

# BUILDING PERMIT

This card must be kept posted in a conspicuous place on site of construction.

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17 192112 BLD 00 SR

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Site Address 21 MILLBROOK CRES

Project Description SFD - Semi-Detached;

Interior Alterations

Date Issued Wednesday July 05, 2017

**Ann Borooh**  
Chief Building Official and  
Executive Director

**Mario Angelucci**  
Deputy Chief Building Official and  
Director

**THIS IS YOUR PERMIT TO CONSTRUCT  
PERMIT NUMBER: 17 192112 BLD 00 SR**

**Owner:**

AARON DAVIS

**Address:**

21 MILLBROOK CRES  
TORONTO, ON M4K 1H2  
CAN

SERJENKA PAUL

21 MILLBROOK CRES  
TORONTO, ON M4K 1H2  
CAN

**Project Description:** SFD - Semi-Detached; Interior Alterations

**Project Location:** 21 MILLBROOK CRES

**Ward:**

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The issuance of this permit is based on the drawings, specifications, details and information submitted with the application. The submitted documents have been reviewed for compliance with the Ontario Building Code, Zoning By-laws, applicable regulations and legislation.

The referenced permit number listed above and on your permit placard also appears on all plans reviewed for this building permit application. The validity of this permit is restricted to the person/company named as owner. Permit ownership cannot be transferred unless prior written authorization is given by the Chief Building Official.

The extent of construction authorized under this permit is limited to the description contained herein as follows: Proposal for interior alterations to basement, ground floor and second floor of existing dwelling.

Stated work and use must be in accordance with the plans, specifications, building permit notes and other information issued with this building permit. Changes to any documents submitted are not to be made unless prior authorization is obtained from the Chief Building Official or designate. False information may be grounds for revocation of the building permit.

Notwithstanding, it is the responsibility of the owner to comply with requirements of the Ontario Building Code and applicable laws as well as to ensure compliance ..

The permit placard must be posted in a conspicuous place on the construction site.

Mario Angelucci  
Deputy Chief Building Official  
Toronto and East York District

**Issued by:** South District Issuance Team  
**Date Issued:** July 05, 2017

**Please see the second page of this letter for additional requirements and inspection information.**

## WHEN YOU BEGIN DEMOLITION/CONSTRUCTION ...

### Site Fencing

As soon as construction or demolition starts, your site must be entirely surrounded by a fence which is in compliance with the City of Toronto Municipal Code Chapter 363, Article III. The minimum requirement is plastic mesh fencing, 1.2 metres high, tied to posts spaced no more than 1.2 metres apart with an 11 gauge top and bottom wire threaded through the mesh and looped around each post. The Municipal Code is available on the City website at: [http://www.toronto.ca/legdocs/municode/1184\\_363.pdf](http://www.toronto.ca/legdocs/municode/1184_363.pdf)

### Construction Noise

Any construction which generates noise is prohibited in residential areas between the hours of 7:00 p.m. one day to 7:00 a.m. the next day, 9:00 a.m. on Saturdays, and all day Sunday and Statutory holidays.

### When To Call For Inspection

You are required by Division C, Part 1, Article 1.3.5.1. of the Ontario Building Code, to notify the building inspection office at several prescribed stages of construction. Please contact the building inspection office at the telephone number listed below, when each of the following stages are substantially complete:

### Inspection Stages

- |                             |                      |                             |
|-----------------------------|----------------------|-----------------------------|
| * Footings/Foundations      | * Structural Framing | * Insulation/Vapour Barrier |
| * Interior Final Inspection | * Occupancy          |                             |

### To Schedule your Next Mandatory Inspection

When you are ready to book your inspection, contact your local building inspection office by telephone at **416-338-0700**. Alternatively, you may also make contact by fax 416-696-4151 or by email to [TOBldgInsp@toronto.ca](mailto:TOBldgInsp@toronto.ca).

Inspections will take place within two days commencing at the start of business on the day following your notification (Inspection Request).

Please leave a telephone number where you can be reached or a message can be left.

The inspector assigned to your project is Les Hargraves (416) 338-0856

### PERMIT PLANS MUST BE ON SITE

Your permit plans and specifications must be on site at all times. Inspections are conducted with your copy of the plans.

July 05, 2017

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## BULLETIN - CONSTRUCTION SAFETY

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The responsibilities of the City of Toronto under the Occupational Health and Safety Act apply to all our employees regardless of the location at which they are working.

Responsibilities for the Construction Safety Regulations on construction sites are clearly spelled out in the Act under the definitions of constructor, employer, supervisor and worker.

The City of Toronto believes that the goal of safe and injury free construction sites is a priority for all parties involved in building construction.

Safety training for the City of Toronto Building Inspectors is mandatory. However the delivery of a safe working environment on construction sites must include the compliance of individual builders with the Occupational Health and Safety Act.

Safety measures include the following:

1. Temporary guards on all openings,
2. Correct use of ladders,
3. Temporary or permanent stairs above or below grade by the time the sub floor is complete,
4. Clear and safe access to the site,
5. Protection of trenches and excavation below four feet deep, and
6. Correct use of fall prevention equipment where required.

As the employer responsible for the safety of building inspectors, the City of Toronto has instructed its Building Inspectors not to conduct inspections on sites where conditions exist that could jeopardize their health and safety.

The following are examples of conditions which may jeopardize the health and safety of inspectors:

1. Guards are missing,
2. Ladders do not meet regulations,
3. Temporary or permanent stairs, above or below grade, to all floor levels are not provided as required.
4. Access to the site has impediments or hazards, or
5. Trenches or excavations lack required shoring or slope of bank.

Prior to calling for an inspection the appropriate safety measures shall be in place as a site inadequately provided with these measures is not ready for inspection. The City of Toronto Building Inspectors will cooperate with builders regarding the timing of making provision for these safety measures. However, if the measures are not provided, an Order Not To Cover could be issued and the Ministry of Labour informed.

We look forward to working with you toward the goal of a safe environment for all workers.

Notice of Project - Please be advised that the Ministry of Labour requires a Notice of Project be filed with them before starting any project costing \$50,000 or more.

For more information about the Notice of Project form, please contact your local Ministry of Labour regional office at 416-314-5421 or 1-800-991-7454. Ministry of Labour construction information is available on their website at:

[http://www.labour.gov.on.ca/english/site/construction\\_info.html](http://www.labour.gov.on.ca/english/site/construction_info.html)

Construction of the work approved in this building permit must be carried out with reasonable care to ensure protection for everyone on the construction site from the hazards associated with all overhead and underground power lines. Obtain further information at: <http://www.torontohydro.com/powerlinesafety>

**TORONTO MUNICIPAL CODE 441  
FEES AND CHARGES  
Appendix C - Schedule 8, Toronto Building**

17 192112 BLD 00 SR  
21 MILLBROOK CRES

Total Permit Fee **\$419.05**

**Work Proposed** *Interior Alterations*      **Sub** *SFD - Semi-Detached*

<b>Building Classification</b>	<b>Service</b> <small><i>Dollars per Square Meter unless otherwise indicated</i></small>	<b>Index</b>	<b>Value in Square Meters</b> <small><i>(unless otherwise indicated)</i></small>	<b>Fee</b>
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**B. Alterations and Renovations:**

Interior Alterations (Partitions, Finishings, Etc.):				
Groups C, E and F	4.93		85	419.05

Total Permit Fee **\$419.05**



## Building Permit 332\_12

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The reviewed plans and specifications must be available on site during construction/demolition. Changes to these plans and specifications are not to be made unless prior written approval is obtained from the Chief Building Official.

