

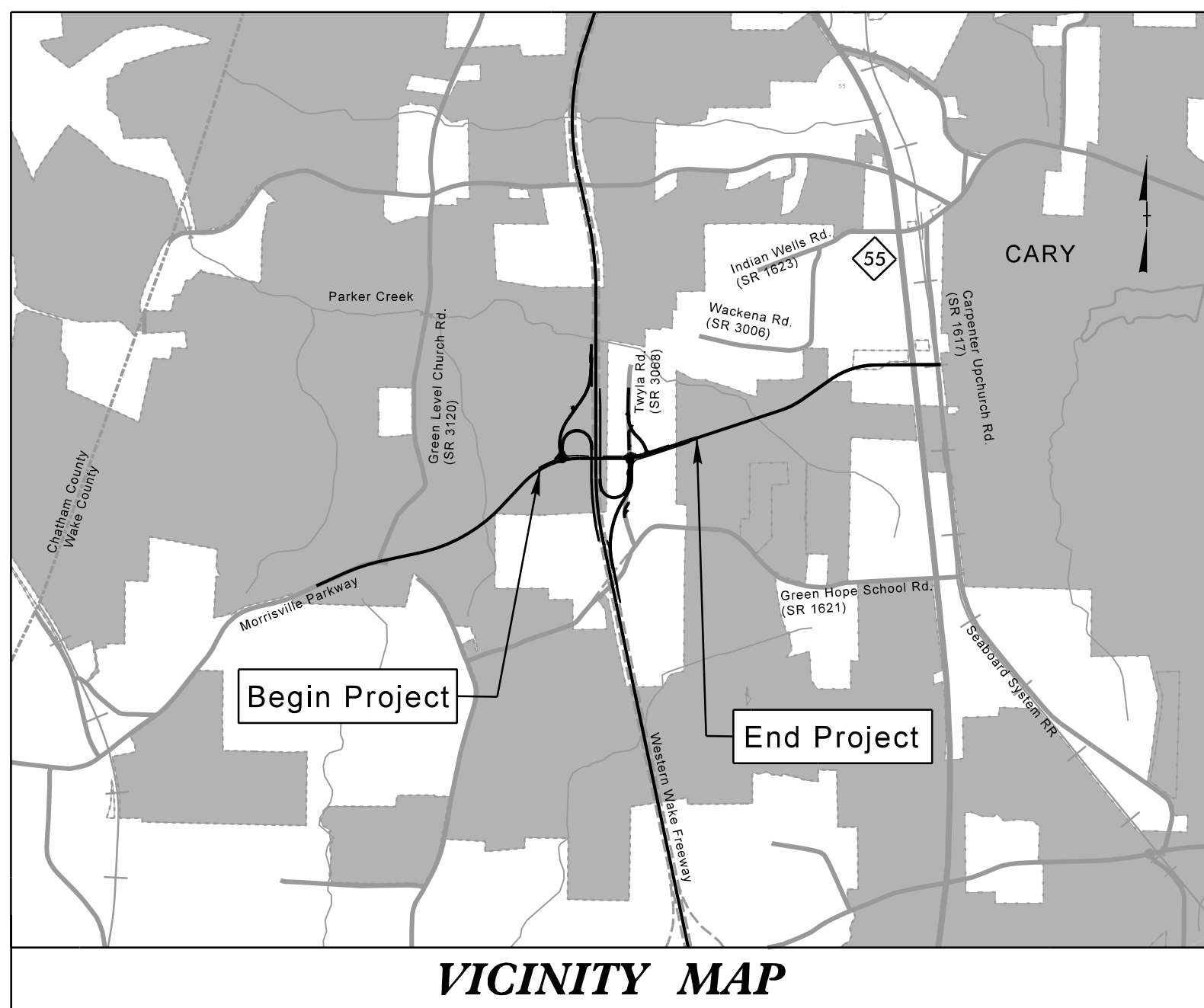
**This electronic collection of documents is provided  
for the convenience of the user  
and is Not a Certified Document –**

**The documents contained herein were originally issued  
and sealed by the individuals whose names and license  
numbers appear on each page, on the dates appearing  
with their signature on that page.**

