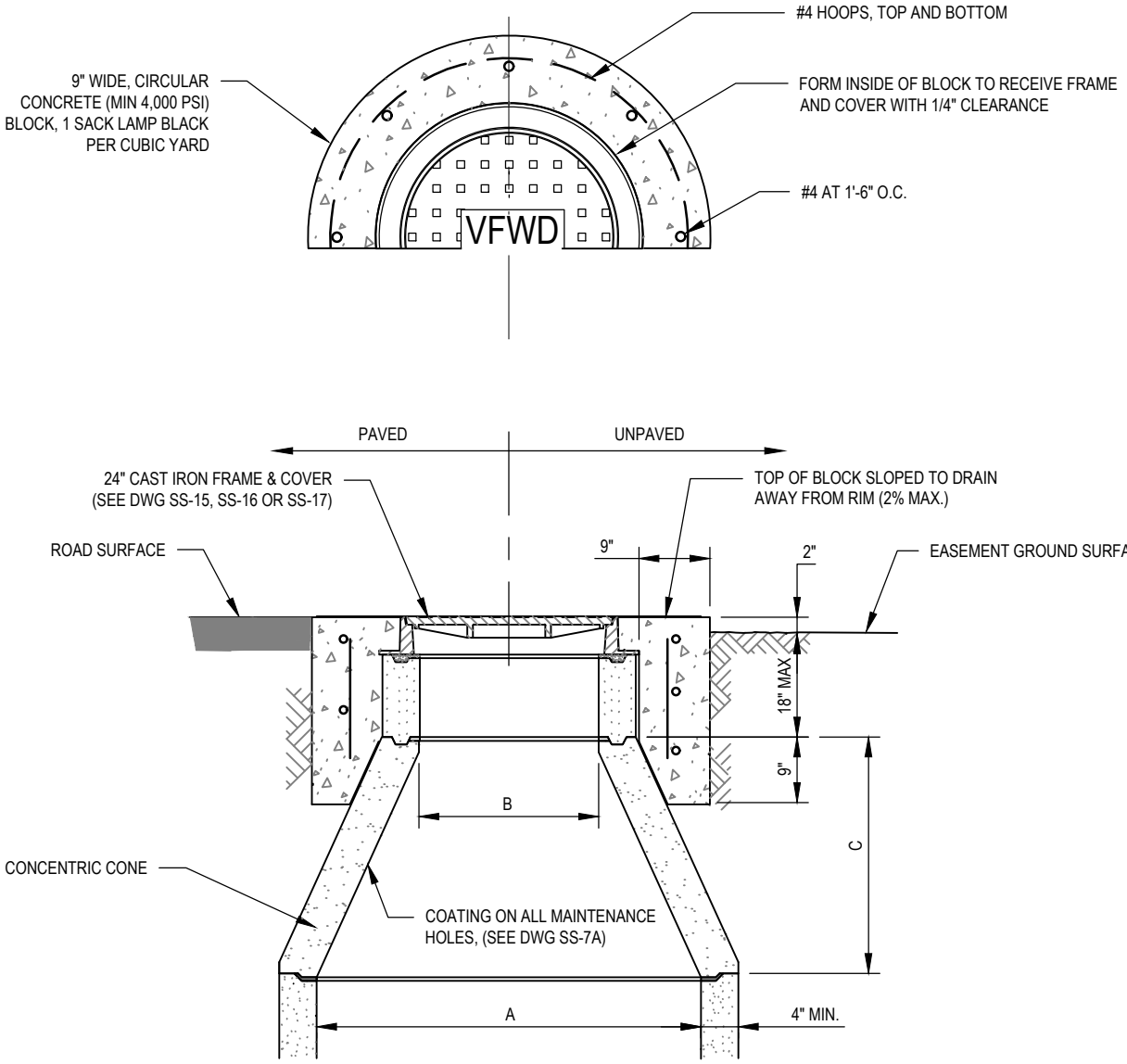


NOTE:
BARREL JOINTS SHALL BE JOINED USING RAM-NECK, OR APPROVED EQUAL.
USE WRAPIDSEAL, OR APPROVED EQUAL, AT ALL JOINTS/GRADE RINGS PRIOR TO BACKFILL.

PIPE DIAMETER	A	B	C	FRAME AND COVER DETAIL
<24"	4 FEET	24 INCHES	3 FEET	SS-15 SS-16
ALL OTHERS	5 FEET	36 INCHES TWO PIECE FRAME & COVER	4 FEET	SS-17

VALLEJO FLOOD & WASTEWATER DISTRICT

UPPER MAINTENANCE HOLE SECTION FOR ALL PIPE DIAMETERS

STANDARD DETAIL

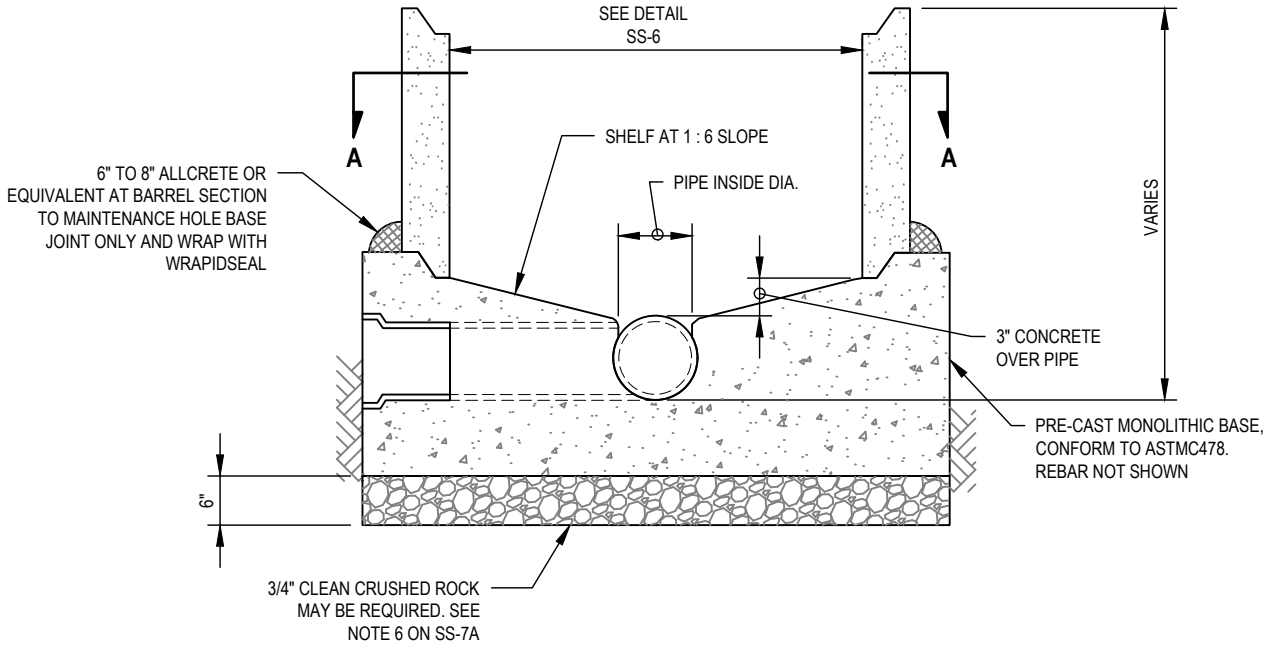
SS-6

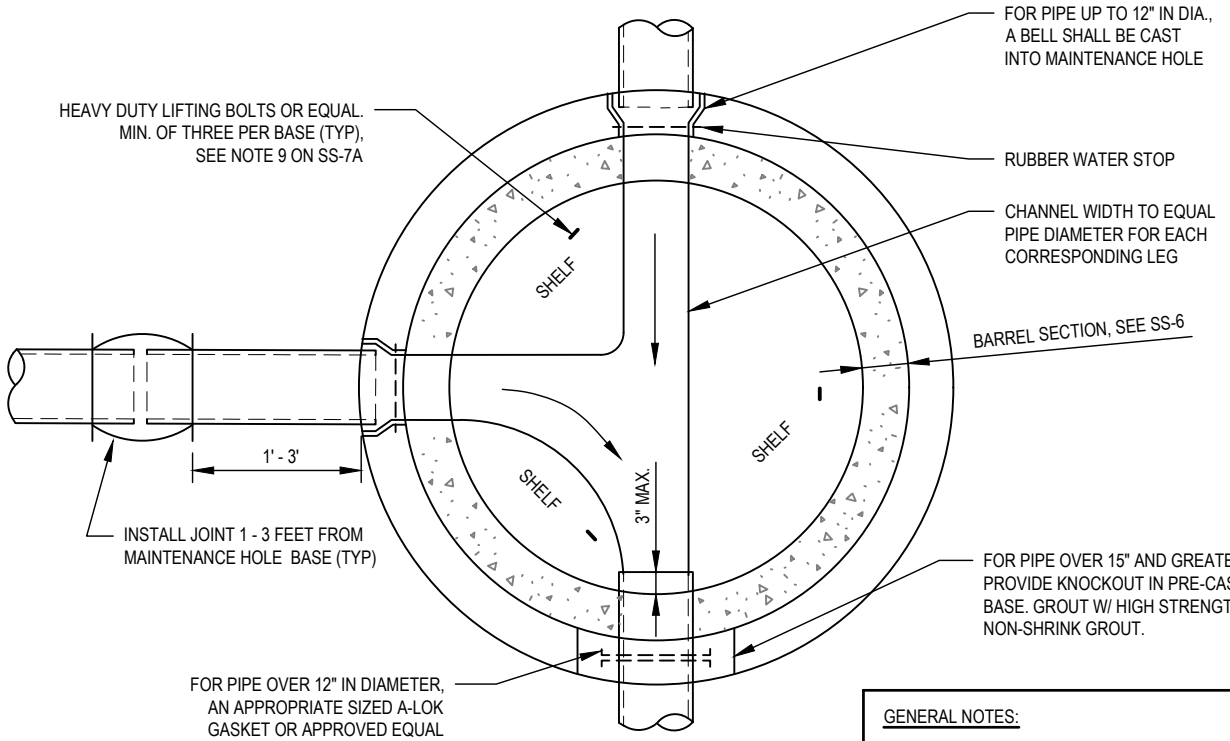
SCALE: NONE

APPROVED:

MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020





BASE SECTION A - A

GENERAL NOTES:

1. OTHER PRODUCTS THAN SPECIFIED WILL BE CONSIDERED ON A CASE BY CASE BASIS.
2. THIS PRECAST MH BASE DETAIL SHALL BE USED FOR NEW CONSTRUCTION.

