Facilities Engineering Seminar: Master Planning

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Port Master Planning Considerations Overview

- Need to understand dynamic, global market conditions (flexibility and programmatic planning)
- Need to optimize existing operating assets and facilities
- Need to be sustainable (including climate change) and have energy resiliency
- Need to be proactive with both internal and external stakeholders
- Need to develop “cost effective” improvement programs that best meet existing tenant/client needs and future market opportunities
Master Planning is an Important Step

> Port master planning allows a port to be proactive in identifying and solving future issues and problems by:
  - Optimizing existing facilities and assets
  - Understanding the business needs of both current and future tenants
  - Providing the flexibility to anticipate and react to new market opportunities
  - Keeping both internal and external stakeholders informed through good communication and outreach programs
  - Identifying future facility and operational requirements before they become critical and a bottleneck to growth
  - Coordinating future needs/plans with other local and regional entities to ensure support and avoid conflicts
Master Planning – Typical Process

Public Participation Program

Notice to Proceed

Initial Project Meeting
- Review Port’s Mission, Goals & Objectives and Overall Business Plan

Develop schedule for informational meetings with Port Staff, Other Stakeholders and Public

Final Public Participation and Establish Liaisons with Other Port Users/Entities

Meetings with key Port Stakeholders Throughout

Public Meeting #1
- Public Meeting to Discuss Master Plan Process

Public Information Tools:
- Websites;
- Emailing List;
- Flyers, etc.

Public Meeting
- Public Meeting to Discuss Preliminary Master Plan

Develop Demand Forecasts:
- Cargo, Passenger, Other Business Opportunities

Environment and Sustainability Reviews of Projects

Assessment of Port Facility and Capacity Versus Market Demand

Identification of Facility Requirements and Capital Projects Required To Meet Demand

Review Meeting
- Facility Conditional Assessment, Shortfall, Long-term Demand Analysis and Capacity Improvements Required

Review Meeting
- Recommended Port Improvement Plan, Plan Implementation Plan

Finalize Port Improvement Plan

Finalize Port Master Plan

Capital Improvement Program/Planning and Budgets

Terminal Inventory and Capacity Analysis:
- Condition, Capacity and Efficiency Analysis of Existing Facilities and Operations

Land Use Plan:
- Identify Available Parcels
- Land Valuation Analysis

Transportation Plan:
- Intermodal Plan;
- Traffic/Roadway Plan

Phase I: Facility Assessment

Phase II: Set Port Strategic Vision and Direction (Market Forecasts)

Phase III: Develop Master Plan and Capital Investment Strategies

Public Participation Program
Phase I Review of Existing Documents and Facilities Assessment

Review Existing Planning Documents:
- Master Plan
- Maintenance Reports
- Facility Condition Reports
- Off-site Development Plan

Terminal Inventory and Capacity Analysis:
- Condition
- Capacity and Efficiency Analysis of Existing Facilities and Operations

Transportation Plan:
- Intermodal Plan
- Traffic/Roadway Plan

Land Use Plan:
- Identify Available Parcels
- Land Valuation Analysis

Port Asset Management Program
Facility Condition Assessments (FCA) are a key to a “cost effective” plan and future port asset management program.
Facility Condition Assessments and Operational Inventory

A critical element of any master plan – making the best use of the port’s *existing* assets
Phase II: Set Port Strategic Vision and Direction (Market Forecasts)

**Master Plan**
Needs to set a vision and direction rather than just react to short-term opportunities

**Initial Project Meeting to:**
- Review Port’s Mission
- Goals & Objectives
- Overall Business Plan

**Review Existing Business and Marketing Plans**

**Identify and Evaluate Strategic Opportunities**

**Develop Demand Forecasts:**
- Cargo
- Passenger
- Other Business Opportunities
Phase III Develop Master Plan and Capital Investment Strategies

- Environment And Sustainability Reviews of Projects
- Capital Improvement Program/ Phasing and Budgets
- Finalize Port Improvement Plan
- Finalize Port Master Plan

Assessment of Port Facility and Capacity Versus Market Demand
Identification of Facility Requirements and Capital Projects Required To Meet Demand

Capital Improvement Plan
Must make best use of limited budgets
Current/Recent Port Master Plan Projects – Understand What You Have

> Port Authority of New York and New Jersey
  – Will include a demand and capacity analysis, working to define an AM Program

> Port of Philadelphia
  – Finished a Strategic Plan, starting a condition assessment and master/capital plan

> Port Canaveral
  – Combining several on-going tasks into one Master Plan

> Port of New Orleans
  – Update of the Master Plan

> Port Freeport
  – Included an FCA as element to the recently completed Master Plan

> Port of Tacoma
  – Developed “State of Art” Asset Management Program

> Port of San Diego
  – Completed visioning, framework review and extensive public outreach, on-going Asset Management Program and will include environmental analysis and program of future uses

> Port of Long Beach
  – Will include a land use, extensive public outreach and a master plan update; developing an Asset Management Roadmap

> Port on Longview
  – Finished an AM Roadmap and starting a strategic vision update

> Port of Houston
  – Developing an Asset Inventory Program to understand what they have before starting their Strategic/Master Plan update
70 Years of Shaping the Future

> Founded in 1945
> A strong reputation throughout our domestic and international operations
> Engineering News Records Top Firms Lists
  – #44 Top 500 Design Firms
  – #55 Top 200 Environmental Firms
> A dedicated staff that specializes in port/terminal planning and design:
  – Port and Terminal Master Plans
  – Bulk Terminal Planning and Material Handling Studies and Design
  – Container Terminal Designs
  – Equipment Studies and Specifications
  – Cost Estimating
  – Vessel Maneuvering and Hydrodynamic Modeling
  – Dredged Material Management and Navigational Studies
  – Sustainability and Energy Planning