W	20°07'02"
C24	39.32'	25.00'	35.39'	N88° 49' 41"E	90°06'41"
C25	34.86'	25.00'	32.10'	S6° 10' 05"E	79°53'48"
C26	5.24'	5.00'	5.00'	S63° 46' 50"W	60°00'00"
C27	22.09'	50.00'	21.91'	N81° 07' 32"E	25°18'36"
C28	11.40'	10.00'	10.79'	N78° 52' 21"W	65°18'51"
C29	11.42'	10.00'	10.81'	S13° 29' 48"E	65°26'14"
C30	37.21'	50.00'	36.36'	N2° 06' 01"W	42°38'39"
C31	9.98'	10.00'	9.57'	S5° 10' 44"W	57°12'10"
C32	4.97'	25.00'	4.96'	S51° 54' 24"E	11°22'57"
C33	34.31'	25.00'	31.68'	N83° 05' 14"E	78°37'48"
C34	39.26'	25.00'	35.35'	N1° 13' 18"W	89°59'15"

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	89.152	N52° 05' 32.00"E
L2	67.589	N44° 13' 54.00"W
L3	86.713	N43° 50' 28.41"W
L7	82.447	N44° 54' 38.51"E
L6	153.632	N64° 23' 41.76"E
L4	49.408	N30° 41' 01.51"W
L5	84.646	N34° 08' 53.15"E

NORTH

NC NAD 83(2011) GRID NORTH

50 0 25 50 100 200

1" = 50'

GRAPHIC SCALE

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES
PHASE 2

POPLAR BRANCH — CURRITUCK COUNTY — NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL LICENSED MARK S. BISSELL 17756 LAND SURVEYOR

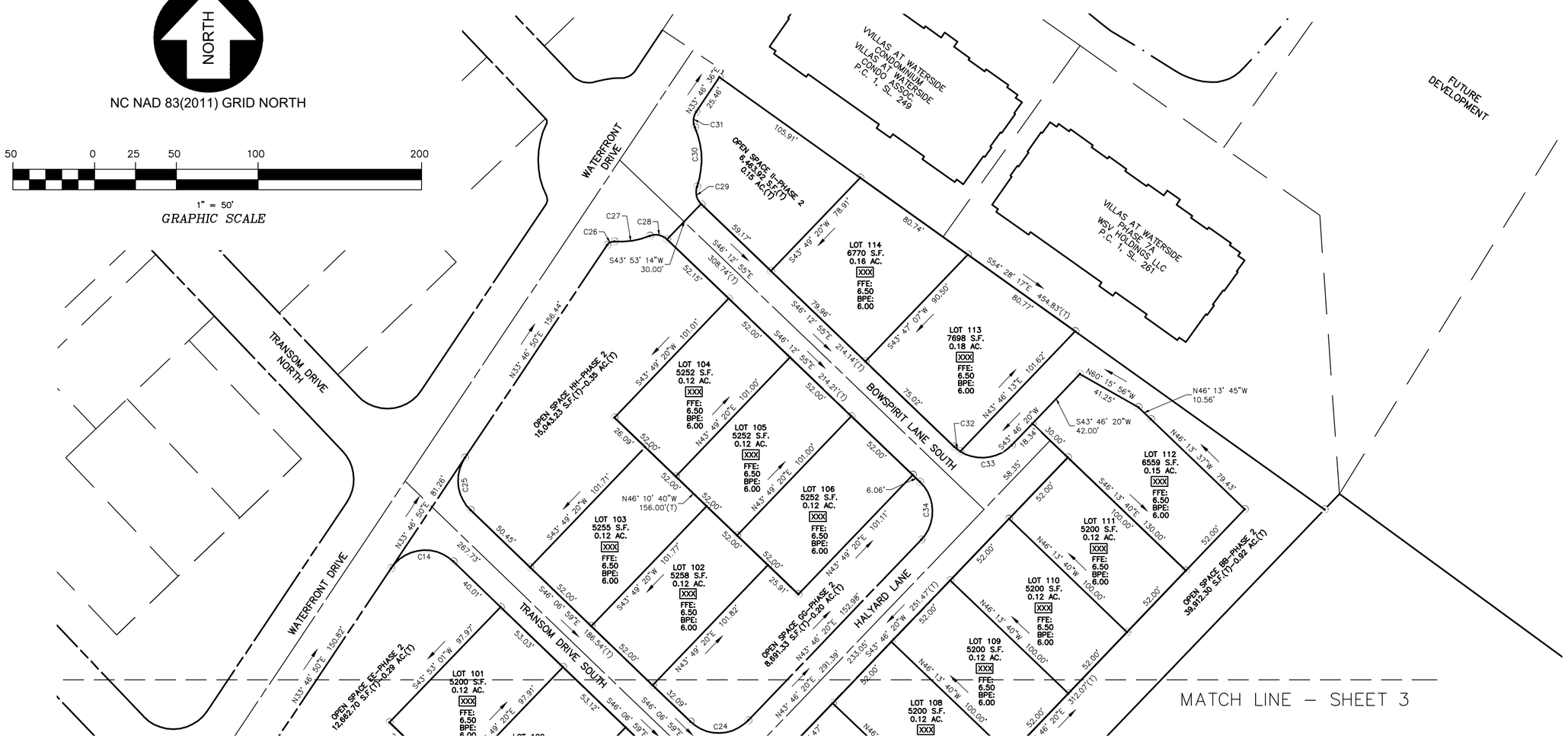
DocuSigned by:
C6DA34EC9CBF428...
12/12/24

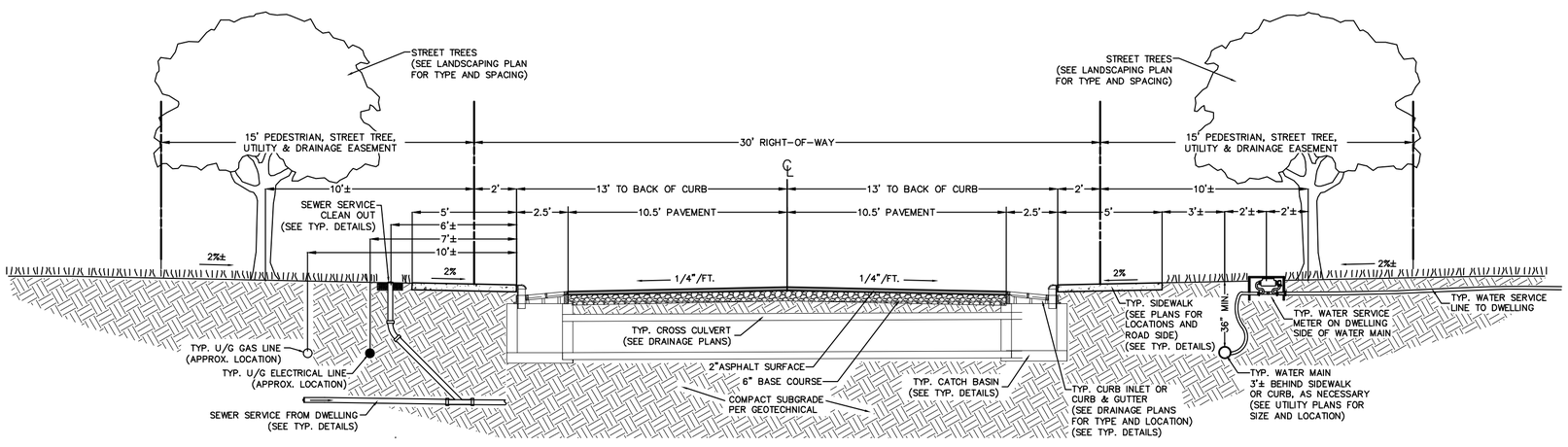
DATE: 06-20-24	SCALE: 1" = 50'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 3 OF 4

CAD FILE: 401800FPPH2

PROJECT NO: 4018





TYPICAL LOCAL ROADWAY SECTION

SCALE: 1" = 5' SECTION VIEW

Bissell Professional Group
Firm License # C-956
5512 North Croatan Highway
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES
PHASE 2

POPLAR BRANCH — CURRITUCK COUNTY — NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL D. BOYLAN

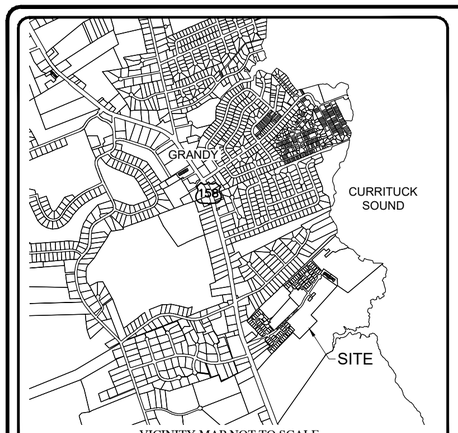
DocuSigned by: C6DA34EC9CBF428...
12/10/24

DATE: 06-20-24	SCALE: 1" = 50'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 4 OF 4

CAD FILE: 401800FPPH2

PROJECT NO: 4018



VICINITY MAP NOT TO SCALE

WATERSIDE VILLAGES OF CURRITUCK

RESIDENTIAL SUBDIVISION
PHASE 4
FINAL PLAT
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY
NORTH CAROLINA

OWNERSHIP AND DEDICATION CERTIFICATE
I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY DESCRIBED HEREON, WHICH PROPERTY IS LOCATED WITHIN THE SUBDIVISION REGULATION JURISDICTION OF CURRITUCK COUNTY, THAT I HEREBY FREELY ADOPT THIS PLAT OF SUBDIVISION AND DEDICATE TO PUBLIC USE ALL AREA SHOWN ON THIS PLAT AS STREETS, UTILITIES, ALLEYS, WALKS, RECREATION AND PARKS, OPEN SPACE AND EASEMENTS, EXCEPT THOSE SPECIFICALLY INDICATED AS PRIVATE AND THAT I WILL MAINTAIN ALL SUCH AREAS UNTIL THE OFFER OF DEDICATION IS ACCEPTED BY THE APPROPRIATE PUBLIC AUTHORITY OR HOME OWNERS' ASSOCIATION. ALL PROPERTY SHOWN ON THIS PLAT AS DEDICATED FOR A PUBLIC USE SHALL BE DEEMED TO BE DEDICATED FOR ANY OTHER PUBLIC USE AUTHORIZED BY LAW WHEN SUCH USE IS APPROVED BY THE APPROPRIATE PUBLIC AUTHORITY IN THE PUBLIC INTEREST.

