EFF. 01-16-2018

REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

Check All

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:

TIP: B-4571

| Include? | STD.NO. TITLE DIVISION 2 - EARTHWORK | | |
|----------|---------------------------------------|---|--|
| | 200.02 | Method of Clearing - Method II | |
| V | 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 Superelevation - Two Lane Pavement | |
| | 225.05 | Method of Obtaining Superelevation - Divided Highways | |
| | 225.06 | Method of Grading Sight Distance at Intersections | |
| | 225.07 | Grading for False Cut at Grade Separations | |
| | 225.08 | Earth Berm Median Pier Protection | |
| | 225.09 | Guide for Shoulder and Ditch Transition at Grade Separations | |
| | 235.01 | Embankment Monitoring | |
| | 240.01 | Guide for Berm Ditch Construction | |
| | 275.01 | Rock Plating | |
| | DIVISIO | N 3 - PIPE CULVERTS | |
| ✓ | 300.01 | Method of Pipe Installation | |
| | 310.02 | Parallel Pipe End Section - Precast Concrete Section for 15" to 24" Pipe | |
| | 310.03 | Cross Pipe End Section - Precast Concrete Section for 18" to 30" Pipe | |
| | 310.04 | Parallel Pipe End Section - Prefabricated Steel Section for 15" to 24" Pipe | |
| | 310.05 | Cross Pipe End Section - Prefabricated Steel Section for 18" to 30" Pipe | |
| | 310.10 | Driveway Pipe Construction | |
| | DIVISIO | N 4 - MAJOR STRUCTURES | |
| | 422.01 | Bridge Approach Fills - Type I Standard Approach Fill | |
| ✓ | 422.02 | Bridge Approach Fills - Type II Modiefied Approach Fill | |
| | 422.03 | Reinforced Bridge Approach Fills - Type A Alternate Approach Fill for Integral Abutment | |
| | DIVISIO | N 5 - SUBGRADE, BASES AND SHOULDERS | |
| ✓ | 560.01 | Method of Shoulder Construction - High Side of Superelevated Curve - Method I | |
| | 560.02 | Method of Shoulder Construction - High Side of Superelevated Curve - Method II | |
| | DIVISIO | N 6 - ASPHALT BASES AND PAVEMENTS | |
| | 610.01 | Guide for Paving Shoulders Under Bridges - Method I | |
| | 610.02 | Guide for Paving Shoulders Under Bridges - Method II | |

| | 610.03 | Guide for Paving Shoulders Under Bridges - Method III | | | |
|----------|---|---|--|--|--|
| | 654.01 | Pavement Repairs | | | |
| | 665.01 | Asphalt Shoulders - Milled Rumble Strips | | | |
| | DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS | | | | |
| | 700.01 | Concrete Pavement Joints - Construction and Contraction Joints | | | |
| | 700.02 | Expansion Joint Layout - for Rigid Doweled Pavement at Bridges | | | |
| | 700.03 | Dowel Assembly | | | |
| | 700.04 | Concrete Pavement Header Board | | | |
| | 700.05 | Tying Proposed Pavement to Existing | | | |
| | 710.01 | Concrete Pavement - Station Marking | | | |
| | 720.01 | Concrete Shoulders - Stamped or Rolled Rumble Strips, Milled Rumble Strips | | | |
| | DIVISIO | N 8 - INCIDENTALS | | | |
| | 806.01 | Concrete Right-of-Way Marker | | | |
| | 806.02 | Granite Right-of-Way Marker | | | |
| | 806.03 | Concrete Contol of Access Marker | | | |
| ✓ | 815.02 | Subsurface Drain | | | |
| | 815.03 | Pipe Underdrain and Blind Drain | | | |
| | 816.01 | Concrete Pads - for Shoulder Drain Installation | | | |
| | 816.02 | Aggregate Shoulder Drain | | | |
| | 816.03 | Geocomposite Shoulder Drain | | | |
| | 816.04 | Markers for Drainage Structure and Concrete Pad (Shoulder Drains) | | | |
| | 820.01 | Funnel and Funnel Drain - 12" Metal Funnel | | | |
| | 838.01 | Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew | | | |
| | 838.02 | Concrete Endwall and Sluice Gate - 15" thru 36" Pipe 90 Skew | | | |
| | 838.04 | Conc. Endwall for Single & Double Pipe Culverts - 17"x13" thru 71"x47" Arch 90 Skew | | | |
| | 838.05 | Concrete 'L' Endwall for Single Pipe Culverts - 15" thru 48" Pipe | | | |
| | 838.06 | Concrete 'L' Endwall for Single Pipe Culverts - 17"x13" thru 71"x47" Pipe Arch | | | |
| | 838.07 | Conc. Endwall for Single & Double Pipe Culvrts - 40"x31" thru 66"x51" Arch 90 Skew | | | |
| | 838.08 | Concrete 'L' Endwall for Single Pipe Culverts - 40"x31" thru 66"x51" Pipe Arch | | | |
| | 838.10 | Concrete Endwall for Outfall - 4", 6" or 8" Pipe | | | |
| | 838.11 | Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew | | | |
| | 838.14 | Brick Endwall for Single & Double Pipe Culverts - 17"x13" thru 71"x47" Arch 90 Skew | | | |
| | 838.15 | Brick 'L' Endwall for Single Pipe Culverts - 15" thru 48" Pipe | | | |
| | 838.16 | Brick 'L' Endwall for Single Pipe Culverts - 17"x13" thru 71"x47" Pipe Arch | | | |
| | 838.17 | Brick Endwall for Single & Double Pipe Culverts - 40"x31" thru 66"x51" Arch 90 Skew | | | |
| | 838.18 | Brick Endwall for Single Pipe Culverts - 40"x31" thru 66"x51" Pipe Arch | | | |
| | 838.20 | Brick Endwall for Outfall - 4", 6" or 8" Pipe | | | |

