### CITIZEN CARE POD©

### Smart Screening & Testing Pod

version 8.0





QUASAR LORING STEPHENSON PARKIN ARCHITECTS

### The Idea

The Intelligent SSTP

**Digital Interaction** 

Technology

**Option 1** Recessed Cubicles

Option 2 Cubicles under Canopy

Option 3 Drive-Through

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Citizen Care Pod is a Smart Screening & Testing Pod (SSTP) made from a prefabricated sea container (20' & 40' long) retrofitted for use as a facility to conduct tests for viruses such as COVID-19

The **SSTP** is equipped with 4 to 10 testing stations that physically and safely separates the healthcare 'tester' from the public (person being tested and or screened)

The interior space of the SSTP can be outfitted with all the necessary equipment and supplies for testing and analysis within a fully conditioned space



# THE IDEA

The SSTP includes DC (low voltage) infrastructure to operate all computer equipment include WiFi and is supported from a rooftop solar array connected back to an internal battery system

The SSTP can be installed with a forklift (or positioned in place from a flatbed truck) within minutes of arriving to a site and only needs a separate AC power connection for air conditioning and electric heating (subject to weather conditions, separate ventilation fans are included that operate on DC power - provided by the rooftop solar array and batteries)

Many options are provided for the **SSTP** which can be easily modified to suit specific site and or client requirements

The SSTP is meant to address the current COVID-19 testing requirements and is also meant for future re-testing in the fall or during the next 'flu-season' (or should COVID-19 re-appear in the new year)

The SSTP is designed to be deployed to construction sites, in front of entrances to hospitals, office buildings, schools, places of large gatherings (i.e. sporting events), cultural centres, etc.

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# **DIGITAL INTERACTION**

Start





### **TECHNOLOGY**

The **SSTP** is designed with a backbone of electrical and IT infrastructure to support a wide variety of technology solutions. The infrastructure includes an IT cabinet with sufficient space for multiple racks and other equipment for wired and wireless connectivity. The interior and exterior walls of the SSTP include a number of outlets and junction boxes that include both electrical and data connectivity (including Power over Ethernet) for a wide variety of hardware solutions: security cameras, thermal and people counting cameras, speakers, mounting of tablets / screens and other technologies.

With the use of the infrastructure built into the SSTP, the right hardware and software, the following is a sampling of smart solutions to effectively and efficiently screen people:

- Cameras to detect if people who are waiting in line are wearing masks - to inform the front-line workers of a potential risk
- 2 Addition of computer tablets added at the glass window where people would communicate versus talking through the speak hole or be used for language translation and assistance on how to administer self tests (real time translation)
- 3 Cameras that detect temperature and fevers in people that are being screened at the window
- 4 Cameras that detect if people are standing a minimum of 6 metres apart when waiting in line – if not, speakers mounted on the unit will inform people to keep a safe distance
- 5 Occupancy sensors with or without cameras to estimate crowd size of people waiting in line and publish this information to an APP / website

The design and layout of the SSTP with the various technologies provides an ideal scenario to gather data about each person screened (without breaching privacy laws) and use this information in conjunction with AI (Artificial Intelligence) machine learning solutions to develop more pro-active and efficient screening procedures for future pandemics.

The **SSTP** includes technology provided by the following partners:





Microsoft Azure

GOJO

Insight.

by PCL Job Site Insight

usage and dispensing

AI and IOT Solution platform by INSIGHT



- Computer hardware and IOT Edge Gateway device by DELL
- Video sensors with onboard analytics for crowd detection and communication
- Efficient HVAC systems and compact water heaters by BOSCH
- Temperature, pressure and humidity monitoring and alerting (inside the **SSTP**)
- Cloud enabled IOT and AI platform by MICROSOFT AZURE
- IoT enabled connected sanitizer dispenser that provides analytics on product



### **OPTION 1** Recessed Cubicles

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#### LEGEND

- A AUTOMATIC SLIDING DOOR (ALUMINUM & GLASS)
- **B** SECURITY CARD READER (ENTRY / EXIT)
- C HAND SANITIZER
- **D** HAND WASHING STATION (BUILT IN WATER TANK)
- **E** BIOHAZARD WASTE RECEPTACLE
- F STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BATTERY STORAGE
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- **N** GLASS WINDOW (DOUBLE GLAZED)
- R DIVIDER (PLEXI-GLASS OR GLASS OR SOLID PANEL)
- **S** FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- **T** ALUMINUM MULLION (THERMALLY BROKEN)



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FLOOR PLAN





**U** RAMP (PORTABLE)

1

### **OPTION 1** Recessed Cubicles

#### LEGEND

- A GLASS WINDOW (DOUBLE GLAZED)
- **B** BIOHAZARD GLOVES INTEGRATED INTO GLAZING
- C GLASS SECURE PASS THRU
- **D** LIGHT FIXTURE
- E SECURITY CARD READER (ENTRY / EXIT)
- **F** AUTOMATIC SLIDING DOOR (ALUMINUM & GLASS)
- **G** SOLAR PANEL
- H AIR CONDITIONER
- J DUCT FOR AIR CONDITIONER
- K THERMAL CAMERA
- L LED SIGN BAND
- M COUNTER (STAINSTEEL STEEL OR MANUFACTURED STONE)
- N WIREMOLD RACEWAY FOR ELECTRICAL AND IT
- **P** BASEBOARD HEATER (ELECTRIC)
- R HAND SANITIZER
- **S** SPEAK HOLE (BUFFERED)









**CROSS SECTION** 



### SIDE ELEVATION



### **REAR ELEVATION**



FRONT ELEVATION (PUBLIC FACING SIDE)



### **OPTION 2** Cubicles under Canopy

#### LEGEND

- A AUTOMATIC SLIDING DOOR (ALUMINUM & GLASS)
- **B** SECURITY CARD READER (ENTRY / EXIT)
- C HAND SANITIZER
- D HAND WASHING STATION (BUILT IN WATER TANK)
- E BIOHAZARD WASTE RECEPTACLE
- F STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BATTERY STORAGE
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- **N** GLASS WINDOW (DOUBLE GLAZED)
- **R** DIVIDER (PLEXI-GLASS OR GLASS OR SOLID PANEL)
- **S** FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- T ALUMINUM MULLION (THERMALLY BROKEN)







FLOOR PLAN



### **OPTION 3** Drive-Through

#### LEGEND

- A AUTOMATIC SLIDING DOOR (ALUMINUM & GLASS)
- **B** SECURITY CARD READER (ENTRY / EXIT)
- C HAND SANITIZER
- **D** HAND WASHING STATION (BUILT IN WATER TANK)
- **E** BIOHAZARD WASTE RECEPTACLE
- F STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BATTERY STORAGE
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- N GLASS WINDOW (DOUBLE GLAZED)
- S FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- T ALUMINUM MULLION (THERMALLY BROKEN)
- U STEEL BOLLARD
- V CONCRETE BASE WITH STEEL PERIMETER CURB













### **OPTION 4** Pass-Through Unit / Secure Testing



### LEGEND

Α	SWING DOOR WITH AUTO DOOR
в	OPERATOR SECURITY CARD READER (ENTRY
с	/ EXIT) HAND SANITIZER
D	BIOHAZARD WASTE RECEPTACLE
E	STORAGE CABINET (METAL)
F	COUNTER (STAINLESS STEEL OR
G	MANUFACTURED STONE) ELECTRICAL PANEL
н	IT/COMMUNICATIONS CABINET
J	SPEAK HOLE (BUFFERED)
к	GLASS WINDOW (DOUBLE
	GLAZED)
L	DIVIDER (PLEX-GLASS OR GLASS
	OR SOLD PANEL)
м	FLOORING WITH INTEGRAL BASE
Ν	ALUMINUM MULLION (THERMALLY
	BROKENI
Ρ	CANOPY ABOVE
R	RAMP (PORTABLE)
S	BARRIER FREE LEDGE
т	ALUMINUM CHECKER STEEL PLATE FLOORING







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### **OPTION 5** Single and Dual Person Compact Unit

This unit can be a single or dual person module, it is very light and constructed from a plastic pallet base (4-way forklift access) and pre-manufactured/finished steel and insulated panels and is meant to be installed in any location - outdoors and indoors









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### **OPTION 5** Single and Dual Person Compact Unit





### LEGEND

•	SWING DOOR	н	LIGHT FIXTURE
•	COUNTER	J	VENT
2	HAND SANITIZER	К	POWER CONNECTION HEATING
)	WINDOW (PLEXI-GLASS)		SPEAK HOLE (BLIEFE
	STORAGE CABINET (METAL)	-	
	CANOPY ABOVE	M	PALLET (PLASTIC)
;	AIR CONDITIONER	Ν	INSULATED METAL P
		Р	THERMAL CAMERA

5





FORKLIFT PLANS

**ELEVATION** 



### **OPTION 6** Testing & Lab Combined Unit

#### LEGEND

- A SWING DOOR WITH AUTO **OPERATOR**
- **B** SECURITY CARD READER (ENTRY/ EXIT)
- C HAND SANITIZER
- **D** SINK (BUILT IN WATER TANK)
- **F** STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BIOSAFETY CABINET
- COUNTER (STAINLESS STEEL OR 1 MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- N GLASS WINDOW (DOUBLE GLAZED)
- P UNDERCOUNTER MEDICAL FRIDGE
- **S** FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- **U** SAMPLE HOLDING CART
- V LAB BENCH



The **SSTP** can be reconfigured to include both a screening / testing and laboratory space windows and the other half of the unit is a 20' long lab space

Screening and tests that require within the **SSTP**. This solution is ideal for locations where tests are required to be sent back to required soon after the tests are



### **OPTION 6** Testing & Lab Combined Unit

#### LEGEND

- SWING DOOR WITH AUTO Α **OPERATOR**
- **B** SECURITY CARD READER (ENTRY/ EXIT)
- C HAND SANITIZER
- **D** SINK (BUILT IN WATER TANK)
- F STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BIOSAFETY CABINET
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- N GLASS WINDOW (DOUBLE GLAZED)
- P UNDERCOUNTER MEDICAL FRIDGE
- **S** FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- **U** SAMPLE HOLDING CART
- V LAB BENCH

In locations where testing is required to service smaller populations and a laboratory is far from the site, the 20' long unit can be reconfigured to accommodate a small lab and screening / testing area.











CONCEPT DESIGN FOR LAB PREPARED BY PARKIN ARCHITECTS LIMITED



### OPTION 7 40' Long Screening & Testing Pod

#### LEGEND

- A SWING DOOR WITH AUTO OPERATOR
- **B** SECURITY CARD READER (ENTRY/EXIT)
- C HAND SANITIZER
- D SINK (BUILT IN WATER TANK)
- **F** STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BIOSAFETY CABINET
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- M SPEAK HOLE (BUFFERED)
- N GLASS WINDOW (DOUBLE GLAZED)
- P UNDERCOUNTER MEDICAL FRIDGE
- S FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- U SAMPLE HOLDING CART
- V LAB / TESTING EQUIPMENT COUNTER
- W SLIDING DOOR
- X RESTING BED







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Y RELAXING CHAIR

The 40' long **SSTP** can be designed to accommodate windows for people that walk-up to the unit (on both sides of the unit) or can include a variety of options that include two windows on one side or both sides for vehicles as a drive-through solution.







## OPTION 7 40' Long Screening & Testing Pod

#### LEGEND

- A SWING DOOR WITH AUTO OPERATOR
- **B** SECURITY CARD READER (ENTRY/EXIT)
- C HAND SANITIZER
- **D** SINK (BUILT IN WATER TANK)
- **F** STORAGE CABINET (METAL)
- **G** WATER COOLER
- H BIOSAFETY CABINET
- J COUNTER (STAINLESS STEEL OR MANUFACTURED STONE)
- K ELECTRICAL PANEL
- L IT/COMMUNICATIONS CABINET
- **M** SPEAK HOLE (BUFFERED)
- **N** GLASS WINDOW (DOUBLE GLAZED)
- P UNDERCOUNTER MEDICAL FRIDGE
- **S** FLOORING WITH INTEGRAL BASE (ONE PIECE VINYL OR LINOLEUM)
- **U** SAMPLE HOLDING CART
- V LAB / TESTING EQUIPMENT COUNTER
- W SLIDING DOOR
- X RESTING BED



Y RELAXING CHAIR



### **OPTION 8** Mobile SSTP

The SSTP can be located on top of a mobile tractor trailer ("lowboy") with a small generator and portable washroom (for staff of the SSTP) and positioned and ready for use upon the truck arriving on site. Portable light-weight stairs and guard rails are positioned in place to allow people safe access to the screening windows.

The intent of this solution is to allow for quick deployment and re-deployment the same day. It is envisioned that the use of this option would be for



general screening and testing for the general public in both urban and rural settings.

People can find the closet location of the SSTP by logging into an APP, typing in their postal code and can register in advance or simply visit the SSTP for an unscheduled screen / test. The APP will identify wait times in advance of people arriving to be screened or tested by use of the technology (cameras) located at the SSTP that are designed for people counting and wait times.





Enter your Postal Code: M6L 29L Location: Humberside Collegiate Institute Operating Hours: 8:00AM to 8:00PM Register in advance: Yes or No Current Wait Time: 15 minutes





# **EXAMPLE INSTALLATION**

### INSTALLATION

The **SSTP** is a standard sea container that can be delivered to site via truck and flatbed, flown into remote locations. Once delivered to site, the SSTP is positioned in place with lowering the flatbed or forklift or crane

All options are essentially complete when delivered except for installing portable ramps for barrier free accessibility.

Several options include a fold down canopy that is positioned in place once the unit is installed in the final location

All options can be equipped with roof top solar arrays that provide DC (low-voltage power) to all interior components with the exception of the air conditioning and the electric heating - an outlet is located on the exterior of the unit for a 50A - 120V connection

For all options, once the SSTP unit is in place and depending on the location and use, security stanchions / crowd control barriers with retractable belts may be required



- 8' x 20' long x 9'-6" high sea container doors to be remove
- 2 Roof of the sea container to be sealed to prevent any water infiltration
- All exterior walls (inside surface), underside of floor and 3 underside of roof to be insulated (spray insulation)
- All exterior walls (inside surface) to be furred out to allow for 4 spray insulation
- 5 All interior walls and ceiling to be finished with mold resistant gypsum board and covered with fibreglass reinforced panels
- 6 Windows to be double glazed (tempered glass for exterior lit in thermally broken frames (glazed from the exterior)
- 7 All infill metal siding to match the sea container or be prefinished steel siding (similar profile)
- 8 All exterior steel / metal components to be painted white
- Entrance doors to be automatic sliding, single glazed, temper 9 glass with breakaway for emergency exit
- 10 Rooftop solar array consisting of 6 panels, 60 cell 300 W
- 11 Air-conditioner to be roof mounted, recreational vehicle quali heavy duty
- 12 Wall mounted industrial style exterior light fixtures
- 13 Thermal cameras located at each cubicle
- 14 Continuous sheet flooring with integral base from either linoleum or vinyl (no seams)





# **KEY COMPONENTS**

ed	15	Counters from stainless steel or manufactured stone on plywood
		support (grommet located in counter at each seat)
	16	'Wiremold' raceway for all items that require power and data
	17	Recessed pot lights within the ceiling cavity located above each seat and within the open space
	18	All fixtures, furnishings and equipment as shown on plans
	19	Windows to include speak hole, secure pass through and biobazard aloves (if required)
	00	
te)	20	curb for Option 3
	21	Foldable steel sheet canopy with collapsible arms for Option 2 (painted white) with integrated slim autter at edge
red	22	Glass or plex-glass or solid phenolic divider panels in aluminum u-channel frame for Option 1
cu	22	Demountable colid phonolic panole in gluminum u channel
	23	frame for Option 2
ity,	24	Exterior grade security stanchions / crowd control barriers with retractable belts
	25	DC (low voltage) ventilation fans (2 per unit), recreational vehicle quality, heavy duty
	26	Card access security system

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