VALLEJO FLOOD & WASTEWATER DISTRICT

PRECAST MAINTENANCE HOLE BASE FOR PIPE <= 48"

STANDARD DETAIL

SS-7

SCALE: NONE

APPROVED: MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020

GENERAL NOTES

1. MAINTENANCE HOLE BASE SHALL BE PRE-CAST MONOLITHIC USING A CLASS "A" PORTLAND CEMENT CONCRETE.

2. THE CENTER LINE OF THE MAINTENANCE HOLE FRAME SHALL COINCIDE WITH THE CENTER LINE OF THE SEWER MAIN.

3. ALL CONCRETE JOINTS SHALL BE CLEANED, AND THEN JOINED TOGETHER USING "RAM-NEK" AND "RAM-NEK_PRIMER, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. AFTER JOINT IS MADE, TRIM JOINT SMOOTH ON INSIDE OF MAINTENANCE HOLE.

4. ALL PRECAST REINFORCED CONCRETE MAINTENANCE HOLE RISERS AND TOPS SHALL CONFORM TO ASTM C478 OR APPROVED EQUAL.

5. WHEN MAINTENANCE HOLES ARE COMPLETE, THEY SHALL BE THOROUGHLY CLEANED INSIDE, AND THEN GIVEN ONE COAT OF "XYPEX" OR "1000 CONSEAL" WATERPROOF MATERIAL, OR APPROVED EQUAL.

6. IF POOR, OR UNSTABLE SUBGRADE, OR WET TRENCH IS ENCOUNTERED AFTER EXCAVATING FOR THE MAINTENANCE HOLE, A LAYER OF ¾" CRUSHED ROCK MAY BE REQUIRED. THICKNESS SHALL BE DETERMINED BY THE ENGINEER.

7. MAINTENANCE HOLE ACCESS AND SECTION JOINTS SHALL BE SEALED WITH "WRAPID SEAL" SHEET ROLL ENCAPSULATION.

8. STANDARD MAINTENANCE HOLE BARREL SECTIONS PER ASTM C478 15.1 (1).

9. SEAL PICK HOLES INSIDE MAINTENANCE HOLE AND AT GRADE RING JOINTS USING NON-SHRINK GROUT.

10. MAINTENANCE HOLE SHALL NOT BE LOCATED IN WATERWAYS, INCLUDING GUTTERS.

VALLEJO FLOOD & WASTEWATER DISTRICT

NOTES FOR SS-7

STANDARD DETAIL

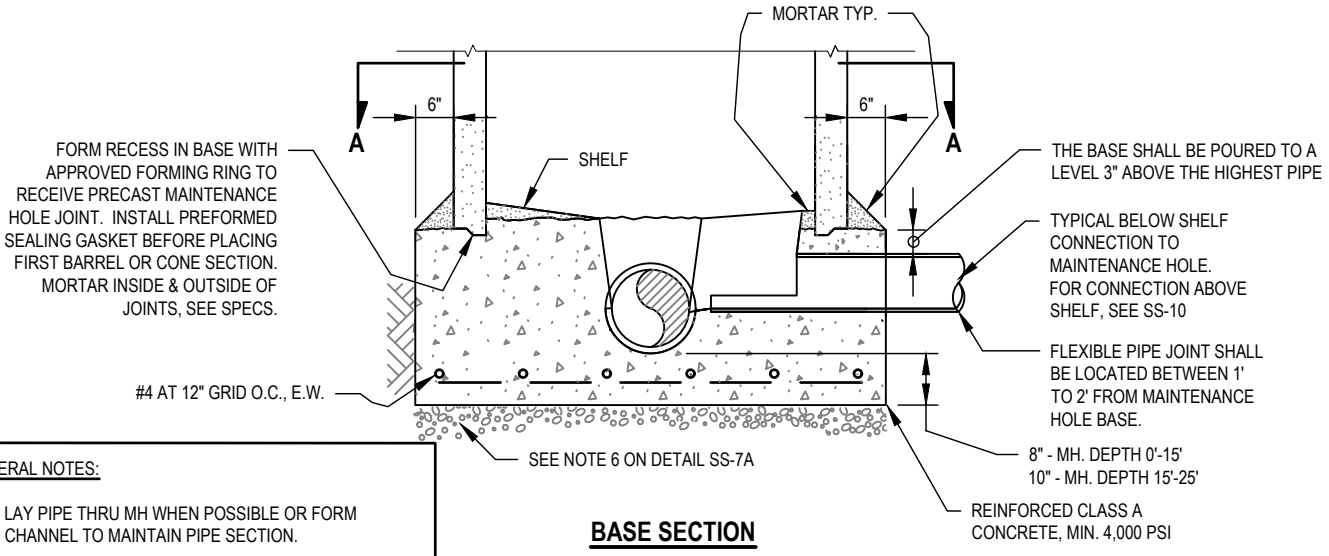
SS-7A

SCALE: NONE

APPROVED: MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020

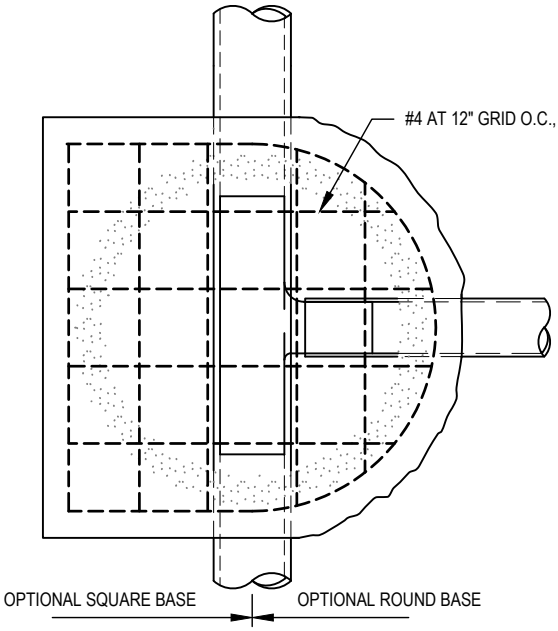
THIS DETAIL TO BE USED ONLY WHEN APPROVED BY DISTRICT



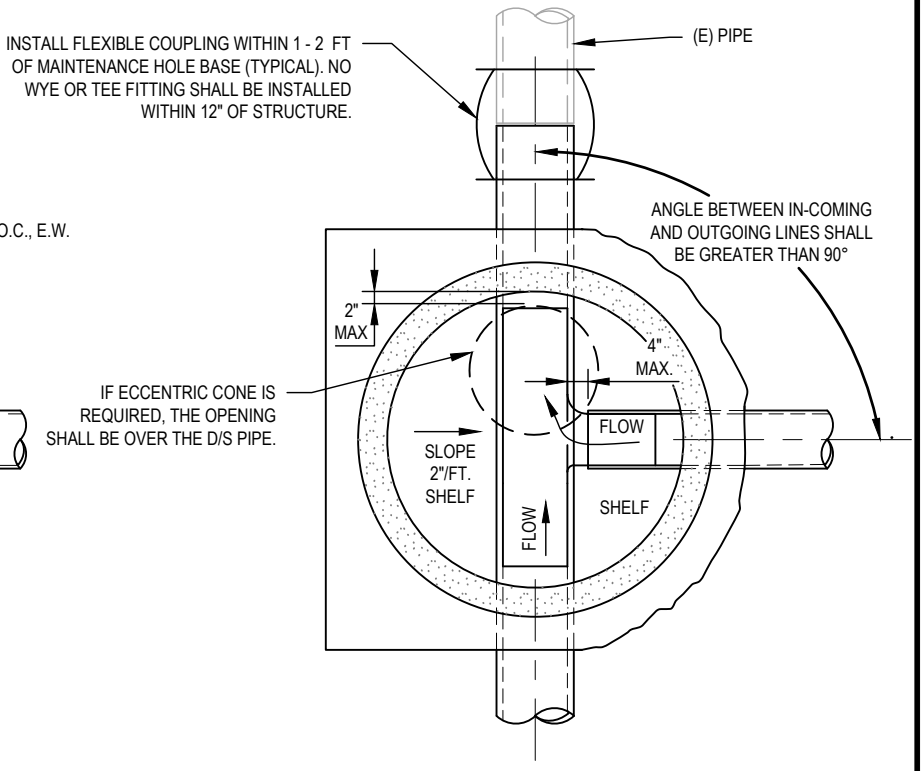
BASE SECTION

GENERAL NOTES:

1. LAY PIPE THRU MH WHEN POSSIBLE OR FORM CHANNEL TO MAINTAIN PIPE SECTION.
2. SEWER PIPES ENTERING OR LEAVING THE MH BASE SHALL HAVE A STANDARD JOINT LOCATED WITHIN 24" OF THE BASE.
3. ALL STEEL REINFORCING IN BASE SHALL BE 3" CLEAR.



