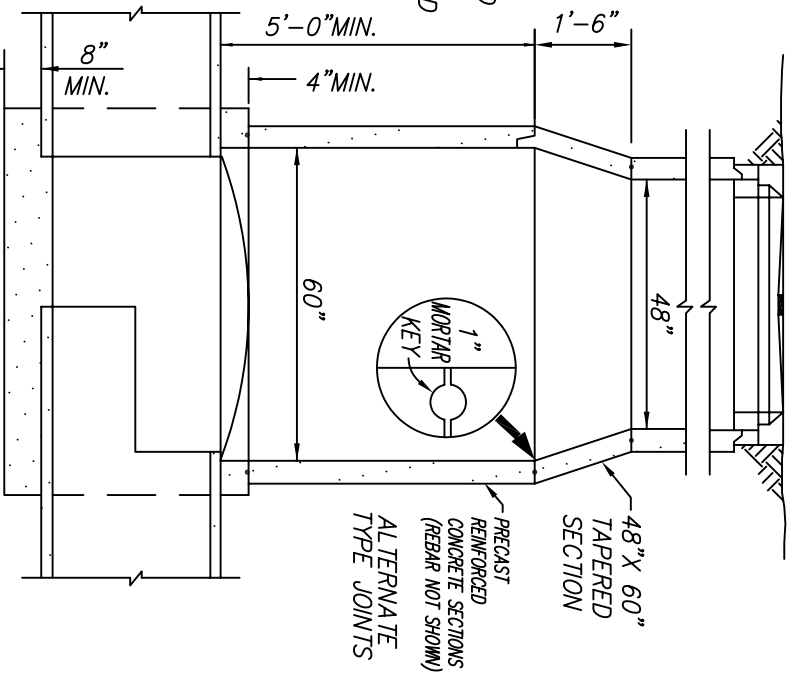
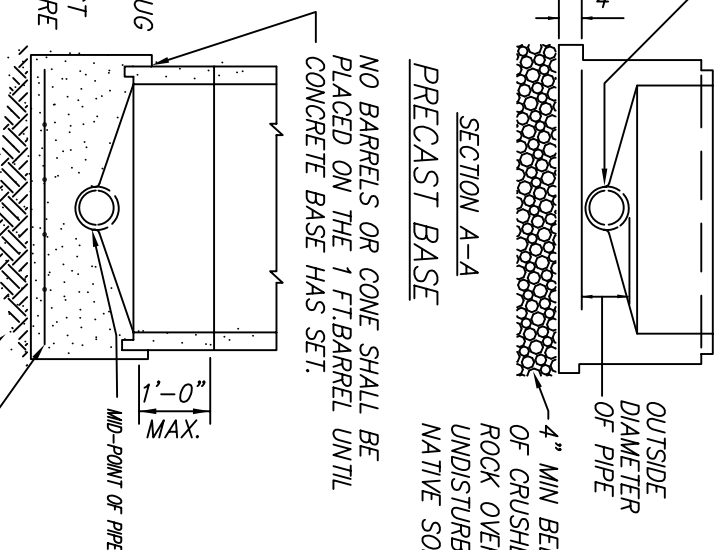
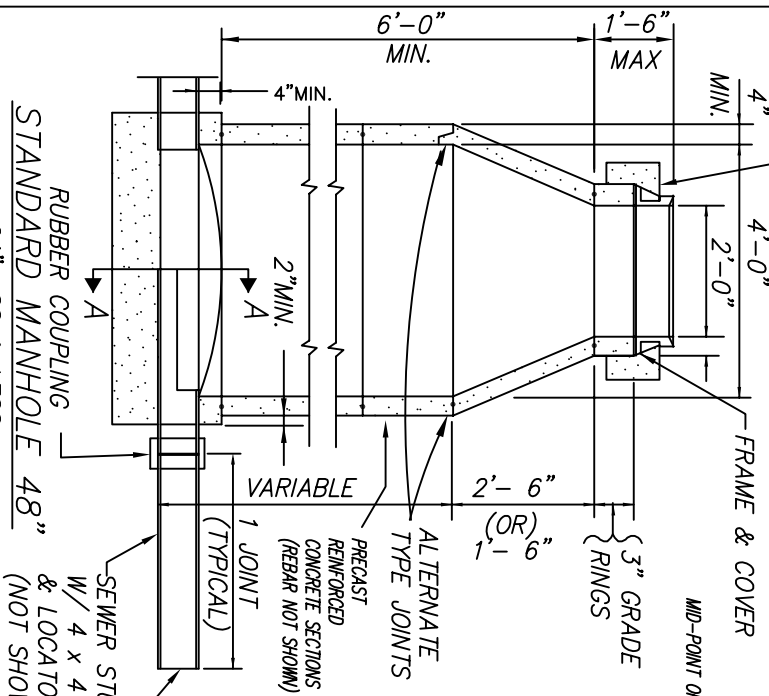


UNPAVED AREAS USE 6" CONCRETE COLLAR/PAVED AREAS USE 4" CONCRETE COLLAR
W/ 2 #4 HOOPS



RUBBER COUPLING
STANDARD MANHOLE 48"

SEWER STUB
W/ 4 x 4 POST
& LOCATOR WIRE
(NOT SHOWN)

ALLOWABLE ONLY WITH
WRITTEN APPROVAL
BY ENGINEER

SECTION A-A
CAST-IN-PLACE BASE
UNDISTURBED
NATIVE SOIL
#4 @ 12" O.C.

IF NO SIDE SEWER, CONSTRUCT
CONTINUOUS CHANNEL

1. CLASS 'A' CONCRETE SHALL BE USED FOR MANHOLE BASES.
2. PIPE MAY STOP AT INSIDE FACE OF MANHOLE OR MAY BE CONTINUOUS THROUGH MANHOLE. IF PIPE LAID CONTINUOUS, TOP HALF SHALL BE BROKEN AWAY AFTER BASE IS POURED.
3. JOINTS FOR THE BARREL SECTION SHALL BE TONGUE & GROOVE. ALL JOINTS MUST EITHER BE MADE W/ PREFORMED PLASTIC JOINT SEALING COMPOUND OR BY BUTTERING THE JOINT SPACE W/ MORTAR.
4. CONNECTION OF THE PIPE TO THE MANHOLE MAY BE MADE USING A RESILIENT CONNECTOR CONFORMING TO ASTM STANDARD C923 SUCH AS KOR-N-SEAL, A-LOK, OR EQUAL.
5. MANHOLES SHALL BE EPOXY COATED PER SECTION SS-57.
6. PROVIDE FIRST FLEX JOINT LESS THAN 2' FROM MANHOLE.
7. PRECAST SECTIONS DETAILED ABOVE.

CITY OF FOLSOM

STANDARD 48" & 60"

SEWER MANHOLE

(TYPE A)