The owner/permit holder is required to comply with the following Permit Notes, which are part of the reviewed permit documents:

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- Carbon monoxide detector conforming with CAN/CGA-6.19, or UL2034 shall be installed on or near the ceiling in each room in which there is installed a solid fuel-burning appliance. Carbon monoxide detector(s) shall be wired so that its activation will activate the smoke alarms or be equipped with an alarm that is audible within bedrooms when the intervening doors are closed.
- Standards referenced in Section 1.3 of Division B shall be complied with Table 1.3.1.2.:
  - a) Wood - CAN/CSA- O86-01
  - b) Plain and Reinforced Masonry - CAN-S304-M or CSA-S304.1
  - c) Plain, reinforced and Pre-stressed Concrete - CAN/CSA-23.3, CAN/CSA A23.1, CAN/CSA A23.2
  - d) Structural Steel - CAN/CSA-S16-01
  - e) Parking Structures - CSA-S413
- Permit issuance does not authorize encroachments onto adjacent property.
- The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.
- HVAC and PLUMBING are not part of this permit approval.
- Smoke alarms conforming to ULC-S531, shall be provided on each floor level in accordance with article 9.10.19.2. Smoke alarms shall be installed near the stairs except, on floors containing sleeping areas the smoke alarms shall be installed between the sleeping areas and the remainder of the floor area. Where more than one smoke alarm is required, they shall be interconnected.
- In compliance with Sentence 9.14.6.1 the building site shall be so graded that discharged water will not accumulate at or near the building and will not adversely affect adjacent properties.

SURVEY INFORMATION:

The survey, required by the Building Division shall be prepared and sealed by an Ontario Land Surveyor and must provide the following information:

- \* Full legal description and address of the property,
- \* The location of the building, including dimensions for the required setbacks from the property lines
- \* The elevation of the first floor as a reference point that will be used to confirm compliance with the maximum height requirement as referenced in the Site Grading plan.
- \*When an integral garage is proposed the elevation of the vehicle entrance; or
- \*When an integral garage is proposed and the concrete slab has not been poured yet, the elevation of the proposed vehicle entrance or the height of the foundation wall directly below the proposed vehicle entrance

All structural wood elements shall be protected against termites and decay as per provisions of 9.3.2.9.

Permit issuance does not include the authority to enter on adjacent property. Refer to City of Toronto Municipal Code, Chapter 363 - Building Construction and Demolition, Article V, Right of Entry, for requirements to allow access onto adjacent property.

Rooms and spaces in residential buildings shall be naturally ventilated in accordance with 9.32.2. or mechanically ventilated in accordance with 9.32.3."



### Excavation and Backfill

- Excavation shall be undertaken in such a manner so as to prevent damage to existing structures, adjacent property and utilities
- The topsoil and vegetable matter in unexcavated areas under a building shall be removed. The bottom of excavations for foundations shall be free of all organic material
- If termites are known to exist, all stumps, roots and wood debris shall be removed to a minimum depth of **300mm** in excavated areas under a building, and the clearance between untreated structural wood elements and the ground shall be no less than **450mm**
- Backfill within **600mm** of the foundation walls shall be free of deleterious debris and boulders over **250mm** in diameter

### Dampproofing and Drainage

- In normal soil conditions, the exterior surfaces of foundation walls enclosing basements and crawl spaces shall be dampproofed. Where hydrostatic pressure occurs, a waterproofing system is required
- Masonry foundation walls shall be parged with **6mm** of mortar covered over the footing prior to dampproofing
- **100mm** dia. foundation drains shall be laid on level, undisturbed ground adjacent to the footings at or below the top of the basement slab or crawl space floor, and shall be covered with **150mm** of crushed stone. Foundation drains shall drain to a storm sewer, drainage ditch, dry well or sump
- Window wells shall be drained to the footing level or to a ditch or sump pump.
- Downspouts not directly connected to a storm sewer shall have extensions to carry water away from the building, and provisions shall be made to prevent soil erosion
- Concrete slabs in attached garages shall be sloped to drain to the exterior
- The building site shall be graded so that surface, sump and roof drainage will not accumulate at or near the building and will not adversely affect adjacent properties

### Footings

- minimum **15MPa** poured concrete
- minimum **1200mm** below finished grade
- Footings shall be founded on natural undisturbed soil, rock or compacted granular fill with minimum bearing capacity of **75kPa**  
**100kPa** for ICF

### Footing Size

Floors Supported	Supporting Ext. Wall	Supporting Int. Wall	Column Area
1	<b>250mm</b>	<b>200mm</b>	<b>0.40m<sup>2</sup></b>
2	<b>350mm</b>	<b>350mm</b>	<b>0.75m<sup>2</sup></b>
3	<b>450mm</b>	<b>500mm</b>	<b>1.00m<sup>2</sup></b>

- Increase exterior footing width by **65mm** for each storey of brick veneer supported, by **130mm** for each storey of masonry and by **150mm** for ICF
- Increase interior footing width by **100mm** for each storey of masonry above footing, and by **100mm** for each **2100mm** of wall height above **5500mm**
- The projection of an unreinforced footing beyond the wall supported shall not be greater than its thickness

### Step Footings

- **600mm** max. rise  
**600mm** min. run

### Foundation Walls

- To be poured concrete, unit masonry, ICF or preserved wood (see drawings for type and thickness)
- Dampproofing shall be a heavy coat of bituminous material.
- Foundation wall to extend minimum **150mm** above finished grade.
- A drainage layer is required on the outside of a foundation wall where the interior insulation extends more than **900mm** below exterior grade. A drainage layer shall consist of
  - Min. **19mm** mineral fibre insulation with min. Density of **57 kg/m<sup>3</sup>**
  - Min. **100mm** of free drainage granular material, or
  - An approved system which provides equivalent performance
- Foundation walls shall be braced or have the floor joists installed before backfilling

### Concrete Floor Slabs

- Garage, carport and exterior slabs and exterior steps shall be **32MPa** concrete with **5-8%** air entrainment
- Basement slab **25MPa** concrete, minimum **75mm** thick, placed on a minimum **100mm** of coarse, clean, granular material
- All fill other than coarse clean material placed beneath concrete slabs shall be compacted to provide uniform support

### Masonry Walls

- Where constructed of **90mm** brick, wall shall be bonded with a header course every **600mm** o/c vertically and horizontally and **900mm** o/c for block or tile.
  - Provide **50mm** solid masonry, concrete filled top course or continuous **38x89** wood plate under all roof and floor framing members
  - Provide **190mm** solid masonry under beams and columns
  - Masonry wall to be tied to each tier of joists with **40mm x 4.76mm** corrosion resistant steel straps, keyed minimum **100mm** into masonry. When joists are parallel to wall, ties are to extend across at least 3 joists @ **2000mm** o.c.
  - Inside of wall to be parged and covered with No. **15** breather-type asphalt paper
  - For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum **90mm** brick to minimum **90mm** back-up block with corrosion resistant ties at least **17.8mm<sup>2</sup>** in cross sectional area, spaced **200mm** vertically and **900mm** horizontally, with joints completely filled with mortar
  - Masonry over openings shall be supported on corrosion resistant or prime painted steel lintels with a minimum of **150mm** end bearing

### Masonry Veneer

- Minimum **70mm** thick if joints are not raked and **90mm** thick if joints are raked
- Minimum **25mm** air space to sheathing
- Provide weep holes @ **800mm** o.c. at the bottom of the cavity and over doors and windows
- Direct drainage through weep holes with **0.5mm** poly flashing extending minimum **150mm** up behind the sheathing paper
- Veneer ties minimum **0.76mm** thick x **22mm** wide corrosion resistant straps spaced @ **500mm** vertically and **600mm** horizontally
- Fasten ties with corrosion resistant **3.18mm** diameter screws or spiral nails which penetrate at least **30mm** into studs

### Wood Frame Construction

- All lumber shall be spruce-pine-fir No. 1 & 2, and shall be identified by a grade stamp
- Maximum moisture content 19% at time of installation
- Wood framing members which are supported on concrete in direct contact with soil shall be separated from the concrete with 0.05mm polyethylene or type 'S' roll roofing

### Walls

- Exterior walls shall consist of:
  - cladding
  - air barrier system lapped 100mm at joints
  - lumber, plywood, OSB or gypsum sheathing
  - 38x140 studs @ 400mm o.c.
  - RSI 3.34 insulation
  - 38x140 bottom plate
  - 38x140 double top plate
- Interior loadbearing walls shall consist of:
  - 38x89 studs @ 400mm o.c.
  - 38x98 bottom plate and double 38x89 top plate
  - 38x89 mid-girts if not sheathed
  - 12.7mm gypsum board sheathing

### Floors

- See 50ld for floor joist size and spacing requirements
- Joists to have minimum 38mm of end bearing
- Joists shall bear on a sill plate fixed to foundation with 12.7mm anchor bolts @ 2400mm o.c
- Header joists between 1200mm and 3200mm in length shall be doubled. Header joists exceeding 3200mm shall be sized by calculations
- Trimmer joists shall be doubled when supported header is between 800mm and 2000mm. Trimmer joists shall be sized by calculations when supported header exceeds 2000mm
- 38x38 cross bridging required not more than 2100mm from each support and from other rows of bridging
- Joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
- Non-loadbearing partitions shall be supported on a joist or on blocking between joists.
- See 50ld for subflooring requirements

