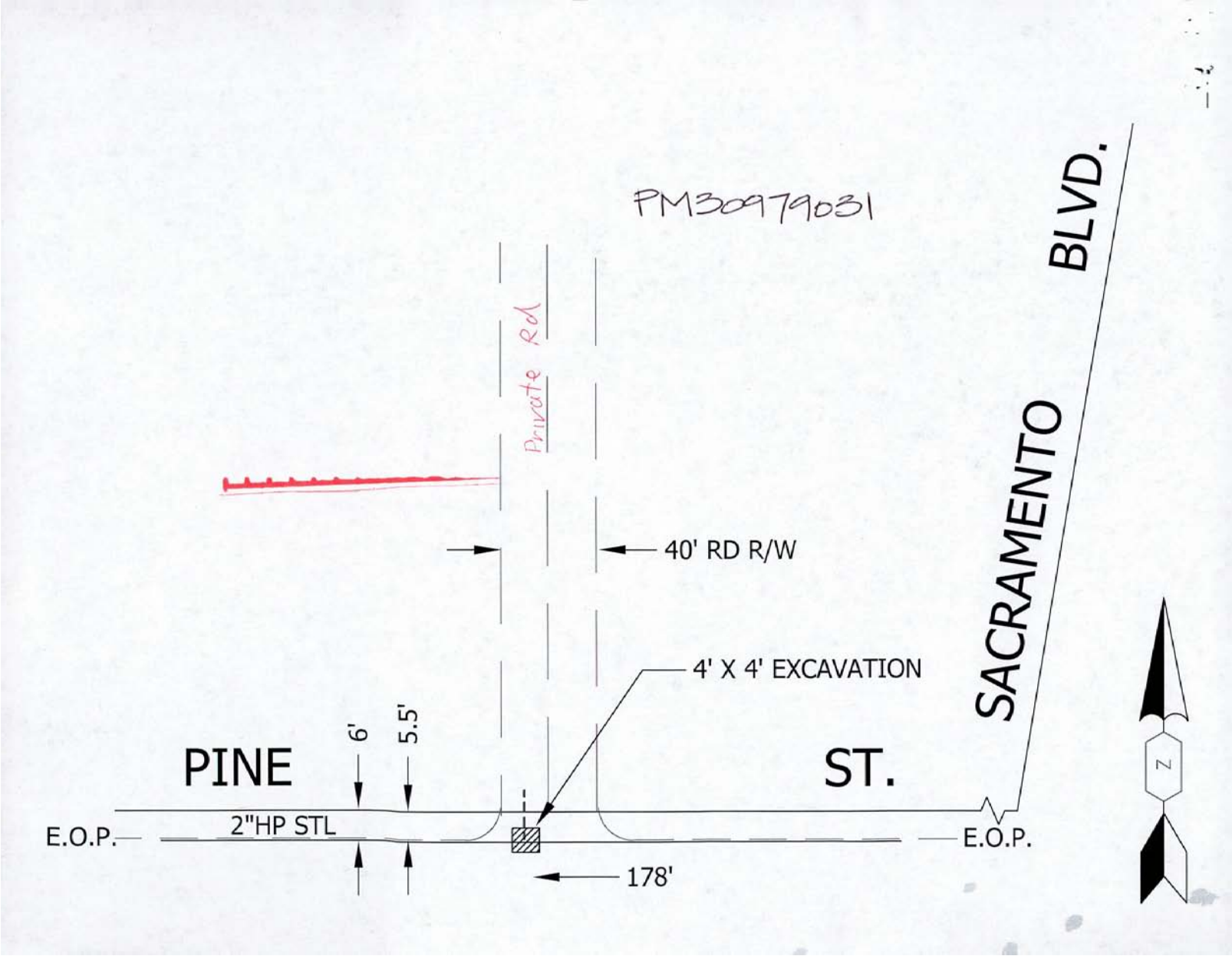
