

3.8.3.12. Universal Washrooms

- (1) A universal washroom room shall... (a) be served by a barrier-free path of travel... (b) have a door that is capable of being locked from the inside and released from the outside in case of emergency and that has... (i) a grasplatch latch-operating mechanism located not less than 900 mm and not more than 1 000 mm above the finished floor... (ii) if it is an outward swinging door, a door pull not less than 140 mm long located on the inside so that the midpoint is not less than 200 mm and not more than 300 mm from the latch side of the door and not less than 900 mm and not more than 1 100 mm above the finished floor, and... (iii) if it is an outward swinging door, a door closer, spring hinges or gravity hinges, so that the door closes automatically... (c) have one lavatory conforming to Sentences 3.8.3.11.(1), (3) and (4)... (d) have one water closet conforming to Article 3.8.3.9. that is located in accordance with Clause 3.8.3.8.(2)(a) or (b)... (e) have grab bars conforming to... (i) Sentence 3.8.3.8.(3), if the water closet is located in accordance with Clause 3.8.3.8.(2)(a), or... (ii) Sentence 3.8.3.8.(4), if the water closet is located in accordance with Clause 3.8.3.8.(2)(b)... (f) have no internal dimension between walls that is less than 1 700 mm... (g) have a coat hook that conforms to Clause 3.8.3.8.(1)(e) and a shelf that is located not more than 1 100 mm above the finished floor and projects not more than 100 mm from the wall... (h) be designed to permit a wheelchair to turn in an open space not less than 1 700 mm in diameter... (i) be provided with a door equipped with a power door operator if the door is equipped with a self-closing device... (j) be provided with a mirror... (k) installed above a lavatory described in Clause 1)(c), and... (l) mounted with its bottom edge not more than 1 000 mm above the finished floor or inclined to the vertical to be usable by a person in a wheelchair, and... (m) have lighting controlled by a motion sensor conforming to Sentence 12.2.4.1.(2). (See Appendix A.)

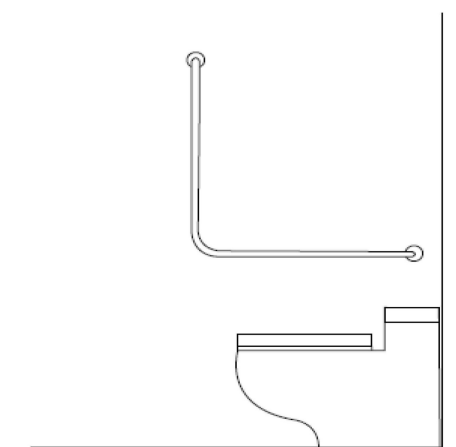
Appendix A

A-3.8.3.8.(3) Additional Grab Bars.

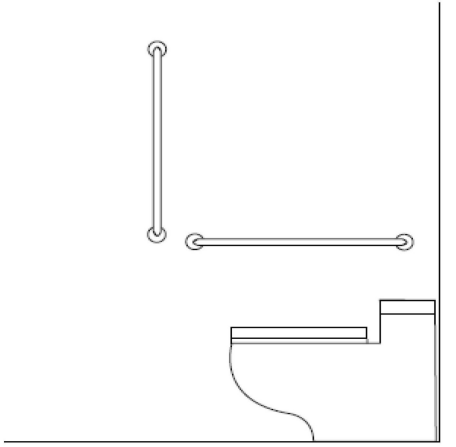
Designers may exceed the minimum requirements found in the Building Code and specify the installation of additional grab bars in other locations. These additional grab bars may be of different configurations and can be installed in other orientations.

A-3.8.3.8.(5) L-Shaped Grab Bar.

L-shaped grab bars provide greater support for people who rely on grab bars to assist them in transferring to and from a standing or seated position. Diagonally mounted grab bars may not be suitable for the downward force necessary for support or for pulling upward. Hands can slip along the bar if it is set in a diagonal position. The use of two straight grab bars located at a 90° angle to one another is not permitted.



