<table>
<thead>
<tr>
<th>REVISION NO.</th>
<th>REVISION DATE</th>
<th>STANDARD No.</th>
<th>NAME</th>
<th>DESCRIPTION OF REVISION</th>
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<tbody>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>10.25B</td>
<td>Commercial Drop Curb Type II Driveway with Planting Strip (2'-6&quot; Curb &amp; Gutter)</td>
<td>Adjust dimension on tapered concrete sides to 5' min., to match sidewalk scoring</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>10.25D</td>
<td>Commercial Drop Curb Type II Driveway with Planting Strip (6&quot; x 18&quot; Vertical Curb)</td>
<td>Adjust dimension on tapered concrete sides to 5' min., to match sidewalk scoring</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>10.2B</td>
<td>Type III Driveway Entrance</td>
<td>Added notes and lines for flowline and for tool joints through apron and sidewalk</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>20.34</td>
<td>Offset Catch Basin</td>
<td>Revised detail for clarity &amp; scale, adjusted dimensions from 6&quot; to face 6&quot; Curb, inset opening depth, side thicknesses &amp; rebar</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>30.12</td>
<td>Gravel and Rip Rap Filter Berm Basin</td>
<td>Removed data block, removed note &quot;that drain 5 ac. or less&quot;</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>50.04B</td>
<td>Safety Rail Warrants</td>
<td>Adjust to clarify dimensions on rail placement and dim. From edge of sidewalk, changed E&amp;M to include Planning and Engineering; removed previous note re: &quot;where a pedestrian can be expected in the vicinity&quot;; removed definition of pedestrian clear zone</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-01</td>
<td>Local Residential Narrow Street Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; Adjusted tack coat notes; removed surface course item 3 &quot;...when approved by NCDOT&quot;</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-02</td>
<td>Local Residential Medium Street Typical Section</td>
<td>Adjusted tack coat note, added notes to clarify 11’ lanes required if used in ETJ</td>
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<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-03</td>
<td>Local Residential Wide Street Plan View</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; added notes to U-03B and U-03C since not for use in ETJ</td>
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<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-03A</td>
<td>Local Residential Wide Street Typical Section</td>
<td>Adjusted tack coat note; revised min. RW width to use even-number of 52’ in ETJ only; adjust note 5 and 6 to exclude ETJ</td>
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<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-03B</td>
<td>Local Residential Wide Street at Midblock with Curb Extension Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note; removed surface course note 3 &quot;...when approved by NCDOT&quot;</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-03C</td>
<td>Local Residential Wide Street at Intersection with Curb Extension Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note; removed surface course note 3 &quot;...when approved by NCDOT&quot;</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-04</td>
<td>Local Office/Commercial Narrow Street Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-05</td>
<td>Local Office/Commercial Wide Street Plan View</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-05A</td>
<td>Local Office/Commercial Wide Street Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-05B</td>
<td>Local Office/Commercial Wide Street at Midblock with Curb Extension Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-05C</td>
<td>Local Office/Commercial Wide Street at Intersection with Curb Extension Typical Section</td>
<td>Removed &quot;Includes ETJ&quot;/Added &quot;Not for use in ETJ&quot;; adjusted tack coat note</td>
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<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-05D</td>
<td>Commercial Wide Street Typical Section (TOD ONLY*)</td>
<td>NEW DETAIL, to be applied per TOD ordinance adopted 4/15/2019</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-06</td>
<td>Local Industrial Street Typical Section</td>
<td>Adjusted tack coat note, added notes to clarify pavement section for ETJ; revised min. RW width to use even-number of 52’ in ETJ only</td>
</tr>
<tr>
<td>19</td>
<td>1/30/2020</td>
<td>U-07</td>
<td>Local Collector Street Typical Section</td>
<td>Adjusted tack coat note, revised min. RW width to use even-number of 52’ in ETJ only</td>
</tr>
</tbody>
</table>
NOTES:

1. ALL CONCRETE TO BE 3600 P.S.I. COMpressive STRENGTH.

2. AT ALL DRIVEWAYS, SIDEWALKS TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE STD. NO. 10.17 FOR JOINT DETAIL.

3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NC DOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.

4. "A" BREAKOVER SHALL BE 8% OR LESS (A=ALGEBRAIC DIFFERENCE).

5. PRIOR APPROVAL IS REQUIRED BY CDOT ON GRADES EXCEEDING THE GRADES SHOWN ON THIS DETAIL.

6. **PER NC IFC SECTION D103.2, FIRE APPARATUS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.

