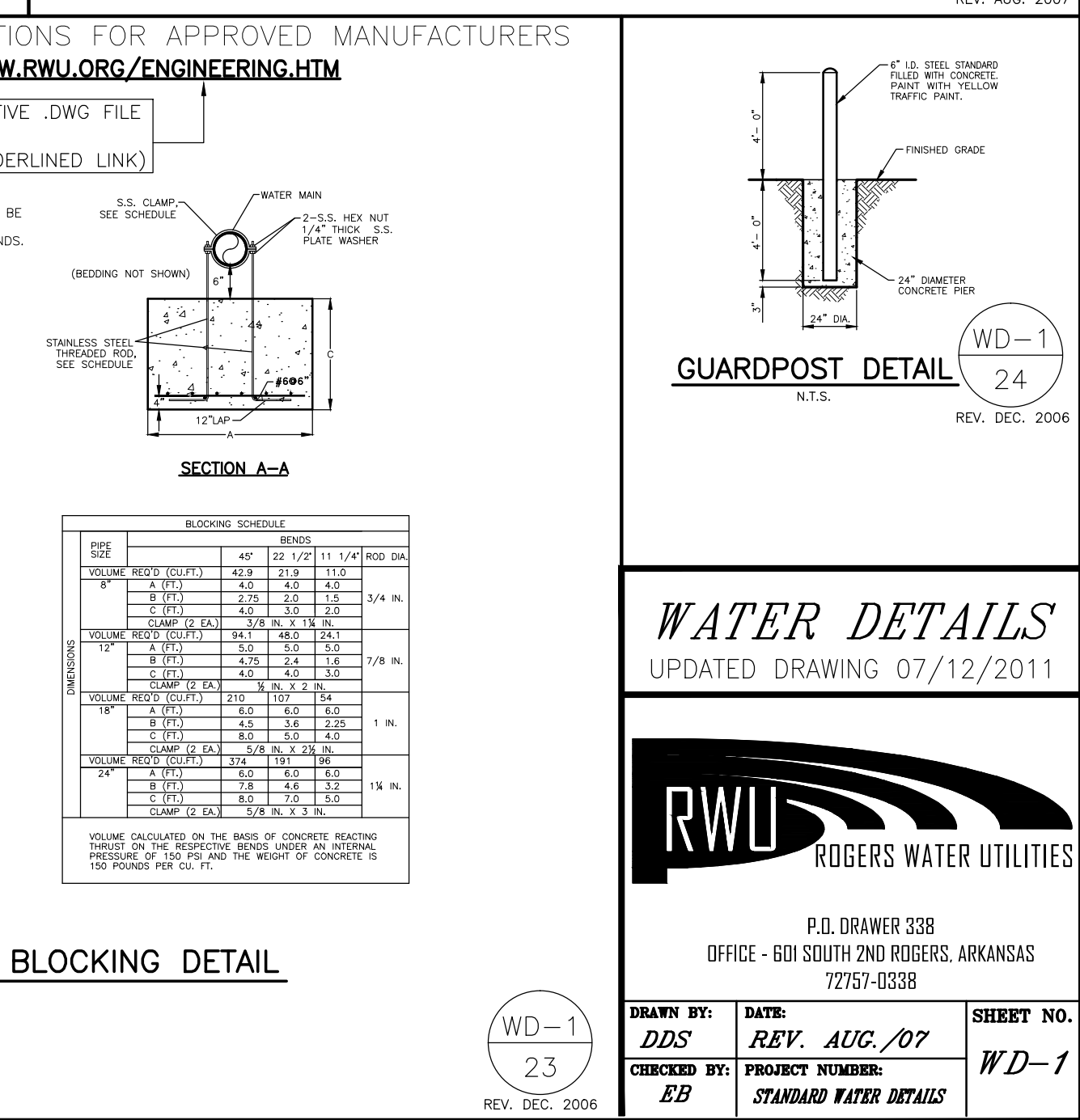
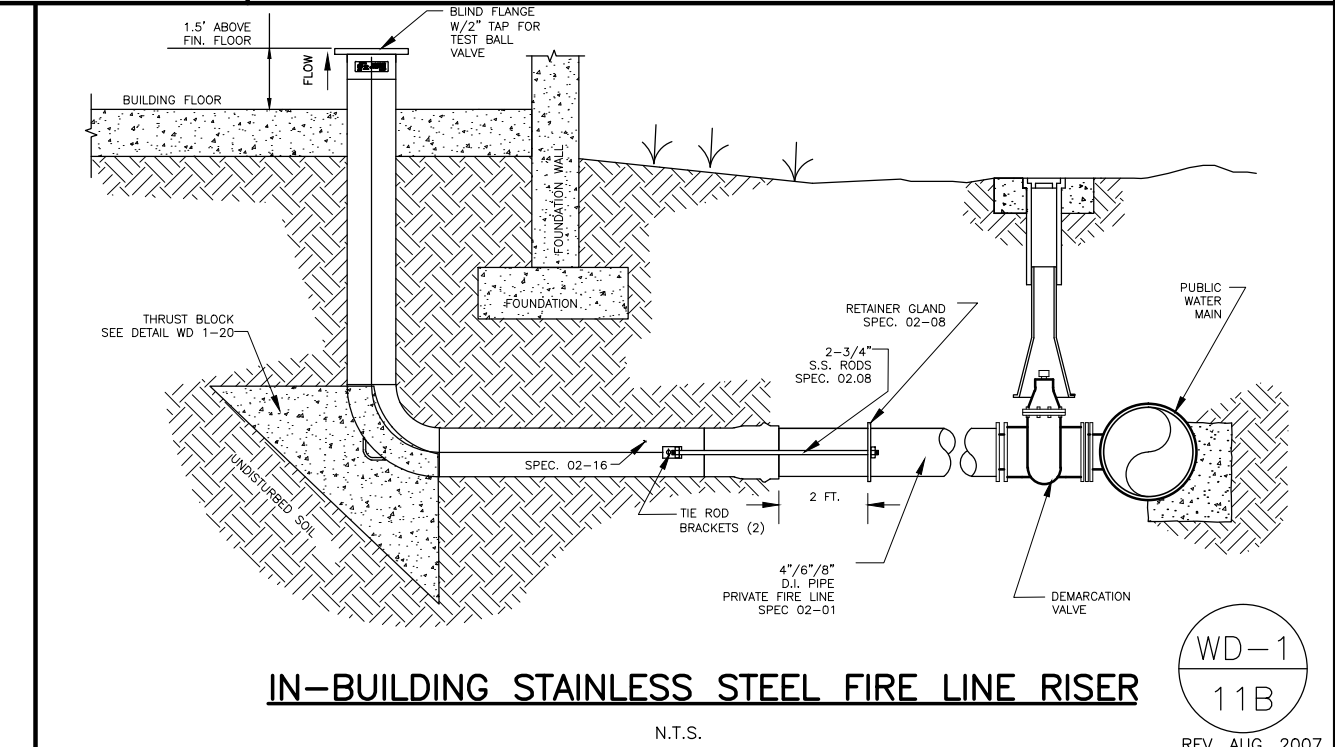
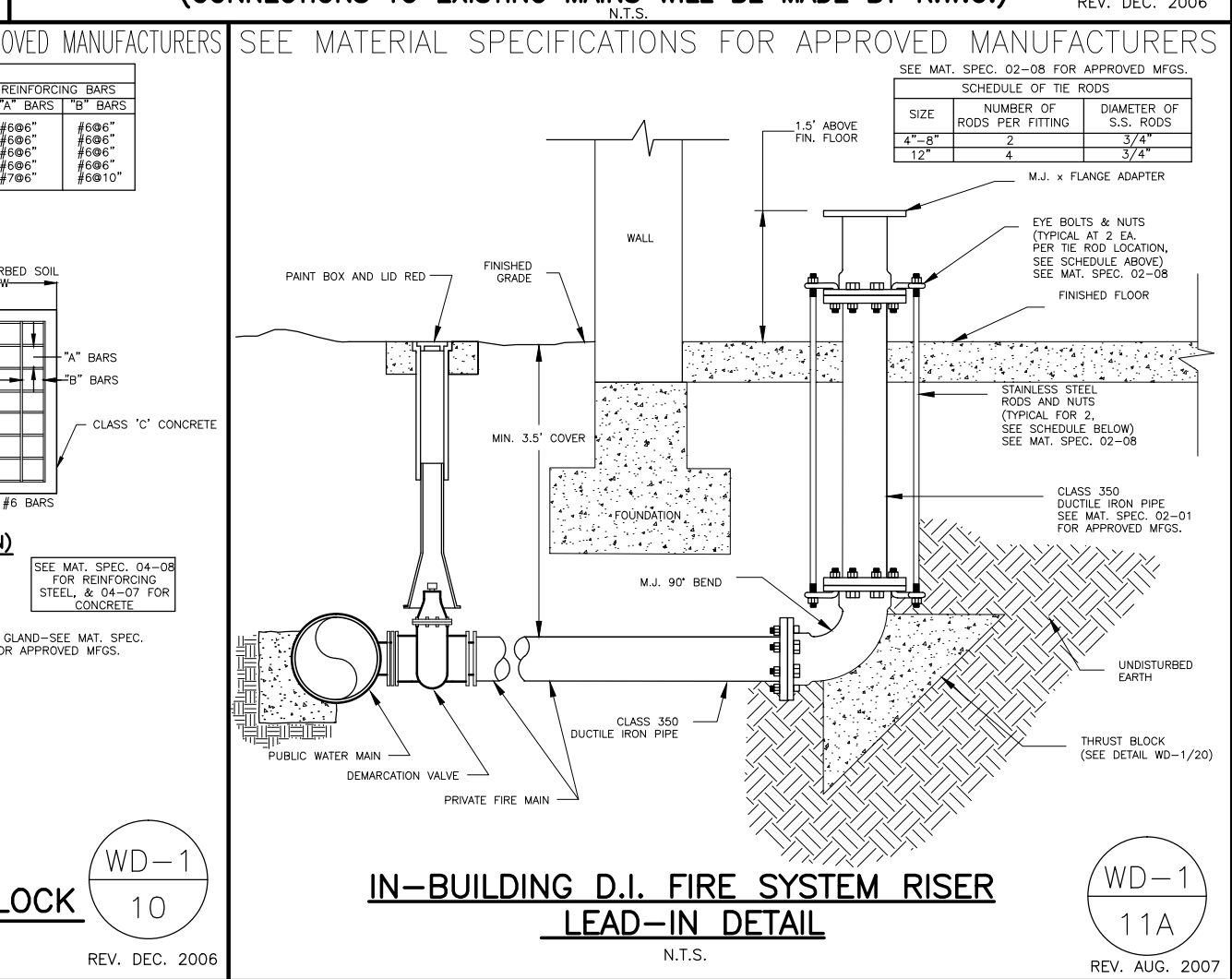
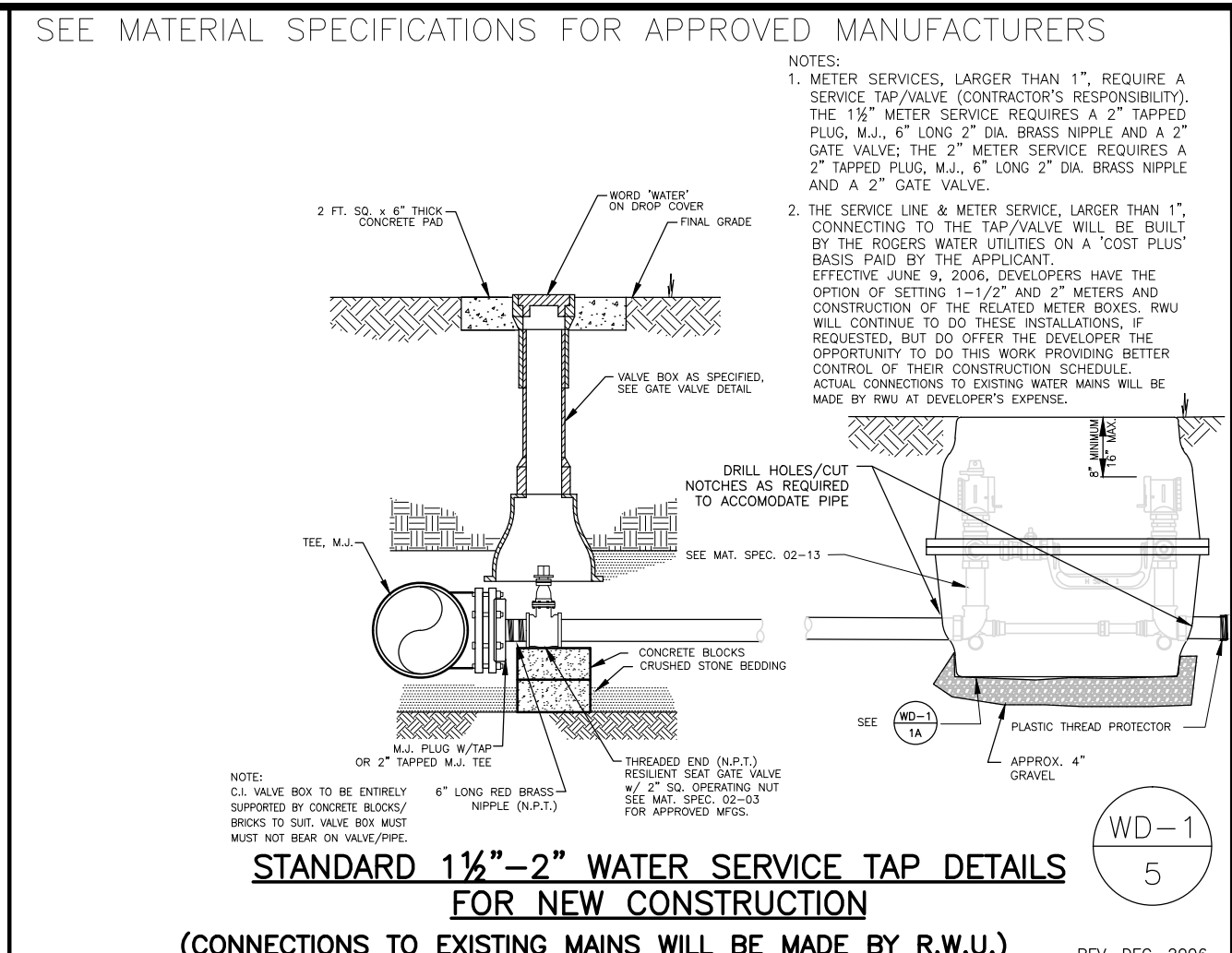
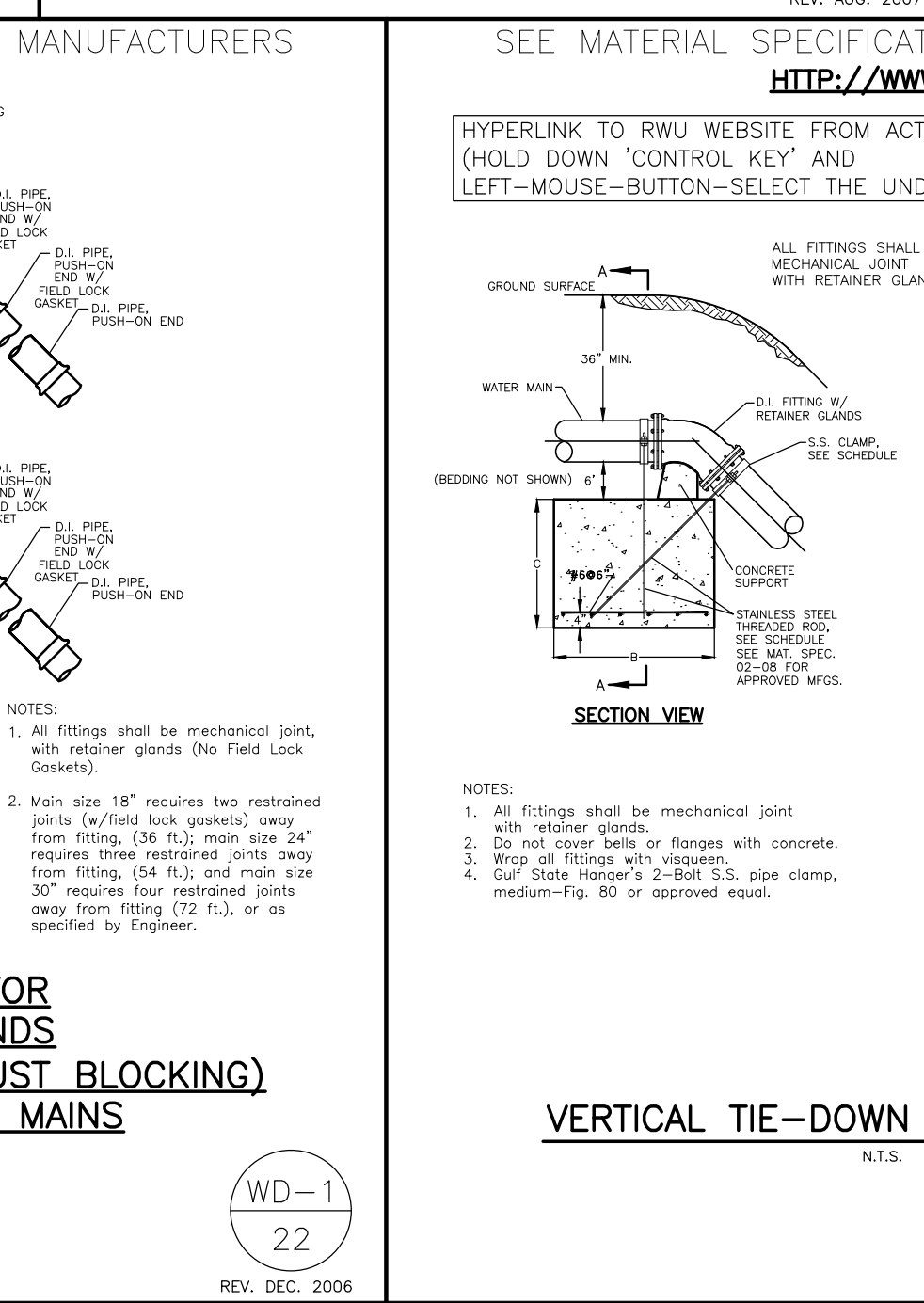
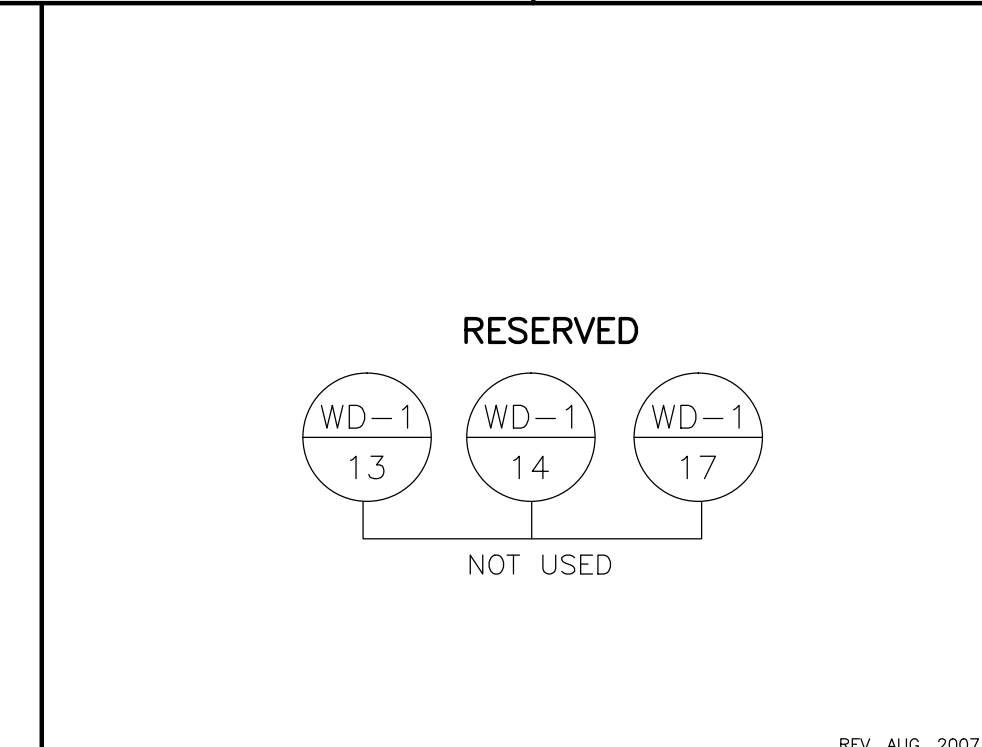
