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<th>DWG NO.</th>
<th>TITLE AND REVISIONS SUMMARY</th>
<th>EFFECTIVE DATE</th>
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<tr>
<td>223.1</td>
<td>“Residential Driveway without Adjacent Sidewalk” – New Drawing to allow flexibility in Roadway Design.</td>
<td>7/1/2016</td>
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<td>234.1</td>
<td>“Typical Bus Turn-Out” – Drawing revised to conform with the International Building Code.</td>
<td>7/1/2016</td>
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<td>234.2</td>
<td>“Typical Bus Stop Passenger Loading with Shelter Pads” – Drawing revised to conform with the International Building Code.</td>
<td>7/1/2016</td>
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<td>234.3</td>
<td>“Typical Double Bus Stop Passenger Loading with Shelter Pads” – Drawing revised to conform with the International Building Code.</td>
<td>7/1/2016</td>
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<tr>
<td>234.4</td>
<td>“Bus Stop Placement within Exclusive Right Turn Lane for Commercial Properties” – Drawing revised to conform with the International Building Code.</td>
<td>7/1/2016</td>
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<tr>
<td>234.5</td>
<td>“Bus Shelter Pad Details and Notes” – New Drawing to conform with the International Building Code.</td>
<td>7/1/2016</td>
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<tr>
<td>246.6</td>
<td>“Standard Pavement Markers Forced Turn Lane” – Drawing revised to fix error in drop lane line dimensions.</td>
<td>7/1/2016</td>
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<td>244.9.S1</td>
<td>“Bicycle Lane Delineation Legend and Signage” - New Drawing to improve bicycle safety.</td>
<td>1/1/2016</td>
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<tr>
<td>408.S1</td>
<td>“Concrete Collar Around Manhole” – New Drawing to improve bicycle safety.</td>
<td>1/1/2016</td>
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<td>408.1.S1</td>
<td>“Concrete Collar Around Manhole 30 inch Ring Cover” – New Drawing to improve bicycle safety.</td>
<td>1/1/2016</td>
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<tr>
<td>508.S1</td>
<td>“Bicycle Lane Permanent Pavement Patch” – New drawing to improve bicycle safety.</td>
<td>1/1/2016</td>
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NOTES:
1. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAYS MAY BE MONOLITHIC TO A.C. LINE.
2. WEAKENED PLANE JOINTS SHALL BE UNIFORMLY PLACED BETWEEN 5’ AND 7’ INTERVALS, SEE STANDARD DRAWING NO. 234.
3. STANDARD DRAWING 223.1 SHALL NOT BE ALLOWED WHEN SIDEWALK IS ATTACHED TO CURB.
4. THE "DUSTPAN" DRIVEWAY CANNOT BE A PART OF THE PEDESTRIAN ACCESS ROUTE SINCE THE DEPRESSED AREA IS NOT COMPLIANT WITH ADAAG.
1. CONCRETE BUS PAD SHALL BE MONOLITHIC. TRANSVERSE WEAKENED PLANE JOINTS SHALL BE INSTALLED AT 10' INTERVALS AND AS DETAILED IN STANDARD DRAWING NO. 233, TYPE "C".

2. A MINIMUM OF ONE SET OF PAVEMENT MARKINGS CONTAINING THE "BUSES ONLY" SYMBOL SHALL BE PLACED IN THE TURN-OUT AREA. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.

3. ADDITIONAL STORAGE AREA WILL BE REQUIRED WHEN MORE THAN ONE BUS IS EXPECTED TO OCCUPY THE TURN-OUT AT THE SAME TIME.

4. ALTERNATE CONCRETE AND BASE THICKNESS MAY BE SUBSTITUTED, BUT MUST BE SUPPORTED BY ENGINEERING ANALYSIS AND APPROVED BY THE ENGINEER.