7. JOINT MATERIAL SHOULD BE PLACED FLUSH WITH CONCRETE.

8. THIS DETAIL IS ONLY FOR USE WHEN PLANTING STRIP IS 6' OR LESS IN WIDTH. USE TYPE II—MODIFIED DRIVEWAY 10.25E WITH LARGER PLANTING STRIP.

<table>
<thead>
<tr>
<th>DRIVEWAYS CLASSIFICATION</th>
<th>MINIMUM</th>
<th>MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE-WAY TYPE II—COMMERCIAL</td>
<td>20’</td>
<td>30’</td>
</tr>
<tr>
<td>TWO-WAY TYPE II—COMMERCIAL</td>
<td>26’</td>
<td>50’*</td>
</tr>
</tbody>
</table>

* NEED MORE THAN ONE CONTRACTION JOINT IN CENTER.

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

COMMERCIAL DROP CURB TYPE II DRIVEWAY
WITH PLANTING STRIP
(2’—6” CURB AND GUTTER)

STD. NO. REV. 10.25B 19
NOTES:

1. ALL CONCRETE TO BE 3600 P.S.I.
2. ALL CURB OR CURB AND GUTTER AND SIDEWALK ARE TO BE REMOVED TO THE NEAREST JOINT BEYOND NEW CONSTRUCTION OR CUT WITH A SAW AND REMOVED. SAW CUT OR JOINT TO BE PERPENDICULAR TO EDGE OF EXISTING PAVEMENT. SEE STD. NO. 10.17 FOR JOINT DETAIL.
3. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
4. "A" BREAKOVER SHALL BE 8% OR LESS. (A—ALGEBRAIC DIFFERENCE)
5. PRIOR APPROVAL IS REQUIRED BY CDOT FOR GRADES EXCEEDING THE GRADES SHOWN ON THIS DETAIL.
6. **PER NC IFC SECTION D103.2, FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 10 PERCENT IN GRADE.
7. JOINT MATERIAL SHOULD BE FLUSH WITH CONCRETE.
8. THIS DETAIL IS ONLY FOR USE WHEN PLANTING STRIP IS 8' OR LESS IN WIDTH. USE TYPE II—MODIFIED DRIVEWAY 10.25E WITH LARGER PLANTING STRIP.

### DRIVEWAYS CLASSIFICATION

<table>
<thead>
<tr>
<th>TYPE DRIVEWAYS</th>
<th>MINIMUM</th>
<th>MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE-WAY TYPE II—COMMERCIAL</td>
<td>20'</td>
<td>30'</td>
</tr>
<tr>
<td>TWO-WAY TYPE II—COMMERCIAL</td>
<td>26'</td>
<td>50'</td>
</tr>
</tbody>
</table>

* NEED MORE THAN ONE CONTRACTION JOINT IN CENTER

---

**SECTION A—A (ALONG FLOW LINE)

("A" SEE NOTE 4)

---

**SECTION B—B

NOT TO SCALE
NOTES:

1. WHERE A TYPE III DRIVEWAY IS APPROVED BY THE CHARLOTTE DEPARTMENT OF TRANSPORTATION (CDOT) THAT CONNECTS TO AN EXISTING SIGNALIZED INTERSECTION, OR AT A LOCATION WHERE A TRAFFIC SIGNAL INSTALLATION IS PROPOSED BY CDOT BASED ON A TRAFFIC IMPACT/SIGNAL WARRANT STUDY, A FULL DEPTH ASPHALT PAVEMENT IS REQUIRED. THIS PAVEMENT DESIGN IS REQUIRED IN THE DRIVEWAY EASEMENT (100-FOOT MINIMUM) TO MAINTAIN DETECTOR LOOPS AND PAVEMENT MARKINGS. A TRAFFIC SIGNAL WILL BE INSTALLED ONLY IF CDOT DETERMINES THAT ONE IS NEEDED BASED ON A TRAFFIC STUDY OF CURRENT CONDITIONS.

2. A CONCRETE GUTTER IS TO BE USED EXCEPT AT EXISTING OR PROPOSED TRAFFIC SIGNAL LOCATIONS. AT THESE LOCATIONS ADDITIONAL DRAINAGE REQUIREMENTS WILL BE NECESSARY TO ELIMINATE THE NEED FOR GUTTER ACROSS THE DRIVEWAY CONNECTIONS.

