## 8. DRAINAGE

### 8A. CATCH BASINS AND COVERS

- **v.19 8A5** Inlet and Manhole Covers
  - **sheet a:** Inlet Covers Type A, H, A-S, H-S and Z
  - **sheet b:** Inlet Covers Type B, B-A, C, MS, MS-A, and WM
  - **sheet c:** Inlet Covers Type F, HM, HM-S, S, T, V, HM-GJ, and HM-GJ-S
  - **sheet d:** Inlet Covers Type BW; Manhole Covers Type J, J-S, K, L and M

- **v.2 8A8** Catch Basins 3-FT, 4-FT, 5-FT and 6-FT Diameter
- **v.2 8A9** Catch Basins 2x3-FT and 2.5x3-FT

### 8B. MANHOLES

- **v.3 8B9** Manholes 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, and 10-FT Diameter
- **v.2 8B10** Manholes 3x3-FT, 4x4-FT, 5x5-FT, and 6x6-FT
- **v.2 8B11** Manholes Variable Tee and Special 4-FT Diameter

### 8C. INLETS

- **v.2 8C6** Inlets 3-FT and 4-FT Diameter
- **v.2 8C7** Inlets 2x2-FT, 2x2.5-FT, 2x3-FT, and 2.5x3-FT
- **v.2 8C8** Inlets Median 1 and 2 Grate
- **v.2 8C9** Inlets Median 3 and 4 Grate

### 8D. CURB AND GUTTER, AND SURFACE DRAINS

- **v.22 8D1** Concrete Curb and Gutter
  - **sheet a:** Concrete Curb and Gutter
  - **sheet b:** Concrete Curb Ties and Curb and Gutter Applications
- **v.7 8D2** Concrete Surface Drains Flume Type at Structures
  - a  b  c
- **v.8 8D3** Concrete Surface Drains Drop Inlet Type at Structures
  - a  b
- **v.6 8D4** Concrete Surface Drains and Asphaltic Flumes
- **v.20 8D5** Curb Ramps
  - **sheet a:** Curb Ramps Types 1 and 1-A
  - **sheet b:** Curb Ramps Types 2 and 3
  - **sheet c:** Curb Ramps Type 4A and 4A1
  - **sheet d:** Curb Ramps Type 4B and 4B1
  - **sheet e:** Curb Ramps Type 5, 6, 7A, 7B & 8
  - **sheet f:** Curb Ramps Radial Detectable Warning Field Applications
  - **sheet g:** Curb Ramps Rectangular and Radial Detectable Warning Plates
- **v.1 8D13** Slotted Corrugated Metal Pipe Surface Drains
- **v.1 8D14** Slotted Vane Drain
v.5 8D15 Edgedrains
   sheet a: Edgedrain Outlet and Outfall Markers
   sheet b: Edgedrain and Base Aggregate Open Graded
   sheet c: Edgedrain and Base Aggregate Open Graded

v.11 8D16 Concrete Gutter, Curb and Gutter and Pavement Ties
v.6 8D17 Manholes, Manhole and Inlet Covers
v.2 8D18 Driveway and Sidewalk Ramps Types X and Y
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v.1 8D20 Driveways with Curb & Gutter Returns
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8E. EROSION CONTROL DEVICES
v.2 8E5 Sodded Backslope Flume and Intercepting Embankment
v.3 8E8 Typical Installations of Erosion Bales/Temporary Ditch Checks
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8F. PIPE AND CULVERT
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9B. CONDUIT
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9C. BASES

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v.10 9C5  Concrete Control Cabinet Bases
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v.10 9C11 Concrete Base Type 10
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9D. CONTROL CABINETS

v.5  9D1  Cabinet Service Installation (Meter Breaker Pedestal)
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9E. POLE MOUNTINGS FOR TRAFFIC SIGNALS & LIGHTING UNITS

