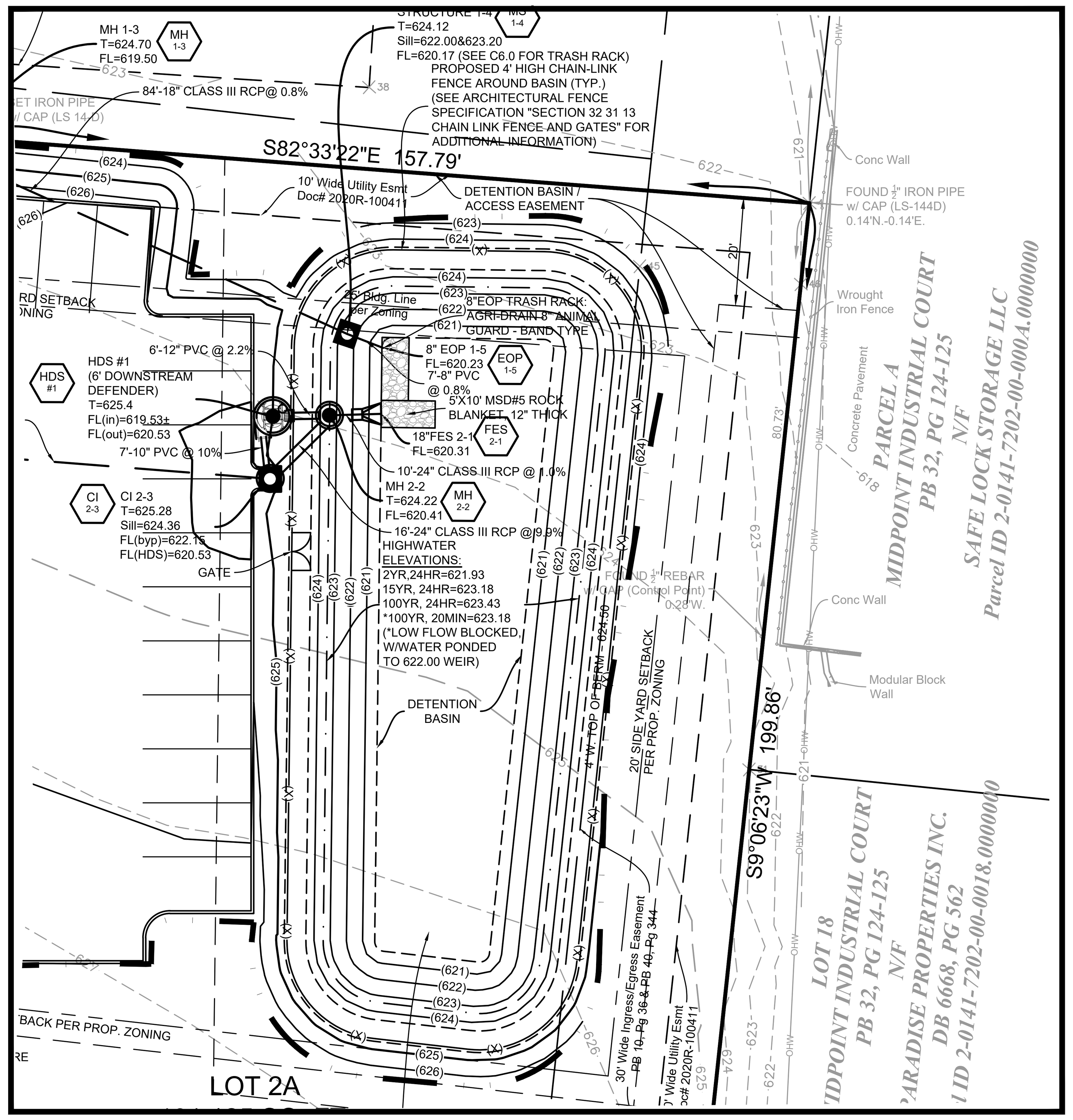
