

Typical Work Zone Traffic Control Standard Drawings for Maintenance Operations

Work Zone Signing

Drawing No. 105-01 Advance Construction Signs Portable Sign Supports Installation.....	WZS-1
Drawing No. 105-10 Work Zone Signing Ground Mounted U-Channel Posts Breakaway System Installation.....	WZS-3
Drawing No. 105-20 Work Zone Signing Ground Mounted U-Channel Posts U-Channel Splice.....	WZS-5
Drawing No. 105-30 Work Zone Signing Square Steel Tube Posts 12 Gauge / 14 Gauge Sign Supports 12 Gauge Ground Support Direct Embedment.....	WZS-7
Drawing No. 105-40 Work Zone Signing Square Steel Tube Posts Typical Single Post Installations Sign Panel Square Footage of 14 Square Feet or Less.....	WZS-9
Drawing No. 105-50 Work Zone Signing Square Steel Tube Posts Single Post Installations 12 Gauge Sign Support 7 Gauge Breakaway Anchors Sign Panels Greater Than 14 Square Feet Up to 20 Square Feet.....	WZS-11
Drawing No. 105-60 Work Zone Signing Square Steel Tube Posts Typical Single Post Installations Sign Panels Greater Than 14 Square Feet Up to 20 Square Feet.....	WZS-13

Lane Closure Installation & Removal

Drawing Nos. 305-01-A 305-01-B 305-02 305-03 Lane Closure Installation & Removal Multilane Primary & Secondary Routes Interstate Routes.....	LCIR-1 LCIR-1 LCIR-2
Installation.....	LCIR-1
Removal.....	LCIR-2

Flagging Operations

Drawing No. 405-01-A	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes.....	FO-1
Scenario – Standard Drawing.....	FO-1
Drawing No. 405-01-B(1)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
Stop Sign Controlled Side Roads.....	FO-3
Drawing No. 405-01-B(2)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
4-Way Stop Controlled Intersection.....	FO-5
Drawing No. 405-01-C(1)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
Traffic Signal Controlled Intersection	
Law Enforcement Officer(s).....	FO-7
Drawing No. 405-01-C(2)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
Traffic Signal Controlled Intersection	
Flaggers.....	FO-9
Drawing No. 405-01-D(1)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
Work Activity Area	
Beginning at an	
Intersection with a	
Two-Lane Two-Way Roadway	
Departure Lane.....	FO-11
Drawing No. 405-01-D(2)	
Flagging Operations	
Multiple Flaggers	
Two-Lane Two-Way Roadways	
Primary & Secondary Routes	
Work Activity Area	
Terminating at an	
Intersection with a	
Two-Lane Two-Way Roadway	
Approach Lane.....	FO-15

Drawing Nos. 405-01-E(1)
Flagging Operations
Multiple Flaggers
Two-Lane Two-Way Roadways
Primary & Secondary Routes
Work Activity Area
Intersections with
Low Speed
< / = 35 MPH
Multilane Roadways..... **FO-18**

Drawing Nos. 405-01-E(2)
Flagging Operations
Multiple Flaggers
Two-Lane Two-Way Roadways
Primary & Secondary Routes
Work Activity Area
Intersections with
Low Speed
< / = 35 MPH
Multilane Roadways..... **FO-20**

Drawing Nos. 405-01-F(1)
Flagging Operations
Multiple Flaggers
Two-Lane Two-Way Roadways
Primary & Secondary Routes
Work Activity Area
Intersections with
Intermediate Speed to High Speed
40 MPH – 60 MPH
Multilane Roadways..... **FO-22**

Drawing Nos. 405-01-F(2)
Flagging Operations
Multiple Flaggers
Two-Lane Two-Way Roadways
Primary & Secondary Routes
Work Activity Area
Intersections with
Intermediate Speed to High Speed
40 MPH – 60 MPH
Multilane Roadways..... **FO-25**

Drawing No. 405-02
Flagging Operations
Single Flagger Operation
Low Volume
Low Speed to Intermediate Speed
Two-Lane Two-Way Roadways
Primary & Secondary Routes..... **FO-27**

Lane Closures
Primary & Secondary Routes

Drawing No. 505-01
Lane Closure
Low Speed Multilane
< / = 35 MPH
Primary & Secondary Routes..... **LCPS-1**