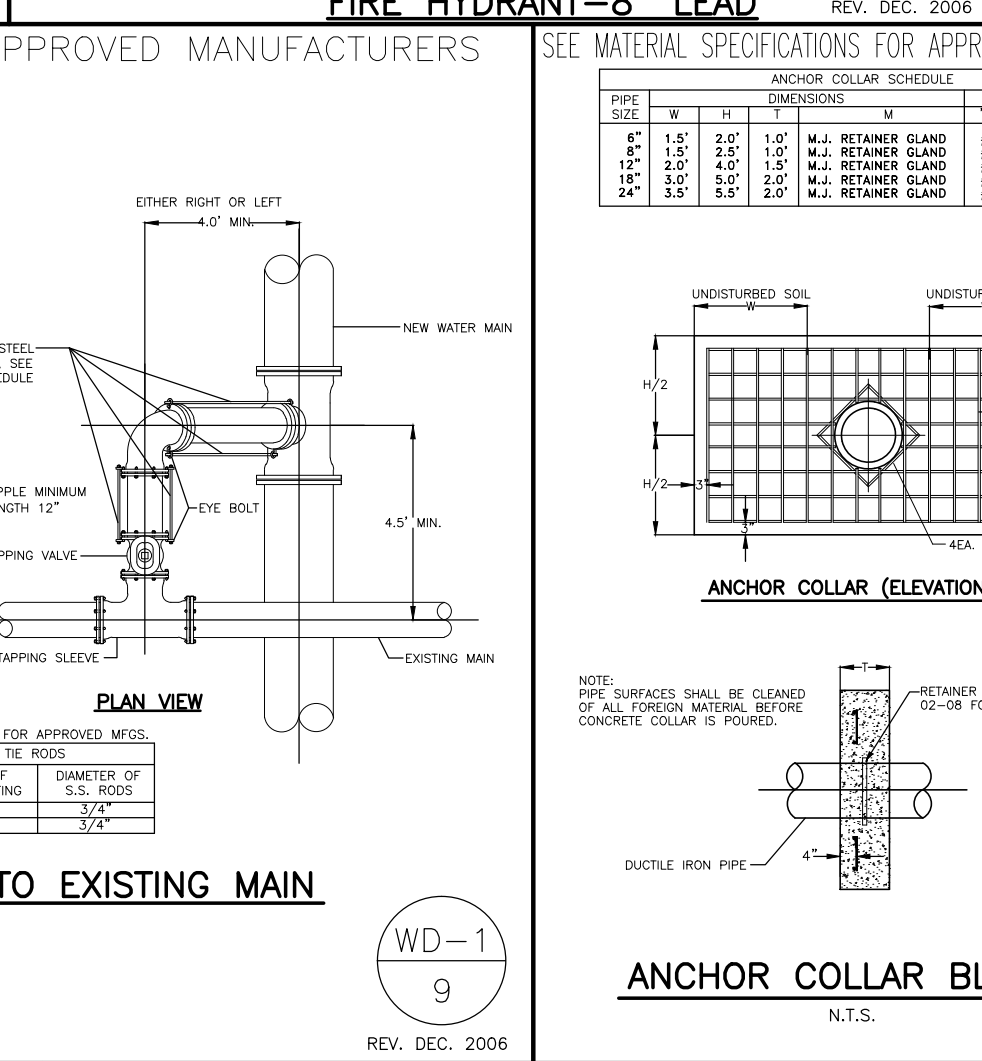
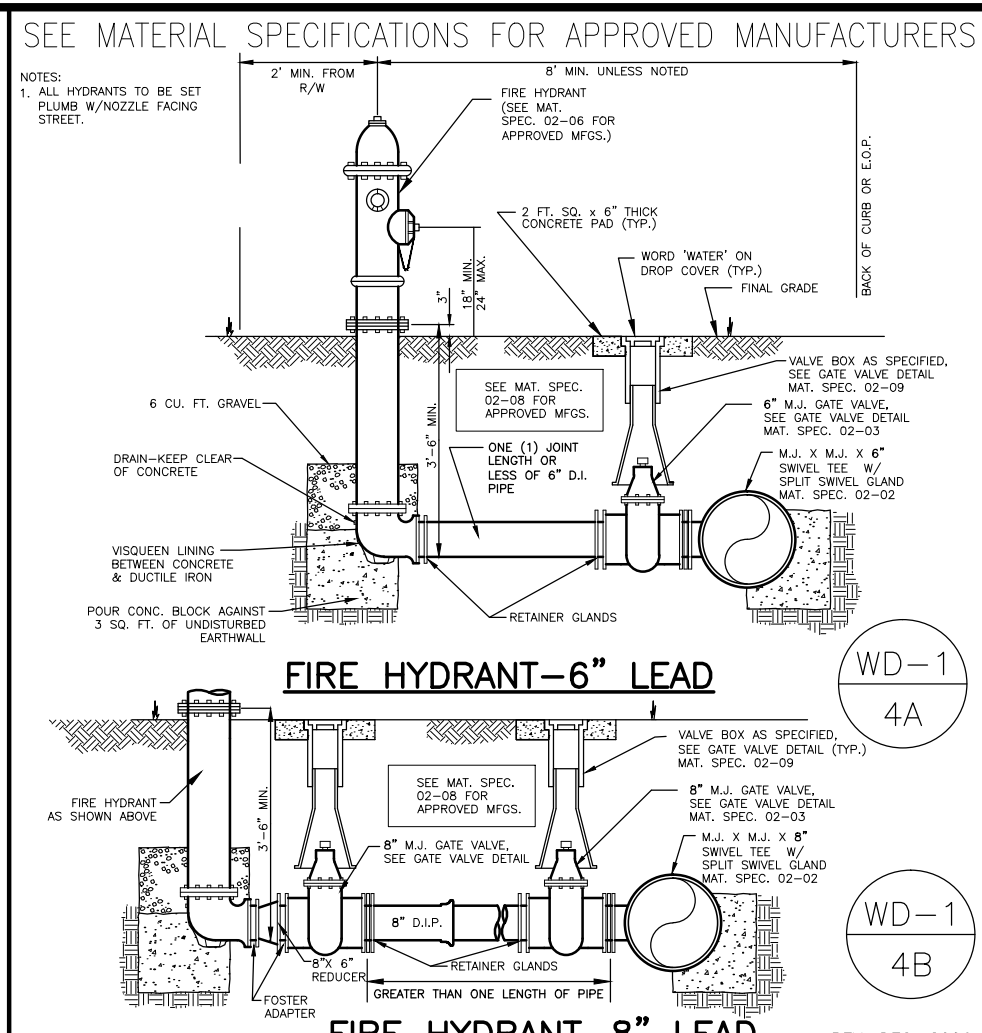
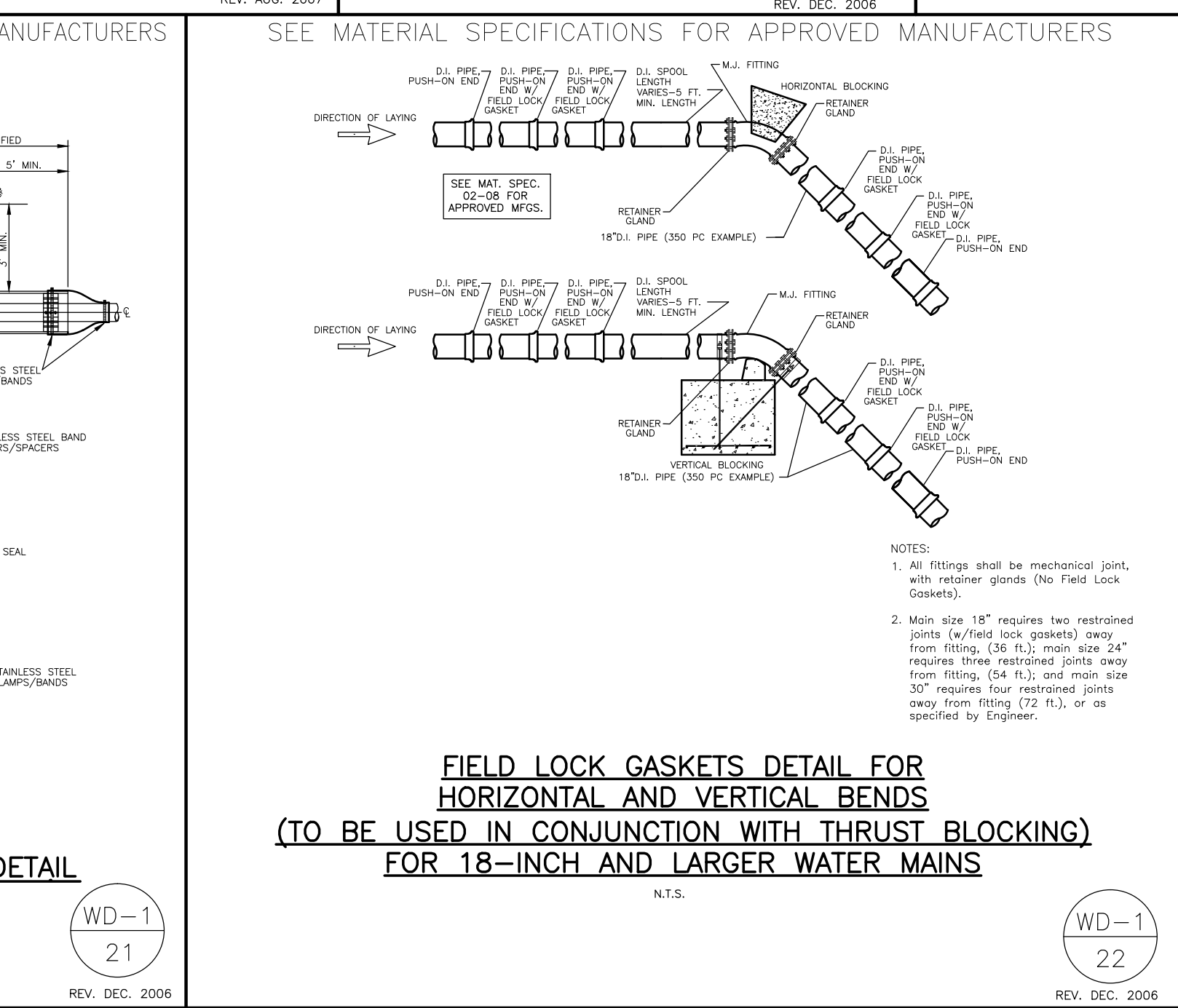
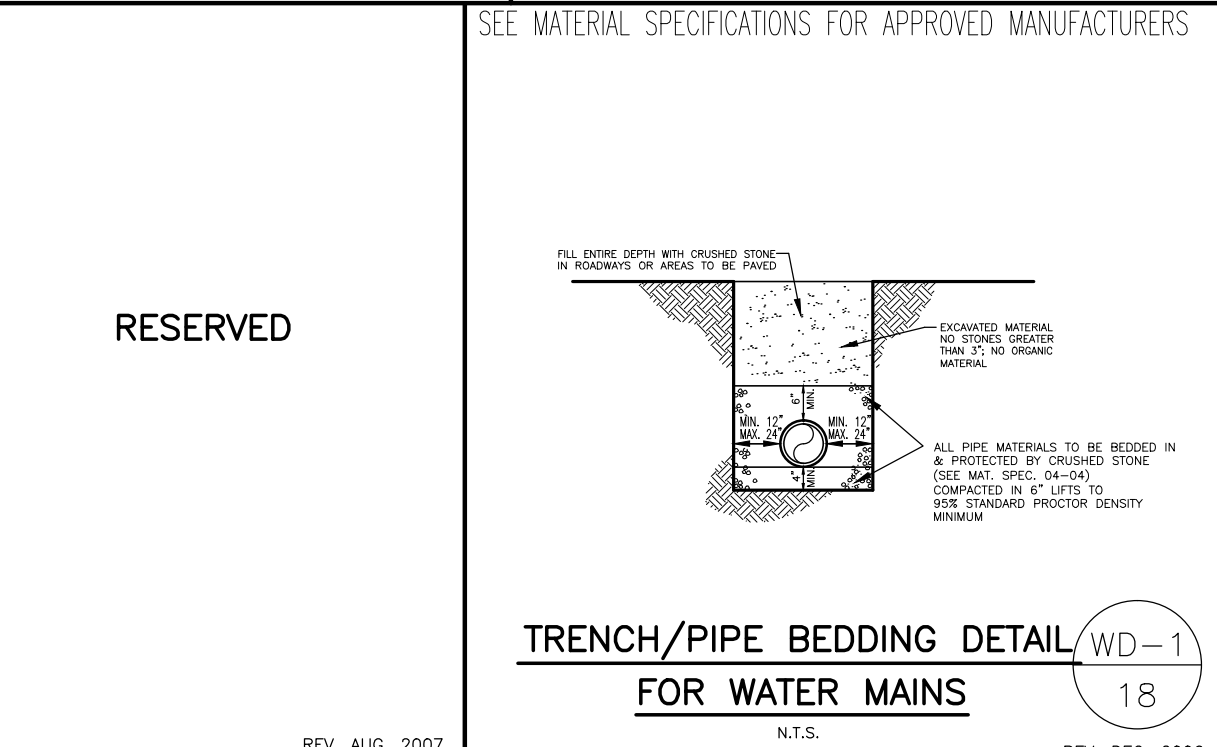
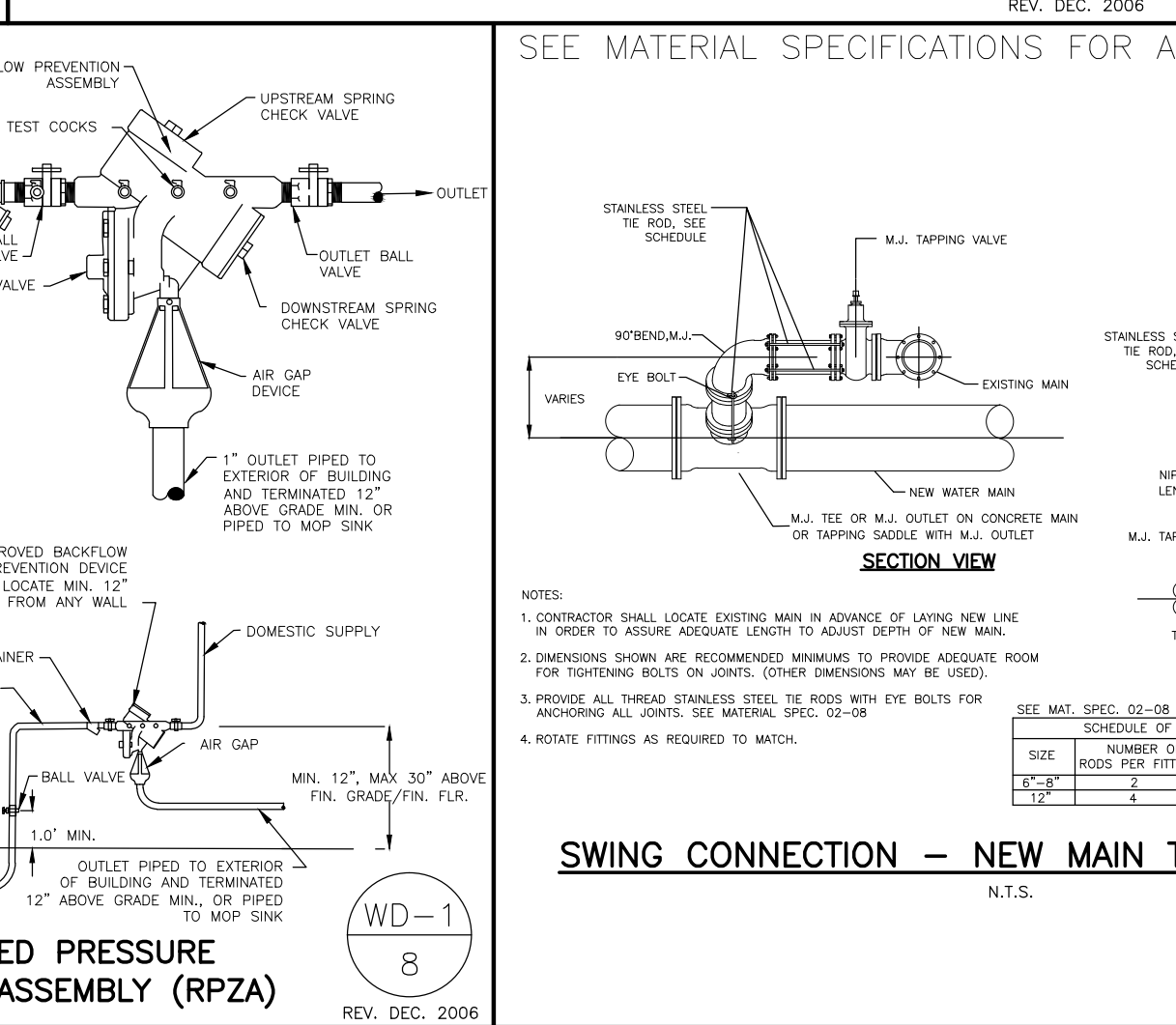
