

MAY 2019

RECORD DRAWINGS

RECORD DRAWINGS

A map showing the project location. The project location is highlighted in black. The map includes the following roads: NW Quarry Park Rd, NW Lowenstein Dr, NW Chipman Rd, Ashurst Dr, NW Pryor Rd, and NW Black Hawk Dr. The project location is situated at the intersection of NW Lowenstein Dr and NW Black Hawk Dr. A north arrow is located to the left of the map, and the text 'NOT TO SCALE' is at the bottom left. Highway shields for 470 and 50 are also shown.

Erosion Control			
Item No.	Item	Estimated Quantity	Unit
1	Erosion Control Devices, Sedimentation Fence	2140	L.F.
2	Erosion Control Devices, Curb Inlet Protection	18	Ea.
3	Seed	0.66	AC

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

I HAVE REVIEWED THE AS-BUILT INFORMATION PROVIDED ON THESE RECORD DRAWINGS AND TAKE NO EXCEPTION TO THE INFORMATION PROVIDED ON SEPTEMBER 2, 2020 BY EMERY SAPP AND SONS, INC.



PREPARED BY:
KAW VALLEY ENGINEERING, INC.
2319 N. JACKSON
JUNCTION CITY, KS 66441
785-762-5040
CONTACT: LEON D OSBOURN
EMAIL: ldo@kveg.com

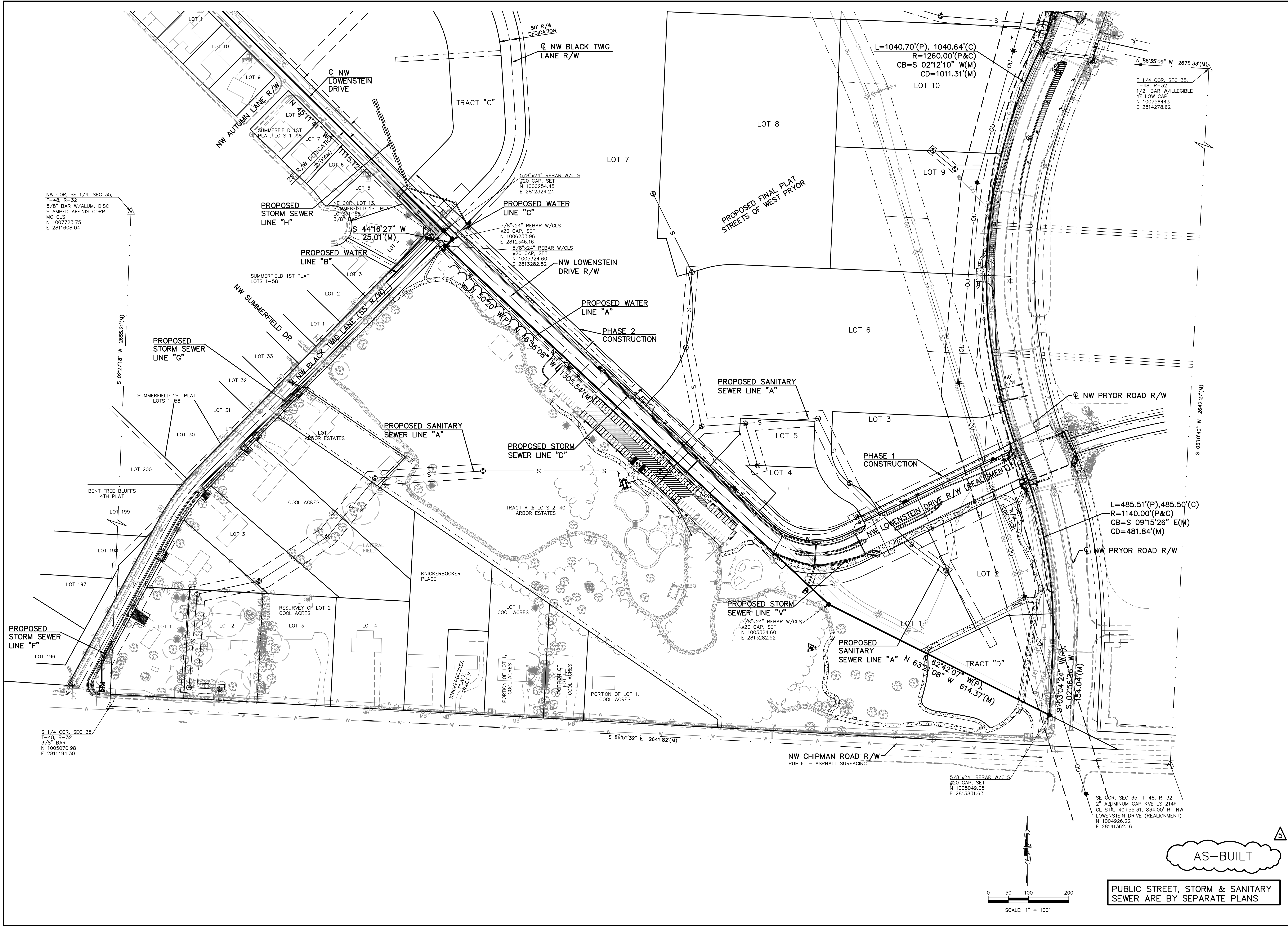


DATUM BENCHMARK:
VERTICAL DATUM IS NAVD 88 ESTABLISHED USING OPUS PROJECTS ON PROJECT CONTROL

BENCHMARKS:
BM #1: CHISELED "SQUARE" ON TOP OF CURB POINT OF INTERSECTION OF WEST PARK
PARKING LOT AT EAST DRIVE ENTRANCE. ELEV=984.97

BM #2: CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25'± EAST OF CURB
LINE AND ON-LINE WITH SOUTH CURB OF LOWENSTEIN DRIVE AT 90° BEND IN ROAD.
ELEV=970.98

STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		 KAW VALLEY ENGINEERING KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19		2319 N. JACKSON P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 762-5040 FAX (785) 762-7744 jk@kveeng.com www.kveeng.com		LEON D. OSBOURN ENGINEER MO # 021726							
WATER LINE PLANS TITLE SHEET		PROJ. NO. A14-7067-1		DESIGNER LDO		DRAWN BY JT/BKR		CFN 7067-1W_TS		SHEET C-1		REV 5	
								5		2-5-21		AS-BUILT PLANS	
								3		5-1-19		REVISED PER CITY COMMENTS	
								2		4-15-19		REVISED PER CITY COMMENTS	
								1		2-26-19		REVISED PER CITY COMMENTS	
								0		1-4-19		INITIAL ISSUE	
								REV		DATE		DESCRIPTION	
								DSN		DWN		CHK	



PROJ. NO.	DESIGNER	DRAWN BY	DATE	DESCRIPTION
A14-7067-1	LDO	JT/BKR	2-5-21	AS-BUILT PLANS
7067-1W_GLS	LDO	JT	4-15-19	REVISED PER CITY COMMENTS
	LDO	JT	2-26-19	REVISED PER CITY COMMENTS
	LDO	JT/BKR	1-4-19	INITIAL ISSUE
	DSN	DWN		CHK

LEON D. OSBOURN
ENGINEER
MO # 021726

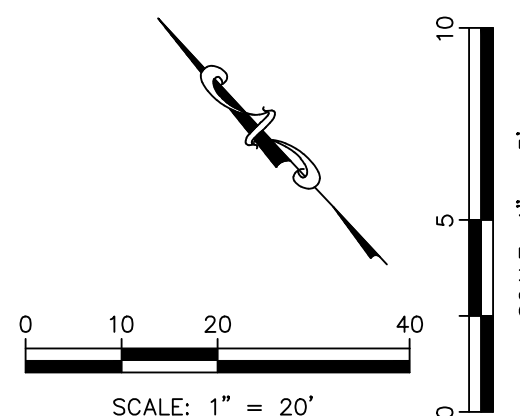
2319 N. JACKSON | P.O. BOX 1304
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KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 008642.
EXPIRES 12/31/19

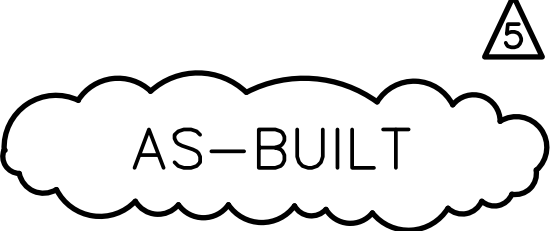
STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

WATER LINE PLANS
GENERAL LAYOUT SHEET

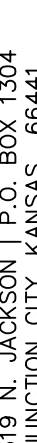
SHEET	REV
C-2	5

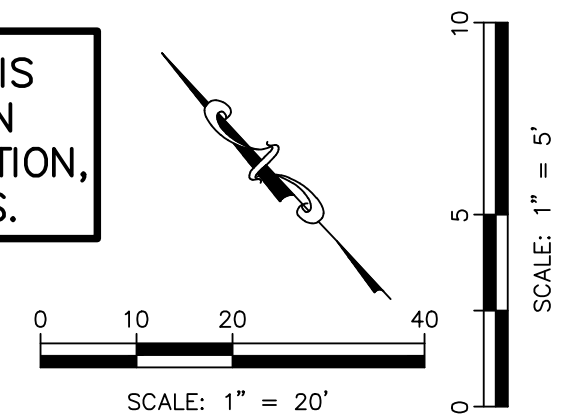


NOTE:
AT ALL SANITARY SEWER AND STORMWATER CROSSINGS, THE WATER LINE SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. A FULL LENGTH OF WATER PIPE (MINIMUM 20 FT) SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE CROSSINGS SO THAT BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE.



PUBLIC STREET, STORM & SANITARY
SEWER ARE BY SEPARATE PLANS

STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		 2319 N. JACKSON P.O. BOX 1394 JACKSON CITY, KANSAS 66441 PH. (785) 762-5040 FAX. (785) 762-7744 jke@kveeng.com www.kveeng.com KAW VALLEY ENGINEERING KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19		 LEON D. OSBOURN ENGINEER MO # 021726		<table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td>2-5-21</td><td>AS-BUILT PLANS</td><td></td><td></td><td>LD0</td></tr><tr><td>5</td><td>5-1-19</td><td>REVISED PER CITY COMMENTS</td><td></td><td></td><td>JT</td></tr><tr><td>2</td><td>4-15-19</td><td>REVISED PER CITY COMMENTS</td><td></td><td></td><td>LD0</td></tr><tr><td>1</td><td>2-26-19</td><td>REVISED PER CITY COMMENTS</td><td></td><td></td><td>JT</td></tr><tr><td>0</td><td>1-4-19</td><td>INITIAL ISSUE</td><td></td><td></td><td>LD0</td></tr><tr><td>REV</td><td>DATE</td><td>DESCRIPTION</td><td></td><td></td><td>CHK</td></tr></table>								3	2-5-21	AS-BUILT PLANS			LD0	5	5-1-19	REVISED PER CITY COMMENTS			JT	2	4-15-19	REVISED PER CITY COMMENTS			LD0	1	2-26-19	REVISED PER CITY COMMENTS			JT	0	1-4-19	INITIAL ISSUE			LD0	REV	DATE	DESCRIPTION			CHK
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PROJ. NO.		A14 7067-1																																															
DESIGNER		LD0		DRAWN BY		JT/BKR																																											
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SHEET		1		REV		5																																											
C-3																																																	

