

GLOBAL GATEWAY CENTRAL

NEWSLETTER

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Cometh the Slotted Trenches:

Phase 1A prepares for future storms. Rain water run off control handled by a terminal version of the "French Drain."

By S K Hessenauer

When April Showers Brings May Flowers, where does all the water go? Eventually into the bay through the GGC storm drain system, but first it runs into these bad boys-meet the slotted trench. Well, at least meet the slit trench foundation for Phase 1A water run-off removal.



Deep below the ground at GGC, and very early in the Phase 1 construction project, huge plastic tubes were buried and tied into our existing storm drain and run-off system. These have been long ago covered by the Port of Oakland Prime Contractor O. C. Jones, but they are there, just quietly waiting for the time to come when their vital job of rain

water removal comes to fore.

You may not realize it, but the new GGC asphalt is not going to be just one large flat surface. The Port of Oakland specially designs the terminal surface to have varying elevations in order to cause the sheeting effect of rain storms to drain into low areas and be carried away by the storm drainage system.

At the low points of the varying elevations lie our slotted trench system, and deep below these structures live the storm drains which carries rain water into the bay.



Slotted trenches are a hardened version of a French Drain sunk into the asphalt of the terminal. French Drains, typically used to divert water from our homes

if we have drainage problems, are long gravel filled trenches, containing a pipe that has holes running along the bottom to allow water to percolate through the soil and be carried away to the storm drain. A slotted trench fulfills the same function.



The tubes above will be buried under ground, with the narrow metal mouths facing upward. A removable grate will be placed over the mouth to keep trash and debris from entering the drain and allow water to fall into the tube. The tubes are long and will create a continuous drainage mouth because in very heavy rains, something called "Sheeting" occurs. Sheeting is generated by heavy volumes of water hitting a flat surface and instantaneously creating a large

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pool, especially if the drainage mouth is not large enough to carry away the volume of water at the rate it is falling onto the terminal.

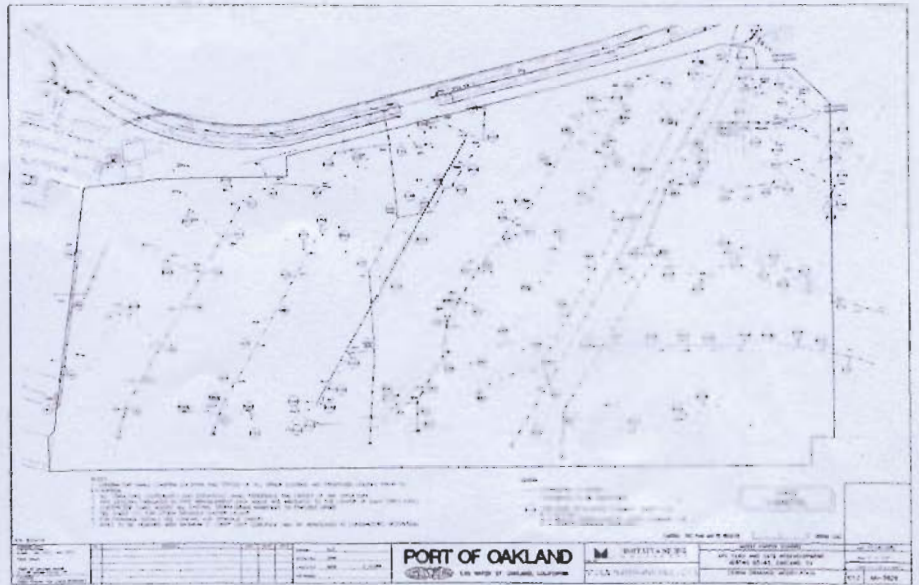
If you think about a very heavy rain falling on the freeway when you drive, you see that even though the road may be slanted to carry away the water, sometimes your car will "Plane" if you drive to fast because your tires "Hydro-plane"; that is start running on water rather than on the road. When that happens! Watch out!



Well, on terminal, we don't have to worry about Hydro-planing since our speeds and cargo weights keep us firmly on the ground, but with a heavy storm, and a large area of relatively flat surface, water can build up fast and cause flooding.

How do we ensure this does not happen?

It's in the Network man! The Slotted Trench Network that is! It's keeping you high and dry while your April Showers brings your May Flowers!



Diesel Particulate Reducer - "All I need is the Air that you Breathe" By Steve Larippa

At GGC we have installed 222 EPS Diesel Particulate reducers on our Nose Mount and Under Slung Gen Set fleet in the last 10 months .This is just one of M&R's

contributions to help clean the air that we all breathe. In addition to reducing particulate matter, this reducer valve also saves approximately 10% of diesel fuel usage. This work is also taking place at GGS and GGN also.

M&R has also restricted the idling time on all of our UTR's (tractors) and all diesel Container Handling Equipment to 15 minutes. This is also a contributor to cleaner air and fuel savings. Combined with the Ultra Low Sulfur Diesel fuel that we are utilizing at GGC, we are



Chassis Side-mount



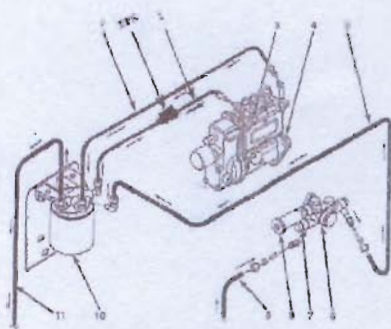
Chassis Center-mount



Reefer Clip-on



making a measurable difference in reducing particulate matter and NOX. We are considering using a Bio Diesel blend at this time and analyzing test results. More information will follow as these test results are known.



1 Fuel Inlet Line	8 Fuel Strainer
2 Fuel Supply Line to Injection Pump	9 Inject Pump
3 Fuel Bleed System	10 Fuel Supply Line
4 Injection Pump	11 Fuel Inlet Filter
5 Fuel Supply Line to Fuel Filter	12 Fuel Return Line
6 Fuel Filter	13 Particulate Reducer
7 Diesel Pump	