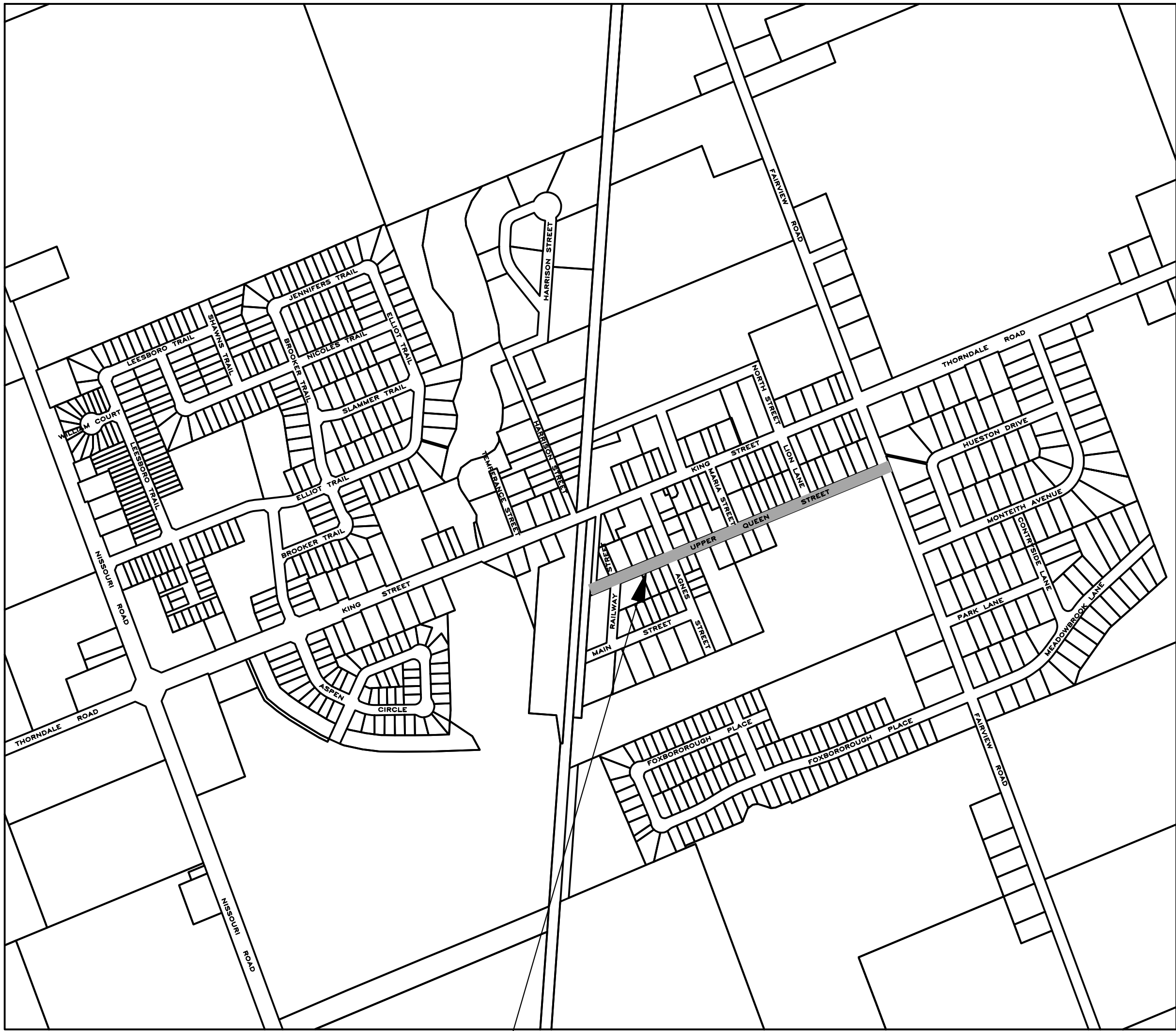


MUNICIPALITY OF THAMES CENTRE

UPPER QUEEN STREET STORM SEWER UPGRADE AND ROAD URBANIZATION

INDEX OF DRAWINGS	
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

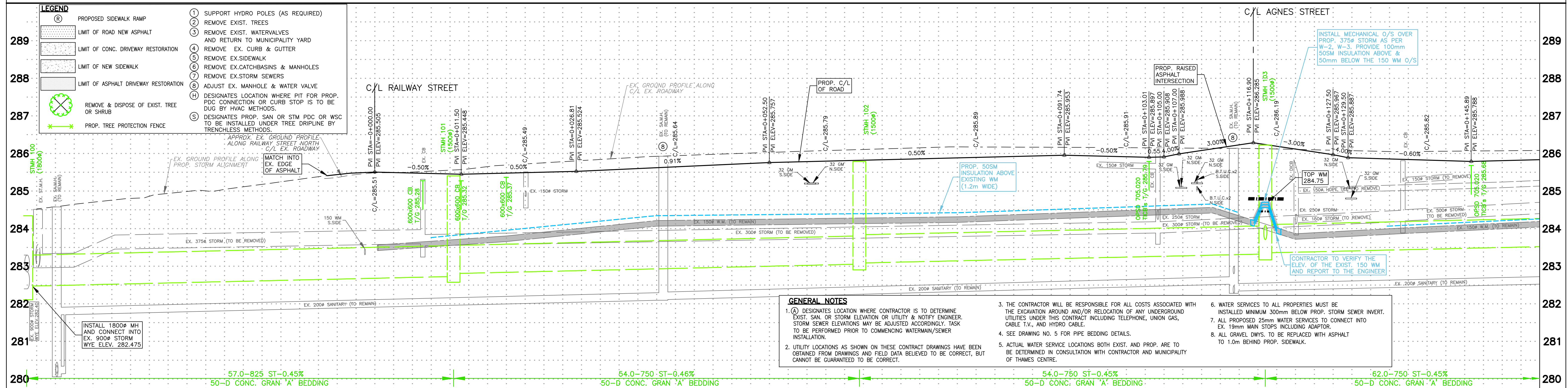
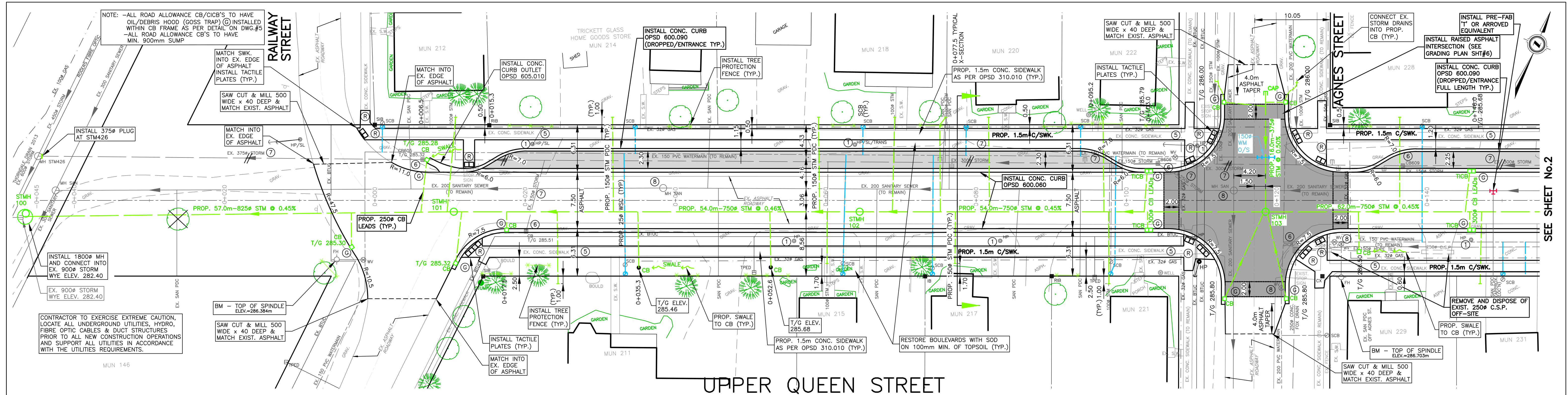
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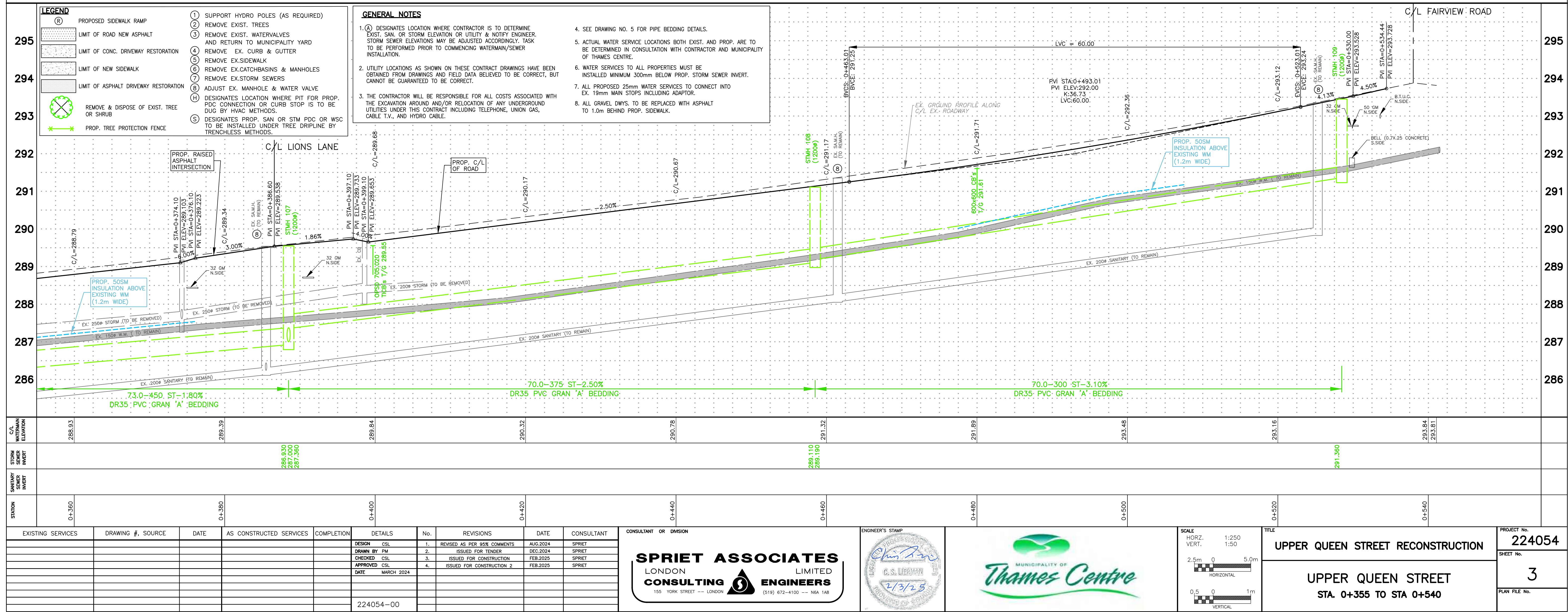


JOB NO – 224054

CONSULTANT



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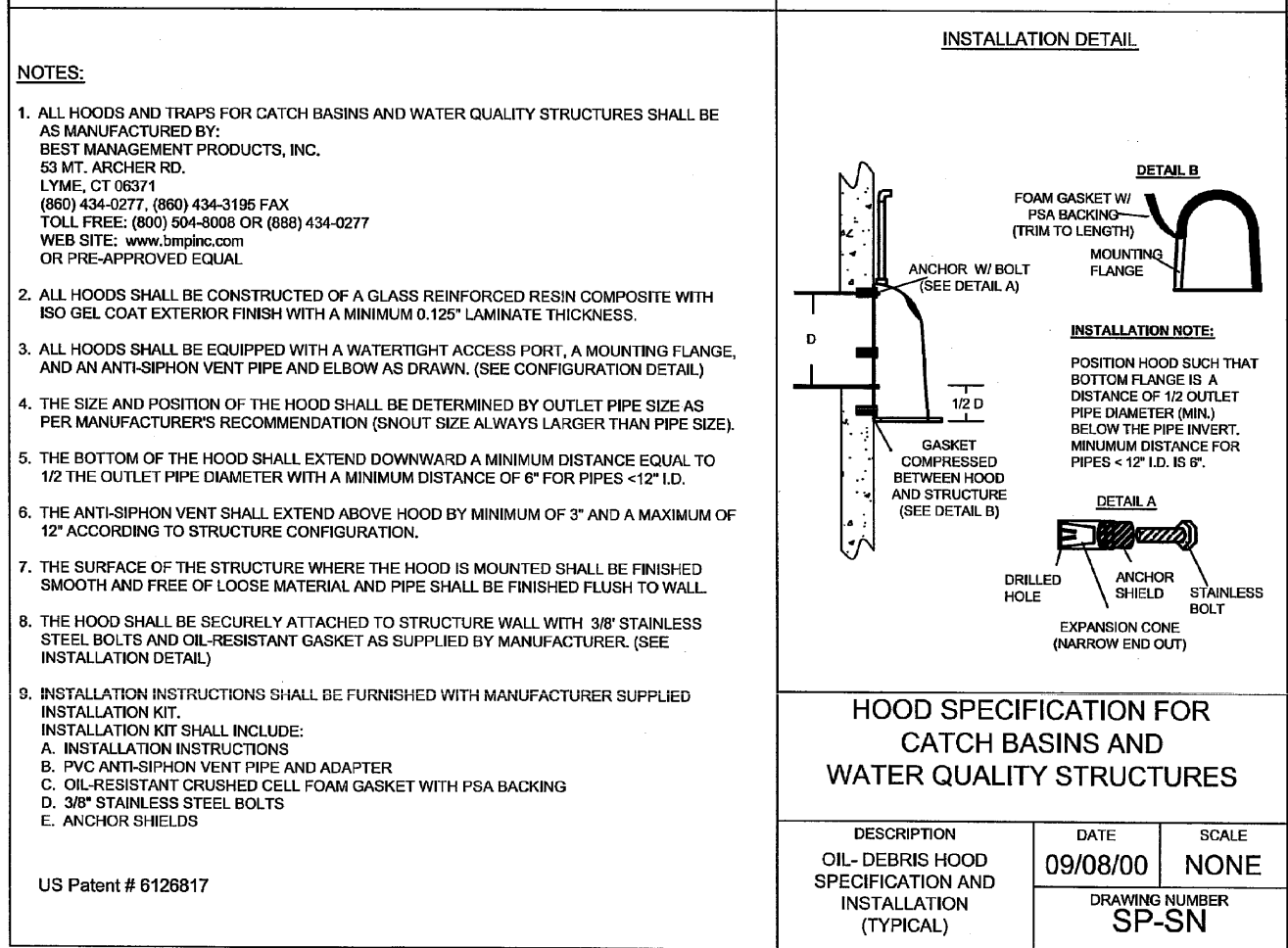
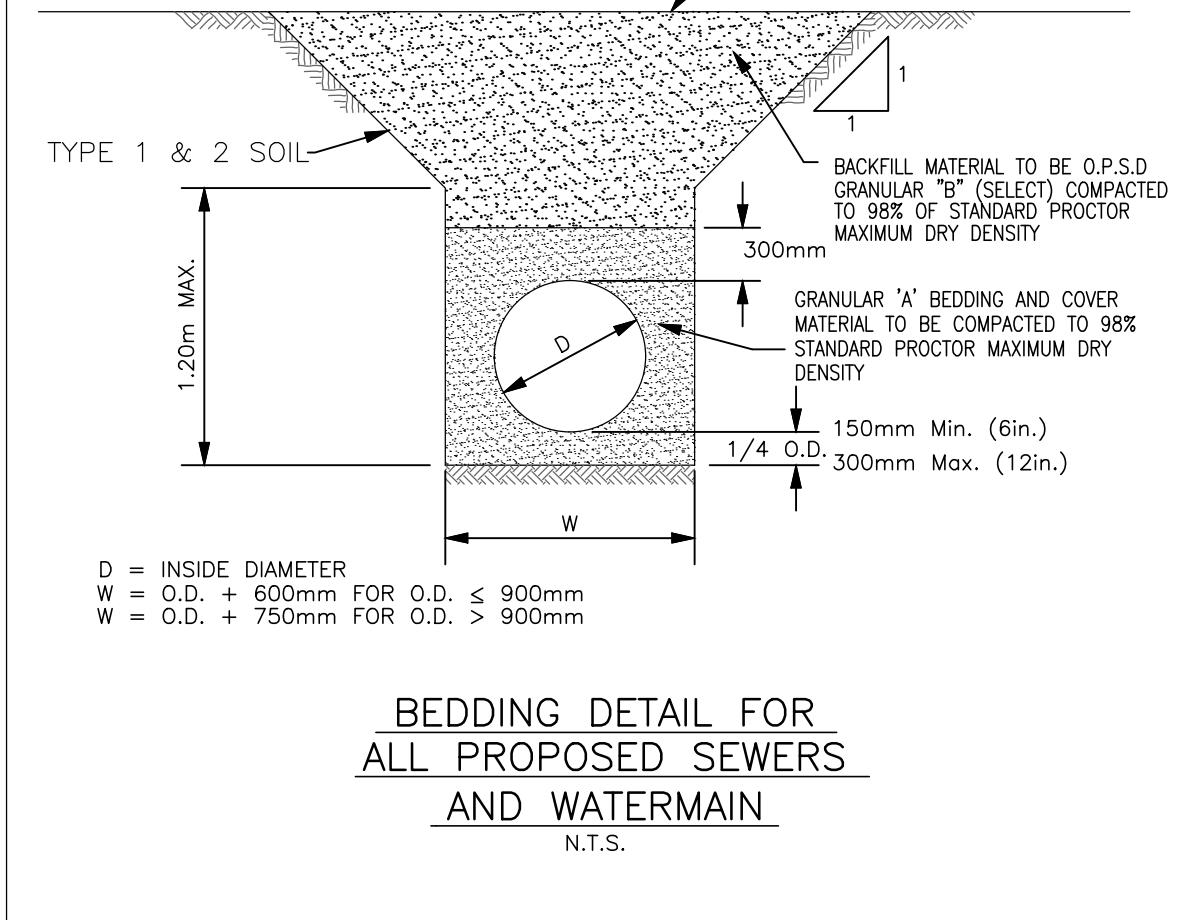
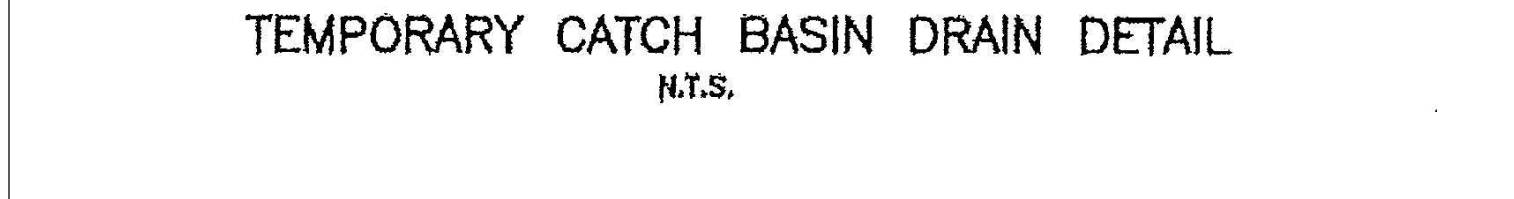
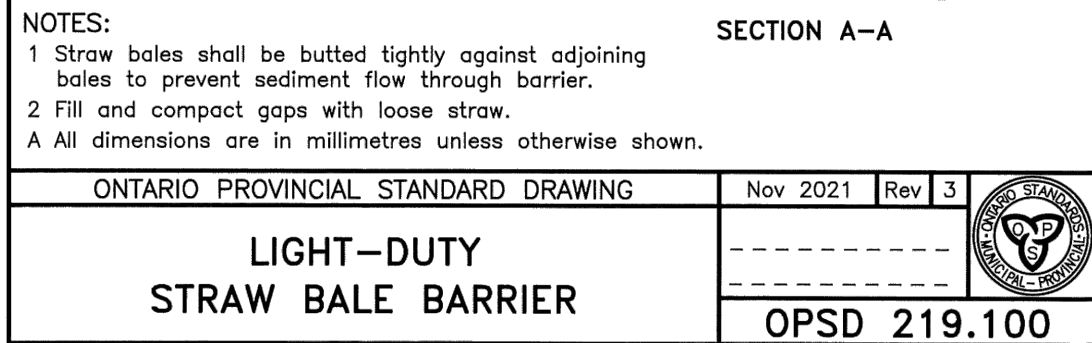
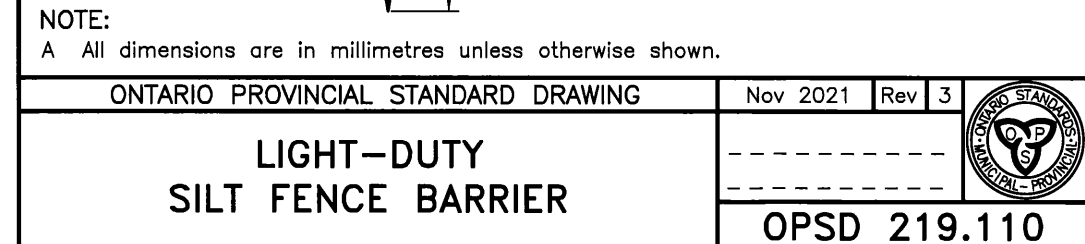
EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT	CONSULTANT OR DIVISION	ENGINEER'S STAMP	TITLE		PROJECT No.
					DESIGN CSL	1.	REVISED AS PER 95% COMMENTS	AUG-2024	SPRIET	SPRIET ASSOCIATES LIMITED CONSULTING ENGINEERS 155 YORK STREET -- LONDON (519) 872-4100 -- N6A 1A8		MUNICIPALITY OF Thames Centre	UPPER QUEEN STREET RECONSTRUCTION	224054
				DRAWN BY PM	2.	ISSUED FOR TENDER	DEC-2024	SPRIET						
				CHECKED CSL	3.	ISSUED FOR CONSTRUCTION	FEB-2025	SPRIET						
				APPROVED CSL										
				DATE MAY 2024										
					X-SECTIONS								TYPICAL CROSS SECTIONS UPPER QUEEN STREET	4 PLAN FILE No.

1. 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.
2. See this drawing for backfill and restoration details.
3. 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.
4. 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.
5. MAINTENANCE OF FLOW
All existing surface and underground drainage systems are to be maintained and restored during construction to the satisfaction of the Engineer.
6. 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.
7. WORK WITHIN PRIVATE PROPERTY
No work shall be carried out on private property without written permission from the owner.
8. 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.
9. WATER SERVICES
The location and alignment shown (and not shown) of existing water services, including curb stops, is not guaranteed.
10. CURB RADIUS
The internal radius at all intersections proposed for construction under this project shall be 7.5m unless other wise noted.
11. All storm sewer private drain connections (p.d.c.) are to be a minimum of 1.2 meters below original ground at property line.
12. 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.

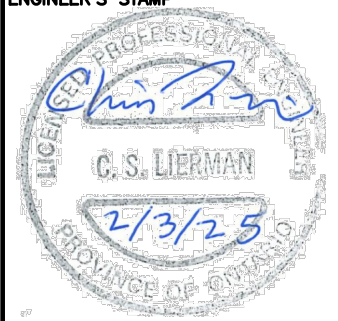
OPS-216.021	SUBURBAN PIPE AND OUTLET DETAILS
OPS-219.110	LIGHT DUTY SILT FENCE BARRIER
OPS-219.180	STRAW BALE FLOW CHECK
OPS-301.020	RURAL ENTRANCES TO ROADS IN EARTH CUT WITH CULVERT INSTALLATION
OPS-310.010	CONCRETE SIDEWALK
OPS-310.020	CONCRETE SIDEWALK ADJACENT TO CURB AND GUTTER
OPS-310.030	CONCRETE SIDEWALK RAMPS AT INTERSECTIONS
OPS-310.050	SIDEWALK DRIVEWAY ENTRANCE DETAILS
OPS-351.010	URBAN RESTORATION ENTRANCE
OPS-400.020	CATCH BASIN, CAST IRON, FRAME AND FLAT SQUARE GRATE
OPS-400.080	CATCH BASIN, CAST IRON, SIDE INLET FRAME
OPS-400.090	CAST IRON CURB INLET OVER CATCH BASIN
OPS-401.010	MAINTENANCE HOLE, CAST IRON, COVER AND SQUARE FRAME
OPS-405.010	MAINTENANCE HOLE STEPS
OPS-600.040	CONCRETE BARRIER CURB WITH STANDARD GUTTER
OPS-600.080	CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER
OPS-600.110	CONCRETE BARRIER CURB
OPS-605.010	45° CONCRETE OUTLET FOR CONCRETE CURB AND GUTTER
OPS-605.030	45° CONCRETE OUTLET FOR CONCRETE CURB AND GUTTER AT END OF RUN
OPS-605.040	METHOD OF TERMINATION OF CONCRETE CURB AND GUTTER
OPS-701.030	PRECAST MAINTENANCE HOLE-1200mm DIAMETER
OPS-701.011	PRECAST MAINTENANCE HOLE-1500mm DIAMETER
OPS-701.021	MAINTENANCE HOLE BENCHING AND PIPE OPENING DETAILS
OPS-701.022	PRECAST MAINTENANCE HOLE-1200mm DIAMETER AFFERED TOP AND FLAT CAP
OPS-701.050	PRECAST MAINTENANCE HOLE 1800mm DIAMETER TRANSITION SLABS
OPS-704.010	PRECAST CONCRETE ADJUSTMENTS UNITS FOR MAINTENANCE HOLES
OPS-705.010	PRECAST CONCRETE CATCH BASIN
OPS-705.020	PRECAST CONCRETE TWIN INLET CATCH BASIN
OPS-705.030	PRECAST CONCRETE DITCH INLET 600mm x 600mm
OPS-802.010	FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION
OPS-802.020	RIDGE PIPE BEDDING, COVER AND BACKFILL TYPE 1 OR 2 SOIL-EARTH EXCAVATION
OPS-1006.010	CONCRETE CONVEYER SEWER CONNECTION
OPS-1006.020	SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN PIPE SEWER
OPS-1102.01	TRENCH BEDDING FOR PRESSURIZED CONDUITS UP TO 900mm DIAMETER
OPS-1104.010	WATER SERVICE CONNECTION DETAIL-19 and 25mm DIAMETER SIZES
OPS-1104.020	WATER SERVICE CONNECTION DETAIL-32, 38 and 50mm DIAMETER SIZES
OPS-1105.010	HYDRANT INSTALLATION

1. Protect all exposed surfaces and control all runoff during construction.
2. All erosion control measures to be in place before starting construction and remain in place until restoration complete.
3. Maintain erosion control measures during construction.
4. All collected sediment to be disposed of at an approved location.
5. Minimize area disturbed during construction.
6. All dewatering to be disposed of in an approved sedimentation basin.
7. Protect all catch basins, maintenance holes and pipe ends from sediment intrusion with geotextile (Terrafix 270R).
8. Keep all sumps clean during construction.
9. Prevent wind-blown dust.
10. 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.
11. Straw bales to be terminated by rounding bales to contain and filter runoff.
12. 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.
13. 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.

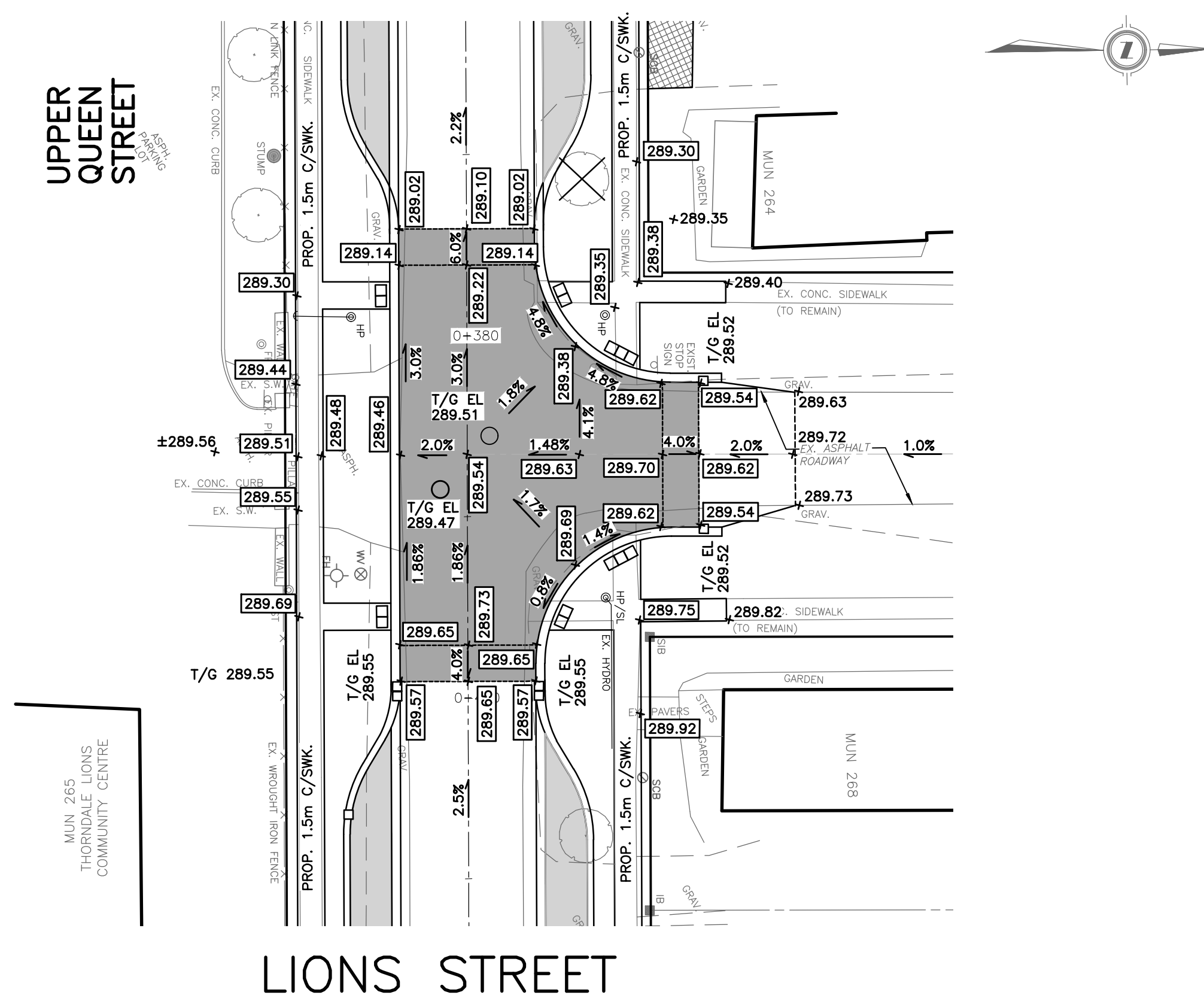
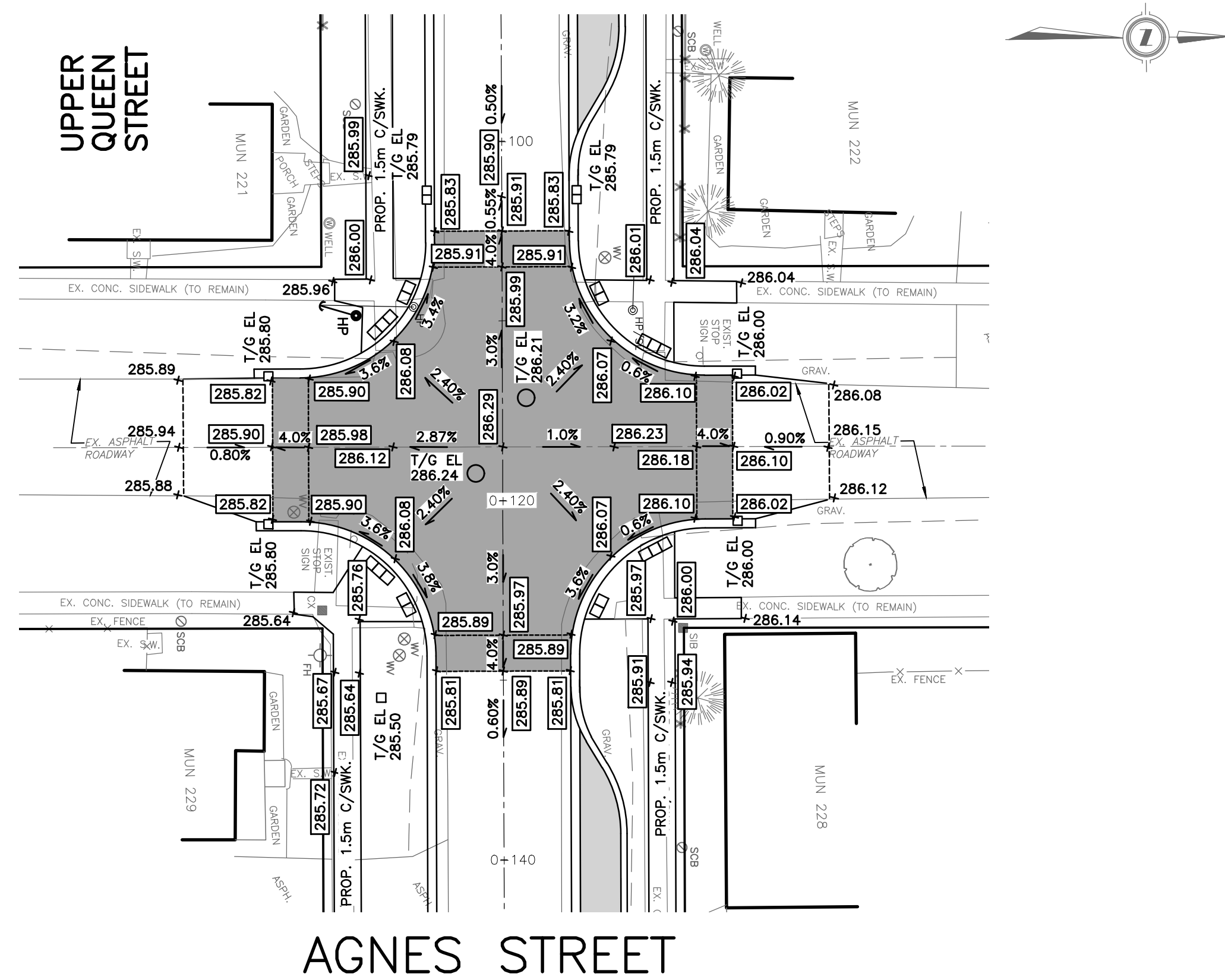
A. STORM SEWER PIPES FOR SERVICE CONNECTIONS (SERVICE LATERALS) SHALL BE COLOUR CODED WHITE TO AVOID CROSS CONNECTIONS. COLOUR CODING METHOD INCLUDES PIPE COLOUR, WRAPPING, DEMARCATION TAPE, OR STENCILING.

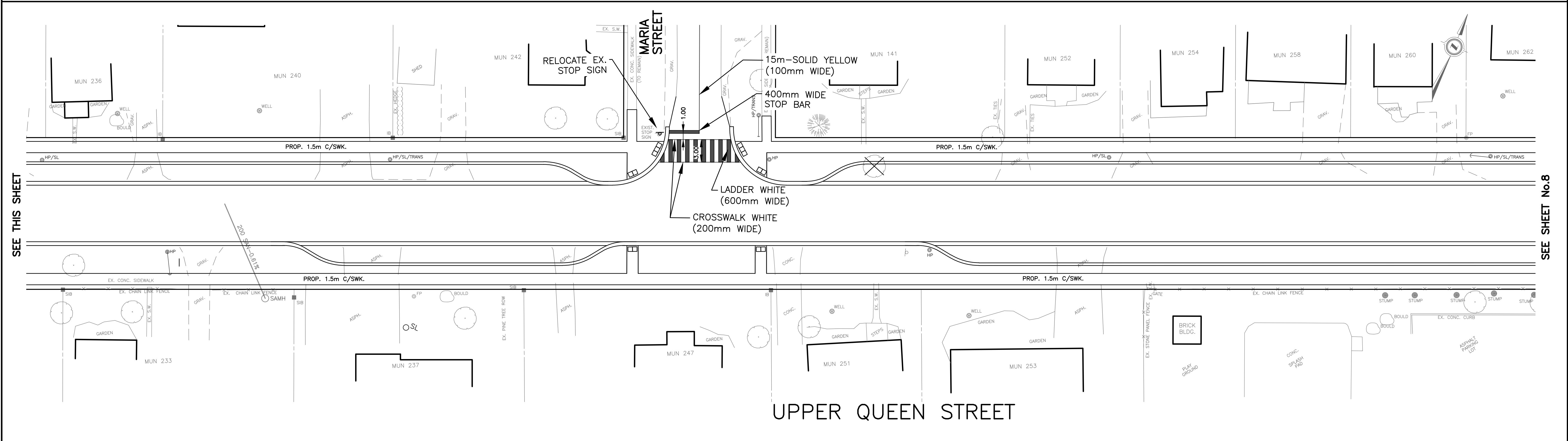
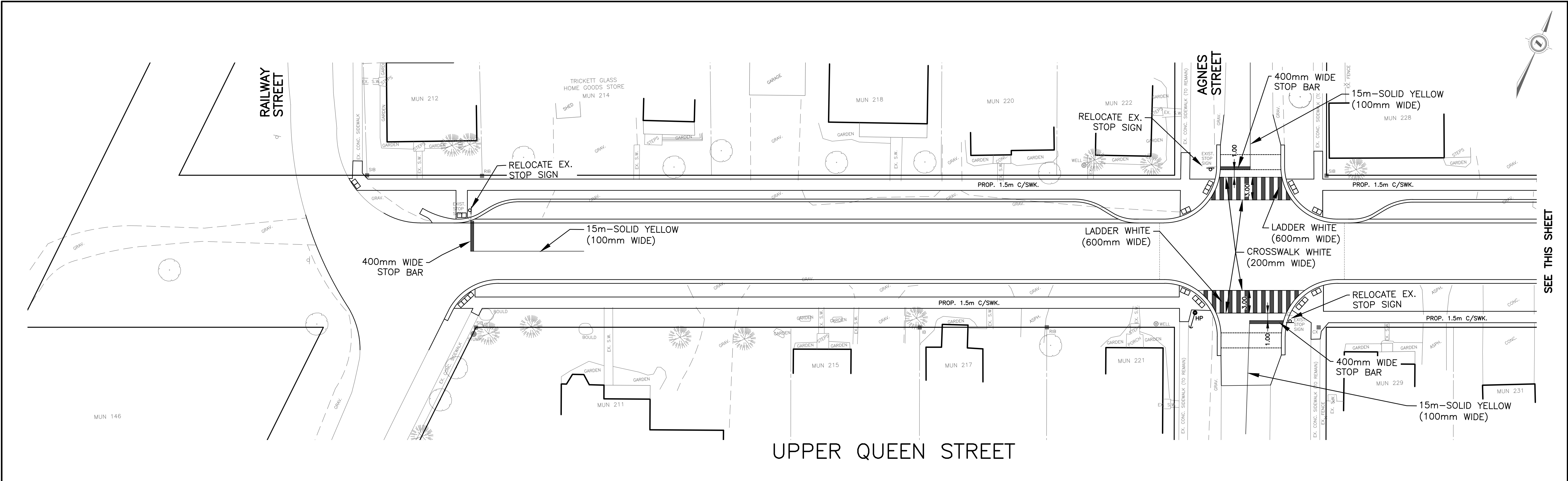
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SPRIET ASSOCIATES
LONDON CONSULTING  LIMITED
155 YORK STREET -- LONDON (519) 672-4100 -- N6A 1A8

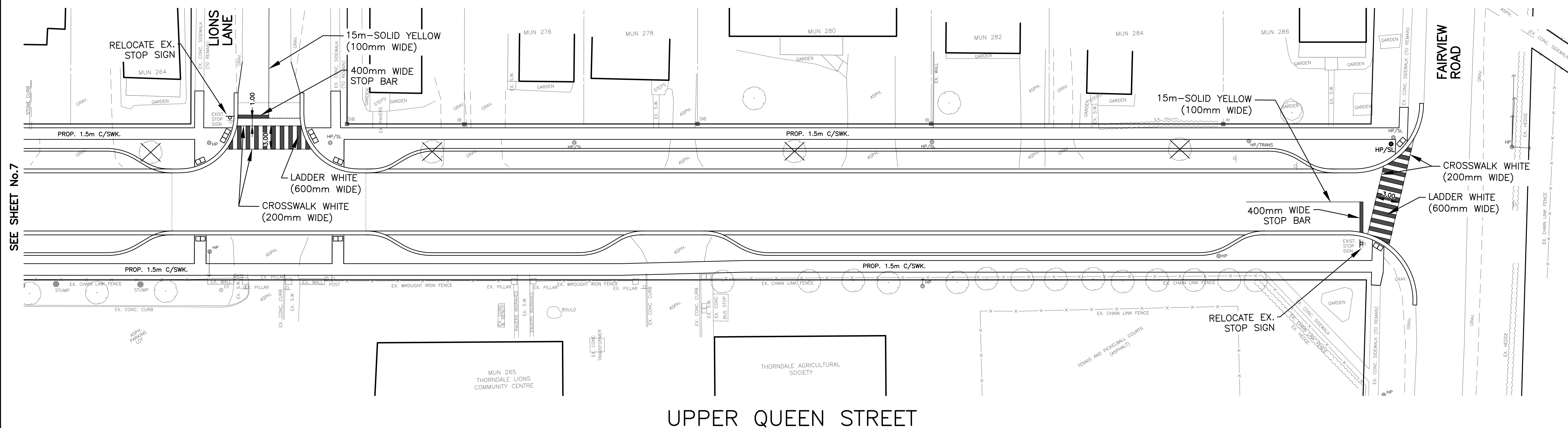


SCALE	TITLE	PROJECT No. 224054
	UPPER QUEEN STREET RECONSTRUCTION	SHEET No.
	MISCELLANEOUS DETAILS AND NOTES	5 PLAN FILE No.

[illegible]

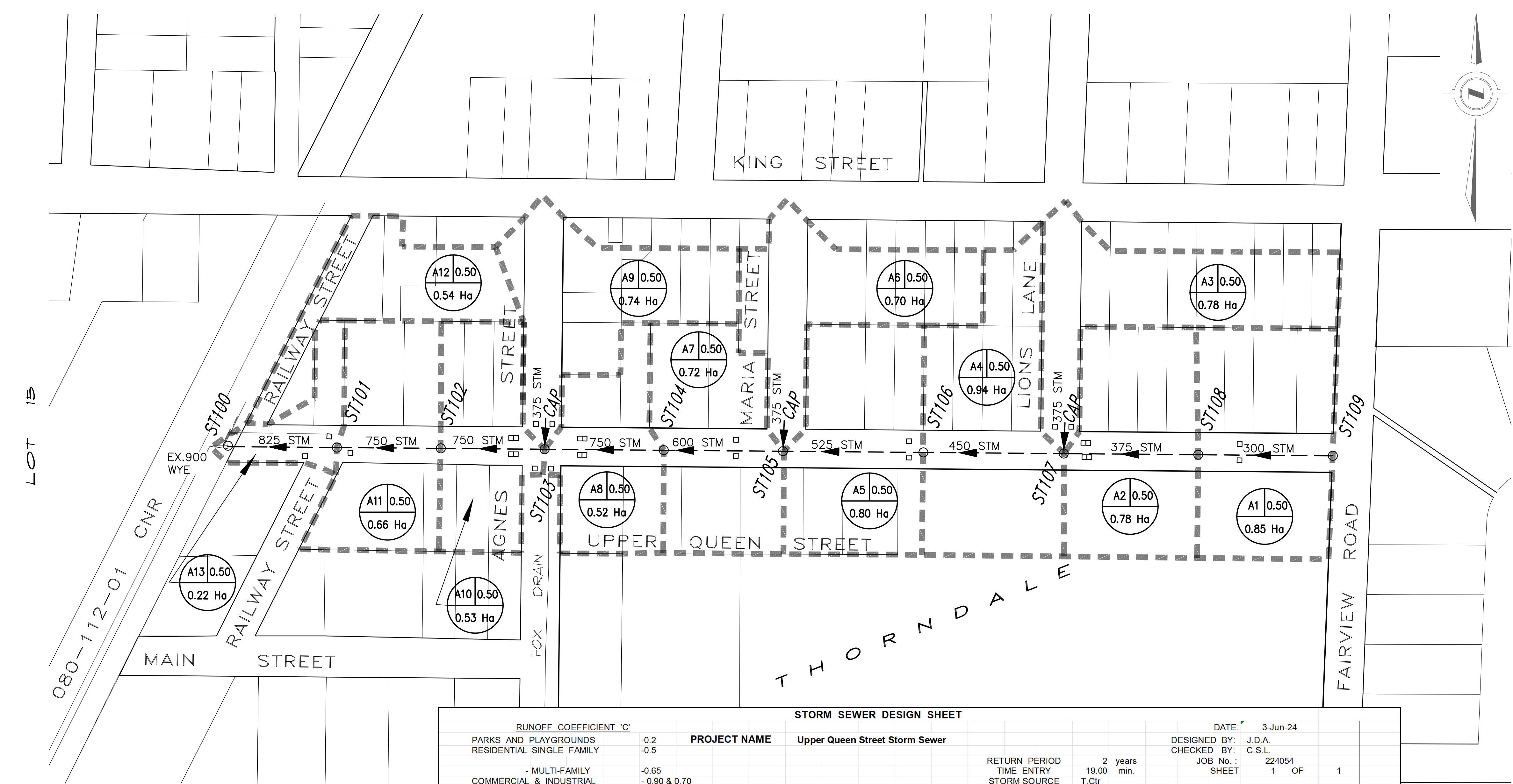


EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT	CONSULTANT OR DIVISION	ENGINEER'S STAMP	SCALE	TITLE	PROJECT No.
					DESIGN	CSL	1.	REVISED AS PER 95% COMMENTS	AUG.2024	SPRIET			UPPER QUEEN STREET RECONSTRUCTION	224054
					DRAWN BY	PM	2.	ISSUED FOR TENDER	DEC.2024	SPRIET				
					CHECKED	CSL	3.	ISSUED FOR CONSTRUCTION	FEB.2025	SPRIET				
					APPROVED	CSL								
					DATE	MARCH 2024							UPPER QUEEN STREET PAVEMENT MARKINGS	7
						224054-00								PLAN FILE No.



UPPER QUEEN STREET

[illegible]



PLAN SCALE 1 : 1,250

LEGEND

ST101 TO ST109 THIS CONTRACT

STORM SEWERSHED LIMIT

STORM AREA DESIGNATION

A1 0.50
0.30 Ha

RUNOFF COEFFICIENT

AREA (ha.)

STORM SEWER DESIGN SHEET																				DATE: 3-Jun-24					
RUNOFF COEFFICIENT 'C'				PROJECT NAME				Upper Queen Street Storm Sewer				RETURN PERIOD TIME ENTRY STORM SOURCE				2 years min.		DESIGNED BY: J.D.A. CHECKED BY: C.S.L.		JOB No.: 224054 SHEET 1 OF 1					
PARKS AND PLAYGROUNDS		-0.2																							
RESIDENTIAL SINGLE FAMILY		-0.5																							
MULTI-FAMILY		-0.65																							
COMMERCIAL & INDUSTRIAL		- 0.90 & 0.70																							
LOCATION			AREA (A)		TOTAL 2.78(AxC)				RAINFALL INTENSITY				SEWER DESIGN				PROFILE								
AREA No.	STREET	FROM M.H.	TO M.H.	AREA hectares	TOTAL hectares	' C '	SECT.	LAT.	SEWER	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.	
																									cal size
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