

FRAMELESS HARMONIC CASCADE® SERIES

Medium Features - 7' to 11' Wide by maximum 15' Tall Dimensions

DESIGN CONSIDERATIONS -

- MINIMUM DIMENSIONS OF A MEDIUM-SIZED FEATURE RANGE BETWEEN 7 FEET TO 11 FEET WIDE BY MAXIMUM 15 FEET TALL.
- OPEN POOL (BY OTHERS) MAY BE PROVIDED IN LIEU OF A CLOSED BASIN DESIGN.
- BASIN/OPEN POOL MAY BE INSTALLED BELOW GRADE, ABOVE GRADE, BUILT INTO SURROUNDING CASEWORK, ETC.
- UPPER DISTRIBUTION SYSTEM MAY BE CONCEALED BEHIND A SOFFIT, FASCIA, DROP CEILING, ETC.
- EQUIPMENT SPECS AND PIPE SIZES VARY AND WILL BE DETERMINED PER JOB.

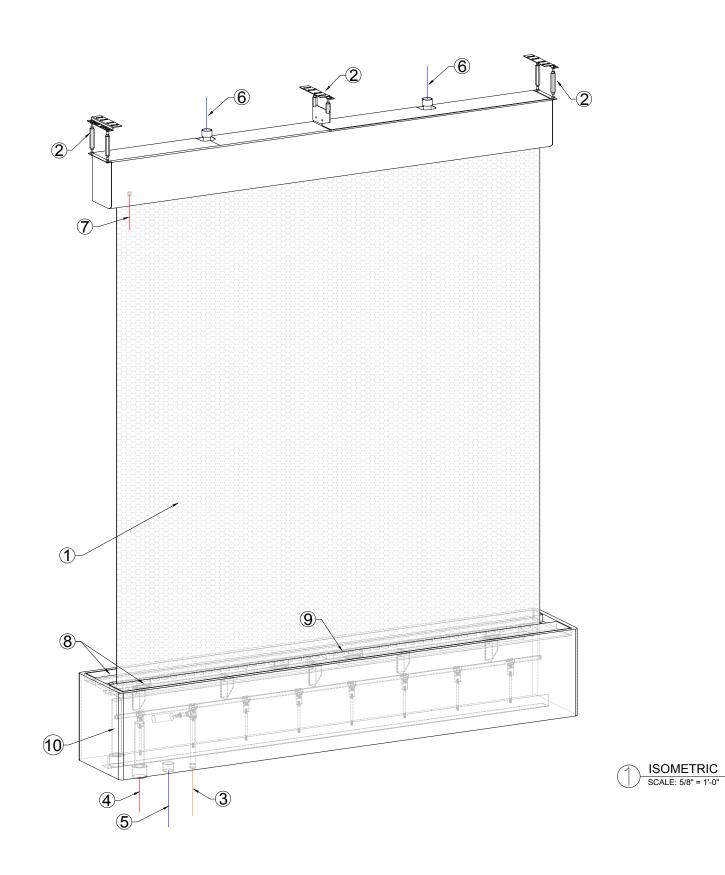
ISOMETRIC
SCALE: 1/2" = 1'-0"

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PROJECT # N/A	DATE 5/23/17	REVISION# 00	DRAWN BY JYM	DESIGNED BY TM	SHEET# 01 OF 17
		Harmonic Caecade® Series	y v		סומו ושפס סופפו המסוו

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premier maker of custom waterfall:
1075 Hialeah Drive





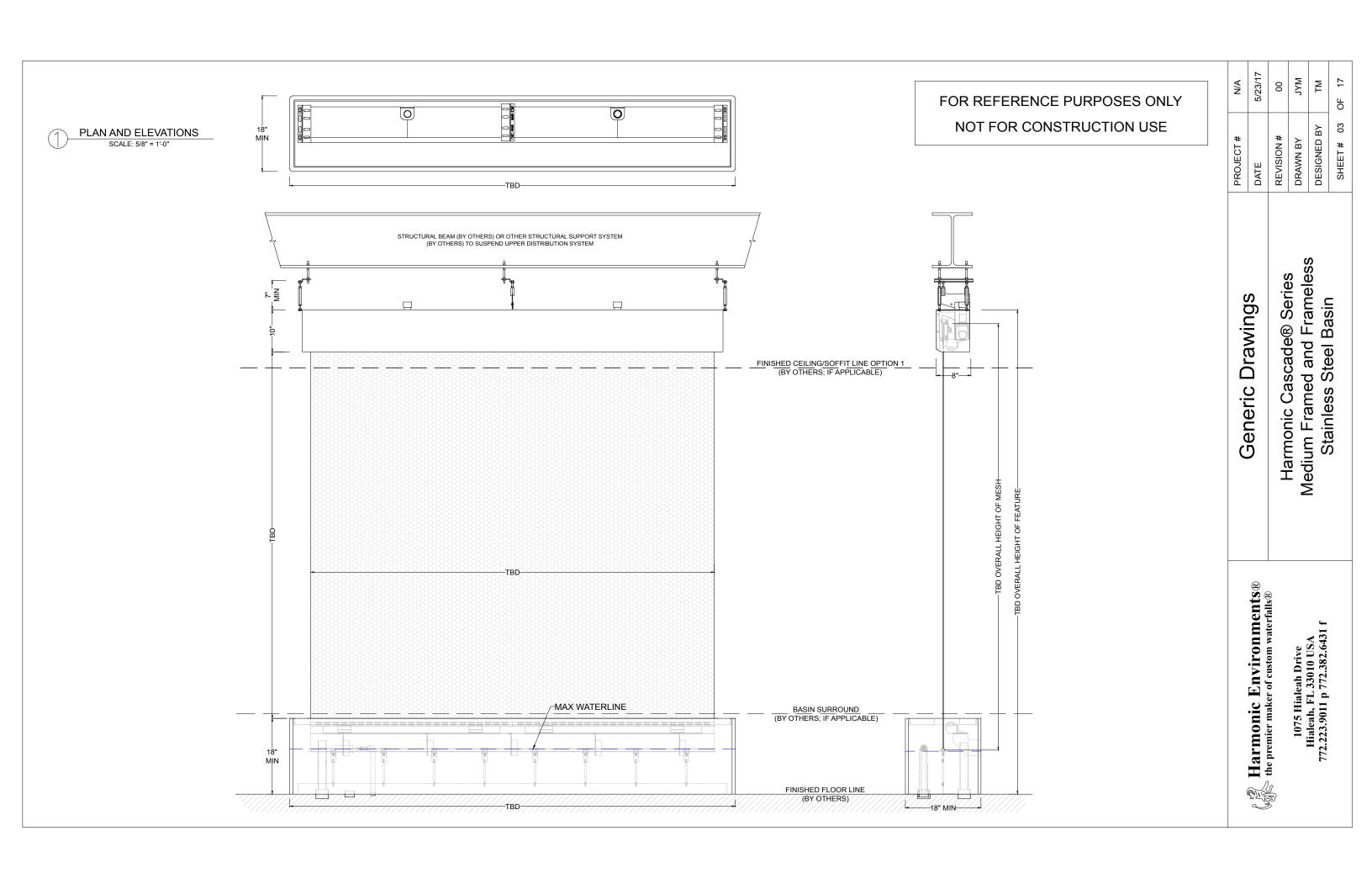
SH	SHEET NOTES:			
1	HARMONIC MESH™			
2	(3) MOUNTING AND LEVELING BRACKETS TO SUSPEND UPPER DIST SYSTEM			
3	1/2" STANDARD WATER LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH AUTO-FILL FLOAT VALVE BY HARMONIC ENVIRONMENTS			
4	1-1/2" DRAIN LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH PVC STANDPIPE OVERFLOW BY HARMONIC ENVIRONMENTS			
5	2" MAIN SUCTION LINE (BY OTHERS)			
6	(2) 2" MAIN RETURN LINE (BY OTHERS)			
7	1/2" UPPER DISTRIBUTION DRAIN LINE (BY OTHERS)			
8	REMOVABLE BASIN LIDS (IF APPLICABLE)			
9	LED LIGHTING FIXTURES (IF APPLICABLE)			
10	1-1/2" ELECTRICAL CONDUIT; NPT SS FEMALE CONNECTION COUPLING AND CONDUIT PROVIDED BY HARMONIC ENVIRONMENTS			