TYPICAL STUB &
WATER TIGHT
STOPPER

PLAN VIEW OF MANHOLE

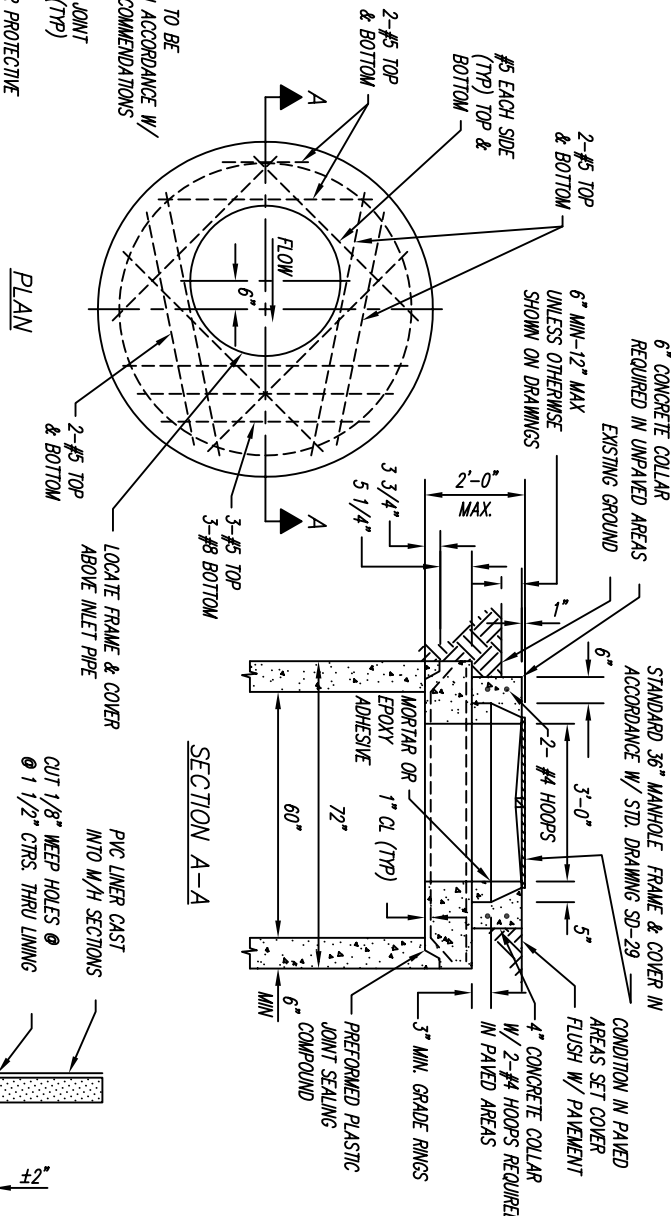
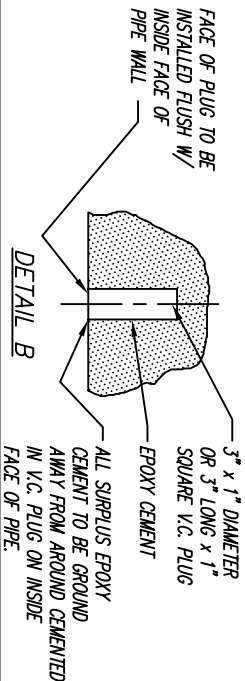
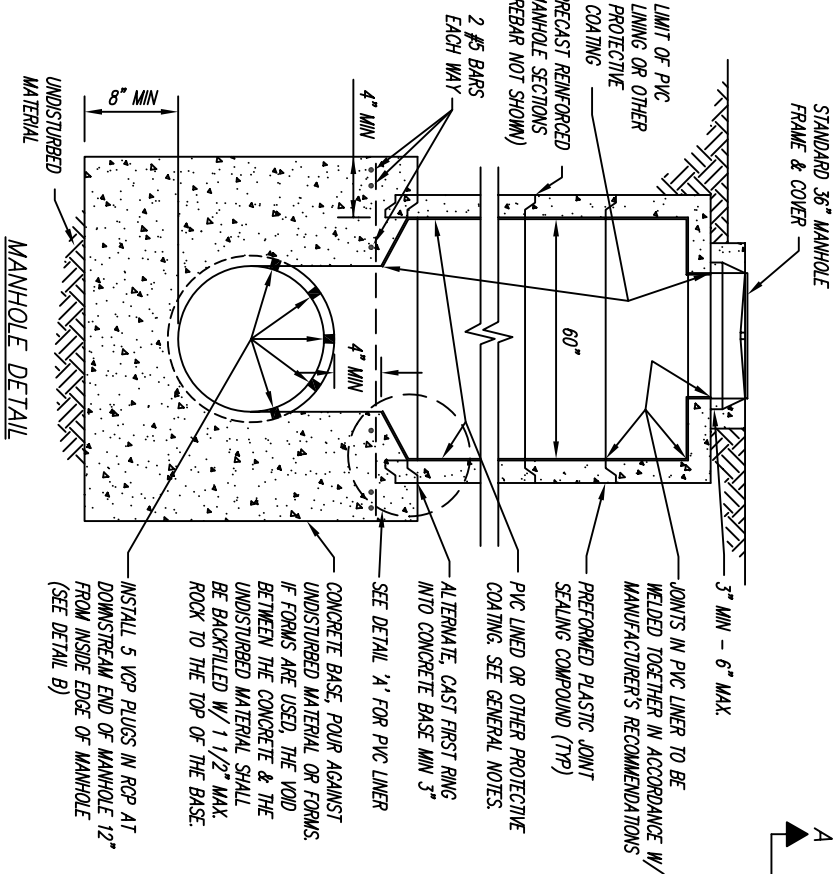
SHOWING INTERSECTING SEWERS

SCALE: NONE
DATE: JULY 2003
DRAWN BY: STAFF

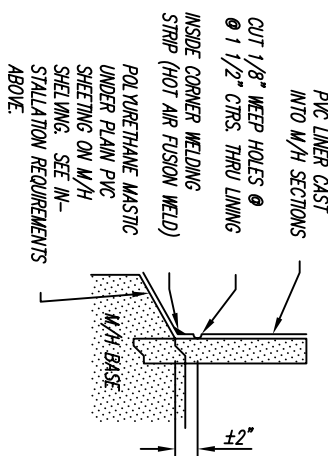
SS-1

GENERAL NOTES:

1. PROTECTIVE COATING SHALL BE A) QUANTUM AS MANUFACTURED BY POLYMORPHIC POLYMERS CORP. OF MIAMI SHORES, FL. MINIMUM THICKNESS OF MULTILAYERED MODIFIED UNSATURATED POLYESTER COATING SHALL BE 125 MIL. B) CONCRETE 1305 AS MANUFACTURED BY ADHESIVE ENGINEERING CO. OF SAN CARLOS, CA. MINIMUM THICKNESS OF MULTILAYERED, APPLIED ANNE CURED EPOXY SHALL BE 40 MILS C) OR EQUAL.
2. BOTH PVC LINING AND PROTECTIVE COATINGS SHALL BE SPARK TESTED FOR INTEGRITY AFTER INSTALLATION.
3. PROTECTIVE COATING SHALL BE APPLIED TO MANHOLE SHELVES, UNDERSIDE OF COVER SLAB, INSIDE OF GRADE RINGS AND ALL OTHER PLACES WHERE PVC IS SHOWN ON DETAIL BELOW.



