

# MUNICIPALITY OF THAMES CENTRE

## UPPER QUEEN STREET STORM SEWER UPGRADE AND ROAD URBANIZATION

| <i>INDEX OF DRAWINGS</i> |                                               |
|--------------------------|-----------------------------------------------|
| DRAWING No.              | DESCRIPTION                                   |
|                          | COVER SHEET                                   |
| 1.                       | UPPER QUEEN STREET – STA. 0+000 TO STA. 0+155 |
| 2.                       | UPPER QUEEN STREET – STA. 0+155 TO STA. 0+355 |
| 3.                       | UPPER QUEEN STREET – STA. 0+355 TO STA. 0+540 |
| 4.                       | TYPICAL CROSS SECTIONS                        |
| 5.                       | MISCELLANEOUS DETAILS AND NOTES               |
| 6.                       | RAISED ASPHALT INTERSECTION GRADING           |
| 7.                       | UPPER QUEEN STREET – PAVEMENT MARKINGS        |
| 8.                       | UPPER QUEEN STREET – PAVEMENT MARKINGS        |
| A1.                      | STORM SEWER DRAINAGE AREA PLAN & DESIGN SHEET |



PROJECT LOCATION

PRELIMINARY

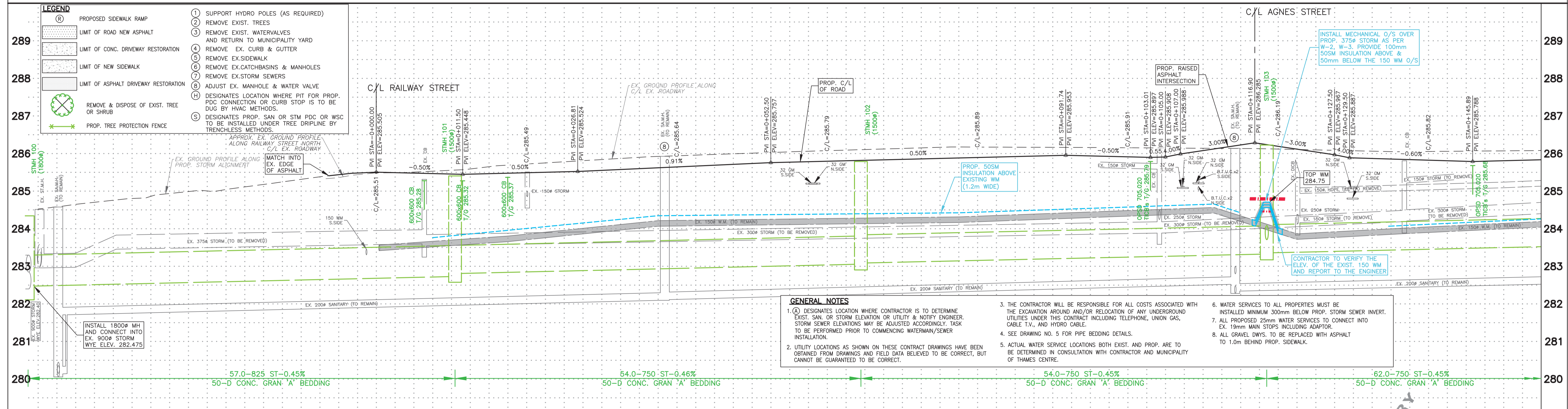
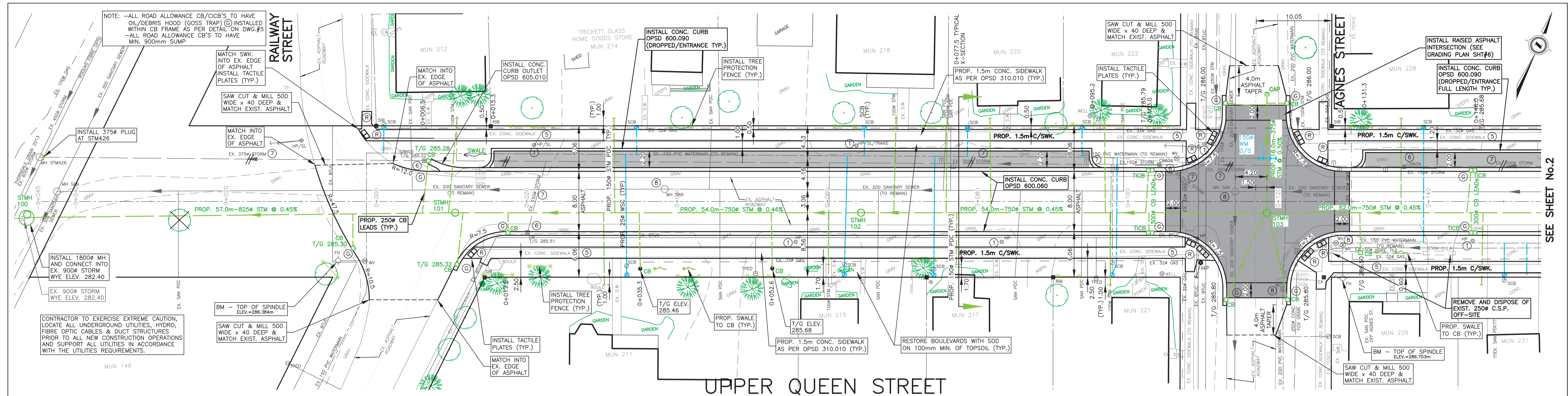
CLIENT:



JOB NO – 224054

CONSULTANT





**LEGEND**

|     |                                          |      |                                                                                                   |
|-----|------------------------------------------|------|---------------------------------------------------------------------------------------------------|
| (R) | PROPOSED SIDEWALK RAMP                   | (1)  | SUPPORT HYDRO POLES (AS REQUIRED)                                                                 |
| (A) | LIMIT OF ROAD NEW ASPHALT                | (2)  | REMOVE EXIST. TREES                                                                               |
| (B) | LIMIT OF CONC. DRIVEWAY RESTORATION      | (3)  | REMOVE EXIST. WATERVALVES AND RETURN TO MUNICIPALITY YARD                                         |
| (C) | LIMIT OF NEW SIDEWALK                    | (4)  | REMOVE EX. CURB & GUTTER                                                                          |
| (D) | LIMIT OF ASPHALT DRIVEWAY RESTORATION    | (5)  | REMOVE EX. SIDEWALK                                                                               |
| (E) | REMOVE & DISPOSE OF EXIST. TREE OR SHRUB | (6)  | REMOVE EX. CATCHBASINS & MANHOLES                                                                 |
| (F) | PROP. TREE PROTECTION FENCE              | (7)  | REMOVE EX. STORM SEWERS                                                                           |
| (G) |                                          | (8)  | ADJUST EX. MANHOLE & WATER VALVE                                                                  |
| (H) |                                          | (9)  | DESIGNATES LOCATION WHERE PIT FOR PROP. PDC CONNECTION OR CURB STOP IS TO BE DUG BY HVAC METHODS. |
| (I) |                                          | (10) | DESIGNATES PROP. SAN OR STM PDC OR WSC TO BE INSTALLED UNDER TREE DRIFLINE BY TRENCHLESS METHODS. |

- GENERAL NOTES**
- DESIGNATES LOCATION WHERE CONTRACTOR IS TO DETERMINE EXIST. SAN. OR STORM ELEVATION OR UTILITY & NOTIFY ENGINEER. STORM SEWER ELEVATIONS MAY BE ADJUSTED ACCORDINGLY. TASK TO BE PERFORMED PRIOR TO COMMENCING WATERMAIN/SEWER INSTALLATION.
  - UTILITY LOCATIONS AS SHOWN ON THESE CONTRACT DRAWINGS HAVE BEEN OBTAINED FROM DRAWINGS AND FIELD DATA BELIEVED TO BE CORRECT, BUT CANNOT BE GUARANTEED TO BE CORRECT.
  - THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE EXCAVATION AROUND AND/OR RELOCATION OF ANY UNDERGROUND UTILITIES UNDER THIS CONTRACT INCLUDING TELEPHONE, UNION GAS, CABLE TV, AND HYDRO CABLE.
  - SEE DRAWING NO. 5 FOR PIPE BEDDING DETAILS.
  - ACTUAL WATER SERVICE LOCATIONS BOTH EXIST. AND PROP. ARE TO BE DETERMINED IN CONSULTATION WITH CONTRACTOR AND MUNICIPALITY OF THAMES CENTRE.
  - WATER SERVICES TO ALL PROPERTIES MUST BE INSTALLED MINIMUM 300mm BELOW PROP. STORM SEWER INVERT.
  - ALL PROPOSED 25mm WATER SERVICES TO CONNECT INTO EX. 19mm MAIN STOPS INCLUDING ADAPTOR.
  - ALL GRAVEL DWS. TO BE REPLACED WITH ASPHALT TO 1.0m BEHIND PROP. SIDEWALK.

|                    |        |        |        |        |        |        |        |        |        |        |        |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| C/L W.M. ELEVATION | 284.52 | 284.65 | 285.04 | 285.49 | 285.72 | 285.94 | 286.08 | 286.17 | 286.15 | 286.12 | 286.06 |
| STORM INVERT       |        |        |        |        |        |        |        |        |        |        |        |
| SANITARY INVERT    |        |        |        |        |        |        |        |        |        |        |        |
| STATION            | 0+040  | 0+020  | 0+000  | 0+020  | 0+040  | 0+060  | 0+080  | 0+100  | 0+120  | 0+140  |        |

| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS         | No. | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|-----------------|-----|-----------|------|------------|
|                   |                   |      |                         |            | DESIGN CSJ      |     |           |      |            |
|                   |                   |      |                         |            | DRAWN BY PM     |     |           |      |            |
|                   |                   |      |                         |            | CHECKED CSJ     |     |           |      |            |
|                   |                   |      |                         |            | APPROVED CSJ    |     |           |      |            |
|                   |                   |      |                         |            | DATE MARCH 2024 |     |           |      |            |

CONSULTANT OR DIVISION

**SPRIET ASSOCIATES**  
LONDON CONSULTING ENGINEERS  
155 YORK STREET -- LONDON (519) 672-4100 -- FAX 148

ENGINEER'S STAMP



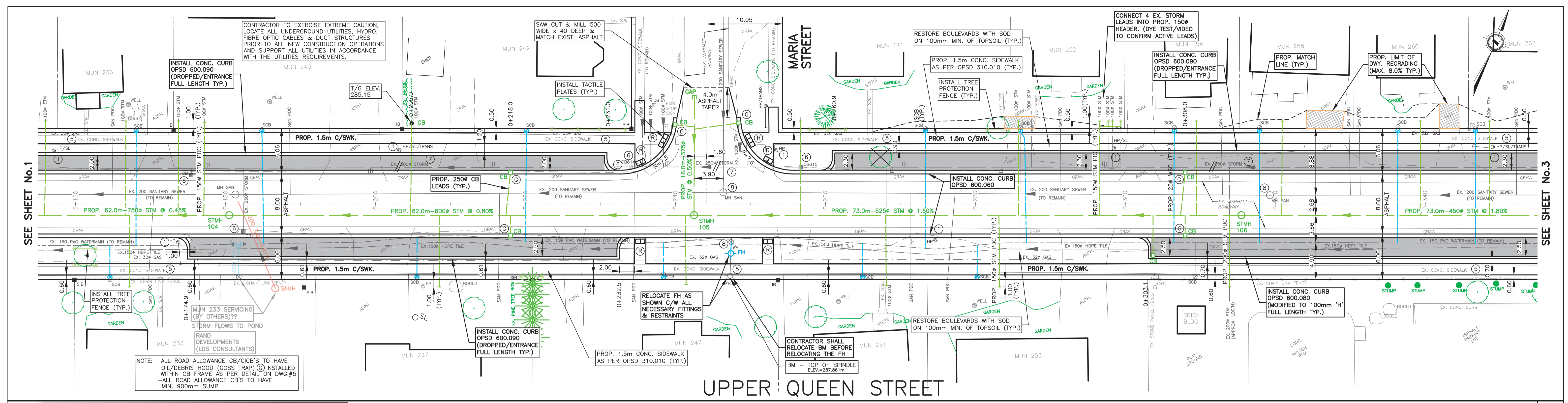
SCALE  
HORZ. 1:250  
VERT. 1:50

TITLE  
**UPPER QUEEN STREET RECONSTRUCTION**  
UPPER QUEEN STREET  
STA. 0+000 TO STA. 0+155

PROJECT No. 224054  
SHEET No. 1  
PLAN FILE No.

PRELIMINARY

SEE SHEET No.2



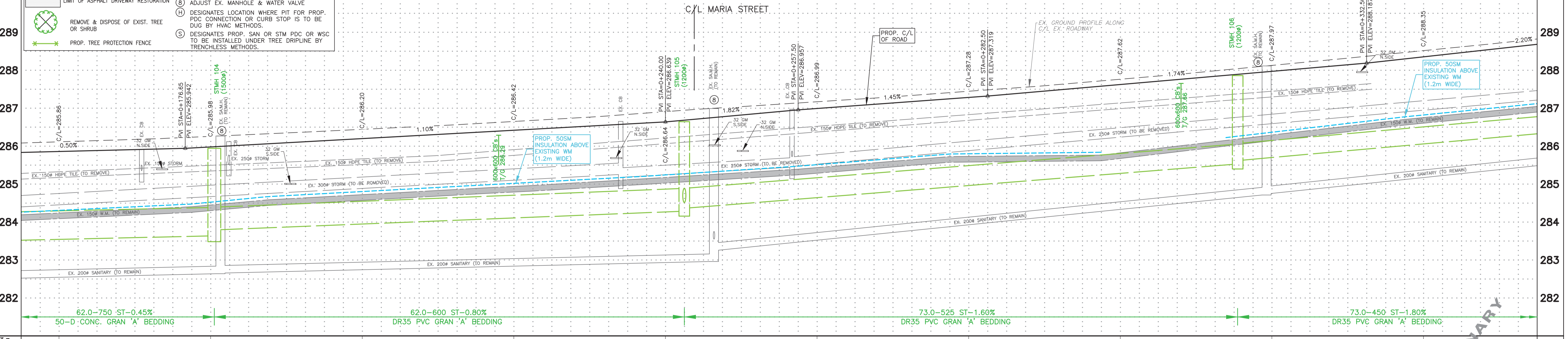
# UPPER QUEEN STREET

**LEGEND**

|     |                                          |      |                                                                                                        |
|-----|------------------------------------------|------|--------------------------------------------------------------------------------------------------------|
| (R) | PROPOSED SIDEWALK RAMP                   | (1)  | SUPPORT HYDRO POLES (AS REQUIRED)                                                                      |
| (A) | LIMIT OF ROAD NEW ASPHALT                | (2)  | REMOVE EXIST. TREES                                                                                    |
| (B) | LIMIT OF CONC. DRIVEWAY RESTORATION      | (3)  | REMOVE EXIST. WATERVALVES AND RETURN TO MUNICIPALITY YARD                                              |
| (C) | LIMIT OF NEW SIDEWALK                    | (4)  | REMOVE EX. CURB & GUTTER                                                                               |
| (D) | LIMIT OF ASPHALT DRIVEWAY RESTORATION    | (5)  | REMOVE EX. SIDEWALK                                                                                    |
| (E) | REMOVE & DISPOSE OF EXIST. TREE OR SHRUB | (6)  | REMOVE EX. CATCHBASINS & MANHOLES                                                                      |
| (F) | PROP. TREE PROTECTION FENCE              | (7)  | REMOVE EX. STORM SEWERS                                                                                |
| (G) |                                          | (8)  | ADJUST EX. MANHOLE & WATER VALVE                                                                       |
| (H) |                                          | (9)  | DESIGNATES LOCATION WHERE PIT FOR PROP. PDC CONNECTION OR CURB STOP IS TO BE DUG BY TRENCHING METHODS. |
| (I) |                                          | (10) | DESIGNATES PROP. SAN OR STM PDC OR WSC TO BE INSTALLED UNDER TREE DRUPLINE BY TRENCHLESS METHODS.      |

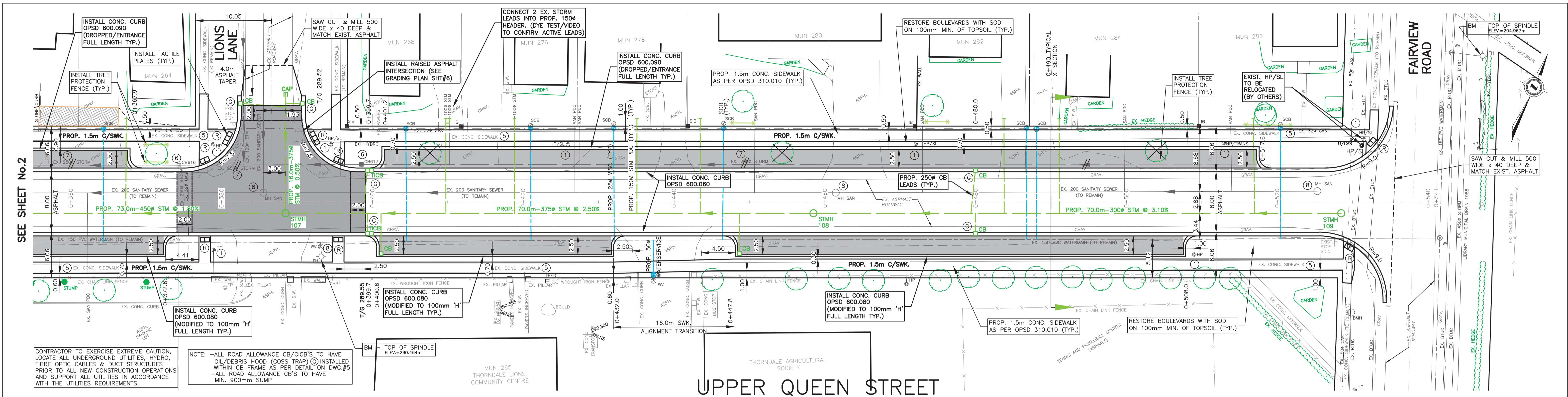
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- SEE DRAWING NO. 5 FOR PIPE BEDDING DETAILS.
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- ALL GRAVEL DWYS. TO BE REPLACED WITH ASPHALT TO 1.0m BEHIND PROP. SIDEWALK.



| STATION | EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS | No. | REVISIONS | DATE | CONSULTANT |
|---------|-------------------|-------------------|------|-------------------------|------------|---------|-----|-----------|------|------------|
| 0+150   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+180   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+200   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+220   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+240   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+260   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+280   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+300   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+320   |                   |                   |      |                         |            |         |     |           |      |            |
| 0+340   |                   |                   |      |                         |            |         |     |           |      |            |

|  |  |                                              |                                                             |
|--|--|----------------------------------------------|-------------------------------------------------------------|
|  |  | <p>SCALE<br/>HORIZ. 1:250<br/>VERT. 1:50</p> | <p>PROJECT No. 224054<br/>SHEET No. 2<br/>PLAN FILE No.</p> |
|--|--|----------------------------------------------|-------------------------------------------------------------|



CONTRACTOR TO EXERCISE EXTREME CAUTION, LOCATE ALL UNDERGROUND UTILITIES, HYDRO, FIBRE OPTIC CABLES & DUCT STRUCTURES PRIOR TO ALL NEW CONSTRUCTION OPERATIONS AND SUPPORT ALL UTILITIES IN ACCORDANCE WITH THE UTILITIES REQUIREMENTS.

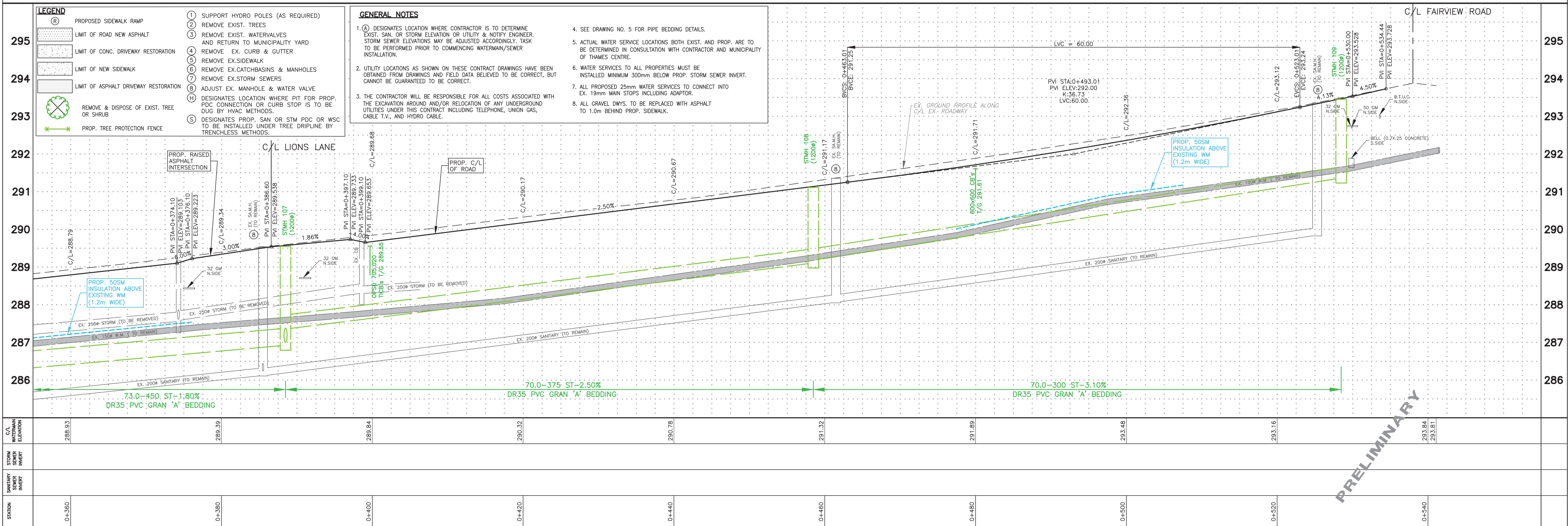
NOTE: -ALL ROAD ALLOWANCE CB/CICB'S TO HAVE OIL/DEBRIS HOOD (ROSS TRAP) (Q) INSTALLED WITHIN CB FRAME AS PER DETAIL ON DWG #5  
-ALL ROAD ALLOWANCE CB'S TO HAVE MIN. 900mm SUMP

**LEGEND**

|     |                                                                                                  |
|-----|--------------------------------------------------------------------------------------------------|
| (R) | PROPOSED SIDEWALK RAMP                                                                           |
| (A) | LIMIT OF ROAD NEW ASPHALT                                                                        |
| (B) | LIMIT OF CONC. DRIVEWAY RESTORATION                                                              |
| (C) | LIMIT OF NEW SIDEWALK                                                                            |
| (D) | LIMIT OF ASPHALT DRIVEWAY RESTORATION                                                            |
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| (F) | PROP. TREE PROTECTION FENCE                                                                      |
| (1) | SUPPORT HYDRO POLES (AS REQUIRED)                                                                |
| (2) | REMOVE EXIST. TREES                                                                              |
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| (4) | REMOVE EX. CURB & GUTTER                                                                         |
| (5) | REMOVE EX. SIDEWALK                                                                              |
| (6) | REMOVE EX. CATCHBASINS & MANHOLES                                                                |
| (7) | REMOVE EX. STORM SEWERS                                                                          |
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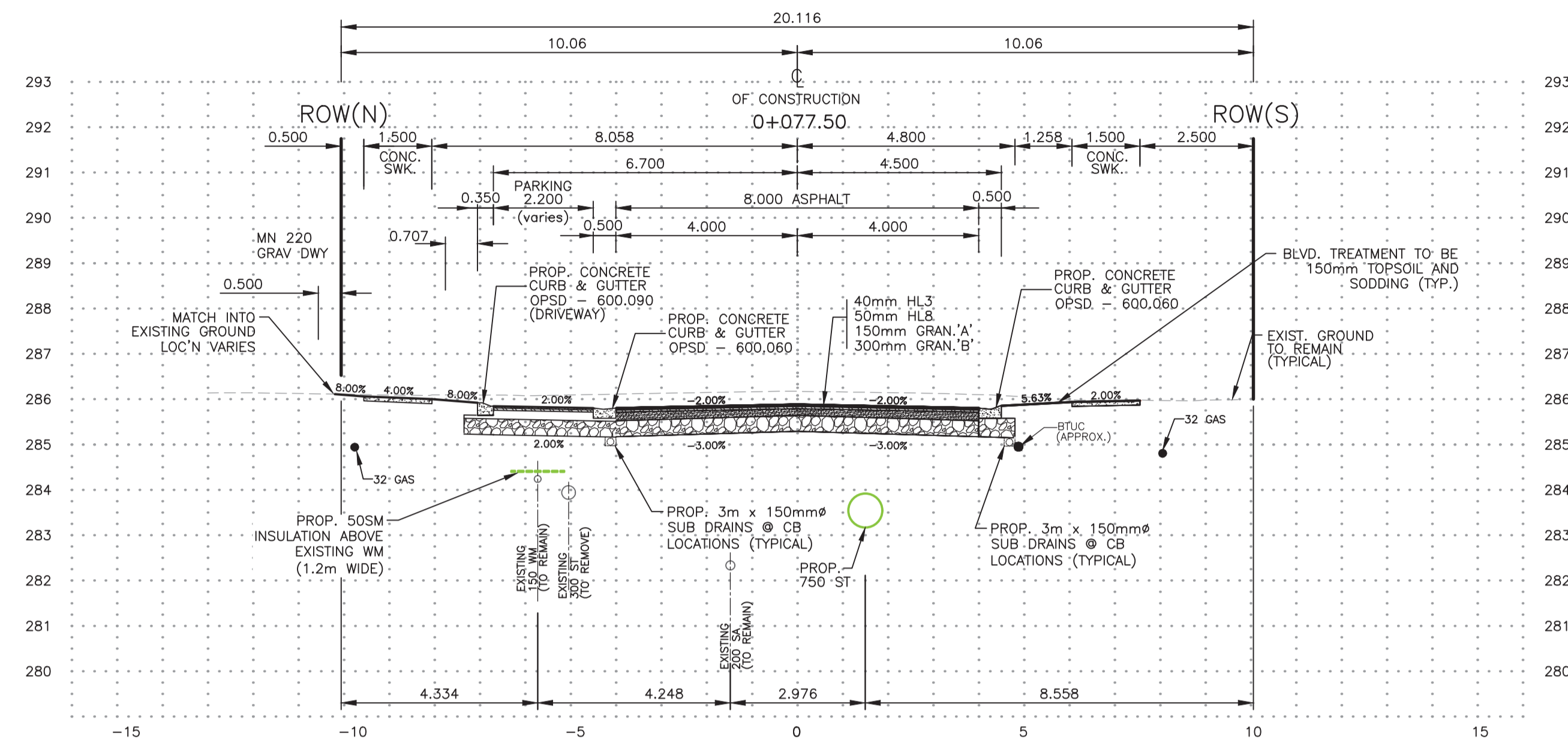


PRELIMINARY

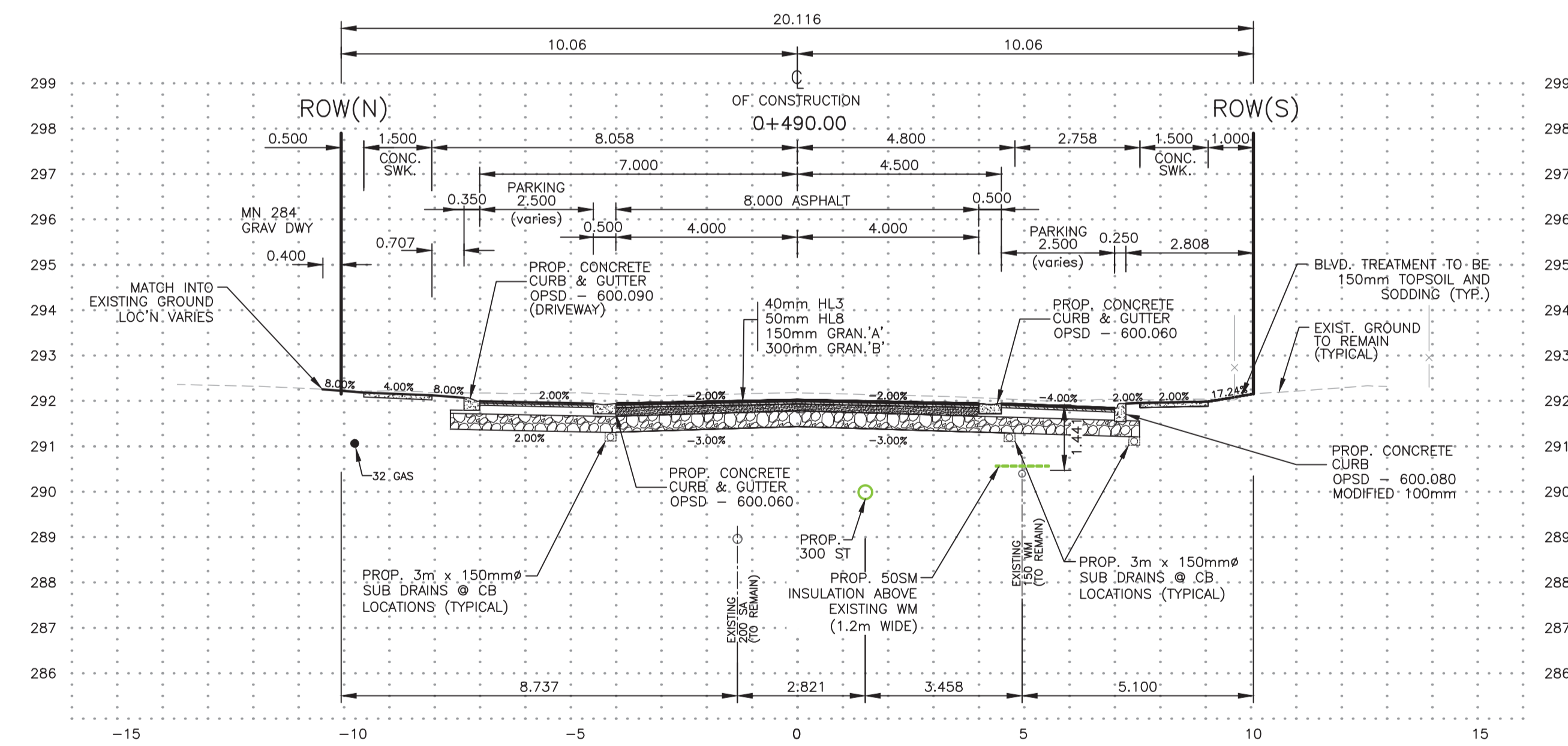
| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS  | No.        | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|----------|------------|-----------|------|------------|
|                   |                   |      |                         |            | DESIGN   | CSL        |           |      |            |
|                   |                   |      |                         |            | DRAWN BY | PM         |           |      |            |
|                   |                   |      |                         |            | CHECKED  | CSL        |           |      |            |
|                   |                   |      |                         |            | APPROVED | CSL        |           |      |            |
|                   |                   |      |                         |            | DATE     | MARCH 2024 |           |      |            |

|                                                                                                         |                  |                                                       |                                                                                    |                              |
|---------------------------------------------------------------------------------------------------------|------------------|-------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------|
| CONSULTANT OR DIVISION                                                                                  | ENGINEER'S STAMP | SCALE                                                 | TITLE                                                                              | PROJECT No.                  |
| SPRIET ASSOCIATES<br>LONDON CONSULTING ENGINEERS<br>155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8 |                  | HORZ. 1:250<br>VERT. 1:50<br>2.5m 0 5.0m<br>0.5m 0 1m | UPPER QUEEN STREET RECONSTRUCTION<br>UPPER QUEEN STREET<br>STA. 0+355 TO STA 0+540 | 224054<br>3<br>PLAN FILE No. |



UPPER QUEEN STREET  
X-SECTION STA. 0+077.5



UPPER QUEEN STREET  
X-SECTION STA. 0+490

PRELIMINARY

| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS    | No.      | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|------------|----------|-----------|------|------------|
|                   |                   |      |                         |            | DESIGN     | CSL      |           |      |            |
|                   |                   |      |                         |            | DRAWN BY   | PM       |           |      |            |
|                   |                   |      |                         |            | CHECKED    | CSL      |           |      |            |
|                   |                   |      |                         |            | APPROVED   | CSL      |           |      |            |
|                   |                   |      |                         |            | DATE       | MAY 2024 |           |      |            |
|                   |                   |      |                         |            | X-SECTIONS |          |           |      |            |

CONSULTANT OR DIVISION

**SPRIET ASSOCIATES**  
LONDON CONSULTING ENGINEERS LIMITED  
155 YORK STREET -- LONDON (519) 672-4100 -- NGA 1A8

ENGINEER'S STAMP



SCALE

|       |       |
|-------|-------|
| HORZ. | 1:100 |
| VERT. | 1:100 |

2.5m 0 5.0m  
HORIZONTAL

0.5 0 1m  
VERTICAL

TITLE

**UPPER QUEEN STREET RECONSTRUCTION**

TYPICAL CROSS SECTIONS  
UPPER QUEEN STREET

|               |        |
|---------------|--------|
| PROJECT No.   | 224054 |
| SHEET No.     | 4      |
| PLAN FILE No. |        |

**GENERAL NOTES:**

- UTILITIES AND SUPPORT**  
Prior to commencing construction on the road allowances, all existing underground and overhead utilities shall be located and marked. Any utilities damaged or disturbed during construction shall be repaired or replaced to the satisfaction of the governing body at the Contractor's expense. Any pole support shall be carried out by the appropriate authority and not the Contractor, but any costs are at the expense of the Contractor. If hydro poles need to be supported during construction, the Contractor shall make all necessary arrangements with the Hydro company. Utility locations shown on these drawings have been obtained from drawings and data believed to be correct, but cannot be guaranteed to be correct. The Contractor will be responsible for all costs associated with the excavation around and/or relocation of any underground utilities under this contract.
- See this drawing for backfill and restoration details.
- Grades, elevations, distances and alignment as shown on the drawings represent the theoretical centerline of the watermain and sewers for purposes of design and the preparation of as built drawings. All profiles of existing ground are approximate and are along the centerline of the travelled portion of the road allowance.
- All existing trees, shrubs, and landscaping are to be protected in accordance with the project specifications unless otherwise stated by the Engineer or shown on the drawings.
- MAINTENANCE OF FLOW**  
All existing surface and underground drainage systems are to be maintained and restored during construction to the satisfaction of the Engineer.
- CONSTRUCTION AND DETOUR SIGNING**  
Minimum construction and detour signing shall be as per Book 7 of the "Ontario Traffic Manual". Drawings to be submitted to the Engineer for approval prior to commencement of the project.
- WORK WITHIN PRIVATE PROPERTY**  
No work shall be carried out on private property without written permission from the owner.
- SEWER LOCATIONS**  
The shown location and alignment of the existing sanitary and storm sewers is from information obtained from the Municipality of Thames Centre. The accuracy of these locations is not guaranteed.
- WATER SERVICES**  
The location and alignment shown (and not shown) of existing water services, including curb stops, is not guaranteed.
- CURB RADIUS**  
The internal radius at all intersections proposed for construction under this project shall be 7.5m unless otherwise noted.
- All storm sewer private drain connections (p.d.c.) are to be a minimum of 1.2 meters below original ground at property line.
- Watermain elevations were obtained from existing drawings only. The contractor shall expose the existing watermain at all locations where it is to be crossed by the proposed storm sewer or leads and notify the engineer of any expected conflicts.

**GENERAL LIST OF MOST COMMON STANDARDS USED  
THE FOLLOWING ONTARIO PROVINCIAL STANDARD DRAWINGS  
MAY BE USED ON THIS PROJECT**

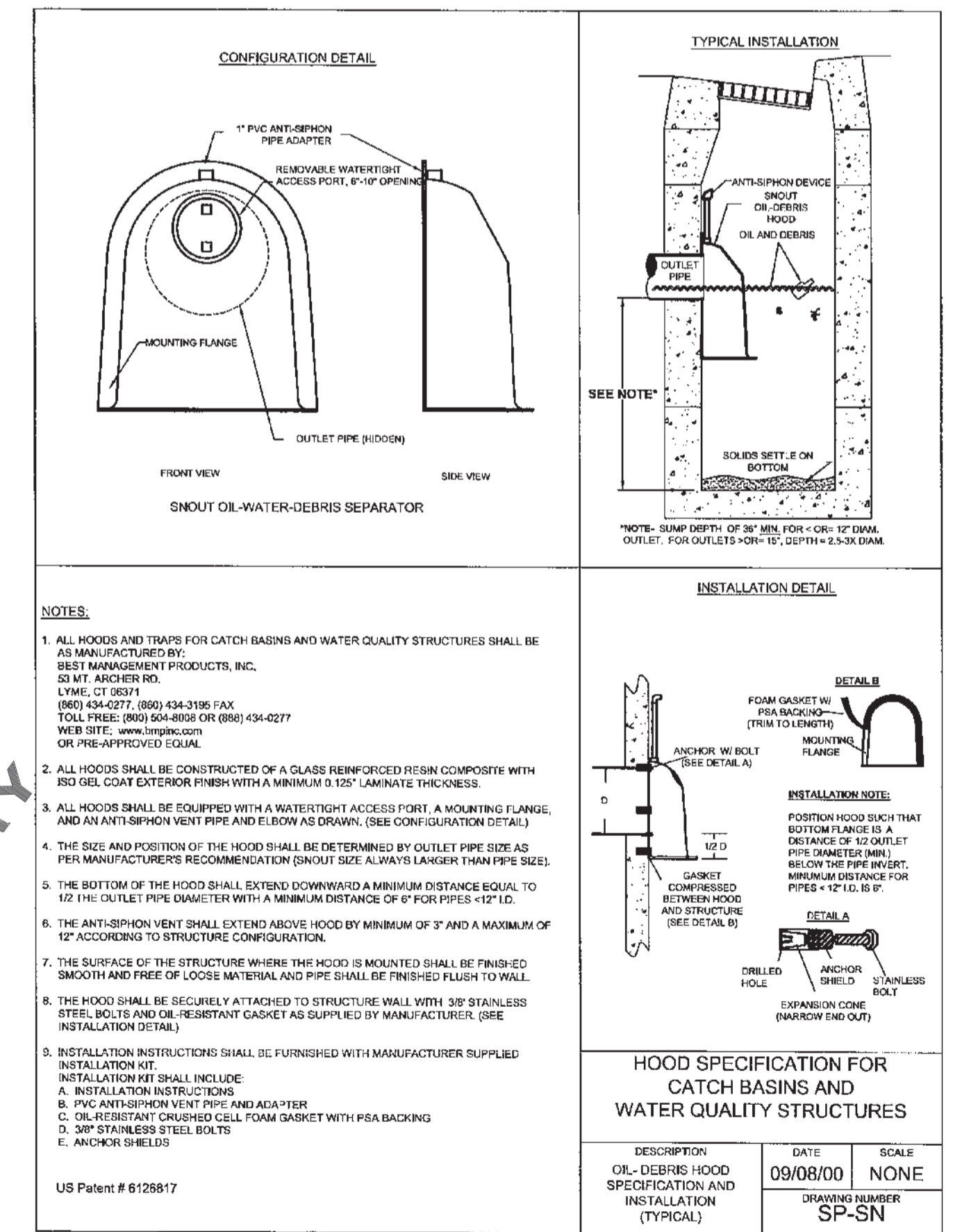
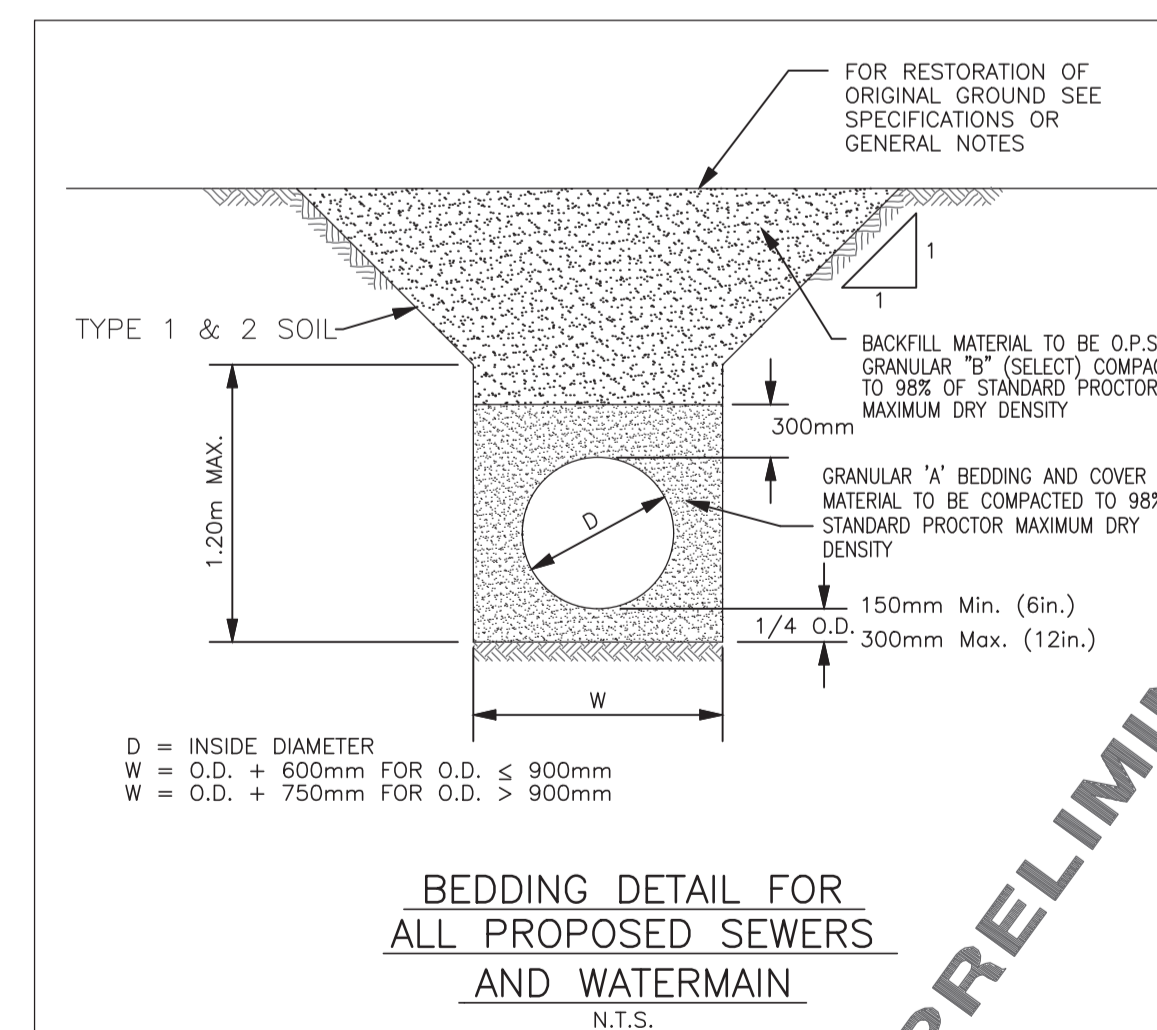
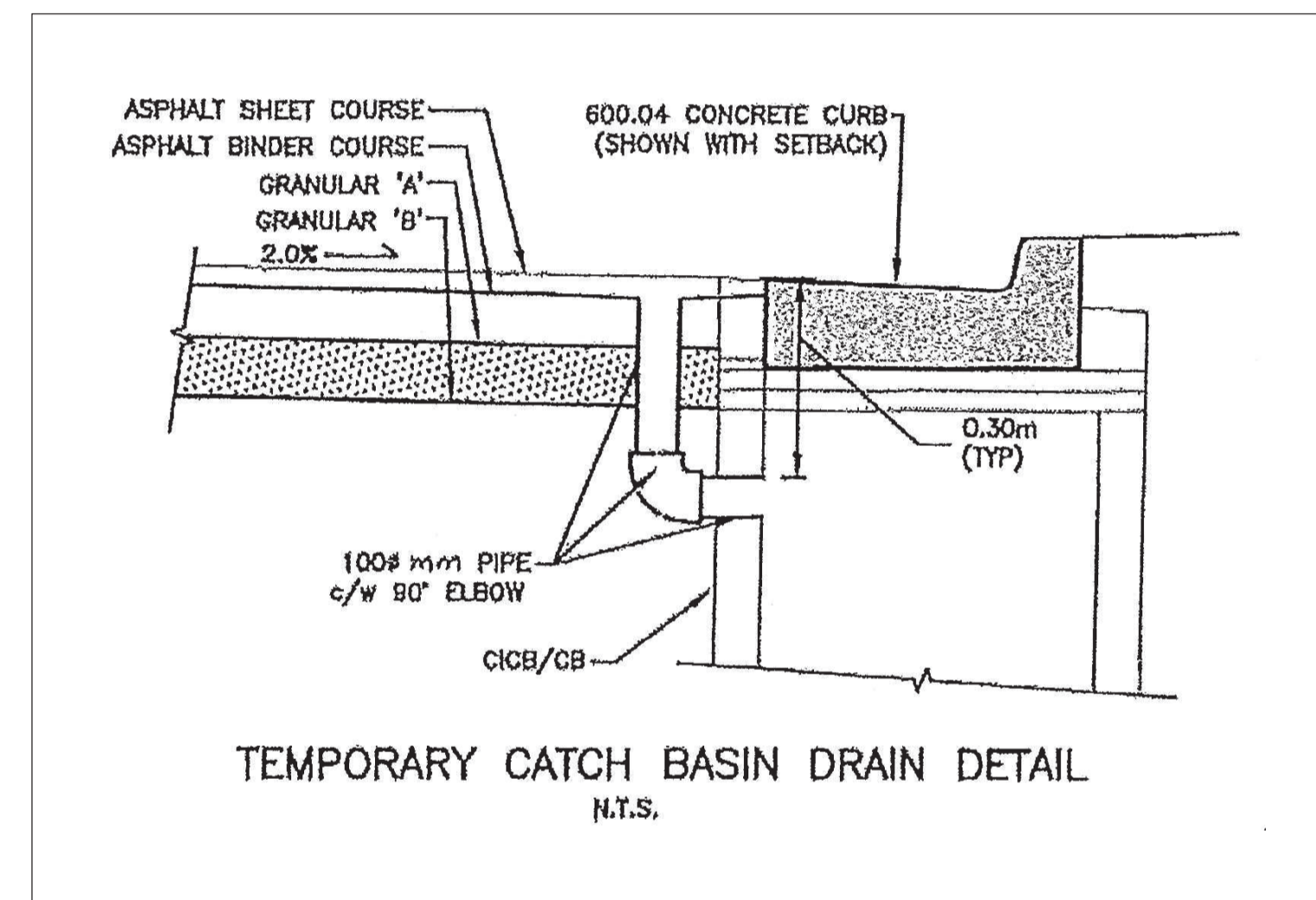
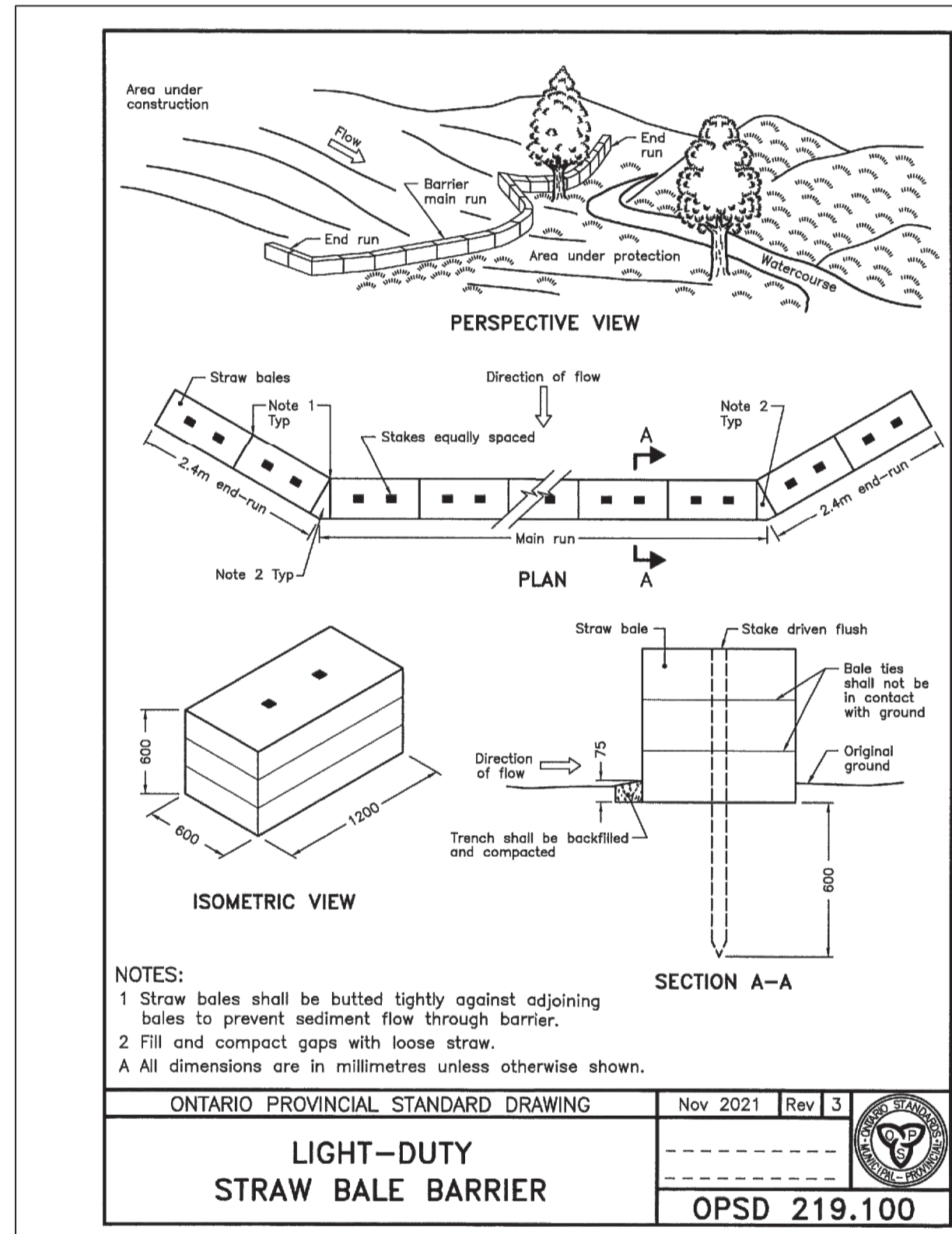
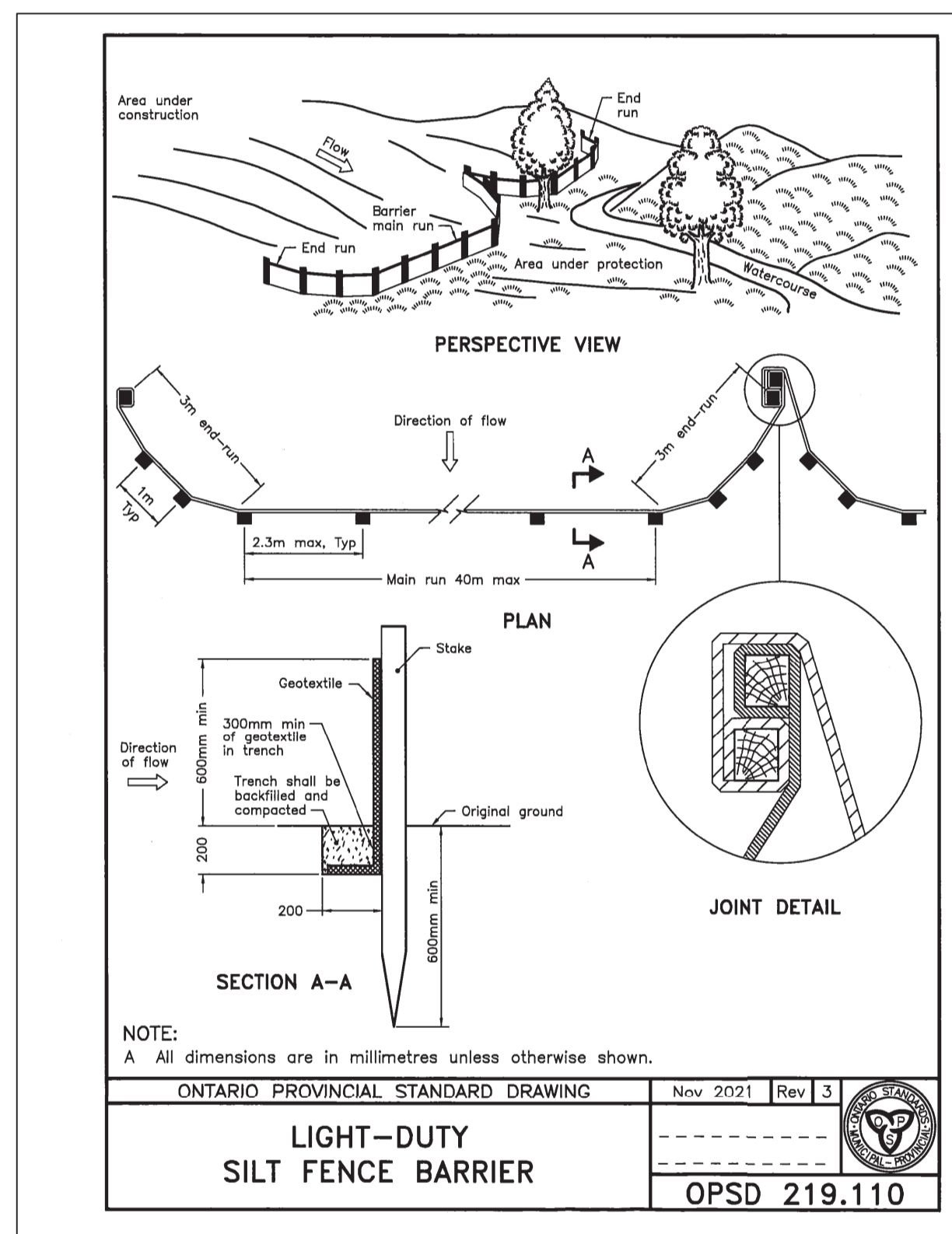
- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| OPSD-216.021<br>OPSD-219.110<br>OPSD-219.180<br>OPSD-301.020<br>OPSD-310.010<br>OPSD-310.020<br>OPSD-310.030<br>OPSD-310.050<br>OPSD-351.010<br>OPSD-400.020<br>OPSD-400.080<br>OPSD-400.090<br>OPSD-401.010<br>OPSD-405.010<br>OPSD-600.040<br>OPSD-600.060<br>OPSD-600.110<br>OPSD-605.010<br>OPSD-605.030<br>OPSD-608.010<br>OPSD-701.010<br>OPSD-701.011<br>OPSD-701.021<br>OPSD-701.030<br>OPSD-701.050<br>OPSD-704.010<br>OPSD-705.010<br>OPSD-705.020<br>OPSD-705.030<br>OPSD-802.010<br>OPSD-802.030<br>OPSD-1006.010<br>OPSD-1006.020<br>OPSD-1102.01<br>OPSD-1104.010<br>OPSD-1104.020<br>OPSD-1105.010 | SUBDRAIN PIPE AND OUTLET DETAILS<br>LIGHT DUTY SILT FENCE BARRIER<br>STRAW BALE FLOW CHECK<br>RURAL ENTRANCES TO ROADS IN EARTH CUT WITH CULVERT INSTALLATION<br>CONCRETE SIDEWALK<br>CONCRETE SIDEWALK ADJACENT TO CURB AND GUTTER<br>CONCRETE SIDEWALK RAMPS AT INTERSECTIONS<br>SIDEWALK DRIVEWAY ENTRANCE DETAILS<br>URBAN RESIDENTIAL ENTRANCE<br>CATCH BASIN, CAST IRON, FRAME AND FLAT SQUARE GRATE<br>CATCH BASIN, CAST IRON, SIDE INLET FRAME<br>CAST IRON, CURB INLET OVERFLOW FOR CATCH BASINS<br>MAINTENANCE HOLE, CAST IRON, COVER AND SQUARE FRAME<br>MAINTENANCE HOLE STEPS<br>CONCRETE BARRIER CURB WITH STANDARD GUTTER<br>CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER<br>CONCRETE BARRIER CURB<br>45° CONCRETE OUTLET FOR CONCRETE CURB AND GUTTER<br>45° CONCRETE OUTLET FOR CONCRETE CURB AND GUTTER AT END OF RUN<br>METHOD OF TERMINATION FOR CONCRETE CURB AND GUTTER<br>PRECAST MAINTENANCE HOLE-1200mm DIAMETER<br>PRECAST MAINTENANCE HOLE-1500mm DIAMETER<br>MAINTENANCE HOLE BENCHING AND PIPE OPENING DETAILS<br>PRECAST MAINTENANCE HOLE 1200mm DIAMETER TAPERED TOP AND FLAT CAP<br>PRECAST MAINTENANCE HOLE 1800mm DIAMETER TRANSITION SLABS<br>PRECAST CONCRETE ADJUSTMENTS UNITS FOR MAINTENANCE HOLES<br>PRECAST CONCRETE CATCH BASIN<br>PRECAST CONCRETE TWIN INLET CATCH BASIN<br>PRECAST CONCRETE DITCH INLET 600mm x 600mm<br>FLEXIBLE PIPE EMBEDEDMENT AND BACKFILL EARTH EXCAVATION<br>RIGID PIPE BEDDING, COVER AND BACKFILL TYPE 1 OR 2 SOIL-EARTH EXCAVATION<br>SEWER SERVICE CONNECTIONS<br>SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN PIPE SEWER<br>TRENCH BEDDING FOR PRESSURIZED CONDUITS UP TO 900mm DIAMETER<br>WATER SERVICE CONNECTION DETAIL-19 AND 25mm DIAMETER SIZES<br>WATER SERVICE CONNECTION DETAIL-32, 38 AND 50mm DIAMETER SIZES<br>HYDRANT INSTALLATION |
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**SEDIMENT AND EROSION CONTROL NOTES**

- Protect all exposed surfaces and control all runoff during construction.
- All erosion control measures to be in place before starting construction and remain in place until restoration complete.
- Maintain erosion control measures during construction.
- All collected sediment to be disposed of at an approved location.
- Minimize area disturbed during construction.
- All dewatering to be disposed of in an approved sedimentation basin.
- Protect all catch basins, maintenance holes and pipe ends from sediment intrusion with geotextile (Terrafix 270R).
- Keep all sumps clean during construction.
- Prevent wind-blown dust.
- Straw bales to be used in localized areas as shown and as directed by the engineer during construction for works which are in or adjacent to flood lines, fill lines and hazardous slopes.
- Straw bales to be terminated by rounding bales to contain and filter runoff.
- All silt fencing and details are at the minimum to be constructed and in accordance with the Ministry of Natural Resources guidelines on erosion and sediment control for urban construction sites.
- All of the above notes and any sediment and erosion control measures are at the minimum to be in accordance with the Ministry of Natural Resources guidelines on erosion and sediment control for urban construction sites.

**COLOUR CODING OF SERVICE CONNECTIONS**

A. STORM SEWER PIPES FOR SERVICE CONNECTIONS (SERVICE LATERALS) SHALL BE COLOUR CODED WHITE TO AVOID CROSS CONNECTIONS. COLOUR CODING METHOD INCLUDES PIPE COLOUR, WRAPPING, DEMARCATION TAPE, OR STENCILING.



**PRELIMINARY**

| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS  | No.       | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|----------|-----------|-----------|------|------------|
|                   |                   |      |                         |            | DESIGN   | CSL       |           |      |            |
|                   |                   |      |                         |            | DRAWN BY | PM        |           |      |            |
|                   |                   |      |                         |            | CHECKED  | CSL       |           |      |            |
|                   |                   |      |                         |            | APPROVED | CSL       |           |      |            |
|                   |                   |      |                         |            | DATE     | MAR. 2024 |           |      |            |

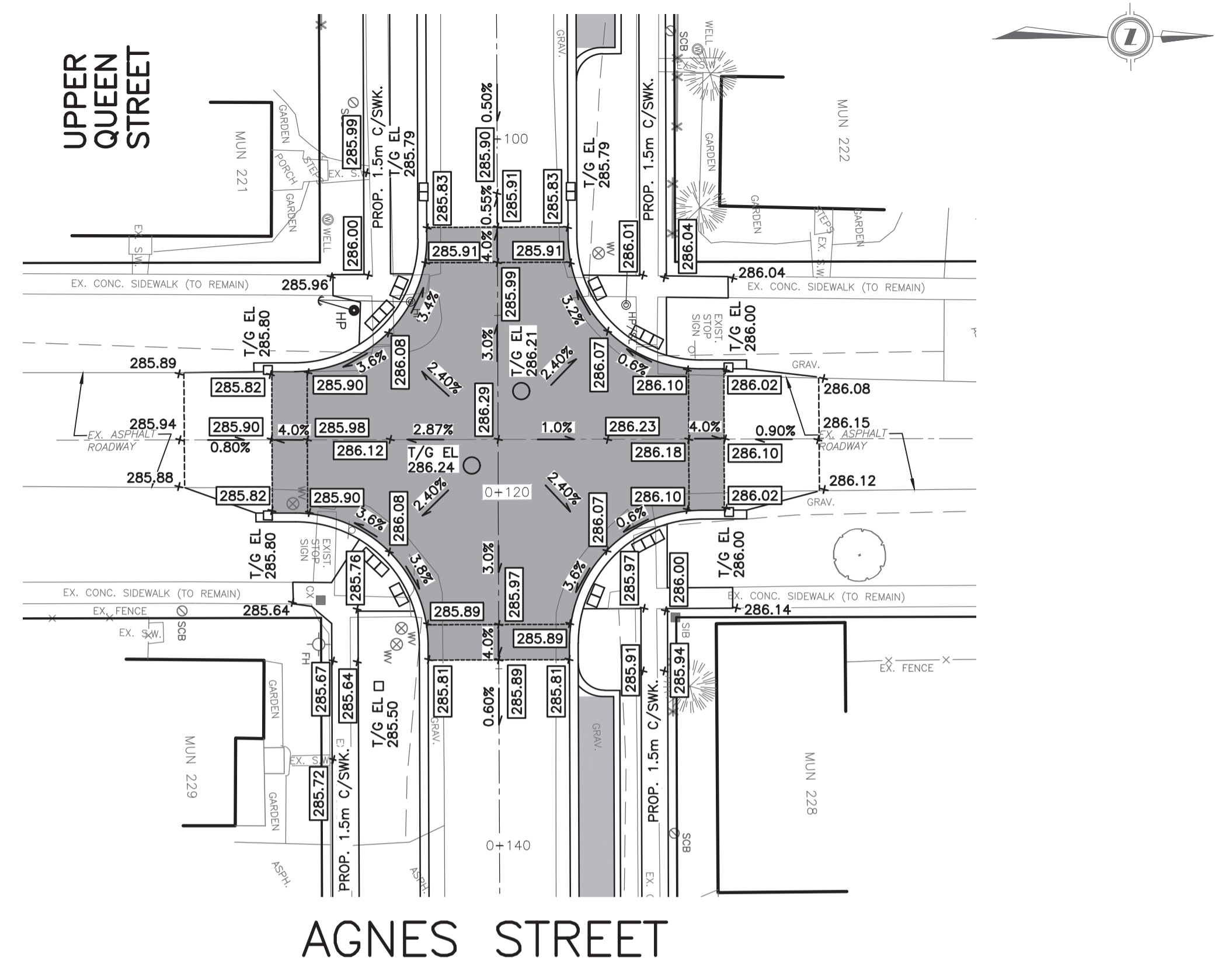
CONSULTANT OR DIVISION

**SPRIET ASSOCIATES**  
LONDON CONSULTING ENGINEERS  
155 YORK STREET - LONDON (519) 672-4100 --- N6A 1A8

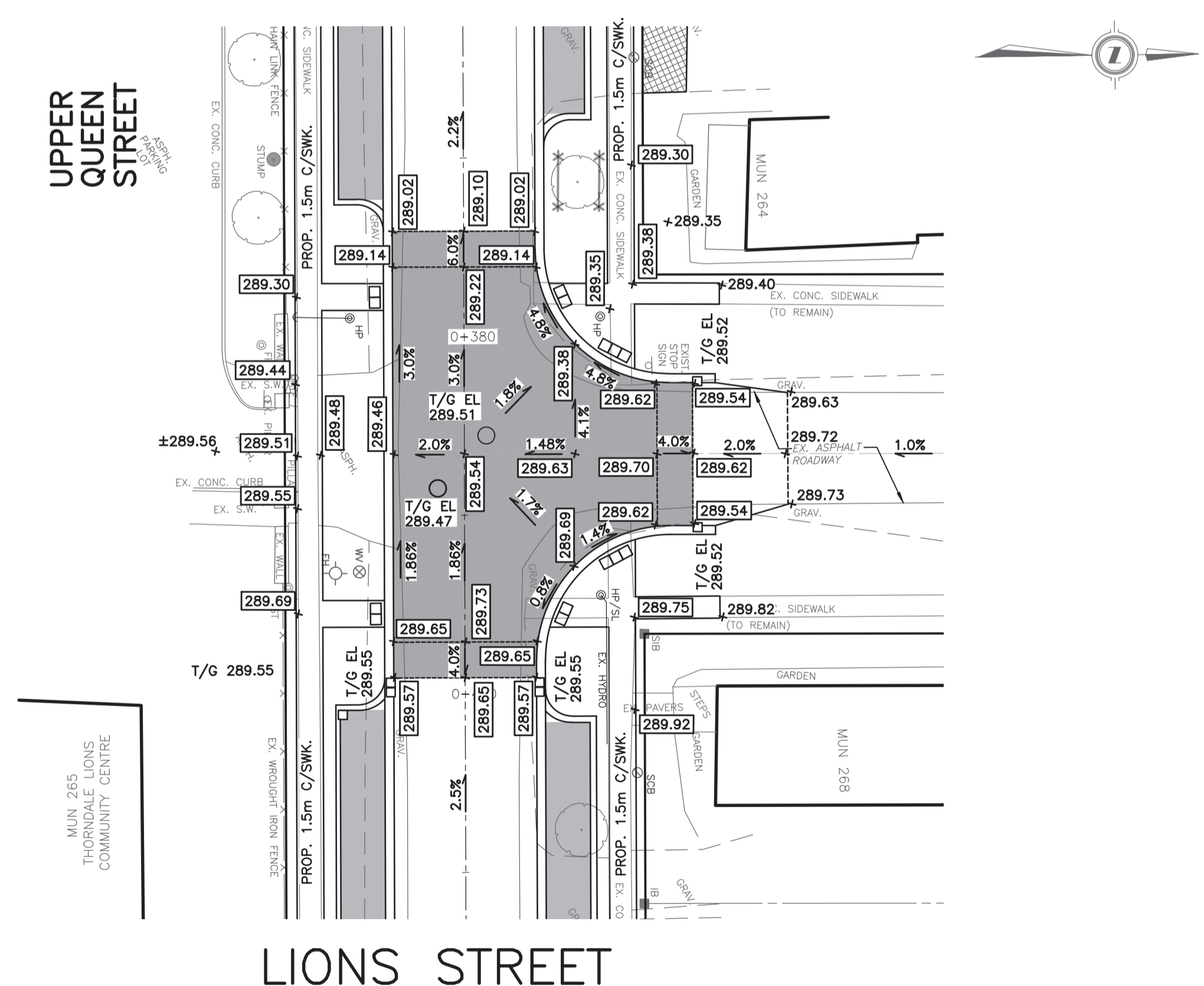
ENGINEER'S STAMP

**MUNICIPALITY OF Thames Centre**

|       |                                   |               |
|-------|-----------------------------------|---------------|
| SCALE | TITLE                             | PROJECT No.   |
|       | UPPER QUEEN STREET RECONSTRUCTION | 224054        |
|       | MISCELLANEOUS DETAILS AND NOTES   | 5             |
|       |                                   | PLAN FILE No. |



**AGNES STREET**



**LIONS STREET**

| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS       | No.       | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|---------------|-----------|-----------|------|------------|
|                   |                   |      |                         |            | DESIGN JA     |           |           |      |            |
|                   |                   |      |                         |            | DRAWN BY JA   |           |           |      |            |
|                   |                   |      |                         |            | CHECKED CSL   |           |           |      |            |
|                   |                   |      |                         |            | APPROVED CSL  |           |           |      |            |
|                   |                   |      |                         |            | DATE MAY 2024 |           |           |      |            |
|                   |                   |      |                         |            |               | 224054-00 |           |      |            |

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ENGINEER'S STAMP

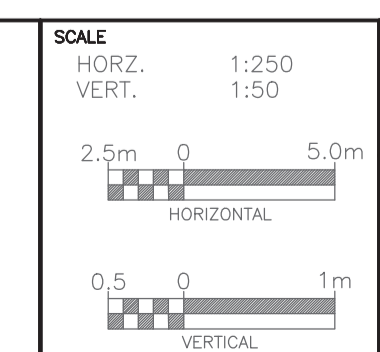
PROJECT No. **224054**

TITLE **UPPER QUEEN STREET RECONSTRUCTION**

**RAISED ASPHALT INTERSECTION GRADING**

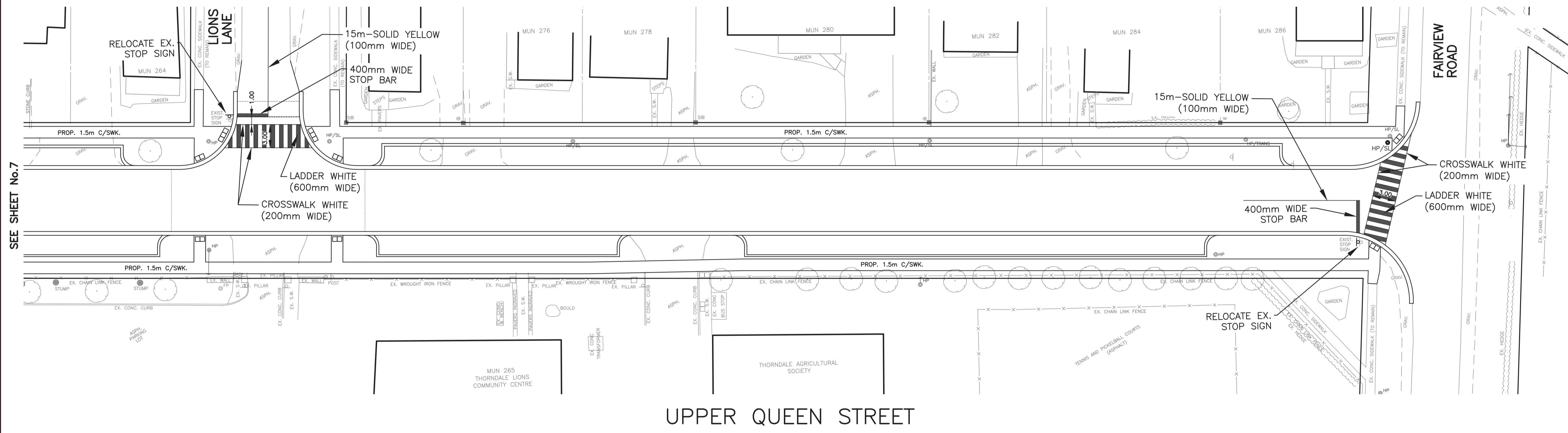
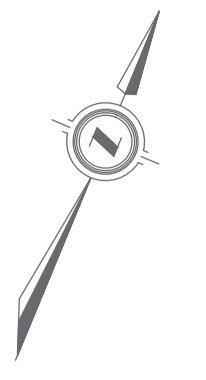
SHEET No. **6**

PLAN FILE No.









SEE SHEET No.7

**PRELIMINARY**

| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS | No. | REVISIONS | DATE | CONSULTANT |
|-------------------|-------------------|------|-------------------------|------------|---------|-----|-----------|------|------------|
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |
|                   |                   |      |                         |            |         |     |           |      |            |

CONSULTANT OR DIVISION

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ENGINEER'S STAMP



SCALE  
 HORZ. 1:250  
 VERT. 1:50

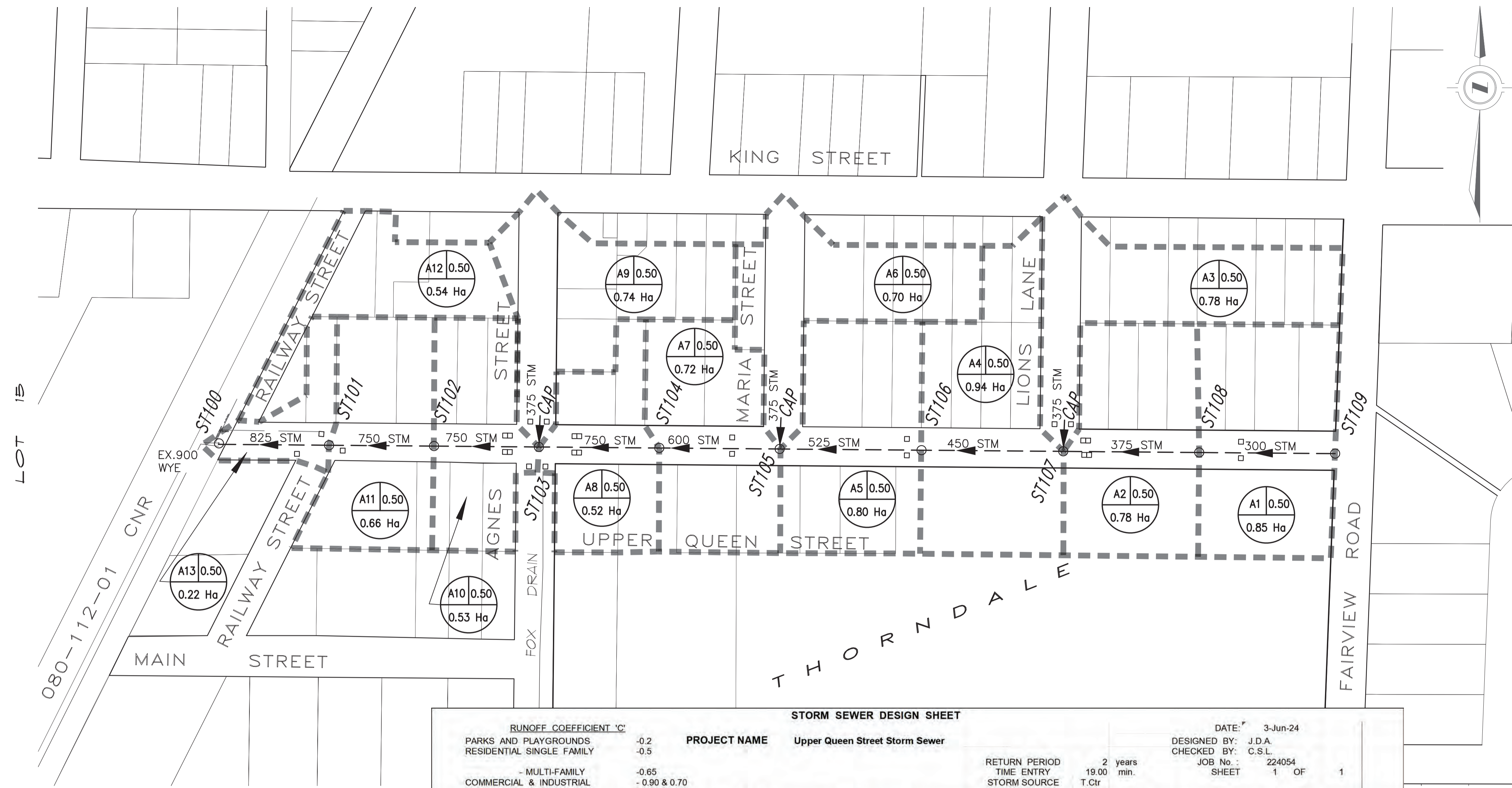
TITLE

**UPPER QUEEN STREET RECONSTRUCTION**

**UPPER QUEEN STREET PAVEMENT MARKINGS**

PROJECT No. **224054**  
 SHEET No. **8**  
 PLAN FILE No.

224054-00



**LEGEND**

ST101 TO ST109 THIS CONTRACT

STORM SEWERSHED LIMIT

STORM AREA DESIGNATION: A1 0.50 RUNOFF COEFFICIENT, 0.30 Ha AREA (ha.)

PLAN SCALE 1 : 2,500

**STORM SEWER DESIGN SHEET**

|                                                                                                                                                               |  |                                                                                           |                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <b>RUNOFF COEFFICIENT 'C'</b><br>PARKS AND PLAYGROUNDS -0.2<br>RESIDENTIAL SINGLE FAMILY -0.5<br>- MULTI-FAMILY -0.65<br>COMMERCIAL & INDUSTRIAL -0.90 & 0.70 |  | <b>PROJECT NAME</b> Upper Queen Street Storm Sewer                                        | DATE: 3-Jun-24<br>DESIGNED BY: J.D.A.<br>CHECKED BY: C.S.L.<br>JOB No.: 224054<br>SHEET 1 OF 1 |
|                                                                                                                                                               |  | <b>RETURN PERIOD</b> 2 years<br><b>TIME ENTRY</b> 19.00 min.<br><b>STORM SOURCE</b> T.Ctr |                                                                                                |

| AREA No. | LOCATION STREET | FROM M.H. | TO M.H. | AREA (A) |                | TOTAL 2.78(AxC) |       | RAINFALL INTENSITY |             |              | SEWER DESIGN |       |         |         |            | PROFILE  |             |           |              |               |             |            |       |       |       |         |         |         |
|----------|-----------------|-----------|---------|----------|----------------|-----------------|-------|--------------------|-------------|--------------|--------------|-------|---------|---------|------------|----------|-------------|-----------|--------------|---------------|-------------|------------|-------|-------|-------|---------|---------|---------|
|          |                 |           |         | hectares | TOTAL hectares | 'C'             | SECT. | SECT. min.         | ACCUM. min. | INTEN. mm/hr | Q l/sec      | n     | SIZE mm | SLOPE % | CAP. l/sec | VEL. m/s | LEN. meters | TIME min. | DROP IN M.H. | FALL IN SEWER | INVERT U.S. | ELEV. D.S. |       |       |       |         |         |         |
| A1       | UPPER QUEEN     | ST109     | ST108   | 0.85     | 0.85           | 0.50            | 1.18  |                    |             |              |              | 1.18  |         | 19.000  | 74.60      | 88.1     | 0.013       | 300       | 3.10         | 170           | 2.41        | 70.0       | 0.484 |       | 2.170 | 291.360 | 289.190 | 234.926 |
| A2       | LIONS LANE      | ST108     | ST107   | 0.78     | 1.63           | 0.50            | 1.08  |                    |             |              |              | 2.27  | 0.484   | 19.484  | 73.49      | 166.5    | 0.013       | 375       | 2.50         | 277           | 2.51        | 70.0       | 0.465 | 0.080 | 1.750 | 289.110 | 287.360 | 310.485 |
| A3       | UPPER QUEEN     | CAP       | ST107   | 0.78     | 0.78           | 0.50            | 1.08  |                    |             |              |              | 1.08  |         | 19.000  | 74.60      | 80.9     | 0.013       | 375       | 0.50         | 124           | 1.12        | 16.0       | 0.238 |       | 0.080 |         | 287.000 | 320.264 |
| A4       | UPPER QUEEN     | ST107     | ST106   | 0.94     | 3.35           | 0.50            | 1.31  |                    |             |              |              | 4.66  | 0.465   | 19.949  | 72.46      | 337.4    | 0.013       | 450       | 1.80         | 383           | 2.41        | 73.0       | 0.506 | 0.430 | 1.314 | 286.930 | 285.616 | 430.334 |
| A5       | UPPER QUEEN     | ST106     | ST105   | 0.80     | 4.15           | 0.50            | 1.11  |                    |             |              |              | 5.77  | 0.506   | 20.455  | 71.37      | 411.7    | 0.013       | 525       | 1.60         | 544           | 2.51        | 73.0       | 0.484 | 0.080 | 1.168 | 285.536 | 284.368 | 474.029 |
| A6       | MARIA STREET    | CAP       | ST105   | 0.70     | 0.70           | 0.50            | 0.97  |                    |             |              |              | 0.97  |         | 19.000  | 74.60      | 72.6     | 0.013       | 375       | 0.50         | 124           | 1.12        | 16.0       | 0.238 |       | 0.080 |         | 284.520 | 307.528 |
| A7       | UPPER QUEEN     | ST105     | ST104   | 0.72     | 5.57           | 0.50            | 1.00  |                    |             |              |              | 7.74  | 0.484   | 20.939  | 70.36      | 544.7    | 0.013       | 600       | 0.80         | 549           | 1.94        | 62.0       | 0.532 | 0.080 | 0.496 | 284.288 | 283.792 | 599.588 |
| A8       | UPPER QUEEN     | ST104     | ST103   | 0.52     | 6.09           | 0.50            | 0.72  |                    |             |              |              | 8.47  | 0.532   | 21.471  | 69.28      | 586.5    | 0.013       | 750       | 0.45         | 747           | 1.69        | 62.0       | 0.611 | 0.150 | 0.279 | 283.642 | 283.363 | 686.645 |
| A9       | AGNES STREET    | CAP       | ST103   | 0.74     | 0.74           | 0.50            | 1.03  |                    |             |              |              | 1.03  |         | 19.000  | 74.60      | 76.7     | 0.013       | 375       | 0.50         | 124           | 1.12        | 16.0       | 0.238 |       | 0.080 |         | 283.710 | 314.004 |
| A10      | UPPER QUEEN     | ST103     | ST102   | 0.53     | 7.36           | 0.50            | 0.74  |                    |             |              |              | 10.23 | 0.611   | 22.082  | 68.09      | 696.6    | 0.013       | 750       | 0.45         | 747           | 1.69        | 54.0       | 0.532 | 0.030 | 0.243 | 283.333 | 283.090 | 732.406 |
| A11      | UPPER QUEEN     | ST102     | ST101   | 0.66     | 8.02           | 0.50            | 0.92  |                    |             |              |              | 11.15 | 0.532   | 22.615  | 67.09      | 747.9    | 0.013       | 750       | 0.46         | 755           | 1.71        | 54.0       | 0.527 | 0.030 | 0.248 | 283.060 | 282.812 | 749.085 |
| A12-A13  | UPPER QUEEN     | ST101     | WYE     | 0.76     | 8.78           | 0.50            | 1.06  |                    |             |              |              | 12.20 | 0.527   | 23.141  | 66.13      | 807.0    | 0.013       | 825       | 0.45         | 963           | 1.80        | 57.0       | 0.527 | 0.080 | 0.257 | 282.732 | 282.475 | 773.955 |

**PRELIMINARY**

|                   |                   |      |                         |            |               |     |           |      |            |
|-------------------|-------------------|------|-------------------------|------------|---------------|-----|-----------|------|------------|
| EXISTING SERVICES | DRAWING #, SOURCE | DATE | AS CONSTRUCTED SERVICES | COMPLETION | DETAILS       | No. | REVISIONS | DATE | CONSULTANT |
|                   |                   |      |                         |            | DESIGN JA     |     |           |      |            |
|                   |                   |      |                         |            | DRAWN BY JA   |     |           |      |            |
|                   |                   |      |                         |            | CHECKED CSL   |     |           |      |            |
|                   |                   |      |                         |            | APPROVED CSL  |     |           |      |            |
|                   |                   |      |                         |            | DATE APR.2024 |     |           |      |            |

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LONDON CONSULTING ENGINEERS LIMITED  
155 YORK STREET --- LONDON (519) 672-4100 --- N6A 1A8

SCALE  
HORZ. 1:2500  
VERT. N.T.S.

**UPPER QUEEN STREET**  
**STORM SEWER DRAINAGE AREA PLAN & DESIGN SHEET**

PROJECT No. **224054**  
SHEET No. **A1**  
PLAN FILE No.