UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS' CONSTRUCTION, OFFSITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA

The following participating entities of the Clark County, Nevada area have adopted these standard drawings.

CITY OF LAS VEGAS
Adopted by City Council action .................................................. November 4, 1987

CITY OF HENDERSON
Adopted by City Council action .................................................. October 20, 1987

CITY OF NORTH LAS VEGAS
Adopted by City Council action .................................................. November 4, 1987

CITY OF BOULDER CITY
Adopted by City Council action .................................................. January 26, 1988

CITY OF MESQUITE
Adopted by City Council action .................................................. January 26, 1988

CLARK COUNTY
Adopted by Board action ............................................................ April 1998

REGIONAL STREET AND HIGHWAY COMMISSION
Adopted by Commission Action.................................................. October 8, 1987

The Uniform Standard Drawings for Public Works Construction may be revised by issuance of revisions or supplements to correct errors and omissions found in these drawings and to reflect advanced thinking and the changing technology of the construction industry. Each revision will supersede any previous pertinent drawing. Upon approval by the RTC, revisions will become effective and be posted on the RTC web-site, www.rtcsnv.com, by the first day of the month of January and July.

To implement this end a Specifications Committee has been established as a permanent organization to continually study and recommend changes to the standard drawings. Interested parties may address suggested changes and questions to the Regional Transportation Commission, 600 South Grand Central Parkway, Suite 350, Las Vegas, Nevada, 89106-4512.
## MISCELLANEOUS TOPOGRAPHIC SYMBOLS

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<thead>
<tr>
<th>Symbol</th>
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<td>Valve (initials indicate ownership and/or type)</td>
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<td>D</td>
<td>Gas cathode protection rectifier</td>
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<td>[ ]</td>
<td>Utility box (initials indicate ownership and/or type)</td>
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<td>O</td>
<td>Public service utility pole, line to show direction of run of overhead line</td>
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<td>[ ]</td>
<td>Pole with guy anchor</td>
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<td>O</td>
<td>Fire hydrant</td>
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<td>Flow line of ditch or channel</td>
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<td>Existing utility stub-out</td>
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<td>Traffic control sign</td>
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<td>Street name sign</td>
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<td>Test hole</td>
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<td>Concrete block wall</td>
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<td>Retaining wall (low side)</td>
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**Uniform Standard Drawings**

**Clark County Area**

**Symbols**

**Agency Approved**

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**Effective as of 08/08/2019**

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**Specification Reference**

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**DATE**

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**DWG. NO.** 101

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**Sheet** 1 of 4
PLAN ONLY

WING TYPE HEADWALL

VALLEY GUTTER

PROPOSED CONSTRUCTION

UNDERGROUND UTILITY WITH MANHOLE AND CASING

OWNERHISP INDICATED BY LINE LEGEND

SIZE AND TYPE OF CONDUIT SHALL BE PLACED ON CONDUIT WHEN AVAILABLE

LEGEND

TSI = TRAFFIC SIGNAL INTERCONNECT
E = ELECTRIC
FA = FIRE ALARM
SL = STREET LIGHT
CATV = CABLE TELEVISION

SS = SANITARY SEWER
SD = STORM DRAIN
W = WATER
S-G = STEEL GAS
PL-G = PLASTIC GAS
T = TELEPHONE

PROFILE ONLY

CENTERLINE GRADE

TOP OF CURB OR FLOW LINE

PIPE

OR

OR

OR

OR

SYMBOLS

AGENCY APPROVED B C H L M N

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE DWG. NO. 101 SHEET 3 OF 4
## MISCELLANEOUS ELECTRICAL SYMBOLS

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**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SYMBOLS**

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### Notes
1. This chart was constructed using the 1993 AASHTO Pavement Design Guide, 1996 NDOT Manual and the 2000 RTC Design Criteria, Section 401.01.02 of the Standard Specifications.
2. An average R-value may be used if it is representative of all project conditions.
3. Additional design compensation is required if expansive soils, hydro-collapsible soils, or soluble materials are present.
4. AC depths shown are minimums and 4" minimum type II is required; other combinations that meet or exceed the structural number requirements are acceptable.

### Specification Reference
**401** Plantmix Bituminous Pavements

### Uniform Standard Drawings
**CLARK COUNTY AREA**

**PAVEMENT STRUCTURE DESIGN GUIDELINE CHART**

**FOR MINOR COLLECTOR AND RESIDENTIAL ROADWAYS**

**DATE 11-10-04  DWG. NO. 200.1**
1. This chart was constructed using the 1993 AASHTO Pavement Design Guide, 1996 NDOT Manual and the 2000 RTC Design Criteria, Section 401.01.02 of the Standard Specifications.

2. A traffic study may be required if TI > 9.5.

3. An average R-value may be used if it is representative of all project conditions.

4. Additional design compensation is required if expansive soils, hydro-collapsible soils, or soluble materials are present.

5. AC depths shown are minimums and 4" minimum type II is required; other combinations that meet or exceed the structural number requirements are acceptable.

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### PAVEMENT STRUCTURE DESIGN GUIDELINE CHART FOR MA. OR COLLECTOR AND ARTERIAL ROADWAYS

**NOTES:**

1. This chart was constructed using the 1993 AASHTO Pavement Design Guide, 1996 NDOT Manual and the 2000 RTC Design Criteria, Section 401.01.02 of the Standard Specifications.

2. A traffic study may be required if TI > 9.5.

3. An average R-value may be used if it is representative of all project conditions.

4. Additional design compensation is required if expansive soils, hydro-collapsible soils, or soluble materials are present.

5. AC depths shown are minimums and 4" minimum type II is required; other combinations that meet or exceed the structural number requirements are acceptable.
NOTE:

SEE STANDARD DRAWING NO. 245.1 (2 SHEETS) FOR TYPICAL LANE CONFIGURATIONS AND DIMENSIONS

AT THE INTERSECTIONS OF 80 FT. AND 100 FT. STREETS, ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED FOR THE 80 FT. STREET. TYPICALLY, THESE 80 FT. STREETS WILL BE IDENTIFIED AS ARTERIALS IN THE REGIONAL TRANSPORTATION PLAN.

5' 5' 15' 54' RADIUS 5' 5' 15' 54' RADIUS

RIGHT-OF-WAY (BEYOND STANDARD 100' ACQUISITION) NECESSARY FOR INTERSECTION

ADDITIONAL RIGHT-OF-WAY NECESSARY FOR EXCLUSIVE RIGHT TURN LANE AT INTERSECTION

80' OR MORE

100' OR MORE
SIGHT VISIBILITY ZONES AT INTERSECTIONS

2.00' - CAR POSITION, CASE B2 (48', 51', & 60' ROW)
9.00' - CAR POSITION, CASE B3 (80' & 100' ROW)

5.00' - EYE POSITION, CASE B1 (80' & 100' ROW)
(48', 51' & 60' ROW)

2.00' - EYE POSITION, CASE B3 & CASE B1 (ALL ROW WIDTHS)

10.00' - EYE POSITION, CASE B2 (ALL ROW WIDTHS)

12.00' - EYE POSITION, CASE B2 (ALL ROW WIDTHS)

5.00' SIDEWALK (51' ROW & GREATER)

4.00' SIDEWALK (48' ROW)

9.00' - CAR POSITION, CASE B3 & CASE B1 (48', 51', & 60' ROW)

14.00' - CAR POSITION, CASE B2 (80' ROW)
12.00' - CAR POSITION, CASE B2 (100' ROW)

10.00' - CAR POSITION, CASE B1 (48', 51', & 60' ROW)

17.00' - CAR POSITION, CASE B3 (80' & 100' ROW)

Effective as of 08/08/2019

NOTE: FOR SIGHT ZONE DIMENSIONS, SEE SETBACK TABLE ON SHEET 2 OF THIS STANDARD DRAWING.

SEE SHEETS 3 THROUGH 8 FOR TYPICAL INTERSECTION SIGHT VISIBILITY ZONE LIMITS

NOTE: FOR TYPICAL INTERSECTION CORNER SIGHT VISIBILITY ZONE LIMITS

Effective as of 08/08/2019
**GENERAL NOTES**

1. EACH CORNER OF EVERY INTERSECTION SHALL HAVE A SIGHT VISIBILITY ZONE REGARDLESS OF RIGHT-OF-WAY WIDTH.

2. NO WALLS, FENCES, SHRUBS, UTILITY APPURTENANCES OR ANY OTHER OB: ECT, OTHER THAN TRAFFIC CONTROL DEVICES, FIRE HYDRANTS, TREES, AND STREET LIGHT POLES, MAY BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE UNLESS SAID OB: ECT IS MAINTAINED AT LESS THAN 24 INCHES IN HEIGHT, MEASURED FROM TOP OF CURB, OR WHERE NO CURB EXISTS, A HEIGHT OF 27 INCHES MEASURED FROM THE TOP OF AD: AGENT ASPHALT, GRAVEL OR PAVEMENT STREET SURFACE. THIS RESTRICTION EXTENDS ALONG THE SIGHT VISIBILITY LINE THROUGH LANDSCAPED MEDIANS.


4. CURVING ROADWAYS AND ROADWAYS WITH INTERSECTING ANGLES GREATER THAN 10 DEGREES MUST BE ANALYZED USING D1, D2, THE EYE POSITION, AND THE CAR POSITION AS SHOWN IN THE INFORMATION ABOVE.

5. USE OF A SIGHT VISIBILITY ZONE DIFFERENT THAN THAT SHOWN HEREIN SHALL REQUIRE A SIGHT VISIBILITY ANALYSIS PREPARED AND SUBMITTED FOR APPROVAL TO THE LOCAL ENTITY ENGINEER BY A CIVIL ENGINEER REGISTERED IN THE STATE OF NEVADA.

6. THE AREA WITHIN THE LIMITS OF THE ARC AND THE CHORD AT THE CURB RETURN (OFFSET 5' FROM BACK OF CURB) SHALL BE ADDED TO THE SIGHT VISIBILITY ZONE AT EACH CORNER OF EVERY INTERSECTION, EXCEPT FOR 80' X 80' INTERSECTIONS OR GREATER.

7. ON-STREET PARKING SHALL BE PROHIBITED WITHIN AREAS DESIGNATED BY DIMENSIONS "A" AND "D" ON SHEET 1 OF THIS DRAWING. SUB: ECT TO THE APPROVAL OF THE TRAFFIC ENGINEER OR DESIGNATED REPRESENTATIVE OF THE ENTITY HAVING JURISDICTION.

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<td>91'</td>
<td>12'</td>
<td>10'</td>
<td>85'</td>
<td>159'</td>
</tr>
<tr>
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<td>B</td>
<td>12'</td>
<td>10'</td>
<td>85'</td>
<td>100'</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>11'</td>
<td>10'</td>
<td>92'</td>
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<tr>
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<td>D</td>
<td>79'</td>
<td>75'</td>
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<td>B</td>
<td>C</td>
<td>D</td>
<td>A</td>
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<tr>
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<td>C</td>
<td>D</td>
<td>A</td>
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<td>D</td>
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<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>110'</td>
<td>11'</td>
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<td>B</td>
<td>10'</td>
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<tr>
<td></td>
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<td>91'</td>
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<td>62'</td>
<td>62'</td>
<td>62'</td>
<td>91'</td>
</tr>
</tbody>
</table>

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**SIGHT VISIBILITY ZONES AT INTERSECTIONS**

*Agency Approved: B, C, H, L, M, N*

**Specification Reference**

**Uniform Standard Drawings**

**Clark County Area**

**Date:** 01-01-13  **DWG. No:** 201.2  **Sheet 2 of 8**
TYPICAL SIGHT VISIBILITY ZONES FOR COMMERCIAL DRIVEWAY APPROACHES

<table>
<thead>
<tr>
<th>Specification Reference</th>
<th>Uniform Standard Drawings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clark County Area</td>
</tr>
</tbody>
</table>

Sight Visibility Zones at Intersections

Agency Approved: B C H L M N

Effective as of 08/08/2019
TYPICAL SIGHT VISIBILITY ZONES FOR 48-FT RIGHT-OF-WAY ROADWAY APPROACHES

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGHT VISIBILITY ZONES
AT INTERSECTIONS

Effective as of 08/08/2019
TYPICAL SIGHT VISIBILITY ZONES FOR 51-FT RIGHT-OF-WAY ROADWAY APPROACHES

<table>
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<th>DATE DWG. NO.</th>
<th>SHEET OF 8</th>
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<tr>
<td>01-01-13</td>
<td>201.2</td>
</tr>
</tbody>
</table>

Effective as of 08/08/2019
TYPICAL SIGHT VISIBILITY ZONES FOR 100-FT RIGHT-OF-WAY ROADWAY APPROACHES

TYPICAL SIGHT VISIBILITY ZONES AT INTERSECTIONS

Effective as of 08/08/2019

DATE 01-01-13  DWG. NO. 201.2  SHEET 8 OF 8
### Back of Curb Line Radii

<table>
<thead>
<tr>
<th>&quot;B&quot; OR &quot;A&quot;</th>
<th>60' OR LESS</th>
<th>80'</th>
<th>100' OR MORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60' OR LESS</td>
<td>20'</td>
<td>25'</td>
<td>30'</td>
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<tr>
<td>80'</td>
<td>25'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>100' OR MORE</td>
<td>30'</td>
<td>30'</td>
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</table>

### Property Line Radii

<table>
<thead>
<tr>
<th>&quot;B&quot; OR &quot;A&quot;</th>
<th>60' OR LESS</th>
<th>80'</th>
<th>100' OR MORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60' OR LESS</td>
<td>15'</td>
<td>25'</td>
<td>30'</td>
</tr>
<tr>
<td>80'</td>
<td>25'</td>
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</tr>
<tr>
<td>100' OR MORE</td>
<td>30'</td>
<td>35'</td>
<td>35'</td>
</tr>
</tbody>
</table>

### Notes
- A traffic chord easement will be required at this corner.

### Uniform Standard Drawings
- Clark County Area
- Supplemental Drawing

### Specification Reference

<table>
<thead>
<tr>
<th>Agency Approved</th>
<th>L</th>
</tr>
</thead>
</table>

| Date 07-01-12 | Drawing No. 201.3.S1 |
NOTES

PROPERTY LINES SHALL BE PARALLEL AND RADIAL TO THE BACK OF CURB AT A DISTANCE CONSISTENT WITH THE STANDARD STREET SECTIONS DRAWING NUMBERS.

PROPERTY LINE RADIUS SHALL BE A MINIMUM OF 54 FEET.

PROPERTY LINE RADIUS SHALL BE A MINIMUM OF 40 FEET.

<table>
<thead>
<tr>
<th>&quot;B&quot;</th>
<th>60' OR LESS</th>
<th>80'</th>
<th>100' OR MORE</th>
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</thead>
<tbody>
<tr>
<td>&quot;A&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20'</td>
<td>25'</td>
<td>30'</td>
</tr>
<tr>
<td>60' OR LESS</td>
<td>25'</td>
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<tr>
<td>80'</td>
<td>25'</td>
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</tr>
<tr>
<td>100' OR MORE</td>
<td>30'</td>
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</table>

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

MINIMUM BACK OF CURB RADIUS

DATE 11-10-04  DWG. NO. 201
1. Final A.C. Pavement Surface shall be 1/2" maximum above lip of gutter. Pavement shall be flush with lip at sidewalk ramps.

2. Structural section shall be in accordance with Standard Specification Section 401 and Standard Drawing 200.

3. The final A.C. Pavement Surface Material requirements are:

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>A.C. Pavement Surface Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLV</td>
<td>1-inch UTACS</td>
</tr>
<tr>
<td>CC, MES, BC</td>
<td>Fog Seal</td>
</tr>
<tr>
<td>NLV, HEN</td>
<td>Fog Seal and/or Open Grade</td>
</tr>
</tbody>
</table>

4. Prime coat is not required in Las Vegas, Henderson, Mesquite, and Boulder City when A.C. thickness is ≥ 5 in.

Agency Approved
1. FINAL A.C. PAVEMENT SURFACE (INCLUDING UTACS OR OPEN GRADE) SHALL BE 3/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. DENSE GRADE SHALL BE FLUSH WITH LIP OF GUTTER.

3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200.

4. THIS STANDARD IS AN ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICTION. NO ABOVE GROUND OB. ECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.

5. UNDERGROUND DRY UTILITIES SHALL BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.

6. OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY.

<table>
<thead>
<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>302 AGGREGATE BASE</td>
<td>CLARK COUNTY AREA</td>
</tr>
<tr>
<td>401 BITUMINOUS PAVEMENT</td>
<td>SUPPLEMENTAL DRAWING</td>
</tr>
<tr>
<td>403 OPEN GRADE</td>
<td>PRIMARY ARTERIAL</td>
</tr>
<tr>
<td>501 CONCRETE</td>
<td>COMPLETE STREET ALTERNATIVE</td>
</tr>
</tbody>
</table>

DATE 07-01/12  DWG. NO. 203.1.S1

Effective as of 08/08/2019

AGENCY APPROVED  L
ARTERIAL WITHOUT MEDIAN ISLAND

ARTERIAL WITH MEDIAN ISLAND

NOTES:

1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/2" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200.

3. THE FINAL A.C. PAVEMENT SURFACE MATERIAL REQUIREMENTS ARE:

<table>
<thead>
<tr>
<th>JURISDICTION</th>
<th>A.C. PAVEMENT SURFACE MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLV</td>
<td>1-INCH UTACS</td>
</tr>
<tr>
<td>CC, MES, BC</td>
<td>FOG SEAL</td>
</tr>
<tr>
<td>NLV, HEN</td>
<td>FOG SEAL AND/OR OPEN GRADE</td>
</tr>
</tbody>
</table>

4. THIS STANDARD IS AN ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICTION. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.

5. UNDERGROUND DRY UTILITIES SHOULD BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.

6. INCREASE PAVEMENT WIDTH BY 11 FEET ON EACH SIDE OF ROADWAY FOR AN 8 LANE CROSS SECTION.

7. PRIME COAT IS NOT REQUIRED IN LAS VEGAS, HENDERSON, MESQUITE, AND BOULDER CITY WHEN A.C. THICKNESS IS 5 IN.

<table>
<thead>
<tr>
<th>AGENCY APPROVED</th>
<th>B</th>
<th>C</th>
<th>H</th>
<th>L</th>
<th>M</th>
<th>N</th>
</tr>
</thead>
</table>

SPECIFICATION REFERENCE

| 302  | AGGREGATE BASE     |
| 401  | BITUMINOUS PAVEMENT|
| 403  | OPEN GRADE         |
| 413  | BITUMINOUS GAP GRADED PAVEMENT |
| 501  | CONCRETE           |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ARTERIAL
ALTERNATE URBAN AREA STREET SECTIONS
WITH OFFSET SIDEWALK

DATE 07-01-14   DWG. NO. 203
NOTES:
1. A.C. Pavement to be 1/2" maximum above lip of gutter after compaction. Pavement shall be flush with lip at sidewalk ramps.
2. The grade break occurring in the cross section shall fall between driving lanes.
3. Structural section shall be in accordance with standard specification section 401 and standard drawing nos. 200 and 200.1.
4. This standard is an alternate street section to be used at locations determined by each local jurisdiction. No above ground objects shall be placed within the 5 foot sidewalk.
5. Underground dry utilities should be placed in a utility corridor under the sidewalk.
6. The final A.C. pavement surface material requirements are:

<table>
<thead>
<tr>
<th>JURISDICTION</th>
<th>A.C. PAVEMENT SURFACE MATERIAL</th>
</tr>
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<tbody>
<tr>
<td>CLV</td>
<td>1-INCH UTACS</td>
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<tr>
<td>CC</td>
<td>FOG SEAL</td>
</tr>
<tr>
<td>NLV, HEN</td>
<td>FOG SEAL AND/OR OPEN GRADE</td>
</tr>
</tbody>
</table>

7. Prime coat is not required in Las Vegas, Henderson, Mesquite, or Boulder City when A.C. thickness is 5 in.
MAJOR COLLECTOR WITHOUT MEDIAN ISLAND

NOTES:

1. A.C. PAVEMENT TO BE 1/2” MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION.  PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. THE GRADE BREAK OCCURRING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NOS. 200 AND 200.1.
4. THIS STANDARD IS AN ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICITON.  NO ABOVE GROUND OB. ECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.
5. UNDERGROUND DRY UTILITIES SHOULD BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.
6. OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY.

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

MAJOR COLLECTOR

COMPLETE STREET ALTERNATIVE

DATE 07-01/12  DWG. NO. 205.2.S1
NOTES:

1. A.C. PAVEMENT TO BE 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. THE GRADE BREAK OCCURING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.

3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NOS. 200 AND 200.1.

4. THIS STANDARD IS COMPLETE STREET ALTERNATE STREET SECTION TO BE USED AT LOCATIONS DETERMINED BY EACH LOCAL JURISDICTION. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE 5 FOOT SIDEWALK.

5. UNDERGROUND DRY UTILITIES SHALL BE PLACED IN A UTILITY CORRIDOR UNDER THE SIDEWALK.

SPECIFICATION REFERENCE

<table>
<thead>
<tr>
<th>SPECIFICATION</th>
<th>REFERENCE</th>
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<tbody>
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<tr>
<td>401 BITUMINOUS PAVEMENT</td>
<td></td>
</tr>
<tr>
<td>406 PRIME COAT</td>
<td></td>
</tr>
<tr>
<td>407 FOG SEAL</td>
<td></td>
</tr>
<tr>
<td>501 CONCRETE</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

MINOR COLLECTOR

COMPLETE STREET ALTERNATIVE

DATE 07-01-12 DWG. NO. 205.3.S1
NOTES:
1. A.C. PAVEMENT TO BE 1/2" MAXIMUM ABOVE LIP OF GUTTER AFTER COMPACTION. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. THE GRADE BREAK OCCURRING IN THE CROSS SECTION SHALL FALL BETWEEN DRIVING LANES.
3. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NOS. 200 AND 200.1.
4. PRIME COAT IS NOT REQUIRED IN LAS VEGAS, HENDERSON, MESQUITE OR BOULDER CITY WHEN A.C. THICKNESS ≥ 5 IN.
5. 4 INCH MINIMUM THICKNESS REQUIRED IN HENDERSON, MESQUITE AND BOULDER CITY.
6. THE FINAL A.C. PAVEMENT SURFACE MATERIAL REQUIREMENTS ARE:

<table>
<thead>
<tr>
<th>JURISDICTION</th>
<th>A.C. PAVEMENT SURFACE MATERIAL</th>
</tr>
</thead>
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<tr>
<td>CLV</td>
<td>1-INCH UTACS (80 FT OR GREATER)</td>
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<td>NLV, HEN</td>
<td>FOG SEAL AND/OR OPEN GRADE</td>
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<table>
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<tr>
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<td>406 PRIME COAT</td>
<td>H</td>
</tr>
<tr>
<td>407 FOG SEAL</td>
<td>L</td>
</tr>
<tr>
<td>413 BITUMINOUS GAP GRADED PAVEMENT</td>
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<tr>
<td>501 CONCRETE</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
COLLECTOR
URBAN AREA STREET SECTIONS
WITH CURBSIDE SIDEWALK

DATE 07-01-14  DWG. NO. 205

Effective as of 08/08/2019
RESIDENTIAL TWO-WAY LOCAL OR CUL-DE-SAC
(LOTS 40' WIDE OR LESS)

NOTES:
1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH
   WITH LIP AT SIDEWALK RAMPS.
2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD
   DRAWING NO. 200.1.
3. HOMES ADJACENT TO THIS STREET SECTION MAY REQUIRE SPRINKLERS PER ENTITY FIRE CODE.

RESIDENTIAL TWO-WAY LOCAL OR CUL-DE-SAC
(LOTS GREATER THAN 40' WIDE - SEE NOTE 3)

NOTES:
1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH
   WITH LIP AT SIDEWALK RAMPS.
2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD
   DRAWING NO. 200.1.
3. HOMES ADJACENT TO THIS STREET SECTION MAY REQUIRE SPRINKLERS PER ENTITY FIRE CODE.

AGENCY APPROVED

SPECIFICATION REFERENCE
| 302 | AGGREGATE BASE |
| 401 | BITUMINOUS PAVEMENT |
| 406 | PRIME COAT |
| 407 | FOG SEAL |
| 501 | CONCRETE |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
SUPPLEMENTAL DRAWING
LOCAL RESIDENTIAL
COMPLETET STREET ALTERNATIVES

DATE 07-01-12   DWG. NO. 206.1.S1
RESIDENTIAL TWO-WAY LOCAL OR CUL-DE-SAC

(OPTION "A")

RESIDENTIAL TWO-WAY LOCAL, CUL-DE-SAC (OPTION "B")

(NOT ALLOWED IN CLV OR CLARK COUNTY)

RESIDENTIAL ONE-WAY (NOT ALLOWED IN CLV OR CLARK COUNTY)

NOTES:

1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.
2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200.1.
3. RESIDENTIAL ONE-WAY STREET SHALL NOT EXCEED ONE THOUSAND FEET OR TWENTY RESIDENTIAL LOTS IN LENGTH WHICHEVER IS LESS.

SPECIFICATION REFERENCE

- 302 AGGREGATE BASE
- 401 BITUMINOUS PAVEMENT
- 406 PRIME COAT
- 407 FOG SEAL
- 501 CONCRETE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

LOCAL RESIDENTIAL URBAN AREA STREET SECTIONS

AGENCY APPROVED C L N

DATE 01-01-18 DWG. NO. 206.S1

Effective as of 08/08/2019
NOTES:

1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STANDARD DRAWING NO. 200.1.
1. Final A.C. pavement surface shall be 1/4" maximum above lip of gutter. Pavement shall be flush with lip at sidewalk ramps.
2. Structural section shall be in accordance with standard specification section 401 and std. dwg. no. 200.1.
3. Residential one-way street shall not exceed one thousand feet or twenty residential lots in length whichever is less.

**NOTES**

**SPECIFICATION REFERENCE**

- 302 AGGREGATE BASE
- 401 BITUMINOUS PAVEMENT
- 406 PRIME COAT
- 407 FOG SEAL
- 501 CONCRETE

**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**SUPPLEMENTAL DRAWING**

LOCAL RESIDENTIAL URBAN AREA STREET SECTION

**AGENCY APPROVED**

C L N

**DATE 01-01-18**

**DWG. NO. 206.S3**
GRADE TO DRAIN WITH SLOPE OR DITCH

A.C. PAVEMENT
SEE NOTE 1

BASE
SEE NOTE 1

ARterial or MAjor COLleCTOR

GRADE TO DRAIN WITH SLOPE OR DITCH

A.C. PAVEMENT
SEE NOTE 1

BASE
SEE NOTE 1

COMMERCIAL/INDUSTRIAL LOCAL
OR MINOR RESIDENTIAL COLLECTOR
OR LOCAL RESIDENTIAL

NOTES:
1. A.C. PAVEMENT AND BASE THICKNESS SHALL BE IN ACCORDANCE TO STANDARD DRAWINGS NUMBER 202 THROUGH 206.52, WHICHEVER IS APPLICABLE.
2. GREATER WIDTHS MAY BE REQUIRED IF TRAFFIC WARRANTS, AS DETERMINED BY THE ENGINEER.
1. Intersections shall have 25 foot minimum edge of oil radii.

2. Compaction of aggregate base and subgrade preparation shall be in accordance with the "Standard Specifications".

3. Structural section shown is based on a subgrade "R" value of 20. Other structural sections may be approved if based on engineering analysis based on "R" or "CBR" values determined by soil testing. In no case shall the A.C. thickness be less than that shown, nor shall the base be less than 4".

4. Culverts may be required at driveways.

Notes:

Agency Approved

Effective as of 08/08/2019
NOTES:

1. INTERSECTIONS SHALL HAVE 34 FOOT MINIMUM EDGE OF A.C. RETURN RADII.

2. COMPACTION OF AGGREGATE BASE AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE UNIFORM STANDARD SPECIFICATIONS.

3. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OF 20. OTHER STRUCTURAL SECTIONS MAY BE APPROVED IF BASED ON ENGINEERING ANALYSIS BASED ON "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING.

4. CULVERTS MAY BE REQUIRED AT DRIVEWAYS.

5. A.C. PAVEMENT SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE UNIFORM STANDARD SPECIFICATIONS. ALTERNATE PAVING MATERIALS MAY BE USED AT THE DISCRETION OF THE ENTITY.

6. PAVEMENT MARKINGS MAY BE REQUIRED AND INCLUDE DOUBLE YELLOW CENTERLINE, RAISED PAVEMENT MARKERS OR YELLOW PAINT, AND 4' OFFSET WHITE PAINTED EDGELINES.

7. PAVEMENT WIDTH AND PAVEMENT THICKNESS MAY BE REDUCED TO 28 FEET (14 FEET EACH DIRECTION) AND 2 INCHES RESPECTIVELY BASED UPON A DETERMINATION BY THE LOCAL ENTITY THAT THE REDUCED WIDTH AND THICKNESS WILL PROVIDE SATISFACTORY LIFE AND A SAFE ROADWAY.

Agency Approved: B C H L M N

Effective as of 08/08/2019

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ACCESS ROADS
(FOR USE IN HYDROGRAPHIC BASIN NO. 212)
(PM-10 NON-ATTAINMENT AREAS)

DATE: 5-20-04

DWG. NO.: 209
3. INTERSECTIONS SHALL HAVE 25 FOOT MINIMUM EDGE OF OIL RADII OR 20 FOOT MINIMUM BACK OF CURB RADII.

4. COMPACTION OF AGGREGATE BASE AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATION".

4. STRUCTURAL SECTION SHOWN IS BASED ON A SUBGRADE "R" VALUE OF 20. OTHER STRUCTURAL SECTIONS MAY BE APPROVED IF BASED ON ENGINEERING ANALYSIS BASED ON "R" OR "CBR" VALUES DETERMINED BY SOIL TESTING. IN NO CASE SHALL THE A.C. THICKNESS BE LESS THAN THAT SHOWN, NOR SHALL THE BASE BE LESS THAN 4" EXCEPT THAT THE BASE SHALL NOT BE LESS THAN 10" IN NORTH LAS VEGAS.

4. ALLOW IN CITY OF NORTH LAS VEGAS ONLY WITH EXPRESS WRITTEN PERMISSION FROM THE CITY ENGINEER.
NOTES:

1. FINAL A.C. PAVEMENT SURFACE SHALL BE 1/4" MAXIMUM ABOVE LIP OF GUTTER. PAVEMENT SHALL BE FLUSH WITH LIP AT SIDEWALK RAMPS.

2. STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 401 AND STD. DWG. NO. 200.1.

3. RESIDENTIAL ONE-WAY STREET SHALL NOT EXCEED ONE THOUSAND FEET OR TWENTY RESIDENTIAL LOTS IN LENGTH WHICHEVER IS LESS.

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<td>401 BITUMINOUS PAVEMENT</td>
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<td>406 PRIME COAT</td>
<td>PRIVATE STREET SECTIONS</td>
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<td>407 FOG SEAL</td>
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AGENCY APPROVED  

DATE 01-01-18  DWG. NO. 210.S1
ALTERNATE CROWN

NOTES:

1. USE 2% SLOPE FROM INNER CURB TO CROWN LINE.
2. FROM CROWN LINE TO OUTER CURB, THE STANDARD SLOPE IS 0.90% (MIN).
3. ELEVATIONS REQUIRED ALONG CURBS (3) AND CROWN EVERY 1/4 (MIN).
4. KNUCKLES ARE ALLOWED ON RESIDENTIAL STREETS ONLY.
5. MINIMUM SLOPE ALONG THE BACK OF CURB OF CURVES (2) AND (3) SHALL BE 0.60% (MIN).
6. SPECIAL KNUCKLE DESIGNS INCLUDING LANDSCAPED MEDIAN ISLAND MAY BE PERMITTED, IF APPROVED BY THE COUNTY ENGINEER.

BCR = \[ \min(\frac{W}{20}, \frac{150}{R}) \]

BCR = \[ \min(\frac{W + 10}{20}, \frac{150}{R}) \]

1. \[ \min(\frac{W}{20}, \frac{150}{R}) \]
2. \[ \frac{W}{20} \]
3. \[ \frac{W + 10}{20} \]
4. \[ \frac{150}{R} \]
1. USE NORMAL SECTION FROM INNER CURB TO CENTER LINE.
2. FROM CROWN LINE TO OUTER CURB, THE STANDARD SLOPE IS 2\%.
3. SUPERELEVATION PERCENTAGES SHOWN ARE A STRAIGHT GRADE FROM CENTER LINE TO CROWN LINE.
4. ELEVATIONS ARE REQUIRED WHERE CIRCLES (\(\Theta\)) ARE SHOWN.
5. KNUCKLES ARE NOT ALLOWED ON MAJOR COLLECTOR OR ARTERIAL STREETS.
NOTE:
IF BLOCK LENGTH IS 150' OR LESS, HAMMERHEAD IS NOT REQUIRED.

INSTALL "NO PARKING BEYOND THIS POINT" SIGN BOTH SIDES OF STREET.

NOTE:
USE OF THE HAMMERHEAD WILL BE ALLOWED IN SINGLE FAMILY RESIDENTIAL DWELLING AREAS ONLY.

AGENCY APPROVED

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<td>HAMMERHEAD</td>
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DATE 11-10-04 | DWG. NO. 212.1.S1
1. ONLY 51’ R/W AND PRIVATE STREET CUL-DE-SACS WILL BE ALLOWED IN THE CITY OF LAS VEGAS.

CITIES OF NORTH LAS VEGAS AND MESQUITE ONLY

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2" MIN. A.C. PAVEMENT

6" CONCRETE (WHERE PROFILE GRADE IS 0.50% OR LESS)

PRIME COAT

FOG SEAL

4" TYPE II AGGREGATE BASE

6" MIN. TYPE I AGGREGATE BASE

SECTION A-A

10' 10'

20'

PLAN

1/4" R

3" 12" MIN.

1/2'' PREMOLD EXPANSION JOINT FILLER, JOINTS EVERY 30'

NO. 4 BARS 12" O.C. BOTH WAYS

STANDARD 1/2" GALVANIZED PIPE WITH END PLUG. GREASE REINFORCING STEEL PRIOR TO PIPE INSTALLATION.

SECTION B-B

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
SUPPLEMENTAL DRAWING

ALLEY

SPECIFICATION REFERENCE

302 AGGREGATE BASE
501 CONCRETE
505 REINFORCING STEEL
707 JOINT MATERIAL

DATE 12-14-00 DWG. NO. 214.S1

Effective as of 08/08/2019
1-1/2" INVERTED CROWN
6" CONC. PAV'T

8" TYPE II AGGREGATE BASE

10' 10'

NO. 4 BARS AT 12' O.C. BOTH WAYS

NO. 4 BARS TO DISCONTINUE WITHIN 2" OF JOINT MATERIAL

WEAKENED PLANE JOINTS 1/4" MAX. WIDTH BY 2" DEPTH SAWCUT

BUILDING OR CURB LINE
1/2" PREMOLD EXPANSION JOINT FILLER

1'-0" 12" MIN.

1/2" PREMOLD EXPANSION JOINT FILLER, JOINTS EVERY 30'

STANDARD 1/2" GALVANIZED PIPE WITH END PLUG, GREASE REINFORCING STEEL PRIOR TO PIPE INSTALLATION.

SECTION B-B

SECTION A-A

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
SUPPLEMENTAL DRAWING

ALLEY, CONCRETE

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DATE 12-14-00  DWG. NO. 215.S1
"L" TYPE CURB AND GUTTER

NOTES:
1. 1" BATTER ON GUTTER FACE OPTIONAL.

WEAKENED PLANE JOINTS
SEE STANDARD DRAWING NUMBER 234

1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND AT 300' MAX. INTERVALS FOR EXTRUDED CURB AND 30' MAX. INTERVALS FOR FORMED CURB. FOR JOINT DETAIL SEE STANDARD DRAWING NUMBER 234

FLOWLINE

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

"L" TYPE CURB AND GUTTER

COMPLETE STREET ALTERNATIVE

DATE 07-01-12  DWG. NO. 216.1.S1
NOTES:
1. 1" BATTER ON GUTTER FACE OPTIONAL.
2. WHERE LONGITUDINAL SLOPE IS LESS THAN 0.4%, THE FLOW LINE SHALL BE WATER TESTED.

1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND AT 300' MAX. INTERVALS FOR EXTRUDED CURB AND 30' MAX. INTERVALS FOR FORMED CURB. SEE JOINT DETAIL NUMBER 234.

Agency Approved: CLARK COUNTY AREA

Effective as of 08/08/2019

DATE 12-14-00  DWG. NO. 216
NOTES:

1. USE OF ROLL CURB MAY BE RESTRICTED BY SURFACE DRAINAGE CONSIDERATIONS.
2. SIDEWALK CONSTRUCTED CONTIGUOUS TO ROLL CURB SHALL BE 5 INCHES THICK (MIN.).
3. ALL CURB FLOW LINES SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW
   SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE PERMITTING AGENCY
   AT THE SOLE EXPENSE OF THE CONTRACTOR.
4. CONSTRUCT 1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF
   CURB RETURNS, AND AT 300 FT. MAX. INTERVALS FOR EXTRUDED CURB AND 30 FT.
   MAX. INTERVALS FOR FORMED CURB. WEAKENED PLANE JOINTS SHALL BE FORMED AT
   THE REMAINING 15 FT. INTERVALS. SEE STD. DWG. NO. 234 FOR JOINT DETAILS.
5. ONE INCH BATTER AT CURB FACE IS OPTIONAL.
6. NO UTILITY BOXES AND COVERS ADJACENT TO 30 INCH MODIFIED ROLL CURB AND GUTTER
   RESIDENTIAL AREA SHALL BE ALLOWED AT DRIVEWAY LOCATIONS.
7. BOULDER CITY ENGINEER APPROVAL REQUIRED FOR USE OF 30 INCH MODIFIED CURB AND GUTTER
   RESIDENTIAL AREA.
8. IF ROLL CURB IS APPROVED FOR OTHER LOCATIONS THAT ARE SUBJECTED TO REGULAR TRAFFIC,
   THEN UTILITY BOXES AND COVERS ADJACENT TO ROLL CURB SHALL MEET H20-44 FOR STEEL BOXES
   AND ANSI/SCTE 77-2007 (TIER-22) FOR FIBERGLASS POLYMER CONCRETE BOXES RATED "TRAFFIC
   BEARING" TYPE.
1. USE OF ROLL CURB MAY BE RESTRICTED BY SURFACE DRAINAGE CONSIDERATIONS.

2. SIDEWALK CONSTRUCTED CONTIGUOUS TO ROLL CURB SHALL BE 5 INCHES THICK (MIN).

3. WHERE LONGITUDINAL SLOPE IS LESS THAN 0.4% THE FLOW LINE SHALL BE WATER TESTED.

4. CONSTRUCT 1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF CURB RETURNS, AND AT 300 FT. MAX. INTERVALS FOR EXTRUDED CURB AND 30 FT. MAX. INTERVALS FOR FORMED CURB. WEAKENED PLANE JOINTS SHALL BE FORMED AT THE REMAINING 15 FT. INTERVALS. SEE STD. DWG. NO. 234 FOR JOINT DETAILS.

5. ONE INCH BATTER AT CURB FACE IS OPTIONAL.

6. CITY OF LAS VEGAS COUNCIL APPROVAL REQUIRED FOR USE OF 30" ROLL CURB IN THE CITY OF LAS VEGAS.

7. IN NORTH LAS VEGAS, ROLL CURBS ARE PROHIBITED IN AREAS WHERE FLOW LINE GRADIENT IS LESS THAN 0.8% UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

8. NO UTILITY BOXES AND COVERS ADJACENT TO 30 INCH MODIFIED ROLL CURB AND GUTTER RESIDENTIAL AREA SHALL BE ALLOWED AT DRIVEWAY LOCATIONS.

9. IF ROLL CURB IS APPROVED FOR OTHER LOCATIONS THAT ARE SUBJECT TO REGULAR TRAFFIC, THEN UTILITY BOXES AND COVERS ADJACENT TO ROLL CURB SHALL MEET H20-44 FOR STEEL BOXES AND ANSI/SCTE 77-2007 (TIER-22) FOR FIBERGLASS POLYMER CONCRETE BOXES RATED "TRAFFIC BEARING" TYPE.
1. WHERE LONGITUDINAL SLOPE IS LESS THAN 0.4% THE FLOW LINE SHALL BE WATER TESTED.

2. CONSTRUCT 1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF CURB RETURNS, AND AT 300 FT. MAX. INTERVALS FOR EXTRUDED CURB AND 30 FT. MAX. INTERVALS FOR FORMED CURB. WEAKENED PLANE JOINTS SHALL BE FORMED AT THE REMAINING 15 FT. INTERVALS. SEE STD. DWG. NO. 234 FOR JOINT DETAILS.

3. ONE INCH BATTER AT GUTTER FACE IS OPTIONAL.

4. NO UTILITY BOXES AND COVERS ADJACENT TO R-TYPE CURB SHALL BE ALLOWED AT DRIVEWAY LOCATIONS. IF R-TYPE CURB IS APPROVED FOR OTHER LOCATIONS THAT ARE SUBJECTED TO REGULAR TRAFFIC, THEN UTILITY BOXES AND COVERS ADJACENT TO R-TYPE CURB SHALL MEET H20-44 FOR STEEL BOXES AND ANSI/SCTE 77-2007 (TIER-22) FOR FIBERGLASS POLYMER CONCRETE BOXES RATED "TRAFFIC BEARING" TYPE.

5. FOR NEW CONSTRUCTION ON RESIDENTIAL SUBDIVISION STREETS ONLY.
CONSTRUCT WEAKENED PLANE JOINT IN CURB AND SLAB AT SAME LOCATION EVERY 10'.

NOTES:
1. CONSTRUCT EXPANSION JOINTS EVERY 300' FOR CONCRETE SLAB TO MATCH CURB JOINTS. FOR JOINT DETAILS SEE STANDARD DRAWING NUMBER 234.
2. "L"-TYPE CURB AND GUTTER PER STANDARD DRAWING NUMBER 219 IS REQUIRED IN THE CITY OF HENDERSON AND MAY BE REQUIRED FOR DRAINAGE CONSIDERATIONS.
3. WHEN CURB MACHINE IS USED TO PLACE CURB, A 2" MINIMUM LEVELING COURSE OF TYPE II AGGREGATE BASE IS REQUIRED.
"L" CURB SECTION

"A" CURB SECTION

WEAKENED PLANE JOINTS
SEE STANDARD DRAWING NUMBER 234

NOTES:
1. CONTINUOUS NO. 4 BAR REQUIRED IN NOSE OF MEDIAN ONLY.
2. 1" BATTER ON GUTTER FACE OPTIONAL.

1/2" EXPANSION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND AT 300' MAX. INTERVALS FOR EXTRUDED CURB AND 30' MAX. INTERVALS FOR FORMED CURB. FOR JOINT DETAIL SEE STANDARD DRAWING NUMBER 234

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

"A" AND "L" TYPE ISLAND CURB

AGGREGATE BASE COURSE
CONCRETE
JOINT MATERIAL

DATE 12-14-00 DWG. NO. 219
FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAIL, SEE STANDARD DRAWING NO. 234.

NOTES:

1. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAIL, SEE STANDARD DRAWING NO. 234.

2. WHEN APPROVED BY THE ENGINEER/ENTITY, STRUCTURAL EPOXY ADHESIVE MAY BE USED IN LIEU OF NUMBER 4 DOWEL BAR EXCEPT AT CURB NOSE AND WITHIN 2 FEET OF ANY POINT OF CURVATURE.

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
SUPPLEMENTAL DRAWING

TACK - ON ISLAND

DATE 01-13-05  DWG. NO. 220.1.S1
1/2" RADIUS ROUNDED EDGE ON ALL EXPOSED CORNERS

NO. 4 BAR CONTINUOUS EXCEPT THROUGH EXPANSION JOINT

SECTION

SURFACE TREATMENT VARIES

EXISTING A.C. PAVEMENT

NO. 4 BARS AT 3'-4" CENTERS 18" LONG

EXTRACTION JOINT AT ALL COLD JOINTS, AT BEGINNING AND END OF RETURN AND 300' MAX INTERVALS FOR EXDTRUDED CURB AND 30' MAX INTERVALS FOR FORMED CURB

SIDE VIEW

DIRECTION OF TRAFFIC

NO. 4 BARS AT 3'-4" CENTERS 18" LONG

WEAKENED PLANE JOINT

10' (TYP)

3'-4" TYP

3" TYP

2" (TYP)

NOTES:

1. FOR EXPANSION JOINT AND WEAKENED PLANE JOINT DETAIL, SEE STANDARD DRAWING NO. 234.

2. WEAKENED PLANE JOINTS EVERY 10' STAGGER WITH NO. 4 BARS.

3. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE SHOWN.

4. WHEN APPROVED BY THE ENGINEER/ENTITY, STRUCTURAL EPOXY ADHESIVE MAY BE USED IN LIEU OF NUMBER 4 DOWEL BAR EXCEPT AT CURB NOSE AND WITHIN 2 FEET OF ANY POINT OF CURVATURE.

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| DATE 01-13-05 | DWG. NO. 220 |

Specify the reference to the uniform standard drawings for the city of Henderson or if specified by the engineer. Special median design is required for intersecting streets with R/W greater than 60 feet.

14' median width, curb face to curb face (Typ.) per STD DWG #218
1. COMMERCIAL AND MULTI-FAMILY DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING NUMBERS 224, 225, 228, 235 AND 235.1.

2. LOCAL ORDINANCES AND POLICIES MAY APPLY AND SHALL HAVE PRECEDENCE. SEE NDOT ACCESS POLICY FOR STATE ROADWAYS.

3. THE TOTAL WIDTH "W" OF DRIVEWAY CURB OPENINGS SHALL NOT EXCEED 65% OF FRONT FOOTAGE.

4. NO DRIVEWAY SHALL BE LOCATED WITHIN 6 FEET OF A LIGHT POLE (UNLESS APPROVED BY THE ENTITY TRAFFIC ENGINEER), FIRE HYDRANT, MAIL BOX, ABOVE-GROUND ELECTRICAL TRANSFER BOX, OR BLOCK WALL HIGHER THAN 2 FEET.

5. THE CENTERLINES OF THE DRIVEWAYS ON OPPOSITE SIDES OF THE STREET AT A MEDIAN OPENING SHOULD BE WITHIN 10' FROM EACH OTHER AT THE MEDIAN OPENING.

6. GEOMETRICS APPLY TO NEW CONSTRUCTION ONLY, AND EXCEPTIONS MAY BE GRANTED BY THE APPROVAL OF THE AGENCY TRAFFIC ENGINEER BASED ON SITE CONSTRAINTS.

7. HANDICAPPED ACCESSIBLE SIDEWALKS SHALL BE PROVIDED ADJACENT TO DRIVEWAYS TO THE P.C. OF THE ONSITE CURB RETURN, MINIMUM, OR AT AN ALTERNATE LOCATION.

8. WHEN A PROPERTY LINE FALLS IN A MEDIAN OPENING A JOINT DRIVEWAY AGREEMENT SHALL BE REQUIRED OR NO DRIVEWAY WILL BE ALLOWED.

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DATE 02-09-06    DWG. NO. 222.1    SHEET 1 OF 2
THROAT DEPTH FOR SECURITY GATE
50' MINIMUM FOR 1 TO 49 HOMES OR APT. UNITS TO VISITOR CALL BOX.
100' MINIMUM FOR 50 TO 100 HOMES OR APT. UNITS TO VISITOR CALL BOX.
GREATER THAN 100 HOMES OR APT. UNITS REQUIRE TRAFFIC STUDY

DIMENSIONS FOR SECURITY GATE
CONTROLLED DRIVEWAY DETAIL

D. ISLAND LENGTH-20' MINIMUM
   WIDTH- 4' MINIMUM
G. 15' MINIMUM
E. 48' MINIMUM
H. 8' MINIMUM & 15' MAXIMUM

DETAIL FOR SECURITY GATE
CONTROLLED DRIVEWAYS

LOOP DETECTOR
CALL BOX
THROAT DEPTH

SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

COMMERCIAL AND MULTI-FAMILY
SECURITY GATE GEOMETRICS

AGENCY APPROVED

B C H L M N

DATE 02-09-06 DWG. NO. 222.1 SHEET 2 OF 2
1. All residential properties may have only one curb cut except circular driveways as shown.

2. Local ordinances may apply and shall have preference.

3. No driveway shall be located wholly or partially, on or over a utility easement which runs perpendicular to the curb line.

4. No driveway shall be located within 6 feet of a light pole (unless accepted by the entity traffic engineer), fire hydrant, mailbox, above-ground electrical transfer box, block wall higher than 2 feet, or the curb return at a street intersection or alley.

5. Common driveway construction may be permitted at any two residential properties of 60 feet in width or less. The width of the joint driveway shall be a maximum of 24 feet. A joint driveway agreement shall be required. (Except Clark County)

6. Geometrics apply to new construction only, and may vary in existing subdivisions subject to approval of the engineer.

7. Multi-family residential and all non-residential driveways shall conform to the commercial driveway standards.

8. All driveway locations shall be subject to review and approval by the engineer.

9. For curb depression and driveway apron detail, see Std. Dwg. No. 223.

---

**Notes:**

- **W**: Width of driveway
- **12' Min.**: 12' min., 16' max. for 1 or 2 car garage, or 28' max. for 3+ garage

**Effective as of 08/08/2019**

---

**Agency Approved**

---

**Specification Reference**

---

**Uniform Standard Drawings**

**Clark County Area**

---

**Residential Driveway Geometrics**

---

**Date**: 8-12-99  **Dwg. No.**: 222
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.

AGENCY APPROVED

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

RESIDENTIAL DRIVEWAY

WITHOUT ADJACENT SIDEWALK

AGENCY APPROVED

DATE 07-01-16

DWG. NO. 223.1
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 234.
3.00’ DRIVEWAY WIDTH VARIES

4.00’ MINIMUM

2.00’ MAX. SLOPE

5.00’ (TYP.) SIDEWALK

2% MAX. SLOPE

1/4” EXPANSION JOINT

SECTION A-A

NOTE: ELEVATIONS SHOWN ARE TYPICAL

1. NO. 4 BARS AT 16” O.C. BOTH WAYS EXTENDING INTO GUTTER. NO. 4 BARS SHALL BE PLACED 3” ABOVE BOTTOM OF CONCRETE SUPPORTED BY NON-FERROUS CHAIRS APPROVED BY THE ENGINEER.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS FOR INDUSTRIAL USE SHALL BE 8” MIN.

4. WEAKENED PLANE JOINTS SHALL BE EQUALLY SPACED AT 15’ MAX. INTERVALS, SEE STANDARD DRAWING NO. 234.

5. NO UTILITY BOXES AND COVERS ADJACENT TO R-TYPE CURB SHALL BE ALLOWED AT DRIVEWAY LOCATIONS.

NOTES:

PLAN VIEW

6" CONC. SIDEWALK
(SEE NOTE 3)

REINFORCING
(SEE NOTE 1)

MIN. MINIMUM

1.50’ 1.50’ 4.00’

LIP ELEV. 100.125

FL ELEV. 100.00

FC ELEV. 100.125

FG ELEV. 100.52

FG ELEV. 100.60

AGENCY APPROVED B C H L M N

SPECIFICATION REFERENCE

302 AGGREGATE BASE

501 CONCRETE

502 CONCRETE STRUCTURES

505 REINFORCING STEEL

707 JOINT MATERIAL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

COMMERCIAL AND INDUSTRIAL
DRIVEWAY (OPTION A)

DATE 01-01-17 DWG. NO. 224

Effective as of 08/08/2019
NOTES:

1. SEPARATION OF PEDESTRIAN AND VEHICLE TRAFFIC MUST BE MAINTAINED ON SITE.

2. FOR GRADE CHANGES GREATER THAN 3%, VERTICAL CURVES OF AT LEAST 10 FEET MUST BE USED.

3. WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN THE CURB RETURN IN ACCORDANCE WITH STANDARD DRAWING NO. 235.

Typical Cross Section

Area required to be dedicated as an easement

40' B.C.

Typical

Back of Curb

Private Street or Driveway

P.C.

R = 25' MIN.

R/W & Back of Sidewalk

Curbing & Gutter

Flow Line

Public Street

Crown

Normal

Flow Line of Cross Gutter

Street Centerline

8'

Typ.

Typical

Maximun Grade Break

±3%
1. NO. 4 BARS AT 16" O.C. BOTH WAYS EXTENDING INTO GUTTER. NO. 4 BARS SHALL BE PLACED 3" ABOVE BOTTOM OF CONCRETE SUPPORTED BY NON-FERROUS CHAIRS APPROVED BY THE ENGINEER.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS FOR INDUSTRIAL USE SHALL BE 8" MIN.

4. WEAKENED PLANE JOINTS SHALL BE EQUALLY SPACED AT 15' MAX. INTERVALS.

5. THIS DRIVEWAY DESIGN SHALL ALSO BE USED FOR ALLEY INTERSECTIONS, 8" MIN. THICKNESS.

6. SPECIAL DESIGNS SUBJECT TO APPROVAL OF THE ENGINEER.
NOTES:

1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. ADJACENT SPANDREL SHALL BE 6" THICK P.C.C.
APPROVED BY THE ENGINEER

#4 BARS AT 16" CENTERS, BOTH WAYS SUPPORTED BY NON-FERROUS CHAIRS

DRAWING NO. 222.1

R = ACCORDING TO UNIFORM STANDARD DRAWING NO. 222.1

FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.