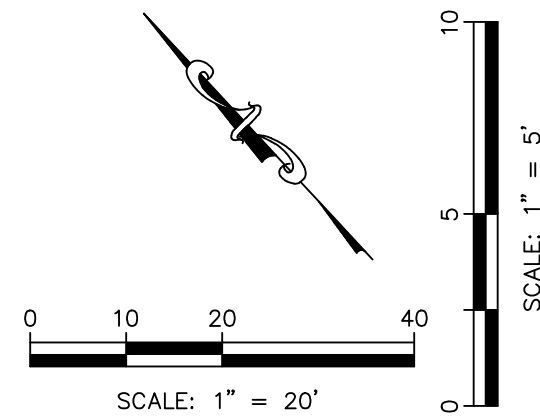
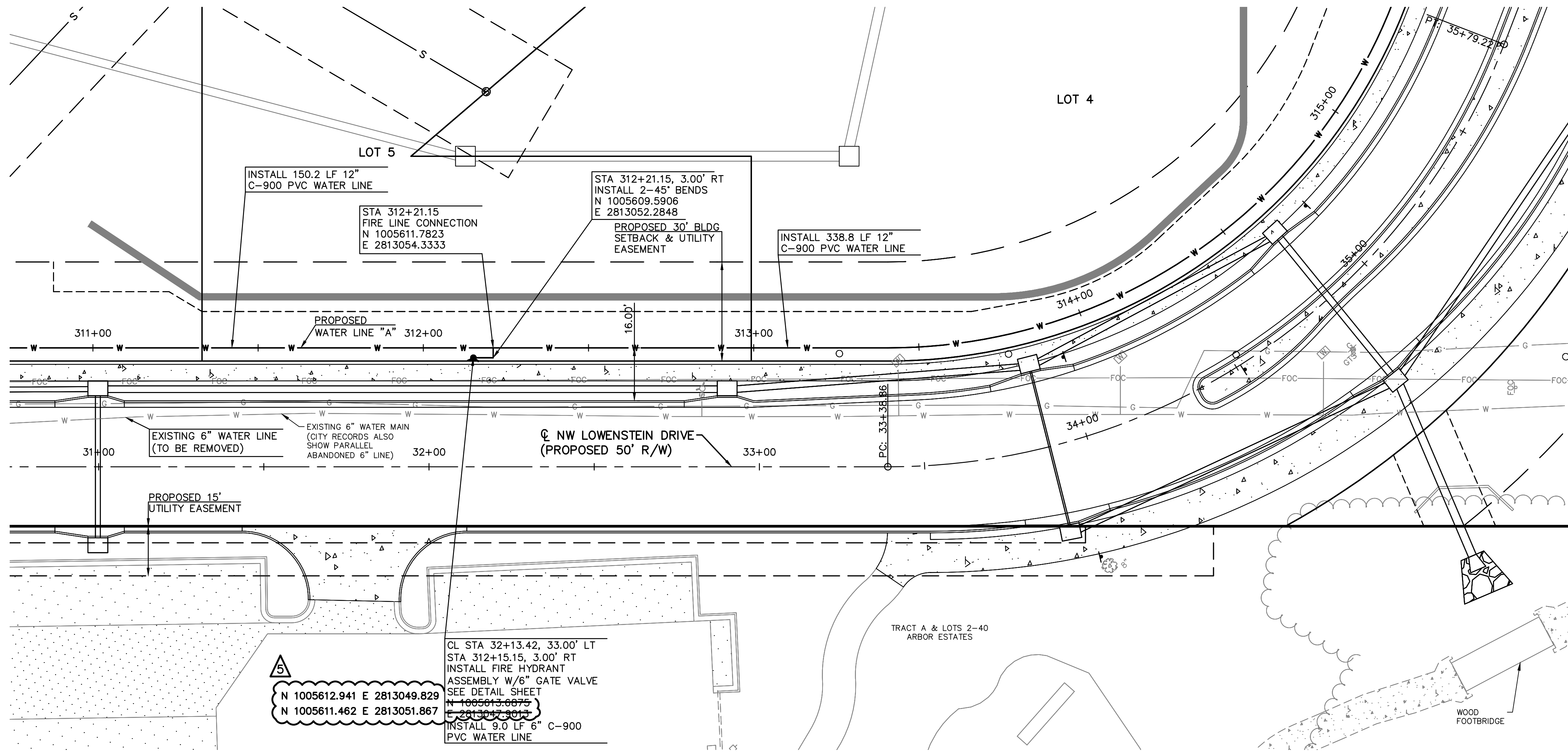


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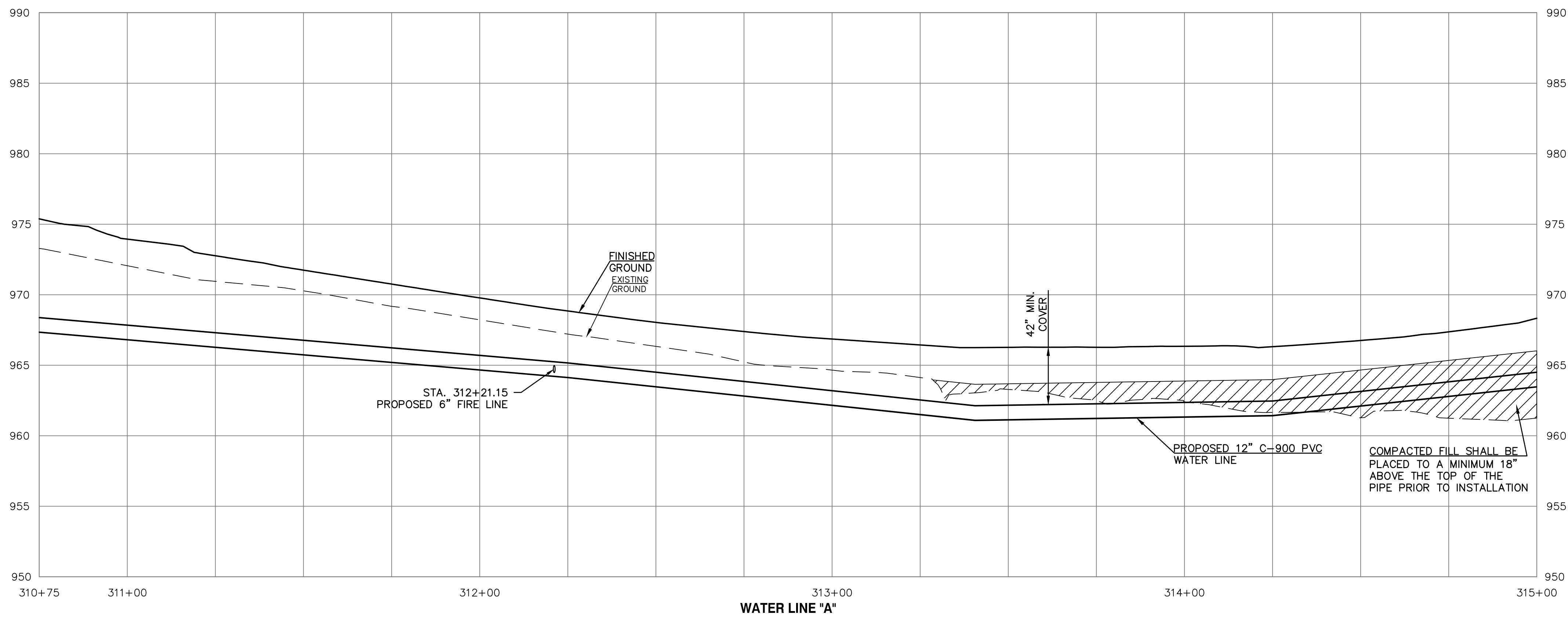


PUBLIC STREET, STORM & SANITARY
SEWER ARE BY SEPARATE PLANS

[illegible]



NOTE:
AT ALL SANITARY SEWER AND STORMWATER CROSSINGS,
THE WATER LINE SHALL BE INSTALLED WITH A MINIMUM
VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE
OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE
SEWER. A FULL LENGTH OF WATER PIPE (MINIMUM 20 FT)
SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE
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AS-BUILT

PUBLIC STREET, STORM & SANITARY
SEWER ARE BY SEPARATE PLANS

PROJ. NO.	A14-7067-1	
DESIGNER	LDO	
DRAWN BY	JT/BKR	
CFN	7067-1W_WPP	
SHEET	C-5	
REV	5	
REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
2	4-15-19	REVISED PER CITY COMMENTS
3	5-1-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS
LDO	JT	DSN
LDO	JT	DWN
LDO	JT	CHK

LEON D. OSBOURN
ENGINEER
MO # 021726

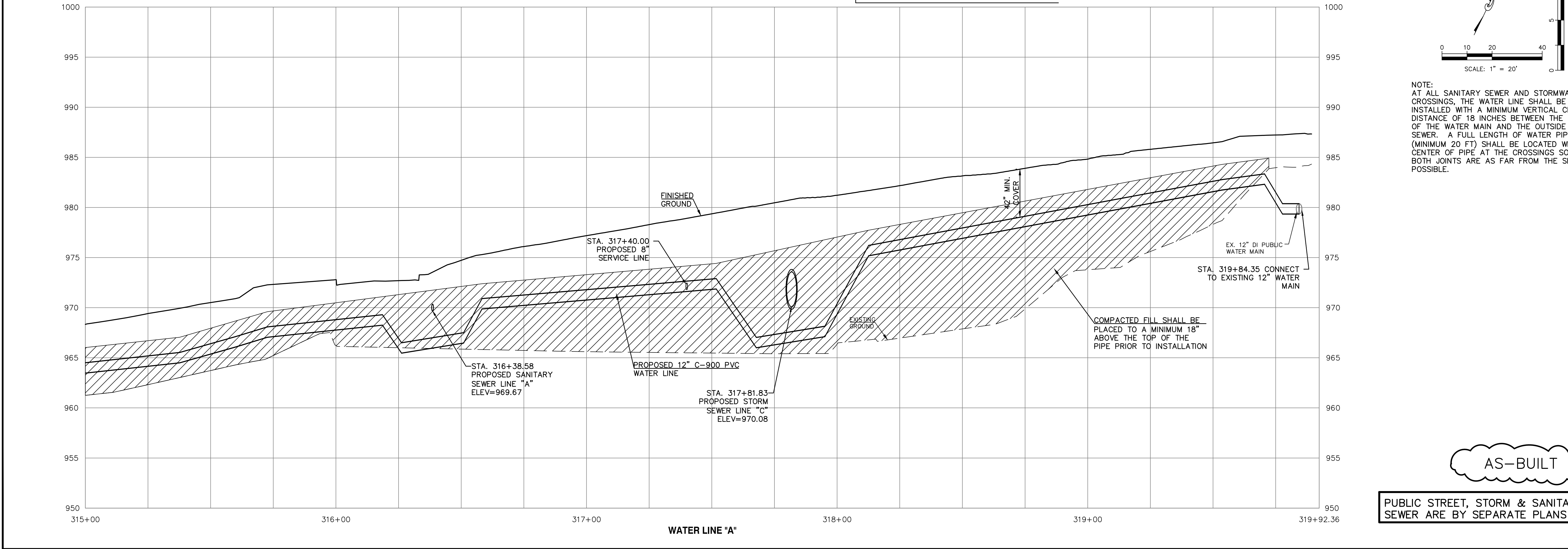
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jdo@kve.com | www.kve.com

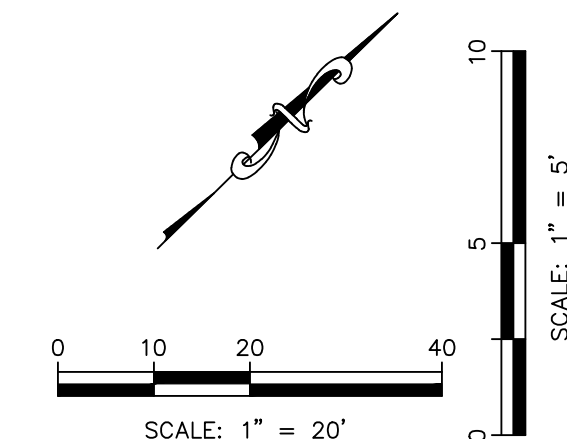
KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 008642. EXPIRES 12/31/19

STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

WATER LINE PLANS
WATER LINE A - PLAN & PROFILE

[illegible]

