



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

MEMORANDUM TO: Roadway Design Project Engineers
Roadway Design Project Design Engineers
Division Design Construction Engineers
Rodger Rochelle, PE

FROM: Jay A. Bennett, PE
State Roadway Design Engineer

SUBJECT: Median U-Turn Bulbs

DATE: February 5, 2009

In an effort to reduce right of way impacts and minimize costs, the median U-turn bulb-out design for a 46' median has been revised.

The revised design reduces the bulb radius to 34' and modifies the configuration of the concrete island. A turning vehicle may need to use the 4' paved shoulder to complete the turn. This design will accommodate WB-50 and WB-65 design vehicles.

Plans that will be submitted for right of way acquisition on June 19, 2009, and beyond should incorporate this update. Design changes for other projects will be evaluated on a case-by-case basis. Please discuss the need to incorporate these changes with the Division Construction Engineer or Resident Engineer. If you have any questions regarding this information, please contact Jay A. Bennett, PE at 919-250-4016.

Attachment
JAB/blm

cc: Jon Nance, PE
Deborah Barbour, PE
Art McMillan, PE
Teresa Bruton, PE
Cynthia Perry, PE
Dewayne Sykes, PE
Jimmy Travis, PE
John Wadsworth, PE
Frankie Draper

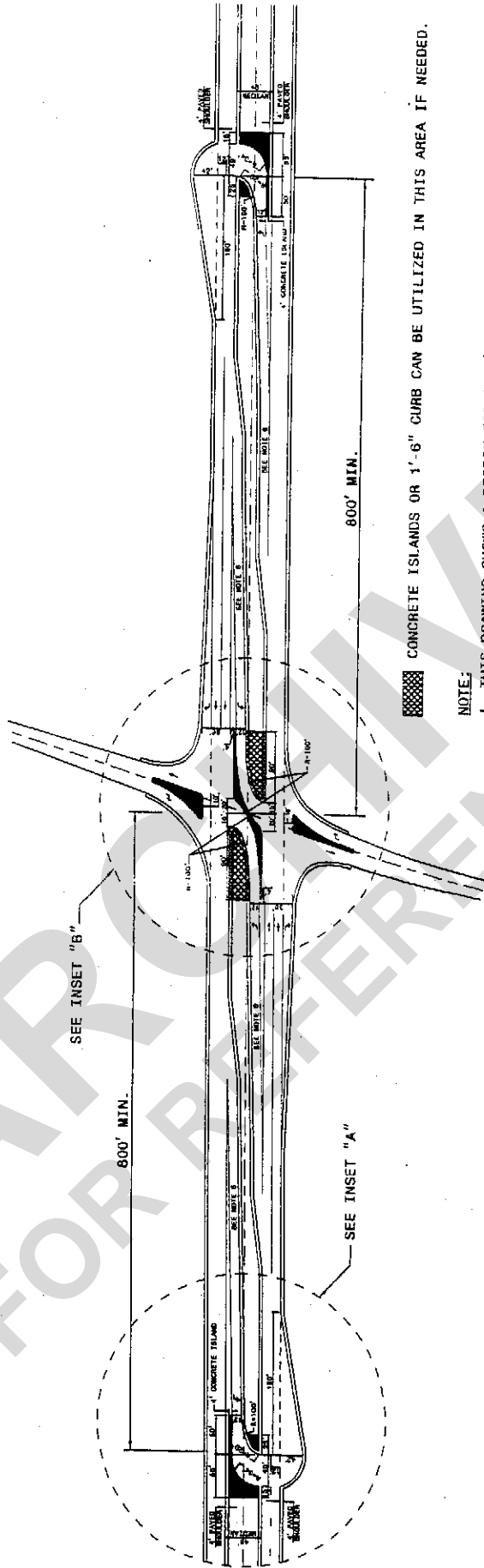
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WEBSITE: WWW.NCDOT.ORG/DOH

