# CONSTRUCTION DETAILS

<table>
<thead>
<tr>
<th>DETAIL NO.</th>
<th>DETAIL NAME</th>
<th>NO. OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-1</td>
<td>PROJECT SIGN</td>
<td>1</td>
</tr>
<tr>
<td>G-2</td>
<td>TRAFFIC CONTROL NOTES</td>
<td>1</td>
</tr>
<tr>
<td>G-4</td>
<td>PLAN LEGEND</td>
<td>2</td>
</tr>
<tr>
<td><strong>WATER SERVICES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-1</td>
<td>OPEN CUT LEAD SERVICE LINE OFFSET FROM PRIVATE DRAIN</td>
<td>1</td>
</tr>
<tr>
<td>WS-2</td>
<td>OPEN CUT LEAD SERVICE LINE REPLACEMENT WITH PRIVATE DRAIN REPLACEMENT-LONG SIDE</td>
<td>1</td>
</tr>
<tr>
<td>WS-3</td>
<td>OPEN CUT LEAD SERVICE LINE REPLACEMENT SHORT SIDE</td>
<td>1</td>
</tr>
<tr>
<td>WS-4</td>
<td>LEAD SERVICE LINE AND HOUSE DRAIN REPLACEMENT DETAILS</td>
<td>1</td>
</tr>
<tr>
<td><strong>WATER MAIN:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-1</td>
<td>CHICAGO FIRE HYDRANT DETAIL</td>
<td>8</td>
</tr>
<tr>
<td>D-2</td>
<td>FIRE HYDRANT SETTING DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-3</td>
<td>FIRE HYDRANT INSTALLATION DETAIL FOR VAULTED SIDEWALKS</td>
<td>1</td>
</tr>
<tr>
<td>D-5</td>
<td>FIRE HYDRANT DRAIN DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-7</td>
<td>COLOR CODE FOR FIRE HYDRANTS</td>
<td>1</td>
</tr>
<tr>
<td>D-8</td>
<td>WATER MAIN TRENCH PHASE DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>D-9</td>
<td>WATER MAIN TRENCH INSULATION DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-10</td>
<td>WATER MAIN POLYETHYLENE WRAP DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-11</td>
<td>THRUST RESTRAINT</td>
<td></td>
</tr>
<tr>
<td>D-12</td>
<td>CONCRETE THRUST BLOCK DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>D-13</td>
<td>THRUST RESTRAINT</td>
<td></td>
</tr>
<tr>
<td>D-14</td>
<td>PRECAST VALVE BASIN</td>
<td>1</td>
</tr>
<tr>
<td>D-15</td>
<td>FOR PIPES UP TO 16” DIA.</td>
<td>1</td>
</tr>
<tr>
<td>D-16</td>
<td>FRAME &amp; LID</td>
<td>1</td>
</tr>
<tr>
<td>D-17</td>
<td>TYPICAL 1” &amp; 2” WATER SERVICE</td>
<td>1</td>
</tr>
<tr>
<td>D-18</td>
<td>CASING PIPE UNDER RAILROAD TRACK DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-20</td>
<td>GENERAL NOTES WATER MAIN CONTRACTS</td>
<td>2</td>
</tr>
<tr>
<td>D-22</td>
<td>BUMPER GUARD DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>D-28</td>
<td>ELECTRICAL CONTINUITY BRACKET FOR TRANSITION COUPLING</td>
<td>1</td>
</tr>
<tr>
<td>D-31</td>
<td>SERVICE PIPE INSULATION DETAILS</td>
<td>1</td>
</tr>
</tbody>
</table>
## APPENDIX A

### CONSTRUCTION DETAILS

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-50</td>
<td>SEWER CROSSING DETAIL</td>
<td>3</td>
</tr>
<tr>
<td>D-51</td>
<td>WATER MAINS CROSSING OVER</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>SEWERS &amp; HOUSE DRAINS</td>
<td></td>
</tr>
</tbody>
</table>

### FEEDER MAIN:

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM-1</td>
<td>INSPECTION MANHOLE</td>
<td>1</td>
</tr>
<tr>
<td>FM-2</td>
<td>INSPECTION MANHOLE INSTALLATION</td>
<td>2</td>
</tr>
<tr>
<td>FM-4</td>
<td>PITOMETER TAP BASIN PRECAST CONCRETE</td>
<td>1</td>
</tr>
<tr>
<td>FM-5</td>
<td>FIRE HYDRANT SETTING 16&quot; &amp; LARGER WATER MAIN</td>
<td>1</td>
</tr>
<tr>
<td>FM-12</td>
<td>PIPE REPLACE INSTALLATION</td>
<td>1</td>
</tr>
<tr>
<td>FM-20</td>
<td>CONCRETE PIPE TAPPING CONNECTION</td>
<td>5</td>
</tr>
<tr>
<td>FM-23</td>
<td>TEST TAP DETAIL [CONCRETE PIPE]</td>
<td>1</td>
</tr>
</tbody>
</table>
# APPENDIX A

## CONSTRUCTION DETAILS

<table>
<thead>
<tr>
<th>DETAIL NO.</th>
<th>DETAIL NAME</th>
<th>NO. OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>RESTORATION:</strong></td>
<td></td>
</tr>
<tr>
<td>R-2</td>
<td>PAVEMENT RESTORATION DETAIL FOR RESIDENTIAL STREETS</td>
<td>1</td>
</tr>
<tr>
<td>R-3</td>
<td>PAVEMENT RESTORATION DETAIL FOR ARTERIAL STREETS</td>
<td>1</td>
</tr>
<tr>
<td>R-4</td>
<td>PCC PAVEMENT</td>
<td>1</td>
</tr>
<tr>
<td>R-5</td>
<td>PCC BASE COURSE WITH HMA BINDER AND SURFACE COURSES</td>
<td>1</td>
</tr>
<tr>
<td>R-8</td>
<td>SPEED HUMP</td>
<td>3</td>
</tr>
<tr>
<td>R-13</td>
<td>RECONSTRUCTION/ ADJUSTMENT OF MASONRY UTILITY STRUCTURE</td>
<td>1</td>
</tr>
<tr>
<td>R-14</td>
<td>PRECAST UTILITY STRUCTURE ADJUSTMENT</td>
<td>1</td>
</tr>
<tr>
<td>R-15</td>
<td>TEMPORARY BITUMINOUS RAMP FOR UTILITY STRUCTURES</td>
<td>1</td>
</tr>
<tr>
<td>R-18</td>
<td>PAVEMENT MARKING DETAILS</td>
<td>3</td>
</tr>
<tr>
<td>R-19</td>
<td>SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS</td>
<td>1</td>
</tr>
<tr>
<td>R-20</td>
<td>CABLE BRIDGING OF CUT RAILS (WHERE RAILS CANNOT BE RE-USED)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>SEWER:</strong></td>
<td></td>
</tr>
<tr>
<td>A-1</td>
<td>VITRIFIED CLAY PIP DRAIN CONNECTION AND SEWER</td>
<td>1</td>
</tr>
<tr>
<td>A-2</td>
<td>TRENCH DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>A-19</td>
<td>CONCRETE COLLAR / CONNECTION DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>A-21</td>
<td>STANDARD INLET – 2’ DIA</td>
<td>1</td>
</tr>
<tr>
<td>A-23</td>
<td>STANDARD CATCH BASIN – 4’ DIA</td>
<td>1</td>
</tr>
</tbody>
</table>
# APPENDIX A

## CONSTRUCTION DETAILS

<table>
<thead>
<tr>
<th>DETAIL NO.</th>
<th>DETAIL NAME</th>
<th>NO. OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDOT DETAILS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-2-2A</td>
<td>STREET PAVEMENT RESTORATION DETAIL WITH TRENCH BACKFILL</td>
<td>1</td>
</tr>
<tr>
<td>A-2-2B</td>
<td>STREET PAVEMENT RESTORATION DETAIL WITH FLOWABLE FILL</td>
<td>1</td>
</tr>
<tr>
<td>A-2-2C</td>
<td>PAVEMENT PATCHING AND PORTLAND CEMENT CONCRETE REPLACEMENT</td>
<td>1</td>
</tr>
<tr>
<td>A-2-3A</td>
<td>TYPICAL JOINT LAYOUT FOR P.C. CONCRETE PAVEMENTS</td>
<td>1</td>
</tr>
<tr>
<td>A-2-3B</td>
<td>P.C.C. PAVEMENT JOINT DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>A-2-3C</td>
<td>P.C.C. BASE COURSE JOINT DETAILS</td>
<td>1</td>
</tr>
<tr>
<td>A-2-6</td>
<td>CONCRETE CURB AND GUTTER DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>A-3-2</td>
<td>DETAILS OF PORTLAND CEMENT CONCRETE CONSTRUCTION</td>
<td>1</td>
</tr>
<tr>
<td>A-5-3</td>
<td>TRENCH GUIDELINES INSTALLATION OF UNDERGROUND UTILITIES ADJACENT TO TREES</td>
<td>1</td>
</tr>
<tr>
<td>A-6-1A</td>
<td>COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL ZONE</td>
<td>1</td>
</tr>
<tr>
<td>A-6-1B</td>
<td>COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL ZONE</td>
<td>1</td>
</tr>
<tr>
<td>A-7-1A</td>
<td>CROSSWALK MARKING DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>A-7-2</td>
<td>6’ BIKE SYMBOL</td>
<td>1</td>
</tr>
<tr>
<td>A-7-3</td>
<td>8’ BIKE SYMBOL</td>
<td>1</td>
</tr>
<tr>
<td>A-7-4</td>
<td>BIKE ARROW</td>
<td>1</td>
</tr>
<tr>
<td>A-7-5</td>
<td>BIKE TURN ARROW</td>
<td>1</td>
</tr>
<tr>
<td>A-7-6</td>
<td>BIKE CHEVRON</td>
<td>1</td>
</tr>
<tr>
<td>A-7-7</td>
<td>SHARED LANE MARKING CHEVRON RIGHT LEG DETAIL</td>
<td>1</td>
</tr>
<tr>
<td>A-7-8</td>
<td>SHARED LANE MARKING LATERAL POSITIONING</td>
<td>1</td>
</tr>
<tr>
<td>A-7-9</td>
<td>SHARED LANE YIELD TO BIKES SIGN</td>
<td>1</td>
</tr>
<tr>
<td>A-7-10</td>
<td>BIKE AND ARROW SYMBOL SPACING</td>
<td>1</td>
</tr>
<tr>
<td>A-7-11</td>
<td>SHARED LANE MARKING</td>
<td>1</td>
</tr>
<tr>
<td>A-7-12</td>
<td>SHARED LANE MARKING LONGITUDINAL SPACING</td>
<td>1</td>
</tr>
</tbody>
</table>
# Appendix A

## Construction Details

<table>
<thead>
<tr>
<th>DETAIL NO.</th>
<th>DETAIL NAME</th>
<th>NO. OF PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>CDOT ADA COVER SHEET &amp; TABLE OF CONTENTS</td>
<td>2</td>
</tr>
<tr>
<td>B-1-1</td>
<td>TYPICAL CORNER RAMP LAYOUTS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-2</td>
<td>2 PERPENDICULAR RAMPS AT CORNER</td>
<td>1</td>
</tr>
<tr>
<td>B-1-3</td>
<td>2 PERPENDICULAR RAMPS AT CORNER WITH RAMPS IN CURB RADIUS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-4</td>
<td>PERPENDICULAR RAMP AT CORNER IN CURB RADIUS WITH SINGLE CROSSING</td>
<td>1</td>
</tr>
<tr>
<td>B-1-5</td>
<td>PERPENDICULAR RAMP AT CORNER IN CURB RADIUS WITH DETECTABLE WARNING SETBACK GREATER THAN 5'</td>
<td>1</td>
</tr>
<tr>
<td>B-1-6</td>
<td>COMBINATION RAMP AT CORNER (PARALLEL AND PERPENDICULAR RAMPS)</td>
<td>1</td>
</tr>
<tr>
<td>B-1-7</td>
<td>BLENDED TRANSITION AT CORNER</td>
<td>1</td>
</tr>
<tr>
<td>B-1-8</td>
<td>BLENDED TRANSITION AT CORNER WITH SINGLE CROSSING</td>
<td>1</td>
</tr>
<tr>
<td>B-1-9</td>
<td>FLUSH TRANSITION AT CORNER</td>
<td>1</td>
</tr>
<tr>
<td>B-1-10</td>
<td>SHARED (DIAGONAL) PERPENDICULAR RAMP AT CORNER</td>
<td>1</td>
</tr>
<tr>
<td>B-1-11</td>
<td>RAMPS AT CORNER WITH DIFFERENT SIDEWALK WIDTHS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-12</td>
<td>PERPENDICULAR RAMPS AT CORNER WITH LARGE CURB RADIUS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-13</td>
<td>BLENDED TRANSITION AT CORNER WITH LARGE CURB RADIUS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-14</td>
<td>RAMPS THAT DO NOT ALIGN WITH CROSSWALK</td>
<td>1</td>
</tr>
<tr>
<td>B-1-15</td>
<td>PERPENDICULAR RAMP AT MID-BLOCK LOCATION</td>
<td>1</td>
</tr>
<tr>
<td>B-1-16</td>
<td>PARALLEL RAMP AT MID-BLOCK LOCATION</td>
<td>1</td>
</tr>
<tr>
<td>B-1-17</td>
<td>PARALLEL RAMP (ONE DIRECTION) AT MID-BLOCK LOCATION</td>
<td>1</td>
</tr>
<tr>
<td>B-1-18</td>
<td>COMBINATION RAMP (PARALLEL &amp; PERPENDICULAR RAMPS) AT MID-BLOCK LOCATION</td>
<td>1</td>
</tr>
<tr>
<td>B-1-19</td>
<td>MEDIAN PASS-THROUGH</td>
<td>1</td>
</tr>
<tr>
<td>B-1-20</td>
<td>MEDIAN PASS-THROUGH WITH RAMPS</td>
<td>1</td>
</tr>
<tr>
<td>B-1-21</td>
<td>ON-GRADE RAMP AT BRIDGE OR OVERPASS</td>
<td>1</td>
</tr>
<tr>
<td>B-2-1</td>
<td>ALLEY RETURN PLAN VIEW</td>
<td>1</td>
</tr>
<tr>
<td>B-2-2</td>
<td>ALLEY RETURN SECTIONS</td>
<td>1</td>
</tr>
<tr>
<td>B-2-3</td>
<td>DRIVEWAY CONSTRUCTION PLAN VIEWS</td>
<td>1</td>
</tr>
<tr>
<td>B-2-4</td>
<td>DRIVEWAY CONSTRUCTION SECTIONS</td>
<td>1</td>
</tr>
</tbody>
</table>
# Appendix A

## Construction Details

<table>
<thead>
<tr>
<th>Detail No.</th>
<th>Detail Name</th>
<th>No. of Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CDOT ADA Standards (Con’t):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-2-5</td>
<td>Alley &amp; Driveway Detail for Reduced Width Pedestrian Access Route</td>
<td>1</td>
</tr>
<tr>
<td>B-3-1</td>
<td>Conversion Charts</td>
<td>1</td>
</tr>
<tr>
<td>B-3-2</td>
<td>General Notes</td>
<td>1</td>
</tr>
<tr>
<td>B-3-3</td>
<td>General Notes (Continued)</td>
<td>1</td>
</tr>
<tr>
<td>B-3-4</td>
<td>ADA Compliance and Transition Guidelines</td>
<td>1</td>
</tr>
<tr>
<td>B-3-5</td>
<td>Seal (ADA)</td>
<td>1</td>
</tr>
<tr>
<td>B-4-1</td>
<td>Detectable Warning Unit Sizes</td>
<td>1</td>
</tr>
<tr>
<td>B-4-2</td>
<td>Detectable Warning Unit Details</td>
<td>1</td>
</tr>
<tr>
<td>B-4-3</td>
<td>Curb &amp; Gutter Details</td>
<td>1</td>
</tr>
</tbody>
</table>

## I.D.O.T Highway Standards:

Note: The I.D.O.T. details are included for reference. The latest details as revised by I.D.O.T. are to be applied.

* 420001  PAVEMENT JOINTS  2
* 420701  PAVEMENT FABRIC  1
* 442101  CLASS B PATCHES  2
  701901  TRAFFIC CONTROL DEVICES  3
  780001  TYPICAL PAVEMENT MARKINGS  2
  781001  TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS  1

Not all portions are applicable to all installations. Local, arterial and I.D.O.T. streets will differ on pavement design required.
NOTES:

1. TWO SIGNS (ONE ON EACH END OF EACH PIPE PROJECT) MUST BE DISPLAYED FROM THE TIME CONSTRUCTION BEGINS TO THE TIME THAT PAVEMENT IS RESTORED.

2. THE LOCATION OF THE SIGN WILL BE DETERMINED FOR THE RESIDENT ENGINEER.

3. AFTER THE COMPLETION OF THE CONTRACT THE SIGN WILL BE PROPERTY OF THE CITY OF CHICAGO AND MUST BE DELIVERED TO THE APPROPRIATE DISTRICT YARD UNLESS ORDERED TO DISCARD BY THE COMMISSIONER.

4. SIZE OF SIGN TO BE DETERMINED BY THE COMMISSIONER (3’x 2’) OR (6’x 4’).
GENERAL NOTES:

1. WHENEVER POSSIBLE CONFINE THE WORK SITE ON A TWO LANE STREET OR HIGHWAY TO ONE TRAFFIC LANE LEAVING THE OPPOSITE LANE OPEN TO TRAFFIC.

2. WHENEVER POSSIBLE, PARK WORK VEHICLES ON THE SAME SIDE OF THE STREET AS THE JOB SITE.

3. WORK VEHICLES MAY BE USED AS AN ADDITIONAL BARRICADE WITH THE FLASHER LIGHT LIT BUT NOT AS A SUBSTITUTE FOR ANY WORK AREA PROTECTION WHICH MAY BE CALLED FOR.

4. UNDER CERTAIN FIELD CONDITIONS SUCH AS HILLS, CROSSROADS, CURVES, DRIVEWAYS, ETC. THE SPACING OF WORK AREA PROTECTION MUST BE ADJUSTED AS NECESSARY.

5. ALL EMPLOYEES WORKING ON THE JOB SITE ALONG HIGHLY TRAVELED ROADS MUST WEAR HIGH VISIBILITY VESTS AS REQUESTED BY THE OSHA ACT.

6. FLAGGERS MUST WEAR HIGH VISIBILITY VESTS WHEN DIRECTING TRAFFIC.

7. FLAGGERS MUST USE THE PROPER TRAFFIC CONTROL SIGN WHEN DIRECTING TRAFFIC.

8. WHEN TWO FLAGGERS ARE NECESSARY, THEY MUST BE IN DIRECT COMMUNICATION WITH EACH OTHER AT ALL TIMES EITHER BY SIGHT OR RADIO COMMUNICATION.

9. WHEN THERE IS NO WORK IN PROGRESS AND THE FLAGGER IS NOT REQUIRED, THE "FLAGGER SYMBOL" SIGN MUST BE REMOVED.

10. REMOVE ALL SIGNS OR TRAFFIC CONTROL DEVICES THAT DO NOT APPLY TO EXISTING CONDITIONS [I.E. IF NO WORK IS BEING PERFORMED, THE WARNING SIGNS MUST BE EITHER TAKEN DOWN OR COVERED.

11. WHEN OPENINGS IN OR NEAR THE SIDEWALK ARE NECESSARY, BARRICADES MUST BE PROPERLY PLACED SO THAT ANYONE PASSING BY WOULD NOT INADVERTENTLY FALL INTO THE EXCAVATION. SAFETY FENCE MAY ALSO BE APPROPRIATE.

12. ALL EXCAVATIONS THAT PRESENT A HAZARD OR MUST BE LEFT OPEN OVERNIGHT MUST BE PROPERLY BARRICADED FOR THE PROTECTION OF THE PUBLIC.

