STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

ROADWAY DESIGN UNIT
DEC 09 2010
BENNETT
STEPHENSON
MUSFELD
GREEN
GOODNIGHT
WIRE
HOUSER
MOORE
MOORE
SHEEP
TAYLOR
THOMAS
WALLS
DISCUSS WITH
PREPARE REPLY FOR ___ SIGNATURE
Baker, McCollum, Hamlin

December 7, 2010

cc:

MEMO TO: Jon Nance, PE, Chief Engineer - Operations
Kevin Lacy, PE, State Traffic Engineer
Ricky Greene, Jr., PE, Director of Field Support
Lacy Love, PE, Director of Asset Management
Mike Bruff, PE, Transportation Planning Branch Manager
Art McMillan, PE, State Highway Design Engineer
Greg Thorpe, Ph.D., Manager, Project Development and Environmental Analysis

FROM: Debbie Barbour, PE Debbie Barbour
Director of Preconstruction

SUBJECT: "Typical" Highway Cross Sections

The comprehensive planning and design "typical" highway cross sections have been updated to support the Department's "Complete Streets" policy that was adopted in July 2009. This guidance establishes design elements that emphasize safety, mobility, and accessibility for multiple modes of travel. These "typical" highway cross sections should be used as preliminary guidelines for comprehensive transportation planning, project planning and project design activities. The specific and final cross section details and right of way limits for projects will be established through the preparation of the National Environmental Policy Act (NEPA) documentation and through final plan preparation.

Please provide this information to your Branches, Units, and other appropriate staff for their information and immediate implementation. This guidance encourages the consideration and incorporation of multimodal alternatives where appropriate when planning, designing, and making transportation improvements. If you have any questions, please contact Jay Bennett, PE, State Roadway Design Engineer, at 919-250-4016.

DMB/jab

Attachments

cc w/attachments:

Terry Gibson, PE	Steve DeWitt, PE	Virgil Pridemore
Susan Coward	Miriam Perry	Jay A. Bennett, PE
Jim Westmoreland, PE	Tom Norman	Dewayne Sykes, PE
Division Engineers	Victor Barbour, PE	Ron Hancock, PE
Calvin Leggett, PE	Division Design Engineers	

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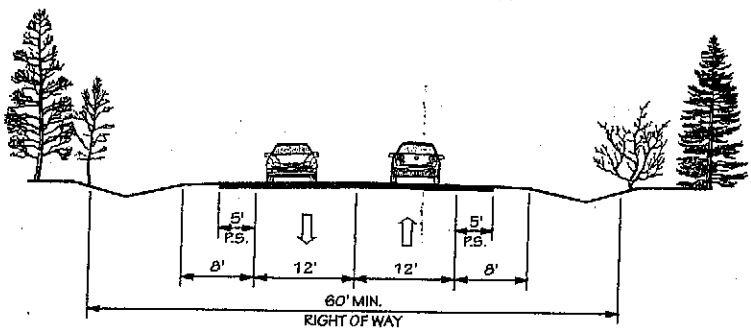
LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