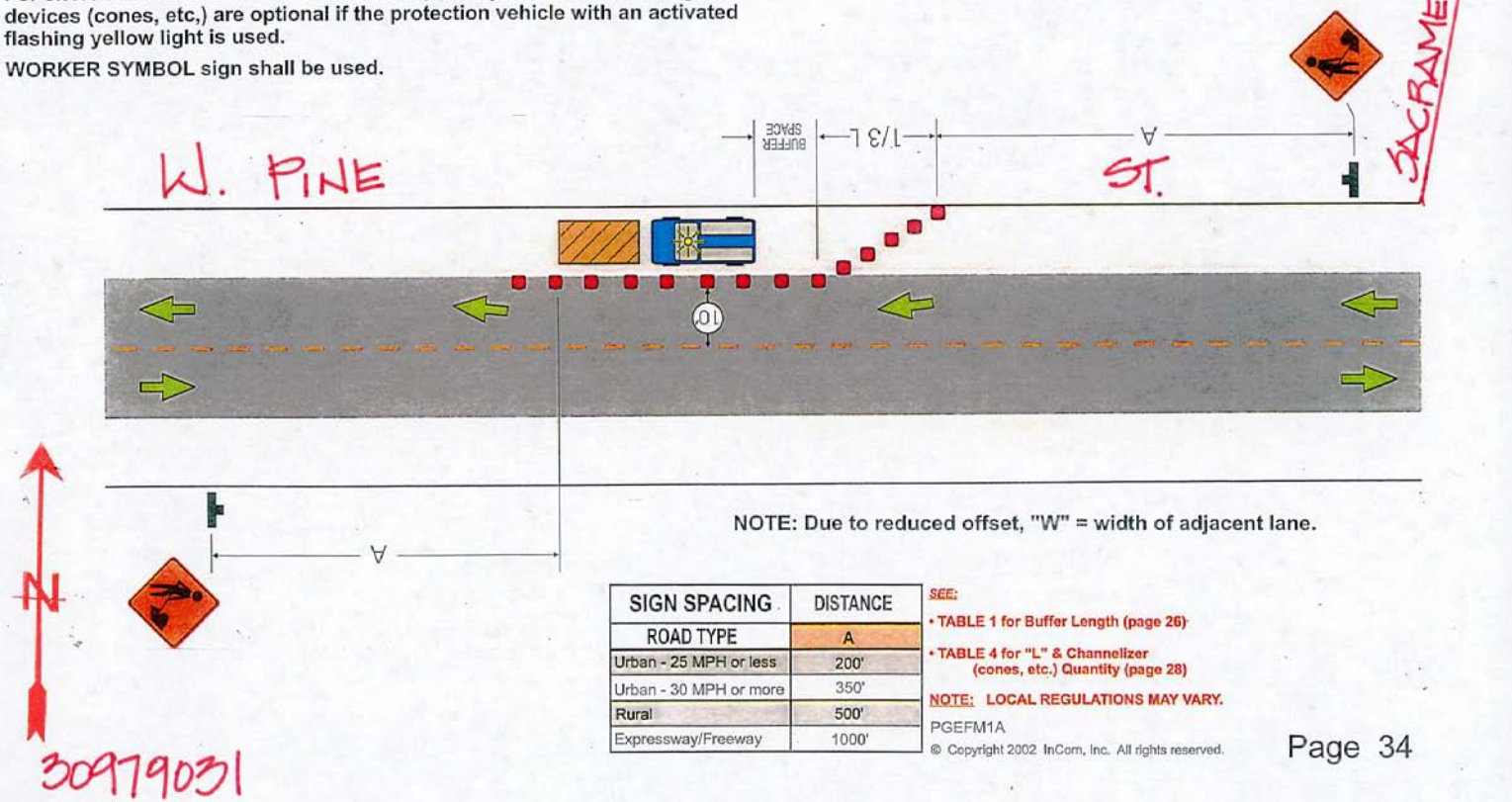