5. TURN-OUT SURFACE SHALL BE TEXTURED IN ACCORDANCE WITH UNIFORM STANDARD SPECIFICATION NO. 409.03.08. FLOW LINE SHALL NOT BE TEXTURED, BUT SHALL BE A TROWELED SURFACE.
NOTES:

1. SIDEWALK RAMP MAY BE REQUIRED TO BE CONSTRUCTED IN THOSE LOCATIONS WHERE THE BUS STOP WOULD OTHERWISE BE INACCESSIBLE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT. SEE DRAWING NO. 235, SHEET 4 OF 4 FOR SIDEWALK RAMP DETAILS.

2. ADDITIONAL RIGHT-OF-WAY OR EASEMENT IS REQUIRED FOR BUS SHELTER PAD AND VARIABLE HEIGHT CURB AT BACK OF SIDEWALK RAMP AND SHALL BE DEDICATED TO THE LOCAL ENTITY.

3. BUS SHELTER PAD CONNECTION TO DETACHED SIDEWALK CONDITION SHALL BE DETERMINED BY THE ENTITIES.

4. "A" = 10', "B" = 15' UNLESS BUS TURNOUT IS CONSTRUCTED PER STANDARD DRAWINGS 234.1 OR 234.4, THEN "A" = 5', "B" = 10'.

5. A 5' x 25' BUS SHELTER PAD BEHIND THE SIDEWALK WHERE NECESSARY SHALL MAY BE ALLOWED AS APPROVED BY THE RTC.
1. SIDEWALK RAMP MAY BE REQUIRED TO BE CONSTRUCTED IN THOSE LOCATIONS WHERE THE BUS STOP WOULD OTHERWISE BE INACCESSIBLE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT. SEE DRAWING NO. 235, SHEET 4 OF 4 FOR SIDEWALK RAMP DETAILS.

2. ADDITIONAL RIGHT-OF-WAY OR EASEMENT IS REQUIRED FOR BUS SHELTER PAD AND VARIABLE HEIGHT CURB AT BACK OF SIDEWALK RAMP AND SHALL BE DEDICATED TO THE LOCAL ENTITY.

3. BUS SHELTER PAD CONNECTION TO DETACHED SIDEWALK CONDITION SHALL BE DETERMINED BY THE ENTITIES.

4. "A" = 10', "B" = 15' UNLESS BUS TURNOUT IS CONSTRUCTED PER STANDARD DRAWINGS 234.1 OR 234.4, THEN "A" = 5', "B" = 10'.

5. A 5' x 50' BUS SHELTER PAD BEHIND THE SIDEWALK WHERE NECESSARY SHALL MAY BE ALLOWED AS APPROVED BY THE RTC.
1. If articulated buses are expected to service bus stop, distance from end of entry taper to the end of the bus stop loading pad shall be increased to 70 ft. min. and the right turn storage lane length shall be increased to 120 ft. min.

2. Where additional motorist guidance is deemed necessary by the engineer, install arrow and "only" symbol pavement markings for the length of the storage line. Symbols shall be seen note 1.

3. Storage lane line shall be approved type I pavement marking film, or if approved by the engineer, raised pavement markers may be used.

4. Reverse curve transition may be used subject to the approval of the engineer.

5. Parking space shall be 6.50 ft. min. and 8.00 ft. max. for buses. Parking space shall be 6.50 ft. min. and 9.00 ft. max. for other vehicles.

Effective 7/1/16
SECTION A-A

NOTES:
1. MINIMUM 28 DAY CONCRETE STRENGTH = 4500 PSI.
2. LAP SPLICES OF REINFORCING STEEL SHALL BE 24". STAGGER LAP SPLICES A MINIMUM OF ONE LAP LENGTH.
3. L & W PER PLAN

