

Scope of Work

402-18-629 Renovate B207 Patient Showers

Contractor to renovate a total of 4 patient shower rooms in Building 207 on the VA Maine Healthcare facility (Togus) in Augusta, ME 04330. Two of the shower rooms are located on the 2nd floor (Rooms 212 and 245); the other two are on the third floor (Rooms 308 and 335). These 4 shower rooms will need to be renovated to better accommodate a patient that will be transported into the shower area on a rolling cart with assistance from nursing staff. Renovation will occur concurrently with normal operations on the 2nd and 3rd floors of this building and therefore contractor must adhere to the work phasing plan outlined in the project specifications. Lead and asbestos surveys completed in November, 2010 indicate the presence of lead based paint in each shower areas. According to the asbestos survey, there is no known asbestos in the rooms to be renovated. Please see attached surveys for further detail. Also attached are drawings indicating removal of old and installation of new devices.

Work shall include, but is not limited to:

Prior or during demolition, retain and or protect the following :

- Existing pull cords that will notify staff if a patient falls in the bathroom.
- Each shower contains heated ceiling tiles. These tiles are to stay in place and be protected if necessary during construction.
- Remove existing stainless steel grab bars. (Contractor will re-installed after renovation is complete)

Removal of the following:

- Ceiling:
 - Demolish existing suspended ceiling in each shower room.
- Floor:
 - Demolish existing tile floor in each bathroom. This is a total of 450 sq ft of tile removal. Existing tile underlayment must also be removed down to concrete slab
- Walls:
 - Completely demolish (4) 5'6" divider walls in each shower room. Walls are finished with both sheetrock and tile.
 - Demolish sheetrock and any wall coverings (tile, plastic linings) on all 4 remaining walls of each shower room. Existing metal studs will remain in place and will be re-used. Total sheetrock demolition not included in the wall demolition listed above = 141 linear ft.
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- Plumbing:
 - Ten existing shower drains and piping will need to be removed. Each shower room contains three drains per room on second floor, and 2 drains per room on the 3rd floor. Drain piping to be removed back to sanitary stack tie in.
 - Remove existing shower heads and water valves.
 - Remove old hot and cold water supply piping going to each existing shower head. Piping shall be removed within the floor plan of the shower room. Existing hot and cold water supply piping will remain outside of the floorplan of the shower room.
 - The two showers on 72 have floor drains installed where the future door will go. These drains will have to be removed.
- HVAC:
 - Second floor shower rooms have air supply ductwork and diffusers in each shower room. These need to be removed. Each shower room should have exhaust ducting only.
- Shower Storage:
 - Remove shelving in each shower room.
- Lighting:
 - Remove all existing lighting within each shower room.
- Fire Suppression:
 - Room 212 will require that one sprinkler head be removed to make way for shower door.
- Other:
 - Based on results from a November 2010 asbestos survey, there is no known asbestos in any of the bathroom floors or walls. Please see attached asbestos survey for more info
 - Based on a lead survey completed in November 2010, each bathroom is known to have lead concentrations in excess of .1 mg/cm ² in the walls and floors. Please see attached lead survey for more info.

Installation of the following:

- Ceiling:
 - Moisture resistant suspended ceiling. Ceiling tiles are to be Armstrong Ceram guard, non-perforated 2'x'4 or equal. An equal product must be made of mineral fiber be resistant to bacteria, mold and mildew, and be washable.

- Floor:
 - Install waterproofing membrane on floor
 - Floor will need to slope so that water will be diverted into a centrally located drain.
 - Tiles to be used shall be unglazed porcelain 12"x24" installed in a staggered fashion.
 - The perimeter of each shower shall be made of the same unglazed porcelain tile but will use be 2"x4" tile.
 - COR will provide further details on layout and appearance of floor tile at the time of construction.

- Walls
 - Install new cement board on all walls.
 - Install waterproofing membrane on walls
 - Install tile wall from bottom to top on all shower walls. Use polished porcelain wall tile. Contact COR for more details concerning size and color of tile

- Plumbing
 - Install new floor drain in the center of each shower room.
 - Install cast iron sanitary piping. Piping to be tied into existing sanitary tie in.
 - Install new copper hot and cold water supply piping to 2 new shower heads per shower room
 - Install mixing valve to blend hot and cold water
 - Install new cast iron floor drain in each of the 2 toilet rooms on the second floor. Drain location is shown on drawings. Tie floor drain into existing sanitary tie in with cast iron piping. Floor drain will have to be placed at a low point in the existing toilet room floor. Contractor will have to re-slope around the new drain location so all water will get directed to the drain.
 - All bathroom fixtures will be supplied by ANA Bath products
 - Each shower head will be detachable with enough length to reach within 3 feet of any corner of the shower room.

- Door
 - Install door going to each shower room.
 - Door and door frame for each shower room shall be 4' and shall be made of galvanized steel sheet meeting the requirements of ASTM A653/A653M. Doors should be lockable with stainless steel hardware.

- HVAC

- 230716109610 Modify exhaust airflow in each **shower room** so that each room achieves a minimum of 10 Air Changes Per Hour with an overall negative (-) air balance for just the shower room.
 - Air changes per hour must be calculated based on exhaust air flow only where makeup air will come from the toilet room.
 - Reference the HVAC analysis for these shower rooms done by VA facilities on the following page.
- Upgrade/modify supply and exhaust airflow in each **toilet room** so that each room achieves a minimum of 10 Air Changes Per Hour with an overall negative (-) air balance for just the toilet room.
 - Air changes per hour must be calculated based on exhaust air flow only. Makeup air in the toilet rooms will need to be adjusted accordingly so that all of the makeup air for both the toilet and shower rooms is not coming 100% from the corridor.
 - Reference the HVAC analysis for these shower rooms done by VA facilities on the following page

- Shower Cabinets

- Install (2) 37" x 37" shower cabinets meeting the specs of section 10 21 16 2.3

- Lighting

- Install new lighting in each shower room. Lighting shall be axis wet beam lights arranged in the attached pattern. A total of 5 lights will be provided in either of the two arrangements shown in the attached. An equal lighting product must be recessed into a suspended ceiling and have moisture resistant properties. Light output from the axis wet-beam or other light shall be in accordance with the attached. T bar to be used will be Prelude plus XL 15/16" or other moisture resistant T bar with the same dimensions

- Grab Bars

- Re-install stainless steel grab-bars that were removed during demolition.
- Coordinate with COR regarding new mounting location for each bar.
- Notify COR if existing grab bars are damaged so that they cannot be re-installed.

- Fire Suppression

- Room 212 will require that one sprinkler head get re-located closer to the center of the toilet room since its present location will interfere with the door to be installed. Contact COR for re-location.

<i>Parameter</i>	212 Shower		245 Shower		308 Shower		335 Shower	
	Cubic Ft.	972.0488	Cubic Ft.	912.254	Cubic Ft.	792	Cubic Ft.	775.4967
	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>
Supply CFM	86	0	109	0	0	0	0	0
Exhaust CFM	86	162.008133	92	152.0423333	129	132	76	129.2495
ACPH	5.308375	10	6.050946	10	9.772727	10	5.880102	10
Supply CFM Change required to meet ACPH	86	-86	109	(109.00)	0	0	0	0
Exhaust CFM Change required to meet ACPH	86	76.01	92	60.04	129	3	76	53.25
	212 Toilets		245 Toilets		308 Toilets		335 Toilets	
	Cubic Ft.	1516.68		1556.198		2032		1981.749
	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>	<u>Current</u>	<u>Required</u>
Supply CFM	226	TBD	245	TBD	464	TBD	484	TBD
Exhaust CFM	89	252.78	230	259.3663333	37	338.666667	89	330.2915
ACPH	3.520848	10.00	8.867766	10	1.09252	10	2.694589	10

The installation shall be done by a certified installer only; certification must be from all regulatory agencies as well as the manufacturer. All work under this contract is to be completed following all federal regulations and VA requirements for construction projects. This is to include site superintendent 30HR OSHA certifications, 10HR certification for all sub-contractors and the adherence to all local and federal building codes. The work is to be done during normal business hours of 7:00am – 3:30pm Monday thru Friday. Work that must occur outside of this timeframe will be permitted on a case by case basis. The period of performance for this work to be completed is 90 days from the issuance of the Notice to Proceed by the contracting officer.

SHOWER FLOOR V1

The diagram shows a shower floor plan with various footcandle readings at different points. The readings are as follows:

Point	Footcandle Reading
Top Left	29.9
Top Middle-Left	32.6
Top Middle-Right	33.1
Top Right	29.8
Middle Left	35.5
Middle Middle-Left	37.8
Middle Middle-Right	37.1
Middle Right	35.6
Middle Far Right	32.3
Bottom Left	36.1
Bottom Middle-Left	37.9
Bottom Middle-Right	36.0
Bottom Right	33.3
Bottom Far Right	29.4
Center	32.6 / 27.7

Luminaires are indicated by symbols: 2R (two small rectangles), 4R (one rectangle), and 6R (one long rectangle). A "FUTURE DOOR" is marked near the center.