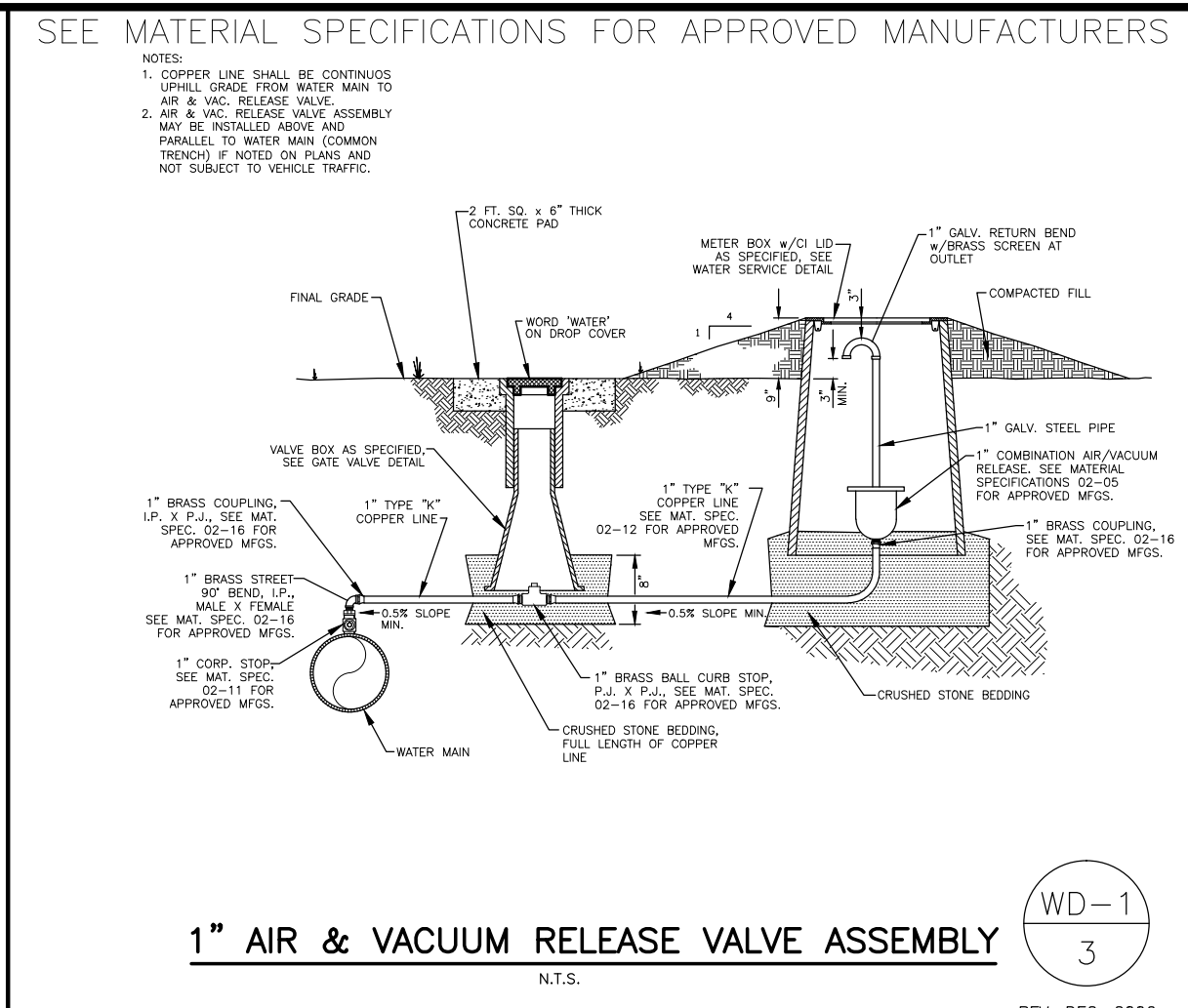
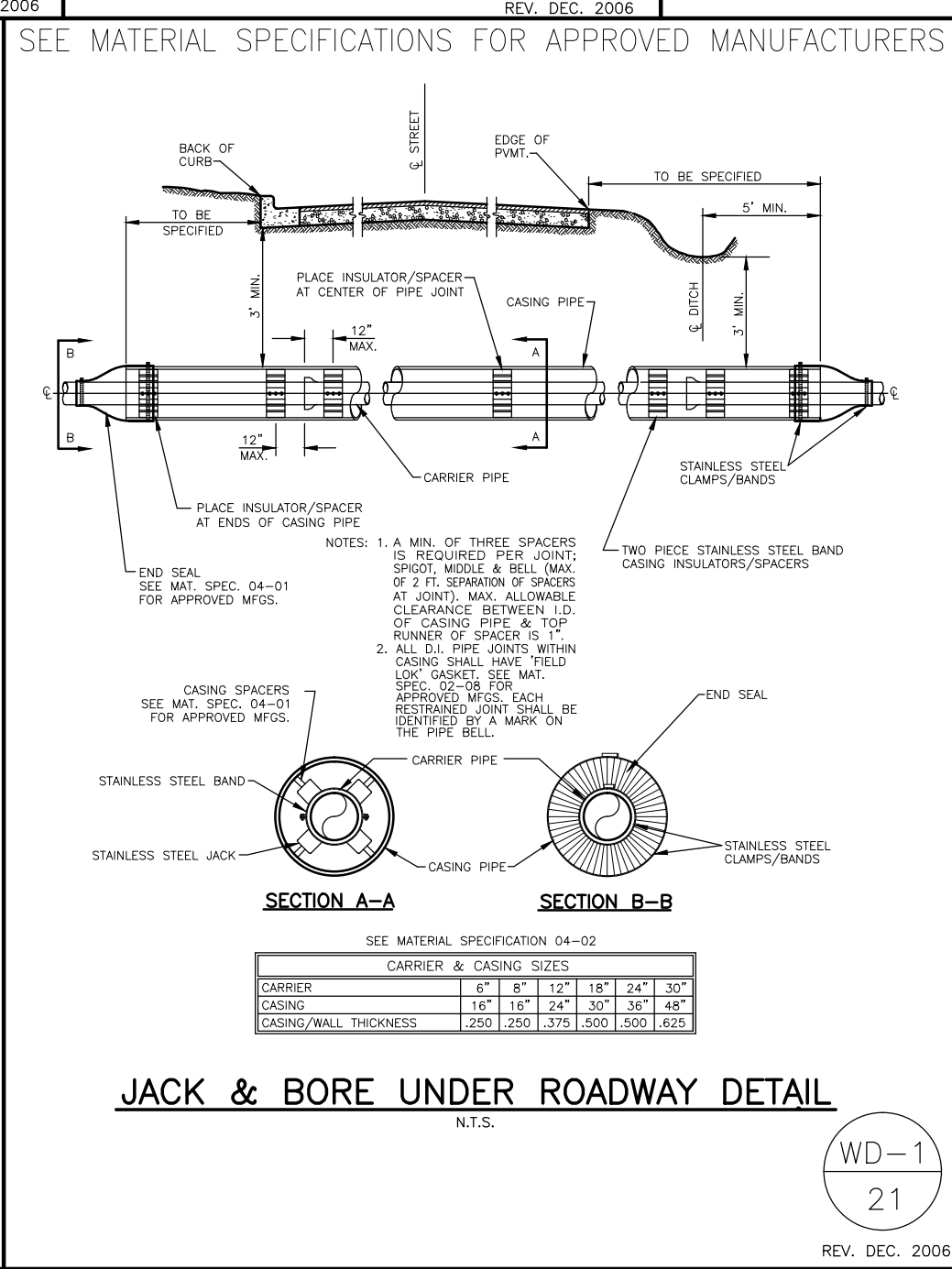
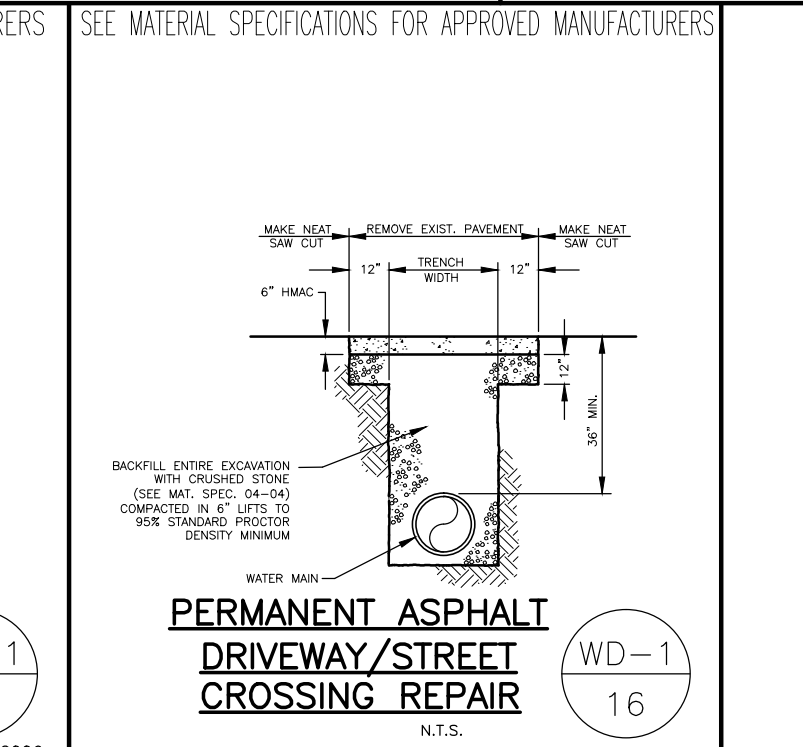
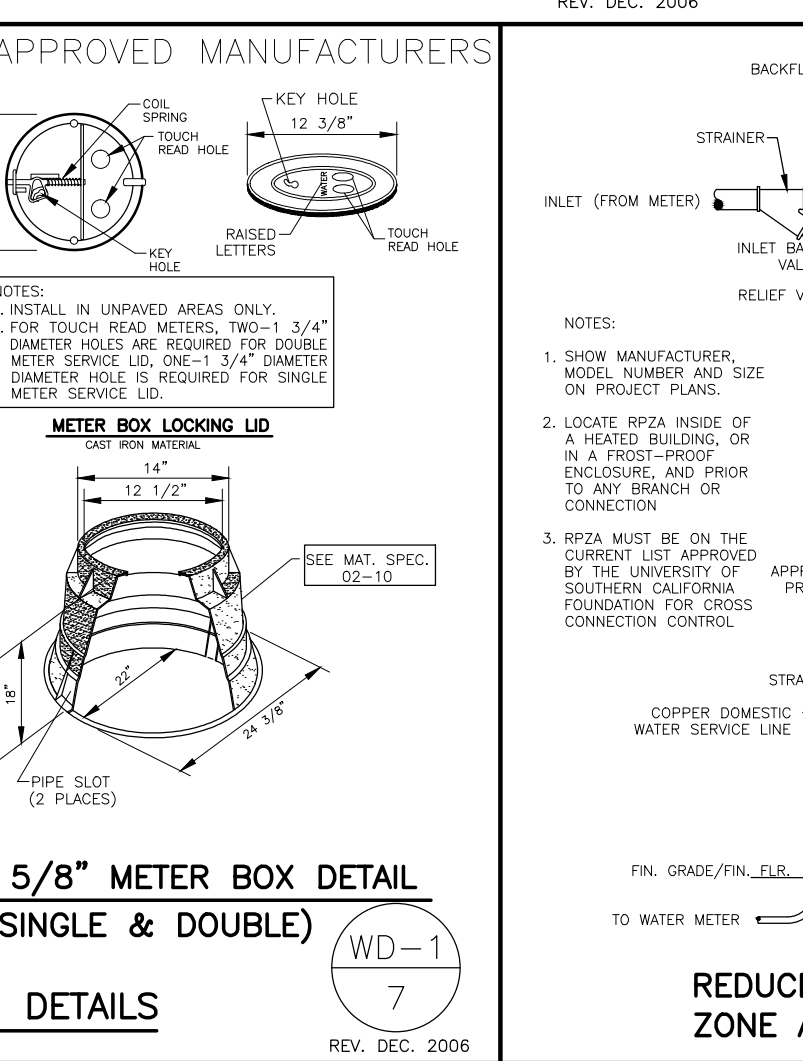
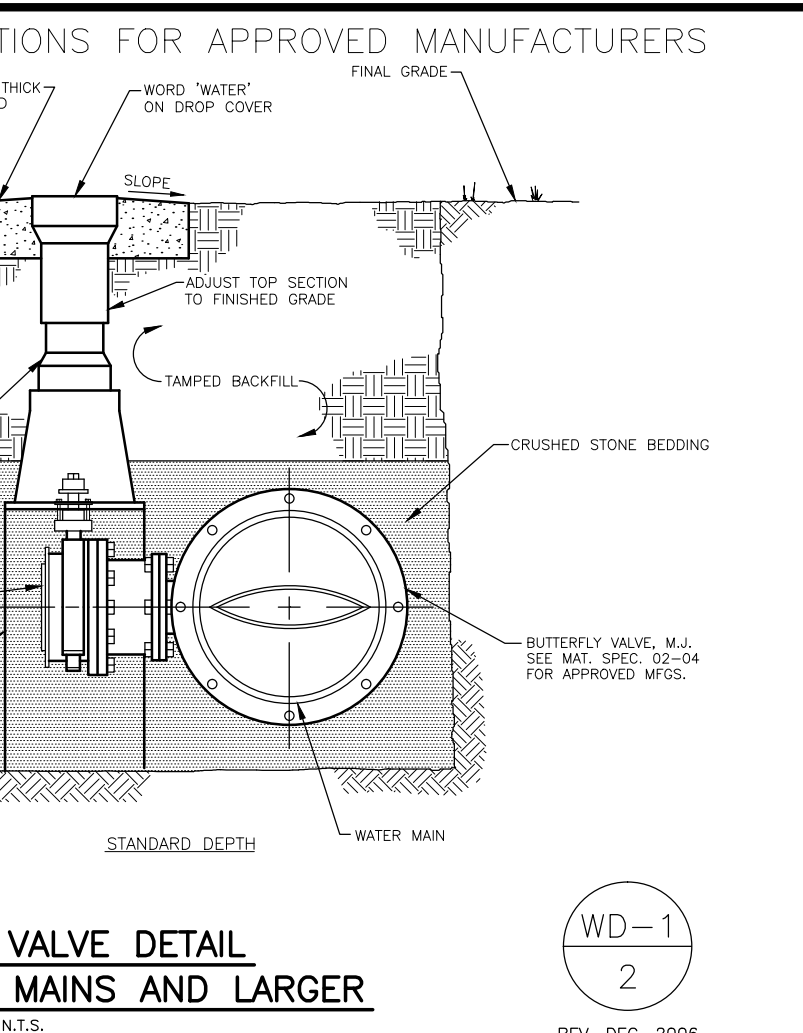
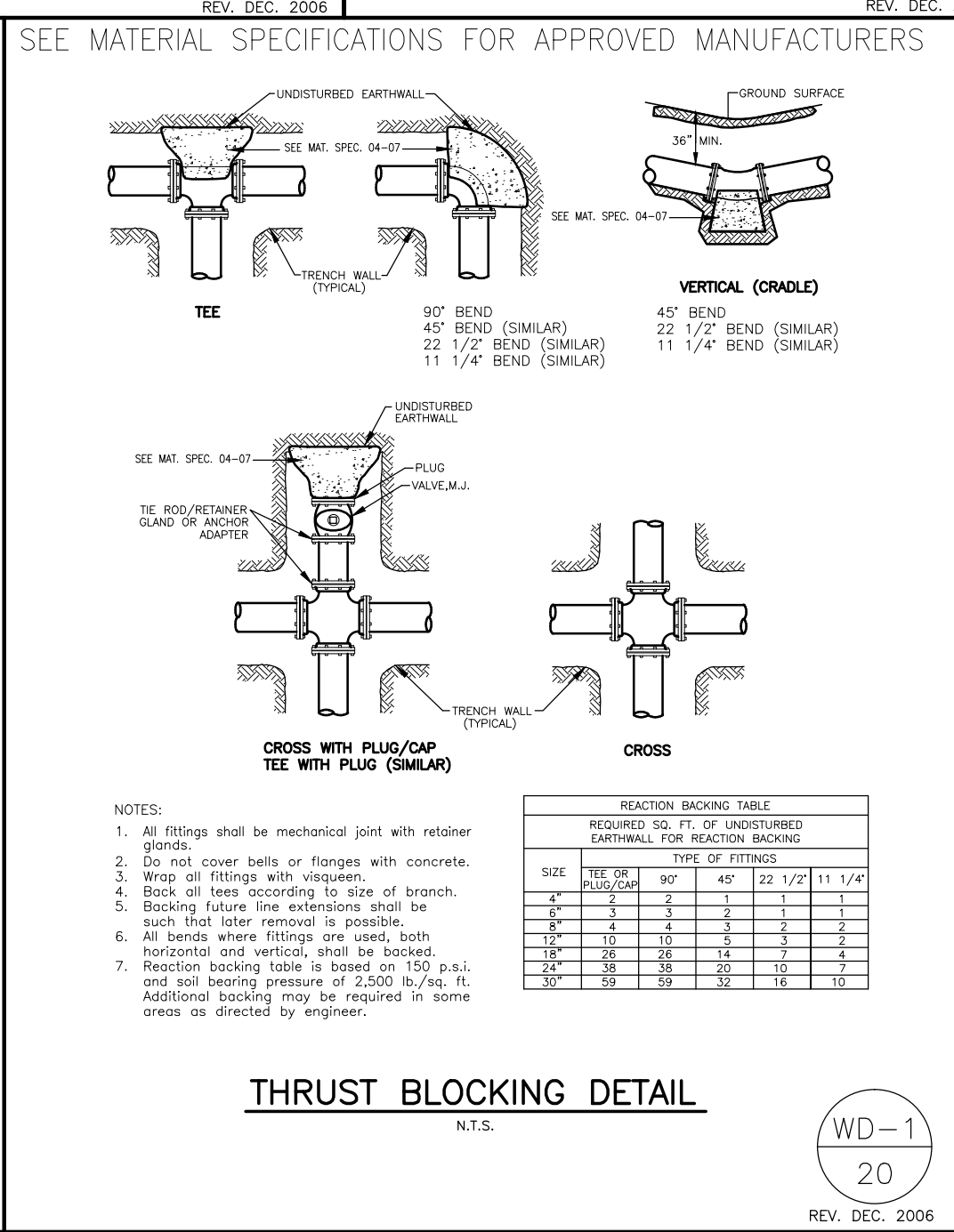