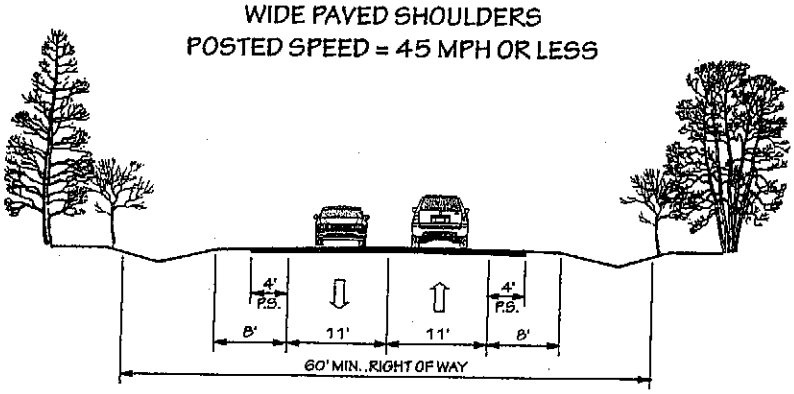
2 A

WIDE PAVED SHOULDERS
POSTED SPEED = 55 MPH



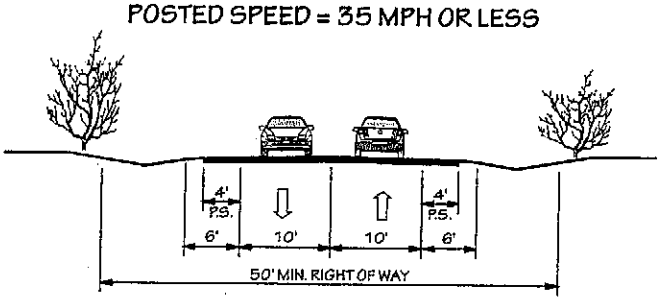
2 B

WIDE PAVED SHOULDERS
POSTED SPEED = 45 MPH OR LESS



2 C

WIDE PAVED SHOULDERS
POSTED SPEED = 35 MPH OR LESS

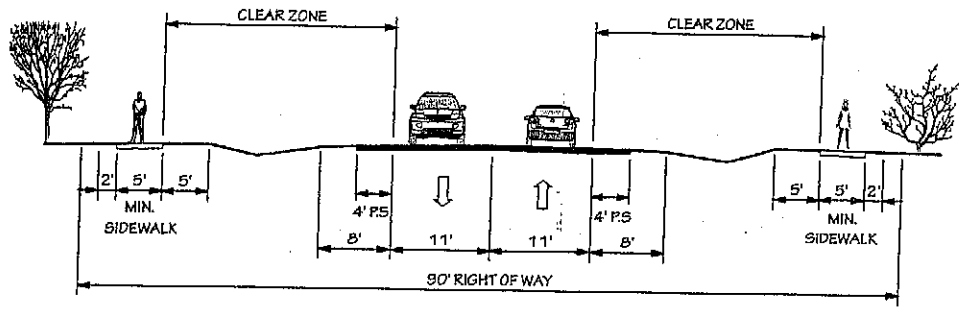


TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

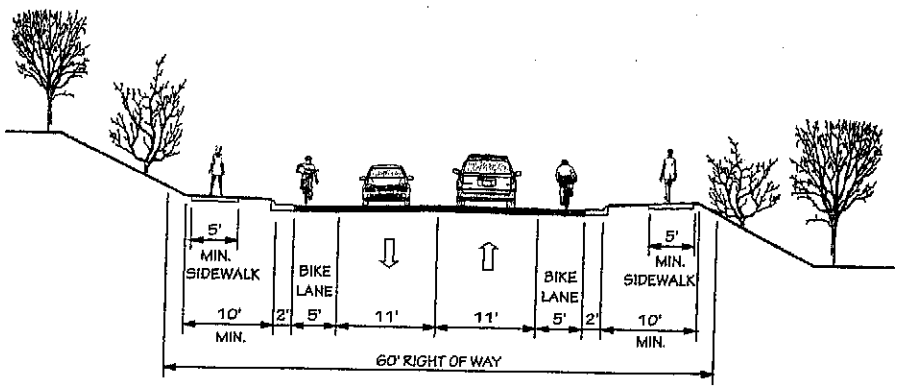
2 D

SIDEWALK PLACEMENT BEHIND A ROADWAY DITCH