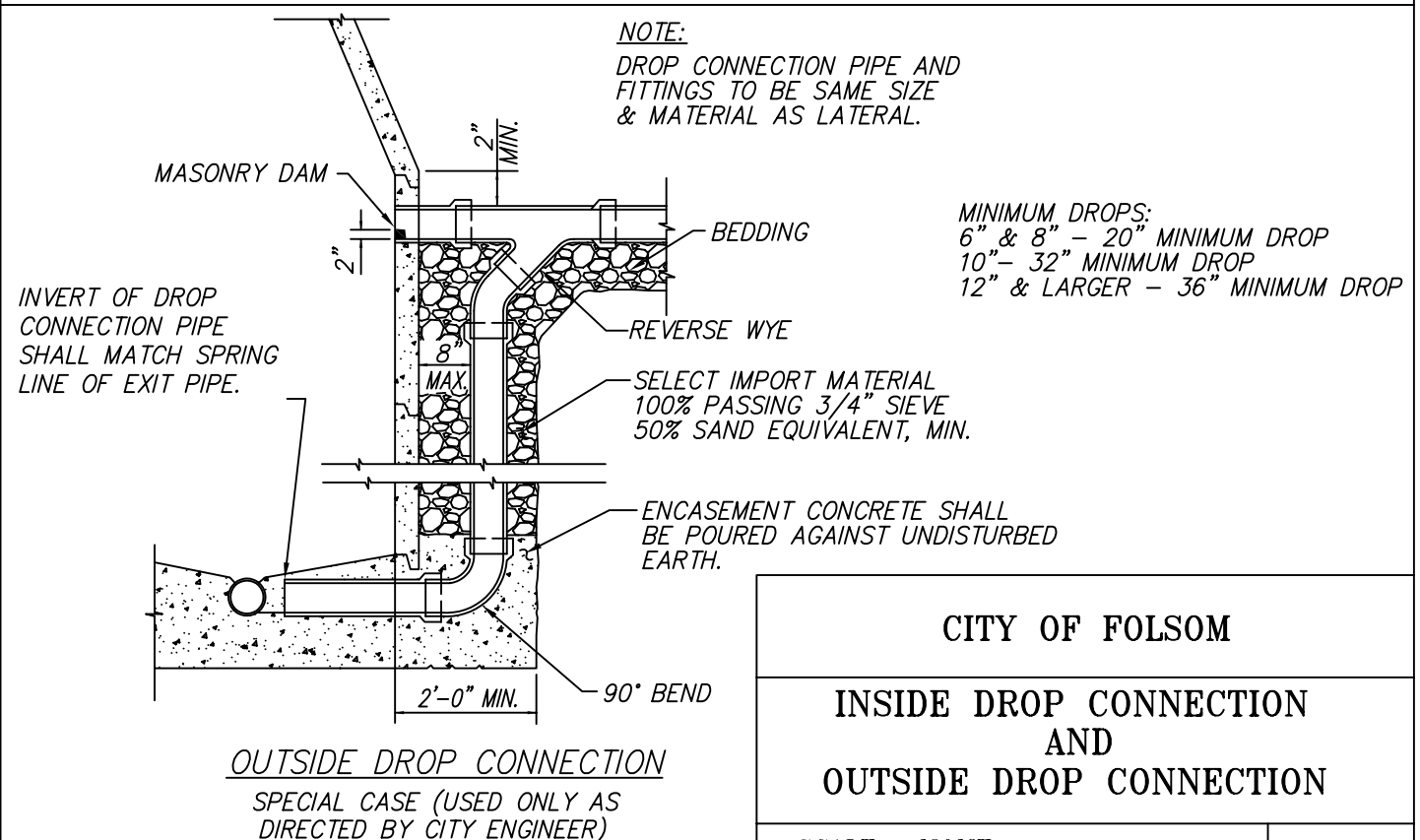
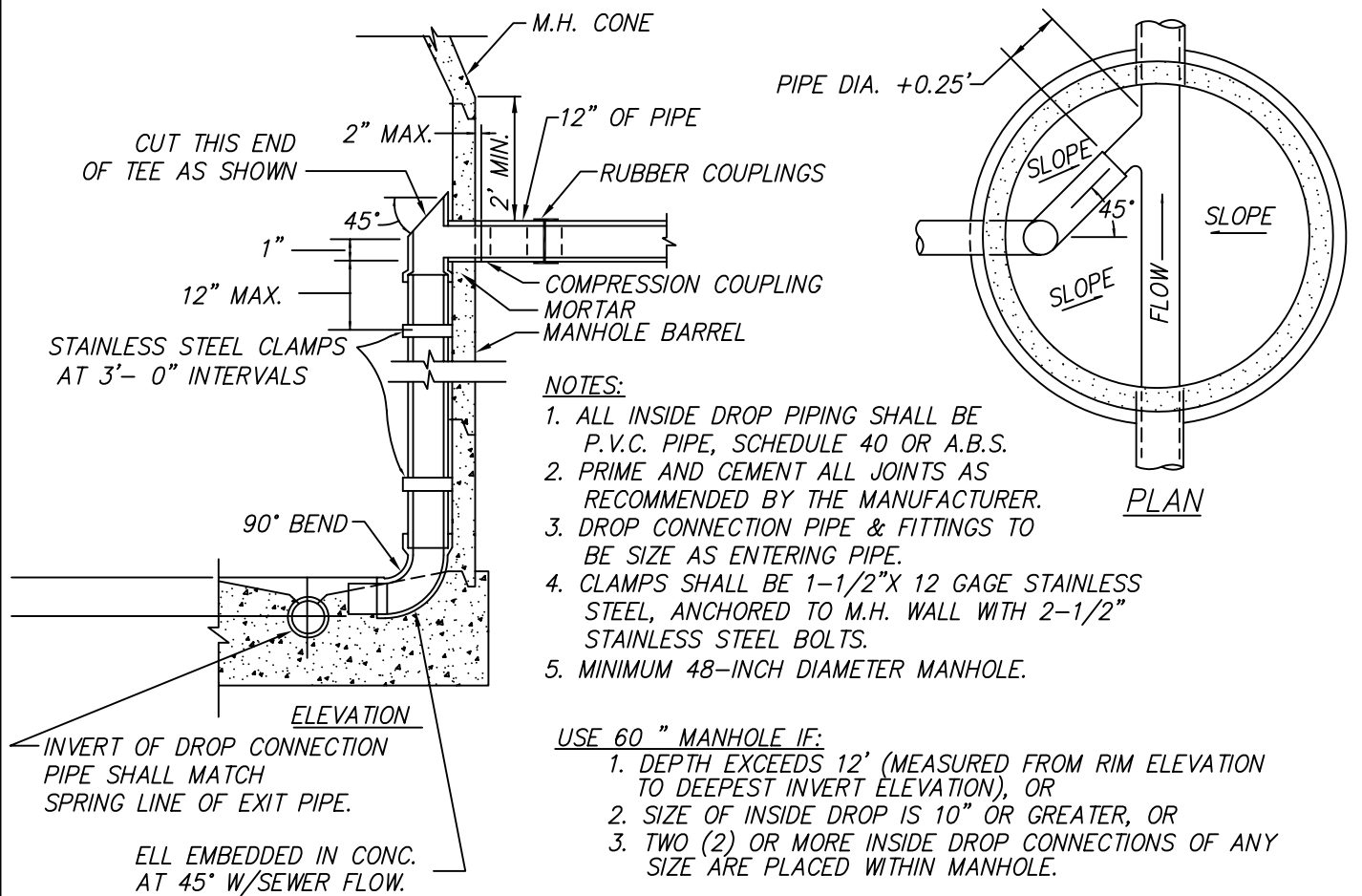
- INSTALLATION REQUIREMENTS FOR PVC SHELF LINER**
1. 30 MIL PVC SHELF LINER SHALL BE PRECUT AND PREPARED ABOVE GROUND PRIOR TO INSTALLATION WITH SAND EMBEDDED NON-SKID SURFACE 1" ± IN FROM EDGE, ACCORDING TO PVC SHEETING MANUFACTURER'S RECOMMENDATION.
 2. COAT CLEAN AND DRY CONCRETE SURFACE OF M/H SHELVES W/ LINABOND PRIMER EP30 AND LINABOND POLYURETHANE MASTIC TO A MINIMUM THICKNESS OF 125 MIL. ALSO COAT CONTACT SIDE OF THE PRECUT PVC SHEETING WITH LINABOND CLA-1 ACTIVATOR ALL AS MANUFACTURED BY ALLIED COATINGS CO. OF HOLLYWOOD, CA. OR EQUAL (SUBMITTAL WILL BE REQUIRED).
 3. ALL MATERIALS SHALL BE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.



CITY OF FOLSOM

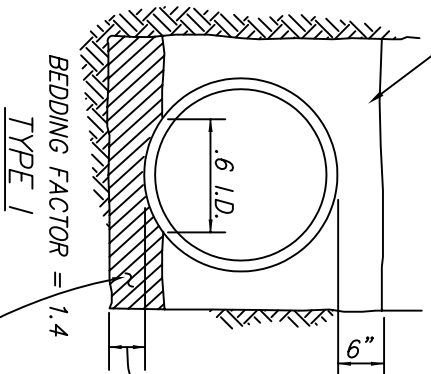
**STANDARD 60" MANHOLE
(TYPE B)**

SCALE: NONE
DATE: JULY 2003
DRAWN BY: STAFF



CITY OF FOLSOM	
INSIDE DROP CONNECTION AND OUTSIDE DROP CONNECTION	
SCALE: NONE DATE: NOVEMBER 2001 DRAWN BY: STAFF	SS-03

CAREFULLY PLACED
BACKFILL, NO SPECIAL
COMPACTION REQUIRED.

