



S29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

[illegible]

PROJECT NO: 21KC10060

DRAWN BY: JK

CHECK BY: JB

ISSUED FOR: REVIEW

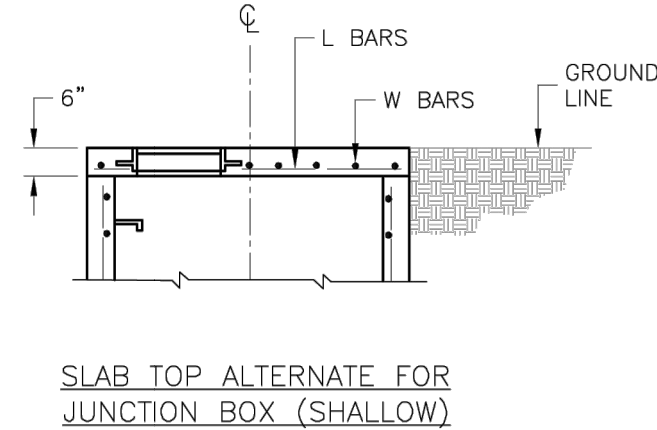
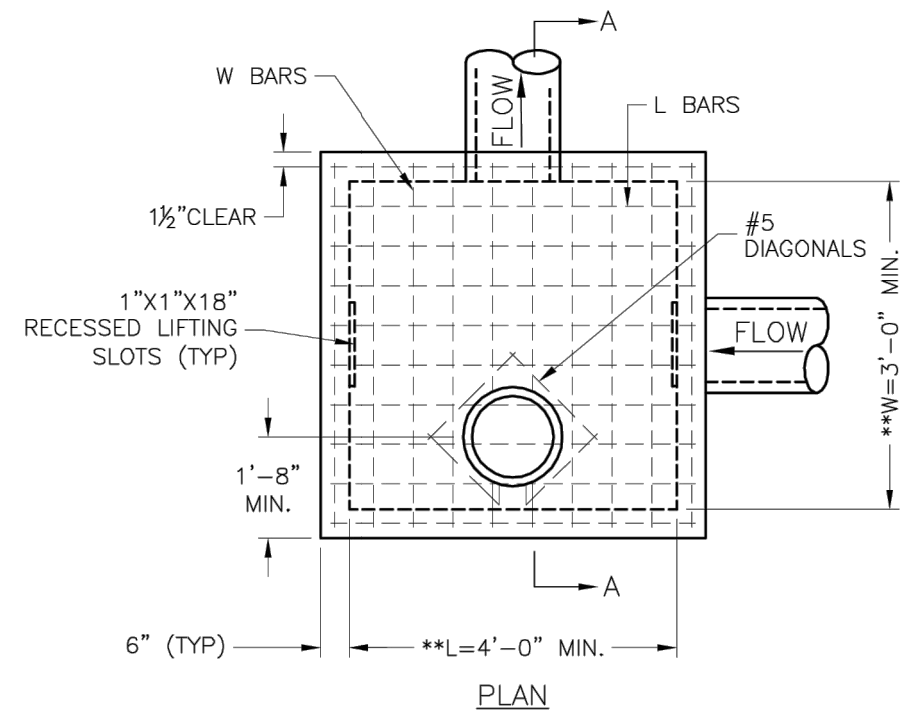
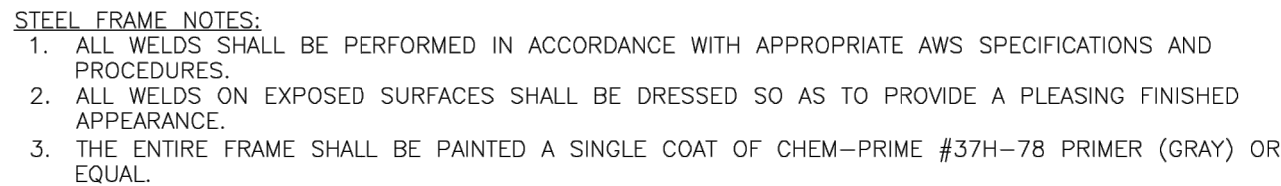
ISSUED DATE: 10/01/2024



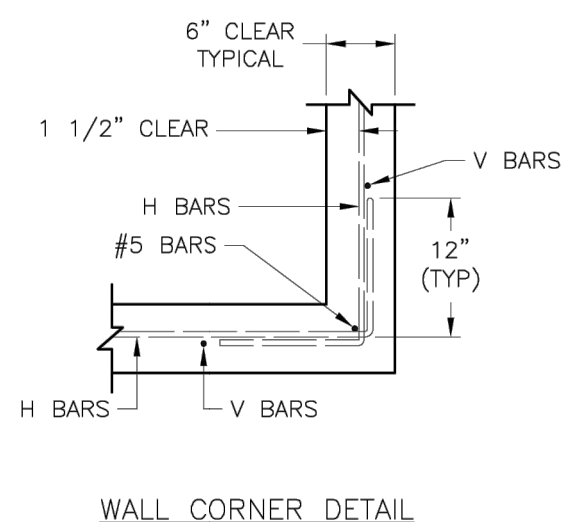
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COA 00062

STORM SEWER DETAILS

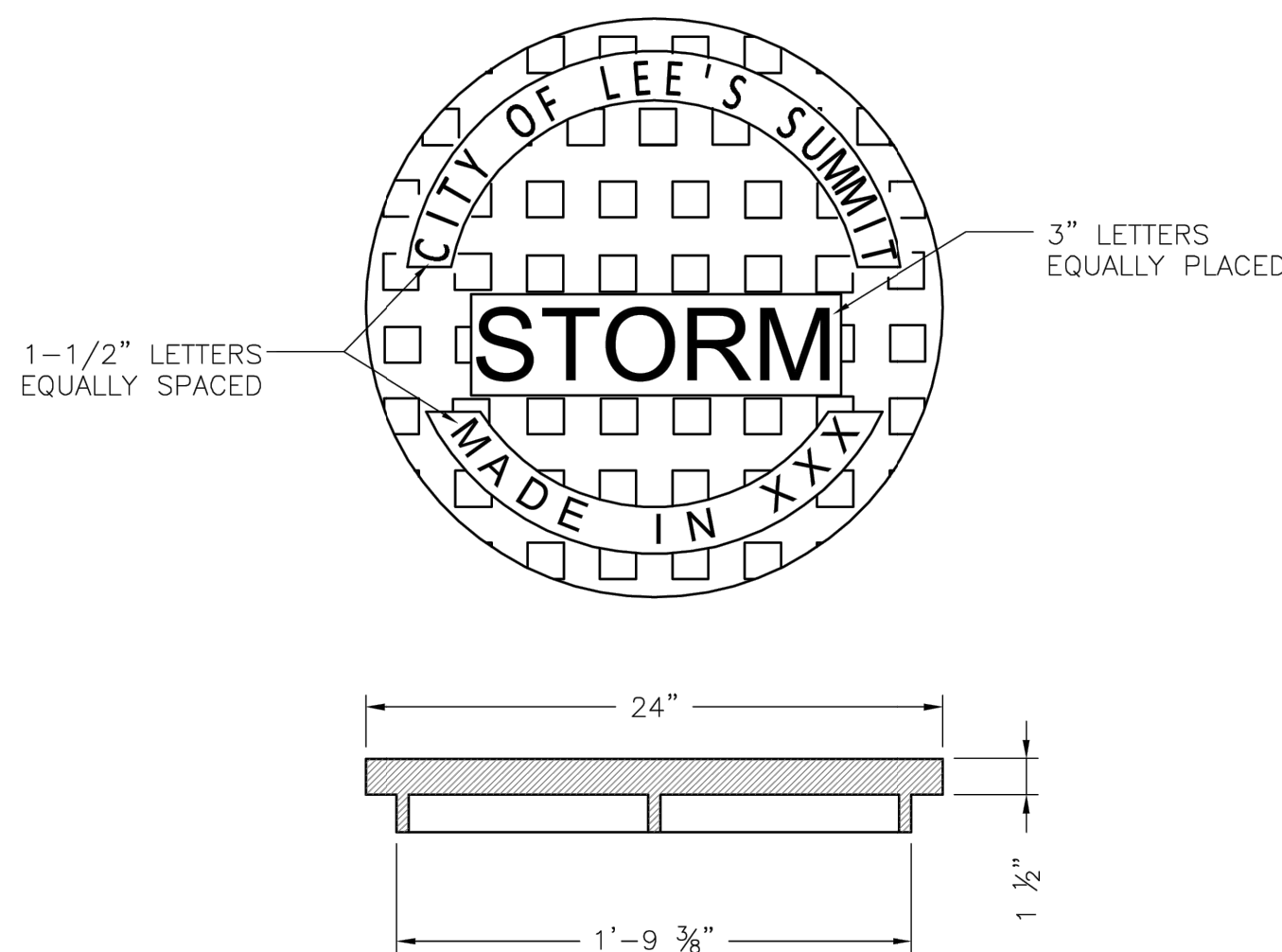
SHEET NUMBER
C702
66 OF 77



REINFORCING		
BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

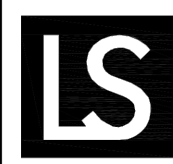


- GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE $\frac{3}{4}$ " CHAMFER STRIP OR $\frac{3}{4}$ " R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4" ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
6. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.



LEE'S SUMMIT
MISSOURI
ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64086

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

STORM MANHOLE COVER DETAIL

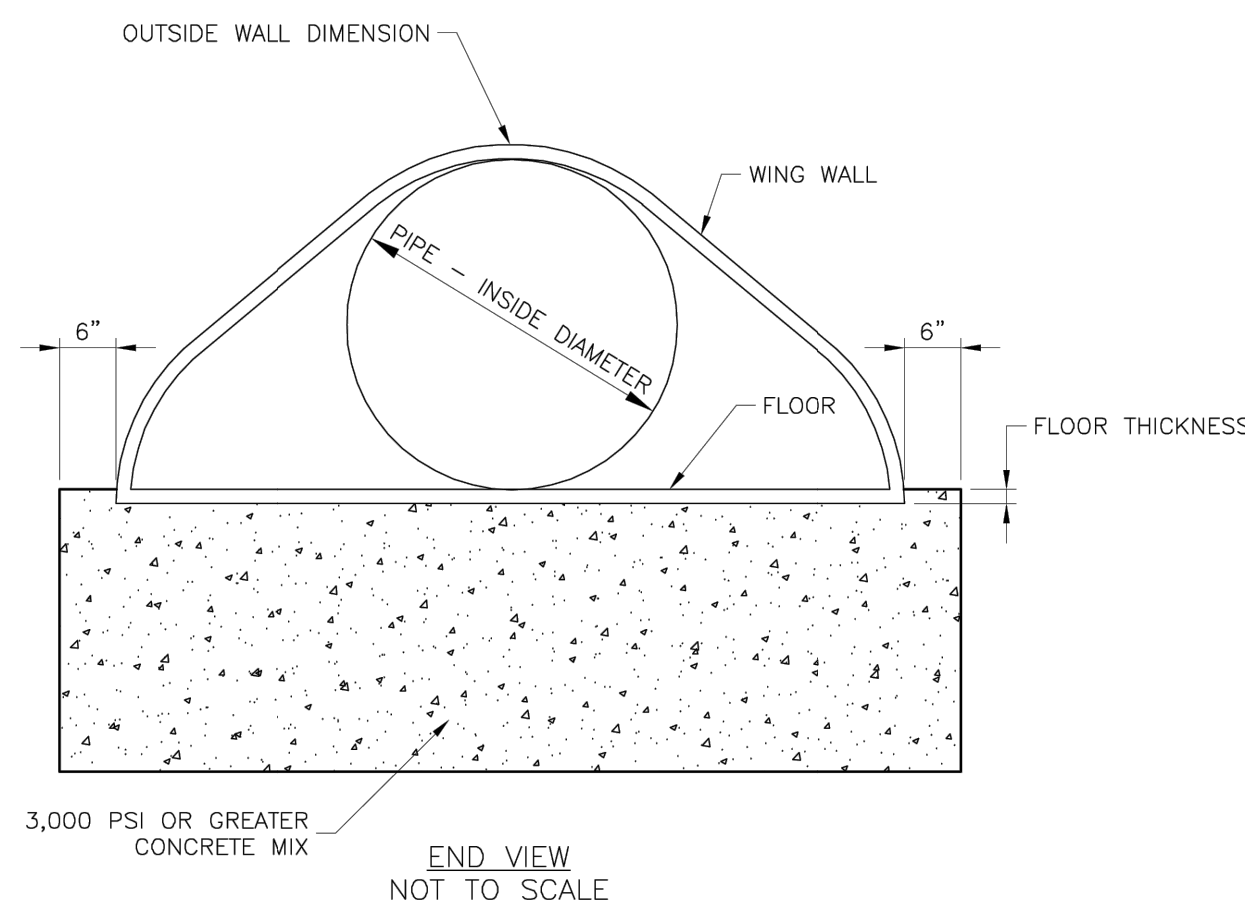
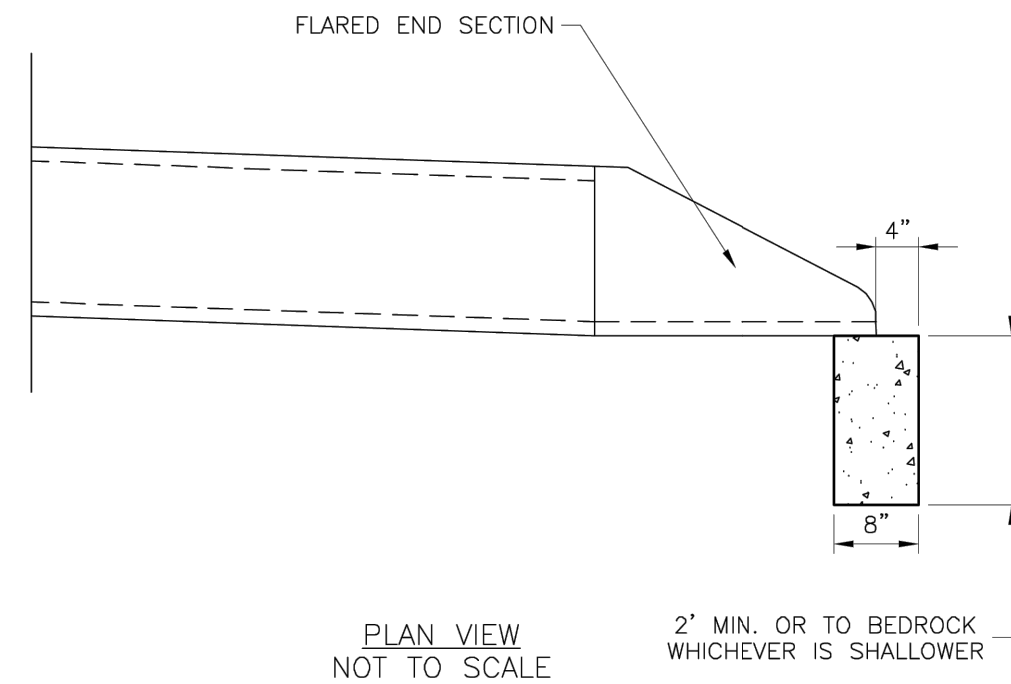
Date: 04/17