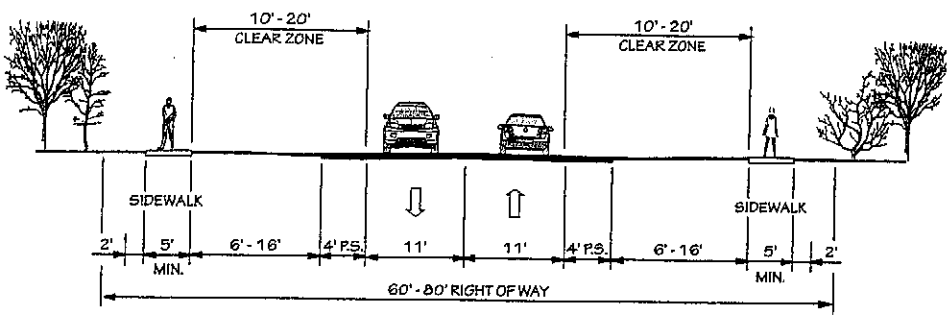
2 E

CURB AND GUTTER
WITH BIKE LANES AND SIDEWALKS



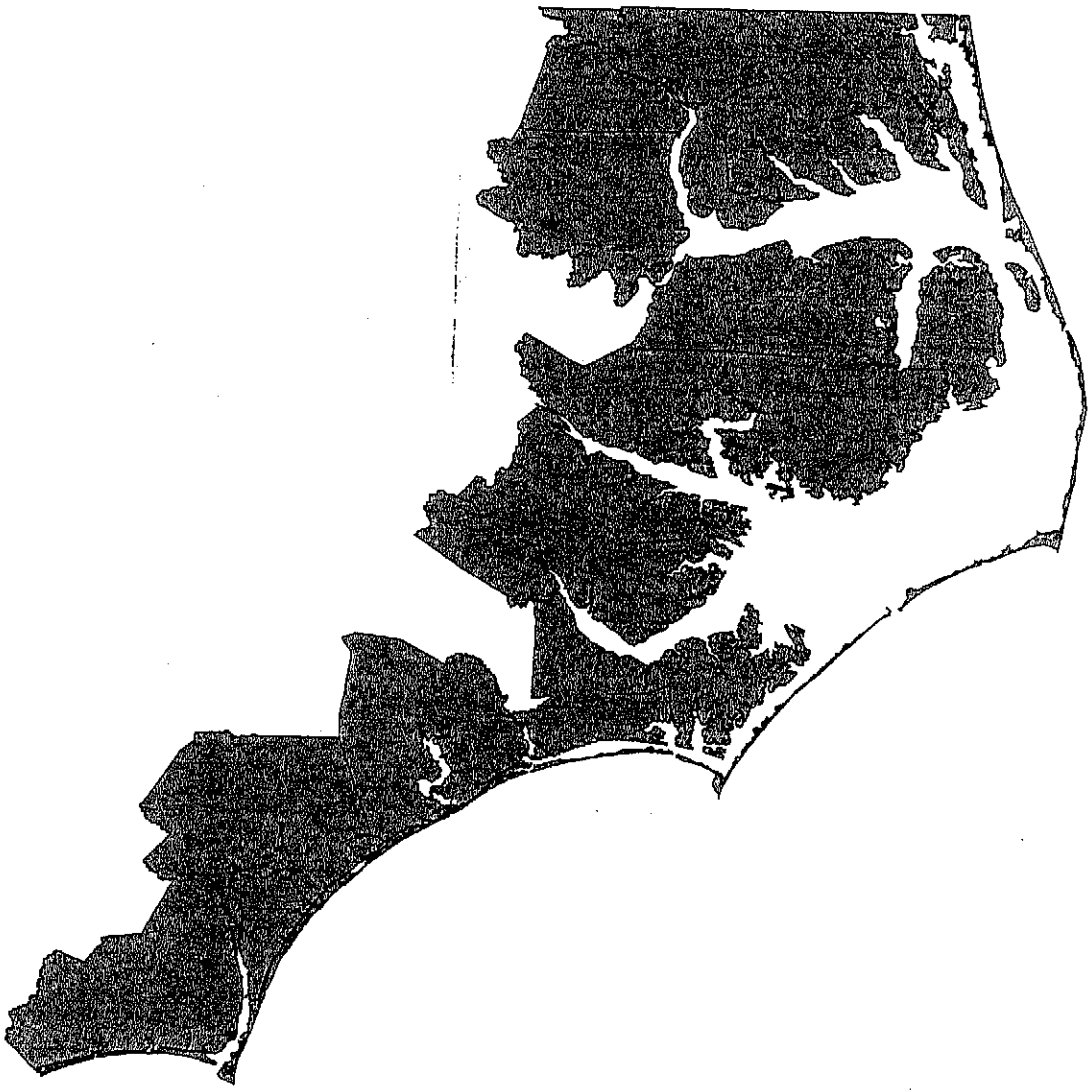
2 F

BUFFERS AND SIDEWALKS WITHOUT A ROADWAY DITCH
(20 MPH TO 45 MPH)
(TYPICALLY COASTAL AREA MANAGEMENT ACT COUNTIES)



CAMA COUNTIES

Beaufort
Bertie
Brunswick
Camden
Carteret
Chowan
Craven
Currituck
Dare
Gates
Hertford
Hyde
New Hanover
Onslow
Pamlico
Pasquotank
Pender
Perquimans
Tyrrell
Washington

