



**NOTES:**

- ALL COSTS IN RELATION TO THE RESTORATION OF THE RIGHT OF WAY SHALL BE THAT OF THE APPLICANT.
- RESPECTING ALL WORK WITHIN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS PRIOR NOTICE TO THE PUBLIC WORKS DEPARTMENT.
- ALL WORK COMPLETED IN THE ROAD ALLOWANCE, INCLUDING RESTORATION, MUST BE PERFORMED UNDER TOWN OF COBourg FIELD STAFF DIRECTION.
- ALL WORKS WITHIN THE TOWN RIGHT-OF-WAY REQUIRE FULL TIME INSPECTION BY THE DEVELOPER'S ENGINEER (D.M. WILLS). THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO WORK ON THE RIGHT-OF-WAY.

**EROSION AND SEDIMENT CONTROL**

- ALL NEW CATCHBASINS ON SITE SHALL HAVE FILTER FABRIC PLACED UNDER THE LID, IMMEDIATELY AFTER INSTALLATION, TO CONTROL ANY SILT THAT MAY ENTER THE STORM SEWER - REFER TO DETAIL 02 ON SHEET 04. THE CONTRACTOR SHALL ENSURE THE FILTER FABRIC IS NOT "SEALED" IN PLACE DURING THE PLACEMENT OF ASPHALT. ALL FILTER FABRIC IS TO BE MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE ALL FILTER FABRIC UPON COMPLETION OF THE PROJECT OR AFTER BEING NOTIFIED BY THE ENGINEER (D.M. WILLS).
- ALL TEMPORARY SILTATION CONTROL DEVICES ARE TO BE PLACED BEFORE CONSTRUCTION STARTS AND MAINTAINED THROUGHOUT CONSTRUCTION. CONTROL DEVICES SHALL BE REMOVED ONCE ALL CONSTRUCTION HAS BEEN COMPLETED. ALL VEGETATION HAS BEEN ESTABLISHED AND AT THE DIRECTION OF THE ENGINEER (D.M. WILLS).
- CONTRACTOR TO PLACE A "MUDMAT" AS INDICATED ON THE SEDIMENT AND EROSION CONTROL PLAN, AT THE CONSTRUCTION ENTRANCE IDENTIFIED. IF THE CONTRACTOR UTILIZES ANY OTHER ENTRANCES AS A CONSTRUCTION ENTRANCE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT A MUD MAT, AS PER MUD-MAT DETAIL 01 ON SHEET 02. AT EACH ENTRANCE AND MAINTAIN THE MUD MAT THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND CLEANING THE MUD MAT TO ENSURE NO DEBRIS IS TRACKED ONTO THE TOWN STREETS. ANY DEBRIS TRACKED ONTO CITY STREETS SHALL BE POWER SWEEPED AT THE END OF EACH DAY. AT THE END OF EACH WORK WEEK (FRIDAYS), IN ADDITION TO THE POWER SWEEPING THE CONTRACTOR SHALL POWER WASH THE TOWN STREET AND CLEAN THE CONSTRUCTION ACCESS (RIP RAP) ON SITE PROPERTY.
- LIGHT-DUTY SILT FENCING WILL BE AS PER OPSD 219.110 (MODIFIED). THE PROPOSED SILT FENCE MUST BE INSPECTED AFTER EVERY RAINFALL TO IDENTIFY FAILED SECTIONS. ANY FAILURES MUST BE REPAIRED IMMEDIATELY. WHEN SEDIMENT ACCUMULATES TO HALF THE HEIGHT OF THE GEOTEXTILE IT IS TO BE REMOVED AND DISPOSED OF IN A CONTROLLED AREA. A SUPPLY OF SILT FENCE IS TO BE KEPT ON SITE TO PROVIDE FOR QUICK REPAIRS OR THE INSTALLATION OF ADDITIONAL FENCE IF REQUIRED.

