September 17, 2025

Mr. Nicholas Wong
California State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA, 95812-100

Re: Trash Full Capture System Certification for ADS Arcadia Separator

Dear Mr. Wong,

Advanced Drainage Systems would like to formally submit the application for the Arcadia Stormwater Treatment System for use as a Trash Treatment Control Device. Please check the attached supporting documents for this application.

1. Cover Letter
2. Application Package Tabel of Contents
3. Physical Description
4. Installation Information
5. Operation and Maintenance Information
6. Vector Control Accessibility
7. Reliability Information
8. Field/Lab Testing Information and Analysis

Thank you for your consideration. If you have any questions or need additional information, please do not hesitate to contact us.

Regards,

Bo Liu
Advanced Drainage Systems

cc Joseph Chylik
Travis Dorman
Gordon Baugh
Michael Gillette
Stefan Lazaroae

1.0 Cover letter

A. Device Product Name & General Description

The ADS Arcadia is an engineered stormwater treatment system designed to remove suspended solids, floating debris and oil/grease through gravitational settling, screening and absorption. When used as a trash capture device, the Arcadia Separator unit features 4.8 mm perforated stainless steel screening as the primary mechanism for trash, effectively preventing them from reaching downstream waterways. Only the trash capture portion of the device is being certified.

B. Applicant's Contact Information and Location.

The ADS contact for this submittal:

Bo Liu, PhD, PE
Lead Technical Engineer
Advanced Drainage Systems
4671 Raindrop Way
Hilliard, OH 43026
Bo.liu@adspipe.com
(301)252-0418

Advanced Drainage Systems, Incorporated has several manufacturing facilities in the state of California. They are located in Bakersfield, and Madera. We have stocking yards in Benicia, and Perris California.
ADS employs over 120 employees in the state of California at these four locations as well as remote locations for our sales and engineering teams.

C. Manufacturer's Website Page for Device

Arcadia™ Separator Stormwater Treatment System | ADS Pipe

D. Device's Manufacturing Location

Advanced Drainage Systems
2650 Hamilton-Eaton Rd.
Hamilton, OH 45011

E. Brief Summary of Field/Lab Testing Results

N/A

F. Description or list of locations, if any, where Device has been installed

N/A

G. If the System is designed to operate outside of a typical stormwater catch basin and is able to trap trash from high flows, indicate a preference to be listed as a high flow capacity System on the State Water Board's website.

Do not list as "high flow capacity trash full capture system".

H. Certification Clause

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

09/17/2025

Bo Liu, Lead Technical Engineer | Date

2. Table of Contents

Appendices

3.0 Physical Description

A. Trash Capture

Advanced Drainage Systems' (ADS) Arcadia™ hydrodynamic separator (Arcadia) is a stormwater treatment device that removes trash found in stormwater runoff. There are no moving parts in Arcadia unit. The internal components, molded from either polyethylene or polypropylene, can be typically installed in either a precast concrete manhole or a polypropylene manhole. In Arcadia, stormwater is directed to an inlet chamber inside the unit, which then directs the flow into the vertical cylinder. A weir separates the inlet chamber from the outlet chamber. Once water has flowed through the inlet chamber and down through the vertical cylinder to the sump, the water rises through a series of angled baffles up to the outlet pipe. The angled baffles have concentric openings, alternating in location between the outer wall and the vertical cylinder, causing the water to flow upward in a circuitous path, which enhances settling and reduces resuspension. The inlet chamber is equipped with a sediment drain opening that directs sediment into the sump during operation. For use in California, the Arcadia AR4 includes a stainless-steel screen (4.8 mm opening) located in the inlet chamber. Please refer to the figures attached in Appendix A for a 3D drawing of the Arcadia design with screen.

B. Peak Flows/Trash Volumes

ADS Arcadia is fabricated to fit varying manhole sizes, depths and outlet pipe locations. The screen length and height are determined by the amount of flow required to pass relative to the flow rate requirements. The bypass height may be adjusted to increase bypass flows as required by the engineer. Trash storage capacity varies based the size of inlet chamber. Refer to Table 3.1 in section 3.C. for hydraulic capacity pertaining to treated and bypass flows.

C. Hydraulic Capacity for Arcadia Configurations - Table 3.1

STANDARD ARCADIA SIZING								
Model	**Linear Screen Width**	**Rolled Scree Length**	**Screen Height**	**Screen Net Open Area[1]**	**No Screen Blinding Flow[2]**	**50% Screen Blinding Flow[3]**	**Max Trash Capture Volume**	**Bypass Capacity[4]**
	(IN)	**(IN)**	**(IN)**	**(FT^2)**	**(CFS)**	**(CFS)**	**(FT^3)**	**(CFS)**
AR3	24	64	24	6	1.9	1.9	5.5	11
AR4	28	83	24	8	3.4	3.4	12.1	19
AR5	34	102	24	10	5.4	5.4	18.8	30
AR6	40	123	24	12	7.7	7.7	28.0	43
AR8	54	164	24	18	13.8	13.8	48.6	76
AR10	68	207	24	26	21.5	21.5	77.1	119

*All values are conservative estimates accounting for site specific limitations. Custom sizing available upon request when standard configurations do not apply.
1. "Screen Net Open Area" is listed as the product of rolled screen length or perimeter and screen height subtracting any occluded area while accounting for a 50% reduction in perforated net open area to physical screen area.
2. "No Screen Blinding Flow" utilize an orifice flow equation where the orifice coefficient (C) has a value of 0.6 and downstream head has an assumed maximum of 50% of screen height when calculating head on the centroid of screen.
3. "50% Screen Blinding Flow" utilize an orifice flow equation where the orifice coefficient (C) has a value of 0.6 and downstream head has an assumed maximum of 25% of screen height when calculating head on the centroid of screen. Screen clogging is assumed to be uniform across the height of the screen.
4. "Bypass Capacity" calculated with a maximum water elevation of 14.25" over the installed screen height.

Screen Flow Calculations:

Model:

Screen flow through can be calculated using an orifice flow calculation while accounting for both upstream and downstream head on both sides of the screen. Screen flows are to be published with a safety factor of two accounting for a clogging factor of up to 50% prior to maintenance.

$$Q_{Screen} = \frac{C_{Screen} A_{Screen} \sqrt{2gH}}{Clogging\ Factor}$$

Equation 1: Flow through an Orifice Plate

Variables:
Q_{Screen} = Screen Flow Rate (CFS)
C_{Screen} = Screen Orifice Coefficient of Discharge (0.6 unitless)
A_{Screen} = Net Open Area of Screen (ft^2)
g = Gravitational Acceleration (32.2 ft/s^2)
H = Depth to Centroid of Screen; Accounting for Downstream Depth (Assumed Max. 50% H_{Screen} without clogging factor, 25% when 50% clogged)

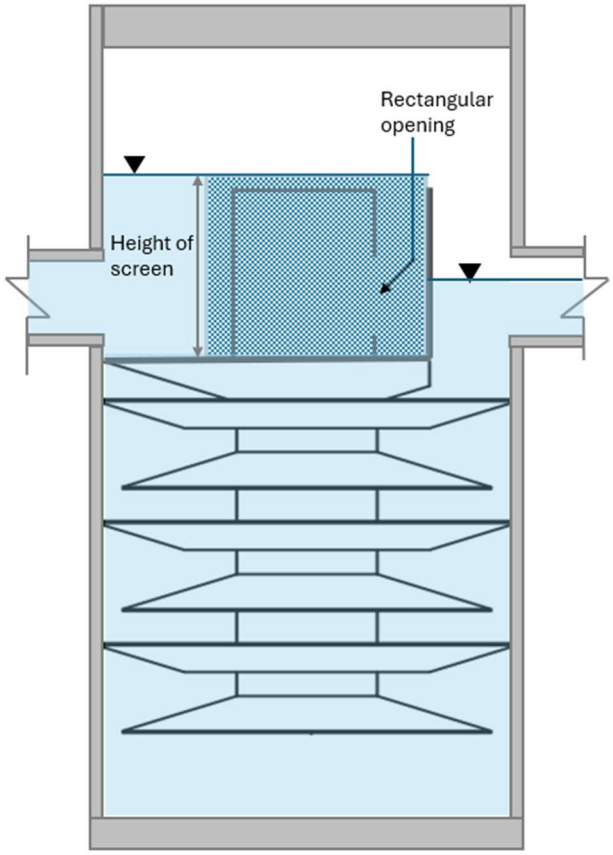


Figure 1: Arcadia AR4 with trash screen treatment flow

Calculation:

Using a AR4 model screen at full capacity before reaching bypass mode and accounting for a clogging factor of 50%. Note, screen model lengths are linear lengths not rolled screen perimeter lengths.

$$Q_{Screen} = \frac{C_{Screen} A_{Screen} \sqrt{2gH}}{Clogging\ Factor}$$

Equation 1: Flow through an Orifice Plate

Variables:

C_{Screen} = Screen Orifice Coefficient of Discharge (0.6 unitless)

A_{Screen} = Net Open Area of Screen (ft^2) ; (L_{Screen} * H_{Screen} + $Bottom_{Screen}$ – $Mounting_{Screen}$) * 50% Perforated Open Area

= ((83” * 24”) + (π14”^{2} / 2 + 13.8” * 28” - π9”^{2}) - (19.25” * 5.64” * 2)) * 0.5 = 7.65 ft^2

g = Gravitational Acceleration (32.2 ft/s^2)
H = Depth to Centroid of Screen; Accounting for Downstream Depth (Assumed Max. 50% H_{Screen} without clogging factor, 25% when 50% clogged)

A negligible head loss of less than 0.125 inches (0.01 ft) was observed across the screen during hydraulic testing of AR4 at a flow rate of 3.4 cfs. The screen itself does not limit flow or contribute significantly to head loss. The measured head—recorded near the top of the screen—is attributed to flow restriction caused by a downstream rectangular opening (0.486 ft²) in the center pipe. The screen flow rate during the test was Q_{Screen} = 3.4 cfs

Even with 50% of the screen clogged, the net open area (3.825 ft², half of the original 7.65 ft²) remains significantly larger than the 0.486 ft² opening in the center pipe for AR4. As a result, the screen flow rate remains unchanged at 3.4 cfs.