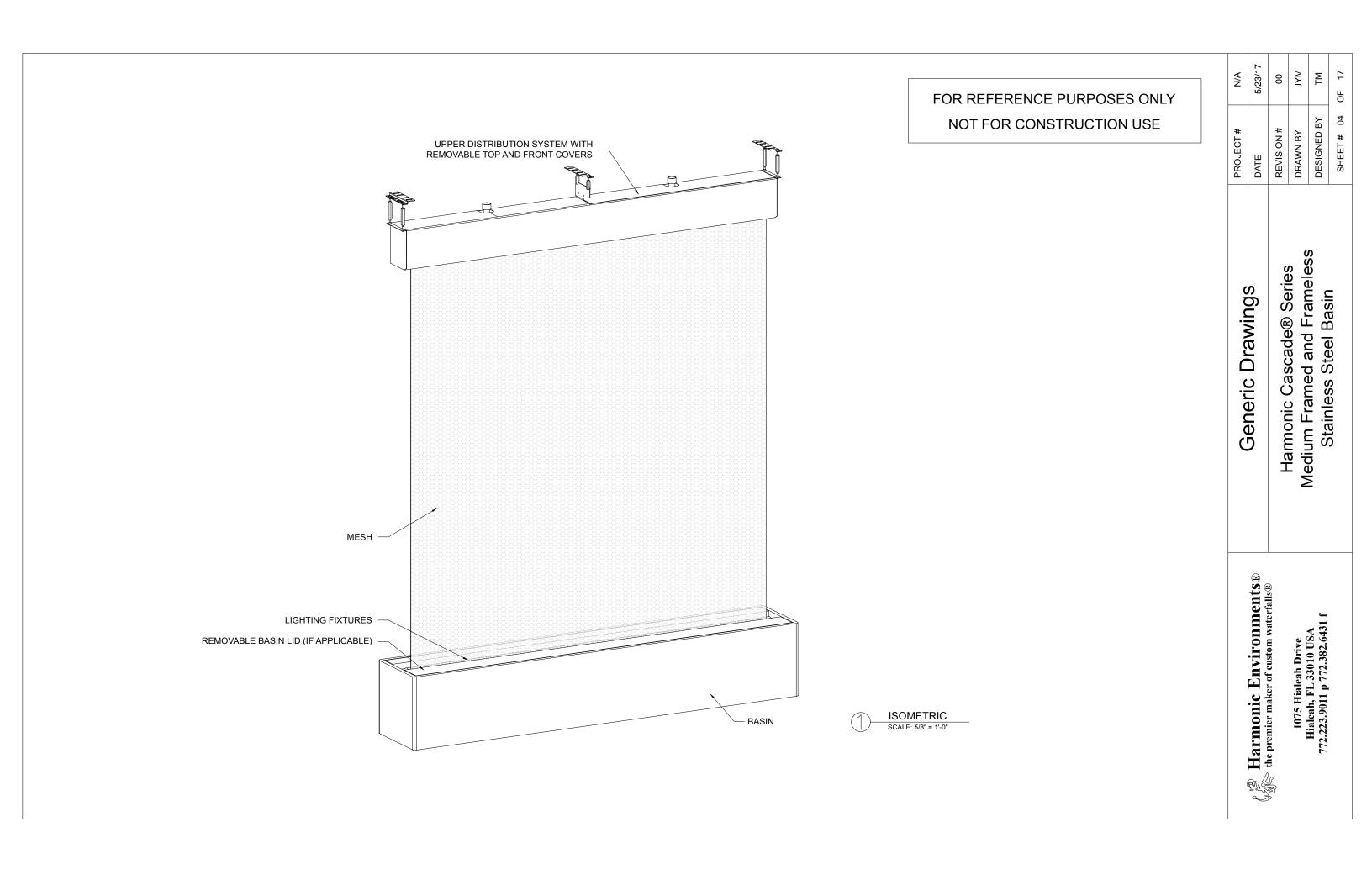
BREAKDOWN OF LOADS IN LBS			
HARMONIC MESH TBD			
WATERFALL (WITHOUT MESH)			
WITH WATER	TBD		
WITHOUT WATER	TBD		