**KEY PLAN**

TRUE NORTH

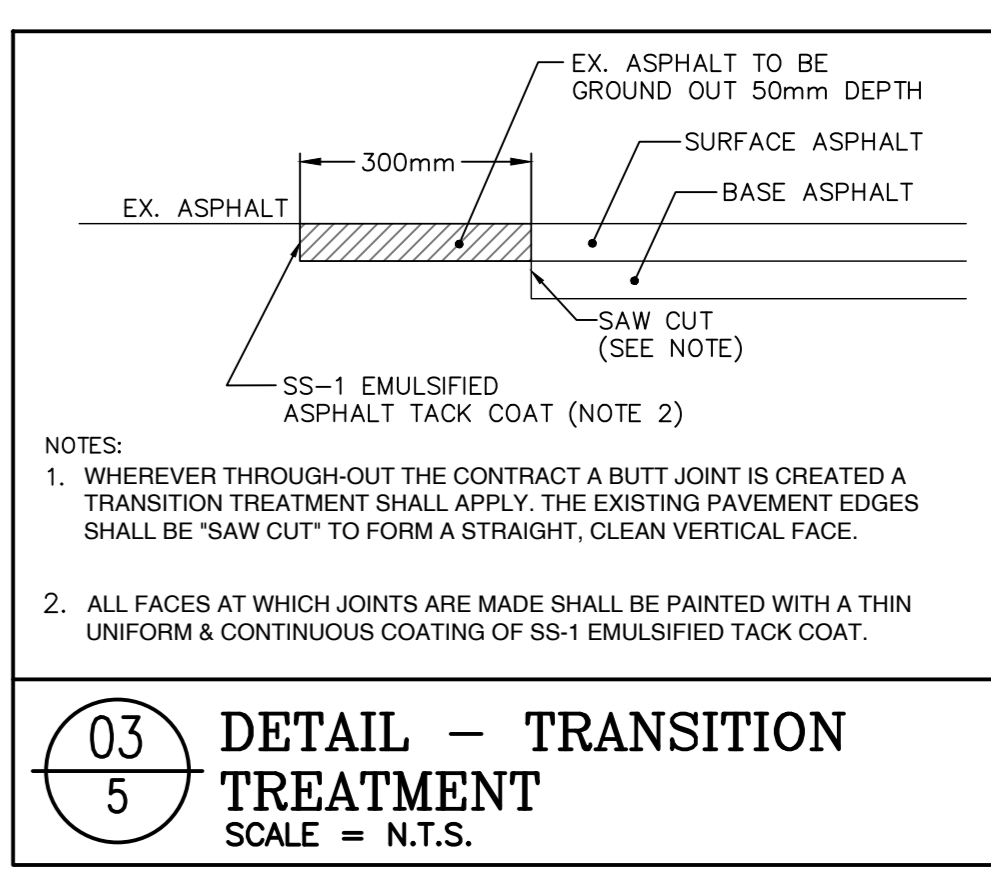
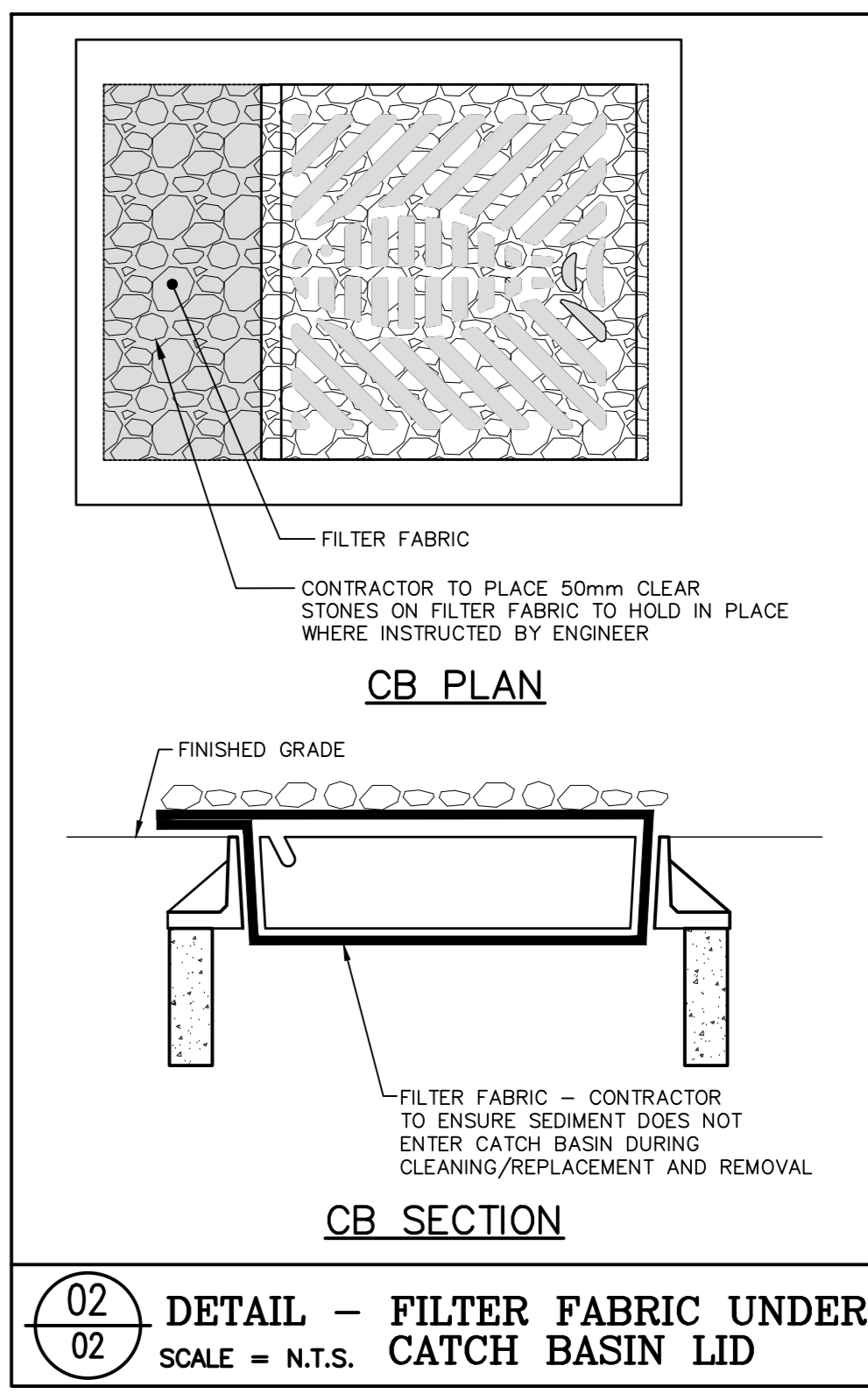
