# CITY OF DENISON, TEXAS
## STANDARD CONSTRUCTION DETAILS

**August, 2015**

<table>
<thead>
<tr>
<th>SECTION</th>
<th>DESCRIPTION</th>
<th>SHEET NO.</th>
<th>SECTION</th>
<th>DESCRIPTION</th>
<th>SHEET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL NOTES</td>
<td>GENERAL CONSTRUCTION NOTES</td>
<td>00</td>
<td>WATER</td>
<td>WATER</td>
<td>14</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / SECTIONS</td>
<td>01</td>
<td>WATER</td>
<td>WATER</td>
<td>15</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / SECTIONS / DETAILS</td>
<td>02</td>
<td>WATER</td>
<td>METER VAULT</td>
<td>16</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / JOINTS</td>
<td>03</td>
<td>WATER</td>
<td>METER VAULT</td>
<td>16A</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / DETAILS</td>
<td>04</td>
<td>WATER SEWER</td>
<td>SANITARY SEWER</td>
<td>17</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / ALLEY / DRIVEWAYS</td>
<td>05</td>
<td>SANITARY SEWER</td>
<td>SANITARY SEWER</td>
<td>18</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / RADIUS</td>
<td>06</td>
<td>SANITARY SEWER</td>
<td>SANITARY SEWER / MANHOLES</td>
<td>19</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / DETAILS / EROSION</td>
<td>07</td>
<td>EMBEDMENT</td>
<td>TYPICAL EMBEDMENTS</td>
<td>20</td>
</tr>
<tr>
<td>STREET</td>
<td>PAVING / SIDEWALKS</td>
<td>08</td>
<td>WALL</td>
<td>THIN BRICK SCREENING WALL</td>
<td>21</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>STORM SEWER / INLET</td>
<td>09</td>
<td>WALL</td>
<td>BRICK SCREENING / RETAINING</td>
<td>22</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>STORM SEWER / INLET</td>
<td>10</td>
<td>FENCE</td>
<td>FENCING</td>
<td>23</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>STORM SEWER / INLET / DETAILS</td>
<td>11</td>
<td>FENCE</td>
<td>FENCING</td>
<td>24</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>CHANNELS / CONCRETE</td>
<td>12</td>
<td>FENCE</td>
<td>FENCING</td>
<td>25</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>CHANNELS / GABIONS</td>
<td>13</td>
<td>MISCELLANEOUS</td>
<td>MISCELLANEOUS</td>
<td>26</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>MISCELLANEOUS</td>
<td>14</td>
<td>MISCELLANEOUS</td>
<td>JUNCTION BOX</td>
<td>27</td>
</tr>
<tr>
<td>STORM SEWER</td>
<td>MISCELLANEOUS</td>
<td>15</td>
<td>MISCELLANEOUS</td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>
TABLE OF CROWN HEIGHTS AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS

<table>
<thead>
<tr>
<th>CURB / GUTTER NO.</th>
<th>CROWN HEIGHT</th>
<th>CROWN RISE</th>
<th>ORDINATE</th>
<th>CROWN FALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>5/16&quot;</td>
<td>3/16&quot;</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>3/16&quot;</td>
<td>3/16&quot;</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>1&quot;</td>
<td>3/16&quot;</td>
<td>3/16&quot;</td>
<td>1&quot;</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

TYPICAL PERMANENT BARRICADE DETAIL

LEGEND

- PARABOLIC CURB
- GUTTER
- BARRICADE

MONOLITHIC CURB

SECTION A-A

CURB AND GUTTER

STREET HEADER

RAIL HEADER

CITY OF DENISON, TEXAS

STANDARD CONSTRUCTION DETAILS

PAVING / SECTIONS / DETAILS
CITY OF DENISON, TEXAS
AUGUST, 2015
CONCRETE FLUME / EROSION CONTROL

STANDARD CONSTRUCTION DETAILS

REINFORCED CONCRETE FLUME WITHOUT CURBS
(Fully Enclosed)

REINFORCED CONCRETE FLUME WITH CURBS

ISOMETRIC VIEW

SILT FENCE DETAIL

STONE OVERFLOW STRUCTURE

EROSION CONTROL

CONSTRUCTION ENTRANCE ROAD
FOR EROSION CONTROL

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
TIPPS Firm No. NO. 141 TIPPS Firm No. 04111008
15150 Greenville Ave., Suite 400
Dallas, Texas 75243 (214) 361-7900

CITY OF DENISON, TEXAS
STANDARD CONSTRUCTION DETAILS
CONCRETE FLUME / EROSION CONTROL

[Diagram of concrete flume and erosion control details]
TYPICAL CHANNEL WITH REINFORCED CONCRETE LINED PILOT CHANNEL

REINFORCED CONCRETE PILOT CHANNEL (VERTICAL WALL)

GENERAL NOTES FOR LINED CHANNELS
1. Construction joint shown for convenience only.
   Modeling construction may be used.
2. All interior channels shall be a through joint.
3. All reinforcing steel shall be 3/8" dia. and spaced 12"
   center to center beam ways unless otherwise specified.
4. If wood forms are used with construction joint, they
   shall be two 3" x 4" and shall not be removed until concrete
   on slopes is ready to be placed.
5. All concrete in lined channel shall be concrete class "A"
   (min. 2000 psi) concrete.
6. Flat bottom to be constructed when channel width is
   less than 12 foot.
7. 3/4" channel on all concrete channels.

TRANVERSE EXPANSION JOINT

CONSTRUCTION JOINT

SLAB EDGE - DETAIL "A"

CITY OF DENISON, TEXAS
STANDARD CONSTRUCTION DETAILS
CHANNELS / CONCRETE

Birkhoff, Hendrick, & Carter, L.L.P.
Professional Engineers
15199 Coles Hill Rd., Suite 660
Dallas, Texas 75243 (214) 341-7900

Sheet No.

City of Denison, Texas
August, 2015
Sheet 12
METER VAULT & BY-PASS SPECIFICATIONS

1. Verify the correct operating department prior to construction of METER VAULT or BY-PASS ASSEMBLY.

2. The METER VAULT can be either round or square to accommodate the single entry point of METER VAULT. A minimum opening shall be 48" x 48".  The single METER VAULT shall be located in the center of the BY-PASS.  The single METER VAULT shall be 1-1/2" I.D. in steel pipe. Any type of pipe material shall be approved by the City of Denison.  All materials shall be approved by the City of Denison.

3. The entry pit of the vault shall be a 1-1/2" pipe entry pit for water metering.  The entry pit shall be 16" x 16".

4. The METER VAULT shall not be encased in any form of framing members and must be located in a drainage area.

5. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

6. A drain valve shall be provided at the base of the METER VAULT to drain the water in the event of flooding.  The drain valve shall be 2" NPT.

7. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

8. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

9. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

10. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

11. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

12. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

13. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.

14. The METER VAULT shall be equipped with a 6" lid that can be easily removed for access to the meter.
AERIAL CROSSING PIER & PIER CAP

NOTE:
ENGINEERING DESIGN SHALL BE SUBMITTED TO CITY FOR APPROVAL. FOR USE FOR EACH CROSSING, PIERs SHALL BE PLACED AT MAXIMUM SPAN DISTANCE AS DICTATED BY ENGINEER’S DESIGN.