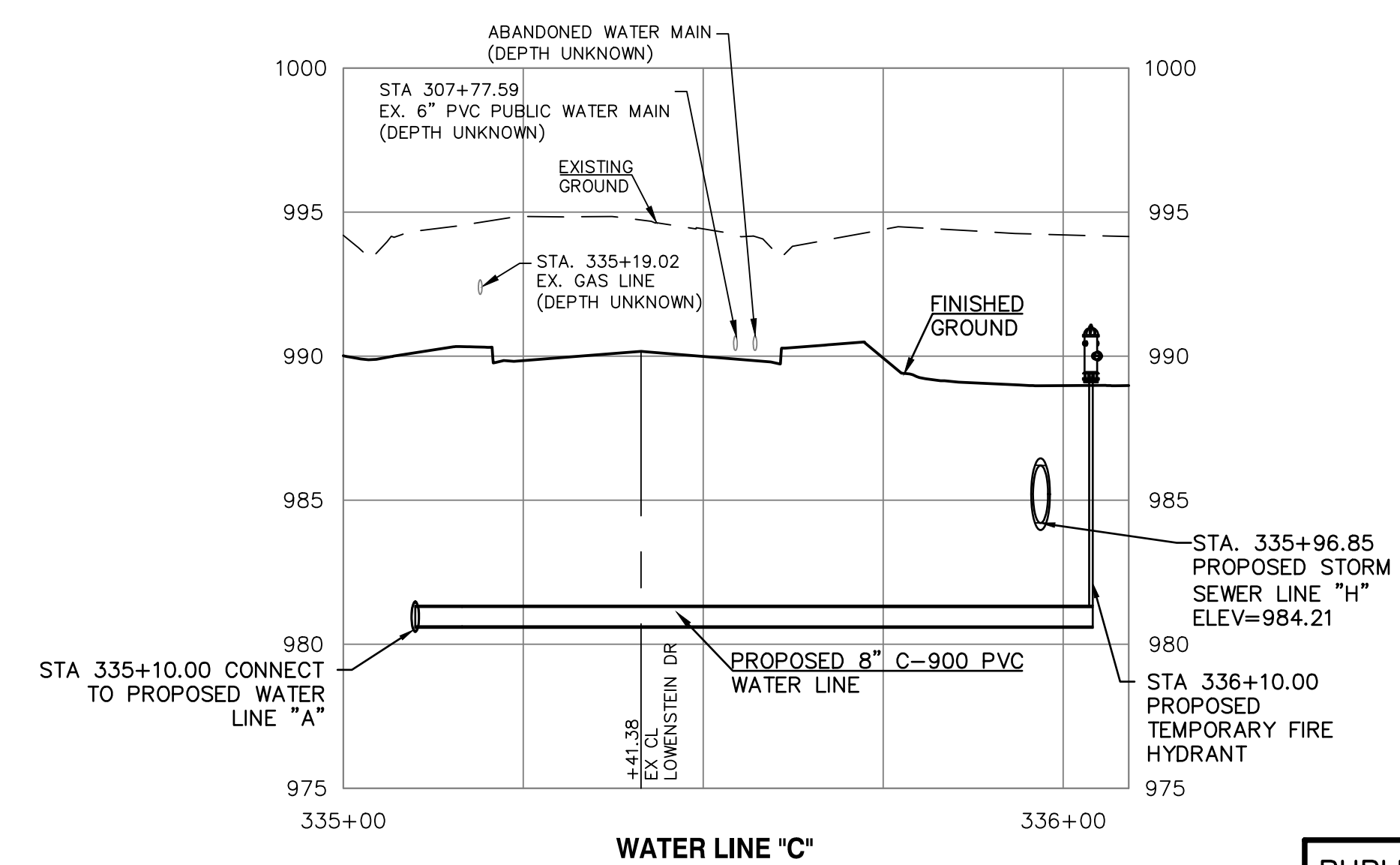


STATE OF MISSOURI
 LEON D. DSBourne
 REGISTERED PROFESSIONAL ENGINEER
 NUMBER
 E-21726
 2-9-2021

2319 N. JACKSON | P.O. BOX 1304
JUNCTION CITY, KANSAS 66441
PH. (785) 762-5040 | FAX (785) 762-7744
jc@kveng.com | www.kveng.com

VALLEY ENGINEERING

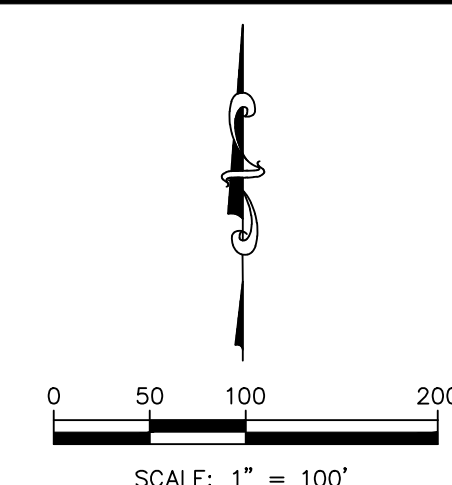
INC., IS AUTHORIZED TO OFFER ENGINEERING
STATE CERTIFICATE OF AUTHORITY # 000842.



AS-BUILT 5

PUBLIC STREET, STORM & SANITARY
SEWER ARE BY SEPARATE PLANS

STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		WATER LINE PLANS WATER LINE B & C - PLAN & PROFILE	
PROJ. NO.		A14-7067-1	
CFN	LDO	DRAWN BY	JT/9KR
SHEET		REV	
0067-1W_WPP		5	
C-7			



13. TEMPORARY SEDIMENT FENCE TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
14. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.
15. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES.
16. INSTALL CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.
17. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED, SODDED, OR LANDSCAPED AS SHOWN ON THE LANDSCAPE PLAN WITHIN 14 DAYS.
18. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.
19. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.
20. ROCK LINING (RIPRAP) SHALL BE DURABLE STONE CONTAINING A COMBINED TOTAL OF NOT MORE THAN 10 PERCENT OF EARTH, SAND, SHALE AND NON-DURABLE ROCK. AT LEAST 60 PERCENT OF THE MASS SHALL BE OF PIECES HAVING A MINIMUM WEIGHT OF 150 POUNDS OR MORE PER CUBIC FOOT.
21. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING ADJACENT TO OR DOWNSTREAM FROM PROPERTY BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.
22. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.

23. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.

24. RIGHT OF WAY TO BE STABILIZED AS REQUIRED BY APWA SECTION 2400.

25. EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.

26. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED, CHUTE ETC. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.

27. EROSION CONTROL SEDIMENT FENCE TO BE INSTALLED "1-0" BEHIND CURB & GUTTER UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM LOT DRAIN TOWARDS CURB. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.

- EROSION & PROPOSED IMPROVEMENTS LEGEND:**
- -970 --- EXISTING GROUND CONTOUR (1' INTERVALS)
- 970 PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- — — SILT FENCE
-  INLET PROTECTION

STREETS OF WEST PRYOR
NW/4 NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

WATER LINE PLANS
EROSION CONTROL PLAN

PROJ. NO.		A14-7067-1	
DESIGNER		DRAWN BY	
LDO		JT/BKR	
CFN			
7067-1W_ECP			
SHEET		REV	
C-8		5	

2319 N. JACKSON | P.O. BOX 1304
JACKSON, MISSOURI 64304
PH. (785) 762-5040 | FAX (785) 762-7744
joe@kveeng.com | www.kveeng.com

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REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180	90	45	22.5	11.25
TEE, PLUG	BEND	BEND	BEND	BEND	BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.4	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	287.1	154.6	78.8	39.6
14	278.7	395.4	210.4	107.3	53.9
16	368.2	523.1	278.8	140.1	70.4
18	472.4	672.7	355.0	177.3	89.1
20	592.4	846.4	446.4	224.4	112.2
24	846.4	1200.0	626.4	316.8	158.4

NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

#4 EPOXY COATED GR. 60 REBAR WITH 6" HOOK & 12" MIN. CONCRETE EMBEDMENT DEPTH

UNDISTURBED EARTH

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VERTICAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-2
Rev: 1/14
Rev:

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180	90	45	22.5	11.25
TEE, PLUG	BEND	BEND	BEND	BEND	BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.5	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	59.2	32.5	16.5	8.3
20	52.4	72.8	40.1	20.4	10.3
24	72.8	102.4	56.0	28.8	14.8

NOTES:

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3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

POURED CONCRETE BLOCKS (TYP.)

UNDISTURBED EARTH

BEARING AREA (TYP.)

BOND BREAKER (TYP. ALL BLOCKS)

PLAN

1/4" BOND BREAKER

SECTION A

1/2" DIAMETER

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14
Rev:

LENGTH AS SHOWN ON PLANS

3" CLEAR

6"

6"

6"

6"

NOTES:

1. INTERMEDIATE BELLS SHALL BE ENCASED.
2. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".
3. THIS DETAIL IS FOR PIPES 12" AND SMALLER.

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

WATER PIPE ENCASEMENT

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-4
Rev: 1/14
Rev:

VALVE COVER

FINAL GRADE

CUT A NOTCH IN TOP OF VALVE BOX AND PLACE 2" OF TRACER WIRE COILED INSIDE VALVE COVER BOX

STANDARD 2" SQUARE VALVE OPERATING NUT

WELD (TYP. 8 PLACES)

ALIGNMENT WASHER 1/8" MIN. STEEL 4-1/2" Ø

1" Ø COLD ROLLED STEEL

MIN. 5" Ø FERROUS METAL VALVE BOX

SOCKET FROM 1/4" STEEL INSIDE DIMENSIONS 2-3/16" X 3" DEEP DO NOT TIGHTEN SET SCREW TO 2" OPERATING NUT

INSTALL TRACER WIRE ALONG OUTSIDE SURFACE OF VALVE BOX

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VALVE STEM EXTENSION AND VALVE BOX

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-9
Rev: 1/14
Rev:

2" FROM BACK OF CURB

BACK OF CURB

GROUND SURFACE

MECHANICAL JOINT (TYP.)

THRUST BLOCK (SEE NOTE 1)

KEEP WEEPHOLE FREE OF CONCRETE AND FOREIGN MATERIAL

24"x24"x4" SOLID CONCRETE PAD

UNDISTURBED EARTH

PROVIDE MIN. 1/2 CU. YD. OF 3/4" GRANULAR FILL PER AWWA C600 SEC. 4.2.7.2.4

MJ RESTRAINT FITTINGS (SEE NOTES 1 & 2)

THRUST BLOCK

UNDISTURBED EARTH

NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION – STRAIGHT SET

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-7
Rev: 1/14
Rev:

2" FROM BACK OF CURB

BACK OF CURB

GROUND SURFACE

THRUST BLOCK (SEE NOTE 1)

KEEP WEEPHOLE FREE OF CONCRETE AND FOREIGN MATERIAL

24"x24"x4" SOLID CONCRETE PAD

UNDISTURBED EARTH

PROVIDE MIN. 1/2 CU. YD. OF 3/4" GRANULAR FILL PER AWWA C600 SECTION 4.2.7.2.4

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THRUST BLOCKS

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5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT WITH 90 DEGREE BEND

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-8
Rev: 1/14
Rev:

FINISHED GRADE

REGULAR BACKFILL

TRENCH AS REQUIRED BY OSHA

FLOWABLE FILL

12" MIN.

12" MIN.

NOT TO SCALE

NOTES:

1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCH CHECK

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-6
Rev: 1/14
Rev:

MANHOLE FRAME AND LID REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES

FINISH GRADE

36" METER WELL ASSEMBLY

1" AIR RELEASE ASSEMBLY REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES

1" FULL PORT BALL VALVE W/ EXTENDED HANDLE 600 PSI BRASS (TYP)

1" SCH 40 RED BRASS THREADED PIPE ASTM B43

12" MIN.

