



**ALABAMA DEPARTMENT OF TRANSPORTATION  
CONSTRUCTION BUREAU**

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*Kay Ivey*  
Governor


*John R. Cooper*  
Transportation Director

September 30, 2019

**MEMORANDUM**

TO: Region Engineers

ATTN: Asst. Region Engineers, Region Preconstruction Engineers,  
Area Operations, Construction, and Local Transportation Engineers

FROM: Winston J. Powe, PE   
State Construction Engineer

RE: Striping, Marking, and Legend Layout

Based on feedback recently received from the ARBA Liaison Committee and from observations in the field, there are still on-going issues with the proper layout of striping, markings, and legends, especially for accel/decel lanes, lane drops, and lane reductions. The need to be knowledgeable about current practices and to communicate with the striping subcontractor well in advance of the performance of the work was previously addressed in CIM 8-2018 (copy attached). Furthermore, this issue was singled out at the 2019 CE/ME Conference as one of the Points of Emphasis in the "State of Construction" presentation.

In an effort to bring about improvements, Mr. Kerry NeSmith, Deputy State Maintenance Engineer, gave a presentation titled **Striping Matters v2.3** at the same CE/ME Conference. The PowerPoint version can be found on ALDOT's Intranet at [\\csnt401\temp\CEME](#), and a pdf version is also attached for distribution to parties outside the Department. The presentation, which references applicable ALDOT special drawings and the MUTCD, would be very useful for training of your personnel. A narrated version is forthcoming to enhance the use of this presentation as a training tool.

Since the release of CIM 8-2018 and its follow-up, we are aware that improvements have been made in plan layouts for striping, marking, and legend layouts and plan box sheets. Examples of each are attached. Providing this type of information will help avoid mistakes in the field and the need for corrections.

CIMs 5-2017 and 1-2019, along with a follow up to CIM 8-2018, are also attached for your reference and emphasis to your personnel. Please share this memorandum with appropriate personnel within your Bureau, Region, and Area.

WJP/JLB/jlb

Attachments

pc:	Mr. George Conner, PE	Mr. Don Arkle, PE	Mr. William Adams, PE
	Mr. Steve Walker, PE	Mr. Ed Phillips, PE	Mr. Clay McBrien, PE
	Mr. Stacey Glass, PE	FHWA	ARBA
	AAPA	ALBCA	ACIA
	ACEA	File	

# “Striping *Matters*”

v2.3

Kerry NeSmith, P.E.

CE/ME Conference

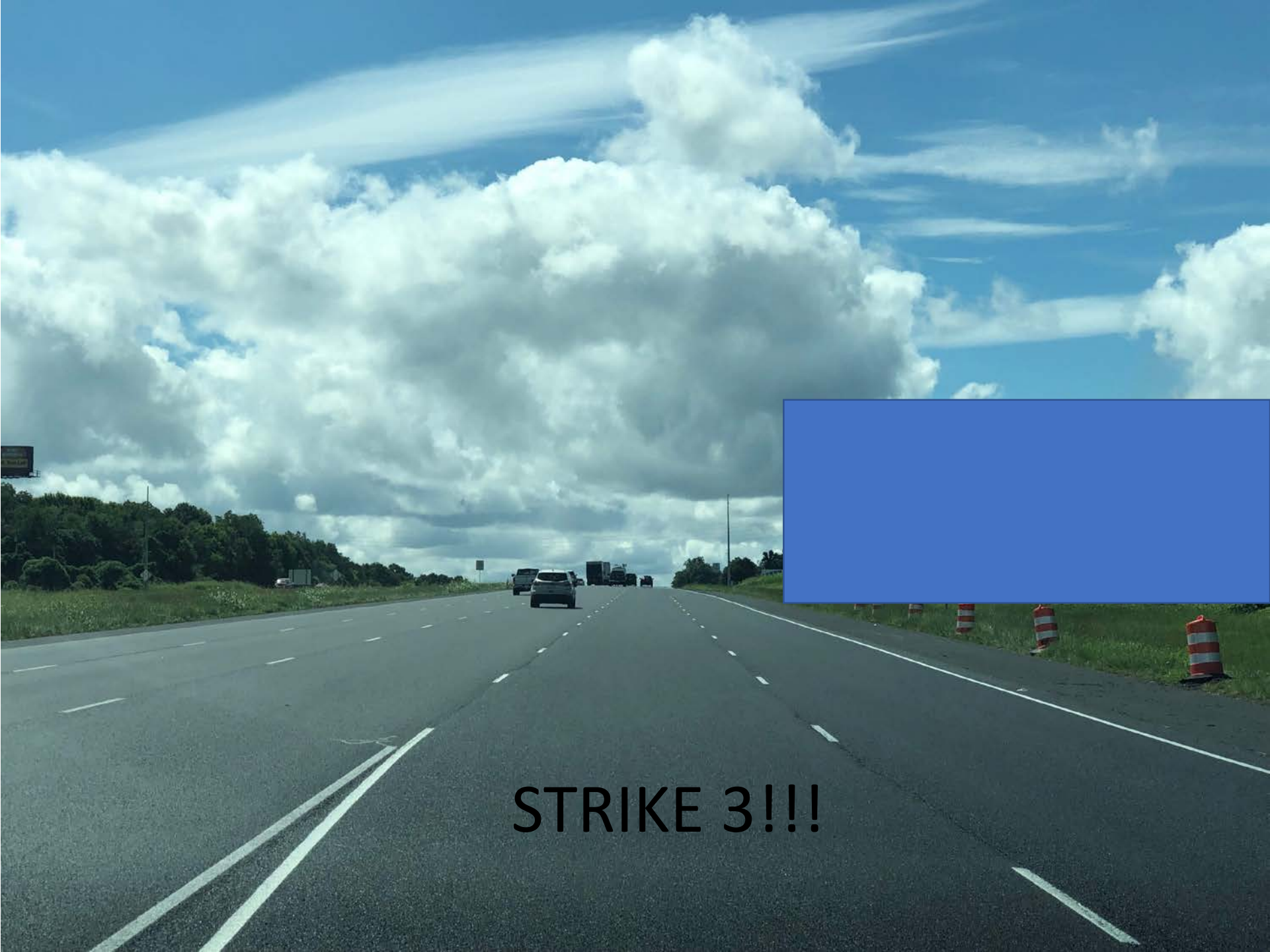
September 5, 2019

# Items to address

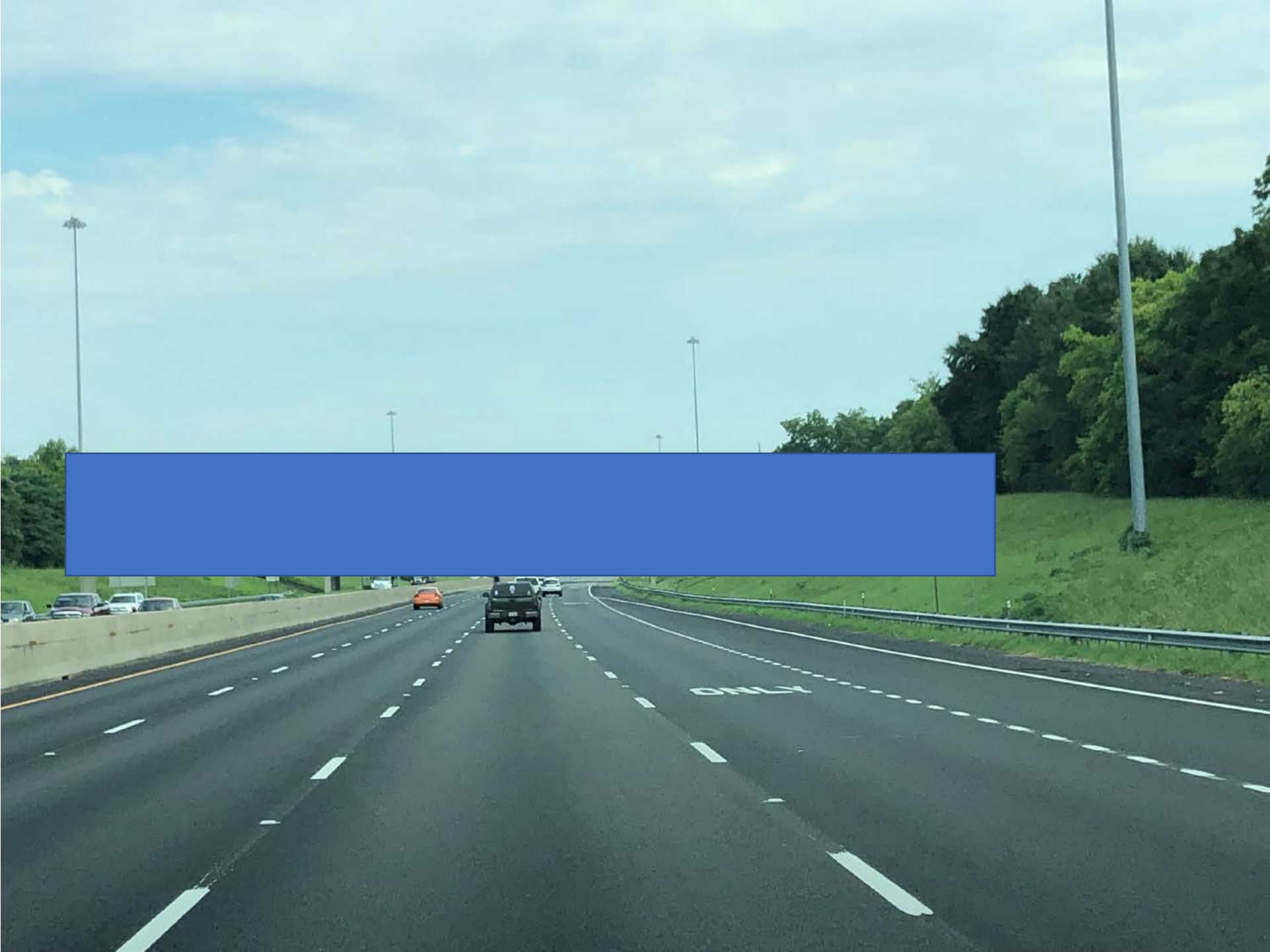
- Acceleration Lanes
- Deceleration Lanes
- Dropped Lanes
- Lane Reductions
- ~~Stop lines~~
- ~~Intersections~~

# Items to address

- Acceleration Lanes
- Deceleration Lanes
- Dropped Lanes

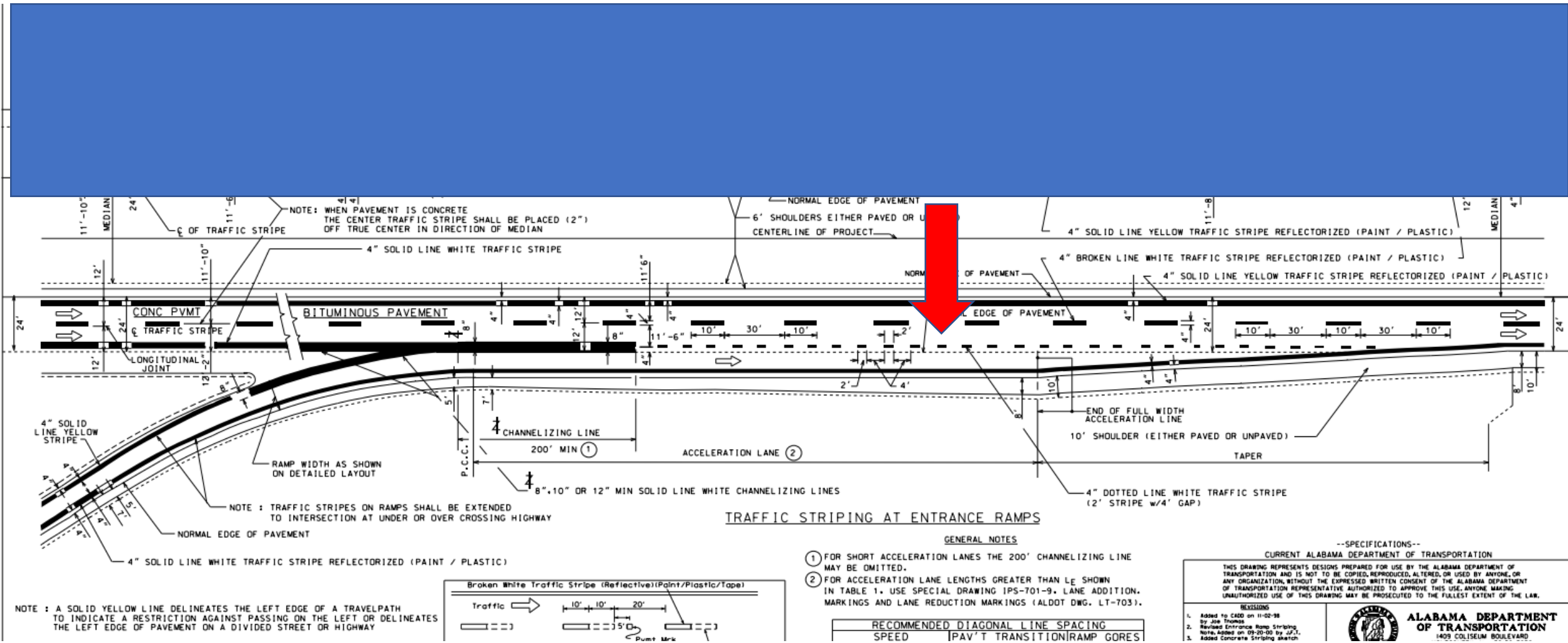


STRIKE 3!!!

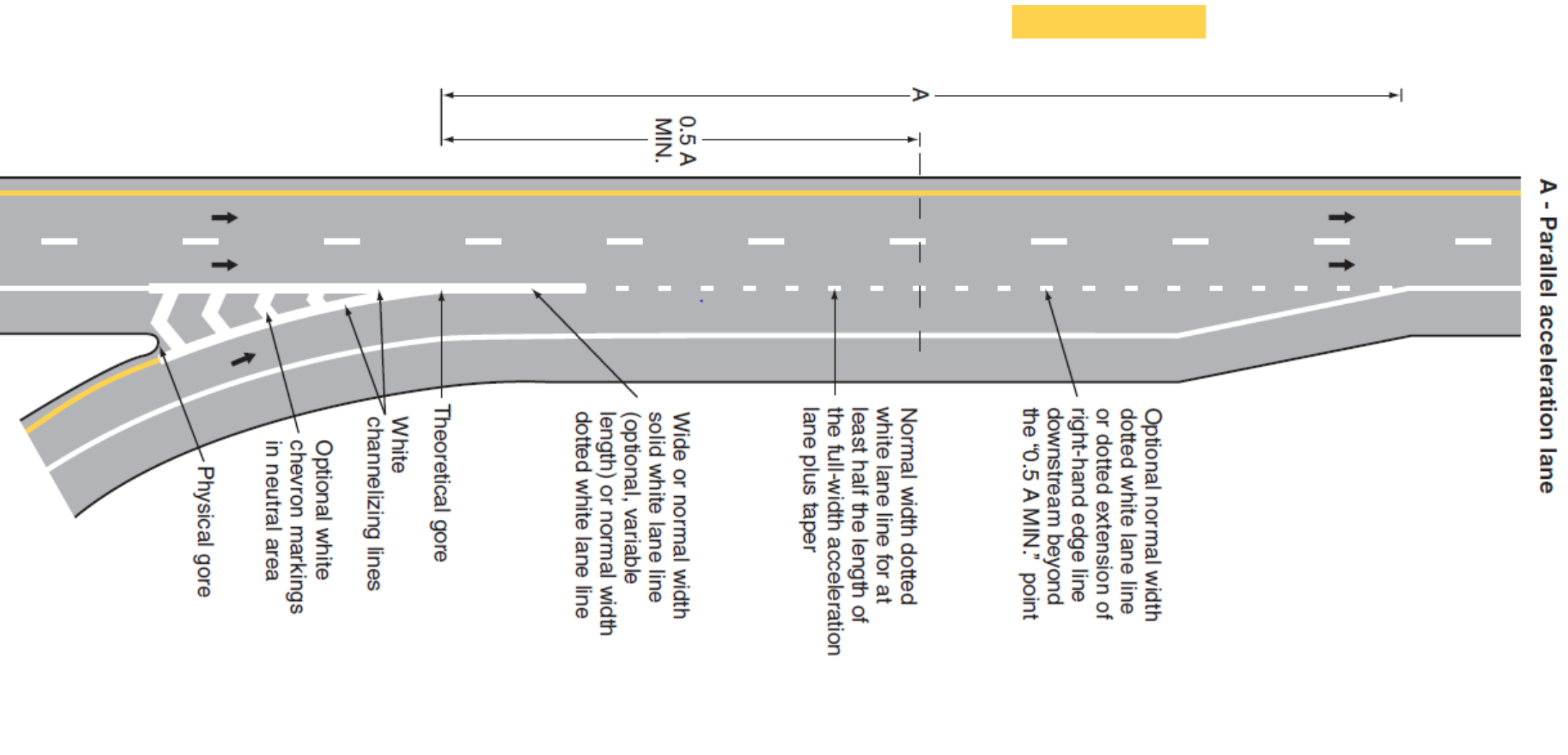




# Acceleration Lanes



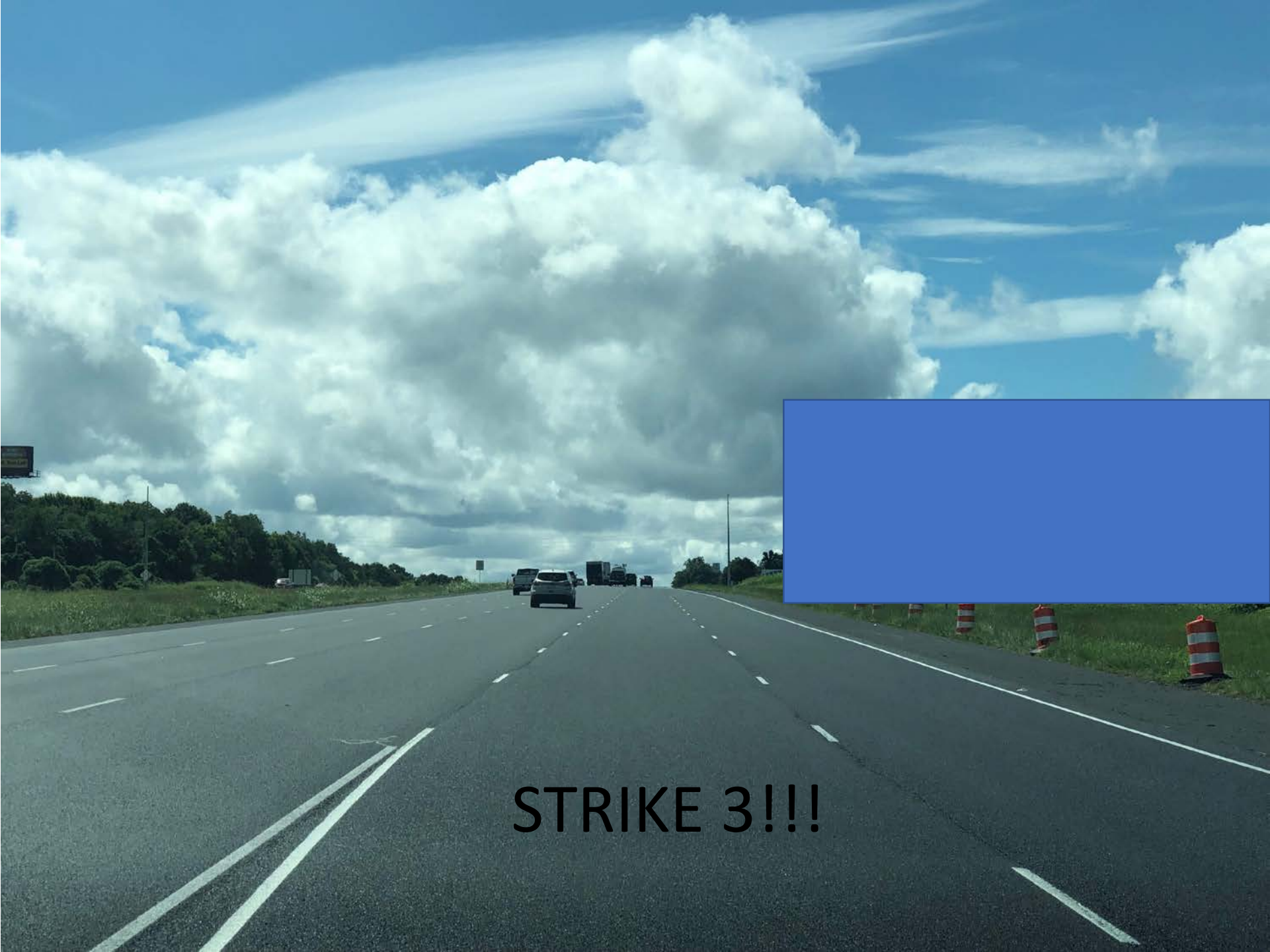
**Figure 3B-9. Examples of Dotted Line and C Entrance Ramp Markings:**