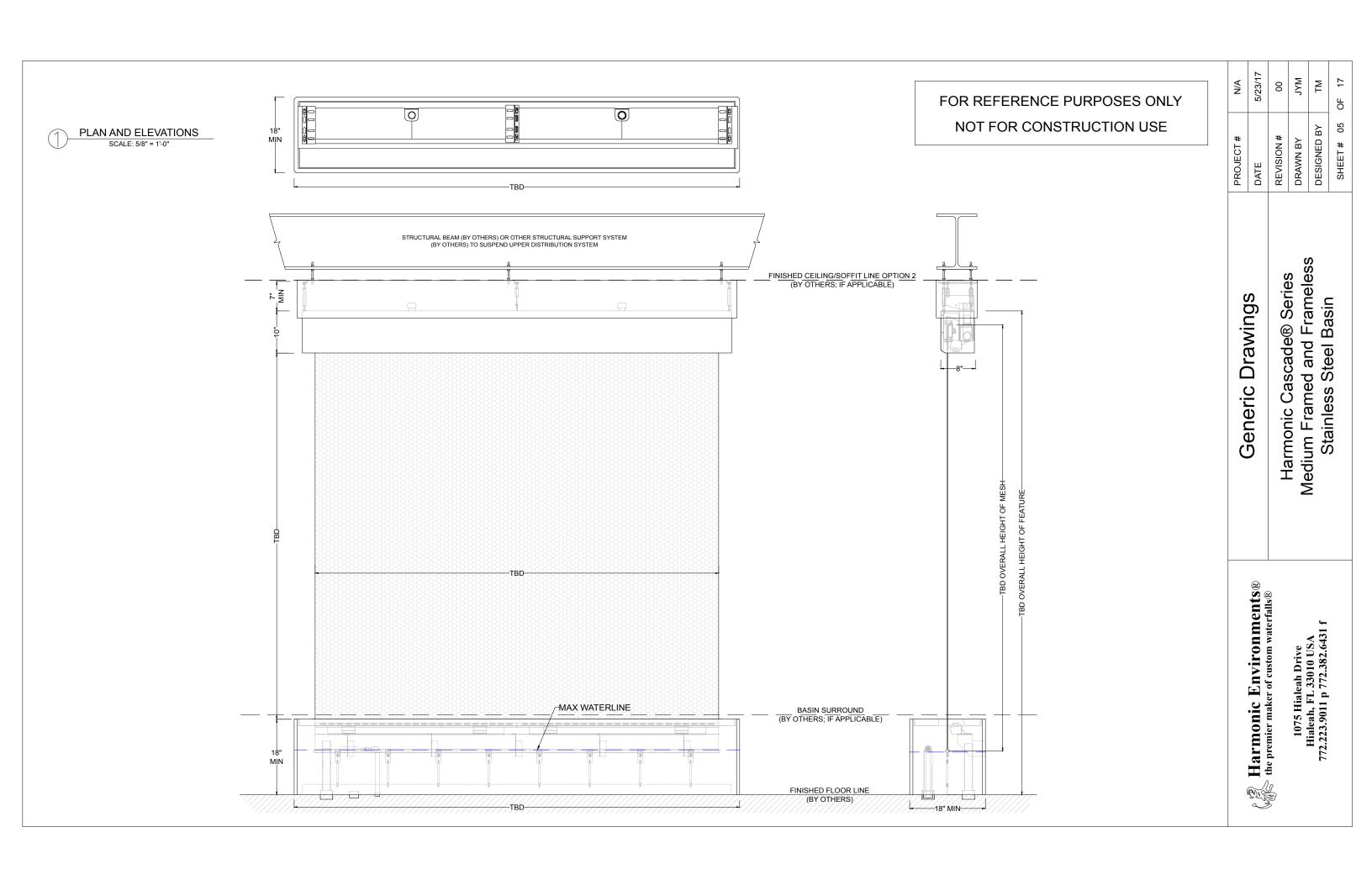
	BREAKDOWN OF WATER VOLUME IN GALLONS				
7	UPPER DIST SYS	TBD			
	HARMONIC MESH	TBD			
	BASIN	TBD			
1	PIPES	TBD			
	TOTAL	TBD			
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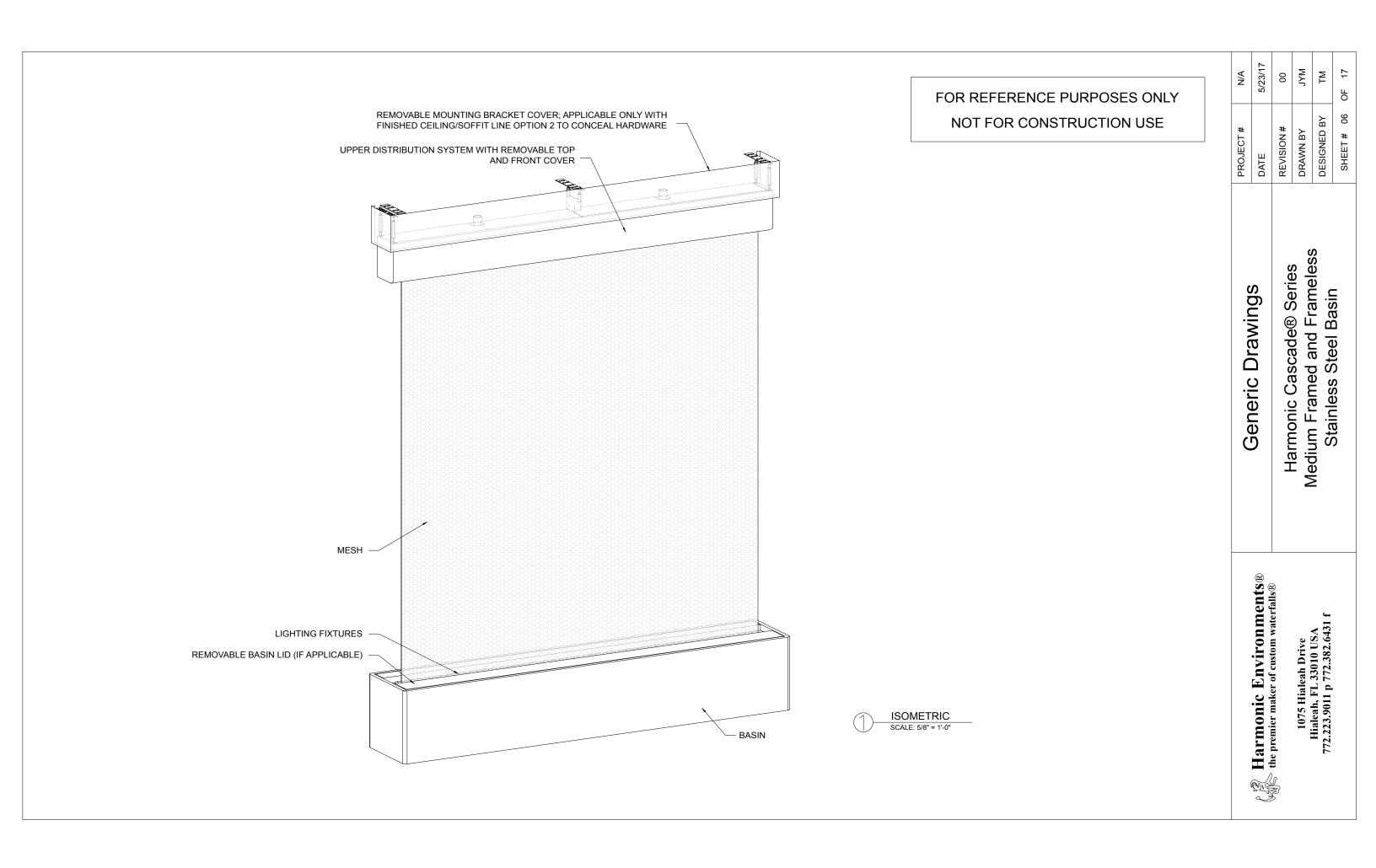
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PROJECT#	DATE	REVISION#	DRAWN BY	DESIGNED BY	SHEET# 02 OF 17
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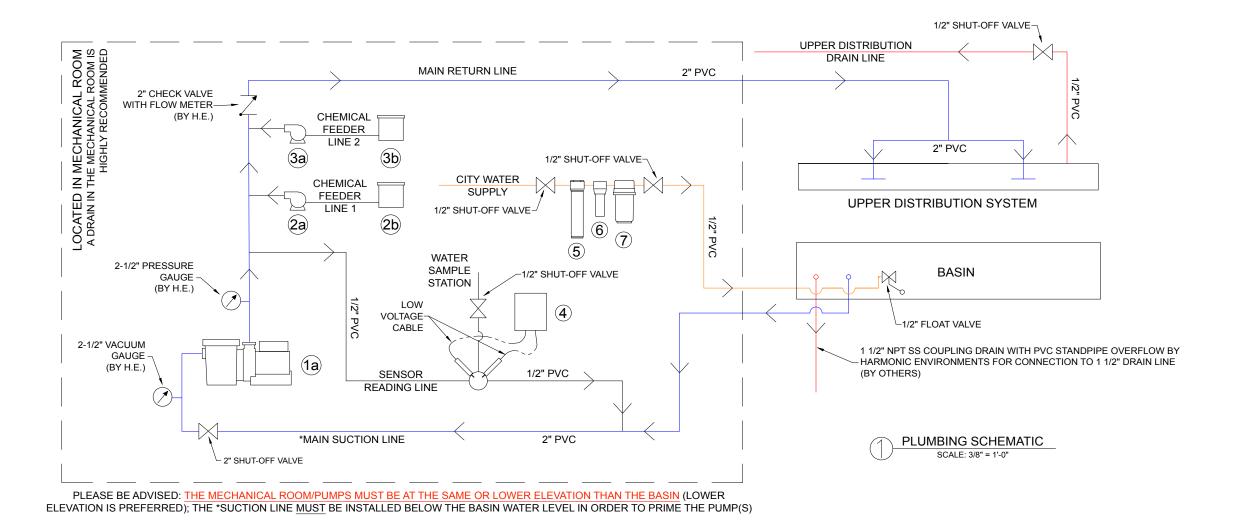






