



MAINTENANCE MAINTAINING TRAFFIC TYPICALS

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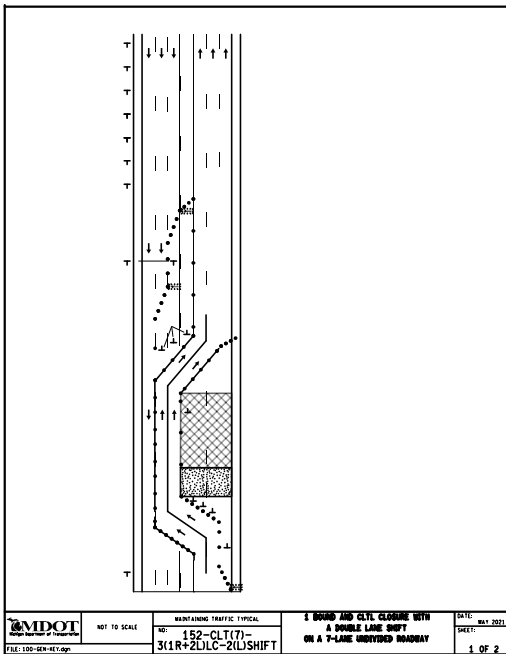
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TYPICAL NUMBER KEY

CODES

AB = ARROW BOARD
 AW = ADVANCE WARNING
 C = CLOSURE
 CLT = CENTER LEFT TURN LANE
 CROSS = CROSSOVER
 CruSha = CRUSH AND SHAPE
 EM = EARLY MERGE
 EnR = ENTRANCE RAMP
 ExR = EXIT RAMP
 FW = FREEWAY
 GEN = GENERAL INFORMATION
 GORE = FREEWAY GORE AREA
 IN = INSIDE
 INT = INTERSECTION
 L = LANE
 (L) = LEFT
 LC = LANE CLOSURE
 LD = LONG DURATION

LO = LANE OPEN
 O = OUTSIDE (LANE CLOSURE)
 OUT = OUTSIDE OF SHOULDER
 MID = MIDDLE OF INTERSECTION OR ROAD
 NFW = NON-FREEWAY
 PARK = PARKING LANE
 PCMS = PORTABLE CHANGEABLE MESSAGE SIGN
 (R) = RIGHT
 ROLL = ROLLING ROADBLOCK
 RUM = RUMBLE STRIP
 SD = SHORT DURATION
 SHL = SHOULDER CLOSURE
 SIGN = SIGN
 SPEED = SPEED
 STA = STOPPED TRAFFIC ADVISORY
 TR = TRAFFIC REGULATOR
 TS = TEMPORARY SIGNAL
 ZIP = ZIPPER MERGE



100 - GENERAL NOTES
 110 - TRAFFIC REGULATORS
 120 - NON-FREEWAY
 130 - CENTER LEFT TURN (CLT) LANES
 140 - PARKING LANES
 150 - CLT 7 LANE SECTIONS
 160 - SIGNAL WORK
 200 - FREEWAY CLOSURES
 210 - FREEWAY LANE SHIFTS
 220 - FREEWAY ENTRANCE RAMPS
 230 - FREEWAY EXIT RAMPS
 300 - ADVANCE WARNINGS
 310 - CROSSOVER CLOSURE
 320 - CRUSH AND SHAPE
 340 - MERGE SYSTEMS
 350 - GORE LOCATIONS
 360 - ROLLING ROADBLOCK
 4000 - MAINTENANCE
 5000 - SURVEY

EXAMPLE TYPICAL

CODE: 152-CTL(7)-3(1R+2L)LC-2(L)SHIFT

152 - TYPICAL NUMBER

CTL(7) = CENTER LEFT TURN LANE, 7 LANES TOTAL.

3(1R+2L)LC = 3 LANES CLOSED, (1 RIGHT LANE AND 2 LEFT LANES).

2(L)SHIFT = 2 LANES SHIFTED TO THE LEFT.

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	TYPICAL NUMBERING KEY	DATE: MAY 2021
		NO: 100-GEN-KEY		SHEET: 1 OF 1

FILE: 100-GEN-KEY.dgn

DISTANCE BETWEEN TRAFFIC SIGNS, "D"

"D" DISTANCES	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
D (FEET)	250	300	350	400	450	500	550	600	650	700	750

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"

"B" LENGTHS	SPEED*, MPH (PRIOR TO WORK AREA)											
	20	25	30	35	40	45	50	55	60	65	70	75
B (FEET)	33	50	83	132	181	230	279	329	411	476	542	625

* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

MINIMUM MERGING TAPER LENGTH, "L" (FEET)

OFFSET (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)										
	25	30	35	40	45	50	55	60	65	70	75
1	11	15	21	27	45	50	55	60	65	70	75
2	21	30	41	54	90	100	110	120	130	140	150
3	32	45	62	80	135	150	165	180	195	210	225
4	42	60	82	107	180	200	220	240	260	280	300
5	53	75	103	134	225	250	275	300	325	350	375
6	63	90	123	160	270	300	330	360	390	420	450
7	73	105	143	187	315	350	385	420	455	490	525
8	84	120	164	214	360	400	440	480	520	560	600
9	94	135	184	240	405	450	495	540	585	630	675
10	105	150	205	267	450	500	550	600	650	700	750
11	115	165	225	294	495	550	605	660	715	770	825
12	125	180	245	320	540	600	660	720	780	840	900
13	136	195	266	347	585	650	715	780	845	910	975
14	146	210	286	374	630	700	770	840	910	980	1050
15	157	225	307	400	675	750	825	900	975	1050	1125

NOT TO SCALE

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL		DATE: MAY 2021	
		NO: 101-GEN-SPACING-CHARTS		SHEET: 1 OF 3	
FILE: 101-GEN-SPACING-CHARTS.dgn		"B", "D" AND "L" TABLES CHANNELIZING DEVICE SPACING, SIGN BORDER KEY, AND ROLL-AHEAD SPACING			

FILE: 101-GEN-SPACING-CHARTS.dgn

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

"L" = $\frac{W \times S^2}{60}$ WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

"L" = W X S WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER
S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA
W = WIDTH OF OFFSET

TYPES OF TAPERS

UPSTREAM TAPERS

MERGING TAPER
SHIFTING TAPER
SHOULDER TAPER
2 TO 1 LANE ROAD TAPER

TAPER LENGTH

L - MINIMUM
1/2 L - MINIMUM
1/3 L - MINIMUM
100' - MAXIMUM

DOWNSTREAM TAPERS

(USE IS RECOMMENDED)

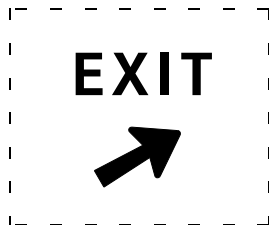
100' (PER LANE)

MAXIMUM SPACING FOR CHANNELIZING DEVICES

WORK ZONE SPEED LIMIT	DAY AND NIGHT 42" DEVICE SPACING (FT)		NIGHTTIME 42" DEVICE SPACING (FT)	
	TAPER	TANGENT	TAPER	TANGENT
< 45 MPH	1 x SPEED LIMIT	2 x SPEED LIMIT	25 FEET	50 FEET
≥ 45 MPH	50 FEET	100 FEET	25 FEET	50 FEET

SIGN OUTLINE KEY

DASHED OUTLINES INDICATE A SIGN THAT EXISTS ON SITE, AND NEEDS TO BE COVERED.



SOLID OUTLINES INDICATE A SIGN THAT IS TO BE PLACED ON THE PROJECT



NOT TO SCALE



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 101-GEN-
SPACING-CHARTS

FILE: 101-GEN-SPACING-CHARTS.dgn

"B", "D" AND "L" TABLES
CHANNELIZING DEVICE SPACING
SIGN BORDER KEY AND ROLL-AHEAD SPACING

DATE: MAY 2021

SHEET:

2 OF 3

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 2

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5.5 TONS (STATIONARY)	40 MPH OR LESS	25 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES – TEST LEVEL 3

WEIGHT OF TMA VEHICLE	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5 TONS (MOBILE)	45 MPH	100 FT
	50-55 MPH	150 FT
	60-75 MPH	175 FT
12 TONS (STATIONARY)	45 MPH	25 FT
	50-55 MPH	25 FT
	60-75 MPH	50 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

GENERAL NOTES

- G1: SEE GEN-SPACING-CHARTS FOR COMMON VALUES INCLUDING:
D = DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
L = MINIMUM LENGTH OF TAPER
B = LENGTH OF LONGITUDINAL BUFFER
ROLL AHEAD DISTANCE
- G2: DISTANCE BETWEEN SIGNS, "D", THE VALUES FOR WHICH ARE SHOWN IN TYPICAL GEN-KEY ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- G3: ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING MUST MEET NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) TEST LEVEL 3, OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) TL-3 AS WELL AS THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- G4: DO NOT STORE EQUIPMENT, MATERIALS OR PERFORM WORK IN ESTABLISHED BUFFER AREAS.
- G5: ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR TRAFFIC PATTERNS FOR WORK LESS THAN THREE DAYS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

SIGN NOTES

- S1: ALL NON-APPLICABLE SIGNING WITHIN THE CIA MUST BE MODIFIED TO FIT CONDITIONS, COVERED, OR REMOVED. FOR GUIDANCE SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, SECTIONS 6.01.09 AND 6.01.10.
- S2: R5-18b SIGNS ARE ONLY REQUIRED ON FREEWAY PROJECTS WITH A DURATION OF 15 DAYS OR LONGER OR NON-FREEWAY PROJECTS WITH A DURATION OF 90 DAYS OR LONGER. TO APPLY THIS TYPICAL WITHOUT R5-18b SIGNS, REMOVE THE SIGNS AND CONSOLIDATE THE SEQUENCE AS APPROPRIATE.
- S3: R5-18c IS ONLY REQUIRED IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. OMIT THIS SIGN IN SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE.
- S4: ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W20-5 SIGNS.
- S5: PLACE ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE WORK ZONE SPEED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK ZONE, OR AFTER EACH ENTRANCE RAMP THAT COMES ONTO THE FREEWAY WHERE THE REDUCED SPEED IS IN EFFECT. PLACE ADDITIONAL SPEED LIMIT SIGNS AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS ARE MORE THAN 2 MILES APART. WHEN REDUCED SPEED LIMITS ARE UTILIZED IN THE WORK AREA, PLACE ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED BEYOND THE LIMITS OF THE WORK AREA AS INDICATED. IF PERMANENT SIGNS DISPLAYING THE CORRECT SPEED LIMIT ARE POSTED, OMIT ALL W3-5b AND R2-1 SIGNS AND REDUCE SPACING ACCORDINGLY.
- S6: FABRICATE SPECIAL SIGNS IN ACCORDANCE WITH CURRENT SIGNING DESIGN STANDARDS.
- S7: PLACE ADDITIONAL R8-3 SIGNS AT A MAXIMUM 500' SPACING THROUGHOUT THE WORK ZONE.
- S8: WHEN SPEED LIMIT SIGNS CANNOT BE PLACED SIDE BY SIDE AS SHOWN, PLACE THEM "D" DISTANCE APART.
- S9: STOP SIGNS NOT REQUIRED IF SIGNALS ARE ON 4-WAY FLASHING RED. STOP AHEAD SIGNS ARE NOT REQUIRED IF THERE IS ADEQUATE VISIBILITY OF THE STOP SIGN OR IF SIGNALS ARE BEING USED TO CONTROL TRAFFIC.
- S10: PLACE REDUCED SPEED ZONE AHEAD SIGN (W3-5b) HERE WHEN USING A SPEED REDUCTION IN THIS DIRECTION.
- S11: THE NUMBER OF W1-6 SHIFT SIGNS TO PLACE FOR A SHIFT IS AS FOLLOWS:
SHIFTS 4FT OR LESS, PLACE ONE W1-6(R)(L)
SHIFTS 5FT TO 12FT, PLACE TWO W1-6(R)(L)
SHIFTS MORE THAN 12FT, PLACE THREE OR MORE W1-6(R)(L) SIGNS DEPENDING UPON LENGTH OF SHIFT AND AS PER THE ENGINEER.
- S12: PLACE R2-1 SIGNS AS DETAILED IN NOTE S5 WHEN THERE IS A SPEED REDUCTION IN THIS DIRECTION

TRAFFIC REGULATOR NOTES

- TR1: TRAFFIC REGULATORS MUST FOLLOW ALL THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS, THE CURRENT VERSIONS OF THE TRAFFIC REGULATOR'S INSTRUCTION MANUAL AND THE VIDEO "HOW TO SAFELY REGULATE TRAFFIC IN MICHIGAN". THE MAXIMUM DISTANCE BETWEEN THE TRAFFIC REGULATORS IS DETERMINED BY THE ROADWAY ADT, GEOMETRICS, AND AS DIRECTED BY THE ENGINEER.
- TR2: PROVIDE APPROPRIATE BALLOON LIGHTING TO SUFFICIENTLY ILLUMINATE TRAFFIC REGULATOR'S STATIONS WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS.

TEMPORARY TRAFFIC CONTROL DEVICE NOTES

- TCD1: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD NOT EXCEED 1.0 TIMES THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 50 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TAPERS ARE NOT TO EXCEED 25 FEET AT NIGHT.
- TCD2: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TANGENT SHOULD NOT EXCEED TWICE THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 100 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TANGENTS ARE NOT TO EXCEED 50 FEET AT NIGHT.
- TCD3: TYPE III BARRICADES MUST BE LIGHTED FOR OVERNIGHT CLOSURES.
- TCD4: WHEN THE HAUL ROAD IS NOT IN USE, PLACE LIGHTED TYPE III BARRICADES WITH "ROAD CLOSED" EXTENDING COMPLETELY ACROSS THE HAUL ROAD.
- TCD5: USE VERTICAL PANELS IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER (R-53, AND R-126) WHEN USED WITH A TEMPORARY SIGNAL SYSTEM.
- TCD6: PLACE LIGHTED ARROW PANELS AS CLOSE TO THE BEGINNING OF TAPERS AS PRACTICAL, BUT NOT IN A MANNER THAT WILL OBSCURE OR CONFUSE APPROACHING MOTORISTS WHEN PHYSICAL LIMITATIONS RESTRICT PLACEMENT. IN CURBED SECTIONS, IF ARROW BOARD CANNOT BE PLACED BEHIND CURB, PLACE ARROW BOARD IN THE CLOSED LANE AS CLOSE TO THE BEGINNING OF TAPER AS POSSIBLE.
- TCD7: ADDITIONAL TYPE III BARRICADES MAY BE REQUIRED TO COMPLETELY CLOSE OFF ROAD FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
- TCD8: WHERE THE SHIFTED SECTION IS SHORTER THAN 600 FEET, A DOUBLE REVERSE CURVE SIGN (W24-1) CAN BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN, AND THE SECOND REVERSE CURVE SIGN CAN BE OMITTED.
- TCD9: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN, AND IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10' AND 20' APART.
- TCD10: SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, PORTABLE CHANGEABLE MESSAGE SIGN GUIDELINES FOR RECOMMENDED AND CORRECT PCMS MESSAGING. STAGGER PCMS THAT ARE ON OPPOSING SIDES OF THE ROAD 1000 FEET FROM EACH OTHER.

RAMP NOTES

- RMP1: WHEN CONDITIONS ALLOW, E5-1 SIGNS MUST BE REMOVED OR COVERED AND CHANNELIZING DEVICES MUST BE POSITIONED TO ENABLE RAMP TRAFFIC TO DIVERGE IN A FREE MANNER
- RMP2: STOP AND YIELD CONDITIONS SHOULD BE AVOIDED WHENEVER PRACTICAL. WHEN CONDITIONS WARRANT, R1-1 SIGNS MAY BE USED IN PLACE OF R1-2 SIGNS. WHEN R-1 SIGNS ARE USED, W3-1 SIGNS MUST BE USED IN PLACE OF W3-2 SIGNS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP TO COMPLETE WORK TO ALLOW AN ADEQUATE MERGE DISTANCE. WORK SHOULD BE EXPEDITED TO AVOID THE STOP AND/OR YIELD CONDITIONS.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO:

102-GEN-NOTES

TRAFFIC TYPICALS
NOTE SHEET

DATE:
MAY 2021

SHEET:

1 OF 2

FILE: 102-GEN-NOTES.dgn

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

SIGNAL NOTES

- SIG1: EXISTING SIGNAL MUST BE EITHER 4-WAY FLASHING RED, BAGGED, OR TURNED OFF.
- SIG2: SIGNAL IS IN OPERATION.
- SIG3: DELINEATE THE WORK ZONE AREA WITH 28 INCH CONES FOR DAYTIME WORK, OR 42 INCH CHANNELIZING DEVICES FOR NIGHTTIME WORK.
- SIG4: THE CONTRACTOR MUST HAVE A DESIGNATED SPOTTER IF THE AERIAL BUCKET TRUCK IS LOCATED OVER ACTIVE TRAVEL LANES.
- SIG5: THE LOWEST POINT OF THE BUCKET MAY NOT TRAVEL BELOW 14 FOOT VERTICAL CLEARANCE. THE CONTRACTOR MUST UTILIZE AN ALTERNATE SET UP, OR PLACE THE INTERSECTION IN A 4 WAY STOP IF THE 14 FOOT VERTICAL CLEARANCE IS COMPROMIZED. USE TRAFFIC REGULATORS TO CONTROL TRAFFIC THROUGH THE INTERSECTION WHEN TRAFFIC IS PLACED IN A 4 WAY STOP.
- SIG6: DELINEATE THE TRUCK WITH CHANNELIZING DEVICES. THE POSITION OF THE TRUCK MAY BE MOVED TO FACILITATE WORK.

MAINTENANCE AND SURVEYING NOTES

- MS1: WHENEVER STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLES SHOULD MAINTAIN THE RECOMENDED DISTANCE FROM THE WORK AREA AND PROCEED AT THE SAME SPEED. THE SHADOW VEHICLE SHOULD SLOW DOWN AND TRAVEL AT A FARTHER DISTANCE TO PROVIDE ADEQUATE SIGHT DISTANCE IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES.
- MS2: WORKERS OUTSIDE OF VEHICLES SHOULD WORK WITHIN 150' OF WORK VEHICLES WITH AN ACTIVATED BEACON, BETWEEN THE "BEGIN WORK CONVOY" SIGN AND THE "END WORK CONVOY" SIGN, OR BETWEEN THE "WORK ZONE BEGINS" AND "END ROAD WORK" SIGN.
- MS3: WORK OR SHADOW VEHICLES WITH OR WITHOUT A TMA MAY BE USED TO SEPARATE THE WORK SPACE FROM TRAFFIC. IF USED, THE VEHICLES SHOULD BE PARKED ACCORDING TO THE ROLL AHEAD DISTANCE TABLES.
- MS4: WORK AND SHADOW VEHICLES SHALL BE APPROPRIATELY EQUIPPED WITH AN ACTIVATED AMBER BEACON.
- MS5: WHEN WORKERS ARE OUTSIDE THEIR VEHICLES IN AN EXISTING LANE WHILE A MOBILE OPERATION IS OCCURRING DURING THE NIGHTTIME HOURS, CHANNELIZING DEVICES TO DELINEATE OPEN OR CLOSED LANES AT 50 FT SPACING MUST BE USED. AN EXAMPLE OF AN OPERATION (BUT NOT LIMITED TO) IS THE LAYOUT OF CONCRETE PATCHES.
- MS6: W21-6 AND W20-1 SIGNS MAY BE SUBSTITUTED AS DETERMINED BY THE TYPE OF WORK TAKING PLACE AS PER THE ENGINEER.



