City of Newport Beach
Coastal/Bay Water Quality Citizens Advisory Committee Minutes

Date: March 8, 2012
Time: 3:00 p.m.
Location: Fire Conference Room

1. **Call Meeting to Order**

2. **Roll Call**
   Committee Members present:
   Chairwoman/Mayor Nancy Gardner
   Council Member Michael Henn
   Dennis Baker
   Jim Miller
   Randy Seton
   Janet Rappaport
   Roberta Jorgensen

   Guests present:
   Pat Fuscoe, Fuscoe Engineering
   Ray Heimstra
   Monica Mazur
   Jim Mosher
   Valeri Nguyen
   Jian Peng – County of Orange
   Dan Purcell
   Jack Skinner, SPON

   Staff present:
   John Kappeler, Water Quality Manager
   Shirley Oborny, Executive Assistant to the City Manager
   Michelle Clemente, Marine Education Supervisor

3. **Public Comments on Agenda Items**

4. **Approval of Minutes**
   The minutes from the February 9, 2012, meeting were approved.

5. **Old Business**
   (a) Bay and Ocean Bacteriological Test Results
   Monica Mazur reviewed recent water quality test results within Newport Bay and along the ocean shoreline.

6. **New Business**
   (a) Green Streets Program
   Pat Fuscoe gave a PowerPoint Presentation (attached).
   - **Mr. Baker** said in order to change policy, there has to be an economic value. Mr. Fuscoe said he looks for economic value in order to pitch the concept, such as features that help to keep cities compliant with water quality requirements, i.e., creating a

benefit district. He said grant money is available for some of the concepts he spoke about.

- In response to **Mr. Baker's** question about drilling holes in concrete for drainage, Mr. Fuscoe suggested premade dry wells.
- **Mr. Baker** said there are opportunities in alleys to install permeable pavement at the same time undergrounding work is done.
- **Mr. Kappeler** said the City's new NPDES permit requires new roadways to incorporate green street standards.
- **Mr. Fuscoe** talked about hydro-modification. It's has to do with containing runoff to control the flow of water to help prevent erosion.

(b) Copper Reduction Project and TMDL Update

- **Mr. Heimstra** gave a PowerPoint Presentation (attached). He said only three boats switched over to the non-copper boat paint as a result of the voluntary program.
- **Chairwoman Gardner** said the City hasn't seen a lot of evidence of harm being done as a result of copper in the water so it's hesitant to spend a lot of funds when there's no guarantee it will help the problem. **Mr. Heimstra** said the studies have been done and if there is a copper level of 3.1 micrograms per liter or more, there is an impact on the environment, whether or not it can be seen. **Mr. Peng** clarified that an absence of specific species in the environment indicates impairment.
- **Mr. Seton** asked about legacy copper in the bay. **Mr. Peng** said there are 50,000 lbs. of copper going into the water body annually, regardless of legacy copper. The copper leaches from the boat paint.
- **Mr. Skinner** talked about how little 3.1 micrograms is – discussion ensued.
- **Mr. Heimstra** mentioned three action items to be aware of:
  1) The possible adoption of the Copper Biologic Ligand Model (BLM)by the USEPA;
  2) What it means if Copper Bill SB 623 is passed;
  3) Funding mechanism to deal with the copper issue. One possibility is charging boat owners a fee for using copper paint.

Action: **Mr. Peng** offered to forward to staff the SCCWRP study that shows boat paint leaches copper into the water. **Mr. Kappeler** will invite Ken Schiff from SCCWRP, the author of the study, to speak at a future committee meeting.

7. Topics for Future Agendas

(a) Bacteriological Dry-Weather Runoff Gutter Study (Phase III)
(b) Prop 84 ASBS Grant Program
(c) Big Canyon Project
(d) Coastal Dolphin Research Program
(e) Rhine Channel Project Wrap Up
(f) G3 – The Green Gardens Group
(g) Newport Bay Sediment TMDL Update
(h) Balboa Island Seawall Update

8. Public Comments on Non-Agenda Items

- **Mr. Seton** said he's meeting with Chris Miller to discuss having the Harbor Commission and the Coastal/Bay Water Quality Committee work on an issue together.
- **Mr. Skinner** updated the group about a discussion at OC Coastkeeper where sediment TMDL 10-yr average load of 62,000 lbs. was discussed.

Action: **Mr. Kappeler** will meet with Mr. Kiff to discuss the sediment TMDL and will move Item 7(g) further up on the list of agenda items.

- **Mr. Kappeler** reminded everybody about tonight's WaterMiser Workshop at the Central Library.

9. Set Next Meeting Date

The next meeting date was set for April 12, 2012, at 3 pm in the Fire Conference Room.

10. Adjournment

The meeting was adjourned at 4:47 pm.

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GREEN STREETS
GRAY TO GREEN

City of Newport Beach

presented by
Patrick R. Fuscoe, PE

March 8, 2012

full circle thinking®

Social/Economic Sustainability

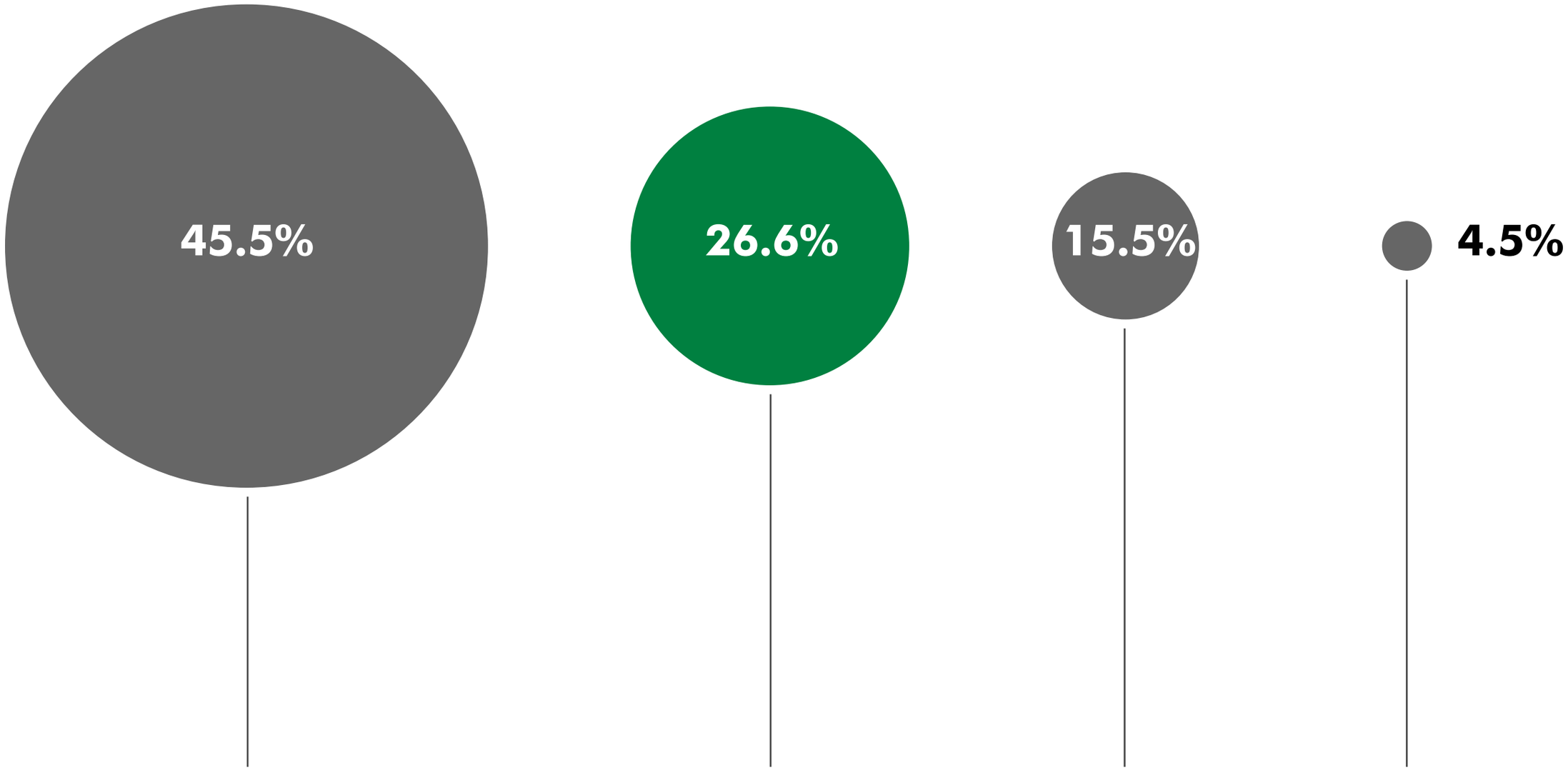
- Streets are 20% of Land Area and are Our Connecting "Circuit Boards" for Moving Us To & Fro

