

# The Research and Economic Development Center

Erie, Pa



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Advisor : D. Riley	Date: 4-3-06
Summary Book	



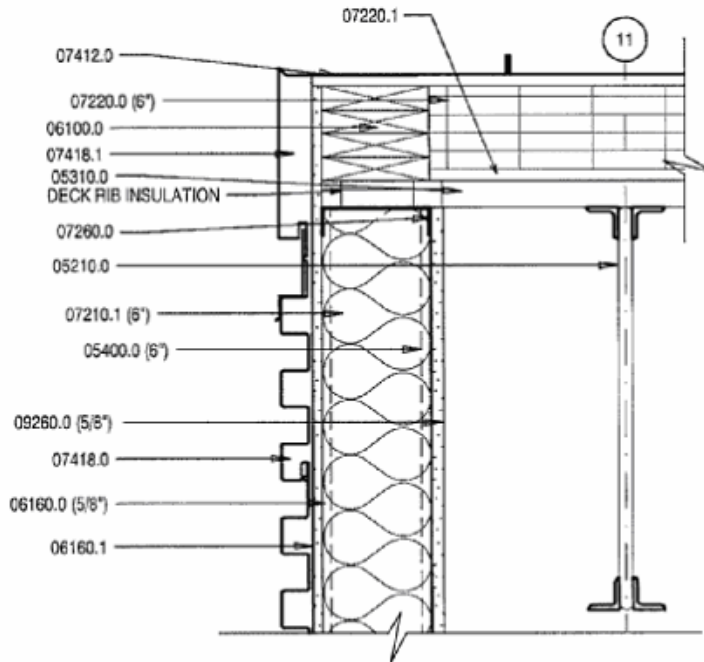
## Appendix 1 - Survey

### MBE/WBE Solicitation Survey For General Service's Projects

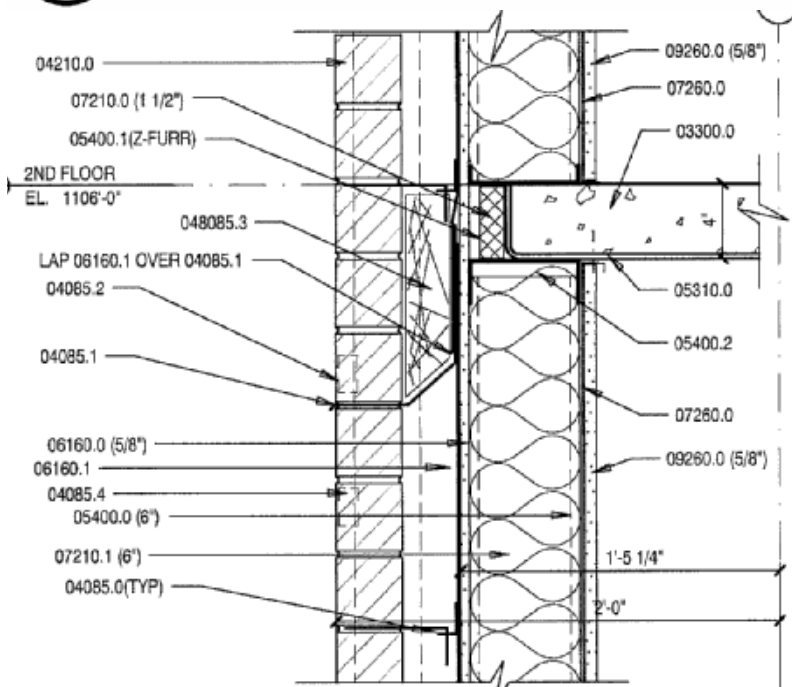
1. Are you a WBE/MBE Contractor?
2. Have you bid on a DGS project which has required WBE/MBE Contractor Solicitation?
3. How many projects requiring WBE/MBE Contractor Solicitation have you worked on?
4. Does the paper work needed for WBE/MBE Contractor Solicitation increase the time that is required in the pre-bid processes?
5. Does your company increase its bid to cover extra work and risk involved with WBE/MBE Solicitation?
6. How much does your company increase the bid by? (percentage or dollar amount)
7. Do you think that WBE/MBE Contractor Solicitation is a fair requirement for all DGS projects?
8. Have you hired a subcontractor that you wouldn't have normally used, due to the solicitation requirements?
9. If yes, has it resulted in a successful contract?
10. Do you feel that this requirement is accomplishing its intended purpose of increasing the usage of disadvantaged businesses in state projects?
11. Additional Comments



