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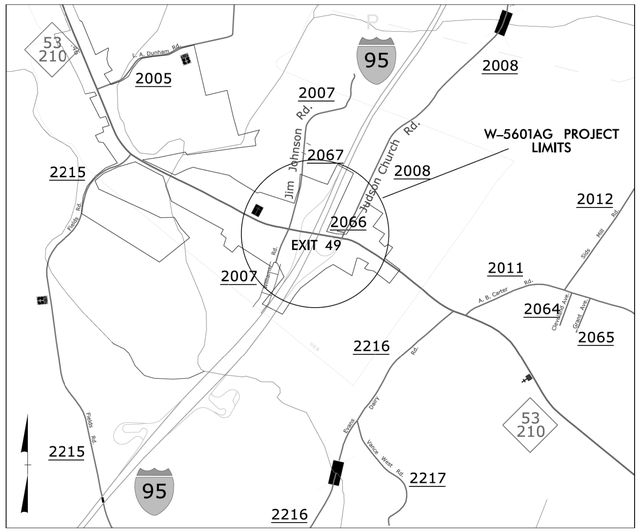
09/08/99

TIP PROJECT: W-5601AG

CONTRACT: DF00132

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5601AG	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50138.1.FR34	HSIP-0053(17)	P.E.
50138.2.34	HSIP-0053(17)	UTILS /ROW
50138.3.34	HSIP-0053(17)	CONSTRUCTION

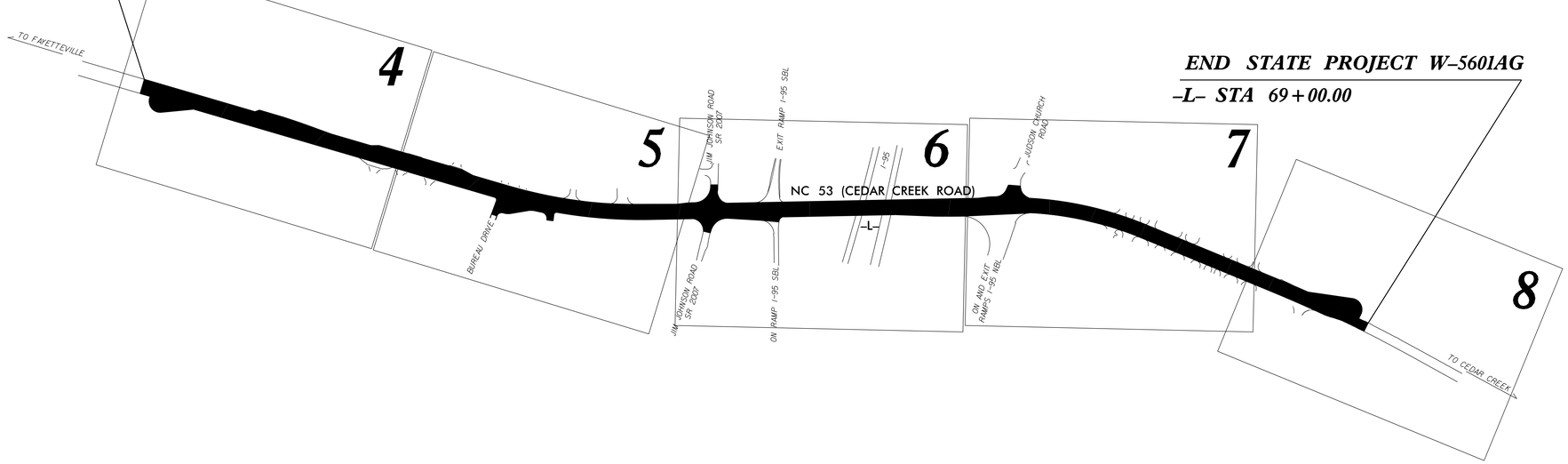
LOCATION: NC 53 – 210 (CEDAR CREEK ROAD) AT I-95

TYPE OF WORK: GRADING, PAVING, PEDESTRIAN SIGNALS DRAINAGE AND PAVEMENT MARKINGS

NAD 83/ NA 2011

BEGIN STATE PROJECT W-5601AG
-L- STA 12+00.00

END STATE PROJECT W-5601AG
-L- STA 69+00.00



GRAPHIC SCALES

PLANS: 50 25 0 50 100

PROFILE (HORIZONTAL): 50 25 0 50 100

PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2016 = 10,300
ADT 2036 = 18,600

V = 50 MPH

PROJECT LENGTH

TOTAL LENGTH OF STATE PROJECT W-5601AG = 1.080mi

Prepared in the Office of:
DIVISION OF HIGHWAYS
431 Transportation Drive, Fayetteville, NC 28301

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 25, 2015

LETTING DATE:
SEPTEMBER 21, 2016

SEAN MATUSZEWSKI
PROJECT ENGINEER

NEIL BUTLER
PROJECT DESIGN ENGINEER

17-AUG-2016 11:34
H:\DDC\Projects\W-5601AG NC 53 (Cedar Creek Road) Median Islands_Cumberland\Roadway\proj\W-5601AG_Rdy_tsh.dgn
$$$$USERNAME$$$$

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H–Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E.*) — W
- U/G Water Line LOS C (S.U.E.*) — W
- U/G Water Line LOS D (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

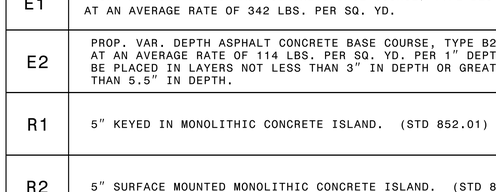
MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	2A-1

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 336 LBS. PER SQ. YD.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BEPLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
R1	5" KEYED IN MONOLITHIC CONCRETE ISLAND. (STD 852.01)
R2	5" SURFACE MOUNTED MONOLITHIC CONCRETE ISLAND. (STD 852.01)
R3	EXISTING 2'-6" CONCRETE CURB AND GUTTER
R4	PROPOSED 2'-6" CONCRETE CURB AND GUTTER
R5	PROPOSED 1'-6" CONCRETE CURB AND GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT 0"-1.5" DEPTH (CURB MILLING)
V2	MILLING ASPHALT PAVEMENT 5.5" DEPTH (3' WIDTH)
W	WEDGING (SEE DETAIL)



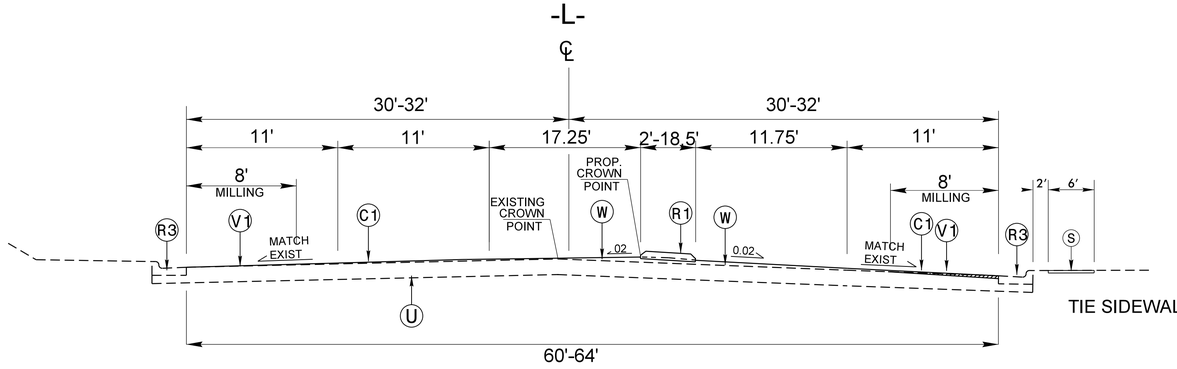
WEDGING DETAIL

-L- STA. 17+50.00 TO STA 27+00.00
-Y- STA. 17+57.00 TO STA 27+25.00

WEDGE AS DIRECTED BY THE ENGINEER TO OBTAIN DRAINAGE LT & RT OF ISLANDS

TRANSITION FROM EXISTING TO TYPICAL NO. 1

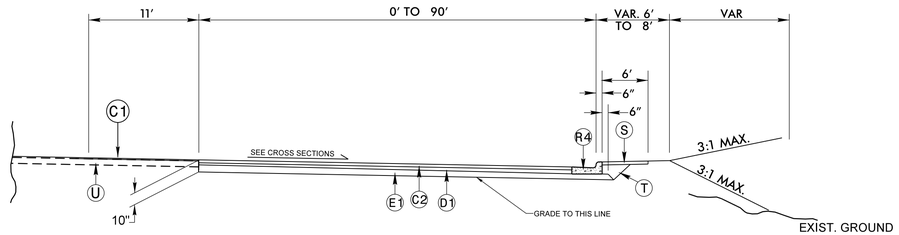
-L- STA 12+00.00 TO 13+40.00



TIE SIDEWALK TO EXISTING

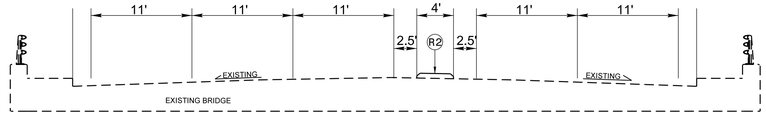
TYPICAL SECTION NO. 1

-L- STA 13+40.00 - 17+00.00
-L- STA 29+05.00 - 32+80.00
-L- STA 34+55.00 - 43+57.00
-L- STA 46+60.00 - 56+50.00
-L- STA 63+85.00 - 67+65.00



DETAIL FOR WIDENING

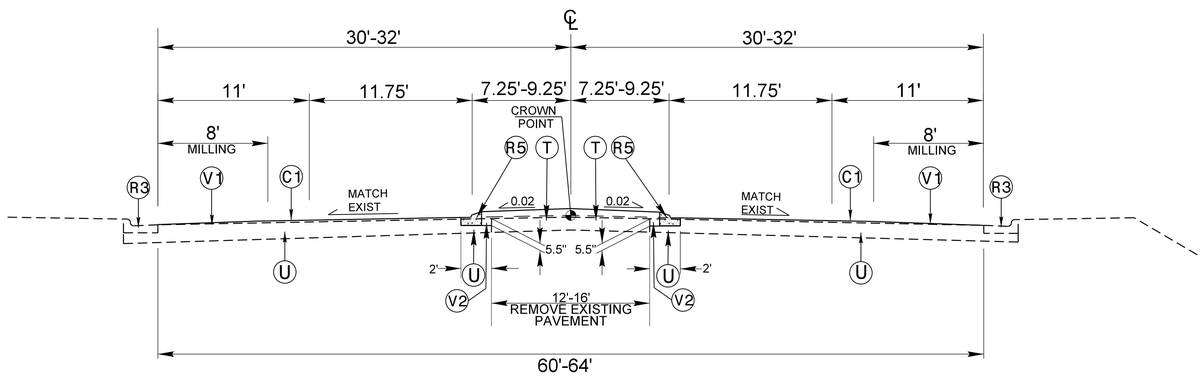
RT -L- STA 13+43.00 - 15+43.00
RT -L- STA 29+60.00 - 31+45.00
LT&RT -L- STA 37+00.00 - 40+35.00
LT -L- STA 50+13.00 - 53+48.00
LT -L- STA 65+07.00 - 67+57.00 (NO SIDEWALK)
LT -L- STA 57+85.00 - 58+20.00 (NO SIDEWALK)



TYPICAL SECTION NO. 2

-L- STA 43+57.00 - 46+60.00
(BRIDGE DECK)
*DECK TO BE CLEANED PRIOR TO PLACING ISLAND

-L-



TYPICAL SECTION NO. 3

-L- STA 17+00.00 - 29+05.00
-L- STA 32+80.00 - 34+55.00
-L- STA 56+50.00 - 63+85.00

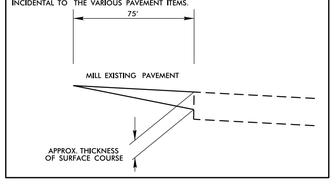
TRANSITION FROM TYPICAL NO. 2 TO EXISTING

-L- STA 63+85.00 - 69+00.00

MILLING AT PAVEMENT TIE-INS

FOR SURFACE MIXES OVER 1" IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER. LOCATIONS SHALL INCLUDE TIES TO EXISTING PAVEMENT AT THE BEGINNING AND END OF RESURFACING LOCATIONS.
PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2012 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOPLISHED AT THE SAME TIME AS THE MILLING OPERATION.

NO PAYMENT WILL BE MADE FOR THIS WORK AS IT WILL BE CONSIDERED INCIDENTAL TO THE VARIOUS PAVEMENT ITEMS.



6/2/99

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$$USER$$
$$DESCRIPTION$$

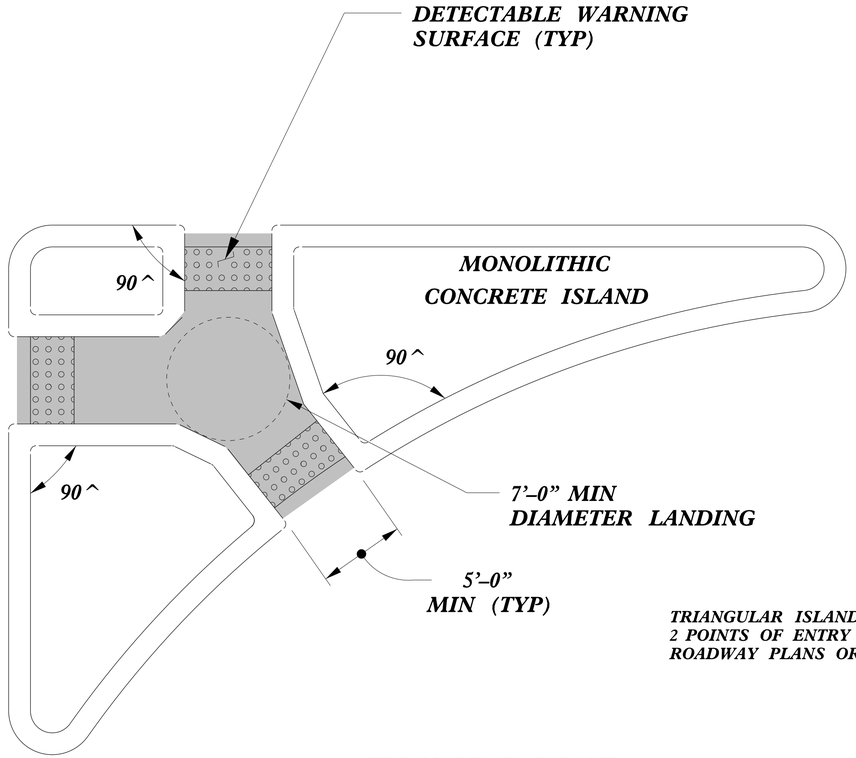
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	2A-2

PROJECT NOTES

1. Contractor to install Erosion Control devices as directed by the Engineer.
2. Contractor shall coordinate with the Division Six Traffic Services Unit (910–486–1452) for placement of all pavement markings and signs.
3. Provide blockouts in concrete islands as well as coring asphalt for sign installation. Core asphalt at a minimum of 42" or per 904.50 sht 2 of 2.
4. Pedestrian signs on RRFB's will be paid for under Signs for Signals.
5. All right of way is to be monumented upon completion of project and will be paid for under construction surveying.

5/14/99

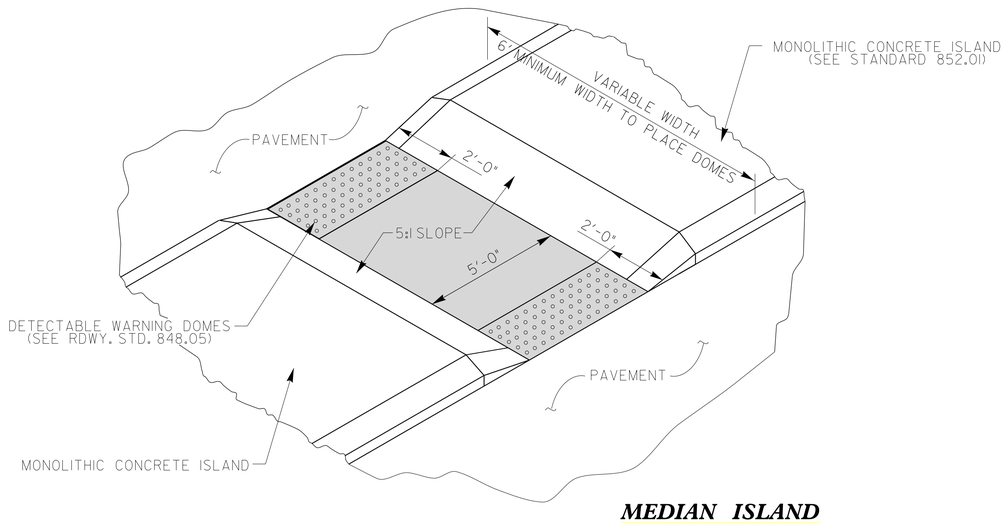
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	2B-1



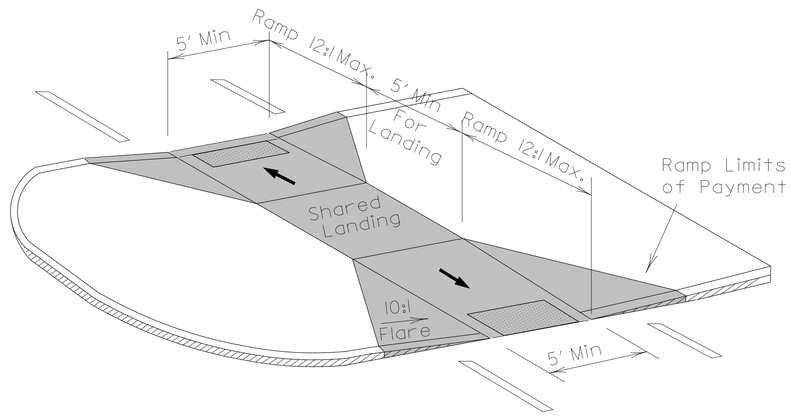
PAY LIMITS FOR 2 OR 3 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)

TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

TRIANGULAR ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

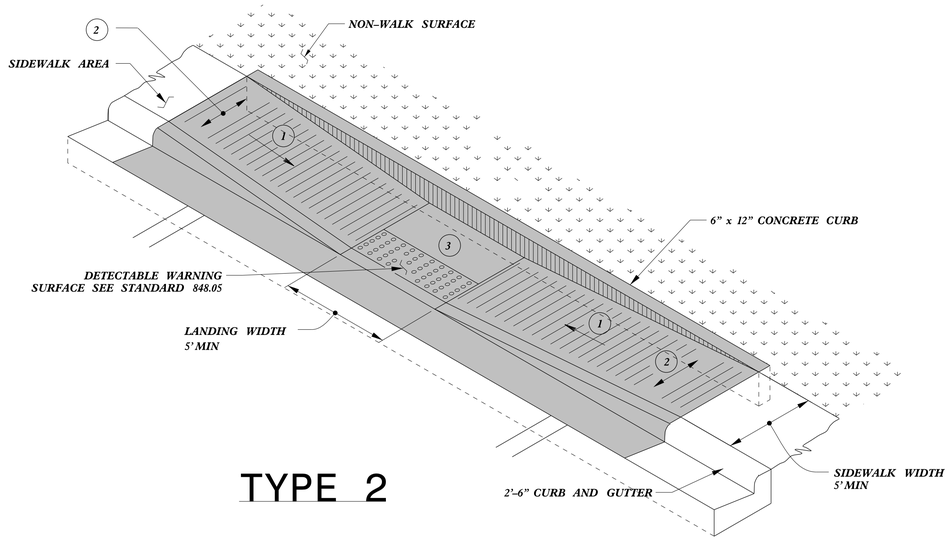
Median or Turn Lane Islands

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

$$$$USERNAME$$$$ $$$$SYSTIME$$$$ $$$$SCALE$$$$ $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