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v.6  9E5  Traffic Signal Standard Ornamental Bracket Mountings (Typical) for 13 ft. or 15 ft.
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v.9  9E8  Type 9, Type 10, Type 9/10 Special, Type 12 and Type 13 Poles with Monotube Arms
   sheet a: Type 9 Pole 15’-30’ Monotube Arm
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   sheet d: Type 9 Special Pole 45’ Monotube Arm
   sheet e: Type 10 Pole 15’-30’ Monotube Arm
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- **9F1** Details for the Installation of Temporary Traffic Signal Loop Detector Wires in any Existing Pavement
- **9F4** Loop Detector Installed in New Concrete Pavement Round CSCP Pullbox
- **9F7** Loop Detector Installed in New Concrete Base with new Asphalatic Overlay Round CSCP Pullbox
- **9F8** Loop Detector Placed in Crushed Aggregate Base (New Asphalatic Pavement)
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- **9F10** Loop Detector Installed in Existing or New Asphalatic Pavement with New Asphalatic Overlay
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- **9F12** Loop Detector Installed in Existing Concrete Pavement
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- **9F14** Loop Detector Installed in New Concrete Pavement Round CSCP Pull Box 45 Degree Elbows to Pull Box
- **9F15** Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Options)
  - **a** Loop Detector Installed in Base Course with Pull (Splice) Box Off Roadway (Option 1)
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**9G. TEMPORARY TRAFFIC SIGNALS**

- **9G1** Span Wire Temporary Traffic Signal
  - **a**
  - **b**
  - **c**
  - **d**
  - **e**
  - **f**
  - **g**
- **9G2** Bridge Temporary Traffic Signal Installation
  - **a**
  - **b**
  - **c**

**9H. INTELLIGENT TRANSPORTATION SYSTEMS (ITS)**

- **9H1** Base ITS Controller Cabinet
- **9H3** 2 Circuit Meter Breaker Pedestal
- **9H4** 2 Circuit Electrical Service Meter Breaker Pedestal and Breaker Disconnect Box
- **9H5** Cabinet Breaker Disconnect Box Installation
- **9H6** Signal Assembly Advance Flasher Type 1
- **9H7** Signal Assembly Ramp Control Side mount
- **9H8** Communications Manhole Detail
- **9H9** Communication Vault Type 1
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10. FREEWAY LIGHTING DESIGN

10A. GENERAL

10A1  Electrical Handhole Wiring
10A2  Identification Plaques Light Poles
10A3  Circuit Identification Plaques Sign Bridges
10A4  Identification Plaques Underdeck and High Mast Lighting
10A5  Electrical Details Ground Mount Light Poles Isolated Neutral Systems
10A6  Electrical Details Ground Mount Light Poles Grounded Neutral Systems
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10A8  Electrical Details Structure Mount Light Poles Isolated Neutral Systems
10A9  Electrical Details Structure Mount Light Poles Grounded Neutral Systems
10A10 Electrical Details Structure Mount Light Poles Phase-to-Phase Systems
10A11 Electrical Details Median Mount Light Poles Isolated Neutral Systems
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sheet a: Poles, Type 7 Aluminum - 35’ - 10” Shaft
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10A18 Luminaires Arms

sheet a: Luminaires Arms, Single Member 6-inch Clamp
sheet b: Luminaires Arms, Truss Type 6-inch Clamp

11. GEOMETRIC DESIGN

11A. MEDIANS

11A1  Maintenance Crossover for Freeways
11B1  Concrete Corrugated Median
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12. STRUCTURES

12A. GENERAL

12A3  Name Plate (Structures)
12A4  Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals
13. PAVEMENT DESIGN

13A. GENERAL

v.6 13A3 Concrete Pavement Shoulders
v.5 13A5 Shoulder Rumble Strip, Milling

a  b

v.2 13A7 Continuously Reinforced Concrete Pavement Repair and Replacement
v.1 13A8 Asphalitic Rumble Strips at Intersection
v.1 13A9 Concrete Rumble Strips at Intersection
v.2 13A10 2-Lane Rural Shoulder Rumble Strip, Milling

sheet a: 2-Lane Rural Shoulder Rumble Strip, Milling - Type 1
sheet b: 2-Lane Rural Shoulder Rumble Strip, Milling - Type 2
sheet c: 2-Lane Rural Shoulder Rumble Strip, Milling - Crossings, Intersections, Bridges, Driveways
sheet d: 2-Lane Rural Shoulder Rumble Strip, Milling – Railroads, Passing, Climbing and Bypass Lanes

v.3 13A11 2-Lane Rural Center Line Rumble Strip, Milling

a  b

13B. APPROACH DETAILS

v.10 13B1 Pavement Details for Railroad Approach
v.9 13B2 Concrete Pavement Approach Slab

sheet a: Concrete Pavement Approach Slab
sheet b: Structural Approach Slab and Concrete Pavement Approach Slab