- Streets Should be Considered Valuable Real Estate and Deserve Multi-Function Use and Amenity Value

- Streets Become "Urban Open Space" and Identify Neighborhoods or Districts

- Streets Can be a "Green Utility"

Streets make up over a quarter of the city's land area.
(Source: PlaNYC Sustainable Stormwater Management Plan,2008)



Percent of New York City Land Area By Use

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Three Step Template

POLICY

- Enables/Incentives

DESIGN GUIDELINES

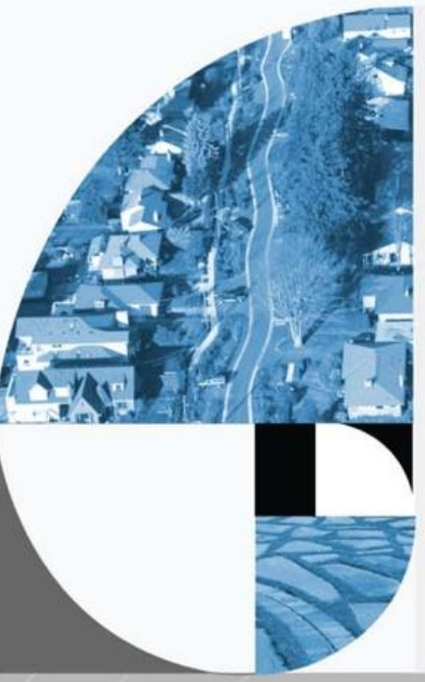
- Initiate & Inform

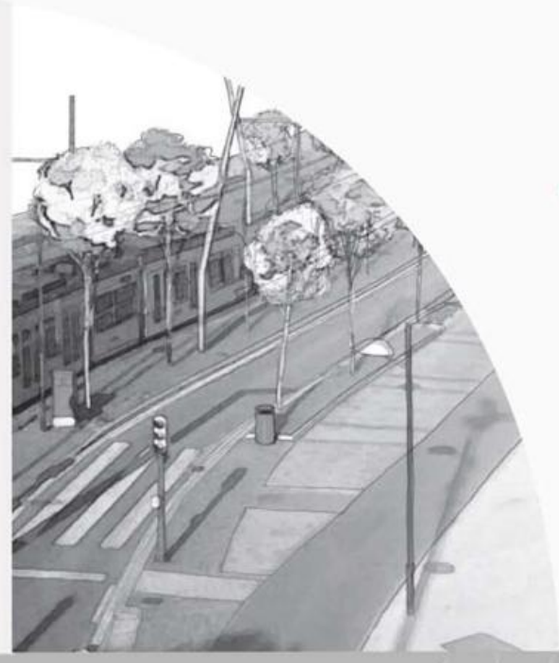
WORKABLE SOLUTIONS

- Site Specific Applications

Sustainable Travelways

"Green Streets" Administrative Guidelines





ORANGE COUNTY GREAT PARK

CITY OF IRVINE 1971

"Growth is inevitable and desirable, but disruption of natural capital and community character is not. The question is not whether your part of the world is going to change. The question is how."

- Edward McMahon, *The Conservation Fund*

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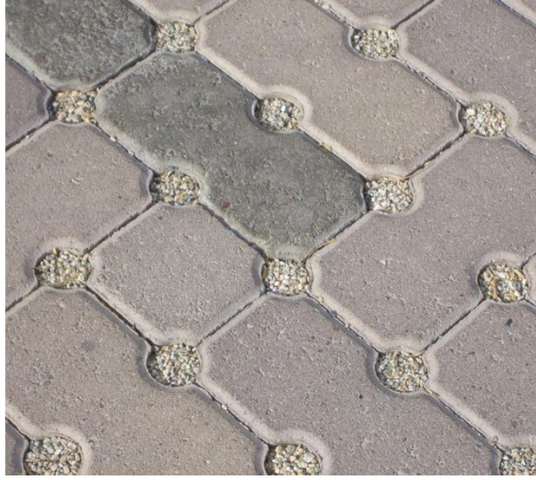

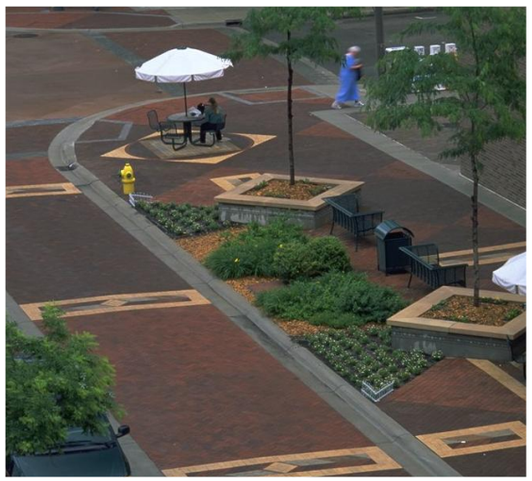

The Green Streets Committee

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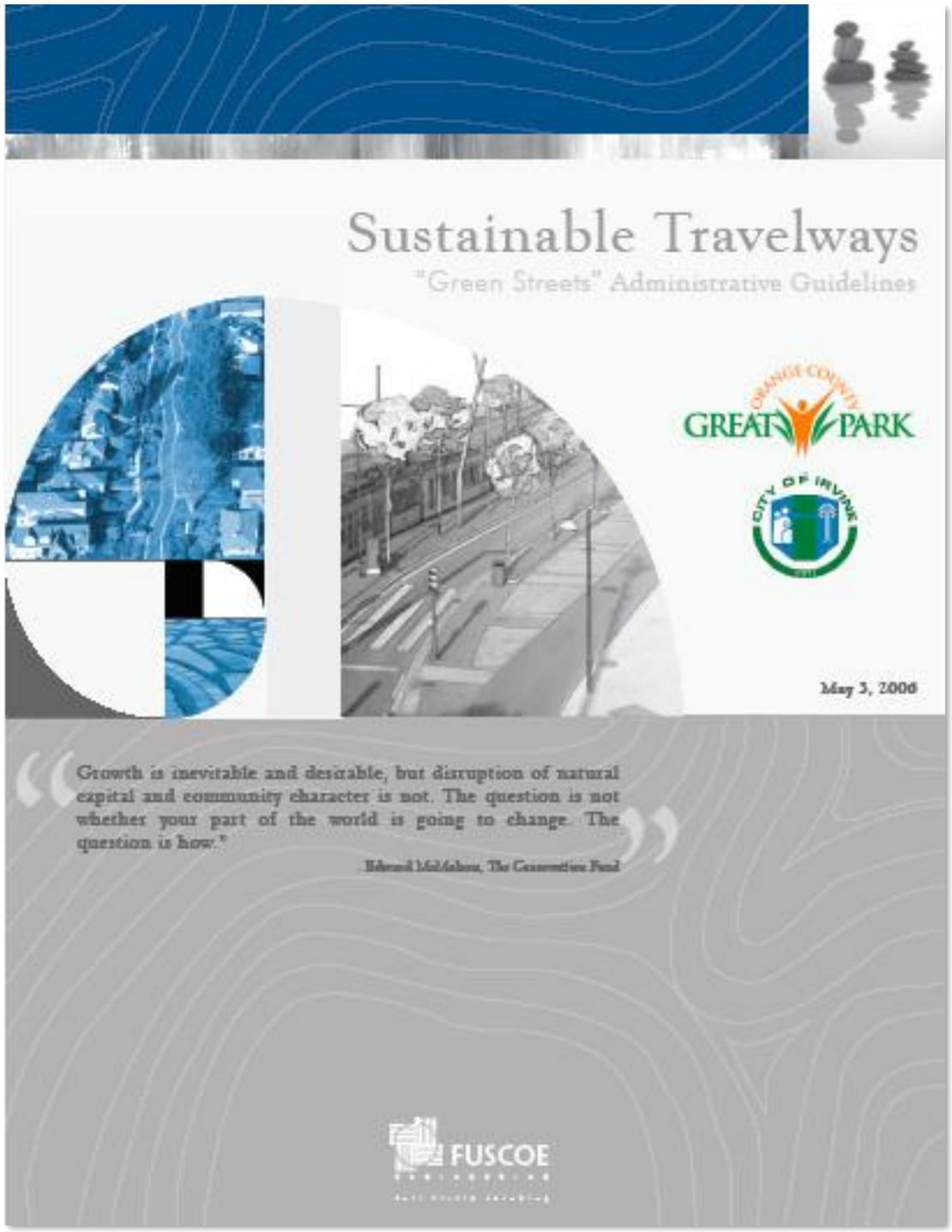
City of Irvine Redevelopment Agency - Green Streets