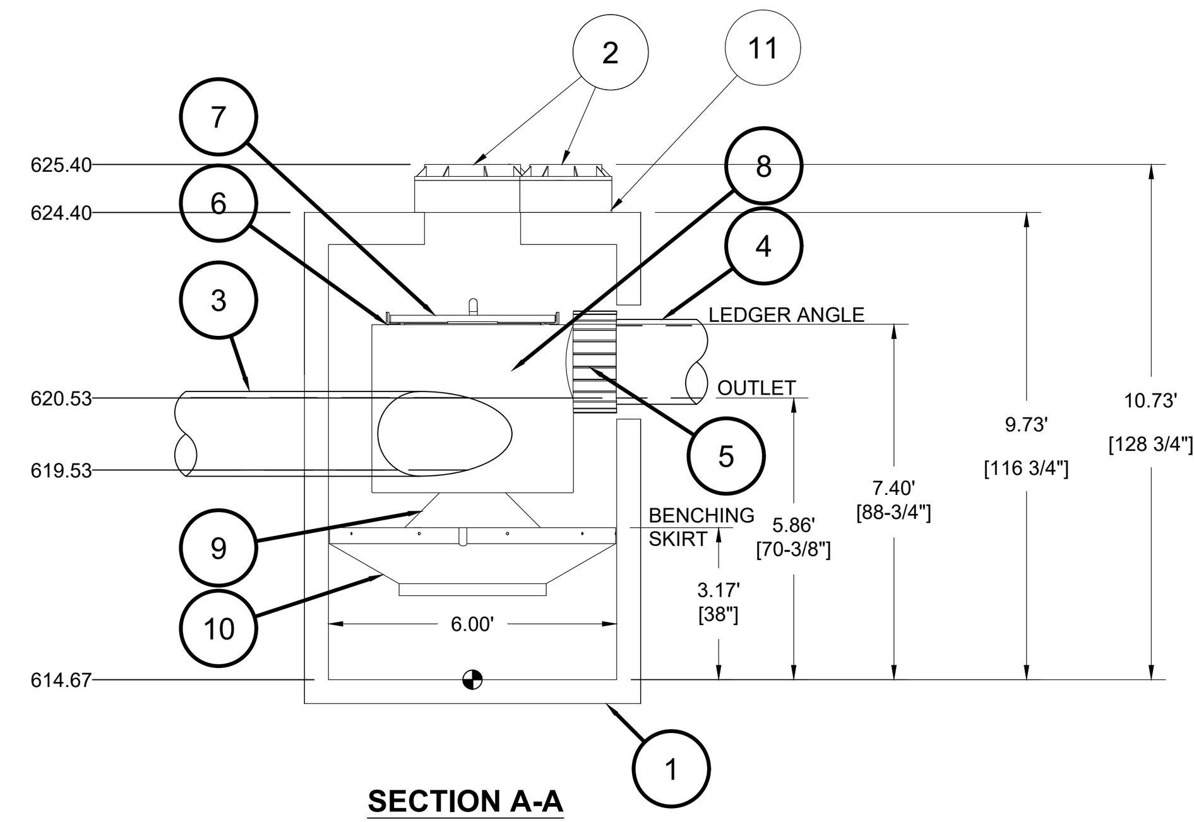