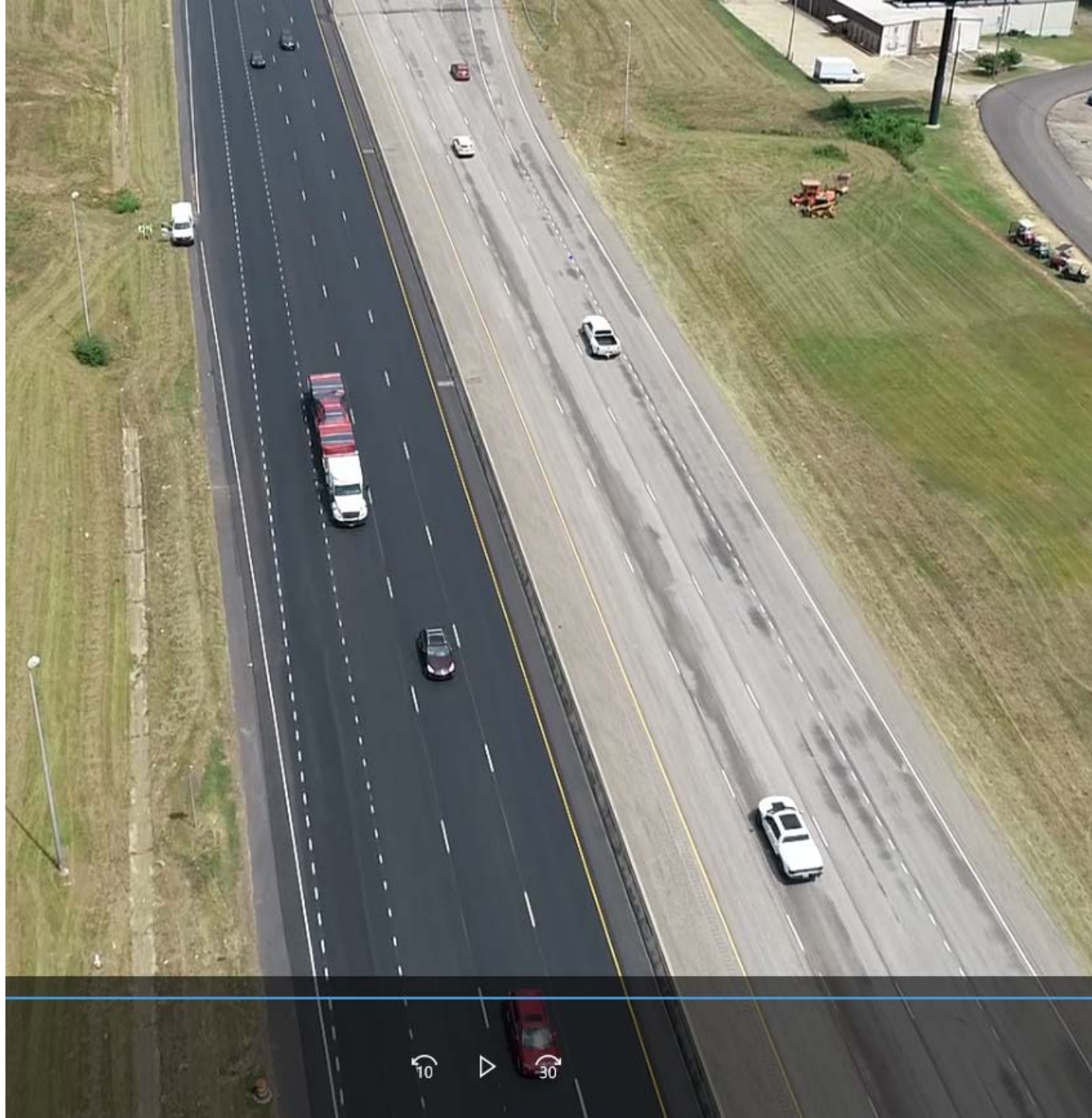




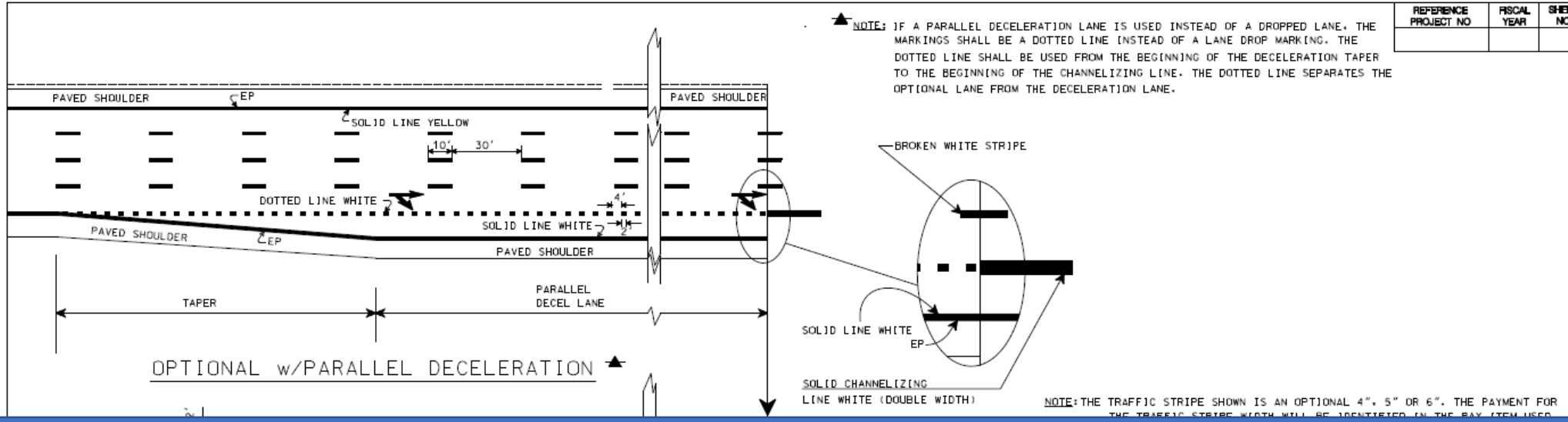
STRIKE 3!!!







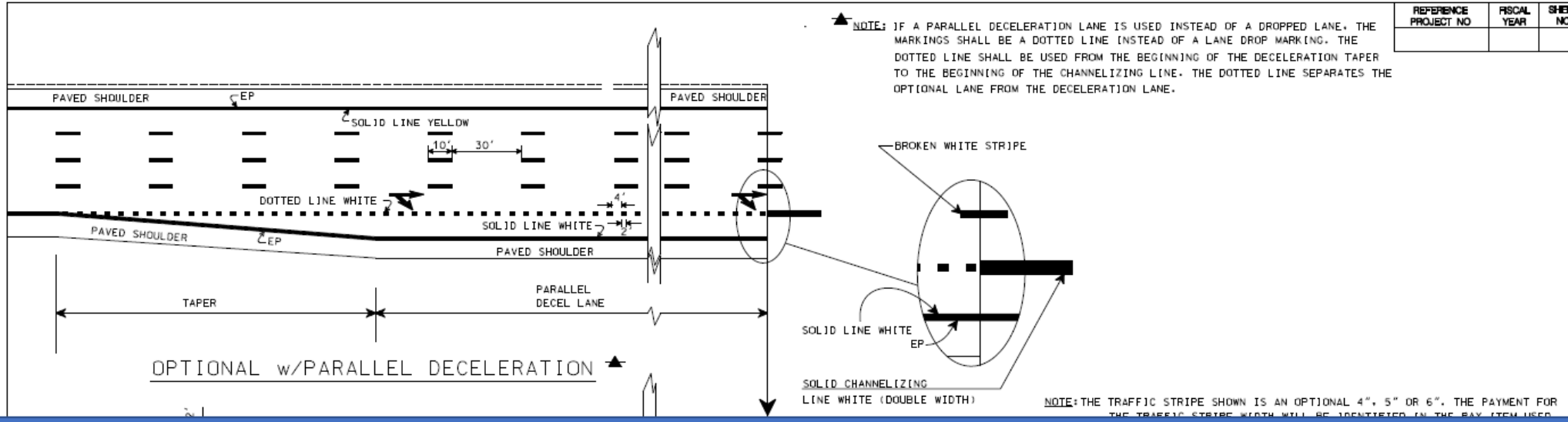
REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO



# Parallel Deceleration Lanes

## Index 1014

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO



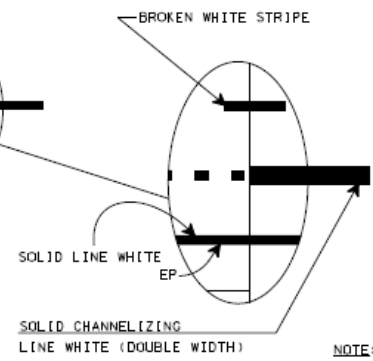
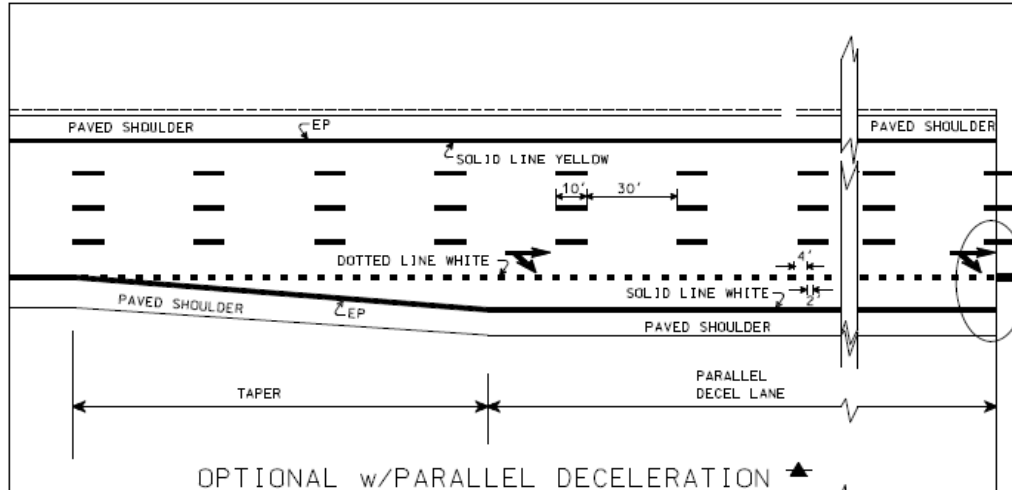
# Parallel Deceleration Lanes (not the same as a drop lane)

## Index 1014

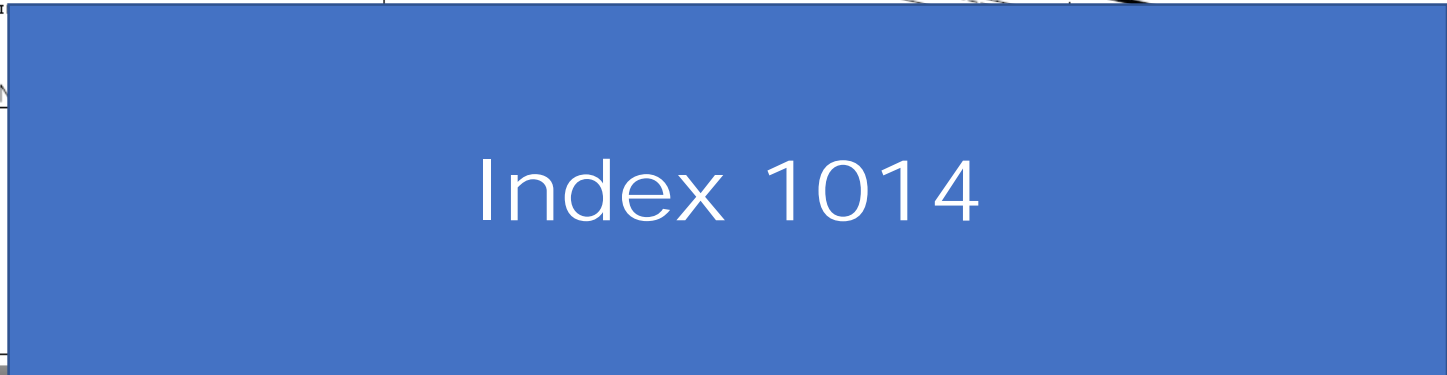
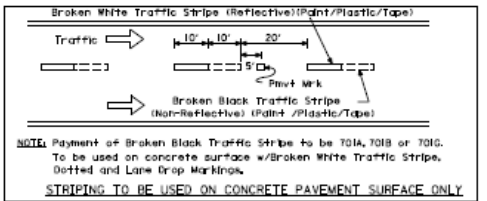
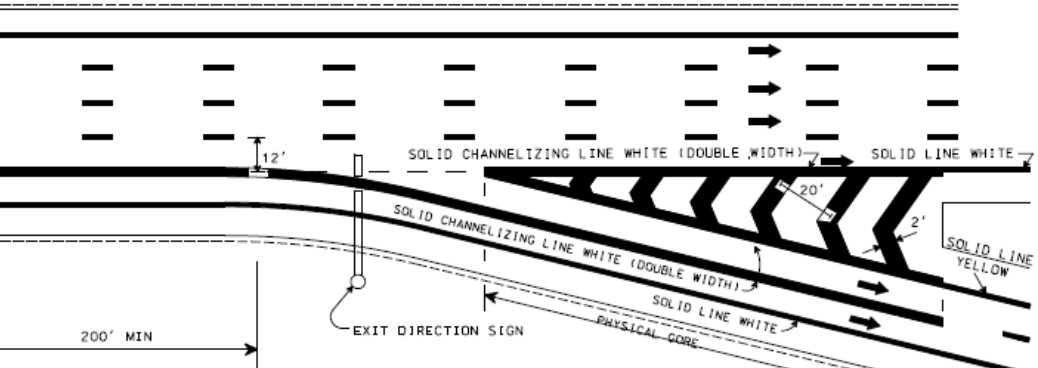
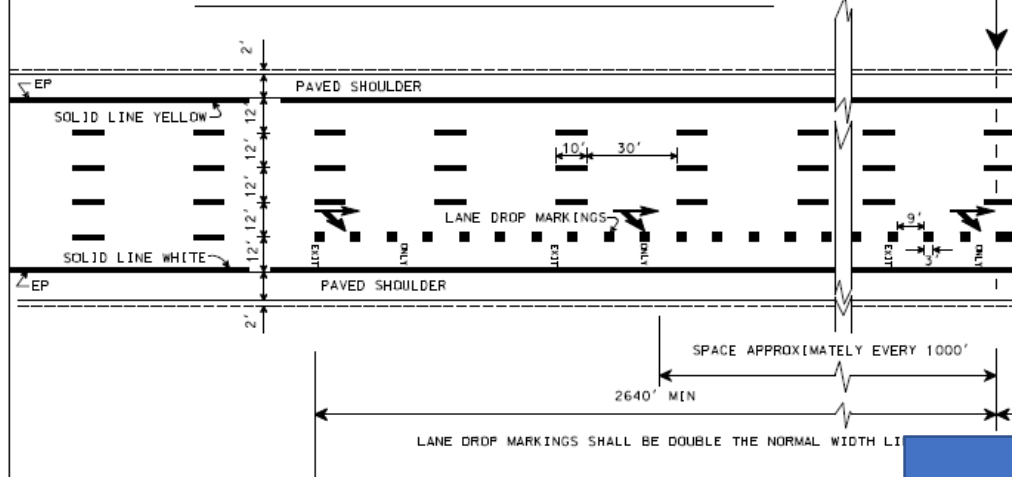


REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

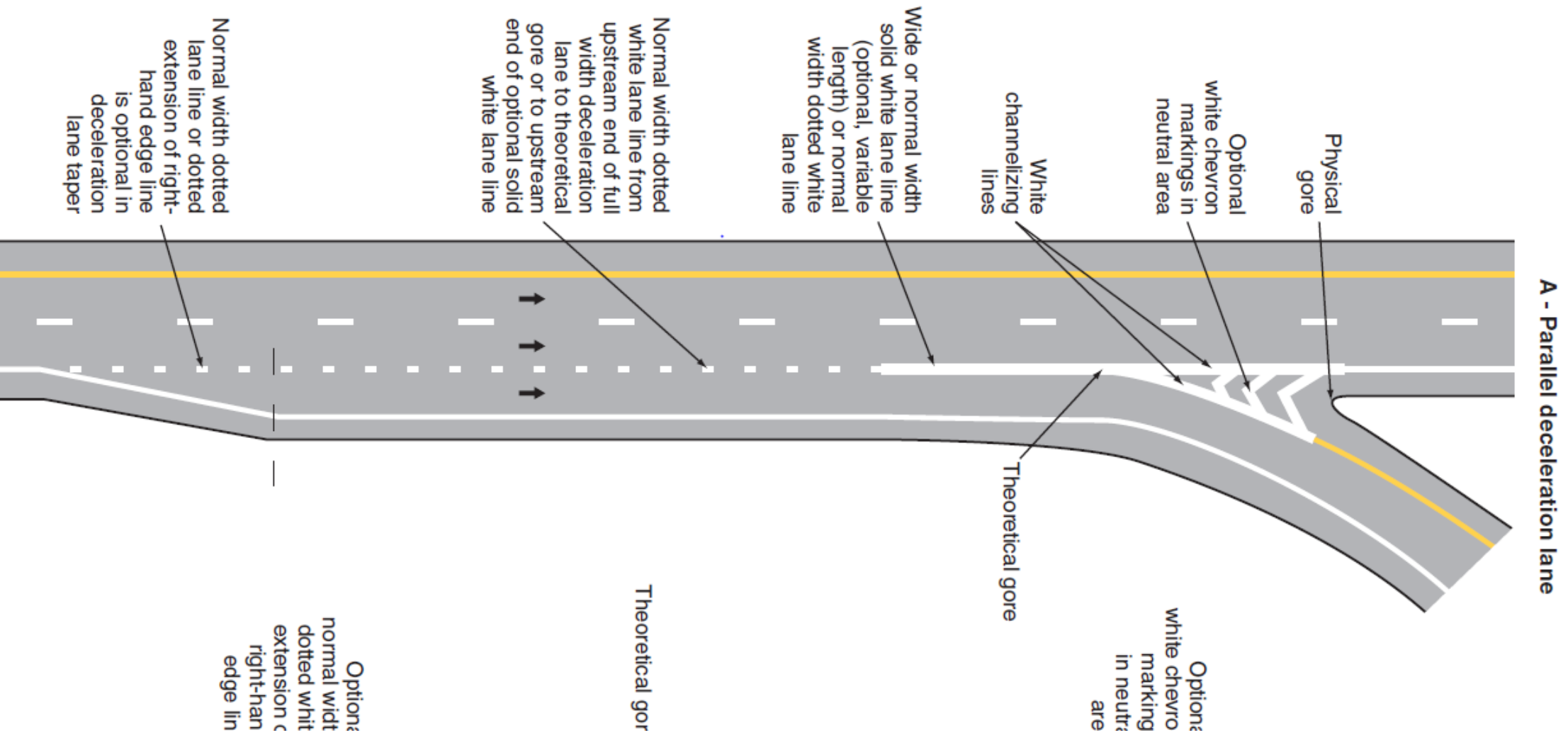
NOTE: IF A PARALLEL DECELERATION LANE IS USED INSTEAD OF A DROPPED LANE, THE MARKINGS SHALL BE A DOTTED LINE INSTEAD OF A LANE DROP MARKING. THE DOTTED LINE SHALL BE USED FROM THE BEGINNING OF THE DECELERATION TAPER TO THE BEGINNING OF THE CHANNELIZING LINE. THE DOTTED LINE SEPARATES THE OPTIONAL LANE FROM THE DECELERATION LANE.