14 Features

- Infiltration Trenches
- Bottomless Catch Basins
- Filter Strips/Vegetated Buffers
- Tree Box Filters
- Permeable Paving
- Bio-Swales
- Bio-Retention Cells
- Stormwater Planters
- Enhanced Tree Canopy
- Traffic Calming Features
- Reduced Pavement Widths
- Integrated Transit
- Reflective Colors
- Alternative Lighting

Feature Format

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ON-SITE & ROADSIDE BIOSWALES

CAPABILITIES

- A bioswale is a form of bioretention used to treat for water quality, attenuate flooding, and convey stormwater away from critical infrastructure.
- Bioswales are a low-impact, ecological way to meet stormwater treatment regulations for pollutant removal while maintaining stormwater management efficiency.
- Bioswales treat stormwater runoff by intentionally slowing down the flow rate and allow effective infiltration into the underlying soil.
- Helps to remove silt and pollutants before water enters a storm sewer or watershed.
- Effective in non-industrial locations such as parks, residential areas, office buildings, parking lots, roadways and rooftops.

STATISTICS

- Meets 85th percentile (two year frequency) MS4 Water Quality permit and City Ordinance Requirements
- Can "reuse" infiltrated water as irrigation for trees and understory foliage while recharging groundwater or rock surfaces
- Effective biofiltration "strips" can be 2'-3' wide & 1'-2' deep with planting
- 90% effective removal of nitrates, phosphates, dissolved solids, metals and hydrocarbons

APPLICATION CRITERIA

- Occupies less than 1% of site area and fits within setbacks, residual open space, and landscaped areas easily
- Requires ½" per hour soil percolation rate or equivalent engineered gravel media

IRVINE ◦ SAN DIEGO ◦ ONTARIO ◦ PALM SPRINGS ◦ LOS ANGELES ◦ EL CENTRO www.fuscoe.com

CAPABILITIES

- Reduce runoff
- Utilize infiltrated runoff for landscape
- Restores and replenishes groundwater aquifer
- Improve water quality (TSS, P, N, Temp., etc.)
- Reduce ambient air temperatures responsible for Heat-Island Effect
- Reduce costs associated with storm drain infrastructure
- Reduce costs with reuse of "El Toro Stone" to define travelways, and as paving material.
- Improve aesthetic paved surfaces for "Streets as Public Places"

STATISTICS

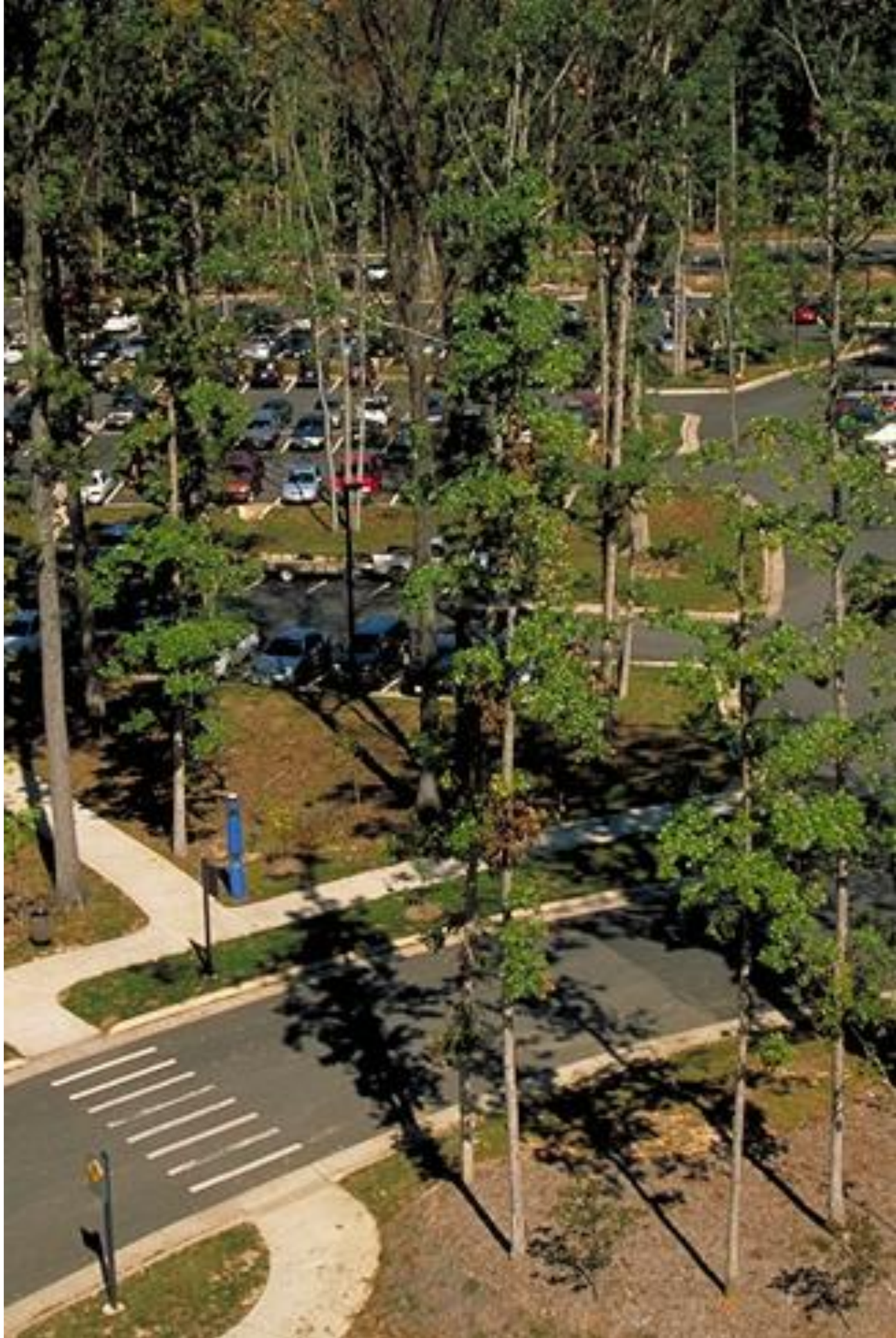
- Up to 90% reduction in runoff volume
- Possible removal of 82-95% of sediment, 65% of total phosphorous, and 80-85% of nitrogen from runoff
- 2-4°C reduction in surface runoff temperatures!
- "Permeable pavements are up to 25 % cheaper (or at least no more expensive than the traditional forms of pavement construction), when all construction and drainage costs are taken into account."

APPLICATION CRITERIA

- Enable "drive over" median breaks for fire/police turnabouts
- Consider curbless edges or panel curbs for more uniform runoff to adjoining parkways and median bio-swales for water quality treatment.
- Drivable grass or planted block grids only on level, very low traffic corridors, event parking areas or utility easements.
- Engineer base materials to meet infiltration requirements
- Enable "drive over" median breaks for fire/police turnabouts

Enhanced Tree Canopy

- Urban Forest vs. Linear Spacing
- Reduces Cooling and Heating Demands & Heat Island Effect
- Improves Air Quality & Property Values
- Up to 36°F Reduction in Surface Asphalt Temperatures
- Planted Trees May Reduce Summer Cooling Costs 20-40%



Enhanced Tree Canopy

- Stormwater Credit for a Deciduous Tree is 100 sq. ft.; Evergreen Tree is 200 sq.ft. of Impervious Area (Evapotranspiration)
- Rainfall Erosion Impact Mitigation by 17% with Better Soil Stability
- Reduces Cabin Temperature of a Parked Car up to 45°F
- Also Results in 2% Reduction in Evaporative Hydrocarbons (Ground Level Ozone)