13. THE SIDES OF BARRICADES FACING TRAFFIC MUST HAVE RETROREFLECTIVE RAIL FACES.

14. ALL TRAFFIC CONTROLS SHALL MEET THE REQUIREMENTS OF CDOT.
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>------</td>
<td>Existing-Water Main</td>
<td>------</td>
<td>Existing-Curb</td>
</tr>
<tr>
<td>------</td>
<td>Existing-Water Services</td>
<td>------</td>
<td>Existing-Sidewalk</td>
</tr>
<tr>
<td>------</td>
<td>Proposed-Water Main</td>
<td>------</td>
<td>Existing-Ditches-Creeks-Edge of Water</td>
</tr>
<tr>
<td>------</td>
<td>Proposed-New Water Services WM to B-Box</td>
<td>------</td>
<td>Existing-Edge of Pavement</td>
</tr>
<tr>
<td>------</td>
<td>Proposed-New Water Services B-Box to Property</td>
<td>------</td>
<td>Existing-Embankments-Dead Ends-Retaining Walls</td>
</tr>
<tr>
<td>------</td>
<td>Proposed-Water Main (By Others)</td>
<td>------</td>
<td>Existing-Fence</td>
</tr>
<tr>
<td>------</td>
<td>Abandoned-Water Main</td>
<td>------</td>
<td>Existing-CTA Buried Electric Cables</td>
</tr>
<tr>
<td>------</td>
<td>Existing ROW</td>
<td>------</td>
<td>Existing-Railroads</td>
</tr>
<tr>
<td>------</td>
<td>Existing ROW (Vacated)</td>
<td>------</td>
<td>Existing-Buried Street Car Tracks</td>
</tr>
<tr>
<td>------</td>
<td>Existing ROW (Elevated)</td>
<td>------</td>
<td>Existing-Steam and Cooling Pipes</td>
</tr>
<tr>
<td>------</td>
<td>Existing-Easement</td>
<td>------</td>
<td>Existing-City Press Electrical</td>
</tr>
<tr>
<td>------</td>
<td>Proposed-ROW</td>
<td>------</td>
<td>Existing-Hedge Line</td>
</tr>
<tr>
<td>------</td>
<td>Existing-City Limits Boundary Line</td>
<td>------</td>
<td>Existing-Woods Tree Line</td>
</tr>
<tr>
<td>------</td>
<td>Existing-Chicago Park District Line</td>
<td>------</td>
<td>Proposed-Curb</td>
</tr>
<tr>
<td>------</td>
<td>Existing-City Electric</td>
<td>------</td>
<td>Proposed-Sidewalk</td>
</tr>
<tr>
<td>------</td>
<td>Existing-ComEd</td>
<td>------</td>
<td>Proposed-Ditches-Creeks-Edge of Water</td>
</tr>
<tr>
<td>------</td>
<td>Existing-Cable TV</td>
<td>------</td>
<td>Proposed-Pavement</td>
</tr>
<tr>
<td>------</td>
<td>Existing-Telephone</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Existing-Sewer</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Proposed-Sewer</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Proposed-Sewer Lateral</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Existing-Sediment Force Main</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Proposed-Sediment Force Main</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Abandoned-Sewer</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Abandoned-Gas</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>Existing-Gas</td>
<td>------</td>
<td></td>
</tr>
</tbody>
</table>
TYPICAL EXISTING WATER SERVICE ABANDONMENT

SCHEMATIC PLAN AND SECTION

TYPICAL OPEN CUT SERVICE CONNECTION

WS-2

Lead Service Line Replacement Program with
Water / Sewer Separation Requirements to the Extents of Water
Service Line Replacement: Long Side Replacement
**DETAIL A: CONCRETE SLAB REPAIR**

**NOTES:**

1. HYDROPHILIC WATERSTOP SHALL BE SIKA CORPORATION HYDROSTOP PRODUCT CJS-1000-FS-AQH, AND SHALL BE APPLIED TO EXISTING CONCRETE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

---

**DETAIL B: CONCRETE SLAB REPAIR**

**NOTES:**

1. HYDROPHILIC WATERSTOP SHALL BE SIKA CORPORATION HYDROSTOP PRODUCT CJS-1000-FS-AQH, AND SHALL BE APPLIED TO EXISTING CONCRETE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
CROSS-SECTIONAL VIEW

NOTE:

1. TOP CASTING IS TURNED 45° FROM TRUE POSITION IN SECTIONAL VIEW.
HYDRANT BOTTOM
1 Req'd - C.I.
8½" DIA.

7.665" DIA.
7.465" DIA.

2½" DIA.

7.34" DIA.
7.54" DIA.

 Hancock School

NOTE:
All flange bolt holes must be
drilled from jig, care being taken

to have all holes symmetrical with
locating lug.

13½" DIA.
9½" DIA.

8½" DIA.

1½" DIA.

See Sht 2 of 8 for
Sections A-A & B-B

HYDRANT BOTTOM

CHICAGO FIRE HYDRANT DETAIL

D-1
SHT. 3 OF 8
VALVE SEAT
1 Req'd - BRONZE
PATT. NO. NH3

TAPER 3/4" PER FOOT
8 BRIGGS THDS. PER INCH

NOTE:
LUG ON EACH FLANGE OF STANDPIPE AND ON SAME SIDE SIMILAR TO LUG ON FLANGE OF HYDRANT BOTTOM.

HEX. BOLTS & NUTS
3/4" x 2 3/4"
16 Req'd. - STEEL

STANDPIPE
1 Req'd. - C.I.
PATT. NO. NH2

GASKET
2 Req'd. - PAPER

DRILL 8-7/8" HOLES
11 3/4" B.C.

VALVE SEAT, STANDPIPE & GASKET

CHICAGO FIRE HYDRANT DETAIL
DRILL FOR 1/16 x 2 3/8" RIVET

SECTION B-B

3/8" DRILLED HOLES

1/8" DRILLED HOLES

CORED GROOVE 4 1/8" WIDE, 1/16" DEEP, CONNECTING 4 1/16" DRILLED HOLES

1/4" DIA. LIGHT DRIVING FIT ON OPERATING STEM.

1" DIA. LIGHT DRIVING FIT ON OPERATING STEM.

1/8" DRILLED HOLES

DRIpg SHUT OFF

2 Req'd - Neoprene
70 DUROMETER

OPERATING STEM
1 Req'd - Mild Steel

1" HEX. GRIP NUT
STEEL - U.S. STD. THREAD
1 REQUIRED

CHICAGO FIRE HYDRANT DETAIL

REV: 04.07

SHT. 5 OF 8
1/4" LETTERS
CITY OF CHICAGO
NAME OF MANUFACTURER
DATE OF MANUFACTURE
DUROMETER

6 3/4" DIA.

1" DIA. CORE

1 1/8" R1/4"

R1/8"

2" DIA.

LIGHT TAPPING FIT ON 1" ROD

6 7/8" DIA.

3/4" 1/2"

30°

30°

VALVE WASHER-CAST IRON
PATTERN NO. NH 10 - 1 REQUIRED

SEATING VALVE - NEOPRENE
1 - REQUIRED
80 DUROMETER

VALVE WASHER & SEATING VALVE

CHICAGO FIRE HYDRANT DETAIL
D-1
SHT. 6 OF 8
NOTE
LETTERS SHALL BE 1/2" HIGH
GOTHIC, RAISED 1/16" FROM A
1/16" RECESS AS SHOWN IN
SECTION A-A

SPECIAL WRENCH NUT - DUCTILE IRON
PATTERN NO. NH7B - 1 REQUIRED

CAP SCREW - STAINLESS STEEL
HEX. HEAD TYPE 300 SERIES
1-Req'd.

FROST PLUG - STAINLESS STEEL
1/4" STANDARD - REQ.

SPECIALTY WRENCH NUT, CAP SCREW & FROST PLUG DETAILS
STUFFING BOX NUT - Bronze  
PATTERN NO. NH 8 - 1 Required

STUFFING BOX NUT & WASHER DETAILS

CHICAGO FIRE HYDRANT DETAIL
NOTE:

1. SEE FIRE HYDRANT DRAIN DETAILS.

2. ALL BURIED DUCTILE IRON HYDRANT COMPONENTS MUST BE WRAPPED IN POLYETHYLENE ENCASEMENT.

3. SEE DETAIL D-5 FOR FIRE HYDRANT DRAIN ASSEMBLY

4. THE TOP AND FACE OF THE CURB ARE TO BE PAINTED ‘SAFETY YELLOW’ FOR 15 FEET EACH SIDE OF THE FIRE HYDRANT, EXCEPT WHERE THE 15 FOOT DIMENSION INTERSECTS A CROSSWALK, DRIVEWAY OR SIMILAR FEATURE.
This detail is provided for reference purposes only and is not a C.D.W.M. water main standard.

Fire Hydrant Installation Detail for Vaulted Sidewalks

Rev: 07.07
NOTES:

1. WATER TABLE MUST BE BELOW BOTTOM OF TRENCH.

2. LAY DRAIN PIPE IN WATER MAIN TRENCH IF HYDRANT LEAD PIPE IS NOT LONG ENOUGH TO ACHIEVE 14" DRAIN PIPE LENGTH.

3. PLACE DRAIN PIPES 50 HOLES ARE FACING DOWN. SEE DETAIL "A".

4. COPPER WATER SERVICE TUBING MUST BE ENCASED IN POLYETHYLENE WRAP.
CIRCULATED WATER MAINS

OR LESS

WATER MAINS LARGER THAN 16-INCH

12-14-16-INCH WATER MAINS

8-INCH WATER MAINS

6-INCH WATER MAINS

4-INCH WATER MAINS

UNCIRCULATED WATER MAINS–DEAD END

OR LESS

W.M. LARGER THAN 16-INCH

12-16-INCH W.M.

8-INCH W.M.

6-INCH W.M.

4-INCH W.M.

B–BLUE FLANGE Y–YELLOW FLANGE R–RED FLANGE W–WHITE FLANGE

ALL PUBLIC FIRE HYDRANTS ARE TO BE PAINTED RED EXCEPT FOR THE TOP FLANGES WHICH MUST BE COLOR CODED.
ROADWAY TRENCH - PHASE 1

PIPE DEPTH REQUIREMENTS

<table>
<thead>
<tr>
<th>SIZE OF PIPE</th>
<th>MINIMUM DEPTH OF COVER FOR WATER MAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot; to 6&quot;</td>
<td>5' - 6&quot; + 3'</td>
</tr>
<tr>
<td>6&quot;</td>
<td>5' - 6&quot; + 3'</td>
</tr>
<tr>
<td>8&quot;</td>
<td>5' - 6&quot; + 3'</td>
</tr>
<tr>
<td>12&quot;</td>
<td>5' - 6&quot; + 2'</td>
</tr>
<tr>
<td>16&quot;</td>
<td>5' - 6&quot; + 2'</td>
</tr>
<tr>
<td>24&quot;</td>
<td>5' - 6&quot; + 2'</td>
</tr>
<tr>
<td>30&quot; to 42&quot;</td>
<td>3' - 6&quot; + MIN.</td>
</tr>
<tr>
<td>48&quot; &amp; LARGER</td>
<td>3' MIN. (SEE PLAN)</td>
</tr>
</tbody>
</table>

PHASE 1: BACKFILL CA-16 TO GRADE FOLLOWING THE INSTALLATION OF PROPOSED WATER MAIN.

PHASE 2: P.C.C. BASE COURSE TO GRADE FOLLOWING THE APPROVAL OF PROPOSED MAIN AND SUCCESSFUL COMPLETION OF SERVICE TRANSFERS AND CONNECTIONS.

PHASE 3: FINAL PAVEMENT RESTORATION LIMITS AS INDICATED ON PLANS.

GENERAL NOTES:
1. PROVIDE PIPE BEDDING TO A DEPTH OF 1/4 OF PIPE DIAMETER OR 6" MINIMUM OF COMPACTED GRANULAR MATERIAL, GRAVEL, OR CRUSHED STONE.
2. USE CA-16 BEDDING MATERIAL FOR PIPE SIZES UP TO 16-INCH DIAMETER.
3. USE CA-11 BEDDING MATERIAL FOR PIPE SIZES LARGER THAN 16-INCH DIAMETER.
5. PLACE ALL UNATTENDED EXCAVATIONS IN PAVEMENT AREAS AND SECURE PLATES TO PAVEMENT AND PROVIDE BARRIERS IN PARKWAY AREAS.
6. GOND BAR BARS SHALL BE AS ENOY COATED BARS 18" LONG DRILLED WITH 9" CHESTNUT AND GROOVED AT 30" CENTERS. GOND BAR MAY BE OMITTED ON C.O.D.T. STREETS WHERE CLSM IS USED AS TRENCH BACKFILL.
7. FOLLOWING THE INSTALLATION OF PROPOSED MAIN AND SUCCESSFUL COMPLETION OF SERVICE TRANSFERS AND CONNECTIONS, PLACE CONCRETE BASE COURSE ALIGNED TO GRADE. THE ADDITIONAL THICKNESS IS TO BE REMOVED DURING PAVEMENT RESTORATION WORK. FINAL CONCRETE BASE THICKNESS MUST BE PER C.O.D.T. AND I.O.D.T. REQUIREMENTS. WHEN THE THICKNESS OF THE EXISTING ROADWAY BASE MATERIAL IS LESS THAN THE MINIMUM THICKNESS INDICATED ON THE PLANS.
8. THE BOTTOM OF BASE MATERIAL WILL EXTEND BELOW THE BOTTOM OF THE BASE MATERIAL OF THE EXISTING PAVEMENT.
10. ALL EXCAVATIONS MAY BE USED IN PLACE OF CA-16 IN PARKWAY TRENCHES.

WATER MAIN TRENCH PHASE DETAILS D-8

REV: 12.18
NOTES:

1. RIGID INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE VI, 40 PSI COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).

2. BACKFILL MATERIAL AROUND RIGID INSULATION BOARD SHALL BE SILICA BASED FINE SAND (FA6 OR FA7), FREE FROM ROOTS, ORGANIC MATTER, LEAVES OR OTHER INJURIOUS MATERIALS.

3. OVERLAP ALL RIGID INSULATION BOARD JOINTS.

4. INSTALL RIGID INSULATION BOARD AS INDICATED ON PLANS OR AS APPROVED BY COMMISSIONER.
8-MIL LOW DENSITY OR 4 MIL CROSS-LAMINATED, HIGH-DENSITY POLYETHYLENE WRAP

APPROXIMATELY 3’ SPACING DRY TRENCH
2’ SPACING FOR WET TRENCH

2” ADHESIVE TAPE

WATER MAIN PIPE

2” ADHESIVE TAPE

2” ADHESIVE TAPE

---

CHART “A” POLYWRAP FLAT TUBE WIDTHS

<table>
<thead>
<tr>
<th>PIPE DIAMETER (IN.)</th>
<th>D.I.P. WITH PUSH-ON JOINTS (IN.)</th>
<th>D.I.P. WITH MECHANICAL JOINTS (IN.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>12</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>16</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>24</td>
<td>53</td>
<td>53</td>
</tr>
</tbody>
</table>

NOTES:

1. USE ONE LENGTH OF POLYETHYLENE TUBE WRAP FOR EACH LENGTH OF PIPE, OVERLAPPED AT PIPE JOINTS AND FOLD EXCESS OVER TOP OF TUBE FOR SLACK REDUCTION.

2. USE CHART “A” TO SELECT SIZE OF WRAP.
VERTICAL THRUST BLOCK DETAILS

NOTES:
1. FULL CONCRETE THRUST BLOCKS AS SHOWN ARE REQUIRED WHEN THRUST RESTRAINT IS NOT PROVIDED BY OTHER MEANS SUCH AS RESTRAINED JOINT PIPE.
2. WHEN THRUST RESTRAINT GLANDS ARE INSTALLED FOR THE CONNECTIONS, CONCRETE THRUST BLOCKS SHALL BE PROVIDED UP TO THE THE DOTTED LINE AS SHOWN.
3. ALL BOLTS, NUTS, THRUST RESTRAINT GLANDS AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE TUBING TO PREVENT CORROSION AND CONCRETE ADHESION.
4. CONCRETE FOR THRUST BLOCKS MUST NOT CONTAIN FLY ASH.

HORIZONTAL THRUST BLOCK DETAILS

TABLE 1

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>DEAD END &amp; TEE</th>
<th>HORIZONTAL 1/8 BEND</th>
<th>HORIZONTAL 3/8 BEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCH DIA.</td>
<td>D H W CY</td>
<td>D H W CY</td>
<td>D H W CY</td>
</tr>
<tr>
<td>16</td>
<td>1 6 5 4 5 2</td>
<td>1 4.5 5 2.5</td>
<td>1 4 3 4 1.5</td>
</tr>
<tr>
<td>12</td>
<td>1 3.5 3.5 1</td>
<td>1 4 4 1.5</td>
<td>1 3 3 75</td>
</tr>
<tr>
<td>8</td>
<td>.5 2.5 2.5 .5</td>
<td>.5 3 3 .5</td>
<td>.5 2 2 .3</td>
</tr>
</tbody>
</table>

TABLE 2

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>HORIZONTAL 1/4 BEND</th>
<th>HORIZONTAL 3/4 BEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCH DIA.</td>
<td>D H W CY</td>
<td>D H W CY</td>
</tr>
<tr>
<td>16</td>
<td>1 3.5 3.5 1</td>
<td>1 2.5 2.5 .6</td>
</tr>
<tr>
<td>12</td>
<td>1 2.5 2.5 .5</td>
<td>1 2 2 .4</td>
</tr>
<tr>
<td>8</td>
<td>.5 1.5 1.5 .25</td>
<td>.5 1.5 1.5 .25</td>
</tr>
</tbody>
</table>

D IS THE DIMENSION INTO UNDISTURBED GROUND IN FEET
H IS HEIGHT OF THRUST BLOCK IN FEET
W IS WIDTH OF THRUST BLOCK IN FEET
ALL DIMENSIONS ARE MINIMUM.
THRUST BLOCKS IN LOOSE FILL OR SAND AREAS ARE NOT INCLUDED IN THESE TABLES AND WILL REQUIRE ADDITIONAL ANALYSIS.