13C. JOINTS

v.19 13C1 Concrete Pavement Longitudinal Joints and Ties
v.17 13C4 Urban Non-Doweled Concrete Pavement
v.2 13C8 Concrete Pavement Partial Depth Repair
v.15 13C9 Concrete Pavement Repair and Replacement

a  b  c

v.2 13C10 Retrofit Dowel Bars
v.12 13C11 Rural Doweled Concrete Pavement

a  b

v.9 13C13 Urban Doweled Concrete Pavement
v.7 13C14 Base Patching Concrete

a  b  c

v.6 13C15 Concrete Base

a  b

v.2 13C16 Detail for Right Turn Lane/ Tee Intersection Bypass Lane on a Concrete Roadway

a  b

v.1 13C17 Concrete Joint Detail for Ramp Termini

sheet a: Concrete Joint Detail for Exit Ramp Termini
sheet b: Concrete Joint Detail for Entrance Ramp Termini
14. INCIDENTAL DESIGN

14A. PRESERVATION DETAILS

14A1 Tree Preservation Details
14A2 Tree Planting Detail

14B. VEHICLE BARRIER SYSTEMS

14B7 Concrete Barrier Temporary Precast
    a b c d e f g h i

14B8 Crash Cushion/Sand Barrel Array and Other Temporary Barrier Layout Details
    sheet a: End Treatments and General Note
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    sheet c: Overlapping of Temporary Barrier and Temporary Barrier Downstream of Hazard
    sheet d: Connecting Temporary Barrier to Permanent Barrier and Overlapping Downstream Temporary Barrier with Permanent Barrier
    sheet e: Median Installation

14B11 Concrete Barrier (Double Faced)

14B15 Steel Plate Beam Guard, Class "A", Installation and Elements
    a b c

14B16 Anchorage for Steel Plate Beam Guard Type 2
    a b

14B18 Steel Plate Beam Guard, Class "A"
    sheet a: Steel Plate Beam Guard, Class "A" (at Bridges, Obstacles and Sideroads/Driveways)
    sheet b: Steel Plate Beam Guard, Class "A" at Median Approach to Bridges at Median Piers and Sign Supports

14B20 Steel Thrie Beam Structure Approach
    sheet a: Steel Thrie Beam Structure Approach
    sheet b: Steel Thrie Beam Structure Approach, Connection to Square End Parapets
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    sheet e: Steel Thrie Beam Structure Approach, Connection to Bridge Railing Types "F" and "W"
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    sheet g: Steel Thrie Beam Structure Approach, Connector Plate Detail
    sheet h: Steel Thrie Beam Structure Approach, Single Slope Attachment

