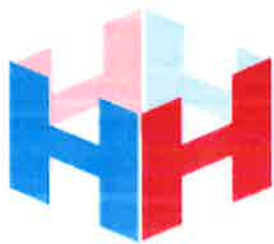




Lori E. Lightfoot
Mayor of Chicago



CITY OF CHICAGO
DEPARTMENT OF
HOUSING

Architectural / Technical Standards Manual

DISCLAIMER

The City of Chicago Department of Housing (DOH) does not guarantee, warrant, or make representations that the information in this document is complete, accurate, or current. DOH assumes no responsibility for the application of the material or information contained herein nor for any error, omissions, or other discrepancies. Nothing in the document is intended to create nor does it create any enforceable rights, remedies, entitlements, or obligations. DOH reserves the right to change or suspend any or all of this document without notice.

The illustrations included within this document are intended merely to assist in navigating the various requirements and architectural/technical standards; to aid staff during the plan review for projects participating in DOH programs and activities; and to add clarity and transparency to designers responding to DOH design review comments. This document is not meant to offer a design template, but rather to document and illustrate some of the design controls and potential outcomes.

The Architect of Record is responsible to ensure a project is designed in a manner to comply with the applicable laws, regulations, codes, and design standards including, but not limited to, those related to non-discrimination.

Introduction

The Department of Housing (DOH) is committed to meeting Chicago resident's needs for decent, safe, sustainable, marketable, and affordable housing. Affordable housing represents a substantial and long-term public investment in the City's housing stock. As such, it is imperative that the housing produced is of good quality and is livable. Since building codes and local regulations/ordinances primarily focus on health and safety and/or protecting property values, they cannot be relied on to meet all our expectations. Therefore, to better meet the residents of the City of Chicago's needs and communicate our expectations, DOH Construction Services Division has developed architectural/technical standards for City funded affordable housing projects.

These architectural/technical standards replace all previous DOH Housing standards associated with the design/construction of projects and are applicable to all DOH involved projects. Projects involving adaptive reuse and/or gut rehabilitation of housing shall comply with standards for new construction to the maximum extent feasible as determined by DOH Construction Services Division.

These architectural/technical standards are not intended to restrict innovation. The Architectural/Technical Standards is an aid for developers, architects and general contractors for the design and construction of quality affordable housing. These shall be used as a reference guide identifying minimum requirements and standards for all projects submitted to the DOH for review and approval. These are considered minimum standards and we encourage the development team to exceed these minimum standards. DOH welcomes innovative ideas and looks forward to implementing any innovations that will provide long-lasting benefits to our residents.

DOH encourages sustainable, healthy housing that optimizes the use of cost-effective durable building materials and systems and that minimizes the consumption of natural resources during construction and in the long-term maintenance and operation of the projects.

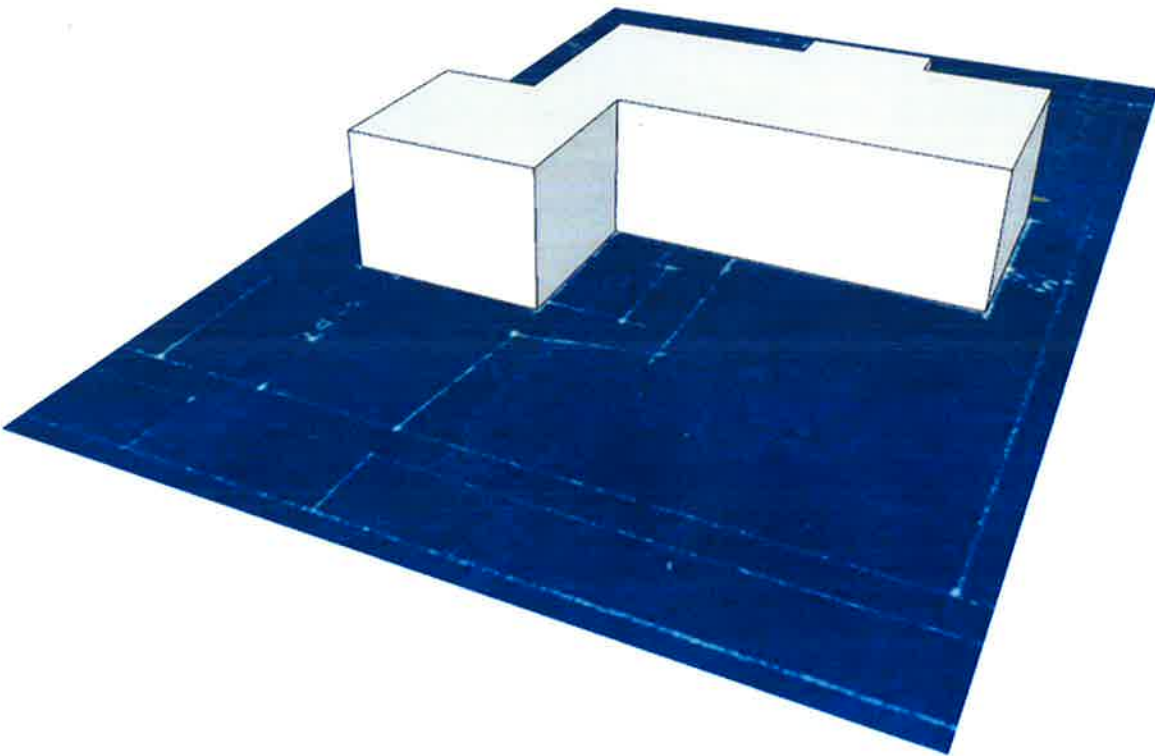
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We encourage optimizing the use of cost-effective, renewable resources and energy, minimizing damage and impact to the environment, and maximizing the use of natural amenities such as (solar, wind, climate, and orientation) of the development's site.

The Basics

- Compliance to the guidelines to the greatest extent feasible per scope of work and funding sources as determined by DOH Construction Services Division.
- The quality of the building and other improvements must comply with the program requirements and policies. Exceeding those is highly encouraged.
- The project must comply with all local, state, federal codes and regulations.
- The development must be consistent with the demands of the marketplace.
- The design and construction must follow standards and practices accepted in the construction industries.
- DOH Construction Services Division reserves the right to object to any proposed building system, material selection, or Development team member as conflicting with DOH interests.

The Architectural/Technical Standards are subject to change and modification. The DOH Construction Services Division may require modification to the standards to meet unique site conditions, design, or use of the development. This will be reviewed on a case by case basis only. It is required that the DOH Construction Services Division and MOPD be brought in at the early stages in the design concept stage and that the Development Team keep the lines of communications open and not skip ahead in the process.



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Codes/Regulations/Policy

The following standards are supplemental to basic standards established by applicable building codes, local zoning, and other applicable regulations. In addition, these standards are supplemental to other applicable design standards promulgated by Department of Housing. Where two standards govern the same condition, conformance to the most restrictive standard is required. All improvements must follow currently adopted Chicago Building Code.

- **The DOH Architectural/Technical Standards**-applies to all DOH programs and developments.
- **Chicago Building Code**-applies to all buildings/projects.
- **Americans with Disabilities Act** –applies to the common areas open to the public use, such as a property management office or rental office.
- **Fair Housing Act** - applies to all new multi-family housing consisting of four or more dwelling units.
- **Illinois Accessibility Code**- applies to all multi-story housing units as defined and governed by the Environmental Barriers Act (EBA). This Code is applicable when work involving new construction of projects containing five or more units, alterations, additions, historic preservation, restoration, or reconstruction in whole or in part.
- **Section 504 of the Rehabilitation Act 1973** – applies to recipients of federal financial assistance.
- **Minimum Property Standards for Housing (MPS) US Department of Housing and Urban Development(HUD)**
- **Title 89 Illinois Administrative Code. Subpart B: Supportive Living Facilities**
- **Multifamily Accelerated Processing (MAP) Guide**
- **Lead Based Paint**- The project shall comply with the applicable lead based paint regulations. All federally-assisted projects having units constructed before 1978 must comply with Title X of the Housing and Community Redevelopment Act of 1992. In addition, all properties and/or units must comply with the Environmental Protection Agency (EPA).
- **Asbestos Containing Material**- All federally-assisted projects must comply with EPA 40 CFR 61.145 and all other HUD, EPA, IEPA, Illinois Department of Public Health (IDPH), and local/municipal regulations.
- **Radon**- All federally-assisted projects must comply with the Illinois Emergency Management Agency Radon program and the EPA's radon guidelines. When radon mitigation is required at minimum a passive-future active system shall be installed.
- **Mold Considerations**- All codes to inspection and removal need to be followed.
- All Compliance Regulations for Wages, Hiring, MBE/WBE must be followed as applicable.

Architectural/Technical Standards – New Construction

Purpose:

To ensure DOH funded housing is decent quality, safe, energy efficient, functional, sustainable, and effective in reducing long-term maintenance costs. Good design matters. It matters particularly with respect to affordable housing, which not only should embody social and community objectives that go well beyond the mere provision of shelter, but also must overcome the stigma of its association with the hulking towers and barren blocks of past housing projects.



Requirements:

1. **Site Design** – Site improvements shall comply with the following standards associated with grading/drainage, parking, garages, sidewalks, play equipment/area, signage, and landscaping as follows:
 - **Grading/Drainage** – The site shall be well drained. Surface water must be directed away from structure. Snow removal/storage shall be addressed.
 - **Parking** – Unless stricter zoning requirements apply, parking shall comply with the following minimum requirements:
 - i. At least one (1) parking space (off street/onsite) for each dwelling unit. (Exception: If on street parking is available on adjacent streets up to 0.5 spaces per dwelling unit may be used toward satisfying this requirement.)
 - ii. Adaptive reuse type projects or single-room-occupancy (SRO) dwelling units may have less than one (1) parking space for each dwelling unit. Exact number shall be reviewed/approved by DOH Construction Services on a case-by-case basis.
 - iii. Parking spaces shall be at least 8’-6” wide except at designated handicapped parking space(s) which shall follow applicable codes.
 - iv. For high-density urban developments that require zero-lot-line coverage, consult DOH Construction Services to agree on how much onsite parking is needed for the proposed development.
 - v. Parking spaces and access isles must be a permeable surface (concrete, pavers, or other DOH Technical Services approved material). Also provide a poured concrete curb and gutter at outer perimeter of onsite drive lanes and parking. (Not required for semi-private driveway leading up to attached garage.) Variations to this requirement shall be reviewed/approved by DOH Construction Services on a case-by-case basis.
 - **Garages** – If private garages are provided, they shall conform to the following:
 - i. Indoor parking will require a minimum of (2) electric car charging stations.
 - ii. Garages for persons who are handicapped shall comply with minimum quantity/dimensions/clearances as required by applicable codes.
 - **Exterior Sidewalks** – Sidewalks shall provide a clear, unobstructed route of travel throughout the site and be wheelchair accessible.
2. **Active Outdoor Space** –
 - i. Active outdoor space for all multi-family and senior projects are required.
 - ii. A play area for children along with play appropriate equipment shall be provided. Based on the type and number of units in the development the size of the play area should be determined as follows:
 - The entire play area must be filled with natural or synthetic protective materials and equipped with reasonable play equipment for the size of the lot. The perimeter shall be designed to keep play area material from spilling, such as curb and/or sidewalk.
 - The play area and play equipment must follow equipment manufacturer requirements. The play area does not have to be square or confined to one location if minimum play area size is complied with.
 - Lumber treated with chromate copper arsenate shall not be used for play equipment.
 - Avoid locating any play area(s) where children are required to cross driveways.
 - Provide drain tile beneath all permeable play area surface materials with outlet to nearest storm sewer or drainage ditch.
 - Provide shade, seating, and trash receptacle near all play areas.

- Play areas must be on an accessible route with accessible entrance onto the play area surface. Playlot equipment and play area must be designed to be as inclusive as possible to people with disabilities.
- Variations to this requirement shall be reviewed/approved by DOH Construction Services Division on a case-by-case basis.

The Center for Active Design publishes *Active Design: Affordable Designs for Affordable Housing* as a guide for designing affordable housing developments that benefit resident health and well-being. The document is available from <http://centerforactivedesign.org/affordablehousingcosts> which outlines a broad array of architectural and urban design strategies to encourage, walking, bicycling, climbing stairs, using transit, and urban recreation, and healthy diet. *Active Design: Affordable Designs for Affordable Housing* is more focused on feasible, low-cost strategies to integrate active design in affordable housing developments. The principles outlined in the document should be considered for new DOH development projects.

3. **Signage** – Signage shall be provided as follows:

- Temporary construction project sign is required and DOH Construction Services Division must review and approve a sample. A temporary construction sign is to be provided and shall be at least 4'x8' in size and erected onsite at time of construction start. It shall contain development name, City of Chicago & DOH Logos, Mayor's, Alderman's, and DOH Commissioner's names, names of other funders, Owner's name, General Contractor's name, Architect's name, and leasing information/phone number.
- Permanent development sign. Every development shall be provided with a permanent development sign that is visible from nearest street. It shall provide name of development and leasing information/phone number. The permanent sign should be in keeping with the architectural theme of the project. Night-time illumination is recommended.

4. **Landscaping** – Landscaping and a landscape plan shall be provided as per Enterprise Green Communities Landscaping Criteria and City of Chicago Landscape Ordinance.

- i. Landscape plans should include locations of all trees, shrubs, berms, and sod/grass.
- ii. Material schedules.
- iii. Substantial landscaping is required for all projects. A combination of native plantings, bushes, plantings, grasses and trees are required.
- iv. All front facades are to have ornamental fencing. This fencing should be utilized on all perimeters that front streets. Appropriate screen fencing shall be utilized on all remaining perimeters.

5. **Building Design** – The building design shall be reasonably appropriate for the intended site, resident population, and anticipated market. It is required to design all the units to be visitable and adaptable. (i.e. light switch heights, lever hardware throughout, door widths, etc.) A universal design/ age in place approach should be used as a minimum design starting point. Many adults prefer to live in their own home and community as they age, wishing to live safely, comfortably, and independently for as long as possible. DOH strongly recommends cost-effective measures to ensure that affordable housing developments accommodate such life-style choices, particularly in senior housing developments. The project at a minimum will need to meet Mayor's Office of People with Disabilities (MOPD) and Department of Housing (DOH) accessibility requirements. All units shall follow the following minimum standards:

- **Laundry** – Tenants shall have access to laundry facilities and shall comply with the following requirements:
 - i. Common laundry is required unless laundry equipment is provided in each dwelling unit.
 - ii. If common laundry, one (1) washer and one (1) dryer must be provided for every twelve (12) dwelling units. Provide folding table and seating area. The laundry area must be a separate room in the building and comply with the Chicago Building Code.

CONSTRUCTION SERVICES DIVISION - ARCHITECTURAL/TECHNICAL STANDARDS

- iii. If laundry equipment is provided in each dwelling unit, stackable equipment is acceptable in non-accessible dwelling units.
- iv. Every clothes washer shall have a disaster pan with floor drain or be in a room with concrete flooring whereby the floor slopes to floor drain.
- **Elevator** – Housing required to have an elevator shall meet the following requirements associated with an elevator:
 - i. The maximum length of travel from any dwelling unit to an elevator shall not exceed two hundred fifty (250) lineal feet.
 - ii. The number of required elevators in each building shall be dictated as follows:

All multifamily/senior units	Two (2) elevators required.
(+9) stories above grade:	Consult Dept. of Buildings.
 - iii. It is highly recommended to include a freight elevator in all projects.
 - iv. All elevators shall be accessible and meet all current codes.
- **Dwelling unit** – Housing shall meet the following requirements associated with decent living space (A typical furniture layout drawing will be required for all the spaces proposed):

Type	Bathrooms	# of People	Minimum Heated Area	
			Attached Units	Detached Units
Efficiency	1	1	450 sq. ft.	-----
1 Bedroom	1	1-2	625 sq. ft.	900 sq. ft.
2 Bedroom	1 – 1.5	2-3	950 sq. ft.	1000 sq. ft.
3 Bedroom	1 ¾ - 2	3-5	1200 sq. ft.	1350 sq. ft.
4 Bedroom	2	5-7	1350 sq. ft.	1450 sq. ft.

*A request to reduce the minimum heated areas in the table above in area by 15% for rehabilitation projects of existing buildings can be considered by DOH Construction Services Division.

- i. Living room
 - Least dimension shall be 11'-6" and appropriately sized for anticipated household size.
 - Must have window (or glass patio door) to exterior for natural lighting.
- ii. Primary or Master bedroom
 - Least Dimension shall be 10'-0"
 - Least square footage shall be 120 sq. ft.
 - Window to exterior for natural lighting.
 - Closet (5 lineal ft. of net rod/shelf length).
 - Door and walls to ceiling for privacy.
 - Exception: Efficiency Dwelling Unit/Single Room Occupancy (SRO)
- iii. Secondary bedroom(s)
 - Least dimension 9'-0".

- Least square footage shall be 110 sq. ft.
- Window to exterior for natural lighting.
- Closet (4 lineal ft. of net rod/shelf length)
- Door and walls to ceiling for privacy.
- Exception: Efficiency Dwelling Unit/Single Room Occupancy (SRO)

iv. Kitchen

Kitchen countertop work area.

- Minimum length shall be 6'-0" measured along the front footage (excluding sink and appliances) for one-bedroom dwelling units;
- 7'-0" for two and three-bedroom dwelling units;
- And 8'-0" for larger dwelling units.
- Snack bar or eat-in kitchen area. (Required in three bedroom and larger dwelling units.)
Snack bar shall be 4'-0" long (minimum).
- The surface of countertops shall be made of new, durable, easily cleaned materials.

Cabinet

- All units shall have kitchen cabinet or other storage area (such as a pantry) proportionate to unit size that at minimum meet the required space listing in the table below. Note that additional kitchen storage area beyond the minimum is desirable. In some cases, additional cabinetry is provided for either base or upper cabinets and credit is requested to reduce cabinetry elsewhere. In this case any additional cabinetry may be substituted for no more than 25% of the cabinetry elsewhere. For example, if ten feet of base and uppers each are required, and 15 feet of base cabinets are provided; only 2.5 feet credit may be applied to the uppers leaving 7.5 feet of uppers required. Cabinet requirements do not include the sink base.

This is generally equivalent to the following lineal feet of cabinets*:

Unit Size	Lineal Feet of Base Cabinets	Cubic Feet of Base Cabinets	Lineal Feet of Upper Cabinets	Cubic Feet of upper Cabinets	Total Cubic Feet
Efficiency	4	17	3	8	25
1 Bedroom	5	22	4	10	32
2 Bedroom	6	26	5	12	38
3 Bedroom	7	30	6	15	45
4 Bedroom	7	30	6	15	45

* Assumes standard 24" depth and 26" height for base cabinets and 12" depth and 30" height for upper cabinets.

Appliances

- All units with two or more bedrooms must be equipped with 30" wide range/self-cleaning oven.
- All appliances shall be UL (Underwriters Laboratories) listed and approved appliances.
- All other units shall be equipped with 24" (min.) range/self-cleaning oven.
- Range or Stove and Oven: One-year minimum warranty. All major appliances used for surface cooking should have a ventilation system that meets code. (typically, a fan rated at a minimum of 150 CFM)
- Refrigerator: one-year minimum warranty on the entire appliance.
- Dishwasher/Garbage Disposal: If provided in the market rate units, all permanently affordable for-sale units shall include a garbage disposal each with a 1-year minimum warranty on the entire appliance.
- Microwaves and other appliances are optional.
- A protective shield must be provided for the section of wall directly behind all ranges and on any abutting partition. Protective shields shall either be high-pressure plastic laminate, enameled steel or stainless steel.
- "Frost Free" refrigerator/freezer with 15" minimum wide counter on latch side. 14 cu. ft. (min.) for one bedroom and smaller dwelling units. Appropriately sized for intended household for larger dwelling units.

Hard-Surface Flooring

- New water-resistant floor covering other than carpet is required for kitchens and bathrooms.
- v. Dining
- Dining room/area designated with hard-surface flooring distinct from living room is required in 2-bedroom and larger dwelling units.
 - The dining room/area must be appropriately sized for the intended household size and accommodate the following:
 - a) 2-bedroom dwelling units: Table w/ four (4) chairs
 - b) 3-bedroom dwelling units: Table w/ six (6) chairs
 - c) ≥4-bedroom dwelling units: Table w/ seven (7) chairs
 - Must have window to exterior or opening to living room.
 - Exceptions:
 - a) An eat-in kitchen may be substituted for dining room/area if kitchen and dining area are appropriately sized for the intended household size plus two (2) guests.
 - b) A 4' long snack bar located on rear side of kitchen countertop may be used in lieu of designated dining room/area in 1-bedroom and smaller dwelling units.
- vi. Bathroom
- Definitions:
 - a) Full Bathroom: (vanity, water closet, and tub w/ showerhead)
 - b) (½) Bathroom or Powder Room: (vanity and water closet)
 - c) (¾) Bathroom: (vanity, water closet, and shower)
 - A minimum of one (1/2) bathroom required at ground floor of any two-story dwelling unit.

- A minimum of one Full bathroom required at 2-bedroom and smaller dwelling units
- A minimum of (1 3/4) bathrooms required at 3-bedroom and larger dwelling units
- Any “Split” bedroom design (bedrooms on opposite sides of living room): At least a 3/4 bathroom adjacent to any bedroom to avoid having to travel through living space when traveling from bedroom to a bathroom.
- In 3-bedroom or larger dwelling units, DOH encourages main bathroom to be compartmentalized for simultaneous, multiple use.
- Minimum Accessories:
 - a) Medicine cabinet (at least one per dwelling unit);
 - b) Towel bar(s) (within reach of lavatory and tub/shower);
 - c) Toilet paper holder;
 - d) Shower curtain rod (if applicable); and
 - e) Mirror
 - f) Storage space/closets

vii. General Storage

- General storage space for household cleaning supplies, vacuum, etc. is required.
- In addition to pantry, bedroom, linen, and entry hall closets, additional enclosed storage space must be provided (garage, extra closet, basement, or outdoor enclosed storage) and square footage of storage area must at minimum meet the standards listed in the table below.

Unit Type	Minimum Storage Area
Efficiency	30 SF
1 Bedroom	40 SF
2 Bedroom	50 SF
3 Bedroom	60 SF
4 Bedroom	70 SF

viii. Plumbing systems – Plumbing systems shall meet the following requirements:

- All kitchen sinks shall be double compartment (33”x 22” min.), 7” deep minimum. Exception: Efficiency dwelling unit/Single room occupancy (SRO) with dishwasher may have single compartment sink.
- Disaster drain pan with floor drain shall be provided under any water heater and clothes washer located above ground level.
- Plumbing chases and plumbing walls shall not be in/at new building exterior walls. If required at existing buildings, chases shall be designed to keep plumbing from freezing.

ix. Heating, ventilating, and air-conditioning (HVAC) system – HVAC systems shall meet the following requirements:

- Bathroom exhaust fans shall be ENERGY STAR-labeled and shall exhaust to the outdoors. Fans shall operate either continuously; or when the light is turned on; or with a humidistat and timer.

- Exhaust ductwork for clothes dryers shall be rigid type and vented to outside.
 - Kitchen range hood shall meet the requirements of Enterprise Green Community Criteria:
 - a) By providing direct exhaust to the exterior.
 - Or
 - b) By placing a recirculating range hood as part of a heat recovery central ventilation system.
 - Intake and exhaust ductwork located in unheated spaces shall be insulated.
 - Air-conditioning shall be provided to all dwelling units.
 - x. Electrical systems – Electrical systems shall meet the following requirements:
 - Ceiling or wall mounted light fixture in all bedrooms.
 - GCFI outlets are required in all bathroom, kitchen areas, exterior, and basements.
 - Arc Fault outlets are required in all bedrooms.
 - All units must have breaker panels in lieu of fuse type panels.
 - Task lighting above kitchen range and kitchen sink.
 - Each dwelling unit shall be wired for hi-speed Internet access.
 - xi. Hardwired smoke detectors and Carbon Monoxide (CO) Alarms located per Chicago Building Code.
6. Building components – DOH encourages the advancement of green/ sustainable building strategies. Refer to the City of Chicago Sustainable Policy Matrix located on the DPD website for the minimum requirements your development will be required to do.
- Millwork
 - i. All new kitchen cabinets and new wood bathroom cabinets shall have solid wood face-frames, doors, and drawer fronts. (Minimum Level 2 doors feature solid wood frames with genuine veneer center panels.)
 - ii. Drawer-box construction shall have dovetail or reinforced joint construction.
 - iii. All new kitchen cabinets and new bathroom cabinets shall have solid plywood box construction. No MDF or laminate boxes, cabinet drawers or door fronts allowed.
 - iv. All cabinet drawers and doors shall have accessible hardware.
 - v. All millwork shall meet the Kitchen Cabinet Manufacturers Association (KCMA) ANSI/KCMA A161.1 standard. KCMA Certification is suggested but not required.
 - Exterior windows and doors
 - i. All new windows and doors must be ENERGY STAR-qualified.
 - ENERGY STAR regularly updates its requirements for qualification. The applicable version current for qualification at the time windows and/or doors are ordered/ purchased shall be applied.
 - ENERGY STAR “Qualified” is based upon standards set for the region in which the window/door is being installed. The applicable region for Chicago/Illinois shall be applied.
 - All windows and windows within doors shall be furnished with window coverings for privacy and control of heat/solar shading.
 - All operable windows and operable windows within doors shall have insect screens.
 - All windows shall meet accessibility operating force.
 - The sill of all windows must be solid wood, stone, man-made solid surface material, or other material approved by DOH Construction Services Division.
 - All windows and doors shall have accessible hardware and locking/operating mechanisms.

- Roofing
 - i. Low Slope Roofing
 - Shall have a minimum of ¼" inch per foot (finished) slope unless otherwise approved by DOH Technical Staff and/or Dept. of Building Official
 - Approved Systems include 60 mils adhered EPDM & TPO, or 4 ply asphalt/gravel built-up assembly.
 - Ballasted or mechanically fastened single ply membranes are not accepted.
 - A Minimum 20- year manufacturer's warranty required.
 - ii. Sloped Roofing
 - A minimum 25-year manufacturer's warranty required.
- Patio and entrance slabs – All patio and entrance slabs shall comply with the following requirements:
 - Stoop/footing frost protection required at all entrance slabs.
 - Where soils are frost susceptible, stoop/footing frost protection required at all patio slabs.
 - ¼" per foot maximum slope.
 - Protect front entrance slab from rain/snow accumulation. (i.e.: overhang, canopy)
 - All front and rear entry stairs shall have a concrete starter step.
 - No wood front porches or entrances will be allowed unless a requirement of a Landmark feature.
- Exterior Façade
 - i. Exterior treatment should be comparable with the surrounding neighborhood context.
 - ii. Masonry veneer with a four-foot wrap for the front façade is mandatory where existing buildings in the neighborhood are predominately masonry structure.
 - iii. All side elevations exposed to the street should have architectural treatment consistent with the front façade.
- Specialties
 - i. Trash chute required for all multi- level developments.

7. Senior Requirements- Additional requirements for senior buildings.

- i. Sprinkler System.
- ii. Fire Alarm system with annunciator panel.
- iii. Emergency call devices in all bedrooms and bathrooms.
- iv. Lever type door handles throughout.
- v. Grab bars in all bathrooms.
- vi. Single lever faucets on all plumbing fixtures.
- vii. Air conditioning in all units and common areas.
- viii. Emergency lighting system.
- ix. Hardwired smoke and heat detectors with strobe type warning light.
- x. Hardwired CO2 detectors.
- xi. Emergency Backup generator.
 - Area Service by Emergency Generator shall include but not limited to the following areas:
 1. Common Areas, (Corridors, Stair, halls, Elevators, Administration Area, Mechanical Rooms).
 2. One Large Gathering Area (Community Room)
 3. Emergency Lights
 4. Emergency Exit Signs
 5. Emergency HVAC System in Common Area, and One Large Gathering Area
 6. Emergency Call /Pull Cord in each Apartment.
 7. Fire Alarm System

8. Sprinkler Pump System.

- Type of Emergency Generator to be determined by Building Design and City of Chicago Electrical Code.
- Location of Emergency Generator to be determined by Building Design and City of Chicago Electrical Code

- xii.** Trash compactor.
- xiii.** STC sound rated glass for all windows.
- xiv.** Active outdoor space.
- xv.** Security system.
- xvi.** Compliance with all MOPD/IAC requirements.



Architectural/Technical Standards – Rehabilitation

Purpose:

To ensure DOH sponsored housing is decent quality, energy efficient, functional, sustainable, and effective in reducing long-term maintenance costs.

Background:

The following standards apply to any rehabilitation housing projects sponsored by the Department of Housing. If the project involves **gut rehabilitation** or **adaptive reuse**, the housing shall also comply to the maximum extent feasible, as deemed by DOH Construction Services, with *the Architectural/Technical Standards – New Construction*.

The following standards are supplemental to basic standards established by applicable building codes, local zoning, and other applicable regulations.

Requirements:

Housing that is undergoing rehabilitation must meet the requirements associated with a physical needs assessment, accessibility assessment, environmental review, capital needs assessment, other inspections, and preliminary scope of work/cost estimate, contract documents as follows:

1. **Physical Needs Assessment** – A Property Physical Needs Assessment (PNA), prepared by an Architect or Qualified Rehab Specialist must be provided for all projects at the time of submittal. Provide a Life Expectancy analysis including Estimated Age, Expected Useful Life (EUL), and Effective Remaining Life (ERL) of the following minimum elements:
 - i. Roof; siding/ exterior walls; windows; doors (exterior entry/ garage, overhead); plumbing fixtures; HVAC Systems; and Kitchen Appliances. The inspection shall be conducted to identify deficiencies under applicable state and local codes, ordinances, and The Minimum Essential Physical Needs as described below:
 - All systems, materials, building envelope, etc. in the development must have a minimum of 15 years EUL remaining to not be included into the current scope of work.
 - **Structural integrity** – Structures shall be structurally sound and free of any pending or imminent structural collapse or failure. (i.e.: decks, basement columns, foundations, floors, walls, roof framing, headers, lintels, etc....)
 - **Building envelope** – The building envelope shall be weather and water tight. All openings susceptible to water and air penetration shall be sealed. Ensure envelope is adequately insulated or supplement the insulation to the envelope. Typically, the attic is the cheapest and easiest to supplement, and will provide the greatest cost-to-benefit payback. Ensure that all attics are adequately ventilated to prevent ice-damming, and all attic bypasses are sealed/insulated.
 - **Site and roof drainage** – The site shall be well drained. There shall be no standing water in non-designated holding pond areas 12 hours after a rain event. Surface drainage must be directed away from the structure, to a designated ponding area, or to municipal storm sewer system. Include roof drainage provisions when assessing site drainage conditions.
 - **Plumbing and sanitation systems** – All plumbing systems shall be code compliant, adequately sized, and operable with an anticipated minimum 7-year life expectancy. No leaks allowed. Obsolete, water wasting fixtures shall be replaced. DOH Construction Services may require sanitary sewer lines to be video- scoped to detect if any unforeseen repair/maintenance is necessary.
 - **Mechanical systems** – All heating, air conditioning, and ventilation systems shall be code compliant, adequately sized, and operable with an anticipated minimum 15-year life expectancy. Bathrooms shall have an operating exhaust vent ducted to the exterior. Clothes dryers shall be connected to code compliant rigid type vent exhausting to the exterior. All dwelling units are air conditioned.
 - **Electrical systems** – All electrical systems shall be code compliant with circuit breakers, adequately sized for the structure and intended use. All electrical life safety fixtures shall be in place and functional including the following:
 - a) *Smoke detectors and CO2 detectors* meeting requirements of Underwriter Laboratories, Inc., approved by the International Conference of Building Officials, shall be furnished and installed in all areas as required for new construction. At least one smoke detector in each dwelling unit shall be hardwired (equipped w/ battery backup) and audible from sleeping rooms.

- b) *Ground-fault circuit-interrupter (GFCI) protection.* GFCI protection shall be provided for receptacle outlets in locations as required by applicable regulations for new construction.
 - c) *Arc-fault circuit-interrupter (AFCI) protection.* AFCI protection shall be provided for receptacle outlets in locations as required per applicable codes/ regulations.
 - d) *Breaker panels.* Breaker panels shall be required in lieu of fuse type panels.
- **Elevator** – Housing required to have an elevator shall meet the following requirements associated with an elevator:
 - i. The maximum length of travel from any dwelling unit to an elevator shall not exceed two hundred fifty (250) lineal feet.
 - ii. The number of required elevators in each building shall be dictated as follows:

All multifamily/senior units	Minimum of two (2) elevators required. *
(+9) stories above grade:	Consult Dept. of Buildings.

- * comply to the maximum extent feasible, as deemed by DOH Construction Services
 - iii. It is highly recommended to include a freight elevator in all projects.
 - iv. A minimum of one elevator shall be accessible
 - v. All elevators shall comply to the current building code.
 - vi. The renovation/scope of work shall not reduce the existing number of elevators in the current building.
- ii. **Functional kitchen** – Kitchen shall be appropriately sized and equipped with appropriate cabinets, sink, and operational range/oven/hood/refrigerator appropriately sized for intended household.
 - iii. Rehabilitation and Adaptive Reuse projects must provide compelling need to replace materials and/or features at 50% expected useful life (EUL) or more **. Items that have 75% EUL or more remaining are not eligible for replacement and use of DOH funds. DOH Construction will review on a case-by-case basis for replacement of items with 75% EUL or more when required to obtain a green certification.
- ** No existing materials and/or features shall have a EUL of less than 15years. These will need to be replaced as part of the scope of work.

*Housing shall meet the requirements associated with decent living space outlined in the previous Architectural/Technical Standards – New Construction section.

- ii. Exception: The Moderate rehab of an existing building/ development may request a variance for the least dimension(s) and area of the Living Room and Bedrooms by 15%. However, any bedroom must still maintain 9'-0" in any direction minimum and all space must remain functional as deemed by DOH Construction Services. If approved by DOH Construction Services Division, the 15% reduction shall be clarified as follows:
 - a. Living Room. 11'-6" x 85% = **9'-9"**.
 - b. Primary/ Master bedroom. 10'-0" x 85% = **8'-6"**. 115 sq. ft. x 85% = **96 sq. ft.**
 - c. Secondary bedroom(s). 9'-6" x 85% = **8'-1"**. 100 sq. ft. x 85% = **85 sq. ft.**
- iii. **Parking** – Adequate parking satisfactory for the resident population shall be available for resident use. Any onsite pavement with initial signs of raveling, transverse cracks, longitudinal cracks, or minor block cracking shall have preventative maintenance which includes corrective measures such as cracksealing, seal coating, asphalt patching/repair. Any onsite pavement with severe cracking/damage shall be adequately repaired/ replaced. Hard surface parking shall be properly striped and any accessible parking spaces properly identified.

2. **Environmental** – It is essential to perform all environmental assessments early in the planning process to ensure that any mitigation measures and costs are integrated into the scope of work. Project activities must comply with the following:
- iv. Historic preservation – The project activities must not be performed on properties that are either listed in or determined eligible for listing in the National Register of Historic Places, or identified as historic by State, territory, Tribe or municipality, unless the project activities comply with applicable standards and guidelines. A documentation plan for rehabilitation shall be developed and submitted early to the enforcement authority for review/approval. Please refer to National Park Service, City of Chicago – DOH Landmarks, and Illinois State Historic Preservation Office for further guidance.
 - v. Contamination – It is DOH policy that all properties be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could afflict the health and safety of occupants or conflict with the intended utilization of the property. Contamination evaluation shall comply with the following:
 - vi. Lead hazard evaluation and reduction. Housing built prior to 1978 must have paint testing which means the process of determining, by a certified lead-based paint inspector or risk assessor, the presence or absence of lead-based paint on deteriorated paint surfaces or painted surfaces to be disturbed or replaced, unless it is presumed that all these painted surfaces are coated with lead-based paint. In addition, a risk assessment which is an on-site investigation to determine the existence, nature severity, and location of lead-based paint hazards is required. DOH encourages that a lead-based paint inspection, which is a surface by surface investigation to determine the presence of lead-based paint be conducted in addition to the risk assessment. If a lead-based paint inspection is conducted, then the required paint testing referenced above is included. Regardless, the Owner shall provide the inspector/assessor a copy of the proposed work scope and a complete list of painted surfaces to be disturbed or replaced during rehabilitation activities.
 - vii. Asbestos. DOH requires an asbestos inspection/assessment on all buildings prior to rehabilitation where there is reason to believe asbestos containing material (ACM) may be present and will likely be disturbed during rehabilitation activities. A management plan is required if any ACM or presumed ACM remains that is in good condition and not likely to be disturbed or become hazardous.
 - viii. Visible mold. Any visible mold or water infiltration shall be investigated for possible causes and properly mitigated. Any mold on materials that cannot be properly cleaned must be removed. If mold is found on drywall it shall be abated (cut out and disposed).
 - ix. Accessibility. Rehabilitation activities shall not reduce or have the effect of reducing accessibility of a building or portion of a building. It is required to design all the units to be visitable and adaptable. (i.e. light switch heights, lever hardware throughout,

door widths, etc.) A universal design/ age in place approach should be used as a minimum design starting point. Many adults prefer to live in their own home and community as they age, wishing to live safely, comfortably, and independently for as long as possible. DOH strongly recommends cost-effective measures to ensure that affordable housing developments accommodate such life-style choices, particularly in senior housing developments. The project at a minimum will need to meet MOPD and DOH accessibility requirements.

3. Senior Requirements- Additional requirements for senior buildings.

- i.** Sprinkler System.
- ii.** Fire Alarm system with annunciator panel.
- iii.** Emergency call devices in all bedrooms and bathrooms.
- iv.** Lever type door handles throughout.
- v.** Grab bars in all bathrooms.
- vi.** Single lever faucets on all plumbing fixtures.
- vii.** Air conditioning in all units and common areas.
- viii.** Emergency lighting system.
- ix.** Hardwired smoke and heat detectors with strobe type warning light.
- x.** Hardwired CO2 detectors.
- xi.** Emergency Backup generator.
 - Area Service by Emergency Generator shall include but not limited to the following areas:
 - 9. Common Areas, (Corridors, Stair, halls, Elevators, Administration Area, Mechanical Rooms).
 - 10. One Large Gathering Area (Community Room)
 - 11. Emergency Lights
 - 12. Emergency Exit Signs
 - 13. Emergency HVAC System in Common Area, and One Large Gathering Area
 - 14. Emergency Call /Pull Cord in each Apartment.
 - 15. Fire Alarm System
 - 16. Sprinkler Pump System.
 - Type of Emergency Generator to be determined by Building Design and City of Chicago Electrical Code.
 - Location of Emergency Generator to be determined by Building Design and City of Chicago Electrical Code
- xii.** Trash compactor.
- xiii.** STC sound rated glass for all windows.
- xiv.** Active outdoor space.
- xv.** Security system.

Compliance with all MOPD/IAC requirements.

Contractual and Policy Requirements

Developer

It is also the developer's responsibility to submit all required documentation to the DOH Construction Services Division for review and approval. A "clarification document" is generated and sent to the Developer outline all documents required for the review of the project. These documents must be submitted in a timely manner and give the Construction Services Division ample time to review and comment on any document. Without Construction Services Division's construction approval, no closing shall take place. Construction approval and a Notice to Proceed cannot be issued if requested documentation is not submitted.

- The developer will be required to submit a minimum of three (3) general contractor bids for all developments.
- All three parties of the Development Team (developer, architect of record, and general contractor) shall be independent of one another and cannot be a related entity, subsidiary, etc. of any other part of the Development Team.
- The chosen general contractor must submit a full "DOH Contractor's Application Package" for review and approval. (See Exhibit #2).
- Contracts for general construction must be an AIA Guaranteed Maximum Price regardless of other options allowed by other funders.
- No early construction starts shall be granted prior to having a closing and receiving a "Notice to Proceed" from DOH Construction Services Division.
- All documents used by the architect of record, general contractor, or developer shall be on standard AIA contract documents or forms. Deviation from these forms will need to be approved by City of Chicago Construction Services Division in writing.
- The developer's fee shall be used for all construction contingency items once the construction contingency for the project has been depleted but the project has not been completed.

Contractual and Policy Requirements

Architect of Record

Once the DOH Construction Services Division has been assigned the project, the architect of record shall submit drawings, a design review package, and initial meeting minutes from MOPD (as outlined in the Exhibit 1 "Architectural Design Guidelines " package) to the staff for their respective review. The Department of Housing's Architectural Design Review process is intended to increase the design integrity of affordable housing in Chicago and help ensure that the architecture enhances the livability of neighborhoods, fosters an improved image and sense of pride and fulfills its potential as a catalyst to transform communities and lives of individual residents. New developments are required to be responsive to our Architectural/Technical Standards manual and comments.

The Exhibit 1 "Architectural Design Guidelines " package and Architectural/Technical Standards manual address critical site and building design issues that impact new and existing residential developments. The goal is to ensure that projects supported by the City of Chicago positively address the adjacent properties and surrounding communities. It is critical that each development team ensure that the proposed development address the guidelines' objectives.

This review along with comments and approval must take place to move along into construction documentation stage and permitting. A DOH Construction and Architectural Design Review with the Construction Services Division and a MOPD meeting must take place to any permitting or submissions for PD, etc. Any major modifications or changes to the initial design need to come back to the Construction Services Division for their review and approval before proceeding. Construction Document review along with final permitted drawings, addendums, and issued for construction drawings must be reviewed and approved by the Technical Staff prior to closing of the project and beginning of construction.

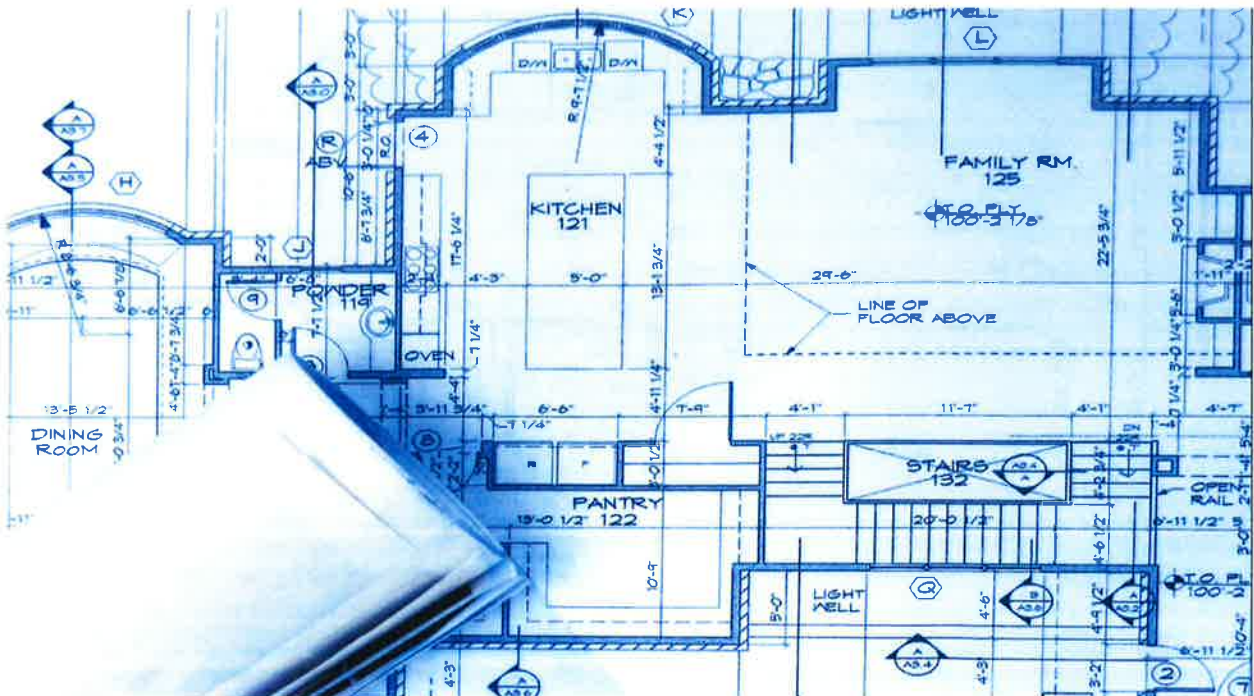
The drawing and specifications must be prepared under direct supervision of an Illinois Licensed Architect in accordance with the Architectural Practice Act, bear the license number of the architect, and if the architect is part of any business structure other than a sole proprietorship, he or she must include the Project Design Firm registration number on the drawings. The drawings are to be signed and sealed by the design architect (Architect of Record). A Professional Engineer licensed to practice their profession in the State of Illinois, when acting as a consultant to the architect of record or under a separate contract with the developer/owner, must sign and seal his work and provide proof of professional liability insurance.

