# Index 102-655 Traffic Pacing

#### **ORIGINATION**

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#### COMMENTARY

Sheet 1: Changed notes

#### **COMMENTS AND RESPONSES**

BLACK = Industry Review Comments RED = Standard Plans Response

Name: Daniel Strickland Date: August 30,2018

#### COMMENT:

Industry has asked us to clarify this Index as it relates to the requirement for a "site specific traffic control plan". Please consider the following changes from Construction, which were also approved by Dave:

 Sheet 1 (Top left under "Traffic Pacing Guide"): Revise the 1<sup>st</sup> paragraph using the recommended changes (see screenshot below). Delete the 2<sup>nd</sup> paragraph with the exception of the last sentence. Add this sentence "Advance notification to the public shall begin at least one week in advance by using Changeable Message Signs." to the beginning of the last paragraph (see screenshot below). Consider revising the last sentence of the 1<sup>st</sup> paragraph to also include "movement of equipment around the project".



The day of the traffic pacing operation, the Changeable Message Sign messages shall be revised to indicate the activity will occur that night of The traffic pacing operation begins with a Traffic Control Officer Supervisor at the work site initiating the pacing operation in accordance with details shown on sheet 2. The intent is to keep traffic moving unless there is an emergency.

2. Sheet 1 (Top left under "NOTICE"): Add the following statement under the last sentence (see screenshot below). This should clarify that there is one work site that would need a specific TCP based on the criteria on sheet 3 of the SP.



## **RESPONSE:** Additional revisions have been made to the Index. Change made.

Name: Waruna Jayasooriyn Date: September 12, 2018

#### COMMENT:

As I understand, the proposed Index 102-655 is using calculation approach instead of site specific designs. But at bottom as I highlighted, this is referring to "PPM site specific designs" instead of FDM. Is this still applicable?

$F_{HV} = Heavy Vehicle Factor$ $F_{HV} = 1 + \left(\frac{1}{\sqrt{2}}\right)$ $P_{e} = \% Trucks$	$\frac{P}{P \cos x} \times 0.5$ For additional guidance for site specific a Preparation Manual, Volume 1 Chapter 10.	For additional guidance fo <mark>r site specific designs</mark> refer to the <mark>Plans</mark> Preparation Manual, Volume 1 Chapter 10.		
FY 2019-20	TRAFFIC PACING	INDEX	sheet	
STANDARD PLANS		102-655	3 of 3	

#### **RESPONSE:**

Thanks for pointing this out. It will be corrected with the appropriate FDM reference.

#### COMMENT:

As a heavy/highway/paving Contractor we have a significant challenge in getting our equipment to and from the work zone during night time operations. On Milling and Resurfacing projects this is further complicated as we must provide for this movement of equipment each shift moving into the lane closure and then at the end of each shift moving the equipment out of the lane closure to a safe staging area. Often, the safe staging area is along the outside ROW. That means that when working the inside lanes on a limited access roadway we have to cross the milling and paving equipment across the roadway into the closed inside lane(s). Typically, this is accomplished with the use of a Traffic Control Officer assisting a "slow roll" to allow sufficient time to cross equipment. Without a slow roll movement of equipment there are very limited options for moving equipment otherwise. When working under night-time lane closure restrictions we are not able to transport the equipment into the work zone since

the equipment (10 ' Pavers and Milling Machines) requires oversize load hauling and those movements are restricted to daylight hours. Transporting equipment after dark or before sunrise is not an option. Even when transporting equipment may be an option for day-time work, it is very inefficient as a lot of time is lost loading and unloading equipment within the closed lane. Allowed lane closure hours are already too restrictive, and losing 45 minutes at beginning and ending of each shift to unload/load equipment is prohibitive. Parking/Staging the equipment along the median of the roadway so as to avoid crossing the roadway is rarely an option on limited access freeways. Median guardrail or barrier wall often prevents such movements and there is typically not enough room in the median to park/stage equipment with consideration to the required clear zone. Consequently, it is typical to park equipment along the outside ROW or within infields at ramp locations and then walk equipment to the work zone lane closure set up for each work shift. There are also activities such as lane shifts, roadway inspections, asphalt coring etc. that require less than 15 minutes to conduct the work activity. These types of activities have typically been performed under the same type of "slow roll" operation using law enforcement officers to lead the traffic through the operation. This now becomes an issue with respect to the definition and use of "slow roll" or "traffic pacing".