_____
DATE

_____
OWNER

I,_____, A NOTARY PUBLIC OF _____ COUNTY, NORTH CAROLINA, DO HEREBY CERTIFY THAT _____ PERSONALLY APPEARED BEFORE ME THIS DATE AND ACKNOWLEDGED THE DUE EXECUTION OF THE FOREGOING CERTIFICATE.

WITNESS MY HAND AND OFFICIAL SEAL THIS _____DAY OF ,_____ 2024.

_____ _____ _____
NOTARY PUBLIC MY COMMISSION EXPIRES

REVIEW OFFICER CERTIFICATE
STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

I,_____, REVIEW OFFICER OF CURRITUCK COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

_____ _____
DATE REVIEW OFFICER

ENGINEER CERTIFICATE FOR PRIVATE STREETS
I HEREBY CERTIFY THAT THE PRIVATE STREETS SHOWN ON THIS PLAT ARE INTENDED FOR PRIVATE USE AND WILL REMAIN UNDER CONTROL, MAINTENANCE AND RESPONSIBILITY OF THE DEVELOPER AND/OR A HOMEOWNER'S ASSOCIATION AND THAT THEY HAVE BEEN COMPLETED IN ACCORDANCE WITH AT LEAST THE MINIMUM SPECIFICATIONS AND STANDARDS OF THE STATE DEPARTMENT OF TRANSPORTATION.

_____
DATE

_____
LICENSED ENGINEER

ENGINEER CERTIFICATE OF STORM WATER IMPROVEMENTS
IN THE SUBDIVISION ENTITLED WATERSIDE VILLAGES, STORMWATER DRAINAGE IMPROVEMENTS HAVE BEEN INSTALLED IN SUBSTANTIAL CONFORMANCE WITH PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP, AND APPROVED BY THE CURRITUCK COUNTY PLANNING BOARD. CURRITUCK COUNTY ASSUMES NO RESPONSIBILITY FOR THE DESIGN, MAINTENANCE OR THE GUARANTEED PERFORMANCE OF THE STORM WATER DRAINAGE IMPROVEMENTS AND THEIR EFFECTS.

_____
REGISTERED LAND SURVEYOR/CIVIL ENGINEER

_____
DATE

_____
REGISTRATION NUMBER

STORMWATER MANAGEMENT SYSTEMS SHALL BE MAINTAINED BY THE WATERSIDE VILLAGES PROPERTY OWNERS ASSOCIATION.

GENERAL NOTES:

1) PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK

2) APPLICANT: WSV HOLDINGS, LLC
OWNER: WSV HOLDINGS, LLC

3) PROPERTY DATA:
PARCEL ID NO: 0108-000-022J-0000
PRIMARY ADDRESS: WATERFRONT DRIVE
GRANDY, NC

4) VERTICAL DATUM IS NAVD 88

5) IRON PINS AT ALL LOT CORNERS UNLESS OTHERWISE NOTED HEREON.

6) PROPERTY ZONING: AG

7) FIRM DATA:
SUBJECT PROPERTY IS LOCATED IN F.I.R.M. ZONE "X" AS SHOWN. REFERENCE F.I.R.M PANEL # 3720992100K, EFFECTIVE DATE: DECEMBER 21, 2018. (SUBJECT TO CHANGE BY F.EM.A.)

8) RECORDED REFERENCES:
DB 202, PG 151 DB 204, PG 199
DB 203, PG 55 DB 207, PG 892
DB 203, PG 367 DB 392, PG 355
DB 124, PG 256, DB 118, PG 494
DB 327, PG 98 PC E, SL 131

9) THE SUBJECT PROPERTY SHOWN HEREON IS ENCUMBERED BY EASEMENTS AND AGREEMENTS FOR ELECTRIC AND TELEPHONE RIGHTS OF WAYS AS RECORDED IN:
DB 51, PG 255 DB 179, PG 207
DB 66, PG 204 DB 125, PG 395
DB 211, PG 65

10) THE CURRITUCK SOUND NATURAL WATER BOUNDARY IS SUBJECT TO CHANGE BY NATURAL CAUSES.

11) SUBJECT TO TITLE SEARCH AND TO ANY AND/OR ALL RIGHTS OF WAYS, ENFORCEABLE RESTRICTIONS, AND/OR EASEMENTS OF RECORD WHETHER SHOWN HEREON OR NOT.

12) UNDERGROUND UTILITIES, IF ANY, WERE NOT LOCATED BY THIS SURVEY.

13) TOTAL SITE AREA PHASE 4: 6.062 ACRES

14) AREA IN R/W PHASE 4: 0.748 ACRES
LINEAR FEET OF PROPOSED 30' ROADWAY PHASE 4: 1,080.20 FEET

15) OPEN SPACE IN PHASE 4: 1.661 ACRES

16) TOTAL LOT AREA PHASE 4: 3.653 ACRES

17) MINIMUM LOT SIZE: 5,200.00 SQ.FT.
TOTAL NUMBER OF LOTS PHASE 4: 30 LOTS

18) A 6' EASEMENT FOR UTILITIES AND DRAINAGE ALONG SIDE LOT LINES AND A 15' EASEMENT FOR UTILITIES AND DRAINAGE ALONG THE FRONT AND REAR LOT LINES IS HEREBY ESTABLISHED.

19) USE OF LAND WITHIN A FLOODWAY OR FLOODPLAIN IS SUBSTANTIALLY RESTRICTED BY ARTICLE 16 OF THE CURRITUCK UNIFIED DEVELOPMENT ORDINANCE.

20) CAMA MINOR PERMITS ARE REQUIRED FOR ANY DEVELOPMENT ACTIVITIES WITHIN THE ESTUARINE SHORELINE AEC. OPEN SPACE, PONDS AND DRAINAGE FACILITIES REQUIRED TO BE PROVIDED BY THE DEVELOPER IN ACCORDANCE WITH THIS ORDINANCE SHALL NOT BE DEDICATED TO PUBLIC USE AND SHALL REMAIN UNDER THE OWNERSHIP AND CONTROL OF THE DEVELOPER (OR HIS SUCCESSOR) OR THE ASSOCIATION OF OWNERS OF PROPERTY SHOWN ON THIS SUBDIVISION PLAT THAT SATISFIES THE CRITERIA ESTABLISHED IN THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

21) ALL PARCELS AND OTHER AREAS IDENTIFIED AS "COMMON AREA" ARE LIMITED TO THE USE AND ENJOYMENT BY THE OWNERS OF LOTS AND ARE NOT FOR PUBLIC USE. NO PARCELS OR AREAS ON THIS SUBDIVISION PLAT ARE OFFERED TO PUBLIC USE, EXCEPT AS SPECIFICALLY DESIGNATED, AND THE RECORDING OF THE SUBDIVISION PLAT DOES NOT CONSTITUTE AN OFFER OF DEDICATION TO PUBLIC USE OF ANY PROPERTY SHOWN HEREON EXCEPT THAT PROPERTY SPECIFICALLY DESIGNATED AS "PUBLIC."

LEGEND	
	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	ADJOINING PROPERTY LINE
	SHORELINE
	EXISTING CONCRETE MONUMENT
	SET IRON ROD
	EXISTING IRON ROD
	EXISTING IRON PIPE
100	STREET ADDRESS
N.T.S.	NOT TO SCALE
P.C.	PLAT CABINET
D.B.	DEED BOOK
SL	SLIDE
(T)	TOTAL
(COMP)	COMPUTED PHASE LINE
SF / SQ.FT.	SQUARE FEET
AC	ACRES

APPROVAL CERTIFICATE
I HEREBY CERTIFY THAT THE SUBDIVISION SHOWN ON THIS PLAT IS IN ALL RESPECTS IN COMPLIANCE WITH THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE AND, THEREFORE, THIS PLAT HAS BEEN APPROVED BY THE CURRITUCK COUNTY TECHNICAL REVIEW COMMITTEE AND SIGNED BY THE ADMINISTRATOR, SUBJECT TO ITS BEING RECORDED IN THE CURRITUCK COUNTY REGISTRY WITHIN 90 DAYS OF THE DATE BELOW.

_____ _____.
DATE ADMINISTRATOR

SURVEY AND ACCURACY CERTIFICATE
I, MICHAEL D. BARR, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED AND DESCRIPTION RECORDED IN BOOKS REFERENCED); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOKS REFERENCED; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THIS IS TO CERTIFY THAT THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.

WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 10TH DAY OF DECEMBER, A.D., 2024.

DocuSigned by:
_____ L-1756
SIGNATURE
C6DA34EC9CBF428...