Bypass Flow Calculations:

Model:

An orifice equation can be used to determine the bypass flow calculations since maximum surface level elevations will exceed the installed height of the screen structure.

$$Q_{Bypass} = C_{Bypass} A_{Bypass} \sqrt{2gH}$$

Equation 2: Bypass Flow Calculation

Variables:
Q_{Bypass} = Bypass Flow Rate (CFS)
C_{Bypass} = Bypass Orifice Coefficient of Discharge (0.6 unitless)
A_{Bypass} = Area of Bypass (ft^2) = L_{Screen} * H_{Bypass}
g = Gravitational Acceleration (32.2 ft/s^2)
H = Depth of water to Centroid of Bypass (ft); Maintaining a 6” Freeboard

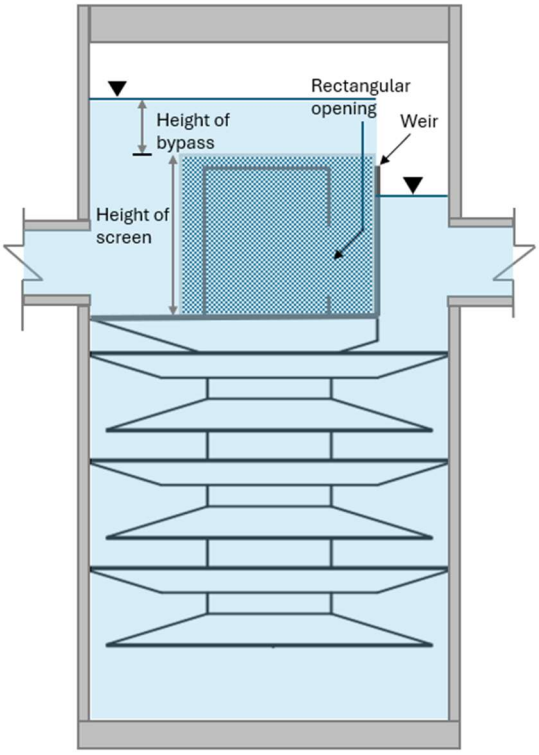


Figure 2: Arcadia AR4 with trash screen bypass flow

Example:

Using a AR4 model screen with rim to invert (RTI) of 52".

$$Q_{Bypass} = C_{Bypass} A_{Bypass} \sqrt{2gH}$$

Equation 2: Bypass Flow Calculation

Variables:

Q_{Bypass} = Bypass Flow Rate (CFS)

C_{Bypass} = Bypass Orifice Coefficient of Discharge (0.6 unitless)

A_{Bypass} = Area of Bypass $(ft^2) = L_{Screen} * H_{Bypass}$

= 39" * 14.25" = 3.86 ft^2

g = Gravitational Acceleration (32.2 ft/s^2)

H = Depth of water to Centroid of Bypass (ft); Maintaining a 6" Freeboard

= Clearance + $H_{Bypass}/2$ - 6" Freeboard

Clearance = RTI – H_{screen} – H_{Bypass} – Curb Height

= 52" – 20.75" - 14.25" - 8" = 9"

= 0.75' + 1.1875'/2 - 0.5' = 0.84'

Q_{Bypass} = 0.75 * 3.86 * sqrt (2*32.2*0.84) = 21 cfs

However, the weir wall downstream of the screen structure will limit the flow to :

Q = 3.33 * (L - 0.2H) * H^(3/2)

= 3.33 * (3.17' - 0.2*1.58') * power (1.58' , 1.5)

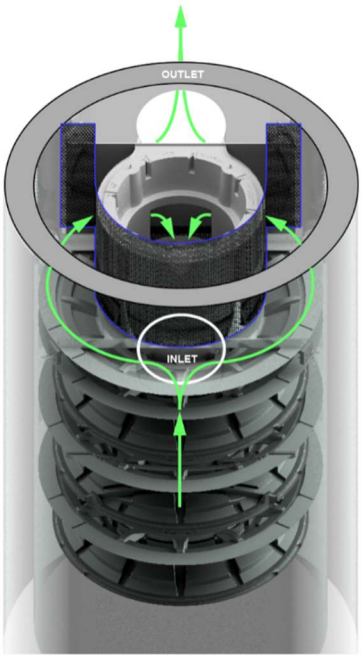
= 19 cfs

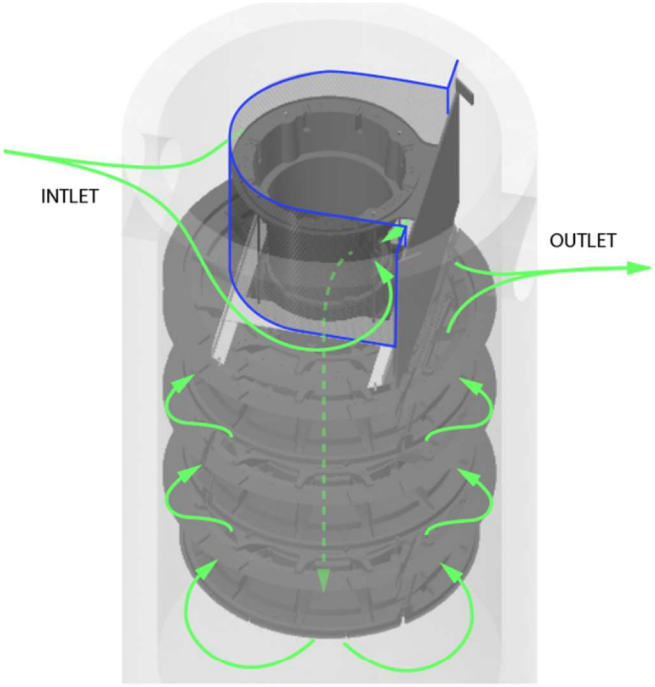
D. Comparison Table

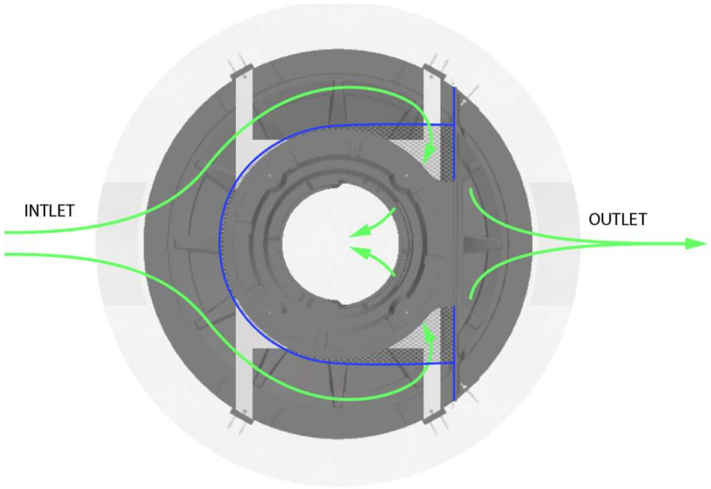
See Table 3.1 in section 3.C for peak flow rates.

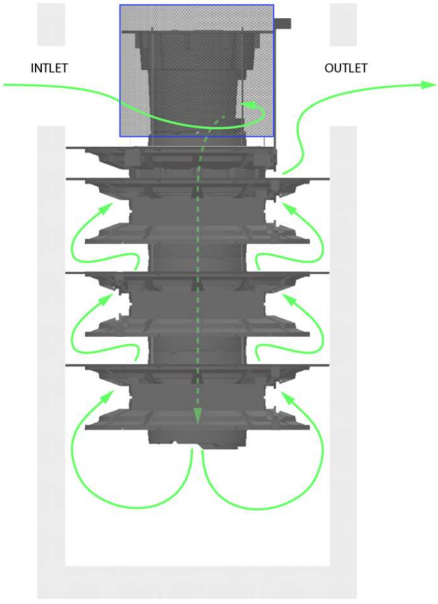
E. Design Drawings for Arcadia Screen Structure Configuration

Engineering drawings for all standard configurations are found in Appendix B.









F. Optional Components

N/A

G. Internal Bypass

The bypass region of the Arcadia Screen is the area above the top of the screen structure. The stormwater may travel over the top of the screen and enter the bypass area if the screen openings are completely blinded by trash and debris, or in the case of a significant rain event.

The engineer is responsible for confirming the ultimate bypass capacity of the Arcadia exceeds the maximum design flow to the catch basin for a chosen rain event.
See Table 3.1in section 3.C for bypass capacity.

H. Feeder Troughs

N/A

I. Calibration Feature

The ADS Arcadia trash basket does not include or require any additional calibration.

J. Previously Trapped Trash

The ADS Arcadia trash screen is designed to capture and retain all trash and debris larger than 4.8mm. The device may re-introduce trash previously captured if the unit is not properly installed or maintained. If laden trash accumulates above the maximum trash capture capacity, the water level rises to reach the bypass allowing floatable, suspended, or buoyant trash and debris to pass.

K.Photographs, if any, of pre-and post-installation examples

N/A

L. Material Type

All ADS Arcadia trash screen are comprised entirely of high strength, non-corrosive 304 stainless steel.

- Filter Screen: 14GA perforated 304 stainless steel screening is uniformly punched with 3/16” dia. holes (4.8 mm) in a staggered pattern that has 50% net open area and retains any particles 4.8mm or larger.
- Anchor Bolts: 3/8” x 3” 316 stainless steel.

M. Design Life

The estimated design life for ADS trash screen is 20 to 40 years. All components are made from 304 Stainless Steel to extend the service life. The true design life of the product is dependent upon proper application use and regular maintenance. The Arcadia unit has an estimated design life of similar to concrete underground pipe and structures. Most DOTs give this a 75 to 100 year design life for concrete structures. According to the Florida Department of Transportation, ADS HP pipe (material the plastic manhole version is made out of polypropylene achieves a 100-year service life.

4. Installation Guidance

A. Standard Device Installation Procedures and Considerations

All ADS Arcadia trash screens are brought to the field pre-configured for easy installation based on the specific dimensions provided by the installer. Details of Arcadia separator installation can be found in Appendix C.

