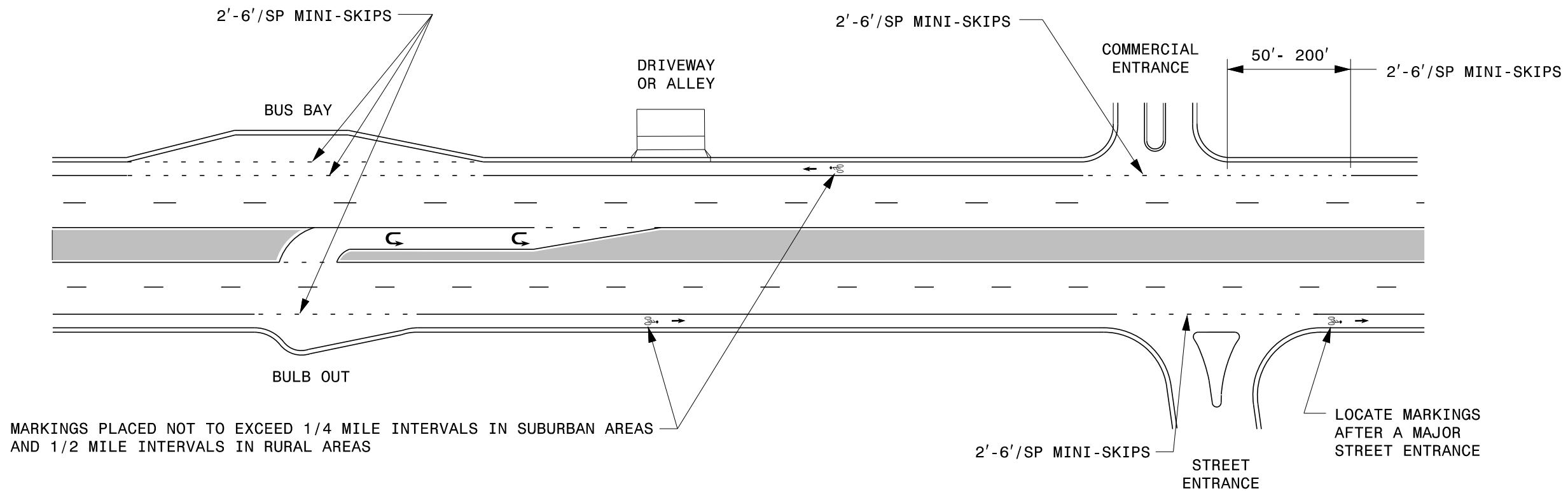


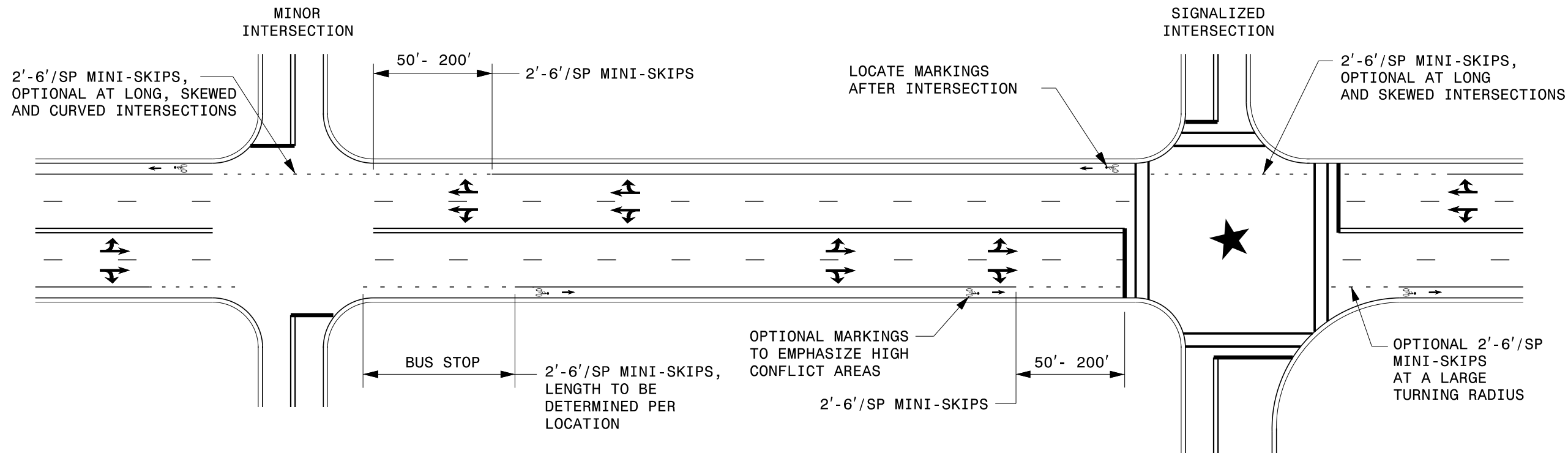
GENERAL NOTES:

- 1- USE THE NOTES AND DETAILS SHOWN ON THE FOLLOWING SHEETS IN CONJUNCTION WITH SIGNING AND PAVEMENT MARKING GUIDANCE SHOWN IN DIVISIONS 9 AND 12 OF THE NCDOT ROADWAY STANDARD DRAWINGS AND THE MUTCD.
- 2- BICYCLE LANES SHOULD BE DELINEATED FROM THE VEHICLE TRAVEL LANES WITH A 4" WIDE SOLID WHITE LINE. MARKINGS MAY BE INCREASED TO 6" WIDE IF EMPHASIS IS NEEDED TO DISTINGUISH BICYCLE LANES FROM OTHER LANE OR EDGE LINE MARKINGS.
- 3- PER NCDOT'S COMPLETE STREET GUIDANCE, BICYCLE LANE WIDTHS ARE TYPICALLY FOUR FEET TO SIX FEET OF PAVEMENT. THE GUTTER PAN ON URBAN STREET IS NOT TO BE CONSIDERED PART OF THE BICYCLE LANE. WHEN BICYCLE LANES ARE ADJACENT TO ON-STREET PARKING OR ON HIGHER-SPEED STREETS, THE MINIMUM WIDTH OF A BIKE LANE IS FIVE FEET.
- 4- BICYCLE LANE LINES CAN BE SOLID, MINI-SKIPS OR DISCONTINUED DEPENDENT ON THE LOCATION. MINI-SKIPS SHOULD BE USED AT LOCATIONS WHERE THERE IS FREQUENT MOTORIST TURNING MOVEMENTS AND WHERE THERE IS MERGING BY BICYCLISTS AND MOTORISTS. REVIEW THE PLANS TO IDENTIFY CONFLICT AREAS. ALL MINI-SKIP LINES SHALL BE 2'-6' SPACING PER ROADWAY STANDARD DRAWING 1205.01 AND MATCH THE WIDTH OF THE LINE IT'S EXTENDING. ENGINEERING JUDGEMENT SHOULD BE USED TO DECIDE WHAT MARKING TYPE TO BE USED, BUT GENERALLY, BICYCLE LANES SHOULD BE MARKED AS FOLLOWS:
 - A- AT DRIVEWAYS AND ALLEY ENTRANCES, BICYCLE LANES SHOULD REMAIN SOLID.
 - B- AT STREET OR COMMERCIAL ENTRANCES, MARK LANE WITH MINI-SKIPS.
 - C- AT INTERSECTIONS THAT DO NOT HAVE A DEDICATED RIGHT-TURN LANE, MINI-SKIPS SHOULD BE USED AT THE APPROACH OF SIGNALIZED AND MINOR INTERSECTIONS AND AT THE APPROACH OF COMMERCIAL ENTRANCES WITH HEAVY RIGHT TURN VOLUMES. MINI-SKIPS SHOULD BE PLACED 50-200 FEET IN ADVANCE OF THE INTERSECTION OR ENTRANCE.
 - D- BIKE LANES ARE NOT REQUIRED THROUGH INTERSECTIONS, BUT MINI-SKIP LANE EXTENSION LINES MAY BE PLACED TO INDICATE LEFT TURN MOVEMENTS AND FOR GUIDANCE THROUGH LONG, SKEWED, OR CURVED INTERSECTIONS. HOWEVER, DO NOT EXTEND THE LINES THROUGH MARKED CROSSWALKS.
 - E- MINI-SKIPS SHOULD BE USED AT THE TAPER OF A "THROUGH BIKE LANE", SEE DETAIL.
 - F- MINI-SKIPS SHOULD BE USED AT THE END OF BICYCLE LANE THAT MERGES THE BICYCLIST BACK INTO THE TRAFFIC LANE.
 - G- MINI-SKIPS SHOULD BE USED AT BUS STOPS, BUS BAYS AND BULB OUTS.
- 5- BICYCLE MARKINGS SHALL CONSIST OF A SYMBOL AND ARROW DIRECTION OR WORD CHARACTER AND ARROW DIRECTION, AVOID MIXING SYMBOLS AND CHARACTERS. DUE TO THE COMPLEXITY OF URBAN STREETS, USE BEST JUDGEMENT IN PLACEMENT TO REMIND MOTORISTS OF THE PRESENCE OF BICYCLISTS. PLACE MARKINGS ALONG THE BIKE LANE AS FOLLOWS:
 - A- AT THE BEGINNING OF THE BICYCLE LANE.
 - B- IN URBAN AREAS, AT THE FAR SIDE OF ALL INTERSECTIONS AND MAJOR STREET ENTRANCES. IF THERE ARE MULTIPLE STREETS WITHIN THE BLOCK, PLACEMENT CAN BETWEEN GROUPS OF ENTRANCES TO PREVENT OVER PLACEMENT. ADDITIONAL MARKINGS MAY BE PLACED AT THE INTERSECTION APPROACH (PRIOR TO A CROSSWALK). TRY NOT TO OVER PLACE IF THE APPROACH LENGTH IS SHORT.
 - C- IN SUBURBAN AND RURAL AREAS, PLACE AFTER MAJOR INTERSECTIONS. WHERE LONG STRETCHES ARE ABSENT OF INTERSECTIONS, PLACE IN INTERVALS NOT TO EXCEED 1/4 MILE IN SUBURBAN AREAS AND 1/2 MILE IN RURAL AREAS.
 - D- AT THE BEGINNING OF THE TAPER OF A THROUGH BICYCLE LANE. IF IT IS A LONG TAPER OR LONG EXTENSION OF THE MINI-SKIPS, PLACE ANOTHER MARKING WHERE THE SOLID BICYCLE LANE RESUMES TO REMIND MOTORIST THE PRESENCE OF A BICYCLE LANE.
 - E- ADDITIONAL MARKINGS MAY BE PLACED AT HEAVY TRAFFIC CONFLICT AREAS TO REMIND MOTORIST OF POTENTIAL PRESENCE OF BICYCLISTS. EXAMPLES WOULD BE BEFORE A MERGE AREA OR ALONG A BICYCLE LANE ADJACENT TO ON-STREET PARKING. AVOID PLACING MARKINGS IN AREAS WHERE MOTORIST WOULD TRACK THROUGH THE MARKINGS SUCH AS MERGE AREAS, DRIVEWAY ENTRANCES OR WITHIN THE TURNING RADIUS OF AN INTERSECTION.
- 6- BICYCLE SIGNING SUPPLEMENTS BIKE LANE MARKINGS. TYPICAL SIGNING FOR BIKE LANES IS AS FOLLOWS:
 - A- THE STANDARD "BIKE LANE (R3-17)" SIGN WITH "AHEAD (R3-17a)" PLAQUE SHOULD BE PLACED IN ADVANCE OF START OF A BIKE LANE. THE "BIKE LANE" WITH THE "ENDS (R3-17b)" PLAQUE SHOULD BE PLACED AND AT A SUFFICIENT DISTANCE TO GIVE WARNING THAT THE BIKE LANE IS ENDING. THE "BIKE LANE ENDS" SIGN SHOULD NOT BE USED IN TEMPORARY INTERRUPTIONS IN A BIKE LANE.
 - B- USING ENGINEERING JUDGEMENT, "BIKE LANE (R13-17)" SIGNS MAY BE PLACED AT PERIODIC INTERVALS ALONG A BIKE LANE. GENERALLY, IT SHOULD BE PLACED ADJACENT TO A BIKE PAVEMENT MARKING, BUT SINCE THERE CAN BE MANY MARKINGS, TRY TO AVOID OVER USE OF THE SIGN.
 - C- WHERE THE BICYCLE LANE ENDS AND TRANSITIONS TO TYPICAL ROADWAY, THE "SHARE THE ROAD" SIGN ASSEMBLY, W11-1 AND W16-1P, MAY BE USED TO REMIND THE MOTORIST THAT THE LANE MUST BE SHARED WITH BICYCLISTS.

MISCELLANEOUS ENTRANCES



TYPICAL INTERSECTIONS



THROUGH BICYCLE LANE

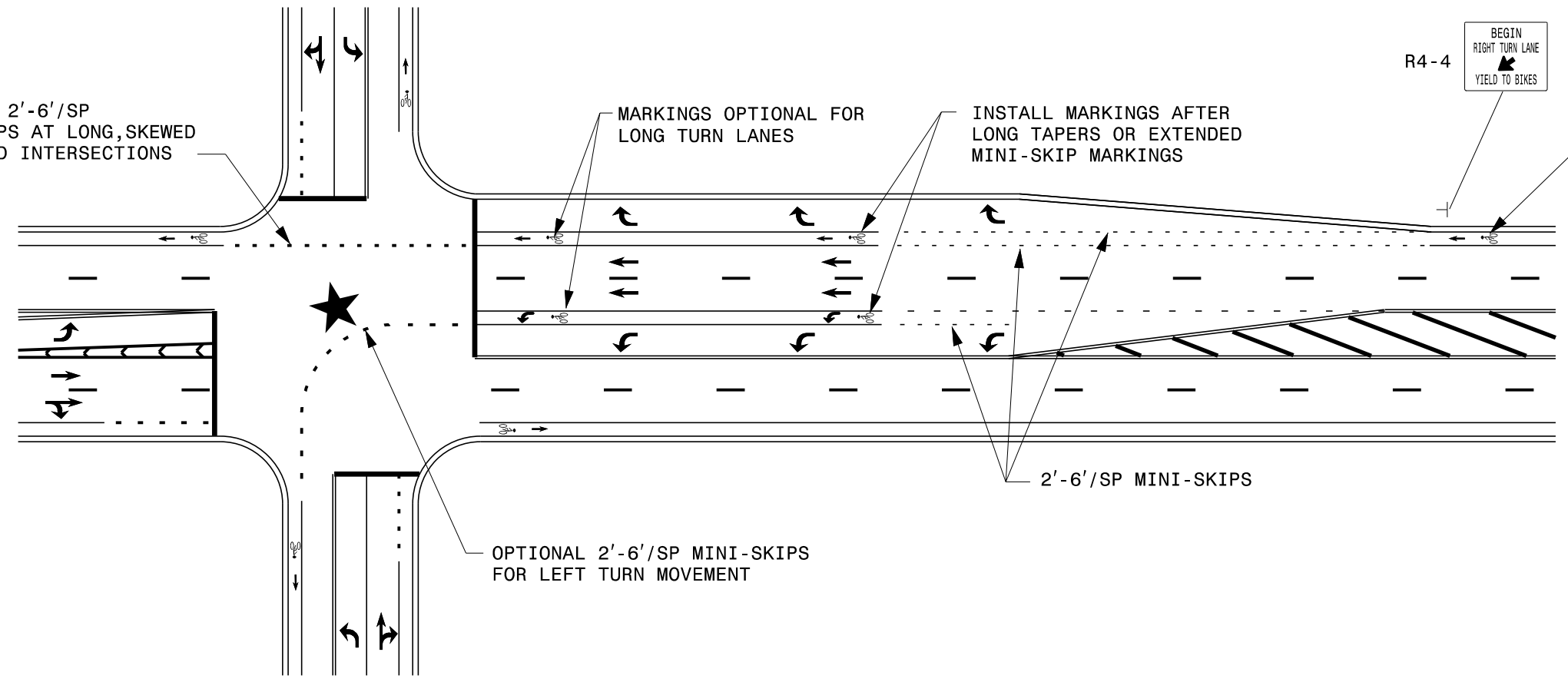
OPTIONAL 2'-6"/SP
MINI-SKIPS AT LONG, SKEWED
OR CURVED INTERSECTIONS

MARKINGS OPTIONAL FOR
LONG TURN LANES

INSTALL MARKINGS AFTER
LONG TAPERS OR EXTENDED
MINI-SKIP MARKINGS

INSTALL MARKINGS AT
BEGINNING OF TAPER

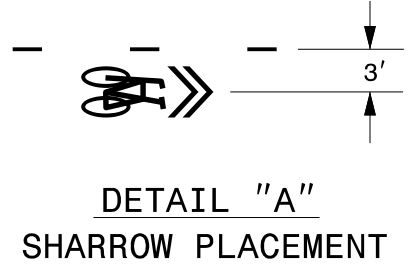
R4-4
BEGIN
RIGHT TURN LANE
YIELD TO BIKES