**This file or an individual page  
shall not be considered a certified document.**

09/08/17

**CARY PROJECT: ST 1123A220 TIP PROJECT: U-5315 A&B**



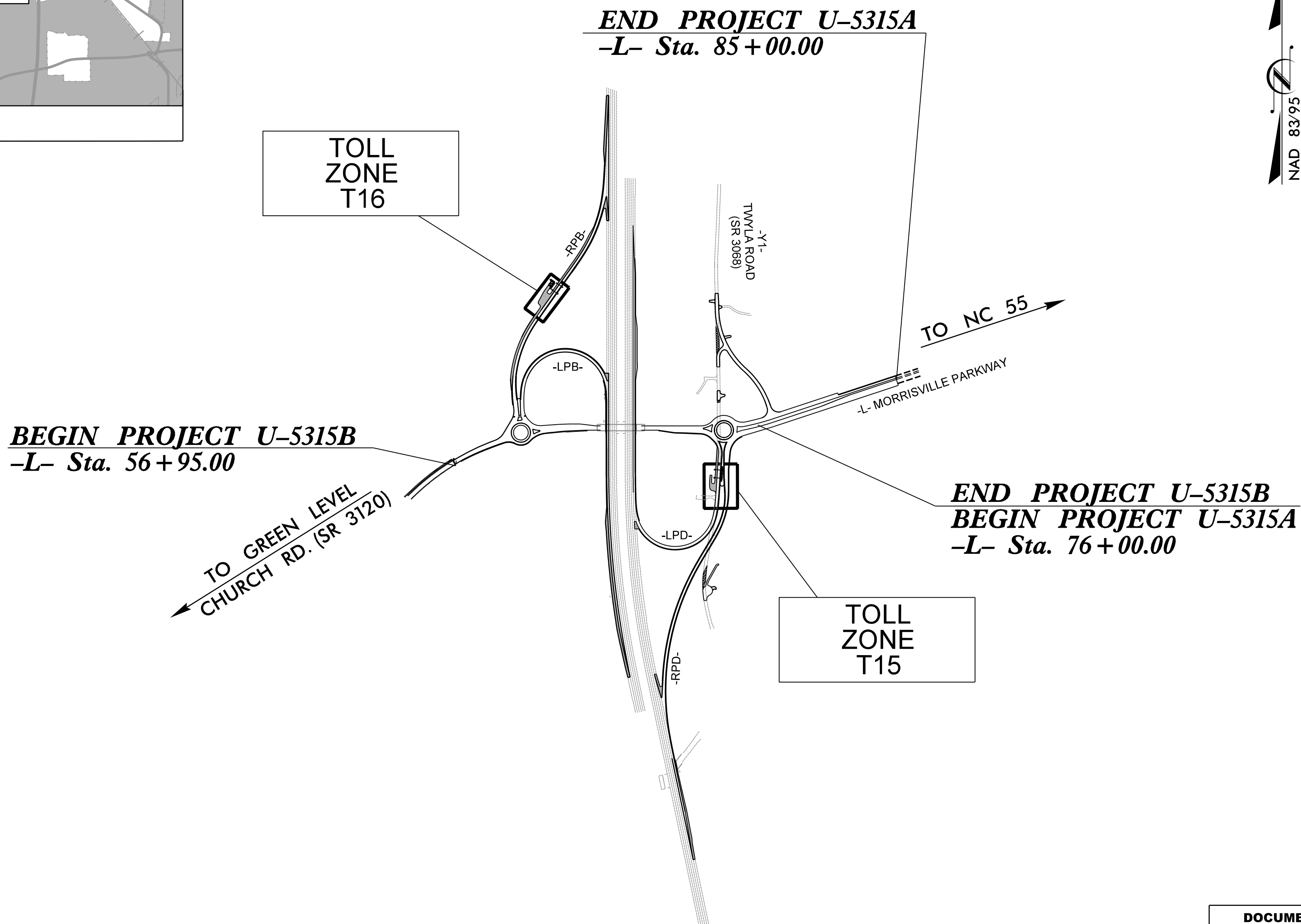
**VICINITY MAP**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WAKE COUNTY**

**LOCATION: MORRISVILLE PARKWAY EXTENSION AND NC 540 INTERCHANGE  
FROM WEST OF HIGHCROFT DRIVE TO EAST OF MILLS PARK DRIVE IN CARY**  
**TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES,  
SIGNING, LIGHTING, AND TOLL INFRASTRUCTURE**