SH	SHEET NOTES:				
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of head	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz			
2a	UTILITY PUMP #1 Product Number: TBD	Power: 120V,1.7A,50/60Hz			
2 b	CHEMICAL VAT #1				
3a	UTILITY PUMP #2 Product Number: TBD	Power: 120V,1.7A,50/60Hz			
3 b	CHEMICAL VAT #2				

1	CONTROL PANEL AND PROBE TESTER ASSEMBLY			
4	Product Number: TBD	Power: 120V/240V,9.25A,50/60Hz		
_	WATER CONDITIONER FILTER			
5	Product Number: TBD	Design Flow Rate: 15 GPM		
PRE FILTER				
6	Product Number: TBD	Design Flow Rate: 6 GPM		
_ BIOLOGICAL FILTER				
/	Product Number: TBD	Design Flow Rate: 25 GPM		



 PROJECT #
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 DATE
 5/23/17

 REVISION #
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 DRAWN BY
 JYM

 DESIGNED BY
 TM

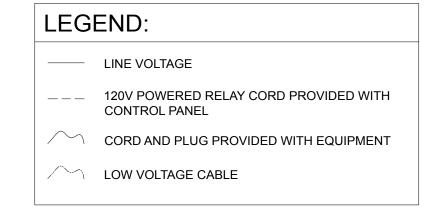
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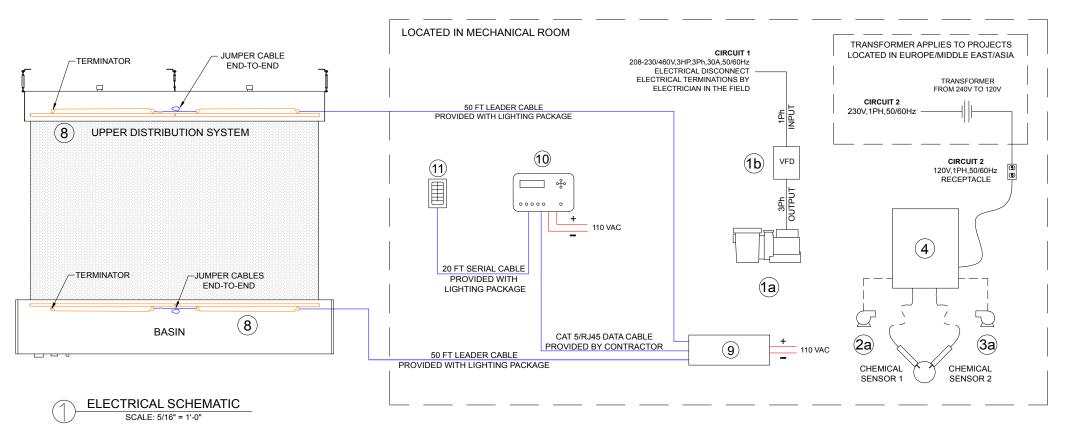
Generic Drawings
Harmonic Cascade® Series
Medium Framed and Frameless

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Hialeah, FL 33010 USA
772.223.9011 p 772.382.6431 f



SH	IEET NOTES:	LABELS CORRESPOND WITH PLUMBING DIAGRAM ON PREVIOUS SHEET
CIRC	UIT 1 - 230V,1Ph,30A circuit,50	0/60Hz (EXAMPLE; MAY VARY)
1 b	PUMP CONTROL PANEL Product Number: TBD Max Input Amp: 24 amp	Input: 208/230V,3HP,1Ph,max 24A,50/60Hz Output: 230V,3HP,3Ph,50/60Hz
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of he	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz
CIRC	UIT 2 - 120V,20A circuit,50/60H	dz (EXAMPLE; MAY VARY)
2a	UTILITY PUMP #1 Product Number: TBD	Power: 120V,1.7A,50/60Hz
За	UTILITY PUMP #2 Product Number: TBD	Power: 120V,1.7A,50/60Hz
4	CONTROL PANEL AND PRO	DBE TESTER ASSEMBLY Power: 120V/240V,9.25A,50Hz/60Hz
8	LIGHTING FIXTURES Product Number: TBD Beam Angle: 10° x 60°	Power: 120V,2.8A,50/60Hz
9	LIGHTING ENABLER Product Number: TBD	
10	LIGHTING CONTROLLER Product Number: TBD	
11	LIGHTING CONTROLLER K Product Number: TBD	EYPAD





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Generic Drawings

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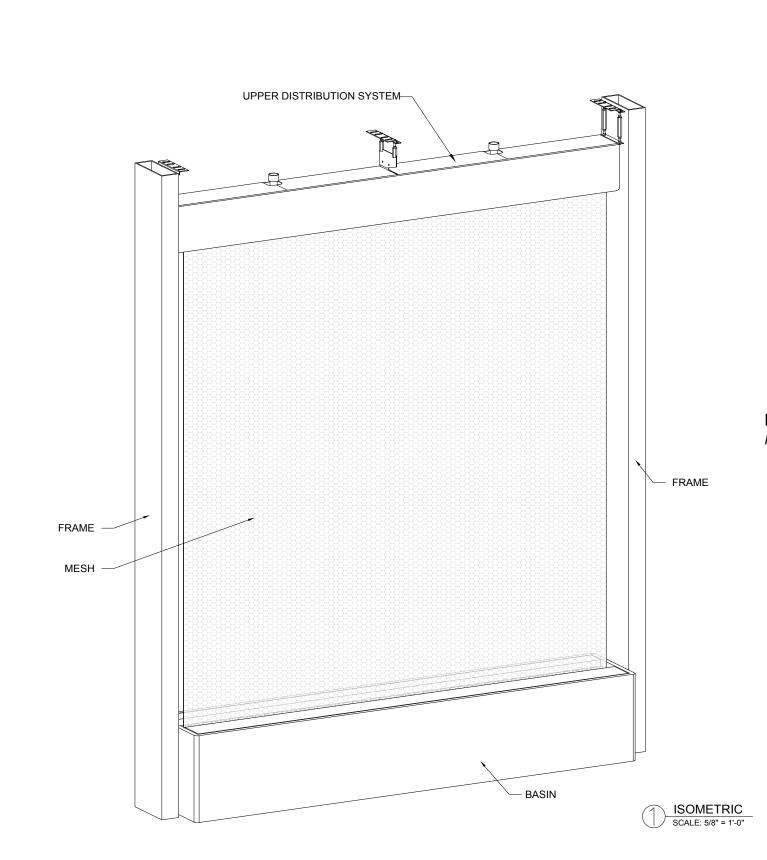
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Harmonic Cascade® Series Medium Framed and Frameles Stainless Steel Basin