THRUST RESTRAINT

CONCRETE THRUST BLOCK DETAILS
HORIZONTAL TEES - LENGTH OF RESTRAINED JOINTS

<table>
<thead>
<tr>
<th>TEE SIZE</th>
<th>L_b</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot; x 8&quot; : (8&quot;, 12&quot;, 16&quot; OR 24&quot;) x 12&quot;</td>
<td>0</td>
</tr>
<tr>
<td>16&quot; x 16&quot;</td>
<td>42'</td>
</tr>
<tr>
<td>36&quot; x 24&quot;</td>
<td>277'</td>
</tr>
</tbody>
</table>

1/8 VERTICAL BENDS - LENGTH OF RESTRAINED JOINTS

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot;</td>
<td>26'</td>
<td>26'</td>
</tr>
<tr>
<td>12&quot;</td>
<td>37'</td>
<td>11'</td>
</tr>
<tr>
<td>16&quot;</td>
<td>67'</td>
<td>20'</td>
</tr>
<tr>
<td>24&quot;</td>
<td>67'</td>
<td>20'</td>
</tr>
</tbody>
</table>

HORIZONTAL BENDS - LENGTH OF RESTRAINED JOINTS

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>L</th>
<th>BEND SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L_32</td>
<td>L_16</td>
</tr>
<tr>
<td>8&quot;</td>
<td>3'</td>
<td>6'</td>
</tr>
<tr>
<td>12&quot;</td>
<td>4'</td>
<td>8'</td>
</tr>
<tr>
<td>16&quot;</td>
<td>7'</td>
<td>15'</td>
</tr>
<tr>
<td>24&quot;</td>
<td>7'</td>
<td>15'</td>
</tr>
</tbody>
</table>

NOTE:
1. MINIMUM LENGTHS OF PIPE REQUIRED TO RESTRAIN FITTINGS SHOWN.
2. LENGTHS BASED ON POLY-WRAPPED PIPE.
STANDARD FRAME AND LID SET IN MORTAR BED

ADJUSTING RING(S) WITH MORTAR JOINT BETWEEN RINGS

VARYING DEPTHS WHEN MULTIPLE RISER SECTIONS ARE USED

SEAL JOINTS WITH MASTIC SEALANT

1" THICK EXPANSION MATERIAL

POURED CONCRETE OR CONCRETE BLOCK SUPPORT UNDER MAIN

4" EPOXY COATED REBARS 4" C/C BOTH WAYS

COMPACTED GRANULAR BEDDING

FOR RESTRICTED HEADROOM USE ALTERNATE DESIGN WITH PRECAST FLAT SLAB TOP DESIGN SLAB FOR H20 LOADING CONDITIONS

PRECINCT REINFORCED CONCRETE MAHOLE CONCENTRIC CONE

2" CORPORATION (2 RED'D) (6" AND LARGER VALVES)

1" CORPORATION (2 RED'D) (8" & 12" VALVES) OPENINGS TO BE TAPPED DRY

FILL SPACE AROUND PIPE W/BRICK AND MORTAR

MORTAR JOINT WATER PIPE

SIDE VIEW SEAL AROUND PIPE

LIFTING LUG

GATE VALVE

MJ VALVE

1" OR 2" TEST TAPS

8" EPOXY COATED REBARS 4" C/C BOTH WAYS

OPTIONAL SPLIT BOTTOM

NOMINAL PIPE SIZES OPENING DIMENSIONS

<table>
<thead>
<tr>
<th>NOMINAL PIPE SIZES</th>
<th>OPENING DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot;</td>
<td>A 11.0&quot; B 12.5&quot;</td>
</tr>
<tr>
<td>12&quot;</td>
<td>A 15.5&quot; B 16.5&quot;</td>
</tr>
<tr>
<td>16&quot;</td>
<td>A 19.5&quot; B 21.0&quot;</td>
</tr>
</tbody>
</table>

PRECAST VALVE BASIN

FOR PIPES UP TO 16" DIA.
NOTES:
ALL FRAMES AND LIDS SHALL BE OF HEAVY DUTY TYPE
DESIGN AND MEET AASHTO M105 AND M306 REQUIREMENTS
FOR A 40,000 LB PROOF LOAD.

LETTERING FOR CHICAGO W.W. ON THE LID SHALL BE
2" SHARP FACE GOTHIC LETTERS, 3/16" WIDE AND RAISED
1/8" FROM 1/8" RECESS AS MEASURED FROM THE TOP
SURFACE OF THE LID.

LETTERING FOR C.W.W. ON THE FRAME SHALL BE LOCATED ON
THE TOP SURFACE OF THE HORIZONTAL FLANGE AND SHALL BE
1" SHARP FACE GOTHIC, 3/16" WIDE AND RAISED 1/8" AS MEASURED
FROM THE FLANGE SURFACE. LOCATION OF LETTERING SHALL BE
AS INDICATED ON DRAWING.

<table>
<thead>
<tr>
<th>FRAME AND LID DIMENSIONS</th>
<th>FRAME AND LID TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STANDARD 36&quot; SPECIAL F&amp;L</td>
</tr>
<tr>
<td>DIMENSION</td>
<td>INCHES</td>
</tr>
<tr>
<td>A</td>
<td>24</td>
</tr>
<tr>
<td>B</td>
<td>22 7/8 - 23</td>
</tr>
<tr>
<td>C</td>
<td>21</td>
</tr>
<tr>
<td>D</td>
<td>9</td>
</tr>
<tr>
<td>E</td>
<td>24 1/2 - 24 13/16</td>
</tr>
<tr>
<td>F</td>
<td>34</td>
</tr>
<tr>
<td>G</td>
<td>22 3/4</td>
</tr>
<tr>
<td>H</td>
<td>3</td>
</tr>
<tr>
<td>I</td>
<td>45 7/8 - 43 3/4</td>
</tr>
</tbody>
</table>
NOTES:
1. WHEN CONNECTING NEW COPPER SERVICE TO EXISTING LEAD SERVICE PROVIDE: COMPRESSION COUPLING FIP/FL
2. THE FIRST THREE (3) FEET OF SERVICE CONNECTION TO WATER MAIN MUST BE ENCASED IN POLYETHYLENE WRAP
NOTES:
1. END SEAL - BRICK AND MORTAR OR SELF CURING RUBBER SEAL.

2. LENGTH OF CASING PIPES UNDER RAILROAD TRACKS SHALL BE EXTENDED TO RAILROAD R.O.W. LINES AND JACKING AND RECEIVING PITS ARE NOT TO BE LOCATED WITHIN TRACK R.O.W.

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY.

CASING PIPE UNDER RAILROAD TRACK DETAIL D-18
1. LOCATION OF UTILITIES AND PROPERTY LINES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED.


3. TEST FITS MUST BE EXCAVATED IN ADVANCE OF PIPELINE CONSTRUCTION IN ORDER TO CONFIRM DEPTH AND LOCATION OF EXISTING UTILITIES AND WHEN DIRECTED BY THE DEPARTMENT MANAGER NO ADDITIONAL PAYMENT WILL BE MADE FOR TEST FIT EXCAVATION.

4. IF ANY PUBLIC OR PRIVATE UTILITIES CROSS THE WATER MAIN TRENCH AND MUST REMAIN IN PLACE, THE CONTRACTOR MUST PROTECT SAID UTILITY IN CONFORMANCE WITH THE SPECIFICATIONS OR AS DIRECTED BY THE COMMISSIONER.

5. PROVIDE EROSION CONTROL IN ACCORDANCE WITH THE SPECIFICATIONS.

6. FITTINGS AND THEIR LOCATIONS INDICATED ON THE DRAWINGS ARE TENTATIVE. THE CONTRACTOR MUST COMPLETE THE INSTALLATION WITH THE NECESSARY FITTINGS DICTATED BY FIELD CONDITIONS.

7. WORK INDICATED ON THE PLANS AND NOT REFERENCED TO A BID ITEM IS CONSIDERED INCIDENTAL TO THE WORK TO WHICH IT APPLIES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

8. WATER MAIN AND FITTINGS LOCATIONS SHOWN ON THE DRAWINGS FOR THE NEW WATER MAINS AND APPURTENANCES MAY BE CHANGED BY THE COMMISSIONER DUE TO FIELD CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SUCH CHANGES UNLESS PREVIOUSLY APPROVED BY THE COMMISSIONER.

9. THE CONTRACTOR MUST PROVIDE THRUST RESTRAINTS IN ACCORDANCE WITH THE SPECIFICATIONS. THE CONTRACTOR MUST FURNISH AND INSTALL MECHANICAL JOINT THRUST RESTRAINT GLANDS AT ALL FITTINGS AND MECHANICAL JOINTS.

10. THE CONTRACTOR MUST VERIFY THE OPERATION OF EVERY VALVE NECESSARY FOR THE REQUIRED WATER MAIN SHUT DOWN FOR EACH PIPE SECTION. FOR VALVES OR WATER MAINS UNDER 16-INCHES IN DIAMETER, THE WORK MUST BE DONE UNDER THE DIRECT SUPERVISION OF A DEPARTMENT REPRESENTATIVE PRIOR TO THE START OF THE JOB. A 24 HOUR ADVANCE NOTICE MUST BE GIVEN TO ALL CONSUMERS AFFECTED AND THE BUREAU OF OPERATIONS AND DISTRIBUTION. THE OPERATION OF ALL VALVES 16-INCHES IN DIAMETER AND LARGER MUST BE PERFORMED BY CITY FORCES PRIOR TO A 72 HOUR ADVANCE NOTIFICATION TO THE DEPARTMENT. ANY VALVE FOUND NOT OPERABLE WILL BE REPAIRED OR REPLACED BY THE DEPARTMENT UNLESS DIRECTED OTHERWISE BY THE COMMISSIONER.

11. PRIOR TO NEW CONSTRUCTION CONTRACTOR MUST PERFORM UNI-DIRECTIONAL FLUSHING OF THE SOURCE WATER MAIN TO REMOVE PIPE SEDIMENT AND FLUSH UNTIL CLEAR. THIS IS FOR EXISTING PIPING ONLY. FLUSHING IS DONE WHEN EXISTING LINE VALVES ARE CHECKED FOR PROPER OPERATION PER NOTE 10.

12. IN INSTANCES WHERE CHLORINATION IS TO BE DONE AGAINST ANY EXISTING VALVE, AT THE TIME THAT THE EXISTING WATER MAIN IS BREACHED FOR FINAL CONNECTION, THE CONTRACTOR IS TO VERIFY THAT THE EXISTING VALVES ARE IN GOOD OPERATING CONDITION AND DO NOT LEAK. ANY LEAKING VALVE SHOULD BE BROUGHT TO THE COMMISSIONER'S ATTENTION AND BE REPAIRED OR REPLACED BY THE COMMISSIONER PRIOR TO MAKING PIPE CONNECTIONS TO THE EXISTING WATER MAIN. THE Valve SHOULD REMAIN IN THE CLOSED POSITION UNTIL THE NEW WATER MAIN IS APPROVED FOR SERVICE.
13. All openings in existing water mains must be plugged or capped with ductile iron fittings until the main is abandoned.

14. All valve basins must be constructed of pre-cast reinforced concrete unless directed otherwise by the commissioner.

15. Notes indicating s.n.l., e.w.l., etc., mean south of the north property line, east of the west property line, etc., and are measured from the nearest street.

16. If a standard mechanical joint sleeve does not fit to make connection of the new pipe to the existing pipe, a transition sleeve must be used. No grinding of the existing pipe is permitted.

17. Buried street car tracks are shown for informational purposes only. Exact locations and dimensions are unknown unless noted otherwise. Caution should be exercised when excavating in the streets containing buried street car tracks. Buried tracks and cables may be used for electrical grounding by the Chicago Transit Authority or members of the Chicago area joint electrolysis committee standards. Electrical conductivity must be maintained.

18. House drains are not shown on the drawings. The contractor must locate all house drains within the area of excavation and make adjustments and/or repairs per details D-50 and D-51.

19. The department will provide the necessary I.E.P.A. water main construction permits for this contract.

20. Work within state routes are noted on the drawings and will require I.D.O.T., region 1, utility permits. The contractor is responsible for securing all permits initiated by the department and obtaining performance bonds. All work must be in accordance with I.D.O.T. permit requirements. Questions should be directed to: I.D.O.T. region one utilities coordinator at (847) 705-4298.

21. Abandon existing water mains in accordance with the specifications.

22. Swab pipe and fittings that will not be pressure tested or chlorinated with chlorine solution during installation and use extra precaution to prevent soil and debris from entering the pipe. Incorporate untested pipe into the flushing routine when possible. When connecting new pipe to the existing water system, use operating pressure to visually inspect for leaks, when feasible. Perform inspection prior to backfilling. Comply with all standards and requirements of the bureau of water quality (312) 744-8190.

23. De-chlorination of heavily chlorinated water is required. The contractor or subcontracted chlorinator shall de-chlorinate as listed for "informational purposes only" in Appendix C of the ANSI/AWWA Standard C651-05. June 1, 2005. The chlorine level must be brought to potable water levels.

24. All sewer facilities impacted or adjusted during the installation of the proposed water main must be made compliant with I.E.P.A. Title 35 regulations prior to connecting to the existing water system and performing hydrostatic testing.
6' of 4" Schedule 40 steel pipe. Fill with concrete.

Above ground paint red to match hydrant or yellow as directed by the Commissioner.

Profile

Plan

Bumper guard (typ.) see profile

Hydrant

Nozzle (typ.)
INSTALLATION NOTE:

AFTER THE TRANSITION SLEEVE IS TIGHTENED AND THE WATER MAIN PRESSURE TESTED, INSTALL MINIMUM OF FOUR (4) ELECTRICAL CONTINUITY BRACKETS. A MINIMUM OF TWO (2) ARE TO BE INSTALLED ON EACH END OF THE TRANSITION SLEEVE TO PROVIDE ELECTRICAL CONTINUITY FOR PIPE THAWING. EQUALLY SPACE BRACKETS AROUND PIPE (E.G. 9 & 3 O’CLOCK POSITION).

FOR 16-INCH DIAMETER CAST IRON PIPE INCREASE THE NUMBER OF ELECTRICAL CONTINUITY BRACKETS TO THREE (3) ON EACH END.

FOR 24-INCH DIAMETER AND LARGER CAST [IRON PIPE CONTACT THE D.W.M., BUREAU OF ENGINEERING SERVICES.

ELECTRICAL CONTINUITY BRACKET FOR TRANSITION COUPLING
BACK FEED TAPS SHALL BE INSTALLED AT APPROXIMATELY 5 "O'CLOCK" POSITION.

NOTES:

1. BACKFILL MATERIAL AROUND RIGID INSULATION BOARD SHALL BE SILICA BASED FINE SAND (FA6 OR FA7), FREE FROM ROOTS, ORGANIC MATTER, LEAVES OR OTHER INJURIOUS MATERIALS.

2. OVERLAP ALL RIGID INSULATION BOARD JOINTS.

3. RIGID INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE V1, 40 PSI COMRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).

4. INSTALL RIGID INSULATION BOARD AS INDICATED ON PLANS OR AS APPROVED BY COMMISSIONER.

SERVICE PIPE INSULATION DETAILS
GENERAL NOTES

SEE DETAIL D-51 FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR SEWER CROSSINGS.

'SEWER-WATER MAIN CLEARANCE' IS THE VERTICAL DISTANCE MEASURED BETWEEN THE OUTER EDGES OF THE SEWER AND THE WATER MAIN.

THE 'PROP. COVER AT SEWER' IS THE DEPTH OF COVER THE PROPOSED WATER MAIN NEEDS TO MEET SEWER SEPARATION REQUIREMENTS. THIS IS A CALCULATED DEPTH AND MAY NEED TO BE ADJUSTED DUE TO FIELD CONDITIONS. ANY ADJUSTMENTS MUST STILL PROVIDE THE SPECIFIED SEWER-WATER MAIN CLEARANCE.

BENDS ARE SHOWN IN THE DETAILS TO MAKE VERTICAL ADJUSTMENTS. USE 1/8" BENDS UNLESS FIELD CONDITIONS NECESSITATE A DIFFERENT ANGLE. WHENLESS THAN 10 1/2 INCHES OF VERTICAL ADJUSTMENT IS REQUIRED FOR A SEWER CROSSING, BREAK PIPE JOINTS RATHER THAN INSTALL BENDS. INSTALL WATER MAIN AT STANDARD DEPTH WHENEVER POSSIBLE.

WHEN VERTICAL BENDS ARE USED, RESTRAIN ALL PIPE JOINTS BETWEEN THE OUTERMOST BENDS.

INSTALL INSULATION WHEN 16" AND SMALLER WATER PIPE (SEE D-8) HAS LESS THAN 5 FEET OF COVER AND WHEN LARGER PIPE HAS LESS THAN 3 1/2 FEET OF COVER. SEE DETAIL D-9 FOR INSTALLATION OF WATER MAIN TRENCH INSULATION.

Casing Notes

UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS, INSTALL CASINGS OVER SEWERS BY OPEN CUT METHOD (SEE SECTION 31.23.10); INSTALL CASINGS UNDER SEWERS BY THE JACK & BORE METHOD (SEE SECTION 33.05.21).

<table>
<thead>
<tr>
<th>CARRIER PIPE</th>
<th>PVC CASING SIZE</th>
<th>STEEL CASING SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; TYPE K COPPER</td>
<td>2&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>1 1/2&quot; TYPE K COPPER</td>
<td>2 1/2&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>2&quot; TYPE K COPPER</td>
<td>3&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>4&quot; DUCTILE IRON</td>
<td>12&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>6&quot; DUCTILE IRON</td>
<td>14&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>8&quot; DUCTILE IRON</td>
<td>14&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>12&quot; DUCTILE IRON</td>
<td>24&quot;</td>
<td>24&quot;</td>
</tr>
</tbody>
</table>

* USE PVC PIPE CONFORMING TO ASTM D1785 (PVC 1120 or PVC 1220).

FOR COPPER PIPE, USE SCHEDULE 40 PVC PIPE;
FOR DUCTILE IRON PIPE, USE SCHEDULE 80 PVC PIPE.

FOR COPPER PIPE, NO JOINTS ARE ALLOWED IN THE CASING. THE COPPER PIPE MAY REST DIRECTLY ON THE INSIDE BOTTOM OF THE CASING.

FOR DI PIPE, CENTER A FULL LENGTH OF PIPE IN THE CASING.
RESTRAIN ALL DI JOINTS WITHIN THE CASING. NO CASING SPACERS ARE REQUIRED;
REST THE TWO PIPE BELLS ASSOCIATED WITH THE FULL LENGTH OF PIPE CENTERED IN THE CASING DIRECTLY ON THE INSIDE BOTTOM OF THE CASING.
INSTALL AN EXTRA LAYER OF POLYWRAP ON EACH BELL IN THE CASING.

AFTER PLACEMENT OF THE CARRIER PIPE THROUGH THE CASING, SEAL THE ENDS OF THE CASING WITH BRICK AND MORTAR, RUBBER END-SEAL, OR OTHER APPROPRIATE METHOD TO PROVIDE A LEAK-TIGHT SEAL.
SEWER CROSSING DETAIL A.0
Water Main 1.5' Above Sewer

Profile View Along Water Main Centerline

SEWER CROSSING DETAIL A.1
Water Main 6" Above Sewer - Case Water Main

Profile View Along Water Main Centerline

SEWER CROSSING DETAIL B.1
Water Main 1.5' Below Sewer - Case Water Main

Profile View Along Water Main Centerline

REV:07.12
SEWER CROSSING DETAIL
D-50
SHT. 2 OF 3
GENERAL NOTES

1. Replace the sewer/drain when the invert of the water main is LESS than 18" ABOVE the crown of the sewer/drain.

2. When a water main crosses UNDER a sewer/drain, see detail "Water Mains Crossing Under Sewers & House Drains."

3. When the invert of the water main is MORE than 18" ABOVE the crown of the sewer/drain, no sewer/drain replacement is required.

KEY TO SYMBOLS

W: Proposed DI Water Main
J: Proposed DI Water Main Joint (Continuous Pipe Between Joints)
S: Existing Sewer or House Drain
R: Proposed Sewer/Drain Replacement
C: Proposed ASTM C1173 Flexible Transition Coupling for Sewer Piping

"W" Undisturbed Soil

SEWER/DRAIN REPLACEMENT NOTES

a. Excavate as needed to replace sewer/drain. Brace and shore trenches and excavations as needed to provide safe working conditions and comply with applicable requirements.

b. Cut existing sewer/drain to remove section to be replaced; breaking or cracking is not allowed.

c. Replace the sewer/drain with a continuous length of ductile iron pipe, the same size as the sewer/drain, cut to fit. Reconnect the sewer/drain with ASTM C1173 Flexible Transition Couplings for Sewer Pipe.

d. Encase the couplings in medium bentonite chips (1/4" - 3/16") mixed with enough clean water to form a stiff clay. Pack the excavations surrounding the couplings to seal off leaks.

e. Center a length of water main pipe (18' typically) over the sewer/drain crossing.

f. Except where bentonite seals are shown, backfill using typical standards.

g. Comply with IL EPA requirements (modified and approved by IL EPA November 13, 2007).