Drawn By: MJF

Checked By: DJ

STM-

STM-1



LEE'S SUMMIT
MISSOURI
ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64086

FLARED END SECTION SUPPORT DETAIL

Date: 04/17

STM

STM-3



S29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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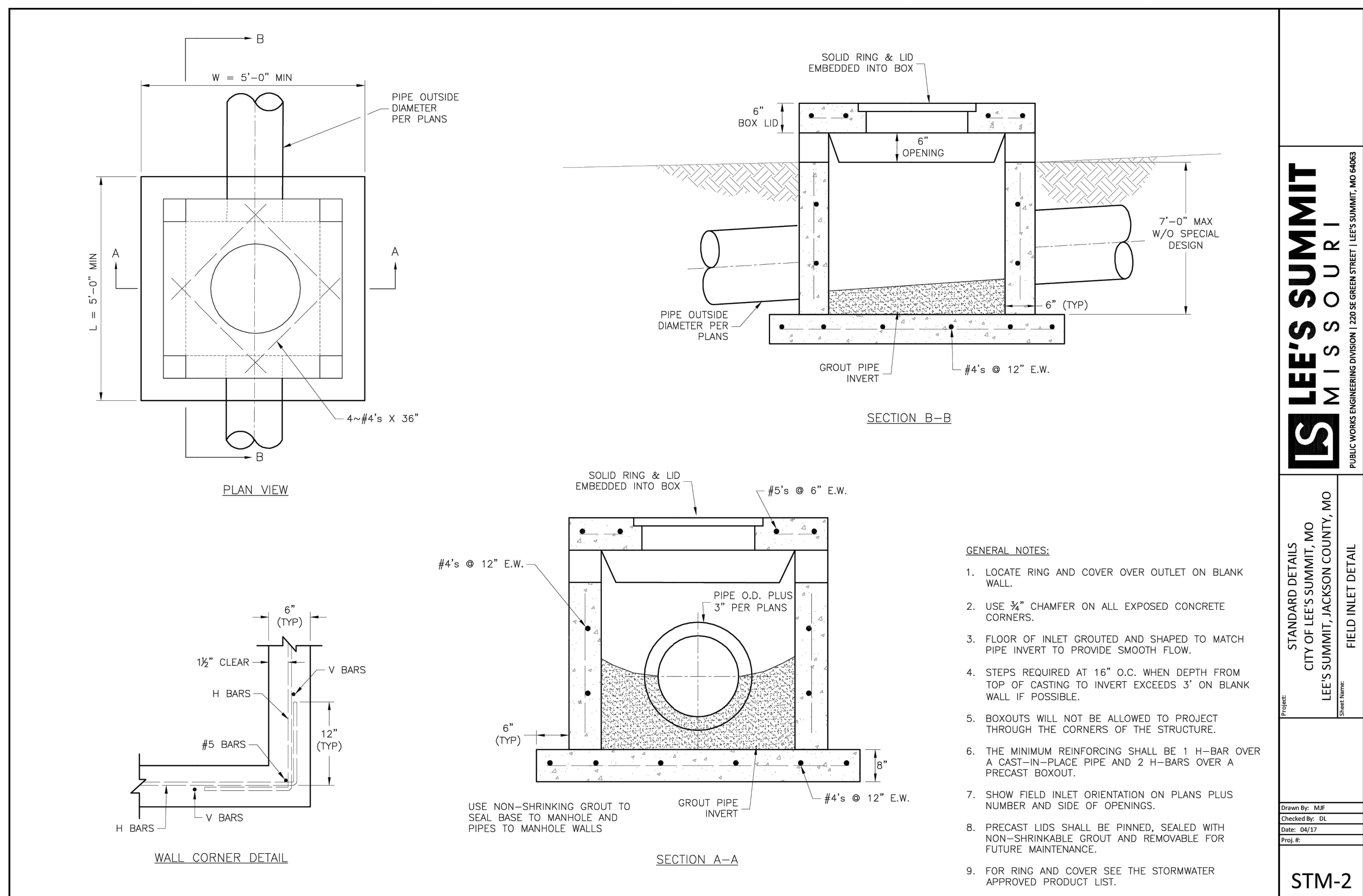
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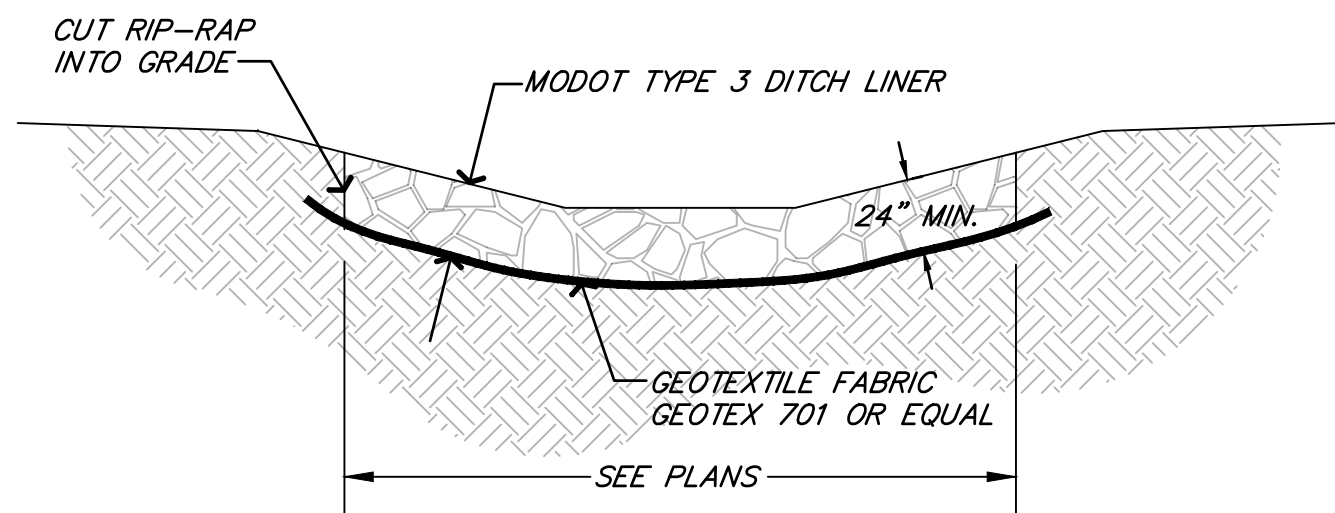
STORM SEWER DETAILS (2)

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- RIP-RAP NOTES:**
1. **ROCK TO BE USED FOR RIP-RAP SHALL CONSIST OF INDIVIDUAL ROCK FRAGMENTS THAT ARE DENSE, SOUND, AND RESISTANT TO ABRASION. THE ROCK SHALL BE FREE OF CRACKS, SEAMS, AND OTHER DEFECTS THAT WOULD TEND TO INCREASE THE DESTRUCTION OF THE INDIVIDUAL ROCK FRAGMENTS DUE TO WATER AND FRONT ACTION. REFER AFWA SECTION 2600.**
 2. **24" RIP-RAP SHALL HAVE A MINIMUM THICKNESS OF 24" AT ALL LOCATIONS SHOWN ON THE PLANS. RIP-RAP SHALL BE PLACED ON GEOTEXTILE FABRIC AS SHOWN IN THE DETAIL.**
 3. **24" THICK RIP-RAP SHALL BE WELL-GRADED ($D_{50} = 14"$) AND CONFORM TO THE TABLE BELOW:**

<u>PERCENT LIGHTER</u>	<u>WEIGHT_LBS.</u>
100	700
85-95	525
30-50	175
0-15	30
 4. **A SAMPLE OF ALL ROCK TO BE PLACED SHALL BE SET ASIDE AT A QUARRY CHOSEN BY THE CONTRACTOR AND VISUALLY INSPECTED BY THE CONTRACTOR FOR QUALITY TO ENSURE ROCK MEETS ALL REQUIREMENTS PRIOR TO DELIVERY.**



RIPRAP DETAILS
NOT TO SCALE

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY
COMPACTED IN MAX. 4" LIFTS

INITIAL BACKFILL

-UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY
COMPACTED IN MAX. 4" LIFTS

-UNDER OPEN AREAS

1/2"-3/4" CLEAN AGGREGATE, HAND TAMPED OR MECHANICALLY
COMPACTED IN MAX. 4" LIFTS

FINAL BACKFILL

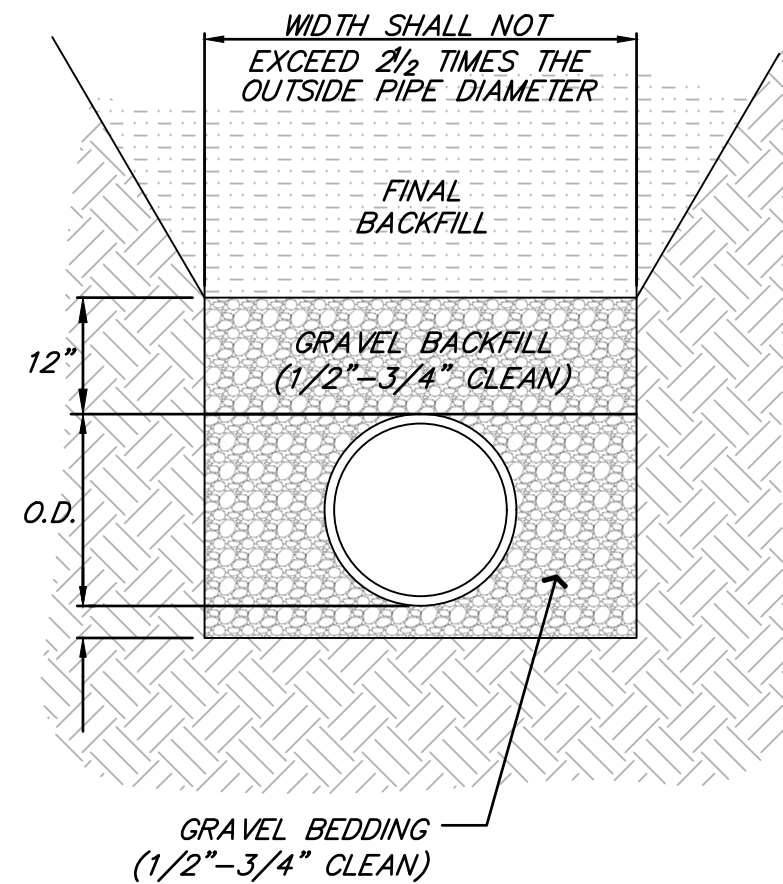
-UNDER PAVED AREAS OR WITHIN 4' HORIZONTAL OF PAVED AREAS

ON-SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN
MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH,
CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8",
COMPACTED TO 95% OF STANDARD DENSITY PER ASTM D-698

-UNDER OPEN AREAS

ON-SITE OR IMPORTED MATERIAL FREE OF MUCK, FROZEN
MATERIAL, EXCESS MOISTURE, ORGANICS, TOPSOIL, RUBBISH,
CONSTRUCTION DEBRIS, ROCK OR BRICK LARGER THAN 8",
COMPACTED TO 90% OF STANDARD DENSITY PER ASTM D-698

BEDDING DEPTH BELOW PIPE		
PIPE DIAMETER	IN SOIL	IN ROCK
24" AND LESS	4"	6"
27" THRU 60"	4"	9"



PIPE BEDDING DETAIL
NOT TO SCALE

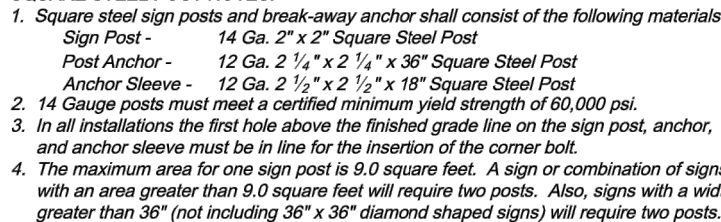
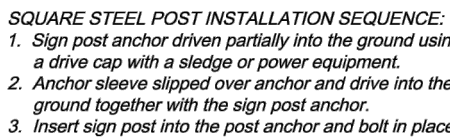
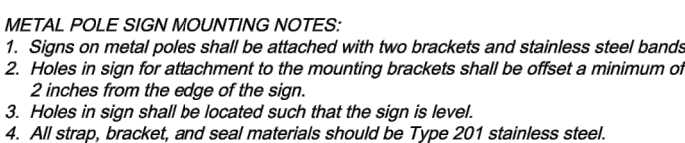
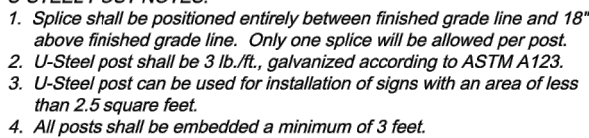
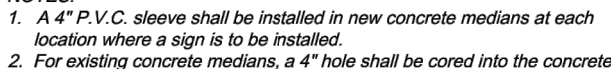
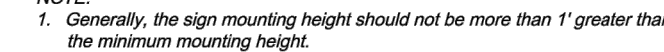


