MIAMIBEACH
RISING ABOVE

PUBLIC WORKS DEPT

Flooding from Stormwater Grates

Roy Coley, Public Works Director
April 29, 2021 Land Use and Sustainability Committee

Flooding from Stormwater Grates

Conditions and Observations

On October 2015, the City initiated a pilot program for inlet grates. Two types of grates were chosen from two different vendors, Stop Ocean Pollution and EcoSense.

Seven Stop Ocean Pollution and nine EcoSense grates were installed along Ocean Drive from 5th Street to 12th Street.

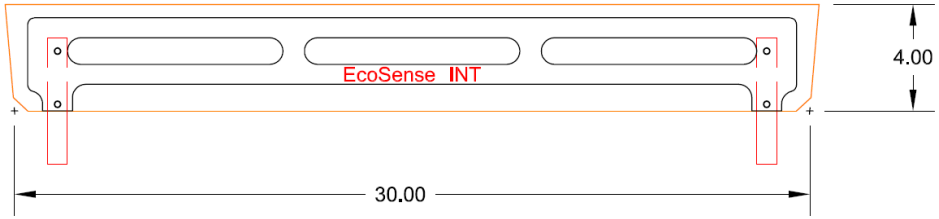
Shortly after installation, a rain event caused flooding on Ocean Drive due to debris clogging the grates. A similar situation was observed at all locations where grates were installed.

Two Types of Grates Installed

Stop Ocean Pollution Grates

Specifications	Price includes the following	Price per filter	Price for 15 filters
6061 Aluminum curb inlet filter Height: 8” Length: 48”	- Manufacturing - Installation documentation - In-person consultation to train the company that will install the filters	$275	$4,125
Shipping	- Shipping 15 filters to zip code 33139	N/A	$130
Installation Materials	- 2 cut-off wheels for metal - Concrete - Construction Adhesives - Anchors - Angles - Utility wire	$17	$255
		Total	**$4,510**

EcoSense Grates



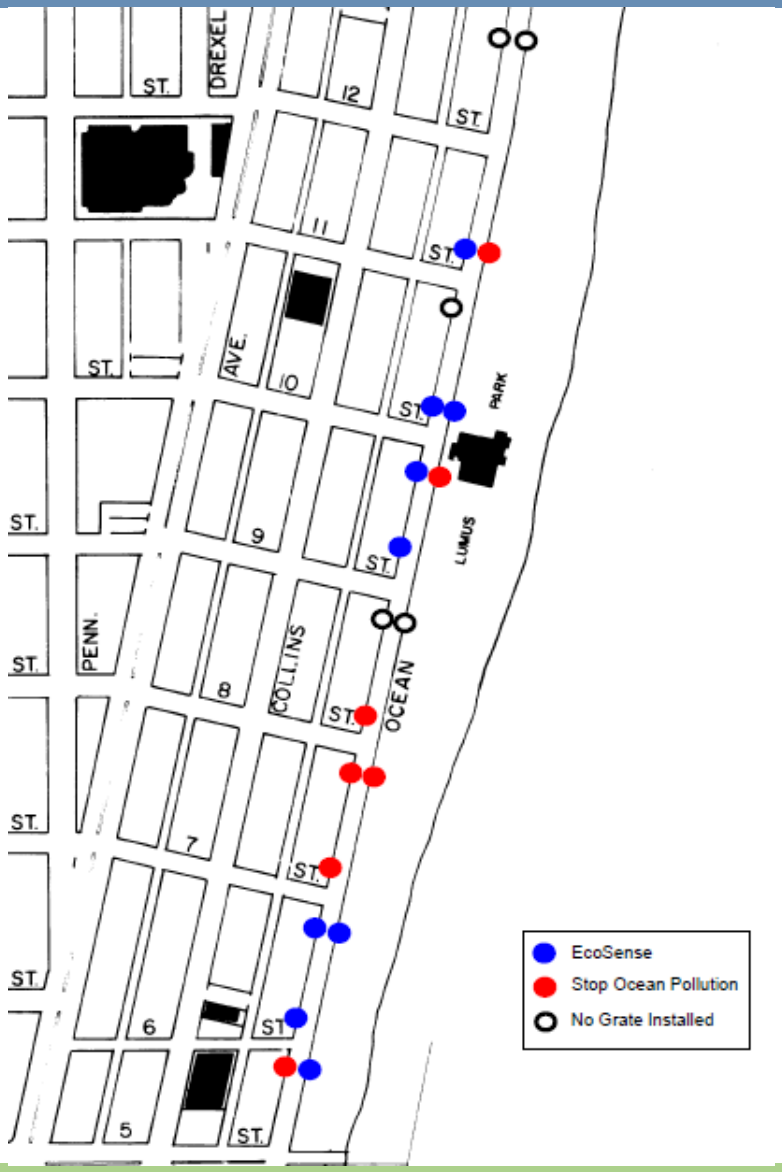
Terms	Sales Rep	FOB	Lead Time
Net 30	RB	ESI	3 - 4 Weeks