5/14/99

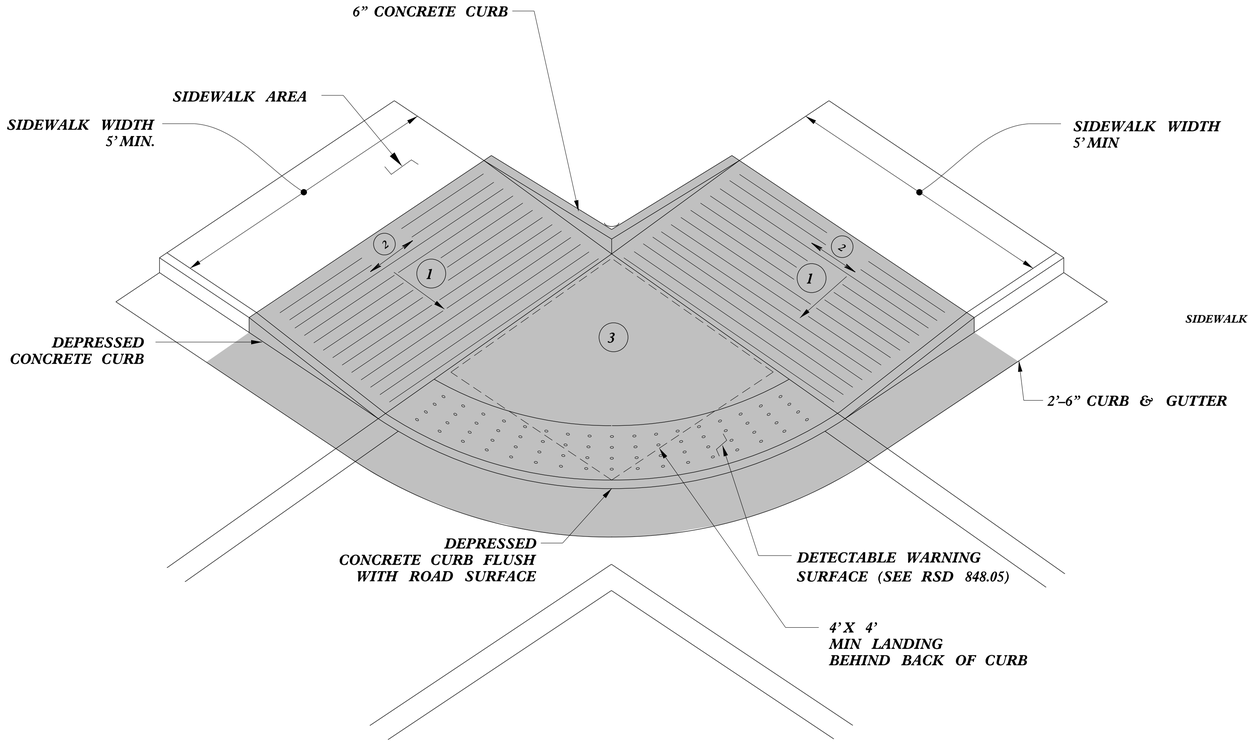
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	2B-2



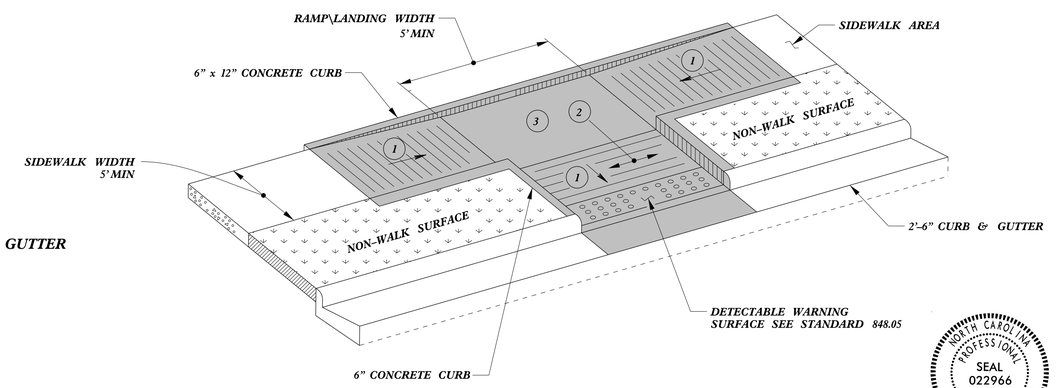
TYPE 2

PAY LIMITS FOR 1 CURB RAMP

1. *8.33% (12:1) MAX RAMP SLOPE*
2. *CROSS SLOPE: 2.00%*
3. *CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.*



TYPE 2A



TYPE 3

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022966 Joel S. Howerton

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

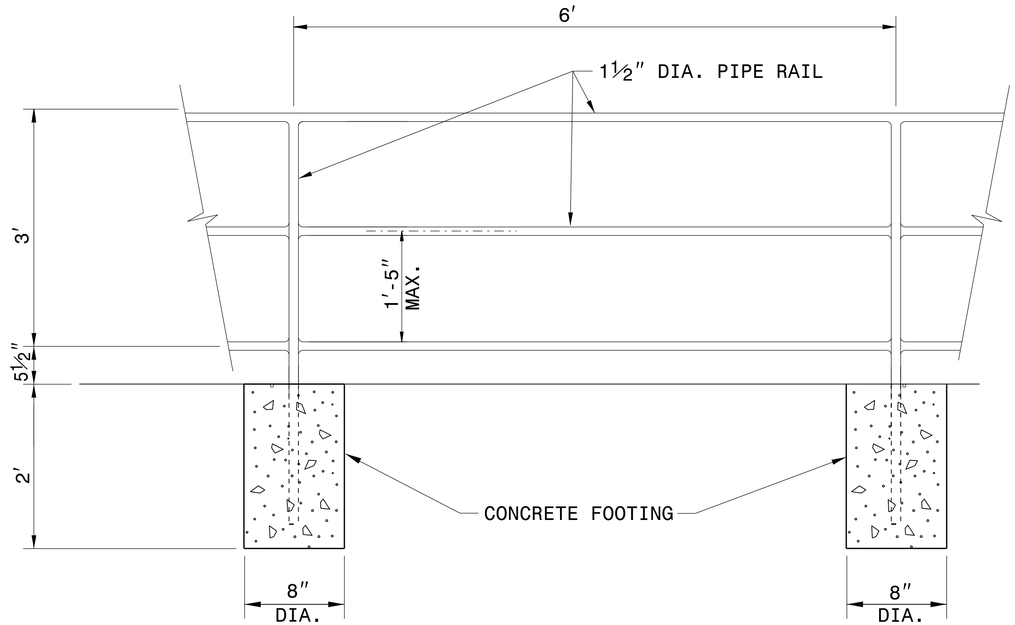
CURB RAMPS

Parallel Ramps

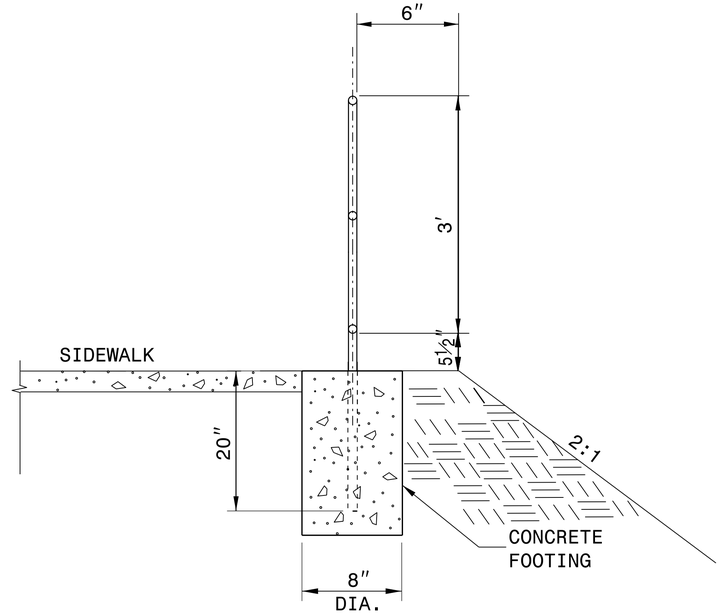
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

$$$$USERNAME$$$$ $$$$CONFIG$$$$ $$$$SYMBOL$$$$ $$$$SYMTIME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	2C-1



ELEVATION OF PROPOSED PEDESTRIAN HANDRAIL



SECTION VIEW

NOTES:

CONSTRUCT PROPOSED STEEL PIPE RAIL OF 1½" DIAMETER SCHEDULE 40 PLAIN END GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

REPAIR GALVANIZING IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS.

PAINT, IF REQUIRED BY THE ENGINEER, IN ACCORDANCE WITH SECTION 1080 OF THE STANDARD SPECIFICATIONS.

WELD IN ACCORDANCE WITH ARTICLE 1072-20 OF THE STANDARD SPECIFICATIONS.

USE CLASS 'B' CONCRETE FOR HANDRAIL FOOTINGS.

PLACEMENT OF HANDRAIL IN RELATION TO SHOULDER BREAK POINT MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

PROPOSED PEDESTRIAN SAFETY RAIL

COMPUTED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	3B-1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
13+00 – 43+50	543		1515	972	
46+70 – 68+00	495		1225	730	
5% TO REPLACE TOP SOIL ON BORROW PIT				85	
PROJECT TOTAL	1038		2740	1787	
SAY	1040		2740	1790	

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION	SQ YD
L	17+00	25+44	CL	1500
L	25+94	28+40	CL	437
L	32+80	34+55	CL	311
L	56+50	59+15	CL	353
L	59+65	61+65	CL	267
L	62+15	62+85	CL	94
			TOTAL	2962
			SAY	2965

CONCRETE PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION	SQ YD
L	25+45	25+95	CL	52
L	30+60	31+11	CL	55
L	51+60	51+60	LT	30
L	51+65	51+65	RT	30
			TOTAL	167
			SAY	170

5/9/06

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$$$$USERNAME$$$$

D6CAD293565

COMPUTED BY: ______________________ DATE: __________

CHECKED BY: ______________________ DATE: __________

PROJECT NO.	SHEET NO.
W-5601AG	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)'	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC)												C.S. PIPE								R.C. PIPE CLASS III								R.C. PIPE CLASS IV								** " R.C. PIPE (CLASS V)	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)		QUANTITIES FOR DRAINAGE STRUCTURES	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B')		C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03			CONCRETE TRANSITIONAL SECTION		D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B.J.B. STD. 840.34	M.H. STD. 840.51, STD 840.52, OR 840.53	M.H. FRAME AND COVER STD. 840.54		CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
SIZE								12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"				CU. YARDS			LIN. FT.			TYPE OF GRATE																						
THICKNESS OR GAUGE		FROM	TO																	.064	.064	.064	.064	.079	.079	.109	.109																				R.C.P.	C.S.P.	PER EACH (0' THRU 5.0')	A 5.0' THRU 10.0'	B 10.0' AND ABOVE		E	F	G	DROP INLET	CATCH BASIN																		
L 13+09		101		88.2																																													1	0.9																		1	1	1					
L 13+40		102		87.4																																													1	0.9		1			1																				
L 13+86		103		88.4																																													1												1		1												
		103	101		85.2	82.3																															80																																					
L 14+12		104		88.5																																													1												1		1												
		104	103		85.3	85.2																															32																																					
		105	102		83.2	81.6																															84																																					
L 14+00		105		86.4																																													1			1	1																						
		106	105		83.4	83.2																															64																																					
L 14+56		106		86.6																																													1			1			1																				
L 29+45		201		90.0																																													1												1		1												
		201	204		86.8	86.3																															100																																					
L 29+67		202		89.5																																													1			1			1																				
		202	216		84.6	84.3																															108																																					
L 30+42		204		89.5																																													1												1		1												
		204	213		86.3	86.2																															20																																					
L 31+40		205		90.6																																													1												1		1												
		205	212		87.9	84.1	1.6																														80																																					
L 33+15		206		92.3																																													1												1		1												
		206	218		89.1	88.1	0.4																														88																																					
L 34+65		207		95.4																																													1												1		1												
		207	206		92.2	89.1																															152																																					
L 36+00		208		98.4																																													1												1		1												
		208	207		95.2	92.2																															136																																					
L 37+04		209		101.0																																													1												1		1												
		209	208		97.8	95.2																															108																																					
L 37+56		210		102.4																																													1												1		1												
		210	209		99.2	97.8																															56																																					
L 37+56		211		102.5																																													1												1		1												
		211	210		99.3	99.2																															20																																					
L 30+63		212		90.2																																													1	1.1										1			1												
L 30+33		213		90.1																																													1												1		1												
		213	212		86.2	86.1																															32																																					
L 30+64		216		90.8																																													1	1.5		1			1																				
L 30+64	RT	214			84.4																																			8																																				0.656		
L 32+30		218		92.3																																													1												1		1												
		218	205		88.1	87.9	0.8																														92																																					
L 38+58		301		104.8																																													1												1		1												
		301	210		101.6	99.2																															104																																					
L 39+19		302		106.5																																													1												1		1												
L 52+44		303		104.4																																													1												1		1												
		303	401		101.2	99.6																															116																																					
L 50+79		304		108.0																																													1												1		1												
		304	303		104.8	101.2																															156																																					
L 53+53		401		102.8																																													1												1		1												
		401	402		99.6	97.5																															168																																					
L 55+21		402		100.7																																													1												1		1												
		402	406		97.5	96.9	1.1																														32																																					
L 56+87		403		101.3																																													1												1		1												
		403	402		98.1	97.5																															168																																					
SHEET TOTALS																																					1996			8									27	4.4		5	1	0	4						20		21					1	1	1			0.656		

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

COMPUTED BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
W-5601AG	3D-2

D6CAD293565

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE	SIDE DRAIN PIPE THICKNESS OR GAUGE	C.S. PIPE SIZE	C.S. PIPE THICKNESS OR GAUGE	R.C. PIPE CLASS III	R.C. PIPE CLASS IV	** " R.C. PIPE (CLASS V)	**** RC PIPE CULVERTS, CONTRACTOR DESIGN	***** RC PIPE CULVERTS, CONTRACTOR DESIGN	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	"TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') LIN. FT. A 5.0' THRU 10.0'	"TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') LIN. FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CONCRETE TRANSITIONAL SECTION CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.25	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B.J.B. STD. 840.34	M.H. STD. 840.51, STD 840.52, OR 840.53	M.H. FRAME AND COVER STD. 840.54	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
								12" 15" 18" 24" 30" 36" 42" 48"	DO NOT USE RCP	12" 15" 18" 24" 30" 36" 42" 48"	.064 .064 .064 .064 .079 .079 .109 .109	12" 15" 18" 24" 30" 36" 42" 48"	12" 15" 18" 24" 30" 36" 42" 48"																																	
									DO NOT USE CSP																																			
									DO NOT USE CAAP																																			
									DO NOT USE HDPE																																			
64+25	CL	409		101.3									28						1																								
		409	410		98.1	98.0																																				
64+50	CL	410		101.2									28						1																								
		410	411		98.0	97.9																																				
64+75	CL	411		101.2									36						1																								
		411	412		97.9	97.7																																				
65+10	CL	412		101.1									76						1																								
		412	413		97.7	97.4																																				
65+85	CL	413		100.8									88						1																								
		413	414		97.4	97.0																																				
66+70	CL	414		100.4									60						1																								
		414	415		97.0	96.5																																				
67+29	CL	416		99.7									44						1																								
		415	416		96.5	95.5																																				
SHEET TOTALS													360						7	0				0	0	0	0						7		7									
PROJECT TOTALS													2360	8					34	4.4				5	1	0	4						27		28				1	1	1			0.656		

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	4

REVISIONS 8/17/99

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C:\Users\...\W-5601AG NC 53 (Cedar Creek Road) Median islands Cumberland\Roadway\proj\W-5601AG Rdy psh 04.dgn
$$$$USERNAME$$$$

NAD 83/NA 2011

5'RADPT +45 4.25'LT
40
110'
1'RADPT +49 8.25'LT
50'R
47'
15'
5'RADPT +45 4.25'RT
1'RADPT +01 8.25'RT

15

BEGIN STATE PROJECT W-5601AG

-L- STA 12+00.00

BL-1
N 458672.9080
E 2051026.9780
ELEV 88.07
-L- STA 15+92.62
44.08' LT

BM-1
N 458659.6963
E 2051098.2016
ELEV 90.33
-L- STA 16+61.97
64.98' LT

W A MAXWELL
DB 9108 PG 851
PB 132 PG 36

K&JS PROPERTIES LLC
DB 9108 PG 848
PB 132 PG 36

S 24°09'54" W 494.43'

BEG 5' ISLAND +40 9.25'LT

200' LEFT TURN TAPER

+00 BEG 16'C&G 9.25'LT

8 ", AC, PWC
FO, CENTURYLINK
FO, TWC
INNERDUCT, CENTURYLINK
400 PAIR, COPPER, CENTURYLINK
Retain Ex. CB
Retain Ex. 18" RCP
Retain Ex. 18" RCP
TB JB W/MH
Piedmont Natural Gas Company Inc 4 ", PLASTIC
8 ", AC, PWC
Retain Ex. CB
107
101
103
2GI
+50 1R
15" RCP-IV
RCP
104
+00 1R
18" RCP
108
102
105
106
CB 15" RCP-IV
50'R
50' TAPER
R/W
+93
+25 EXIST 110'
+40 EXIST 110'
TIE TO EXISTING SIDEWALK
TIE TO EXISTING SIDEWALK
TIE TO EXIST C&G
BEG 5' ISLAND +40 9.25'RT
+00 BEG 16'C&G 9.25'RT
NC 53 64' BST (CEDAR CREEK ROAD)
Piedmont Natural Gas Company Inc 4 " PLASTIC
30" C&G
18" RCP
15" RCP
30" C&G 6' SIDEWALK
72" CONC SW
EXISTING R/W
CONC
CB
FO
T
E
W
S 62°46'23" E 150.00'
S 62°46'23" E 170.00'

JOHN A MARTIN JR.
& WIFE GAYLE W TRUSTEES
DB 8375 PG 626

SIG HOSPITALITY LLC
DB 4513 PG 367
PB 93 PG 24

MARY T McLAUGHLIN &
ANN T CLEVELAND
DB 8673 PG 119
PB 123 PG 119

ASSOCIATED MOTELS INC &
ASSOCIATED HOTELS INC

PAVEMENT REMOVAL

20

DI TOP=85.87' INV=83.68'
PWC
15" RCP
N 23°37'18" E 595.51'
S 23°27'41" W 592.82'
CB TOP=88.12' INV=84.64'
TOP=88.78' INV=85.73'
CB TOP=88.27' INV=85.74'
INV=84.83'
20' UTILITY EASEMENT
EXISTING R/W 8.00'
CB TOP=89.11' INV=86.75'
1'6"C&G
1 S 62°43'15.2" E -L-
4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION BEYOND SIDEWALK
DI TOP=87.10' INV=85.02'
8" VC
S 2°13'37" W 372.40'
TOP=89.07' INV=83.78'
6' GAS & DRAINAGE EASEMENT
CB TOP=88.50' INV=84.37'
CB TOP=89.07' INV=85.38'
INV=85.75'
CB TOP=88.89' INV=80.30'
20' CITY OF FAYETTVILLE EASEMENT
N 21°35'52" E 580.00'
S 31°50'02" W 475.94'
30' CITY OF FAYETVILLE EASEMENT
PRIVATE DRIVE 20' BST