### Roof & Ceilings

- See 50ld for rafter, roof joist and ceiling joist size and spacing requirements
- Hip and valley rafter shall be 38mm deeper than common rafters
- 38x89 collar ties @ rafter spacing with 19x89 continuous brace at mid span if collar tie exceeds 2400mm in length
- See 50ld for roof sheathing requirements

### Notching & Drilling of Trusses, Joists, Rafters

- Holes in floor, roof and ceiling members to be not larger than 1/4 the actual depth of member and not less than 50mm from edges
- Notches in floor, roof and ceiling members to be located on top of the member within 1/2 the actual depth from the edge of bearing and not greater than 1/3 the joist depth
- Wall studs may be notched or drilled provided that no less than 2/3 the depth of the stud remains, if load bearing, and 40mm if non-load bearing
- Roof truss members shall not be notched, drilled or weakened unless accommodated in the design

### Roofing

- Fasteners for roofing shall be corrosion resistant. Roofing nails shall penetrate through or at least 12mm into roof sheathing
- Every asphalt shingle shall be fastened with at least 4 nails for 1000mm wide shingle (or 6 11mm staples)
- Eave protection shall extend 900mm up the roof slope from the edge, and at least 300mm from the inside face of the exterior wall, and shall consist of Type M or Type S Roll Roofing laid with minimum 100mm head and end laps cemented together, or glass Fibre or Polyester Fibre coated base sheets, or self sealing composite membranes consisting of modified bituminous coated material or No.15 saturated felt lapped and cemented. Eave protection is not required for unheated buildings, for roofs exceeding a slope of 1 in 1.5, or where a low slope asphalt shingle application is provided
- Open valleys shall be flashed with 2 layers of roll roofing, or 1 layer of sheet metal min. 600mm wide
- Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys
- Sheet metal flashing shall consist of not less than 1.73mm sheet lead, 0.33mm galvanized steel, 0.33mm copper, 0.35mm zinc, or 0.48mm aluminum

### Columns, Beams & Lintels

- Steel beams and columns shall be shop primed 350W steel.
- Minimum 89mm end bearing for wood and steel beams, with 190mm solid masonry beneath the beam.
- Steel columns to have minimum outside diameter of 73mm and minimum wall thickness of 4.76mm
- Wood columns for carports and garages shall be minimum 89mm x 89mm; in all other cases either 140mm x 140mm or 184mm round, unless calculations based on actual loads show lesser sizes are adequate. All columns shall be not less than the width of the supported member
- Masonry columns shall be a minimum of 290mm x 290mm or 240mm x 380mm
- Provide solid blocking the full width of the supported member under all concentrated loads

### Insulation & Weatherproofing

- |                           |          |
|---------------------------|----------|
| Ceiling with attic        | RSI 8.81 |
| Roof without attic        | RSI 5.46 |
| Exterior Wall             | RSI 4.23 |
| Foundation Wall           | RSI 3.52 |
| Foundation > 50% exposed  | RSI 4.23 |
| Exposed Floor             | RSI 5.46 |
| Slabs on Grade (unheated) | RSI 1.76 |
| (heated)                  | RSI 1.76 |
- Supply Ducts in unheated space RSI 2.11
  - Insulation shall be protected with gypsum board or an equivalent interior finish, except for unfinished basements where 0.15mm poly is sufficient for fibreglass type insulations
  - Ducts passing through unheated space shall be made airtight with tape or sealant
  - Caulking shall be provided for all exterior doors and windows between the frame and the exterior cladding
  - Weatherstripping shall be provided on all doors and access hatches to the exterior, except doors from a garage to the exterior
  - Exterior walls, ceilings and floors shall be constructed so as to provide a continuous barrier to the passage of water vapour from the interior and to the leakage of air from the exterior

### Natural Ventilation

- Every roof space above an insulated ceiling shall be ventilated with unobstructed openings equal to not less than 1/300 of the insulated ceiling area
- Insulated roof spaces not incorporating an attic shall be ventilated with unobstructed openings equal to not less than 1/150 of the insulated ceiling area.
- Roof vents shall be uniformly distributed with min. 25% at top of the space and 25% at bottom of the space designed to prevent the entry of rain, snow or insects
- Unheated crawl spaces shall be provided with 0.1m<sup>2</sup> of ventilation for each 50m<sup>2</sup>
- Minimum natural ventilation areas, where mechanical ventilation is not provided, are:  
Bathrooms: 0.09m<sup>2</sup>  
other rooms: 0.28m<sup>2</sup>  
Unfinished basement: 0.2% of floor area

### Doors and Windows

- Every floor level containing a bedroom and not served by an exterior door shall contain at least 1 window having an unobstructed open area of 0.35m<sup>2</sup> and no dimension less than 380mm, which is openable from the inside without tools. Maximum sill height 1000mm for fin. floors above grade.
- Exterior house doors and windows within 2000mm from grade shall be constructed to resist forced entry. Doors shall have a deadbolt lock
- The principal entry door shall have either a door viewer, transparent glazing or a sidelight
- Maximum U-value 1.8 for windows & sliding glass doors

### Exterior Walls

- No windows or other unprotected openings are permitted in exterior walls less than 1200mm from property lines
- 15.9mm type 'x' fire rated drywall shall be installed on the inside face of attached garage exterior walls and gable ends of roofs which are less than 1200mm and not less than 600mm from property lines
- Non combustible cladding shall be installed on all exterior walls less than 600mm from property lines

### Ceramic Tile

- When ceramic tile is applied to a mortar bed with adhesive, the bed shall be a minimum of 12.5mm thick & reinforced with galvanized diamond mesh lath, applied over polyethylene on subflooring on joists at no more than 400mm o.c. with at least 2 rows cross bridging

### Access to Attics and Crawl Spaces

- Access hatch minimum 545mmx 588mm to be provided to every roof space which is 10m<sup>2</sup> or more in area and more than 600mm in height
- Access hatch minimum 500mmx 700mm to be provided to every crawl space

### Garage Gasproofing

- The walls and ceiling of an attached garage shall be constructed and sealed so as to provide an effective barrier to exhaust fumes
- All plumbing and other penetrations through the walls and ceiling shall be caulked
- Doors between the dwelling and attached garage may not open into a bedroom and shall be weatherstripped and have a self-closer

### Alarms and Detectors

- At least one smoke alarm shall be installed on or near the ceiling on each floor and basement level 900mm or more above an adjacent level
- Smoke alarms shall be interconnected and located such that one is within 5m of every bedroom door and no more than 15m travel distance from any point on a floor
- A carbon monoxide detector shall be installed adjacent to every sleeping area for dwellings with fuel burning fireplace or stove, or an attached garage

### Stairs

- Maximum Rise 200mm
- Minimum Run 210mm
- Minimum Tread 235mm
- Minimum Head Room 1950mm
- Minimum Width 860mm
- Curved stairs shall have a min. run of 150mm at any point and a minimum average run of 200mm
- Winders which converge to a point in stairs must turn through an angle of no more than 90°, with no less than 30° or more than 45° per tread. Sets of winders must be separated by 1200mm along the run of the stair
- A landing is required at the top of any stair leading to the principal entrance to a dwelling and other exterior entrances with more than 3 risers
- Exterior concrete stairs with more than 2 risers require foundations

### Handrails and Guards

- A handrail is required for interior stairs containing more than 2 risers and exterior stairs containing more than 3 risers
- Guards are required around every accessible surface which is more than 600mm above the adjacent level and where the adjacent surface has a slope more than 1:2
- Interior and exterior guards min. 900mm high. Exterior guards shall be 1070mm high where height above adjacent surface exceeds 1800mm
- Guards shall have openings smaller than 100mm and no member between 140mm and 900mm that will facilitate climbing

### Plumbing

- Every dwelling requires a kitchen sink, lavatory, water closet, bathtub or shower stall and the installation or availability of laundry facilities
- A floor drain shall be installed in the basement, and connected to the sanitary sewer where gravity drainage is possible. In other cases, it shall be connected to a sewage ejection pump.