A typical installation follows the steps below:

1. Assembly of Arcadia Hydrodynamic Separator with Trash Screen
    a. Baffles are stacked on top of each other in alternating pattern according to assembly instructions in appendix.
    b. The preassembled Trash Screen is placed on the top of the unit, sliding down over 4 threaded rods.
    c. The upper cylinder and weir are then attached with coupling nuts to the threaded rods, which are tightened to tie the entire stack together.
    d. The Trash Screen is fixed to the weir with bolts.

2. Installation of Arcadia Hydrodynamic Separator with Trash Screen
    a. Jobsite contractor lifts the entire unit with integrated Trash Screen via lifting points on the internal metal frame.
    b. Unit is lowered into manhole onto four pre-installed mounting brackets. The brackets support the four corners of the internal frame.
    c. Unit is fixed to the mounting brackets with lag screws.
    d. Weir corners are wedge anchored to concrete manhole walls.
3. Edges of Weir and Trash Screen are sealed to manhole walls using conseal

B. Description of Device Installation Limitations and/or Non-Standard Device Installation Procedures

The ADS Arcadia trash screen has limitations in shallow catch basins that lack sufficient space for access or installation. Because the units are prefabricated, an adequately sized opening is required to allow the device to be properly installed.

C. Methods for Diagnosing and Correcting Installation Errors

HP manhole systems come with components pre-installed which minimizes installation errors. Concrete manhole systems are typically assembled in the field. ADS technical personnel are available to visit the project site and coordinate a pre-construction meeting to minimize the potential for installation errors in both the HP and Concrete Manhole options. To prevent systems from being installed backwards, both the inlet and outlet pipe stub-outs on all units are clearly labeled prior to shipment from fabrication facility. Following installation, a final visual inspection should be conducted for each screen structure to verify proper placement and secure contact with all mounting points.

5. Operation and Maintenance Information

A. Device Inspection Procedures and Inspection Frequency Considerations

ADS Arcadia Trash Screen inspections should occur quarterly in areas with year-round rainfall. Wall markers and staff gauges may be used to determine the level of trash and debris accumulated in the catch basin. Adjusted intervals may be required on a per site basis dependent on localized conditions.

B. Maintenance Frequency

The ADS Arcadia must be maintained for continued effectiveness. Maintenance is a simple procedure performed using a vacuum truck or similar equipment. ADS advises that catch basins be cleaned out at least two (2) times per year and/or if debris has filled above a 40% level of screen height. Sites with large amounts of foliage, high trash loads, or smaller Arcadia devices may need to be cleaned at more frequent intervals. In addition, the Municipal Storm Water permit may specify more frequent maintenance.

C. Maintenance Procedures

Contractors can access the trash stored in the manhole through the manhole cover. This allows them to gain vacuum hose access to the bottom of the manhole to remove sediment and trash. There is no confined space entry necessary for inspection or maintenance. The entire maintenance procedure typically takes from 1 to 3 hours, depending on the size of the system, the captured material, and the capacity of the vacuum truck. Recommended equipment include: a vactor truck with a boom and section of flexible hose (typically 3-5ft), skimmer equipment, and a pressure hose/wand. The pressure hose is used to help dislodge any substantial material attached to the trash screens within the unit.

Local regulations may apply to the maintenance procedure. Safe and legal disposal of trash is the responsibility of the maintenance contractor. Maintenance should be performed only by a qualified contractor. Again, see Appendix D Inspection and Maintenance Manual.

D. Essential equipment and materials for proper maintenance activities.

Suggested method for maintenance is utilization of a vacuum truck combined with a power washer / high pressure hose.

E. Description of the effects of deferred maintenance on device structural integrity, performance, odors, etc.

Delayed maintenance could diminish performance in terms of flow conveyance or effluent water quality if the trash and/or sediment retention capacity is exceeded. Blocking flow from excessive debris will lower the flow rate of unit and could cause the system to have an elevated hydraulic grade line, beyond the Civil Engineer's original design. Removal efficiencies of TSS could also decrease (worsen) as the unit continues to take on sediment and debris due to a loss of available storage area in the sump of the structure.

As far as the effects of delayed maintenance on the device's structural integrity, it would depend on the materials captured and the effect it could have on the unit's internal components. The HDPE baffles and the stainless steel screens are basically inert and non-reactive when coming into contact with traditional stormwater runoff. Delayed maintenance could result in anaerobic or anoxic conditions within the unit. Such conditions can promote the formation of hydrogen sulfide, which will degrade concrete, especially at the water line within the unit. These conditions can create noxious odors from the unit itself, as well.

F. Repair procedures for the device's structural and screening components.

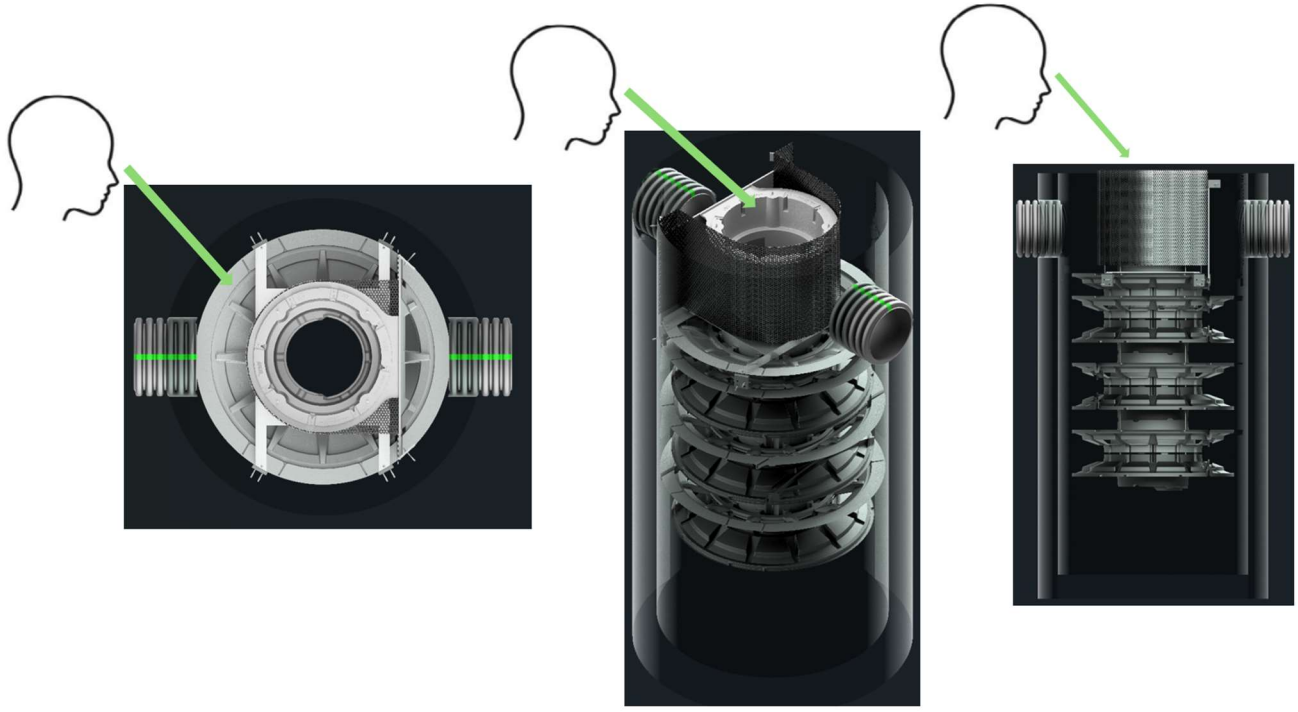
For repair to be needed to an installed unit, something catastrophic would have had to happen for repair to be necessary. If the perforated steel screen is damaged or detached, fasten or secure in place. Inspection should occur immediately after repairs checking the integrity of the device. If the damage is beyond repair, it is recommended to replace the entire unit.

6. Vector Control Accessibility

A. Descriptions of Vector Control Accessibility

Mosquito and Vector personnel can use manhole access point to visually inspect for mosquito and vector activity. This manhole access can be used as well to introduce the application of larvicide pellets, briquettes or liquid sprays. For Mosquito Vector Control personnel to access the bottom of the device, they will remove the manhole lid, from which they will have open access to the bottom sump of the structure through the center pipe. For areas of the country that require mosquito and vector management, ADS will utilize manhole covers are solid and are sealed with gaskets. We will utilize "water tight" gasketed manhole covers for the California market. These types of manhole covers are typically used in the sanitary sewer market and are readily available in California.

B. System Drawings of Vector Control Accessibility



C. Date of Application Submittal to Mosquito Vector Control Association

Application submitted on August 26, 2025

D. Mosquito Vector Control Association of California Letter of Verification

See Appendix E

7. Reliability Information

A. Estimated design life of device components before major overhaul.

The ADS Arcadia has an estimated 75yr design life. This is based on the service life of the concrete manhole being the limiting factor.

B. Warranty information.

ADS warrants the Arcadia screen structure to be free of defects in material and workmanship in accordance with proper installation, normal use, and service from one year from the date of shipment. Damaged Arcadia screen structure due to negligence or lack of maintenance are not covered.