RACHINA LLC
DB 6855 PG 705
PB 111 PG 152

DOMINION CRISTIAN CENTER
DB 9335 PG 464
PB 111 PG 152

JOHN A MARTIN JR.
& WIFE GAYLE W TRUSTEES
DB 8375 PG 626

RACHINA LLC
DB 7173 PG 220
PB 92 PG 53

BL-2
N 458348.2833
E 2051658.8463
ELEV 89.93
-L- STA 23+03.00
45.16' LT

MATCHLINE SHEET 5 -L- STA 24+00.00

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W5601AG-1"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 458942.6043(ft) EASTING: 2050504.0185(ft)
ELEVATION: 86.98(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988222
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5601AG-1" TO -L- STATION 13+00 IS
S 54° 14' 28.03" E Distance 299.0595
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	5

REVISIONS

8/17/99

MATCHLINE SHEET 4 –L– STA 24+00.00

MATCHLINE SHEET 6 –L– STA 37+50.00

PAVEMENT REMOVAL

MAINTAIN PED SIGNS & RRFB

RELOCATE EXIST PED SIGNS & RRFB TO NEW PED CROSSING STA 28+65

REMOVE EXISTING CURB RAMP AND REPLACE WITH 2'6" C&G AND SIDEWALK

REMOVE AND REPLACE EXISTING CONCRETE ISLANDS

REMOVE EXISTING CONCRETE ISLANDS

RETROFIT EXISTING CURB RAMPS WITH TRUNCATED DOMES AS NEEDED AND AS DIRECTED BY THE ENGINEER

200' LEFT TURN TAPER

200' LT TURN TAPER

50' TAPER

4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION

4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION BEYOND SIDEWALK

COLLAR AND EXTEND

TIE TO EXISTING

TIE TO EXIST C&G

PC Sta. 29+49.96

PT Sta. 35+84.16

BEG ISLAND +44

END ISLAND +64

BEG ISLAND +40

BEG 16'C&G +80 9.5'LT

END 16'C&G +55 9.25'LT

BEG 16'C&G +80 9.5'RT

END 16'C&G +55 9.25'RT

+80 105' EXIST

+55 EXIST

EXIST 105'

DB 4376 PG 431
PB 94 PG 159

ASSOCIATED HOSPITALITY SERVICES INC
DB 4711 PG 196
PB 94 PG 159

JUDSON BAPTIST CH CEMETARY
DB 457 PG 248

HARIPREET INC
DB 6957 PG 224

JOHN V & NANCY C BAXLEY
DB 7057 PG 615
PB 58 PG 84

SPPR-HOTELS LLC
DB 7070 PG 330
PB 56 PG 46

FHCC 1965 CEDAR CREEK RD LLC
DB 8642 PG 530
PB 119 PG 38

EOLFINANCING PARTNERSHIP
DB 4613 PG 454
PB 57 PG 126

HOLT REAL ESTATE ENTERPRISES
DB 2937 PG 140

RUBY TUESDAY INC
DB 6632 PG 397

AROMA HOTELS 195 LLC
DB 8096 PG 833

LAFAYETTE HOSPITALITY LLC
DB 8022 PG 524
PB 66 PG 12

V/D NEAL PROPERTIES LLC
DB 6426 PG 49
PB 91 PG 165

BL–3
N 457998.9015
E 2052140.1271
ELEV 91.39
–L– STA 28+90.88
44.78' RT

BL–4
N 457778.7144
E 2052741.9928
ELEV 97.33
–L– STA 35+21.88
44.29' RT

–L–
PI Sta 32+69.53
Δ = 17° 26' 26.5" (LT)
D = 2° 45' 00.0"
L = 634.21'
T = 319.57'
R = 2,083.48'

NAD 1983 2011

17-AUG-2016 11:51
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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	6

REVISIONS

8/17/99

MATCHLINE SHEET 5 –L– STA 37+50.00

MATCHLINE SHEET 7 –L– STA 49+00.00

CRACKER BARREL OLD COUNTRY STORE INC (#271) DB 4500 PG 140 PB 91PG 76

EXISTING R/W VARIES

R/W MON

EIP

40

45

N 24°30'00" E

R, COPPER, CENTURYLINK

FO, TWC

COAX, TWC

50 PAIR, COPPER, CENTURYLINK

100 PAIR, COPPER, CENTURYLINK

PWC

30" C&G

30 ", DIP, PWC

50 PAIR, COPPER, CENTURYLINK

Piedmont Natural Gas Company Inc, 2 ", PLASTIC

GAS LINE TOO DEEP TO LOCATE

N 03°37'48" E 107.18'

PRIVATE DRIVE 27' BST

FHCC LLC DB 9035 PG 707

JIM JOHNSON ROAD

37' BST

SR 2007

18" RCP

E.P. R/W MON

70'R

INNERDUCT, CENTURYLINK

INV=82.16' FO, CENTURYLINK

13" CONC HW

20 ", DIP, PWC

INV=83.79'

400 PAIR, COPPER, CENTURYLINK

600 PAIR, COPPER, CENTURYLINK

200 PAIR, COPPER, CENTURYLINK

ABANDON

48" CMP

Retain Ex. CB

100' TAPER

60' CONC SW

305

+77.59

+05 TR

+50 TR

+00 TR

+20 9.25'R

+93 2'R

+15

210

211

301

302

303

304

307

Retain Existing 12" RCP

15" RCP-IV 100'R

2GI

20'R

100'R

Retain Ex. CB

Retain Ex. 15" RCP

72" CONC SW

30" C&G

66" CONC SW

TOP=111.28 INV=107.36'

INV=107.36'

15" RCP

OUTLET BURIED; APPROX. LOCATION

TIE TO EXISTING C&G AND SIDEWALK

MEDIAN ISLAND WITH CUT THROUGH SEE DETAIL

REPLACE STEEL PIPE HANDRAIL ALONG SIDEWALK

EXTEND SIDEWALK

REMOVE EXISTING CURB RAMP AND REPLACE WITH 2'6" C&G AND SIDEWALK

SURFACE MOUNTED MONOLITHIC ISLAND ON BRIDGE DECK. DECK TO BE CLEANED PRIOR TO PLACING ISLAND.

200' TAPER

S 80°09'41.7" E

53.64' BST (CEDAR CREEK ROAD)

NC 53 76' BST (CEDAR CREEK ROAD)

EXIT RAMP I-95 25' BST SBL

ON RAMP I-95 20' BST SBL

JUDSON MISSIONARY BAPTIST CH DB 2640 PG 841

ECM

EXISTING R/W

S 26°51'51" W 522.33'

NAD 83/ NA 2011

Piedmont Natural Gas Company Inc, 4 ", PLASTIC

MARINE FEDERAL CREDIT UNION DB 9150 PG 835

BL-5
N 457669.2920
E 2053378.0390
ELEV 111.67
-L- STA 41+65.95
42.47' RT

17-AUG-2016 11:52
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$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	7

MATCHLINE SHEET 6 –L– STA 49+00.00

MATCHLINE SHEET 8 –L– STA 63+00.00

PAVEMENT REMOVAL

NAD 83/2011 NA

BL–6
N 457622.0691
E 2054162.1910
ELEV 110.70
–L– STA 49+46.64
44.99' LT

BL–7
N 457450.8749
E 2054744.1739
ELEV 103.16
–L– STA 55+45.05
35.30' LT

BL–8
N 457144.7479
E 2055237.9323
ELEV 100.83
–L– STA 61+21.68
37.39' LT

–L–
PI Sta 54+40.51
Δ = 23° 33' 05.7" (RT)
D = 3° 45' 00.0"
L = 628.04'
T = 318.52'
R = 1,527.89'

PC Sta. 51+21.99

PT Sta 57+50.03

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	8

REVISIONS

8/17/99

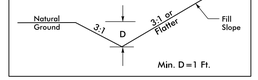
MATCHLINE SHEET

SHEET 7 -L- STA 63+00.00

END STATE PROJECT W-5601AG

-L- STA 68+00.00

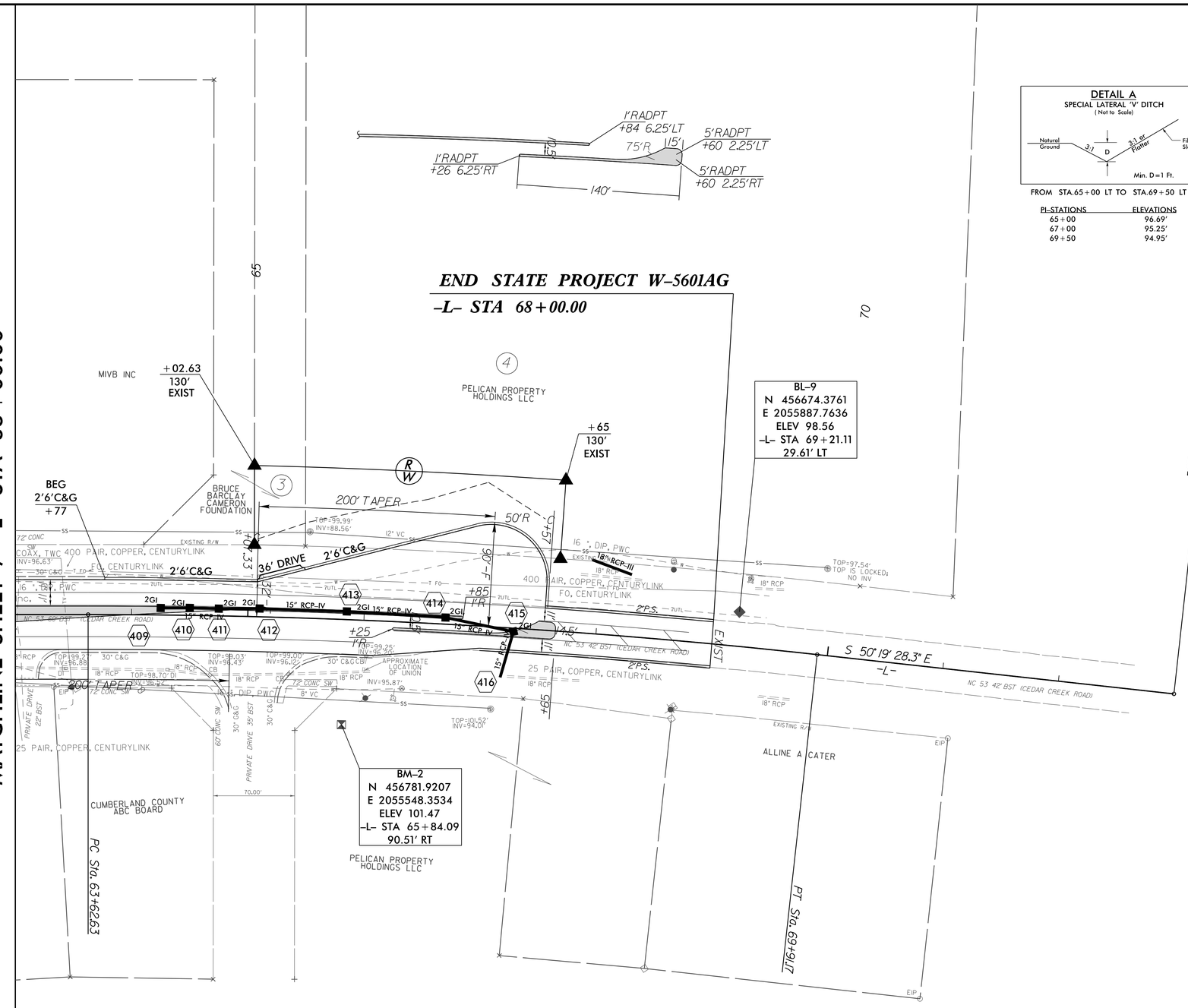
DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 65+00 LT TO STA. 69+50 LT

PI-STATIONS	ELEVATIONS
65+00	96.69'
67+00	95.25'
69+50	94.95'

NAD 83 NA 2011



-L-
PI Sta 66+77.22
△ = 6°17'07.6" (RT)
D = 1°00'00.0"
L = 628.55'
T = 314.59'
R = 5,729.58'

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	9

BEGIN STATE PROJECT W-5601AG

-L- STA 13+00.00

BM-1
-L- STA 16+61.97 64.98' LT
RR SPIKE IN BASE OF 18" PINE
ELEV 90.33

-L-

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

130 120 110 100 90 80 70 60 50 40

140 130 120 110 100 90 80 70 60 50

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	10

140 130 120 110 100 90 80 70 60 50

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00 52+00

52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00

BM-2
-L- STA 65+84.09 90.51' RT
RR SPIKE IN BASE OF 18" PINE
ELEV 101.47

5/28/99

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	11

END STATE PROJECT W-5601AG
-L- STA 68+00.00

140
130
120
110
100
90
80
70
60
50

66+00 67+00 68+00 69+00 70+00 71+00 72+00

-L-

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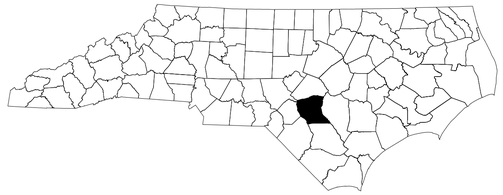
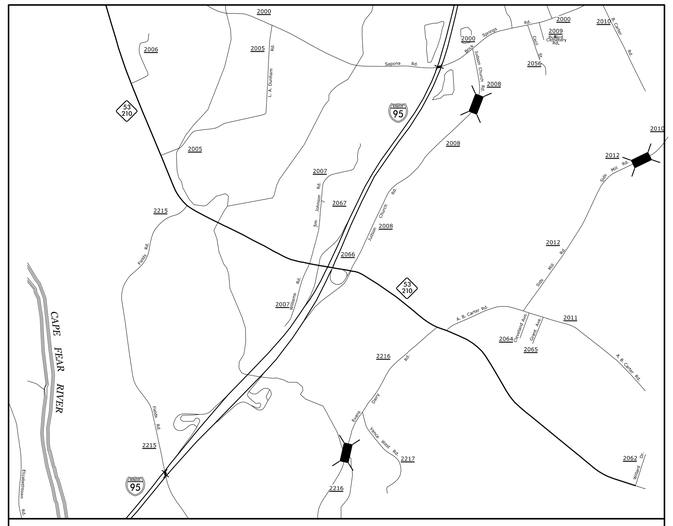
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CUMBERLAND COUNTY





VICINITY MAP

LOCATION: NC 53 (CEDAR CREEK ROAD) AT I-95

INDEX OF SHEETS

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: DocuSigned by: Don A. Parker 4DD4828626184 1D...

DATE: 8/18/2016

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043251 DON A. PARKER

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
D. A. PARKER, P.E. — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. N. GREEN — TRAFFIC CONTROL DESIGN ENGINEER

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

SHEET NO.
TMP-1

W-5601AG

TIP PROJECT:

8/18/2016
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User:sbjennings

PROJ. REFERENCE NO.	SHEET NO.
W-5601AG	TMP-2

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

LANE CLOSURE RESTRICTIONS:

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
NC 53	FRIDAY 12:00 P.M. (NOON) TO SUNDAY 9:00 P.M.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME	HOLIDAY
NC 53	

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

   WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT INSTALL MORE THAN 2000 FT OF LANE CLOSURE ON NC 53 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

I) DO NOT INSTALL MORE THAN ONE SIMULTANEOUS LANE CLOSURES IN ANY ONE DIRECTION ON NC 53.

J) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

   BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

   BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

   BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

L) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

M) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

P) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

Q) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

R) INSTALL TEMPORARY PAVEMENT MARKINGS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING
NC 53	PAINT

S) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

V) LAW ENFORCMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

APPROVED: DocuSigned by: Don A. Parker 4DD4826826184 1D...

DATE: 8/18/2016

NORTH CAROLINA PROFESSIONAL SEAL 043251 ENGINEER DON A. PARKER

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

GENERAL NOTES

8/18/2016
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User:sbjennings

PROJ. REFERENCE NO.	SHEET NO.
W-5601AG	TMP-3

PHASING

MAINTAIN A MINIMUM OF 1 HI-VISIBILITY PEDESTRIAN CROSSWALK AT ALL TIMES DURING CONSTRUCTION. IF A PEDESTRIAN CROSSWALK IS CLOSED DUE TO MEDIAN CONSTRUCTION, USE SKINNY DRUMS PLACED ON THE BERM BETWEEN THE SIDEWALK AND THE BACK OF CURB WITH "PEDESTRIAN DETOUR" (M4-9B) ON A PORTABLE SIGN STAND AT THE CLOSED LOCATION TO CLEARLY INDICATE THE CROSSWALK IS CLOSED. NO PORTION OF ANY TRAFFIC CONTROL DEVICE MAY ENCROACH UPON THE SIDEWALK THAT MAY PRESENT A TRIPPING HAZARD.

PHASE I

STEP 1 -- USING RSD 1101.01, SHEET 2, INSTALL WORK ZONE ADVANCE WARNING SIGNS.

STEP 2 -- USING RSD 1101.02, SHEET 3, CLOSE THE OUTSIDE TRAVEL LANE AND CONSTRUCT OUTSIDE DRAINAGE AND WIDENING FOR U-TURN BULB-OUTS UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.

-- MAY BEGIN INSTALLATION OF FINAL SIGNALS.

PHASE II

NOTE: FOR PHASE II, STEPS 1 THRU 6, LANE CLOSURES MAY BE LEFT IN PLACE OVERNIGHT (IN ACCORDANCE WITH LANE CLOSURE RESTRICTIONS) ONLY IF WORK WILL RESUME THE FOLLOWING MORNING.

NOTE: STEP 2 MAY BE WORKED BEFORE STEP 1

STEP 1 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE TRAVEL LANES AND CONSTRUCT THE MEDIAN DRAINAGE AND THE MONOLITHIC CONCRETE ISLANDS FOR THE U-TURN AT STA. 14+00 +/-. OPEN THIS U-TURN TO TRAFFIC.

STEP 2 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE TRAVEL LANES AND CONSTRUCT THE MEDIAN DRAINAGE AND THE MONOLITHIC CONCRETE ISLANDS FOR THE U-TURN AT STA. 67+00 +/-. OPEN THIS U-TURN TO TRAFFIC.

STEP 3 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE TRAVEL LANES AND CONSTRUCT THE MEDIAN DRAINAGE AND THE MONOLITHIC CONCRETE ISLANDS FOR THE U-TURN AT STA. 30+00 +/-. OPEN THIS U-TURN TO TRAFFIC.

NOTE: STEPS 4-6 MAY BE WORKED OUT OF ORDER UPON APPROVAL OF THE ENGINEER.