(SERVICE STATIONS, INDUSTRIAL, LOADING DOCKS, ETC.)

HEAVY DUTY COMMERCIAL DRIVeway

AGGREGATE BASE - SEE NOTE NO. 2

CONCRETE - SEE NOTE NO. 2

NOTES:

1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. ADJACENT SPANDREL SHALL BE 9" THICK P.C.C.

SECTION A-A

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

HEAVY DUTY COMMERCIAL DRIVeway

(SERVICE STATIONS, INDUSTRIAL, LOADING DOCKS, ETC.)

SPECIFICATION REFERENCE

302 AGGREGATE BASE
501 CONCRETE
502 CONCRETE STRUCTURES
505 REINFORCING STEEL
707 EXPANSION JOINT MATERIAL

TT-S-00153A CLASS A SEALANT

DATE 12-14-00 DWG. NO. 226.S3
NOTES:
1. NO. 4 BARS AT 16" O.C. BOTH WAYS CONTINUOUS THROUGH GUTTER. NO. 4 BARS SHALL BE PLACED 3" ABOVE BOTTOM OF CONCRETE.

2. WHEN CONSTRUCTING DRIVEWAY WHERE CURB AND GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB AND GUTTER. DRIVEWAY SHALL BE MONOLITHIC TO A.C. LINE.

3. DRIVEWAY THICKNESS SHALL BE 8" MIN.

Effective as of 08/08/2019
NOTES:
1. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
2. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
3. ADJACENT SPANDREL SHALL BE 9" THICK P.C.C.
FOR DETAIL CONSTRUCTION SEE CROSS GUTTER STANDARD DRAWING NO. 228

AGENCY APPROVED

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

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DATE DWG. NO. 229
1. CONCRETE SHALL BE PLACED MONOLITHICALLY FOR EACH FOUR QUADRANTS OF THE INTERSECTION.
2. LONGITUDINAL AND TRANSVERSE WEAKENED PLANE JOINTS SHALL BE TYPE "C".
3. LONGITUDINAL AND TRANSVERSE CONSTRUCTION JOINTS SHALL BE TYPE "B".
4. FOR JOINT DETAILS SEE STANDARD DRAWING NO. 233.
5. ALL MANHOLES AND WATER VALVES SHALL BE BOXED OUT. SEE DETAIL ON STANDARD DRAWING NO. 232.
6. LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE TIED INTO THE CORNERS OF ALL BOXOUTS. THIS WILL REQUIRE THE ENGINEER TO SHOW ALL UTILITY BOXOUTS ON THE PLANS, AND THE JOINT LAYOUT PATTERNS THAT TIE INTO THEM. WHENEVER POSSIBLE, INTERSECTION OF JOINTS SHALL BE AT 90°, BUT NOT LESS THAN 60° OR GREATER THAN 140°.
7. CONCRETE PAVEMENT PLACED ALONG EXISTING CURB AND GUTTER SHALL HAVE A THICKENED EDGE. SEE STANDARD DRAWING NO. 232.
8. CONCRETE PAVEMENT PLACED ALONG PROPOSED CURB AND GUTTER SHALL BE CONSTRUCTED WITH TYPE "B" JOINT. SEE DETAIL ON STANDARD DRAWING NO. 232.
9. LOCATION OF JOINTS FOR PROPOSED CURB & GUTTER SHALL COINCIDE WITH JOINTS IN CONCRETE PAVEMENT.
10. LANE MARKERS SHALL NOT BE PLACED ON TOP OF ANY JOINT.

NOTES CONTINUED:

CONCRETE ISLAND, LENGTH VARIES
THICKENED EDGE
TYPE "D" JOINTS
VARIES ACCORDING TO WIDTHS OF TRAFFIC & PARKING LANES

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CONCRETE PAVEMENT INTERSECTION
TYPICAL LAYOUT

SPECIFICATION REFERENCE

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DATE DWG. NO. 230
NOTE:

CONCRETE AND BASE THICKNESS TO BE DETERMINED BY ENGINEERING ANALYSIS BASED ON TRAFFIC CONDITIONS, SUBGRADE STRENGTH, QUALITY OF BASE, AND FLEXURAL STRENGTH OF CONCRETE.

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<td>PAVEMENT MARKERS</td>
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AGENCY APPROVED

Effective as of 08/08/2019
**Concrete Pavement Construction Details**

**Type "B" Joint**
- (See Standard Drawing No. 233)

**"L" Type Curb & Gutter**
- (See Standard Drawing No. 216)

**Silicone Joint Sealant**
- See Construction Joint Seal (Detail on Standard Drawing No. 233)

**Boxout Detail**
- Varies

**Thickened Edge Detail**
- 1/2" Radius (Typical)

**Tack on Concrete Island Detail**
- 4" Min.
- 1-1/2" Min.
- 9" No. 4 Rebar □ 36" O.C.

**Agency Approved**
- Effective as of 08/08/2019

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**Specification Reference**
- 409 Concretes Pavement
- 501 Concrete
- 505 Reinforcing Steel
- TT-S-00153A Class A Sealant

---

**Uniform Standard Drawings**
- Clark County Area

**Concrete Pavement Construction Details**

---

**Date**
- DWG. No. 232
CONCRETE PAVEMENT JOINT DETAILS

**TYPE "A" EXPANSION JOINT DETAIL BOXOUT**

- 3/4" PREMOLDED EXPANSION JOINT FILLER
- CONCRETE PAVMT
- BASE
- MANHOLE OR WATER VALVE

**TYPE "C" WEAKENED PLANE JOINT DETAIL SINGLE SAW-CUT**

- 1/8" RADIUS
- SILICONE JOINT SEALANT
- BOND BREAKER MATERIAL (OR) 1" BACKING ROD

**TYPE "C" WEAKENED PLANE JOINT DETAIL DOUBLE SAW-CUT**

- DEFORMED TIE BARS NO. 4 x 30" @ 24" O.C.
- SILICONE JOINT SEALANT
- (SEE CONSTRUCTION JOINT SEAL DETAIL)

**TYPE "D" TIED CONSTRUCTION JOINT DETAIL**

- SEE TYPE "B" CONSTRUCTION JOINT DETAIL FOR KEYWAY DIMENSIONS

**CONSTRUCTION JOINT SEAL DETAIL**

- DEFORMED TIE BARS NO. 4 x 30" @ 24" O.C.
- SILICONE JOINT SEALANT
- (SEE CONSTRUCTION JOINT SEAL DETAIL)

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</table>
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. 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 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 MAY BE ALLOWED AS APPROVED BY THE RTC.
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<td>07-01-16</td>
<td>234.4</td>
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### Notes:

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 approved Type II pavement marking film.

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.

### Diagram:

- Traffic Flow
- 6:1 (typ.) transition (see note 4)
- 10' min.
- 60' typ.
- 30' typ.
- 50' min.
- 100' min.
- Storage length
- ROW
- BCR
- Buses: Exempt
- Buses: Must turn right
- Buses: Must
- Storage lane line
- 8" storage lane line
- 6:1 transition
- See note 2
- See note 1
- See note 3
- See note 4
- BCR
- Bus shelter pad (see standard drawing no. 234.5)
- 8" storage lane line
- 100' min.
- See note 1
- 50' min.
- See note 1
- 60' typ.
- 30' typ.
- Gutter
- Curb
- Sidewalk
- 628
- 2.07'
- 4.13'
- 25.00'
- 23.27'
- 44°
- \( R = 25.00' \)
- \( L = 4.13' \)
- \( T = 2.07' \)
- \( \theta = 23.27' \)
- 44°
**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.
NOTES:

1. ON ALL CURB RETURNS A 1/2" EXPANSION JOINT SHALL BE CONSTRUCTED BETWEEN THE BACK OF CURB AND THE SIDEWALK FOR THE ENTIRE LENGTH OF THE RETURN.

2. THE TYPE II AGGREGATE BASE THICKNESS IS SHOWN ON THE TYPICAL SECTION DRAWINGS LONGITUDINAL WEAKENED PLANE JOINT REQUIRED AT MIDPOINT OF SIDEWALK 10' OR WIDER.

3. LONGITUDINAL WEAKENED PLANE JOINT REQUIRED AT MIDPOINT OF SIDEWALK 10' OR WIDER.

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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SIDEWALK**

**DATE 01-01-17**

**DWG. NO. 234**
OFFSET "T"

ISOLATED "T"

NOTES:

1. THE TYPICAL LOCATIONS OF SIDEWALK RAMPS SHOWN ABOVE ARE INTENDED TO MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). AT LEAST ONE SIDEWALK RAMP SHALL BE CONSTRUCTED OPPOSITE THE INTERSECTING ROADWAY. ADDITIONAL SIDEWALK RAMPS MAY BE REQUIRED BY THE ENGINEER TO PROVIDE A CONTINUOUS UNOBSTRUCTED PEDESTRIAN CIRCULATION PATH AS DEFINED BY THE ADA.

2. SIDEWALK RAMP LOCATIONS SHOWN ARE FOR INTERSECTIONS WITH UNMARKED CROSSWALKS. IF A PEDESTRIAN CROSSING AREA IS MARKED, SIDEWALK RAMPS SHALL BE LOCATED WITHIN THE MARKED CROSSWALKS AS APPROVED BY THE ENGINEER.
"A" AND "B" ARE EQUAL TO 8' WHEN FLOW LINE GRADE IS BETWEEN -2% AND +2%. FOR "A" AND "B" AT OTHER FLOW LINE GRADES, SEE TABLE 1 SHEET 4 THIS DRAWING NO.

RAMP IN CURB RETURN

30' OR MORE RADIUS BACK OF CURB

RAMP OUTSIDE CURB RETURN

VARIABLE HEIGHT MONOLITHIC CURB (SEE NOTE 5)

SECTION C-C

NOTES:
1. SIDEWALK RAMPS OUTSIDE OF THE CURB RETURN SHALL BE LOCATED ADJACENT TO THE RETURN UNLESS OTHERWISE APPROVED.
2. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
3. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.
4. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF THIS DRAWING NO. AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING THE FULL WIDTH OF THE RAMP AND TO A MINIMUM DEPTH OF 24 INCHES. PAVER BLOCKS PERMITTED ONLY IN THE CITY OF BOULDER CITY FOR DETECTABLE WARNING AREAS.
5. CURB MAY BE PLACED AND IS PREFERRED BEHIND BACK OF WALK IF SUFFICIENT RIGHT-OF-WAY OR EASEMENTS EXIST AND AS APPROVED BY THE ENGINEER.
"A" AND "B" ARE EQUAL TO 6.5' WHEN FLOW LINE GRADE IS BETWEEN -2% AND +2%. FOR "A" AND "B" AT OTHER FLOW LINE GRADES, SEE TABLE 2 SHEET 4 THIS DRAWING NO. FOR ALL "A" AND "B" MAX. SIDE SLOPE IS EQUAL TO 1:10.

NOTES:

1. SIDEWALK RAMP WITHIN CURB RETURN SHALL BE LOCATED AT THE MIDPOINT OF CURB RETURN UNLESS OTHERWISE APPROVED.
2. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
3. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.
4. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS DETECTABLE WARNING AREAS.

CASE II SHALL BE USED WHERE R/W AND FIELD CONDITIONS PERMIT.

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

SIDEWALK RAMP

CASE II

DATE 11-10-04 DWG. NO. 235 SHEET 2 OF 4
1. SIDEWALK RAMP WITHIN CURB RETURN SHALL BE LOCATED AT THE MIDPOINT OF CURB RETURN UNLESS OTHERWISE APPROVED.

2. SIDEWALK RAMPS OUTSIDE OF THE CURB RETURN SHALL BE LOCATED ADJACENT TO THE RETURN UNLESS OTHERWISE APPROVED.

3. RAMPS SHALL BE CONSTRUCTED WITH A ROUGH BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

4. WHEN CONSTRUCTING RAMP WHERE CURB & GUTTER EXISTS, COMPLETELY REMOVE INTERFERING PORTIONS OF EXISTING CURB & GUTTER.

5. DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES WHICH COMPLY WITH DETAILS ON SHEET 4 OF THIS DRAWING NO. AND CONTRASTING VISUALLY WITH ADJOINING SURFACES SHALL BE PLACED ON BOTTOM PORTION OF RAMP EXTENDING THE FULL WIDTH OF THE RAMP AND TO A MINIMUM DEPTH OF 24 INCHES. PAVER BLOCKS PERMITTED ONLY IN THE CITY OF BOULDER CITY FOR DETECTABLE WARNING AREAS.

**NOTES:**

- **SIDEWALK RAMP WITHIN CURB RETURN**
- **SIDEWALK RAMP OUTSIDE CURB RETURN**
- **PROFILE**
- **CASE III**

**SPECIFICATION REFERENCE**

<table>
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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SIDEWALK RAMP**

**CASE III**
### Table 1. Transition Lengths for 1:12 Side Slopes

<table>
<thead>
<tr>
<th>Grade (°) &quot;B&quot; to &quot;A&quot;</th>
<th>&quot;A&quot; (FT) MIN.</th>
<th>&quot;B&quot; (FT) MIN.</th>
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<tbody>
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<td>-6 TO -5.01</td>
<td>4.5</td>
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<tr>
<td>-5 TO -4.01</td>
<td>4.5</td>
<td>15.0</td>
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<tr>
<td>-4 TO -3.01</td>
<td>4.5</td>
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<td>-3 TO -2.01</td>
<td>4.5</td>
<td>9.5</td>
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<tr>
<td>-2 TO 2</td>
<td>8.0</td>
<td>8.0</td>
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<tr>
<td>2.01 TO 3</td>
<td>9.5</td>
<td>4.5</td>
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<tr>
<td>3.01 TO 4</td>
<td>12.0</td>
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<td>4.01 TO 5</td>
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<tr>
<td>5.01 TO 6</td>
<td>21.5</td>
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### Table 2. Transition Lengths for 1:10 Side Slopes

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<tr>
<th>Grade (°) &quot;B&quot; to &quot;A&quot;</th>
<th>&quot;A&quot; (FT) MIN.</th>
<th>&quot;B&quot; (FT) MIN.</th>
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<td>4.01 TO 5</td>
<td>10.0</td>
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<tr>
<td>5.01 TO 6</td>
<td>12.5</td>
<td>4.0</td>
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**Note:**
Charts apply to curb with 6" curb face. If curb has greater than a 6" curb face, a special design is required.

**Specimen Reference**: Uniform Standard Drawings, Clark County Area

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<tr>
<td>501 CONCRETE</td>
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<tr>
<td>502 CONCRETE STRUCTURES</td>
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**Sidewalk Ramp Details**

Effective as of 08/08/2019

Effective as of 08/08/2019
NOTES:

1. IF WIDTH OF PLATE IS GREATER THAN 24", A SPECIAL DESIGN IS REQUIRED.

2. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AND ALL GALVANIZING DAMAGED BY FABRICATION OR INSTALLATION SHALL RECEIVE TWO COATS OF ALUMINUM PAINT (GALVONOX OR EQUAL).
**CONCRETE BARRIER RAIL**

**OPERATING SPEED** | **FLARE RATE**
--- | ---
60 | 17.1 MAX
50 | 14.1
40 | 11.1

**NOTES:**
1. TRANSVERSE JOINTS WITH 1" PREMOLDED EXPANSION JOINT FILLER OR 1" OPEN TRANSVERSE JOINTS SHALL BE PLACED AT STRUCTURES. JOINTS IN BARRIER RAIL OVER A STRUCTURE SHALL BE AT THE SAME LOCATION AND OF THE SAME DIMENSION AS THOSE IN THE STRUCTURE.

2. BITUMINOUS PAVING REQUIRED: PAVING SHALL BUTT AGAINST THE BARRIER END ANCHOR SECTION AND SHALL EXTEND FULL WIDTH UNDER THE NORMAL BARRIER RAIL SECTION PLUS 6" MINIMUM 6-INCH DEEP BARRIER. END ANCHORS SHALL BE CONSTRUCTED IN THE FIRST AND LAST 10 LINEAR FEET OF THE FULL HEIGHT BARRIER RAIL RUN. IF TRANSITIONS ARE USED, THE ANCHOR SHALL BE EXTENDED UNDER THE TRANSITION.

**TRANSITION OF END OF BARRIER**

**TO BE USED ONLY IF END IS FLARED**

**SPECIFICATION REFERENCE**

501 CONCRETE

502 CONCRETE STRUCTURES

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**CONCRETE BARRIER RAIL**

**DATE 12-14-00**

**DWG. NO. 237**

Effective as of 08/08/2019
NOTES:
1. PRECAST BUMPER BLOCK TO BE USED IN PARKING LOTS ONLY.
2. GROUT HOLE BEFORE DRIVING SPIKE. AFTER DRIVING SPIKE, FILL HOLE WITH CONCRETE MORTAR AND FINISH FLUSH WITH TOP.

STEEL WIRE BRIDGE SPIKE

TOP VIEW

SIDE VIEW

END VIEW

1/2" DEFORMED BAR TO STAY 1" MIN. INSIDE CONCRETE

GROUT

CONCRETE

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

501 CONCRETE
505 REINFORCING STEEL

PRECAST BUMPER BLOCK

DATE 12-14-00 DWG. NO. 238
TYPE I MONUMENT

501 CONCRETE
621 MONUMENTS
704 BASE AGGREGATE

NOTE:
TYPE I MONUMENTS TO BE SET AT ALL SECTION CORNERS AND 1/4 SECTION CORNERS WHICH FALL WITHIN IMPROVED STREET SECTIONS, AND MARKED IN ACCORDANCE WITH THE 1973 B.L.M. MANUAL OF SURVEYING INSTRUCTIONS.

11" DIA. CAST IRON TRAFFIC COVER

MONUMENT

PLAN

11" DIA. CAST IRON TRAFFIC COVER

CONCRETE

6" MIN.

11-1/8" MIN.

6" MIN.

12" MIN.

3/4" SIZE DRAIN BACKFILL

NON-FERROUS CAP
(SEE DETAIL STANDARD DRAWING NO. 242)
(NOT TO BE MARKED BY CONTRACTOR)

6" DIA. 12" MIN. LENGTH
CLASS "D" CONCRETE MONUMENT.
(SEE DETAIL STANDARD DRAWING NO. 240).

5/8" MINIMUM DIA. REBAR SET A MINIMUM OF 4" BELOW TOP OF CONCRETE AT APPROXIMATE CENTER.

SECTION A-A

STANDARD MONUMENT ASSY.
(CHRISTY GS BOX OR APPROVED EQUAL) WITH CAST IRON MONUMENT LID. NO PART OF ASSEMBLY IS TO TOUCH CONCRETE CYLINDER.
NOTES:
1. TYPE II-A MONUMENTS TO BE SET AT ALL SECTION CORNERS, 1/4 SECTION CORNERS AND
   1/16 SECTION CORNERS WHICH FALL WITHIN UNIMPROVED STREET SECTIONS.
2. TYPE II-B MONUMENTS TO BE SET AT ALL 1/16 SECTION CORNERS WHICH FALL WITHIN
   IMPROVED STREET SECTIONS.
3. ALL TYPE II MONUMENTS ARE TO BE MARKED IN ACCORDANCE WITH THE 1973 B.L.M.
   MANUAL OF SURVEYING INSTRUCTIONS.
4. 6" x 6" SQUARE MONUMENTS ARE ALSO ACCEPTABLE.
5. IF MONUMENTS ARE TO BE "PRECAST" THEY ARE TO BE EMBEDDED IN FRESH CONCRETE TO
   PREVENT MOVEMENT.
6. THE COUNTY/CITY SURVEYOR MAY REQUIRE TYPE II MONUMENTS IN ADDITIONAL LOCATIONS.

SURFACE OF UNPAVED STREET

SECTION A-A
TYPE II-A
UNPAVED STREET

SECTION A-A
TYPE II-B
PAVED STREET

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE II MONUMENT

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<tbody>
<tr>
<td>501 CONCRETE</td>
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<tr>
<td>621 MONUMENTS</td>
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</tbody>
</table>

DATE 12-14-00  DWG. NO. 240
NOTES:
1. TYPE III MONUMENTS TO BE SET AT ALL CENTERLINE CONTROL POINTS NOT OTHERWISE IDENTIFIED BY A TYPE I OR TYPE II MONUMENT, INCLUDING STREET INTERSECTIONS, POINTS OF CURVATURE, POINTS OF TANGENCY, POINTS OF INTERSECTION AND CENTERS OF HAMMERHEAD TURNAROUNDS OR CIRCULAR CUL-DE-SACS.
2. THE REGISTERED LAND SURVEYOR'S NUMBER, AND A PUNCH MARK ARE TO APPEAR ON THE SURFACE OF THE CAP.

CAP TO BE SECURED WITH PLASTIC INSERT OR EPOXY CONFORMING TO A.S.T.M. C881-78 SPECIFICATIONS.

5/8" MIN. DIA. REBAR OF SUFFICIENT LENGTH TO RESIST REMOVAL

NOTE:
( MINIMUM 1" DIA. NON-FERROUS CAP TO BE SET BY REGISTERED LAND SURVEYOR )

TYPE III MONUMENT
NOTES:

1. FOUR (4) TYPE IV REFERENCE MONUMENTS TO BE SET WITHIN A RADIUS OF TWENTY (20) TO ONE HUNDRED (100) FEET FROM ALL TYPE I, II, AND III MONUMENTS.

2. THE TIE DISTANCE AND THE INITIALS R.M. ARE TO BE STAMPED ON THE CAP, FOR TYPE IV MONUMENTS.

3. NON-FERROUS CAP TO BE MADE FROM CAST VIRGIN METAL IN ONE PIECE, FREE FROM CASTING IMPERFECTIONS, WITH CORRUGATED SHAFT.

4. TYPE III AND TYPE IV MONUMENT CAP DIAMETER MAY BE REDUCED TO 1".

DETAIL

STANDARD CAP

NON-FERROUS CAP (SEE DETAIL)
INSET IN TOP OF CURB, BONDED SECURELY WITH EPOXY.
(A.S.T.M. C881 - 78 SPECS.)

TYPE IV-A MONUMENT
EXISTING CURB & GUTTER

TYPE IV-B MONUMENT
NO CURB & GUTTER

MINIMUM 5/8" DIA. REBAR SET A MINIMUM OF 4" BELOW TOP OF CONCRETE AT APPROX. CENTER.

MIN. 12"

CONCRETE
TYPICAL MONUMENT LOCATION

LEGEND

P.C. - POINT OF CURVE
P.R.C. - POINT OF REVERSE CURVE
P.T. - POINT OF TANGENCY
LC - CENTERLINE
B.C. - BACK OF CURB
P.I. - POINT OF INTERSECTION
R/W - RIGHT-OF-WAY

- TYPE I, II, OR III MONUMENT
- TYPE III MONUMENT
- TYPE IV A OR IV B REFERENCE MONUMENT

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL MONUMENT LOCATION

DATE | DWG. NO. | 243
**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**DATE DWG. NO.**

244.1

**TYPICAL LANE LINE**

**DELINEATION**

**TYPE 4 LANE LINE**

(DIVIDED, UNDIVIDED OR ONE-WAY ROADWAY)

10' 30'

3'-4" 40'

TYPE A

TYPE F

633 PAVEMENT MARKERS

AGENCY APPROVED

C

H L M N

Effective as of 08/08/2019

Typical Lane Line

Delineation

DATE 4-8-99 DWG. NO. 244.1
120 FT. STREET WITH BIKE LANE
(WITHOUT PARKING)

100 FT. STREET WITH BIKE LANE
(WITH PARKING/EMERGENCY LANE)

120 FT. STREET WITH BIKE LANE
(WITHOUT PARKING)

100 FT. STREET WITH SHARED
BIKE/VEHICLE LANE (WITHOUT PARKING)

NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244.1.
2. IN SOME CASES, A MEDIAN WILL EXIST INSTEAD OF TWO-WAY LEFT TURN LANE.
3. BIKE LANE MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE.
   HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
4. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED TO 11 FT.
   WIDTHS OF INTERIOR TRAVEL LANES MAY VARY FROM 12 FT. TO 16 FT.
   THE WIDTH OF TRAVEL LANES ADJACENT TO BIKE LANES MAY VARY FROM 12 FT. TO 16 FT.
5. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.

SPECIFICATION REFERENCE
628 PAINTING TRAFFIC STRIPING
633 PAVEMENT MARKERS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL DELINEATION FOR ROADWAYS
100 FT. OR GREATER RIGHT-OF-WAY
WITH CURBSIDE SIDEWALK

AGENCY APPROVED

B C H L M N

DATE 7-10-03 DWG. NO. 244.2
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244.1.
2. BIKE LANE TO BE PROVIDED IF SEGMENT CONNECTS TO OTHER BIKE LANES OR IF ROADWAY SEGMENT IS 1 MILE OR GREATER. IF BIKE LANE IS NOT PROVIDED, TRAVEL LANES SHOULD REMAIN AT DIMENSIONS SHOWN SO A BICYCLE LANE COULD BE PROVIDED IN THE FUTURE. SEE DRAWING NUMBER 246.1 FOR BIKE LANE SIGNING AND STRIPING DETAILS.
3. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.
4. CONTACT THE LOCAL JURISDICTIONAL FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.
NOTES:

1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244.1.
2. IN SOME CASES, A MEDIAN WILL EXIST INSTEAD OF TWO-WAY LEFT TURN LANE.
3. BIKE LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE. HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
4. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR TRAVEL LANES MAY BE REDUCED TO 11 FT.
5. ALL CURB LANE ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.

Agency Approved

Specifications Reference

628 Painting Traffic Striping
401 Pavement Markers

Uniform Standard Drawings

Clark County Area

Typical Delineation for Roadways

100 FT. Right-Of-Way

With Curbside Sidewalk

Date 3-9-06

Dwg. No. 244.4
NOTES:

1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NOS. 244 & 244.1.
2. BIKE LANE MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE. HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR TRAVEL LANE MAY BE REDUCED TO 11 FT.
4. ALL CURB LINES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT IF CURB AND GUTTER DO NOT EXIST.
NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244.1.
2. BIKE LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE.
   HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. WHERE 6 FT. SIDEWALK EXISTS, WIDTH OF MEDIAN MAY BE REDUCED BY 2 FT. OR
   TRAVEL LANES MAY BE REDUCED TO 11 FT.
4. ALL CURB LANES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT
   IF CURB AND GUTTER DO NOT EXIST.

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<tr>
<th>SPECIFICATION REFERENCE</th>
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<tbody>
<tr>
<td>628 PAINTING TRAFFIC STRIPING</td>
<td>CLARK COUNTY AREA</td>
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TYPICAL DELINEATION FOR ROADWAYS 80 FT. RIGHT-OF-WAY WITH CURBSIDE SIDEWALK

DATE 7-10-03  DWG. NO. 244.5  SHEET 2 OF 2
### Notes:
1. Lane line delineation shall comply with standard drawing No. 244 & 244.1.
2. Bike lanes to be provided if segment connects to other bike lanes or if roadway segment is 1 mile or greater. If bike lane is not provided, travel lanes should remain at dimensions shown so a bicycle lane could be provided in the future. See drawing number 246.1 for bike lane signing and striping details.
3. All curb lanes are measured to lip of gutter or edge of pavement if curb and gutter do not exist.
4. Contact the local jurisdiction for development requirements for the area between the curb and sidewalk.

### Uniform Standard Drawings

**Clark County Area**

**Supplemental Drawing**

**Typical Delineation for Roadways**

**Complete Street Alternative**

**Agency Approved**

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<th>Specification Reference</th>
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<th>Clark County Area</th>
<th>Supplemental Drawing</th>
<th>Typical Delineation for Roadways</th>
<th>Complete Street Alternative</th>
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**Date** 07-01-12  **DWG. No.** 244.6.S1

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**Notes:**
1. Lane line delineation shall comply with standard drawing No. 244 & 244.1.
2. Bike lanes to be provided if segment connects to other bike lanes or if roadway segment is 1 mile or greater. If bike lane is not provided, travel lanes should remain at dimensions shown so a bicycle lane could be provided in the future. See drawing number 246.1 for bike lane signing and striping details.
3. All curb lanes are measured to lip of gutter or edge of pavement if curb and gutter do not exist.
4. Contact the local jurisdiction for development requirements for the area between the curb and sidewalk.
NOTES:
1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244.1.
2. BIKE LANES MUST BE A MINIMUM OF 4 FT. AND NO GREATER THAN 8 FT. WIDE.
   HOWEVER, A WIDTH OF 5 FT. IS PREFERRED.
3. ALL CURB LINES ARE MEASURED TO LIP OF GUTTER OR EDGE OF PAVEMENT
   IF CURB AND GUTTER DO NOT EXIST.

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<tr>
<td>633 PAVEMENT MARKERS</td>
<td>TYPICAL DELINEATION FOR BIKE FACILITIES</td>
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<td></td>
<td>60 FT. RIGHT-OF-WAY</td>
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<td>(PARKING ON BOTH SIDES)</td>
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<td>6-8-95</td>
<td>244.7</td>
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NOTES:

1. LANE LINE DELINEATION SHALL COMPLY WITH STANDARD DRAWING NO. 244 & 244.1.
2. BIKE LANES MUST BE A MINIMUM OF 5 FEET WHERE ADJACENT TO A PARKING LANE, 4 FEET MINIMUM IN OTHER CASES AND NO GREATER THAN 8 FEET WIDE.
3. ALL CURB LANES ARE MEASURED TO THE EDGE OF PAVEMENT. THE TOP OF PAVEMENT SHALL BE FLUSH WITH GUTTER.
4. BICYCLE LANE SHALL BE ON RIGHT SIDE OF ONE-WAY ROADWAYS, EXCEPT IN LIMITED SITUATIONS, SUCH AS WHEN THERE ARE SIGNIFICANTLY LESS POTENTIAL CONFLICTS ALONG THE LEFT SIDE OF THE ROADWAY OR WHEN SIGNIFICANT BICYCLE TRIP GENERATION ARE ALONG THE LEFT SIDE OF THE ROADWAY.
5. SEE DRAWING NO. 244.9 FOR BIKE LANE SIGNAGE DETAILS.
BIKE LANE DELINEATION AND LEGEND

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.
BIKE LANE DELINEATION AND LEGEND

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

DATE 01-01-16  DWG. NO. 244.9.S1
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**Typical Centerline Delineation**

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<tr>
<td>6-11-93</td>
<td>244</td>
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TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS

STORAGE 300' TYP.
TAPER 115.37' TYP.
STORAGE VARIES (150' MIN.)
TRANSITION 225' TYP.
200' RADIUS
250' SYMMETRICAL RADIUS
REVERSE CURVES
62.45' TYP.
FOR REVERSE CURVE TAPER
STORAGE 660' TYP.
TAPER 99.5' TYP.
TRANSITION 225' TYP.
SYMMETRICAL REVERSE CURVE
(Straight line taper may be substituted as approved by engineer)

FOR ROADWAYS WITH DEDICATED BIKE LANE, REDUCE MEDIAN WIDTH TO 2 FT. AND OUTSIDE TRAVEL LANES TO 11 FT.

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL
CASE I - WITH CURBSIDE SIDEWALK

SPECIFICATION REFERENCE

CLARK COUNTY AREA

TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL
CASE I - WITH CURBSIDE SIDEWALK

DATE 7-10-03 DWG. NO. 245.1 SHEET 1 OF 2

Effective as of 08/08/2019
**TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL**

**CASE II - WITH CURBSIDE SIDEWALK**

- **300’ TYP. STORAGE**
- **605’**
- **225’ TYP. TRANSITION**
- **45:1**
- **50’ TYP.**
- **100’**
- **62.45’ TYP. FOR REVERSE CURVE TAPER**
- **100’ RADIUS**
- **STORAGE VARIES (150’ MIN.)**

**FOR ROADWAYS WITH DEDICATED BIKE LANE, REDUCE TWO-WAY LEFT LANE TO 12 FT., MEDIAN ISLAND TO 2 FT., AND OUTSIDE TRAVEL LANES TO 11 FT.**

**EXCLUSIVE RIGHT TURN LANE**

- **ADDITIONAL 10’ RIGHT-OF-WAY DEDICATION REQUIRED FOR EXCLUSIVE RIGHT TURN LANE**

**SYMETRICAL REVERSE CURVE**

- **(STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)**

**SPECIFICATION REFERENCE**

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</table>
| **CLARK COUNTY AREA**
| TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL
| CASE II - WITH CURBSIDE SIDEWALK |

**DATE 7-10-03**  **DWG. NO. 245.1**  **SHEET 2 OF 2**
SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.
TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL CASE II - WITH OFFSET SIDEWALK

TYPICAL LANE CONFIGURATION FOR MAJOR STREET INTERSECTIONS AND MEDIAN DETAIL CASE II - WITH OFFSET SIDEWALK

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE

BIKE LANE

SIDEWALK

BUFFER

BIKE LANE

SIDEWALK

BUFFER

NOTES:
1. SIDEWALK SHOULD BE OFFSET THROUGH THE INTERSECTION WITH A CURB RAMP CONNECTING THE SIDEWALK TO THE CROSSWALK. NO ABOVE GROUND OBJECTS SHALL BE PLACED WITHIN THE SIDEWALK. CONTACT THE LOCAL JURISDICTION FOR DEVELOPMENT REQUIREMENTS FOR THE AREA BETWEEN THE CURB AND SIDEWALK.

STORAGE VARIIES (150' MIN.)

ASYMMETRICAL REVERSE CURVE (STRAIGHT LINE TAPER MAY BE SUBSTITUTED AS APPROVED BY ENGINEER)

CONTACT THE LOCAL JURISDICTION FOR THE AREA BETWEEN THE CURB AND SIDEWALK.
NOTE:
SEE SHEET 3 THIS DRAWING NUMBER IF PATTERN IS TO BE USED AT A GORE POINT TO DIVIDE TRAFFIC MOVING IN SAME DIRECTION.

FORM ENTIRE ISLAND USING RAISED PAVEMENT MARKER PATTERN FOR TRANSITION AREA

T OR L \( \frac{(W \times X)^2}{S^2} \times \frac{60}{(\text{DESIGN SPEED} \leq 40 \text{ MPH OR LESS})} \)
\( \frac{(W \times X)^2}{S^2} \times \frac{60}{(\text{DESIGN SPEED} > 40 \text{ MPH OR GREATER})} \)

SEE DETAIL "A" SHT. 2 THIS DRAWING NO.
SEE DETAIL "B" SHT. 2 THIS DRAWING NO.

BEGINNING OF LANE TRANSITION END 4 LANE RAISED PAVEMENT MARKER PATTERN

TYPE "F"

TYPE "A"

3' TYP.

4' TYP.

14' STORAGE LANE TYP.

MARKER PATTERN AGENCY APPROVED

Effective as of 08/08/2019

SPECIFICATION REFERENCE

| 628 | PAINTING TRAFFIC STRIPING |
| 633 | PAVEMENT MARKERS |

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL LANE DELINEATION IN TRANSITION SECTIONS

AGENCY APPROVED  B  C  H  L  M  N

DATE 6-11-93  DWG. NO. 245  SHEET 1 OF 3
SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE DWG. NO.

TYPICAL LANE DELINEATION IN TRANSITION SECTIONS

SHEET 2 OF 3 6-11-93 245

628 PAINTING TRAFFIC STRIPING
633 PAVEMENT MARKERS

NOTE:
PAINT MAY BE USED IN LIEU OF TAPE AND/OR RAISED PAVEMENT MARKERS AT THE DISCRETION OF THE ENGINEER.

DETAIL "A"

DETAIL "B"

SOLID YELLOW TAPE

TAPE 24" WIDE YELLOW STRIPES AT 25' O.C. INSIDE MEDIAN PATTERN

TYPE "C"

TYPE "B"

5'

5'

3'

3'

45'

3'

45'
TYPICAL LANE DELINEATION IN TRANSITION SECTIONS WHERE TRAFFIC FLOW IN SAME DIRECTION

**SPECIFICATION REFERENCE**

- **628**: PAINTING TRAFFIC STRIPING
- **633**: PAVEMENT MARKERS

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**TYPICAL LANE DELINEATION IN TRANSITION SECTIONS WHERE TRAFFIC FLOW IN SAME DIRECTION**

**DATE**: 6-11-93  **DWG. NO.**: 245  **SHEET 3 OF 3**
1. STORAGE LENGTH TO BE DETERMINED BY TRAFFIC ENGINEER.
2. SEE DRAWING NO. 244.9 FOR BIKE LANE LEGEND AND SIGNAGE.
3. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE TRAFFIC ENGINEER, INSTALL R3-7R SIGN AND ARROW SYMBOL. PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. APPROVED TYPE II PAVEMENT MARKING FILM SHALL BE USED FOR SYMBOL MARKINGS.
4. SEE DRAWING NO. 246 NOTE 1 FOR STANDARD PAVEMENT MARKERS ADDED TURN LANE.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BICYCLE LANE APPROACH TO INTERSECTION WITH EXCLUSIVE RIGHT TURN LANE

DATE 06-09-11 DWG. NO. 246.1
BICYCLE LANE TRANSITION TO SHARED LANE AT INTERSECTION

06-09-11

6" SOLID WHITE LINE (SEE NOTE 2)

(SEE NOTE 2)

6" SOLID WHITE LINE (SEE NOTE 2)

1. THE ABOVE DETAIL SHOULD BE FOLLOWED IN SITUATIONS WHERE THERE IS NOT ADEQUATE SPACE TO PROVIDE A SEPARATE BICYCLE LANE.

2. SEE DRAWING NUMBER 244.9 FOR BIKE LANE LEGEND AND SIGNAGE.

3. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL R3-7R SIGN AND ARROW SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE. APPROVED TYPE II PAVEMENT MARKING FILM SHALL BE USED FOR SYMBOL MARKINGS.

4. SEE DWG. 246 NOTE 1 FOR STANDARD PAVEMENT MARKERS ADDED TURN LANE.

5. THE ABOVE DETAIL SHOULD BE FOLLOWED IN SITUATIONS WHERE THERE IS NOT ADEQUATE SPACE TO PROVIDE A SEPARATE BICYCLE LANE.

NOTES:

WITH EXCLUSIVE RIGHT-TURN LANE

WITHOUT EXCLUSIVE RIGHT-TURN LANE

UTILITY (ABOVE GROUND) CORRIDOR (IF APPLICABLE)

SIDEWALK

TRAVEL LANES

WITH EXCLUSIVE RIGHT-TURN LANE

WITHOUT EXCLUSIVE RIGHT-TURN LANE

UTILITY (ABOVE GROUND) CORRIDOR (IF APPLICABLE)

SIDEWALK

TRAVEL LANES

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

BICYCLE LANE TRANSITION TO SHARED LANE AT INTERSECTION

DATE 06-09-11  DWG. NO. 246.2
NOTES:

1. FORCED RIGHT-TURN LANES AND LONG RIGHT TURN POCKETS ARE NOT DESIRABLE FOR BICYCLISTS AND SHOULD BE AVOIDED WHEN POSSIBLE.

2. SEE DRAWING NO. 244.9 FOR BIKE LANE DELINEATION, LEGEND, AND SIGNAGE DETAILS.

3. SEE DRAWING NO. 246.6 FOR DETAILS ON THE FORCED TURN LANE.

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<tr>
<td>BICYCLE LANE AT A RIGHT TURN DROP LANE</td>
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<td>7-10-03</td>
<td>246.3</td>
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</table>
BICYCLE LANE DELINEATION AT APPROACH TO INTERSECTION

NOTES:

1. A SOLID BICYCLE LANE STRIPE SHOULD CONTINUE ACROSS DRIVEWAY ACCESS POINTS.
2. SEE DRAWING NO. 244.9 FOR BIKE LANE LEGEND AND SIGNAGE DETAILS.

SPECIFICATION REFERENCE

| 628 | PAINTING TRAFFIC STRIPING |
| 633 | PAVEMENT MARKERS |

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BICYCLE LANE DELINEATION AT APPROACH TO INTERSECTION
WITHOUT EXCLUSIVE RIGHT TURN LANE

DATE  7-10-03   DWG. NO.  246.4
NOTES:

1. SEE DRAWING NUMBER 244.9 FOR BIKE LANE LEGEND AND SIGNAGE DETAILS.

2. USE 2 FOOT LONG SKIP LINE, 8 FEET ON CENTER, FOR LOCATIONS WITH BUS STOPS. FOR TYPICAL BUS STOP, TRANSITION FROM SOLID LINE TO SKIP LINE FOR 150 FEET CENTERED ON BUS STOP.
TYP. DROP LINE LENGTHS

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<td>40</td>
<td>480</td>
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<tr>
<td>45</td>
<td>560</td>
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<tr>
<td>50</td>
<td>640</td>
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<td>55</td>
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FORCED LEFT TURN LANE

FORCED RIGHT TURN LANE

NOTES:

1. THE MINIMUM LENGTH OF STORAGE LINE 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 LINE.
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. SYMBOLS SHALL BE APPROVED TYPE II PAVEMENT MARKING FILM.
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. LENGTH OF STORAGE LANE LINE IS TWO THIRDS OF THE TURN LANE STORAGE LENGTH.
2. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL ARROW SYMBOL PAVEMENT MARKINGS FOR THE LENGTH OF THE STORAGE LINE.
3. PAVEMENT MARKINGS SHALL BE TYPE I TAPE OR PAINT AS DIRECTED BY THE ENGINEER.
4. INSTALL "NO PARKING" SIGNS FOR ENTIRE LENGTH OF TURN LANE. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, INSTALL R3-7R SIGNS.
NOTES

1. THE MINIMUM LENGTH OF DOTTED LINES IS 150' FT. ON MAJOR/MAJOR INTERSECTION.

2. A MINIMUM OF 1 @ R3-7R AND R3-BE; 1 @ USD 246.10 SIGNS SHALL BE INSTALLED IN ADVANCE OF THE INTERSECTION AT DISTANCES APPROVED BY THE ENGINEER. RECOMMENDED LOCATIONS ARE SHOWN ABOVE.

3. DOTTED WHITE LINES SHALL NOT BE RAISED PAVEMENT MARKERS.
NOTES:

1. THE MINIMUM LENGTH OF DOTTED LINES TO BE 100 FT.
2. A MINIMUM OF 1 @ R3-7R AND R3-BE; 1 @ USD 246.10 SIGNS SHALL BE INSTALLED IN ADVANCE OF THE INTERSECTION AT DISTANCES APPROVED BY THE ENGINEER. RECOMMENDED LOCATIONS ARE SHOWN.
3. DOTTED WHITE LINES SHALL NOT BE RAISED PAVEMENT MARKERS.
ADDED LEFT TURN LANE

TYPICAL LEFT TURN MEDIAN DETAIL

ADDED RIGHT TURN LANE

NOTES:
1. LENGTH OF STORAGE LINE IS TWO THIRDS OF THE ADDED TURN BAY. (MIN. 100')
2. WHERE ADDITIONAL MOTORIST GUIDANCE IS DEEMED NECESSARY BY THE ENGINEER, 
INSTALL R3-7R SIGN AND ARROW SYMBOL PAVEMENT MARKINGS 
FOR THE LENGTH OF THE STORAGE LINE. SYMBOLS SHALL BE APPROVED TYPE II 
PAVEMENT MARKING FILM.
3. APPROVED TYPE II PAVEMENT MARKING FILM OR RAISED PAVEMENT MARKERS MAY BE 
USED FOR ADDITIONAL GUIDANCE AT THE DISCRETION OF THE ENGINEER.
4. STORAGE LANE LINE SHALL BE APPROVED TYPE I PAVEMENT MARKING FILM OR IF 
APPROVED BY THE ENGINEER, RAISED PAVEMENT MARKERS MAY BE USED.
LANE MARKER SCHEDULE

| TYPE A | CIRCULAR WHITE CERAMIC MARKER |
| TYPE B | CIRCULAR YELLOW CERAMIC MARKER |
| TYPE C | TWO WAY YELLOW REFLECTOR |
| TYPE D | ONE WAY YELLOW REFLECTOR, YELLOW TOWARD ONCOMING TRAFFIC |
| TYPE E | ONE WAY WHITE REFLECTOR, WHITE TOWARD ONCOMING TRAFFIC |
| TYPE F | TWO WAY WHITE AND RED REFLECTOR, WHITE TOWARD ONCOMING TRAFFIC |

**TYPE A & B MARKER DETAIL**

(CLOSE-REFLECTIVE)

- DIA. 4" ± 0.12" ± 0.630" TO 0.750"

**TYPE C, D, E & F MARKER DETAIL**

(REFLECTIVE)

- DIA. 4" ± 0.12" ± 0.725" MAX.

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**SPECIFICATION REFERENCE**

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| UNIFORM STANDARD DRAWINGS |
| CLARK COUNTY AREA |

**MARKER DETAILS AND LANE MARKER SCHEDULE**

DATE 5-13-99  DWG. NO. 247
**SPACING TABLE**

<table>
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<tr>
<th>&quot;W&quot;</th>
<th>NUMBER OR REFLECTORS PER MEDIAN NOSE</th>
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<tbody>
<tr>
<td>1.0’ TO 2.0’</td>
<td>3</td>
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<tr>
<td>2.0’ TO 3.0’</td>
<td>4</td>
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<tr>
<td>3.0’ TO 4.0’</td>
<td>5</td>
</tr>
<tr>
<td>4.0’ &amp; GREATER</td>
<td>1 EACH FOR EVERY 1.0’ OF CURB LENGTH</td>
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**NOTES:**

1. ENTIRE MEDIAN SHALL BE PAINTED WITH REFLECTIVE PAINT, OF SAME COLOR AS REFLECTIVE MARKERS, FROM THE MEDIAN NOSE BACK 5 FEET OR TO THE P.C., WHICHERVER IS GREATER.
2. REFLECTIVE PAVEMENT MARKERS USED ON MEDIAN SHALL CONFORM TO STANDARD DRAWING NO. 247.
3. ORIENTATION OF THE REFLECTIVE MARKERS FACES SHALL BE MADE IN THE FIELD TO ENSURE THAT MARKERS ARE AIMED AT APPROACHING VEHICLES TO BEST ADVANTAGE, ESPECIALLY IN HORIZONTALLY CURVED ROAD SECTIONS.
NOTES:

1. ALL COMPONENTS SHALL BE MINIMUM 12 GA. SQUARE POST WITH 7/16" PUNCHED THRU HOLES 1" ON CENTER, ON ALL FOUR SIDES. ANCHORS SHALL BE TWO PIECE BREAKAWAY ANCHORS.
2. ATTACH ANCHOR AND SLEEVE TOGETHER PRIOR TO DRIVING INTO GROUND. LEAVE AT LEAST TWO HOLES, BUT NO MORE THAN THREE HOLES ABOVE GROUND OR ABOVE SIDEWALK.
3. FOR SIDEWALK INSTALLATION, DRILL SIDEWALK AND CONCRETE PAD INSTALLATION, DRILL A 3" HOLE (DEPENDENT UPON ANCHOR SIZE), THE CENTER TO BE 6" FROM THE BACK OF SIDEWALK.
4. ATTACH POST TO ANCHORING SYSTEM BY USING AT LEAST TWO 3/8" DIA. DRIVE RIVETS.
5. PROVIDE 4" MINIMUM LAP BETWEEN BOTTOM OF POST AND THE BOTTOM OF THE ANCHOR/SLEEVE ASSEMBLY.
6. SIGNS LARGER THAN 24" x 30" REQUIRE 3/8" x 1-1/2" FENDER WASHERS UNDER DRIVE RIVETS.
7. "U-CHANNEL" POSTS ARE NOT ACCEPTABLE.
8. BOLTS IN LIEU OF DRIVE RIVETS ARE NOT ACCEPTABLE.
9. ALL URBAN SIGN INSTALLATIONS ARE TO BE INSTALLED IN A CONCRETE SIDEWALK, OR IN A CONCRETE PAD (24" x 24" x 4") WHEN NO SIDEWALK EXISTS.
10. INSTALLATION OF SIGNS SHALL MEET LATEST ADA REQUIREMENTS.
11. SIGNS SHALL HAVE A STICKER AT THE BACK WITH THE NAME OF THE CONTRACTOR AND THE DATE OF INSTALLATION.
NOTES:

1. ALL COMPONENTS SHALL BE SQUARE POST, PERFORATED ON ALL FOUR SIDES.

2. ATTACH ANCHOR AND SLEEVE TOGETHER PRIOR TO DRIVING INTO GROUND. LEAVE AT LEAST ONE HOLE, BUT NO MORE THAN TWO, ABOVE GROUND OR ABOVE SIDEWALK.

3. FOR SIDEWALK INSTALLATION, DRILL SIDEWALK WITH A 3" HOLE, THE CENTER TO BE 6" FROM BACK OF SIDEWALK.

4. ATTACH POST TO ANCHORING SYSTEM BY USING AT LEAST TWO 3/8" DIA. DRIVE RIVETS.

5. PROVIDE 4" MINIMUM LAP BETWEEN POST AND THE ANCHOR/SLEEVE ASSEMBLY.

6. ALL STREET NAME SIGNS SHALL BE 9 INCH STANDARD IN THE CITY OF MESQUITE ONLY.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STANDARD STREET NAME SIGN POST INSTALLATION

<table>
<thead>
<tr>
<th>AGENCY APPROVED</th>
<th>B</th>
<th>C</th>
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631 STREET NAME SIGNS

DATE 5-20-04 DWG. NO. 249
**NOTES:**

1. SIGN SHALL BE WHITE LETTERS AND NUMBERS ON GREEN BACKGROUND. (THE CITY OF NORTH LAS VEGAS BACKGROUND IS BLUE.) CUT-OUT LETTERS AND NUMBERS ARE NOT ACCEPTABLE (EXCEPT FOR THE BLOCK NUMBER).

2. REFLECTIVE SHEETING MATERIAL SHALL BE TYPE XI.

3. PRIMARY COPY FOR 9" AND 12" SIGNS SHALL BE 6" SERIES 'C' UPPERCASE WITH 4 1/2" SERIES 'C' LOWERCASE. HOWEVER, WHEN DESCENDERS ARE REQUIRED ON 9" SIGNS, PRIMARY COPY SHALL BE 5 1/2". ORDINAL, SUFFIX AND BLOCK NUMBER SHALL BE 3" SERIES 'C' UPPERCASE. (ORDINAL MAY BE OMITTED FROM 12" SIGNS, EXCEPT IN CLARK COUNTY.) SPACING BETWEEN LETTERS SHALL BE AS ON SHEET 2 OF THIS DRAWING.

4. THE SIGN SHALL HAVE A MINIMUM LENGTH OF 30". WHERE EXTRA LENGTH IS REQUIRED, IT SHALL BE PROVIDED IN 6" INCREMENTS. GROUND MOUNTED SIGNS SHALL HAVE A MAXIMUM LENGTH OF 42".

5. BOTH SIGNS PLACED ON MAJOR OR STREETS WITH RIGHTS-OF-WAY 80' OR GREATER SHALL HAVE A HEIGHT OF 12". SIGNS PLACED ON MINOR STREETS WITH RIGHTS-OF-WAY OF LESS THAN 80' SHALL HAVE A HEIGHT OF 9".

6. 12" SIGNS SHALL HAVE A 1/2" WHITE BORDER AT THE EDGE.

7. SIGN BLANKS SHALL HAVE ROUNDED CORNERS.

---

**SPECIFICATION REFERENCE**

<table>
<thead>
<tr>
<th>631</th>
<th>STREET NAME SIGNS</th>
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</thead>
<tbody>
<tr>
<td>716</td>
<td>SIGN MATERIALS</td>
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</table>

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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**STREET NAME SIGNS**

**FACE COPY**

AGENCY APPROVED

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<thead>
<tr>
<th>B</th>
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<table>
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<tr>
<th>DATE</th>
<th>07/01/12</th>
<th>DWG. NO.</th>
<th>250</th>
<th>SHEET 1 OF 2</th>
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</thead>
</table>

Effective as of 08/08/2019
SPACING OF STREET NAME SIGN LEGENDS

SPACING FOR STREET NAME SIGN LEGENDS SHALL BE OBTAINED BY MODIFICATION TO THE REQUIREMENTS OF THE FHWA STANDARD SPACING CHART FOR 6" UPPERCASE LETTERS. THE FOLLOWING STEPS SHALL BE USED TO DETERMINE REQUIRED SPACING:

1. SIGN LAYOUT COMPUTER SOFTWARE SHALL BE EVALUATED TO DETERMINE THE "CORRECTION FACTOR" NECESSARY FOR LAYOUT SOFTWARE LETTER SPACING TO BE APPROXIMATELY EQUAL TO THE FHWA STANDARD SPACING FOR UPPERCASE LETTERS.
2. CORRECTION FACTOR SHALL BE USED TO ADJUST THE SPACING FOR THE LOWERCASE LETTERS.
3. SPACING FOR STREET NAME SIGN LEGENDS SHALL BE EQUAL TO \(\frac{110}{100}\) OF THE "CORRECTED" LAYOUT SOFTWARE LETTER SPACING.

(SAME STEPS ARE TO BE FOLLOWED WHEN FONT SIZE OF LEGEND IS REDUCED IN ORDER NOT TO EXCEED THE MAXIMUM LENGTH LIMITATIONS.)

IF LEGEND SPACED ACCORDING TO RECOMMENDED PROCEDURE ABOVE EXCEEDS THE MAXIMUM ALLOWABLE SIGN LENGTH (42" FOR GROUND-MOUNTED), THE FOLLOWING ACTIONS, LISTED IN PRIORITY ORDER, SHALL BE TAKEN TO REDUCE LENGTH OF THE SIGNBLANK.

A. REDUCE THE FONT TO 5 1/2" SERIES 'C'.
B. REDUCE THE SPACING TO 100% OF THE "FEDERAL STANDARD".
C. REDUCE THE FONT TO 5 1/2" SERIES "B".
D. CONSIDER ABBREVIATING ANY LEGEND WORDS WHICH ARE EXTREMELY COMMON (I.E., "MTN" FOR "MOUNTAIN") SUCH ABBREVIATIONS MUST BE APPROVED BY THE TRAFFIC ENGINEER AND THE FIRE DEPARTMENT.
E. REDUCE THE LEADING AND TRAILING BLANK GREEN SPACE BY 50%.
F. CONSTRUCT THE SIGN ACCORDING TO THE STANDARD SPACING WHICH WILL BE GREATER THAN 42" IN LENGTH, AND MOUNT ON A STREETLIGHT POLE OR OTHER ELEVATED MOUNT AS APPROVED BY THE TRAFFIC ENGINEER WITH APPROPRIATE SIGN BRACING AND MOUNTING HARDWARE.
STREET NAME SIGNS

SIGN MATERIALS

ALUMINUM BLANK

5052-H38 OR 6061-T6, HEAT-TREATED, HIGH TENSILE, DEGREASED AND ALODINE 1200 FINISH.

THICKNESS TO BE 0.080" FOR SIGNS LESS THAN 36" AND 0.100" FOR SIGNS 36" AND LONGER.

1. FOR SIGN FACE SPECIFICATIONS SEE STANDARD DRAWING NO. 250.

NOTE:

STREET NAME SIGN BLANKS

AGENCY APPROVED

有效日期：2019年08月08日
1. FENCING SHALL BE CHAIN LINK AND SHALL CONSIST OF GALVANIZED CHAIN LINK FABRIC ON STEEL POSTS.
   (A) ALL POSTS TOPS SHALL BE FITTED WITH SUITABLE FINIALS.
   (B) BRACES SHALL BE SPACED APPROXIMATELY 12" BELOW TOP OF TERMINAL POSTS AND SHALL EXTEND FROM END, GATE, OR CORNER POSTS TO FIRST ADJACENT LINE POST.
   (C) ALL FITTINGS SHALL BE HOT-DIPPED GALVANIZED MALLEABLE, CAST IRON, OR PRESSED STEEL.
   (D) TOP AND BOTTOM SELVAGES OF THE FENCE SHALL HAVE A TWISTED AND BARBED FINISH.

2. BARBED WIRE, EXTENSION ARMS, AND TOP HORIZONTAL RAILS SHALL BE INSTALLED ONLY WHEN SHOWN ON THE PLANS AND/OR CALLED FOR IN THE SPECIAL PROVISIONS.

**NOTES:**

1. **CHAIN LINK FENCING (72 INCH HIGH OR LESS)**

**TABLE I**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>MIN. SIZE</th>
<th>MIN. WEIGHT</th>
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<tr>
<td>END, CORNER &amp; PULL</td>
<td>2.351 O.D.</td>
<td>3.10</td>
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<tr>
<td>LINE</td>
<td>2.00 O.D.</td>
<td>2.72</td>
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<tr>
<td>BRACES</td>
<td>1.630 O.D.</td>
<td>2.27</td>
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<tr>
<td>TOP RAIL</td>
<td>1.630 O.D.</td>
<td>2.27</td>
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</tbody>
</table>
### Chain Link Gates

**Double Swing Gate**
- Steel drop bar (1/2" #)
- Chain link fabric
- Concrete
- Top hinge (180° swing)
- Bottom hinge (180° swing)
- Truss rods
- Stretcher rods
- Truss rods (3/8" round rod w/ take-up)
- Concrete 10' max.

**Single Gate**
- Steel drop bar (1/2" #)
- Chain link fabric
- Concrete
- Top hinge (90° swing)
- Bottom hinge (90° swing)
- Fabrics band
- Concrete 10' max.

### Gate Swing Post Dia. Pipe Dia.

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<th>Gate Swing Post Dia.</th>
<th>Gate Size</th>
<th>Pipe Dia.</th>
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### Agency Approved

**Agency Approved**

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### Specification Reference

**Uniform Standard Drawings**

**Clark County Area**

**Chain Link Gates**

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<td>501 CONCRETE</td>
<td>253</td>
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<tr>
<td>616 FENCING</td>
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SPECIFICATION REFERENCE

DATE DWG. NO.

CROSSWALK MARKINGS - TYPE II

48" MIN.

TYPICAL MARKING
CURB RAMP IN MIDDLE OF CURB RETURN

3' MIN.

CURB LINE PROJECTED (TYP.)

NOTE:

USE MARKING PER OPTIONAL DETAIL IF NECESSARY TO OBTAIN 3' MINIMUM CLEARANCE BETWEEN CROSSWALK AND CURB LINE PROJECTED.

NOTE:

8-12-99

CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS SUPPLEMENTAL DRAWING

AGENCY APPROVED B H L M N

UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

CROSSWALK MARKINGS - TYPE II

DATE 8-12-99  DWG. NO. 254.1.S1

Effective as of 08/08/2019
TYPICAL CROSSWALK
STRIPING DETAIL

2' TYP
10' TYP
2' TYP
5' TYP
4' MIN
2' WIDE BARS TO BE CENTERED BETWEEN LANE LINES AND ON LANE LINES (TYP)
3' MIN

MEDIAN ISLAND (AS APPLICABLE)
LANE LINES

SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CROSSWALK MARKINGS - TYPE I

REVISIONS

DATE 11-12-09
DWG. NO. 254

Effective as of 08/08/2019
NOTES:
1. 12 FOOT WIDTH IS RECOMMENDED. 10 FOOT WIDTH IS ALLOWABLE ALONG A PATH PARALLEL TO A ROADWAY OR WHERE SPACE IS LIMITED. PAVEMENT AND BASE DEPTH WILL VARY BASED ON SOIL CONDITIONS. PORTLAND CEMENT CONCRETE (PCC) MAY BE USED INSTEAD OF ASPHALT AND PCC MAY BE REQUIRED BY THE LOCAL JURISDICTION.
2. SEE DRAWING NUMBER 255 FOR SHARED USE PATH NOT ALONG A ROADWAY.
3. SEE THE GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, ASSHTO 1999, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ADDITIONAL GUIDELINES AND STANDARDS.
4. SEE LOCAL JURISDICTIONS FOR LANDSCAPING REQUIREMENTS.
5. 3 FOOT LATERAL CLEARANCE RECOMMENDED BETWEEN EDGE OF PATH AND A FIXED OBJECT, 2 FOOT MINIMUM.
6. IF 16 FEET IS NOT AVAILABLE FROM THE BACK OF CURB TO THE RIGHT-OF-WAY LINE, A BICYCLE LANE/ROUTE AND THE SIDEWALK WILL SUBSTITUTE FOR THE PATH. PLACE A PATH ENDS SIGN (W9) 25 FEET IN ADVANCE OF THE PATH ENDING.
TYPICAL TRANSITION SECTION
FROM SHARED USE PATH ALONG
ROADWAY TO SIDEWALK

NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMP DETAILS.
## SIGN SIZES FOR SHARED-USE PATHS

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<tr>
<th>MUTCD CODE</th>
<th>SIGN</th>
<th>MINIMUM SIGN SIZE (IN)</th>
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<td>R1-1</td>
<td>STOP</td>
<td>18 X 18</td>
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<td>R1-2</td>
<td>YIELD</td>
<td>24 X 24 X 24</td>
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<tr>
<td>R3-16, 16A, 17, 17A</td>
<td>BICYCLE LANE</td>
<td>24 X 30</td>
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<tr>
<td>R4-1, 2, 3, 7</td>
<td>MOVEMENT RESTRICTION</td>
<td>12 X 18</td>
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<tr>
<td>R4-4</td>
<td>BEGIN RIGHT TURN LANE YIELD TO BIKES</td>
<td>36 X 30</td>
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<tr>
<td>R5-3</td>
<td>NO MOTOR VEHICLES</td>
<td>24 X 24</td>
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<td>R5-6</td>
<td>BICYCLE PROHIBITION</td>
<td>24 X 24</td>
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<tr>
<td>R7-9, 9A</td>
<td>NO PARKING BIKE LANE</td>
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<td>R9-3A</td>
<td>PEDESTRIANS PROHIBITED</td>
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<td>R9-5, 6</td>
<td>BICYCLE REGULATORY</td>
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<td>R9-7</td>
<td>SHARED-USE PATH RESTRICTION</td>
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<td>R15-1</td>
<td>RAILROAD CROSSBUCK</td>
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<td>TURN AND CURVE WARNING</td>
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<td>W1-6, 7</td>
<td>ARROW WARNING</td>
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<td>STOP, YIELD, SIGNAL AHEAD</td>
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<td>W5-2A</td>
<td>ROAD NARROWS</td>
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<td>W5-4</td>
<td>BIKEWAY NARROWS</td>
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<td>W7-5</td>
<td>HILL SIGN</td>
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<td>W8-1, 2</td>
<td>BUMP OR DIP</td>
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<td>W8-10</td>
<td>BICYCLE SURFACE CONDITION</td>
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<td>W10-1</td>
<td>ADVANCE GRADE CROSSING</td>
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<td>W11-1</td>
<td>BICYCLE CROSSING</td>
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<td>W12-2</td>
<td>LOW CLEARANCE</td>
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<td>W16-1</td>
<td>SHARE THE ROAD PLAQUE</td>
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<td>D11-1</td>
<td>BIKE ROUTE</td>
<td>24 X 18</td>
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<td>BIKE ROUTE MARKER</td>
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<td>BIKE ROUTE MARKER</td>
<td>18 X 24</td>
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<td>M4-11, 12, 13</td>
<td>SUPPLEMENTAL BICYCLE ROUTE GUIDE</td>
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<td>M7-1, 2, 3, 4, 5, 6, 7</td>
<td>ROUTE MARKER SUPPLEMENTAL PLAQUES</td>
<td>12 X 9</td>
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**NOTES:**

1. SIGN TABLE INSERTED FROM MUTCD FOR REFERENCE. SEE CURRENT MUTCD FOR UPDATED INFORMATION.
2. SIGNS R3-16(A), R3-17(A), R4-4, W5-2A, AND W16-1 NOT USED FOR SHARED USE PATHS.
NOTES:

1. USE BOLLARDS ONLY AT LOCATIONS WHERE UNAUTHORIZED ACCESS IS ANTICIPATED. INSTALL EITHER 1 OR 3 (5 FOOT SPACING DESIRABLE) SIX-INCH DIAMETER BY 3 FT. TALL REFLECTORIZED BOLLARDS WHEN NECESSARY. CENTERLINE DELINEATION SHOULD BE PROVIDED AT APPROACH TO INTERSECTION EVEN WHEN BOLLARD IS NOT PROVIDED.

2. ANY OBSTRUCTION IN PATH SHOULD BE REMOVED. IF OBSTRUCTION CANNOT BE REMOVED, OBSTRUCTION MUST BE REFLECTORIZED.

3. USE CENTERLINE DELINEATION AT APPROACHES TO INTERSECTIONS AND AROUND OBSTRUCTIONS IN ALL CASES. ONLY USE CENTERLINE DELINEATION IN OTHER CASES WHERE CONFLICTS BETWEEN USERS TRAVELING IN OPPOSITE DIRECTIONS ARE ANTICIPATED.

### Uniform Standard Drawings

**Agency Approved:**

- **B**: 
- **C**: 
- **H**: 
- **L**: 
- **M**: 
- **N**: 

**Specification Reference**

- **628 PAINTING TRAFFIC STRIPING**
- **633 PAVEMENT MARKERS**

**Delination and Bollared Usage on Shared Use Path**

- **Date**: 7-10-03
- **DWG. No.**: 255.4

Effective as of 08/08/2019

---

**Typical Centerline Delineation Around Obstruction**

**Typical Centerline Delineation at the Beginning and End of a Shared Use Path**

---

**Diagram Details**

- **4" Dashed Yellow Line**
- **4" Solid Yellow Line**
- **ReflectORIZED Obstruction (See Note 2)**
- **ReflectORIZED Bollards (See Note 1)**

---

**Centerline Delineation**

- **Passing Permitted**
- **Passing Prohibited**
NOTES:
1. 12' FOOT WIDTH IS RECOMMENDED. 10 FOOT WIDTH IS ALLOWABLE ALONG A PATH PARALLEL TO A ROADWAY OR WHERE SPACE IS LIMITED. PAVEMENT AND BASE DEPTH WILL VARY BASED ON SOIL CONDITIONS. PORTLAND CEMENT CONCRETE MAY BE USED INSTEAD OF ASPHALT.
2. SEE DRAWING NUMBER 255.1 FOR SHARED USE PATH ALONG A ROADWAY.
3. SEE THE GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, AASHTO 1999, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ADDITIONAL GUIDELINES AND STANDARDS.
4. SEE LOCAL JURISDICTIONS FOR LANDSCAPING REQUIREMENTS.
1. USE ENGINEERING JUDGMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE MUTCD TABLE 2C-4 FOR ADVANCED WARNING PLACEMENT.
3. INSTALL BOLLARDS ONLY AT LOCATIONS WHERE UNAUTHORIZED ACCESS IS ANTICIPATED.
   INSTALL EITHER 1 OR 3 SIX INCH DIAMETER BY 3 FEET TALL BOLLARDS WHEN REQUIRED.
4. SEE DRAWING NO. 201.2 FOR SIGHT VISIBILITY ZONES AT INTERSECTIONS.
5. CONTACT AGENCY’S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-2 SIGN.
**NOTES:**

1. Use engineering judgment to apply this detail to similar scenarios.
2. See Drawing No. 218, 248 for median island. A 15 degree skew angling in direction of oncoming traffic is desirable.
3. See Drawing No. 255.4 for bollards and centerline delineation.
4. See Drawing No. 235, Case III, for sidewalk ramps (use path width feet instead of 5 feet).
5. See Drawing No. 254 and 254.1 for crosswalks.
6. See Drawing No. 255.3 for sign sizes for shared use paths.
7. See Drawing No. 245 (2 of 3) for delineation in transition sections.
8. See MUTCD for advance placement of warning signs.
9. See AASHTO Highways and Streets for sight visibility zones (sight triangles).
10. See street lighting section.
11. Contact agency's traffic engineer to verify if agency prefers to use a W11-1 (bicycle) sign in place of the W11-2 sign.

**SPECIFICATION REFERENCE**

<table>
<thead>
<tr>
<th>628</th>
<th>Painting Traffic Striping</th>
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<tr>
<td>633</td>
<td>Pavement Markers</td>
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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SHARED USE PATH CROSSING**

**TWO LANE ROADWAY**

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<tr>
<td>7-10-03</td>
<td>256.2</td>
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NOTES:
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 218, 248, AND 256.2 FOR MEDIAN ISLAND.
3. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE STRIPING.
4. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE 12 FEET INSTEAD OF 5 FEET).
5. SEE DRAWING NO. 254 AND 254.1.S1 FOR CROSSWALKS.
6. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
7. SEE DRAWING NO. 245 (2 OF 3) FOR DELINEATION IN TRANSITION SECTIONS.
8. SEE MUTCD FOR ADVANCE PLACEMENT OF WARNING SIGNS.
9. SEE AASHTO HIGHWAYS AND STREETS FOR SIGHT VISIBILITY ZONES (SIGHT TRIANGLES).
10. SEE STREET LIGHTING SECTION.
11. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-1 SIGN.
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 218, 248, AND 256.2 FOR MEDIAN ISLAND.
3. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE STRIPING.
4. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE 12 FEET INSTEAD OF 5 FEET).
5. SEE DRAWING NO. 254 AND 254.5.1 FOR CROSSWALKS.
6. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
7. SEE DRAWING NO. 245 (2 OF 3) FOR DELINEATION IN TRANSITION SECTIONS.
8. SEE MUTCD FOR ADVANCE PLACEMENT OF WARNING SIGNS.
9. SEE AASHTO HIGHWAYS AND STREETS FOR SIGHT VISIBILITY ZONES (SIGHT TRIANGLES).
10. SEE STREET LIGHTING SECTION.
11. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-1 SIGN.

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SHARED USE PATH CROSSING
SIX LANE ROADWAY

DATE 7-12-07  DWG. NO. 256.4
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 255.4 FOR BOLLARDS AND CENTERLINE STRIPING.
3. SEE DRAWING NO. 235, CASE III, FOR SIDEWALK RAMPS (USE 12 FEET INSTEAD 5 FEET OF CENTER SECTION OF SIDEWALK).
4. SEE DRAWING NO. 255.3 FOR SIGN SIZES FOR SHARED USE PATHS.
5. SEE TABLE 2C-4 IN MUTCD FOR ADVANCE PLACEMENT OF WARNING SIGNS.
6. SEE DRAWING NO. 256.4 FOR THE AN MID-BLOCK AT-GRADE CROSSING DESIGN.
7. A MINIMUM 8 FOOT CLEARANCE IS REQUIRED FOR THE UNDER CROSSING. GRADES GREATER THAN 5 PERCENT ARE UNDESIRABLE. SEE THE 1999, OR CURRENT EDITION, AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES FOR GRADE RESTRICTIONS IF A 5 PERCENT GRADE IS EXCEEDED.
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE MUTCD FOR GUIDELINES REFERENCED IN FIGURE.
1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.
2. SEE DRAWING NO. 254 AND 254.1.S1 FOR CROSSWALKS.
3. SEE MUTCD FOR ADVANCED PLACEMENT OF WARNING SIGNS.
4. SEE DRAWING NO. 255.5 FOR BOLLARDS AND CENTERLINE STRIPING.
5. SEE DRAWING NO. 256.2 - 256.4 FOR ADDITIONAL CROSSING DETAILS.
NOTES:

1. USE ENGINEERING JUDGEMENT TO APPLY THIS DETAIL TO SIMILAR SCENARIOS.

2. CONTACT AGENCY'S TRAFFIC ENGINEER TO VERIFY IF AGENCY PREFERS TO USE A W11-1 (BICYCLE) SIGN IN PLACE OF THE W11-2 SIGN.
1. INSTALL STREETLIGHT STANDARDS AT INTERSECTIONS INCLUDING "L" AND "T" TYPES, PER STANDARD DRAWINGS 301 THROUGH 310 IN ACCORDANCE WITH THE APPROPRIATE RIGHT-OF-WAY.

2. STREET CLASSIFICATION AND STREETLIGHT STANDARD APPLICATION SHALL BE AS LISTED IN TABLE 1 BELOW. ACTUAL LUMINAIRE WATTAGE AND/OR STREETLIGHT STANDARD SPACING MAY BE VARIED BY THE ENGINEER, WHEN SUPPORTED BY AN APPROVED LIGHTING STUDY IN ACCORDANCE WITH THE IES RECOMMENDED PRACTICE FOR ROADWAY LIGHTING IN ORDER TO MEET CURRENT AND FUTURE TRAFFIC CONTROL NEEDS AND APPROVED BY THE RESPECTIVE AGENCY. AVERAGE LEVELS ARE MAINTAINED LEVELS AT A 0.8 MAINTENANCE FACTOR (0.82 FOR CLARK COUNTY) IN FOOTCANDLES MEASURED HORIZONTALLY AT THE SURFACE.

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>R/W OR MORE</th>
<th>LUMINAIRE (H.P.S.)</th>
<th>AVG. IES LIGHTING LEVEL</th>
<th>IES UNIFORMITY AVG/MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTERIAL 100'</td>
<td>250W</td>
<td>1.58 FC</td>
<td>3:1</td>
<td></td>
</tr>
<tr>
<td>MA: OR COLLECTOR</td>
<td>0'</td>
<td>150W</td>
<td>0.84 FC</td>
<td>4:1</td>
</tr>
<tr>
<td>MINOR COLLECTOR</td>
<td>0'</td>
<td>150W 250W (CC)</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
<tr>
<td>RESIDENTIAL 51'</td>
<td>0'</td>
<td>100W</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
</tbody>
</table>

3. NEW STREETLIGHT STANDARDS INSTALLED ADJACENT TO OR OPPOSITE FROM EXISTING STREETLIGHTS SHALL MATCH THE EXISTING LOCATION, SPACING, POLE AND LUMINAIRE TYPES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. STREETLIGHT STANDARDS INSTALLED ON 60' OR LESS RIGHT-OF-WAYS MAY BE INSTALLED ON EITHER SIDE OF ROADWAY AS DIRECTED BY THE ENGINEER.

5. TRAFFIC SIGNAL FOUNDATIONS AND ADAPTOR PLATES MAY BE REQUIRED AT INTERSECTIONS AS DIRECTED BY THE ENGINEER.

6. AT LEAST ONE STREETLIGHT SHALL BE REQUIRED IN THE BULB SECTION OF A CUL-DE-SAC OR HAMMERHEAD. LOCATION SHALL BE AS REQUIRED BY THE ENGINEER.

Effective as of 08/08/2019
1. INSTALL STREETLIGHT STANDARDS AT INTERSECTIONS INCLUDING "L" AND "T" TYPES, PER STANDARD DRAWINGS 301 THROUGH 310 IN ACCORDANCE WITH THE APPROPRIATE RIGHT-OF-WAY.

2. STREET CLASSIFICATION AND STREETLIGHT STANDARD APPLICATION SHALL BE AS LISTED IN TABLE 1 BELOW. ACTUAL LUMINAIRE WATTAGE AND/OR STREETLIGHT STANDARD SPACING MAY BE VARIED BY THE ENGINEER, WHEN SUPPORTED BY AN APPROVED LIGHTING STUDY IN ACCORDANCE WITH THE IES RECOMMENDED PRACTICE FOR ROADWAY LIGHTING IN ORDER TO MEET CURRENT AND FUTURE TRAFFIC CONTROL NEEDS AND APPROVED BY THE RESPECTIVE AGENCY. AVERAGE LEVELS ARE MAINTAINED LEVELS AT A 0.8 MAINTENANCE FACTOR IN FOOTCANDLES MEASURED HORIZONTALLY AT THE SURFACE.

### TABLE 1

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>RW</th>
<th>LUMINAIRE (INDUCTION)</th>
<th>AVG PHOTOPIC ILLUMINANCE</th>
<th>UNIFORMITY AVG/MIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNALIZED INTERSECTIONS</td>
<td>ALL</td>
<td>250W 5000K CCT</td>
<td>1.80 FC</td>
<td>3:1</td>
</tr>
<tr>
<td>ARTERIAL</td>
<td>100’ OR MORE</td>
<td>150W 5000K CCT</td>
<td>1.24 FC</td>
<td>3:1</td>
</tr>
<tr>
<td>MA/ OR COLLECTOR</td>
<td>80’</td>
<td>150W 5000K CCT</td>
<td>0.49 FC</td>
<td>4:1</td>
</tr>
<tr>
<td>MINOR COLLECTOR</td>
<td>60’</td>
<td>55W 850K CCT</td>
<td>0.17 FC</td>
<td>6:1</td>
</tr>
<tr>
<td>RESIDENTIAL</td>
<td>51’ OR LESS</td>
<td>55W 850K CCT</td>
<td>0.17 FC</td>
<td>6:1</td>
</tr>
</tbody>
</table>

3. NEW STREETLIGHT STANDARDS INSTALLED ADJACENT TO OR OPPOSITE FROM EXISTING STREETLIGHTS SHALL MATCH THE EXISTING LOCATION, SPACING, POLE AND LUMINAIRE TYPES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. STREETLIGHT STANDARDS INSTALLED ON 60’ OR LESS RIGHT-OF-WAYS MAY BE INSTALLED ON EITHER SIDE OF ROADWAY AS DIRECTED BY THE ENGINEER.

5. TRAFFIC SIGNAL FOUNDATIONS AND ADAPTOR PLATES MAY BE REQUIRED AT INTERSECTIONS AS DIRECTED BY THE ENGINEER.

6. AT LEAST ONE STREETLIGHT SHALL BE REQUIRED IN THE BULB SECTION OF A CUL-DE-SAC OR HAMMERHEAD. LOCATION SHALL BE AS REQUIRED BY THE ENGINEER.

7. LUMINARE SPECIFICATIONS (MINIMUM VALUES)
   - 80% LIGHT OUTPUT @ 80,000 HR LIFE
   - SCOTOPIC/PHOTOPIC RATIO OF LIGHT SOURCE 1.8
   - HIGH COLOR RENDITIONS 80 CRI
   - 10 YEAR WARRANTY ON LUMINAIRE AND BALLAST

Effective as of 08/08/2019
1. INSTALL STREETLIGHT STANDARDS AT INTERSECTIONS INCLUDING "L" AND "T" TYPES, PER STANDARD DRAWINGS 301 THROUGH 310 IN ACCORDANCE WITH THE APPROPRIATE RIGHT-OF-WAY.

2. STREET CLASSIFICATION, THE RESPECTIVE LIGHTING LEVELS, AND STREETLIGHT STANDARD APPLICATION IS LISTED IN TABLE 1 BELOW. ACTUAL LUMINARIA WATTAGE AND/OR STREETLIGHT STANDARD SPACING MAY BE VARIED BY THE ENGINEER, WHEN SUPPORTED BY AN APPROVED LIGHTING STUDY IN ACCORDANCE WITH THE IES RECOMMENDED PRACTICE FOR ROADWAY LIGHTING IN ORDER TO MEET CURRENT AND FUTURE TRAFFIC CONTROL NEEDS AND APPROVED BY THE RESPECTIVE AGENCY. FOR LED FIXTURES, AVERAGE LEVELS ARE MAINTAINED LEVELS AT A 0.92 MAINTENANCE FACTOR IN FOOTCANDLES MEASURED HORIZONTALLY AT GROUND LEVEL.

3. NEW STREETLIGHT STANDARDS INSTALLED ADJACENT TO OR OPPOSITE FROM EXISTING STREETLIGHTS SHALL MATCH THE EXISTING LOCATION, SPACING, POLE AND LUMINARIA TYPES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. STREETLIGHT STANDARDS INSTALLED ON 60' OR LESS RIGHT-OF-WAYS MAY BE INSTALLED ON EITHER SIDE OF ROADWAY AS DIRECTED BY THE ENGINEER.

5. TRAFFIC SIGNAL FOUNDATIONS AND ADAPTOR PLATES MAY BE REQUIRED AT INTERSECTIONS AS DIRECTED BY THE ENGINEER.

6. AT LEAST ONE STREETLIGHT SHALL BE REQUIRED IN THE BULB SECTION OF A CUL-DE-SAC OR HAMMERHEAD. LOCATION SHALL BE AS REQUIRED BY THE ENGINEER.

7. FOR A SPECIFIC FIXTURE TO BE APPROVED, AN INDEPENDENT EVALUATION WITH THE AGI32 LIGHTING MODELING SOFTWARE PROGRAM (OR OTHER SOFTWARE APPROVED BY THE AGENCY) SHALL BE SUBMITTED FOR REVIEW BY THE AGENCY. THE IES PHOTOMETRIC FILE SHALL BE LOADED INTO THE MODEL AND ALL REQUISITE INPUTS SHALL CONFORM TO THE LOCATION, HEIGHT, AND OTHER ASSOCIATED FACTORS DESIGNATED IN DRAWINGS 301 THROUGH 310 IN ACCORDANCE WITH THE APPROPRIATE RIGHT-OF-WAY.

<table>
<thead>
<tr>
<th>ROADWAY CLASS</th>
<th>R.O.W. WIDTHS</th>
<th>ROADWAY LIGHTING ILLUMINANCE LEVELS</th>
<th>SIDEWALK / WALKWAY ILLUMINANCE LIGHTING LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MIN. AVG.</td>
<td>UNIFORMITY AVG./MIN.</td>
<td>MIN. ILLUMINANCE</td>
</tr>
<tr>
<td>ARTERIAL</td>
<td>100' OR GREATER</td>
<td>1.58 FC</td>
<td>3:1</td>
</tr>
<tr>
<td>MAJOR COLLECTOR</td>
<td>80' TO 99'</td>
<td>0.84 FC</td>
<td>4:1</td>
</tr>
<tr>
<td>MINOR COLLECTOR</td>
<td>60' TO 79'</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
<tr>
<td>RESIDENTIAL</td>
<td>51' OR LESS</td>
<td>0.38 FC</td>
<td>6:1</td>
</tr>
</tbody>
</table>
8. For each fixture assessed, upon demonstration of the adequate illumination capability through the computer model on the specific roadway type, the vendor shall deliver the requested number of luminaires of that type for further agency evaluation. They will be evaluated on the criteria noted in the following section, though the agency may include additional requirements. Final approval and acceptance of the respective luminaires for a specific application shall be at the sole discretion of the purchasing agency.

9. The following list represents the criteria upon which each luminaire shall be evaluated. The agency may include additional items for evaluation at its sole discretion.

- Color Rendering Index
- Energy Efficiency
- Aesthetics
- Quality of Construction
- Weatherproofing
- IP65 Rating
- Durability
- Ease of Maintenance
- Ease of Installation
- Weight
- Power Consumption
- Color Temperature (CCT)
- Life of fixture and individual components
- Length of warranty luminaire fixture, LED’s, and ballast
- Initial Cost
- Life Cycle Cost
- LM 79, LM 80
- Bug Rating (backlighting, uplighting, glare)
- Transient Voltage Surge Suppression - SPD (Surge Protection Device)

### Table 2

**Required Illuminance Values for Signalized Intersections**

<table>
<thead>
<tr>
<th>Roadway Class</th>
<th>R.O.W. Widths</th>
<th>Min. Ave. Illuminance by Pedestrian Area Classification</th>
<th>Sidewalk/Walkway Lighting Levels</th>
<th>Uniformity Avg./Min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial / Arterial</td>
<td>100' or greater by 100' or greater by</td>
<td>3.4 FC</td>
<td>2.6 FC</td>
<td>1.8 FC</td>
</tr>
<tr>
<td>Arterial / MA: or Collector</td>
<td>100' or greater by 80' or greater by</td>
<td>2.9 FC</td>
<td>2.2 FC</td>
<td>1.5 FC</td>
</tr>
<tr>
<td>Arterial / Minor Collector - Residential</td>
<td>100' or greater by 79' or less</td>
<td>2.6 FC</td>
<td>2.0 FC</td>
<td>1.3 FC</td>
</tr>
<tr>
<td>MA: or Collector / MA: or Collector</td>
<td>80' - 99' by 80' - 99'</td>
<td>2.4 FC</td>
<td>1.8 FC</td>
<td>1.2 FC</td>
</tr>
<tr>
<td>MA: or Collector / Residential</td>
<td>80' - 99' by 79' or less</td>
<td>2.1 FC</td>
<td>1.6 FC</td>
<td>1.0 FC</td>
</tr>
</tbody>
</table>

**Agency Approved**

B C H L M N

**Specification Reference**

623 Traffic Signals & Streetlighting

**Uniform Standard Drawings**

Clark County Area

**Supplemental Drawing**

Streetlight Location

L.E.D. Lighting Standards and General Notes

**Date** 07-01-14

**Dwg. No.** 300.S3

**Sheet 2 of 2**
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312.S2. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

<table>
<thead>
<tr>
<th>POLE LOCATION TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KEYED NOTE</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>INTERSECTION LUMINAIRE TYPE</td>
</tr>
</tbody>
</table>
100' R/W OR GREATER

100' R/W OR GREATER

SPACING TYPICAL ALL DIRECTIONS

CURB RADIUS

400W HPS FIXTURE TYPICAL

BACK OF CURB

BOTH LUMINAIRE ARMS SHALL BE MOUNTED ON THE SIGNAL SHAFT 90° APART.

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. WITH THE ENGINEER'S APPROVAL, A SECOND LUMINAIRE MOUNTING PLATE MAY BE FIELD WELDED BY A CERTIFIED WELDER.
4. ALL LUMINAIRE MAST ARMS FOR 400W FIXTURES SHALL BE 15 FT. LONG AND INSTALLED PER STANDARD DRAWING NO. 808 UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>120'</td>
</tr>
<tr>
<td>2</td>
<td>60'</td>
</tr>
<tr>
<td>3</td>
<td>(SEE DRAWING NO. 320)</td>
</tr>
</tbody>
</table>

NOTES:

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
100 FT. OR GREATER/100 FT. OR GREATER
RIGHT-OF-WAY

DATE 07-01-13 DWG. NO. 301.S2
**NOTES:**

1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

---

**POLE LOCATION TABLE**

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>CLV</th>
<th>NLV</th>
<th>MES</th>
<th>BC</th>
<th>HND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>160'</td>
<td></td>
<td></td>
<td></td>
<td>140'</td>
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<tr>
<td>2</td>
<td>80'</td>
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<td>70'</td>
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<td>3</td>
<td>(SEE DRAWING NO. 320)</td>
<td></td>
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<td>(SEE DRAWING NO. 320)</td>
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<tr>
<td>4</td>
<td>170'</td>
<td></td>
<td></td>
<td></td>
<td>140'</td>
</tr>
<tr>
<td>5</td>
<td>85'</td>
<td></td>
<td></td>
<td></td>
<td>70'</td>
</tr>
</tbody>
</table>

INTERSECTION LUMINAIRE TYPE

- 400W HPS
- 150W IND

---

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**SPECIFICATION REFERENCE**

623 TRAFFIC SIGNALS & STREETLIGHTING

**SUPPLEMENTAL DRAWING**

**STREETLIGHT LOCATIONS AT INTERSECTIONS**

100' OR GREATER/80' RIGHT-OF-WAY

**AGENCY APPROVED**

**Effective as of 08/08/2019**

**DATE** 07-01-13  **DWG. NO.** 302.S1  **PAGE NO.**
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2,
   STANDARD DRAWING NO. 300, IS REQUIRED
   FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. ALL LUMINAIRE MAST ARMS FOR 400W FIXTURES SHALL BE
   15 FT. LONG AND INSTALLED PER STANDARD DRAWING
   NO. 808 UNLESS OTHERWISE APPROVED BY THE ENGINEER.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
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<tbody>
<tr>
<td>1</td>
<td>120'</td>
</tr>
<tr>
<td>2</td>
<td>60'</td>
</tr>
<tr>
<td>3</td>
<td>(SEE DRAWING NO. 320)</td>
</tr>
<tr>
<td>4</td>
<td>170'</td>
</tr>
<tr>
<td>5</td>
<td>85'</td>
</tr>
</tbody>
</table>

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

AGENCY APPROVED           C

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
100' OR GREATER/80' RIGHT-OF-WAY

DATE 07-01-13     DWG. NO. 302.S2     PAGE NO.
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
<th>CLV</th>
<th>NLV</th>
<th>MES</th>
<th>BC</th>
<th>HND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>160'</td>
<td>140'</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>80'</td>
<td>70'</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3</td>
<td>12'</td>
<td>12'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
<td>(SEE DRAWING NO. 320)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>180'</td>
<td>170'</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>90'</td>
<td>170'</td>
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</tbody>
</table>

INTERSECTION LUMINAIRE TYPE
250W HPS 150W IND

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS 100' OR GREATER/60' RIGHT-OF-WAY

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

DATE 07-01-13 DWG. NO. 303.S1

Effective as of 08/08/2019
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS AND DUAL ARM CONFIGURATION SHALL BE USED FOR 100 FT. RIGHT-OF-WAY SIMILAR TO STANDARD DRAWING NO. 302.S2.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>ENTITY</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<td>60'</td>
</tr>
<tr>
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<tr>
<td>4</td>
<td>(SEE DRAWING NO. 320)</td>
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<tr>
<td>5</td>
<td>170'</td>
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<tr>
<td>6</td>
<td>170'</td>
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</tbody>
</table>

Effective as of 08/08/2019

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
100' OR GREATER/60' RIGHT-OF-WAY

DATE 07-01-13 DWG. NO. 303.S2
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET. ADEQUATE INTERSECTION LIGHTING SHALL ALSO BE ADDRESSED IN THE LIGHTING STUDY.
3. CITY OF HENDERSON AND BOULDER CITY REQUIRE STREETLIGHTING IN THE MEDIAN FOR RIGHTS-OF-WAY 100 FEET OR GREATER. SEE STANDARD DRAWING NO. 312.S2. IN THE ABSENCE OF A MEDIAN, STREETLIGHT LOCATION SHALL BE THE SAME AS THE OTHER ENTITIES.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
<th>CLV</th>
<th>NLV</th>
<th>MES</th>
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<th>HND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>160'</td>
<td></td>
<td></td>
<td></td>
<td>140'</td>
</tr>
<tr>
<td>2</td>
<td>80'</td>
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INTERSECTION LUMINAIRE TYPE

| 250W HPS | 150W IND |

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<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
<th>CLARK COUNTY AREA</th>
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<tbody>
<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td>SUPPLEMENTAL DRAWING</td>
<td>STREETLIGHT LOCATIONS AT INTERSECTIONS</td>
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<tr>
<td></td>
<td></td>
<td>100' OR GREATER/51' OR LESS</td>
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DATE 07-01-13  DWG. NO. 304.S1
NOTES:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300 IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET. ADEQUATE INTERSECTION LIGHTING SHALL ALSO BE ADDRESSED IN THE LIGHTING STUDY.
3. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS AND DUAL ARM CONFIGURATION SHALL BE USED FOR 100 FT. RIGHT-OF-WAY SIMILAR TO STANDARD DRAWING NO. 302.S2.

POLE LOCATION TABLE

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<td>(SEE DRAWING NO. 320)</td>
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SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
100' OR GREATER/51' OR LESS
RIGHT-OF-WAY

DATE 07-01-13 DWG. NO. 304.S2

AGENCY APPROVED
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

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INTERSECTION LUMINAIRE TYPE

- 250W HPS
- 150W IND

AGENCY APPROVED

SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'/80' RIGHT-OF-WAY

DATE 07-01-13  DWG. NO. 305.S1  PAGE No.
**POLE LOCATION TABLE**

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**NOTE:**
SEE GENERAL NOTES STANDARD DRAWING NO. 300.
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

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INTERSECTION LUMINAIRE TYPE
150W HPS
150W IND

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'/60' RIGHT-OF-WAY

DATE 07-01-13
DWG. NO. 306.S1

SPECIFICATION REFERENCE

TRAFFIC SIGNALS & STREETLIGHTING

Effective as of 08/08/2019
NOTE:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. IF THE INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS.
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

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INTERSECTION LUMINAIRE TYPE: 150W HPS, 150W IND

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS AT INTERSECTIONS
80'/51' OR LESS RIGHT-OF-WAY

DATE 07-01-13

DWG. NO. 307.S1
NOTE:
1. SEE GENERAL NOTES STANDARD DRAWING NO. 300.
2. IF INTERSECTION IS SIGNALIZED, 400 WATT LUMINAIRES SHALL BE INSTALLED ON ALL CORNERS.
NOTE:
SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.

POLE LOCATION TABLE

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STREETLIGHT LOCATIONS AT INTERSECTIONS
60'/60' RIGHT-OF-WAY

AGENCY APPROVED

SPECIFICATION REFERENCE
623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT LOCATIONS AT INTERSECTIONS
60'/60' RIGHT-OF-WAY

DATE 07-01-13 DWG. NO. 308
POLE LOCATION TABLE

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NOTE:
SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.
NOTE:
SEE GENERAL NOTES STANDARD DRAWING NO. 300.

POLE LOCATION TABLE

<table>
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NOTES:

1. SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.
NOTES:

1. SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.

2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
NOTES:
1.  SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.
2.  AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.

DISTANCE LISTED INDICATES MAXIMUM SPACING. LIGHTING STANDARDS SHALL BE EQUIDISTANT AFTER LOCATING THE END OF ISLAND POLES.

POLE LOCATION TABLE

<table>
<thead>
<tr>
<th>KEYED NOTE</th>
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AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS ON TRAFFIC ISLANDS
100' OR GREATER RIGHT-OF-WAY
NOTES:
1. SEE STANDARD DRAWING NO. 300 FOR LUMINAIRE TYPE.
2. AN APPROVED LIGHTING STUDY PER NOTE 2, STANDARD DRAWING NO. 300, IS REQUIRED FOR RIGHT-OF-WAY GREATER THAN 100 FEET.
3. STREET LIGHTING IN THE MEDIAN IS ALLOWED FOR MEDIAN WIDTHS OF 10 FEET OR GREATER.

DISTANCE LISTED INDICATES MAXIMUM SPACING. LIGHTING STANDARDS SHALL BE EQUI DISTANT AFTER LOCATING THE END OF ISLAND POLES.

POLE LOCATION TABLE

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AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT LOCATIONS ON TRAFFIC ISLANDS 100' OR GREATER RIGHT-OF-WAY
1. ALL STREETLIGHT STANDARDS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THE STANDARD SPECIFICATIONS AND AS INDICATED ON THESE DRAWINGS.

2. ALL COMPONENTS OF THE STREETLIGHT STANDARD INCLUDING THE POLE, ARM, HANDHOLE COVER, BASE COVER AND THE POLE CAP SHALL BE FERROUS METAL AND HOT-DIP GALVANIZED AFTER CONSTRUCTION IN ACCORDANCE WITH ASTM A123. ALUMINUM OR ALUMINUM ALLOY IS NOT ACCEPTABLE. FLAWS IN THE APPEARANCE OF THESE GALVANIZED COMPONENTS (i.e., "TIGER-STRIPED," "ZEBRA-STRIPED"), SHALL BE CAUSE FOR REJECTION. NON-METALLIC TYPE BASE COVERS MAY BE ACCEPTABLE AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CONCRETE POLES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

3. ALL FASTENING HARDWARE SHALL BE NON-CORROSIVE, CADMIUM-PLATED, OR EQUAL, APPROVED BY THE ENGINEER. FASTENERS SHALL BE OF THE SIZE AND CONFIGURATION NOTED ON THE DRAWINGS.

4. CONCRETE POLE FOUNDATIONS SHOULD BE POURED AGAINST UNDISTURBED, NATURAL SOIL OR IF FORMING MATERIAL IS USED IT SHALL BE STRIPPED AWAY FROM THE FOUNDATION AT LEAST ONE (1) FOOT BELOW FINISHED GRADE.

5. POLES SHALL BE INSTALLED ON CONCRETE FOUNDATIONS WITH ANCHOR BOLTS. EACH BOLT SHALL BE INSTALLED WITH TWO (2) HEX NUTS AND TWO (2) FLAT WASHERS. EXCEPT FOR "H" AND "L" FOUNDATIONS, THE ANCHOR BOLTS SHALL BE 1" X 36" X 4" FOR ELEVEN (11) GAGE POLES AND 1 1/8" X 40" X 4" FOR SEVEN (7) GAGE POLES. THE ANCHOR BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED. THE POLE SHALL BE PLUMBING PRIOR TO PLACING THE GROUT OR CONCRETE CAP. USE OF GROUT OR CONCRETE FOR CAP SHALL BE DESIGNATED BY ENTITY ENGINEER. SHIMS OR WEDGES OF ANY KIND ARE NOT ACCEPTABLE TO PLUMB THE POLE AFTER THE CAP HAS BEEN PLACED.

6. ALL UNDERGROUND CONDUIT INSTALLED SHALL HAVE RED, CONTINUOUS MARKING TAPE INSTALLED IN THE TRENCH AT 12" BELOW FINISHED GRADE.

7. WHERE SIGNALS AND STANDARDS ARE INSTALLED UNDER OVERHEAD POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRICAL SAFETY CODE SECTION 234 REQUIREMENTS. INSTALL STRAIGHT ARM STREETLIGHT ASSEMBLIES WHERE ADDITIONAL CLEARANCE IS REQUIRED.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

B C H L M N

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

STREETLIGHT STANDARD GENERAL NOTES

DATE  7-8-04   DWG. NO.  313
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

SPECIFICATION REFERENCE

<table>
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<tr>
<th>AGENCY APPROVED</th>
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<td>506 STEEL STRUCTURES</td>
<td>STREETLIGHT STANDARD WITH 2 INCH PIPE ARM</td>
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DATE 12-12-96 DWG. NO. 314
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

AGENCY APPROVED

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<td>623</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT STANDARD
WITH DOUBLE 2 INCH PIPE ARM

DATE 12-12-96  DWG. NO. 315
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.

NOTES:

STEEL STRUCTURES
GALVANIZING
TRAFFIC SIGNALS & STREETLIGHTING

2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.

3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

POLE/ARM SCHEDULE

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<th>SINGLE ARM</th>
<th>DOUBLE ARM</th>
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<tr>
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<td>10'-0&quot;</td>
<td>32'-10&quot;</td>
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</tr>
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<td>11</td>
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NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.
2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.
3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

AGENCY APPROVED

SPECIFICATION REFERENCE

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<tr>
<td>623</td>
<td>TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
</tr>
<tr>
<td>715</td>
<td>GALVANIZING</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT STANDARD
WITH TAPERED MAST ARM

DATE 12-12-96   DWG. NO. 316
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313.

NOTES:

STEEL STRUCTURES

GALVANIZING

TRAFFIC SIGNALS & STREETLIGHTING

2. SEE STANDARD DRAWING NO. 319 FOR DETAIL OF POLE BASE.

3. SEE STANDARD DRAWING NO. 318 FOR DETAIL OF POLE CAP.

506
623
715

SPECIFICATION REFERENCE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STREETLIGHT STANDARD
WITH DOUBLE TAPERED MAST ARM

DATE 12-12-96  DWG. NO.  317
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313
2. HANDHOLE SHALL FACE AWAY FROM ONCOMING TRAFFIC.
3. HANDHOLE SIZE FOR CC AND CLV FOR STREET LIGHT POLES SHALL BE 4" X 6" I.D.

---

**NOTES:**

**SPECIFICATION REFERENCE**

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<th>AGENCY APPROVED</th>
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</table>
| **UNIFORM STANDARD DRAWINGS**
| **CLARK COUNTY AREA**
| **LOWER POLE DETAILS**
| **FOR PIPE AND MAST ARM POLES**

<table>
<thead>
<tr>
<th>DRAWING NO.</th>
<th>319</th>
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<tr>
<td>DATE</td>
<td>07-01-17</td>
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</table>
POLE BASE COVERS SHALL BE FURNISHED AND INSTALLED FOR ALL POLES PER THE STANDARD SPECIFICATIONS AND DRAWINGS.
BEHIND CURBSIDE SIDEWALK

(EASEMENT MAY BE REQUIRED)

(SEE USD 320.1)

1. FOUNDATIONS SHALL BE LOCATED OUTSIDE OF THE SIDEWALK WHENEVER FEASIBLE. A CLEARANCE OF 48" SHALL BE MAINTAINED ON SIDEWALK TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT.

2. FOUNDATION CAP SHALL BE CONCRETE OR GROUT AS DESIGNATED BY THE ENTITY ENGINEER.

OPEN AREA OR BETWEEN CURB AND SIDEWALK

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LIGHTING STANDARD SETBACK

<table>
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<th>AGENCY APPROVED</th>
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<tr>
<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS</th>
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<tbody>
<tr>
<td>501 PORTLAND CEMENT CONCRETE</td>
<td>CLARK COUNTY AREA</td>
</tr>
<tr>
<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
<td></td>
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</tbody>
</table>

DATE 07-01-15 DWG. NO. 320
1. WHEN NO GROUNDING ELECTRODE EXISTS, 5/8 IN. DIA. SOLID COPPER GROUNDING ROD, 8 FT. IN LENGTH, SHALL BE INSTALLED.
2. ANCHOR BOLTS SHALL BE CONTINUOUS AND HAVE A MINIMUM 1 IN. FREE THREAD.
3. FOUNDATION CAP SHALL BE CONCRETE OR GROUT AS DESIGNATED BY ENTITY ENGINEER.
1. SEE GENERAL NOTES STANDARD DRAWING NO. 313
   OFFSET AS NEEDED TO STAY WITHIN RIGHT-OF-WAY

   ALTERNATE 30" DIAMETER FOUNDATION

   1-1/4" PVC CONDUIT, TYP.

   #4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

   15# FELT (2 LAYERS)

   CONCRETE FOUNDATION

   ALTERNATE 30" DIAMETER FOUNDATION
   OFFSET AS NEEDED TO STAY WITHIN RIGHT-OF-WAY

2. CONTINUOUS BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND
   ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE
   CONTINUING DOWN TO THE POLE GROUNDING PLATE.

3. FOUNDATION CAP SHALL BE CONCRETE OR GROUT AS DESIGNATED BY THE
   ENTITY ENGINEER.

NOTES:

1. SEE GENERAL NOTES STANDARD DRAWING NO. 313

2. CONTINUOUS BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND
   ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE
   CONTINUING DOWN TO THE POLE GROUNDING PLATE.

3. FOUNDATION CAP SHALL BE CONCRETE OR GROUT AS DESIGNATED BY THE
   ENTITY ENGINEER.

SPECIFICATION REFERENCE

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<th>501</th>
<th>PORTLAND CEMENT CONCRETE</th>
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LIGHTING STANDARD FOUNDATION

AGENCY APPROVED

Uniform Standard Drawings
Clark County Area

DATE 7-8-04  DWG. NO. 321
BASE ADAPTOR PLATE
FOR 19 INCH BOLT CIRCLE FOUNDATION

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BASE ADAPTOR PLATE
FOR 19 INCH BOLT CIRCLE FOUNDATION

DATE 12-12-96  DWG. NO. 322.1
BASE ADAPTOR PLATE
FOR 16-1/2 INCH BOLT CIRCLE FOUNDATION

AGENCY APPROVED | B | C | H | L | M | N
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE 12-12-96 DWG. NO. 322
NOTES:
1. PULL BOX LID SHOULD BE TAPPED WITH A 3/8" X 16 COURSE THREAD TAP.
2. FOR TYPICAL NO. 7 PULL BOX COVER GROUNDING, SEE STANDARD DRAWING NO. 327.
dead front mounting tab

chase nipple, locking ring and bushing, t yp.

size opening for switch

bottom tab

switch bracket

side tab

mounting hole, t yp.

front

pole

nipple

s.s. banding

hub

side

keyed note:

single pole, single throw on-off, 10 amp, 125 vac switch, sealed, with 5 in. wire leads

switch bracket, 14 ga.

switch bracket, side tab mounting hole, t yp.

dead front drill hole to clear switch

blind rivet, t yp.
EXTRACTION SIGNALS & STREETLIGHTING

CAST IRON OR NON-CONDUCTIVE COVER FOR PEDESTRIAN AREAS

COVER

BODY

EXTENSION
AS SPECIFIED BY THE ENGINEER

BRASS "L" BOLT AND NUT

PULL BOX

<table>
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<tr>
<th>SIZE (COMMERCIAL DESIGNATION)</th>
<th>3-1/2</th>
<th>5</th>
<th>7</th>
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<tr>
<td>A</td>
<td>15</td>
<td>21-3/4</td>
<td>30-5/8</td>
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<tr>
<td>B</td>
<td>10</td>
<td>11-3/4</td>
<td>17-5/8</td>
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<tr>
<td>C</td>
<td>3/4</td>
<td>2</td>
<td>2</td>
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<tr>
<td>D</td>
<td>19-3/8</td>
<td>25</td>
<td>34-3/4</td>
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<tr>
<td>E</td>
<td>14-3/8</td>
<td>15</td>
<td>21-3/4</td>
</tr>
<tr>
<td>F</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>G</td>
<td>N/A</td>
<td>10-1/4</td>
<td>11-1/2</td>
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</table>

NOTES:
1. COVERS INSTALLED IN TRAFFIC AND OPEN AREAS ACCESSIBLE TO TRAFFIC SHALL BE PER STANDARD DRAWING NO. 327.
2. SEE STANDARD DRAWING NO. 323 FOR COVER GROUNDING.

SPECIFICATION REFERENCE

<table>
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<th>UNIFORM STANDARD DRAWINGS</th>
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| CLARK COUNTY AREA |

| PRECAST REINFORCED CONCRETE PULL BOX |

| DATE 12-12-96 | DWG. NO. 326 |

| 503 PRECAST PRESTRESSED CONCRETE MEMBERS |

| 623 TRAFFIC SIGNALS & STREETLIGHTING |
1. COVER USED IN TRAFFIC AND OPEN AREAS ACCESSIBLE TO TRAFFIC ONLY.
2. TYPICAL NO. 7 PULL BOX COVER SHOWN. SUBMIT OTHERS TO THE ENGINEER FOR APPROVAL.
3. ALL TRAFFIC AND OPEN AREA COVERS SHALL BE H 20 RATED.

NOTES:

17-1/4" BOX "L" BOLTS
LOCATE TO MATCH PULL BOX "L" BOLTS
ACCESS HOLE TO PULL BOX
BEAD WELD INSCRIPTION
STEEL FLOOR PLATE, 3/8" THICK, ROUND CORNERS TO MATCH EDGES OF PULL BOX
FINISHED GRADE

FRONT VIEW

SIDE VIEW

BOTTOM VIEW

1/4" TYP.
2-1/4" TYP.
15-1/4"
1/4"
2" 8-5/8"
30-1/2"
2-1/2"
17-1/4"
3/8" .16 COARSE THREAD TAP, CENTERED BETWEEN RIBS. FOR COVER GROUND CONNECTION SEE STANDARD DRAWING NO. 323

SPECIFICATION REFERENCE

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<tr>
<td>506 STEEL STRUCTURES</td>
<td>PULL BOX STREET COVER</td>
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DATE 12-12-96 DWG. NO. 327
1. PROVIDE A MINIMUM OF 8" AROUND ALL BOXES. ANY BOX SHALL NOT BE PLACED WITHIN 3'-3" OF FIRE HYDRANTS IN DRIVEWAYS OR DRIVEWAY APRONS. THIS DRAWING IS NOT INTENDED TO LIMIT THE NUMBER OF BOXES BETWEEN DRIVEWAYS TO TWO.

2. FOR WATER SERVICE BOXES, REFER TO UDACS PLATE 1-7.

NOTE:

UTILITY BOXES BETWEEN DRIVEWAYS

UTILITY BOXES IN SIDEWALK

UTILITY BOXES IN SIDEWALK AND BETWEEN DRIVEWAYS

AGENCY APPROVED

CLARK COUNTY AREA

UNIFORM STANDARD DRAWINGS

SPECIFICATION REFERENCE

REINFORCING STEEL

TRAFFIC SIGNALS & STREETLIGHTING

UTILITY PULL BOX LOCATIONS

SIDEWALK AND BETWEEN DRIVEWAYS

DATE 04-12-07

DWG. NO. 328
TYPICAL SECTION

CONCRETE COLLAR

#4 REBAR, 2" MIN. 4" MAX FROM EDGE OF BOX

LAP TIED 12" MIN.

CURB

GRADE

8" MIN. ALL AROUND

UTILITY BOX

VARIES

GUTTER

CURB

VARIES

CONCRETE COLLAR

#4 REBAR

6"

1" MIN.

GRADE

3"

329

12-12-96

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CONCRETE AROUND PULL BOXES
IN UNDEVELOPED AREAS

SPECIFICATION REFERENCE

501 PORTLAND CEMENT CONCRETE
505 REINFORCING STEEL
623 TRAFFIC SIGNALS & STREETLIGHTING

AGENCY APPROVED

B C H L M N

DATE 12-12-96 DWG. NO. 329

Effective as of 08/08/2019

Effective as of 08/08/2019
null
1. BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

2. IN AREAS WHERE R/W PERMITS, THE CONCRETE BASE SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK.

3. REFER TO STD. DWG. 331 FOR SERVICE PEDESTAL SETBACK AND ORIENTATION.

4. WIRE SIZES ARE BASED ON UNDERGROUND FEED.

5. WIRE SIZES SHALL BE INCREASED FOR VOLTAGE DROP LIMITATION WHEN RUN IS LONG.
NOTES

1. BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

2. IN AREAS WHERE R/W PERMITS, THE CONCRETE BASE SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK.

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5. WIRE SIZES SHALL BE INCREASED FOR VOLTAGE DROP LIMITATION WHEN RUN IS LONG.
TRAFFIC SIGNALS & STREETLIGHTING

623

LC

12" MAX.

SHALL BE AS SHOWN FOR STABILITY

POLE SHAFT, CHASE NIPPLE PLACEMENT

FASTENERS IF USED SHALL NOT PENETRATE

BE SECURE AND RIGID ON THE POLE.

METER SOCKET (PER UTILITY’S REQUIREMENTS)

FACE METER AWAY FROM TRAFFIC.

HUB, RAIN TIGHT

SINGLE PHASE, 3 WIRE, 120/240 VAC CIRCUIT

BREAKER LOAD CENTER, MAIN LUGS ONLY,

NEMA 3R (RAIN-TIGHT) ENCLOSURE WITH

PADLOCKING PROVISIONS, AND A MINIMUM OF

EIGHT (8) SINGLE SPACES. BUSSING SHALL BE

COPPER.

FOR LOAD MAINS AMPERE RATING, AND/OR CIRCUIT

BREAKER RATINGS, NUMBER OF POLES AND

QUANTITY, SEE PLANS.

SEE STANDARD DRAWING NO. 324 FOR BYPASS

SWITCH BRACKET INSTALLATION.

HANDHOLE (FACE AWAY FROM ONCOMING TRAFFIC)

SINGLE-STRAND BARE #4 AWG COPPER GROUNDING

CONDUCTOR TO LOAD CENTER. CONDUCTOR

SHALL BE USED TO GROUND POLE AND

MUST BE UNBROKEN.

BRONZE GROUNDING CONNECTOR

UL LISTED FOR UNDERGROUND USE

CONCRETE FOUNDATION

SEE STANDARD DRAWING NO. 321

NOTE:

RECOMMEND LOCATING SERVICE POINT AS
CLOSE TO THE CENTER OF THE
STREETLIGHTING CIRCUIT AS POSSIBLE.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREET LIGHTING SERVICE

POINT LOCATED ON

STREETLIGHT STANDARD

SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

DATE 4-13-00 DWG. NO. 333.S1

Effective as of 08/08/2019
TO UTILITY SINGLE PHASE, 3 WIRE, 120/240 VAC SERVICE.
LEAVE A MINIMUM OF 10 FEET SLACK IN EACH CONDUCTOR.

SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE DWG. NO. 8-12-99 334

NOTES:
1. ALL WIRES TO BE COPPER; SEE PLANS FOR QUANTITY AND GAGES.
2. WITH ENGINEER'S APPROVAL, AN 8 FT. BY 5/8 IN. COPPER-CLAD GROUNDING ROD MAY BE USED.
3. ALL CONDUIT FITTINGS TO BE WATER-TIGHT.

AGENCY APPROVED

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

TEMPORARY APPLICATION
120/240 VAC SERVICE
ON WOOD POLE
OVERHEAD SERVICE

RATING, NUMBER OF POLES AND QUANTITY, SEE PLANS.

FOR LOAD MAINS AMPERE RATING, AND/OR CIRCUIT BREAKER RATINGS, NUMBER OF POLES AND QUANTITY, SEE PLANS.

125 AMP SERVICE: 2" CONDUIT, 2 #1/0 THW AND 1 #4 WHITE THW
200 AMP SERVICE: 2" CONDUIT, 2 250 KCML THW AND 1 #1/0 WHITE THW
0.82 DERATE HAS BEEN APPLIED FOR AMBIENT TEMPERATURE
TRAFFIC SIGNALS & STREETLIGHTING

SEE STANDARD DRAWING NOS. 336 AND 337.

GROUNDING AND BONDING CONDUCTORS OMITTED FOR CLARITY,

200 AMP SERVICE: 2" CONDUIT, 2 #3/0 THW AND 1 #2 WHITE THW
125 AMP SERVICE: 2" CONDUIT, 2 #1 THW AND 1 #6 WHITE THW

TYP. LUMINAIRE 10/2 UF WITH GROUND

AND FUSES, TYP. SEE STANDARD
2 POLE WATERPROOF FUSE HOLDER

#10 THW STRANDED

TO END OF CIRCUIT

#10 THW STRANDED

2 POLE WATERPROOF FUSE HOLDER
AND FUSES, TYP., SEE STANDARD
DRAWING NO. 338

10/2 UF WITH GROUND

LUMINAIRE

TYP.

125 AMP SERVICE: 2" CONDUIT, 2 #1 THW AND 1 #6 WHITE THW
200 AMP SERVICE: 2" CONDUIT, 2 #3/0 THW AND 1 #2 WHITE THW
FOR POLE SERVICE, WIRE SIZES SHALL BE TEMPERATURE DERATED.

GROUNDING AND BONDING CONDUCTORS OMITTED FOR CLARITY,
SEE STANDARD DRAWING NOS. 336 AND 337.

SINGLE POLE, SINGLE THROW, ON-OFF, 10 AMP, 125 VAC SWITCH, SEALED, WITH 5 IN. LEADS

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

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SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

STREETLIGHT CIRCUIT
ONE LINE DIAGRAM

DATE 2-10-00 DWG. NO. 335.S1
TRAFFIC SIGNALS & STREETLIGHTING

1. SEE STANDARD DRAWING NOS. 336 AND 337.
   
   GROUNDING AND BONDING CONDUCTORS OMITTED FOR CLARITY,
   FOR CONDUIT SIZE AND WIRING REQUIREMENTS FOR STREETLIGHT SERVICE, SEE STANDARD
   DRAWING NO. 338

   SERVICE PEDESTAL ASSEMBLY
   SHALL BE FACTORY ASSEMBLED
   OR BUILT BY UL LISTED VENDOR.

   FOR CONDUIT SIZE AND WIRING REQUIREMENTS FOR STREETLIGHT SERVICE, SEE STANDARD
   DRAWING NO. 332.S2.

   GROUNDING AND BONDING CONDUCTORS OMITTED FOR CLARITY,
   SEE STANDARD DRAWING NOS. 336 AND 337.

   SINGLE POLE, SINGLE THROW, ON-OFF, 15 AMP, 125 VAC SWITCH, SEALED, WITH 5 IN. LEADS

   LUMINAIRE TYP.

   #10 THW STRANDED
   2 POLE WATERPROOF FUSE HOLDER
   AND FUSES, TYP. SEE STANDARD
   DRAWING NO. 338

   10/2 UF WITH GROUND

   NOTE:

   Service Pedestal Assembly
   Shall Be Factory Assembled
   Or Built By Ul Listed Vendor.

   For conduit size and wiring requirements for streetlight service, see standard
   drawing no. 332.s2.

   Grounding and bonding conductors omitted for clarity,
   see standard drawing nos. 336 and 337.

   Single pole, single throw, on-off, 15 amp, 125 vac switch, sealed, with 5 in. leads

   Bronze split-bolt connector,
   tape to insulate to the dielectric
   strength of the conductor insulation
   all conductors shall be copper.

   To end of circuit

   #14 THW

   2 #4 THW (240 VOLT)

   60 AMP

   2 POLE

   LIGHTING CONTACTOR

   2 #4 THW, TYP.

   60 AMP

   2 POLE

   COIL

   120 VOLT

   LOAD (RED)

   NEUTRAL (WHITE)

   Electronics type installed
   in service pedestal, area
   research SST-IES or
   approved equal.

   Nema rated continuous
   duty type lighting
   contactor general
   electric no.
   CR360L40202AABZ or
   approved equal.

   All services shall be
   pad-mounted. Pole-
   mounted services are
   not acceptable.
FOR CONDUIT SIZE AND WIRING REQUIREMENTS FOR STREET LIGHT SERVICE, SEE STANDARD DRAWING NO. 332.S2 FOR LAS VEGAS AND CLARK COUNTY ONLY AND 332.S1 FOR ALL OTHER ENTITIES.
3" 1-1/4" PVC CONDUIT

TRAFFIC SIGNALS & STREETLIGHTING

1 #8 GREEN THWN
2 #4 THW AND
10/2 UF WITH GROUND

LIGHTING STANDARD WIRING
DIAGRAM, 240 VOLT, TWO WIRE

#10 BARE COPPER
LOAD SIDE

DOUBLE POLE WATERPROOF
FUSE HOLDER ASSEMBLY
LINE SIDE

#10 THW STRANDED

POLE SHAFT

2 #4 THW AND
1 #8 GREEN THWN

HANDHOLE, PROVIDE SLACK IN WIRES TO EXTRACT FUSE HOLDER AND CONNECTIONS, 18" MIN.

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER

POLE GROUNDING POINT

1-1/4" PVC CONDUIT

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

BRONZE SPLIT-BOLT CONNECTOR OR APPROVED EQUAL INSULATED PER STANDARD SPECIFICATIONS

BRONZE ANCHOR BOLT GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE

#10 BARE COPPER

LOAD SIDE

DOUBLE POLE WATERPROOF FUSE HOLDER ASSEMBLY

LINE SIDE

#10 THW STRANDED

POLE SHAFT

2 #4 THW AND 1 #8 GREEN THWN

HANDHOLE, PROVIDE SLACK IN WIRES TO EXTRACT FUSE HOLDER AND CONNECTIONS, 18" MIN.

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER

POLE GROUNDING POINT

1-1/4" PVC CONDUIT

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

BRONZE SPLIT-BOLT CONNECTOR OR APPROVED EQUAL INSULATED PER STANDARD SPECIFICATIONS

BRONZE ANCHOR BOLT GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE
1-1/4" PVC CONDUIT

TRAFFIC SIGNALS & STREETLIGHTING

3" - 1-1/4" PVC CONDUIT

1 #8 GREEN THWN

2 #4 THW AND 10/2 UF WITH GROUND, TYP.

TWIN LIGHTING STANDARD WIRING DIAGRAM, 240 VOLT, TWO WIRE

1 #10 BARE COPPER, TYP.

10/2 UF WITH GROUND, TYP.

LOAD SIDE, TYP.

DOUBLE POLE WATERPROOF FUSE HOLDER ASSEMBLY, TYP.

LINE SIDE, TYP.

#10 THW STRANDED, TYP.

2 #4 THW AND 1 #8 GREEN THWN

POLE SHAFT

3"

HANDHOLE, PROVIDE SLACK IN WIRES TO EXTRACT FUSE HOLDERS AND CONNECTIONS, 18" MIN.

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

POLE GROUNDING POINT

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER

#4 AWG SINGLE-STRAND BARE COPPER GROUNDING CONDUCTOR

BRONZE SPLIT-BOLT CONNECTOR OR APPROVED EQUAL INSULATED PER STANDARD SPECIFICATIONS

BARE COPPER GROUNDING CONDUCTOR

BRONZE ANCHOR BOLT GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

CLARK COUNTY AREA

SPECIFICATION REFERENCE

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS

TWIN LIGHTING STANDARD WIRING DIAGRAM, 240 VOLT, TWO WIRE

DATE 12-12-96 DWG. NO. 339

Effective as of 08/08/2019
NOTES

1. ADDITIONAL SPECIFICATIONS PER POLE MANUFACTURER.
2. 8" ARMS SHALL BE USED FOR ROADSIDE INSTALLATIONS ON STREETS WITH LESS THAN 100' RIGHT-OF-WAY, UNLESS OTHERWISE DIRECTED.
3. 10" ARMS SHALL BE USED FOR MEDIAN INSTALLATIONS AND ON ROADSIDES WITH 100' OR GREATER RIGHT-OF-WAY, UNLESS OTHERWISE DIRECTED.
4. PAINT ARMS AND ATTACHMENT HARDWARE SEMIGLOSS BLACK.
5. BANNER ARMS ONLY WHEN SPECIFIED ON THE PLANS.
6. CONSTRUCT FOUNDATION PER US343.
7. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, PRIOR TO ORDERING MATERIALS. APPROVED FIXTURE LIST IS LOCATED ON CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS.
8. CITY ENGINEER MAY APPROVE EQUAL FIXTURES THAT MEET AESTHETIC AND LIGHT LEVEL REQUIREMENT PER US390:03. LIGHTING STUDY REQUIRED.

CONCRETE POLE (AMERON 681-26 OR STRESSCRETE KMH196-G-E11-TEP-LAG), SEE NOTES PER 342.1, (OR APPROVED EQUAL MANUFACTURED PER ASTM C-1089.97 SPECIFICATIONS)
POLE SHALL BE BLACK, EXPOSED AGGREGATE FINISH WITH FULL LENGTH ANTI-GRAFFITI COATING.

HANDHOLE OPENING W/ GROUNDED ALUMINUM COVER PAINTED BLACK SEMIGLOSS (4" X 5-3/8" X 10-1/2" FOR STRESSCRETE POLES; 3-1/2" X 5" X 9-1/2" FOR AMERON POLES). COVERS MUST FACE STREET OR SIDEWALK AND MUST BE (2) SCREW TYPE; (4) SCREW TYPE COVERS WILL NOT BE ACCEPTED.

AGENCY APPROVED

SPECIFICATION REFERENCE

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<tr>
<td>623 TRAFFIC SIGNALS &amp; STREET LIGHTING</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CITY OF LAS VEGAS
26" STREET LIGHT POLE
FOR TOWN CENTER AREA

DATE 08-09-18  DWG. NO. 341
MANHOLE NOTES

1. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 609, “CATCH BASINS, MANHOLES AND INLETS” OF THE “STANDARD SPECIFICATIONS”.

2. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST ONE (1) INCH CLEAR UNLESS OTHERWISE NOTED.

3. EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE, IF SOIL CONDITIONS REQUIRE), IN EXISTING STREET SECTIONS, ALLEY SECTIONS AND CONFINED AREAS SUCH AS LIMITED EASEMENTS OR ADJACENT TO STRUCTURES. NATURAL ANGLE OF REPOSE WILL ALLOW IN ALL OTHER AREAS.

4. MANHOLE DESIGN FOR PIPE LARGER THAN SIXTY (60) INCHES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

5. MANHOLE DESIGN FOR DEPTHS EXCEEDING EIGHTEEN (18) FEET SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

6. TYPE AND SIZE OF MANHOLE TO BE CONSTRUCTED IN A PARTICULAR LOCATION SHALL BE DETERMINED BY THE PIPE SIZE, ALIGNMENT AND GRADE AS FOLLOWS:

   TYPE I
   
   FORTY-EIGHT (48) INCH SIZE
   A. ALL CASES FOR PIPE EIGHTEEN (18) INCHES AND SMALLER.
   B. TWENTY-FOUR (24) INCHES AND SMALLER PIPE ON TANGENT LINE AND GRADE.

   SIXTY (60) INCH SIZE
   A. TWENTY-SEVEN (27) INCH THROUGH THIRTY-SIX (36) INCH PIPE ON TANGENT LINE AND GRADE.
   B. TWENTY-ONE (21) INCH THROUGH TWENTY-SEVEN (27) INCH PIPE AT ANGLE POINTS AND CHANGES IN GRADE OR PIPE SIZE.

   TYPE I-A
   
   USED IN PLACE OF TYPE I WHEN COVER ABOVE CONDUIT IS LIMITED, AND WHEN APPROVED BY THE ENGINEER.

   TYPE II
   
   FORTY-EIGHT (48) INCH SIZE
   A. THIRTY (30) INCH THROUGH SIXTY (60) INCH PIPE ON TANGENT LINE WITH A CHANGE IN GRADE OR PIPE SIZE.
MANHOLE NOTES (CONTINUED)

TYPE III

TANGENT
SIXTY (60) INCH SIZE
A. THIRTY-NINE (39) INCH THROUGH SIXTY (60) INCH PIPE ON TANGENT LINE AND
GRADE WITH NO CHANGE IN PIPE SIZE.

ANGLE POINT
SIXTY (60) INCH SIZE
A. THIRTY (30) INCH THROUGH SIXTY (60) INCH PIPE AT THE ANGLE POINT IN LINE.

7. PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.

8. DISTANCE BETWEEN THE TOP OF MANHOLE AND FIRST STEP SHALL BE A MAXIMUM OF SIXTEEN (16)
INCHES. MANHOLE STEPS SHALL BE GROUTED IN PLACE.

9. (CLARK COUNTY ONLY) DISTANCE BETWEEN MANHOLES SHALL BE A MAXIMUM OF FOUR HUNDRED (400)
FEET.

10. MANHOLE SPACING SHALL BE REFERRED TO THE WASTE WATER COLLECTION STANDARDS.
DROP INLET NOTES:

1. ALL DROP INLETS, REGARDLESS OF TYPE, SHALL BE LOCATED SUCH THAT THE CURB OPENING (OR GRATE) IS A MINIMUM OF TEN (10) FEET FROM THE NEAREST P.C. OR P.T. OF THE CURRENT OR FUTURE CURB RETURN.


3. IF DRIVEWAYS OR UTILITIES EXIST, THE ENTITY ENGINEER SHALL APPROVE THE LOCATION OF THE DROP INLET.
1. IN UNIMPROVED NON-TRAFFIC AREAS, TOP OF MANHOLE SHALL BE 6" TO 9" ABOVE GRADE.

2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF MANHOLE SECTION. CONSTRUCT WATER TIGHT CONNECTION TO MANHOLE.

3. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

4. AN OPTIONAL TWO PIECE 30" TO 48" AND 48" TO 60" CONE MAY BE USED.

5. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
NOTES:

1. IN UNIMPROVED NON-TRAFFIC AREAS, TOP OF MANHOLE SHALL BE 6" TO 9" ABOVE GRADE.

2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE OF MANHOLE SECTION. CONSTRUCT WATER TIGHT CONNECTION TO MANHOLE.

3. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

4. AN OPTIONAL TWO PIECE 24" TO 48" AND 48" TO 60" CONE MAY BE USED.
<table>
<thead>
<tr>
<th>SYM.</th>
<th>ITEM</th>
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<tbody>
<tr>
<td>A</td>
<td>RING &amp; COVER</td>
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<tr>
<td>B</td>
<td>GRADE ADJUSTING RING</td>
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<td>C</td>
<td>1' SECTION REIN. CONC. PIPE</td>
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<td>D</td>
<td>2' SECTION REIN. CONC. PIPE</td>
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<td>E</td>
<td>3' SECTION REIN. CONC. PIPE</td>
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<td>F</td>
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**NOTE:**
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.
2. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

**TONGUE AND GROOVE JOINTS**
FULL MORTARED JOINTS (CLASS "B" MORTAR)

**CONCRETE COLLAR**
SEE STANDARD DWG.
NO. 408.1

**8" FLAT SLAB**

**STREET ELEV.**

**48" OR 60"**

**30"**

**6"**

**FLEXIBLE MORTAR JOINTS**

**30 INCH RING AND COVER**

**AGENCY APPROVED**

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<td>CATCH BASINS, MANHOLES &amp; INLETS</td>
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**DATE 11-10-05**

**DWG. NO. 404.1**
NOTE:
1. PIPE SECTION LENGTHS ARRANGED TO FIT DEPTH.

SYM. | ITEM
--- | ---
A   | RING & COVER
B   | GRADE ADJUSTING RING
C   | 1' SECTION REIN. CONC. PIPE
D   | 2' SECTION REIN. CONC. PIPE
E   | 3' SECTION REIN. CONC. PIPE
F   | BASE

SPECIFICATION REFERENCE
501  | CONCRETE & MORTAR
609  | CATCH BASINS, MANHOLES & INLETS

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE IA MANHOLE

DATE 11-10-05  DWG. NO. 404
NOTES:

1. STEPS SHALL BE INSTALLED ON THE SIDE WALL OF THE MANHOLE.
2. W = I.D. + 12-INCHES MIN. BUT IN NO CASE SHALL W BE LESS THAN 60-INCHES.
3. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
NOTES:
1. ALL BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM-A706 GRADE 60.

2. CONCRETE SHALL BE MADE WITH TYPE V CEMENT IN ACCORDANCE WITH ASTM C-150. MINIMUM COMPRRESSIVE 28 DAY STRENGTH = 4000 psi, MAX. SLUMP = 4".

3. CLEARANCE TO REINFORCING BARS TO BE 2 1/2" UNLESS NOTED OTHERWISE.

4. FOR PRECAST RCB, THE REINFORCING SHALL BE IN ACCORDANCE WITH MANUFACTURER DESIGN, AS APPROVED BY THE ENGINEER.

TYPE II-SD MANHOLE - RCB
 TYPE II-SD MANHOLE - PIPE

PLAN - NO SIDE DRAIN
POSITION MANHOLE ON EITHER SIDE

PLAN - SINGLE SIDE DRAIN
POSITION MANHOLE ON OPPOSITE SIDE FROM THE SIDE DRAIN

NOTES:
1. ALL BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM-A706 GRADE 60.
2. CONCRETE SHALL BE MADE WITH TYPE V CEMENT IN ACCORDANCE WITH ASTM C-150, MINIMUM COMPRESSIVE 28 DAY STRENGTH = 4000 PSI, MAX. SLUMP = 4".
3. CLEARANCE TO REINFORCING BARS TO BE 2 1/2" UNLESS NOTED OTHERWISE.
4. THIS DESIGN IS FOR PIPE SIZES 36-INCH TO 72-INCH. LARGER PIPE SIZES REQUIRE SPECIAL DESIGN.
NOTES:

1. STEPS SHALL BE INSTALLED ON THE UPSTREAM WALL OF THE MANHOLE.
2. W □ I.D. □ 12-INCHES MIN. BUT IN NO CASE SHALL W BE LESS THAN 60-INCHES.
NOTE:

1. STEPS SHALL BE INSTALLED ON THE UPSTREAM WALL OF THE MANHOLE.
2. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.

11-10-05 DWG. NO. 406.1
NOTE:

1. STEPS SHALL BE INSTALLED ON THE UPSTREAM WALL OF THE MANHOLE.
NOTE:
1. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PRECAST MANHOLE TEES

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NOTES:
1. CONCRETE COLLAR TO BE CONSTRUCTED 1/8" BELOW SURFACE OF DENSE GRADE WHERE OPEN GRADE IS NOT USED.
2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.
3. THE USE OF 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
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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<td>505 REINFORCING STEEL</td>
<td>SUPPLEMENTAL DRAWING</td>
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CONCRETE COLLAR AROUND MANHOLE
30 INCH RING AND COVER

DATE 01-01-16  DWG. NO. 408.1.S1

Effective as of 08/08/2019
NOTES:

1. CONCRETE COLLAR TO BE CONSTRUCTED 1/8" BELOW SURFACE OF DENSE GRADE WHERE OPEN GRADE IS NOT USED.

2. CONCRETE COLLAR NOT REQUIRED IN UNINCORPORATED CLARK COUNTY RESIDENTIAL STREETS LESS THAN 80' R/W WIDTH.

**PLAN**

**SECTION A-A**

**SPECIFICATION REFERENCE**

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**AGENCY APPROVED**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**CONCRETE COLLAR AROUND MANHOLES**

**DATE 12-14-00**

**DWG. NO. 408**

Effective as of 08/08/2019
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.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

CONCRETE COLLAR AROUND MANHOLES

AGENCY APPROVED

DATE 01-01-16  DWG. NO. 408.S1
1. FRAME AND COVER TO BE ALHAMBRA FOUNDRY COMPANY TYPE A1310 IN ACCORDANCE WITH ASTM A-48, CLASS 30, OR APPROVED EQUAL.
2. CAST IRON SHALL HAVE MINIMUM TENSILE STRENGTH OF 30,000 P.S.I.
3. FRAME AND COVER MACHINED TO FIT.
4. WEIGHT OF FRAME AND COVER 330 LBS. MINIMUM.
5. THE USE OF A 30" RING AND COVER SHALL BE APPROVED BY THE ENTITY ENGINEER.
NOTES:

1. FRAME AND COVER TO BE ALHAMBRA FOUNDRY COMPANY TYPE A1310 IN ACCORDANCE WITH ASTM A-48, CLASS 30, OR APPROVED EQUAL.
2. CAST IRON SHALL HAVE MINIMUM TENSILE STRENGTH OF 30,000 P.S.I.
3. FRAME AND COVER MACHINED TO FIT.
4. WEIGHT OF FRAME AND COVER 330 LBS. MINIMUM.

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NOTES

1. MANHOLE STEP SHALL CONFORM TO A.S.T.M. C-478 AND C-497.

2. ALUMINUM STEPS SHALL BE SOLID, MADE FROM MATERIAL IN CONFORMANCE WITH A.S.T.M. B221 (ALLOY 6005-T6).

3. REINFORCED PLASTIC STEPS SHALL BE POLYPROPYLENE PLASTIC, WITH NO. 3 (MIN.) DEFORMED STEEL ROD (GRADE 60/A.S.T.M. A-615).

4. STEPS SHALL BE EVENLY SPACED FROM 12" TO 16".

5. ALL STEPS MUST BE EPOXIED IN PLACE DURING THE INSTALLATION PROCESS.
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

MODIFIED TYPE "A"
DROP INLET

DATE 9-14-06  DWG. NO. 411.1

1. ALL REBAR SHALL HAVE 2-1/2" COVER U.O.N.
2. ALL CONCRETE SHALL BE CLASS DA 4000 PSI.
3. SEE PLANS FOR LENGTH (L) AND DEPTH (H) OF EACH INLET.
4. SEE PLANS FOR SIZE AND LOCATION OF OUTLET PIPE.
5. ALL EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED.
6. ALL DAMAGED GALVANIZED STEEL SHALL BE PAINTED WITH A MINIMUM 3.5 MIL. COAT OF ONE OF THE FOLLOWING ZINC RICH PAINTS:
   - GLEVONOX TYPE I
   - LPS COLD GALVANIZE
   - SHERWIN-WILLIAMS "ZINC CLAD I"
7. ALL REBAR SHALL BE GRADE 60.
8. ALL STRUCTURAL STEEL SHALL BE A36.
10. BEDDING FOR DROP INLET SHALL BE 6" MIN. OF TYPE II AGGREGATE BASE COMPACTED TO 95% MAXIMUM DENSITY PER ASTM D1557.

Notes:

1. ALL REBAR SHALL HAVE 2-1/2" COVER U.O.N.
2. ALL CONCRETE SHALL BE CLASS DA 4000 PSI.
3. SEE PLANS FOR LENGTH (L) AND DEPTH (H) OF EACH INLET.
4. SEE PLANS FOR SIZE AND LOCATION OF OUTLET PIPE.
5. ALL EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED.
6. ALL DAMAGED GALVANIZED STEEL SHALL BE PAINTED WITH A MINIMUM 3.5 MIL. COAT OF ONE OF THE FOLLOWING ZINC RICH PAINTS:
   - GLEVONOX TYPE I
   - LPS COLD GALVANIZE
   - SHERWIN-WILLIAMS "ZINC CLAD I"
7. ALL REBAR SHALL BE GRADE 60.
8. ALL STRUCTURAL STEEL SHALL BE A36.
10. BEDDING FOR DROP INLET SHALL BE 6" MIN. OF TYPE II AGGREGATE BASE COMPACTED TO 95% MAXIMUM DENSITY PER ASTM D1557.
**NOTES:**

1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. OUTLET PIPE SHALL BE TRIMMED FLUSH WITH INSIDE FACE OF INLET.
4. SECTION B-B IS OPTIONAL FOR INLETS WHERE L ≥ 7'-0" OR GREATER, AND D ≥ 5'-0" OR GREATER, SEE STANDARD DRAWING NO. 415.

---

**SECTION A-A**

- NO. 4 BARS 12" O.C. MAX.
- 1/4" PER FOOT
- 1'-0"
- 6" COLD JOINT
- PLATE & PROTECTION BAR SEE STANDARD DRAWING NO. 418
- 2'-6"
- "D"
- 8" MIN.
- OUTLET PIPE
- SLOPE TO DRAIN ALL DIRECTIONS
- 1-1/2" CLEAR (TYP.)
- BOTH WAYS

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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**DROP INLET TYPE "A"**

**DATE** 4-11-02  **DWG. NO.** 411
SPECIFICATION REFERENCE

501 CONCRETE
501 CONCRETE STRUCTURES
501 REINFORCING STEEL
501 STEEL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "C-D" MODIFIED
DROP INLET

NOTES:

PER STD. DWG. NO. 234
CONSTRUCTION JOINT
3'-0" CURB TR.
(TYP)
LIP OF GUTTER
FLOWLINE
FACE OF CURB
BACK OF CURB
2'-6" MIN. "L"

VARIES PER PLAN
A
D6
6"
B
D6
PER STD. DWG.
CONSTRUCTION JOINT
NO. 234
3-#5 DIAG.
(TYP. 4-PLCS.)
4-#5 VERT.
3-#5 HORIZ.
2" CLR.
(TYP.)
OPENING FOR RCP
1" CLR. BETWEEN
BARS. (TYP.)
3-#5 HORIZ.
SECTION "A"
ALTERNATE CONNECTION DETAIL
AROUND OPENING
6-#4 BARS ALL
8" 8" 1/4"
L 3" x 3" x 1/2"
2'-0" LONG
FLOW
TYP. WALL REINF.
8" 1/4" 1/2"  DIA. x 4" LONG
HEADED ANCHOR
EACH END OF ANGLE
LOCATE 6" FROM
(TYPICAL ENDS OF
DROP INLETS)
SECTION "B"
1" DIA. ROD CENTERED
ON BEAM
L 3 1/2" x 2 1/2" x 1/2"
4" LONG LLH
CL 1/2" DIA. BOLTS W/
NUTS AND WASHERS
2 1/4" GAGE (2 TOTAL)
BEAM
DETAIL "B"
TYP. WALL REINF.
2'-2"
2"
7/8"
6"
7-7/8"
BACK OF CURB
TYP
2"
CLR.
6"
ANCHOR, SEE NOTE 6
1/2" DIA. x 8" LONG HEADED
TYP. SLAB REINF.
PROTECTIVE FACE ANGLE
5-1/2" x 4-0" x 5/16" LLH
FLUSH W/CURB FACE
1" DIA. ROD X 10-1/2" LONG
W/D (DOUBLE) HEX NUTS AND
WASHERS AT TOP, SEE DETAIL
'B' FOR CONNECTION TO BEAM

6" 4" 4-1/2" 3/16"
BICYCLE PROOF HEAVY DUTY
2-1/2" THK x 17-3/4" W x 29-3/4" L
VANE GRATE NEENAH TYPE R-4999-L9
OR APPROVED EQUAL
PROTECTIVE ANGLE
2-1/2" x 2-1/2"
CONT.

ALL EXPOSED METALS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
1. PROVIDE 1/2" (MIN.) CLEARANCE ALL AROUND THE STEEL BEAM,
2. DRY PACK AFTER INSTALLATION.
3. WHEN REQUIRED BY LENGTH OF OPENING, PLATE ANGLE MAY BE
DELIVERED IN SECTIONS AND BUTT WELDED IN PLACE.
4. ALGALLOY DAMAGED BY WELDING SHALL RECEIVE TWO COATS
OF GALVALLOY OR EQUAL.
5. CONCRETE SHALL BE MODIFIED CLASS DA 4000 PSI, SEE SPECIAL PROVISIONS
6. ANGLE ANCHORS SHALL BE EMBED IN WALL PROVIDE HEX NUT AND
WASHER 2-1/4" GAGE (2 TOTAL)

Effective as of 08/08/2019
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET
TYPE "B"

DATE 4-11-02 DWG. NO. 412

AGENCY APPROVED B C H L M N

SPECIFICATION

REFERENCE

501 CONCRETE
502 CONCRETE STRUCTURES
505 REINFORCING STEEL
713 STEEL

NOTES:
1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. CONCRETE SHALL BE CLASS "D" OR "DA".
4. OUTLET PIPE SHALL BE TRIMMED FLUSH WITH INSIDE FACE OF INLET.
5. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417

OUTLET PIPE
PLATE & PROTECTION BAR SEE STD. DWG NO. 418

1/4" PER FOOT
SLOPE TO DRAIN ALL DIRECTIONS

#4 BARS 11 1/2" C-C

1 1/2" CLEAR

4'-4 3/4"

4'-4 3/4"

1/2" STD. ROD

TOP VIEW

STANDARD Curb
APRON
STANDARD GUTTER

PROTECTION BAR

OUTLET PIPE

SIDE VIEW

1 1/2" CLEAR (TYP.)

STANDARD CURB
STANDARD GUTTER

6" CURB FACE

OUTLET PIPE
STANDARD CURB
STANDARD GUTTER

EXPANSION JOINT

6" CURB FACE

PLATE ANCHOR

1/2" STD. ROD

TOP VIEW

PLATE ANCHOR

1/2" STD. ROD

TOP VIEW

OUTLET PIPE

6"

TOP VIEW

OUTLET PIPE

6"

TOP VIEW

OUTLET PIPE

6"
ALHAMBRA FOUNDRY TYPE A1530 FRAME AND COVER (WITH 22" DIA. CLEAR OPENING) IN ACCORDANCE WITH ASTM A-48, CLASS 30, OR APPROVED EQUAL. COVER TO BE SECURED WITH 2-5/8" DIAMETER STAINLESS STEEL BOLTS.

NOTES:
1. DEPTH "D" TO BE SHOWN ON PLANS.
2. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
3. WHEN LENGTH "L" EXCEEDS 4'-0" SUPPORT BOLTS REQUIRED, SEE STANDARD DRAWING NO. 418.
4. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417.
5. SECTION B-B IS OPTIONAL FOR INLETS WHERE L > 7'-0" AND D > 5'-0", SEE STANDARD DRAWING NO. 415.

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET TYPE "C"

SPECIFICATION REFERENCE
501 CONCRETE
502 CONCRETE STRUCTURES
505 REINFORCING STEEL
713 STEEL

AGENCY APPROVED
B C H L M N

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET TYPE "C"

DATE 4-11-02 DWG. NO. 413
1. DROP INLET TYPE "D" TO BE USED WHEN CONFLICTING UTILITIES ARE LOCATED IN THE SIDEWALK AREA.
2. DEPTH "D" AND DISTANCE "Y" TO BE SHOWN ON PLANS.
3. OUTLET PIPE SIZE TO BE SHOWN ON PLANS.
4. WHEN LENGTH "L" EXCEEDS 4'-0" SUPPORT BOLTS REQUIRED, SEE STANDARD DRAWING NO. 418.
5. FOR GRATE DETAIL SEE STANDARD DRAWING NO. 417.
6. SECTION B-B IS OPTIONAL FOR INLETS WHERE L > 7'-0" AND D > 5'-0", SEE STANDARD DRAWING NO. 415.

NOTES:

SPECIFICATION REFERENCE

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<td>CONCRETE STRUCTURES</td>
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<tr>
<td>505</td>
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<td>713</td>
<td>STEEL</td>
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AGENCY APPROVED

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UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

DROP INLET TYPE "D"

DATE 4-11-02 DWG. NO. 414

Effective as of 08/08/2019
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<tr>
<th>&quot;D&quot;</th>
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<tr>
<td>2'-0&quot; TO 8'-0&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>8'-1&quot; TO 20'-0&quot;</td>
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### Notes:

1. Depth "D" to be shown on plans.
2. Outlet pipe size to be shown on plans.
3. Section appears as Section B-B for Drop Inlet Type "A", Standard Drawing No. 411 and for Drop Inlet Type "C", Standard Drawing No. 413.

### Section B-B

**Slope to Drain**

**Outlet Pipe**

**Agency Approved**: Effective as of 08/08/2019
BEEHIVE DROP INLETS SHALL BE USED AT LOCATIONS APPROVED BY THE ENGINEER.

NOTE:
BEEHIVE DROP INLETS SHALL BE USED AT LOCATIONS APPROVED BY THE ENGINEER.
PLAN

SECTION E-E

3-1/2" x 3" x 3/8" FRAME ANGLE WELDED TO LONGITUDINAL FRAME

3-1/2" x 3" x 1/2" FRAME ANGLE

SECTION D-D

3" x 3/8" FRAME BAR WELDED TO FRAME ANGLE

1" x 1/4" x 4" BAR WELDED TO FRAME ANGLE

NOTE:

ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AND ALL GALVANIZING DAMAGED BY FABRICATION OR INSTALLATION SHALL RECEIVE TWO COATS OF ALUMINUM PAINT (GALVONOX OR EQUAL).

FRAME & GRATE INSTALLATION

PROTECTION BAR LOCATION
SEE STANDARD DRAWING NO. 418

APPROXIMATE WEIGHT

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<th>GRATE</th>
<th>TOTAL</th>
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<tr>
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<td>78 LBS.</td>
<td>157 LBS.</td>
<td>235 LBS.</td>
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FRAME

GRATE

TOTAL

Effective as of 08/08/2019

AGENCY APPROVED

SPECIFICATION REFERENCE

712 MISCELLANEOUS METAL

714 PAINT

715 GALVANIZING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DROP INLET
FRAME AND GRATE

DATE 10-14-99 DWG. NO. 417
NOTE:

1/2" STEEL ANCHORS
EVERY 6" O.C.

EQUALLY SPACED
BETWEEN BOLT HOLES.
(ALTERNATE AS SHOWN)

FOR STEEL PLATE AND PROTECTION BAR DETAILS, SEE
STANDARD DRAWING NO. 419.
1. PROTECTION BAR SHALL BE REQUIRED ON ALL INLETS AND SHALL BE PLACED PARALLEL TO THE STEEL FACE PLATE.

2. SUPPORT BOLTS SHALL BE EQUALLY SPACED AT NOT MORE THAN 2'-0" O.C. AND NOT LESS THAN 1'-6" O.C.

3. ALL EXPOSED METAL PARTS SHALL BE GALVANIZED AND GALVANIZING DAMAGED BY FABRICATION OR INSTALLATION SHALL RECEIVE TWO COATS OF ALUMINUM PAINT (GALVONOX OR EQUAL).

4. FOR STEEL PLATE ANCHORAGE, SEE STANDARD DRAWING NO. 418.

5. #4 BARS ☐(L·6") SHALL BE IN ADDITION TO REINFORCING STEEL PER APPLICABLE DROP INLET STANDARD PLAN.

ADJUSTING NUTS TO BE TIGHTENED & SECURED IN PLACE WHEN PLATE IS IN PROPER POSITION.

1" ☐ PROTECTION BAR SHALL BE EMBEDDED 5" AT EACH END. (SEE NOTE 1)

1" ☐(CURB FACE ☐6") SUPPORT BOLT.

7 - #4 BARS ☐(L·6")

1-1/2" CLEAR TYP.

3" R

1-1/2" CLEAR TYP.

3"

GUTTER FLOW LINE

3"

ADJUSTING NUTS TO BE TIGHTENED & SECURED IN PLACE WHEN PLATE IS IN PROPER POSITION.

7 - #4 BARS ☐(L·6")

1-1/2" CLEAR TYP.

3"

GUTTER FLOW LINE

3"

ADJUSTING NUTS TO BE TIGHTENED & SECURED IN PLACE WHEN PLATE IS IN PROPER POSITION.

7 - #4 BARS ☐(L·6")

1-1/2" CLEAR TYP.
NOTES:

1. CONSTRUCT 14-FOOT WIDE CHAIN LINK GATE AT ALL STREET ACCESS POINTS, FOR ACCESS ONTO 12-FOOT ACCESS ROADS.
2. CONSTRUCT 3-FOOT WIDE CHAIN LINK GATE AT ALL STREET ACCESS POINTS FOR ACCESS ON THE 5-FOOT WIDTH ACCESS SIDE.
3. CONSTRUCT SECOND ACCESS ROAD (12-FOOT MINIMUM WIDTH WITH 6-INCH MIN. TYPE II AGGREGATE BASE) IF B EXCEEDS 30'.
4. FOR UNLINED CHANNELS H > 2.
5. "V" DITCH SHALL BE CONSTRUCTED TO PREVENT OVERLAND RUNOFF FROM ERODING SIDES OF BANK. AN ADEQUATE NUMBER OF INLETS ALONG THE "V" DITCH SHALL BE DESIGNED WITH A MINIMUM 12-INCH CMP LATERAL DISCHARGING INTO THE CHANNEL. APPROPRIATE BANK PROTECTION FOR LATERAL PIPE DISCHARGE SHALL BE PROVIDED. OTHER METHODS OF OVERLAND RUNOFF CONTROL MAY BE ACCEPTABLE IF APPROVED BY THE ENGINEER.
NOTES

1. MESSAGE OR SYMBOL SHALL BE AS SHOWN ON THE DRAWING OR ON THE VERTICAL CURB NEXT TO THE DROP INLET OR AS APPROVED BY THE APPROPRIATE CITY OR COUNTY ENGINEER.

2. LETTERS SHALL BE 1-7/16" IN HEIGHT. THE MESSAGE SHALL BE CENTERED ON THE BACK OF THE INLET OR ON THE TOP OF CURB.

3. CONCRETE SHALL BE STAMPED IN SUCH A WAY AS TO PROVIDE FOR A CLEAR AND LEGIBLE IMAGE. (APPROXIMATE DEPTH OF 1/4”).

4. ALL STAMPS SHALL BE APPROVED BY THE CITY OR COUNTY ENGINEER BEFORE BEING USED.

5. STAMP MAY BE PERMANENTLY CAST INTO CAST IRON FRAME OR PRE-CAST CONCRETE PORTIONS OF INLET.

6. WHERE RETROFITTING IS REQUIRED, AN EPOXIED PLACARD BEARING THE MESSAGE AND SYMBOL APPROVED BY THE APPROPRIATE CITY OR COUNTY ENGINEER SHALL BE PERMANENTLY AFFIXED ON THE TOP OF THE ADJACENT CURB.

7. THIS STANDARD IS REQUIRED IN THE LAS VEGAS VALLEY IN WHICH AREA WATER DRAINS TO LAKE MEAD.
NOTES

1. MESSAGE OR SYMBOL SHALL BE AS SHOWN ON THE DRAWING OR ON THE VERTICAL CURB NEXT TO THE DROP INLET OR AS APPROVED BY THE APPROPRIATE CITY OR COUNTY ENGINEER.

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7. THIS STANDARD IS REQUIRED IN THE LAS VEGAS VALLEY IN WHICH AREA WATER DRAINS TO LAKE MEAD.
STAMP MESSAGES AND SYMBOLS

16.5" MAXIMUM

DON'T POLLUTE

DRAINS

TO LAKE MEAD

5" MAX.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

STORM WATER QUALITY MANAGEMENT
STAMP AND SIGN DETAIL

DATE 12-09-10  DWG. NO.  421  SHEET 2 OF 3
4" PLACARD - COLORS □ BLUE AND GREEN

This epoxy placard message and symbol has been approved by the appropriate city or county engineer. Any other equivalent message and symbol designs will require prior approval of the appropriate city or county before installation. The placard material shall be either polycarbonate or metal and the finish shall be UV and abrasion resistant.

STORM DRAIN MARKER

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<td>STORM WATER QUALITY MANAGEMENT</td>
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<td>STAMP AND SIGN DETAIL</td>
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<th>C</th>
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DATE 12-09-10  DWG. NO.  421  SHEET 3 OF 3
NOTES:
1. ALL EXPOSED METALS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
2. PROVIDE 1/2" (MIN.) CLEARANCE ALL AROUND THE STEEL BEAM, DRY PACK AFTER INSTALLATION.
3. WHEN REQUIRED BY LENGTH OF OPENING, PLATE ANGLE MAY BE DELIVERED IN SECTIONS AND BUTT WELDED IN PLACE.
4. ALL GALVANIZED DAMAGED BY WELDING SHALL RECEIVE TWO COATS OF GALVALLOY OR EQUAL.
5. CONCRETE SHALL BE MODIFIED CLASS DA 4000 PSI, SEE SPECIAL PROVISIONS.
6. ANGLE ANCHORS SHALL BE EMBEDDED MIDPOINT IN EACH ENDWALL AND EVENLY SPACED. (MAXIMUM SPACING OF 2').
7. THE GAP BETWEEN THE GRATES MUST BE 1/2-INCH OR LESS.

SPECIFICATION REFERENCE

501 CONCRETE
501 CONCRETE STRUCTURES
501 REINFORCING STEEL
501 STEEL

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "CM" DROP INLET

AGENCY APPROVED
B C H L M N

SPECIFICATION

DATE 07-01-14 DWG. NO. 422

TABLE

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<th>D (MAX)</th>
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<td>8&quot;</td>
<td>#5 12&quot; O.C.</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>8&quot;</td>
<td>#5 12&quot; O.C.</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>8&quot;</td>
<td>#5 9&quot; O.C.</td>
</tr>
<tr>
<td>10'-0&quot;</td>
<td>8&quot;</td>
<td>#5 6&quot; O.C.</td>
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Effective as of 08/08/2019
ONE PERCENT MINIMUM SLOPE THROUGH DRAINAGE SLAB IS REQUIRED. WHERE A STORM DRAIN LINE IS AVAILABLE IN THE EXTERIOR STREET, A STORM DRAIN INLET AT THE BEGINNING OF THE EASEMENT AND AN 18-INCH MINIMUM STORM DRAIN PIPE IS REQUIRED TO CONVEY SUBURBAN WATER THROUGH THE EASEMENT.

NOTE #1: 20'-STANDARD WIDTH, DIFFERENT WIDTHS TO BE DESIGNED ACCORDINGLY AND IN CONFORMANCE WITH THE CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL.

GENERAL NOTE: GATE AND FENCE CONSTRUCTIONS INTENDED TO PREVENT STORAGE OF MATERIALS AND VEHICLES WITHIN CHANNEL. PREVENTION OF PEDESTRIAN USE MAY BE IMPAIRED, BUT THE DESIGN IS NOT INTENDED TO PREVENT PEDESTRIAN TRAFFIC. BOLLARDS MAY BE USED IN LIEU OF GATE IF PEDESTRIAN ACCESS IS DESIRED.

NOTE #2: OWNED AND MAINTAINED.
NO SURFACE UTILITY FIXTURES ALLOWED.

NOTE #3: SEE NOTE #3.

6" CONCRETE SLAB W/ #4 REBAR @ 12" O.C. EACH WAY.
CONSTRUCT EXPANSION JOINTS ALL AROUND THE CONCRETE SLAB AND SEAL WITH ELASTOMERIC JOINT SEALANT. CONSTRUCT TRANSVERSE WEAKENED PLANE JOINTS @ 18" O.C. (FOR JOINT DETAILS SEE USD 234).

PER USD 236

(SEE NOTE #1)

95% MIN. COMPACTION.
6" CONCRETE SLAB W/ #4 REBAR @ 12" O.C. EACH WAY.

SEE NOTE #3
2% CROSS SLOPE
CHANNEL FLOOR

SEE NOTE #3
2% CROSS SLOPE
FLOW LINE

6" TYPE II AGGREGATE BASE
95% MIN. COMPACTION.

SEE NOTE #2

2% CROSS SLOPE
FLOW LINE

2% CROSS SLOPE
FLOW LINE

SECTION A-A'

NOT FOR USE IN EMERGENCY ACCESS

SPECIFICATION REFERENCE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

THROUGH-LOT DRAIN

DATE 07-01-14  DWG. NO. 425.S1  SHEET 1 OF 3
ONE PERCENT MINIMUM SLOPE THROUGH DRAINAGE
SLAB IS REQUIRED. WHERE A STORM DRAIN LINE IS
AVAILABLE IN THE EXTERIOR STREET, A STORM DRAIN
INLET AT THE BEGINNING OF THE EASEMENT AND AN
15-INCH MINIMUM STORM DRAIN PIPE IS REQUIRED.
TO CONVEY NUISANCE WATER THROUGH THE EASEMENT.

NOTE #1: 20' STANDARD WIDTH. DIFFERENT
WIDTHS TO BE DESIGNED ACCORDINGLY.

GENERAL NOTE: GATE AND FENCE CONSTRUCTION IS
INTENDED TO PREVENT STORAGE OF MATERIALS AND
VEHICLES WITHIN CHANNEL. PREVENTION OF PEDESTRIAN
USE MAY BE IMPAIRED, BUT THE DESIGN IS NOT INTENDED
TO PREVENT PEDESTRIAN TRAFFIC.

BOLLARDS MAY BE USED IN LIEU OF GATE
IF PEDESTRIAN ACCESS IS DESIRED.

PLAN VIEW

SECTION A-A'

NOT FOR USE IN EMERGENCY ACCESS

SIGNATURES

AGENCY APPROVED

CLARK COUNTY AREA

SUPPORTMENTAL DRAWING

THROUGH-LOT DRAIN

DATE 07-01-14

DWG. NO. 425.S1

SHEET 2 OF 3
NOT FOR USE IN EMERGENCY ACCESS

**EXTERIOR STREETS**

CURB PAINTED RED

FENCE

SIDESWALK DRAIN

PER USD 236

**GENERAL NOTE:** GATE AND FENCE CONSTRUCTION IS INTENDED TO PREVENT STORAGE OF MATERIALS AND VEHICLES WITHIN CHANNEL. PREVENTION OF PEDESTRIAN USE MAY BE IMPAIRED, BUT THE DESIGN IS NOT INTENDED TO PREVENT PEDESTRIAN TRAFFIC. BOLLARDS MAY BE USED IN LIEU OF GATE IF PEDESTRIAN ACCESS IS DESIRED.

**PLAN VIEW**

NOTE #1: 20' STANDARD WIDTH, DIFFERENT WIDTHS TO BE DESIGNED ACCORDINGLY.

**SECTION A-A'**

NOTE: POSTS PLACED IN HARDENED CONCRETE REQUIRE AN INJECTION THROUGH THE SLAB AND BASE FULLY COATED WITH HIGH STRENGTH GROUT.

INTERIOR POSTS POURED MONOLITHIC WITH THE SLAB SHALL BE EMBEDDED A MINIMUM OF 18" INTO THE SLAB. EXTERIOR POSTS POURED MONOLITHIC WITH THE SLAB SHALL HAVE FULL EMBREMENT IN THE SLAB.

NOTE: STEEL WILL BE POWDER COATED AND PAINTED WHITE UNLESS OTHERWISE SPECIFIED.

**DETAIL 1 (HINGE)**

SEEN FROM OUTSIDE

4"x4" EXTRA HEAVY DUTY HINGE (STANLEY 12-6350)

1/8" FENCE POST

1 1/2" GATE FRAME

WELD TO PROVIDE A MINIMUM RETURN OF 1" ON GATE FRAME AND FENCE POST.

**DETAIL 2 (CHAIN LATCH)**

SEEN FROM OUTSIDE

3/8" HIGH TEST CHAIN

WELD HALF OF CHAIN LINK TO THE GATE FRAME

**DETAIL 3 (ANCHOR ROD)**

1" EMBEDDED GALVANIZED STEEL SLEEVE

5/8" ANCHOR ROD

1/4" WELDED GUIDE FLANGE (1/8" THICK TYP.)

**DETAIL 4 (SLEEVE)**

GALVANIZED STEEL SLEEVE

1" EMBEDDED GALVANIZED STEEL SLEEVE

1/4" WELDED GUIDE FLANGE (1/8" THICK TYP.)

NOT SPECIFIED FOR USE IN EMERGENCY ACCESS.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

THROUGH-LOT DRAIN

DATE 07-01-14

DWG. NO. 425.S1

SHEET 3 OF 3
LONGITUDINAL CUT RESTORATION

MIN. RESTORATION LIMITS UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

TRENCH LIMITS

ASPHALT PATCH TO MATCH CONTIGUOUS SECTION AND SHALL BE NO LESS THAN 2"

MILL AND OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY. REMOVE AND REPLACE ASPHALT PAVEMENT IF EXISTING ASPHALT PAVEMENT IS 2" THICK OR LESS.

NOTES:

SEE DWG. 500.1 SHEET 2 OF 2
LONGITUDINAL CUT RESTORATION

MILL AND OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY. REMOVE AND REPLACE ASPHALT PAVEMENT IF EXISTING ASPHALT PAVEMENT IS 2" THICK OR LESS.

ASPHALT PATCH TO MATCH CONTIGUOUS SECTION AND SHALL BE NO LESS THAN 2"

LONGITUDINAL CUT RESTORATION

MIN. RESTORATION LIMITS UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

TRENCH LIMITS

NOTES:

SEE DWG. 500.1 SHEET 2 OF 2

SPECIFICATION REFERENCE

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

0 TO 5 YEARS
PAVEMENT RESTORATION
LONGITUDINAL CUT

AGENCY APPROVED

B C H L M N

DATE 6-12-08
DWG. NO. 500.1
SHEET 1 OF 2

Effective as of 08/08/2019
1. IF THERE IS A MEDIAN, RESTORATION MAY BE LIMITED TO THE AREA BETWEEN C & G AND THE MEDIAN CURB.
2. WHEN EXISTING PAVEMENT IS 2" THICK OR LESS, PAVEMENT WITHIN THE RESTORATION AREA SHALL BE REMOVED AND REPLACED IN KIND AS REQUIRED BY THE ENTITY.
3. IF SAWCUT LINE IS WITHIN FIVE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR EXISTING SAWCUT LINE, MILL AND OVERLAY OR REPLACE TO THAT EDGE.
4. PAVEMENT RESTORATION AREA SAWCUT LINES SHALL NOT FALL WITHIN STREET INTERSECTION.
5. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
6. THE ENTITY’S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.
1. IF THERE IS MEDIAN, RESTORATION MAY BE LIMITED TO THE AREA BETWEEN C&G TO CURB OF MEDIAN.
2. IF SAWCUT LINE IS WITHIN FIVE FEET OF EDGE OF EXISTING ASPHALT CONCRETE SURFACE OR EXISTING SAWCUT LINE, MILL AND OVERLAY OR REPLACE TO THAT EDGE.
3. WHEN EXISTING PAVEMENT IS LESS 2" THICK OR LESS, PAVEMENT WITHIN THE RESTORATION AREA SHALL BE REMOVED AND REPLACED IN KIND AS REQUIRED BY THE ENTITY.
4. PAVEMENT RESTORATION AREA SAWCUT LINES SHALL NOT FALL WITHIN STREET INTERSECTION.
5. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
6. THE ENTITY’S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

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**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**0 TO 5 YEARS**

**PAVEMENT RESTORATION**

**TRANSVERSE CUT**

**DATE 6-12-08**

**DWG. NO. 500.2**

Effective as of 08/08/2019
1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.
2. THE ENTITY’S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

AGENCY APPROVED

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<td>OVER 5 YEARS</td>
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<td>PAVEMENT RESTORATION - LONGITUDINAL</td>
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<td>PRIME COAT</td>
<td>CUT- GREATER THAN 60 FT. RIGHT-OF-WAY</td>
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NOTES:
- MIN. RESTORATION LIMITS UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.
- MILL AND OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY. REMOVE AND REPLACE ASPHALT PAVEMENT IF EXISTING ASPHALT PAVEMENT IS 2" THICK OR LESS.
- MIN. RESTORATION LIMITS UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

OVER 5 YEARS
PAVEMENT RESTORATION - Longitudinal Cut - Greater Than 60 FT. Right-Of-Way
Longitudinal Cut Restoration

**1.** If trench edge is 5-ft or less from lip of gutter, then replace 8-ft (min.) of asphalt.

**2.** If trench edge is between 5-ft & 9-ft from lip of gutter, then replace 11-ft (min.) of asphalt.  
Exception: for residential streets 51-ft or less, replace full half street.

**3.** If trench edge is between 10-ft & 14-ft from centerline, then replace 16-ft (min.) of asphalt.  
Exception: for residential streets 51-ft or less, replace full half street.

**4.** If trench edge is between 2-ft & 10-ft from centerline, then replace 12-ft (min.) of asphalt.

Notes:
1. If cut is within a marked lane, pavement restoration must extend to the marked lane line.
2. The entity's requirements take precedence over any minimum requirements shown hereon.
3. Minimum asphalt replacement width shall not be less than the limits of the paving machinery used.

---

**Plan View**

<table>
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OVER 5 YEARS  
Pavement Restoration  
Longitudinal Cut - 60' R/W or Less  

Effective as of 08/08/2019
NOTES:

1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.

2. THE ENTITY'S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.

SPECIFICATION REFERENCE

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<th>AGENCY APPROVED</th>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

OVER 5 YEARS
PAVEMENT RESTORATION
TRANSVERSE CUT
ALL RIGHT-OF-WAY WIDTHS

DATE 6-12-08   DWG. NO. 500.5

MILL AND OVERLAY 1" UTACS UNLESS OTHERWISE REQUIRED BY THE ENTITY. REMOVE AND REPLACE ASPHALT PAVEMENT IF EXISTING PAVEMENT IS 2" THICK OR LESS. RESTORATION TO THE NEXT LANE LINE UNLESS OTHERWISE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR.

ASPHALT PATCH TO MATCH CONTIGUOUS SECTION AND SHALL BE NO LESS THAN 2".

PLAN VIEW

1. IF CUT IS WITHIN A LANE, PAVEMENT RESTORATION MUST EXTEND TO THE NEXT LANE LINE.

2. THE ENTITY'S REQUIREMENTS TAKE PRECEDENCE OVER ANY MINIMUM REQUIREMENTS SHOWN HEREON.
A. STREETLIGHT CONDUIT  
B. POWER COMPANY SECONDARY  
C. POWER COMPANY PRIMARY  
D. TELEPHONE CONDUITS  
E. CABLE T.V. CONDUIT  
F. TRAFFIC SIGNAL CONDUIT  
G. OTHER COMMUNICATIONS CONDUIT  
H. POWER MARKING TAPE  
□ TELEPHONE MARKING TAPE

1. STORM/SANITARY SEWER AND GAS MAY BE LOCATED ON OTHER SIDE OF CENTERLINE AS TERRAIN AND/OR SEPARATIONS DICTATES.  
2. STREETLIGHT FOUNDATIONS SHALL BE LOCATED BEHIND SIDEWALK FOR SIDEWALK WIDTHS LESS THAN 5 FEET PER STANDARD DRAWING NO. 320.  
3. SEPARATION DISTANCE SHALL CONFORM TO UTILITY STANDARDS ADOPTED BY THE GOVERNING AGENCY FOR SEWER AND WATER FACILITIES.  
4. STREET CONSTRUCTION SHALL CONFORM TO THE DESIGNED PLANS.  
5. UTILITY CONSTRUCTION BACKFILL SHALL CONFORM TO SECTION 208.  
6. UTILITY LINES SHALL BE RE-ROUTED IF DROP INLET IS IN CONFLICT.  
7. WATER TRANSMISSION MAIN SEPARATION SHALL BE REFERRED TO WATER PURVEYOR GUIDELINES.
NOTES:
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.
MILL AND OVERLAY RESTORATION LIMITS TO BE DETERMINED BY ENTITY PLAN CHECK, WITH FINAL LIMITS SET BY FIELD INSPECTOR. REFER TO DRAWINGS 500 SERIES.

EXISTING AGGREGATE BASE

INSTALLATION REQUIREMENTS INCLUDING CONTRACTOR TESTING AND FILL LiftS SEE SECTION 208- TRENCH EXCAVATION AND BACKFILL

MINIMUM TRENCH WIDTH IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208- TRENCH EXCAVATION AND BACKFILL

GRANULAR BACKFILL OR SELECT BACKFILL OR BACKFILL WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) OR AS APPROVED BY THE ENGINEER SEE NOTE 1

DEPTH OF COVER IS RELATED TO DESIGN REQUIREMENTS AND SHALL BE INDICATED ON THE PLAN DRAWINGS. SEE SECTION 208- TRENCH EXCAVATION AND BACKFILL

PIECE ZONE

PIPE BEDDING SEE NOTE 3

NOTES:
1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2' OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

METHOD A FOR RIGID PIPE
TRENCH BACKFILL - PAVED AREAS

DATE 01-01-12 DWG. NO. 503.2
**NOTES:**

1. NO STONES OR LUMPS GREATER THAN 3" PERMITTED IN TRENCH 2" OR LESS IN WIDTH.
2. TRENCH WIDTH, BEDDING, SUBGRADE AND PIPE ZONE REQUIREMENTS FOR UTILITY INSTALLATIONS SHALL CONFORM TO THE RESPECTIVE ENTITY REQUIREMENTS.
3. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY. SEE STANDARD DRAWING NO. 505 FOR PIPE BEDDING METHODS.
4. LAS VEGAS VALLEY WATER DISTRICT REQUIRES PIPE BEDDING AND BACKFILL WITHIN THE PIPE ZONE TO BE OF THE SAME MATERIAL.
**SPECIFICATION REFERENCE**

<table>
<thead>
<tr>
<th>PIPE TRENCH BEDDING METHODS</th>
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**PIPE BEDDING TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY.**

**INDICATED THICKNESS OF BEDDING MATERIAL TO BE CONSTRUCTED UNDER THE BARREL.**

**SUBGRADE SHALL CONFORM TO RESPECTIVE ENTITY REQUIREMENTS.**

**NOTES:**

1. PIPE BEDDING TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY. SUBGRADE SHALL CONFORM TO RESPECTIVE ENTITY REQUIREMENTS.
2. INDICATED THICKNESS OF BEDDING MATERIAL TO BE CONSTRUCTED UNDER THE BARREL. SUBGRADE TO BE EXCAVATED TO PROVIDE 2" CLEARANCE UNDER THE BELL.
3. OTHER BEDDING METHODS MAY BE SPECIFIED OR APPROVED.
4. CRUSHED ROCK MAY BE USED FOR PIPE BEDDING ONLY IF MATERIAL USE HAS BEEN SPECIFICALLY APPROVED BY THE GOVERNING AGENCY.

---

**TABLE 1**

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
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</tr>
<tr>
<td>21&quot;</td>
<td>5&quot;</td>
<td>5&quot;</td>
</tr>
</tbody>
</table>

**D** = OUTSIDE DIAMETER OF PIPE  
**W** = OUTSIDE DIAMETER OF PIPE + 24" MAXIMUM

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**UNIFORM STANDARD DRAWINGS**  
**CLARK COUNTY AREA**

**SPECIFICATION REFERENCE**

- 208 TRENCH EXCAVATION & BACKFILL  
- 302 AGGREGATE BASE COURSES  
- 501 CONCRETE  
- 505 REINFORCEMENT STEEL

**AGENCY APPROVED**

**DATE** 11-9-06  
**DWG. NO.** 505
TYPE B - KEYHOLE REPAIR
REQUIRED FOR ROW WIDTH GREATER THAN 60'
OPTIONAL FOR ROW WIDTH 60' OR LESS

NOTES:
1. CUT AND REMOVE PAVEMENT PLUG, WITH AN APPROVED KEYSHELL CORING PLUG TOOL. PLUG SHALL BE AT LEAST 4" THICK AND CAN BE AS GREAT AS 6" IN DIAMETER. REMOVED MATERIAL MAY BE USED FOR BACKFILL.
2. BONDING MATERIAL SHALL BE A SINGLE COMPONENT CEMENTitous RAPID HARDENING HIGH STRENGTH WATER-COMMISSION BONDING AGENT THAT ALLOWS THE BOND TO DEVELOP A MINIMUM TENSILE STRENGTH OF 200 PSI IN 30 MINUTES OF APPLICATION. BOND AGENT MUST SHOW A MINIMUM BOND STRENGTH OF 280 PSI IN 28 DAYS.
3. AGENCY APPROVED BACKFILL BRIEFS SHALL BE PER SECTION 215.
4. PRIOR AGENCY APPROVAL IS REQUIRED FOR MULTIPLE KEYHOLE REPAIRS WITHIN A GIVEN ROADWAY SEGMENT. A 3 YEAR WARRANTY IS REQUIRED ON ALL REPAIRS.

<table>
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<th>SPECIFICATION REFERENCE</th>
<th>UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>215 KEYHOLE POTHEOLE EXCAVATION AND BACKFILL</td>
<td>UTILITY POTHEOLE REPAIR</td>
</tr>
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</table>

DATE 01-01-12
DWG. NO. 506
1. CALL AND SCHEDULE INSPECTION TO OBSERVE CONCRETE PLUG AFTER PLACEMENT.

2. PERMIT TYPICALLY VALID FOR 30 DAYS - EXTENSION OF PERMIT IS REQUIRED PRIOR TO EXPIRATION IF WORK IS NOT COMPLETE.

3. FOR BORINGS GREATER THAN 12-INCHES IN DIAMETER, SUBMIT PERMANENT PATCHING PLAN WITH PERMIT APPLICATION.

4. IF GROUNDWATER IS ENCOUNTERED FOLLOW APPROPRIATE AGENCY REQUIREMENTS.

5. THE CONNECTION OF THE PIPE AND FLAT PLATE SHALL BE CONTINUOUSLY WELDED ALL OF THE WAY AROUND. THE SIZE OF THE WIRE SHALL BE 0.35 WIRE (ER70S-6) OR 7018 ROD, AND THE WELDER SHALL HAVE A W.S. CERTIFICATION IN FLAT PLATE.
ROADWAY WITH DESIGNATED BICYCLE LANE

PERMANENT PAVEMENT PATCH DETAIL

ROADWAY WITH DESIGNATED BICYCLE AND PARKING LANE

PERMANENT PAVEMENT PATCH DETAIL

PERMANENT PAVEMENT PATCH DETAIL

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

BICYCLE LANE PERMANENT
PAVEMENT PATCH

AGENCY APPROVED

L

AGENCY APPROVED

L

DATE 01-01-16 | DWG. NO. 508.S1 | SHEET 1 OF 2

Effective as of 08/08/2019
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 CONTRACTORS 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.
TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

TYPICAL APPLICATION FOR BARRICADES & FLAGGER TRAFFIC CONTROL SIGN STANDARD DESIGNS

NOTE: ALTERNATE DESIGNS OF TYPE III-B BARRICADES MAY BE PERMITTED UPON APPROVAL OF PLAN SUBMITTED BY CONTRACTOR.

1. CONES TO BE PREDOMINATELY ORANGE.
2. CONES TO BE USED DURING NIGHTTIME HOURS.
3. CONES, DRUMS AND VERTICAL PANEL POST SHALL HAVE WEIGHTED BASES; HOWEVER IF THE CONTRACTOR WISHES IN LIEU OF WEIGHTED BASES, THE DEVICES MAY BE NAILED OR EPOXYED IN PLACE. DO NOT NAILED OR EPOXY TO FINAL PAVEMENT.

4. NAME & PHONE NUMBER OF OWNER MAY BE SHOWN ON NON-REFLECTIVE SURFACE; MUST BE OF ONE COLOR, NON-REFLECTIVE, WITH MAXIMUM 1" LETTERS ON THE FACE.
5. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE SURFACE.

6. THE PORTION OF THE SIGN FACE SHALL MATCH THE SIGN COLORS.
7. ALL COLORS AND LETTERS SHALL MEET APPLICABLE FEDERAL STANDARDS.

BARRICADE NOTES
1. ALL REFLECTIVE SHEETING ON BARRICADES, VERTICAL PANELS & SIGNALING DEVICES SHALL BE MADE OF MATERIALS CONFORMING TO SUBSECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.
2. BARRICADES MAY BE WEIGHTED WITH SANDBAGS, BUT SUCH SANDBAGS SHALL BE PLACED SO AS TO DISTURB THE RETRO REFLECTIVE SURFACE. YOU SHALL THEN BE LOCATED HIGHER THAN 18" ABOVE THE PLANS.
3. WARNING LIGHTS MAY BE PLACED ON ALL BARRICADES WHEN USED DURING NIGHTTIME HOURS.

4. ALL MATERIALS CONFORMING TO SUBSECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

TRAFFIC CONES
1. CONES TO BE PREDOMINATELY ORANGE.
2. CONES TO BE USED DURING NIGHTTIME HOURS.
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7. ALL COLORS AND LETTERS SHALL MEET APPLICABLE FEDERAL STANDARDS.
TYPICAL APPLICATION FOR
BARRICADES & FLAGGER TRAFFIC CONTROL SIGN STANDARD DESIGNS

DATE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA
1-9-97 DWG. NO. 601

SPECIFICATION REFERENCE
TRAFFIC CONTROL PLAN
FOR
HIGHWAY WORK ZONE

TYPE IIIA BARRICADE
N.T.S.

4' MINIMUM (SEE PLANS)

FRONT VIEW

1/2" CARRIAGE BOLTS WITH WASHERS
IN HORIZONTAL RAILS

1/2" MACHINE BOLTS WITH WASHERS

2"X4"

4"X4"

1'-6"

2'-0"

1/8" X 3 1/2" X 10" STEEL PLATE

1/2" MACHINE BOLTS

PLACED ON GROUND. USE SANDBAGS

 WHEN PLACED ON PAVEMENT.

PORTABLE TYPE IIIA
BARRICADE
N.T.S.

1'-0"

6" 1/4" CARRIAGE BOLTS WITH NUTS AND WASHERS

REMOVABLE MOUNTING ON 1" PLYWOOD
TYPICAL FOR PANELS

1/4" STEEL PINS. USE PINS WHEN
PLACED ON GROUND. USE SANDBAGS
WHEN PLACED ON PAVEMENT.

1/4" CARRIAGE BOLTS WITH NUTS AND WASHERS

WELDED ON SIDES ONLY

WELDED TO TUBING

3/8" X 1" BOLT WITH NUT

FOOT DETAIL

STEEL PINS. USE PINS WASH
PLACED ON GROUND. USE SANDBAGS
WASH PLACED ON PAVEMENT.

SIDE VIEW

TYPICAL FOR PANELS

REFLECTIVE SHEETING ON 1" PLYWOOD
TYPICAL FOR PANELS

1-1/2" 0.065 GAGE STEEL TUBING

1/2" 0.065 GAGE STEEL TUBING

2" 0.065 GAGE STEEL TUBING

AHEAD OF HORSE

SIDE VIEW

AGENCY APPROVED

Effective as of 08/08/2019

TRAFFIC CONTROL PLAN
FOR
HIGHWAY WORK ZONE

SPECIFICATION REFERENCE

TYPICAL APPLICATION FOR
BARRICADES & FLAGGER TRAFFIC CONTROL SIGN STANDARD DESIGNS

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE 1-9-97

DWG. NO. 601

SHEET 2 OF 2
**TRAFFIC CONTROL PLAN**

**FILL SECTION SLOPE (b / a)**

- 0.2
- 0.1

**TRAVELED WAY**

- 40 MPH

**PORTABLE CONCRETE BARRIER RAIL SHALL BE USED TO PROTECT ANY WORK AREA IN WHICH IS ESTABLISHED A CONDITION SHOWN IN TABLE 1.**

**TABLE 1. CLEAR ZONE DISTANCES (IN FEET FROM EDGE OF DRIVING LANE)**

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</table>

**TABLE 2. TYPICAL WARRANTS FOR NONTRAVERSABLE AND FIXED OB: ECT HAZARDS**

- SHIELDING GENERALLY REQUIRED
  - BOLDOVERS
  - CULVERTS, PIPE, HEADWALLS
  - CUT SLOPES (SMOOTH)
  - CUT SLOPES (ROUGH)
  - DITCHES (PARALLEL)
  - DITCHES (TRANSVERSE)

**TABLE 3. HORIZONTAL CURVE AD: USTMENTS**

- MAY BE USED FOR CURVE BASED SITE SPECIFIC WORKSHEETS. SEE ROADSIDE DESIGN GUIDE FOR FURTHER DISCUSSION.
- FILL OR DEMS SHOULD NOT BE PROHIBITED AT THE WORST OF THE TWO OF THESE SCENARIOS: RECOVERY OF HIGH SPEED VEHICLE OR HEAD-ON IMPACT. SHIELDING IS RECOMMENDED REGARDLESS OF THE SIZE, SHAPE AND LOCATION OF THE OBJECT.

**FIGURE A. WARRIANTS FOR FILL SECTION EMBANKMENTS**

**FIGURE B. CLEAR ZONE DISTANCE CURVES**

(For slopes greater than 1 consult AASHTO ROADSIDE DESIGN GUIDE 1989)

**FIGURE C. CLEAR ZONE DISTANCE CURVES**

(For slopes greater than 1 consult AASHTO ROADSIDE DESIGN GUIDE 1989)
Effective as of 08/08/2019

TRAFFIC CONTROL PLAN
FOR
HIGHWAY WORK ZONE

NOTE:
1. THE MINIMUM LENGTH OF PORTABLE BARRIER SYSTEM SHOULD BE 100 FT. AS PER I-205 DESIGN GUIDELINES.
2. STEEL BARS #5 @ 18" AND #4 @ 14" MAY BE REPLACED BY STEEL BARS #4 @ 18".
3. THE TWO #5 BARS SHALL BE EQUALLY SPACED FROM THE VERTEX OF THE FACE.
4. AN INTERIM WHITE REFLECTORIZED EDGE LINE, 6" WIDE MINIMUM SHOULD BE INSTALLED FROM THE START OF THE TAPER TO A POINT BEYOND THE WORK AREA.
5. THE MINIMUM LENGTH OF PORTABLE BARRIER SYSTEM SHOULD BE 100 FT. AS PER I-205 DESIGN GUIDELINES.
6. THE USE OF A BARRIER SHALL BE BASED ON THE NEED DETERMINED BY THE TRAFFIC ENGINEER.
7. WATER-FILLED BARRIER RAIL MAY BE USED ON SHORT TERM MOVING OPERATIONS.
8. TYPE "B" HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE THE BARRIER.
9. PROVIDE AT LEAST 3 FT. BETWEEN THE BARRIER AND THE WORK AREA.
10. FOR BETTER NIGHT VISIBILITY, STEADY BURN LIGHTS MAY BE MOUNTED IN 3" DRILLED HOLE IN THE BARRIER.

Table of典型应用

<table>
<thead>
<tr>
<th>Part A</th>
<th>#5</th>
<th>Part B</th>
<th>#5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Traffic Control Plan

- **Roadwork Area**: Where work activities are expected to take place.
- **Work Area**: Area designated for temporary roadwork operations.
- **Signs**: Used to communicate important information to drivers.
- **Lighting**: Provides visibility and safety during work hours and at night.
- **Pavement Markings**: Used to guide traffic and indicate work zones.
- **Access for Catenary Transit Service, Pedestrians, and Bicycles**: Ensuring safe and accessible routes for all users.
- **Temporary Roadway Layout**: Adapted for specific traffic conditions.
- **Other**: Additional elements as identified in the project specifications.

Agency Approved

**Uniform Standard Drawings**

- **Clack County Area**
- **Date**: 1/9-97
- **Drawing No.**: 602
- **Sheet**: 2 of 2

**TYPICAL APPLICATION FOR PORTABLE CONCRETE BARRIER RAIL**

- **Material**: Precast concrete panels.
- **Dimensions**: Varies depending on project requirements.
- **Weight**: 3.1 to 3.9 tons per panel.
- **Concrete**: 1.55 to 1.93 cubic yards per panel.
- **Alternatives**: Steel bars can be used to reinforce the barrier, especially in areas with higher traffic volumes.

**Construction Details**

- **Foundation**: Must be prepared to support the weight of the panel.
- **Attachment**: Use mechanical fasteners to secure the panel to the existing pavement.
- **Markings**: Paint or stencils may be added for additional safety.
- **Signage**: Informational signs may be placed to inform drivers of the work zone.

**Design Considerations**

- **Traffic Flow**: Ensure that barriers do not obstruct traffic flow unnecessarily.
- **Visibility**: Barriers and markings should be clearly visible to drivers.
- **Accessibility**: Provide access for emergency services and other necessary pathways.

**Notes**

- **Note 1**: Ensure that all barriers are placed in accordance with current local and state guidelines.
- **Note 2**: Use appropriate materials to withstand environmental conditions.
- **Note 3**: Regular maintenance is required to keep barriers in good condition.

**Autodesk Inventor**

- **Software**: Used for detailed design and modeling of the barrier system.
A. For any operation that encroaches in the area between the centerline and a line 2 ft. outside the edge of the pavement for a period of less than 15 minutes.

B. For any operation that encroaches in the area between the centerline and a line 2 ft. outside the edge of the pavement for a period in excess of 15 minutes but less than 60 minutes.

C. For any operation that is more than 2 ft. outside the edge of the pavement for a period of less than 60 minutes.

General Notes:
1. Construction operations shall be confined to one traffic lane on two-lane roads at least 30 ft. in width, and on single traffic lanes shall be available for traffic movement at intervals not greater than 30 ft. a cross. Traffic control devices are required for any project expected to exceed 300 ft. in length.
2. The flaggers shall be in sight of each other or in direct communication at all times.
3. All signs are to be removed at completion of each operation.
4. For three lane roadways, the flagger shown for traffic approaching from the opposite direction may be deleted if one lane is maintained in each direction, as directed by the traffic engineer. The advance warning sign for traffic approaching from the opposite direction, omitted, and the flaggers may be deleted if 300-360 min. prior to beginning work.
5. Longitudinal dimensions may be as listed to fit field conditions by the traffic engineer. The lateral placement of the flags may be varied from that shown.
6. All vehicles, equipment workers, except flaggers, and their activities are restricted at times to one side of the pavement unless otherwise authorized by the traffic engineer.
7. All warning signs shall have black legends and border on an orange background. All signs having an orange color shall be made of materials conforming to section 7.0.3.3.1 of the uniform standard specifications.
8. If working at or near a traffic signal, contact LVACTS at 229-6611 or 229-6331 (URBAN) or 455-4481 at least 3 normal working days prior to beginning such operations.
9. If the work place is in the median of a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.
10. Access for cat transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of access is necessary, the contractor shall provide the entity’s traffic engineer with a map showing the proposed re-routes for approval.
11. If construction operations affect bus stops or facilities, the contractor shall notify the regional transportation commission at least 3 normal working days prior to beginning such operations.
12. Floodlights should be provided to mark flagger stations at night as needed.

Symbols:
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLASHER WITH TRAFFIC CONTROL SIGN
- TRAFFIC CONES
- TRAFFIC DIRECTION

Table for spacing of advance warning signs:

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>DISTANCE BETWEEN SIGNS (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN (LESS THAN 35 MPH)</td>
<td>200</td>
</tr>
<tr>
<td>URBAN (35 MPH OR GREATER)</td>
<td>300</td>
</tr>
<tr>
<td>RURAL</td>
<td>350</td>
</tr>
<tr>
<td>EXPRESSWAY/FREEWAY</td>
<td>500</td>
</tr>
</tbody>
</table>

Traffic Control Plan for Highway Work Zone

TYPICAL APPLICATION FOR
SHORT TIME, DAY OR NIGHT OPERATIONS

Uniform Standard Drawings
CLARK COUNTY AREA

Agency Approved: B C H L M N

Date: 1-9-97

Dwg No: 603
TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

TYPICAL APPLICATION FOR

RURAL MOVING DAY OPERATIONS WHERE ACTIVITIES ENCROACH ON THE SHOULDER

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

AGENCY APPROVED

B C H L M N

DATE 1-9-97

DWG NO. 604

GENERAL NOTES

1. MINIMUM DISTANCE IS 200 FT. MAXIMUM DISTANCE TO BE DETERMINED BY THE TRAFFIC ENGINEER BUT SHOULD NOT EXCEED 1/2 THE LENGTH REQUIRED FOR ONE NORMAL WORKING DAY'S OPERATION. IN SITUATIONS WHERE MULTIPLE WORK LOCATIONS IN A LIMITED DISTANCE MAKE IT PRACTICABLE TO PLACE STATIONARY SIGNS, THE MAXIMUM SPACING FOR THE ADVANCE WARNING SIGN IS 5 MILES IN ADVANCE OF THE WORK.

2. IF THE WORK OPERATION DOES NOT EXCEED 60 MINUTES, TRAFFIC CONTROL MAY BE IN CONFORMANCE WITH STANDARD DRAWING NO. 303.

3. ALL SIGNS ARE TO BE REMOVED AT COMPLETION OF THE DAY'S OPERATION.

4. FOR DIVIDED ROADWAYS THE REQUIRED ADVANCE WARNING SIGNS SHALL BE POSTED ON BOTH THE RIGHT AND MEDIAN SIDE OF THE AFFECTED APPROACH.

5. FOR MULTILANE ROADWAYS THE REQUIRED WARNING SIGNS MAY BE REQUIRED FOR TRAFFIC APPROACHING FROM THE OPPOSITE DIRECTION.

6. WORKER SIGNS ARE TO BE REMOVED WHEN NO WORK IS BEING PERFORMED. ANY UNATTENDED OBSTACLE OR EXCAVATION IN THE WORK AREA, WHICH IN THE OPINION OF THE TRAFFIC ENGINEER CONSTITUTES A HAZARD, SHALL BE PROTECTED BY BARRIERS WITH BURNING LIGHTS SHALL BE USED FOR DELINEATION AND LONG LINE DEVICES FOR TAPER IN FEET.

7. IF THE WORK OPERATION REQUIRES ANY WORK VEHICLE TO ENTER OR LEAVE THE THROUGH TRAFFIC LANES, A FLAGGER SHALL BE PROVIDED AND THE FLAGGER SIGN SHALL BE SUBSTITUTED FOR THE WORKER SIGN. A 100 FT. CONE TAPER SHALL BE PROVIDED PRIOR TO STATION 0 TO PROTECT THE FLAGGER. FLAGGER IS NOT REQUIRED FOR 25 MPH OR LESS RESIDENTIAL STREETS.

8. ADJUNCT SIGNS THAT ARE ADJACENT TO THE WORKER SIGN OR LEADING EDGE OF THE WORK AREA AND THAT PERFORM AS A地段 WITHIN THE ROADWAY OR ARE PART OF A CHANNELIZING DEVICE, SHALL BE INCLUDED IN THE REQUIRED WARNING DISTANCE MAKE IT PRACTICABLE TO PLACE STATIONARY SIGNS, THE MAXIMUM SPACING VALUES LISTED IN THE TABLE BELOW.

9. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTES FOR APPROVAL. IF RE-ROUTING OF SERVICE IS NECESSARY, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-4481 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.

10. ALL WORKING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

11. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>G</th>
<th>R</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN (35 MPH OR GREATER)</td>
<td>200</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>URBAN (LESS THAN 35 MPH)</td>
<td>350</td>
<td>175</td>
<td>87.5</td>
</tr>
<tr>
<td>RURAL</td>
<td>500</td>
<td>250</td>
<td>125</td>
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<tr>
<td>WORKING MEN</td>
<td>650</td>
<td>325</td>
<td>162.5</td>
</tr>
</tbody>
</table>

12. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6331 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK:

- BOULDER CITY: 263-9320
- MESQUITE: 346-5365
- CLARK COUNTY: 455-0150
- NORTH LAS VEGAS: 642-2462
- HENDERSON: 229-6311
- LAS VEGAS: 229-6331

13. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF RE-ROUTING OF ACCESS IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTES FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-4481 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.
1. Construction operations shall be confined to one traffic lane. Leaving the opposite lane open to traffic. At least 100' of both traffic lanes shall be available for traffic movement at intervals not greater than 1,500 ft. A special traffic control detail must be approved for any project expected to exceed 1,500 ft. in length.

2. The flaggers shall be in sight of each other or in direct communication at all times.

3. Maximum distance to be determined by the traffic engineer but should not exceed 2/3 the length required for one normal working day’s operation or 1,000 ft., whichever is less.

4. If the work operation does not exceed 60 minutes, traffic control will be in conformance with standard drawing No. 803.

5. All signs are to be removed at completion of the day’s operations.

6. For divided roadways the required advance warning signs shall be posted on both the right and left side of the affected approach.

7. For multilane roadways, the flagger and the advance warning signs shown may be required for traffic approaching from the opposite direction. Right-lane closed ahead signs shall be substituted for the ‘one lane road ahead’ signs.

8. This case also applies when work is being performed in lanes adjacent to the centerline of an undivided multilane highway or on a divided highway. Under these conditions, ‘left lane closed ahead’ signs shall be substituted for ‘right lane closed ahead’ signs.

9. This case does not apply when work is being performed in the middle lanes of a six or more lane highway. Special traffic control details approved by the traffic engineer will be required.

10. "One lane road ahead" and flagger signs shall be removed or covered when no work is being performed.

11. Longitudinal dimensions may be adjusted to fit field conditions by the traffic engineer. The lateral placement of the flaggers may be varied from that shown. If a curved section of roadway is involved flagger should be placed at the beginning of curve (P.C.).

12. All vehicles, equipment, workers (except flaggers) and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the traffic engineer.

13. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to section 716.03.01 of the Uniform Standard Specifications.

14. In multilane situations, the flagger and flagger warning signs on the side opposite to the work area are required only when traffic in any direction is made to cross the road centerline.

15. Table for spacing of advance warning signs

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>ROAD WORK</th>
<th>TABLE FOR SPACING OF ADVANCE WARNING SIGNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BITUMINOUS RESURFACING</td>
<td>CRACK POURING</td>
<td>UTILITY OPERATIONS</td>
</tr>
</tbody>
</table>

16. If working at or near a traffic signal, contact LVACTS at 229-6611 and local entity at appropriate numbers listed below at least two working days prior to beginning work.

<table>
<thead>
<tr>
<th>City</th>
<th>Phone</th>
<th>City</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulder City</td>
<td>260-9200</td>
<td>Las Vegas</td>
<td>229-6331</td>
</tr>
<tr>
<td>Clark County</td>
<td>455-6100</td>
<td>Mesquite</td>
<td>346-5295</td>
</tr>
<tr>
<td>Henderson</td>
<td>565-2140</td>
<td>North Las Vegas</td>
<td>640-2492</td>
</tr>
</tbody>
</table>

GENERAL NOTES

TYPICAL APPLICATIONS

| BITUMINOUS RESURFACING | CRACK POURING | UTILITY OPERATIONS |

SYMBOLS

- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH TRAFFIC CONTROL SIGN
- TRAFFIC CONTROL DETAIL
- TRAFFIC DIRECTION

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

SPECIFICATION REFERENCE

RURAL MOVING DAY OPERATIONS WHERE ACTIVITIES ENCROACH ON THE PAVEMENT

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

AGENCY APPROVED

B C H L M N

DATE 1-9-97

DWG NO. 605

Effective as of 08/08/2019
GENERAL NOTES

1. NO SPECIAL SIGNING IS REQUIRED.

2. IF THE WORK OPERATION REQUIRES ANY WORK VEHICLES TO CROSS THE 15 FT. CLEAR ZONE, TRAFFIC CONTROL SHALL CONFORM WITH STANDARD DRAWING NO. 607.

3. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.

4. TYPE "B" HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.

SYMBOLS

- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TRAFFIC DIRECTION

TYPICAL APPLICATIONS

- LANDSCAPING WORK
- UTILITY WORK
- FENCING CONTRACTS
- AND MAINTENANCE
- CLEANING CULVERTS

TABLE FOR SPACING OF ADVANCE WARNING SIGNS

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>UNITS LESS THAN 15 MPH</th>
<th>15-25 MPH</th>
<th>26-35 MPH</th>
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<tbody>
<tr>
<td>CITY</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>URBAN (30 MPH OR GREATER)</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>EXPRESSWAY/FREEWAY</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>APPROVED</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

Effective as of 08/08/2019
TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

TYPICAL APPLICATIONS

UTILITY OPERATION
CULVERT EXTENSIONS
SIDE SLOPE CHANGES
GUARD RAIL INSTALLATION AND MAINTENANCE
LANDSCAPING OPERATIONS
CLEANING DITCHES AND DRAINAGE STRUCTURES
SIGN INSTALLATION AND MAINTENANCE
SHOULDER REPAIR

SYMBOLES

WORK AREA
SIGN ON PORTABLE OR PERMANENT SUPPORT
TRAFFIC DIRECTION

GENERAL NOTES

1. IF THE WORK OPERATION DOES NOT EXCEED 60 MINUTES, TRAFFIC CONTROL MAY BE IN CONFORMANCE WITH STANDARD DRAWING NO. 603.

2. WORKER SIGNS ARE TO BE REMOVED WHEN NO WORK IS BEING PERFORMED. ANY UNATTENDED OBSTACLE OR EXCAVATION IN THE WORK AREA WHICH IN THE OPINION OF THE TRAFFIC ENGINEER CONSTITUTES A HAZARD SHALL BE PROTECTED BY BARRICADES WITH FLASHING LIGHTS AT NIGHT AT THE POINTS OF HAZARD. STEADY BURNING LIGHTS SHALL BE USED FOR DELINEATION AND LONG LINE GUIDANCE. BARRICADES SHALL BE PLACED ACCORDING TO MAXIMUM 4.

3. TYPE "B" HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.

4. IF THE WORK OPERATION REQUIRES ANY WORK VEHICLES TO ENTER OR LEAVE THROUGH TRAFFIC LANES, A FLAGGER SHALL BE PROVIDED AND A FLAGGER SIGN SHALL BE SUBSTITUTED FOR THE WORKER SIGN. A 100 FT. CONE TAPER SHALL BE PROVIDED PRIOR TO STATION TO PROTECT THE FLAGGER. FLAGGER IS NOT REQUIRED FOR 25 MPH OR LESS RESIDENTIAL STREETS.

5. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE TRAFFIC ENGINEER.

6. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

7. ALL WARNING SIGNS SHALL HAVE BLACK LETTERING FOR USE CONFORMING TO STANDARD DRAWING NO. 601.

8. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>DISTANCE BETWEEN SIGNS FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN (35 MPH OR GREATER)</td>
<td>200</td>
</tr>
<tr>
<td>URBAN (LESS THAN 35 MPH)</td>
<td>100</td>
</tr>
<tr>
<td>EXPRESSWAY/FREEWAY</td>
<td>260</td>
</tr>
<tr>
<td>RURAL</td>
<td>200</td>
</tr>
</tbody>
</table>

9. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.

10. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

11. IF WORKSPACE IS IN THE MEDIAN OF A DIVIDED HIGHWAY, AN ADVANCE WARNING SIGN SHOULD ALSO BE PLACED ON THE LEFT SIDE OF THE DIRECTIONAL ROADWAY.

12. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT. OBTAINATION OF CONSTRUCTION, IF RE-ROUTING OF ACCESS IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTINGS FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-4481 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.

TRAFFIC DIRECTION

W2-1-1

W2-1

W2-1-4

ROAD WORK AHEAD

W2-1-1

HIGH WORKING

A

B

C

D

E

F

G

H

I

J

K

L

M

N

Effective as of 08/08/2019

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

TYPICAL APPLICATION FOR TWO-LANE, TWO-WAY, RURAL DAY OR NIGHT OPERATIONS WHERE ACTIVITIES WILL ENCROACH BETWEEN 15 FT. & 2 FT. OUTSIDE OF PAVEMENT EDGE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE 1-9-97

DWG NO. 607

AGENCY APPROVED

B

C

H

L

M

N
TYPICAL APPLICATIONS

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

SPECFICATION REFERENCE

TYPICAL APPLICATION FOR

UNIFORM STANDARD DRAWINGS 
CLARK COUNTY AREA

DATE 1-9-97

DRAW NO. 608
**General Notes**

1. Construction operations shall be confined to one traffic lane, leaving the opposite lane open to traffic.

2. All vehicles, equipment, workers (except flaggers) and their activities are restricted at all times to one side of the street.

3. All devices establishing a taper or tangent line shall be of one type. Devices shall not be mixed by type.

4. The flaggers shall be in sight of each other or in direct communication at all times.

5. Flaggers shall be required at all entry points into the work area.

6. All signs shall be ground-mounted if the closure time exceeds four days and as required by Section 620 of the Uniform Standard Specifications.

7. Type "B" high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

8. Longitudinal dimensions may be adjusted to fit field conditions by the traffic engineer. The lateral placement of the flaggers may vary from that shown.

9. All vehicles, equipment, workers (except flaggers) and their activities are restricted at all times to one side of the street. No work other than the work specified in the table shall be performed until written authorization is obtained from the traffic engineer.

10. All barricade lights shall be bidirectional, except lights on taper barricades, which shall be unidirectional.

11. All warning signs shall have black legend and border on an orange background, all signs having an orange color shall be made of materials conforming to Section 716.05.B of the Uniform Standard Specifications.

12. Table for spacing of advance warning signs

13. If working at or near a traffic signal, contact LVACTS at 229-4611 and local entity at appropriate numbers listed below at least two working days prior to beginning work.

14. Floodlights should be provided to mark flagger stations at night as needed.

15. A lateral buffer space may be required to separate work space from traffic space, the width shall be determined by the traffic engineer.

16. Access for CAT transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If routing of access is necessary, the contractor shall coordinate the details of traffic control with the local agency.

17. If construction operations affect CAT bus stops or facilities, the contractor shall notify the regional transportation commission at 665-4841 at least 30 working days prior to beginning such operations.

**Typical Application for Two-Lane, Two-Way, Rural Night Operations Where Activities Will Encroach Between Centerline & 2 Ft. Outside of Pavement Edge**

**Traffic Control Plan for Highway Work Zone**
TYPICAL APPLICATIONS

OVERHEAD STRINGING OF CABLE

CABLE LAYING

WORK PARTY.

SYMBOLS

GENERAL NOTES

1. ALL DEVICES ESTABLISHING A TAPER OR TANGENT LINE SHALL BE OF ONE TYPE; DEVICES SHALL NOT BE MIXED BY TYPE.

2. WHEN THE DISTANCE BETWEEN SUCCESSIVE PATCHES IS LESS THAN 2,000 FT., THE ENTIRE OPERATION MAY BE CONSIDERED AS ONE WORK AREA FOR DESIGN PURPOSES. WHEN SHOWN USING SCHEMATIC SYMBOLS IS USED FOR WORK SITES UP TO 2,000 FT. APART, LANE CLOSURE SHOULD BE CONTINUED THROUGHOUT THE WORK. WHEN THE DISTANCE BETWEEN SUCCESSIVE PATCHES EXCEEDS 2,000 FT., ADDITIONAL WARNING SIGNS AND TAPES SHALL BE PLACED AS REQUIRED FOR DISTANCES LESS THAN 2,000 FT. AT THE DISCRETION OF THE TRAFFIC ENGINEER.

3. WHERE SUCCESSIVE PATCHES ARE MORE THAN 50 FT. BUT LESS THAN 1,000 FT. APART, BARRICADES WITH FLASHING LIGHTS SHALL BE PLACED ON THE PADWAY BEYOND AND IN ADVANCE OF THE WORK AREAS. ALL BARRICADES WILL HAVE THE REFLECTIVE SURFACE FACING TRAFFIC AT NIGHT.

4. THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES AND SHALL BE POSITIONED TO PROTECT THE WORKERS. THE FIRST FLAGGER SHALL BE A MINIMUM OF 200 FT. AND A MAXIMUM DISTANCE OF 1000 FT. NORMAL OPERATION BEYOND THE FLAGGERS SIGN AND A MINIMUM OF 100 FT. IN ADVANCE OF THE WORK PARTY. ALL DEVICES ESTABLISHING A TAPER OR TANGENT LINE SHALL BE OF ONE TYPE; DEVICES SHALL NOT BE MIXED BY TYPE.

5. FLAGGERS SHALL BE PLACED AT ALL ENTRY POINTS INTO THE WORK AREA. WHEN NO WORK IS BEING PERFORMED, THE FLAGGERS WILL NOT BE RELOCATED OR COVERED. ALL BARRICADES OR CONES SHALL BE REMOVED. WHEN THE DISTANCE BETWEEN PATCHES IS LESS THAN 50 FT. THE BARRICADE AD JUXTAPOSED TO THE EDGE OF PAVEMENT ON THE FAR SIDE OF THE PATCH MAY BE OMITTED.

6. THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES AND SHALL BE POSITIONED TO PROTECT THE WORKERS. THE FIRST FLAGGER SHALL BE A MINIMUM OF 200 FT. AND A MAXIMUM DISTANCE OF 1000 FT. NORMAL OPERATION BEYOND THE FLAGGERS SIGN AND A MINIMUM OF 100 FT. IN ADVANCE OF THE WORK PARTY.

7. LIGHTS WILL NOT BE REQUIRED ON BARRICADES FOR DAY OPERATIONS.

8. WHEN THE DISTANCE BETWEEN PATCHES IS LESS THAN 50 FT., THE BARRICADE AD JUXTAPOSED TO THE EDGE OF PAVEMENT ON THE FAR SIDE OF THE PATCH MAY BE OMITTED.

9. ALL SIGNS SHALL BE GROUND-MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS AND AS REQUIRED BY SECTION 702.02 OF THE UNIFORM STANDARD SPECIFICATIONS.

10. TYPE "B" HIGH INTENSITY FLASHING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.

11. LONGBORDAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS BY THE TRAFFIC ENGINEER. THE LATERAL PLACEMENT OF THE FLAGGERS MAY BE VARIED FROM THAT SHOWN.

12. ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGERS) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE CLOSURE. DEVICES SHALL BE PLACED AS REQUIRED FOR DISTANCES LESS THAN 2,000 FT. AT THE DISCRETION OF THE TRAFFIC ENGINEER.

13. ALL BARRICADES SHOULD BE PLACED IN A TAPERED MANNER. LIGHTS ON TAPER BARRICADES, WHICH SHALL BE MONOCONDUCATIONAL.

14. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

15. CONSTRUCTION OPERATIONS SHALL BE CONFINED TO ONE TRAFFIC LANE, LEAVING THE OPPOSITE LANE OPEN TO TRAFFIC. AT LEAST 300 FT. OR BOTH TRAFFIC LANES SHALL BE AVAILABLE FOR TRAFFIC MOVEMENT. AT INTERVALS NOT GREATER THAN 500 FT. TWO FLAGGERS SHALL BE REQUIRED FOR EACH SEPARATE CONSTRUCTION OPERATION. ALL WORK AREAS SHALL BE PROTECTED DURING PERIODS WHEN WORKERS ARE PRESENT TO PREVENT COLLISIONS BETWEEN BARRICADES ALONG THE CENTER LINE.

16. DURING DAYTIME OPERATIONS, CONES MAY BE SUBSTITUTED FOR BARRICADES AT HALF THE BARRICADE SPACING.

17. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

18. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST WORKING DAYS PRIOR TO BEGINNING WORK.

19. IF RE-ROUTING NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTES FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT LEAST 600 FT. PRIOR TO BEGINNING SUCH OPERATIONS.

20. A LATERAL BUFFER SPACE MAY BE REQUIRED TO SEPARATE WORK SPACE FROM TRAFFIC SPACE. THE WIDTH SHALL BE DETERMINED BY THE TRAFFIC ENGINEER.

21. FLOODLIGHTS SHOULD BE PROVIDED TO MARK WORK SPACE AT NIGHT AS NECESSARY.

22. ACCESS FOR CAT TRANSIT SERVICE, RIDEALERTS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF RE-ROUTING OF CAT BUS ROUTE IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTES FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT LEAST 600 FT. PRIOR TO BEGINNING SUCH OPERATIONS.

23. PERMANENT ROAD SIGNS NOT REQUIRED FOR WORK AREA

24. BEST MANAGEMENT PRACTICES SHALL BE USED TO PROTECT THE LOCAL WILDLIFE DURING CONSTRUCTION OPERATIONS.

25. PROVISION OF NIGHT TIME SIGNAGE TO SUPPORT THE OPTICAL COMMUNICATIONS FACILITIES.

26. PROVISION OF NIGHT TIME SIGNAGE TO SUPPORT THE OPTICAL COMMUNICATIONS FACILITIES.
1. Where the distance between paving and excavating operations is less than 2,000 ft., the entire operation may be considered as one work area for signing purposes. When the distance between operations exceeds 2,000 ft., additional warning signs may be required as directed by the traffic engineer.

2. One flagger shall be required for each separate construction operation. For residential streets 25 MPH or less, flaggers shall be in sight of each other or in direct communication at all times.

3. No paving or excavating operations shall be performed at night unless authorized by the traffic engineer.

4. Maximum distance to be determined by the traffic engineer but in no case to exceed the length of 1/2 day’s normal operation.

5. All signs shall be ground-mounted if the working time exceeds four days and as required by Section 625 of the Uniform Standard Specifications.

6. Devices shall be at 200 ft. centers, with a minimum of 500 ft. between excavating operations. Devices at 100 ft. centers may be required as directed by the traffic engineer.

7. Type “B” high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

8. Unilateral dimensions may be adjusted to fit field conditions by the traffic engineer. The lateral placement of the flagger may be varied from that shown.

9. All vehicles, equipment, workers, flaggers and their activities are restricted at all times to one side of the roadway unless otherwise authorized by the traffic engineer.

10. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to Section 716.03.01 of the Uniform Standard Specifications.

11. All devices establishing a taper or tangent line shall be of one type; devices shall not be mixed by type.

12. If working at or near a traffic signal, contact the Nevada Transportation Commission at 455-4481 at least 3 normal working days prior to beginning such operations.

13. Floodlights should be provided to mark flagger stations at night as needed.

14. Access for CAT transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of CAT transit service becomes necessary, a traffic engineer will provide a map showing the proposed re-routes for approval. Construction operations affect CAT bus stops or facilities, the contractor shall notify the Regional Transportation Commission at 455-4481 at least 3 normal working days prior to beginning such operations.

GENERAL NOTES:

1. Where the distance between paving and excavating operations is less than 2,000 ft., the entire operation may be considered as one work area for signing purposes. When the distance between operations exceeds 2,000 ft., additional warning signs may be required as directed by the traffic engineer.

2. One flagger shall be required for each separate construction operation. For residential streets 25 MPH or less, flaggers shall be in sight of each other or in direct communication at all times.

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9. All vehicles, equipment, workers, flaggers and their activities are restricted at all times to one side of the roadway unless otherwise authorized by the traffic engineer.

10. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to Section 716.03.01 of the Uniform Standard Specifications.

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12. If working at or near a traffic signal, contact the Nevada Transportation Commission at 455-4481 at least 3 normal working days prior to beginning such operations.

13. Floodlights should be provided to mark flagger stations at night as needed.

14. Access for CAT transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of CAT transit service becomes necessary, a traffic engineer will provide a map showing the proposed re-routes for approval. Construction operations affect CAT bus stops or facilities, the contractor shall notify the Regional Transportation Commission at 455-4481 at least 3 normal working days prior to beginning such operations.
1. All temporary bypasses shall be paved when duration exceeds time limits established by the entity. Graded & compacted gravel, acceptable for durations established by the entity, see sheet 7 of this drawing for unpaved temporary bypass.

2. On paved bypasses (except edge lines and a center line reflectorized: removable, non-foul pavement marking tape shall be used for marking the edge lines and center line on existing pavement. (Reflectorized pavement marking paint may be used for markings on the paved bypasses.) Raised reflective pavement markers conforming to claim agency standards may be used in lieu of tape or paint where the pavement marking is to be placed adjacent to barricades or vertical panels. All existing pavement marking which conflict with the revised traffic pattern shall be removed. If stripping is to be placed on final pavement only, removable non-foul tape shall be used. Edge line markings shall be a minimum of 6 in. wide.

3. When (T) is greater than 800 feet, 4-foot lengths of single yellow reflectorized, removable, non-foul pavement marking tape at 4-foot centers may be used within the tangent section (only if passing zones can be safely allowed in accordance with MUTCD Secs. 2B-3 thru. 2B-6).

4. A curve sign will be required at exit end of the bypass if (T) is equal, or greater than 1,000 feet.

5. The advisory safe speed, to be shown below the reverse curve (turn) sign, shall be determined at the site and approved by the traffic engineer.

6. Steady burning lights will not be required on barricades for day operations.

7. Cones may be substituted for barricades at half the spacing during day operations.

8. All signs shall be ground/mounted if the closure time exceeds 30 minutes and as required by sections 5 of the uniform standard specifications.

9. Type "I" high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

10. Longitudinal dimensions may be adjusted to fit field conditions by the traffic engineer.

11. All barricade lights shall be bidirectional.

12. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to section 7B-3.03.01 of the uniform standard specifications.

13. Table for specifying of advance warning signs.

14. All devices indicated shall be of one type; devices shall not be mixed.

15. If working at or near a traffic signal, contact LVACTS at 229-6331 and local entity at appropriate numbers listed below at least two working days prior to beginning work.

16. Where the temporary pavement and/or pavement are different colors, the temporary pavement should start below at least two working days prior to beginning such operations.

17. Access for car transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of access is necessary, the contractor shall provide the entity's traffic engineer with a map showing the proposed re-routes for approval. If construction operations necessitate closing the public roadway, the contractor shall notify the Regional Transportation Commission at 455-6100 at least 5 normal working days prior to beginning such operations.

18. If the detour is short and has sharp curves (30 mph or less), reverse turn (W1-3) sign should be used.

19. Pavement markings that are no longer applicable shall be masked with approved blackout tape or obliterated as approved by the traffic engineer.

General Notes:

- All temporary bypasses shall be paved when duration exceeds time limits established by the entity. Graded & compacted gravel, acceptable for durations established by the entity, see sheet 7 of this drawing for unpaved temporary bypass.
- On paved bypasses (except edge lines and a center line reflectorized: removable, non-foul pavement marking tape shall be used for marking the edge lines and center line on existing pavement. (Reflectorized pavement marking paint may be used for markings on the paved bypasses.) Raised reflective pavement markers conforming to claim agency standards may be used in lieu of tape or paint where the pavement marking is to be placed adjacent to barricades or vertical panels. All existing pavement marking which conflict with the revised traffic pattern shall be removed. If stripping is to be placed on final pavement only, removable non-foul tape shall be used. Edge line markings shall be a minimum of 6 in. wide.
- When (T) is greater than 800 feet, 4-foot lengths of single yellow reflectorized, removable, non-foul pavement marking tape at 4-foot centers may be used within the tangent section (only if passing zones can be safely allowed in accordance with MUTCD Secs. 2B-3 thru. 2B-6).
- A curve sign will be required at exit end of the bypass if (T) is equal, or greater than 1,000 feet.
- The advisory safe speed, to be shown below the reverse curve (turn) sign, shall be determined at the site and approved by the traffic engineer.
- Steady burning lights will not be required on barricades for day operations.
- Cones may be substituted for barricades at half the spacing during day operations.
- All signs shall be ground/mounted if the closure time exceeds 30 minutes and as required by sections 5 of the uniform standard specifications.
- Type "I" high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.
- Longitudinal dimensions may be adjusted to fit field conditions by the traffic engineer.
- All barricade lights shall be bidirectional.
- All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to section 7B-3.03.01 of the uniform standard specifications.
- Table for specifying of advance warning signs.
- All devices indicated shall be of one type; devices shall not be mixed.
- If working at or near a traffic signal, contact LVACTS at 229-6331 and local entity at appropriate numbers listed below at least two working days prior to beginning work.
- Where the temporary pavement and/or pavement are different colors, the temporary pavement should start below at least two working days prior to beginning such operations.
- Access for car transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of access is necessary, the contractor shall provide the entity's traffic engineer with a map showing the proposed re-routes for approval. If construction operations necessitate closing the public roadway, the contractor shall notify the Regional Transportation Commission at 455-6100 at least 5 normal working days prior to beginning such operations.
- If the detour is short and has sharp curves (30 mph or less), reverse turn (W1-3) sign should be used.
- Pavement markings that are no longer applicable shall be masked with approved blackout tape or obliterated as approved by the traffic engineer.
TYPICAL APPLICATION FOR HIGHWAY WORK ZONE

Effective as of 08/08/2019

TRAFFIC CONTROL PLAN

1. TEMPORARY UNPAVED BYPASSES SHALL BE GRACED AND COMPACTED GRAVEL AND ARE ACCEPTABLE FOR TIME LIMITS ESTABLISHED BY THE ENTITY.

2. REFLECTORIZED 28 IN. MIN. TRAFFIC CONES OR VERTICAL PANELS SHALL BE USED FOR CENTERLINE DELINEATION FOR SHORT-TERM PROJECTS. FOR LONG TERM PROJECTS OF 72 CONTINUOUS HOURS OR MORE AND PROJECTS PERFORMED AT NIGHT, VERTICAL PANELS SHALL BE USED. SEE STANDARD DRAWING 601 SHEET 1 FOR DETAILS OF CONES AND PANELS.

3. A CURVE SIGN WILL BE REQUIRED AT EXIT END OF THE BYPASS IF (T) IS EQUAL TO OR GREATER THAN 1,000 FEET.

4. THE ADVISORY SAFE SPEED TO BE SHOWN BELOW THE REVERSE CURVE (TURN) SIGNS SHALL BE DETERMINED AT THE SITE AND APPROVED BY THE TRAFFIC ENGINEER.

5. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES FOR DAY OPERATIONS.

6. CONES MAY BE SUBSTITUTED FOR BARRICADES AT HALF THE SPACING DURING DAY OPERATIONS.

7. ALL SIGNS SHALL BE GROUND-MOUNTED IF THE CLOSURE TIME EXCEEDS 6 HOURS.

8. CONES MAY BE SUBSTITUTED FOR BARRICADES AT HALF THE SPACING DURING DAY OPERATIONS.

9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS BY THE TRAFFIC ENGINEER.

10. ALL BARRICADE LIGHTS SHALL BE BIDIRECTIONAL.

11. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MASKED WITH APPROVED BLACKOUT TAPE OR OBLITERATED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.

12. TYPE III HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.

13. ALL DEVICES INDICATED SHALL BE OF ONE TYPE; DEVICES SHALL NOT BE MIXED.

14. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.  PROVISIONAL WORK PERMIT WILL BE ISSUED.

15. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF RE-ROUTING OF ACCESS IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY’S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTING FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO SECTION THUSDAY OF THE UNIFORM STANDARD SPECIFICATIONS.

16. IF THE DETOUR IS SHORT AND HAS SHARP CURVES (30 MPH OR LESS), REVERSE CURVE (W1-3) SIGN SHOULD BE USED.

17. SRAEY WARNING SIGNS THAT ARE NO LONGER APPLICABLE SHALL BE MASKED WITH APPROVED BLACKOUT TAPE OR OBLITERATED AS APPROVED BY THE TRAFFIC ENGINEER.
1. The traffic engineer must be notified at least 72 hours prior to placing the temporary signals in operation so that arrangements can be made to inspect the installation and set the timing of the signals.

2. At any time that the signals are not operating, the signal head shall be hooded and the signal ahead sign covered or removed.

3. The left signal head shall normally be mounted at a height of 10 feet above the road surface measured to the bottom of the signal head. The right signal head shall be mounted equally spaced to the left signal head. The back plates will be required on all signals. A right arm signal should be used on the right side when possible.

4. All lenses shall be 12 inch nominal diameter. The right signal head shall be hooded.

5. Each signal shall be hooded to allow for flashing.

6. If flags are used instead of traffic signals, the traffic control devices shall continue to standard working no. 601: a 12 ft. cone, traffic signal shall be provided prior to traffic signals to protect the flagger. Temporary flashers may be provided to mark flagger stations at night as needed.

7. During daytime operations cones may be substituted for barricades with steady burning lights at half the barricade spacing.

8. Steady burning lights will not be required for day.

9. Directional lights shall be used at night along the center line whether the work area is separated from the traveled lane using barricades or by uses of other devices. Monumental directional lights shall be used at night on all other barricades.

10. All signs shall be ground mounted if the closure time exceeds four days and as required by section 6 of the uniform standard specifications.

11. Type "W" high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

12. Longitudinal dimensions may be added to fit field conditions by the traffic engineer.

13. All vehicles, equipment, workers and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the traffic engineer.

14. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be of one type; devices shall not be mixed by type.

15. If working at or near a traffic signal, contact the local entity at appropriate numbers listed below at least two working days prior to beginning work.

16. All devices establishing a taper or tangent line shall be of one type. Devices shall not be mixed by type.

17. Adequate area illumination to clearly identify both ends of the work space at night for long-term operations of 72 continuous hours or more should be provided.

18. A lateral buffer space may be required to separate work space from traffic space. The width shall be determined by the traffic engineer.

19. Access for CAT transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If routing of access is necessary, the contractor shall provide the entity's traffic engineer with a map showing the proposed access route for CAT transit service, pedestrians and bicycles. The contractor shall notify the regional transportation commission at 48 hours at least normal working days prior to beginning such operations.

20. Edge line shall be a minimum of 6 in. wide and should be installed from the start of the taper to a point behind the work zone, using the permanent edge line.

21. For long-term projects of 72 continuous hours or more, conflicting pavement markings between activity area and stop line shall be removed.

**Table for Spacing of Advance Warning Signs**

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<thead>
<tr>
<th>Type of Operations</th>
<th>Road Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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**Uniform Standard Drawings**

- **Clark County Area**

**Table for Spacing of Advance Warning Signs**

- **A:** Road work ahead
- **B:** Road work ahead
- **C:** Road work ahead
- **D:** Road work ahead
1. NO SPECIAL SIGNING IS REQUIRED.
2. IF THE WORK OPERATION REQUIRES TWO OR MORE WORK VEHICLES CROSSED THE 15 FT. CLEAR ZONE IN ANY ONE HOUR TRAFFIC CONTROL WILL BE IN CONFORMANCE WITH STANDARD DRAWING NO. 615.
3. THIS CASE ALSO APPLIES TO WORK PERFORMED IN THE MEDIAN MORE THAN 15 FT. FROM EITHER PAVEMENT.
4. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.
   - Boulder City: 203-9200
   - Mesquite: 340-5295
   - Clark County: 405-8100
   - Henderson: 565-2140
   - North Las Vegas: 642-2462
   - Las Vegas: 229-6331
5. TYPE "B" HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.
SIGN ON PORTABLE OR PERMANENT SUPPORT
WORK AREA
SYMBOLS
GENERAL NOTES
1. WORKER SIGNS ARE TO BE REMOVED WHEN NO WORK IS BEING
PERFORMED. ANY UNATTENDED OBSTACLE OR EXCAVATION IN THE
WORK AREA WHICH IN THE OPINION OF THE TRAFFIC ENGINEER
CONSTITUTES A HAZARD SHALL BE PROTECTED BY BARRICADES WITH
FLASHING LIGHTS AT NIGHT AT THE POINTS OF HAZARD. STEADY
BURNING LIGHTS SHALL BE USED FOR DELINEATION AND LONG LINE
GUIDANCE. BARRICADE SHALL BE PLACED ACCORDING TO MAXIMUM
2. IF THE WORK OPERATION REQUIRES THAT FOUR OR MORE WORK
VEHICLES ENTER THROUGH TRAFFIC LANES IN A ONE HOUR PERIOD, A
FLAGGER SHALL BE SUBSTITUTED FOR THE WORKER SIGN.
3. THIS CASE ALSO APPLIES WHEN WORK IS BEING PERFORMED ON A
MULTILANE UNDIVIDED HIGHWAY. UNDER THESE CONDITIONS THE
SIGNS NORMALLY MOUNTED IN THE MEDIAN SHALL BE OMITTED.
4. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS
5. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE
RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS
OTHERWISE AUTHORIZED BY THE TRAFFIC ENGINEER.
6. REQUIRED PROTECTION FOR OPEN EXCAVATIONS DURING NON-WORKING HOURS:
OPEN TRENCHES SHALL BE COMPLETELY FENCED (ALL FENCES TO BE SIX (6)
FOOT HIGH, NON-CLIMBABLE FENCE), BACKFILLED OR PLATED IN ANY AREA
OF THE CITY OF LAS VEGAS THAT ARE WITHIN 200 FT. OF ANY BUILDING OR
ROADWAY. AFTER WORKING HOURS.
7. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611
AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO
WORKING DAYS PRIOR TO BEGINNING WORK.
8. REQUIRED PROTECTION FOR OPEN EXCAVATIONS DURING NON-WORKING HOURS:
OPEN TRENCHES SHALL BE COMPLETELY FENCED (ALL FENCES TO BE SIX (6)
FOOT HIGH, NON-CLIMBABLE FENCE), BACKFILLED OR PLATED IN ANY AREA
OF THE CITY OF LAS VEGAS THAT ARE WITHIN 200 FT. OF ANY BUILDING OR
ROADWAY. AFTER WORKING HOURS.
9. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611
AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO
WORKING DAYS PRIOR TO BEGINNING WORK.
10. IF THE WORK SPACE IS IN THE MEDIAN OF A DIVIDED
HIGHWAY, AN ADVANCE WARNING SIGN SHOULD ALSO
BE PLACED ON THE LEFT SIDE OF THE DIRECTIONAL
ROADWAY.
11. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND
PEDESTRIANS

TYPICAL APPLICATIONS

<table>
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<tr>
<th>ROAD TYPE</th>
<th>MULTILANE, DIVIDED OR UNDIVIDED, RURAL OR SUBURBAN, DAY OR NIGHT OPERATIONS</th>
<th>WHERE ACTIVITIES WILL ENCROACH BETWEEN 15 FT. &amp; 2 FT. OUTSIDE PAVEMENT EDGE</th>
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TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

SPECIFICATION REFERENCE

TYPICAL APPLICATION FOR

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

AGENCY APPROVED

B C H L M N

DATE 1-9-97

DWG NO. 615
HIGHWAY, THE PROTECTION VEHICLE SHALL FOLLOW ON THE LEFT SHOULDER AND THE BOTTOM LINE SHALL READ "USE RIGHT LANE".

2. IF WORK IS BEING PERFORMED ON THE CENTER LANE OF THE ROADWAY, TRAFFIC SHALL BE DIVERTED TO EITHER LEFT OR RIGHT LANE. AT NO TIME IS TRAFFIC PERMITTED TO PASS ON BOTH SIDES OF MOVING OPERATION. CENTER LANE OPERATIONS SHALL NOT BE PERFORMED DURING PEAK TRAVEL TIMES.

3. THE LIGHTS ON THE TRAILER SHALL FLASH IN PARTS ALTERNATING BETWEEN THE TWO OUTSIDE LIGHTS AND THE TWO INSIDE LIGHTS OR SEQUENTIAL FLASHING.

4. ALL STRIPING SHALL HAVE ALTERNATING WHITE AND ORANGE STRIPES AT 45° FROM THE VERTICAL. ALL STRIPES SHALL BE 6" IN WIDTH.

5. THE SIGN PANELS SHALL HAVE THE MINIMUM DIMENSIONS SHOWN AND HAVE BLACK LEGEND ON AN ORANGE REFLECTORIZED BACKGROUND CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

6. PAVEMENT STRIPING AND CONE PICKUP WILL BE CONSIDERED AS TWO SEPARATE OPERATIONS.

7. WHERE WORK OPERATIONS ARE MORE THAN 2 FT. FROM THE EDGE OF THE PAVEMENT, PROTECTION VEHICLES MAY BE OMITTED.

8. THIS CASE DOES NOT APPLY WHEN WORK IS BEING PERFORMED IN THE MIDDLE LANE(S) OF A SIX OR MORE LANE HIGHWAY. SPECIAL PLANS APPROVED BY THE TRAFFIC ENGINEER ARE REQUIRED.

9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS BY THE TRAFFIC ENGINEER.

10. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE TRAFFIC ENGINEER.

11. ALL WARNING SIGNS HAVE BLACK LEGEND AND BORDER ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

12. TABLE FOR SPACING OF FOLLOWING VEHICLE

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>DISTANCE BETWEEN SIGNS (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URBAN (LESS THAN 35 MPH)</td>
<td>200 500 350 100</td>
</tr>
<tr>
<td>RURAL</td>
<td>2600 500 350 200</td>
</tr>
<tr>
<td>EXPRESSWAY/FREEWAY</td>
<td>1600 500 350 200</td>
</tr>
</tbody>
</table>

13. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.

BOULDER CITY: 229-6331
CLARK COUNTY: 455-6100
HENDERSON: 229-6331
LAS VEGAS: 346-5295
MESQUITE: 335-5295
NORTH LAS VEGAS: 642-2462

14. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF RE-ROUTING OF ACCESS IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRANSPORTATION COMMISSION WITH A MAP SHOWING THE PROPOSED ROUTES FOR APPROVAL. IF CONSTRUCTION OPERATIONS AFFECT CAT BUS STOPS OR FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.
1. THE "L" DISTANCE EQUALS:

- S = POSTED SPEED, OR OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING OR THE ANTICIPATED OPERATING SPEED.
- W = WIDTH OF LANE OR OFFSET
- L = TAPER LENGTH

2. WHEN EQUIPMENT ENTERS OR EXITS THE WORK AREA DIRECTLY FROM THE ADJOINING LANE CARRYING TRAFFIC, A FLAGGER WILL BE REQUIRED. IF THE FLAGGER IS PRESENT, THE FLAGGER SIGN SHALL BE PLACED AT DISTANCE "A" PRIOR TO THE FLAGGER AND TURNPIECE TO LAPPE SIGN IT WILL BE PLACED AT DISTANCE "A" PRIOR TO THE WORK AREA. IF A FLAGGER IS NOT PRESENT, THE TAPER LENGTHS SHAIL NOT BE REQUIRED FOR SPEEDS OF 25 MPH OR LESS. A TAPER TAPER SHOULD BE PROVIDED PRIOR TO FLAGGER STATION TO PROTECT THE FLAGGER. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGERS STATION AT NIGHT AS NEEDED.

3. THIS CASE ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE LEFT LANE. UNDER THESE CONDITIONS, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR RIGHT LANE CLOSED SIGNS. IF INDIVIDUAL HIGHWAYS SIGNS SHALL BE ADDED IN THE OPPOSITE DIRECTION AS SHOWN AND CONES SHALL BE PLACED ALONG THE CENTERLINE THROUGHOUT THE TAPER AND WORK AREA.

4. ALL SIGNS, CONES, BARRIERS AND DRUMS ARE TO BE REMOVED AT CENTERLINE THROUGHOUT THE TAPER AND WORK AREA.

5. CONES SHALL BE A MINIMUM OF 28 IN. IN HEIGHT.

6. WHEN EQUIPMENT ENTERS OR EXITS THE WORK AREA DIRECTLY FROM THE ADJOINING LANE CARRYING TRAFFIC, A FLAGGER WILL BE REQUIRED. IF THE FLAGGER IS PRESENT, THE FLAGGER SIGN SHALL BE PLACED AT DISTANCE "A" PRIOR TO THE FLAGGER AND TURNPIECE TO LAPPE SIGN IT WILL BE PLACED AT DISTANCE "A" PRIOR TO THE WORK AREA. IF A FLAGGER IS NOT PRESENT, THE TAPER LENGTHS SHAIL NOT BE REQUIRED FOR SPEEDS OF 25 MPH OR LESS. A TAPER TAPER SHOULD BE PROVIDED PRIOR TO FLAGGER STATION TO PROTECT THE FLAGGER. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGERS STATION AT NIGHT AS NEEDED.

7. WHEN EQUIPMENT ENTERS OR EXITS THE WORK AREA DIRECTLY FROM THE ADJOINING LANE CARRYING TRAFFIC, A FLAGGER WILL BE REQUIRED. IF THE FLAGGER IS PRESENT, THE FLAGGER SIGN SHALL BE PLACED AT DISTANCE "A" PRIOR TO THE FLAGGER AND TURNPIECE TO LAPPE SIGN IT WILL BE PLACED AT DISTANCE "A" PRIOR TO THE WORK AREA. IF A FLAGGER IS NOT PRESENT, THE TAPER LENGTHS SHAIL NOT BE REQUIRED FOR SPEEDS OF 25 MPH OR LESS. A TAPER TAPER SHOULD BE PROVIDED PRIOR TO FLAGGER STATION TO PROTECT THE FLAGGER. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGERS STATION AT NIGHT AS NEEDED.

8. WHEN EQUIPMENT ENTERS OR EXITS THE WORK AREA DIRECTLY FROM THE ADJOINING LANE CARRYING TRAFFIC, A FLAGGER WILL BE REQUIRED. IF THE FLAGGER IS PRESENT, THE FLAGGER SIGN SHALL BE PLACED AT DISTANCE "A" PRIOR TO THE FLAGGER AND TURNPIECE TO LAPPE SIGN IT WILL BE PLACED AT DISTANCE "A" PRIOR TO THE WORK AREA. IF A FLAGGER IS NOT PRESENT, THE TAPER LENGTHS SHAIL NOT BE REQUIRED FOR SPEEDS OF 25 MPH OR LESS. A TAPER TAPER SHOULD BE PROVIDED PRIOR TO FLAGGER STATION TO PROTECT THE FLAGGER. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGERS STATION AT NIGHT AS NEEDED.

9. THIS CASE DOES NOT APPLY WHEN WORK IS BEING PERFORMED IN THE LEFT LANE. UNDER THESE CONDITIONS, LEFT LANE CLOSED SIGNS SHALL BE ADDED IN THE OPPOSITE DIRECTION AS SHOWN AND CONES SHALL BE PLACED ALONG THE CENTERLINE THROUGHOUT THE TAPER AND WORK AREA.

10. GENERAL NOTES

- ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGERS) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE ROADWAY UNLESS OTHERWISE AUTHORIZED BY THE TRAFFIC ENGINEER.

- ALL WORKING SIGNS SHALL HAVE BLACK LEGEND AND BOARDS ON AN ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

- ALL DEVICES ESTABLISHING A TAPER OR TANGENT LINE SHALL BE OF ONE TYPE. DEVICES SHALL NOT BE MIXED BY TYPE.

11. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

<table>
<thead>
<tr>
<th>SPEED (M.P.H.)</th>
<th>LOW</th>
<th>MIDDLE</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
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<tr>
<td>30</td>
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<td>60</td>
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<tr>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
</tbody>
</table>

12. ARROWBOARD PANELS SHALL BE USED ON HIGH-SPEED ROADWAYS WITH SPEED LIMITS OVER 15 MPH OR AS DIRECTED BY THE TRAFFIC ENGINEER. ARROWBOARDS SHOULD BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE AS LONG AS THERE IS ADEQUATE SPACE.

13. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-9461 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.

- BOULDER CITY 293-5020 LAS VEGAS 229-8431
- CLARK COUNTY 628-0160 MESQUITE 246-2558
- HENDERSON 628-2140 NORTH LAS VEGAS 640-2462

14. BUFFER SPACE SHALL BE:

<table>
<thead>
<tr>
<th>SPACE (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>250</td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>500</td>
</tr>
</tbody>
</table>

15. WHEN A SIDE ROAD INTERSECTS THE HIGHWAY WITHIN THE TEMPORARY TRAFFIC CONTROL ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED, AS NEEDED.

16. A LATERAL BUFFER SPACE MAY BE REQUIRED TO SEPARATE WORK SPACE FROM TRAFFIC SPACE. THE WIDTH SHALL BE DETERMINED BY THE TRAFFIC ENGINEER.

17. FOR LONG TERM PROJECTS OF 72 CONTINUOUS HOURS OR MORE, A 5 IN. WIDE INTERIM WHITE EDGE LINE SHOULD BE INSTALLED FROM THE ADJOINING LANE TO MARK THE EDGE OF THE WORK AREA. ADDITIONAL INTERIM WHITE EDGE LINE SHOULD BE PROVIDED IF NECESSARY TO MARK THE EDGE OF THE WORK AREA. INTERIM WHITE EDGE LINE SAIL NOT BE REFLECTIVE. NON-FOIL PAVEMENT MARKING TAPE. FOR LEFT LANE CLOSURE, THE EDGE LINE SHALL BE YELLOW. PAVEMENT MARKINGS THAT ARE NOT IN THE ROADWAY SHALL BE MET WITH APPROVED MATERIALS, CONFORMING TO SECTION 716.03.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

18. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND CYCLES TO THE ROADWAY SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION. IF MOUTHS OF ACCESS ARE NEEDED, THE CONTRACTOR SHALL PROVIDE THE WORKER'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED ROUTE OF TRAVEL. FOR CYCLES A TAPER OF 50 FT. SHOULD BE PROVIDED. THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-6100 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.

19. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND CYCLES TO THE ROADWAY SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION. IF MOUTHS OF ACCESS ARE NEEDED, THE CONTRACTOR SHALL PROVIDE THE WORKER'S TRAFFIC ENGINEER WITH A MAP SHOWING THE PROPOSED ROUTE OF TRAVEL. FOR CYCLES A TAPER OF 50 FT. SHOULD BE PROVIDED. THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-6100 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.
PROVIDING NO OTHER CONSTRUCTION OR MAINTENANCE OPERATION WITHIN 2 MILES

END ROAD WORK

ROAD WORK AHEAD

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

SPECIFICATION REFERENCE

TYPICAL APPLICATION FOR MULTILANE, DIVIDED OR UNDIVIDED, RURAL OR SUBURBAN, DAY OR NIGHT OPERATIONS WHERE ACTIVITIES WILL ENCROACH ON LANE ABUTTING SHOULDER OR ON THE SHOULDER WITHIN 2 FT. OUTSIDE OF PAVEMENT EDGE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS

CLARK COUNTY

DATE 1-9-97

DWG. NO. 618

GENERAL NOTES

2. WHEN EQUIPMENT ENTERS OR EXITS THE WORK AREA DIRECTLY FROM THE ADJOINING LANE CARRYING TRAFFIC, A FLAGGER WILL BE REQUIRED. IF THE FLAGGER IS PRESENT, THE FLAGGER SIGN SHALL BE PLACED AT DISTANCE "A" PRIOR TO THE FLAGGER AND PREPARE TO STOP SIGN (W21-1) SHALL BE PLACED AT DISTANCE "W" PRIOR TO THE FLAGGER SIGN.LOODLIGHTS SHALL BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED. A 1/2 FT. CONE TAPER SHALL BE PROVIDED PRIOR TO STATION TO PROTECT THE FLAGGER. FLAGGERS SHALL NOT BE REQUIRED FOR SPEEDS OF 25 MPH OR LESS.

3. THIS CASE ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE LEFT LANE. UNDER THESE CONDITIONS, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR RIGHT LANE CLOSED SIGNS. ON UNDIVIDED HIGHWAYS SIGNS SHALL BE ADDED IN OPPOSITE DIRECTION AS SHOWN.

4. THIS CASE DOES NOT APPLY WHEN WORK IS BEING PERFORMED IN THE MIDDLE LANES OF A SIX OR MORE LANE HIGHWAY. SPECIAL PLANS APPROVED BY THE TRAFFIC ENGINEER WILL BE REQUIRED.

5. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS CONES SHALL BE A MINIMUM OF 20" IN HEIGHT.

6. STEADY BURNING LIGHTS SHALL NOT BE REQUIRED ON BARRICADES FOR DAY OPERATIONS.

7. ALL SIGNS SHALL BE GROUND-MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS AND AS REQUIRED BY SECTION 616 OF THE STANDARD SPECIFICATIONS.

8. TYPE "W" HIGH INTENSITY FLASHING WARNING LIGHTS MAY BE INSTALLED ABOVE EACH WORK-ZONE CONSTRUCTION SIGN FOR USE DURING HOURS OF DARKNESS.

9. FOR LONG TERM PROJECTS OF 72 CONTINUOUS HOURS OR MORE, A 6" WHITE INTERMEDIATE EDGE LINE SHOULD BE INSTALLED FROM THE ENTRANCE TAPER TO A POINT BEYOND THE WORK AREA, 4" WHITE INTERMEDIATE EDGE LINE SHOULD BE USED IN A TRANSITION AREA OF 30' BEYOND THE END OF THE WORK AREA. INTERMEDIATE EDGE LINE SHALL BE MASKED WITH APPROVED REMOVABLE, NON-FOIL PAVEMENT MARKING TAPE. FOR LEFT LANE REJOINING THE PERMANENT EDGE LINE, INTERIM EDGE LINE SHALL BE INSTALLED FROM THE START OF THE TAPER TO A POINT BEYOND THE WORK AREA, 2" WHITE INTERMEDIATE EDGE LINE SHOULD BE INSTALLED FROM THE ENTRANCE TAPER TO A POINT BEYOND THE WORK AREA, AND 4" WHITE INTERMEDIATE EDGE LINE SHOULD BE SUBSTITUTED FOR RIGHT LANE CLOSED SIGNS. ON UNDIVIDED HIGHWAYS, SIGNS SHALL BE ADDED IN OPPOSITE DIRECTION AS SHOWN.

10. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIELD CONDITIONS BY THE TRAFFIC ENGINEER. THE LATERAL PLACEMENT OF THE FLAGGER, IF NECESSARY, MAY BE VARIED.

11. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE WORK AREA UNLESS OTHERWISE AUTHORIZED BY THE TRAFFIC ENGINEER.

12. ARROWBOARD PANELS SHALL BE USED ON HIGH SPEED ROADWAYS WITH SPEED LIMITS OVER 35 MPH OR AS DIRECTED BY THE TRAFFIC ENGINEER. ARROWBOARD SHOULD BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE, AS SOON AS THERE IS ADEQUATE SPACE.

13. ALL WARNING SIGNS SHALL HAVE BLACK LEGENDS AND BORDERS ON AN ORANGE BACKGROUND. ALL SIGNS MAINTAIN AN ORANGE COLOR SHALL BE MADE OF MATERIALS CONFORMING TO SECTION 716-3.01 OF THE UNIFORM STANDARD SPECIFICATIONS.

14. ALL DEVICES INSTALLING A TAPER OR TANGENT LINE SHALL BE OF ONE TYPE. DEVICES SHALL NOT BE MIXED BY TYPE.

15. TABLE FOR WORK ZONE ADVANCE WARNING SIGNS

16. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 455-4481 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.

17. ARROWBOARD PANELS SHALL BE USED ON HIGH SPEED ROADWAYS WITH SPEED LIMITS OVER 35 MPH OR AS DIRECTED BY THE TRAFFIC ENGINEER. ARROWBOARD SHOULD BE PLACED AS CLOSE TO THE BEGINNING OF THE TAPER AS POSSIBLE, AS SOON AS THERE IS ADEQUATE SPACE.

18. BUFFER SPACE SHALL BE:

19. A LATERAL BUFFER SPACE MAY BE REQUIRED TO SEPARATE WORK AREA FROM TRAFFIC SPACE. THE WIDTH SHALL BE DETERMINED BY THE TRAFFIC ENGINEER.

20. WHEN A SIDE ROAD INTERSECTS THE HIGHWAY WITHIN THE TEMPORARY TRAFFIC CONTROL ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED, AS NEEDED.

21. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF ACCESS TO OR ACCESS FROM THE HIGHWAY ENTRANCE/EXITS IS NOT POSSIBLE, IT SHALL BE DETERMINED BY THE TRAFFIC ENGINEER.

NOTE 1: THE LATERAL BUFFER SPACE SHALL BE ERECTED, AS REQUIRED.

NOTE 2: THE TEMPORARY TRAFFIC CONTROL ZONE SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.
Effective as of 08/08/2019

TYPICAL APPLICATION FOR

TRAFFIC CONTROL PLAN

HIGHWAY WORK ZONE

1. TAPER FORMULA:
   L = S X W FOR SPEEDS OF 45 MPH OR MORE
   L = WS FOR SPEEDS OF 45 MPH OR LESS

   WHERE:
   L = MINIMUM LENGTH OF TAPER
   S = POSTED SPEED, 85TH PERCENTILE SPEED PRIOR TO
   WORK STARTING OR ANTICIPATED OPERATING SPEED
   W = WIDTH OF OFFSET

2. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER
   SHALL BE AS SPECIFIED IN TABLE IN NOTE 1.

3. TYPE "T" HIGH INTENSITY FLASHING WARNING LIGHT MAY BE
   INSTALLED ABOVE EACH WORK ZONE CONSTRUCTION SIGN FOR USE
   AS NEEDED.

4. ALL WARNING SIGNS SHALL HAVE BLACK LEGEND AND BORDER ON AN
   ORANGE BACKGROUND. ALL SIGNS HAVING AN ORANGE COLOR SHALL
   BE MADE OF MATERIALS CONFORMING TO SECTION 716.03.01 OF THE
   UNIFORM STANDARD SPECIFICATIONS.

5. A BUFFER SPACE SHOULD BE REQUIRED AS FOLLOWS:

6. TABLE FOR SPACING OF ADVANCE WARNING SIGNS

7. ALL DEVICES ESTABLISHING A TAPER OR TANGENT LINE SHALL BE OF ONE
   TYPE; DEVICES SHALL NOT BE MIXED BY TYPE.

8. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6411
   AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO
   WORKING DAYS PRIOR TO BEGINNING WORK.

9. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE
   MAINTAINED THROUGHOUT, SUBURBAN OR CONSTRUCTION. IF BREAK-UP OF
   ACCESS IS NECESSARY, THE CONTRACTOR SHALL PROVIDE THE ENTITY'S TRAFFIC
   ENGINEER WITH A MAP SHOWING THE PROPOSED RE-ROUTES FOR APPROVAL.

10. DURING HOURS OF DARKNESS, STEADY BURNING WARNING LIGHTS SHALL BE
    USED ON ALL CHANNELIZING DEVICES.

GENERAL NOTES

ROAD WORK (OPTIONAL)

W4-2L

LEFT LANE CLOSED

W21-4

ROAD WORK AHEAD

WW-8L

ADVISORY SPEED (XX) TO BE NOTED ON APPROVED BARRICADE PLANS

VEHICLE WITH/CAN FLASHING OR FLASHING AMBER WARNING LIGHT(S) OPERATING.

C

L

SEE NOTE 5

A

SEE NOTE 7

TO BE NOTED ON APPROVED BARRICADE PLANS

AHEAD

WORK

W20-5L

ROAD

AHEAD

W-8L

LEFT LANE CLOSED

END ROAD WORK

G20-2A (OPTIONAL)

SYMBOLS

ARRIVAL PANEL

FLASHING VEHICLE LIGHT

ADVISORY SPEED (XX) TO BE NOTED ON APPROVED BARRICADE PLANS

BARRICADE, DRUM, VERTICAL PANEL OR CONE.

SIGN ON PORTABLE OR PERMANENT SUPPORT

TRAFFIC DIRECTION

WORK AREA

TRAFFIC ENGINEER.
1. **TAPER FORMULA:** \( L = S \times W \) FOR SPEEDS OF 45 MPH OR MORE
   \( L = W \times S \) FOR SPEEDS OF 40 MPH OR LESS

   *WHERE L: MINIMUM LENGTH OF TAPER
   S: POSTED SPEED, 85TH PERCENTILE SPEED PRIOR TO WORK STARTING OR THE ANTICIPATED OPERATING SPEED.
   W: WIDTH OF OFFSET

   2. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHALL BE AS SPECIFIED IN THE TABLE IN NOTE 1.

   **TABULATION SHOWING FOR CHANNELIZING DEVICES: DISTANCE L BETWEEN CH},
1. **GENERAL NOTES**

1.1. Any road closure must be expressly permitted in writing by the administering entity's traffic management division manager or the director of its public works department.

1.2. All warning signs shall have black legend and border on an orange background. All signs having an orange color shall be made of materials conforming to Section 716.03.01 of the uniform standard specifications.

1.3. Regulatory traffic control devices to be modified as needed for the duration of the detour.

1.4. Warning lights may be used to mark barricades at night as needed.

1.5. Street names may be used when desirable for directing detour traffic. Letters used for street names shall be made of materials conforming to Section 716.03.04 of the uniform standard specifications.

1.6. If working at or near a traffic signal, contact LVACTS at 229-6611 and local entity at appropriate numbers listed below at least two working days prior to beginning work. Boulder City: 203-9320; Mesquite: 345-5295; Clark County: 465-1410; North Las Vegas: 642-2482; Las Vegas: 229-9320.

1.7. Type "B" high intensity flashing warning lights may be installed above each work zone construction sign for use during hours of darkness.

1.8. Access for CAT transit service, pedestrians and bicycles shall be maintained throughout duration of construction. If re-routing of access is necessary, the contractor shall provide The entity's traffic engineer with a map showing the proposed re-routes for approval. If construction operations necessitate temporary elimination of CAT transit service, the contractor shall notify the Regional Transportation Commission at least 10 normal working days prior to beginning such operations.

1.9. Table for spacing of advance warning signs

<table>
<thead>
<tr>
<th>Road Type</th>
<th>Distance Between Signs (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressway/Interstate</td>
<td>500</td>
</tr>
<tr>
<td>Rural/Urban</td>
<td>350</td>
</tr>
<tr>
<td>Urban/Highway (marked)</td>
<td>200</td>
</tr>
</tbody>
</table>

1.10. Temporary signs shall be a minimum of 6" in height.

A. **TYPICAL APPLICATION—ROADWAY CLOSED BEYOND DETOUR POINT**

B. **TYPICAL APPLICATION—DETOUR SIGNING FOR ROAD CONSTRUCTION PROJECT IN A STREET GRID**

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

TYPICAL APPLICATION FOR

UNIFORM STANDARD DRAWINGS

CLARK COUNTY

DATE 1-9-97

DWG NO. 623

AGENCY APPROVED
THIS CROSSWALK SHALL NOT BE OBSTRUCTED AT SAME TIME AS ONE OPPOSITE AT INTERSECTION

GENERAL NOTES:

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS FOR PEDESTRIANS ONLY ARE ShOWN. VEHICULAR TRAFFIC CONTROLS SHALL COMPLY WITH APPROPRIATE STANDARD DRAWINGS.
3. STREET LIGHTING SHOULD BE CONSIDERED.
4. WARNING LIGHTS MAY BE USED ON BARRIERS.
5. IF THERE EXIST ANY SOURCE OF PEDESTRIAN MOVEMENTS IN THIS AREA, SUCH THAT THE PEDESTRIAN APPROACHING THE WORK AREA COULD NOT SEE THE IN-USE SIGN, THEN ALTERNATES MUST BE USED TO INSURE THAT THIS WORK IS VISIBLE.
6. CONCRETE BARRIER RAIL SHALL BE USED TO SEPARATE TEMPORARY WALKWAY FROM TRAFFIC.
7. IF WORKING AT OR NEAR A TRAFFIC SIGNAL, CONTACT LVACTS AT 229-6611 AND LOCAL ENTITY AT APPROPRIATE NUMBERS LISTED BELOW AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING WORK.
8. PEDESTRIANS SHOULD BE DIVERTED TO A SAFE AREA. DIVERSIONS SHALL BE AN ACCESSIBLE ROUTE AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT (ADA).
9. FOR NIGHT-TIME CLOSURES, TYPE A FLASHING LIGHTS MAY BE USED ON BARRIERS SUPPORTING SIGNS AND CLOSING WALKWAYS. TYPE C STEADY-BURN LIGHTS SHALL BE USED ON CHANNELIZING DEVICES SEPARATING THE TEMPORARY WALKWAY FROM VEHICULAR TRAFFIC.
10. ACCESS FOR CAT TRANSIT SERVICE, PEDESTRIANS AND BICYCLES SHALL BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION. IF RE-ROUTING OF ACCESS IS NECESSARY, THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRANSPORTATION COMMISSION AT 455-4481 AT LEAST 3 NORMAL WORKING DAYS PRIOR TO BEGINNING SUCH OPERATIONS.
STANDARD PROCEDURE & CONDITIONS WHICH, WHEN MET, ELIMINATE THE NEED FOR INDIVIDUAL TRAFFIC CONTROL PLAN AND/OR PERMIT

<table>
<thead>
<tr>
<th>SITUATION/CASE #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. MINIMUM 60 IN. WIDE FLASHER BAR ATOP VEHICLE, WITH GREATER THAN 4 LIGHT ELEMENTS VISIBLE TO APPROACHING TRAFFIC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>B. CONES SET OUT BEHIND VEHICLE</td>
<td>3, ACROSS BLOCKED LANE</td>
<td>3, ACROSS BLOCKED LANE</td>
<td>5, ACROSS BLOCKED LANE</td>
<td>NONE</td>
</tr>
<tr>
<td>C. TURN ON VEHICLE'S EMERGENCY HAZARD FLASHERS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>NOT REQUIRED</td>
</tr>
<tr>
<td>D. ALL PERSONNEL WEAR ORANGE VESTS OR Shirts WHEN OUTSIDE OF VEHICLE</td>
<td>ALWAYS</td>
<td>ALWAYS</td>
<td>ALWAYS</td>
<td>ALWAYS</td>
</tr>
<tr>
<td>E. O.K. FOR NIGHTTIME DEPLOYMENT?</td>
<td>NO</td>
<td>ONLY WHEN SPEED LIMIT &lt; 35 MPH</td>
<td>O.K., BUT USE REFLECTIVE VESTS</td>
<td>O.K., BUT REFLECTIVE VESTS</td>
</tr>
<tr>
<td>F. WATER-FILLED CRASH CUSHION, OR EQUIVALENT; TRUNK OR TRAILER-MOUNTED IMPACT ATTENUATORS</td>
<td>RECOMMENDED, BUT MANDATORY WHEN SPEED LIMIT EXCEEDS 45 MPH</td>
<td>NO</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>G. NO STOPPING UNLESS STOPPED VEHICLE IS VISIBLE TO APPROACHING TRAFFIC GREATER THAN 10 SECONDS AT SPEED LIMIT</td>
<td>YES, APPLY THIS RULE</td>
<td>N/A - ON STRAIGHT-AWAY</td>
<td>NOT REQUIRED</td>
<td>DESIRED, BUT NOT REQUIRED</td>
</tr>
<tr>
<td>H. O.K. TO SET UP DURING PEAK TRAVEL HOURS: 7-9 AM, 4-6 PM</td>
<td>YES, BUT ONLY FOR EMERGENCY-TYPE REPAIR ACTIVITIES</td>
<td>O.K.</td>
<td>NOT RECOMMENDED</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: TYPICAL APPLICATION IS FOR LANDSCAPE OR UTILITY ACTIVITIES.
1. SPECIAL "NO PARKING" SIGN SHALL BE PLACED ON FIRST BARRICADE AND ON EVERY OTHER BARRICADE THEREAFTER.

2. BARRICADES SHALL NOT BLOCK DRIVEWAYS OR ACCESSORIES PRIOR TO MAINTENANCE OPERATION. SPECIAL "NO PARKING" SIGN SHALL BE PLACED ON FIRST BARRICADE FOLLOWING SPACE PROVIDED FOR ACCESS.

3. BARRICADES MAY BE PLACED ON PAVEMENT OR ON SIDEWALK AT THE DISCRETION OF THE ENGINEER. "NO PARKING" SIGNS PLACED ON SIDEWALKS SHALL NOT BE SET AT AN ANGLE greater than 30 DEGREES WITH THE LINE OF TRAFFIC FLOW TO BE VISIBLE TO APPEARING TRAFFIC. A MINIMUM OF 36" CLEAR SPACE ON SIDEWALK SHALL BE MAINTAINED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT WHEN BARRICADES ARE PLACED ON SIDEWALKS.

4. "NO PARKING" SIGNS AND BARRICADES SHOULD BE PLACED IN AREA OF REHABILITATION AT LEAST 72 HOURS IN ADVANCE OF WORK BEGINNING. NOTIFICATION OF PERSONS AFFECTED BY STREET WORK SHALL BE PERFORMED AS REQUIRED BY RESPECTIVE ENTITY AND NEVADA REVISED STATUTES.

5. ALL BARRICADES AND "NO PARKING" SIGNS SHALL BE REMOVED AS SOON AS IMPROVED SURFACE IS READY FOR TRAFFIC AS DETERMINED BY THE ENGINEER.
GENERAL NOTES:

1. RETRO-REFLECTIVE SIGN SHEETING SHALL CONFORM TO SECTION 7.6, LATEST REVISION, OF THE UNIFORM STANDARD SPECIFICATIONS.
2. SIGN LEGENDS AND BORDERS SHALL COMPLY WITH THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
3. SIGNS SHALL BE MOUNTED IN CONFORMANCE WITH PART 6, MUTCD, LATEST EDITION.
4. THE "DOUBLE PENALTIES IN WORK ZONES" SIGN SHOULD BE MOUNTED WITH THE FIRST SIGN IN THE ADVANCE WARNING SIGN SERIES, TYPICALLY THE "ROAD WORK AHEAD" SIGN.
5. "END WORK ZONE" SIGN SHALL BE MOUNTED AT THE END OF THE WORK ZONE WITH THE "END DOUBLE PENALTIES" SIGN, IF APPLICABLE, ON THE SAME DEVICE OR POST.
6. THE DESIGNATION OF WORK ZONE, INCLUDING MARKING OF THE "DOUBLE PENALTIES", SHALL NOT BE REQUIRED ON STREETS POSTED AT 25 MILES PER HOUR OR LESS AND ARE THE ACCESS TO OR APPURTENANT TO A RESIDENTIAL AREA.

TYPICAL SIGN AND LETTERING SIZE TABLE

<table>
<thead>
<tr>
<th>SPEED LIMIT</th>
<th>&quot;DOUBLE PENALTIES IN WORK ZONE&quot; SIGN</th>
<th>&quot;BEGIN WORK ZONE&quot; SIGN</th>
<th>&quot;END WORK ZONE&quot; SIGN</th>
<th>&quot;END DOUBLE PENALTIES&quot; SIGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN 45 MPH</td>
<td>&quot;W&quot; (IN.)</td>
<td>&quot;H&quot; (IN.)</td>
<td>LETTERING</td>
<td>&quot;W&quot; (IN.)</td>
</tr>
<tr>
<td>45 MPH OR GREATER OR IF MULTILINE</td>
<td>&quot;W&quot; (IN.)</td>
<td>&quot;H&quot; (IN.)</td>
<td>LETTERING</td>
<td>&quot;W&quot; (IN.)</td>
</tr>
</tbody>
</table>

SEE THE CURRENT EDITION OF THE "STANDARD HIGHWAY SIGNS" MANUAL FOR SERIES "C" AND SERIES "D" LETTERING DIMENSIONS.

TYPICAL SIGN PLACEMENT

TYPICAL SIGN PLACEMENT NOTES:

1. FOR DIMENSIONS "A", "B", AND "C", SEE THE CURRENT MUTCD TABLE 6C-1 "Recommended Advance Warning Sign Minimum Spacing."
2. FOR DIMENSION "L", SEE THE CURRENT MUTCD TABLE 6C-3 & 6C-4.
3. SIGNS MAY BE Omitted IN THE DIRECTION WORK IS NOT BEING CONDUCTED IF THE ROADWAY IS PHYSICALLY SEPARATED BY A RAISED MEDIAN OR BARRIER WALL THROUGH THE COMPLETE WORK ZONE.

TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONE

SPECIFICATION REFERENCE

SIGN MATERIALS

TYPICAL APPLICATION FOR STANDARD FOR "DOUBLE PENALTIES" SIGNS FOR USE IN TEMPORARY TRAFFIC CONTROL ZONES

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

DATE 07/01/12 DWG NO. 627

CLARK COUNTY AREA

DRAWN

 checked

effected as of 08/08/2019
PROPOSED EXISTING

- Pull Box
- Signal Luminaire Pole, Post
- Utility Pole
- Control Cabinet
- Conduit Run
- Aerial Cable
- Detector Loop
- Padmount, Electrical Service or Splice Box
- Fluorescent Luminaire
- High Pressure Sodium Luminaire - 750 Watt
- High Pressure Sodium Luminaire - 400 Watt
- Traffic Signal Indication with Backplate
- Traffic Signal Indication with Directional Arrow and Backplate
- Pedestrian Indication and Direction
- Hazard Beacon, One Way

Effective as of 08/08/2019

<table>
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<th>SPECIFICATION REFERENCE</th>
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<td></td>
<td>CLARK COUNTY AREA</td>
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<tr>
<td></td>
<td>STANDARD SYMBOLS FOR</td>
</tr>
<tr>
<td></td>
<td>TRAFFIC SIGNAL DRAWINGS</td>
</tr>
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</table>

DATE 12-12-96 DWG. NO. 701 SHEET 1 OF 2
<table>
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<tr>
<td><img src="image1.png" alt="Diagram Image 1" /></td>
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<td><img src="image3.png" alt="Diagram Image 3" /></td>
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<td><img src="image5.png" alt="Diagram Image 5" /></td>
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<td><img src="image7.png" alt="Diagram Image 7" /></td>
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<td><img src="image17.png" alt="Diagram Image 17" /></td>
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**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**STANDARD SYMBOLS FOR TRAFFIC SIGNAL DRAWINGS**

**AGENCY APPROVED**

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<th>N</th>
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</thead>
</table>

| DATE 12-12-96 | DWG. NO. 701 | SHEET 2 OF 2 |
CLARK COUNTY AREA

QUADRANT DETAIL

NOTE: QUADRANT IS IN RELATION WITH SHEET - NOT WITH NORTH ARROW

Effective as of 08/08/2019
CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

NOTES:

1. THIS PULL BOX SHALL NOT BE USED IN TRAFFIC OR PARKING LANES.

2. ALL DIMENSIONS ARE NOMINAL.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

NO. 3 1/2 PULL BOX
NOTES:

1. THIS PULL BOX SHALL NOT BE USED IN VEHICLE TRAVEL AREAS.

2. PULL BOX TO BE USED IN CONCRETE SIDEWALKS ONLY.

REINFORCED PLASTIC MORTAR EXTENSION.
CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

PRECAST REINFORCED CONCRETE EXTENSION. (MUST NOT BE USED UNLESS SPECIFIED.)

NOTES:

1. CAST IRON COVER SHALL BE USED IN SIDEWALK ONLY.

2. SEE DRAWING NO. 709 FOR COVER TO BE USED IN STREET AND UNDEVELOPED AREAS.

3. ALL DIMENSIONS ARE NOMINAL.

Effective as of 08/08/2019

CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

PRECAST REINFORCED CONCRETE EXTENSION. (MUST NOT BE USED UNLESS SPECIFIED.)

NOTES:

1. CAST IRON COVER SHALL BE USED IN SIDEWALK ONLY.

2. SEE DRAWING NO. 709 FOR COVER TO BE USED IN STREET AND UNDEVELOPED AREAS.

3. ALL DIMENSIONS ARE NOMINAL.

Effective as of 08/08/2019

CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

PRECAST REINFORCED CONCRETE EXTENSION. (MUST NOT BE USED UNLESS SPECIFIED.)

NOTES:

1. CAST IRON COVER SHALL BE USED IN SIDEWALK ONLY.

2. SEE DRAWING NO. 709 FOR COVER TO BE USED IN STREET AND UNDEVELOPED AREAS.

3. ALL DIMENSIONS ARE NOMINAL.

Effective as of 08/08/2019

CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

PRECAST REINFORCED CONCRETE EXTENSION. (MUST NOT BE USED UNLESS SPECIFIED.)

NOTES:

1. CAST IRON COVER SHALL BE USED IN SIDEWALK ONLY.

2. SEE DRAWING NO. 709 FOR COVER TO BE USED IN STREET AND UNDEVELOPED AREAS.

3. ALL DIMENSIONS ARE NOMINAL.

Effective as of 08/08/2019

CAST IRON SIDEWALK COVER MARKED "TRAFFIC SIGNAL"

PRECAST REINFORCED CONCRETE BODY

PRECAST REINFORCED CONCRETE EXTENSION. (MUST NOT BE USED UNLESS SPECIFIED.)

NOTES:

1. CAST IRON COVER SHALL BE USED IN SIDEWALK ONLY.

2. SEE DRAWING NO. 709 FOR COVER TO BE USED IN STREET AND UNDEVELOPED AREAS.

3. ALL DIMENSIONS ARE NOMINAL.

Effective as of 08/08/2019
NOTES: 
1. THIS PULL BOX SHALL NOT BE USED IN VEHICLE TRAVEL AREAS. 
2. PULL BOX TO BE USED IN CONCRETE SIDEWALKS ONLY.
CAST IRON SIDEWALK COVER
MARKED "TRAFFIC SIGNAL"
STEEL PULL BOX COVER,
DRAWING NO. 709 IS
PREFERRED FOR ALL USES,
THIS PULL BOX ONLY.

PRECAST REINFORCED
CONCRETE BODY.

PRECAST REINFORCED CONCRETE
EXTENSION. (MUST NOT BE
USED UNLESS SPECIFIED.)

NOTES:
1. THIS PULL BOX SHALL NOT BE USED
IN TRAFFIC OR PARKING LANES.
2. SEE DRAWING NO.709 FOR
ALTERNATE COVER.
NOTE:
1. THIS PULL BOX SHALL BE USED IN VEHICLE TRAVEL AREAS.

AVAILABLE IN #3, #5, & #7 SIZES (3 GAUGE STEEL)
1. THIS COVER TO BE USED IN STREET AREAS AND UNDEVELOPED AREAS ONLY.
2. TYPICAL NO. 7 PULL BOX COVER SHOWN. SUBMIT OTHERS TO THE ENGINEER FOR APPROVAL.
3. ALL TRAFFIC AND OPEN AREA COVERS SHALL BE H-20 RATED.
4. GROUNDING OF STEEL PULL BOX COVERS IS NOT NECESSARY FOR PULL BOXES CONTAINING LOW VOLTAGE, POWER-LIMITED CONNECTIONS.
3. All traffic and open area covers shall be H 20 rated.

2. Typical No. 7 pull box cover shown. Submit others to the engineer for approval.

1. This cover to be used in street areas and undeveloped areas only.

NOTES:

4. Grounding of steel pull box covers is not necessary for pull boxes containing low voltage, power-limited connections.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

B C H L M N

SPECIFICATION REFERENCE

506 STEEL STRUCTURES

623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

PULL BOX STREET COVER

DATE 12-12-96

DWG. NO. 709

SHEET 1 OF 2
NOTES:

1. PULL BOX LID SHOULD BE TAPPED WITH A 3/8" X 16 COURSE THREAD TAP.
2. FOR TYPICAL NO. 7 PULL BOX COVER GROUNDING, SEE SHEET 1 OF THIS DRAWING NO.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PULL BOX COVER
BONDING DETAIL

DATE 12-12-96 DWG. NO. 709 SHEET 2 OF 2
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PULL BOX
FOUNDATION

DATE 7-12-01  DWG. NO. 710

Effective as of 08/08/2019
1. P30 PULL BOXES SHALL BE INSTALLED FOR THE SIGNAL ITS COMMUNICATIONS PER APPLICABLE STANDARDS.

2. PULL BOX COVER SHALL BE INSCRIBED “FIBER OPTIC”.

3. LOCATIONS OF THE PROPOSED P30 ITS COMMUNICATION PULL BOXES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING THE LOCATIONS IN THE FIELD AT APPROXIMATELY 500 FEET INTERVALS. THESE LOCATIONS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER BEFORE INSTALLATION.

4. DETAIL SHOWS METHOD OF INSTALLATION WHEN FIBER OPTIC CABLE IS REQUIRED.

5. CONDUIT SIZES SHALL BE PER UNIFORM STANDARD SPECIFICATIONS, SECTION 623.

6. ALL CONDUITS SHALL HAVE A CONTINUOUS RUN OF 6 PAIR PE39 #22 AWG INTERCONNECT CABLE.

7. UNDERGROUND ORANGE MARKING TAPE SHALL BE PLACED 12 INCHES ABOVE THE INSTALLED CONDUIT AND MARKED WITH THE LEGEND “FIBER OPTIC”.

NOTES:

AGENCY APPROVED

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<table>
<thead>
<tr>
<th>PULL BOX CONCRETE COLLAR</th>
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</table>
2" CONDUIT

24" DIA. CONCRETE BASE OR 18" SQ. CONCRETE BASE

USE TEMPLATE PROVIDED BY MFR.

NO. 4 AWG SEVEN (7) STRAND BARE COPPER GROUNDING WIRE 3' ABOVE FOUNDATION. CONNECT GROUNDING WIRE TO GROUNDING POINT.

CONDUIT TO EXTEND 6" ABOVE TOP OF THE ANCHOR BOLTS

BASE OF POLE

1" NON-SHRINK GROUT BETWEEN POLE BASE AND SIDEWALK

5/8" X 12" HOT-DIP GALVANIZED ANCHOR BOLTS

BASE COVER

48" MIN.

2 MAX. SLOPE

4" CAP

15# FELT (2 LAYERS)

STANDARD GROUNDING PLATE PER NEC 250.52 & 250.53

NOTE:

1. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.
NOTE:
1. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

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<tr>
<td>501 PORTLAND CEMENT CONCRETE</td>
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<td>623 TRAFFIC SIGNALS &amp; STREETLIGHTING</td>
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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "B" FOUNDATION

DATE 07-01-15  DWG. NO. 716
NOTE:
1. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.
NOTES:

1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.

2. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

CONDUIT TO EXTEND 6" ABOVE TOP OF THE ANCHOR BOLTS
BASE OF POLE 1" NON-SHRINK GROUT BETWEEN POLE BASE AND SIDEWALK
4" MIN.-6" MAX. CONCRETE CAP

ANCHOR BOLTS

<table>
<thead>
<tr>
<th>POLE GA.</th>
<th>BOLT &quot;E&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>SEE POLE DRAWING</td>
</tr>
<tr>
<td>7</td>
<td>1-1/8&quot; X 40&quot; X 4&quot;</td>
</tr>
<tr>
<td>3</td>
<td>1-1/4&quot; X 44&quot; X 4&quot;</td>
</tr>
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BRONZE GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE (ONE PER BOLT) SEE NOTE 2

2" CONDUIT 36" DIA. CONCRETE BASE

6"X6" WIRE MESH 10 GA.

3'-6" MESH HEIGHT 24" MIN.

2" MAX SLOPE

15# FELT (2 LAYERS)

STD. GROUNDING PLATE PER NEC 250.52 & 250.53

USE TEMPLATE PROVIDED BY MFR.
NOTES:

1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.

2. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

3. VERTICAL ADJUSTMENT REQUIRED FOR POLES INSIDE ACCESS RAMPS.

ANCHOR BOLTS

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<th>POLE GA.</th>
<th>BOLT &quot;E&quot;</th>
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</table>

Bronze grounding connector UL listed for underground use (one per bolt) see note 2

NOTES:

1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.

2. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

3. VERTICAL ADJUSTMENT REQUIRED FOR POLES INSIDE ACCESS RAMPS.

ANCHOR BOLTS

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Bronze grounding connector UL listed for underground use (one per bolt) see note 2

Professional electrical engineer stamp on file

Effective as of 08/08/2019
NOTES:

1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.

2. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

3. VERTICAL ADJUSTMENT REQUIRED FOR POLES INSIDE ACCESS RAMPS.

<table>
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<td>7</td>
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USE TEMPLATE PROVIDED BY MFR.

NO. 4 AWG SEVEN (7) STRAND BARE COPPER GROUNDING WIRE 3' ABOVE FOUNDATION. CONNECT GROUNDING WIRE TO GROUNDING PLATE.

CONDUIT TO EXTEND 6" ABOVE TOP OF THE ANCHOR BOLTS BASE OF POLE

1" NON-SHRINK GROUT BETWEEN POLE BASE AND SIDEWALK 4" MIN. 6" MAX. CONCRETE CAP

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

Effective as of 08/08/2019
1. Anchor bolts shall be hot-dip galvanized steel with nut and washer.

2. Continuous bare copper grounding wire shall be looped around anchor bolts one time and connected to each anchor bolt before continuing down to the grounding plate.

3. Vertical adjustment required for poles inside access ramps.
NOTES:

1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.
2. ANCHOR BOLT MINIMUM YIELD STRENGTH Fy = 50 KSI.
3. SURROUNDING SOIL MUST HAVE SOIL-BEARING PRESSURE S1 OF 1500 PSF.
4. WRAP 20' OF #4 AWG BARE COPPER GROUNDING WIRE AROUND ENTIRE CAGE. GROUNDING WIRE SHALL BE CONNECTED TO ONE ANCHOR BOLT NEAR TOP OF FOUNDATION AND CONTINUE DOWN AROUND CAGE AND CONNECT TO GROUNDING PLATE AT BOTTOM OF FOUNDATION.
5. STEEL WIRE SHALL BE USED TO TIE ALL BARS AND WIRE MESH FIRMLY TOGETHER.
6. VERTICAL ADJUSTMENT REQUIRED FOR POLES INSIDE ACCESS RAMPS.

CONDUIT TO EXTEND 6" ABOVE TOP OF THE ANCHOR BOLTS
2" X 66" X 6" BOLTS
1" NON-SHRINK GROUT BETWEEN POLE BASE AND SIDEWALK
4" MIN.-6" MAX. CONCRETE CAP

#4 BAR 2"X2" SPACING, TOP 14" MIN.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

SPECIFICATION REFERENCE
501 PORTLAND CEMENT CONCRETE
623 TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "L" FOUNDATION

DATE 07-01-15 DWG. NO. 722
NOTES:
1. ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL WITH NUT AND WASHER.
2. WRAP 20' OF #4 AWG BARE COPPER GROUNDING WIRE AROUND ENTIRE CAGE. GROUNDING WIRE SHALL BE CONNECTED TO ONE ANCHOR BOLT NEAR TOP OF FOUNDATION AND CONTINUE DOWN AROUND CAGE AND CONNECT TO GROUNDING PLATE AT BOTTOM OF FOUNDATION.
3. STEEL WIRE SHALL BE USED TO TIE ALL BARS AND SPIRAL FIRMLY TOGETHER.
4. 28 DAY STRENGTH - 4000 PSI MIN. ALL REINFORCING STEEL SHALL BE ASTM A615 GR 60.
5. MAXIMUM ALLOWABLE OVERTURNING MOMENT IS 180 FT-KIPS.
6. MAXIMUM ALLOWABLE TORSION IS 220 FT-KIPS.
7. THE FOUNDATION DESIGN SHOWN ASSUMES A NON-COHESIVE SOIL WITH A MINIMUM INTERNAL FRICTION ANGLE OF 30 DEGREES. IF ACTUAL SOIL CONDITIONS ARE LESSER QUALITY, THE FOUNDATION SHOULD BE DESIGNED FOR THE SPECIFIC SITE CONDITIONS.
8. VERTICAL ADJUSTMENT REQUIRED FOR POLES INSIDE ACCESS RAMPS.

BASE COVER

16 - #9 BARS
15'-6" LONG EQUALLY SPACED

DRILLED SHAFT

USE TEMPLATE PROVIDED BY MFR.

2" CONDUIT

4" CLR. (MIN.)

NO. 4 AWG SINGLE-STRAND BARE COPPER GROUNDING WIRE 3' ABOVE FOUNDATION. CONNECT GROUNDING WIRE TO GROUNDING PLATE AT BOTTOM OF FOUNDATION. (SEE NOTE 4)

CONDUIT TO EXTEND 6' ABOVE TOP OF THE ANCHOR BOLTS 2-1/4" X 93" X 9" A307 GRADE B BOLTS BASE OF POLE
1" NON-SHRINK GROUT BETWEEN POLE BASE AND SIDEWALK
4" MIN.-6" MAX. CONCRETE CAP

FOR TYPE XX-B SIGNAL AND LUMINAIRE POLES, SEE STANDARD DRAWING NO. 810.

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE "M" FOUNDATION

AGENCY APPROVED B C H L M N

SPECIFICATION REFERENCE

501 PORTLAND CEMENT CONCRETE

623 TRAFFIC SIGNALS & STREETLIGHTING

DATE 07-01-15 DWG. NO. 723

Effective as of 08/08/2019
**NOTES:**
1. FOR CONDUIT SIZE, LOCATION AND QUANTITY, SEE PLANS.
2. ANCHOR BOLTS 3/4" X 18" X 3" SHALL BE HOT-DIP GALVANIZED COMMERCIAL GRADE STEEL WITH NUT AND WASHER.
3. ANCHOR BOLT PROJECTION ABOVE FOUNDATION SHALL BE 3-1/2" MIN., 4-1/2" MAX.
4. CONDUIT PROJECTION ABOVE FOUNDATION SHALL BE 2" MIN., 4" MAX.
5. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.
NOTES

1. 3" OR 4" FIBER OR INTERCONNECT FROM TYPE 200 OR P-30 PULL BOX. REFER TO PLANS FOR INTERCONNECT/FIBER CONDUIT SIZE.
2. 2" CONDUIT FROM SERVICE PEDESTAL.
3. 3" CONDUITS FROM #7 TRAFFIC SIGNAL PULL BOX FOR SIGNAL POLES.
4. #4 SINGLE STRAND BARE COPPER WIRE SEE DRAWING 725 FOR DETAILS.
5. INSTALL CONDUITS 1" FRONT OF CENTER LINE.
6. REFER TO PLANS FOR ANY ADDITIONAL CONDUITS.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CABINET CONDUIT LAYOUT
TYPE "J" & "K" FOUNDATIONS

DATE: 10-9-08   DWG. NO. 725.1
2" PVC COND. TO BE ADDED IN EVERY FDN. FOR FUTURE USE. POINT TOWARDS INTERSECTION.

BRONZE GROUNDING CONNECTOR UL LISTED FOR UNDERGROUND USE (ONE PER BOLT) SEE NOTE 6

NOTES:

1. FOR CONDUIT SIZE, LOCATION, AND QUANTITY SEE PLANS REFER TO CONDUIT LAYOUT DRAWING # 725.1 FOR DETAILS.

2. 3/4" X 18" X 3" HOT-DIP GALVANIZED ANCHOR BOLTS. LOCATE WITH TEMPLATE.

3. ANCHOR BOLT PROJECTION ABOVE FOUNDATION SHALL BE 3-1/2" MIN., 4-1/2" MAX.

4. CONDUIT PROJECTION ABOVE FOUNDATION SHALL BE 1" MIN., 4" MAX.

5. LOCATION OF FOUNDATION MUST BE APPROVED BY ENGINEER IN FIELD.

6. CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE CONNECTED TO EACH ANCHOR BOLT WITH BRONZE GROUNDING CONNECTOR BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.
NOTES

1. BARE COPPER GROUNDING CONDUCTOR SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE.

2. IN AREAS WHERE R/W PERMITS, THE CONCRETE BASE SHALL BE PLACED AT THE BACK EDGE OF THE SIDEWALK.

3. REFER TO STD. DWG. 331 FOR SERVICE PEDESTAL SETBACK AND ORIENTATION.
SERVICE PEDESTAL ENCLOSURE, 12 GA. SHEET METAL BODY AND EQUIPMENT MOUNTING PANEL, 14 GA. FRONT COVER(S) AND 16 GA. MIN. FOR ALL OTHER PANELS. ALL SHEET METAL SHALL BE FINISHED WITH ZINC CHROMATE PRIMER AND GREEN BAKED ENAMEL OR POWDER COAT FINISH. METERING SECTION PER P.U.E.S.E.R. STANDARDS.

UTILITY METER SECTION, 125 OR 200 AMP AS NEEDED, 120/240 VOLT, 1 PHASE, 3 WIRE. THE SECTION SHALL HAVE A HINGED COVER WITH PADLOCK TAB.

CIRCUIT BREAKER DISTRIBUTION SECTION, 125 OR 200 AMP AS NEEDED, 120/240 VOLT, 1 PHASE, 3 WIRE. THE SECTION SHALL BE COMPLETE WITH SEPARATE DEAD FRONT, COPPER BUSING, SPACE FOR A MINIMUM OF TEN FULL SIZE (1") GE TYPE PLUG-IN CIRCUIT BREAKERS (EXCLUDING MAIN BREAKER), COPPER NEUTRAL/GROUNDING BUS AND MAIN BREAKER AS SPECIFIED BY THE ENGINEER. THE SECTION SHALL BE FACTORY WIRED TO THE METER SECTION WITH THE APPROPRIATE SIZE COPPER CONDUCTORS.

EQUIPMENT MOUNTING PANEL, 10" H X 12" W MIN., OPEN OR ENCLOSED, FOR LIGHTING CONTACTORS AS NEEDED.

DISTRIBUTION AND EQUIPMENT SECTION COVER WITH PADLOCK TAB.

BASE AND ENCLOSURE WIDTH (16" TYP.)

BASE DEPTH (16" TYP.)

ENCLOSURE DEPTH (17" TYP.)

TYPICAL MOUNTING BASE DETAIL

(DIMENSIONS MAY VARY DEPENDING ON MANUFACTURER)

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

B  C  H  L  M  N

SPECIFICATION REFERENCE

506  STEEL STRUCTURES

623  TRAFFIC SIGNALS & STREETLIGHTING

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

SINGLE METER SERVICE PEDESTAL

DATE 8-12-99  DWG. NO. 730
TO UTILITY SINGLE PHASE, 3 WIRE, 120/240 VAC SERVICE.
LEAVE A MINIMUM OF 10 FEET SLACK IN EACH CONDUCTOR.

2" RIGID GALVANIZED STEEL CONDUIT

2-HOLE PIPE STRAPS
SPACED 5 FEET APART

METER SOCKET (PER UTILITY'S REQUIREMENTS)
FACE METER AWAY FROM TRAFFIC.

SINGLE PHASE, 3 WIRE, 120/240 VAC CIRCUIT BREAKER
LOAD CENTER, MAIN LUGS ONLY, NEMA 3R (RAIN-TIGHT)
ENCLOSURE WITH PADLOCKING PROVISIONS, AND A
MINIMUM OF EIGHT (8) SINGLE SPACES.
BUSSING SHALL BE COPPER.
FOR LOAD MAINS AMPERE RATING, AND/OR CIRCUIT BREAKER
RATINGS, NUMBER OF POLES AND QUANTITY, SEE PLANS.

NO. 4 AWG GROUNDING CONDUCTOR ENCASED
IN 1/2" E.M.T.

FINISHED GRADE

EQUIPMENT GROUNDING:
MINIMUM OF 20 FEET
OF SOLID NO. 4 AWG
BARE COPPER WIRE,
SPIRAL WRAPPED AROUND
POLE WITH A 1/2 INCH
PITCH. SEE NOTE 2.

PVC COATED OR WRAPPED WITH
10 MIL CORROSION PROTECTIVE
TAPE, 1/2 LAPPED, RIGID GALVANIZED
STEEL 90° ELBOW, 24" MIN. RADIUS

2" PVC CONDUIT TO TRAFFIC
SIGNAL CONTROLLER CABINET
(SEE PLANS FOR WIRE QUANTITY
AND GAGES)

NOTES:
1. ALL WIRES TO BE COPPER; SEE PLANS FOR QUANTITY AND GAGES.
2. WITH ENGINEER'S APPROVAL, AN 8 FT. BY 5/8 IN. COPPER-CLAD
GROUNDING ROD MAY BE USED.
3. ALL CONDUIT FITTINGS TO BE WATER-TIGHT.
INSTALLATION OF CONDUIT INTO PULL BOX FROM LIP OF GUTTER TRENCH

36" MIN. RADIUS - USE ONLY 20 MIL OR THICKER PVC COATED RIGID IRON CONDUIT FOR BEND AREA. SEE SPECIFICATIONS.

EXCAVATE UNDER EXISTING CURB & GUTTER DO NOT REMOVE C & G.

FILL WITH SAND AND COMPACT AS REQUIRED BY FIELD ENGINEER

NOTE: DO NOT MAKE COMPOUND BENDS IN CONDUIT

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36" MIN. RADIUS - USE ONLY 20 MIL OR THICKER PVC COATED RIGID IRON CONDUIT FOR BEND AREA. SEE SPECIFICATIONS.
THE CONTRACTOR SHALL USE PVC COATED RIGID IRON CONDUIT CONFORMING TO SPECIFICATIONS.

B.C. RADIUS VARIES

THE CONTRACTOR SHALL USE PVC COATED RIGID IRON CONDUIT CONFORMING TO SPECIFICATIONS.

CONNECTORS

TYPICAL CONDUIT LOCATIONS

6" MAX.

TRENCH

CURB & GUTTER 24"

TRENCH

6" MAX.

RIGID IRON CONDUIT TO PVC CONDUIT CONNECTOR

PVC FOR CONTINUATION

RIGID IRON CONDUIT TO PVC CONDUIT CONNECTOR

PVC FOR CONTINUATION

6" MAX.

TRENCH

LIP OF GUTTER FOR A/C PAVEMENT

BACK OF CURB FOR SIDEWALK

SIDEWALK OR A/C PAVEMENT

NEW CONSTRUCTION

6" MIN.

2" MIN.

6" MAX.

CONDUIT RETROFIT (EXIST. PAVEMENT)

CONDUIT RETROFIT (EXIST. PAVEMENT)

6" MAX.

SAND BACKFILL

SAND BEDDING

CONDUIT

6" MIN.

2" MIN.

6" MAX.

CONDUIT RETROFIT (EXIST. PAVEMENT)

CONDUIT RETROFIT (EXIST. PAVEMENT)

6" MAX.

LIP OF GUTTER FOR A/C PAVEMENT

BACK OF CURB FOR SIDEWALK

SIDEWALK OR A/C PAVEMENT

NEW CONSTRUCTION

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2" MIN.

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LIP OF GUTTER FOR A/C PAVEMENT

BACK OF CURB FOR SIDEWALK

SIDEWALK OR A/C PAVEMENT

NEW CONSTRUCTION

6" MIN.

2" MIN.

6" MAX.
NOTES:

1. CONSTRUCT FROM MINIMUM 12-GUAGE STEEL.

2. THE TIMER SHALL BE RTC-AP21 OR EQUIVALENT.
NOTES:
1. ALL WIRING INSIDE THE CABINET SHALL BE #14 THW.
2. ALL FIELD WIRE TO THE SIGNAL SHALL BE #14 SOLID COPPER.
3. THE SERVICE WIRE SHALL BE 2-#4 THW & 1-#6 THW.
   PROVIDE #10 PIGTAIL FOR CONNECTION TO BREAKER.
4. THE TIMER SHALL BE RTC-AP21 OR EQUIVALENT.
5. TWO POLE SOLID STATE FLASHER.
6. THERE SHALL BE A 1” MINIMUM CLEARANCE BETWEEN INDIVIDUAL COMPONENTS.
7. ALL SERVICE POINTS SHALL BE AS FOR STREET LIGHTING.
8. FLASHING PATTERN OF LIGHTS TO BE SPECIFIED BY THE ENTITY.
LUMINAIRE PIPE TENON AS REQUIRED

15' ARM LENGTH

THIS ARM DESIGN FOR 35' MTG. HEIGHT ONLY

11 GA. ROUND TAPERED ARM

PROVIDE WIRE GUIDE INTO SHAFT

1. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

2. LOW BIDDER MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL BEFORE CONTRACT CAN BE AWARDED.

3. FOR OTHER DETAILS SEE DRAWING NO. 808 SHTS. 2 & 6.

4. INSTALL A BACKFACING LIGHT ON BACK OF OUTERMOST LIGHT, INDICATING THE SPEED LIMIT MESSAGE IS IN OPERATION.

5. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.

6. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

FOR "F" TYPE FOUNDATION SEE DRAWING NO. 808

AGENCY APPROVED

SCHOOL FLASHING SIGN ON POLE WITH LUMINAIRE

DATE 9-14-06  DWG. NO. 743  SHEET 1 OF 2
NOTES:

1. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

2. INSTALL A BACKFACING LIGHT ON BACK OF OUTERMOST LIGHT, INDICATING THE SPEED LIMIT MESSAGE IS IN OPERATION.

SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SCHOOL FLASHING SIGN ON TYPE III POLE

DATE 12-12-96  DWG. NO.  743  SHEET  2 OF 2
6" SCH. 40
GRADE "A"

(8) WELDED
STEEL COUPLING

(8) 8" SIGNAL HEADS
SHOULD EXTEND TO
TOP & BOTTOM OF
SIGN AS SHOWN

PLAN OF BASE

4" X 6-1/2" (INSIDE DIM.)
HANDHOLE AND COVER
(SHALF FACE AWAY FROM
ONCOMING TRAFFIC)

3/8" STEEL PLATE
BASE THICKNESS

HEAVY SQ. NUTS
FOR PLUMBING

NOTES:

1. DRILL 1" HOLES IN STEEL PIPE WHERE
1-1/2" STEEL COUPLINGS ARE TO BE.

2. POLE TO BE HOT-DIP GALVANIZED BY MANUFACTURER
OR PRIME PAINTED BY MANUFACTURER AND FINISH
PAINTED BY CONTRACTOR PER SPECIFICATIONS
AND AS REQUIRED BY THE ENTITY.

3. HANDHOLE COVERS SHALL BE MOUNTED WITH
TAMPER-RESISTANT SCREWS.

FOR TYPE "G" FOUNDATION SEE DRAWING NO. 720

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGN POST WITH
SCHOOL SIGN MOUNTED

DATE 12-12-96  DWG. NO. 744 SHEET 1 OF 2
SIGN POST WITH SCHOOL SIGN MOUNTED DETAILS

3/16" x 3"
HI-TENSILE STEEL CLAMPS

1-1/4" HI-TENSILE HEX. HEAD BOLTS AND NUTS.

1" THICK FLANGE

2" DIA. WIRING HOLE
1-1/4" THICK FLANGE

DETAIL A

DETAIL B

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGN POST WITH SCHOOL SIGN MOUNTED DETAILS

DATE
DWG. NO. 744
SHEET 2 OF 2
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

30 FT. POLE WITH SCHOOL FLASHING SIGN

DATE 9-14-06  DWG. NO. 745
SCHOOL SIGN POLE
TYPE XX-A

NOTES:
1. LOW BIDDER MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL BEFORE CONTRACT CAN BE AWARDED.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. FOR OTHER DETAILS SEE DRAWING NO. 808 SHTS. 2 & 6.
4. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.
5. SCHOOL SIGN SHALL BE MOUNTED AS SHOWN IN STANDARD DRAWING NO. 745
6. REFER TO DRAWING NO. 812 SHEET 1 OF 2 IF XX-20 POLE IS REQUIRED.
7. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

FOR "H" TYPE FOUNDATION
DRAWING NO. 721
IN THE CITY OF NORTH LAS VEGAS, USE ONLY XX-A POLE DWG.808 SHT 3 & 6
FOR "L" FOUNDATION SEE DWG.722
NOTES:

1. ALL INDICATIONS ARE TO BE YELLOW LED BALLS.
2. ALL M-2A INDICATIONS ARE 12" NOMINAL.
3. CIRCULAR VISORS TO BE INSTALLED ON ALL HEADS.
4. SEE SIGNAL PLANS FOR MAST ARM TENON LOCATIONS.
5. THIS HEAD ASSEMBLY SHALL BE USED ONLY ON THE END OF THE MAST ARM.
PROVIDE LOUVERED BACKPLATE SIMILAR TO DRAWING 840

NOTES:
1. ALL INDICATIONS ARE TO BE YELLOW LED BALLS.
2. ALL M-2B INDICATIONS ARE 12" NOMINAL.
3. CIRCULAR VISORS TO BE INSTALLED ON ALL HEADS.
4. SEE SIGNAL PLANS FOR MAST ARM TENON LOCATIONS.
REINFORCED POLYMER CONCRETE COVER MARKED "FIBER OPTIC"

POLYMER COMPOSITE BODY

NOTES:

1. THIS PULL BOX SHALL NOT BE USED IN TRAVEL OR PARKING LANES

2. TAPERED SIDE WALLS ARE ALLOWED.

"P30" PULLBOX

( FOR USE IN INTERCONNECT AND COMMUNICATIONS INSTALLATIONS)
1. DESIGN LOAD: H-20 WHEEL LOADINGS.
2. SUITABLE FOR USE IN OFF STREET LOCATIONS WHERE NOT SUBJECT TO HIGH DENSITY TRAFFIC. IT SHALL NOT BE USED IN TRAVEL OR PARKING LANES.
3. INSIDE DIMENSIONS - 30"X48"X36"
4. FOR USE AT FIBER OPTIC SPLICE POINTS.

TYPE 200 VAULT
EXISTING CURB AND GUTTER

SIDEWALK TO BE REMOVED AND REPLACED PER SECTION 202 OF THE STANDARD SPECIFICATIONS

RIGID CONDUIT BEND
3' MINIMUM RADIUS

FIBER OPTIC CABLE

10' TYP.
TO NEAREST EXISTING CONSTRUCTION JOINT

P30 ITS COMMUNICATION PULL BOX
SEE NOTES ON SHEET 2

5' TYP.
TO NEAREST EXISTING CONSTRUCTION JOINT

SAWCUT

EXISTING CONCRETE SIDEWALK

4" PVC CONDUIT

12" MIN CLEARANCE

10'

CONDUIT BEND

10'

10'

AGENCY APPROVED

B

C

H

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M

N

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS

CLARK COUNTY AREA

ITS COMMUNICATION CONDUIT AND PULL BOX DETAIL

(FOR EXISTING CURB & GUTTER)

DATE 3-13-08

DWG. NO. 763

SHEET 1 OF 2

Effective as of 08/08/2019

Effective as of 08/08/2019
PULL BOX MAY ALSO BE PLACED NEAR THE BACK OF CURB WITH A MIN. 8" CLEARANCE.

1. P30 PULL BOX SHALL BE INSTALLED FOR THE TRAFFIC SIGNAL ITS COMMUNICATIONS PER APPLICABLE STANDARDS.
2. PULL BOX COVER SHALL BE INSCRIBED "FIBER OPTICS".
3. APPROXIMATE LOCATIONS OF THE PROPOSED P30 ITS COMMUNICATION PULL BOXES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING THE LOCATIONS OF THE PROPOSED ITS COMMUNICATION PULL BOXES IN THE FIELD PER STANDARD STANDARD SPECIFICATION INTERVALS AND THESE LOCATIONS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER BEFORE INSTALLATION.
4. DETAIL SHOWS METHOD OF INSTALLATION WHEN FIBER OPTIC CABLE IS REQUIRED.

NOTES:

A MIN. 8" CLEARANCE NEAR THE BACK OF CURB WITH PULL BOX MAY ALSO BE PLACED

FLOWABLE BACKFILL

1/2" DRAIN ROCK

SECTION A-A

ITS COMMUNICATION CONDUIT AND PULL BOX DETAIL (FOR EXISTING CURB & GUTTER)
**Fiber Optic Cable**

- **Depth as Required**
- **Extend Conduit 3” into the Box**
- **4” Min. Clearance**
- **Type 2 Gravel 12” Depth**

**New Concrete Sidewalk**

**PVC Conduit**

**Interconnect Cable**

**Pull Box**

**Back of Sidewalk**

---

**Table: Specification Reference**

<table>
<thead>
<tr>
<th>Specification Reference</th>
<th>Uniform Standard Drawings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clark County Area</td>
</tr>
<tr>
<td></td>
<td>Its Communication Conduit</td>
</tr>
<tr>
<td></td>
<td>And Pull Box Detail</td>
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<td>Installed Under New Sidewalk</td>
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<th>AGENCY APPROVED</th>
<th>B</th>
<th>C</th>
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<tbody>
<tr>
<td>3-13-08</td>
<td>764</td>
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</table>
1. All its conduits shall have a 6-pair, REA-PE39 #22 AWG twisted wire pair cable installed.

2. Any existing its conduits from the opposing side of the street shall be connected to proposed conduits using the same size conduit. If undergrounds do not exist, then proposed conduits shall be extended 5' past the existing or proposed edge of pavement to a #3-1/2 pull box marked "fiber optic."

3. Fiber optic conduit shall be installed with P30 pull boxes placed at a maximum spacing of 1000', but shall not be installed within 5' of the point of curvature (PC) of the R/W radius, in sidewalk ramps or driveways. The its conduits shall be connected to the existing its conduits or, if not existing, an additional P30 pull box shall be installed at the proposed development’s property line.

4. All conduit bends shall be PVC coated rigid 1/4 minimum radius of 36 inches.

5. All its pull boxes shall have a polymer composite body with resin polymer reinforced non-conductive cover marked "fiber optic."

6. Underground orange marking tape shall be placed 12 inches above the installed conduit and marked with the legend "fiber optic."

7. If traffic signal cabinet exists or is being installed on corner, install type 200 vault per 762 and 889 with its conduit into traffic signal cabinet. If traffic signal cabinet does not exist or is not being installed in corner, install P30 pull box.
CONNECT TO BACK OF LOCAL
CCTV CAMERA CONTROL UNIT
COHU 9300 SERIES -CONTROL
(OR APPROVED EQUAL IN TRAFFIC
CONTROLLER CABINET)
(MALE)
(SEE DWG. NO. 766, SHEET 2 OF 4)

WEATHER PROOF
MS STYLE CONNECTOR

CONNECTS TO CA295H CABLE (MALE)

CONNECTS TO CAMERA
ACCESSORY (FEMALE)

CABLE (COHU MODEL CA295H
OR APPROVED EQUAL)
SEE CABLE WIRING DIAGRAM
(DWG. NO. 766, SHEET 2 OF 4)

1/2" S.S. ALL THREAD / SINGLE S.S. FLAT WASHER
AND DOUBLE S.S. NUTS (EACH SIDE) TO EXTEND
COMPLETELY THROUGH POLE AND CAP (2-ALL-
THREAD BOLTS REQ'D PER POLE WITH EACH
OFFSET TO EXTEND THROUGH POLE).
**NOTE:**

1. IF PULLING CCTV CABLE IN EXISTING SIGNAL CONDUIT, AGENCY APPROVAL REQUIRED FOR METHOD OF INSTALLATION.

---

**CCTV CAMERA**

**CA295H CABLE WIRING DIAGRAM**

---

**LOCAL CCTV CAMERA CONTROL UNIT**

COHU 9300 SERIES -CONTROL (OR APPROVED EQUAL) (IN TRAFFIC CONTROLLER CABINET)

---

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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

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**CLOSED CIRCUIT TELEVISION CAMERA CONTROL UNIT AND CABLE WIRING DIAGRAM**

---

**DATE** 04-08-10  **DWG. NO.** 766  **SHEET** 2 OF 4
CAMERA ADAPTER STAND  
(REQUIRED FOR POLE CAP MOUNTING)

1/2" S.S. ALL THREAD //SINGLE S.S. FLAT WASHER AND DOUBLE S.S. NUTS (EACH SIDE) TO EXTEND COMPLETELY THROUGH POLE AND CAP (2-ALL-THREAD BOLTS REQ'D PER POLE WITH EACH OFFSET TO EXTEND THROUGH POLE).

NOTE:
CAMERA STAND TO BE USED ONLY TO AVOID CONFLICT WITH OVERHEAD POWER LINES. AGENCY APPROVAL REQUIRED.

MAT'L (FLANGE): 1018 STEEL OR EQUIV.
MAT'L (TUBE): Ø 3.5 X 1/8 WALL 1018 STEEL OR EQUIV.
3. ALL POLE AND CAP MATERIALS TO BE GALVANIZED STEEL.
4. REMOVE ALL BURRS AND SHARP EDGES 0.015 MAX

CAMERA & LENS HOUSING
POLE CAP
CAMERA ADAPTER STAND
CABLE AND CONNECTOR // PART OF CAMERA ACCESSORY
TRAFFIC SIGNAL POLE

WELD COMPLETELY AROUND CIRCUM

○ Ø 0.600 THRU
○ Ø 1.750 THRU

.375 -.750 THRU SLOT EQUAL SPACED ON 4.750 BC BOTH SIDES

.250 TYP

3.0 +/- 0.1

Agency Approved

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<th>CLARK COUNTY AREA</th>
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Effective as of 08/08/2019
**CAMERA EXTENSION POLE**

(REQUIRED FOR POLE CAP MOUNTING)

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**POLE DATA**

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<tr>
<th>BASE DIA. (IN)</th>
<th>LENGTH (FT)</th>
<th>GAUGE OR THICKNESS (IN)</th>
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<tr>
<td>3.50</td>
<td>11.35</td>
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**MATERIAL DATA**

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<th>ASTM DESIGNATION</th>
<th>MIN. YIELD (KSI)</th>
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<td>POLE TUBE</td>
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<td>PLATES</td>
<td>A36</td>
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<td>GALVANIZING -HARDWARE</td>
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<td>CCTV FIELD EQUIPMENT</td>
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**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**CLOSED CIRCUIT TELEVISION CAMERA**

**EXTENSION POLE**

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**AGENCY APPROVED**

**DATE** 04-08-10  **DWG. NO.** 766  **SHEET** 4 OF 4

---

Effective as of 08/08/2019
NOTE

AN ADDITIONAL 120V OUTLET TO BE INSTALLED ON SIDE RAIL, NEAR TOP, FOR ITS EQUIPMENT ON EITHER SIDE OF CABINET. LOCATION TO BE APPROVED BY AGENCY ENGINEER BEFORE INSTALLATION. MAXIMUM OF FOUR OUTLETS PER CABINET.
MOTOR: 1/125 HP - 3000 RPM NEMA CLASS 0.65 AMPS AT 115 VAC.

VENT FAN SPECIFICATION:
134 C.F.M. RATING AT .160" OF WATER STATIC PRESSURE.

NOTES:
1. MATERIAL - 14 GA. SHEET STEEL, OR ALUMINUM EQUIVALENT.
2. PAINT OUTSIDE TWO COATS AND INSIDE TWO COATS WHITE ENAMEL OR AS APPROPRIATE.
3. DOOR SHALL LOCK AT THREE POINTS.
4. FOR FOUNDATION DETAILS AND ANCHOR BOLT LOCATION SEE DRAWING NO. 724.
5. INCLUDE 3/4" x 18" x 3" HOT-DIP GALVANIZED ANCHOR BOLTS WITH EACH CABINET.
"P" CABINET

NOTES:

1. MATERIAL - 14 GA. SHEET STEEL, OR ALUMINUM EQUIVALENT.
2. PAINT OUTSIDE TWO COATS AND INSIDE TWO COATS WHITE ENAMEL OR AS APPROPRIATE.
3. SHELVES SHALL BE REMOVABLE AND ADJUSTABLE FOR VERTICAL SPACING.
4. DOOR SHALL LOCK AT THREE POINTS.
5. FOR FOUNDATION DETAILS AND ANCHOR BOLT LOCATION SEE DRAWING NO. 725.
6. INCLUDE 3/4" x 18" x 3" HOT-DIP GALVANIZED ANCHOR BOLTS WITH EACH CABINET. 

VENT FAN SPECIFICATION:
SEE STANDARD DRAWING NO. 801
VENT FAN SPECIFICATION:
SEE STANDARD DRAWING NO. 801

NOTES:

1. MATERIAL = 14 GA. SHEET STEEL, OR ALUMINUM EQUIVALENT.
2. PAINT OUTSIDE TWO COATS AND INSIDE TWO COATS WHITE ENAMEL OR AS APPROPRIATE.
3. FOR FOUNDATION DETAILS AND ANCHOR BOLT LOCATION SEE DRAWING NO. 725.
4. INCLUDE 3/4" x 18" x 3" HOT-DIP GALVANIZED ANCHOR BOLTS WITH EACH CABINET.

"R" CABINET
NOTES:

1. MATERIAL - 14 GA. SHEET STEEL, OR ALUMINUM EQUIVALENT.

2. PAINT OUTSIDE TWO COATS AND INSIDE TWO COATS WHITE ENAMEL OR AS APPROPRIATE.

3. FOUNDATION DETAILS SHALL BE SPECIFIED ON THE SIGNAL CONSTRUCTION PLANS.

4. INCLUDE 3/4" x 18" x 3" HOT-DIP GALVANIZED ANCHOR BOLTS WITH EACH CABINET.

VENT FAN SPECIFICATION:
SEE STANDARD DRAWING NO. 801

"RR" CABINET

AGENCY APPROVED

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<td></td>
<td>TYPE IX CABINET</td>
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<td>DATE 12-12-96 DWG. NO. 804</td>
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**NOTES:**

1. PEDESTRIAN PUSH BUTTON SHALL NOT BE LOCATED MORE THAN 24" FROM THE BACK OF WALK. IF DISTANCE FROM BACK OF WALK TO PUSH BUTTON IS 20" TO 24", THE BUTTON SHALL BE LOCATED AT A MAXIMUM HEIGHT OF 44" FROM THE SURFACE OF THE WALK. OTHERWISE, THE MAXIMUM HEIGHT SHALL BE 48".

2. THE FORCE REQUIRED TO ACTIVATE CONTROL SHALL BE NO GREATER THAN 5 LB.

3. POST SHALL BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

FOR TYPE "A" FOUNDATION SEE DRAWING NO. 715
PEDESTRIAN PUSH BUTTON
FOR 2 1/2" POSTTOP MOUNTING

5/8" X 12" X 3"
HOT-DIP GALVANIZED
BASE
(3/8") PL.

PIPE

4-1/2" DIA. B.C.

PLAN OF BASE

NOTE:
1. PEDESTRIAN PUSH BUTTON SHALL NOT BE LOCATED MORE THAN 24" FROM THE
   BACK OF WALK. IF DISTANCE FROM BACK OF WALK TO PUSH BUTTON IS 20" TO 24",
   THE BUTTON SHALL BE LOCATED AT A MAXIMUM HEIGHT OF 44" FROM THE SURFACE
   OF THE WALK. OTHERWISE, THE MAXIMUM HEIGHT SHALL BE 48".

2. THE FORCE REQUIRED TO ACTIVATE CONTROL SHALL BE NO GREATER THAN 5 LB.

3. POST SHALL BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER
   AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY
   THE ENTITY.

FOR TYPE "A" FOUNDATION SEE DRAWING NO. 715

Provide 5" x 7-3/4" sign this post only.

Additional Pedestrian Push Button, if required.

Include 5/8" x 12" x 3"
HOT-DIP GALVANIZED
ANCHOR BOLTS.

For Type "A" Foundation See Drawing No. 715

Agency Approved

Effective as of 08/08/2019

Uniform Standard Drawings
Clark County Area

Pedestrian Push Button Post for
2 1/2 Inches Posttop Mounting

Date 08-09-18

Spec. Reference

805

Sheet 2 of 2
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGNAL STANDARD
TYPE 1-A, 1-B

---

**TABLE:** POLE TYPE

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<tr>
<th>POLE TYPE</th>
<th>&quot;A&quot; NOM.</th>
<th>SHAFT SIZE</th>
<th>NEAR RIGHTS &amp; ISL. POLES</th>
<th>PED. HEADS &amp; BUTTON ONLY</th>
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<tr>
<td>1-A</td>
<td>10'-0&quot;</td>
<td>11 GA. 5.5&quot; X 4.1&quot; X 10'-0&quot;</td>
<td>NEAR RIGHTS &amp; ISL. POLES</td>
<td>PED. HEADS &amp; BUTTON ONLY</td>
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<td>11 GA. 5.5&quot; X 4.1&quot; X 7'-0&quot;</td>
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**NOTES:**

1. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

2. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.

---

FOR TYPE "C" FOUNDATION SEE DRAWING NO. 717.
8-1/2" DIA. B.C.

1/2" N.C. SQ. NUT
FOR GROUND (OPP. HAND HOLE)

NOTES:

1. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH BY PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

2. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.

FOR TYPE "C" FOUNDATION SEE DRAWING NO. 717.

Agency Approved

Effective as of 08/08/2019
**Notes:**

1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.
4. WHERE SIGNALS AND STANDARDS ARE INSTALLED BELOW OVERHEAD POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRIC SAFETY CODE SECTION 234 REQUIREMENTS. INSTALL STRAIGHT ARM STREETLIGHT ASSEMBLIES WHERE ADDITIONAL CLEARANCE IS REQUIRED.
5. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

Poles designed per specification of A.A.S.H.T.O., 90 MPH winds. (See drawing No. 808 Sheet 5 for loading information)

For "H" type foundation see drawing No. 721

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### LUMINAIRE ARM DATA

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<td>33'-3&quot;</td>
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<td>15</td>
<td>4.95</td>
<td>2.38</td>
<td>11</td>
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**Uniform Standard Drawings**

**Clark County Area**

**Type XX-30 FT. Signal & Luminaire Pole**

(45 FT. OR LESS MAST ARMS)
**Notes:**
1. Contractor must supply shop drawing for design approval.
2. All poles to be hot-dip galvanized by manufacturer or prime painted by manufacturer and finish painted by contractor per specifications and as required by the entity.
3. Handhole covers shall be mounted with tamper-resistant screws.
4. Where signals and standards are installed below overhead power lines, clearances shall be per National Electric Safety Code Section 234 requirements. Install straight arm streetlight assemblies where additional clearance is required.
5. Multi-sided pole and mast arm with a minimum of 16 sides may be used if directed by the entity engineer.

**Effective as of 08/08/2019**
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<td>2.38</td>
<td>11</td>
<td>37'-0&quot;</td>
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1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.
4. WHERE SIGNALS AND STANDARDS ARE INSTALLED BELOW OVERHEAD POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRIC SAFETY CODE SECTION 234 REQUIREMENTS. INSTALL STRAIGHT ARM STREETLIGHT ASSEMBLIES WHERE ADDITIONAL CLEARANCE IS REQUIRED.
5. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

POLES DESIGNED PER SPECIFICATION OF A.A.S.H.T.O., 90 MPH WINDS.
(SEE DRAWING NO. 808 SHEET 5 FOR LOADING INFORMATION)

FOR "L" TYPE FOUNDATION SEE DRAWING NO. 722
1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.
4. WHERE SIGNALS AND STANDARDS ARE INSTALLED BELOW OVERHEAD POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRIC SAFETY CODE SECTION 234 ADDITIONAL CLEARANCE IS REQUIRED.
5. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

NOTES:

BOLTS 3-EA. 3/4" X 1-3/4" A325-X

POLE PLATE
0.75" DIA. HOLE

1/4" THK. GUSSETTS

3/4"

1"

2" DIA. WIRE ENTRY WITH EDGES DEBURRED

LUMINAIRE ARM CONNECTION DETAIL

ARM PLATE
1.75"

0.50" DIA. KEY

BOLTS 4-EA. 1-1/2" X 4-1/2" A325-X

MAST ARM CONNECTION DETAIL

2.25" 6" X 9" I.D.

HANDHOLE AND COVER (SHALL FACE)

1/2" N.C. SQUARE NUT FOR GROUND

BASE COVER

2" SCH. 40 PIPE WIRE ENTRY (EDGES DEBURRED)

5/16" THK. TOP BOTTOM & SIDE GUSSETS.

6" X 9" I.D.

HANDHOLE AND COVER (LOCATED 180° OPPOSITE MAST ARM)

2" SCH. 40 PIPE WIRE ENTRY (EDGES DEBURRED)

3" HOLE IN SHAFT.

POLE MOUNTING DETAIL

AGENCY APPROVED

B

C

H

L

M

N

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE XX - A - 30 FT.
(50 FT. THRU 60 FT. MAST ARMS)
SIGNAL & LUMINAIRE POLE DETAILS

DATE 07-01-17

DWG. NO. 808

SHEET 4 OF 6
NOTE: TYPE XX-A POLE SHALL ALSO SUPPORT THE ALTERNATE LOADING SHOWN ABOVE.

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LOADING INFORMATION

DATE 07-01-17  DWG. NO.  808  SHEET  5 OF 6
NOTE:
EACH CONDUCTOR SHALL HAVE A MINIMUM OF 18 INCHES OF SLACK

#8 GREEN THWN BONDING CONDUCTOR CONNECTED TO POLE GROUND WITH SPLIT BOLT CONNECTOR

CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE. (GROUNDING CONFIGURATION DIFFERS FOR TYPE "L" FOUNDATION. SEE STANDARD DRAWING NO. 722)

BRONZE GROUNDING CONNECTOR (UL LISTED FOR UNDERGROUND USE) FOR NO.4 WIRE

SIGNAL STANDARD

6" X 9" I.D. HANDHOLE AND COVER (SHALL FACE AWAY FROM ONCOMING TRAFFIC)

SPLIT-BOLT CONNECTOR

HEX HEAD NON-CORROSIVE CAP SCREW WITH FLAT WASHER WITH A SINGLE-STRAND BARE NO. 4 AWG COPPER GROUNDING CONDUCTOR

NOTE:
EACH CONDUCTOR SHALL HAVE A MINIMUM OF 18 INCHES OF SLACK

#8 GREEN THWN BONDING CONDUCTOR CONNECTED TO POLE GROUND WITH SPLIT BOLT CONNECTOR

CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE. (GROUNDING CONFIGURATION DIFFERS FOR TYPE "L" FOUNDATION. SEE STANDARD DRAWING NO. 722)

BRONZE GROUNDING CONNECTOR (UL LISTED FOR UNDERGROUND USE) FOR NO.4 WIRE

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CONTINUOUS BARE COPPER GROUNDING WIRE SHALL BE LOOPED AROUND ANCHOR BOLTS ONE TIME AND CONNECTED TO EACH ANCHOR BOLT BEFORE CONTINUING DOWN TO THE GROUNDING PLATE. (GROUNDING CONFIGURATION DIFFERS FOR TYPE "L" FOUNDATION. SEE STANDARD DRAWING NO. 722)
1/4" NON-THREADED WITH LOCK NUT WASHER WITH DOUBLE HEX HEAD NUTS (HOLES FOR NON-THREADED SHALL BE FIELD DRILLED)

REMOVABLE MAST ARM RAIN CAP

REMOVABLE MAST ARM END CAP DETAIL

SPECIFICATION REFERENCE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

623 TRAFFIC SIGNALS & STREET LIGHTING

REMOVABLE MAST ARM END CAP DETAIL

DATE 05-19-05  DWG. NO.  809
**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

CLARK COUNTY AREA

**DATE 07-01-17 DWG. NO. 810 SHEET 1 OF 3**

**TYPE XX - B - 30 FT. SIGNAL & LUMINAIRE POLE**

(65 FT. THRU 85 FT. MAST ARMS)

---

### LUMINAIRE ARM DATA

<table>
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<tr>
<th>ARM SPAN &quot;L&quot; (FT)</th>
<th>FIXED END DIA. (IN)</th>
<th>FREE END DIA. (IN)</th>
<th>GAUGE</th>
<th>LUMINAIRE MOUNTING HEIGHT</th>
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<tr>
<td>6</td>
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<td>2.38</td>
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<td>8</td>
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<td>2.38</td>
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**NOTES:**

1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. HANDHOLE COVERS SHALL BE ATTACHED VIA TWO SCREWS INTO PLATES MOUNTED INSIDE THE HANDHOLE.
4. WHERE SIGNALS AND STANDARDS ARE INSTALLED BELOW OVERHEAD POWER LINES, CLEARANCES SHALL BE PER NATIONAL ELECTRIC SAFETY CODE SECTION 234 REQUIREMENTS. INSTALLATION OF STRAIGHT ARM STREETLIGHT ASSEMBLIES WHERE ADDITIONAL CLEARANCE IS REQUIRED SHALL BE APPROVED BY THE ENGINEER.
5. IF DUAL LUMINAIRE ARMS ARE NOT SPECIFIED IN THE PLANS, THE SECOND CONNECTION POINT SHALL BE COVERED BY A COVER PLATE UNTIL SUCH TIME AS A SECOND ARM MIGHT BE ADDED.

**POLES DESIGNED PER SPECIFICATION OF A.A.S.H.T.O. 90 MPH WINDS. (SEE DRAWING NO. 810 SHEET 3 OF 3 FOR LOADING INFORMATION).**

**FOR "M" TYPE FOUNDATION SEE DRAWING NO. 723**
### Specification Reference

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**DATE 07-01-17 DWG. NO.**

### Loading Information

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<td>(B) Sign</td>
<td>R3-5 24&quot; X 30&quot;</td>
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<td>(C) Sign</td>
<td>R3-4 24&quot; X 24&quot;</td>
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<td>(D) Signal</td>
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<td>(E) Sign</td>
<td>R10-12 OR R10-12F 30&quot; X 36&quot;</td>
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<td>(F) Sign</td>
<td>STREET NAME-FREE SWINGING-1.68' X 8'</td>
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<td>(G) Signal</td>
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<td>(H) Signal</td>
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**Design Criteria:**

- AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. (FATIGUE LOADS SPECIFIED IN CHAPTER 11 NOT REQUIRED.)

- DESIGN MINIMUM YIELD STRENGTH FOR TUBULAR MEMBERS SHALL BE LIMITED TO 48,000 PSI FOR COLD WORKED MATERIALS AND 50,000 PSI FOR NON-COLD WORKED MATERIALS.

- WIND VELOCITY: 90 MPH ISOTACH.

**Note:**

TYPE XX-B POLE SHALL ALSO SUPPORT THE ALTERNATE LOADING SHOWN ABOVE.

**Alternate Loading**

- 65' THRU 85' SPANS ALTERNATE SIGN INSTALLATION

**Alternate Sign Installation**

- MAX. 85' SPAN

**Type XX-B**

- MAX. 85' SPAN

**Design Information**

- 15' MAX.
- 12'
- 8'

**Usage Information**

- 3' 4'

**Agency Approved**

- B C H L M N
NOTES:

1. CONTRACTOR TO INSTALL RED LIGHT RUNNING INDICATORS, McCAIN MODELS M61385 (RED) & M61448 (BLUE), OR APPROVED EQUAL AS INDICATED BY THE TRAFFIC ENGINEER.

2. RED (THRU) INDICATOR SHALL BE MOUNTED 16' ABOVE POLE BASE PLATE AND BLUE (LEFT) INDICATOR SHALL BE MOUNTED 17' ABOVE POLE BASE PLATE AND SHALL FACE AWAY FROM ONCOMING TRAFFIC.

3. RED LIGHT RUNNING INDICATOR L.E.D. HOUSING SHALL BE FIELD ADJUSTED. PLEASE CONTACT THE TRAFFIC ENGINEER FOR COORDINATION.

4. CONTRACTOR SHALL WIRE INDICATORS DIRECTLY TO BUSS IN "J" BOX PER CALL OUT PHASING IN POLE SCHEDULE ON TRAFFIC SIGNAL PLANS.
NOTES:

1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.

2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.

3. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.

