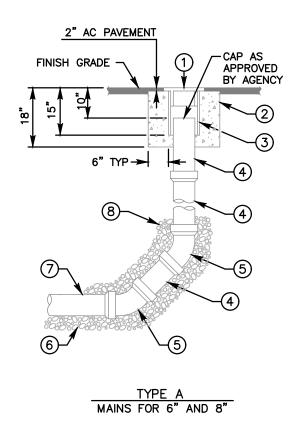
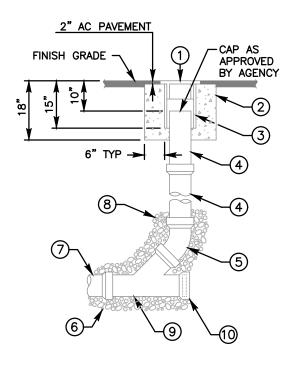
SEWERAGE SYSTEMS



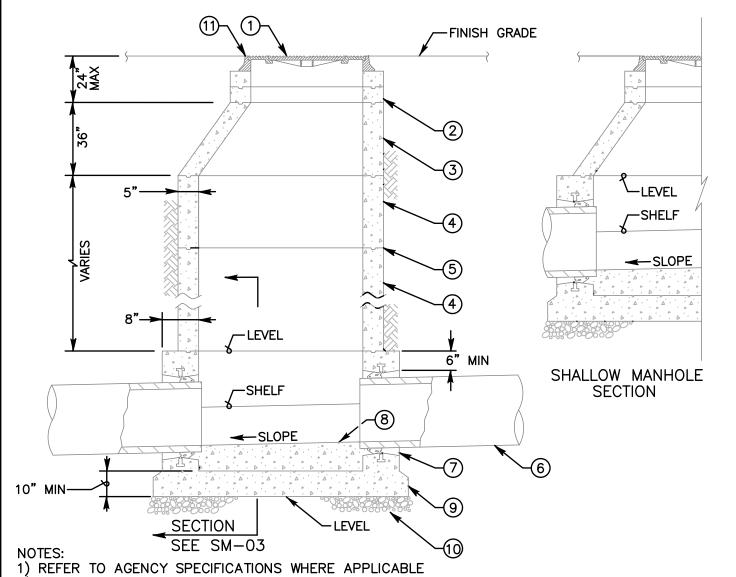


TYPE B SEWER LATERAL **CLEANOUT**

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) CLEANOUTS TO BE INSTALLED AT THE END OF MAINS WHERE INDICATED ON THE PLANS
- 3) CLEANOUT PIPE TO BE SAME SIZE AND MATERIAL AS SEWER MAIN UP TO
- 4) BACKFILL TO TOP OF 45° BEND WITH 3/4" CRUSHED ROCK 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

NO NO		S	IZE A	ND DESCRIPTION	ITEM NO	SIZE AND	DESCRIPTION	I
① ② ③ ④	'SE COI 12" BO	WER'ANI NCRETE F 'PVC, C- X)	D AGE RING -900	BOX COVER MARKED ENCY NAME AS REQUIRED × 15" LONG (CLEANOUT LENGTH PVC PIPE	567890	45° ELBOW 3/4" CRUSHED ROCK SEWER MAIN 3/4" CRUSHED ROCK STANDARD WYE BRAN	SEE NOTE	4
Revision ORIGINAL	Ву	Approved Kercheval	Date 12/75	SAN DIEGO REGIONA	AL STAN	IDARD DRAWING		BY THE SAN DIEGO IDARDS COMMITTEE
Reviewed	вк	B. KNOLL	04/15				Samson	200 03/24/2022
Reviewed	вк	B. KNOLL	10/18	SEWER CLEANOUT			Chairperson R.C	7
Reviewed	RP	S. Engeda	03/22	JEWER .	DRAWING NUMBER	SC-01		



2) VERTICAL WALL OF CONE TO BE ON THE UPSTREAM SIDE OF MANHOLE SEE SM-05 FOR ACCESS LOCATIONS

3) FOR MANHOLE BASES SEE SM-03

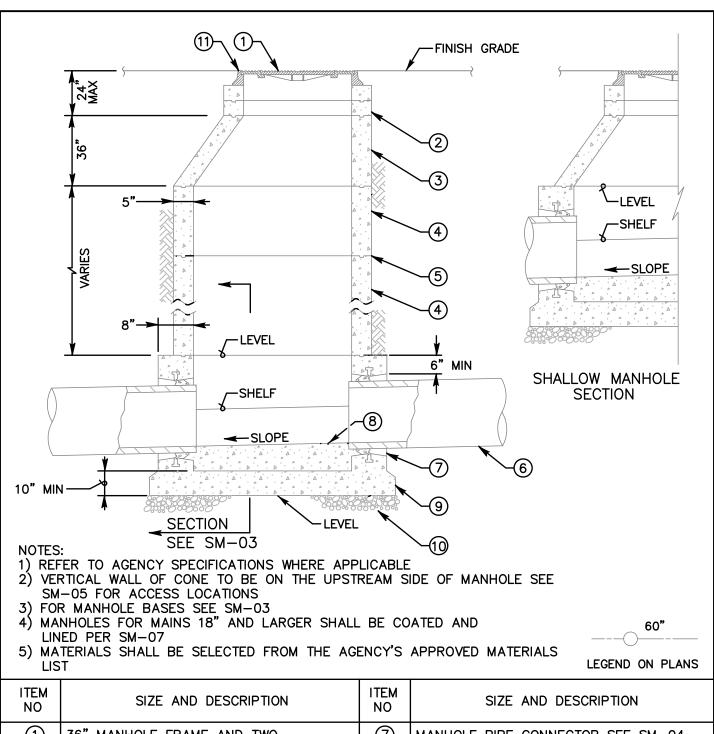
4) MANHOLES FOR MAINS 18" AND LARGER SHALL BE COATED AND LINED PER SM-07

5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

LEGEND ON PLANS

48"