SHOWER FLOOR V2

The diagram shows a shower floor plan with various footcandle readings at different points. The readings are as follows:

Point	Footcandle Reading
Top Left	34.0
Top Middle-Left	36.6
Top Middle-Right	37.2
Top Right	33.1
Middle Left	39.9
Middle Middle-Left	42.3
Middle Middle-Right	41.9
Middle Right	40.2
Middle Far Right	36.4
Bottom Left	39.9
Bottom Middle-Left	41.7
Bottom Middle-Right	40.3
Bottom Right	37.8
Bottom Far Right	33.5
Bottom Center	35.3 / 30.7

Luminaires are indicated by symbols: 2R (two small rectangles), 3R (one rectangle), 4R (one rectangle), and 6R (one long rectangle). A "FUTURE DOOR" is marked near the bottom center.

Luminaire Schedule				
Qty	Symbol	Label	Manufacturer	Description
4		2R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-2.5-W-UNV-D-I-D (2.5FT)
2		3R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-3-W-UNV-D-I-D (3FT)
2		4R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-4-W-UNV-D-I-D (4FT)
2		6R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-6.5-W-UNV-D-I-D (6FT)

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Showers Floor V1	Illuminance	Fc	33.36	37.9	27.7	1.20	1.37
Showers Floor V2	Illuminance	Fc	37.28	42.3	30.7	1.21	1.38

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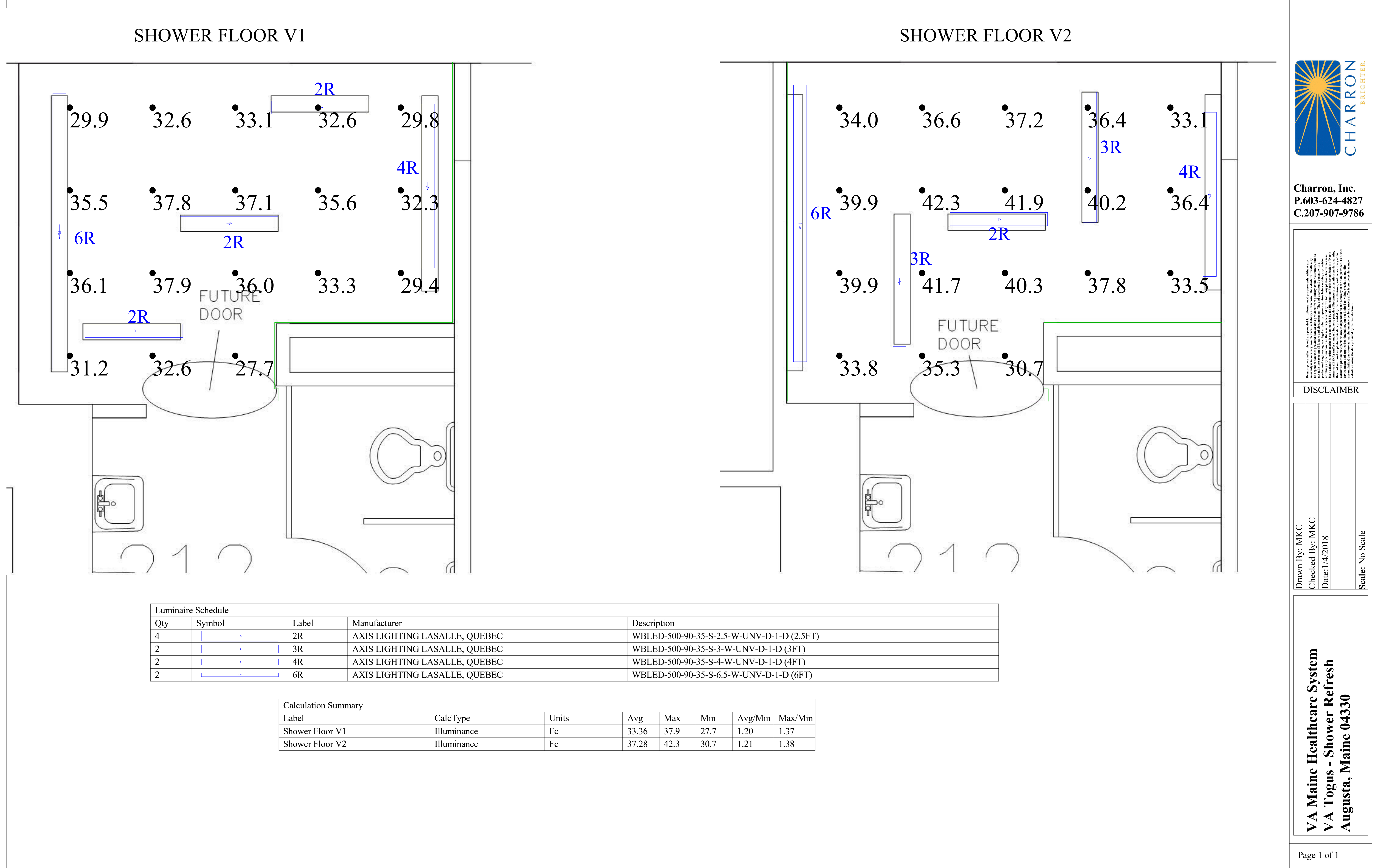
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SHOWER FLOOR V1