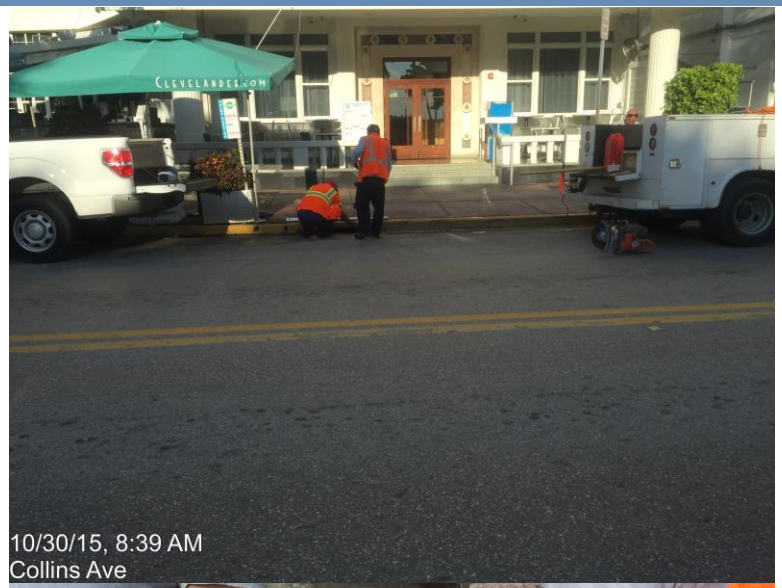
Lin...	Part #	Description	Qty	Cost	Total
1	10002030	Curb Inlet Grate for 30" Curb Inlet Dimensions: 30" x 4"	8	89.00	712.00
2	10002029	Curb Inlet Grate for 42" Curb Inlet Dimensions: 42" x 5.5"	7	98.00	686.00

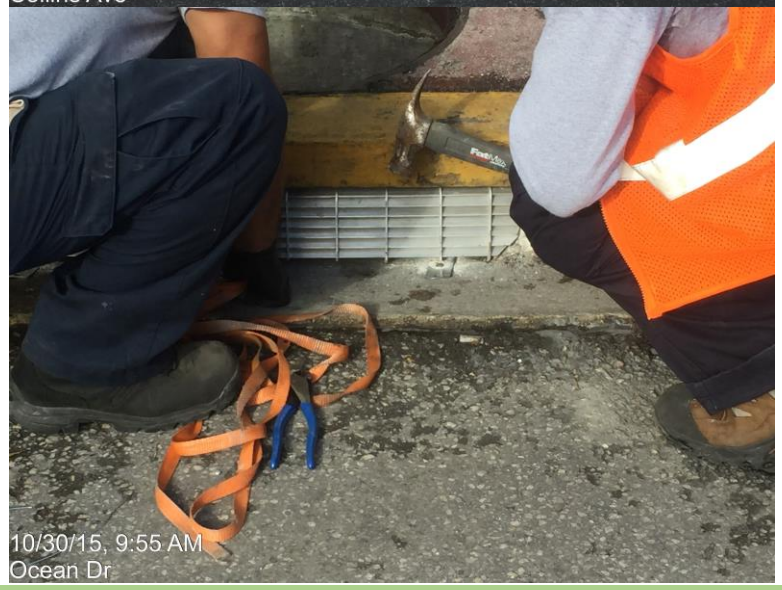
QUOTE VALID FOR 30 DAYS
This quote has been provided to you for your convienence. Please sign and return to indicate your acceptance of this quote with a purchase order.
Offerta valida per 30 giorni. Questa citazione è stata fornita voi per il vostro convienence. Prego firmate e rinviate questo documento di accettazione di questa quota con un ordine d'acquisto.
Offerte geldig gedurende 30 dagen. Deze aanbieding is voor uw gemak gemaakt. Om uw bestelling te plaatsen hoeft u deze aanbieding alleen is ondertekenen en terug te sturen. Wij weten dan dat uw order geplaatst is en verwerkt kan worden.