Permitted Continuous L-Shaped Grab Bar



Not Permitted Discontinuous L-Shaped Grab Bar

3.8.3.11. Lavatories (See Appendix A.)

- (1) A washroom described in Sentence 3.8.3.12.(1)(c) shall be provided with a lavatory that shall... (a) be located so that the distance between the centre line of the lavatory and the side wall is not less than 460 mm... (b) be mounted so that the top of the lavatory is not more than 840 mm above the finished floor... (c) have a clearance beneath the lavatory not less than... (i) 920 mm wide... (ii) 735 mm high at the front edge... (iii) 685 mm high at a point 205 mm back from the front edge, and... (iv) 350 mm high from a point 300 mm back from the front edge to the wall. (See Appendix A.)... (d) have insulated pipes where they would otherwise present a burn hazard or have water supply temperature limited to a maximum of 43°C. (See Appendix A.)... (e) be equipped with faucets that have lever type handles without spring loading or operate automatically and that are located so that the distance from the centre line of the faucet to the edge of the basin or, where the basin is mounted in a vanity, to the front edge of the vanity, is not more than 465 mm... (f) have a minimum 1 370 mm deep floor space to allow for a forward approach, of which a maximum of 500 mm can be located above the lavatory. (See Appendix A.)... (g) have a soap dispenser that is...

A-3.8.3.9. Water Closets.

Article 7.2.2.5. applies to water closets referenced in Articles 3.8.3.8., 3.8.3.9. and 3.8.3.12. A shelf or projection should not be located behind a water closet such that it could present a hazard.

A-3.8.3.9.(1)(c) Back Support at Water Closets.

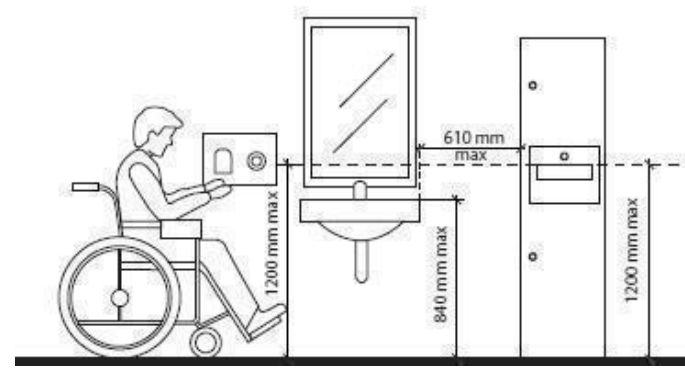
The purpose of the back support is to reduce the chance of imbalance or injury caused by a user leaning against exposed flush valves or pipes. A toilet seat lid, where provided, may be a suitable back support.

A-3.8.3.9.(1) Water Closets.

Wall-mounted water closets or floor models with receding bases are preferable because they provide the least amount of obstruction.

A-3.8.3.11. Washroom Accessories.

Washroom accessories for barrier-free water closets and lavatories must be located within arm's reach of a person in a seated position. Placement of towel dispensers and hand dryers should not require that a person seated in a wheelchair must travel beyond the reach range of the lavatory to dry his or her hands.



3.8.3.9. Water Closets (See Appendix A.)

- (1) A water closet described in Clause 3.8.3.12.(1)(d) shall... (a) be equipped with a seat located at not less than 430 mm and not more than 465 mm above the finished floor... (b) be equipped with hand-operated flushing controls that are easily accessible to a wheelchair user or be automatically operable... (c) be equipped with a back support where there is no seat lid or tank, and (See Appendix A.)... (d) not have a spring-activated seat. (See Appendix A.)... (2) Hand-operated flushing controls required by Clause 1)(b) shall be operable using a closed fist and with a force of not more than 22.2 N.