DESIGN ISSUES

The Exhibit 1 "Architectural Design Guidelines " package and the Architectural/Technical Standards manual are intended to direct development team, designers and project reviewers to look closely at local conditions and produce new buildings that enhance, rather than detract, from their surroundings. For "in-fill" projects, which constitute most new development in Chicago, good design cannot be judged in terms of the individual building on its site but must be considered in the context of its surroundings. For a proposal located on a street with a consistent and distinctive architectural character, the architectural elements of the building are key to helping the building fit the neighborhood. On other sites with few attractive neighboring buildings, the placement of open space and treatment of pedestrian areas may be of greater importance.

- Promote use of durable materials that reduce long term maintenance costs.
- Create a healthy living environment for residents of all backgrounds and abilities.
- Enhance energy efficiency to reduce operating costs.
- Appropriately balance high quality design and materials with cost containment principles.

It is critical that each development team review the guidelines and become familiar with the proposed sites and ensure that the proposed project positively responds to the various design issue.



SITE PLANNING

- **Responding to Site Characteristics:** The siting of buildings should respond to specific site conditions and opportunities, such as irregular lots, location on prominent intersections, significant views or other natural features.
- **Streetscape Compatibility:** The siting of buildings should acknowledge and reinforce the existing desirable spatial characteristics of the right-of-way.
- **Visible Entrances:** Entries should be clearly identifiable and visible from the street.
- **Human Activity:** Buildings should be sited and designed to encourage human activity on the street.
- **Respect for Adjacent Sites:** Buildings should respect adjacent properties; site-location should minimize disruption of privacy and outdoor activities of residents in adjacent buildings.
- **Transition between Residences and Street:** The space between buildings and the sidewalk should provide security and privacy for residents while encouraging social interaction among residents and neighbors.
- **Open Space:** Development should be sited to maximize opportunities for creating usable, attractive, well-integrated open space.
- **Parking and Vehicle Access:** Siting should minimize the impact of automobile parking and driveways on the pedestrian environment, adjacent properties and pedestrian safety.
- **Corner Lots:** Buildings on corner lots should be oriented to the corner and public street fronts. Parking and automobile access should be located away from corners.

HEIGHT, BULK AND SCALE

- **Height, Bulk, and Scale Compatibility:** Buildings should be compatible with the scale of development in the surrounding area and should be sited and designed to provide a sensitive transition to nearby unlike development.
- **Human Scale:** Design should incorporate architectural features, elements and details that achieve a good human scale

LANDSCAPING

- **Reinforce Design Continuity with adjacent sites:** Landscaping should reinforce the character of neighboring properties and abutting Streetscape.
- **Enhance the Building and/or the Site:** Landscaping (natural plant material, architectural pavement, trellises, screen walls, planter, etc.) should be appropriately incorporated into overall design

ARCHITECTURAL ELEMENTS AND MATERIALS

- **Architectural Context:** New buildings in existing neighborhoods with a well-defined and desirable character should be compatible with or complement the architectural character and setting of neighboring buildings.
- **Architectural Concept and Consistency:** Building design elements, details and massing should create a well-proportioned and unified form and exhibit an overall architectural concept.
- **Architectural Diversity and Innovation:** Multi-building developments should acknowledge the city's rich tradition of diverse styles within neighborhoods.
- **Exterior Materials:** Building exteriors should be constructed of durable, energy efficient and easily maintainable materials that are attractive even when viewed up close. Materials that have texture, pattern, or lend themselves to a high quality of detailing are encouraged.
- **Natural Light:** Building design should incorporate maximum feasible natural light into the interior.
- **Parking Entrances:** The presence and appearance of garage entrances should be minimized so that they do not dominate the street frontage of a building.

PEDESTRIAN ENVIRONMENT

- **Convenient Entries:** Convenient and attractive access to a building's entry should be provided. To ensure comfort and security, paths and entries should be sufficiently lighted and protected from the weather.
- **Blank Walls:** Buildings should avoid large, blank walls facing the street, especially near sidewalks. Where blank walls are unavoidable, they should receive design treatment to increase pedestrian comfort and interest.
- **Parking Lots Near Sidewalks:** Parking lots near sidewalks should provide adequate security and lighting and be screened from the street and adjacent properties by attractive landscaping.
- **Screening of Service Areas and Facilities:** Service areas and facilities should be located away from the street front and screened from view.
- **Personal Safety and Security:** Project or building design should consider opportunities for enhancing

SUSTAINABLE/GREEN REQUIREMENTS

DOH encourages the advancement of green/ sustainable building strategies. Refer to the City of Chicago DPD Sustainable Policy Matrix for the minimum requirements your development will be required to do.

It is important to note that green building products and systems should be integrated into the design of the project at the beginning of the process. It is much more difficult to incorporate these items as an "after thought" once building design has already started. It is also helpful to view the building holistically. Many green products and systems are not stand alone and impact other building systems. It is only by analyzing the entire building that a sensible and efficient design can be achieved.

Contractual and Policy Requirements

General Contractor

The following items apply to the General Contractor for the Project:

- The staff shall evaluate the General Contractor's past performance in addition to the requirements as indicated on the General Contractor's Application Package.
- The chosen General Contractor from the initial bidding process (See Developer Section of this Manual) must submit a complete "Contractor's Application Package". (*DOH Construction Services Division reserves the right to deny a project's funding where a proposed contractor does not meet the standards established in this certification, or if the contractor's history with the DOH does not meet a high-quality standard of construction expected to be provided for all projects.*)
- Upon appointment of the General Contractor by the Developer, the General Contractor will need to submit a minimum of three subcontractor bids for all line items.
- All self-performed work by the General Contractor or one of its entities will have to include a letter of explanation as to the need of self-performed work along with all the requirements as any other line item. (a minimum of 3 bids for all self-performing work) However, self-performed or related entity work performed cannot charge general conditions, overhead or profit for that line item.
- These subcontractor bids shall be submitted in a binder with tabs corresponding to each line item on the General Contractor's sworn statement. Each section shall have a bid tabulation sheet for all bidders in the section that follows. If required by Department of Buildings a copy of that subcontractor's license shall be included in the documentation along with any MBE/WBE certification.
- The sworn statement and the successful subcontractor bidder's bid shall be updated accordingly to reflect the issued for construction drawings prior to closing.
- All prospective General Contractors and all subcontractors need to be licensed by the City of Chicago for their trade as applicable.
- A letter on the General Contractor's letterhead stating they received the issued for construction drawings with all addendums and correction and that the sworn statement amounts have been adjusted accordingly to reflect those changes must be submitted prior to closing.
- Once a sub-contract line item has been let a copy of the subcontract agreement must be submitted detailing all work in the scope, amount of contract, and that line item shall not be adjusted, removed or scope subdivide.

- No line items and/or amounts shall be adjusted, removed or scope subdivided without DOH Construction Services Division review and written approval (No internal change orders, etc.)
- Contracts for General Construction must be an AIA Guaranteed Maximum Price. The final sum and language of the contract shall be reviewed and must meet all program guidelines.
- The DOH Construction Services Division Architectural/Technical Standards is to be an exhibit in the General Contractor's contract.
- Any work started prior to a "Notice to Proceed" being issued by the DOH Construction Services Division shall not be paid out from the project budget and may put the proposed funding at risk. City of Chicago shall not be responsible for payment, compensation, loss of funding due to unauthorized work or activity.

The General Contractor is allowed "profit" in the amount of 6%, "overhead" in the amount of 2% and "general conditions" (which includes Bond and Insurance) in the amount of 6%, all of which are maximum amounts calculated from the net construction costs.

- **Profit** is defined as the proceeds of the transaction minus the cost, including intangibles such as contract incentives.
In the event there is an identity of interest between the owner/developer and general contractor, the following will apply: (a) the developer fee will be removed or (b) the general contractor's 6% profit shall be eliminated.
- **Overhead** being the expense necessary to conduct a business. Cost shall also include those specific to the project and include transportation, travel expenses, temporary housing, etc. In the event there is an identity of interest between the owner/developer and general contractor, the following will apply: (a) the developer fee will be removed or (b) the general contractor's 2% overhead shall be eliminated.
- **General Conditions/General Requirements** are functions needed to complete the construction phase and shall include but not be limited to the following costs: project manager/superintendent, draw related paperwork, layout, surveys, plans/printing, material testing, communications, mobilization, temporary heat and utilities, portable toilets, temporary fencing, OSHA protection, field office, hoisting equipment, security, small tools, disposal, construction photography, cost certifications, audits, mock-ups, daily construction site cleaning, final cleaning, general labor, etc., essentially including, but not limited to, items identified within Construction Specifications Institute (CSI) Master Format Divisions 0 and 1 within the project manual (when provided). As the General Contractor is responsible for these functions any subcontracting of these out to lower tier subcontractors will reduce the amount of the General Contractor's General Conditions percentage that a General Contractor can collect accordingly.

When a contractor is acting in the capacity of a General Contractor they shall provide all the functions typically associated with the position. The General Contractor is responsible for the overall construction management aspects and tasks involved from the Project's start-up through completion. Functions include (but are not limited to): scheduling, coordination of the trades, supervision, safety, program compliance, monitoring, and all other means and methods required to complete the construction of the project. As such DOH Construction Services Division will not allow for a "Straw" General Contractor or a firm which reaps the benefits and fees associated with

the General Contractor title but, subcontracts these functions to another General Contractor or separately contracted individual to perform these duties in place of a primary employee of the General Contractor. Subsequently the General Contractor is expected to be on the site during construction and at least daily, and maintain a daily log documenting the progress of the work to be available for review upon DOH Construction Services Division request. Similarly, any side agreements to the contrary or kickbacks will result in forfeiture of any future work with the City of Chicago. Furthermore, all joint ventures created for the project will have to have a formal JV contract and will be reflected on the permit. If the basis of the joint venture is to reap the benefits of a minority status by one of the members than that member must hold 51% or more of the joint venture share. Both joint venture members must play an active role on the project site and representatives from both parties must document their activities for the project.

All construction related costs required to complete the project shall be determined prior to the project receiving a "Notice to Proceed" from DOH Construction Services staff.

- The General Contractor's Sworn Statement needs to include all permit review corrections, requirements, addendums, value engineering, proper wages, etc. It is the responsibility of the General Contractor to familiarize themselves with the project site including but not limited to the site conditions, soil reports, utility locations and services, logistics and material deliveries, staging, etc.
- The General Contractor must submit a statement on company letterhead, prior to closing, that all subcontractor pricing includes all permit review changes, corrections, addendums, etc. and that all subcontractors have reviewed the issued for construction documents and have adjusted the contracts accordingly.
- Any deletion of DOH Construction Services required work items (as indicated the DOH Architectural Technical Standards, Design Review comments, etc.) from the scope due to costs will not be approved, nor will the utilization of the contingency to pay for these items. (No contingency money shall be used for these items after the 'Notice to Proceed' is issued.)
- Additional funding for increased construction budget costs shall be the responsibility of the Developer or General Contractor and not the City of Chicago or DOH.
- Winter Conditions shall be carried on the Owner's Sworn Statement with no exceptions. This will be treated as a contingency item and will follow all change order procedures. Unused winter condition amounts will be returned to the City of Chicago to write down the amount of financing that was given by the City of Chicago and not redistributed into the project in another line item.
- Construction Performance Bonds are by a company approved by the City of Chicago Department of Housing Construction Services equal to one hundred (100%) percent of the cost of construction of the development and include the City of Chicago as a bond holder.
- In all instances where any subcontract agreements result in cost savings to the Project or there is a construction contingency balance, the disposition of any savings/balance shall be in the sole discretion of DOH Construction Services.
- Material suppliers for construction related products shall be identified on the contractors sworn accordingly.
- Draws for materials and/or furniture, fixtures and equipment (FF&E) can only occur when they have been properly installed and inspected by DOH Construction Division.
- Payment for any shop drawings will be limited to 5% of the total cost for that line item.
- The maximum payment for elevators allowed prior to installation is 50% of the contract amount with progressive payments following percentage complete.
- Stored materials can only be paid out to a maximum of 50% of the corresponding line item for that trade. All requirements for the stored material draw shall be followed and is included in the exhibits section of this document.

- **Retention.** A 10% retention on all line items shall be held for all line items on the General Contractor's Sworn Statement. (Including General Conditions/Requirements, Overhead, and Profit) until 90% completion of the project. A reduction to 5% can be made at the 90% completion point in the project where it shall stay until 100% project completion. A retention reduction form must be filled out and submitted to DOH Construction Services Division.

Construction Contingency

Construction Contingency shall be carried on the Owner's Sworn Statement and will be 5% for new construction and 10% for renovation projects. The percentages are based on the total construction contract amount. The construction contingency will only be used to fund unforeseen conditions and not be used to fund soft costs, developer fees, up-grades and betterments, reserves, or other costs DOH Construction Services Division deems ineligible. The General Contractor needs to include all permit review corrections, requirements, addendums, value engineering, proper wages, etc. in his pricing and not contingency. It is the responsibility of the General Contractor to familiarize themselves with the project site including but not limited to the site conditions, soil reports, utility locations and services, logistics and material deliveries, staging, etc. Change orders for these items will not be eligible for contingency. Extra contingency shall not be carried in the subcontractor line items.

The General Contractor and Subcontractors shall be limited to marking up change orders to 6/2/6 %. Change orders submitted by the General Contractor for self-performed work or a related entity can only include actual material and labor costs only and no markups. All change orders need to be submitted to DOH, reviewed and a written response shall be issued. (All change orders including "internal change orders")

When a change order is requested the following must be submitted to DOH Construction Services Division prior to any work taking place or material ordered for that change order.

- AIA G701 Change order form needs to be executed by the Developer/Owner, Architect of Record, and General Contractor and must be submitted to DOH Construction Services Division prior to any work taking place or material ordered for that change order.
- The owner/developer must also include a detailed letter from the Architect of Record clearly explaining the reasons for the change order and all documentation backing up said change order (plans and sketches outlining the change clearly showing original versus new, photographs, subcontractors and general contractor's proposals, etc.)
- DOH Construction Services Division needs to verify the pre-existing condition and the change order's finished product.
- The Architect and General Contractor needs to insure the items being requested on the change order are not already included in the plans, specifications or the various contract documents.
- It is the General Contractor's responsibility to fully document the before conditions and provide DOH Construction Services Division with documentation and photographs.

DOH Construction Services Division will review the submitted change order. A written determination shall be sent to the Developer.

The following items will be followed to determine the allowance for change orders:

1. Any deletion of DOH Construction Services Division required work items (as indicated the DOH Architecture Technical Standards, Design Review comments, etc.) from the scope.
2. Failure to submit change orders in a timely manner and sequentially to the work performed will result in non-payment.
3. Change orders for work in place prior to notification and written approval of DOH Construction Services Division shall not be approved.
4. The owner/developer assumes all risk (both monetary and construction re-work) in completing change order work without DOH prior approval
5. Any change order work completed that is in conflict with any codes, requirements, standards, guidelines will be the responsibility of the owner/developer.
6. Concealed Condition - Unforeseen items (as determined by DOH Construction Staff).
7. Construction Cost Increases - Cost increases for materials or labor.
8. Contractor Negligence - Any damage or neglect by the Contractor.
9. Building Code Related Issues - are foreseeable costs and will not be approved for payment from the construction contingency.
10. Upgrades (Betterments) - will be approved for payments from the construction contingency on a case by case basis and from the value engineered list provided prior to construction.
11. Architects, engineers, and contractor's errors and omissions and additional architectural and engineering fees - Will not be approved for payment from the construction contingency.
12. Building Inspector- if required by a building department official and can be confirmed as a building code requirement it will not be approved for payment from the construction contingency.
13. Separate contracts outside of the General Contract - When a separate contract is let by the Developer/Owner for work to be performed outside of the General Contractor's contract for the project and scope of work and there are additions costs incurred, those additional costs shall not be paid out of the construction contingency. A separate contingency should be established for that and needs approval by DOH Construction Services Division.
14. Damage or Theft - The Developer/Owner and the General Contractor are responsible to have sufficient insurance in place for the project to cover any losses due to theft, damage or other items covered under the policy for the project. Claiming to have large deductible or potential increases in premiums shall not be a reason for use of contingency.
15. Seasonal Constraints - such as water extraction from recent rains or other costs that could result in scheduling delays will not be approved from the construction contingency. These items should be anticipated and included when compiling a construction schedule. Winter Conditions shall be evaluated on a case by case basis.
16. Other - Any additional architectural, engineering, or other services outside of the scope of work that may be required, or a result of an unapproved change order will not be paid out of contingency.
17. Overtime costs and scheduling delays or delivery of materials is the General Contractor's responsibility and not contingency eligible.

RESOURCES / ACKNOWLEDGEMENTS

- [2019](#) Rental Design and Construction Standards – Minnesota Housing Dept.
- Illinois Housing Development Authority Standards for Architectural Planning and Construction – Illinois Housing and Development Authority
- HPD Design Guidelines - NYC Department of Housing Preservation & Development
- Municipal Code of Chicago (Building & Zoning) – City of Chicago
- Americans with Disabilities Act (ADA) 2010
- Fair Housing Act
- Illinois Accessibility Code
- Section 504 of the Rehabilitation Act 1973
- Minimum Property Standards for Housing (MPS) -US Department of Housing and Urban Development (HUD)
- Title 89 Illinois Administrative Code. Subpart B: Supportive Living Facilities
- Affordable housing Incentives Guidelines – City of Los Angeles
- Covington, George and Hannah, Bruce Access By Design. New York, Van Nostrand Reinhold 1997.
- Preiser, Wolfgang and Ostroff, Elaine editors. Universal Design Handbook, New York, McGraw Hill 2003.
- Goldsmith, Selwyn Universal Design, A Manual of Practical Guidance for Architects. Oxford, Architectural Press. 2000
- Leibrock, Cynthia Beautiful Barrier Free, A Visual Guide to Accessibility. New York, Van Nostrand Reinhold 1993.
- Steven Winter Associates, Accessible Housing By Design, Universal Design Principles in Practice. New York, McGraw-Hill 1997.
- Affordable Housing Design Guidelines Booklet – City of Springfield Missouri
- Housing Authority of the City of Milwaukee (HACM)
- Residential Construction Performance Guidelines for Professional Builders & Remodelers, Fourth Edition – BuilderBooks NAHB
- NASCLA Residential Construction Standards- NASCLA
- Residential Construction Performance Guidelines, Fifth Edition – NAHB
- Best Practices Guide to Residential Construction: Materials, Finishes, and Details by Steven Bliss, published by Wiley
- ANSI/ASHRAE/IES Standard 90.2-2018 Energy-Efficient Design of Low-Rise Residential Buildings
- Active Design: Affordable Designs for Affordable Housing - The Center for Active Design

EXHIBIT #1



**DEPARTMENT OF HOUSING
BUREAU OF CONSTRUCTION AND COMPLIANCE**

ARCHITECTURAL DESIGN GUIDELINES

Lori E. Lightfoot
Mayor of Chicago



Marisa Novara, Commissioner

Bureau of Construction and Compliance
City Hall Room 1000
121 North LaSalle Street
Chicago, Illinois 60602

Architectural Design Review

The Department of Housing's Construction and Architectural Design Review process is intended to increase the design integrity of affordable housing in Chicago and help ensure that the architecture enhances the livability of neighborhoods, fosters an improved image and sense of pride and fulfills its potential as a catalyst to transform communities and lives of individual residents. New developments are required to be responsive to our Architectural Design Guidelines.

The Architectural Design Guidelines address critical site and building design issues that impact new and existing residential developments. The goal is to ensure that projects supported by the City of Chicago positively address the adjacent properties and surrounding communities. It is critical that each development team ensure that the proposed development address the guidelines' objectives.

Architectural Review Process

The Department of Housing's Construction and Architectural Design Review is scheduled early in the DOH process prior to submission of a complete set of construction documents. With early guidance, applicants will have the opportunity to identify concerns and challenges and address accordingly. Other architectural requirements apply and will be discussed later in the development process.

The development team and architect of record are required to prepare a concise informative submittal package, including a project narrative, vicinity map, site plan and drawings that illustrate scale, streetscape, architectural or urban design context, as well as, the opportunities and constraints of the site itself. Development objectives should be addressed, as should site design and building design and building concept(s). The review submittal should also include project development costs, construction cost estimates and project funding sources.

Review Submission Requirements

Development teams are required to provide the following drawings as requested:

1. **Master Plan**
The master plan should locate the project site(s), depict the adjacencies to existing properties and in the case of larger developments illustrate proximity of proposed multiple sites.
2. **Context Photographs**
For projects with noncontiguous parcels, the presenting architect must also provide the following materials: (a) Photographs of the sites including the nearest adjacent buildings; (b) One drawing of each building type in context and one drawing of each group of four or more in context. Provide context photographs of proposed scheme in streetscape context.
3. **Site Plan**
The conceptual site plan should identify setbacks; easements, number of parking spaces provided/required, and location of refuge pick up areas, utilities, and pedestrian environment issues.
4. **Landscape Plan**

- The landscape plan should illustrate type of plant materials, locations of shrubs and trees, ground treatment, security fencing and other site features.
5. **Floor Plans**
The floor plans, building section and elevations should clearly depict room designations, dimensions and typical furniture layout.
 6. **Building Section (optional)**
The building sectional drawing should identify building materials, structural framing, and depth of footings/foundations, ceiling heights of interior spaces and general floor and roof framing.
 7. **Front, Side and Rear Elevations**
The elevation drawings should illustrate selection and location of materials, doors, and fenestration and roof configuration. Elevation drawings should also indicate vertical heights and depth of foundations when a section drawing is not provided.
 8. **Project Narrative**
The project narrative should briefly summarize the development objectives, site, building construction systems (identify wall, floor and roof construction) and building design concepts. Development teams should also include discussion on broader urban design context, as well as, the opportunities and constraints of the site itself. The project narrative should be limited to one (1) letter sized double spaced typed page.

DOH requires that the design be presented in a PowerPoint format to the design review committee.

Additionally, the presentation must be mounted on 24X36 boards. These boards must convey the design intent of the project and contain at a minimum all floor plans, elevations, site plans, landscaping plans, a section, contextual photos, and color elevations.

The Development team is required to submit a copy of the PowerPoint presentation or presentation boards in an 11x17 format – 8 copies **NO LATER THAN 3 DAYS Prior** to the scheduled date. All copies of color renderings should remain in color in these packages. Failure to submit the review package prior to the design review may result in rescheduling of the meeting.

If you have any additional questions regarding the Department of Housing's Construction and Architectural Design Review, please contact the Bureau of Construction and Compliance at (312) 742-0141.

ARCHITECTURAL DESIGN GUIDELINES

The Architectural Design Guidelines are intended to direct development team, designers and project reviewers to look closely at local conditions and produce new buildings that enhance, rather than detract, from their surroundings. For “in-fill” projects, which constitute most new development in Chicago, good design cannot be judged in terms of the individual building on its site but must be considered in the context of its surroundings. For a proposal located on a street with a consistent and distinctive architectural character, the architectural elements of the building are key to helping the building fit the neighborhood. On other sites with few attractive neighboring buildings, the placement of open space and treatment of pedestrian areas may be of greater importance.

It is critical that each development team review the guidelines and become familiar with the proposed sites and ensure that the proposed project positively responds to the various design issues.

DESIGN ISSUES

SITE PLANNING

- **Responding to Site Characteristics:** The siting of buildings should respond to specific site conditions and opportunities, such as irregular lots, location on prominent intersections, significant views or other natural features.
- **Streetscape Compatibility:** The siting of buildings should acknowledge and reinforce the existing desirable spatial characteristics of the right-of-way.
- **Visible Entrances:** Entries should be clearly identifiable and visible from the street.
- **Human Activity:** Buildings should be sited and designed to encourage human activity on the street.
- **Respect for Adjacent Sites:** Buildings should respect adjacent properties; site location should minimize disruption of privacy and outdoor activities of residents in adjacent buildings.
- **Transition between Residences and Street:** The space between buildings and the sidewalk should provide security and privacy for residents while encouraging social interaction among residents and neighbors.
- **Open Space:** Development should be sited to maximize opportunities for creating usable, attractive, well-integrated open space.
- **Parking and Vehicle Access:** Siting should minimize the impact of automobile parking and driveways on the pedestrian environment, adjacent properties and pedestrian safety.
- **Corner Lots:** Buildings on corner lots should be oriented to the corner and public street fronts. Parking and automobile access should be located away from corners.

HEIGHT, BULK AND SCALE

- **Height, Bulk, and Scale Compatibility:** Buildings should be compatible with the scale of development in the surrounding area and should be sited and designed to provide a sensitive transition to nearby unlike development.

- **Human Scale:** Design should incorporate architectural features, elements and details that achieve a good human scale.

ARCHITECTURAL ELEMENTS AND MATERIALS

- **Architectural Context:** New buildings in existing neighborhoods with a well-defined and desirable character should be compatible with or complement the architectural character and setting of neighboring buildings.
- **Architectural Concept and Consistency:** Building design elements, details and massing should create a well proportioned and unified form and exhibit an overall architectural concept.
- **Architectural Diversity and Innovation:** Multi-building developments should acknowledge the city's rich tradition of diverse styles within neighborhoods.
- **Exterior Materials:** Building exteriors should be constructed of durable, energy efficient and easily maintainable materials that are attractive even when viewed up close. Materials that have texture, pattern, or lend themselves to a high quality of detailing are encouraged.
- **Natural Light:** Building design should incorporate maximum feasible natural light into the interior.
- **Parking Entrances:** The presence and appearance of garage entrances should be minimized so that they do not dominate the street frontage of a building.

PEDESTRIAN ENVIRONMENT

- **Convenient Entries:** Convenient and attractive access to a building's entry should be provided. To ensure comfort and security, paths and entries should be sufficiently lighted and protected from the weather.
- **Blank Walls:** Buildings should avoid large, blank walls facing the street, especially near sidewalks. Where blank walls are unavoidable, they should receive design treatment to increase pedestrian comfort and interest.
- **Parking Lots Near Sidewalks:** Parking lots near sidewalks should provide adequate security and lighting and be screened from the street and adjacent properties by attractive landscaping.
- **Screening of Service Areas and Facilities:** Service areas and facilities should be located away from the street front and screened from view.
- **Personal Safety and Security:** Project or building design should consider opportunities for enhancing personal safety and security.

LANDSCAPING

- **Reinforce Design Continuity with adjacent sites:** Landscaping should reinforce the character of neighboring properties and abutting Streetscape.
- **Enhance the Building and/or the Site:** Landscaping (natural plant material, architectural pavement, trellises, screen walls, planter, etc.) should be appropriately incorporated into overall design.

EXHIBIT #2



**City of Chicago
 Department of Housing
 Construction Services Bureau
 CONTRACTOR'S APPLICATION PACKAGE**

Prospective Contractor's Statement of Qualifications

The contents of this questionnaire will be considered confidential.

If the City of Chicago is not satisfied with the answers provided herein, it may reject the placement of the contractor on the list of prospective bidders for construction contracts, disregard the same, or require additional information.

1. Name of Contracting Firm _____
2. Address of Firm _____
 Street _____
 City _____ State _____ Zip Code _____
3. Telephone Number of Firm (____) _____ Website: _____
4. When organized/how long in business? _____
5. Where incorporated and when _____
6. How long have you been engaged in the contracting business under the present firm name?

7. Have you done business under any other names?

8. General nature of work performed by your company.

9. Has your firm been certified by the City of Chicago as an MBE and/or WBE Venture?
 Yes No
10. Have you ever failed to complete any work awarded to you?
 Yes No
 If yes, attach statement showing when, where and why.
11. Have you ever defaulted on a contract?
 Yes No
 If yes, attach statement showing when, where and why.
12. Credit available. Furnish written evidence, preferably from your source of funding.
13. Have you any liens against any of your current projects?
 Yes No
 If yes, attach statement showing when, where and why.
14. Have you failed to meet MBE/WBE Requirements? Local Hiring requirements?
 Yes No
 If yes, attach statement showing when, where and why.
15. Have you fallen behind schedule on any current project?
 Yes No
 If yes, attach statement showing when, where and why.
16. Have you worked on any DOH Funded projects?
 Yes No
 If yes, attach statement listing those projects.

- Name of Developer
- Property Address
- Date of Completion
- Contract Value
- Number of Units

17. Attach a copy of your current General Contractor's License from the City of Chicago Department of Buildings.

18. Bonding capacity \$ _____ Name and address of bonding company:

19. Name and address of insurance company:

20. Amount of coverage on your present policy:

Bodily injury \$ _____ Property damage \$ _____

Other, explain

Expiration of present policy

The City of Chicago reserves the right to verify any or all of the information given above by the contractor. This includes but is not limited to the listed contractors, firms, references listed above as it deems necessary.

The City requires that a copy of your insurance policy be mailed by your agent to the Department of Housing, Attn. Michael Burt/Paul Kulisz 121 N. LaSalle, 10th Floor, Chicago, Illinois 60602. The contractor also acknowledges that he/she will have to furnish insurance in at least the minimum coverage as required by the City of Chicago.

Dated this _____ day of _____ 20 ____.

Name of organization:

By: _____

Title: _____

State of: _____

County of: _____

_____ Being duly sworn, says that he/she is _____
 Name Title

and that the answers to the foregoing questions and all statements contained therein are true and correct.

Signed:

Subscribed and sworn to before me
 this _____ day of _____ 20 ____.

Notary Public

My commission expires: _____



**City of Chicago
Department of Housing
Construction Services Bureau
CONTRACTOR'S APPLICATION PACKAGE**

DISCLOSURE OF OWNERSHIP INTERESTS

Contractor's Name: _____

Contractor's Address: _____

- | | | | | |
|----------------|----|-------------|----|-------------|
| Contractor is: | 1. | Corporation | 2. | Partnership |
| | 3. | Sole Owner | 4. | Other |

SECTION I CORPORATION

- 1a. Incorporated in the State of _____
- 1b. Authorized to do business in the State of Illinois: Yes No
- 1c. Names of Officers and directors of Corporation. (Attach a Statement)
- 1d. If the Corporation has fewer than 100 shareholders attach hereto, a list of names and address of all shareholders and the percentage of interest of each. (Attach a Statement)
- 1e. If the corporation has 100 or more shareholders attach hereto, a list of names and addresses of all shareholders owning shares equal to, or in excess, of 3% of the proportionate ownership interest and the percentage interest of each. (Attach a Statement)

SECTION II PARTNERSHIP

- 2a. If the applicant is a partnership indicate the name of each such partner and the percentage of interest of each therein. (Attach a Statement)

SECTION III SOLE PROPRIETOR

- 3a. The applicant is a sole owner and is not acting in any representative capacity or in behalf of any beneficiary Yes No
If NO, provide the following information:
- 3b. If the sole proprietorship is held by an agent(s) or a nominee(s) indicate the principals for whom the agent or nominee hold such interest. (Attach a Statement)

SECTION IV OTHER

- 4a. If the applicant is a land trust, business trust, estate or other similar commercial or legal entity, identify representative person, or entity holding legal title as well as each beneficiary in whose behalf title is held, including the name, address and percentage of interest of each beneficiary. (Attach a Statement)

To the best of his or her knowledge the information provided hereon is accurate and current.
If a corporation, seal must be affixed.

(Signature of Person Preparing Statement)

Title: _____

SUBSCRIBED AND SWORN TO BEFORE ME

CORPORATE SEAL:

This _____ Day of _____, 200__

Notary Public

Commission Expires: _____



**CITY OF CHICAGO
DEPARTMENT OF HOUSING
SCHEDULE OF APPLICABLE
FEDERAL, STATE AND CITY REGULATIONS**

CONTRACTORS WHO ENTER INTO DEPARTMENT OF HOUSING CONTRACTS MUST OPERATE IN ACCORDANCE WITH PRINCIPLES ESTABLISHED IN RULES, STATUTES, HANDBOOKS, REGULATIONS, ETC, AS INDICATED BELOW. COPIES OF THESE REQUIREMENTS ARE AVAILABLE UPON WRITTEN REQUEST:

1. Civil Rights Act of 1964.
2. Fair Labor Standards Act of 1938.
3. Equal Employment Act of 1972.
4. Illinois Minimum Wage Law of 1971.
5. Contract Work Hours and Safety Standards Act.
6. Copeland (anti-Kickback) Act.
7. Illinois Child Labor Laws.
8. The Illinois Human Rights Act, and the regulation promulgated by The Illinois Department of Human Rights.
9. Executive Order 11246 (Equal Employment Opportunity).
10. Davis-Bacon Act (Federal)
11. Minority Business Enterprise/Women's Business Enterprise (MBE/WBE) Requirements.
12. "City Preference" Employment Requirements. Section 3 of the Housing and Urban Development Act of 1968.
13. DPD Construction Guidelines.

I HEREBY AFFIRM AND ACKNOWLEDGE THE OBLIGATION TO COMPLY WITH ALL APPLICABLE RULES, REGULATIONS, DIRECTIVES AND REQUIREMENTS AS REQUIRED BY THE STATUTES AND DIRECTIVES INDICATED ABOVE.

FIRM: (Print) _____

REPRESENTATIVE: (Print) _____

TITLE: (Print) _____

SIGNATURE: _____ DATE: Month: _____ Day: _____ Year: _____

NOTARY: Subscribed and Sworn to _____ Corporate Seal: _____

Before Me:

Date: _____

Signature

My Commission Expires:

Date: _____



**City of Chicago
Department of Housing
Construction Services Bureau
CONTRACTOR'S APPLICATION PACKAGE**

NOTE: ALL INFORMATION PERTAINING TO THIS APPLICATION WILL BE VERIFIED AND KEPT IN THE STRICTEST CONFIDENCE. FALSIFICATION OF THE INFORMATION REQUESTED AND REQUIRED HEREIN IS CAUSE FOR REJECTION AND/OR DISQUALIFICATION FROM PARTICIPATION IN DEPARTMENT OF PLANNING AND DEVELOPMENT FUNDED PROJECTS.

DIRECTIONS AND DOCUMENTATION REQUIREMENTS

TYPE OR PRINT ALL INFORMATION REQUESTED.

- ANSWER ALL QUESTIONS COMPLETELY. PROVIDE ALL DOCUMENTS SPECIFIED BY THIS DOCUMENT.
- ALL APPLICATIONS MUST BE ACCOMPANIED BY ONE OF THE FOLLOWING:
 - ✓ Certified Financial Statement from the most recently completed fiscal year.
 - ✓ Interim Statement from the most recently completed quarterly report.

NOTE: ALL CERTIFIED FINANCIAL STATEMENTS SHALL INCLUDE THE FOLLOWING:

- ✓ Profit and Loss Summary
- ✓ Cash Flow and Balance Sheet
- ✓ Notes and Supplementary Schedules
- ✓ Auditor's "Statement of Opinion"
- ALL APPLICATIONS MUST BE ACCOMPANIED BY CERTIFICATE(S) OF INSURANCE CONFIRMING:
 - ✓ Public Liability Coverage
 - ✓ Workman's Compensation Coverage
 - ✓ Auto, Truck, Construction Vehicles, etc. Coverage
 - All coverage must be in full force and meet coverage minimums as stated in the application package.

NOTE: Firms and/or individuals providing architectural and/or engineering or other licensed professional services shall provide confirmation of professional liability, errors and omissions coverage.

Copies of all license(s) and/or professional certifications shall also be submitted.

General Contractors entering into contracts for DOH Funded projects shall be required to provide certificates indicating DOH/City of Chicago as co-insured and/or additionally insured as directed.

- ALL APPLICATIONS SHALL BE ACCOMPANIED BY THE SUBMISSION OF COPIES OF ALL BUSINESS LICENSES AND CERTIFICATIONS REQUIRED BY THE CITY OF CHICAGO/STATE OF ILLINOIS.
- THESE SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

A. Limited Business License

- B. Trade License (Plumbing, Heating, Electrical, etc.)
- C. Architecture/Engineers License
- D. Roofing License
- E. Home Repair License
- F. Certificates of Registration as issued by the Department of Buildings, City of Chicago.
- G. Minority Business Enterprise/Women's Business Enterprise (MBE/WBE) Certification.

ALL APPLICATIONS SHALL BE ACCOMPANIED BY THE SUBMISSION OF VERIFICATION OF THE APPLICANT'S ABILITY TO OBTAIN THE FOLLOWING SURETY:

- A. Performance and Payment Bonding
- B. Letter of Credit

Written statements affirming the financial institutions and/or other corporate entities preparedness to extend surety in the amounts required will be accepted in the interim.

All statements shall be signed, dated and notarized. Any expiration's dates shall be clearly indicated.

RETURN THE COMPLETED APPLICATION PACKAGE AND ALL REQUIRED DOCUMENTS TO:

City of Chicago
Department of Housing
Construction Services Bureau
Attn: Michael Burt / Paul Kulisz
30 North LaSalle Street – 2nd Floor – Suite 200
Chicago, Illinois 60602

EXHIBIT #3



**DEPARTMENT OF HOUSING
BUREAU OF CONSTRUCTION AND COMPLIANCE**

**ONSITE & OFFSITE STORAGE REQUIREMENTS
FOR CONSTRUCTION MATERIALS**

City of Chicago

Lori E. Lightfoot, Mayor



Marisa Novara, Commissioner

City Hall Room 1000
Bureau of Construction and Compliance
121 North LaSalle Street
Chicago, Illinois 60602

1. The components stored offsite or onsite that will be recognized for payment of the contract are those listed on the General Contractor's Sworn Statement, Construction Documents and Specifications. The general contractor must provide an inventory of the "stored components" and a breakdown of the line item of which the stored components are a part. The breakdown must state:

- Cost of Components (Invoice Value)
- Cost of transportation from the offsite storage location to the construction site
- Location of stored materials.
- Cost of Installation
- Costs of any other items included in the line item.

2. The Contractor is responsible for:

- All direct and indirect costs associated with the storage and transportation of components stored offsite.
- Obtaining a risk of loss insurance policy which covers the components during storage, in transit and until installed at the project site. The policy must name the Mortgagor, the Mortgagee and the City of Chicago as their interest may appear. Evidence of the existence of this insurance must be submitted to DOH prior to the approval of any advance for components stored offsite.
- Assuring to the satisfaction of DOH proper identification and segregation of components while in storage and protection of components while in storage and transportation.
- Securing from the mortgagor or mortgagee all necessary security agreements, copies of financing statement, and documentation pertaining to first lien warranties, and submitting them with the request for payment.

3. All requests for payment for components stored onsite/offsite must be submitted by the general contractor accompanied by the following:

A statement from the architect of record certifying that:

- He/she has visited the storage site and inspected the components for which payment has been requested.
- The components are in good condition and they comply with the contract requirement.
- The components are properly stored and protected
- The components are segregated, in an easily identified manner from other materials stored at the same site and are marked for identification.
- A bill of sale accompanied by an itemized invoice transferring title of the components to the mortgagor.
- Photos of the stored components.

Restrictions.

- Payments for components stored onsite/offsite shall be limited to the cost of components (Invoice Value) and shall be subject to a 10 percent holdback.
- In no case shall a payment be approved for components stored onsite/offsite to a contractor whose performance, in the judgment of the DOH Field Person, is marked by serious deviations from the contract documents.
- At no time may the outstanding amount of payments for components stored exceed 50 percent of the total estimated construction costs for that line item.
- The minimum amount for any single advance is \$10,000.