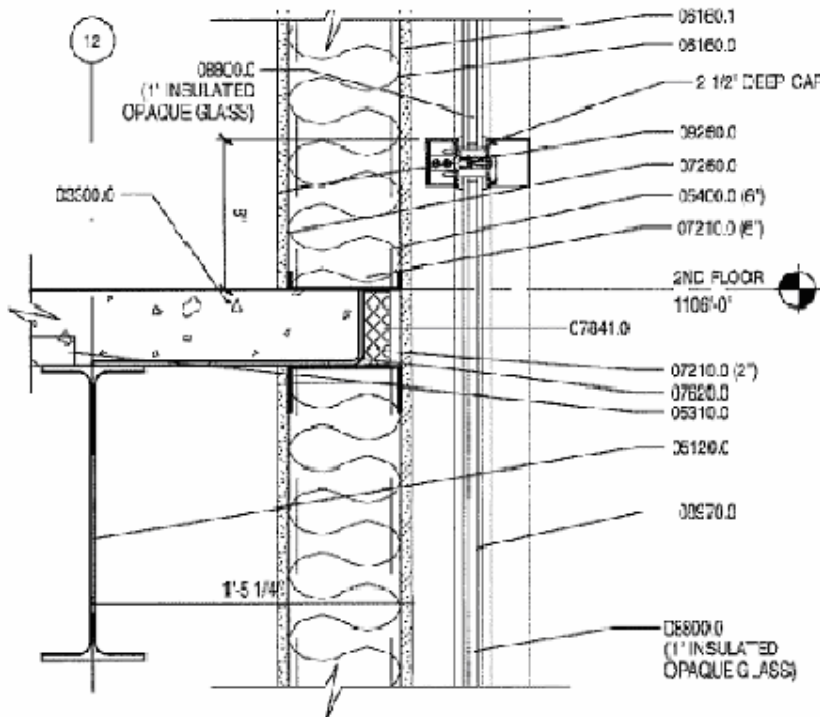
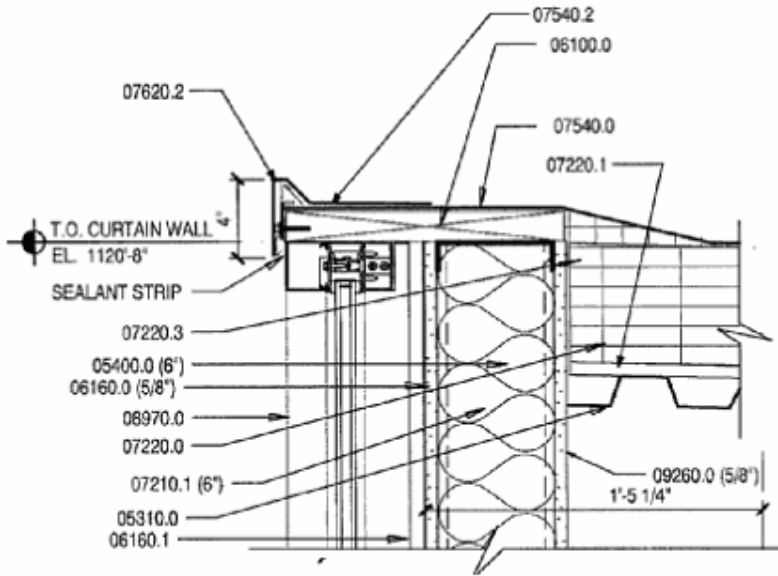
## Appendix 2 – Existing Cladding System



**E4** METAL SIDING - SECTION  
 SCALE: 1 1/2" = 1'-0"



**D1** MASONRY WALL - SECTION  
 SCALE: 1 1/2" = 1'-0"



**(B2) CURTAIN WALL VENEER DETAILS**  
 SCALE: 1 1/2" = 1'-0"



## Air 403 Industrial Wind Generator



**Same quality features as the AIR 403 and the AIR Marine, but designed for heavy duty use in continuous high wind conditions. Operates in hurricane winds.**

### Specifications for AIR 403 Industrial Wind Module

<b>Rotor Diameter:</b>	<b>45" (1.14 meters)</b>
<b>Weight:</b>	<b>14 lbs (6.2 kg)</b>
<b>Start up wind speed:</b>	<b>6 knots/7 mph (2.7 m/s)</b>
<b>Voltage:</b>	<b>12, 24, 48 volts</b>
<b>Output:</b>	<b>400 watts at 24 knots (12.5 m/s)</b>

### 3 YEAR WARRANTY

**BLADES:** The AIR's blades are made of carbon fiber reinforced composite that twists as the turbine reaches its rated output. This twisting effect changes the shape of the blade, causing it to go into stall mode. This limits the RPM of the alternator, preventing damage in high winds.

**ALTERNATOR:** The AIR's alternator is optimized to match as close as possible the energy available in the wind. It is constructed with Neodymium Iron Boron permanent magnets and is brushless for superior performance and maintenance-free operation.

**REGULATION & CONTROL ELECTRONICS:** The electronics performs several functions to assure maximum output and safety for the user. The control electronics maintains a load on the alternator at all times to make sure that the turbine never over speeds, regardless of the condition of the battery. As the battery is charged, the sophisticated regulator periodically checks the line, correcting for voltage loss and monitoring charge rate. Once the battery has reached its optimum charge level the regulator shuts the current off, preventing the battery from being overcharged while maintaining a load on the alternator at all times to prevent over speeding.

List Price \$995.00 **SALE PRICE \$879.00**

Stop switch	50 amp, DC, single pole double throw switch	\$20
Ammeter	0-30 amp, DC, analog meter	\$21
Circuit breaker	100 amp DC breaker	\$49

## Appendix 4- Tower Kit Specification



# Wind Generator Tower Kits from Southwest Windpower

## The Tower Kit

27 foot kit: **\$139.00**

45 foot kit: **\$199.00**

(kits do not include poles or anchors)

## Anchors

36" (for 27 foot kit) set of 4 **\$55.00**

48" (for 45 foot kit) set of 4 **\$70.00**

### Available in 27 and 45 foot kits

Installs in a few hours No Cement

No Gin Pole  
(27' only)

No Winching

No Sweat!

Includes everything except pipe and anchors

45' Tower Kit includes gin pole hardware

### No Room for a tower...

How easy is it to install?

Simple roof top tower mount offers easy installation for your AIR wind module

### Technical Information

Design includes vibration isolation mounts that reduce mechanically transmitted noise by 80%

Installs on the side of a building or through the roof

Includes everything except pole and mounting bolts





## 27' Guyed Tower Kit

### Technical Information

*A Revolution in Tower Design*



<b>Kits include:</b>	<b>27 ft (8 m)</b>
<b>Base Connector</b>	<b>1</b>
<b>Lower Wire Set (160 ft. pre-cut)</b>	<b>1</b>
<b>Base Staples</b>	<b>2</b>
<b>3/8" x 1 1/2" Bolt</b>	<b>2</b>
<b>3/8" Locknut</b>	<b>2</b>
<b>Cable Thimbles</b>	<b>4</b>
<b>Cable Clamps</b>	<b>8</b>

### Pipe Pieces Needed:

(available at fence suppliers)

- 24 foot (7.2 meter) length for tower
- 3 foot (.9 meter) length for tower
- 6 foot (1.8 meter) length for tower base

### Pipe Requirements

Tower Kits use 1-7/8 inch (47.5 mm) Steel Tubing

### Maximum Wind Speed

<u>Maximum Wind Speed</u>	<u>Recommended Wall Thickness</u>	<u>Pipe Schedule</u>
90 mph	.065 inch (1.65 mm)	n/a
100 mph	.090 inch (2.3 mm)	Schedule 20
120 mph	.140 inch (3.6 mm)	Schedule 40



## Appendix 5 - Kiosk Cut Sheet

### GENERAL



The Slabb M kiosk was the first kiosk released in the new X series line. Its super modern design and amazingly low price allow more clients to utilize high-end kiosk technology without the high price tag. It is a smart blend of stainless steel, simplicity, elegance, function and aesthetics.

The display is a 17" LCD monitor which allows a large space to advertise content to people within close proximity of the kiosk. Options include a stainless steel keyboard/trackball, custom color finishes, SAW Glass Touchscreen, and Book Sized PC.

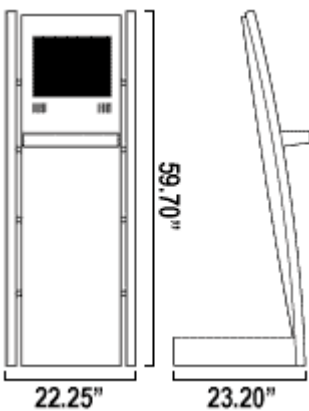
The Slabb M kiosk ships in a flat box which lowers shipping costs. Light assembly is required by the end-user, but setup time does not exceed 10 minutes per kiosk.

This kiosk was designed to accommodate a small form factor PC. We recommend that you use a Dell Optiplex GX520 PC which can be supplied from us.



Standard colors include silver/gray, white or black.

Lead Time: 1-2 weeks (some basic models ship in 48-72 hours).







SPECIFICATIONS	
16 Gauge Mild and Stainless Steel Enclosure 17" LCD Monitor (1280 X 1024 Max Resolution) Vandal Resistant Powder coat Finish Brushed Stainless Steel Poles with spacers Cooling Fan in base Steel Power Strip Large Access Doors with Tubular Locks/Keys Protective Glass (if no touchscreen used) ADA Compliant Design  Dimensions: With Keyboard: 59.70" Tall x 22.25" Wide x 24.375" Deep Without Keyboard: 59.75" Tall x 22.25" Wide x 23.2" Deep Packed Dimensions: 30" Deep X 18.5" Tall X 68" Wide  Weight: Kiosk Weight: 85 lbs Packed Weight: 120 lbs Add 7 pounds for keyboard/trackball Add 12 pounds for book sized PC	

Base Unit ::	1-9
Slabb M Floor Standing Kiosk with 17" LCD	\$1695

<http://www.slabb.com/productDetails.jsp?product=1>



## Acknowledgments

Bruce Rohrbach – Thank you for the help with the building systems and getting me drawings and specs.

Tim Swarner – Thank you for taking me to the building and introducing me to all the key players.

David Rieley – Thank you for helping guide my ideas and edit my work.

Office of Physical Plant – Thank you for the information and all the help and support that you have given me during the last year.

Matt Young - Thanks for the help and support.

Paul Bowers - Thank you for helping me with all of my technical questions especially about structural abilities.

AE 5th years - Thank you for being there and providing help to me all of my years here.

AE Faculty - Thank you for all your teachings. It was extremely useful over the course of the last 5 years here.