

NOTES

- THESE NOTES APPLY TO ALL DRAWINGS.
- THE MECHANICAL DESIGN SHOWN IN THESE DRAWINGS IS BASED ON DATA TAKEN FROM EXP STORM WATER MANAGEMENT REPORT (SWM BELOW) AND COMPRISES SCHEDULE F OF THAT REPORT AND ALSO FROM EXP'S C100 DRAWING (EDITED FOR BREVITY).
- REFER TO EXP DRAWINGS FOR CIVIL DESIGN.
- ALL STORM PIPE LOCATIONS, PIPE INVERTS, CATCH BASIN AND AREA DRAIN LOCATIONS ARE TAKEN FROM THE SWM.
- "PST" AREA DESIGNATIONS ARE TAKEN FROM FIGURE A-2 OF THE SWM.
- DATA FOR CISTERN SIZING WAS TAKEN FROM TABLES IN APPENDIX D OF THE SWM.
- CISTERN 1 IS INTENDED TO SERVE THE "10mm" VOLUME IDENTIFIED IN THE SWM.
- CISTERN 2 IS INTENDED TO SERVE ALL OTHER FLOWS IDENTIFIED IN THE SWM.
- THE OIL GRIT SEPARATOR (OGS, STORMCEPTOR MODEL EFO4) FLOW RATE AND AREA SERVED WAS DETERMINED FROM THE SWM. CHAMBER WILL BE FACTORY FABRICATED AND SIT ON THE P-1 SLAB WITH ACCESS IN THE LANDSCAPE AREA ABOVE. IT SHALL MEET OR EXCEED ALL THE REQUIREMENTS OF THE SWM. SIZE SHOWN HERE IS NOMINAL 1500mm DIAMETER, 900mm SOLID ACCESS HATCH, SIDE INLET AND DISCHARGE.
- THE PUMP/FILTRATION SYSTEM DESIGNATED P-01 CAPACITY IS BASED ON PROVIDING WATER FOR IRRIGATION AND FOR HOSE BIBB AND NON-FREEZE WALL HYDRANT USE. THE SYSTEM IS BASED ON "CLEAN FLO WATER TECHNOLOGIES" UL FILTRATION STORMWATER PROCESS DESIGN AND YIELDS WATER SUITABLE FOR NON-POTABLE USE. ALL PIPING AND EQUIPMENT CONNECTED TO THIS SYSTEM SHALL BE IDENTIFIED AS NON-POTABLE THROUGHOUT THE PROJECT. THE SYSTEM MAY ALSO BE USED FOR SELECT TOILET/URINAL FLUSHING.
- THE TREATMENT SYSTEM IS COMPRISED OF THE FOLLOWING:
 - PACKAGED STORMWATER PUMPING AND TREATMENT SYSTEM. THE SYSTEM SHALL BE DESIGNED TO AUTOMATICALLY REUSE STORMWATER. THE STORMWATER SHALL BE TREATED AND USED FOR IRRIGATION, HOSE BIBBS, TOILET AND URINAL FLUSHING.
 - PACKAGED SYSTEM SHALL BE A COMPLETELY SKID MOUNTED SYSTEM AND INCLUDE EVERYTHING IN A SINGLE COHESIVE FINISHED PRODUCT.
 - PACKAGED SYSTEM SHALL CONTAIN ALL COMPONENTS NECESSARY TO PROCESS AND PRESSURIZE THE COLLECTED STORMWATER INCLUDING BUT NOT LIMITED TO:
 - STORAGE TANK ACCESSORIES
 - TRANSFER PUMP
 - FILTRATION
 - ULTRAFILTRATION MEMBRANE
 - DAY TANK
 - CHLORINE INJECTION RECIRCULATION (NON GASEOUS STORAGE)
 - REPRESSURIZATION BOOSTER PUMPS
 - BLADDER TANK
 - STORMWATER CONTROL AND MONITORING SYSTEM
 - CONNECTION TO BUILDING AUTOMATION SYSTEM (BAS) BACNET TCP/IP PROTOCOL.