Low Volume Irrigation

- 50-80% Reduction in Irrigation Water Requirements
- 25% Reduction in Overall Water Usage (SB County)
- Every 5 PSI Reduction Reduces Water Usage by 6-8%.
- “Smart” Controllers Reduce Runoff Over 50%
- Use Native, California Friendly, and Drought Tolerant Planting

Permeable Pavements and Surfaces

- Reduces Stormwater Runoff
- Improves Water Quality
- Reduces Storm Drain Infrastructure
- Replenishes Groundwater Aquifer
- Cools Surface Temperature

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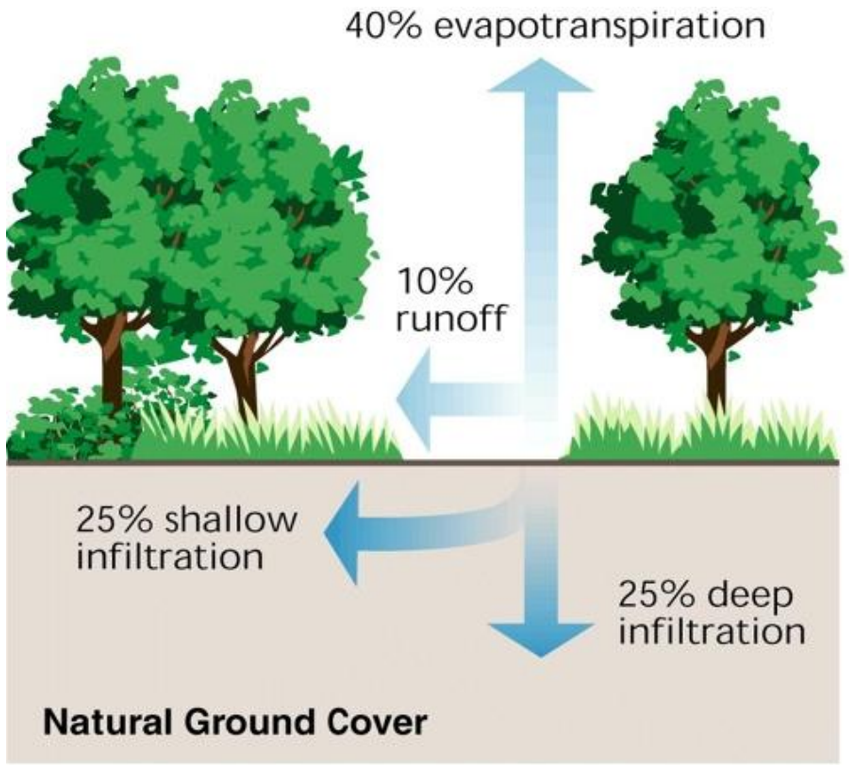
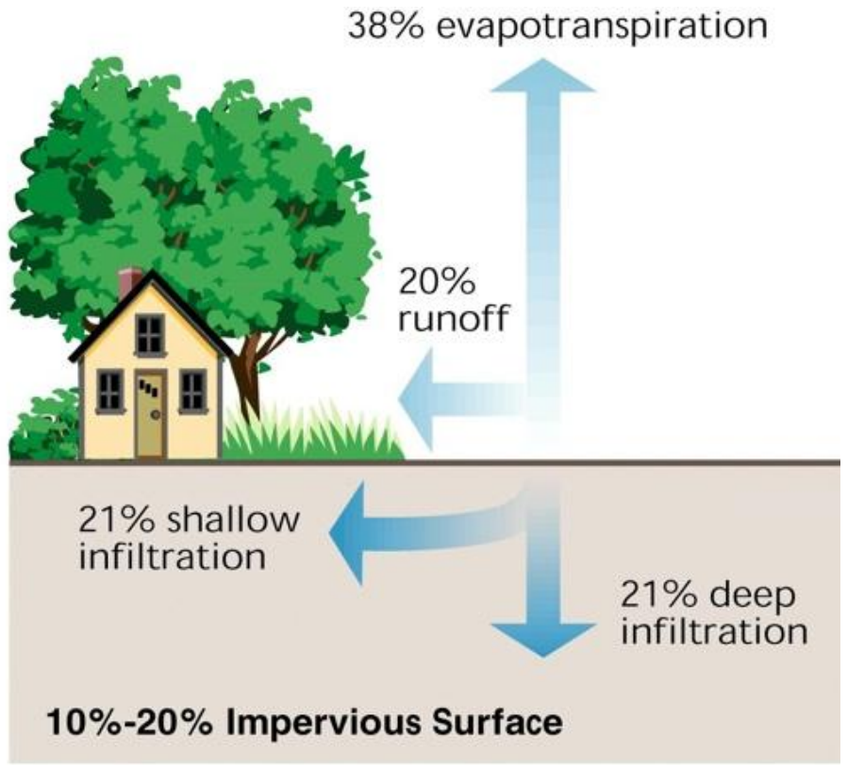
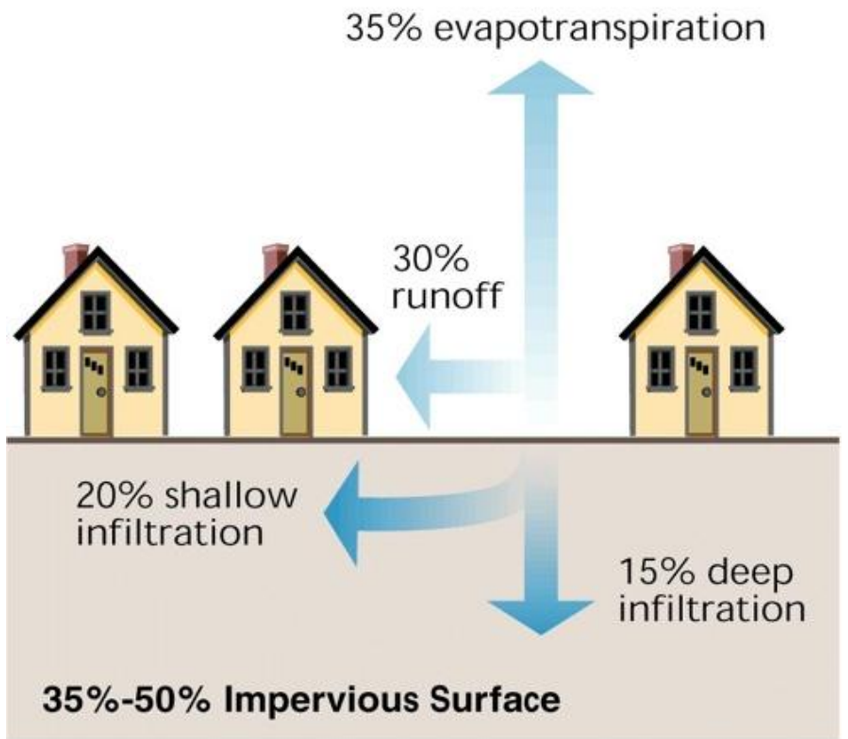
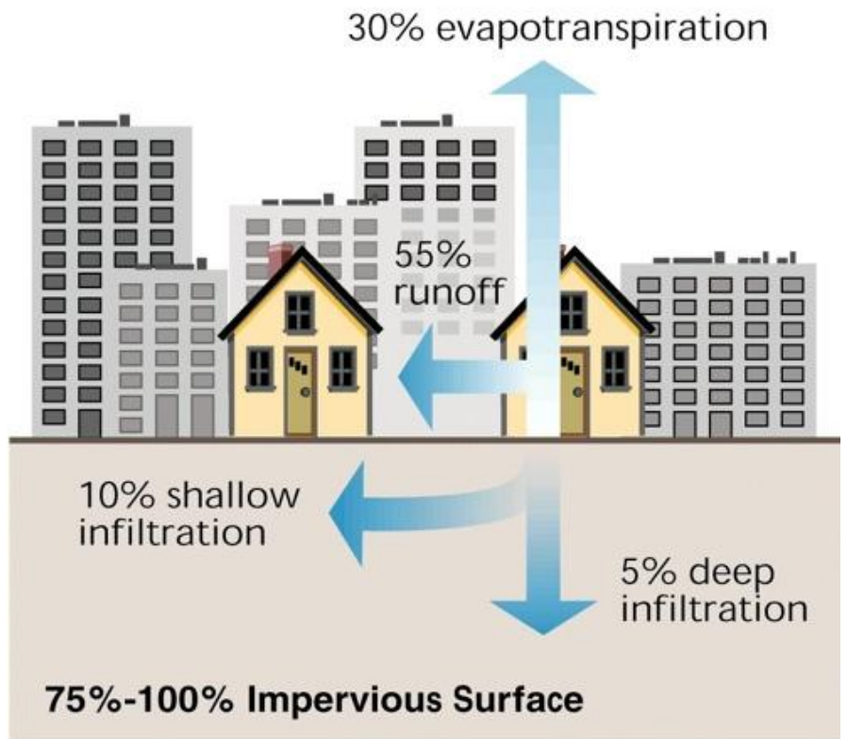




