OPEN LEFT EXIT-RAMP DETAIL

NOT TO SCALE

CLOSED LEFT EXIT-RAMP DETAIL

LEFT EXIT-RAMPS ARE TO REMAIN OPEN WITH THIS
SHIFTED DOUBLE RIGHT LANE CLOSURE CONFIGURATION

FREEWAY (3 LANES): DOUBLE RIGHT LANE CLOSURE WITH 5' MAX SHIFT ONTO LEFT SHOULDER
(60 MPH TO 45 MPH VARIABLE WORK ZONE SPEED LIMIT REDUCTION, 40 MPH ADVISORY SPEED)

NOT TO SCALE

TYPICAL TRAFFIC CONTROL PLANS

Washington State
Department of Transportation

TC257
**DESIGNER NOTES:**

A. SEE WSDOT PROJECT DELIVERY MEMO 19-01 IN REGARDS TO FREEWAY WORK ZONE VARIABLE REGULATORY SIGNALING SYSTEM (VRSS) DESIGN PLANS. PER VRSS DESIGN GUIDANCE IN REGARDS TO APPROVAL AUTHORITY INFORMATION FOR VARIABLE REGULATORY AND ADVISORY SPEEDS IN WORK ZONES. CONTACT WSDOT REGION TRAFFIC OFFICES FOR ADDITIONAL INFORMATION.

B. TEMPORARY LANE CONTROL PLANS ARE TYPICAL AND MAY BE MODIFIED FOR SITE SPECIFIC SITUATIONS AND/OR WSDOT REGION TRAFFIC PRACTICES. CONTACT WSDOT REGION TRAFFIC OFFICES FOR ANY MODIFICATIONS OF THE WORK ZONE VARIABLE REGULATORY SPEED LIMIT OR ADVISORY SPEED.

C. THE SIGN SIZES SHOWN ARE TYPICAL AND MEET MINIMUM SIZES REQUIRED PER MUTCD ON FREEWAYS FOR TEMPORARY TRAFFIC CONTROL.

D. IN REGARDS TO ADVANCED WARNING SIGN SPACING: PER MUTCD SECTION 6C.04 PARAGRAPHS 6-1 (THE 468-95-150) ARE RECOMMENDED DISTANCES AND INTENDED FOR GUIDANCE PURPOSES ONLY AND SHOULD BE ADJUSTED FOR FIELD CONDITIONS. REDUCING FREEWAY SIGN SPACING ON FREEWAY WORK ZONES TO MORE THAN 950' IS NOT RECOMMENDED. A MINIMUM SPACING OF 500' IS REQUIRED FOR EXIT RAMPS MAINLINES ONLY WHEN NECESSARY. ADVISORY SIGNS AND RADAR SPEED DISPLAY SIGNS CAN BE SPACED AT 300' +/-.

E. PER WAC 468-95-300, ALL SIGN SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS. ON-RAMP SIGNING IS TYPICALLY 200', EVEN IN SUBURBAN AND RURAL AREAS, BUT CAN BE REDUCED AS NEEDED TO FIT.

F. WHEN POSITIONED BEHIND CHANNELIZATION DEVICES, TEMPORARY SIGNS SHOULD BE MOUNTED AT 5' MINIMUM.

G. PER MUTCD 6H-13, USING PCMS FOR FREEWAY LANE CLOSURES IS NOT REQUIRED. PCMS IS 1 OPTIONAL AND INTENDED ONLY TO BE USED WHEN WORK ZONE TRAFFIC QUEUES ARE EXPECTED TO EXTEND BEYOND THE W3-1 SIGN. FOR ADDITIONAL INFORMATION REGARDING ACTIVE QUEUE DETECTION TECHNOLOGY, CONTACT STEVE HAAPALA & LINTZ. (SOUTH LEAF ON FILE, B-157)

H. THE RADAR SPEED DISPLAY SIGN (RSS) IS REQUIRED FOR FREEWAY LANE CLOSURES WHEN A SINGLE OPEN LANE IS SHUTTLED ON THE SHOULDER.

I. WARNING LIGHTS ON CHANNELIZATION DEVICES ARE OPTIONAL; CONTACT REGION TRAFFIC OFFICES FOR THEIR SPECIFIC PRACTICES.

J. CHANNELIZATION DEVICES MAY BE MODIFIED FROM THOSE SHOWN ON THESE TYPICAL PLANS. PER MUTCD, THE MINIMUM REQUIRED DEVICE ON HIGH-SPEED ROADSWAY IS A 20' REFLECTIVE CONE.