	, ,						
ITEM NO			SIZE	AND DESCRIPTION	ITEM NO	SIZE AN	ID DESCRIPTION
1 23456	C(36 E(48 W	ONCENTR 5" DIA G CCENTRIC 3" DIA R	IC CO RADE CON ING(S)	RAME AND TWO VERS SEE S.D.R.S.D. M-3 RING(S) 6" TO 18" HIGH E SEE NOTE 2) VARIABLE HEIGHT DINTS SEE SM-05	7899	FIELD INSTALLED I	
Revision ORIGINAL	Ву	Approved Kercheval		SAN DIEGO REGIONAL	STANDA	ARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Reviewed	ВК		04/15		DEO 4 0	T 14411101 F	Samson Engeda 03/24/202
Reviewed	BK	B. KNOLL	10/18	48" DIAMETER P			Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	INSTAI	LLATIO	N	DRAWING NUMBER SM-01



ITEM NO			SIZE	AND DESCRIPTION	ITEM NO	SIZE AN	ND DESCRIPTION	
1 2 3 4 5 6	C: 30	36" MANHOLE FRAME AND TWO CONCENTRIC COVERS SEE S.D.R.S.D. M-3 36" DIA GRADE RING(S) 6" TO 18" HIGH ECCENTRIC CONE SEE NOTE 2 60" DIA RING(S) VARIABLE HEIGHT WATER TIGHT JOINTS SEE SM-05 SEWER MAIN				FIELD INSTALLED		
Revision	Ву	' '	Date	SAN DIEGO REGIONAL	STANDA	ARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE	
ORIGINAL		Kercheval	12/75					
Reviewed	ВК	B. KNOLL					Samon - re ha 03/24/2022	
Reviewed	ВК	B. KNOLL	10/18		· · · · · · · ·		Chairperson R.C.E. 52241 Date	
					I ATIO	\ 1		

INSTALLATION

DRAWING

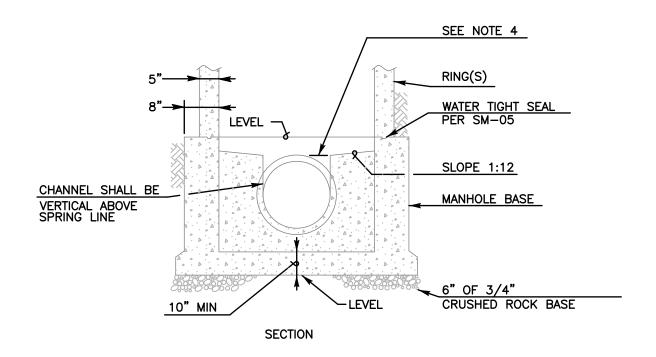
NUMBER

SM-02

03/22

S. Engeda

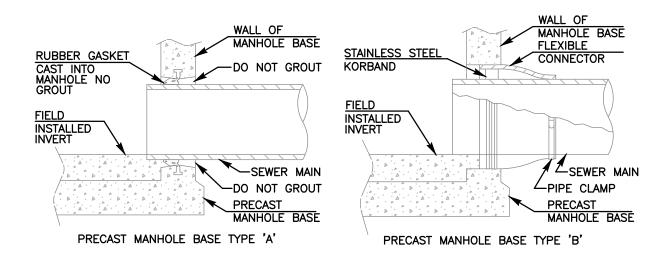
Reviewed

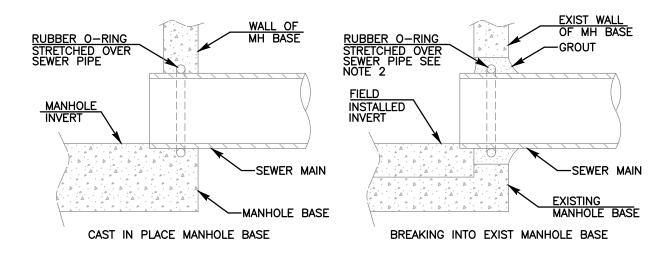


- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

- 2) FOR MANHOLE INSTALLATIONS SEE SM-01 AND SM-02
 3) MANHOLE BASES FOR MAINS 18" AND LARGER SHALL BE COATED PER SM-07
 4) LOWEST POINT ON SHELF SHALL BE EVEN WITH TOP OF PIPE
 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

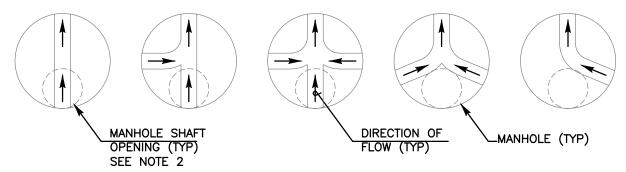
Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	ВК	B. KNOLL	04/15		Samon Jacka 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	SEWER MANHOLE BASE	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING CM 03
					NUMBER SM-03



