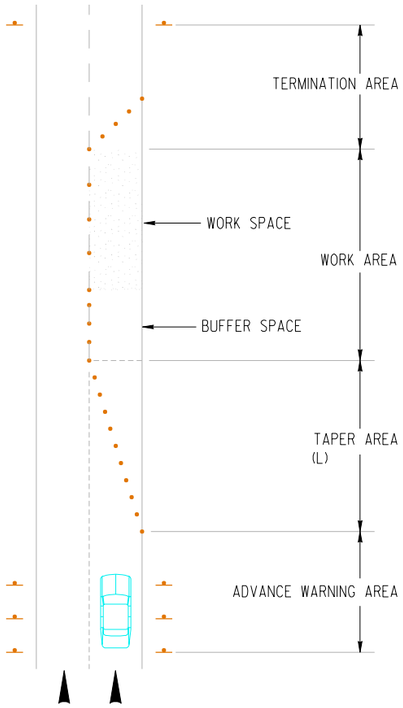


TAPER CRITERIA

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPERS	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MIMUMIM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS (USE IS OPTIONAL)	100 FEET PER LANE

SPEED LIMIT	FORMULAS FOR L: FORMULA
40 MPH OR LESS	$L=\frac{WS^2}{60}$
45 MPH OR GREATER	L=WxS

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED
D = DISTANCE BETWEEN ADVANCE WARNING SIGNS (SEE CHART)

TAPERS

A TAPER IS A SERIES OF CHANNELIZING DEVICES AND PAVEMENT MARKINGS PLACED ON AN ANGLE TO MOVE TRAFFIC OUT OF ITS NORMAL PATH.

FOUR GENERAL TYPES OF TAPERS USED IN TRAFFIC CONTROL ZONES ARE:

- LANE CLOSURE TAPERS ARE THOSE NECESSARY FOR CLOSING LANES OF MOVING TRAFFIC (SOMETIMES REFERRED TO AS CHANNELIZING TAPERS).
- TWO-WAY TRAFFIC TAPERS ARE THOSE NEEDED TO CONTROL TWO-WAY TRAFFIC WHERE TRAFFIC IS REQUIRED TO ALTERNATELY USE A SINGLE LANE (COMMONLY USED WHEN FLAGGERS ARE PRESENT).
- SHOULDER CLOSURE TAPERS ARE THOSE NEEDED TO CLOSE SHOULDER AREAS.
- DOWNSTREAM TAPERS ARE THOSE INSTALLED TO DIRECT TRAFFIC BACK INTO ITS NOMAL PATH.

SIGN DISTANCE CHART

POSTED SPEED LIMIT (MPH)	D 1	D2	L
15	200'	200'	45'
20	200'	200'	80'
25	300'	250'	125'
30	300'	300'	180'
35	300'	300'	245'
40	500'	400'	320'
45	500'	400'	540'

NOTE: DISTANCES AS FIELD CONDITIONS WILL PERMIT.

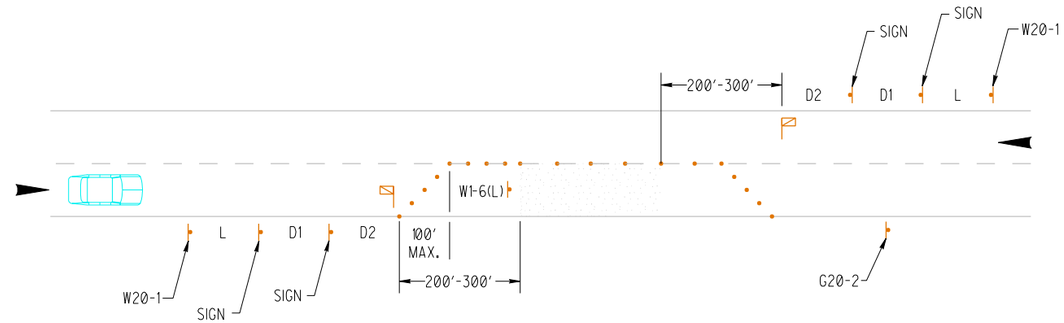
TAPER CHART

SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH (L) 11' TAPER	MINIMUM TAPER LENGTH (L) 12' TAPER	MIN. NUMBER OF DEVICES IN TAPER 11' TAPER	MIN. NUMBER OF DEVICES IN TAPER 12' TAPER
15	43'	45'	4	4
20	75'	80'	5	5
25	115'	125'	6	6
30	165'	180'	7	7
35	225'	245'	8	8
40	295'	320'	9	9
45	495'	540'	12	13

NOTE: AS FIELD CONDITIONS WILL PERMIT.