C. Customer Support Information

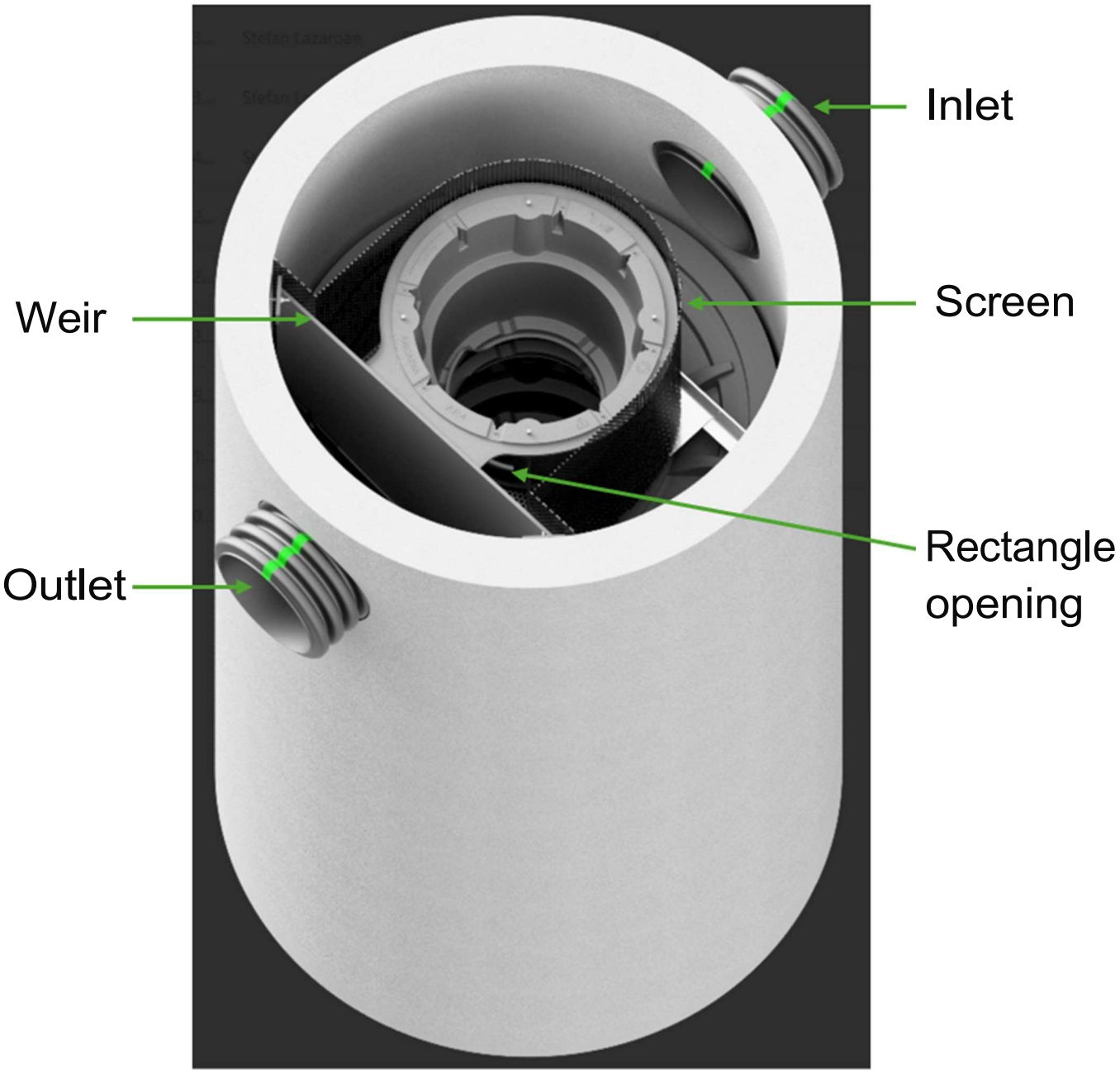
ADS has a nationwide support team with local field sales and engineering representatives and product managers. The local sales or engineering manager can be reached at 1-800-821-6710 or by accessing the ADS website at https://www.adspipe.com/start-a-project/find-a-pro/sales.

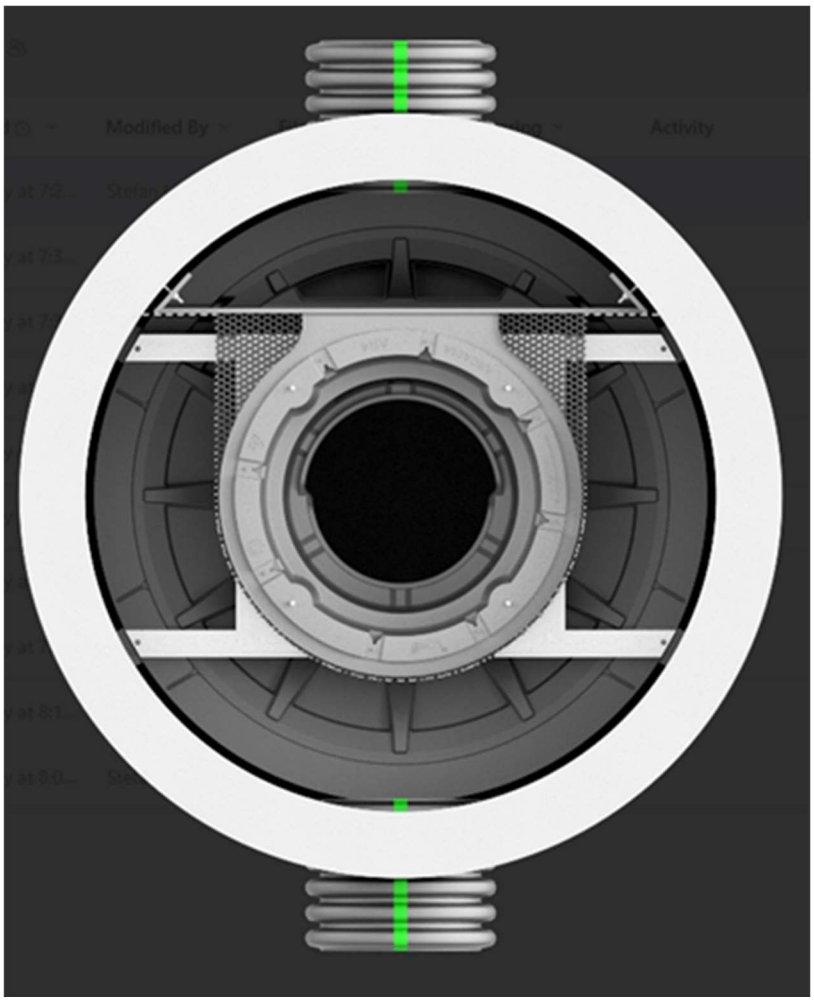
8. Field/Lab Testing Information and Analysis

A. For devices with 5mm screening, any available field/lab testing information that demonstrates the device functionality and performance.

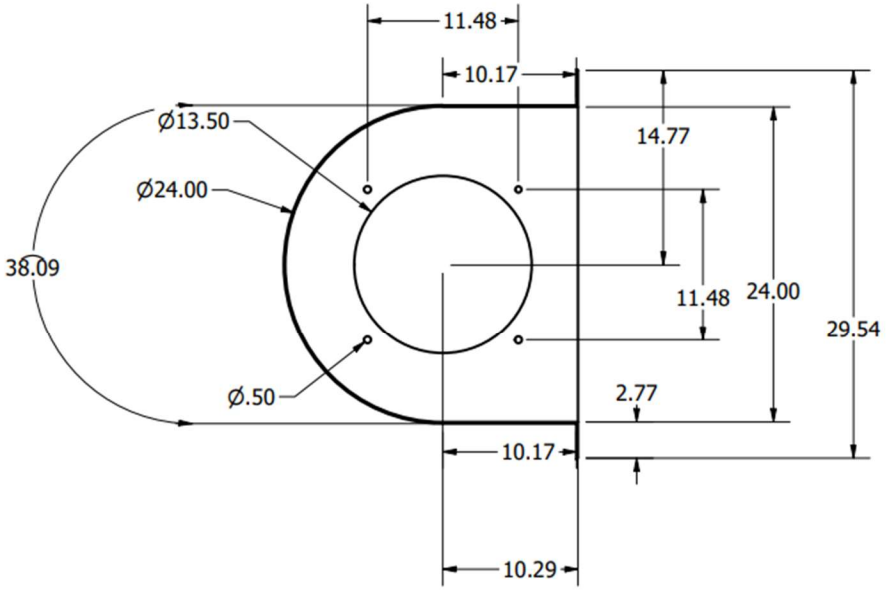
All ADS Arcadia screen structure are made of screen with 3/16” (4.8 mm) openings. Field/lab testing is not required because all particles and debris larger than 5mm would be trapped by the screen.