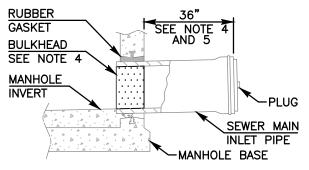


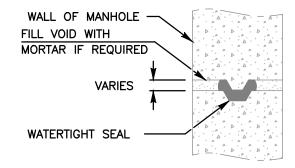
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 2) A RUBBER O-RING OR A FLEXIBLE CONNECTOR (AS SHOWN IN PRECAST MANHOLE BASE TYPE 'B') CAN BE USED WHEN BREAKING INTO EXISTING MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
 4) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

Revision	-		Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75		
Reviewed	BK	B. KNOLL	04/15		Samph - 26 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	MANHOLE PIPE CONNECTORS +	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22		DRAWING SM-04
					NUMBER SIVI-U4



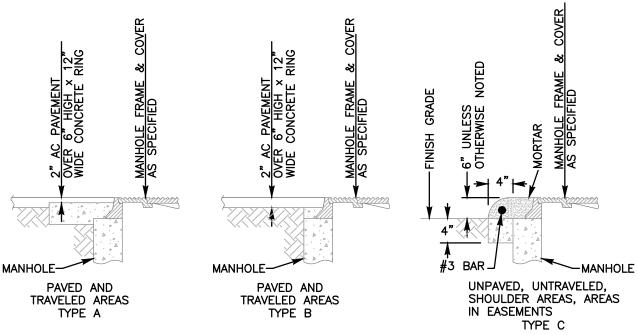
MANHOLE ACCESS LOCATION PLAN VIEW





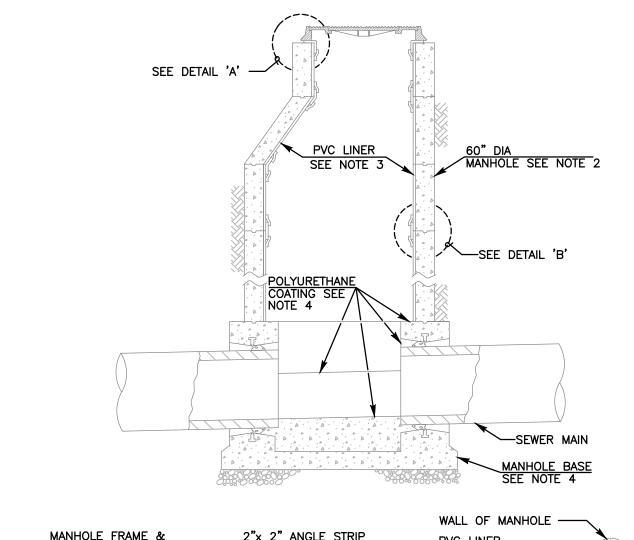
MANHOLE STUB OUT FOR FUTURE CONNECTION

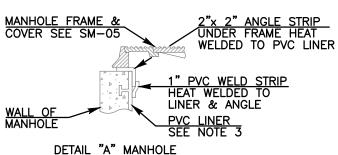
WATERTIGHT MANHOLE JOINT



- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
 2) VERTICAL WALL OF CONE TO BE ON THE UP STREAM SIDE OF MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
- 4) STUBS SHALL BE BULKHEADED AT THE MANHOLE END
- 5) SEWER MAIN TO BE LAID WITH BELLS UP-GRADE
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

				JE!/NEO	NUMBER SIVI-US
Reviewed	RP	S. Engeda	03/22	DETAILS	DRAWING SM-05
Reviewed	ВК	B. KNOLL	10/18	MANHOLE MISCELLANEOUS	Chairperson R.C.E. 52241 Date
Reviewed	BK	B. KNOLL	04/15		Samon Engels 03/24/2022
ORIGINAL		Kercheval	12/75	OAN DIEGO REGIONAL GTANDARD DRAWING	REGIONAL STANDARDS COMMITTEE
Revision	RÀ	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE





WALL OF MANHOLE

PVC LINER
SEE NOTE 3

4" PVC BAND HEAT
WELDED TO PVC LINER

1" PVC WELD STRIP
HEAT WELDED TO LINER
AND BAND (2-EACH)

DETAIL "B" MANHOLE JOINT SECTIONS

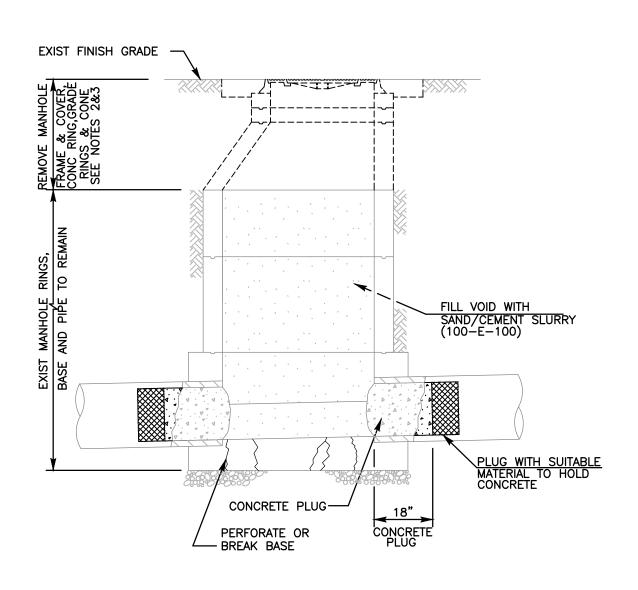
NOTES:

1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

FRAME & COVER

- 2) MANHOLES FOR SEWER MAINS 18" AND LARGER SHALL BE COATED AND LINED
- 3) MANHOLE SHAFT AND CONE SECTIONS, AND GRADE RINGS SHALL HAVE A PVC LINER PLACED WITH T-SHAPED SUPPORTS INTEGRALLY CAST INTO THE CONCRETE (OR AGENCY APPROVED EQUAL TO PVC LINER)
- 4) ELASTOMERIC POLYURETHANE COATING SHALL BE APPLIED TO THE INTERIOR OF MANHOLE BASES
- 5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

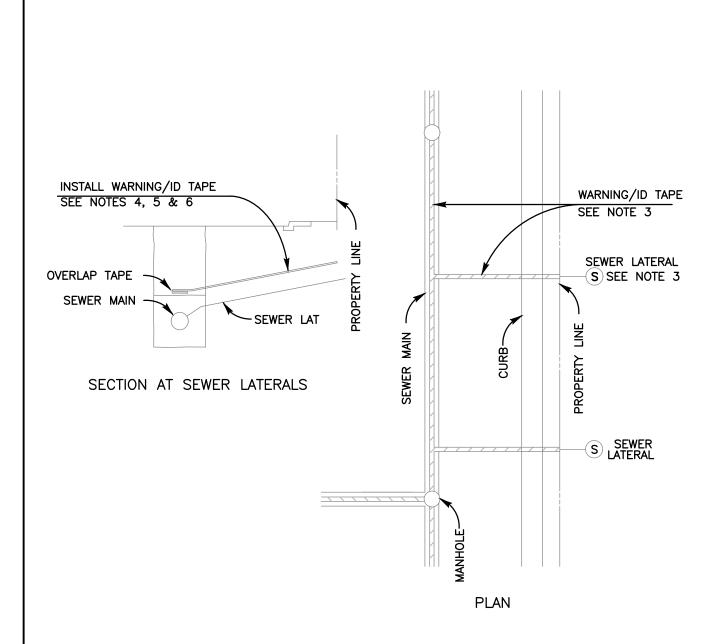
					NUMBER SIVI-U7
Reviewed	RP	S. Engeda	03/22	LINING SYSTEM	DRAWING SM-07
Reviewed	BK	B. KNOLL	10/18	MANHOLE COATING AND	Chairperson R.C.E. 52241 Date
Note 3	ВК	B. KNOLL	04/15		Samon - 20 to 03/24/2022
ORIGINAL		Kercheval	12/75	OAN DIEGO REGIONAL GTANDARD DRAWING	NEGOTAL STATEMENT COMMITTEE
Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE



1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) ALL SALVAGED MATERIAL BECOMES PROPERTY OF AGENCY OF JURISDICTION
3) BACKFILL PER AGENCY'S REQUIREMENT

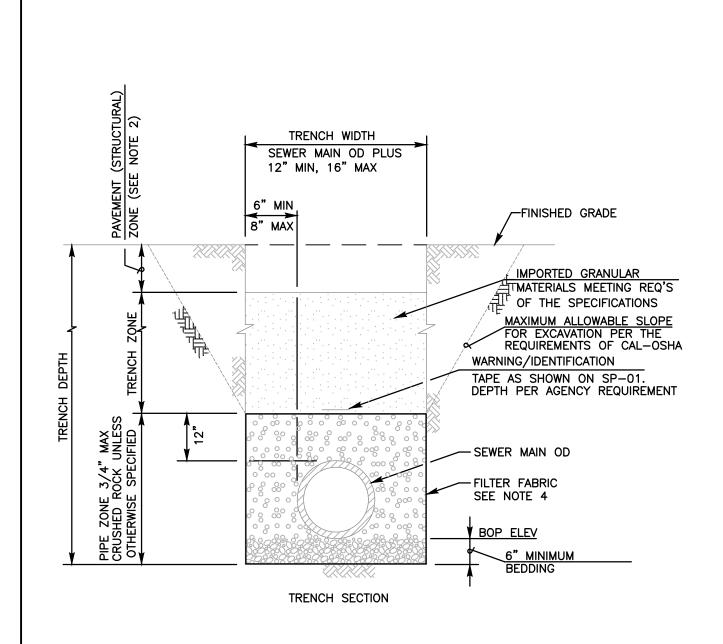
4) FOR CUTTING & PLUGGING ABANDONED SEWER MAINS SEE WP-03

Revision ORIGINAL		Approved Kercheval	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
Add Call—out		B. KNOLL	04/15	EVICTING MANUALE	Samsin Engels 03/24/2022 Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	ABANDONMENT	DRAWING NUMBER SM-08