FORMERLY ANDERSON ENGINEERING

**COBEY CREEK - 2ND
PLAT**

[illegible]

ISSUED DATE: 10/01/2024



2

CLAYTON
PROPERTIES GROUP
COBEY CREEK - 2ND
PLAT

S29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

REVISIONS

NO.	DESCRIPTION	DATE

DRAWING INFORMATION

PROJECT NO: 21KC10060

DRAWN BY: JK

CHECK BY: JB

ISSUED FOR: REVIEW

ISSUED DATE: 10/01/2024



ISSUED BY: JEFFREY BARTZ

LICENSE NO: PE - 2012022594

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Engineering Corporation
COA 00062

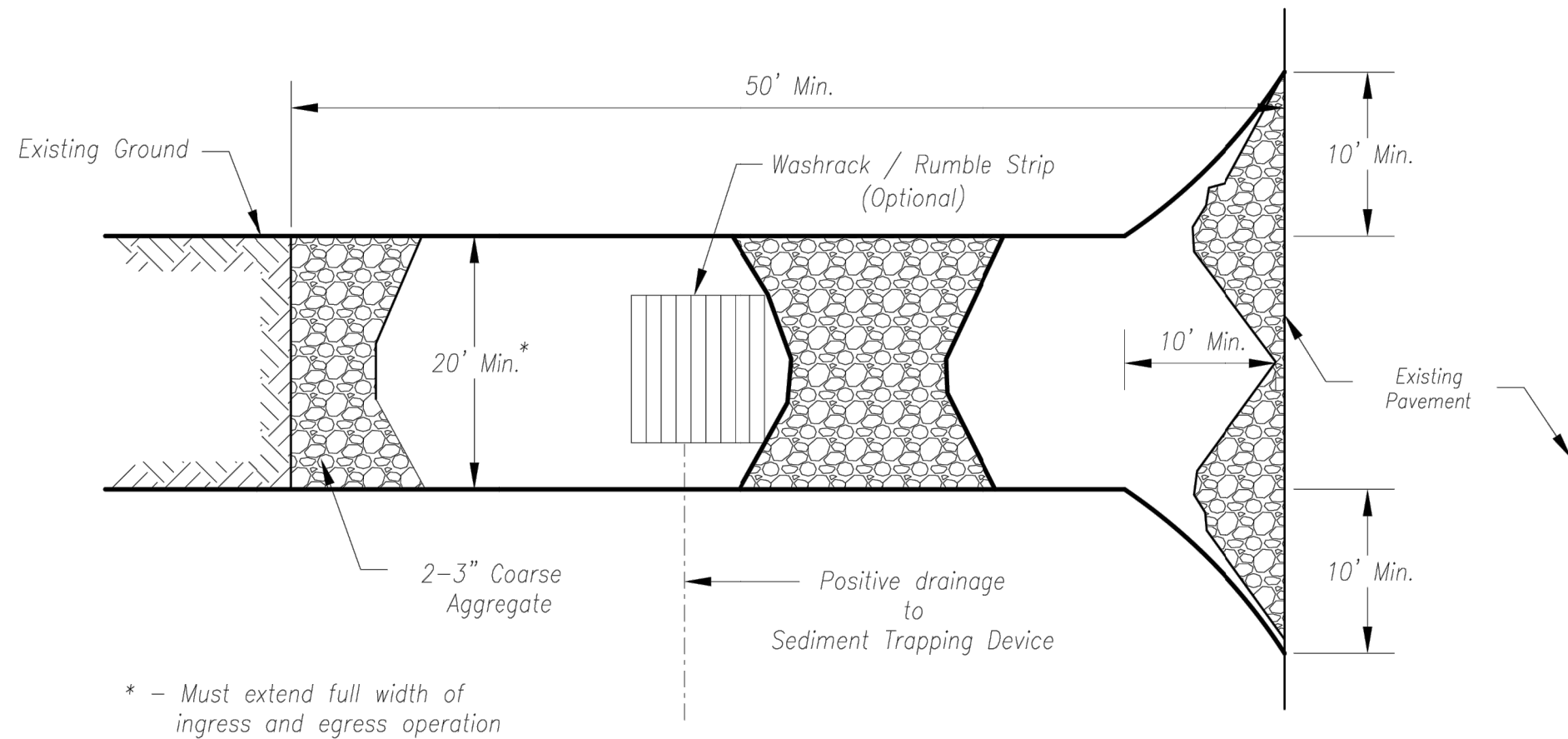
SHEET TITLE

CONSTRUCTION
ENTRANCE
DETAILS

SHEET NUMBER

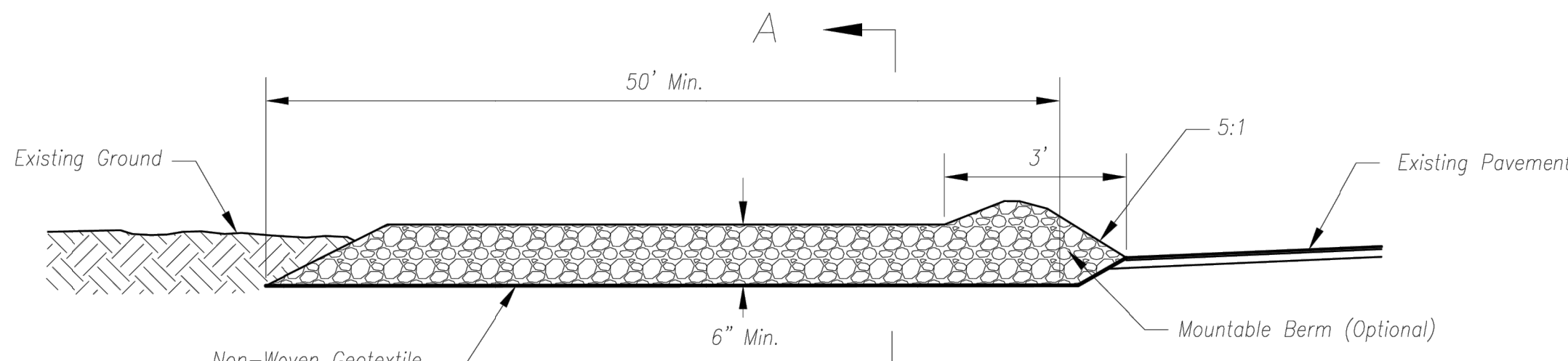
C800

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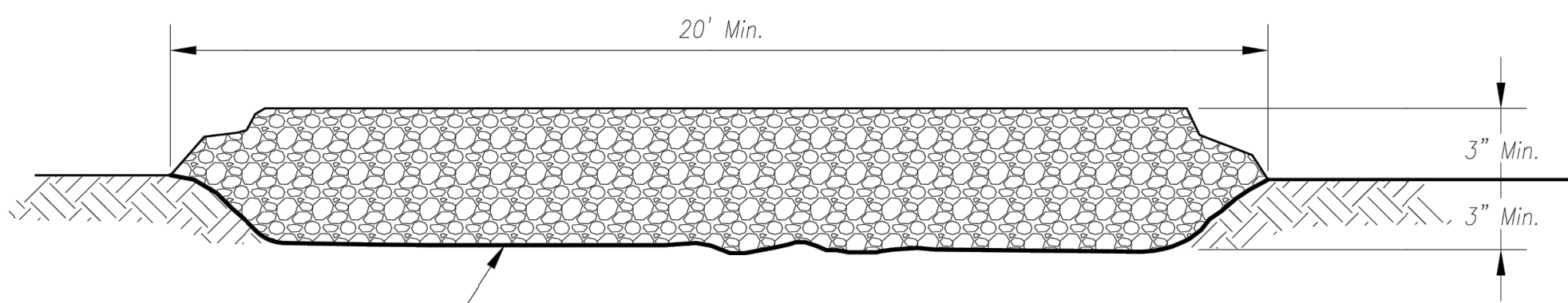
Plan View

Not to Scale



Side Elevation

Not to Scale



Section A-A

Not to Scale

Notes for Construction Entrance:

- Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
- Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
- 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.
- Install pipe under the entrance if needed to maintain drainage ditches along public roads.
- Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
- Divert all surface runoff and drainage from the entrance to a sediment control device.
- If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

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

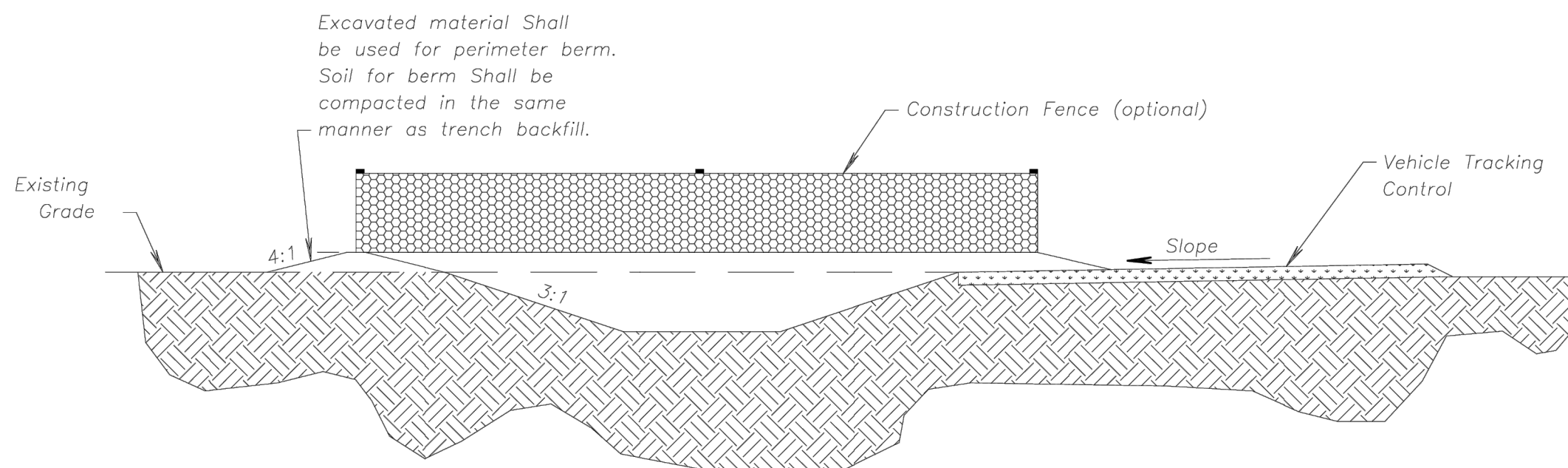
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

- Concrete washout areas shall be installed prior to any concrete placement on site.
- 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.
- Vehicle tracking control is required at the access point to all concrete washout areas.
- 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.
- 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:

- Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
- Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
- 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.
- Concrete washout areas shall remain in place until all concrete for the project is placed.
- 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

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY
METRO CHAPTER

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.



FORMERLY ANDERSON ENGINEERING

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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STATE OF MISSOURI
JEFFREY W. BARTZ
NUMBER
PE-2012022594
10/01/2024
PROFESSIONAL ENGINEER

A licensed Missouri
Engineering Corporation
COA 00062

SHEET NUMBER
C801
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1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.



C – Channel bottom / side slope vertices;

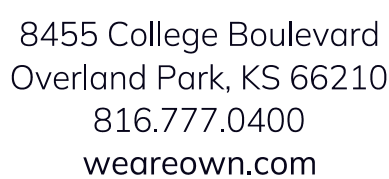
Kansas City Metro Chapter
APWA
AMERICAN PUBLIC WORKS ASSOCIATION



EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

S	STANDARD DRAWING NUMBER ESC-02
	ADOPTED: 10/24/2016

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



**CLAYTON
PROPERTIES GROUP**

**COBEY CREEK - 2ND
PLAT**

REVISIONS

[illegible]

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LICENSE NO: PE - 2012022594

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Engineering Corporation
COA 00062

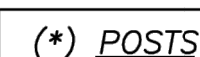
SHEET TITLE

SILT FENCE DETAILS

SHEET NUMBER

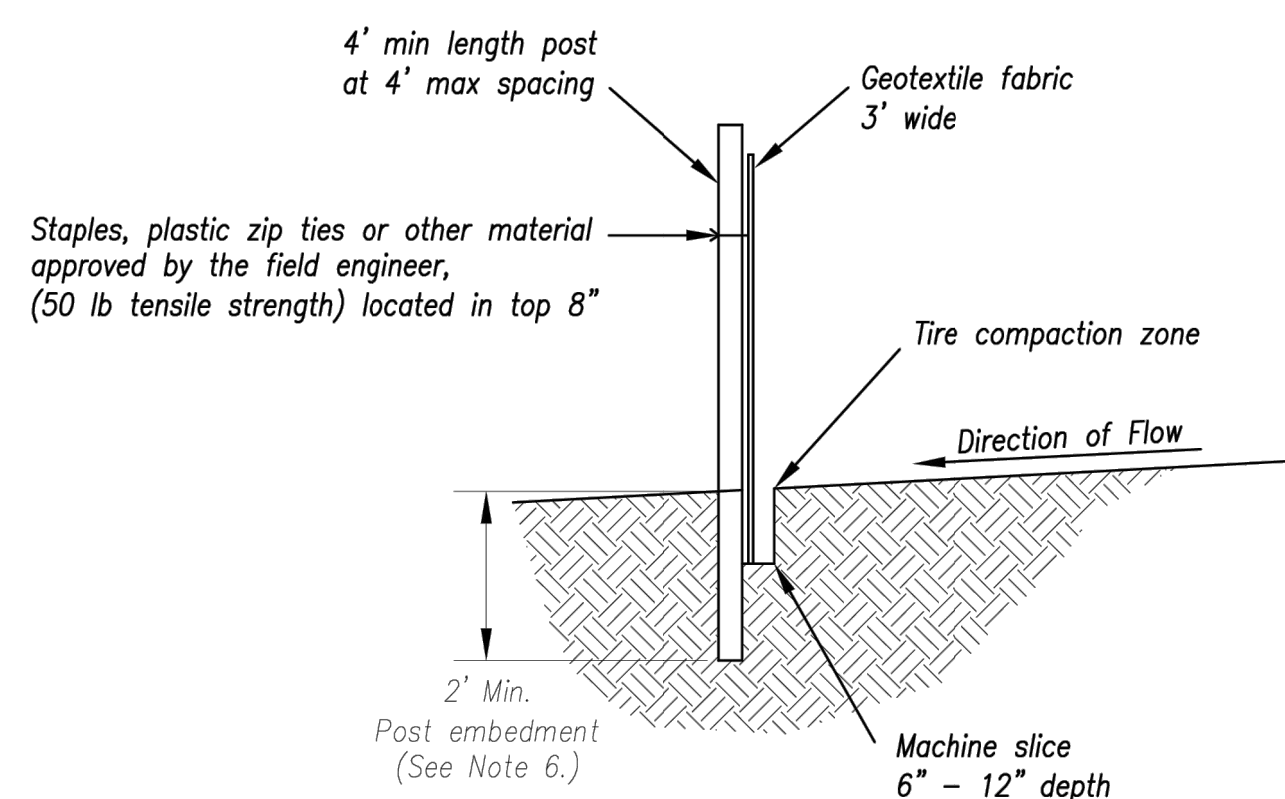
C802

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- MIN, LENGTH 4'
- HARDWOOD 1 $\frac{3}{16}$ " x 1 $\frac{3}{16}$ "
- NO.2 SOUTHERN PINE 2 $\frac{5}{8}$ " x 2 $\frac{5}{8}$ "
- STEEL 1.33 LB/FT