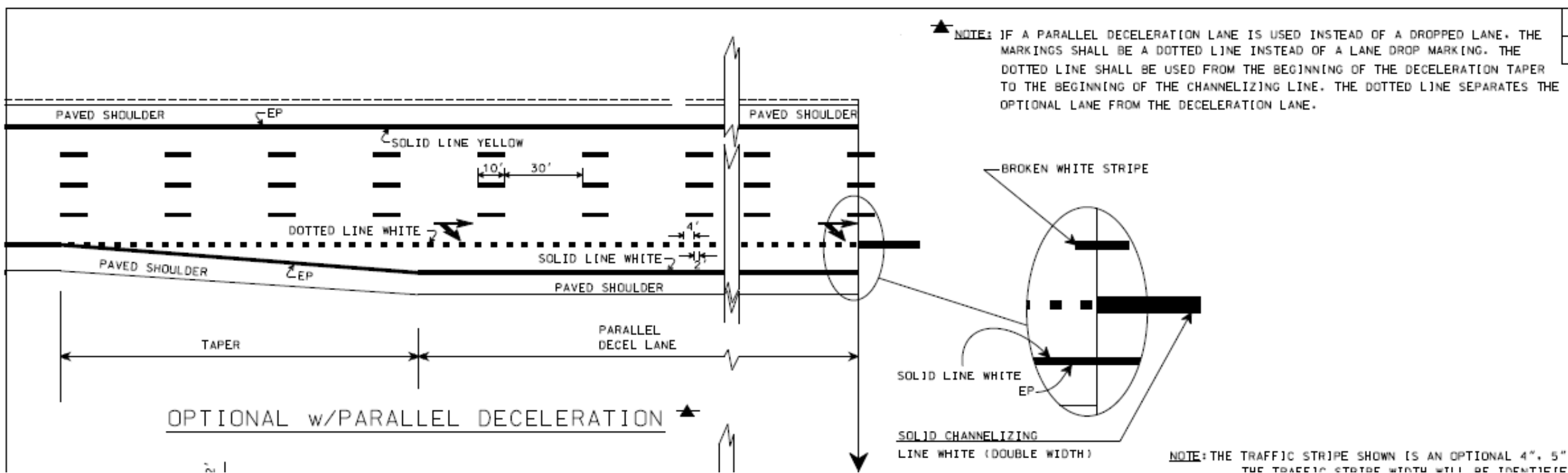


NOTE: THE TRAFFIC STRIPE SHOWN IS AN OPTIONAL 4", 5" OR 6". THE PAYMENT FOR THE TRAFFIC STRIPE WIDTH WILL BE IDENTIFIED IN THE PAY ITEM USED.



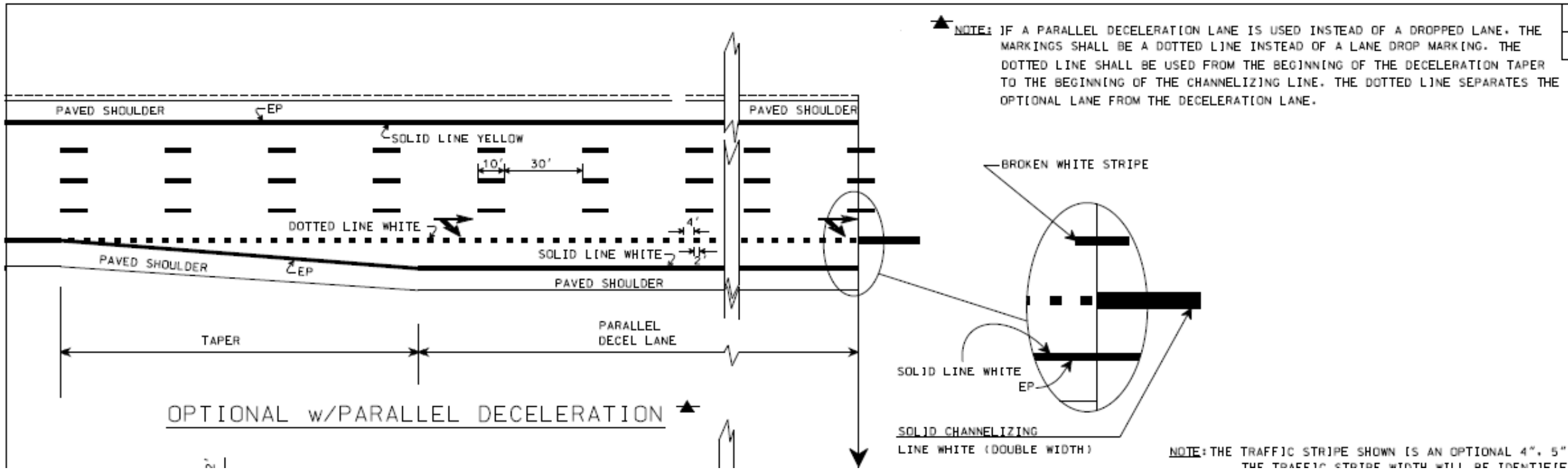
**Figure 3B-8. Examples of Dotted Line and Chan for Exit Ramp Markings (Shee**





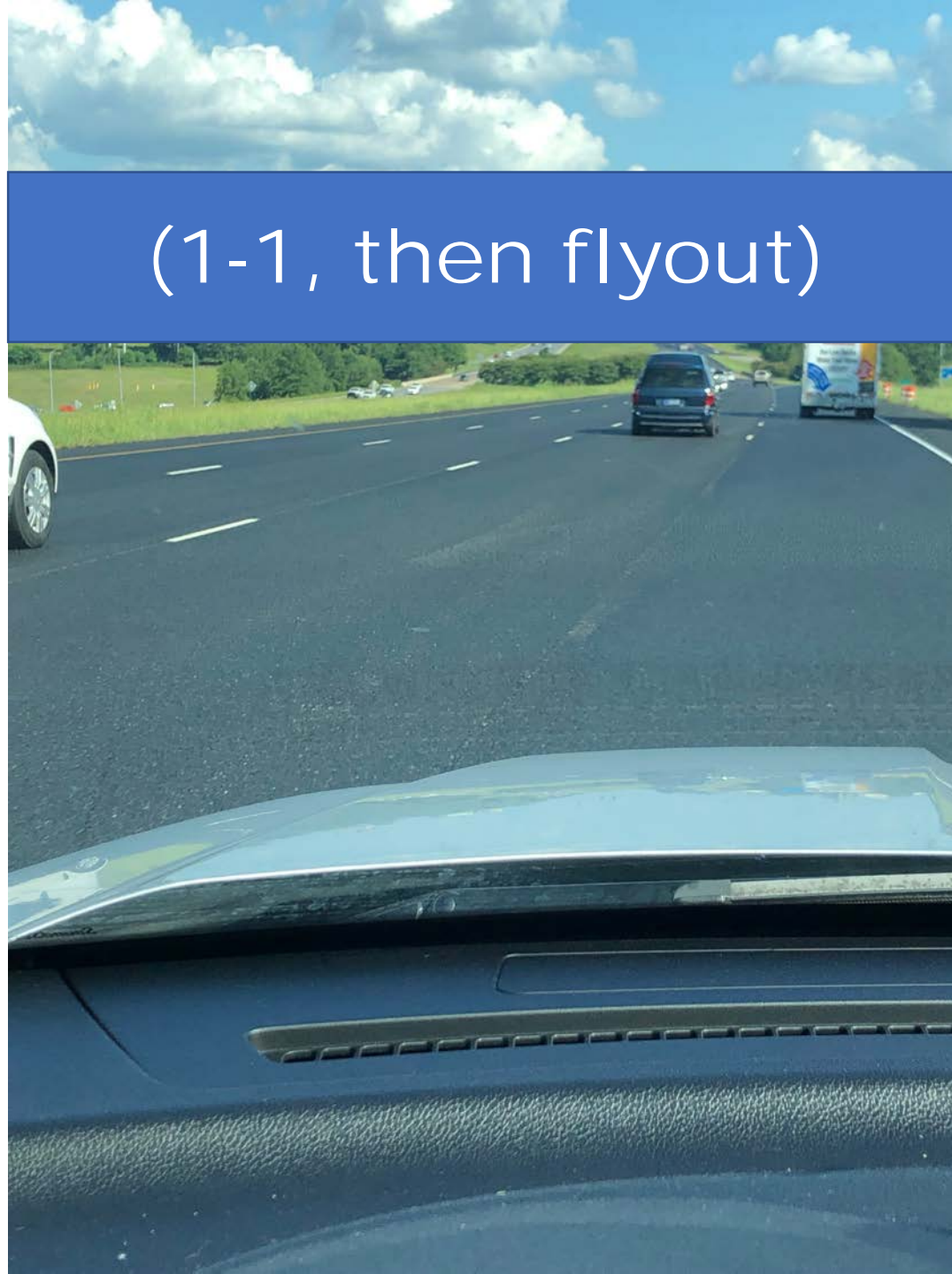
OPTIONAL w/PARALLEL DECELERATION

2.1



Same striping with or without optional exit lane!

(1-1, then flyout)









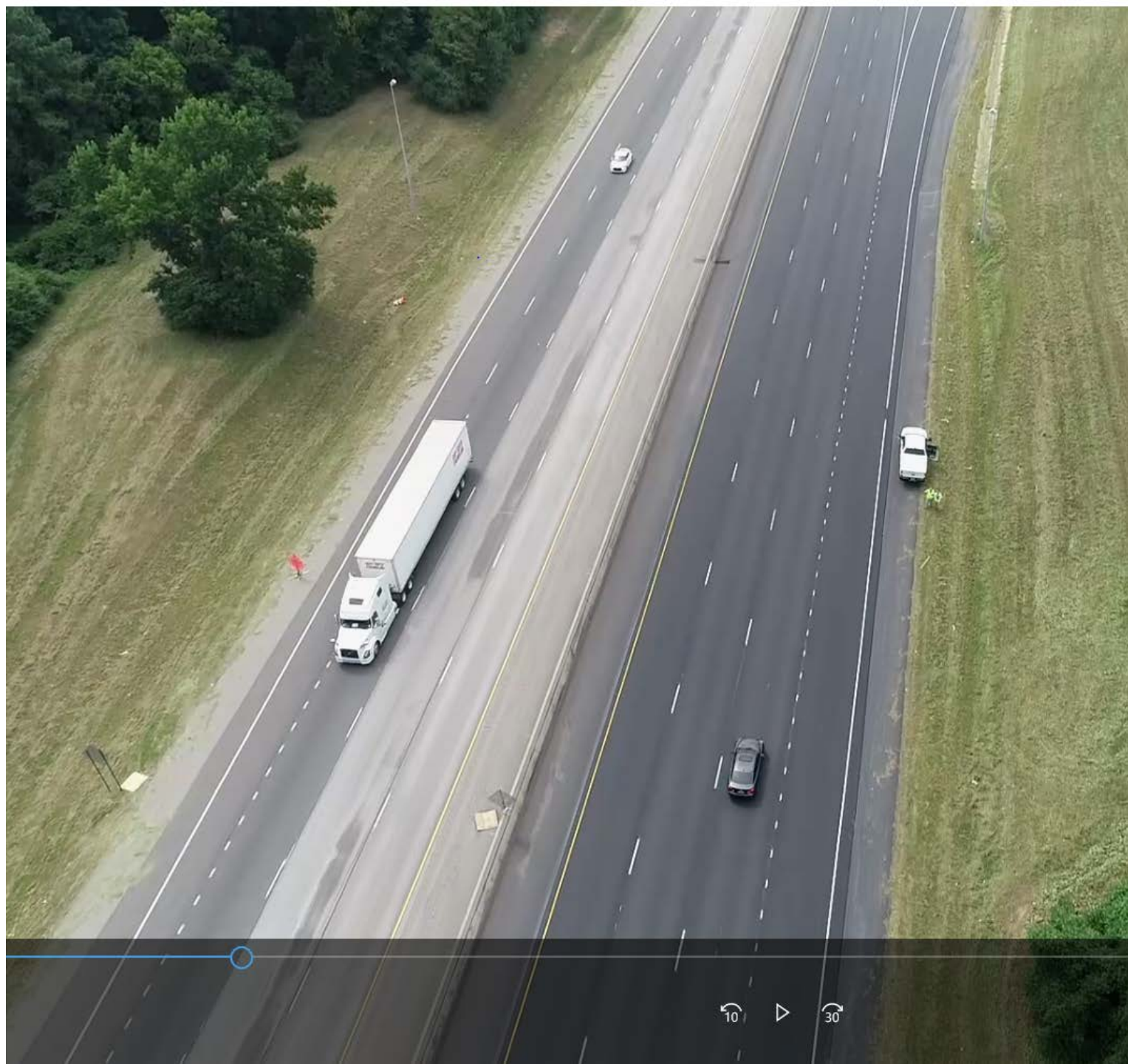
A photograph of a multi-lane highway with a blue overlay box containing the text 'Base Hit!!!'. The highway has several lanes with white dashed lines. In the distance, there are several cars driving away. The sky is blue with some white clouds. The text 'Base Hit!!!' is written in white on a blue rectangular background that covers the upper right portion of the image.

Base Hit!!!



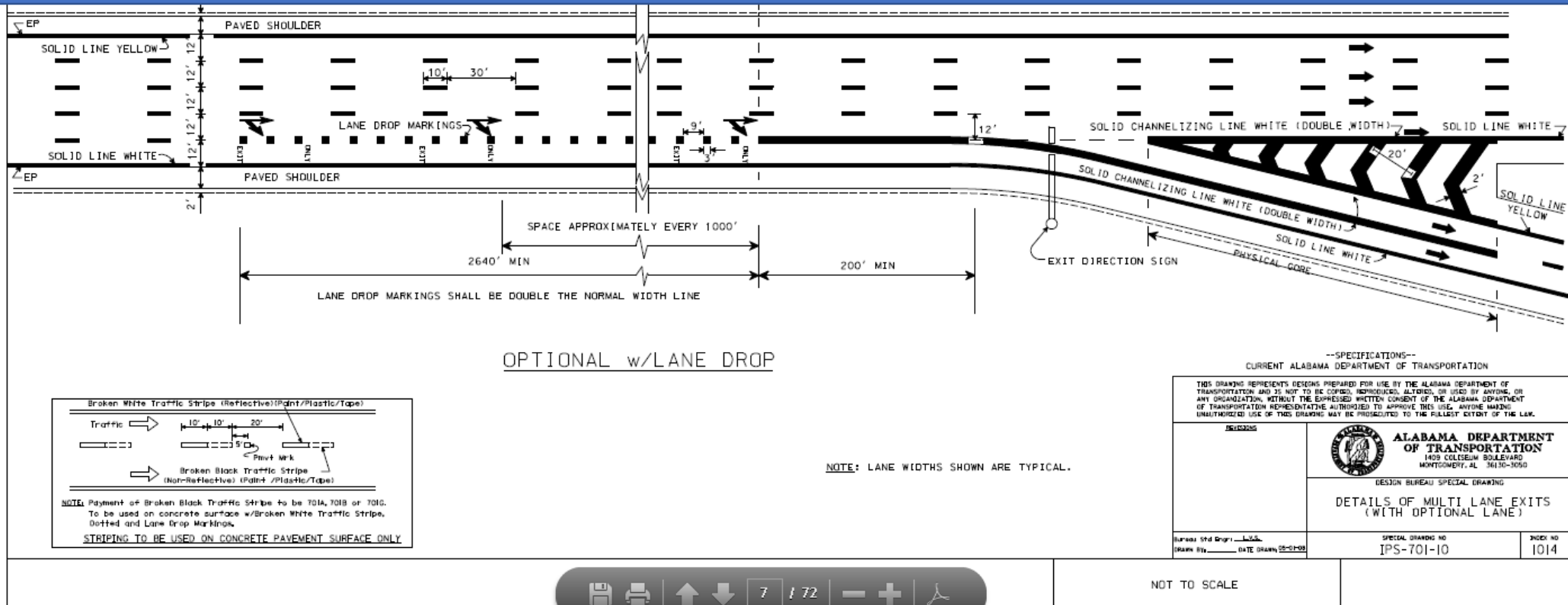
600+ Free Smiley & Emoticon Vectors ...  
pixabay.com