1" BALL CORPORATION STOP AWWA/CC TAPER THREAD INLET BY FEMALE IRON PIPE THREAD OUTLET

BRASS SERVICE SADDLE (2 STRAPS REQUIRED FOR DUCTILE IRON PIPE)

WATER MAIN

CONCRETE BLOCK

GRANULAR BEDDING TO SPRING LINE

GRANULAR BEDDING

AIR RELEASE ASSEMBLY NOT TO SCALE

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

Date: 04/17
Drawn By: MIF
Checked By: DL
WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VERTICAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-2
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

WATER PIPE ENCASEMENT

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-4
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VALVE STEM EXTENSION AND VALVE BOX

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-9
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION – STRAIGHT SET

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-7
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT WITH 90 DEGREE BEND

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Checked By: DL
FILE: WAT-8
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCH CHECK

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-6
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

Date: 04/17
Drawn By: MIF
Checked By: DL
WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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LEE'S SUMMIT
MISSOURI

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LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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Rev: 1/14
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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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MISSOURI

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MISSOURI

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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WAT-10

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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MISSOURI

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MISSOURI

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WAT-10

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev:

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MISSOURI

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MISSOURI

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WAT-10

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MISSOURI

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MISSOURI

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MISSOURI

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MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCH CHECK

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev:

LEE'S SUMMIT
MISSOURI

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LEE'S SUMMIT
MISSOURI

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MISSOURI

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

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WAT-10

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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Rev: 1/14
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LEE'S SUMMIT
MISSOURI

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LEE'S SUMMIT
MISSOURI

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MISSOURI

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Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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LEE'S SUMMIT
MISSOURI

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LEE'S SUMMIT
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MISSOURI

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LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCH CHECK

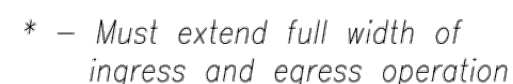
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Drawn By: JN
Checked By: DL
FILE: WAT-6
Rev: 1/14
Rev:

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

Date: 04/1



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

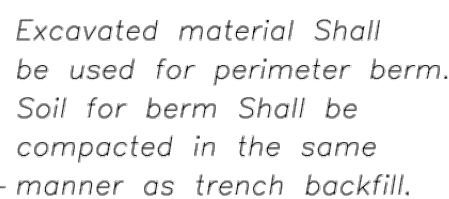
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

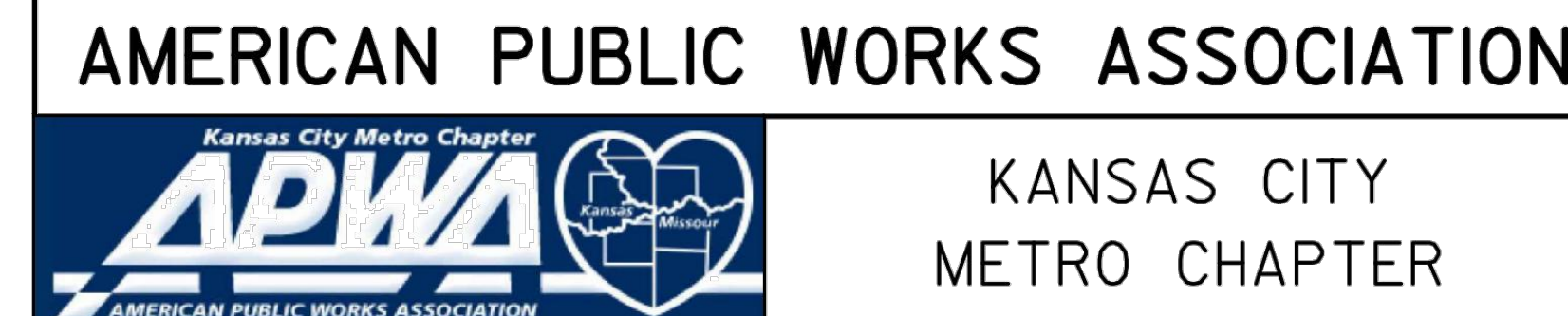
Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

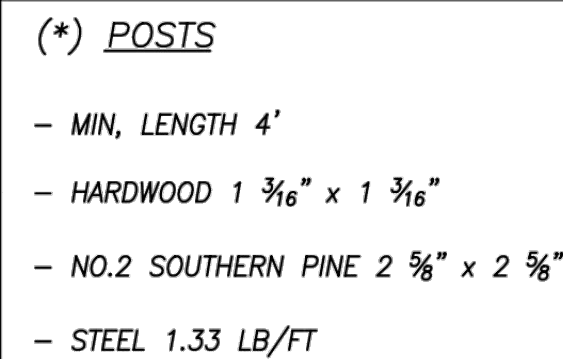
AS-BUILT



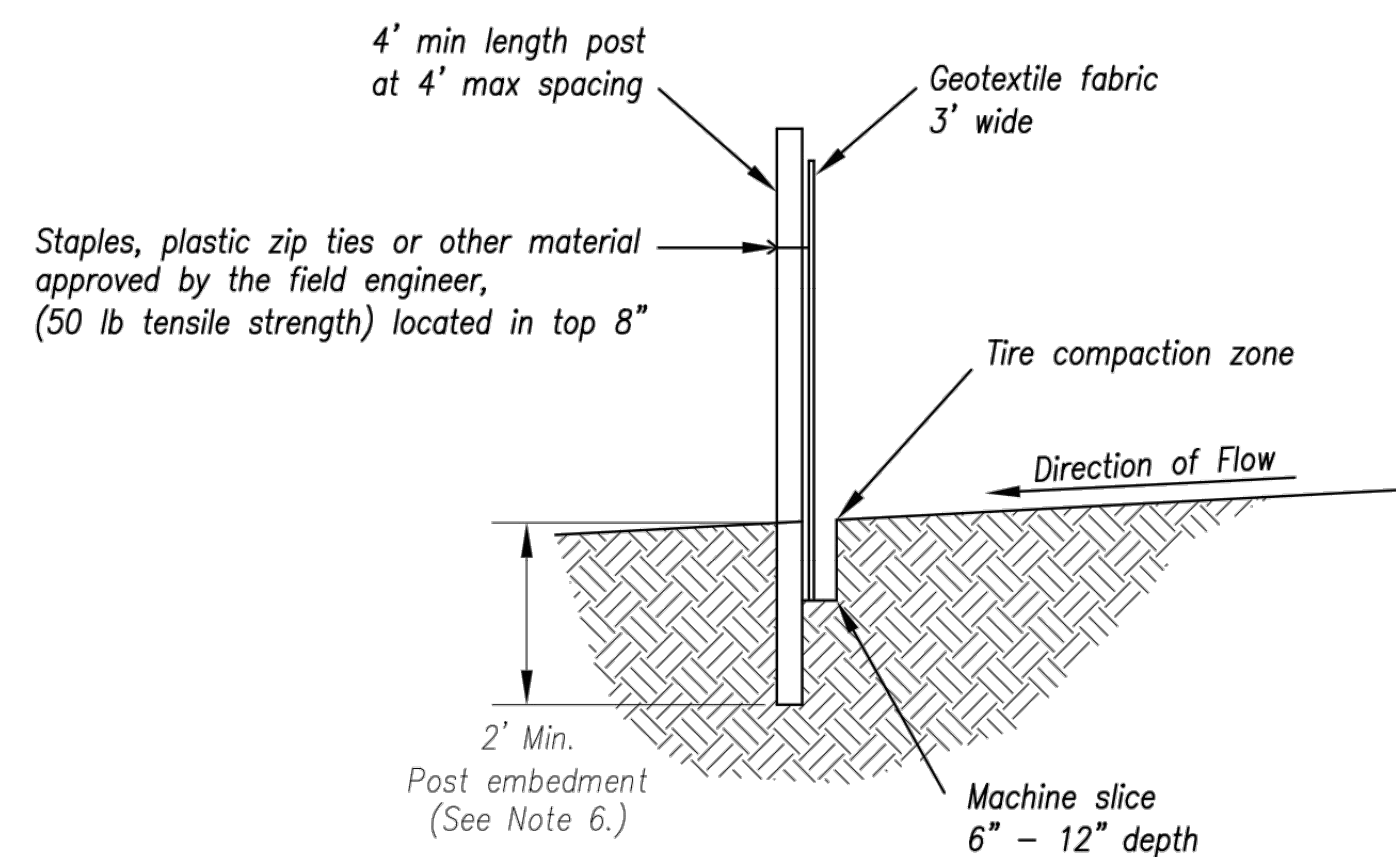
CONSTRUCTION ENTRANCE
AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.



SILT FENCE DETAILS
Not to Scale

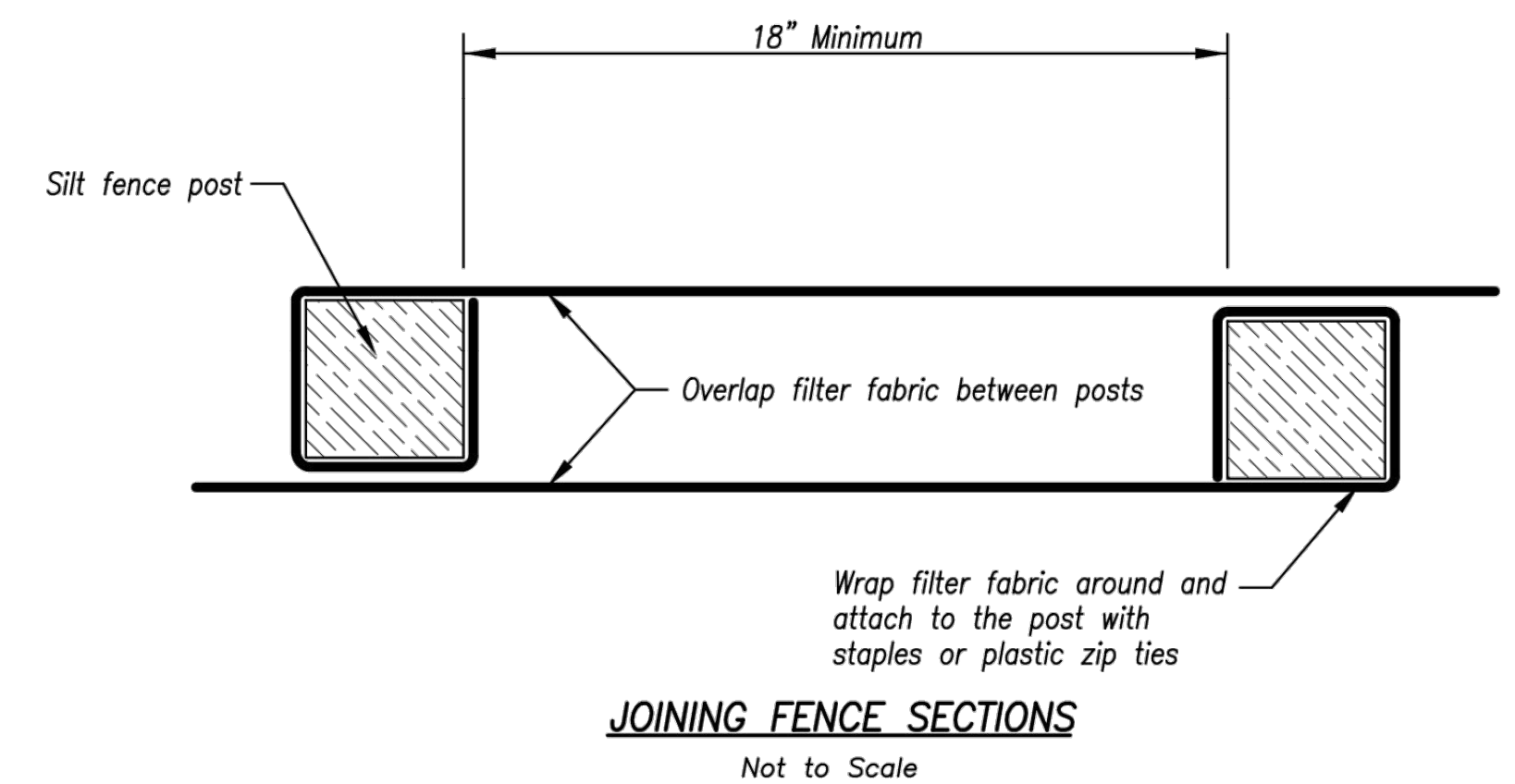


Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches $\frac{1}{3}$ the height of silt fence.
2. Repair as necessary to maintain function and structure.