Drawing No. 505-02 Dual Lane Closure Low Speed Multilane < / = 35 MPH Primary & Secondary Routes.....	LCPS-4
Drawing No. 505-03-A Lane Closure Intermediate Speed to High Speed 40 MPH – 60 MPH Multilane Primary & Secondary Routes.....	LCPS-7
Drawing No. 505-03-B Lane Closure Intermediate Speed to High Speed 40 MPH – 60 MPH Exit / Entrance Ramps Multilane Primary & Secondary Routes.....	LCPS-10
Drawing Nos. 505-04-A 505-04-B Dual Lane Closure Intermediate Speed to High Speed 40 MPH – 60 MPH Transition / Activity Areas / Advance Warning Area Multilane Primary & Secondary Routes.....	LCPS-12
Drawing No. 505-04-C Dual Lane Closure Intermediate Speed to High Speed 40 MPH – 60 MPH Exit / Entrance Ramps Multilane Primary & Secondary Routes.....	LCPS-16

**Lane Closures
Interstate Routes**

Drawing No. 510-01-A Lane Closure Interstate Routes.....	LCI-1
Drawing No. 510-01-B Lane Closure Exit / Entrance Ramps Interstate Routes.....	LCI-4
Drawing Nos. 510-02-A 510-02-B Dual Lane Closure Transition / Activity Areas / Advance Warning Area Interstate Routes.....	LCI-6
Drawing No. 510-02-C Dual Lane Closure Exit / Entrance Ramps Interstate Routes.....	LCI-10

**Shoulder Closures
Primary & Secondary Routes**

Drawing No. 515-01-A Right Shoulder Closure (Case I / Case II) Two-Lane Two-Way Roadway Primary & Secondary Routes.....	SCPS-1
Drawing No. 515-01-B Right Shoulder Closure (Case I / Case II) Multilane Primary & Secondary Routes.....	SCPS-3
Drawing No. 515-01-C Right Shoulder Closure Low Speed < / = 35 MPH Primary & Secondary Routes (Minor Encroachment).....	SCPS-5
Drawing No. 515-01-D Left Shoulder Closure Low Speed < / = 35 MPH Multilane Divided Highway with Grassed Earth Median Primary & Secondary Routes (Minor Encroachment).....	SCPS-7
Drawing No. 515-02 Left Shoulder Closure (Case I / Case I) Multilane Primary & Secondary Routes.....	SCPS-9
Drawing No. 515-03 Left Shoulder Closure (Case I / Case II) Multilane Primary & Secondary Routes.....	SCPS-11

**Shoulder Closures
Interstate Routes**

Drawing No. 520-01 Right Shoulder Closure (Case I / Case II) Interstate Routes.....	SCI-1
Drawing No. 520-02 Left Shoulder Closure (Case I / Case I) Narrow Median Interstate Routes.....	SCI-3
Drawing No. 520-03 Left Shoulder Closure (Case I / Case I) Wide Median Interstate Routes.....	SCI-5

Drawing No. 520-04
 Left Shoulder Closure
 (Case I / Case II)
 Wide Median
 Interstate Routes..... SCI-7

Drawing No. 520-05
 Left Shoulder Closure
 (Case II / Case II)
 Wide Median
 Interstate Routes..... SCI-9

Drawing No. 520-06
 Gore Area
 Interstate Routes..... SCI-11

**Mobilized Shoulder Operations
 Primary & Secondary Routes**

Drawing No. 525-01
 Mobilized Shoulder Operations
 Road Machinery – Minor Encroachment
 Primary & Secondary Routes..... MSOPS-1

Drawing No. 525-02
 Mobilized Shoulder Operations
 Pedestrian Workers – No Encroachment
 Road Machinery – Minor Encroachment
 Primary & Secondary Routes..... MSOPS-3

Drawing No. 525-03
 Mobilized Shoulder Operations
 Road Machinery – Major Encroachment
 Primary & Secondary Routes..... MSOPS-5

Drawing No. 525-04
 Mobilized Shoulder Operations
 Intermediate Speed to High Speed
 40 MPH – 60 MPH
 Pedestrian Workers - Major Encroachment
 Road Machinery - Major Encroachment
 Multilane
 Primary & Secondary Routes..... MSOP-7

**Mobilized Shoulder Operations
 Interstate Routes**

Drawing No. 530-01
 Mobilized Shoulder Operations
 Road Machinery – Major Encroachment
 Interstate Routes..... MSOI-1

Drawing No. 530-02
 Mobilized Shoulder Operations
 Pedestrian Workers – Minor Encroachment Upon Paved Shoulder
 Interstate Routes..... MSOI-3

Drawing No. 530-03
 Mobilized Shoulder Operations
 Pedestrian Workers – Major Encroachment Upon Paved Shoulder
 Road Machinery – Major Encroachment Upon Travel Lane
 Interstate Routes..... MSOI-5