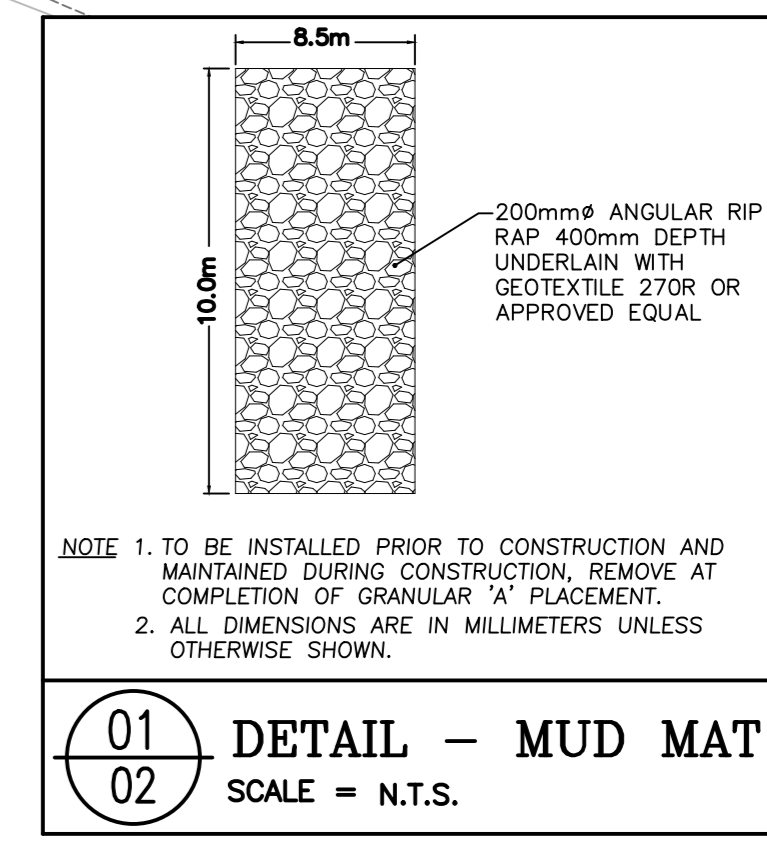
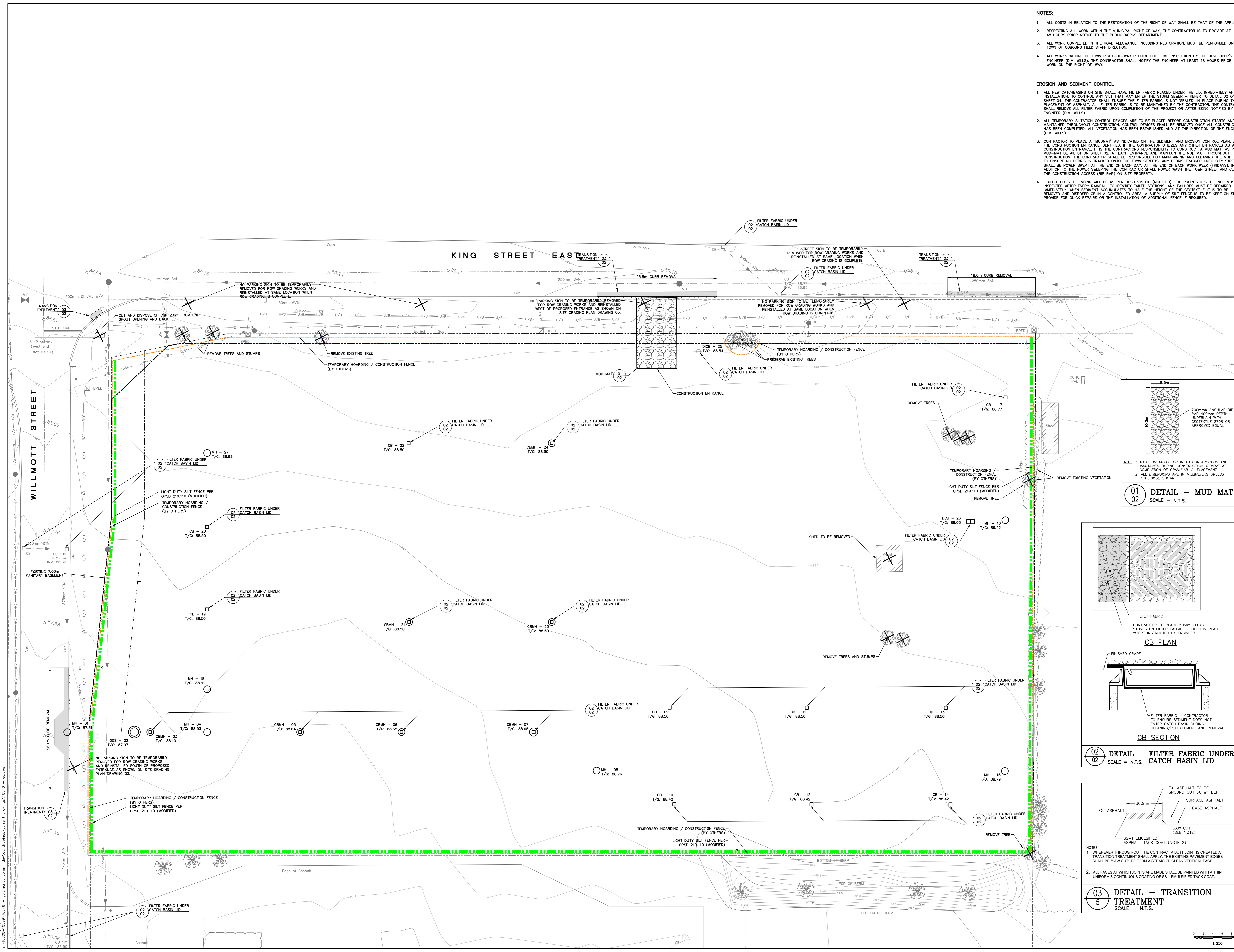
NO. 1