14B22 Concrete Barrier, Single Faced (with Anchorage)
    a b
v.9 14B24 Steel Plate Beam Guard Energy Absorbing Terminal
  a  b  c
v.1 14B25 Steel Plate Beam Guard, Class "A", Over Fill Culverts
v.4 14B26 Steel Thrie Beam Bullnose Terminal
  a  b  c  d  e  f  g  h
v.1 14B27 Steel Plate Beam Guard Short Radius Terminal
  a  b  c
v.4 14B28 Guardrail Mow Strip
  a  b
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v.9 14B32 Concrete Barrier Single Slope (CBSS)
  sheet a: Concrete Barrier Single Slope-Standard, Barrier on Bridge, Delineation
  sheet b: Concrete Barrier Single Slope-Steel Reinforcement
  sheet c: Concrete Barrier Single Slope Fixed Object Protection
  sheet d: Concrete Barrier Single Slope-Drainage and Joint Detail
  sheet e: Concrete Barrier Single Slope-Cold Joint and Height Transition
  sheet f: Concrete Barrier Single Slope-End Anchor and Median Barrier, Reinforcement
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v.2 14B33 Concrete Barrier Single Slope Thrie Beam Anchorage
  sheet a: Concrete Barrier Single Slope 32-inch Thrie Beam Anchorage - Barrier Layout
  sheet b: Concrete Barrier Single Slope 32-inch Thrie Beam Anchorage - Steel Layout #1
  sheet c: Concrete Barrier Single Slope 32-inch Thrie Beam Anchorage - Steel Layout #2
  sheet d: Concrete Barrier Single Slope 36-inch Thrie Beam Anchorage - Barrier Layout
  sheet e: Concrete Barrier Single Slope 36-inch Thrie Beam Anchorage - Steel Layout #1
  sheet f: Concrete Barrier Single Slope 36-inch Thrie Beam Anchorage - Steel Layout #2
  sheet g: Concrete Barrier Single Slope 42-inch Thrie Beam Anchorage - Barrier Layout
  sheet h: Concrete Barrier Single Slope 42-inch Thrie Beam Anchorage - Steel Layout #1
v.2 14B34 Concrete Barrier Single Slope for Runs under 40-Feet Long
  sheet a: 32-inch, 36-inch and 42-inch Concrete Barrier Single Slope Class B
  sheet b: 56-Inch Concrete Barrier Single Slope Class B
  sheet c: Concrete Barrier Single Slope Type B
v.2 14B35 Single-Faced NJ Shape Concrete Barrier to Single Slope Concrete Barrier Transitions
  sheet a: 32-Inch Single-Faced NJ Shape to 32-Inch Single Slope Concrete Barrier Transition - Transition Layout
  sheet b: 32-Inch Single-Faced NJ Shape to 32-Inch Single Slope Concrete Barrier Transition - Steel Layout
  sheet c: 32-Inch Single-Faced NJ Shape to 36-Inch Single Slope Concrete Barrier Transition - Transition Layout
  sheet d: 32-Inch Single-Faced NJ Shape to 36-Inch Single Slope Concrete Barrier Transition - Steel Layout
  sheet e: 42-Inch Single-Faced NJ Shape to 42-Inch Single Slope Concrete Barrier Transition - Transition Layout
  sheet f: 42-Inch Single-Faced NJ Shape to 42-Inch Single Slope Concrete Barrier Transition - Steel Layout
v.2 14B36  F Shape Concrete Barrier to Single Slope Concrete Barrier Transitions

sheet a: 32-Inch Single-Faced F Shape to 32-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet b: 32-Inch Single-Faced F Shape to 32-Inch Single Slope Concrete Barrier Transition - Steel Layout
sheet c: 32-inch Single-Faced F Shape to 36-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet d: 32-Inch Single-Faced F Shape to 36-Inch Single Slope Concrete Barrier Transition - Steel Layout
sheet e: 42-Inch Single-Faced F Shape to 42-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet f: 42-Inch Single-Faced F Shape to 42-Inch Single Slope Concrete Barrier Transition - Steel Layout
sheet g: 51-Inch Single-Faced F Shape to 42-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet h: 51-Inch Single-Faced F Shape to 42-Inch Single Slope Concrete Barrier Transition - Steel Layout
sheet i: 51-Inch Single-Faced F Shape to 56-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet j: 51-Inch Single-Faced F Shape to 56-Inch Single Slope Concrete Barrier Transition - Steel Layout

v.2 14B37  Double-Faced NJ Shape Concrete Barrier to Single Slope Concrete Barrier Transitions

sheet a: 32-Inch Double-Faced NJ Shape to 36-Inch Single Slope Concrete Barrier Transition - Transition Layout
sheet b: 32-Inch Double-Faced NJ Shape to 36-Inch Single Slope Concrete Barrier Transition - Steel Layout

v.2 14B38  Double-Faced F Shape Concrete Barrier to Single Slope Concrete Barrier Transitions

sheet a: 32-Inch Double-Faced F Shape to 32-Inch Single Slope Transition - Transition Layout
sheet b: 32-Inch Double-Faced F Shape to 32-Inch Single Slope Transition - Steel Layout
sheet c: 32-Inch Double-Faced F Shape to 36-Inch Single Slope Transition - Transition Layout
sheet d: 32-Inch Double-Faced F Shape to 36-Inch Single Slope Transition - Steel Layout

v.2 14B39  Height Transitions for Single Slope Concrete Barrier

sheet a: 32-inch to 36-inch Single Slope Concrete Barrier Height Transition
sheet b: 36-inch to 42-inch Single Slope Concrete Barrier Height Transition
sheet c: 42-inch to 56-inch Single Slope Concrete Barrier Height Transition