Mobile Operations Intermittent

Drawing Nos. 535-01-A 535-01-B		
Mobile Operations Intermittent Stopping Sight Distance Vehicle Train Requirements Vertical Curve (Hill) / Horizontal Curve (Curve).....		MOI-1
Vehicle Train Requirements.....		MOI-2
Single Work Vehicle.....		MOI-2
Shadow Vehicle.....		MOI-2
 Drawing Nos. 535-02-A 535-02-B		
Mobile Operations Intermittent Low Volume Low Speed / Intermediate Speed to High Speed Primary & Secondary Routes.....		MOI-5
 Drawing Nos. 535-03-A 535-03-B		
Mobile Operations Intermittent Intermediate Volume Low Speed / Intermediate Speed to High Speed Primary & Secondary Routes.....		MOI-8
 Drawing No. 535-04-A		
Mobile Operations Intermittent High Volume Low Speed Primary & Secondary Routes.....		MOI-11
 Drawing No. 535-04-B		
Mobile Operations Intermittent High Volume Low Speed Interior Travel Lane Operations Primary & Secondary Routes.....		MOI-13
 Drawing No. 535-04-C		
Mobile Operations Intermittent High Volume Intermediate Speed to High Speed Primary & Secondary Routes.....		MOI-15
 Drawing No. 535-04-D(1)		
Mobile Operations Intermittent High Volume High Speed Interstate Routes.....		MOI-17
 Drawing No. 535-04-D(2)		
Mobile Operations Intermittent Pedestrian Workers Interstate Routes (Major Encroachment).....		MOI-19

Drawing No. 535-04-E Mobile Operations Intermittent High Volume High Speed Interior Travel Lane Operations Interstate Routes.....	MOI-22
---	--------

**Mobile Operations
Continuous**

Drawing No. 540-01 Mobile Operations Continuous Two-Lane Two-Way Roadways Primary & Secondary Routes.....	MOC-1
---	-------

Drawing Nos. 540-02-A 540-02-B Mobile Operations Continuous Multilane Primary & Secondary Routes Earth Median with Grassed or Paved Shoulders / Paved Median with Curb & Gutter.....	MOC-3
--	-------

Drawing Nos. 540-03-A 540-03-B Mobile Operations Continuous Interstate Routes Right Travel Lane / Left Travel Lane.....	MOC-6
--	-------

Drawing Nos. 540-04-A 540-04-B Mobile Operations Continuous Dual Lane Closures Interior Travel Lane Operations Interstate Routes Right Travel Lanes / Left Travel Lanes.....	MOC-9
---	-------

**Traffic Signal Work Operations
Signal Heads**

Drawing No. 605-01-A Traffic Signal Work Operations Vehicle Train Two-Lane Two-Way Roadway Primary & Secondary Routes Traffic Signal Work Activities Completed in 15 Minutes or Less.....	TSSH-1
--	--------

Drawing No. 605-01-B Traffic Signal Work Operations Vehicle Train Two-Lane Two-Way Roadway Primary & Secondary Routes Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes.....	TSSH-3
--	--------

Drawing No. 605-02-A Traffic Signal Work Operations Vehicle Train Right Lane Closure Multilane Primary & Secondary Routes Traffic Signal Work Activities Completed in 15 Minutes or Less.....	TSSH-5
Drawing No. 605-02-B Traffic Signal Work Operations Vehicle Train Right Lane Closure Multilane Primary & Secondary Routes Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes But Not More Than 60 Minutes.....	TSSH-7
Drawing No. 605-03-A Traffic Signal Work Operations Vehicle Train Interior Lane Closure Multilane Primary & Secondary Routes with 2 Through Lanes Traffic Signal Work Activities Completed in 15 Minutes or Less.....	TSSH-9
Drawing No. 605-03-B Traffic Signal Work Operations Vehicle Train Interior Lane Closure Multilane Primary & Secondary Routes with 2 Through Lanes Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes But Not More Than 60 Minutes.....	TSSH-11
Drawing No. 605-04-A Traffic Signal Work Operations Vehicle Train Interior Lane Closure Multilane Primary & Secondary Routes with 3 or More Through Lanes Traffic Signal Work Activities Completed in 15 Minutes or Less.....	TSSH-13
Drawing No. 605-04-B Traffic Signal Work Operations Vehicle Train Interior Lane Closure Multilane Primary & Secondary Routes with 3 or More Through Lanes Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes But Not More Than 60 Minutes.....	TSSH-15
Drawing No. 605-05-A(1) Traffic Signal Work Operations Side Street Treatment Dual Left Turn Lanes Work Vehicle – Right Lane Multilane Primary & Secondary Routes Traffic Signal Work Activities Completed in 15 Minutes or Less.....	TSSH-17

