

**TABLE OF CONTENTS**  
**FY 2020-21 STANDARD PLANS FOR ROAD CONSTRUCTION**

<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>
<b>Miscellaneous</b>		
510	000-510	Superelevation Transitions - High Speed Roadways
511	000-511	Superelevation Transitions - Low Speed Roadways
525	000-525	Ramp Terminals
<b>General Construction Operations</b>		
<b>Maintenance of Traffic</b>		
415	102-100	Temporary Barrier
414	102-110	Type K Temporary Concrete Barrier System
412	102-120	Low Profile Barrier
600	102-600	General Information for Traffic Control Through Work Zones
601	102-601	Two-Lane, Two-Way, Work Outside Shoulder
602	102-602	Two-Lane, Two-Way, Work on Shoulder
603	102-603	Two-Lane, Two-Way, Work Within the Travel Way
604	102-604	Two-Lane, Two-Way, Work in intersection
605	102-605	Two-Lane, Two-Way, Work Near Intersection
606	102-606	Two-Lane, Two-Way, Work Within the Travel Way - Signal Control
607	102-607	Two-Lane, Two-Way, Mobile Operation, Work on Shoulder, Work Within the Travel Way
608	102-608	Two-Lane, Two-Way, Temporary Diversion Connection
611	102-611	Multilane, Work Outside Shoulder
612	102-612	Multilane, Work on Shoulder
613	102-613	Multilane, Work Within the Travel Way - Median or Outside Lane
614	102-614	Multilane, Work Within the Travel Way - Center Lane
615	102-615	Multilane, Work in Intersection
616	102-616	Multilane, Work Near Intersection - Median or Outside Lane
617	102-617	Multilane, Work in Intersection - Center Lane
618	102-618	Multilane, Work in Intersection - Two Lanes Closed - 45 mph or Less
619	102-619	Multilane, Mobile Operations, Work on Shoulder, Work Within the Travel Way
620	102-620	Multilane, Divided, Temporary Diversion Connection
621	102-621	Multilane, Undivided, Temporary Diversion Connection
622	102-622	Multilane, Work Near Intersection-Temporary Diversion Connection-35 mph or Less
623	102-623	Multilane, Work Within the Travel Way Double Lane Closure
625	102-625	Temporary Road Closure - 5 Minutes or Less
628	102-628	Two-Way Left Turn Lane Closure
630	102-630	Crossover for Paving Train Operations, Rural
631	102-631	Temporary Crossover
640	102-640	Converting Two-Lanes to Four-Lanes Divided, Rural
641	102-641	Converting Two-Lanes to Four-Lanes Divided, Urban
642	102-642	Transitions for Temporary Concrete Barrier Wall on Freeway Facilities
650	102-650	Two-Lane, Two-Way Rural Structure Replacement

<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>
<b>Maintenance of Traffic (Cont.)</b>		
651	102-651	Multilane, Divided, Maintenance and Construction
655	102-655	Traffic Pacing
660	102-660	Pedestrian Control for Closure of Sidewalks
665	102-665	Limited Access, Temporary Opening
667	102-667	Toll Plaza, Traffic Control Standards
670	102-670	Motorist Awareness System
<b>Clearing Construction Site</b>		
<b>Clearing and Grubbing</b>		
542	110-100	Tree Protection and Preservation
532	110-200	Mailboxes
<b>Earthwork and Related Operations</b>		
505	120-001	Embankment Utilization
500	120-002	Subsoil Excavation
307	125-001	Utility Adjustments thru Existing Pavement
540	141-T01	Settlement Plate
506	160-001	Miscellaneous Earthwork Details
<b>Bituminous Treatments, Surface Courses and Concrete Pavement</b>		
<b>Concrete Pavement</b>		
515/516	330-001	Paved and Graded Driveways
305	350-001	Concrete Pavement Joints
308	353-001	Concrete Slab Replacement
306	370-001	Bridge Approach Expansion Joint - Concrete Pavement with Special Select Soil Base
<b>Structures</b>		
<b>Concrete Structures</b>		
6010	400-010	Cantilever Retaining Wall (C-I-P)
6011	400-011	Gravity Wall
521	400-021	Concrete Steps
<b>Inlets, Manholes and Junction Boxes</b>		
201	425-001	Supplementary Details for Manholes and Inlets
200	425-010	Structure Bottoms - Type J and P
210	425-020	Curb Inlet Tops - Types 1, 2, 3 and 4
211	425-021	Curb Inlet Tops - Types 5 and 6
212	425-022	Curb Inlet - Type 7
213	425-023	Curb Inlet - Type 8
214	425-024	Curb Inlet Top - Type 9
215	425-025	Curb Inlet Top - Type 10
217	425-030	Median Barrier Inlets Types 1 and 2
218	425-031	Adjacent Barrier Inlet