BASE SECTION A - A
REINFORCING DETAIL



BASE SECTION A - A

VALLEJO FLOOD & WASTEWATER DISTRICT

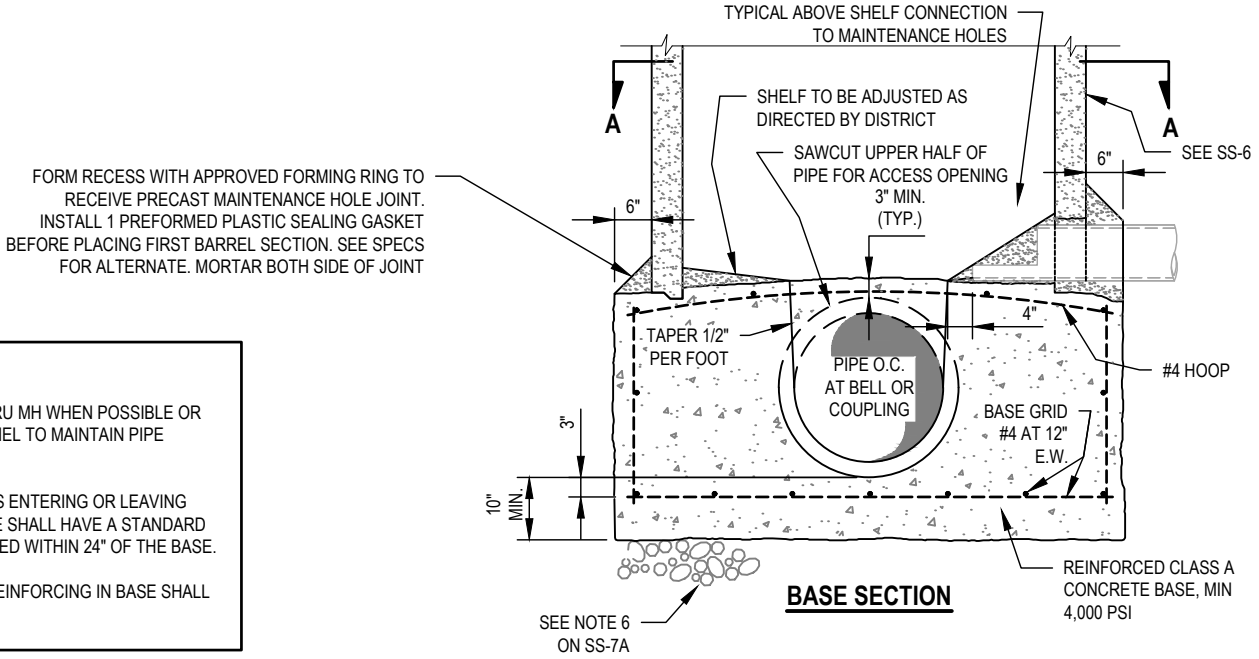
CAST-IN-PLACE MAINTENANCE HOLE BASE FOR PIPES 24" AND SMALLER

STANDARD DETAIL

SS-9

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020

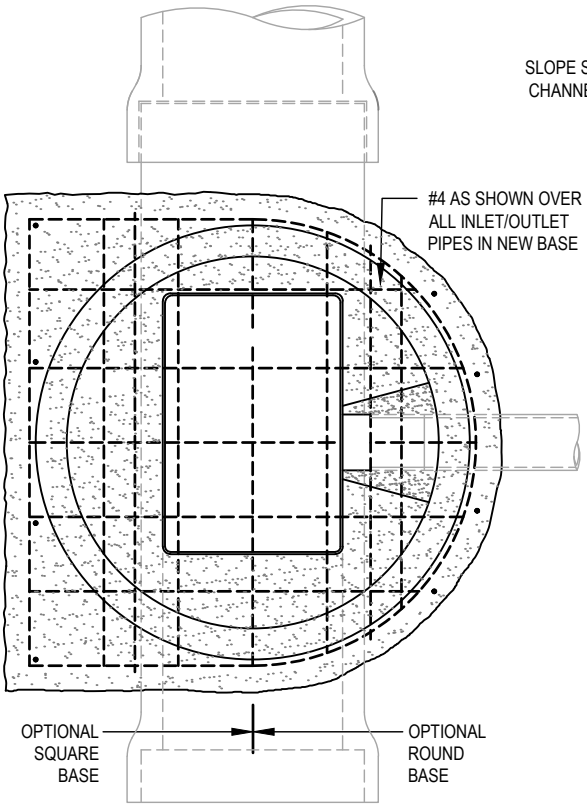
THIS DETAIL TO BE USED ONLY WHEN APPROVED BY DISTRICT



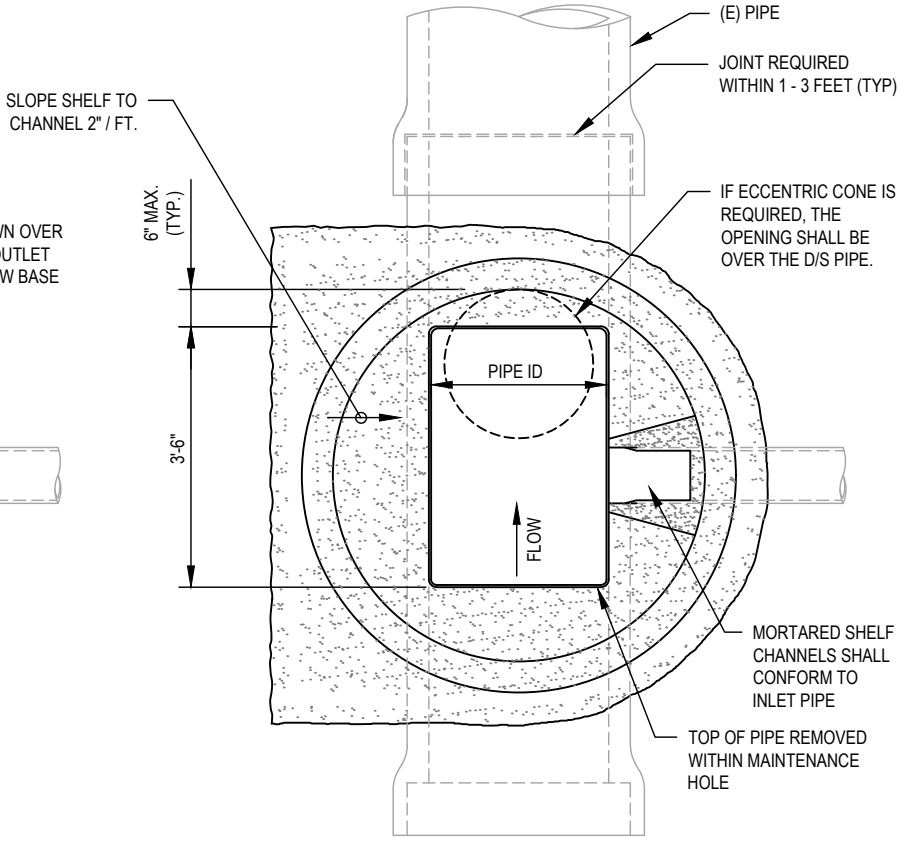
BASE SECTION

GENERAL NOTES:

1. LAY PIPE THRU MH WHEN POSSIBLE OR FORM CHANNEL TO MAINTAIN PIPE SECTION.
2. SEWER PIPES ENTERING OR LEAVING THE MH BASE SHALL HAVE A STANDARD JOINT LOCATED WITHIN 24" OF THE BASE.
3. ALL STEEL REINFORCING IN BASE SHALL BE 3" CLEAR.



