

PERFORMANCE ACTIVITY 605

FLASHERS

WORK DESCRIPTION 1	Trouble Call
WORK DESCRIPTION 2	Rebuild
WORK DESCRIPTION 3	Install
WORK DESCRIPTION 4	Revise
WORK DESCRIPTION 5	Repair
WORK DESCRIPTION 6	Preventative Maintenance Inspection
WORK DESCRIPTION 7	Contract Inspection

SHOULDER - STRUCTURE MOUNTED
OVERHEAD - SPAN WIRE MOUNTED

605 FLASHERS

ACTIVITY DESCRIPTION

Install and maintain flashers.

WORK DESCRIPTION 1 Trouble Call
WORK DESCRIPTION 2 Rebuild
WORK DESCRIPTION 3 Install
WORK DESCRIPTION 4 Revise
WORK DESCRIPTION 5 Repair
WORK DESCRIPTION 6 Preventative Maintenance Inspection
WORK DESCRIPTION 7 Contract Inspection

SHOULDER - STRUCTURE MOUNTED

TRAFFIC CONTROL

TWO-LANE TWO-WAY ROADWAYS

Utilize intermittent mobile operations for these work activities under the following conditions:

Condition 1 - The maximum time duration of a stop is 15 minutes if the work vehicle and/or the shadow vehicle encroach upon a travel lane more than 2 feet.

Condition 2 - The maximum time duration of a stop is 30 minutes if the work vehicle and/or the shadow vehicle encroach upon a travel lane 2 feet or less.

During intermittent mobile operations, utilize a shadow vehicle when the stopping sight distance interval between the work vehicle or road machinery and an approaching motorist is unavailable based upon the posted regulatory speed limit of the work location.

Utilize shoulder closures for work activities that cannot be conducted in 30 minutes or less and do require equipment, personnel, materials, or any vehicles to encroach upon a travel lane or within 1 foot of a travel lane. When the work may be performed without the necessity for equipment, personnel, materials, or vehicles to encroach within 1 foot of the adjacent travel, utilize right shoulder closures.

Flagging operations are required for work activities that cannot be conducted under the conditions required for intermittent mobile operations or right shoulder closures.

TYPICAL DRAWING APPLICATIONS

FLAGGING OPERATIONS

DRAWING 405-01-A	-	FLAGGING OPERATIONS MULTIPLE FLAGGERS TWO-LANE TWO-WAY ROADWAYS PRIMARY & SECONDARY ROUTES
DRAWING 405-01-B(1)	-	FLAGGING OPERATIONS MULTIPLE FLAGGERS TWO-LANE TWO-WAY ROADWAYS PRIMARY & SECONDARY ROUTES STOP SIGN CONTROLLED SIDE ROADS
DRAWING 405-01-B(2)	-	FLAGGING OPERATIONS MULTIPLE FLAGGERS TWO-LANE TWO-WAY ROADWAYS PRIMARY & SECONDARY ROUTES 4-WAY STOP CONTROLLED INTERSECTION

- DRAWING 405-01-C(1)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL CONTROLLED INTERSECTION
LAW ENFORCEMENT OFFICER(S)
- DRAWING 405-01-C(2)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL CONTROLLED INTERSECTION
FLAGGERS
- DRAWING 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
- DRAWING 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
- DRAWING 405-01-E(1)**
DRAWING 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
- DRAWING 405-01-F(1)**
DRAWING 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
- DRAWING 405-02** - FLAGGING OPERATIONS
SINGLE FLAGGER OPERATION
LOW VOLUME
LOW SPEED TO INTERMEDIATE SPEED
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES

MOBILE OPERATIONS – INTERMITTENT

DRAWING 535-01-A	-	MOBILE OPERATIONS – INTERMITTENT STOPPING SIGHT DISTANCE VEHICLE TRAIN REQUIREMENTS VERTICAL CURVE (HILL)
DRAWING 535-01-B	-	MOBILE OPERATIONS – INTERMITTENT STOPPING SIGHT DISTANCE VEHICLE TRAIN REQUIREMENTS HORIZONTAL CURVE (CURVE)
DRAWING 535-02-A	-	MOBILE OPERATIONS – INTERMITTENT LOW VOLUME LOW SPEED PRIMARY & SECONDARY ROUTES
DRAWING 535-02-B	-	MOBILE OPERATIONS – INTERMITTENT LOW VOLUME INTERMEDIATE SPEED TO HIGH SPEED PRIMARY & SECONDARY ROUTES
DRAWING 535-03-A	-	MOBILE OPERATIONS – INTERMITTENT INTERMEDIATE VOLUME LOW SPEED PRIMARY & SECONDARY ROUTES
DRAWING 535-03-B	-	MOBILE OPERATIONS – INTERMITTENT INTERMEDIATE VOLUME INTERMEDIATE SPEED TO HIGH SPEED PRIMARY & SECONDARY ROUTES
DRAWING 535-04-A	-	MOBILE OPERATIONS – INTERMITTENT HIGH VOLUME LOW SPEED PRIMARY & SECONDARY ROUTES
DRAWING 535-04-B	-	MOBILE OPERATIONS – INTERMITTENT HIGH VOLUME LOW SPEED INTERIOR TRAVEL LANE OPERATIONS PRIMARY & SECONDARY ROUTES
DRAWING 535-04-C	-	MOBILE OPERATIONS – INTERMITTENT HIGH VOLUME INTERMEDIATE SPEED TO HIGH SPEED PRIMARY & SECONDARY ROUTES

MULTILANE SECONDARY AND PRIMARY ROADWAYS

TYPICAL DRAWING APPLICATIONS

Utilize intermittent mobile operations for these work activities under the following conditions:

Condition 1 - The maximum time duration of a stop is 15 minutes if the work vehicle and/or the shadow vehicle encroach upon a travel lane more than 2 feet.