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LEGEND

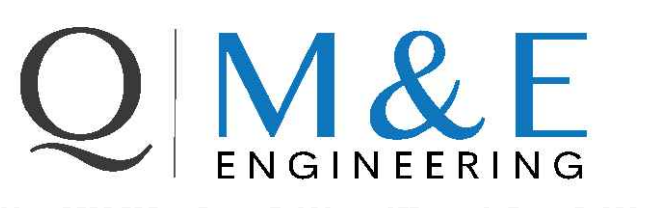
- ST STORM DRAIN ABOVE GRADE/FLOOR
- ST STORM DRAIN BURIED
- NON-POTABLE WATER
- PIPE DROPS, PIPE RISES
- DIELECTRIC UNION
- PUMP, PIPE SIZE IS NOT CONNECTION SIZE.
- COMBO SHUTOFF AND BALANCING VALVE
- ISOLATING VALVE
- PRESSURE REDUCING VALVE
- STRAINER
- CHECK VALVE

DRAWING LIST

M-005	SITE PLAN TOWERS A AND B
M-006	CISTERN SCHEMATICS AND DETAILS
M-140	LEVEL P-2 MECHANICAL SWM DESIGN
M-150	LEVEL P-1 MECHANICAL SWM DESIGN

12	ISSUED FOR SITE PLAN COORDINATION	11 OCT 2023
11	REVISED AND RE-ISSUED FOR SITE PLAN COORDINATION	16 AUG 2023
10	ISSUED FOR SITE PLAN COORDINATION	16 AUG 2023
9	ISSUED FOR CONSULTANT COORDINATION	15 SEP 2022
8	ISSUED FOR SITE PLAN APPROVAL	09 DEC 2021
7	ISSUED FOR CONSULTANT COORDINATION	08 DEC 2021
6	ISSUED FOR SITE PLAN COORDINATION	26 NOV 2021
5	ISSUED FOR SITE PLAN COORDINATION	12 NOV 2021
4	ISSUED FOR COORDINATION (ONLY M-290)	26 MAY 2021
3	ISSUED FOR COORDINATION (ONLY M-005)	23 FEB 2021
2	ISSUED FOR COORDINATION	29 JAN 2021
1	ISSUED FOR DESIGN BRIEF	21 DEC 2020
NO.	REVISION	DATE

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PROJECT	20-0086
DRAWING NUMBER	M-005