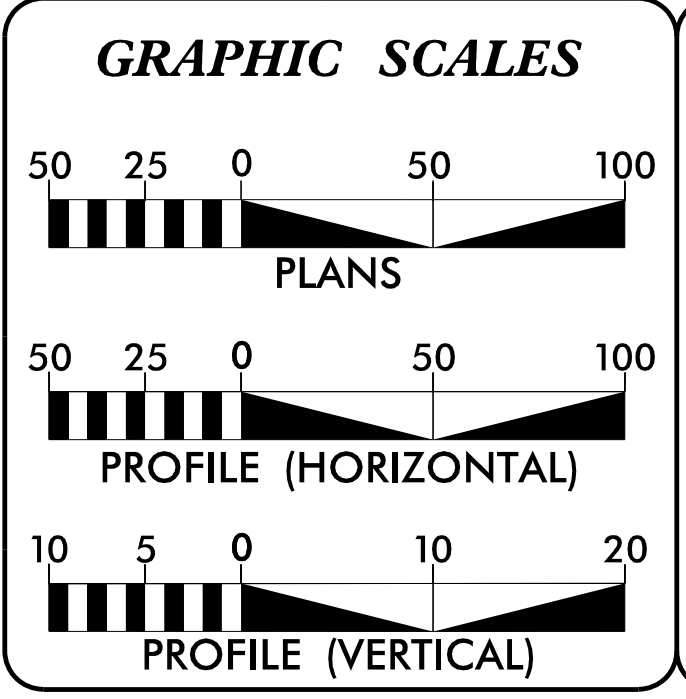
STATE	STATE PROJECT REFERENCE NO.		SHEET NO.
N.C.	U-5315A/U-5315B		GAN-1
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
U-5315A	45429.1.F2	STPDA-0503(19)	PE
U-5315A	45429.2.2	STPDA-0540(38)	R/W, UTILITIES
U-5315B	45429.1.F3	STPDA-0503(19)	PE
U-5315B	45429.2.3	STPDA-0540(39)	R/W, UTILITIES
U-5315A&B	45429.3.3	STPDA-0540(39)	CONST.
U-5315B	45429.5.TA1		TURNPIKE CONST.
U-5315B	45429.5.TA3		TURNPIKE ROW



INDEX OF SHEETS	
SHEET NUMBER	SHEET
GAN-1	TITLE SHEET
GAN-2	TOLL ZONE T16 PLAN SHEET
GAN-3	TOLL ZONE T15 PLAN SHEET
GAN-4	TOLL ZONE T16 GANTRY XSC'S
GAN-5	TOLL ZONE T15 GANTRY XSC'S

NOTES:  
1. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



**DESIGN DATA**

ADT 2015 =	10,700
ADT 2035 =	22,200
DHV =	12 %
D =	60 %
T =	4 % *
V =	50 MPH
* (TTST 1% + DUALS 3%)	
FUNC. CLASS =	MAJOR THOROUGHFARE / URBAN ARTERIAL

**PROJECT LENGTH**

LENGTH OF PROJECT U-5315B.....	0.36 mi
LENGTH OF PROJECT U-5315A.....	0.17 mi
TOTAL LENGTH.....	0.53 mi

PREPARED IN THE OFFICE OF:  
**RK&K**  
RUMMEL, KLEPPER & KAHL LLP  
900 RIDGEFIELD DRIVE, SUITE 350  
RALEIGH, NORTH CAROLINA 27609  
NC LICENSE NO. F-0112

FOR NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS  
**RIGHT OF WAY DATE:**  
NOVEMBER 20, 2015