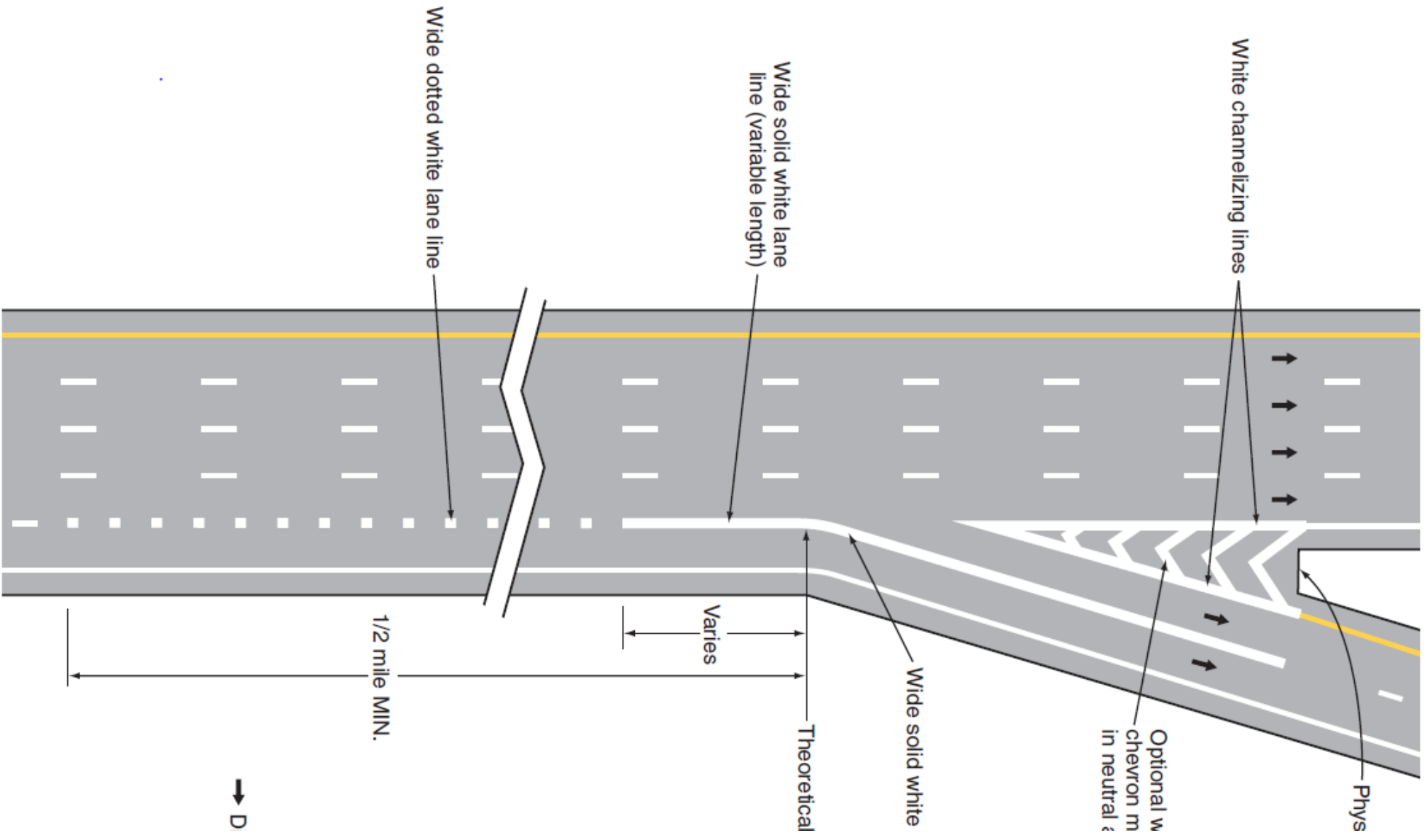
# LANE DROPS

## Index 1014

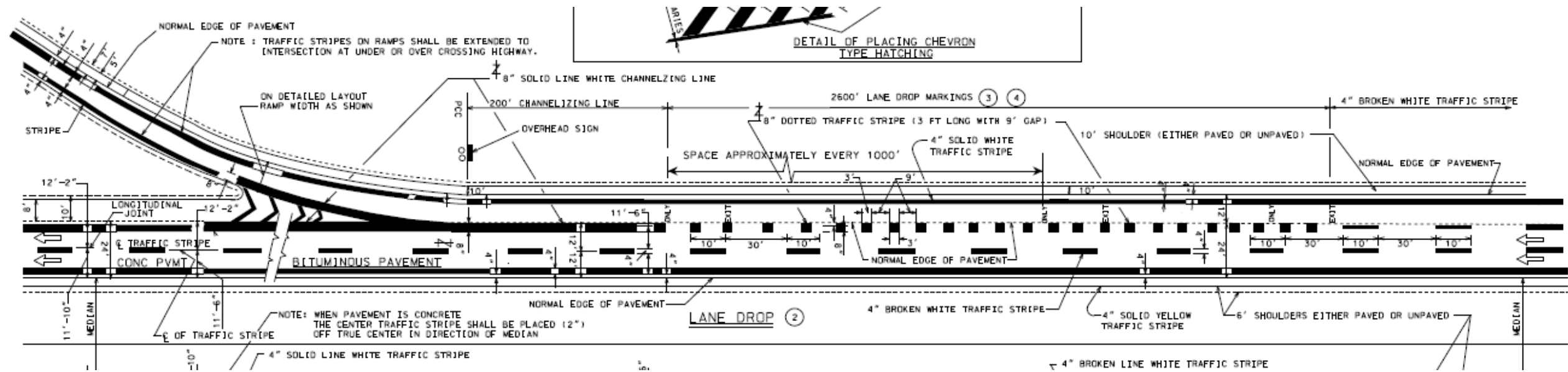


**Figure 3B-10. Examples of Applications of Freeway and Express Lane-Drop Markings (Sheet 2 of 5)**

**B – Lane drop at a multi-lane exit ramp having an optional exit lane that also carries the through route**



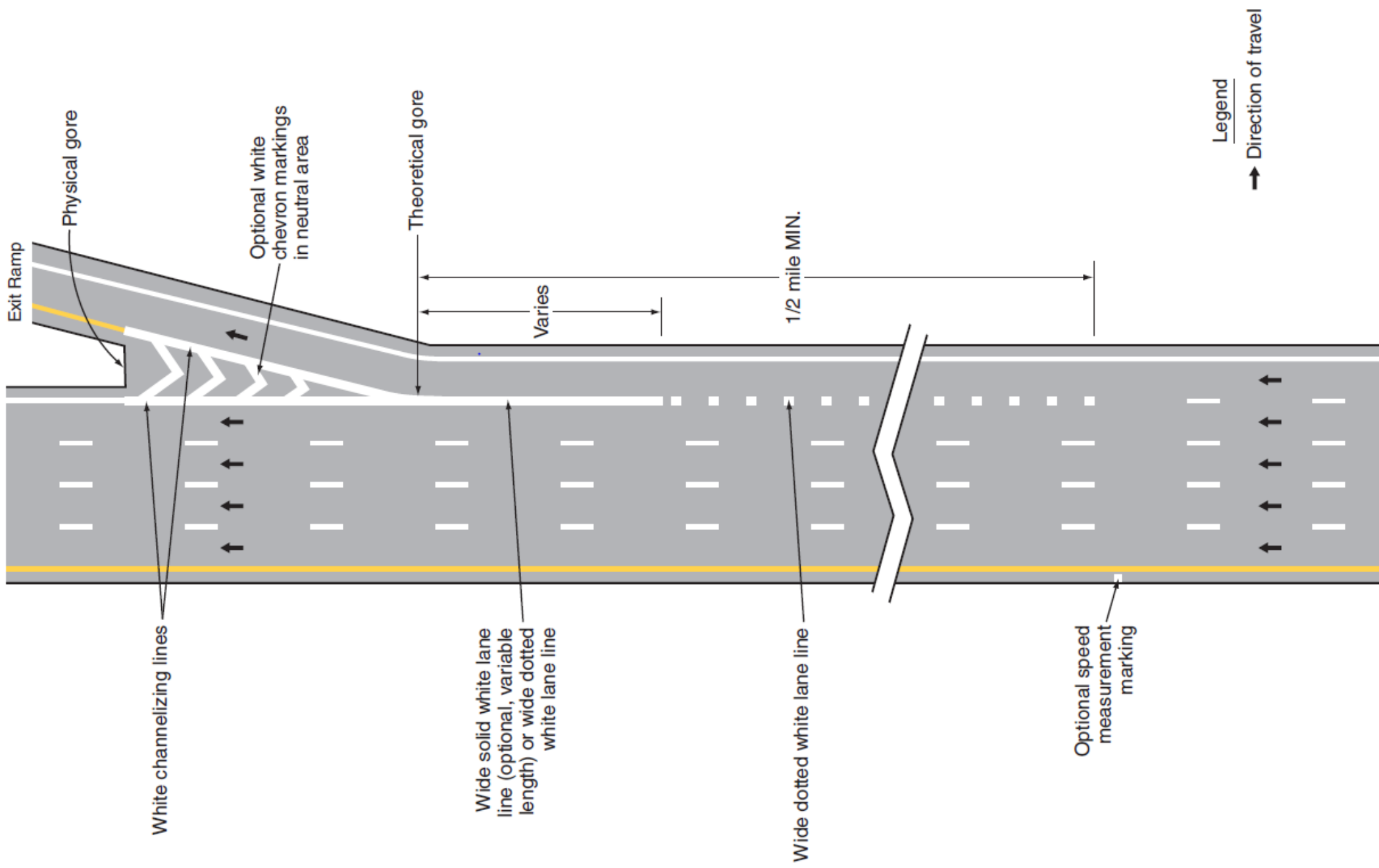




# Index 1013

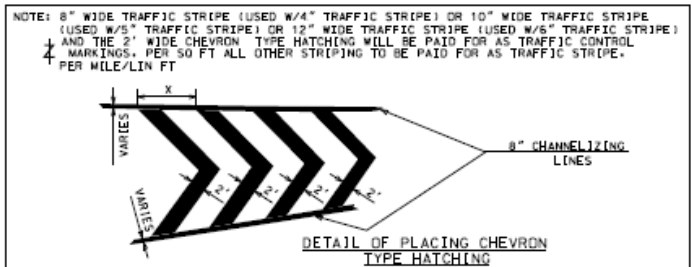
**Figure 3B-10. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 1 of 5)**

**A – Lane drop at a single lane exit ramp**

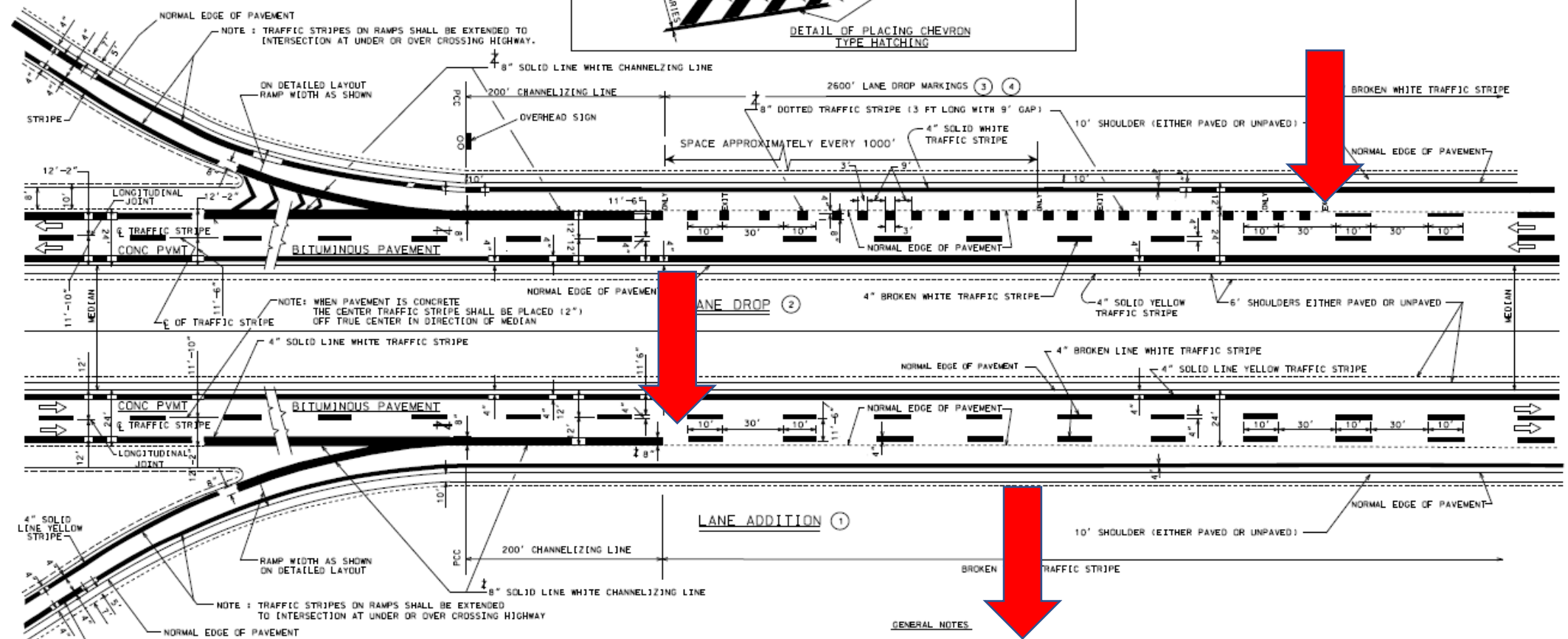


REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO

# Index 1013

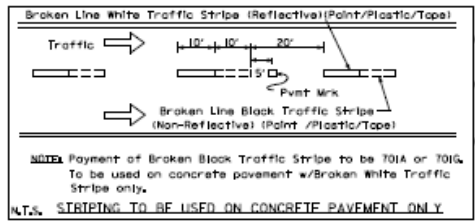


SPEED	RECOMMENDED DIAGONAL LINE SPACING	
	PAV'T TRANSITION	RAMP GORES
≤40	Z	X
≥45	20'	10'
	30' - 40'	20'



NOTE: A SOLID YELLOW LINE DELINEATES THE LEFT EDGE OF A TRAVELPATH TO INDICATE A RESTRICTION AGAINST PASSING ON THE LEFT OR DELINEATES THE LEFT EDGE OF PAVEMENT ON A DIVIDED STREET OR HIGHWAY

NOTE: THE 5" OR 6" TRAFFIC STRIPE IS OPTIONAL AT LOCATIONS SHOWN AS 4" TRAFFIC STRIPE. THE PAYMENT OF THE 5" OR 6" TRAFFIC STRIPE WILL BE IDENTIFIED IN THE PAY ITEM USED.



- GENERAL NOTES
- FOR LANE ADDITIONS GREATER THAN 2 MILES WHICH TERMINATE DOWNSTREAM AS A LANE END RATHER THAN A LANE DROP, THE BROKEN TRAFFIC STRIPE SHALL TERMINATE IN ACCORDANCE WITH ALDOT DRAWING LT-703.
  - THE APPLICATION OF LANE DROP MARKINGS SHALL EXTEND THE ENTIRE LENGTH BETWEEN RAMPS OF 2 MILES OR LESS DISTANCE.
  - LANE DROP MARKINGS SHOULD BEGIN AT THE FIRST SIGN INDICATING AN "EXIT ONLY" LANE OR NO LESS THAN 2600 FEET FROM THE UP-STREAM END OF THE CHANNELIZING LINE.
  - THE BROKEN WHITE STRIPE SHALL ONLY BE USED ON ADDED LANES THAT EXCEED 2 MILES. OTHERWISE THE STRIPE IS TO BE WIDE DOTTED AND FOLLOW THE "AUX LANE" FIGURE 38-10 FROM THE MUTCD 2009 EDITION.

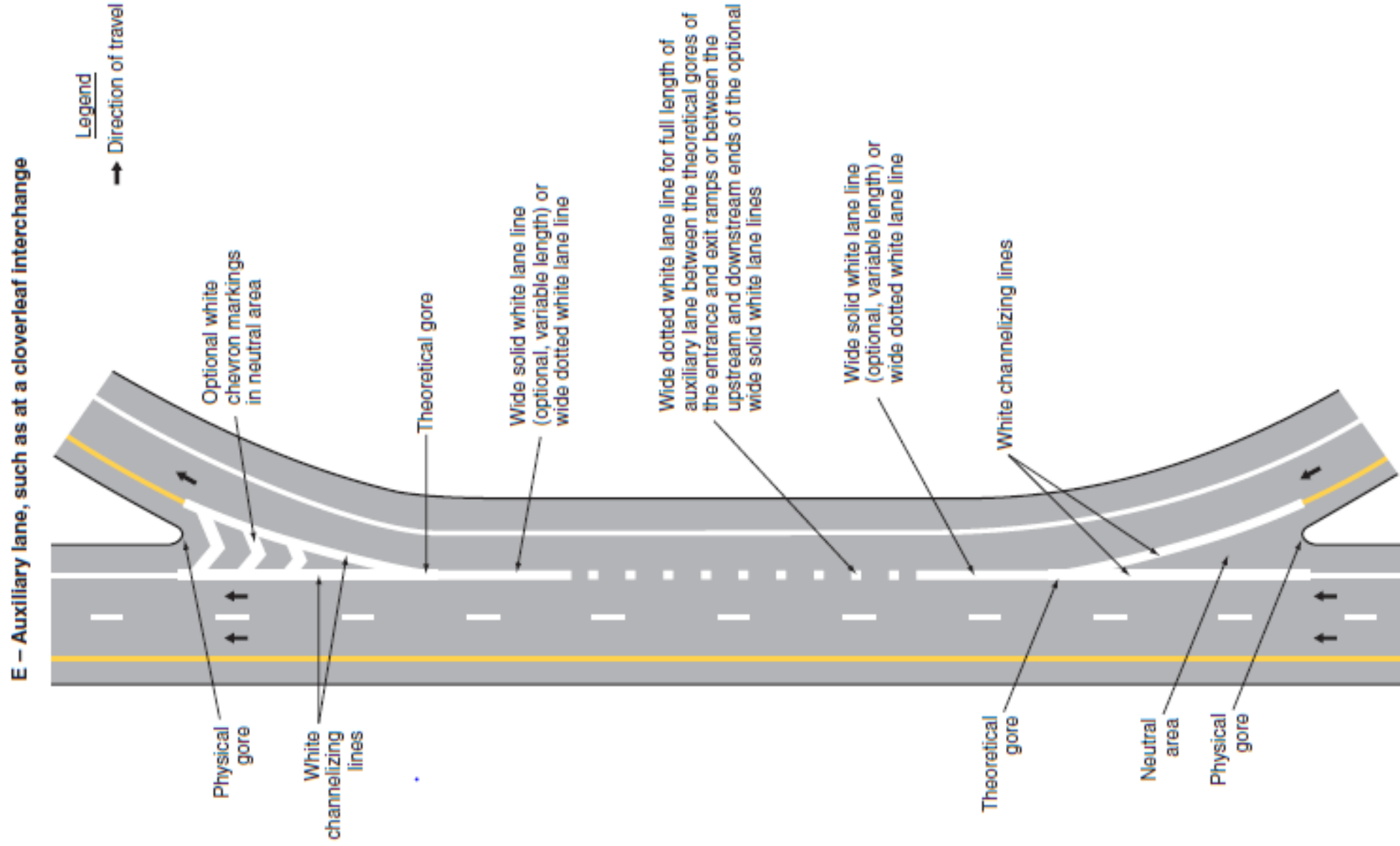
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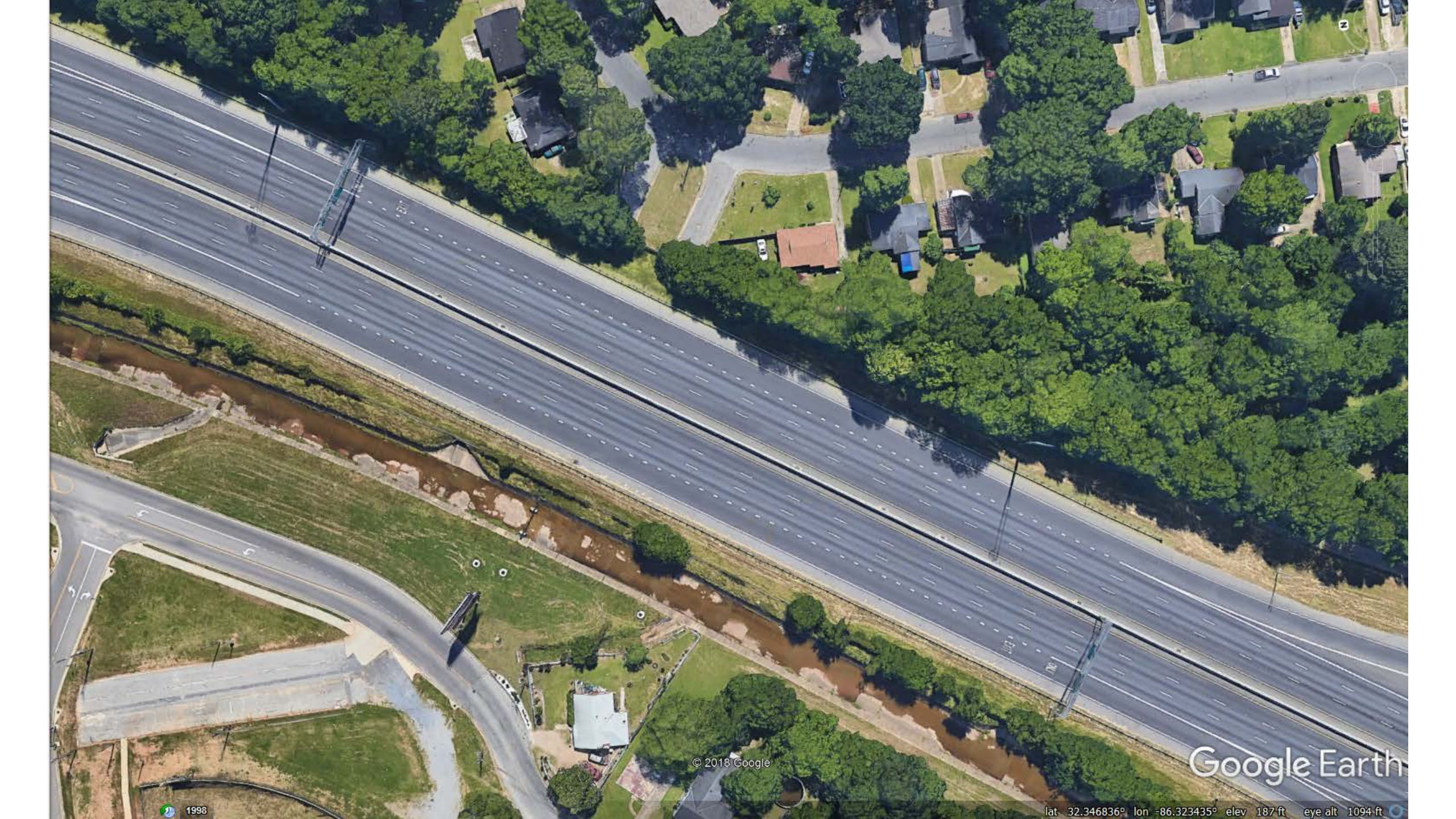
<p><b>REVISIONS</b></p> <ol style="list-style-type: none"> <li>Revised to show diagonal line spacing per notes 1 &amp; 4 and changed R/W Striped to 4' Overhead Sign for Exit Ramp as directed by S&amp;L.</li> <li>Added MUTCD 2011 Pavement markings on Turn Lane on 10-14-11 by JET.</li> <li>Revised Title (Revised notes 4 and added in per note 4 and notes 1 and 2 on 11-14-11 by S&amp;L).</li> </ol>	<p><b>ALABAMA DEPARTMENT OF TRANSPORTATION</b> 1405 COLLEGE BLVD MONTGOMERY, AL 36130-3050</p> <p>DESIGN BUREAU SPECIAL DRAWING</p> <p>DETAILS OF TRAFFIC STRIPING AUXILIARY LANES AND RAMPS (LANE ADDITION &amp; LANE DROP)</p>
<p>Bureau Std. Draw. L.V.S. DRAWN BY: DATE DRAWN: 08-20-01</p>	<p>SPECIAL DRAWING NO IPS-701-9</p>
	<p>SHEET NO 1013</p>