Condition 2 - The maximum time duration of a stop is 30 minutes if the work vehicle and/or the shadow vehicle encroach upon a travel lane 2 feet or less.

During intermittent mobile operations, utilize a shadow vehicle when the stopping sight distance interval between the work vehicle or road machinery and an approaching motorist is unavailable based upon the posted regulatory speed limit of the work location.

Utilize shoulder closures for work activities that cannot be conducted in 30 minutes or less and do require equipment, personnel, materials, or any vehicles to encroach upon a travel lane or within 1 foot of a travel lane. When the work may be performed without the necessity for equipment, personnel, materials, or vehicles to encroach within 1 foot of the adjacent travel, utilize right shoulder closures.

Lane closures are required for work activities that cannot be conducted under the conditions required for intermittent mobile operations or standard shoulder closures.

TYPICAL DRAWING APPLICATIONS

LANE CLOSURES

- | | | |
|-------------------------|---|--|
| DRAWING 505-01 | - | LANE CLOSURE
LOW SPEED MULTILANE
< / = 35 MPH
PRIMARY & SECONDARY ROUTES |
| DRAWING 505-03-A | - | LANE CLOSURE
INTERMEDIATE SPEED TO HIGH SPEED
40 MPH - 60 MPH
MULTILANE
PRIMARY & SECONDARY ROUTES |

MOBILE OPERATIONS – INTERMITTENT

- | | | |
|-------------------------|---|---|
| DRAWING 535-01-A | - | MOBILE OPERATIONS – INTERMITTENT
STOPPING SIGHT DISTANCE
VEHICLE TRAIN REQUIREMENTS
VERTICAL CURVE (HILL) |
| DRAWING 535-01-B | - | MOBILE OPERATIONS – INTERMITTENT
STOPPING SIGHT DISTANCE
VEHICLE TRAIN REQUIREMENTS
HORIZONTAL CURVE (CURVE) |
| DRAWING 535-03-A | - | MOBILE OPERATIONS – INTERMITTENT
INTERMEDIATE VOLUME
LOW SPEED
PRIMARY & SECONDARY ROUTES |
| DRAWING 535-03-B | - | MOBILE OPERATIONS – INTERMITTENT
INTERMEDIATE VOLUME
INTERMEDIATE SPEED TO HIGH SPEED
PRIMARY & SECONDARY ROUTES |
| DRAWING 535-04-A | - | MOBILE OPERATIONS – INTERMITTENT
HIGH VOLUME
LOW SPEED
PRIMARY & SECONDARY ROUTES |
| DRAWING 535-04-B | - | MOBILE OPERATIONS – INTERMITTENT
HIGH VOLUME
LOW SPEED
INTERIOR TRAVEL LANE OPERATIONS
PRIMARY & SECONDARY ROUTES |
| DRAWING 535-04-C | - | MOBILE OPERATIONS – INTERMITTENT
HIGH VOLUME
INTERMEDIATE SPEED TO HIGH SPEED
PRIMARY & SECONDARY ROUTES |

INTERSTATE ROADWAYS

Lane closures are required for work activities that require equipment, personnel, materials, or any vehicles to encroach upon a travel lane or within 10 feet of a travel lane. When the work may be performed without the necessity for equipment, personnel, materials, or vehicles to encroach within 10 feet of an adjacent travel, utilize shoulder closures.

TYPICAL DRAWING APPLICATIONS

LANE CLOSURES

- DRAWING 510-01-A - LANE CLOSURE
INTERSTATE ROUTES
- DRAWING 510-01-B - LANE CLOSURE
EXIT / ENTRANCE RAMPS
INTERSTATE ROUTES

SHOULDER CLOSURES

- DRAWING 520-01 - RIGHT SHOULDER CLOSURE
CASE I / CASE II
INTERSTATE ROUTES
- DRAWING 520-02 - LEFT SHOULDER CLOSURE
CASE I / CASE I
NARROW MEDIAN
INTERSTATE ROUTES
- DRAWING 520-03 - LEFT SHOULDER CLOSURE
CASE I / CASE I
WIDE MEDIAN
INTERSTATE ROUTES
- DRAWING 520-04 - LEFT SHOULDER CLOSURE
CASE I / CASE II
WIDE MEDIAN
INTERSTATE ROUTES
- DRAWING 520-05 - LEFT SHOULDER CLOSURE
CASE II / CASE II
WIDE MEDIAN
INTERSTATE ROUTES

OVERHEAD - SPAN WIRE MOUNTED

TRAFFIC CONTROL

TWO-LANE TWO-WAY ROADWAYS

Utilize the traffic control set-ups for traffic signal work operations on two-lane two-way roadways.