WATER MAINS CROSSING OVER SEWERS & HOUSE DRAINS

Rev: 07.12

D-61
SHT. 1 OF 2
GENERAL NOTES

1. Replace the sewer/drain in all cases when a water main crosses UNDER the sewer/drain.

2. When a water main crosses OVER a sewer/drain, see detail "Water Mains Crossing Over Sewers & House Drains."

KEY TO SYMBOLS

W Proposed D1 Water Main
J Proposed D1 Water Main Joint (Continuous Pipe Between Joints)
S Existing Sewer or House Drain
R Proposed Sewer/Drain Replacement
C Proposed ASTM C1173 Flexible Transition Coupling for Sewer Piping

W WATER MAIN TRENCH Varies
J No Scale

SEWER/DRAIN REPLACEMENT NOTES

a. Minimum clearance between the crown of the water main and the invert of the sewer/drain is 18”.

b. Excavate as needed to replace sewer/drain. Brace and shore trenches and excavations as needed to provide safe working conditions and comply with applicable requirements.

c. Cut existing sewer/drain to remove section to be replaced; breaking or cracking is not allowed.

d. Replace the sewer/drain with a continuous length of ductile iron pipe, the same size as the sewer/drain, cut to fit. Reconnect the sewer/drain with ASTM C1173 Flexible Transition Couplings for Sewer Pipe.

e. Center a length of water main pipe (18’ typically) under the sewer/drain crossing.

f. Backfill using typical standards.

g. Comply with JL EPA requirements.

REV: 07.12

WATER MAINS CROSSING UNDER
SEWERS & HOUSE DRAINS

D-61
SHT. 2 OF 2
NOTE:
ALL OPENINGS IN BASIN SHALL BE SEALED WITH "NO SHRINK" GROUT.
NOTES

1. DUCTILE IRON WATER MAIN
2. ADAPTER P.C.C.P. TO DUCTILE IRON
3. 24" BRANCH DUCTILE IRON 3BMJ TEE
4. MJ SLEEVE
5. 24" MJ PLUG AND GASKET
6. MEGALUGS AT ALL MJ JOINTS

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY

INSPECTION MANHOLE INSTALLATION
REPLACE PIPE
NOTES

1. TAPPING SADDLE WITH 24" FLANGE
   ENCASE BURIED METAL PARTS IN CONCRETE.
   CONCRETE MUST NOT CONTAIN FLY ASH.

2. TAPPING VALVE

3. 24" BLIND FLANGE AND GASKET.

TYPICAL FOR INSTALLATION ADJACENT TO BUTTERFLY
VALVES OVER 24" DIAMETER, UNLESS OTHERWISE NOTED
ON THE DRAWINGS OR DIRECTED BY THE COMMISSIONER.

THIS DETAIL IS PROVIDED FOR
REFERENCE PURPOSES ONLY
NOTE:

1. PROVIDE 6" THICK COMPACTED CA-16 BEDDING

2. USE PRECAST CONCRETE BASE OR PROVIDE 6" THICK IDOT CLASS 'S1' CONCRETE BASE POURED IN PLACE WITH #4 EPOXY COATED REBARS 4" C/C BOTH WAYS.

3. PROVIDE FOUR #4 REBAR LUGS FOR HANDLING. CUT THE LUGS AFTER PLACING THE SLAB IN POSITION.

4. PRECAST CONCRETE TOP SLAB TO BE USED WHERE head room IS REQUIRED.

5. THE LOCATIoN OF MANHOLE TO BE DETERMINED ON INDIVIDUAL BASIS.

* 6. OPENING ON TOP SLAB TO BE CENTERED OVER TEST TAP.

SECTIONAL VIEW
SCALE: N.T.S.

USE CITY OF CHICAGO STANDARD MANHOLE FRAME AND LID

PRECAST CONCRETE ADJUSTING RINGS

FILL CA-16

24" MIN.

5'-0" (16" - 30" DIA. PIPE)
* 6'-0" (36" DIA. PIPE)
* 7'-0" (42" & 48" DIA. PIPE)

6" MIN.

2' - 3" MIN

2" TEST TAP

PIPE DIA. (SEE PLAN)

PIPE O.D.

LUG

PITOMETER TAP BASIN
PRECAST CONCRETE

FM - 4
NOTE:
INSTALL THRUST RESTRAINT GLAND ON ALL MECHANICAL JOINTS.
CONCRETE PIPE REMOVED

26"

16.8"
1.4'
12.3"

4.5"

28.8" MAX.
24" MIN.

D.I.P.
MJ SLEEVE

CONCRETE BELL
AND MJ SPIGOT

FILLER PIECE

D.I.P.
BELL END

CONCRETE SPIGOT
AND MJ SPIGOT

(TYP. P.C.C.P. BELL
TO D.I. SPIGOT)

(TYP. D.I. BELL
TO P.C.C.P. SPIGOT)

THIS DETAIL IS PROVIDED FOR
REFERENCE PURPOSES ONLY
1. CONCRETE CYLINDER PIPE
2. NUTS AND BOLTS
3. U-BOLT STRAPS
4. RUBBER GASKETS
5. GROUT OPENING
6. OPENING
7. PRESTRESSING WIRES
8. RUBBER GLAND GASKET
9. GLAND
10. STUDS AND NUTS

NOTE: INSTALL BLIND FLANGE VALVE AS REQUIRED

CONCRETE PIPE TAPPING CONNECTION
SKETCH B

① FRAME
② GLAND
③ CORPORATION STOP
④ JACKING BOLT
⑤ TOGGLE INSERTING MACHINE
⑥ SEAL CHECK COCK
CONCRETE PIPE TAPPING CONNECTION

SKETCH C

1. FRAME
2. RIBS
3. CLAMP PLATE
4. SCREWS

DETAIL VIEW
SKETCH D

- 1/4" 2ONC-2THD
- 5/16" 18NC-2THD
- 3/4" x 2 3/4" "DIAMOND" TOGGLE
- CONICAL PILOT NUT
- 1 3/16" O.D. x 3/8" J.D. STEEL WASHER
- RUBBER STOPPER
- TOGGLE BOLT
CONCRETE ENCASEMENT AROUND BURIED METAL PARTS OF TAPPING SADDLE. 3" COVER MINIMUM.

NOTES:

1. CONCRETE ENCASEMENT MUST NOT CONTAIN FLY ASH.

2. TOP OF ENCASEMENT CONCRETE MUST CONFORM TO THE ROUND SHAPE OF PIPE. DO NOT FINISH CONCRETE FLAT OVER TOP OF PIPE.
NOTES:

1. PIPE SURFACE RECEIVING A CEMENT MORTAR COATING MUST BE THOROUGHLY CLEAN AND WETTED WITH WATER JUST PRIOR TO PLACING THE CEMENT MORTAR.

2. PLACE A GROUT BAND AROUND THE PIPE AND TAPPING SADDLE STRAPS, PROVIDE SUFFICIENT LENGTH OF BAND TO ESSENTIALLY ENCIRCLE THE PIPE AND SECURE THE BAND IN SUCH A MANNER THAT MORTAR GROUT WILL BE CONTAINED WITH LITTLE OR NO LEAKAGE.

3. COMPLETELY FILL THE BAND WITH MORTAR IN ONE OPERATION BY FILLING FROM ONE END UNTIL THE MORTAR RISES ON THE OPPOSITE SIDE, AND THEN ROD OR AGITATE ON BOTH SIDES OF THE PIPE ALTERNATELY TO SETTLE THE MORTAR. DO NOT AGITATE THE MORTAR FOR AT LEAST 15 MINUTES TO ALLOW EXCESS WATER TO SEEP THROUGH THE GROUT BAND AND TO ALLOW THE MORTAR TO STIFFEN. AFTER THIS PERIOD ADD MORE MORTAR, AS NECESSARY, TO COVER THE SADDLE AND STRAPS COMPLETELY.

4. THE GAP AT THE TOP OF THE GROUT BAND MUST BE PROTECTED FROM PENETRATION OF BACKFILL INTO THE MORTAR EITHER BY ALLOWING THE MORTAR TO STIFFEN, OR BY CAPPING WITH A STIFF MORTAR MIX, OR BY COVERING WITH A STRUCTURALLY PROTECTIVE MATERIAL. THE BAND MUST NOT BE REMOVED FROM THE JOINT.

5. THE MORTAR USED AT JOINTS MUST CONSIST OF ONE PART PORTLAND CEMENT TO NO MORE THAN 3 PARTS CLEAN SAND MIXED WITH WATER. MORTAR MUST BE MIXED WITH WATER UNTIL IT HAS THE CONSISTENCY OF THICK CREAM. DURING PERIODS OF COLD WEATHER THE MORTAR MUST BE ADEQUATELY PROTECTED FROM FREEZING.

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY.
A. EXISTING BASE COURSE
B. EXISTING HOT-MIX ASPHALT SURFACE COURSE
C1. EXISTING PAVEMENT REMOVED BY MECHANICAL MILLING
C2. HOT-MIX ASPHALT BINDER COURSE 1 1/2"
C3. HOT-MIX ASPHALT SURFACE COURSE 1 1/2" OR 1 3/4"
D. BITUMINOUS MATERIAL (PRIME COAT)
E. EXISTING CURB & GUTTER
F. SEE UTILITY TRENCH DETAIL. CLSM TO USED FROM DIVISION ST. TO ROOSEVELT RD. AND HALSTED ST. TO LAKE MICHIGAN.
G. BASE MATERIAL (7" PCC BASE COURSE) SEE NOTE 1.
H. SUB-BASE GRANULAR MATERIAL, TYPE B - 6" (OMIT IF CLSM USED AS TRENCH BACKFILL)
I. #5 EPOXY COATED TIE BARS 18" LONG AT 30" C/C DRILLED AND GROUTED INTO EXISTING CONCRETE BASE (OMIT IF CLSM USED AS TRENCH BACKFILL)


2. FOR ADDITIONAL INFORMATION AND DETAILS SEE PAGES 39 & 40 AND SHEET A-2-2A OF C.D.O.T. REGULATIONS FOR OPENINGS, CONSTRUCTION AND REPAIR IN PUBLIC WAY.

3. PLATE ALL UNATTENDED EXCAVATION IN PAVEMENT AREAS AND SECURE PLATES TO PAVEMENT AND PROVIDE BARRIERS IN PARKWAY AREAS.

PAVEMENT RESTORATION DETAIL
FOR RESIDENTIAL STREETS

REV: 06.10
SEE DRAWINGS FOR FULL WIDTH RESURFACING

A EXISTING BASE COURSE
B EXISTING HOT-MIX ASPHALT SURFACE COURSE
C1 EXISTING PAVEMENT REMOVED BY MECHANICAL MILLING
C2 HOT-MIX ASPHALT BINDER COURSE 1 1/2"
C3 HOT-MIX ASPHALT SURFACE COURSE, 1 1/2" OR 1 3/4"
D BITUMINOUS MATERIAL (PRIME COAT)
E EXISTING CURB & GUTTER

F SEE UTILITY TRENCH DETAIL. CLSM IS TO BE USED FROM DIVISION ST. TO ROOSEVELT RD. AND HALSTED ST. TO LAKE STREET.

G BASE COURSE (9" PCC BASE COURSE) SEE NOTE 1.

H SUB-BASE GRANULAR MATERIAL, TYPE B - 6" (OMIT IF CLSM USED AS TRENCH BACKFILL)

I #5 EPOXY COATED TIE BARS 18" LONG AT 30" C/C DRILLED AND GROUTED INTO EXISTING CONCRETE BASE (OMIT IF CLSM USED AS TRENCH BACKFILL)


2. FOR ADDITIONAL INFORMATION AND DETAILS SEE PAGES 39 & 40 AND SHEET A-2-2A OF C.D.O.T. REGULATIONS FOR OPENINGS, CONSTRUCTION AND REPAIR IN PUBLIC WAY.

3. PLATE ALL UNATTENDED EXCAVATION IN PAVEMENT AREAS AND SECURE PLATES TO PAVEMENT AND PROVIDE BARRIERS IN PARKWAY AREAS.

PAVEMENT RESTORATION DETAIL
FOR ARTERIAL STREETS

REV: 06.10
SECTION A-A
(TYPICAL 2-LANE WITH SHOULDERS)

TRANSVERSE CONSTRUCTION JOINT

PLAN

PCC PAVEMENT
420601-05

THIS DETAIL IS PROVIDED FOR
REFERENCE PURPOSES ONLY
SECTION A-A
(TYPICAL 2 LANE WITH SHOULDERS)

ALTERNATE SECTION A-A
(TYPICAL 2 LANE WITH SHOULDERS)

PLAN

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY
SPEED HUMP PLAN

EXISTING STREET PAVEMENT

WIDTH OF STREET VARIES

TYPICAL SPEED HUMP PLAN

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY

SPEED HUMP

REV: 04.09
SHT. 1 OF 3
SECTION A-A

SECTION B-B

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY
EXISTING CONDITION

CONCRETE COLLAR (9" THICK AND DIAMETER OF STRUCTURE)
REUSED EXISTING CASTING (FRAME/GRADE IF NOT DAMAGED)

NEW STREET GRADE

PRE-CAST CONCRETE ADJUSTMENT RINGS (2 MAX.) SET IN MORTAR BEDS

ADJUST HEIGHT AS NEEDED

NEW BRICK

EXISTING MASONRY STRUCTURE

ADJUSTED STRUCTURES

NEW PRE-CAST CONCRETE SLAB, THICKNESS DESIGNED TO SUPPORT H-20 HIGHWAY LOADING
RECONSTRUCT TOP 2' OF EXISTING STRUCTURE AS REQUIRED

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY

RECONSTRUCTION/ADJUSTMENT OF MASONRY UTILITY STRUCTURE

REV: 12.15 R-13
NOTE:
IF THE ADJUSTMENT EXCEEDS A 24" HEIGHT THE CONE MUST BE REMOVED AND THE BARREL SECTION HAS TO BE ADJUSTED. THIS WORK SHALL BE PAID FOR UNDER RECONSTRUCTION PAY ITEM.

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY
NOTE:

THE TEMPORARY BITUMINOUS RAMP, LEVELING BINDER (HAND METHOD) SUPER PAVE, IS TO BE FORMED WHEN OVER 1½” IS EXPOSED ON ARTERIAL STREET AND WHERE DIRECTED BY THE COMMISSIONER REGARDLESS OF SHAPE (ROUND, SQUARE OR RECTANGULAR), THE COST OF WHICH SHALL BE INCIDENTAL TO THE ITEM, HOT-MIX ASPHALT SURFACE COURSE.

THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY
INSTALL PAVEMENT MARKERS WITHIN PROJECT LIMITS IN ACCORDANCE WITH IDOT AND CDOT APPLICABLE STANDARDS.

FULL SIZE LETTERS AND ARROWS SHALL BE USED.

\[\text{AREA} = 15.6 \text{ SQ. FT.}\]  \[\text{ONLY}\]  \[\text{AREA} = 20.8 \text{ SQ. FT.}\]

\[\text{AREA} = 11.7 \text{ SQ. FT.}\]  \[\text{AREA} = 26.9 \text{ SQ. FT.}\]

ALL PAVEMENT MARKINGS MUST CONFORM WITH THE SPECIFICATIONS.

LAYOUT OF ALL PAVEMENT SYMBOLS MUST BE APPROVED BY CDOT AND/OR IDOT AS APPLICABLE BEFORE INSTALLATION.
CURB (TYP.)

DIMENSION
IN ACCORDANCE
WITH NOTE NO. 1

CROSSWALK 6" WIDE
WHITE LINES

CROSSWALK WIDTH
(SEE NOTE NO. 1)

EXISTING CROSSWAY
RAMPS (TYP.)

STOP BAR
12" OR 24" WIDE WHITE LINE
(MATCH EXISTING WIDTH)

CENTER LINE 4" WHITE LINE
(WHEN USED)

4' TYP.  
(SEE NOTE NO. 1)

NOTE:

1. DISTANCE MUST BE IN ACCORDANCE WITH EXISTING
INSTALLATION OR AS DIRECTED BY CDOT AND/OR
IDOT AS APPLICABLE.
THIS DETAIL IS PROVIDED FOR REFERENCE PURPOSES ONLY

PAVEMENT MARKING DETAILS

LETTERS & SYMBOLS

R-18

REV:04.09

SHT: 3 OF 3
QUANTITY 21.1 S.F.

QUANTITY 27.4 S.F.

QUANTITY 15.2 S.F.

THIS DETAIL IS PROVIDED FOR
REFERENCE PURPOSES ONLY

SHORT TERM PAVEMENT
MARKING LETTERS AND SYMBOLS

REV:04.09
CABLE BRIDGING OF CUT RAILS
(WHICH RAILS CANNOT BE RE-USED)

CONTACT YOUSSEF TABIB, COM ED TRANSMISSION LINE ENGINEERING, AT (630) 576-6952 (OFFICE) OR (708) 204-7178 (CELL) A MINIMUM OF 2 WEEKS IN ADVANCE OF STREET CAR TRACK WORK TO SCHEDULE RECTIFIER SHUT-DOWN AND DE-ENERGIZING OF THE RAILS.
1. **For Lifting Hole:**
   - Hole plug detail.
   - For concrete pipe.
   - Details per IDOT SSRBC.

2. **For Backfill of Hatchet Areas:**
   - Use concrete, flowable fill, or CLSM.

3. **For Drain Connections:**
   - Joining joints as specified in specifications.

**NOTES:**
- Hole plug detail.
- Lengths vary.
- See this sheet.

**Typical Drain Connections:**
- Number of straight lines:
  - For existing drains:
    - 2
    - 1
    - 3

**Plan:**
- Limit of drain connection elevation.
- To be determined by the commissioner.

**Elevation:**
- Holes to be backfilled with concrete pipe sewer section of reinforced concrete.

**Future Drain:**
- Construction to an elevation that is a minimum of 7' and a maximum of 8' below ground grade.

**Future Use:**
- Branch clay wye.
- One vit. clay stopper.
- Vit. clay curve 30°.
- Clay curve 45°.

**Contract:**
- Approved plan.
- Per standard revisions.

**Granular Embedment:**
- Crushed concrete.
- Crushed gravel, crushed stone, or CA-11.

**Stabilization Stone:**
- CA-7, flowable fill, or CLSM.

**Future Connections:**
- For details of concrete pipe sewer section of reinforced concrete.

**Trench Backfill:**
- Aggregate placed for temporary bottom.
- Material is encountered at trench bottom.
- Stabilization stone is only required when unstable.

**Surface Restoration:**
- Will not be paid.

**Aggregates:**
- Stone, CA-7, flowable fill, or CLSM, in place.
- Placed within 2 feet of the pipe invert.

**Note:**
- Any additional changes or updates should be noted.

**Figure:**
- Trench backfill detail.
- Drain connection details.
- Drain stacks for future use.
FOR BRICK SEWERS

BRICK SEWER DRAIN CONNECTIONS

Connection

Proposed drain connection

Invert of proposed drain

Invert elevation of existing sewer, as requested by CDWM

Concrete collar around end of pipe, and place insert segment of bell in place.

Break out hole, invert elevation of existing sewer, to seal earth, as requested by CDWM.

Bar driven into undisturbed backfill.

Trench backfill

Line of undisturbed earth

Section of reinforced concrete pipe sewer

Granular embedment to springline

NOTE:
1. Ductile iron pipe must be bell end with push-on joints conforming to ANSI specifications.
2. Connections and stacks shown must be used for 6", 8", & 10" drains only.
3. For vitrified clay pipe drain connection and drain stack construction, see Sheet No. A1.
4. For trench backfill, refer to S يوسف. Article 1003.04.
5. For granular embedment, use CA-11 crushed gravel, crushed stone, or crushed concrete.