AS-BUILT

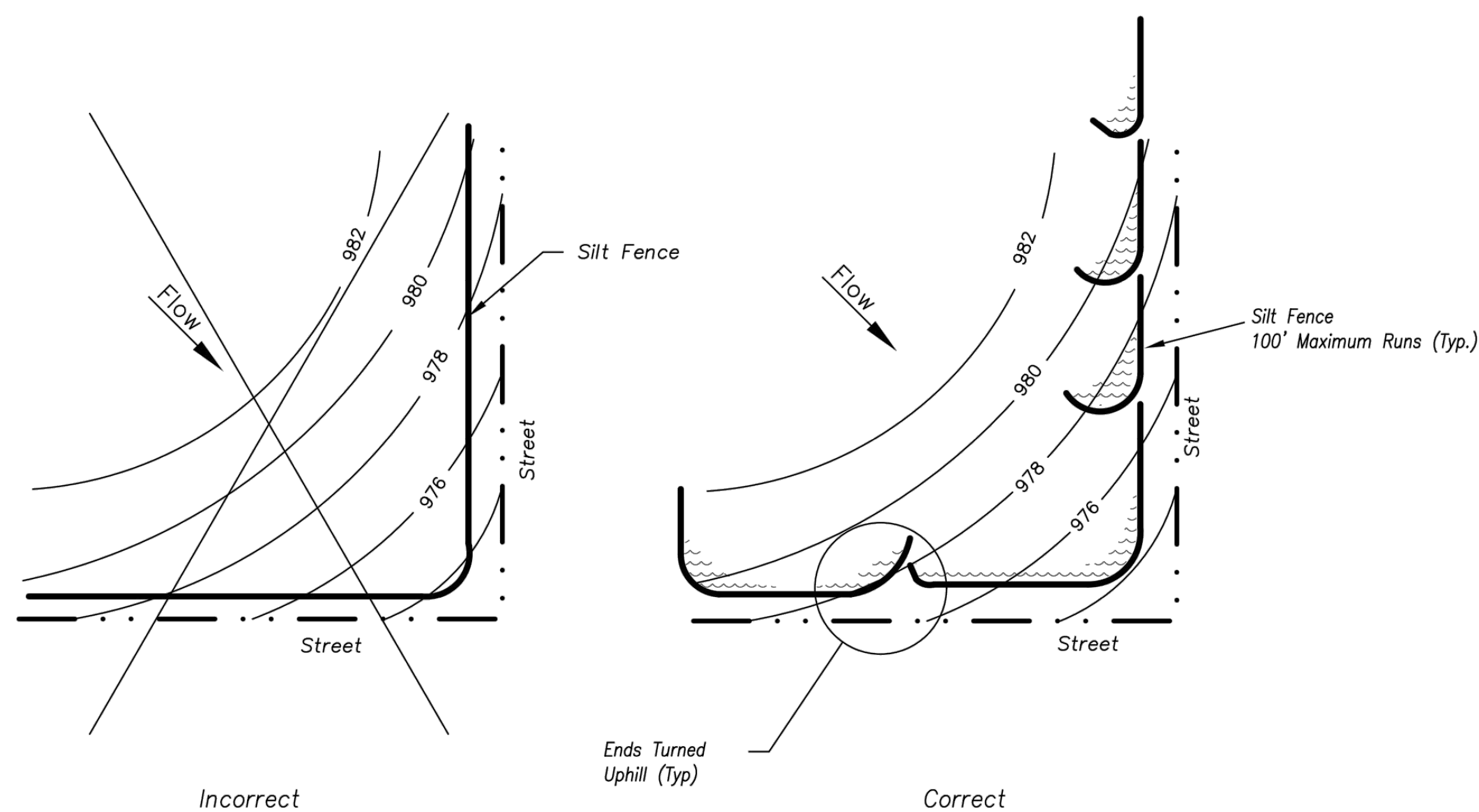
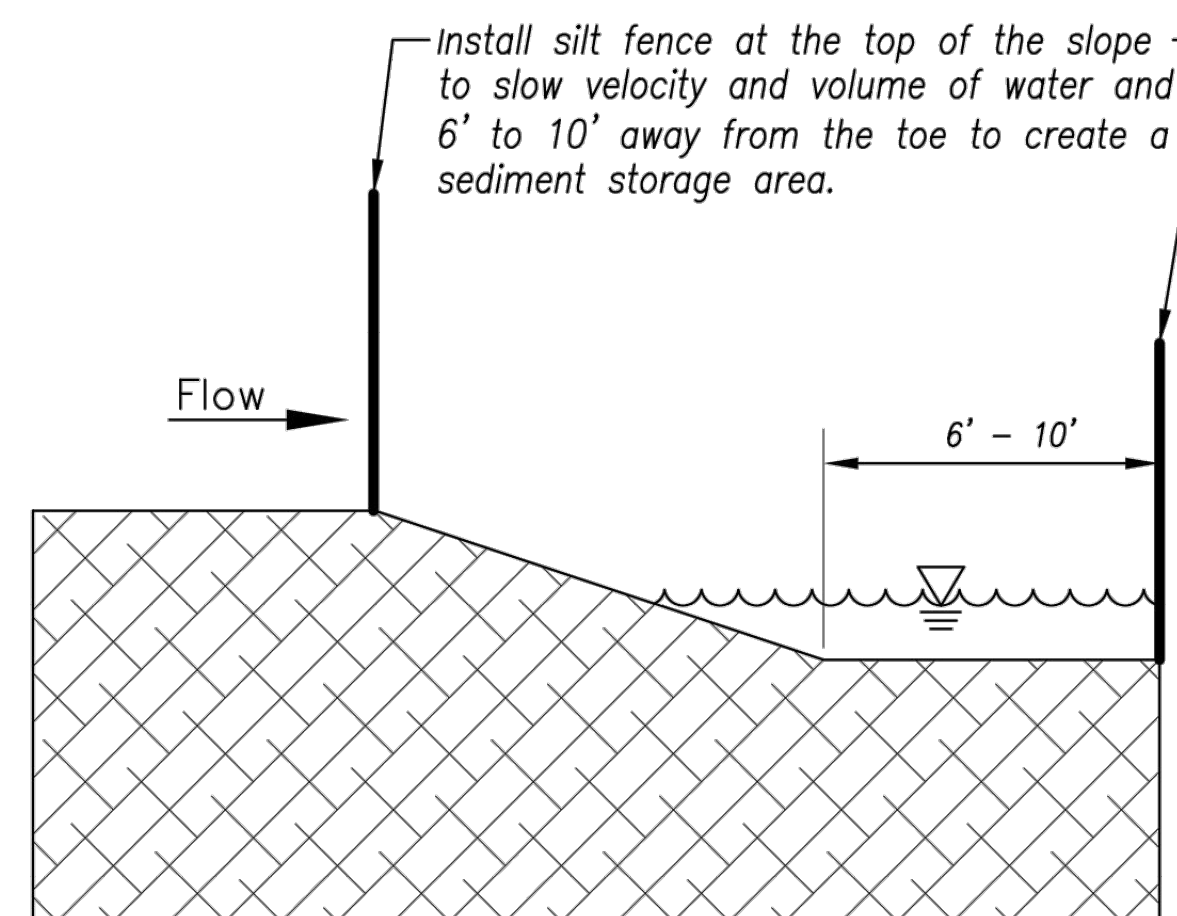


Figure A

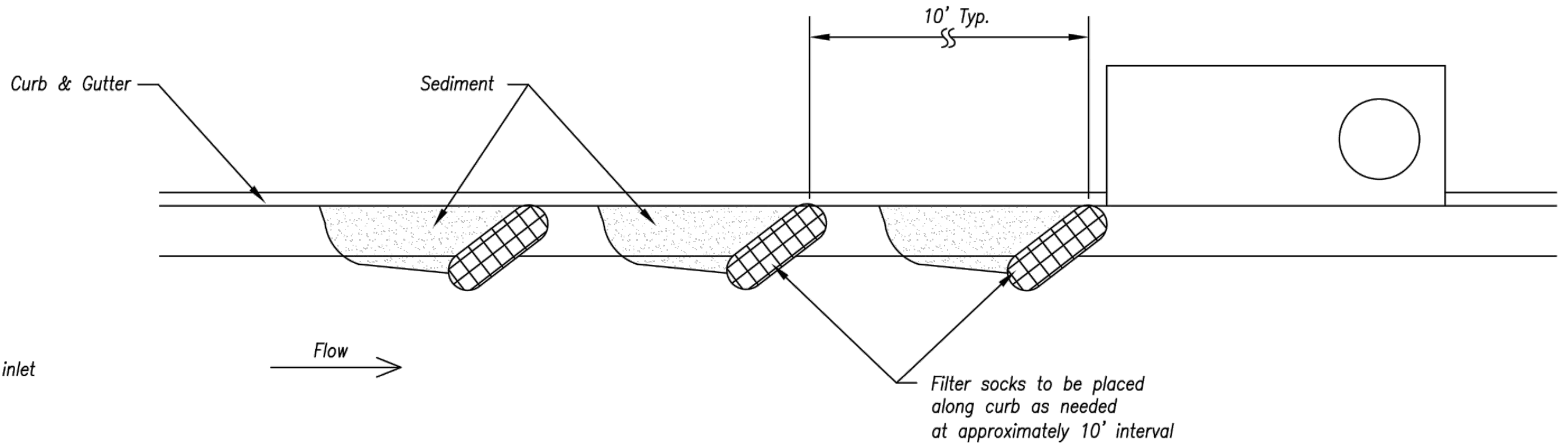
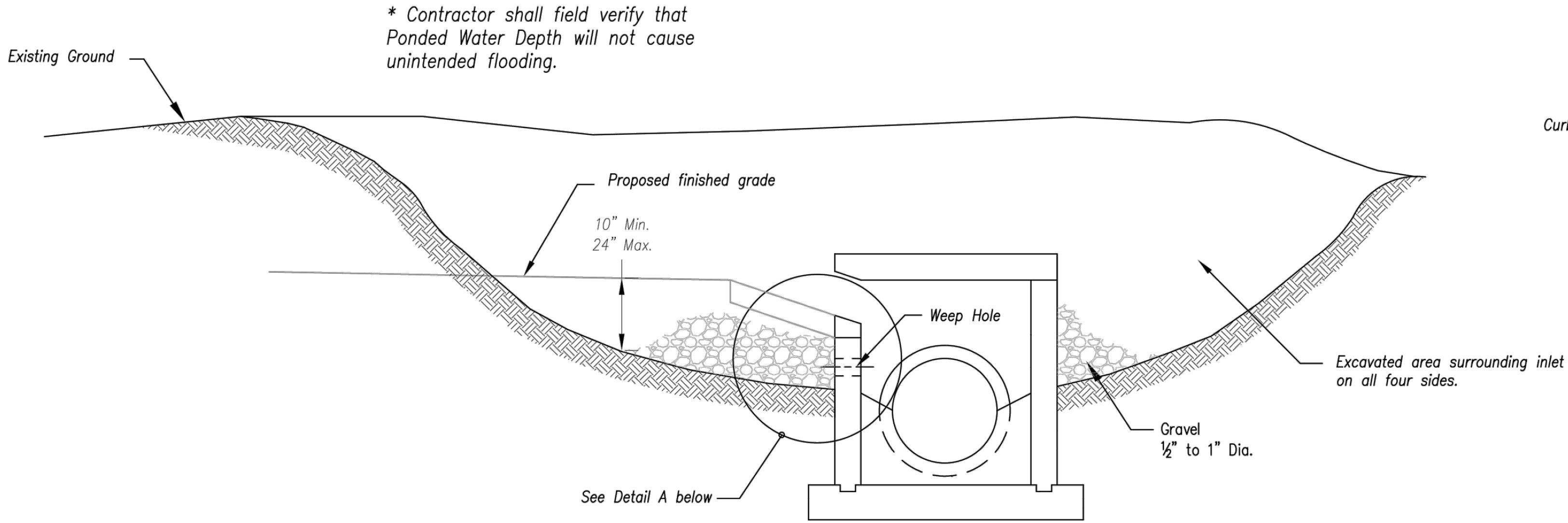
SILT FENCE LAYOUT
Not to Scale



