GUIDELINE FOR RESIDENTIAL DEVELOPERS & HOMEBUILDERS

ELECTRICAL, NATURAL GAS and COMMUNICATIONS SERVICES IN NEW SUBDIVISIONS

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INTRODUCTION

This booklet serves as a guide for Land Developers and Home Builders who require ELECTRICAL, NATURAL GAS and/or COMMUNICATION services in new developments or condominiums.

Content of this "Guide" describes the MANITOBA HYDRO requirements for new natural gas and electric service installations.

LOCAL/REGIONAL OFFICES

For assistance or further information covering material contained in this Booklet, *contact the Energy Service Coordinator or your Local Manitoba Hydro office.* For Communications information please contact the representatives listed below.

MANITOBA HYDRO SALES AND SERVICE

For Natural Gas and Electric Service Extensions

CUSTOMER SERVICE WINNIPEG –
360 Portage Avenue 204-360-4127
Winnipeg, Manitoba R3C 2P4

CUSTOMER SERVICE GAS -
360 Portage Avenue 204-360-7533
Winnipeg, Manitoba R3C 2P4

For service outside of Winnipeg, contact your local Manitoba Hydro office which will direct you to the appropriate Energy Services Coordinator.

BellMTS

BellMTS Net Eng Control Center
191 Pioneer Avenue G300S
WINNIPEG (MANITOBA) Canada
R3C 3N8
Email: neteng.control@bellmts.ca
Phone: 204-941-4369
or
Toll Free 1-866-756-7642

SHAW COMMUNICATIONS

Shaw Cablesystems
22 Scurfield Blvd.
Winnipeg,Mb
R3Y 1S5

Email: winnipegplanning@sjrb.net

phone: 204-480-7429

WESTMAN COMMUNICATION GROUP

Westman Communications Group - Engineering
1906 Park Ave
Brandon, MB
R7B 0R9

Email: engineering@westmancom.com

Phone: 204-725-4300
Toll Free: 1-800-664-3337
Fax: 204-728-2086

COMMSTREAM

COMMSTREAM
125 Oakland Road
Oak Bluff, MB
R3G 0A4

Email: planning@commstream.net

Phone: 204-272-1347

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Engineering Standards & Support Services
360 Portage Avenue (19)
Email: jpinkowski@hydro.mb.ca
Phone: (204) 360-7293
Fax: (204) 360-6110

DEFINITIONS

Common Trench

The coincident installation of all 4 utilities services including electric, natural gas, telephone and cable tv. In areas where cable tv is not available the installations will be similar.

Deep Utilities

The deep utilities are typically the water, sewer and land drainage.

Developer

The owner(s) of property within a registered plan of a subdivision who on their own behalf or through an agent apply for installation of communication/energy services.

Joint-Use

Terminology used by Manitoba Hydro, CATV and MTS to describe the shared use of a common distribution system (overhead or underground) for the installation of their respective cables or natural gas services.

For joint-use installations each Utility designs and maintains its own services throughout the development. The actual installation of services may be undertaken by all Utilities jointly or one Utility may act solely as the contractor installing all Utility's services.

Planning Authority

Representatives of the various levels of government responsible for city, town or municipal planning.

Public Authority

Includes Municipal Corporations, Local Government Districts, First Nations, Provincial and Federal Government Agencies. If property is being developed, the Public Authority may authorize the Developer to act on its behalf.

Registered Plan of Sub-Division

A parcel of land which has been divided into smaller segments (lots/blocks), approved under the "Provincial Planning Act" and registered in a Land Titles Office.

Road Crossing Drawing

A separate drawing from Manitoba Hydro detailing the location and specifications for each crossing to be installed by the Developer during construction of roadways in the Development.

Temporary Service

A service extension to an approved electrical load centre which is planned for short-term use and subsequently to be removed, e.g. builders' services.

Shallow Utilities

The shallow utilities are made up of the electric, gas, telephone and cable tv.

Trench-Trenching

The words used in this booklet to define the sub-surface excavation housing cable or pipe services. The words "plow and pipe push" can also mean "trench". Rights are reserved by the Utilities to adopt any methods deemed most practical.

U.R.D. Areas – (Underground Residential Distribution Areas)

Residential subdivisions/developments designated by a local planning authority where all electrical, natural gas and communication services are installed below ground with the exception of above ground Hydro transformers/switching cubicles, ornamental street lights, CATV and MTS communication terminal housings (pedestals).

Underground Service

Utility-owned primary and/or secondary electrical cables connected to the Utility's underground distribution system installed in a trench and terminated in the customer-owned point of delivery.

DEVELOPERS GUIDE

Underground Residential Distribution (URD)

DEVELOPER RESPONSIBILITIES - GENERAL

It is the developer's responsibility to provide the following:

Pre-service Charge (Electric)

Manitoba Hydro administers and assesses a unit cost per lot for pre-servicing a subdivision for electric service. The preferred installation method is to have all shallow utilities in a Common Trench either on easement or public rights-of-way depending on the setback of the houses.

The Developer will be assessed a per lot cost for pre-servicing. In addition, if a Public Authority requires roadway lighting, the Developer will be assessed these associated additional costs. Payment of these charges is required to be made in full to Manitoba Hydro prior to commencement of project design.

Lots built upon and permanently connected within ten years of pre-servicing may qualify for a full or partial refund on a per lot basis.

It is the responsibility of the Developer to regularly submit written requests for refunds, accurately identifying the qualifying lots by subdivision name, Land Titles Office plan number, lot and block number, address, street or avenue, etc.

All pre-service charges associated with lots not permanently connected after ten years from the date of service being available will be non-refundable.

NOTE: Any unpaid charges identified by the communication Utilities may result in a delay in commencing the project design.

Pre-service Charge (Gas)

Pre-service charges for the installation of natural gas services are determined by a feasibility test. If a Developer contribution is required as a result, a true-up is run after 5 years and a portion of the contribution may be refunded. Contact Manitoba Hydro's Gas Energy Services Advisor for details.

Lot Plans

After approval of the subdivision from the Planning Authority, the Developer shall provide to Manitoba Hydro and the communication utilities, at no cost to the utilities, an electronic copy in AutoCAD format, of the REGISTERED plans indicating subdivision lot lines and roadways and the planning application number for the development. These Registered plans as well as developer design drawings for sewer (both land drainage and waste water), water, lot layout, front property retaining walls, Developer installed side lot fences, subdivision esthetic walls and grade plans clearly indicating any shallow land drainage "swales" and/or culvert locations and sizes are **required a minimum of 120 days in advance of requested in-service date.** If the Developer makes subsequent changes to these original plans which call for modification to a Utility's design or installation, the in-service date will be adjusted accordingly and the Developer will be required to pay for any additional costs any Utility may incur.

These drawings shall also contain dimension to the water and sewer services and the lot foot print (garage orientation). The Developer shall also include the minimum proposed setback from the building to the front property line.

Easements

In accordance with the REAL PROPERTY ACT, utility easements (RIGHTS-OF-WAY) require registration in the Land Titles Office. The Developer is required to grant Manitoba Hydro and the communication utilities all easement alignments for the purpose of placing and maintaining services throughout the subdivision. The Developer must provide at its own expense a plan of RIGHTS-OF-WAY delineating the subject subdivision. All Utilities will identify their easement requirements and return it to the Developer/Planning Authority for registration. The easement may be used for common trench locations, pad mounted transformers, communication handholes, pedestals and other related features.

Note: Easement requirements for Manitoba Hydro electric, telephone and cable tv will be included on a single agreement administered by Manitoba Hydro. The City of Brandon has their own form of easement. A separate easement agreement is required for Manitoba Hydro's natural gas installation.

Grading / Brush Clearing

The Developer is responsible for ensuring that all trench locations are clear of all debris/obstructions (eg snow, structures, trees, shrubs, stumps and construction material) and brought to within ± 150mm (6") of final grade in U.R.D. areas. Where sub surface chambers are to be located, final grade is to be confirmed by the developer on site and in writing before installation occurs. Please note that final grade is considered to be the grade at which the finished landscaping has been completed.

Manitoba Hydro Engineering will provide trench location plans for the Developer.

Where fill is required, the Developer will ensure that it is free from debris, rubble, broken concrete, large boulders and tree roots and shall be compacted. Compacting shall be performed on maximum 150mm thick lifts using appropriate dynamic or static packing equipment.

The Developer will clear the rights-of-way of all obstructions (eg. snow, structures, trees, shrubs, stumps and construction material) to accommodate service routes. The cost of any construction delays resulting from the above will be charged to the Developer.

All rights-of-way should be cleared two weeks prior to the start of construction.

Locates

The developer shall be responsible for locating the sewer and water facilities and provide any relevant information, instructions and documents respecting the facilities installed as part of the subdivision prior to Manitoba Hydro commencing installation of the shallow utilities. Please note that as per the Manitoba Workplace Safety and Health Regulation W210, neither Manitoba Hydro nor its contractors can excavate without prior receipt of these locates.

Developer Approval

The developer shall review the multi-party construction drawing to verify and provide concurrence for the locations of the following items:

1. Manitoba Hydro above grade equipment (transformers, distribution centres) and communication pedestal/grade level enclosures
2. Streetlight locations, quantities and types
3. Service point locations
4. Elevations of any proposed facilities that can be reasonably assumed to extend above final grade

If any conflicts with civil infrastructure are identified upon review the developer shall immediately notify Manitoba Hydro of such conflicts. Manitoba Hydro shall review these conflicts and may subsequently revise the construction drawing.

Developer concurrence shall be provided to the respective Manitoba Hydro Energy Services Advisor by way of signed drawing or email within five (5) business days. Please note that any delay with receiving this concurrence will result in the delay of installation of the shallow utilities.

Manitoba Hydro Construction Delays

The cost of Manitoba Hydro's construction delays resulting from things like construction material on the trench alignment will be charged to the Developer/Homebuilder. If Manitoba Hydro is required to remove anything from the trench alignment, Manitoba Hydro will not be held liable for any damages.

MANITOBA HYDRO RESPONSIBILITIES - GENERAL

Design and Layout

Manitoba Hydro designs the layout of the natural gas and electric distribution system throughout the development. Manitoba Hydro designs each lot capacity at 200 amps. Manitoba Hydro will design natural gas mains to meet typical residential gas loads.

Roadway Lighting

Manitoba Hydro can design roadway lighting to I.E.S (Illuminating Engineering Society) recommendations. To do so information is required from the local Public Authority stating the type of roadway. Absent this information, Manitoba Hydro will make its best effort to design the Roadway lighting appropriately or as instructed by the Public Authority. Where applicable, the lighting design must receive the Public Authority's approval prior to the Developer accepting the costs on the Electric Service Agreement.

Services

The Utilities will provide service cables/pipe to the corner of each lot as shown on the design drawing. Where requested by the Developer, natural gas, electric, telephone and cable tv services will be included.

In the case of a duplex, the utilities may provide service cables/pipe to the two front corners of the building provided that the developer provides documentation that they have instructed the respective homebuilder that the homebuilder is obligated to ensure that all applicable building codes, standards and by- laws are complied with. Proof of developer direction to the homebuilder prior to the final multi party design may be requested by Manitoba Hydro.

OTHER UTILITY RESPONSIBILITIES - GENERAL

Further information on Communication (telephone and cable tv) requirements may be available from the respective company contacts referred to at the beginning of this document.

DEVELOPER INSTALLED CROSSING

The Developer may be responsible for the placing of utility provided conduit (including trenching) prior to street paving and after road base compaction. Contact your Energy Service Coordinator for further details.

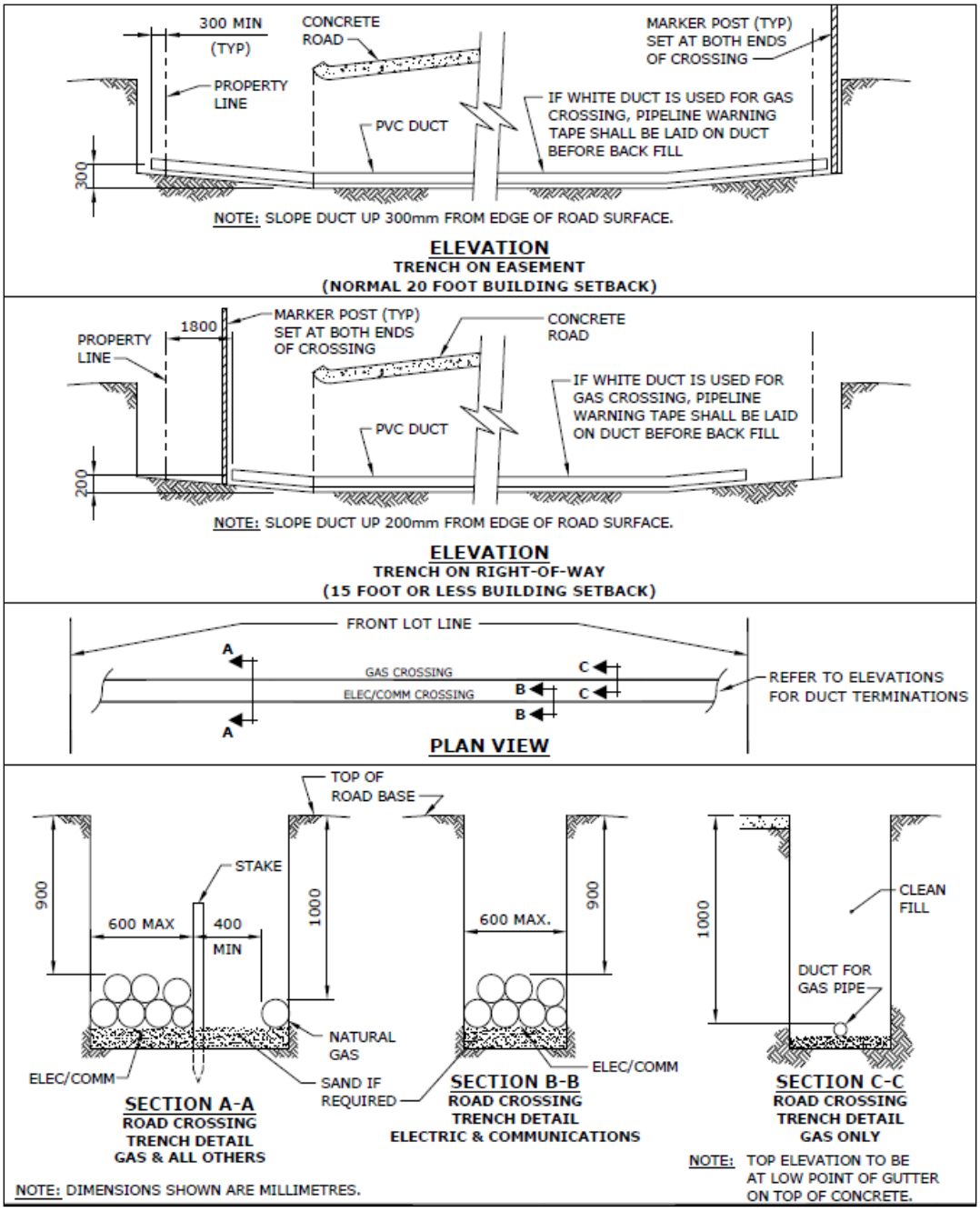


Figure 1

Developer Responsibilities

1. Provide trench depth to suit required depth of cover as shown in Figure 1. Note these dimensions are minimums.

2. Place conduits with end caps glued and sealed and mark each end with planking provided by utility. Sizes of conduits shall be specified by utility on Road Crossing Drawing. Road Crossing pipes are to be installed similar to Section A-A, B-B or C-C above and are to extend the entire width of the road allowance.

3. Backfill trench. Use sand where required.

4. **If crossings are missed or installed incorrectly by the Developer, the utilities shall directional drill the crossing, at a location selected by the Utility, and at the Developer's sole expense with no liability towards the utility.**

5. The Developer or its consultant shall contact Manitoba Hydro Construction Department a minimum of 72 hours prior to placing the crossings.

The Developer shall tie in road crossings to legal survey bar(s), and provide the information to the utilities upon their request.

Utility Responsibilities

1. Arrange all staking to identify where crossings are to be located.

2. Provide all conduits (natural gas, electric & communications) complete with end caps. Size of conduits shall be specified by the utility on the Road Crossing Drawing.

3. Provide sand as required.

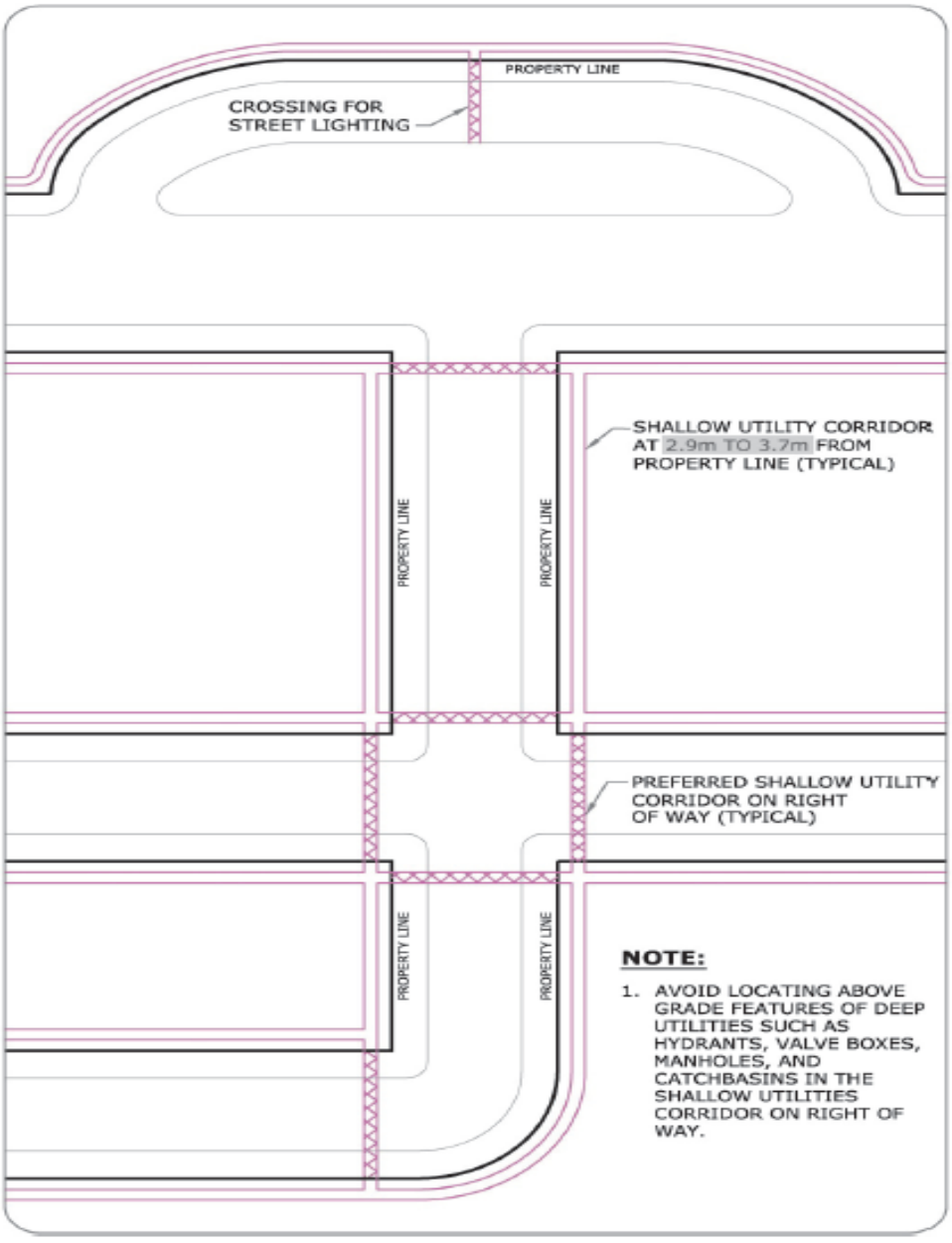
4. Provide 2" X 6" planks to mark ends of crossings.

5. Provide inspection at the discretion of Manitoba Hydro.

SHALLOW UTILITY CORRIDOR

The design for a sub-division or condominium development requires the coordination of the requirements for both the deep and shallow utilities as there is limited space. To aid in this effort below is a representation of the typical shallow utility corridor. Deep utility designer should consider the future location of the shallow utilities in this corridor when doing their design.

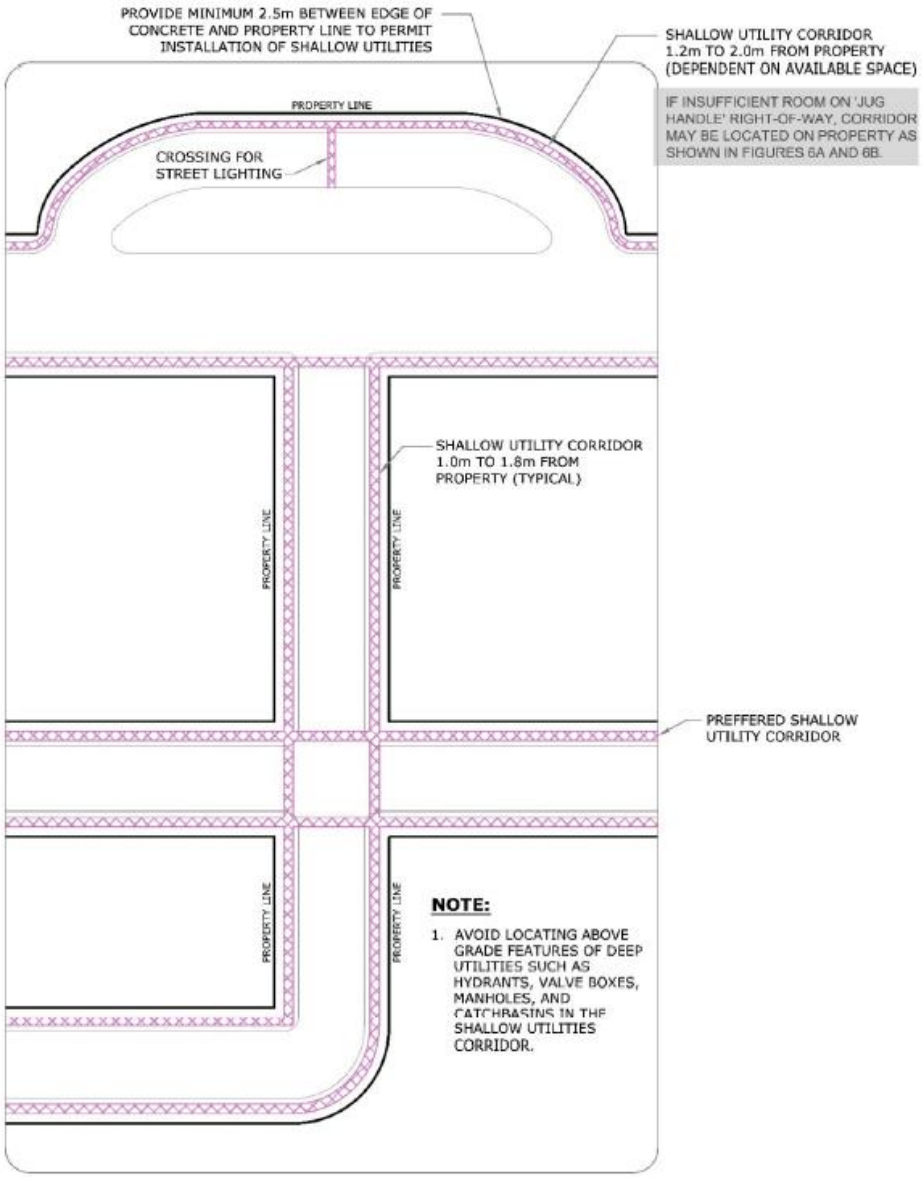
Setback 25' and more



Preferred Shallow Utilities Corridor, Trench on Property - **Setback 25' and More**

Figure 2

Setback less than 25'



Preferred Shallow Utilities Corridor, Trench on Right of Way - **Setback less than 25'**

Figure 3

WATER AND SEWER SERVICES

Depending on the layout of the sub-division, the Developer may be required to install water and sewer stubs onto each lot. The following drawings show the relationship between the deep and shallow services to each lot and the requirement for the stubbing of the water and sewer. Contact your Energy Service Coordinator for further details

CITY OF WINNIPEG APPROVED ALIGNMENTS

The City of Winnipeg has approved a alternate alignments for shallow and deep utilities for 18 Meter Residential Streets. These alignments are applicable wherever the setback of the houses, from front property, is less than 20'.

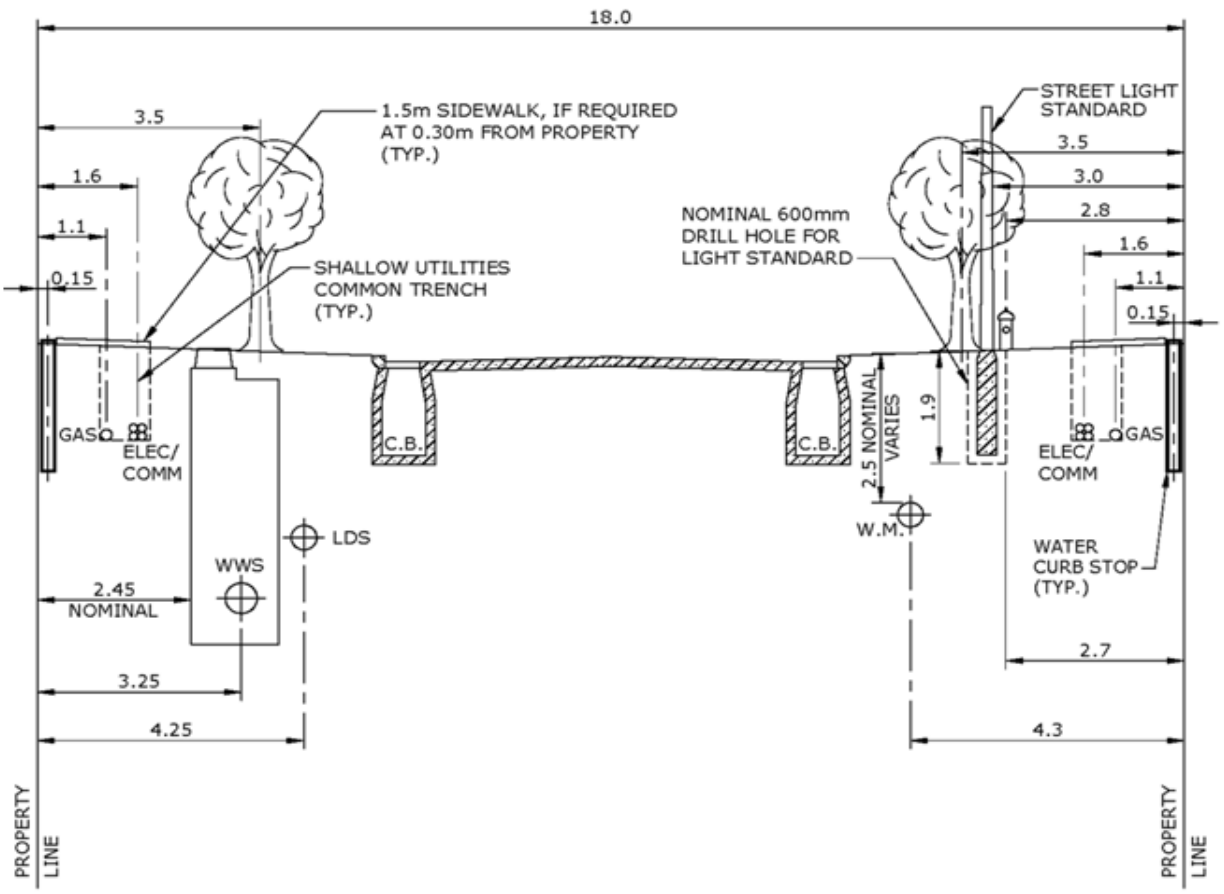


FIGURE 5 – TYPICAL UTILITY LOCATIONS ON A RESIDENTIAL STREET (18 METRE)

NOTES:

1. SHALLOW UTILITIES – NATURAL GAS, PRIMARY & SECONDARY ELECTRIC, TELEPHONE AND CABLE TELEVISION. THE ELECTRIC AND COMMUNICATIONS CABLE AND CONDUIT BUNDLE IS A NOMINAL 0.3m WIDE.
2. THE ALIGNMENT SHOWN IS FOR USE IN THE CITY OF WINNIPEG, REVIEW LOCAL REQUIREMENTS AS REQUIRED.
3. ALL DIMENSIONS ARE METRES.

Figure 4

SHALLOW UTILITIES ON EASEMENT (Setback 25'or more)

Where the setbacks of the homes are 25' or more, the shallow utilities will typically be installed on a front lot easement. It is in this case that the Developer will be required to stub the water and sewer services 5.4M onto the lot past the shallow utility main trench.

Typical URD Layout -Common Trench on Easement (25' Setback or more)

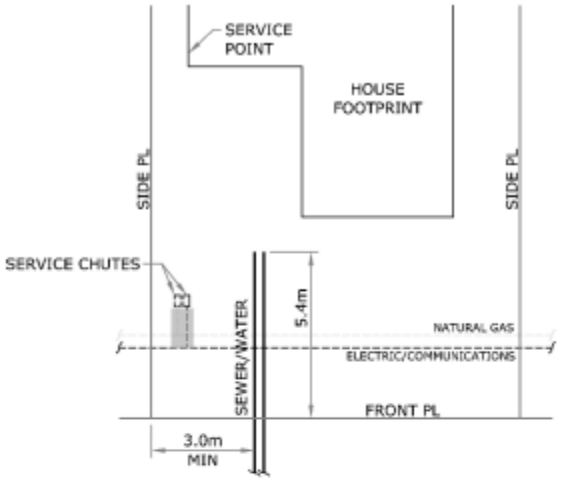


FIGURE 22 - TYPICAL SERVICE STUB LOCATION MAIN TRENCH ON EASEMENT

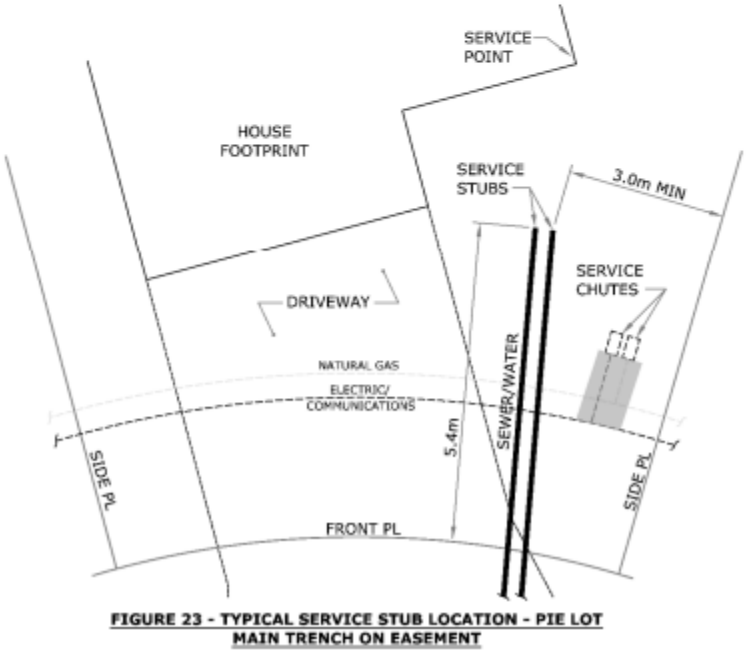


FIGURE 23 - TYPICAL SERVICE STUB LOCATION - PIE LOT MAIN TRENCH ON EASEMENT

Figure 5

Developer Responsibilities

Install water and sewer services 5.4m onto the lot and a minimum of 3.0m from the side lot line as indicated. Each service is to be identified via 2x6 plank extending 1m above grade.

Utility Responsibilities

Where water and sewer services are installed 5.4m onto the lot and a minimum of 3.0m from the side lot line the utilities shall provide a service point on the same side of the lot as the water and sewer stubs.

Alternate URD Layout - Common Trench on Easement (25' setback or more)

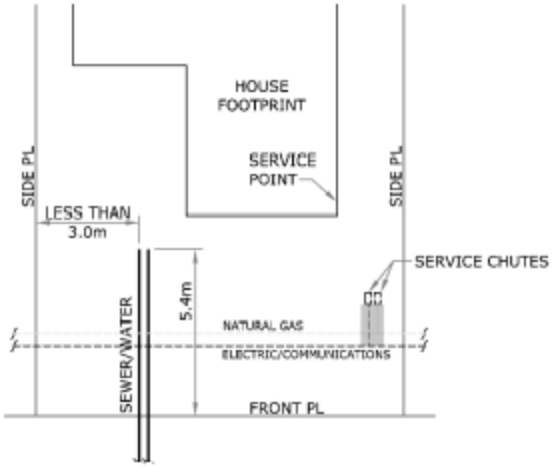


FIGURE 24 - ALTERNATE SERVICE STUB LOCATION MAIN TRENCH ON EASEMENT

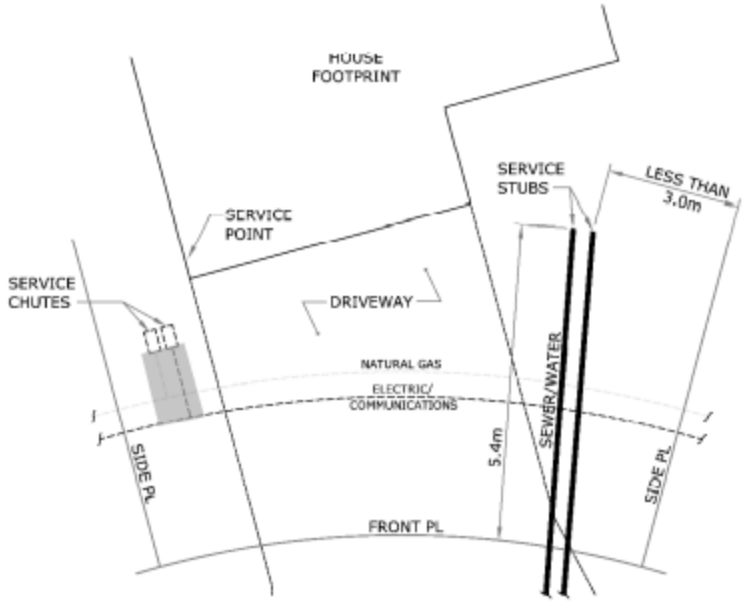


FIGURE 25 - ALTERNATE SERVICE STUB LOCATION - PIE LOT MAIN TRENCH ON EASEMENT

Figure 6

Developer Responsibilities

Install water and sewer services 5.4m onto the lot. Each service is to be identified via 2x6 plank extending 1m above grade.

Where the water and sewer services are installed less than 3.0m from side lot line, shallow utility (natural gas, electric & communications) services shall be installed on the opposite side of lot as indicated.

Utility Responsibilities

Where water and sewer services are installed 5.4m onto the lot but are less than 3.0m from side lot line, the utility shall provide a service point to the opposite side of lot to the water and sewer.

SHALLOW UTILITIES ON RIGHT OF WAY (Setback less than 25')

Where the setbacks of the homes are less than 25', the shallow utilities, in most cases, will be installed on public Right of Way. In this case the Developer can terminate the water and sewer service stubs at the property line. If the shallow utilities are installed on easement, as in the case of what are referred to as "jug handles", the Developer will be required to stub the water and sewer services 4.5M onto the lot past the shallow utility main trench.

Typical URD Layout -Common Trench on Right-of Way

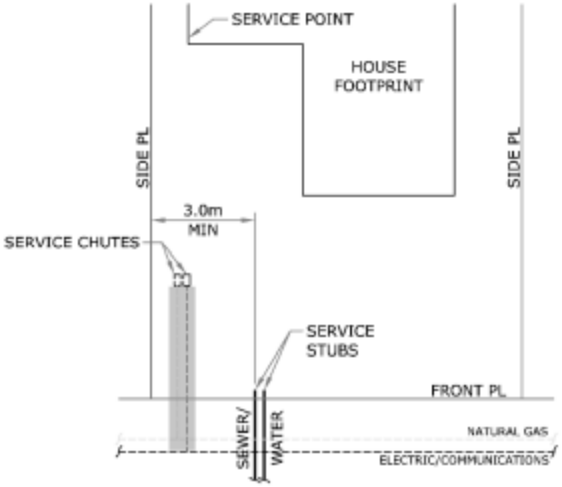


FIGURE 26 - TYPICAL SERVICE STUB LOCATION
MAIN TRENCH ON RIGHT OF WAY

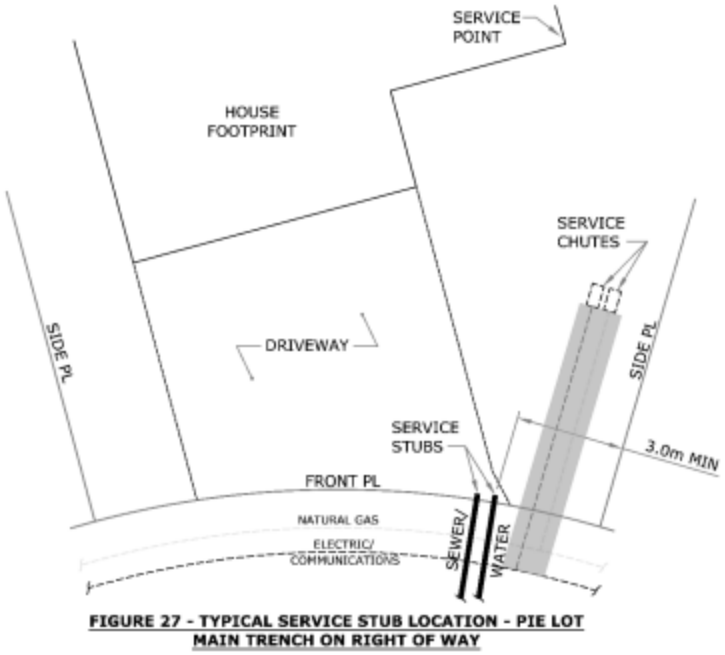


FIGURE 27 - TYPICAL SERVICE STUB LOCATION - PIE LOT
MAIN TRENCH ON RIGHT OF WAY

Figure 7

Developer Responsibilities

Install water and sewer services to property line and a minimum of 3.0m from the side lot line as indicated. Each service is to be identified via 2x6 plank extending 1m above grade.

Utility Responsibilities

Where water and sewer services are installed a minimum of 3.0m from the side lot line the utilities shall provide a service point on the same side of the lot as the water and sewer stubs.

Alternate URD Layout - Common Trench on Right of Way (Setback less than 25')

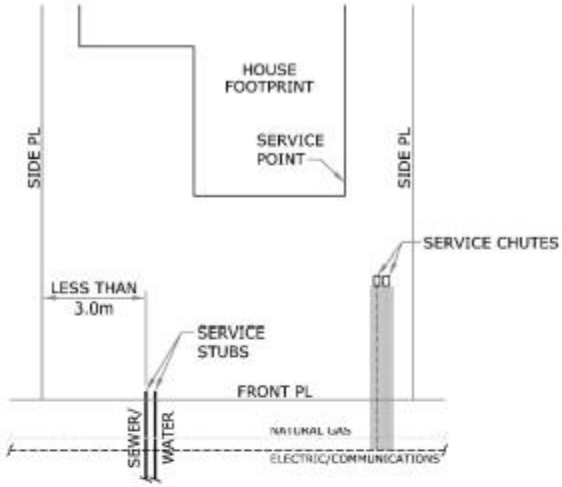


FIGURE 28 - ALTERNATE SERVICE STUB LOCATION MAIN TRENCH ON RIGHT OF WAY

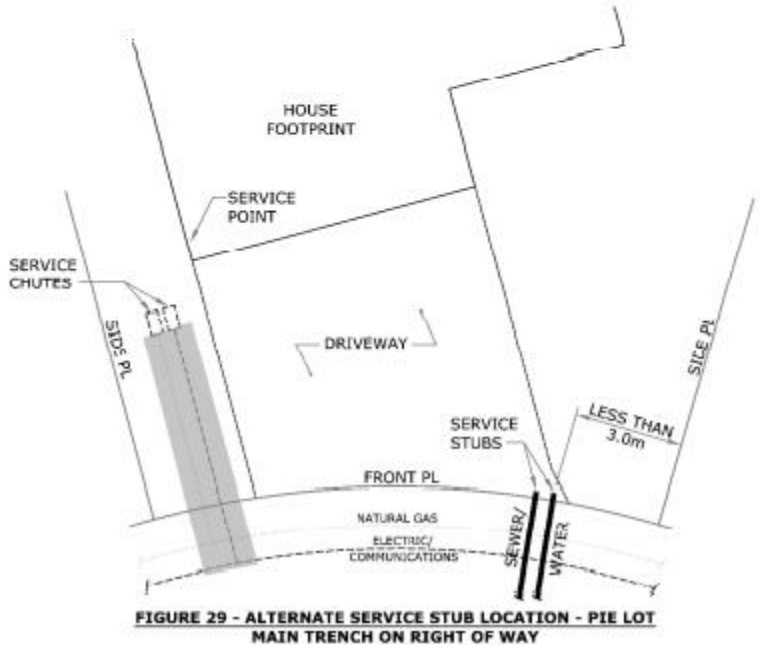


FIGURE 29 - ALTERNATE SERVICE STUB LOCATION - PIE LOT MAIN TRENCH ON RIGHT OF WAY

Figure 8

Developer Responsibilities

Install water and sewer services to front property line. Each service is to be identified via 2x6 plank extending 1m above grade.

Where the water and sewer services are installed less than 3.0m from side lot line, shallow utility (natural gas, electric & communications) services shall be installed on the opposite side of lot as indicated.

Utility Responsibilities

Where water and sewer services are installed less than 3.0m from side lot line, the utility shall provide a service point to the opposite side of lot to the water and sewer.

Multi Family Dwellings and CONDOMINIUMS

Underground Residential Distribution

DEVELOPER RESPONSIBILITIES - GENERAL

Design and Layout

The Developer shall design the multi family or condominium development including building, street and deep utility layout in order to allow a corridor for the shallow utilities (Refer to Fig.9). The space required for the shallow utilities shall be based on the following criteria:

- The natural gas main shall maintain a minimum of 2.5m clearance from the building foundation.

- The electric/communication will be located relative to the natural gas main in an 800mm wide common trench.

- Typically a common trench will be required on both sides of a paved street (Fig. 2 & 3 on pages 17 & 18).

- Space shall be maintained for the pad mounted transformers and communication pedestals. A minimum 1.0m clearance is required between the transformer/pedestals and the building.

- The transformer/pedestals shall not be located on top of the natural gas, water or sewer mains. The electric/communications may be located under the transformer/pedestals.

- The natural gas and/or electric/communication alignment shall maintain a minimum clearance from the deep utilities of 1.25m.

Typical Utility Alignment for Condo Developments

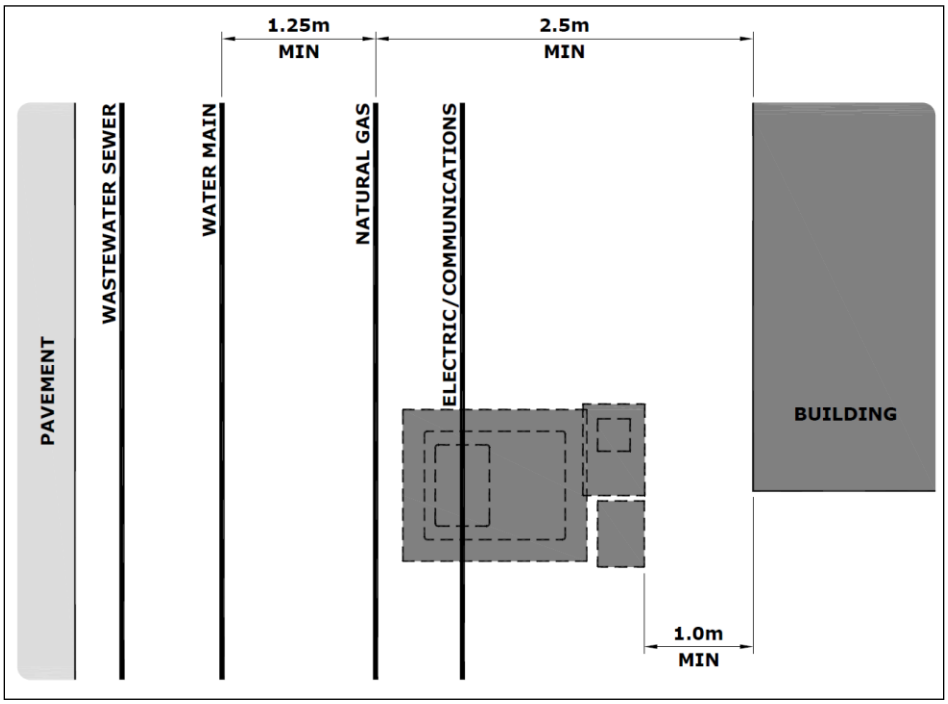


Figure 9

Figure 9 above is for illustration purposes only. Other configurations may be acceptable providing all conditions above are met.

NEW HOME CONSTRUCTION

Before you start your new home construction contact your local Manitoba Hydro office to determine:

Service Point Location
Any applicable costs
Service Requirements
Service installation date

Application for Service

Prior to receiving service you must complete an application for Electric/Natural gas Service – Residential. Information required for the service application is:

Service Location
Site Plan
Home Design (first floor)
Service Size
Heating Source (electric, gas, geothermal)
Gas Appliances (fireplace, range, BBQ, pool heater, etc)
Contractor Name
Date Service Required

Service points

Your natural gas and electric service points are designated by Manitoba Hydro customer service staff. It is the obligation of the homebuilder to ensure that all applicable building codes, standards and by- laws are complied with. Proof of a completed inspection by a Public Authority, prior to the connection of the electric and/or gas service, may be required by Manitoba Hydro.

Both your natural gas and electric service points will be located on the corner of your home or garage nearest the energy service chute box or service pole. The first 2 metres of the home or garage must be free of windows, air intakes, exhaust vents, dryer vents and electrical outlets to allow for the installation of the meters. See Figure 12.

In the case of a duplex, a separate natural gas and electric service point will be located on both the left hand and right hand corners of the building. In the case of an infill lot, proof of inclusion

of an approved firewall by an Architect, Professional Engineer etc registered to practice in the Province of Manitoba shall be required.

The first 2 metres of the home or garage must be free of windows, air intakes, exhaust vents, dryer vents and electrical outlets to allow for the installation of the meters. See Figure 12.

The amount of utility space required can be minimized by using a Compact Meter Layout. Using this layout reduces the amount of space to 1.1M. See Figures 13 & 14.

Electric Meter Box Size

Depending on the size of the lot and distance from the service point to the transformer, Manitoba Hydro may have installed larger 350kcmil service cable to the corner of the lot. As a result your electrician will need to ensure that the meter box is installed will accept this size of cable, for example:

Manufacture	*Amperage*	*Part No.*
Hydel Enterprises	200A	MSC200XL

Electric Service Point on Garage

Manitoba Hydro works with the Developers to avoid service points on garages where possible. However, there will be times when the electric meter will be installed on the garage. Several options are open to the homeowner to get the wires from the meter to the service panel often located in the utility room in the basement. These options are:

- pipe along the surface of wall to the service panel
- with the addition of an electric meter box and disconnect, the pipe or cable may be taken through the inside of the garage/house to the service panel.
- with the use of underground cable the service may be placed in a trench along side the basement wall of the house to the service panel

As seen above, there are options to running a pipe down the wall of the garage/house to the service panel. Consult with your electrician to see what option is best for you.

Gas Service Point on Garage

As noted above, Manitoba Hydro works with the Developers to avoid service points on garages where possible. However, there will be times when the gas meter will be installed on the garage. There are options for the homeowner for getting the gas pipe from the meter to the furnace:

- pipe along the surface of the wall to the furnace. (Note: This piping can be inside or outside the building.)

- install a polyethylene gas line from the meter, underground in a trench alongside the basement wall of the house to the furnace. Manitoba Hydro can provide the appropriate polyethylene underground gas line c/w fittings for a charge.

Communication Service Point on Garage

For cases when the communication services are installed on the garage, homeowners must be aware that a separate grounding conductor needs to be installed by their electrician to the service point on the garage. For further information on this requirement contact MTS and/or your Cable TV company contact.

Permits

Prior to commencing work you will require a permit for electric and natural gas service. Your service will not be connected if the work has not passed inspection.

Service Installation

Manitoba Hydro installs the service conductor to the service point specified by Manitoba Hydro. The Home Owner is responsible to install the electric meter and riser pipe. The Home Owner is also responsible to install one pipe each for telephone and cable tv. See Figures 11, 13 & 14.

Communication services will be installed at the same time as the electric and gas.

Manitoba Hydro installs the service pipe, meter and regulator to the service point specified by Manitoba Hydro. The installation of the natural gas meter must comply with the CSA B-149 code book (please contact your Energy Service Coordinator for regulations). It is the responsibility of the homebuilder to contact Manitoba Hydro regarding service inquiries.

Service Installation Timing

Once you have completed the application for service, taken out the required permits, passed the required inspections and paid any applicable costs (all utilities), Manitoba Hydro will schedule your service installation. The timing for the installation of the services may vary upon location.

There are requirements that need to be met to acquire a service at this point in construction:

1. first floor plan must be provided in order to ensure that no opening windows, vents, exhausts etc are to be installed in the vicinity of the gas service. See Figure 15 for clearance requirements.
2. The structure must be up, weatherproof and secure before the electrical service will be energized.

Grade Changes

Manitoba Hydro transformers and communication company's pedestals and/or grade level enclosures subjected to higher or lower grades than specified by the Developer will result in this equipment needing to be reinstalled. The cost of such reinstallation will be the responsibility of the Home Owner.

Damage to Utility Services

The cost to repair any damage to Utility services caused by the Home Owner or any of their contractors will be the responsibility of the Home Owner.

Damage to Utility Chute Box Markers

Damage to the Utility Chute Box Markers will result in an additional charge to the Home Owner of $250.00.

TEMPORARY SERVICE

If temporary service is required it will be treated as a separate item and temporary service charges will apply.

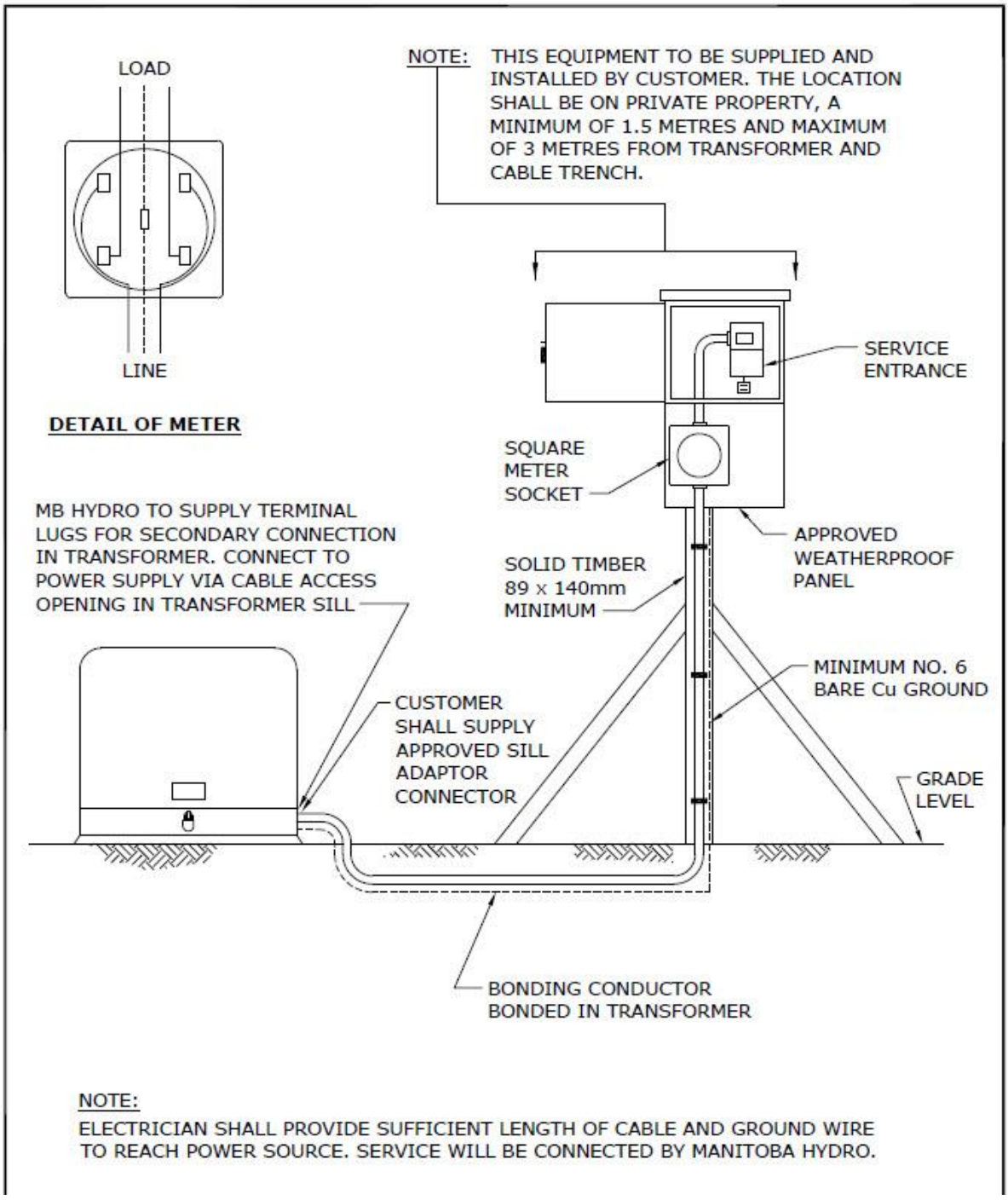
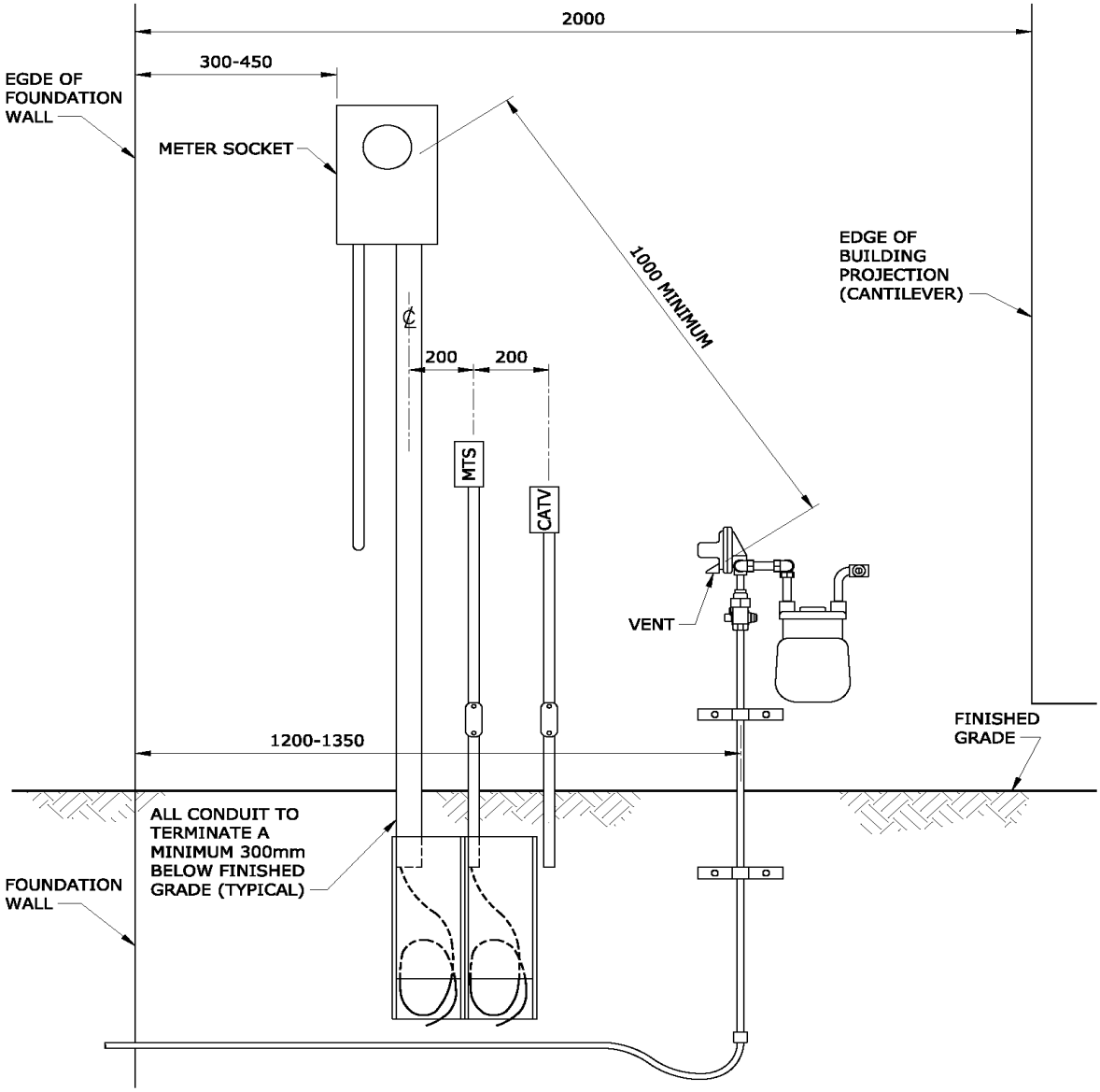


Figure 10

TYPICAL METER LAYOUT



NOTES:

1. MINIMUM SEPARATION FROM BOTTOM OF VENT TO METER GLASS, AND FROM EDGE OF FOUNDATION TO START OF CANTILEVER MUST BE PROVIDED. ALL OTHER DIMENSIONS ARE NOMINAL (PLUS/MINUS) TO SUIT SITE CONDITIONS.
2. A MINIMUM 1000mm CLEARANCE IS REQUIRED BETWEEN THE METER SOCKET BASE AND THE PROPERTY LINE.
3. DIMENSIONS SHOWN ARE MILLIMETRES.
4. LEFT SIDE LAYOUT IS SIMILIAR.
5. LOCATION OF THE COMMUNICATION SERVICE POINTS CAN BE SWITCHED WITH THE ELECTRIC SERVICE POINT TO SUIT SITE REQUIREMENTS.

Figure 11

Clearance from Natural Gas Regulator Vent

This standard identifies separation of regulator vents and building openings and/or sources of ignition. This standard is not intended to describe separation requirements between various building openings.

Separation Requirement

Spacing between a regulator vent and building openings or sources of ignition shall comply with distances shown.

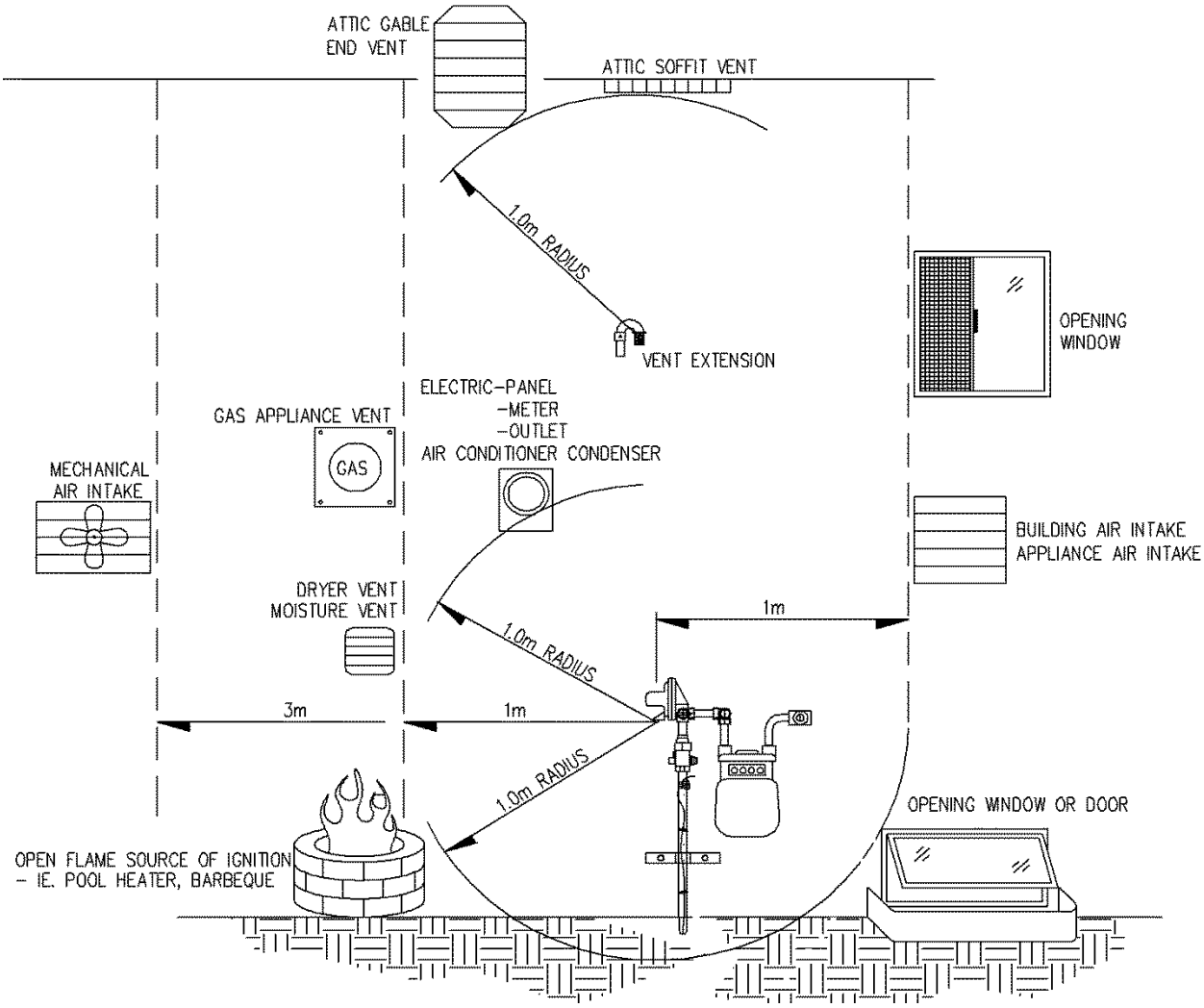


Figure 12
Separation Requirements for gas service

COMPACT METER LAYOUT – RIGHT SIDE

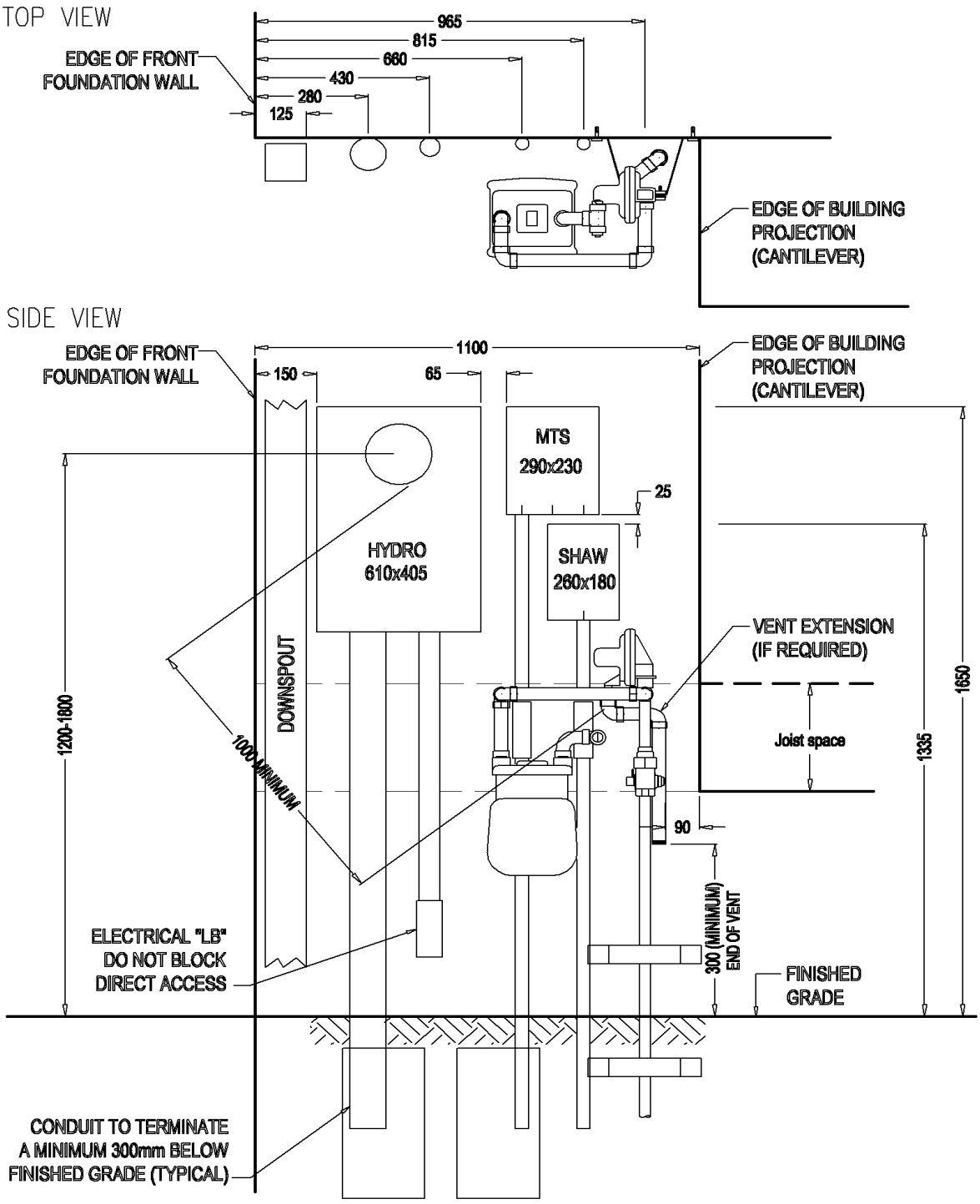


Figure 13

Figure 13A

Installation Notes

1. A minimum of 1000mm clearance is required from the closest point of the electric meter glass to the gas regulator relief vent. Install a vent extension if needed to obtain this distance.
2. As per the Manitoba Electrical Code, a minimum working space of 1000mm with secure footing is required in front of all electrical equipment, including the electrical meter socket. Thins distance must be located on the customer's own property and the measurement cannot extend beyond the customer property line.
3. The 24"X16" (610X405mm) Hydro meter box shown is suitable for use with 350kcmil Hydro secondary conductors. All dimensions shown shall apply when a smaller meter box is used.
4. Dimensions shown are in millimetres.