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288



SILT FENCE DETAILS

Not to Scale

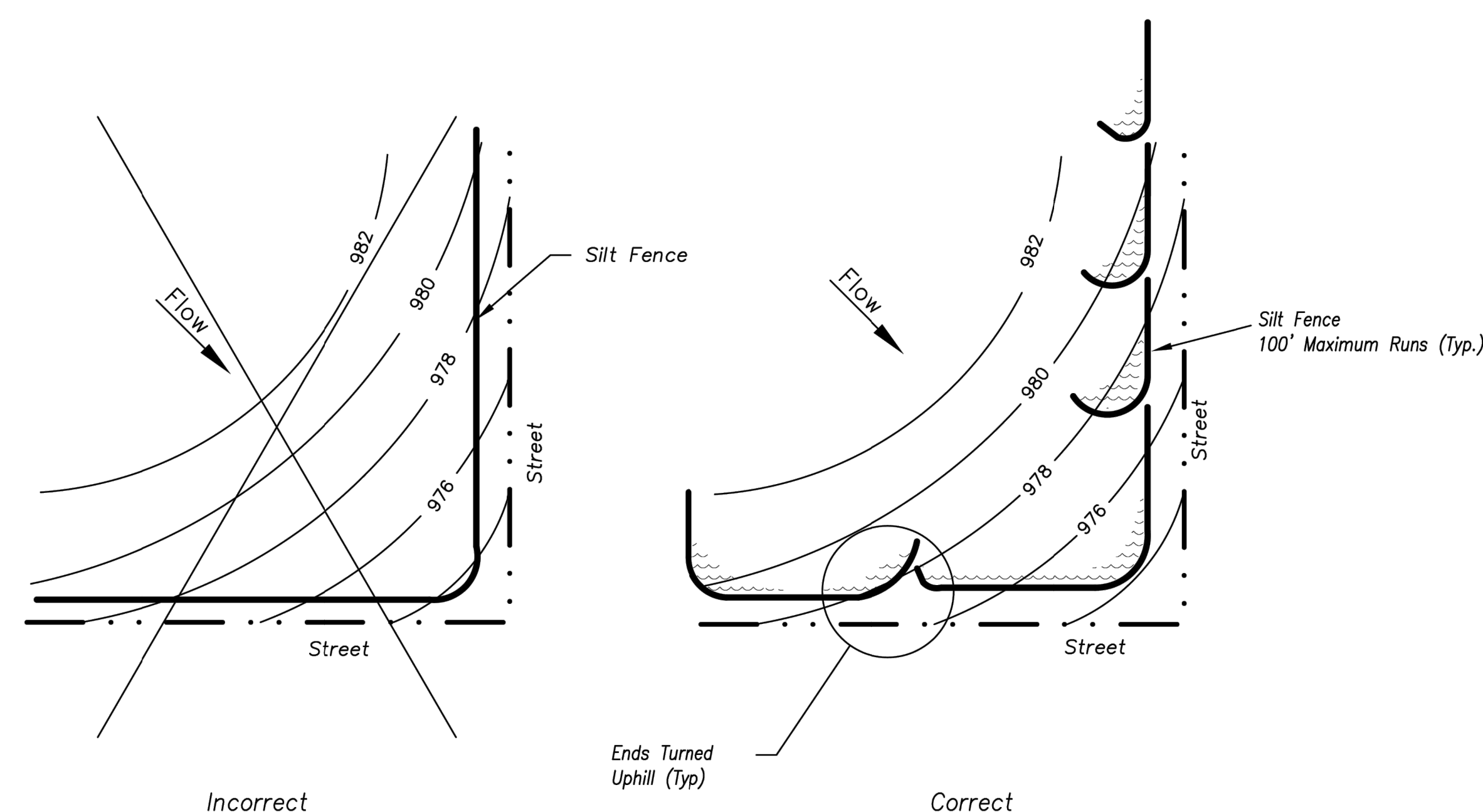
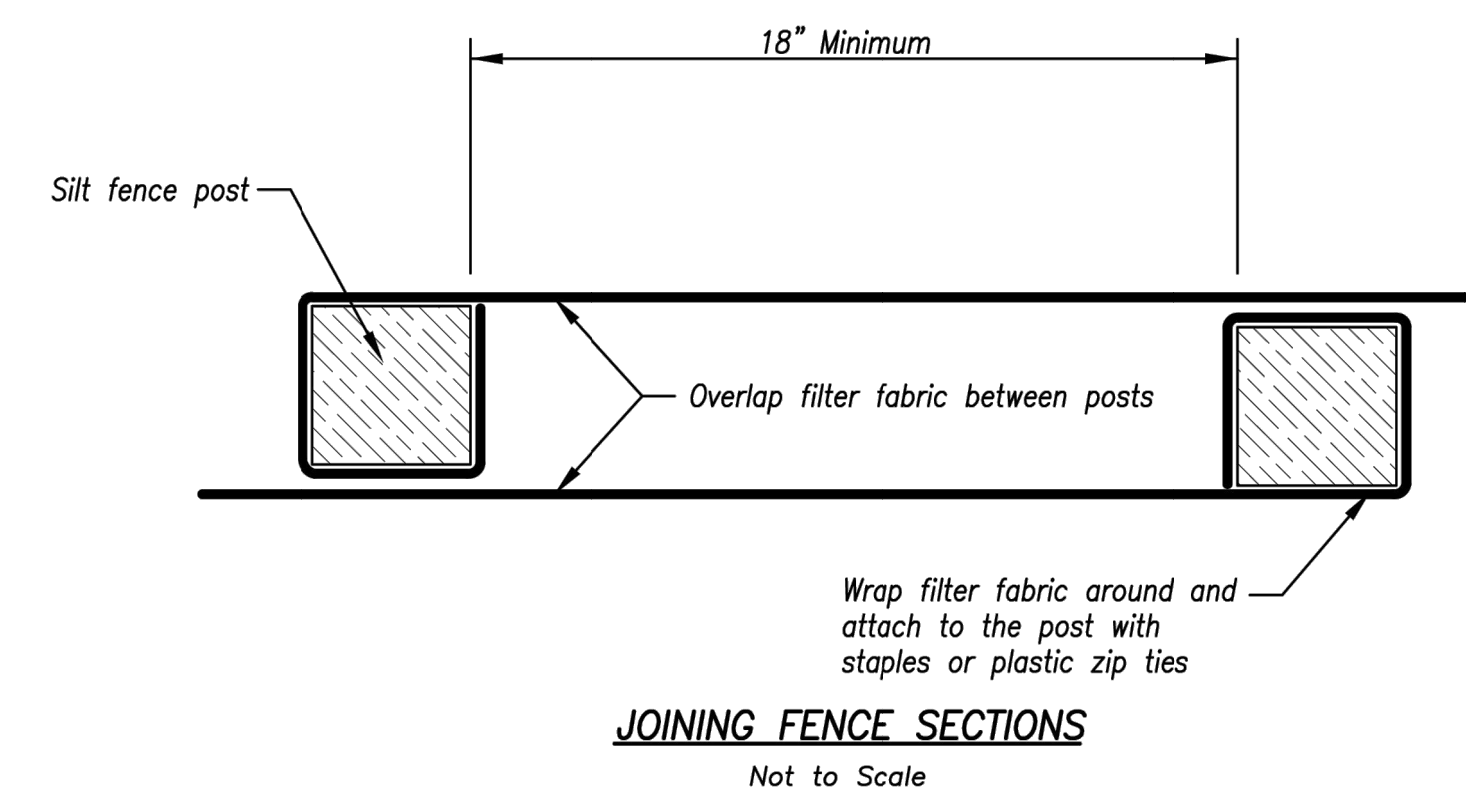
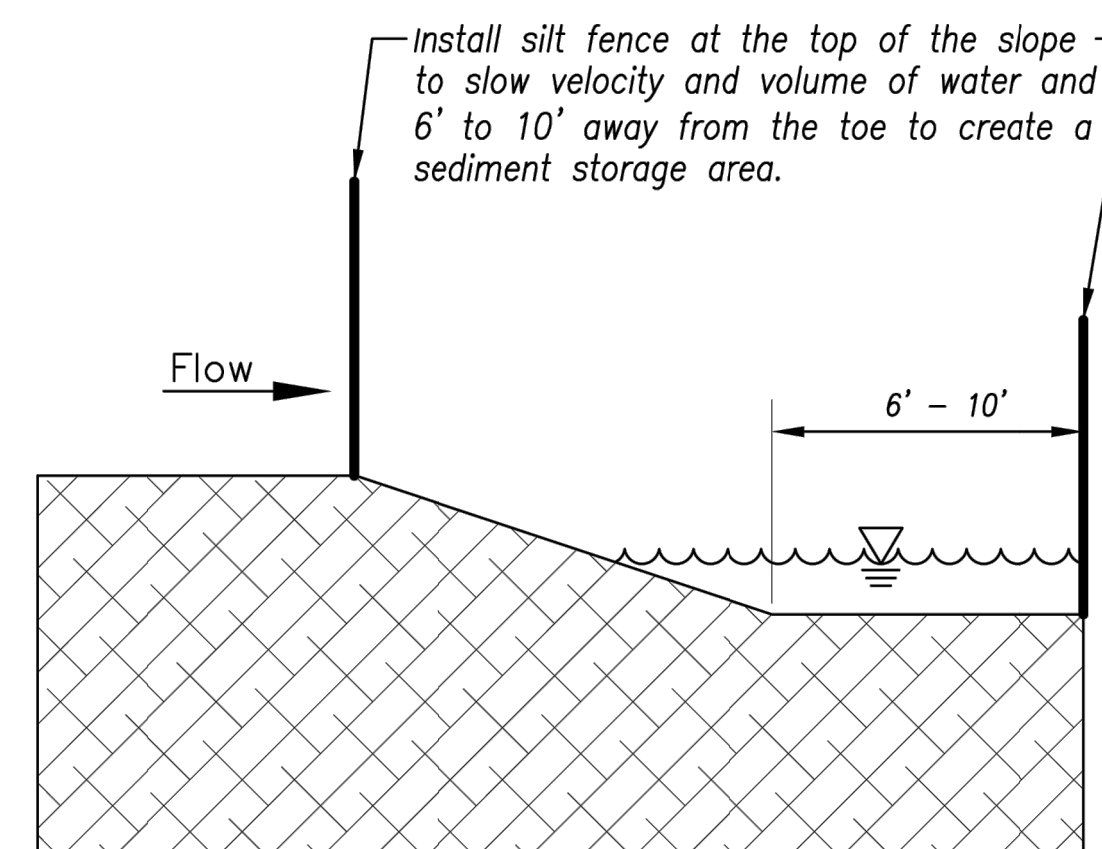