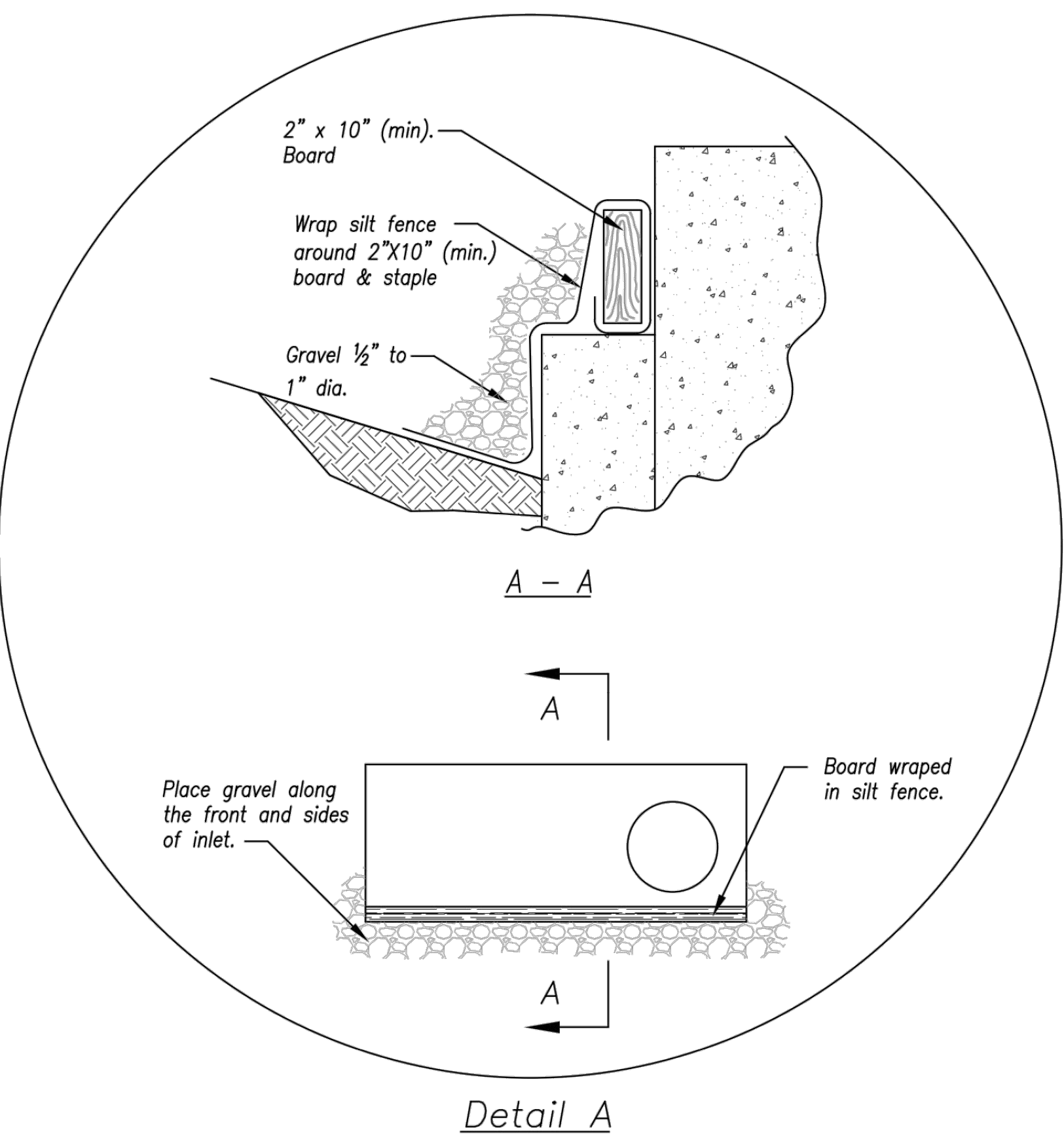
Modified from 2015 Overland Park Standard Details
for Erosion and Sediment Control.

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SILT FENCE	STANDARD DRAWING NUMBER ESC-03	
	ADOPTED: 10/24/2016	

[illegible]



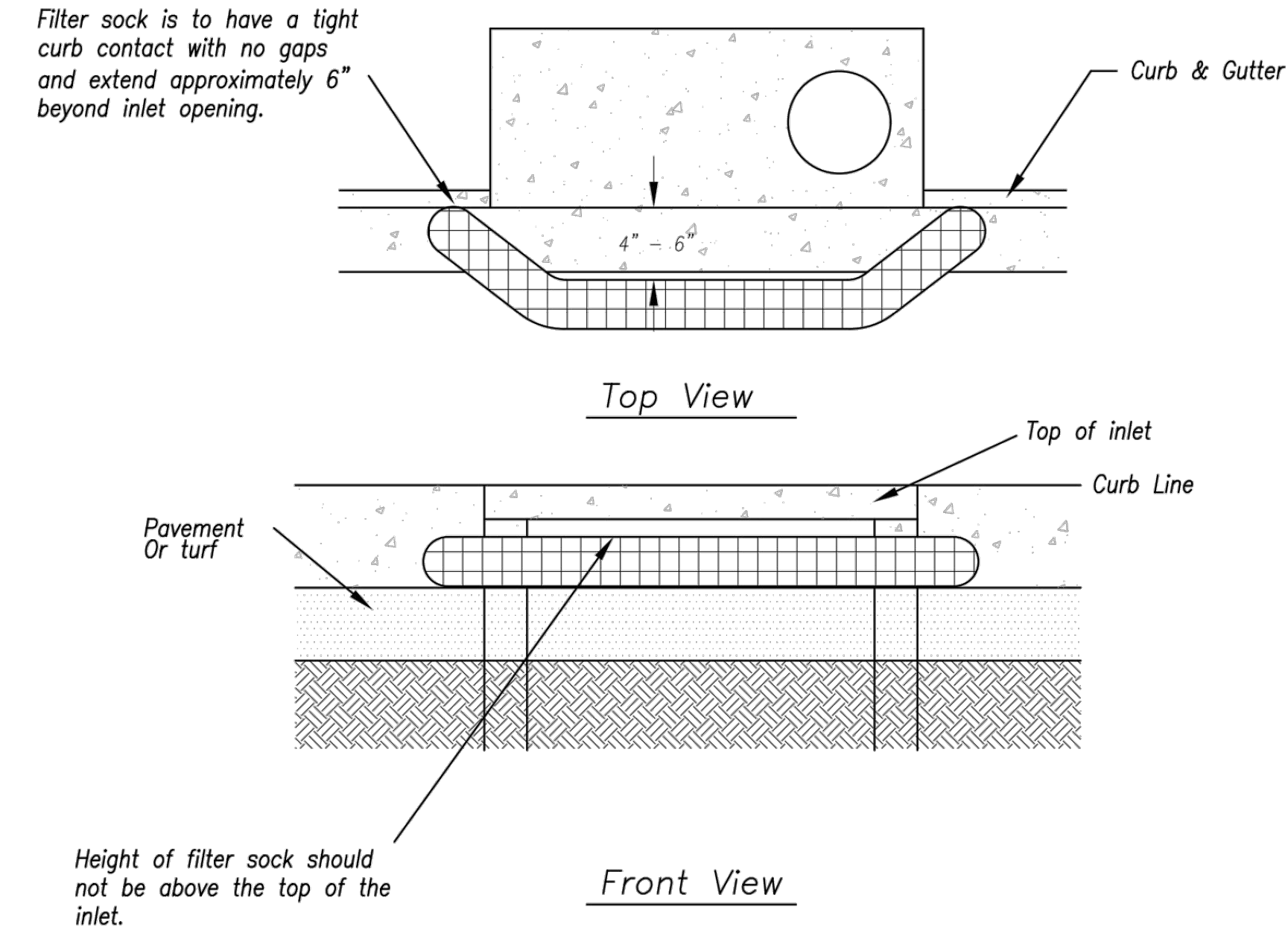
On Grade Curb Inlet Protection



EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

- Notes:
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
 2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
 3. Contractor to field verify ponding water shall not create a traffic hazard.

- Maintenance:
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
 3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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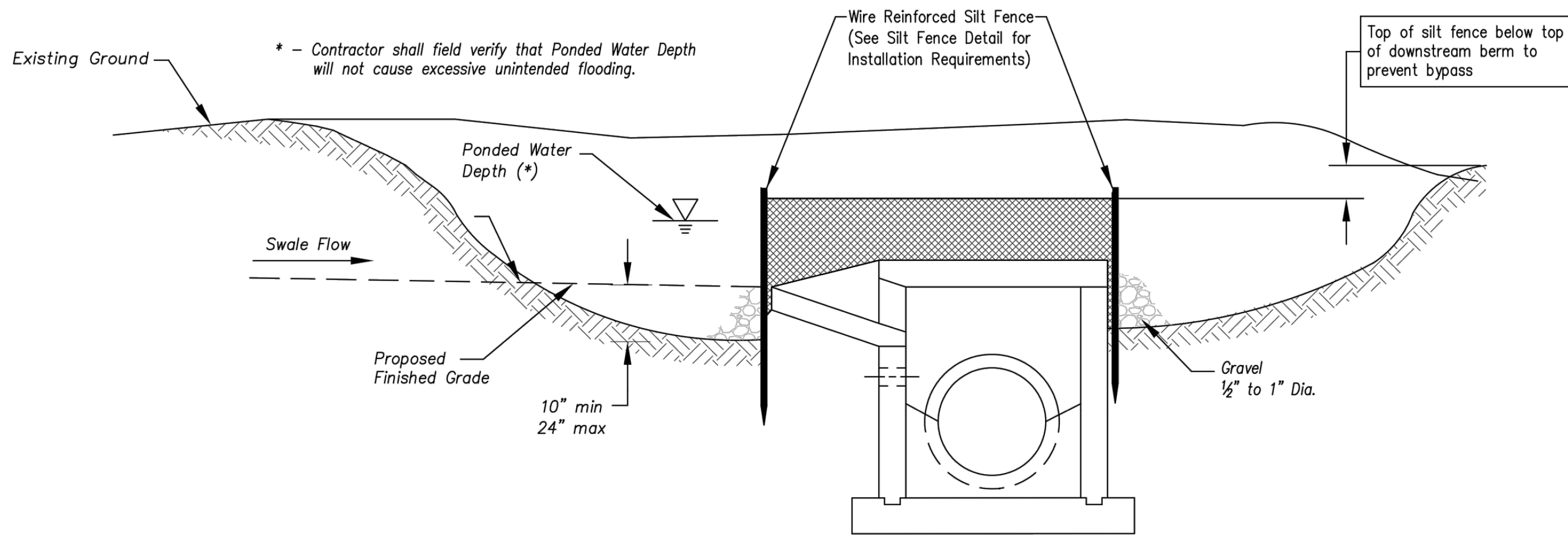
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY

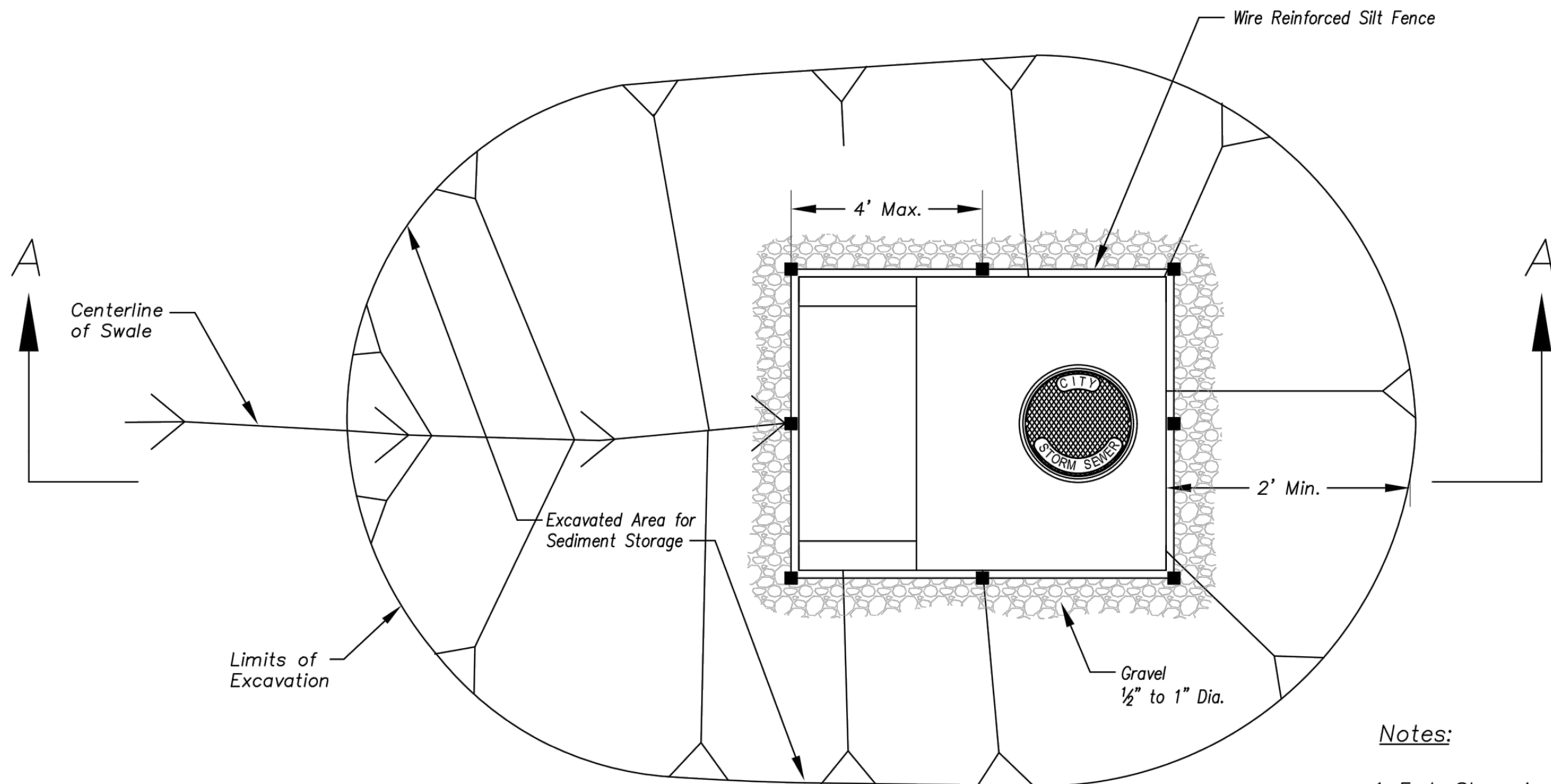
METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING
NUMBER ESC-06
ADOPTED:
10/24/2016