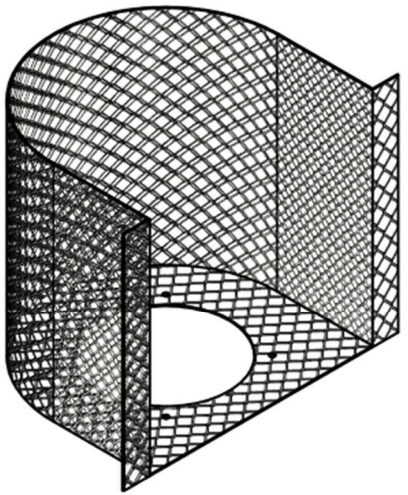
APPENDIX A

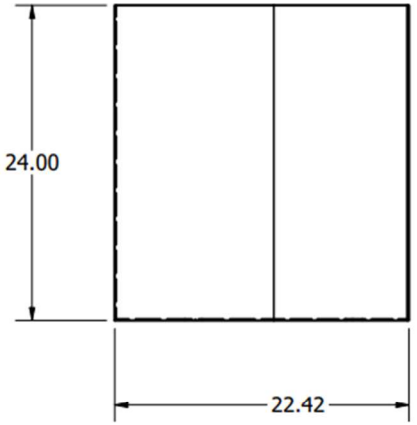

Inlet
Weir
Screen
Outlet
Rectangle opening

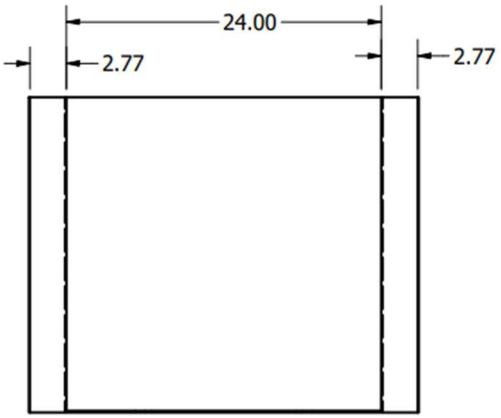


APPENDIX B









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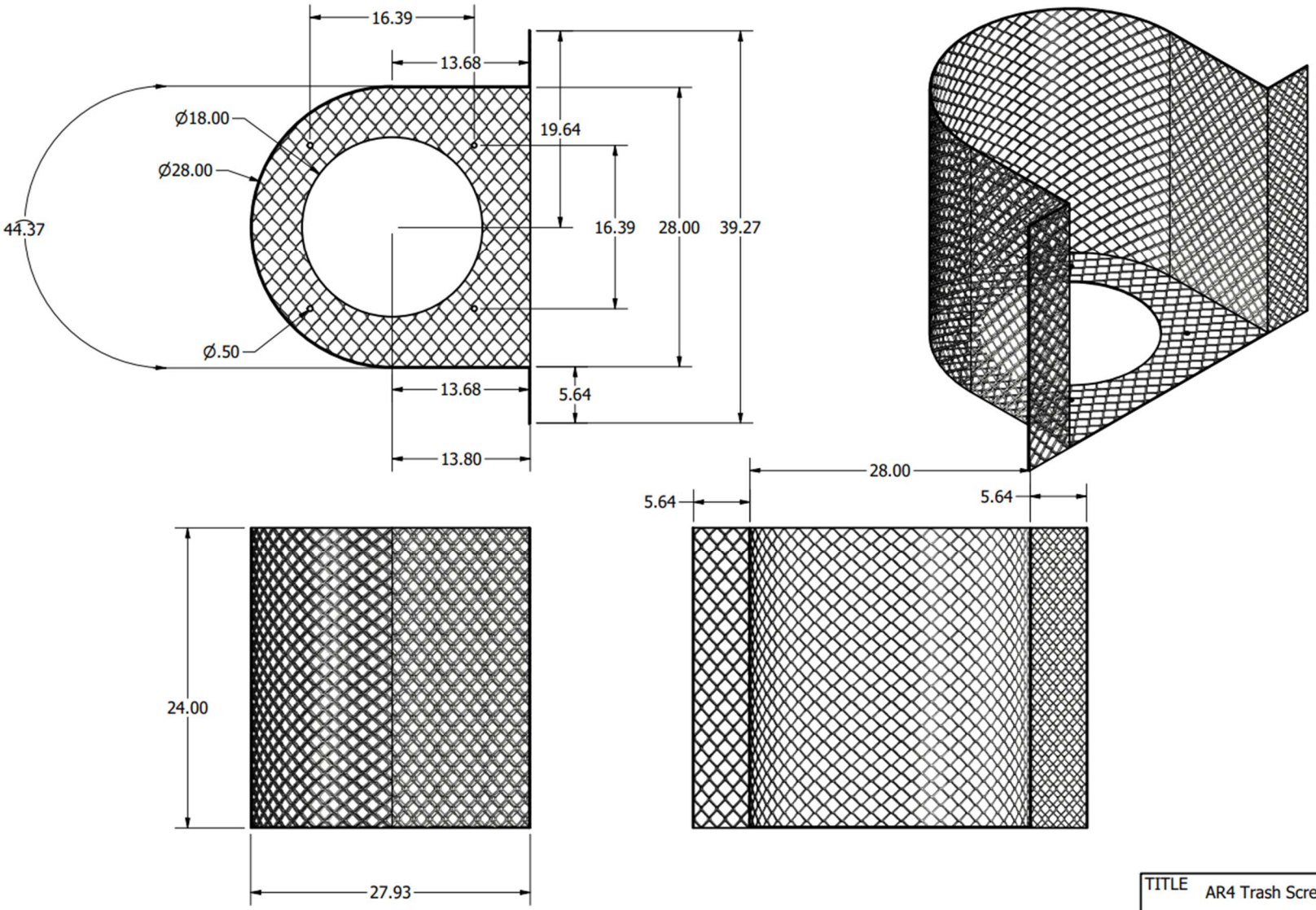

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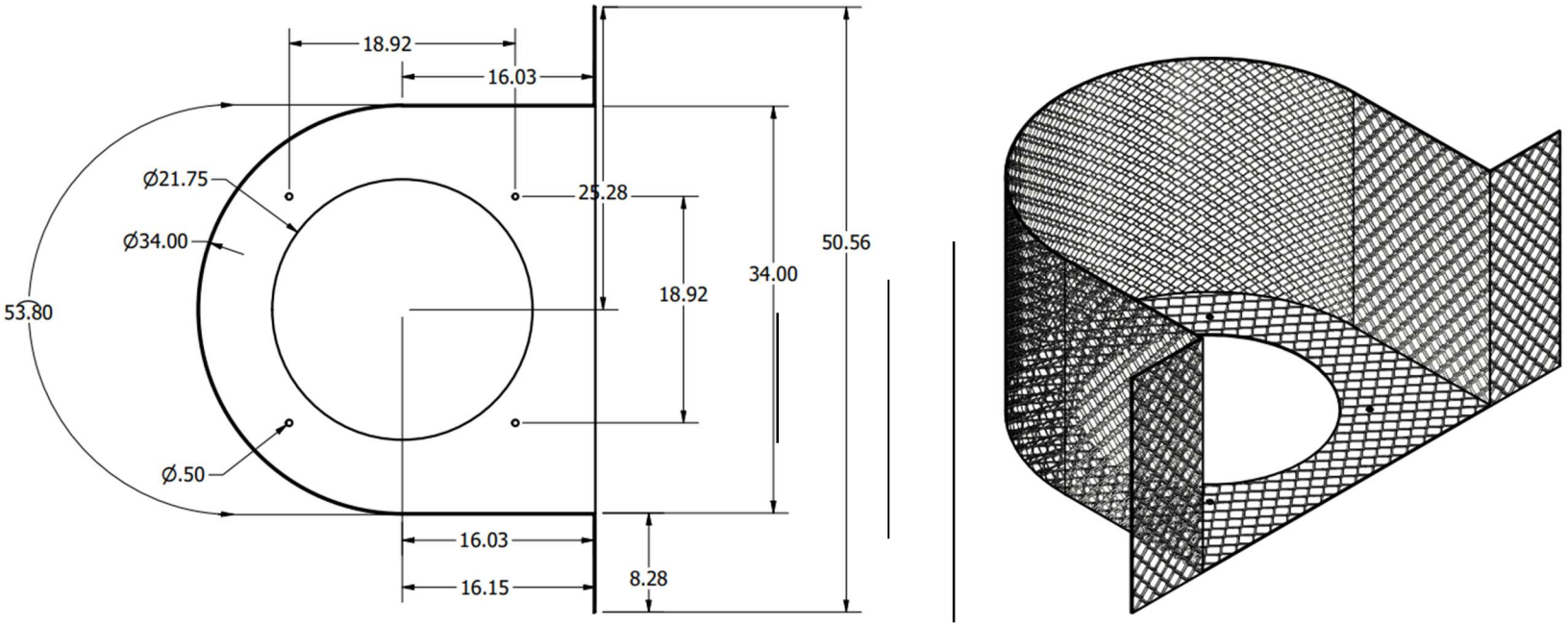
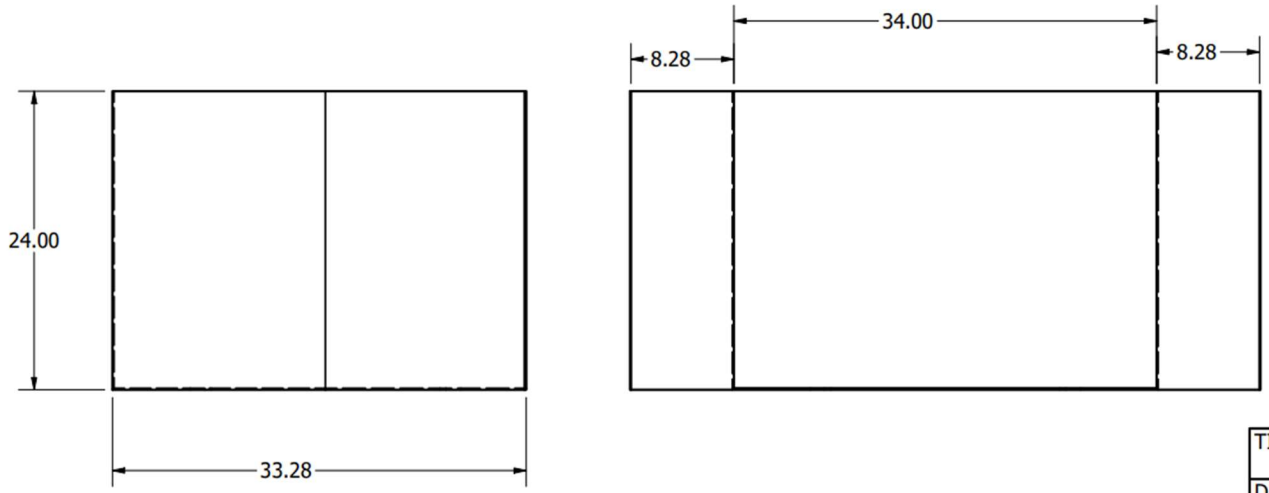
CHECK BY		SHEET 1 of 1