### Electrical

- An exterior light controlled by an interior switch is required at every entrance
- A light controlled by a switch is required in every kitchen, bedroom, living room, utility room, laundry room, dining room, bathroom, vestibule, hallway, garage and carport. A switched receptacle may be provided instead of a light in bedrooms and living rooms
- Stairs shall be lighted, and except where serving an unfinished basement shall be controlled by a 3 way switch at the head and foot of the stairs
- Basements require a light for each 30m<sup>2</sup> controlled by a switch at the head of the stairs

### Mechanical Ventilation

- A mechanical ventilation system is required with a total capacity at least equal to the sum of:
  - 10.0 L/S each for basement and master bedroom
  - 5.0 L/S for each other room
- A principal dwelling exhaust fan shall be installed and controlled by a centrally located switch identified as such
- Supplemental exhaust shall be installed so that the total capacity of all kitchen, bathroom and other exhausts, less the principal exhaust, is not less than the total required capacity
- A Heat Recovery Ventilator may be employed in lieu of exhaust to provide ventilation. An HRV is required if any solid fuel burning appliances are installed
- Supply air intakes shall be located so as to avoid contamination from exhaust outlets

## ROOF RAFTERS (WHERE NO CEILING IS INSTALLED)

MAXIMUM CLEAR SPAN (M)						
RAFTER SIZE	ROOF SNOW LOAD 1.0 kPa			ROOF SNOW LOAD 1.5 kPa		
	RAFTER SPACING (mm) O.C.					
	300	400	600	300	400	600
38x89	3.11	2.83	2.47	2.72	2.47	2.16
38x140	4.90	4.45	3.89	4.28	3.89	3.40
38x184	6.44	5.85	5.11	5.62	5.11	4.41
38x235	8.22	7.47	6.38	7.18	6.52	5.39

## ROOF JOISTS (WHERE CEILING IS INSTALLED)

MAXIMUM CLEAR SPAN (M)						
JOIST SIZE	ROOF SNOW LOAD 1.0 kPa			ROOF SNOW LOAD 1.5 kPa		
	JOIST SPACING (mm) O.C.					
	300	400	600	300	400	600
38x89	2.47	2.24	1.96	2.16	1.96	1.71
38x140	3.89	3.53	3.08	3.40	3.08	2.69
38x184	5.11	4.64	4.05	4.46	4.05	3.54
38x235	6.52	5.93	5.18	5.70	5.18	4.52

## FLOOR JOISTS

MAXIMUM CLEAR SPAN (M)												
JOIST SIZE	19x64mm STRAPPING OR DRYWALL CLG.			38x38mm CROSS BRIDGING			BOTH STRAPPING & BRIDGING			38-51mm CONCRETE TOPPING		
	JOIST SPACING (mm)			JOIST SPACING (mm)			JOIST SPACING (mm)			JOIST SPACING (mm)		
	300	400	600	300	400	600	300	400	600	300	400	600
38x89	1.86	1.72	1.58	1.99	1.81	1.58	1.99	1.81	1.58	1.99	1.81	1.58
38x140	2.92	2.71	2.49	3.14	2.85	2.49	3.14	2.85	2.49	3.14	2.85	2.49
38x184	3.54	3.36	3.20	3.81	3.58	3.27	3.99	3.72	3.27	4.12	3.75	3.27
38x235	4.17	3.96	3.77	4.44	4.17	3.92	4.60	4.29	4.00	5.27	4.79	4.13
38x286	4.75	4.52	4.30	5.01	4.71	4.42	5.17	4.82	4.49	6.23	5.81	4.79

## CEILING JOISTS

MAXIMUM CLEAR SPAN (M)			
JOIST SIZE	JOIST SPACING (mm) O.C.		
	300	400	600
38x89	3.11	2.83	2.47
38x140	4.90	4.45	3.89
38x184	6.44	5.85	5.11
38x235	8.22	7.47	6.52

## SUBFLOORING

FLOOR JOIST UP TO (mm) O.C.	SUBFLOORING MIN. THICKNESS (mm)		
	PLYWOOD	WAFER BD.	LUMBER
400	15.5	15.9	17.0
500	15.5	15.9	19.0
600	18.5	19.0	19.0

## ROOF SHEATHING

ROOF FRAMING (mm) O.C.	ROOF SHEATHING UNSUPPORTED EDGES MIN. THICKNESS (mm)	ROOF SHEATHING TONGUE & GROOVE, 'H'-CLIPS OR OTHER EDGE SUPPORT MIN. THICKNESS (mm)
300	7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER	7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER
400	9.5 PLYWOOD, 11.1 WAFER BD. OR 17.0 LUMBER	7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER
600	12.5 PLYWOOD OR 19.0 LUMBER	9.5 PLYWOOD, 11.1 WAFER BD. OR 19.0 LUMBER

## GENERAL NOTES

- ALL LUMBER TO BE NO. 1#2 SPF OR BETTER
- STRAPPING & CROSS BRIDGING MAXIMUM 2100mm FROM END SUPPORT & OTHER ROWS OF STRAPPING & BRIDGING.
- CEILING JOIST TABLE MAY BE APPLIED ONLY WHERE ATTIC IS NOT ACCESSIBLE BY A STAIRWAY.
- WHERE FINISHED FLOORING CONSISTS OF 19mm WOOD STRIPS, SUBFLOOR MAY BE REDUCED TO 12.7mm.

**TACBOC**  
STANDARD DETAIL

TITLE  
SPECIFICATION - BUILDING CODE STANDARDS  
STRUCTURAL SPAN TABLES & NOTES

DWG. NO.

SOLD

2007

## 1. MATERIALS AND EQUIPMENT

- A 'T' FITTING SHALL NOT BE USED IN A DRAINAGE SYSTEM EXCEPT TO CONNECT A VENT PIPE.
- A CROSS FITTING SHALL NOT BE USED IN A DRAINAGE SYSTEM.
- NO 'Y', DOUBLE 'Y', DOUBLE 'T' OR DOUBLE WASTE FITTING SHALL BE INSTALLED IN A NOMINALLY HORIZONTAL SOIL OR WASTE PIPE.

