

Transportation Landscape Architecture



District 12 July 2008

Transportation Landscape Architecture



VALUES
Aesthetic
Environment
Scenic
Community











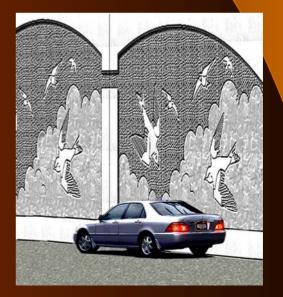
Aesthetic

• Protect and improve transportation facility aesthetics.











Environmental

- Integrate transportation facilities and the environment:
 - ✓ Preserve and restore habitat.
 - ✓ Conserve agricultural lands.
 - ✓ Conserve water with drought tolerant plants.
 - ✓ Use inert materials for groundcover.
 - ✓ Use non-potable water.
 - ✓ Prevent storm water pollution.









- Assess potential adverse visual impacts.
- Design mitigation for scenic protection and preservation.



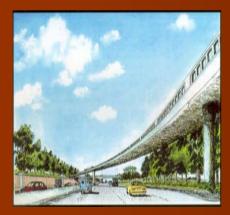






Community

- Integrate transportation needs:
 Community goals.
 Community involvement.
 Corridor planning.
- Implement Context Sensitive Design Policy









Landscape Architecture Design Considerations



- Context Sensitive Design Policy
- Freeway Master Plans
- Corridor Aesthetic Considerations
- Plant Selection Process
- Native Plant Considerations
- Drought Considerations



Context Sensitive Design Policy

- Harmonize roadway, topography and land use.
- Preserve and enhance community character.
- Meet needs of non-motorized travelers.
- Support transportation art and community identification.





Freeway Master Plans



Dames & Moore, Inc.

December, 1995

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December, 1995

Freeway Master Plan

Master Plan of Freeway and Transit Corridor Enhancements: Creating a quality environment along Orange County's Transportation Network

MASTER PLAN OF FREEWAY AND TRANSIT CORRIDOR ENHANCEMENTS:



Creating a Quality Environment Along Orange County's Transportation Network







Transportation Authority

Orange County

California Department of Transportation, District 12

> Dames & Moore, Inc. December, 1995



Corridor Aesthetic Considerations











Master Plan of Freeway and Transit Corridor Enhancements:

- Northern Canyon
- Suburban Basin
- Northwest Bay
- Agricultural/ Office Industrial Park
 Ocean
- •Upland Residential
- Mission/Rural



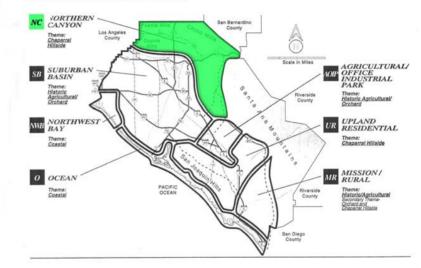
Northern Canyon

- Route 57
- Route 90
- Route 91



LANDSCAPE UNITS

The following section provides a discussion of each Landscape Unit. Eight main topics are summarized including: Cities, Visual Character (Dezign Theme), Landmarks, Gateways, Crossroads, Freeway and Rail Corridors, Existing Corridor Dezign Characteristics, and Project Dezign Opportunities. All topics are organized by landscape unit and identified by the symbol which represents the unit. In addition, the theme for each unit is identified below and referenced within each section.













Northern Canyon



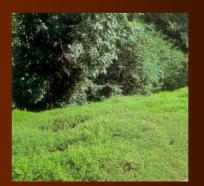


Design Theme

Chaparral Hillside

- Aesthetic Treatment
 - ✓ Natural Elements
- Landscape Treatment
 - ✓ Natural
 - ✓ Drought tolerant







Suburban Basin





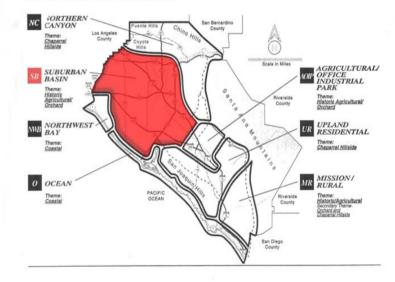
• Route 5

• Route 22

- Route 55
- Route 57
- Route 91
- Route 405
- Route 605

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Suburban Basin







Design Theme Historic Agriculture/ Orchard

- Aesthetic Treatment
 - ✓ Geometric
- Landscape Treatment
 - ✓ Row Pattern
 - ✓ Symmetrical







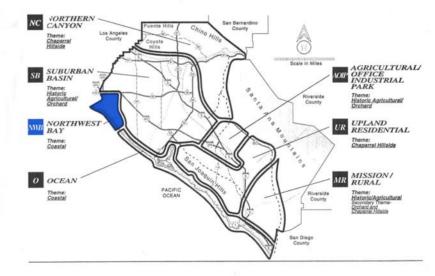


Northwest Bay

- Route 1
- Route 22
- Route 405

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Northwest Bay





Design Theme Coastal

- Aesthetic Treatment
 - ✓ Natural
- Landscape Treatment
 - ✓ Free Form









Agricultural/ Office Industrial Park

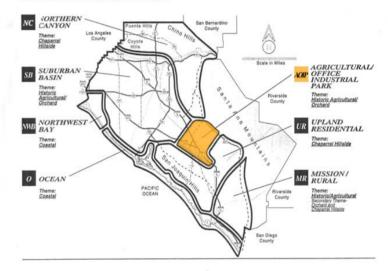


• Route 5

- Route 133
- Route 231 Toll
- Route 241 Toll
- Route 405

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Agricultural/ Office Industrial Park





