TRENDS IN FACILITIES ENGINEERING

Presented by
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Port of Los Angeles
Driving Forces

- Trends in shipping (Larger Container Vessels)
- Container Cargo Growth
- Roadway/Rail Traffic Congestion
- Security
- Environmental Concerns
Trends in shipping
(Larger Container Vessels)

- 9,100 TEU
- 6,600 TEU
- 4,800 TEU
Trends in shipping (Larger Container Vessels)

Deeper and Wider Navigation Channels, etc.
Trends in shipping
(Larger Container Vessels)

Larger Cranes/ Higher Wharf Loads
Trends in shipping
(Larger Container Vessels)

Larger Cranes/ Higher Wharf Loads
Trends in shipping (Larger **Cruise** Vessels)

- Deeper Draft
- Higher Air Draft
- Wharf Loads
- Parking Requirements
- Traffic Control
Container Cargo Growth

Mercer Forecast
San Pedro Bay


Total Throughput
Container Cargo Growth
Higher Throughput Velocities
Container Cargo Growth
Higher Throughput Velocities

OCR Gate Portal at TraPac POLA
Container Cargo Growth
Higher Throughput Velocities
Container Cargo Growth
Higher Throughput Velocities
Roadway/Rail Traffic Congestion
Roadway/Rail Traffic Congestion
Security
Security

Vacis X-ray Inspection in Hong Kong for Automated Inspection of Emptyships

Radiation is beamed between these two panels.
Environmental Concerns
Environmental Concerns

Leadership in Energy & Environmental Design®

Low Impact Development

Key Elements of LID

Conservation
Preserves native trees, vegetation and soils.
Maintains natural drainage patterns.

Small-scale Controls
Minics natural hydrology and processes.

Customized Site Design
Ensures each site helps protect the entire watershed.

Directing Runoff to Natural Areas
Encourages infiltration and recharge of streams, wetlands and aquifers.

Maintenance, Pollution Prevention and Education
Reduces pollutant loads and increases efficiency and longevity.
Educates and involves the public.
Environmental Concerns

Vessels Generate a Large Fraction of Total Port Pollution

Diesel Yard Cranes Are Also Significant Emitters
Environmental Concerns
Alternative Marine Power (AMP) Wharf-to-Vessel Cable Connections
Alternative Maritime Power (AMP)
Environmental Concerns

Review of Greenest Terminal Features

- Electric power for vessels at berth
- Electric dock cranes
- Automated low emission transport vehicles
- End-loaded electric yard cranes
- Automated mooring to reduce vessel idle
- On-terminal IY served by electric rail cranes
- Street trucks turn off engines while awaiting service
- Gate appointments minimize wait time for street trucks
Questions?