Section A-A
Not to Scale



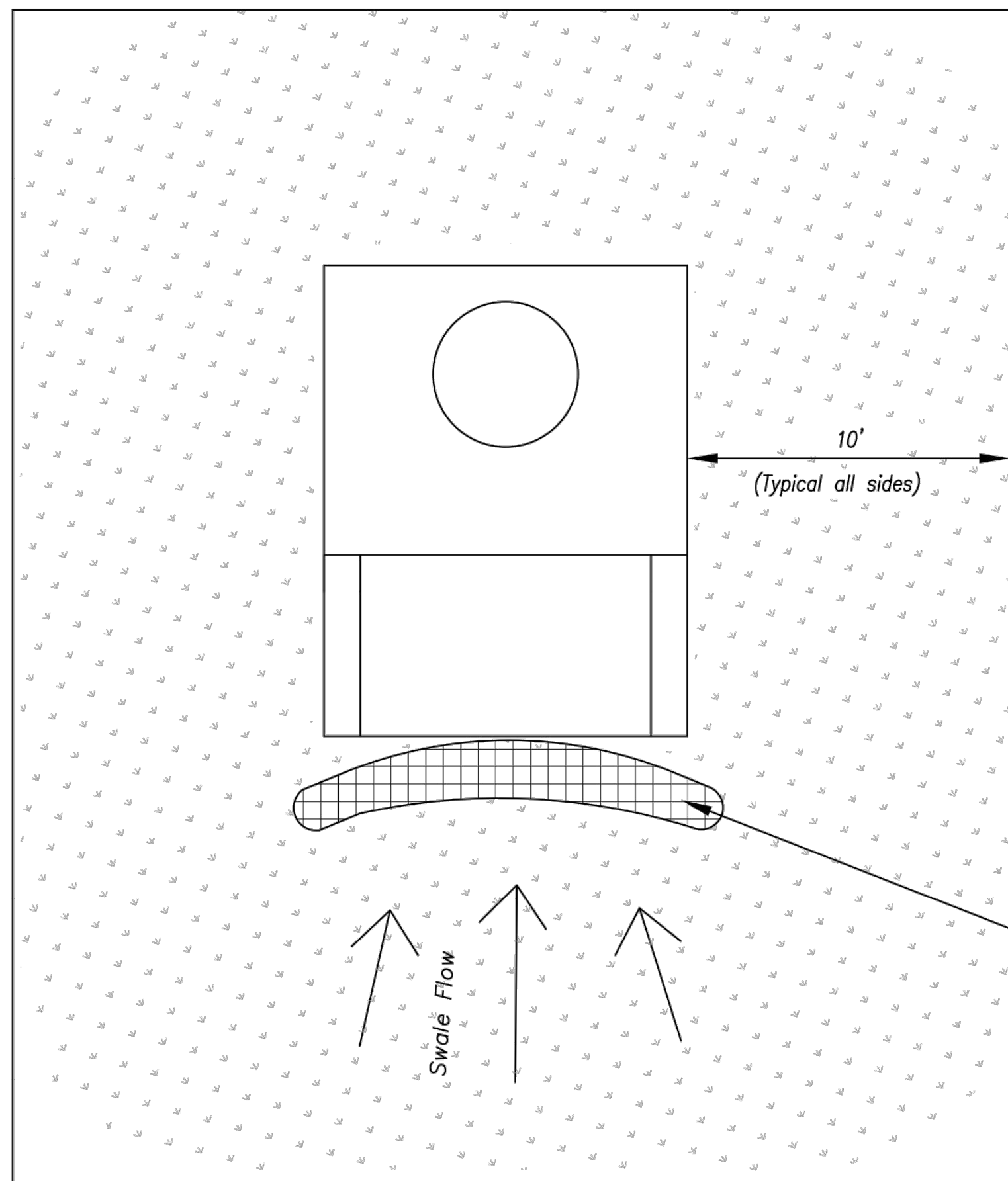
Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

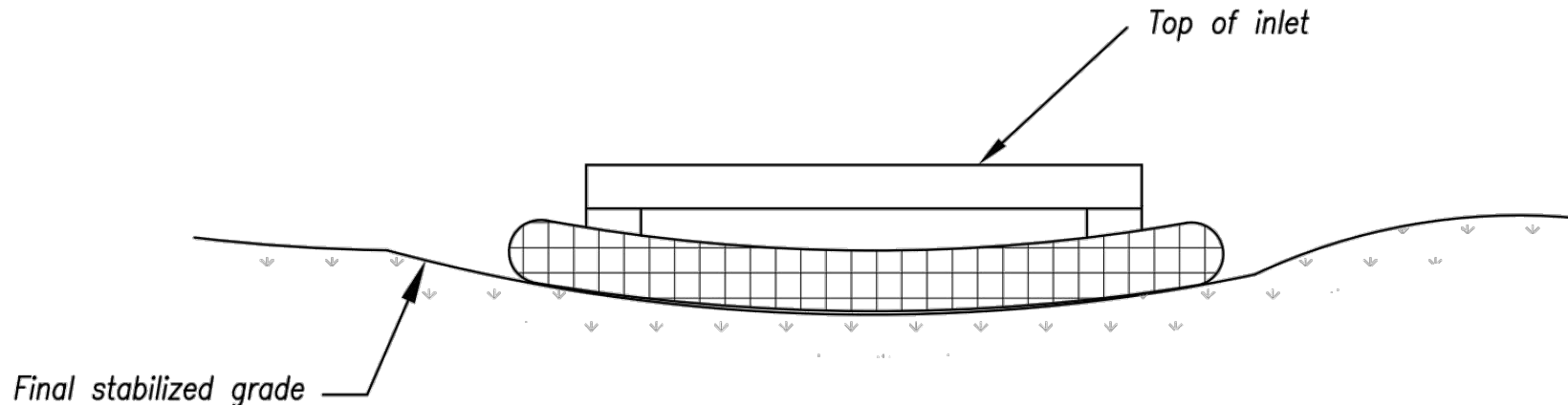
Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Modified from 2015 Overland Park Standard Details
for Erosion and Sediment Control.



