### Queue Length Measured

**From Here (See Note 7)**

<table>
<thead>
<tr>
<th>QUEUE LENGTH (miles)</th>
<th>TRAFFIC SENSORS</th>
<th>PCMS 7</th>
<th>PCMS 6</th>
<th>PCMS 5</th>
<th>PCMS 4</th>
<th>PCMS 3</th>
<th>PCMS 2</th>
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<td>1 LANE CLOSED AHEAD</td>
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<td>SLOW OR STOPPED TRAFFIC</td>
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<td>2 MILE BACKUP</td>
<td># MINUTE DELAY</td>
<td>TRAFFIC MERGED AHEAD</td>
<td>USE ALL OPEN LANES</td>
<td>MINIMIZE DELAYS FOR ALL</td>
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**Legend**

1. Temporary Sign Location
2. Traffic Safety Drum
3. Portable Travel Time Reader
4. Sequential Arrow Sign
5. Portable Changeable Message Sign

**Freeway (2 Lanes): Smart Work Zone System for Single Left Lane Closure (Queues Up to 6 Miles)**

**Not to Scale**
DESIGNER NOTES:
A. INCLUDE THE "SMART WORK ZONE SYSTEM" GENERAL SPECIAL PROVISION THAT IS NOW AVAILABLE IN THE CONTRACT SPECIAL PROVISIONS.
B. IF ACTUAL QUEUES EXCEED 6 MILES, SMART WORK ZONE SYSTEM SHOULD BE MODIFIED. CONTACT FRED LINTZ (FINTZ@WSDOT.WA.GOV) OR STEVE HAAPALA (HAAPALS@WSDOT.WA.GOV) FOR ADDITIONAL GUIDANCE.
C. THESE TRAFFIC CONTROL PLANS ARE TYPICAL AND MAY BE MODIFIED FOR SITE SPECIFIC SITUATIONS AND/OR WSDOT REGION TRAFFIC PRACTICES.
D. TO MATCH THE GENERAL SPECIAL PROVISIONS, TRAFFIC SAFETY DRUMS SHOULD BE USED AS SHOWN IN THE TRAFFIC CONTROL PLAN.
E. WARNING LIGHTS ON CHANNELIZATION DEVICES ARE OPTIONAL; CONTACT REGION TRAFFIC OFFICES FOR THEIR POLICY.
F. VERTICAL PANEL CHANNELIZATION DEVICES SHALL NOT BE USED.

MODIFYING SMART WORK ZONE SYSTEM TRAFFIC CONTROL PLANS
IF ACTUAL QUEUES ARE LESS THAN EXPECTED, THIS SMART WORK ZONE SYSTEM CAN BE SIMPLIFIED:

IF QUEUES ARE LESS THAN 4 MILES:
* DELETE PCMS 1
* DELETE TRAFFIC SENSOR F

IF QUEUES ARE LESS THAN 3 MILES:
* SEE SIMPLER SYSTEM ON TC151 (HAAPALS@WSDOT.WA.GOV)

IF QUEUES ARE LESS THAN 1 MILE:
* SIMPLY USE PCMS 1 & PCMS 2 MESSAGES AS SHOWN IN TYPICAL FREEWAY LANE CLOSURE TRAFFIC CONTROL PLANS (SEE BELOW).

FREeways (2 Lanes): SMART WORK ZONE SYSTEM FOR SINGLE LEFT LANE CLOSURE
(QUEUES UP TO 6 MILES)

PCMS 1

PCMS 2

<table>
<thead>
<tr>
<th>SLOW TRAFFIC</th>
<th>NEXT</th>
<th># MILES</th>
<th>2.0 SEC</th>
<th>2.0 SEC</th>
<th>2.0 SEC</th>
<th>2.0 SEC</th>
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</thead>
<tbody>
<tr>
<td>LEFT 1 MILE</td>
<td>AHEAD</td>
<td>CLOSED</td>
<td>1</td>
<td>2</td>
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</table>

FIELD LOCATE AT LEAST 1/2 MILE IN ADVANCE OF PCMS 1.
RELOCATE AS NEEDED TO REMAIN 1 MILE IN ADVANCE OF QUEUE.
PCMS MAY BE TRUCK MOUNTED IF SO THE TRAFFIC CONTROL SYSTEM CHALLENGES, DRUMS ARE OPTIONAL.
RELOCATE WHEN QUEUES NO LONGER PRESENT.

* - APPROXIMATE QUEUE LENGTHS ROUNDED UP TO NEAREST MILE.

LOCATE PCMS PER WSDOT STANDARD SPECIFICATION 1-10.3C.

NOT TO SCALE

Washington State Department of Transportation

DESIGNER GUIDANCE

FILE NAME: C:\Users\LintzF\Desktop\Work Zone TCPs\161Fwy6MileSWZS1Lt.dgn
TIME: 13:32:20 PM
DATE: 6/20/2019
ENTERED BY: F. LINTZ
CHECKED BY: S. HAAPALA
PLOTTED BY: F. LINTZ
REGIONAL ADM.: HAAPALA STEVE
TC161

FILE 2

DATE: PLOT 2
LEFT RT DATE: 6/20/2019
RIGHT RT DATE: 6/20/2019

CONTRACT NO.: 10 WASH

REGIONAL ADM.:
PROJ. ENGR.
REVISION:
REGIONAL ADM.