COMPACT METER LAYOUT – LEFT SIDE

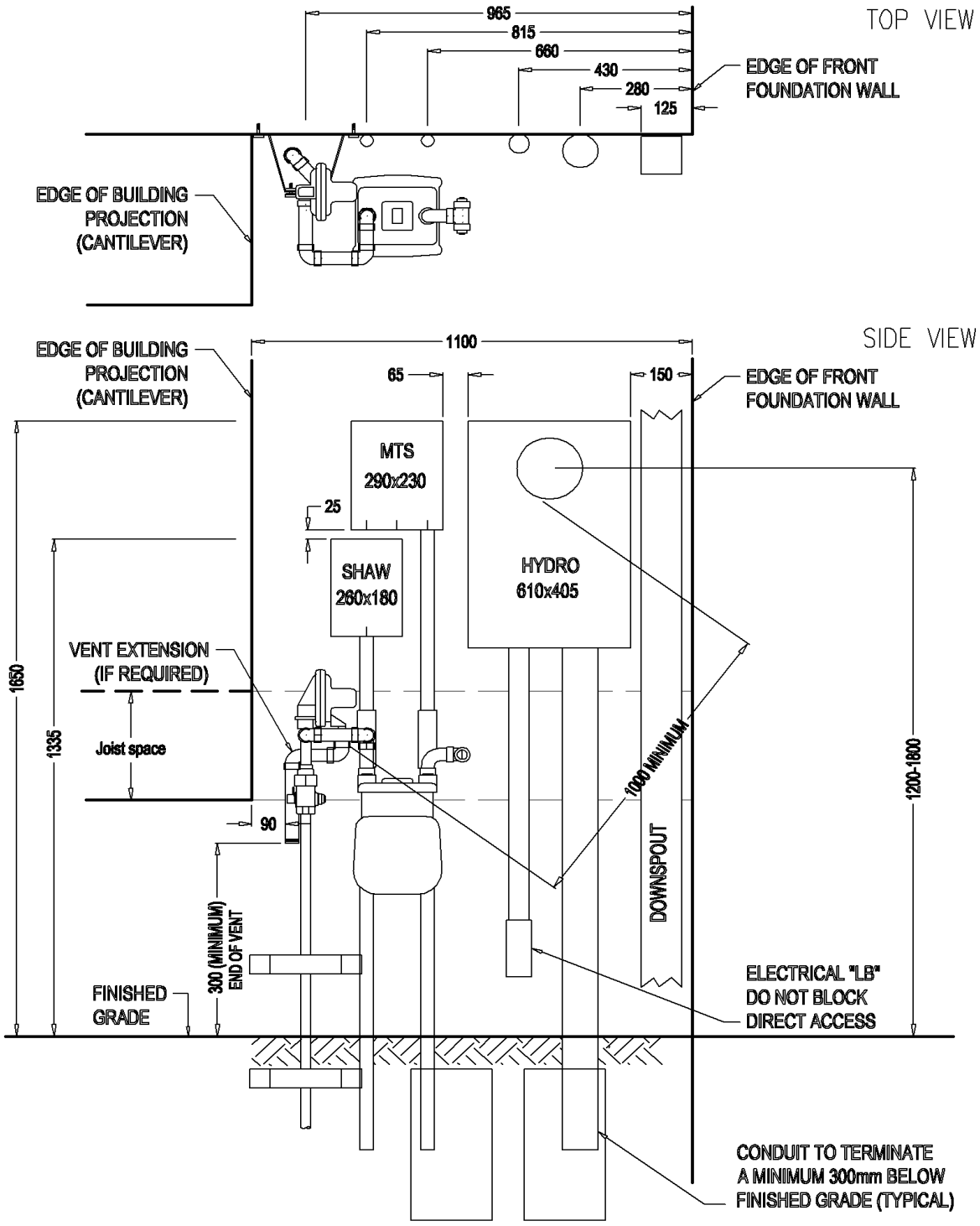


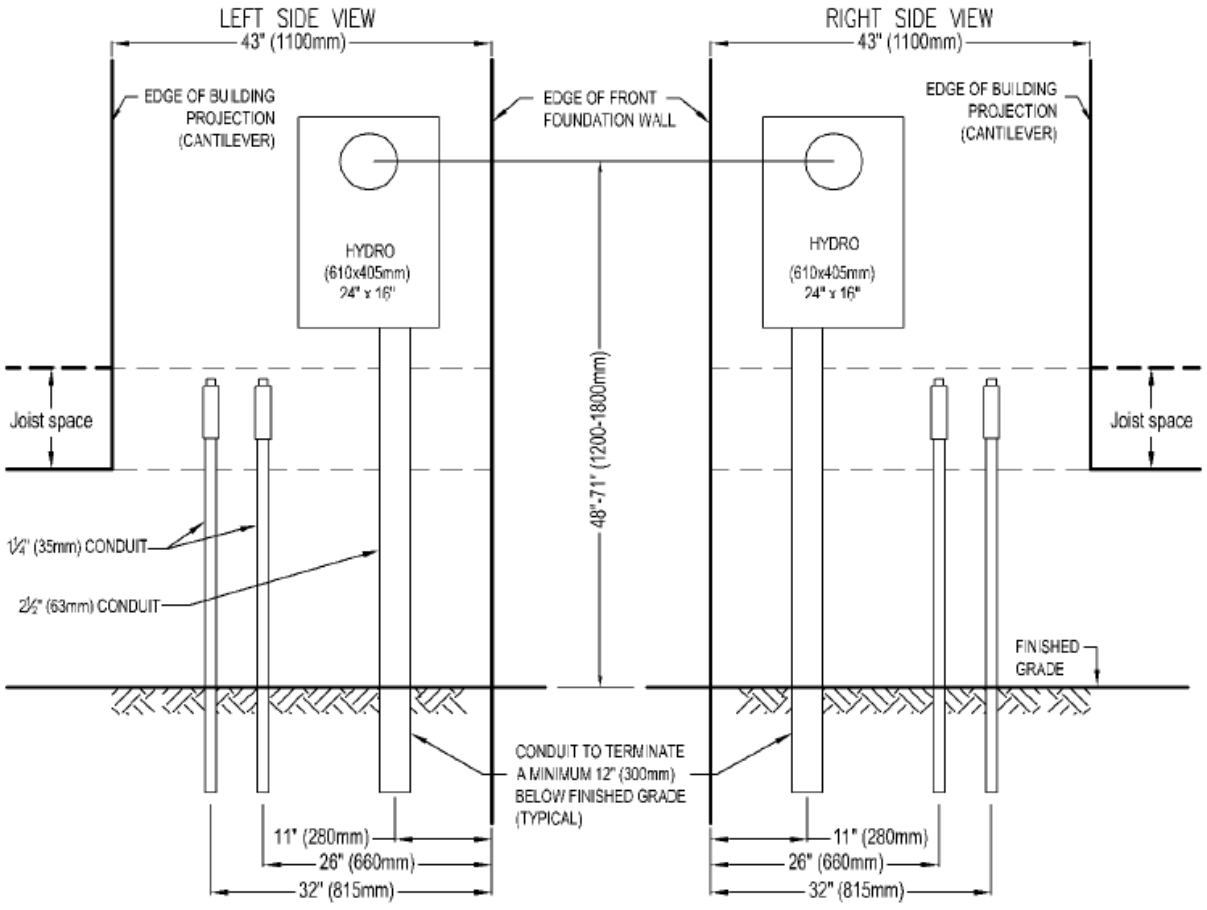
Figure 14

Figure 14A

Installation Notes

1. A minimum of 1000mm clearance is required from the closest point of the electric meter glass to the gas regulator relief vent. Install a vent extension if needed to obtain this distance.
2. As per the Manitoba Electrical Code, a minimum working space of 1000mm with secure footing is required in front of all electrical equipment, including the electrical meter socket. Thins distance must be located on the customer's own property and the measurement cannot extend beyond the customer property line.
3. The 24"X16" (610X405mm) Hydro meter box shown is suitable for use with 350kcmil Hydro secondary conductors. All dimensions shown shall apply when a smaller meter box is used.
4. Dimensions shown are in millimetres.

Compact Meter Layout - Electrical Contractor Rough-in

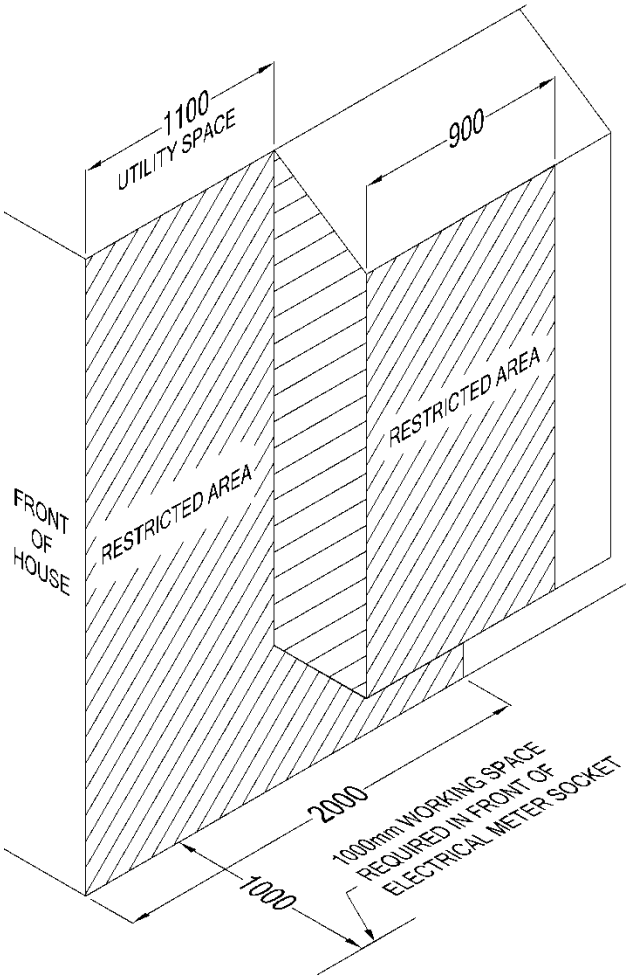


Notes:

Manitoba Hydro service installation will not proceed if rough-in is not installed as shown.

Figure 15

Utility Space Restricted Area
Minimum Distance from Building Corner



Shaded area ▨ denotes the restricted area prohibiting wall openings and certain features including:

- Doors
- Opening windows
- Building or combustion air intakes
- Exhaust vents (building exhaust, dryer exhaust, appliance vent)
- Source of ignition
- Electrical outlets
- Sump pump discharge
- Outdoor tap

Notes:

The utility space shall be a flat surface i.e. no cantilevers, faux columns or other obstructions.

The installation of a rain gutter downspout shall not interfere with the utility equipment.

Dimensions shown are millimetres.

Figure 16

ALWAYS USE ELECTRICITY SAFELY

- Where conductors are overhead or adjacent to your work area of activity, contact Manitoba Hydro for assistance to assure worker electrical safety and to prevent power outages.

- Locate material storage areas well away from power lines to prevent workers and children from climbing up to a live circuit.

Residential properties may have various utilities buried on them including gas, electric, telephone and cable tv. Have these underground lines located **before** you dig. Cutting into an electric or gas line can be dangerous. Cutting into a telephone or cable tv cable can be costly. Manitoba Hydro will locate their underground electric and gas lines for you at no charge.

CONTACT "CLICK BEFORE YOU DIG MANITOBA" AT

ClickBeforeYouDigMB.com

THREE FULL WORKING DAYS

PRIOR TO CONSTRUCTION FOR LOCATION OF EXISTING WATER, WASTEWATER, LAND DRAINAGE UTILITIES AND MANITOBA HYDRO UTILITIES

Regrading and landscaping can reduce the amount of soil over buried lines. Check for utility locations before starting this kind of work.

Call or click before you dig.

For Manitoba Hydro (Electricity & Natural Gas) Call:

1-800-940-3447
Email: info@clickbeforeyoudigmb.com

For more information on Click Before You Dig go to:

http://www.clickbeforeyoudigmb.com/

Available in accessible formats upon request