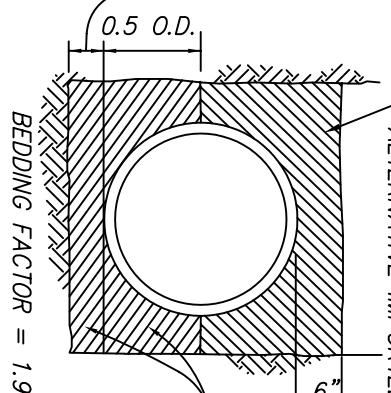


TYPE I

BEDDING FACTOR = 1.4

3" FOR 10" OR
SMALLER PIPE
4" FOR 12"
OR LARGER PIPE

ALTERNATE FOR BACKFILL
ABOVE SPRING LINE ONLY
NATIVE BACKFILL, 90%
RELATIVE COMPACTION OR
ALTERNATIVE IMPORTED MATERIAL



TYPE II

BEDDING FACTOR = 1.9

IMPORTED MATERIAL,
LESS THAN 10%
PASSING No. 8 Sieve;
100% PASSING 1/2"
Sieve for pipe 10"
or smaller, 100%
passing 3/4" sieve
for pipe 12" or larger.

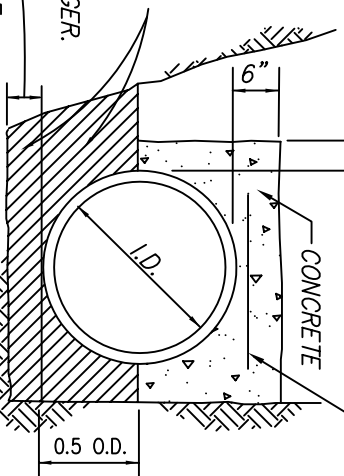
3" FOR 10"
OR SMALLER PIPE
4" FOR 12"
OR LARGER PIPE

TRANSVERSE STEEL REINFORCING
1/8d { 4" MIN.
12" MAX.

(SEE NOTES 1 & 5)

BEDDING FACTOR = 3.4

TYPE IV

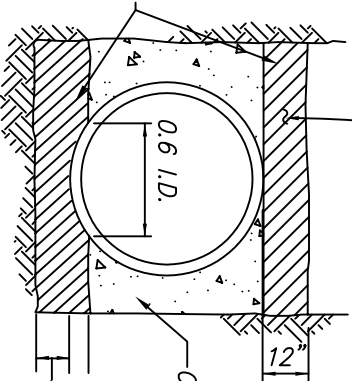


IMPORTED MATERIAL, MIN. SAND EQUIVALENT
OF 50; 100% PASSING 1/2" Sieve for
pipe 10" or smaller, 100% passing 3/4"
sieve for pipe 12" or larger.

(SEE NOTE 3)

IMPORTED MATERIAL,
LESS THAN 10%
PASSING No. 8 Sieve;
100% PASSING 1/2"
Sieve for pipe 10"
or smaller, 100%
passing 3/4" sieve
for pipe 12"
or larger.

IMPORTED MATERIAL,
LESS THAN 10%
PASSING No. 8 Sieve;
100% PASSING 1/2"
Sieve for pipe 10"
or smaller, 100%
passing 3/4" sieve
for pipe 12"
or larger.

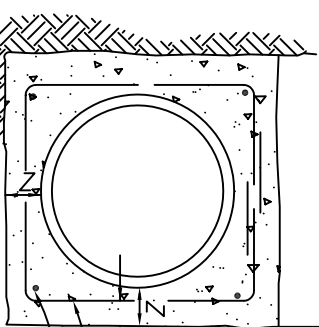


TYPE III

(SEE NOTE 1)

3" FOR 10" OR SMALLER PIPE
4" FOR 12" OR LARGER PIPE

COMPLETE ENCASUREMENT DETAIL



4" MIN. FOR SERVICE SEWER
Z=6" MIN. FOR ALL SEWER PIPES

3" CLEAR
#2 TIE BARS @ 18"
#4 REINFORCEMENT BARS

CITY OF FOLSOM

SEWER PIPE

BEDDING AND

INITIAL BACKFILL

SCALE: NONE

DATE: JULY 2003

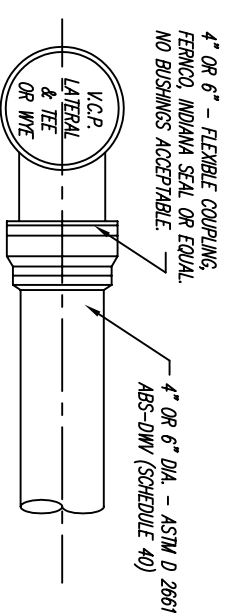
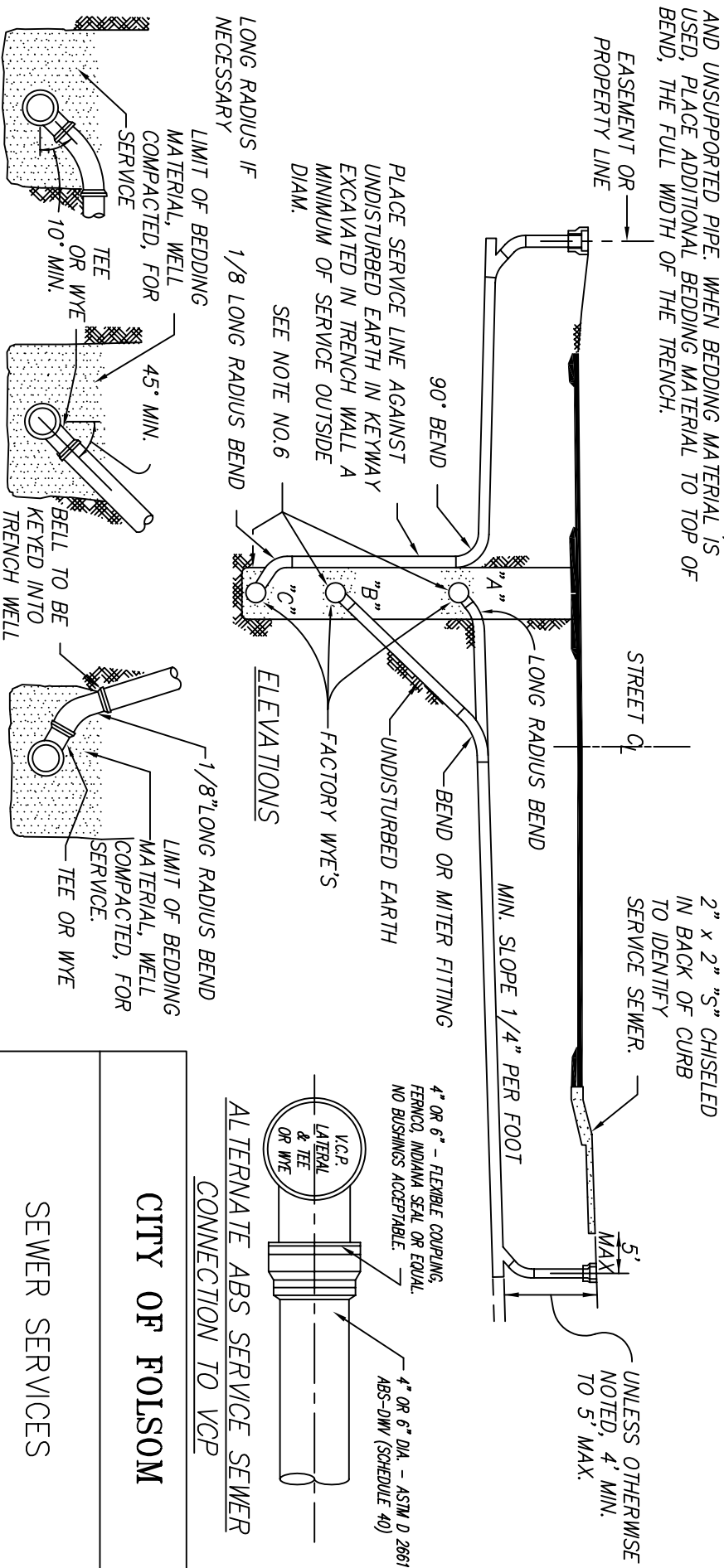
DRAWN BY: STAFF

SS-4

1. TYPES III & IV MAY BE USED ONLY WHEN CONSTRUCTION CONDITIONS ENCOUNTERED IN THE FIELD HAVE RESULTED IN THE ALLOWABLE TRENCH WIDTH FOR TYPE II AND TYPE III ALTERNATE BEING EXCEEDED. WRITTEN APPROVAL OF THE ENGINEER IS NECESSARY.
2. FOR REINFORCED CONCRETE, P IS THE PERCENTAGE OF THE AREA OF TRANSVERSE STEEL TO THE AREA OF CONCRETE ABOVE THE TOP OF THE BARREL.
3. FOR ALL FLEXIBLE (NON-RIGID) PIPE, IMPORTED MATERIAL MUST BE USED FOR BEDDING AND INITIAL BACKFILL TO 12" OVER PIPE BELL.
4. SEE SECTIONS SS-13 FOR TRENCH BEDDING AND BACKFILL LIMITS.
5. MINIMUM DEPTH OF BEDDING MATERIAL UNDER PIPE BELLS SHALL BE 1-1/2 INCHES.