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WD-1  
19  
REV. DEC. 2006



**WATER DETAILS**  
UPDATED DRAWING 07/12/2011



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

**DRAWN BY:** DDS  
**CHECKED BY:** EB  
**DATE:** REV. AUG. 07  
**PRODUCT NUMBER:** STANDARD WATER DETAILS  
**SHEET NO.:** WD-1




Diagram illustrating the fire hydrant assembly and its connections to existing public water main, commercial water service, and irrigation.

Key components and labels:

- EXISTING TEE AND VALVE
- EXISTING PUBLIC WATER MAIN
- MIN. 8" O.D.P. WATER MAIN
- WATER METER, SEE DETAILS WD-1/7A, WD-1/7B, WD-1/6, WD-1/7
- COMMERCIAL WATER SERVICE
- FIRE HYDRANT ASSEMBLY SEE WD-1/7ABSE
- IRIGATION
- REDUCER, IF NEEDED
- NEW PUBLIC WATER MAIN
- EASEMENT REQUIRED
- COMMUNICATION VAULT SEE M.C. SPEC. 02-03 FOR APPROVED INFO. PORT, FIBER BOX AND L.C. BOX
- PRIVATE FIRE LINE

WD-2  
2

WD-2  
3  
REV. MAR. 2

Diagram of a fire hydrant assembly with the following labels:

- FIRE HYDRANT ASSEMBLY SEE WD-1/ANAB
- FOSTER ADAPTER
- M.J. X M.S. GATE VALVE OR BUTTERFLY VALVE AS SPECIFIED FOR PIPE SIZE SEE MAX. SIZE, GS-103 FOR APPROVED WPGs
- M.J. PLUG

WD-4

Diagram illustrating the components of the Fire Hydrant Assembly (Fig. 1):

- FIRE HYDRANT ASSEMBLY  
SEE WD 1/4/AB
- FOSTER ADAPTER
- M.A. & M.A. BUTTERFLY VALVE & SPECIFIED FOR TWO SIZE SEE WD 1/2/ SPEC. CO-101 FOR APPROVED WELD
- M.A. FLUG
- THRUST BLOOMING  
SEE DETAIL WD 1/2/ (TOP)
- SS RODS & DIE BRG'S-SEE WD 1/2
- ANCHOR COLLAR BLOCK  
SEE WD 1/10

WD-2  
5

Diagram illustrating the Thrust Blocking Method for installing a new water main:

- NEW WATER MAIN**: The new pipe being installed.
- SOLID SLEEVE**: SEE MAT. SPEC. Q2-07 FOR APPROVED INFO.
- SS RODS & EYE BOLTS-SEE 10-1/9**: Structural reinforcement rods.
- M.U. CAP**: Manhole Utility Cap.
- REMOVE EXIST.**: Remove existing structure.
- EXISTING WATER MAIN**: The existing pipe being replaced or connected to.
- THRUST BLOCKING**: SEE DETAIL NO. 1-150 (TYP.)
- TAPPING SLEEVE & VALVE**: SEE MAT. SPEC. Q2-07 FOR APPROVED WAGS.
- ANCHOR COLLAR BLOCK**: SEE WCD 10-1/10

WD-2  
1  
REV. DEC. 20

WD-2  
7  
REV. DEC.

WD-2  
8

WD-3  
9  
REV. NOV. 200

WD-10

WD-2  
11

WD-2  
12  
REV. DEC. 20

4" PRESSURE TREATED BRACE POST (TYPICAL)

8'-0"

11'-10" +/-

12' WIDE TUBULAR STEEL GATE

8'-0"

4 STRANDS OF #9 WIRE TWISTED (TYPICAL)

6" PRESSURE TREATED POST (TYPICAL)

12'-0"

11'-10" +/-

6"

WD-2  
13  
REV. AUG. 2000

The diagram illustrates the cross-section of a bridge deck with reinforcement details. Key features include:

- LIMITS OF NEW WIRE:** Indicated by a double-headed arrow at the top, spanning the width of the deck.
- 6" - 0"**: Dimensioned on both sides of the central reinforcement area.
- 12" - 10" ± 1/2"**: Dimensioned in the center of the deck.
- 6" PRESSURE TREATED (BRACE POST) (TYPICAL)**: Labeled for the vertical posts supporting the deck.
- 4 STRANDS OF #9 WIRE TWISTED (TYPICAL)**: Labeled for the horizontal reinforcement strands.
- 6" PRESSURE TREATED POST (TYPICAL)**: Labeled for the bottom support post.
- Dimensions:**
  - 12/5"**: Vertical dimension on the right side.
  - 22/5"**: Vertical dimension on the right side.
  - 30"**: Vertical dimension at the bottom right corner.