2'-6"/SP MINI-SKIPS

OPTIONAL 2'-6"/SP MINI-SKIPS
FOR LEFT TURN MOVEMENT

SHARED TURN LANE



2'-6"/SP MINI-SKIPS

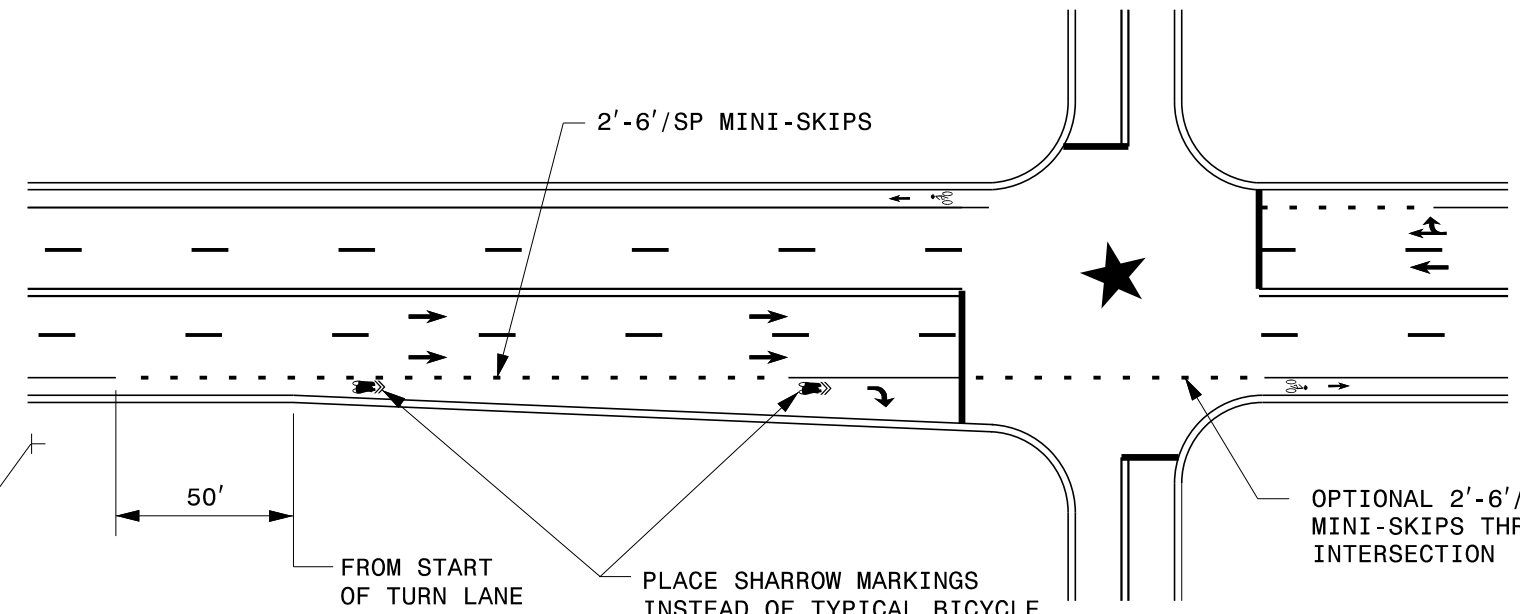
R4-4
BEGIN
RIGHT TURN LANE
YIELD TO BIKES

50'