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SHEET #



FRAMED HARMONIC CASCADE® SERIES

Medium Features - 7' to 11' Wide by maximum 15' Tall Dimensions

DESIGN CONSIDERATIONS -

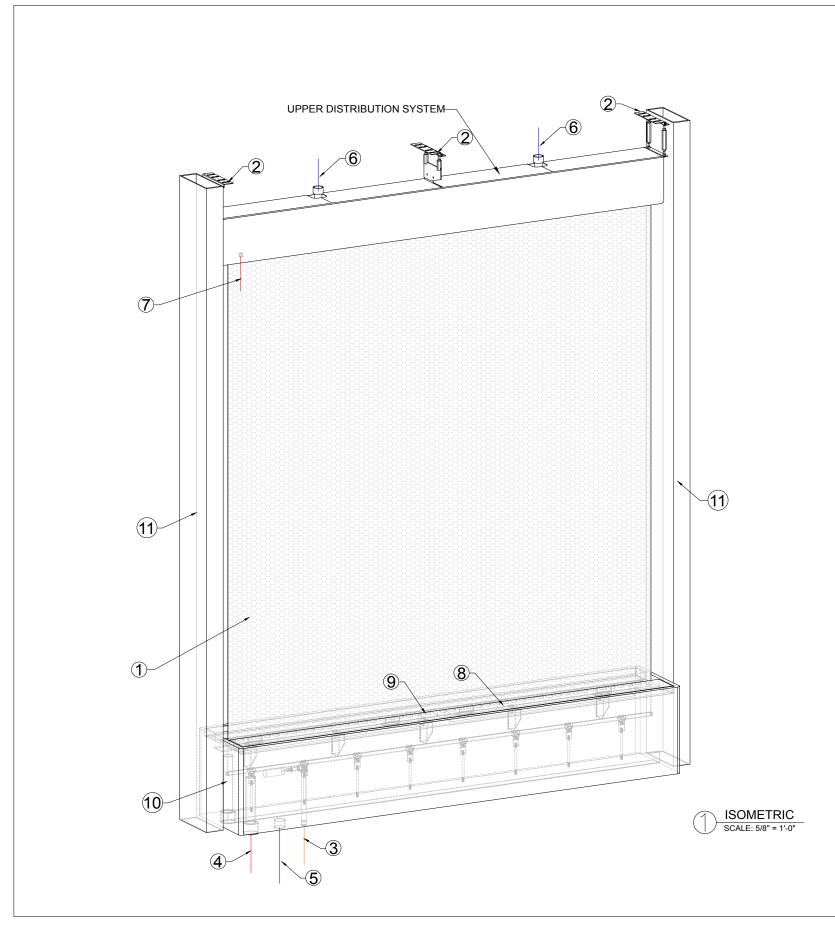
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- EQUIPMENT SPECS AND PIPE SIZES VARY AND WILL BE DETERMINED PER JOB.

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N/A	5/23/17	00	JYM	ΔL	OF 17
PROJECT#	DATE	REVISION#	DRAWN BY	DESIGNED BY	SHEET # 09 OF 17
		Harmonic Cascade® Series	Modium Framed and Frameless	Stainless Steel Basin	
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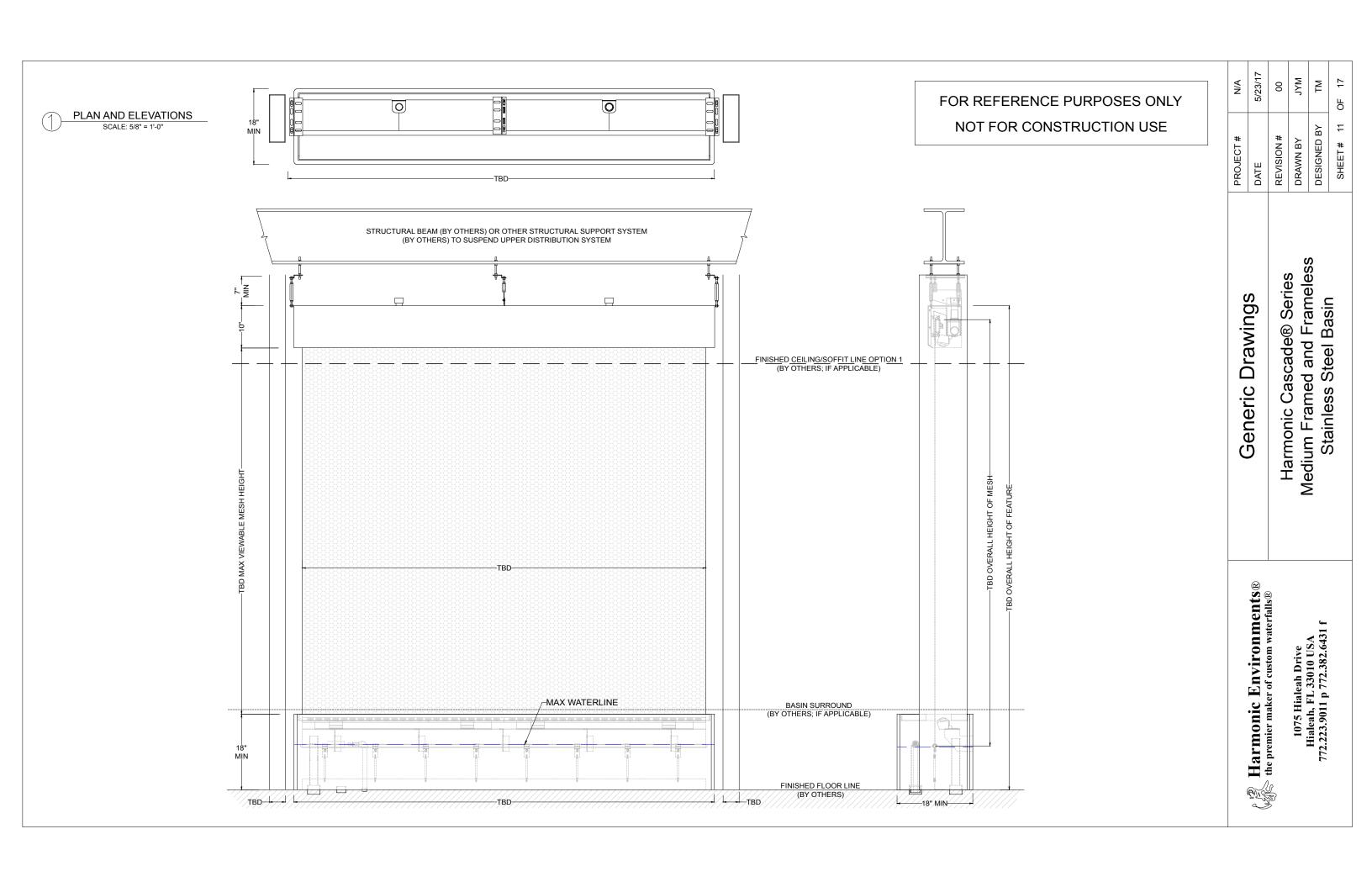
SHEET NOTES:				
1	HARMONIC MESH™			
2	(3) MOUNTING AND LEVELING BRACKETS TO SUSPEND UPPER DIST SYSTEM			
3	1/2" STANDARD WATER LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH AUTO-FILL FLOAT VALVE BY HARMONIC ENVIRONMENTS			
4	1-1/2" DRAIN LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH PVC STANDPIPE OVERFLOW BY HARMONIC ENVIRONMENTS			
5	2" MAIN SUCTION LINE (BY OTHERS)			
6	(2) 2" MAIN RETURN LINE (BY OTHERS)			
7	1/2" UPPER DISTRIBUTION DRAIN LINE (BY OTHERS)			
8	REMOVABLE BASIN LID (IF APPLICABLE)			
9	LED LIGHTING FIXTURE (IF APPLICABLE)			
10	1-1/2" ELECTRICAL CONDUIT; NPT SS FEMALE CONNECTION COUPLING AND CONDUIT PROVIDED BY HARMONIC ENVIRONMENTS			
11	STAINLESS STEEL FRAME; PROVIDED BY HARMONIC ENVIRONMENTS			

