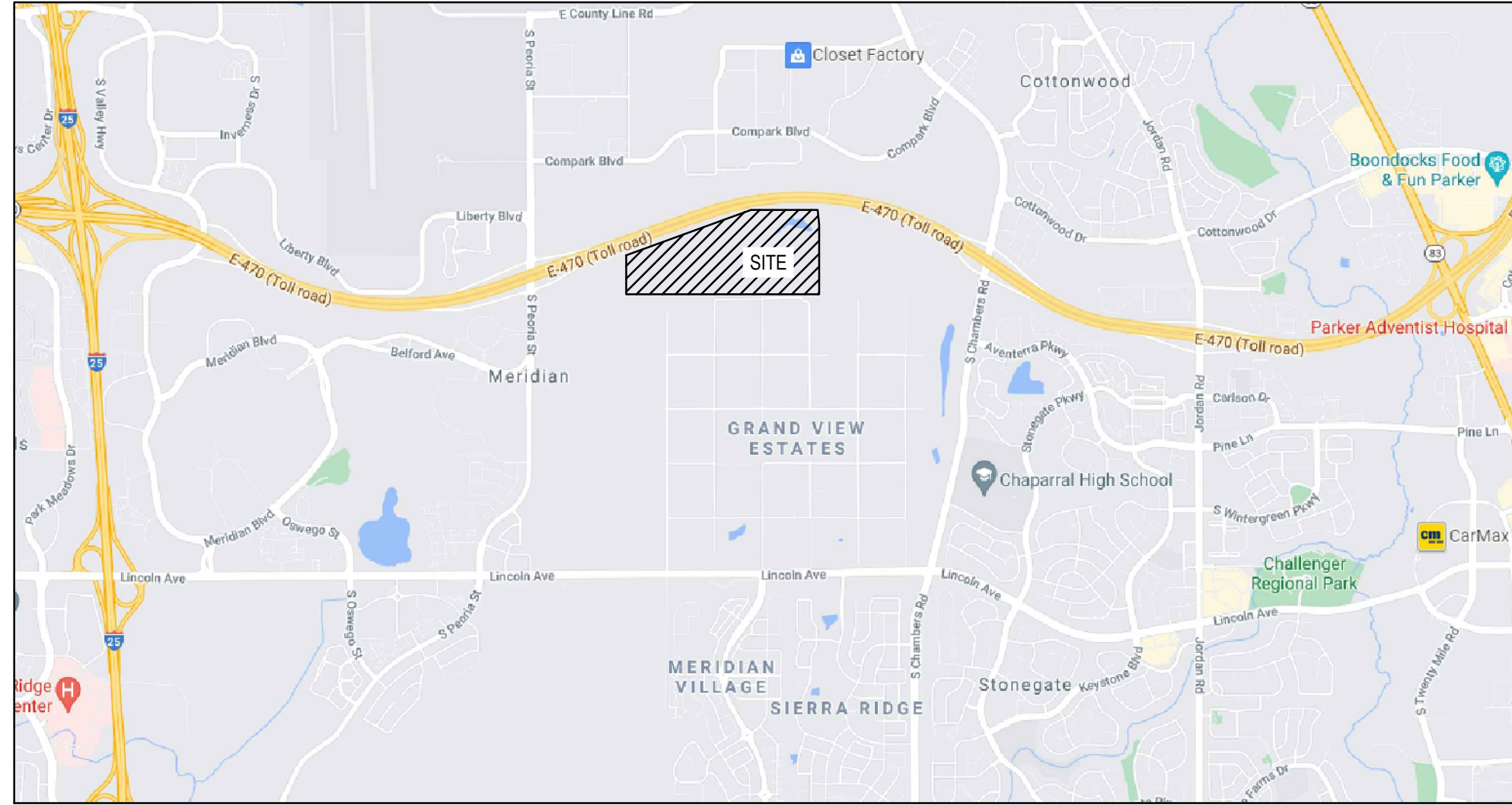


# SVMD SANITARY AND WATER CONSTRUCTION PLANS FOR: COMPARK VILLAGE SOUTH TRACT A, FILING NO. 1 AMENDMENT 1

COMPARK VILLAGE SOUTH,  
TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

TRACT A, COMPARK VILLAGE SOUTH FILING NO. 1, AMENDMENT 1, LOCATED IN THE SOUTH HALF OF SECTION 6,  
TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

## STONEGATE VILLAGE METRO DISTRICT WATER AND SANITARY SEWER PLAN



Vicinity Map

N.T.S.

PROPOSED		EXISTING		
CATV	CATV	CATV	CATV	CABLE TV LINE W/ PEDESTAL
E	E	EX E	EX E	ELECTRIC LINE W/ BOX, METER, AND LIGHT
OHE	OHE	EX OE	EX OE	OVERHEAD ELECTRIC WITH POLE
OHE/C	OHE/C	EX OHE/C	EX OHE/C	OVERHEAD ELECTRIC COMMUNICATIONS
UE	UE	EX UE	EX UE	UNDERGROUND ELECTRIC
FO	FO	EX FO	EX FO	FIBER OPTIC LINE W/ TRAFFIC CONTROL BOX
F	F	EX F	EX F	FIRE
G	G	EX G	EX G	GAS LINE W/ DRY UTILITY VAULT
IRR	IRR	EX IRR	EX IRR	IRRIGATION
SS	SS	EX SS	EX SS	SANITARY SEWER W/ MANHOLE
T	T	EX T	EX T	TELEPHONE LINE W/ PEDESTAL
OT	OT	OHT	OHT	OVERHEAD TELEPHONE
W	W	EX W	EX W	WATER LINE, VALVE, FITTINGS, METER, AND HYDRANT
T	T	EX T	EX T	UNDERDRAIN
				CURB AND GUTTER
				WHEEL STOP
				CONTOURS
				TRASH ENCLOSURE
UD	UD	UD	UD	UNDERDRAIN W/ TYPE R INLET
X	X	X	X	FENCE LINE
>	>	>	>	DRAINAGE SWALE
				RIGHT-OF-WAY
				SECTION LINE
				PROPERTY LINE
				LOT LINE
				EASEMENT
				IRRIGATION CONTROL VALVE BOX
				PEDESTRIAN LIGHT
				STREET LIGHT
				TRAFFIC LIGHT
				PVMT
				SPOT ELEVATION
				FLOW OF WATER
				SIGN

### ABBREVIATION LEGEND

TW	GRADE AT TOP OF WALL
BG	GRADE AT BOTTOM OF WALL
PC	POINT OF CURVE
PT	POINT OF TANGENT
Δ	DELTA, HORIZONTAL CURVE DIRECTION CHANGE
CL	CENTERLINE
FL	FLOWLINE
DBL	DOUBLE
C.O.	CLEAN OUT
K	RATE OF CURVATURE
AD	ABSOLUTE GRADE DIFFERENCE IN %
VC	VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE
PVT	POINT OF VERTICAL TANGENT
PVI	POINT OF VERTICAL INTERSECTION
PI	POINT OF TANGENT INTERSECTION
ROW	RIGHT OF WAY
PVMT	PAVEMENT
HP	HIGH POINT
LP	LOW POINT
PCR	POINT OF CURB RETURN
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
EX, EX	EXISTING
PR, PR	PROPOSED
ME	MATCH EXISTING
TC	BACK TOP OF CURB
FG	FINISHED GRADE
STA	STATION
EL, ELEV	ELEVATION
FF	FINISHED FLOOR
TC	TOP OF CONCRETE
B/P	BOTTOM OF PIPE
T/P	TOP OF PIPE
Ø	DIAMETER
UE	UTILITY EASEMENT
ESMT	EASEMENT
HCL	HORIZONTAL CONTROL LINE
N	NORTH/NORTHING
E	EAST/EASTING
W	WEST
S	SOUTH
R	RADIUS
LC	LENGTH OF CORD
L	LENGTH
CB	CHORD BEARING

**DEVELOPER/ OWNER**  
CENTURY COMMUNITIES  
8390 E. CRESCENT PARKWAY,  
SUITE 650, GREENWOOD VILLAGE,  
CO 80111  
PHONE: 303-770-8300  
CONTACT: CINDY MYERS

**SURVEYOR**  
MERRICK & COMPANY  
5970 GREENWOOD PLAZA BLVD.  
GREENWOOD VILLAGE, CO 80111  
PHONE: 303-751-0741  
CONTACT: KENNETH G. OUELLETTE, PLS

### TOWN & UTILITY CONTACTS

**TOWN OF PARKER**  
CONTACT: MIKE WAUGH  
PHONE: 303-840-9546

**INTERMOUNTAIN REA**  
CONTACT: BROOKS KAUFMAN  
PHONE: 303-888-3100

**CENTURY LINK**  
CONTACT: WILLIAM BENSON  
PHONE: 303-320-8333

**SOUTH METRO FIRE DISTRICT**  
CONTACT: MICHELLE HERIAN  
PHONE: 720-488-7200

**PLANNER**  
PCS GROUP  
200 KLAMATH ST, DENVER, CO  
80223  
PHONE: 720-259-8248  
CONTACT: PAUL SHOUKAS

**ENGINEER**  
MERRICK & COMPANY  
5970 GREENWOOD PLAZA BLVD.  
GREENWOOD VILLAGE, CO 80111  
PHONE: 303-751-0741  
CONTACT: KRISTOFER K. WIEST, PE

**COMCAST**  
CONTACT: KEVIN YOUNG  
PHONE: 720-490-3867

**XCEL ENERGY**  
CONTACT: MICHELLE O'NAN  
PHONE: 303-329-1618

**STONEGATE VILLAGE METRO DISTRICT**  
CONTACT: SCOTT BARNETT  
PHONE: 303-649-9857

### DISTRICT APPROVALS

THESE DESIGN PLANS AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE DISTRICT'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR THE DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY EITHER THE STONEGATE VILLAGE METROPOLITAN DISTRICT OR THE DISTRICT ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATIONS. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THIS DATE:

BY: \_\_\_\_\_  
STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER

DATE: \_\_\_\_\_

Sheet Number	Sheet Title	Sheet Description
00	COVER SHEET	C7.0
01	GENERAL NOTES	C7.1
03	OVERALL UTILITY PLAN	C7.2
04	WATER-P&P	C7.3
05	SAN-P&P	C7.5
06	WATER DETAILS	C7.6
07	WATER DETAILS	C7.7
08	WATER DETAILS	C7.8
09	WATER DETAILS	C7.9
10	WATER DETAILS	C7.10
11	WATER DETAILS	C7.11

WATER MAIN QUANTITIES		
DESCRIPTION	AMOUNT	UNIT
8" PVC WATER MAIN	683.96	LF
8" TO 6" TEE/W/ KICK BLOCK	33	EACH
8" 11.25 DEGREE BEND	1	EACH
8" 22.5 DEGREE BEND	1	EACH
VERTICAL BEND	2	EACH
FIRE HYDRANT ASSEMBLY	1	EACH
REMOVE EXISTING 8" PLUG AND MAKE DRY CONNECT	2	EACH
SANITARY SEWER MAIN QUANTITIES		
DESCRIPTION	AMOUNT	UNIT
8" SANITARY SEWER MAIN (0-16" DEPTH)	603.6	LF
4" DIAMETER MANHOLES (0-20" DEPTH)	2	EACH
CONNECTION TO EXISTING SANITARY SEWER	1	EACH

### FIRE/LIFE SAFETY REVIEW BLOCK

All fire hydrants shall be installed according to water utility standards. The number and locations of the fire hydrants as shown on the Overall Utility Plan are correct as specified by the Town of Parker, Community Development Department.

Fire Code Official or Designated Representative

(NOTE – Underground Fire Line (UFL) submittal documents must meet the requirements of NFPA 24 when submitting for review.)

The Town of Parker review constitutes general compliance with the Town's Standards and approved variances, subject to these plans being stamped, signed, and dated by the professional engineer of record. Review by the Town does not constitute approval of the plan design or accuracy and correctness of engineering calculations. Errors in the design or calculations remain the responsibility of the registered professional engineer whose stamp and signature are affixed to this document.

This review does not constitute approval of any private on-site improvements which may be shown. Construction cannot commence until all required drainage/traffic report(s), final development plan(s), special review(s), grading permit, and/or other permits are complete, approved and on file with the Town of Parker.

