

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN D					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	310	#5	4	7'-8"	2376'-8"
S12	154	#5	4	8'-2"	1257'-8"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6289.33'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
D	4	VARIES	519.53'		

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN E					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	340	#5	4	7'-8"	2606'-8"
S13	124	#5	4	8'-3"	1023'-0"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6284.67'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
E	4	VARIES	520.17'		

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN F					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	310	#5	4	7'-8"	2376'-8"
S13	154	#5	4	8'-3"	1270'-6"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6302.17'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
F	4	VARIES	518.67'		

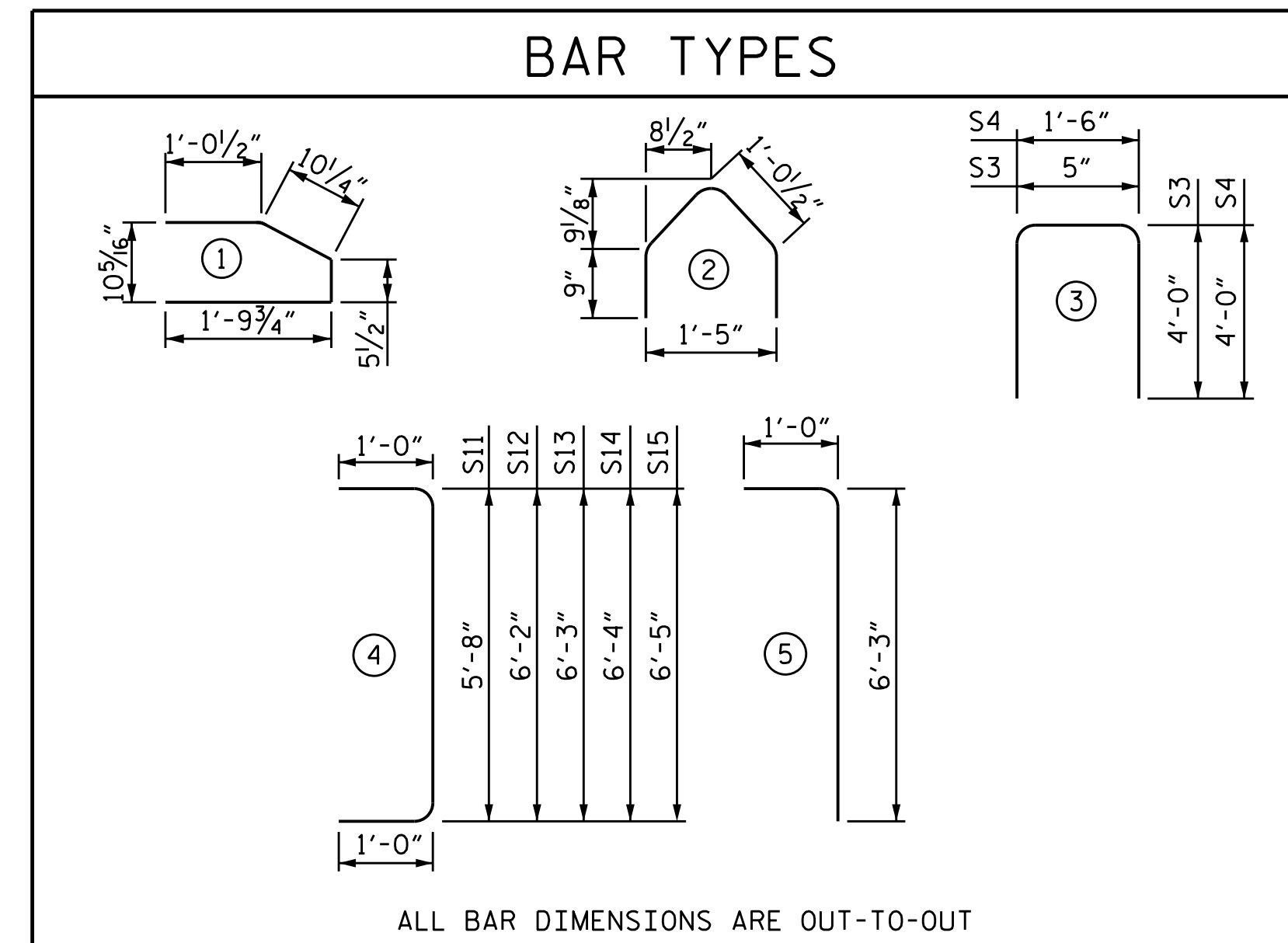
0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN J					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	310	#5	4	7'-8"	2376'-8"
S15	154	#5	4	8'-5"	1296'-2"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6327.83'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
J	4	VARIES	518.67'		