CONNECTED ABOVE

No shrink mortar and wedges in tapered hole

Trench backfill

Section of reinforced concrete pipe sewer

Granular embedment to springline

NOT TO SCALE

EXISTING BRICK SEWER

TYPICAL DRAIN CONNECTIONS

FOR EXISTING DRAINS

TYPICAL DRAIN STACKS

FOR FUTURE USE

DUCTILE IRON PIPE DRAIN CONNECTIONS

FOR MONOLITHIC CONCRETE SEWERS

FOR REDUCED CONCRETE PIPE SEWERS

FOR BRICK SEWERS

FOR REINFORCED CONCRETE PIPE SEWERS

GRANULAR EMBEDMENT TO SPRINGLINE

6" SOL TO ENSURE PROPER PLACEMENT OF GRANULAR EMBEDMENT

SECTION OF REINFORCED CONCRETE PIPE SEWER

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

6" SOL TO ENSURE PROPER PLACEMENT OF GRANULAR EMBEDMENT

SECTION OF REINFORCED CONCRETE PIPE SEWER

GRANULAR EMBEDMENT TO SPRINGLINE

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

NOT TO SCALE

EXISTING BRICK SEWER

TYPICAL DRAIN CONNECTIONS

FOR EXISTING DRAINS

TYPICAL DRAIN STACKS

FOR FUTURE USE

DUCTILE IRON PIPE DRAIN CONNECTIONS

FOR MONOLITHIC CONCRETE SEWERS

FOR REDUCED CONCRETE PIPE SEWERS

FOR BRICK SEWERS

FOR REINFORCED CONCRETE PIPE SEWERS

GRANULAR EMBEDMENT TO SPRINGLINE

6" SOL TO ENSURE PROPER PLACEMENT OF GRANULAR EMBEDMENT

SECTION OF REINFORCED CONCRETE PIPE SEWER

GRANULAR EMBEDMENT TO SPRINGLINE

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.

NOT TO SCALE

EXISTING BRICK SEWER

TYPICAL DRAIN CONNECTIONS

FOR EXISTING DRAINS

TYPICAL DRAIN STACKS

FOR FUTURE USE

DUCTILE IRON PIPE DRAIN CONNECTIONS

FOR MONOLITHIC CONCRETE SEWERS

FOR REDUCED CONCRETE PIPE SEWERS

FOR BRICK SEWERS

FOR REINFORCED CONCRETE PIPE SEWERS

GRANULAR EMBEDMENT TO SPRINGLINE

6" SOL TO ENSURE PROPER PLACEMENT OF GRANULAR EMBEDMENT

SECTION OF REINFORCED CONCRETE PIPE SEWER

GRANULAR EMBEDMENT TO SPRINGLINE

IN MONOLITHIC CONCRETE SEWERS, FORM A TAPERED HOLE FOR EXISTING 6", 8", & 10" DRAIN CONNECTIONS.
COLLAR AROUND AND PLACE CONCRETE END OF PIPE, SEGMENT OF BELL FURNISHED AT THE UNIT PRICE OF THE WORK. SCOPE OF THE WORK, HOWEVER, CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY NEEDED APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE DURING CONSTRUCTION OPERATIONS UNTIL BACKFILL IN PLACE. PROVISIONS SHALL BE MADE BE MAINTAINED IN SERVICE AT ALL TIMES. SUBMIT MEANS OF FLOW DIVERSION FOR REVIEW 7. CONTRACTOR SHALL DIVERT ALL FLOW FROM THE EXISTING SEWER PRIOR TO EXISTING STRUCTURE IS RESPONSIBILITY OF THE CONTRACTOR. SEWER DURING CONSTRUCTION. SUBMIT DESIGN AND DETAILS, SEALED AND SIGNED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, SHOWING TEMPORARY BRACING FOR THE EXISTING SEWER DURING CONSTRUCTION. CONTRACTOR SHALL ADEQUATELY BRACE OR SHORE EXISTING SEWER IF REQUIRED TO MAINTAIN INTEGRITY OF PROPOSED PIPE TO PIPE CONNECTION SIZE. CENTER TO CENTER SPACING OF LATERAL RECEIVING BRICK SEWER. IF DIAMETER IS MORE THAN H/3, THEN A SPECIAL DESIGN IS REQUIRED BY A STRUCTURAL ENGINEER, APPROVAL IS REQUIRED BY A LICENSED IN THE STATE OF ILLINOIS. 6. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE EXISTING SEWER DURING CONSTRUCTION. CONTRACTOR SHALL DIVERT ALL FLOW FROM THE EXISTING SEWER PRIOR TO EXISTING PIPE END TO PROVIDE FLUSH BUTT JOINT, INSTALL REBAR, AND PLACE CONCRETE JOINT AT DIAMETER OF THE CONNECTION DIAMETER OF THE CONNECTION SIZE. LESS THAN 6 TIMES THE DIAMETER CENTER TO CENTER SPACING OF LATERAL 3 #5 EQUALLY PIPE OUTSIDE DIA. CONCRETE CEMENT AGAINST PERMANENTLY EXPOSE EARTH: 3" B.) ALL OTHER REINFORCING BARS SHALL CONFORM TO IDOT SSRBC SECTION 508, COMPRESSIVE STRENGTH OF 3500 PSI.

1. ALL ITEMS AND MATERIALS SHALL CONFORM TO THE LATEST IDOT SSRBC SPECIFICATIONS, UNLESS OTHERWISE NOTED IN SUPPLEMENTAL SPECIFICATIONS FOR THE SPECIFIC PROJECT.

A.) CONCRETE CAST AGAINST PERMANENTLY EXPOSE EARTH: 3" B.) ALL OTHER REINFORCING BARS SHALL CONFORM TO IDOT SSRBC SECTION 508, COMPRESSIVE STRENGTH OF 3500 PSI.

2. ALL CONCRETE SHALL CONFORM TO IDOT SSRBC ARTICLE 1020.04, CLASS SI, WITH A

3. ALL EPOXY COATED REINFORCEMENT BARS SHALL CONFORM TO IDOT SSRBC SECTION 508, COMPRESSIVE STRENGTH OF 3500 PSI.

CONCRETE COLLAR NOTES:

- USE EPOXY OR EQUIVALENT TO SECURE REBAR.
- 2-#5 SPACED EQUALLY TO TIE COLLAR AROUND TO SEAL COLAR.
- SPACED 3 #5 EQUALLY OF THE CONNECTION BELL END OF PIPE, AND BULKHEAD MUST BE REMOVED, OR LEFT IN PLACE, ONLY AS APPROVED BY THE CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT.

PIPE TO PIPE CONCRETE COLLAR DETAIL.}

<table>
<thead>
<tr>
<th>Reinforcement Concrete Collar Detail</th>
<th>Reinforcement Concrete Collar Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>#5-H BARS</td>
<td>#5-H BARS</td>
</tr>
<tr>
<td>BARS</td>
<td>BARS</td>
</tr>
<tr>
<td>4 EACH #5 U-BARS</td>
<td>4 EACH #5 U-BARS</td>
</tr>
<tr>
<td>LAP BARS 16&quot;</td>
<td>LAP BARS 16&quot;</td>
</tr>
<tr>
<td>M20</td>
<td>M20</td>
</tr>
<tr>
<td>M20</td>
<td>M20</td>
</tr>
</tbody>
</table>

DEPARTMENT OF WATER MANAGEMENT
CITY OF CHICAGO
BUREAU OF ENGINEERING SERVICES

Example Concrete Collar Reinforcement Details

DATE: 7/3/2018
PERCENT COMPLETE: 25%
STANDARD REVISIONS: A.19

CHECKED: REVIEWED: DESIGNED: DRAWN:

[Diagram of Concrete Collar Details with dimensions and reinforcement details]
THIS INLET DETAIL IS SOMETIMES REFERRED TO AS "CHICAGO STANDARD INLET, TYPE A" - TO BE USED ONLY WITH PRIOR APPROVAL OF C.O.W.M.

SECTION
N.T.S.
STANDARD DRAINAGE STRUCTURE FOR PUBLIC STREETS

STANDARD INLET-2' Dia.
CHICAGO STANDARD MANHOLE FRAME & LID

PRECAST CONCRETE ADJUSTMENT RING

TYPE B-V.12 CURB AND GUTTER

8"
2 RING MAXIMUM

2'-0" DIA.

2'-12"

2'-12"

7'-4"

SWIRL CHAMBER

PRECAST REINF. CONC. OFFSET CONE

PULL ON RESTRICTOR TO VERIFY THAT A TIGHT FIT IS MADE.


4'-0" DIA.

PRECAST REINFORCED BASE AND RISER WITH MINIMUM 6" EMBEDMENT

SECTION

N. T. S.

STANDARD DRAINAGE STRUCTURE FOR PUBLIC STREETS

REV: 12.15

STANDARD CATCH BASIN 4' Dia.

A-23
PAVEMENT REMOVAL AND REPLACEMENT AS PER RESTORATION PLAN

HOT POURSED JOINT SEALER

VARIES*

W = 9" + O.D. + 9", WHEN TRENCH DEPTH \leq 5" FT.
W = 18" + O.D. + 18", WHEN TRENCH DEPTH > 5" FT.

NOTES:

1. THE PORTLAND CEMENT CONCRETE BASE SHALL BE 8" OR MORE (SEE SECTION 4.2b FOR REQUIRED THICKNESS). FOR CONCRETE STREETS THE CONCRETE SHALL BE BROUGHT TO GRADE (INCLUDING 1'-0" OVERLAP) AND FINISHED AS REQUIRED IN THE IDOT SSRBC.
2. ALL EXISTING PAVEMENTS SHALL BE SAW CUT 1'-0" ON BOTH SIDES OF THE TRENCH OR PAVEMENT OPENING. UNDER NO CIRCUMSTANCES SHOULD EXISTING PAVEMENT, WHICH HAS BEEN UNDERMINED OR OTHERWISE DISTURBED, BE LEFT IN PLACE AND NOT RESTORED.
3. ALL STREET PAVEMENT WILL REQUIRE PLACEMENT OF #5 TIE BARS, 18 INCHES LONG DRILLED AND GROUTED (NON SHRINK) AT 30" CENTERS ON ALL SIDES. A MINIMUM OF TWO TIE BARS WILL BE REQUIRED ON EACH SIDE OF SAW CUT BOUNDARIES.
4. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED (INCIDENTAL).

DATE REVISION CITY OF CHICAGO
1/1/2014 REV 1 STREET PAVEMENT RESTORATION
1/27/2016 REV 2 DETAIL WITH TRENCH BACKFILL

DATE SHEET DRAWN BY
12/12/06 A-2-2A CDOT
NOTES:

1. THE PORTLAND CEMENT CONCRETE BASE SHALL BE 8" OR MORE (SEE SECTION 4.2b FOR REQUIRED THICKNESS). FOR CONCRETE STREETS THE CONCRETE SHALL BE BROUGHT TO GRADE (INCLUDING 1'-0" OVERLAP) AND FINISHED AS REQUIRED IN THE IDOT SSRBC.

2. ALL EXISTING PAVEMENTS SHALL BE SAW CUT 1'-0" ON BOTH SIDES OF THE TRENCH OR PAVEMENT OPENING. UNDER NO CIRCUMSTANCES SHOULD EXISTING PAVEMENT, WHICH HAS BEEN UNDERMINED OR OTHERWISE DISTURBED, BE LEFT IN PLACE AND NOT RESTORED.

3. ALL STREET PAVEMENT WILL REQUIRE PLACEMENT OF #5 TIE BARS, 18 INCHES LONG DRILLED AND GROUTED (NON SHRINK) AT 30" CENTERS ON ALL SIDES. A MINIMUM OF TWO TIE BARS WILL BE REQUIRED ON EACH SIDE OF SAW CUT BOUNDARIES.

4. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED (INCIDENTAL).
NOTES:

1. THE PORTLAND CEMENT CONCRETE BASE SHALL BE 8" OR MORE (SEE SECTION 4.2b FOR REQUIRED THICKNESS). FOR CONCRETE STREETS THE CONCRETE SHALL BE BROUGHT TO GRADE (INCLUDING 1'-0" OVERLAP) AND FINISHED AS REQUIRED IN THE IDOT SSRBC.

2. ALL EXISTING PAVEMENTS SHALL BE SAW CUT 1'-0" ON BOTH SIDES OF THE TRENCH OR PAVEMENT OPENING. UNDER NO CIRCUMSTANCES SHOULD EXISTING PAVEMENT, WHICH HAS BEEN UNDERMINED OR OTHERWISE DISTURBED, BE LEFT IN PLACE AND NOT RESTORED.

3. ALL STREET PAVEMENT WILL REQUIRE PLACEMENT OF #5 TIE BARS, 18 INCHES LONG DRILLED AND GROUTED (NON SHRINK) AT 30" CENTERS ON ALL SIDES. A MINIMUM OF TWO TIE BARS WILL BE REQUIRED ON EACH SIDE OF SAW CUT BOUNDARIES.

4. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED (INCIDENTAL).
NOTES:
1. DEFORMED TIE BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 OR M-53 WITH AN ELONGATION NOT LESS THAN 20%.

2. HOT Poured JOINT MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-173-60 FOR CONCRETE JOINT SEALER.

3. ALL TIE BARS AND DOWEL BARS ARE TO BE EPOXY COATED.

4. SPLIT BOARD HEADERS WILL NOT BE ALLOWED.
NOTES:

1. Deformed tie bars shall conform to the requirements of AASHTO M-31 or M-53 with an elongation not less than 20%.

2. Hot poured joint material shall conform to the requirements of AASHTO Specification M-173-60 for concrete joint sealer.

3. All tie bars and dowel bars are to be epoxy coated.

4. Split board headers will not be allowed.

TYPE A
Expantion Joint (may be construction joint)

TYPE B
Construction Joint
(Longitudinal or Transverse)

TYPE C
Sawed Longitundinal Joint

TYPE D
Sawed Contraction Joint
(Longitudinal or Transverse)

TYPE D
Dummy Groove Contraction Joint
(Transverse Only)

TYPE E
Premolded Contraction Joint
(Transverse Only)
NOTE: \( H = \text{variable} 3" \text{ to } 9" \)
\( X = \text{thickness of pavement} \)
\( Y = \text{one half the thickness of concrete pavement or concrete base} \)
\( Z = 10" \text{ or thickness of pavement - whichever is greater} \)

**Type BV, 12 or**

**Type 3 Curb & Gutter**

**Type B or Type 4 Curb**

**Barrier Curb**

**Joints in Curb, Combined Curb & Gutter**

Transverse joints of a type similar to that used in the adjacent pavement shall be installed in the curb, gutter and combined curb & gutter in prolongation with the joints in the pavement. The details of the transverse joints in the curb, gutter and combined curb & gutter shall be approved by the commissioner. Curb, gutter or combined curb & gutter is constructed adjacent to a flexible base pavement. 1" thick expansion joints composed of bituminous performed joint filler shall be installed in the curb and/or gutter at points of curvature and at construction joints. Contraction joints shall also be placed between these expansion joints at distances not exceeding 20 feet. All tie bars shall be deformed—All dowel bars shall be smooth.

Note: All tie bars and dowel bars to be epoxy coated.

*At locations requiring depressed curbs see* the ADA Standards for Construction Details.
VARIOUS LOCATIONS. OF THE BITUMINOUS PREFORMED JOINT FILLER REQUIRED AT

* THE 1/2" AND 3/4" DIMENSIONS REFER TO THE POCKETS OF THE BITUMINOUS PREFORMED JOINT FILLER REQUIRED AT THE

VARIOUS LOCATIONS.
Diagram illustrating the use of soil augers in the presence of trees.

<table>
<thead>
<tr>
<th>TREE DIAMETER</th>
<th>DISTANCE OF TUNNEL FROM TREE TRUNK</th>
<th>DISTANCE OF OPEN BYPASS TRENCH FROM TREE TRUNK</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCHES</td>
<td>FEET</td>
<td>FEET</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>5*</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>6*</td>
<td>12</td>
</tr>
<tr>
<td>18</td>
<td>7*</td>
<td>14</td>
</tr>
<tr>
<td>24+</td>
<td>8*</td>
<td>16</td>
</tr>
</tbody>
</table>

* DEPENDENT ON PARKWAY WIDTH
COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL ZONE

**LEGEND**

- **ARROW** DIRECTION OF TRAVEL
- **CHANNELIZING DEVICE**
- **FILLED** WORK SPACE
- **SQUARE** SIGN

**MERGING TAPER**

**LONGITUDINAL BUFFER SPACE (OPTIONAL)**

**SHIFTING TAPER 1/2 L**

**LATERAL BUFFER SPACE (OPTIONAL)**

**SHIFTING TAPER 1/2 L**

**4 x S ft**

*S = SPEED IN MPH

L = \( \frac{ws^2}{60} \)

w = LANE WIDTH

**DOWNSTREAM TAPER (OPTIONAL)**

**LONGITUDINAL BUFFER SPACE (OPTIONAL)**

**1/2 L SHIFTING TAPER**

**LONGITUDINAL BUFFER SPACE (OPTIONAL)**

**1/3 L SHOULDER (OPTIONAL)**

**LONGITUDINAL BUFFER SPACE (OPTIONAL)**

**WORK SPACE**

**SIGN**

**CHANNELIZING DEVICE**

**DIRECTION OF TRAVEL**

**DATE**

**REVISION**

**CITY OF CHICAGO**

**DATE**

1/1/14

**SHEET**

A-6-1B

**DRAWN BY**

CDOT
DETAIL A
CONTINENTAL CROSSTRAKE
CURB-ATTACHED SIDEWALK

24" WIDE
STOP BAR (TYP.)

4' MIN. (SEE NOTE 2)

MATCHING EXISTING
RIGHT-OF-WAY LINE

2'MIN.

DETAIL C
CONTINENTAL CROSSTRAKE
SKewed INTERSECTION

SEE DETAIL A OR B TO
DETERMINE CROSSTRAKE WIDTH

2' WHITE BARS TO BE
PARALLEL TO TRAFFIC FLOW

INSTALL STOP LINE
PARALLEL TO CROSSWALK

4' MIN. (SEE NOTE 2)

DETAIL D
LADDER CROSSTRAKE

EXISTING 6" WHITE LINES
(DO NOT REPAINT)

PAGE 1 OF 2
AREA = 8.36 ft²

ALL ROUNDS R1” UNLESS OTHERWISE NOTED.
AREA = 16.2 ft²

ALL ROUNDS R1.5"
UNLESS OTHERWISE NOTED
AREA = 4.56 ft²
NOTE:
THIS SPECIFICATION REPRESENTS THE BIKE LEFT
TURN ARROW. FOR A BIKE RIGHT TURN ARROW,
USE A MIRROR IMAGE.
AREA = 6.68 ft²
NOTE:
1. THESE DIMENSIONS SHOULD BE CONSIDERED AN APPROXIMATION, TO BE USED WHEN THE CHEVRON IS CUT, IN THE FIELD, FROM 6" PREFORMED THERMOPLASTIC MARKING.
2. THIS DRAWING REPRESENTS THE RIGHT LEG OF THE CHEVRON. MIRROR THIS DRAWING FOR THE CHEVRON’S LEFT LEG.

DATE: 1/1/2014
REVISION: REVISION 1
CITY OF CHICAGO

CDOT
PARKING ON-STREET PERMITTED

WHEN POSITIONING IS PROHIBITED

ON-STREET PARKING (TYPICAL)

FACE OF CURB

EDGE OF PAVEMENT

BACK OF CURB

SHARED LANE MARKING

LATERAL POSITIONING

POSITIONING WHEN PARKING IS PROHIBITED

POSITIONING WHEN ON-STREET PARKING IS PERMITTED

11' MIN

4' MIN
SHARED LANE YIELD TO BIKES

Colors: Legend - Black
       Background - Orange

* FHWA Series 2000 Standard Alphabet
Refer to FHWA Standard Highway Signs manual for symbol detail.

DATE  REVISION  CITY OF CHICAGO

SHARED LANE YIELD TO BIKES SIGN

DATE  SHEET  DRAWN BY
1/1/14  A-7-9  CDOT
Refer to detail A.

L = 330' max.

1 Use 120' when marked bikeway ends, otherwise maintain constant symbol frequency (L).

2 Place bike & arrow symbols 6' past mid-block breaks in bike lane.
REFER TO BIKE CHEVRON DETAIL FOR MARKING DIMENSIONS.

INSTALL BIKE CHEVRON AND BIKE SYMBOL FLUSH TO ONE ANOTHER.