Town of Parker, Director of Engineering/Public Works



COMPARK VILLAGE SOUTH  
WATER AND SANITARY  
PLANS  
COVER SHEET

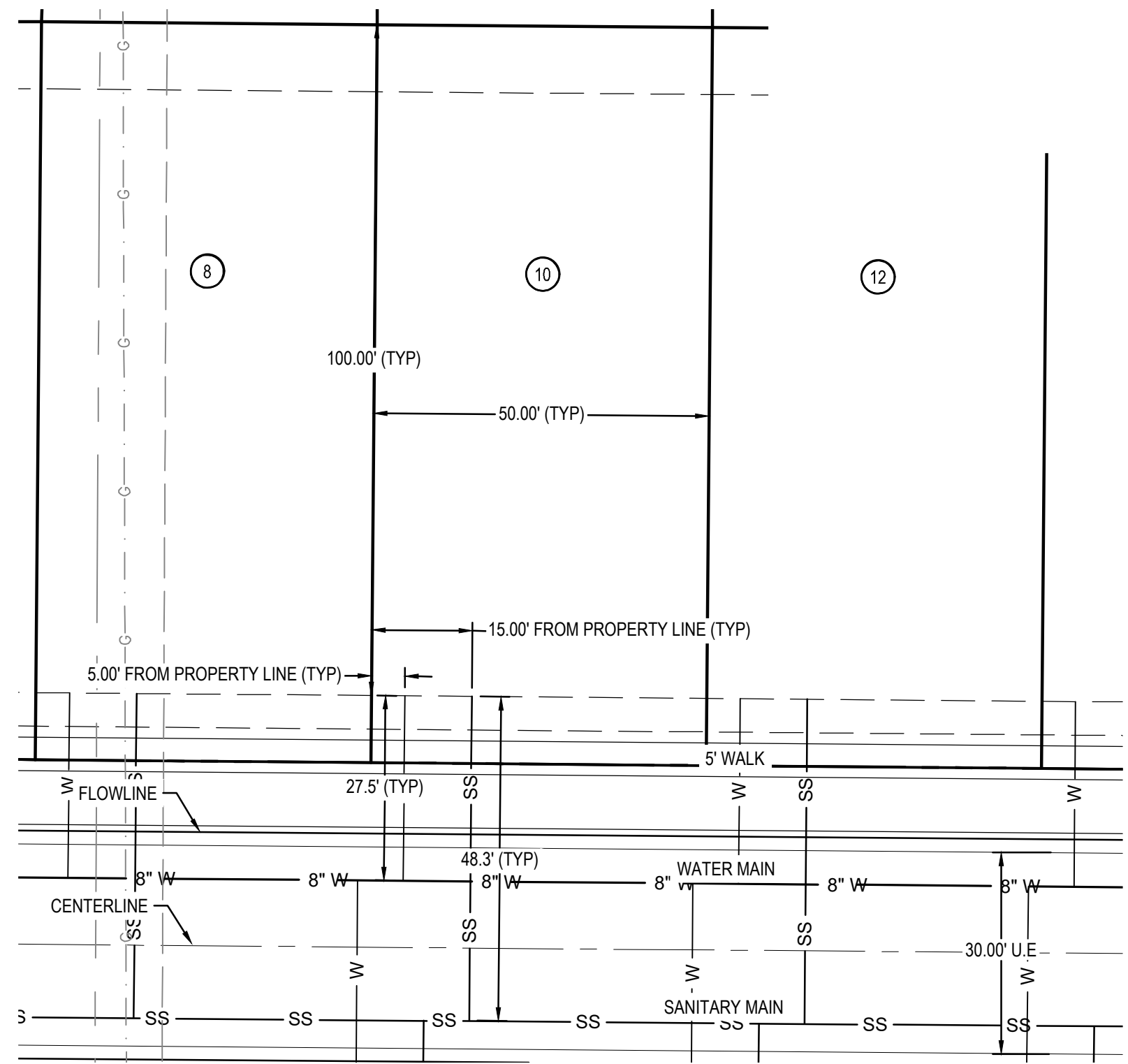
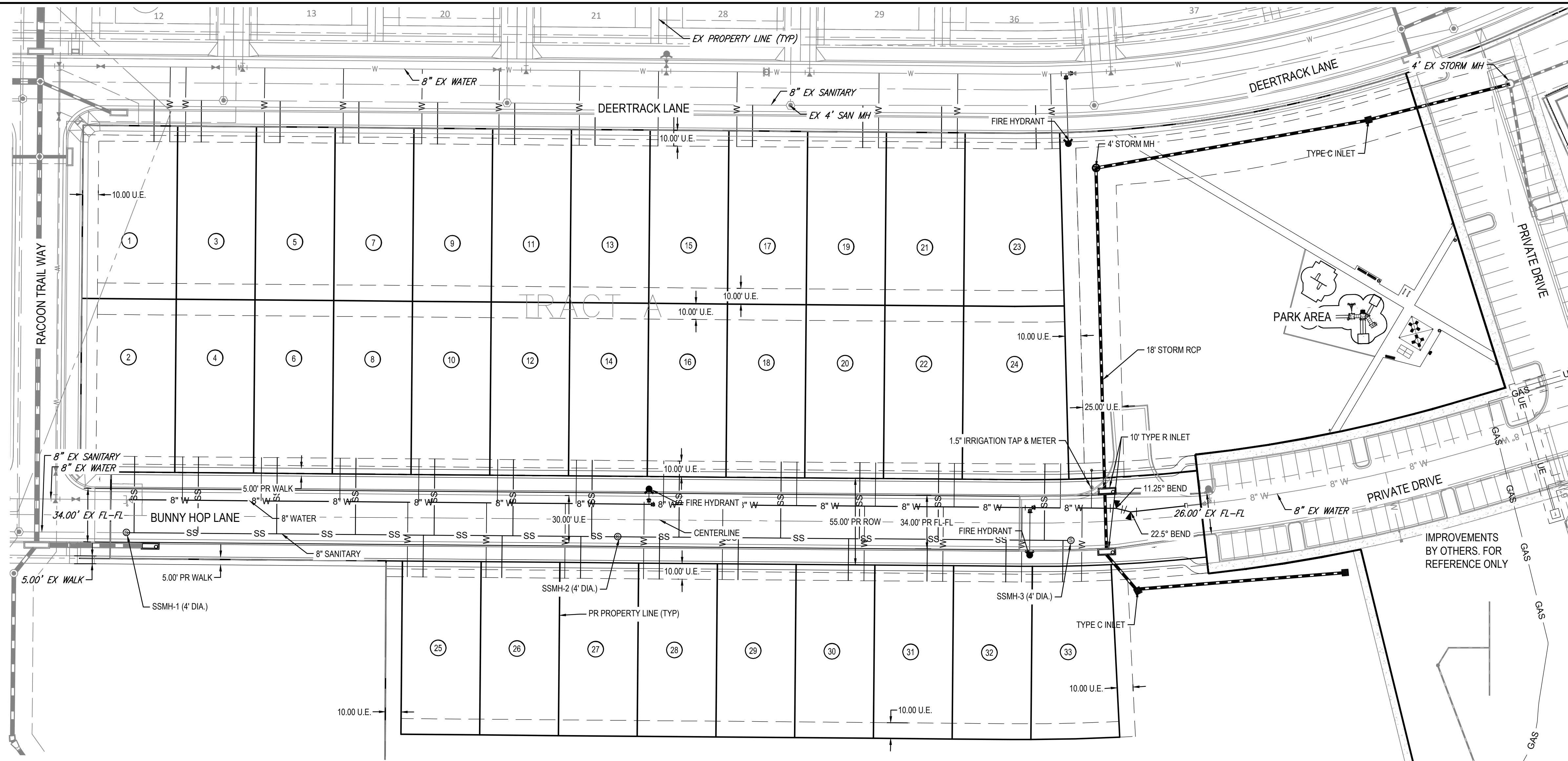
ISSUED FOR REVIEW

DATE	11/02/2022
SHEET	C7.0
00	

THE USE OF ANY OTHER DESIGN OR CONSTRUCTION METHOD OR MATERIALS THAN THOSE SPECIFIED IN THESE PLANS IS AT THE USER'S RISK. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

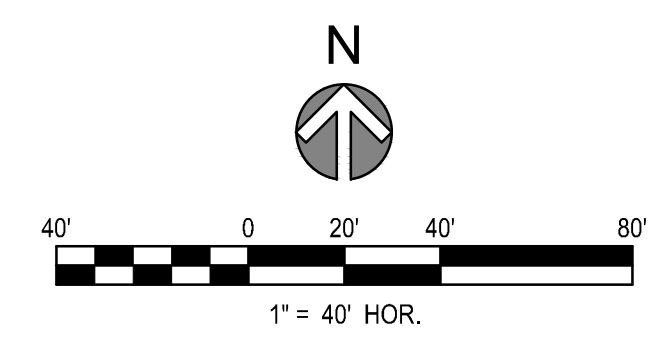


THE ANY OTHER ENGINEERING, ARCHITECTURE, OR SURVEYING PROFESSIONAL SEAL OR SIGNATURE IS AN INSTRUMENT OF SERVICE PROVIDED BY THE ENGINEER, ARCHITECT, OR SURVEYOR FOR A SPECIFIC PROJECT. IT IS NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE IN WHOLE OR IN PART OR ON OTHER PROJECTS WITHOUT THE WRITTEN CONSENT OF THE ENGINEER, ARCHITECT, OR SURVEYOR. ANY REUSE OR MODIFICATION OF ANY INSTRUMENT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER, ARCHITECT, OR SURVEYOR IS UNLAWFUL AND SUBJECT TO PENALTY AND DAMAGES.



NOTES:  
1. SERVICE LOCATIONS ARE TYPICAL UNLESS OTHERWISE NOTED.

NOTES:  
CONTRACTOR TO FIELD VERIFY VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES AND IRRIGATION.



**FIRE/LIFE SAFETY REVIEW BLOCK**

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Date \_\_\_\_\_

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This review does not constitute approval of any private on-site improvements which may be shown. Construction cannot commence until all required drainage/traffic report(s), final development plan(s), special review(s), grading permit, and/or other permits are complete, approved and on file with the Town of Parker.

Town of Parker, Director of Engineering/Public Works \_\_\_\_\_ Date \_\_\_\_\_



REV	REVISION DESCRIPTION	DATE	CHKD	CHKD	APPR

**COMPARK VILLAGE SOUTH  
PRIVATE IMPROVEMENT  
CONSTRUCTION PLANS  
OVERALL UTILITY PLAN**

ISSUED FOR REVIEW

JOB NUMBER	65120350
DATE	8/11/2023
SHEET	C7.2
	03







THE USE OF THESE STANDARD DRAWINGS IS AN ACKNOWLEDGMENT OF THE DESIGNER'S RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. THESE DRAWINGS ARE NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. THE DESIGNER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THESE DRAWINGS AND FOR THE PROTECTION OF THE PROJECT FROM ANY OTHER PROJECTS.

### LENGTH OF TIED PIPE

PIPE SIZE	4"		6"		8"		10"		12"		16"		20"		24"		
	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L	
3/4" OR 1" VALVE	3/4"	6.0"	3/4"	13.0"	3/4"	20.0"	3/4"	28.0"	3/4"	36.0"	3/4"	46.0"	3/4"	58.0"	3/4"	72.0"	
45° BEND	3/4"	6.0"	M.S.	3/4"	13.0"	M.S.	3/4"	20.0"	M.S.	3/4"	28.0"	M.S.	3/4"	36.0"	M.S.	3/4"	46.0"
22-1/2° BEND	3/4"	2.0"	M.S.	3/4"	4.0"	M.S.	3/4"	6.0"	M.S.	3/4"	11.0"	M.S.	3/4"	17.0"	M.S.	3/4"	24.0"
11-1/4° BEND	3/4"	1.0"	M.S.	3/4"	2.0"	M.S.	3/4"	3.0"	M.S.	3/4"	5.0"	M.S.	3/4"	8.0"	M.S.	3/4"	12.0"

TIE ROD VALVE

SPICE BEND

BENDS

**NOTES:**

- LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
- CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
- D = DIAMETER, L = LENGTH, G = GRADE, M.S. = MILD STEEL, H.S. = HIGH STRENGTH.
- MINIMUM 4.5" GROUND COVER REQUIRED.
- BASED ON 150 PSI INTERNAL PRESSURE.
- M.S. MEANS MILD STEEL, ROD A.S.T.M. STANDARD DESIGNATION A-36.
- H.S. MEANS HIGH STRENGTH ROD A.S.T.M. STANDARD DESIGNATION A-36.
- NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEXAGON HEAVY SERIES.
- CLAMP DETAILS AND SET CLAMP DETAILS.
- LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
- STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 18".
- MINIMUM OF 4 RODS REQUIRED ON 18" PIPE IF STAR BOLTS ARE USED.
- TEES ARE TO BE RODED ON BRANCH ONLY.
- ALL VALVES TO BE RODED IN BOTH DIRECTIONS.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

LENGTH OF TIED PIPE

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 18

### TIE ROD DETAIL

### WASHER DETAIL

ROD DIAMETER	THREAD	ROD LENGTH	ROD LENGTH
3/4"	ALL THREAD	11	11
1"	ALL THREAD	10	11
1-1/4"	ALL THREAD	10	11

WIDTH	HOLE DIAMETER	LENGTH	THICKNESS
3"	3/8"	7"	3/8"
4"	1-1/8"	7"	1/2"
6"	1-3/8"	7"	3/8"

**NOTES:**

- SEE TIED JOINTS ROD DIMENSIONS SHEET.
- SEE CLAMP DETAILS AND DIMENSIONS SHEET 23 FOR PROPER PLACEMENT OF WASHERS.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

TIE ROD AND WASHER DETAILS

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 19

### TIE ROD COUPLING DETAIL

### SECTION "A-A"

**NOTE:** BLACK IRON PIPE = SCHEDULE 40.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

TIE ROD COUPLING

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 20

### FLANGE LUG DETAIL

### DIMENSIONS (IN INCHES)

PIPE DIA.	N	O	U.S. ROD			M.S. ROD			R	S	U	V	PIPE DIA.
			P	Q	ROD DIA.	P	Q	ROD DIA.					
4	1-1/2	3-1/4	7/8	3/4	7/8	3/4	7/8	3/4	3/4	3/4	3/4	4	
6	2-1/4	4-3/4	7/8	3/4	7/8	3/4	7/8	3/4	3/4	3/4	3/4	6	
8	3-1/8	5-1/2	1-1/8	1-1/4	1-1/8	1-1/4	1-1/8	1-1/4	1-1/4	1-1/4	1-1/4	8	
10	4-1/8	6-1/4	1-1/2	1-3/4	1-1/2	1-3/4	1-1/2	1-3/4	1-1/2	1-1/2	1-1/2	10	
12	5-1/8	7-1/4	1-3/4	1-7/8	1-3/4	1-7/8	1-3/4	1-7/8	1-3/4	1-3/4	1-3/4	12	

**NOTES:**

- M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36. (NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEXAGON HEAVY SERIES).
- H.S. MEANS HIGH STRENGTH STEEL ROD A.S.T.M. STANDARD DESIGNATION A-193 GRADE B7. (NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-194 GRADE 2H).
- FLANGE LUGS SHALL NOT BE USED ON VALVES.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

FLANGE LUG DETAIL

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 21

### PIPE BEDDING

(a) **Installation of Bedding and Pipe:** After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bell holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the bell and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade, and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug bell holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, bell holes, and silt holes. The purpose of tamping is to ensure uniform support for the pipe.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved backfill may then be installed to the groundline. See Section 8 of these Standards for backfill and composition of backfill.

Compaction of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet 8 of the Standard Drawings for a typical trench cross section.

(b) **Bedding Material:** The bedding material shall be a clean well-graded sand or squeegee sand and shall conform to the following limits when tested by means of laboratory sieves:

Well-Graded Sand	
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	85-100
No. 8	50-100
No. 16	25-85
No. 30	10-60
No. 50	10-30
No. 100	2-10
No. 200	0

Squeegee Sand	
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 100	0-5

If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental substance, shall be placed closer to the pipe than six inches (6"). Approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

PIPE BEDDING

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 22

### CLAMP DETAILS

**NOTE: ALL BOLT HOLES TO BE 1/8" LARGER DIA. THAN BOLT**

### DIMENSIONS

PIPE DIA.	A		B		C		D		E		F		BOLT SIZES		PIPE DIA.	
	BELL	BODY	BELL	BODY	BELL	BODY	BELL	BODY	BELL	BODY	BELL	BODY	BELL	BODY		
4	1-1/2	2-1/2	3/4	7/8	3/8	3/8	1	1	6-3/4	4-7/8	2-3/4	1-13/16	1-1/4	1-1/4	3/8 x 1/2	4
6	2-1/2	3-1/2	7/8	1-1/8	3/8	3/8	2	2	10-1/4	7-7/8	4-1/8	2-1/8	2	2	3/8 x 1/2	6
8	3-1/2	4-1/2	1-1/8	1-1/4	3/8	3/8	3	3	14-1/4	10-1/4	5-1/8	3-1/8	3	3	3/8 x 1/2	8
10	4-1/2	5-1/2	1-3/8	1-3/4	3/8	3/8	4	4	18-1/4	13-1/4	6-1/8	4-1/8	4	4	3/8 x 1/2	10
12	5-1/2	6-1/2	1-7/8	1-7/8	3/8	3/8	5	5	22-1/4	16-1/4	7-1/8	5-1/8	5	5	3/8 x 1/2	12
16	7-1/2	8-1/2	1-7/8	1-7/8	3/8	3/8	7	7	28-1/4	20-1/4	9-1/8	7-1/8	7	7	3/8 x 1/2	16
20	9-1/2	10-1/2	1-7/8	1-7/8	3/8	3/8	9	9	34-1/4	26-1/4	10-1/8	9-1/8	9	9	3/8 x 1/2	20
24	11-1/2	12-1/2	1-7/8	1-7/8	3/8	3/8	11	11	40-1/4	32-1/4	11-1/8	10-1/8	11	11	3/8 x 1/2	24

**NOTE: ALL DIMENSIONS IN INCHES. CLAMPS MAY NOT BE USED ON PVC PIPE.**

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

CLAMP DETAILS AND DIMENSIONS

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 23

### TOP VIEW

### SIDE VIEW

### HARNESS LUG DIMENSIONS

CARRIER PIPE NOMINAL DIA.	STUD DIA.	A	W	Z	T	H	E	H1	Y	X
4" TO 16"	3/4"	5"	1-1/2"	3-3/4"	3/8"	4-1/8"	3-1/8"	2"	4-1/2"	5"
20"	1"	5-3/4"	1-3/4"	4-7/16"	3/8"	4-1/2"	3-1/4"	2"	5-1/4"	5-11/16"

**NOTES:**

- USE TWO HIGH STRENGTH STEEL TIE RODS AT END OF CASING.
- TIE ROD HOLE DIAMETER 1/8" LARGER THAN STUD DIAMETER.
- BOTTOM EDGE OF ALL PLATES SHAPED TO FIT O.D. OF PIPE.