NOT TO SCALE

**Figure 3B-10. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 5 of 5)**







© 2018 Google

Google Earth

1998

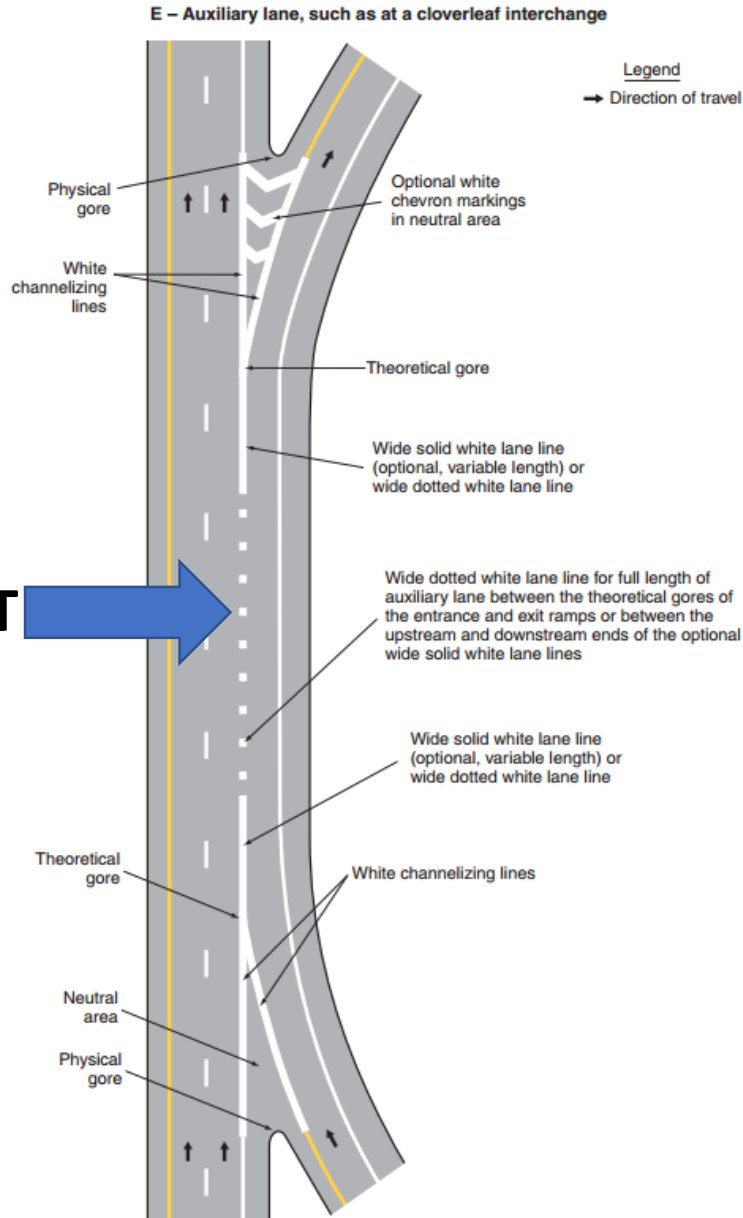
lat 32.346836° lon -86.323435° elev 187 ft eye alt 1094 ft



Figure 3B-10. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 5 of 5)

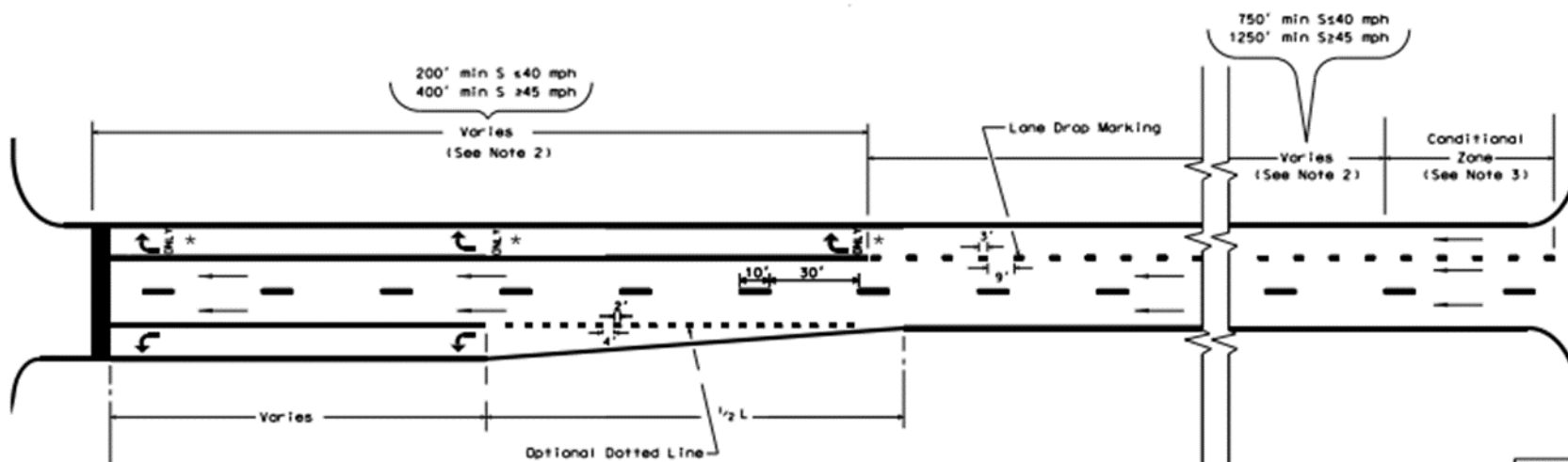
Up to 2 MILES

**CORRECT**



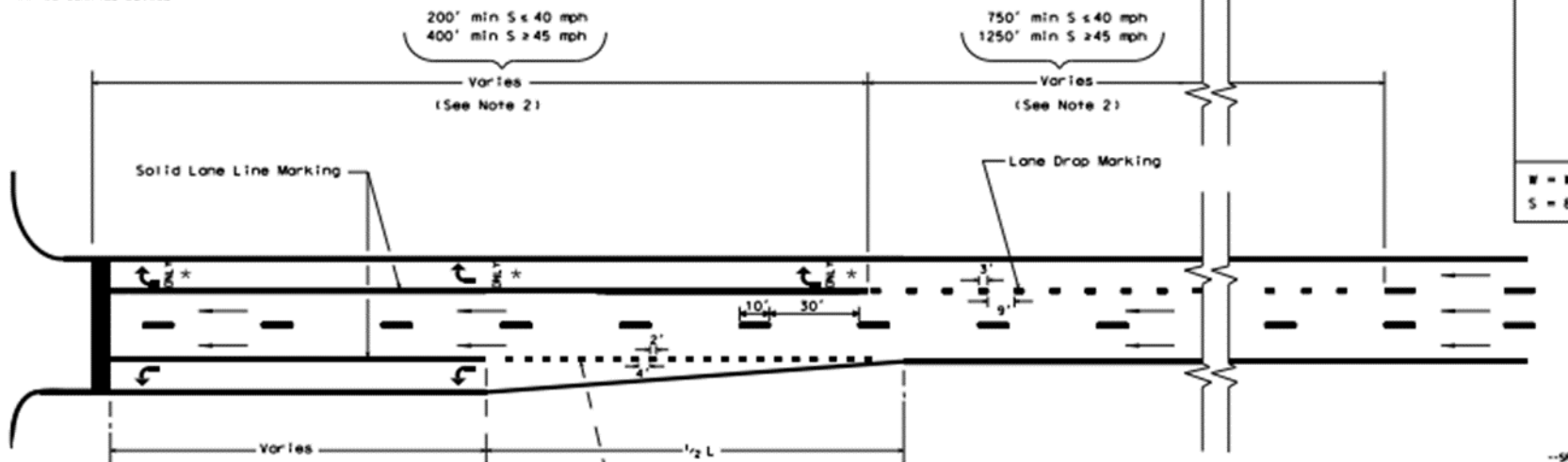






AUXILIARY LANE FUNCTIONING AS A DROP LANE

NOTE: STOP LINES SHOULD NOT BE USED WITHOUT A TRAFFIC CONTROL DEVICE



CONVERSION OF A THROUGH LANE TO A DROP LANE

GENERAL NOTES

1. A LANE DROP MARKING IS TWICE THE WIDTH OF A NORMAL TRAFFIC STRIPE MARKING. THE LANE DROP MARKING CONSISTS OF 3' LINE SEGMENTS SEPARATED BY 9' GAPS.
2. WHERE MINIMUM LENGTHS OF MARKINGS CANNOT BE ATTAINED FOR DROP LANES, IT IS DESIRABLE TO REDUCE THE LENGTH OF THE SOLID LANE LINE MARKING IF THE MINIMUM LANE DROP MARKING LENGTH CAN BE ATTAINED.
3. BROKEN WHITE TRAFFIC STRIPE (10'-30') FOR AUXILIARY LANES MAY BE INSTALLED CONDITIONALLY AS FOLLOWS:  
THE MINIMUM LENGTH OF LANE DROP MARKINGS ARE PROVIDED AND THE MINIMUM NUMBER OF BROKEN WHITE TRAFFIC STRIPES (10') ARE PROVIDED  
a. 13 BROKEN STRIPES IF S 45 MPH. OR  
b. 8 BROKEN STRIPES IF S 40 MPH

\* "ONLY" PAVEMENT MARKING LEGEND IS OPTIONAL.  
← TRAFFIC DIRECTION

TRANSITIONAL TAPER TABLE	
S (MPH)	L (FT)
25	10.4 W
30	15.0 W
35	20.4 W
40	26.7 W
45	45.0 W
50	50.0 W
55	55.0 W
60	60.0 W
65	65.0 W

W = WIDTH OF TRANSITION IN FEET  
S = 85th PERCENTILE OR POSTED SPEED

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DESIGN BUREAU SPECIAL DRAWING  
STRIPING DETAILS FOR  
DROP LANES AND  
TURN LANES

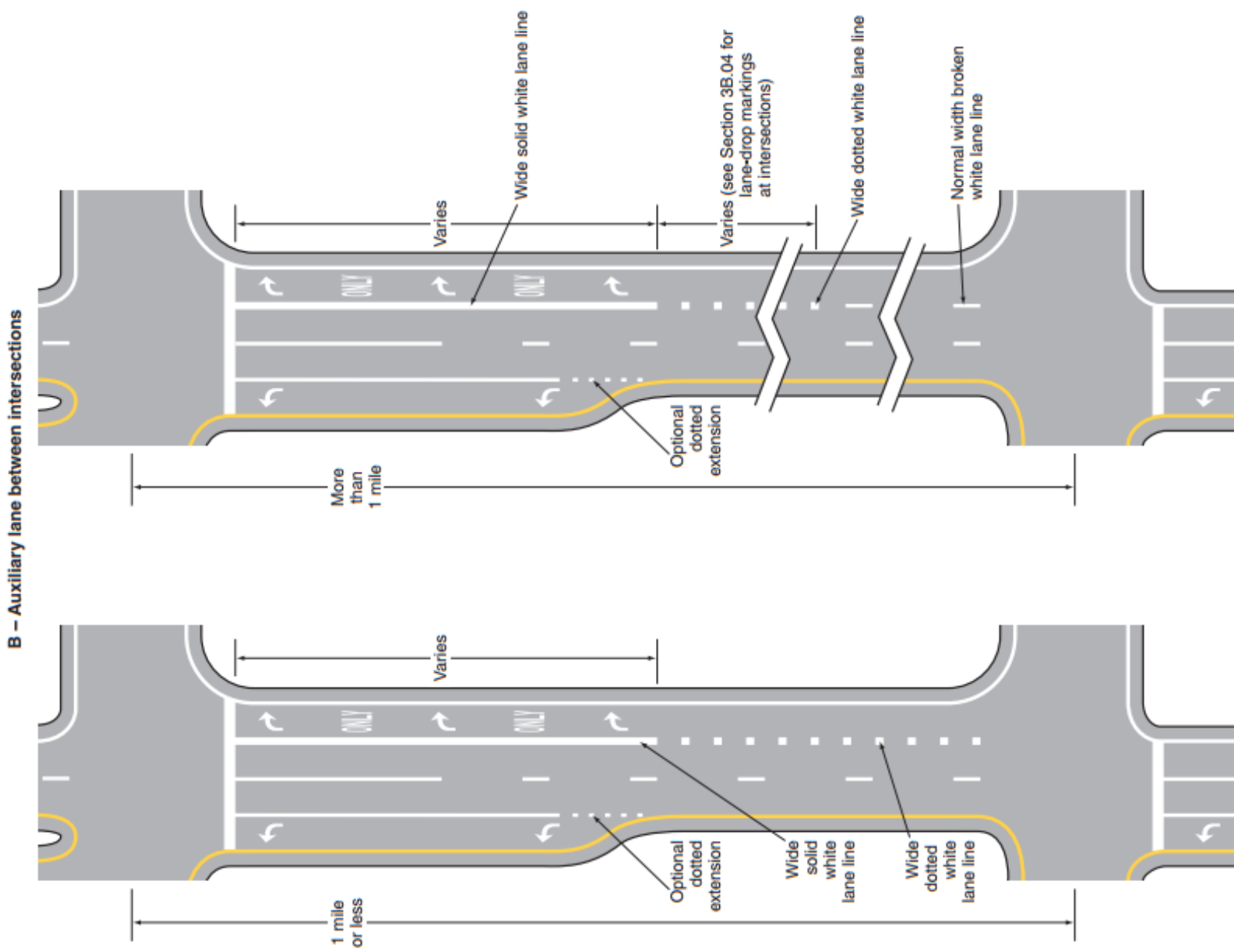
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PS-701-7

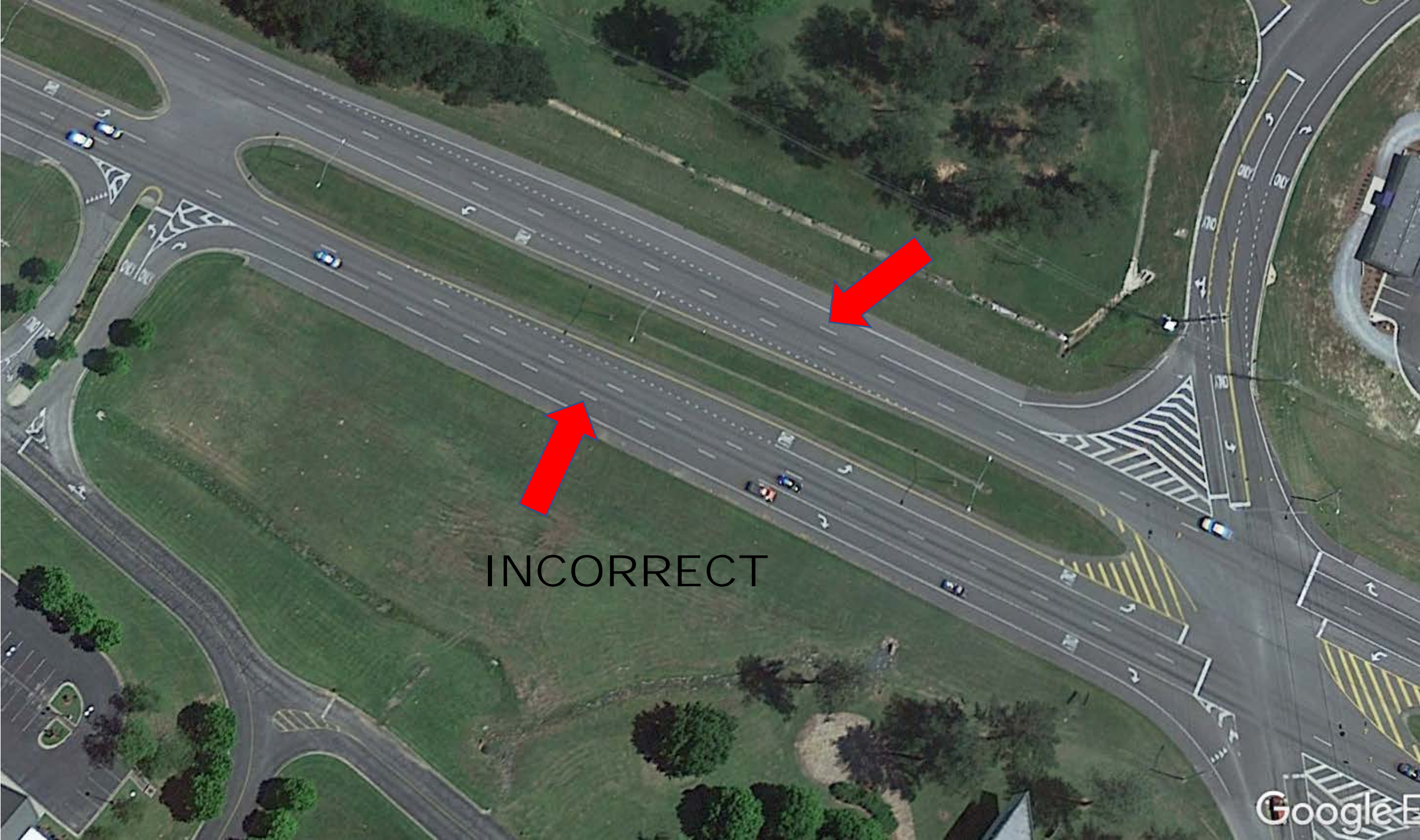
DATE SHOWN: 02-14-09

ALABAMA DEPARTMENT OF TRANSPORTATION  
HIGH COLLEGE BOULEVARD  
MONTGOMERY, AL 36103-3000

1038

**Figure 3B-11. Examples of Applications of Conventional Road Lane-Drop Markings**  
(Sheet 2 of 2)





INCORRECT



Missed opportunity!





