PROJECT INFORMATION	
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ADVANCED DRAINAGE SYSTEMS, INC.

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3817-3843 INNES ROAD

EMBRUN, ON.

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL BE CERTIFIED TO CSA B184, "POLYMERIC SUB-SURFACE STORMWATER MANAGEMENT STRUCTURES", AND MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE CSA S6 CL-625 TRUCK AND THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 50 mm (2").
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 23° C / 73° F), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 150 mm (6") SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 20-50 mm (3/4-2").
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 900 mm (36") OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT	
43	STORMTECH SC-740 CHAMBERS
14	STORMTECH SC-740 END CAPS
152	STONE ABOVE (mm)
152	STONE BELOW (mm)
40	% STONE VOID
120.9	**INSTALLED SYSTEM VOLUME (m^3) (PERIMETER STONE INCLUDED)**
204.8	SYSTEM AREA (m^2)
191.0	SYSTEM PERIMETER (m)

PROPOSED ELEVATIONS - HH01 TO MHCB02	
92.190	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
90.362	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
90.209	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
90.209	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
90.209	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
89.904	TOP OF STONE:
89.752	TOP OF SC-740 CHAMBER:
89.308	300 mm TOP MANIFOLD INVERT:
89.020	300 mm ISOLATOR ROW INVERT:
88.990	BOTTOM OF SC-740 CHAMBER:
88.838	BOTTOM OF STONE:

PROPOSED ELEVATIONS - MHCB02 TO MHCB03	
92.320	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
90.492	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
90.339	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
90.339	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
90.339	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
90.034	TOP OF STONE:
89.882	TOP OF SC-740 CHAMBER:
89.150	300 mm ISOLATOR ROW INVERT:
89.120	BOTTOM OF SC-740 CHAMBER:
88.968	BOTTOM OF STONE:

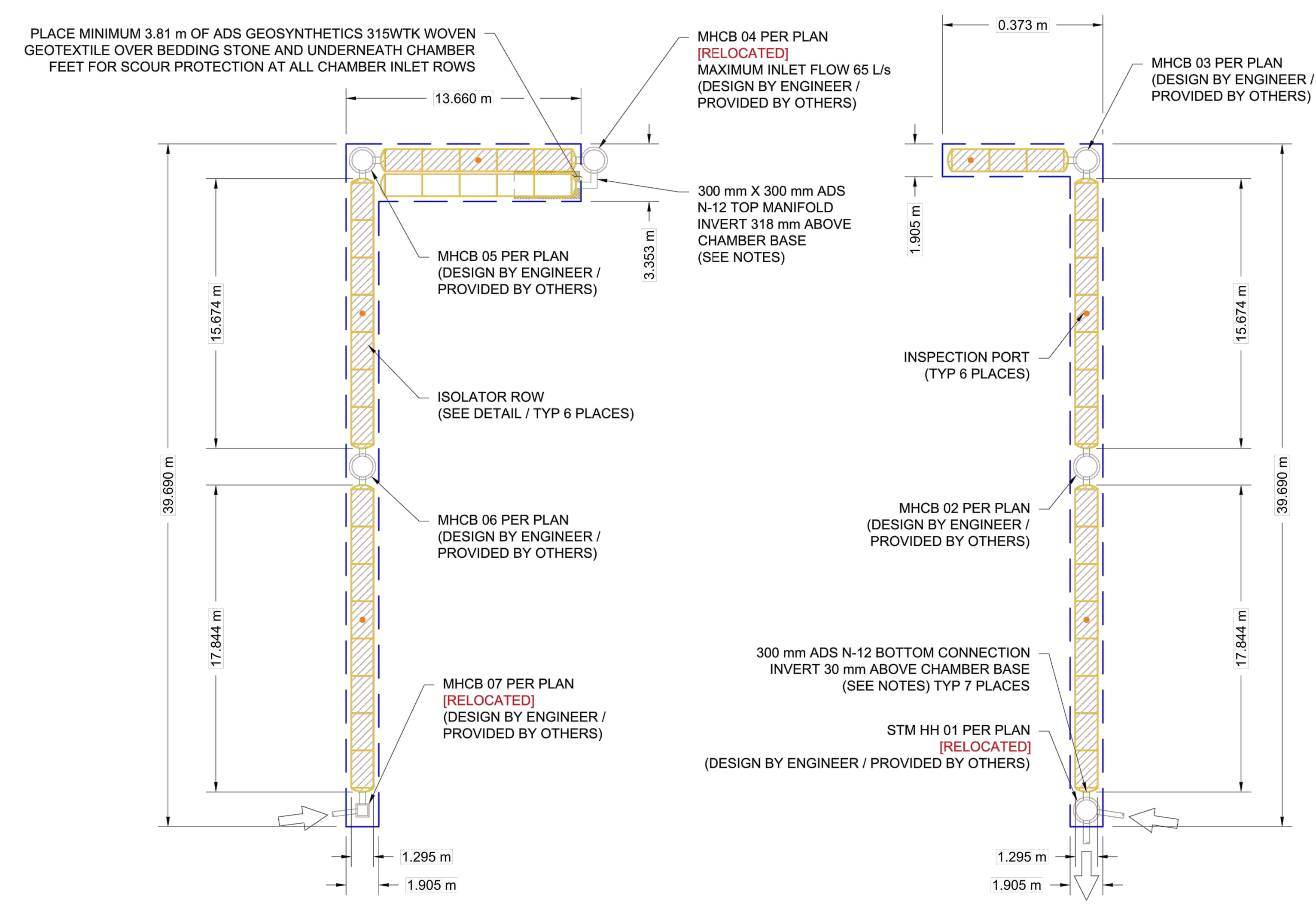
PROPOSED ELEVATIONS - MHCB04 TO MHCB05	
92.590	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
90.762	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
90.609	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
90.609	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
90.609	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
90.304	TOP OF STONE:
90.152	TOP OF SC-740 CHAMBER:
89.408	250 mm BOTTOM CONNECTION INVERT:
89.420	300 mm ISOLATOR ROW INVERT:
89.390	BOTTOM OF SC-740 CHAMBER:
89.238	BOTTOM OF STONE:

PROPOSED ELEVATIONS - MHCB05 TO MHCB06	
92.740	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
90.912	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
90.759	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
90.759	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
90.759	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
90.454	TOP OF STONE:
90.302	TOP OF SC-740 CHAMBER:
89.570	300 mm ISOLATOR ROW INVERT:
89.540	BOTTOM OF SC-740 CHAMBER:
89.388	BOTTOM OF STONE:

PROPOSED ELEVATIONS - MHCB06 TO MHCB07	
92.870	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
91.042	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
90.889	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
90.889	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
90.889	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
90.584	TOP OF STONE:
90.432	TOP OF SC-740 CHAMBER:
89.700	300 mm ISOLATOR ROW INVERT:
89.670	BOTTOM OF SC-740 CHAMBER:
89.518	BOTTOM OF STONE:

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



3817-3843 INNES ROAD
EMBRUN, ON.
DATE: 09/16/20 DRAWN: RCT
PROJECT #: S201666 CHECKED: NPB

StormTech

4640 TRUEMAN BLVD
HILLIARD, OH 43026
ADVANCED DRAINAGE SYSTEMS, INC.

SCALE = 1 : 300

SHEET 2 OF 5

ENGINEERING STAMP

LICENSED PROFESSIONAL ENGINEER
G. L. BRUNET
100191036
14/10/2020
PROVINCE OF ONTARIO

NO.	REVISION	DATE (DD/MM/YYYY)
#8		
#7		
#6		
#5		
#4		
#3		
#2	REVISED FOR COMMENTS	14 / 10 / 2020
#1	ISSUED FOR SPA	30 / 09 / 2020

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EMBRUN, ON

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3817 - 3843 INNES RD,
ORLEANS, ON

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