REFER TO BIKE SYMBOL DETAIL FOR MARKING DIMENSIONS.
Refer to Detail A

L = 220' MAX

50"

L

20'

1 Use 50' when marked bikeway ends, otherwise maintain constant symbol frequency

Detail A
APPENDIX B:
ADA STANDARDS

Provided hereinafter are the latest Department of Transportation ADA Standards which must be followed for infrastructure construction in the Public Way. Please be advised that these may be revised without notice because of new standards and regulations imposed by the Federal, State and Local Governments.
# APPENDIX B - ADA STANDARDS

## TABLE OF CONTENTS

### SECTION 1 - PLAN SHEETS

<table>
<thead>
<tr>
<th>SHEET#</th>
<th>SHEET NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1-1</td>
<td>TYPICAL CORNER RAMP LAYOUTS</td>
</tr>
<tr>
<td>B-1-2</td>
<td>2 PERPENDICULAR RAMPS AT CORNER</td>
</tr>
<tr>
<td>B-1-3</td>
<td>2 PERPENDICULAR RAMPS AT CORNER WITH RAMPS IN CURB RADIUS</td>
</tr>
<tr>
<td>B-1-4</td>
<td>PERPENDICULAR RAMP AT CORNER IN CURB RADIUS WITH SINGLE CROSSING</td>
</tr>
<tr>
<td>B-1-5</td>
<td>PERPENDICULAR RAMP AT CORNER IN CURB RADIUS WITH DETECTABLE WARNING SETBACK GREATER THAN 5'</td>
</tr>
<tr>
<td>B-1-6</td>
<td>COMBINATION RAMP AT CORNER (PARALLEL AND PERPENDICULAR RAMPS)</td>
</tr>
<tr>
<td>B-1-7</td>
<td>BLENDED TRANSITION AT CORNER</td>
</tr>
<tr>
<td>B-1-8</td>
<td>BLENDED TRANSITION AT CORNER WITH SINGLE CROSSING</td>
</tr>
<tr>
<td>B-1-9</td>
<td>FLUSH TRANSITION AT CORNER</td>
</tr>
<tr>
<td>B-1-10</td>
<td>SHARED (DIAGONAL) PERPENDICULAR RAMP AT CORNER</td>
</tr>
<tr>
<td>B-1-11</td>
<td>RAMPS AT CORNER WITH DIFFERENT SIDEWALK WIDTHS</td>
</tr>
<tr>
<td>B-1-12</td>
<td>PERPENDICULAR RAMPS AT CORNER WITH LARGE CURB RADIUS</td>
</tr>
<tr>
<td>B-1-13</td>
<td>BLENDED TRANSITION AT CORNER WITH LARGE CURB RADIUS</td>
</tr>
<tr>
<td>B-1-14</td>
<td>RAMPS THAT DO NOT ALIGN WITH CROSSWALK</td>
</tr>
<tr>
<td>B-1-15</td>
<td>PERPENDICULAR RAMP AT MID-BLOCK LOCATION</td>
</tr>
<tr>
<td>B-1-16</td>
<td>PARALLEL RAMPS AT MID-BLOCK LOCATION</td>
</tr>
<tr>
<td>B-1-17</td>
<td>PARALLEL RAMPS (ONE DIRECTION) AT MID-BLOCK LOCATION</td>
</tr>
<tr>
<td>B-1-18</td>
<td>COMBINATION RAMP (PARALLEL AND PERPENDICULAR RAMPS) AT MID-BLOCK LOCATION</td>
</tr>
<tr>
<td>B-1-19</td>
<td>MEDIAN PASS-THROUGH</td>
</tr>
<tr>
<td>B-1-20</td>
<td>MEDIAN PASS-THROUGH WITH RAMPS</td>
</tr>
<tr>
<td>B-1-21</td>
<td>ON-GRADE RAMP AT BRIDGE OR OVERPASS</td>
</tr>
</tbody>
</table>

### SECTION 2 - ALLEY AND DRIVEWAY SHEETS

<table>
<thead>
<tr>
<th>SHEET#</th>
<th>SHEET NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-2-1</td>
<td>ALLEY RETURN PLAN VIEW</td>
</tr>
<tr>
<td>B-2-2</td>
<td>ALLEY RETURN SECTIONS</td>
</tr>
<tr>
<td>B-2-3</td>
<td>DRIVEWAY CONSTRUCTION PLAN VIEWS</td>
</tr>
<tr>
<td>B-2-4</td>
<td>DRIVEWAY CONSTRUCTION SECTIONS</td>
</tr>
<tr>
<td>B-2-5</td>
<td>ALLEY &amp; DRIVEWAY DETAIL FOR REDUCED WIDTH PEDESTRIAN ACCESS ROUTE</td>
</tr>
</tbody>
</table>

### SECTION 3 - NOTES

<table>
<thead>
<tr>
<th>SHEET#</th>
<th>SHEET NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-3-1</td>
<td>CONVERSION CHARTS</td>
</tr>
<tr>
<td>B-3-2</td>
<td>GENERAL NOTES</td>
</tr>
<tr>
<td>B-3-3</td>
<td>GENERAL NOTES (CONTINUED)</td>
</tr>
<tr>
<td>B-3-4</td>
<td>ADA COMPLIANCE AND TRANSITION GUIDELINES</td>
</tr>
<tr>
<td>B-3-5</td>
<td>SEAL</td>
</tr>
</tbody>
</table>

### SECTION 4 - DETAILS

<table>
<thead>
<tr>
<th>SHEET#</th>
<th>SHEET NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-4-1</td>
<td>DETECTABLE WARNING UNIT SIZES</td>
</tr>
<tr>
<td>B-4-2</td>
<td>DETECTABLE WARNING DETAILS</td>
</tr>
<tr>
<td>B-4-3</td>
<td>CURB &amp; GUTTER DETAILS</td>
</tr>
</tbody>
</table>

---

**CITY OF CHICAGO**

**TABLE OF CONTENTS**

---

**DATE:** 10/23/2008

**SCALE:** NOT TO SCALE

**DRAWN BY:** CDOT

**CHECKED BY:** LGM
NOTES:

CURB RAMP LAYOUT B-1-2 IS PREFERRED WHEREVER POSSIBLE. WHERE RAMPS ARE LOCATED IN THE CORNER RADIUS, LAYOUT B-1-3 SHALL BE USED.

CURB RAMP PLACEMENT SHALL BE COORDINATED AS REQUIRED TO ALLOW FOR A 4’ MINIMUM WIDTH SIDEWALK AROUND EACH CORNER OF INTERSECTION. SIDEWALK NOT TO BE OBSTRUCTED BY CURB RAMPS OR OTHER BARRIERS AND SHALL HAVE A CROSS SLOPE OF 1:64 MAXIMUM.

THE BLENDED TRANSITION LAYOUT B-1-7 (AND SIMILAR) MAY BE USED WHERE TWO RAMPS ARE NOT POSSIBLE DUE TO GEOMETRIC CONSTRAINTS, SUCH AS LIMITED SIDEWALK WIDTH OR GRADE ELEVATIONS. THE BLENDED TRANSITION SHALL NOT BE USED IF ACCESS TO AN EXISTING FACILITY WOULD BE REDUCED.

THE SHARED PERPENDICULAR RAMP AT CORNER LAYOUT B-1-10 IS NOT PREFERRED AND MAY ONLY BE USED WITH PERMISSION FROM THE COMMISSIONER.

SEE SHEET B-3-3 FOR TRANSITION PANEL GUIDELINES.

Sheet B-1-2: 2 Perpendicular Ramps

Sheet B-1-3: 2 Ramps in Radius

Sheet B-1-7: Blended Transition

Sheet B-1-10: Shared Perpendicular Ramp at Corner
* SIDE FLARES WITH A MINIMUM SLOPE OF 1:20 (MEASURED PARALLEL TO CURB) ARE NECESSARY FOR DETECTION BY THE BLIND AND VISUALLY IMPAIRED AT PAVED PARKWAYS WHERE DETECTABLE WARNING IS SET BACK FROM BACK OF CURB (TO BE POSITIONED PERPENDICULAR TO THE PATH OF TRAVEL). WHERE RAMP AND SIDE FLARE SLOPES ARE NOT NECESSARY TO CONNECT STREET AND SIDEWALK, THE DETECTABLE WARNING MUST FIT BACK OF CURB (SIMILAR TO SHEETS B-1-7 THRU B-1-9).

** REFER TO DTL. SHT. B-1-5 WHERE DETECTABLE WARNING SETBACK EXCEEDS 5'-0".
SECTION A-A

NOTE:
DO NOT USE THIS DESIGN IF ACCESS TO EXISTING FACILITIES IS REDUCED
(DO NOT RAMP IN FRONT OF ENTRIES, STAIRS, GATES, ETC.)

CROSS SLOPE
1:64 MAX.
PROPERTY LINE CURB
(WHERE NECESSARY)
FACE OF BUILDING
(WHERE APPLIES)

RAMP
1:14 MAX.
TRANSITION PANEL
1:24 PREF.
1:14 MAX.

PAVED PARKWAY

LEVEL LANDING AREA
1:64 MAX.

RAMP
1:14 MAX.
CROSS SLOPE
1:64 MAX.

1:24 PREF.
1:24 MAX.

LANDSCAPED PARKWAY

SIDE CURB
SEE DTL.
SHT. B-4-3

DEPRESSED CURB
& GUTTER (SEE
DTL. SHT. B-4-3)

MINIMUM SIDEWALK
WIDTH 6'

PLAN VIEW

6' (MIN) RAMP WIDTH (TYP.)

EDGEOF GUTTER
FACE OF CURB

DEPRESSED CURB & GUTTER
DETECTABLE WARNING SURFACE

CITY OF CHICAGO
COMBINATION RAMP AT CORNER
(PARALLEL AND PERPENDICULAR RAMPS)

DRAWN BY: CDOT
CHECKED BY: LOM

DATE: 10/23/00

DATE: 07/20/00

DATE: 11/15/00

DATE: 11/14/00

DATE: 11/02/00

DATE: 08/10/12

REV 1

REV 2

REV 3

REV 4

REV 5
* THE FLAT LANDING AREA INCLUDES THE ENTIRE SPACE BEHIND THE BACK OF THE CURB TO THE BOTTOM OF EACH RAMP; THE 4'x4' AREA DASHED IS THE MINIMUM REQUIRED MANEUVERING AREA AT A LANDING (FIT BEHIND THE BACK OF CURB) FOR A PEDESTRIAN USING A WHEELCHAIR. THE FLAT LANDING MAY INCLUDE DETECTABLE WARNING.

** WHERE A STREET CROSSING IS ONLY PROVIDED IN ONE DIRECTION, SITUATE THE DETECTABLE WARNING AND DEPRESSED CURB TO BEST SERVE THE ONLY AVAILABLE CROSSING (SEE DTL. SHT. B-1-8).

*** DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY LOCATION WHERE THE SIDEWALK AND STREET ARE FLUSH.

**SECTION A-A**

DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

**SECTION B-B**

NOTE:

DO NOT USE THIS DESIGN IF ACCESS TO EXISTING FACILITIES IS REDUCED (DO NOT RAMP IN FRONT OF ENTRIES, STAIRS, GATES, ETC.)

FACE OF BUILDING (WHERE APPLIES)

PROPERTY LINE CURB (WHERE NECESSARY)

MINIMUM SIDEWALK WIDTH 6' (TYP.)

PLAN VIEW

CROSSWALK **

FACE OF CURB

EDGE OF GUTTER

DEPRESSED CURB & GUTTER

LEVEL LANDING AREA 1:64 MAX*

LEVING AREA

CROSSWALK **

CROSSWALK **

CROSSWALK **
"THE FLAT LANDING AREA INCLUDES THE ENTIRE SPACE BEHIND THE BACK OF RADIAL CURB TO THE BOTTOM OF EACH RAMP; THE 4'x4' AREA DASHED IS THE MINIMUM REQUIRED MANEUVERING AREA AT A LANDING (FIT BEHIND BACK OF CURB) FOR A PEDESTRIAN USING A WHEELCHAIR. THE FLAT LANDING MAY INCLUDE DETECTABLE WARNING

"DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY LOCATION WHERE THE SIDEWALK AND STREET ARE FLUSH. REFER TO NOTE #3 ON SHEET B-3-2 FOR ADDITIONAL INFORMATION WHEN CUTTING UNITS IS NECESSARY

NOTE:
DO NOT USE THESE DESIGNS IF ACCESS TO EXISTING FACILITIES IS REDUCED (DO NOT RAMP IN FRONT OF ENTRIES, STAIRS, GATES, ETC.)

PLAN VIEW
(PREFERRED OPTION)

CITY OF CHICAGO
BLENDED TRANSITION AT CORNER
WITH SINGLE CROSSING

DRAWN BY: CDOT
CHECKED BY: LOM

DATE: 10/23/2008
SCALE: NOT TO SCALE
DATE: 10/23/2008
SHEET B-1-8
NOTE:
A FLUSH TRANSITION IS ANY LOCATION WHERE THE SIDEWALK & TOP OF CURB REMAIN RELATIVELY FLAT AND THE ELEVATION OF THE ROADWAY PAVEMENT COMES UP TO MEET THE ELEVATION AT THE SIDEWALK AND TOP OF CURB. IN THESE CASES, NO RAMP IS NECESSARY TO CONNECT THE SIDEWALK WITH THE PEDESTRIAN CROSSING.

* DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY LOCATION WHERE THE SIDEWALK AND STREET ARE FLUSH
SECTION A-A

CLEAR MANEUVERING AREA 4' MIN.  

TOP LANDING 4' MIN.

1:14 MAX.  1:64 MAX.

DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

FACE OF BUILDING (WHERE APPLIES)

TRANSITION PANEL

LEVEL LANDING AREA 1:64 MAX.

RAMP 1:14 MAX.

90° 4' MIN.  6PREF.

CROSS SLOPE 1:64 MAX.

DEPRESSED CURB & GUTTER

DETECTABLE WARNING SURFACE

4'x4' MIN. CLEAR MANEUVERING AREA  
SEE NOTES

CROSSWALK

NOTES:

A. MIN. 17° RADIUS IS REQUIRED TO PROVIDE 4'x4' MIN. CLEAR MANEUVERING AREA AT BOTTOM OF RAMP AS SHOWN.

B. THE CLEAR MANEUVERING AREA MUST FALL COMPLETELY WITHIN THE AREA BEHIND THE FACE OF CURB LINES EXTENDED. CORNER RADIUS MUST BE MODIFIED TO MEET THIS REQUIREMENT.

C. PLACE CLEAR MANEUVERING AREA LEVEL (1:64 SLOPE) IF POSSIBLE.

FACE OF CURB (EDGE OF TRAVEL WAY)

EDGE OF GUTTER

* THE 2' MINIMUM FROM THE END OF FLARE TO THE CROSSWALK IS REQUIRED FOR THIS TYPE OF CORNER RAMP ONLY
NOTES:

A. REFER TO DETAIL SHEETS B-1-2 & B-1-3 FOR ADDITIONAL REQUIREMENTS FOR PERPENDICULAR RAMPS AT CORNER.

B. REFER TO DETAIL SHEET B-1-7 FOR ADDITIONAL REQUIREMENTS FOR BLENDED TRANSITION DESIGN.

PLAN VIEW - OPTION B: BLENDED TRANSITION

PLAN VIEW - OPTION A: PERPENDICULAR RAMPS (PREFERRED OPTION)
NOTES:

A. IT MAY BE NECESSARY TO ALIGN THE CURB RAMPS PERPENDICULAR TO CURB RATHER THAN IN LINE WITH CORRESPONDING CROSSWALK AT LARGE CURB RADI. REFER TO DETAIL SHEET B-1-14 FOR ADDITIONAL REQUIREMENTS.

B. IT IS TYPICALLY PREFERRED THAT THE RAMP ALIGNS WITH THE CROSSWALK, BUT THE AVAILABLE RIGHT-OF-WAY OR OTHER CONDITIONS MAY PROHIBIT THIS.

C. REFER TO DETAIL SHEETS B-1-2 & B-1-3 FOR ADDITIONAL REQUIREMENTS FOR PERPENDICULAR RAMPS AT CORNER.
NOTES:

A. IT IS ACCEPTABLE TO RAMP DOWN PARALLEL TO THE RADIAL CURB WHERE THE PEDESTRIAN ROUTE IS PARALLEL TO THE CURB. RAMP GRADE BREAKS MUST ALWAYS BE PERPENDICULAR TO THE PATH OF TRAVEL.

B. REFER TO DETAIL SHEET B-1-7 FOR ADDITIONAL REQUIREMENTS FOR BLENDED TRANSITION DESIGN.
NOTES:


B. IT IS TYPICALLY PREFERRED THAT THE RAMP aligns with the crosswalk, but the available right-of-way or other conditions may prohibit this.

C. REFER TO DETAIL SHEETS B-1-2 & B-1-3 FOR ADDITIONAL REQUIREMENTS FOR PERPENDICULAR RAMPS AT CORNER.
SECTION A-A

SECTION B-B

NOTE:
DO NOT USE THIS DESIGN IF ACCESS TO EXISTING FACILITIES IS REDUCED
(DO NOT RAMP IN FRONT OF ENTRIES, STAIRS, GATES, ETC.)

PLAN VIEW

LEVEL LANDING AREA
1:64 MAX.

6' MIN.

CROSSWALK

DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

SIDE CURB (WHERE APPLIES)

PROPERTY LINE CURB (WHERE NECESSARY)

MINIMUM SIDEWALK WIDTH 6' (TYP.)

1:24 PREF. 1:14 MAX.

TRANSITION PANEL

CROSS SLOPE 1:64 MAX.

RAMP 1:14 MAX.

DEPRESSED CURB & GUTTER

DETECTABLE WARNING SURFACE

CITY OF CHICAGO
PARALLEL RAMP AT MID-BLOCK LOCATION

DRAWN BY: CDOT
CHECKED BY: LGM

DATE: 10/23/2008

SCALE: NOT TO SCALE

SHEET B-1-16
NOTE:
DO NOT USE THIS DESIGN IF ACCESS TO EXISTING FACILITIES IS REDUCED
(DO NOT RAMP IN FRONT OF ENTRIES, STAIRS, GATES, ETC.)

SECTION A-A

DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

SECTION B-B

FACE OF BUILDING
(WHERE APPLIES)

TRANSITION PANEL

PAVED PARKWAY

DEPRESSED CURB & GUTTER
DETECTABLE WARNING SURFACE

PLAN VIEW

CITY OF CHICAGO
COMBINATION RAMP (PARALLEL AND PERPENDICULAR RAMPS) AT MID-BLOCK LOCATION

DRAWN BY: CDOT
CHECKED BY: LCM
PAVEMENT

** CONCRETE SIDEWALK ON TOP OF 6" SUBBASE GRANULAR MATERIAL, TYPE B

SECTION A-A

* DETECTABLE WARNING SURFACE

CROSSWALK

A

* DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

** 8"

PVEMENT

6' MIN. PEDESTRIAN REFUGE *

1:24 MAX.

8" **

1:24 MAX.

6' MIN.

MEDIAN

CROSS SLOPE 1:64 MAX.

CROSS SLOPE 1:64 MAX.

MEDIAN

SIDE CURB SEE DTL.

SHT. B-4-3

PLAN VIEW

CITY OF CHICAGO
MEDIAN PASS-THROUGH

DRAWN BY: CDOT
CHECKED BY: GK

DATE: 01/01/14
REVISION 6

08/10/12
REVISION 5

11/02/09
REVISION 4

11/14/08
REVISION 3

11/15/07
REVISION 2

07/27/07
REVISION 1

DATE: 10/23/008
SCALE: NOT TO SCALE

City of Chicago
Rahm Emanuel, Mayor
Department of Transportation
Director of Engineering
www.chicago.gov

CDOT
CHICAGO DEPARTMENT OF TRANSPORTATION
CONCRETE SIDEWALK ON TOP OF 6" SUBBASE GRANULAR MATERIAL, TYPE B

DEPRESSED CURB & GUTTER (SEE DTL. SHT. B-4-3)

SECTION A-A

DETECTABLE WARNING SURFACE

CROSSWALK

PVEMENT

RAMP

4' MIN. LANDING

RAMP

PVEMENT

1:14 MAX.

1:64 MAX.