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO:

102-GEN-NOTES

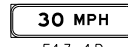
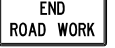
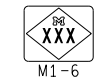
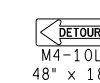
TRAFFIC TYPICALS
NOTE SHEET

DATE:
MAY 2021

SHEET:

2 OF 2

SIGN NUMBER KEY

E5-1f
48" x 48"
60" x 48"E5-2
48" x 36"E5-2a
48" x 36"E5-3
48" x 36"E13-1P
VAR x 24"E13-1aP
36" x 24"G20-1
60" x 24"G20-2
48" x 24"G20-4
36" x 18"I-6a
18" x 18"
24" x 24"
30" x 30"M1-1
18" x 18"
24" x 24"
36" x 36"
48" x 48"M1-1
22.5" x 18"
30" x 24"
45" x 36"
60" x 48"M1-2
18" x 18"
24" x 24"
36" x 36"
48" x 48"M1-2
22.5" x 18"
30" x 24"
45" x 36"
60" x 48"M1-3
18" x 18"
24" x 24"
36" x 36"
48" x 48"M1-3
22.5" x 18"
30" x 24"
45" x 36"
60" x 48"M1-4
18" x 18"
24" x 24"
36" x 36"
48" x 48"M1-4
22.5" x 18"
30" x 24"
45" x 36"
60" x 48"M1-5
18" x 18"
24" x 24"
30" x 30"
36" x 36"M1-5a
18" x 18"
24" x 24"M1-6
18" x 18"
24" x 24"
36" x 36"M1-6
22.5" x 18"
30" x 24"
45" x 36"M3-1
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M3-2
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M3-3
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M3-4
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-1
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-1a
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-2
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-3
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-4
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-5
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-6
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-7
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-7a
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M4-8
12" x 6"
18" x 9"
24" x 12"
30" x 15"M4-8a
24" x 18"M4-8b
24" x 12"M4-9L
30" x 24"
48" x 36"
60" x 48"M4-9R
30" x 24"
48" x 36"
60" x 48"M4-9j
30" x 24"
48" x 36"
60" x 48"M4-9kL
30" x 30"
48" x 42"
60" x 54"M4-9kR
30" x 30"
48" x 42"
60" x 54"M4-9mL
30" x 30"
48" x 42"
60" x 54"M4-9mR
30" x 30"
48" x 42"
60" x 54"M4-9dL
12" x 18"M4-9dR
12" x 18"M4-9e
12" x 18"M4-9f
12" x 18"M4-9gL
12" x 18"M4-9gR
12" x 18"M4-9h
12" x 24"M4-9i
12" x 18"M4-10L
48" x 18"M4-10R
48" x 18"M4-11a
12" x 6"
18" x 9"
24" x 12"
30" x 15"
36" x 18"M5-1L
12" x 9"
21" x 15"
30" x 21"M5-1R
12" x 9"
21" x 15"
30" x 21"M5-2L
12" x 9"
21" x 15"
30" x 21"M5-2R
12" x 9"
21" x 15"
30" x 21"M5-3
12" x 9"
21" x 15"
30" x 21"M6-1L
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-1R
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-2L
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-2R
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-3
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-4
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-5
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-6L
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-6R
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-7L
12" x 9"
18" x 12"
21" x 15"
30" x 21"M6-7R
12" x 9"
18" x 12"
21" x 15"
30" x 21"

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MAINTAINING TRAFFIC TYPICAL

NO:

103-GEN-SIGN

TRAFFIC TYPICAL
SIGN SHEETDATE:
JUNE 2021

SHEET:

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FILE: 103-GEN-SIGN.dgn

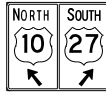
SIGN NUMBER KEY



M8-1gL
36" x 66"



M8-1gR
36" x 66"



M8-2d
60" x 48"



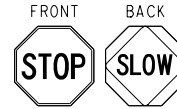
OM-3L
12" x 36"
24" x 48"
36" x 72"



OM-3R
12" x 36"
24" x 48"
36" x 72"



R1-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R1-1a
18" x 18"
24" x 24"



R1-2
18"
24"
30"
36"
48"
60"



R1-2aP
24" x 18"
36" x 30"
48" x 36"



R2-1
18" x 24"
24" x 30"
30" x 36"
36" x 48"
48" x 60"



R2-1a
48" x 60"



R3-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-3
24" x 24"
36" x 36"
48" x 48"



R3-4
24" x 24"
30" x 30"
36" x 36"
48" x 48"



R3-5L
30" x 36"
36" x 48"



R3-5R
30" x 36"
36" x 48"



R3-5a
30" x 36"
36" x 48"



R3-6L
30" x 36"
42" x 48"



R3-6R
30" x 36"
42" x 48"



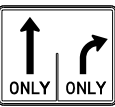
R3-7L
30" x 30"
36" x 36"



R3-7R
30" x 30"
36" x 36"



R3-8c
36" x 30"



R3-8d
36" x 30"



R4-1
12" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-2
12" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-7
12" x 18"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-8
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R4-9
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R5-1
30" x 30"
36" x 36"
48" x 48"



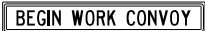
R5-1a
30" x 18"
36" x 24"
42" x 30"



R5-18b
48" x 60"



R5-18c
48" x 48"



R5-18d
78" x 12"



R5-18e
72" x 12"



R5-18f
48" x 60"



R5-18g
30" x 42"



R5-18h
48" x 60"



R6-1L
36" x 12"
54" x 18"



R6-1R
36" x 12"
54" x 18"



R6-2L
12" x 16"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



R6-2R
12" x 16"
18" x 24"
24" x 30"
36" x 48"
48" x 60"



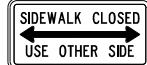
R8-3
12" x 12"
18" x 18"
24" x 24"
36" x 36"
48" x 48"



R9-8
36" x 18"



R9-9
24" x 12"
30" x 18"



R9-10
24" x 12"
48" x 24"



R9-11L
24" x 12"
48" x 36"



R9-11R
24" x 12"
48" x 36"



R9-11aL
24" x 12"
48" x 24"



R9-11aR
24" x 12"
48" x 24"



R10-6b
36" x 54"



R11-2
48" x 30"



R11-2a
48" x 30"



R11-2b
48" x 30"



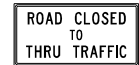
R11-2c
60" x 30"



R11-3a
60" x 30"



R11-3b
60" x 30"



R11-4
60" x 30"

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SIGN NUMBER KEY



W1-1L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-1R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-2bL
36" x 36"
48" x 48"



W1-2bR
36" x 36"
48" x 48"



W1-3L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-3R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4L
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4R
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4bL
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4bR
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4cL
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W1-4cR
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W24-1L
30" x 30"
36" x 36"
48" x 48"



W24-1cP
24" x 18"
30" x 24"



W24-1R
30" x 30"
36" x 36"
48" x 48"



W24-1aL
30" x 30"
36" x 36"
48" x 48"



W24-1aR
30" x 30"
36" x 36"
48" x 48"



W24-1bL
30" x 30"
36" x 36"
48" x 48"



W24-1bR
30" x 30"
36" x 36"
48" x 48"



W1-6L
24" x 12"
36" x 18"
48" x 24"
60" x 30"
96" x 48"



W1-6R
24" x 12"
36" x 18"
48" x 24"
60" x 30"
96" x 48"



W1-8L
12" x 18"
18" x 24"
24" x 30"
30" x 36"
36" x 48"



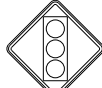
W1-8R
12" x 18"
18" x 24"
24" x 30"
30" x 36"
36" x 48"



W3-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W3-2
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W3-3
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W3-4
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W3-4b
30" x 30"
36" x 36"
48" x 48"



W3-5
36" x 36"
48" x 48"



W3-5a
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W3-5b
30" x 30"
36" x 36"
48" x 48"



W4-1L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-1R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-2L
30" x 30"
36" x 36"
48" x 48"



W4-2R
30" x 30"
36" x 36"
48" x 48"



W4-3L
30" x 30"
36" x 36"
48" x 48"



W4-3R
30" x 30"
36" x 36"
48" x 48"



W4-5L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-5R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-5P
18" x 24"
24" x 30"



W4-6L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-6R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W4-7L
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W4-7R
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W5-1
30" x 30"
36" x 36"
48" x 48"



W5-2
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W5-3
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W5-4
30" x 30"
36" x 36"
48" x 48"



W6-1
30" x 30"
36" x 36"
48" x 48"



W6-2
30" x 30"
36" x 36"
48" x 48"



W6-3
30" x 30"
36" x 36"
48" x 48"



W6-4
12" x 18"



W7-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W7-1a
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-1
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"

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SIGN NUMBER KEY



W8-2
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-3
18" x 18"
30" x 30"
36" x 36"
48" x 48"



W8-4
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-5
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-5P
24" x 18"
30" x 24"
36" x 30"



W8-7
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-8
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-9
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-11
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-12
30" x 30"
36" x 36"
48" x 48"



W8-14
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-15
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-15P
24" x 18"
30" x 24"
36" x 30"



W8-17L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-17R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-17P
24" x 18"
30" x 24"
36" x 30"



W8-18
24" x 24"
36" x 36"
48" x 48"



W8-23
24" x 24"
36" x 36"
48" x 48"



W8-24
30" x 30"
36" x 36"
48" x 48"



W8-25
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W8-26
36" x 36"
48" x 48"



W9-1L
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W9-1R
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W9-2L
30" x 30"
36" x 36"
48" x 48"



W9-2R
30" x 30"
36" x 36"
48" x 48"



W9-3C
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3L
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3R
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3a
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W9-3b
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W11-10
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-10a
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W11-24
36" x 36"
48" x 48"



W12-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



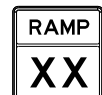
W12-2
18" x 18"
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W13-1P
18" x 18"
24" x 24"
30" x 30"



W13-2
24" x 30"
36" x 48"
48" x 60"



W13-3
24" x 30"
36" x 48"
48" x 60"



W13-4P
24" x 24"
36" x 36"



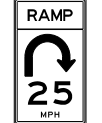
W13-6
24" x 42"
36" x 60"
48" x 84"



W13-6a
24" x 42"
36" x 60"
48" x 84"



W13-7
24" x 42"
36" x 60"
48" x 84"



W13-7a
24" x 42"
36" x 60"
48" x 84"



W14-3
36" x 24"
40" x 30"
48" x 36"
64" x 48"



W16-2P
18" x 12"
24" x 18"
30" x 24"



W16-4aP
18" x 12"
24" x 18"
30" x 24"
36" x 30"



W16-12P
24" x 18"



W16-13P
24" x 18"
30" x 24"



W20-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1a
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1b
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1c
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-1d
24" x 24"
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W20-2
30" x 30"
36" x 36"
48" x 48"



W20-3
30" x 30"
36" x 36"
48" x 48"



W20-3a
30" x 30"
36" x 36"
48" x 48"

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W20-3b
30" x 30"
36" x 36"
48" x 48"



W20-4
30" x 30"
36" x 36"
48" x 48"



W20-4c
36" x 36"
48" x 48"



W20-5C
30" x 30"
36" x 36"
48" x 48"



W20-5L
30" x 30"
36" x 36"
48" x 48"



W20-5L1
30" x 30"
36" x 36"
48" x 48"



W20-5L2
30" x 30"
36" x 36"
48" x 48"



W20-5R
30" x 30"
36" x 36"
48" x 48"



W20-5R1
30" x 30"
36" x 36"
48" x 48"



W20-5R2
30" x 30"
36" x 36"
48" x 48"



W20-5aL2
30" x 30"
36" x 36"
48" x 48"



W20-5aL3
30" x 30"
36" x 36"
48" x 48"



W20-5aR2
30" x 30"
36" x 36"
48" x 48"



W20-5aR3
30" x 30"
36" x 36"
48" x 48"



W20-7a
30" x 30"
36" x 36"
48" x 48"



W20-8
24" x 18"



W20-9
54" x 48"



W20-10
48" x 24"
66" x 30"



W20-11
12" x 18"



W20-12P
VARIABLE x 12"



W20-13P
VARIABLE x 12"



W20-14L
36" x 36"
48" x 48"



W20-14R
36" x 36"
48" x 48"



W20-14aP
36" x 12"
48" x 12"



W20-14bP
36" x 12"
48" x 12"



W20-15
36" x 36"
48" x 48"



W20-15a
36" x 36"
48" x 48"



W20-15c
48" x 54"



W20-15d
48" x 54"



W20-16
36" x 36"
48" x 48"



W20-17
36" x 36"
48" x 48"



W21-1
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-2
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-3
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-4
36" x 18"



W21-5
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-5aL
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5aR
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5bL
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-5bR
30" x 30"
36" x 36"
48" x 48"
60" x 60"



W21-6
24" x 24"
30" x 30"
36" x 36"
48" x 48"



W21-7
30" x 30"
36" x 36"
48" x 48"



W21-8
30" x 30"
36" x 36"
48" x 48"



W22-1
30" x 30"
36" x 36"
48" x 48"



W22-2
42" x 36"



W22-3
36" x 30"
42" x 36"



W23-1
48" x 24"



W23-2
36" x 36"
48" x 48"

SEE MDOT SHS 13-WORK ZONE FOR SIGN DETAILS



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO:

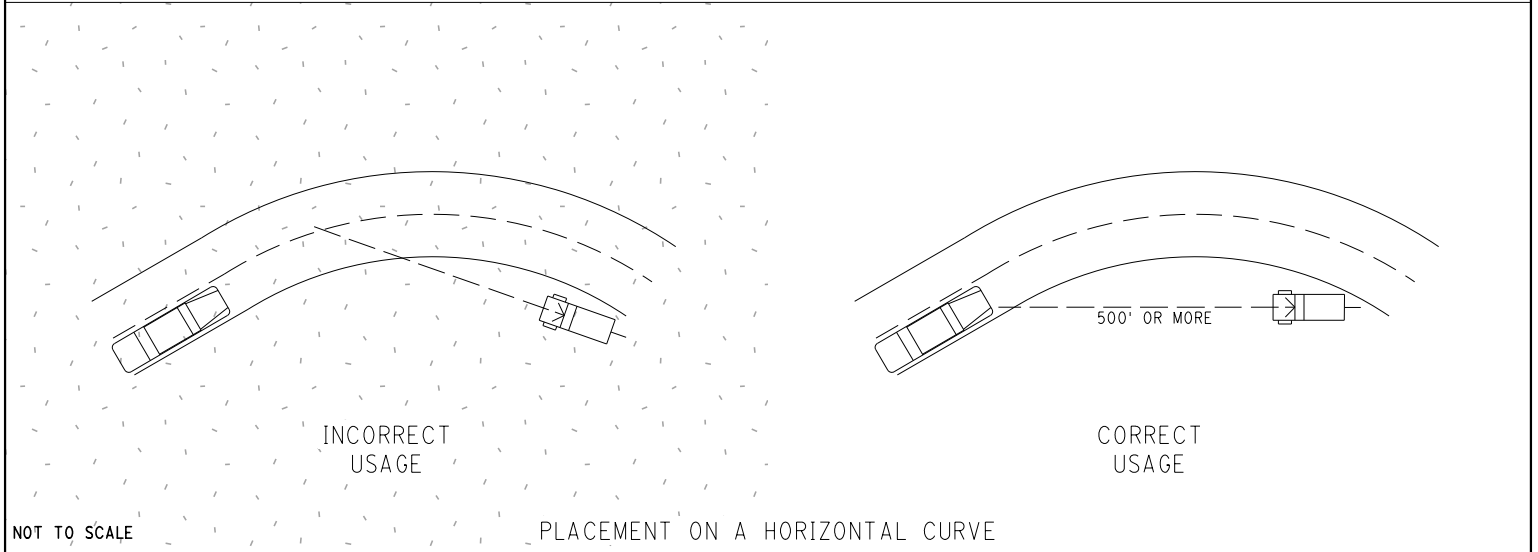
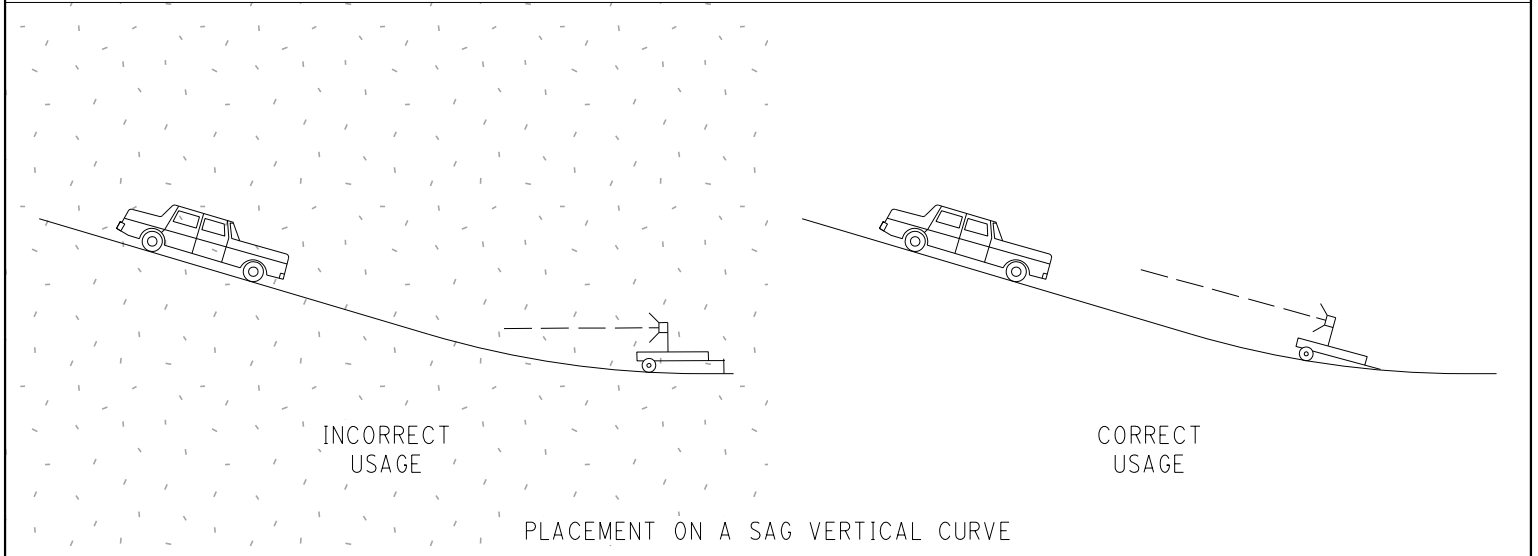
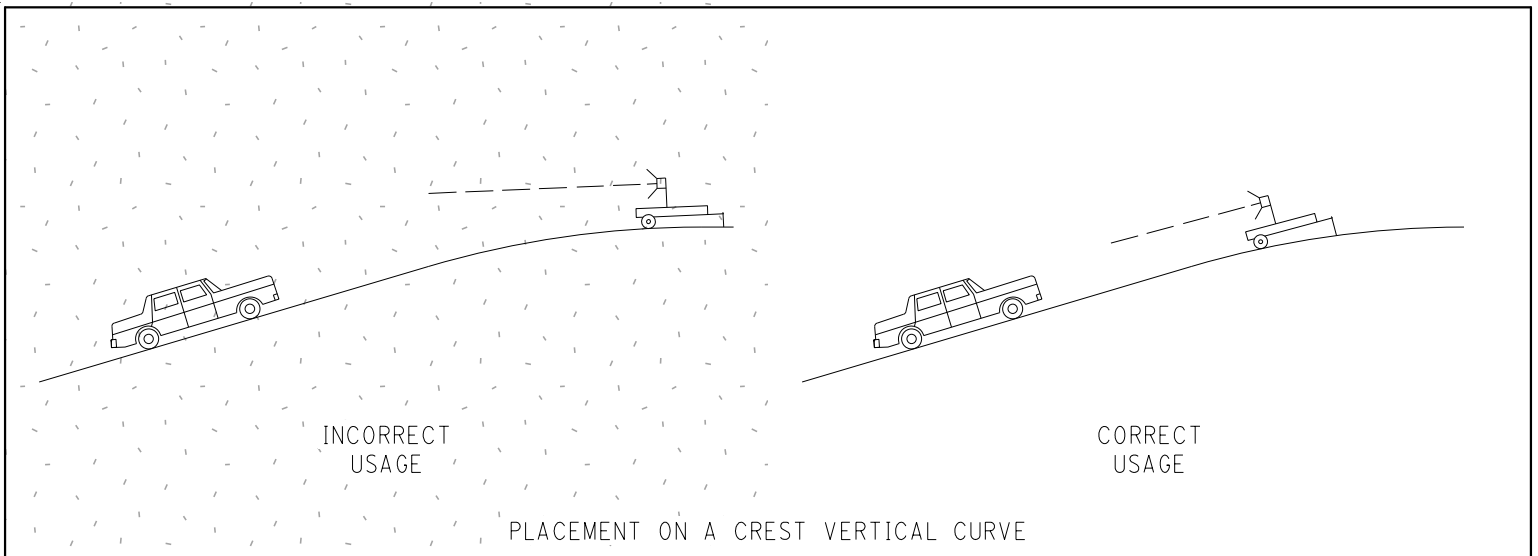
103-GEN-SIGN

TRAFFIC TYPICAL
SIGN SHEET

DATE:
JUNE 2021

SHEET:

5 OF 5



NOTE:

ENSURE THE ARROW REMAINS CLEARLY LEGIBLE AT DISTANCES FROM 2,500 FEET TO 200 FEET, FROM ALL TRAFFIC LANES AND ROADWAY ENTRANCES. DO NOT PLACE THE LIGHTED ARROW ON A HORIZONTAL OR VERTICAL CURVE THAT MIGHT INTERFERE WITH THIS LEGIBILITY REQUIREMENT.

	NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	USE OF ARROW BOARD ON HILL OR CURVE AND WORK ZONE LAYOUT	DATE: MAY 2021
		NO: 104-GEN-AB		SHEET: 1 OF 1

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

SHOULDER

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

ENTRANCE RAMP

SHOULDER

SHOULDER

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

CROSSROAD

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

SPEED
LIMIT
XX

R2-1

WHERE
WORKERS
PRESENT
45

R2-1a

ENTRANCE RAMP

SHOULDER

SHOULDER

SHOULDER

* SUPPLEMENTAL SET OF SPEED LIMIT SIGNS ARE REQUIRED WHEN
ENTRANCE RAMP(S) ARE MORE THAN 2 MILES APART, SUCH THAT NO SET OF
THESE SPEED LIMIT SIGNS ARE EVER PLACED MORE THAN 2 MILES APART.