**TABLE OF CONTENTS**  
**FY 2020-21 STANDARD PLANS FOR ROAD CONSTRUCTION**

<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>	<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>
<b><i>Inlets, Manholes and Junction Boxes (Cont.)</i></b>			<b><i>Incidental Construction</i></b>		
219	425-032	<i>Curb and Gutter Barrier Inlet</i>	<b><i>Miscellaneous</i></b>		
220	425-040	<i>Gutter Inlet - Type S</i>	17890	508-T01	<i>Traffic Control Devices for Movable Span Bridge Signals</i>
221	425-041	<i>Gutter Inlet - Type V</i>	17882	509-070	<i>Railroad Grade Crossing Traffic Control Devices</i>
230	425-050	<i>Ditch Bottom Inlet - Type A</i>	17881	509-100	<i>Advance Warning for R/R Crossing</i>
231	425-051	<i>Ditch Bottom Inlet - Type B</i>	<b><i>Metal Pedestrian/Bicycle Railings, Guiderails and Handrails</i></b>		
232	425-052	<i>Ditch Bottom Inlets - Types C, D, E and H</i>	852	515-052	<i>Pedestrian/Bicycle Railing (Steel)</i>
233	425-053	<i>Ditch Bottom Inlets - Types F and G</i>	862	515-062	<i>Pedestrian/Bicycle Railing (Aluminum)</i>
234	425-054	<i>Ditch Bottom Inlet - Type J</i>	870	515-070	<i>Pipe Guiderail (Aluminum)</i>
235	425-055	<i>Ditch Bottom Inlet - Type K</i>	880	515-080	<i>Pipe Guiderail (Steel)</i>
282	425-060	<i>Back of Sidewalk Drainage</i>	<b><i>Concrete Gutter, Curb Elements and Traffic Separator</i></b>		
216	425-061	<i>Closed Flume Inlet</i>	300	520-001	<i>Curb and Gutter</i>
240	425-070	<i>Skimmer for Outlet Control Structures</i>	284	520-005	<i>Concrete Shoulder Gutter Spillway</i>
307	425-080	<i>Utility Conflicts thru Drainage Structures</i>	283	520-010	<i>Median Opening Flume</i>
293	425-090	<i>Safety Modifications for Inlets In Box Culverts</i>	302	520-020	<i>Traffic Separators</i>
<b><i>Pipe Culverts - End Treatments</i></b>			<b><i>Concrete Barriers, Traffic Railings, and Parapets</i></b>		
280	430-001	<i>Miscellaneous Drainage Details</i>	410	521-001	<i>Concrete Barrier</i>
260	430-010	<i>U-Type Concrete Endwalls With Grates - 15" to 30" Pipe</i>	411	521-002	<i>Pier Protection Barrier</i>
261	430-011	<i>U-Type Concrete Endwalls - Baffles and Grate Optional - 15" to 30" Pipe</i>	461	521-010	<i>Opaque Visual Barrier</i>
264	430-012	<i>U-Type Concrete Endwall - Energy Dissipator - 30" to 72" Pipe</i>	5210	521-510	<i>Concrete Barrier/Noise Wall (8'-0")</i>
270	430-020	<i>Flared End Section</i>	5211	521-511	<i>Concrete Barrier/Noise Wall (14'-0")</i>
272	430-021	<i>Cross Drain Mitered End Section</i>	5212	521-512	<i>Concrete Barrier/Noise Wall (8'-0") Junction Slab</i>
273	430-022	<i>Side Drain Mitered End Section</i>	5213	521-513	<i>Concrete Barrier/Noise Wall T-Shaped Spread Footing</i>
250	430-030	<i>Straight Concrete Endwalls - Single and Multiple Pipe</i>	5214	521-514	<i>Concrete Barrier/Noise Wall L-Shaped Spread Footing</i>
251	430-031	<i>Straight Concrete Endwalls - Single and Double 60" Pipe</i>	5215	521-515	<i>Concrete Barrier/Noise Wall Trench Footing</i>
252	430-032	<i>Straight Concrete Endwalls - Single and Double 66" Pipe</i>	6100	521-600	<i>MSE Wall Coping (Precast or C-I-P)</i>
253	430-033	<i>Straight Concrete Endwalls - Single and Double 72" Pipe</i>	6110	521-610	<i>Concrete Barrier/Junction Slab - Wall Coping</i>
255	430-034	<i>Straight Concrete Endwalls - Single 84" Pipe</i>	6120	521-620	<i>Concrete Barrier/Raised Sidewalk - Wall Coping</i>
266	430-040	<i>Winged Concrete Endwalls</i>	6130	521-630	<i>Parapet with C-I-P Sidewalk - Wall Coping</i>
295	430-090	<i>Safety Modifications for Endwalls</i>	6201	521-640	<i>Drainage Inlet Openings in Junction Slab - Wall Coping</i>
<b><i>Structures - Miscellaneous Drainage</i></b>			6200	521-650	<i>Light Pole Pedestal - Wall Coping</i>
206	436-001	<i>Trench Drain</i>	<b><i>Concrete Sidewalk and Driveways</i></b>		
286	440-001	<i>Underdrain</i>	310	522-001	<i>Concrete Sidewalk</i>
245	440-002	<i>Underdrain Inspection Box</i>	304	522-002	<i>Detectable Warnings and Sidewalk Curb Ramps</i>
285	443-001	<i>French Drain</i>	515	522-003	<i>Concrete Flared Driveways</i>
241	443-002	<i>Skimmers for French Drain Outlets</i>	<b><i>Ditch and Slope Pavement</i></b>		
288	444-T01	<i>Deep Well Injection Box</i>	281	524-001	<i>Ditch Pavement and Sodding</i>
287	446-001	<i>Concrete Pavement Subdrainage</i>	<b><i>Noise and Perimeter Walls</i></b>		
<b><i>Structures Foundations - Sheet Pile Wall</i></b>			5200	534-200	<i>Noise Walls (Precast)</i>
6040	455-400	<i>Precast Concrete Sheet Pile Wall (Conventional)</i>	5250	534-250	<i>Perimeter Walls</i>
22440	455-440	<i>Precast Concrete Sheet Pile Wall (CFRP/GFRP &amp; HSSS/GFRP)</i>			