REQUIRED IMPROVEMENTS CERTIFICATE
I HEREBY CERTIFY THAT ALL OF THE IMPROVEMENTS REQUIRED BY THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE HAVE BEEN INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP, AND THAT SAID IMPROVEMENTS COMPLY WITH CURRITUCK COUNTY SPECIFICATIONS, EXCEPT THAT A PERFORMANCE GUARANTEE HAS BEEN POSTED WITH CURRITUCK COUNTY GUARANTEEING THAT ALL REMAINING IMPROVEMENTS MUST BE COMPLETED BY THE 10TH DAY OF DECEMBER, 2026 ACCORDING TO THE PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP. REMAINING IMPROVEMENTS INCLUDE:

- PAVEMENT MARKINGS
- SIDEWALKS
- STREET TREES
- BUFFER TREES
- STREET LIGHTS

12/10/2024
DATE

DocuSigned by:
C6DA34EC9CBF428...
REGISTERED LAND SURVEYOR/ENGINEER
L-1756

_____
REGISTRATION NUMBER

Bissell Professional Group
Firm License # C-956
3512 North Croatan Highway
P.O. Box 1088
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT: WATERSIDE VILLAGES OF CURRITUCK
PHASE 4
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA
FINAL SUBDIVISION PLAT

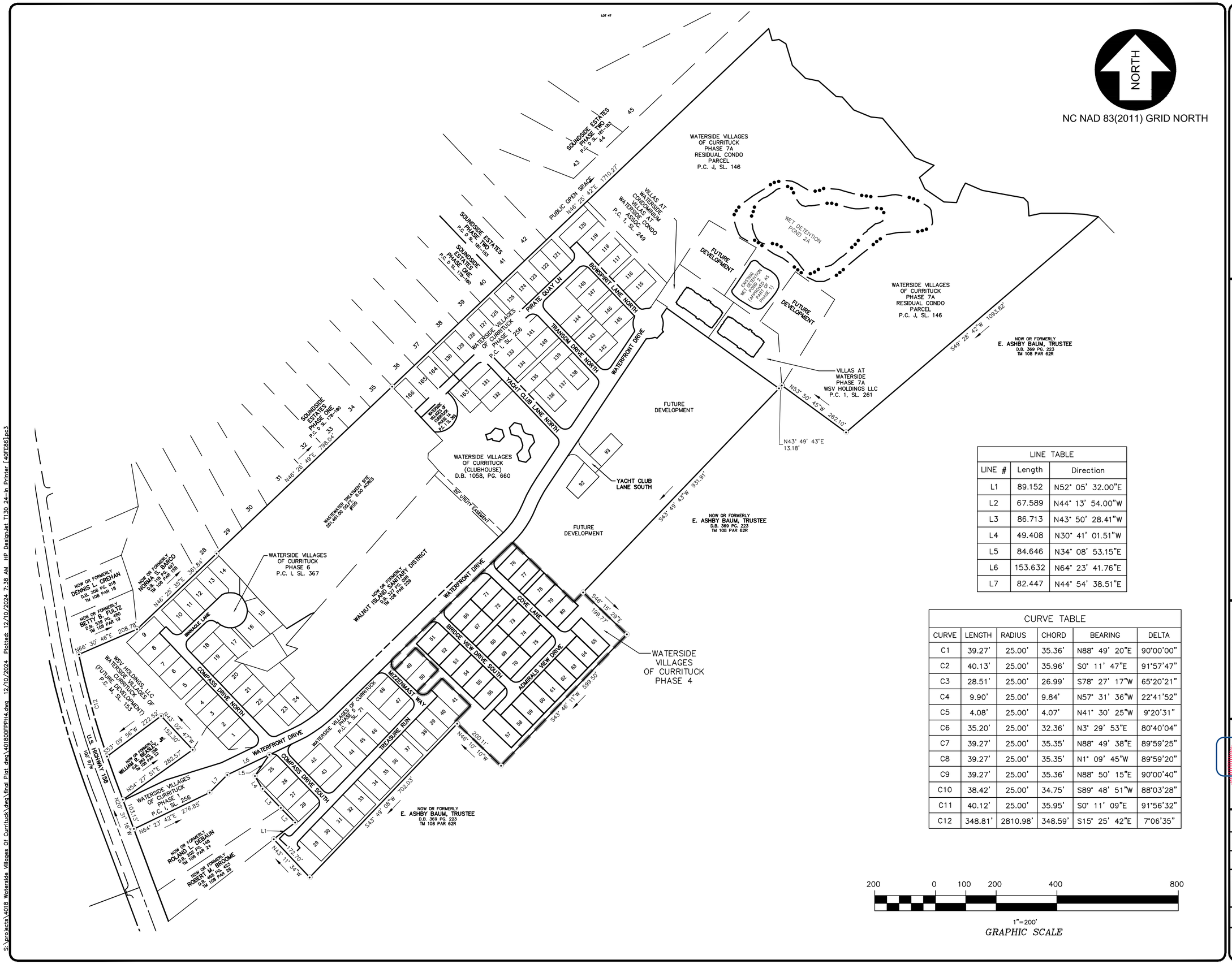
REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL D. BARR

DATE: 06-12-24	SCALE: AS SHOWN
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 1 OF 4
CAD FILE: 401800FPPH4
PROJECT NO: 4018



LINE TABLE		
LINE #	Length	Direction
L1	89.152	N52° 05' 32.00"E
L2	67.589	N44° 13' 54.00"W
L3	86.713	N43° 50' 28.41"W
L4	49.408	N30° 41' 01.51"W
L5	84.646	N34° 08' 53.15"E
L6	153.632	N64° 23' 41.76"E
L7	82.447	N44° 54' 38.51"E

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	39.27'	25.00'	35.36'	N88° 49' 20"E	90°00'00"
C2	40.13'	25.00'	35.96'	S0° 11' 47"E	91°57'47"
C3	28.51'	25.00'	26.99'	S78° 27' 17"W	65°20'21"
C4	9.90'	25.00'	9.84'	N57° 31' 36"W	22°41'52"
C5	4.08'	25.00'	4.07'	N41° 30' 25"W	9°20'31"
C6	35.20'	25.00'	32.36'	N3° 29' 53"E	80°40'04"
C7	39.27'	25.00'	35.35'	N88° 49' 38"E	89°59'25"
C8	39.27'	25.00'	35.35'	N1° 09' 45"W	89°59'20"
C9	39.27'	25.00'	35.36'	N88° 50' 15"E	90°00'40"
C10	38.42'	25.00'	34.75'	S89° 48' 51"W	88°03'28"
C11	40.12'	25.00'	35.95'	S0° 11' 09"E	91°56'32"
C12	348.81'	2810.98'	348.59'	S15° 25' 42"E	7°06'35"

200 0 100 200 400 800

1"=200'

GRAPHIC SCALE

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
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3512 North Croatan Highway
P.O. Box 1088
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(252) 261-3266
FAX (252) 261-1760
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES

PHASE 4

POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL A. KERR

DocuSigned by:
C6DA94EC9CBF429...

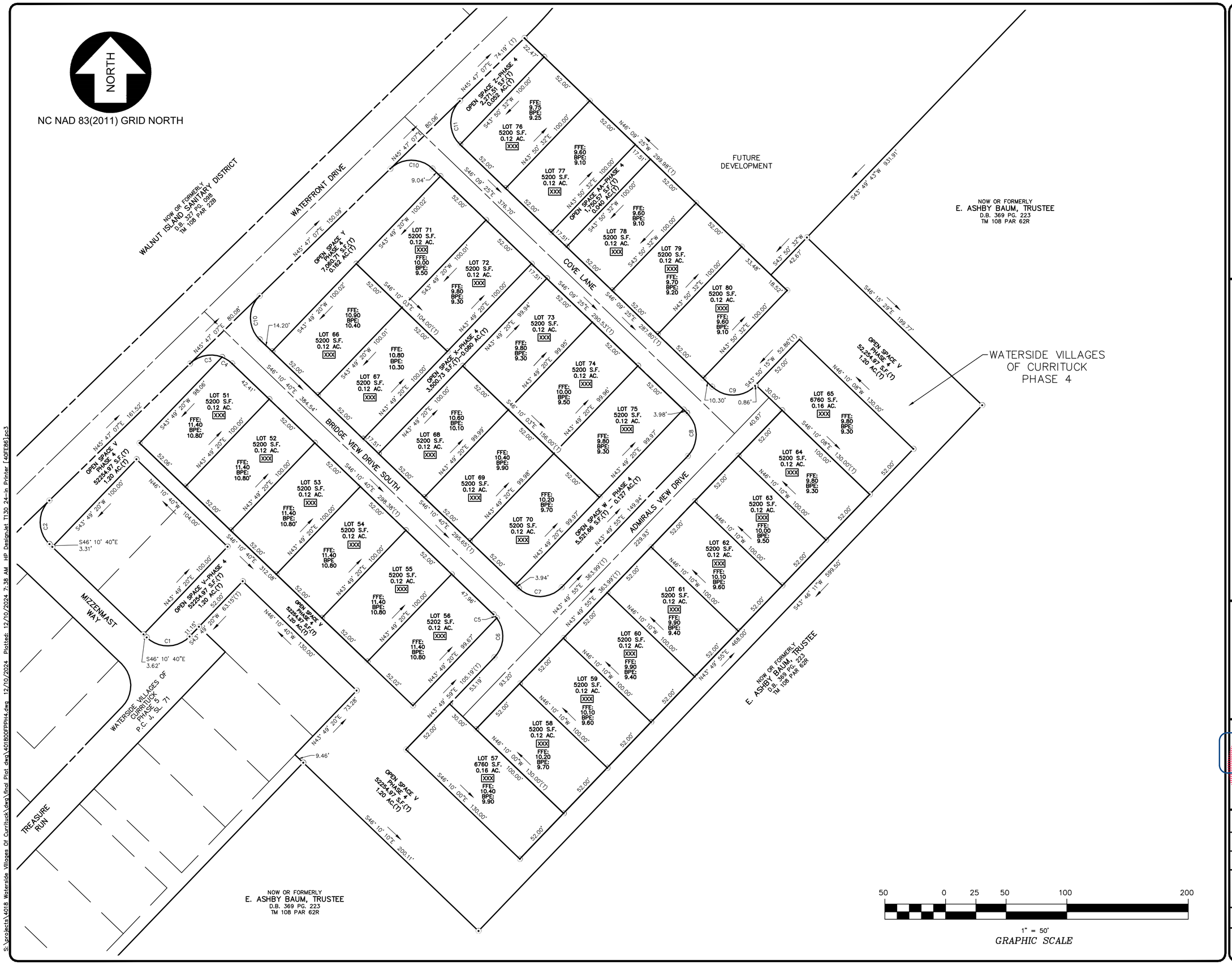
12/12/24

DATE: 06-12-24	SCALE: 1" = 200'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 2 OF 4