K. VERTICAL PANEL CHANNELIZATION DEVICES SHALL NOT BE USED.

L. CHANNELIZATION DEVICE SPACING TABLE IS BASED ON WAC 468-95-301; HOWEVER, DEVICE SPACING MAY BE MODIFIED.

M. TAPER LENGTHS ARE BASED ON MUTCD TABLES 6C-3 AND 6C-4. TAPER LENGTHS SHALL MEET OR EXCEED THIS SPECIFIED DISTANCE WITHOUT EXCEPTION. THE TAPER DISTANCES PROVIDED ON THIS TYPICAL TRAFFIC CONTROL PLAN WERE BASED ON THE ASSUMPTION OF 12 LANES BEING SHUTTLED. OTHER TAPER DISTANCES MAY BE REQUIRED BASED ON NUMBER OF LANES SHUTTLED. TAPER LENGTHS MAY NEED TO BE MODIFIED FOR 5-Foot MAXIMUM SHIFT.

N. PER MUTCD FIGURE 6H-13, SEQUENTIAL ARROW BOARDS SHALL BE USED FOR ALL FREEWAY LANE CLOSURES. EACH LANE CLOSURE SHALL HAVE A SEPARATE SEQUENTIAL ARROW BOARD. SEQUENTIAL ARROW BOARDS SHALL NOT BE USED FOR LANE SHIFTS, RAMP SHIFTS, OR LANE BLIND SHIFTS.

O. THE "2L" TANGENT BETWEEN LANE CLOSURE TAPERS MAY BE REDUCED TO "L" IN TIGHT GEOMETRIC SITUATIONS, BUT "2L" SHOULD BE OBTAINED WHEN POSSIBLE.

P. PER MUTCD FIGURE 6H-13, LONGITUDINAL BUFFER SPACES IS OPTIONAL. THEIR USE IS RECOMMENDED WHEN FEASIBLE. IF THE DESIGN BUFFER IS NOT AVAILABLE, THE BUFFER SHOULD BE MAXIMIZED. THE BUFFER CAN EXCEED THE DESIGN BUFFER DISTANCE (THIS "MIN" IS USED).

Q. THE TRANSVERSE BUFFER (LATERALLY BETWEEN TRAFFIC LANE AND WORK AREA) IS RECOMMENDED AS 2-FOOT BUT MAY BE INCREASED AS DESIRED.

R. PER MUTCD FIGURE 6H-13, TRANSPORTABLE ATTENUATORS ARE OPTIONAL. THEIR USE IS STRONGLY RECOMMENDED. TRANSPORTABLE ATTENUATORS SHOULD BE PLACED INreneasuneCNO s FREEWAY LANE Closures TRANSPORTABLE ATTENUATORS CAN BE PLACED BETWEEN THE ADJACENT FREEWAY LANE TO TRAFFIC PRIOR TO SEPARATE WORK AREAS, PARTICULARLY AFTER OPEN TEMPORARY EXISTING LANE SHIFTS. TRANSPORTABLE ATTENUATORS CAN BE PLACED IN THE ADJACENT CLOSED LANES EXCEPT THE CLOSED LANE ADJACENT TO TRAFFIC.

S. PLACING CHANNELING DEVICES TRANSVERSELY (AT 45° AND 5-FOOT SPACING) IS AN EFFECTIVE TECHNIQUE TO MOVE ERRANT DRIVERS BACK OUT OF CLOSED LANES AND SHOULDERS.

T. TEMPORARY SIGNS CAN BE PLACED ADJACENT TO THE PAYMENT RIDER (SIGN IS NOT TO PROTRUDE INTO TRAVEL WAY) INSTEAD OF WITHIN THE CLOSED LANES IF CONFLICTING WITH WORK OPERATIONS.

