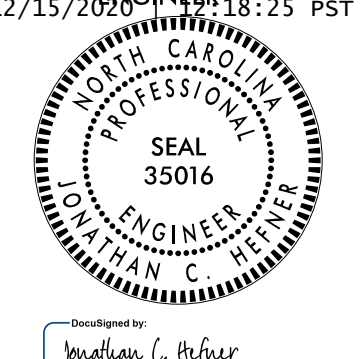
 <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	PROJECT REFERENCE NO. W-5600	SHEET NO. 1A
	ROADWAY DESIGN 12/15/2020 ENGINEER 18:25 PST 	

INDEX OF SHEETS

2018 ROADWAY ENGLISH STANDARD DRAWINGS

GENERAL NOTES

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1 THRU 1C-14	SURVEY CONTROL SHEETS
1D-1	CENTERLINE COORDINATE LIST
1E-1 THRU 1E-4	RIGHT-OF-WAY CONTROL SHEETS
2A-1 THRU 2A-5	TYPICAL SECTIONS AND PAVEMENT SCHEDULE
2C-1	TYPE III REINFORCED APPROACH FILLS
2C-2	COAL COMBUSTION PRODUCT PLACEMENT DETAIL
2C-3	CONCRETE ENDWALL FOR TRIPLE AND QUADRUPLE PIPE CULVERTS (15" THRU 48" PIPE - 90° SKEW)
2C-4	CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS (15" THRU 48" PIPE - 60° OR 120° SKEW)
2C-5	CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS (15" THRU 48" PIPE - 45° OR 135° SKEW)
2C-6	DETAIL OF REINFORCED CONCRETE ENDWALL FOR SINGLE 72" DIAMETER PIPE - 60° SKEW
2C-7	DETAIL OF REINFORCED CONCRETE ENDWALL FOR SINGLE 72" DIAMETER PIPE - 45° SKEW
2C-8	CONCRETE OPEN THROAT CATCH BASIN (3 OR 4 SIDE OPEN THROAT) (MANHOLE OPTIONAL)
2C-9	DETAIL TO CONVERT EXISTING DI, CB, OTCB, OR GI TO JUNCTION BOX (MANHOLE OPTIONAL)
2C-10	SPECIAL JUNCTION BOX WITH SLAB LID
2C-11	GUARDRAIL PLACEMENT - IMPACT ATTENUATOR
2C-12	GUARDRAIL - W-BEAM RAIL SECTION
2C-13	CABLE GUIDERAIL IMPACT ATTENUATOR
2C-14	STRUCTURE ANCHOR UNITS (TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE)
2D-1 THRU 2D-3	DRAINAGE DETAILS
2G-1	ROCK PLATING DETAIL
3B-1 THRU 3B-3	ROADWAY SUMMARIES
3D-1 THRU 3D-11	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 60	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-43	TRAFFIC MANAGEMENT PLANS
PM-1 THRU PM-14	PAVEMENT MARKING PLANS
EC-1 THRU EC-49	EROSION CONTROL PLANS
RF-1 THRU RF-3	REFORESTATION PLANS
SIGN-1 THRU SIGN-34	SIGNING PLANS
SIG 1.0 THRU SIG 4.1	SIGNAL PLANS
ITS-1 THRU ITS-12	ITS PLANS
UC-1 THRU UC-29	UTILITIES CONSTRUCTION PLANS
UD-1 THRU UD-24	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX SHEET
X-1A THRU X-10	CROSS SECTION SUMMARY SHEETS
X-2 THRU X-218	CROSS-SECTIONS
C1-1 THRU C1-10	CULVERT 1 PLANS
C2-1 THRU C2-7	CULVERT 2 PLANS
C3-1 THRU C3-8	CULVERT 3 PLANS
S1-1 THRU S1-27	STRUCTURE 1 PLANS
S2-1 THRU S2-18	STRUCTURE 2 PLANS
S3-1 THRU S3-32	STRUCTURE 3 PLANS
W-1 THRU W-6	RETAINING WALL PLANS

STANDARD NO.	TITLE
2018 ROADWAY ENGLISH STANDARD DRAWINGS	
EFF. 01-16-2018 REV.	
The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:	
200.03	Method of Clearing - Method III
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.02	Guide for Grading Subgrade - Secondary and Local
225.03	Deceleration and Acceleration Lanes
225.04	Method of Obtaining Super-elevation - Two Lane Pavement
225.05	Method of Obtaining Super-elevation - Divided Highways
225.06	Method of Grading Sight Distance at Intersections
240.01	Guide for Berm Ditch Construction
275.01	Rock Plating
DIVISION 2 - EARTHWORK	
300.01	Method of Pipe Installation
DIVISION 3 - PIPE CULVERTS	
422.01	Bridge Approach Fills - Type I Standard Approach Fill
422.03	Reinforced Bridge Approach Fills - Type A Alternate Approach Fill for Integral Abutment
DIVISION 4 - MAJOR STRUCTURES	
560.01	Method of Shoulder Construction - High Side of Super-elevated Curve - Method I
560.02	Method of Shoulder Construction - High Side of Super-elevated Curve - Method II
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
610.02	Guide for Paving Shoulders Under Bridges - Method II
654.01	Pavement Repairs
665.01	Asphalt Shoulders - Milled Rumble Strips
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
815.02	Subsurface Drain
815.03	Pipe Underdrain and Blind Drain
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.04	Conc. Endwall for Single & Double Pipe Culverts - 17"x13" thru 71"x47" Arch 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.21	Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew
838.39	Reinforced Concrete Endwall - for Single 72" Pipe 90 Skew
838.45	Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40
838.51	Reinforced Brick Endwall - for Single 54" Pipe 90 Skew
838.69	Reinforced Brick Endwall - for Single 72" Pipe 90 Skew
838.75	Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.01	Concrete Sidewalk
848.04	Street Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
850.11	Guide for Berm Drainage Outlet - 24" and 30" Pipe
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
854.02	Double Faced Concrete Barrier - Types 'T', 'T1' and 'T2'
857.01	Precast Reinforced Concrete Barrier - 41" Single Faced
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
865.01	Cable Guiderail
866.02	Woven Wire Fence - with Wood Post
866.03	Woven Wire Fence - with Steel Post
866.04	Barbed Wire Fence with Wood Posts (2 - 7 Strands)
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 & STD. NO. 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 & STD. NO. 560.02

SIDE ROADS:
THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SUBSURFACE DRAINS:
SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

UNDERDRAINS:
UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

END BENTS:
THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:
Duke Energy - Power Distribution and Transmission
Charter / Spectrum - Communications
Centurylink - Communications
AT&T - Communications
Colonial Pipeline - Gas
PNG - Gas
Johnston County - Water and Sewer
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:
ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS
CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.05 and/or 848.06.