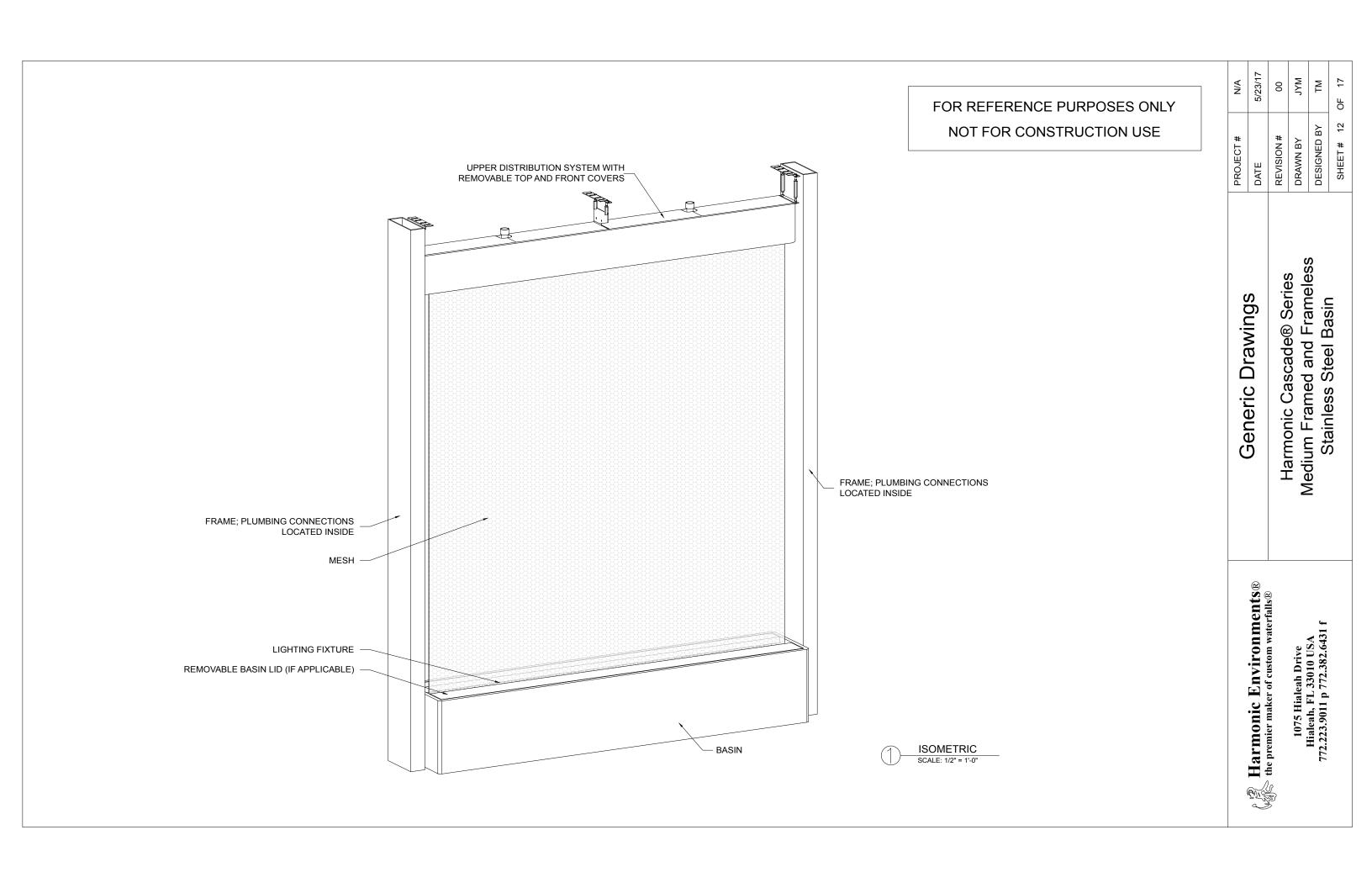
BREAKDOWN OF LOADS IN LBS			
HARMONIC MESH	TBD		
WATERFALL (WITHOUT MESH)			
WITH WATER	TBD		
WITHOUT WATER	TBD		

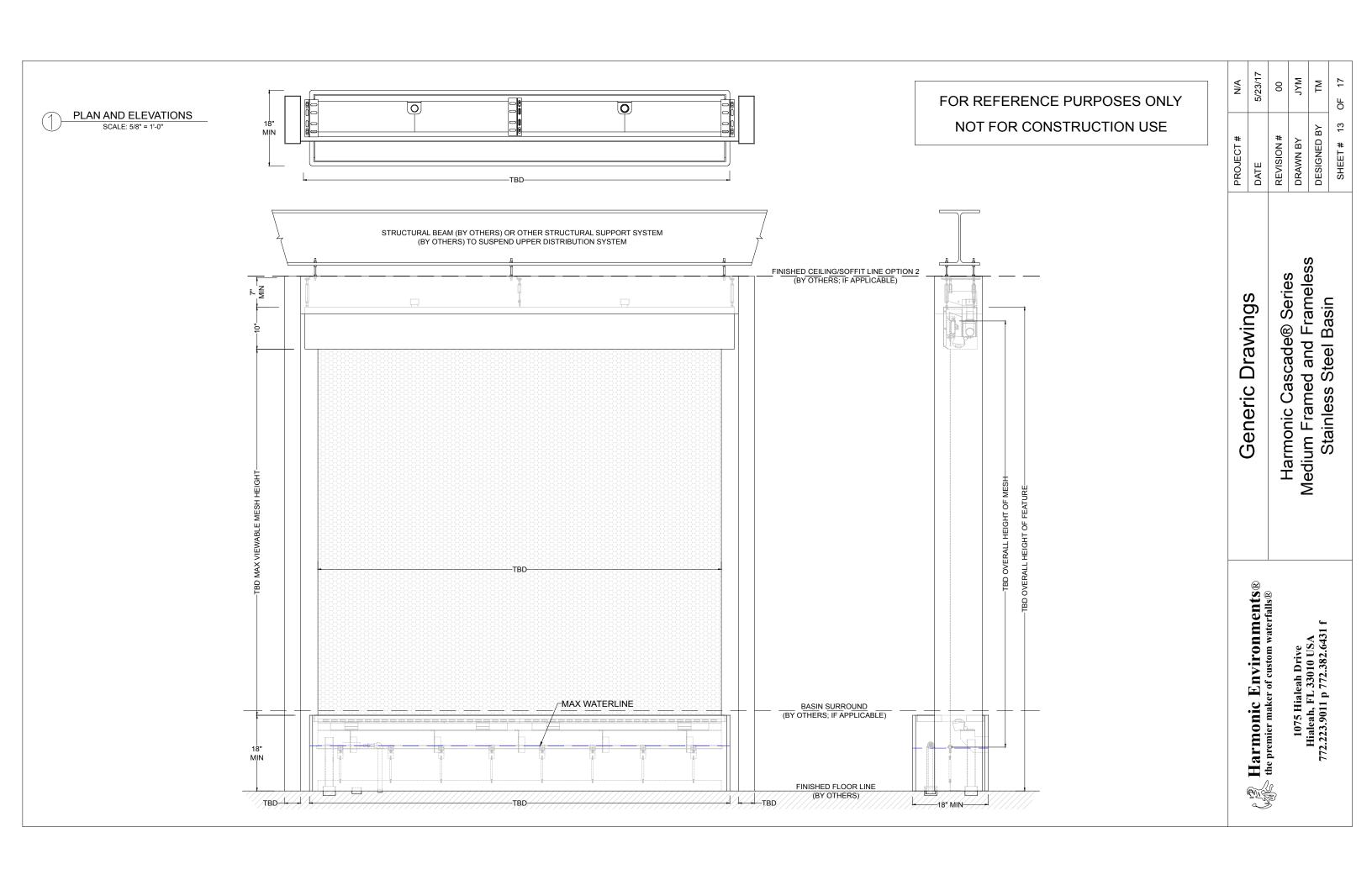
	2.12.11.00	BREAKDOWN OF WATER VOLUME IN GALLONS				
3S	UPPER DIST SYS	TBD				
	HARMONIC MESH	TBD				
)	BASIN	TBD				
	PIPES	TBD				
	TOTAL	TBD				