CAD FILE: 401800FPPH4

PROJECT NO: 4018



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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES
PHASE 4

POPLAR BRANCH — CURRITUCK COUNTY — NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL MICHAEL D. BARR PLANNING AND SURVEYING

DocuSigned by:
C6DA34EC5CBF428...
12/12/24

DATE: 06-12-24	SCALE: 1" = 50'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 3 OF 4

CAD FILE: 401800FPPH4

PROJECT NO: 4018

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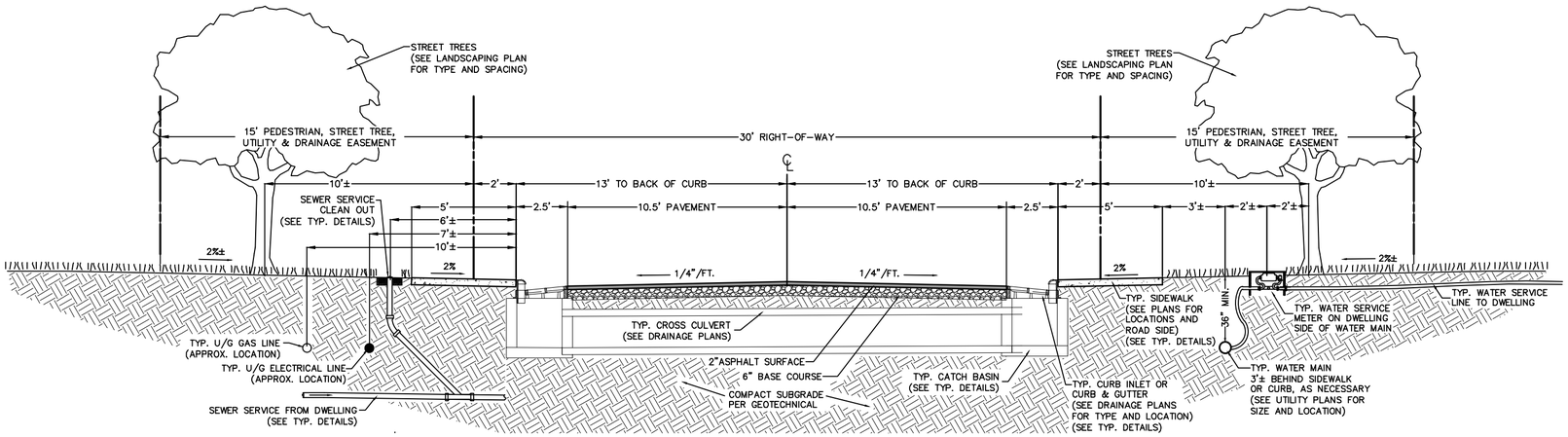

TYPICAL LOCAL ROADWAY SECTION

SCALE: 1" = 5' SECTION VIEW

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Engineers, Planners, Surveyors
and Environmental Specialists

PROJECT:

WATERSIDE VILLAGES
PHASE 4

POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

FINAL SUBDIVISION PLAT

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL MICHAEL D. BAILEY LAND SURVEYOR

DocuSigned by:
C6DA34EC9CBF428...
12/10/24

DATE: 06-12-24	SCALE: 1" = 50'
DESIGNED:	CHECKED: MDB
DRAWN: AKM	APPROVED: BPG

SHEET: 4 OF 4

CAD FILE: 401800FPPH4

PROJECT NO: 4018

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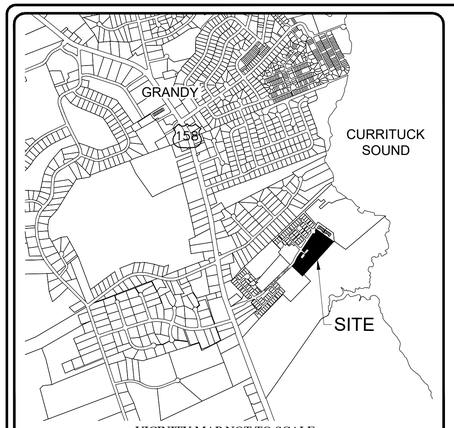

VICINITY MAP NOT TO SCALE

CONSTRUCTION RECORD DRAWINGS FOR

WATERSIDE VILLAGES OF CURRITUCK

PHASES 2 & 4

POLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

GENERAL NOTES:

1. PROJECT NAME: WATERSIDE VILLAGES OF CURRITUCK – PHASES 2 & 4
2. OWNER/APPLICANT: WSV HOLDINGS, LLC
   P.O. BOX 90
   KILL DEVIL HILLS, NC 27948
3. ALL SURVEY DATA IS REFERENCED TO NAD 83 NORTH CAROLINA STATE PLANE HORIZONTAL COORDINATE SYSTEM AND THE NAVD 1988 VERTICAL DATUM.
4. F.I.R.M. DATA:
   ZONES X, SHADED X AND AE (4') PER F.E.M.A. F.I.R.M. MAP PANEL # 3721803200K, EFFECTIVE DATE DECEMBER 21, 2018. USE OF LAND WITHIN A FLOODWAY OR FLOOD PLAIN IS SUBSTANTIALLY RESTRICTED BY CHAPTER 7 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.
5. THESE CONSTRUCTION RECORD DRAWINGS AREA BASED ON A COMBINATION OF ACTUAL FIELD SURVEYS AND FIELD OBSERVATIONS PERFORMED BY BISSELL PROFESSIONAL GROUP AS WELL AS INFORMATION PROVIDED BY THE PROJECT'S CONSTRUCTION CONTRACTORS AND THE CURRITUCK COUNTY WATER DEPARTMENT. ANY SITE MODIFICATIONS MADE AFTER THE LAST FIELD SURVEY ARE NOT REPRESENTED IN THESE DRAWINGS. CONTRIBUTING FIELD SURVEYS WERE CONDUCTED ON THE FOLLOWING DATES:
   - 03-20-24
   - 12-11-24
   - 05-03-24
   - 05-17-24
   - 05-20-24
   - 05-21-24
   - 07-02-24
   - 09-09-24
   - 09-11-24
   - 09-12-24
   - 09-16-24
   - 11-11-24
   - 12-10-24

AS-BUILT SURVEY

I HEREBY CERTIFY THAT ALL IMPROVEMENTS FOR THIS SUBDIVISION HAVE BEEN INSTALLED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS PREPARED BY BISSELL PROFESSIONAL GROUP AND APPROVED BY CURRITUCK COUNTY, EXCEPT THAT A PERFORMANCE GUARANTEE HAS BEEN POSTED WITH CURRITUCK COUNTY GUARANTEEING THAT ALL REMAINING IMPROVEMENTS MUST BE COMPLETED BY THE _____ DAY OF _____, 20___ ACCORDING TO THE PLANS AND SPECIFICATIONS PREPARED BY BISSELL PROFESSIONAL GROUP. FINAL GROUND STABILIZATION OF THE SITE IS ONGOING AND IS NOT INCLUDED IN THIS CERTIFICATION.
REMAINING IMPROVEMENTS INCLUDE:

- STREET TREES
- STREET LIGHTS
- PROPERTY LINE SWALES

12-11-2024
DATE

DocuSigned by:
C6DA34EC9CBF428...
REGISTERED LAND SURVEYOR/ENGINEER

I-1756
REGISTRATION NUMBER

PERFORMANCE GUARANTEE

SHOULD THE OWNER OR DEVELOPER FAIL TO COMPLETE INSTALLATION OF THE GUARANTEED IMPROVEMENTS PER APPROVED PLAN WITHIN THE TERM OF THE PERFORMANCE (AS MAY BE EXTENDED), THE DIRECTOR SHALL GIVE THE OWNER OR DEVELOPER 30 DAYS WRITTEN NOTICE OF THE DEFAULT BY CERTIFIED MAIL. AFTER THE 30-DAY NOTICE PERIOD EXPIRES, THE COUNTY MAY DRAW ON THE GUARANTEE AND USE THE FUNDS TO PERFORM WORK NECESSARY TO COMPLETE INSTALLATION OF THE GUARANTEED IMPROVEMENTS. UPON COMPLETION OF SAID WORK, THE COUNTY SHALL PROVIDE AN ACCOUNTING STATEMENT OF THE EXPENDITURES TO THE OWNER OR DEVELOPER AND AS APPLICABLE, THE OWNER OR DEVELOPER SHALL REIMBURSE THE COUNTY IN ORDER TO BE RELEASED OF BOND AND AVOID A WARRANT OF INDEBTEDNESS.