KEY

- ... CHANNELIZING DEVICE
- ← TRAFFIC FLOW
- PLACE AS INDICATED IN NOTE S5
- ◇ R2-1a OPTIONAL

STANDARD NOTES

(SEE GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S5, S8

DEVICES: TCD2

KEY

- ... CHANNELIZING DEVICE
- ↑ TRAFFIC FLOW
- ⬆ LIGHTED ARROW PANEL
- I TYPE III BARRICADE
- ◆ PART OF LEAD-IN SIGNING SEQUENCE
- ◆ REQUIRED AFTER MAJOR INTERSECTIONS

STANDARD NOTES

(SEE GEN-NOTES)

GENERAL: G1, G2, G3, G4
SIGNING: S1, S5
DEVICES: TCD1, TCD2, TCD3, TCD6

MAJOR
INTERSECTION

MAJOR
INTERSECTION

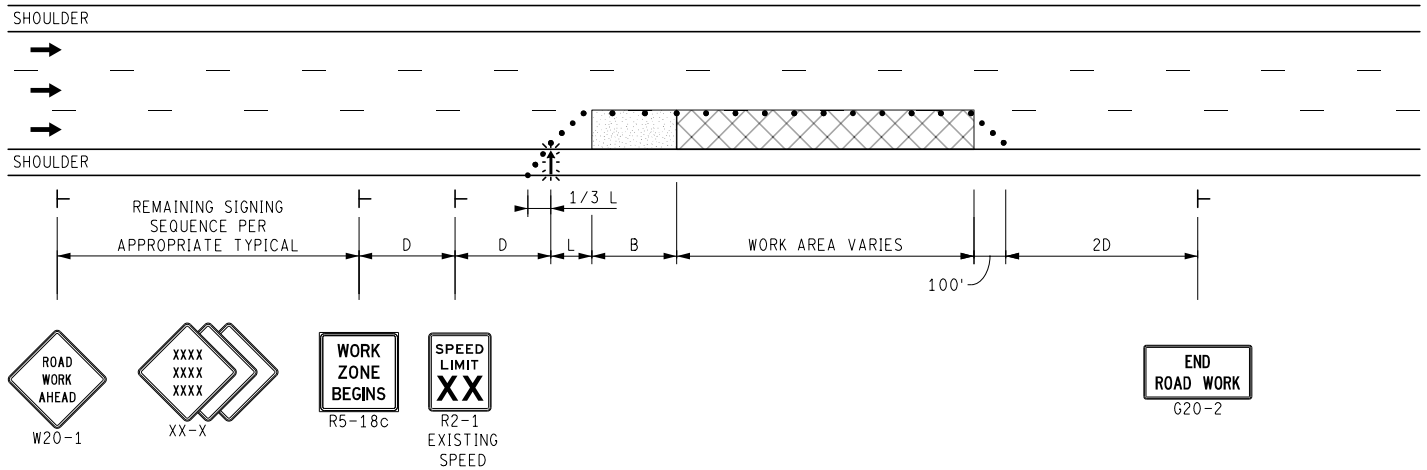
MAJOR
INTERSECTION

GREATER THAN 2 MILES
LESS THAN 4 MILES

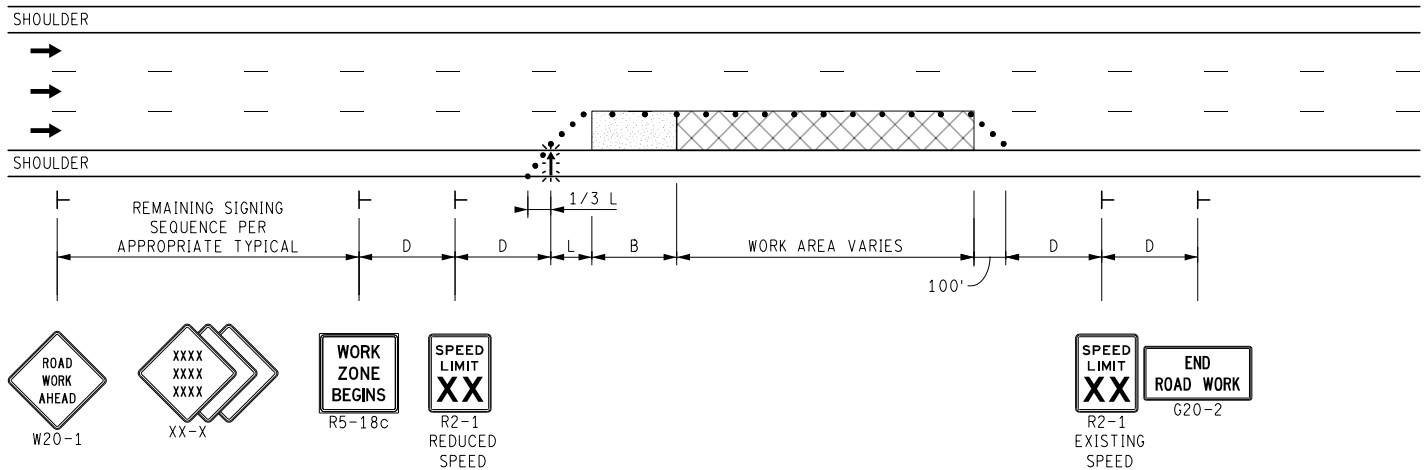
LESS THAN 2 MILES

LESS THAN 2 MILES

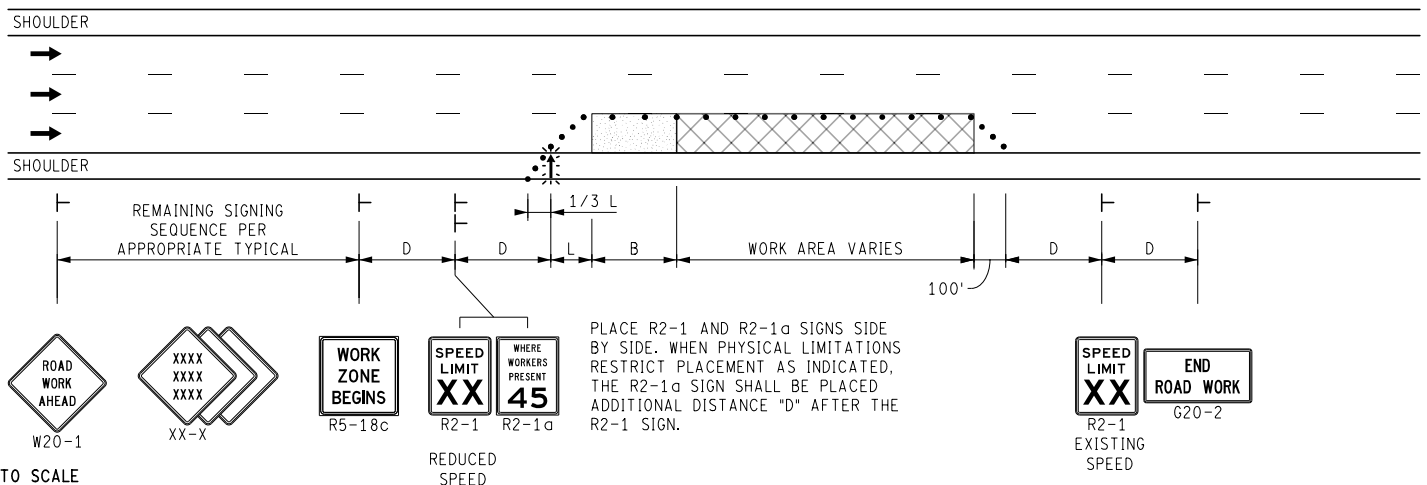
NO SPEED REDUCTION THROUGH WORK ZONE



REDUCED SPEED THROUGH WORK ZONE



REDUCED SPEED THROUGH WORK ZONE USING "WHERE WORKERS PRESENT"



NOT TO SCALE



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL
NO: 107-GEN-SPEED

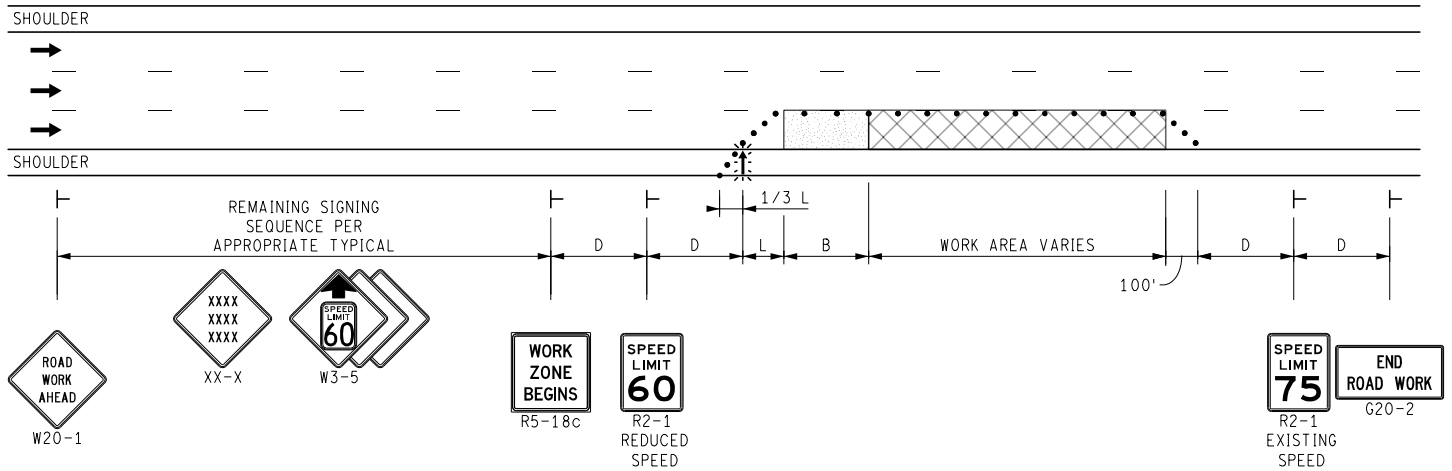
SPEED LIMIT LAYOUT

DATE: MAY 2021
SHEET:

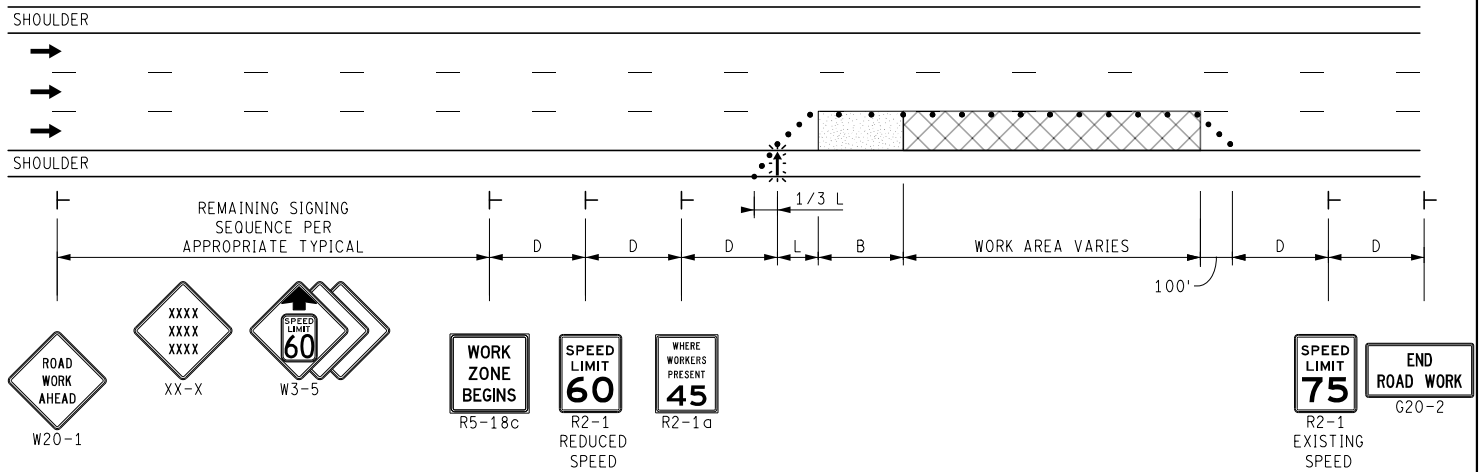
FILE: 107-GEN-SPEED.dgn

1 OF 2

REDUCED SPEED FROM 75 TO 60 THROUGH WORK ZONE



REDUCED SPEED FROM 75 TO 45 WWP THROUGH WORK ZONE



NOT TO SCALE



NOT TO SCALE

MAINTAINING TRAFFIC TYPICAL

NO: 107-GEN-SPEED

SPEED LIMIT LAYOUT

DATE: MAY 2021

SHEET:

FILE: 107-GEN-SPEED.dgn

2 OF 2

NOTES

1. FOR SHORT-DURATION OR MOBILE OPERATIONS, NO SIGNS ARE REQUIRED IF APPROPRIATELY EQUIPPED VEHICLES ARE USED.
2. IF THE OPERATION HAS VEHICLE(S) PARKED ON THE SHOULDER OR VEHICLES ACCESSING THE WORK SITE VIA THE HIGHWAY OR CROSSING THE HIGHWAY TO PERFORM OPERATIONS, A "ROAD WORK AHEAD" SIGN OR AN ARROW BOARD IN CAUTION MODE SHALL BE USED.
3. WORK VEHICLES SHOULD BE PARKED AS FAR OFF THE TRAVELED WAY AS PRACTICAL.
4. IF THE WORK SPACE IS IN THE MEDIAN OF A DIVIDED ROADWAY, ADVANCE WARNING SIGNS SHALL BE PLACED IN BOTH DIRECTIONS OF TRAVEL.
5. VEHICLES AND PERSONNEL SHOULD ALL BE LOCATED AND PARKED ON THE SAME SIDE OF THE ROADWAY TO THE EXTENT PRACTICAL.

KEY

← TRAFFIC FLOW

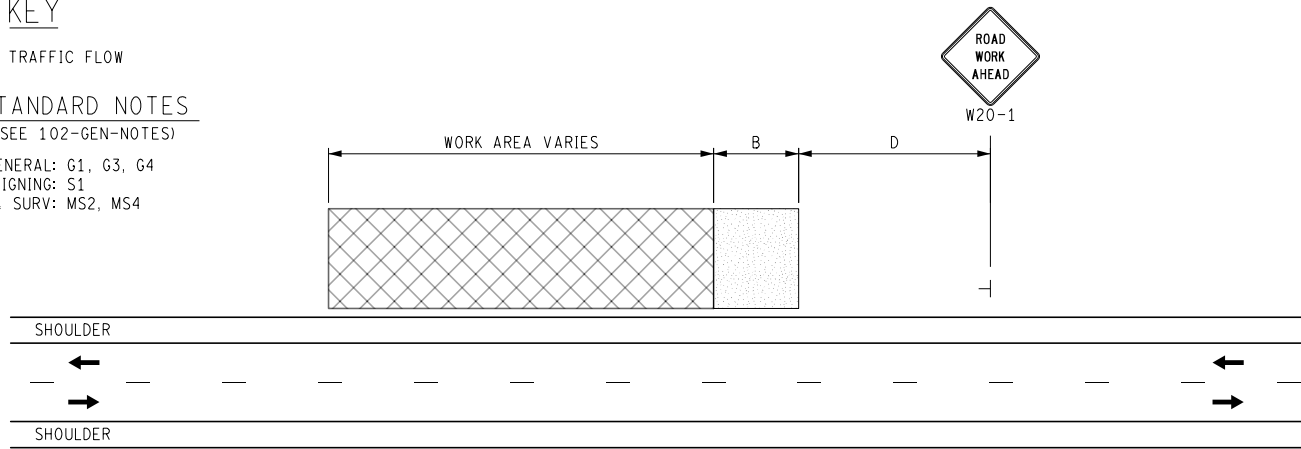
STANDARD NOTES

(SEE 102-GEN-NOTES)

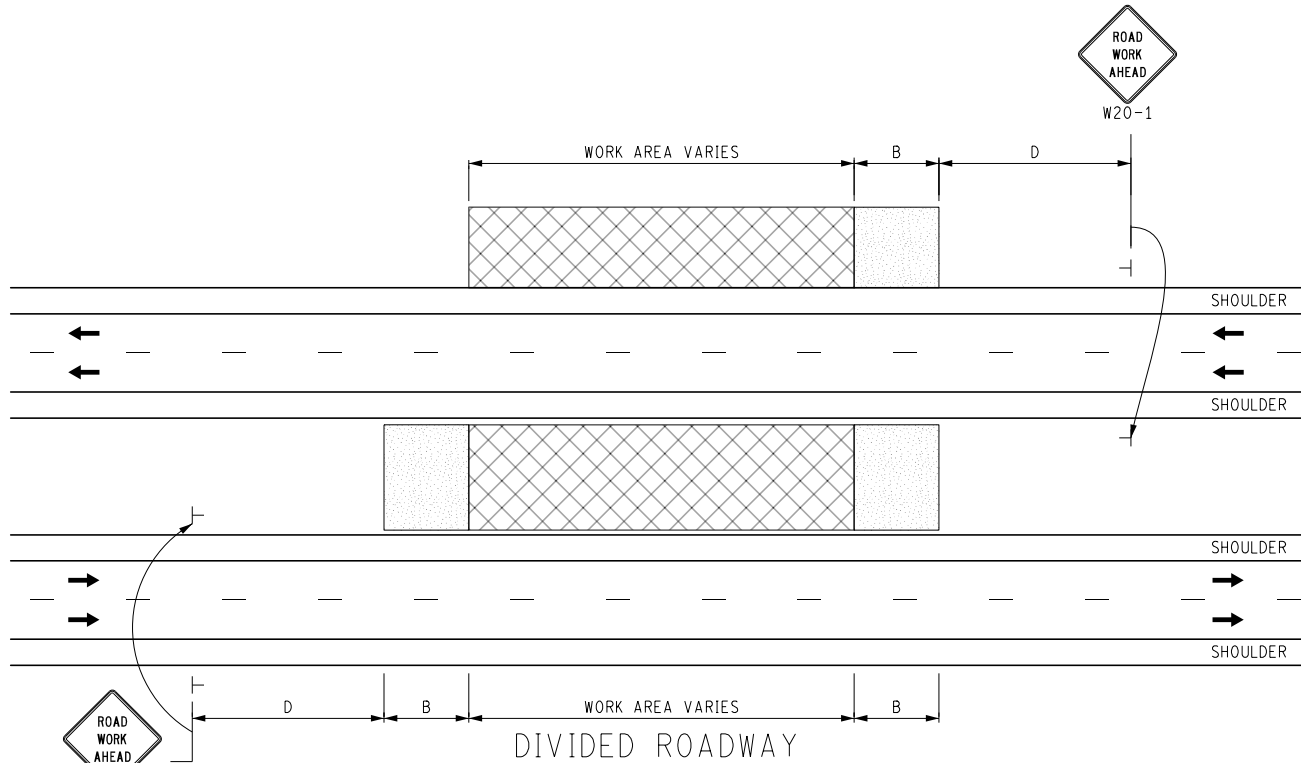
GENERAL: G1, G3, G4

SIGNING: S1

MAINT & SURV: MS2, MS4



TWO LANE, TWO WAY ROADWAY



DIVIDED ROADWAY

NOT TO SCALE

W20-1



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

ALL

WORK OUTSIDE SHOULDER








DATE:
MAY 2021

NO:
4000-M-SHL-OUT

SHEET:
1 OF 1

FILE: 4000-M-SHL-OUT.dgn

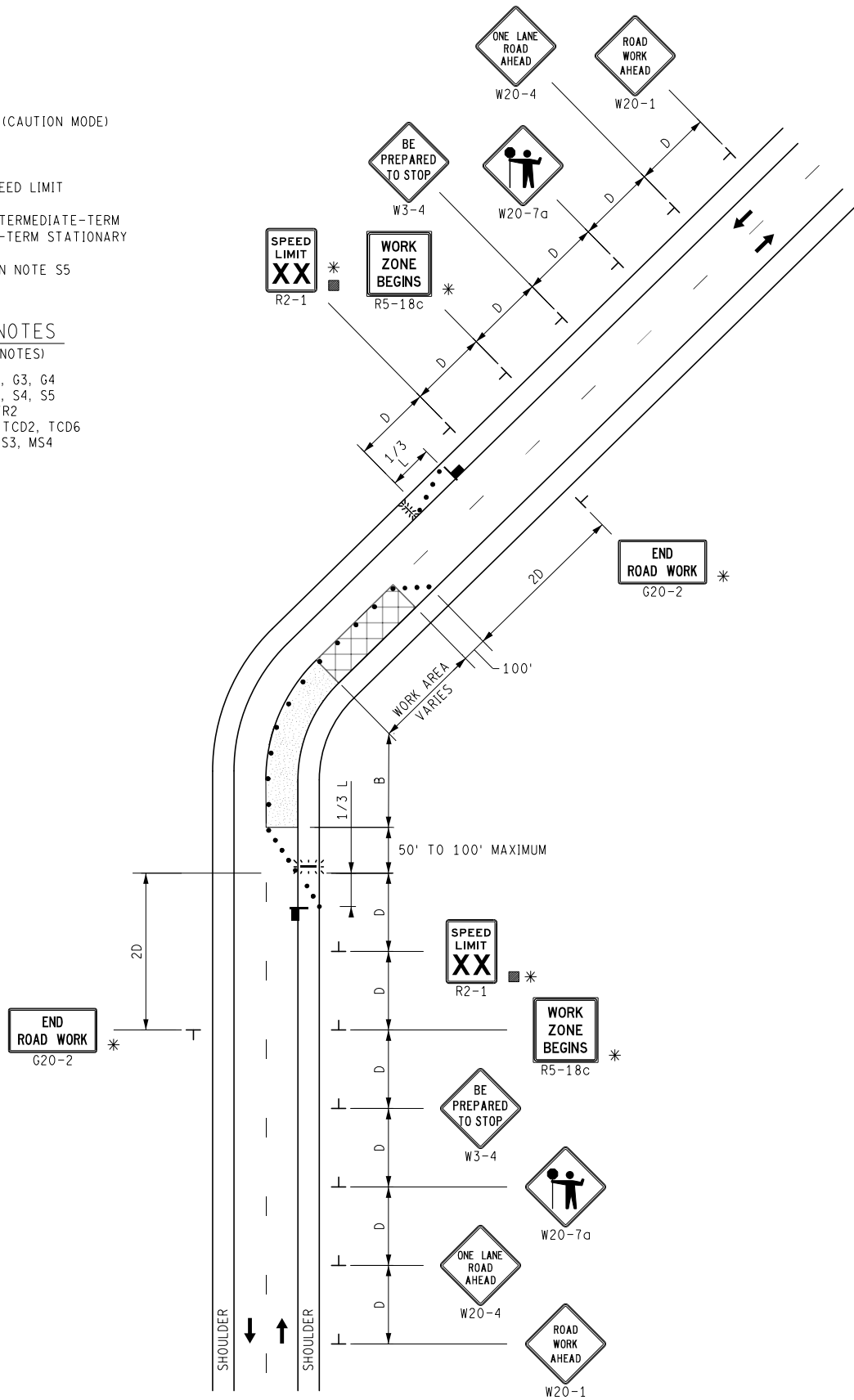
KEY

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  REFLECTS EXISTING SPEED LIMIT
-  ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
-  PLACE AS INDICATED IN NOTE S5

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
 SIGNING: S1, S3, S4, S5
 TRAF REG: TR1, TR2
 DEVICES: TCD1, TCD2, TCD6
 MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
 MAINTAINING TRAFFIC
 TYPICAL








DURATION:
 LONG-TERM STATIONARY
 INTERMEDIATE-TERM STATIONARY
 SHORT-TERM STATIONARY

LANE CLOSURE
 FOR A TWO-LANE, TWO-WAY ROADWAY
 UTILIZING TRAFFIC REGULATORS
 NO SPEED REDUCTION

DATE: MAY 2021
 NO: 4110A-M-TR-NFW-2L
 SHEET: 1 OF 1

FILE: 4110A-M-TR-NFW-2L.dgn

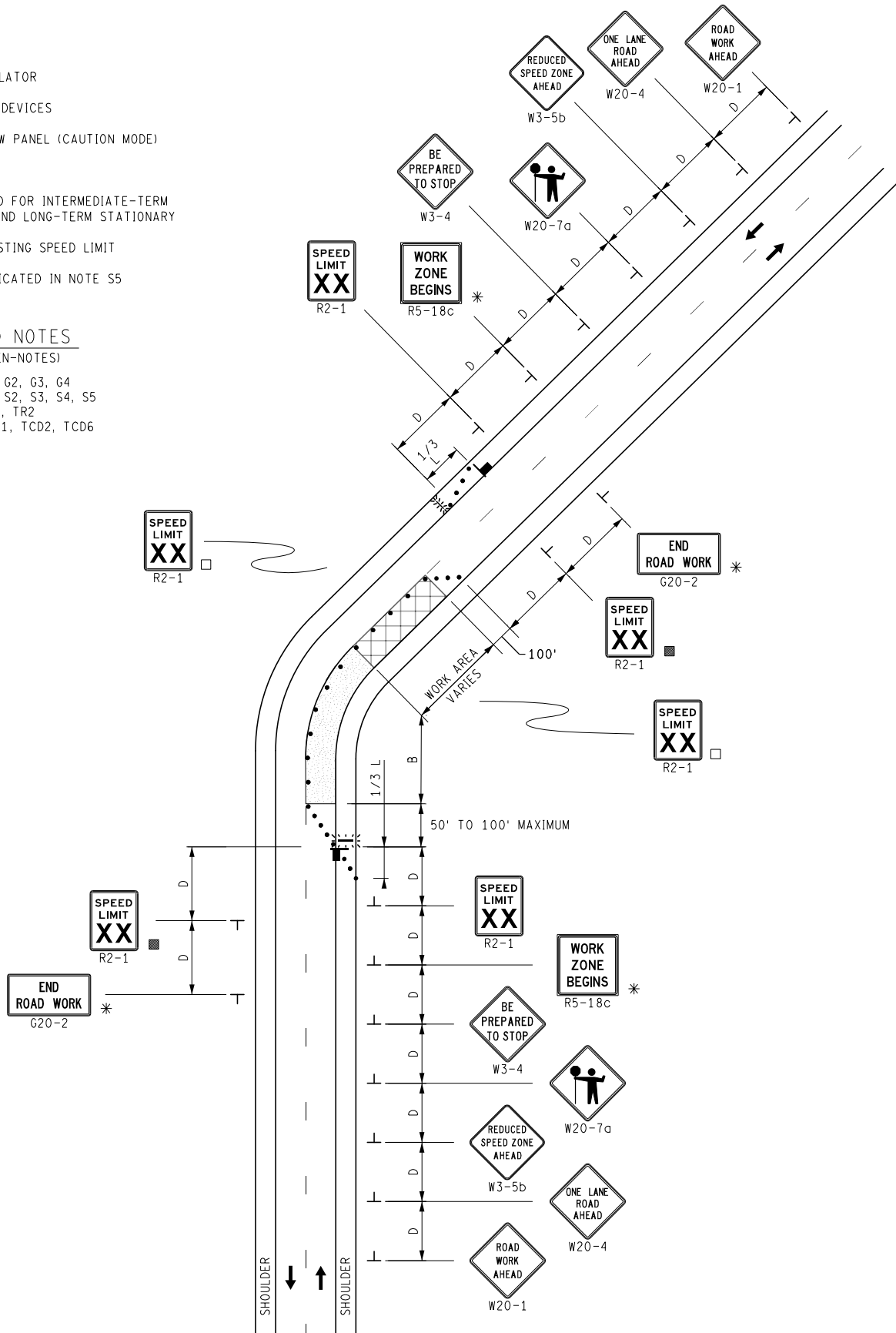
KEY

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
-  REFLECTS EXISTING SPEED LIMIT
-  PLACE AS INDICATED IN NOTE S5

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
SIGNING: S1, S2, S3, S4, S5
TRAF REG: TR1, TR2
DEVICES: TCD1, TCD2, TCD6



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

LANE CLOSURE
FOR A TWO-LANE, TWO-WAY ROADWAY
UTILIZING TRAFFIC REGULATORS
WITH A MAXIMUM 10 MPH SPEED REDUCTION

DATE: MAY 2021
NO: 4110B-M-TR-NFW-2L
SHEET: 1 OF 1

FILE: 4110B-M-TR-NFW-2L.dgn

KEY

- ... CHANNELIZING DEVICES
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT

- TEMPORARY TRAFFIC SIGNAL
- TEMPORARY PAVEMENT MARKING (SOLID 24" STOP BAR)
- TEMPORARY CONCRETE BARRIER WALL
- CRASH ATTENUATOR

NOTES

SEE TABLE 6-11 IN DESIGN MANUAL, EDGE DROP TREATMENT FOR BARRIER WALL USAGE GUIDELINES.