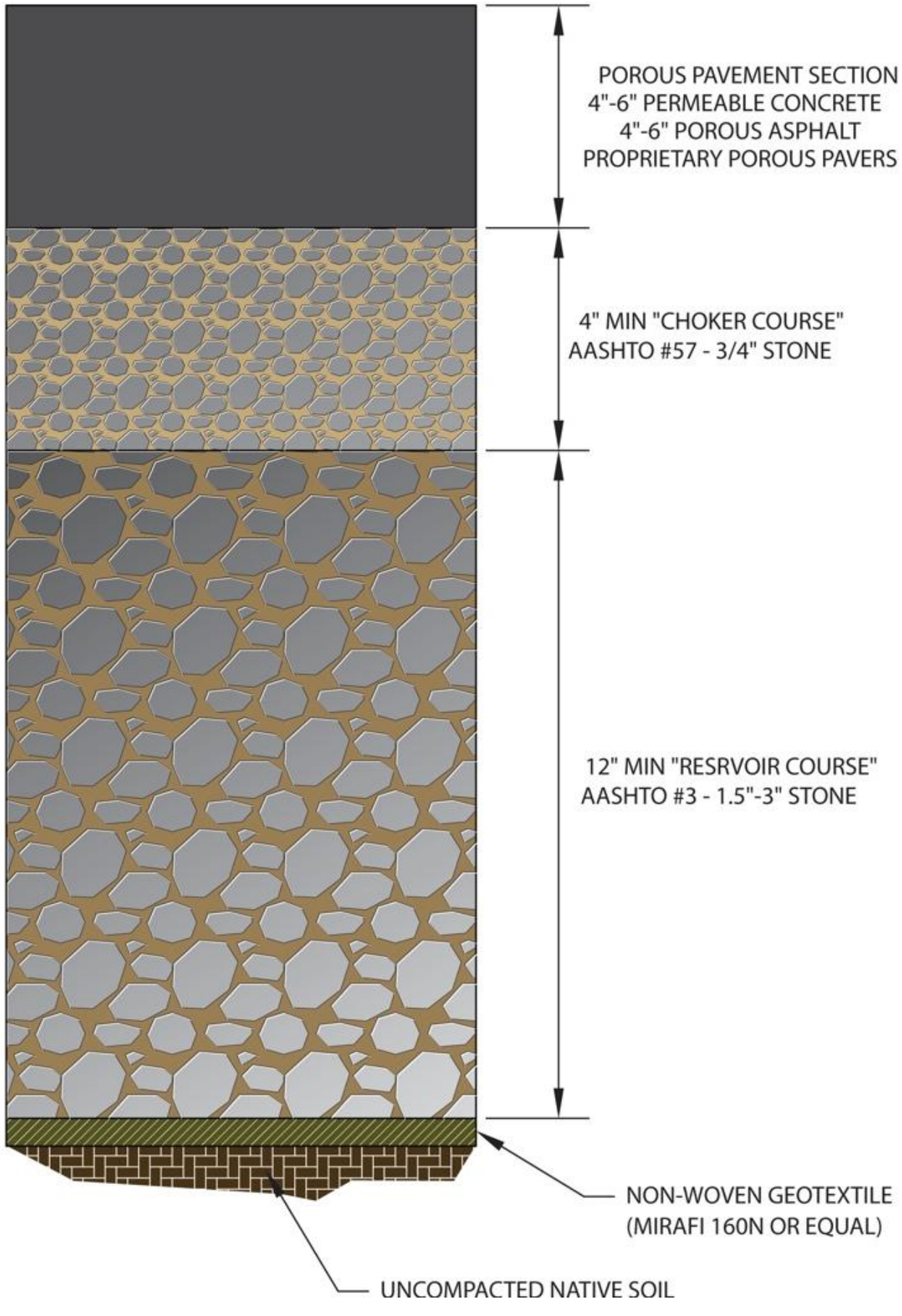




Changes in Impervious Cover vs Runoff (FISRWG 2001)

Permeable Pavements and Surfaces

- Approximately 20% of the Impervious Area Should be Replaced by Pervious
- For 20% Coverage, the Typical 3/4" Water Quality Storm Event can be Stored in a 10" Base Section Under the Pervious Pavement
- Subgrade Should be Flat to Allow for Even Spreading of Infiltration Flows
- Subdrains are Required for Soil Infiltration Rates of .5"/Hour or Less



Porous Concrete on Street in Parking Zone

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Pervious Pavements

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Porous Pavement

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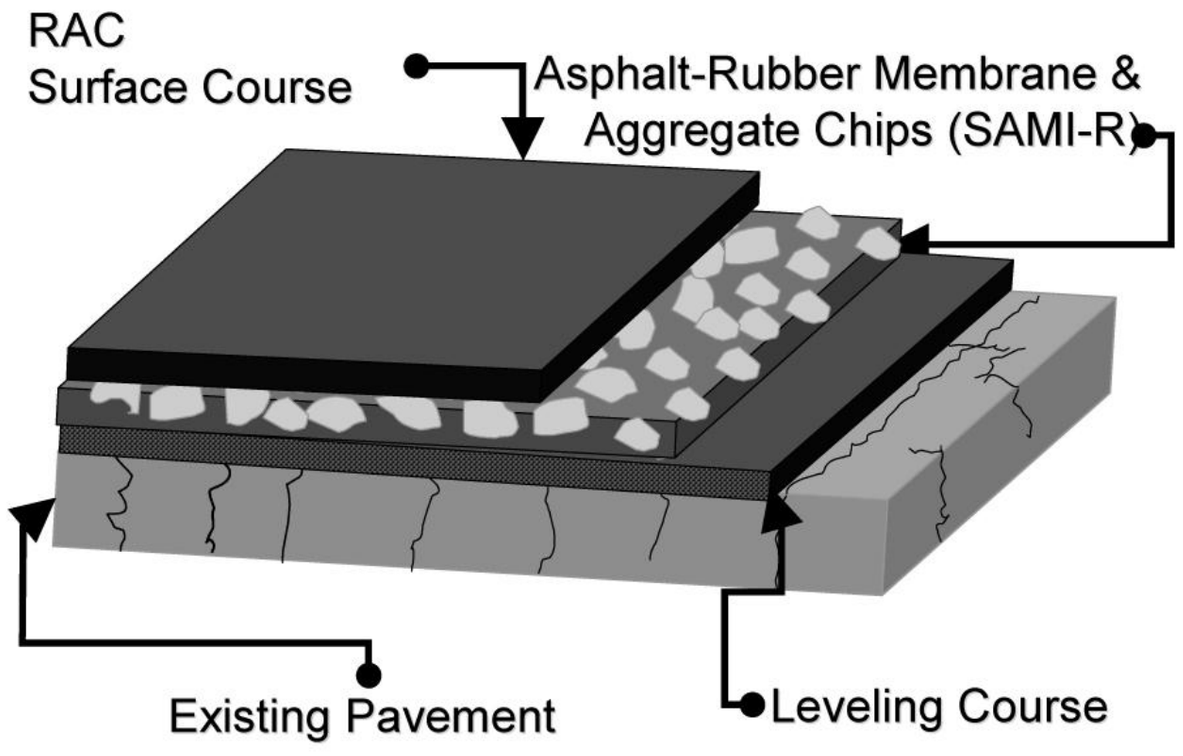
Recycled Materials