NOTE: COMPLETE THE WORK OF STEP 4 IN 72 CONSECUTIVE HOURS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 4 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE LANES AND CONSTRUCT THE MEDIAN DRAINAGE FROM STR. 210 TO 301 AND THE MONOLITHIC CONCRETE ISLAND FROM STA. 37+70 +/- TO 41+20 +/-. NO LEFT TURNS WILL BE PERMITTED AT JIM JOHNSON RD. DURING THIS OPERATION.

NOTE: COMPLETE THE WORK OF STEP 5 IN 12 CONSECUTIVE HOURS. SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.

STEP 5 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE LANES AND CONSTRUCT THE MEDIAN DRAINAGE FROM STR. 304 TO 303, BACKFILL AND PAVE. NO LEFT TURNS WILL BE PERMITTED AT I-95 DURING THIS OPERATION.

STEP 6 -- USING RSD 1101.02, SHEET 3, CLOSE THE INSIDE TRAVEL LANES AND CONSTRUCT THE REMAINING MEDIAN DRAINAGE, MONOLITHIC CONCRETE ISLANDS, AND RAISED MEDIAN.

STEP 7 -- USING RSD 1101.02, SHEET 3, USE ALTERNATING LANE CLOSURES TO COMPLETE MILLING WITHIN THE OUTSIDE TRAVEL LANES AND PLACE FINAL LIFT OF SURFACE COURSE. INSTALL FINAL PAVEMENT MARKINGS, ACTIVATE FINAL SIGNALS, AND OPEN PROJECT TO FINAL TRAFFIC PATTERN.

STEP 8 -- REMOVE ALL TRAFFIC CONTROL DEVICES.

APPROVED: DocuSigned by: Don A. Parker 4DD4828826184 1D...

DATE: 8/18/2016

NORTH CAROLINA PROFESSIONAL SEAL 043251 ENGINEER DON A. PARKER

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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASING

8/18/2016
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User:sbjennings

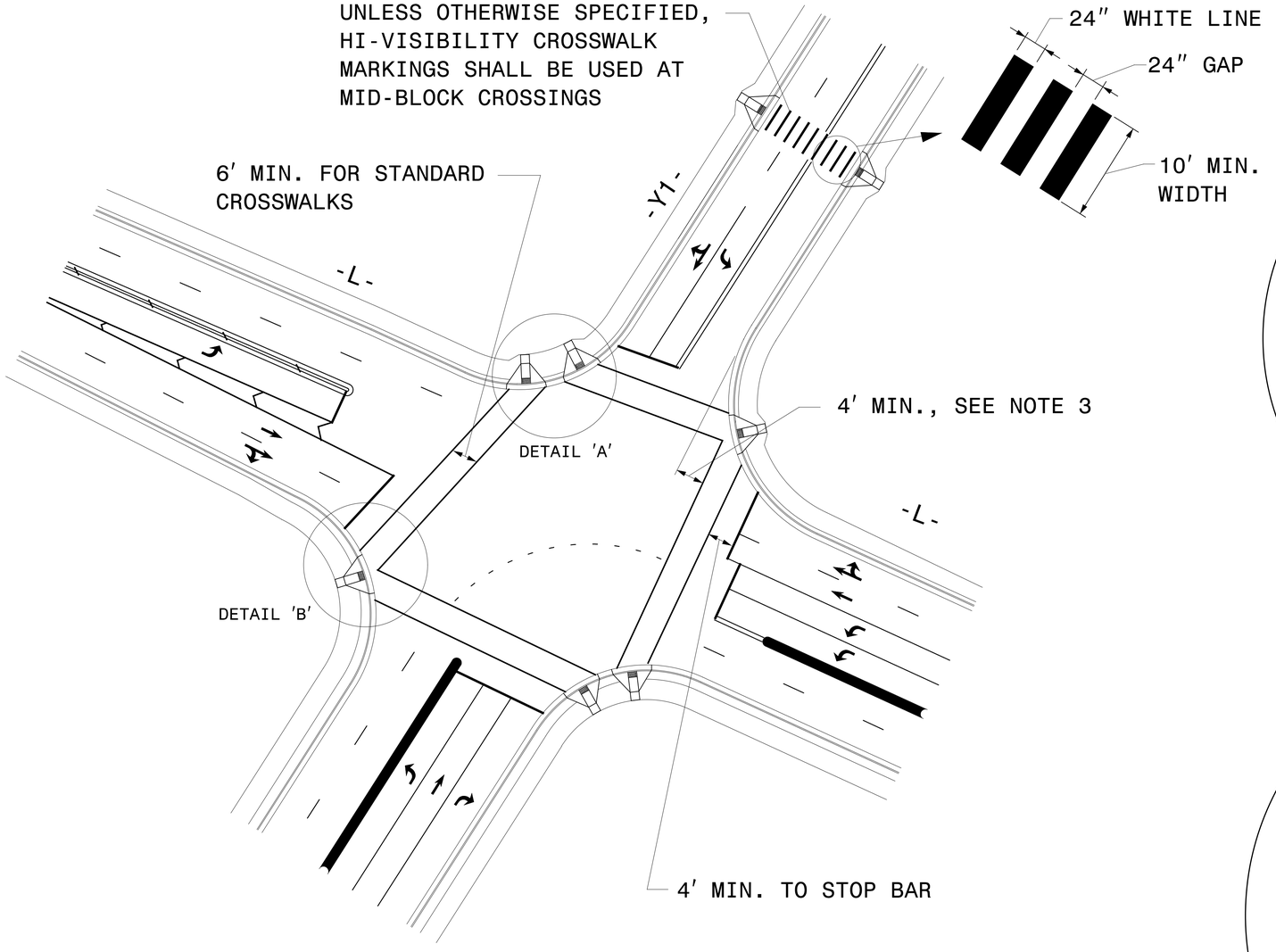
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-1

APPROVED: _____

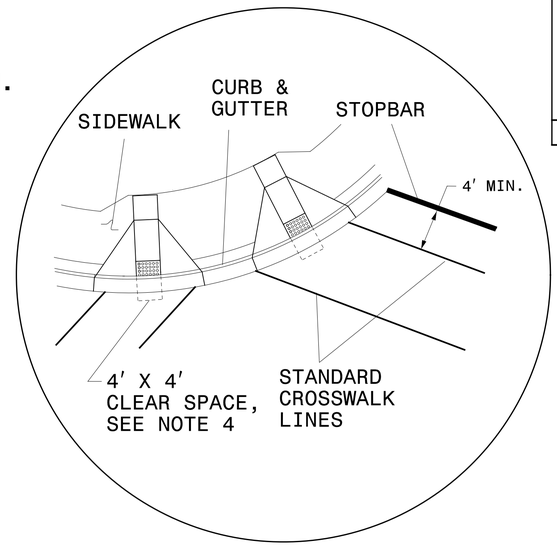
DATE: _____

SEAL

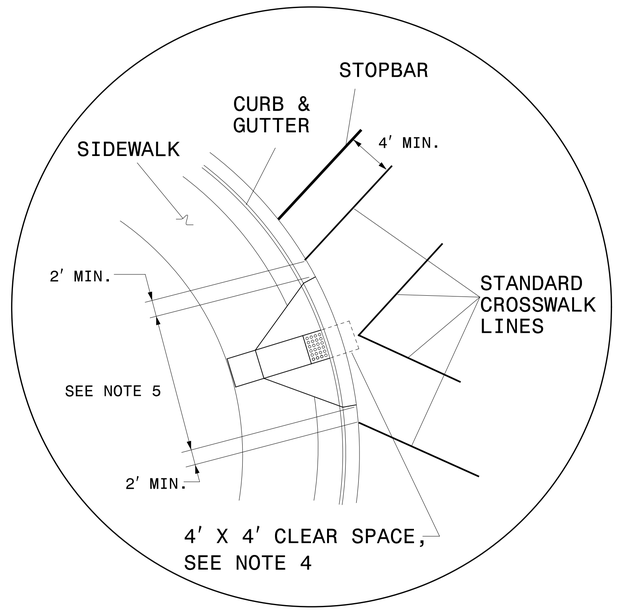
REVISIONS



GUIDANCE DETAIL FOR CROSSWALK MARKINGS



DETAIL 'A'- DUAL CURB RAMPS



DETAIL 'B'- SINGLE DIAGONAL CURB RAMP

NOTES:

1. USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS NOT STATIONED ON THE DETAIL SHEETS OR WHEN FIELD ADJUSTMENTS REQUIRED MOVING STATIONED MARKINGS AS DIRECTED BY THE ENGINEER. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.

2. THE CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. ONLY INSTALL CROSSWALK MARKINGS WHERE SHOWN ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALL AS SPECIFIED ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.

3. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4′ MIN.

4. BEYOND THE BOTTOM GRADE BRAKE, A CLEAR SPACE OF 4′ X 4′ MINIMUM SHALL BE PROVIDED WITHIN THE MARKINGS.

5. SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2 FEET LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.

6. CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS.

CROSSWALK PAVEMENT MARKING GUIDANCE DETAIL

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-2

APPROVED: _____

DATE: _____

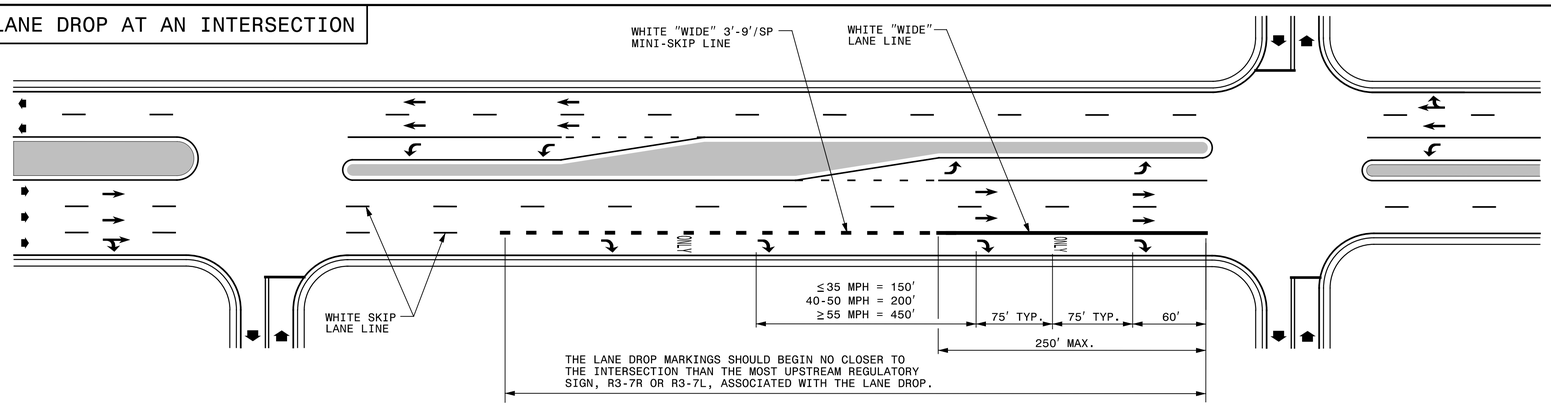
SEAL

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

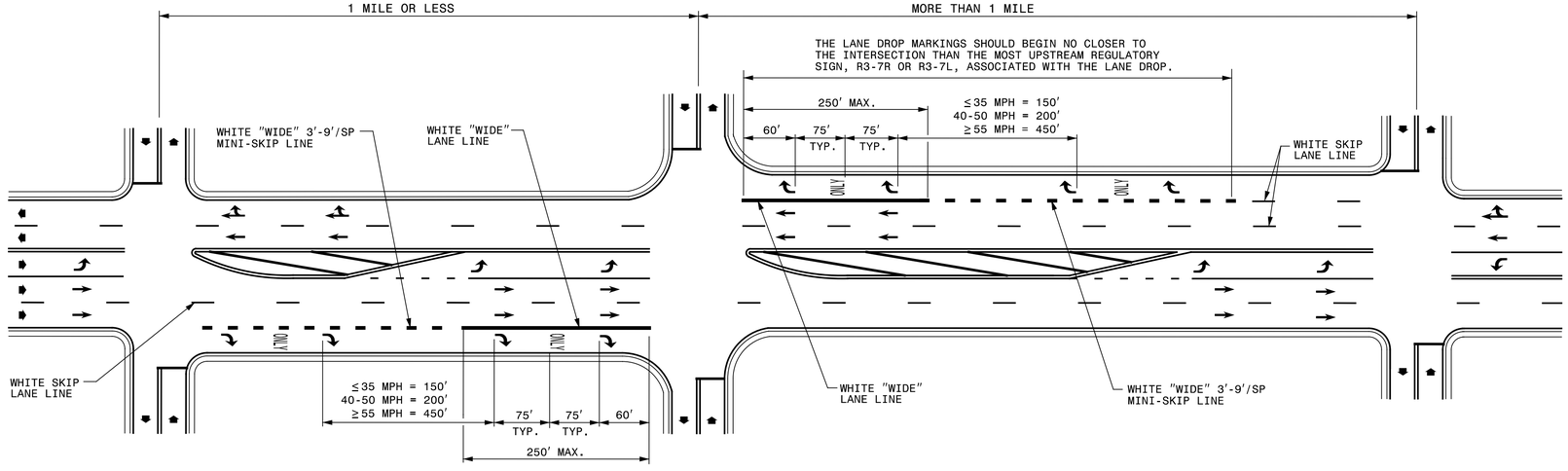
1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

LANE DROP AT AN INTERSECTION



LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND

W = WIDTH OF TRAVEL LANE	ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
DIRECTION OF TRAFFIC FLOW	

SHEET 1 OF 3

1205D06

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

1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3

1205D06

REVISED PAVEMENT MARKING ROADWAY STANDARD DRAWING

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-3

REVISIONS

8/17/99

NAD 83/ NA 2011

15

20

OM1-3
18" X 18"

R4-7
24" X 30"

TC TI TP TH UT TE UT TD

TD UB TE TD TC TD

CONC

T9 TH TD

TC

12' PAVEL

–L– NC 53 (CEDAR CREEK ROAD)

PRIVATE DRIVE
22' BST

MATCHLINE SHEET PMP–4 –L– STA 24+00.00

PAVEMENT MARKING SCHEDULE

T9	2 FT.- 6 FT./SP YELLOW MINISKIP (4",120 MILS)
TC	10' FT.WHITE SKIP (4",120 MILS)
TD	3 FT.- 9 FT./SP WHITE MINISKIP (4",120 MILS)
TE	WHITE SOLID LANE LINE (4",120 MILS)
TH	YELLOW SINGLE CENTER (4",120 MILS)
TI	YELLOW DOUBLE CENTER (4",120 MILS)
TP	YELLOW DIAGONAL (8",90 MILS)
UB	RIGHT TURN ARROW (90 MILS)
UT	U-TURN ARROW (90 MILS)

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-4

REVISIONS

8/17/99

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MATCHLINE SHEET PMP-3 –L– STA 24+00.00

NAD 83/2011

25 30 35

MAINTAIN SIGNS

RELOCATE SIGNS

–L– NC 53–210 (CEDAR CREEK ROAD)

PRIVATE DRIVE 32' BST

PRIVATE DRIVE 31' BST

PRIVATE DRIVE 26' BST

PRIVATE DRIVE 45' BST

PRIVATE DRIVE 30.5' BST

PRIVATE DRIVE 30.25' BST

PRIVATE DRIVE 20' BST

PRIVATE DRIVE 21' BST

MAINTAIN SIGNS

RELOCATE SIGNS

BUREAU DRIVE

MATCHLINE SHEET PMP-5 –L– STA 37+50.00

* CONTACT TRAFFIC SERVICES (910–486–1452) FOR ASSISTANCE WITH ALIGNMENT OF BUREAU DRIVE

PAVEMENT MARKING SCHEDULE

TI	YELLOW DOUBLE CENTER (4",120 MILS)
T3	WHITE CROSSWALK LINE (24",120 MILS)
T9	2 FT.- 6 FT./SP YELLOW MINISKIP (4",120 MILS)
TC	10' FT.WHITE SKIP (4",120 MILS)
TD	3 FT.- 9 FT./SP WHITE MINISKIP (4",120 MILS)
TE	WHITE SOLID LANE LINE (4",120 MILS)
TH	YELLOW SINGLE CENTER (4",120 MILS)
TI	YELLOW DOUBLE CENTER (4",120 MILS)
TV	YELLOW DIAGONAL (12",90 MILS)
UA	LEFT TURN ARROW (90 MILS)
UB	RIGHT TURN ARROW (90 MILS)
UM	12" YIELD LINE TRIANGLE (90 MILS)

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-5

8/17/99

REVISIONS

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40

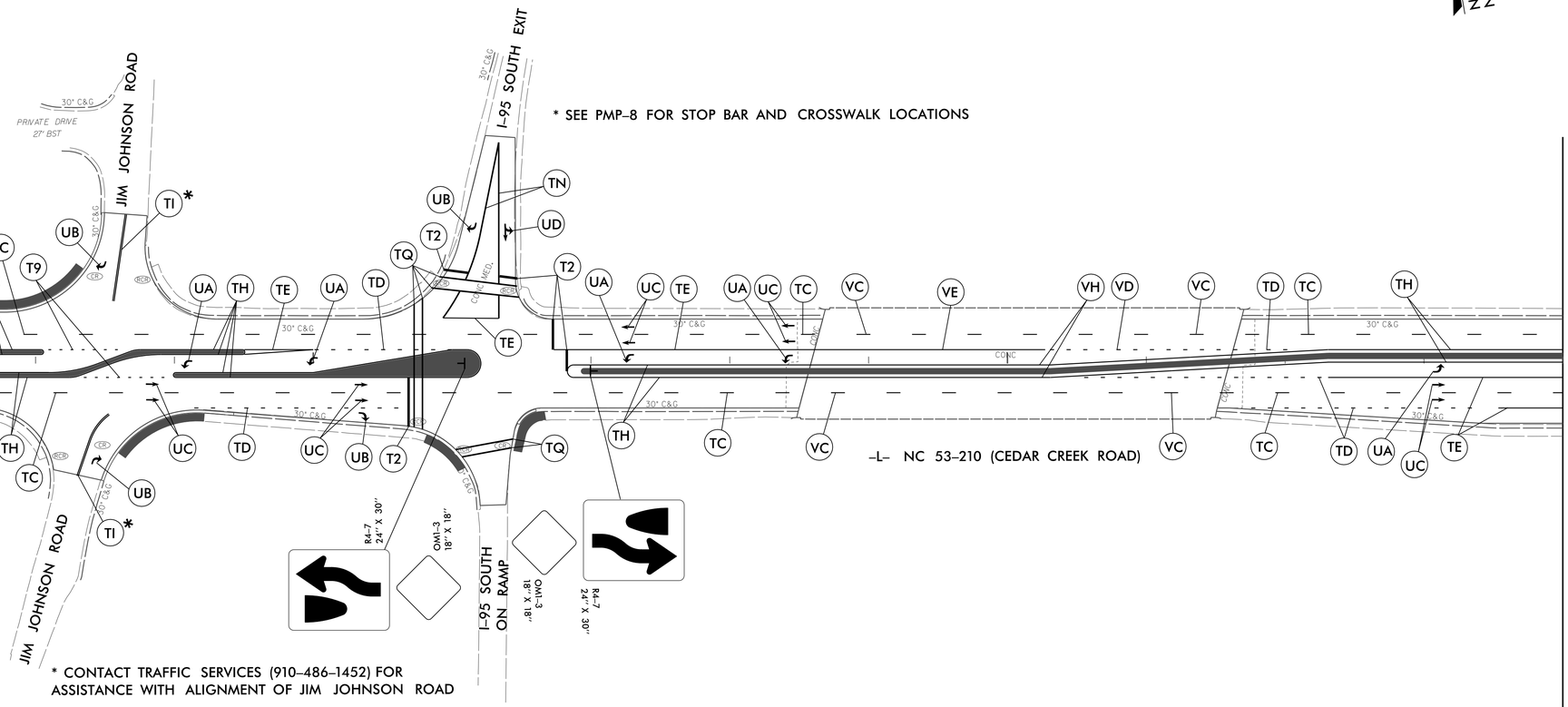
45

NAD 83/ NA 2011

MATCHLINE SHEET PMP–4 –L– STA 37+50.00

MATCHLINE SHEET PMP–6 –L– STA 49+00.00

* SEE PMP–8 FOR STOP BAR AND CROSSWALK LOCATIONS



* CONTACT TRAFFIC SERVICES (910–486–1452) FOR ASSISTANCE WITH ALIGNMENT OF JIM JOHNSON ROAD

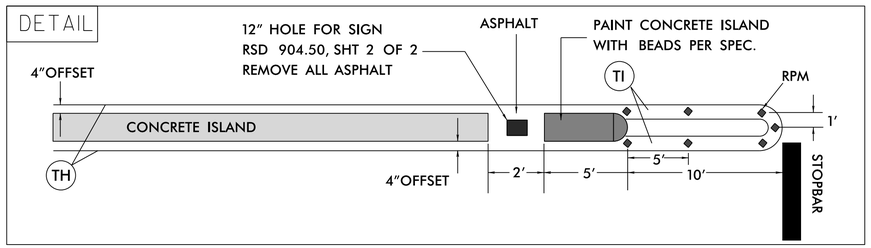
PAVEMENT MARKING SCHEDULE

TI	YELLOW DOUBLE CENTER (4",120 MILS)
T2	WHITE (24",120 MILS)
T9	2 FT.– 6 FT./SP YELLOW MINISKIP (4",120 MILS)
TC	10' FT.WHITE SKIP (4",120 MILS)
TD	3 FT.– 9 FT./SP WHITE MINISKIP (4",120 MILS)
TE	WHITE SOLID LANE LINE (4",120 MILS)
TH	YELLOW SINGLE CENTER (4",120 MILS)
TI	YELLOW DOUBLE CENTER (4",120 MILS)
TN	WHITE GORELINE (8",90 MILS)
TQ	WHITE CROSSWALK LINE (8",120 MILS)
UA	LEFT TURN ARROW (90 MILS)
UB	RIGHT TURN ARROW (90 MILS)
UC	STRAIGHT ARROW (90 MILS)
UD	COMBO.LEFT/STRAIGHT ARROW (90 MILS)