BASE SECTION A - A
REINFORCING DETAIL



BASE SECTION A - A

VALLEJO FLOOD & WASTEWATER DISTRICT

CAST-IN-PLACE MAINTENANCE HOLE BASE FOR PIPES 24" - 48"

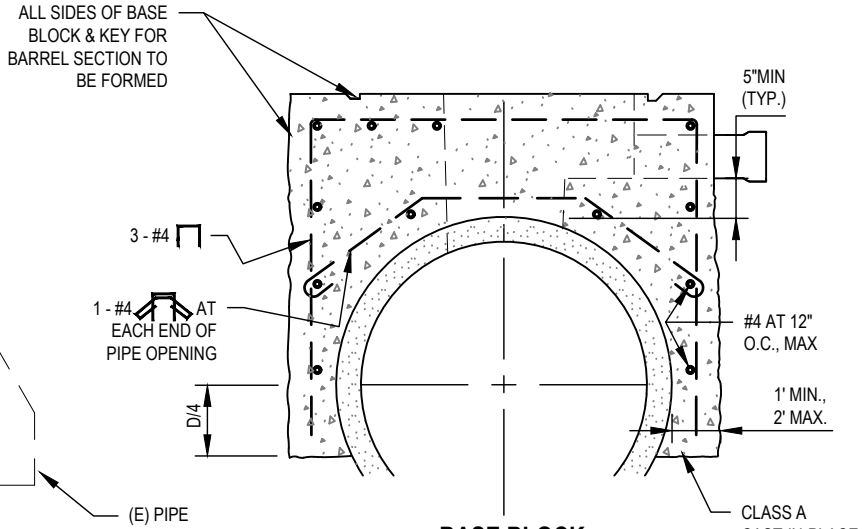
STANDARD DETAIL

SS-10

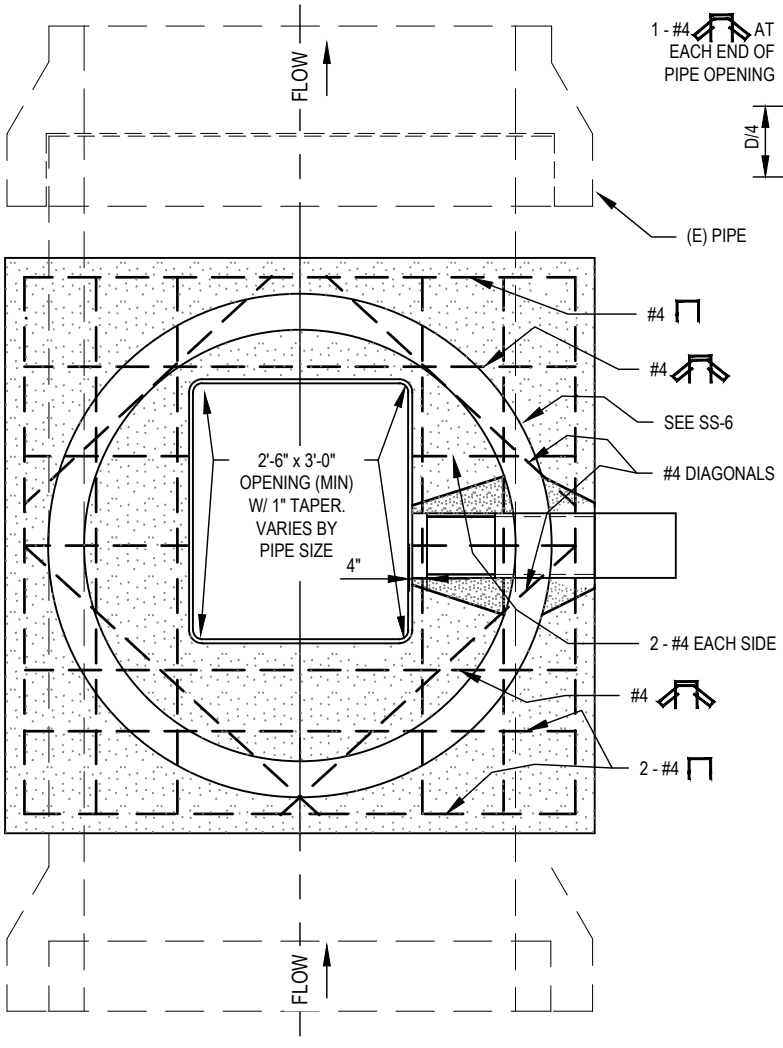
SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020

GENERAL NOTES:

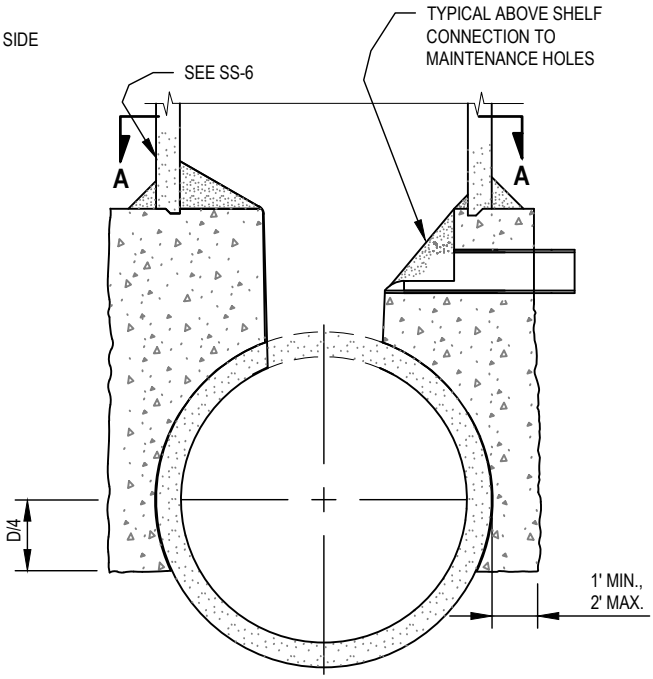
1. ALL STEEL REINFORCING SHALL BE #4 WITH 3" CLEAR MINIMUM CONCRETE COVER.
2. PROVIDE REBAR SHOP DRAWINGS AS A SUBMITTAL DURING CONSTRUCTION.



BASE BLOCK REINFORCING DETAIL



BASE SECTION A - A



BASE SECTION

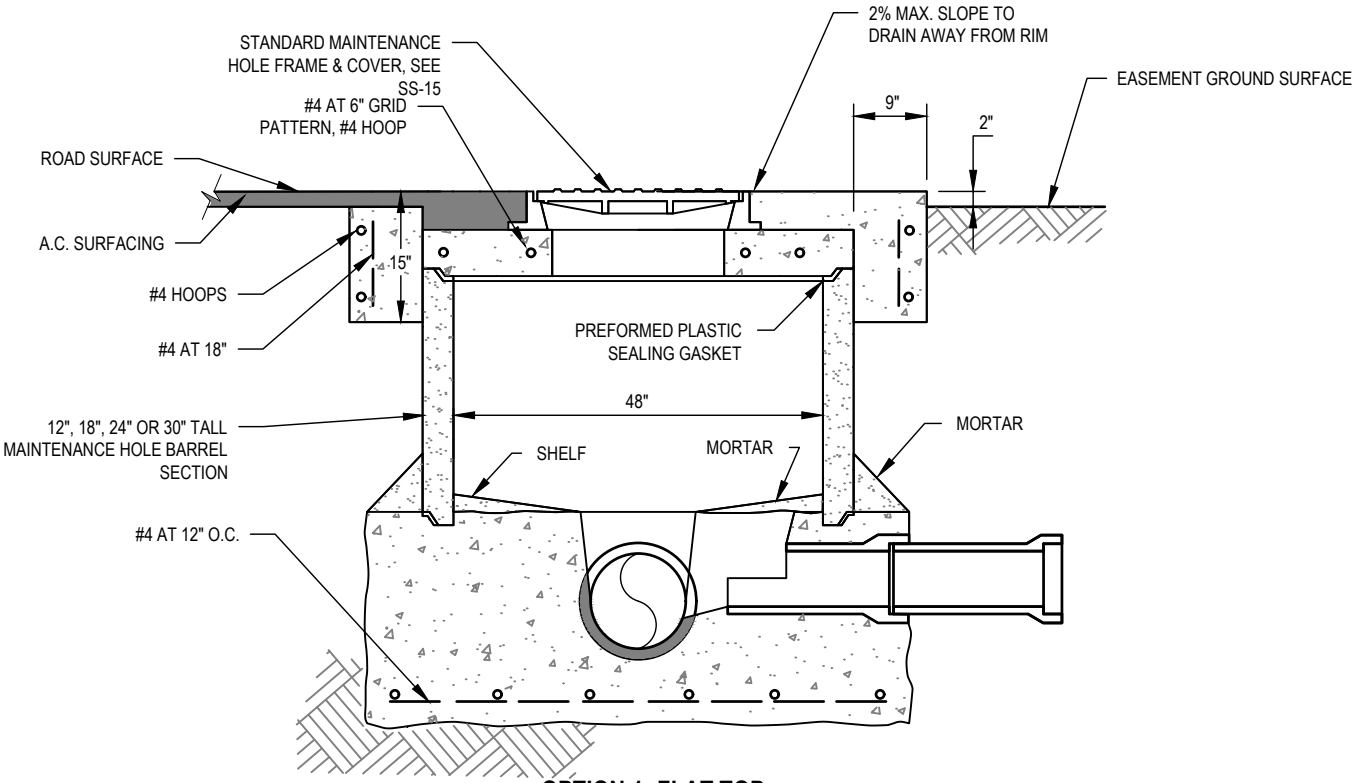
VALLEJO FLOOD & WASTEWATER DISTRICT

CAST-IN-PLACE MAINTENANCE HOLE BASE FOR PIPES LARGER THAN 48"