Design Theme Historic Agriculture/ Orchard

- Aesthetic Treatment
 Geometric
- Landscape Treatment
 Row Pattern
 - ✓ Symmetrical





• Ocean

Route 1 Route 5







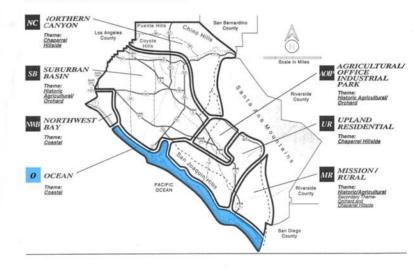






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• Ocean



Design Theme Coastal

Aesthetic Treatment
 ✓ Natural



Landscape Treatment
 ✓ Free Form





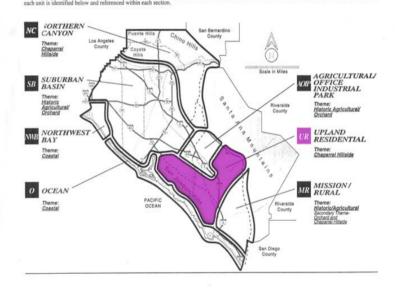




• Upland Residential

- Route 5
- Route 133
- Route 73 Toll
- Route 241 Toll

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• Upland Residential





Design Theme Chaparral Hillside

- Aesthetic Treatment
 ✓ Natural Elements
- Landscape Treatment
 Natural
 Drought tolerant







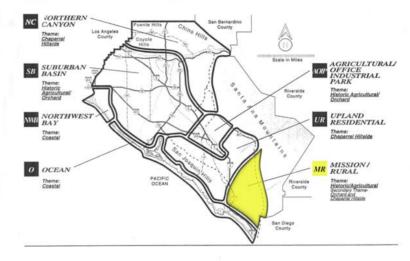


• Mission/ Rural

Route 5 Route 241 Toll

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Mission/ Rural





Design Theme Historic /Agricultural

- Aesthetic Treatment
 ✓ Historical
- Landscape Treatment
 - ✓ Row Pattern
 - ✓ Natural







Route Design Considerations



Aesthetic Treatments



Landscape Treatments



































































Route 5/22/57 Interchange









Galtrar































Route 55/405 Interchange























Routes 22/405/605 Interchange































Route 5/91 Interchange













Toll Roads















Plant Selection Criteria











• Safety

- Context Sensitivity
- Environmental Analysis
- Cost
- Maintainability













Native Plant Considerations



California Sycamore



Toyon



Native Grasses

- Use when feasible.
- Use for mitigation purposes.
- Sensitive to environmental conditions.









Oaks



California Pepper



Native Plant Considerations





- Dormant/brown in summer.
- Complex to create native micro-climate.
- Flammable.













Drought Considerations







- Caltrans Water Conservation Efforts
 - ✓ Proactive design for drought resistance.
 - ✓ 1993 Deputy Directive to Conserve Water.
 - ✓ 1993 Reclaimed Water Master Plan.
 - ✓ Remote irrigation systems (RICS).
 - ✓ Low water use plants.
 - ✓ Mulch, paving, inert material.



Drought Considerations





SUMMARY OF REGIONAL WATER STORAGE IN 151 MAJOR RESERVOIRS

(1000 4011)						
AREA	NO. OF RES.	TOTAL CAPACITY	HISTORICAL AVERAGE	30-Apr 2008	PERCENT OF AVERAGE	SHORTAGE STATUS
			INTRASTATE		- contraction of	
NORTH COAST (NC)	6	3,096	2,490	2,080	84%	OK
SAN FRANCISCO BAY (SF)	14	546	401	386	96%	OK
CENTRAL COAST (CC)	6	970	710	706	99%	OK
SOUTH COAST (SC)	29	1,989	1,527	1,467	96%	OK
SACRAMENTO RIVER (SR)	43	16,001	13,155	10,361	79%	OK
SAN JOAQUIN RIVER (SJ)	34	11,439	7,743	6,707	87%	OK
TULARE LAKE (TL)	6	2,044	1,050	817	78%	OK
NORTH LAHONTAN (NL)	5	1,072	610	450	74%	OK
SOUTH LAHONTAN (SL)	8	402	260	266	102%	OK
SUBTOTAL	151	37,559	27,946	23,240	83%	
			INTERSTATE			the state of the s
NORTH COAST (NC)	3	1,107	825	677	82%	OK
COLORADO RIVER (CR)	4	53,590	40,655	25,873	64%	OK
TOTAL	158	92,256	69,425	49,791	72%	

SERIOUS WATER SHORTAGE: Water storage has fallen 50% below historical average CRITICAL WATER SHORTAGE: Water storage has fallen 70% below historical average

Water Conservation Marks 7-18-08 Attachment H20 Disrege Dist MayOE.co.

✓ Project Development Procedures.

✓ Serious water shortage procedures.

✓ Critical water shortage procedures.

Current water shortage status.



Proactive Water Conservation Practice

1993 Director's Water Conservation Honor

Category : Water Management

Utilization of Proactive Management Strategies

Presented to :

District 12

"District's 'can-do' attitude and aggressive efforts to negotiate feasible reclaimed water agreements with local agencies resulted in substantial potable water savings."

