POLYUREA ON BRIDGE

VC	10' FT.WHITE SKIP (4")
VD	3 FT.– 9 FT./SP WHITE MINISKIP (4")
VE	WHITE SOLID LANE LINE (4")
VH	YELLOW SINGLE CENTER (4")

DETAIL



PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-6

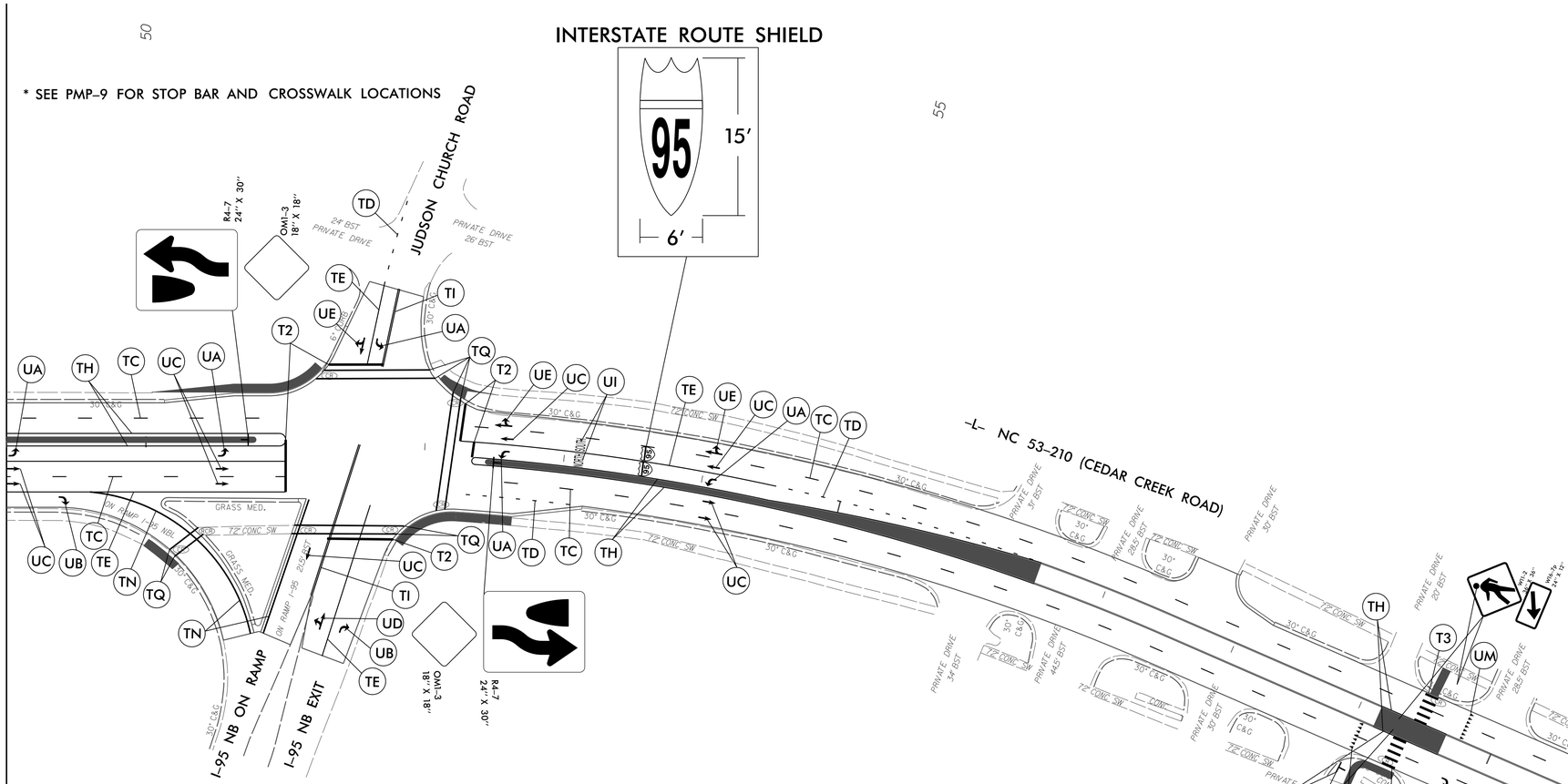
8/17/99

REVISIONS

MATCHLINE SHEET PMP-5 -L- STA 49+00.00

* SEE PMP-9 FOR STOP BAR AND CROSSWALK LOCATIONS

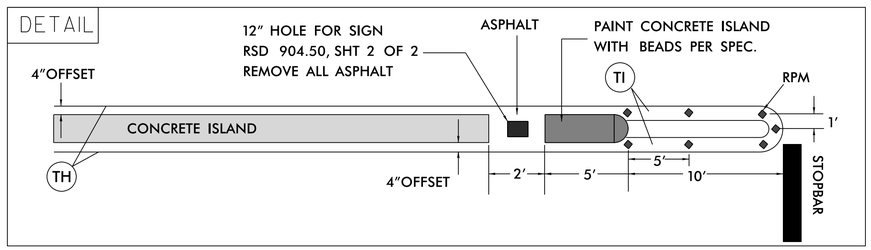
INTERSTATE ROUTE SHIELD



PAVEMENT MARKING SCHEDULE

TI	YELLOW DOUBLE CENTER (4",120 MILS)
T2	WHITE (24",120 MILS)
T9	2 FT.- 6 FT./SP YELLOW MINISKIP (4",120 MILS)
TC	10' FT.WHITE SKIP (4",120 MILS)
TD	3 FT.- 9 FT./SP WHITE MINISKIP (4",120 MILS)
TE	WHITE SOLID LANE LINE (4",120 MILS)
TH	YELLOW SINGLE CENTER (4",120 MILS)
TI	YELLOW DOUBLE CENTER (4",120 MILS)
TQ	WHITE CROSSWALK LINE (8",120 MILS)
UA	LEFT TURN ARROW (90 MILS)
UB	RIGHT TURN ARROW (90 MILS)
UC	STRAIGHT ARROW (90 MILS)
UD	COMBO.LEFT/STRAIGHT ARROW (90 MILS)
UE	COMBO.RIGHT/STRAIGHT ARROW (90 MILS)
UI	ALPHANUMERIC CHARACTER (90 MILS)
UM	12" YIELD LINE TRIANGLE (90 MILS)

DETAIL



MATCHLINE SHEET PMP-7 -L- STA 63+00.00

NAD 83/ NA 2011

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-7

8/17/99

REVISIONS

MATCHLINE SHEET PMP-6 -L- STA 63+00.00

65

70

NAD 83/ NA 2011

PAVEMENT MARKING SCHEDULE

TI	YELLOW DOUBLE CENTER (4",120 MILS)
T9	2 FT.- 6 FT./SP YELLOW MINISKIP (4",120 MILS)
TC	10' FT.WHITE SKIP (4",120 MILS)
TD	3 FT.- 9 FT./SP WHITE MINISKIP (4",120 MILS)
TE	WHITE SOLID LANE LINE (4",120 MILS)
TH	YELLOW SINGLE CENTER (4",120 MILS)
TI	YELLOW DOUBLE CENTER (4",120 MILS)
TP	YELLOW DIAGONAL (8",90 MILS)
UB	RIGHT TURN ARROW (90 MILS)
UP	MERGE ARROW (90 MILS)
UT	U-TURN (90 MILS)

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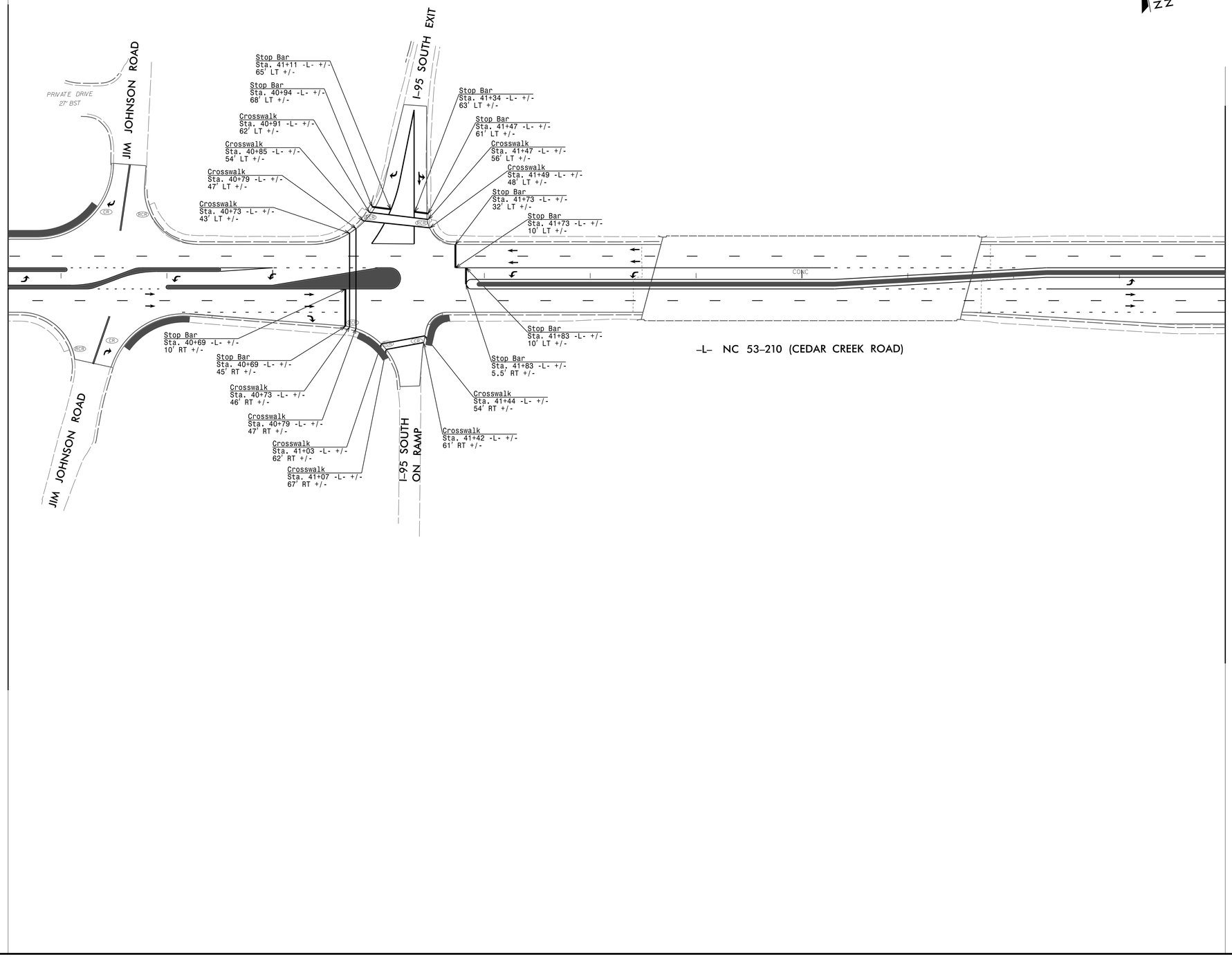
Road Median Islands_Cumberland\PMP\W-5601AG NC 53 (Cedar Creek

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-8



REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	PMP-9

REVISIONS

8/17/99

NAD 83/
NA 2011

50

55

60

JUDSON CHURCH ROAD

-L- NC 53-210 (CEDAR CREEK ROAD)

I-95 NB ON RAMP

I-95 NB EXIT

Stop Bar
Sta. 51+68 -L- +/-
60' LT +/-

Stop Bar
Sta. 51+31 -L- +/-
59' LT +/-

Crosswalk
Sta. 51+28 -L- +/-
55' LT +/-

Crosswalk
Sta. 51+22 -L- +/-
49' LT +/-

Stop Bar
Sta. 51+00 -L- +/-
5.5' LT +/-

Stop Bar
Sta. 51+00 -L- +/-
32' RT +/-

Crosswalk
Sta. 52+00 -L- +/-
58' LT +/-

Crosswalk
Sta. 52+05 -L- +/-
52' LT +/-

Crosswalk
Sta. 52+18 -L- +/-
43' LT +/-

Crosswalk
Sta. 52+23 -L- +/-
39' LT +/-

Stop Bar
Sta. 52+27 -L- +/-
35' LT +/-

Stop Bar
Sta. 52+25 -L- +/-
8' LT +/-

Stop Bar
Sta. 52+35 -L- +/-
8' LT +/-

Stop Bar
Sta. 52+34 -L- +/-
3' RT +/-

Crosswalk
Sta. 52+17 -L- +/-
42' RT +/-

Crosswalk
Sta. 52+11 -L- +/-
43' RT +/-

Crosswalk
Sta. 51+87 -L- +/-
55' RT +/-

Crosswalk
Sta. 51+83 -L- +/-
61' RT +/-

Stop Bar
Sta. 51+80 -L- +/-
65' RT +/-

Stop Bar
Sta. 51+30 -L- +/-
65' RT +/-

Crosswalk
Sta. 50+38 -L- +/-
57' RT +/-

Crosswalk
Sta. 50+17 -L- +/-
74' RT +/-

Crosswalk
Sta. 50+20 -L- +/-
78' RT +/-

Crosswalk
Sta. 50+41 -L- +/-
62' RT +/-

Crosswalk
Sta. 51+06 -L- +/-
56' RT +/-

Crosswalk
Sta. 51+05 -L- +/-
62' RT +/-

24' BST
PRIVATE DRIVE

PRIVATE DRIVE
46' BST

6" CURB

30" C&G

GRASS MED.

ON RAMP I-95 NB

ON RAMP I-95 SB
215' BST

TYP. 4 LANES

TZ CONC SW

PRIVATE DRIVE
3' BST

PRIVATE DRIVE
28.5' BST

PRIVATE DRIVE
30' BST

PRIVATE DRIVE
20' BST

PRIVATE DRIVE
34' BST

PRIVATE DRIVE
44.5' BST

PRIVATE DRIVE
31.5' BST

PRIVATE DRIVE
19' BST

PRIVATE DRIVE
14.5' BST

PRIVATE DRIVE
49' BST

CONC

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	EC-1

8/17/99

REVISIONS

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NAD 83/NA 2011

5'RADPT +45 4.25'LT
40
110'
1'RADPT +49 8.25'LT
50'R
45°
15°
5'RADPT +45 4.25'RT
1'RADPT +01 8.25'RT

15

20

BEGIN STATE PROJECT W-5601AG

-L- STA 12+00.00

BM-1
N 458659.6963
E 2051098.2016
ELEV 90.33
-L- STA 16+61.97
64.98' LT

BL-1
N 458672.9080
E 2051026.9780
ELEV 88.07
-L- STA 15+92.62
44.08' LT

BL-2
N 458348.2833
E 2051658.8463
ELEV 89.93
-L- STA 23+03.00
45.16' LT

K&JS PROPERTIES LLC
DB 9108 PG 848
PB 132 PG 36

W A MAXWELL
DB 9108 PG 851
PB 132 PG 36

SIG HOSPITALITY LLC
DB 4513 PG 367
PB 93 PG 24

MARY T. McLAUGHLIN & ANN T CLEVELAND
DB 8673 PG 19
PB 123 PG 119

ASSOCIATED MOTELS INC & ASSOCIATED HOTELS INC

PAVEMENT REMOVAL

BEG 5' ISLAND +40 9.25'LT

200' LEFT TURN TAPER

BEG 16'GB +00 9.25'LT

8 ", AC, PWC
FO, CENTURYLINK
FO, TWC
INNERDUCT, CENTURYLINK
400 PAIR, COPPER, CENTURYLINK
Retain Ex. CB
Retain Ex. 18" RCP
TB JB
Retain Ex. 18" RCP
Piedmont Natural Gas Company Inc, 4 ", PLASTIC
Retain Ex. CB
NC 53 64' BST (CEDAR CREEK ROAD)
EXISTING R/W
30' C&G
18" RCP
72" CONC SW
CONC
CB
2GI
107
101
103
104
105
106
108
+00 -L-
+50 -L-
+00 RPI
+50 RPI
+00 IR
+50 IR
15" RCP IN
15" RCP OUT
18" RCP
INV=81.63'
INV=82.60'
INV=87.85'
INV=82.79'
INV=84.34'
INV=87.20'
INV=83.20'
INV=86.07'
INV=80.17'
INV=86.39'
INV=81.39'
TOP=89.00'
INV=83.38'
TOP=88.12'
INV=84.64'
TOP=88.78'
INV=85.73'
TOP=88.27'
INV=85.74'
INV=84.83'
TOP=88.50'
INV=84.71'
TOP=89.07'
INV=85.75'
TOP=89.07'
INV=85.91'
TOP=88.91'
INV=86.75'
TOP=88.89'
INV=80.30'
DI
TOP=85.87'
INV=83.68'
PWC
15" RCP
S 24°09'54" W
494.43'
S 23°27'41" W
592.82'
N 21°35'52" E
580.00'
N 23°31'18" E
595.51'
S 23°31'18" W
595.51'
S 62°43'15" E
S 62°46'23" E
150.00'
S 62°46'23" E
170.00'
S 27°53'37" W
372.00'
S 31°50'02" W
476.94'
1'6"C&G
1'6 C&G
5' SIDEWALK
6" GAS & DRAINAGE EASEMENT
20' UTILITY EASEMENT
8" VC
4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION BEYOND SIDEWALK
20' CITY OF FAYETTVILLE EASEMENT
30' CITY OF FAYETTVILLE EASEMENT
PRIVATE DRIVE 20' BST
+40 9.25'RT
+00 9.25'RT
+00 16'GB 9.25'RT
+25 EXIST 110'
+40 EXIST 110'
150' TAPER
TIE TO EXISTING SIDEWALK
TIE TO EXIST C&G
SILT FENCE