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

HARNESS LUG DETAILS

SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 24

### SEWER CROSSING UNDER (WITH "D" LESS THAN 2')

### SECTION A-A

STONEGATE VILLAGE  
METROPOLITAN DISTRICT

CROSSING STORM & SANITARY SEWERS

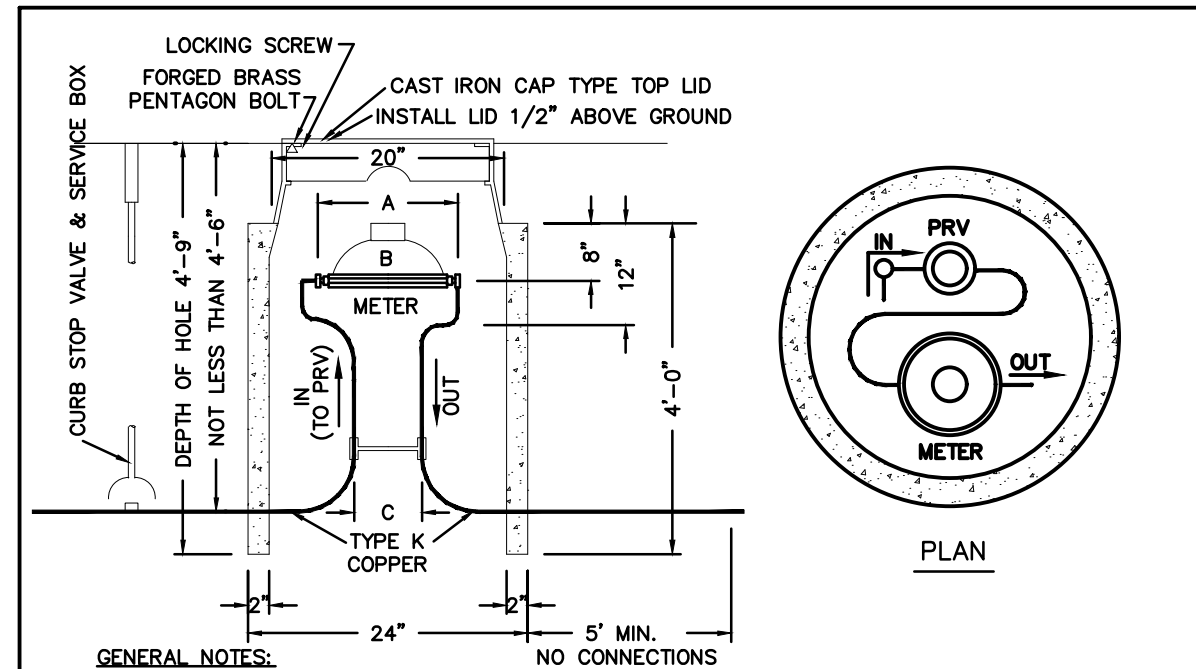
SCALE: NONE      DATE: 4/00

APPROVED: R/JG  
DISTRICT ENGINEER

2000 REVISION      SHEET 25



THE USE OF ANY OTHER TYPE OF METAL ENCASUREMENT IS AN INSTRUMENT OF SERVICE PROVIDED BY MERRICK AND ASSOCIATES, INC. A REFERENCE TO THIS SHEET SHALL BE TO THE STANDARD DETAILS SHEET NO. 1000 UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE DISTRICT AND ANY OTHER AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE DISTRICT AND ANY OTHER AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE DISTRICT AND ANY OTHER AGENCIES.



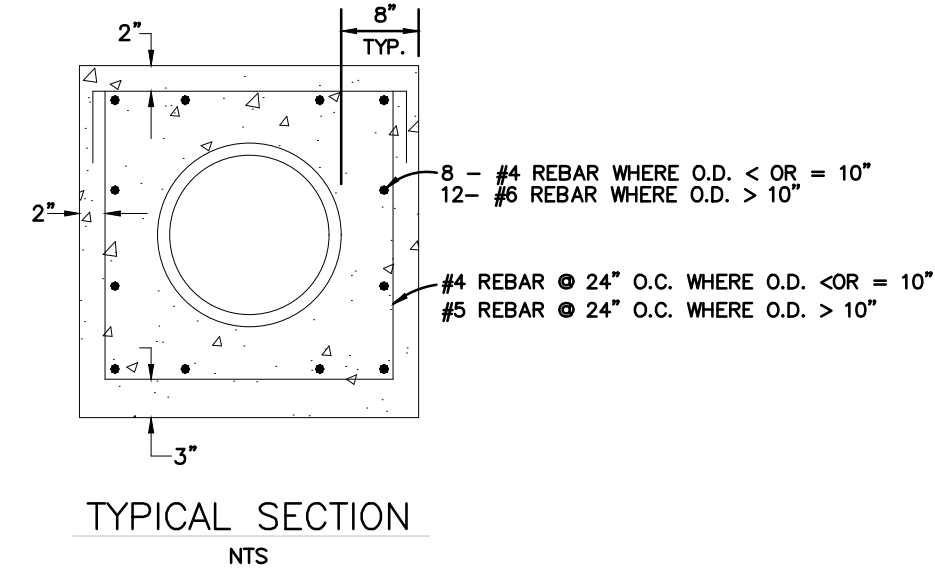
- GENERAL NOTES:**
- NOT FOR INSTALLATION IN ROADWAYS, OR PARKING AREAS.
  - IF SURFACE IS NOT TO FINAL GRADE AT TIME OF INSTALLATION OF METER, OWNER MUST RAISE OR LOWER PIT WHEN SURFACE IS GRADED.
  - METER SETTING MUST BE INSPECTED BY THE DISTRICT BEFORE BACKFILLING.
  - LOCATION OF METER TO BE ESTABLISHED BY A DISTRICT REPRESENTATIVE.
  - NO CONCRETE FLOOR TO BE LAID IN METER PIT.
  - METER PIT SHALL BE CONSTRUCTED OF FOUR 12", OR ONE 12" AND ONE 36" RINGS. WALLS SHALL BE 2" THICK.
  - ADJUSTMENT RINGS SHALL BE 2", 3" 4" OR 6" IN HEIGHT AND SHALL BE INSERTED BETWEEN THE TOP TWO RINGS.
  - NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT WALL ON THE OUTLET SIDE.
  - LAWN SPRINKLER CONNECTION SHALL BE A MINIMUM OF FIVE FEET FROM THE METER PIT WALL ON THE OUTLET SIDE.
  - THIS DETAIL TO BE USED ONLY WITH EXPRESS PERMISSION OF THE DISTRICT.
  - THE FORD TANDEM COPPERSETTER TO HOLD A WATTS USE PRESSURE REGULATOR (PRV) JUST AHEAD OF THE WATER METER.
  - (JUMPER OR CHEATER) PIPES TO BE REMOVED BEFORE METER SET DATE.

METER SIZE	A	B	C
5/8" x 3/4"	12 5/8"	7 1/2"	4"
3/4"	14 1/4"	9 5/16"	5"
1"	17 1/4"	11 1/16"	6"

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**ALL OUTSIDE SETTING FOR 5/8" x 3/4", 3/4" & 1" METERS w/ PRV**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 45

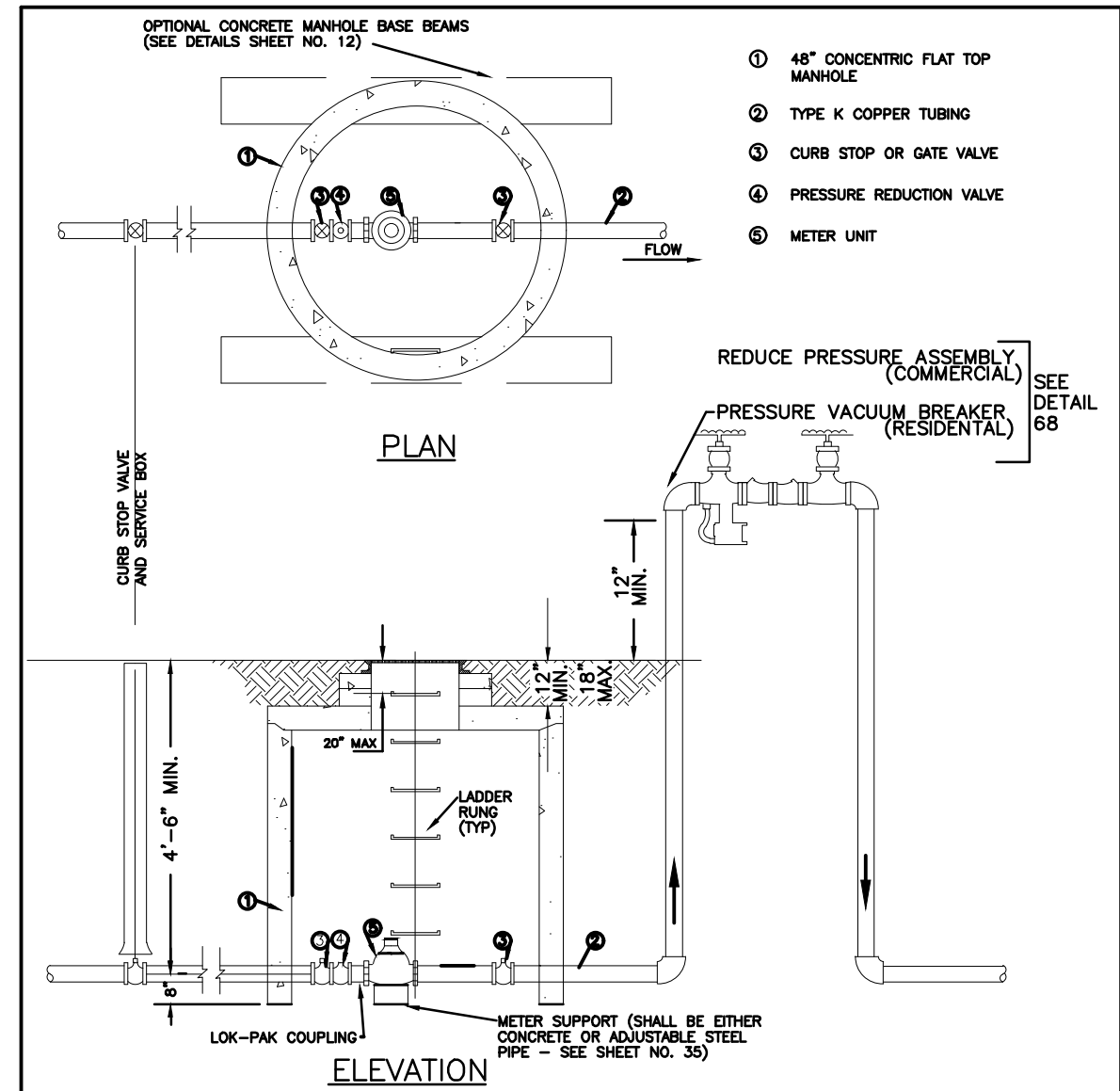


- NOTES:**
- ALL CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3,000 PSI USING TYPE 1 PORTLAND CEMENT AND 3/4" AGGREGATE. ALL CONCRETE SHALL HAVE 5-7% ENTRAINED AIR CONTENT AND A MAXIMUM SLUMP OF 4".
  - ALL REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
  - ALL REINFORCEMENT SHALL HAVE 2" MIN. CONCRETE COVER.
  - THE SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY PRIOR TO FORMING THE STRUCTURE.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**WATERLINE ENCASUREMENT**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 48

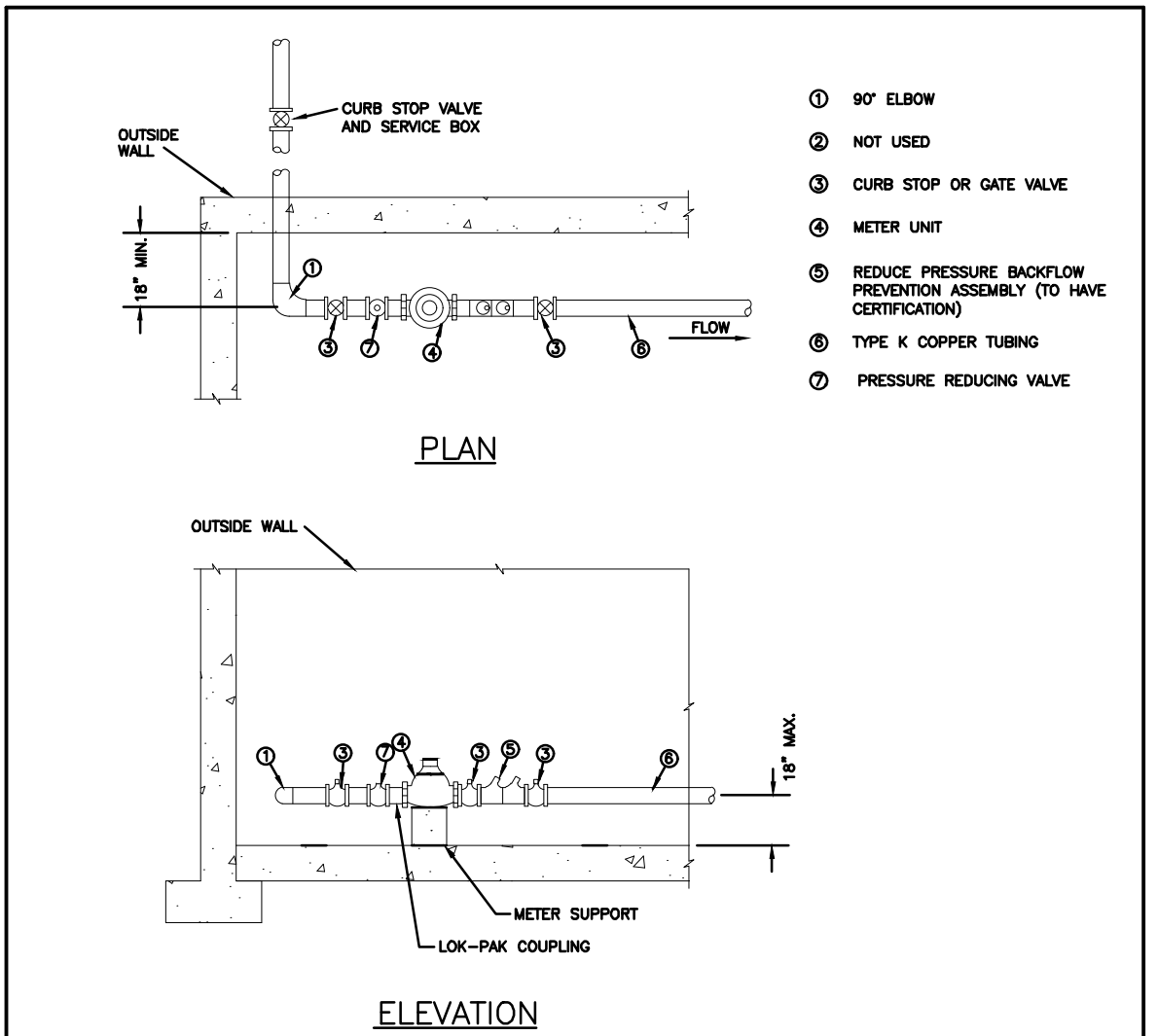


- NOTES:**
- MANHOLE BASE BEAMS SHALL BE REQUIRED FOR INSTALLATIONS IN DRIVEWAYS, OR PARKING AREAS.
  - A 48" DIA. MANHOLE RING WILL ACCOMMODATE 1 1/2" AND 2" SPLIT BASE METERS.
  - JOINTS INSIDE METER VAULT SHALL BE EITHER THREADED OR SOLDERED WITH 95-5 TINANTIMONY SOLDER.
  - SEE SECTION 10.9, WATER SYSTEM SPECIFICATIONS FOR GENERAL METER NOTES.
  - NO CONCRETE TO BE LAID IN FLOOR OF METER M.H.
  - METER SHALL BE FLANGED WITH BRASS COMPANION FLANGES.
  - NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT ON THE OUTLET SIDE.
  - LADDER RINGS SHALL BE ON OPPOSITE SIDE OF BYPASS.
  - (JUMPER OR CHEATER) PIPES TO BE REMOVED BEFORE METER SET DATE.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**OUTSIDE SETTING FOR 1 1/2" & 2" METER FOR IRRIGATION**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 49