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DATE	7/7/2025	
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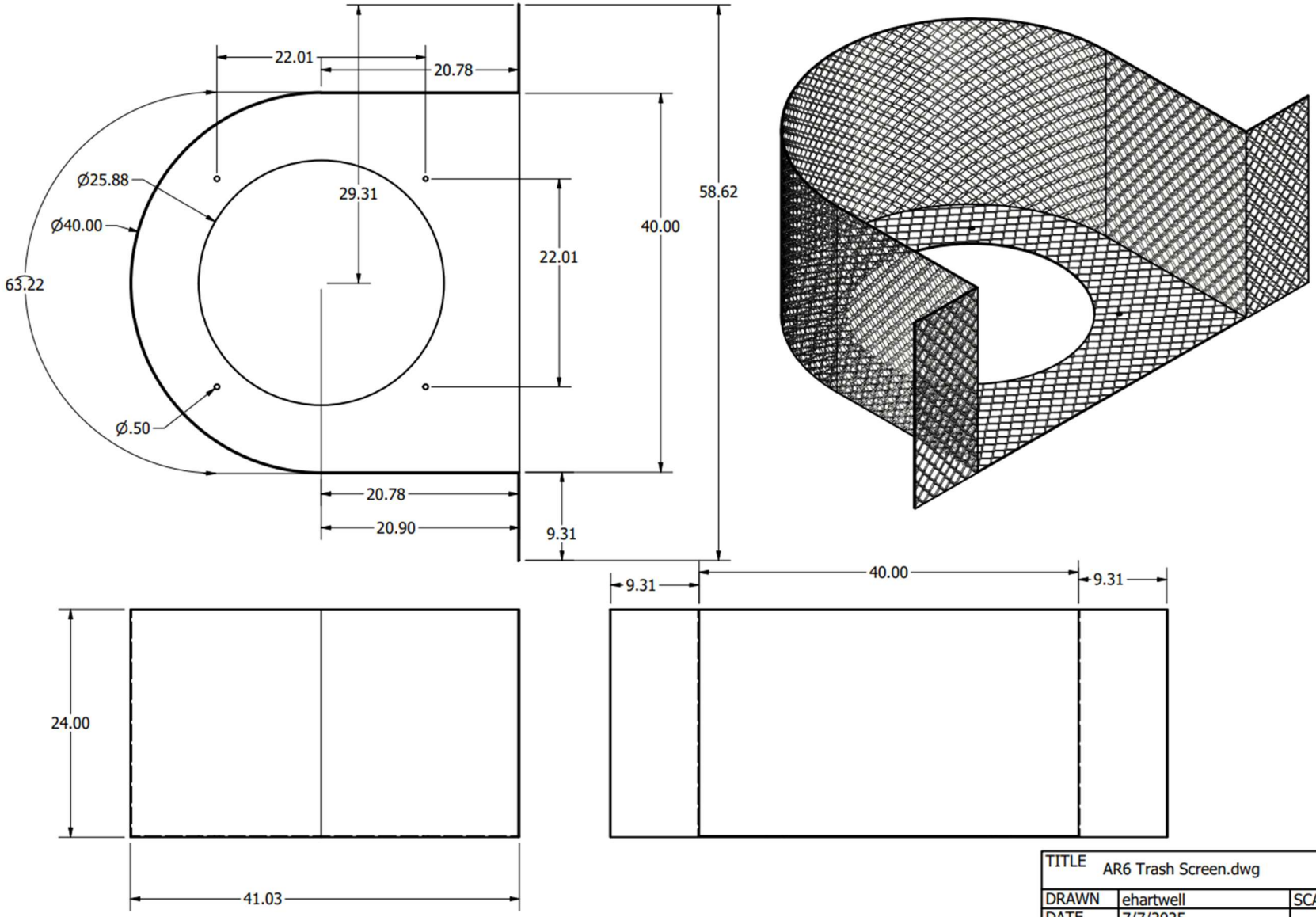

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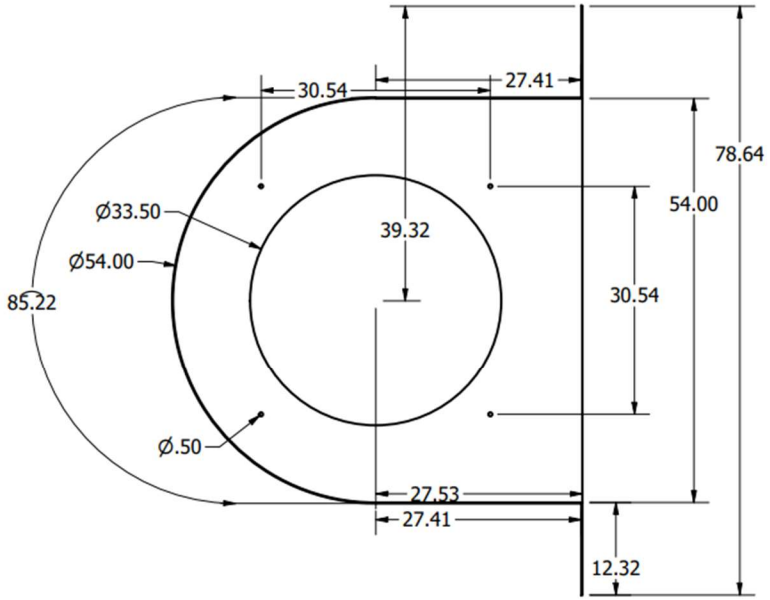

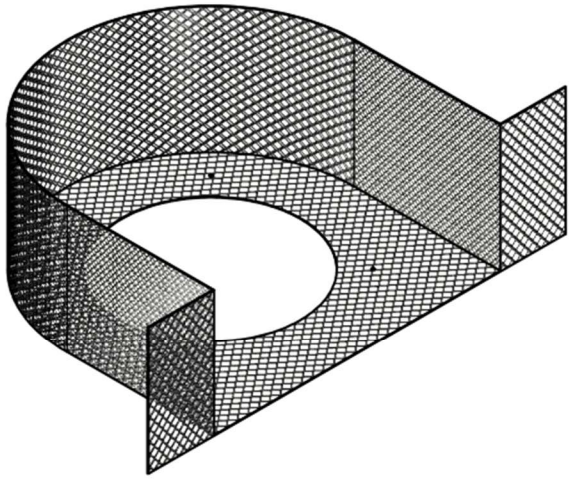

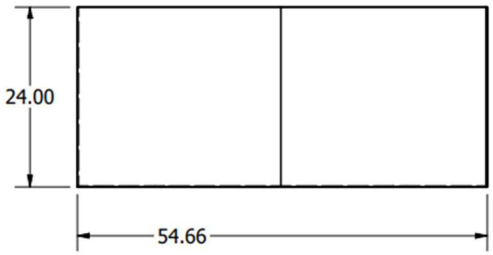

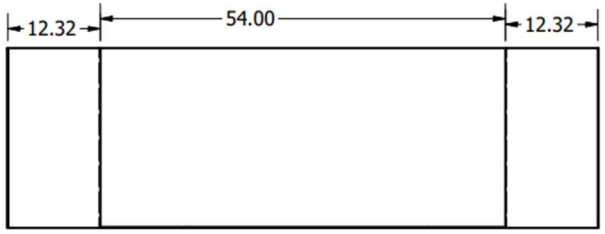

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DATE	7/7/2025	
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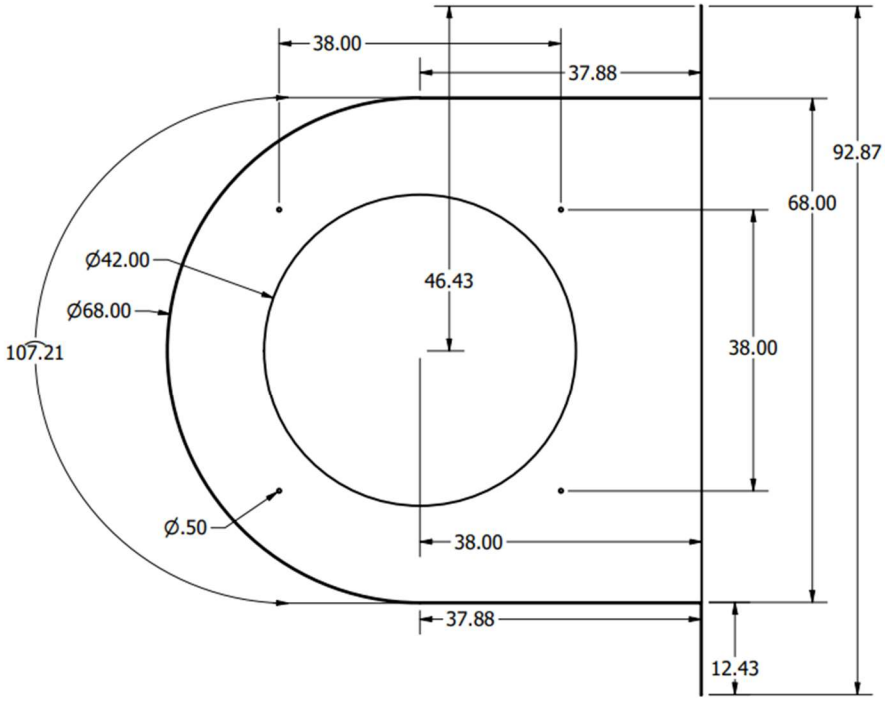

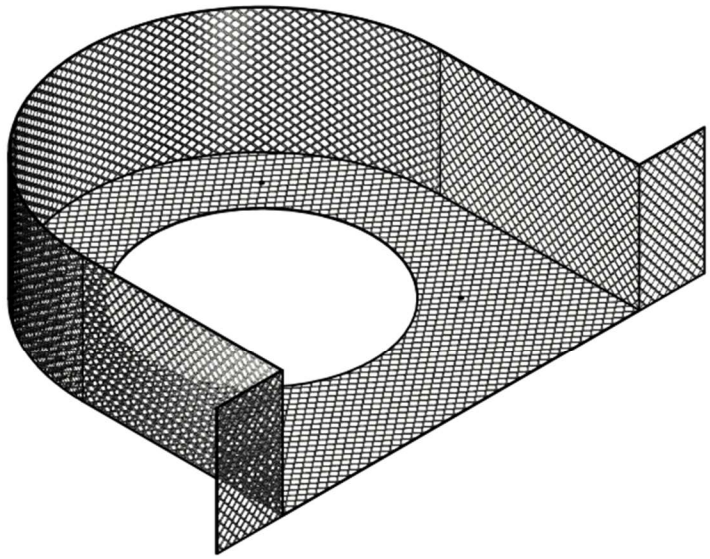

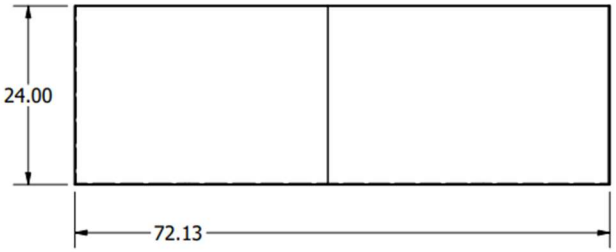

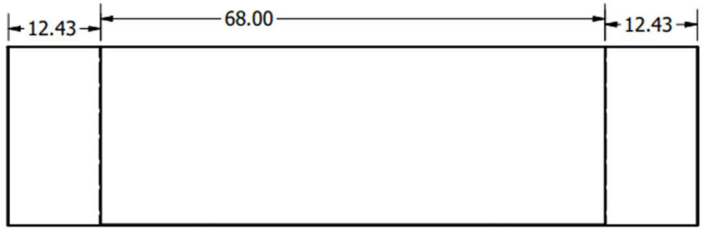

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DRAWN	ehartwell	SCALE 1/16
DATE	7/7/2025	
CHECK BY		SHEET 1 of 1

APPENDIX C

Installing Arcadia Internals into the Manhole

These directions assume the manhole base and riser have been assembled, and that the top slab has not been set.