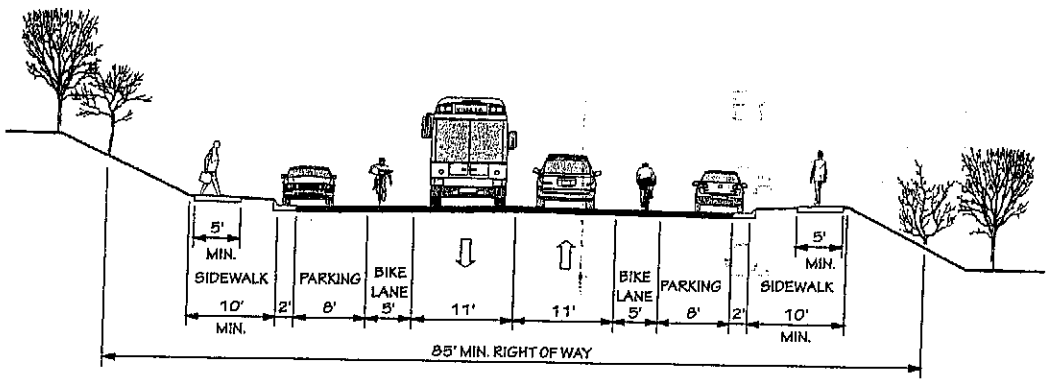


TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

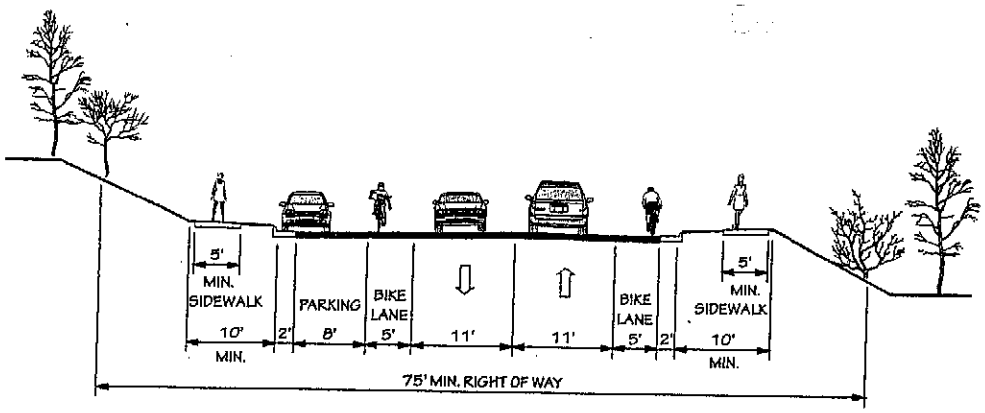
2 G

CURB & GUTTER - PARKING ON EACH SIDE



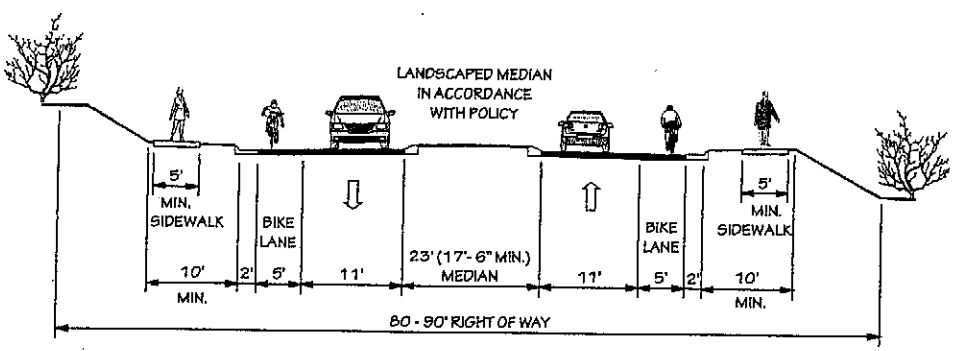
2 H

CURB & GUTTER - PARKING ON ONE SIDE



2 I

RAISED MEDIAN WITH CURB & GUTTER

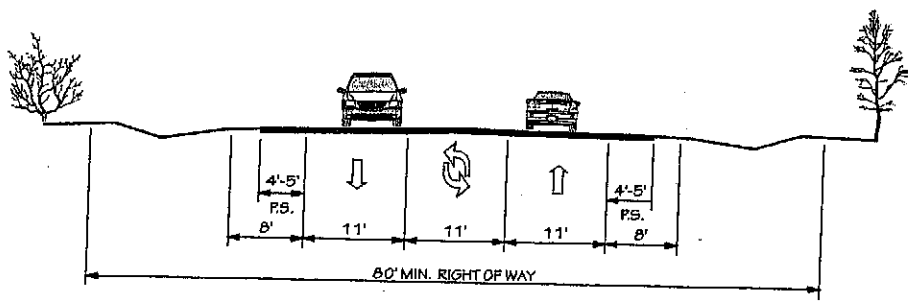


TYPICAL HIGHWAY CROSS SECTIONS

3 LANES