BARRIER WALL AND OM-3 SIGNS MAY BE REMOVED AND REPLACED WITH CHANNELIZING DEVICES IF THERE IS NO DROP OFF.

STANDARD NOTES

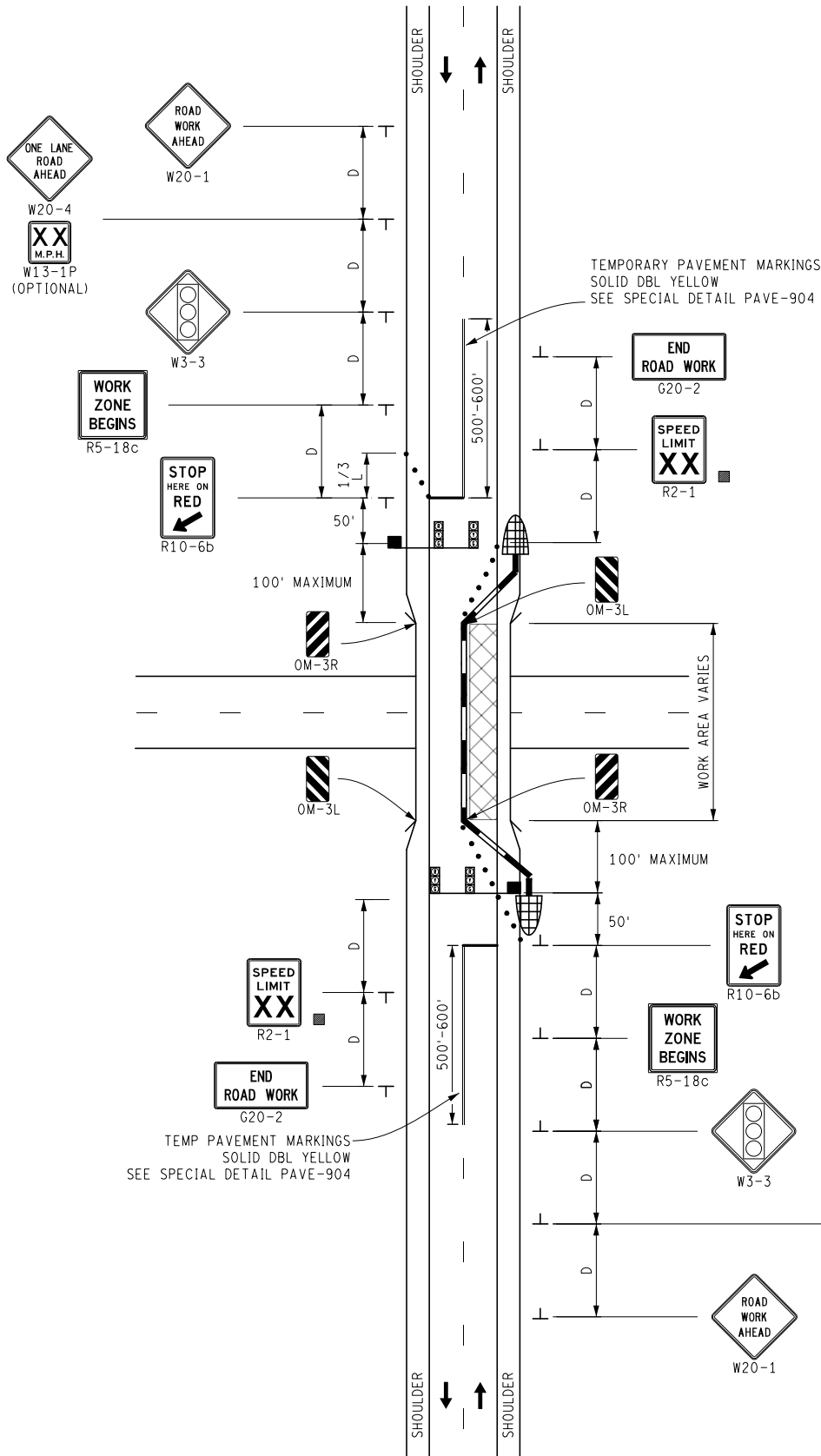
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G5

SIGNING: S1, S3, S4

DEVICES: TCD1, TCD5

MAINT & SURV MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY

TEMPORARY TRAFFIC SIGNAL
ON A TWO-LANE, TWO-WAY ROADWAY
NO SPEED REDUCTION
(WITH TEMPORARY BARRIER WALL)

DATE:
MAY 2021
NO:
4121-M-TS
SHEET:
1 OF 1

FILE: 4121-M-TS.dgn

KEY

- CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL (CAUTION MODE)
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

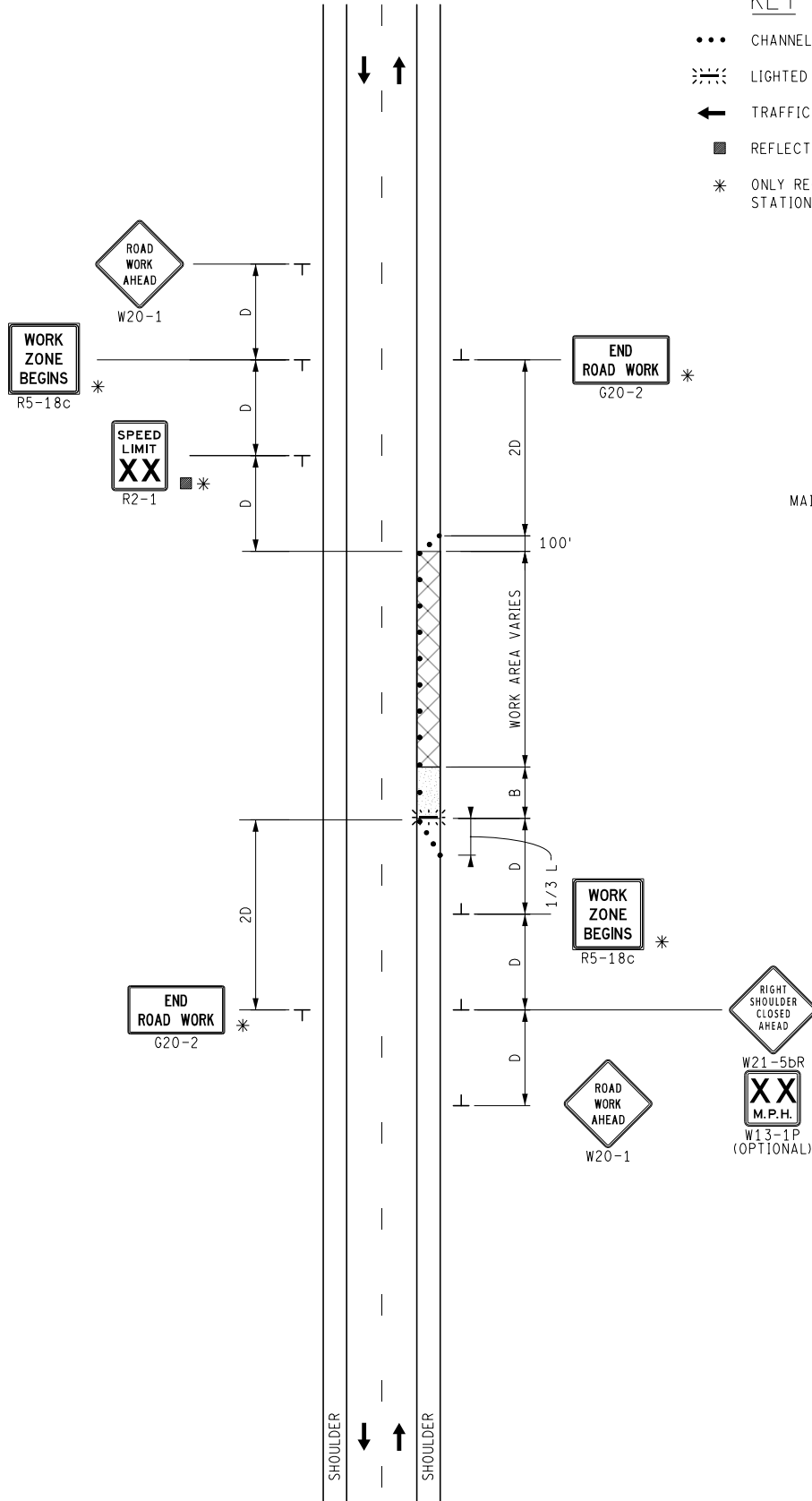
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE

	<p>MAINTENANCE MAINTAINING TRAFFIC TYPICAL</p>	<p>DURATION: SHORT-TERM STATIONARY, SHORT DURATION LONG-TERM STATIONARY INTERMEDIATE-TERM STATIONARY</p>	<p>SHOULDER CLOSURE ON A TWO-LANE, TWO-WAY ROADWAY</p>	<p>DATE: MAY 2021</p> <p>NO: 4122-M-NFW-SHL</p> <p>SHEET: 1 OF 1</p>
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FILE: 4122-M-NFW-SHL.dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

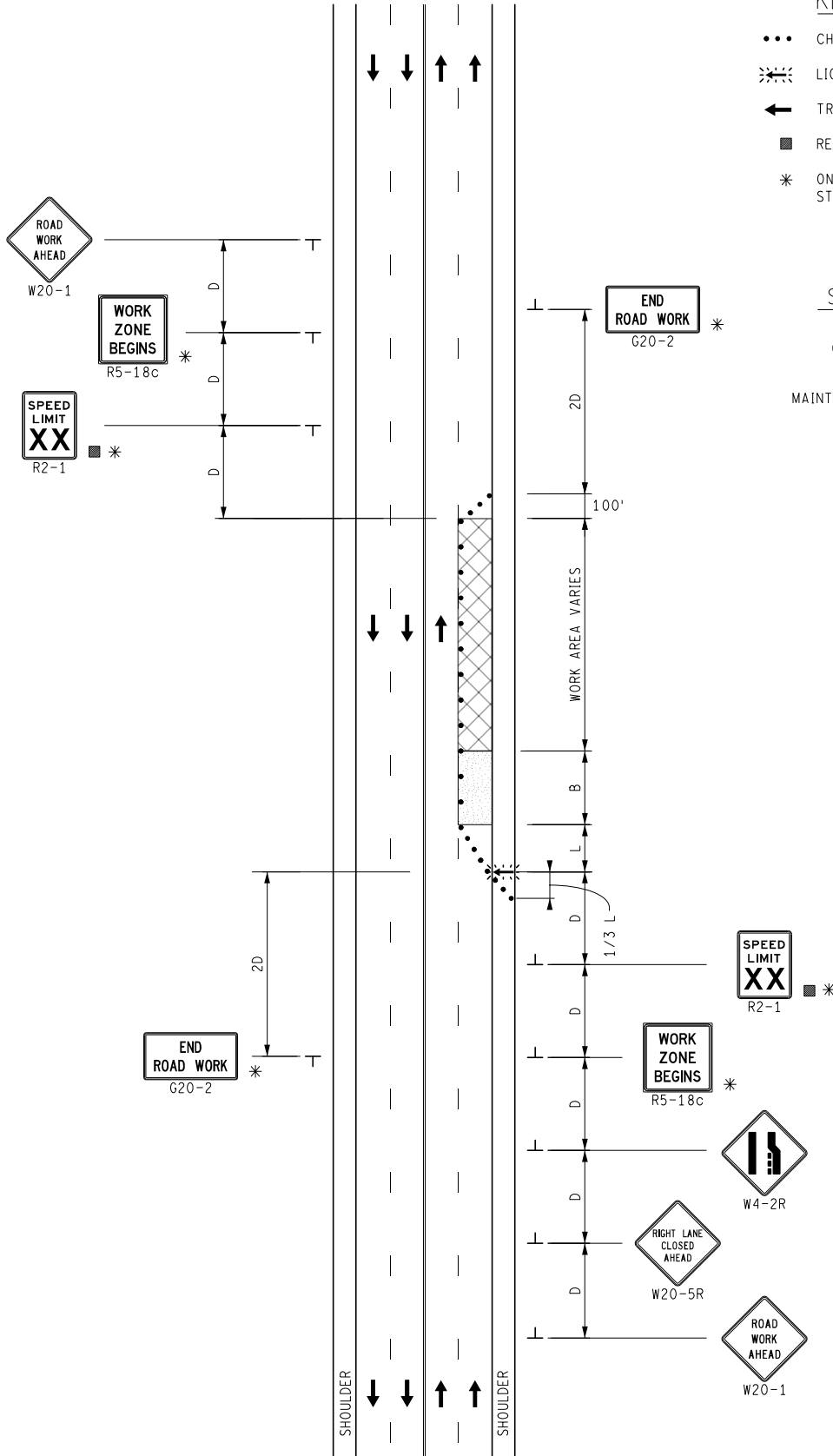
STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3

DEVICES: TCD1, TCD2, TCD6
MAINT & SURV MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

RIGHT LANE CLOSURE ON AN
UNDIVIDED MULTI-LANE ROADWAY,
NO SPEED REDUCTION

DATE:
MAY 2021
NO: 4123A-
M-NFW-1LC-(R)
SHEET:
1 OF 1

FILE: 4123A-M-NFW-1LC-(R).dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

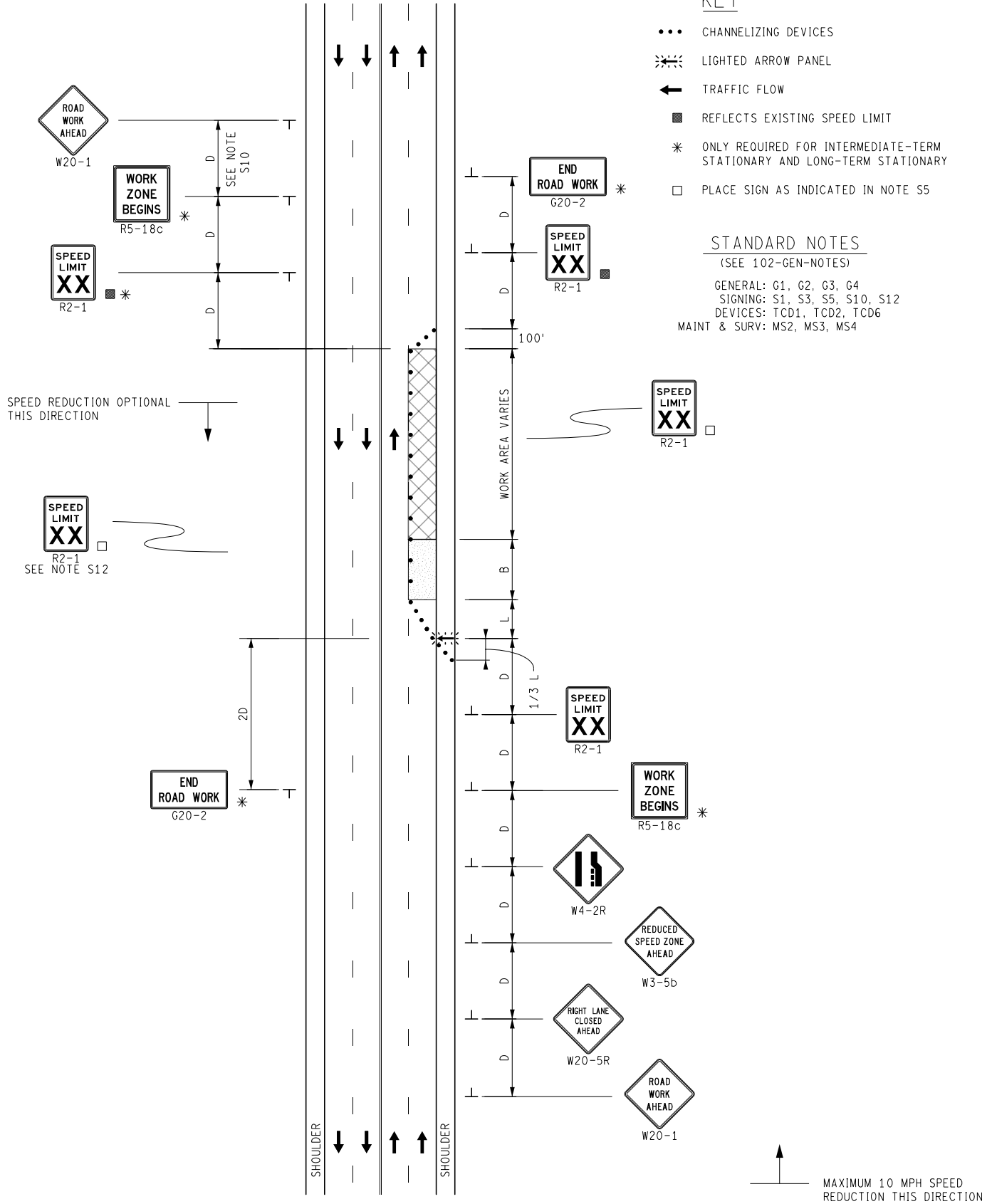
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3, S5, S10, S12

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE

	<p>MAINTENANCE MAINTAINING TRAFFIC TYPICAL</p>	<p>DURATION: LONG-TERM STATIONARY INTERMEDIATE-TERM STATIONARY SHORT-TERM STATIONARY</p>	<p>ONE-LANE CLOSURE ON AN UNDIVIDED MULTI-LANE ROADWAY, WITH A MAXIMUM 10 MPH SPEED REDUCTION</p>	<p>DATE: MAY 2021</p> <p>NO: 4123B- M-NFW-1LC-(R)</p> <p>SHEET: 1 OF 1</p>
--	--	--	---	--

FILE: 4123B-M-NFW-1LC-(R).dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

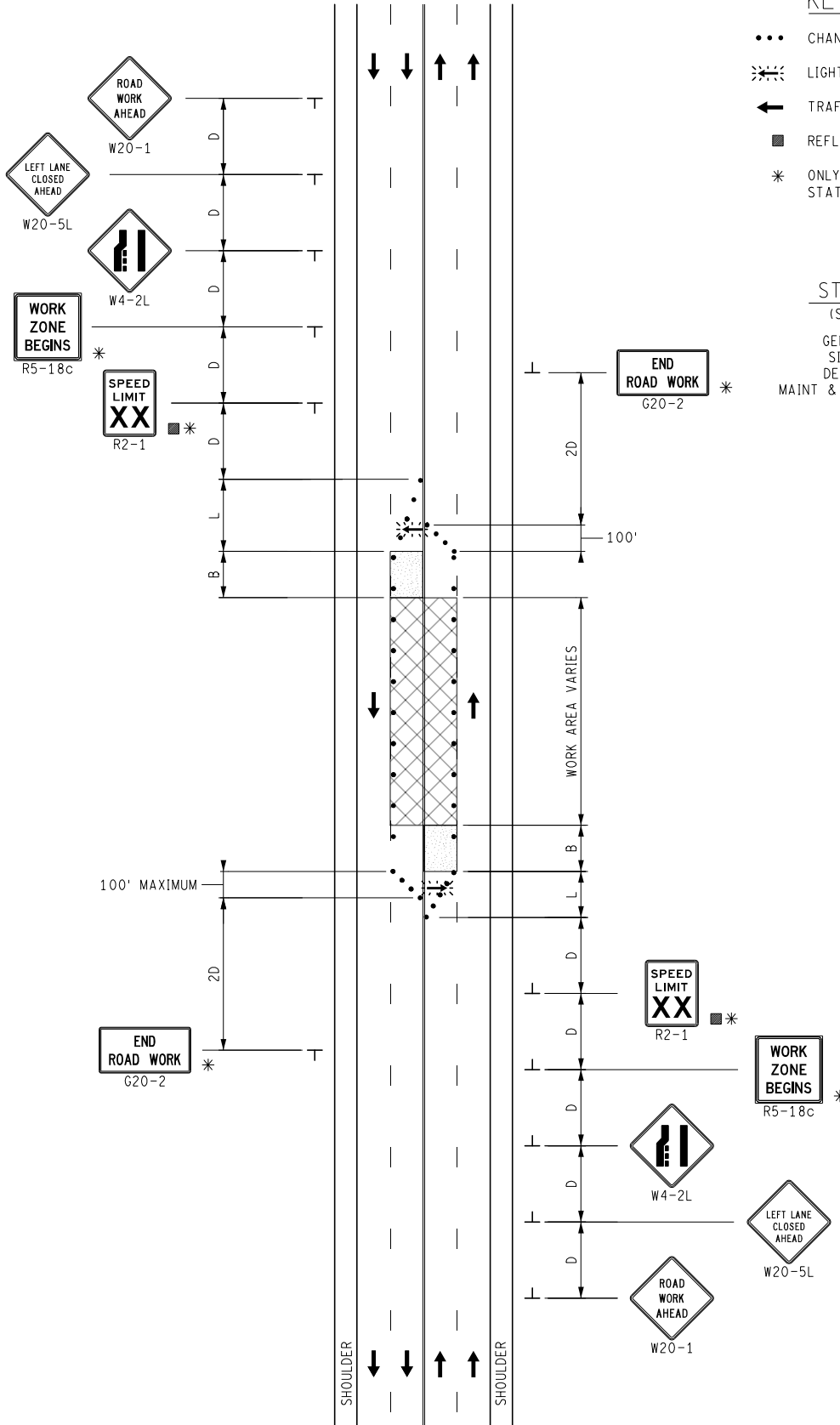
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