JOHN A MARTIN JR.
& WIFE GAYLE W TRUSTEES
DB 8375 PG 626

RACHINA LLC
DB 6855 PG 705
PB 111 PG 152

DOMINION CRISTIAN CENTER
DB 9335 PG 464
PB 111 PG 152

JOHN A MARTIN JR.
& WIFE GAYLE W TRUSTEES
DB 8375 PG 626

RACHINA LLC
DB 7173 PG 220
PB 92 PG 53

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W5601AG-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 458942.6043(ft) EASTING: 2050504.0185(ft) ELEVATION: 86.98(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0. 99988222
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5601AG-1" TO -L- STATION 13+00 IS S 54° 14' 28.03" E Distance 299.0595
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

MATCHLINE SHEET EC-2 -L- STA 24+00.00

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	EC-2

8/17/99

REVISIONS

MATCHLINE SHEET EC-1 –L– STA 24+00.00

MATCHLINE SHEET EC-3 –L– STA 37+50.00

NAD 1983 2011

PAVEMENT REMOVAL

SILT FENCE

RETROFIT EXISTING CURB RAMPS WITH TRUNCATED DOMES AS NEEDED AND AS DIRECTED BY THE ENGINEER

–L–
PI Sta 32+69.53
Δ = 17° 26' 26.5" (LT)
D = 2° 45' 00.0"
L = 634.21'
T = 319.57'
R = 2,083.48'

BL–3
N 457998.9015
E 2052140.1271
ELEV 91.39
–L– STA 28+90.88
44.78' RT

BL–4
N 457778.7144
E 2052741.9928
ELEV 97.33
–L– STA 35+21.88
44.29' RT

DB 4376 PG 431
PB 94 PG 159

ASSOCIATED HOSPITALITY SERVICES INC
DB 4711 PG 196
PB 94 PG 159

JUDSON BAPTIST CH CEMETARY
DB 457 PG 248

HARIPREET INC
DB 6957 PG 224

JOHN V & NANCY C BAXLEY
DB 7057 PG 615
PB 58 PG 84

SPPR-HOTELS LLC
DB 7070 PG 330
PB 56 PG 46

FHCC 1965 CEDAR CREEK RD LLC
DB 8642 PG 530
PB 119 PG 38

EOLFINANCING PARTNERSHIP
DB 4613 PG 454
PB 57 PG 126

HOLT REAL ESTATE ENTERPRISES
DB 2937 PG 140

RUBY TUESDAY INC
DB 6632 PG 397

AROMA HOTELS 195 LLC
DB 8096 PG 833

LAFAYETTE HOSPITALITY LLC
DB 8022 PG 524
PB 66 PG 12

V/D NEAL PROPERTIES LLC
DB 6426 PG 49
PB 91 PG 165

MAINTAIN PED SIGNS & RRFB

RELOCATE EXIST PED SIGNS & RRFB TO NEW PED CROSSING STA 28+65

REMOVE EXISTING CURB RAMP AND REPLACE WITH 2'6" C&G AND SIDEWALK

REMOVE AND REPLACE EXISTING CONCRETE ISLANDS

4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION

4" ENCASEMENT PIPE TO BE INSTALLED BY TRENCHLESS INSTALLATION BEYOND SIDEWALK

200' LEFT TURN TAPER

200' RIGHT TURN TAPER

50' TAPER

TIE TO EXISTING

TIE TO EXIST C&G

COLLAR AND

FORCED MAIN

BEG ISLAND +44

END ISLAND +49

BEG ISLAND +40

PC Sta 29+49.96

PT Sta 35+84.16

BEG 16'C&G +80 9.5'LT

END 16'C&G +55 9.25'LT

BEG 16'C&G +80 9.5'RT

END 16'C&G +55 9.25'RT

+60.28 +92.79

+80 105' EXIST

+55 EXIST

EXIST 105'

N 72°46'08" W 150.00'

N 24°25'48" E 580.00'

N 21°15'52" E 200.00'

N 21°15'52" E 959.86'

N 31°23'51" E 184.96'

N 31°38'26" E 164.32'

N 31°23'51" E 481.91'

S 31°22'50" W 475.49'

N 62°44'56" W 149.03'

N 69°22'39" W 266.60'

N 21°15'10" E 250.00'

S 21°12'10" E

20' UTILITY EASEMENT

PRIVATE DRIVE 445' BST

PRIVATE DRIVE 32' BST

PRIVATE DRIVE 31' BST

PRIVATE DRIVE 20' BST

PRIVATE DRIVE 21' BST

PRIVATE DRIVE 36' BST

PRIVATE DRIVE 355' BST

PRIVATE DRIVE 30.5' BST

PRIVATE DRIVE 3425' BST

72' CONC SW

30' C&G

1'6" C&G

48" CHL

15" RCP-IV

30" RCP

Retain Ex. 36" RCP

Retain Ex. CB

2GI

8" VC

4" PLASTIC

400 PAIR, COPPER, CENTURYLINK

1900 PAIR, COPPER, CENTURYLINK

50 PAIR, COPPER, CENTURYLINK

4" Admont Natural Gas Company Inc.

NC 53 64' BST (CEDAR CREEK ROAD)

EXISTING R/W

R/R MON

F.O. CENTURYLINK

INNERDUCT, CENTURYLINK

COAX, TWC

PWC

20" D.I.P. PWC

Dia = 16" RCP

Dia = 18" RCP

Dia = 24" RCP

Dia = 30" RCP

201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218

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PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	EC-3

MATCHLINE SHEET EC-2 -L- STA 37+50.00

MATCHLINE SHEET EC-4 -L- STA 49+00.00

GAS LINE TOO DEEP TO LOCATE

SURFACE MOUNTED MONOLITHIC ISLAND ON BRIDGE DECK. DECK TO BE CLEANED PRIOR TO PLACING ISLAND.

SILT FENCE

TIE TO EXISTING C&G AND SIDEWALK

MEDIAN ISLAND WITH CUT THROUGH SIDE DETAIL

REMOVE EXISTING CURB RAMP AND REPLACE WITH 2'6" C&G AND SIDEWALK

REPLACE STEEL PIPE HANDRAIL ALONG SIDEWALK

EXTEND SIDEWALK

BL-5
N 457669.2920
E 2053378.0390
ELEV 111.67
-L- STA 41+65.95
42.47' RT

CRACKER BARREL OLD COUNTRY STORE INC (#270) DB 4500 PG 140 PB 91PG 76

FHCC LLC DB 9035 PG 707

JUDSON MISSIONARY BAPTIST CH DB 2640 PG 841

MARINE FEDERAL CREDIT UNION DB 9150 PG 835

Piedmont Natural Gas Company Inc, 4 ", PLASTIC

50 PAIR, COPPER, CENTURYLINK

100 PAIR, COPPER, CENTURYLINK

400 PAIR, COPPER, CENTURYLINK

600 PAIR, COPPER, CENTURYLINK

200 PAIR, COPPER, CENTURYLINK

INNERDUCT, CENTURYLINK

FO, CENTURYLINK

FO, TWC

COAX, TWC

20 ", DIP, PWC

30 ", DIP, PWC

200' TAPER

100' TAPER

S 80°09'41.7" E

NC 53 64' BST (CEDAR CREEK ROAD)

NC 53 76' BST (CEDAR CREEK ROAD)

NAD 83/ NA 2011

REVISIONS

8/17/99

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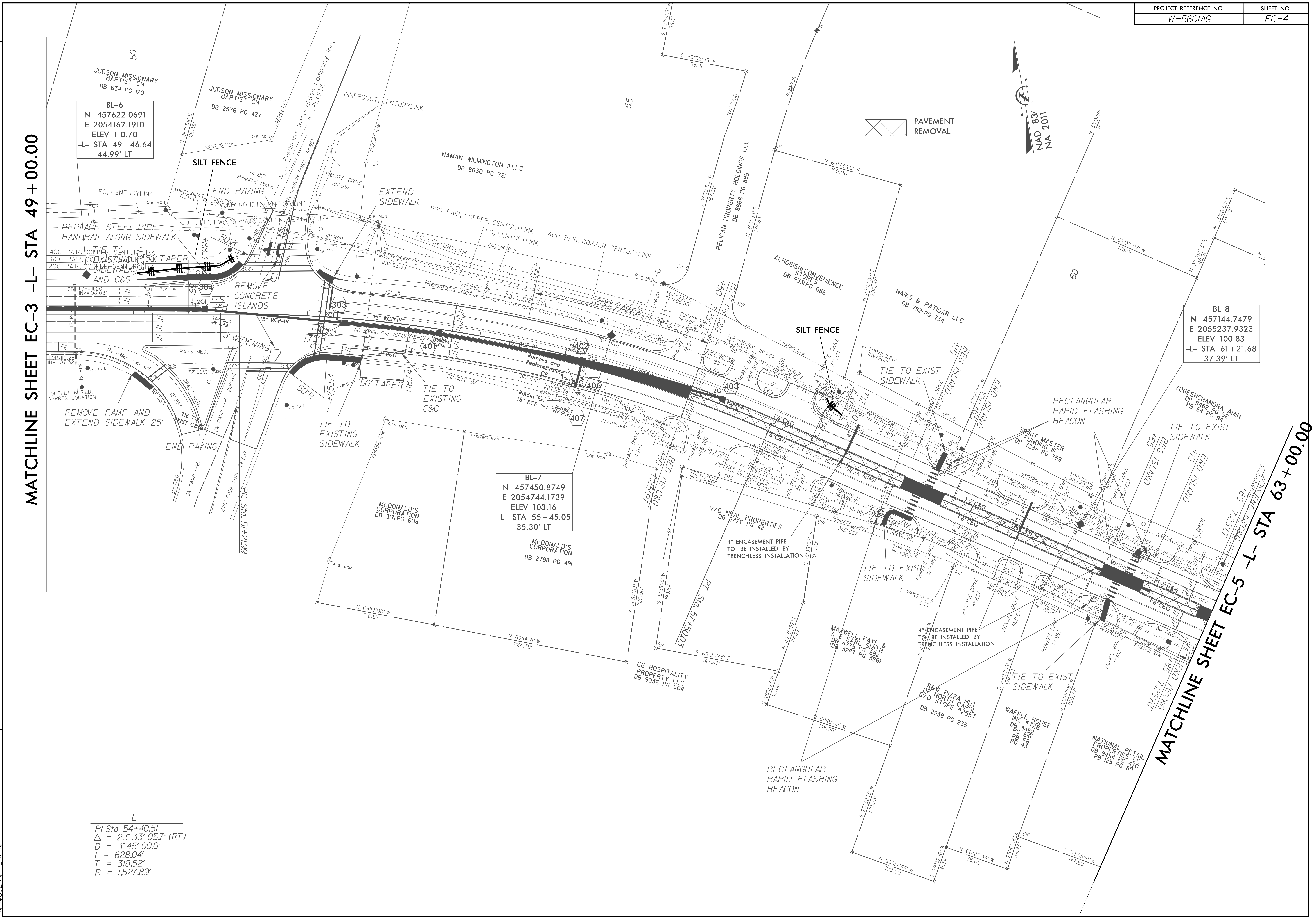
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	EC-4



-L-
PI Sta 54+40.51
Δ = 23° 33' 05.7" (RT)
D = 3° 45' 00.0"
L = 628.04'
T = 318.52'
R = 1,527.89'

REVISIONS

8/17/99

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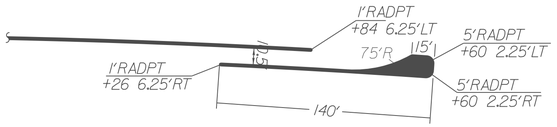
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	EC-5

8/17/99

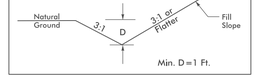
REVISIONS

MATCHLINE SHEET

SHEET 7 -L- STA 63+00.00



DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

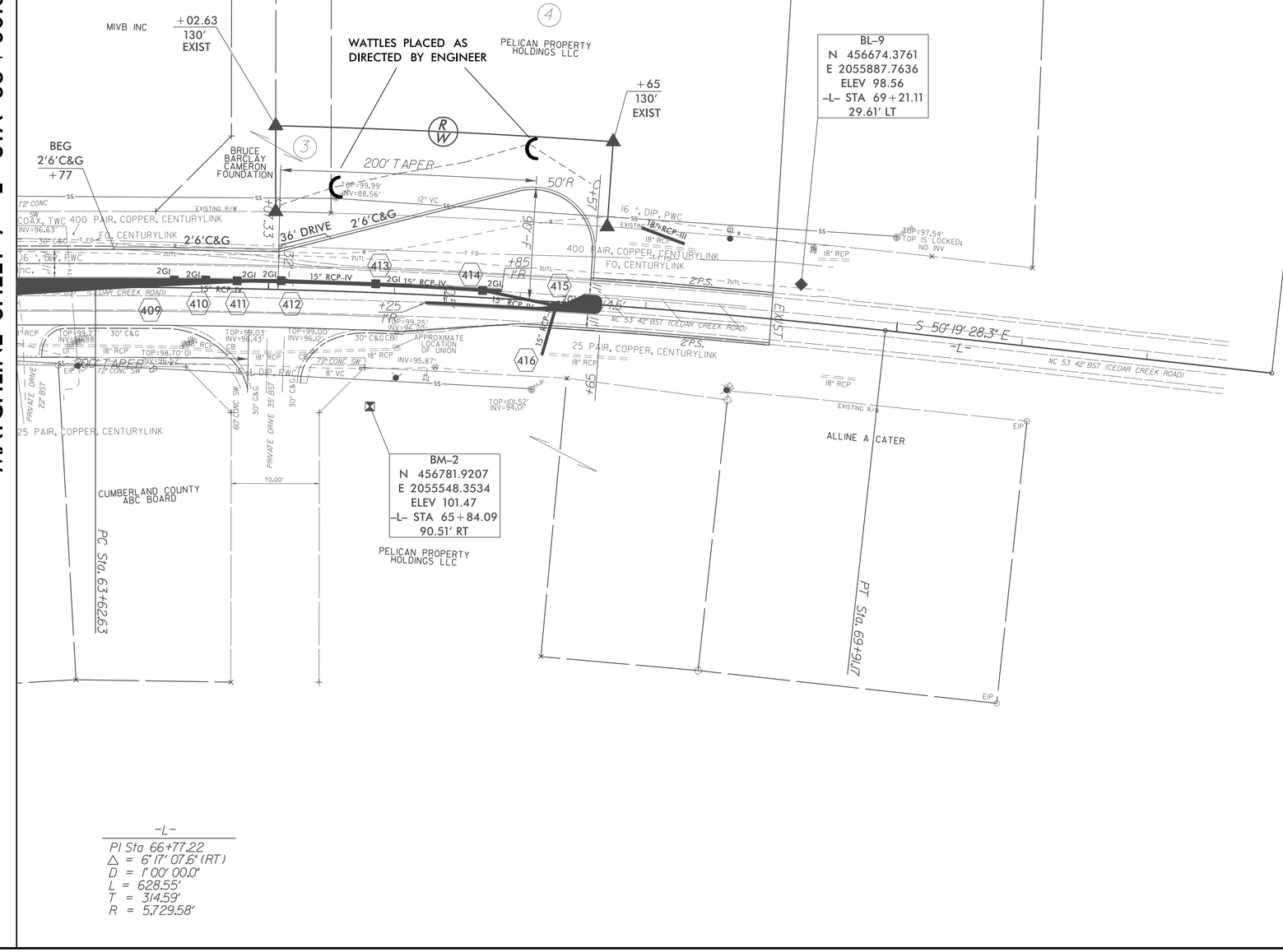


FROM STA. 65+00 LT TO STA. 69+50 LT

PI-STATIONS	ELEVATIONS
65+00	96.69'
67+00	95.25'
69+50	94.95'

NAD 83/ NA 2011

END STATE PROJECT W-5601AG
-L- STA 68+00.00



-L-
PI Sta 66+77.22
△ = 6° 17' 07.6" (RT)
D = 1° 00' 00.0"
L = 628.55'
T = 314.59'
R = 5,729.58'

TIP PROJECT: W-5601AG

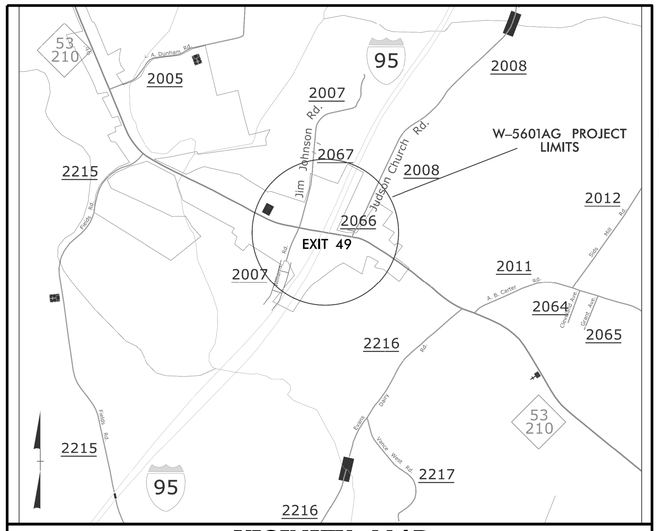
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

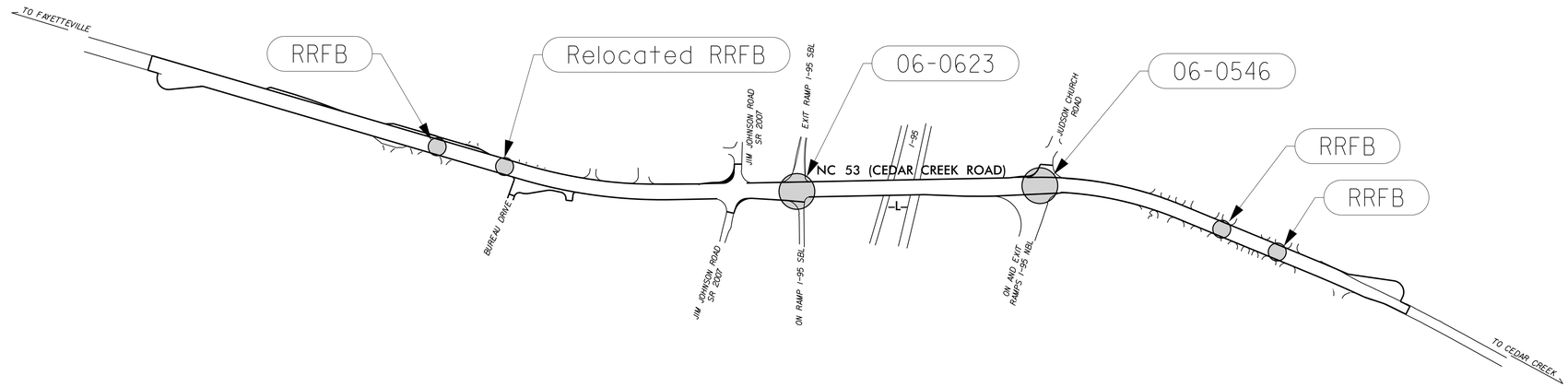
Project No.	Sheet No.
W-5601AG	Sig. 1.0

LOCATION: NC 53 (CEDAR CREEK ROAD) AT I-95

TYPE OF WORK: SIGNALS



VICINITY MAP



Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.