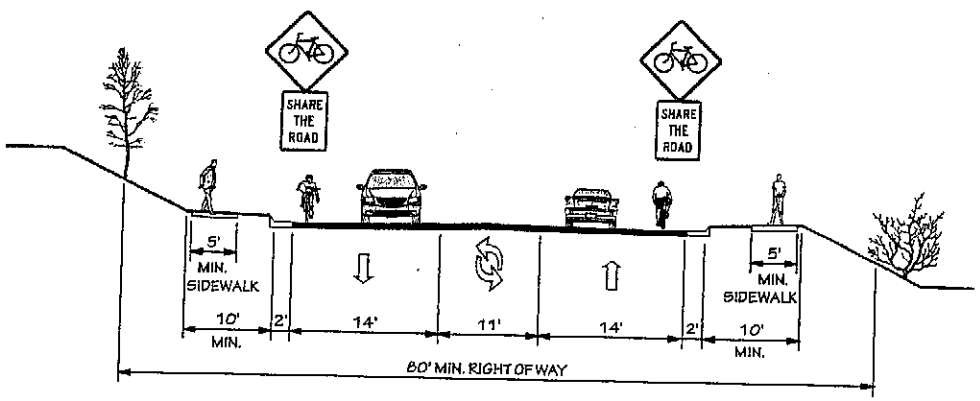
3 A

WIDE PAVED SHOULDERS



3 B

CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS

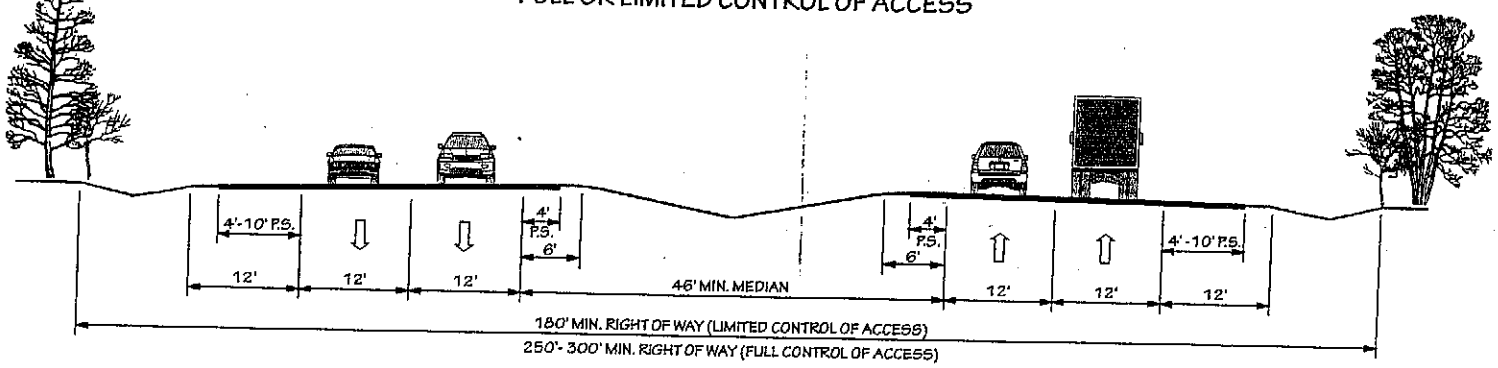


TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

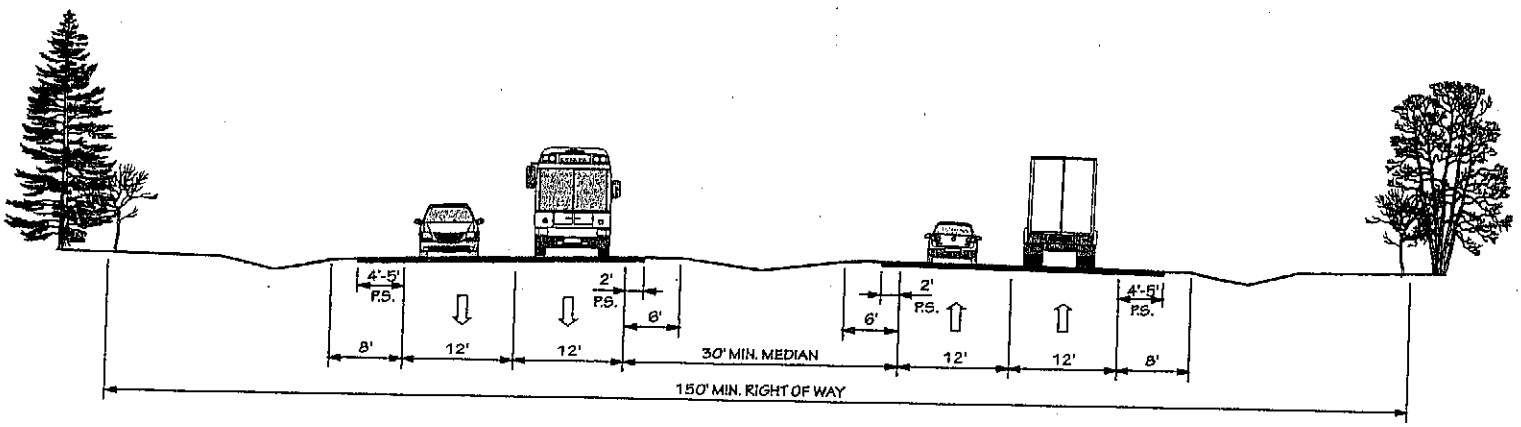
4 A

DIVIDED WITH MEDIAN
FULL OR LIMITED CONTROL OF ACCESS



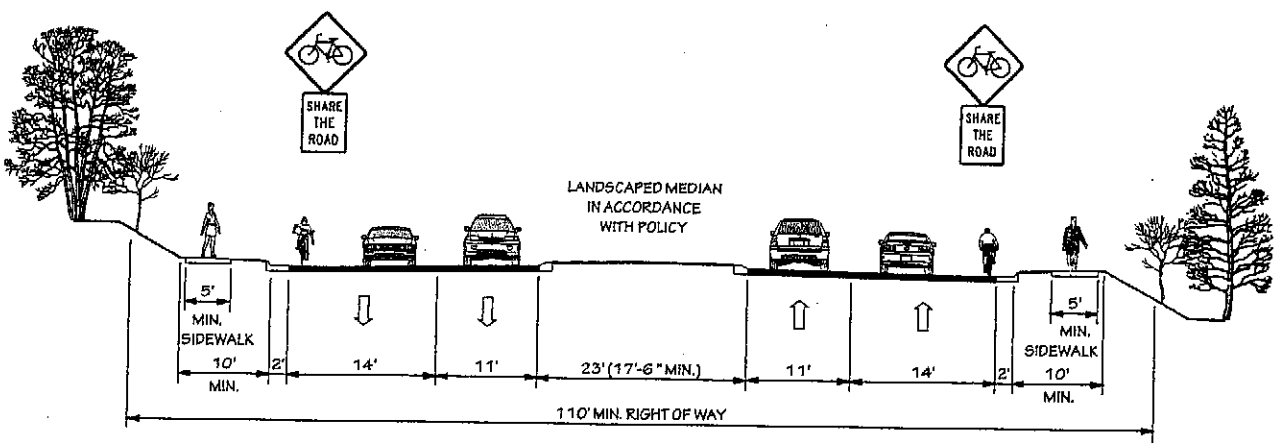
4 B

DIVIDED WITH MEDIAN - NO CURB & GUTTER