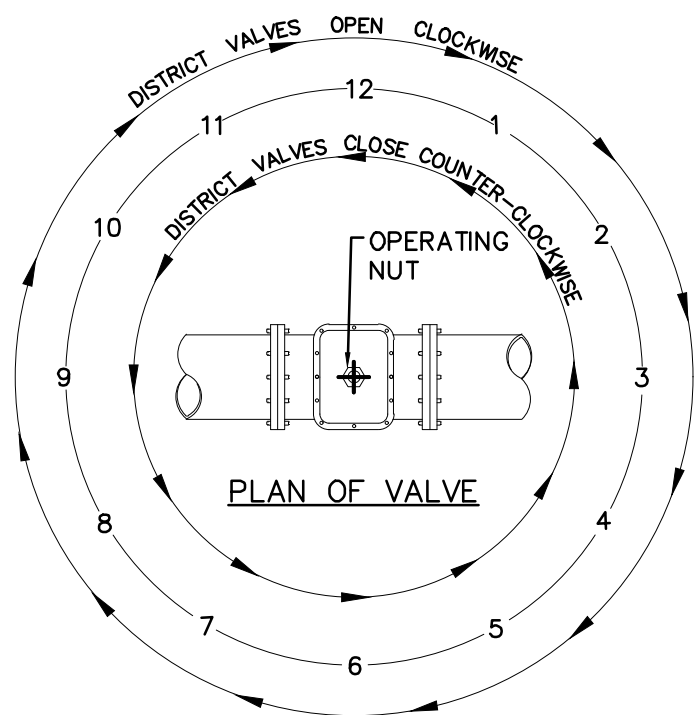


- NOTES:**
- PIPE JOINT SHALL BE THREADED OR SOLDERED WITH SILVER SOLDER.
  - INSTALLATION MUST ALLOW ACCESS FOR MAINTENANCE AND BE PROTECTED FROM FREEZING.
  - SEE SECTION 10.9, WATER SYSTEM SPECIFICATIONS FOR GENERAL METER NOTES.
  - COMPANION FLANGES SHALL BE BRASS.
  - METER SUPPORT SHALL BE EITHER CONCRETE OR ADJ. STEEL PIPE (SEE SHEET NO. 34)
  - THIS DETAIL TO BE USED ONLY WITH EXPRESS PERMISSION OF THE DISTRICT ENGINEER.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**INSIDE SETTING FOR 1 1/2" & 2" METER WITH CHECK VALVE**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 51



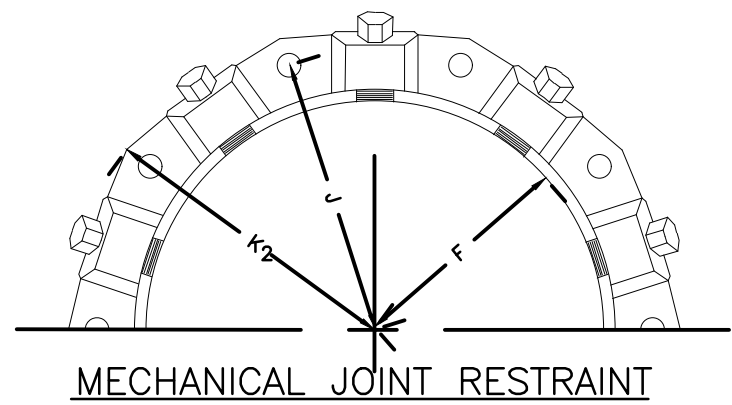
**NOTE:**  
 NORMALLY VALVES WITH A RED OPERATING NUT INDICATE A STANDARD DENVER VALVE.

**VALVE OPENING & CLOSING PROCEDURE**

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**VALVE OPERATION**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 61



**MECHANICAL JOINT RESTRAINT DETAILS**

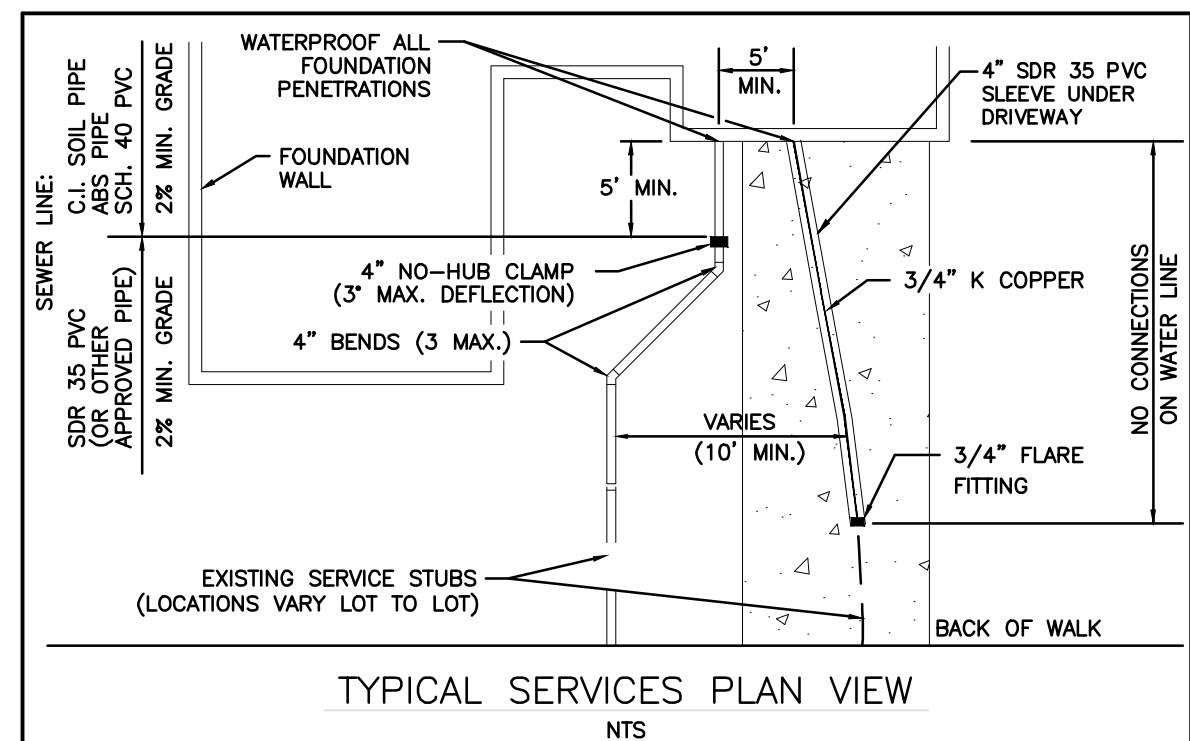
NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	2	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25
4"	4	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25

- NOTES:**
- REFER TO SHEET W-19 SECTION 6.10.
  - DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

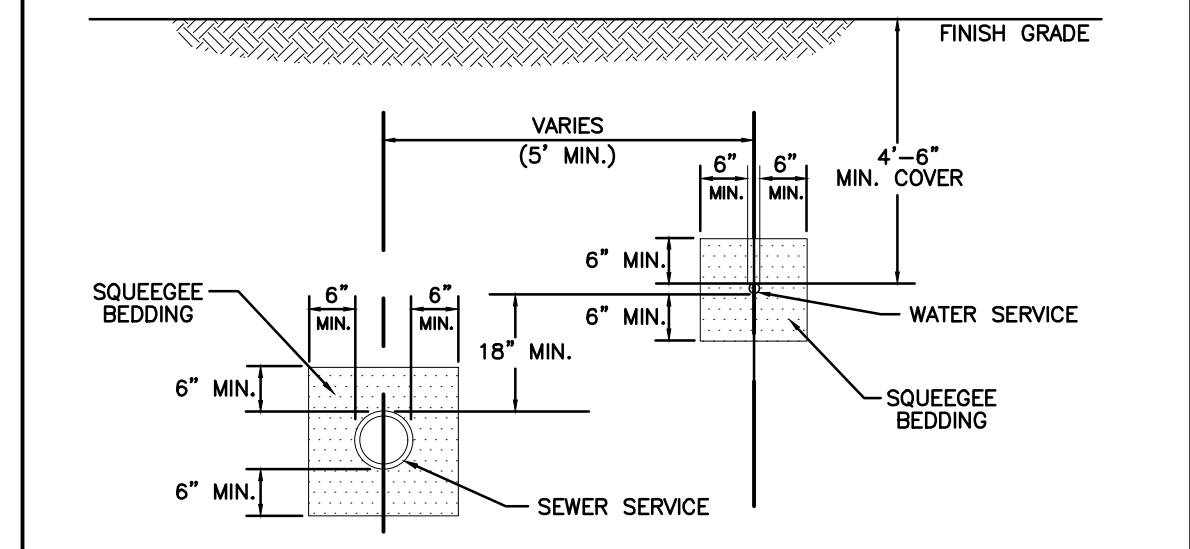
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**MECHANICAL JOINT RESTRAINT DETAILS**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 65



**TYPICAL SERVICES PLAN VIEW**



**TYPICAL SERVICES SECTION**

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**TYPICAL WATER SERVICES**

SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 68

- INSPECTION POLICY:**
- ALL SERVICE INSPECTIONS MUST BE SCHEDULED WITH THE DISTRICT ENGINEER (303) 283-3889 AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
  - SERVICE INSPECTIONS WILL OCCUR BETWEEN 8:00 A.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
  - IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
  - SHOULD THE SERVICE LINES BE DAMAGED BY LATER CONSTRUCTION, AN INSPECTION OF THE REPAIR WILL BE REQUIRED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
  - THE CONTRACTOR SHALL LEAVE ALL PIPE AND FITTINGS EXPOSED FOR THE INSPECTOR TO OBSERVE. INSPECTORS WILL NOT ENTER ANY EXCAVATIONS TO CHECK MATERIALS. THE TOP LAYER OF BEDDING CAN BE ADDED AFTER THE INSPECTION HAS BEEN COMPLETED.
  - ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.

- INSTALLATION NOTES:**
- WATER**
- ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING. (3/4" MIN.)
  - APPROVED BEDDING TO BE SQUEEGEE.
  - ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE STUB-IN AND BUILDING. A COUPLING MAY BE EITHER FLARED OR SILVER-SOLDERED. COMPRESSION COUPLINGS WILL NOT BE ALLOWED. MOVED CURB BOXES MUST BE INSPECTED BY PWSO PRIOR TO BURIAL.
  - A WATER SERVICE WHICH CROSSES A SEWER SERVICE CAN DO SO ONLY AT A 90°± ANGLE MAXIMUM, 45° ANGLE MINIMUM. WATER SERVICES SHALL BE LOCATED A MINIMUM OF 18" ABOVE SEWER SERVICE.
  - WATER SERVICE FOUNDATION PENETRATIONS SHALL BE WATERPROOFED USING MASTIC OR OTHER APPROVED METHOD.
  - STOPBOX MUST BE PLUMB AND CENTERED OVER NUT, AND MUST BE SET AT OR, SLIGHTLY ABOVE FINISHED GRADE.
  - STOPBOXES MUST BE SET AT BACK OF SIDEWALK ONLY (TOUCHING) NOT AT CURBS.
  - NO CRAWLSPACE MOUNTED METERS ALLOWED.
  - WATERLINE MUST BE ATTACHED TO A SUPPORT BOARD THAT IS MOUNTED TO THE WALL.
  - NO VOIDS ALLOWED UNDER WATERLINES FROM STOP BOX TO FOUNDATION.
  - METER SHOULD BE LOCATED ON SAME SIDE OF HOUSE AS CURBSTOP IF POSSIBLE.
  - WATERLINES PASSING UNDER DRIVEWAYS NEED TO BE SLEEVED IN 4" P.V.C. AND HAVE EXPRESS PERMISSION OF THE DISTRICT.
  - YOKES SHOULD BE MOUNTED NO GREATER THAN 6 INCHES ABOVE BOTTOM SHUTOFF. EACH SERVICE MUST INCLUDE A STOP AND WASTE VALVE AND A PRESSURE REDUCING VALVE LOCATED WITHIN THE ABOVE REFERENCED 6 INCH SPACE.
  - NO SPLICES OR FLARED COUPLINGS ALLOWED ON WATERLINES. SILVER SOLDER JOINTS MUST BE USED IN MOVING STOPBOXES, AND SILVER SOLDER JOINT MUST BE INSPECTED BY SQUAD PRIOR TO BURIAL.
  - ONLY 3/4" (JUMPER OR CHEATER) PIPES (RESIDENCES) ARE ALLOWED. (JUMPER OR CHEATER) PIPES WILL BE REMOVED PRIOR TO METER SET DATE.
  - ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS: "X" FOR SANITARY SEWER SERVICE "W" FOR WATER SERVICES

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES**

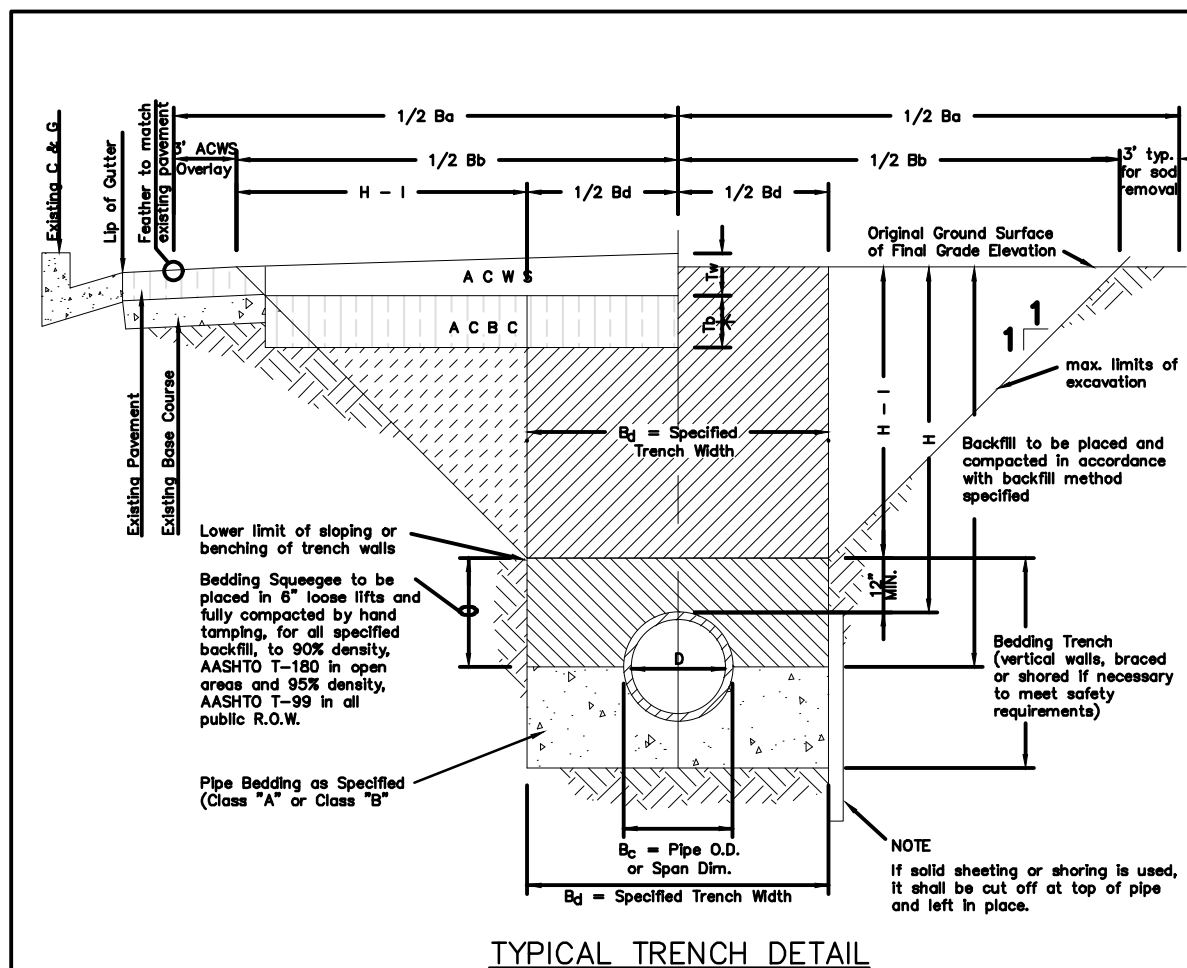
SCALE: NONE DATE: 4/00  
 APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION SHEET 67