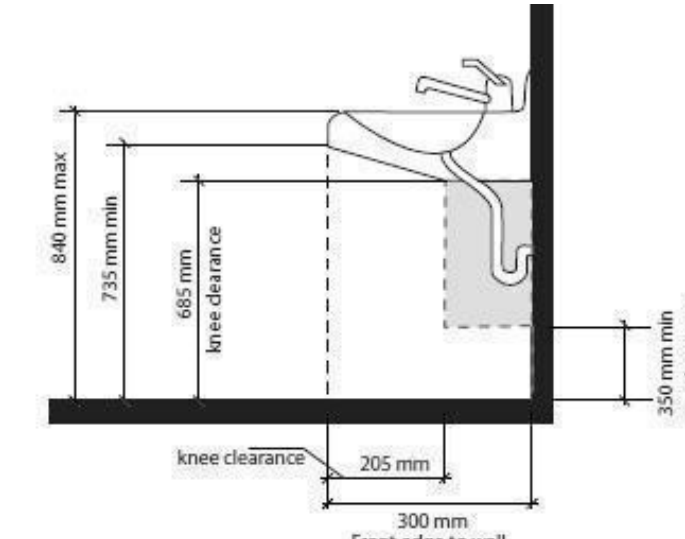
3.8.3.3.(17) POWER DOOR OPERATORS

- (17) The control for a power door operator shall... (a) have a face dimension of not less than... (i) 150mm in diameter where the control is circular, or... (ii) 50mm by 100mm where the control is rectangular... (b) be operable using a closed fist... (c) be located so that... (i) its centre is located not less than 900mm and not more than 1100mm from the finished floor or ground... (d) be located not less than 600 mm and not more than 1500mm beyond the door swing where the door opens towards the control... (e) be located in a clearly visible position, and... (f) contain a sign incorporating the International Symbol of Access

A-3.8.3.11.(1)(c) Clearances Beneath a Lavatory.

Barrier-free lavatories require sufficient knee and toe clearance below to permit a person in a wheelchair to move close enough to the faucet to easily use the water stream.

In order to meet the clearances contained in this Clause, and depending on the lavatory to be installed, it may be necessary to install an offset P.O. lavatory drain.

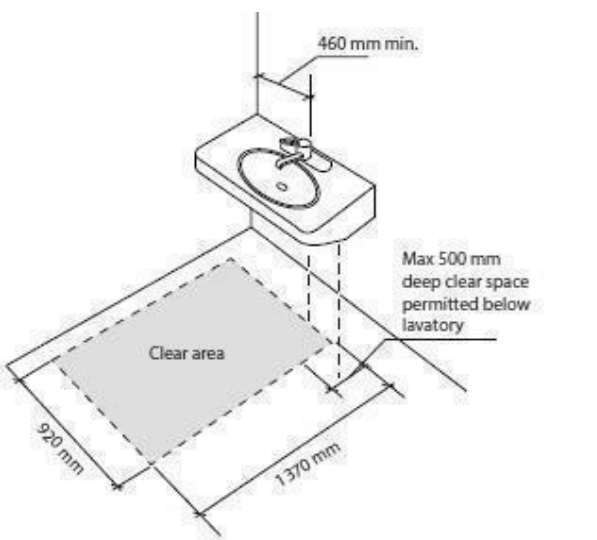


A-3.8.3.11.(1)(d) Pipe Protection.

The pipes referred to in Clause 3.8.3.11.(1)(d) include both supply and waste pipes. The hazard can be prevented by insulating the pipes, by locating the pipes in enclosures, or avoided by limiting the temperature of the hot water to a maximum of 43°C.

A-3.8.3.11.(1)(f) Clear Space at Lavatory.

The clear space required for the wheelchair user to pull into the fountain may overlap with an adjacent barrier-free path of travel but should not prevent other building users from passing when the barrier-free lavatory is in use.



A-3.8.3.12.(1)(d) Transfer Space.

The transfer space beside a water closet or the approach space at a lavatory must be a clear space with no obstruction or potential obstruction of the space from adjacent elements such as a fold-down change table, or other fixture. The exception to this would be a fold-down grab bar where provided. If a fold-down change table is not returned to the folded up position after use, the next user of the space should not be inconvenienced from using the water closet or lavatory due to the transfer or approach spaces being blocked.

A-3.8.3.12.(1) and (3) Universal Washroom.

Unobstructed areas in front of the lavatory, in front of the water closet and on one side of the water closet are necessary for manoeuvrability of a wheelchair. The door swing may overlap the turning circle within the universal washroom as long as there is sufficient space for a wheelchair user to manoeuvre to clear the door and close the door from a front approach position. The space for an adult size change table may encroach upon the 1700 mm turning circle only where the change table is movable and is not permanently fixed or stored within the washroom. In that case the table, such as a hospital gurney is brought into the washroom when needed and removed after use. A permanently fixed table may not be appropriate for certain building occupancies due to operational and maintenance considerations.

A-3.8.3.12.(2) Emergency Call System.

The purpose of the emergency call system is to notify other building occupants that a person using the universal washroom requires assistance. The visual signal and alarm should be different from the building fire and smoke alarms and visual signals, where installed, as this call system is for personal, not building, emergencies.

The emergency call button is intended to provide a local visual signal outside of the washroom to alert others that someone in the washroom needs assistance. It is not required to be linked to a central monitoring station. Where central monitoring is not provided, such as in the case of a small building or a standalone washroom in a park, an additional sign informing the washroom users that there is no central monitoring may be appropriate.

12.2.4.1. Motion Sensors

- (1) Lighting installed to provide the minimum illumination levels required by this Code may be controlled by motion sensors except where the lighting... (a) is installed in an exit... (b) is installed in a corridor serving patients or residents in a Group B, Division 2 or Division 3 occupancy, or... (c) is required to conform to Sentence 3.2.7.1.(6)... (2) Where motion sensors are used to control minimum lighting in a public corridor or corridor providing access to an exit for the public, the motion sensors shall be installed with switch controllers equipped for fail-safe operation and illumination timers set for a minimum 15-minute duration... (3) A motion sensor shall not be used to control emergency lighting.

ENGINEER'S STRUCTURAL NOTES:

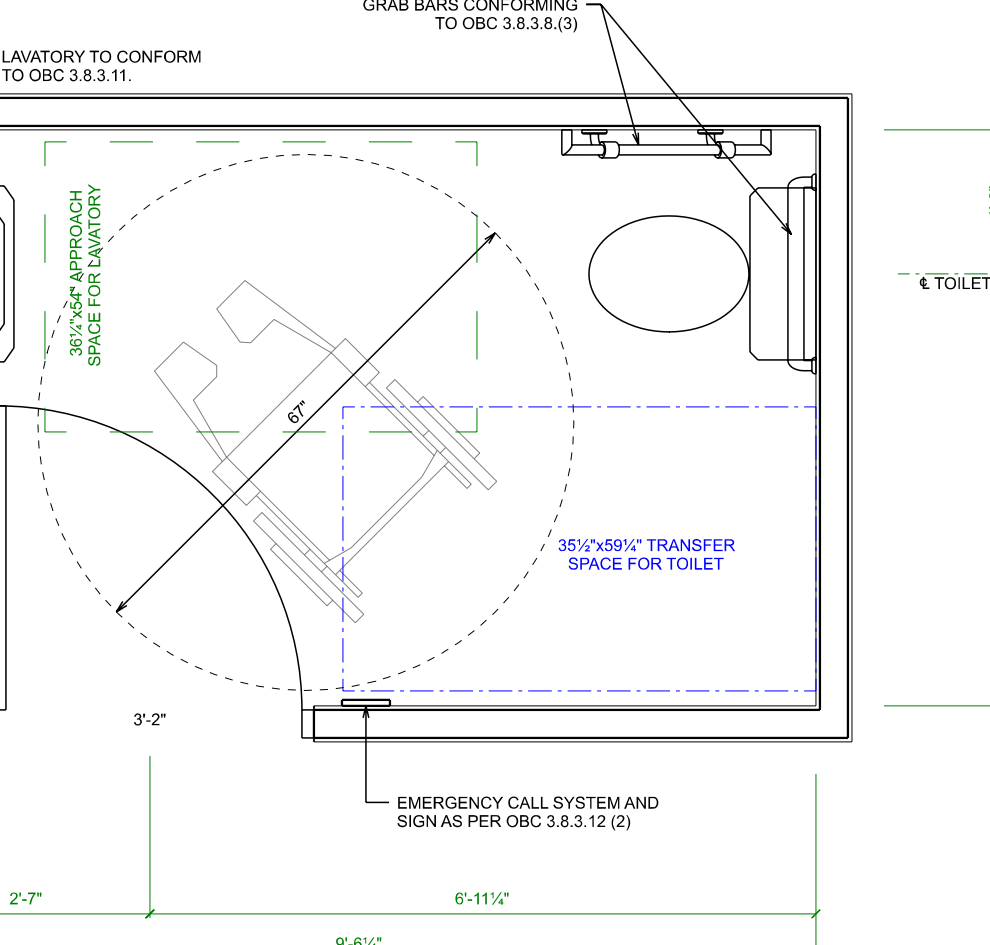
GENERAL
1. THE STRUCTURE IS TO BE BUILT IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 OBC, AND ANY APPLICABLE REQUIREMENTS OR BY LAWS OF THE AUTHORITY HAVING JURISDICTION.
2. THE CONTRACTOR SHALL ENSURE THE STABILITY AND THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING UTILITIES DURING ALL STAGES OF THE WORK.
DESIGN CODE
1. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE (OBC 2012).
2. ALL REINFORCED CONCRETE ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA23.3-24.
3. ALL STRUCTURAL STEEL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA S16-24.
LOADING
BUILDING IMPORTANCE CATEGORY = NORMAL
MEZzanine DL = 0.65 kPa
LL = 9.8 kPa
REEFZANINE DL = 0.65 kPa
LL = 9.8 kPa
SNOW Ss = 2.4 kPa
Sr = 0.4 kPa
WIND q(150) = 0.41 kPa
W LLS = 1.0
W SLS = 0.75
INTERNAL PRESSURE CATEGORY 2
REINFORCING STEEL
1. REINFORCING STEEL SHALL BE GRADE 400W UNLESS SPECIFIED OTHERWISE.
2. WELDED WIRE FABRIC (WWF) SHALL BE Fy = 386 MPa.
3. TENSION LAP SPLICES FOR REINFORCING STEEL BARS SHALL BE CLASS B.
4. LAP SPLICES FOR 152x152 WELDED WIRE FABRIC (WWF) SHALL BE 500mm (1' 8").
5. BAR HOOKS SHALL HAVE STANDARD HOOK DIMENSIONS USING MINIMUM BEND DIAMETERS. WHILE STIRRUPS AND TIES SHALL HAVE MINIMUM HOOK DIMENSIONS. ALL STANDARD HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH CSA23.3.1.C1.6.6.2.
WOOD
1. UNLESS SPECIFIED OTHERWISE, FINISHING SHALL BE IN ACCORDANCE WITH THE OBC 2012.
2. LUMBER SHALL BE SPF No. 112 OR BETTER. MOISTURE CONTENT SHALL BE 19% OR LESS.
3. PREFABRICATED WOOD TRUSSES: SHOP DRAWINGS TO INCLUDE ENGINEERED DESIGNS, MATERIAL GRADES, LAYOUT DRAWINGS, BEARING DETAILS, ANCHORAGE DETAILS AND CONNECTION DETAILS. TEMPORARY BRACING AND PERMANENT BRACING AND BRIDGING DETAILS AFFECTING THE STRUCTURAL CAPACITY OF THE TRUSSES. SHOP DRAWINGS (INCLUDING LAYOUTS) TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

CONCRETE
1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF CSA A23.1.2.3 FOR MATERIALS AND WORKMANSHIP.
LOCATION CLASS STRENGTH
EXTERIOR WALLS F-2 25 MPa
FOOTINGS F-2 25 MPa
PRESS. F-2 25 MPa
INTERIOR SLAB ON GRADE N 32 MPa

2. TEMPALATES SHALL BE USED TO ENSURE CORRECT PLACEMENT OF ANCHORS.
3. PROVIDE CONTROL JOINTS IN SLABS ON GRADE AT 4.5m (15ft) ON CENTER EACH WAY. 6 TO 18 HOURS AFTER PLACING CONCRETE. SAW CUT DEPTH TO BE EQUAL TO ON QUARTER OF THE CONCRETE THICKNESS.