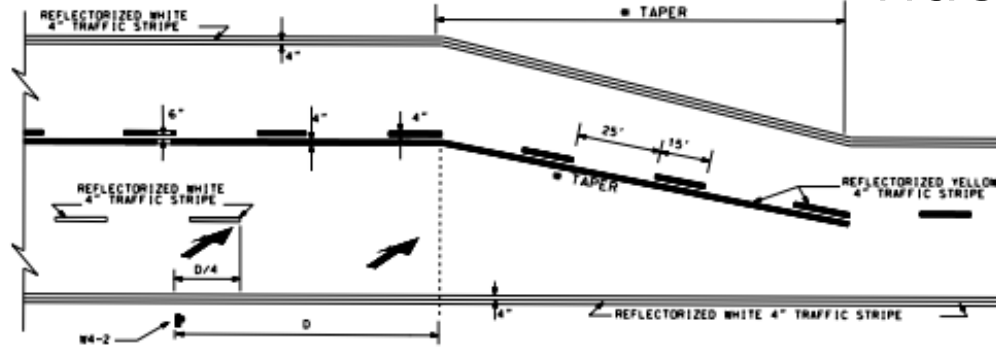
# QUESTION

- According to MUTCD Standards, what are the ONLY 2 types of permissible stripe to use in an acceleration or deceleration lane???
- ANSWER: dotted and solid

# Lane reductions

- Standard has been constant since 1940s!
- Same principles apply for ALL roadways

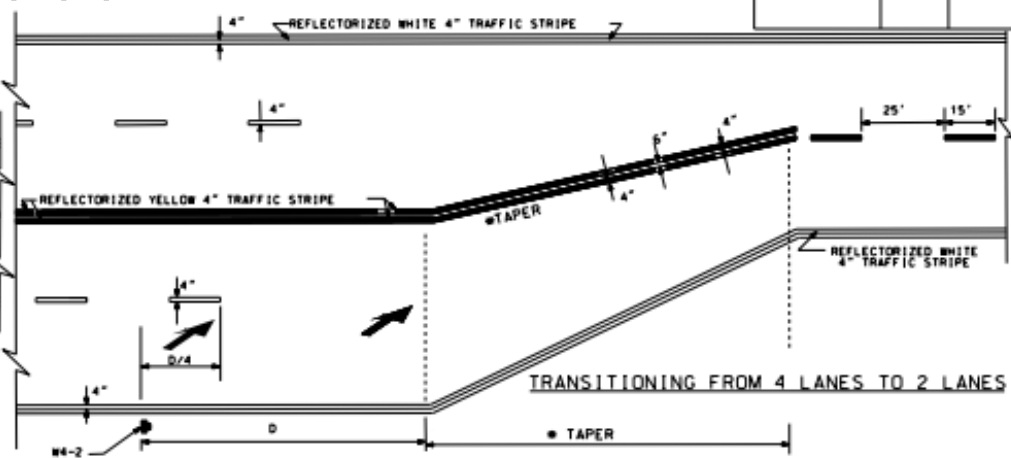
REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.



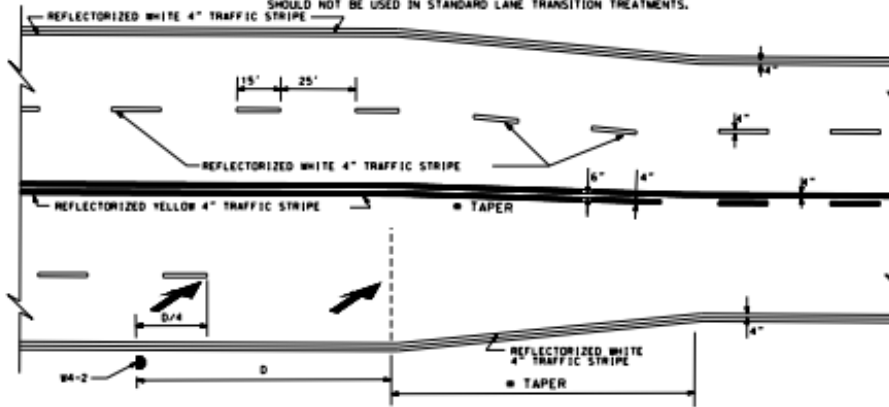
### TRANSITIONING FROM 3 LANES TO 2 LANES

- NOTE: 1. IF THE RECOMMENDED SPACING IN THIS TABLE DOES NOT PERMIT AT LEAST FIVE DIAGONAL LINES WITHIN THE RESTRICTED AREA, THE SPACING SHOULD BE REDUCED TO PROVIDE FOR FIVE DIAGONAL LINES. THE SPACING SHOULD NOT BE LESS THAN 4 FEET. DIAGONAL LINES SHALL BE MARKED AT A 45 DEGREE ANGLE TO THE MARKINGS OUTLINING THE RESTRICTED AREA OR TO THE CENTER LINE OF THE MAIN TRAVELWAY.
2. THE RECOMMENDED SPACING IS MEASURED PARALLEL TO THE PAVEMENT CENTER LINE, ALONG THE MARKING OUTLINING THE RESTRICTED AREA OR ALONG THE CENTER LINE OF THE MAIN TRAVELWAY.
3. THE DIAGONAL LINE SPACING FOR S 40 SHOULD BE USED IN THE IMMEDIATE VICINITY OF INTERSECTIONS AND MAY BE USED IN OTHER AREAS WHERE ENGINEERING JUDGEMENT INDICATES THAT REDUCED SPACING IS DESIRABLE TO IMPROVE VISIBILITY.
4. STANDARD SIGNS SHOULD BE PLACED AS SHOWN AND THEN SUPPLEMENTED BY THE APPROPRIATE PAVEMENT MARKINGS. THE W9-1 (RIGHT (LEFT) LANE ENDS) MAY BE USED IN ADVANCE OF THE W4-2. IF USED, THE W9-1 SHOULD BE LOCATED AT DISTANCE D' UPSTREAM OF THE W4-2.
5. ONE OR MORE LANE REDUCTION ARROWS MAY BE USED IN THE FULL WIDTH PORTION OF THE TERMINATED LANE WHERE ADDITIONAL MARKING GUIDANCE IS DESIRABLE. DOTTED LINE MARKINGS SHOULD NOT BE USED IN STANDARD LANE TRANSITION TREATMENTS.

SPEED	RECOMMENDED DIAGONAL LINE SPACING	
	INTERSECTION CHANNELIZATION	PAVEMENT TRANSITION
S 40	V	Z
S 45	10'	20'
	20'	30' - 40'



### TRANSITIONING FROM 4 LANES TO 2 LANES

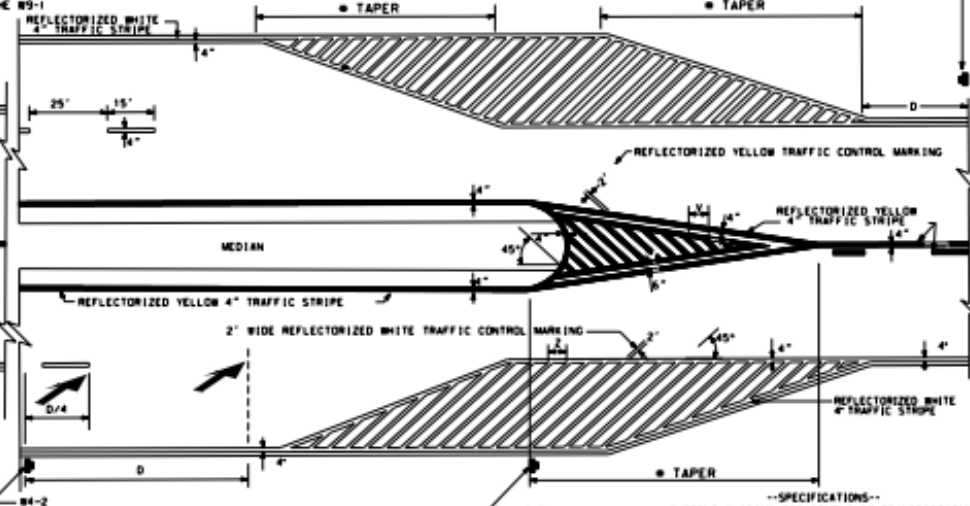


### TRANSITIONING FROM 4 LANES TO 3 LANES

- NOTE:
- L = LENGTH IN FEET (TAPER)
  - S = 85TH PERCENTILE SPEED OR POSTED SPEED
  - W = OFFSET IN FEET
  - FOR SPEEDS 45 MPH OR GREATER USE  $L = WS$
  - FOR SPEEDS 40 MPH OR LESS USE  $L = WS^2/60$

S	D
25 mph	325'
30 mph	460'
35 mph	565'
40 mph	670'
45 mph	775'
50 mph	885'
55 mph	990'
60 mph	1100'
65 mph	1200'
70 mph	1250'

- NOTE: USE SEGMENTS OF TEN FEET FOR STRIPE AND THIRTY FEET FOR GAPS ON RURAL HIGHWAYS OR OUTSIDE CITY LIMITS.
- NOTE: THE 5" OR 6" TRAFFIC STRIPE IS OPTIONAL AT LOCATIONS SHOWN AS 4" TRAFFIC STRIPE. THE PAYMENT OF THE 5" OR 6" TRAFFIC STRIPE WILL BE IDENTIFIED IN THE PAY ITEM USED.



### TRANSITIONING FROM 4 LANES TO 2 LANES

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DESIGN BUREAU SPECIAL DRAWING

STANDARD TRANSITION TAPERS FOR 2, 3 AND 4 LANE HIGHWAYS

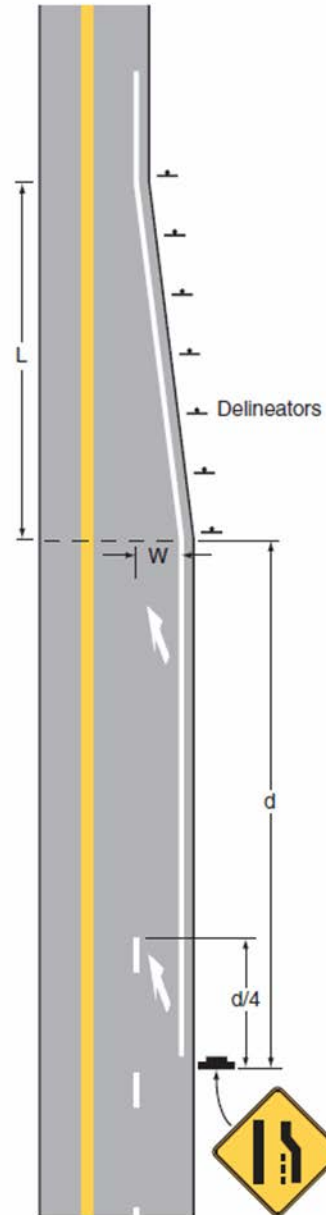
SPECIAL DRAWING NO. LT-703

DATE: 02-28-93

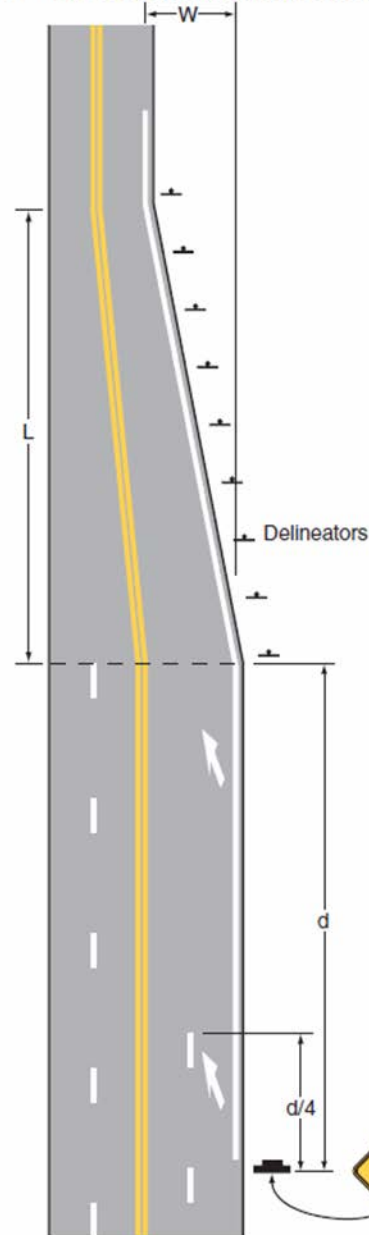
711

Figure 3B-14. Examples of Applications of Lane-Reduction Transition Markings

A – Lane reduction



B – Lane reduction with lateral shift to the left



Notes:

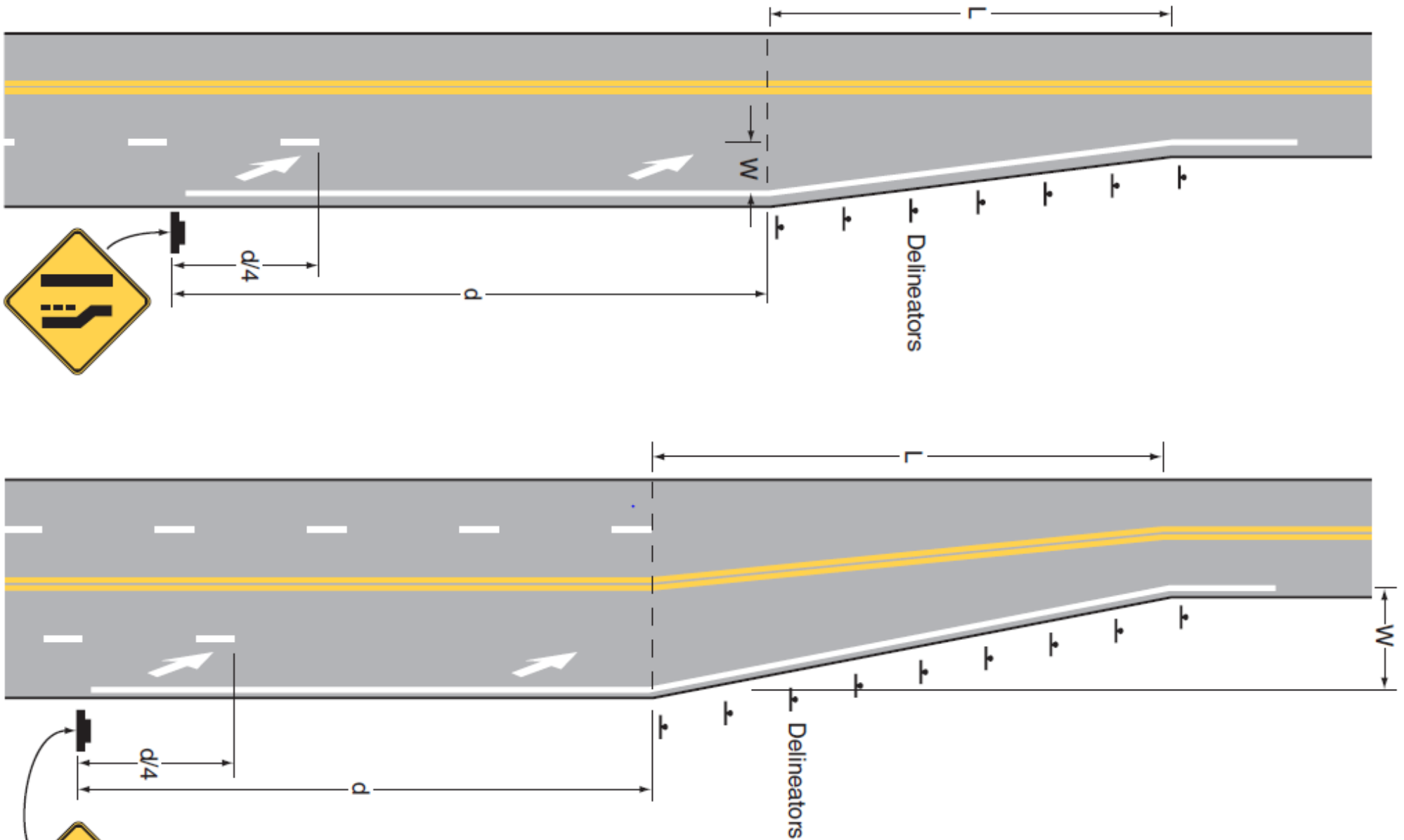
1. Lane-reduction arrows are optional for speeds of less than 45 mph
2. See Section 3F.04 for delineator spacing
3.  $L = WS$  for speeds of 45 mph or greater and  $L = WS^2/60$  for speeds of less than 45 mph, where:  
 $L$  = Length of taper in feet  
 $S$  = Posted, 85th-percentile, or statutory speed in mph  
 $W$  = Offset in feet
4.  $d$  = Advance warning distance (see Section 2C.05)



Figure 3B-14. Examples of Applications of Lane-Reduction Tran

A – Lane reduction

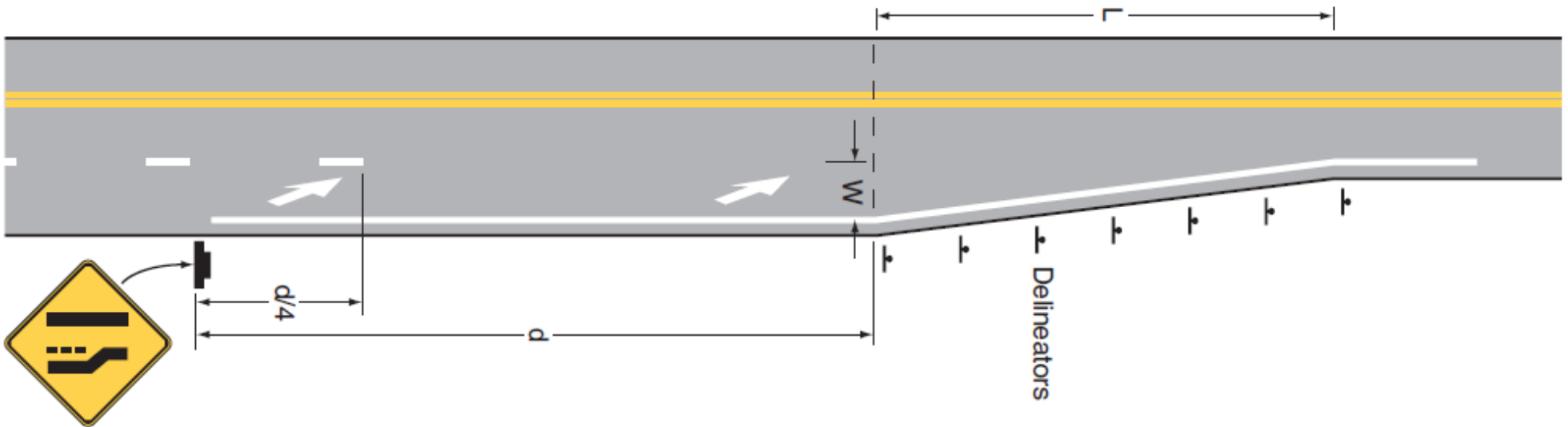
B – Lane reduction with lateral shift to the left