PM30979031
Private Rd
40' RD R/W
4' X 4' EXCAVATION
6'
5.5'
PINE
ST.
SACRAMENTO
BLVD.
E.O.P.
2"HP STL
E.O.P.
178'
N

1. May be used on a minor road having low speed volume. For higher speed traffic conditions, a lane closure should be considered.
2. The lane must be at least 10' wide
3. Where the opposite shoulder is suitable for carrying traffic and of adequate width, traffic lanes may be shifted by use of closely spaced channelizing devices, provided 10-foot-wide lanes are maintained.
4. Additional advance warning signs may be appropriate.
5. For short-duration work 60 minutes or less, the taper and channelizing devices (cones, etc,) are optional if the protection vehicle with an activated flashing yellow light is used.
6. WORKER SYMBOL sign shall be used.

UTILITY TYPICAL APPLICATIONS

UTA-3 Shoulder Work with Minor Encroachment



NOTE: Due to reduced offset, "W" = width of adjacent lane.

SIGN SPACING	DISTANCE
ROAD TYPE	A
Urban - 25 MPH or less	200'
Urban - 30 MPH or more	350'
Rural	500'
Expressway/Freeway	1000'

SEE:
- TABLE 1 for Buffer Length (page 26)
- TABLE 4 for "L" & Channelizer (cones, etc.) Quantity (page 28)

NOTE: LOCAL REGULATIONS MAY VARY.

PGEFM1A

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TABLE 1. Guidelines for length of longitudinal buffer space

This table to be used for determining buffer space lengths on all typical application diagrams.

SPEED* MPH	LENGTH in feet
20	35'
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'
60	415'

**Posted speed or the anticipated operating speed in mph.*

TABLE 2. Taper length criteria for temporary traffic control zones

TYPE OF TAPER	TAPER LENGTH
Upstream Tapers:	
• Merging Tapers	L Minimum
• Shifting Tapers	1/2 L Minimum
• Shoulder Tapers	1/3 L Minimum
• Two-Way Traffic (Flagger) Tapers	100 Feet Max
Downstream Tapers: • (Use is optional)	100 Feet Min

Formula for Taper Length "L"

L = W x S x S/60 FOR 40 MPH OR LESS

L = W x S FOR 45 MPH OR MORE

L = MINIMUM LENGTH OF TAPER IN FEET
W = WIDTH OF OFFSET IN FEET
S = SPEED IN MPH

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NOTE: Local regulations may vary.

TABLE 4. Taper length (L) / Channelizer (cones, etc.) quantity Index

	WIDTH OF LANE OFFSET (From Normal Lane Width Due To Work Zone)													
MPH	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'
30	75'	90'	105'	120'	135'	150'	165'	180'	195'	210'	225'	240'	255'	270'
	(3)	*(3)*	*(4)*	*(5)*	*(5)*	*(6)*	*(6)*	*(7)*	*(7)*	*(8)*	*(8)*	*(9)*	*(9)*	*(10)*
35	102'	123'	143'	163'	184'	204'	225'	245'	265'	286'	306'	327'	347'	368'
	(3)	*(4)*	*(4)*	*(5)*	*(6)*	*(6)*	*(7)*	*(8)*	*(8)*	*(9)*	*(9)*	*(10)*	*(10)*	*(11)*
40	133'	160'	187'	213'	240'	267'	293'	320'	347'	373'	400'	427'	453'	480'
	(4)	*(5)*	*(5)*	*(6)*	*(7)*	*(7)*	*(8)*	*(8)*	*(9)*	*(9)*	*(10)*	*(11)*	*(11)*	*(12)*
45	225'	270'	315'	360'	405'	450'	495'	540'	585'	630'	675'	720'	765'	810'
	(6)	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*
50	250'	300'	350'	400'	450'	500'	550'	600'	650'	700'	750'	800'	850'	900'
	(6)	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(18)*	*(19)*	*(20)*
55	275'	330'	385'	440'	495'	550'	605'	660'	715'	770'	825'	880'	935'	990'
	(6)	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*
60	300'	360'	420'	480'	540'	600'	660'	720'	780'	840'	900'	960'	1020'	1080'
	(6)	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*
65	325'	390'	455'	520'	585'	650'	715'	780'	845'	910'	975'	1040'	1105'	1170'
	(6)	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*

FOR LENGTHS NOT SHOWN ABOVE

L = W x S x S/60 FOR 40 MPH OR LESS
L = W x S FOR 45 MPH OR MORE

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET
S = SPEED LIMIT

TAPER LENGTHS
(MIN # OF CHANNELIZERS)

When using Shoulder Taper (1/3 L), determine L based on the actual lane width of the adjacent lane.

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NOTE: Local regulations may vary.