PROJECT INFORMATION		
ENGINEERED PRODUCT MANAGER		
ADS SALES REP		
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1412 STITTSVILLE MAIN STREET

STITTSVILLE, ON, CANADA

SC-310 STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- 3. CHAMBERS SHALL BE CERTIFIED TO CSA B184, "POLYMERIC SUB-SURFACE STORMWATER MANAGEMENT STRUCTURES", AND MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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:

FROM REFLECTIVE GOLD OR YELLOW COLORS.

- 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 F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. AND b) TO RESIST CHAMBER

DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 23° C / 73° F), CHAMBERS SHALL BE PRODUCED

- 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 F2922 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-310 SYSTEM

- 1. STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 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.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
 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

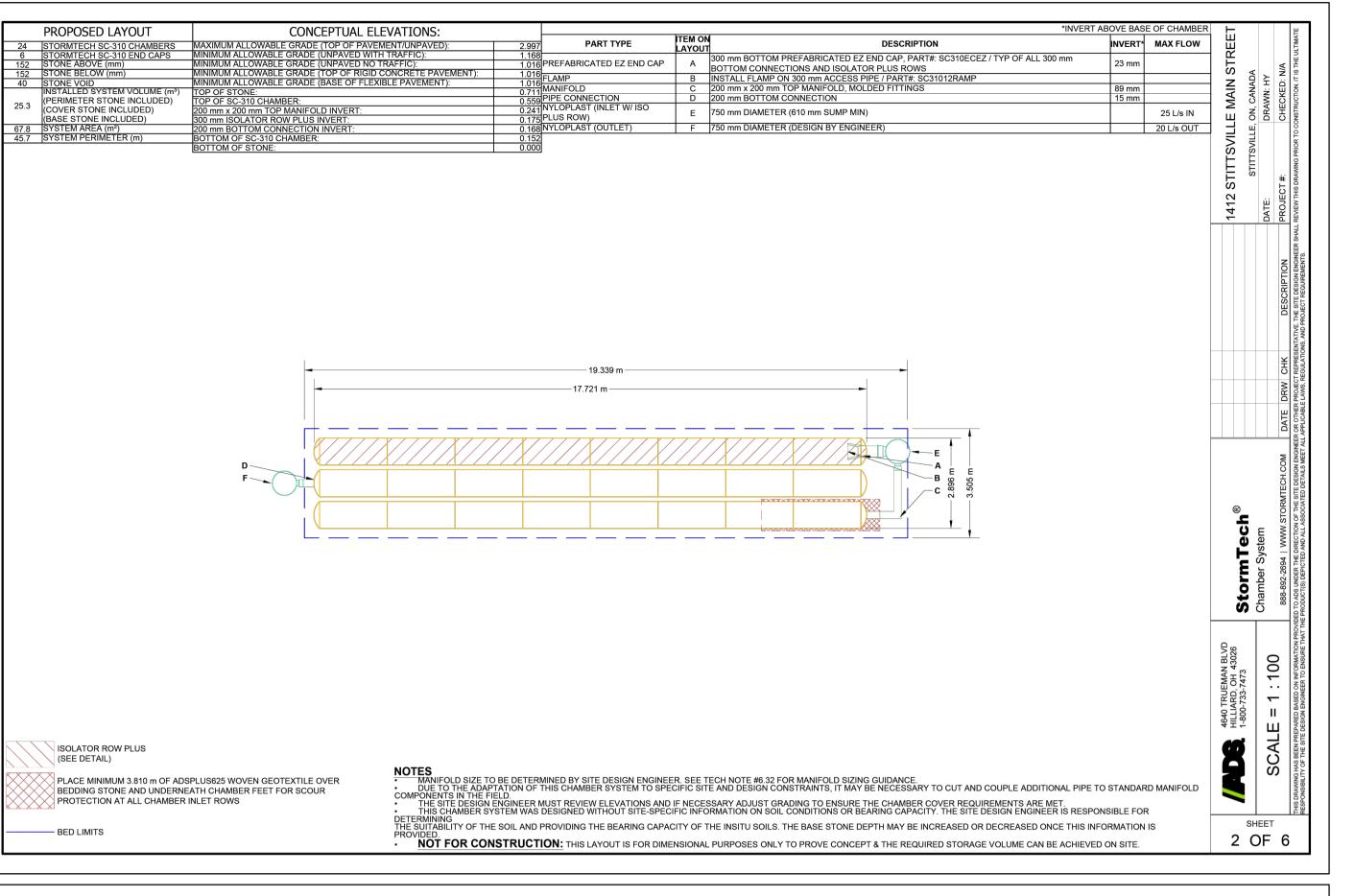
1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".