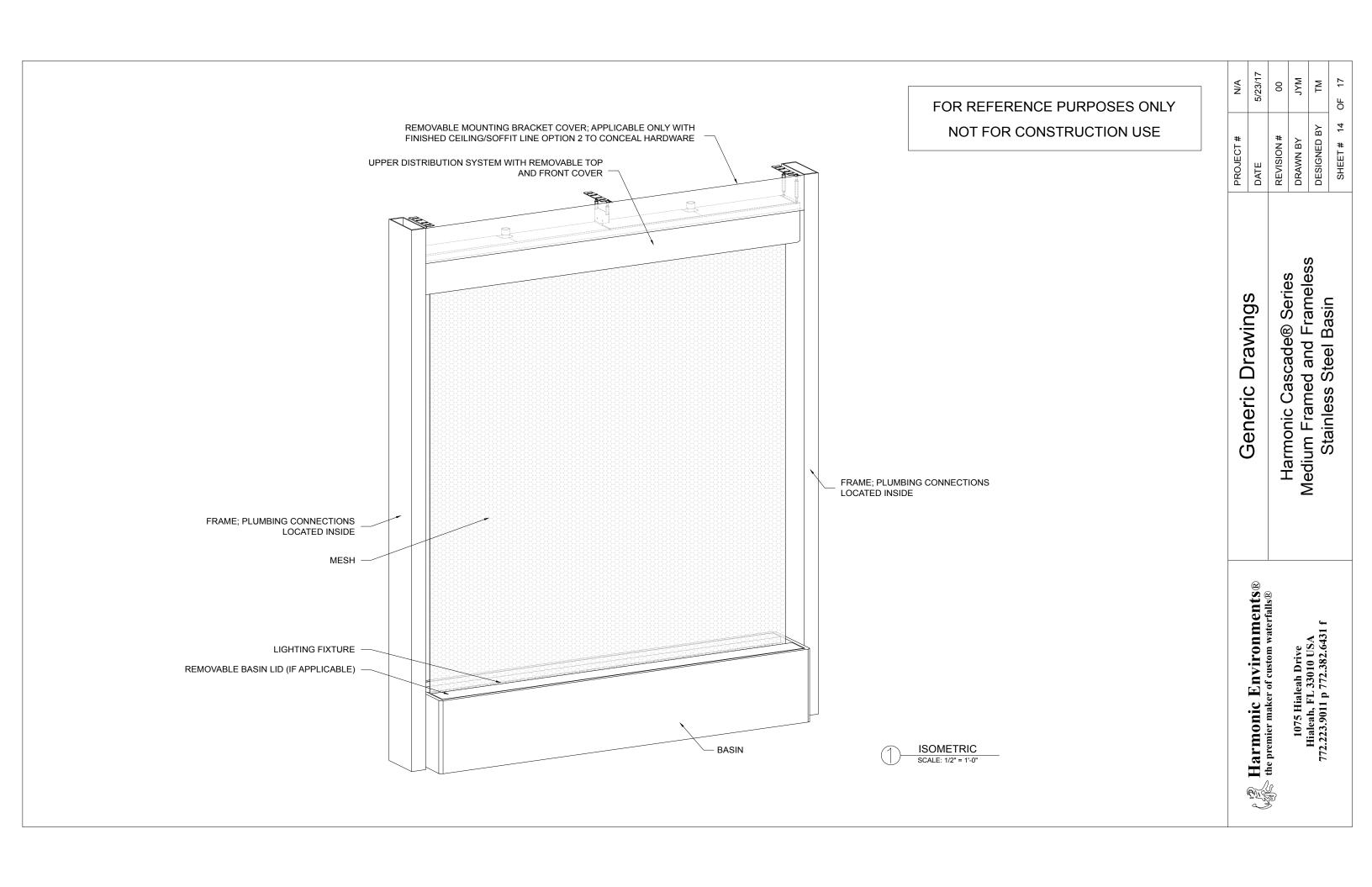
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PROJECT#	DATE	REVISION#	DRAWN BY	DESIGNED BY	SHEET# 10 OF 17
Generic Drawings DATE DATE		Harmonic Cascade® Series	Modium Framed and Frameless	Medial Halled and Halleless Stainless Steel Basin	

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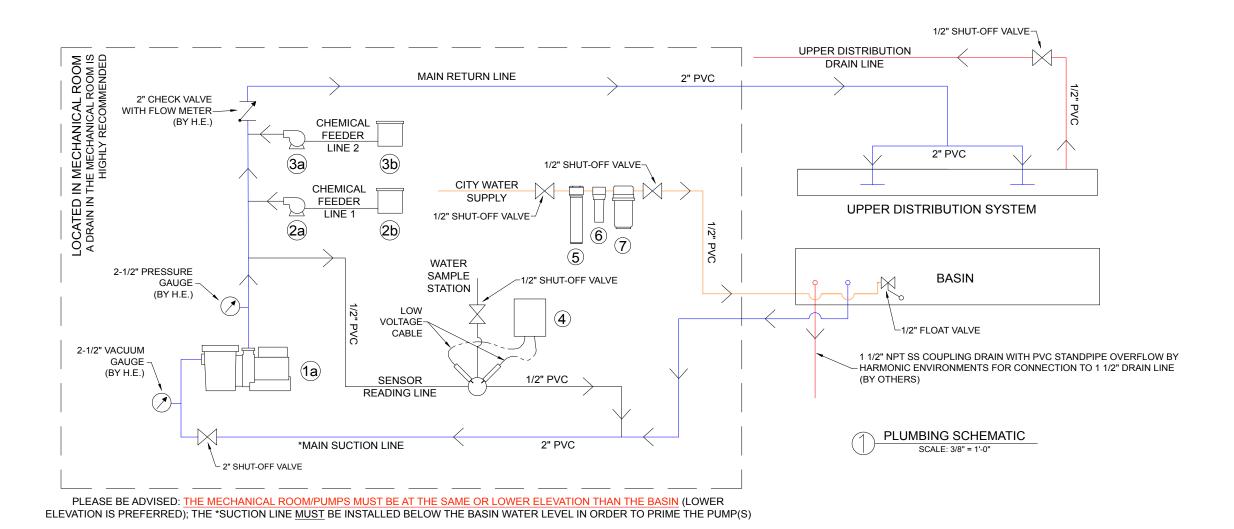






SHEET NOTES:				
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of head	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz		
2a	UTILITY PUMP #1 Product Number: TBD	Power: 120V,1.7A,50/60Hz		
2 b	CHEMICAL VAT #1			
3a	UTILITY PUMP #2 Product Number: TBD	Power: 120V,1.7A,50/60Hz		
3 b	CHEMICAL VAT #2			

1	CONTROL PANEL AND PROBE TESTER ASSEMBLY					
4	Product Number: TBD	Power: 120V/240V,9.25A,50/60Hz				
5	WATER CONDITIONER FILTER Product Number: TBD	Design Flow Rate: 15 GPM				
6	PRE FILTER Product Number: TBD	Design Flow Rate: 6 GPM				
7	BIOLOGICAL FILTER Product Number: TBD	Design Flow Rate: 25 GPM				