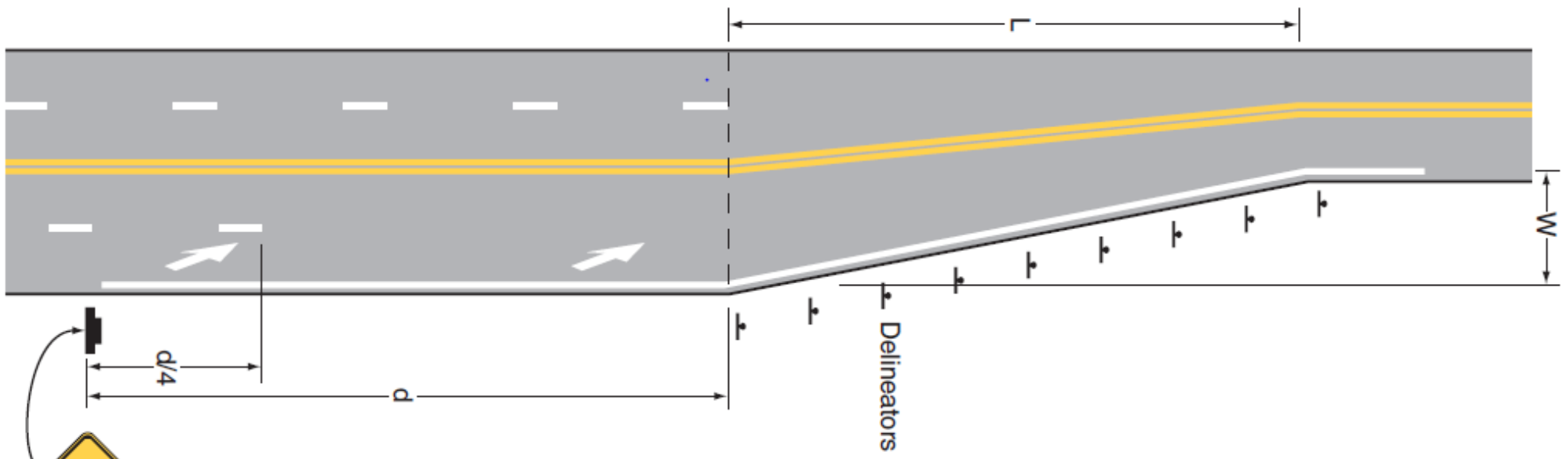
- Notes:
1. Lane- for sp
  2. See S spac
  3.  $L = W$  greater of less
  4.  $d = A$  (s)

Figure 3B-14. Examples of Applications of Lane-Reduction Tran

A – Lane reduction



B – Lane reduction with lateral shift to the left



What if my signs are not at the correct location???

- Notes:
1. Lane- for sp
  2. See S spac
  3.  $L = W$  greater of less
  4.  $d = A$  (s)
- $W =$   
 $S =$   
 $L =$





© 2014 Google

Google earth

1997

Imagery Date: 12/17/2013 33°56'04.82" N 86°52'05.74" W elev 361 ft eye alt 1191 ft





© 2018 Google

Google Earth

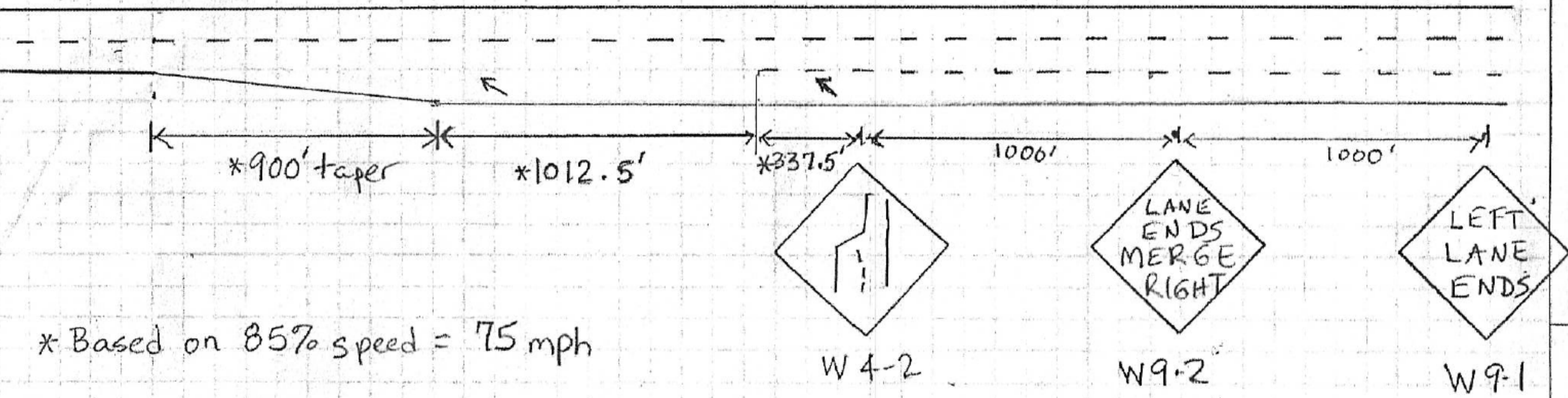
1997

Imagery Date: 2/1/2019 lat 33.933092° lon -86.868436° elev 303 ft eye alt 1190 ft





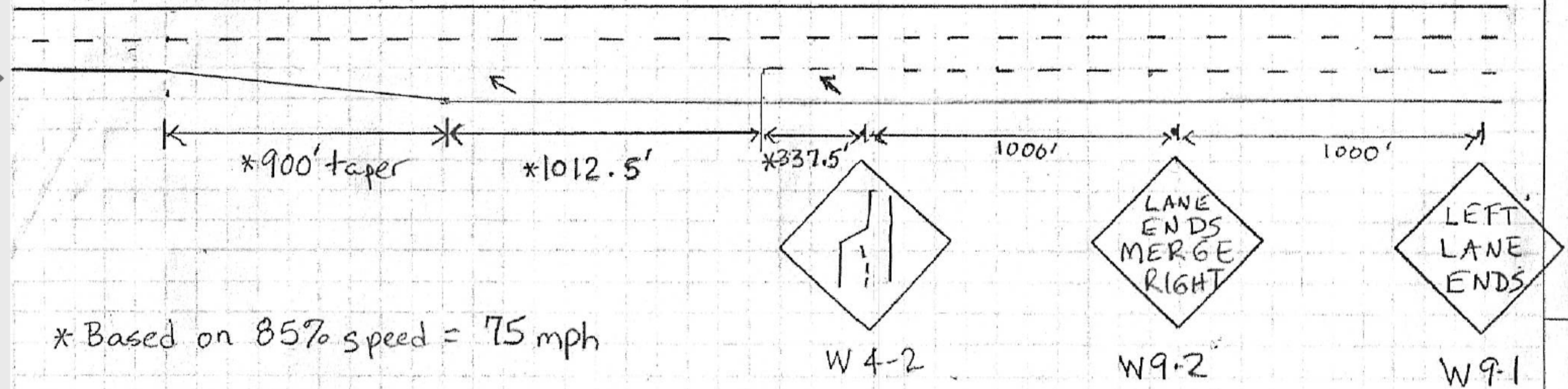
# Interstate Lane Reduction Striping/Signing Scheme



\* Based on 85% speed = 75 mph

# Interstate Lane Reduction Striping/Signing Scheme

Why not reduce on the right side???



\* Based on 85% speed = 75 mph

# Correct lane reduction markings

- I-65 NB at mp 290, Blount County
- I-85 NB at mp 10, Montgomery County
- I-20 EB at mp 188, Calhoun County
- I-20 WB at mp 205, Cleburne County
- I-20 EB at mp 214, Cleburne County (Georgia line)
- I-20 WB at mp 173, Talladega County????
- I-65 NB at mp 182, Elmore/Autauga Counties? TBD



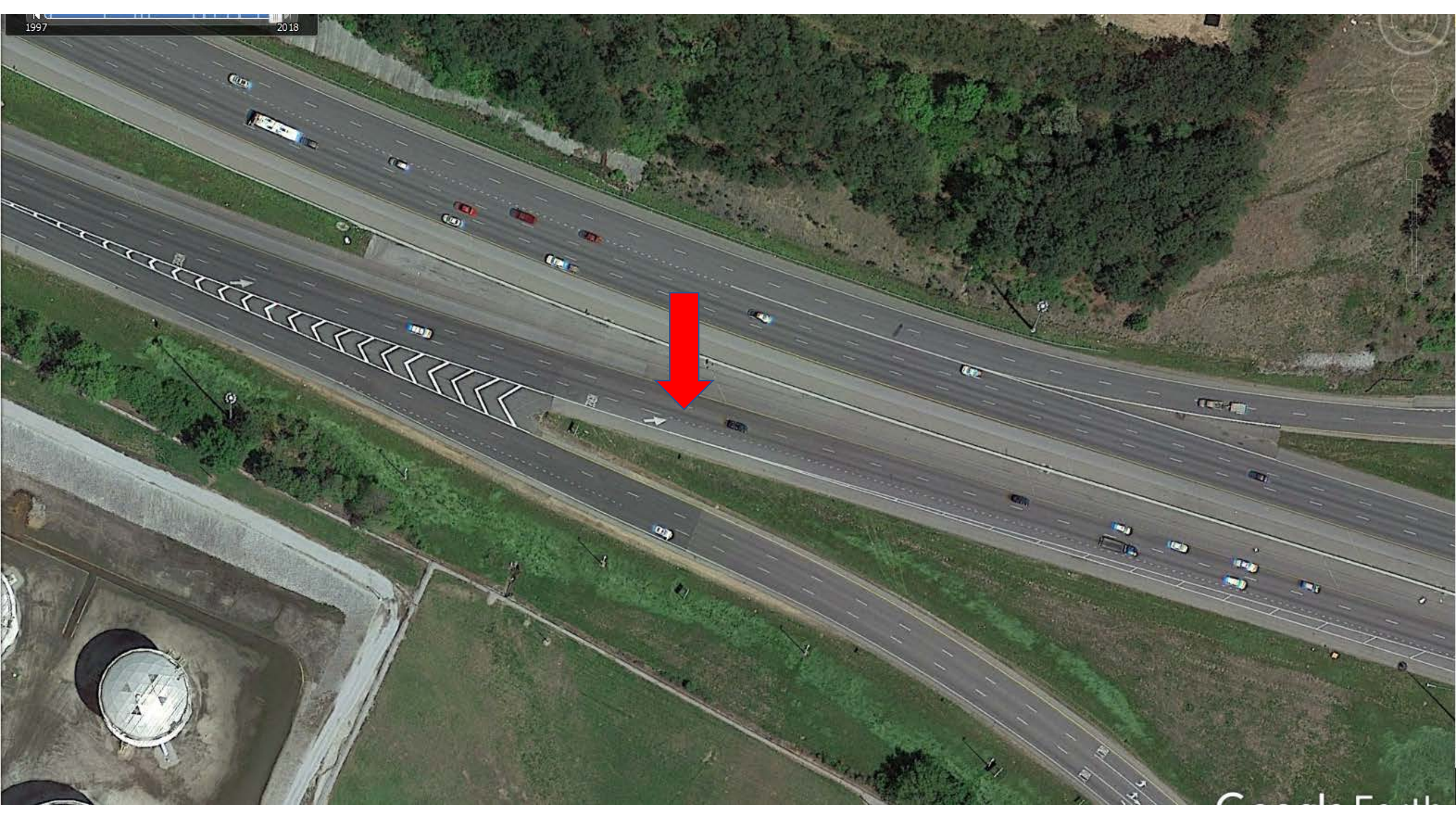


Recovery Lanes



1997

2018





Get it right the first time!







# Upcoming striping changes???

- New *MUTCD* in 2020???
- Unlike 2009 edition, little if any change to these standards.....
- *Except* these potential new standards:

# Potential new standards

- 6" wide stripes for certain roadways (Interstates, high speed roadways {>40mph})
- Chevrons in all gores

# What YOU need to do:

- Assume your striping is wrong! (or at least non standard)
- Have an open mind to doing it DIFFERENTLY
- Consult standard drawings and *MUTCD*

# What YOU need to do:

- Consult with Area Traffic Engineer
- Don't resist intervention
- If all else fails, contact Maintenance Bureau Traffic Operations



# What YOU need to do:

- STOP using any source besides our standards!
- Get it right WITH EACH LAYER!

Questions???



# Points of Emphasis

## Striping

- 4 CIMs over last 2+ years
  - 5-2017
  - 8-2018
  - 8-2018 Follow-up
  - 1-2019
- Despite the emphasis, still struggling
- Can't afford to mess up the wearing surface
- Plan what to do and communicate prior to!!!
- Kerry will elaborate tomorrow

STATE	REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NO.
AL	RPF-IMF-1065 (467)	2017	31

# SUMMARY OF QUANTITIES

LOCATION	REQUIRED TRAFFIC STRIPING										REMARKS
	ITEM NO. 701A-227	ITEM NO. 701A-230	ITEM NO. 701A-227	ITEM NO. 701B-207	ITEM NO. 701B-142	ITEM NO. 701B-148	ITEM NO. 701C-154	ITEM NO. 701D-148	ITEM NO. 701E-148	ITEM NO. 701F-148	
	SOLID WHITE CL 2 TYPE A TRAFFIC STRIPE (5" WIDE)	BROKEN WHITE CL 2 TYPE A TRAFFIC STRIPE (5" WIDE)	DOTTED CL 2 TYPE A TRAFFIC STRIPE (5" WIDE)	DOTTED CL 2 TYPE A TRAFFIC STRIPE (5" WIDE)	DOTTED CL 2 TYPE A TRAFFIC STRIPE (5" WIDE)	BROKEN WHITE CL W TYPE A TRAFFIC STRIPE (5" WIDE)	BROKEN WHITE CL W TYPE A TRAFFIC STRIPE (5" WIDE)	SOLID WHITE CL W TYPE A TRAFFIC STRIPE (5" WIDE)	SOLID WHITE CL W TYPE A TRAFFIC STRIPE (5" WIDE)	SOLID YELLOW CL W TYPE A TRAFFIC STRIPE (5" WIDE)	
	MILE	MILE	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	DRAWING NUMBER
NORTHBOUND LANES	12.41	12.41									A,B,C,D,E
SOUTHBOUND LANES	12.41	12.41									A,B,C,D,E
EXIT 340 INTERCHANGE	4.28	3.02	273.00	12138.00	871.00	1217.00					A,C,D,E,J,K,L
EXIT 347 INTERCHANGE	1.39	0.62	2540.00								A,C,D,E,J,K,L
EXIT 351 INTERCHANGE	1.39	0.62	2540.00								A,C,D,E,J,K,L
TOTAL	32	27	273	17218	1831	2377				2104	

LOCATION	REQUIRED TEMPORARY STRIPING & STRIPE REMOVAL										REMARKS
	ITEM NO. 701C-000	ITEM NO. 701C-001	ITEM NO. 701H-002	ITEM NO. 701H-002	ITEM NO. 701H-007	ITEM NO. 701H-007	ITEM NO. 701H-007	ITEM NO. 701H-007	ITEM NO. 701H-007	ITEM NO. 701H-007	
	BROKEN TEMPORARY TRAFFIC STRIPE	SOLID TEMPORARY TRAFFIC STRIPE	SOLID TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	SOLID TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	BROKEN TEMPORARY TRAFFIC STRIPE REMOVED (TAPE)	
	MILE	MILE	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	LN FT	DRAWING NUMBER
NORTHBOUND LANES	62.07	124.13	1160.00	1160.00	580.00	580.00	580.00	580.00	580.00	580.00	B,C,D,E
SOUTHBOUND LANES	62.07	124.13	1160.00	1160.00	580.00	580.00	580.00	580.00	580.00	580.00	B,C,D,E
EXIT 340 INTERCHANGE	4.64	28.16	2191.00		844.00						G,D,E,J,K,L
EXIT 347 INTERCHANGE	7.77										G,D,E,J,K,L
EXIT 351 INTERCHANGE	7.77										G,D,E,J,K,L
TOTAL	129	283	4481		2104						

LOCATION	REQUIRED MARKINGS, LEGENDS, & PAVEMENT MARKERS										REMARKS
	ITEM NO. 703A-002	ITEM NO. 703B-002	ITEM NO. 703A-030	ITEM NO. 703A-030	ITEM NO. 703A-031	ITEM NO. 703A-032	ITEM NO. 703D-001	ITEM NO. 703D-001	ITEM NO. 703D-001	ITEM NO. 703D-001	
	MARKINGS CLASS 2 TYPE A	LEGENDS CLASS 2 TYPE A	PAVEMENT MARKERS CLASS A-H TYPE 2-C	PAVEMENT MARKERS CLASS A-H TYPE 1-A	PAVEMENT MARKERS CLASS A-H TYPE 1-A	PAVEMENT MARKERS CLASS A-H TYPE 1-B	TEMPORARY TRAFFIC CONTROL MARKINGS	TEMPORARY TRAFFIC CONTROL MARKINGS	TEMPORARY TRAFFIC CONTROL MARKINGS	TEMPORARY TRAFFIC CONTROL MARKINGS	
	SO FT	SO FT	EACH	EACH	EACH	EACH	SO FT	SO FT	SO FT	SO FT	DRAWING NUMBERS
NORTHBOUND LANES			819.3								F,G
SOUTHBOUND LANES			819.3								F,G
EXIT 340 INTERCHANGE	5861.24	134.46	499.6	1135.0	287.3	135.2	158.0	188.0	324		A,C,E,F,G,H,I
EXIT 347 INTERCHANGE	2281.06	69.64	244.5	481.2	119.5	188.0					A,C,E,F,G,H,I
EXIT 351 INTERCHANGE	1756.36	44.62	134.5	500.2	119.5	188.0					A,C,E,F,G,H,I
TOTAL	7668	289	2542	2117	543	324					

STD DRAWING LEGEND	
A	IPS-10(SCT)
B	IPS-701-7
C	IPS-701-8
D	IPS-701-9
E	IPS-701-10
F	PM-705-1
G	PM-705-2
H	PM-705-3
I	TCM-703
J	SHEET 4
K	SHEET 5
L	SHEET 6