8" *

1:14 MAX.

LEVEL LANDING AREA 1:64 MAX.

RAMP 1:14 MAX.

CROSS SLOPE 1:84 MAX.

RAMP 1:14 MAX.

CROSS SLOPE 1:84 MAX.

4 MIN.

SIDE CURB SEE DTL. SHT. B-4-3

PLAN VIEW
PLAN VIEW - SINGLE AVAILABLE CROSSING

NOTES:

A. REFER TO DETAIL SHEETS B-1-2 & B-1-3 FOR ADDITIONAL REQUIREMENTS FOR PERPENDICULAR RAMPS AT CORNER.

B. REFER TO DETAIL SHEET B-1-7 FOR ADDITIONAL REQUIREMENTS FOR BLENDED TRANSITION DESIGN. IF AVAILABLE SPACE ALLOWS, PERPENDICULAR RAMPS SHALL BE USED.

PLAN VIEW (BLENDED TRANSITION)
NOTES:

A. DETECTABLE WARNING IS NOT REQUIRED AT ALLEY RETURNS.

B. RAMP DETAILS ARE DEPENDENT UPON SITE SPECIFIC CONDITIONS (WHERE RAMPS ARE NECESSARY). SEE APPROPRIATE RAMP SHEET AS REQUIRED (TYP.).

C. SEE DETAIL B-2-5 FOR REDUCED WIDTH (4' MIN.) PEDESTRIAN ACCESSIBLE ROUTE ACROSS ALLEY / DRIVEWAY (TO ALLOW FOR ADDITIONAL SLOPE AT ALLEY / DRIVEWAY).

---

PLAN VIEW

NOTE:
WORK THIS SHEET WITH SHEET B-2-2.
SECTION A-A: CROSS SECTION AT PROPERTY LINE

EXISTING ALLEY

ALLEY RETURN (VARIES)

6' PEDESTRIAN ALLEY CROSSING

1:24 MAX.

1:24 MAX.

8" PCC

ALLEY WIDTH

W

ELEV. OF GUTTER = 0.0

EDGES ARE 1/4" MAX. ABOVE THE EDGE OF GUTTER

DEPRESSED CURB & GUTTER

ELEV. = ±7/8"

BREAK LINE

3/4" PREFORMED EXPANSION JOINT

SECTION B-B: LONGITUDINAL SECTION SHOWING DEPRESSED CURB & GUTTER

EXISTING ALLEY

ALLEY RETURN (VARIES)

6' PEDESTRIAN ALLEY CROSSING

1:12 MAX. *

1:50 MIN. *

1:64 MAX.

PROPERTY LINE

1"**

MOUNTABLE CURB & GUTTER

ELEV. = ±2"

BREAK LINE

3/4" PREFORMED EXPANSION JOINT

SECTION B-B: LONGITUDINAL SECTION SHOWING MOUNTABLE CURB & GUTTER

NOTE:

WORK THIS SHEET WITH SHEET B-2-1.
OPTION A - DRIVEWAY WITH FLARES

DEPRESSED CURB (TYP.)
DETECTABLE WARNING SURFACE

OPTION B - COMMERCIAL AND RESIDENTIAL DRIVEWAY WITH CURB
FOR USE WITH TRAFFIC SIGNALIZATION APPROVED BY CITY ORDINANCE

ALLEY NOTES:
A. DETECTABLE WARNING IS NOT REQUIRED AT NON-SIGNALIZED DRIVEWAYS.
B. RAMP DETAILS ARE DEPENDENT UPON SITE SPECIFIC CONDITIONS (WHERE RAMPS ARE NECESSARY), SEE APPROPRIATE RAMP SHEET AS REQUIRED (TYP.).
C. SEE DETAIL B-2-5 FOR REDUCED WIDTH (4' MIN.) PEDESTRIAN ACCESSIBLE ROUTE ACROSS ALLEY / DRIVEWAY (TO ALLOW FOR ADDITIONAL SLOPE AT ALLEY / DRIVEWAY).
D. DEPENDENT UPON TYPE & VOLUME OF TRAFFIC.

* SLOPE VARIES AND IS NOT GOVERNED BY ADA

NOTE:
WORK THIS SHEET WITH SHEET B-2-4.
SECTION A-A

NOTE: TRANSITION CURB AS SHOWN TO ALLOW FOR ADDITIONAL SLOPE OF ALLEY OR DRIVEWAY

WHERE REQUIRED UNITS TO EXTEND FULL WIDTH OF ACCESSIBLE ROUTE

DETECTED WARNING SURFACE REQUIRED ONLY FOR COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES, I.E. TRAFFIC SIGNALS

LANDSCAPED PARKWAY

6' (MIN) SIDEWALK

4' MIN. ACCESSIBLE PEDESTRIAN ROUTE

1:64 MAX.

TOP OF SIDEWALK (BEYOND)

TOP OF CURB (BEYOND)

TOP OF ALLEY OR DRIVEWAY

PROPERTY LINE

DEPRESSED CURB

PROPERTY LINE

4' MIN. ACCESSIBLE ROUTE

1:64 MAX.

PCC ALLEY OR DRIVEWAY

1:12 MAX.

PLAN VIEW
<table>
<thead>
<tr>
<th>% SLOPE</th>
<th>SLOPE RATIO</th>
<th>INCHES PER FOOT</th>
<th>DECIMAL FEET PER FOOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.67%</td>
<td>1:6</td>
<td>2&quot;</td>
<td>0.167'</td>
</tr>
<tr>
<td>10%</td>
<td>1:10</td>
<td>1 1/4&quot;</td>
<td>0.104'</td>
</tr>
<tr>
<td>8.33%</td>
<td>1:12</td>
<td>1&quot;</td>
<td>0.083'</td>
</tr>
<tr>
<td>7.14%</td>
<td>1:14</td>
<td>7/8&quot;</td>
<td>0.073'</td>
</tr>
<tr>
<td>5%</td>
<td>1:20</td>
<td>5/8&quot;</td>
<td>0.052'</td>
</tr>
<tr>
<td>4.17%</td>
<td>1:24</td>
<td>1/2&quot;</td>
<td>0.042'</td>
</tr>
<tr>
<td>2%</td>
<td>1:50</td>
<td>1/4&quot;</td>
<td>0.021'</td>
</tr>
<tr>
<td>1.56%</td>
<td>1:64</td>
<td>3/16&quot;</td>
<td>0.016'</td>
</tr>
</tbody>
</table>
GENERAL NOTES:

1. THE DETECTABLE WARNING USED SHALL BE CHOSEN FROM THE CHICAGO DEPARTMENT OF TRANSPORTATION LIST OF APPROVED DETECTABLE WARNING PRODUCTS. (AVAILABLE ON THE CITY OF CHICAGO WEBSITE). IT IS NOT ACCEPTABLE TO INSTALL TWO DIFFERENT DETECTABLE WARNING PRODUCTS ADJACENT TO ONE ANOTHER AT ANY LOCATION. IN THE CENTRAL BUSINESS DISTRICT, GRANITE OR OTHER SPECIALTY PAVING MATERIALS MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

2. THE DETECTABLE WARNING MUST BE INSTALLED A MAXIMUM OF 8" OR LESS FROM FACE OF CURB (SEE DETAIL SHEET B-4-2).


4. WHERE APPLICABLE, A COMBINATION OF STRAIGHT AND RADIAL DETECTABLE WARNING UNITS MAY BE USED ON COMPOUND AND LARGE RADIUS. CONTRACTOR MUST MAKE THIS DETERMINATION AND VERIFY IN FIELD.

5. THE DETECTABLE WARNING MUST CONTRAST WITH ADJACENT PAVEMENT. IF LIGHT COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE RED. IF A DARK COLORED PAVEMENT IS USED THE DETECTABLE WARNING COLOR SHALL BE YELLOW. CONTRACTOR TO VERIFY THAT PROPER CONTRAST IS OBTAINED.

6. PRIOR TO PLACING CONCRETE FOR DEPRESSED CURBS, RAMPS, OR SIDEWALKS THE CONTRACTOR SHALL VERIFY THAT LAYOUT OR DESIGN COMPLIES WITH THE REQUIREMENTS OF THE CDOT ADA STANDARDS.

7. RAMP WIDTH MUST BE A MINIMUM OF 6'-0" AND IN INCREMENTS OF 1'-0", EXCEPT WHEN USING THE PERPENDICULAR RAMP AT CORNER (OR OTHER SPECIAL CDOT APPROVED CONDITIONS), WHICH HAS A MINIMUM WIDTH OF 4'-0".

8. THE MAXIMUM ALLOWABLE RAMP RUNNING SLOPE IS 1:14, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED. GRADE BREAKS AT THE TOP AND BOTTOM OF RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN.

9. THE MAXIMUM ALLOWABLE RAMP CROSS SLOPE IS 1:64, MEASURED AT ANY PORTION OF THE RAMP. IF POSSIBLE, A MORE GRADUAL SLOPE SHALL BE USED.

10. THE MAXIMUM ALLOWABLE RAMP LANDING SLOPE IS 1:64, MEASURED AT ANY LOCATION AND IN ANY DIRECTION ON THE LANDING. THE RAMP LANDING WIDTH SHALL MATCH THE FULL WIDTH OF THE RAMP FOR A MINIMUM UNOBSERVED DEPTH OF 4'-0". RAMP LANDINGS SHALL BE PROVIDED AT THE TOP AND/OR BOTTOM OF RAMPS WHERE TURNING IS REQUIRED.

11. RAMP SIDE FLARES SHALL BE INSTALLED AT ANY LOCATION WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS INTENDED FOR PEDESTRIAN USE. TRIPPING HAZARDS, INCLUDING STEPS, DROP-OFFS, OR CURBS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK. RAMP SIDE FLARES ARE NOT REQUIRED WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS LANDSCAPED OR IS OCCUPIED BY A BARRIER THAT BLOCKS PEDESTRIAN ACCESS. EXCEPTIONS TO THIS RULE MAY BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.
GENERAL NOTES (CONTINUED):

12. UTILITIES, SUCH AS LIGHT POLES, TRAFFIC POLES AND HYDRANTS, MAY BE LOCATED IN THE FLARE OF THE RAMP BUT ARE NOT ALLOWED ON THE RAMP SURFACE OR LANDING AREAS. EXISTING UTILITY STRUCTURE LIDS MAY REMAIN WITHIN THE FLARE OR ON THE SURFACE OF THE RAMP IF THE REQUIREMENTS OF GENERAL NOTE #19 ARE MET.

13. ALL LOCATIONS WITH TYPE 4 OR TYPE B CURB (EXCEPT ALLEY APRONS) SHALL BE CONSTRUCTED AS CURB AND GUTTER TYPE BV.12 THROUGH THE LIMITS OF THE CORNER AND THE CURB RAMPS.

14. ALTERATIONS SHALL NOT DECREASE THE ACCESSIBILITY TO EXISTING FACILITIES, SIDEWALKS LEADING TO EXISTING FACILITIES, OR DOOR OR GATE ACCESS POINTS TO FACILITIES. THE ELEVATION AT THE EXISTING PROPERTY LINE OR FACILITY ACCESS POINT SHALL BE MAINTAINED AT A MINIMUM. ANY ALTERATIONS ADJACENT TO OR AFFECTING A FACILITY ACCESS POINT SHALL RESULT IN IMPROVED ACCESS OR AT A MINIMUM A REPLICATION OF EXISTING CONDITIONS, INCLUDING SIDEWALK SLOPES AND SURFACE CONDITIONS. FACILITIES INCLUDE, BUT ARE NOT LIMITED TO PRIVATE BUSINESSES, PUBLIC BUILDINGS, RESIDENCES, BUS STOPS, PUBLIC BENCHES, PAY PHONES, AND PARKING METERS.

15. THE MINIMUM CROSSWALK WIDTH IS 6'-0". CROSSWALKS SHALL BE LOCATED AS SHOWN IN THE PLAN SHEETS DEPENDING ON THE TYPE OF CURB RAMP USED. BEYOND THE CURB FACE AT THE BASE OF CURB RAMPS, A CLEAR SPACE OF 4'-0" BY 4'-0" MINIMUM SHALL BE PROVIDED WITHIN THE STRIPES OF THE CROSSWALK (WHERE PROVIDED).


17. MAIN LINE SIDEWALK SHALL HAVE A MAXIMUM CROSS SLOPE NOT TO EXCEED 1:64 FOR THE FULL WIDTH OF WALK UNLESS OTHERWISE APPROVED BY THE COMMISSIONER. WHERE TURNING IS REQUIRED AND WHERE SIDEWALKS INTERSECT, THE SLOPE OF THE SIDEWALK SHALL NOT EXCEED 1:64 IN ANY DIRECTION.

18. MAIN LINE SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 1:24 OR THE GENERAL GRADE ESTABLISHED FOR THE ADJACENT STREET, WHICH EVER IS HIGHER.

19. THERE SHALL BE NO VERTICAL LEVEL DIFFERENCES BETWEEN SURFACES GREATER THAN 1/4" ON THE MAIN LINE SIDEWALK. THERE SHALL BE NO HORIZONTAL GAPS OR OPENINGS GREATER THAN 1/2" ON THE MAIN LINE SIDEWALK.

20. WHERE OBSTRUCTIONS EXIST ON THE MAINLINE SIDEWALK, THE CLEAR WIDTH OF USEABLE SIDEWALK SHALL NOT BE LESS THAN 4'-0". OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO SIDEWALK BENCHES, FIRE HYDRANTS, SIGNAL OR LIGHT POLES, NEWSPAPER DISPENSERS, TRASH RECEPTACLES, AND UTILITY PEDESTALS.

21. CURB RAMPS AND LANDING (KEYSTONE) TO BE CONSTRUCTED WITH 8" THICK CONCRETE AT ALL TRAFFIC SIGNALIZED INTERSECTIONS AND INDUSTRIAL STREET INTERSECTIONS. AT ALL OTHER LOCATIONS, 5" THICK CONCRETE TO BE USED.

22. DEPRESSED CURB, RAMP, OR SIDEWALK DESIGNS OR LAYOUTS SHALL MAINTAIN OR IMPROVE EXISTING DRAINAGE AND THE EXISTING INTERSECTION GEOMETRY SHALL NOT BE MODIFIED WITHOUT CDOT APPROVAL.

23. ALL CONSTRUCTION DOCUMENTS MUST BE STAMPED BY A LICENSED ARCHITECT/LANDSCAPE ARCHITECT/ ENGINEER TO CERTIFY THAT THEY ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ALL CODES AND BUILDING ORDINANCES OF THE CITY OF CHICAGO AND THE STATE OF ILLINOIS.

24. NO DEVIATIONS FROM THESE STANDARDS ARE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COMMISSIONER.
I. STREET/ALLEY RESTORATION

FOR ANY PROJECT WHERE, WITHIN THE PROJECT LIMITS, A CROSSWALK IS ENCOUNTERED OR WHERE THE PROJECT LIMITS TERMINATE WITHIN 4’ OR LESS OF A CROSSWALK, THOSE CROSSWALKS AND THE ASSOCIATED CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A.)

WHEN A PROJECT CALLS FOR ONLY AN INTERSECTION TO BE REPaved, THE INTERSECTION LIMITS AS DEFINED BY THE AREA OUTLINED BY OUTERMOST CROSSWALK LINES AND ADJACENT CURB FACES AND ALL ADJOINING CROSSWALKS AND CURB RAMPS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A).

WHEN WORK IS LIMITED TO A SINGLE CORNER OF AN INTERSECTION, THE CURB RAMP MUST BE IMPROVED TO CURRENT ADA STANDARDS AND THE ADJACENT PAVEMENT MUST BE RESURFACED, AS NECESSARY TO PROVIDE FOR A FLUSH TRANSITION (SEE APPENDIX A).

WHEN ADA WORK IS LIMITED TO A SINGLE CORNER OF AN INTERSECTION, THE ADJACENT PAVEMENT MUST BE RESTORED (SEE APPENDIX A).

FOR ANY CONSTRUCTION WHERE, WITHIN THE PROJECT LIMITS, AN ALLEY APRON IS ENCOUNTERED, THE ASSOCIATED CURB RAMPS, ALLEY APRON, AND SIDEWALKS MUST BE IMPROVED TO CURRENT ADA STANDARDS IF THEY ARE NOT COMPLIANT (SEE APPENDIX A).

II. SIDEWALK INSTALLATION / REPAIRS / RECONSTRUCTION

THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10’) IN LENGTH, THAT ABUT AN EXISTING RAMP, KEYSTONE, TRANSITION PANEL, AND/OR LANDING AREA (THIS TOTAL LENGTH INCLUDES THE PRIOR ELEMENTS), SHALL BE EXTENDED TO INCLUDE THE AFFECTED RAMPS AND THESE RAMPS SHALL BE RECONSTRUCTED TO CURRENT ADA STANDARDS. IN ADDITION, ALL NEWLY PLACED SIDEWALK TEN FEET (10’) OR MORE IN LENGTH SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS WHICH INCLUDE PROVIDING A MINIMUM FOUR FEET (4’) WIDTH ACCESSIBLE PATHWAY WITH A CROSS SLOPE NOT TO EXCEED 1:64 (SEE APPENDIX A).

III. GUIDELINES FOR TRANSITIONING TO EXISTING NON-COMPLIANT CONDITION

NEW SIDEWALK PLACEMENTS GREATER THAN TEN FEET IN CONTIGUOUS LENGTH:

THE LIMITS OF ANY MAINLINE SIDEWALK REPLACEMENT, GREATER THAN TEN FEET (10’) IN LENGTH, MUST BE EXTENDED FOR A MINIMUM FIVE ADDITIONAL FEET (5’) EITHER SIDE IN ORDER TO PROVIDE A TRANSITION TO MATCH THE EXISTING SIDEWALK. THE LENGTH OF TRANSITION SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

NEW SIDEWALK REPLACEMENTS TEN FEET OR LESS IN CONTIGUOUS LENGTH (REPAIRS):

IT IS ACCEPTABLE PRACTICE TO MATCH ADJACENT SIDEWALKS AT THE EXISTING SLOPE.

CURB RAMP REPLACEMENTS

WHEN REPLACING AN ADA RAMP, THE SIDEWALK REPLACEMENT MUST EXTEND BEYOND THE LIMITS OF THE LANDING AREA AND/OR THE “KEYSTONE” A MINIMUM OF AN ADDITIONAL FIVE FEET (5’) ON EITHER SIDE IN ORDER TO PROVIDE A TRANSITION TO MATCH THE EXISTING SIDEWALK. THE TRANSITION PANEL SHALL BE LENGTHENED AS NECESSARY TO ENSURE THAT THE RUNNING SLOPE OF THE TRANSITION PANEL DOES NOT EXCEED A SLOPE OF 1:24 (PREFERRED) OR 1:14 (MAXIMUM) AT ANY POINT.

NO EXCEPTIONS TO THE ABOVE WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COMMISSIONER.
ALL DRAWINGS FOR WORK IN THE PUBLIC WAY MUST BE STAMPED AND SIGNED BY A LICENSED ARCHITECT, LANDSCAPE ARCHITECT OR LICENSED ENGINEER FOR CERTIFICATION

CERTIFICATION:

THIS CERTIFIED THAT THESE DRAWINGS HAVE BEEN REVIEWED TO THE BEST OF MY KNOWLEDGE AND THAT I BELIEVE THEY ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), AND ALL CODES AND BUILDING ORDINANCES OF THE CITY OF CHICAGO, STATE OF ILLINOIS.

LICENSED ARCHITECT / LANDSCAPE ARCHITECT / LICENSED ENGINEER
STRAIGHT DETECTABLE WARNING UNITS

WIDTH MAY VARY PER MANUFACTURER

RADIAL DETECTABLE WARNING UNITS

RADII & WIDTH MAY VARY PER MANUFACTURER

DETECTABLE WARNING UNIT SIZES

- VERIFY ALL DIMENSIONS WITH THE PRODUCT MANUFACTURER.