Drawing No. 605-05-A(2)
 Traffic Signal Work Operations
 Side Street Treatment
 Dual Left Turn Lanes
 Work Vehicle – Left Lane
 Multilane
 Primary & Secondary Routes
 Traffic Signal Work Activities Completed in 15 Minutes or Less..... TSSH-19

Drawing No. 605-05-B(1)
 Traffic Signal Work Operations
 Side Street Treatment
 Dual Left Turn Lanes
 Work Vehicle – Right Lane
 Multilane
 Primary & Secondary Routes
 Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes
 But Not More Than 60 Minutes..... TSSH-21

Drawing No. 605-05-B(2)
 Traffic Signal Work Operations
 Side Street Treatment
 Dual Left Turn Lanes
 Work Vehicle – Left Lane
 Multilane
 Primary & Secondary Routes
 Traffic Signal Work Activities That Exceed a Time Duration of 15 Minutes
 But Not More Than 60 Minutes..... TSSH-23

**Traffic Signal Work Operations
 Loops**

Drawing No. 606-01
 Traffic Signal Work Operations
 Vehicle Train
 Two-Lane Two-Way Roadway
 Primary & Secondary Routes
 Traffic Signal Detection Loop Installation
 Stop Bar Loops..... TSL-1

Drawing No. 606-02
 Traffic Signal Work Operations
 Vehicle Train
 Two-Lane Two-Way Roadway
 Primary & Secondary Routes
 Traffic Signal Detection Loop Installation
 Set Back Loops..... TSL-3

Drawing No. 606-03
 Traffic Signal Work Operations
 Vehicle Train
 Right Lane Closure
 Multilane
 Primary & Secondary Routes
 Traffic Signal Detection Loop Installation
 Stop Bar Loops..... TSL-5

Drawing No. 606-04-A
 Traffic Signal Work Operations
 Vehicle Train
 Interior Lane Closure
 Multilane
 Primary & Secondary Routes with 2 Through Lanes
 Traffic Signal Detection Loop Installation
 Stop Bar Loops..... TSL-7

Drawing No. 606-04-B
 Traffic Signal Work Operations
 Vehicle Train
 Interior Lane Closure
 Multilane
 Primary & Secondary Routes with 2 Through Lanes
 Connecting The Stop Bar Loop to The Pull Box..... TSL-9

Drawing No. 606-05-A
 Traffic Signal Work Operations
 Vehicle Train
 Interior Lane Closure
 Multilane
 Primary & Secondary Routes with 3 or More Through Lanes
 Traffic Signal Detection Loop Installation
 Stop Bar Loops..... TSL-11

Drawing No. 606-05-B
 Traffic Signal Work Operations
 Vehicle Train
 Interior Lane Closure
 Multilane
 Primary & Secondary Routes with 3 or More Through Lanes
 Connecting The Stop Bar Loop to The Pull Box..... TSL-13

Drawing No. 606-06
 Traffic Signal Work Operations
 Vehicle Train
 Right Lane Closure
 Multilane
 Primary & Secondary Routes with 2 Through Lanes
 Traffic Signal Detection Loop Installation
 Set Back Loops..... TSL-15

Drawing No. 606-07
 Traffic Signal Work Operations
 Vehicle Train
 Right Lane Closure
 Multilane
 Primary & Secondary Routes with 3 or More Through Lanes
 Traffic Signal Detection Loop Installation
 Set Back Loops..... TSL-17

Pavement Marking Application Operations

Drawing No. 610-01
 Pavement Marking Application
 Intersections
 Vehicle Train
 Two-Lane Two-Way Roadway
 Primary & Secondary Routes..... PMO-1

Drawing No. 610-02
 Pavement Marking Application
 Intersections
 Vehicle Train
 Right Lane Closure
 Multilane..... PMO-3

Drawing No. 610-03
 Pavement Marking Application
 Intersections
 Vehicle Train
 Interior Lane Closure
 Multilane
 2 Through Lanes..... PMO-5

Drawing No. 610-04
 Pavement Marking Application
 Intersections
 Vehicle Train
 Interior Lane Closure
 Multilane
 2 or More Through Lanes..... PMO-7

**Extended
 Road Closures**

Drawing No. 705-01
 Extended Road Closure of Roadway..... ERC-1

Drawing No. 705-02
 Extended Road Closure for Bridge Work..... ERC-3

Detour Signing

Drawing No. 805-01
 Detour Signing for Primary and Interstate Routes..... DS-1

Drawing No. 805-02
 Detour Signing for Secondary Routes..... DS-3