TABLE OF CONTENTS

LEGEND

	ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	ADJOINING PROPERTY LINE
	SWALE CENTERLINE
	SWALE/BMP TOP OF BANK
	CULVERT (SIZE, TYPE & INVERTS AS NOTED)
	RECORD WATER DISTRIBUTION MAIN (SIZE AS NOTED)
EWL EWL	EXISTING WATER LINE
	6" FIRE HYDRANT TYPICAL
WTR	WATER VALVE TYPICAL (SIZE AS NOTED)
	WATER SERVICE METER BOX
S	8" GRAVITY SEWER LINE & MANHOLE
D	CATCH BASIN/DROP INLET & STORM PIPE
o	SEWER SERVICE CLEANOUT
	DRAINAGE FLOW DIRECTION
F/L	FLOWLINE
EOC	EDGE OF CONCRETE
X 0.00 BPE	BUILDING PAD ELEVATION
X 0.00	SPOT ELEVATION

BISSELL PROFESSIONAL GROUP
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

COVER SHEET

PROJECT: WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

REVISIONS

NO.	DATE	DESCRIPTION	BY

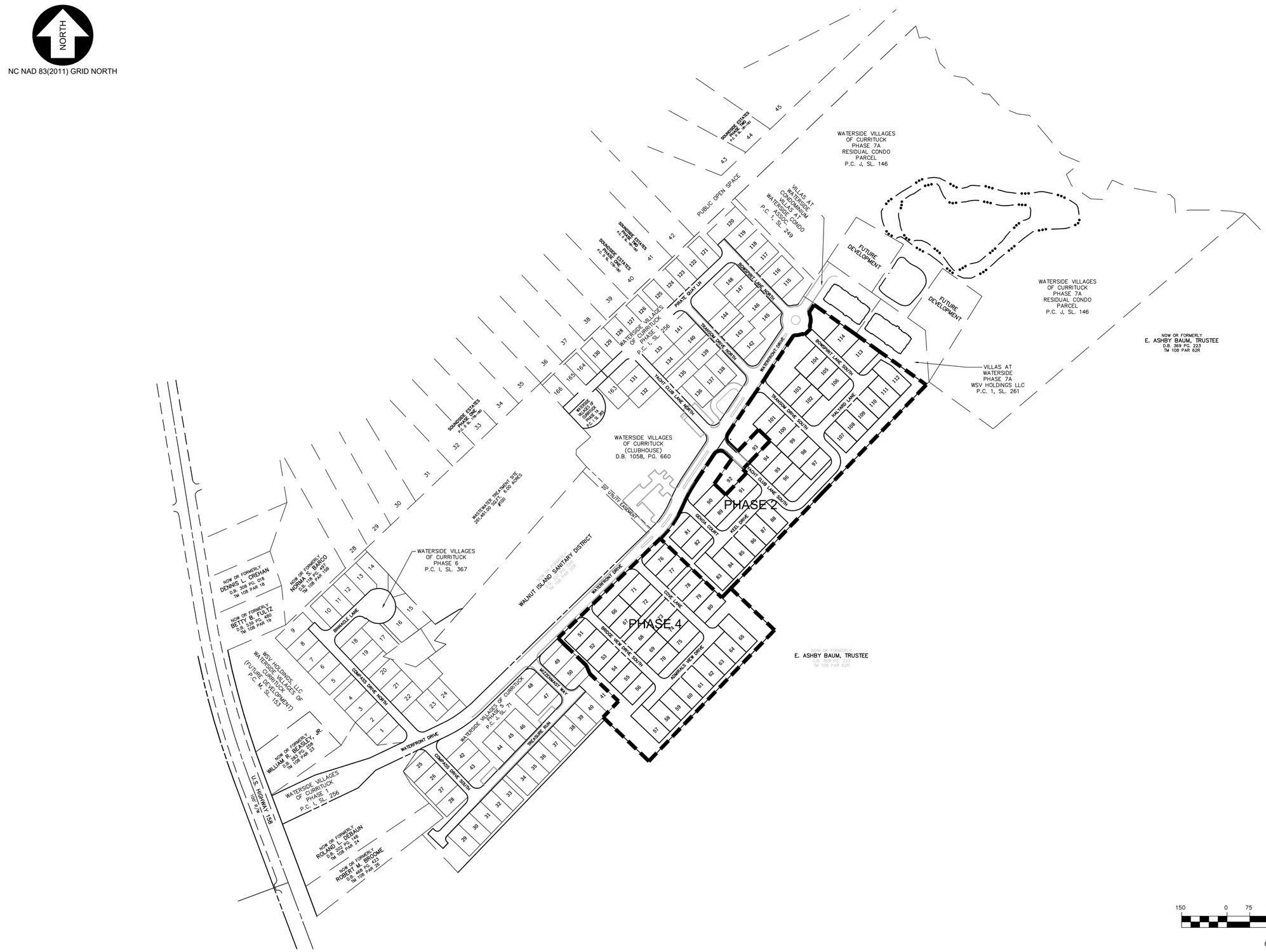
NORTH CAROLINA PROFESSIONAL SEAL L-1756 LAND SURVEYOR MICHAEL D. BARR

DATE: 12-11-24	SCALE: AS SHOWN
DESIGNED:	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 1 OF 9

CAD FILE: 401800ASBPH2-4

PROJECT NO: 4018



Bissell Professional Group
Firm License # C-1295
3512 North Croatan Highway
P.O. Box 1888
Kitty Hawk, North Carolina 27949
(252) 261-3266
FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

DEVELOPMENT OVERVIEW AND PHASING PLAN

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH | CURRITUCK COUNTY | NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

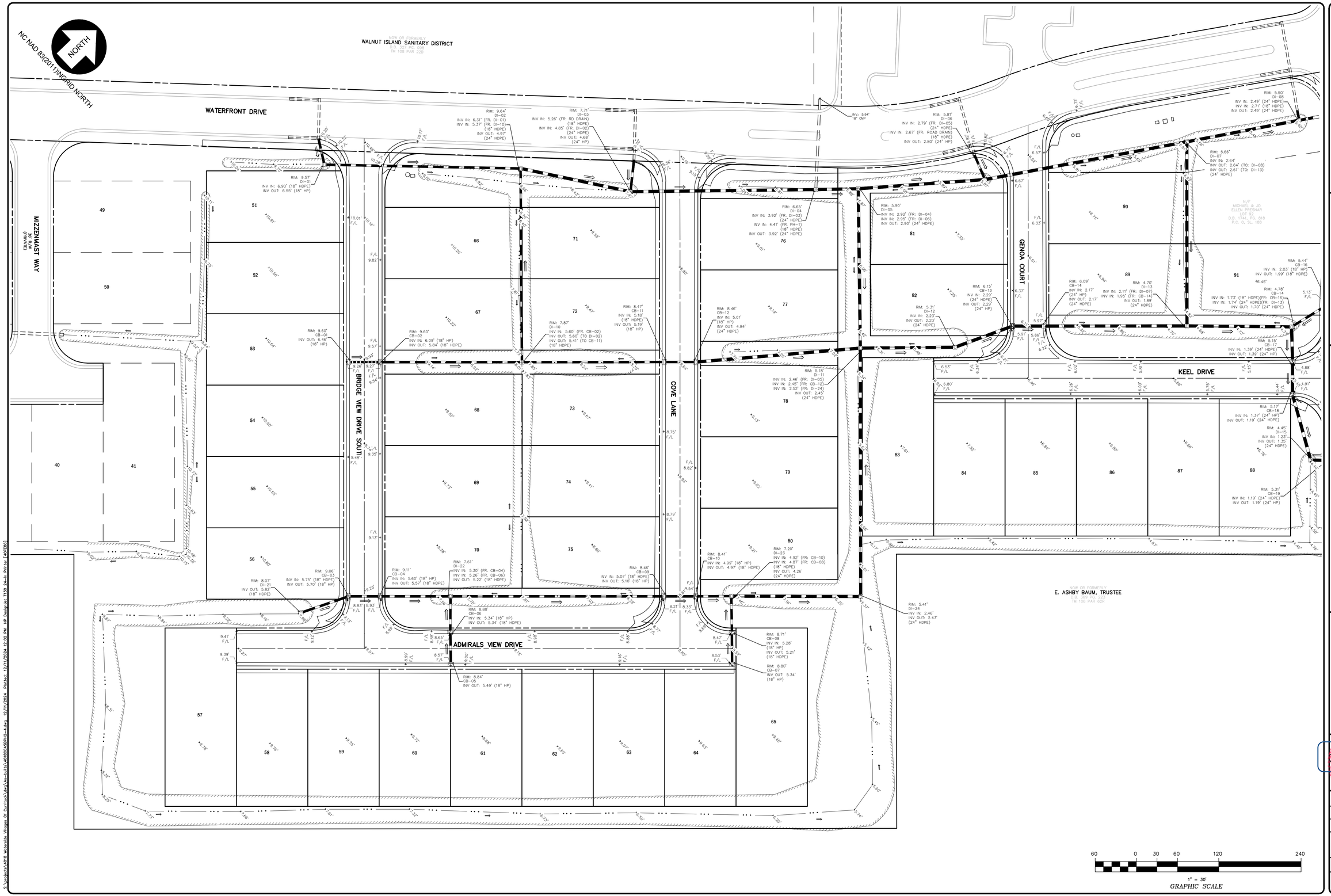
REVISIONS

NO.	DATE	DESCRIPTION	BY

DocuSigned by:
C6D531EC9EBF428...
12-11-24

DATE: 12-11-24	SCALE: 1" = 150'
DESIGNED:	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 2 OF 9
CAD FILE: 401800ASBPH2-4
PROJECT NO: 4018



Bissell Professional Group
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3512 North Croatan Highway
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(252) 261-3266
FAX (252) 261-1760
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Engineers, Planners, Surveyors and Environmental Specialists

ROADWAY & DRAINAGE RECORD

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH
CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