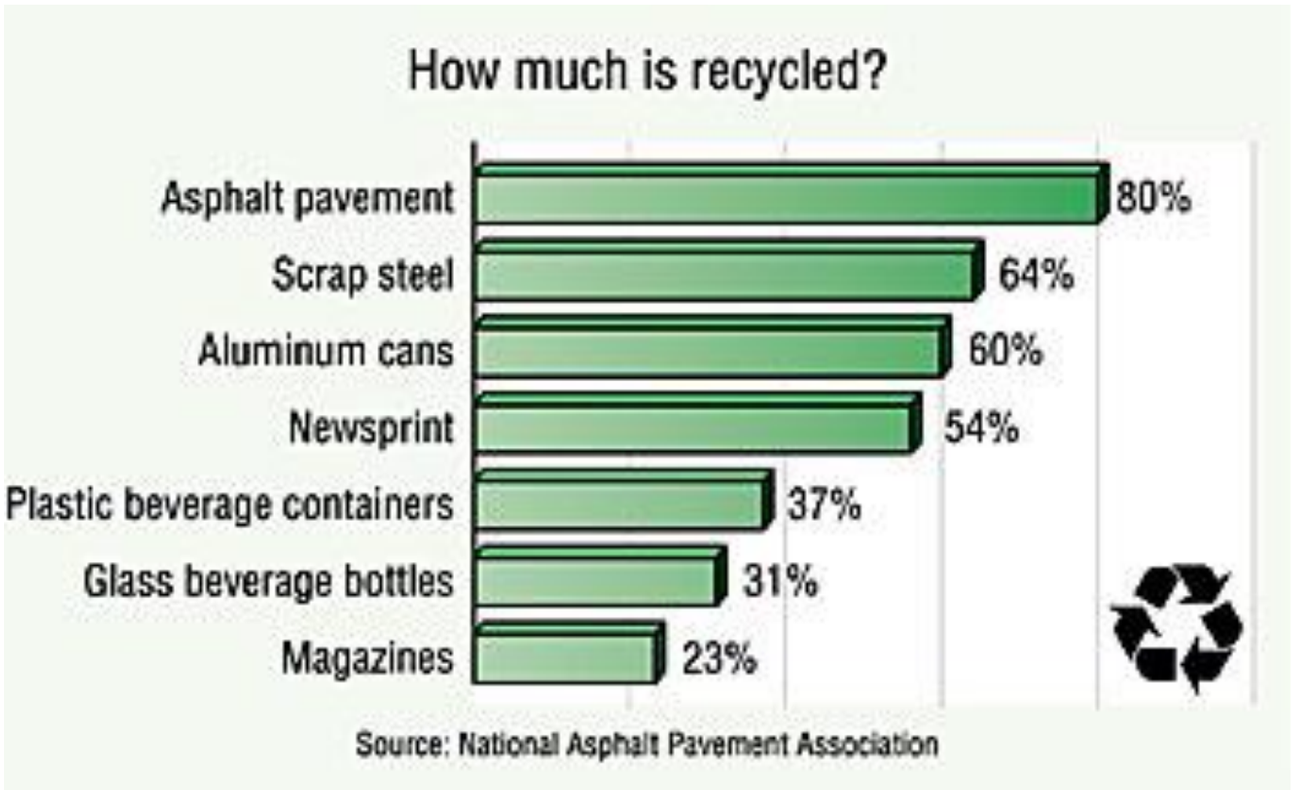
- 44 States Use Recycled Concrete in Road Base

- On-site Re-use or Local Source for Reduction in Transportation, Energy and Disposal Costs

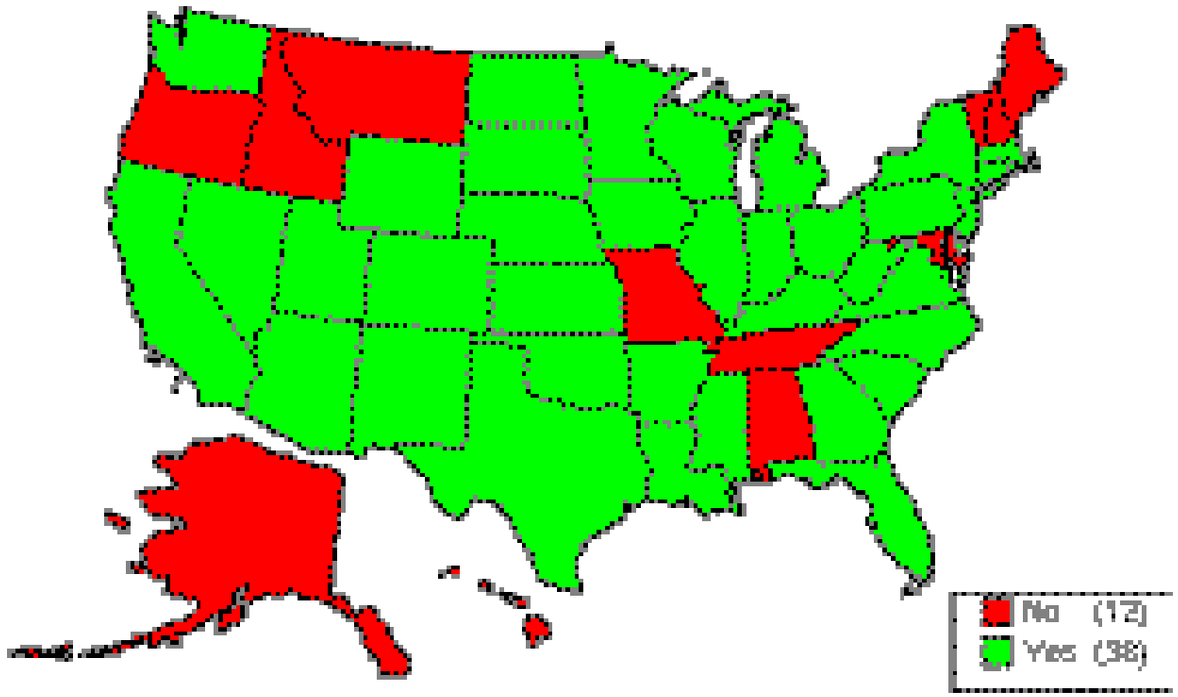
- Rubberized Asphalt Reduces Noise, has Longer Life and Uses Less Waste Materials

- $6/cy vs. $4/cy



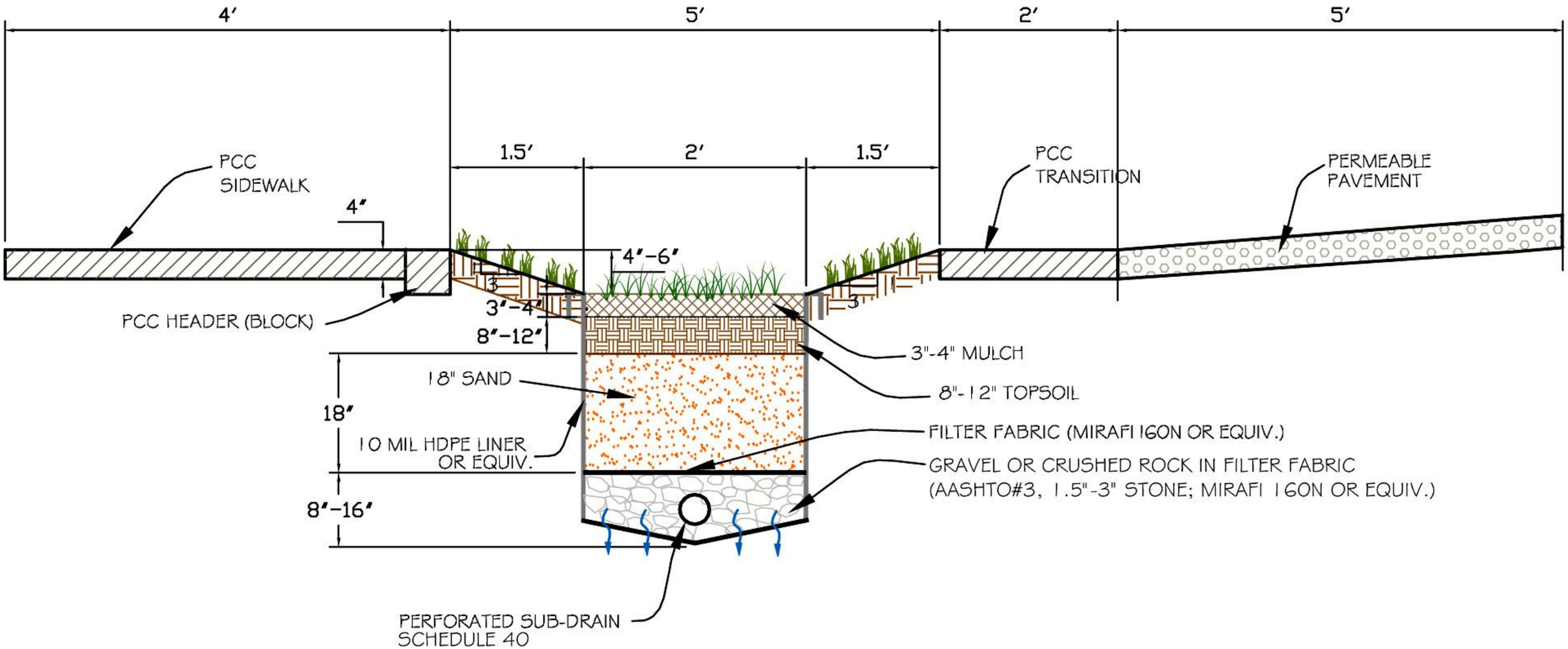


States Using Recycled Concrete as Aggregate Base



Integrated Runoff Treatment - Bioswales

- Bio-infiltration Within Inverted Parkway or Median
- Localized Water Treatment is Most Effective
- Replenishes Groundwater Aquifer
- Harvests Runoff for Landscape & Habitat
- Improves Water Quality
- Meets NPDES Permit Requirements as BMP