- IF USING RADIAL UNITS, VERIFY THAT THE CURB RADIUS MATCHES AVAILABLE UNIT RADII WITH THE PRODUCT MANUFACTURER.

- APPROVED LIST OF DETECTABLE WARNING PRODUCTS CAN BE FOUND ON CDOT’S WEBSITE (www.cityofchicago.org).

CITY OF CHICAGO
DETECTABLE WARNING UNIT SIZES
SHEET B-4-1

DATE: 10/23/008
DRAWN BY: CDOT
CHECKED BY: LCM
GENERAL NOTE:
THE ROWS OF DOMES IN THE DETECTABLE WARNING MATERIAL MUST BE ALIGNED WITH THE PATH OF
WHEELCHAIR TRAVEL WHICH IS REQUIRED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BOTTOM OF THE
RAMP TO PERMIT TRACKING BETWEEN DOME ROWS. ON BLENDED TRANSITIONS OR FLUSH TRANSITIONS, WHERE
RADIAL UNITS ARE SITUATED ABOUT THE CURB RADIUS, DOME ORIENTATION IS NOT SIGNIFICANT.

UNIT PATTERN & DOME DETAIL

1/4" MAX. VERTICAL
TRANSITION BETWEEN THE
UNIT EDGE AND ADJACENT
CONCRETE

SECURING PIN OR ANCHOR
SUPPLIED BY MANUFACTURER
(WHERE APPLICABLE)

DETECTABLE WARNING SURFACE

5" OR 8"
CONCRETE WALK

DETECTABLE WARNING
MATCHES FULL RAMP WIDTH
OR SIDEWALK WHERE FLUSH
WITH STREET

TYPICAL DETECTABLE WARNING
PLACEMENT ON A RADIUS

DETECTABLE WARNING
MATCHES FULL RAMP WIDTH
OR SIDEWALK WHERE FLUSH
WITH STREET

RAMP SIDE
FLARE (OR SIDE
CURB WHERE
APPLIES)

DETECTABLE WARNING UNIT SECTION
NOTES FOR CURB & GUTTER
DETAILS THIS SHEET:

A. CROSS SLOPE AT DEPRESSED CURB & GUTTER NOT TO EXCEED 1:64.

B. DETECTABLE WARNING SURFACE AT DRIVEWAYS REQUIRED ONLY FOR COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES, I.E. SIGNALS.

C. REFER TO REGULATIONS FOR OPENINGS, CONSTRUCTION AND REPAIR IN THE PUBLIC WAY (CDOT) FOR ADDITIONAL REQUIREMENTS FOR CURB AND GUTTER INSTALLATION.

D. RAMP SIDE FLARES SHALL BE INSTALLED AT ANY LOCATION WHERE THE SURFACE ADJACENT TO THE RAMP SURFACE IS INTENDED FOR PEDESTRIAN USE. TRIPPING HAZARDS, INCLUDING STEPS, DROP-OFFS, OR SIDE CURBS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE SIDEWALK.

E. 'P.J.M.' THIS SHEET REFERS TO PREFORMED JOINT MATERIAL.

DEPRESSED CURB & GUTTER AT ALLEY/DRIVEWAY APRON (TYPE 4 OR B CURB)

DEPRESSED CURB & GUTTER AT BOTTOM OF TYPICAL CURB RAMP
GENERAL NOTES

Pavement fabric shall be placed at least 24 in. (600 mm) from contraction joints.

Pavement fabric which is tacked longitudinally shall extend a minimum of 4 in. (100 mm) from the joint.

Pavement fabric may be positioned with the transverse edges on top or bottom of the longitudinal fabric.

All dimensions are in inches unless otherwise shown.

DATE
REV. 01-30

WP-08
Main corrections of

STD 420701-02
POST MOUNTED SIGNS

When both a parapet shoulder and a parapet are present, the dimension shall be 24 inches to the outside edge of the panel shoulder.

SIGNS ON TEMPORARY SUPPORTS

When work operations exceed four days, the sign shall be supported behind safety devices. The height shall be sufficient to be seen by motorists.

HIGH LEVEL WARNING DEVICE

ROAD CONSTRUCTION sign shall be placed 500 feet in advance of project limits.

END CONSTRUCTION sign shall be placed at the end of the work zone and shall be within 2 miles of the limits.

WORK LIMIT SIGNING

STOP

SLOW

FLAGGER TRAFFIC CONTROL SIGN
TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

Reinforced concrete jersey barriers should appear on both sides of the barricades. If a Type III barricade with an attached sign panel is not available, the sign may be stacked on an NCHRP 350 temporary sign support directly in front of the barricade.

Traffic Control Devices
STANDARD 701801-02
LANE AND EDGE LINES

2 LANE

MULTI LANE

PEND MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

NOTES:
The transverse spread of the "X" may vary according to lane width.

On multiple lane roads the edge lines shall extend across each lane.

Lanes and separate RRR symbols shall be placed adjacent to each other in each lane.

When the pavement marking symbol is used, a portion of the symbol should be located directly adjacent to the advance warning sign (NCDOT as placed by Table 2C-4, Condition 8 of the NCDOT).

All dimensions are in inches unless otherwise shown.

DATE | REVISIONS
-----|--------
1994-12 | Updated reference to current AASHTO publication.
1990-12 | Updated reference to current AASHTO publication.
1998-09 | Updated reference to current AASHTO publication.

STANDARD 780001-03
TWO-LANE / TWO-WAY

LANE REDUCTION TRANSITION

MULTI-LANE UNDIVIDED

MULTI-LANE DIVIDED

RURAL LEFT TURN

FREEWAY EXIT RAMP

SYMBOLS
- Solid line
- Chain line
- Chevron
- Solid white line
- Solid yellow line

TYPICAL APPLICATIONS
RAISED REFLECTIVE
PAVEMENT MARKERS

DATE | REVISIONS
-----|---------
2009 | Switched units to English

STANDARD 781001-03
Approved Materials List

Meter Type Installation Flowchart (WM-1)
Flowchart to determine the proper type of meter installation for the conditions found at the work site.

Typical Inside Meter Installation - Vertical Pipe (WM-2)

Typical Inside Meter Installation - Horizontal Pipe (WM-3)

Typical Inside Meter Installation – Horizontal Pipe with Contractor Spread (WM-4)

Typical Outside Meter Installation in Vault (WM-5)

Water Meter Sealing Diagram

Meter Control Information
Meter information to be collected at the time of installation

Meter Box Frame
East Jordan Iron Works

Meter Box Lid
Nicor, Inc.

Water Meter Enclosure
Old Castle Precast Carson

B-Box
Approved Materials List
for
Water Meter Installations
Revised 12/16/2011

Note: The Department of Water Management will furnish water meters, meter interface units, seals and seal crimping tools.

Where approved meter materials reference Ford Meter Box Company model numbers, equal meter materials from A.Y. McDonald or Mueller are allowed. Other substitutions are not permitted.

The following Standards will apply:
  1) Underwriters Laboratories Inc. (UL) Classified to NSF/ANSI Standard 61
  2) Applicable AWWA and ASTM standards (latest versions) including but not limited to AWWA C700, AWWA C800, ASTM B-62, ASTM B-75, ASTM B-584
  3) City of Chicago Plumbing Code (latest version)
  4) All pipes, fittings, valves and solder joints must be “Lead Free” as described below.

Reduction of Lead in Drinking Water Act:

Any part of a pipe, pipe fitting, plumbing fitting or fixture used in the installation of meters under this Contract that is in contact with potable water for human consumption must be “Lead Free” in compliance with Federal Public Law 111-380 and the Safe Drinking Water Act. This includes but is not limited to corporation stops, curb stops, roundways, service fittings and couplings, meter valves, meter couplings, copper meter setters, plumbing valves, pipe and pipe fittings.

This “Lead Free” requirement will be effective immediately upon award of Contract.

Proof of certification by an ANSI accredited test lab per ANSI/NSF Standard 61, Drinking Water Components – Health Effects, Section 8 is required. The lead content of the wetted components in contact with potable water must also be verified by an ANSI accredited test lab.

Materials identified as “Lead Free” or “No-Lead” must have a manufacturer’s mark, e.g., “NL” cast or permanently stamped into the main body for proper identification.
An affidavit certifying compliance with these standards and specifications must be signed and submitted by the manufacturing firm’s Quality Assurance or Engineering Manager.

**Water Meter Indoor Installation**

**Meter Settings:**
- CH11-233-NL (Copper Horn, FIP swivel inlet / swivel outlet ¾” x ¾”, 5/8” x 7/8” Meter- No Lead)
- CH11-243-NL (Copper Horn, FIP swivel inlet / swivel outlet 1” x ¾”, 5/8” x 7/8” Meter- No Lead)
- CH11-244-NL (Copper Horn, FIP swivel inlet / swivel outlet 1” x 1”, 5/8” x 7/8” Meter- No Lead)
- CH11-444-NL (Copper Horn, FIP swivel inlet / swivel outlet 1” x 1”, 1” Meter- No Lead)

**Straight Meter Ball Valves:**
- B13-332-W-NL (3/4” Ball Valve, ¾” FIP x 5/8” x 3/4” Meter Swivel, Locking Wing- No Lead)
- B13-342-W-NL (3/4” Ball Valve, 1” FIP x 5/8” x 3/4” Meter Swivel, Locking Wing- No Lead)
- B13-444-W-NL (1” Ball Valve, 1” FIP x 1” Meter Swivel, Locking Wing- No Lead)
- B11-666-W-NL (1-1/2” Ball Valve, 1-1/2” FIP x 1-1/2” FIP, Locking Wing- No Lead)*
- B11-777-W-NL (2” Ball Valve, 2” FIP x 2” FIP, Locking Wing- No Lead)*

**Straight Meter Couplings:**
- C38-xx-NL (Coupling, Meter Swivel x MIP, Size x Size- No Lead)
- C31-xx-NL (Coupling, Meter Swivel x FIP, Size x Size- No Lead)

**Regulator Adapter (RA or “Meter Spud”) Fittings:**
- RA-6-NL (Regulator Adapter 1-1/2” Meter, Male Meter Threads x 1-1/2” MIP)
- RA-7-NL (Regulator Adapter 2” Meter, Male Meter Threads x 2” MIP)

**Bent Meter Couplings:**
- L38-xx-NL (1/4 Bend, Meter Swivel x MIP, Size x Size- No Lead)
- L31-xx-NL (1/4 Bend, Meter Swivel x FIP, Size x Size- No Lead)

**Compression Couplings**: **++:**
- C14.xx-NL (Coupling, FIP x CTS Comp, size x size- No Lead)
- C17.xx-NL (Coupling, FIP x PVC,(IPS) Comp, size x size- No Lead)
C84-xx-NL (Coupling, MIP x CTS Comp, size x size- No Lead)
C87-xx-NL (Coupling, MIP x PVC,(IPS) Comp, size x size- No Lead)
**To be used only on new installations of 5/8" and 1" meters (service not presently metered)

**Ball Valves:**
B11-333-NL (3/4" Ball Valve, ½" FIP x ⅜" FIP- No Lead)
B11-444-NL (1" Ball Valve, 1" FIP x ⅜" FIP- No Lead)
B11-666-NL (1-1/2" Ball Valve, 1-1/2" FIP x 1-1/2" FIP- No Lead)
B11-777-NL (2" Ball Valve, 2" FIP x 2" FIP- No Lead)
HB-34S (Straight Lever Handle (3-1/4" Long) For 3/4" and 1" Ball Valves)
HB-67S (Straight Lever Handle (4-7/8" Long) For 1-1/2" and 2" Ball Valves)

**Access Panels:**
Watts Springfit Access Panel, API-15, 15" X 15"
ACUDOR Plastic Access Door, PA-3000, 14"x29" OR 22"X22"

**Water Meter Pit (Outdoor) Installation**

**Meter Setters:**
Ford Model VBB82W-22-44-FP-NL (5/8"x3/4"meter w/ 2 full port ball valves, flare copper inlet & outlet)
Ford Model VBB84W-22-44-FP-NL (1"meter w/ 2 full port ball valves, flare copper inlet & outlet)

**Compression Couplings:**
Ford Model Qx2-x4 (Pack Joint for lead pipe by 1" flare copper)

**Water Meter Enclosures:**
Oldcastle Precast Carson, Model MS24558, 3 layer rotational molded polyethylene blend, 53 ½"L X 23 ½"T.D. X 5/8” Wall. Black exterior / white interior. (See attached drawing)

**Meter Box Frame:** East Jordan Iron Works, Product No. 144011, Catalog No. 1440Z. (See attached drawing)

**Meter Box Cover:** Nicor 15 inch Read Rite (See attached drawing)

**Roundway and B-Box Replacement**

Roundways:
B22-444M-NL (1" Ball Valve-Minneapolis, 1"Flare Copper x 1" Flare Copper- No Lead)
B-Boxes (Shut-off Boxes):
VALCO Model 3113636M2 (City of Chicago, cast iron lid and rim, brass pentagon head bolt, ABS plastic tube sections, screw style bottom for attachment to 1” Minneapolis roundways) or approved equal (See attached drawing).
METER TYPE INSTALLATION FLOWCHART
(SERVICE IS PRESENTLY UNMETERED)

Perform inspection of outside site and interior piping at service entrance into basement.

Consult with DWM on appropriate action to take. May have to defer meter installation or install in outside pit.

Were any of the following found:
- Existing outdoor meter pit?
- Multiple branches not controlled by one valve?
- Piping in poor condition?
- Living Space?
- Obstructions?
- Corroded?

HORIZONTAL PIPE-CONTRACTOR SPREAD
NO METER SETTER INSTALLATION
Remove existing spread fittings and install horizontal meter with appropriate valves and fittings.

INTERIOR PIPING HAS HORIZONTAL SPREAD AREA ADEQUATELY BLED FOR METER INSTALLATION WITH FITTINGS.

For other piping configurations or site conditions that seem to prohibit the standard meter installation described, consult with DWM for appropriate action to take.

HORIZONTAL PIPE-CONTRACTOR SPREAD
NO METER SETTER INSTALLATION
Cut into horizontal piping and install horizontal meter with appropriate valves and fittings.

INTERIOR PIPING IS HORIZONTAL OR HAS HORIZONTAL SPREAD AREA.

INTERIOR PIPING HAS NO UNION OR FITTINGS TO CUT LINE FOR METER INSTALLATION WITH FITTINGS.

VERTICAL PIPE METER SETTER INSTALLATION
Cut into vertical piping and install vertical meter setter with appropriate valves and fittings.

WM-1
Revised 11/7/11
TYPICAL INSIDE METER INSTALLATION

VERTICAL PIPE*

(SERVICE IS PRESENTLY UNMETERED)

BEFORE

CUT & REMOVE EXISTING PIPE SECTION

EXISTING STREET SIDE CONTROL VALVE

BASEMENT FLOOR

AFTER

IPS BRASS NIPPLE

APPROVED COMPRESSION CONNECTION

OUTLET BALL VALVE (IF SPACE PERMITS)

METER

IPS BRASS NIPPLE

APPROVED METER SETTER

INLET BALL VALVE (IF REQUIRED)

EXISTING STREET SIDE CONTROL VALVE

NOTE: CUT WALL OPENING AND ADD ACCESS DOOR AS REQUIRED FOR CONCEALED PIPING.

*INSTALLATION SHOWN IS TYPICAL ACTUAL FIELD CONDITIONS MAY VARY AND REQUIRE ADDITIONAL FITTINGS NOT SHOWN TO PROPERLY COMPLETE THE METER INSTALLATION.
TYPICAL INSIDE METER INSTALLATION
HORIZONTAL PIPE*
(SERVICE IS PRESENTLY UNMETERED)

BEFORE
CUT & REMOVE
EXISTING PIPE
& FITTINGS
EXISTING STREET SIDE
CONTROL VALVE
BASEMENT
FLOOR

AFTER
IPS BRASS
NIPPLE & ELBOW
METER
EXISTING STREET SIDE
CONTROL VALVE
BALL METER VALVE
FEMALE METER COUPLING
(IF SPACE PERMITS)
IPS BRASS NIPPLE
BALL METER VALVE
MALE IPS X FEMALE METER COUPLING
(IF REQUIRED)
APPROVED COMPRESSION
CONNECTION

NOTE: CUT WALL OPENING AND ADD ACCESS
DOOR AS REQUIRED FOR CONCEALED PIPING.

*INSTALLATION SHOWN IS TYPICAL, ACTUAL FIELD CONDITIONS MAY
VARY AND REQUIRE ADDITIONAL FITTINGS NOT SHOWN TO PROPERLY
COMPLETE THE METER INSTALLATION.

NOT TO SCALE
REVISED 11/7/11
TYPICAL INSIDE METER INSTALLATION
HORIZONTAL PIPE WITH CONTRACTOR SPREAD*
(SERVICE IS PRESENTLY UNMETERED)

BEFORE

EXISTING STREET SIDE CONTROL VALVE
BASEMENT FLOOR

REMOVE EXISTING IPS UNION & NIPPLES

~13"

AFTER

CONNECTORS MALE IPS x METER COUPLING
EXISTING STREET SIDE CONTROL VALVE
INSTALL METER OUTLET VALVE IF SPACE PERMITS

NOTE: CUT WALL OPENING AND ADD ACCESS DOOR AS REQUIRED FOR CONCEALED PIPING.

*INSTALLATION SHOWN IS TYPICAL. ACTUAL FIELD CONDITIONS MAY VARY AND REQUIRE ADDITIONAL FITTINGS NOT SHOWN TO PROPERLY COMPLETE THE METER INSTALLATION.

WM-4
NOT TO SCALE
REVISED 11/7/11

173
NOTE: INSTALL INSULATED METER BOX OVER METER AND SETTER

*INSTALLATION SHOWN IS TYPICAL; ACTUAL FIELD CONDITIONS MAY VARY AND REQUIRE ADDITIONAL FITTINGS NOT SHOWN TO PROPERLY COMPLETE THE METER INSTALLATION.
INSTALLATION OF SEAL WIRE AFTER METER INSTALLATION

1. Run seal wire through hole in street side or inlet side meter coupling
2. Run seal wire through hole located on the underside of the meter
3. Run seal wire through hole in house side or outlet side meter coupling
4. Run both ends of seal wire through seal tag
5. Make certain seal wire is tight
6. Clamp seal tag closed
INSTALLATION OF SEAL WIRE AFTER METER INSTALLATION

1. Run seal wire through hole in street side or inlet side meter coupling
2. Run seal wire through hole located on the underside of the meter
3. Run seal wire through hole in house side or outlet side meter coupling
4. Run both ends of seal wire through seal tag
5. Make certain seal wire is tight
6. Crimp seal tag closed
Meter Control Information

The following information is required by the Department for control of water meters and is to be recorded at the time of meter installation:

Address
Make of Meter
Size of Meter
Meter Serial #
Meter Location ( bsmt., 1st flr., crswl space., sdwk. vlt./ plky. vlt., )
Nature of Occupancy - Old SFR , Old Condos/Apt.’s w/ # of units.
Date Occupied - This will be FOR YEARS unless occupied within last year.
Meter Set Date
Control Date
Building Size   (ex. 2x20x54)
Meter Transmitter #
Meter Registration
Meter Location (relative to public right-of-way measurements for nearest intersection)
CUSTOMER FORMAT DRAWING
ESTIMATED PART WEIGHT: 57 lbs.

MATERIAL: POLYETHYLENE BLEND
BLACK EXTERIOR/WHITE INTERIOR

REFERENCE VIEWS

WHITE INTERIOR

SECTION B-B

5/8 WALL
3 1/2 TYP
1 1/2 FOOTING

5 3/8 TYP
2 3/8 TYP
2 TYP

Diameter: 53 1/2

A A

B B

C C

D D

E E

F F

G G

H H

I I

J J

K K

L L

M M

N N

O O

P P

Q Q

R R

S S

T T

U U

V V

W W

X X

Y Y

Z Z

NOT RELEASED

180
PLASTIC SHUT-OFF BOX
FOR SERVICES 2" & SMALLER

D-17