NOTES:

1. ALL SERVICE LINES SHALL BE 4" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
2. SERVICES SHALL HAVE SAME BEDDING AND BACKFILL AS LATERAL SEWER.
3. CONTRACTOR SHALL USE THE MOST APPROPRIATE TYPE CONNECTION (A, B OR C) FOR THE PARTICULAR SITUATION ENCOUNTERED.
4. SERVICE SEWER SHALL HAVE MINIMUM 4'-0" COVER AT PROPERTY LINE WHENEVER LATERAL DEPTH AND SERVICE SEWER SLOPE OF 1/4" PER FOOT (MINIMUM) PERMIT.
5. WHEN THE LATERAL SEWER DEPTH IS SUCH THAT MINIMUM COVER AT PROPERTY LINE CANNOT BE MET, THE MINIMUM SLOPE OF 1/4" PER FOOT SHALL GOVERN THE COVER.
6. PLACE CONCRETE 12" WIDE UNDER THE TEE BRANCH, THE FITTING, AND UNSUPPORTED PIPE. WHEN BEDDING MATERIAL IS USED, PLACE ADDITIONAL BEDDING MATERIAL TO TOP OF BEND, THE FULL WIDTH OF THE TRENCH.
7. MIN. SPECIFIED COVER AT THE PROPERTY LINE SHALL BE MEASURED FROM EXISTING GROUND SURFACE OR EDGE OF ADJACENT ROADWAY, WHICHEVER IS LOWER.
8. A SPECIFIC ELEVATION AT THE PROPERTY LINE, WHEN SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER, SHALL GOVERN.
9. MITER FITTING SHALL BE MAX. 45°.



ALTERNATE ABS SERVICE SEWER
CONNECTION TO VCP

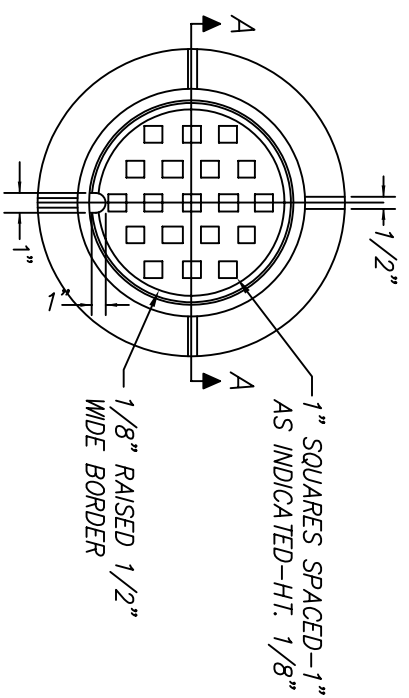
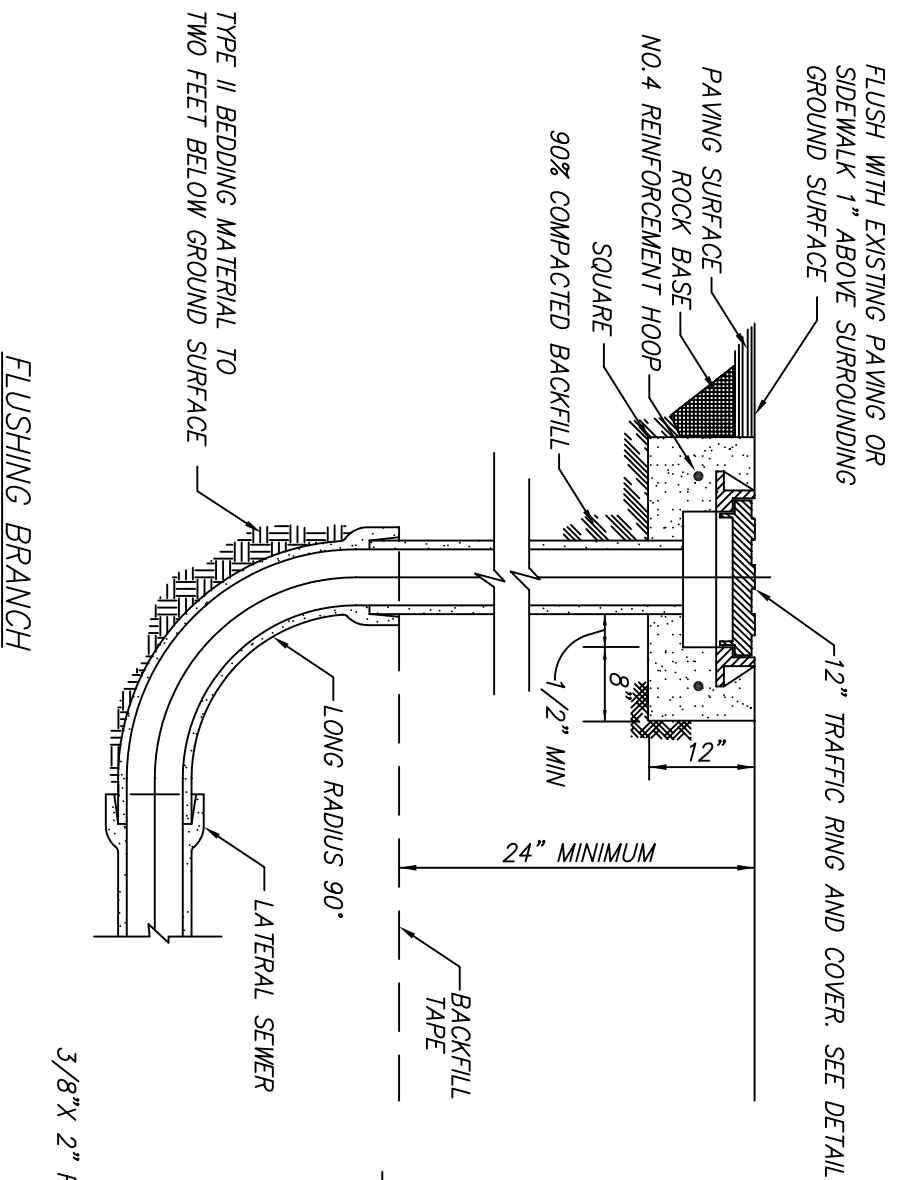
TYPE A