REVISIONS

NO.	DATE	DESCRIPTION	BY

DocuSigned by:
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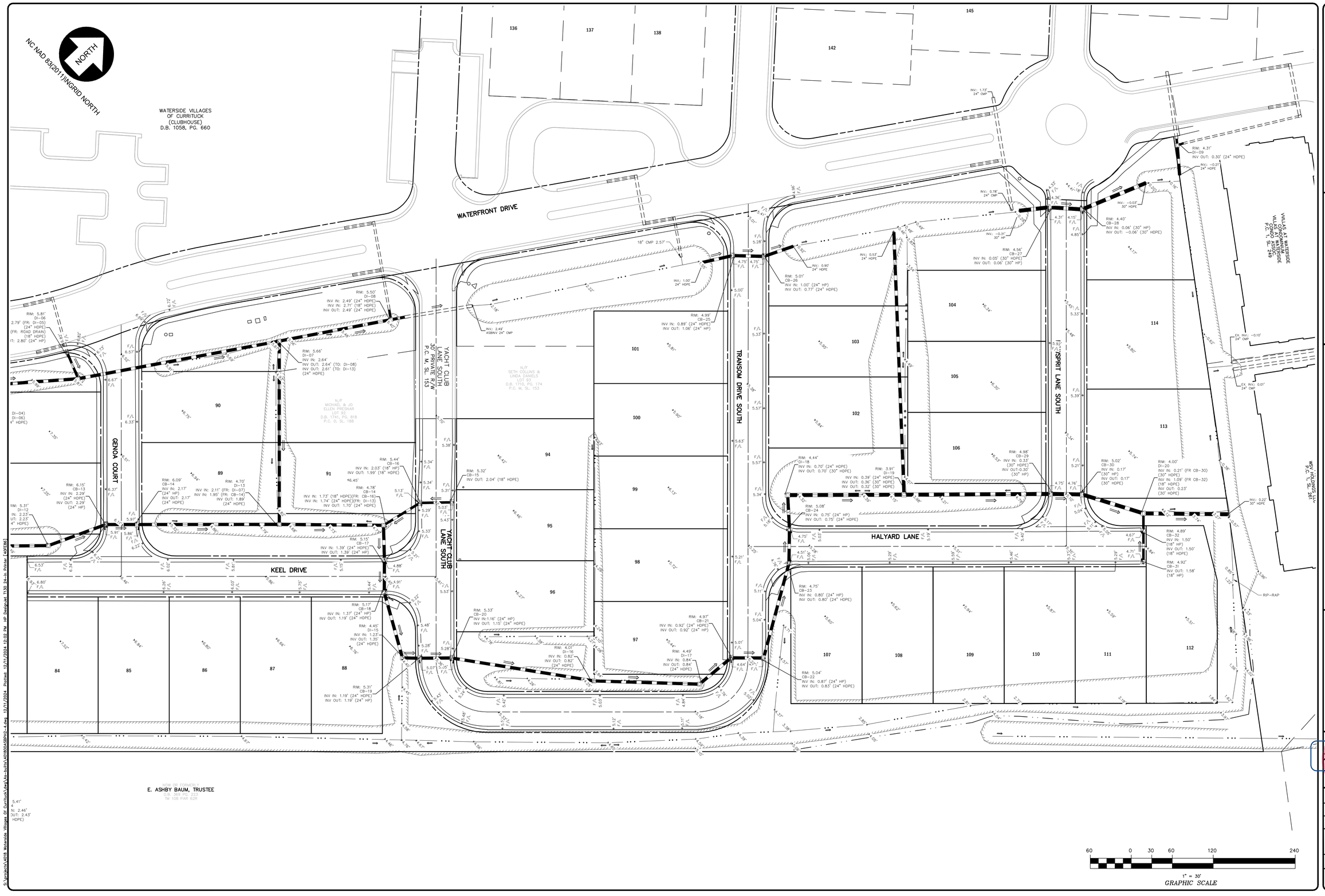
12-11-24

DATE: 12-11-24	SCALE: 1" = 30'
DESIGNED	CHECKED MDB
DRAWN DMK	APPROVED BPG

SHEET: 3 OF 9

CAD FILE: 401800ASBPH2-4

PROJECT NO: 4018



Bissell Professional Group
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FAX (252) 261-1760
BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

ROADWAY & DRAINAGE RECORD

PROJECT: WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH — CURRITUCK COUNTY — NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

REVISIONS

NO.	DATE	DESCRIPTION	BY

DocuSigned by:
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12-11-24

DATE: 12-11-24	SCALE: 1" = 30'
DESIGNED:	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 4 OF 9

CAD FILE: 401800ASBPH2-4

PROJECT NO: 4018

GRAPHIC SCALE
1" = 30'

Bissell Professional Group
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3512 North Croatan Highway
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

WATER DISTRIBUTION & SANITARY SEWER RECORD

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH
CURRITUCK COUNTY
NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

REVISIONS

NO.	DATE	DESCRIPTION	BY

DocuSigned by:
CEDA34EC9CBF428...
12-11-24

DATE: 12-11-24	SCALE: 1" = 30'
DESIGNED:	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 5 OF 9
CAD FILE: 401800ASBPH2-4
PROJECT NO: 4018

Bissell Professional Group
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BISSELL PROFESSIONAL GROUP
Engineers, Planners, Surveyors and Environmental Specialists

WATER DISTRIBUTION & SANITARY SEWER RECORD

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH
CURRITUCK COUNTY
NORTH CAROLINA

CONSTRUCTION RECORD DRAWING

REVISIONS

NO.	DATE	DESCRIPTION	BY

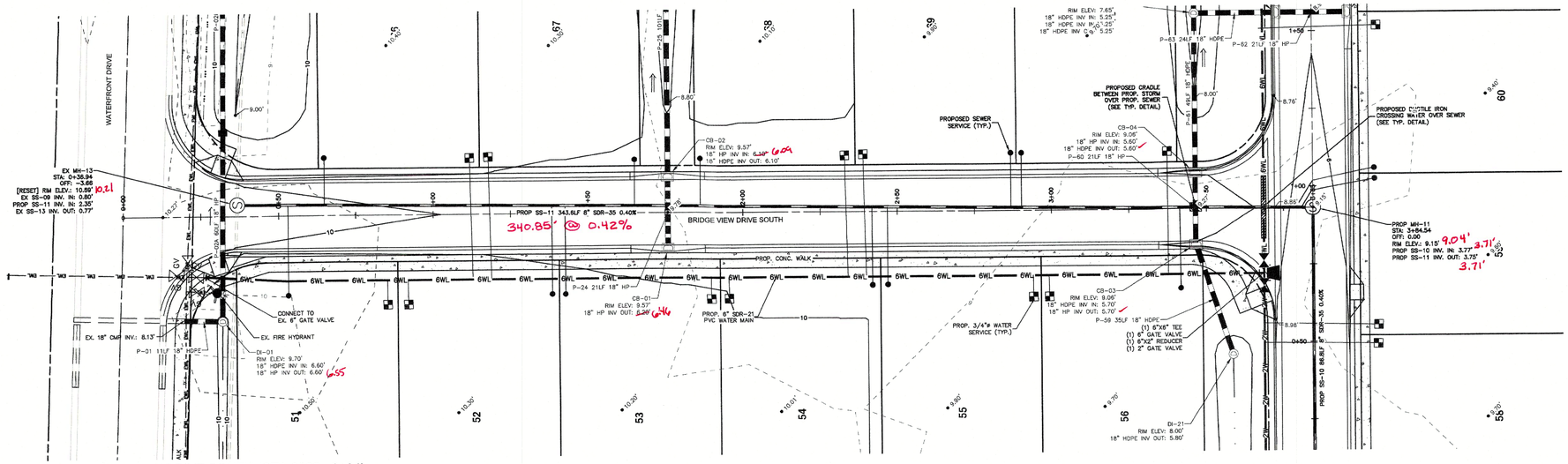
DocuSigned by:
CEDA34EC9CBE428...
12-11-24

DATE: 12-11-24	SCALE: 1" = 30'
DESIGNED:	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 6 OF 9

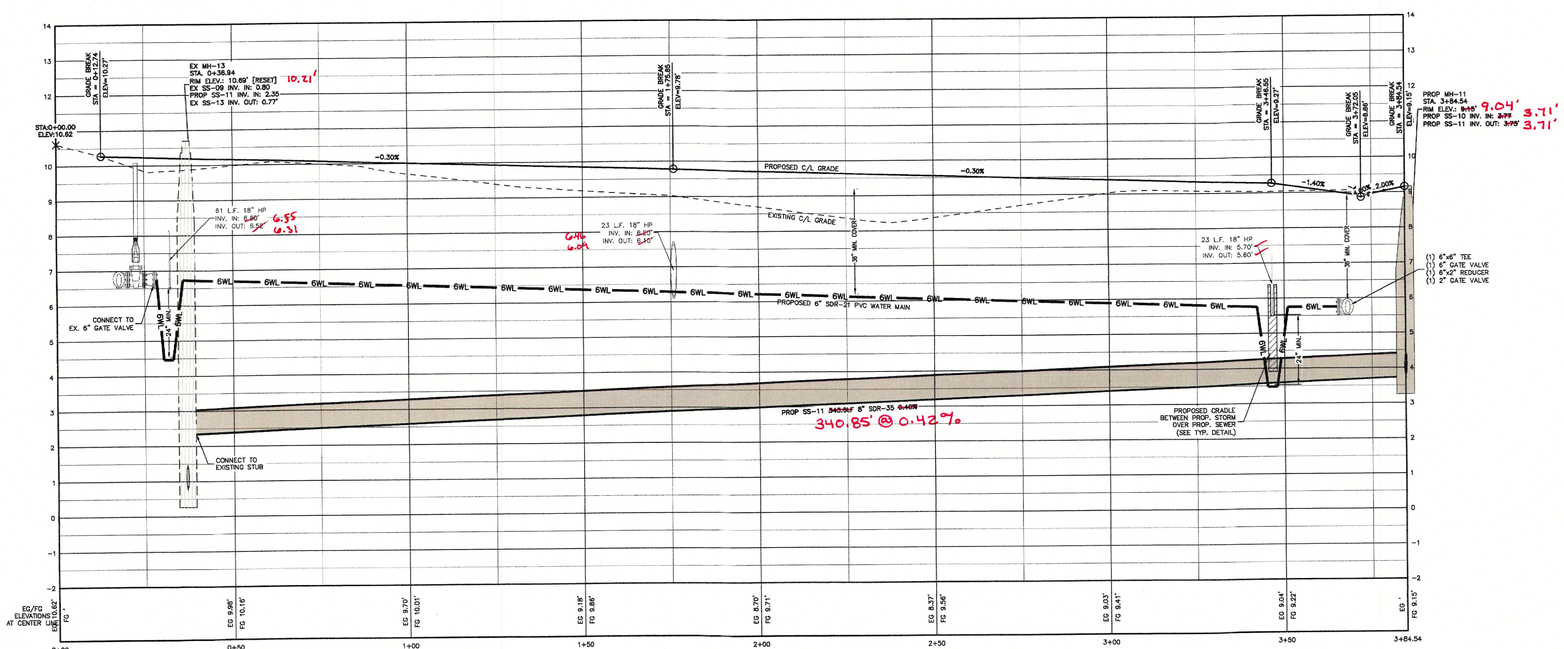
CAD FILE: 401800ASBPH2-4

PROJECT NO: 4018



ALIGNMENT: BRIDGE VIEW DRIVE SOUTH (STA 0+00 - 3+84)