| | 838.21 | Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew |
|----------|--------|---|
| | 838.22 | Reinforced Concrete Endwall - for Double and Triple 54" Pipes 90 Skew |
| | 838.27 | Reinforced Concrete Endwall - for Single 60" Pipe 90 Skew |
| | 838.28 | Reinforced Concrete Endwall - for Double and Triple 60" Pipes 90 Skew |
| | 838.33 | Reinforced Concrete Endwall - for Single 66" Pipe 90 Skew |
| | 838.34 | Reinforced Concrete Endwall - for Double and Triple 66" Pipes 90 Skew |
| | 838.39 | Reinforced Concrete Endwall - for Single 72" Pipe 90 Skew |
| | 838.40 | Reinforced Concrete Endwall - for Double and Triple 72" Pipes 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 |
| | 838.52 | Reinforced Brick Endwall - for Double and Triple 54" Pipes 90 Skew |
| | 838.57 | Reinforced Brick Endwall - for Single 60" Pipe 90 Skew |
| | 838.58 | Reinforced Brick Endwall - for Double and Triple 60" Pipes 90 Skew |
| | 838.63 | Reinforced Brick Endwall - for Single 66" Pipe 90 Skew |
| | 838.64 | Reinforced Brick Endwall - for Double and Triple 66" Pipes 90 Skew |
| | 838.69 | Reinforced Brick Endwall - for Single 72" Pipe 90 Skew |
| | 838.70 | Reinforced Brick Endwall - for Double and Triple 72" Pipes 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 |
| | 840.04 | Concrete Open Throat Catch Basin - 12" thru 48" Pipe |
| | 840.05 | Brick Open Throat Catch Basin - 12" thru 48" Pipe |
| | 840.13 | Concrete Bridge Approach Drop Inlet - 12" thru 24" Pipe |
| | 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 |
| | 840.24 | Frames and Narrow 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 |
|----------|--------|---|
| ✓ | 840.29 | Frames and Narrow Slot Flat Grates |
| | 840.30 | Driveway Drop Inlet |
| | 840.31 | Concrete Junction Box - 12" thru 66" Pipe |
| | 840.32 | Brick Junction Box - 12" thru 66" Pipe |
| | 840.33 | Angled Vane Grates and Frames |
| | 840.34 | Traffic Bearing Junction Box - for Use with Pipes 42" and Under |
| ✓ | 840.35 | Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates |
| | 840.36 | Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates |
| | 840.37 | Steel Grate and Frame |
| | 840.41 | Spring Box - Concrete or Brick |
| ✓ | 840.45 | Precast Drainage Structure |
| ✓ | 840.46 | Traffic Bearing Precast Drainage Structure |
| | 840.51 | Brick Manhole - 12" thru 36" Pipe |
| | 840.52 | Precast Manhole - 4', 5' and 6' Diameter |
| | 840.53 | Precast Manhole with Masonry Base - 12" thru 42" Pipe |
| | 840.54 | Manhole Frame and Cover |
| | 840.66 | Drainage Structure Steps |
| | 840.71 | Concrete and Brick Pipe Plug |
| | 840.72 | Pipe Collar |
| ✓ | 846.01 | Concrete Curb, Gutter and Curb & Gutter |
| | 846.02 | Drop Inlet Installation in Expressway Gutter |
| | 846.03 | Funnel Drain Installation in Shoulder Berm Gutter |
| ✓ | 846.04 | Drop Inlet Installation in Shoulder Berm Gutter |
| | 848.01 | Concrete Sidewalk |
| | 848.02 | Driveway Turnout - Radius Type |
| | 848.03 | Driveway Turnout - Drop Curb Type |
| | 848.04 | Street Turnout |
| | 848.05 | Curb Ramp - Proposed Curb & Gutter |
| | 848.06 | Curb Ramp - Existing 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 |
| | 852.02 | Concrete Mountable Median - for Use with Rigid or Flexible Pavement |
| | 852.04 | Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter |
| | 852.05 | Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter |

| | 852.06 | Method for Placement of Drop Inlets in Concrete Islands |
|----------|--------|--|
| | 852.10 | Median Construction - with Curb and Gutter |
| | 854.01 | Double Faced Concrete Barrier - Types I, II, III and IV |
| | 854.02 | Double Faced Concrete Barrier - Types 'T', 'T1' and 'T2' |
| | 854.04 | Concrete Median Barrier - Precast Permanent |
| | 854.05 | Concrete Median Transition Barrier - Location of Overhead Assembly |
| | 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 |
| | 866.01 | Chain Link Fence - 4', 5' and 6' High Fence |
| | 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) |
| | 866.05 | Glare Screen - Chain Link Fabric/Guardrail Mounted |
| ✓ | 876.01 | Rip Rap in Channels |
| ✓ | 876.02 | Guide for Rip Rap at Pipe Outlets |
| | 876.03 | Drainage Ditches with Class 'A' Rip Rap |
| ✓ | 876.04 | Drainage Ditches with Class 'B' Rip Rap |
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