2-LANE CLOSURE, INSIDE
OF A MULTI-LANE UNDIVIDED ROADWAY,
NO SPEED REDUCTION

DATE: MAY 2021
NO: 4125A-M-NFW-2LC-(IN)
SHEET: 1 OF 1

FILE: 4125A-M-NFW-2LC-(IN).dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

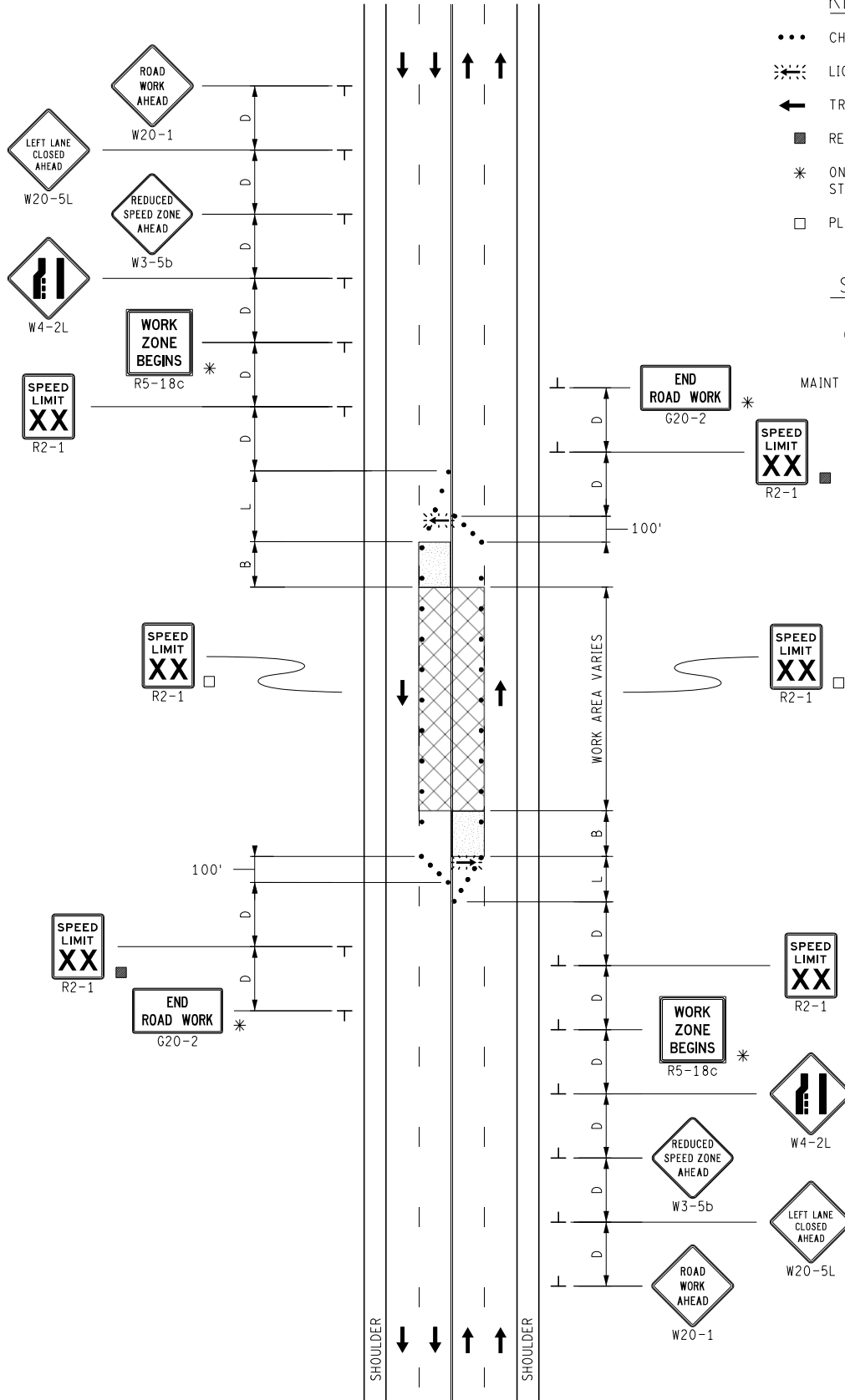
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3, S5

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

2-LANE CLOSURE, INSIDE
OF A MULTI-LANE UNDIVIDED ROADWAY,
WITH A MAXIMUM 10 MPH
SPEED REDUCTION

DATE:
MAY 2021
NO: 4125B-
M-NFW-2LC-(IN)
SHEET:
1 OF 1

FILE: 4125B-M-NFW-2LC-(IN).dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

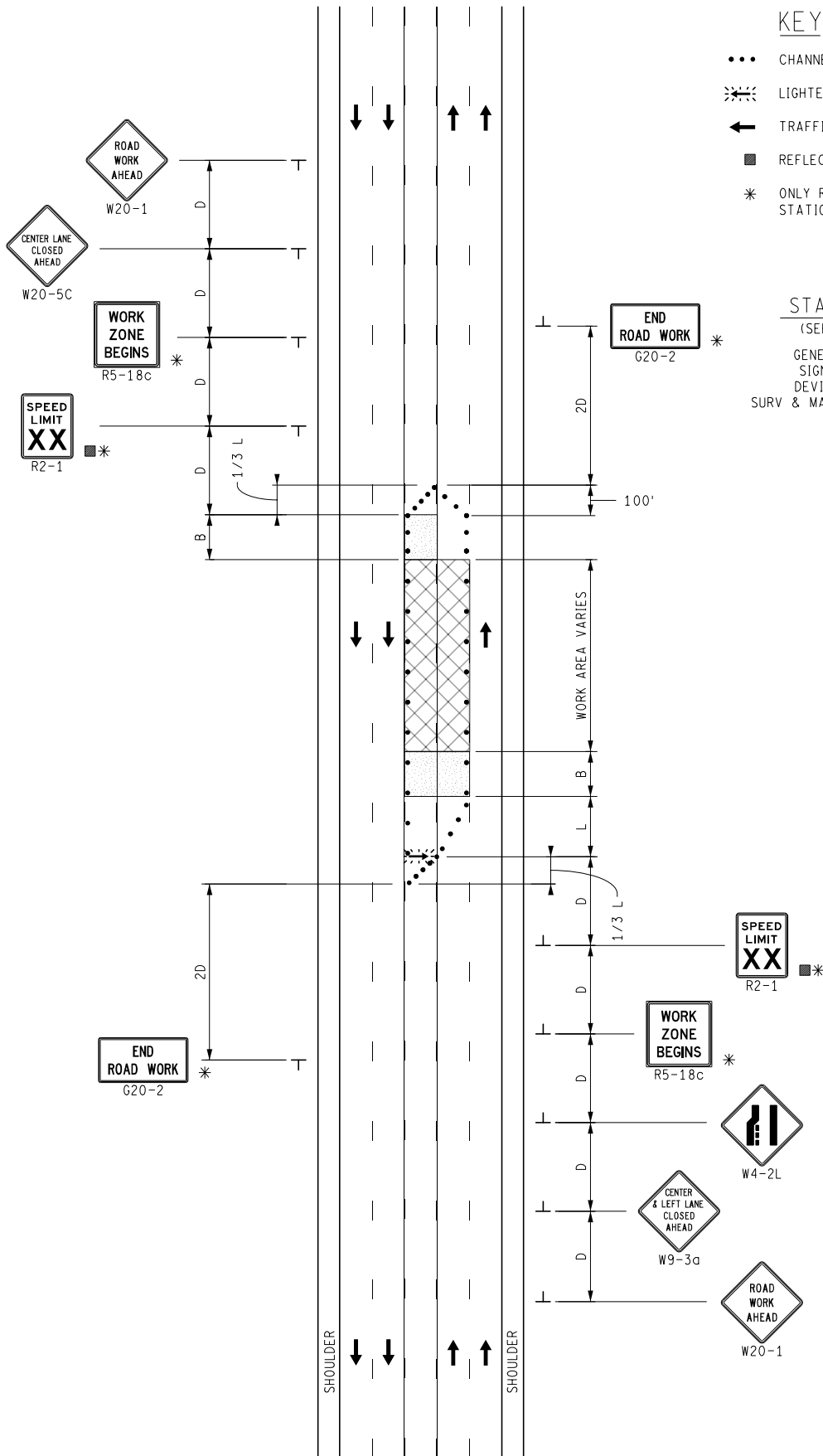
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3

DEVICES: TCD1, TCD2, TCD6

SURV & MAINT: M2, M3, M4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

CENTER AND LEFT LANE CLOSURE
OF A MULTI-LANE UNDIVIDED ROADWAY,
NO SPEED REDUCTION

DATE:
MAY 2021
NO: 4133A-
M-CLT-1LC-(L)
SHEET:
1 OF 1

FILE: 4133A-M-CLT-1LC-(L).dgn

SPEED REDUCTION OPTIONAL
THIS DIRECTION

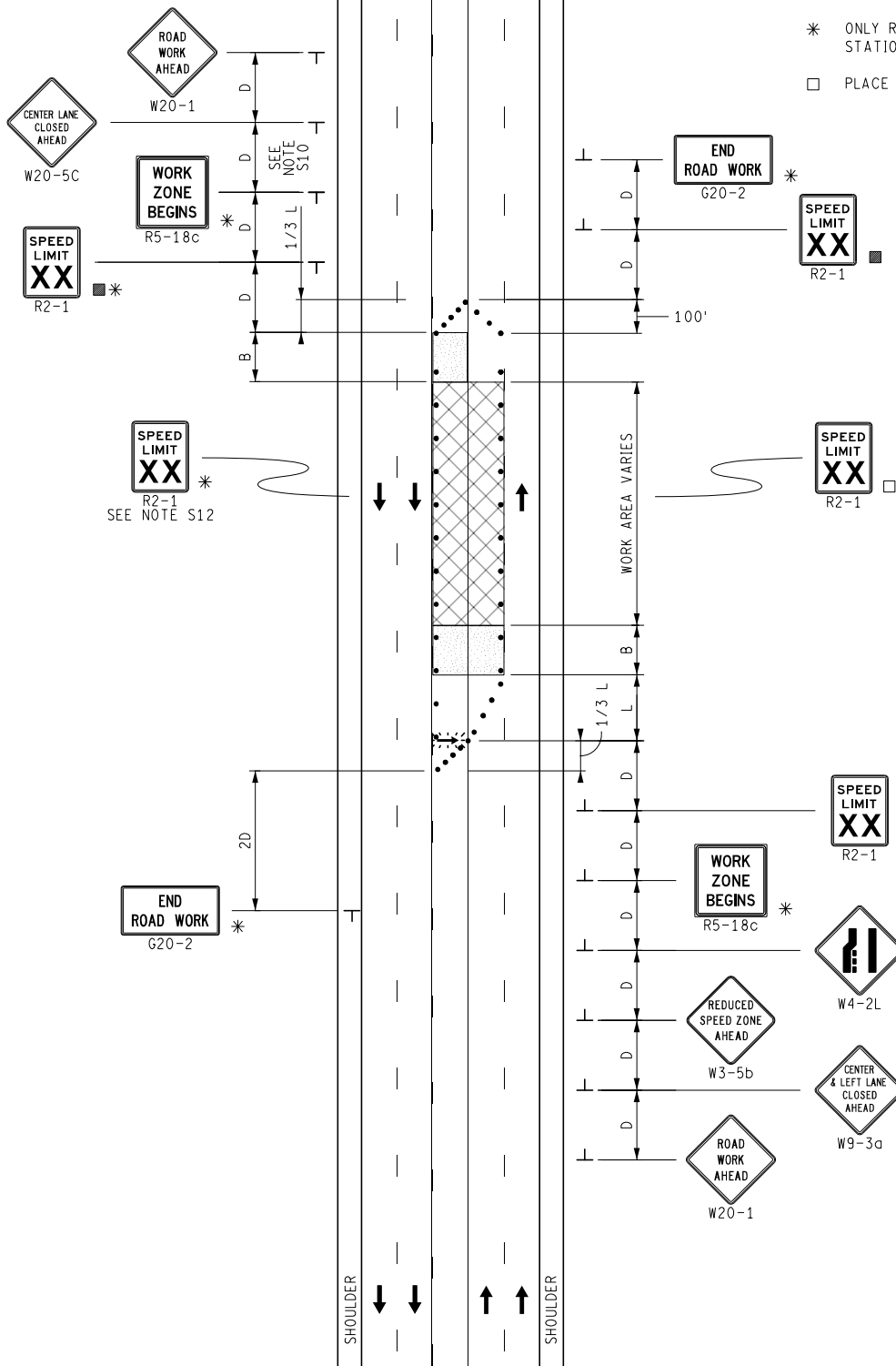
KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
SIGNING: S1, S3, S5, S10, S12
DEVICES: TCD1, TCD2, TCD6
MAINT & SURV: MS2, MS3, MS4



MAXIMUM 10 MPH SPEED
REDUCTION THIS DIRECTION

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

CENTER AND LEFT LANE CLOSURE
OF A MULTI-LANE UNDIVIDED ROADWAY,
WITH A MAXIMUM 10 MPH SPEED REDUCTION

DATE:
MAY 2021
NO: 4133B-
M-CLT-1LC-(L)
SHEET:
1 OF 1

FILE: 4133B-M-CLT-1LC-(L).dgn

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

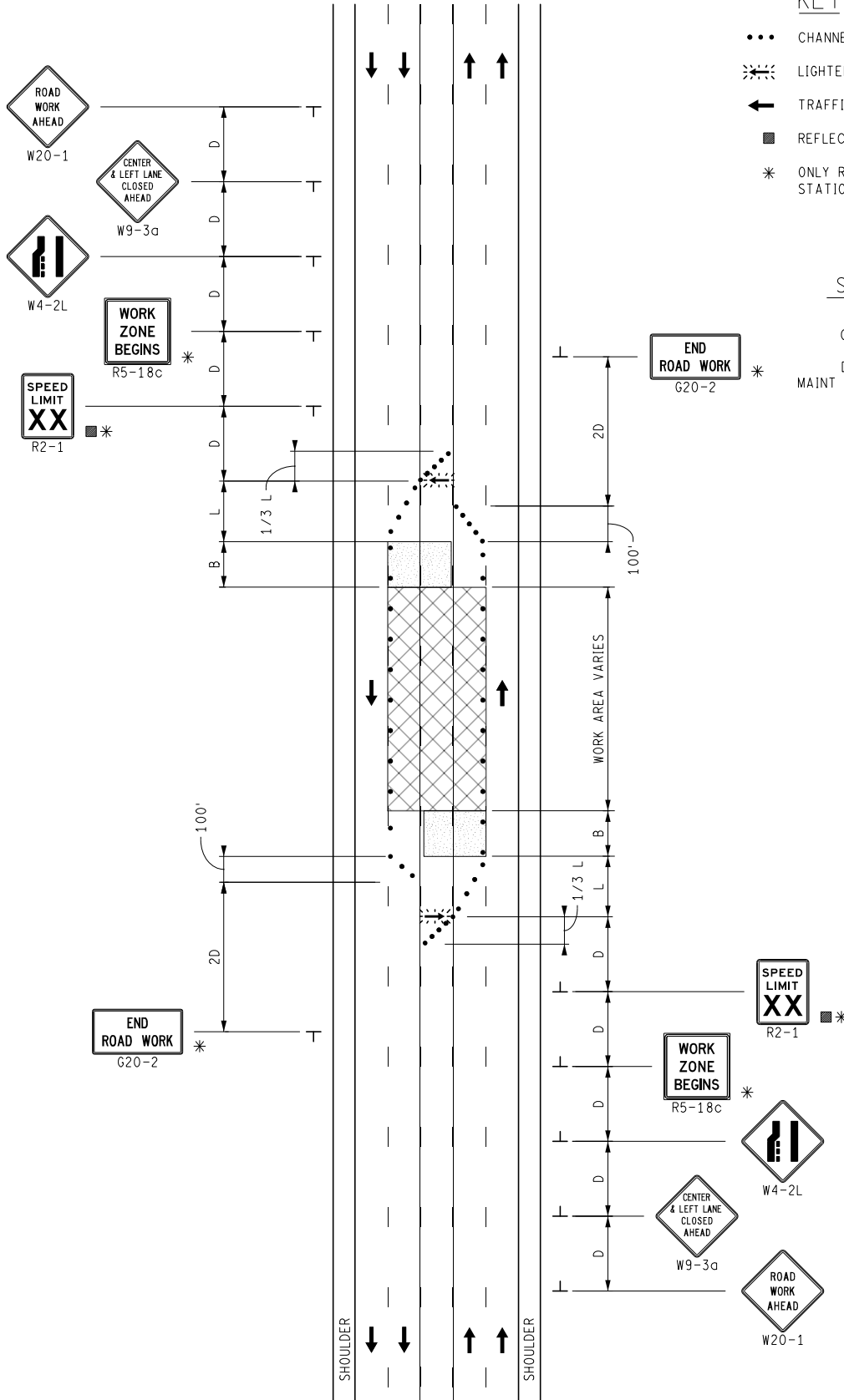
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

CLOSURE OF CENTER LANE AND LEFT LANES
OF A MULTI-LANE UNDIVIDED ROADWAY,
NO SPEED REDUCTION

DATE:
MAY 2021
NO: 4134A-M-CLT-
2(L)LC-(IN)
SHEET:
1 OF 1

FILE: 4134A-M-CLT-2(L)LC-(IN).dgn

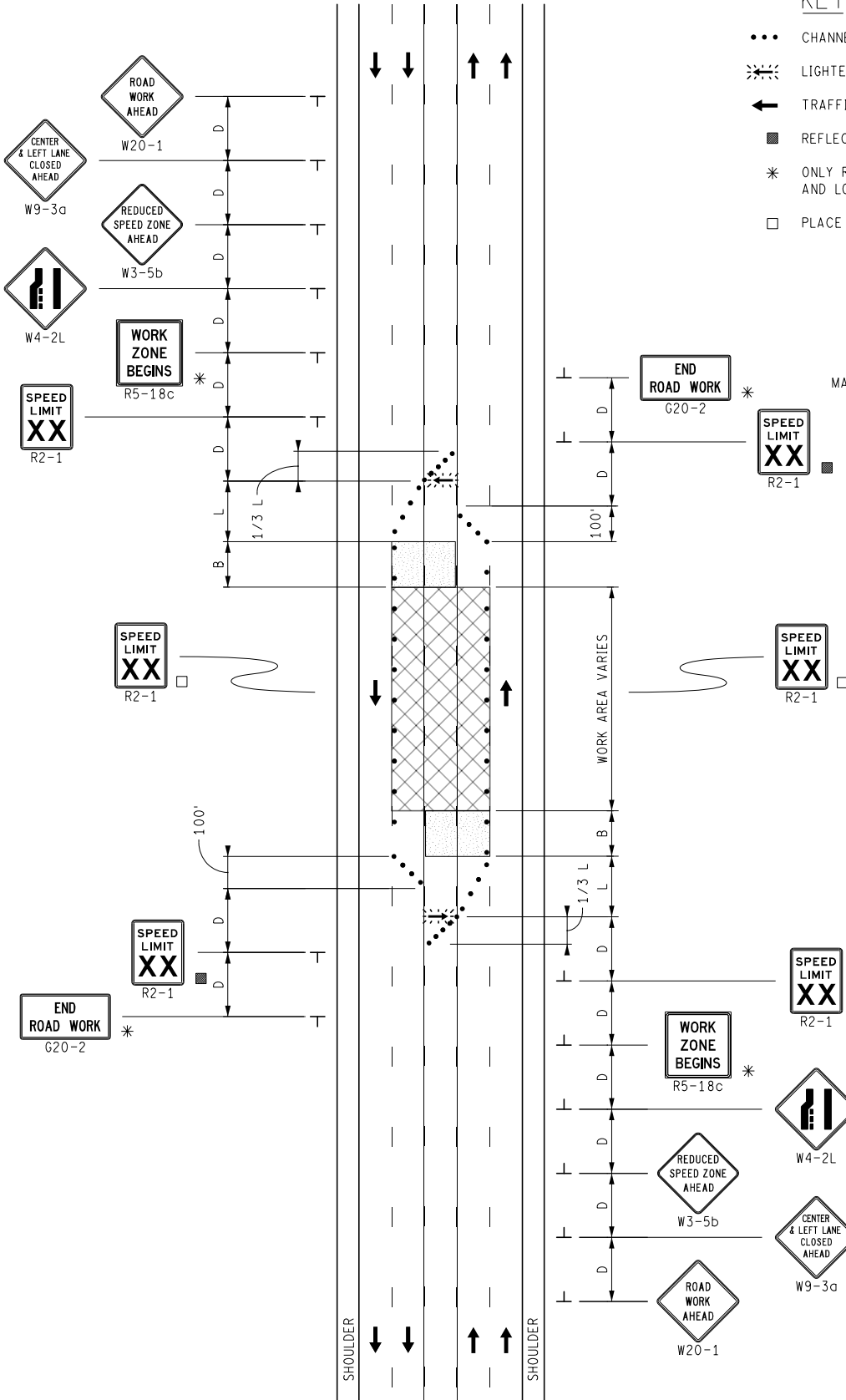
KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
 SIGNING: S1, S3, S5
 DEVICES: TCD1, TCD2, TCD6
 MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