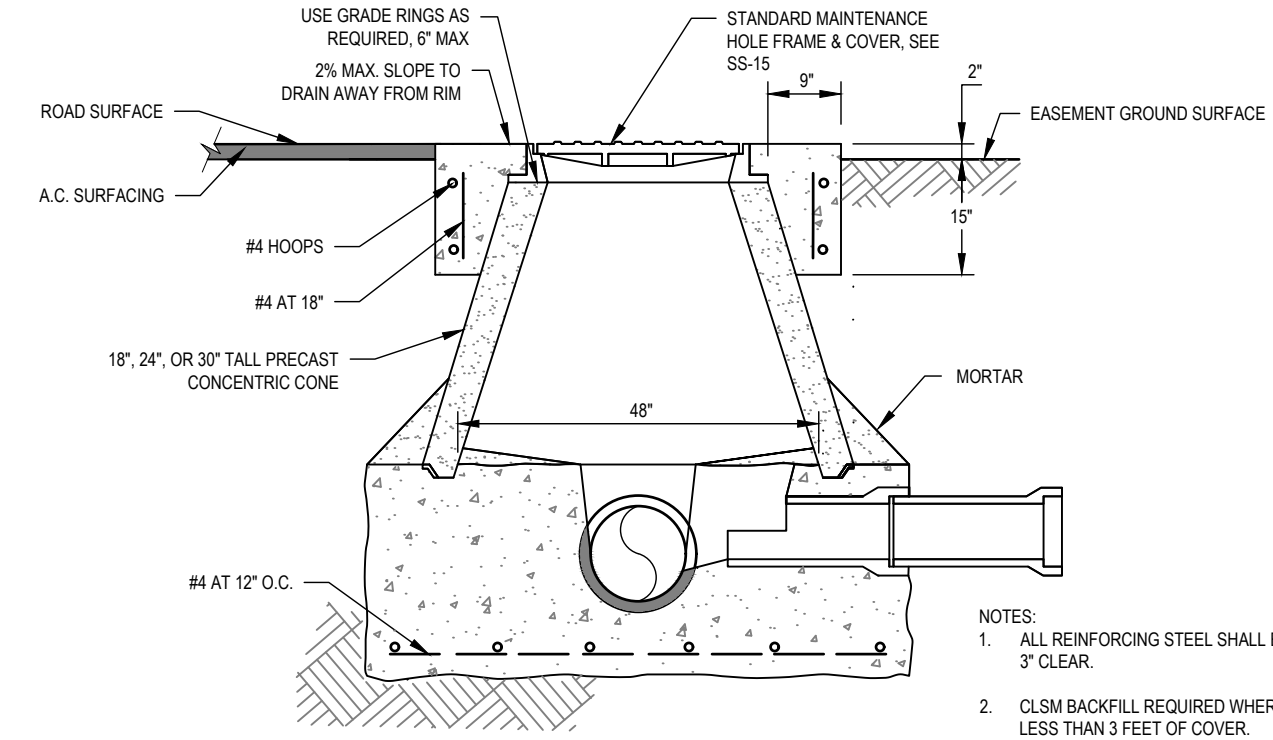
STANDARD DETAIL

SS-11

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020



OPTION 1: FLAT TOP



OPTION 2: SHALLOW CONE

NOTES:

1. ALL REINFORCING STEEL SHALL BE 3" CLEAR.
2. CLSM BACKFILL REQUIRED WHERE LESS THAN 3 FEET OF COVER.
3. EITHER SHALLOW MAINTENANCE HOLE OPTION IS ACCEPTABLE.

VALLEJO FLOOD & WASTEWATER DISTRICT

SHALLOW MAINTENANCE HOLE

STANDARD DETAIL

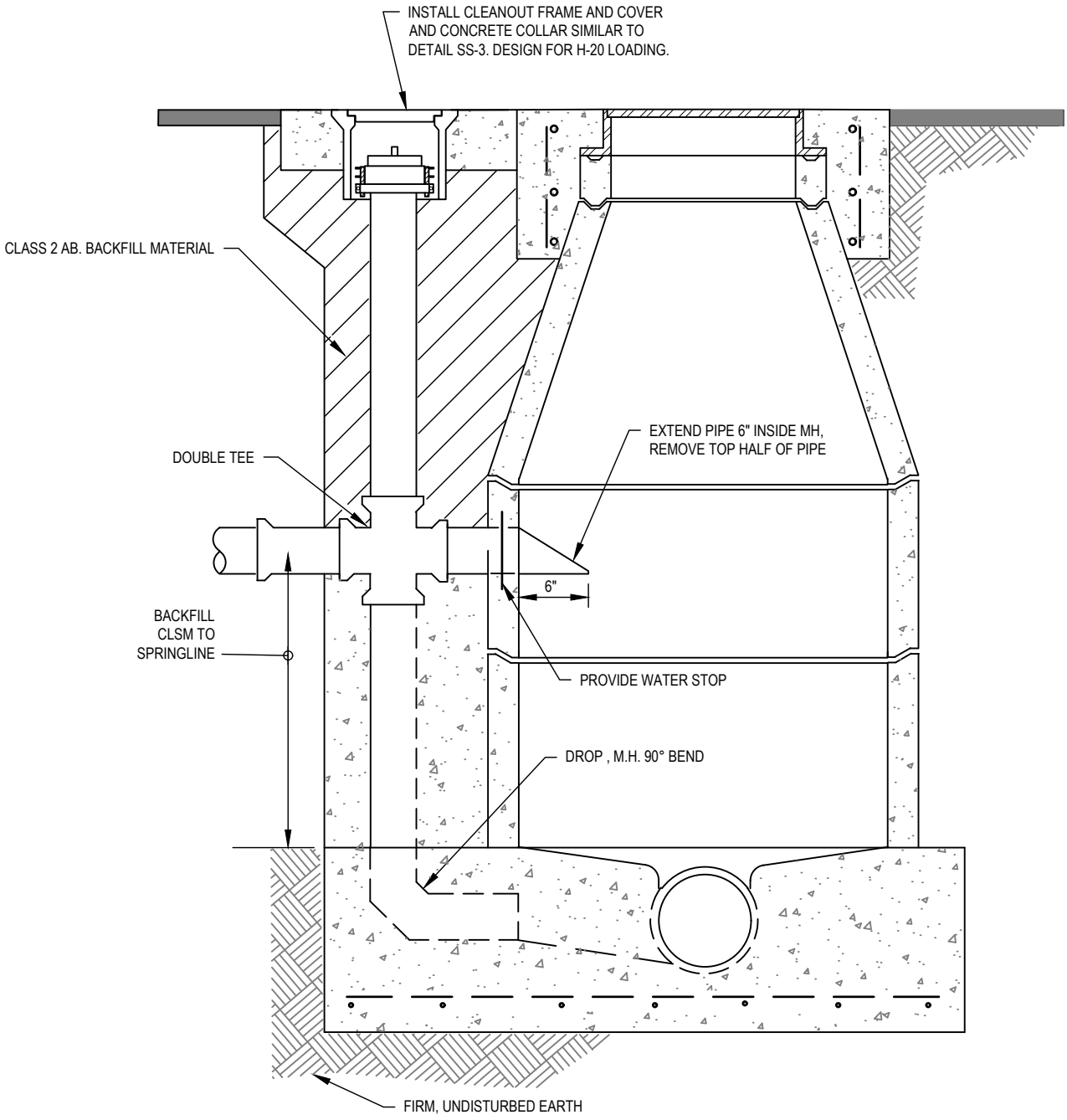
SS-12

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020

THIS DETAIL TO BE USED ONLY WHEN APPROVED BY DISTRICT

GENERAL NOTES:

1. DROP TYPE CONNECTION SHALL BE USED IF THE DIFFERENCE IN ELEV. BETWEEN THE MAIN AND INTERSECTING PIPES IS GREATER THAN 2.5 FEET.
2. THE DROP TYPE MAINTENANCE HOLE IS THE SAME AS THE STANDARD MAINTENANCE HOLE EXCEPT FOR DROP TYPE CONNECTION.
3. DROP TYPE MAINTENANCE HOLE SHALL ONLY BE USED WITH APPROVAL OF DISTRICT.



