

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. A MANHOLE BARREL CONSTRUCTION JOINT IS ALLOWED WITHIN A STRAIGHT WALL SECTION OF THE BARREL AT 12'-0" ABOVE THE MANHOLE BASE AND SHALL HAVE A KEY WAY AND #4 REBAR AT 12"-INCH ON CENTERS WITH 15' EMBEDMENT. A WATER STOP SHALL BE USED IF DIRECTED BY THE UTILITY.  
2. THE BASE AND WALLS SHALL BE POURED MONOLITHICALLY.  
3. THE CENTERLINE OF ALL PIPES ENTERING AND LEAVING MANHOLE SHALL PASS THROUGH THE CENTER OF THE MANHOLE.  
4. MANHOLES THAT ARE LESS THAN 12'-0" IN DEPTH SHALL BE INDIVIDUALLY DESIGNED PER LOCATION CONDITIONS AND MUST BE APPROVED BY THE UTILITY.

5. POUR OUTSIDE MANHOLE BASE SO THAT THE TOP OF OUTSIDE BASE IS EVEN OR 2-INCH ABOVE THE CROWN OF THE PIPES ENTERING AND LEAVING MANHOLE. EXTEND MANHOLE BASE TO LIMITS OF EXCAVATION IN ALL DIRECTIONS 24" MINIMUM.  
6. CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES. SLOPE CHANNELS TO MATCH PIPE INVERTS.  
7. THE TOP OF MANHOLE TO BE LEVEL WITH FINISHED GRADE, UNLESS OTHERWISE NOTED OR DIRECTED BY THE UTILITY.  
8. BRUSH FINISH SURFACES OF CONCRETE AND REMOVE ALL SHARP EDGES.

1. THE UTILITY MUST APPROVE THE USE OF A DROP MANHOLE AND IF APPROVED, THE DROP MANHOLE SHALL BE INSTALLED IN THE 6'-0" BARREL SECTION.  
2. THE SEWER SERVICE PIPE CROWN ELEVATION ENTERING THE MANHOLE SHALL MATCH THE PIPE CROWN ELEVATION OF THE ENTERING SEWER MAIN.

**6 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL**  
N.T.S.

SD-1  
1  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. A MANHOLE BARREL CONSTRUCTION JOINT IS ALLOWED WITHIN A STRAIGHT WALL SECTION OF THE BARREL AT 12'-0" ABOVE THE MANHOLE BASE AND SHALL HAVE A KEY WAY AND #4 REBAR AT 12"-INCH ON CENTERS WITH 15' EMBEDMENT. A WATER STOP SHALL BE USED IF DIRECTED BY THE UTILITY.  
2. THE BASE AND WALLS SHALL BE POURED MONOLITHICALLY.  
3. THE CENTERLINE OF ALL PIPES ENTERING AND LEAVING MANHOLE SHALL PASS THROUGH THE CENTER OF THE MANHOLE.  
4. MANHOLES THAT ARE LESS THAN 8'-0" IN DEPTH SHALL BE INDIVIDUALLY DESIGNED PER LOCATION CONDITIONS AND MUST BE APPROVED BY THE UTILITY.

5. POUR OUTSIDE MANHOLE BASE SO THAT THE TOP OF OUTSIDE BASE IS EVEN OR 2-INCH ABOVE THE CROWN OF THE PIPES ENTERING AND LEAVING MANHOLE. EXTEND MANHOLE BASE TO LIMITS OF EXCAVATION IN ALL DIRECTIONS 24" MINIMUM.  
6. CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES. SLOPE CHANNELS TO MATCH PIPE INVERTS.  
7. THE TOP OF MANHOLE TO BE LEVEL WITH FINISHED GRADE, UNLESS OTHERWISE NOTED OR DIRECTED BY THE UTILITY.  
8. BRUSH FINISH SURFACES OF CONCRETE AND REMOVE ALL SHARP EDGES.

1. THE UTILITY MUST APPROVE THE USE OF A DROP MANHOLE AND IF APPROVED, THE DROP MANHOLE ASSEMBLY IS ONLY ALLOWED IN THE 4'-0" BARREL SECTION.  
2. THE SEWER SERVICE PIPE CROWN ELEVATION ENTERING THE MANHOLE SHALL MATCH THE PIPE CROWN ELEVATION OF THE ENTERING SEWER MAIN.

**4 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL**  
N.T.S.

SD-1  
2  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**STANDARD SEWER SERVICE LATERAL**  
N.T.S.

SD-1  
3  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**BORED SEWER SERVICE LATERAL UNDER EXISTING STREET**  
N.T.S.