WD-2  
14  
REV. AUG. 2

WD-2  
15

WD-2  
16

WD-2  
17

WD-18

METER SIZE	FLOW RANGE	CONNECTION TO MAIN		METER BOX APPROX. SIZE		SOURCE
		NEW MAIN	EXISTING MAIN	SIDEWALK	GREEN AREAS	
5/8" (SINGLE OR DOUBLE)	1-20 GPM	1" CORP. STOP	1" CORP. STOP		~22" DIA. BASE	SEE STANDARD SPEC. 02-10
1"	3-50 GPM	1" CORP. STOP	1" CORP. STOP		~18"x24" BASE	SEE STANDARD SPEC. 02-10
1 1/2"	4-120 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	32" x 42" (PRECAST BOX)	2-24"x 37" METER BOXES	SEE STANDARD SPEC. 02-13
2"	4-160 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	32" x 42" (PRECAST BOX)	2-24"x 37" METER BOXES	SEE STANDARD SPEC. 02-13
3"	5-350 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	8' L. x 5.5' W. x 4' D.		PRECAST BY PILE CONCRETE, LOWELL, AR
4"	15-1000 GPM	MAIN x 4" TEE AND VALVE	MAIN x 4" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWJ FOR LID DETAIL
6"	30-2,000 GPM	MAIN x 6" TEE AND VALVE	MAIN x 6" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWJ FOR LID DETAIL
8"	35-3,500 GPM	MAIN x 8" TEE AND VALVE	MAIN x 8" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWJ FOR LID DETAIL

WD-19

WD-3  
20

WD-2  
21

WD-  
22

WD-23

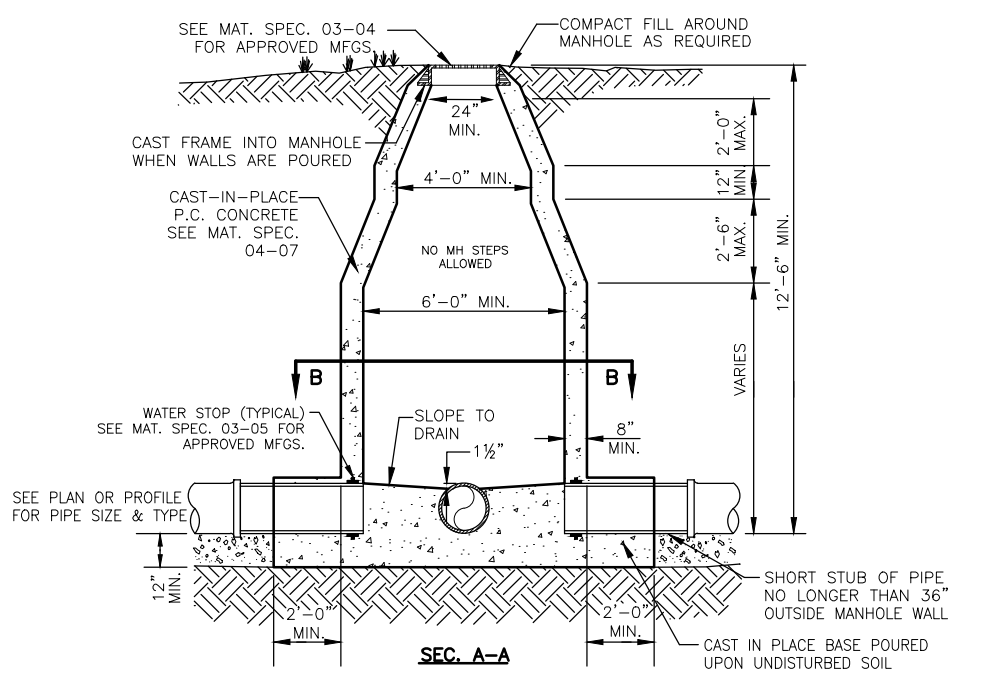
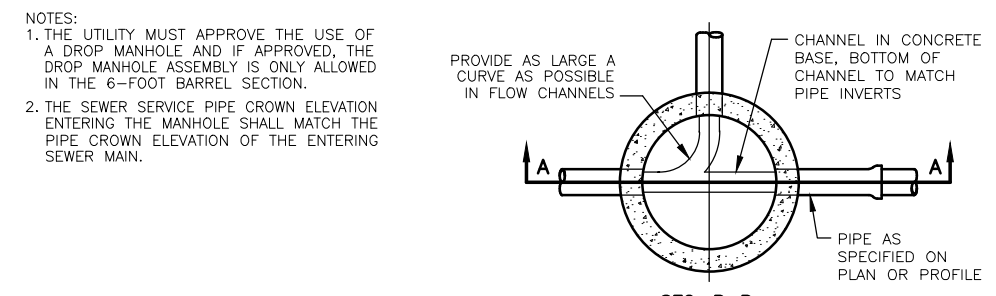


P.O. DRAWER 338 OFFICE - 601 SOUTH 2ND ROGERS, ARKANSAS 72757-0338		
DRAWN BY: <i>DDS</i>	DATE: <i>REV. JAN./08</i>	SHEET NO.  <i>WD-2</i>
CHECKED BY: <i>EB</i>	PROJECT NUMBER: <i>STANDARD WATER DETAILS</i>	



# SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

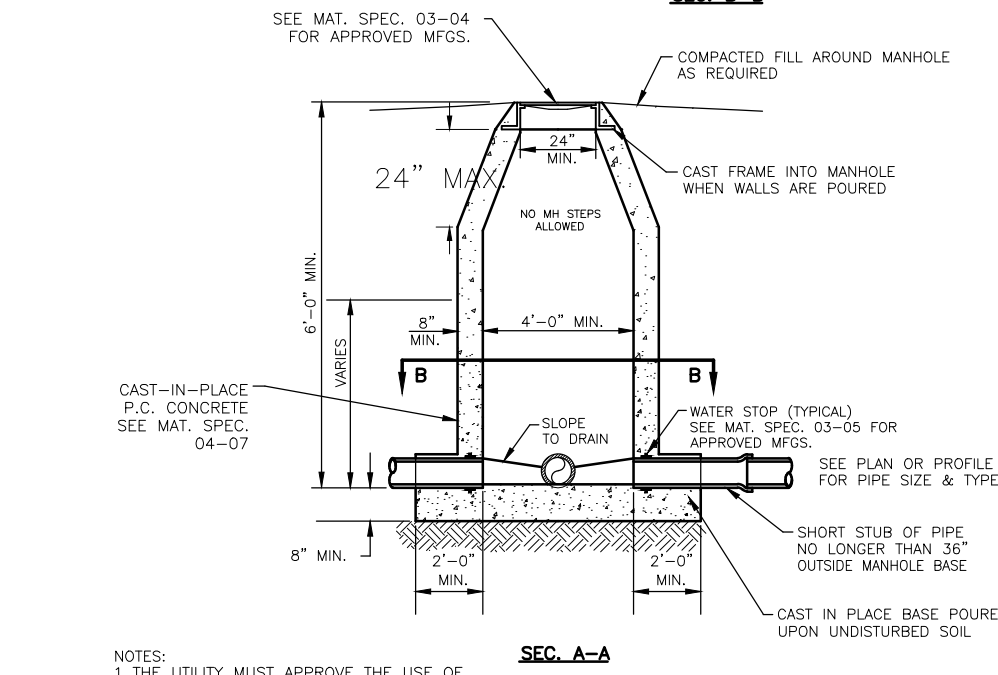
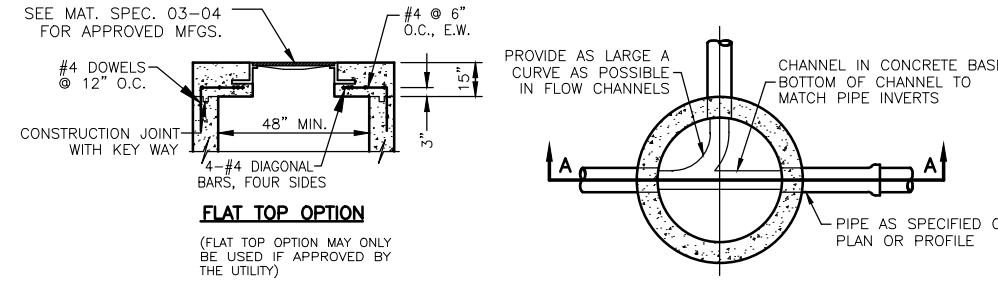
- NOTES:
1. A MANHOLE BARREL CONSTRUCTION JOINT IS ALLOWED WITHIN A STRAIGHT MANHOLE. THE BARREL AT 12'-0" ABOVE THE MANHOLE BASE AND SHALL HAVE A 4'-0" WIDE AND 4'-0" DEEP AT 12'-0" ON CENTERS WITH 15' EMBEDEDMENT. A WATER STOP SHALL BE USED IF DIRECTED BY THE UTILITY.
  2. THE BASE AND WALLS SHALL 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 THE MANHOLE BASE. 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.



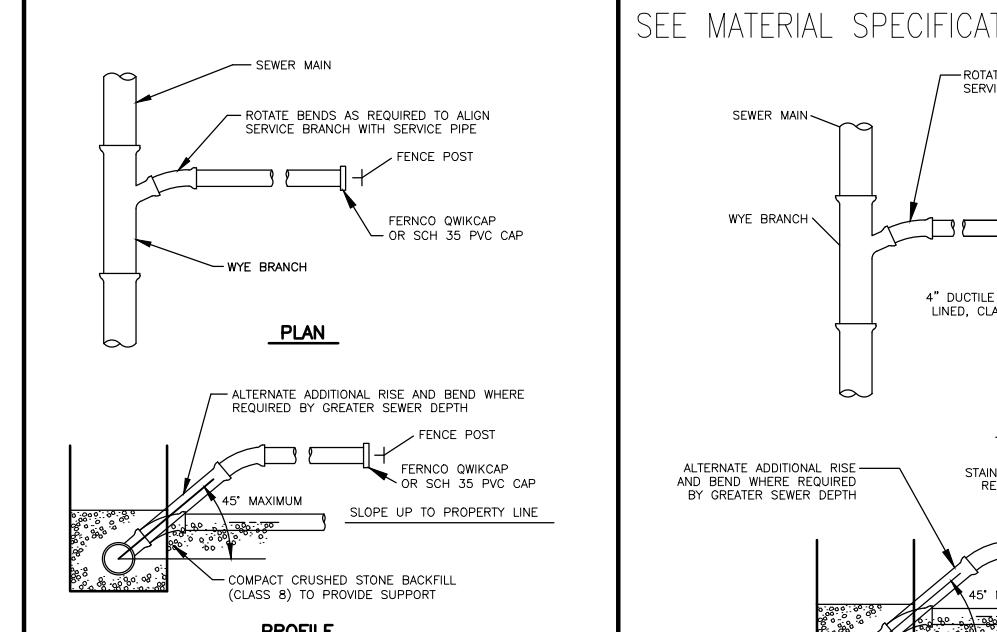
**6 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL**  
N.T.S.

# SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

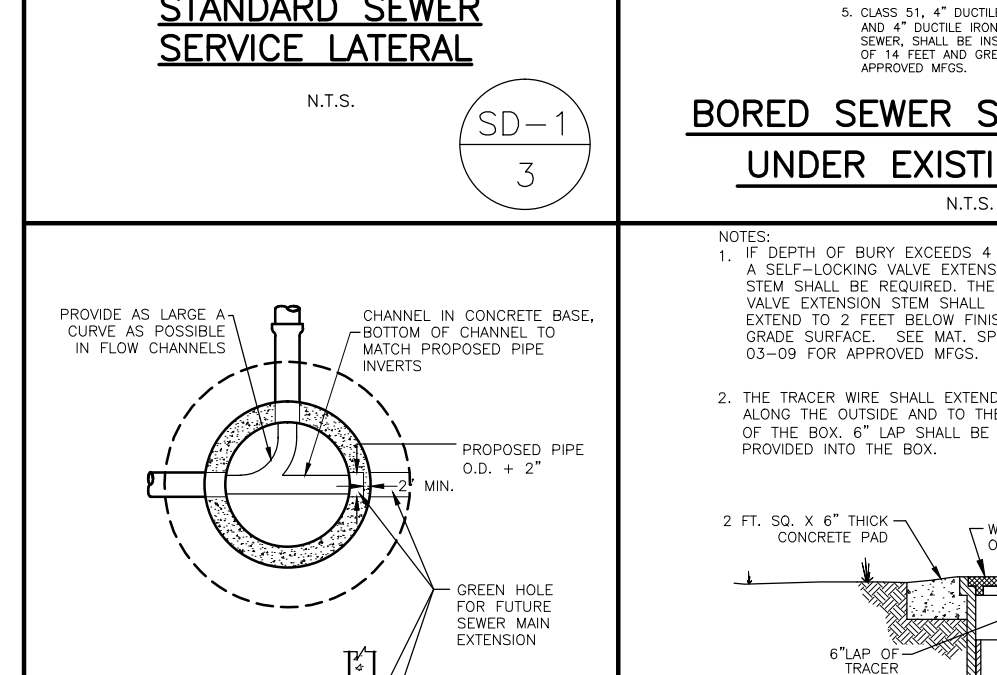
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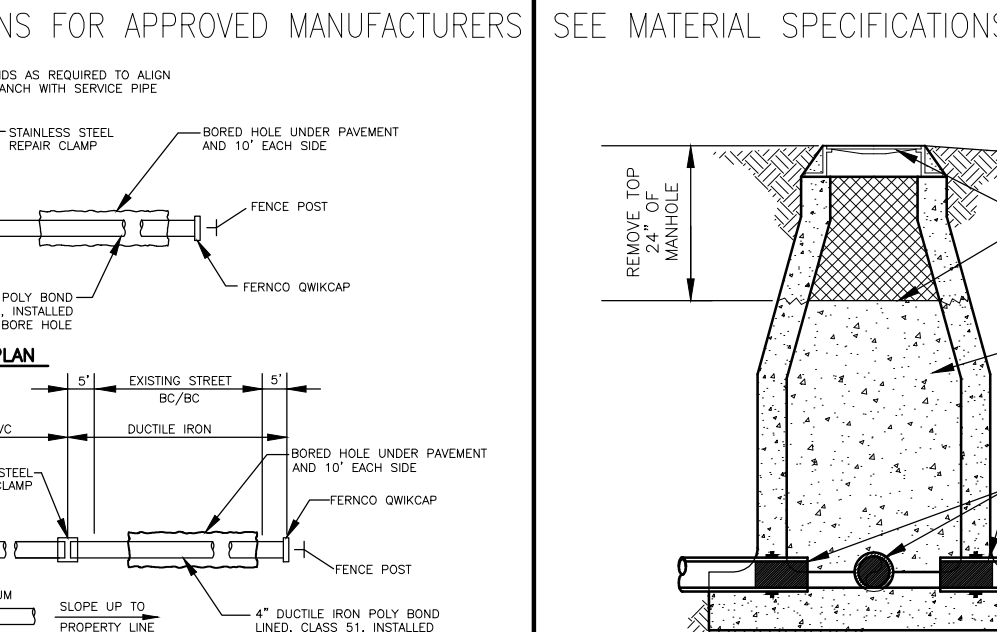
**4 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL**  
N.T.S.