DATE 5/23/17

REVISION # 00

DRAWN BY JYM

DESIGNED BY TM

SHEET # 15 OF 17

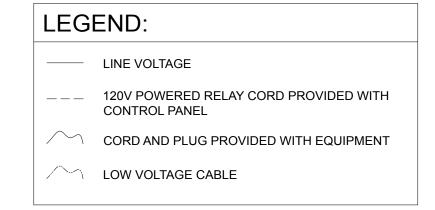
Harmonic Cascade® Series
Medium Framed and Frameles:
Stainless Steel Basin

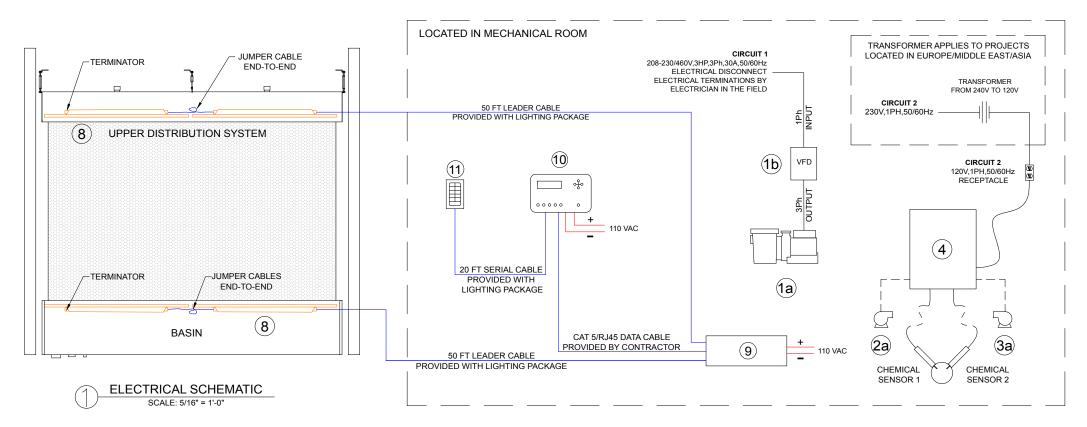
Generic Drawings

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SH	IEET NOTES:	LABELS CORRESPOND WITH PLUMBING DIAGRAM ON PREVIOUS SHEET
CIRC	UIT 1 - 230V,1Ph,30A circuit,5	0/60Hz (EXAMPLE; MAY VARY)
1ь	PUMP CONTROL PANEL Product Number: TBD Max Input Amp: 24 amp	Input: 208/230V,3HP,1Ph,max 24A,50/60Hz Output: 230V,3HP,3Ph,50/60Hz
1a	MAIN PUMP Model Number: TBD Design Flow Rate: 220 GPM @ 105 ft of h	Power: 208-230/460V,3HP,3Ph,9.5-9.4/4.7A,50/60Hz ead
CIRC	UIT 2 - 120V,45A circuit,50/60	Hz (EXAMPLE; MAY VARY)
2a	UTILITY PUMP #1 Product Number: TBD	Power: 120V,1.7A,50/60Hz
За	UTILITY PUMP #2 Product Number: TBD	Power: 120V,1.7A,50/60Hz
4	CONTROL PANEL AND PROPRODUCT Number: TBD	OBE TESTER ASSEMBLY Power: 120V/240V,9.25A,50Hz/60Hz
8	LIGHTING FIXTURES Product Number: TBD Beam Angle: 10° x 60°	Power: 120V,5.6A,50/60Hz
9	LIGHTING ENABLER Product Number: TBD	
10	LIGHTING CONTROLLER Product Number: TBD	
11	LIGHTING CONTROLLER K Product Number: TBD	KEYPAD





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5/23/17

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REVISION #
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SHEET #

GENERAL NOTES

OWNER/GENERAL CONTRACTOR TO PROVIDE THE FOLLOWING:

- 1. MANPOWER AND EQUIPMENT REQUIRED TO UNLOAD THE CRATED PRODUCTS DELIVERED TO THE JOB AND PERFORM INSTALLATION. HARMONIC ENVIRONMENTS WILL PERFORM INSTALLATION CONSULTATION ONLY.
- 2. PLUMBING CONNECTIONS TO MINIMIZE CLEANING AND MAINTENANCE.
 - a. STANDARD 1/2" WATER LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH AUTO-FILL FLOAT VALVE BY HARMONIC ENVIRONMENTS.
 - b. 1-1/2" DRAIN LINE (BY OTHERS); NPT SS FEMALE CONNECTION COUPLING WITH STANDPIPE OVERFLOW BY HARMONIC ENVIRONMENTS.
 - c. 1/2" UPPER DISTRIBUTION SYSTEM DRAIN LINE (BY OTHERS; IF APPLICABLE); NPT SS FEMALE CONNECTION COUPLING BY HARMONIC ENVIRONMENTS.
 - d. A DRAIN IN THE MECHANICAL ROOM IS HIGHLY RECOMMENDED (IF APPLICABLE).
- 3. LEVEL SURFACE FOR THE BASIN (IF APPLICABLE).
- 4. STRUCTURAL SUPPORTS AS NECESSARY.
- 5. IF WATER FEATURE TOWER EXTENDS UP BEHIND A SOFFIT OR FASCIA, SOFFIT OR FASCIA SHOULD BE INSTALLED AFTER WATER FEATURE IS IN PLACE.
- 6. IF THERE IS TO BE A SURROUND AT THE WATER FEATURE BASIN, IT SHOULD BE INSTALLED AFTER WATER FEATURE IS IN PLACE.
- 7. VERIFY THAT SITE FACILITIES (I.E ELEVATORS, DOORWAYS, ETC.) WILL ALLOW CLEAR ACCESS FOR ALL WATERFALL COMPONENTS TO BE DELIVERED AND MOVED INTO PLACE AS NEEDED.
- 8. ALLOW 6" MINIMUM ACCESS BEHIND AND AT LEAST 3" ON EACH SIDE OF THE MESH, UNLESS CLEAR ACCESS IS AVAILABLE FROM THE BACK OF THE MESH FOR MAINTENANCE.
- 9. MINIMUM 7" CLEARANCE REQUIRED ABOVE UPPER DISTRIBUTION SYSTEM FOR REMOVAL OF TOP COVER(S) AND 4" CLEARANCE IN FRONT AND BACK OF UPPER DISTRIBUTION SYSTEM FOR REMOVAL OF FRONT COVER(S) (IF APPLICABLE) AND ACCESS TO LIGHTING (IF APPLICABLE).
- 10. ACCESSIBLE AREA TO ACCOMMODATE EQUIPMENT PER PLUMBING & ELECTRICAL SCHEMATIC AND LED POWER SUPPLY COMPONENTS PER LIGHTING SPECIFICATIONS, WITHIN 50 FT OF WATER FEATURE (IF APPLICABLE).
- 11. PLUMBING PER PLUMBING SCHEMATIC ON SHEETS 07 OR 15.
- 12. ELECTRICAL SERVICES AND OUTLETS PER ELECTRICAL SCHEMATIC ON SHEETS 08 OR 16.

ABBREVIATIONS FOUND IN THIS DOCUMENT REPRESENT THE FOLLOWING -

- TBD: TO BE DEFINED
- LBS: POUNDS (WEIGHT)
- UPPER DIST SYS: UPPER DISTRIBUTION SYSTEM
- NPT SS: NOMINAL PIPE SIZE STAINLESS STEEL
- VFD: VARIABLE FREQUENCY DRIVE
- H.E: HARMONIC ENVIRONMENTS

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PROJECT # N/A	DATE 5/23/17	REVISION # 00	DRAWN BY JYM	DESIGNED BY TM	SHEET# 17 OF 17
		Harmonic Caecade® Series	Modium Framed and Frameless	Stainless Steel Basin	
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