TYPE B

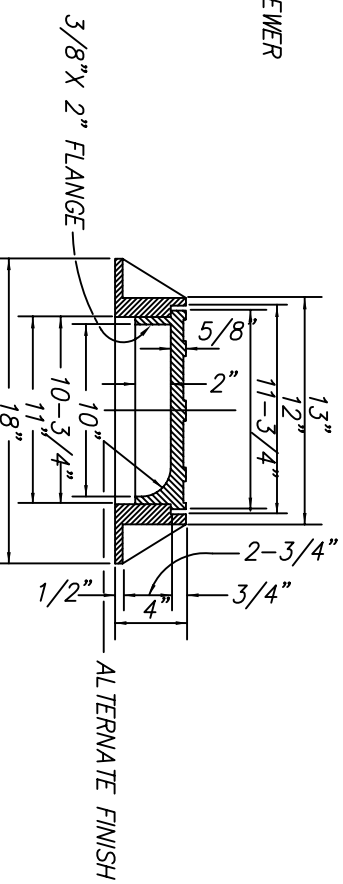
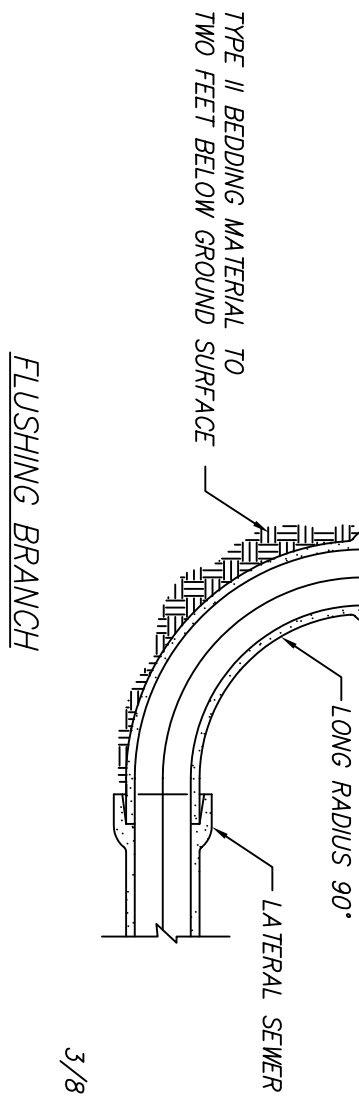
TYPE C

CONNECTION DETAILS

CITY OF FOLSOM	
SEWER SERVICES	
SCALE: NONE	SS-5
DATE: JULY 2003	
DRAWN BY: STAFF	



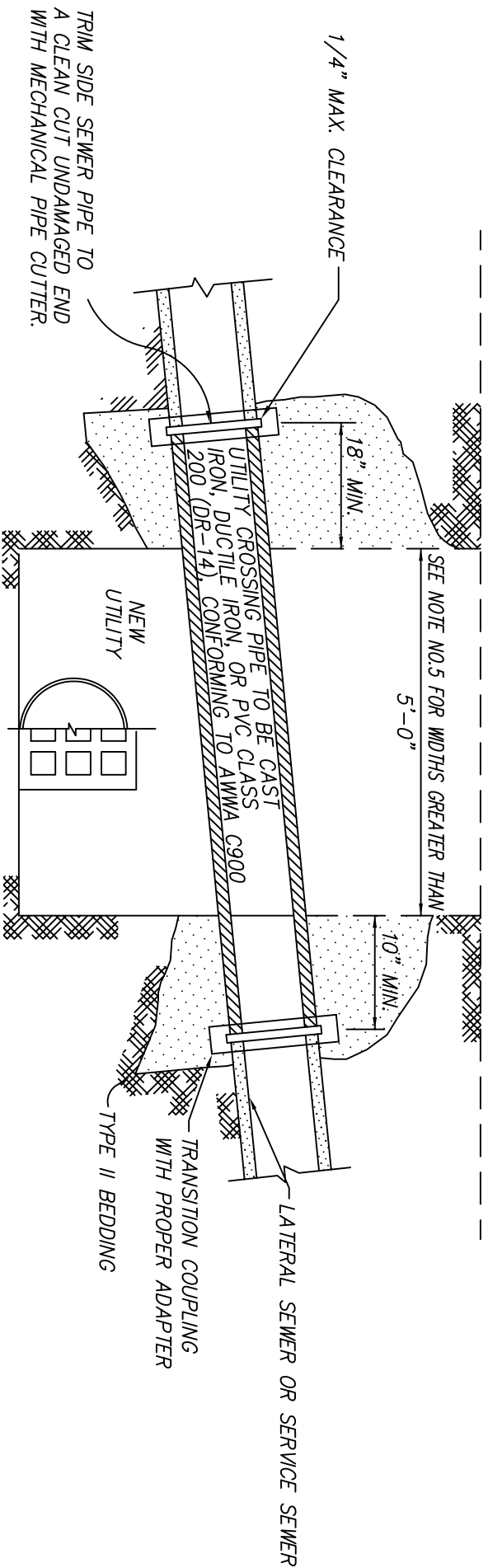
TYPICAL 12" TRAFFIC RING & COVER



FRAME WT. APPROX. 59 LBS.
COVER WT. APPROX. 28 LBS.

NOTE:
ALL PIPE AND FITTINGS SHALL BE THE SAME SIZE AND MATERIAL AS THE HORIZONTAL PIPE TO WHICH THEY CONNECT. JOINT SHALL BE AS SPECIFIED FOR THE TYPE OF PIPE USED.

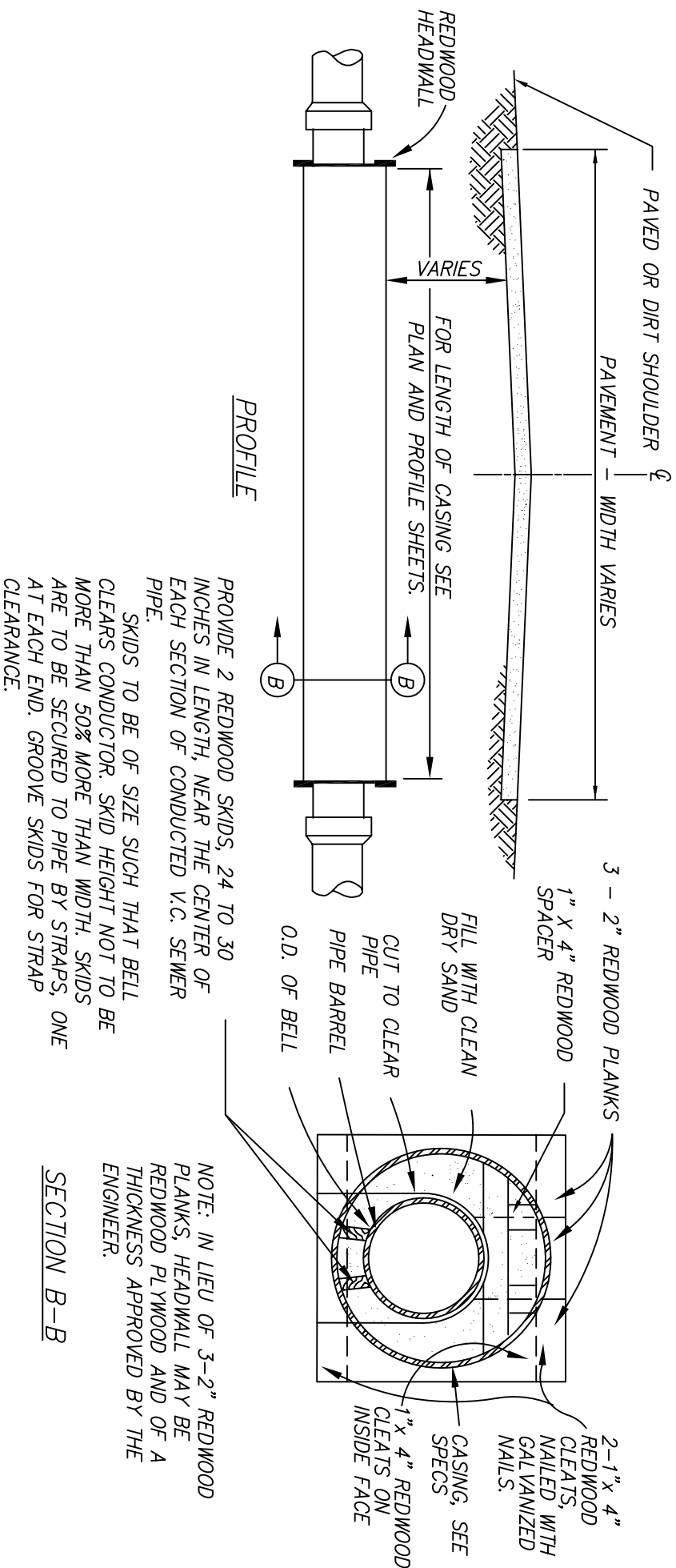
CITY OF FOLSOM	
FLUSHING BRANCH	
SCALE: NONE DATE: JULY 2003 DRAWN BY: STAFF	SS-6



NOTES:

1. INSIDE DIAMETER OF UTILITY CROSSING PIPE TO BE THE SAME AS THE PIPE TO WHICH IT CONNECTS.
2. THIS DETAIL SHALL APPLY WHENEVER THE LATERAL OR SERVICE SEWER IS CUT OR DAMAGED.
3. THIS DETAIL IS APPLICABLE WHENEVER CONSTRUCTION PASSES BENEATH THE LATERAL OR SERVICE SEWER.
4. ALTERATION OF SEWER GRADES WILL BE PERMITTED ONLY AFTER WRITTEN PERMISSION HAS BEEN RECEIVED FROM THE CITY OF FOLSOM DEPARTMENT OF PUBLIC WORKS.
5. WHENEVER THE SPAN, WHETHER CAUSED BY TRENCH WIDTH OR CROSSING ANGLE OF THE UTILITY CROSSING PIPE EXCEEDS 5'-0", PLACE TYPE II BEDDING TO 6" ABOVE THE PIPE AND 18" EACH SIDE OF ITS CENTER LINE.