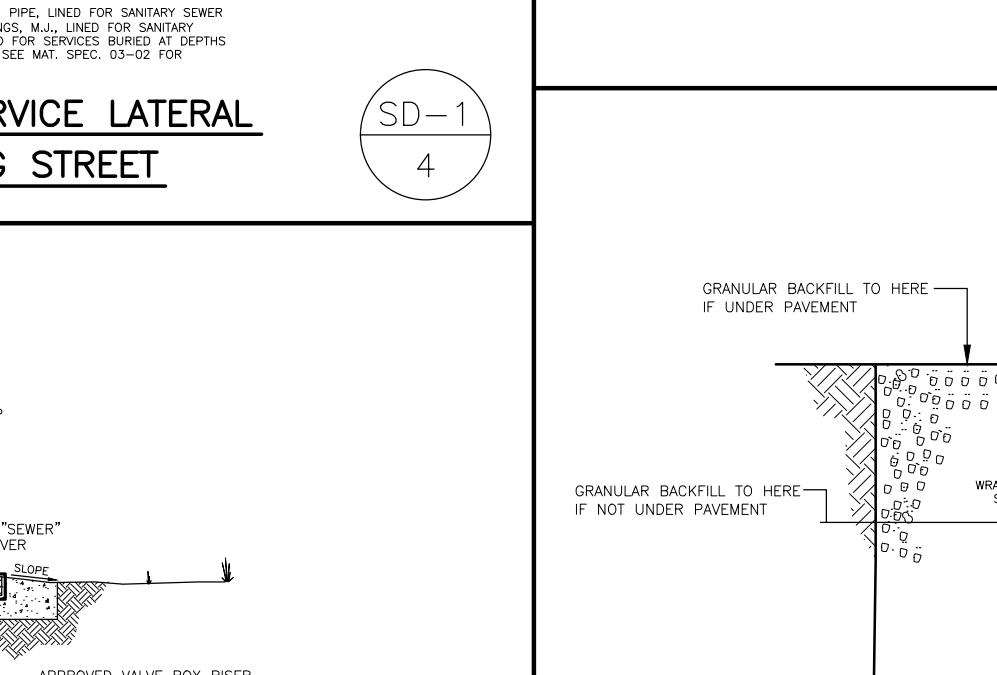
**STANDARD SEWER SERVICE LATERAL**  
N.T.S.



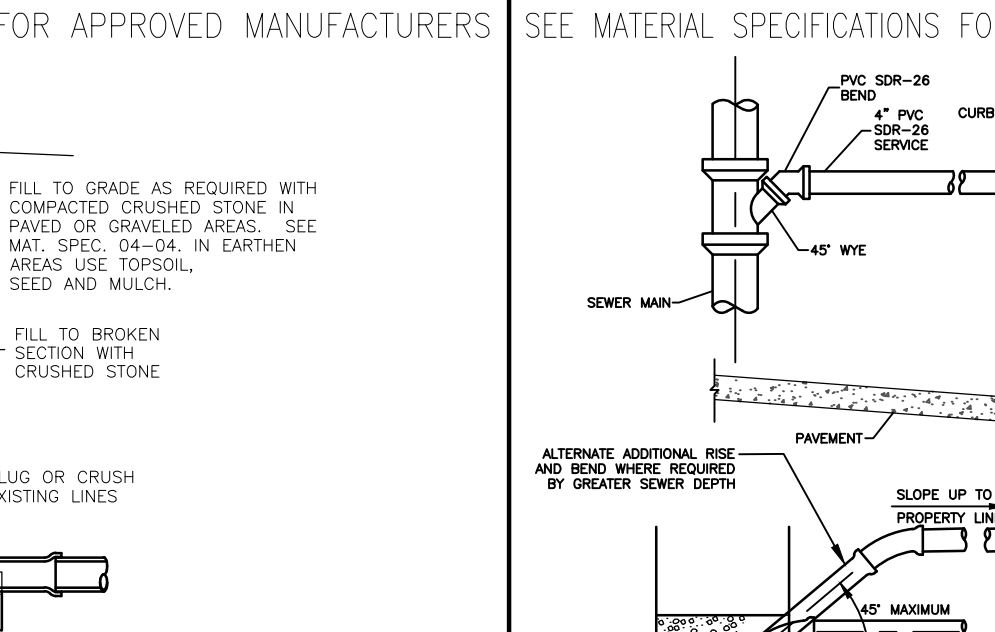
**GREENHOLE/BLOCK OUT FOR FUTURE EXTENSION**  
N.T.S.



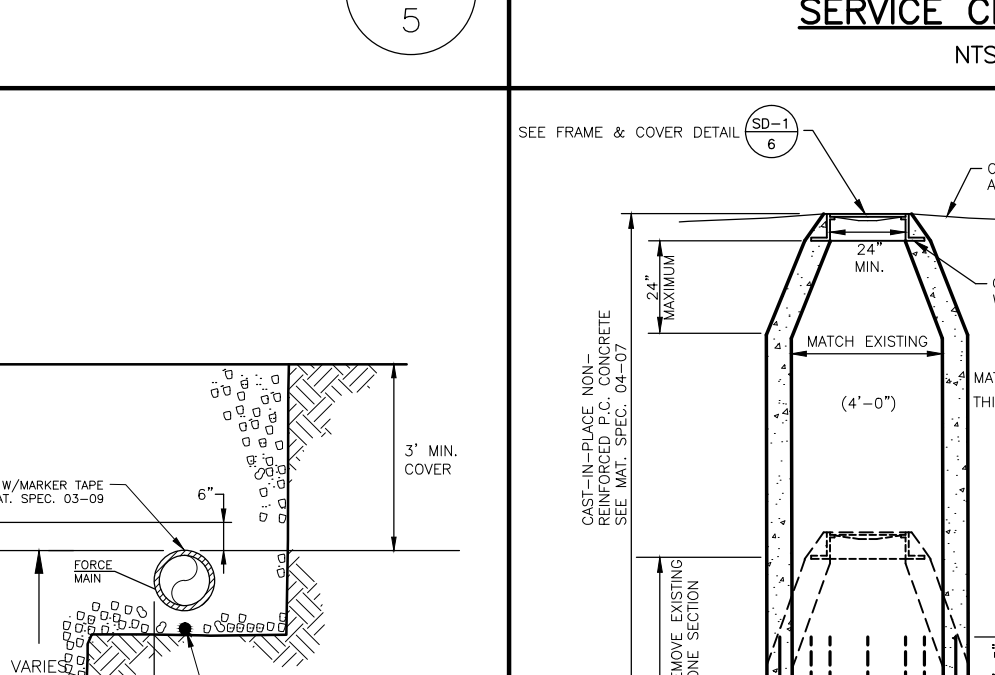
**BORED SEWER SERVICE LATERAL UNDER EXISTING STREET**  
N.T.S.



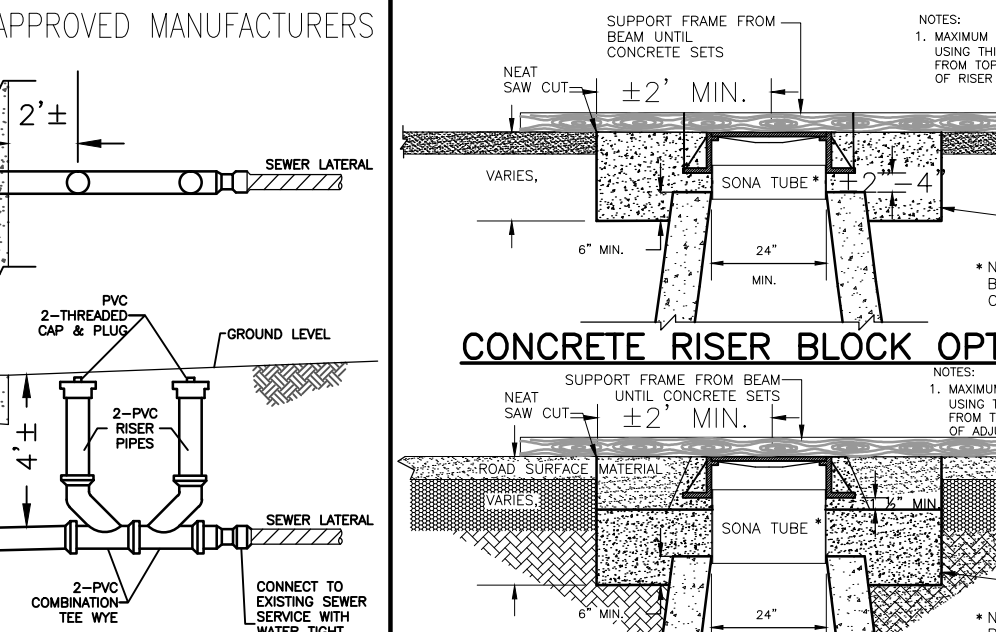
**4'-12" SEWER FORCE MAIN PLUG VALVE DETAIL**  
N.T.S.



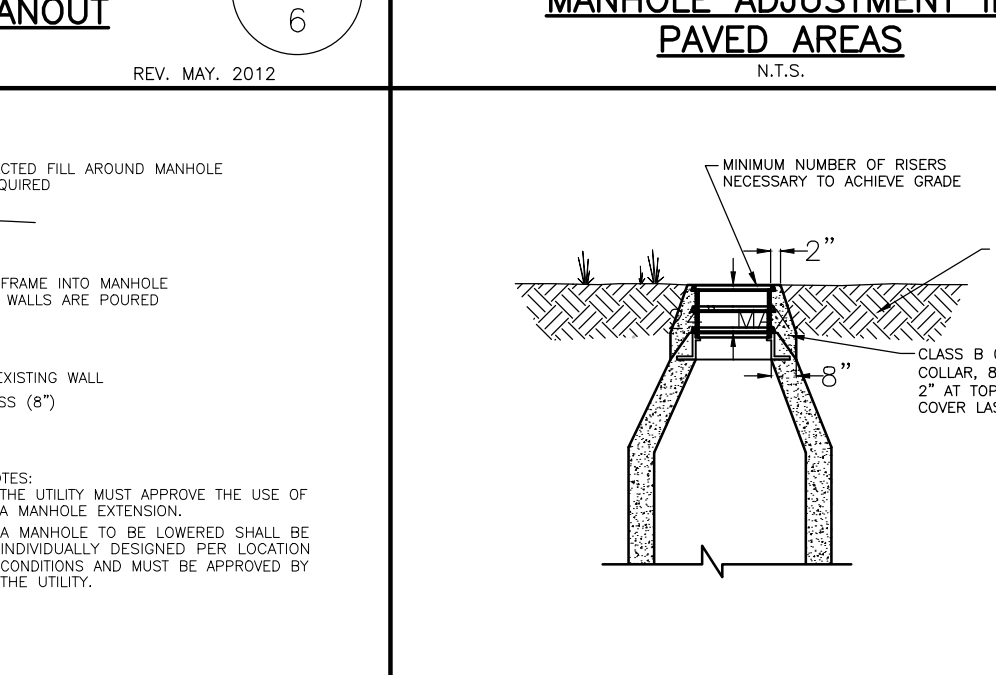
**SANITARY SEWER MANHOLE ABANDONMENT**  
N.T.S.



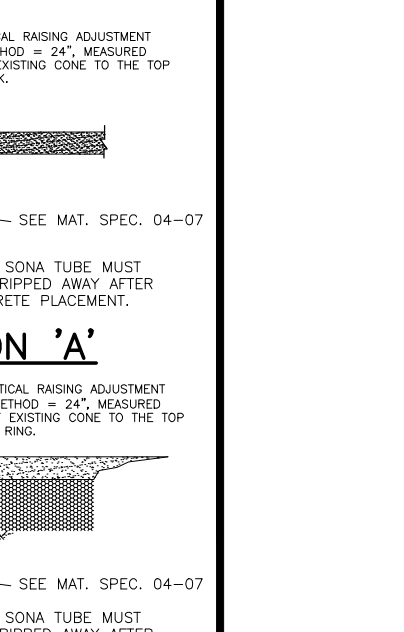
**PARALLEL SEWER FORCE MAIN & SANITARY SEWER MAIN**  
N.T.S.



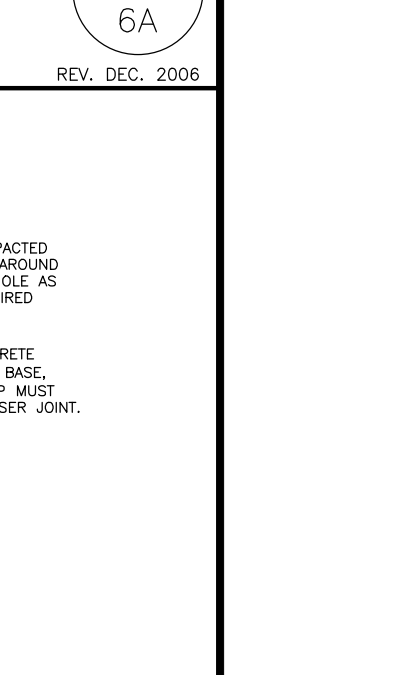
**4 INCH TWO-WAY SEWER CLEANOUT**  
N.T.S.



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



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



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

SD-1  
1  
REV. DEC. 2006

SD-1  
2  
REV. DEC. 2006

SD-1  
3  
REV. DEC. 2006

SD-1  
4  
REV. DEC. 2006

SD-1  
5  
REV. MAY. 2012

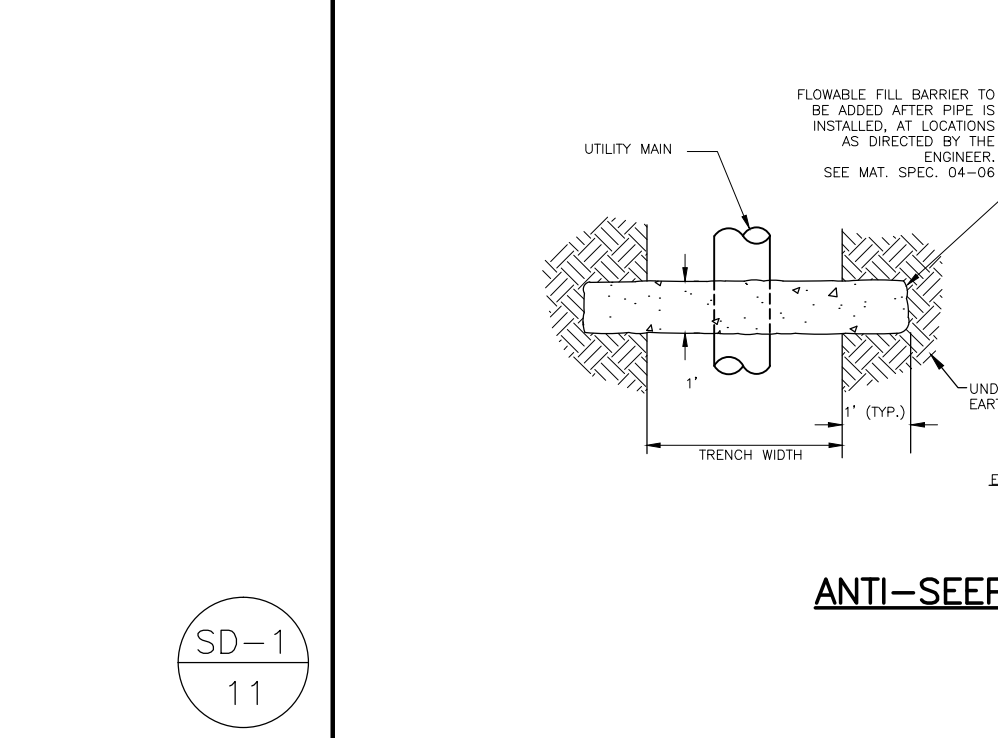
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REV. DEC. 2006