Figure A

SILT FENCE LAYOUT

Not to Scale



AMERICAN PUBLIC WORKS ASSOCIATION



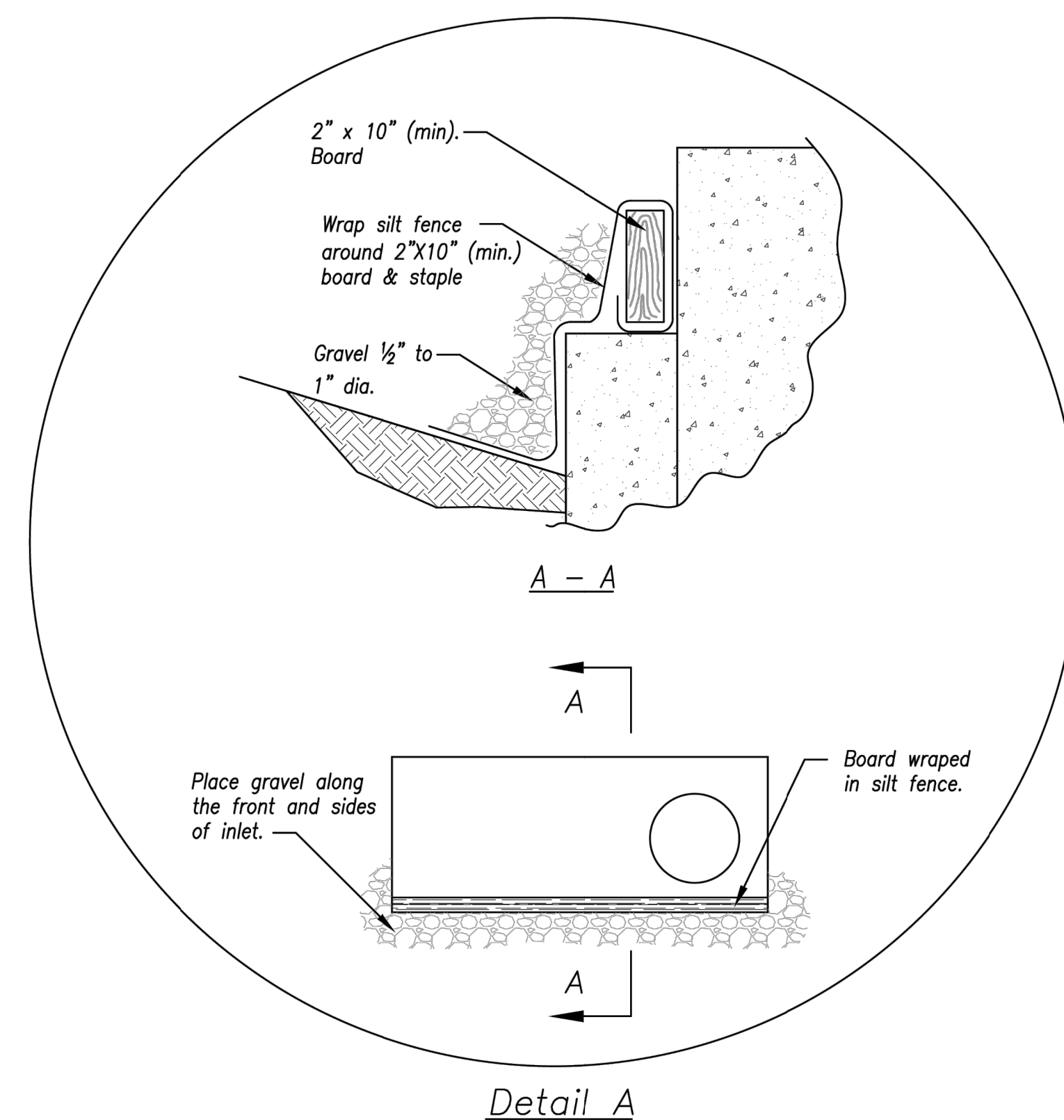
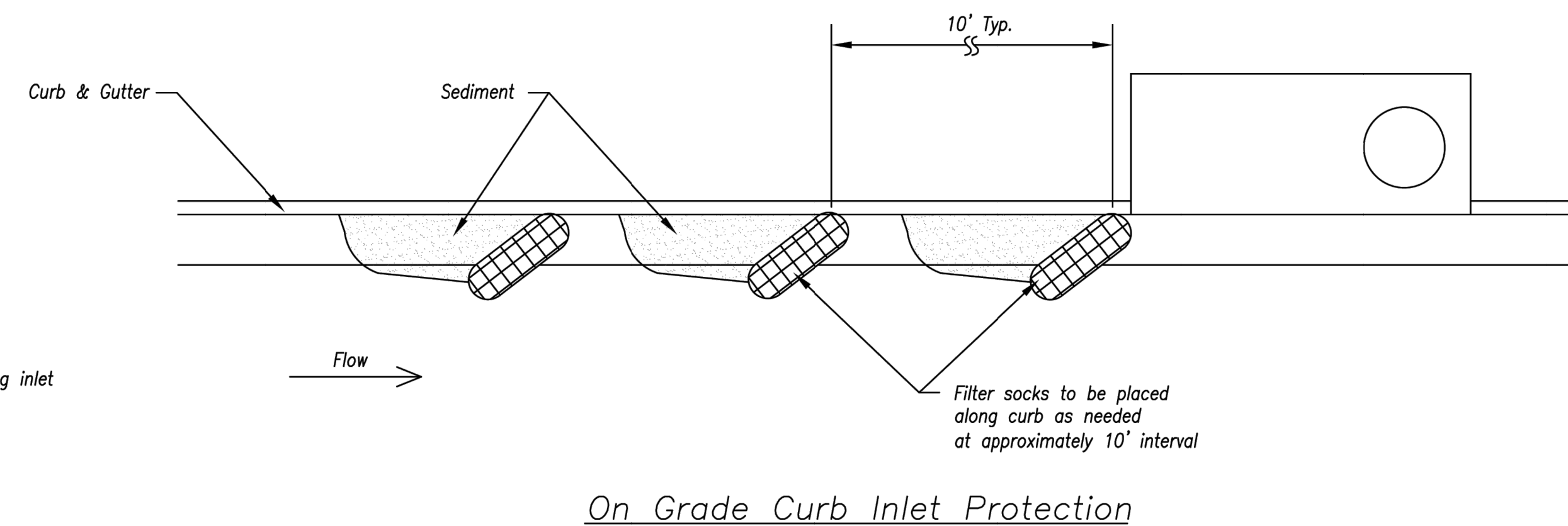
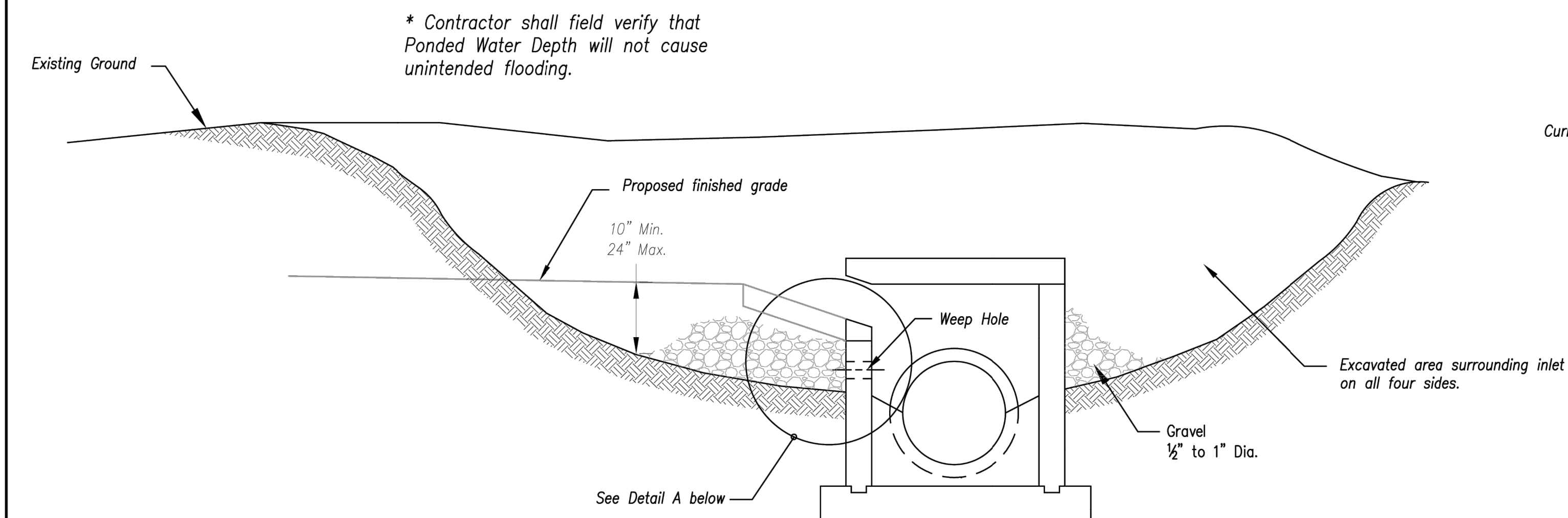
KANSAS CITY
METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03

ADOPTED:
10/24/2016

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



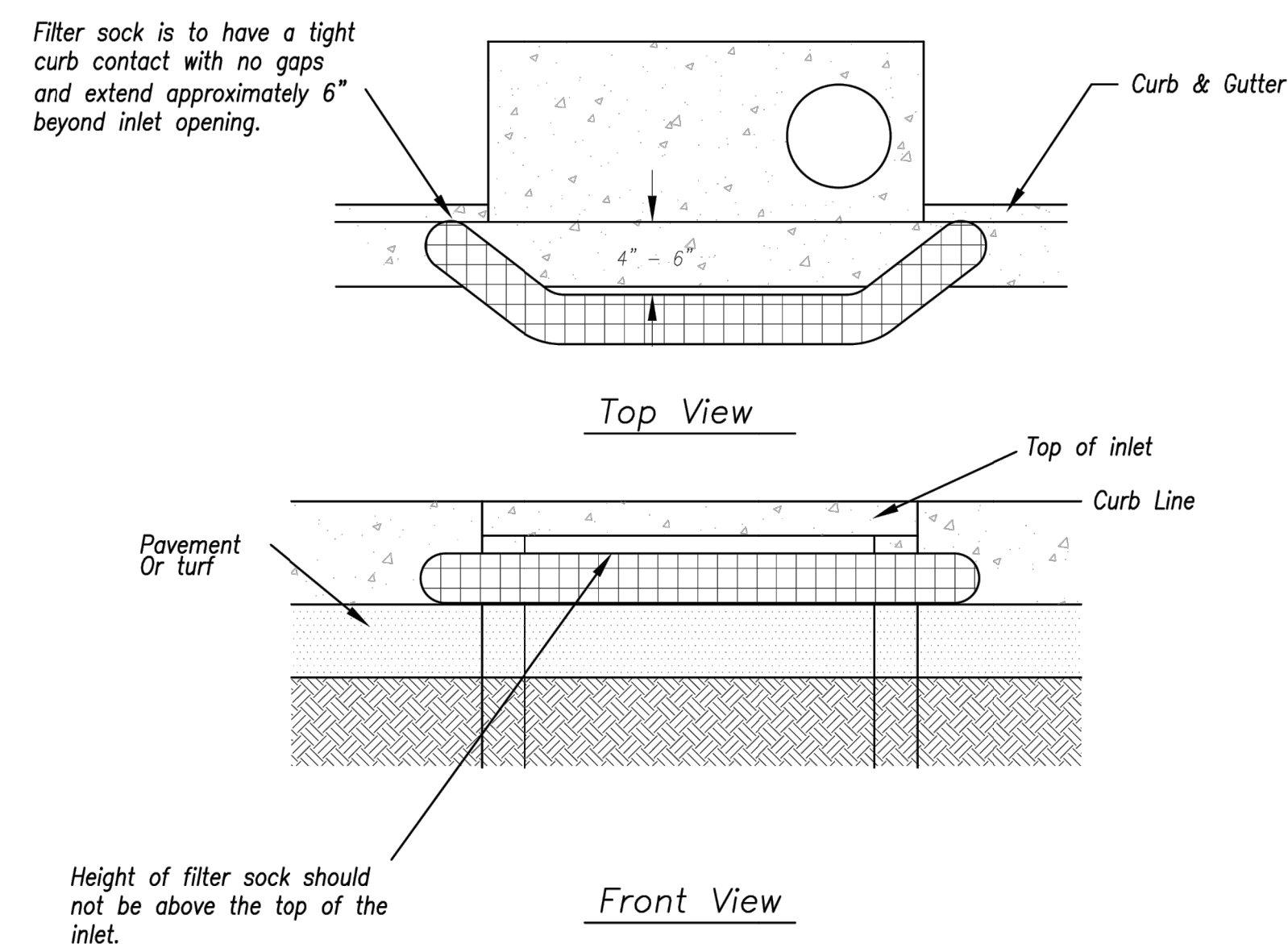
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring
Curb and Inlet Throat)

- 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)

AMERICAN PUBLIC WORKS ASSOCIATION	
	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06
	ADOPTED: 10/24/2016

[illegible]

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COA 00062

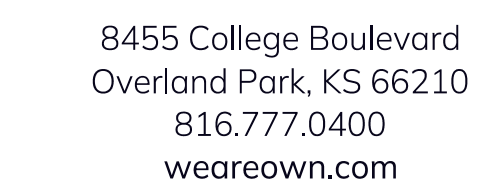
SHEET TITLE

CURB INLET PROTECTION DETAILS

SHEET NUMBER

C803

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**CLAYTON
PROPERTIES GROUP
COBEY CREEK - 2ND
PLAT**

S29, T47N, R31W

REVISIONS

[illegible]

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COA 00062

AREA INLET PROTECTION DETAILS

C804

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Not to Scale



Not to Scale

(All open boxes and inlets not at final grade)

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.*

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.