CITY OF FOLSOM		
UTILITY CROSSING		
SCALE: NONE	SS-7	
DATE: JULY 2003		
DRAWN BY: STAFF		

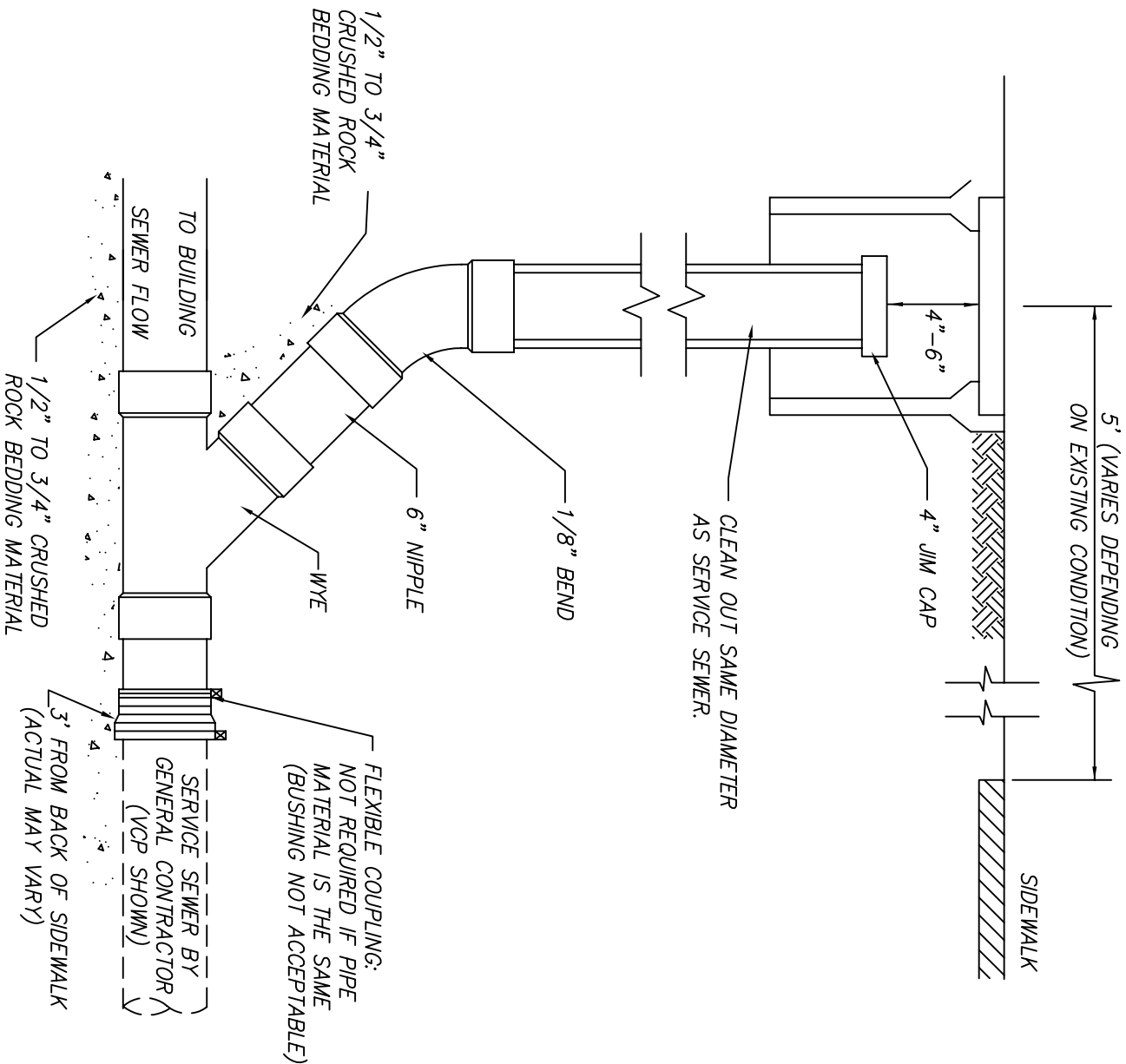


CITY OF FOLSOM

CONDUCTOR CROSSING DETAIL

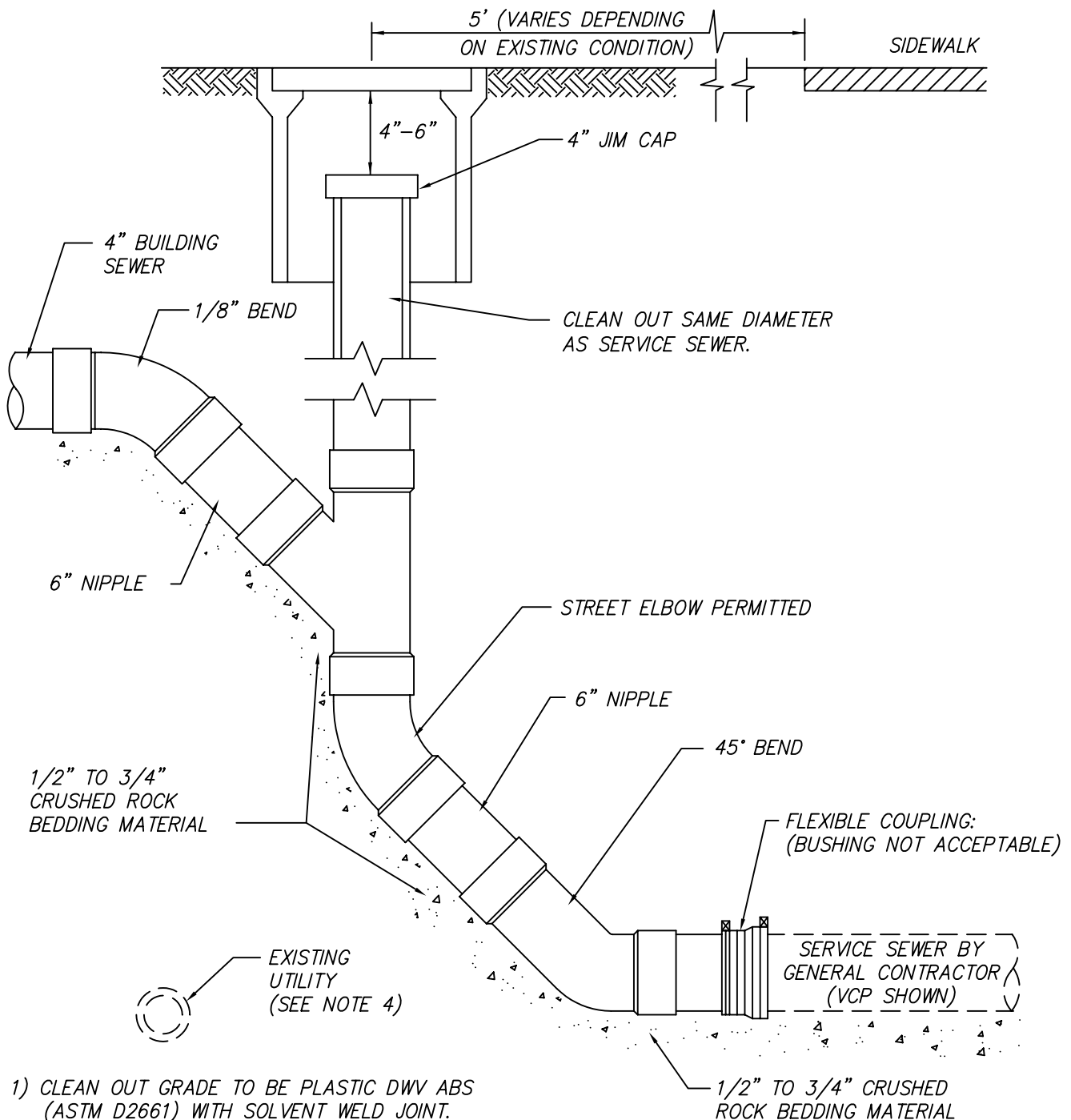
SCALE: NONE
DATE: JULY 2003
DRAWN BY: STAFF