TRAFFIC CONTROL ELEMENTS - PLAN

SCALE: NONE

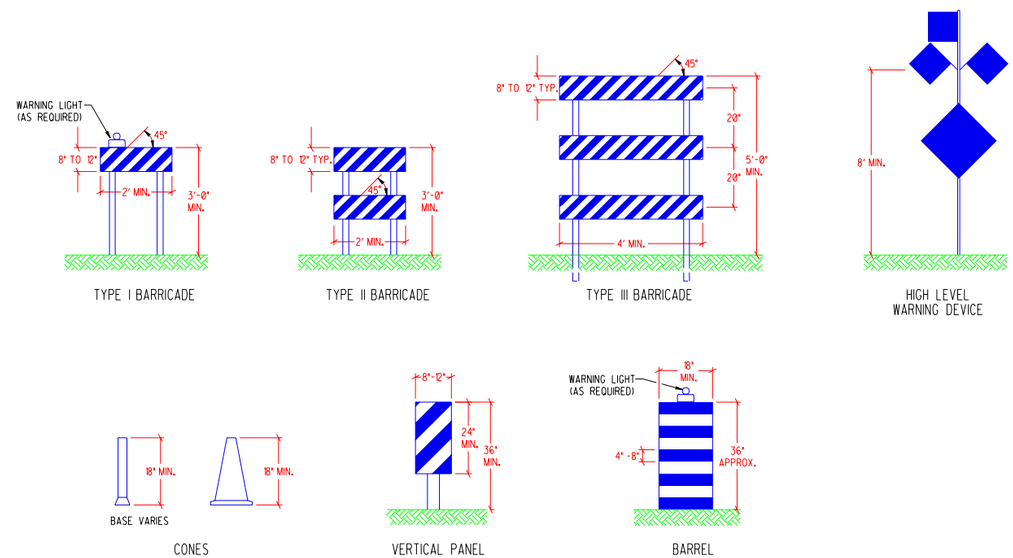


TYPICAL FLAGGING OPERATION - PLAN

SCALE: NONE

GENERAL NOTES

1. CONTRACTOR MUST OBTAIN A DIGGING PERMIT BEFORE BEGINNING ANY CONSTRUCTION OR MAINTANCE WORK.
2. CONTRACTOR SHALL SUBMIT FOR APPROVAL, A TRAFFIC CONTROL PLAN SHOULD SNL PROVIDE ON CONTRACT DRAWING. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT.
3. THE SDR SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.
4. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY AS NOTED ON STANDARD DWG. C-5005STD. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TRAFFIC CONTROL DEVICES AND THROUGHTOUT LENGTH OF PROJECT.
5. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.
6. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT.
7. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF THE SDR.
8. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.
9. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND FOR ALL TEMPORARY STRIPING.
10. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES AT ALL TIMES.
11. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION.



WORK AREA

BARRICADE - TYPE I, TYPE II, BARREL OR CONES

TYPE III BARRICADE

VERTICAL PANEL

ADVANCE WARNING SIGN

FLAGGER POSITION

CHANNELING AND WARNING DEVICES

SCALE: NONE

P.O. OR W.O. / PROJECT NO.	REV	DATE	DESCRIPTION	DWN	CKD	APP
		6-15-01	UDS MODS	EG FL		

U.S. DEPARTMENT OF ENERGY
KIRTLAND AREA OFFICE — ALBUQUERQUE, NEW MEXICO

SANDIA NATIONAL LABORATORIES
ALBUQUERQUE, NEW MEXICO; LIVERMORE, CALIFORNIA; TONOPAH, NEVADA

TRAFFIC CONTROL STANDARDS-SIGNS

P.O. OR W.O.	
PROJECT NO.	
DRAWN BY	MAJ
CHECKED BY	JAJ
APPROVED BY	ILM
DATE	8-93

CIVIL — STANDARD

C-5004STD — SIZE D+ — DRAWING NO./SHEET 101754A02 — SEQ.

CAD DRAWING
COMPUTER SYSTEMS DEPT. 7901

FILE NAME: C-5004STD.dgn

REFERENCE FILES: