

**JULY 8, 2022**

**CITY OF MIAMI BEACH**  
**ITN 2020-239-KB**  
**BUS SHELTERS AND STREET FURNITURE**

**HISTORIC PRESERVATION BOARD &  
DESIGN REVIEW BOARD PRESENTATION**

**OUTFRONT/**

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# BUS SHELTER

SECTION

1

OUTFRONT/



# WASHINGTON AV.

## 20' x 7' SHELTER

- Lean bar
- Bench
- BusPas Technology
- Advertising Panel





## COLLINS AV.

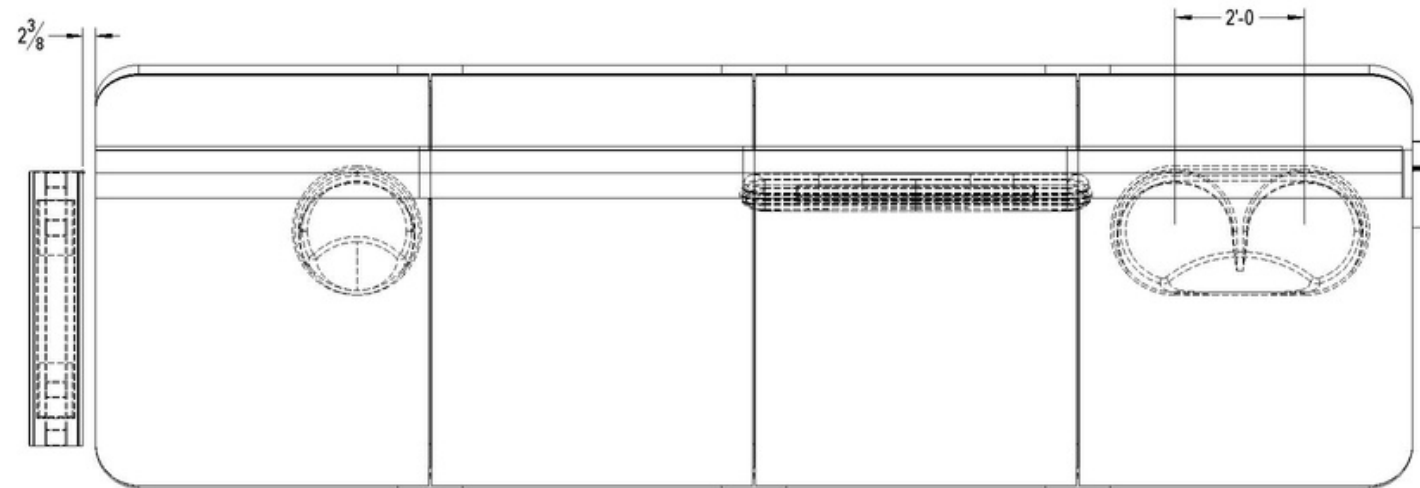
### 20' x 7' SHELTER

- Lean bar
- Bench
- Advertising Panel





# 20' x 7' BUS SHELTER



## 20 x 7 SHELTER MATERIAL DESCRIPTIONS

MAIN SHELTER STRUCTURE : 6061-T6 ALUMINUM

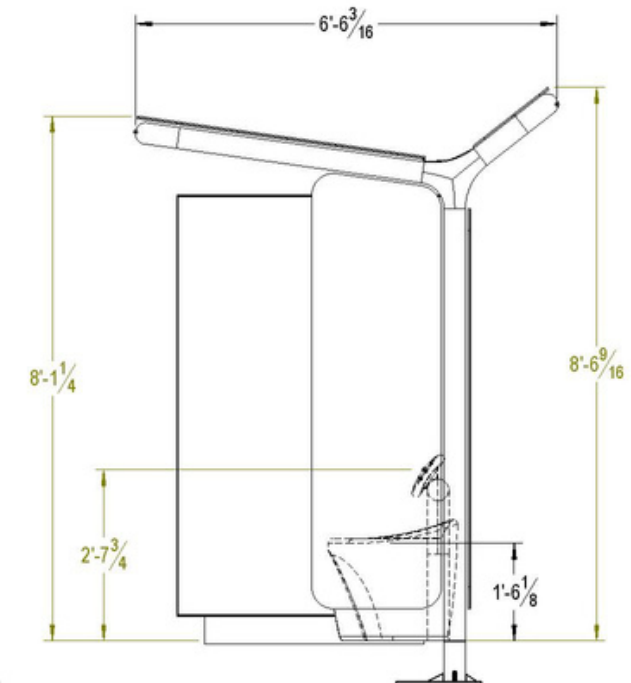
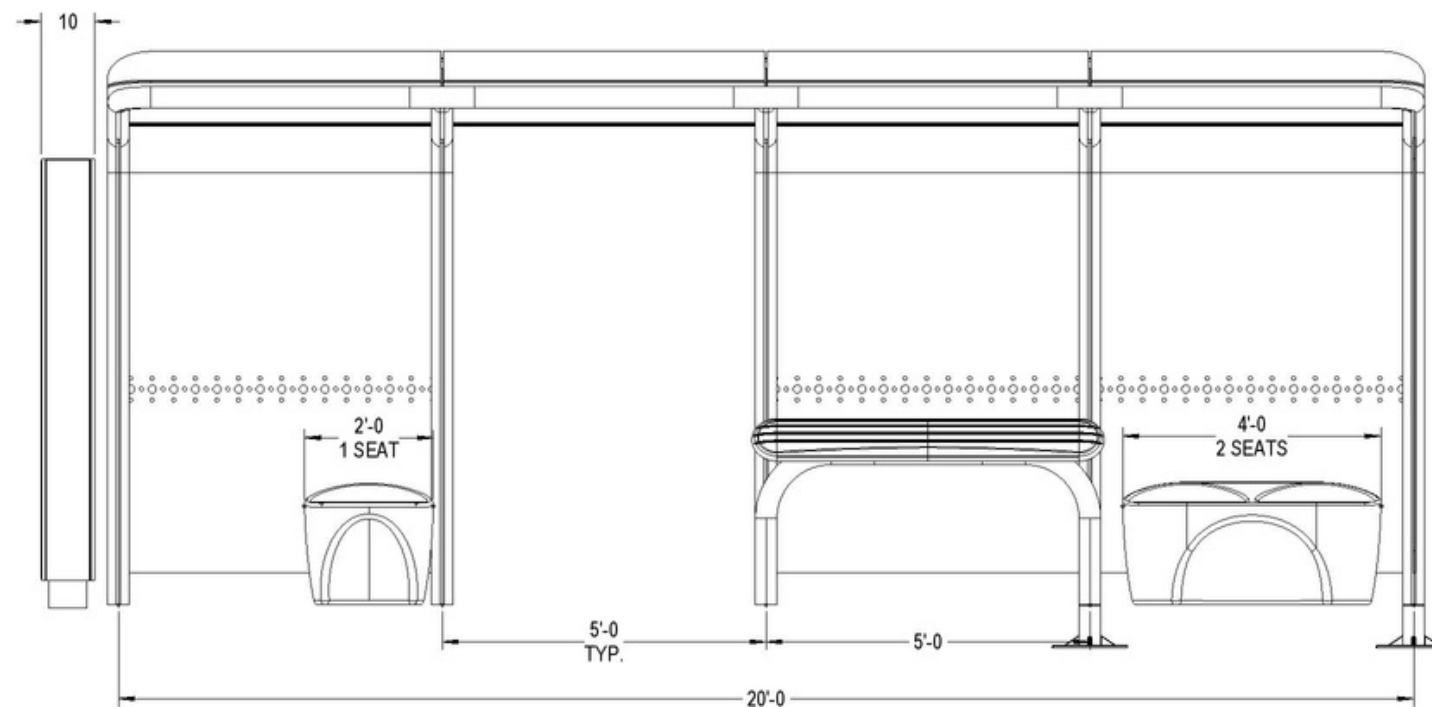
ROOF PANELS : 1/2" THK CLEAR LAMINATED TEMPERED GLASS  
OPTION : POLYCARBONATE

WALL PANELS : 3/8 THK CLEAR TEMPERED GLASS

BENCH : ROTOMOLDED PLASTIC

LEANBAR : ROTOMOLDED PLASTIC AND 6061-T6 ALUMINUM FRAME.

AD DISPLAY : MAIN FRAME 6061-T6 \$ 5052-H34 ALUMINUM  
DOOR PANELS : 1/4" THK CLEAR TEMPERED GLASS W/ BLACK FRIT FRAME APPLIED ON 2D SURFACE (BACK)





## CONVENTION CENTER DRIVE

### 10' x 7' SHELTER

- Bench
- Advertising Panel

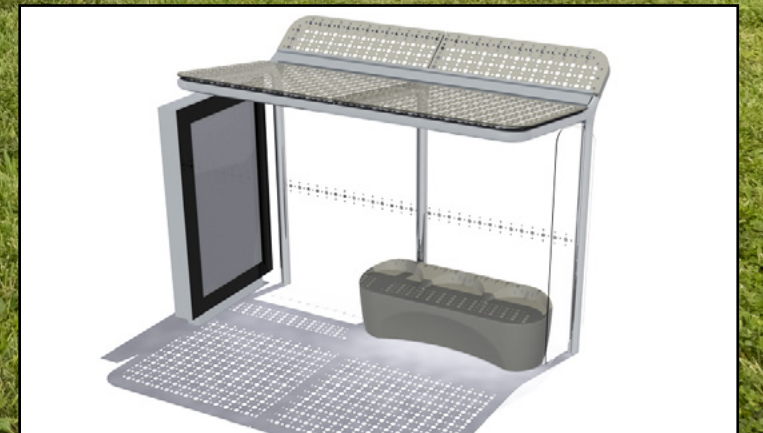




# CONVENTION CENTER DRIVE

## 10' x 7' SHELTER

- Bench
- BusPas Technology
- Advertising Panel





## 5TH STREET

### 10' x 7' SHELTER

- Bench
- BusPas Technology
- Advertising Panel





## CONVENTION CENTER DRIVE — NIGHT RENDERING

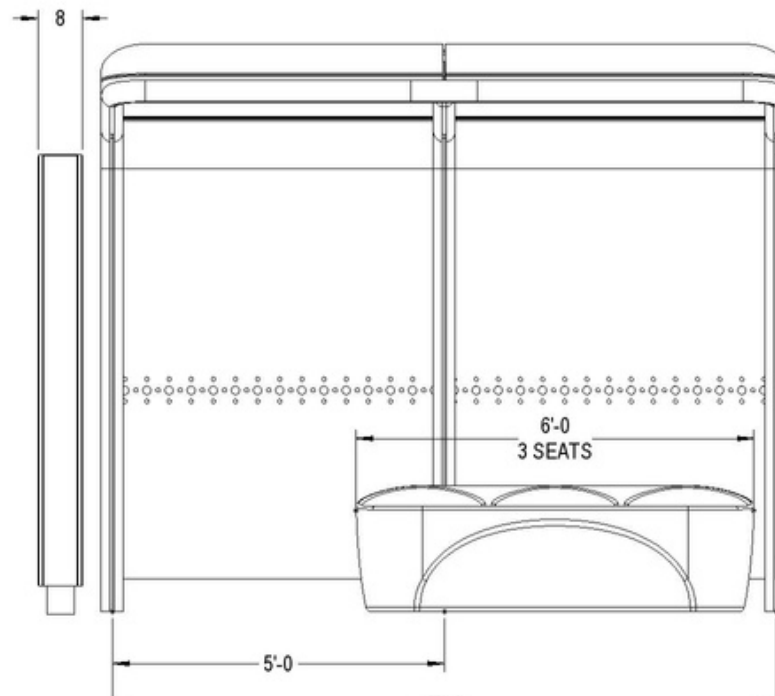
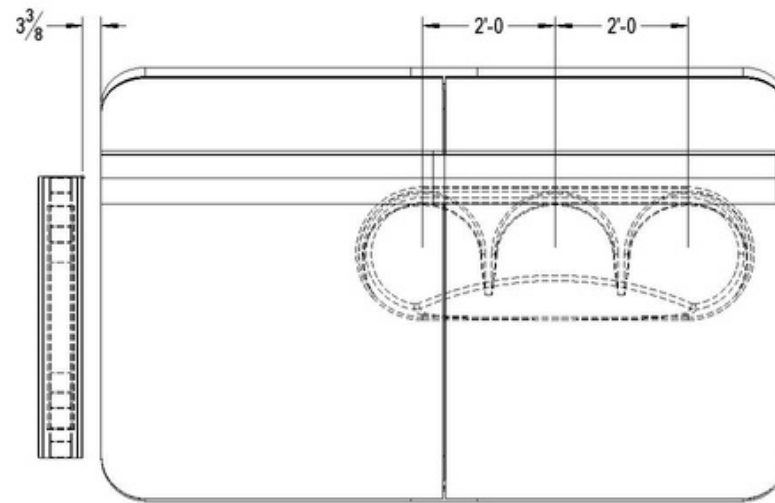
### 10' x 7' SHELTER

- Bench
- Advertising Panel





# 10' x 7' BUS SHELTER



## 10 x 7 SHELTER MATERIAL DESCRIPTIONS

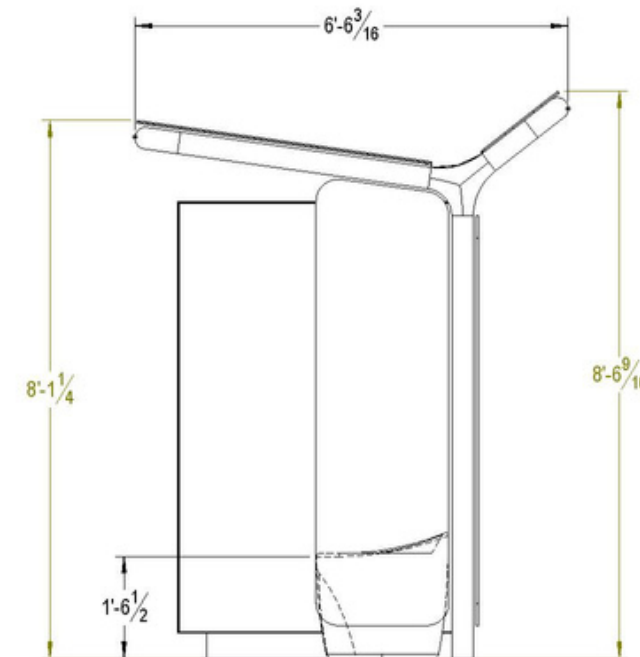
MAIN SHELTER STRUCTURE : 6061-T6 ALUMINUM

ROOF PANELS : 1/2" THK CLEAR LAMINATED TEMPERED GLASS  
OPTION : POLYCARBONATE

WALL PANELS : 3/8 THK CLEAR TEMPERED GLASS

BENCH : ROTOMOLDED PLASTIC

AD DISPLAY : MAIN FRAME 6061-T6 \$ 5052-H34 ALUMINUM  
DOOR PANELS : 1/4" THK CLEAR TEMPERED GLASS W/ BLACK FRIT FRAME APPLIED ON 2D SURFACE (BACK)



## COLLINS AV.

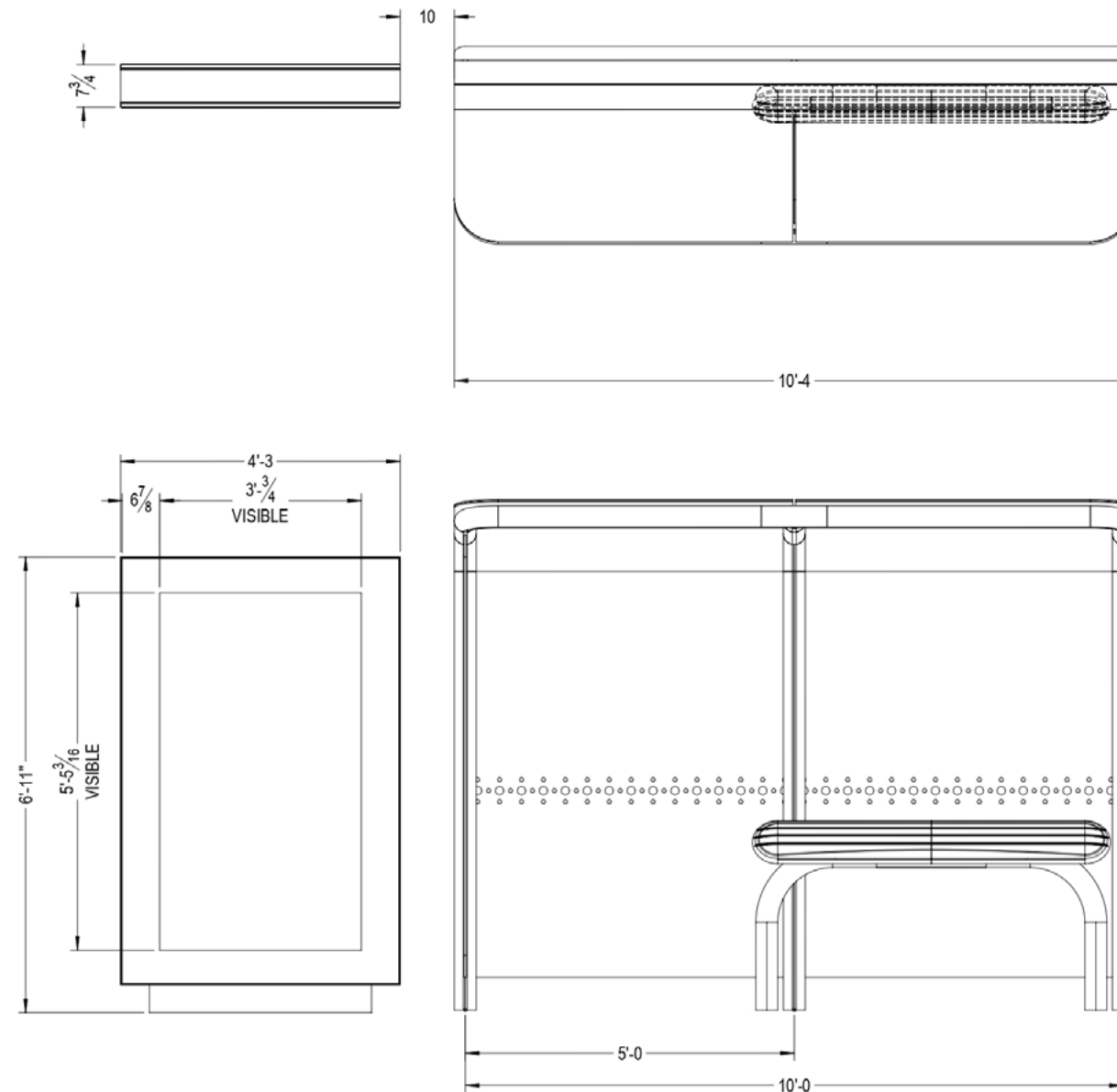
### 10' x 3' NARROW SHELTER

- Lean Bar
- Advertising Panel





# 10' x 3' BUS SHELTER DRAWING



## 10 x 3 SHELTER MATERIAL DESCRIPTIONS

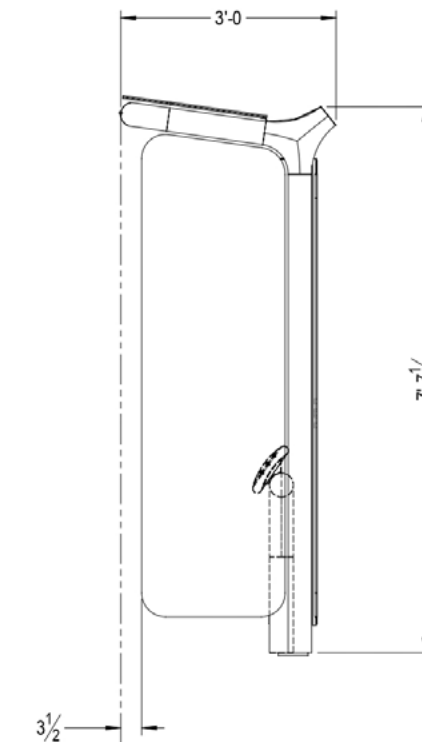
MAIN SHELTER STRUCTURE : 6061-T6 ALUMINUM

ROOF PANELS : 1/2" THK CLEAR LAMINATED TEMPERED GLASS  
OPTION : POLYCARBONATE

WALL PANELS : 3/8 THK CLEAR TEMPERED GLASS

LEANBAR : ROTOMOLDED PLASTIC AND 6061-T6 ALUMINUM FRAME.

AD DISPLAY : ALUMINUM FRAME AND PANELS FRONT DOOR WITH 1/4" THK TEMPERED GLASS WITH BLACK FRIT FRAME AND ALUMINUM DOOR FRAME.



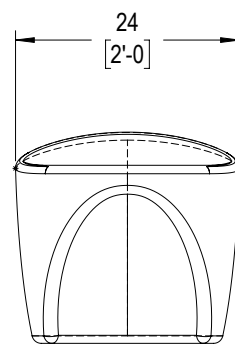
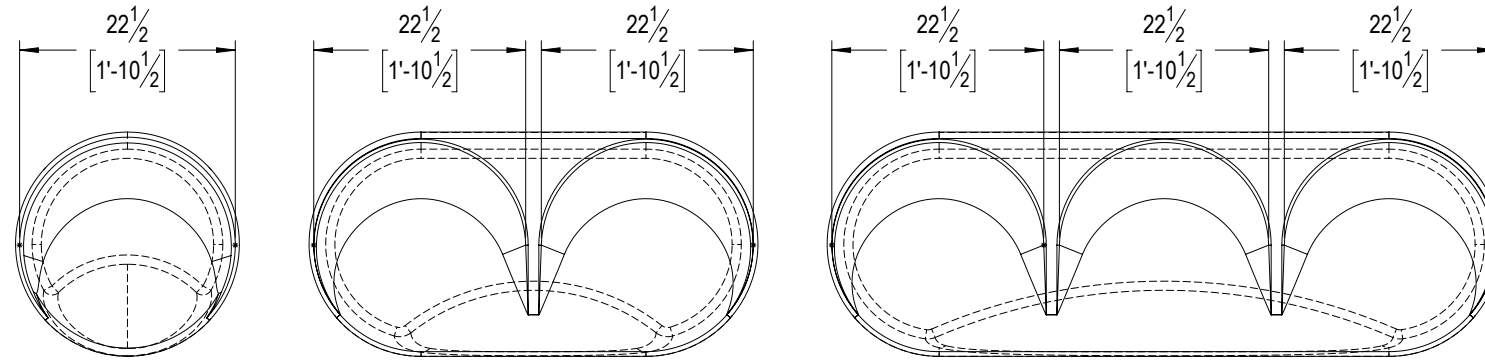


## BENCHES

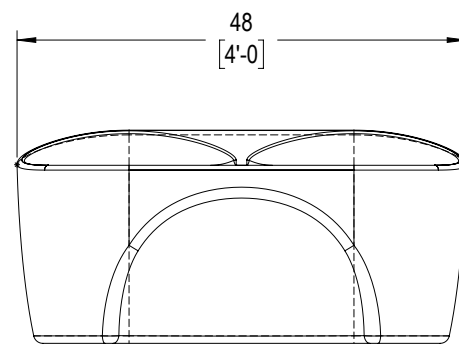




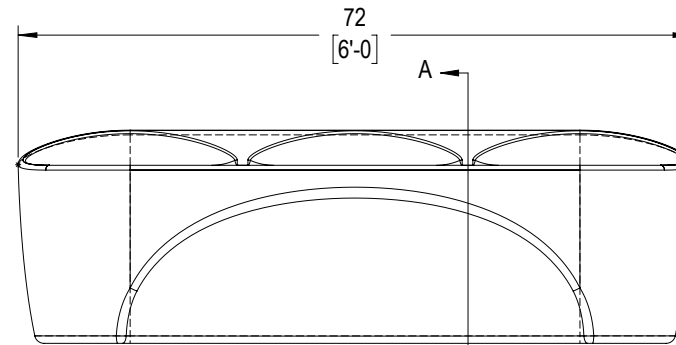
# BENCH DRAWINGS



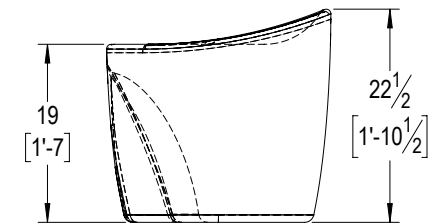
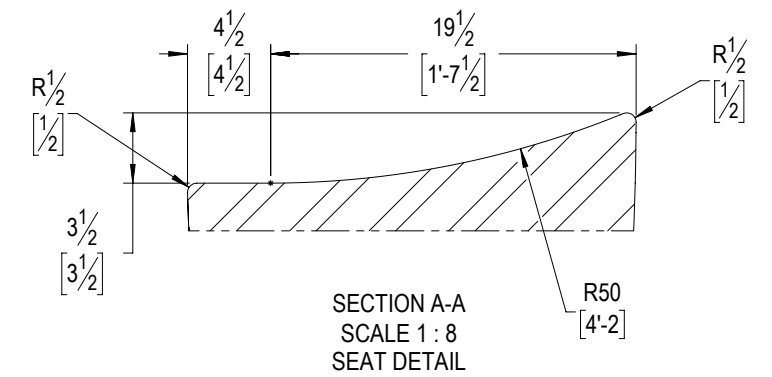
1 SEAT BENCH



2 SEAT BENCH



3 SEAT BENCH

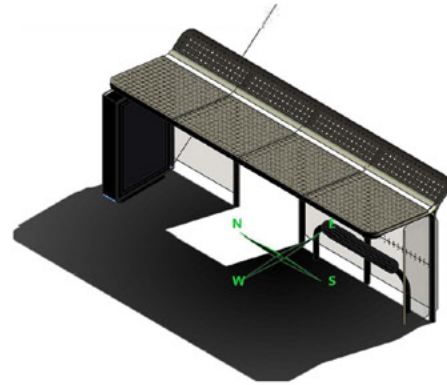




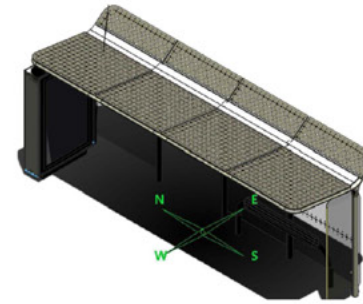
# SHADE STUDY

August, Miami

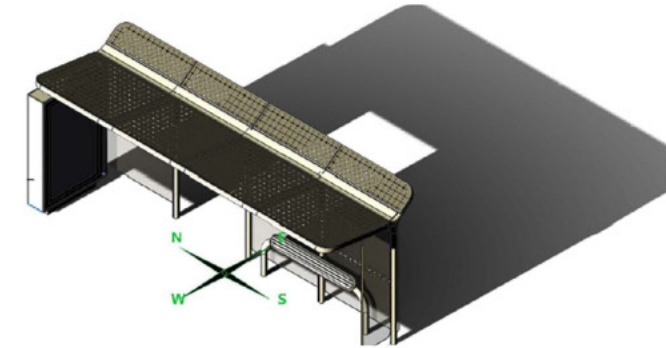
9 AM



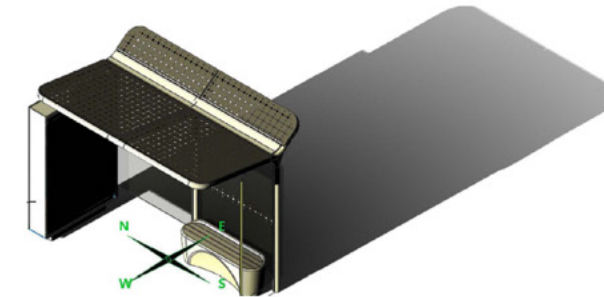
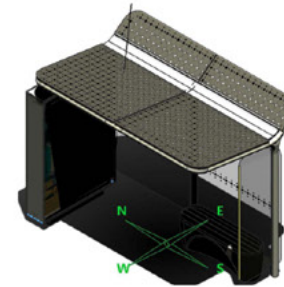
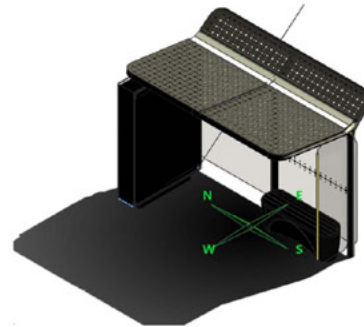
12 PM



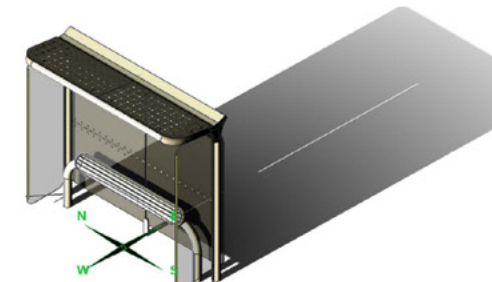
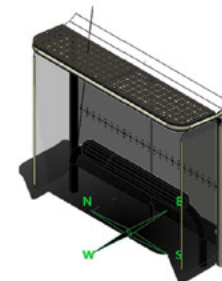
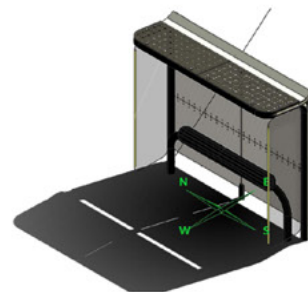
4 PM



SHELTER 20' x 7'



SHELTER 10' x 7'



SHELTER 10' x 3"

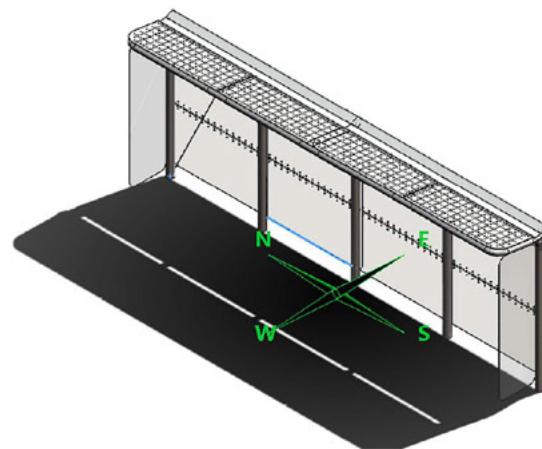
NOTE : Location used for shade study facing WEST on August 24th @ 25.788, -80.133



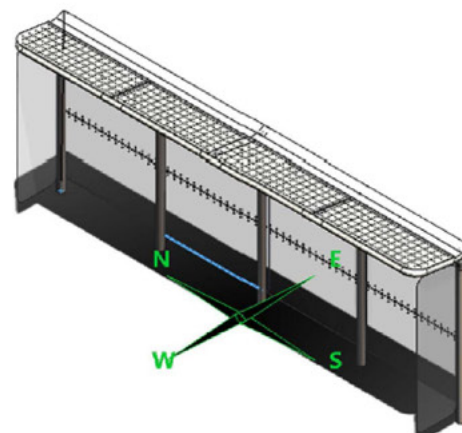
# SHADE STUDY

August, Miami

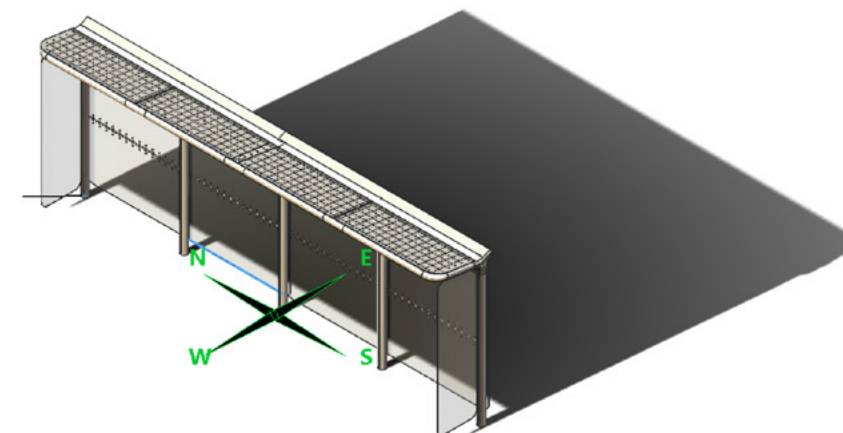
9AM



12PM



4PM



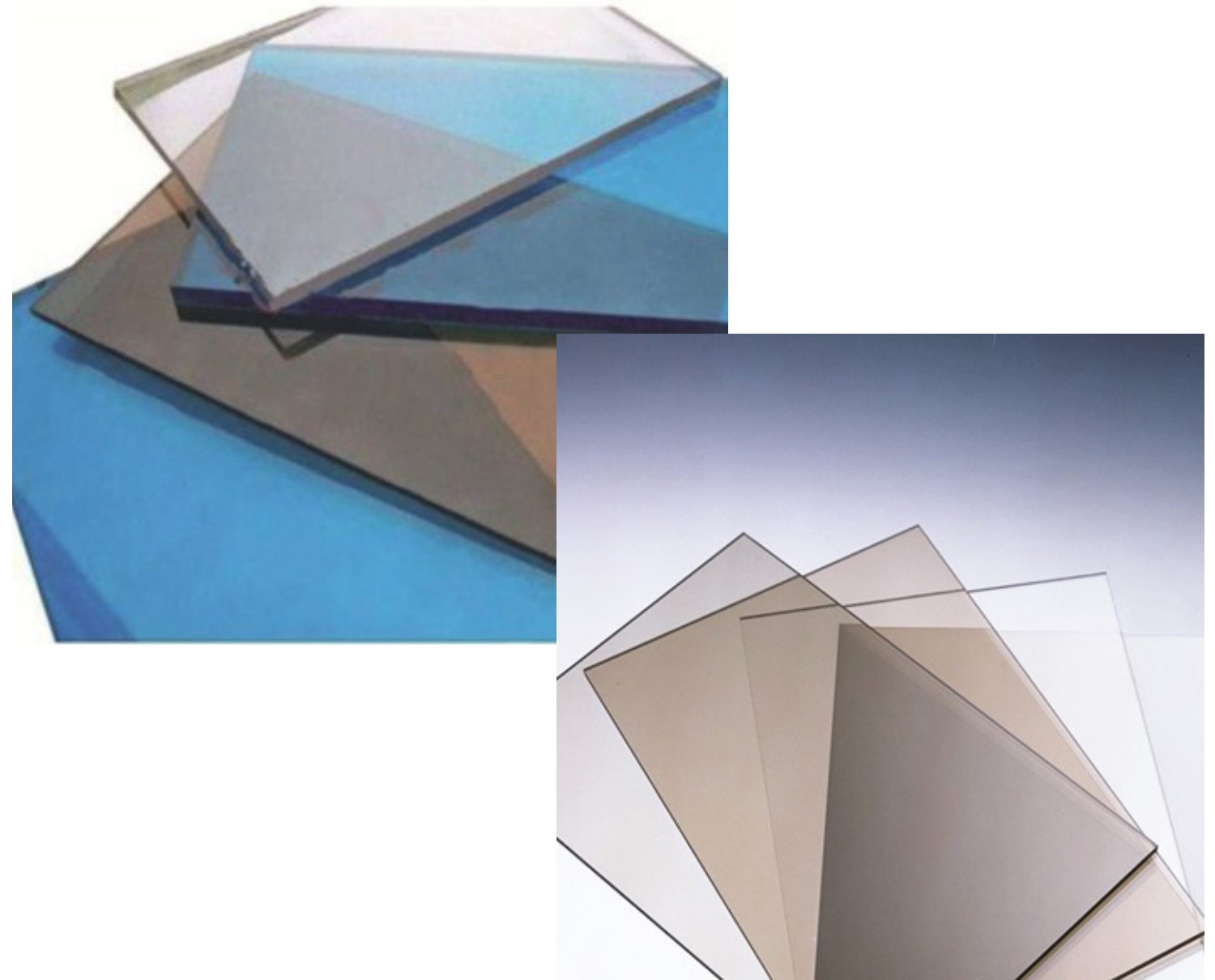
20 x 3 NARROW SHELTER



## PROPOSED ALTERNATE ROOF MATERIAL

### Lexan™ UV Resistant Sheet (XL102UV)

The original plans developed by Pininfarina/ACAI and provided to bidders during the ITN called for a transparent, glass roof for all the new bus shelter versions. During our manufacturing feasibility study performed in conjunction with our shelter manufacturing partner Poitras, it was determined that the use of a polycarbonate/resin roof would improve structural integrity and safety of the structure during a high wind event, as well as significantly reduce the long-term maintenance costs for the program. This material can be ordered in almost any finish/color/pattern, and OUTFRONT recommends an nearly opaque finish which will provide passengers with near complete UV-blocking as well as significant shading, without causing the interior of the structure to be overly dark.





## SIDE-BY-SIDE COMPARISON





# BUSPAS

SECTION

2

OUTFRONT/



## BUSPAS



Each BusPas SpaD unit can display real-time Miami-Dade County bus Miami Beach trolley arrival information on a low-powered elnk display which can be illuminated at night for full-time visibility. Backhauled by a cellular connection, no wired data network is required, although if one exists it can be leveraged by the unit. Additionally, each unit features speakers for audio announcements, and motion and light sensors for comprehensive operational awareness and monitoring. BusPas also provides a full suite of device management software tools for remote administration and monitoring by the municipality.





## STANDALONE ETA SIGN

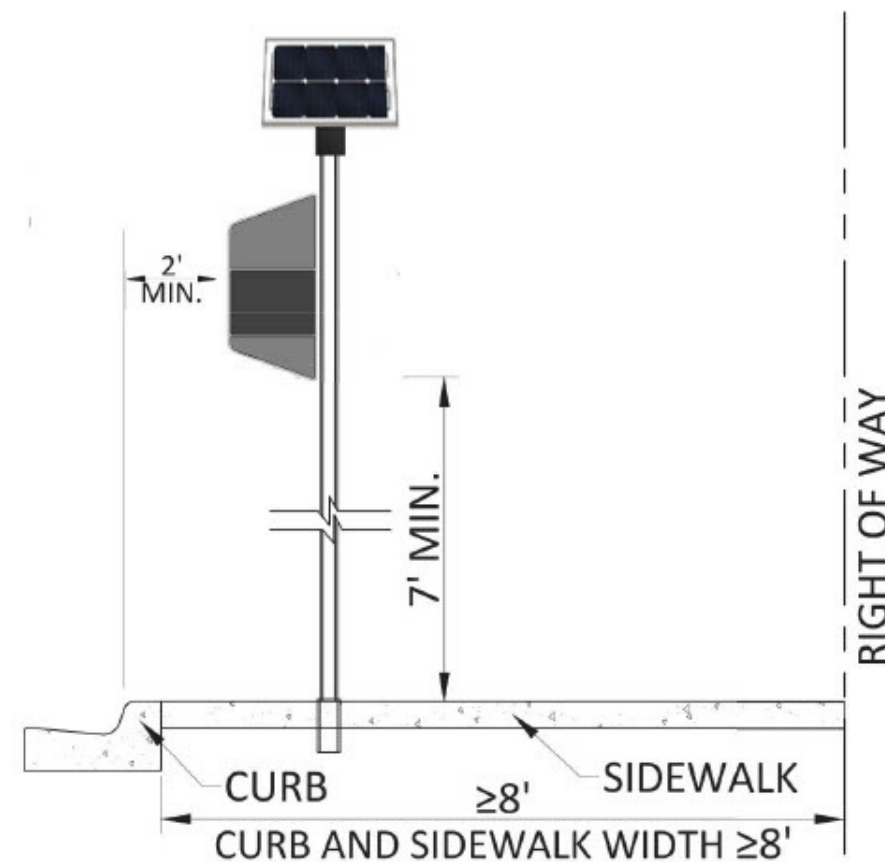
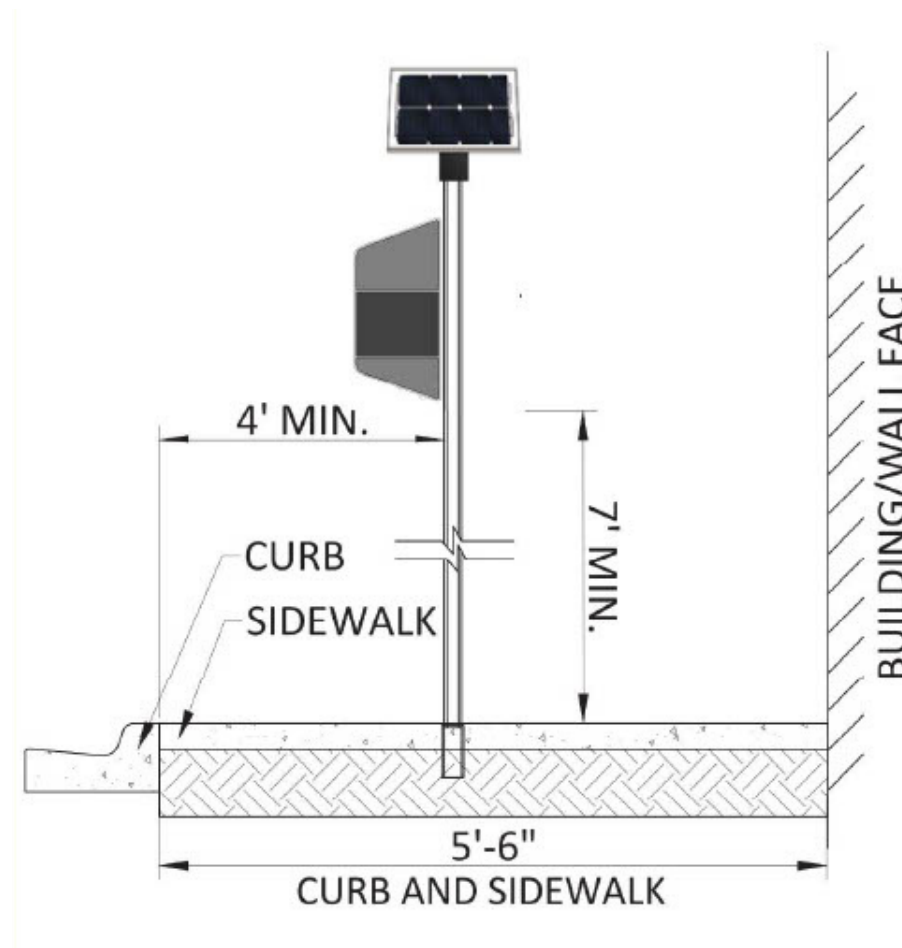
- BusPas Technology





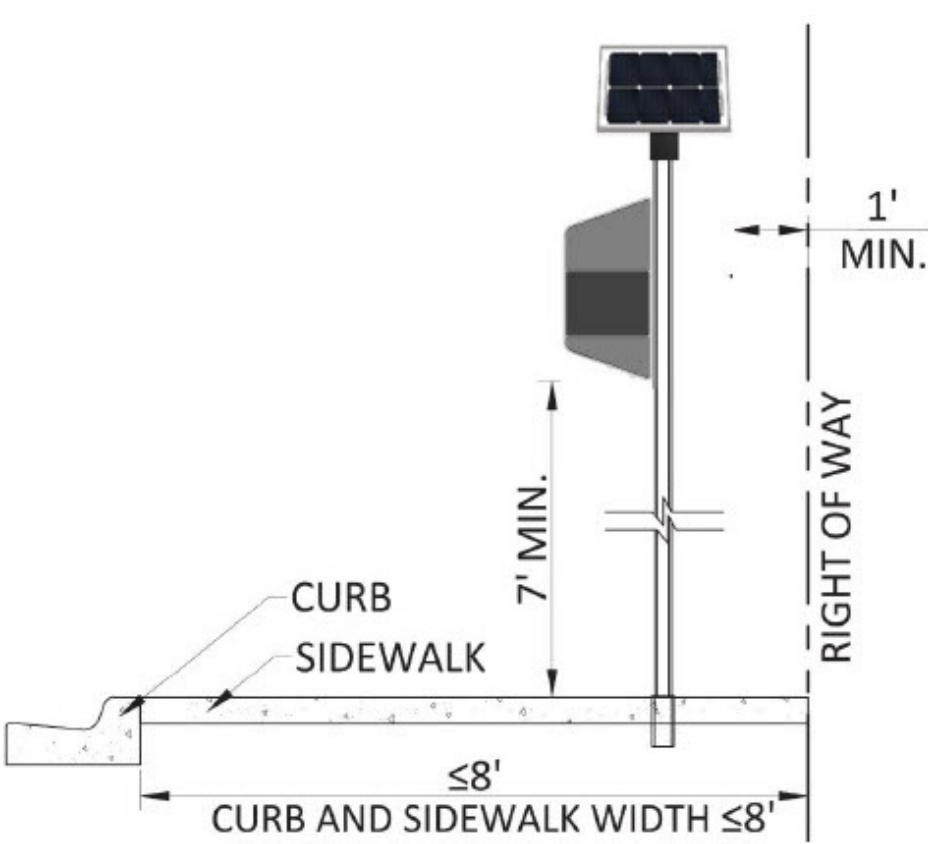
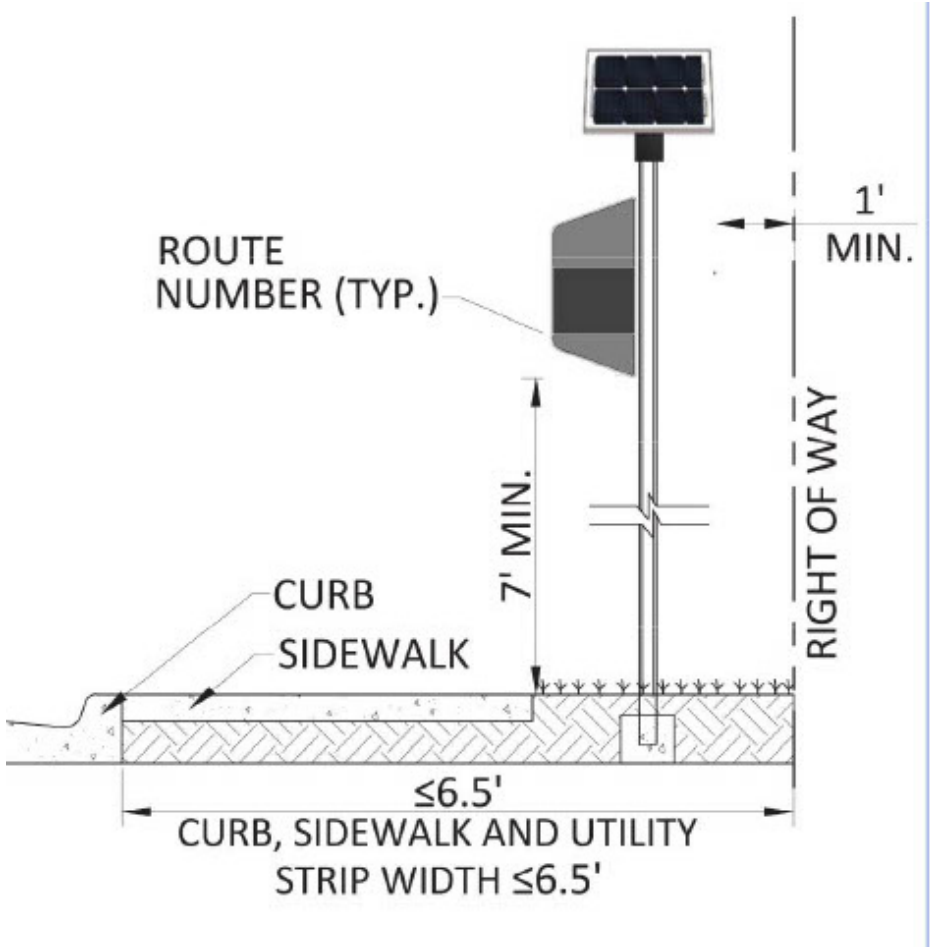
# STANDALONE POLE DRAWINGS

- BusPas Technology



# STANDALONE POLE DRAWINGS

- BusPas Technology





# **SOLAR PANELS**

SECTION

3

**OUTFRONT/**



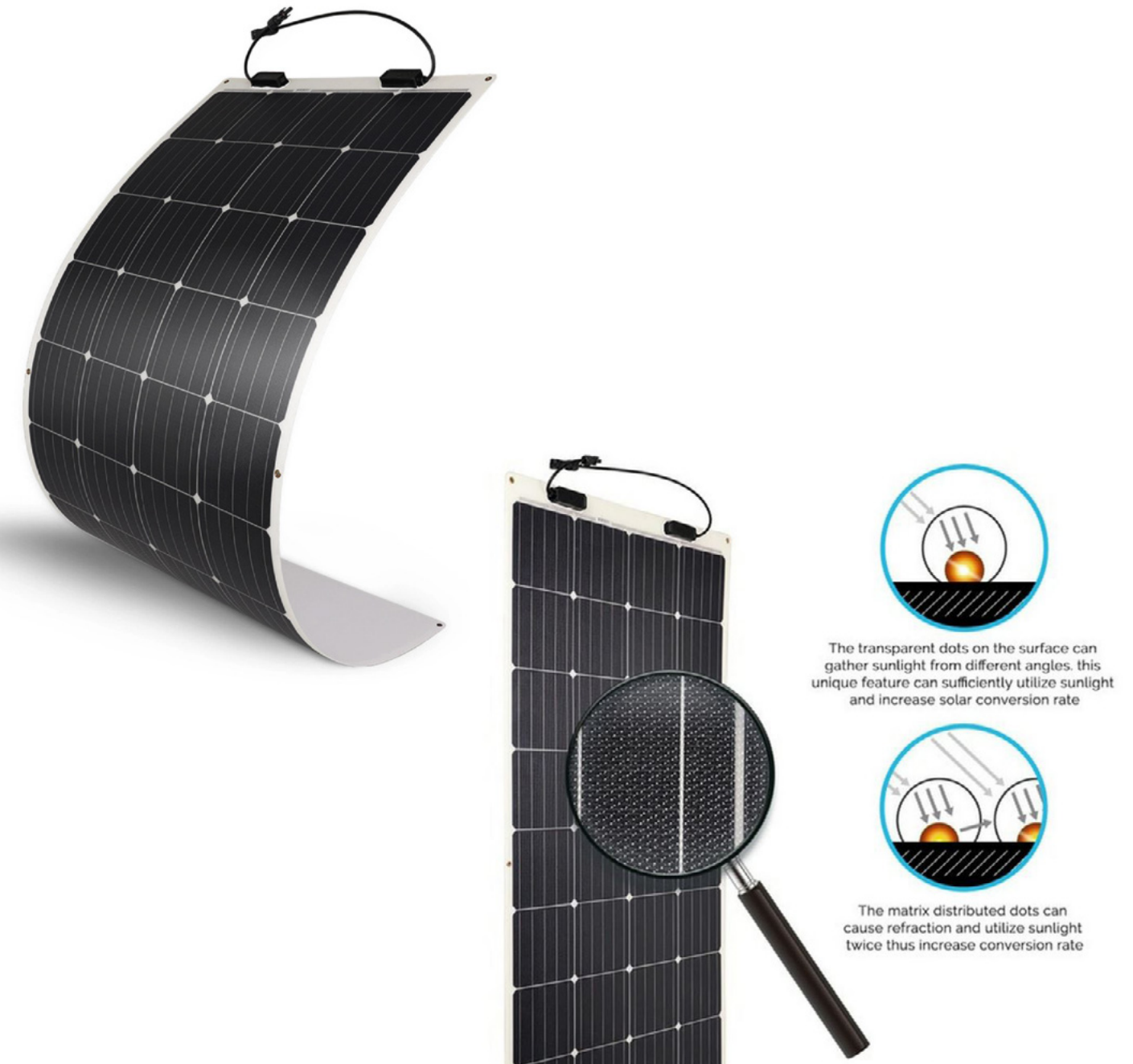
## RENOGY SOLAR PANEL

OUTFRONT proposes to deploy solar panels atop shelters at new shelter locations that lack hard-wired electrical connections to power the following device types:

- Real-time arrival displays (BusPas technology)
- Security lighting
- Static advertising panel backlights

Shelter locations that include a digital advertising panel (up to 40 locations) cannot be powered from solar, and will require hard-wired electrical connections, which OUTFRONT will be responsible for building. Any accessory devices at these hard-wired locations will also be powered from the same hard-wired electrical connection.

We are currently testing flexible solar panel ‘films’ from two different vendors, but also have a low-profile rigid panel that can be used if the power generation capacity of the films is not sufficient to realize the City’s goals. Depending on the final material selection for the shelter roofs (glass vs polycarbonate), and the results of our real-world solar film testing currently happening in Miami-Dade County, a final solar solution will be selected that will both minimize the visual impact to the structure from a pedestrian view yet also provide adequate power to the required accessory devices installed at each shelter location.





**OUTFRONT/**