SD-1  
7  
REV. DEC. 2006

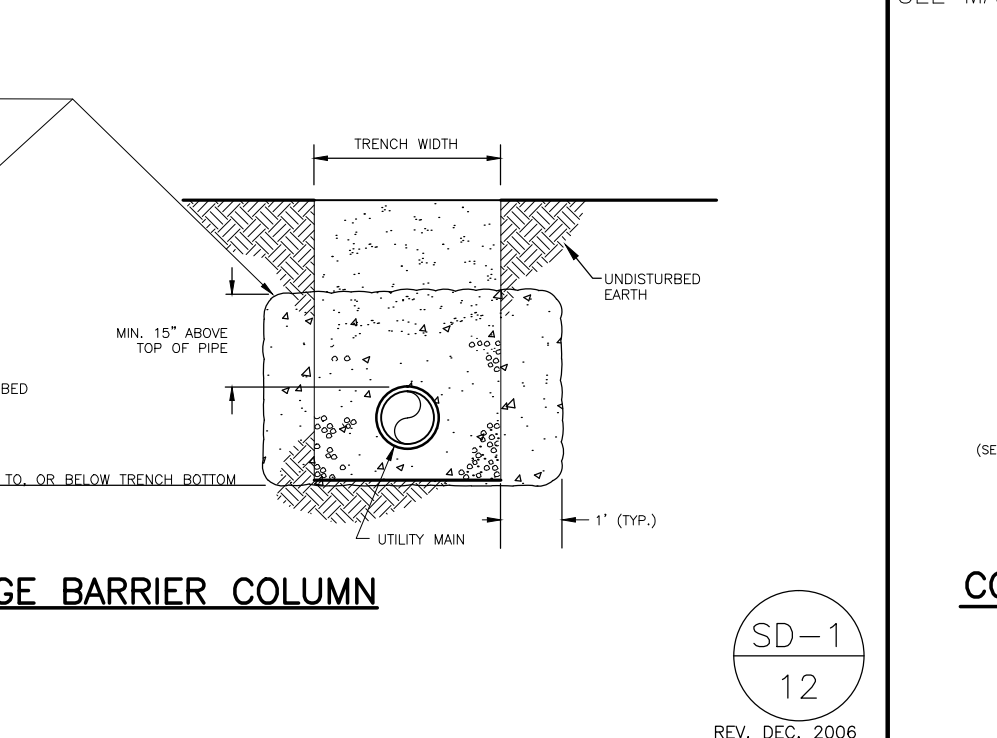
RESERVED

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

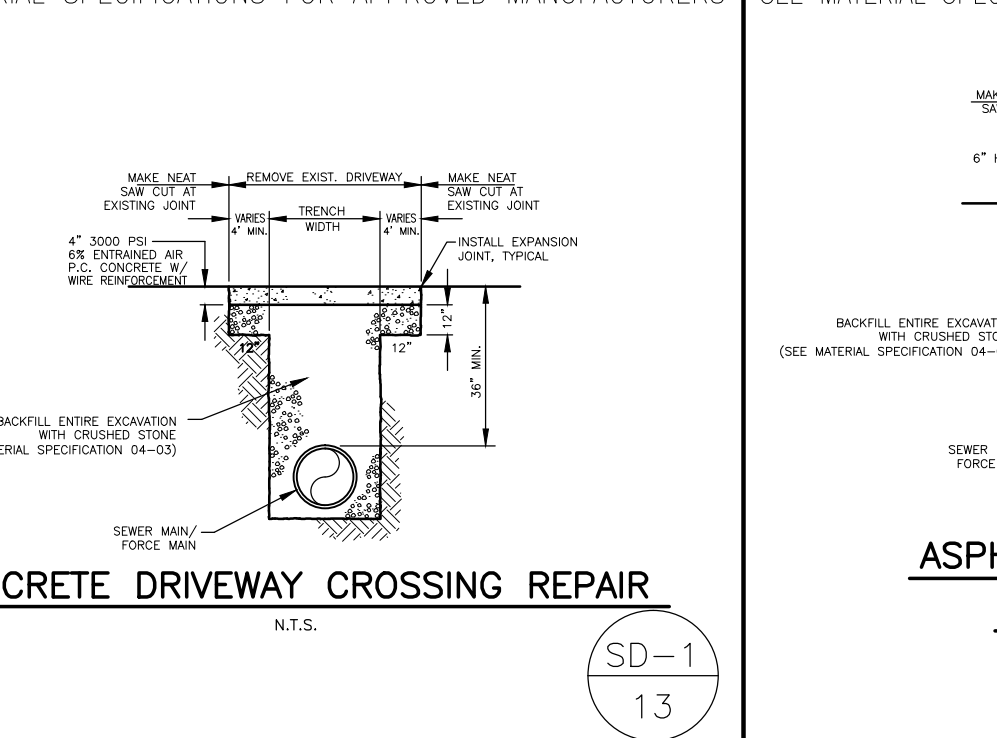
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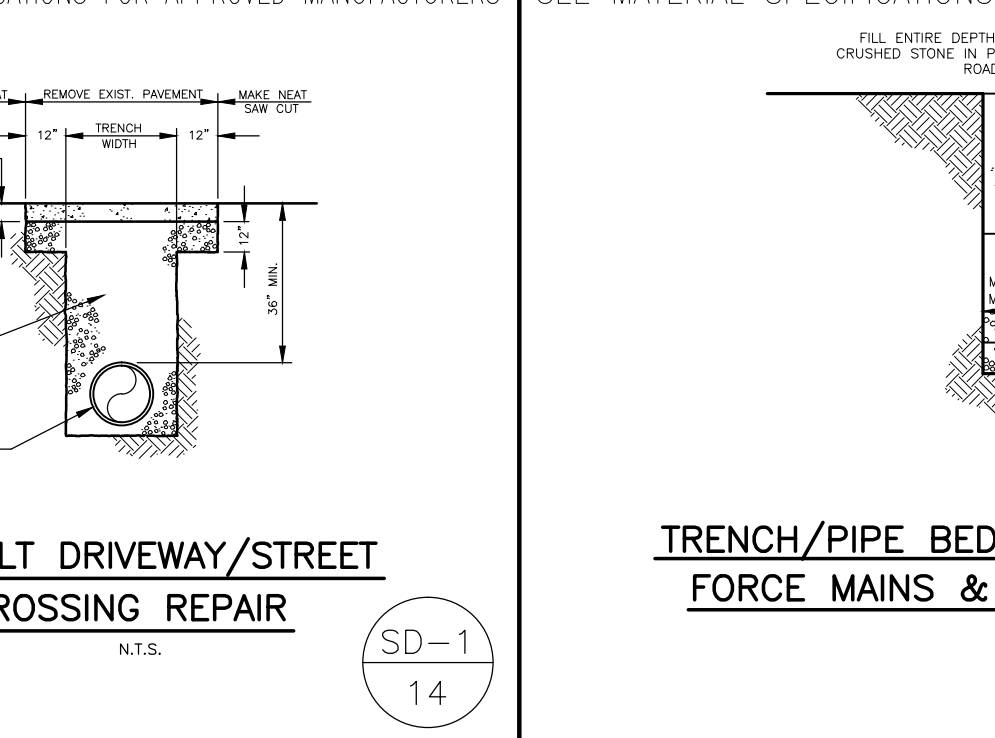
**ANTI-SEEPAGE BARRIER COLUMN**  
N.T.S.



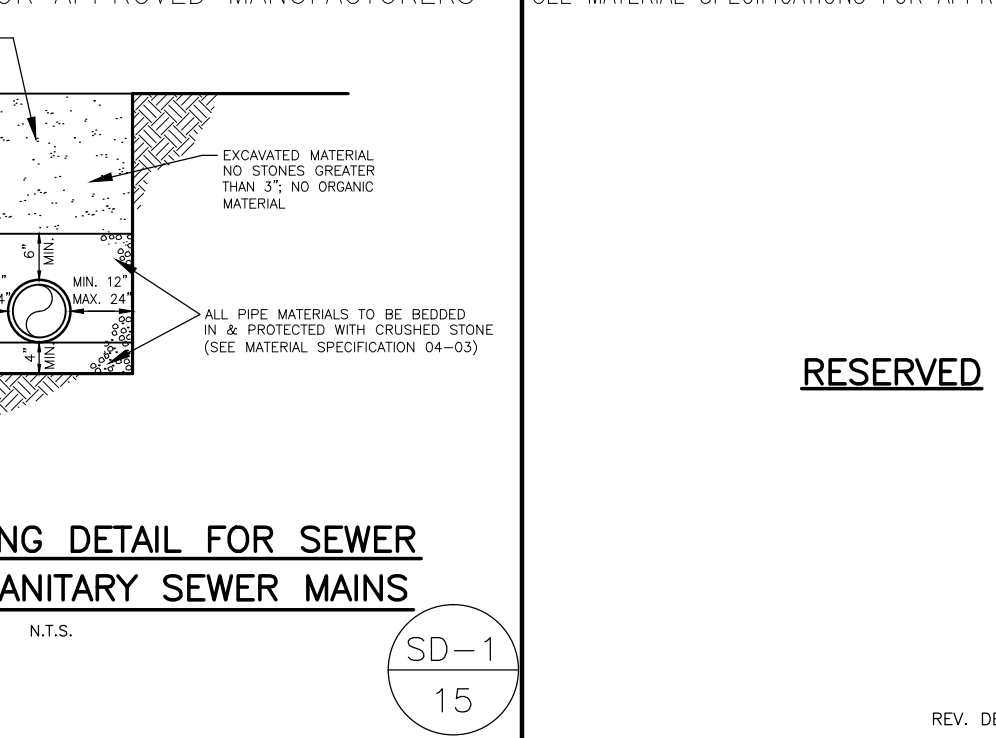
**CONCRETE DRIVEWAY CROSSING REPAIR**  
N.T.S.



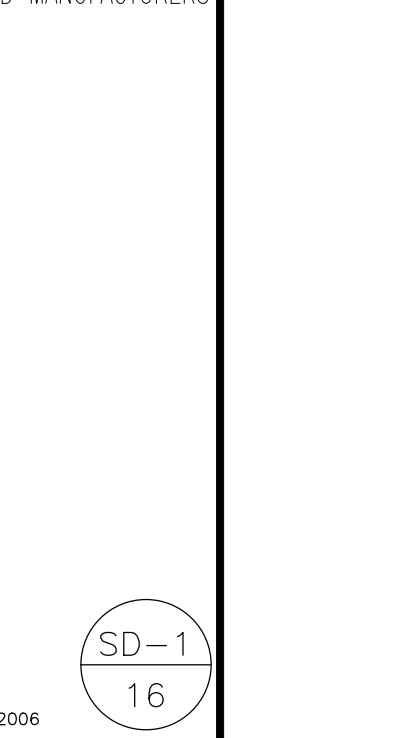
**ASPHALT DRIVEWAY/STREET CROSSING REPAIR**  
N.T.S.



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



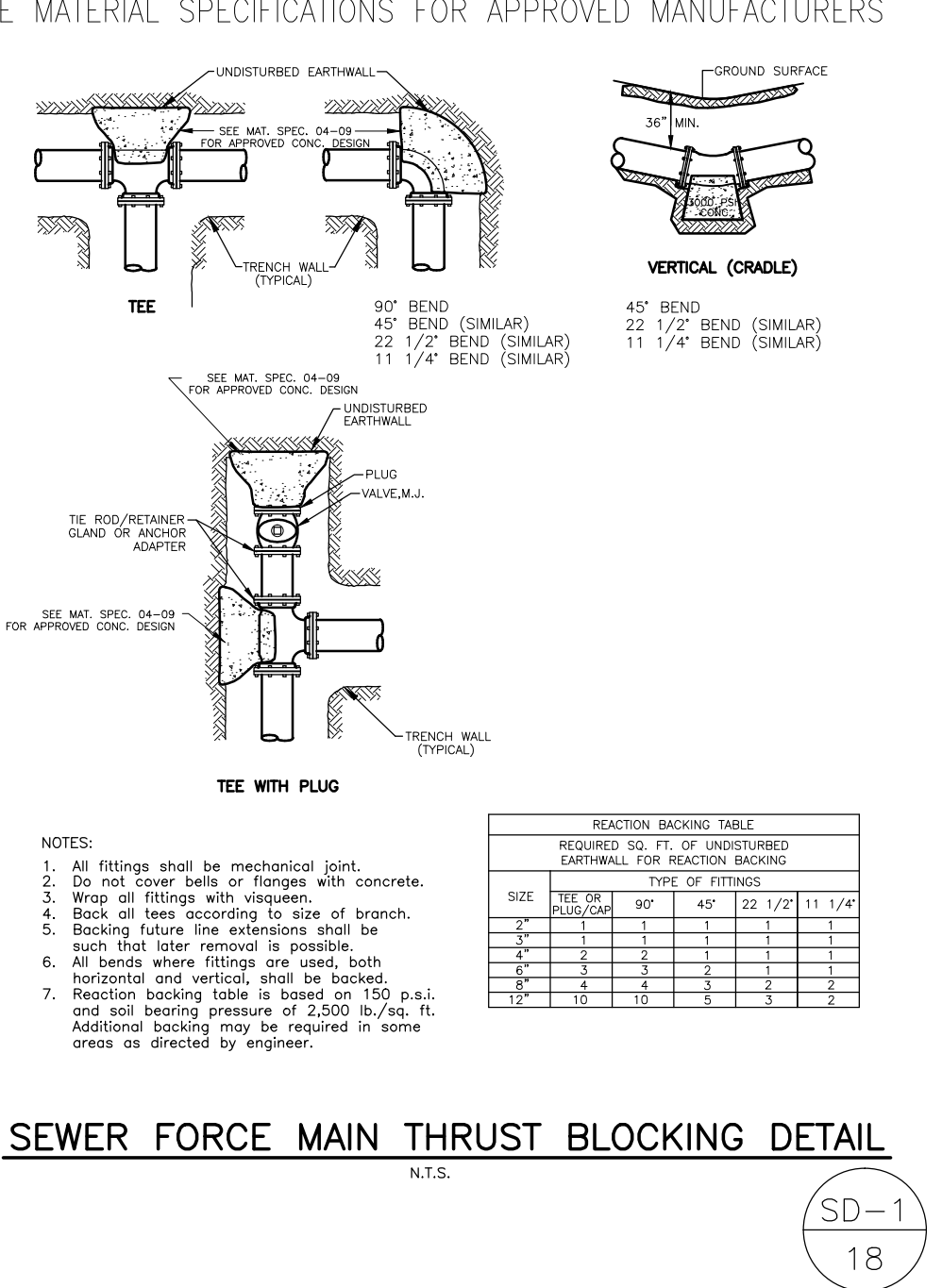
**GUARDPOST DETAIL**  
N.T.S.