HYDRODYNAMIC SEPARATOR #1 – WATER QUALITY AREA

SCALE: 1"=10'



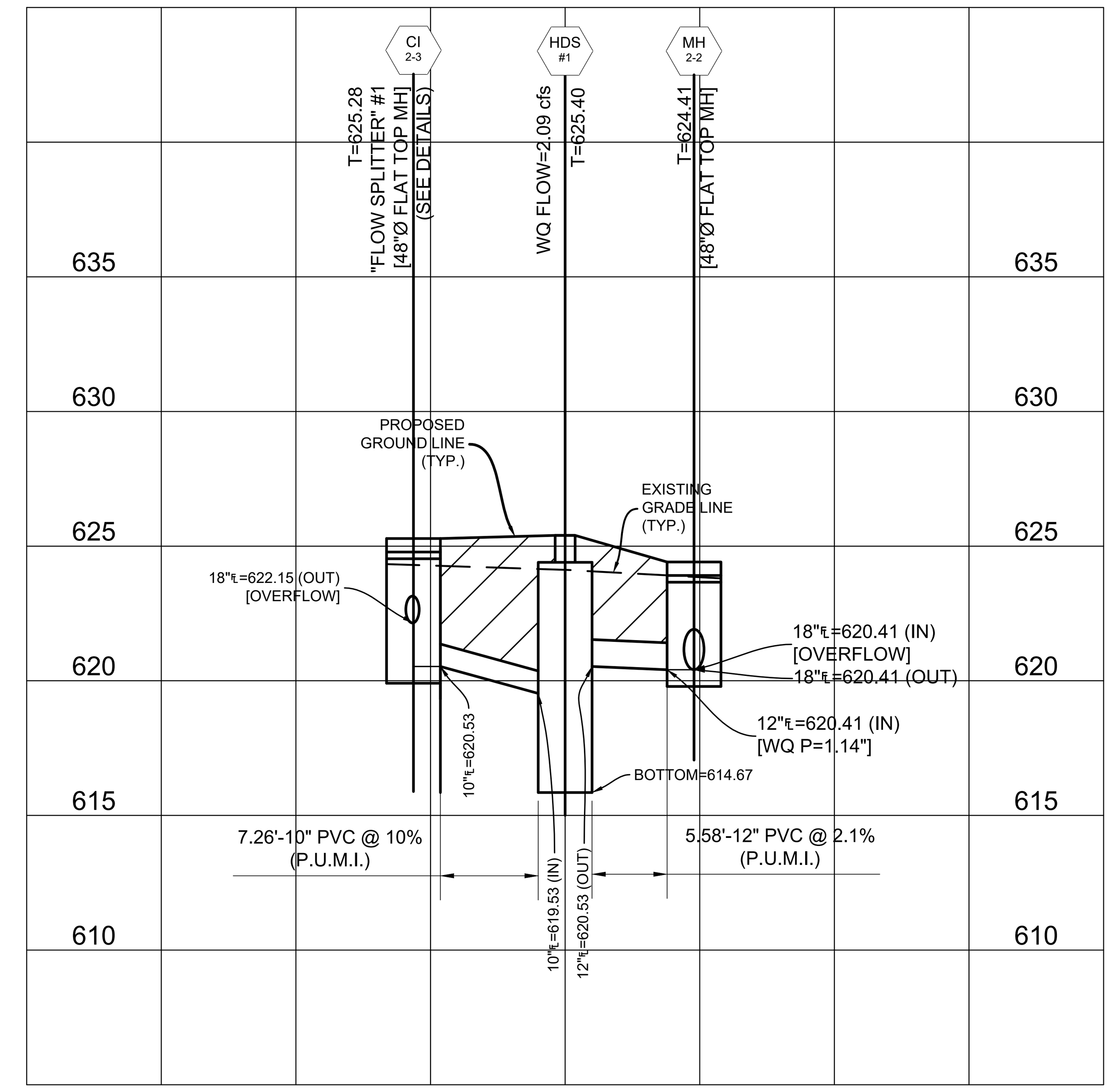
SECTION A-A

1/4" = 1'

PARTS LIST: **6' DOWNSTREAM DEFENDER**			
ITEM	**SIZE (IN)**	**MATERIAL**	**DESCRIPTION**
1	72	CONCRETE	I.D. PRECAST MANHOLE
2	18 & 24	-	FRAME & COVER
3	10	PVC	INLET PIPE (BY OTHERS)
4	12	PVC	OUTLET PIPE (BY OTHERS)
5	18	-	PIPE COUPLING (BY OTHERS)
6	-	-	LEDGER ANGLE
7	-	-	SUPPORT FRAME
8	-	-	DIP PLATE
9	-	-	CENTER SHAFT & CONE
10	-	-	BENCHING SKIRT
11	-	-	MATERIALS & LABOR TO ACHIEVE FINAL GRADE (BY OTHERS)

NOTES:

*ENGINEER / CONTRACTOR TO CONFIRM PIPE MATERIALS.
*ALL CONNECTIONS TO DOWNSTREAM DEFENDER TO BE A-LOK CONNECTIONS.