OWNER

CONTRACTOR

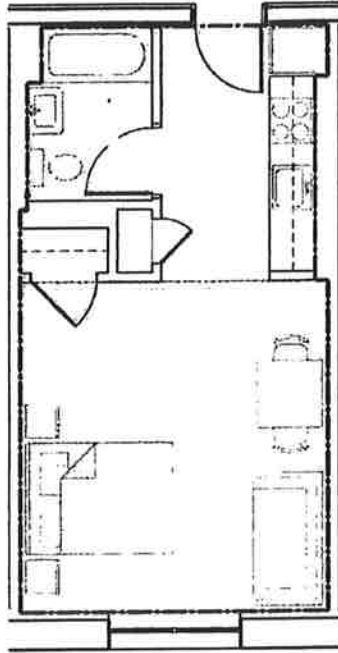
DATE: _____

DATE: _____

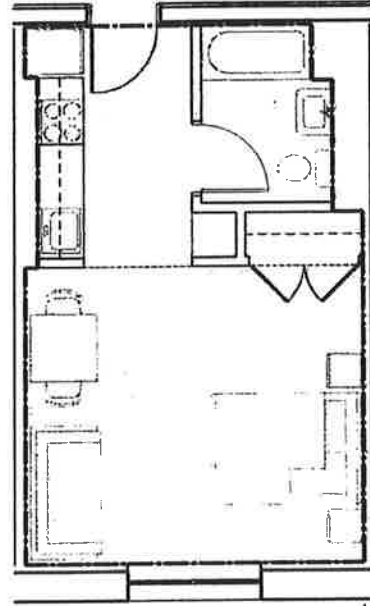
EXHIBIT #4

SAMPLE 0-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

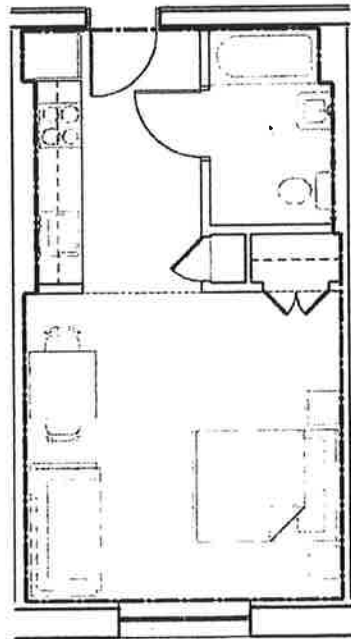
UNIT 0a



UNIT 0b

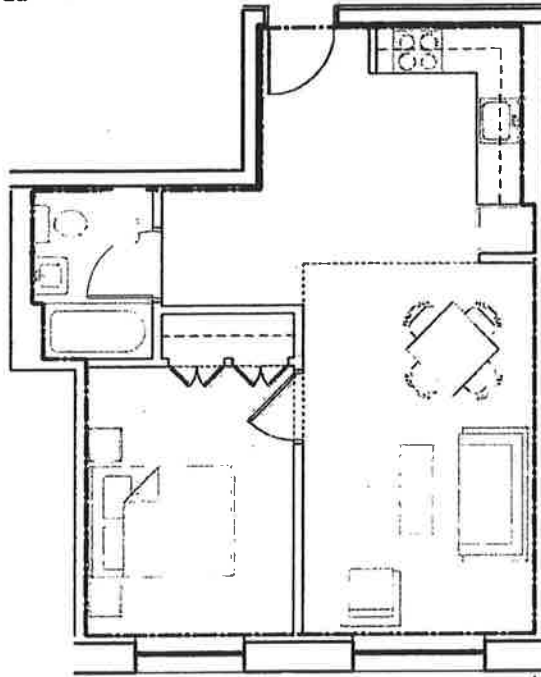


UNIT 0c UFAS Mobility Impaired Unit

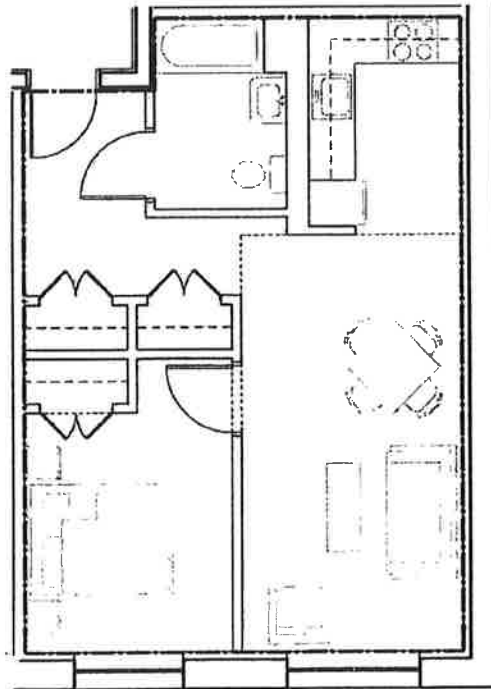


SAMPLE 1-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 1a

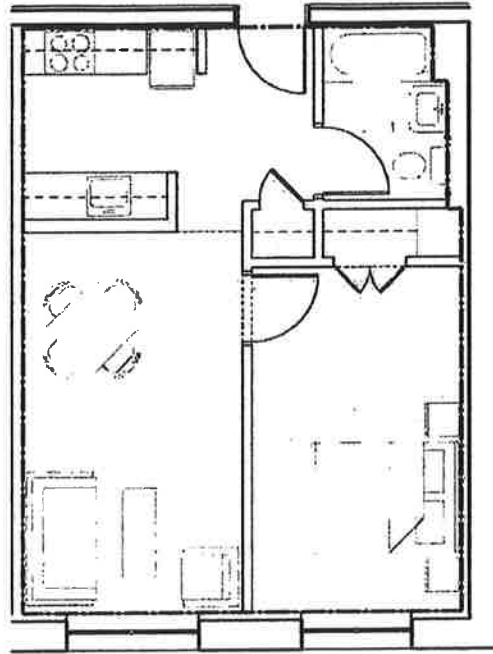


UNIT 1b UFAS Mobility Impaired Unit
550 SF

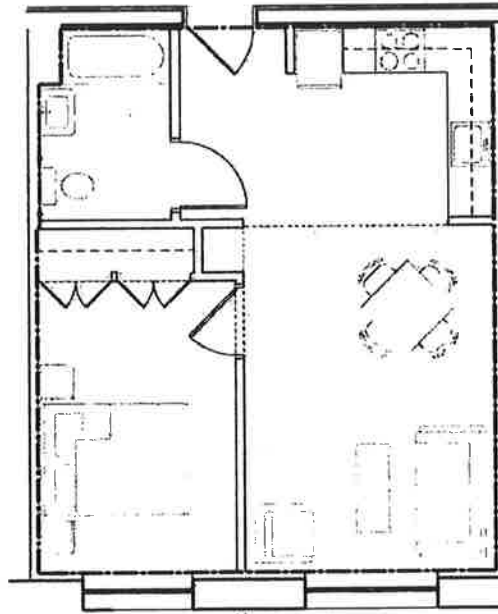


SAMPLE 1-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 1c

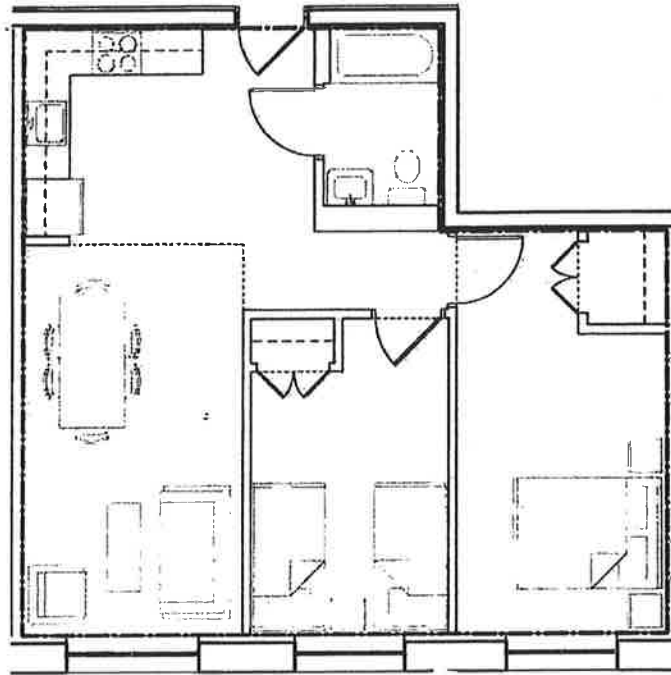


UNIT 1d UFAS Mobility Impaired Unit

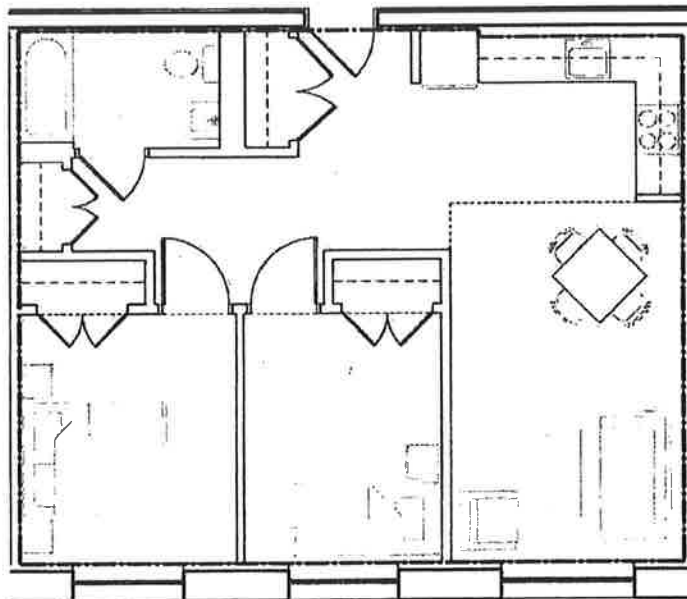


SAMPLE 2-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 2a

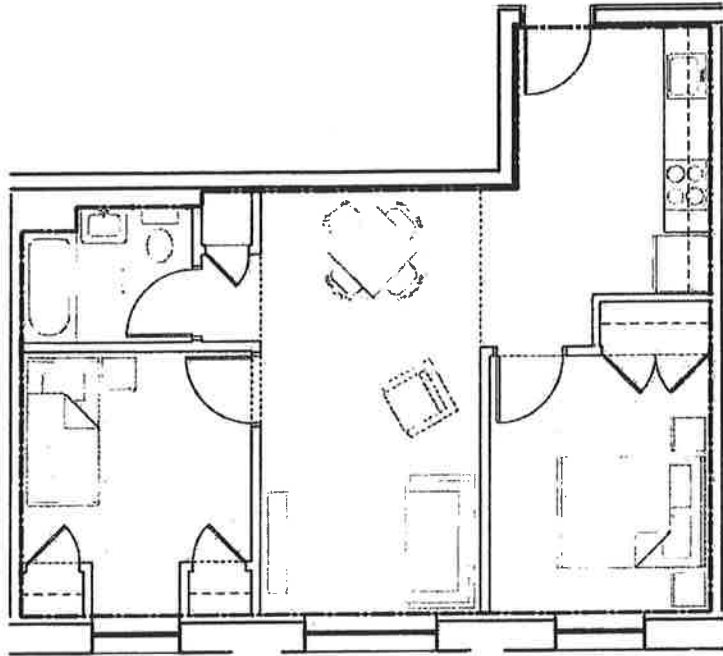


UNIT 2b UFAS Mobility Impaired Unit

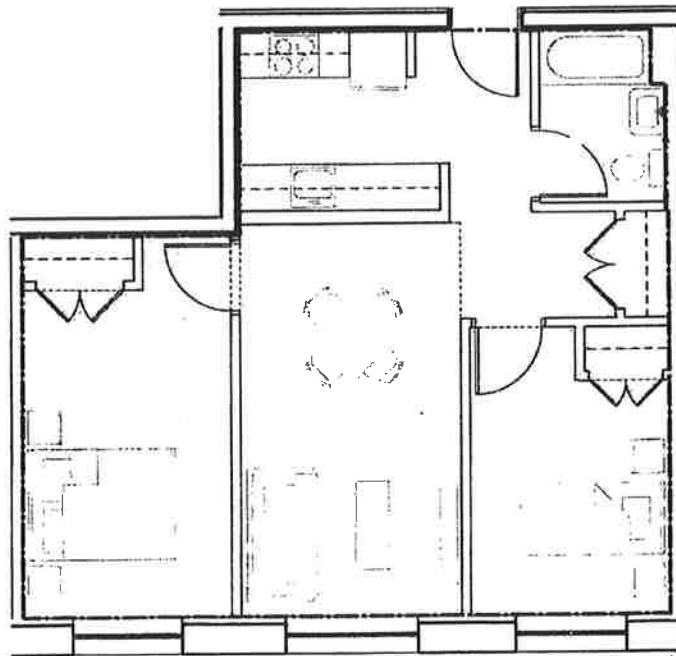


SAMPLE 2-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 2c

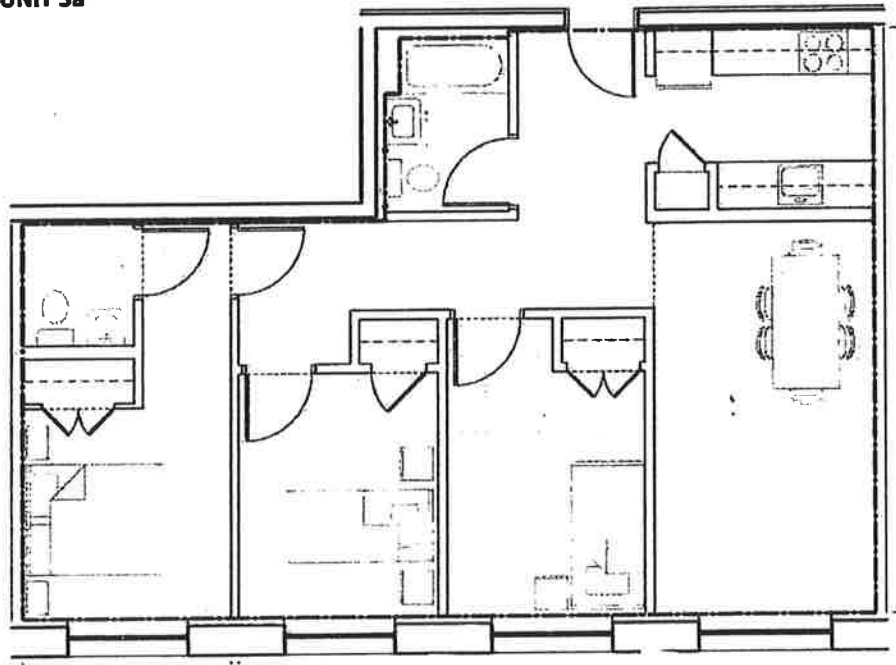


UNIT 2d

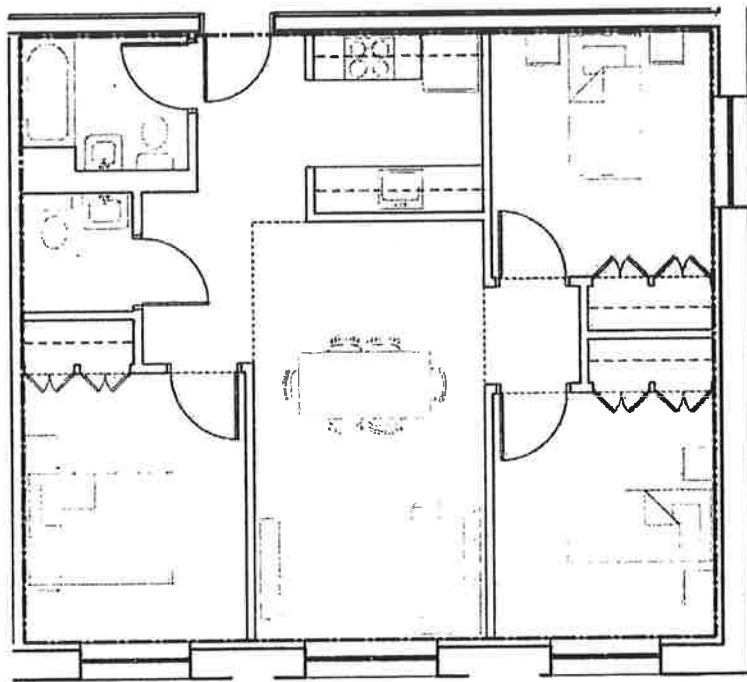


SAMPLE 3-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 3a

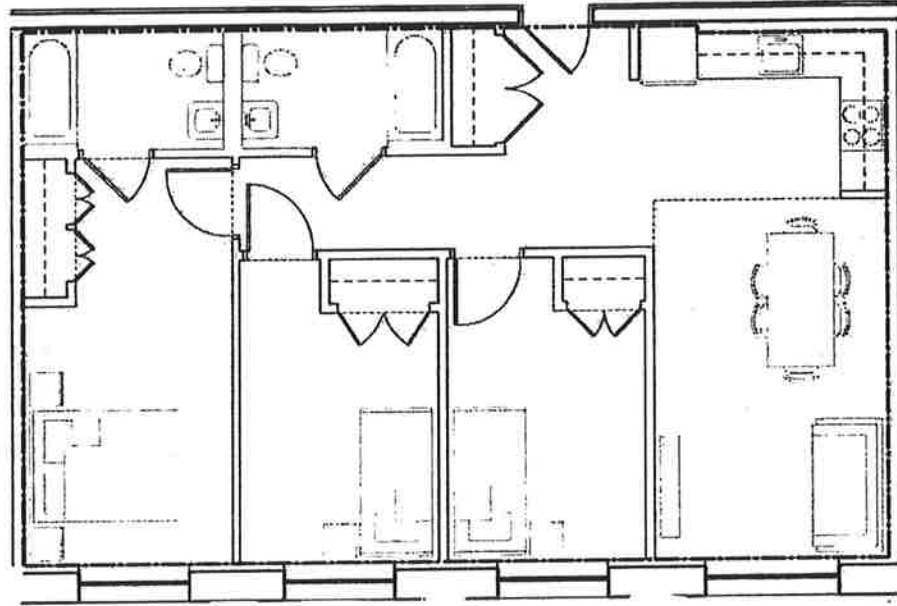


UNIT 3b



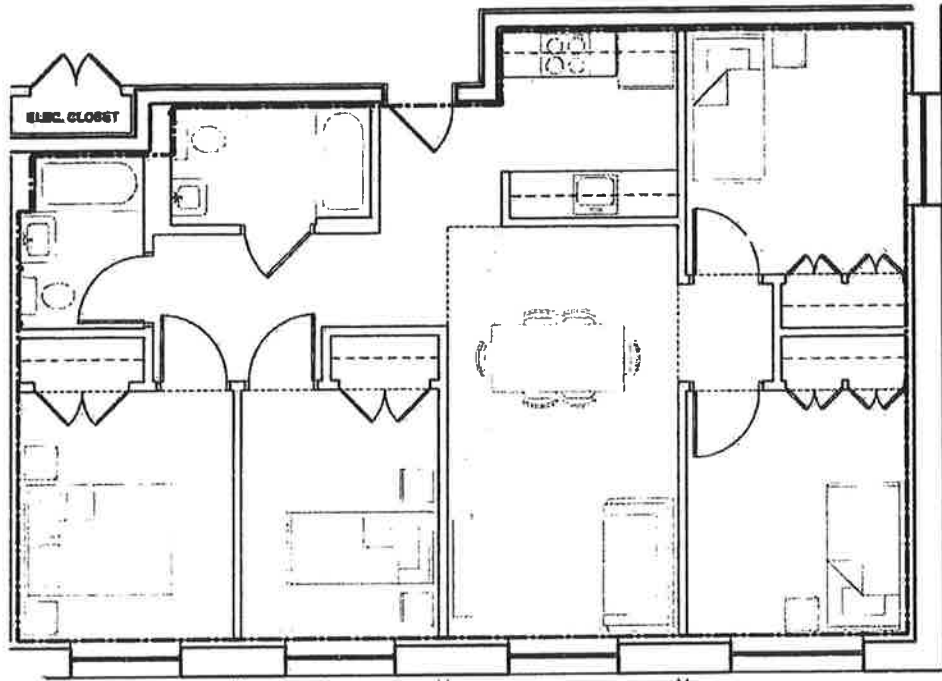
SAMPLE 3-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 3c UFAS Mobility Impaired Unit



SAMPLE 4-BEDROOM NEW CONSTRUCTION UNIT LAYOUTS

UNIT 4a UFAS Mobility Impaired Unit



UNIT 4b

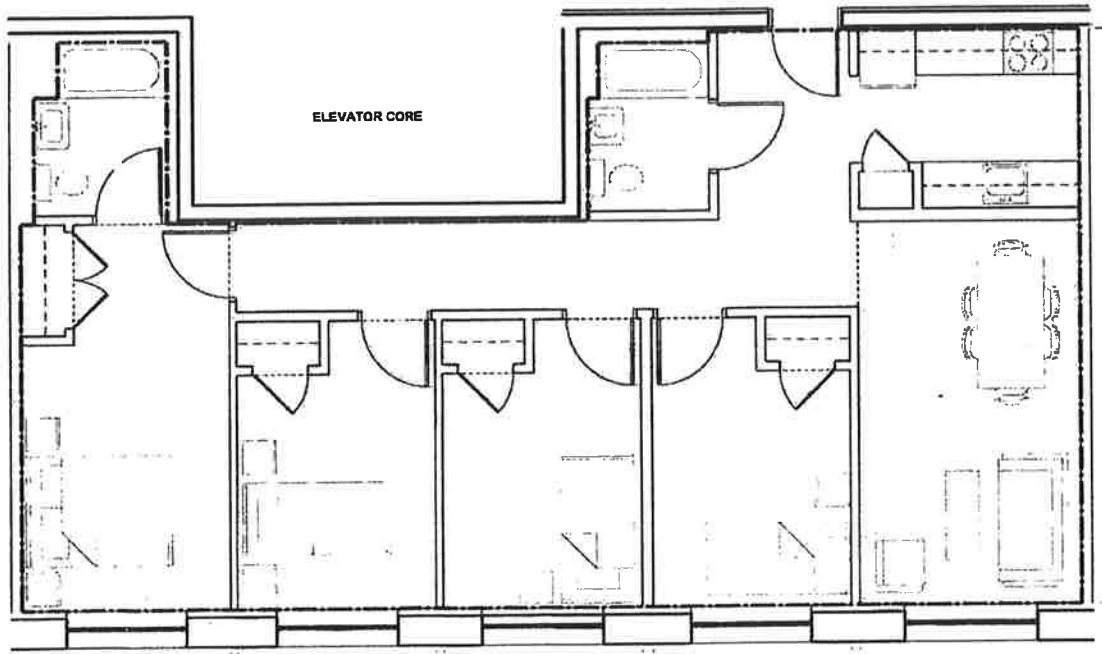


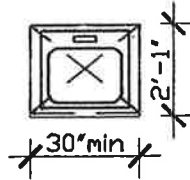
EXHIBIT #5

*** HPD BLDS Accessibility Diagrams 5.2.216

ABBREVIATIONS:

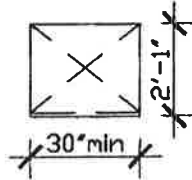
ADA	The Americans with Disabilities Act-2010 ADA Standards
AFF	Above Finished Floor
ANSI	American National Standards Institute-ANSI/A117.1-1986
BC	2014 New York City Building Code
Ⓢ	Centerline
CFS	Clear Floor Space
Dia	Diameter
FHA	Fair Housing Act
Fig	Figure
ICC	International Code Council -ICC/A117.1-2009
K	Kitchen Layout Sheet (Ex K-1)
KR	Kitchen Reference Sheet (Ex KR-1)
max	Maximum
min	Minimum
NYC	New York City
Ref	Refrigerator
Sec	Section or Reference Section
SC	Sink+Counter
UFAS	Uniform Federal Accessibility Standards
WS	Work Surface

LEGEND:



Kitchen Sink & Surrounding Counter, min 30" wide, with Removable Base cabinet below
As per

1. BC-Sec 1107.2.3,
ICC-Sec 1003.12.4.1,
Exception 2
2. UFAS-Sec 4.34.6.5(1) & (5),
Fig 51

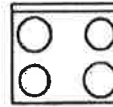


Work Surface, min 30" wide, with Removable Base cabinet below
As per

1. BC-Sec 1107.2.3,
ICC-Sec 1003.12.3.1,
Exception
2. UFAS-Sec 4.34.6.4(1) & (2),
Fig 50



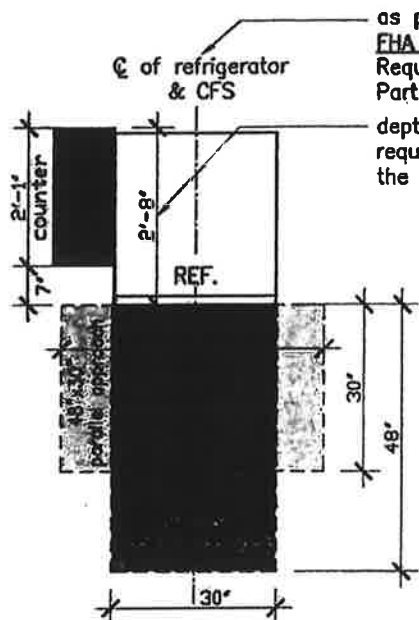
Refrigerator



Range

NOTES:

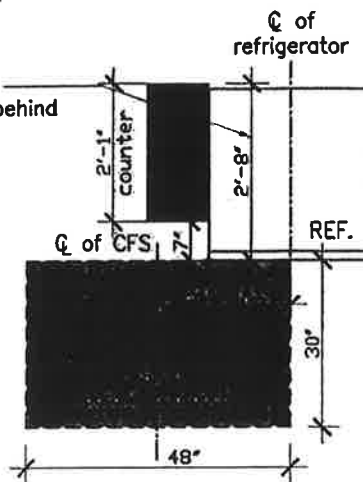
1. Section 504 Mobility Impaired Unit (5% of total units) kitchens shall comply with UFAS, BC & FHA. All the rest including Section 504 Hearing/Visual Impaired Unit (2% of total units) kitchens shall comply with BC & FHA.
2. Please keep in mind that selected Safe Harbor for FHA compliance may effect these layouts.
3. The width and length of kitchen may change depending on the size of refrigerator & range.
4. Refrigerator is assumed to be 30" wide & 31" min deep with 1" air space behind the refrigerator.
5. Range is assumed to be 30" wide & 27" min deep.
6. Base Cabinet is assumed to be 24" deep & Counter to be 2'-1"(25") min deep.
7. Locate the required work surface in the kitchen against a full height wall so as to facilitate required wall cabinet or shelf above (see reference sheet KR-7).
8. Locate the refrigerator (Ref) so that the doors can swing open to a minimum of 90 degrees to facilitate parallel/forward approach.
9. In Section 504 Mobility Impaired Unit, range shall be self cleaning or be located adjacent to an adjustable height counter with knee space below, as per UFAS-Sec 4.34.6.7, Fig 52. (verify the market availability of range with self-cleaning ovens in the proposed dimensions).
10. In Section 504 Mobility Impaired Unit, either top of open Shelf or top of lowest shelf of wall cabinet above the required work surface shall be mounted at 48" maximum AFF, as per UFAS-Sec 4.34.6.10(1), Fig 50.
11. In Section 504 Mobility Impaired Unit, microwave shall be installed @ an accessible height as per UFAS-Sec 4.34.2(9).
12. In Section 504 Mobility Impaired Unit, depth of the sink bowl shall be no greater than 6½", as per UFAS-sec 4.34.6.5(3)



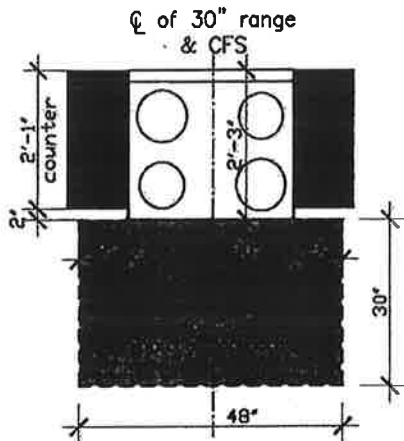
30"x48" CFS for Forward or Parallel Approach to Ref,
As per
1. FHA Requirement 7(1)(a)
2. UFAS-Sec. 4.34.6.2

as per
FHA Design Manual-
Requirement 7,
Part A, Page 7.6
depth of the Ref +
required air space behind
the Ref

OR

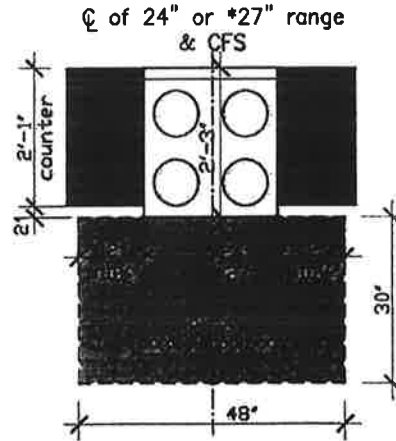


30"x48" CFS for Parallel Approach to Ref,
As per
1. BC-Sec 1107.2.3.3,
ICC-Sec 1003.12.5.6
2. UFAS-Sec. 4.34.6.2



30"x48" CFS for Parallel Approach to Range,
As per
1. FHA Design Manual-
Requirement 7, Part A, Page 7.4
2. BC-Sec 1107.2.3.4, ICC-Sec
1003.12.5.4.3
3. UFAS-Sec. 4.34.6.2

OR



30"x48" CFS for Parallel Approach to Range,
As per
1. FHA Design Manual-
Requirement 7, Part A, Page 7.4
2. BC-Sec 1107.2.3.4,
ICC-Sec 1003.12.5.4.3
3. UFAS-Sec. 4.34.6.2

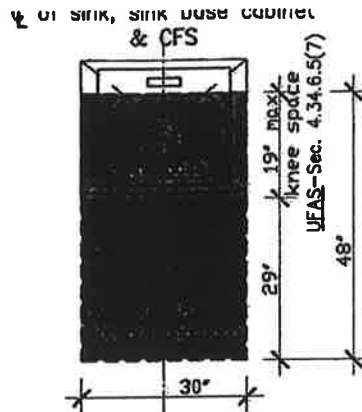
OPTION 1:

Can be used for

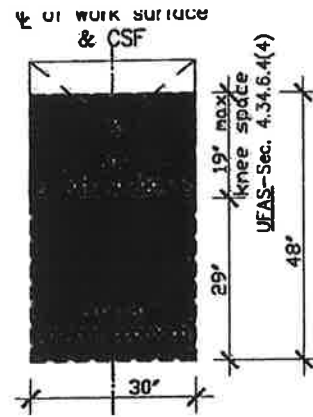
1. Open Strip kitchen
2. Open "L" shaped kitchen
3. "U" shaped kitchen

(where 60" turning space is available or provided)

**For Example
See Kitchen Layouts
K-1, K-3 & K-6**



30"x48" CFS for
Forward Approach to Sink,
As per
1. FHA Design Manual
-Requirement 7, Part A,
Page 7.11
2. BC-Sec 1107.2.3,



30"x48" CFS for
Forward Approach to WS,
As per
1. BC-Sec 1107.2.3,
ICC-Sec 1003.12.3.1
2. UFAS-Sec. 4.34.6.4(4)

&

OPTION 2:

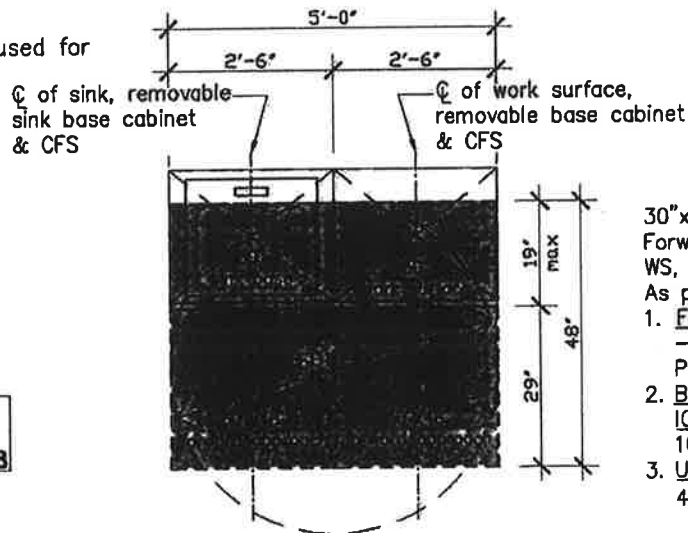
Can be used for

1. Enclosed Strip kitchen
2. Enclosed "L" shaped kitchen
3. "U" shaped kitchen

(where 60" turning space needs to be provided)

This option can also be used for
any shape kitchen

**For Example
See Kitchen Layouts
K-2, K-4 K-5, K-7 & K-8**



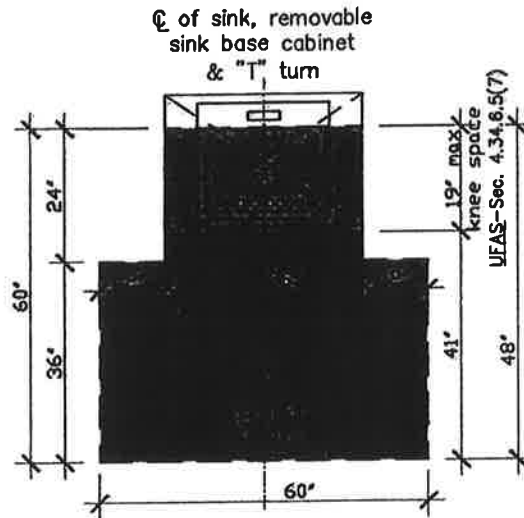
30"x48" CFS for
Forward Approach to Sink &
WS,
As per
1. FHA Design Manual
-Requirement 7,
Part A, Page 7.11.
2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.3.1,
1003.12.4.1, & 304.3.1
3. UFAS-Sec. 4.34.6.4,
4.34.6.5, & 4.34.2(2)

OPTION 3:

Can be used for
 1. Galley kitchen
 (where 60" turning space
 is not feasible)

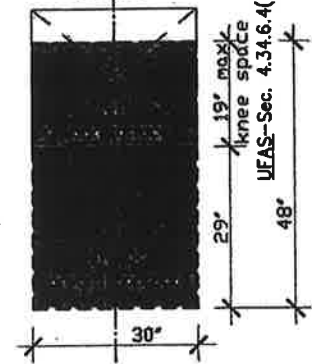
This option can also be
 used for any shape kitchen

For Example
 See Kitchen Layout
 K-9



36" wide Sink Base to facilitate
 a "T" Turn.
 As per
 1. ICC-Sec 304.3.2 & 1013.3.2
 2. UFAS-Sec 4.34.2(2)

C of work surface,
 removable base cabinet
 & CFS



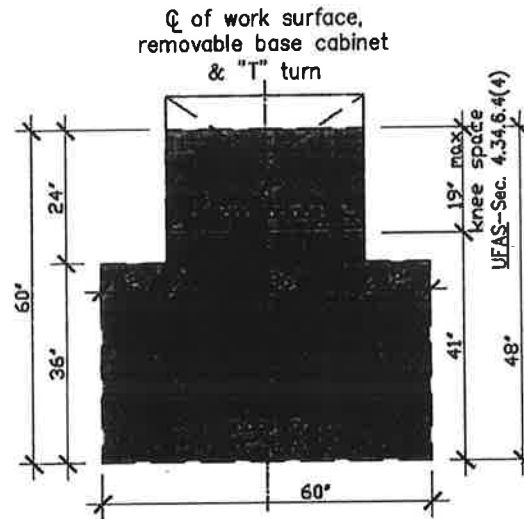
30"x48" CFS for
 Forward Approach to WS,
 As per
 1. BC-Sec 1107.2.3,
 ICC-Sec 1003.12.3.1
 2. UFAS-Sec. 4.34.6.4(4)

OPTION 4:

Can be used for
 1. Galley kitchen
 (where 60" turning space
 is not feasible)

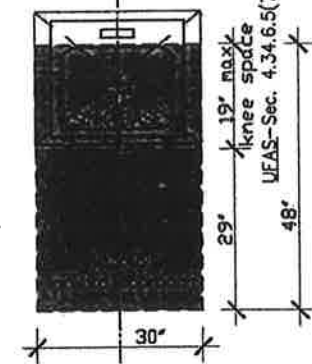
This option can also be
 used for any shape kitchen

For Example
 See Kitchen Layout
 K-10

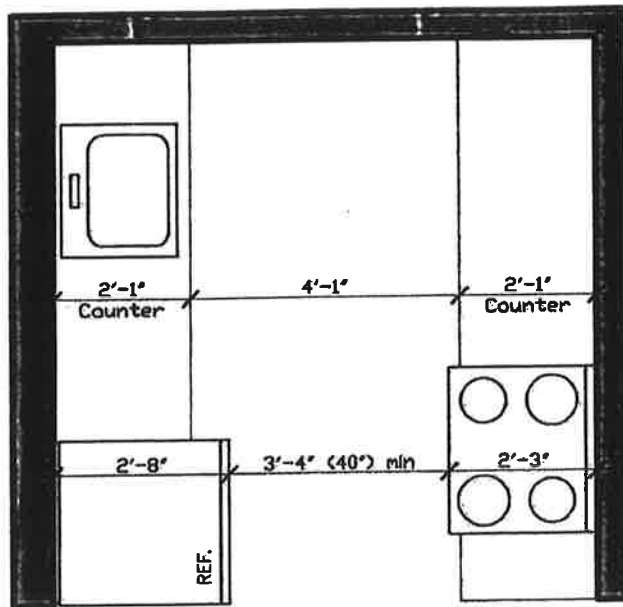


36" wide Base Cabinet Under
 36" wide Work surface to
 facilitate a "T" Turn.
 As per
 1. ICC-Sec 304.3.2 & 1003.3.2
 2. UFAS-Sec. 4.34.2(2)

C of sink, removable
 sink base cabinet
 & CFS



30"x48" CFS for
 Forward Approach to sink,
 As per
 1. FHA Design Manual
 -Requirement 7, Part A, Page 7.
 2. BC-Sec 1107.2.3,
 ICC-Sec 1003.12.4.1
 3. UFAS-Sec. 4.34.6.5(7)

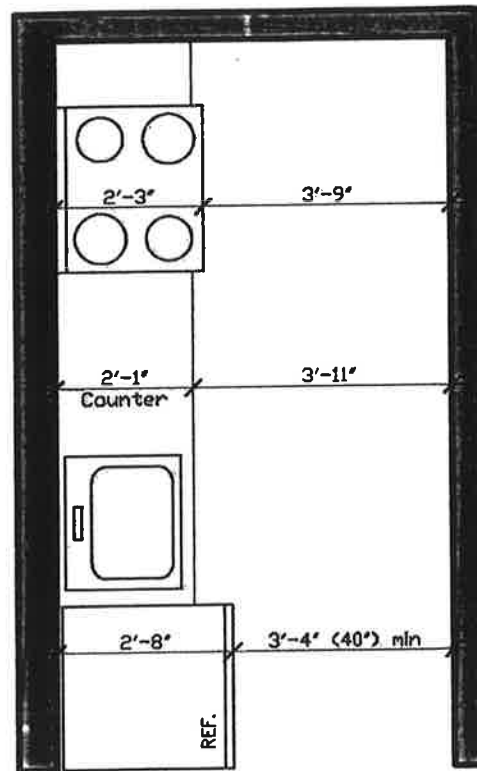


Minimum Kitchen Clearances

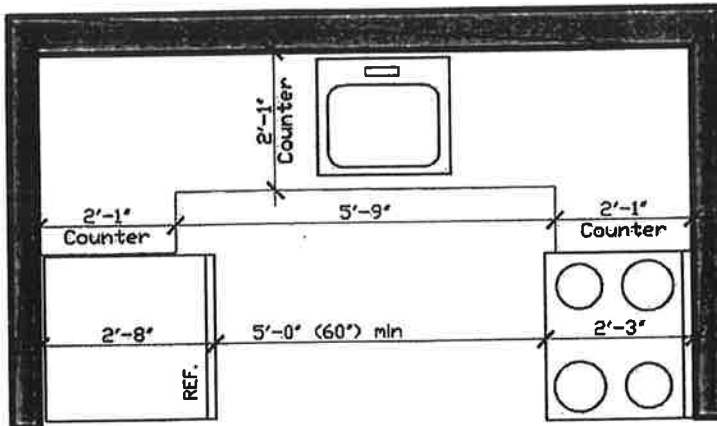
Minimum Clearance:

- Clearance between all opposing base cabinets, counter tops, appliances or walls shall be is at least 40" minimum
As per

1. FHA Requirement 7(1)(b)
2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.1.1
3. UFAS-Sec 4.34.6.1



Minimum Kitchen Clearances



Minimum Clearances in U-Shaped Kitchen

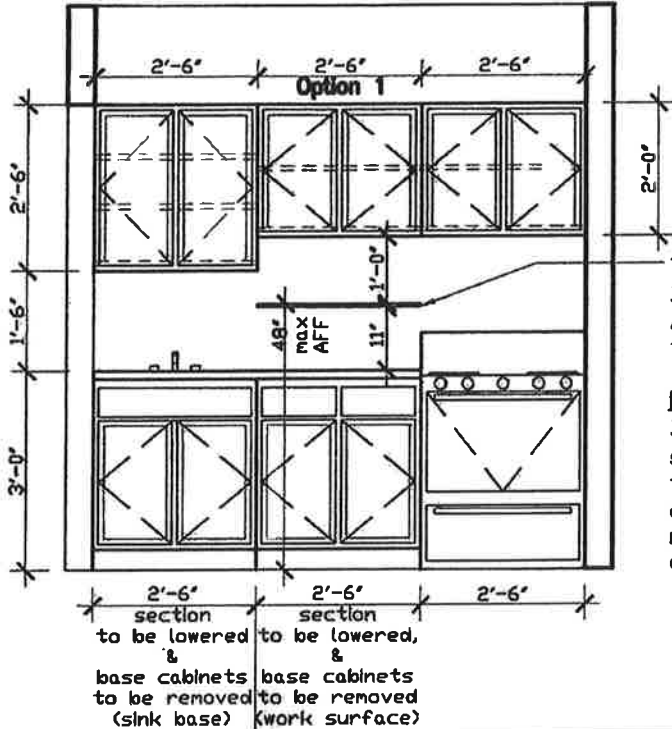
NOTE:
Consider the most protruding element in the kitchen while calculating the clearances

"U" Shaped Kitchens:

- In kitchens with counters, appliances or cabinets on three contiguous sides, Clearance between all opposing base cabinets, counter tops, appliances or walls shall be is at least 40" minimum
As per

1. FHA Requirement 7(1)(c)
2. BC-Sec 1107.2.3,
ICC-Sec 1003.12.1.2
3. UFAS-Sec 4.34.6.1

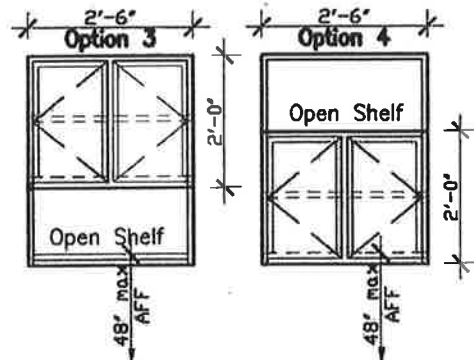
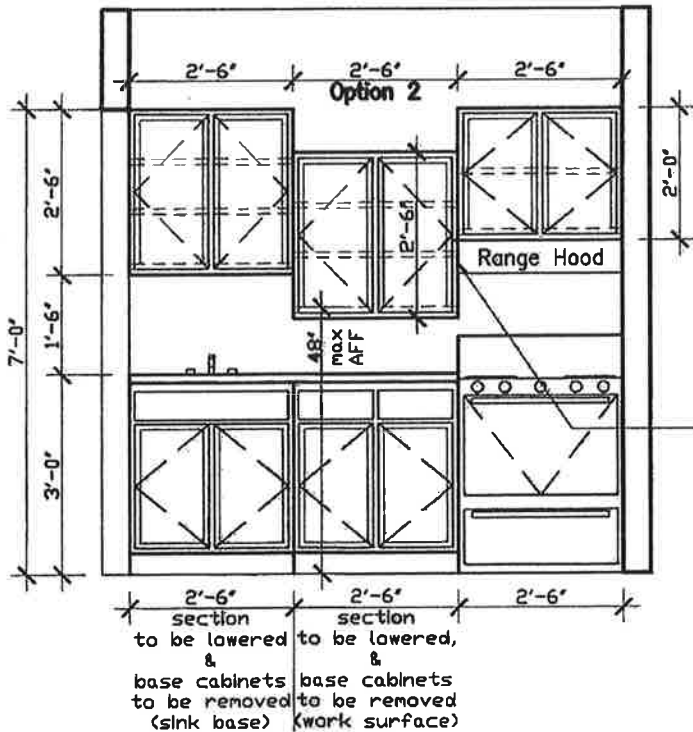
Option 1:



Top of Shelf @ 48" max AFF above 30" wide work surface
As per
1. UFAS-Sec 4.34.6.10(1)

NOTE:
30" wide shelf above 30" wide work surface @ 48" max AFF, with 9" to 12" clear storage height & same depth as wall cabinets, will provide reasonable storage space at an accessible height

Option 2, 3 & 4:

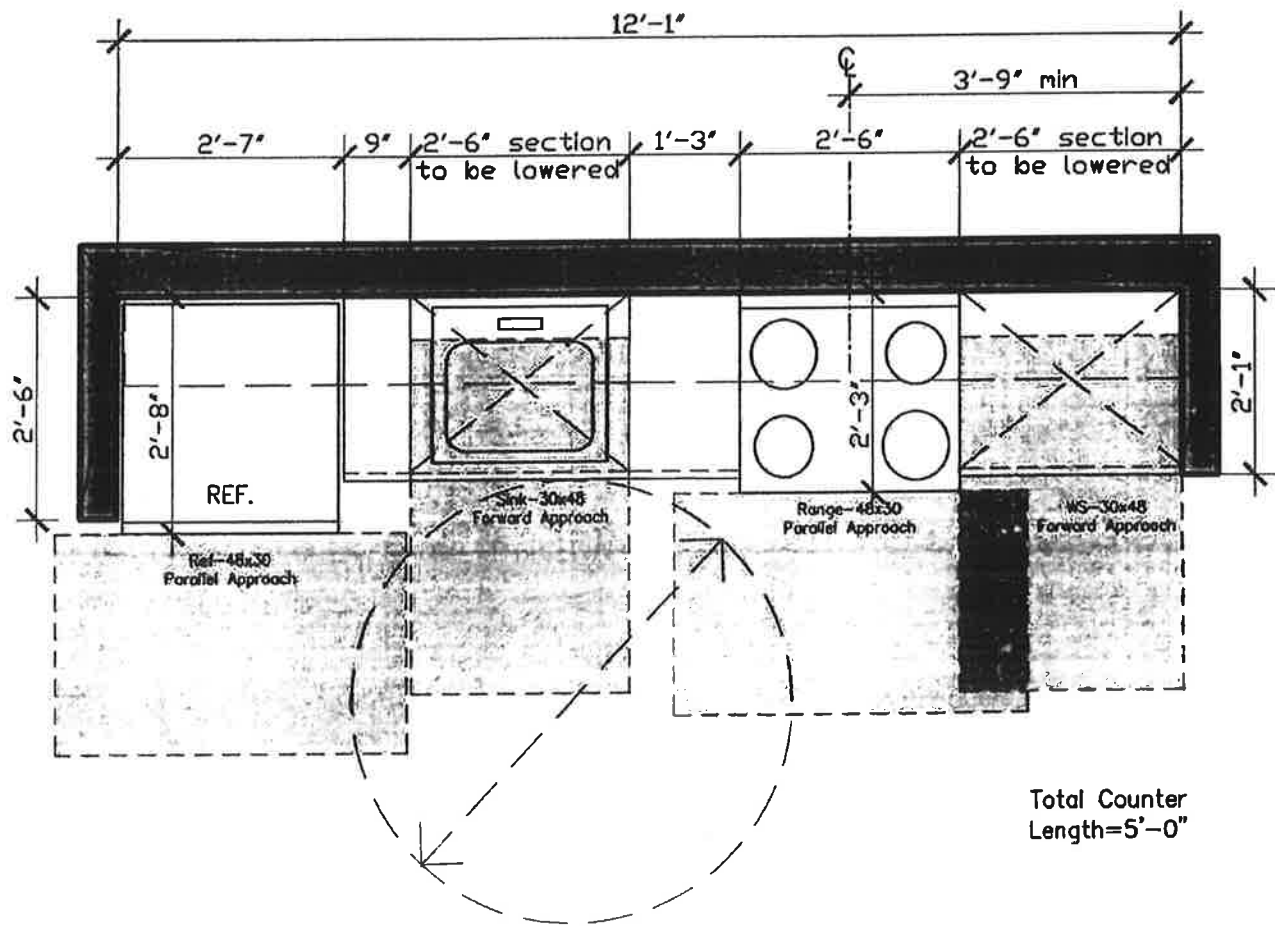


Wall cabinet, with top of the lowest shelf @ 48" max AFF, above 30" wide work surface
As per
1. UFAS-Sec 4.34.6.10(1)

NOTE:
30" wide, taller wall cabinet above 30" wide work surface will provide reasonable storage space at an accessible height.