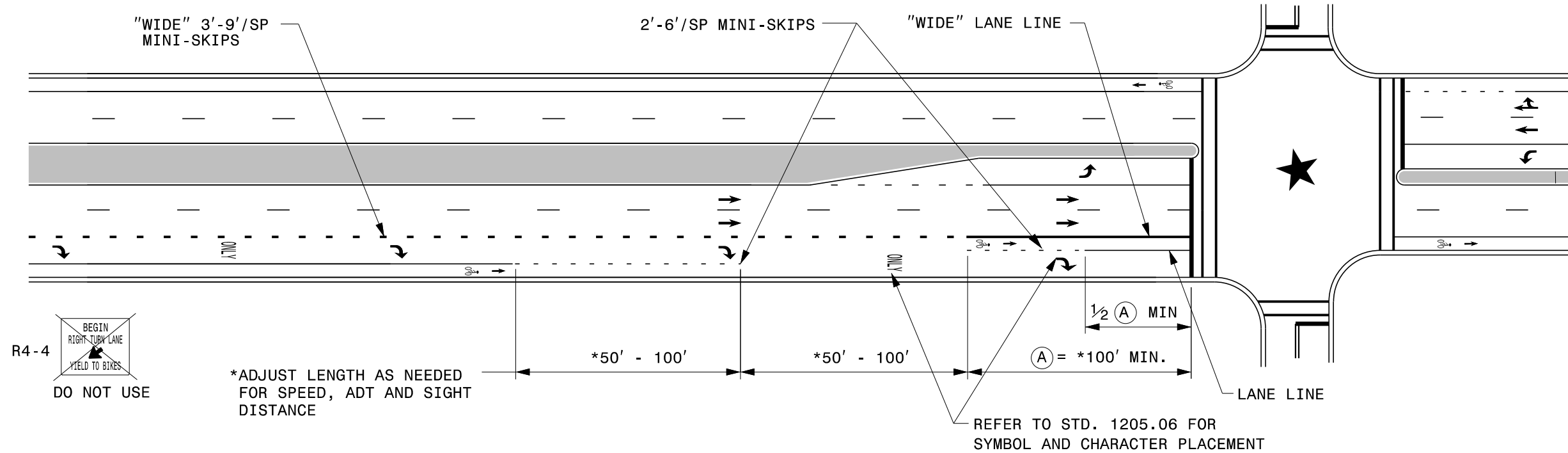
FROM START
OF TURN LANE

PLACE SHARROW MARKINGS
INSTEAD OF TYPICAL BICYCLE
MARKINGS. PLACE ALONG
INSIDE OF SHARED TURNED LANE,
SEE DETAIL "A"

OPTIONAL 2'-6"/SP
MINI-SKIPS THROUGH
INTERSECTION

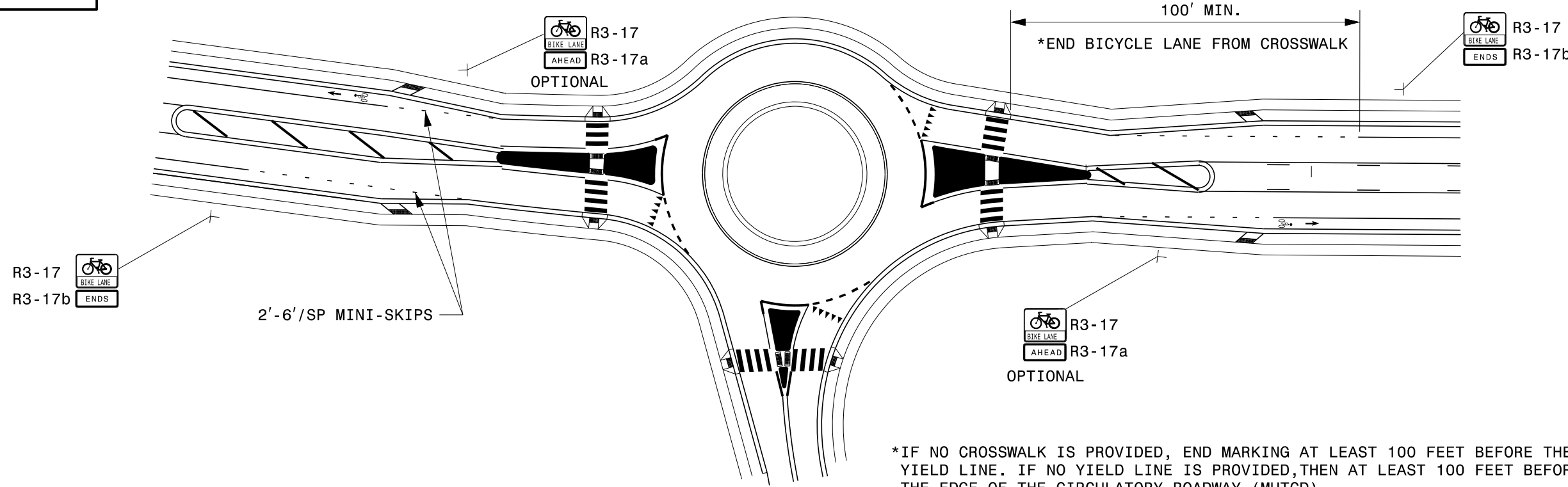


LANE DROP AT AN INTERSECTION



- NOTES:
- 1- THE BIKE LANE SHOULD NOT BE STRIPED DIAGONALLY ACROSS THE TRAVEL LANE.
 - 2- THE R4-4 SIGN "BEGIN RIGHT TURN LANE YIELD TO BIKE" SHOULD NOT BE USED.

ROUNDBABOUT



*IF NO CROSSWALK IS PROVIDED, END MARKING AT LEAST 100 FEET BEFORE THE YIELD LINE. IF NO YIELD LINE IS PROVIDED, THEN AT LEAST 100 FEET BEFORE THE EDGE OF THE CIRCULATORY ROADWAY (MUTCD)