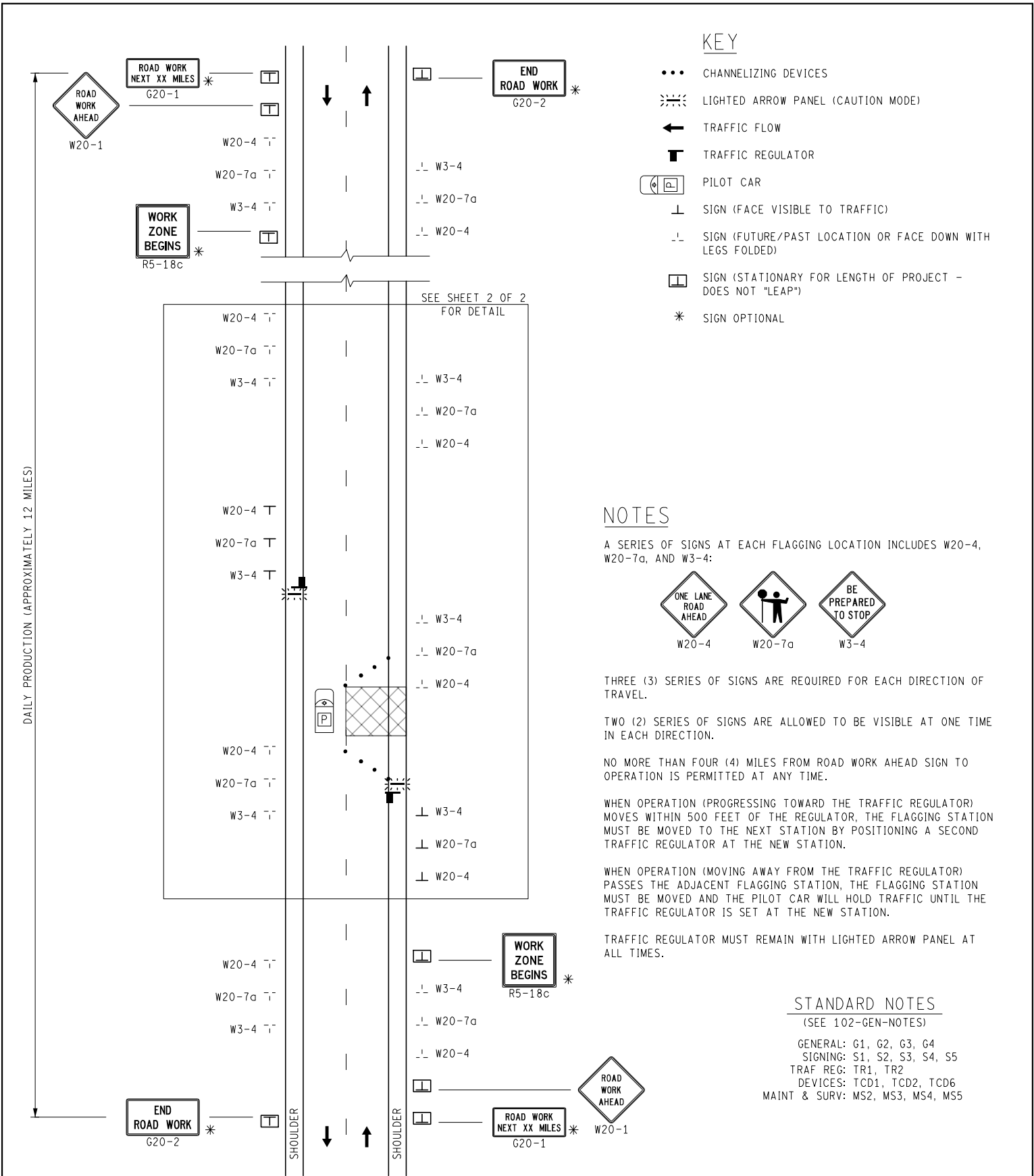
MAINTENANCE
 MAINTAINING TRAFFIC
 TYPICAL

DURATION:
 LONG-TERM STATIONARY
 INTERMEDIATE-TERM STATIONARY
 SHORT-TERM STATIONARY


CLOSURE OF CENTER LANE AND LEFT LANES
 OF A MULTI-LANE UNDIVIDED ROADWAY,
 WITH A MAXIMUM 10 MPH SPEED REDUCTION

DATE: MAY 2021
 NO: 4134B-M-CLT-2(L)LC-(IN)
 SHEET: 1 OF 1

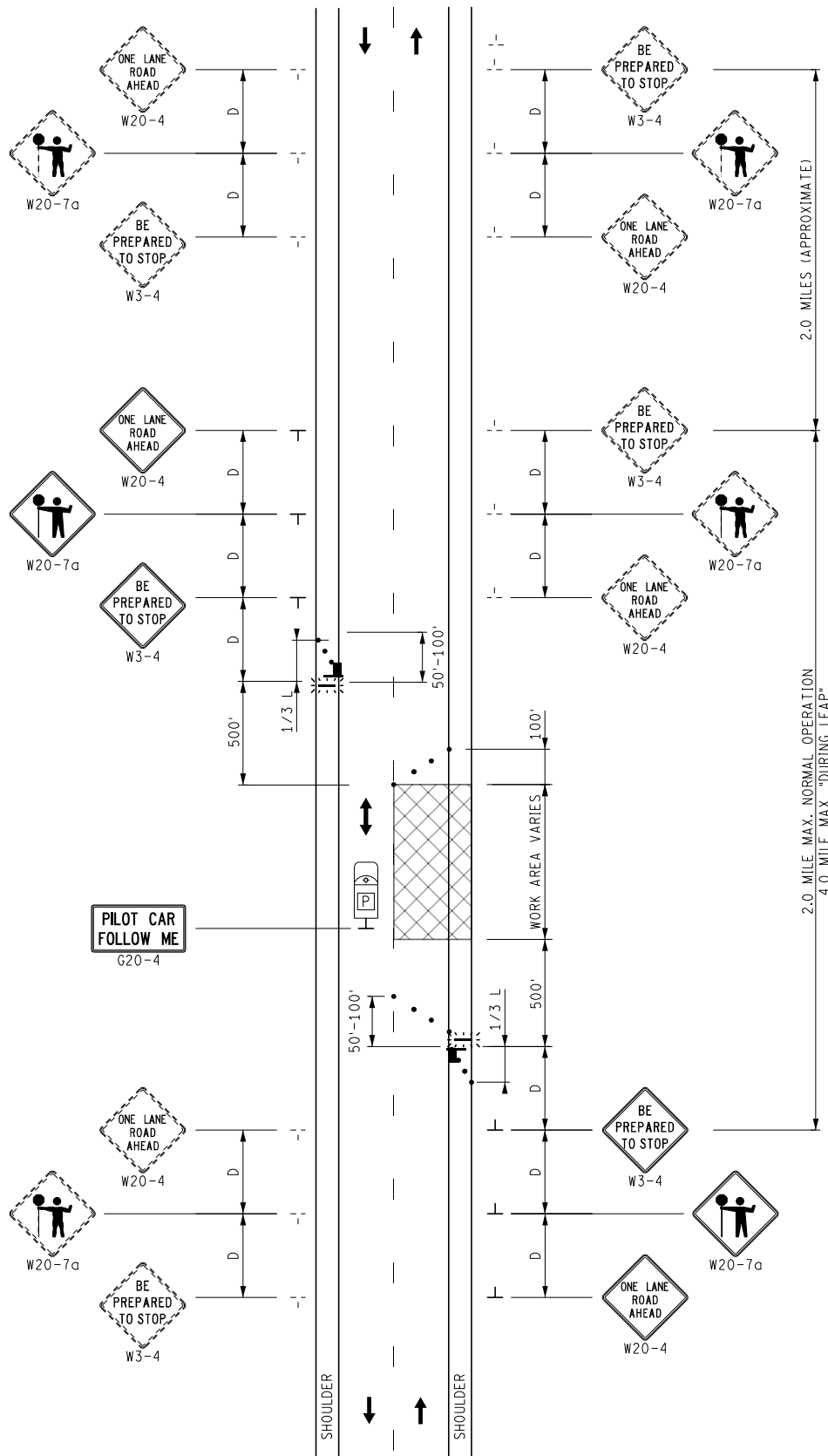
FILE: 4134B-M-CLT-2(L)LC-(IN).dgn



NOT TO SCALE

 <p>Michigan Department of Transportation</p>	<p>MAINTENANCE MAINTAINING TRAFFIC TYPICAL</p>	<p>DURATION: MOBILE SHORT DURATION SHORT-TERM STATIONARY</p>	<p>LEAP FROG LANE CLOSURE ON A TWO-LANE, TWO-WAY ROADWAY</p>	<p>DATE: MAY 2021 NO: 4180-M-TR-NFW-2L SHEET: 1 OF 2</p>
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FILE: 4180-M-TR-NFW-2L.dgn



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

MOBILE
SHORT DURATION
SHORT-TERM STATIONARY

LEAP FROG LANE CLOSURE
ON A TWO-LANE, TWO-WAY ROADWAY

DATE:
MAY 2021

NO: 4180-
M-TR-NFW-2L

SHEET:
2 OF 2

FILE: 4180-M-TR-NFW-2L.dgn

END
ROAD WORK
G20-2 *

SPEED
LIMIT
XX
R2-1 *

END
ROAD WORK
G20-2 *

SPEED
LIMIT
XX
R2-1 *

- KEY**
- ... CHANNELIZING DEVICES
 - ⋈ LIGHTED ARROW PANEL (CAUTION MODE)
 - ← TRAFFIC FLOW
 - REFLECTS EXISTING SPEED LIMIT
 - * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
SIGNING: S1, S3
DEVICES: TCD1, TCD2, TCD6
MAINT & SURV MS2, MS3, MS4

NOTE

THIS TYPICAL MAY ALSO BE USED WHEN WORK IS BEING PERFORMED IN THE SHOULDER ADJACENT TO THE MEDIAN OF THE ROADWAY. IN THIS CASE THE, "LEFT SHOULDER CLOSED" AND "LEFT SHOULDER CLOSED AHEAD" SIGNS SHALL BE SUBSTITUTED AND PLACED ON THE LEFT SIDE.

WORK
ZONE
BEGINS
R5-18c *

ROAD
WORK
AHEAD
W20-1
NEXT
X MILES
W16-4aP
(ORANGE)

WORK
ZONE
BEGINS
R5-18c *


ROAD
WORK
AHEAD
W20-1
NEXT
X MILES
W16-4aP
(ORANGE)

RIGHT
SHOULDER
CLOSED
W21-5aR
XX
M.P.H.
W13-1P
(OPTIONAL)

RIGHT
SHOULDER
CLOSED
AHEAD
W21-5bR
XX
M.P.H.
W13-1P
(OPTIONAL)

(POST W16-4aP WHEN SHOULDER CLOSURE EXCEEDS 1 MILE IN LENGTH)

NOT TO SCALE

 <p>Michigan Department of Transportation</p>	MAINTENANCE MAINTAINING TRAFFIC TYPICAL	DURATION: LONG-TERM STATIONARY INTERMEDIATE-TERM STATIONARY SHORT-TERM STATIONARY	SHOULDER CLOSURE ON A DIVIDED ROADWAY OR FREEWAY	DATE: MAY 2021
				NO: 4200-M-FW-SHL
				SHEET: 1 OF 1

KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

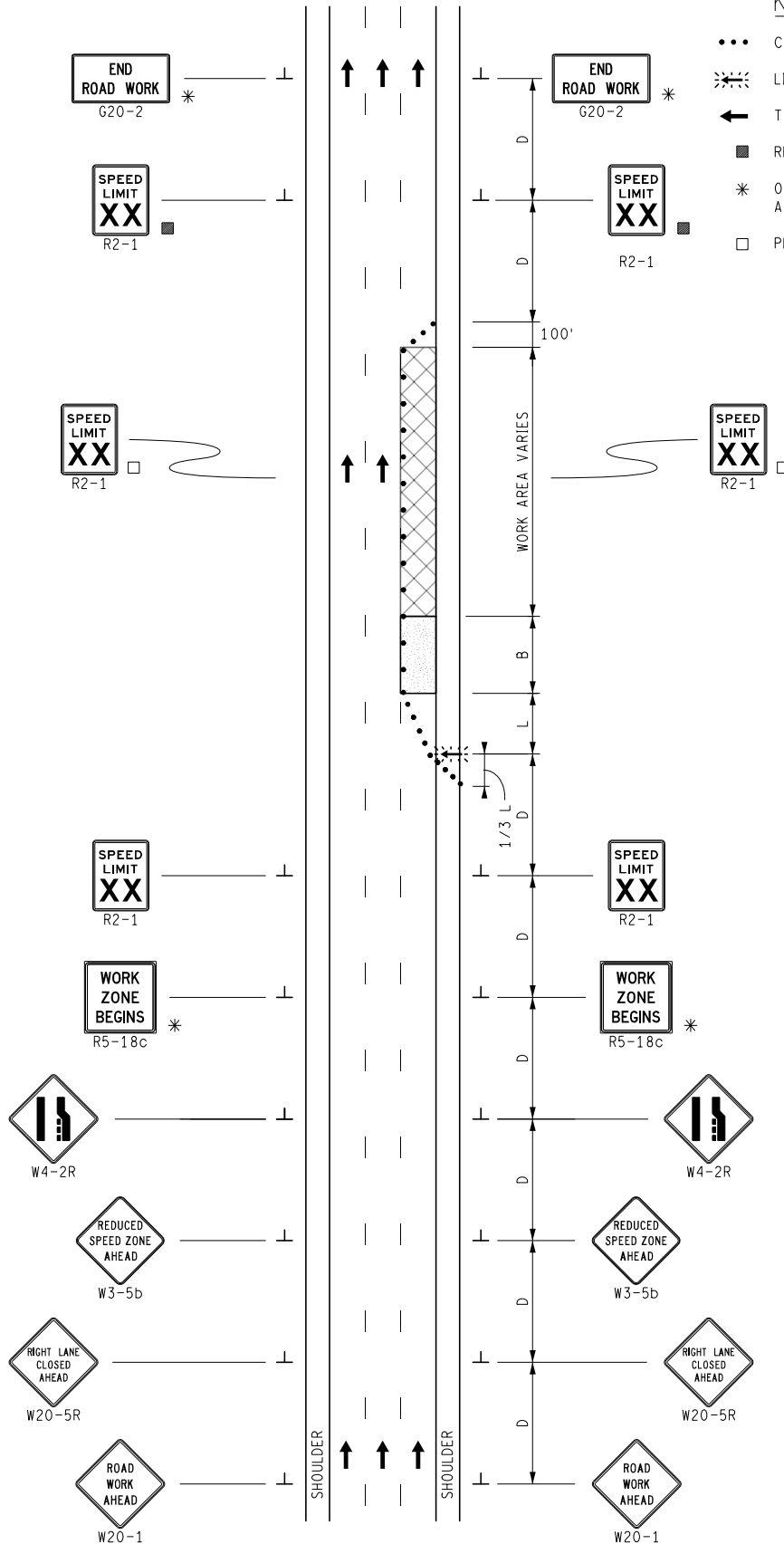
(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1, S3, S5

DEVICES: TCD1, TCD2, TCD6

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

SINGLE RIGHT LANE CLOSURE ON A FREEWAY
USING A 10 MPH STEP DOWN
IN SPEED LIMIT

DATE:
MAY 2021
NO: 4203A-
M-FW-1LC-(R)
SHEET:
1 OF 1

FILE: 4203A-M-FW-1LC-(R).dgn

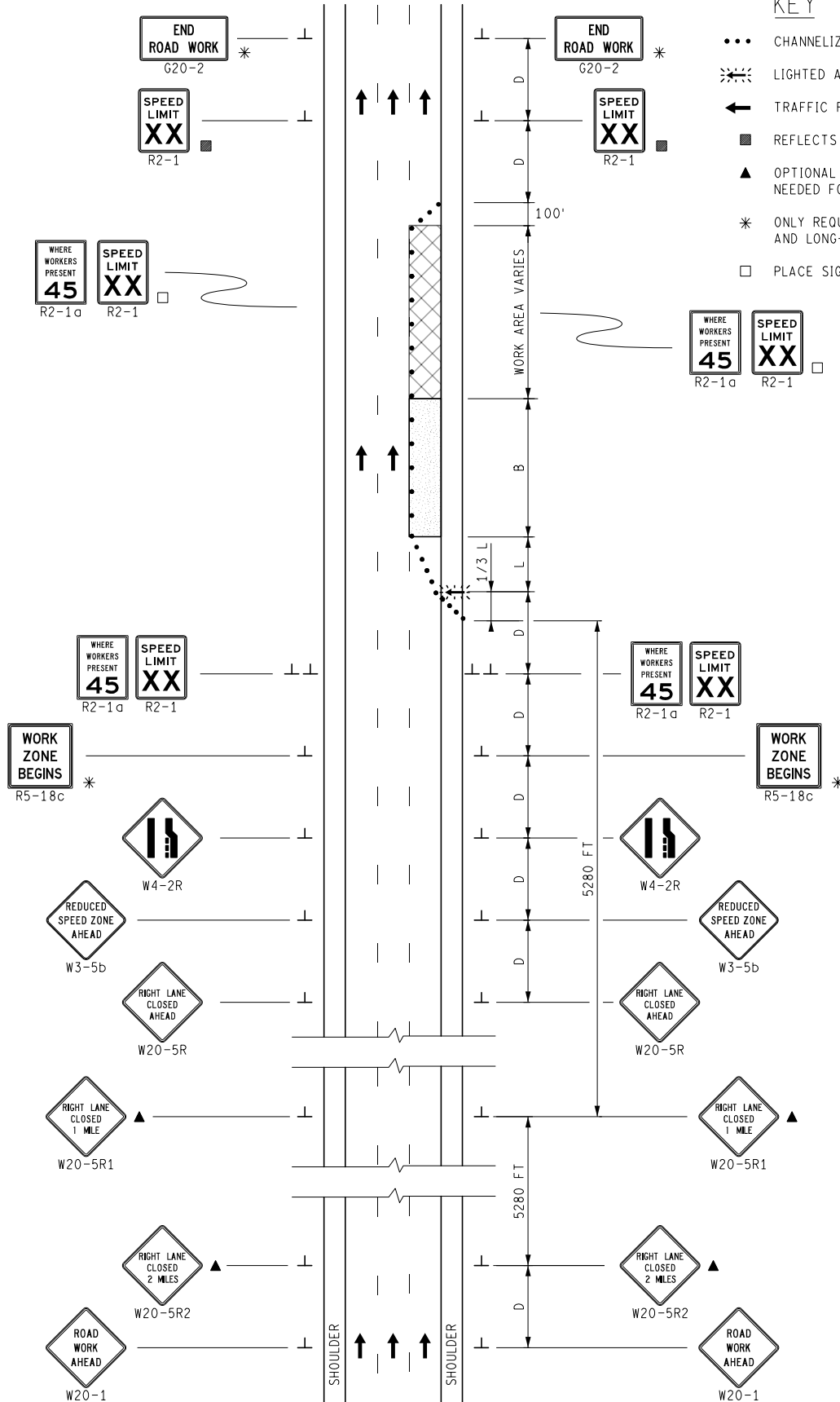
KEY

- ... CHANNELIZING DEVICES
- ⚡ LIGHTED ARROW PANEL
- ← TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT
- ▲ OPTIONAL FOR LONG-TERM STATIONARY AND NOT NEEDED FOR SHORT DURATION
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY
- PLACE SIGN AS INDICATED IN NOTE S5

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4
SIGNING: S1, S3, S5
DEVICES: TCD1, TCD2, TCD6
MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
APPLIES TO ALL DURATIONS

SINGLE LANE CLOSURE ON A FREEWAY
USING "WHERE WORKERS PRESENT" AND A
10 MPH STEP DOWN IN SPEED LIMIT
2 MILE ADVANCED WARNING

DATE:
MAY 2021
NO: 4203B-
M-FW-1LC-(R)
SHEET:
1 OF 1

FILE: 4203B-M-FW-1LC-(R).dgn

KEY

- ... CHANNELIZING DEVICES
- ← TRAFFIC FLOW

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

DEVICES: TCD1, TCD2

RAMP: RMP2

WORK ZONE SPEED LIMIT / RAMP TAPER LENGTH

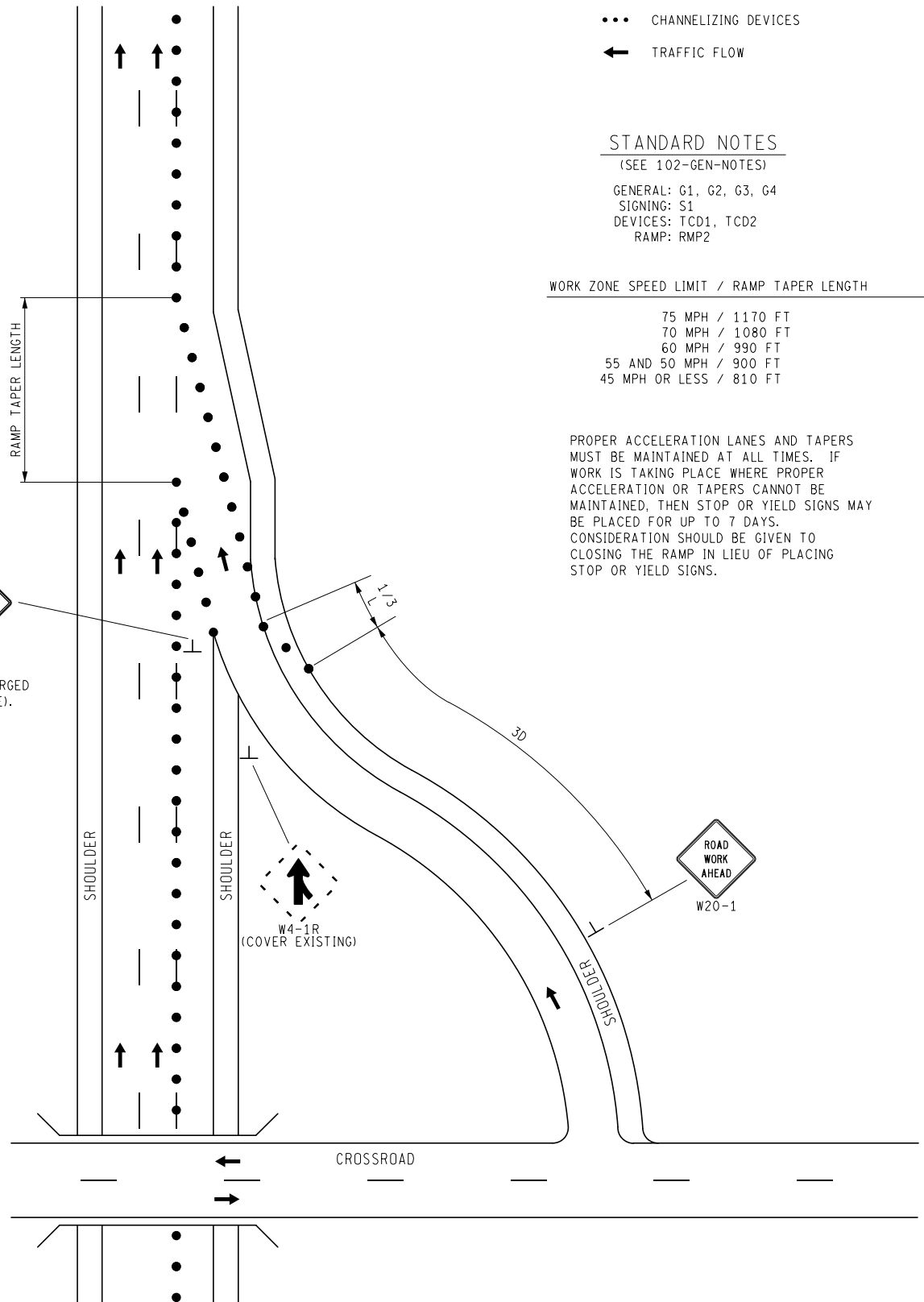
75 MPH /	1170 FT
70 MPH /	1080 FT
60 MPH /	990 FT
55 AND 50 MPH /	900 FT
45 MPH OR LESS /	810 FT

PROPER ACCELERATION LANES AND TAPERS MUST BE MAINTAINED AT ALL TIMES. IF WORK IS TAKING PLACE WHERE PROPER ACCELERATION OR TAPERS CANNOT BE MAINTAINED, THEN STOP OR YIELD SIGNS MAY BE PLACED FOR UP TO 7 DAYS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP IN LIEU OF PLACING STOP OR YIELD SIGNS.