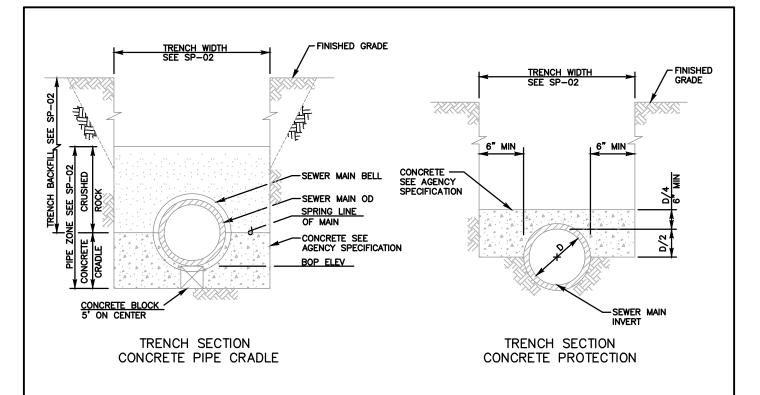
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) WARNING/IDENTIFICATION TAPE SHALL BE INSTALLED AS SPECIFIED BY AGENCY 3) STAMP OR CHISEL A 2" HIGH 'S' IN CURB FACE TO IDENTIFY SEWER LATERAL **LOCATION**
- 4) FOR SEWER LATERALS EXTEND TAPE TO PROPERTY LINE
- 5) DEPTH OF WARNING/IDENTIFICATION TAPE AS SPECIFIED BY AGENCY
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

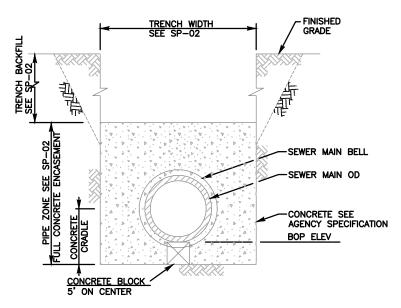
Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	0/ 1/ B/200 / (20/0/1/ 12 0 // 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/	
Reviewed	BK	B. KNOLL	04/15		Samon Soula 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	WARNING/IDENTIFICATION	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	TAPE INSTALLATION	DRAWING SP-01
				TALE INSTALLATION	NUMBER SP-UT



- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) PAVING OR PAVEMENT REPAIR TO BE DONE IN ACCORDANCE WITH AGENCY OF JURISDICTION
- 3) EXCAVATE BELL HOLES AT EACH JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT
- 4) FILTER FABRIC AS REQUIRED BY AGENCY OF JURISDICTION (WITH A MINIMUM 12" OVERLAP).

Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	OAN DIEGO REGIONAE GIANDARD DIAWING	Theoretical Strategic Schmill File
Reviewed	ВК	B. KNOLL	04/15	DIDE DEDDING AND TRENGU	Samon 2 and 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	PIPE BEDDING AND TRENCH	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	BACKFILL FOR SEWER FACILITIES	DRAWING SP-02
					NUMBER 3P-02



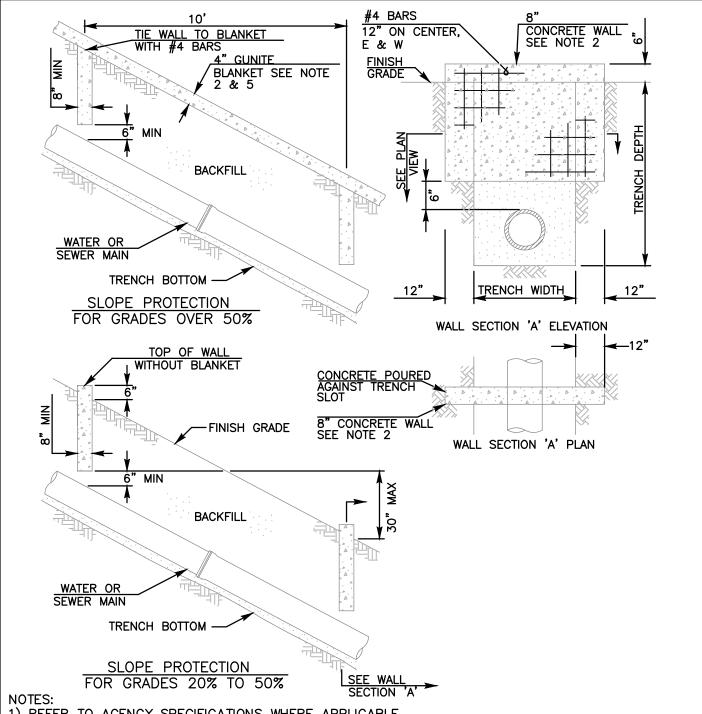


TRENCH SECTION CONCRETE PIPE ENCASEMENT

NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) CONCRETE CRADLE SHALL BE USED WHEN THE TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE EXCEEDS THE MAX WIDTH SPECIFIED ON SP-02 AND OR DIRECTED BY AGENCY'S ENGINEER
- 3) FOR PIPE BEDDING AND TRENCH BACKFILL SEE SP-02

Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		Kercheval	12/75	CAN DIEGO NEGIGIALO TANDAND DIAWING	
Reviewed	ВК	B. KNOLL	04/15		Samon 200 6 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	CONCRETE PROTECTION FOR	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	SEWER PIPE	DRAWING SP-03
				SEWER THE	NUMBER SP-U3