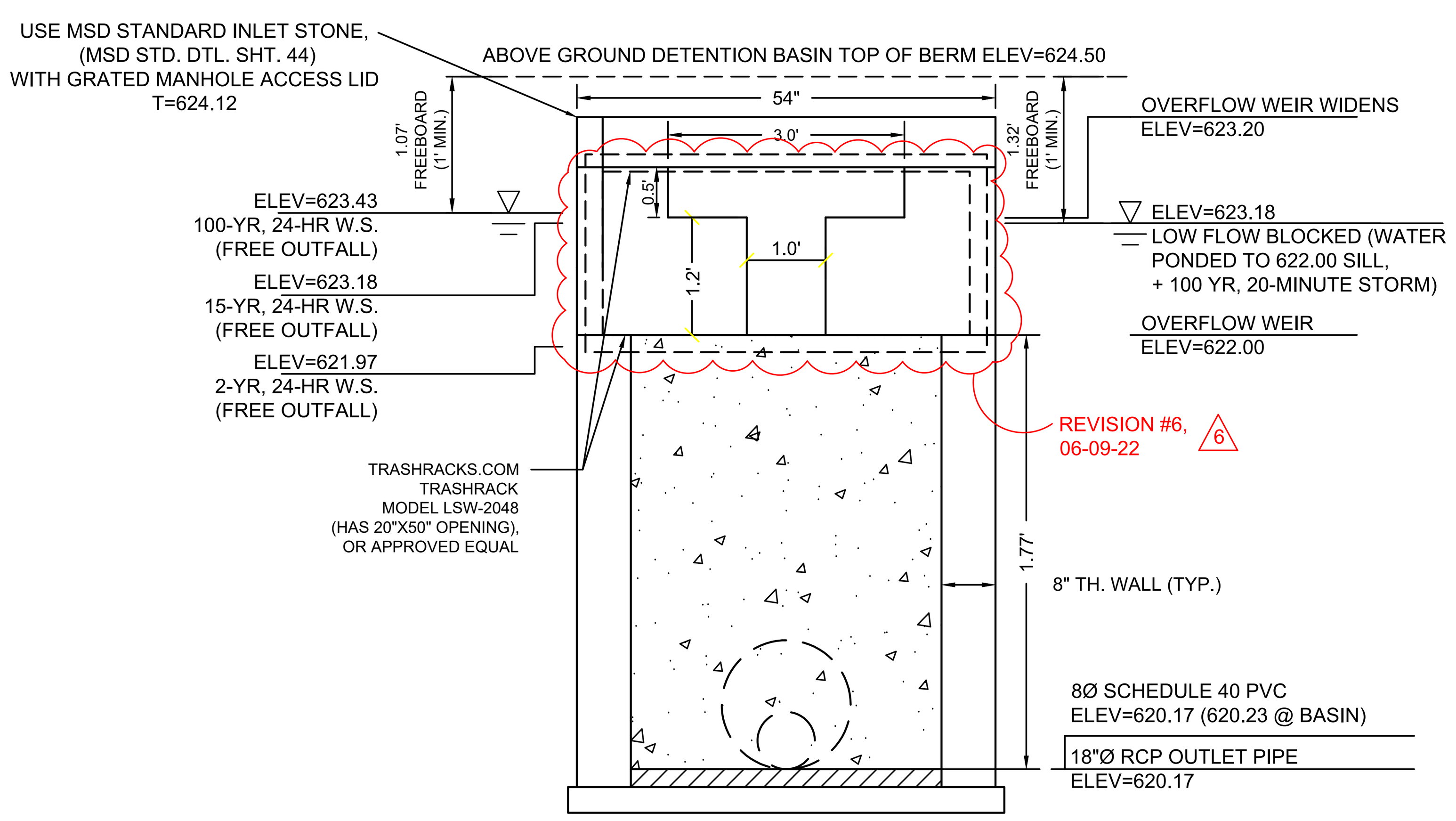


HDS UNIT NOTES:

1. HDS UNIT = HYDRODYNAMIC SEPARATOR UNIT (WATER QUALITY PROPRIETARY DEVICE)
2. THE PIPE SLOPES IN AND OUT OF THE HYDRODYNAMIC SEPARATOR ARE CALCULATED BASED ON THE DISTANCE BETWEEN THE INSIDE OF A 48" (I.D.) STRUCTURE (CI 2-3) AND THE INTAKE CONNECTION POINT OF THE HDS UNIT, AND BETWEEN THE DISCHARGE CONNECTION POINT OF THE HDS UNIT AND INSIDE OF A 48" (I.D.) STRUCTURE (CI 2-2). THE PIPE SLOPES ARE THE CRITICAL FACTOR FOR INSTALLATION, AS THIS GENERATES THE PROPER FLOW RATE TO TREAT THE WATER QUALITY DESIGN STORM. THESE PIPES MUST BE INSTALLED AT THE LISTED SLOPE. SHOULD A DIFFERENT DIAMETER (+ / -) STRUCTURE BE REQUIRED FOR CI 2-3, THEN THE DESIGN WILL BE REVIEWED BY THE PROJECT ENGINEER AFTER THE CONTRACTOR SUPPLIES SHOP DRAWINGS. NO STORM STRUCTURE FABRICATION SHALL OCCUR PRIOR TO SHOP DRAWING APPROVAL.