v.2 14B40  Vertical Faced Concrete Barrier to Single Slope Concrete Barrier Transitions

sheet a: 32-Inch Vertical to 32-Inch Single Slope Transition - Transition Layout
sheet b: 32-Inch Vertical to 32-Inch Single Slope Transition - Steel Layout
sheet c: 32-Inch Vertical to 36-Inch Single Slope Transition - Transition Layout
sheet d: 32-Inch Vertical to 36-Inch Single Slope Transition - Steel Layout
sheet e: 42-Inch Vertical to 42-Inch Single Slope Transition - Transition Layout
sheet f: 42-Inch Vertical to 42-Inch Single Slope Transition - Steel Layout
sheet g: 51-Inch Vertical to 42-Inch Single Slope Transition - Transition Layout
sheet h: 51-Inch Vertical to 42-Inch Single Slope Transition - Steel Layout
sheet i: 56-Inch Vertical to 56-Inch Single Slope Transition - Transition Layout
sheet j: 56-Inch Vertical to 56-Inch Single Slope Transition - Steel Layout
14B41 Single Slope Roadside Retaining Wall
  sheet a: Single Slope Roadside Retaining Wall - Cross Section and Steel Details
  sheet b: Single Slope Roadside Retaining Wall - Placement and Drainage

14B42 Midwest Guardrail System (MGS) Guardrail
  sheet a: Midwest Guardrail System (MGS) - Installation Cross Sections, Post and Block Details
  sheet b: MGS - Bolt, Post Spacing, Reflector Detail
  sheet c: MGS - Block-out Depth, Bolt Detail, Beam Lapping, Alternative Wood Block-out and Adjusting post spacing for Obstructions
  sheet d: MGS - Missing Post Details

14B43 Midwest Guardrail System Long Span (MGS L)
  sheet a: Midwest Guardrail System Long Span (MGS L) Two-way Road Layout
  sheet b: Midwest Guardrail System Long Span (MGS L) One-way Road Layout
  sheet c: Midwest Guardrail System Long Span (MGS L) Cross Section and CRT Post Details

14B44 Midwest Guardrail System (MGS) Terminal
  sheet a: Midwest Guardrail System (MGS) Energy Absorbing Terminal (EAT) - Layout
  sheet b: MGS EAT - Ground Strut, Anchor Cable Box, Bearing Plate
  sheet c: MGS EAT - Post Details, Block Detail, Marker Post Detail, Reflective Sheeting Detail

14B45 Midwest Guardrail System (MGS) Thrie Beam Transition
  sheet a: Midwest Guardrail System (MGS) Thrie Beam Transition - Layout
  sheet b: MGS Thrie Beam Transition - Post Details, Thrie Beam Terminal Connector Details, Splice Detail, Cross Section
  sheet c: MGS Thrie Beam Transition - Thrie Beam Details, Post Details, Block Details
  sheet d: MGS Thrie Beam Transition - W and Thrie Beam Connection to Bridge Parapet with Square Ends
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  sheet f: MGS Thrie Beam Transition - W and Thrie Beam Connection to Bridge Parapets with Sloped Ends
  sheet g: MGS Thrie Beam Transition - Connection to W and F Bridge Parapet
  sheet h: MGS Thrie Beam Transition - Connection to M Bridge Parapet
  sheet i: MGS Thrie Beam Transition - Single Slope Connection Plate Details
  sheet j: MGS Thrie Beam Transition - Connection to Single Slope Barrier
  sheet k: MGS Thrie Beam Transition - Approach Connection to NY Bridge Parapets
  sheet l: MGS Thrie Beam Transition - Downstream Connection to NY Bridge Parapets

14B47 Midwest Guardrail System (MGS) Type 2 Terminal
  sheet a: Midwest Guardrail System (MGS) Type 2 Terminal - Terminal Layout
  sheet b: MGS Type 2 Terminal - Details
  sheet c: MGS Type 2 Terminal - Post Components and Assemblies
  sheet d: MGS Type 2 Terminal - Ground Strut, Guardrail, Cable Assembly Components
  sheet e: MGS Type 2 Terminal -Arm Components and Assembly, Cable Bracket Components and Assembly
  sheet f: MGS Type 2 Terminal - Part List
  sheet g: MGS Type 2 Terminal - Part List