**TABLE OF CONTENTS**  
**FY 2020-21 STANDARD PLANS FOR ROAD CONSTRUCTION**

<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>	<i>Design Standards Index</i>	<i>Standard Plans Index</i>	<i>Index Title</i>
<b>Guardrail</b>			<b>Traffic Control Signals and Devices (Cont.)</b>		
400	536-001	Guardrail	17784	665-001	Pedestrian Detector Assembly Installation Details
402	536-002	Guardrail Transitions and Connections for Existing Bridges	17870	671-001	Standard Signal Operating Plans
<b>Crash Cushions</b>			17841	676-010	Cabinet Installation Details
430	544-001	Crash Cushion Transition Details	17900	695-001	Traffic Monitoring Site
<b>Rumble Strips</b>			<b>Signing, Pavement Markings and Lighting</b>		
517	546-001	Raised Rumble Strips	<b>Highway Signing</b>		
518	546-010	Ground-In Rumble Strips	11860	700-010	Single Column Ground Signs
<b>Retaining Wall Systems</b>			11861	700-011	Single Column Cantilever Ground Mounted Sign
6020	548-020	MSE Retaining Wall Systems - Permanent	11870	700-012	Single Post Bridge Mounted Sign Support
6030	548-030	MSE Retaining Wall Systems - Temporary	11871	700-013	Single Post Median Barrier Mounted Sign Support
<b>Fencing</b>			11200	700-020	Multi-Column Ground Sign
801	550-001	Fence - Type A	11300	700-030	Wind and Hanger Beams for Overhead Signs
802	550-002	Fence - Type B	17505	700-031	External Lighting for Signs
803	550-003	Cantilever Slide Gate - Type B Fence	11310	700-040	Cantilever Sign Structure
800	550-004	Fence Location	11320	700-041	Span Sign Structure
<b>Performance Turf</b>			17748	700-050	Free-Swinging, Internally-Illuminated Street Sign Assemblies
104	570-001	Permanent Erosion Control	18300	700-090	Dynamic Message Sign Walk-In
105	570-010	Shoulder Sodding and Turf on Existing Facilities	N/A	700-091	Catwalk Details
<b>Landscape</b>			17302	700-101	Typical Sections for Placement of Single and Multi-Column Signs
544	580-001	Landscape Installation	17355	700-102	Special Sign Details
<b>Traffic Control Signals and Devices</b>			17350	700-104	Signing for Motorist Services
17721	630-001	Conduit Installation Details	17351	700-105	Welcome Center Signing
17727	634-001	Signal Cable and Span Wire Installation Details	17359	700-106	Rural Narrow Bridge Treatment
17733	634-002	Aerial Interconnect	17357	700-107	Bridge Weight Restrictions
17700	635-001	Pull and Splice Boxes	17328	700-108	Typical Signing for Truck Weigh and Inspection Stations
17504	639-001	Service Point Details	17349	700-109	Traffic Controls for Street Terminations
17736	639-002	Electric Power Service	13417	700-110	Mounting Exit Number Panels to Signs
17725	641-010	Concrete Poles	11862	700-120	Enhanced Highway Signing Assemblies
18113	641-020	Concrete CCTV Pole	<b>Pavement Markings</b>		
17723	649-010	Steel Strain Pole	17352	706-001	Typical Placement of Raised Pavement Markers
18111	649-020	Steel CCTV Pole	17346	711-001	Pavement Markings
17743	649-030	Standard Mast Arm Assemblies	17347	711-002	Bicycle Markings
17745	649-031	Mast Arm Assemblies	17345	711-003	Interchange Markings
17764	653-001	Pedestrian Control Signal Installation Details	<b>Highway Lighting Systems</b>		
11862	654-001	Rectangular Rapid Flashing Beacon Assembly	17500	715-001	Conventional Lighting
17356	659-010	Span Wire Mounted Sign Details	17515	715-002	Standard Aluminum Lighting
18110	659-020	Camera Mounting Details	17502	715-010	High Mast Lighting
17781	660-001	Vehicle Loop Installation Details	<b>Railroad Crossing</b>		
			560	830-T01	Railroad (Grade) Crossings