**LETTING DATE:**  
DECEMBER, 2017

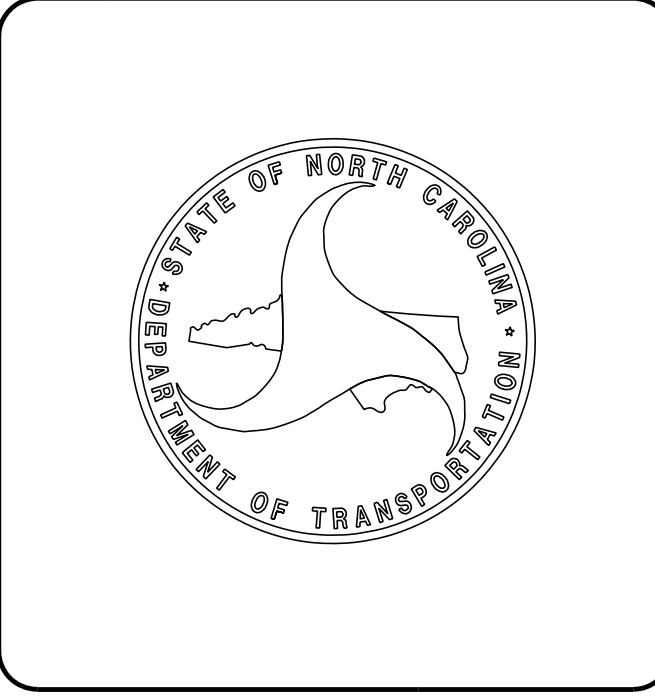
NCDOT CONTACT: **CHRISTOPHER K. HAIRE, PE**  
SPECIAL DESIGN PROJECT ENGINEER  
ROADWAY DESIGN UNIT

**B. KEITH SKINNER, P.E.**  
PROJECT ENGINEER

**STEPHEN ROBERTS, P.E.**  
PROJECT DESIGN ENGINEER

**ENGINEER SEAL**

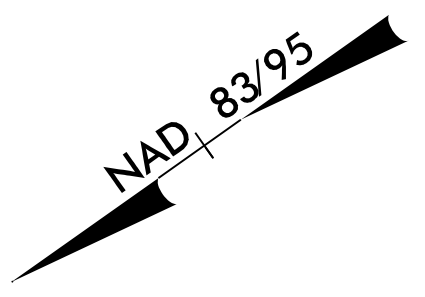
DocuSigned by:  
*David J. Sears*  
11/10/2017  
P.E.



11/10/2017  
R:\Tran\Projects\1123A220\U5315\_GAN\_1.sh.dgn  
ds@sears

B:17/99

TOLL ZONE  
T16



PROJECT REFERENCE NO. U-5315 A&B	SHEET NO. GAN-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
<small>DocuSigned by: David T. Sears</small>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

TOLL GANTRY NO. 1  
-RPB- STA. 20+14.00

☉ TOLL ZONE  
-RPB- STA. 20+39.00

TOLL GANTRY NO. 2  
-RPB- STA. 20+64.00

GUARDRAIL W/  
DOUBLE POSTS

-RPB-

20+00

44'

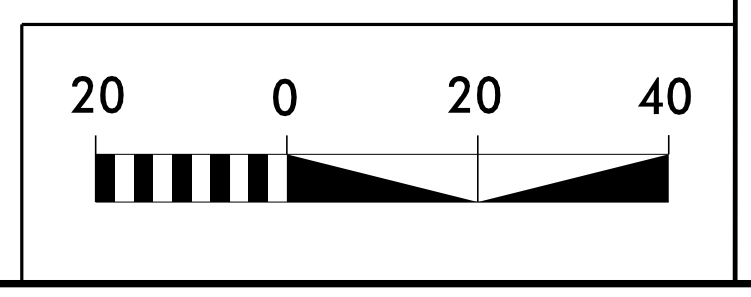
16'

44'

F

C

F



PLANS PREPARED BY :

**RK&K**

RUMMEL, KLEPPER & KAHL, LLP  
 900 RIDGEFIELD DRIVE SUITE 350  
 RALEIGH, NORTH CAROLINA 27609-3960  
 NC LICENSE NO. F-0112 • (919) 878-9560