Index of Plans

Sheet #	*Reference #*	*Location/Description*
Sig. 1.0	--------	*Title Sheet*
Sig. N/A	*RRFB*	*RRFB (See Roadway Plansheets for Locations)*
Sig. 2.0	*06-0623*	*NC 53-210 (Cedar Creek Road) at I-95 SB Ramps*
Sig. 3.0	*06-0546*	*NC 53-210 (Cedar Creek Road) at I-95 NB Ramps/SR 2008 (Judson Church Rd)*

INTELLIGENT TRANSPORTATION AND SIGNALS UNIT

Contacts:

Jason P. Galloway, PE – East Region Signals Engineer
Keith M. Mims, PE – Signal Equipment Design Engineer

Prepared in the Office of:
DIVISION OF HIGHWAYS
TRANSPORTATION MOBILITY AND SAFETY DIVISION

750 N. Greenfield Parkway, Garner, NC 27529

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	Sig. 2.0

PHASING DIAGRAM

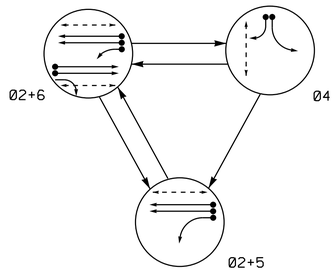
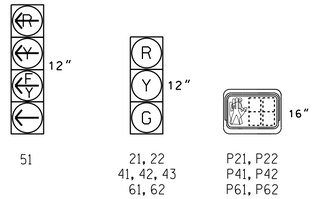


TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 04	PHASE FLASH
21, 22	G	G	R	Y
41, 42, 43	R	R	G	R
51	←F	~~F~~	~~R~~	~~Y~~
61, 62	R	G	R	Y
P21, P22	W	W	DW	DRK
P41, P42	DW	DW	W	DRK
P61, P62	DW	W	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A, 2B	✳	300	✳	-	2	Y	Y	-	-	-	-	-
4A	6X60	+5	2-4-2	-	4	Y	Y	-	-	-	-	-
4B	6X60	+5	2-4-2	-	4	Y	Y	-	-	15	-	-
5A	6X40	+5	2-4-2	Y	5	Y	Y	-	-	15	-	-
					2	Y	Y	Y	-	3	-	-
6A/S3	6X6	300	4	Y	6	Y	Y	-	-	-	Y	-
6B/S4	6X6	300	4	Y	6	Y	Y	-	-	-	Y	-

✳ Probe Microloop

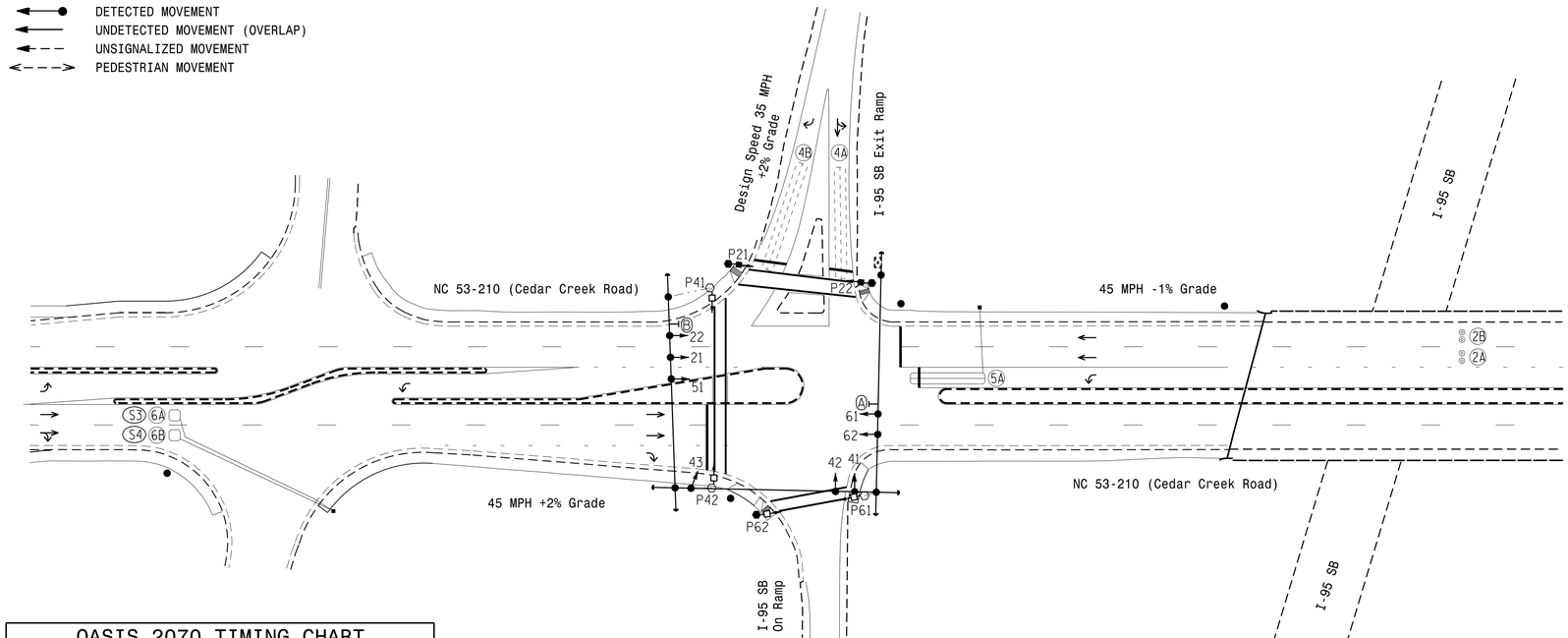
3 Phase
Fully Actuated
NC 53-210 CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data: Controller Asset #0623.

PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT



OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	12	7	7	12
Extension 1 *	6.0	1.0	2.0	6.0
Max Green 1 *	100	25	25	100
Yellow Clearance	4.6	3.7	3.0	4.6
Red Clearance	1.6	2.4	3.2	1.6
Red Revert	-	-	-	-
Walk 1 *	7	7	-	7
Don't Walk 1	14	24	-	8
Seconds Per Actuation *	1.5	-	-	1.5
Max Variable Initial *	34	-	-	34
Time Before Reduction *	20	-	-	20
Time To Reduce *	40	-	-	40
Minimum Gap	3.0	-	-	3.0
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□↓	Pedestrian Signal Head With Push Button & Sign	■↓
○)	Signal Pole with Guy	●)
○⤵	Signal Pole with Sidewalk Guy	●⤵
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊡
□	Junction Box	■
·····	2-in Underground Conduit	·····
N/A	Right of Way	-----
→	Directional Arrow	→
N/A	Microloop	◉
N/A	Wheelchair Ramp	♿
⬡	Pedestrian Signal Pedestal	⬢
Ⓐ	No Left Turn Sign (R3-2)	Ⓐ
Ⓑ	No Right Turn Sign (R3-1)	Ⓑ

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared In the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

NC 53-210 (Cedar Creek Road) at I-95 Southbound Ramps

Division 6 Cumberland County Fayetteville

PLAN DATE: April 2016 REVIEWED BY: JPG

PREPARED BY: Devin Smith REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029904 ENGINEER JASON P. GALLOWAY

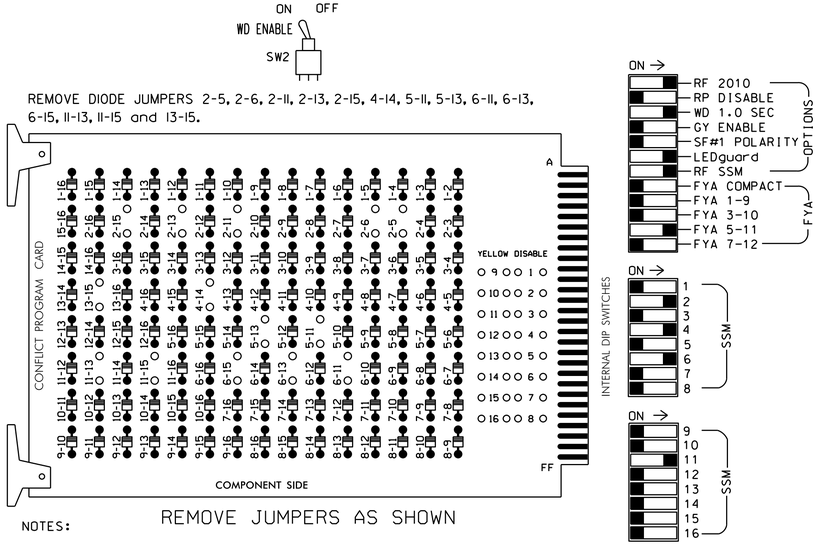
DocuSigned by: Jason P. Galloway 6/22/2016
F700EA704818411... DATE

SIG. INVENTORY NO. 06-0623

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	Sig. 2.1

EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



NOTES: REMOVE JUMPERS AS SHOWN

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

■ = DENOTES POSITION OF SWITCH

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 1,3,5, 7,8,9,10,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Start Up In Green.
6. Program phases 2, 4 and 6 for 'STARTUP PED CALL'.
7. Program phases 2 and 6 for Yellow Flash.
8. The cabinet and controller are part of the NC 53-210 Closed Loop System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINET.....332 /W/ AUX
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S2,S2P,S4,S4P,S5,S6,S6P,S12
PHASES USED.....2,2 PED,4,4 PED,5,6,6 PED
OVERLAP "A".....NOT USED
OVERLAP "B".....NOT USED
OVERLAP "C".....5+6
OVERLAP "D".....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	21,22	P21, P22	NU	41,42 43	P41, P42	51★	61,62	P61, P62	NU	NU	NU	NU	NU	NU	51★	NU	NU
RED		128			101			134										
YELLOW		129			102		✳	135										
GREEN		130			103			136										
RED ARROW																A114		
YELLOW ARROW																A115		
FLASHING YELLOW ARROW																A116		
GREEN ARROW							133											
✋			113			104			119									
🚶			115			106			121									

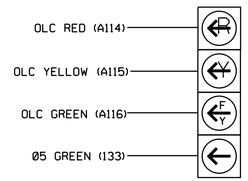
NU = Not Used

✳ Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail below.

4 SECTION FYA PPLT SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

1. The sequence display for this signal requires special logic programming. See sheet 2 of 2 for programming instructions.

COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	Ø2 2A,2B	SLOT EMPTY	WIRED ⊗ INPUT	SLOT EMPTY	Ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø2 PED DC ISOLATOR	Ø6 PED DC ISOLATOR	FS DC ISOLATOR
	L		NOT USED				Ø4 4B						Ø4 PED DC ISOLATOR	NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6/SYS 6A/S3	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø6/SYS 6B/S4												

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A,2B	TB2-5,6	I2U	39	1	2	2	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			15
5A[1]	TB3-1,2	J1U	55	17	5	5	Y	Y			15
	-	I4U	47	9	22	2	Y	Y	Y		3
6A/S3	TB3-5,6	J2U	40	2	6	6/SYS	Y	Y			
6B/S4	TB3-7,8	J2L	44	6	16	6/SYS	Y	Y			
PED PUSH BUTTONS							NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.				
P21,P22	TB8-4,6	I12U	67	29	PED 2	2 PED					
P41,P42	TB8-5,6	I12L	69	31	PED 4	4 PED					
P61,P62	TB8-7,9	I13U	68	30	PED 6	6 PED					

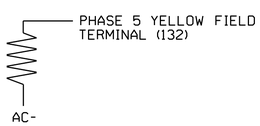
[1] Add jumper from J1-W to I4-W, on rear of input file.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown below)

ACCEPTABLE VALUES	
VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0623
DESIGNED: April 2016
SEALED: 6/22/2016
REVISED:

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 53-210 (Cedar Creek Road) at I-95 Southbound Ramps

Division 06 | Cumberland County | Fayetteville

PLAN DATE: June 2016 | REVIEWED BY: BAS

PREPARED BY: C. Strickland | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
North Carolina Department of Transportation
Signals Management Section
750 N. Greenfield Pwky, Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030530 ENGINEER ZACHARY M. LITTLE

DocuSigned by: Zachary M. Little 6/24/2016
0C21EFD04F5341F... DATE

SIG. INVENTORY NO. 06-0623

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cestrickland

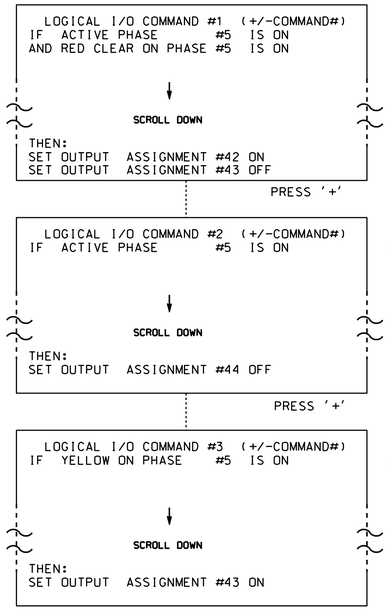
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	Sig. 2.2

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL
TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2 AND 3.

2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).



NOTE: LOGIC FOR PHASE 5 RED CLEAR WHEN TRANSITIONING FROM PHASE 5 TO PHASE 6 (HEAD 51).

NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 5 (HEAD 51).

NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 5 (HEAD 51).

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

OUTPUT REFERENCE SCHEDULE

OUTPUT 42 = Overlap C Red
OUTPUT 43 = Overlap C Yellow
OUTPUT 44 = Overlap C Green

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

PRESS '+' TWICE

```
 PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
 PHASE:          |1234567891011121314151 6
VEH OVL PARENTS:|    XX
VEH OVL NOT VEH:|
VEH OVL NOT PED:|
VEH OVL GRN EXT:|
STARTUP COLOR: _ RED  _ YELLOW  _ GREEN
FLASH COLORS:  _ RED  _ YELLOW  X GREEN
SELECT VEHICLE OVERLAP OPTIONS:   (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC).........0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
```

NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0623
DESIGNED: April 2016
SEALED: 6/22/2016
REVISED:

Electrical Detail - Sheet 2 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 53-210 (Cedar Creek Road)
at
I-95 Southbound Ramps

Division 06 | Cumberland County | Fayetteville

PLAN DATE:	June 2016	REVIEWED BY:	BAS
PREPARED BY:	C. Strickland	REVIEWED BY:	

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Signals Management Section
750 N. Greenfield Pwky, Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030530 ENGINEER ZACHARY M. LITTLE

DocuSigned by: Zachary M. Little 6/24/2016
DC216FD84F5341F...
DATE

SIG. INVENTORY NO. 06-0623

23-JUN-2016 11:10
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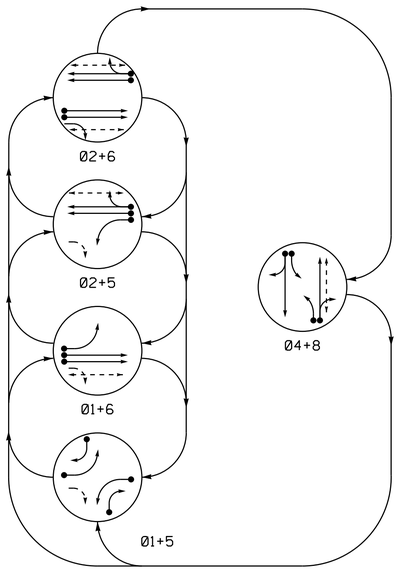
cestrickland

PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	Sig.3.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

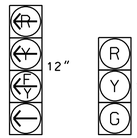
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11	←	~~←~~	~~F Y~~	F Y	~~R~~	~~Y~~
21, 22	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
51	~~←~~	F Y	~~←~~	F Y	~~R~~	~~Y~~
61, 62	R	G	R	G	R	Y
81,82	R	R	R	R	G	R
P21, P22	DW	DW	W	W	DW	DRK
P41, P42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK

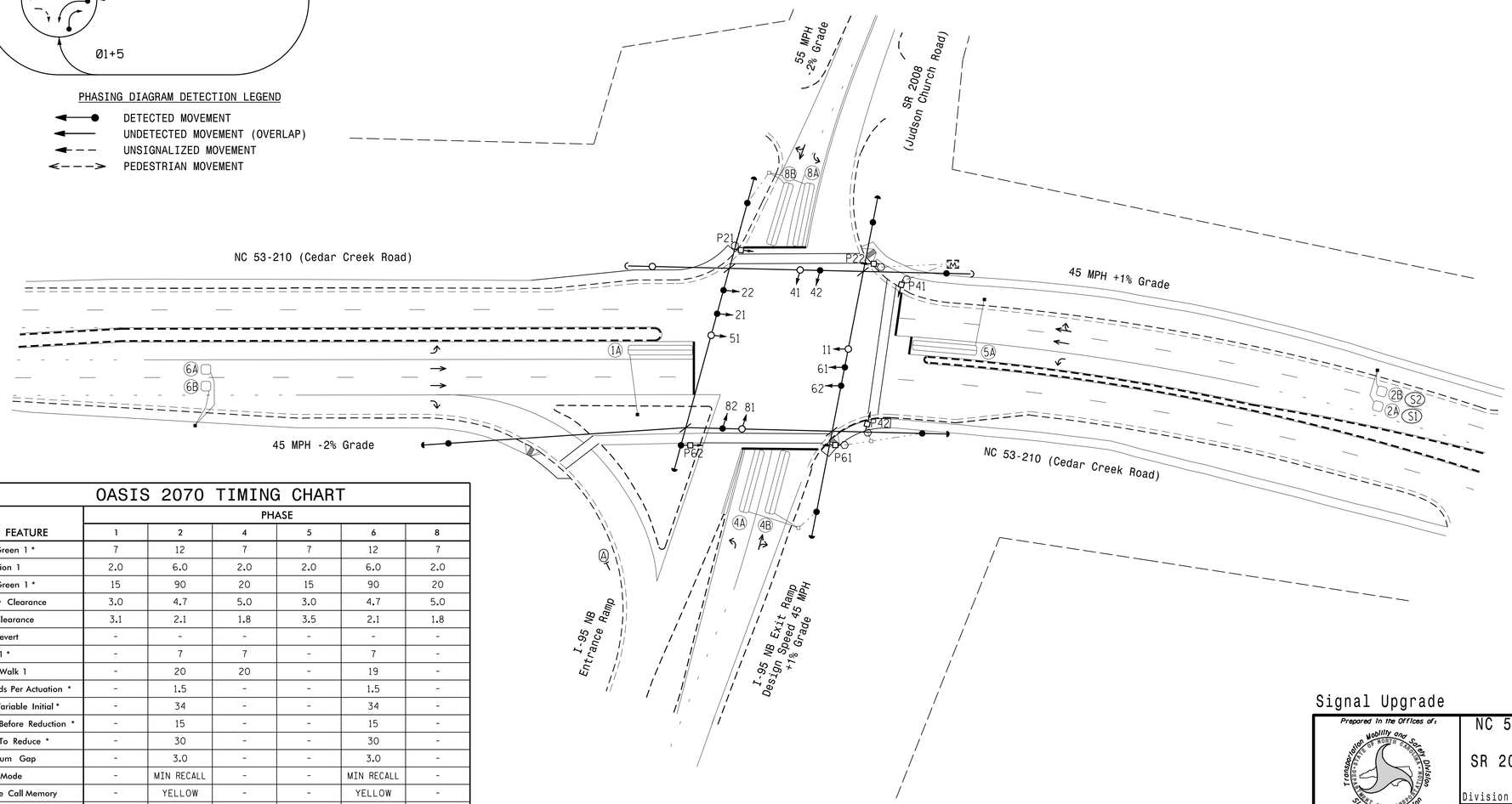
SIGNAL FACE I.D.