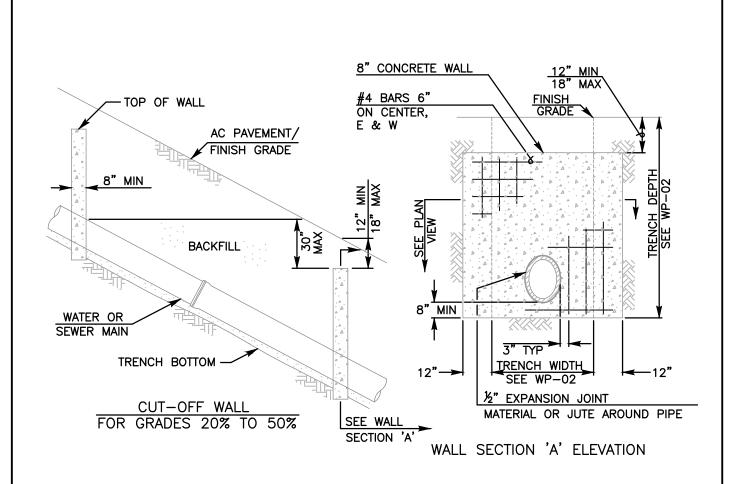


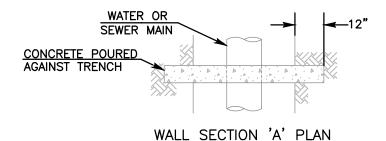
1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

- 2) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
- 3) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS
- 4) FOR GRADES OVER 50%, SLOPE PROTECTION SHALL ALSO INCLUDE AC PAVING, CONCRETE SLAB OR GUNITE BLANKET PLACED OVER THE PIPELINE ALIGNMENT

5) 4" GUNITE BLANKET WITH 6" SQUARE x 10 GAGE WIRE FABRIC AT THE **ENGINEERS DISCRETION**

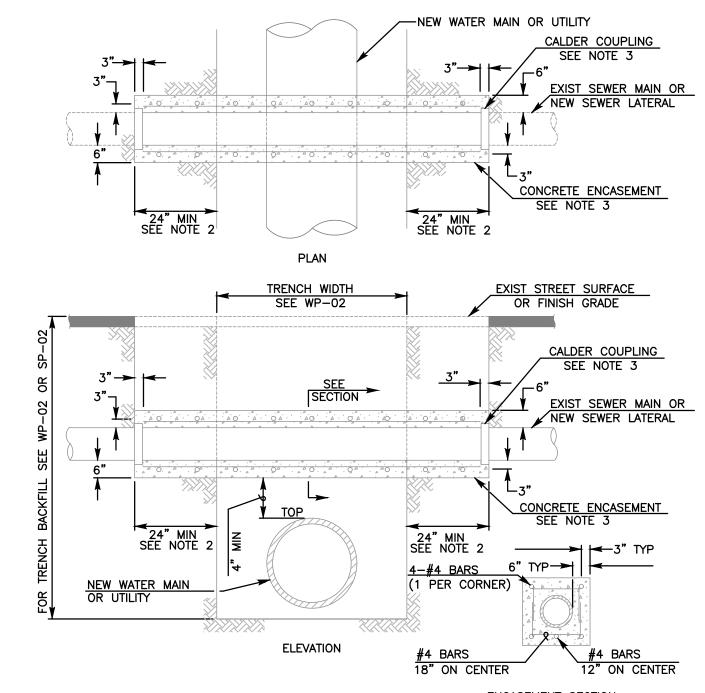
Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	03/05		
Reviewed	ВК	B. KNOLL	04/15		Sames Engels 03/24/2022
Reviewed	ВК	B. KNOLL	10/18	SLOPE PROTECTION INSTALLATIONS	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	SLOPE PROTECTION INSTALLATIONS	DRAWING SP-05
					NUMBER SP-U5





- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) FOR USE AS TRENCH BACKFILL STABILIZATION IN TRAVELED AREAS
 3) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION
 4) WALLS SHALL BE REINFORCED CONCRETE OR 8" x 8" x 16" CONCRETE BLOCK, BEINFORCED AND ALL CORES FILED.
- REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS (HOR. 2-#4@32", VERT. 1-#4@8")
- 5) FOR GRADES OVER 50% SEE WP-05/SP-05"

Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	03/05	OAN DIEGO NEGIONAL GTANDAND DIAWING	ACCIONAL STANDARDS SOMMITTEE
Note 4	вк	B. KNOLL	04/15		Samon Fra do 03/24/2022
Reviewed	вк	B. KNOLL	10/18	CUT-OFF WALL INSTALLATION IN	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	TRAVELED AREAS	DRAWING SP-07
				THAT LEED MILE MO	NUMBER SP-07