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



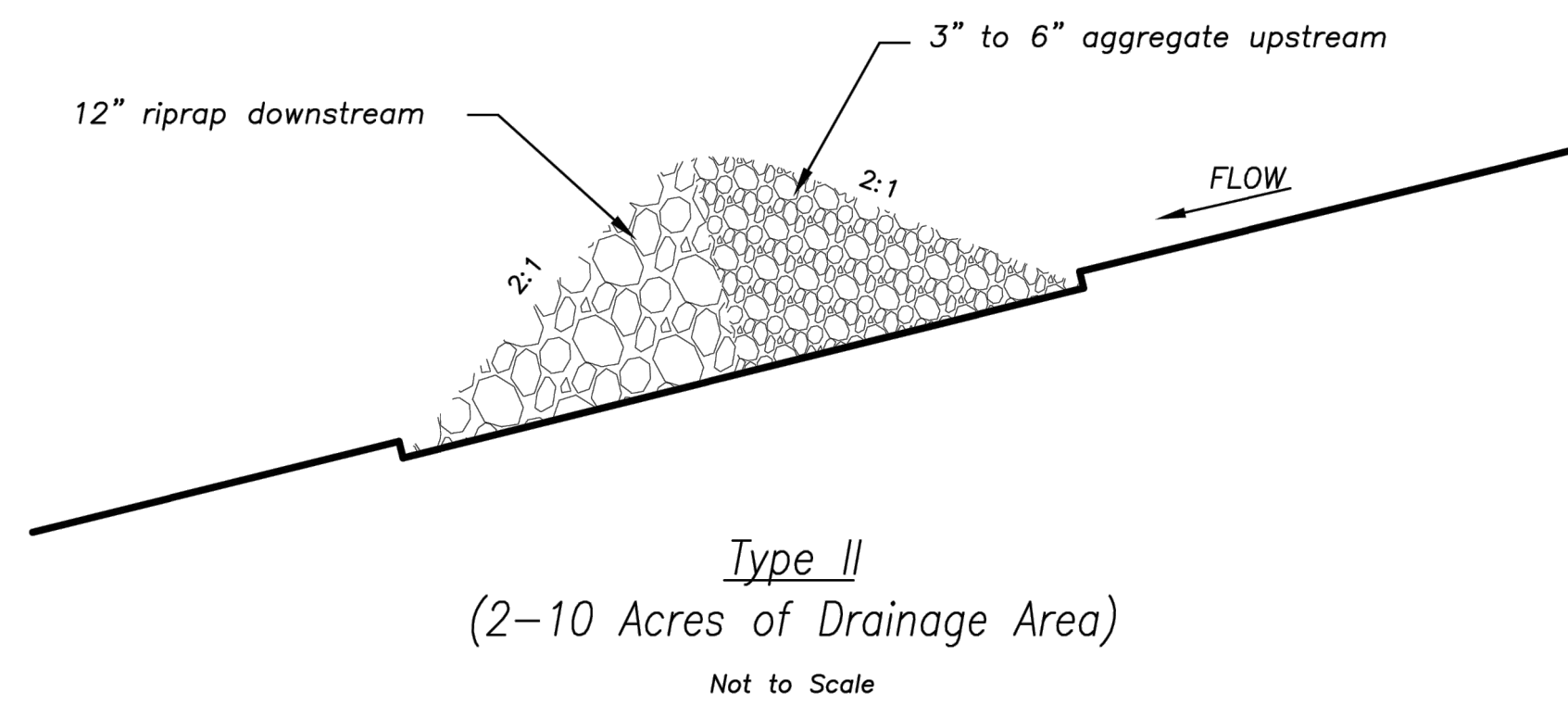
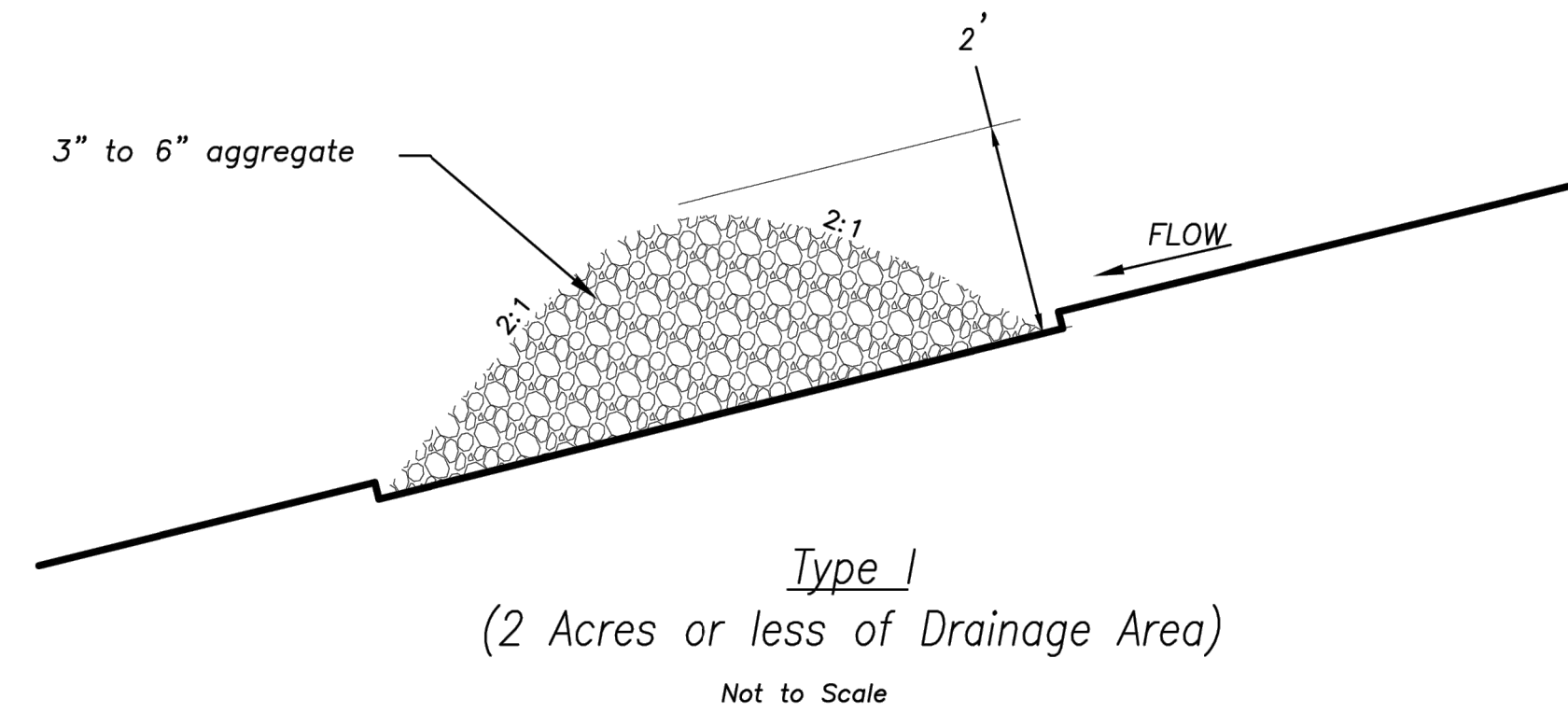
Kansas City Metro Chapter
APWA
A COMMITMENT TO EXCELLENCE

KANSAS CITY
METRO CHAPTER

AREA INLET AND JUNCTION BOX PROTECTION

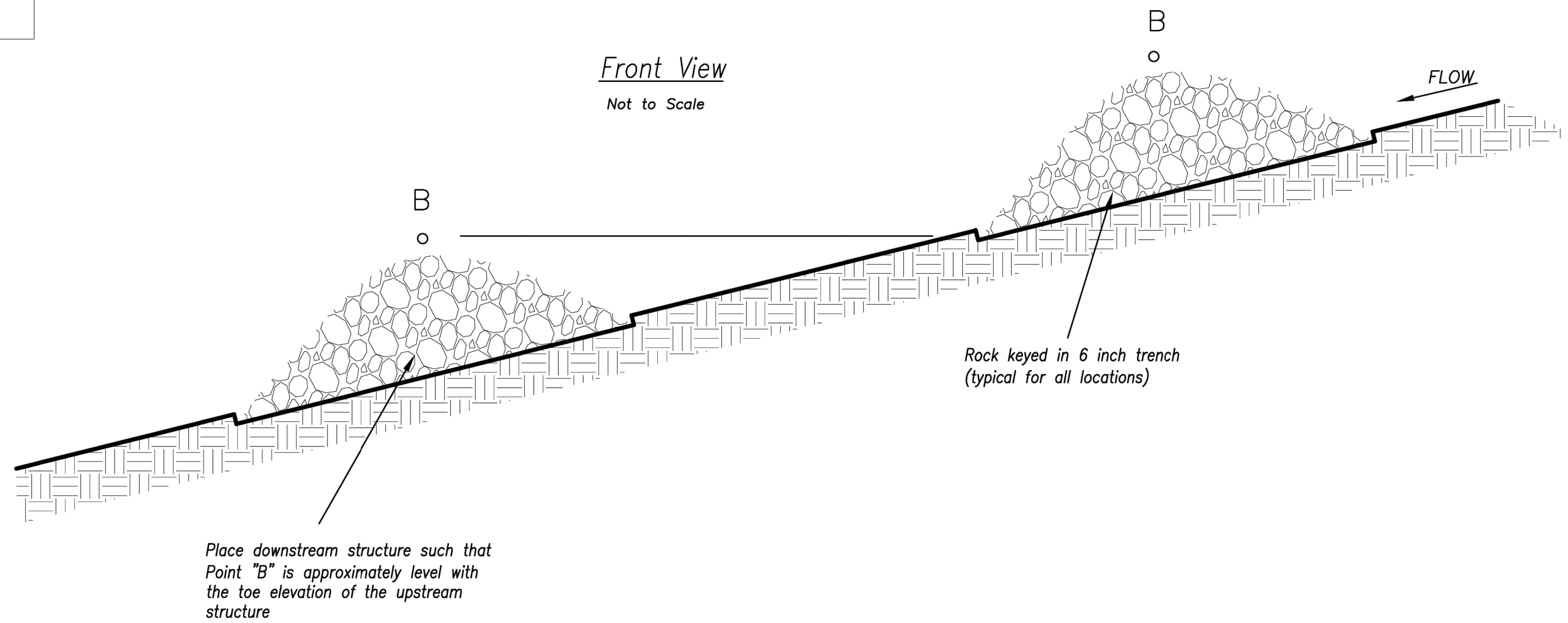
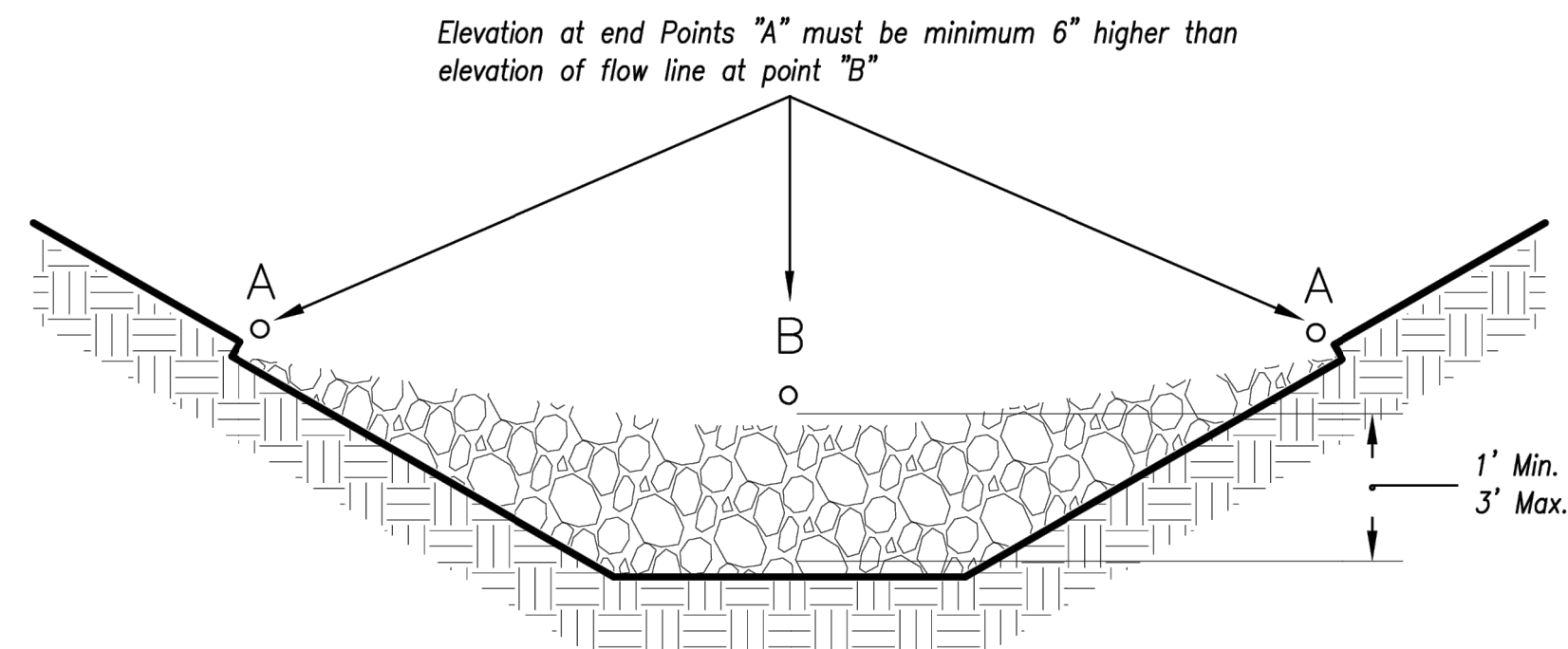
STANDARD DRAWING NUMBER ESC-07

ADOPTED:
10/24/2016



ROCK DITCH CHECK

Temporary Rock Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29
Note: Use this spacing only for Rock Ditch Checks.	



Spacing Between Check Dams (all types)

Not to Scale

Notes:

1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.


Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

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

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter



AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

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

ROCK DITCH CHECKS



Engineering beyond.™

8455 College Boulevard
Overland Park, KS 66210
816.777.0400
weareown.com

FORMERLY ANDERSON ENGINEERING

CLAYTON PROPERTIES GROUP

COBEY CREEK - 2ND PLAT

S29, T47N, R31W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

REVISIONS		
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SHEET TITLE

ROCK DITCH CHECKS

SHEET NUMBER

C805

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CLAYTON
PROPERTIES GROUP
COBEY CREEK - 2ND
PLAT

S29, T47N, R31W
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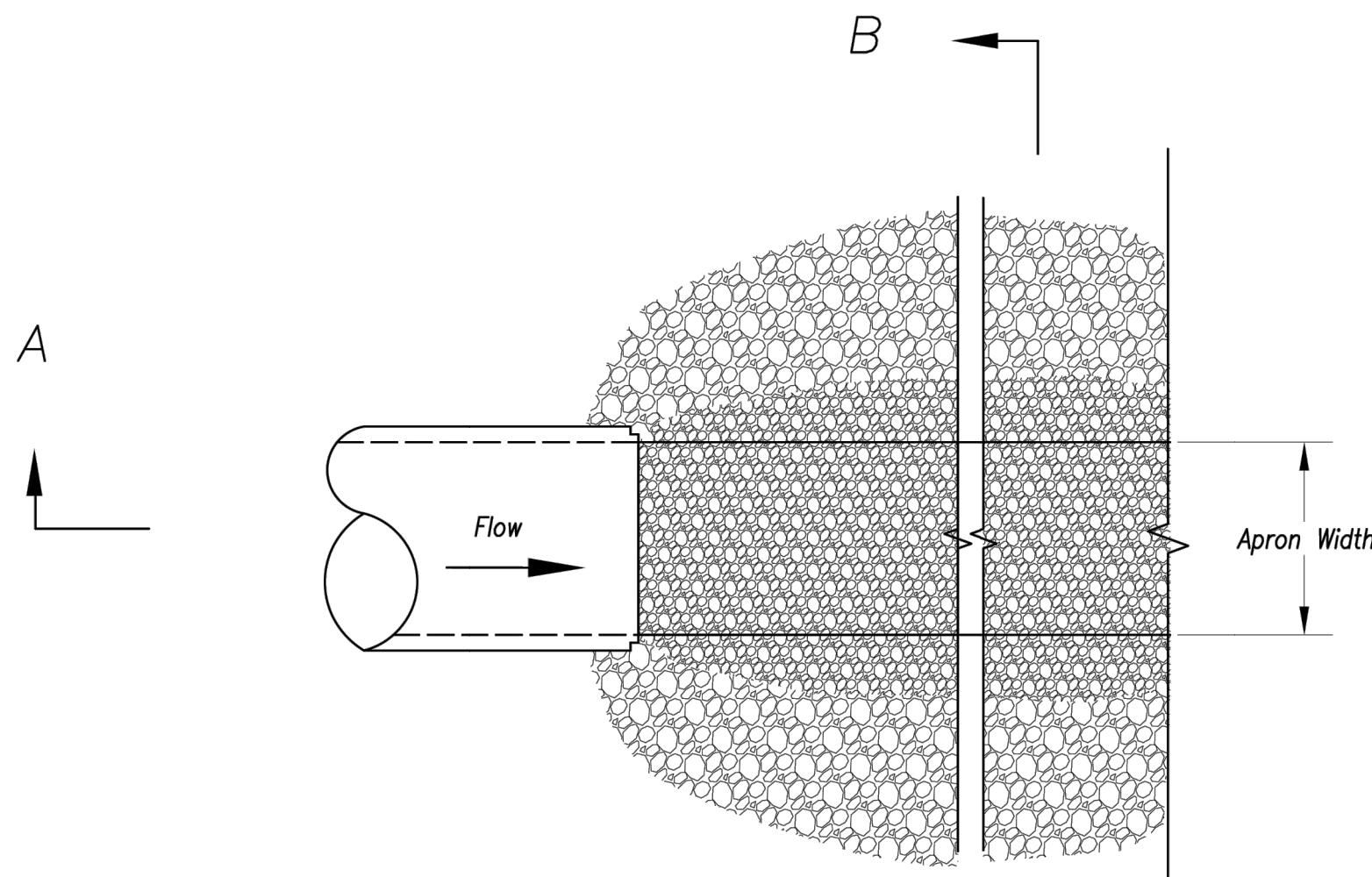
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OUTLET
PROTECTION
DETAILS

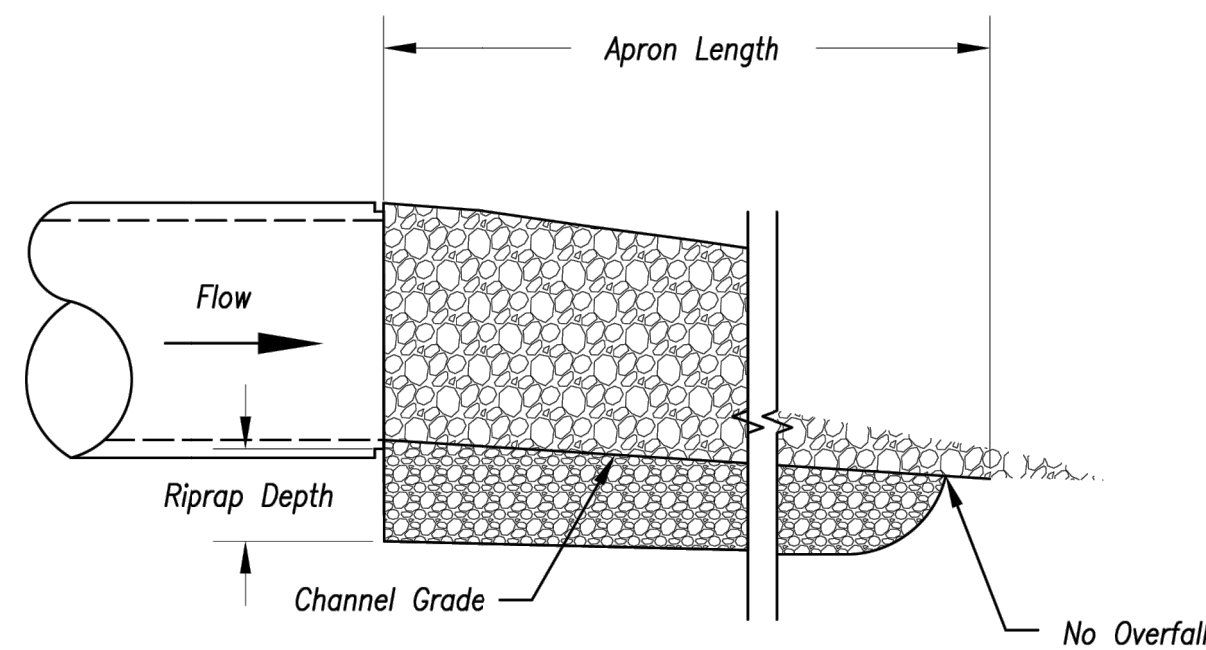
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C806

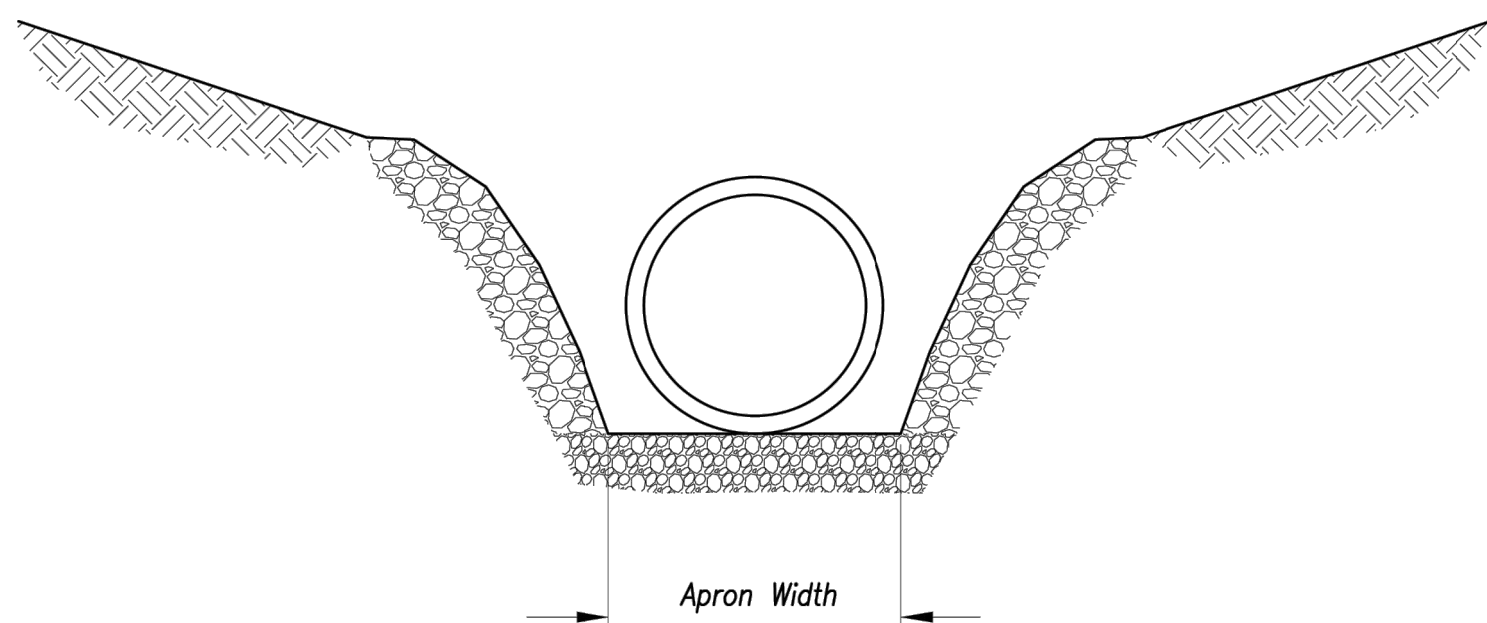
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Plan View
Not to Scale

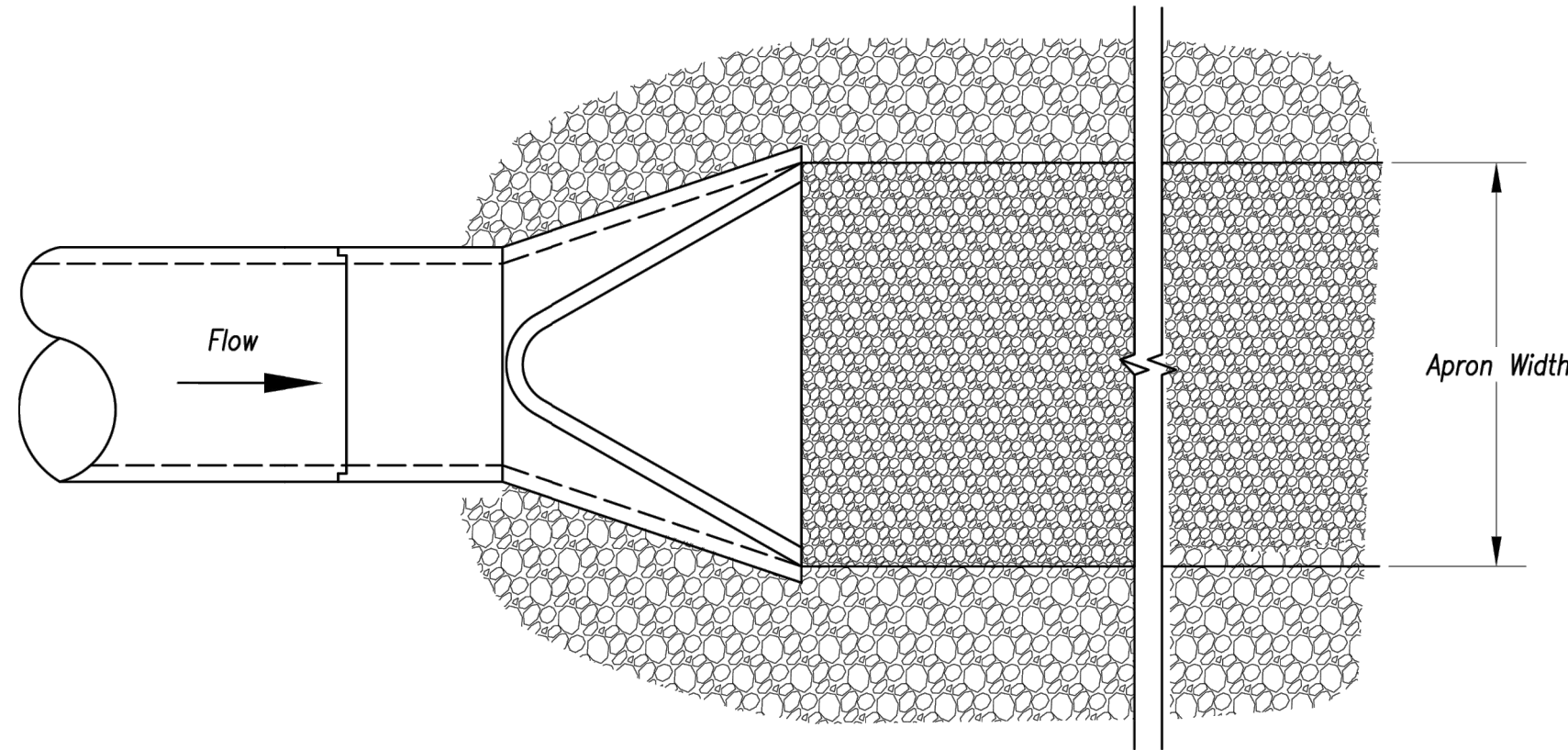


Section A-A
Not to Scale

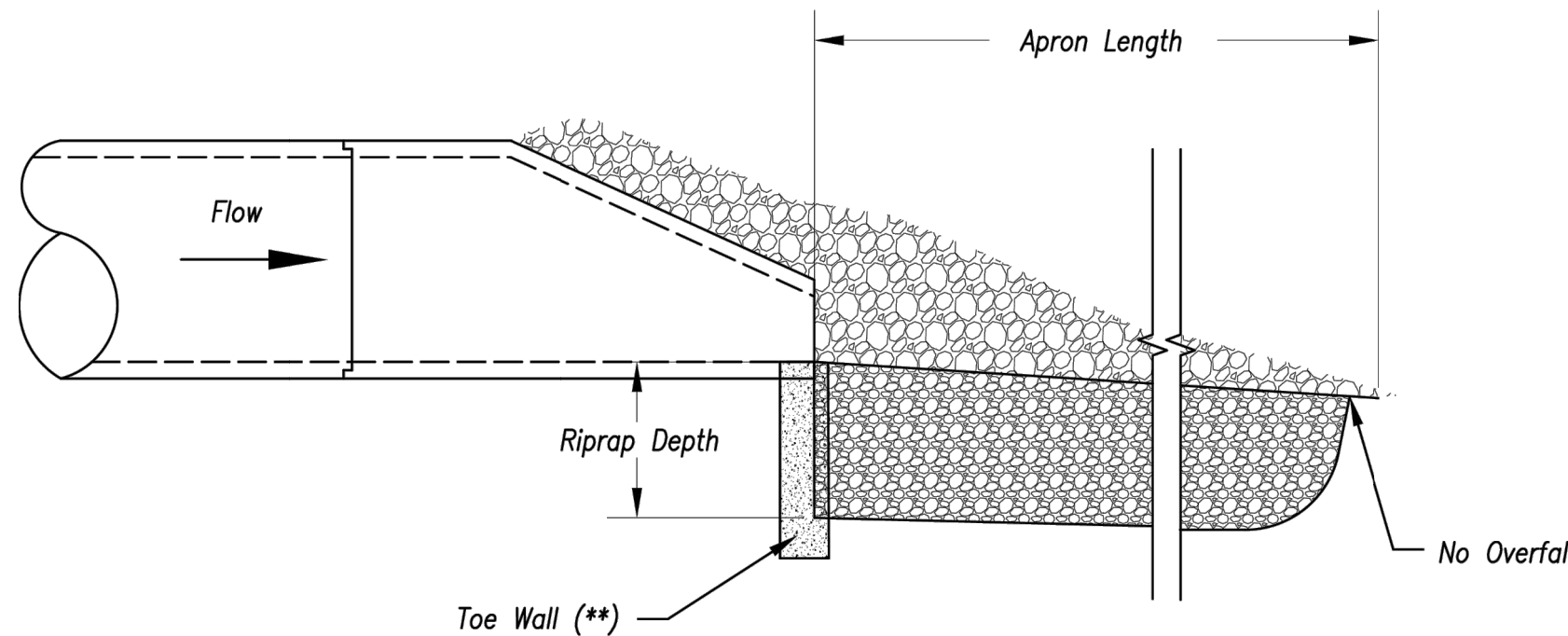


Section B-B
Not to Scale

OUTLET PROTECTION W/O END SECTION



Plan View
Not to Scale



Section A-A
Not to Scale

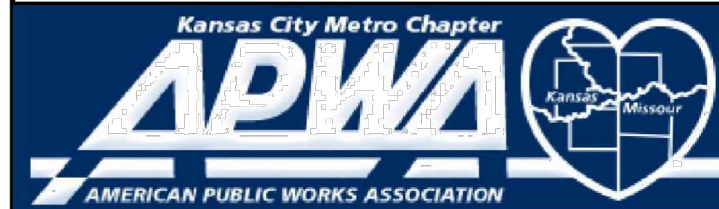
OUTLET PROTECTION WITH END SECTION

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.