## 2. DRAINAGE SYSTEM

- EVERY SANITARY DRAINAGE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PROVIDED WITH CLEANOUTS THAT WILL PERMIT CLEANING OF THE ENTIRE SYSTEM.
- A CLEANOUT FITTING SHALL BE PROVIDED ON THE UPSTREAM SIDE AND DIRECTLY OVER EVERY RUNNING TRAP. HORIZONTAL SOIL OR WASTE PIPE.
- WHERE THERE IS A CHANGE OF DIRECTION GREATER THAN 45 DEGREES IN A SANITARY BUILDING DRAIN OR SANITARY BUILDING SEWER, A CLEANOUT SHALL BE INSTALLED AT EACH CHANGE IN DIRECTION.
- EVERY SANITARY BUILDING DRAIN OR STORM BUILDING DRAIN SHALL BE PROVIDED WITH A CLEANOUT FITTING THAT IS LOCATED AS CLOSE AS PRACTICAL TO THE PLACE WHERE THE DRAIN LEAVES THE BUILDING.
- EVERY SOIL OR WASTE STACK SHALL BE PROVIDED WITH A CLEANOUT FITTING AT THE BOTTOM OF THE STACK.
- A CLEANOUT SHALL BE INSTALLED ON A FIXTURE DRAIN SERVING A KITCHEN SINK.
- WHEN GRAVITY DRAINAGE TO A SANITARY DRAINAGE SYSTEM IS POSSIBLE, A FLOOR DRAIN SHALL BE INSTALLED IN A BASEMENT, FORMING PART OF A DWELLING UNIT.
- SANITARY UNITS, BATHTUBS AND SHOWER BATHS SHALL NOT BE INSTALLED ADJACENT TO WALL AND FLOOR SURFACES THAT ARE PERVIOUS TO WATER.
- EVERY FIXTURE SHALL BE PROTECTED BY A SEPARATE TRAP.
- PROVISION SHALL BE MADE FOR MAINTAINING THE TRAP SEAL OF A FLOOR DRAIN BY THE USE OF A TRAP SEAL PRIMER.
- EVERY DRAINAGE PIPE THAT HAS A SIZE OF 3 INCHES (75mm) OR LESS, AND EVERY FIXTURE DRAIN SHALL HAVE A DOWNWARD SLOPE IN THE DIRECTION OF FLOW OF AT LEAST 1 IN 50 ( 1/4 INCH PER FOOT ).
- WHERE IT IS NOT POSSIBLE TO COMPLY WITH 1 IN 50 SLOPE A LESSER SLOPE MAY BE USED IF IT WILL PROVIDE A GRAVITY FLOW OF NOT LESS THAN 0.60M PER SECOND.
- EVERY SANITARY BUILDING DRAIN AND EVERY SANITARY BUILDING SEWER SHALL BE AT LEAST 4 INCHES IN SIZE.
- EVERY STORM BUILDING DRAIN AND EVERY STORM BUILDING SEWER SHALL BE AT LEAST 4 INCHES IN SIZE.
- INDIRECT CONNECTIONS OR ANY TRAP THAT MAY OVERFLOW SHALL NOT BE LOCATED IN A CRAWL SPACE OR ANY OTHER UNFREQUENTED AREA.
- THERE SHALL BE NO UNUSED OPEN ENDS IN A DRAINAGE SYSTEM AND DEAD ENDS SHALL BE SO GRADED THAT WATER WILL NOT COLLECT IN THEM.
- ONLY PIPING THAT IS TOO LOW TO DRAIN INTO A BUILDING SEWER BY GRAVITY SHALL BE DRAINED TO A SUMP OR RECEIVING TANK.
- WHERE THE SUMP OR TANK RECEIVES SANITARY SEWAGE IT SHALL BE WATER AND AIR-TIGHT AND SHALL BE VENTED.
- THE DISCHARGE PIPE FROM EVERY PUMPED SANITARY SEWAGE PUMP SHALL BE EQUIPPED WITH A UNION, A CHECK VALVE AND A SHUT-OFF VALVE INSTALLED IN THAT SEQUENCE IN THE DIRECTION OF DISCHARGE.
- A SUBSOIL DRAINAGE PIPE THAT DRAINS INTO A SANITARY DRAINAGE SYSTEM THAT IS SUBJECT TO SURCHARGE SHALL BE CONNECTED IN SUCH A MANNER THAT SEWAGE CANNOT BACK UP INTO THE SUBSOIL DRAINAGE PIPE.
- THE DEVELOPED LENGTH OF EVERY FIXTURE OUTLET PIPE SHALL NOT EXCEED 1200mm.
- WHERE CLOTHES WASHERS DO NOT DRAIN TO A LAUNDRY TRAY, THE TRAP INLET SHALL BE FITTED WITH A VERTICAL STANDPIPE THAT IS NOT LESS THAN 600mm LONG MEASURED FROM THE TRAP WEIR AND THE TOP OF THE STANDPIPE SHALL TERMINATE ABOVE THE FLOOD LEVEL RIM OF THE CLOTHES WASHER IT SERVES.

## 3. VENTING SYSTEM

- EVERY TRAP SHALL BE VENTED.
- EVERY SANITARY BUILDING DRAIN SHALL TERMINATE AT ITS UPSTREAM END IN A STACK OF AT LEAST 3 INCHES IN SIZE.
- A STACK SHALL BE A SOIL STACK IF ONE IS AVAILABLE AND MAY BE A VENT STACK OR WASTE STACK THAT PROVIDES AT LEAST 3 INCHES STACK VENT AND THAT GOES TO OPEN AIR ABOVE THE ROOF, EITHER DIRECTLY OR THROUGH A HEADER.
- EVERY SUMP OR TANK THAT RECEIVES SANITARY SEWAGE SHALL BE PROVIDED WITH A VENT PIPE THAT IS CONNECTED TO THE TOP OF THE SUMP OR TANK.
- THE MINIMUM SIZE OF THE VENT PIPE FOR A SANITARY SEWAGE PUMP OR TANK, OR DILUTION TANK SHALL BE ONE SIZE SMALLER THAN THE SIZE OF THE LARGEST BRANCH OR FIXTURE DRAIN DRAINING TO THE SUMP OR TANK.
- AIR ADMITTANCE VALVES SHALL ONLY BE USED IN BUILDINGS UNDERGOING RENOVATION AND INSTALLATIONS WHERE CONNECTION TO A VENT MAY NOT BE PRACTICAL.
- INSTALLED AIR ADMITTANCE VALVES SHALL BE ACCESSABLE AND LOCATED IN A SPACE THAT ALLOWS AIR TO ENTER THE VALVE.

## 4. POTABLE WATER

- EVERY POTABLE WATER SYSTEM SHALL BE CAPABLE OF WITHSTANDING WITHOUT LEAKAGE A WATER PRESSURE THAT IS AT LEAST 1000 kPa (145 PSI) FOR AT LEAST 1 HOUR OR WITHSTANDING FOR AT LEAST 2 HOURS WITHOUT A DROP IN PRESSURE, AN AIR PRESSURE THAT IS AT LEAST 700 kPa (102 PSI).
- EVERY FIXTURE SUPPLIED WITH SEPARATE HOT AND COLD WATER CONTROLS SHALL HAVE THE HOT WATER CONTROL ON THE LEFT AND THE COLD ON THE RIGHT.
- A BUILDING CONTROL VALVE SHALL BE PROVIDED ON EVERY WATER SERVICE PIPE AT THE LOCATION WHERE THE WATER SERVICE PIPE ENTERS THE BUILDING.
- EVERY WATER CLOSET SHALL BE PROVIDED WITH A SHUT-OFF VALVE ON ITS WATER SUPPLY PIPE.
- EVERY WATER PIPE THAT SUPPLIES A HOT WATER TANK, PRESSURE VESSEL, PLUMBING APPLIANCE OR WATER USING DEVICE SHALL BE PROVIDED WITH A SHUT OFF VALVE LOCATED CLOSE TO THE TANK, PRESSURE VESSEL, PLUMBING APPLIANCE OR WATER USING DEVICE.
- EVERY PIPE THAT PASSES THROUGH AN EXTERIOR WALL TO SUPPLY WATER TO THE EXTERIOR OF THE BUILDING SHALL BE PROVIDED WITH A FROST-PROOF HYDRANT WITH A SEPARATE SHUT-OFF VALVE OR A STOP-AND-WASTE COCK LOCATED INSIDE THE BUILDING AND CLOSE TO THE WALL.
- WHERE A HOSE BIB IS INSTALLED OUTSIDE A BUILDING, INSIDE A GARAGE OR WHERE THERE IS AN IDENTIFIABLE RISK OF CONTAMINATION, THE POTABLE WATER SYSTEM SHALL BE PROTECTED AGAINST BACKFLOW BY A BACKFLOW PREVENTER.
- NO WATER SYSTEM BETWEEN THE POINT OF CONNECTION WITH THE WATER SERVICE PIPE OR THE WATER METER AND THE FIRST BRANCH THAT SUPPLIES A WATER HEATER SHALL BE LESS THAN 3/4 INCH IN SIZE.
- EVERY WATER SERVICE PIPE SHALL NOT BE LESS THAN 3/4 INCH IN TRADE SIZE.
- A CHECK VALVE SHALL BE INSTALLED AT THE BUILDING END OF THE WATER SERVICE PIPE WHERE THE PIPE IS MADE OF PLASTIC THAT IS SUITABLE FOR COLD WATER USE ONLY.
- PROTECTION AGAINST THERMAL EXPANSION SHALL BE REQUIRED WHEN A CHECK VALVE, A BACKFLOW PREVENTER OR A PRESSURE REDUCING VALVE IS REQUIRED.

## 5. HOT WATER TEMPERATURE CONTROL

- SHOWER VALVES SHALL BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. A PRESSURE BALANCED OR THERMOSTATIC MIXING VALVE SHALL NOT BE REQUIRED FOR SHOWERS WHERE THE HOT WATER SUPPLY FOR SHOWERS, ARE CONTROLLED BY A MASTER THERMOSTATIC MIXING VALVE. PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES SHALL BE DESIGNED SUCH THAT THE OUTLET TEMPERATURE DOES NOT EXCEED 44°C (120°F).

# DRAWING PACKAGE PROPOSED 2 STOREY INTERIOR ALTERATION









21 MILLBROOK CRES  
TORONTO ONTARIO

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Tel: 416-816-3089 [INFO\\_SDCONSTRUCTION@YAHOO.CA](mailto:INFO_SDCONSTRUCTION@YAHOO.CA)

17 192112 BLD 00

ZONING **FOR**  
O.B.C. **REFERENCE**  
FIRE SERVICES **ONLY**  
O.B.C. (S)

TYPICAL LEGEND	
	EXISTING WALL
	TYPICAL INTERIOR WALLS, 2"x4" WOOD STUDS @ 16" O.C R20 INSULATION, SUPER 6 WAPOUR BARRIAR, 1/2 " GYPSUM BOARD.
	TYPICAL INTERIOR WALLS, 2"x4" WOOD STUDS @ 16" O.C. 1/2 " GYPSUM BOARD.
	MECHANICAL VENT FAN
	FURNACE
	SMOKE ALARM
	CARBON MONOXIDE DETECTOR
	HOT WATER HEATER

NOTE:  
PROPOSED ALTERATION AREA: 350 FT [32.5 M]<sup>2</sup>  
PROPOSED FINISHING BASEMENT AREA: 478 FT [44.4 M]<sup>2</sup>

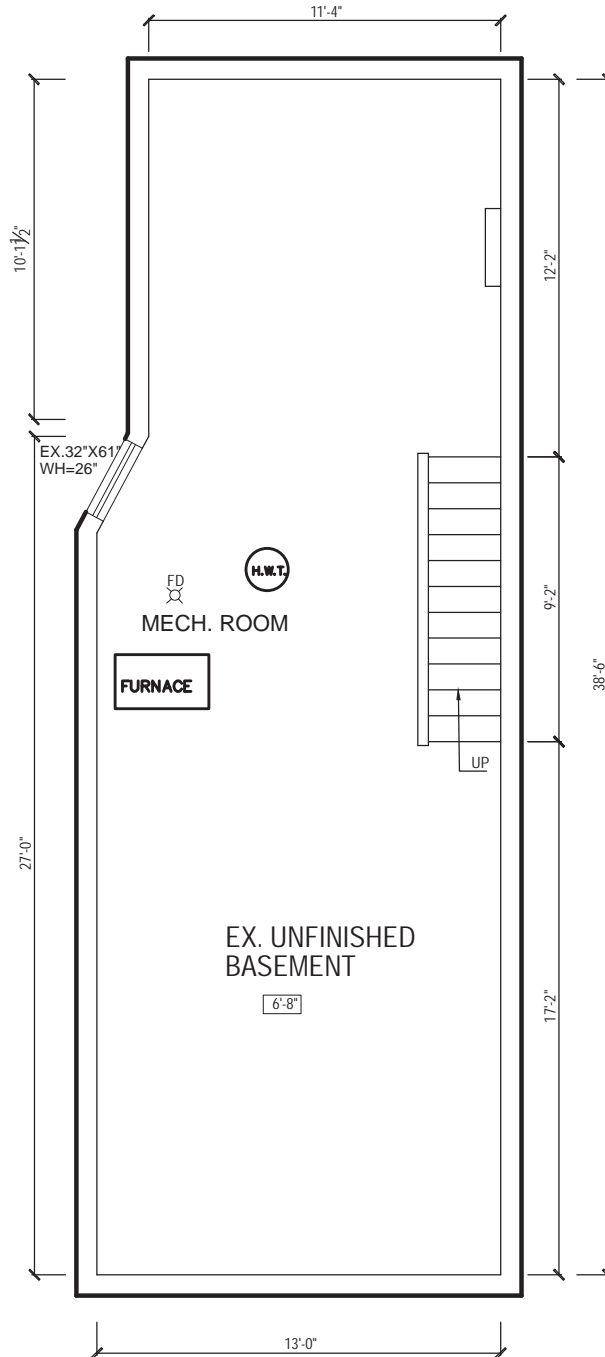


Drawing are not to be scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code-O. REG.350.06 as amended.

Please note: \_\_\_\_\_  
Date: Jun. 23, 2017  
Scale: NTS  
Drawn by: T  
Project: 21 MILLBROOK CRES  
TORONTO ONTARIO  
Drawing: LEDGEND  
Project #: \_\_\_\_\_ Drawing #: A0

**FOR  
REFERENCE  
ONLY**

ZONING	
O.B.C.	
FIRE SERVICES	
O.B.C. (S)	



Existing basement Floor Plan



Drawing are not to be scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code O. REG.350.06 as amended.

Please note: \_\_\_\_\_

Date: Jun. 23, 2017

Scale: 1/4" = 1'

Drawn by: T

Project: 21 MILLBROOK CRES  
TORONTO ONTARIO

Drawing: Existing basement Floor Plan

Project #: \_\_\_\_\_

Drawn by #: A1



THIS PERMIT HAS BEEN REVIEWED FOR THE PROPOSED INTERIOR ALTERATIONS ONLY. ANY OTHER WORK IS BEYOND THIS REVIEW.

NO ENCROACHMENTS PERMITTED ONTO ADJACENT PROPERTIES ABOVE OR BELOW GRADE, INCLUDING EAVES, OVERHANGS, AND FOOTINGS

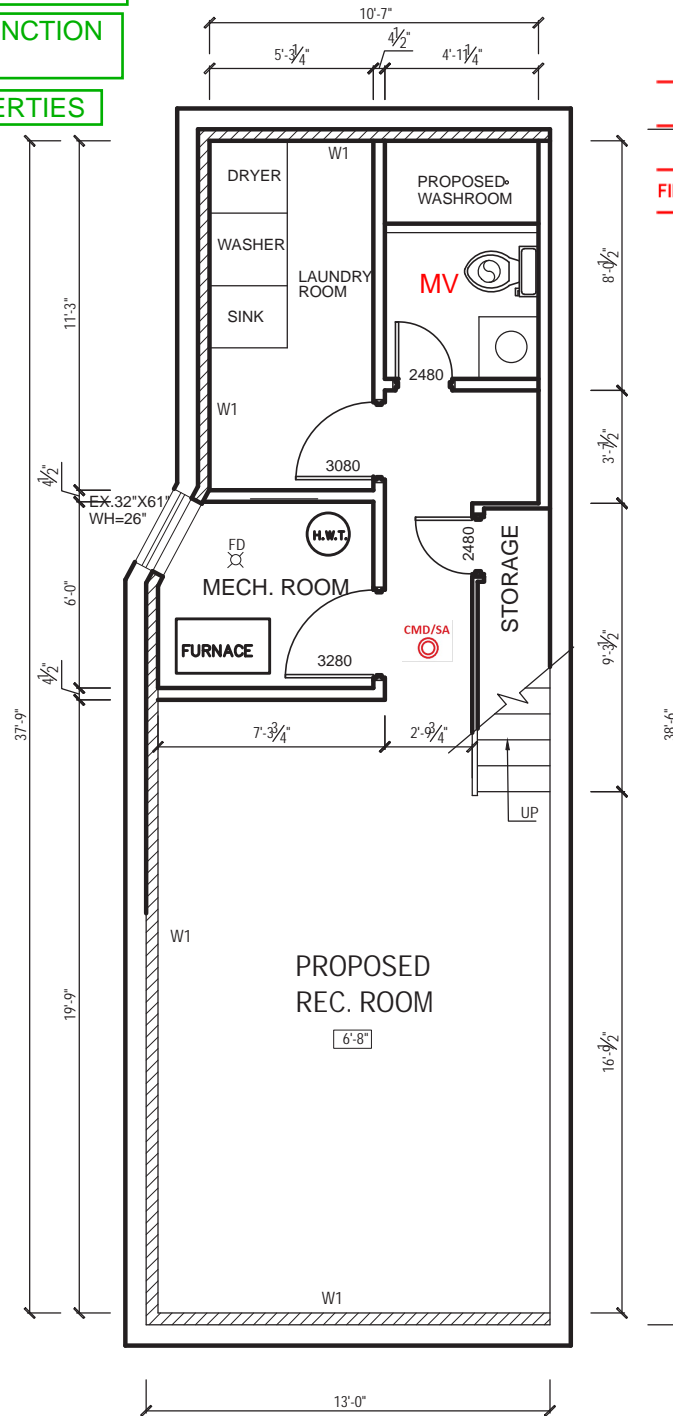
ALL FLOORS TO BE USED IN CONJUNCTION AS A SINGLE FAMILY DWELLING.

DRAINAGE ONTO ADJACENT PROPERTIES

ZONING	Magolon, Marta	05/Jul/2017
O.B.C.	Magolon, Marta	05/Jul/2017
FIRE SERVICES		

O.B.C. (S)

PROVIDE EXHAUST FAN AT EACH NEW BATHROOM



Proposed basement Floor Plan  
(FINISHING BASEMENT AREA  
478 SQFT)



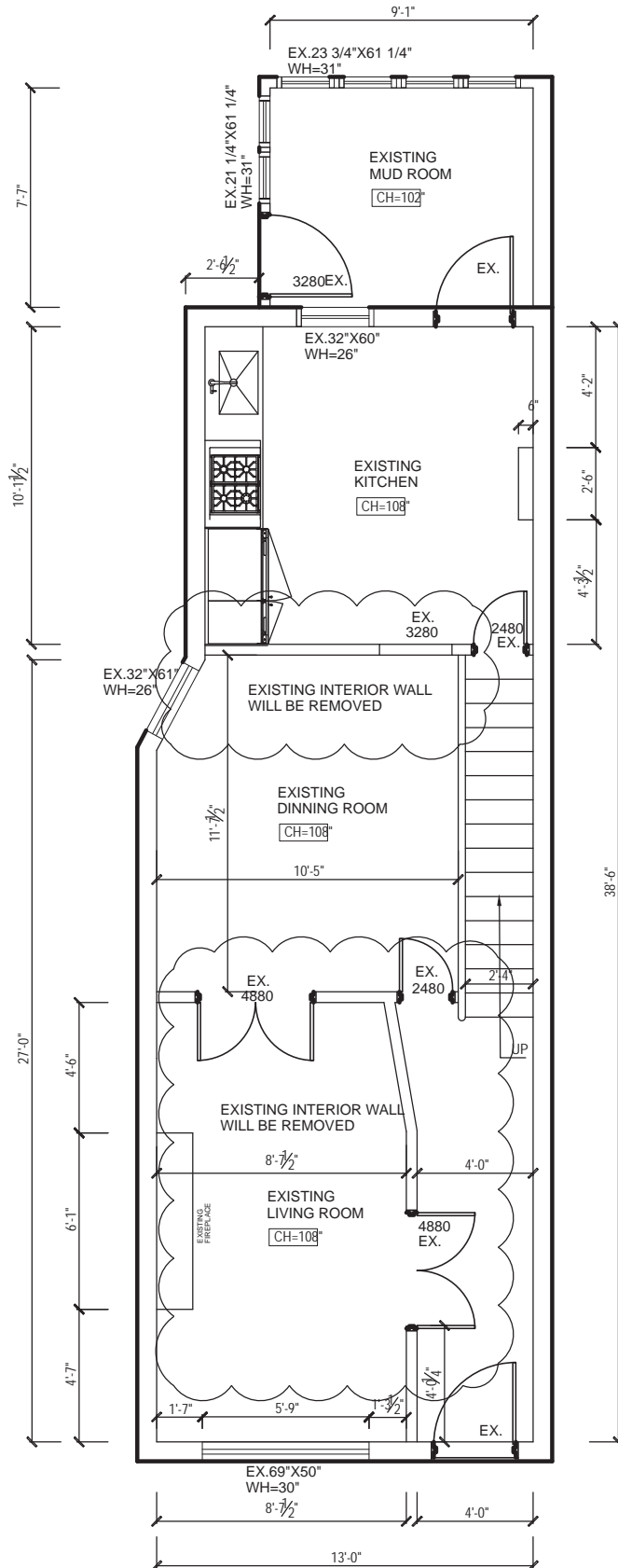
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Please note:

Date:	Jun. 23, 2017
Scale:	1/4" = 1'
Drawn by:	T
Project:	21 MILLBROOK CRES TORONTO ONTARIO
Drawing:	Proposed basement Floor Plan
Project #:	A2
Drawing #:	

**FOR REFERENCE ONLY**

O.B.C. (S)



Existing Ground Floor Plan



Drawing are not to be scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code O. REG.350.06 as amended.

Please note: \_\_\_\_\_

Date: Jun. 23, 2017

Scale: 1/4" = 1'-0"

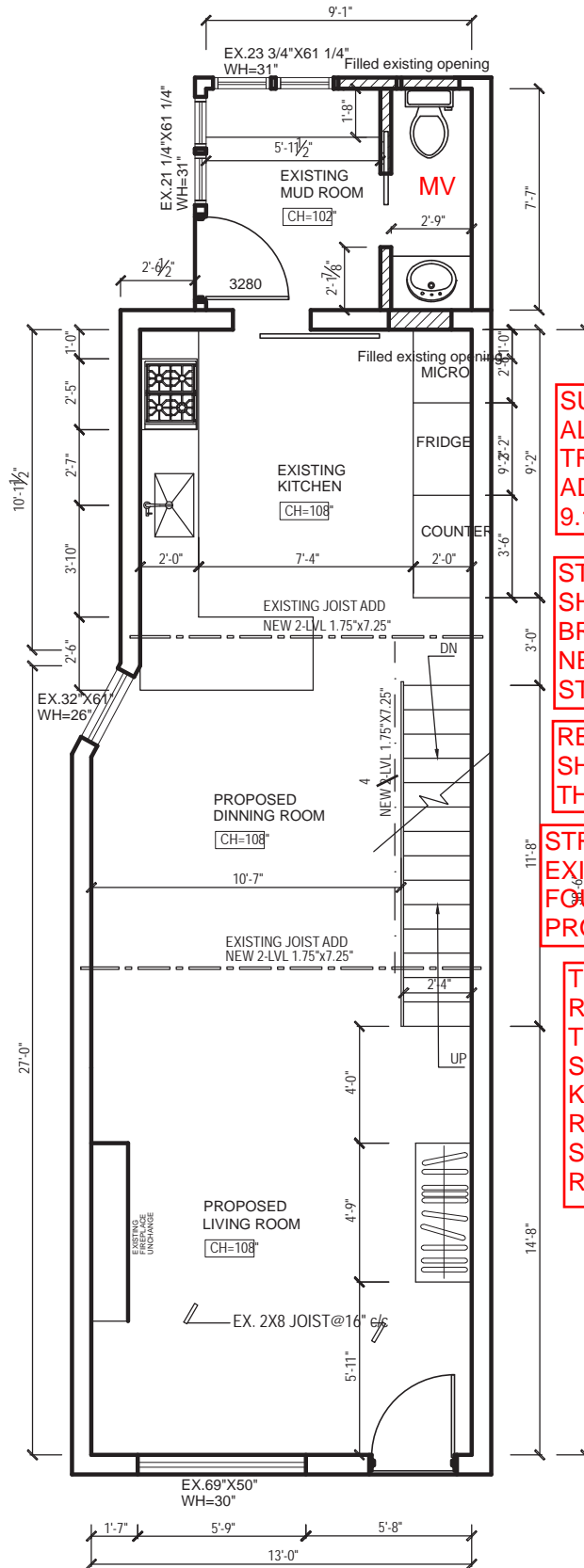
Drawn by: T

21 MILLBROOK CRES  
TORONTO ONTARIO

Existing Ground Floor Plan

Project #: \_\_\_\_\_ Drawing #: A3

ZONING	Magolon, Marta	05/Jul/2017
O.B.C.	Magolon, Marta	05/Jul/2017
FIRE SERVICES		
O.B.C. (S)		



**Proposed Ground Floor Plan**  
(ALTERATION AREA  
200 SQFT)

**SUPPORT – LOADS:**  
ALL LOADS MUST BE SUPPORTED AND TRANSFERRED TO FOUNDATION OR ADEQUATE SUPPORT. O.B.C. 9.23.4.2., 9.17., 9.15., 9.20.8.3., 9.23.8.1., 9.23.10.7. AND 9.23.9.8.

**STRUCTURAL INTEGRITY:** ALL MEMBERS SHALL BE SO FRAMED, FASTENED, TIED, BRACED AND ANCHORED TO PROVIDE THE NECESSARY STRENGTH, RIGIDITY AND STABILITY PER OBC 9.23.2.1.