SS-8



- 1) CLEAN OUT GRADE TO BE PLASTIC DWV ABS (ASTM D2661) WITH SOLVENT WELD JOINT.
- 2) FOR 4" SERVICES INSTALL ROUND, NON-TRAFFIC TYPE CONCRETE OR PVC VALVE BOX INSIDE DIAMETER TO BE A MINIMUM OF 7" AND A MAXIMUM OF 10"
- 3) FOR SERVICES 6" OR LARGER, INSTALL ROUND, CONCRETE TRAFFIC TYPE VALVE BOX WITH CAST IRON COVER MARKED "SEWER".
- 4) DEPTH AT PROPERTY LINE SHOULD BE 4' MINIMUM, 5' MAXIMUM. EXISTING CONDITIONS MAY VARY.

CITY OF FOLSOM	
ABS CLEANOUT	
SCALE: NONE DATE: JULY 2003 DRAWN BY: STAFF	SS-10



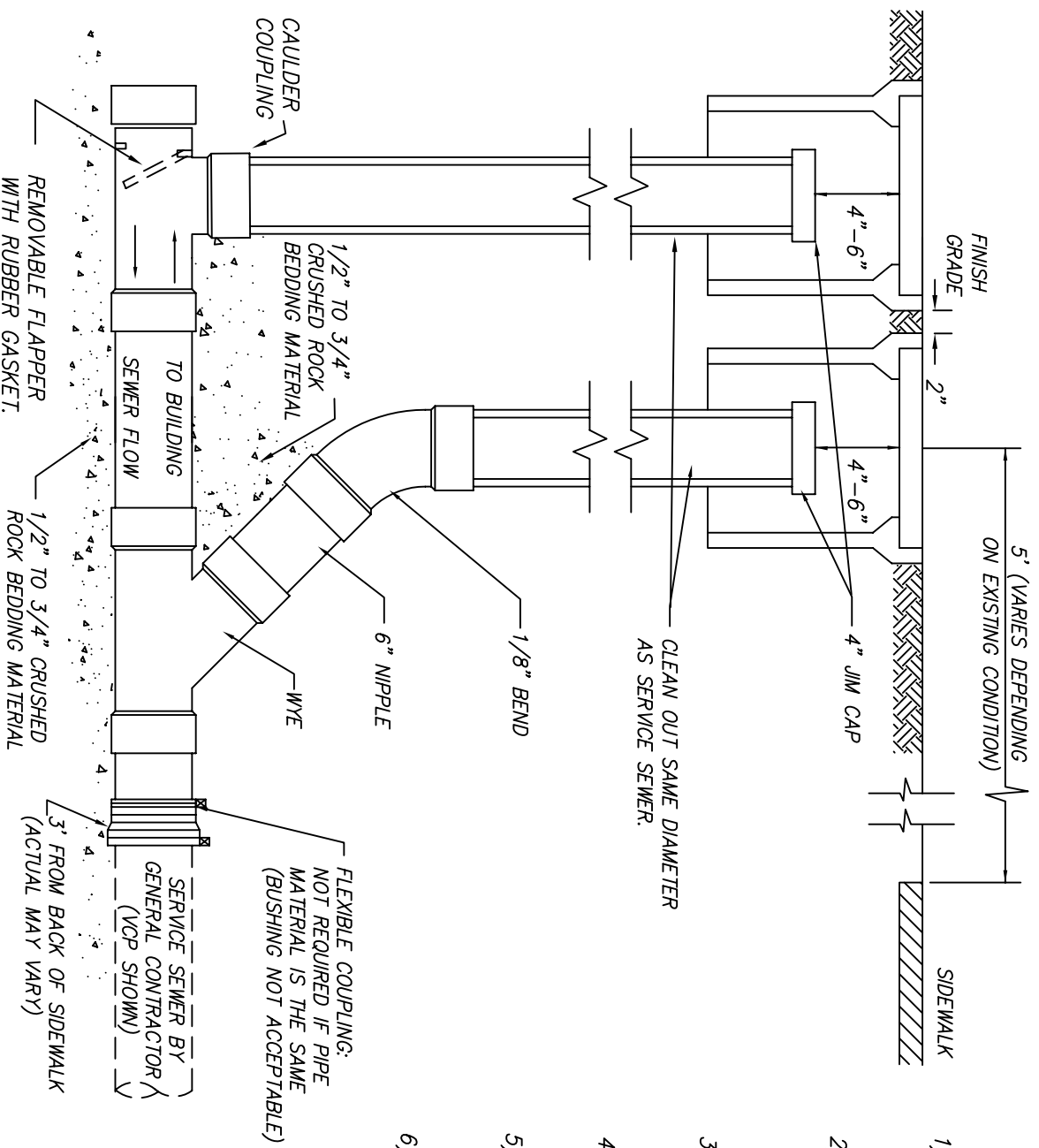
- 1) CLEAN OUT GRADE TO BE PLASTIC DWV ABS (ASTM D2661) WITH SOLVENT WELD JOINT.
- 2) FOR 4" SERVICES INSTALL ROUND, NON-TRAFFIC TYPE CONCRETE OR PVC VALVE BOX AND COVER, MARKED "SEWER". BOX INSIDE DIAMETER TO BE A MINIMUM OF 7" AND A MAXIMUM OF 10"
- 3) FOR SERVICES 6" OR LARGER, INSTALL ROUND, CONCRETE TRAFFIC TYPE VALVE BOX WITH CAST IRON COVER MARKED "SEWER".
- 4) INSTALLATION TO AVOID EXISTING UTILITY ONLY.
- 5) DEPTH AT PROPERTY LINE SHOULD BE 4' MINIMUM 5' MAXIMUM. EXISTING CONDITIONS MAY VARY.

CITY OF FOLSOM

ABS OR PVC CLEANOUT
(SEWER CONNECTED TO RISER)

SCALE: NONE
DATE: JULY 2003
DRAWN BY: STAFF

SS-11



- 1) CLEAN OUT GRADE TO BE PLASTIC DWV ABS (ASTM D2661) WITH SOLVENT WELD JOINT.
- 2) FOR 4" SERVICES INSTALL ROUND, NON-TRAFFIC TYPE CONCRETE OR PVC VALVE BOX INSIDE DIAMETER TO BE A MINIMUM OF 7" AND A MAXIMUM OF 10"
- 3) FOR SERVICES 6" OR LARGER, INSTALL ROUND, CONCRETE TRAFFIC TYPE VALVE BOX WITH CAST IRON COVER MARKED "SEWER".
- 4) DEPTH AT PROPERTY LINE SHOULD BE 4" MINIMUM, 5" MAXIMUM. EXISTING CONDITIONS MAY VARY.
- 5) STAND PIPE CAULDERED TO BACKFLOW VALVE AND BROUGHT TO GRADE WITH BOX ON ALL VALVES DEEPER THAN 30".
- 6) BACKFLOW VALVE MUST BE NATIONAL DIVERSIFIED SALES NDS #475 (ASTM 2662) OR APPROVED EQUAL.

CITY OF FOLSOM		
ABS OR PVC CLEANOUT WITH BACKFLOW PREVENTER		
SCALE: NONE		
DATE: JULY 2003		
DRAWN BY: STAFF		
	SS-12	