W4-1R

USE W4-1 WHEN HAVING TRAFFIC MERGED INTO AN OPEN LANE (AS SHOWN HERE).



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

OUTSIDE LANE CLOSURE ON A FREEWAY
THROUGH ENTRANCE RAMP AREA
FREEFLOW CONDITION

DATE:
MAY 2021

NO: 4221-FW
EnR-0-LC-FREE

SHEET:
1 OF 1

FILE: 4221-FW-EnR-0-LC-FREE.dgn

KEY

... CHANNELIZING DEVICES

← TRAFFIC FLOW

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

DEVICES: TCD1, TCD2

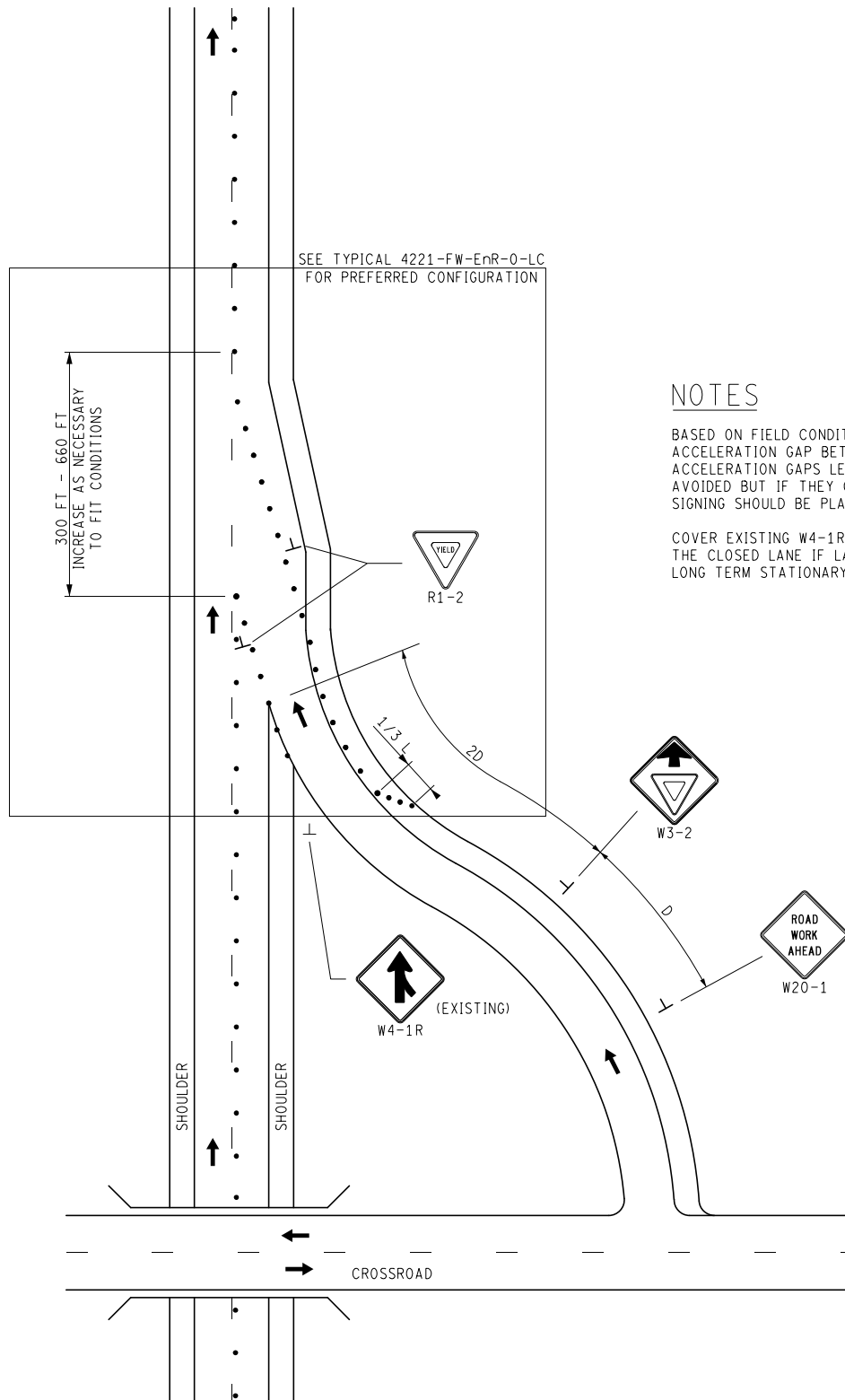
RAMP: RMP2

MAINT & SURV: MS2, MS3, MS4

NOTES

BASED ON FIELD CONDITIONS, PROVIDE AN ACCELERATION GAP BETWEEN 300 AND 660 FT. ACCELERATION GAPS LESS THAN 300 FT SHOULD BE AVOIDED BUT IF THEY CANNOT, THEN R1-1 (STOP) SIGNING SHOULD BE PLACED.

COVER EXISTING W4-1R SIGN AND POST A W4-1R SIGN IN THE CLOSED LANE IF LANE CLOSURE IS IN PLACE FOR A LONG TERM STATIONARY DURATION.



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

OUTSIDE LANE CLOSURE ON A FREEWAY
THROUGH ENTRANCE RAMP AREA
YIELD CONDITION






DATE:
MAY 2021

NO: 4222-FW
EnR-0-LC-YIELD

SHEET:
1 OF 1

FILE: 4222-FW-EnR-0-LC-YIELD.dgn

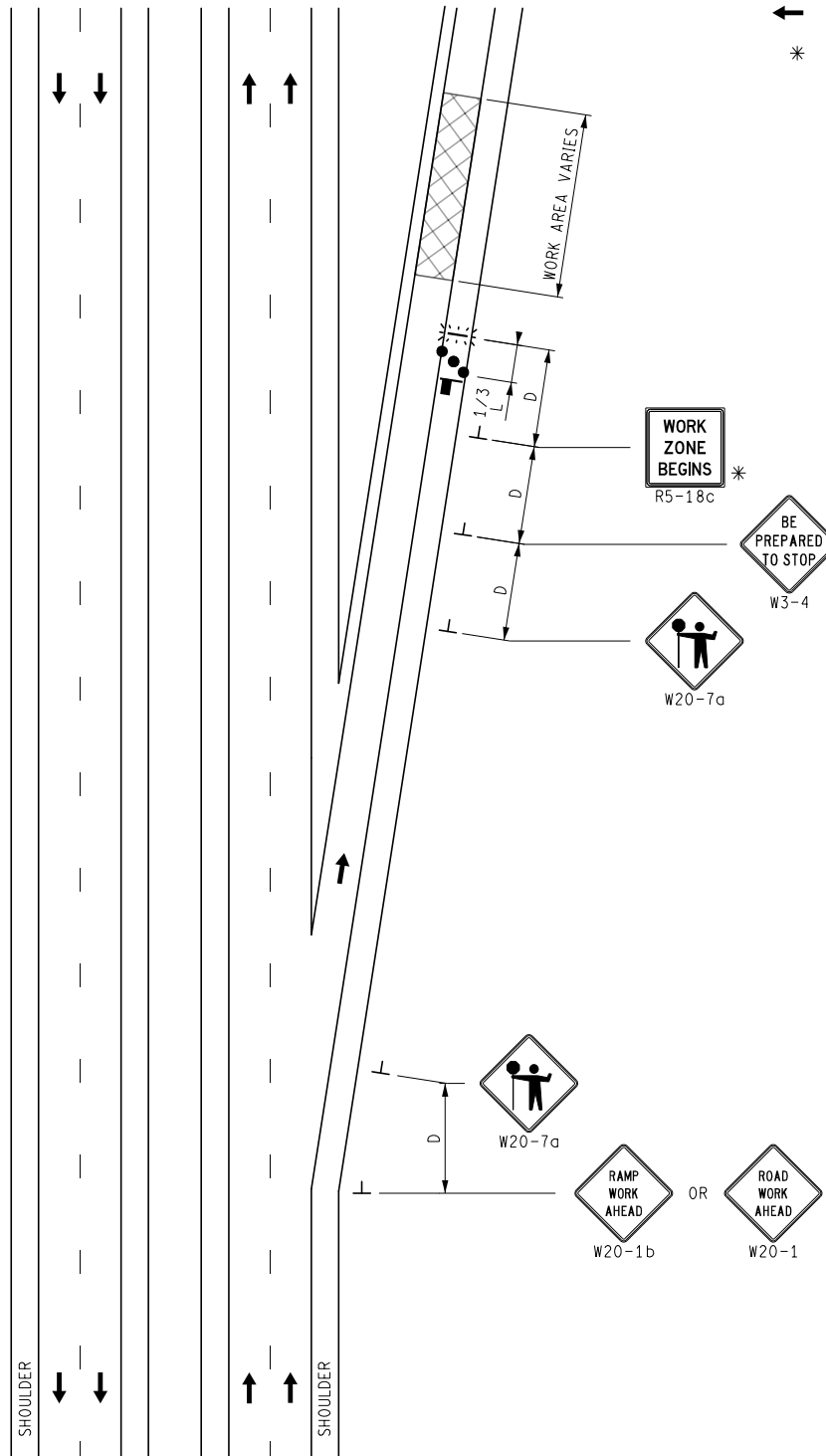
KEY

-  TRAFFIC REGULATOR
-  CHANNELIZING DEVICES
-  LIGHTED ARROW PANEL (CAUTION MODE)
-  TRAFFIC FLOW
-  * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

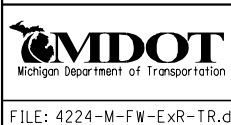
STANDARD NOTES

(SEE 102-GEN-NOTES)

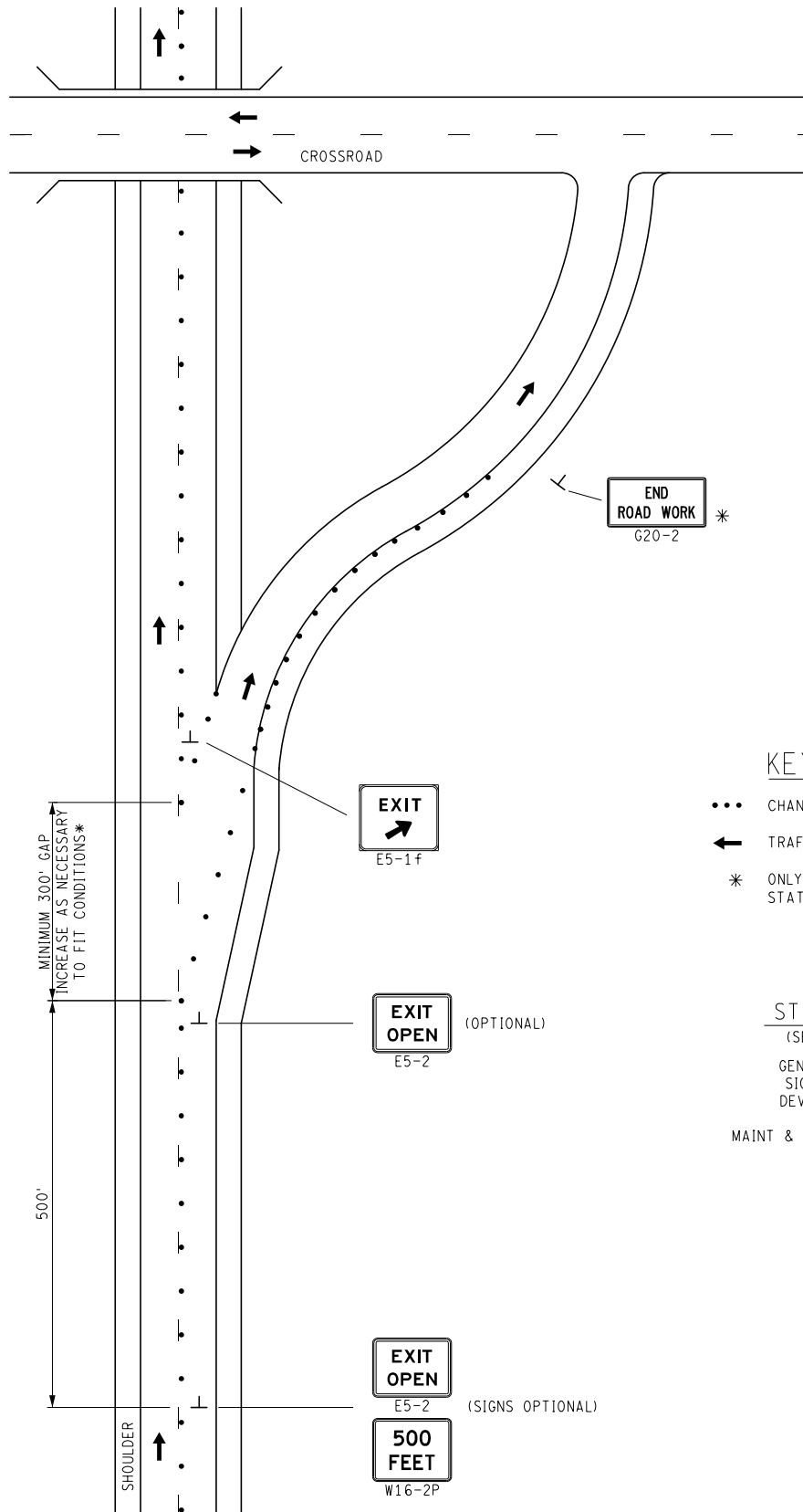
GENERAL: G1, G2, G3, G4
 SIGNING: S1, S3, S4
 TRAF REG: TR1, TR2
 DEVICES: TCD1, TCD2, TCD6
 MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE

	MAINTENANCE MAINTAINING TRAFFIC TYPICAL	DURATION: LONG-TERM STATIONARY INTERMEDIATE-TERM STATIONARY SHORT-TERM STATIONARY	WORK OPERATIONS ON EXIT RAMPs	DATE: MAY 2021
				NO: 4224-M-FW-ExR-TR SHEET: 1 OF 1

FILE: 4224-M-FW-ExR-TR.dgn



KEY

- CHANNELIZING DEVICES
- ← TRAFFIC FLOW
- * ONLY REQUIRED FOR INTERMEDIATE-TERM STATIONARY AND LONG-TERM STATIONARY

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

DEVICES: TCD1, TCD2

RAMP: RMP1

MAINT & SURV: MS2, MS3, MS4

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:
LONG-TERM STATIONARY
INTERMEDIATE-TERM STATIONARY
SHORT-TERM STATIONARY

EXIT RAMP TREATMENT
ON A FREEWAY
WITH OUTSIDE LANE CLOSURE

DATE: MAY 2021
NO: 4231-M-FW-ExR-0-LC
SHEET: 1 OF 1

FILE: 4231-M-FW-ExR-0-LC.dgn

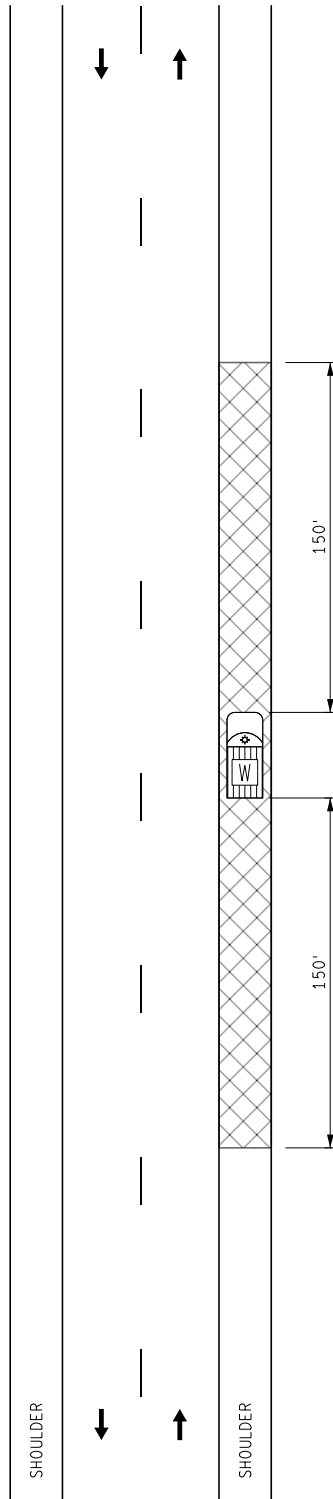
KEY



VEHICLE FROM WHICH WORK IS BEING PERFORMED



TRAFFIC FLOW



STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

MAINT & SURV: MS2, MS3, MS4

NOTES

AT A MINIMUM, MAINTAINING TRAFFIC SHALL CONSIST OF AN APPROPRIATELY MARKED VEHICLE WITH A ROTATING BEACON. NO SIGNS OR CHANNELIZING DEVICES ARE REQUIRED.

THE FOLLOWING FACTORS SHOULD BE CONSIDERED IN DETERMINING THE NEED FOR ADDITIONAL ADVANCE WARNING:

1. TRAFFIC VOLUME
2. POSTED AND OPERATING SPEED LIMITS
3. HORIZONTAL AND VERTICAL ALIGNMENTS
4. URBAN OR RURAL SITE
5. WORK TYPE
6. AVAILABLE SHOULDER WIDTH

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

MOBILE

SHOULDER WORK WITH
TRAFFIC VOLUMES LESS THAN 10,000 ADT
AND ADEQUATE SIGHT DISTANCES

DATE:
MAY 2021

NO: 4400-M-NFW-
SHL-MOB

SHEET:
1 OF 1

FILE: 4400-M-SHL-MOB.dgn

KEY

 LIGHTED ARROW PANEL (CAUTION MODE)

 TRAFFIC FLOW

 SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

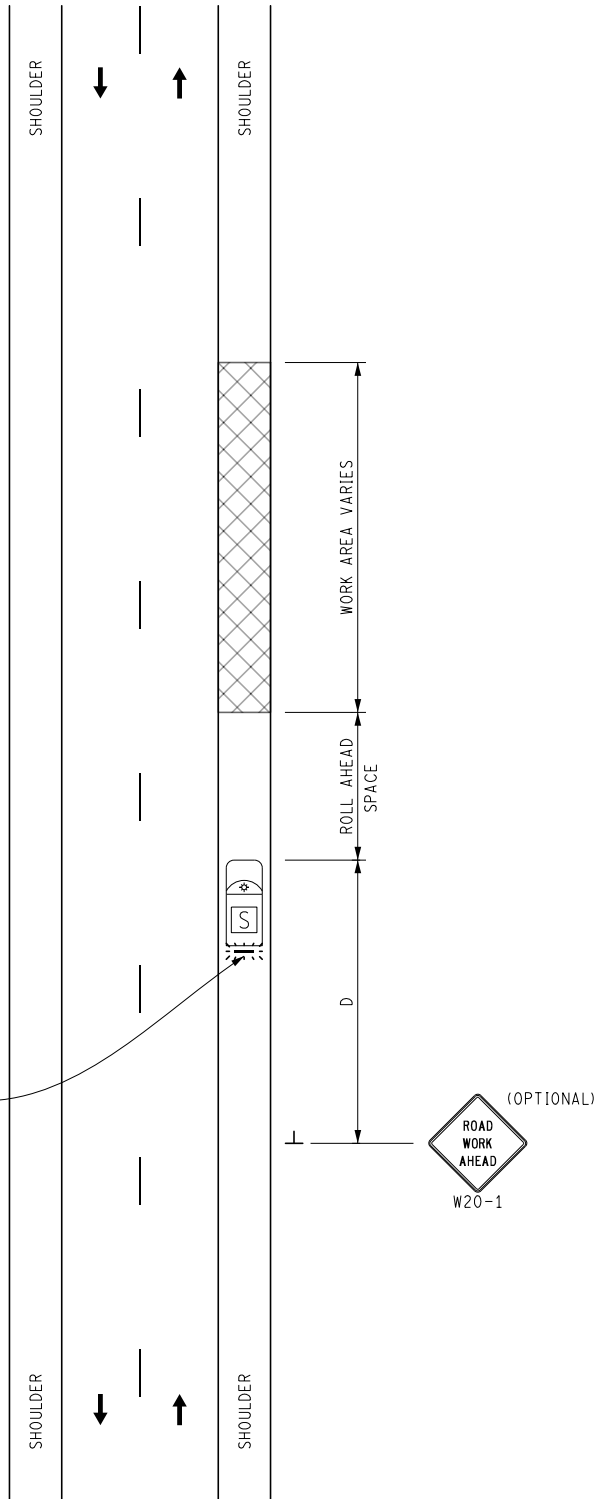
SIGNING: S1

MAINT & SURV: MS2, MS3, MS4

NOTES

THERE MUST BE EITHER AN APPROPRIATELY MARKED VEHICLE WITH A ROTATING BEACON OR OPTIONAL W20-1 SIGNS TO INDICATE TO THE PUBLIC THAT WORK IS BEING DONE IN THE AREA.