**RENOVATION NOTE:** PROVIDE ALL BRACING, SHORING AND NEEDLING NECESSARY FOR THE SAFE EXECUTION OF THIS WORK.

**STRUCTURAL ADEQUACY:** VERIFY/REINFORCE EXISTING SUPPORT SYSTEM, INCLUDING FOUNDATIONS, FOR LOADS IMPOSED BY THE PROPOSED CONSTRUCTION.

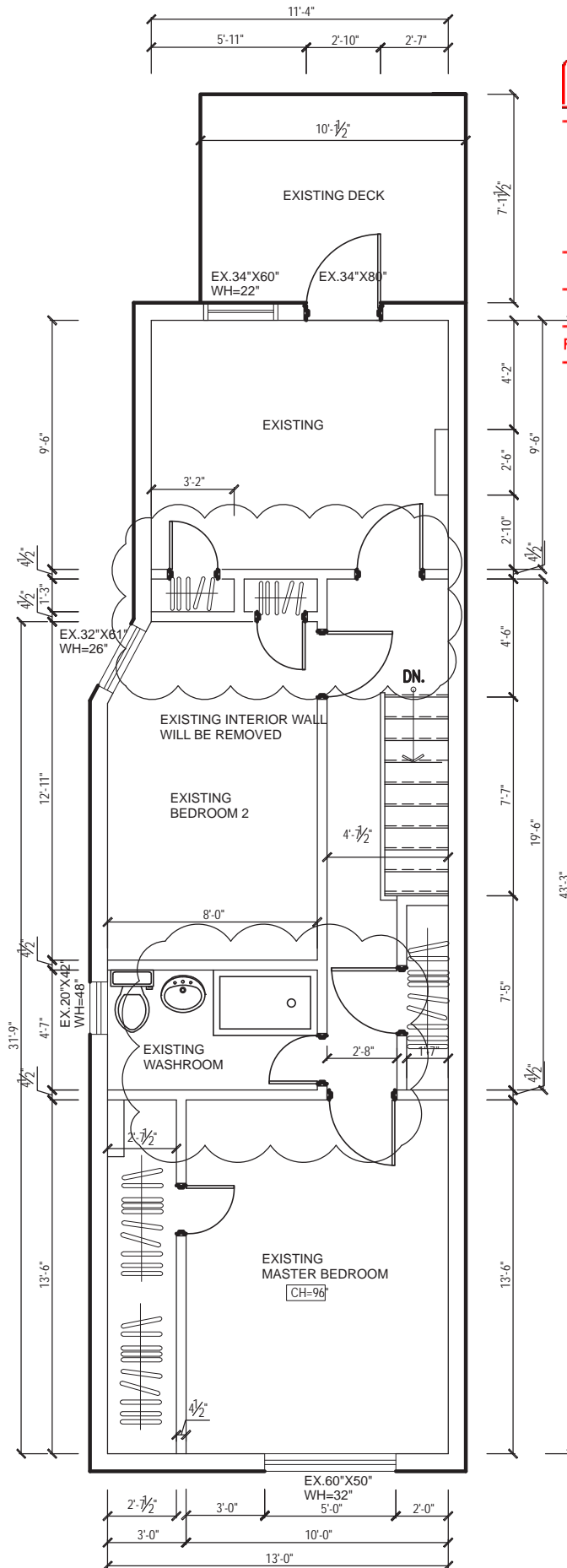
**THE STAMP AND SEAL OF THE ENGINEER OF RECORD IS GENERALLY AN ACCEPTANCE THAT THE CONTENTS OF THE DOCUMENTS SEALED REFLECT PROFESSIONAL KNOWLEDGE, DILIGENCE AND RESPONSIBILITY, AND THAT APPLICABLE STATUTES, STANDARDS, CODES AND REGULATIONS HAVE BEEN DULY FOLLOWED.**



Drawing are not to scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code O. REG.350.06 as amended.

Notes:-	_____
Date:-	Jun. 23, 2017
Scale:-	1/4" = 1'
Drawn by:-	T
Project:-	21 MILLBROOK CRES TORONTO ONTARIO
Drawing:-	Proposed Ground Floor Plan
Project #:-	A4
Drawing #:-	_____

ZONING	<b>FOR REFERENCE ONLY</b>
O.B.C.	
FIRE SERVICES	
O.B.C. (S)	



Existing 2nd Floor Plan



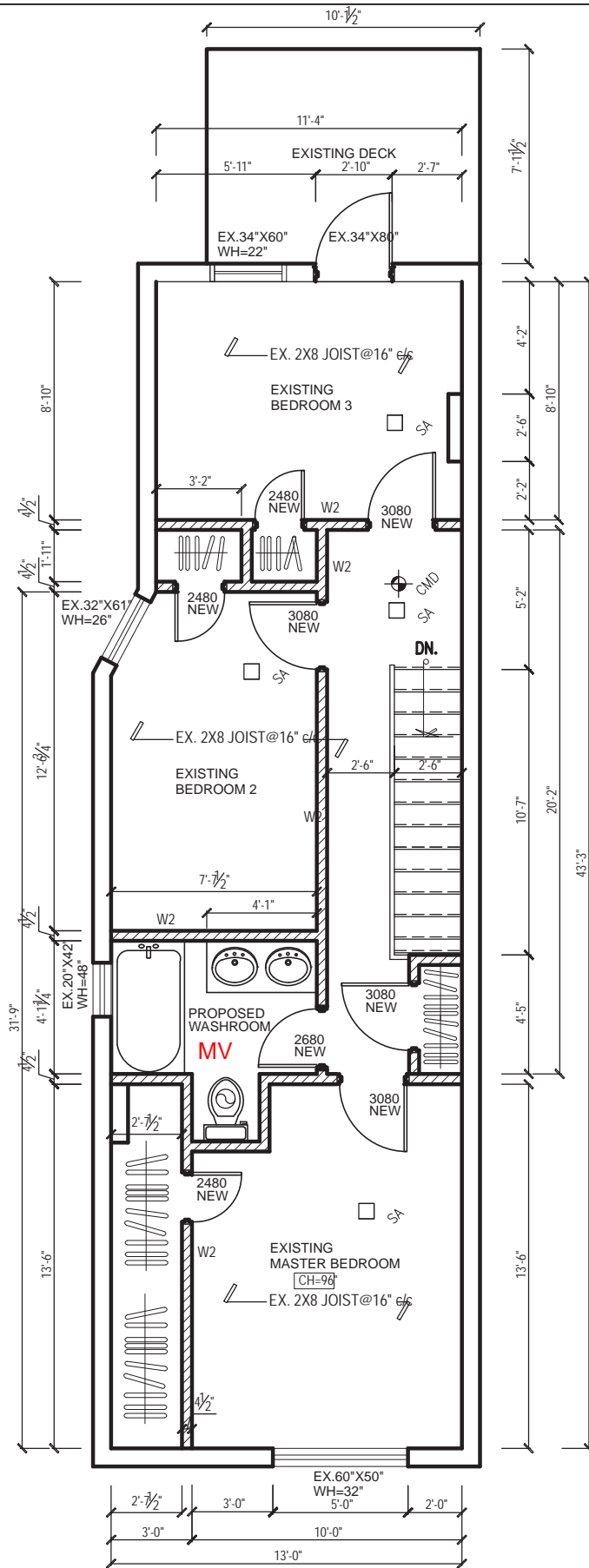
Drawing are not to scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code O. REG.350.06 as amended.

Please note:	_____
Date:	Jun. 23, 2017
Scale:	1/4" = 1'
Drawn by:	T
Project:	21 MILLBROOK CRES TORONTO ONTARIO
Drawing:	Existing 2nd Floor Plan
Project #:	A5
Drawing #:	_____

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ZONING	Magolon, Marta	05/Jul/2017
O.B.C.	Magolon, Marta	05/Jul/2017
FIRE SERVICES		

O.B.C. (S)



**PROPOSED 2nd Floor Plan**  
**(ALTERATION AREA**  
**150 SQFT)**



Drawing are not to scaled. Contractor must verify all job dimensions, details and specifications, and report any discrepancies to designer before proceeding with work. All work shall conform to the Ontario Building Code O. REG.350.06 as amended.

Please note:	
Date:	Jun. 23, 2017
Scale:	1/4" = 1'
Drawn by:	T
Project:	21 MILLBROOK CRES TORONTO ONTARIO
Drawing:	PROPOSED 2nd Floor Plan
Project #:	A6
Drawing #:	