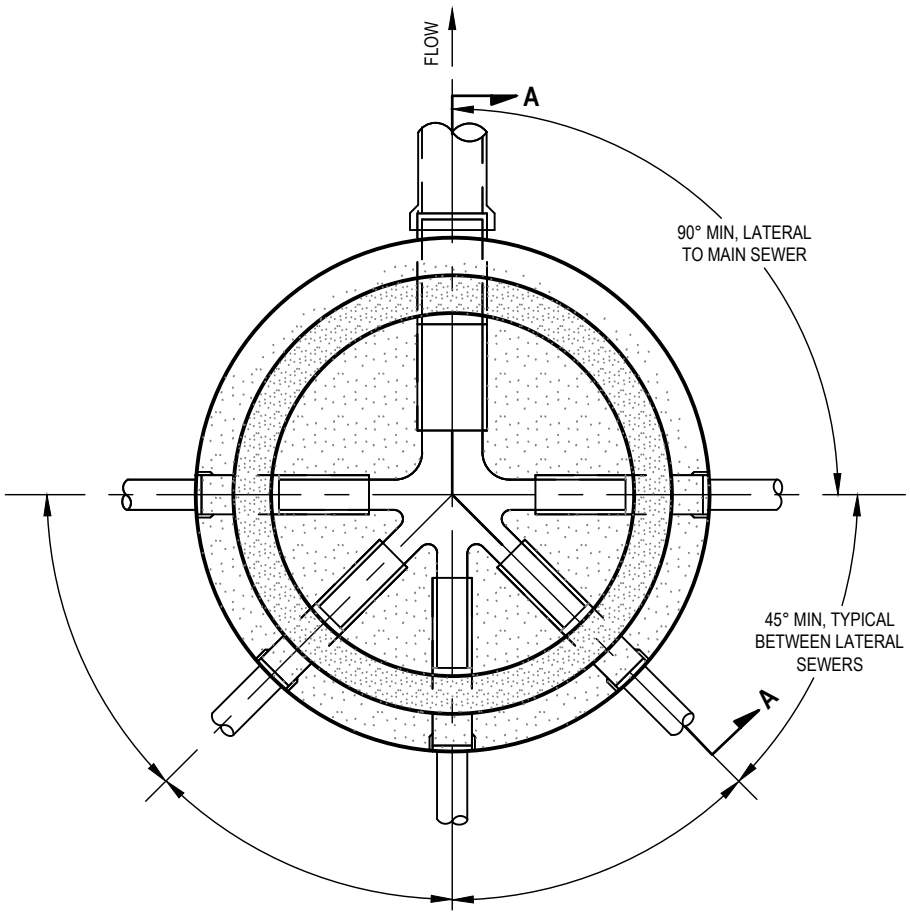
VALLEJO FLOOD & WASTEWATER DISTRICT

DROP TYPE MAINTENANCE HOLE

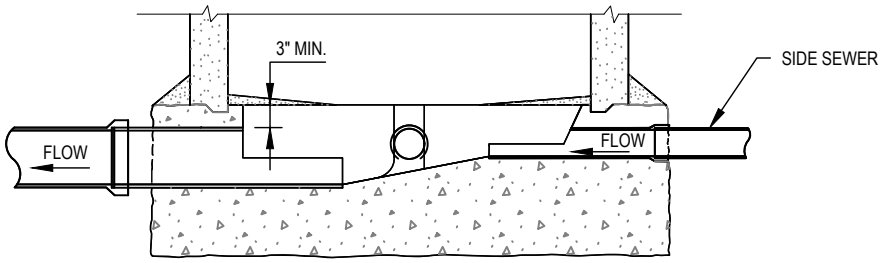
STANDARD DETAIL

SS-13

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020



PLAN



SECTION A - A

NOTES:

1. NO LATERAL CONNECTIONS SHALL BE MADE IN DOWNSTREAM HALF OF MAINTENANCE HOLE.
2. MAXIMUM NUMBER OF LATERALS ALLOWED = 5.
3. TOP OF SIDE SEWERS SHALL MATCH TOP OF OUTLET PIPE UNLESS OTHERWISE INDICATED.
4. ALL LATERAL PENETRATIONS SHALL BE CORE-DRILLED, W/ HYDOPHILIC GASKET AND NON-SHRINK GROUT.

VALLEJO FLOOD & WASTEWATER DISTRICT

SPECIAL MAINTENANCE HOLE BASE FOR LINES TERMINATING IN A CUL-DE-SAC

STANDARD DETAIL

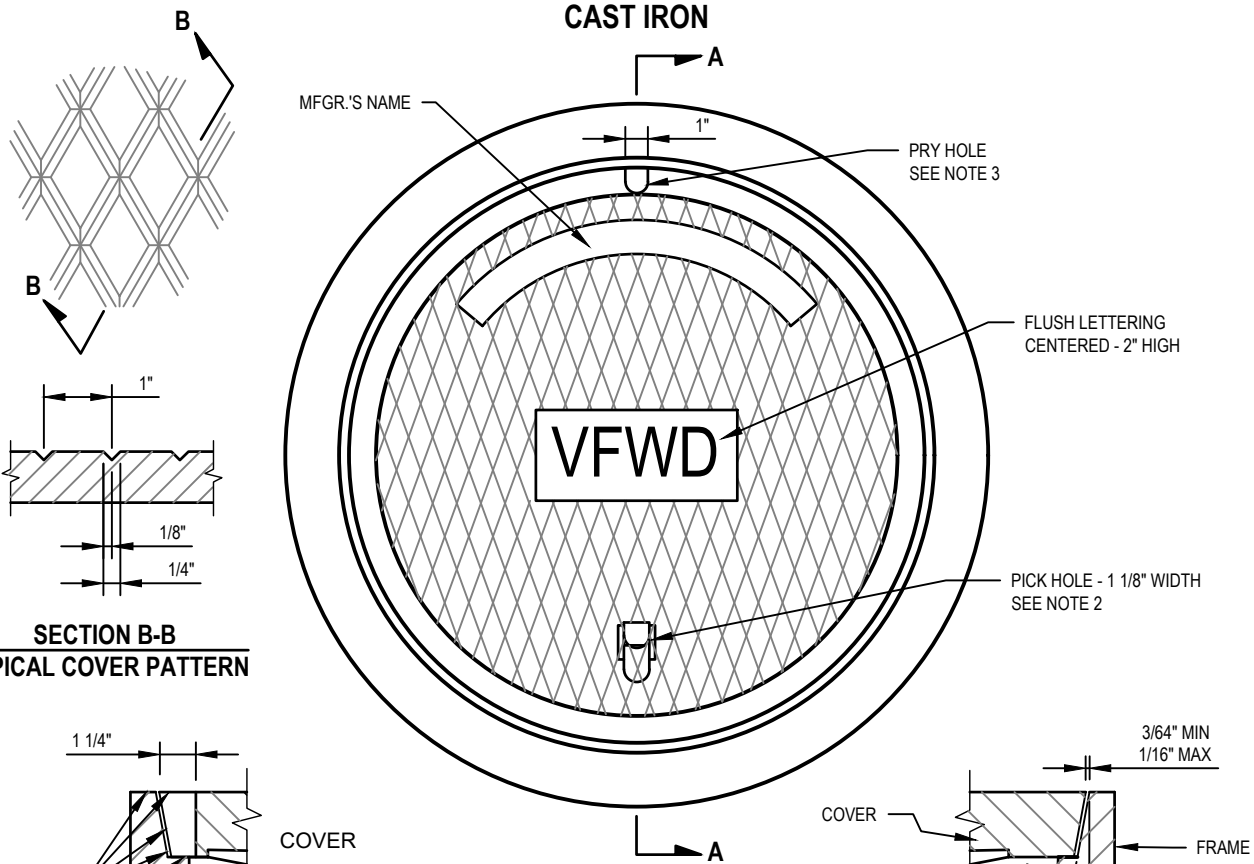
SS-14

SCALE: NONE

APPROVED: MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020

CAST IRON

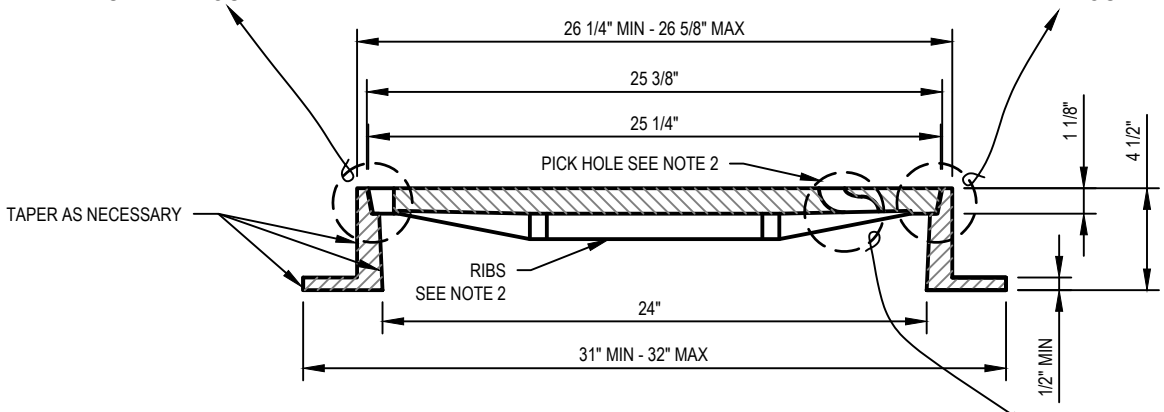


SECTION B-B
TYPICAL COVER PATTERN

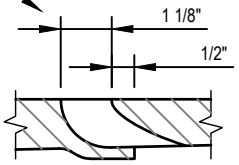
PLAN

DETAIL
PRY HOLE AND COVER BEVEL

DETAIL
FRAME AND COVER BEVEL



SECTION A - A



DETAIL
PICK HOLE

NOTES:

1. COVER MAY BE FURNISHED WITH OR WITHOUT RIBS BUT SHALL MEET H-20 HIGHWAY LOADING.
2. PICK HOLE SHALL BE OPEN AND FIT A STANDARD PICK.
3. PRY HOLE SHALL BE LOCATED AT TOP DEAD CENTER OF THE MAINTENANCE HOLE COVER AS SHOWN.
4. ROTATING HINGE FRAMES AND COVERS SHALL BE USED ON ABOVE GROUND MH OPENINGS OR AS APPROVED BY DISTRICT.