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN K					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	340	#5	4	7'-8"	2606'-8"
S15	124	#5	4	8'-5"	1043'-8"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6305.33'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
K	4	VARIES	520.19'		

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPANS L, P, & Q					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	310	#5	4	7'-8"	2376'-8"
S13	68	#5	4	8'-3"	561'-0"
S14	86	#5	4	8'-4"	716'-8"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6309.33'			56		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
L	4	VARIES	518.31'		
P	4	VARIES	517.67'		
Q	4	VARIES	518.67'		

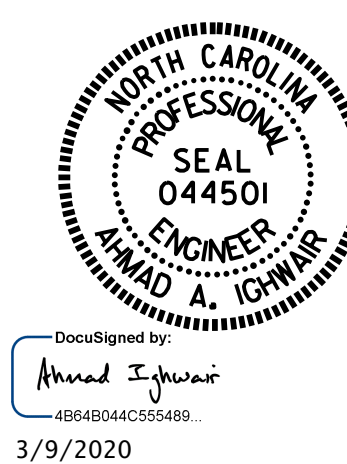
0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPANS M & O					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	310	#5	4	7'-8"	2376'-8"
S14	68	#5	4	8'-4"	566'-8"
S15	86	#5	4	8'-5"	723'-10"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6322.17'			58		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
M	4	VARIES	518.13'		
O	4	VARIES	517.67'		

0.6" Ø CFRP STRANDS					
AREA	ULTIMATE STRENGTH	APPLIED PRESTRESS			
(SQUARE INCHES)	(LBS. PER STRAND)	(LBS. PER STRAND)			
0.179	60,749	42,524			
GFRP BARS FOR ONE GDR					
SPAN N					
BAR	NUMBER	SIZE	TYPE	LENGTH	LIN. FT.
S1	116	#4	1	4'-2"	483'-4"
S2	58	#4	2	3'-7"	207'-10"
S3	14	#3	3	8'-5"	117'-10"
S4	2	#3	3	9'-6"	19'-0"
S5	174	#4	STR	3'-8"	638'-0"
S11	340	#5	4	7'-8"	2606'-8"
S14	68	#5	4	8'-4"	566'-8"
S15	56	#5	4	8'-5"	471'-4"
S16	164	#5	5	7'-3"	1189'-0"
QUANTITIES FOR ONE GIRDER					
TOTAL GFRP BARS LENGTH			0.6" Ø CFRP STRANDS		
LIN. FT.			No.		
6299.67'			58		
GIRDERS REQUIRED					
SPAN	NUMBER	LENGTH	TOTAL LENGTH		
N	4	VARIES	519.67'		



PROJECT NO. B-4863  
CARTERET COUNTY  
 STATION: 34+75.00 -L-

SHEET 13 OF 17



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUPERSTRUCTURE 72" CFRP F.I.B. PRESTRESSED CONCRETE GIRDER (GFRP STIRRUP OPTION)					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S1-090
					TOTAL SHEETS 194

DRAWN BY: B.N.BARODAWALA DATE: 01-20  
 CHECKED BY: A. A. IGHWAIR DATE: 01-20  
 DESIGN ENGINEER OF RECORD: A. A. IGHWAIR DATE: 01-20

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED