<table>
<thead>
<tr>
<th>DRAWING NUMBER AND TITLE</th>
<th>SHEET NUMBER(S)</th>
<th>NATURE OF CHANGE</th>
<th>EFFECTIVE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.210 Type “M” Foundation</td>
<td>1</td>
<td>New Drawing. Foundation for use with traffic signal poles with mast arm lengths of 65 to 80 feet.</td>
<td>11/1/02</td>
</tr>
</tbody>
</table>
FOREWORD

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

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 Regional Transportation Commission, revisions will be posted to the RTC website, www.rtsouthernnevada.com, on the first day of the month following the meeting. This volume contains all revisions through December 2002.

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.
# Uniform Standard Drawings, Clark County Area

## Table of Contents

### Volume II

**Traffic Signals**

### Drawing Number

<table>
<thead>
<tr>
<th>Drawing Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.001</td>
<td>Standard Symbols for Traffic Signal Drawings (2 sheets)</td>
</tr>
<tr>
<td>404.002</td>
<td>Quadrant Detail</td>
</tr>
</tbody>
</table>

### Symbols

- 404.110: No. 3 1/2 Pull Box
- 404.120: No. 5 Pull Box
- 404.121: Reinforced Plastic Mortar Service Box Assembly #5
- 404.130: No. 7 Pull Box
- 404.131: Reinforced Plastic Mortar Service Box Assembly #7
- 404.139: Steel Pull Boxes
- 404.140(SH1): Pull Box Street Cover
- 404.140(SH2): Pull Box Cover Bonding Detail
- 404.141: Pull Box Foundation

### Foundations

- 404.201: Type "A" Foundation
- 404.202: Type "B" Foundation
- 404.203: Type "C" Foundation
- 404.204: Deleted
- 404.205: Type "E" Foundation
- 404.206: Type "F" Foundation
- 404.207: Type "G" Foundation
- 404.208: Type "H" Foundation
- 404.209: Type "L" Foundation
- 404.210: Type "M" Foundation
- 404.211: Type "T" Foundation
- 404.213: Type "J" and "K" Foundation
- 404.214: Service Pedestal Foundation
VOLUME II
TRAFFIC SIGNALS
CONTINUED

DRAWING NUMBER

CABINET

404.304     Type V Cabinet
404.305     Type VI Cabinet
404.307     Type VIII Cabinet
404.308     Type IX Cabinet
404.309     Flashing Beacon Controller Cabinet
404.310     Wiring Diagram for Flashing Beacon Timer Controlled Operation

PRIORITY VEHICLE PREEMPTION SYSTEM

404.320     DELETED - See Uniform Standard Specifications
             Subsection 623T.02.12

POLES AND POSTS

404.400(SH1) School Flashing Sign on Pole with Luminaire
404.400(SH2) School Flashing Sign on Type-III Pole
404.401(SH1) Pedestrian Push Button Post for Special Sign (8'-6")
404.401(SH2) Pedestrian Push Button Post for 2-½" Post Top Mounting
404.402     Signal Standard Type 1-A, 1-B
404.403     Sign Post with School Sign Mounted (2 sheets)
404.404     DELETED
404.405     Pedestal for Controller Cabinets
404.406     Type XX & XX-A -- 30' Signal and Luminaire Pole (6 sheets)
404.407(SH1) Type XX -- 20' Signal Pole (45' or Less Mast Arms)
404.407(SH2) Type XXA -- 20'-0" (50' through 60' Mast Arms)
             Signal Pole
404.408     DELETED
404.409(SH1) Base Adaptor Plate for Type "H" Foundation
404.409(SH2) Base Adaptor Plate for Type "L" Foundation
404.410     30' Luminaire with School Flashing Sign
404.411     School Sign Mounted on a Traffic Signal Standard
404.412     School Sign Pole Type XX -- 30'
404.413     School Sign Pole Type XX -- 20'
404.414     Streetlighting Pole with Illuminated Street Name Sign
VOLUME II
TRAFFIC SIGNALS
CONTINUED

DRAWING NUMBER

POLES AND POSTS (CON’T)

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.415</td>
<td>Type III Pole with Illuminated Street Name Sign</td>
</tr>
<tr>
<td>404.416</td>
<td>Type XX Pole with Illuminated Street Name Sign</td>
</tr>
<tr>
<td>404.417</td>
<td>Street Name Sign Internally Illuminated</td>
</tr>
<tr>
<td>404.418</td>
<td>Sign Mounting Illustration</td>
</tr>
<tr>
<td>404.420</td>
<td>Block Number Sign</td>
</tr>
</tbody>
</table>

MAST ARMS AND ASSEMBLIES

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.500</td>
<td>DELETED</td>
</tr>
<tr>
<td>404.501</td>
<td>DELETED</td>
</tr>
<tr>
<td>404.502</td>
<td>One Bolt Simplex Arm Attachment Clamp Assembly</td>
</tr>
<tr>
<td>404.503</td>
<td>Retrofit Streetlight Mast Arm</td>
</tr>
</tbody>
</table>

DRILLING DETAILS

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.600</td>
<td>Pole Drilling Details</td>
</tr>
<tr>
<td>404.601</td>
<td>Island Signal Pole Details for 10' Pole</td>
</tr>
</tbody>
</table>

ISLAND EQUIPMENT

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.700</td>
<td>Island Signal Location</td>
</tr>
</tbody>
</table>

DETECTORS

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.800</td>
<td>DELETED - See Uniform Standard Specifications</td>
</tr>
<tr>
<td></td>
<td>Subsection 623T.02.04</td>
</tr>
<tr>
<td>404.801</td>
<td>DELETED - See Uniform Standard Specifications</td>
</tr>
<tr>
<td></td>
<td>Subsection 623T.02.04</td>
</tr>
<tr>
<td>404.810</td>
<td>Sawcut Details for Induction Loops</td>
</tr>
<tr>
<td>404.811</td>
<td>Details at Loop Pull Box</td>
</tr>
<tr>
<td>404.820</td>
<td>1 Induction Loop for 1 Travel Lane</td>
</tr>
<tr>
<td>404.821(SH1)</td>
<td>1 Induction Loop for 2 Travel Lanes</td>
</tr>
<tr>
<td>404.821(SH2)</td>
<td>2 Induction Loops for 2 Travel Lanes</td>
</tr>
<tr>
<td>404.822(SH1)</td>
<td>1 Induction Loop for 3 Travel Lanes</td>
</tr>
<tr>
<td>404.822(SH2)</td>
<td>3 Induction Loops for 3 Travel Lanes</td>
</tr>
</tbody>
</table>
VOLUME II
TRAFFIC SIGNALS
CONTINUED

DRAWING NUMBER

DETECTORS (CON'T)

404.823(SH1)    1 Induction Loop for 4 Travel Lanes
404.823(SH2)    4 Induction Loops for 4 Travel Lanes
404.825         3 Induction Loops for 3 Travel Lanes
404.826         Multiple Loop System for Thru Lane
404.827         Multiple Loop System for Left Turn Pocket
404.828         Type "Quadrapole" Loop Installation
404.829         Wire Diagrams for Multiple Loop Systems for Left Turn Pocket and Thru Lane
404.830         Circular Induction Loops for Travel Lanes
404.851         Pedestrian Push Button Detectors

BACK PLATES

404.900         Louvered Backplate for Mast Arm Mounted Signal
404.901         Louvered Backplate for Pole Mounted Signal
404.902         Louvered Backplate for 5 Section Signal Head
404.903         Louvered Backplate for 5 Section Signal Head

SIGNAL UNITS

404.1005        Bill of Materials - Signal Assemblies

SIGNAL ASSEMBLIES

404.1011        Types: A-1, A-2T, A-3
404.1012        Types: A-4T, A-5T
404.1013        Type: A-6T
404.1015        Types: A-8T, A-9T
404.1016        Types: A-10T, A-11T
404.1017        Types: A-12T, A-13T
404.1018        Types: A-14T, A-15T
404.1019        Type: A-16T
404.1020        Type: A-17T
MAST ARM SIGNAL ASSEMBLIES