3. THE DRIVEWAY MUST RISE 6" FROM THE GUTTER LINE TO PREVENT RUNOFF FROM ENTERING DRIVEWAY.

4. ALL DRIVEWAYS MUST MEET THE CURRENT CITY DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.

5. TWO (2) CURB RAMPS PER CURB RETURN REQUIRED AT SIGNALIZED INTERSECTIONS.

6. FOUR (4) FOOT GUTTER AND WINGS ARE REQUIRED TO DIRECT WATER ACROSS DRIVE. GUTTER AND WINGS MAY NOT BE REQUIRED IF THE DRIVEWAY GUTTER SLOPE IS GREATER THAN 2%.

7. MAINTAIN UP TO 1.5% (MAX. 2%) CROSS-SLOPE ON THE PEDESTRIAN ACCESS ROUTE BETWEEN CURB RAMPS. CONCRETE IS OPTIONAL FOR THE CROSSWALK AREA IN THE DRIVEWAY.

SECTION A-A

* TRANSITION CONCRETE DEPTH FROM 7" AT LIP TO 10" AT 4'-0" CONCRETE GUTTER CONSTRUCTION JOINT IF NO ASPHALT BASE INSTALLED. IF ASPHALT BASE IS USED, 7" CONCRETE DEPTH CAN BE CARRIED THROUGH THE 4' CONCRETE GUTTER.
OFFSET CATCH BASIN
FOR USE W/ EXISTING UTILITY CONFLICT
NOT TO SCALE

NOTES:
1. PRIOR APPROVAL FROM THE CITY ENGINEER IS REQUIRED FOR USE.
2. THIS STRUCTURE IS TO ONLY BE USED ON CITY MAINTAINED STREETS AND ONLY ON NCDOT-MAINTAINED STREETS WITH SPECIAL NCDOT PERMISSION.
3. SEE NCDOT DETAIL 840.01 FOR MAXIMUM PIPE SIZE ALLOWABLE
GENERAL NOTES:

1. GRAVEL AND RIP RAP FILTER BERM BASIN SHOULD BE USED TO PROTECT EXISTING PIPE INERTS.

2. DIMENSIONS SHOWN ARE THE MINIMUM ACCEPTED UNLESS OTHERWISE NOTED.

3. CLEANOUT PRIOR TO SEDIMENT REACHING HALF OF BERM HEIGHT.

4. MAY BE USED AT PIPES WITH MAX. DIAMETER OF 36".

VOLUME = 3600 FT³ PER ACRE DISTURBED TO TOP OF BERM ELEVATION.
SURFACE AREA REQ'D = 435 SQ. FT. PER CFS Q10

FLOW

PIECE

#5 WASHED STONE
6" MIN. THICK x 3" HIGH (MIN)

CLASS I RIP RAP

36" PIPE DIAMETER MAX.

FLOW

PERSPECTIVE VIEW

SECTION

#5 WASHED STONE

1" MIN.

3"

H MIN.

FINISHED GRADE

CLASS I RIP RAP

CLEANOUT ELEVATION (SEE NOTE 3)

PIECE

NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

GRAVEL AND RIP RAP FILTER BERM BASIN

STD. NO. REV.
30.12 19
WARRANTS

STANDARD SAFETY RAIL (STD. #50.04A) SHALL BE INSTALLED UNDER ANY OF THE FOLLOWING CIRCUMSTANCES IN BOTH NEW CONSTRUCTION AND IN RETROFITTING OR RECONSTRUCTION OF EXISTING ROADWAYS OR SITES:

1. WHEN THE CULVERT CROSSING DETAIL (STD. #10.36A–B) APPLIES.

2. IF THERE IS A TWO FOOT OR GREATER DROP-OFF WITHIN 2 FEET OF THE EDGE OF THE SIDEWALK (SEE DIAGRAM A).

3. IF THERE IS A 1-FOOT OR LARGER DROP-OFF DIRECTLY ADJACENT TO THE SIDEWALK EDGE (SEE DIAGRAM B).

4. AT THE DIRECTION OF CDOT, PLANNING, OR ENGINEERING STAFF BASED ON FIELD CONDITIONS.

DEFINITIONS

• DROP-OFF — A SLOPE OF 2:1 OR STEEPER. EXAMPLES INCLUDE HEADWALLS, RETAINING WALLS, AND CULVERTS.

• SIDEWALK — FOR PURPOSES OF THIS STANDARD, THE TERM “SIDEWALK” IS USED GENERICALLY AND SHALL MEAN ANY PATH OR SURFACE TO BE USED FOR BICYCLE AND/OR PEDESTRIAN TRANSPORTATION. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO, SIDEWALKS, BIKE PATHS, SHARED-USE PATHS, PEDESTRIAN PATHS, AND GREENWAYS.

DIAGRAM A
SLOPED DROP-OFF AT BACK OF SIDEWALK

DIAGRAM B
VERTICAL DROP-OFF AT BACK OF SIDEWALK

* IF VERTICAL DROP-OFF IS LESS THAN 1 FOOT, SAFETY RAIL MAY NOT BE WARRANTED. INSTEAD, THE EDGE OF SIDEWALK MUST BE MARKED WITH 6” WIDE YELLOW PAINT LINE, 10’ PAST DROP-OFF IN EACH DIRECTION ALONG THE SIDEWALK.

NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

SAFETY RAIL WARRANTS

STD. NO. REV.
50.04B 19
TYPICAL PAVEMENT SECTION

SURFACE COURSE
1" S9.5B
FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:
1) 75% DEVELOPMENT OCCUPANCY
2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT

INTERMEDIATE COURSE
1 1/2" S9.5C OR S9.5B

BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE, OR 4" BCBC TYPE B25.0C. SHOULD ENTIRE DEVELOPMENT HAVE A CBR OF 6 OR GREATER, THEN AN ALTERNATIVE BASE COURSE PAVEMENT DESIGN MAY BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

SUBGRADE
COMPACTED SUBGRADE (SEE SECTION 1.A.18)

KEY
R 2'-0" STANDARD CURB AND GUTTER OR 2'-0" VALLEY GUTTER (SEE NOTE 1)
S 4" CONCRETE SIDEWALK

NOTES:
1. VALLEY GUTTER IS ALLOWED ONLY WITH PRIOR APPROVAL FROM CDOT AND CITY ENGINEERING.
2. DETAIL CAN BE USED ONLY UNDER THE CIRCUMSTANCES PRESCRIBED IN THE USDG ON CITY-MAINTAINED STREETS ONLY. SEE CLDSD SPECIFICATIONS AND SPECIAL PROVISION NOTES: "USDG TYPICAL SECTION ALTERNATIVES" NOTE C AND TABLE 1 FOR MORE INFORMATION.
3. BACK OF CURB TO BACK OF CURB DIMENSION OF 21' SHALL BE USED REGARDLESS OF CURB TYPE.
4. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
5. ZONING SETBACKS MEASURED FROM TOTAL R/W
6. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4" PER FOOT (MIN.) UP TO 1/4" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPRACTICAL, IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

NOT FOR USE IN ETJ
NOT TO SCALE
NOT TO SCALE

LOCAL RESIDENTIAL MEDIUM STREET
TYPICAL SECTION

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

NOTES:
1. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
2. ZONING SETBACKS MEASURED FROM TOTAL R/W
3. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4" PER FOOT (MIN.) UP TO 1 1/4" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.
4. MIN. 11" LANES REQUIRED IF USED IN ETJ.
NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS
INCLUDES CHARLOTTE ETJ

LOCAL RESIDENTIAL WIDE STREET
TYPICAL SECTION

SURFACE COURSE
1” S9.5B
FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:
1) 75% DEVELOPMENT OCCUPANCY,
2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT,
3) FOR ETJ STREETS, FINAL 1” MAY BE PLACED WHEN APPROVED BY NCDOT.

INTERMEDIATE COURSE
1 1/2” S9.5C OR S9.5B
BASE COURSE
8” COMPACTED AGGREGATE BASE COURSE, OR 4” BCBC TYPE B25.0C. SHOULD ENTIRE DEVELOPMENT HAVE A CBR OF 6 OR GREATER, THEN AN ALTERNATIVE BASE COURSE PAVEMENT DESIGN MAY BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

SUBGRADE
COMPACTED SUBGRADE (SEE SECTION 1A.18)

KEY
R 2’-6” STANDARD CURB AND GUTTER,
    2’-0” STANDARD CURB AND GUTTER, OR
    2’-0” VALLEY GUTTER (SEE NOTE 1)
S 4” CONCRETE SIDEWALK

NOTES:
1. VALLEY GUTTER IS ALLOWED ONLY WITH PRIOR APPROVAL FROM CDOT AND CITY ENGINEERING.
2. SIDEWALK IS 6’ MIN. WHEN LESS THAN 12 DWELLING UNITS PER ACRE (D.U.A.). SIDEWALK IS 8’ MIN. WHEN 12 D.U.A. OR GREATER.
3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT/NCDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
4. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.
5. SEE PARKING STANDARD DETAILS #50.09A, B, & C FOR INFORMATION REGARDING ON-STREET “HEAD-IN” PARKING, EXCEPT IN ETJ WHERE NO HEAD-IN PARKING IS PERMITTED BY NCDOT.
6. ON STREETS WITH FREQUENT DRIVEWAYS THAT PRECLUDE ON-STREET PARKING, USE DETAIL #U-03C, EXCEPT IN ETJ. NO BUMPOUTS PERMITTED IN ETJ.
7. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
8. ZONING SETBACK MEASURED FROM TOTAL R/W.
9. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4” PER FOOT (MIN.) UP TO 1/4” PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.
NOT FOR USE IN ETJ
NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS

LOCAL RESIDENTIAL WIDE STREET AT MIDBLOCK WITH CURB EXTENSION TYPICAL SECTION

STANDARD NO. U-03B 19

NOTES:

1. VALLEY GUTTER IS ALLOWED ONLY WITH PRIOR APPROVAL FROM CDOT AND CITY ENGINEERING.

2. SIDEWALK IS 6' MIN. WHEN LESS THAN 12 DWELLING UNITS PER ACRE (D.U.A.). SIDEWALK IS 8' MIN. WHEN 12 D.U.A. OR GREATER.

3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERs.

4. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.

5. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).

6. ZONING SETBACKS MEASURED FROM TOTAL R/W.

7. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRDED TO 3/4" PER FOOT (MIN.) UP TO 1 1/4" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPRACTICAL. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

KEY:

R 2'-6" STANDARD CURB AND GUTTER,
2'-0" STANDARD CURB AND GUTTER, OR
2'-0" VALLEY GUTTER (SEE NOTE 1)
S 4" CONCRETE SIDEWALK

SPECIAL SURFACING COAT PER NCDOT "STD. SPECS. FOR ROADS AND STRUCTURES," SECTION 605

SPECIAL SURFACE COARSE
1" S9.5B
FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:
1) 75% DEVELOPMENT OCCUPANCY
2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT

INTERMEDIATE COURSE
1-1/2" S9.5C OR S9.5B

BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE, OR 4" BCBC TYPE B25.0C. SHOULD ENTIRE DEVELOPMENT HAVE A CBR OF 6 OR GREATER, THEN AN ALTERNATIVE BASE COURSE PAVEMENT DESIGN MAY BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

SUBGRADE
COMPACTED SUBGRADE (SEE SECTION 1.A.1B)

PLANTING STRIP
SEE NOTE 7

2:1 CUT MAX.
3:1 FILL MAX.
NOT FOR USE IN ETJ

NOT TO SCALE

CITY OF CHARLOTTE
LAND DEVELOPMENT STANDARDS

LOCAL RESIDENTIAL WIDE STREET AT INTERSECTION WITH CURB EXTENSION TYPICAL SECTION

KEY
- 2'-6" STANDARD CURB AND GUTTER
- 2'-0" STANDARD CURB AND GUTTER, OR 2'-0" VALLEY GUTTER (SEE NOTE 1)
- 4" CONCRETE SIDEWALK

SURFACE COURSE
1" S9.5B
FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:
1) 75% DEVELOPMENT OCCUPANCY
2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT

INTERMEDIATE COURSE
1 1/2" S9.5C OR S9.5B

BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE, OR 4" BCBC TYPE B25.0C. SHOULD ENTIRE DEVELOPMENT HAVE A CBR OF 6 OR GREATER, THEN AN ALTERNATIVE BASE COURSE PAVEMENT DESIGN MAY BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

SUBGRADE
COMPACTED SUBGRADE (SEE SECTION 1.A.18)

NOTES:
1. VALLEY GUTTER IS ALLOWED ONLY WITH PRIOR APPROVAL FROM CDOT AND CITY ENGINEERING.
2. SIDEWALK IS 6' MIN. WHEN LESS THAN 12 DWELLING UNITS PER ACRE (D.U.A.). SIDEWALK IS 8' MIN. WHEN 12 D.U.A. OR GREATER.
3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
4. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.
5. THIS DETAIL IS FOR USE ON STREETS WITH FREQUENT DRIVeways THAT PRECLUDE ON-STREET PARKING.
6. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
7. ZONING SETBACKS MEASURED FROM TOTAL R/W.
8. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/2" PER FOOT (MIN.) UP TO 1" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.
EITHER OF THESE PAVEMENT SECTIONS MAY BE USED:

SURFACE COURSE
3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C
TO BE PLACED IN TWO 1.5" LIFTS EACH

INTERMEDIATE COURSE
2.5" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C

BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE
(USE 6.5" COMPACTED ABC UNDER CURB & GUTTER)

COMPACTED SUBGRADE

APPLY TACK COAT PER NCDOT "STD. SPEC. FOR ROADS AND STRUCTURES," SECTION 605

TYPICAL PAVEMENT SECTION WITH STONE BASE

SURFACE COURSE
3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C
TO BE PLACED IN TWO 1.5" LIFTS EACH

INTERMEDIATE COURSE
4" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C

BASE COURSE
3" BITUMINOUS CONCRETE BASE COURSE, TYPE B25.0C.

COMPACTED SUBGRADE

TYPICAL FULL-DEPTH ASPHALT PAVEMENT SECTION

NOTES:
1. USE OF VALLEY GUTTER PROHIBITED.
2. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.
3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
4. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
5. ZONING SETBACKS MEASURED FROM TOTAL R/W.
6. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO ¼" PER FOOT (MIN.) UP TO ¾" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

KEY
R 2'-6" STANDARD CURB AND GUTTER (SHOWN) OR 2'-0" STANDARD CURB AND GUTTER
S 4" CONCRETE SIDEWALK

NOT FOR USE IN ETJ
NOT TO SCALE
NOTES:

1. REFER TO U-05A FOR TYPICAL SECTION, U-05B FOR MID-BLOCK SECTION, AND U-05C FOR INTERSECTION SECTION.

2. SHADOW PARKING WITH CURB EXTENSIONS, SHOWN AT U-03B. IF CURB EXTENSION IS ONLY ON ONE SIDE OF ROAD, A 30' PAVEMENT WIDTH WILL BE REQUIRED AS SHOWN ABOVE.
EITHER OF THESE PAVEMENT SECTIONS MAY BE USED:

**TYPICAL PAVEMENT SECTION WITH STONE BASE**

SURFACE COURSE
3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C TO BE PLACED IN TWO 1.5" LIFTS EACH
INTERMEDIATE COURSE
2.5" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE (USE 6.5" COMPACTED ABC UNDER CURB & GUTTER)
COMPACTED SUBGRADE

**TYPICAL FULL-DEPTH ASPHALT PAVEMENT SECTION**

SURFACE COURSE
3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C TO BE PLACED IN TWO 1.5" LIFTS EACH
INTERMEDIATE COURSE
4" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
BASE COURSE
3" BITUMINOUS CONCRETE BASE COURSE, TYPE B22.0C
COMPACTED SUBGRADE

NOTES:

1. USE OF VALLEY GUTTER PROHIBITED.
2. WIDER SIDEWALKS MAY BE REQUIRED UNDER CIRCUMSTANCES AS IDENTIFIED IN THE USDO.
3. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.
4. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
5. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.
6. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).
7. ZONING SETBACKS MEASURED FROM TOTAL R/W.
8. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4" PER FOOT (MIN.) UP TO 1 1/2" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

KEY

- R 2'-6" STANDARD CURB AND GUTTER ONLY
- S 4" THICK CONCRETE SIDEWALK 3600 PSI AT 28 DAYS

NOT TO SCALE
EITHER OF THESE PAVEMENT SECTIONS MAY BE USED:

- **Surface Course**: 3" Bituminous Concrete Surface Course, Type 50.5C to be placed in two 1.5" lifts each
- **Intermediate Course**: 2.5" Bituminous Concrete Intermediate Course, Type 119.0C
- **Base Course**: 8" Compacted Aggregate Base Course (Use 6.5" Compacted ABC under Curb & Gutter)
- **Compacted Subgrade**:

![Typical Pavement Section with Stone Base](image)

**NOTES:**

1. USE OF VALLEY GUTTER IS PROHIBITED.
2. WIDER SIDEWALKS MAY BE REQUIRED UNDER CIRCUMSTANCES AS IDENTIFIED IN THE USDG.
3. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.
4. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
5. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.
6. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20–22(d).
7. ZONING SETBACKS MEASURED FROM TOTAL R/W.
8. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 1/4" PER FOOT (MIN.) UP TO 1¾" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPRACTICAL. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

**KEY**

- **R**: 2'–6" Standard Curb and Gutter Only
- **S**: 4" Concrete Sidewalk

NOT FOR USE IN ETJ

NOT TO SCALE

CITY OF CHARLOTTE

LAND DEVELOPMENT STANDARDS

LOCAL OFFICE/COMMERCIAL WIDE STREET AT MIDBLOCK WITH CURB EXTENSION TYPICAL SECTION

STD. NO. REV.

U–05B 19


Either of these pavement sections may be used:

- **Surface Course**: 3" bituminous concrete surface course, type S9.5C to be placed in two 1.5" lifts each.
- **Intermediate Course**: 2.5" bituminous concrete intermediate course, type I19.0C.
- **Base Course**: 8" compacted aggregate base course (use 6.5" compacted ABC under curb & gutter).
- **Compacted Subgrade**.

**Typical Pavement Section with Stone Base**:

- **Surface Course**: 3" bituminous concrete surface course, type S9.5C to be placed in two 1.5" lifts each.
- **Intermediate Course**: 4" bituminous concrete intermediate course, type I19.0C.
- **Base Course**: 3" bituminous concrete base course, type B25.0C.
- **Compacted Subgrade**.

**Typical Full-Depth Asphalt Pavement Section**:

...Continued...

**Notes**:

1. USE OF VALLEY GUTTER IS PROHIBITED.
2. WIDER SIDEWALKS MAY BE REQUIRED UNDER CIRCUMSTANCES AS IDENTIFIED IN THE USDG.
3. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.
4. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
5. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT, AND PLANNING.
6. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20.22(d).
7. ZONING SETBACKS MEASURED FROM TOTAL R/W.
8. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO ¼" PER FOOT (MIN.) UP TO 1¼" PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

**Key**:

- **R**: 2'-6" standard curb and gutter only
- **S**: 4" concrete sidewalk

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**Notes for Use in ETJ**

**NOT TO SCALE**
EITHER OF THESE PAVEMENT SECTIONS MAY BE USED:

- SURFACE COURSE
  - 3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C TO BE PLACED IN TWO 1.5" LIFTS EACH
- INTERMEDIATE COURSE
  - 2.5" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
- BASE COURSE
  - 8" COMPACTED AGGREGATE BASE COURSE (USE 6.5" COMPACTED ABC UNDER CURB & GUTTER)
  - COMPACTED SUBGRADE

TYPICAL PAVEMENT SECTION WITH STONE BASE

- SURFACE COURSE
  - 3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C TO BE PLACED IN TWO 1.5" LIFTS EACH
- INTERMEDIATE COURSE
  - 4" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
- BASE COURSE
  - 3" BITUMINOUS CONCRETE BASE COURSE, TYPE B25.0C
  - COMPACTED SUBGRADE

TYPICAL FULL-DEPTH ASPHALT PAVEMENT SECTION

NOTES:

1. USE OF VALLEY GUTTER PROHIBITED.
2. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.
3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.
4. ZONING SETBACKS MEASURED FROM BACK OF CURB.
5. HARDSCAPED AMENITY ZONE WITH TREES IN GRATES IS TYPICAL. SEE TOD ORDINANCE FOR APPLICABILITY OF PLANTING STRIP.
6. FOR 8' WIDE SIDEWALK ZONE WITHIN HARDSCAPE, CROSS SLOPE IS 1.5% (DESIGN). HARDSCAPED AMENITY ZONES SHOULD MATCH SIDEWALK CROSS SLOPE TO ALLOW FOR ITEMS TYPICAL IN THIS AREA.

* TO BE APPLIED PER TOD ORDINANCE ADOPTED 4/15/19

KEY

- 2'-6" STANDARD CURB AND GUTTER ONLY

NOT FOR USE IN ETJ

NOT TO SCALE

COMMERCIAL WIDE STREET
TYPICAL SECTION (TOD ONLY*)
NOTES:

1. USE OF VALLEY GUTTER IS PROHIBITED.

2. DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT SECTION DESIGN TO CITY ENGINEER.

3. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT/NCDOT BASED ON SPECIFIC TRAFFIC PARAMETERS.

4. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION 20-22(d).

5. ZONING SETBACKS MEASURED FROM TOTAL R/W

6. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO ¼” PER FOOT (MIN.) UP TO 1¼” PER FOOT (MAX.), EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPractical. IN SUCH CASES, THE CITY ENGINEER MAY AUTHORIZE A SUITABLE GRADE.

7. IF USED IN ETJ, FULL-DEPTH ASPHALT PAVEMENT SECTION REQUIRED.

KEY

R  2'-6" STANDARD CURB AND GUTTER
S  4" CONCRETE SIDEWALK

TYPICAL PAVEMENT SECTION WITH STONE BASE (CITY ONLY)
(IN ETJ, USE FULL DEPTH ASPHALT SECTION BELOW)

- 3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C
- TO BE PLACED IN TWO 1.5' LIFTS EACH
- INTERMEDIATE COURSE
- 2.5" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
- BASE COURSE
- 8" COMPACTED AGGREGATE BASE COURSE (USE 6.5" COMPACTED ABC UNDER CURB & GUTTER)
- COMPACTED SUBGRADE

TYPICAL FULL-DEPTH ASPHALT PAVEMENT SECTION (CITY OR ETJ)

- 3" BITUMINOUS CONCRETE SURFACE COURSE, TYPE S9.5C
- TO BE PLACED IN TWO 1.5' LIFTS EACH
- INTERMEDIATE COURSE
- 4" BITUMINOUS CONCRETE INTERMEDIATE COURSE, TYPE I19.0C
- BASE COURSE
- 3" BITUMINOUS CONCRETE BASE COURSE, TYPE B25.0C
- COMPACTED SUBGRADE

APPLY TACK COAT PER NCDOT "STD. SPECs. FOR ROADS AND STRUCTURES," SECTION 605

NOT TO SCALE
NOT TO SCALE

SURFACE COURSE
1" S9.5B
FINAL LIFT TO BE APPLIED UPON MEETING ONE OF THE FOLLOWING CONDITIONS:
1) 75% DEVELOPMENT OCCUPANCY,
2) 1 YEAR FROM INTERMEDIATE COURSE PLACEMENT,
3) FOR ETJ STREETS, FINAL 1" MAY BE PLACED WHEN APPROVED BY NCDOT.

INTERMEDIATE COURSE
1 1/2" S9.5C OR S9.5B

BASE COURSE
8" COMPACTED AGGREGATE BASE COURSE, OR 4" 325 TYPE B25-0C.
SHOULD ENTIRE DEVELOPMENT HAVE A CBR OF 6 OR GREATER, THEN AN
ALTERNATIVE BASE COURSE PAVEMENT DESIGN MAY BE SUBMITTED TO
THE CITY ENGINEER FOR APPROVAL.

SUBGRADE
COMPACTED SUBGRADE

TYPICAL PAVEMENT SECTION

NOTES:

1. SIDEWALK IS 5' MIN. WHEN LESS THAN 8 DUA. SIDEWALK IS 6' MIN. WHEN 8 DUA OR GREATER BUT LESS THAN 12
DUA. SIDEWALK IS 8' MIN. WHEN 12 DUA OR GREATER.

2. AN ALTERNATIVE PAVEMENT SECTION DESIGN MAY BE REQUIRED BY CDOT/NCDOT BASED ON SPECIFIC TRAFFIC
PARAMETERS.

3. AMENITY ZONE (HARDSCAPE) ALLOWED IN LIEU OF PLANTING STRIP WITH PRIOR APPROVAL FROM ENGINEERING, CDOT,
AND PLANNING.

4. FOR EXPLANATION OF RIGHT-OF-WAY WIDTHS REFER TO CITY OF CHARLOTTE SUBDIVISION ORDINANCE SECTION
20-22(d).

5. ZONING SETBACKS MEASURED FROM TOTAL R/W.

6. PLANTING STRIP ADJACENT TO SIDEWALK SHALL BE GRADED TO 3/8" PER FOOT (MIN.) UP TO 1½" PER FOOT (MAX.),
EXCEPT WHERE EXCESSIVE NATURAL GRADES MAKE THIS REQUIREMENT IMPRactical. IN SUCH CASES, THE CITY
ENGINEER MAY AUTHORIZc A SUITABLE GRADE.

KEY
R 2'-6" STANDARD CURB AND GUTTER (SHOWN) OR 2'-0" VALLEY GUTTER
S 4" CONCRETE SIDEWALK