VALLEJO FLOOD & WASTEWATER DISTRICT

24" MAINTENANCE HOLE FRAME AND COVER

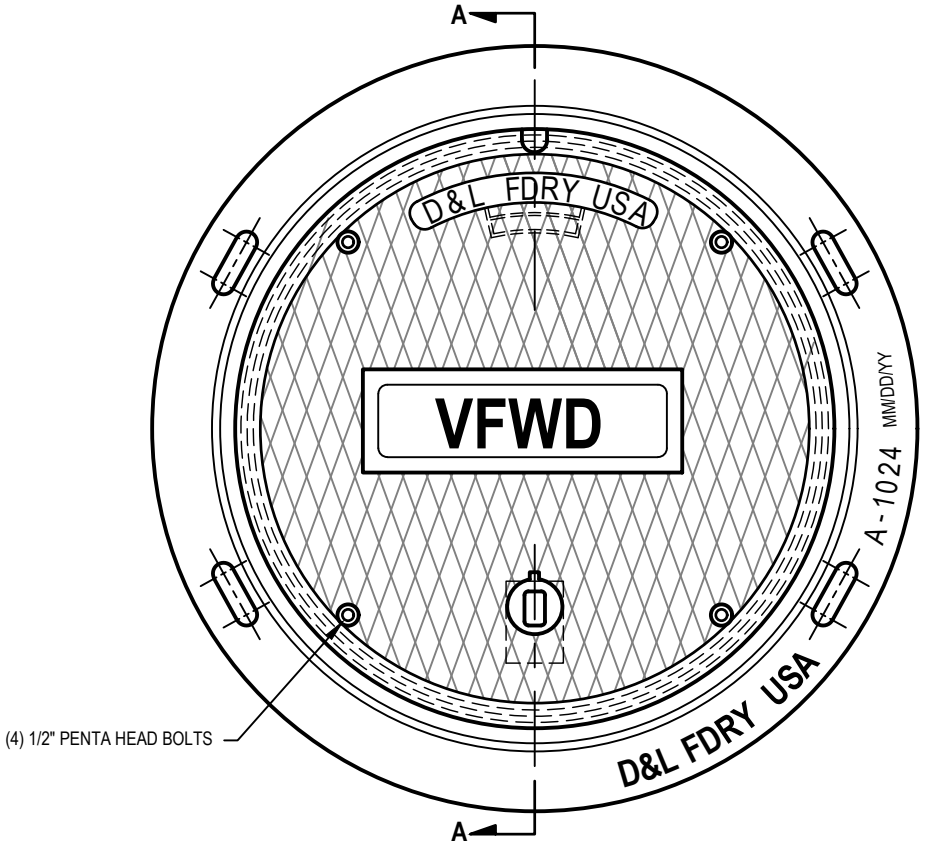
STANDARD DETAIL

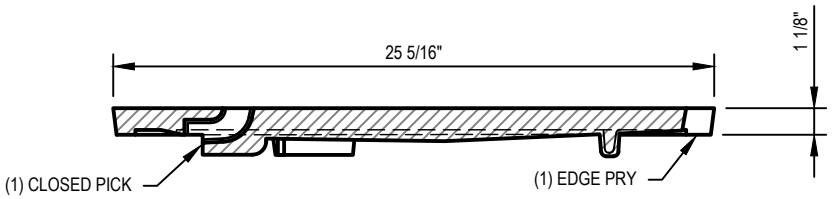
SS-15

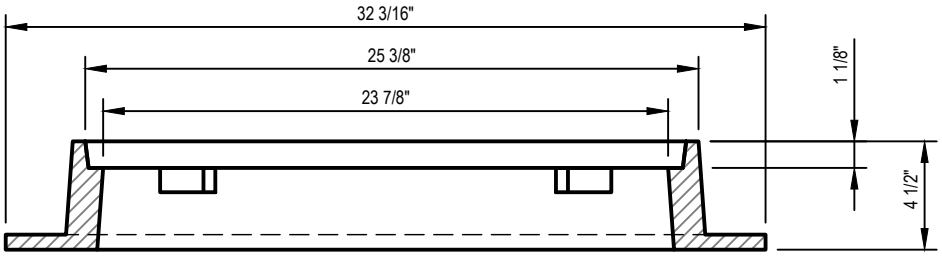
SCALE: NONE

APPROVED: MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020







SECTION A - A
VIEW IS ROTATED

NOTES:

1. FRAME AND COVER SHALL BE DESIGNED FOR H-20 HIGHWAY LOADING.
2. USE IN BACKYARD SEWER MAINS OR EASEMENTS, OR AS APPROVED BY DISTRICT.
3. D&L FOUNDRY A-1024 AND A-1024-R3, OR APPROVED EQUAL.

VALLEJO FLOOD & WASTEWATER DISTRICT

Vallejo FLOOD & WASTEWATER DISTRICT

24" MAINTENANCE HOLE BOLTED FRAME AND COVER

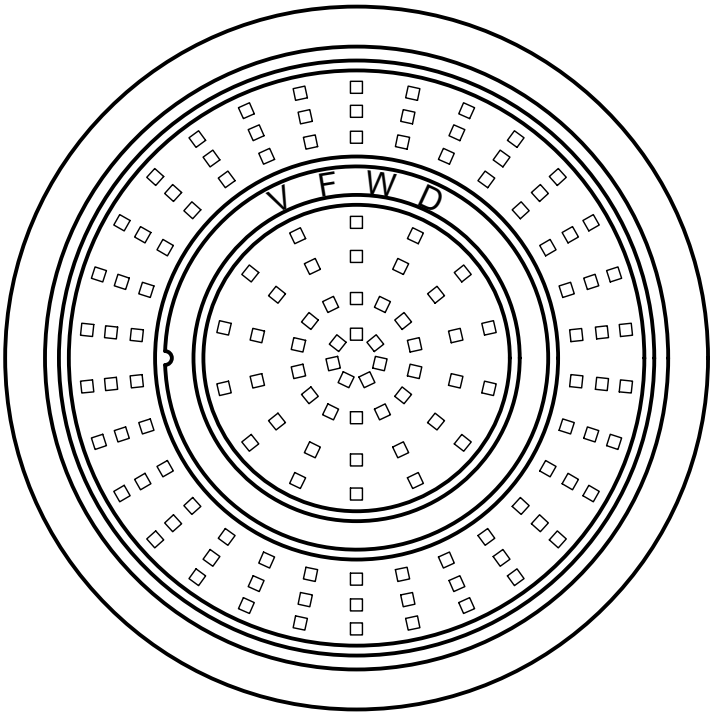
STANDARD DETAIL

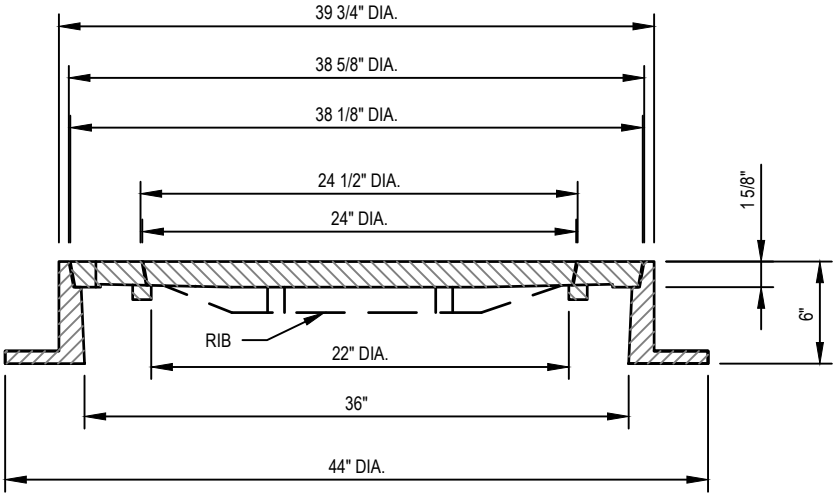
SS-16

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020

GENERAL NOTES:

1. FRAME AND COVER SHALL BE DESIGNED FOR H-20 HIGHWAY LOADING. COVER MAY BE FURNISHED WITH OR WITHOUT RIBS.
2. FRAME AND COVER SHALL BE MACHINED ON BEARING SURFACES TO ASSURE CLOSE, QUIET FIT.
3. CASTING SHALL BE DIPPED IN BLACK BITUMINOUS PAINT.
4. FRAME AND COVERS AS MANUFACTURED BY SOUTH BAY FOUNDRY, PHOENIX IRON WORKS, OR APPROVED EQUAL.
5. ALL MATERIAL USED IN MANUFACTURING SHALL CONFORM TO ASTM 48-30.