REVISIONS		Date
No.	Description	Date
4	SPA 4th SUBMISSION	01/06/21
3	SPA 3rd SUBMISSION	20/11/20
2	SPA 2nd SUBMISSION	13/12/19
1	SPA 1st SUBMISSION	18/11/18

**METRIC** Dimensions are in METRES and/or MILLIMETRES unless otherwise shown TO BE READ IN CONJUNCTION WITH OPSD 002 SERIES

**LEGEND**

REFER TO SHEET 01



**PROFESSIONAL ENGINEER**  
D.A. KEAY  
90446865  
01/06/21  
ENGINEER & ARCHITECT

**WILLS**

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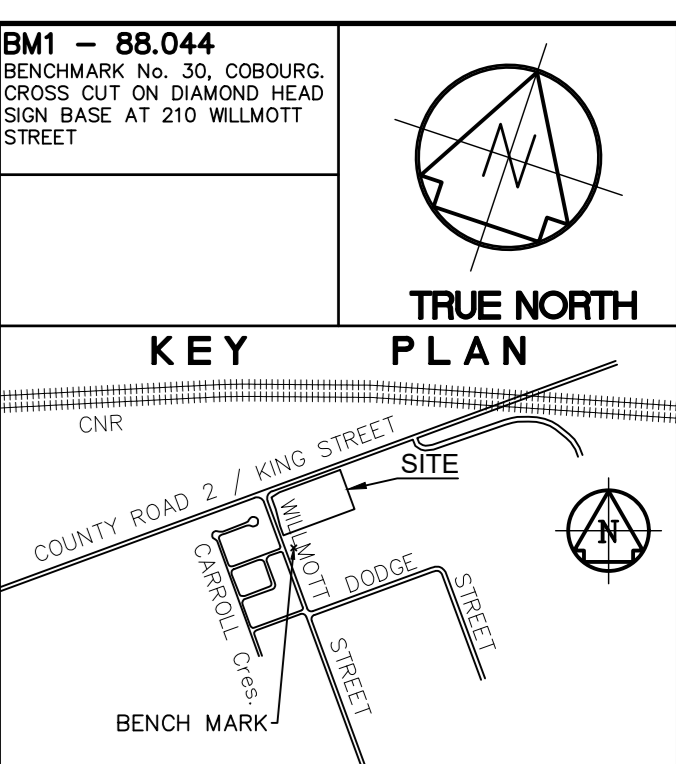
Project Name/Location  
**545 KING STREET EAST GOLDMANCO**  
COBURG, ONTARIO

**EROSION AND SEDIMENT CONTROL PLAN**

Drawn By: K.W.P. SCALE: HORIZ: 1:250 VERT: --  
Designed By: K.W.P. Plot Date: 2021-06-01  
Checked By: J.D.F. Project No.: 18-10846  
Engineer: D.A.K. Day File No.: 10846 - EC 02

Printed On: June 1, 2021  
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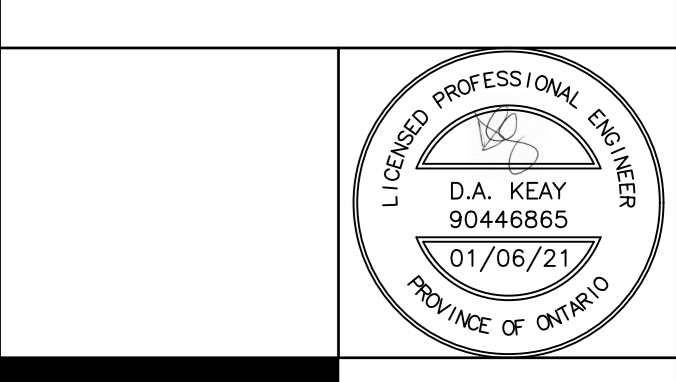
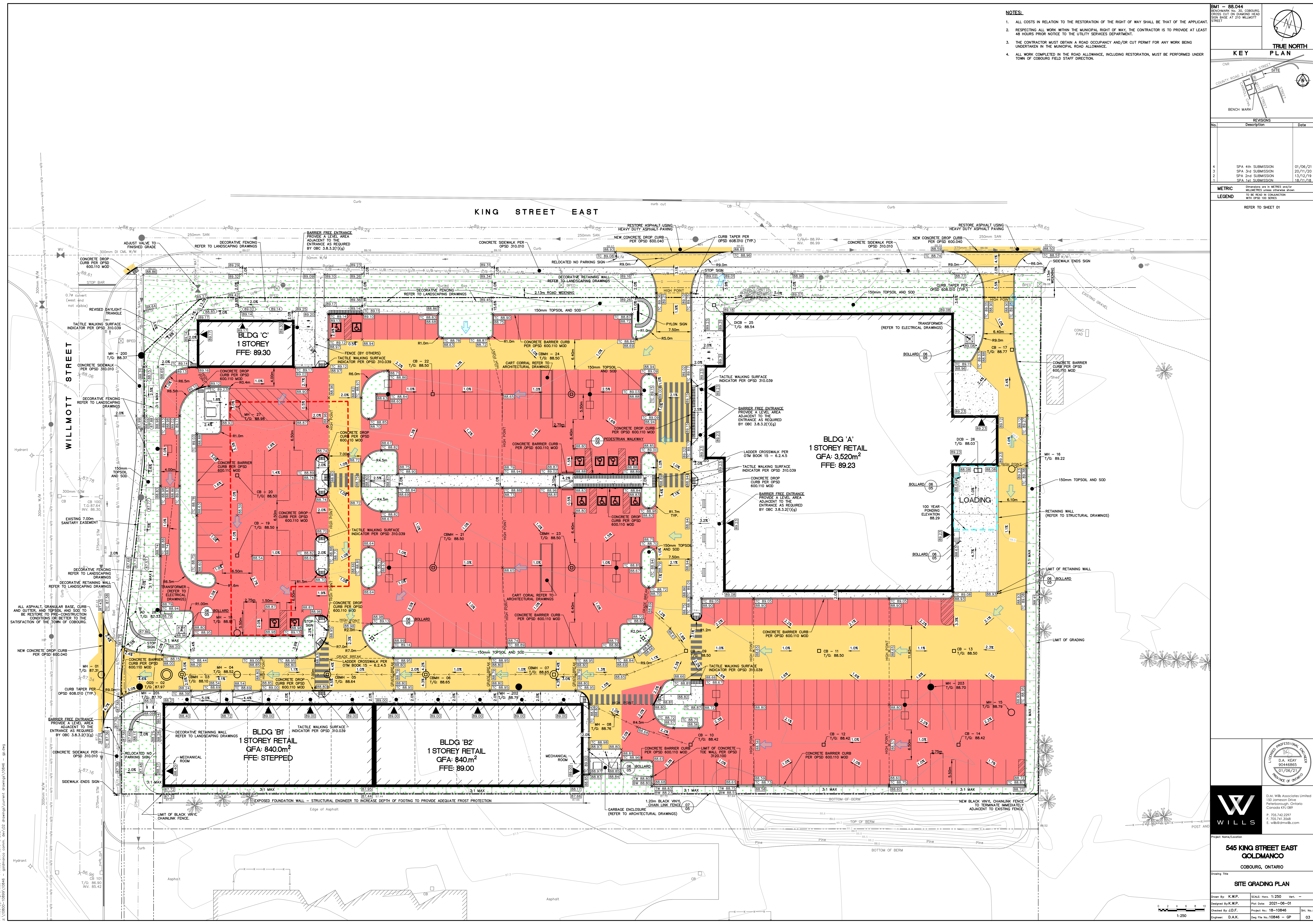
- NOTES:**
- ALL COSTS IN RELATION TO THE RESTORATION OF THE RIGHT OF WAY SHALL BE THAT OF THE APPLICANT.
  - RESPECTING ALL WORK WITHIN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS PRIOR NOTICE TO THE UTILITY SERVICES DEPARTMENT.
  - THE CONTRACTOR MUST OBTAIN A ROAD OCCUPANCY AND/OR CUT PERMIT FOR ANY WORK BEING UNDERTAKEN IN THE MUNICIPAL ROAD ALLOWANCE.
  - ALL WORK COMPLETED IN THE ROAD ALLOWANCE, INCLUDING RESTORATION, MUST BE PERFORMED UNDER TOWN OF COBURG FIELD STAFF DIRECTION.