PARTIAL CONTROL OF ACCESS



4 C

RAISED MEDIAN WITH WIDE OUTSIDE LANES AND SIDEWALKS

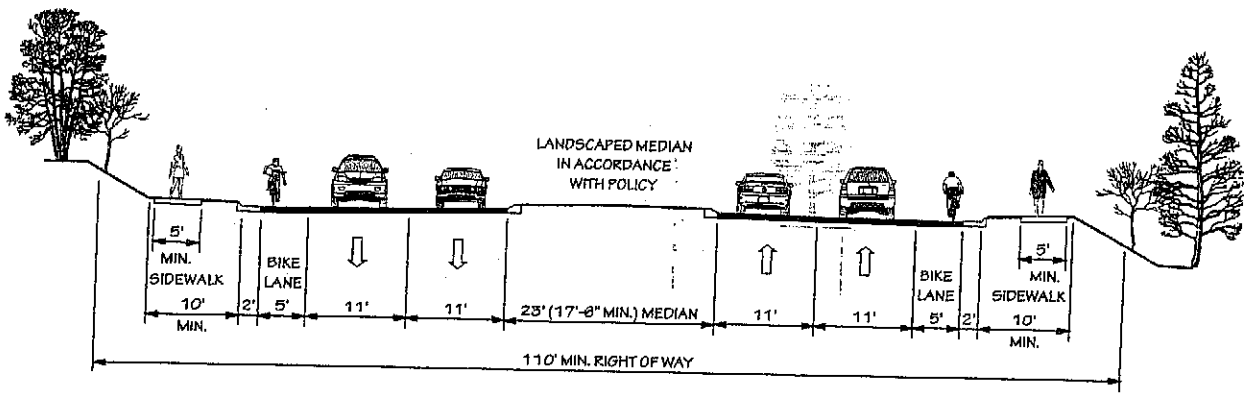


TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

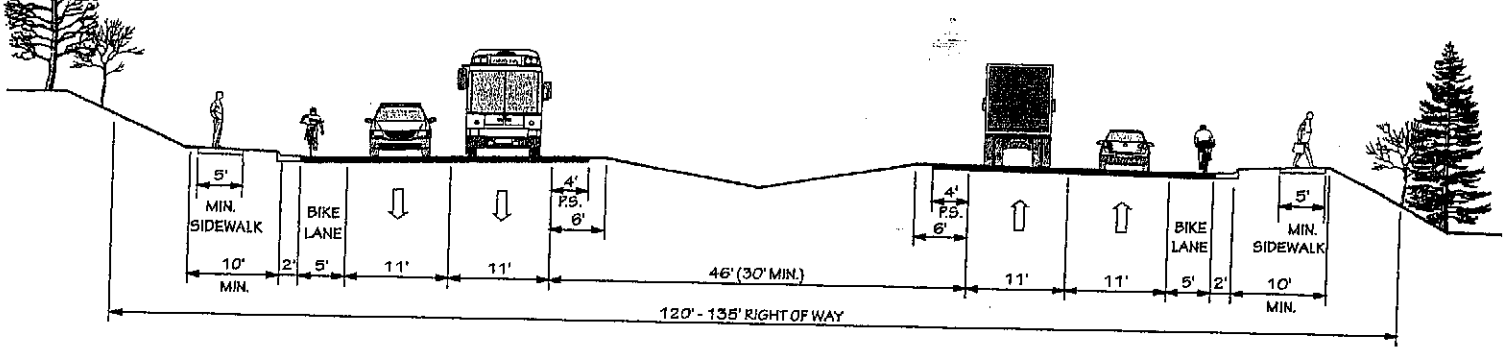
4 D

RAISED MEDIAN - CURB & GUTTER WITH BIKE LANES AND SIDEWALKS



4 E

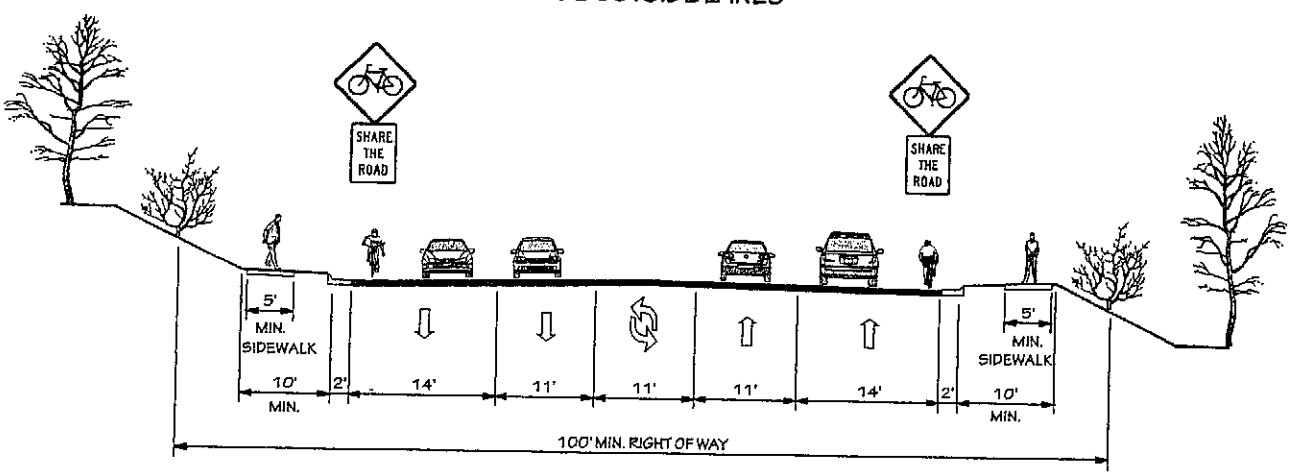
GRASS MEDIAN WITH BIKE LANES AND SIDEWALKS