Plan
Not to Scale



Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

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METRO CHAPTER

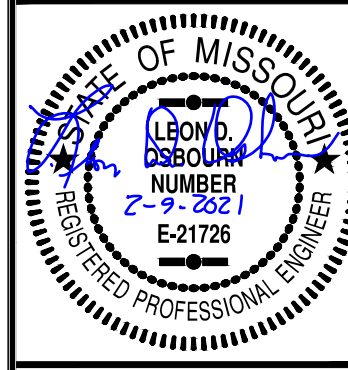
AREA INLET AND
JUNCTION BOX PROTECTION

STANDARD DRAWING
NUMBER ESC-07
ADOPTED:
10/24/2016

STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

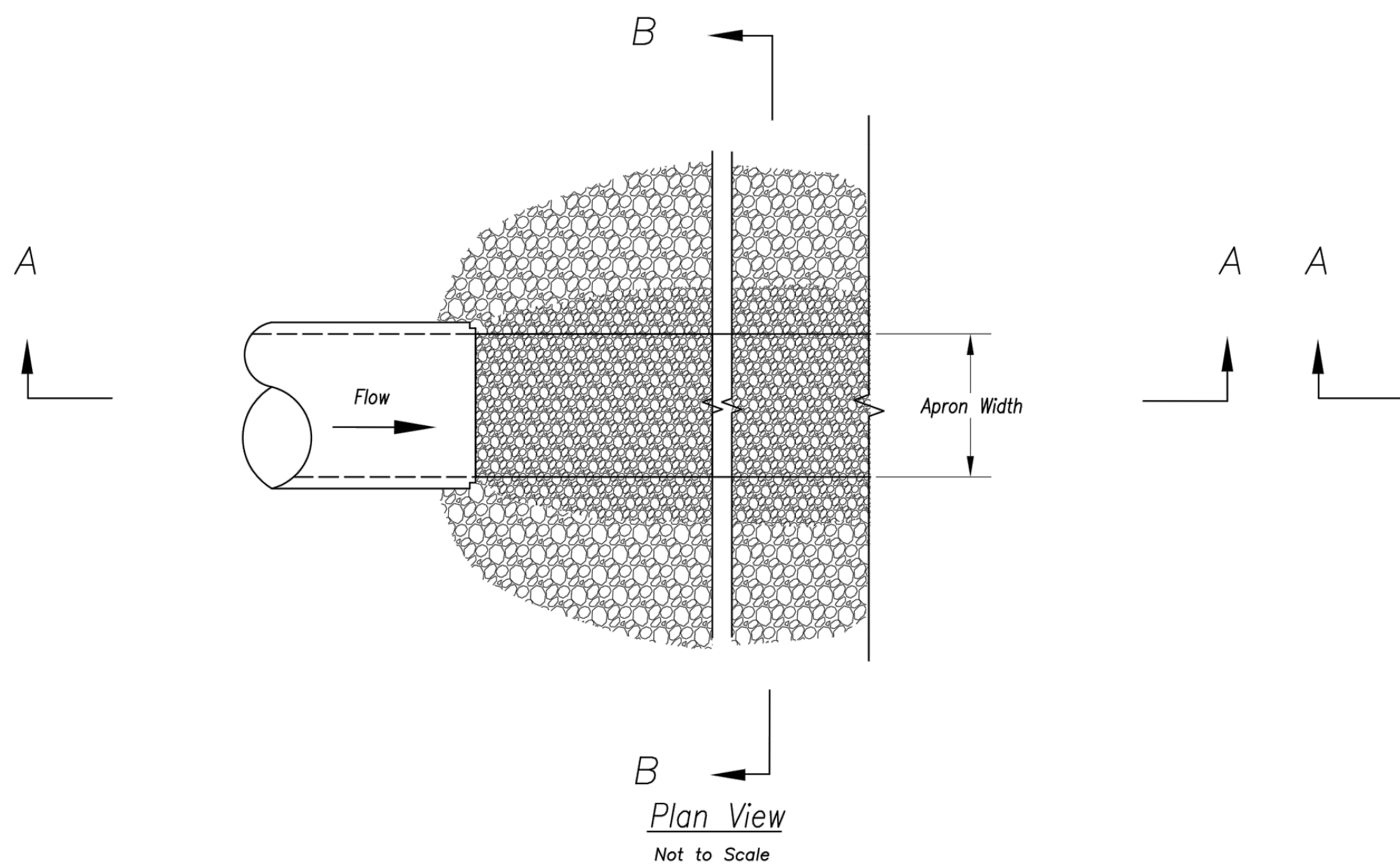
WATER LINE PLANS
DETAIL SHEET

PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
CFN	7067-1W_DET
SHEET	5

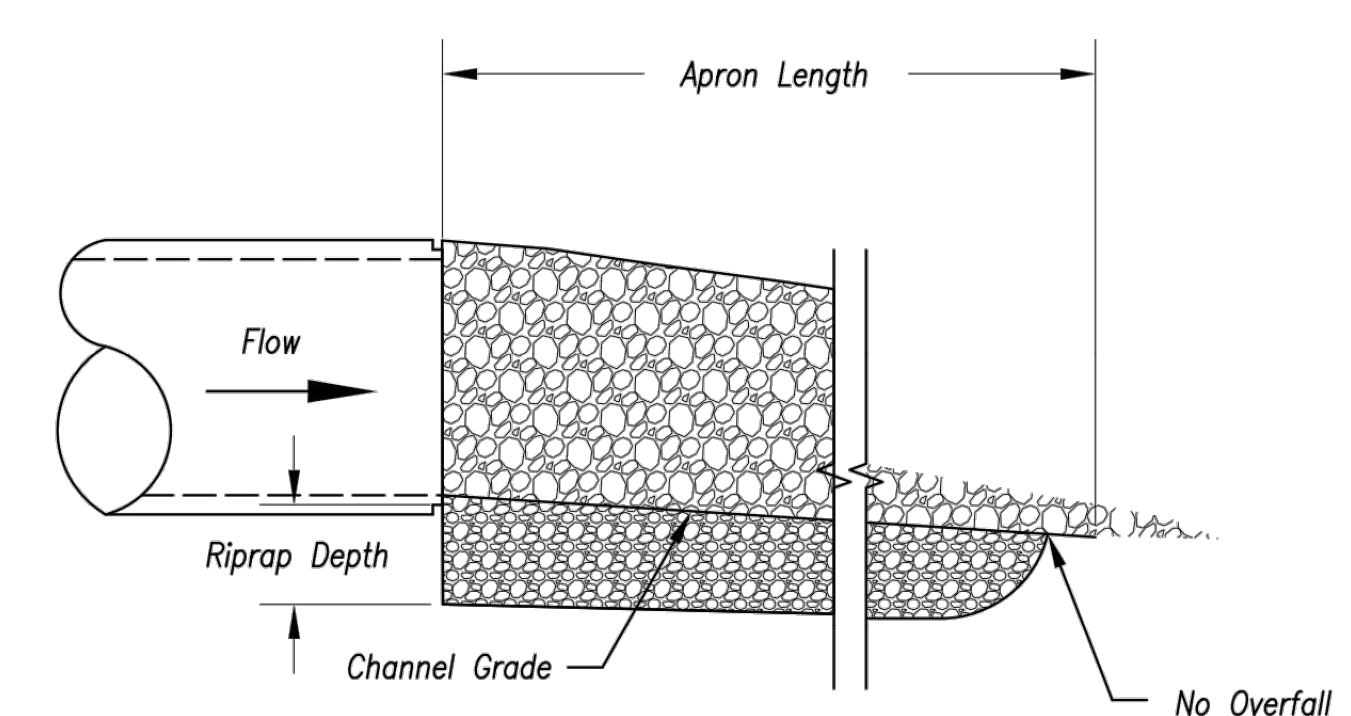


LEON D. OSBOURN
ENGINEER
MO # 021726

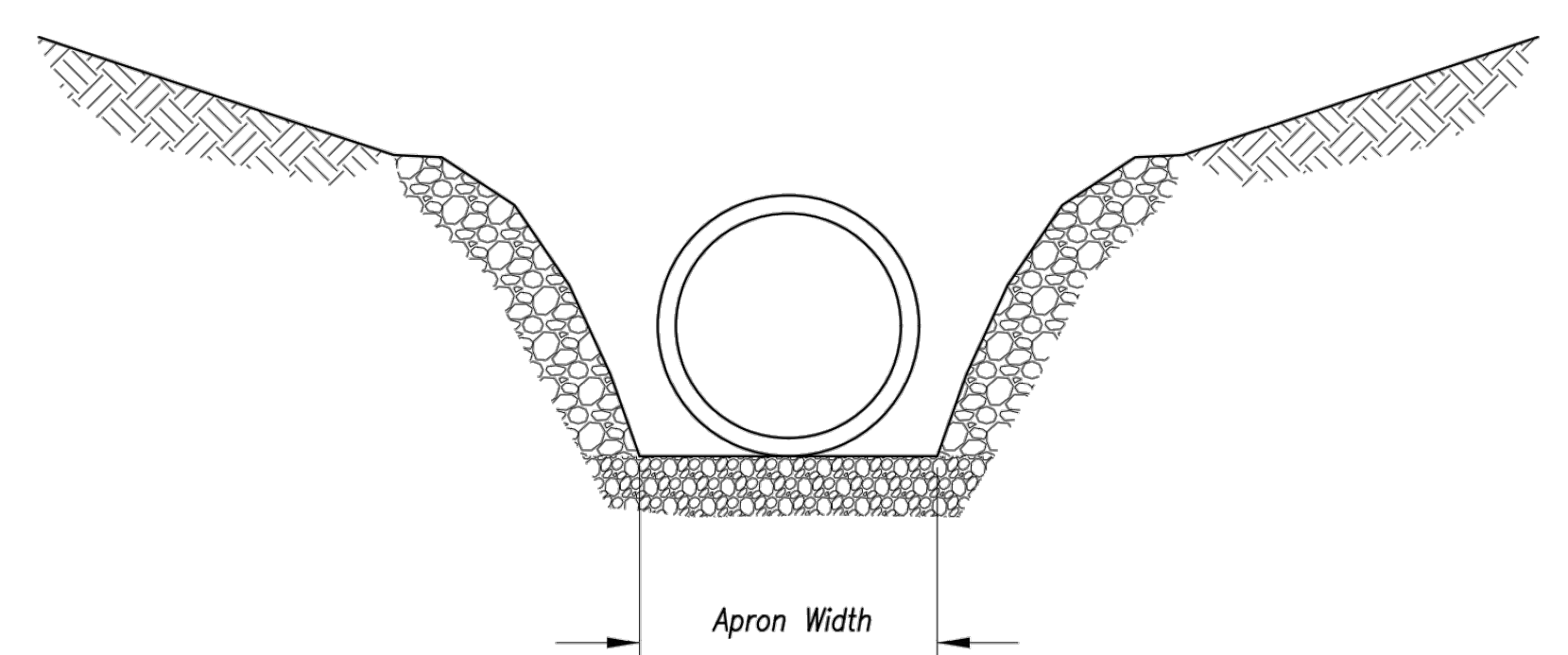
2319 N. JACKSON | P.O. BOX 1304
JUNCTION CITY, KANSAS 66441
PH. (785) 762-5040 | FAX (785) 762-7744
jdo@kveeng.com | www.kveeng.com
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EXPIRES 12/31/19



Plan View
Not to Scale

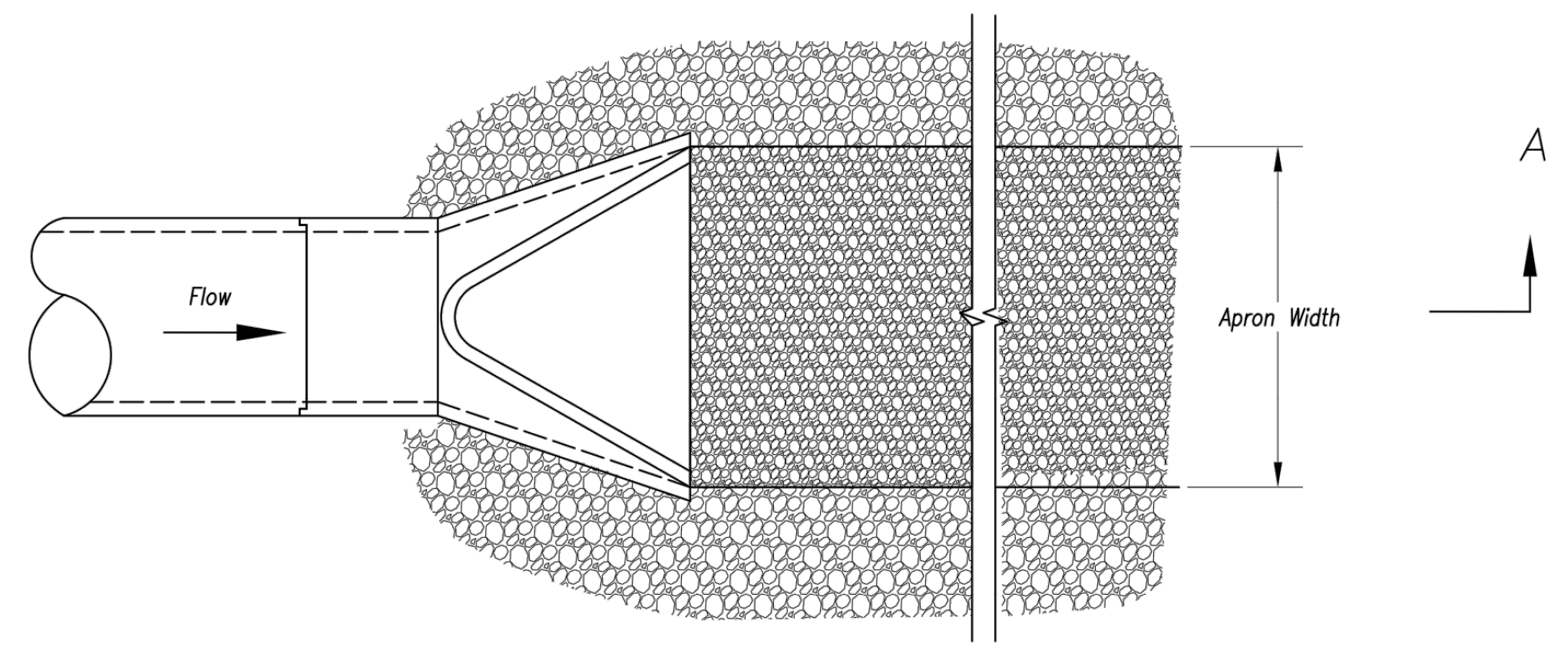


Section A-A
Not to Scale

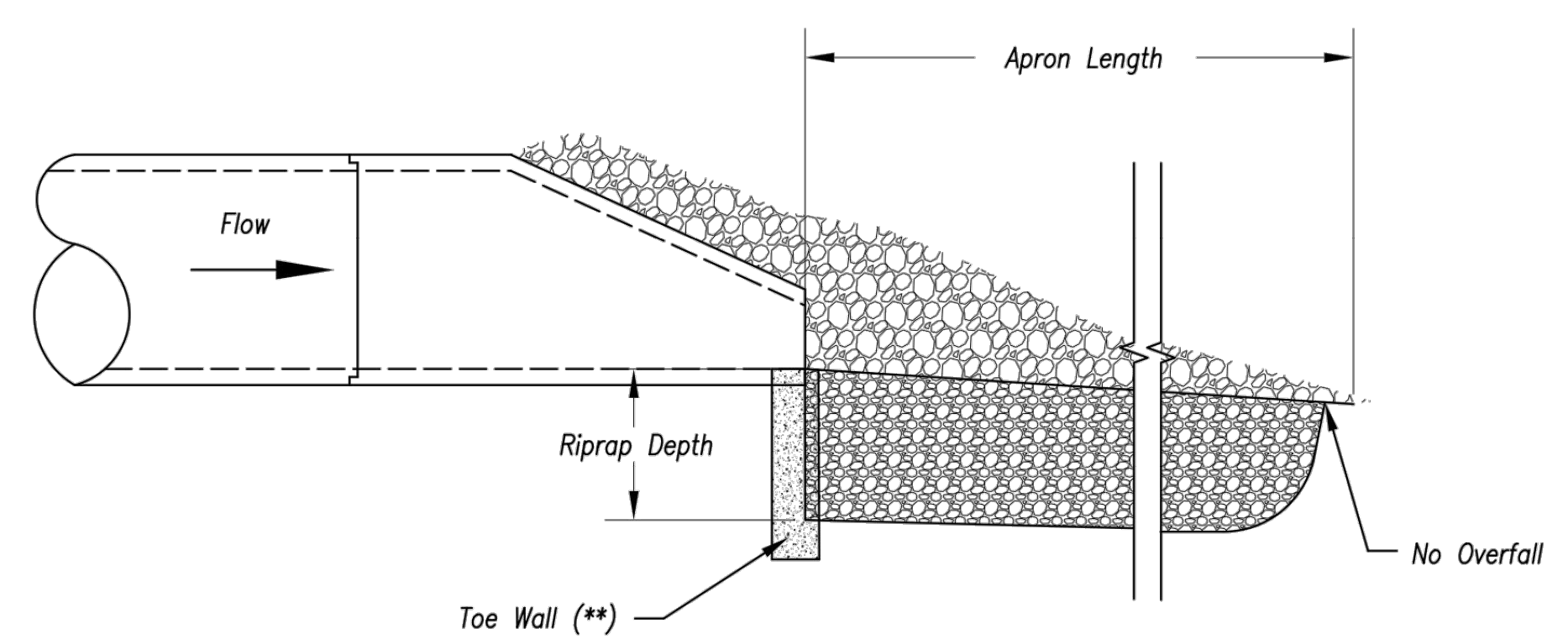


Section B-B
Not to Scale

OUTLET PROTECTION W/O END SECTION



Plan View
Not to Scale



Section A-A
Not to Scale

OUTLET PROTECTION WITH END SECTION

- Notes:
1. Rock all sides steeper than 3:1.
 2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
 3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
 4. Install riprap apron so that it is no higher than flowline of pipe.
 5. Reference APWA Specification 2650 for rock type, size, and placement.

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OUTLET PROTECTION

STANDARD DRAWING

NUMBER ESC-I4

ADOPTED:

10/24/2016