HDS UNIT #1 PROFILE VIEW

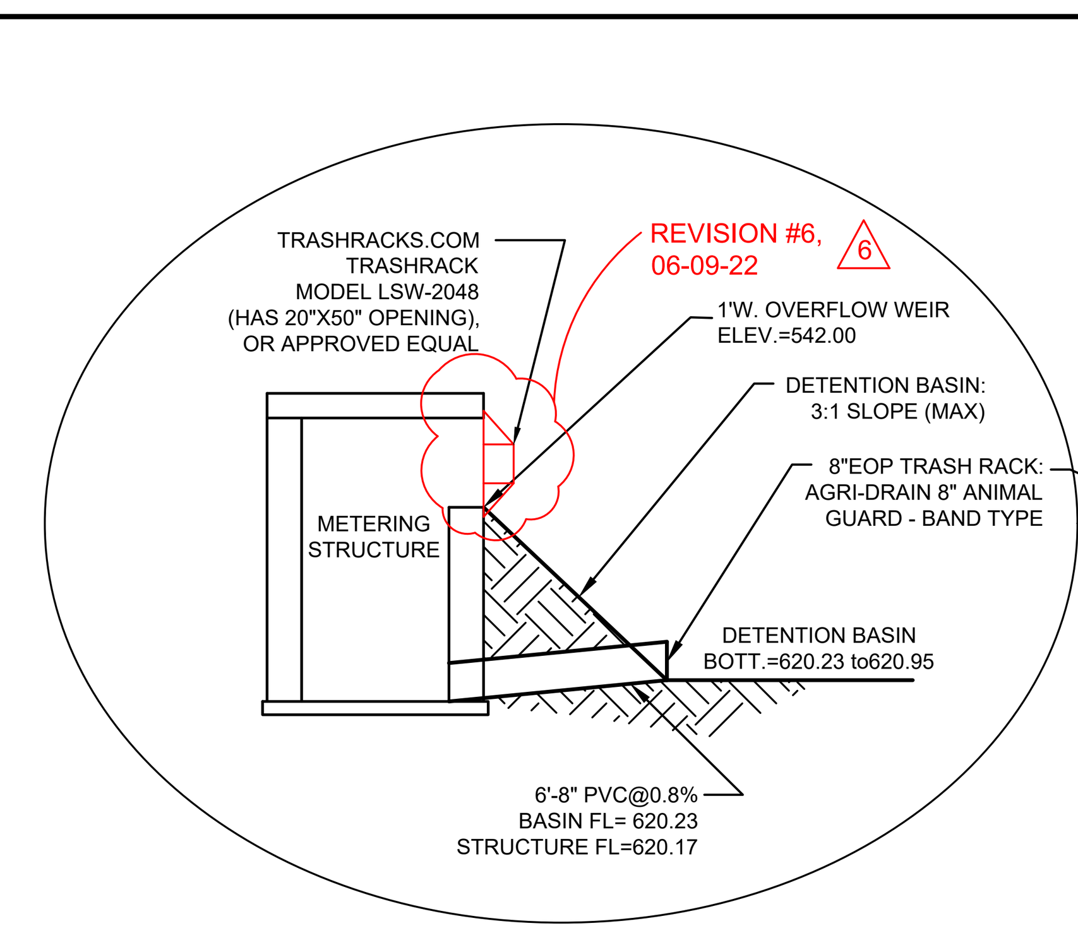
SCALE H: 1"=10'
SCALE V: 1"=5'

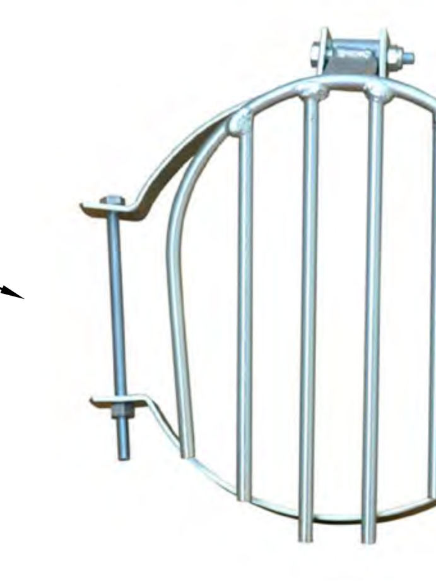


USE A MODIFIED MSD AREA INLET PRECAST CONCRETE (MSD STD. DTL. SHT. 34)
(OPEN 1 SIDE - EAST SIDE ONLY)

REINFORCED CONCRETE METERING STRUCTURE (MS 1–4)

SCALE: N.T.S.