STRUCTURAL STEEL
1. STRUCTURAL WIDE FLANGE SHAPES SHALL CONFORM TO CAN/CSA G40.20/G40.21 GRADE 350W OR ASTM A992/992M GRADE 50.
2. ANGLE AND PLATES SHALL CONFORM TO CAN/CSA G40.20/G40.21 GRADE 350W.
3. HOLLOW STRUCTURAL SECTIONS TO CONFORM TO ASTM A500 GRADE C.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH CSA W59.
5. STRUCTURAL BOLTS SHALL BE ASTM A325/A325M, TYPE 1. BOLT THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANES.
6. ALL CONNECTIONS ARE ASSUMED TO BE BEARING TYPE CONNECTIONS. BOLTS SHALL BE SNUG-TIGHT AS DEFINED BY CSA S16.

FOUNDATION
1. CONSTRUCT ALL FOOTINGS ON UNDISTURBED SOIL. EARTH BOTTOMS OF EXCAVATIONS TO BE DRY UNDISTURBED SOIL, LEVEL, FREE FROM LOOSE OR ORGANIC MATERIAL. REPLACE UNSUITABLE MATERIAL WITH GRANULAR MATERIAL COMPACTED TO 98% S.P.D.
2. AN ALLOWABLE BEARING PRESSURE CAPACITY OF 15 kPa SHALL BE CONFIRMED DURING CONSTRUCTION AT STRIP FOOTINGS, SPREAD FOOTINGS WITH AND WITHOUT PIERS, AND LEAN-TO PIERS.
3. FOUND FOOTINGS SUSCEPTIBLE TO FROST DAMAGE A MINIMUM OF 6" OR BELOW FINISHED EXTERIOR GRADE.
4. PROVIDE TEMPORARY FROST PROTECTION DURING CONSTRUCTION, AS REQUIRED, FOR ALL FOOTINGS WHICH ARE NOT FOUNDED A MINIMUM OF 6" BELOW GRADE.
5. SLAB-ON-GRADE EXTRUDED POLYSTYRENE INSULATION TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 240 kPa.



UNIVERSAL WASHROOM DETAIL
SCALE: 1/2" = 1'-0"

TABLE SB 5.5-6-2017 (See Appendix A.)
(Supersedes Table 5.5-6 in 2013 ANS/ASHRAE/IES 90.1)
Building Envelope Requirements for Climate Zone 6 (A, B) (I-P)

Table with columns for Opaque Elements, Nonresidential, Residential, and Semihatched, and sub-columns for Assembly, Insulation, Max. U-Value, and Min. R-Value.

The following definitions apply: ci = continuous insulation, La = liner system, NR = no (insulation) requirement.
\* When using the R-value compliance method for metal building roofs, a thermal spacer block is required.

ONTARIO BUILDING CODE MATRIX - PART 9

Table mapping building code requirements to specific building details like Warehouse (F3), Major Occupancy (S), Building Area, Gross Floor Area, Number of Stories, Height of Building, Number of Streets, Sprinkler System Proposed, Fire Alarm Required, Permitted Construction, Occupant Load, Water Closets, Hazardous Substances, Concealed Space Used as a Plenum, Fire Resistance Ratings Required, Spatial Separation, and Number & Locations of Exits.

ONTARIO FIRE CODE

Table detailing fire extinguisher requirements, including where they are required, travel distance, and location of portable extinguishers.

QUALIFICATION INFORMATION

REQUIRED UNLESS DESIGN IS EXEMPT UNDER DIVISION C-3.2.4.1 OF THE 2012 O.B.C.
Signature of Jakob Faber, BCIN 114291, ELEVATE HOME DESIGN INC., BCIN 118456.



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40 x 80 WAREHOUSE
TITAN ENVIRONMENTAL
SOMME STREET, BLOCK 2, PART 1
OTTAWA, ON

OBC NOTES & UNIVERSAL W.R.

PROJECT NO: 24-001
STARTING DATE: Jan 2, 2024
LAST REVISION DATE: Apr 24, 2026
DRAWN BY: J.F.

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SCALE: As Noted

UNIVERSAL WASHROOM NOTES

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