Total USD 1,398.00

Installation Locations on Ocean Drive







Flooding from Stormwater Grates

Actions Taken

Daily cleaning of the grates was required along with routine inspections during rain events to clear clogs.

The City received numerous phone calls, service requests, and other complaints regarding the ineffectiveness of the grates during the short time they were installed.

Stop Ocean Pollution representatives advised Public Works staff that grates may have been installed incorrectly, therefore contributing to the problem. The issue continued after adjustments were made by Stop Ocean Pollution representatives.

Flooding from Stormwater Grates, 8th Street

Figure 1: Pictures (above) taken after street sweepers passed by drains.

Flooding from Stormwater Grates, 8th Street

Figure 2: Stop Ocean Pollution Grates clogged with trash and debris do not look aesthetically pleasing in between cleanings.

Flooding from Stormwater Grates, Ocean Drive

Figure 3: Grates clog and backup water into the street.

Flooding from Stormwater Grates, Ocean Drive

Figure 4: EcoSense grates are better for stopping larger items but need to be cleaned frequently by street sweepers.

Flooding from Stormwater Grates, Ocean Drive

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Flooding from Stormwater Grates, Ocean Drive

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EcoSense grates, flooding from stormwater grates

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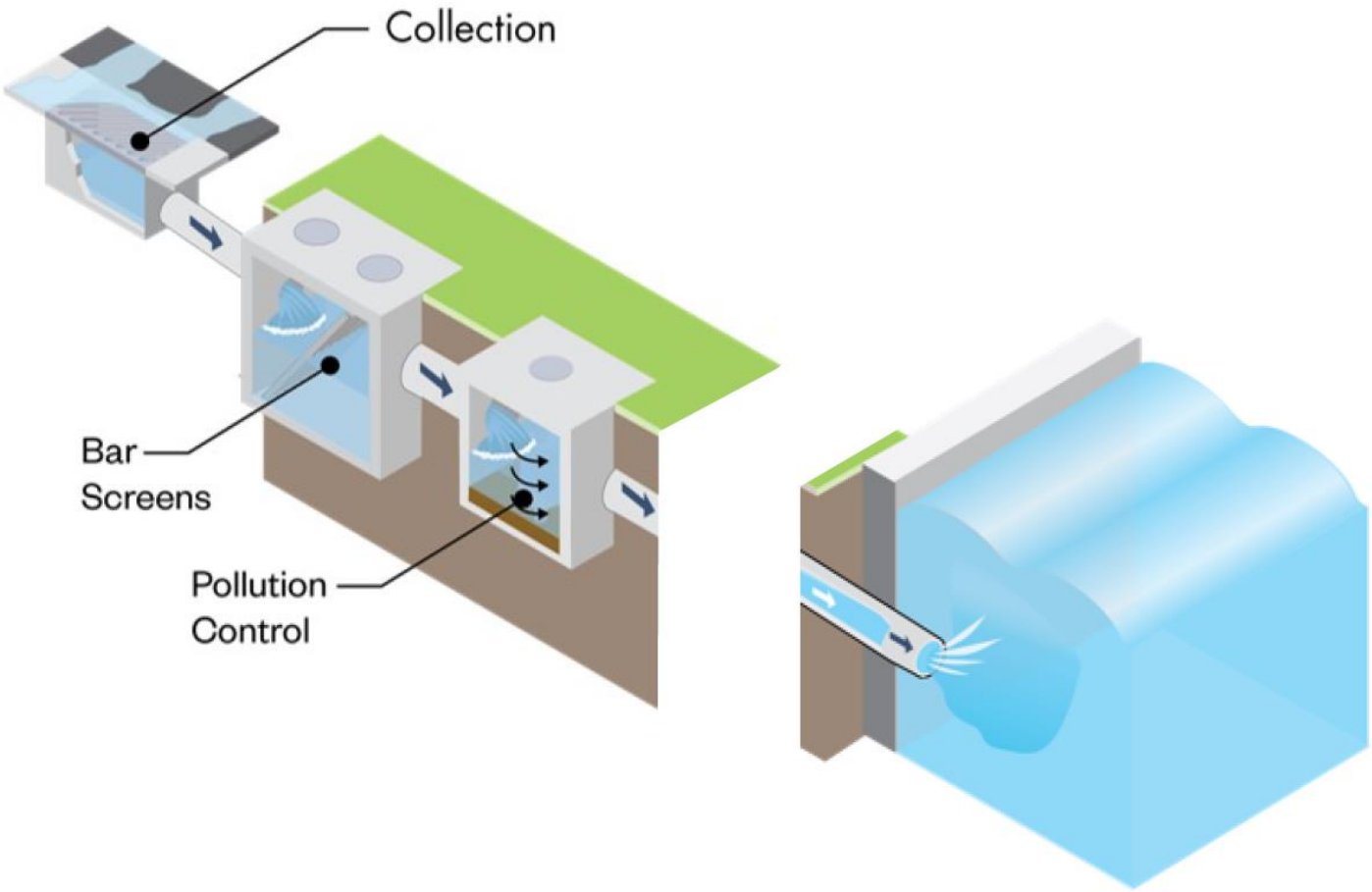
Flooding from Stormwater Grates

Determination

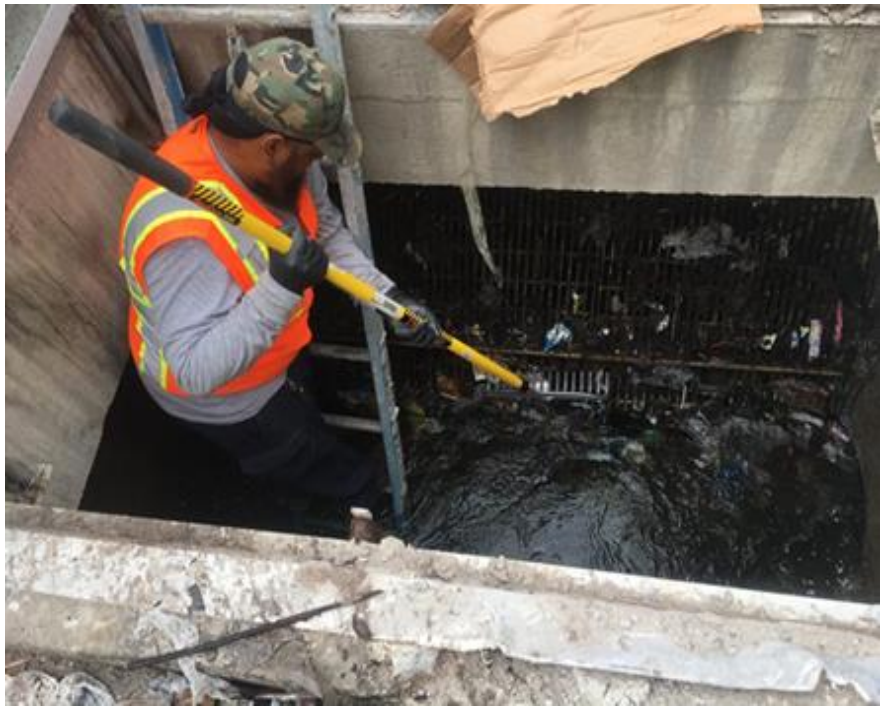
City staff determined these stormwater grates were not a good fit for the City.

The process is extremely labor intensive. The daily inspections cleaning of the city's 4100 storm inlets is cost prohibitive. Less impact to collect the trash at the pump stations collection systems

Current Pump Station Design



Cleaning at Screen/Trash Rack Structure



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