#### **RESPONSE:**

General Note #6 has been added to address the request for short duration traffic pacing operations. Change made.

## TRAFFIC PACING GUIDE

Traffic pacing is a traffic control technique to slow but not stop traffic to facilitate short duration work operations without an elaborate and difficult detour or diversion. Traffic Control Officers pace or slow the traffic to a speed that provides approximately 20-30 minutes to perform the work operation. The Department has frequently used this technique for setting bridge beams, overhead sign structures and replacing overhead sign panels.



This Index represents the minimum requirements for traffic pacing operations on the State Highway System.

Develop a site specific traffic control plan for each pacing operation location.

# TRAFFIC PACING GENERAL NOTES

- covered until the pacing operation begins and covered when the pacing operation has ended.
- activity requiring the traffic pacing operation.
- attenuator(s) are not required.
- the police vehicles involved in the pacing operation.
- work area as determined by the project administrator or traffic control officer supervisor.
- distance values from the five minute column of the table on Sheet 3.

# TRAFFIC CONTROL PLANS OR TECHNICAL SPECIFICATION

- be immediately cleared, traffic can then be diverted off the facility.
- traffic control plans.

LAST REVISION 11/01/18

DESCRIPTION:



FY 2019-20 STANDARD PLANS

TRAFFIC PACING

## NOTICE

1. Install ROAD CLOSED (W20-3) signs approximately 1000' prior to the work area. These signs shall remain

2. Prior to requesting that the traffic control officer supervisor initiate the pacing operation, the contractor shall ensure that the necessary equipment is properly positioned (off the roadway) for the construction

3. Truck mounted attenuator(s) with changeable message sign(s) are required to protect workers and/or equipment positioned in a travel lane(s) at the work area during the pacing operation from an errant vehicle. If no workers and/or equipment are positioned in a travel lane(s) at the work area, truck mounted

4. A traffic control officer supervisor shall be stationed at the work area continuously throughout the pacing operation to insure radio communications between the contractor and/or the project administrator, and all

5. When more than one pacing operation is required in one work period the contractor shall allow sufficient time between pacing operations to permit traffic to return to normal speeds and flow. Additional time may be required between pacing operations to allow traffic to resume normal speeds and flow upstream of the

6. For work durations of less than five minutes, coordinate with traffic control officer to provide resources necessary for pacing traffic. Portable changeable message signs, truck-mounted attenuators, ROAD CLOSED signs, and site specific traffic control plans are not required for such operations. Use traffic pacing

1. The specific activities and locations, along with allowable times of day and days of the week, when pacing will be allowed should be clearly detailed in the traffic control plans or technical specification. If there are specific holiday or special event dates that, due to anticipated traffic congestion, pacing operations should not be allowed, these dates should also be spelled out in plans or specifications. When detailing the specific activities and locations of pacing activities, identify the minimum number of traffic control officers needed for each function and location of the pacing operation. If there are certain work activities that need to be completed prior to the contractor starting the work anticipated during the pacing operation, the activities should be clearly detailed in the plans or technical specification.

2. When developing a pacing plan, failsafe "stop points" should be identified for those work operations in which a construction problem could create a condition that could not be immediately cleared. A failsafe stop point is the last safe egress from the highway facility prior to traffic coming upon the work that is being completed during the operation. In the unlikely event that the work is not completed during the time estimated for the pacing, the plans or specification should direct the pacing to not proceed past the failsafe stop point until the highway is cleared. In the event of major construction problem that cannot

3. The traffic control plans or technical specification should require the contractor to submit a pacing plan in advance of the operation. The pacing plan should outline the contractors expected equipment and personnel, outline the operation, and include a contingency plan should any of the contractor's critical equipment break down. If the project includes a damage recovery clause, the traffic control plan or technical specification should be clear that the damage recovery applies to the pacing operation as well.

4. Changeable message signs shall be displayed one week prior to work using messages described in the traffic pacing plan. The number and location of changeable message signs shall be called out in the

INDEX	SHEET
102-655	1 of 3