5 LANES

5 A

WIDE OUTSIDE LANES

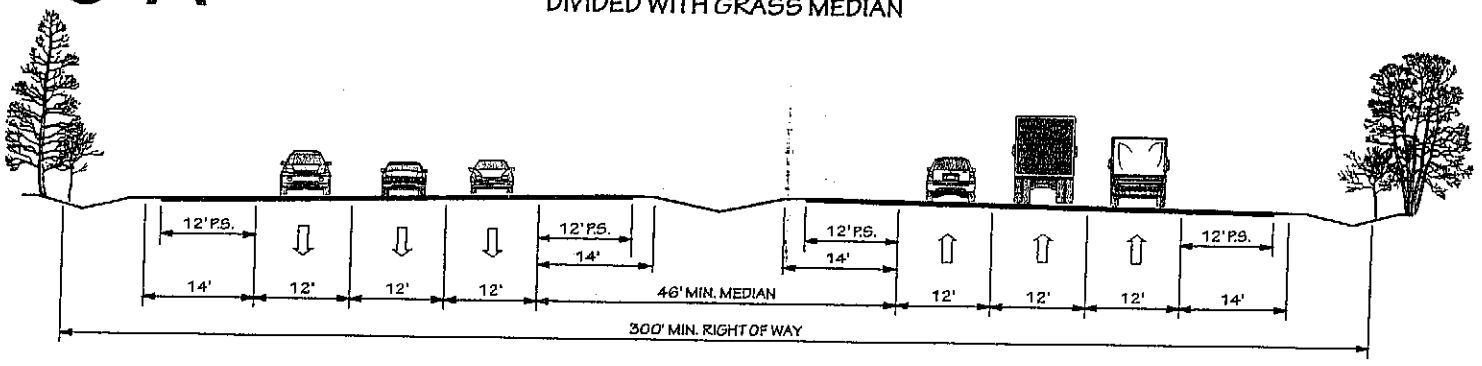


TYPICAL HIGHWAY CROSS SECTIONS

6 LANES

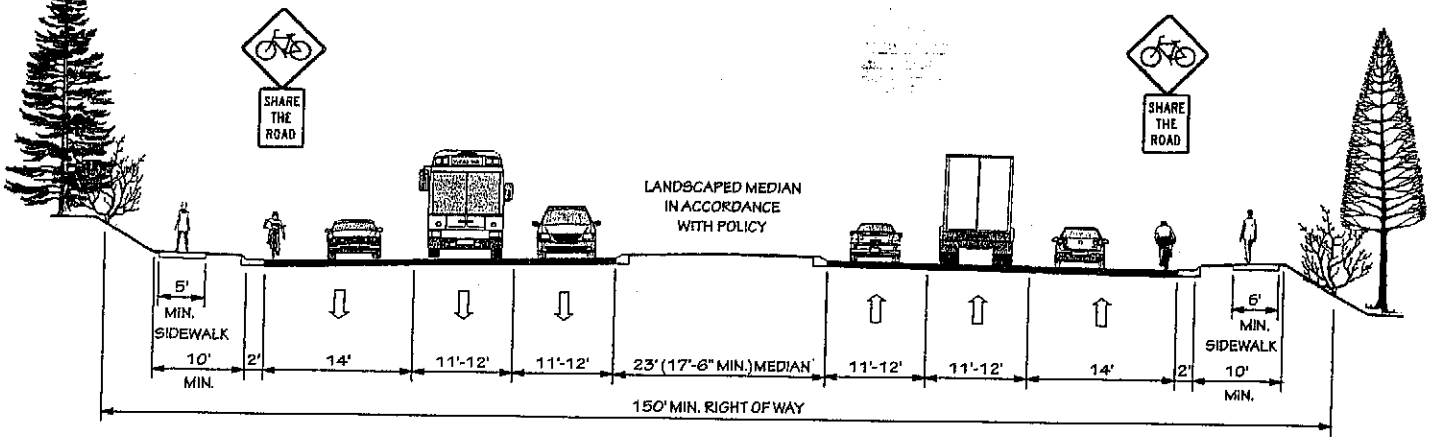
6 A

DIVIDED WITH GRASS MEDIAN



6 B

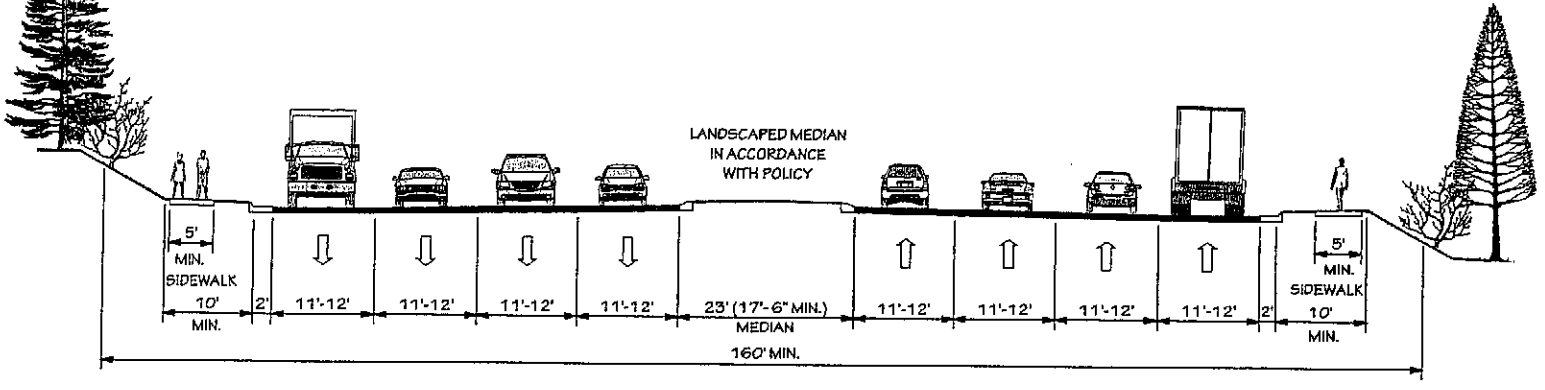
RAISED MEDIAN - CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS



8 LANES

8 A

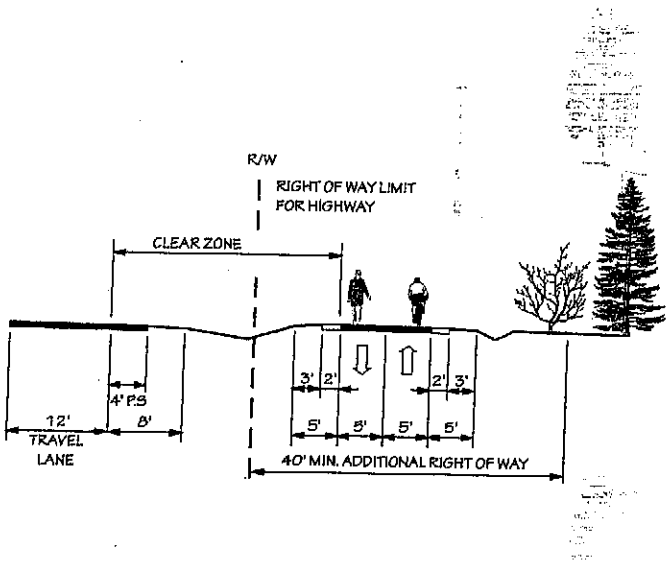
RAISED MEDIAN - CURB & GUTTER WITH SIDEWALKS

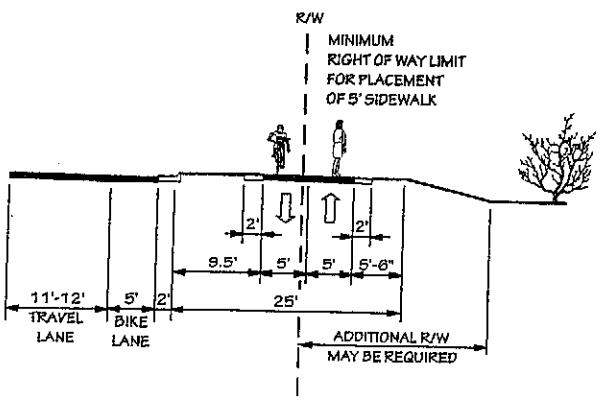


TYPICAL MULTI - USE PATH

MULTI - USE PATH
ADJACENT TO RIGHT OF WAY OR SEPARATE PATHWAY

M A



MULTI - USE PATH ADJACENT TO CURB AND GUTTER

M B