14B48 Retrofit Cantilever Blunt End
  sheet a: Retrofit Cantilever Blunt End - Elevation, Section details, Installation and Bill of Materials
  sheet b: Retrofit Cantilever Blunt End - Components
14B49 Retrofit Cantilever Sloped End
   sheet a: Retrofit Cantilever Sloped End - Elevation, Section Detail Installation and Bill of Materials
   sheet b: Retrofit Cantilever Sloped End - Anchor Plate Assembly Parts and Component Details

14B50 Thrie Beam Approach Retrofit Installation of Missing Post
   sheet a: Thrie Beam Approach Retrofit Installation of Missing Post - Missing Post Cross-Beam Layout
   sheet b: Thrie Beam Approach Retrofit Installation of Missing Post - Missing Post Cross-Beam Components
   sheet c: Thrie Beam Approach Retrofit Installation of Missing Post - Post Details, Bill of Materials

14B51 Anchor Post Assembly Top Mounted
   sheet a: Anchor Post Assembly Top-Mounted - Layout and Mounting Details
   sheet b: Anchor Post Assembly Top-Mounted - Assembly Details
   sheet c: Anchor Post Assembly Top-Mounted - Fill, Joint Placement and Bill of Materials

14B52 Cable Barrier Type 1
   sheet a: Cable Barrier Type 1 - Layout, Material List
   sheet b: Cable Barrier Type 1 - Rock Excavation, Cross Section, Line Post Details
   sheet c: Cable Barrier Type 1 - Layout, Bill of Materials

14B53 Short Radius MGS
   sheet a: Short Radius Beam Guard and Terminal (MGS) - Layout
   sheet b: Short Radius Beam Guard and Terminal (MGS) - Short Radius Terminal Views, Detail A
   sheet c: Short Radius Beam Guard and Terminal (MGS) - Terminal Detail B, Detail C and Detail D
   sheet d: Short Radius Beam Guard and Terminal (MGS) - Terminal Anchor Bracket and Anchor Bracket Bearing Details
   sheet e: Short Radius Beam Guard and Terminal (MGS) - End Section Buffer, Terminal Connector, Reflector Sheeting Parts
   sheet f: Short Radius Beam Guard and Terminal (MGS) - Washer, Post, Tube, Plate and Terminal Post Details, Cable Assembly Detail
   sheet g: Short Radius Beam Guard and Terminal (MGS) - Part List
   sheet h: Short Radius Beam Guard and Terminal (MGS) - Part List
   sheet i: Short Radius Beam Guard and Terminal (MGS) - Part List

14C. RECREATIONAL FACILITIES

14C1 Timber Rail Guard Fence, Curb and Guard Post and Marker Post

14C2 Historical Marker Construction

14C3 Roadside Picnic Table

14C6 Wayside Well Shelter and Pump and Well Platform
   a  b

14C7 Picnic Tables, Single Pedestal
   a  b

15. R/W, ACCESS CONTROL AND TRAFFIC CONTROL

15A. MARKER POSTS

15A1 Marker Post for Right-of-Way
   sheet a: Marker Post for Right-of-Way
   sheet b: Flexible Marker Post for Right-of-Way

15A3 Flexible Marker Post for Culvert End
   a  b
15A4  Delineator and Delineator Post
   sheet a:  Flexible Delineator Post
   sheet b:  Barrier Wall Delineator with Reflective Sheeting
   sheet c:  Delineator Post with Reflective Sheeting
   sheet d:  Channelizing Devices, Permanent Flexible Tubular Marker Post
   sheet e:  Delineator with Reflective Sheeting

15A7  Object Marker for Hazardous Culverts

15B. FENCING

15B1  Fence Woven Wire
   a  b

15B3  Chain Link Fence
   a  b

15B10  Wood Gate, Double Leaf
   a  b  c

15B11  Wood Gate, Single Leaf
   a  b

15B12  Pipe Gate Details
   a  b

15C. MARKING AND SIGNING

15C2  Barricades and Signs for Mainline, Detour, On Ramp, Off Ramp Closures and Advanced Width Restriction
   sheet a:  Barricades and Signs for Mainline Closures
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16. SURVEYING

16A. MONUMENTS

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