

**Section 3** 



### SUBDIVISION SUBMISSION REQUIREMENTS Operations Services

The Corporation of the Town of Tillsonburg
Development Guidelines and Design Criteria

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Section 3 - Appendix "3-1" Asset Management Plan Data Table Example



### 3 SUBDIVISION SUBMISSION REQUIREMENTS

### 3.1 General Requirements

The purpose of this section is to provide general submission requirements and design guidelines for the developer and its engineering consultants required for project acceptance by Operations Services of the Town of Tillsonburg.

### 3.1.1 Tillsonburg Hydro Inc.

Tillsonburg Hydro Inc. is responsible for the approval of the electrical distribution system and services installed within all road allowances and associated registered easements within the Town of Tillsonburg.

All hydro servicing is to be designed by an Electrical Consultant and installed within the road allowance or applicable easement in accordance with the most recent requirements and specifications of the Town and Tillsonburg Hydro Inc. The developer will be required to enter into a separate Connection Agreement for the hydro installation with Tillsonburg Hydro Inc. All inquiries regarding hydro servicing shall be directed to Tillsonburg Hydro Inc.

### 3.1.2 Water Distribution System

The Consultant shall submit a general plan of the proposed water distribution system indicating the main size, material, location of hydrants, valves, blowoffs and other appurtenances, including sidewalks prior to the preparation of the plan and profile drawings to the Town for review and approval. If hydraulic modelling is required to verify watermain sizing, the County of Oxford will provide water pressures and flows at locations specified by the consulting engineer for their design.

### 3.1.3 Utilities

The Developer shall arrange for streetlight, servicing cables, telecommunication cables and natural gas to be installed underground, all to the satisfaction of the respective Operating Authority and the Town of Tillsonburg.

A street lighting system providing illumination in accordance with the requirements of Section 9 - Utilities and installed by the Developer to the current standards of the Town. A digital file in AutoCAD Format shall be submitted to the Town.

#### 3.1.4 Easements

The Developer shall provide easements of sufficient width for all municipal services and utilities that cross private property. Easement width shall be determined based on minimum trench width, side slopes and soil types as per Ontario Health and Safety Act. The developer shall register all



easements at no cost to the Town of Tillsonburg. Preliminary reference plans shall be submitted to the Town of Tillsonburg for approval.

### 3.1.5 Geotechnical Report

A soils investigation and report from a qualified geotechnical engineer is required to be provided with the first submission of engineering drawings, which will address the following:

- soil types to be encountered during construction and building
- information on water table levels and impacts on road structure
- recommendations regarding trench backfill and bedding material
- road structure design
- recommended stable trench construction and building foundation support

### 3.1.6 Excess Soil Management Plan

An Excess Soil Management Plan shall be prepared by a Qualified Person, as defined by Ontario Regulation 153/04, for proposed developments that require excess soil to be removed from site and meets the criteria of current Ontario regulations. The purpose of the report is to characterize the quality of the excess soil and generate a management plan that is in compliance with the current Ontario regulations for excess soil management.

The Plan shall be prepared as per the MOE's "Management of Excess Soil – A Guide for Best Management Practices" and shall comply with the current regulatory implementation schedule as put forth by the MOE.

The Excess Soil Management Plan shall be submitted to the Town of Tillsonburg for approval. If deemed appropriate by the Town, the Town may appoint a qualified third-party reviewer to review the plan for compliance to the current regulatory obligations. The owner shall be responsible for the cost of the third-party reviewer.

The Owner will be responsible for O.Reg 406/19 ON-SITE AND EXCESS SOIL MANAGEMENT

### 3.1.7 Functional Servicing Report

A functional servicing report (FSR) describes the layout of the development and required infrastructure including detailed engineering to demonstrate the feasibility of the services requiring approval from the Town and County. The FSR ensures that the proposed development can be serviced for its intended use, and that all on-site and off-site servicing requirements are identified.

In cases where the subdivision development under consideration forms part of a larger area set aside for future development, the FSR shall be a definite requirement in order to confirm that the servicing design does not limit the future development. The FSR shall be a definite requirement, when a subdivision is being phased and the engineering design is being undertaken for each phase separately. The FSR shall be signed and sealed by a professional engineer.



A FSR shall include, but will not necessarily be limited to the following considerations:

- Major roadway alignments, cross-sections and intersections
- Watercourse improvement and channelization
- Railway crossings as applicable
- Major trunk sewers and watermains
- Stormwater management facilities
- Storm drainage systems
- Sanitary drainage systems
- Water distribution systems
- Utility servicing
- Site grading design
- Pumping station locations (if applicable)

### 3.2 Submission of Servicing Drawings

#### 3.2.1 First Submission

The first submission of servicing drawings and design calculations for a proposed development shall contain the following information:

- three copies of the proposed Draft Plan
- three copies of the Calculated Survey Plan
- three copies of the General Plan of Services
- three copies of the Sanitary Drainage Areas and Design Sheet
- three copies of the Storm Drainage Areas and Design Sheet
- three copies of the External Drainage Areas (if required)
- three copies of the Plan and Profiles
- three copies of the Lot Grading & Erosion Control Plans
- three copies of the Storm Water Management Facility (if required)
- three copies of the Photometrics Plan
- three copies of the Composite Utility Plan
- three copies of the Landscape Plan
- three copies of the Details and Notes
- three copies of all External Works (if required)



- three copies of the geotechnical report, storm water management facility functional report, slope stability report, all reports required as noted in the conditions of draft plan approval
- three copies hydraulic water analysis report and drawing (if required)
- Digital copies in PDF format of all requirement documentation.

The above information will be reviewed by the Town of Tillsonburg and a summary comment letter will be provided to the Consultant Engineer for review and responses.