SITE PLAN
TOWERS A AND B



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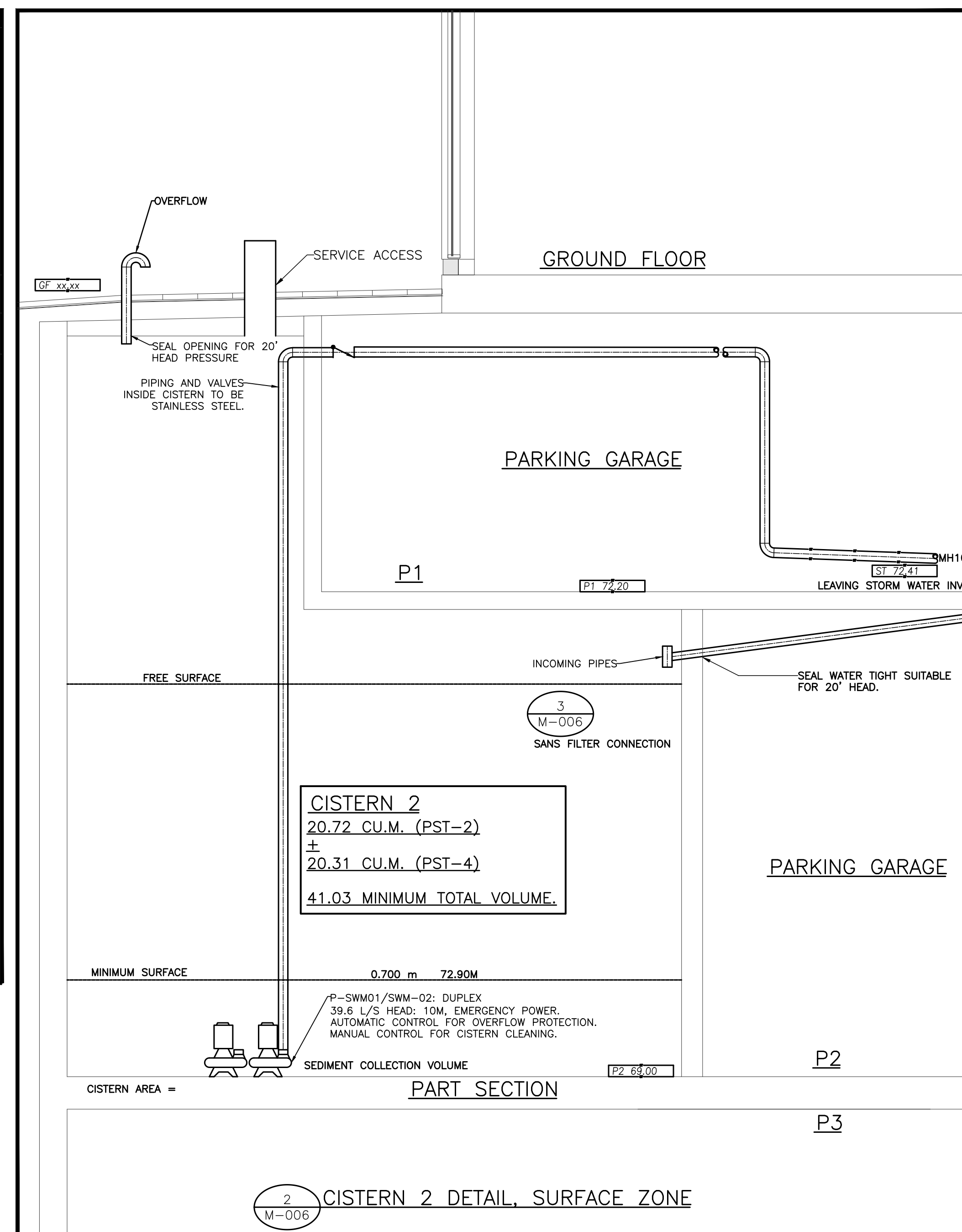
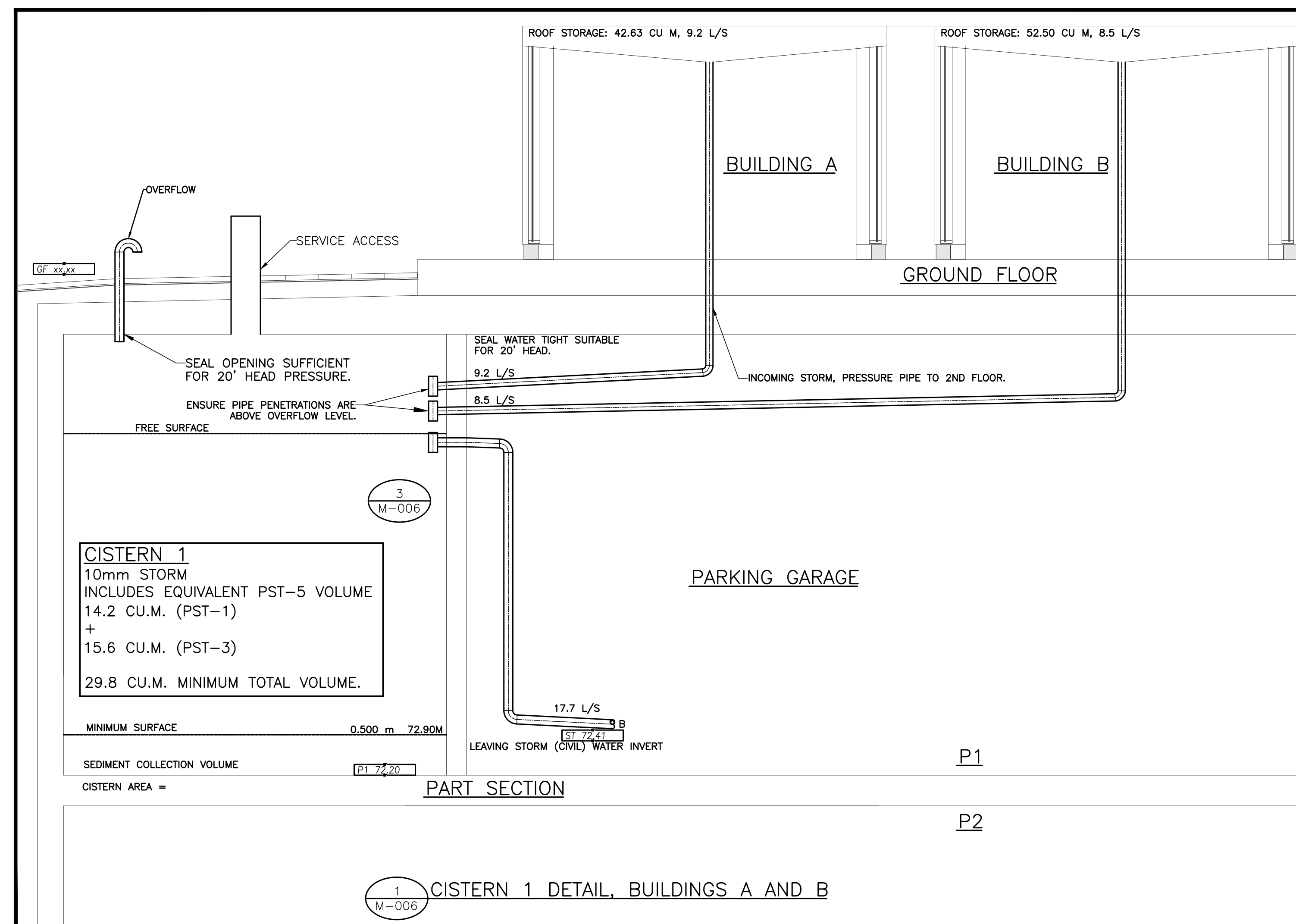
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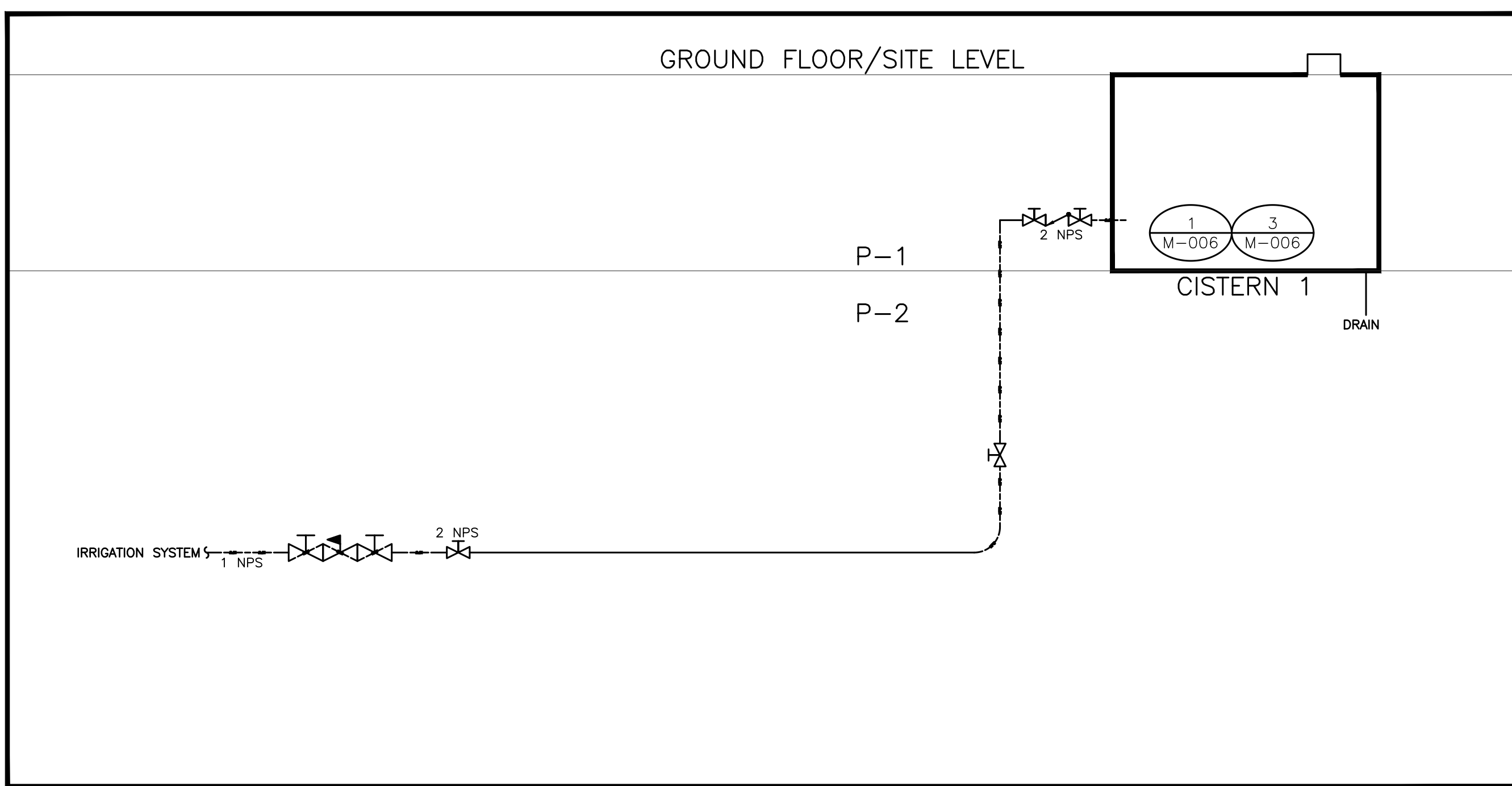