SHOWER FLOOR V2

Luminaire Schedule				
Qty	Symbol	Label	Manufacturer	Description
4	[Symbol]	2R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-2.5-W-UNV-D-I-D (2.5FT)
2	[Symbol]	3R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-3-W-UNV-D-I-D (3FT)
2	[Symbol]	4R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-4-W-UNV-D-I-D (4FT)
2	[Symbol]	6R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-6.5-W-UNV-D-I-D (6FT)

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Showr Floor V1	Illuminance	Fc	33.36	37.9	27.7	1.20	1.37
Showr Floor V2	Illuminance	Fc	37.28	42.3	30.7	1.21	1.38

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Bottom Left	36.1
Bottom Middle-Left	37.9
Bottom Middle-Right	36.0
Bottom Right	33.3
Bottom Far Right	29.4
Center	32.6 / 27.7

Luminaires are indicated by symbols: 2R (two rectangles), 4R (four rectangles), and 6R (six rectangles). A "FUTURE DOOR" is marked near the center.

SHOWER FLOOR V2

The diagram shows a shower floor plan with various footcandle readings at different points. The readings are as follows:

Point	Footcandle Reading
Top Left	34.0
Top Middle-Left	36.6
Top Middle-Right	37.2
Top Right	36.4
Top Far Right	33.1
Middle Left	39.9
Middle Middle-Left	42.3
Middle Middle-Right	41.9
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2		4R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-4-W-UNV-D-I-D (4FT)
2		6R	AXIS LIGHTING LASALLE, QUEBEC	WBLED-500-90-35-S-6.5-W-UNV-D-I-D (6FT)

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4.3.8 PATIENT TOILET/SHOWER

DESIGN PARAMETERS:

- (1) Average Maintained Illumination - Ambient: 300 lx (30 FC) at 1'-6" AFF
- (2) Average Maintained Illumination - Task / Focus:
 - Shower: 200 lx (20 FC) at finished floor
 - Night Light: 10 lx (1 FC) at finished floor
- (3) Uniformity Ratio (max / min):
 - n/a
- (4) Color Temperature (CCT):
 - Fluorescent: 3500 degrees
 - LED: 3500 degrees
 - Compact Fluorescent: 3500 degrees
- (5) Color Rendering (CRI):
 - Fluorescent: minimum of 80
 - LED: minimum of 80
 - Compact Fluorescent: minimum of 80
- (6) Power Source:
 - Normal
 - Critical branch of the EES.

DESIGN APPROACH:

Provide adequate vertical illumination at the vanity.

RECOMMENDED LUMINAIRES:

- (1) Recessed ceiling-mounted compact fluorescent or LED downlight.
- (2) Wall-mounted compact fluorescent, fluorescent or LED mirror or vanity luminaire.
- (3) Recessed wall-mounted amber LED night light.

CONTROL APPROACH:

- (1) Automatic full OFF or scheduled OFF with local manual control devices for all lighting.
- (2) Automatic daylight response by photocontrols for night lighting.

SPECIFIC COORDINATION ISSUES:

- (1) Bariatric care rooms must coordinate luminaire placement with ceiling track and ceiling track supports.
- (2) Lighting in the toilet rooms should be located to coordinate with plumbing fixtures, vanities, and wall-mounted equipment.