VALLEJO FLOOD & WASTEWATER DISTRICT

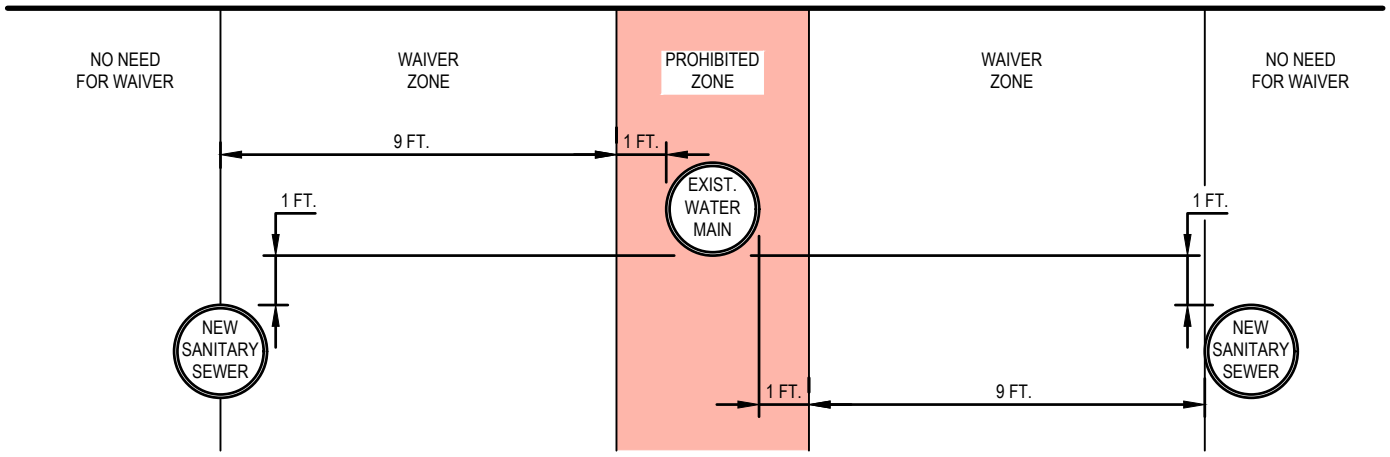
36" MAINTENANCE HOLE FRAME AND COVER

STANDARD DETAIL

SS-17

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020

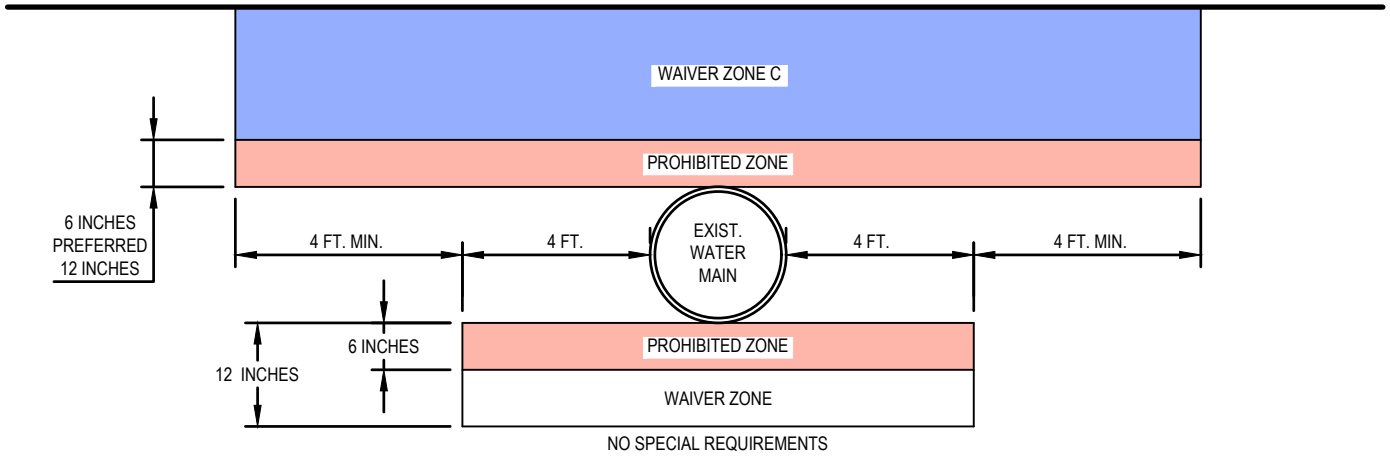
THE INFORMATION SHOWN IS A GUIDE FOR DISTRICT USE ONLY. CONTRACTORS AND DESIGNERS ARE REQUIRED TO CONTACT THE CITY OF VALLEJO WATER DIVISION FOR MINIMUM SEPARATION REQUIREMENTS AND FOR REQUESTING WAIVER.



PARALLEL CONSTRUCTION TO EXISTING WATER MAIN

NOTES:

TO MAXIMIZE THE LENGTH OF THE PIPE WITHOUT JOINTS IN ZONE C, AN AN 18 TO 20+ FOOT PIPE LENGTH CAN BE CENTERED ABOVE A WATER MAIN WITH A DIAMETER OF LESS THAN 24 INCHES.



NEW SEWER MAIN CROSSING EXISTING WATER

VALLEJO FLOOD & WASTEWATER DISTRICT

SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS

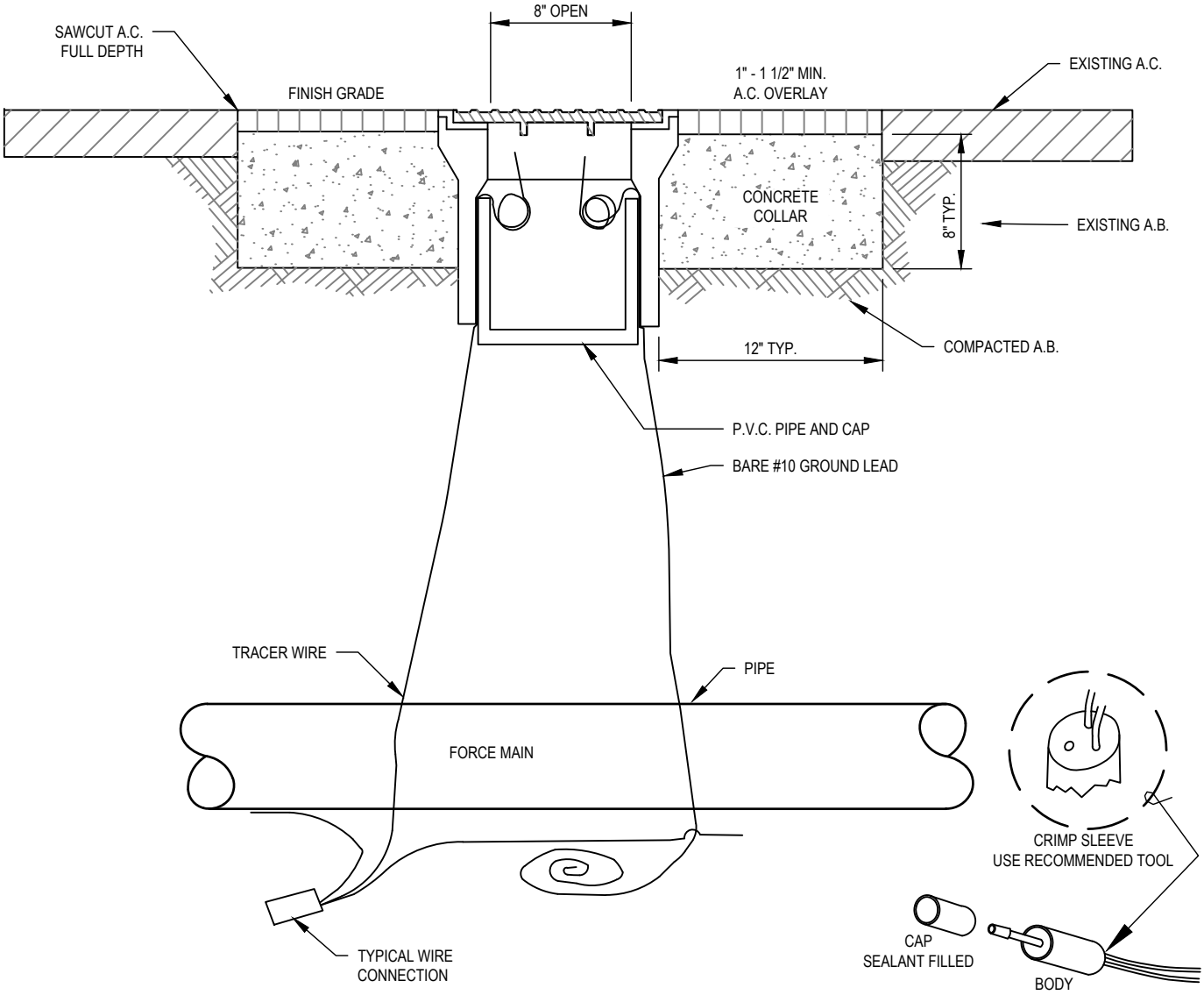
STANDARD DETAIL

SS-19

SCALE: NONE

APPROVED: MARK TOMKO, DIRECTOR OF ENGINEERING C59700

DATE: JULY 2020



TYPICAL WIRE CONNECTION

TERMINAL BOX

FULL TRAFFIC RATED CAST IRON FRAME AND COVER. "SSFM TRACER" SHALL BE CAST INTO COVER.

TERMINAL BOXES SHALL BE AT EACH END OF THE FORCE MAIN AND AT 500FT. MAXIMUM SPACING.

TRACER WIRE

ALL FORCE MAINS INCLUDING D.I.P. SHALL HAVE A TRACER WIRE (#10 SOLID COPPER TW OR THHN). LAID ON THE TRENCH BOTTOM AND CENTER UNDER THE PIPE. A CONTACT LOAD SHALL BE PROVIDED INSIDE THE TERMINAL BOX. AT ALL TERMINAL LOCATIONS A BARE #10 COPPER GROUND LEAD SHALL BE PROVIDED AS SHOWN. TRACER WIRE MAY BE LOOPED INSIDE TERMINAL BOX OVER FORCE MAIN.

CAUTION TAPE

SEE SPECIFICATIONS.

VALLEJO FLOOD & WASTEWATER DISTRICT

SANITARY SEWER FORCE MAIN TRACER WIRE AND TERMINAL BOX

STANDARD DETAIL

SS-20

SCALE:	APPROVED:	DATE:
NONE	MARK TOMKO, DIRECTOR OF ENGINEERING C59700	JULY 2020