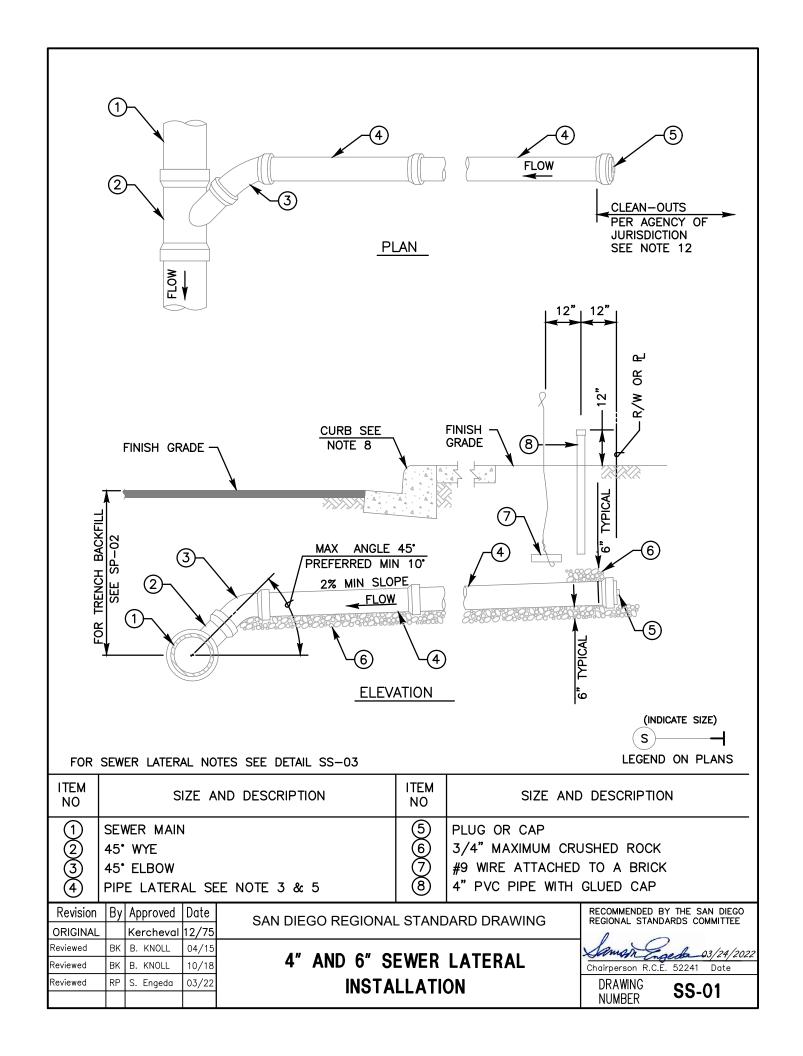
ENCASEMENT SECTION

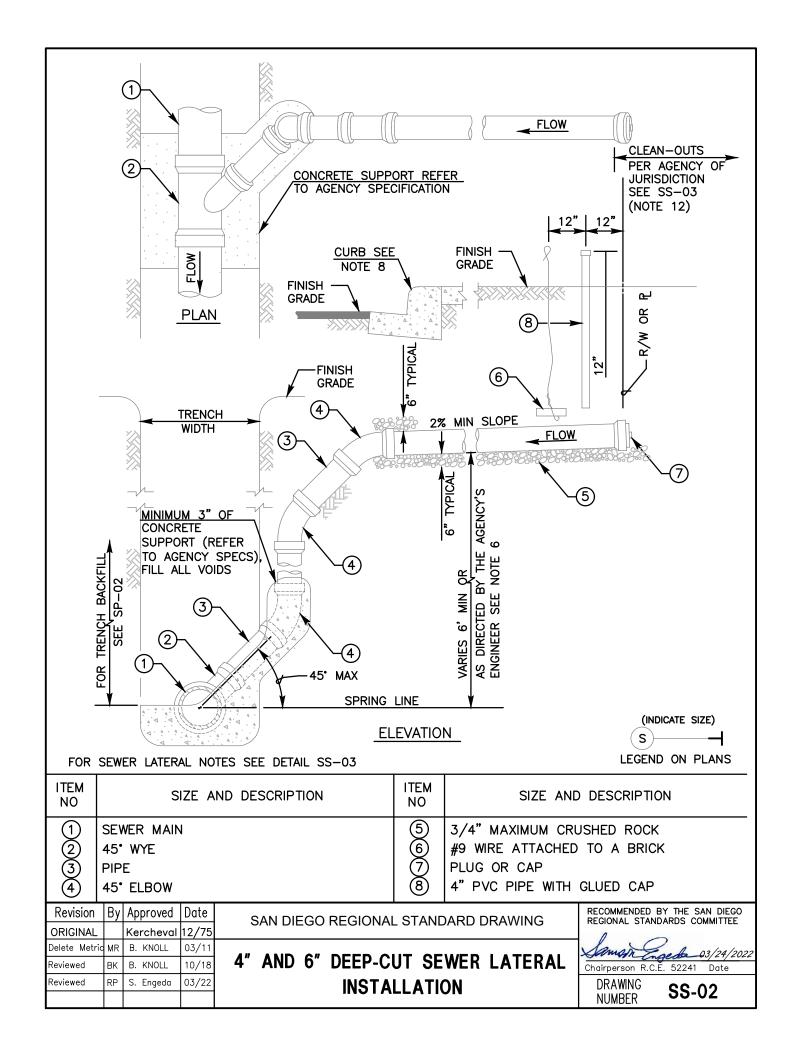
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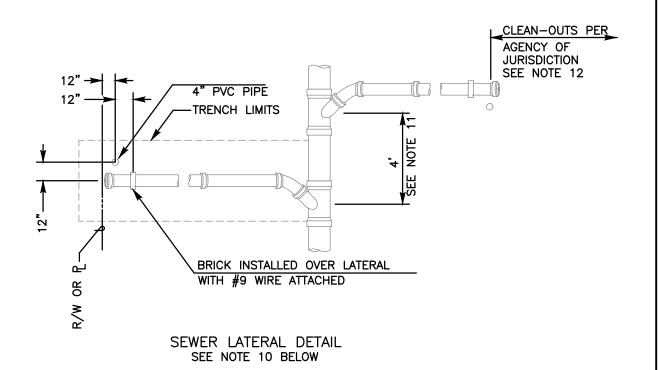
- 1) REFER TO AGENCY SPECIFICATIONS FOR PROTECTION OF EXISTING FACILITIES
- 2) ENCASEMENT SHALL EXTEND TO FIRST JOINT BEYOND BOTH SIDES OF TRENCH (24" MIN, 48" MAX OF SUITABLE NATIVE SUPPORT BEYOND EDGE OF TRENCH).
- 3) CONCRETE ENCASEMENT REQUIRED FOR SEWER MAINS ONLY. CALDER COUPLINGS REQUIRED FOR SEWER LATERALS ONLY. SEWER LATERALS TO BE REPLACED WITH SCH. 80 PVC WITH NO INTERMEDIATE JOINTS.