Bio Cell Typical Profile

Installed Green Street Features

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Residential Landscaped Curb Extension

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Bioretention Planters

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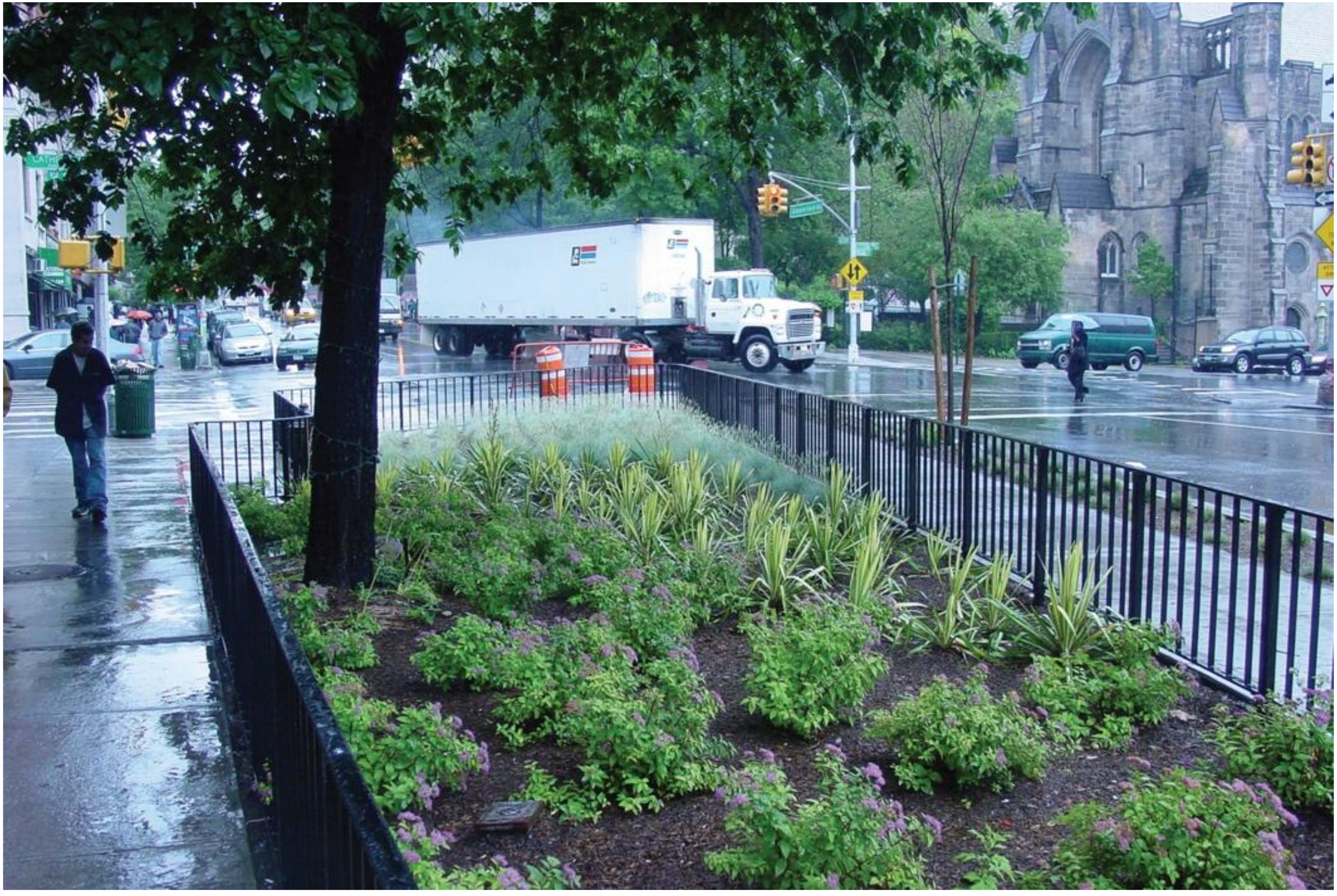

Raised Planter in Parkway

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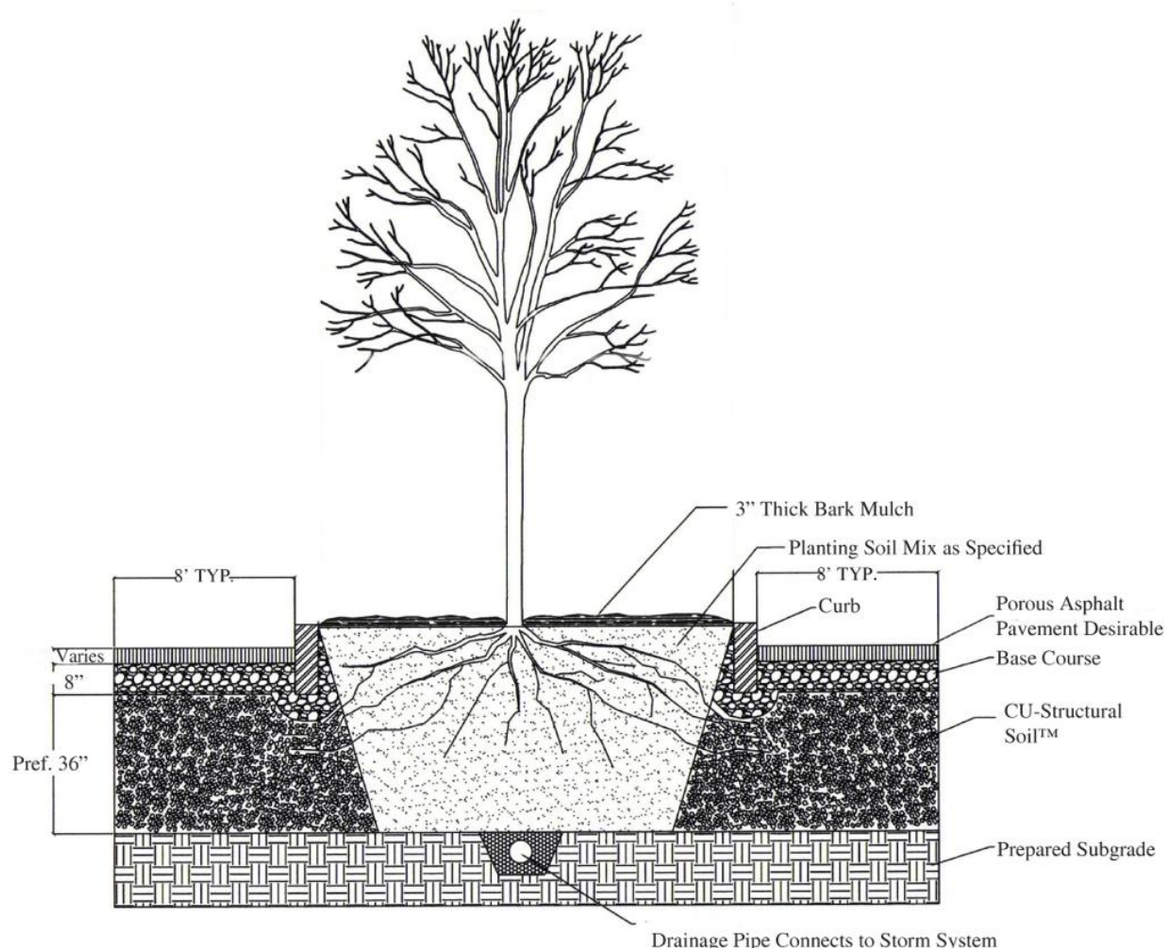
Conservation Oriented Planting Palettes