REV	REVISION DESCRIPTION	DATE	CHKD	APPD



THE ABOVE SPECIFICATIONS AND DRAWINGS ARE AN INSTRUMENT OF SERVICE PROVIDED BY MERRICK AND ASSOCIATES, INC. FOR THE PROJECT DESCRIBED HEREIN. THE CLIENT'S RESPONSIBILITY IS TO OBTAIN NECESSARY PERMITS AND TO OBTAIN NECESSARY APPROVALS FROM THE APPROPRIATE AGENCIES. MERRICK AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR ANY OMISSIONS, ERRORS, OR INADEQUACIES IN THE DESIGN OR CONSTRUCTION OF THE PROJECT OR FOR ANY DAMAGE TO PERSONS OR PROPERTY, INCLUDING THE PROJECTOR OR ANY OTHER PARTY, ARISING FROM ANY CAUSE, INCLUDING NEGLIGENCE, WHETHER CAUSED BY MERRICK AND ASSOCIATES, INC. OR ANY OTHER PARTY. MERRICK AND ASSOCIATES, INC. SHALL NOT BE LIABLE FOR THE CONSTRUCTION OF THE PROJECT OR FOR ANY DAMAGE TO PERSONS OR PROPERTY, INCLUDING THE PROJECTOR OR ANY OTHER PARTY, ARISING FROM ANY CAUSE, INCLUDING NEGLIGENCE, WHETHER CAUSED BY MERRICK AND ASSOCIATES, INC. OR ANY OTHER PARTY.



**NOTES**

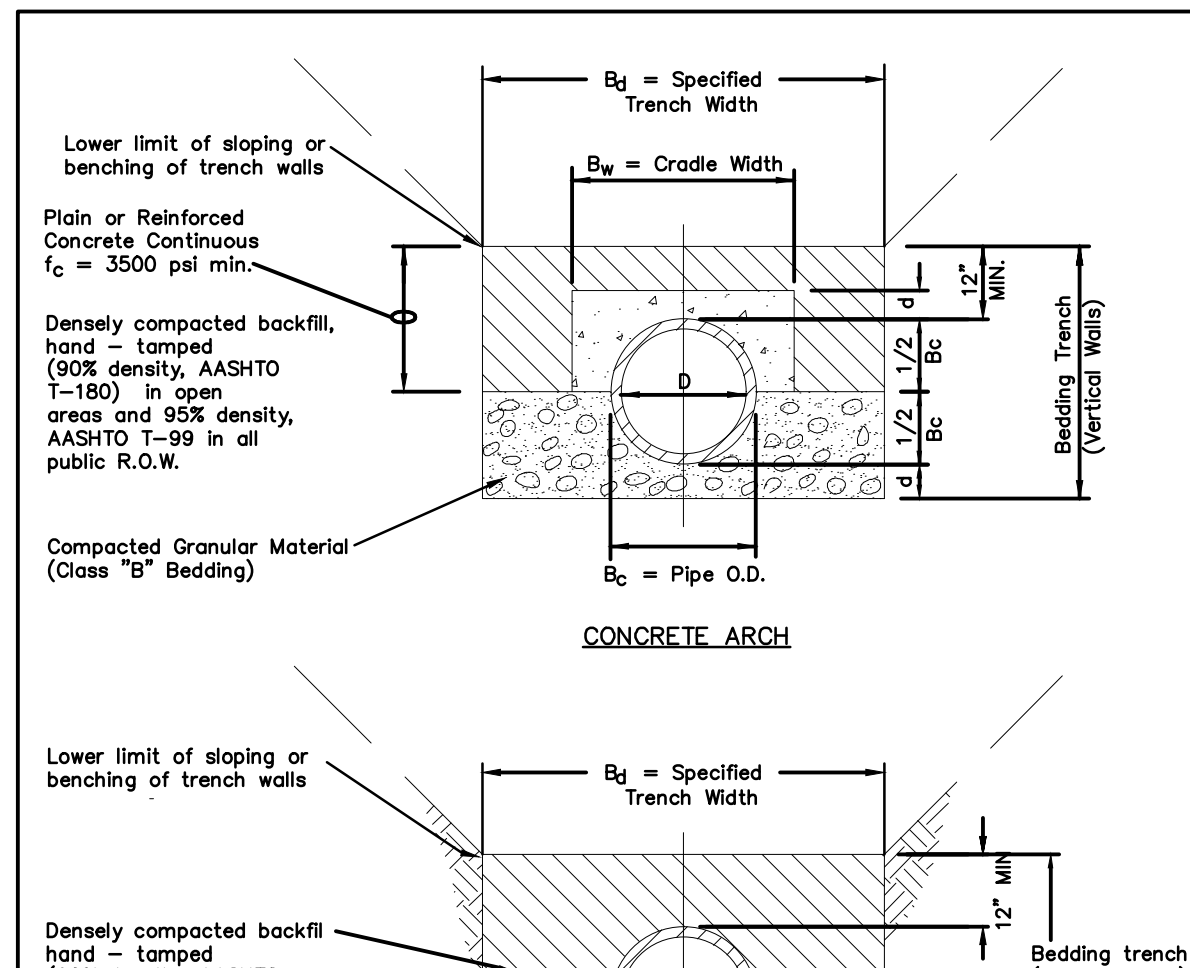
- Sloping or benching of trench side walls, where permitted shall be in accordance with applicable Federal, State and Local safety regulations.
- Trench shall be broomed and shored as necessary to allow safe working conditions or to protect adjacent utilities, structures, etc. Unless otherwise specified on the plans, no pavement will be made for removal, replacement or relocation of curb and gutters, utilities, sidewalks, driveways, etc. outside the maximum limits of excavation as shown and the contractor shall be responsible for protection of same.
- If dimension  $T_2$  is  $\leq 5'$ , then existing asphalt pavement shall be removed and replaced up to the gutter. Maximum asphalt pay width,  $B_2$  if  $B_2$  shall then be based upon this detail.

**ASPHALT AND BASE COURSE REPLACEMENT SCHEDULE**

STREET WIDTH	ASPHALTIC BASE COURSE (1/2")	ASPHALTIC WEARING SURFACE (1/2")	TOTAL THICKNESS (1/2")
UP TO 36'	4"	2"	6"
36' TO 44'	4"	3"	7"
44' TO 48'	5"	3"	8"
WIDER THAN 48'	6"	3"	9"

TABLE II \* Unless otherwise noted on the plans or in the specs.

2000 REVISION SHEET 1



**TABLE III**

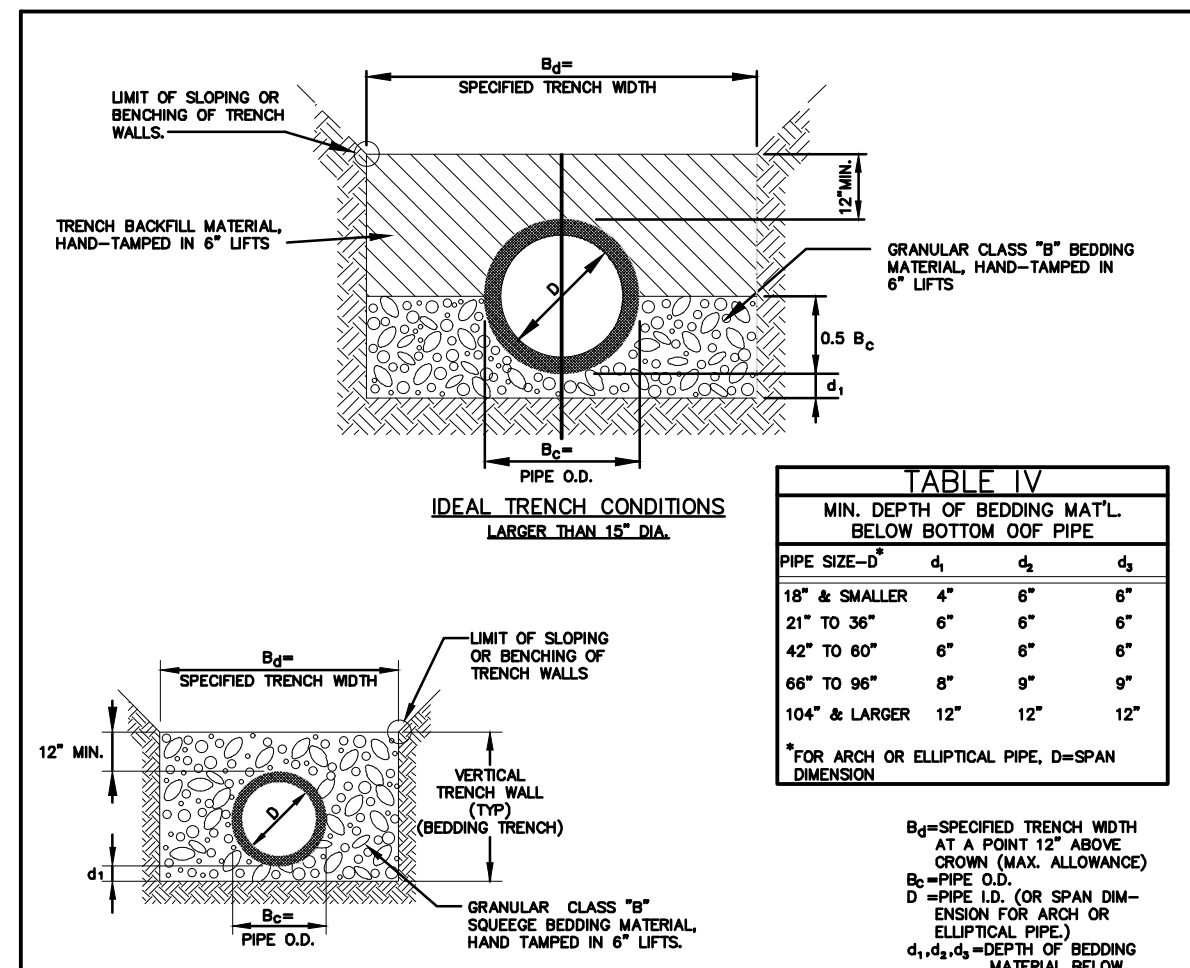
NOMINAL DIAMETER (D)	MINIMUM THICKNESS (t)	MIN. WIDTH OF CRADLE (B <sub>w</sub> )
18" & smaller	4"	B <sub>c</sub> + 8"
21" TO 24"	6"	B <sub>c</sub> + 8"
27" TO 33"	8"	B <sub>c</sub> + 8"
36" TO 42"	10"	1.25 B <sub>c</sub>
48" & larger	1/4 D	1.25 B <sub>c</sub>

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
TRENCHING AND BEDDING DETAIL - CLASS "A"

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 2



**TABLE IV**

PIPE SIZE - Ø	4"	6"	8"
18" & SMALLER	4"	6"	6"
21" TO 36"	6"	6"	6"
42" TO 60"	6"	6"	6"
66" TO 96"	6"	9"	9"
104" & LARGER	12"	12"	12"

**GENERAL NOTES:**

1. THESE DETAILS ARE TYPICAL FOR NORMAL TRENCH CONDITIONS. FOR INSTALLATIONS OTHER THAN THESE (SUCH AS EMBANKMENT OR TUNNEL INSTALLATIONS, ETC.) EXCAVATION, BEDDING AND BACKFILL REQUIREMENTS SHALL BE DETAIL ON THE CONSTRUCTION DRAWINGS. FOR UNUSUAL OR UNSTABLE SOIL CONDITIONS, TRENCH AND BEDDING DETAILS SHALL BE A SPECIAL DESIGN.
2. ULTIMATE BACKFILL LOADS AND STRUCTURAL DESIGN OF PIPE OR CONDUIT SHALL BE BASED UPON B<sub>2</sub> ± TRANSITION WIDTH AS SET FORTH IN "REFERENCE R-2" (SEE BLOCK BELOW).
3. FOR INSTALLATIONS OTHER THAN TYPICAL TRENCH CONDITIONS, EXCAVATIONS, BEDDING, BACKFILL AND STRUCTURAL REQUIREMENTS SHALL BE DESIGNED IN ACCORDANCE WITH THE REFERENCES NOTED BELOW OR THE PIPE MFG.'S RECOMMENDATIONS.