SCALE: HOR.: 1"=20' (PLAN VIEW)



ALIGNMENT: BRIDGE VIEW DRIVE SOUTH (STA 0+00 - 3+84)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phases 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:14 AM HP Designjet T2500 PS HPGL2.pc3

BISSELL
Bissell Professional Group
Firm License # C-0793
3512 North Croatan Highway
P.O. Box 1080
Jamesville, North Carolina 27949
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(252) 375-3264
FAX (252) 375-7750
Engineers, Planners, Surveyors
and Environmental Specialists

BRIDGE VIEW DRIVE SOUTH
PLAN & PROFILE (STATION 0+00 - 3+84)

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 039 ENGINEER DAVID M KLEBITZ 9-26-22

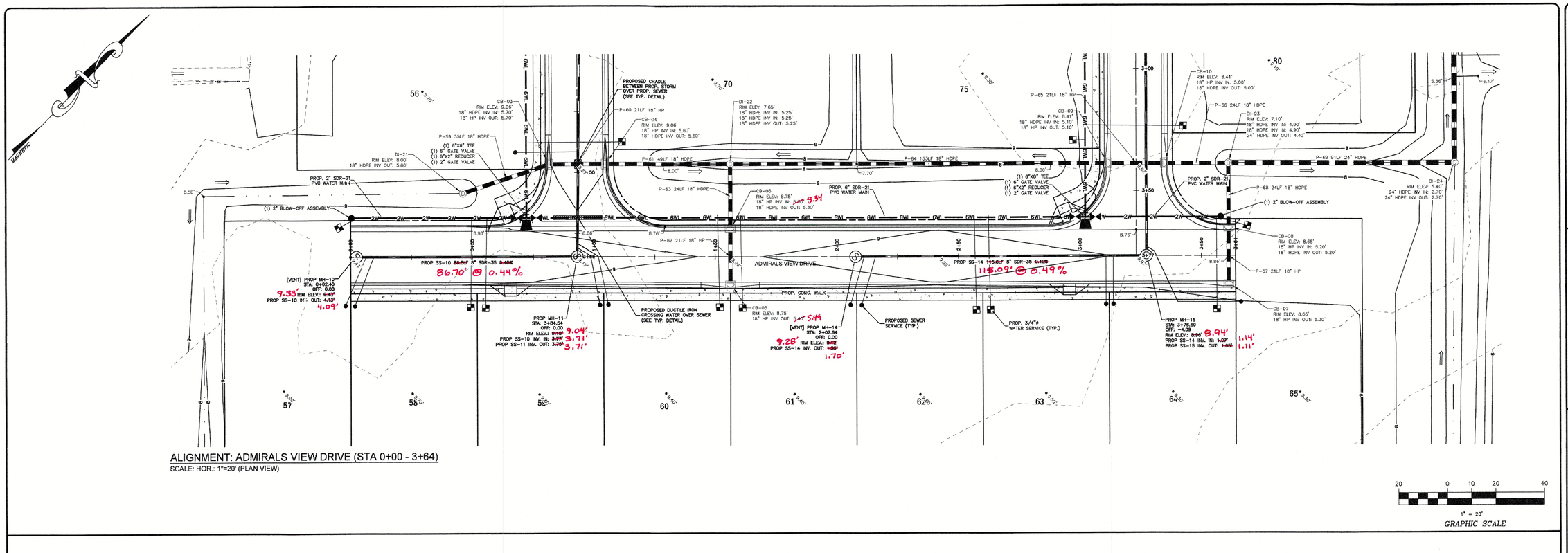
FINAL DRAWING
NOT RELEASED FOR
CONSTRUCTION

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 9 OF 23

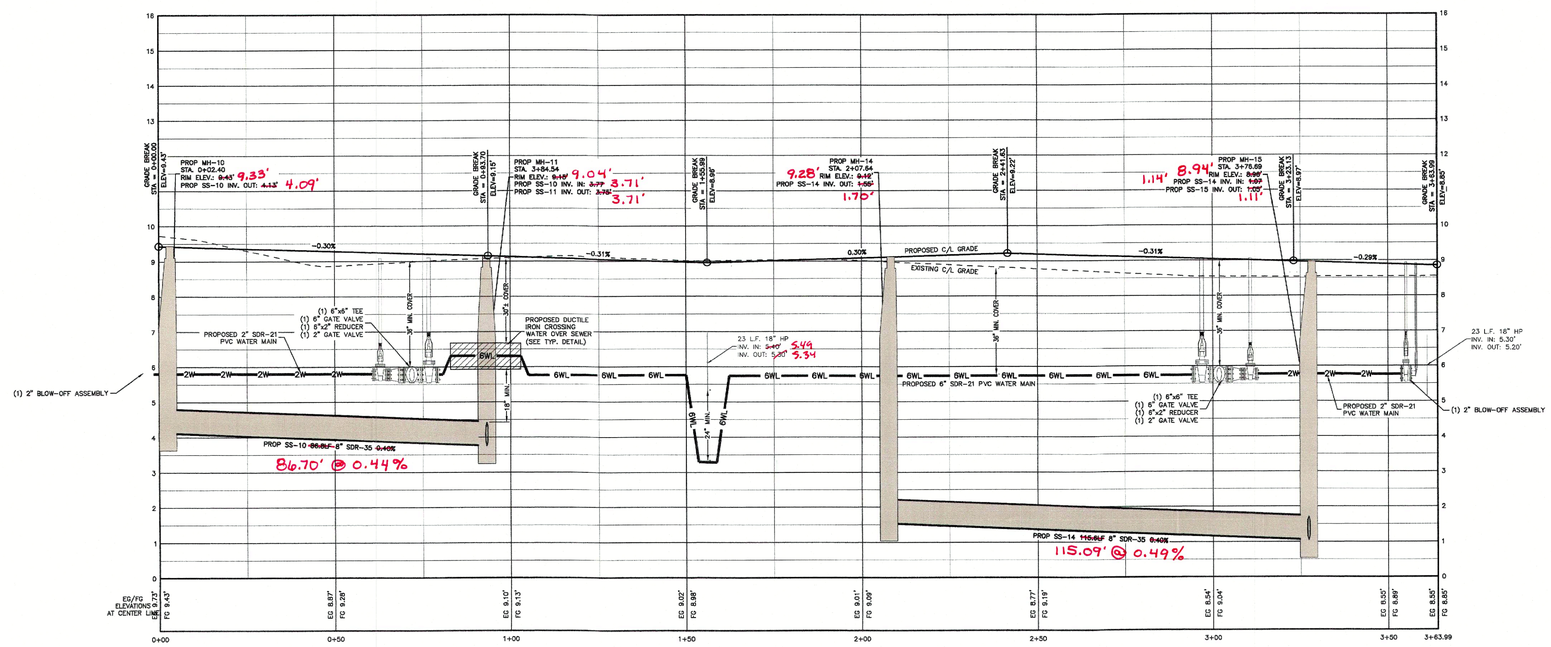
CAD FILE: 4018_PH_2-4

PROJECT NO: 4018



ALIGNMENT: ADMIRALS VIEW DRIVE (STA 0+00 - 3+64)

SCALE: HOR.: 1"=20' (PLAN VIEW)



ALIGNMENT: ADMIRALS VIEW DRIVE (STA 0+00 - 3+64)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFESSIONAL VIEW)

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

BISSELL PROFESSIONAL GROUP
Bissell Professional Group
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Engineers, Planners, Surveyors and Environmental Specialists

ADMIRALS VIEW DRIVE
PLAN & PROFILE (STATION 0+00 - 3+64)

PROJECT:
WATERSIDE VILLAGES OF CURRITUCK
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA
CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