### 3.2.2 Subsequent Submissions

Subsequent submissions of applicable drawings and calculations shall be made until the engineering drawings, design, and calculations are acceptable to the Town of Tillsonburg. Once approved two copies of all supporting information shall be forwarded to the Town of Tillsonburg Operations Services for their records.

Fees for additional submissions will be assessed based on the Town of Tillsonburg Rates and Fees Bylaw (as amended).

### 3.2.3 Ministry of the Environment, Conservation and Parks Applications

Once the engineering design, drawings, and calculations have been approved by the Town of Tillsonburg, three copies of Ministry of the Environment, Conservation and Parks Applications completed by the Developer / Consulting Engineer shall be forwarded to the Town of Tillsonburg and the County of Oxford for signing.

A copy of the MOE Form 1 for any watermain systems shall be forwarded to the Town of Tillsonburg for their records.

### 3.2.4 Other Approvals

The developer/engineering consultant shall be required to make all submissions and representations necessary to obtain approval from all authorities affected by the development. These may include but are not limited to the following: County of Oxford, Ministry of Transportation, Ministry of Natural Resources and Forestry, Fire Department, Parks Division, and Long Point Region Conservation Authority. The Town of Tillsonburg shall be kept informed of the progress of these approvals by copies of all correspondence. All approvals shall be in place prior to the execution of any Development Agreement.

### 3.3 Drawing Format and Requirements

The following information is required to be submitted for approval of servicing drawings.



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**Development Guidelines and Design Criteria** 

### 3.3.1 Calculate Survey Plan and Draft Plan

A calculated plan completed by an Ontario Land Surveyor must be completed and submitted with the first submission of servicing drawings. The calculated plan shall be drawn in metric units. The approved draft plan shall also be provided with the first submission of servicing drawings.

#### 3.3.2 Cover Sheet

The cover sheet shall include the Name of Development, Developers Name, List of Drawings, Town's Logo and Key Plan showing location of project.

#### 3.3.3 General Plan of Services

The General Plan of Services shall include sanitary sewers, storm sewers, watermains, storm water management facilities, and all easements. Lot numbering and lot fabric shall match that of the draft plan. The General Plan of Services shall show all proposed and existing services required for servicing the proposed development and serves as a "key" plan for the remainder of the drawing set. In addition, the General Plan of Services shall satisfy the following requirements:

- scale shall be 1:1000
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers
- proposed and existing street names
- proposed and existing sanitary and storm sewers
- label all proposed and existing sewer lengths (one decimal), size, manholes, catch basins, ditch inlet catch basins, grades (two decimals) and direction of flow
- all proposed and existing watermains, size, material, hydrants, valves and fittings
- legend
- at least three geodetic benchmarks
- reference drawing numbers for plan and profiles
- all drawings to be stamped, signed and dated by a professional engineer

### 3.3.4 Sanitary Sewer Design and Area Plan

The Sanitary Sewage Design and Area Plan shall include all information necessary to complete a thorough review of the design. All external areas shall be shown on the drawing. If the external areas are too large to be accommodated, a separate drawing for the external sanitary areas shall be included in the set. Drainage areas shall be delineated on a lot line by lot line and manhole to manhole basis and shall include drainage area numbers, areas in hectares and population or non-



residential zoning class. A design sheet shall also be included on the drawing. If the design sheet cannot be accommodated on the drainage area plans, the sanitary design sheet can be shown on its own drawing or included with the storm design sheet on its own drawing. In addition, the Sanitary Sewage Design and Area Plan shall satisfy the following requirements:

- scale shall be 1:1000
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers
- easements, municipal numbers of existing lots, road widenings, identify semi- detached lots
- proposed and existing street names
- proposed and existing sanitary sewers
- label all proposed and existing sewer lengths (one decimal), size, manholes, grades (two decimals) and direction of flow
- delineate all sanitary drainage areas by lot line and on a manhole by manhole basis, show drainage area number, area in hectares, and population and/or non-residential zoning class for each catchment area
- design sheet to be shown on drawing
- legend
- all drawings to be stamped, signed and dated by a professional engineer

#### 3.3.5 Storm Sewer Design and Area Plan

The Storm Sewer Design and Area Plan shall include all information necessary to complete a thorough review of the design. All external areas shall be shown on the drawing. If the external areas are too large to be accommodated, a separate drawing for the external storm areas shall be included in the set. Drainage areas shall be delineated on an actual contributing drainage area and manhole to manhole basis and shall include drainage area numbers, areas in hectares and runoff coefficients. A design sheet shall also be included on the drawing. If the design sheet cannot be accommodated on the drainage area plans, the storm design sheet can be shown on its own drawing or included with the sanitary design sheet on its own drawing. In addition, the Storm Sewer Design and Area Plan shall satisfy the following requirements:

- scale shall be 1:1000
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers



- lot/block dimensions, easements, municipal numbers of existing lots, road widenings, identify semi- detached lots
- proposed and existing street names
- proposed and existing storm sewers, ditches and watercourses
- label all proposed and existing sewer lengths (one decimal), size, manholes, catchbasins, ditch inlet catchbasins, grades (two decimals) and direction of flow
- delineate all storm drainage areas by the actual catchment area and a structure by structure basis, show drainage area number, area in hectares, runoff coefficient for each catchment area
- design sheet to be shown on drawing
- legend
- all drawings to be stamped, signed and dated by a professional engineer
- overland flow

### 3.3.6 Plan and Profile Drawings

Plan and Profile drawings of each street and easement shall include all information necessary to construct the proposed works. In addition, Plan and Profile drawings shall satisfy the following requirements:

- scale shall be horizontal 1:500, vertical 1:50
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers
- lot/block dimensions, easements, municipal numbers of existing lots, road widenings, horizontal curve data, vertical curve data, S.I.B. locations, identify semi-detached lots and all pertinent survey data
- proposed and existing street names
- proposed and existing sanitary and storm sewers and watermain
- label all proposed and existing manholes, catch basins, ditch inlet catch basins, hydrants, valves, etc
- for storm, sanitary and watermain label pipe material, size, bedding type, inverts or C/L of watermain, length (one decimal) and grade (two decimals)
- elevations for top of base flange of hydrants, catchbasin and ditch inlet frame and grates
- all proposed and existing surface features such as curb and gutter, sidewalk, asphalt roadways, ditches, swales, existing buildings, etc
- all existing utilities abutting proposed development shall be shown



- all landscaping shall be shown as per the landscape plan
- show elevations and chainages at Beginning of Curves (B.C.'s), End of Curves (E.C.'s), project limits, centerline intersections, 20m intervals, and breakpoints
- show private drain connections, and water services
- show existing and future profiles for a distance of 60m from project limits
- plan and profiles of rear yard catchbasins, walkways, and servicing easements are required
- reference drawing numbers for adjoining plan and profiles
- borehole information in plan and profile
- dimensions for road width, manholes, catch basins, sidewalks, watermain, etc
- show all existing features i.e. trees, mailboxes, creeks, ponds, etc
- all drawings to be stamped, signed and dated by a professional engineer

### 3.3.7 Lot Grading Drawings

The Lot Grading Drawings shall include all information and grades necessary to ensure proper grading of the proposed lots as well as ensuring drainage compatibility with existing lands, which abut the proposed development, i.e. not restricted or inundated due to the new development. The drawings should also include overland flow arrows which delineate the proposed flow route of a major storm. Erosion and sediment control measures and notes can be included on the Lot Grading Drawings. In addition, Lot Grading Drawings shall satisfy the following requirements:

- scale shall be 1:500
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers, registered plan numbers etc
- lot/block dimensions, easements, municipal numbers of existing lots, road widenings,
   S.I.B. locations, identify semi-detached lots and all pertinent survey data
- at least two geodetic benchmarks
- proposed and existing street names
- all proposed and existing surface features such as curb and gutter, sidewalk, asphalt roadways, driveways, ditches, swales, existing buildings, hydrants, valves, manholes, catch basins, ditch inlet catch basins, etc
- all existing surface utilities abutting proposed development shall be shown
- show proposed elevations at B.C.'s, E.C.'s, project limits, centreline intersections, 30m intervals, lot corners, building setback line, and breakpoints



- show proposed maximum building envelopes, elevations at all lot and block corners, proposed elevations at the front and rear of all buildings, proposed finished floor or top of foundation elevations for all lots as well as break point elevations along rear and side yard swales and accompanying slopes along each side yard / swale
- provide drainage arrows for overland surface flow
- provide drainage arrows for major overland flow due to 100-year storm flooding
- show existing contours at 0.5m interval and existing spot elevations around perimeter of development
- show a minimum of 30m of existing contours and features around perimeter of development
- show all existing features i.e. trees, mailboxes, creeks, ponds, etc
- all drawings to be stamped, signed and dated by a professional engineer

### 3.3.8 Storm Water Management Drawings

The Storm Water Management Drawings shall include all information necessary to construct the stormwater management facility so it will function as per design. Details for the Storm drainage area shall be included. Details for inlet and outlet structures shall be included on this sheet. Cross sections along the length and perpendicular to the facility shall be included. Ground cover and erosion protection to be detailed on this drawing. In addition, Stormwater Management Drawings shall satisfy the following requirements:

- scale shall be 1:500 or larger.(i.e. 1:250)
- metric A1 sheet
- north arrow
- delineate limits of subdivision and/or phasing
- proposed and existing lot/block numbers
- lot/block dimensions, easements, municipal numbers of existing lots, road widenings
- at least two geodetic benchmarks
- proposed and existing street names
- all proposed and existing features such as curb and gutter, sidewalk, asphalt roadways, ditches, swales, existing buildings, hydrants, valves, manholes, catch basins, ditch inlet catch basins, etc
- all existing surface utilities abutting proposed development shall be shown
- show a minimum of 30m of existing contours and features around perimeter of development
- show all existing features i.e. trees, mailboxes, creeks, ponds, etc.
- show all related design features, structures, weirs and grades / elevations, etc.



- show maintenance access
- Overland Flow route
- all drawings to be stamped, signed and dated by a professional engineer
- details and notes

The Details and Notes drawings shall contain specific details and notes needed to construct the proposed works. Notes shall include standard specifications relating to general construction or specific items. There shall be a typical cross-section through a R.O.W. showing pavement width, road structure, general sewer locations, watermain and utility locations. In addition, the Details and Notes drawings shall satisfy the following requirements:

- details to scale if possible
- metric A1 sheet
- standard general construction notes
- sewer and watermain construction notes
- list of standard OPSD and Town of Tillsonburg standards to be used on project
- typical cross section showing sewer and watermain locations, R.O.W. dimensions, pavement structure, trenching details based on soil type, curb and gutter type, sidewalk location, subdrains, trench backfill details, and proposed utility locations
- miscellaneous details and sections required for construction of development
- benchmark list (at least two)
- all drawings to be stamped, signed and dated by a professional engineer

#### 3.3.9 Photometric Plan Submission

The Photometric Plan shall be prepared and should reference 'LUX' units of measure for information purposes. The Plan should include a point-by-point photometric grid superimposed over the site that clearly indicates the proposed site lighting levels.

Other plan requirements include:

- a fixture legend indicating the fixture details
- arm length and height
- LED wattage
- LED Colour Rendering Index Rating(s)
- shield specifications (if applicable)
- fixture light shield locations
- A chart that confirms calculated average, minimum and maximum LUX, veiling luminescence and uniformity



### 3.3.10 Composite Utility Plan

The Composite Utility Plan shall include sanitary sewers, storm sewers, watermain, storm water management facilities, and all easements. Lot numbering and lot fabric shall match that of the registered plan. The Composite Utility Plan shall show all proposed and existing services required for servicing the proposed development and serves as a "key" plan for the remainder of the drawing set. In addition, the Composite Utility Plan shall satisfy the following requirements:

- scale shall be 1:500;
- metric A1 sheet;
- north arrow;
- location of all existing and proposed utilities;
- offsets from property line;
- location of all proposed street trees;
- location of all proposed streetlights;
- location of all driveways; and,
- all drawings to be stamped, signed and dated by a professional engineer.

### 3.3.11 Landscape Plan

The landscaping plan shall include all plantings, tree, and landscaping features proposed as part of the development. In addition, the Landscaping Plan shall satisfy the following requirements:

- scale shall be 1:500;
- metric A1 sheet;
- north arrow;
- location of all trees, shrubs, and miscellaneous plantings;
- complete list of tree/planting sizes, common name, species name, and quantities;
- All drawings are to be stamped, signed and dated by a landscape architect

### 3.4 "As-Constructed" Drawings

The "As-Constructed" Drawings constitute the original engineering drawings, which have been amended to incorporate the construction changes and variances to provide accurate information on the works as installed in the development. The Registered Plan Number must be clearly shown on all "As-Constructed" Drawings.



### 3.4.1 "As-Constructed" Field Survey

The "As-Constructed" revisions shall be based on a final survey of all the subdivision services and from construction records. The final survey of the subdivision services shall include a field check of the following items:

- location and invert elevations of all sewer manholes and revised grade of sewers
- distance between manholes
- location of all roadway catchbasins
- location, lid and invert elevations for all rear yard catchbasins
- location of curb and sidewalk
- location of hydrants
- location and ties to all valve boxes and valve chambers located in landscaped areas
- location and ties to watermain (horz. & vert.) all blow-offs and other special watermain appurtenances
- road centreline elevations
- location and elevation site benchmarks established during construction
- location of all service connections to all lots and blocks and chainage of the connection at the sewer to the nearest downstream manhole
- all sewer and watermain sizes, material, bedding type
- location of fencing constructed as part of the subdivision services
- location of all street light poles and transformers

### 3.4.2 Drawings Revisions

The original drawings shall be revised to reflect the "As-Recorded" changes which were documented by the consulting engineer. The drawing revisions shall include but are not limited to the following:

- all sewer and road grades are to be recalculated to two decimal places
- all screening shall be removed
- all street names, lot and block numbering and dimensions shall be checked against the registered plan
- an "As-Recorded" revision note shall be placed on all drawings

### 3.4.3 Submission of "As-Constructed" Drawings

Upon completion of all underground and road construction the "As-Constructed" drawings shall be submitted to the Town of Tillsonburg Operations and Development Services on 'white prints' for review. When the drawings have been revised to the satisfaction of the Town, the engineering consultant will supply the Town with one set of stamped "As-Constructed" mylars and



an AutoCAD digital file for their records.

The information shown on the "As-Constructed" drawings may be checked by the Town at any time up to two years from the "Final Acceptance" of the development and if discrepancies are found between the information shown on the drawings and the field conditions, the drawings will be returned to the Engineering Consultant for rechecking and further revisions.

The Engineering Consultant may be required to explain, in writing, any differences between the design and the "As-Constructed" data and provide verification that the alterations will not adversely affect the design of the subdivision services. The "As-Constructed" drawings shall be submitted to the Town before "Preliminary Acceptance" for the underground works will be given.

#### 3.4.4 GIS Information

Finalized digital CAD files, properly georeferenced (NAD 83 17N) are to be provided, showing all services for the entire development with each asset category drawn on its own layer.

### 3.4.5 Asset Management Information

As part of the submission of "As-Recorded" drawings, it is necessary to supply all infrastructure attribute information for the development to the Town in a spreadsheet format that will allow for importation into the Towns Asset Management system (sample spreadsheets and datasets are included in Appendix 3-1 for this purpose). The collection of infrastructure attribute information is required to enable efficient lifecycle management practices for infrastructure and to account for infrastructure assets on annual financial statements.

Section 3 - Appendix "3-1" Asset Management Plan Data Table Example

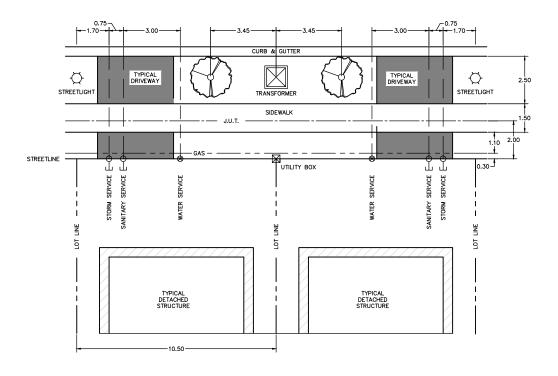


ROAD				
FIELD NAME	DATA TYPE	COMMENTS		
RoadID	Text	To be assigned by TofT		
STREET NAME	Text			
XSTREET1	Text			
XSTREET2	Text			
CLASS	Number			
TYPE	Text	Alley, Arterial, Collector, Local		
MATERIAL	Text			
LENGTH (m)	Number			
# OF LANES	Number			
GRAN_A (mm)	Number			
GRAN_B (mm)	Number			
BASE (mm)	Number			
SURFACE (mm)	Number			
COMPLETION DATE	Date			
DATA SOURCE	Text	e.g. Drawing #		

CURB				
DATA TYPE	COMMENTS			
Text	To be assigned by TofT			
Text				
Text				
Text				
Number				
Number				
Date				
Text	e.g. Drawing #			
	DATA TYPE Text Text Text Text Number Number Date			

SIDEWALK				
FIELD NAME	DATA TYPE	COMMENTS		
RoadID	Text	To be assigned by TofT		
STREET NAME	Text			
XSTREET1	Text			
XSTREET2	Text			
LENGTH (m)	Number			
WIDTH (m)	Number			
MATERIAL	Text			
COMPLETION DATE	Date			
DATA SOURCE	Text	e.g. Drawing #		

POLE				
FIELD NAME	DATA TYPE	COMMENTS		
POLE ID	Text			
LOT#	Number			
STREET#	Number	Service address #		
STREET NAME	Text	Service address street name		



- FOR WATER AND SANITARY SERVICE SPECIFICATIONS, REFER TO OXFORD COUNTY DESIGN GUIDELINES
  AND SPECIFICATIONS.
- FOR STORMWATER SERVICE SPECIFICATIONS REFER TO TOWN OF TILLSONBURG DEVELOPMENT GUIDELINES AND DESIGN CRITERIA.
- SANITARY AND STORMWATER SERVICES ARE TO BE BROUGHT 1.0m PAST PROPERTY LINE AND PROPERLY MARKED WITH A 50x100mm STAKE EXTENDING FROM THE INVERT OF THE SERVICE TO GROUND LEVEL. SANITARY SERVICES TO BE MARKED GREEN. STORM SERVICES TO BE MARKED IN WHITE.
- 4. WATER SERVICES ARE TO BE BROUGHT TO PROPERTY LINE, TERMINATED WITH A CURB STOP AND PROPERLY MARKED WITH A 50 X 100mm STAKE EXTENDING FROM THE INVERT OF SERVICE TO GROUND LEVEL. WATER SERVICES TO BE MARKED BLUE.
- 5. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
- 6. REFER TO TSD-301 FOR VERTICAL LOCATION OF PRIVATE DRAIN CONNECTIONS AT PROPERTY LINES.
- 7. REFER TO TSD-302 FOR TYPICAL STORMWATER PRIVATE DRAIN CLEAN-OUT DETAIL.
- 8. REFER TO OXFORD COUNTY D-1860-1-2018 TYPICAL SANITARY PRIVATE DRAIN CLEAN-OUT DETAIL.



STANDARD RESIDENTIAL SERVICE LOCATIONS 10.5m LOT

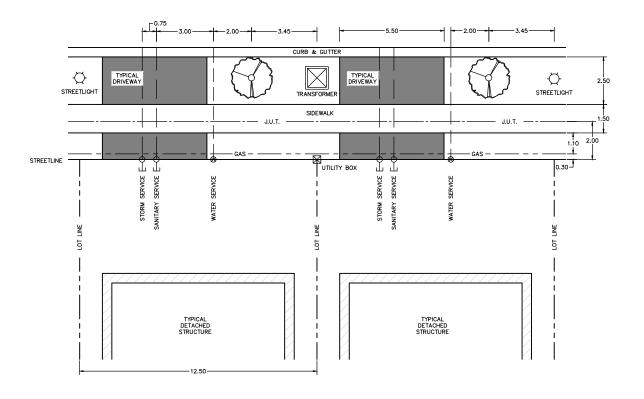
APPROVED

MANAGER OF ENGINEERING DATE

DIRECTOR OF OPERATIONS DATE

REVISION No. DATE: FEB 2022

SCALE: N.T.S.



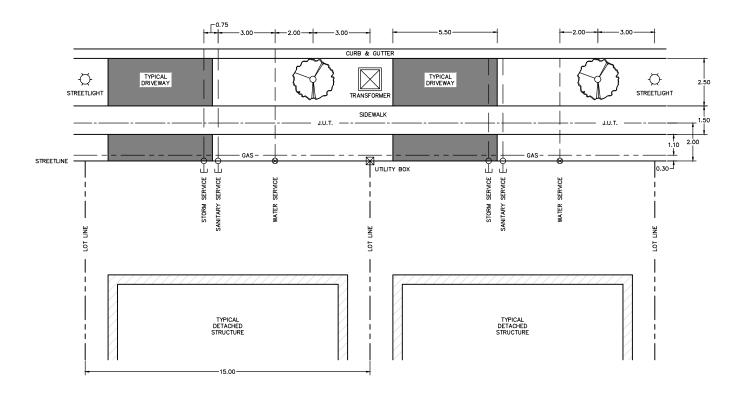
- FOR WATER AND SANITARY SERVICE SPECIFICATIONS, REFER TO OXFORD COUNTY DESIGN GUIDELINES AND SPECIFICATIONS.
- FOR STORMWATER SERVICE SPECIFICATIONS REFER TO TOWN OF TILLSONBURG DEVELOPMENT GUIDELINES AND DESIGN CRITERIA.
- SANITARY AND STORMWATER SERVICES ARE TO BE BROUGHT 1.0m PAST PROPERTY LINE AND PROPERLY
  MARKED WITH A 50x100mm STAKE EXTENDING FROM THE INVERT OF THE SERVICE TO GROUND LEVEL.
  SANITARY SERVICES TO BE MARKED GREEN. STORM SERVICES TO BE MARKED IN WHITE.
- 4. WATER SERVICES ARE TO BE BROUGHT TO PROPERTY LINE, TERMINATED WITH A CURB STOP AND PROPERLY MARKED WITH A 50 X 100mm STAKE EXTENDING FROM THE INVERT OF SERVICE TO GROUND LEVEL. WATER SERVICES TO BE MARKED BLUE.
- 5. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
- 6. REFER TO TSD-301 FOR VERTICAL LOCATION OF PRIVATE DRAIN CONNECTIONS AT PROPERTY LINES.
- REFER TO TSD-302 FOR TYPICAL STORMWATER PRIVATE DRAIN CLEAN-OUT DETAIL.
- 8. REFER TO OXFORD COUNTY D-1860-1-2018 TYPICAL SANITARY PRIVATE DRAIN CLEAN-OUT DETAIL.



STANDARD RESIDENTIAL SERVICE LOCATIONS 12.5m LOT APPROVED

MANAGER OF ENGINEERING DATE

DIRECTOR OF OPERATIONS DATE



- FOR WATER AND SANITARY SERVICE SPECIFICATIONS, REFER TO OXFORD COUNTY DESIGN GUIDELINES AND SPECIFICATIONS.
- 2. FOR STORMWATER SERVICE SPECIFICATIONS REFER TO TOWN OF TILLSONBURG DEVELOPMENT GUIDELINES AND DESIGN CRITERIA.
- SANITARY AND STORMWATER SERVICES ARE TO BE BROUGHT 1.0m PAST PROPERTY LINE AND PROPERLY
  MARKED WITH A 50x100mm STAKE EXTENDING FROM THE INVERT OF THE SERVICE TO GROUND LEVEL.
  SANITARY SERVICES TO BE MARKED GREEN. STORM SERVICES TO BE MARKED IN WHITE.
- 4. WATER SERVICES ARE TO BE BROUGHT TO PROPERTY LINE, TERMINATED WITH A CURB STOP AND PROPERLY MARKED WITH A 50 X 100mm STAKE EXTENDING FROM THE INVERT OF SERVICE TO GROUND LEVEL. WATER SERVICES TO BE MARKED BLUE.
- 5. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
- 6. REFER TO TSD-301 FOR VERTICAL LOCATION OF PRIVATE DRAIN CONNECTIONS AT PROPERTY LINES.
- 7. REFER TO TSD-302 FOR TYPICAL STORMWATER PRIVATE DRAIN CLEAN-OUT DETAIL.
- 8. REFER TO OXFORD COUNTY D-1860-1-2018 TYPICAL SANITARY PRIVATE DRAIN CLEAN-OUT DETAIL.



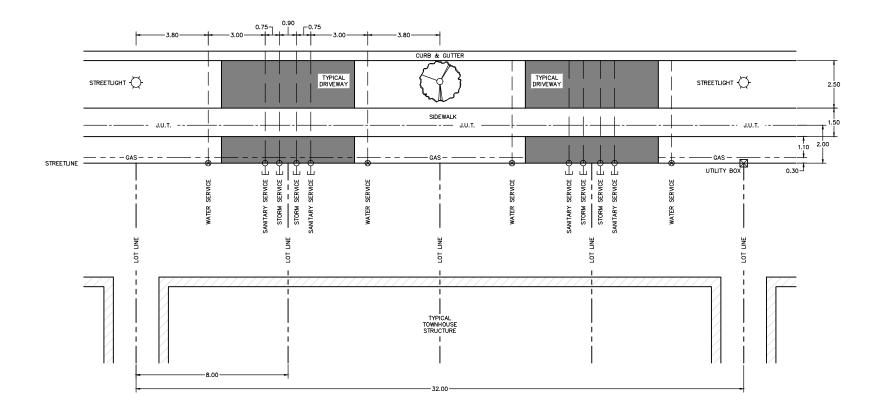
STANDARD RESIDENTIAL SERVICE LOCATIONS 15m LOT APPROVED

MANAGER OF ENGINEERING DATE

DIRECTOR OF OPERATIONS DATE

REVISION No. DATE: FEB 2022

SCALE: N.T.S.



- FOR WATER AND SANITARY SERVICE SPECIFICATIONS, REFER TO OXFORD COUNTY DESIGN GUIDELINES AND SPECIFICATIONS.
- FOR STORMWATER SERVICE SPECIFICATIONS REFER TO TOWN OF TILLSONBURG DEVELOPMENT GUIDELINES AND DESIGN CRITERIA.
- SANITARY AND STORMWATER SERVICES ARE TO BE BROUGHT 1.0m PAST PROPERTY LINE AND PROPERLY MARKED WITH A 50x100mm STAKE EXTENDING FROM THE INVERT OF THE SERVICE TO GROUND LEVEL. SANITARY SERVICES TO BE MARKED GREEN. STORM SERVICES TO BE MARKED IN WHITE.
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- 8. REFER TO OXFORD COUNTY D-1860-1-2018 TYPICAL SANITARY PRIVATE DRAIN CLEAN-OUT DETAIL.



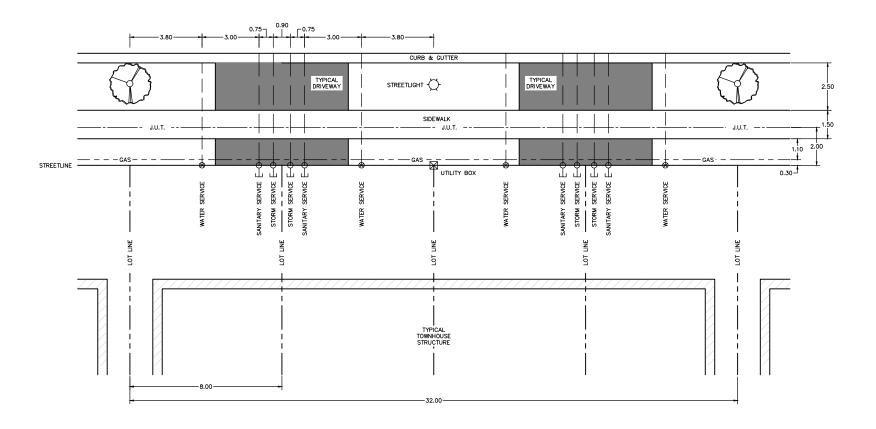
STANDARD TOWNHOUSE SERVICE LOCATIONS 32m LOT APPROVED

MANAGER OF ENGINEERING DATE

DIRECTOR OF OPERATIONS DATE

REVISION No. DATE: FEB 2022

SCALE: N.T.S.



- FOR WATER AND SANITARY SERVICE SPECIFICATIONS, REFER TO OXFORD COUNTY DESIGN GUIDELINES AND SPECIFICATIONS.
- FOR STORMWATER SERVICE SPECIFICATIONS REFER TO TOWN OF TILLSONBURG DEVELOPMENT GUIDELINES AND DESIGN CRITERIA.
- SANITARY AND STORMWATER SERVICES ARE TO BE BROUGHT 1.0m PAST PROPERTY LINE AND PROPERLY MARKED WITH A 50x100mm STAKE EXTENDING FROM THE INVERT OF THE SERVICE TO GROUND LEVEL. SANITARY SERVICES TO BE MARKED GREEN. STORM SERVICES TO BE MARKED IN WHITE.
- 4. WATER SERVICES ARE TO BE BROUGHT TO PROPERTY LINE, TERMINATED WITH A CURB STOP AND PROPERLY MARKED WITH A 50 X 100mm STAKE EXTENDING FROM THE INVERT OF SERVICE TO GROUND LEVEL. WATER SERVICES TO BE MARKED BLUE.
- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
- 6. REFER TO TSD-301 FOR VERTICAL LOCATION OF PRIVATE DRAIN CONNECTIONS AT PROPERTY LINES.
- 7. REFER TO TSD-302 FOR TYPICAL STORMWATER PRIVATE DRAIN CLEAN-OUT DETAIL.
- 8. REFER TO OXFORD COUNTY D-1860-1-2018 TYPICAL SANITARY PRIVATE DRAIN CLEAN-OUT DETAIL.



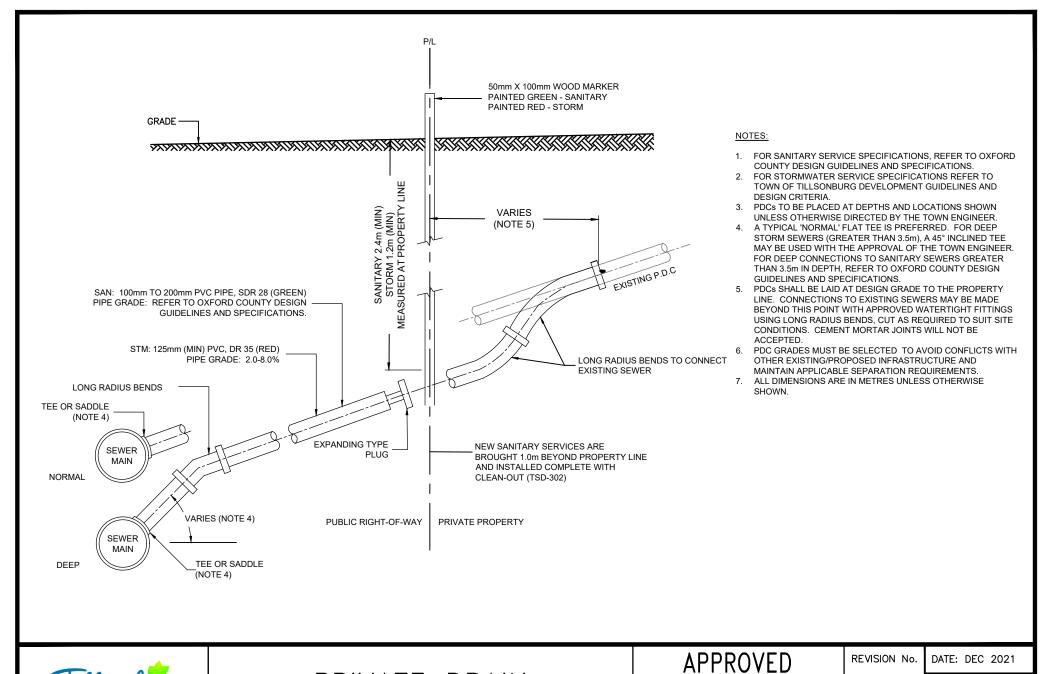
STANDARD TOWNHOUSE SERVICE LOCATIONS 32m LOT APPROVED

MANAGER OF ENGINEERING DATE

DIRECTOR OF OPERATIONS DATE

REVISION No. DATE: FEB 2022
SCALE: N.T.S.

TSD-304

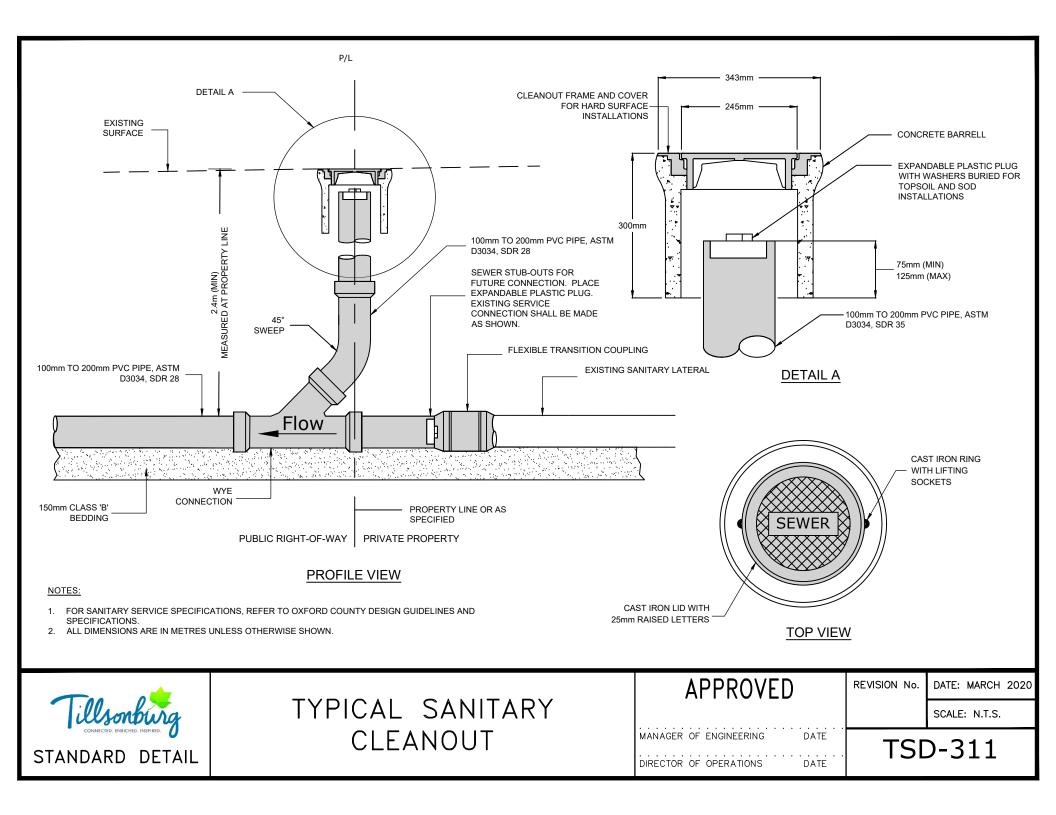


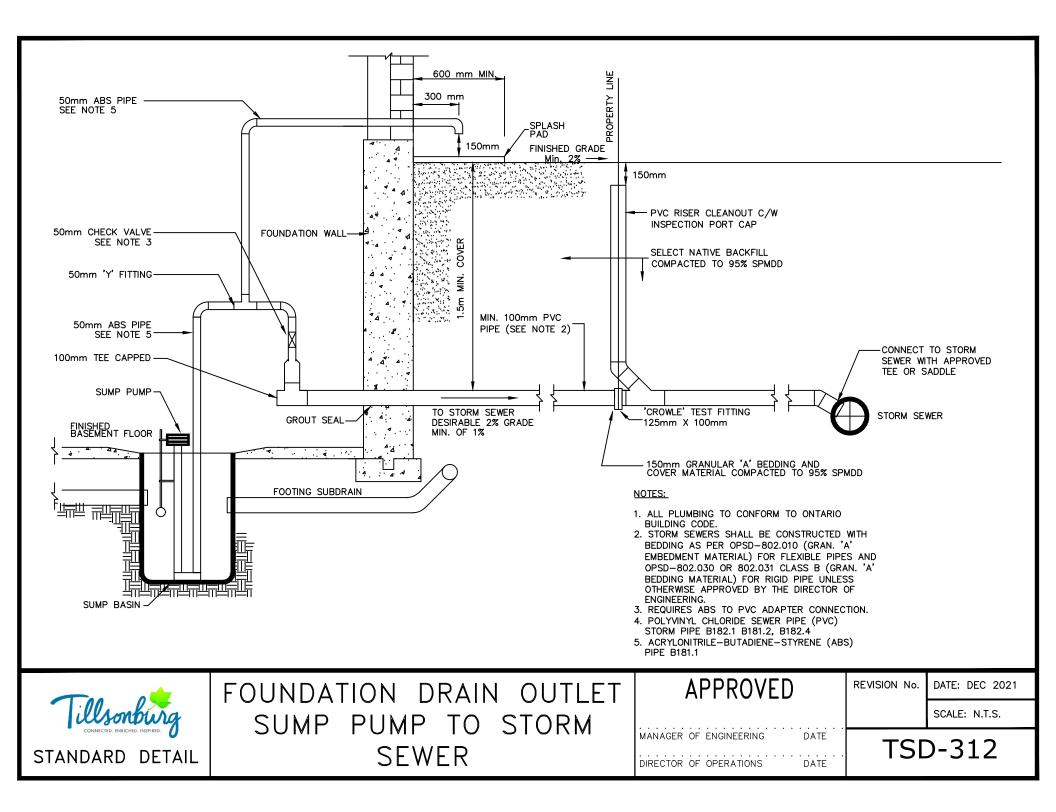


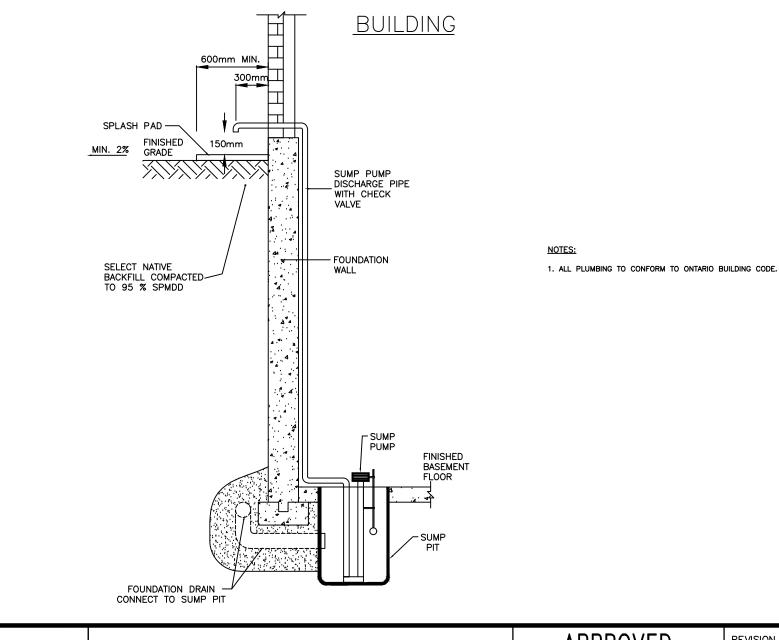
PRIVATE DRAIN CONNECTIONS

MANAGER OF ENGINEERING DATE
DIRECTOR OF OPERATIONS DATE

SCALE: N.T.S.









FOUNDATION DRAIN OUTLET SUMP PUMP TO SURFACE

**APPROVED** 

REVISION No.

DATE: DEC 2021

SCALE: N.T.S.

MANAGER OF ENGINEERING DATE DIRECTOR OF OPERATIONS

DATE