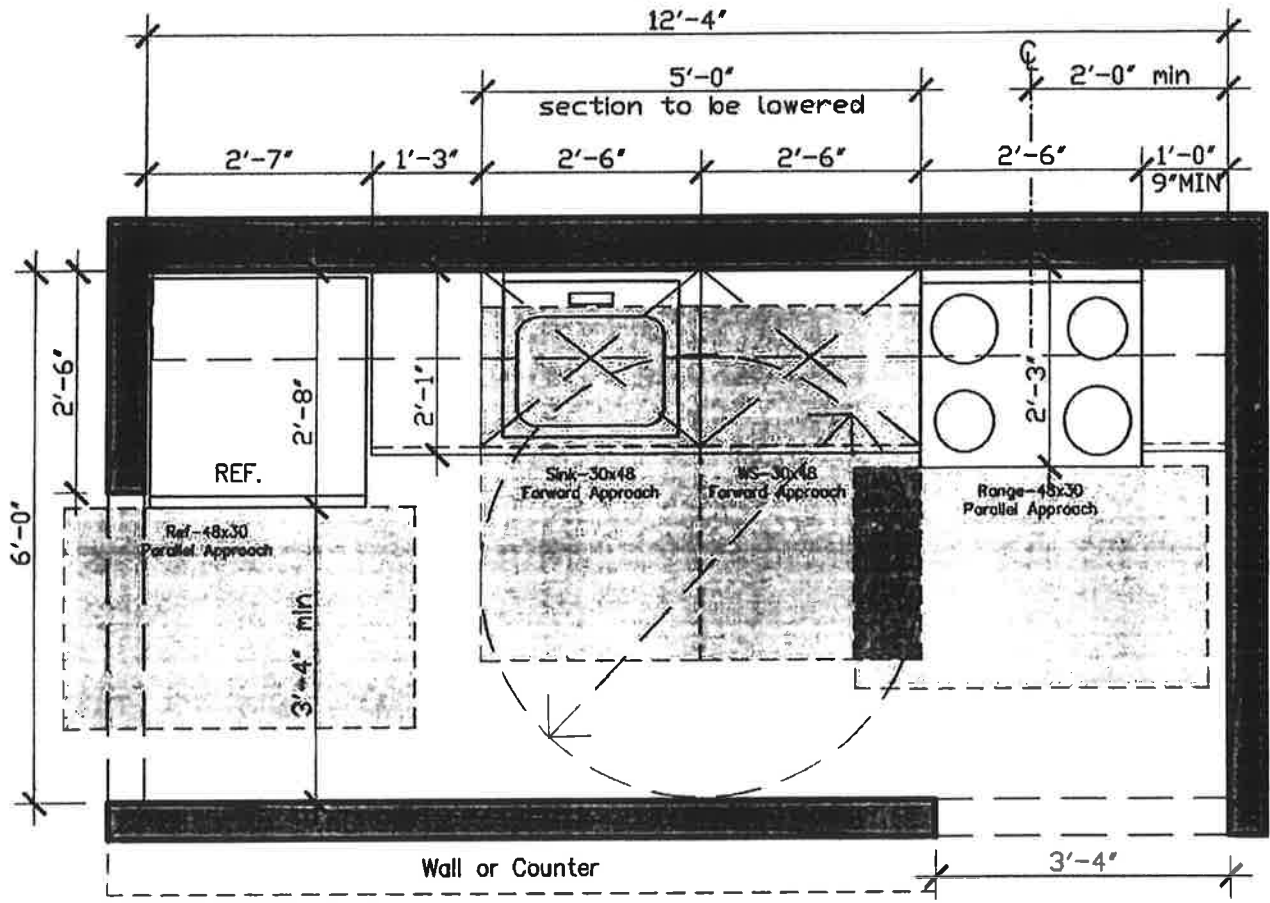
Elevation of Wall Cabinet or Shelf above Work Surface
for Section 504 Mobility Impaired Unit Kitchens;
& Removable Base Cabinets Under Sink & Work Surface
for all Kitchens

KR-7



Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 Open Strip Kitchen Layout

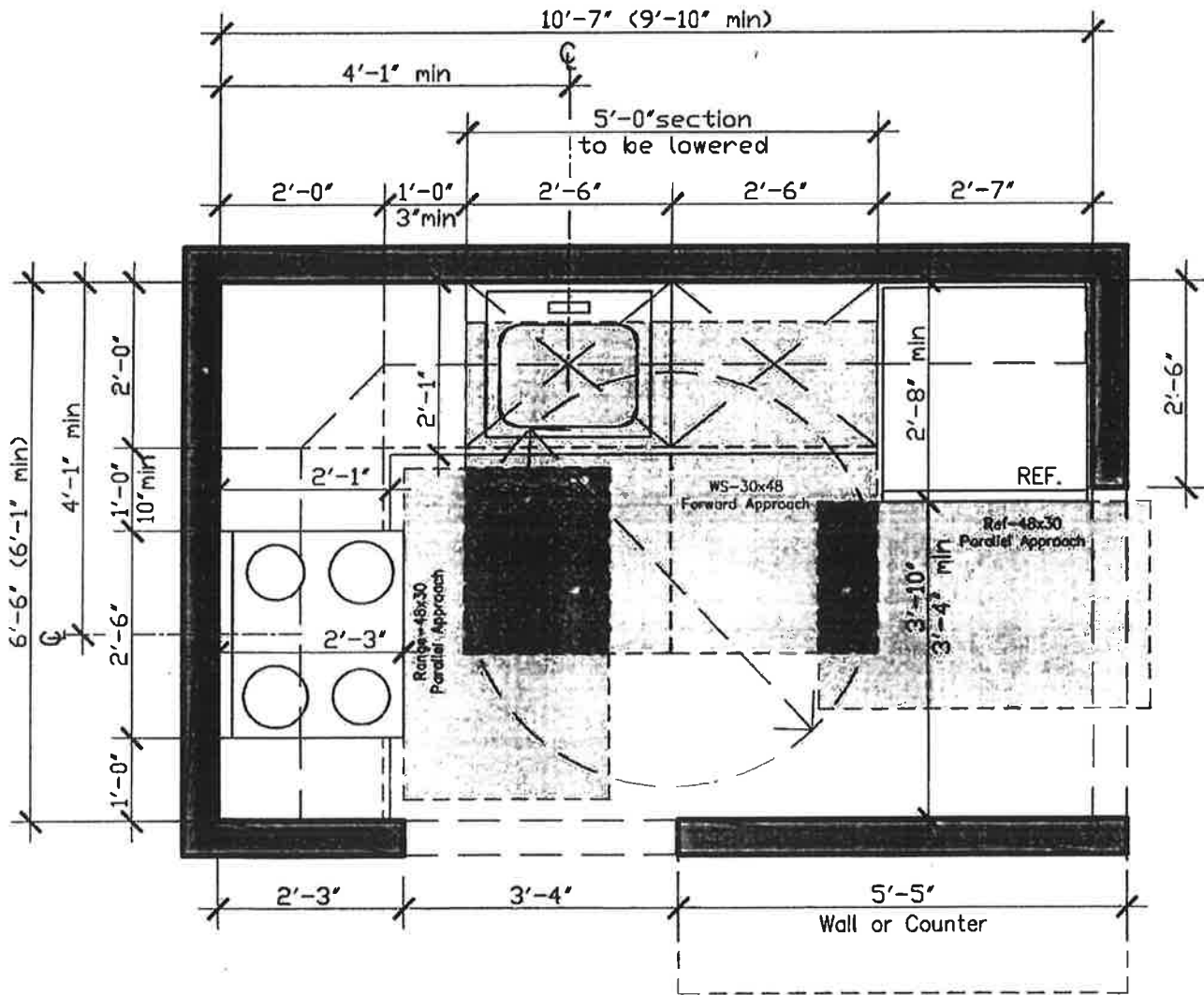
K-1



Total Counter Length=5'-3"

Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 Enclosed Strip Kitchen Layout

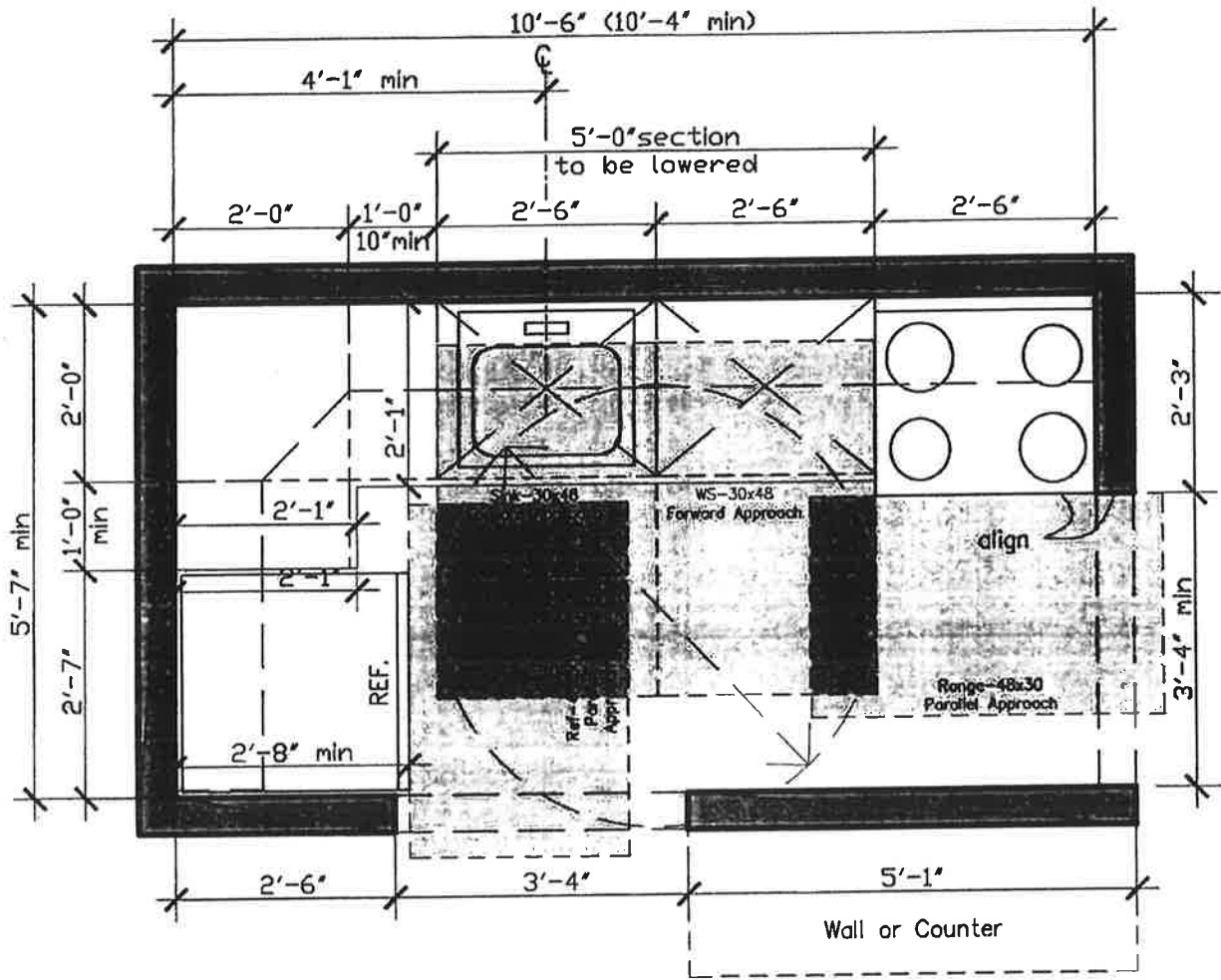
K-2



- Total counter Length=6'-0"
- Range shall be self cleaning in

Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Turning Space for
 Enclosed "L" Shaped Kitchen Layout

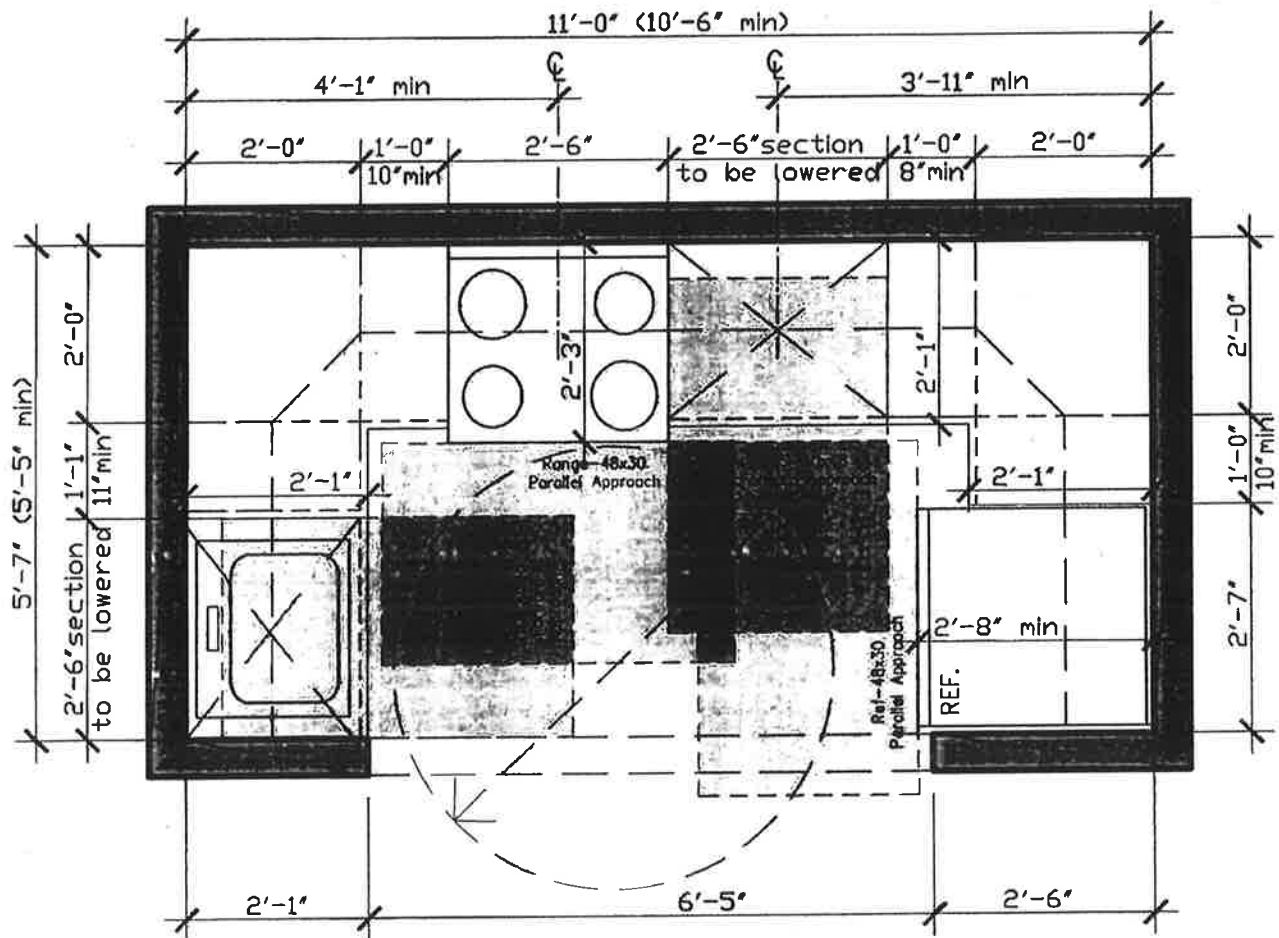
K-4



Total counter Length=5'-0"

Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Turning Space for
 Enclosed "L" Shaped Kitchen Layout

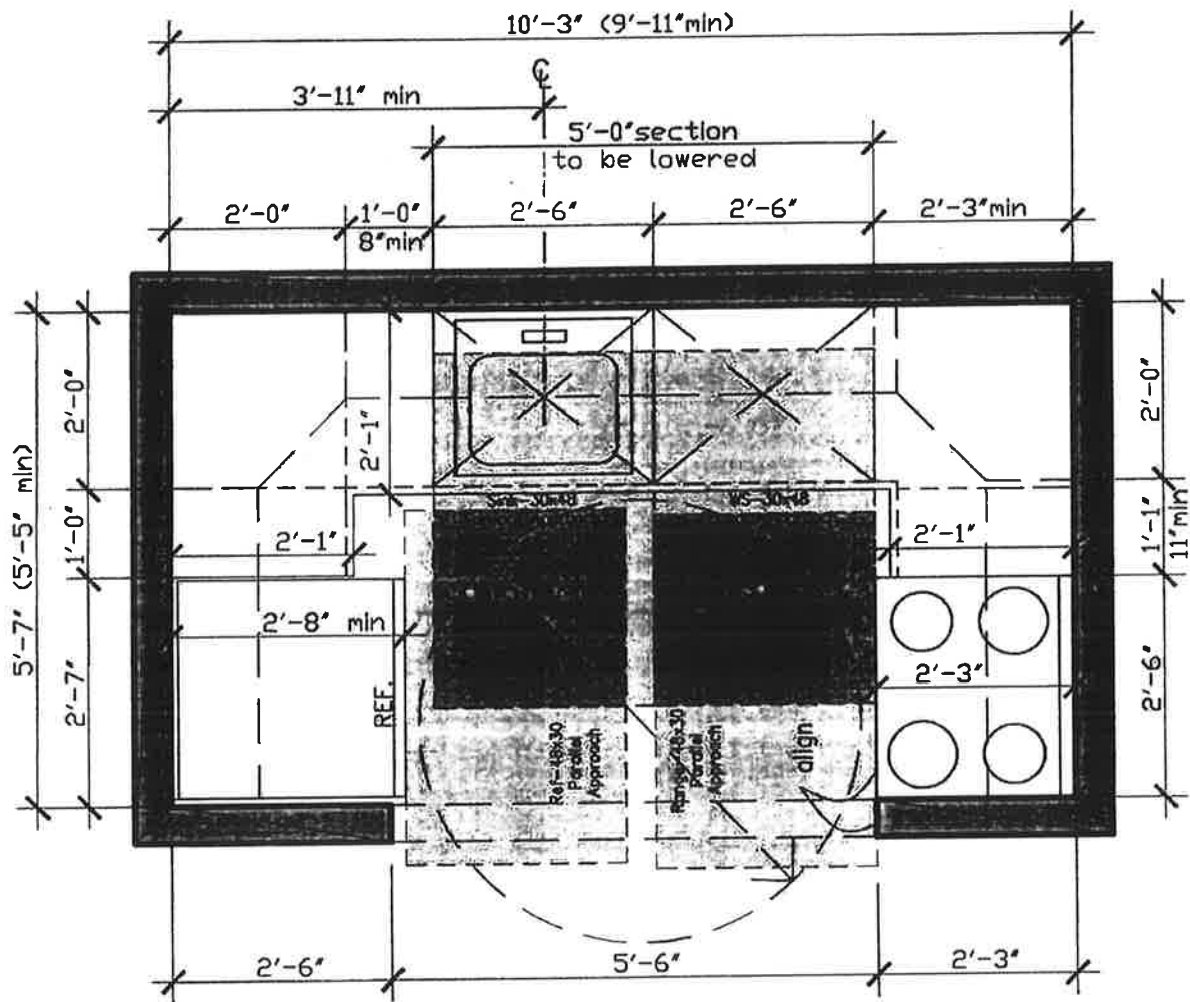
K-5



Total counter Length=7'-0"

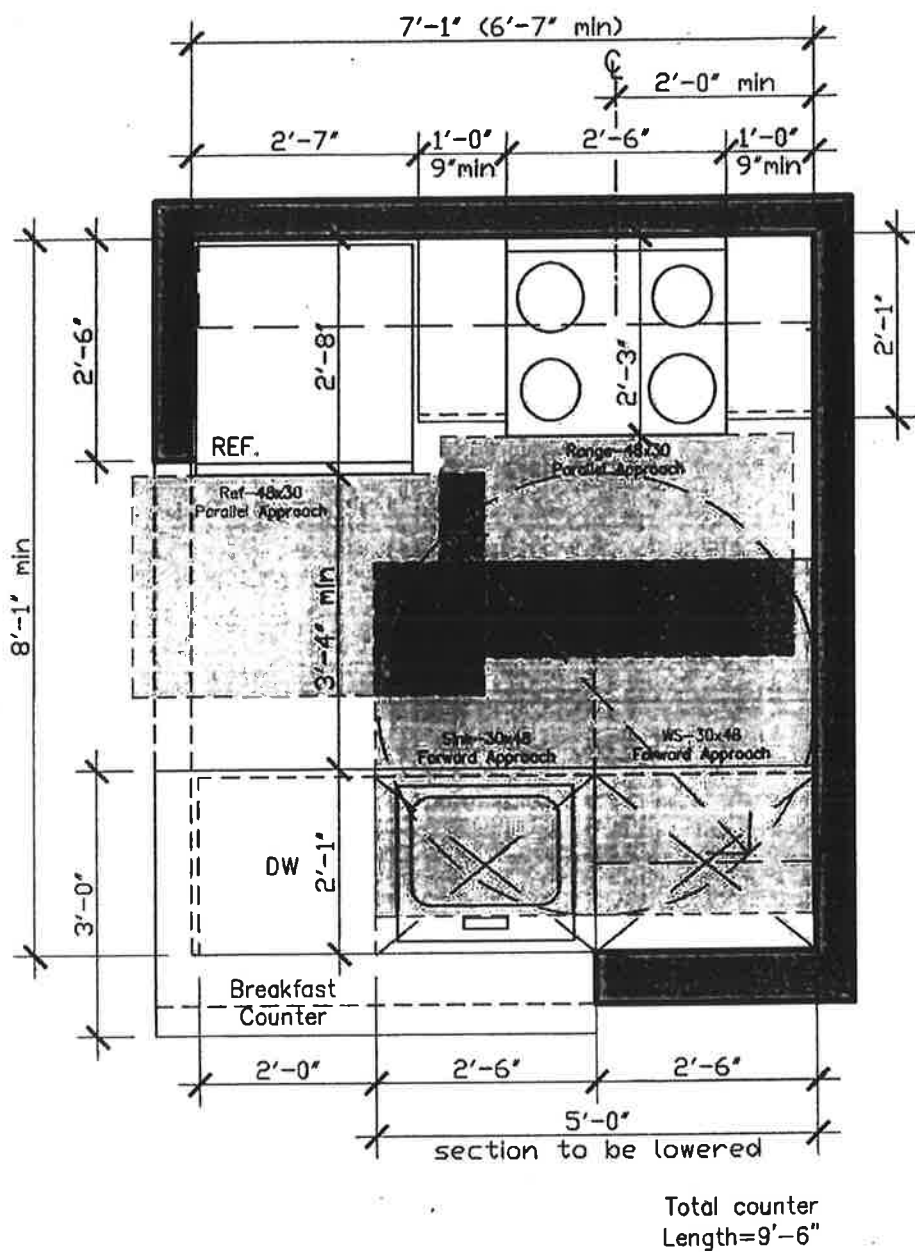
Min. Kitchen Size as per FHA, BC, & UFAS
with 60" Dia Turning Space for
"U" Shaped Kitchen Layout

K-6



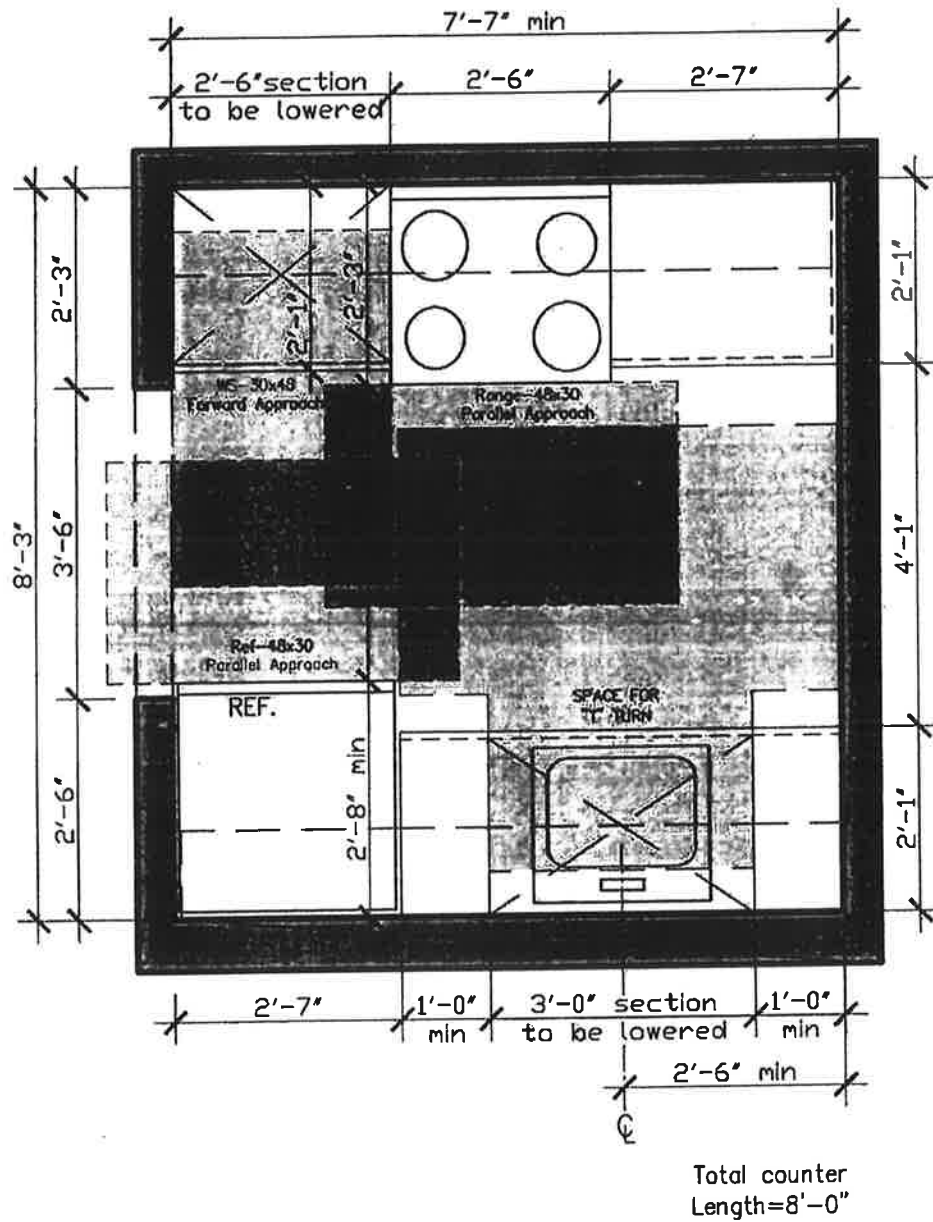
Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 "U" Shaped Kitchen Layout

K-7



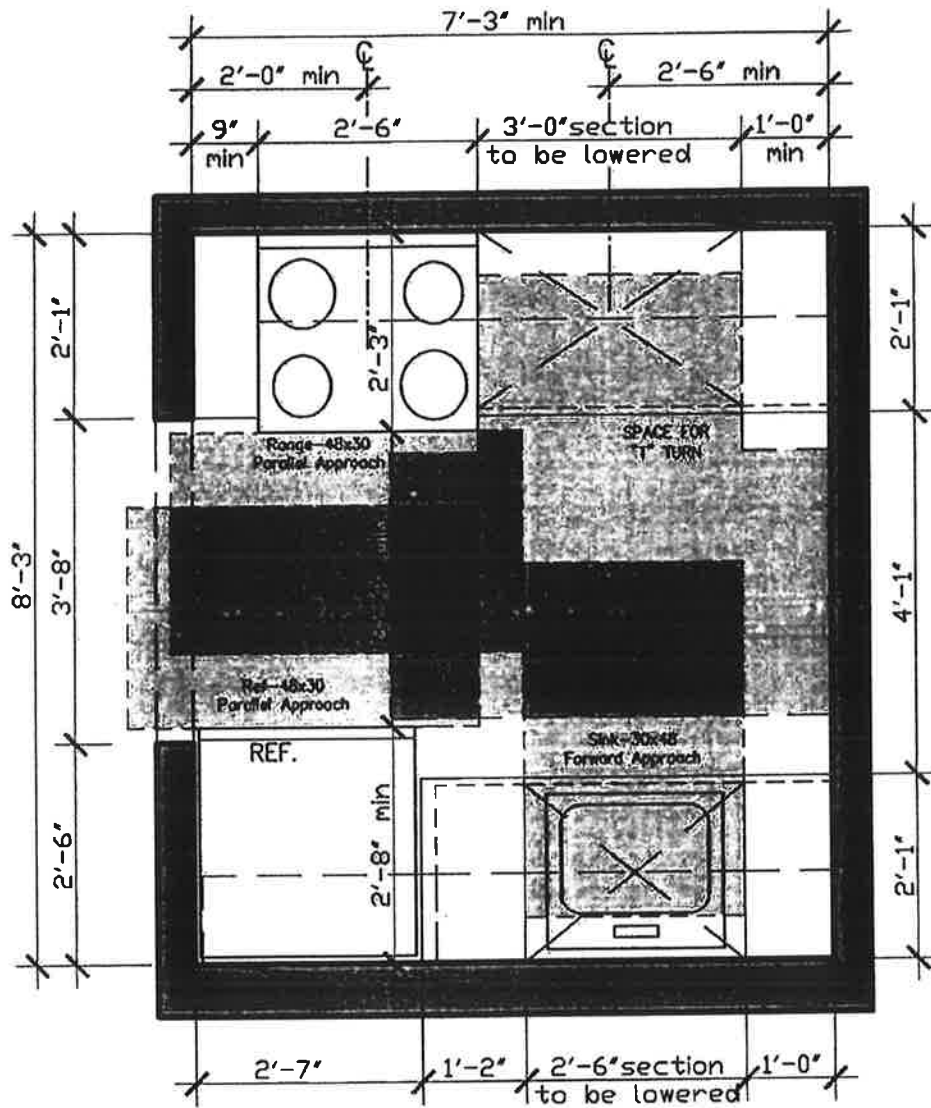
Min. Kitchen Size as per FHA, BC, & UFAS
 with 60" Dia Turning Space for
 Galley Kitchen Layout

K-8



Min. Kitchen Size as per FHA, BC, & UFAS
 with "T" Shaped Turning Space Under the SC for
 Galley Kitchen Layout

K-9



Total counter
Length 8'-0"

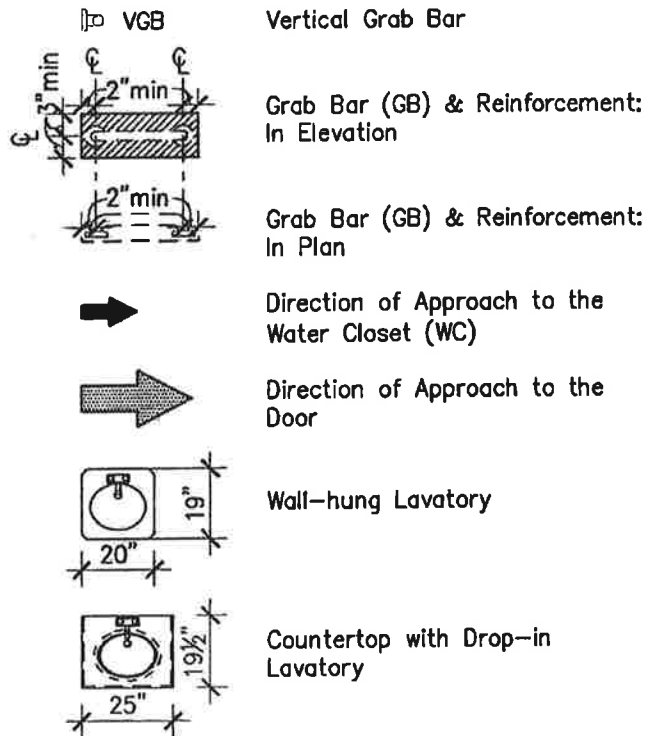
Min. Kitchen Size as per FHA, BC, & UFAS
with "T" Shaped Turning Space Under the WS for
Galley Kitchen Layout

K-10

ABBREVIATIONS:

ADA	The Americans with Disabilities Act—2010 ADA Standards
AFF	Above Finished Floor
ANSI	American National Standards Institute—ANSI/A117.1—1986
B	Full Bathroom Layout Sheet with Lav, WC & Tub (Ex B-1)
BC	2014 New York City Building Code
BR	Bathroom Reference Sheet (Ex BR-1)
⊕ of VGB	Centerline Of Vertical Grab Bar
CFS	Clear Floor Space
Dia	Diameter
DMC	Door Maneuvering Clearance
FHA	Fair Housing Act
Fig	Figure
GB	Grab Bar
HB	Half (½) Bath Reference Sheet with Lav & WC only (Ex HB-1)
ICC	International Code Council—ICC/A117.1—2009
Lav	Lavatory
max	Maximum
min	Minimum
NYC	New York City
PT	Common/Public Single-User Toilets Reference Sheet with Lav & WC Only (Ex PT-1)
Sec	Section or Reference Section
TPH	Toilet Paper Holder
UFAS	Uniform Federal Accessibility Standards
WC	Water Closet

LEGEND



NOTES:

1. Section 504 Mobility Impaired Unit (5% of total units) bathrooms shall comply with UFAS, BC & FHA. All the rest including Section 504 Hearing/Visual Impaired Unit (2% of total units) bathrooms shall comply with BC & FHA.
2. Please keep in mind that selected Safe Harbor for FHA compliance may effect these layouts.
3. The width and length of bathroom and half-bath may change depending on the size of lavatory or countertop with drop-in lavatory; Depth of the water closet; Width of the toilet bowl; Width & Depth of the toilet tank; Size & Location of the grab bars; Size & Location of surface-mounted TPH
4. Lavatory is assumed to be 20" wide & 19" deep; Countertop to be 25" wide & 19½" deep with removable vanity to be 24" wide & 19" deep.
5. Depth of water closet is assumed to be 30"; Width of the toilet bowl is assumed to be 14½"; Width & Depth of the toilet tank to be 20" & 10" respectively.
6. Surface Mounted TPH is assumed to be 6¼" wide & 6" deep.
7. Diameter of the escutcheon for the grab bars is assumed to be 3".
8. Roll-in shower shall not have more than 1:50 (2% max) pitch as shower area is used for 60" Dia turning space &/or DMC.
9. As per UFAS-Sec 4.34.5.1, doors shall not swing into CFS required for any fixture.
10. All dimensions are from finished wall surface, including wall tiles.

Scenario 1

BC Compliant Adaptable Unit or Section 504 Hearing/Vision Impaired Unit With 1 Bath

Appendix "P" Compliant Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

Full Bath

Use Layouts B-1a to B-5b

Scenario 2

Section 504 Mobility Impaired Unit with 1 Bath

UFAS & Appendix "P" Compliant

Shall comply with:

1. UFAS-Sec 4.34.5
2. Appendix "P" as per BC-Sec 1107.2.2

Full Bath

Use Bathroom Layouts B-11a to B-15

Scenario 3

BC Compliant Adaptable Unit or Section 504 Hearing/Vision Impaired Unit With 2 or more Bathrooms One Full Bath; plus either a full Bath or HB

Appendix "P" Compliant

Shall comply with:

1. Appendix "P" as per BC-Sec. 1107.2.2

Full Bath

Use Layouts B-1a to B-5b

Appendix "P" Compliant

Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

Full Bath or HB

Use Layouts B-1a to B-5b / HB-1a to HB-5b

Scenario 4

Section 504 Mobility Impaired Unit with 2 or more Bathrooms One Full Bath; plus either a full Bath or HB

4a

UFAS & Type "A" of ICC Compliant

Shall comply with:

1. UFAS-Sec 4.34.5
2. Type "A" of ICC-Sec 1003.11, as per BC-Sec 1107.2.2, Exception 1

Full Bath

Use Layouts B-21a to B-26b

Must comply with Type "A" as it is more stringent than UFAS

Indicated Sec. of ICC Compliant

Shall comply with:

1. Following Sections of ICC as per BC-Sec. 1107.2.2, Exception 2
 - Sec 1004.3
 - Sec 1004.4
 - Sec 1004.5.2
 - Sec 1004.9
 - Sec 1004.11.1
 - Sec 1107.2.1, Exception 5

Full Bath or HB

Use Layouts B-31 to B-33 / HB-11 to HB-15

If this is a HB, then no reinforcement for grab bar @ WC is required.

4b

UFAS Compliant

Shall comply with:

1. UFAS-Sec 4.34.5

Full Bath

Use Bathroom Layouts B-11a to B-15

Appendix "P" Compliant

Shall comply with:

1. Appendix "P" as per BC-Sec 1107.2.2

Full Bath or HB

Use Bathroom Layouts B-1a to B-5b / HB-1a to HB-5b

NOTES:

1. All Bathrooms shall also comply with FHA.

Accessibility/Adaptability Reference Requirements for Baths & Half (1/2) Baths in Dwelling Units

BR-3

NOTES:

1. If multiple single-user toilets, for public or common use, are clustered to be within sight of, or adjacent to one another at a single location at least 50%, but not less than one for each use at each cluster shall be accessible:
As per
 - BC-Sec 1109.2, Exception(3)
 - ADA-Sec 213.2, Exception(4)
2. Where toilet rooms are provided for common use of residents or for public use, at least one fixture of each type provided must be accessible per room.:
As per
 - FHA Guidelines, Item #11 of the chart of Requirement 2 in Section 5
3. If toilet facilities are provided, then each public use and common use toilet room shall be accessible:
As per
 - UFAS-Sec 4.1.2(10)

Scenario 1

Cluster of toilets for Common Use:

FHA, BC, & UFAS
Compliant

First 50%
or at least
one min

Shall comply with:

1. ANSI-Sec 4.22
2. ICC-Sec 604 & 606
3. UFAS-Sec 4.22

Use Layouts
PT-1 to PT-6

ANSI & UFAS
Compliant

The
Remaining

Shall comply with:

1. ANSI-Sec 4.22
2. UFAS-Sec 4.22

Use Layouts
PT-11 & PT-12

Scenario 2

Cluster of toilets for Public Use:

FHA, BC, UFAS & ADA
Compliant

First 50%
or at least
one min

Shall comply with:

1. ANSI-Sec 4.22
2. ICC-Sec 604 & 606
3. UFAS-Sec 4.22
4. ADA-Sec 604 & 606

Use Layouts
PT-1 to PT-6

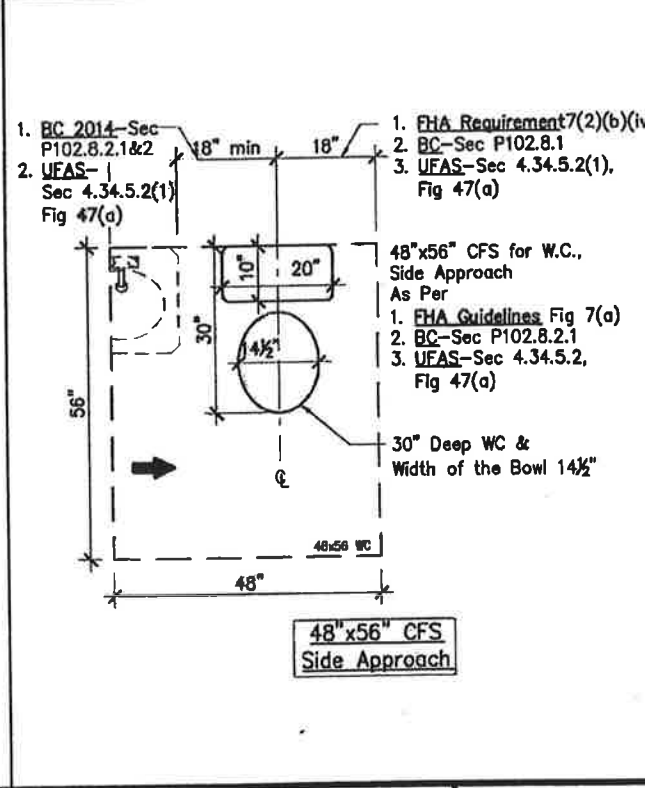
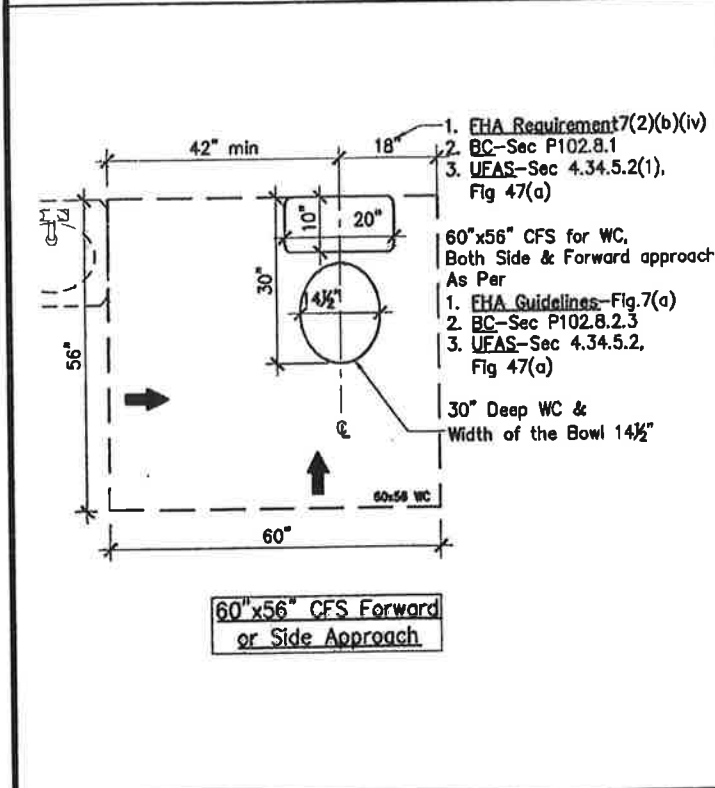
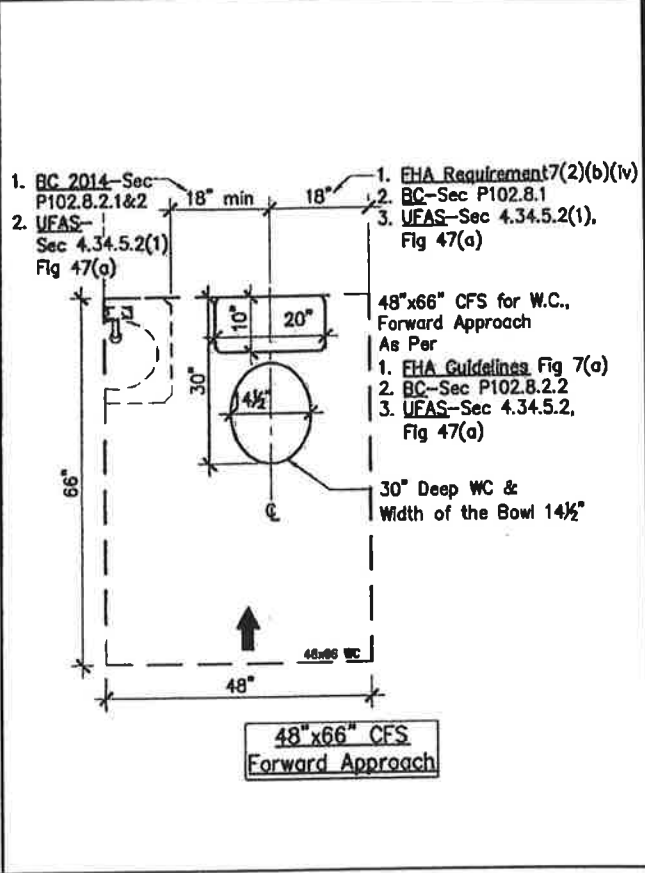
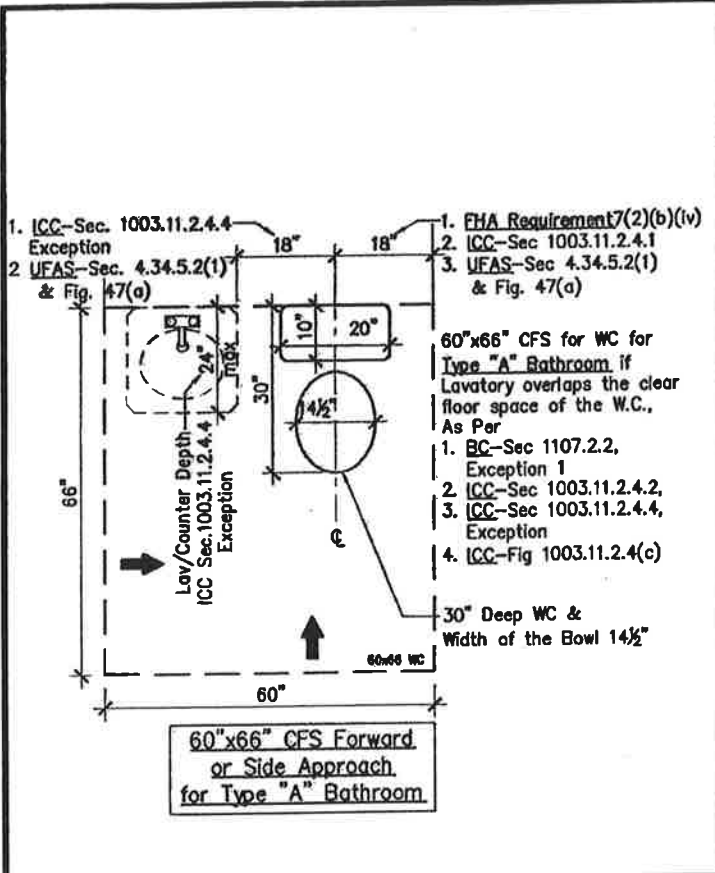
ANSI & UFAS
Compliant

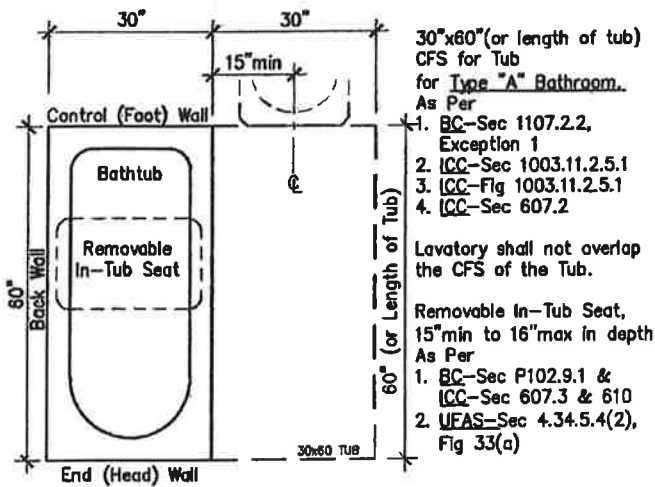
The
Remaining

Shall comply with:

1. ANSI-Sec 4.22
2. UFAS-Sec 4.22

Use Layouts
PT-11 & PT-12





**30"x60" CFS
for Type "A" Bathroom**

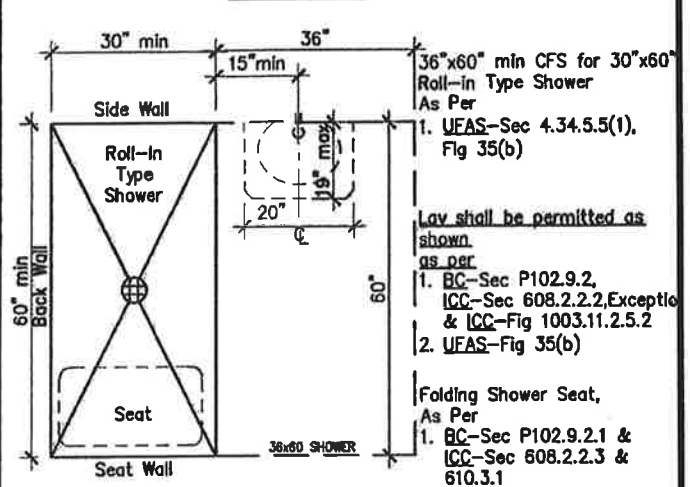
30"x60" (or length of tub)
CFS for Tub
for Type "A" Bathroom.
As Per

1. BC-Sec 1107.2.2, Exception 1
2. ICC-Sec 1003.11.2.5.1
3. ICC-Fig 1003.11.2.5.1
4. ICC-Sec 607.2

Lavatory shall not overlap
the CFS of the Tub.

Removable In-Tub Seat,
15"min to 16"max in depth
As Per

1. BC-Sec P102.9.1 & ICC-Sec 607.3 & 610
2. UFAS-Sec 4.34.5.4(2), Fig 33(a)



36"x60" CFS

36"x60" min CFS for 30"x60"
Roll-in Type Shower
As Per

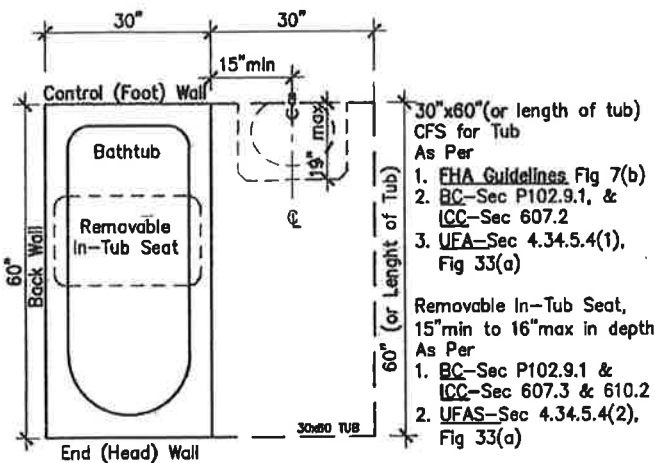
1. UFAS-Sec 4.34.5.5(1), Fig 35(b)

Lav shall be permitted as
shown
as per

1. BC-Sec P102.9.2, ICC-Sec 608.2.2.2, Exceptic & ICC-Fig 1003.11.2.5.2
2. UFAS-Fig 35(b)

Folding Shower Seat,
As Per

1. BC-Sec P102.9.2.1 & ICC-Sec 608.2.2.3 & 610.3.1



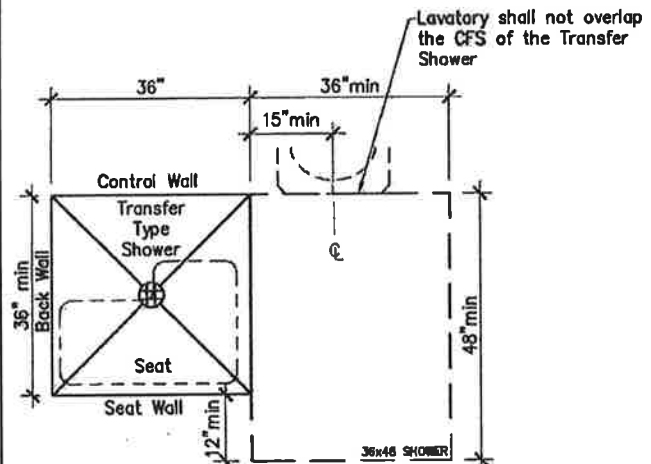
30"x60" CFS

30"x60" (or length of tub)
CFS for Tub
As Per

1. FHA Guidelines Fig 7(b)
2. BC-Sec P102.9.1, & ICC-Sec 607.2
3. UFA-Sec 4.34.5.4(1), Fig 33(a)

Removable In-Tub Seat,
15"min to 16"max in depth
As Per

1. BC-Sec P102.9.1 & ICC-Sec 607.3 & 610.2
2. UFAS-Sec 4.34.5.4(2), Fig 33(a)



36"x48" CFS

Lavatory shall not overlap
the CFS of the Transfer
Shower

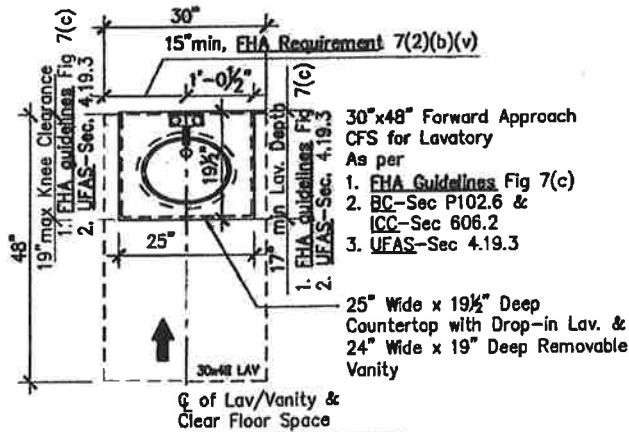
Transfer Shower Seat,
As Per

1. BC 2014-Sec P102.9.2.1 & ICC-Sec 607.3 & 610.3.2
2. UFAS-Sec 4.34.5.4(2), Fig 35(a) & 36

36"x48" min CFS for
36"x36" Transfer Shower
As Per

1. BC 2014-Sec P102.9.2 & ICC-Sec 608.2.1
2. UFAS-Sec 4.34.5.5, Fig 35(a)

Countertop with Drop-in Lavatory

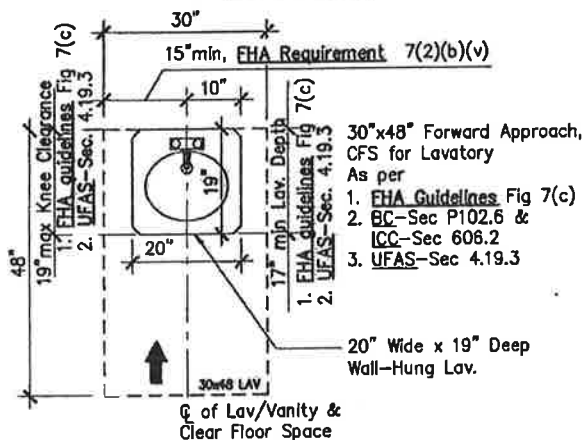


30"x48" CFS Forward Approach

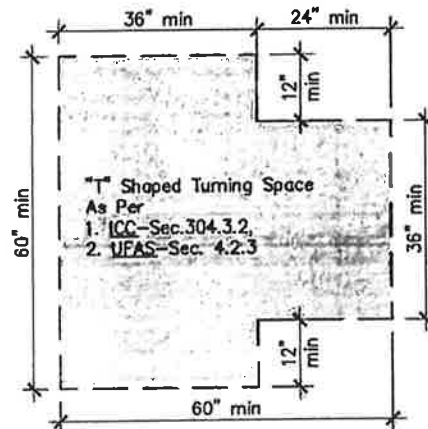


60" Dia Space for 180° Turn

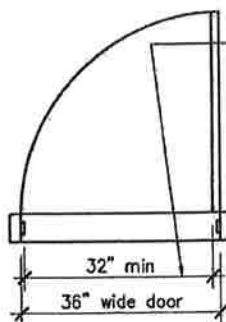
Wall-hung Lavatory



30"x48" CFS Forward Approach

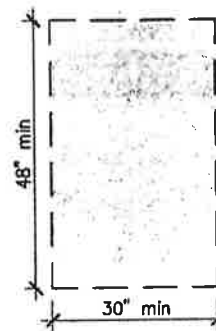


"T" Shaped Space for 180° Turn



Clear Opening Width at Bathroom Door

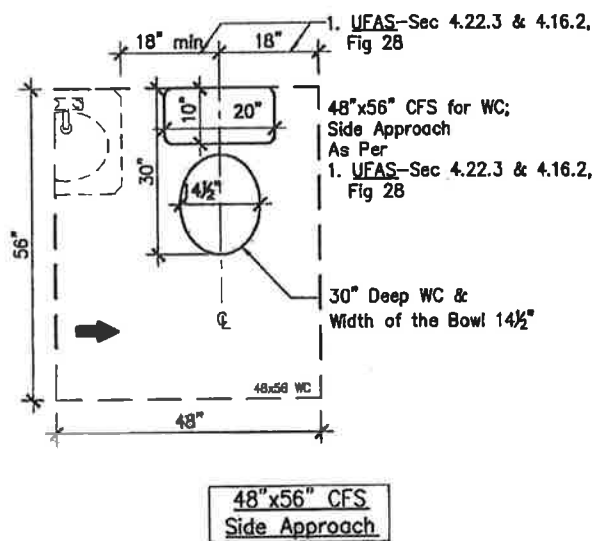
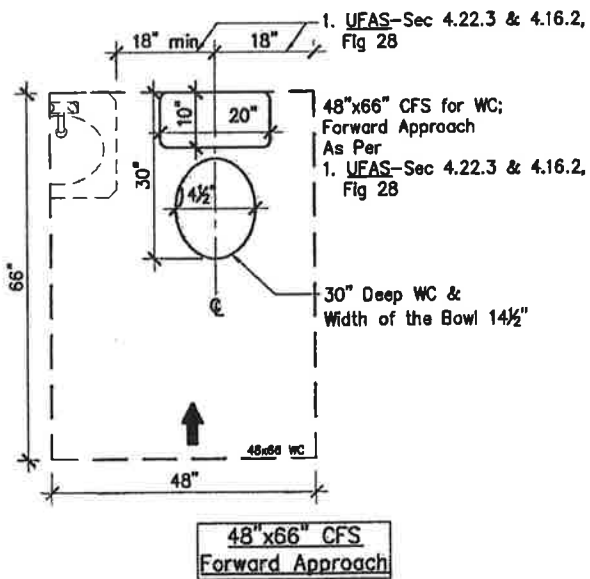
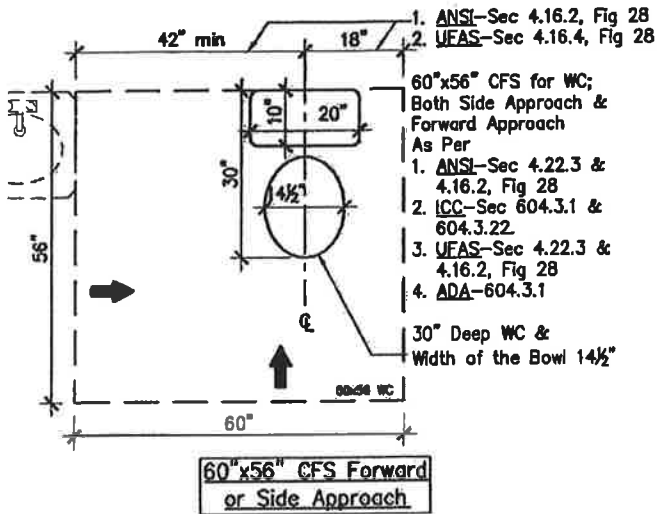
- 32" min Clear Opening Width
As Per
1. BC-Sec 1107.2.1 & ICC-Sec 1003.5 & 404.2.2
 2. UFAS-Sec 4.13.5
- DMC Requirements
1. Appendix "P" Bathrooms / HB - Only outside
 2. Type "A" and Section 504 Mobility Impaired bathrooms - both inside & outside
 3. As per ICC-Sec 404.2.3 required DMC shall not include knee & toe clearance



30"x48" CFS

- 30"x48" CFS
As Per
1. FHA Guidelines-Fig 6
 2. ICC-Sec 305.3.
 3. UFAS-Sec 4.2.4.1
- 30"x48" CFS is required beyond the arc of the door swing for dwelling unit bathroom
As Per
1. FHA Requirement-7(2)(b)(i)
 2. ICC-Sec P102.3 Exception
 3. 2010 ADA-Sec 603.2.3, Exception 2

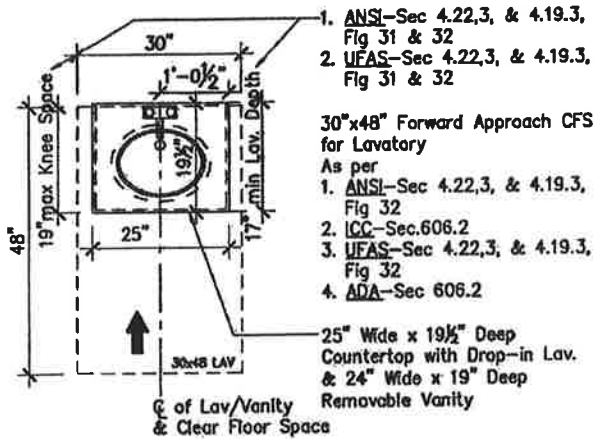
Reference Sheet for Maneuvering Clearances for Wall-hung Lavatory & Countertop with Drop-in Lavatory within the Dwelling Unit Bathroom; 180 degree Turning Spaces & Clear Floor Space for Wheelchair; & Minimum Clear Opening at Bathroom Door



Reference Sheet for
CFS Requirements for WC
in Common/Public Single-User Toilet Rooms

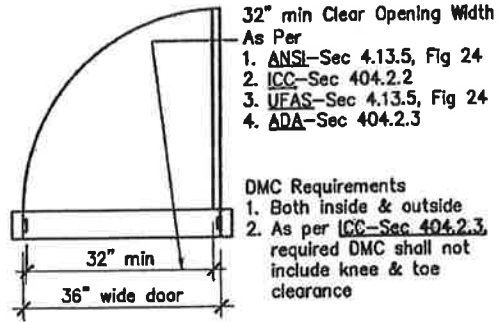
BR-8

Countertop with Drop-in Lavatory



1. ANSI—Sec 4.22.3, & 4.19.3, Fig 31 & 32
 2. UFAS—Sec 4.22.3, & 4.19.3, Fig 31 & 32
- 30"x48" Forward Approach CFS for Lavatory
As per
1. ANSI—Sec 4.22.3, & 4.19.3, Fig 32
 2. ICC—Sec.606.2
 3. UFAS—Sec 4.22.3, & 4.19.3, Fig 32
 4. ADA—Sec 606.2
- 25" Wide x 19½" Deep Countertop with Drop-in Lav. & 24" Wide x 19" Deep Removable Vanity
- ☉ of Lav/Vanity & Clear Floor Space

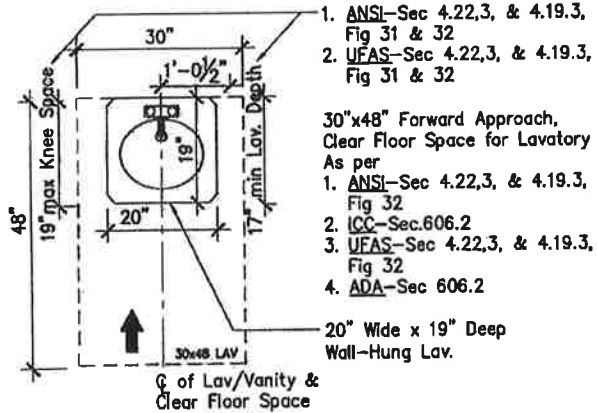
30"x48" CFS Forward Approach



- 32" min Clear Opening Width
As Per
1. ANSI—Sec 4.13.5, Fig 24
 2. ICC—Sec 404.2.2
 3. UFAS—Sec 4.13.5, Fig 24
 4. ADA—Sec 404.2.3
- DMC Requirements
1. Both inside & outside
 2. As per ICC—Sec 404.2.3, required DMC shall not include knee & toe clearance

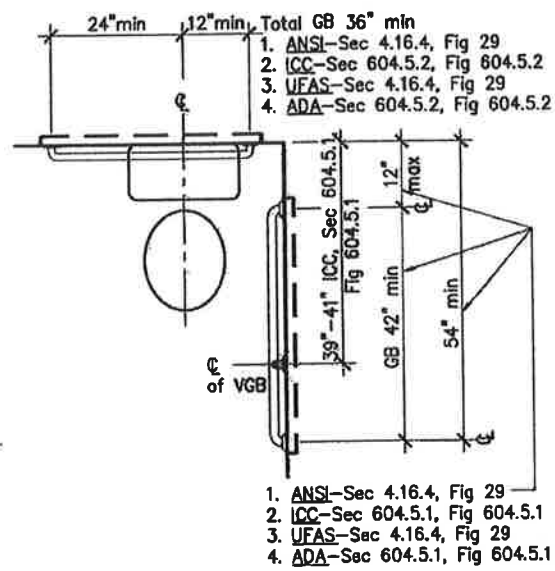
Clear Opening Width at Toilet Room Door

Wall-hung Lavatory



1. ANSI—Sec 4.22.3, & 4.19.3, Fig 31 & 32
 2. UFAS—Sec 4.22.3, & 4.19.3, Fig 31 & 32
- 30"x48" Forward Approach, Clear Floor Space for Lavatory
As per
1. ANSI—Sec 4.22.3, & 4.19.3, Fig 32
 2. ICC—Sec.606.2
 3. UFAS—Sec 4.22.3, & 4.19.3, Fig 32
 4. ADA—Sec 606.2
- 20" Wide x 19" Deep Wall-Hung Lav.
- ☉ of Lav/Vanity & Clear Floor Space

30"x48" CFS Forward Approach



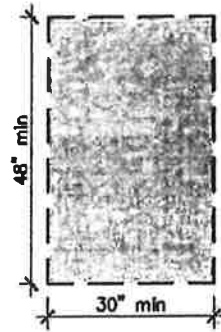
- 24" min 12" min Total GB 36" min
1. ANSI—Sec 4.16.4, Fig 29
 2. ICC—Sec 604.5.2, Fig 604.5.2
 3. UFAS—Sec 4.16.4, Fig 29
 4. ADA—Sec 604.5.2, Fig 604.5.2
- ☉ of VGB
- 39"–41" ICC, Sec 604.5.1 Fig 604.5.1
- 12" max
- GB 42" min
- 54" min
1. ANSI—Sec 4.16.4, Fig 29
 2. ICC—Sec 604.5.1, Fig 604.5.1
 3. UFAS—Sec 4.16.4, Fig 29
 4. ADA—Sec 604.5.1, Fig 604.5.1

Horizontal & Vertical Grab Bar Placement

Reference Sheet for Maneuvering Clearances for Wall-hung Lavatory & Countertop with Drop-in Lavatory; Grab Bar Locations; & Minimum Clear Opening at Bathroom Door in Common/Public Single-User Toilet Rooms

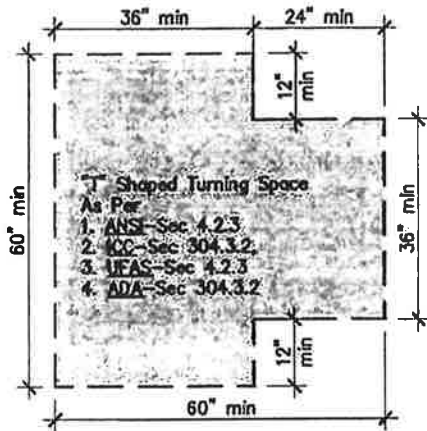


60" Dia Space for 180° Turn.



30"x48" clear floor space
As Per
1. FHA Guidelines Fig 6
2. ICC-Sec 305.3.
3. UFAS-Sec 4.2.4.1
4. ADA-Sec 305.3

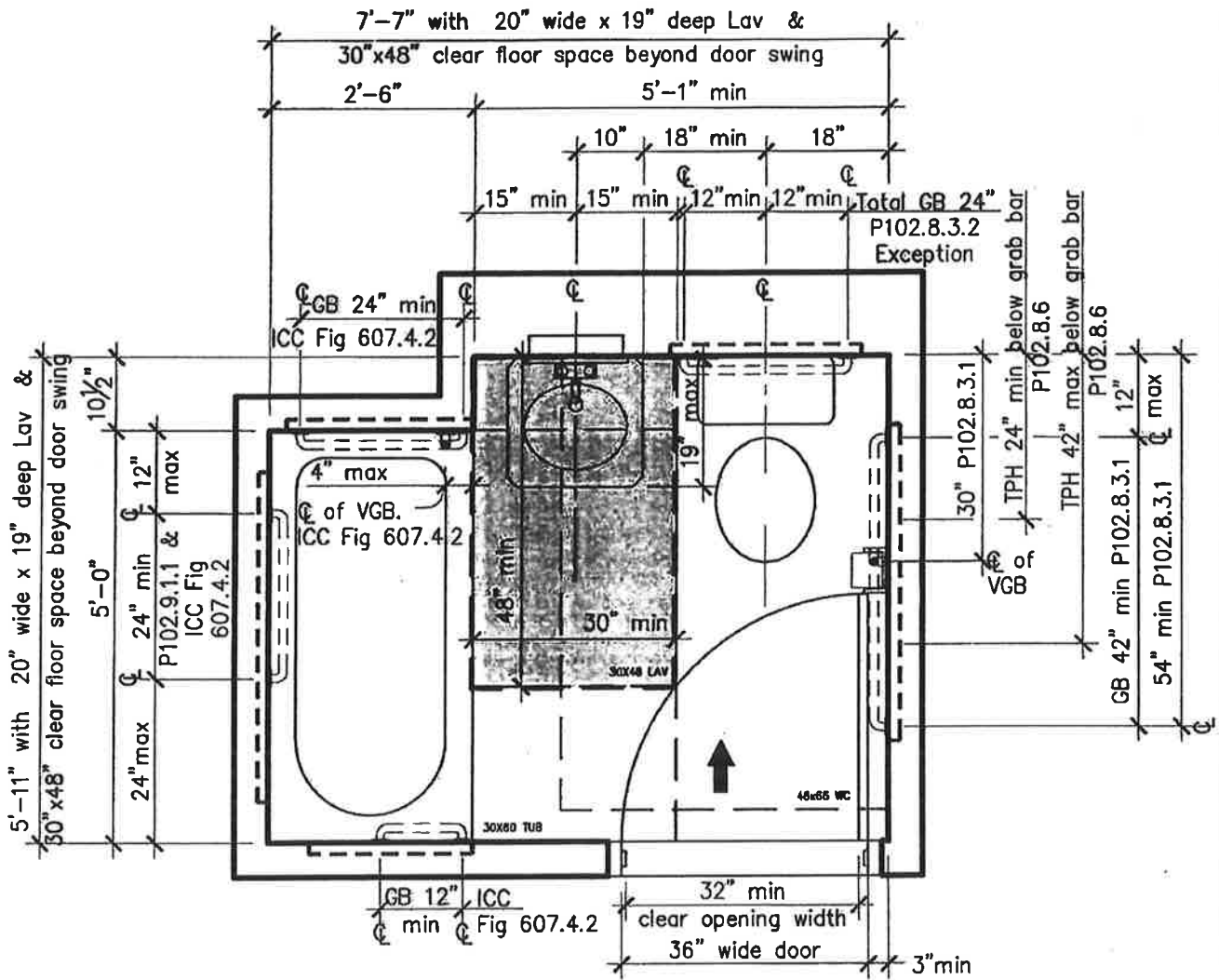
30"x48" CFS



"T" Shaped Space for 180° Turn.

Reference Sheet for
180 degree Turning Spaces, & CFS for Wheelchair
in Common/Public Single User Toilet Rooms

BR-10

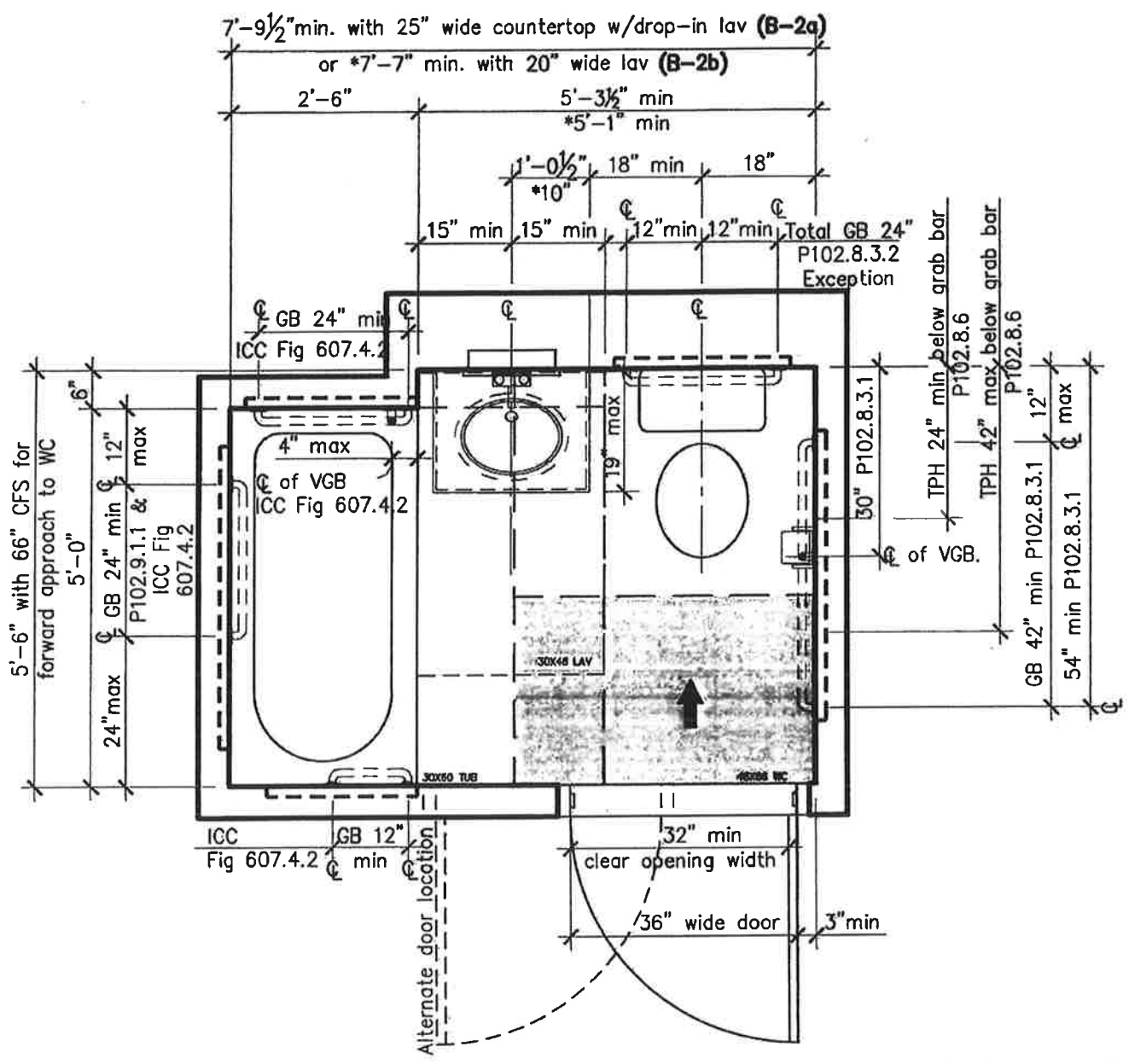


7'-7" x 5'-11"

- door maneuvering clearance is required only outside of the bathroom
- When TPH is surface mounted, it shall be installed so as not to limit full 90 degree door swing.
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception.

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CFS Beyond In-Swing Door (Front Door, Opposite to WC);
 Maneuvering Clearances at all Fixtures
 & Grab Bar Locations;

B-1b

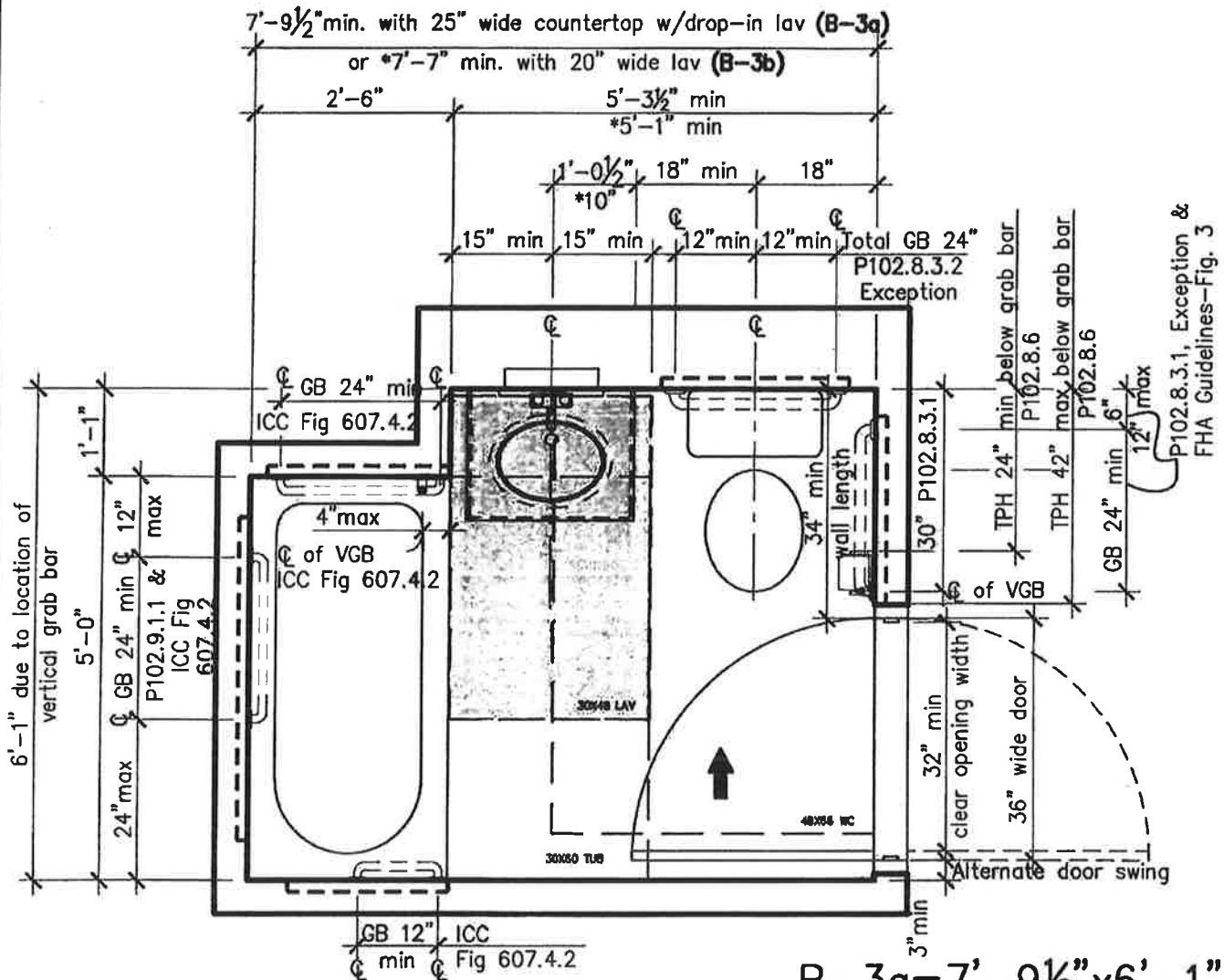


$B-2a = 7'-9\frac{1}{2}'' \times 5'-6''$
 $*B-2b = 7'-7'' \times 5'-6''$

• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Appendix-"P"
 with Maneuvering Clearances at all Fixtures
 (Front Door, Out-Swing, Opposite to WC or Lav);
 & Grab Bar Locations

B-2a
 B-2b



$$B-3a = 7'-9\frac{1}{2}" \times 6'-1"$$

$$*B-3b = 7'-7" \times 6'-1"$$

- door maneuvering clearance is required only outside of the bathroom

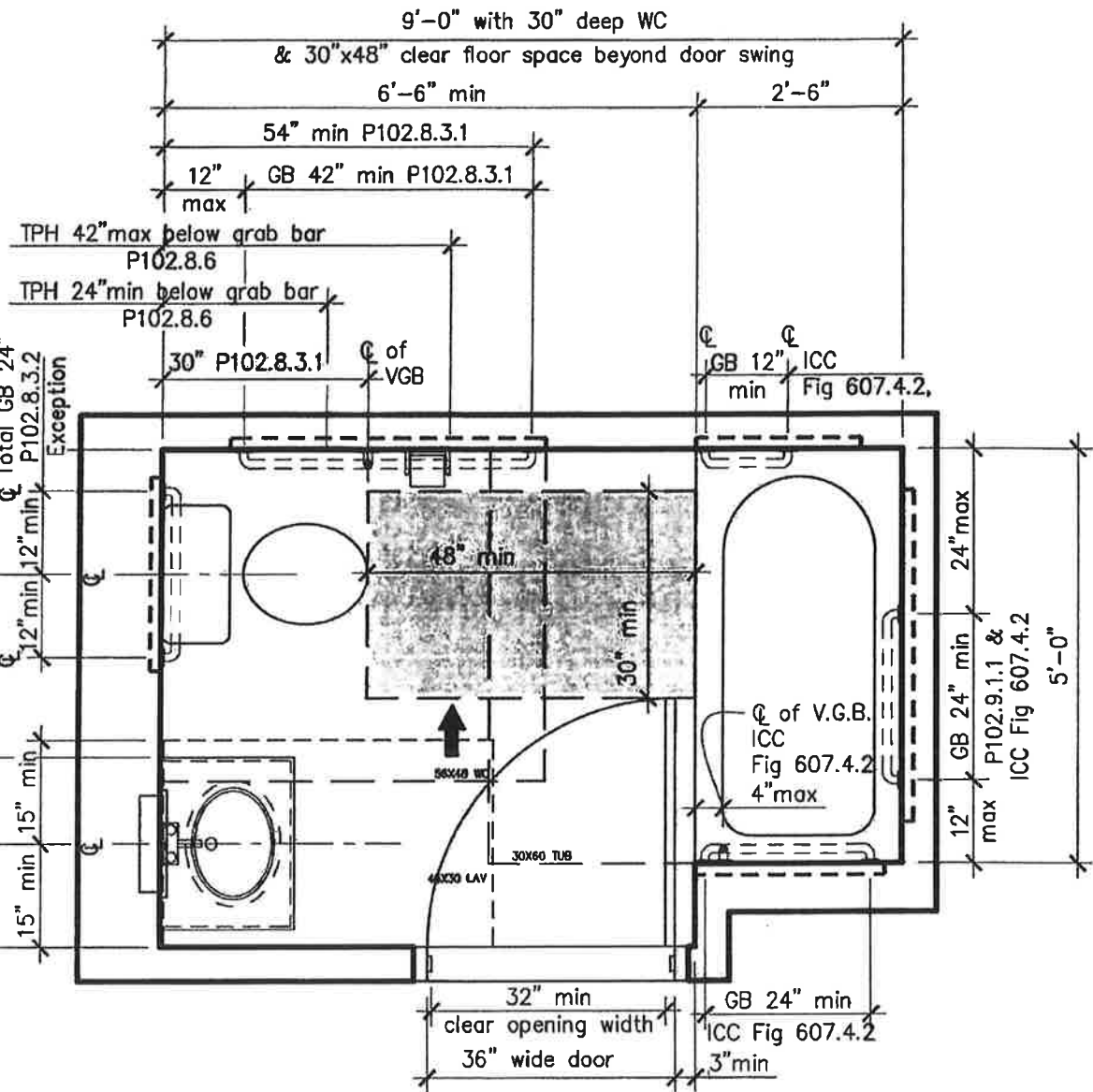
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CSF Beyond In-Swing or Out-Swing Door
 (Side Door, Adjacent to WC); Maneuvering Clearances at all Fixtures
 & Grab Bar Locations

B-3a

B-3b

6'-0" with 30" CFS beyond 36" wide door swing & Surface Mounted TPH (B-5a)
 or *5'-6" with 30" CFS beyond 36" wide door swing & Recessed TPH (B-5b)



$$B-5a = 9'-0" \times 6'-0"$$

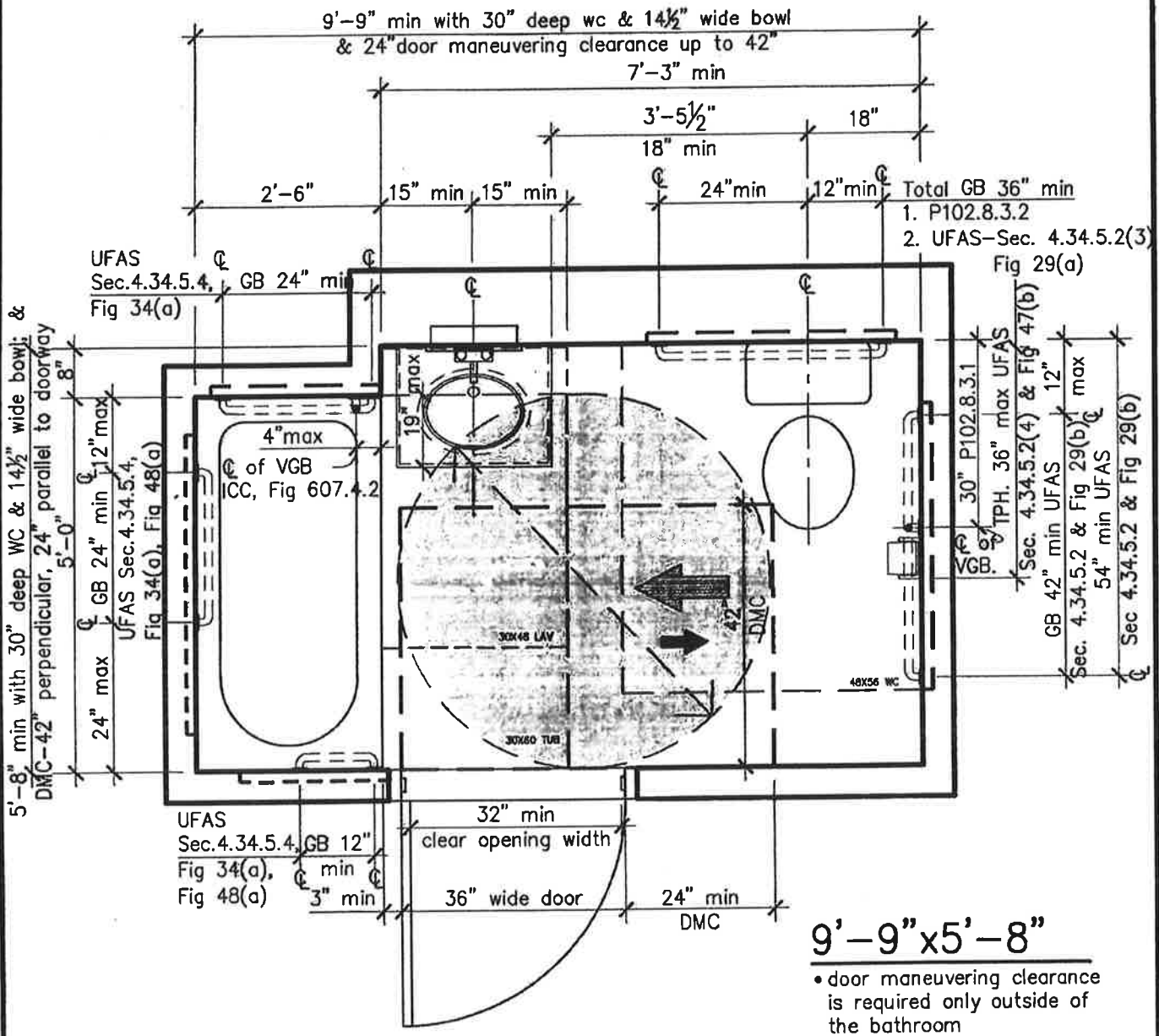
$$*B-5b = 9'-0" \times 5'-6"$$

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Bathroom Size as per BC-Appendix-"P"
 with 30"x48" CSF Beyond In-Swing Door (Side Door, Adjacent to WC);
 Maneuvering Clearances at all Fixtures
 & Grab Bar Locations

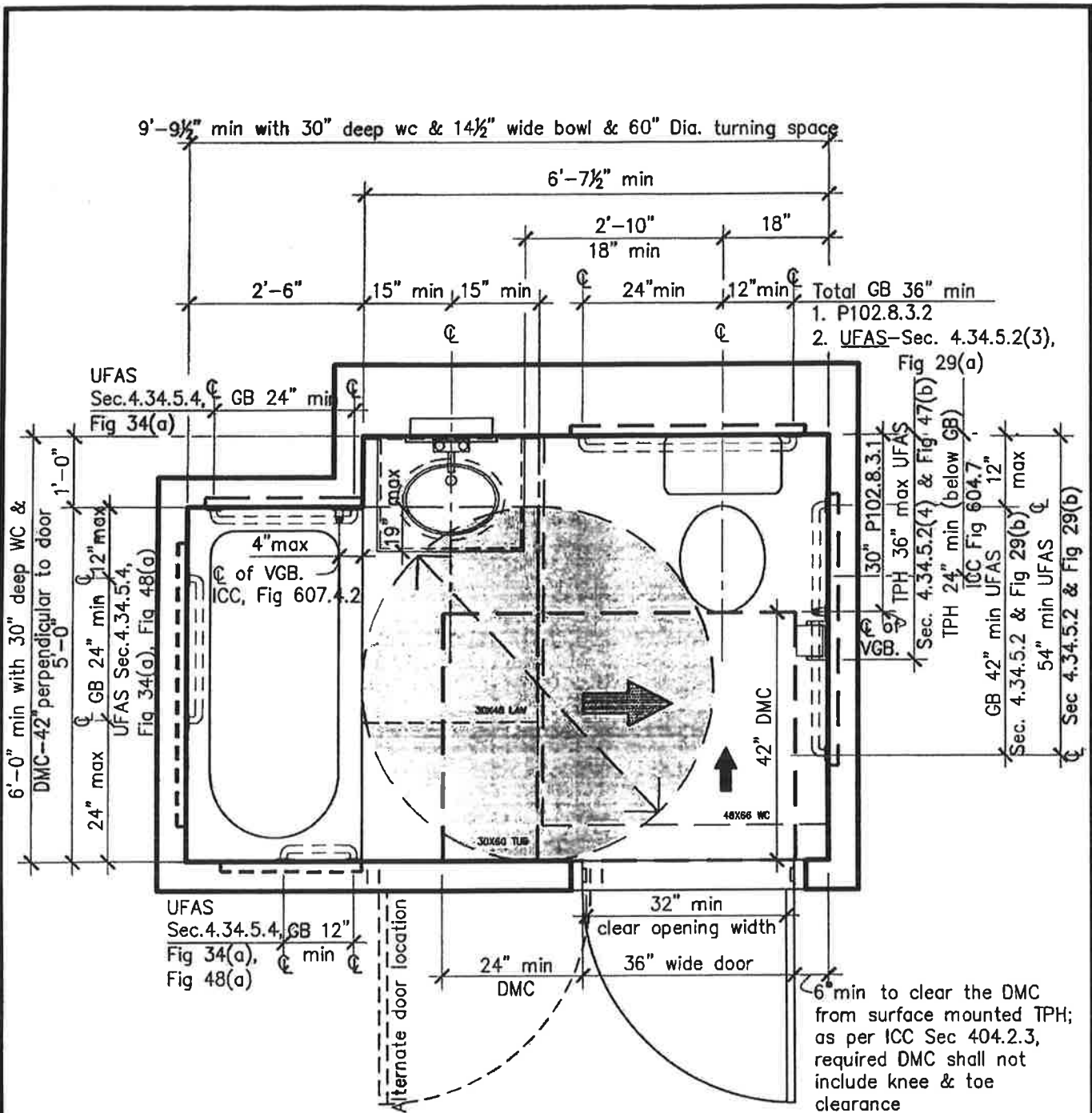
B-5a

B-5b



Min. Bathroom Size as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

B-11a



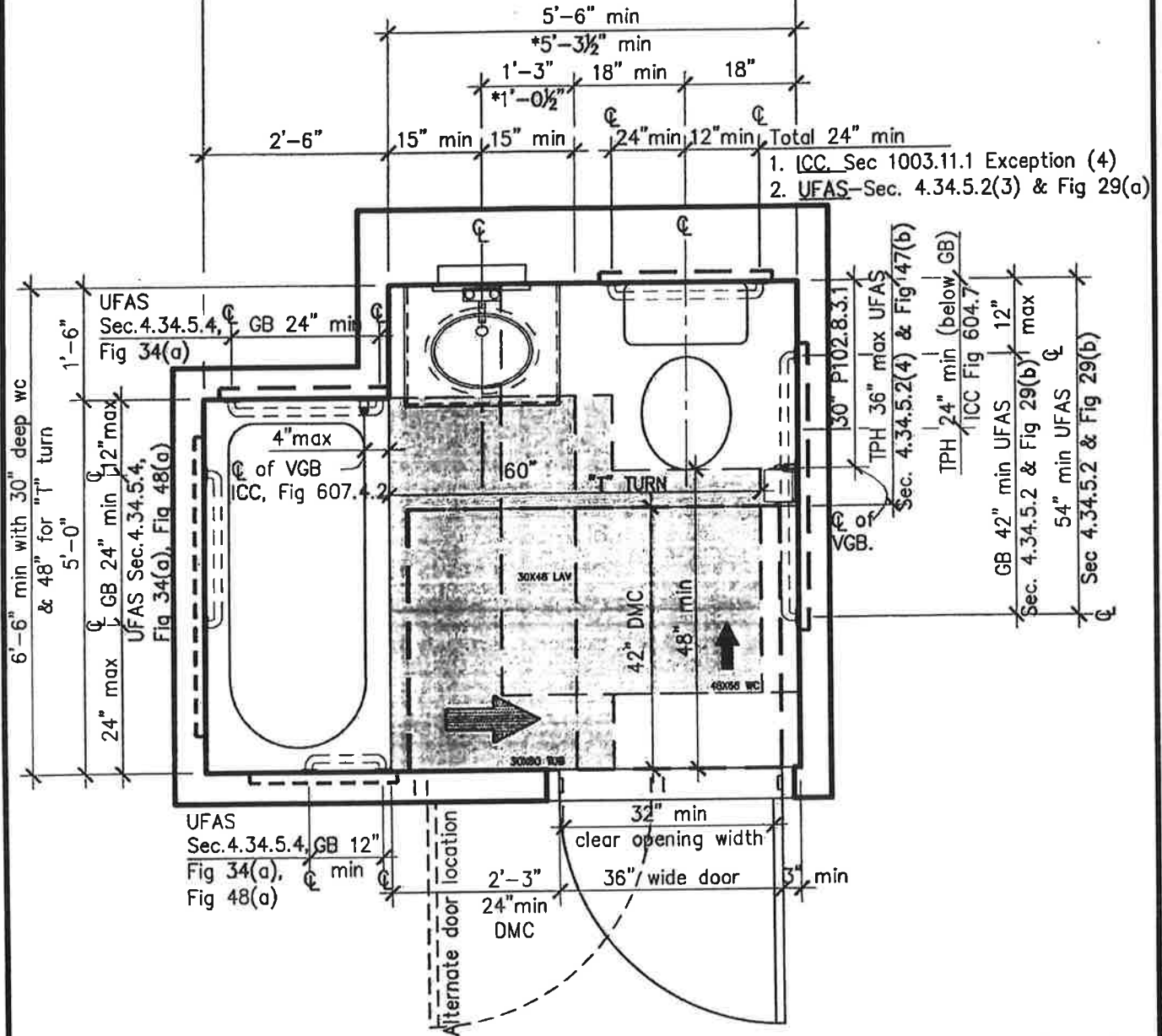
9'-9 1/2" x 6'-0"

• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to W.C. or Lav); & Grab Bar Locations

B-11b

8'-0" min with 60" for "T" turn & surface mounted TPH
 upto 30" wide countertop w/drop-in lav. can be used (25" shown) (B-12a)
 or *7'-9½" min with 60" for "T" turn & Recessed TPH
 (with 25" wide countertop w/drop-in lav.) (B-12b)



$$B-12a = 8'-0" \times 6'-6"$$

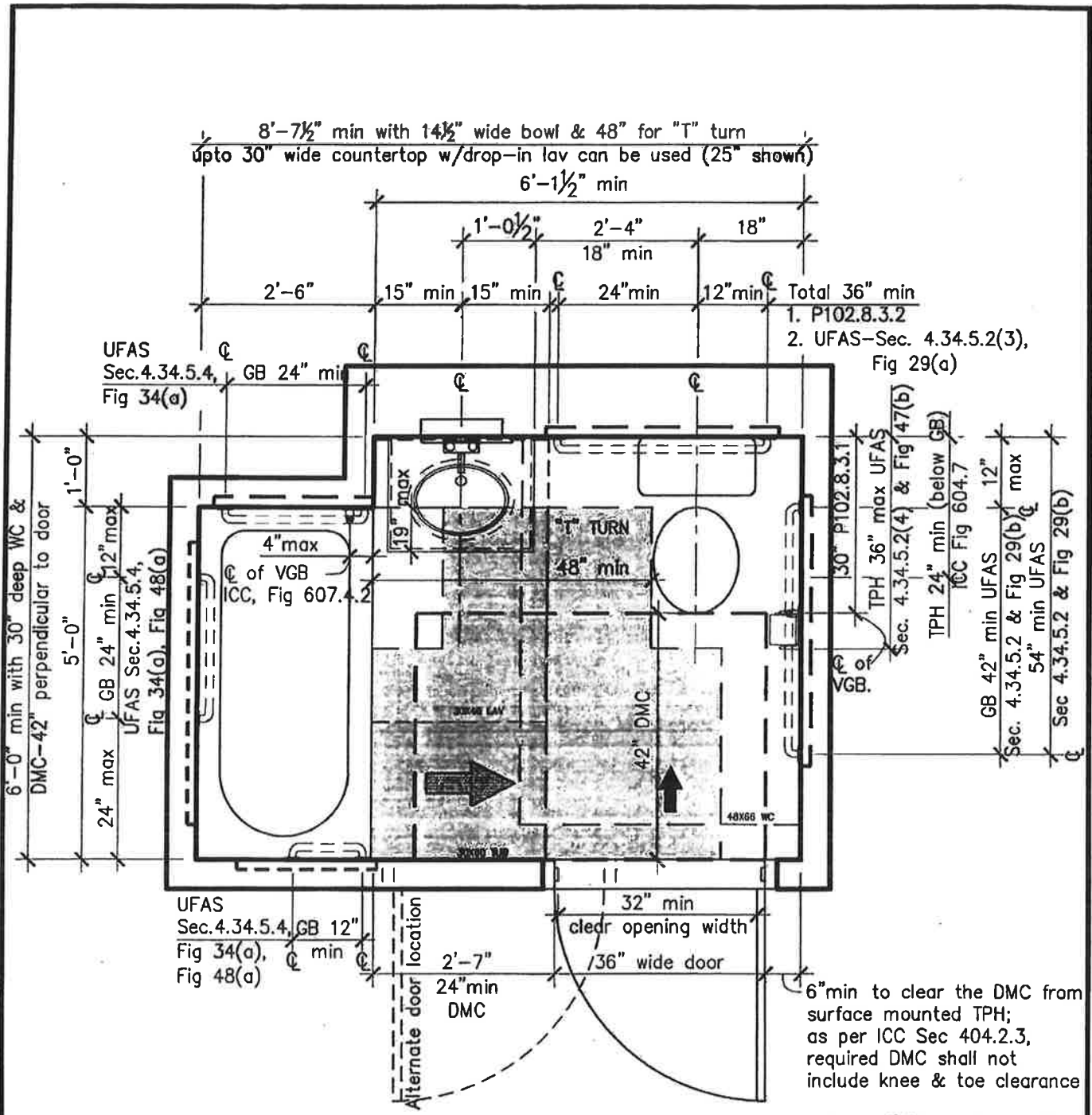
$$*B-12b = 7'-9\frac{1}{2}" \times 6'-6"$$

• door maneuvering clearance is required only outside of

Min. Bathroom Size as per UFAS & BC-Appendix "P" with "T" Shaped Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to WC or Lav); & Grab Bar Locations

B-12a

B-12b

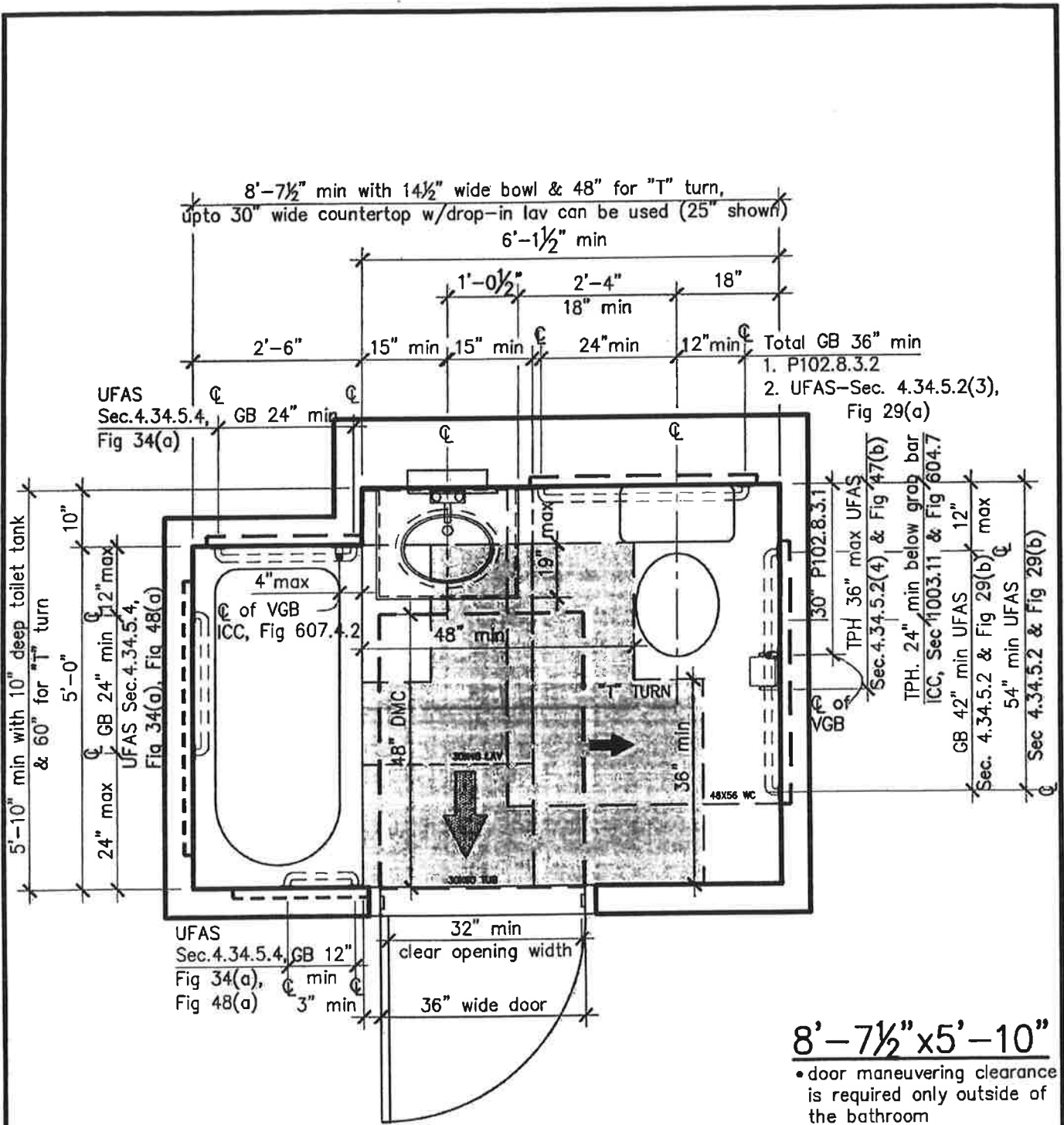


8'-7½" x 6'-0"

- door maneuvering clearance is required only outside of the bathroom

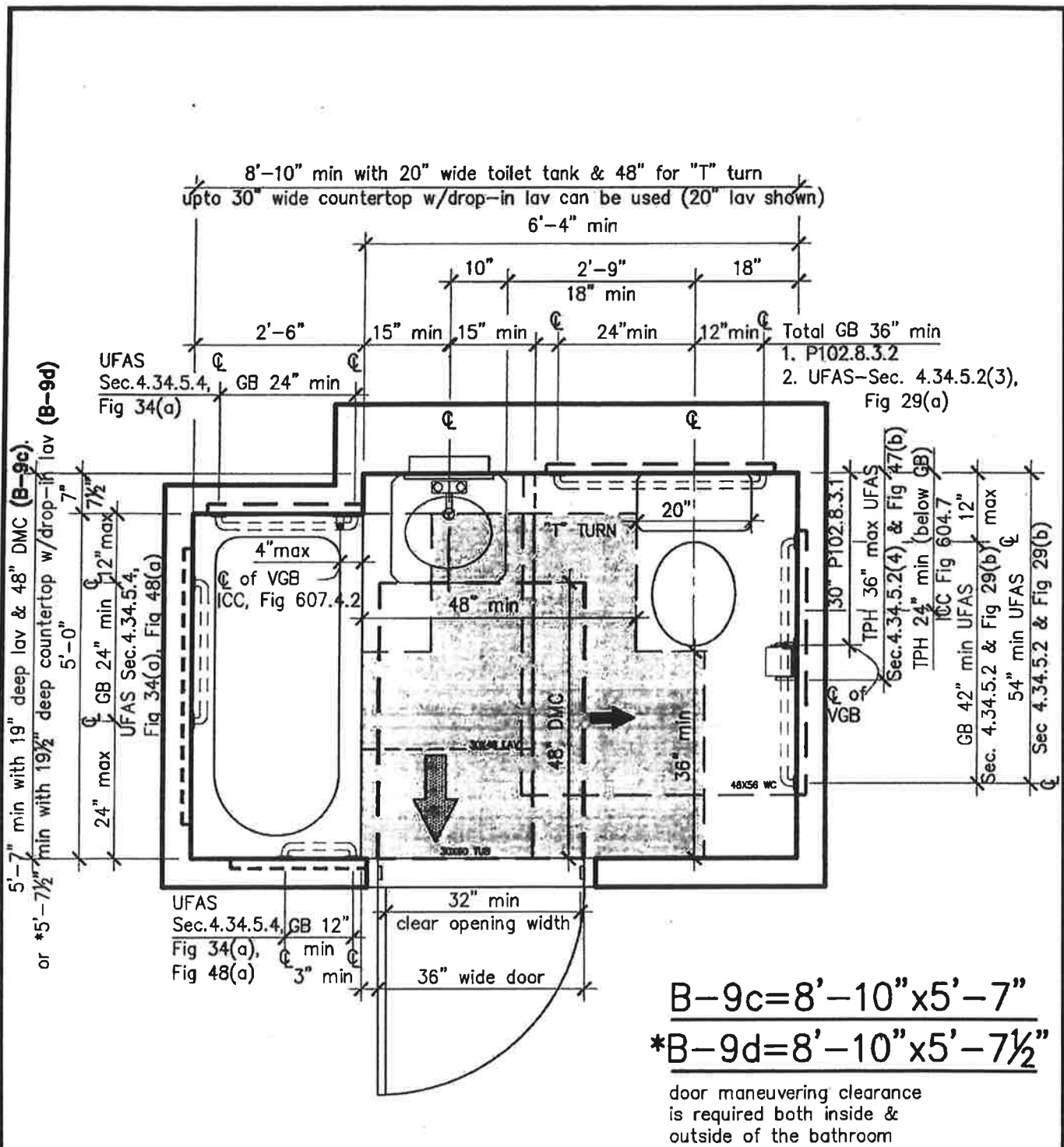
Min. Bathroom Size as per UFAS & BC-Appendix "P"
 with "T" Shaped Turning Space; Maneuvering Clearances at all
 Fixtures & Door (Front Door, Opposite to WC or Lav);
 & Grab Bar Locations

B-13a



Min. Bathroom Size as per UFAS & BC-Appendix "P"
with "T" Shaped Turning Space; Maneuvering Clearances at all
Fixtures & Door (Front Door, Opposite to Lav);
& Grab Bar Locations

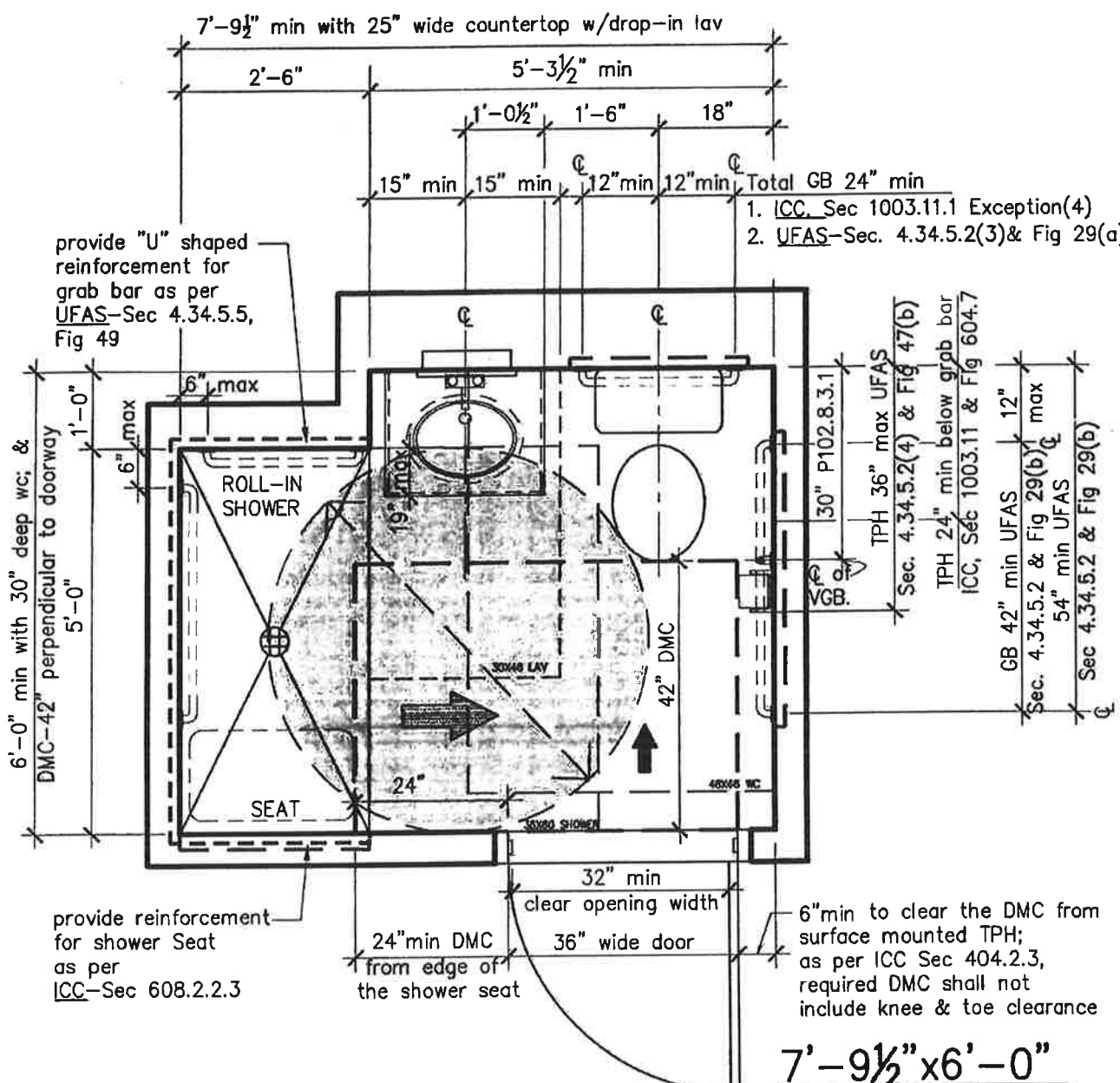
B-13b



Min. Bathroom Size as per UFAS & BC-Appendix "P"
 with "T" Shaped Turning Space; Maneuvering Clearances at all
 Fixtures & Door (Front Door, Opposite to Lav);
 & Grab Bar Locations

B-13c

B-13d



provide "U" shaped reinforcement for grab bar as per UFAS-Sec 4.34.5.5, Fig 49

6'-0" min with 30" deep wc; & DMC-42" perpendicular to doorway

provide reinforcement for shower seat as per ICC-Sec 608.2.2.3

1. ICC, Sec 1003.11.1 Exception(4)
2. UFAS-Sec. 4.34.5.2(3) & Fig 29(a)

30" P102.8.3.1
 TPH 36" max UFAS
 Sec. 4.34.5.2(4) & Fig 47(b)
 TPH 24" min below grab bar
 ICC, Sec 1003.11 & Fig 604.7

GB 42" min UFAS
 Sec. 4.34.5.2 & Fig 29(b)
 54" min UFAS
 Sec 4.34.5.2 & Fig 29(b)

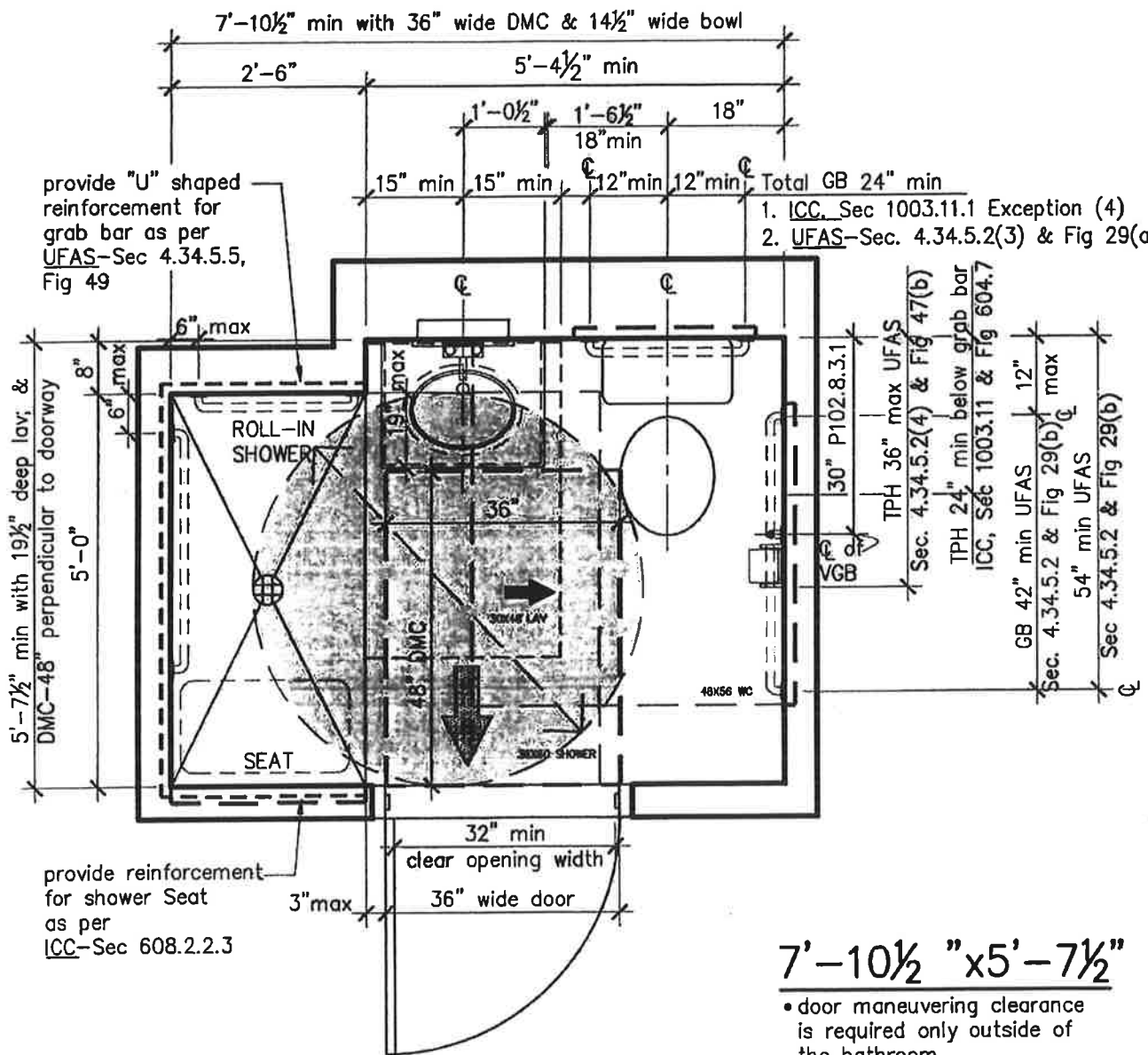
6" min to clear the DMC from surface mounted TPH; as per ICC Sec 404.2.3, required DMC shall not include knee & toe clearance

7'-9 1/2" x 6'-0"

- door maneuvering clearance is required only outside of the bathroom
- Roll-in shower shall not have more than 1:50 pitch (2% max.) as the shower area is used for 60" Dia turning space & DMC

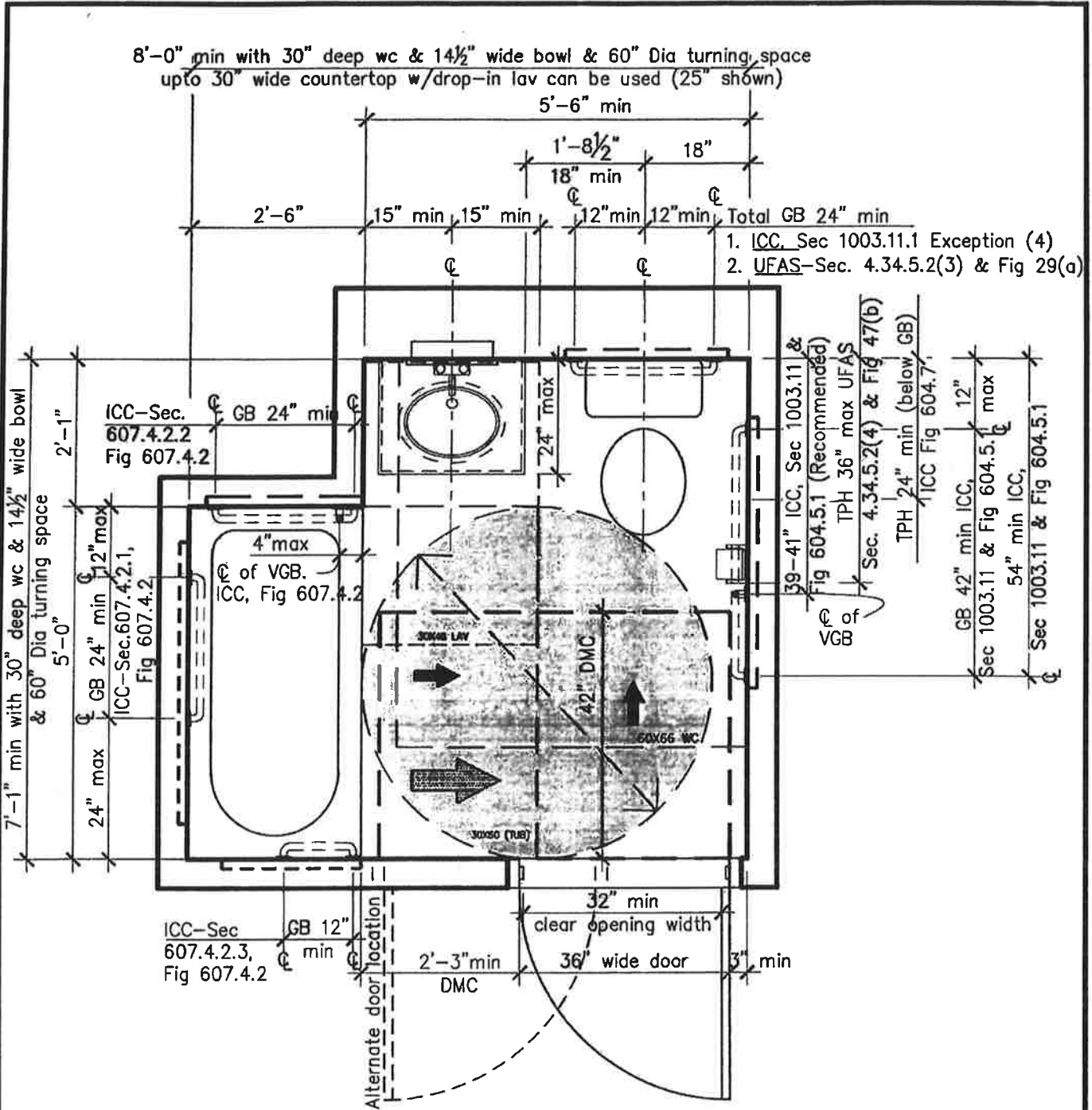
Min. Bathroom Size with Roll-in Type Shower as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to WC); & Grab Bar Locations

B-14a



Min. Bathroom Size with Roll-in Type Shower as per UFAS & BC-Appendix "P" with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

B-14b



8'-0" x 7'-1"

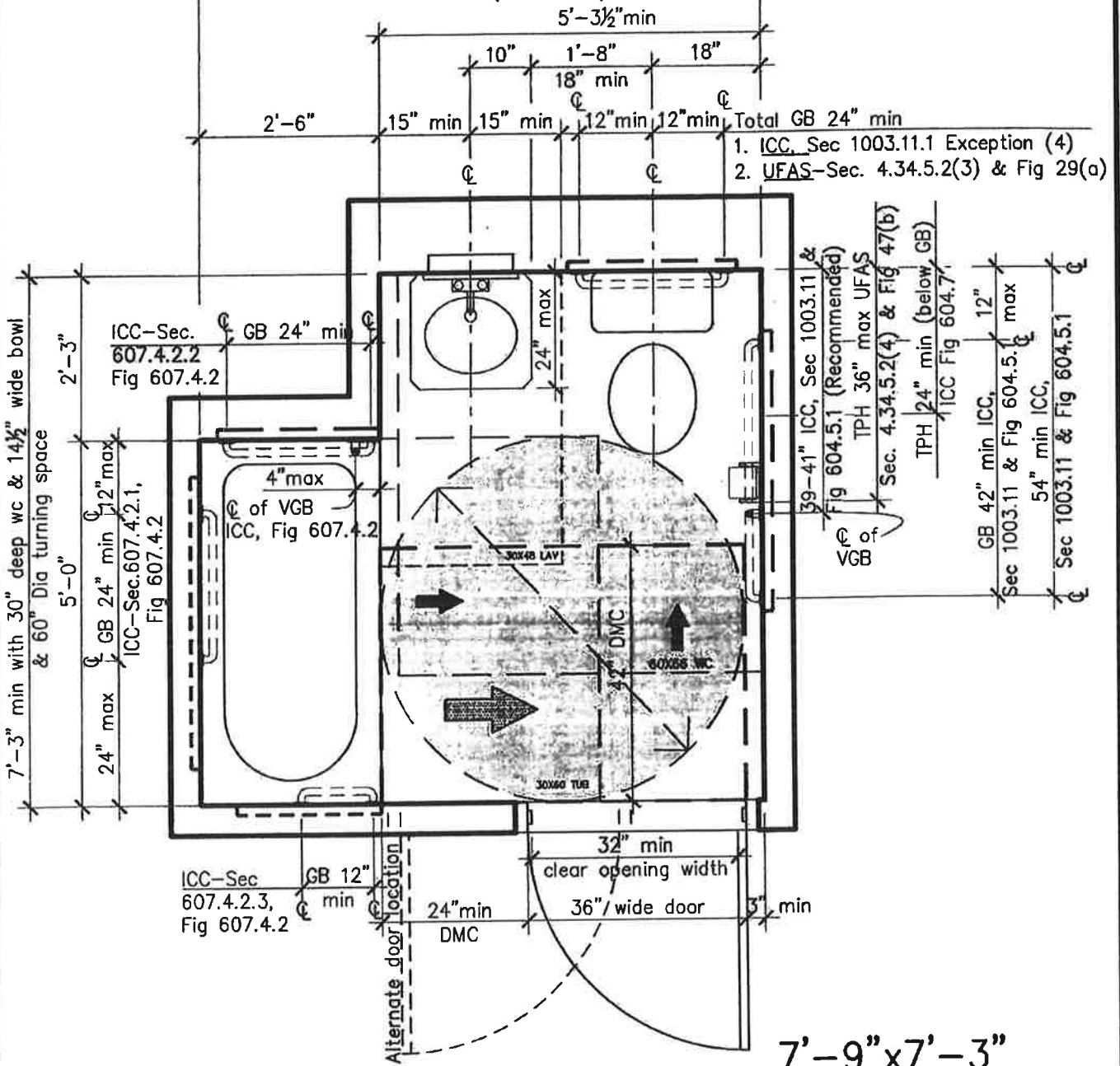
- door maneuvering clearance is required only outside of the bathroom
- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
i.e. Type "A" of ICC-Sec 1003.11; & UFAS with 60" Dia Turning Space;
Maneuvering Clearances at all Fixtures & Door
(Front Door, Opposite to WC or Lav); & Grab Bar Locations

B-21a

7'-9½" min with 30" deep WC & 14½" wide bowl;
 & DMC-24" parallel & 42" perpendicular to door,

upto 25" wide lav or 25" wide countertop w/drop-in lav
 can be used (20" shown)



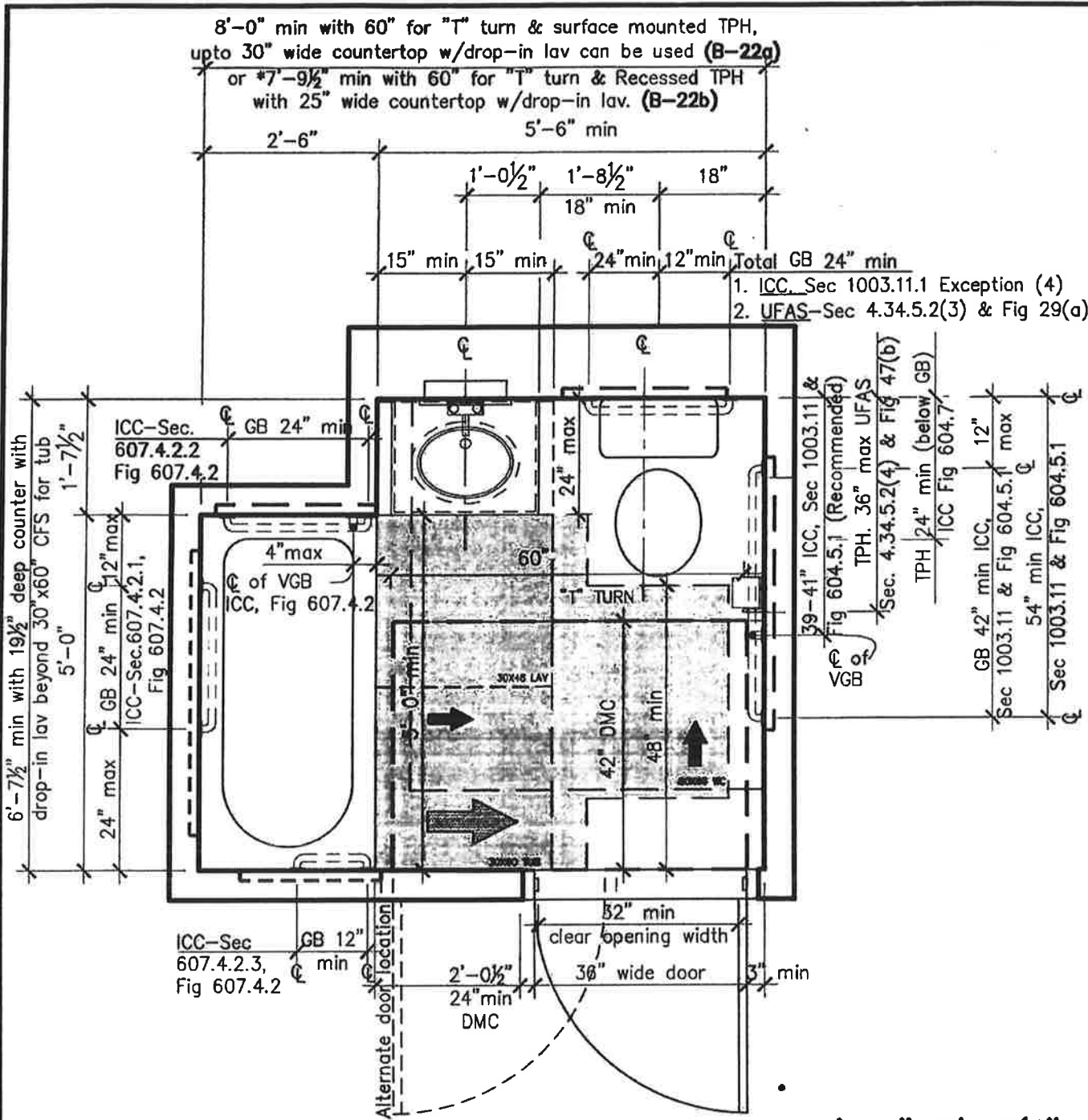
1. ICC, Sec 1003.11.1 Exception (4)
2. UFAS-Sec. 4.34.5.2(3) & Fig 29(a)

7'-9" x 7'-3"

- door maneuvering clearance is required only outside of the bathroom
- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
 i.e. Type "A" of ICC-Sec 1003.11 & UFAS with 60" Dia Turning Space;
 Maneuvering Clearances at all Fixtures & Door
 (Front Door, Opposite to WC or Lav); & Grab Bar Locations

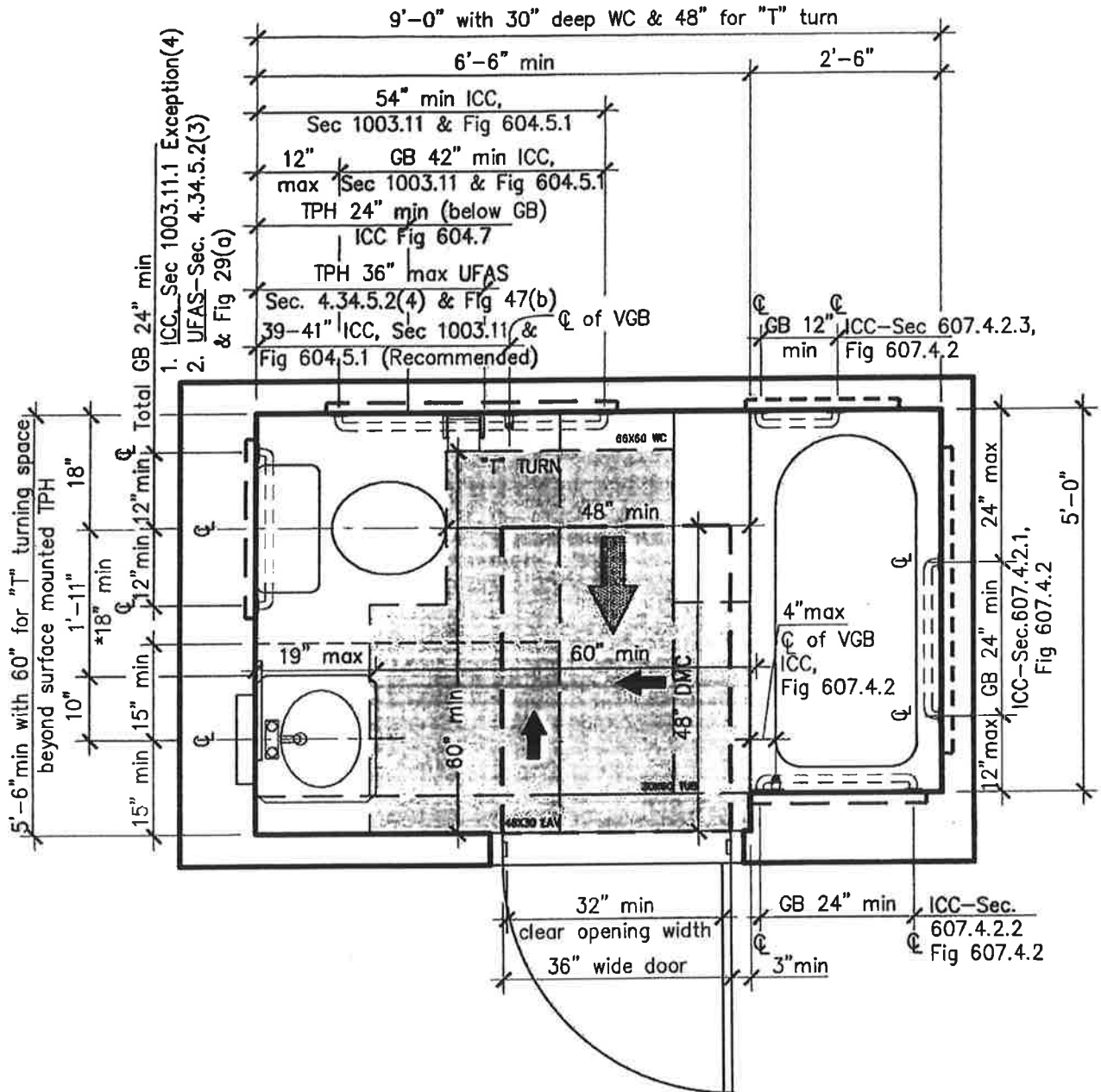
B-21b



B-22a=8'-0" x 6'-7 1/2"
***B-22b=7'-9 1/2" x 6'-7 1/2"**

- door maneuvering clearance is required only outside of the bathroom
- Lav cannot overlap the required CFS of the tub

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1, i.e. Type "A" of ICC-Sec. 1003.11 & UFAS with "T" Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to WC or Lav); & Grab Bar Locations	B-22a
	B-22b



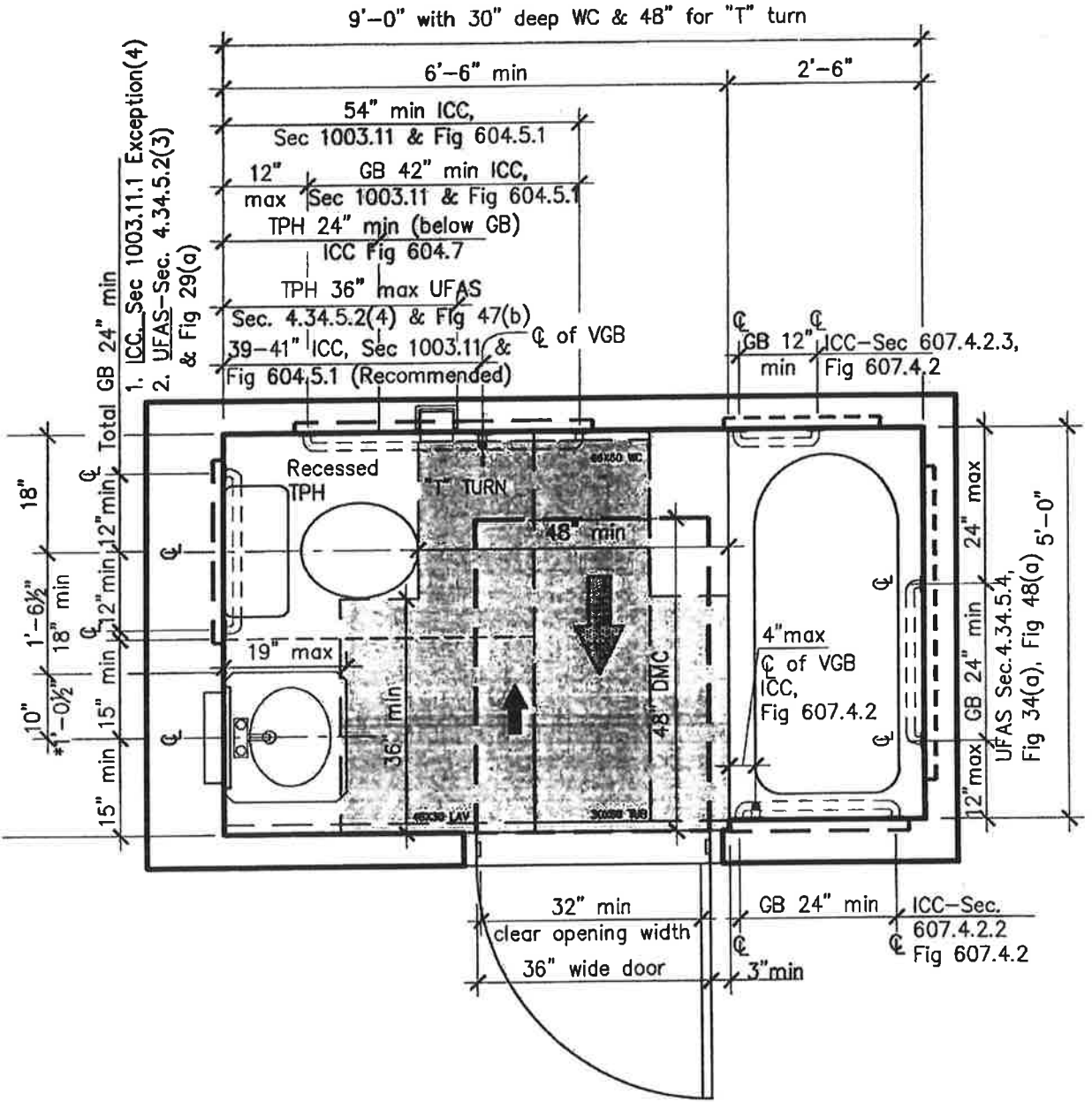
B-23a=9'-0"x5'-6"

- door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
i.e. Type "A" of ICC-Sec 1003.11; & UFAS with "T" Turning Space;
Maneuvering Clearances at all Fixtures & Door
(Front Door, Center, Adjacent to Lav); & Grab Bar Locations

B-23a

5'-1½" min with 14½" wide toilet bowl & 36" for "T" turning space;
 or *5'-3½" min with 25" wide countertop w/drop-in lav (20" shown) (B-23c)

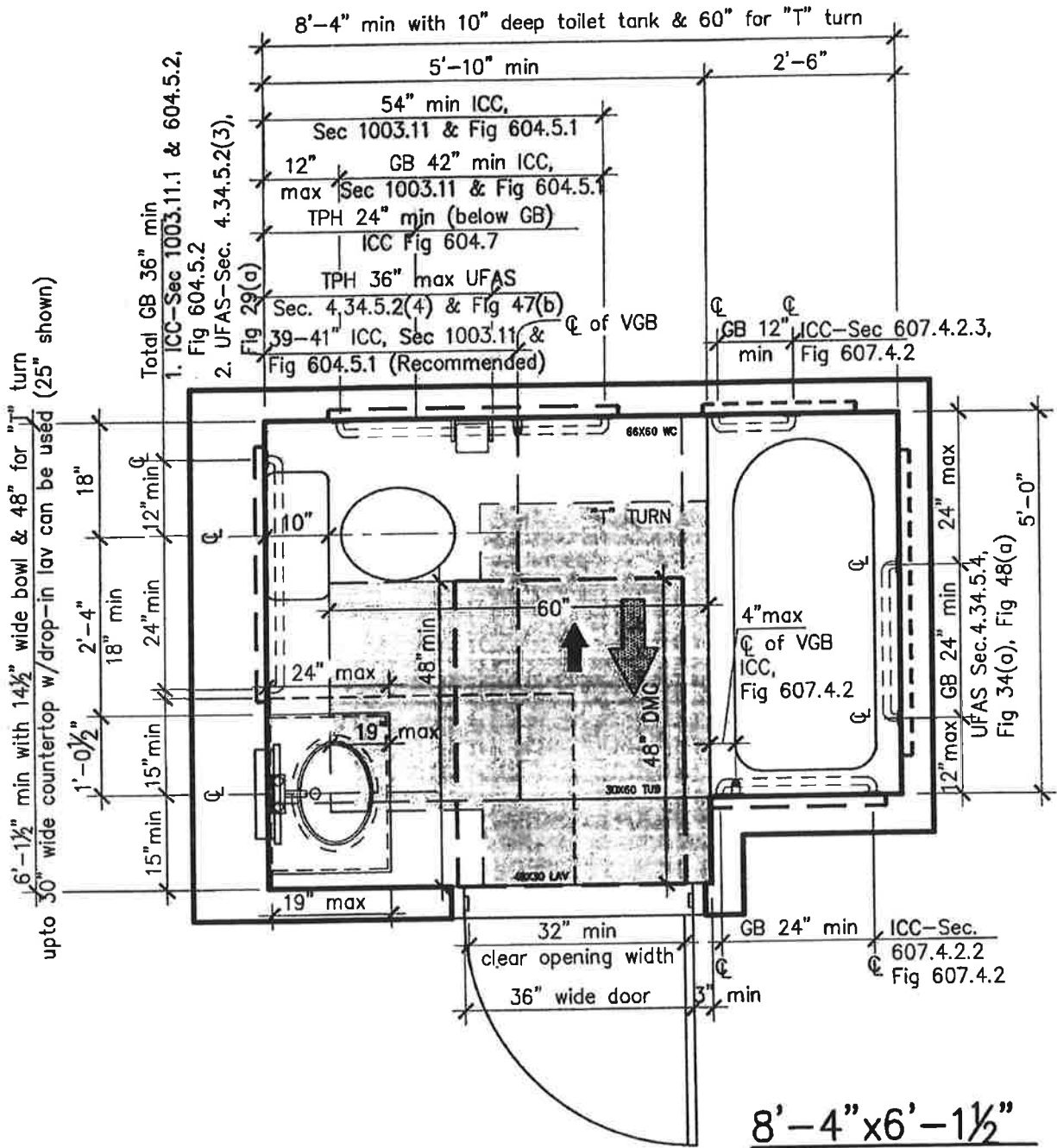


B-23b=9'-0" x 5'-1½"
***B-23c=9'-0" x 5'-3½"**

• door maneuvering clearance is required only outside of the bathroom

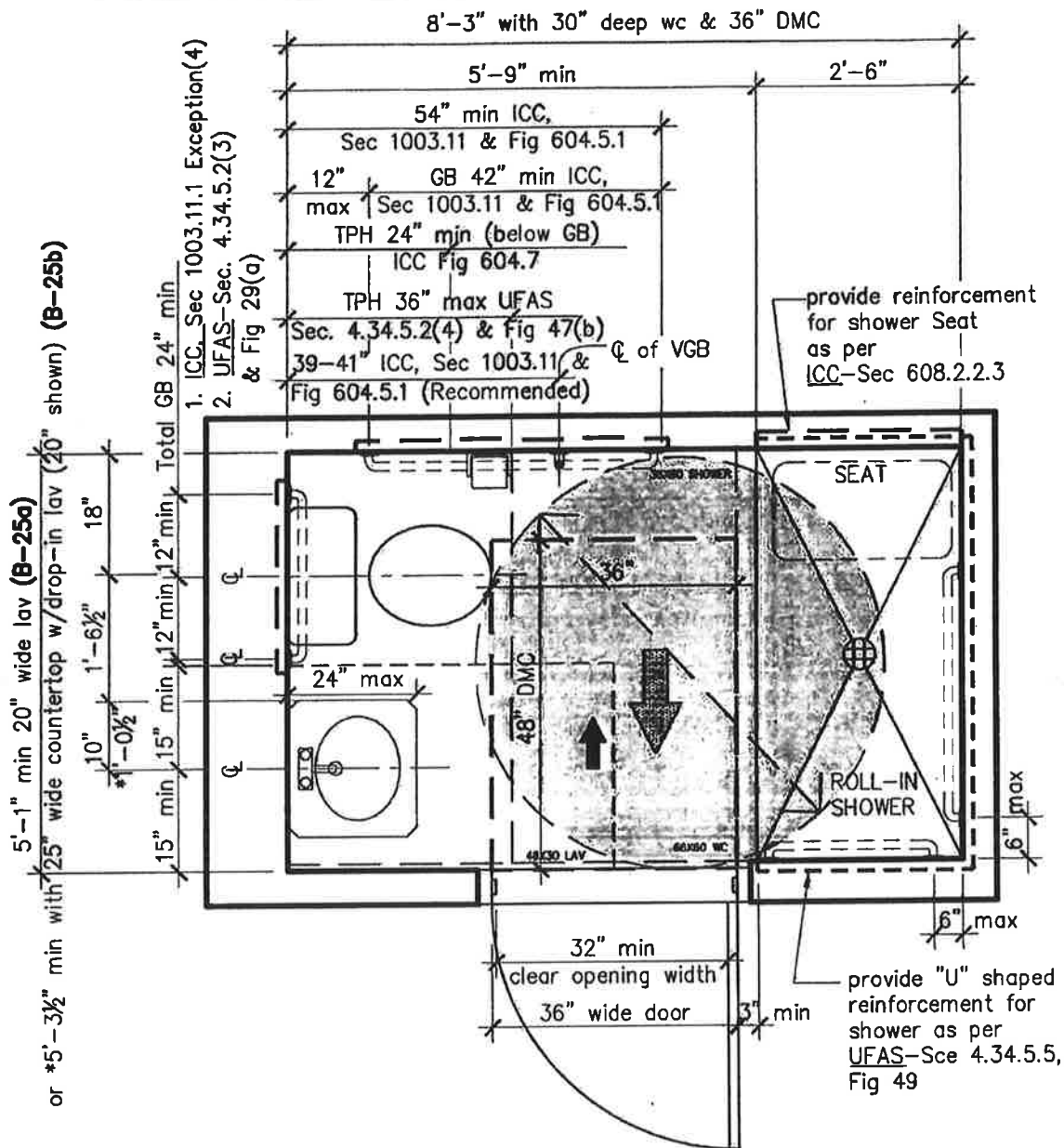
Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
 i.e. Type "A" of ICC-Sec 1003.11; & UFAS with "T" Turning Space;
 Maneuvering Clearances at all Fixtures & Door
 (Front Door, Center, Adjacent to Lav); & Grab Bar Locations

B-23b
 B-23c



• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
 i.e. Type "A" of ICC-Sec 1003.11; & UFAS with "T" Turning Space;
 Maneuvering Clearances at all Fixtures & Door
 (Front Door, Center, Adjacent to Lav); & Grab Bar Locations



$$B-25a = 8'-3" \times 5'-1"$$

$$*B-25b = 8'-3" \times 5'-3\frac{1}{2}"$$

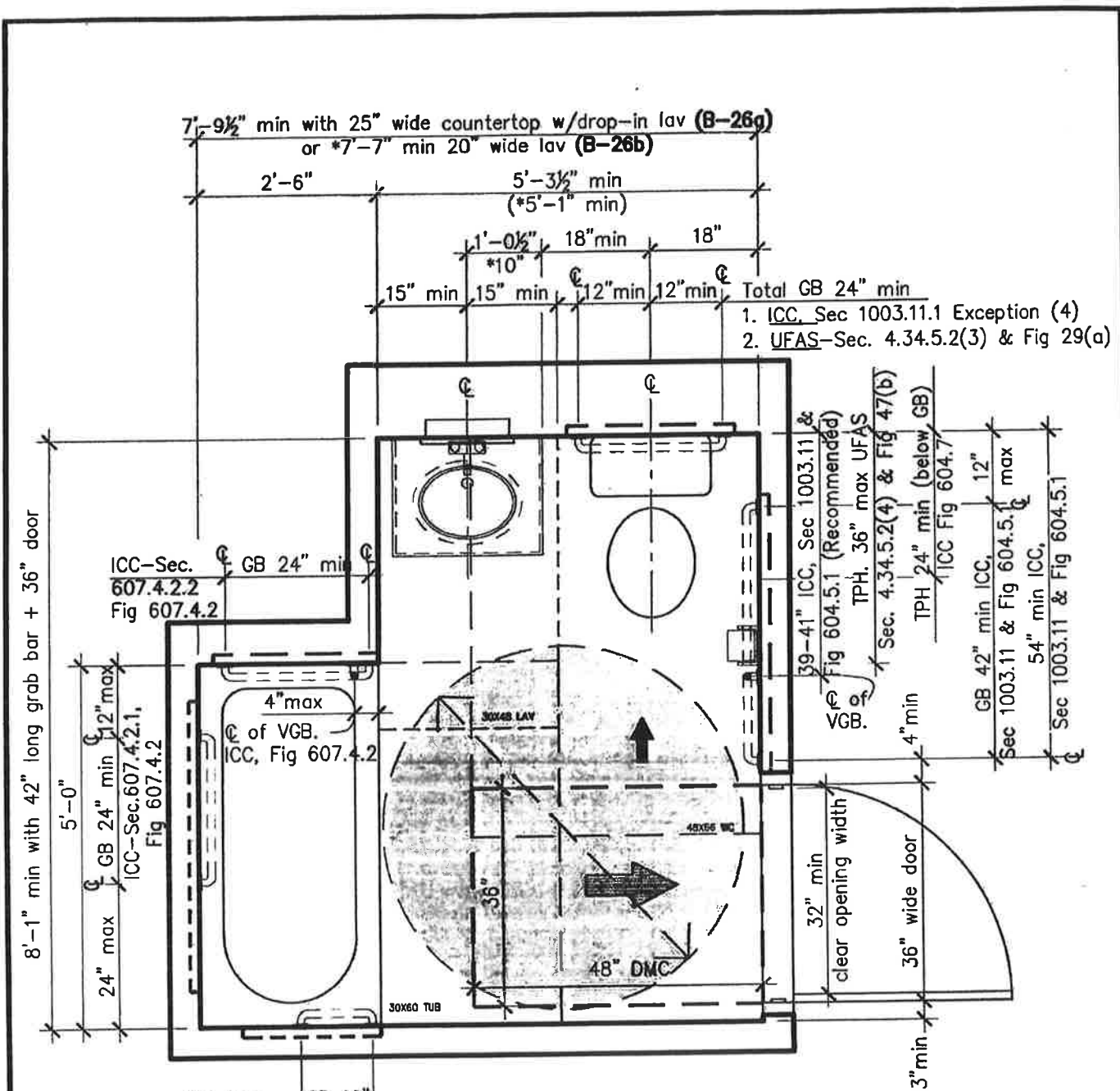
- door maneuvering clearance is required only outside of the bathroom

- Roll-in shower shall not have more than 1:50 pitch (2% max.) as the shower area is used for 60" Dia turning space & DMC

Min. Bathroom Size as per BC-Sec. 1107.2.2 Exception 1,
i.e. Type "A" of ICC-Sec 1003.11; & UFAS with 60" Dia Turning space;
Maneuvering Clearances at all Bathroom Fixtures & Door
(Front Door, Center, Adjacent to Lav); & Grab Bar Locations

B-25a

B-25b

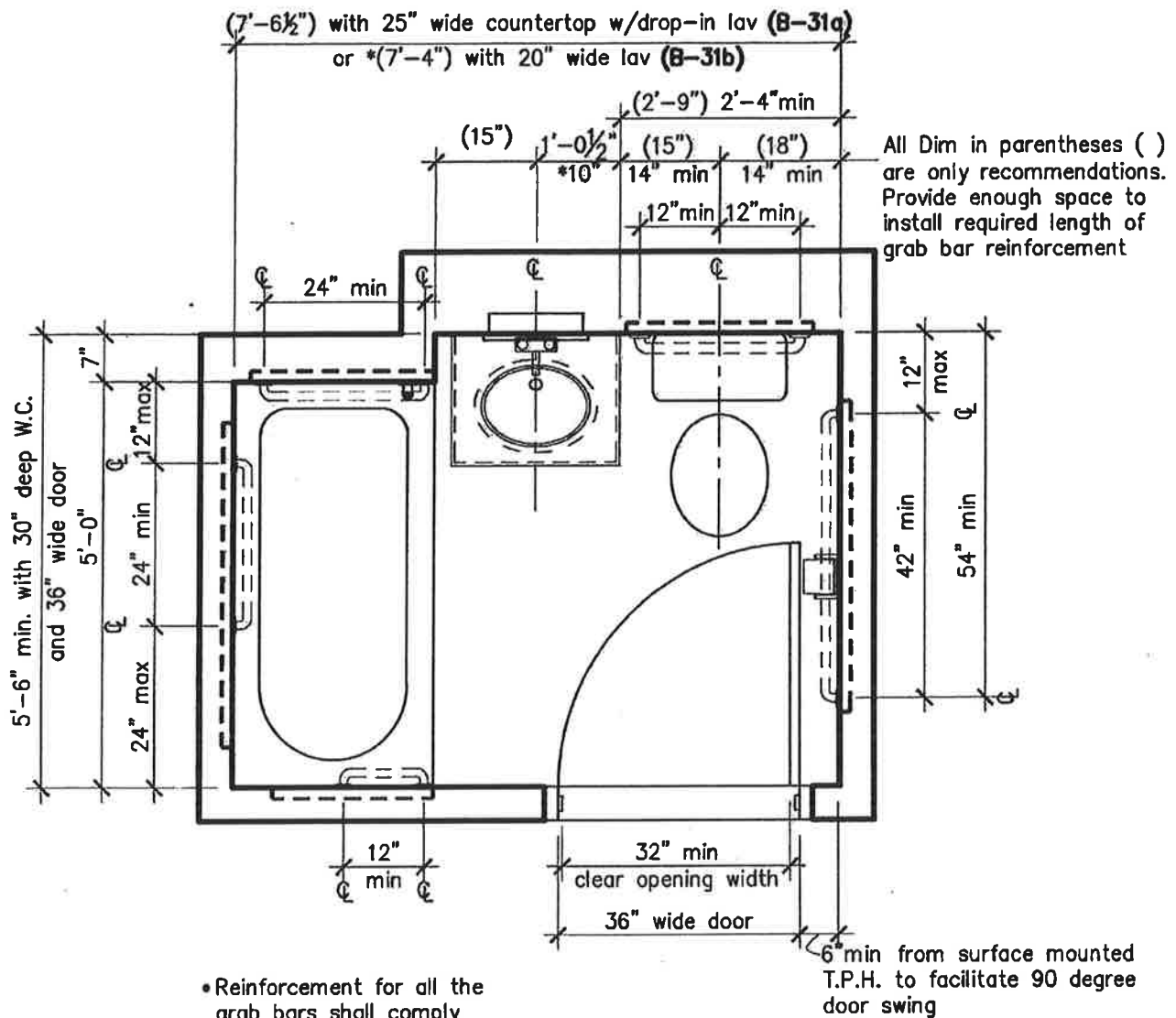


1. ICC, Sec 1003.11.1 Exception (4)
2. UFAS—Sec. 4.34.5.2(3) & Fig 29(a)

B-26a = 7'-9 1/2" x 8'-1"
***B-26b = 7'-7" x 8'-1"**

• door maneuvering clearance is required only outside of the bathroom

Min. Bathroom Size as per <u>BC-Sec. 1107.2.2 Exception 1</u> , i.e. <u>Type "A"</u> of <u>ICC-Sec 1003.11</u> ; & <u>UFAS</u> with 60" Dia Turning space; Maneuvering Clearances at all Fixtures & Door (Side Door—Corner, Adjacent to WC); & Grab Bar Locations	B-26a B-26b
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• Reinforcement for all the grab bars shall comply with

1. FHA Guidelines, Requirement 6, Fig 3,4, & 5
2. ICC 2009-Sec 1104.11.1, 604.5, 607.4, & 608.3
As per BC 2014-Sec 107.2.2,

$$\underline{B-31a=7'-6\frac{1}{2}'' \times 5'-6''}$$

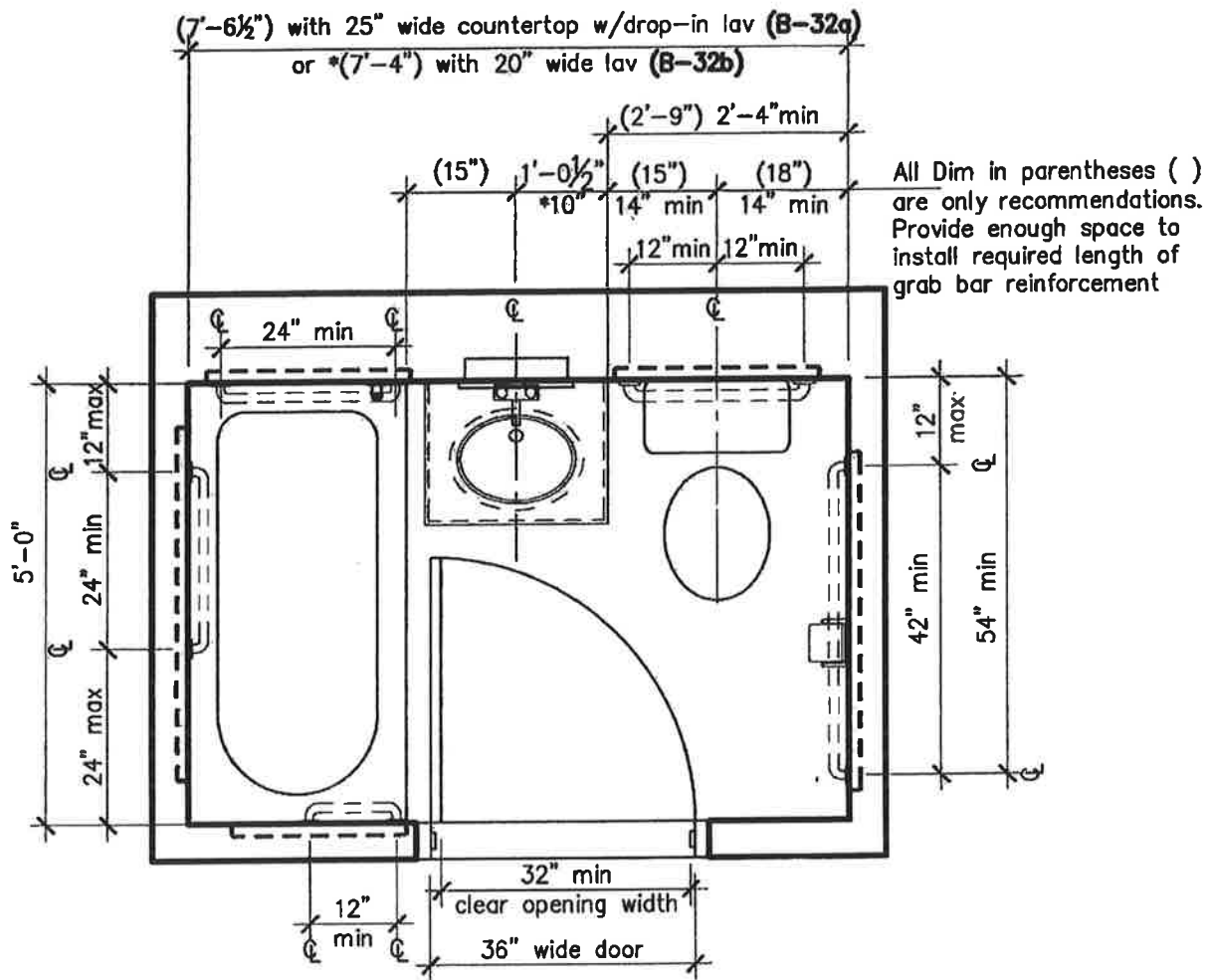
$$\underline{*B-31b=7'-4'' \times 5'-6''}$$

• door maneuvering clearance is only required outside of the bathroom

Min. Bathroom Size as per BC-Sec 1007.2.2. Exception 2
(Front Door, In-Swing, Opposite to WC)

B-31a

B-31b



• Reinforcement for all the grab bars shall comply with

1. FHA Guidelines, Requirement 6, Fig 3,4, & 5
2. ICC 2009–Sec 1104.11.1, 604.5, 607.4, & 608.3
As per BC 2014–Sec 107.2.2,

$$\underline{B-32a=7'-6\frac{1}{2}'' \times 5'-0''}$$

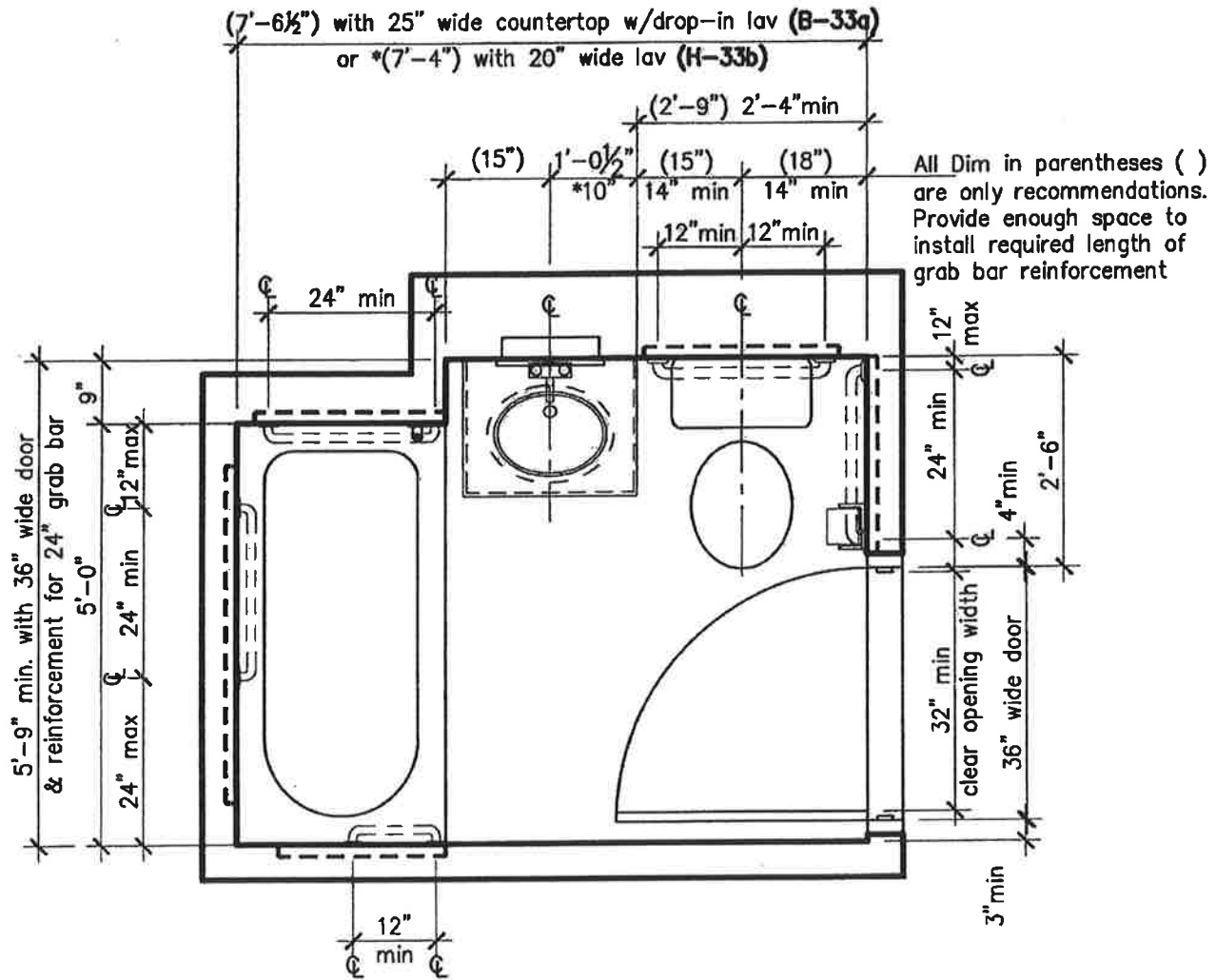
$$\underline{*B-32b=7'-4'' \times 5'-0''}$$

• door maneuvering clearance is only required outside of the bathroom

Min. Bathroom Size as per BC–Sec 1007.2.2, Exception 2
(Front Door, In–Swing, Opposite to WC)

B–32a

B–32b



• Reinforcement for all the grab bars shall comply with

1. FHA Guidelines, Requirement 6, Fig 3,4, & 5
2. ICC 2009–Sec 1104.11.1, 604.5, 607.4, & 608.3
As per BC 2014–Sec 107.2.2,

$$\underline{B-33a=7'-6\frac{1}{2}'' \times 5'-9''}$$

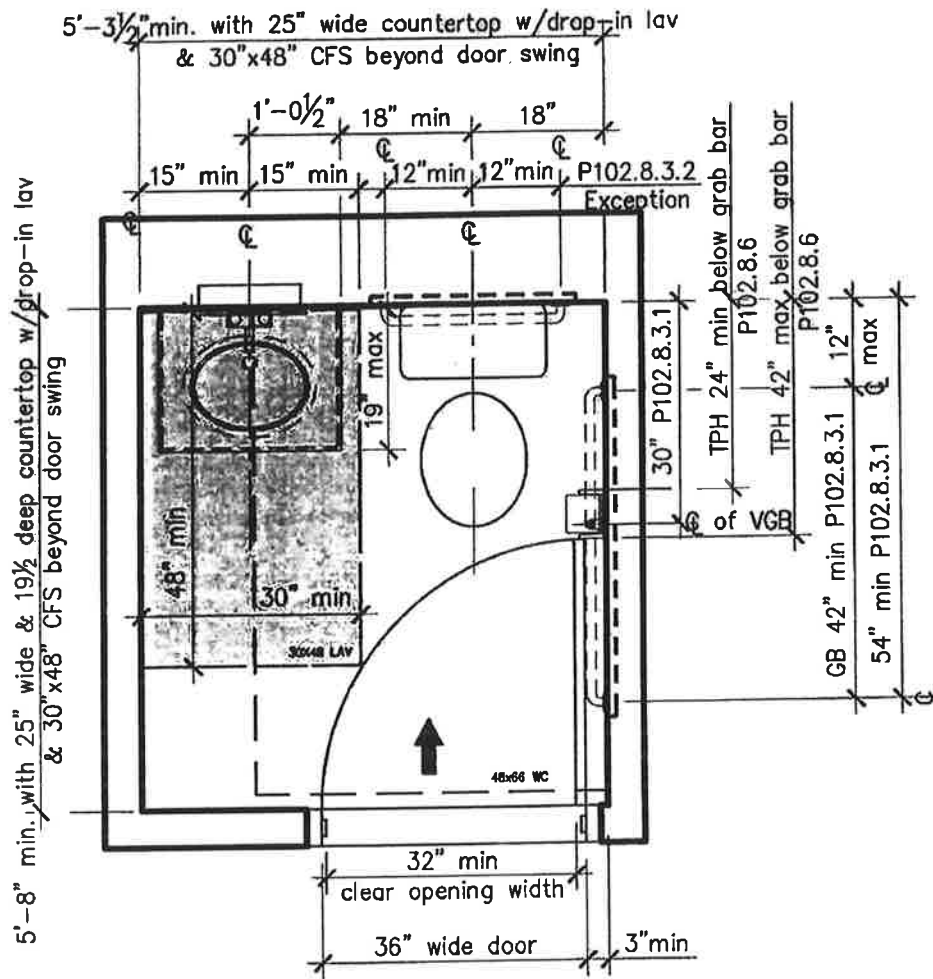
$$\underline{*B-33b=7'-4'' \times 5'-9''}$$

• door maneuvering clearance is only required outside of the bathroom

Min. Bathroom Size as per BC–Sec 1007.2.2, Exception 2
(Side Door, In–Swing, Adjacent to WC)

B-33a

B-33b

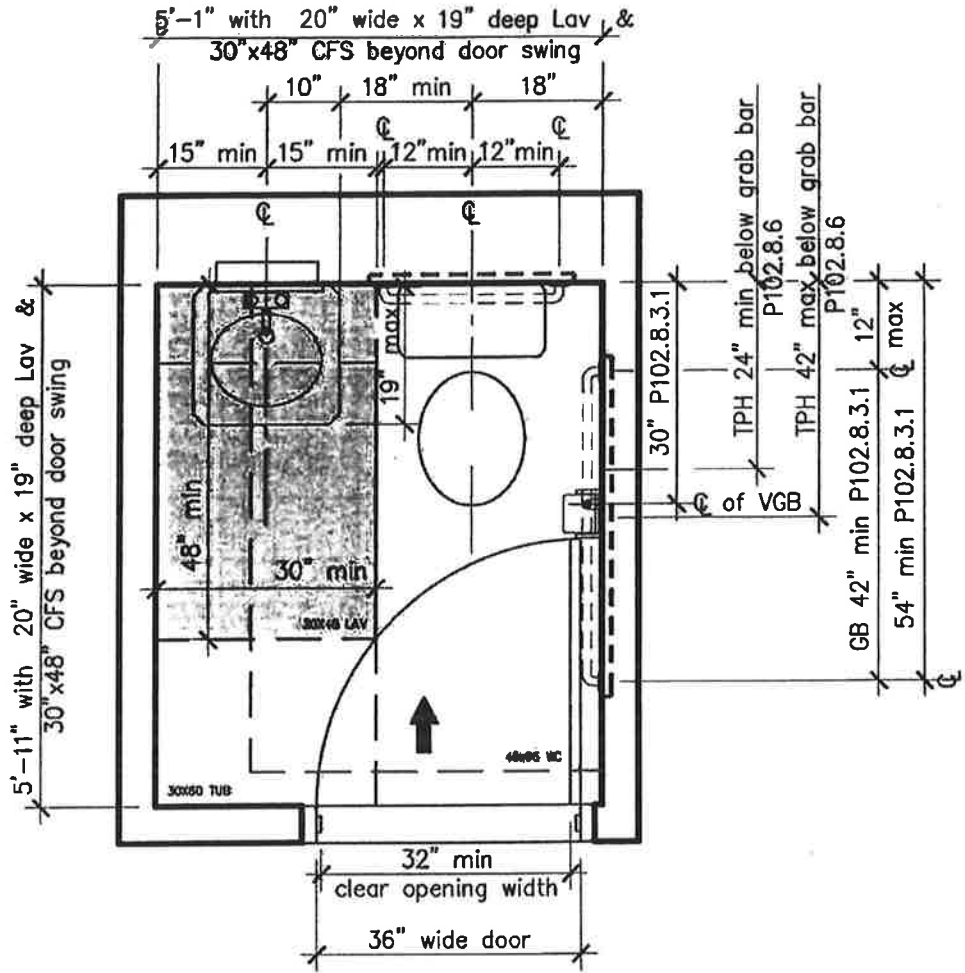


5'-3 1/2" x 5'-8"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath CFS Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door
 (Front Door, Opposite to WC); Maneuvering Clearances at all
 Fixtures; & Grab Bar Locations

HB-1a

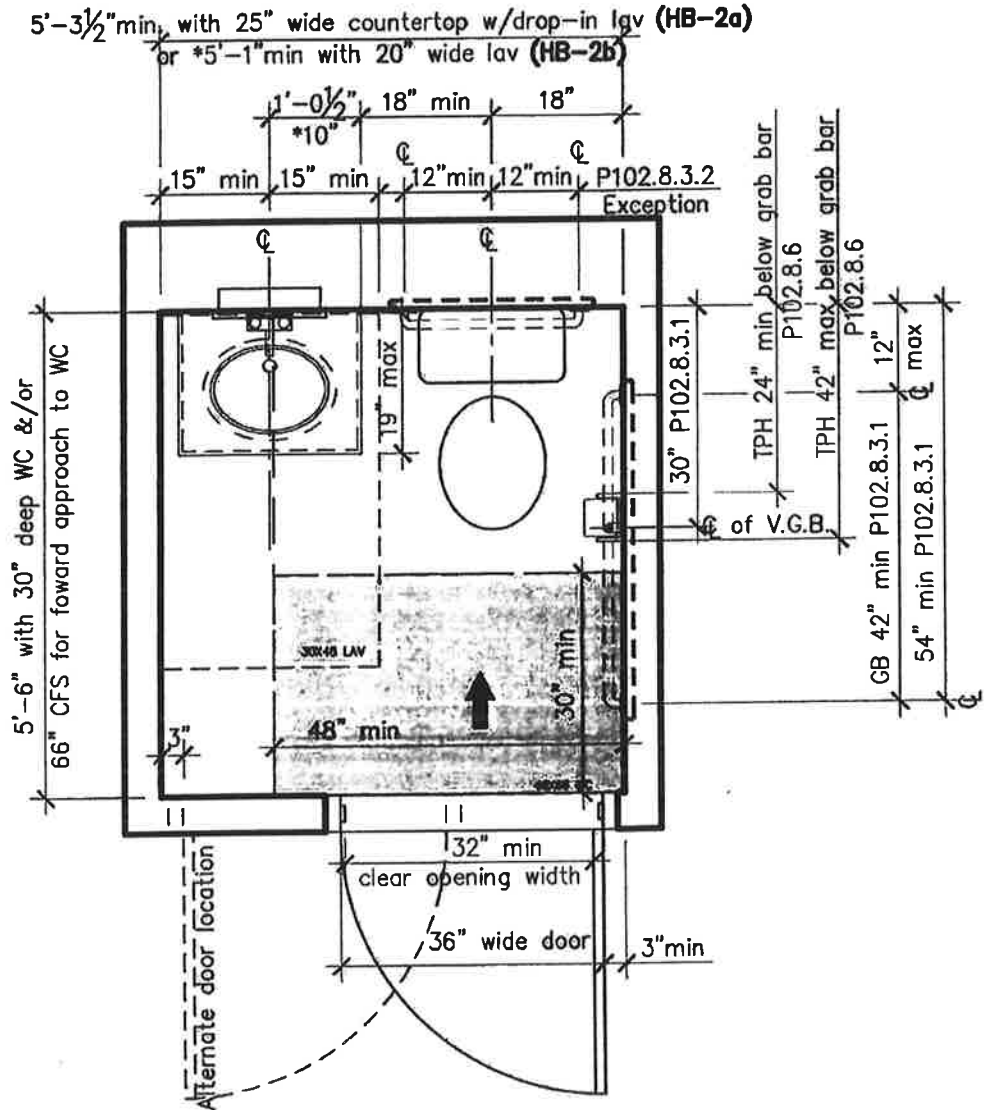


5'-1" x 5'-11"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door (Front Door,
 Opposite to WC); Maneuvering Clearances at all Fixtures;
 & Grab Bar Locations

HB-1b



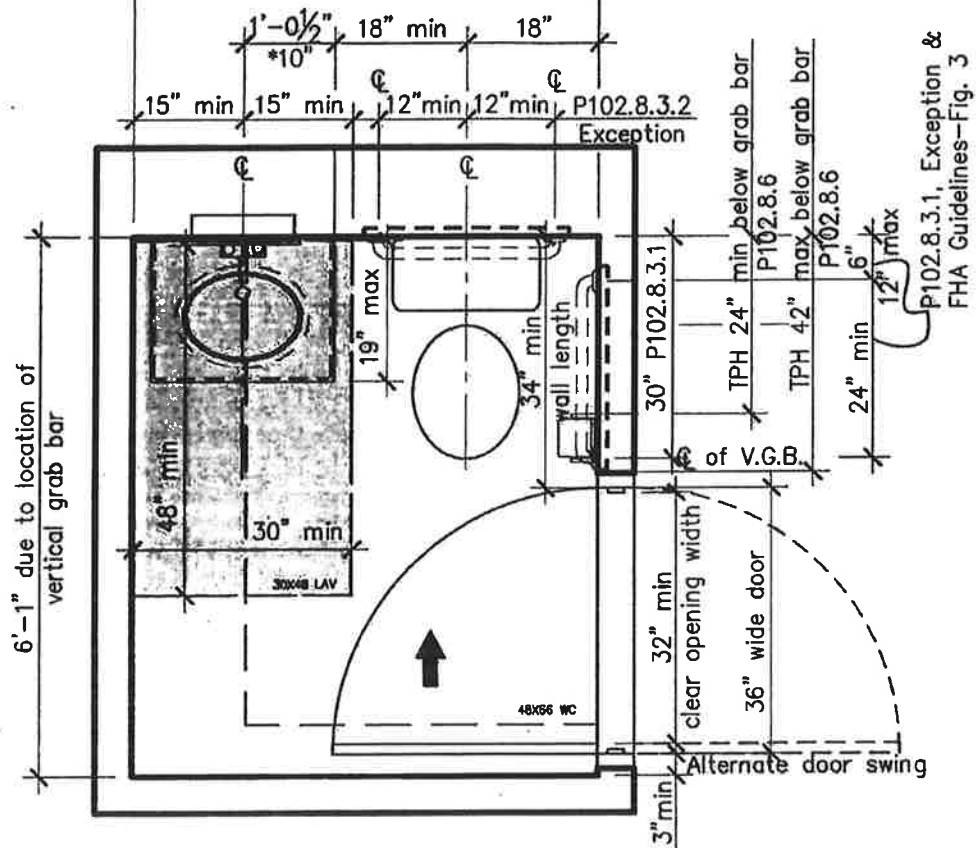
HB-2a=5'-3½"x5'-6'
*HB-2b=5'-1"x5'-6"

• door maneuvering clearance is required only outside of the bathroom

Min. Half-Bath Size as per BC-Appendix "P"
 with Maneuvering Clearances at all Fixtures; & Grab Bar Locations
 (Front Door, Out-Swing, Opposite to WC or Lav)

HB-2a
 HB-2b

5'-3½" min, with 25" wide countertop w/drop-in lav (HB-3a)
 or *5'-1" min with 20" wide lav (HB-3b)



HB-3a=5'-3½"x6'-1"