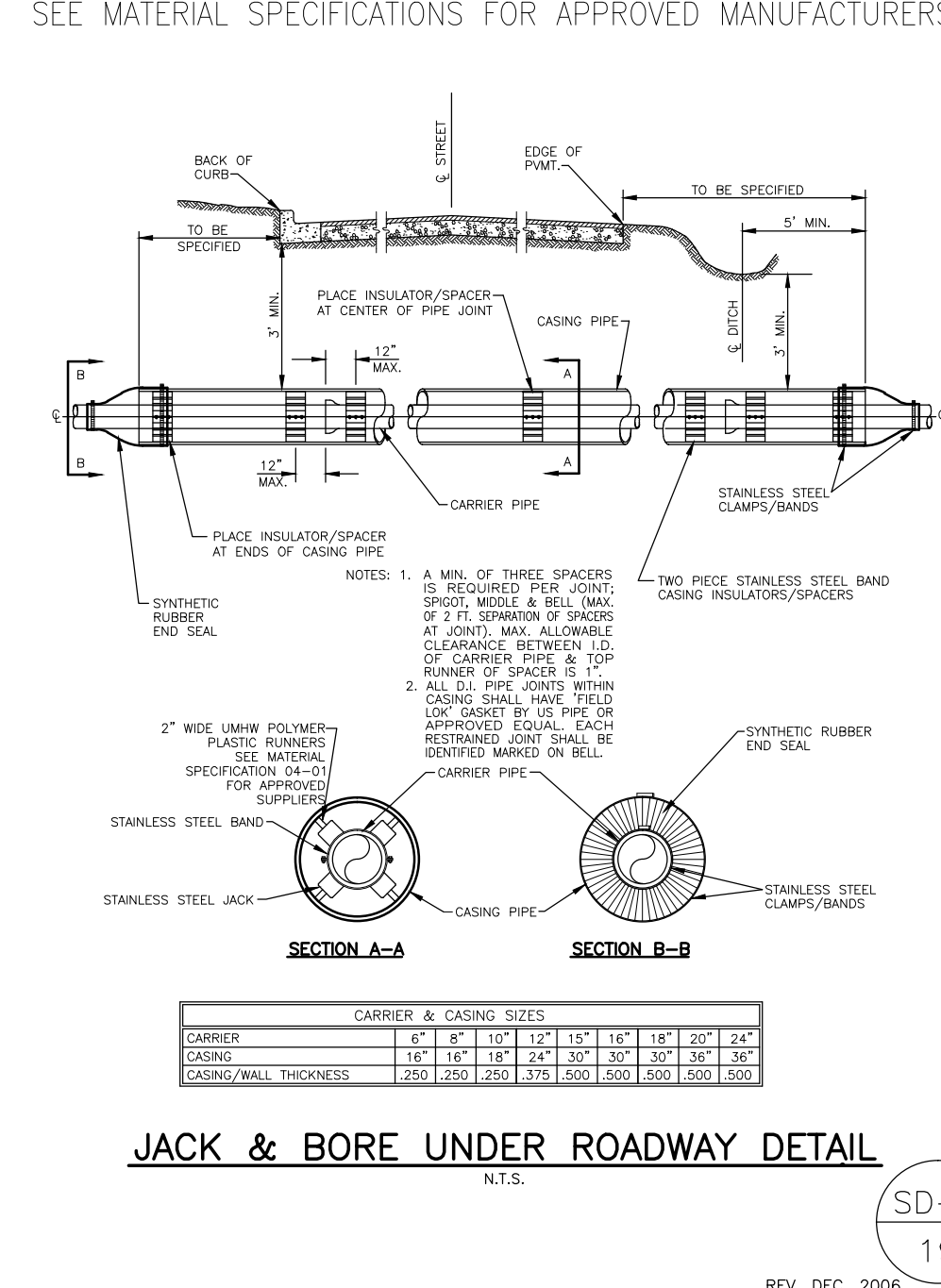
**FARM GATE INSTALLATION DETAIL**  
N.T.S.

**GENERAL CONSTRUCTION NOTES:**

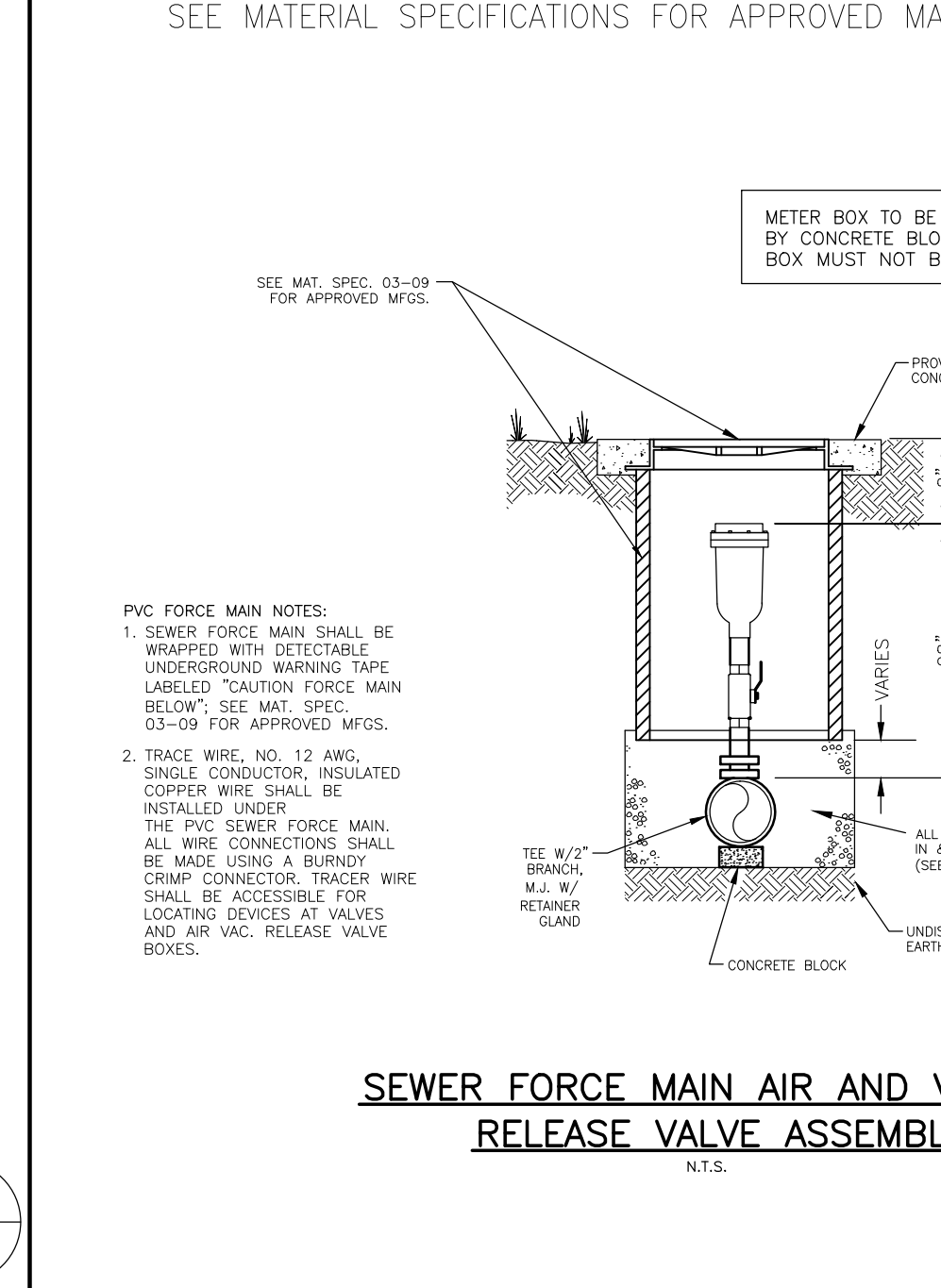
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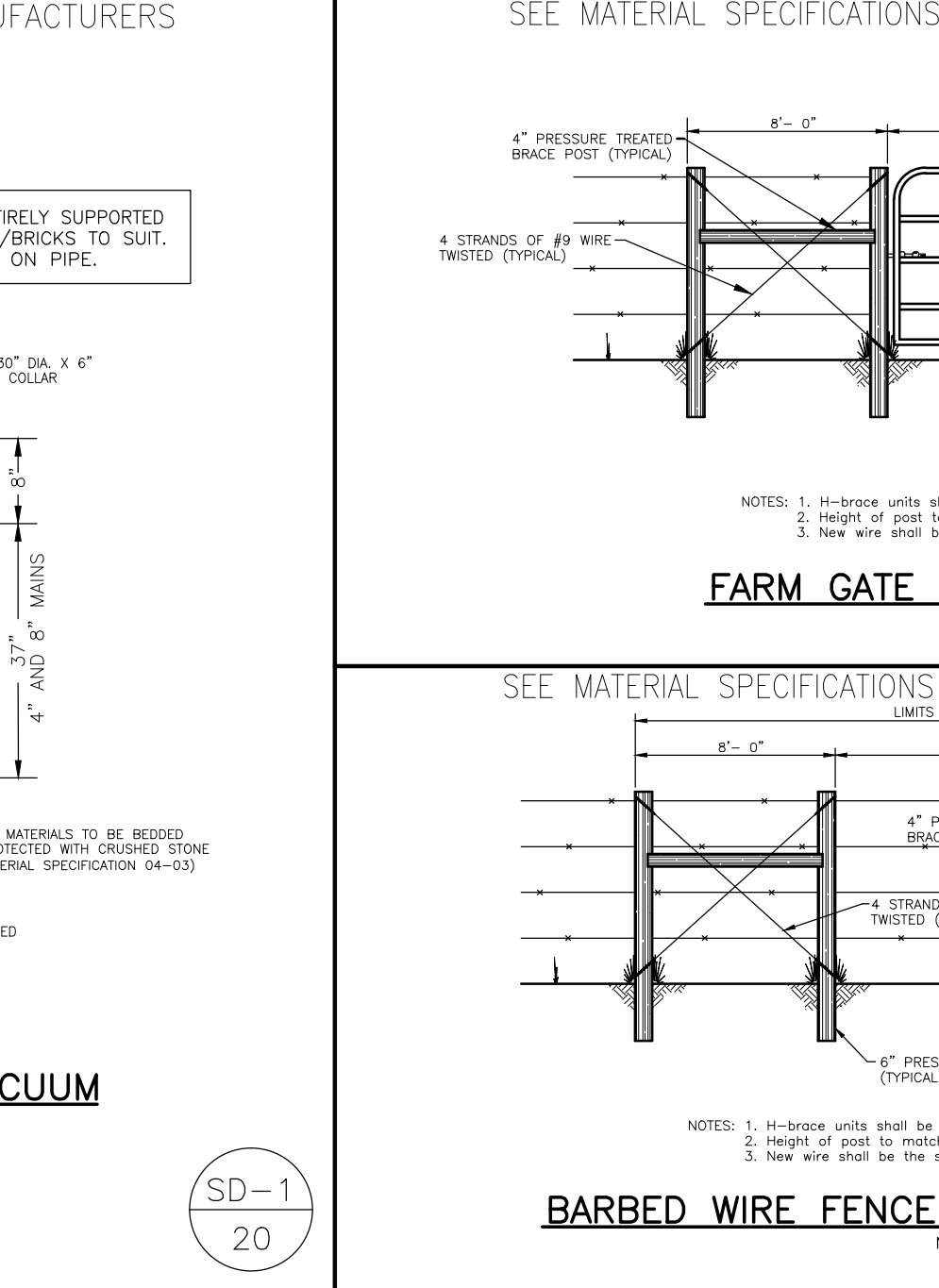
**SEWER FORCE MAIN THRUST BLOCKING DETAIL**  
N.T.S.



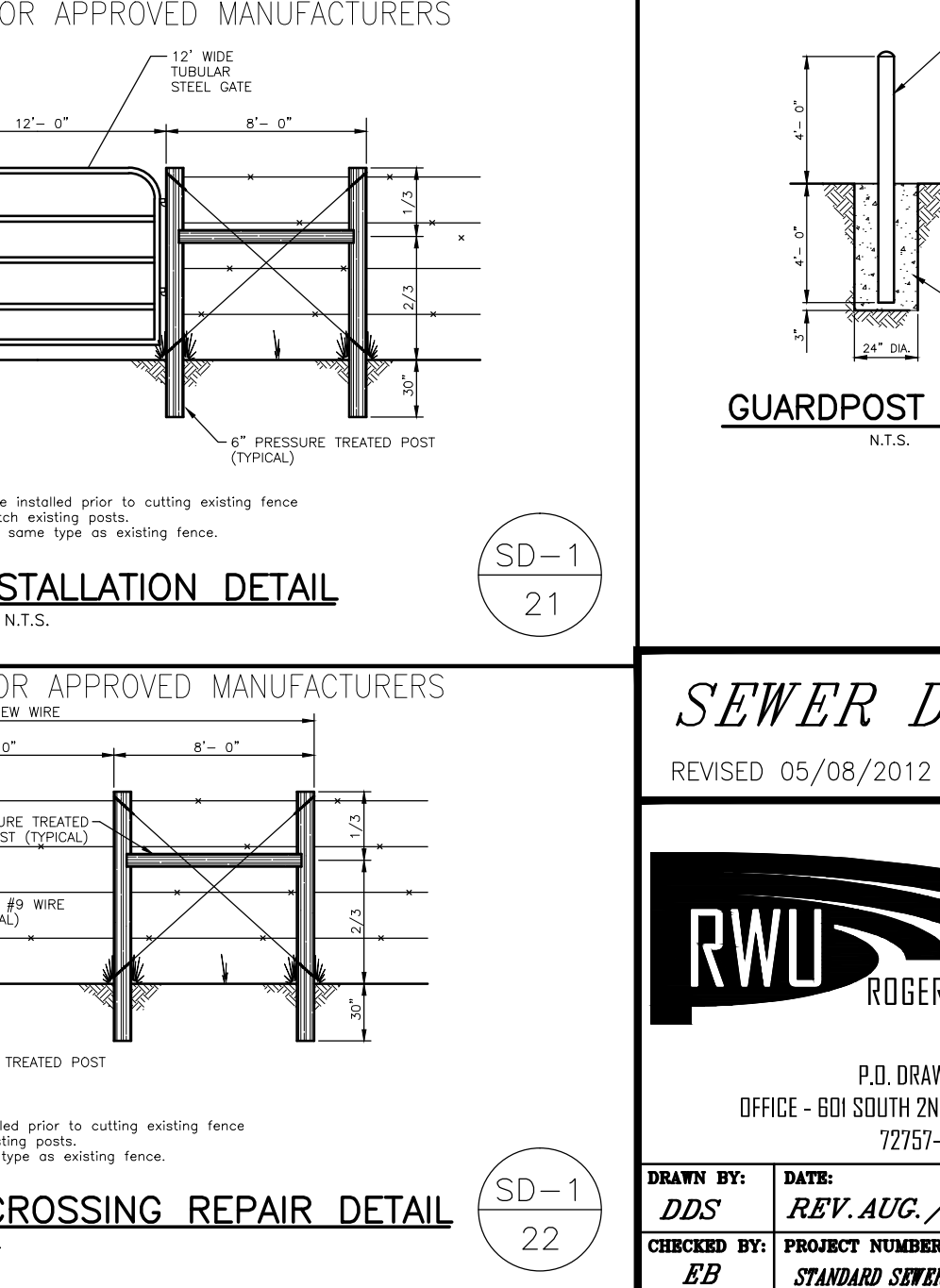
**JACK & BORE UNDER ROADWAY DETAIL**  
N.T.S.



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



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



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

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

**RWU**  
RODGERS WATER UTILITIES

P.D. DRAWER 338  
OFFICE - 600 SOUTH 2ND ROGERS, ARKANSAS  
72757-0338

DRAWN BY: **DD'S**  
CHECKED BY: **EB**

DATE: **REV. AUG. 2007**  
PROJECT NUMBER: **STANDARD SEWER DETAILS**

SHEET NO. **SD-1**