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

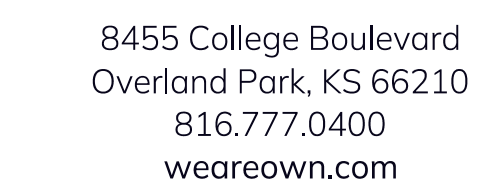
AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY
METRO CHAPTER

OUTLET PROTECTION

STANDARD DRAWING
NUMBER ESC-14
ADOPTED:
10/24/2016



**CLAYTON
PROPERTIES GROUP
COBEY CREEK - 2ND
PLAT**

[illegible]

PROJECT NO: 21KC10060
DRAWN BY: JK
CHECK BY: JB
ISSUED FOR: REVIEW
ISSUED DATE: 10/01/2024



A licensed Missouri
Engineering Corporation
COA 00062

SEDIMENT BASIN DETAILS

C807

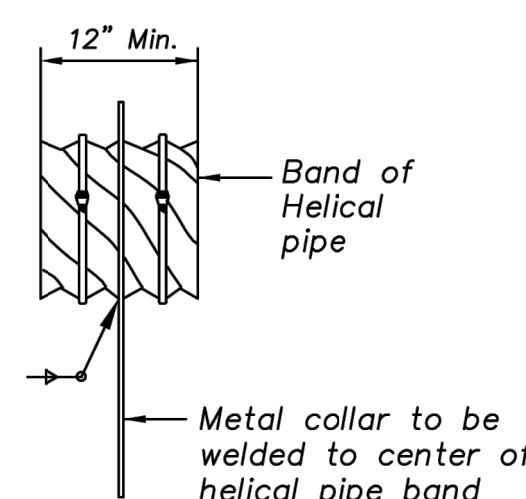
77 OF 77



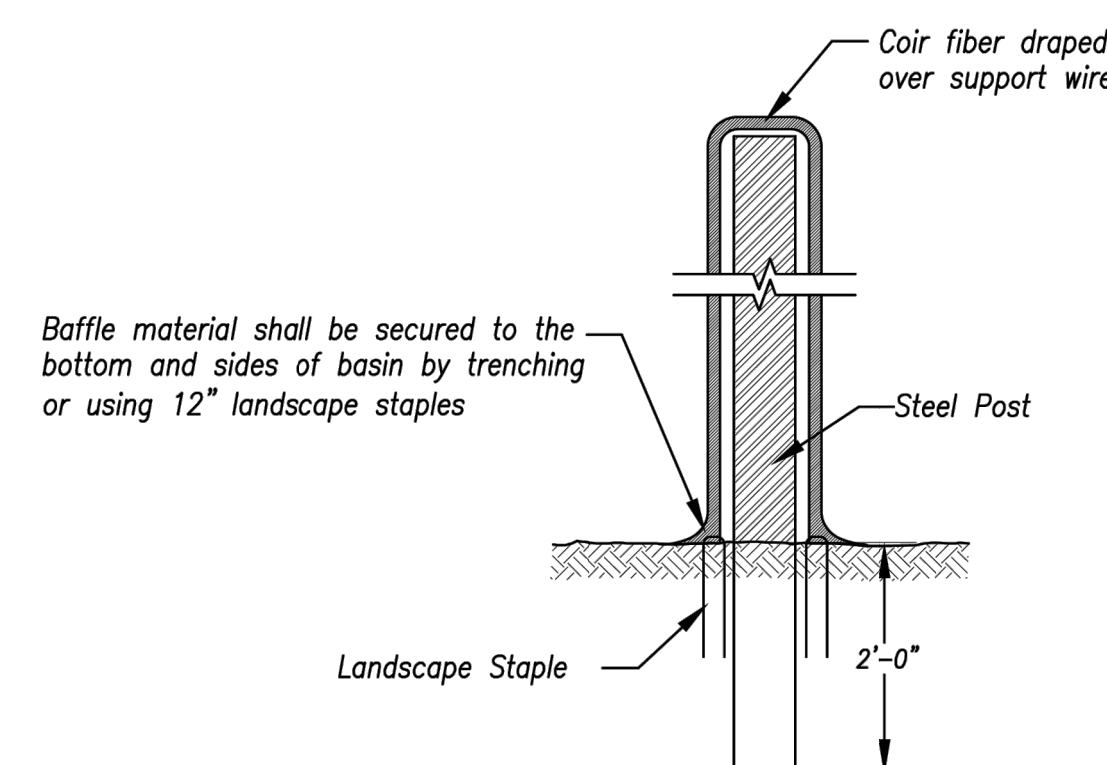
SKIMMER DETAIL (Typ.) *

SECTION B-E

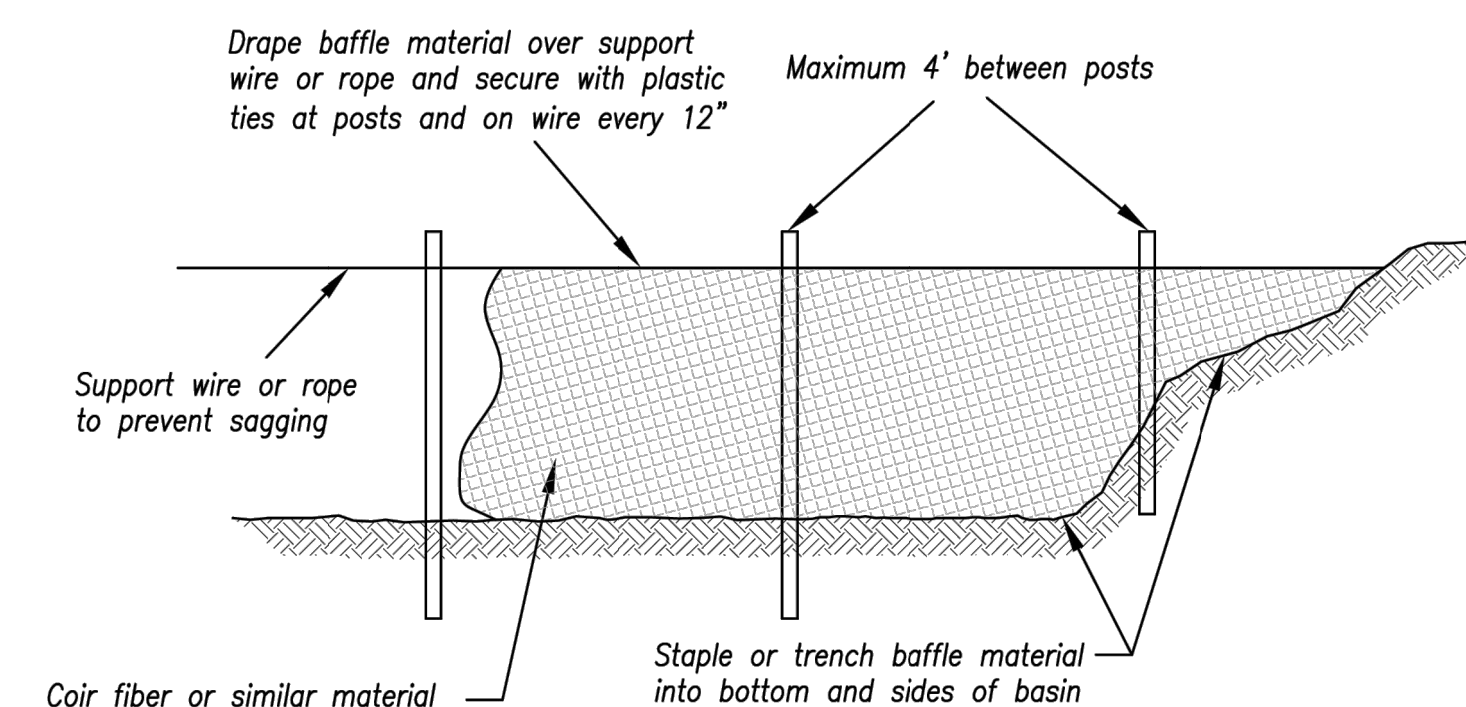
Size and spacing of slotted openings shall be the same as shown for CM collar.
Use rods and lugs to clamp bands securely to pipe.



PARTIAL ELEVATION

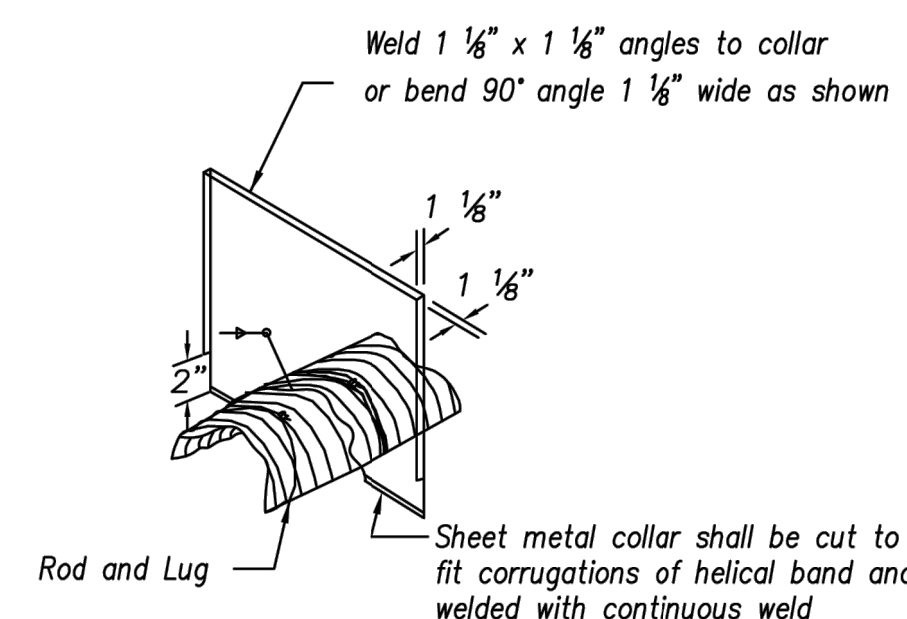


Option B – Coir Fiber Material

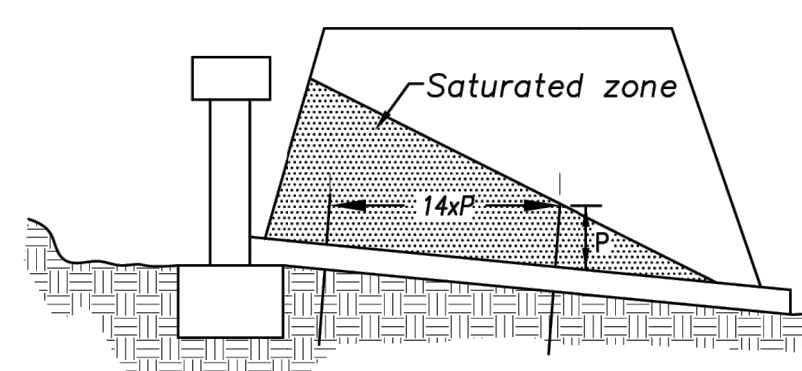


BAFFLE DETAILS

Not to Scale



ISOMETRIC VIEW



ANTI-SEEPAGE COLLAR LOCATIONS

CORRUGATED METAL
ANTI-SFEPAGE COLLAR DETAIL

Not to Scale

Anti-Seepage Collar Notes:

1. Connections between the anti-seepage collar and the barrel must be watertight.
2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage length.
3. $14xP$ = Max. spacing between collars.
4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
5. All materials to be in accordance with construction material specifications.
6. When specified on the plans, coating of collars shall be in accordance with construction material specifications.
7. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
8. The lap between the two half sections and between the pipe and a connecting band shall be caulked with asphalt mastic at the time of installation.
9. Each collar shall be furnished with two (2) 1/2 diameter rods with standard tank lugs for connecting the collars to the pipe.
10. For bands and collars, modification of the details shown may be used providing equal water tightness is maintained and detailed drawings are Submitted and approved by the Engineer prior to delivery.
11. Two other types of anti-seep collars are:
 - a. Corrugated metal, similar to above, except shop welded to a 4 ft. section of the pipe and connected to the pipe with connecting bands.
 - b. Concrete, 6 inches thick, formed around the pipe with #3 rebar spaced 15".

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