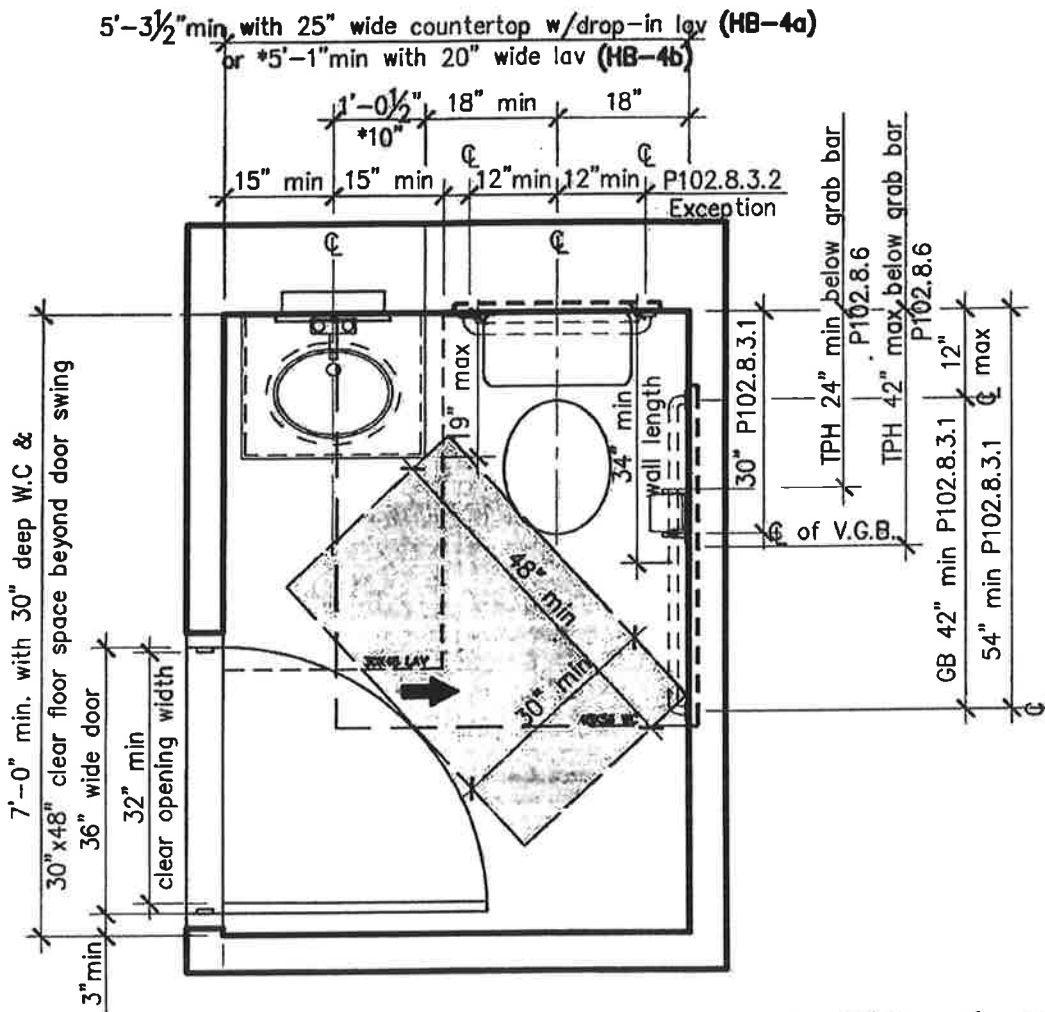
*HB-3b=5'-1"x6'-1"

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door
 (Side Door, In-Swing or Out-Swing, Adjacent to WC);
 Maneuvering Clearances at all Fixtures; & Grab Bar Locations

HB-3a

HB-3b



HB-4a = 5'-3 1/2" x 7'-0"

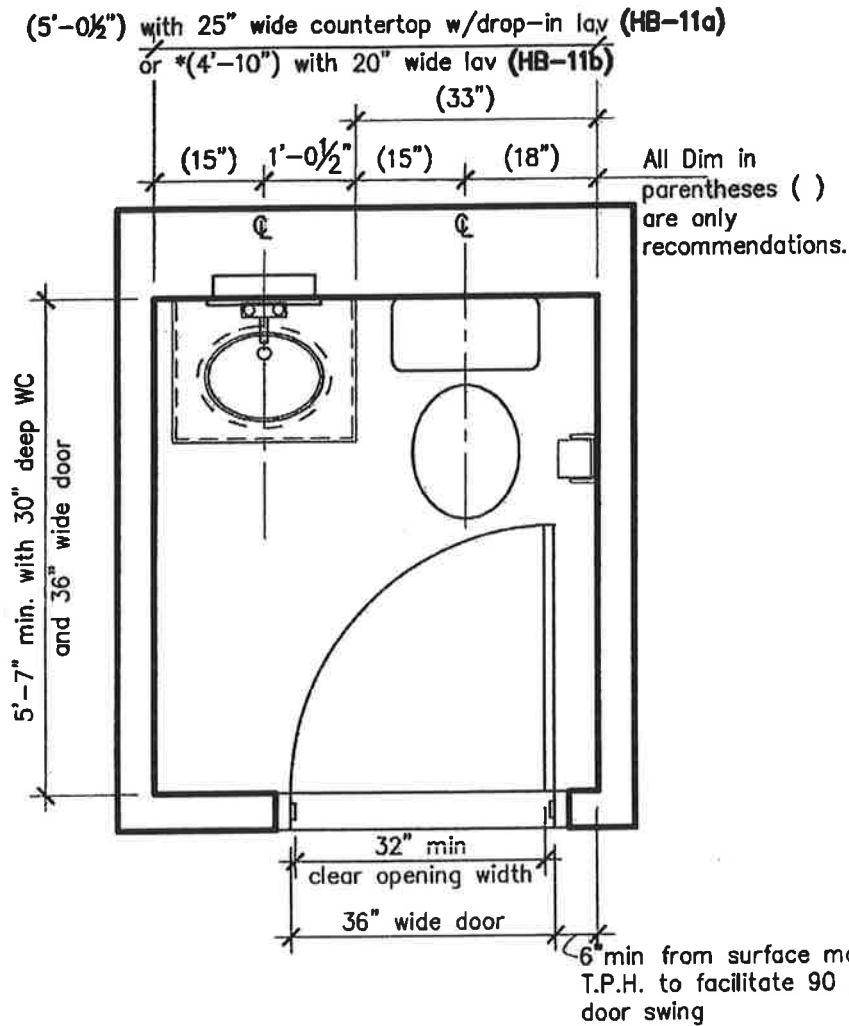
***HB-4b = 5'-1" x 7'-0"**

- door maneuvering clearance is required only outside of the bathroom
- Door may swing into CFS of fixtures where 30"x48" CFS is provided beyond the arc of the door as per BC-Sec P102.3, Exception

Min. Half-Bath Size as per BC-Appendix "P"
 with 30"x48" CFS Beyond In-Swing Door (Side Door,
 Adjacent to Lav); Maneuvering Clearances at all Fixtures;
 & Grab Bar Locations

HB-4a

HB-4b



$$\underline{\text{HB-11a} = 5' - 0\frac{1}{2}'' \times 5' - 7''}$$

$$\underline{* \text{HB-11b} = 4' - 10'' \times 5' - 7''}$$

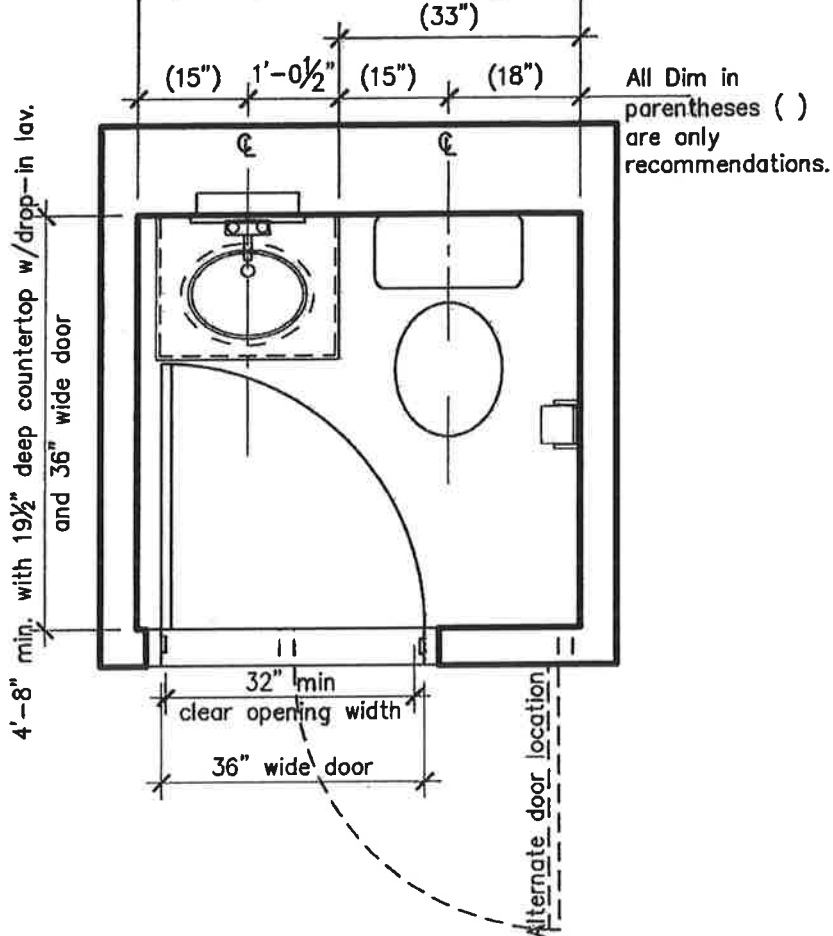
- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Front Door, In-Swing, Opposite to WC)

HB-11a

HB-11b

(5'-0½") with 25" wide countertop w/drop-in lav (HB-12a)
 or *(4'-10") with 20" wide lav (HB-12b)

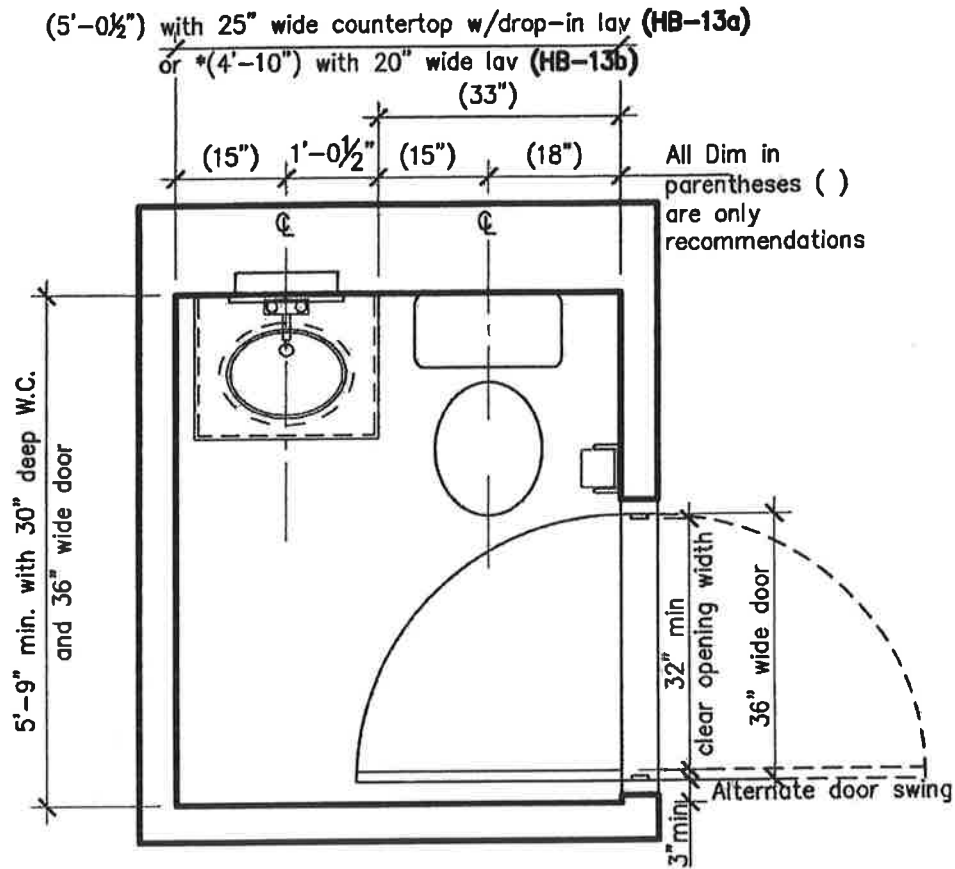


HB-12a = 5'-0½" x 4'-8"
***HB-12b = 4'-10" x 4'-8"**

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Front Door, In-Swing, Opposite to Lav/
 or Out-Swing, Opposite to WC)

HB-12a
 HB-12b

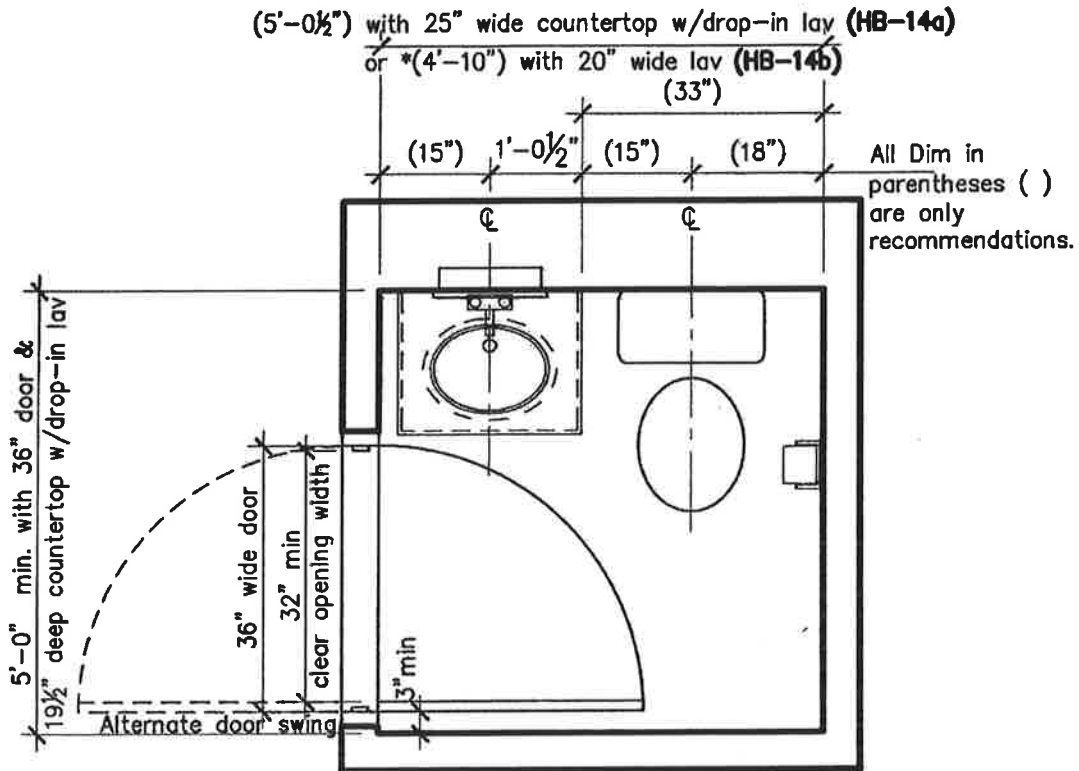


HB-13a=5'-0½"x5'-9"
*HB-13b=4'-10"x5'-9"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Side Door, In-Swing or Out-Swing, Adjacent to WC)

HB-13a
 HB-13b



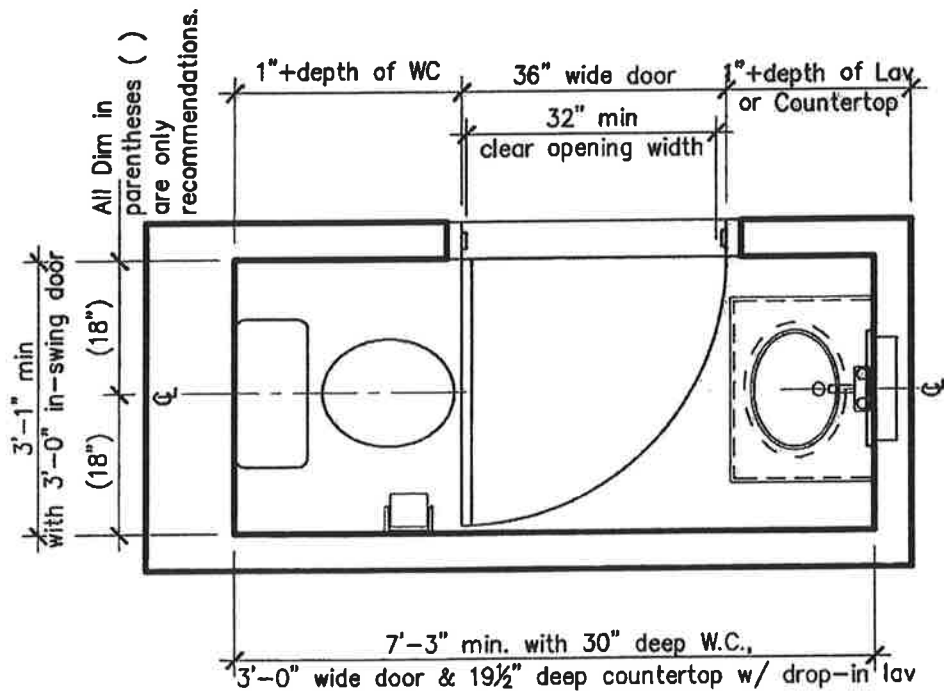
HB-14a=5'-0½"x5'-0"
*HB-14b=4'-10"x5'-0"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
 (Side Door, In-Swing or Out-Swing, Adjacent to Lav)

HB-14a

HB-14b

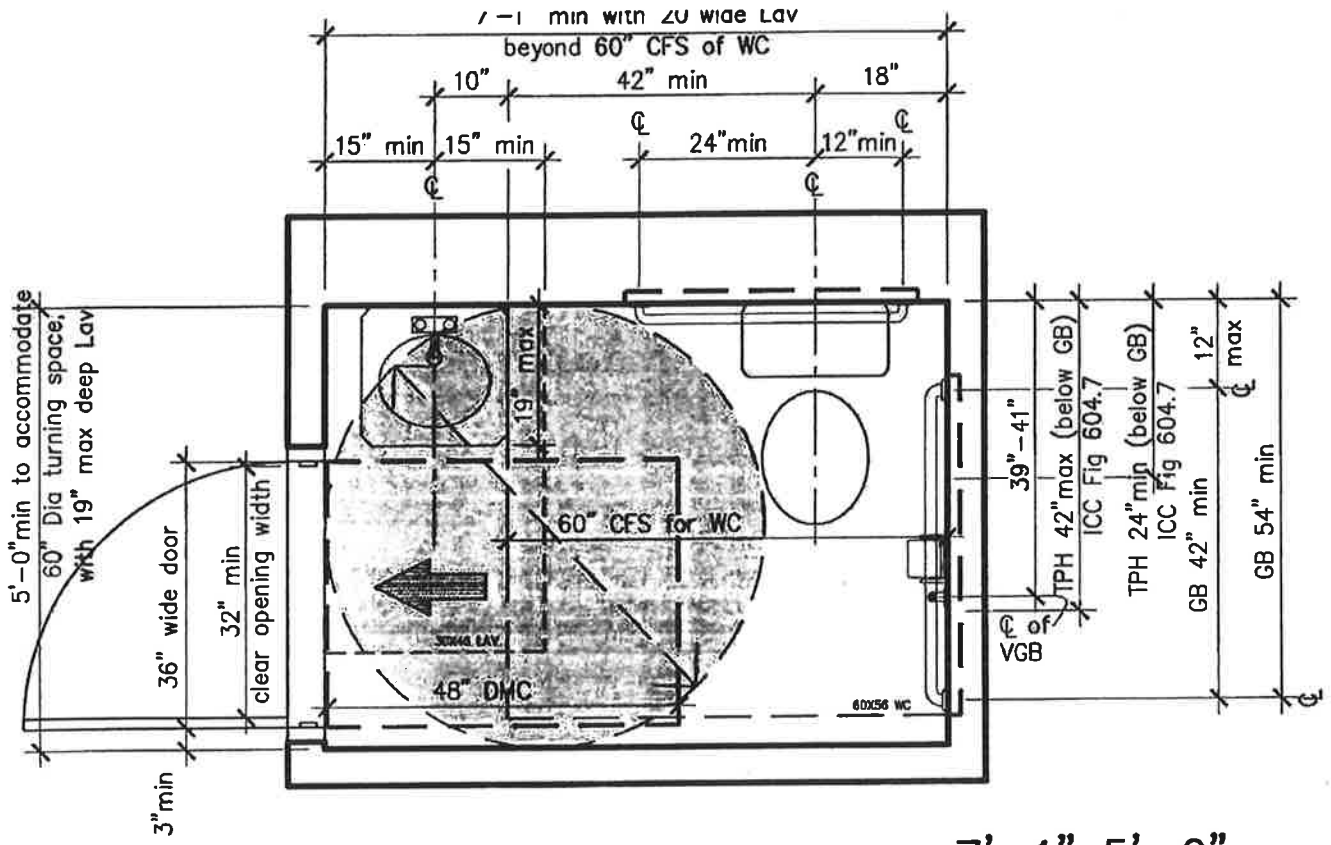


PR-4=7'-2"x3'-1"

- door maneuvering clearance is only required outside of the bathroom

Min. Half-Bath Size as per BC-Sec 1007.2.2, Exception 2
(Front Door-Center, In-Swing)

HB-15

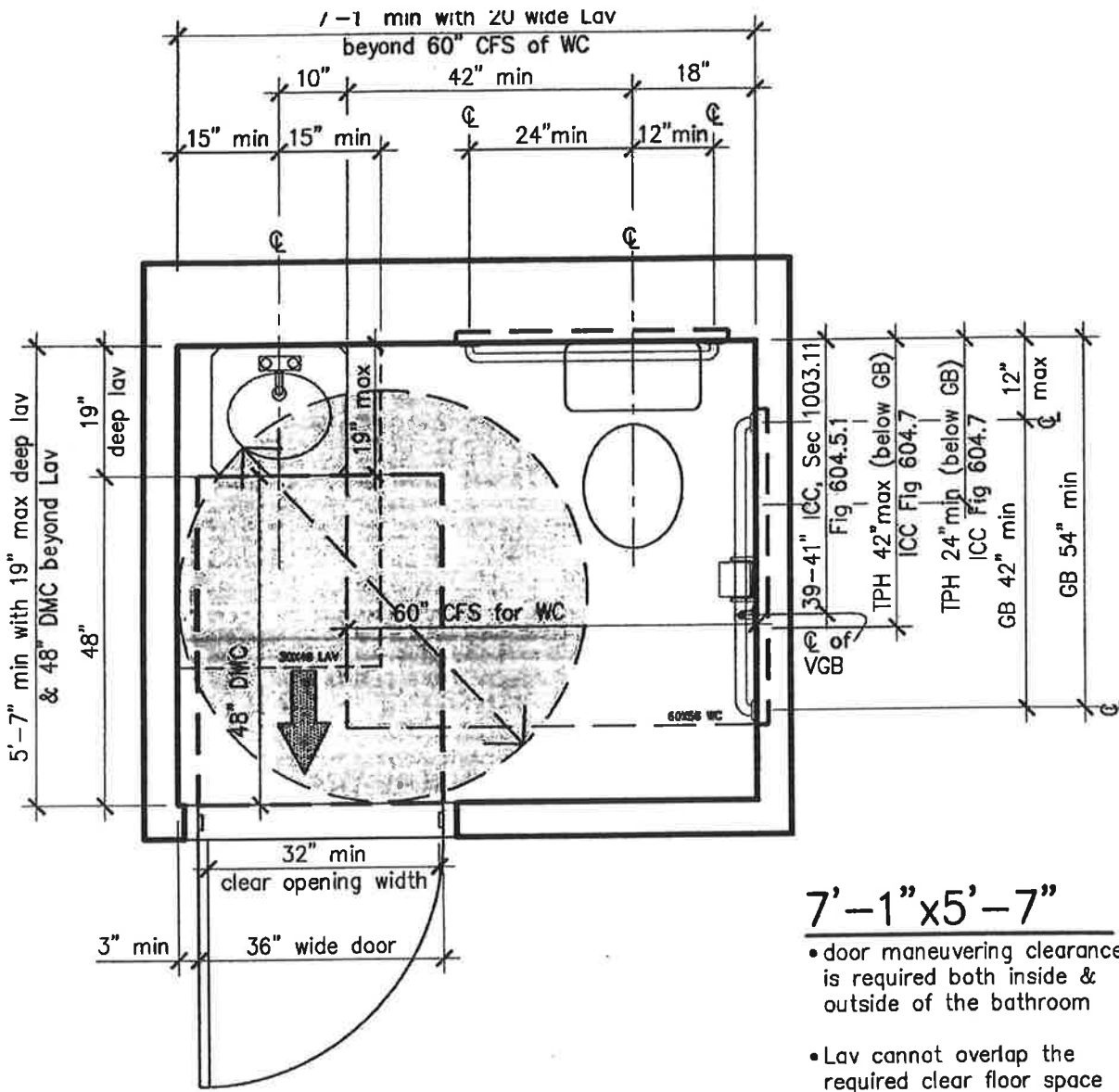


7'-1" x 5'-0"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Side Door, Out-Swing, Adjacent to Lav); & Grab Bar Locations

PT-1

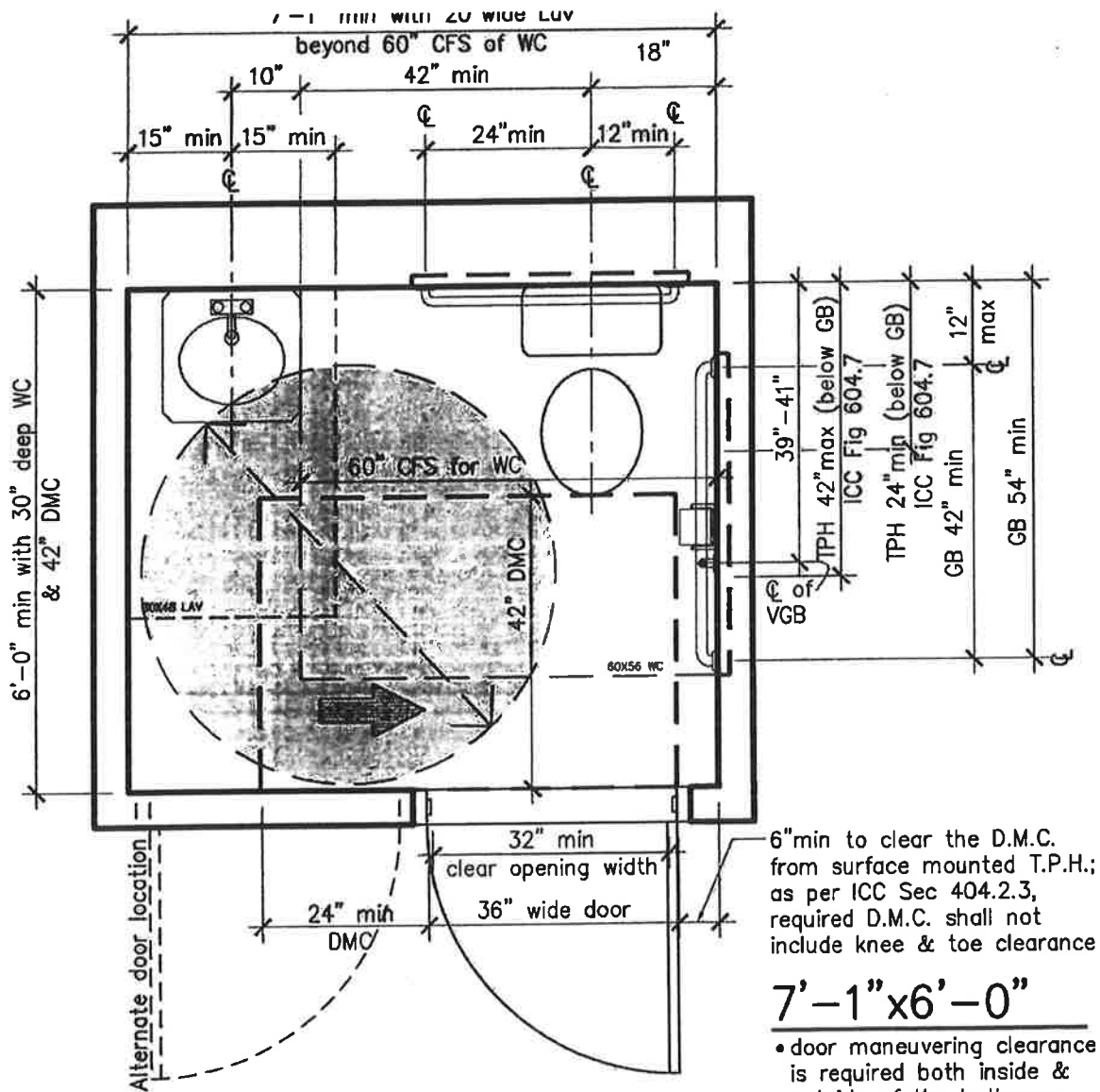


7'-1" x 5'-7"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

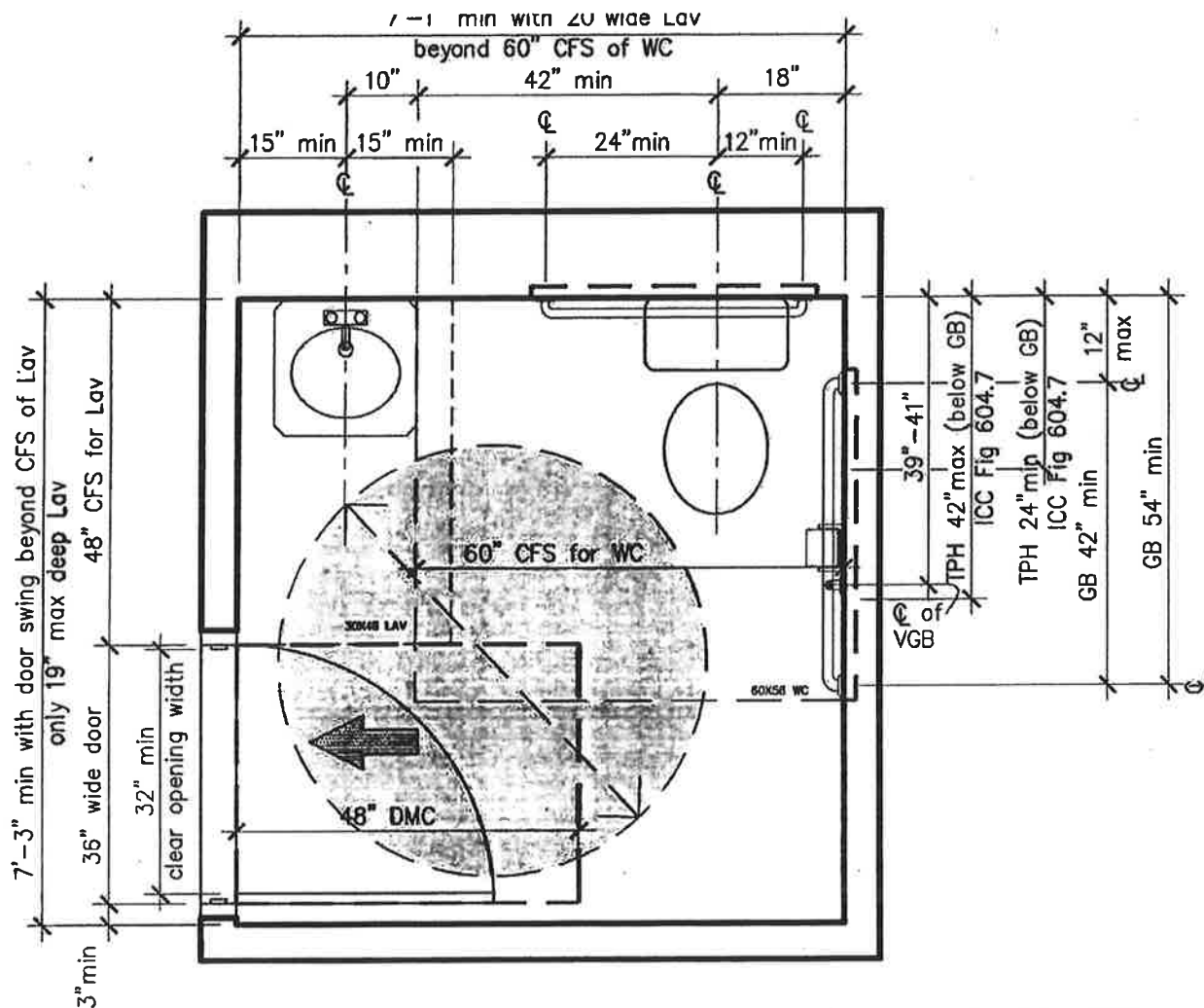
Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Out-Swing, Opposite to Lav); & Grab Bar Locations

PT-2



Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; Maneuvering Clearances at all Fixtures & Door (Front Door, Out-Swing, Opposite to WC); & Grab Bar Locations

PT-4

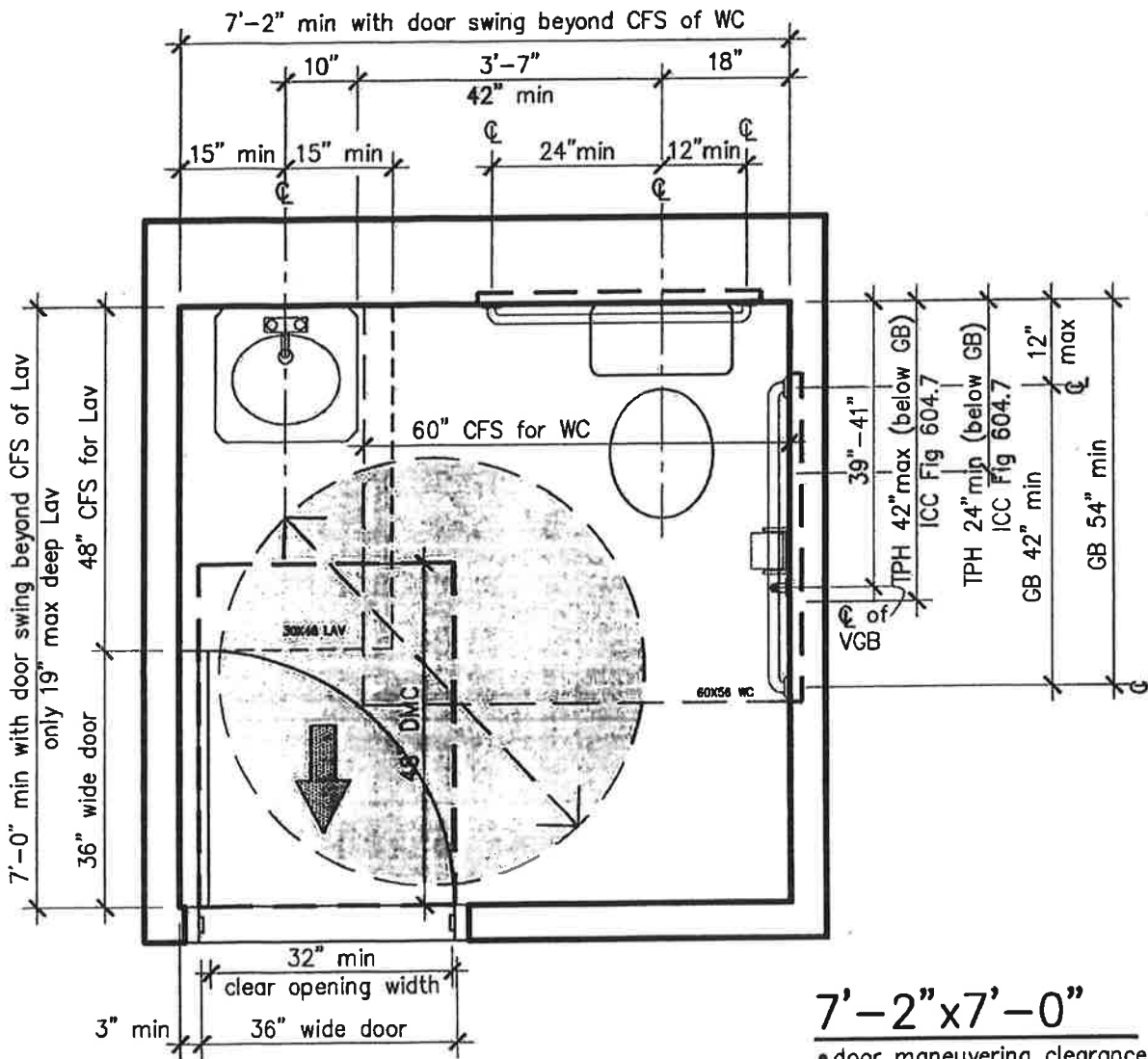


7'-1" x 7'-3"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door (Side Door, Adjacent to Lav); Maneuvering Clearances at all Fixtures & Door & Grab Bar Locations

PT-5

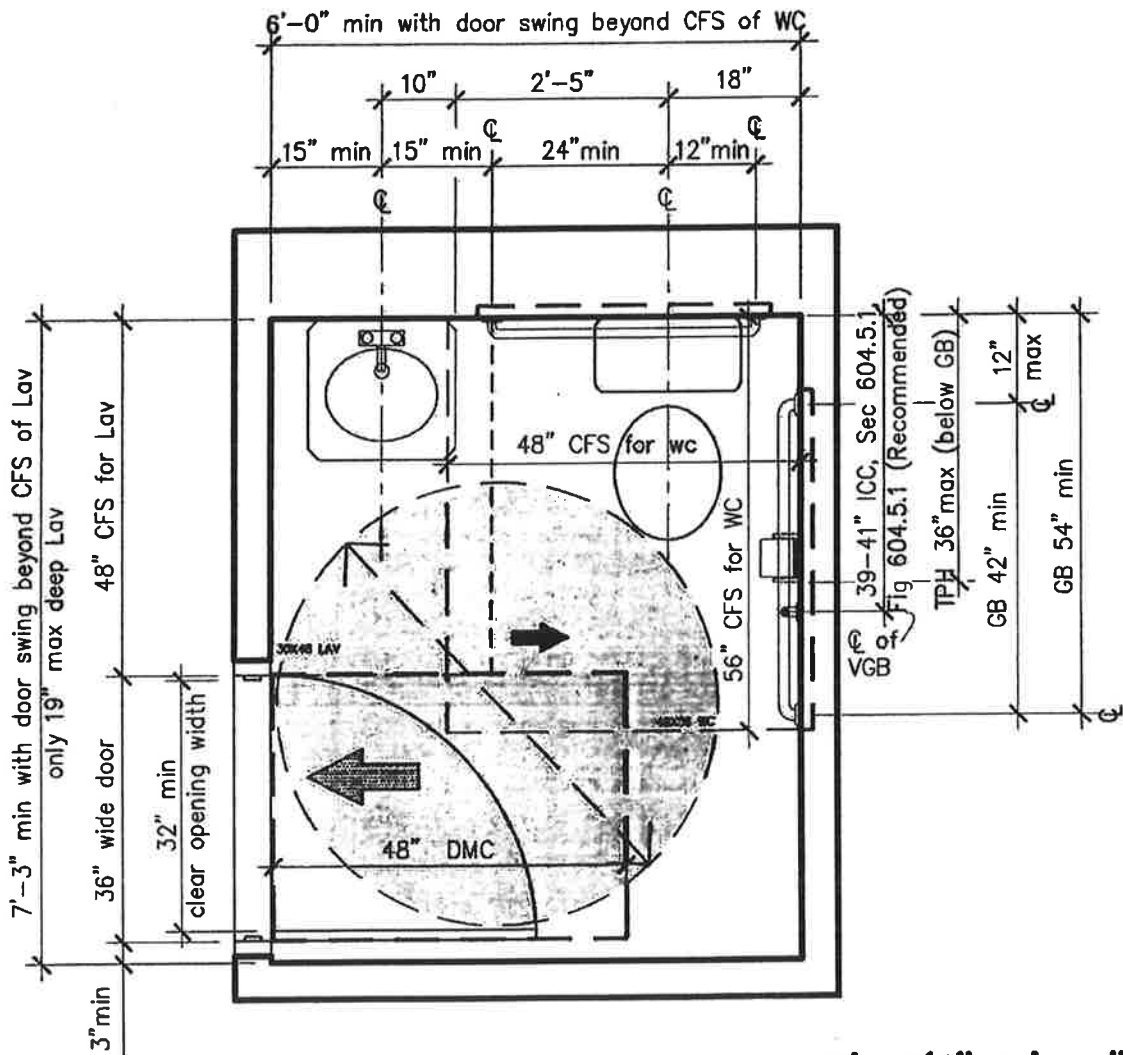


7'-2" x 7'-0"

- door maneuvering clearance is required both inside & outside of the bathroom
- Lav cannot overlap the required clear floor space of the WC

Min. Common/Public Single-User Toilet Room as per ANSI, BC, UFAS & ADA with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door (Front Door, Opposite to Lav); Maneuvering Clearances at all Fixtures & Door; & Grab Bar Locations

PT-6

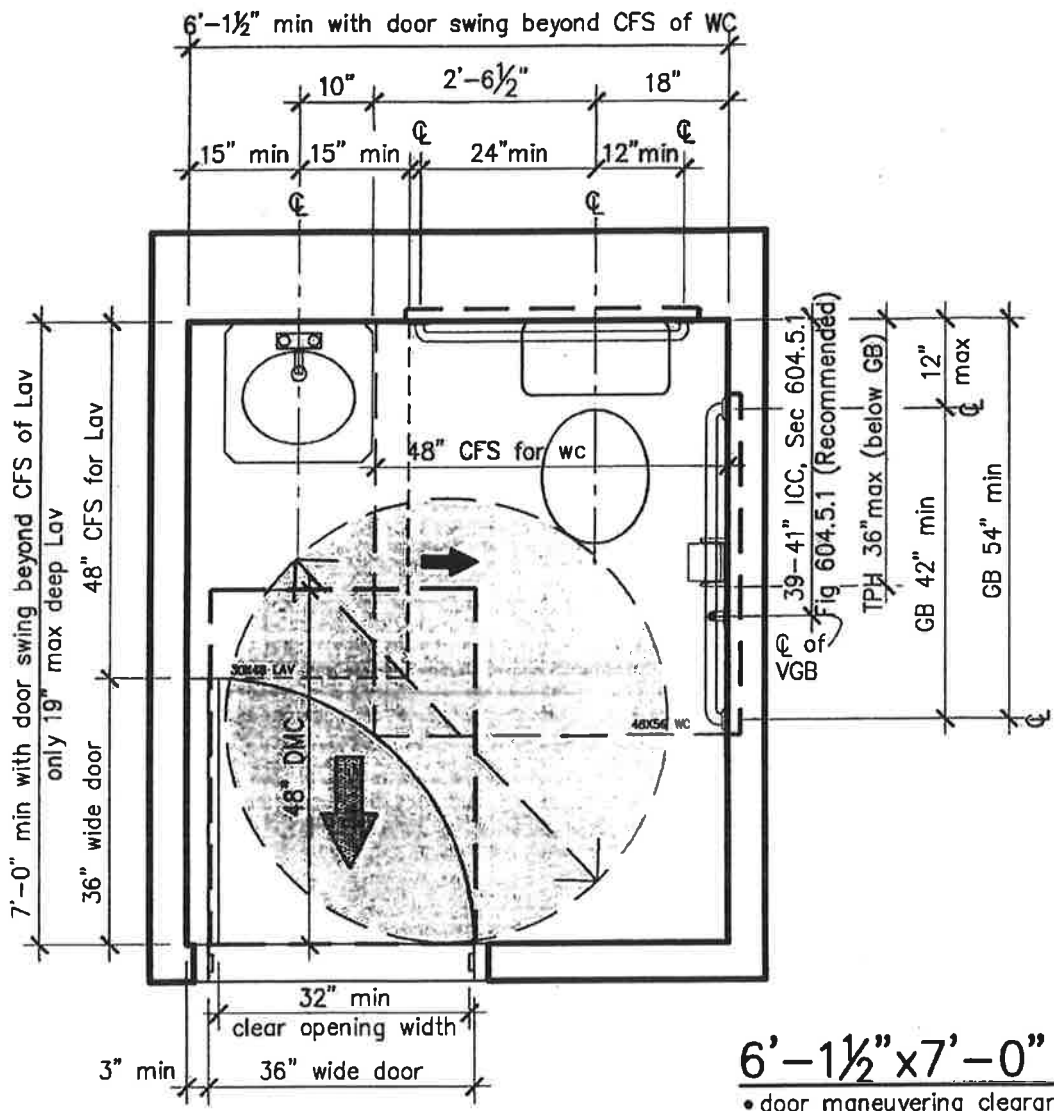


6'-1½" x 7'-3"

- door maneuvering clearance is required both inside & outside of the bathroom

Min. Common/Public Single-User Toilet Room as per ANSI & UFAS with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door; Maneuvering Clearances at all Fixtures & Door (Side Door, Adjacent to Lav); & Grab Bar Locations

PT-11



6'-1/2" x 7'-0"

• door maneuvering clearance is required both inside & outside of the bathroom

Min. Common/Public Single-User Toilet Room as per ANSI & UFAS with 60" Dia Turning Space; CFS of Lav & WC beyond In-Swing Door; Maneuvering Clearances at all Fixtures & Door (Front Door, Opposite to Lav); & Grab Bar Locations

PT-12