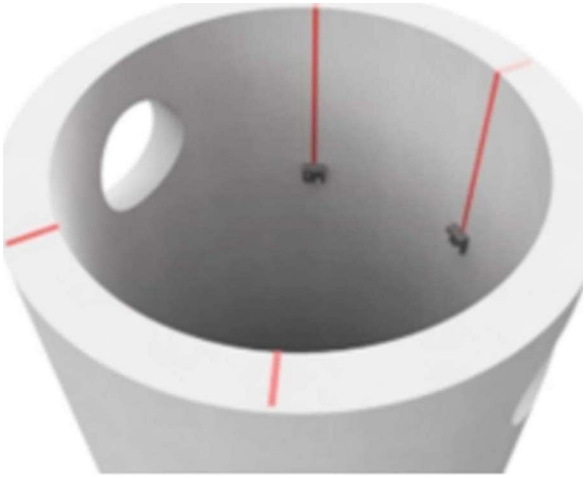
NOTE: Do not insert the inlet or outlet pipes until after the Arcadia internals have been installed. If pipes must be inserted in advance, the pipes should not protrude into the structure as they can interfere with installation of the Arcadia Internals.

- **Materials Provided by ADS:**
  - Qty 1: Arcadia Internals
  - Qty 2: ¼" Dia.-20 thread size, 3¼" wedge anchors
  - Qty 4: 5/16" Dia.-1¼" hex head lag screws
  - Conseal Roll(s)

- **Other Tools Needed:**
  - Drill
  - ¼" Masonry Drill Bit
  - 3/16" multi-purpose drill bit
  - Hammer
  - 7/16" Socket or Wrench
  - Rigging

1. Locate the concrete riser section with Arcadia Mounting Brackets installed.

2. Check for bracket centerline markings inside and on top edge of the manhole. If no markings are present, find and extend the centerlines of each bracket along the inside of the riser all the way to the riser top edge as shown. These centerlines will be used to align the unit during installation.



3. Rig Arcadia internals for overhead lifting. Use the stainless-steel frame arms as pick points for straps, chains or other qualified rigging. It is recommended to attach diagonally to opposite arms.

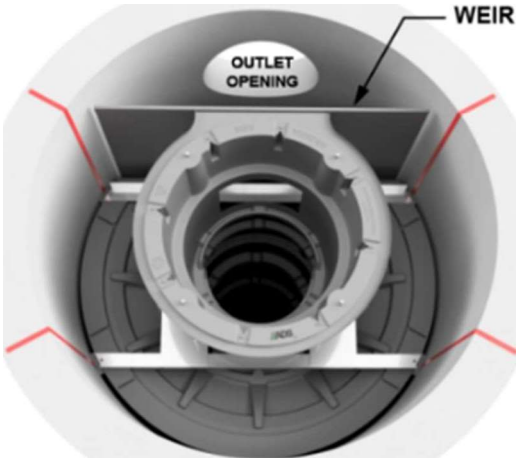
Appropriate rigging examples:

Arcadia Separator Internals Weight (lbs) Once Assembled.

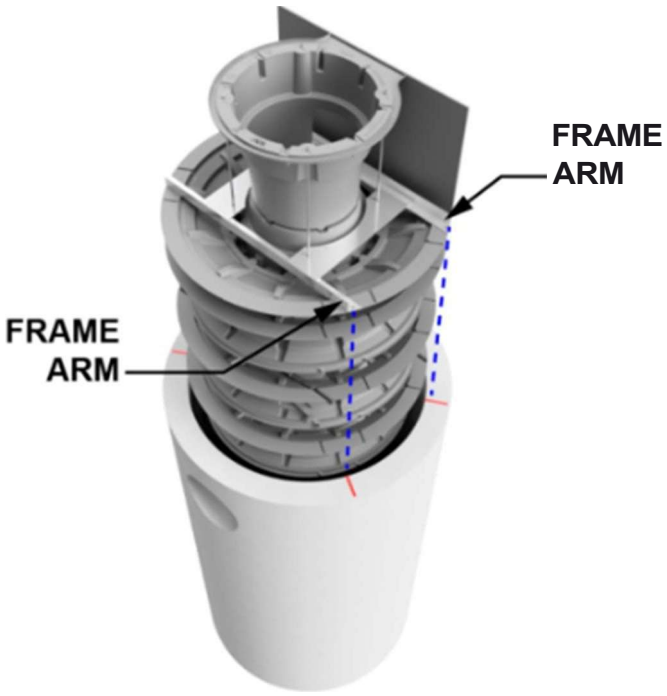
Arcadia Model	AR3	AR4	ARS	AR6	AR8	AR10
Weight (lbs)	82	165	252	356	882	1306

4. Lift Arcadia internals at slow speed. Before lowering the unit into the manhole, check for proper alignment with the mounting brackets inside the manhole. Orientation is important throughout the entire installation process.

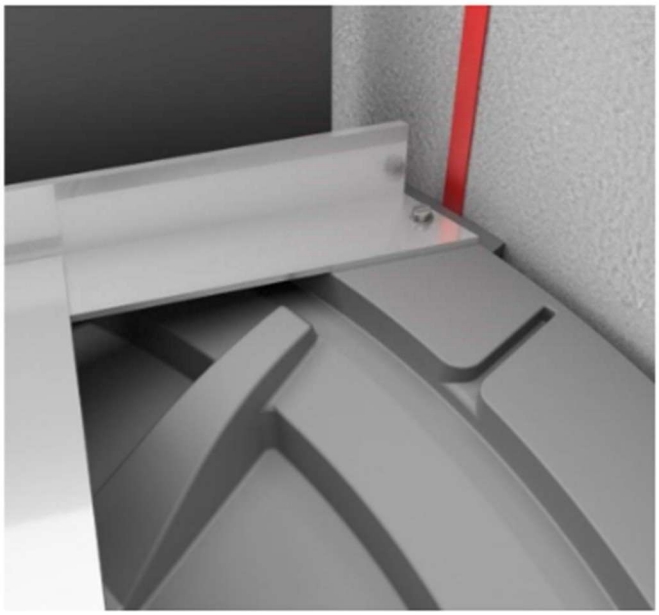
   a. Keep the **WEIR** (F) centered above the outlet pipe opening.



   b. **KEEP FRAME ARMS ALIGNED WITH BRACKET CENTERLINES, DURING** THE **ENTIRE LOWERING PROCESS**. Failure to maintain alignment could result in damage to the unit.



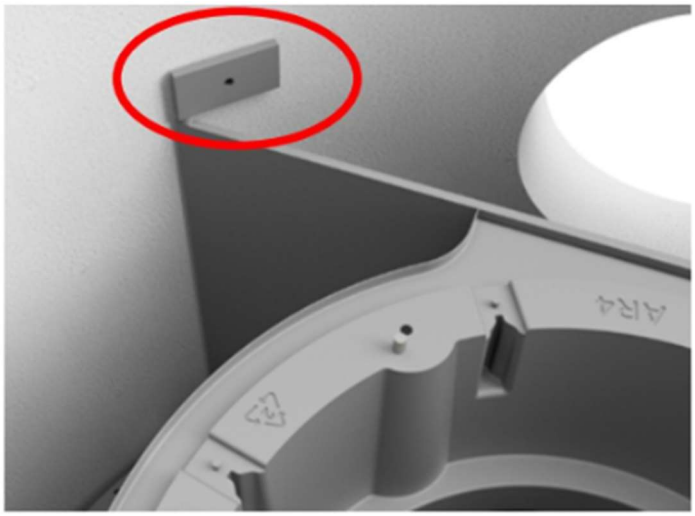
5. Once aligned, slowly lower Arcadia internals into manhole. **KEEP FRAME ARMS ALIGNED WITH BRACKET CENTERLINES, DURING THE ENTIRE LOWERING PROCESS.** Utilize a spotter to guide the alignment of the unit with tagline. Proceed until the stainless-steel frame arms are resting on the pre-installed mounting brackets within the manhole.

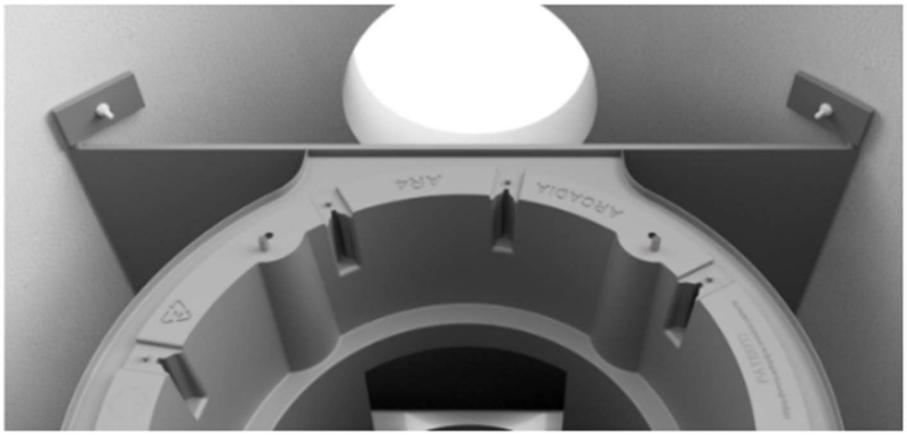


6. Affix Arcadia internals with provided lag screws and washers through the holes in the ends of the stainless-steel frame arms, through the top plastic of the unit and into the plastic brackets beneath. First pre-drill each with a 3/16" drill bit. Use 7/16" socket to drive in lag screws until snug.