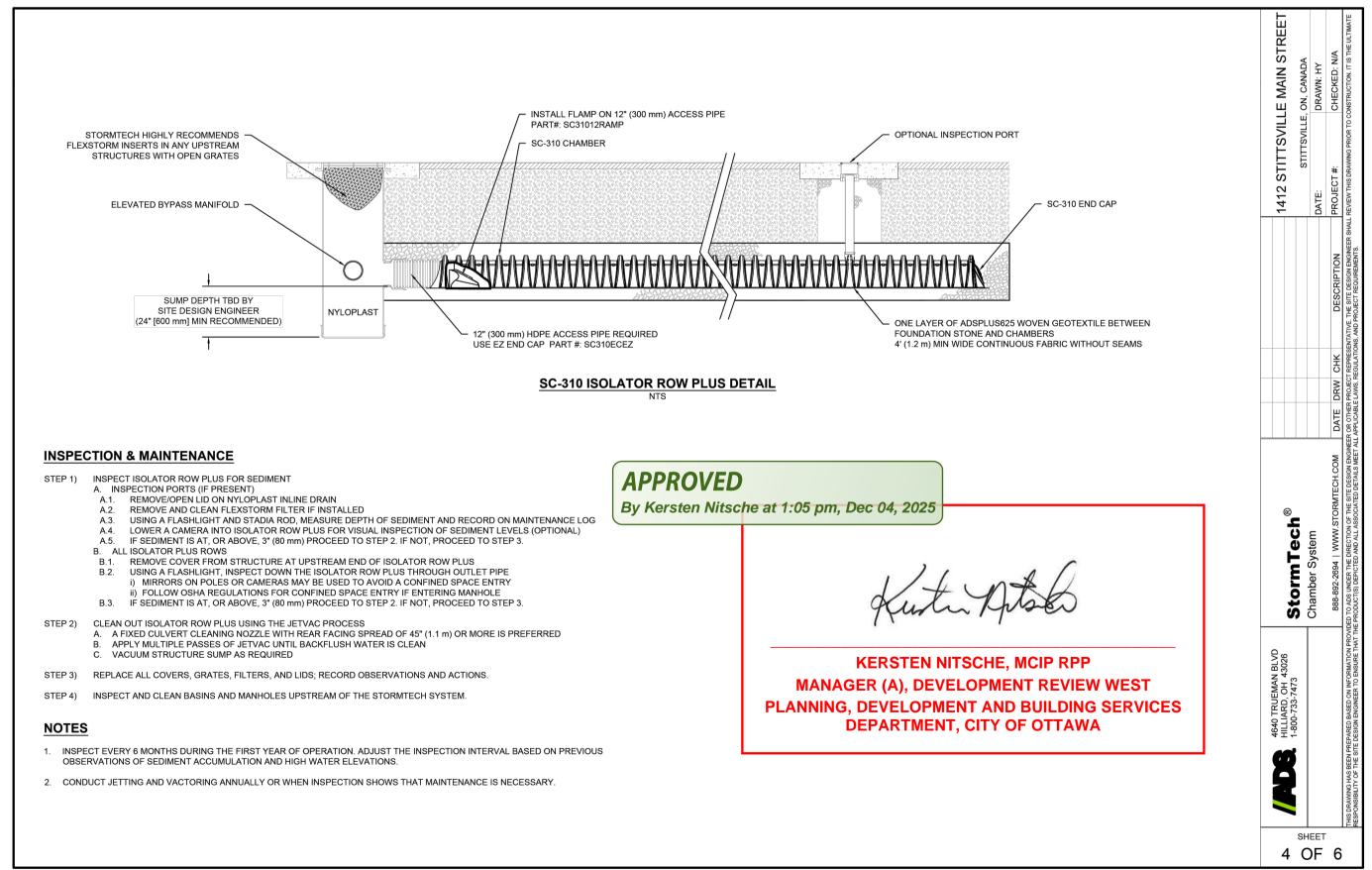
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
- NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 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.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS AASHTO MATERIAL MATERIAL LOCATION DESCRIPTION COMPACTION / DENSITY REQUIREMENT CLASSIFICATIONS FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED AYER TO THE BOTTOM OF ELEXIBLE PAVEMENT OR LINPAVED FINISHED ANY SOIL/ROCK MATERIALS. NATIVE SOILS, OR PER ENGINEER'S PLANS INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. PREPARATION REQUIREMENTS. BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER AASHTO M145 GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE A-1, A-2-4, A-3 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS PROCESSED AGGREGATE MATERIALS. ROLLER GROSS AASHTO M431 EHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC LAYER. 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 FORCE NOT TO EXCEED 20,000 lbs (89 kN). EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE CLEAN, CRUSHED, ANGULAR STONE NO COMPACTION REQUIRED. DUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. OR RECYCLED CONCRETE5 3, 357, 4, 467, 5, 56, 57 FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO AASHTO M431 CLEAN, CRUSHED, ANGULAR STONE PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.2, OR RECYCLED CONCRETES THE FOOT (BOTTOM) OF THE CHAMBER. 3, 357, 4, 467, 5, 56, 57 THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE". STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT, FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE, MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL". ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL PAVEMENT LAYER (DESIGNED BY SITE DESIGN ENGINEER) PERIMETER STONE 6" (150 mm) (SEE NOTE 5) MIN (450 mm) MIN* **EXCAVATION WALL** (CAN BE SLOPED OR VERTICAL) MINIMUM REQUIREMENTS FOR INSTALLATION. PLEASE SEE THE LAYOUT SHEET(S) FOR DEPTH OF STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 6" (150 mm) MIN SUBGRADE SOILS S to CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION 2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". . THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. 4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS. 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 2".





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TOPOGRAPHIC SURVEY WAS COMPLETED BY FARLEY, SMITH & DENNIS SURVEYING LTD. ON JANUARY 11,

• TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD

ELEVATIONS ARE DERIVED FROM ONTARIO CONTROL MONUMENT 0011968U118, HAVING A PUBLISHED ELEVATION OF 126.180m

TBM: CC ON THE SOUTHWEST CORNER OF THE HYDRO TRANSFORMER CONCRETE PAD. ELEV.

APPLICANT:
ELITE PROPERTY DEVELOPMENTS INC.

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 No.
 REVISION DESCRIPTION
 DATE

 2.
 RE-ISSUED FOR SPA
 SEPT. 2024

 3
 RE-ISSUED FOR SPA
 APR. 2025

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 RE-ISSUED FOR SPA
 JUL. 2025

 5.
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 OCT. 2025

 6.
 RE-ISSUED FOR SPA
 NOV. 2025

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ENGINEER STAMP

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1412 STITTSVILLE MAIN STREET TOWNSHIP OF STITTSVILLE

TATHAM

DETAILS PLAN 2

DESIGN: HY	FILE:	524659	D
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DET-2