AGENCY APPROVED

SPECIFICATION REFERENCE
302 AGGREGATE BASE
501 CONCRETE
502 CONCRETE STRUCTURES

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BUS SHELTER PAD DETAILS AND NOTES
NEW DRAWING

DATE XX-XX-XX  DWG. NO. 234.5
**BIKE LANE DELINEATION AND LEGEND**

- **6" SOLID WHITE LINE**
  - **SEE NOTE 2**

- **6" X 2' SKIP WHITE LINE 8' ON CENTER**
  - **SEE NOTE 3**

- **TRANSITION ZONE**
  - **SEE NOTE 3**

**BIKE LANE DELINEATION AT DROP INLET**

- **6" SOLID WHITE LINE**
  - **SEE NOTE 2**

- **BEGIN 6" WHITE LINE ALONG LIP OF CURB**
- **END 6" WHITE LINE ALONG LIP OF CURB**

**BIKE LANE SIGNAGE**

- **R3-17**
  - **(BLACK AND WHITE)**
- **R3-17B**
  - **(BLACK AND WHITE)**

**NOTES:**

1. BIKE LANE LEGENDS SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM AND SHALL BE SLIP RESISTANT.
2. BIKE LANE LINES SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM AND SHALL BE SLIP RESISTANT.
3. BIKE LANES MUST BE A MINIMUM OF 5 FEET WHEN ADJACENT TO A PARKING LANE, 4 FEET MINIMUM IN OTHER CASES AND NO GREATER THAN 8 FT WIDE; HOWEVER A WIDTH OF 5 FEET IS PREFERRED.
4. BICYCLE LANE DELINEATION, LEGEND, AND SIGNING SHALL CONFORM TO THE MUTCD LATEST EDITION.
5. SIGN SIZE AND PLACEMENT SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD, LATEST EDITION.
6. THE BIKE LANE SIGNAGE SHALL BE TYPE XI SHEETING.
7. A CONTINUOUS 6" WHITE LINE SHALL EXTEND 20' ON EACH SIDE OF THE DROP INLET.
8. INSTALL "DO NOT RIDE IN GUTTER" SIGN IN THE CITY OF LAS VEGAS, SIGN WIDTH TO MATCH R3-17.
9. THE WIDTH OF THE BICYCLE LANE SHALL EXCLUDE THE GUTTER PAN.

**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**SUPPLEMENTAL DRAWING**

BICYCLE LANE DELINEATION, LEGEND, AND SIGNAGE

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<td>X-X-XX</td>
<td>244.9.S1</td>
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**NEW DRAWING**
TYP. DROP LINE LENGTHS

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<th>LENGTH (FT)</th>
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<tbody>
<tr>
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<td>50</td>
<td>640</td>
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<tr>
<td>55</td>
<td>720</td>
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NOTES:
1. THE MINIMUM LENGTH OF STORAGE LANE IS 250 FT. ON ARTERIALS AND 150 FT. ON ALL OTHERS.
2. A MINIMUM OF 2@ R3-7R OR R3-7L SIGNS SHALL BE INSTALLED IN ADVANCE OF THE INTERSECTION AT DISTANCES APPROVED BY THE ENGINEER. RECOMMENDED LOCATIONS ARE SHOWN ABOVE.
3. ONE SET OF PAVEMENT MARKINGS CONTAINING ONE ARROW SYMBOL AND ONE "ONLY" SYMBOL SHALL BE PLACED AT THE BEGINNING OF THE DROP LANE.
4. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, ADDITIONAL ARROW AND "ONLY" SYMBOL PAVEMENT MARKINGS AND OVERHEAD MOUNTED R3-5 SIGNS MAY BE INSTALLED.
5. APPROVED TYPE I PAVEMENT MARKING FILM OR RAISED PAVEMENT MARKERS MAY BE USED FOR ADDITIONAL GUIDANCE AT THE DISCRETION OF THE ENGINEER.
6. STORAGE LANE LINE AND SKIP LINES SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM OR IF APPROVED BY THE ENGINEER, RAISED PAVEMENT MARKERS MAY BE USED.
NOTES:
1. CONCRETE COLLAR, FRAME, AND COVER SHALL BE CONSTRUCTED 1/8" BELOW THE ADJACENT SURFACE, ±1/16".
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.
3. IF MANHOLE IS MORE THAN 1-1/2" ABOVE OR BELOW THE ADJACENT ROADWAY SURFACE, MANHOLE SHALL BE ADJUSTED TO GRADE BY UTILITY OWNER.
4. IF MANHOLE IS MORE THAN 1/4" ABOVE OR BELOW THE ADJACENT ROADWAY SURFACE IN A BICYCLE LANE, MANHOLE SHALL BE ADJUSTED TO GRADE BY UTILITY OWNER.
5. THE USE OF 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