SD-1  
4  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**PARALLEL SEWER FORCE MAIN & SANITARY SEWER MAIN**  
N.T.S.

SD-1  
9  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**SANITARY SEWER MANHOLE EXTENSION/SHORTENING DETAIL**  
N.T.S.

SD-1  
10  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**CONCRETE RISER BLOCK OPTION 'A'**  
**CONCRETE RISER BLOCK OPTION 'B'**  
N.T.S.

SD-1  
6A  
REV. DEC. 2006

RESERVED

HYPERLINK TO RWU WEBSITE FROM ACTIVE .DWG FILE (HOLD DOWN CONTROL KEY AND LEFT-MOUSE-BUTTON-SELECT THE UNDERLINED LINK)

[HTTP://WWW.RWU.ORG/ENGINEERING.HTM](http://www.rwu.org/engineering.htm)

SD-1  
11  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**ANTI-SEEPAGE BARRIER COLUMN**  
N.T.S.

SD-1  
12  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**CONCRETE DRIVEWAY CROSSING REPAIR**  
N.T.S.

SD-1  
13  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**ASPHALT DRIVEWAY/STREET CROSSING REPAIR**  
N.T.S.

SD-1  
14  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**TRENCH/PIPE BEDDING DETAIL FOR SEWER FORCE MAINS & SANITARY SEWER MAINS**  
N.T.S.

SD-1  
15  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**FARM GATE INSTALLATION DETAIL**  
N.T.S.

SD-1  
21  
REV. DEC. 2006

RESERVED

SD-1  
23  
REV. DEC. 2006

GENERAL CONSTRUCTION NOTES:

A. The contractor will be held solely responsible for damage occurring to any property during the construction of this project. Said contractor shall take all necessary precautions to prevent property damage.

B. In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.

The duty of Rogers Water Utilities to conduct construction inspection or review of the contractor's performance is not an inspection or review of the adequacy of the contractor's safety measures in, on, or near the construction site.

C. All water and sewer improvements shall be constructed in accordance with the latest revision to the Rogers Water Utilities Standard Specifications.

D. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

E. Contractor is to remove and dispose of all debris, rubbish and other materials resulting from previous and current construction operations. Disposal will be in accordance with all local, state and/or federal regulations governing such operations.

F. Prior to installation of any utilities, the contractor is to excavate, verify, and calculate all crossings and inform the Rogers Water Utilities of any conflicts prior to construction.

G. Construction shall not start on any water utility until approval is given by Rogers Water Utilities. Said contractor shall not operate any valve, hydrant, or water utility appurtenance nor shall he attach to or tap any water utility main without approval. The contractor shall bear the cost and consequence of any disruption of utility operation caused by construction.

**SEWER FORCE MAIN THRUST BLOCKING DETAIL**  
N.T.S.

SD-1  
17  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**JACK & BORE UNDER ROADWAY DETAIL**  
N.T.S.

SD-1  
18  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**SEWER FORCE MAIN AIR AND VACUUM RELEASE VALVE ASSEMBLY**  
N.T.S.

SD-1  
19  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**BARBED WIRE FENCE CROSSING REPAIR DETAIL**  
N.T.S.

SD-1  
20  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0".  
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MANHOLE.  
3. SERVICE LATERAL SHALL BE SMALLER THAN AT LEAST 2 FEET FROM THE CENTERLINE OF THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE. THE SERVICE LATERAL SHALL BE 1/2" SMALLER THAN THE MAIN LINE.  
4. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
5. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.  
6. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL. BORE AND FOOT STEEL TRACER SHALL BE USED AT END OF SERVICE LATERAL.

**GUARDPOST DETAIL**  
N.T.S.

SD-1  
23  
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:  
1. H-brace units shall be installed prior to cutting existing fence.  
2. Height of post to match existing posts.  
3. New wire shall be the same type as existing fence.

**BARBED WIRE FENCE CROSSING REPAIR DETAIL**  
N.T.S.

SD-1  
22  
REV. DEC. 2006

RESERVED

SD-1  
23  
REV. DEC. 2006

**SEWER DETAILS**  
REVISED 05/08/2012

**RWU**  
ROGERS WATER UTILITIES

P.O. DRAWER 338  
OFFICE - 601 SOUTH 2ND ROGERS, ARKANSAS  
72757-0338

DRAWN BY: **DD'S** DATE: **REV. AUG. 2007** SHEET NO. **SD-1**  
CHECKED BY: **EB** PROJECT NUMBER: **STANDARD SEWER DETAILS**