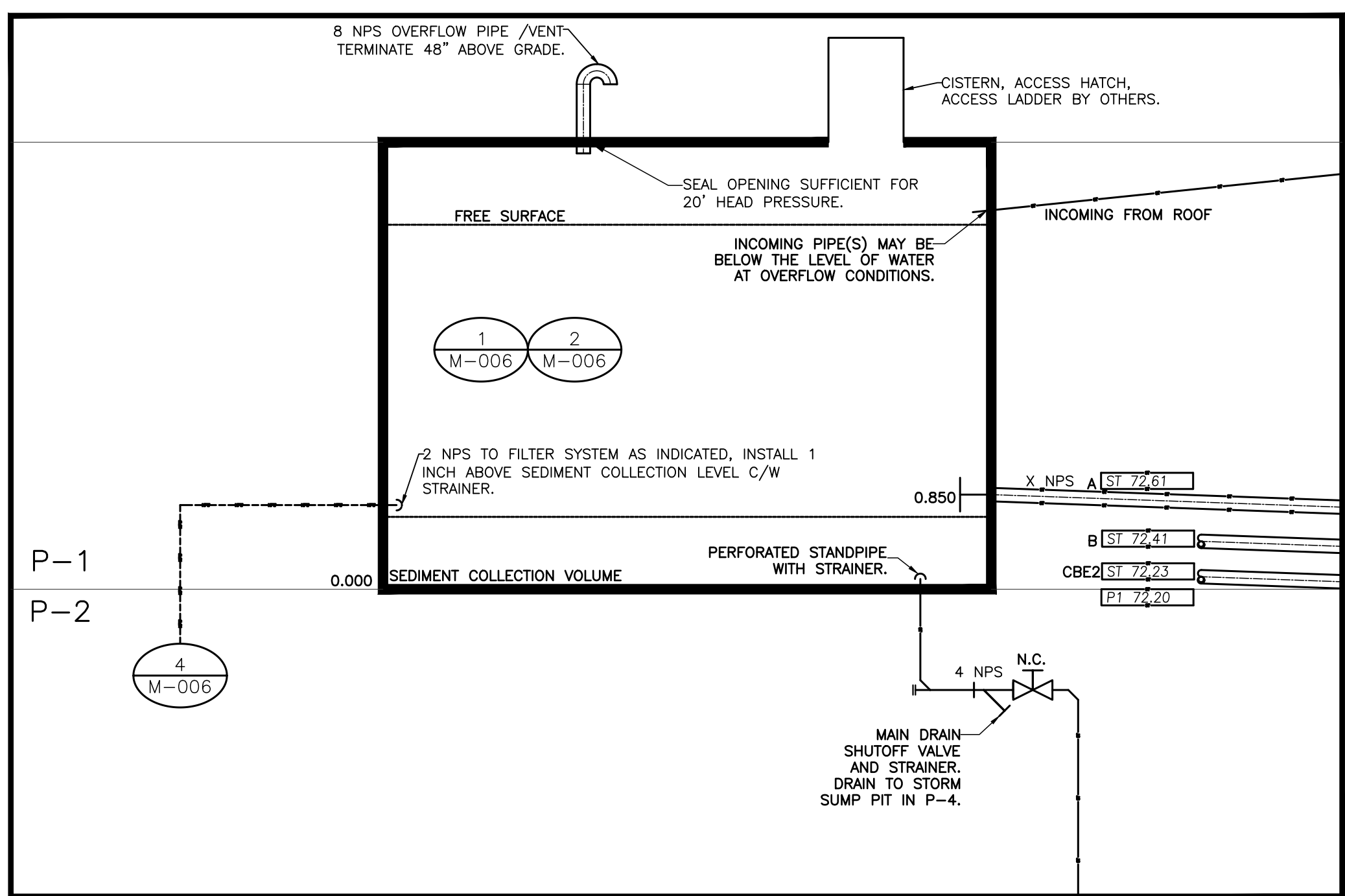
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CISTERN AND OIL/GRIT SEPARATOR (OGS) SCHEDULE							
TAG	SWM REPORT FIGURE/TABLE	CATCHMENT	RELEASE RATE L/S	STORAGE CUBIC METER	10mm STORAGE CUBIC METER	TO LEAVING STORM	TO CISTERN
CIS-01	A-2/D-12 D-13	PST-1 + PST-2	9.2 - 8.5	42.63 - 52.50	29.8	GRAVITY	N/A
CIS-02	A-2/D-14	PST-4	16.5	41.03	0	PUMPED	N/A
			DRAINAGE AREA	TSS REMOVAL	WATER QUAL CAPTURE	OIL/FUEL SPILL RISK	
OGS	A-2/D-11	DRIVEWAY	0.1124 Ha	39.6	>90%	YES	CIS-02