No.	REVISIONS	Date
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METRIC Dimensions are in METRES and/or MILLIMETRES unless otherwise shown TO BE READ IN CONJUNCTION WITH THIS DRAWING

LEGEND REFER TO SHEET 01



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Project Name/Location  
**545 KING STREET EAST  
GOLDMANCO  
COBURG, ONTARIO**

Drawing Title  
**SITE GRADING PLAN**

Drawn By: K.W.P. Scale: 1:250 Ver: --  
 Checked By: J.D.F. Plot Date: 2021-06-01  
 Engineer: D.A.K. Day File No: 10846 - GP 03

Printed On: June 1, 2021  
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**BM1 = 88.044**  
BENCHMARK No. 302, COBourg,  
CROSS CUT ON DIAMOND HEAD  
500 BASE AT 210 WILLMOTT  
STREET

**KEY PLAN**

**REVISIONS**

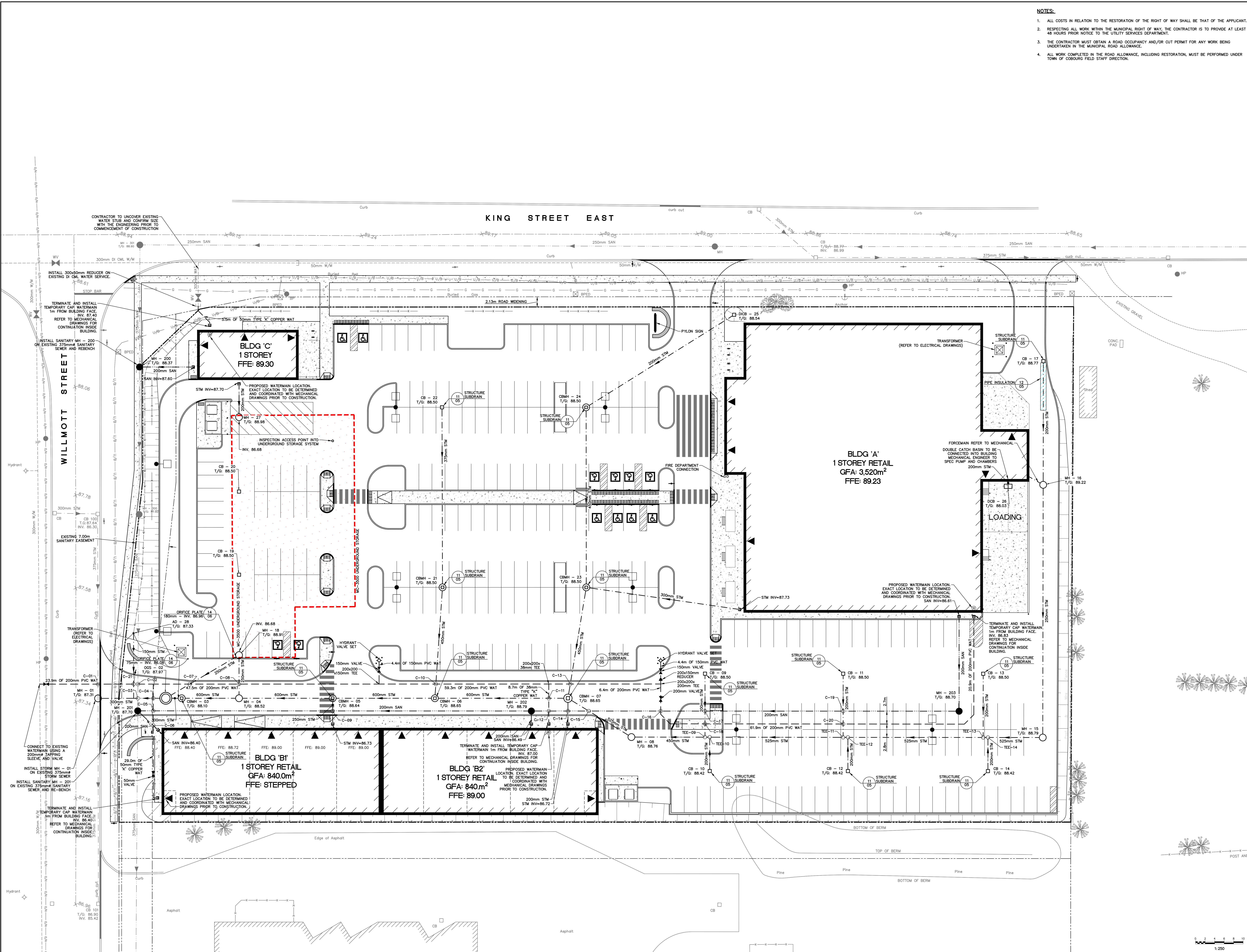
No.	Description	Date
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1	SPA 1st SUBMISSION	18/11/18