LIGHTED ARROW PANEL
(CAUTION MODE)



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

SHORT-DURATION
MOBILE

SHOULDER WORK ON A
TWO-LANE, TWO-WAY ROADWAY

DATE:
MAY 2021

NO: 4401-M-NFW-SHL-2L

SHEET:
1 OF 1

FILE: 4401-M-NFW-SHL-2L.dgn

KEY



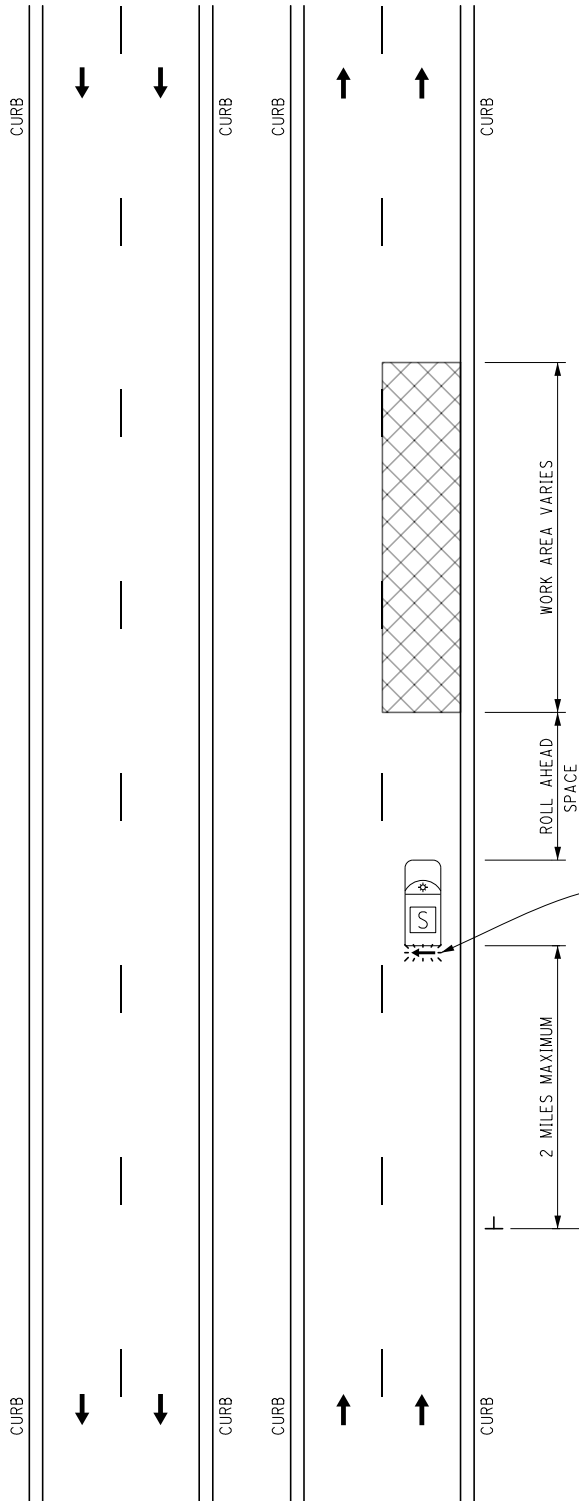
LIGHTED ARROW PANEL



TRAFFIC FLOW



SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR



NOTES

"ROAD WORK AHEAD" SIGN SHALL BE WITHIN TWO MILES OF WORK AREA.

THIS DETAIL IS ONLY ALLOWED IN AREAS WITHOUT SHOULDERS AND SPEED LIMITS OF 45 MPH OR LESS. USED FOR PATROLLING, MINOR PATCHING AND OTHER ACTIVITIES IN AREAS WITH CURBED ROADWAY.

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

MAINT & SURV: MS1, MS2, MS3, MS4, MS5

LIGHTED ARROW PANEL
(ARROW MODE)



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

SHORT-DURATION
MOBILE

LANE CLOSURE ON A
DIVIDED ROADWAY WITH CURBS
AND SPEED LIMITS 45 MPH OR LESS

DATE:
MAY 2021

NO:
4402-M-NFW-1LC

SHEET:
1 OF 1

FILE: 4402-M-NFW-1LC.dgn

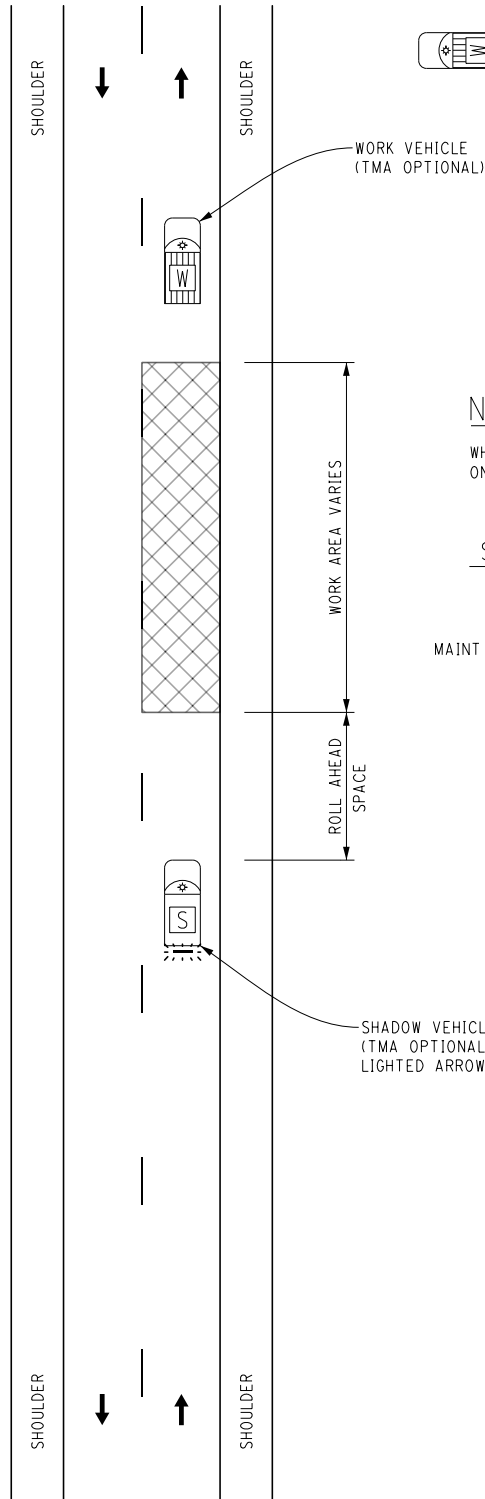
KEY

 LIGHTED ARROW PANEL (CAUTION MODE)

 TRAFFIC FLOW

 SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR

 WORK VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR



NOTES

WHERE VEHICLE TRAFFIC CANNOT EFFECTIVELY SELF REGULATE, ONE OR TWO TRAFFIC REGULATORS SHALL BE USED.

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G3, G4

SIGNING: S1

MAINT & SURV: MS1, MS2, MS3, MS4, MS5

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

SHORT-DURATION
MOBILE

MOBILE OPERATION
ON A TWO-LANE ROADWAY


DATE:
MAY 2021

NO:
4403-M-NFW-2L


SHEET:
1 OF 1


FILE: 4403-M-NFW-2L.dgn

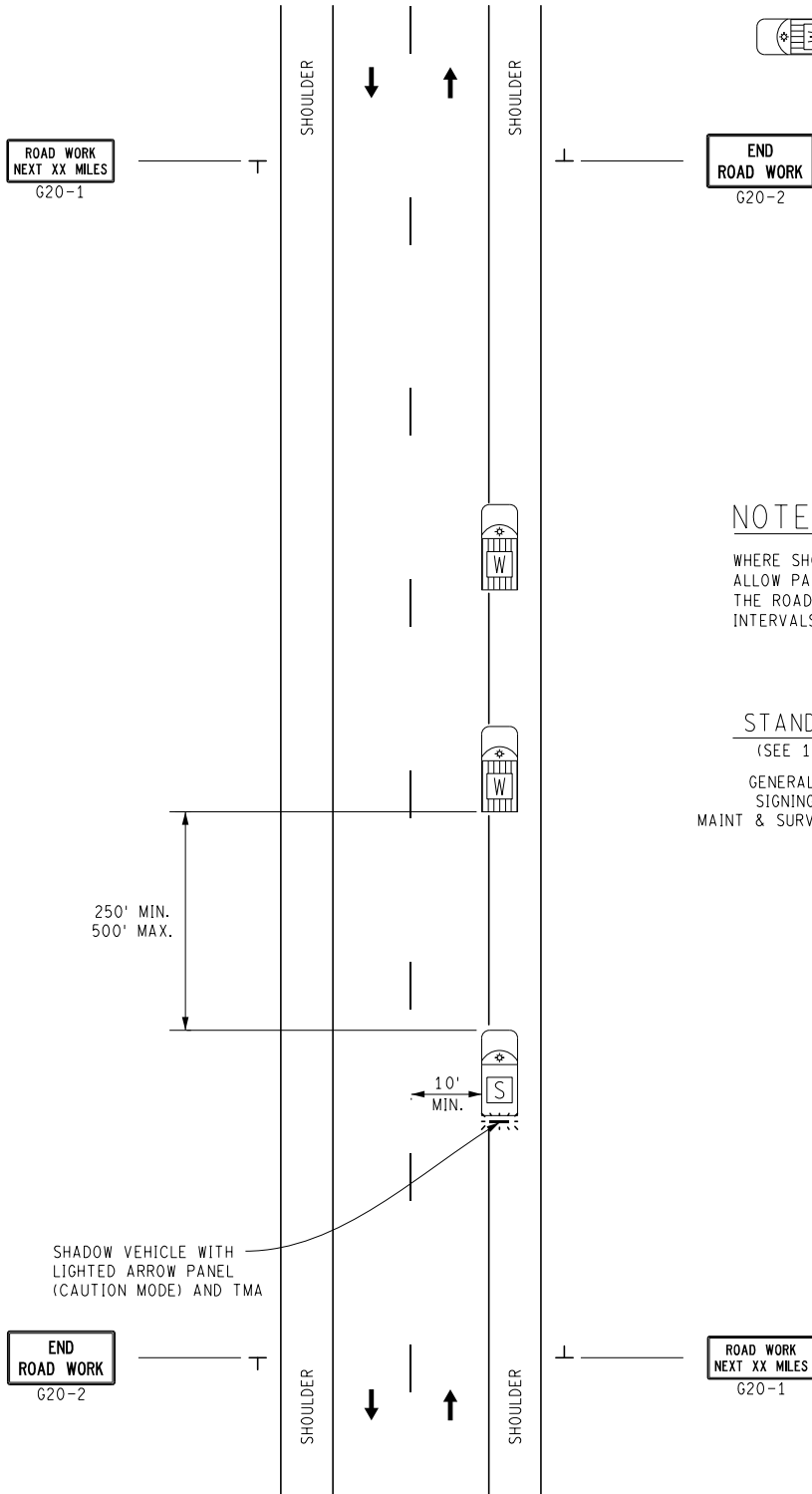
KEY

 LIGHTED ARROW PANEL (TRUCK MOUNTED) (CAUTION MODE)

 TRAFFIC FLOW

 SHADOW VEHICLE WITH TRUCK MOUNTED ATTENUATOR

 WORK VEHICLE



NOTES

WHERE SHOULDERS ARE NARROW AND INSUFFICIENT WIDTH EXISTS TO ALLOW PASSING, THE CONVOY SHALL CEASE OPERATION AND PULL OFF THE ROADWAY TO ALLOW QUEUED TRAFFIC TO PASS AT REASONABLE INTERVALS.

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G3, G4

SIGNING: S1

MAINT & SURV: MS1, MS2, MS3, MS4, MS5

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

MOBILE

SHOULDER WORK ON A
TWO-LANE, TWO-WAY ROADWAY
WITH LANE ENCROACHMENTS

DATE:
MAY 2021

NO:
4405-M-NFW-SHL

SHEET:
1 OF 1

FILE: 4405-M-NFW-SHL.dgn

KEY

 LIGHTED ARROW PANEL (CAUTION MODE)

 TRAFFIC FLOW

 SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR

NOTES

THERE MUST BE EITHER AN APPROPRIATELY MARKED VEHICLE WITH A ROTATING BEACON OR OPTIONAL W20-1 SIGNS TO INDICATE TO THE PUBLIC THAT WORK IS BEING DONE IN THE AREA.

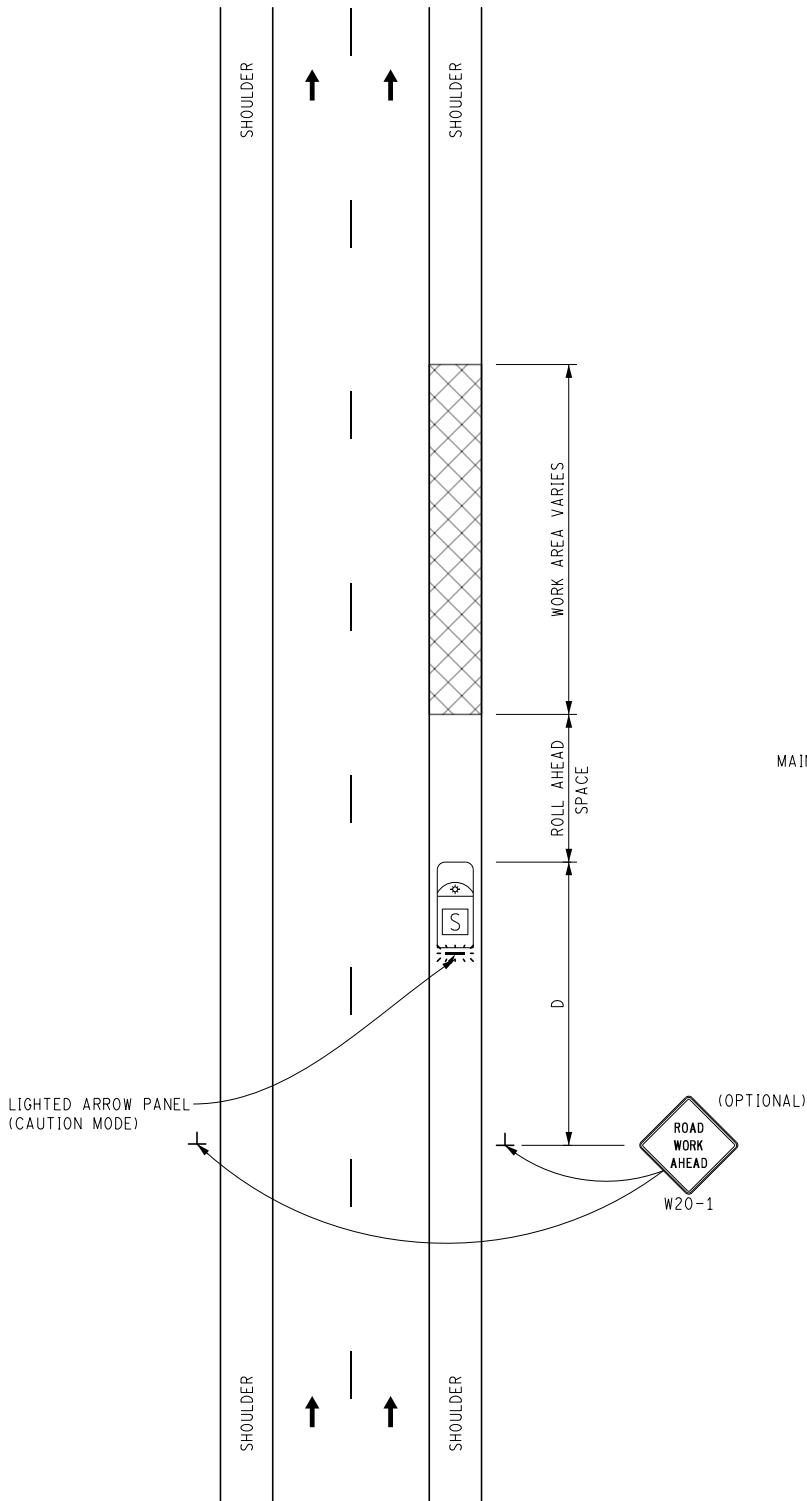
STANDARD NOTES

(SEE 102-GEN-NOTES)


GENERAL: G1, G2, G3, G4

SIGNING: S1

MAINT & SURV: MS2, MS3, MS4



NOT TO SCALE

 FILE: 4420-M-FW-SHL.dgn	MAINTENANCE MAINTAINING TRAFFIC TYPICAL	DURATION: SHORT-DURATION MOBILE	SHOULDER WORK ON A DIVIDED ROADWAY OR FREEWAY	DATE: MAY 2021
				NO: 4420-M-FW-SHL SHEET: 1 OF 1

KEY



LIGHTED ARROW PANEL



TRAFFIC FLOW



SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR



WORK VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR

STANDARD NOTES

(SEE 102-GEN-NOTES)

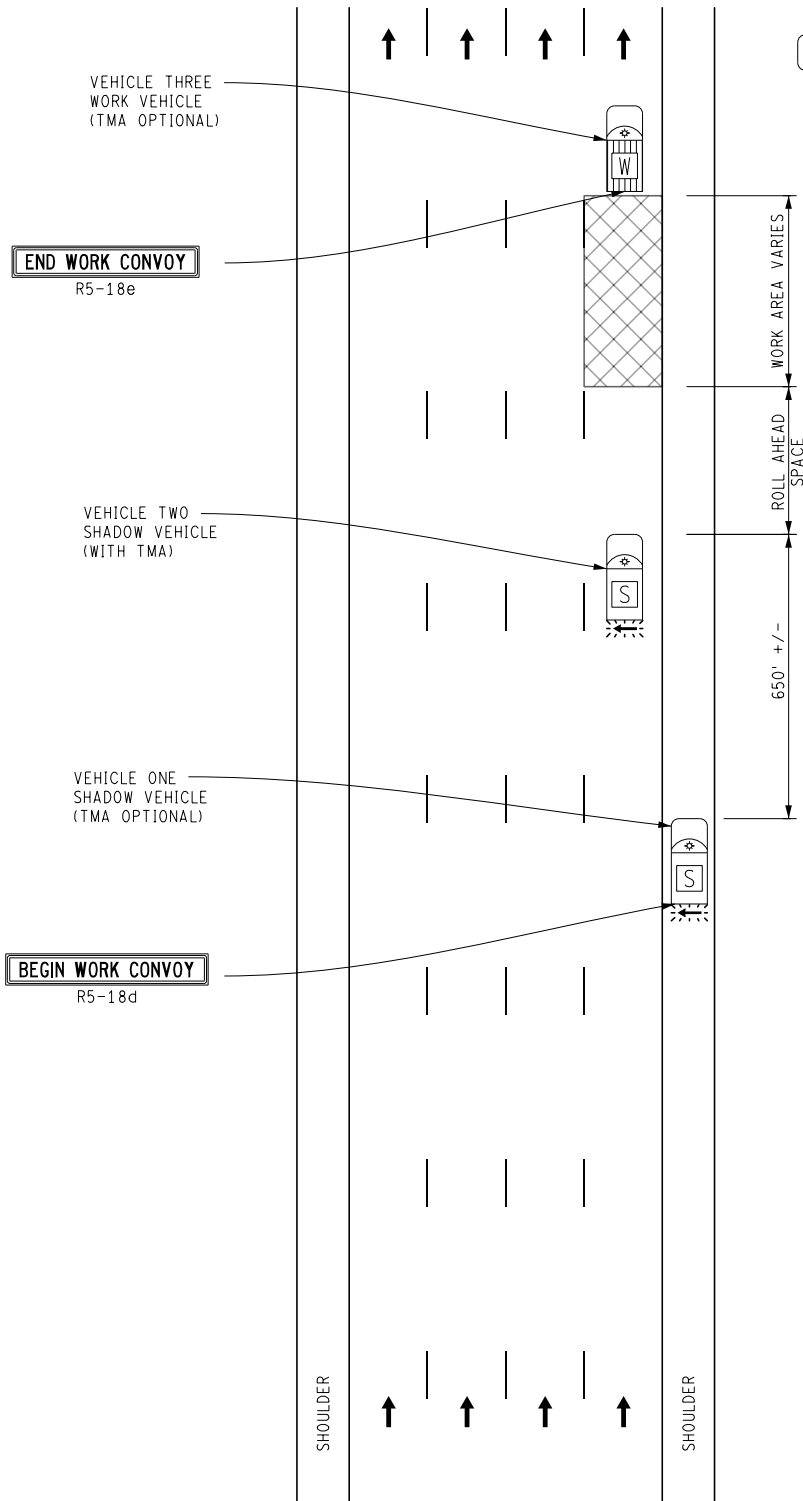
GENERAL: G1, G3, G4

SIGNING: S1

MAINT & SURV: MS1, MS2, MS3, MS4, MS5

NOTES

1. THIS TYPICAL ALSO MAY BE USED WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN OF THE ROADWAY. IN THIS CASE, THE "LEFT LANE CLOSED AHEAD" SIGNS SHALL BE SUBSTITUTED.



NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

SHORT-DURATION
MOBILE

MOBILE OPERATION
ON A MULTI-LANE ROADWAY

DATE:
MAY 2021

NO:
4421-M-FW-1LC

SHEET:
1 OF 1

FILE: 4421-M-FW-1LC.dgn

KEY



LIGHTED ARROW PANEL



TRAFFIC FLOW



SHADOW VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR



WORK VEHICLE WITH OPTIONAL TRUCK MOUNTED ATTENUATOR

STANDARD NOTES

(SEE 102-GEN-NOTES)

GENERAL: G1, G2, G3, G4

SIGNING: S1

MAINT & SURV: MS1, MS2, MS3, MS4, MS5

NOTES

1. THIS TYPICAL ALSO MAY BE USED WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN OF THE ROADWAY. IN THIS CASE, THE "LEFT TWO LANES CLOSED AHEAD" SIGNS SHALL BE SUBSTITUTED.

PLACE "END WORK CONVOY" SIGN ON LAST VEHICLE IN WORK AREA (TMA OPTIONAL)

END WORK CONVOY

R5-18e

VEHICLE THREE (WITH TMA)

VEHICLE FOUR (OPTIONAL) (TMA OPTIONAL)

VEHICLE TWO (WITH TMA), MAY STRADDLE SHOULDER

VEHICLE ONE (TMA OPTIONAL)

BEGIN WORK CONVOY

R5-18d

SHOULDER

SHOULDER

WORK AREA VARIES

ROLL AHEAD SPACE

650'±

650'±

NOT TO SCALE



MAINTENANCE
MAINTAINING TRAFFIC
TYPICAL

DURATION:

SHORT-DURATION
MOBILE

MOBILE OPERATION
ON A MULTI-LANE ROADWAY - 2 LANES

DATE:
MAY 2021

NO:
4422-M-FW-2LC

SHEET:
1 OF 1

FILE: 4422-M-FW-2LC.dgn