**REFERENCE:**

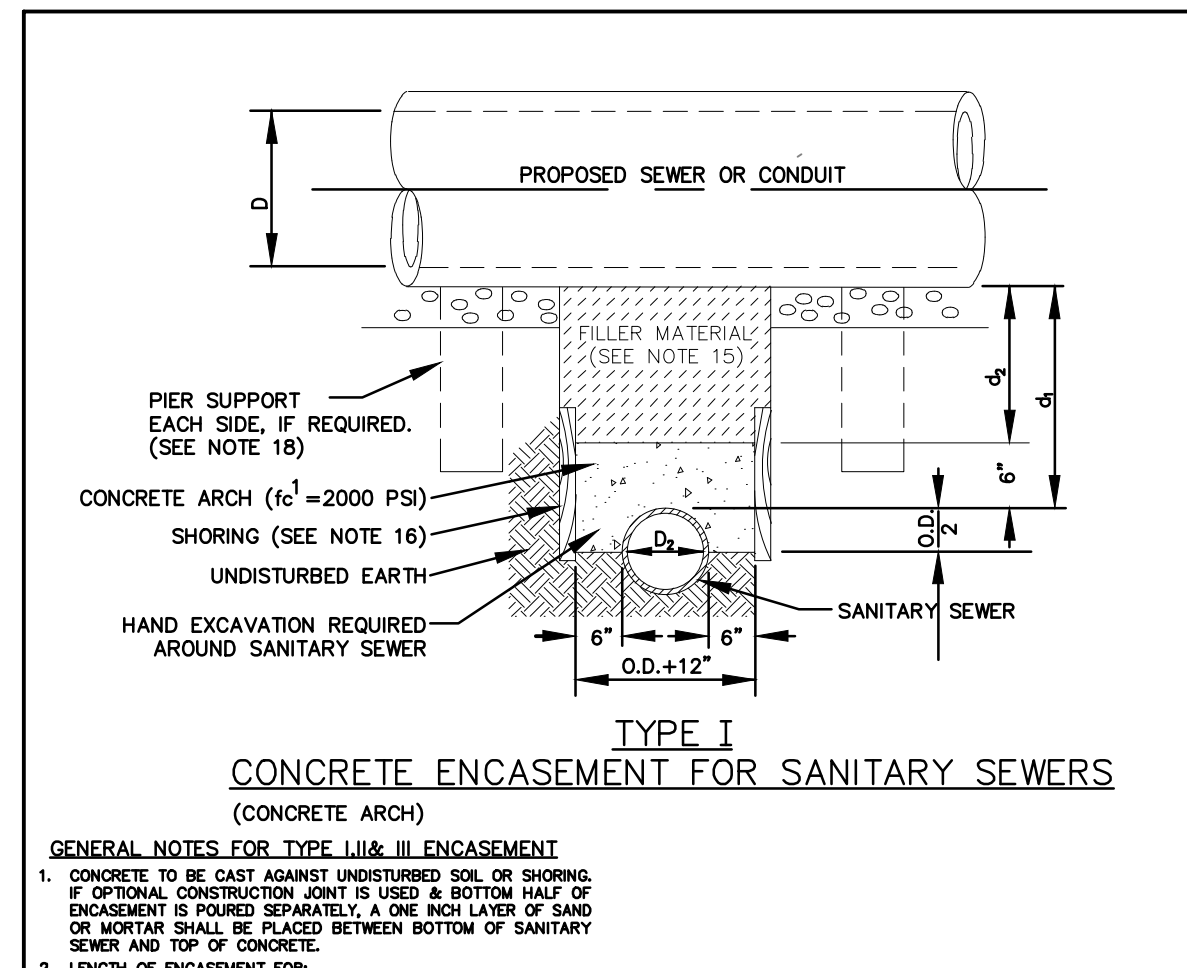
- R-1 M.P.C.F. MANUAL OF PRACTICE NO. 9 (A.S.T.M. MANUAL)
- R-2 AMERICAN CONCRETE PIPE ASSOCIATION DESIGN MANUAL LATEST EDITION.

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
TRENCHING AND BEDDING DETAIL - CLASS "B"

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 3



**GENERAL NOTES FOR TYPE I, II & III ENCASEMENT**

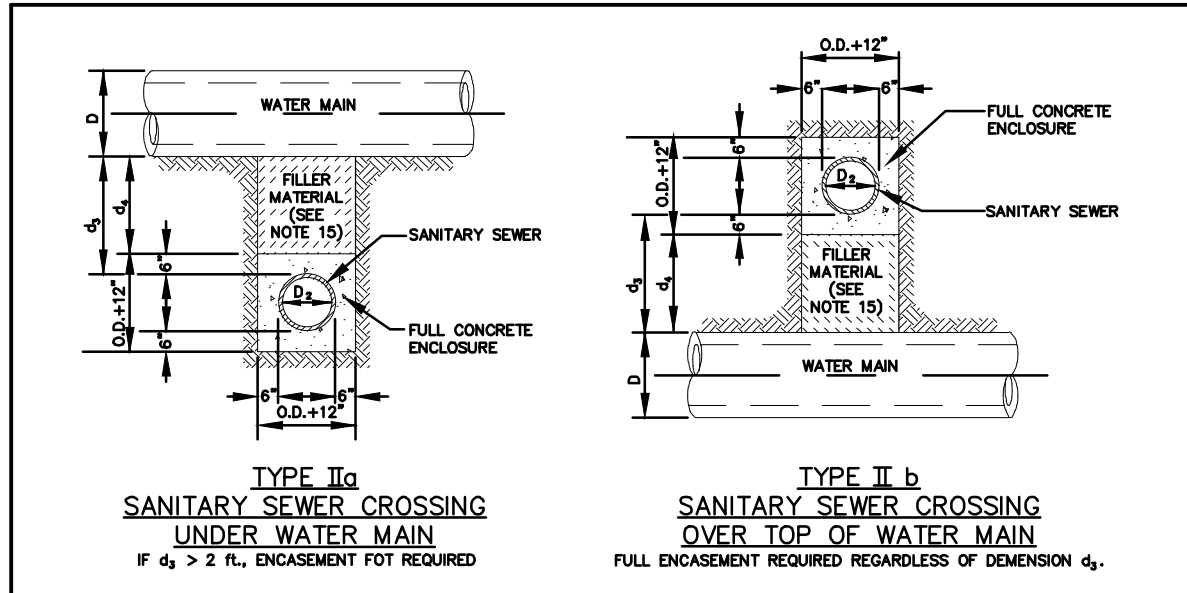
- CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIONAL CONSTRUCTION JOINT IS USED & BOTTOM HALF OF ENCASEMENT IS POURED SEPARATELY, A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
- LENGTH OF ENCASEMENT FOR: (a) TYPE I & II ENCASEMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT. (b) TYPE III ENCASEMENT SHALL EXTEND AT LEAST TO FEET EACH SIDE OF WATER MAIN.
- UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE I, II & III ENCASEMENTS NEED NOT BE REINFORCED. REINFORCEMENT, IF REQUIRED, SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
- TYPE I, II OR III ENCASEMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS: (a) TYPE I OR TYPE II IF  $d \leq 18"$  (Ø  $\leq 12"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS. (b) TYPE I OR TYPE II IF  $d \leq 24"$  (Ø  $\leq 18"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS. (c) TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION "d". (d) EXCEPT FOR UNUSUAL CIRCUMSTANCES, WATER MAIN CROSSINGS, OR WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, TYPE I ENCASEMENT WILL NORMALLY BE SATISFACTORY. (e) IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF DUCTILE IRON PIPE (AWWA C-150 OR C-151), CONCRETE ENCASEMENT MAY NOT BE REQUIRED.
- FILLER MATERIAL BETWEEN CONDUITS TO BE: (a) APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF  $d \leq 4"$  &  $s \leq 5"$ . (b) COMPACTED CLASS "B" BEDDING IF  $d \leq 4"$  &  $s > 5"$ . (IF  $d > 4"$  FOR TYPE II ENCASEMENT POUR CONCRETE ON UNDISTURBED SOIL.)
- SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT.
- THESE ENCASEMENT DETAILS MAY ALSO BE APPLICABLE FOR CONDUITS OTHER THAN STORM OR SANITARY SEWER INSTALLATIONS.
- IN CERTAIN SITUATIONS WHERE CONDUIT DIAMETER "D" IS EXTREMELY LARGE, PIER SUPPORTS ON EACH SIDE OF SANITARY SEWER MAY ALSO BE REQUIRED. IF REQUIRED, SUPPORTS SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN AND PROFILE DRAWINGS.

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
CONCRETE ENCASEMENT TYPE I

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 6



**GENERAL NOTES FOR TYPE I, II & III ENCASEMENT**

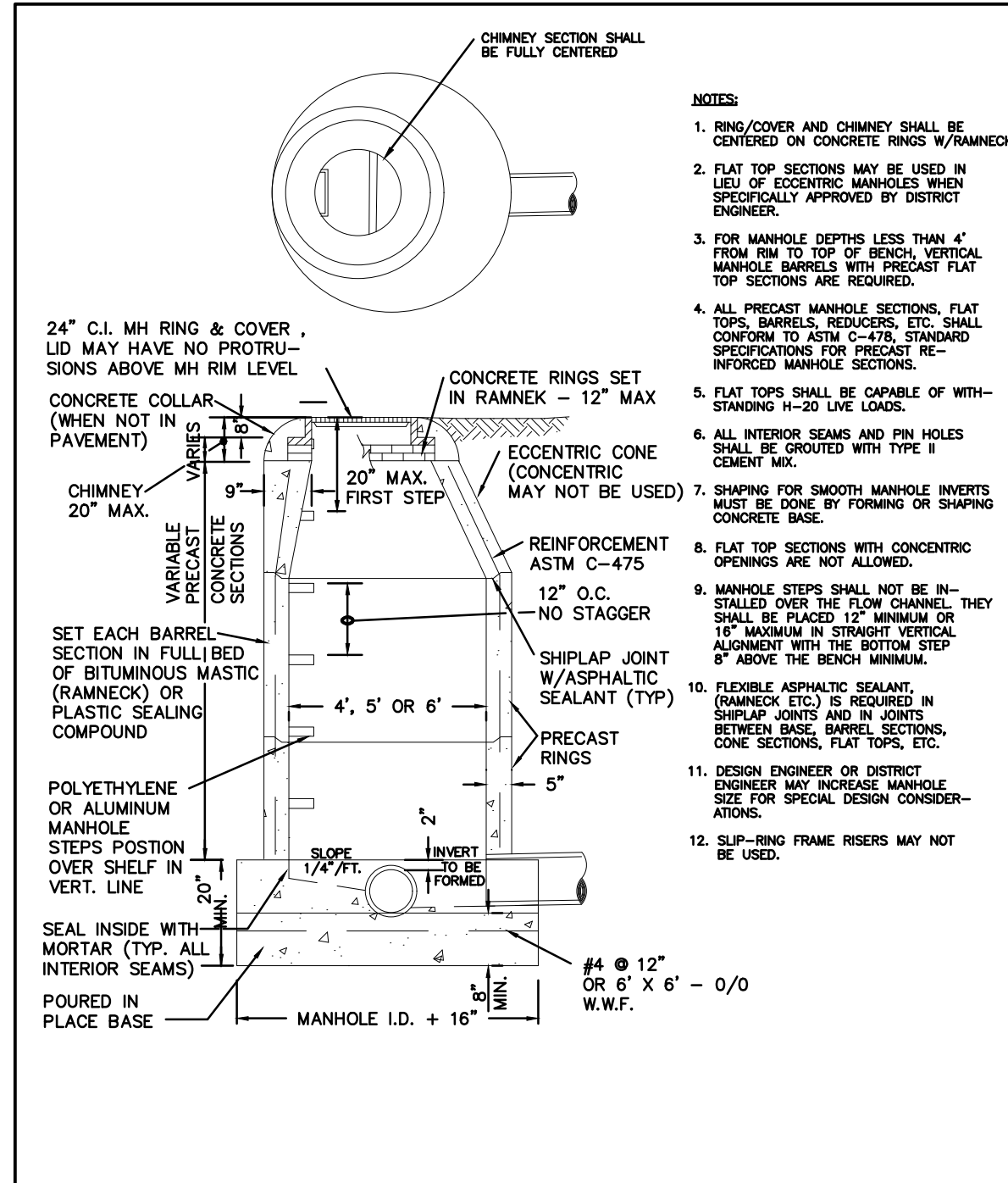
- CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIONAL CONSTRUCTION JOINT IS USED & BOTTOM HALF OF ENCASEMENT IS POURED SEPARATELY, A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
- LENGTH OF ENCASEMENT FOR: (a) TYPE I & II ENCASEMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT. (b) TYPE III ENCASEMENT SHALL EXTEND AT LEAST TO FEET EACH SIDE OF WATER MAIN.
- UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE I, II & III ENCASEMENTS NEED NOT BE REINFORCED. REINFORCEMENT, IF REQUIRED, SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
- TYPE I, II OR III ENCASEMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS: (a) TYPE I OR TYPE II IF  $d \leq 18"$  (Ø  $\leq 12"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS. (b) TYPE I OR TYPE II IF  $d \leq 24"$  (Ø  $\leq 18"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION "d". (c) TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION "d". (d) EXCEPT FOR UNUSUAL CIRCUMSTANCES, WATER MAIN CROSSINGS, OR WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, TYPE I ENCASEMENT WILL NORMALLY BE SATISFACTORY. (e) IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF DUCTILE IRON PIPE (AWWA C-150 OR C-151), CONCRETE ENCASEMENT MAY NOT BE REQUIRED.
- FILLER MATERIAL BETWEEN CONDUITS TO BE: (a) APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF  $d \leq 4"$  &  $s \leq 5"$ . (b) COMPACTED CLASS "B" BEDDING IF  $d \leq 4"$  &  $s > 5"$ . (IF  $d > 4"$  FOR TYPE II ENCASEMENT POUR CONCRETE ON UNDISTURBED SOIL.)
- SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT.
- THESE ENCASEMENT DETAILS MAY ALSO BE APPLICABLE FOR CONDUITS OTHER THAN STORM OR SANITARY SEWER INSTALLATIONS.
- IN CERTAIN SITUATIONS WHERE CONDUIT DIAMETER "D" IS EXTREMELY LARGE, PIER SUPPORTS ON EACH SIDE OF SANITARY SEWER MAY ALSO BE REQUIRED. IF REQUIRED, SUPPORTS SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN AND PROFILE DRAWINGS.

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
CONCRETE ENCASEMENT TYPE II

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 7



**PIPE I.D. MANHOLE I.D.**

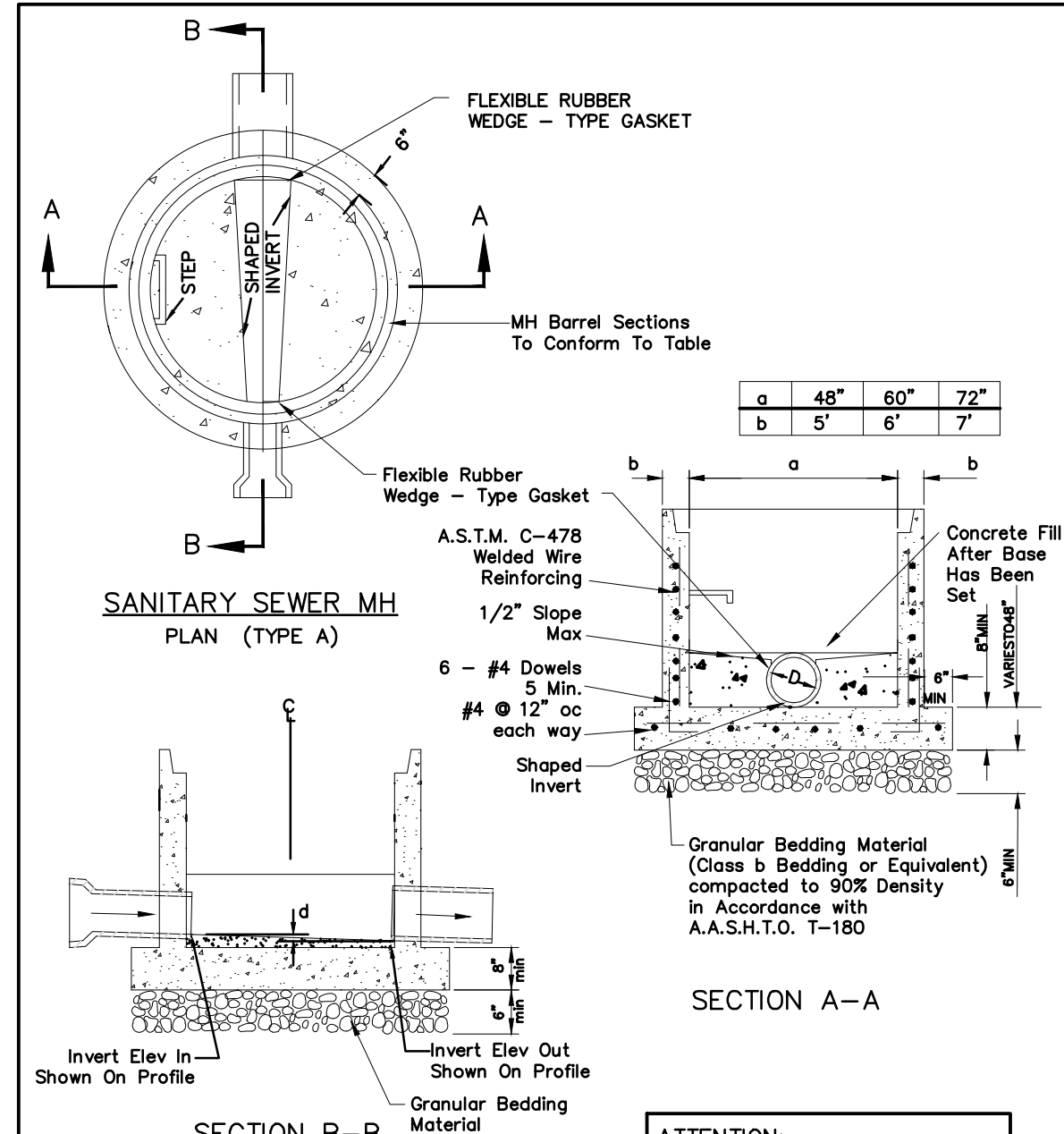
18" & SMALLER	4'-0"
21" TO 48"	5'-0"
54"	6'-0"
60" & LARGER	SPECIAL DESIGN