**METRIC** Dimensions are in METRES and/or MILLIMETRES unless otherwise shown TO BE READ IN CONJUNCTION WITH THIS SET OF DRAWINGS

**LEGEND**

REFER TO SHEET 01

- NOTES:**
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Printed On: June 1, 2021  
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Project Name/Location: 545 KING STREET EAST GOLDMANCO COBURG, ONTARIO

**WILLS**

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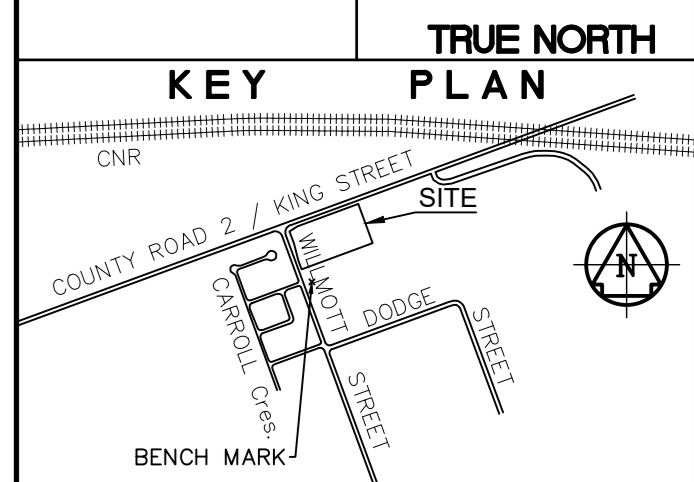
**545 KING STREET EAST  
GOLDMANCO  
COBURG, ONTARIO**

**SITE SERVING PLAN**

Drawn By: K.W.P. Scale: 1:250 Vert. ---  
Designed By: J.D.F. Plot Date: 2021-06-01  
Checked By: J.D.F. Project No.: 18-10846  
Engineer: D.A.K. Day No.: 10846 - SS 04