All Heads L.E.D.



21, 22
41, 42
61, 62
81, 82

P21, P22
P41, P42
P61, P62



OASIS 2070 TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green 1 *	7	12	7	7	12	7
Extension 1	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	15	90	20	15	90	20
Yellow Clearance	3.0	4.7	5.0	3.0	4.7	5.0
Red Clearance	3.1	2.1	1.8	3.5	2.1	1.8
Red Revert	-	-	-	-	-	-
Walk 1 *	-	7	7	-	7	-
Don't Walk 1	-	20	20	-	19	-
Seconds Per Actuation *	-	1.5	-	-	1.5	-
Max Variable Initial *	-	34	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	+5	2-4-2	Y	1	Y	Y	-	-	15	-	-
					6	Y	Y	Y	-	3	-	-
2A/S1	6X6	300	4	Y	2	Y	Y	-	-	-	Y	-
2B/S2	6X6	300	4	Y	2	Y	Y	-	-	-	Y	-
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	-
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	-
5A	6X40	+5	2-4-2	Y	5	Y	Y	-	-	15	-	-
					2	Y	Y	Y	-	3	-	-
6A	6X6	300	4	Y	6	Y	Y	-	-	-	-	-
6B	6X6	300	4	Y	6	Y	Y	-	-	-	-	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	-
8B	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	-

6 Phase
Fully Actuated
NC 53-210 CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
7. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Closed loop system data: Master Asset #10620. Controller Asset #0546.

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
M	Master Controller & Cabinet	M
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	Wheelchair Ramp	
	Pedestrian Signal Pedestal	
A	"YIELD" Sign (R1-2)	A

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
Traffic Engineering Branch
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 53-210 (Cedar Creek Road)
at
SR 2008 (Judson Church Road)/
I-95 Northbound Ramp

Division 6 Cumberland County Fayetteville

PLAN DATE: April 2016 REVIEWED BY: JPG
PREPARED BY: Devin Smith REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029904 ENGINEER JASON P. GALLOWAY

DocuSigned by: Jason P. Galloway F700EA704818411D... 6/24/2016
DATE

SIG. INVENTORY NO. 06-0546

11-AUG-2016 09:16
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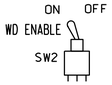
jgalloway

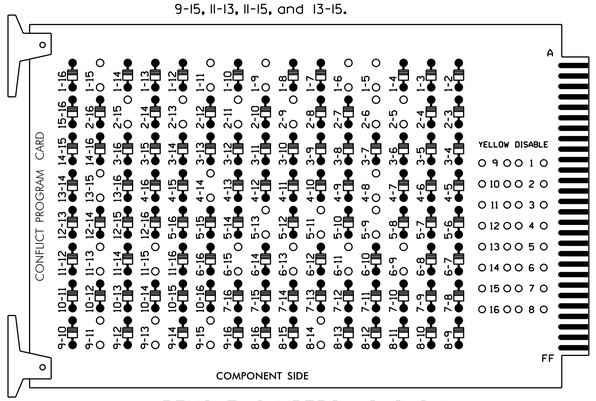
PROJECT REFERENCE NO.	SHEET NO.
W-5601AG	Sig. 3.1

EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

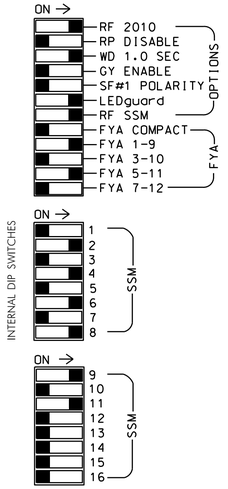
(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 1-15, 2-5, 2-6, 2-9, 2-11, 2-13, 2-15, 4-8, 4-14, 5-9, 5-11, 5-13, 6-9, 6-11, 6-13, 6-15, 8-14, 9-11, 9-13, 9-15, 11-13, 11-15, and 13-15.



REMOVE JUMPERS AS SHOWN



■ = DENOTES POSITION OF SWITCH

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. To prevent red failures on unused monitor channels, see Red Monitor Board Programming Detail on sheet 2.
3. Program phases 4 and 8 for Dual Entry.
4. Enable Simultaneous Gap-Out for all phases.
5. Program phases 2 and 6 for Variable Initial and Gap Reduction.
6. Program phases 2 and 6 for Start Up In Green.
7. Program phases 2, 4 and 6 for 'STARTUP PED CALL'.
8. Program phases 2 and 6 for Yellow Flash, and overlap 1 as WAG Overlaps.
9. The cabinet and controller are part of the NC 53-210 Closed Loop System.

EQUIPMENT INFORMATION

CONTROLLER.....EAGLE 2070
CABINET.....McCAIN/CONTROL TECHNOLOGIES
(DWG.NO.9500-332-NCDOT)
SOFTWARE.....ECONOLITE OASIS
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS..18 (12-STD, 6-AUX)
LOAD SWITCHES USED.....S1,S2,S2P,S4,S4P,S5,S6,S6P,S8,S9,S12
PHASES USED.....1,2,2PED,4,4PED,5,6,6PED,8
OVERLAP A.....1+2
OVERLAP B.....NOT USED
OVERLAP C.....5+6
OVERLAP D.....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11 ★	21,22	P21, P22	NU	41,42	P41, P42	51 ★	61,62	P61, P62	NU	81,82	NU	11 ★	NU	NU	51 ★	NU	NU
RED		128			101			134			107							
YELLOW	✳	129			102		✳	135			108							
GREEN		130			103			136			109							
RED ARROW													A121			A114		
YELLOW ARROW													A122			A115		
FLASHING YELLOW ARROW													A123			A116		
GREEN ARROW	127						133											
✋			113			104			119									
🚶			115			106			121									

NU = Not Used

✳ Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail below.

NOTE: Rewire OLD to flash on Flasher #1, Circuit #2. This will restore the cabinet to its original configuration.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø 1 1A	Ø2/SYS 2A/S1	SLOT EMPTY	WAGES INPUT ⊗	SLOT EMPTY	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø2 PED DC ISOLATOR	Ø6 PED DC ISOLATOR	FS DC ISOLATOR
	L	NOT USED	Ø2/SYS 2B/S2				Ø 4 4B						Ø4 PED DC ISOLATOR	NOT USED	ST DC ISOLATOR
FILE "J"	U	Ø 5 5A	Ø 6 6A	SLOT EMPTY	WAGES INPUT ⊗	SLOT EMPTY	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø 6 6B				Ø 8 8B								

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A[1]	TB2-1,2	I1U	56	18	1	1	Y	Y			15
	-	J4U	48	10	26	6	Y	Y	Y		3
2A/S1	TB2-5,6	I2U	39	1	2	2/SYS	Y	Y			
2B/S2	TB2-7,8	I2L	43	5	12	2/SYS	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			10
5A[2]	TB3-1,2	J1U	55	17	5	5	Y	Y			15
	-	I4U	47	9	22	2	Y	Y	Y		3
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y	Y			10
PED PUSH BUTTONS											
P21,P22	TB8-4,6	I12U	67	29	PED 2	2 PED					
P41,P42	TB8-5,6	I12L	69	31	PED 4	4 PED					
P61,P62	TB8-7,9	I13U	68	30	PED 6	6 PED					

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

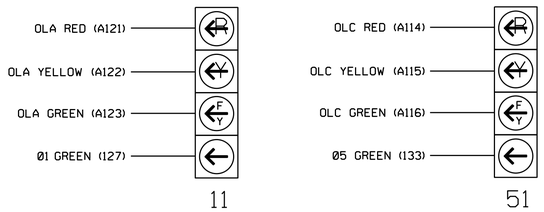
[1] Add jumper from I1-W to J4-W, on rear of input file.

[2] Add jumper from J1-W to I4-W, on rear of input file.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

The sequence display for signal heads 11 and 51 requires special logic programming. See sheet 2 for programming instructions.

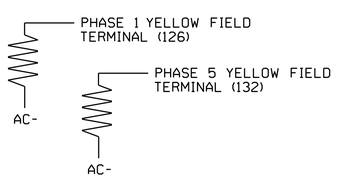
COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

ACCEPTABLE VALUES	
VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 06-0546
DESIGNED: April 2016
SEALED: 6/24/2016
REVISED: N/A

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 53-210 (Cedar Creek Road) at SR 2008 (Judson Church Road)/ I-95 Northbound Ramp

Division 6 | Cumberland County | Fayetteville

PLAN DATE: June 2016 | REVIEWED BY: BAS

PREPARED BY: S. Armstrong | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals Management Section
750 N.Greenfield Pkwy.Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MIMS

DocuSigned by: Keith M. Mims 6/28/2016
2F80786E6CD34A5 DATE

SIG. INVENTORY NO. 06-0546

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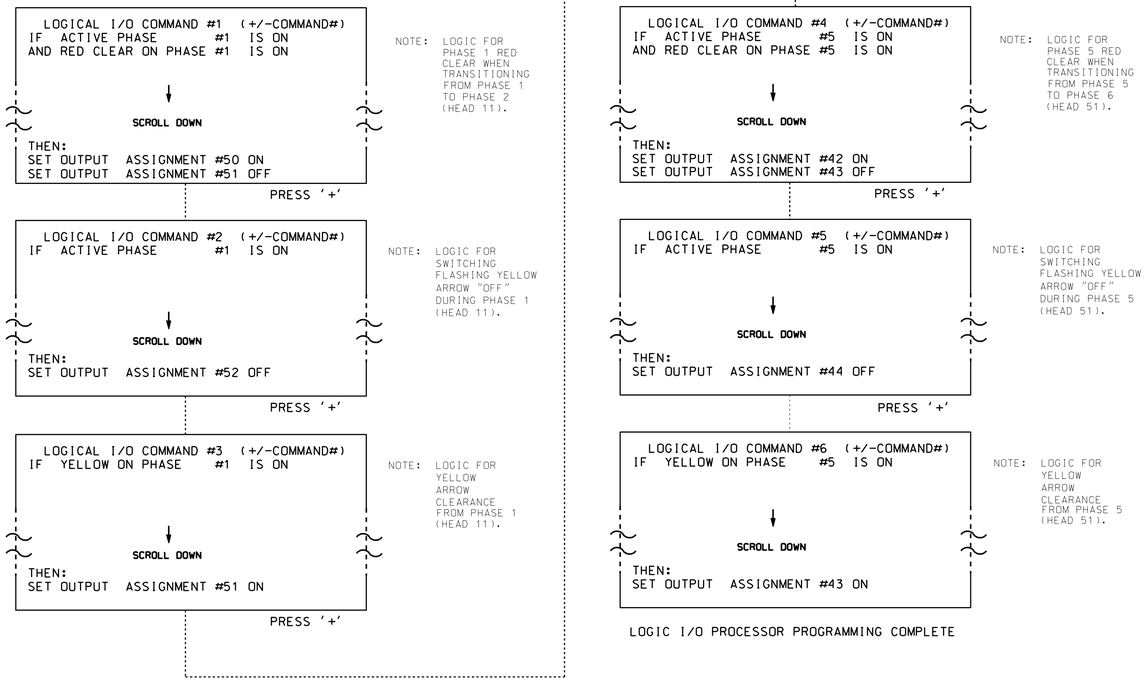
sarmstrong

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL
TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, 3, 4, 5 AND 6.

2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).



OUTPUT REFERENCE SCHEDULE

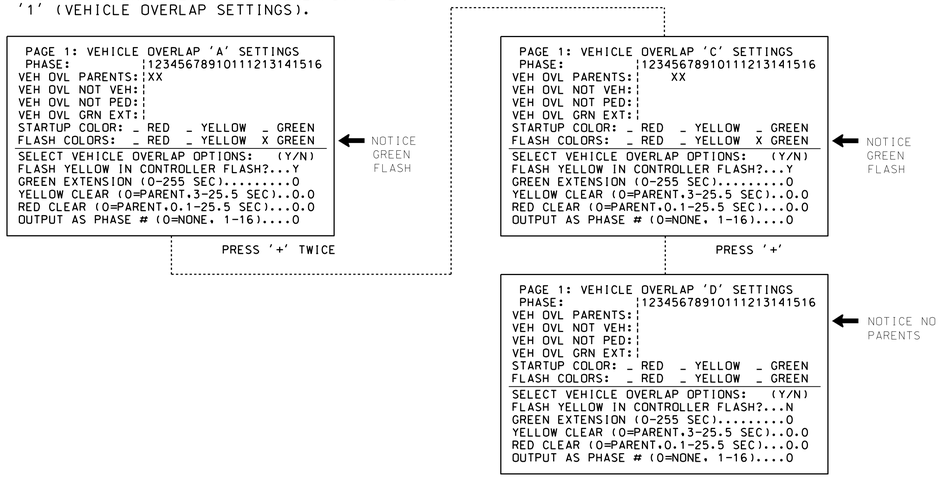
OUTPUT 42 = Overlap C Red
OUTPUT 43 = Overlap C Yellow
OUTPUT 44 = Overlap C Green
OUTPUT 50 = Overlap A Red
OUTPUT 51 = Overlap A Yellow
OUTPUT 52 = Overlap A Green

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0546
DESIGNED: April 2016
SEALED: 6/24/2016
REVISED: N/A

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

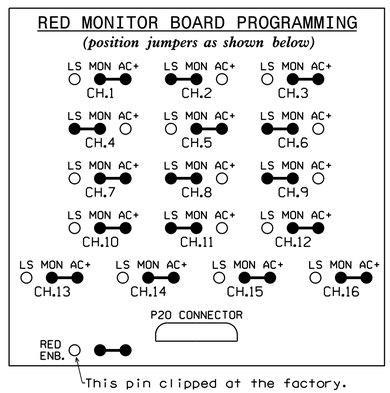
FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).



OVERLAP PROGRAMMING COMPLETE

RED MONITOR BOARD PROGRAMMING

(position jumpers as shown below)



Electrical Detail - Sheet 2 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 53-210 (Cedar Creek Road)
at
SR 2008 (Judson Church Road)/
I-95 Northbound Ramp

Division 6 | Cumberland County | Fayetteville

PLAN DATE: June 2016 | REVIEWED BY: BAS

PREPARED BY: S. Armstrong | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036880 ENGINEER KEITH M. MIMS

DocuSigned by: Keith M. Mims 6/28/2016
2F807866ECD34A6 DATE

SIG. INVENTORY NO. 06-0546

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armstrong

8/23/99

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	W-5601AG	X-1

14+50.00
88.59
02
3:1
S.S.86.78

14+00.00
88.47
02
3:1
S.S.86.06

13+50.00
88.33
02
3:1
S.S.86.62

13+00.00
88.25

12+50.00
88.11

12+00.00
87.93

11+50.00
87.78

11+00.00
87.58

10+50.00
87.35

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	W-5601AG	X-2

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100 90 80

89.53
19+00.00

89.46
18+50.00

89.36
18+00.00

89.27
17+50.00

89.18
17+00.00

89.10
16+50.00

88.94
16+00.00

88.82
15+50.00

02

3:1

$.S.86.88

88.75
15+00.00

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100 90 80

90.85
23+50.00

90.54
23+00.00

90.29
22+50.00

90.11
22+00.00

90.04
21+50.00

89.96
21+00.00

89.82
20+50.00

89.74
20+00.00

89.60
19+50.00

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	W-5601AG	X-4

28+00.00
90.88

27+50.00
91.10

27+00.00
91.32

26+50.00
91.46

26+00.00
91.52

25+50.00
92.07

25+00.00
91.55

24+50.00
91.37

24+00.00
91.13

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	W-5601AG	X-5

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100 90 80

9.12
32+50.00

90.61
32+00.00

01
90.26
31+50.00

01 3:1 S.S.9.11
90.42
31+00.00

01 3:1 S.S.90.55
89.85
30+50.00

01 3:1 S.S.89.92
89.86
30+00.00

01 3:1 S.S.89.74
90.08
29+50.00

90.44
29+00.00

90.65
28+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
W-5601AG	X-6

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	W-5601AG	X-7

40+00.00

108.61

39+50.00

107.36

39+00.00

S.S.104.94

106.03

38+50.00

104.70

38+00.00

3:1

S.S.102.22

103.50

37+50.00

3:1

S.S.100.95

102.30

8/23/99

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	W-5601AG	X-8

114.32
47 + 00.00

114.44
43 + 50.00

113.97
43 + 00.00

113.35
42 + 50.00

112.59
42 + 00.00

111.55
41 + 50.00

110.81
41 + 00.00

109.79
40 + 50.00

8/23/99

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8/23/99

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	W-5601AG	X-9

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120
110
100
90

110.04

50+00.00

110
100
90

111.00

49+50.00

110
100
90

111.95

49+00.00

110
100
90

112.80

48+50.00

120
110
100
90

113.49

48+00.00

120
110
100

114.00

47+50.00

110
100

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	W-5601AG	X-10

102.37

53+50.00

103.23

53+00.00

104.22

52+50.00

105.31

52+00.00

106.35

51+50.00

S.S.107.34

107.69

51+00.00

S.S.106.42

108.86

50+50.00

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8/23/99

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	W-5601AG	X-11

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110 100 90

S.S.100.92

101.41

58 + 00.00

101.28

57 + 50.00

101.07

57 + 00.00

100.86

56 + 50.00

100.70

56 + 00.00

100.70

55 + 50.00

100.78

55 + 00.00

101.21

54 + 50.00

101.69

54 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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	W-5601AG	X-12

101137
62+50.00

101144
62+00.00

101142
61+50.00

101138
61+00.00

101135
60+50.00

101140
60+00.00

101134
59+50.00

101140
59+00.00

101141
58+50.00

8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
W-5601AG	X-13

17-AUG-2016 15:52
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$$$$USERNAME$$$$

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	W-5601AG	X-14

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

100 90

97.99
72+00.00

98.13
71+50.00

98.30
71+00.00

98.52
70+50.00

98.78
70+00.00

99.00
69+50.00

99.21
69+00.00

99.36
68+50.00

99.50
68+00.00

S.S. 99.64
3:1
3:1
EXIST
99.72
67+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

17-AUG-2016 15:53
$$$$USERNAME$$$$
$$$$DGNFILE$$$$
$$$$MODEL$$$$
W-5601AG NC 53 (Cedar Creek Road)Median Islands_Cumberland\Roadway\xsc\W-5601AG_Rdy_xpLL.dgn