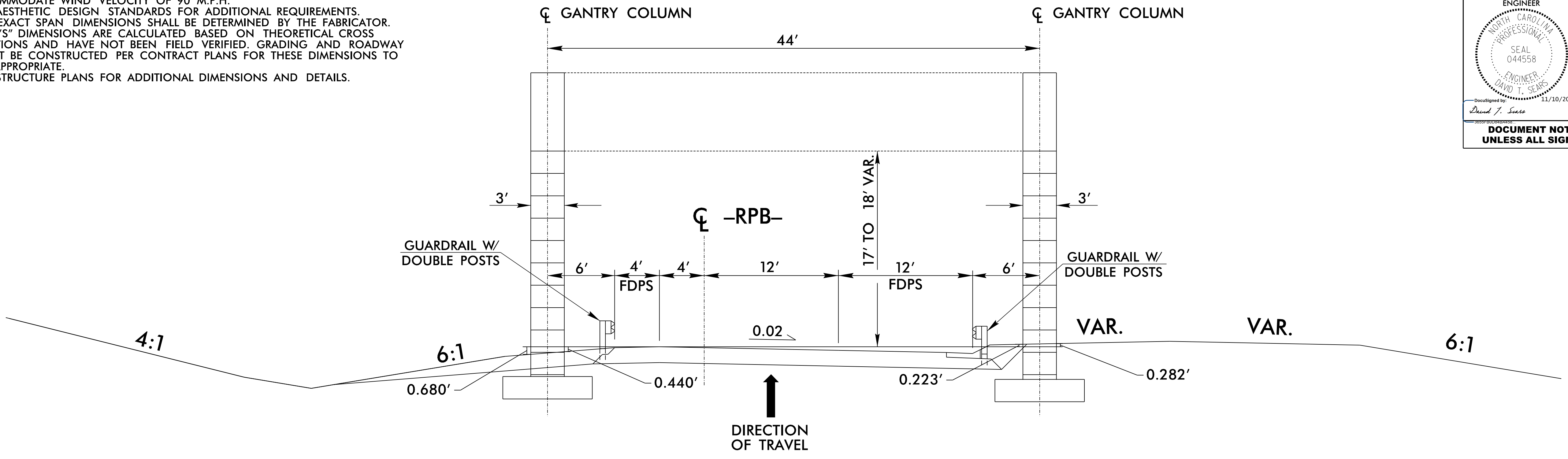
I:\Q\2017\11\11\TTS\DCN\U5315\_GAN\_psh02.dgn



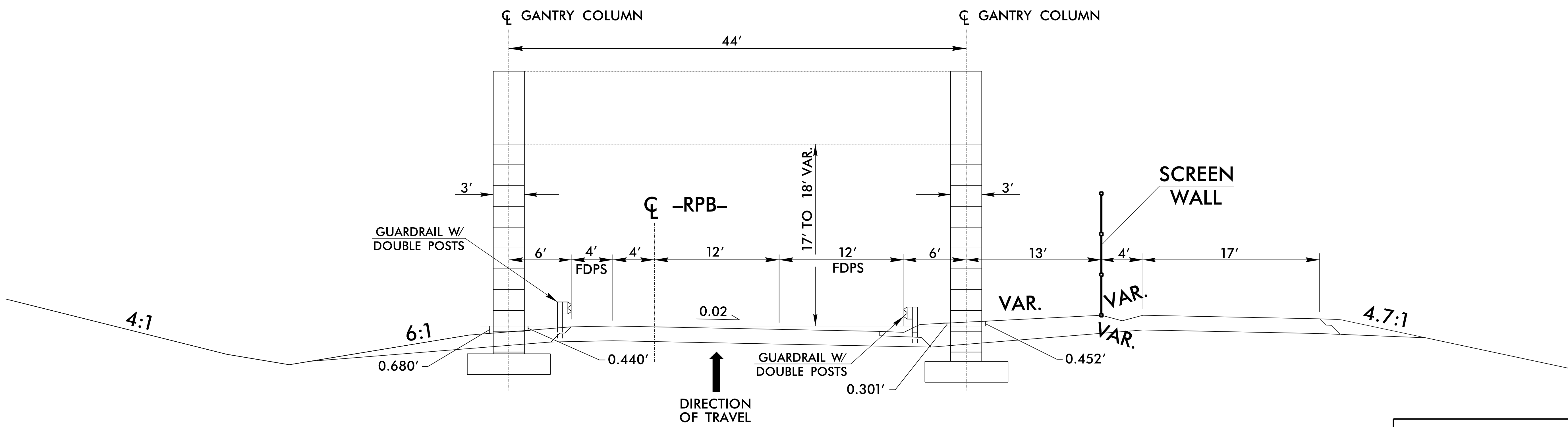
6/2/2017

- NOTES:
1. DESIGN AND CONSTRUCTION REQUIRES TOLL GANTRY STRUCTURES TO ACCOMMODATE WIND VELOCITY OF 90 M.P.H.
  2. SEE AESTHETIC DESIGN STANDARDS FOR ADDITIONAL REQUIREMENTS.
  3. THE EXACT SPAN DIMENSIONS SHALL BE DETERMINED BY THE FABRICATOR.
  4. THE "S" DIMENSIONS ARE CALCULATED BASED ON THEORETICAL CROSS SECTIONS AND HAVE NOT BEEN FIELD VERIFIED. GRADING AND ROADWAY MUST BE CONSTRUCTED PER CONTRACT PLANS FOR THESE DIMENSIONS TO BE APPROPRIATE.
  5. SEE STRUCTURE PLANS FOR ADDITIONAL DIMENSIONS AND DETAILS.