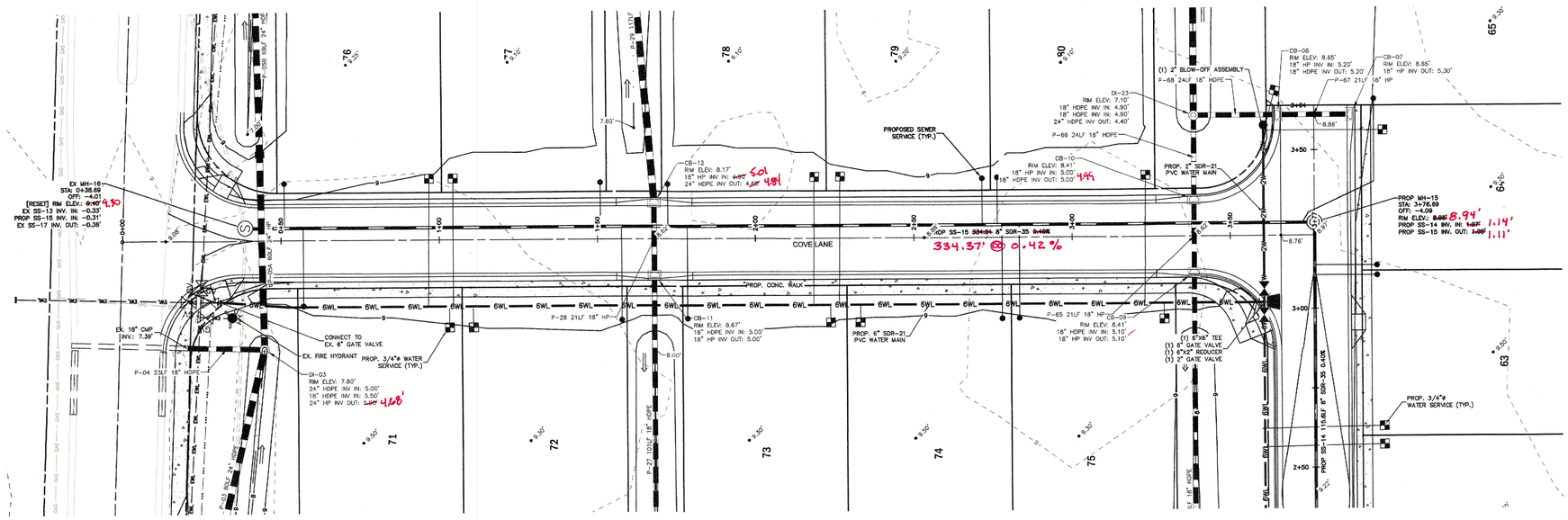
NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 039 ENGINEER DAVID M. KLEBITZ
9-26-22

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KFW/DMK	APPROVED: BPG

SHEET: 10 OF 23
CAD FILE: 4018_PH_2-4
PROJECT NO: 4018

S:\projects\4018 Waterside Villages Of Currituck\Phasing\Phase 2&4\4018_PH_2-4.dwg 9/26/2022 Plotted: 9/26/2022 11:14 AM HP Designjet T2500 PS HPGL2.pc3



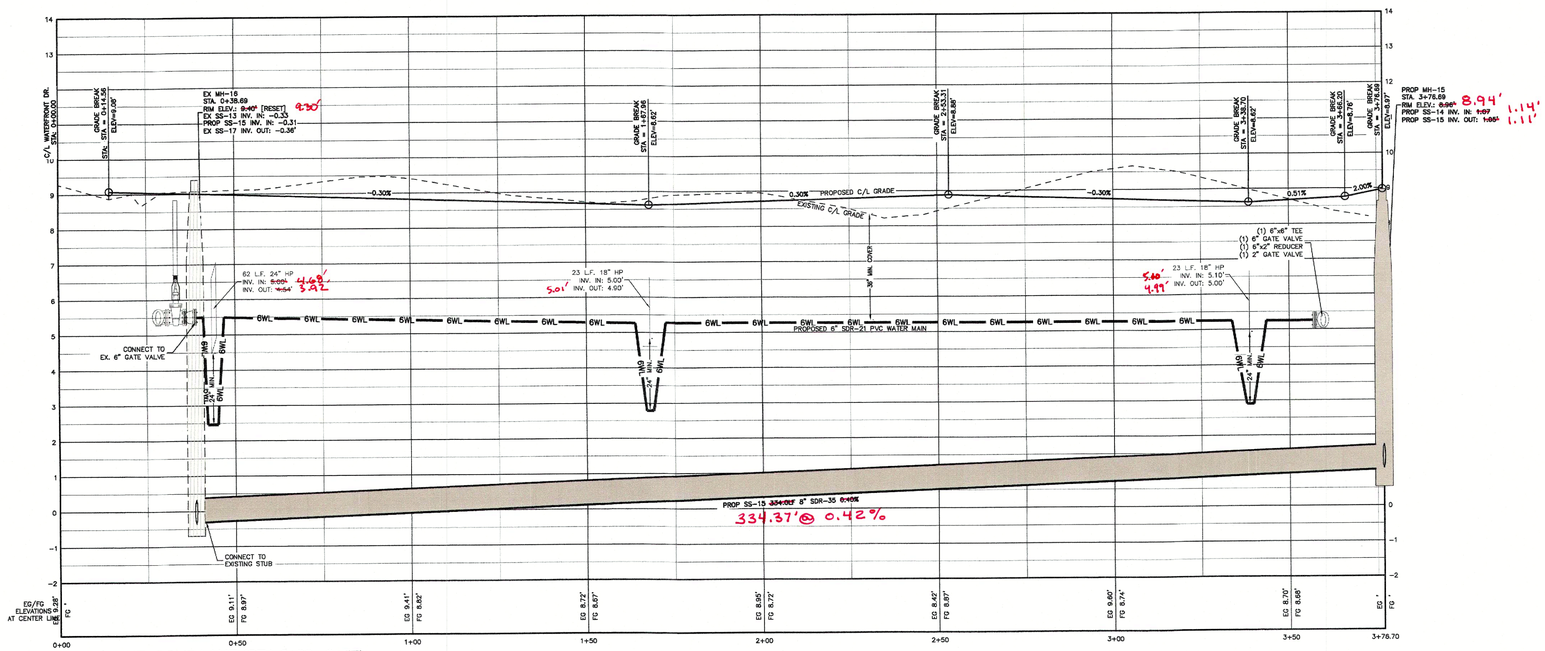
ALIGNMENT: COVE LANE (STA 0+00 - 3+77)

SCALE: HOR.: 1"=20' (PLAN VIEW)

20 0 10 20 40

1" = 20'

GRAPHIC SCALE



ALIGNMENT: COVE LANE (STA 0+00 - 3+77)

SCALE: HOR.: 1"=20' VERT.: 1"=2' (PROFILE VIEW)

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COVE LANE

PLAN & PROFILE (STATION 0+00 - 3+77)

PROJECT:

WATERSIDE VILLAGES OF CURRITUCK

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

CONSTRUCTION DRAWINGS PHASES 2 & 4

REVISIONS

NO.	DATE	DESCRIPTION	BY

NORTH CAROLINA PROFESSIONAL SEAL 042180 ENGINEER DAVID M. KLEBITZ

9-26-22

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

DATE: 9-26-22	SCALE: 1" = 20', 1" = 2'
DESIGNED: BPG	CHECKED: MSB
DRAWN: KPW/DMK	APPROVED: BPG

SHEET: 11 OF 23

CAD FILE: 4018_PH_2-4

PROJECT NO: 4018

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MIN. BUILDING PAD ELEVATION (BPE) AND FIRST FLOOR ELEVATION (FFE) TABLE

Lot	Min. BPE (88)	Min. FFE (88)
51	10.80	11.40
52	10.80	11.40
53	10.80	11.40
54	10.80	11.40
55	10.80	11.40
56	10.80	11.40
57	9.90	10.40
58	9.70	10.20
59	9.60	10.10
60	9.40	9.90
61	9.40	9.90
62	9.60	10.10
63	9.50	10.00
64	9.30	9.80
65	9.30	9.80

Lot	Min. BPE (88)	Min. FFE (88)
66	10.40	10.90
67	10.30	10.80
68	10.10	10.60
69	9.90	10.40
70	9.70	10.20
71	9.50	10.00
72	9.30	9.80
73	9.30	9.80
74	9.50	10.00
75	9.30	9.80
76	9.25	9.75
77	9.10	9.60
78	9.10	9.60
79	9.20	9.70
80	9.10	9.60

Lot	Min. BPE (88)	Min. FFE (88)
81	7.25	7.75
82	7.10	7.60
83	7.20	7.70
84	7.00	7.50
85	6.80	7.30
86	6.50	7.00
87	6.30	6.80
88	6.10	6.60
89	6.80	7.30
90	7.00	7.50
91	6.25	6.75
94	6.00	6.50
95	6.00	6.50
96	6.00	6.50
97	6.00	6.50

Lot	Min. BPE (88)	Min. FFE (88)
98	6.00	6.50
99	6.00	6.50
100	6.00	6.50
101	6.00	6.50
102	6.00	6.50
103	6.00	6.50
104	6.00	6.50
105	6.00	6.50
106	6.00	6.50
107	6.00	6.50
108	6.00	6.50
109	6.00	6.50
110	6.00	6.50
111	6.00	6.50
112	6.00	6.50
113	6.00	6.50

EXISTING CONDITIONS BASED ON CONSTRUCTION RECORD SURVEYS AND DRAWINGS PERFORMED AND PREPARE BY BISSELL PROFESSIONAL GROUP.

FEMA ZONES X, SHADED X AND AE (4') PER F.E.M.A. F.I.R.M. MAP NUMBER 3721803200 K, EFFECTIVE DATE DECEMBER 21, 2018. SUBJECT TO CHANGE BY FEMA

THIS MAP SUMMARIZES STORMWATER MANAGEMENT DESIGN REQUIREMENTS FOR THE SUBDIVISION AND IS INTENDED TO BE UTILIZED AS A GUIDANCE DOCUMENT FOR FUTURE DEVELOPMENT OF THE INDIVIDUAL RESIDENTIAL LOTS. INCLUDED ARE TABLES OF MINIMUM REQUIRED BUILDING PAD ELEVATIONS (BPE) AND MINIMUM REQUIRED FIRST FLOOR ELEVATIONS (FFE)

60 0 30 60 120 240

1" = 50'

GRAPHIC SCALE

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RESIDENTIAL LOT DEVELOPMENT MAP & TABLES

PROJECT: WATERSIDE VILLAGES OF CURRITUCK - PH 2 & 4
POPLAR BRANCH CURRITUCK COUNTY NORTH CAROLINA

LOT DEVELOPMENT GUIDANCE MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PRELIMINARY PLAT
For Review Purposes Only

DATE: 12-11-24	SCALE: 1" = 50'
DESIGNED: BPG	CHECKED: MDB
DRAWN: DMK	APPROVED: BPG

SHEET: 1 OF 1

CAD FILE: PH 2 & 4 GUIDANCE

PROJECT NO. 4018

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