LOCATION:
CENTURY CENTER COMPLEX
BUILDING A
1000 BIRCH RIDGE DRIVE
RALEIGH NC

DIRECTIONAL CROSSOVER WITH MEDIAN U-TURNS

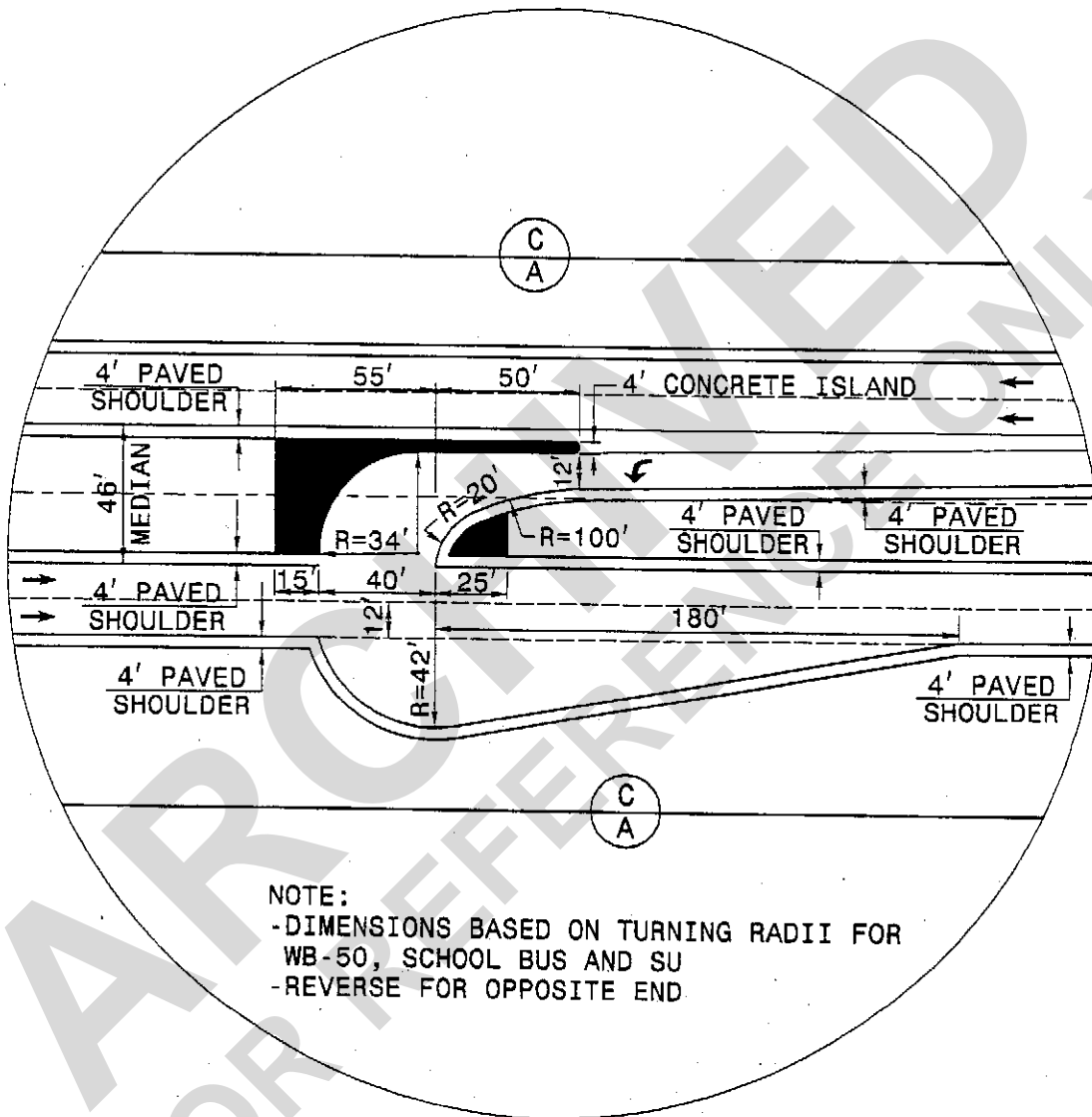


CONCRETE ISLANDS OR 1'-6" CURB CAN BE UTILIZED IN THIS AREA IF NEEDED.

NOTE:

1. THIS DRAWING SHOWS A DESIGN FOR A 46' MEDIAN WITH 4' PAVED SHOULDERS (MEDIAN AND OUTSIDE) ASSUMING A 55 MPH POSTED SPEED. WHEN OTHER MEDIAN WIDTHS, PAVED SHOULDERS AND POSTED SPEEDS ARE USED, ENGINEERING JUDGEMENT SHOULD BE USED TO ESTABLISH APPROPRIATE GEOMETRY.
2. AT 'Y' LINES ONLY PASSENGER CAR U-TURNS ARE ACCOMMODATED.
3. DESIGN BULB OUTS TO ACCOMMODATE WB-50. IN AREAS WHERE THERE ARE R/W OR ENVIRONMENTAL CONSTRAINTS, BULB OUT DIMENSIONS MAY BE REDUCED.
4. ALL DIMENSIONS ARE SUBJECT TO FIELD CONDITIONS.
5. FULL CONTROL OF ACCESS SHOULD BE OBTAINED THROUGHOUT LIMITS OF THE BULB OUT ON BOTH SIDES OF ROADWAY.
6. USE 575' MINIMUM LENGTH FOR ALL LEFT TURN LANES (INCLUDES TAPER AND FULL STORAGE LENGTH).

PLAN



INSET "A"