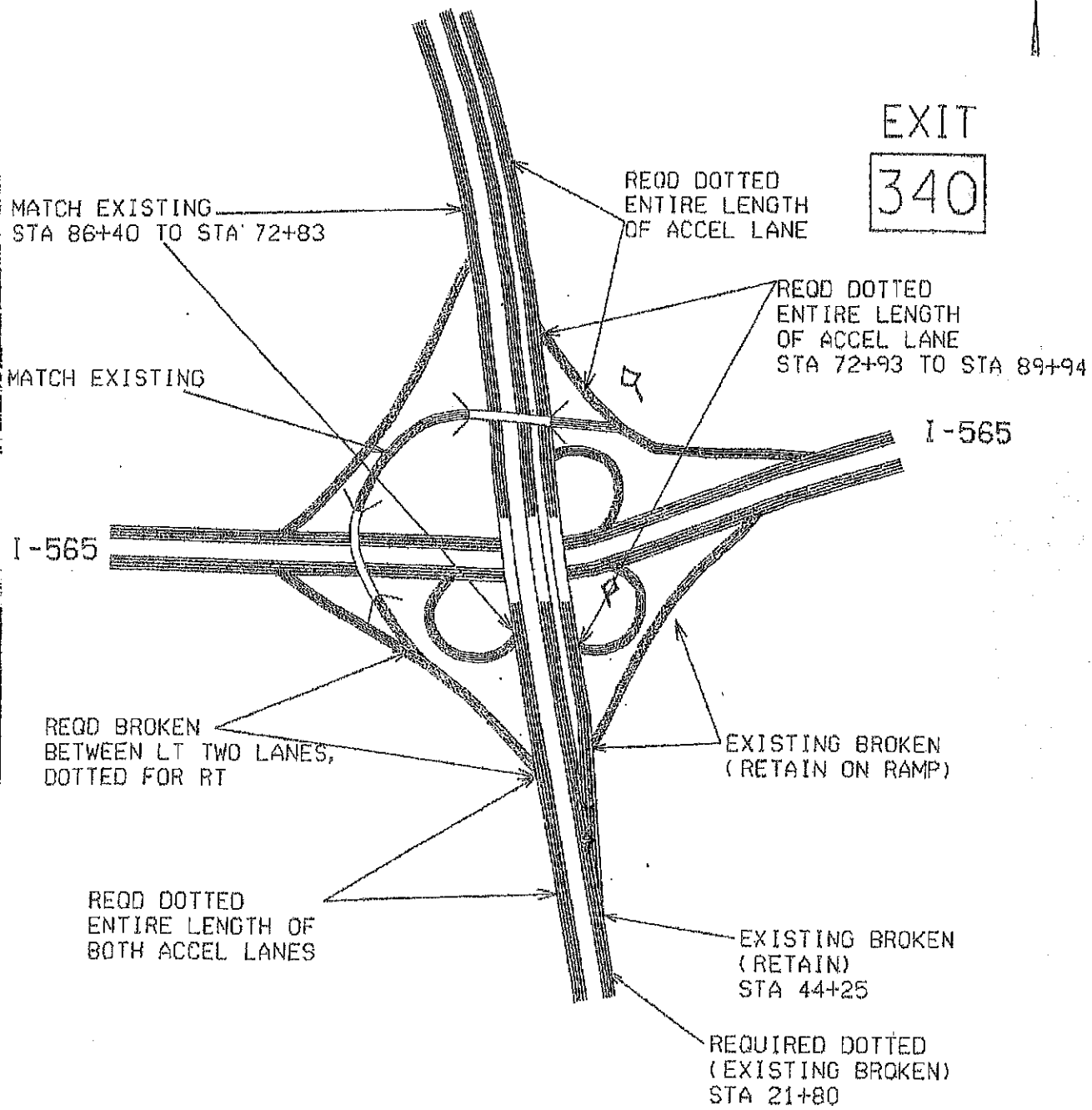


STATE	REFERENCE PROJECT NUMBER	FISCAL YEAR	SHEET NO.
AL	RPF-IMF-1065 (467)	2017	4

# RAMP TRAFFIC STRIPE SCHEDULE



EXIT  
340



\*SEE SHEET 10 FOR RAMP LAYOUT



KAY IVEY  
GOVERNOR

**ALABAMA**  
**DEPARTMENT OF TRANSPORTATION**  
CONSTRUCTION BUREAU  
1409 COLISEUM BOULEVARD, G-101  
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PHONE (334) 242-6208  
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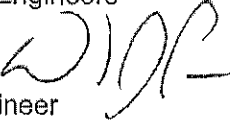
JOHN R. COOPER  
TRANSPORTATION DIRECTOR

May 1, 2017

**Construction Information Memorandum No. 5 – 2017**

TO: Region Engineers

ATTN: Region Preconstruction and Area Operations, Construction, and  
County Transportation Engineers

FROM: Winston J. Powe, P.E.   
State Construction Engineer

RE: Layout of No-Passing Zones

Subarticle 701.03(j) the *Standard Specifications for Highway Construction* outlines the requirements for the Engineer to set the limits of no-passing zones for the placement and location of the required traffic stripe items. On the typical "construction" project, this is done on the Paving Layout, Striping & Signage Sheets or the Striping Details Sheets. However, on resurfacing projects, this is normally handled by the Project Manager and his/her staff marking the limits using the existing striping while accounting for changes in the sight distance or by using engineered studies indicated in a striping layout book on file typically at the District Office or with the Area Traffic Engineer. The procedures for performing this layout work are outlined in Article 2:4:A of the *Construction Manual*, specifically the **Engineering** requirements for **PROJECT CONSTRUCTION (TRAFFIC CONTROL): Traffic Stripe, Markings & Legends & Pavement Markers** on Sheet 2-132.

It has come to our attention that project notes are being included in some plans requiring the Contractor to check and set the limits of all no-passing zones in addition to other controls required to place the stripe with this required work being performed as a subsidiary obligation of the striping items. Another form of the note requires the Contractor to reference the location of the existing stripe and then re-stripe based on the reference. Subarticle 105.04(a) outlines that the plans govern over the *Standard Specifications*, but the requirements in Subarticle 701.03(j) and Article 2:4:A specifically direct the Engineer to perform such layout work. Plainly stated, it is our responsibility. Furthermore, the Contractor's Liability Law allows them certain legal protection for the work performed during the project once the project is completed. By placing the engineering layout of the traffic striping on the Contractor, this is making him responsible for a design or engineering functionality, and thus, placing him at risk after the project completion and Department acceptance. This is undue risk that the Contractor should not be exposed to for work that we, the Department, are required to do. Because of that risk, this matter has been discussed with the industry liaison committees, and the Department has agreed to cease such practice. While we have been trying to handle on a case-by-case basis during our Final Construction Plans Review, the time has come to place a Department-wide emphasis on the requirements of the *Standard Specifications* and the *Construction Manual*. Therefore, effective

with the May 26, 2017 letting, no project notes requiring the Contractor to perform layout of the no-passing zones shall be allowed in the plans.

Moreover, many times on our resurfacing projects, we simply restripe the roadway as it was prior to the project work. However, conditions along the roadway and ROW, as well as off ROW, change through time that affect the sight distance and how the striping and pavement markings and legends should be placed in order to conform to the applicable and current details in the Department's *Standard and Special Drawings for Highway Construction*. Designers and project personnel should review the details in Index No. 806 for as well as those on Index Nos. 711, 715, 737, 913, and 1005-1041 to ensure they are familiar with the current requirements. Project plans and field layout work should reflect these drawing details, and since these details are revised annually, Contractors cannot simply restripe based on the existing since the requirements have changed.

Please utilize these references to ensure the plans and field engineering required by the Engineer are performed as required and ensure that your Project Managers, Area contract administration personnel, and most importantly, your designers, are familiar with this CIM.

WJP

pc: Mr. George Conner  
Mr. Don Arkle  
Mr. William Adams  
Mr. Steve Walker  
Mr. Terry McDuffie  
Mr. Clay McBrien  
Mr. Ed Phillips  
Mr. Terry Robinson  
Mark Bartlett, FHWA  
Alabama Road Builders Association  
Alabama Asphalt Pavement Association  
Alabama Bridge Contractors Association  
CIM File



**ALABAMA**  
**DEPARTMENT OF TRANSPORTATION**  
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 1409 COLISEUM BOULEVARD  
 MONTGOMERY, ALABAMA 36110  
 PHONE (334) 242-6208



Key Ivey  
GOVERNOR

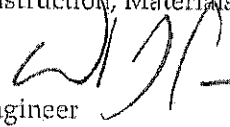
John R. Cooper  
TRANSPORTATION DIRECTOR

September 7, 2018

Construction Information Memorandum No. 8 - 2018

TO: Region Engineers

ATTN: Area Operations, Construction, Materials, and Local Transportation Engineers

FROM: Winston J. Powe, P.E.   
State Construction Engineer

RE: Proper Layout and Application of Striping, Markings, and Legends

The purpose of this CIM is to call attention to the need for appropriate Department personnel to review all applicable standard and special drawings, plan sheets, and specification requirements regarding the placement of striping, markings, and legends prior to allowing the Contractor to begin work on these items.

Construction and Maintenance Bureau staff members met recently to discuss concerns from striping subcontractors regarding corrections having to be made after their work was accomplished, along with additional work being requested after their crews had demobilized. As we do more night paving work, it is critical to pre-communicate so that we do not place errant stripe on our new pavement. Some specific issues that the industry is having involves lane drop markings, edge line adjacent to curb and gutter sections, shields on interstates, and bicycle symbols. While these situations are not entirely avoidable, we request that every effort be made by Project, District, and Area personnel to be satisfied and in agreement with the manner in which a subcontractor intends to accomplish his work prior to that work beginning. We have also reminded the subcontractors that they bear responsibility to give early notification (through the prime) of when they intend to arrive at the project site so Department personnel will have sufficient time to visit the site and review striping plans, drawings, etc.

Particularly noteworthy in this matter is the use of Google Earth imagery for re-striping purposes. Personnel should be reminded of CIM 5-2017 and the fact that existing striping, markings, and legends may no longer conform to current standards.

The Department is looking into ways to better denote or depict on the plans the layout and quantities for striping, legends and markings. This may be in the form of more detailed striping layout sheets, box sheets, or updates to standard and special drawings.

Please ensure your inspection personnel are familiar with these issues.

WJP/JLB/jlb

pc: Mr. George Conner, PE	Mr. Stacey Glass, PE	Mr. Steve Walker, PE	FHWA
ARBA	AAPA	ALBCA	ACIA
ACEA	CIM File		





KAY IVEY  
GOVERNOR

**ALABAMA**  
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1409 COLISEUM BOULEVARD, G-101  
MONTGOMERY, ALABAMA 36110  
PHONE (334) 242-6208  
FAX (334) 264-3727



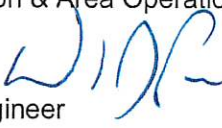
JOHN R. COOPER  
TRANSPORTATION DIRECTOR

December 5, 2018

**MEMORANDUM**

TO: Region Engineers

ATTN: Region Pre-Construction & Area Operations, Construction, & Local Transportation Engineers

FROM: Winston J. Powe, P.E.   
State Construction Engineer

RE: Plan Needs for Traffic Striping, Dotted, Markings, and Legends  
Follow-up for CIM 8-2018

In general, plans for construction projects include Striping & Signage Sheets, but plans for resurfacing and other maintenance-type projects only include Box Sheets with a summary of striping items and quantities and no specific location information. It is these type projects that have posed the layout and application issues addressed in CIMs 5-2017 and 8-2018.

As a follow-up to CIM 8-2018, we have been reviewing various plans and details and communicating with industry representatives on how to better depict the layout and quantities for striping, markings, and legends on the plans. Since the Department is responsible for layout of No-Passing Zones, that relieves much of the need for Striping & Signage Sheets. However, the Department continues to have issues with the proper layout and application of Lane Drop Markings. Because of this, the impact it has on our striping "message" to the traveling public, and the problems that corrective measures can have on our new wearing surfaces, more information is needed in our plans for the location of these Markings. From our reviews and communication efforts, it appears the simplest means of doing this is including location and quantity information in Box Sheets like we do for other pay items. An example of such is attached. Please utilize this type of example in your future resurfacing plans. You may also include it for your plans for construction projects to summarize what is shown on the Striping & Signage Sheets.

In addition, one of the issues addressed in CIM 8-2018 for shields on the interstates and bicycle symbols needs additional emphasis and guidance. These markings, along with those for shared lanes and handicap pavement, are shown on Special Drawing No. TCM-703 (Sheet 2 of 2) Index 1049, and all are listed as "Specialty Traffic Control Markings". Item 703.03(c)3. of the Standard Specifications references the use of details in the Special Drawings or the plans, and Subarticle 703.05(b) lists the pay items for this work as 703H000 Specialty Traffic Control Markings. However, there has been conflict in some plans using the normal 703A items for Traffic Control Markings where they were supposed to use 703H000. Please remind your designers and project managers that these details are part of the plans by TCM-703 being included on the Index to Special and Standard Drawings Sheet in the front of the plan set. A project note that attempts to pay for these markings as part of the normal 703A Traffic Control Markings item conflicts with this Special Drawing, which is part of the plans. Thus, the plans are in conflict, and we will end up having to add Item 703H000 by supplemental agreement. Instead of having to do a change order, we need to ensure Item 703H000 is set up in the plans when these details are required.

With our traffic volumes steadily increasing each year on our highways, it is imperative that our traffic striping, markings, and legends be installed properly and consistently to send a uniform message. Since we are down to a limited number of striping contractors trying to cover the whole state, it is also imperative we communicate this uniform message in our plans and contracts so that we get the project striped correctly the first time and minimize delays, re-work, and change orders trying to determine what is required by the Special Drawings.

Please ensure that all personnel designing and managing your construction projects are familiar with this matter.

WJP

Attachment

pc: Mr. George Conner  
Mr. Stacey Glass  
Mr. Ed Phillips  
Mr. Clay McBrien  
ARBA  
ALBCA  
ACEA

Mr. Don Arkle  
Mr. Steve Walker  
Mr. Terry Robinson  
Mark Bartlett, FHWA  
AAPA  
ACIA  
CIM File





Kay Ivey  
GOVERNOR

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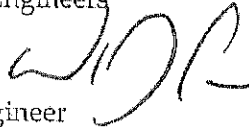
John R. Cooper  
TRANSPORTATION DIRECTOR

May 21, 2019

Construction Information Memorandum No. 1 - 2019

TO: Region Engineers

ATTN: Region Pre-Construction & Area Operations, Construction, and  
Local Transportation Engineers

FROM: Winston J. Powe, P.E.   
State Construction Engineer

RE: Handicap/Disability Pavement Markings

There have been recent discussions between the Construction, Design, and Maintenance Bureaus over the use of the color blue for parking spaces and symbol background for handicap/disability pavement markings. The purpose of this CIM is to clarify the requirements of the Department and MUTCD.

It is common to see blue used for the lines of parking spaces and symbol background in parking areas of private businesses. In addition, the Department has on occasion either required a blue background as a preference or has referenced the use of a blue background in project notes. The Department has also striped parking spaces at welcome centers and rest areas with blue lines.

Page 387 of the 2009 MUTCD (partial page shown below) mentions blue lines and background, but only in the context of being supplementary or optional. Special Drawing Index No. 1049 (partial sheet shown below) does not require a background at all, but simply states under General Note #4 that "...all legends and markings shall be white in color unless otherwise noted on detail."

Based on this guidance and in order to provide consistency for the traveling public, the use of the color blue for lines of parking spaces, symbols, and background for handicap/disability pavement markings shall be discontinued immediately on all projects and at all ALDOT facilities.

WJP/JLB/jlb

Attachments

pc: Mr. George Conner, PE	Mr. Don Arkle, PE	Mr. William Adams, PE
Mr. Steve Walker, PE	Mr. Stacey Glass, PE	Mr. Scott George, PE
Mr. Ed Phillips, PE	Mr. Clay McBrien, PE	FHWA
ARBA	AAPA	ALBCA
ACIA	ACEA	CIM File



2009 Edition

Page 387

**Option:**

Blue lines may supplement white parking space markings of each parking space designated for use only by persons with disabilities.

**Support:**

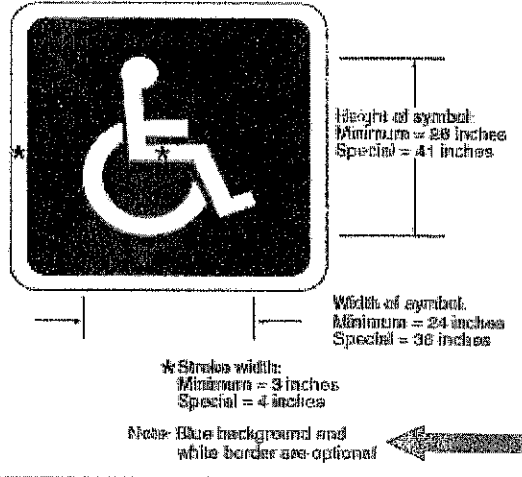
64 Additional parking space markings for the purpose of designating spaces for use only by persons with disabilities are discussed in Section 3B.20 and illustrated in Figure 3B-22. The design and layout of accessible parking spaces for persons with disabilities is provided in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" (see Section 1A.11).

**Section 3B.20 Pavement Word, Symbol, and Arrow Markings**

**Support:**

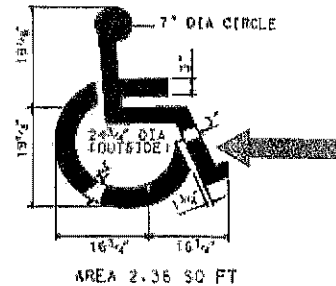
71 Word, symbol, and arrow markings on the pavement are used for the purpose of guiding, warning, or regulating traffic. These pavement markings can be helpful to road users in some locations by supplementing signs and providing additional emphasis for important regulatory, warning, or guidance messages, because the markings do not require diversion of the road user's attention from the roadway surface. Symbol messages are preferable to word messages. Examples of standard word and arrow pavement markings are shown in Figures 3B-23 and 3B-24.

**Figure 3B-22. International Symbol of Accessibility Parking Space Marking**



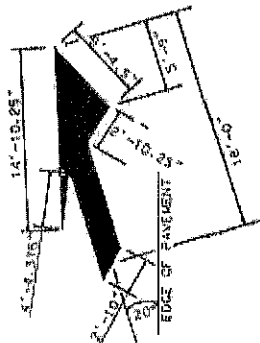
**\* GENERAL NOTES**

1. ALL LEGENDS AND MARKINGS SHALL CONFORM TO THE MUTCD.
2. THE AREA SHOWN FOR MARKINGS AND LEGENDS ARE APPROXIMATE AND ARE PROVIDED FOR ESTIMATING AND PAYMENT PURPOSES.
3. THE FIRST TURN LANE LEGEND SHALL BE LOCATED ADJACENT TO THE BEGINNING OF THE SPEED CHANGE LANE LINE.
4. ALL LEGENDS AND MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED ON DETAIL.
5. ALL LETTERS OF THE ALPHABET AND NUMERALS SHALL BE CLASSIFIED AS LEGENDS. ALL OTHERS SHALL BE CLASSIFIED AS MARKINGS, UNLESS OTHERWISE NOTED AS "SPECIALTY TRAFFIC CONTROL MARKINGS".



AREA 2.36 SQ FT

**HANDICAP PYMT MARKING SYMBOL**  
 "SPECIALTY TRAFFIC CONTROL MARKINGS"



LANE REDUCTION  
 AREA 42.25 SQ FT

**--SPECIFICATIONS--**

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1. ALABAMA DEPARTMENT OF TRANSPORTATION 2. ALABAMA DEPARTMENT OF TRANSPORTATION 3. ALABAMA DEPARTMENT OF TRANSPORTATION 4. ALABAMA DEPARTMENT OF TRANSPORTATION 5. ALABAMA DEPARTMENT OF TRANSPORTATION	ALABAMA DEPARTMENT OF TRANSPORTATION 1000 COLLEEN WALKER MONTGOMERY, AL 36102-1010  DESIGN SOURCE: SPECIALTY TRAFFIC CONTROL MARKINGS  PAVEMENT LEGENDS AND MARKINGS
Drawn by: [Signature] Date: [Date]	SPECIAL TRAFFIC TO TCM-703 (SHEET 2 OF 2)