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**SPECIFICATION REFERENCE**

<table>
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<tr>
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<tr>
<td>501</td>
<td>CONCRETE</td>
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<tr>
<td>505</td>
<td>REINFORCING STEEL</td>
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**SUPPLEMENTAL DRAWING**

**NEW DRAWING**

**CONCRETE COLLAR AROUND**

**MANHOLES**

**30 INCH RING AND COVER**

**DATE X-X-XX**

**DWG. NO.** 408.1.S1
CONCRETE COLLAR AROUND MANHOLES

NOTES:
1. CONCRETE COLLAR, FRAME, AND COVER SHALL BE CONSTRUCTED 1/8" BELOW THE ADJACENT SURFACE, ±1/16".
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.
3. IF MANHOLE IS MORE THAN 1-1/2" ABOVE OR BELOW THE ADJACENT ROADWAY SURFACE, MANHOLE SHALL BE ADJUSTED TO GRADE BY UTILITY OWNER.
4. IF MANHOLE IS MORE THAN 1/4" ABOVE OR BELOW THE ADJACENT ROADWAY SURFACE IN A BICYCLE LANE, MANHOLE SHALL BE ADJUSTED TO GRADE BY UTILITY OWNER.

1 NO. 4 BAR WRAPPED AROUND

ASPHALT
(SEE NOTE 6 DRAWING NO. 205)

MANHOLE FRAME AND COVER

OPEN GRADE OR
SEAL COAT OVER SLAB

8"

MIN.

12"

CONCRETE COLLAR AROUND MANHOLE FRAME AND COVER

GRADE RING

CONCRETE COLLAR
### Roadway with Designated Bicycle Lane

- **Permanent Pavement Patch Detail**

### Roadway with Designated Bicycle and Parking Lane

- **Permanent Pavement Patch Detail**

### Lane Delineation

- **Shared Bicycle/Vehicle Lane Delineation**

#### Permanent Pavement Patch Detail

- **Agency Approved**

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**Specification Reference**

| 208 | Trench Excavation & Backfill |
| 302 | Aggregate Base Courses |

**Supplemental Drawing**

**Bicycle Lane Permanent Pavement Patch**

**Date X-X-XX**  **DWG. No.**  **508.S1**  **Sheet 1 of 2**
**GENERAL NOTES:**

1. Longitudinal joints are not allowed within a bicycle lane/area.
2. Pavement patches within a bicycle lane shall not be within 100' of another pavement patch (existing or proposed). If a pavement patch is within 100', the pavement between patches shall be removed and replaced with one continuous patch.
3. No patches within a bicycle lane/area shall be less than 10' in length.
4. Temporary patches shall be asphalt.
5. The contractor's name and date of construction shall be spray painted on the temporary patch by the contractor.
6. Temporary patches shall be compacted, maintained, and flush with the adjacent pavement at all times.
7. Temporary patches shall be removed and replaced within 60 calendar days.
8. A ring top delineator post shall be placed within the gutter to alert bicyclists of the temporary patch condition if the bicycle lane is adjacent to curb and gutter or edge of pavement.
9. Contractor shall install rough road warning signs to warn bicyclists of the temporary patch condition.
10. Asphalt design gradation shall be continuous with adjacent roadway.
11. See 500 series standard drawings for backfill requirements.
12. Contractor shall be responsible for any damages due to non-compliance with these requirements and all applicable codes and regulations.
13. Contractor shall have permit on-site when present. Contractor will be assessed a $300 fine if permit is not on-site.
14. All patches shall be machine laid.