4) FOR PIPE BEDDING AND TRENCH BACKFILL SEE WP-02 OR SP-02.

Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
ORIGINAL		J. Tomasulo	03/05		REGIONAL STANDARDS COMMITTEE
Reviewed	BK	B. KNOLL	04/15		Samon 2 03/24/2022
Reviewed	BK	B. KNOLL	10/18	PIPE SUPPORT FOR UNDERCUT	Chairperson R.C.E. 52241 Date
Reviewed	RP	S. Engeda	03/22	SEWER MAINS OR SEWER LATERALS	DRAWING SP-09
				DEWER MAINS ON SEWER EATERALS	NUMBER SP-U9



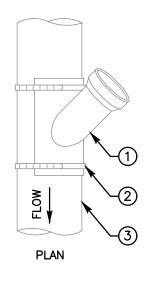


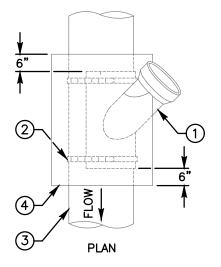


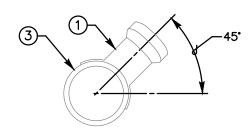
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) IN NO CASE SHALL LATERAL CONNECT DIRECTLY ON TOP OF SEWER MAIN 3) LATERAL SHALL BE INSTALLED TO PROPERTY LINE UNLESS SPECIFIED ON PLANS
- 4) MINIMUM 4' COVER ABOVE LATERAL AT PROPERTY LINE
- 5) LATERAL TO HAVE A MINIMUM SLOPE OF 2%
- 6) VERTICAL PIPE SHALL BE BRACED WHILE BACKFILLING TRENCH
- 7) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON SP-01 8) STAMP OR CHISEL A 2" HIGH "S" IN CURB FACE OVER LATERAL TO IDENTIFY SEWER LATERAL LOCATION
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST
- 10)FOR SEWER LATERAL INSTALLATIONS SEE SS-01 AND SS-02
- 11)FOR SEWERS SPECIFIED AS PVC PIPE, A MINIMUM 3' SECTION OF PIPE IS REQUIRED BETWEEN FITTINGS
- 12)SEWER CLEAN-OUT SEE SC-01 TYPE B AS REQUIRED BY AGENCY OF **JURISDICTION**

(INDICATE SIZE) LEGEND ON PLANS

Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE		
ORIGINAL		Kercheval	12/75	SAN BIEGO REGIONAL OTANOMINO BIONANINO			
Delete Metric	MR	B. KNOLL	03/11	SEWER LATERAL NOTES AND DETAIL	Samon Jacoba 03/24/2022		
Reviewed	BK	B. KNOLL	10/18		Chairperson R.C.E. 52241 Date		
Reviewed	RP	S. Engeda	03/22	SEWER EATERAL NOTES AND DETAIL	DRAWING SS-03		
					NUMBER 55-03		

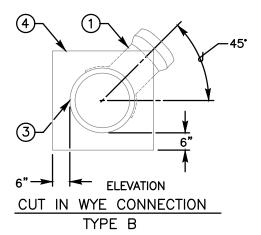






CUT IN WYE CONNECTION
TYPE A

ELEVATION



NOTES:

- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) CONNECTIONS TO EXISTING SEWER MAINS TO BE MADE BY AGENCY PERSONNEL IN ACCORDANCE WITH SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS
- 3) IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN
- 4) NO MORE THAN ONE CUT IN WYE WILL BE ALLOWED FOR EACH LENGTH OF EXISTING VCP SEWER MAIN
- 5) FOR SEWER LATERAL INSTALLATION SEE SS-01 AND SS-02
- 6) FOR TRENCH BACKFILL SEE SP-02
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

ITEM NO	SIZE AND DESCRIPTION	ITEM NO	SIZE AND DESCRIPTION
1 2	45° SADDLE WYE WITH GASKET STAINLESS STEEL HOSE CLAMPS (2-EACH)	3 4	EXISTING SEWER MAIN CONCRETE ENCASEMENT

					NUMBER 33-04
Reviewed	RP	S. Engeda	03/22	CONNECTIONS	DRAWING SS-04
Reviewed	BK	B. KNOLL	10/18	4 AND O SEWER CUI-IN WIE	Chairperson R.C.E. 52241 Date
Reviewed	ВК	B. KNOLL	04/15	4" AND 6" SEWER CUT-IN WYE	Samon Engela 03/24/2022
ORIGINAL		Kercheval	12/75		
Revision	Ву	Approved	Date	SAN DIEGO REGIONAL STANDARD DRAWING	RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE
	317	4INLE22	SIEEL	HUSE CLAMPS (2-EACH) (4) CONCRETE ENCASE	MENI