404.1022  Types: M-2A, M-3A
404.1023  Types: M-3, M-2

SIGNAL ASSEMBLIES

404.1024  Types: B-1T, B-2T, B-3T
404.1025  Types: B-5T, B-6T
404.1026  Types: B-7T, B-8T, B-9T
404.1027  Types: B-10, B-11T
404.1028  Types: B-12T, B-13T
404.1029  Type: B-14T
404.1030  Protective/Permissive M-5 Signal Heads
404.1031  Protective/Permissive M-5 Signal Heads, Assemblies and Part List
          (3 sheets)
404.1032  Pedestrian Signal Assemblies W-0T, W-1, W-2T, W-3T, W-1T
404.1033  DELETED
404.1034  Pedestrian Push Button Sign Detail

VISORS AND LOUVERS

404.1100(SH1)  Visors for 8" Signal
404.1100(SH2)  Louvers and Visors for 12" Signal
404.1100(SH3)  Geometrically Programmed Louver
404.1101    Backplate and Signal Head Assembly

SIGNAL HARDWARE

404.1200  Miscellaneous Signal Mounting Hardware
404.1201  Pole Plate Details
404.1202  Miscellaneous Signal Mounting Hardware
404.1203  Elevator Plumbizer
404.1204  Pole Plate with Wire Guide Details
404.1205  4 Way Center Hub
404.1206  Standard Malleable Pipe Hardware -- 1 1/2" IPS
404.1207  Post Top Mounted Adapter with Terminal Compartment
404.1208  Side Bracket Mounted Adapter with Wire Guide
### VOLUME II
#### TRAFFIC SIGNALS
#### CONTINUED

**DRAWING NUMBER**

**SIGNAL HARDWARE (CON'T)**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.1210</td>
<td>One Way Mount</td>
</tr>
<tr>
<td>404.1211</td>
<td>One Way Mount for 3M Signals</td>
</tr>
<tr>
<td>404.1212</td>
<td>One Way Mount Detail</td>
</tr>
</tbody>
</table>

**EQUIPMENT ORIENTATION ON SIGNAL POLES**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.1300(SH1)</td>
<td>Pole Location and Signal Mounting at Intersection</td>
</tr>
<tr>
<td>404.1300(SH2)</td>
<td>Pole Location and Signal Mounting at Intersection (Center of Return)</td>
</tr>
<tr>
<td>404.1301</td>
<td>Pole Location and Signals Mounting on Right Turn Islands</td>
</tr>
<tr>
<td>404.1302(SH1)</td>
<td>Future Pole Location Case I (Except City of Las Vegas)</td>
</tr>
<tr>
<td>404.1302(SH2)</td>
<td>Future Pole Location Case II</td>
</tr>
<tr>
<td>404.1306</td>
<td>Typical Traffic Signal Conduit Layout with Streetlighting</td>
</tr>
</tbody>
</table>

**MISCELLANEOUS**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>404.1410</td>
<td>12&quot; Arrow Lens</td>
</tr>
<tr>
<td>404.1412</td>
<td>Single Meter Service Pedestal</td>
</tr>
<tr>
<td>404.1413</td>
<td>120/240 VAC Service on Wood Pole Overhead Service</td>
</tr>
<tr>
<td>404.1414</td>
<td>Auxiliary Cabinet Equipment Wiring</td>
</tr>
<tr>
<td>404.1418</td>
<td>Installation of Conduit into Pull Box from Lip of Gutter Trench</td>
</tr>
<tr>
<td>404.1419</td>
<td>Installation of Conduit</td>
</tr>
<tr>
<td>404.1422</td>
<td><strong>DELETED</strong> - See Uniform Standard Specifications</td>
</tr>
<tr>
<td></td>
<td>Section 623G.03.07</td>
</tr>
</tbody>
</table>

**Revised December 2002**
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.

FOR TYPE XX-B SIGNAL AND LUMINAIRE POLES, SEE STANDARD DRAWING NOS. 404.406, 404.407 AND 404.409.

UNIFORM STANDARD DRAWINGS
CLARK COUNTY AREA

SPECIFICATION REFERENCE

623G.03.06 FOUNDATION

DATE 10-10-02 DWG. NO. 404.210 SHEET 1 OF 1

TYPE "M" FOUNDATION