U. PER MUTCD FIGURE 6H-13, THE REOPENING TAPER IS OPTIONAL.

V. A TAPERED TEMPORARY EXIT-RAMP IS TYPICALLY USED WITH A TYPICAL 20.1 TAPER RATE.

W. THE ON-RAMP SHIFT CAN OCCUR THROUGH THE PAVED GORE INSTEAD OF AT THE END OF THE GORE PAVEMENT MARKINGS.

X. WHEN SHIFTING TRAFFIC INTO CLOSED SHOULDER OR ACROSS CLEARED PAVEMENT GORES, VERIFY CROSS-SLOPE IS TRAVERSIBLE. PAVEMENT THICKNESS IS ADEQUATE. CATCH BASINNIS BOXES ARE TRAFFIC BEARING TYPES.

Y. A PARALLEL TEMPORARY ON-RAMP IS BASED ON WSDOT DESIGN MANUAL EXHIBIT 1900-19. THE ON-RAMP IS SHUTTLED ACROSS EACH CLOSED LANE AT 5-Foot MAXIMUM SHIFT RATE THEN AN ACCELERATION TANGENT OF 2L IS FOLLOWED BY AN L2 ON-RAMP MERGE TO EXIT RAMPS.

Z. TO DISCLOSE WORK ZONE INTRUSIONS DEVICE SPACING IS REDUCED BY HALF ACROSS CLOSED EXIT RAMPS BETWEEN THE "EXIT CLOSED" SIGN AND THE END OF THE EXIT RAMPS CLOSED GORE.

AA. ACTUAL WORK AREA LIMITS CAN BE MODIFIED.

BB. RAMP DETOUR SIGNAGE IS RECOMMENDED BY MUTCD 6C.09. IT IS RECOMMENDED TO USE ROUT SPECIFIC DETOUR SIGNAGE FOR SIGNIFICANT RAMPS CLOSURES.

CC. THE ROUTE SPECIFIC DETOUR ROUTE SIGN INCLUDES EITHER AN INTERSTATE SIGN (FOR FREEWAY RAMPS), HIGHWAY SHIELD (FOR STATE HIGHWAY RAMPS) OR HIGHWAY DESCRIPTION. IF THE RAMPS IS TO EXIT RAMPS, THE DETOUR ROUTE, INCLUDE ITS DIRECTION. MAXIMIZE THE SIZE OF THE SIGNS, ARROWS TO FIT ON THE 45° SIGN.

DD. THE CHANNELIZATION DEVICE IS SHOWN ON THE GRADING ADJACENT TO THE 4-Foot LEFT SHOULDER TO MAXIMIZE WORK AREA. WHEN 6' LEFT SHOULDERS ARE PRESENT THE CHANNELIZATION DEVICE SHOULD MOVE BACKED ONTO THE SHOULDER PAVEMENT AT ITS EDGE. CROSS SECTIONS "C-C" AND "D-D" ARE SHOWN BELOW.

EE. FOR FREEWAYS WITH LEFT SHOULDER 8 FEET OR WIDER, SEPARATE TEMPORARY TRAFFIC CONTROL PLANS FOR 5-Foot MAX LEFT SHOULDER SHIFTS ARE PROVIDED IN THE WORK ZONE LIBRARY.

FF. THIS TRAFFIC CONTROL PLAN IS NOT APPLICABLE WHEN HOV-RESTRICTED LANES ARE PRESENT. FOR FREEWAYS WITH LEFT LANE HOV RESTRICTIONS, SEPARATE TEMPORARY TRAFFIC CONTROL PLANS ARE PROVIDED IN THE WSDOT LIBRARY FOR HOV-RESTRICTED LANE CONFIGURATIONS (SUCH AS HOV LANE CLOSURES). THE RESTRICTIONS INCLUDING A BUFFER SEPARATION DIRECT-ACCESS HOV RAMPS, OR RIGHT LANES THAT ARE HOV-RESTRICTED) CONTACT REGION TRAFFIC OFFICE WHEN DEVELOPING RAMPS.

GG. THIS TRAFFIC CONTROL PLAN IS NOT APPLICABLE WHEN EXPRESS TOLL LANE(S) PRESENT. FOR FREEWAYS WITH EXPRESS TOLL LANE(S), CONTACT REGION TRAFFIC OFFICE WHEN DEVELOPING PLANS.

**FREEWAY (3 LANES): DOUBLE RIGHT LANE CLOSURE WITH 5' MAX SHIFT ONTO LEFT SHOULDER (60 MPH TO 45 MPH VARIABLE WORK ZONE SPEED LIMIT REDUCTION, 40 MPH ADVISORY SPEED) NOT TO SCALE**