REFERENCE: SITE SERVICING AND STORM WATER MANAGEMENT REPORT 365 FOREST STREET, OTTAWA, ON AS PREPARED BY EXP

NOTES
1. SEE NOTES ON M-005



CISTERN NOTES

- SEE EXP SERVICES INC. STORMWATER MANAGEMENT REPORT FOR ADDITIONAL SUPPORTING INFORMATION FOR THE SYSTEM. THAT REPORT SHALL FORM PART OF THE SUPPORTING DOCUMENTS FOR THIS CONTRACT. CONTRACTOR SHALL READ THE REPORT PRIOR TO SUBMITTING CONTRACT PRICE.
- THIS CONTRACTOR TO PROVIDE PIPING, CONTROLS, CONDUIT, WIRING AND EQUIPMENT FOR THE CISTERNS, CISTERNS TO BE PROVIDED BY GENERAL CONTRACTOR.
- ALL PIPING SHALL BE PRESSURE PIPING INCLUDING STORM UP TO THE 2ND FLOOR.
- ALL PIPING TO BE IDENTIFIED AS "NON-POTABLE WATER" IN ADDITION TO ANY IDENTIFICATION REQUIRED IN THE SPECIFICATION.
- ALL PENETRATIONS OF THE CISTERN SHALL BE MADE PRESSURE AND WATER TIGHT.
- THIS CONTRACTOR TO MEASURE AREA OF CISTERN AFTER IT IS FORMED AND DETERMINE HEIGHTS OF ALL WATER LEVELS, FLOAT LEVELS AND PIPE PENETRATIONS. SUBMIT FABRICATION SKETCH TO ENGINEER FOR REVIEW PRIOR TO STARTING WORK. ALL PIPE AND CONTROLS OPENINGS TO BE CORED IN THE CISTERN AFTER IT IS FORMED.

3 M-006 CISTERN STORM WATER MANAGEMENT SYSTEM, GENERAL CISTERN SCHEMATIC 1

4 M-006 CISTERN STORM WATER MANAGEMENT SYSTEM, CISTERN WATER TREATMENT SCHEMATIC

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CISTERN SCHEMATICS AND DETAILS