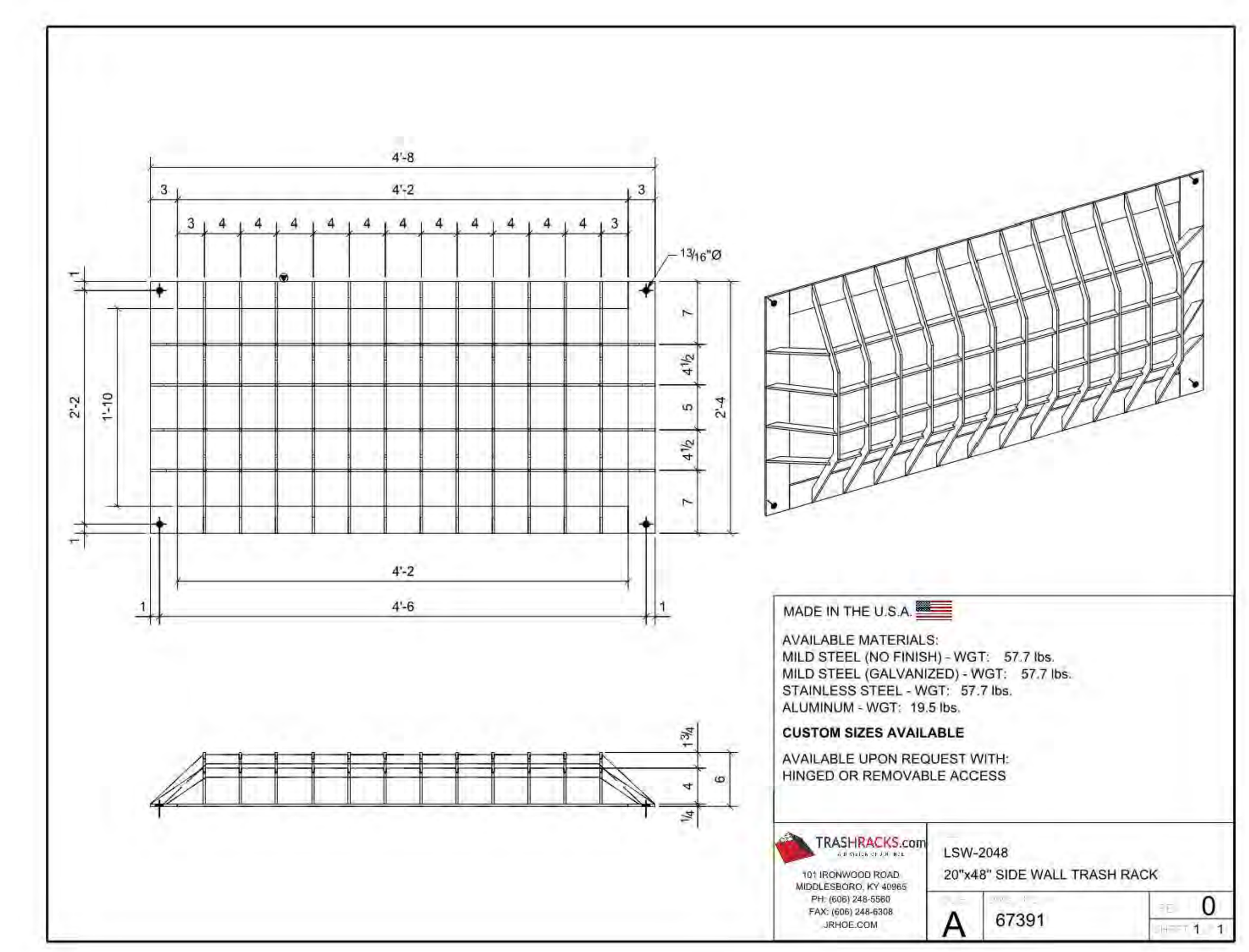


TYPICAL DETENTION METERING STRUCTURE

LOW FLOW PIPE

SCALE: N.T.S.

REVISION #6, 06-09-22



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REVISIONS

1	04-01-22	EAS	Minor building/parking lot revisions, added HDS info
2	04-25-22	EAS	City of O'Fallon comments
3	05-03-22	EAS	MoDOT comments
4	05-13-22	EAS	BID SET
6	06-09-22	EAS	New Address, trash rack, removed west gate

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Prepared for:
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O'Fallon, MO 63366

Eric A. Skelton - Professional Engineer (PE-2000150069)

STATE OF MISSOURI
ERIC A. SKELTON
NUMBER
PE-2000150069
PROFESSIONAL ENGINEER
06-09-22

Designed	EAS
Drawn	EAS
Checked	EAS
Date	March 19, 2022
Project Number	21243
Sheet Number	C6.0 of