TYPICAL DRAWING APPLICATIONS

TRAFFIC SIGNAL WORK OPERATIONS

- DRAWING 605-01-A** - VEHICLE TRAIN
TWO-LANE TWO-WAY ROADWAY
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL WORK ACTIVITIES
COMPLETED IN 15 MINUTES OR LESS

- DRAWING 605-01-B** - VEHICLE TRAIN
TWO-LANE TWO-WAY ROADWAY
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL WORK ACTIVITIES
THAT EXCEED A TIME DURATION OF 15 MINUTES

MULTILANE SECONDARY AND PRIMARY ROADWAYS

Utilize the traffic control set-ups for traffic signal work operations on multilane roadways.

Flagging operations may be necessary to control the flow of traffic on intersecting two-lane two-way roadways.

FLAGGING OPERATIONS

- DRAWING 405-01-A** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES

- DRAWING 405-01-B(1)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
STOP SIGN CONTROLLED SIDE ROADS

- DRAWING 405-01-B(2)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
4-WAY STOP CONTROLLED INTERSECTION

- DRAWING 405-01-C(1)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL CONTROLLED INTERSECTION
LAW ENFORCEMENT OFFICER(S)

- DRAWING 405-01-C(2)** - FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL CONTROLLED INTERSECTION
FLAGGERS

- DRAWING 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
- DRAWING 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
- DRAWING 405-01-E(1)**
DRAWING 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
- DRAWING 405-01-F(1)**
DRAWING 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

TRAFFIC SIGNAL WORK OPERATIONS

- DRAWING 605-02-A** - VEHICLE TRAIN
RIGHT LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL WORK ACTIVITIES
COMPLETED IN 15 MINUTES OR LESS
- DRAWING 605-02-B** - VEHICLE TRAIN
RIGHT LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
TRAFFIC SIGNAL WORK ACTIVITIES
THAT EXCEED A TIME DURATION OF 15 MINUTES
- DRAWING 605-03-A** - VEHICLE TRAIN
INTERIOR LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
w/ 2 THROUGH LANES
TRAFFIC SIGNAL WORK ACTIVITIES
COMPLETED IN 15 MINUTES OR LESS

- DRAWING 605-03-B** - VEHICLE TRAIN
INTERIOR LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
w/ 2 THROUGH LANES
TRAFFIC SIGNAL WORK ACTIVITIES
THAT EXCEED A TIME DURATION OF 15 MINUTES
- DRAWING 605-04-A** - VEHICLE TRAIN
INTERIOR LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
w/ 3 OR MORE THROUGH LANES
TRAFFIC SIGNAL WORK ACTIVITIES
COMPLETED IN 15 MINUTES OR LESS
- DRAWING 605-04-B** - VEHICLE TRAIN
INTERIOR LANE CLOSURE
MULTILANE
PRIMARY & SECONDARY ROUTES
w/ 3 OR MORE THROUGH LANES
TRAFFIC SIGNAL WORK ACTIVITIES
THAT EXCEED A TIME DURATION OF 15 MINUTES

INTERSTATE ROADWAYS

Lane closures are required for work activities that require equipment, personnel, materials, or any vehicles to encroach upon a travel lane or within 10 feet of a travel lane. When the work may be performed without the necessity for equipment, personnel, materials, or vehicles to encroach within 10 feet of the adjacent travel, utilize shoulder closures.

TYPICAL DRAWING APPLICATIONS

LANE CLOSURES

- DRAWING 510-01-A** - LANE CLOSURE
INTERSTATE ROUTES
- DRAWING 510-01-B** - LANE CLOSURE
EXIT / ENTRANCE RAMPS
INTERSTATE ROUTES
- DRAWING 510-02-A** - DUAL LANE CLOSURE
TRANSITION / ACTIVITY AREAS
INTERSTATE ROUTES
- DRAWING 510-02-B** - DUAL LANE CLOSURE
ADVANCE WARNING AREA
INTERSTATE ROUTES
- DRAWING 510-02-C** - DUAL LANE CLOSURE
EXIT / ENTRANCE RAMPS
INTERSTATE ROUTES

SHOULDER CLOSURES

- DRAWING 520-01** - RIGHT SHOULDER CLOSURE
CASE I / CASE II
INTERSTATE ROUTES

- DRAWING 520-02** - LEFT SHOULDER CLOSURE
CASE I / CASE I
NARROW MEDIAN
INTERSTATE ROUTES

- DRAWING 520-03** - LEFT SHOULDER CLOSURE
CASE I / CASE I
WIDE MEDIAN
INTERSTATE ROUTES

- DRAWING 520-04** - LEFT SHOULDER CLOSURE
CASE I / CASE II
WIDE MEDIAN
INTERSTATE ROUTES

- DRAWING 520-05** - LEFT SHOULDER CLOSURE
CASE II / CASE II
WIDE MEDIAN
INTERSTATE ROUTES