NOTES

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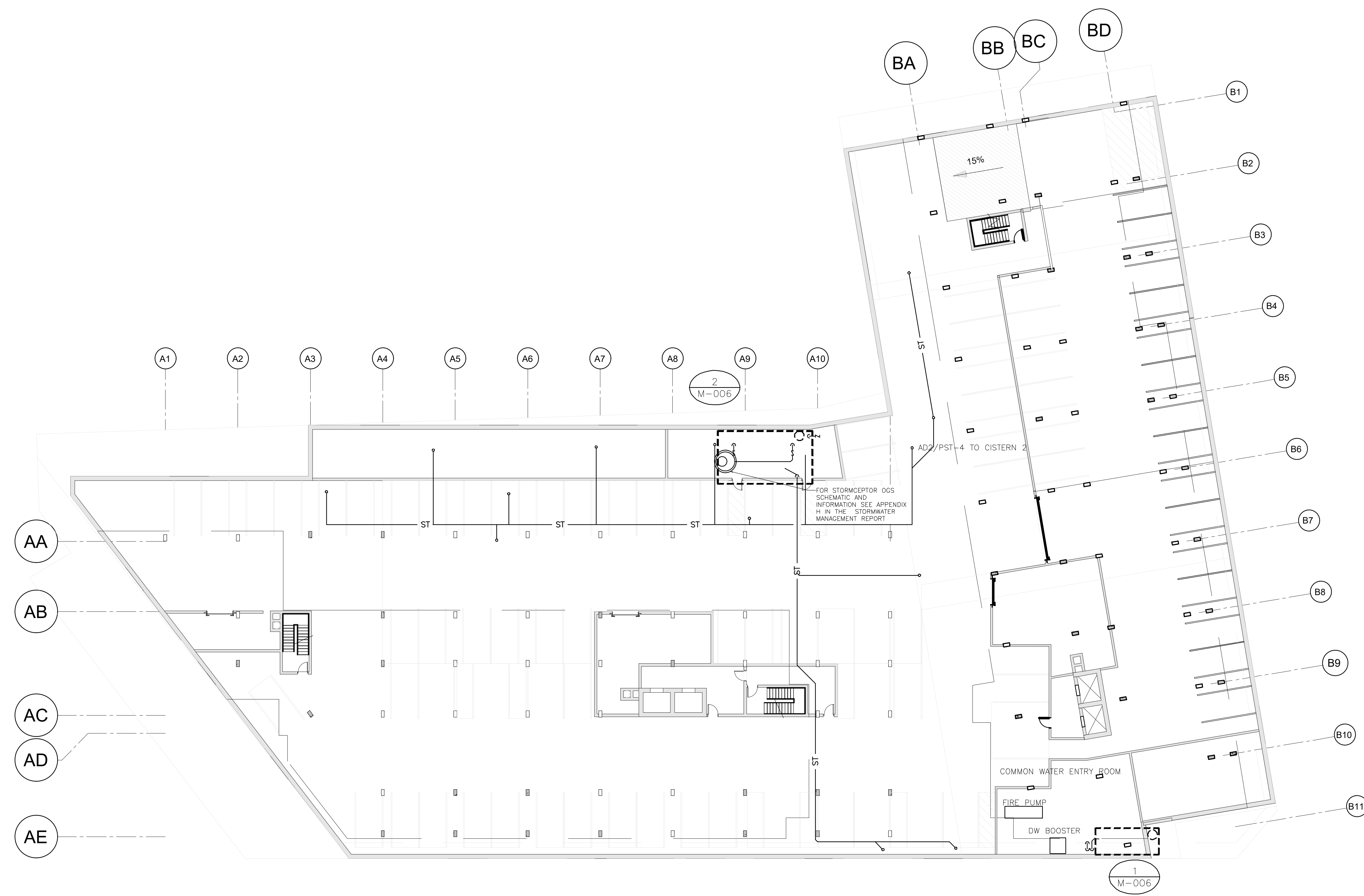
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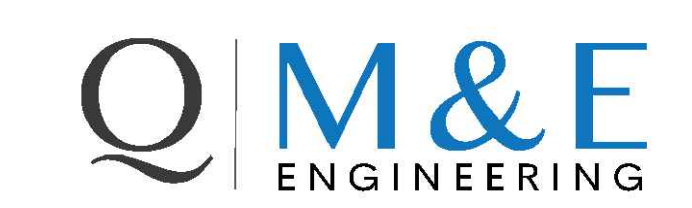
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1 FLOOR PLAN
M-150

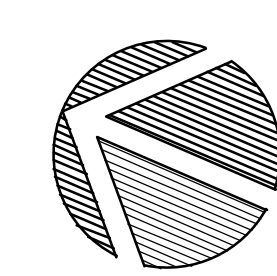
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LEVEL P-1
MECHANICAL SWM DESIGN