PROJECT REFERENCE NO. U-5315 A&B	SHEET NO. GAN-4
ROADWAY DESIGN ENGINEER DAVID T. SEARS NORTH CAROLINA PROFESSIONAL SEAL 044558 11/10/2017	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**TOLL GANTRY NO. 1**  
-RPB- STA. 20 + 14



**TOLL GANTRY NO. 2**  
-RPB- STA. 20 + 64

PLANS PREPARED BY :

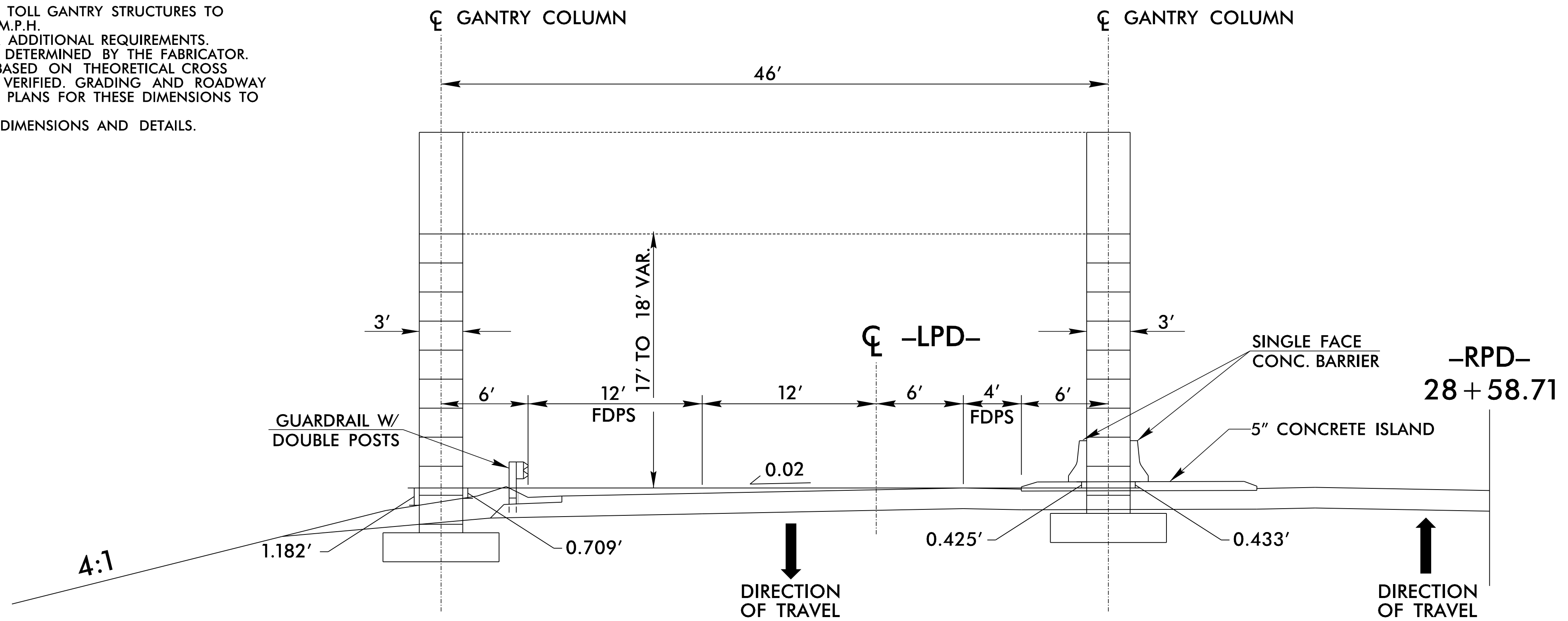
**RK&K**

RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

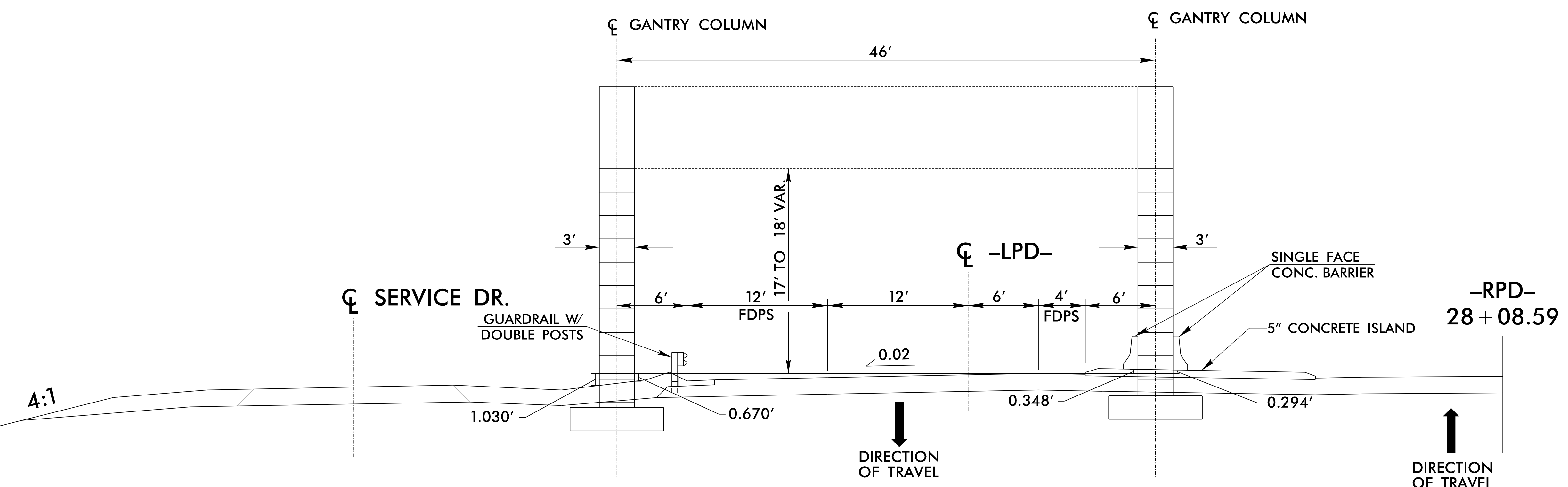
11/10/2017 11:51:51 AM F:\c:\p\ITS\06GNA\05315\_GAN\_psh04.dgn

PROJECT REFERENCE NO. U-5315 A&B	SHEET NO. GAN-5
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 044558 ENGINEER DAVID T. SEARS 11/10/2017	
<small>Designed by David T. Sears</small> <b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

- NOTES:
- DESIGN AND CONSTRUCTION REQUIRES TOLL GANTRY STRUCTURES TO ACCOMMODATE WIND VELOCITY OF 90 M.P.H.
  - SEE AESTHETIC DESIGN STANDARDS FOR ADDITIONAL REQUIREMENTS.
  - THE EXACT SPAN DIMENSIONS SHALL BE DETERMINED BY THE FABRICATOR.
  - THE "S" DIMENSIONS ARE CALCULATED BASED ON THEORETICAL CROSS SECTIONS AND HAVE NOT BEEN FIELD VERIFIED. GRADING AND ROADWAY MUST BE CONSTRUCTED PER CONTRACT PLANS FOR THESE DIMENSIONS TO BE APPROPRIATE.
  - SEE STRUCTURE PLANS FOR ADDITIONAL DIMENSIONS AND DETAILS.



**TOLL GANTRY NO. 3**  
-LPD- STA. 21+16



**TOLL GANTRY NO. 4**  
-LPD- STA. 20+66

PLANS PREPARED BY :

**RK&K**

RUMMEL, KLEPPER & KAHL, LLP  
900 RIDGEFIELD DRIVE SUITE 350  
RALEIGH, NORTH CAROLINA 27609-3960  
NC LICENSE NO. F-0112 • (919) 878-9560

6/2/2017 10:10:20 AM I:\ITS\IDGN\U5315\_CAN\_psh05.dgn