4. PHOTOOEYE MAY NEED TO BE AFFIXED TO POLE CAP FOR STREET NAME SIGN ACTIVATION.

5. MULTI-SIDED POLE AND MAST ARM WITH A MINIMUM OF 16 SIDES MAY BE USED IF DIRECTED BY THE ENTITY ENGINEER.

POLES DESIGNED PER SPECIFICATION OF A.A.S.H.T.O., 90 MPH WINDS.
(SEE DRAWING NO. 808 SHEET 5 FOR LOADING INFORMATION)

FOR OTHER DETAILS SEE DRAWING NO. 808 SHTS. 2 & 6.
FOR "H" TYPE FOUNDATION SEE DRAWING NO. 721.
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE XX-A-20 FT.
(50 FT. THRU 60 FT. MAST ARMS)
SIGNAL POLE

NOTES:

1. CONTRACTOR MUST SUPPLY SHOP DRAWING FOR DESIGN APPROVAL.
2. ALL POLES TO BE HOT-DIP GALVANIZED BY MANUFACTURER OR PRIME PAINTED BY MANUFACTURER AND FINISH PAINTED BY CONTRACTOR PER SPECIFICATIONS AND AS REQUIRED BY THE ENTITY.
3. HANDHOLE COVERS SHALL BE MOUNTED WITH TAMPER-RESISTANT SCREWS.
4. PHOTOEYE MAY NEED TO BE AFFIXED TO POLE CAP FOR STREET NAME SIGN ACTIVATION.
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POLES DESIGNED PER SPECIFICATION OF A.A.S.H.T.O., 90 MPH WINDS.
(SEE DRAWING NO. 808 SHEET 5 FOR LOADING INFORMATION)
FOR OTHER DETAILS SEE DRAWING NO. 808 SHEETS 4 & 6.
FOR "L" TYPE FOUNDATION SEE DRAWING NO. 722.
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BASE ADAPTOR PLATE
FOR TYPE "H" FOUNDATION

DATE 12-12-96  DWG. NO. 813  SHEET 1 OF 2
2" HOT-DIP GALV. ANCHOR BOLTS WITH TWO
HOT-DIP GALV. HEX. HD. NUTS & WASHERS
PER BOLT (4 REQD.) FOR FOUNDATION.
SEE DRAWING NO. 722.

4.506" .003" HOLE DIA.

1-3/16" HOLE, 4 REQD.

6-3/4"

3-7/8"

5-3/4"

7-3/4"

1-1/8" R

1/4" X 4" GUSSETS
- 4 REQUIRED

1/4"

9 1/2"

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

BASE ADAPTOR PLATE
FOR TYPE "L" FOUNDATION

DATE 12-12-96 DWG. NO. 813 SHEET 2 OF 2

AGENCY APPROVED
NOTES:

1. COMPLETE BACK BRACE ASSEMBLY SHALL BE HOT-DIP GALVANIZED OR PRIME-PAINTED AS REQUIRED BY THE ENTITY.

2. COMPLETE BRACE ASSEMBLY SIMILAR TO PUMCO PART NO. 769-6, AND SHALL HAVE (4) FOUR BOLTS.

3. BRACE ASSEMBLY TO BE USED ON 30' POLES ONLY. TO BE MOUNTED 20' FROM POLE BASE.

4. WHEN VOLTAGE EXceeds 120V, A STEP-DOWN TRANSFORMER SHALL BE SUPPLIED.

5. STREET NAME SIGN WIRING TO RUN THROUGH TWO (2) SEAL-TITE 90° FITTINGS WITH LIQUID-TIGHT FLEXIBLE CONDUIT. USE A DRIP LOOP SUFFICIENT ENOUGH TO ALLOW SIGN TO SWING FREELY.
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE III POLE WITH ILLUMINATED STREET NAME SIGN

DATE 12-12-96  DWG. NO.  815
1. FOR TYPE XX POLE SPECIFICATIONS SEE DRAWING NO. 808.

2. STREET NAME SIGN WIRING TO RUN THROUGH TWO (2) SEAL-TITE 90° FITTINGS WITH LIQUID-TIGHT FLEXIBLE CONDUIT. USE A DRIP LOOP SUFFICIENT ENOUGH TO ALLOW SIGN TO SWING FREELY.
NOTES:

1. OVERHEAD UTILITY LINES SHALL BE CLEAR OF HIGHEST BACK PLATE
   ON ANY GIVEN SIGNAL ARM AND LOWEST PLATE OF STREET NAME SIGN.
2. ANY UTILITY CABLE BEING INSTALLED WITHIN THE CLEARANCE
   ZONE SHALL NEED PRIOR APPROVAL FROM THE TRAFFIC ENGINEERING
   DIVISION WHO CONTROLS THE RIGHT OF WAY.
3. PARTIES SHALL COORDINATE AND CONCUR ON CABLE AND SIGNAL
   INSTALLATIONS TO AVOID CREATION OF CROSSING CONFLICTS WITHIN
   THIS CLEARANCE ZONE.

Effective as of 08/08/2019

Utility Cable Clearance Over Traffic Signals New Installation Only

Date 2-08-07  Dwg. No. 817
1. SIGN SHALL BE DOUBLE FACED.
2. ALUMINUM EXTRUSION CABINET 12" DEEP - MILL FINISH WITH ALL ALUMINUM INTERNAL STRUCTURE.
3. TOP-HINGED RETAINER SYSTEM WITH PROP ROD FOR ACCESS AND SERVICE.
4. T12 800MA CWHO FLUORESCENT ILLUMINATION INTERNALLY.
5. SIGN PANEL SHALL BE WHITE WIDE-ANGLE PRISMATIC TRANSLUCENT REFLECTIVE SHEETING, EITHER REVERSE-SCREENED WITH MANUFACTURER'S RECOMMENDED GREEN INK AND CLEAR COATING OR OVERLAYED WITH GREEN ELECTRONIC CUTTABLE TRANSPARENT OVERLAY FILM, APPLIED TO A POLYCARBONATE CLEAR SUBSTRATE, 0.177" THICK.
6. LETTERS SHALL BE 8" SERIES E AND UNLESS OTHERWISE SPECIFIED BY THE TRAFFIC ENGINEER, SHALL BE ALL UPPERCASE WITH NO STREET NAME SUFFIX. IF NECESSARY TO MAKE SPACING FIT, REDUCE TO 8" SERIES D. SPACING BETWEEN LETTERS MAY BE INCREASED BY UP TO 25% (MAX) TO ACHIEVE 4" END SPACES.
7. STEEL BRACKETS SHALL BE USED FOR FLAG MOUNT POLE ATTACHMENT.
8. THE USE OF THE POLE MOUNTED STREET NAME SIGN SHALL BE APPROVED BY THE ENTITY ENGINEER.
ALUMINUM ANGLE WELDED TO INSIDE OF EXTRUDED CABINET
3/8" PLATE STEEL
5/16" SET SCREWS INTO POLE
1/2" X 1 1/2" BOLTS
BRACKET FABRICATED FROM 3/8" PLATE STEEL

TRAFFIC POLE

DIAMETER VARIES

3"
2.5"
1" GAP
4.25"
5"
1.75"
2.25" TYP.
7.5"
2" .75"
INSTALLATION INSTRUCTIONS

- **ATTACH BRACKETS ① TO CABINET END AT TOP AND BOTTOM WITH BOLTS PROVIDED LOSSELY TIGHTEN BOLTS (SNUG).**
- **LIFT CABINET WITH BRACKETS TO POLE AT FINISHED HEIGHT USING A NYLON LIFTING SNAP NEAR THE BRACKETS (WHERE BALANCED).**
- **ATTACH BRACKET HALVES ② TOGETHER AROUND POLE WITH PROVIDED HARDWARE AS SHOWN.**
- **MOVE LIFTING STRIP TO CENTER OF CABINET & LEVEL THEN TIGHTEN BOLTS INTO CABINET.**
- **ATTACH SET SCREWS ③ THROUGH BRACKET INTO POLE AS SHOWN.**
- **HOOK UP ELECTRICAL CONNECTION (SEE PAGE 2 FOR AN EXAMPLE).**

WIRING RECOMMENDATIONS

- **LOCATE & DRILL A 3/4" DIA. HOLE A THRU POLE. THREAD HOLE WITH 1/2" PIPE THREAD TAP.**
- **PULL WIRES FROM GROUND THRU TAPPED HOLE GUIDE WIRES TO AVOID SCRAPING INSULATION.**
- **ASSEMBLE LIQUID TIGHT 1/2" CONDUIT B & FITTING C TO CONNECT POLE TO CABINET.**
- **FEED WIRES THRU CONDUIT & INTO CABINET, USE A 2X4 HANDY BOX INSIDE OF CABINET TO FACILITATE WIRE PULLING.**
- **AFTER FEEDING WIRES, THEN THREAD FITTINGS INTO THREADED HOLE IN POLE & CABINET.**
- **WIRE BALLAST INSIDE CABINET AS REQUIRED.**

NOTE: THE STREET NAME SIGN SHALL BE MOUNTED 18" ABOVE THE MAST ARM

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<th>UNIFORM STANDARD DRAWINGS</th>
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<tr>
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<td>ALTERNATIVE POLE MOUNTED STREET</td>
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<tr>
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<td>NAME SIGN INTERNALLY ILLUMINATED</td>
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<td>BRACKET DETAIL</td>
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DATE 11/10/05 | DWG. NO. 818.1 | SHEET 3 OF 3
NOTE:
THE BRACKET AND STRAP ARE OF THE BANDIT TYPE OR EQUIVALENT.
1. SIGN ASSEMBLY SHALL INCLUDE SIGN ENCLOSURE AND TWO SIGN PANELS.
2. TWO (2) ADVANCE BALLAST IOP-2P59-SC, OR AN APPROVED EQUIVALENT BY THE ENGINEER, SHALL BE INSTALLED FOR EACH SIGN ENCLOSURE.
3. SEE SHEETS 2 AND 3 FOR WIRING DIAGRAMS.
4. SEE SHEET 4 FOR SIGN PANEL DETAILS.
5. 1/2" JAM NUT TO SECURE "L" BRACKET.

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SUPPLEMENTAL DRAWING

ILLUMINATED STREET NAME SIGN
- ENCLOSURE

DATE: 01-01-13  DWG. NO.  818.S1  SHEET 1 OF 5
1. SIGN SHALL BE DOUBLE FACED.

2. SIGN PANELS SHALL BE FABRICATED OF CLEAR, IMPACT RESISTANT, ACRYLIC SHEETING WITH ALUMINUM FRAMING.

3. SIGN PANEL SHALL BE COVERED WITH WHITE, WIDE-ANGLE, TRANSLUCENT PRISMATIC TYPE XI REFLECTIVE SIGN FACE SHEETING, AND EITHER REVERSE-SCREENED WITH MANUFACTURER’S RECOMMENDED GREEN INK AND CLEAR COATING OR OVERLAID WITH GREEN ELECTRONIC CUTTABLE TRANSPARENT OVERLAY FILM.

4. SHEETING SHALL BE APPLIED IN A VERTICAL ORIENTATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.

5. SIGN PANEL SHALL BE CAPABLE OF WITHSTANDING WINDS OF 90 MPH OR GREATER WITHOUT DAMAGE OR SEPARATION FROM THE SIGN ENCLOSURE.

6. LETTERS FOR STREET NAMES SHALL BE 12" SERIES D, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, AND SHALL BE UPPER AND LOWERCASE. IF NECESSARY TO MAKE SPACING FIT, 12" SERIES C LETTERS MAY BE USED. LOWER CASE LETTERS SHALL BE 9" IN HEIGHT. LETTERS FOR CARDINAL DIRECTION, STREET NAME SUFFIX, AND BLOCK NUMBER SHALL BE 5" SERIES C, AND SHALL BE IN ALL UPPER CASE.

7. APPROVAL OF SHOP DRAWING OF SIGNFACE LAYOUT BY THE ENGINEER IS REQUIRED PRIOR TO FABRICATION OF SIGN PANELS.
"L" BRACKET

BANDABLE MOUNTING BRACKET
SEE DRAWING NO. 818 FOR STREET NAME SIGN DETAILS

1. N, E, S, OR W REQUIRED ON ALL BLOCK NUMBER SIGNS WITH A SPACE BETWEEN THE LETTER AND THE NUMBERS. (i.e. W 6900)

2. STREET NAME SIGN WIRING TO RUN THROUGH TWO (2) SEAL-TITE 90° FITTINGS WITH LIQUID-TIGHT FLEXIBLE CONDUIT. USE A DRIP LOOP SUFFICIENT ENOUGH TO ALLOW SIGN TO SWING FREELY.

NOTES:

AGENCY APPROVED

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Effective as of 08/08/2019
NOTES:

1. COMPLETE ASSEMBLY SHALL BE HOT-DIP GALVANIZED OR PRIME-PAINTED AS REQUIRED BY THE ENTITY.
2. COMPLETE ASSEMBLY SIMILAR TO PUMCO PART NO. 207-769-6.
3. THIS ASSEMBLY TO BE USED ON EXISTING 30' POLES ONLY.
CLAMP RANGE
3 3/4" TO 4" O.D.

(4) 1/2" - 13 N.C. X 2" HEX HEAD MACH. BOLTS W/(4) 1/2" - 13 N.C. HEX. NUTS (GALVANIZED)

EXISTING ROUND STEEL POLE W/ SIMPLEX ATTACHMENT

2" STD. PIPE (2.375" O.D.)

21' 7/8" R.

EXISTING ARM ATTACHMENT
(ONE BOLT SIMPLEX)
USE FOR WIRING ENTRANCE

BRACKET RATING
MAX. LUMINAIRE AREA  = 2.7 FT \(^2\)
MAX. LUMINAIRE WT. = 57 LBS.

RETOFIT STREETLIGHT MAST ARM

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

RETROFIT STREETLIGHT MAST ARM

AGENCY APPROVED B C H L M N

DATE DWG. NO. 821 SHEET 2 OF 2
### Retrofit Streetlight Mast Arm

**Bracket Rating**
- Max. Luminaire Area: \(2.7 \text{ ft}^2\)
- Max. Luminaire WT: 57 LBS.

**Dimensions**
- 8' Span (NOM.)
- 4' 6" Rise
- 4" Straight

**Clamp Range**
- 3 3/4" to 4" O.D.

**Existing Round Steel Pole** with Simplex Attachment
- 2" Std. Pipe (2.375" O.D.)
- 21' 7/8" R.

**Existing Arm Attachment**
- (One Bolt Simplex)

**Use for Wiring Entrance**

---

**Specification Reference**

**Uniform Standard Drawings**

**Clark County Area**

**Retrofit Streetlight**

**Mast Arm**

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**Agency Approved**

**B C H L M N**

Effective as of 08/08/2019
SPECIAL NOTE:
Pole shall not be drilled for clamshell until after installation of pole.

NOTES:
1. Drilling of pole to be oriented according to pole layout, specifications, and engineering.
2. Dimensions are from curb level.
3. Dimensions are to wire inlet hole only. Use manufacturer's template to locate all other holes.
4. All holes are to conform to manufacturer's recommendations.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

POLE DRILLING DETAILS

DATE DWG. NO. 823
SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ISLAND SIGNAL POLE
DETAILS FOR 10 FT. POLE

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**NOTE:**

For pole location on right turn island see drawing no. 887.
### Specification Reference

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<td>SAWCUT DETAILS FOR INDUCTION LOOPS</td>
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### Diagram Details

- **Direction of Travel**
- **Overlap All Cuts to Maintain Full Slot Depth for Wires**
- **Detector Sealant (Flush W/ Surface)**
- **3/8" x 2" Min.**

### Table

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4" HOLE, FILL WITH SAND TO WITHIN 1 INCH OF TOP. TOP 1 INCH TO BE FILLED WITH EPOXY.

NOTE:
PATCH SLOT AND HOLE WITH EPOXY, REMOVE OVERFLOW BEFORE IT HARDENS.
NOTE:
1. 4 TURNS OF WIRE SHOWN. ALWAYS INSTALL 4 TURNS OF CABLE IN DUCT UNLESS OTHERWISE SPECIFIED ON THE PLANS. WINDING DIRECTION SHALL BE INDICATED ON WIRE.

SEE DRAWING NO. 827 FOR METHOD OF INSTALLING PULL BOX.

SECTION A-A

DEPTH TO ALLOW 3/4" FROM TOP WIRE TO SURFACE

SECTION B-B

DEPTH TO ALLOW 3/4" FROM TOP WIRE TO SURFACE

SAWCUT DIAGRAM

SEE DRAWING NO. 826 FOR SAWCUT DETAILS.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

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<td>ONE INDUCTION LOOP FOR ONE TRAVEL LANE</td>
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DATE  DWG. NO.  828
NOTE:
2 turns of wire shown. Always install 2 turns of cable in duct unless otherwise specified on plans. Winding direction shall be indicated on wire.

WIRING DIAGRAM

SAWCUT DIAGRAM

See drawing no. 826 for sawcut details.

One induction loop for two travel lanes
2 turns of wire shown. Always install 2 turns of cable in duct unless otherwise specified on plans. Winding direction shall be indicated on wire.
NOTE:
2 TURNS OF WIRE SHOWN. ALWAYS INSTALL 2 TURNS OF CABLE IN DUCT UNLESS OTHERWISE SPECIFIED ON PLANS. WINDING DIRECTION SHALL BE INDICATED ON WIRE.

SEE DRAWING NO. 827 FOR METHOD OF INSTALLING PULL BOX.

SEE PLANS

DIRECTION OF TRAVEL

WIRING DIAGRAM

DEPTH TO ALLOW 3/4" FROM TOP WIRE TO SURFACE.

3/8"

SAWCUT DIAGRAM

SEE DRAWING NO. 826 FOR SAWCUT DETAILS.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

Effective as of 08/08/2019

AGENCY APPROVED
B C H L M N

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ONE INDUCTION LOOP
FOR THREE TRAVEL LANES

DATE DWG. NO. 830 SHEET 1 OF 2
2 turns of wire shown. Always install 2 turns of cable in duct unless otherwise specified on plans. Winding direction shall be indicated on wire.

See drawing no. 826 for sawcut details.

See plans for method of installing pull box.

Depth to allow 3/4" from top wire to surface.

Winding direction shall be indicated on wire.

See plans for method of installing pull box.

Depth to allow 3/4" from top wire to surface.

Direction of travel.

Wiring diagram.

Sawcut diagram.

Note:

Professional electrical engineer stamp on file.

Effective as of 08/08/2019.
NOTE:
2 TURNS OF WIRE SHOWN. ALWAYS INSTALL 2 TURNS OF CABLE IN DUCT UNLESS OTHERWISE SPECIFIED ON PLANS. WINDING DIRECTION SHALL BE INDICATED ON WIRE.

SEE DRAWING NO. 827 FOR METHOD OF INSTALLING PULL BOX.

DEPTH TO ALLOW 3/4" FROM TOP WIRE TO SURFACE.

WINDING DIRECTION

DIRECTION OF TRAVEL

WIRING DIAGRAM

SEE PLANS 48" MAX

SAWCUT DIAGRAM

SEE DRAWING NO. 826 FOR SAWCUT DETAILS.

SAWCUT DIAGRAM

SEE DRAWING NO. 826 FOR SAWCUT DETAILS.
**NOTE:**

2 turns of wire shown. Always install 2 turns of cable in duct unless otherwise specified on plans. Winding direction shall be indicated on wire.

**WINDING DIRECTION**

Dirction of Travel

**SAWCUT DIAGRAM**

See Drawing No. 826 for sawcut details.

**DIRECTION OF TRAVEL**

**WIRING DIAGRAM**

Depth to allow 3/4" from top wire to surface

**DEPTH TO ALLOW 3/4" FROM TOP WIRE TO SURFACE**

6'

**SAWCUT DIAGRAM**

See Drawing No. 827 for method of installing pull box

3/8"

**See Plans**

3/8"
NOTES:
1. 4 TURNS OF WIRE SHOWN. ALWAYS INSTALL 4 TURNS OF CABLE IN DUCT UNLESS OTHERWISE SPECIFIED ON THE PLANS. WINDING DIRECTION SHALL BE INDICATED ON WIRE.
2. TRAFFIC ENGINEER SHALL ESTABLISH LATERAL Locations ON ROADS WITHOUT MARKED LANES.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

THREE INDUCTION LOOPS
FOR THREE TRAVEL LANES

DATE

DWG. NO.
832
1. FRONT OF THE LOOP MUST EXTEND INTO THE CROSSWALK 2’ TO 4’.
2. INSULATION TEST FOR EACH LOOP TO GROUND MUST NOT READ LESS THAN 50 MEG OHMS TO INFINITY. (USING MEGGER)
3. USE COLOR CODED 4 TURN CABLE IN DUCT AS SHOWN.
4. SEE DRAWING NO. 836 FOR WIRING CONNECTIONS.

SEE DRAWING NO. 836 FOR WIRE CONNECTIONS.
SEE DRAWING NO. 826 FOR SAWCUT DETAILS.
1. Front of the loop must extend in the crosswalk 2' to 4'.
2. Insulation test for each loop to ground must not read less than 50 Meg Ohms to infinity. (Using Megger)
3. Use color coded 4 turn cable in duct as shown.

See Drawing No. 827 for method of installing pull box.
All wires into pull box must be tagged and winding direction shall be marked.

See Drawing No. 836 for wire connections.
See Drawing No. 826 for sawcut details.

Wiring Diagram

Notes
WHENEVER MORE THAN ONE LOOP TERMINATES IN A PULL BOX, ALL LEADS MUST BE TAGGED AND IDENTIFIED.

NOTES:
1. FOR ALL LOOPS, TWO TURNS ARE REQUIRED.
2. FRONT OF LOOP MUST EXTEND IN THE CROSSWALK 2' TO 4'.
WIRE DIAGRAMS FOR MULTIPLE LOOP SYSTEMS FOR LEFT TURN POCKET AND THRU LANE
NOTES:

1. INSULATION FOR EACH LOOP MUST NOT READ LESS THAN 50 MEG OHMS TO INFINITY. (USING MEGGER)
2. USE COLOR CODED 4 TURN CABLE IN DUCT AS SHOWN.
3. FRONT OF LOOP MUST EXTEND IN THE CROSSWALK 2’ TO 4’.

SAWCUT DIAGRAM

DIRECTION OF TRAVEL

2" MIN. SLOT DEPTH

OR AS SPECIFIED IN PLANS

WIRING DIAGRAM

SEE DRAWING NO.
827 FOR METHOD OF INSTALLING PULL BOX
ALL WIRES TO PULL BOX MUST BE TAGGED
AND WINDING DIRECTION SHALL BE MARKED.

RED

BLUE

YELLOW

WHITE

1

1A

2

2A

3

3A

4

4A

AGENCY APPROVED

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SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

CIRCULAR INDUCTION LOOPS
FOR TRAVEL LANES

DATE

DWG. NO.
837
1. At locations where "Walk" "Don't Walk" signals are provided, provide black lettering on a white background on porcelain signs.
2. At locations where "Symbolic" signals are provided, provide white figures on a black background.
3. Mounting surface for the signs shall be 9" x 12".

NOTES:
1. Cast aluminum housing.
2. Paint color shall match signal housing.

FOR FLAT SURFACE MOUNTING
FOR SIGNAL STANDARD MOUNTING
FOR 2-1/2" IPS MOUNTING

AGENCY APPROVED

SPECIFICATION REFERENCE
UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PEDESTRIAN PUSH BUTTON DETECTORS

DATE 08-09-18  DWG. NO.  838
1. All traffic signal backplates shall have a 2-inch retroreflective adhesive sheeting border on the entire outer perimeter of the front side of the backplate.
2. Retroreflective sheeting shall be fluorescent yellow, ASTM D4956-13 Type XI or better.
3. The retroreflective sheeting border shall have a minimum of 0.5" clearance from all louvers. No retroreflective sheeting shall be placed over any louvered area.
4. Retroreflective sheeting border shall be installed by the manufacturer, and modifications shall not be made by the contractor.
5. The back plate with retroreflective sheeting border shall be from the same manufacturer as the signal head assembly. The complete head assembly, including the backplate, shall be capable of withstanding winds of 90 MPH without damage or separation of any parts from the signal head assembly.

Effective as of 08/08/2019

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LOUVERED BACKPLATE FOR MAST ARM MOUNTED SIGNAL

DATE 07-01-17  DWG. NO.  840
1. All traffic signal backplates shall have a 2-inch retroreflective adhesive sheeting border on the entire outer perimeter of the front side of the backplate.
2. Retroreflective sheeting shall be fluorescent yellow, ASTM D4956-13 Type XI or better.
3. The retroreflective sheeting border shall have a minimum of 0.5" clearance from all louvers. No retroreflective sheeting shall be placed over any louvered area.
4. Retroreflective sheeting border shall be installed by the manufacturer, and modifications shall not be made by the contractor.
5. The back plate with retroreflective sheeting border shall be from the same manufacturer as the signal head assembly. The complete head assembly, including the backplate, shall be capable of withstanding winds of 90 MPH without damage or separation of any parts from the signal head assembly.
NOTES:

1. ALL TRAFFIC SIGNAL BACKPLATES SHALL HAVE A 2-INCH RETROREFLECTIVE ADHESIVE SHEETING BORDER ON THE ENTIRE OUTER PERIMETER OF THE FRONT SIDE OF THE BACKPLATE.
2. RETROREFLECTIVE SHEETING SHALL BE FLUORESCENT YELLOW, ASTM D4956-13 TYPE XI OR BETTER.
3. THE RETROREFLECTIVE SHEETING BORDER SHALL HAVE A MINIMUM OF 0.5" CLEARANCE FROM ALL LOUVERS. NO RETROREFLECTIVE SHEETING SHALL BE PLACED OVER ANY LOUVERED AREA.
4. RETROREFLECTIVE SHEETING BORDER SHALL BE INSTALLED BY THE MANUFACTURER, AND MODIFICATIONS SHALL NOT BE MADE BY THE CONTRACTOR.
5. THE BACK PLATE WITH RETROREFLECTIVE SHEETING BORDER SHALL BE FROM THE SAME MANUFACTURER AS THE SIGNAL HEAD ASSEMBLY. THE COMPLETE HEAD ASSEMBLY, INCLUDING THE BACKPLATE, SHALL BE CAPABLE OF WITHSTANDING WINDS OF 90 MPH WITHOUT DAMAGE OR SEPARATION OF ANY PARTS FROM THE SIGNAL HEAD ASSEMBLY.
Paint: Flat Black

Shown 5 section, 12" signal head backplate with elevator plumbizer

Refer to drawing no. 863
1. ALL SIGNALS ARE 12" NOMINAL.
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.
3. FOR ARROW LENS SEE DRAWING NO. 890.
1. ALL SIGNALS ARE 12" NOMINAL.
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.
3. FOR ARROW LENS SEE DRAWING NO. 890.
1. All signals are 12" nominal.
2. For itemized parts, see drawing no. 845.2.
3. For arrow lens see drawing no. 890.

NOTES:

1. All signals are 12" nominal.
2. For itemized parts, see drawing no. 845.
3. For arrow lens see drawing no. 890.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGNAL ASSEMBLIES
BRACKET MOUNT

AGENCY APPROVED  B  C  H  L  M  N

DATE  07-01-14  DWG. NO.  844  SHEET  1 OF 2
1. ALL SIGNALS ARE 12" NOMINAL.
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.
3. FOR ARROW LENS SEE DRAWING NO. 890.

NOTE:

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SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGNAL ASSEMBLIES
BRACKET MOUNT

DATE 07-01-14  DWG. NO. 844  SHEET 2 OF 2
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<td>2.</td>
<td>ELEVATOR PLUMBIZER</td>
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<td>POLE PLATE WITH WIRE GUIDE</td>
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<td>SPECIAL TEE</td>
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<tr>
<td>9.</td>
<td>MALLEABLE ELBOW-REAMED/SET SCREW</td>
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<tr>
<td>10.</td>
<td>MALLEABLE ELBOW/SIDE OUTLET/REAMED/SET SCREW</td>
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<td>MALLEABLE TEE, REAMED/SET SCREW</td>
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<td>MALLEABLE TEE/SIDE OUTLET, REAMED/SET SCREW</td>
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<td>4-WAY CENTER HUB</td>
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<td>POST TOP MOUNTED BRACKET</td>
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<td>SIDE BRACKET MOUNTED ADAPTER WITH TERMINAL COMPT.</td>
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<td>18.</td>
<td>POST TOP MOUNTED ADAPTER WITH TERMINAL COMPT.</td>
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<td>ORNAMENTAL CAP</td>
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<td>POST TOP MOUNTED ADAPTER WITH 3 PORTS</td>
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<td>POLE PLATE</td>
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<td>24.</td>
<td>1-1/2&quot; MENERALLAC STRAP OR APPROVED EQUAL</td>
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**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**BILL OF MATERIALS**

**SIGNAL ASSEMBLIES**

**DATE:** 10-9-08  **DWG. NO:** 845
1. ALL SIGNALS ARE 12" NOMINAL (GLASS).
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.
1. ALL SIGNALS ARE 12" NOMINAL (GLASS).
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.

NOTES:

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SIGNAL ASSEMBLIES
A-4T, A-5T

DATE  DWG. NO.  847
NOTES:

1. ON LOWER ASSEMBLY, ALL INDICATIONS ARE 12" NOMINAL (GLASS).
2. SEE DRAWING NO. 890 FOR ARROW LENS.
3. ON TOP ASSEMBLY, USE M-3 WITH BACKPLATE.
4. SEE STANDARD SPECIFICATIONS FOR PROGRAMMED VISIBILITY HEAD.
5. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.
6. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.
**NOTES:**

1. PROVIDE BACKPLATE ON A-8T.
2. ALL INDICATIONS ARE 12" NOMINAL (GLASS).
3. SEE DRAWING NO. 890 OR ARROW LENS.
4. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.
5. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.

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**SPECIFICATION REFERENCE**

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**DATE** 2-11-93  **DWG. NO.** 849
NOTES:
1. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.
2. SEE STANDARD SPECIFICATIONS FOR PROGRAMMED VISIBILITY HEAD.
3. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.
NOTES:
1. FOR ITEMIZED PARTS SEE DRAWING NO. 845.
2. FOR ARROW LENS SEE DRAWING NO. 890.
3. PROVIDE BACKPLATE ON A-13T ONLY.
4. ALL SIGNALS ARE 12" NOMINAL (GLASS).
1. All signals are 12" nominal (glass).
2. For itemized parts, see drawing no. 845.
3. For arrow lens see drawing no. 890.
4. See plans for backplate requirements.
NOTES:

1. ALL SIGNALS ARE 12" NOMINAL (GLASS).
2. FOR ITEMIZED PARTS SEE DRAWING NO. 845.
3. FOR ARROW LENS SEE DRAWING NO. 890.
4. SEE PLANS FOR BACKPLATE REQUIREMENTS.
5. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATIONS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.
NOTES:

1. FOR ITEMIZED PARTS SEE DRAWING NO. 845.
2. FOR ARROW LENS SEE DRAWING NO. 890.
3. SEE PLANS FOR BACKPLATE REQUIREMENTS.
4. ALL SIGNALS ARE 12" NOMINAL (GLASS).
**NOTES:**

1. ALL SIGNALS ARE 12" NOMINAL (GLASS)
2. FOR ITEMIZED PARTS, SEE DRAWING 845.

---

**PROGRAMMED VISIBILITY HEADS**

**M-3A**

- RED
- YELLOW
- GREEN
- GREEN ARROW

**STANDARD 12" SIGNAL HEADS**

**M-2A**

- RED
- YELLOW
- GREEN
- GREEN ARROW

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**MAST ARM SIGNAL ASSEMBLIES**

M-2A, M-3A

---

**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**MAST ARM SIGNAL ASSEMBLIES**

M-2A, M-3A

---

**DATE**

**DWG. NO.**

855
1. See standard specifications for programmed visibility head.
2. All M-2 indications are 12" nominal (glass).
3. See drawing No. 845 for itemized parts.
4. See signal plans for ball or arrow indications.
NOTES:
1. ALL SIGNALS ARE 12" NOMINAL.
2. FOR ITEMIZED PARTS, SEE DRAWING 845.
NOTES:

1. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.
2. SEE DRAWING NO. 890 FOR ARROW LENS.
3. ALL INDICATIONS ARE 12" NOMINAL. SEE SUB-SECTION 623 T.02.08 FOR SPECIFICATIONS.
4. SEE SIGNAL PLANS FOR BACKPLATE REQUIREMENTS.
5. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.
6. ALL BOTTOM NIPPLES ARE 18" AND TOP NIPPLES ARE 18 1/2".

AGENCY APPROVED

SIGNAL ASSEMBLIES
B-1T, B-2T, B-3T

DATE: 10-9-08  DWG. NO. 858
NOTES:

1. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.
2. SEE DRAWING NO. 890 FOR ARROW LENS.
3. ALL INDICATIONS ARE 12" NOMINAL (GLASS).
4. SEE SIGNAL PLANS FOR BACKPLATE REQUIREMENTS.
5. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.
6. ALL BOTTOM NIPPLES ARE 18" AND TOP NIPPLES ARE 18 1/2".
NOTES:
1. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.
2. FOR ARROW LENS SEE DRAWING NO. 890.
3. ALL SIGNALS ARE 12" NOMINAL (GLASS) UNLESS NOTED.
NOTES:

1. SEE DRAWING NO. 845 FOR ITEMIZED PARTS.

2. SEE STANDARD SPECIFICATIONS FOR PROGRAMMED VISIBILITY HEADS.

3. SEE SIGNAL PLANS FOR BACKPLATE REQUIREMENTS.

4. SEE SIGNAL PLANS FOR R OR RED ARROW INDICATION.

5. ALL BOTTOM NIPPLES ARE 18" AND TOP NIPPLES ARE 18 1/2".

---

**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS CLARK COUNTY AREA**

**SIGNAL ASSEMBLIES**

B-12T, B-13T

**DATE** 2-11-93 **DWG. NO.** 862
NOTES:

1. FOR ITEMIZED PARTS SEE DRAWING NO. 845.
2. FOR ARROW LENS SEE DRAWING NO. 890.
3. SEE PLANS FOR BACKPLATE REQUIREMENTS.
4. ALL SIGNALS ARE 12" NOMINAL. SEE SUB-SECTION 623 T.02.08 FOR SPECIFICATIONS.
5. OPTIONAL 3° CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATIONS ON 5-SECTION HEADS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.
NOTES

1. ALL SIGNALS ARE 12" NOMINAL (GLASS).
2. FOR ITEMIZED PARTS SEE DRAWING 845.
3. FOR ARROW LENS SEE DRAWING 890.
4. SEE PLANS FOR BACKPLATE REQUIREMENTS.
5. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW
   AND GREEN BALL INDICATIONS ON 5-SECTION
   HEADS MAY BE PROVIDED AS DIRECTED
   BY THE TRAFFIC ENGINEER.
LEFT TURN
YIELD
ON GREEN

NOTES:
1. ALL BACKPLATES SHALL BE LOUVERED.
2. ALL LENSES SHALL BE GLASS.
3. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATIONS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.

POST MOUNTING

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

PROTECTED / PERMISSIVE
M-5 SIGNAL HEADS

DATE 5-12-94  DWG. NO. 865  SHEET 1 OF 4
NOTES:

1. ALL BACKPLATES SHALL BE LOUVERED.
2. ALL LENSES SHALL BE GLASS.
3. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATIONS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.

MAST ARM MOUNTING

AGENCY APPROVED

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DATE 5-12-94  DWG. NO. 865  SHEET 2 OF 4
BACKPLATE TO MATCH
ORDER PART NO. E 2074
NOTES: UNLESS OTHERWISE SPECIFIED

AGENCY APPROVED

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPE M-5 ASSEMBLIES
AND PARTS LIST

DATE  DWG. NO.  SHEET
865  3 OF 4
FW 2933 AND SIGNAL ASSEMBLY

FRAMEWORK -- CLUSTER MOUNTING
1 WAY, 5 COL., 12" ALUMINUM SIGNAL
WITH ELEVATOR PLUMBIZER

<table>
<thead>
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<td>3</td>
<td>E2051P1</td>
<td>BOTTOM BRACKET</td>
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<td>4</td>
<td>E1270P1</td>
<td>ADAPTOR RING</td>
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NOTES:

1. FOR GENERAL SPECIFICATIONS SEE TRAFFIC SIGNAL PLANS.
2. FOR ITEMIZED PARTS, SEE DRAWING NO. 845.2.
3. THE HAND SYMBOL (DON'T WALK) IS PORTLAND ORANGE AND HUMAN SYMBOL (WALK) IS LUNAR WHITE.
NOTE: TAMPER-PROOF SCREWS TO BE USED.
NOTES:

1. ALL BACKPLATES SHALL BE LOUVERED.
2. ALL LENSES SHALL BE GLASS.
3. OPTIONAL 3" CUTOFF LOUVERS ON RED, YELLOW AND GREEN BALL INDICATIONS MAY BE PROVIDED AS DIRECTED BY THE TRAFFIC ENGINEER.
**VISORS** (FOR 8" HEADS)

Paint: Flat Black on inside. Outside paint color shall match signal housing.

---

**STANDARD FULL CIRCLE VISOR**

Dimensions:
- 8" Nom. inside
- 5" height

**STANDARD ANGLE VISOR**

Dimensions:
- 8" Nom. inside
- 5" height

**LEFT ANGLE-SHOWN**

Dimensions:
- 18" Nominal

**RIGHT ANGLE-REVERSE**

Dimensions:
- 8" Nom. inside
- 5" height

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**SPECIFICATION REFERENCE**

**UNIFORM STANDARD DRAWINGS**

**CLARK COUNTY AREA**

**VISORS**

**FOR 8 INCH SIGNALS**

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<th>DATE</th>
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STANDARD FULL CIRCLE VISOR

STANDARD ANGLE VISOR

DIRECTIONAL LOUVERS
PAINT: FLAT BLACK

VISORS (FOR 12" HEADS)
PAINT: FLAT BLACK ON INSIDE, OUTSIDE PAINT COLOR SHALL MATCH SIGNAL HOUSING.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LOUVERS AND VISORS FOR 12 INCH SIGNALS

AGENCY APPROVED B C H L M N

Effective as of 08/08/2019
NOTE:
ALL BOLTS, NUTS AND WASHERS SHALL BE BRASS OR STAINLESS STEEL.

ALL BOLTS, NUTS AND WASHERS SHALL BE BRASS OR STAINLESS STEEL.

Effective as of 08/08/2019
MISCELLANEOUS SIGNAL MOUNTING HARDWARE

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

LOCKING RING - 1/2 PIN
MATERIAL: BRONZE

1/4"

1/8"

72 TEETH - 1/2"
HIGH ALL AROUND

TIE BRACE, FERROUS, 2 WAY
PAINT COLOR SHALL MATCH SIGNAL HOUSING

TIE BRACE, FERROUS, 3 WAY
PAINT COLOR SHALL MATCH SIGNAL HOUSING

TIE BRACE, FERROUS, 4 WAY
PAINT COLOR SHALL MATCH SIGNAL HOUSING

ORNAMENTAL CAP
DIE CAST ALUMINUM
PAINT COLOR SHALL MATCH SIGNAL HOUSING

LOCKING NIPPLE

Effective as of 08/08/2019
**Ferrous Special Tee**
Paint color shall match signal housing

**Ferrous Special Elbow**
Paint color shall match signal housing

**Post Top Mounted Bracket with Serrated Offset Mount.**
(Use for all post top mountings not requiring side ports)

Material: Bronze
Paint color shall match signal housing

---

**Agency Approved**

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**Uniform Standard Drawings**

**Clark County Area**

**Miscellaneous Signal Mounting Hardware**

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**Date**

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<th>DWG. NO.</th>
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NOTES:
1. MATERIAL-BRONZE
2. PAINT COLOR SHALL MATCH SIGNAL HOUSING
3. PROVIDE WASHERS SHOWN AND 1/2" PLATED BOLTS, LENGTH FOR STEEL POLE MOUNTING.

NOTES:
DO NOT PROVIDE UNLESS SPECIFIED ON THE PLANS.

AGENCY APPROVED

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<tr>
<td>SPECIFICATION REFERENCE</td>
<td>UNIFORM STANDARD DRAWINGS</td>
<td>CLARK COUNTY AREA</td>
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<tr>
<td>POLE PLATE DETAILS</td>
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</table>
NOTES:
1. MATERIAL - BRONZE
2. PAINT COLOR SHALL MATCH SIGNAL HOUSING

ELEVATOR PLUMBIZER

CADMIUM PLATED STEEL
3-3/8" X 3/4" SQ. HD.
SET SCREWS

SLOTTED HOLE FOR 3/8" THRU BOLT BOTH SIDES

2" DIA.
NOTES:

1. MATERIAL-BRONZE

2. PAINT COLOR SHALL MATCH SIGNAL HOUSING.

3. PROVIDE WASHERS SHOWN AND 1/2" PLATED BOLTS, LENGTH FOR STEEL POLE MOUNTING.

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

POLE PLATE
WITH WIRE GUIDE DETAILS

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LIST OF MATERIALS

<table>
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<tr>
<th>ITEM</th>
<th>QU.</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1.</td>
<td>2</td>
<td>1/4&quot; - 20 UNC-2A X 3/8&quot; SOCKET, CUP SET SCREW</td>
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<tr>
<td>2.</td>
<td>1</td>
<td>CORK GASKET TO MATCH COVER</td>
</tr>
<tr>
<td>3.</td>
<td>1</td>
<td>3/32&quot; STEEL COVER WITH 2 BOLT HOLES OPPOSITE</td>
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<tr>
<td>4.</td>
<td>2</td>
<td>STANDARD LOCK WASHER</td>
</tr>
<tr>
<td>5.</td>
<td>5</td>
<td>3/8&quot; - 16 UNC-2A X 1&quot; BRASS HEX. HD CAP SCREW 2 REQ.</td>
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</table>

NOTES:

1. PAINT COLOR AND FINISHING SHALL MATCH SIGNAL HOUSING
2. MATERIAL: HIGH STRENGTH CAST ALUMINUM ALLOY

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

4 WAY CENTER HUB

Effective as of 08/08/2019
NOTES:
1. REAM FOR 1-1/2" IPS. PROVIDE SET SCREW.
2. ALL OTHER OPENINGS SHALL BE THREADED.
3. PAINT COLOR SHALL MATCH SIGNAL HOUSING.

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<tr>
<td></td>
<td>STANDARD MALLEABLE PIPE HARDWARE- 1-1/2 INCH IPS</td>
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</table>
NOTES:

1. MATERIAL - ALUMINUM
2. PAINT COLOR SHALL MATCH SIGNAL HOUSING
3. PROVIDE 12 POSITION PRESSURE TYPE TERMINAL BLOCK MOUNTED INSIDE COMPARTMENT

- SPECIFICATION REFERENCE
  - POST TOP MOUNTED ADAPTER WITH TERMINAL COMPARTMENT

- AGENCY APPROVED
  - B
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  - L
  - M
  - N

- DATE
  - .

- DWG. NO.
  - 879
1. MATERIAL - ALUMINUM
2. PAINT COLOR SHALL MATCH SIGNAL HOUSING
3. PROVIDE 12 POSITION PRESSURE TYPE TERMINAL BLOCK MOUNTED INSIDE COMPARTMENT

NOTES:

For cover, see drawing no. 879.
### NOTES

1. The devices will be constructed or cast in accordance with special patented devices, materials, and processes.

2. Signal head mount and flange adapter will be of high strength cast aluminum.

3. Signal head mount shall be fastened to flange adapter by means of four common structural steel bolts per spec. Each with two flat washers, lock washer and nut.

4. All bolts, nuts, and washers required shall be as regularly supplied by the manufacturer.

5. One-way mount shall be used when plans or special provisions call for one-way signal mounted on signal mast arm.

6. Two-way mount shall be used when plans or special provisions call for two-way signal mounted on signal mast arm.

7. Two signal indications shall be mounted below the mount and all remaining signal indications mounted above.

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### AGENCY APPROVED

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### ONE WAY MOUNT

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SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ONE WAY MOUNT FOR 3M SIGNALS

NOTES:
1. THE DEVICES WILL BE CONSTRUCTED OR CAST IN ACCORDANCE WITH SPECIAL PATENTED DEVICES, MATERIALS, AND PROCESSES.
2. SIGNAL HEAD MOUNT AND FLANGE ADAPTER WILL BE OF HIGH STRENGTH CAST ALUMINUM.
3. SIGNAL HEAD MOUNT SHALL BE FASTENED TO FLANGE ADAPTER BY MEANS OF FOUR COMMON STRUCTURAL STEEL BOLTS WITH LOCK WASHERS AND NUTS.
4. ALL BOLTS, NUTS, AND WASHERS REQUIRED SHALL BE AS REGULARLY SUPPLIED BY THE MANUFACTURER.
5. ONE-WAY MOUNT SHALL BE USED WHEN PLANS OR SPECIAL PROVISIONS CALL FOR ONE-WAY SIGNAL MOUNTED ON SIGNAL MAST ARM.
6. TWO-WAY MOUNT SHALL BE USED WHEN PLANS OR SPECIAL PROVISIONS CALL FOR TWO-WAY SIGNAL MOUNTED ON SIGNAL MAST ARM.
7. TWO SIGNAL INDICATIONS SHALL BE MOUNTED BELOW THE MOUNT AND ALL REMAINING SIGNAL INDICATIONS MOUNTED ABOVE.

AGENCY APPROVED

B C H L M N

SPECIFICATION REFERENCE

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

ONE WAY MOUNT FOR 3M SIGNALS

DATE  DWG. NO.  882

Effective as of 08/08/2019
### One Way Mount Detail

**Flange Detail**
- 2" Clamp Type Adapter

**FLANGE DETAIL**
- 2-3/4" DIAMETER HOLE
- 5/16" DIAMETER HOLE
- 1/4" MINIMUM GROOVE BOTH SIDES
- 3/32" x 3/32" "O" RING
- SEE DETAIL "A"

**Assembly Detail**
- Flat Washer (Four)
- Flat Washer (Four)
- Nut (Four)
- Flange Welded To Mast Arm
- Flange Adaptor MAST ARM OR FLANGE WELDED TO

### Specification Reference

**Agency Approved**

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**Uniform Standard Drawings**

**Clark County Area**

**One Way Mount**

**Detail**

**Date**

**Drawing No.** 883

*Effective as of 08/08/2019*
NOTE:

1. ALTERNATE LOCATIONS FOR THE POLES MAY BE APPROVED BY THE AGENCY’S TRAFFIC ENGINEER.
NOTE:

1. ALTERNATE LOCATIONS FOR THE SIGNAL POLE MAY BE APPROVED BY THE AGENCY'S TRAFFIC ENGINEER.
1. ALTERNATE LOCATIONS FOR THE POLES MAY BE APPROVED BY THE AGENCY'S TRAFFIC ENGINEER.
MOUNT SIGNAL ASSEMBLIES ON SIDE OF POLE OPPOSITE OF CURB LINE AS SHOWN. SEE DRAWING NO. 823 FOR DRILLING DETAILS.

PED. PUSH BUTTONS. SEE DRAWING NO. 808 FOR DRILLING DETAILS.

UTILITY (ABOVE GROUND) CORRIDOR

3' MIN. OFFSET FROM CENTER OF RETURN

NOTE:
1. ALTERNATE LOCATIONS FOR THE SIGNAL POLE MAY BE APPROVED BY THE AGENCY'S TRAFFIC ENGINEER.
MOUNT SIGNAL ASSEMBLIES ON SIDE OF POLE, 180° OPPOSITE OF CURB LINE AS SHOWN. SEE DWG. 823 FOR DRILLING DETAILS.

NOTE:
SIDEWALK RAMPS IN ACCORDANCE WITH DRAWING NO. 235 SHALL BE CONSTRUCTED. HANDICAPPED ACCESS MUST BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).

PEC. PUSH BUTTONS. SEE DWG NO. 808 FOR DRILLING DETAILS.

4' MIN (TYP.)

MOUNTING ON RIGHT TURN ISLANDS

POLE LOCATION AND SIGNALS MOUNTING ON RIGHT TURN ISLANDS

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

DATE 12-12-96  DWG. NO. 887
1. THE AREA SHALL REMAIN ACCESSIBLE FOR THESE FOUNDATIONS.

2. TRAFFIC SIGNAL POLES SHALL REMAIN AT THE MIDDLE OF THE RETURN BEHIND THE SIDEWALK SO THAT THE OUTSIDE SIGNAL HEAD IS DIRECTLY ABOVE THE LEFT TURN LANE.

3. A TYPE "H" OR "L" FOUNDATION IS REQUIRED FOR MAST ARMS 45' OR LESS. SEE DRAWING NO. 721.

4. A TYPE "L" FOUNDATION IS REQUIRED FOR MAST ARMS LONGER THAN 45'. SEE DRAWING NO. 722.

5. A MINIMUM OF 48" SHALL BE MAINTAINED BETWEEN TRAFFIC SIGNAL POLE FOUNDATION "CRASH CAP" AND THE BACK OF THE CURB FOR WHEELCHAIR CLEARANCE.

6. THE TRAFFIC ENGINEER WILL MAKE THE FINAL DETERMINATION FOR THE LOCATION OF TRAFFIC SIGNAL POLES.

Notes:

- Type XX or XX-A pole
- Typical location for all roadways other than 100' row
- Greater than or equal to 50 ft.
- Typical location for all 100' section line arterials
- Case II
- See Note 2, 3 & 4

Effective as of 08/08/2019
NOTE:
1. SEE PLANS FOR FOUNDATION TYPE.
NOTES:

1. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED PER ASTM A 123.

2. ELECTRIC UTILITY TO SHOW FEEDER TO SERVICE PEDESTAL.

3. FOR POLE, POLE FOUNDATION, SERVICE PEDESTAL AND SERVICE PEDESTAL FOUNDATION DETAILS, SEE CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS.

4. EXTEND THE 2-2" PVC, THE 2-3" AND THE 1-PER TABLE PVC SCHEDULE 40, 5 FEET PAST EDGE OF PAVEMENT STUB AND CAP OR CONNECT TO THE EXISTING TRAFFIC SIGNAL CONDUIT.

5. ALL EMPTY CONDUIT WILL CONTAIN A SINGLE NO. 8 AWG THW OR BARE COPPER WIRE FOR THE PURPOSE OF LOCATING THE CONDUIT.
TYPICAL TRAFFIC SIGNAL UNDERGROUND
LAYOUT WITH INTERIM STREET LIGHTING
AND SERVICE PEDESTAL

COMM CONDUIT PER TABLE

EXTEND THE 2-2" PVC, THE 2-3" AND THE 1-PER TABLE PVC SCHEDULE 40, 5 FEET PAST
EDGE OF PAVEMENT STUB AND CAP OR CONNECT TO THE EXISTING TRAFFIC SIGNAL
CONDUIT.

FOR POLE, POLE FOUNDATION, SERVICE PEDESTAL AND SERVICE PEDESTAL FOUNDATION
DETAILS, SEE CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS.

ALL EMPTY CONDUIT WILL CONTAIN A SINGLE No. 8 AWG THW OR BARE COPPER WIRE FOR
THE PURPOSE OF LOCATING THE CONDUIT.

NOTES:
1. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED PER ASTM A.123.
2. ELECTRIC UTILITY TO SHOW FEEDER TO SERVICE PEDESTAL.
3. FOR POLE, POLE FOUNDATION, SERVICE PEDESTAL AND SERVICE PEDESTAL FOUNDATION
DETAILS, SEE CLARK COUNTY AREA UNIFORM STANDARD DRAWINGS.
4. EXTEND THE 2-2" PVC, THE 2-3" AND THE 1-PER TABLE PVC SCHEDULE 40, 5 FEET PAST
EDGE OF PAVEMENT STUB AND CAP OR CONNECT TO THE EXISTING TRAFFIC SIGNAL
CONDUIT.
5. ALL EMPTY CONDUIT WILL CONTAIN A SINGLE No. 8 AWG THW OR BARE COPPER WIRE FOR
THE PURPOSE OF LOCATING THE CONDUIT.

PROFESSIONAL ELECTRICAL ENGINEER STAMP ON FILE

AGENCY APPROVED

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

TYPICAL TRAFFIC SIGNAL UNDERGROUND
LAYOUT WITH INTERIM STREET LIGHTING
AND SERVICE PEDESTAL
(END OF CURVE RADIUS)

DATE 3-13-03 DWG. NO. 889 SHEET 2 OF 2
THE ARROW LENS SHALL BE GLASS AND CONFORM TO THE SPECIFICATIONS AS SET FORTH IN TECHNICAL REPORT NO. 1, REVISED 1966, BY THE INSTITUTE OF TRAFFIC ENGINEERS AND APPROVED AS A STANDARD BY THE UNITED STATES OF AMERICA STANDARD INSTITUTE. ANY FUTURE REVISIONS ACCEPTABLE AND ADOPTED BY THE U.S.A.S.I. SHALL AUTOMATICALLY BE PART OF THIS DRAWING SPECIFICATION.
NOTE:
THERMOSTAT, FAN WIRING, AND TERMINAL BLOCK CONNECTIONS NOT SHOWN.

NOTES:
1. MAIN SWITCH.
2. 30 AMP CIRCUIT BREAKERS.
3. SIGNAL FLASH SWITCH INSIDE CABINET.
4. AUXILIARY DOOR SIGNAL FLASH SWITCH.
5. NEMA STD. PLUG RECEPTACLE WITH GROUNDING CONTACT.
6. RADIO FREQUENCY INTERFERENCE SUPPRESSOR.
7. SOLID STATE SIGNAL FLASHER (CABINET MFR. TO DETERMINE POLES AND CAPACITY, UNLESS OTHERWISE SPECIFIED)
8. SIGNAL FLASHING CONTROL RELAYS.

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UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

AUXILIARY CABINET
EQUIPMENT WIRING

DATE | DWG. NO. | 891