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
PRECAST MANHOLE ECCENTRIC CONE

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 9



**TABLE**

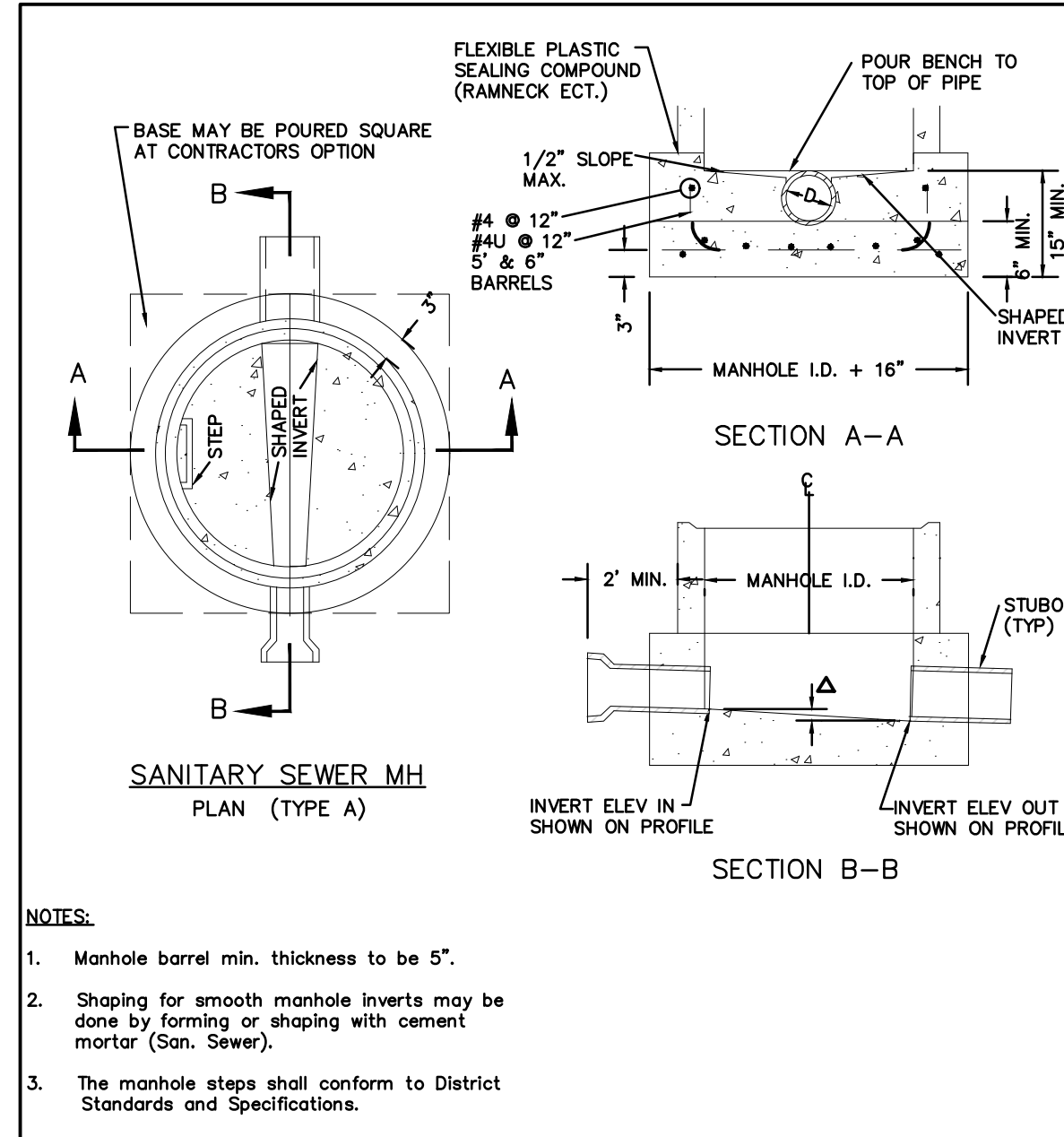
a	48"	60"	72"
b	5"	6"	7"

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
PRECAST MANHOLE BASE DETAIL