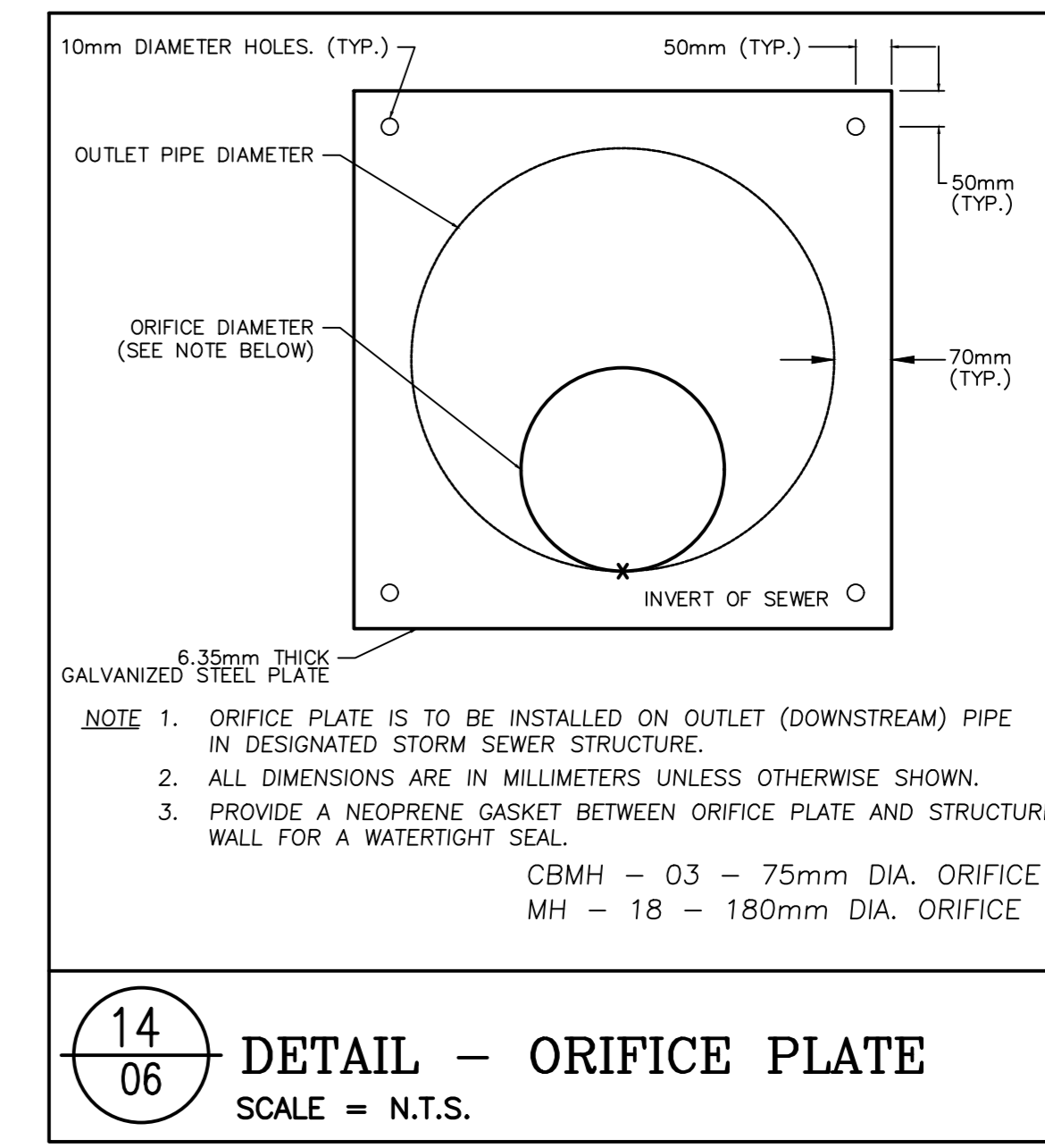
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REVISIONS		
No.	Description	Date
4	SPA 4th SUBMISSION	01/06/21
3	SPA 3rd SUBMISSION	20/11/20
2	SPA 2nd SUBMISSION	13/12/19
1	SPA 1st SUBMISSION	18/11/18

**METRIC** Dimensions are in METRES and/or MILLIMETRES unless otherwise shown  
**LEGEND** TO BE READ IN CONJUNCTION WITH OTHER 100 SERIES



**NOTE** 1. ORIFICE PLATE IS TO BE INSTALLED ON OUTLET (DOWNSTREAM) PIPE IN DESIGNATED STORM SEWER STRUCTURE.  
 2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.  
 3. PROVIDE A NEOPRENE GASKET BETWEEN ORIFICE PLATE AND STRUCTURE WALL FOR A WATER TIGHT SEAL.  
 CSMH - 03 - 75mm DIA. ORIFICE  
 MH - 18 - 180mm DIA. ORIFICE

**14**  
**06** **DETAIL - ORIFICE PLATE**  
 SCALE = N.T.S.

**PROPOSED LAYOUT**

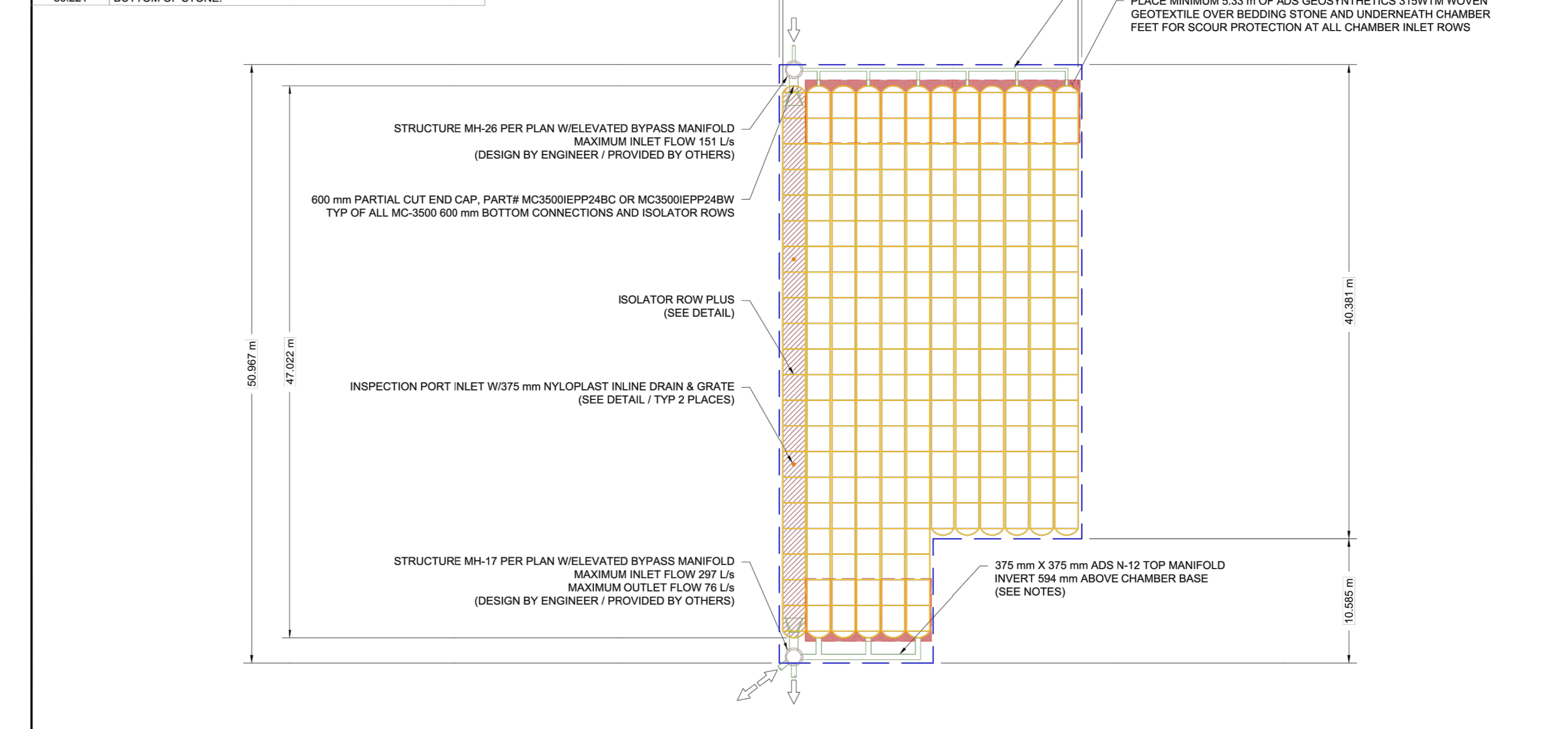
228	STORMTECH MC-3500 CHAMBERS
24	STORMTECH MC-3500 END CAPS
375	STONE ABOVE (mm)
225	STONE BELOW (mm)
42	1/2 STONE VOID
1,098.8	INSTALLED SYSTEM VOLUME (m³) ABOVE ELEVATION 86.66
135.8	PERIMETER STONE INCLUDED
1,178.8	SYSTEM AREA (m²)
135.8	SYSTEM PERIMETER (m)

**PROPOSED ELEVATIONS**

90.031	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
88.203	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
88.050	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
88.050	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
88.050	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
87.968	TOP OF STONE
87.503	TOP OF MC-3500 CHAMBER
87.241	200 mm TOP MANFOLD INVERT
86.502	600 mm ISOLATOR ROW INVERT
86.490	375 mm BOTTOM MANFOLD INVERT
86.490	BOTTOM OF MC-3500 CHAMBER
86.221	BOTTOM OF STONE

**NOTES**

- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANHOLE 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 MANHOLE COMPONENTS IN THE FIELD.
- 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 IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



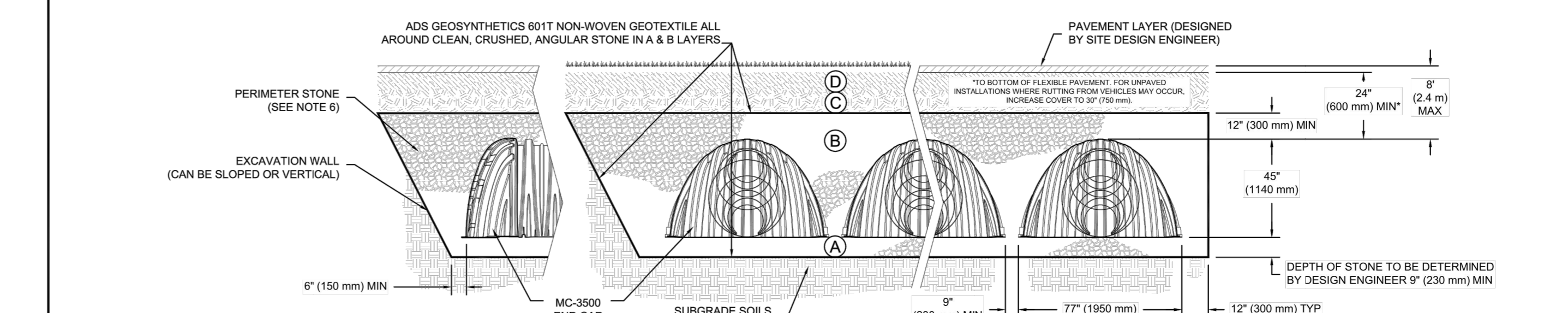
545 KING STREET EAST GOLDMANCO  
 COBOURG, ONT  
 DATE: 10/10/20 DRAWN: BRE  
 CHECKED: JMD  
 PROJECT # 18-10846

StormTech  
 4460 TRILUMINA BLVD  
 HILLIARD, OH 43026  
 SCALE = 1 : 300

2 SHEET OF 5

**ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	NA	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (IF LAYER 'D' IS 100mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	AASHTO M140 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>1</sup> 3, 3S7, 4, 4S7, 5, 5S, 6, 6S, 67, 68, 7, 7S, 8, 8S, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 90% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SURFACE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 4	FLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. **



**PLEASE NOTE:**

- 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 COVERSAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY BANKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

**NOTES:**

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F218 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2187 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 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.

StormTech  
 4460 TRILUMINA BLVD  
 HILLIARD, OH 43026  
 SCALE = 1 : 300

3 SHEET OF 6

**WILLS**  
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 100193869  
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Project Name/Location  
**545 KING STREET EAST GOLDMANCO**  
 COBOURG, ONTARIO

Drawing Title  
**STORM WATER MANAGEMENT DETAILS**

Drawn By: K.W.P. SCALE: Horiz. -- Vert. --  
 Designed By: K.W.P. Plot Date: 2021-06-01  
 Checked By: C.P.B. Project No.: 18-10846  
 Engineer: C.P.B. Day File No.: 10846 - QNDT 06