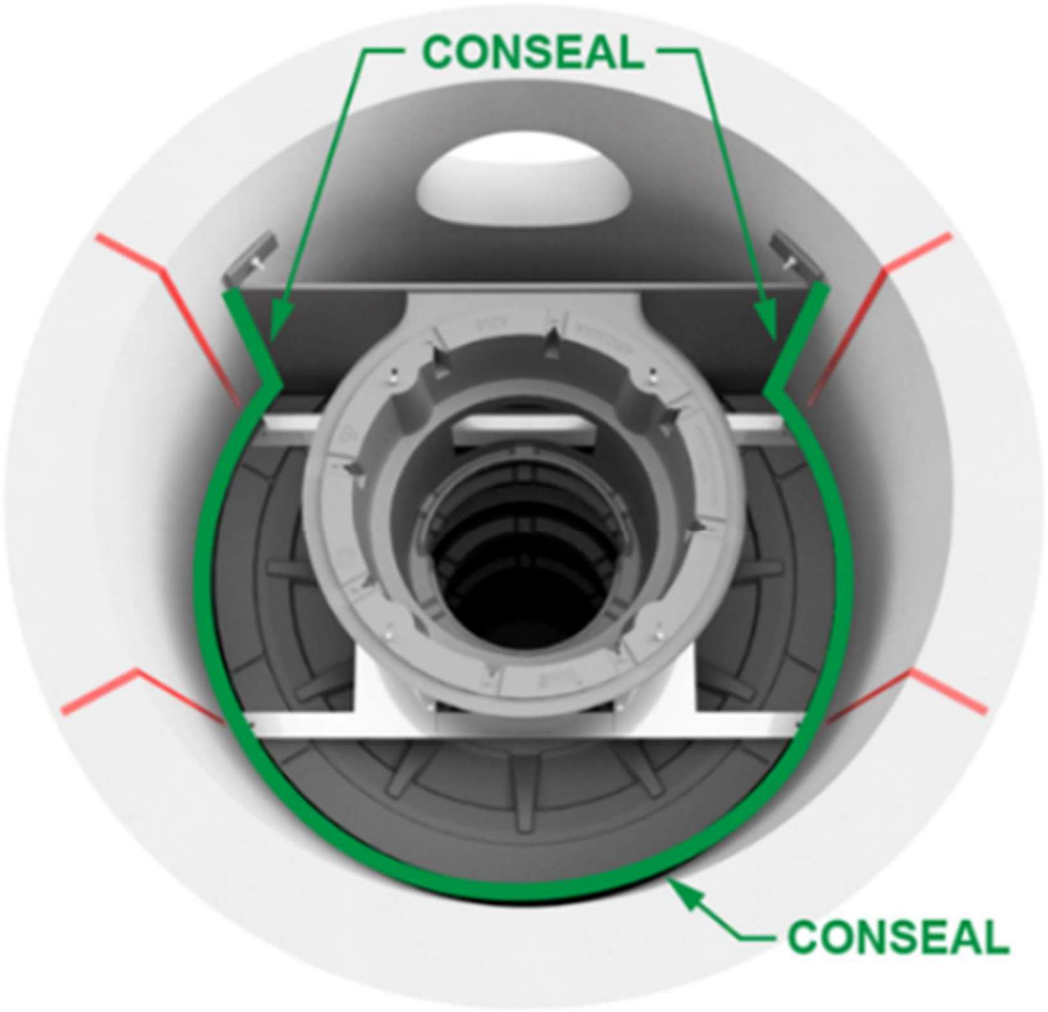
7. Affix **WEIR (F)** edges to manhole walls using concrete anchors.

    a. Bend **WEIR (F)** installation tabs to the manhole wall.
    b. Mark holes for anchors, one hole per tab.
    c. Drill a 1/4" hole 2½" deep at each marked hole.
    d. Bend WEIR installation tabs to manhole wall.
    e. Insert anchors and lightly hammer in place to secure **WEIR (F)** to manhole wall.
    f. Tighten the locking nuts to firmly secure brackets to the manhole wall.





8. Finally, seal **WEIR (F) & TOP BAFFLE (C)** edges to manhole wall using CONSEAL to fill any gaps.


CONSEAL
CONSEAL

APPENDIX D

Arcadia™
Maintenance Guide

One of Arcadia's advantages is the ease of maintenance. Like any system that collects pollutants, the Arcadia hydrodynamic separator must be regularly maintained for continued effectiveness. Maintenance is a simple procedure performed using a vacuum truck or similar equipment. The system is designed to minimize the volume of water lost during routine maintenance, reducing disposal costs.

Contractors can access the pollutants stored in the manhole through the manhole cover. This allows them to gain vacuum hose access to the bottom of the manhole to remove sediment and trash. There is no confined space entry necessary for inspection or maintenance.

The entire maintenance procedure typically takes 2 to 4 hours, depending on the system's size, the amount of captured material, and the vacuum truck's capacity.

Local regulations may apply to the maintenance procedure. Safe and legal disposal of pollutants is the responsibility of the maintenance contractor. Maintenance should be performed only by a qualified contractor.

Inspection and Cleaning Cycle

Periodic inspection is necessary to determine the need for and frequency of maintenance. Inspections should begin as soon as construction is complete and then on an annual basis ongoing. Under normal use, the system will need to be cleaned every 1-3 years.

Sites that have excessive oil, fuel or sediment runoff may shorten the maintenance cycle. Periodic inspection is important.

Determining When to Clean

To determine the sediment depth, the maintenance contractor should lower a stadia rod into the manhole until it reaches the top of the captured sediment. Mark this spot on the rod, then continue pushing the rod through the sediment until it reaches the bottom of the sump. Next, mark the second spot on the rod then compare the two markings to determine the depth of the captured sediment.

Maintenance should occur when the sediment has reached a depth of 18" (450 mm).

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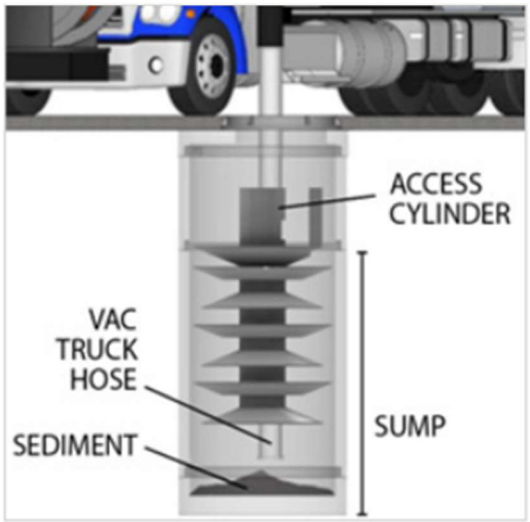
Arcadia Storage Capacities

Model	Manhole Diameter in (mm)	Total System Volume Gallons (Liters)	Treatment Chamber Capacity Gallons (Liters)	Standard Sediment Capacity (18" depth) Yards^3 (m^3)	NJDEP Sediment Capacity (50% of Standard Depth) Yards^3 (m^3)
AR3	36 (914)	242 (917)	203 (767)	0.39 (0.30)	0.19 (0.15)
AR4	48 (1219)	635 (2402)	564 (2135)	0.70 (0.53)	0.35 (0.27)
AR5	60 (1524)	991 (3753)	881 (3336)	1.09 (0.83)	0.55 (0.42)
AR6	72 (1829)	1428 (5404)	1269 (4804)	1.57 (1.20)	0.79 (0.60)
AR8	96 (2438)	4136 (15656)	3854 (14588)	2.79 (2.14)	1.40 (1.07)
AR10	120 (3048)	7931 (30022)	7490 (28354)	4.36 (3.34)	2.18 (1.67)

Maintenance Procedures

1. Remove the manhole cover to provide access to the pollutant storage. Pollutants are stored in the sump, below the unit assembly. Access this area through the access cylinder (larger than 10" (254 mm) diameter for all sizes).
2. Use a vacuum truck or other similar equipment to remove all water, debris, oil and sediment. See Figure 1.
3. Use a high pressure hose to clean the manhole of all remaining sediment and debris. Then, use the vacuum truck to remove the water.
4. Fill the clean manhole with water until the level reaches the invert of the outlet pipe.
5. Replace the manhole cover.
6. Dispose of the polluted water, oil, sediment and trash at an approved facility.
    a. Local regulations prohibit the discharge of solid material into the sanitary system. Check with the local sewer authority for authorization to discharge the liquid.
    b. Some localities treat the pollutants as leachate. Check with local regulators about disposal requirements.
    c. Additional local regulations may apply to the maintenance procedure.

Figure 1



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APPENDIX E

MVCAC
Mosquito and Vector Control Association of California
One Capitol Mall, Suite 320 • Sacramento, CA 95814 • p: (916) 440-0826 • f: (916) 444-7462 • e: mvcac@mvcac.org

Advanced Drainage Systems, Inc.
4671 Raindrop Way
Hilliard, OH 43026

September 16, 2025

Dear Mr. Liu,

Thank you for the submission of the Advanced Drainage Systems (ADS) Arcadia hydrodynamic separator for review by the Mosquito and Vector Control Association of California pursuant to the SWRCB Trash Treatment Control Device Application Requirements. The Association has reviewed the conceptual drawings for the ADS Arcadia and verifies that provisions have been included in the design that allow for full visual access to all areas for presence of standing water, and when necessary, allows for treatments of mosquitoes.

While this verification letter confirms that inspection and treatment for the purpose of minimizing mosquito production should be possible with the ADS Arcadia as presented, it does not affect the local mosquito control agency's rights and remedies under the State Mosquito Abatement and Vector Control District Law. For example, if the installed device or the associated stormwater system infrastructure becomes a mosquito breeding source, it may be determined by a local mosquito control agency to be a public nuisance in accordance with California Health and Safety Code sections 2060-2067.

"Public nuisance" means any of the following:

1. Any property, excluding water, that has been artificially altered from its natural condition so that it now supports the development, attraction, or harborage of vectors. The presence of vectors in their developmental stages on a property is prima facie evidence that the property is a public nuisance.
2. Any water that is a breeding place for vectors. The presence of vectors in their developmental stages in the water is prima facie evidence that the water is a public nuisance.
3. Any activity that supports the development, attraction, or harborage of vectors, or that facilitates the introduction or spread of vectors. (Heal. & Saf. Code § 2002 (j).)

Declaration of a facility or property as a public nuisance may result in penalties as provided under the Health and Safety Code. Municipalities and the vendors they work with are encouraged to discuss the design, installation, and maintenance of stormwater trash capture devices with their local mosquito control agency to reduce the potential for disease transmission and public nuisance associated with mosquito production.

Sincerely,

Megan MacNee
MVCAC Executive Director