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 12



**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
CAST-IN-PLACE MANHOLE BASE DETAIL

SCALE: NONE DATE: 4/00

APPROVED: RJD DISTRICT ENGINEER

2000 REVISION SHEET 13



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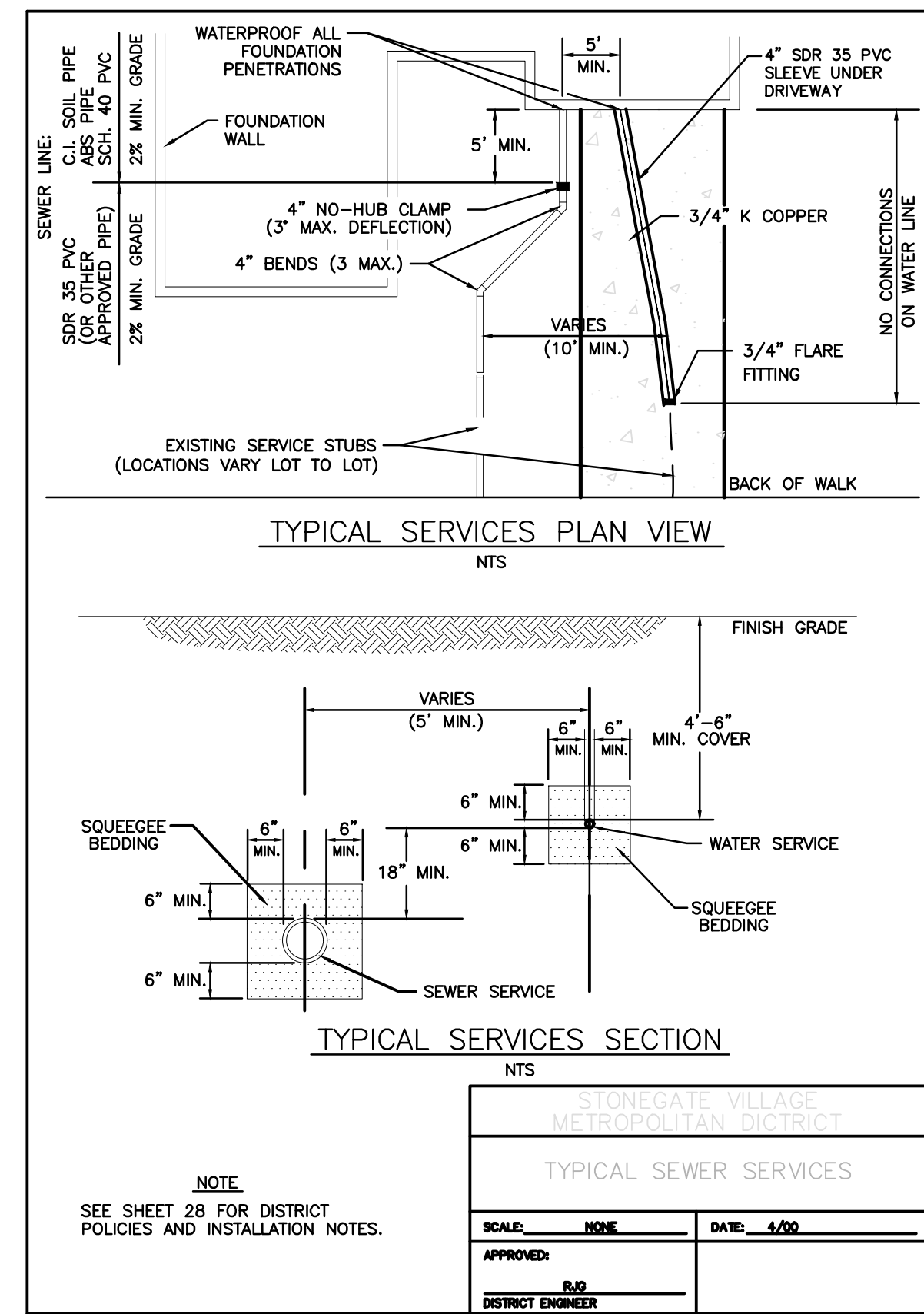
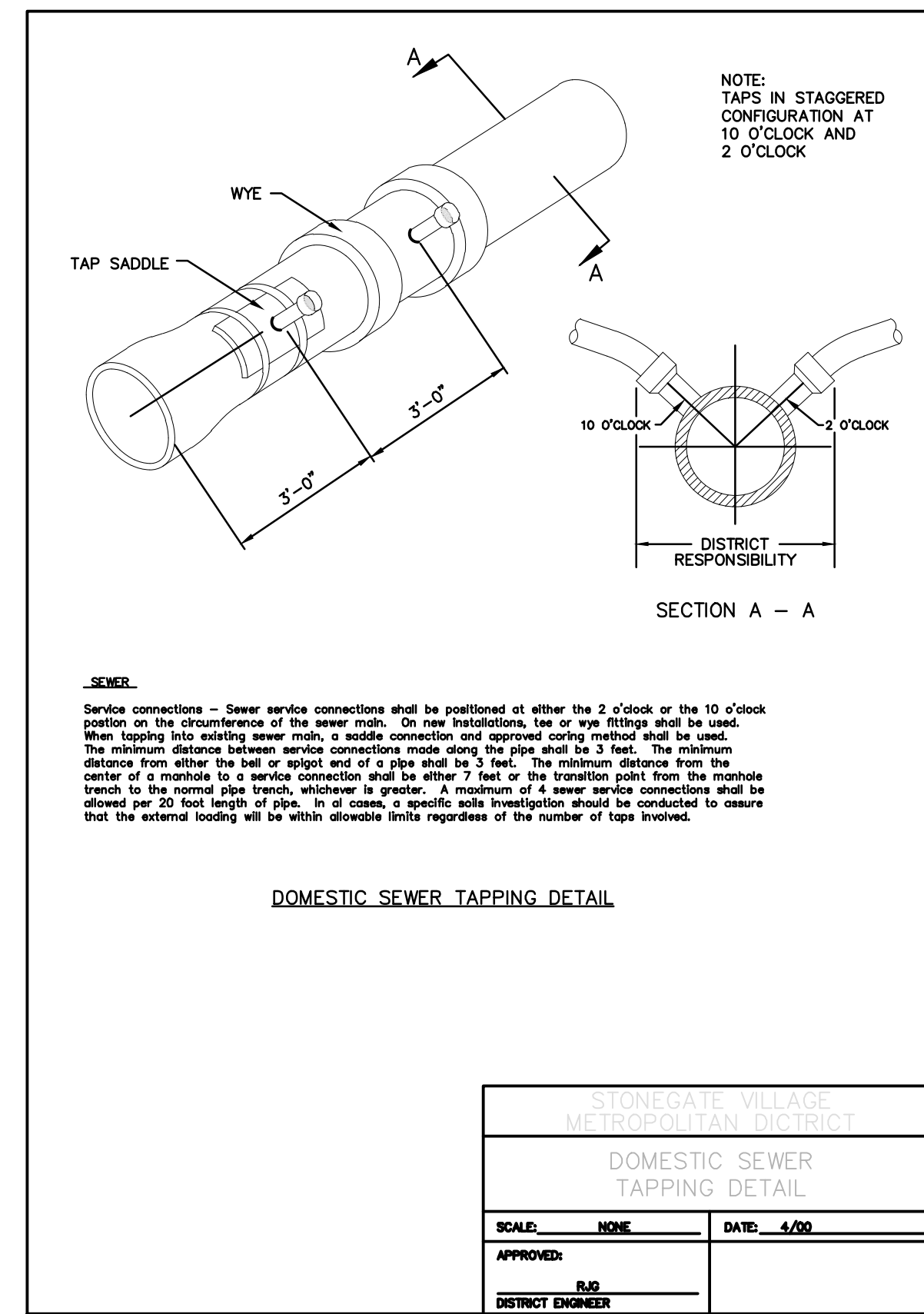
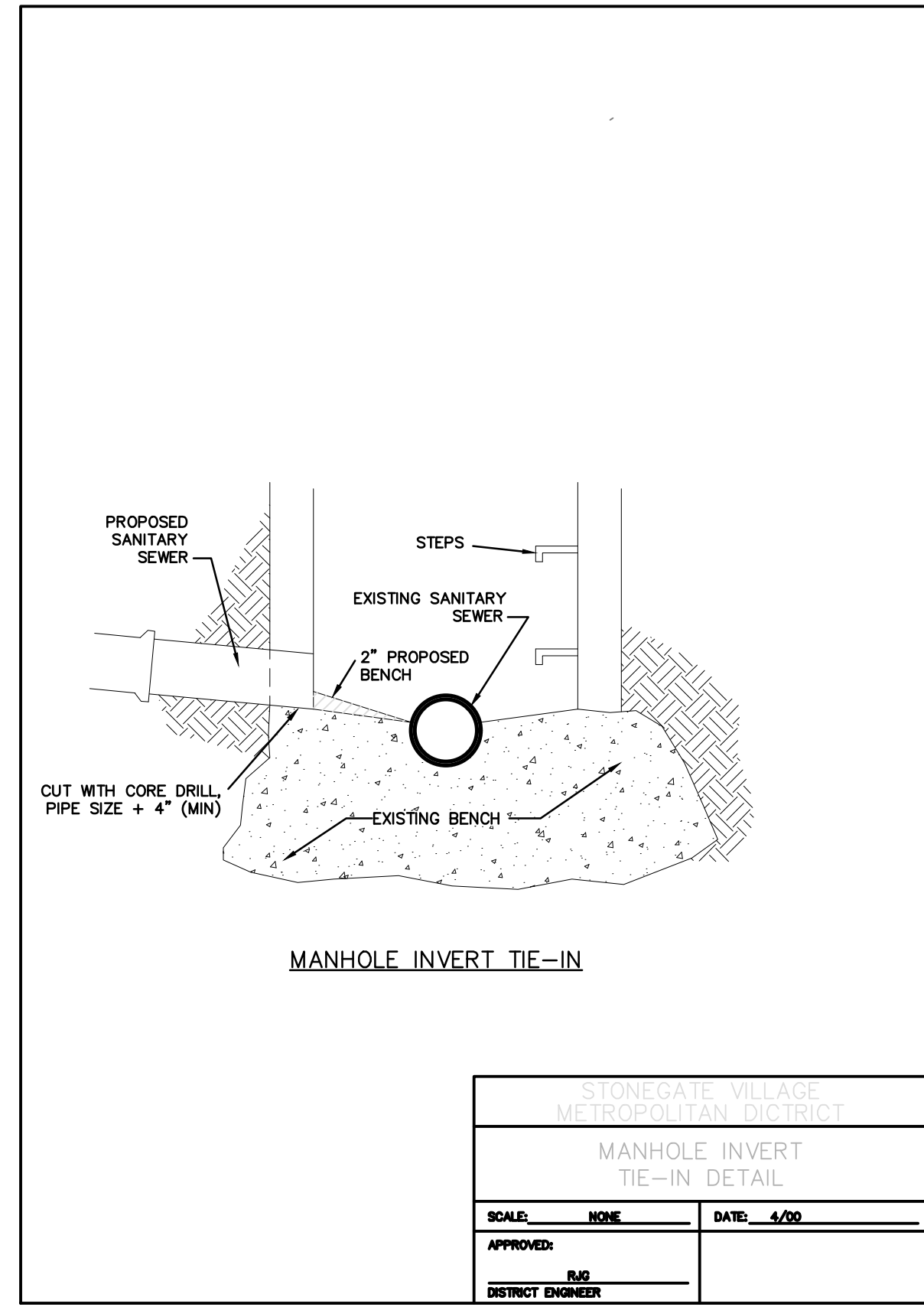
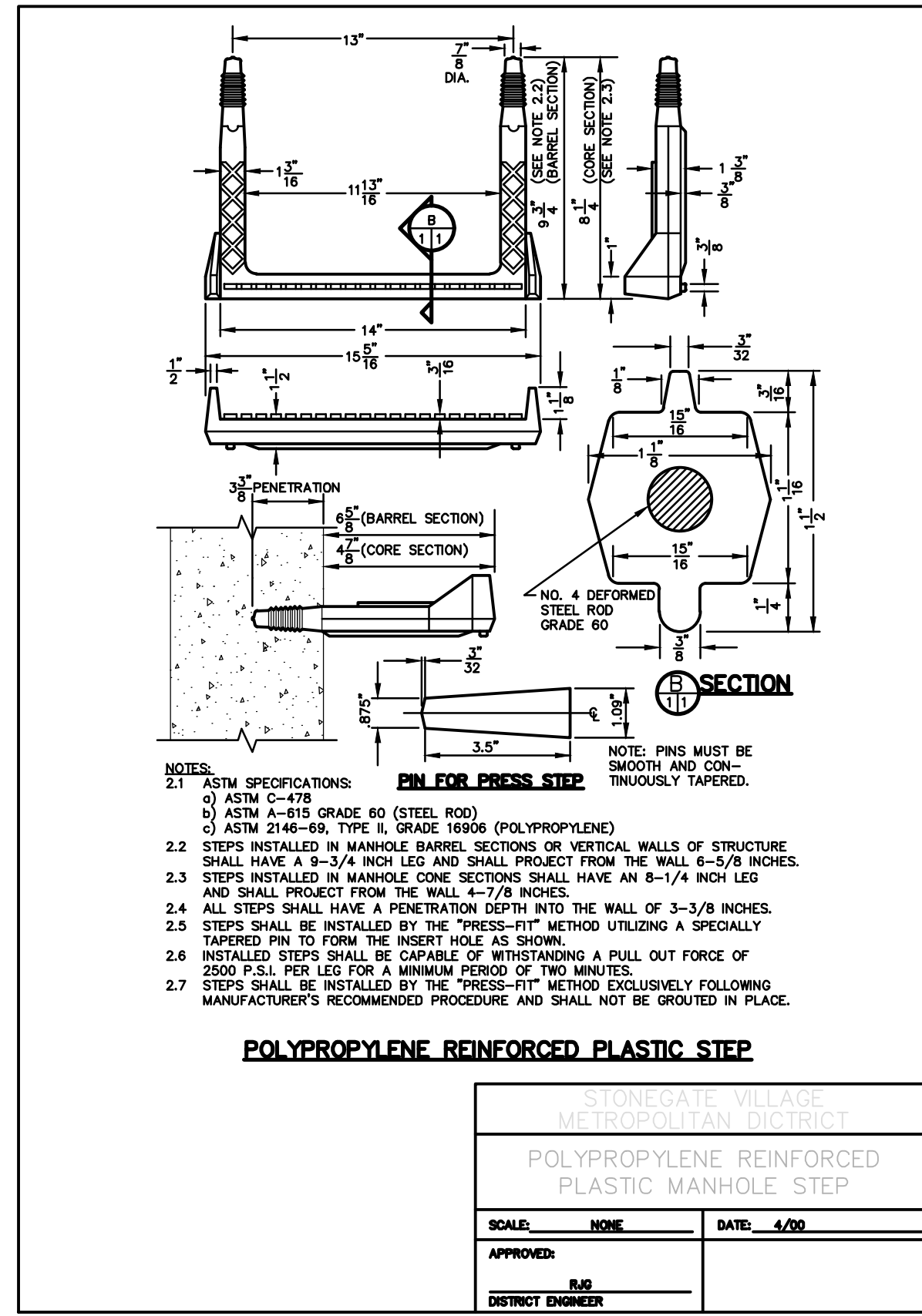
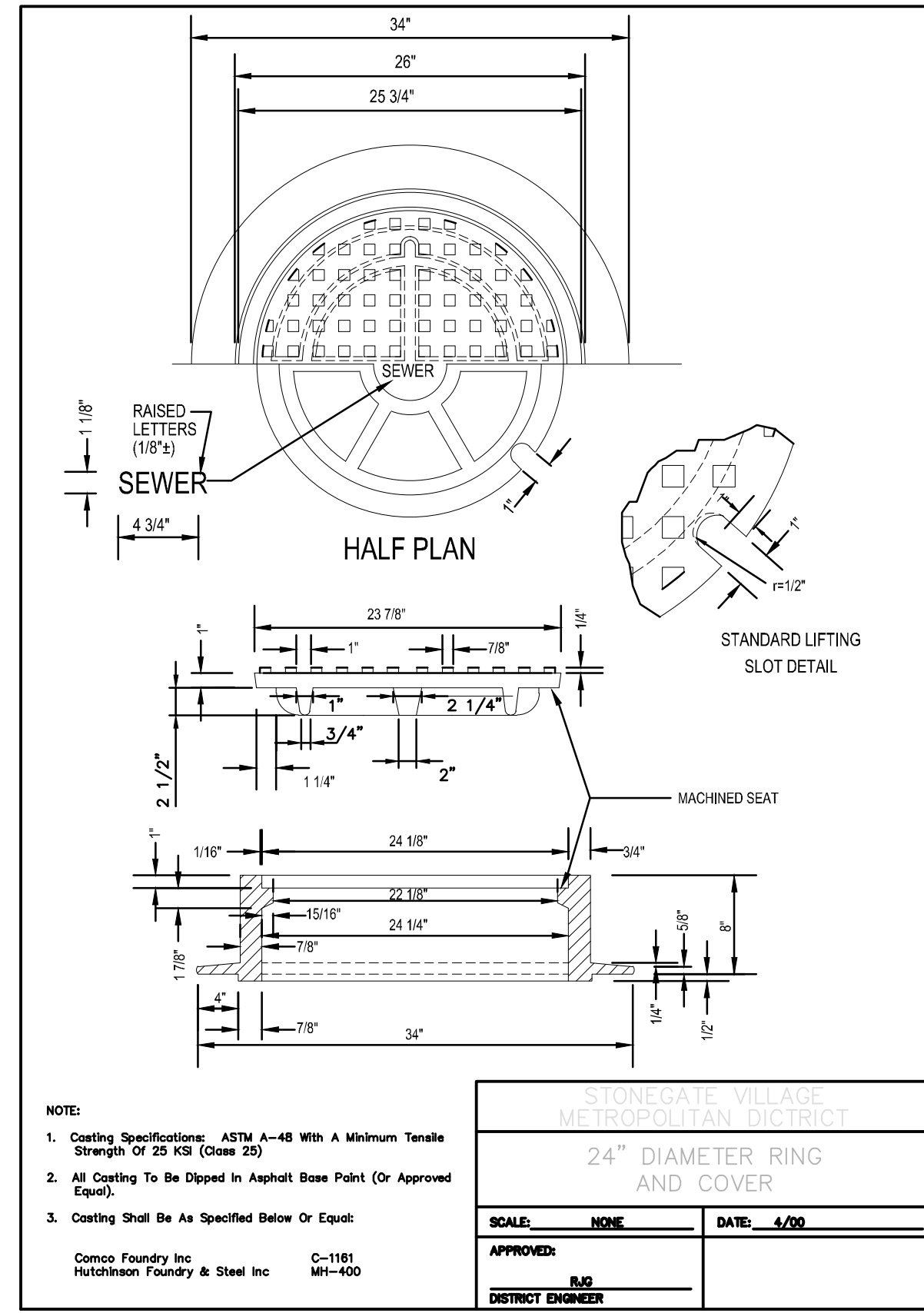
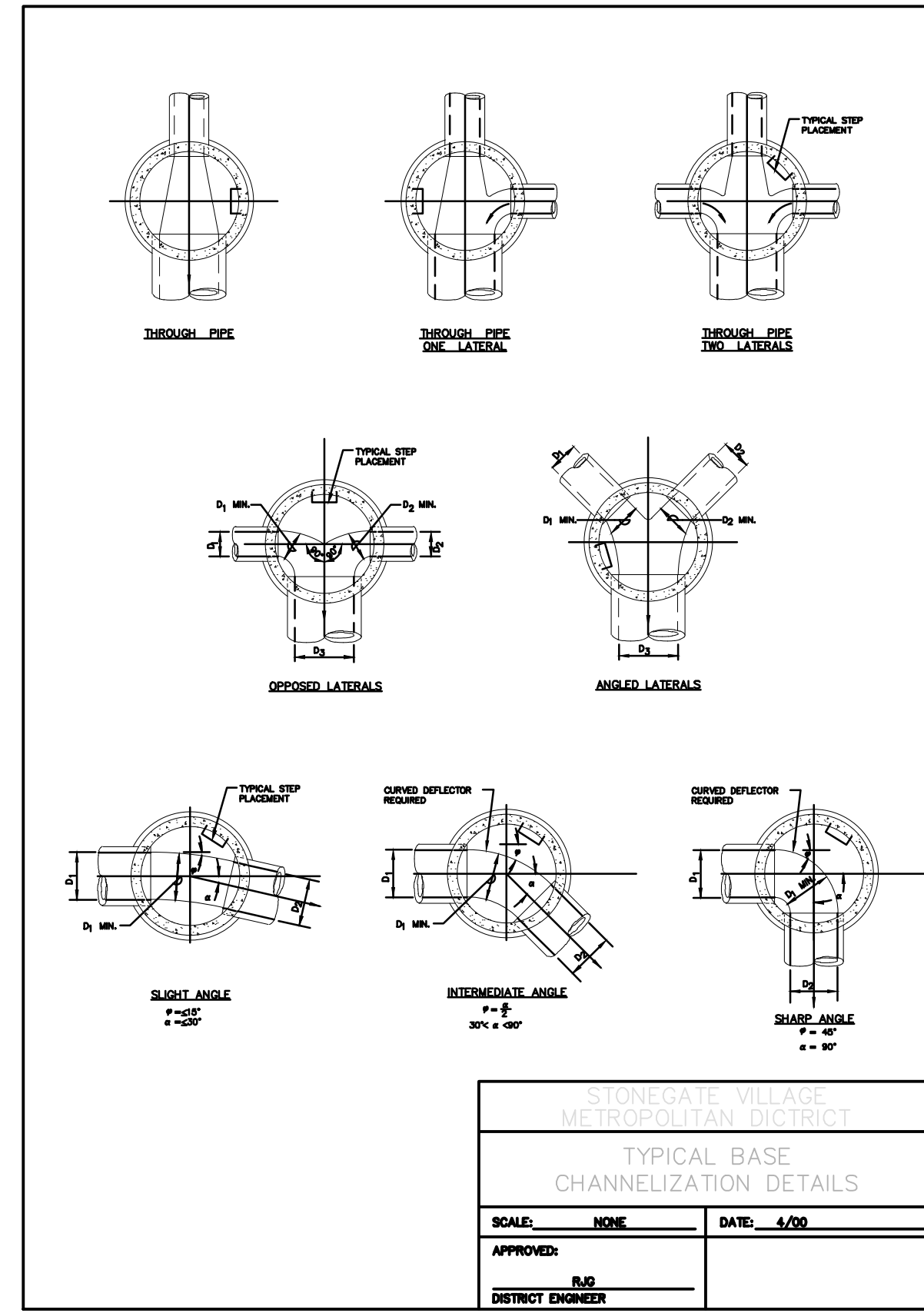
**CENTURY LIVING**

REV	REVISION DESCRIPTION	DATE	CHG	CHKD	APPR
A	ISSUED FOR CONSTRUCTION	8/25/2022			

LOT 1, COMPARK VILLAGE SOUTH  
FLG 1, AMD 2  
WATER & SANITARY SEWER IMPROVEMENTS  
STANDARD DETAILS - SANITARY

FILE NUMBER: 65120850  
DATE: 6/31/2023  
SHEET: 07-11  
FOR OR ON BEHALF OF MERRICK & ASSOCIATES, INC.

THE USE OF THESE BLUEPRINTS IS AN ACKNOWLEDGMENT OF THE USER'S RESPONSIBILITY TO VERIFY THE ACCURACY AND COMPLETENESS OF THE INFORMATION PROVIDED HEREON. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.



INSPECTION POLICY:

- ALL SERVICE INSPECTIONS MUST BE SCHEDULED WITH THE DISTRICT ENGINEER'S OFFICE (303) 263-3699 AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
- SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 4:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
- IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
- SHOULD THE SERVICE LINES BE DAMAGED BY LATER CONSTRUCTION, AN INSPECTION OF THE REPAIR WILL BE REQUIRED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
- THE CONTRACTOR SHALL LEAVE ALL PIPE AND FITTINGS EXPOSED FOR THE INSPECTOR TO OBSERVE. INSPECTORS WILL NOT ENTER ANY EXCAVATIONS TO CHECK MATERIALS. THE TOP LAYER OF BEDDING CAN BE ADDED AFTER THE INSPECTION HAS BEEN COMPLETED.
- ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.

INSTALLATION NOTES:

SEWER

- ACCEPTABLE PIPE MATERIALS ARE TO BE SDR 35 PVC PIPE, ABS PIPE AND CAST IRON CLASS 22 SOIL PIPE. APPROVED BEDDING IS TO BE SQUEEGEE.
- NO-HUB CLAMPS SHALL BE USED TO JOIN 2 MALE PIPE ENDS WITH A MAXIMUM DEFLECTION OF 3".
- MINIMUM GRADE SHALL BE 2%.
- INSTALLATION SHALL INCLUDE NO MORE THAN 3 BENDS. 90° BENDS ARE NOT ALLOWED. SOLVENT WELDED PIPE WILL NOT BE ALLOWED.
- CLEAN-OUTS SHALL BE INSTALLED AT 100' INTERVALS. CLEAN-OUTS ARE NOT REQUIRED FOR SERVICES LESS THAN 100'.
- STRESSING OF THE PIPE BETWEEN FITTINGS WILL NOT BE ALLOWED.

2000 REVISION SHEET 29

File Location: D:\DEN\Projects\0950-C00 Compark South\CAD\CDS\SF-WATER\0950-SAN DET\ALS-dwg.Plot Date: 9/7/2023 12:51 PM Last Saved By: KATHERINE ADAMS



Know what's below.  
Call before you dig.

REV	DESCRIPTION	DATE	BY	CHKD	APPD
A	ISSUED FOR CONSTRUCTION	8/25/2022			