- Reduce Costs of Maintenance & Irrigation
- Increase Habitat Compatibility
- Improve Aesthetics
- Up to 70% of Water Use is for External Purposes
- Native Plants Require Little to No Additional Water Once Established

Structured Soil Preparation

- Increases Water Storage Credit for BMP
- Optimizes Aeration, Infiltration, and Organic Productivity
- Offsets 90% Compaction Issue & Increases Survival Rate of Vegetation and Trees
- Reduces Root Upheaval



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CAUTION: Uneven Sidewalk

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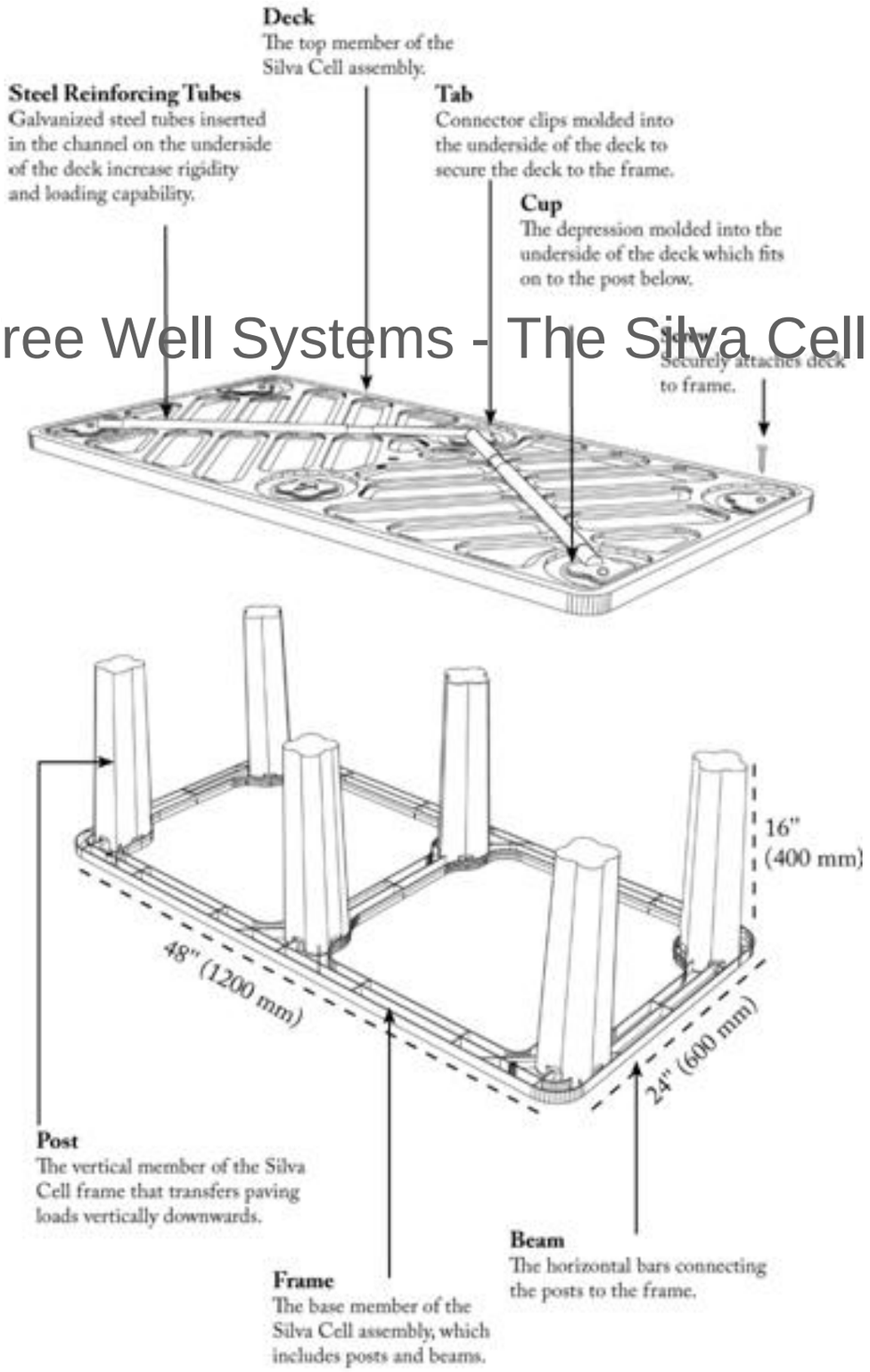
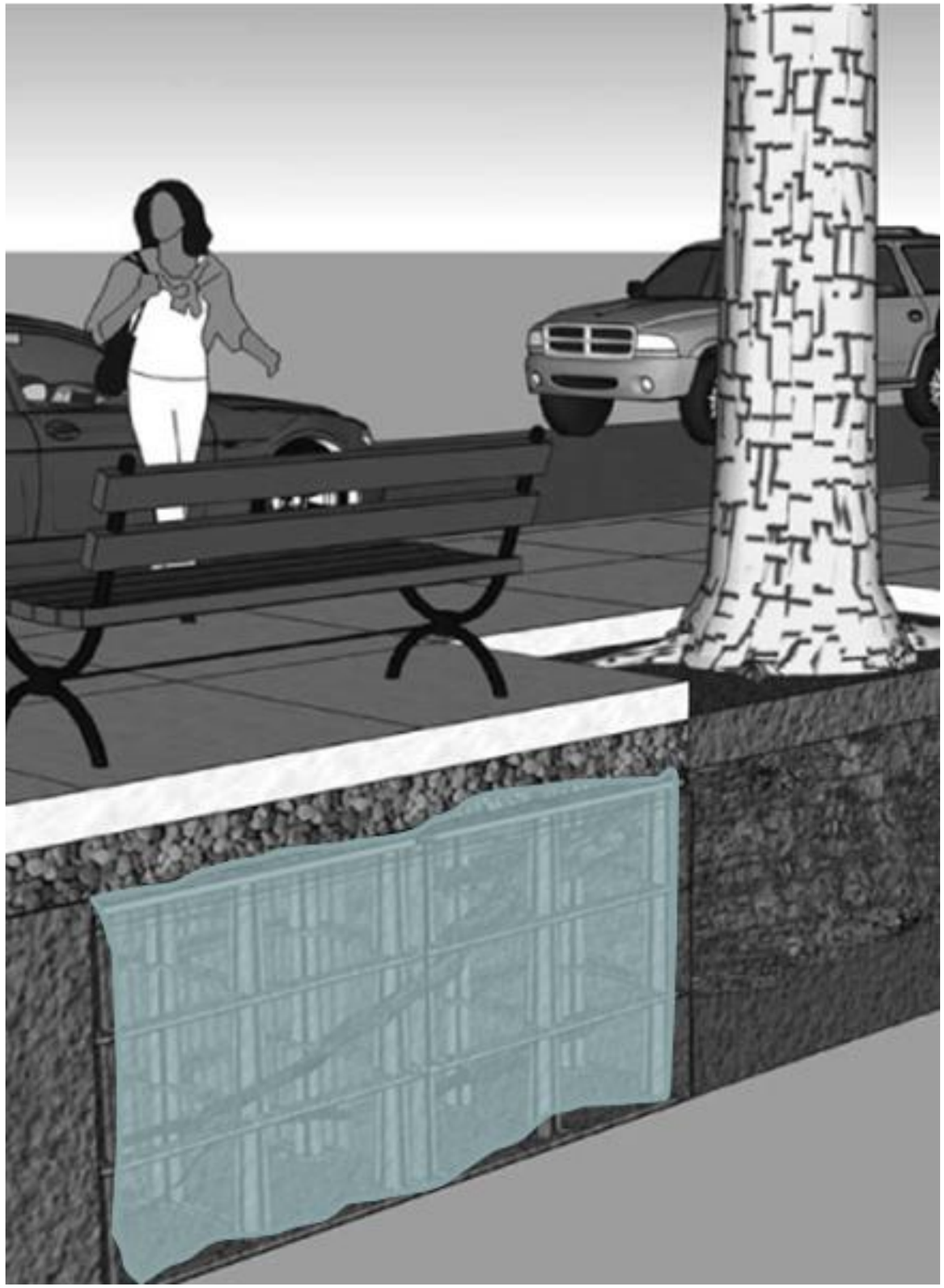
Tree Well Systems - The Silva Cell





AHBE

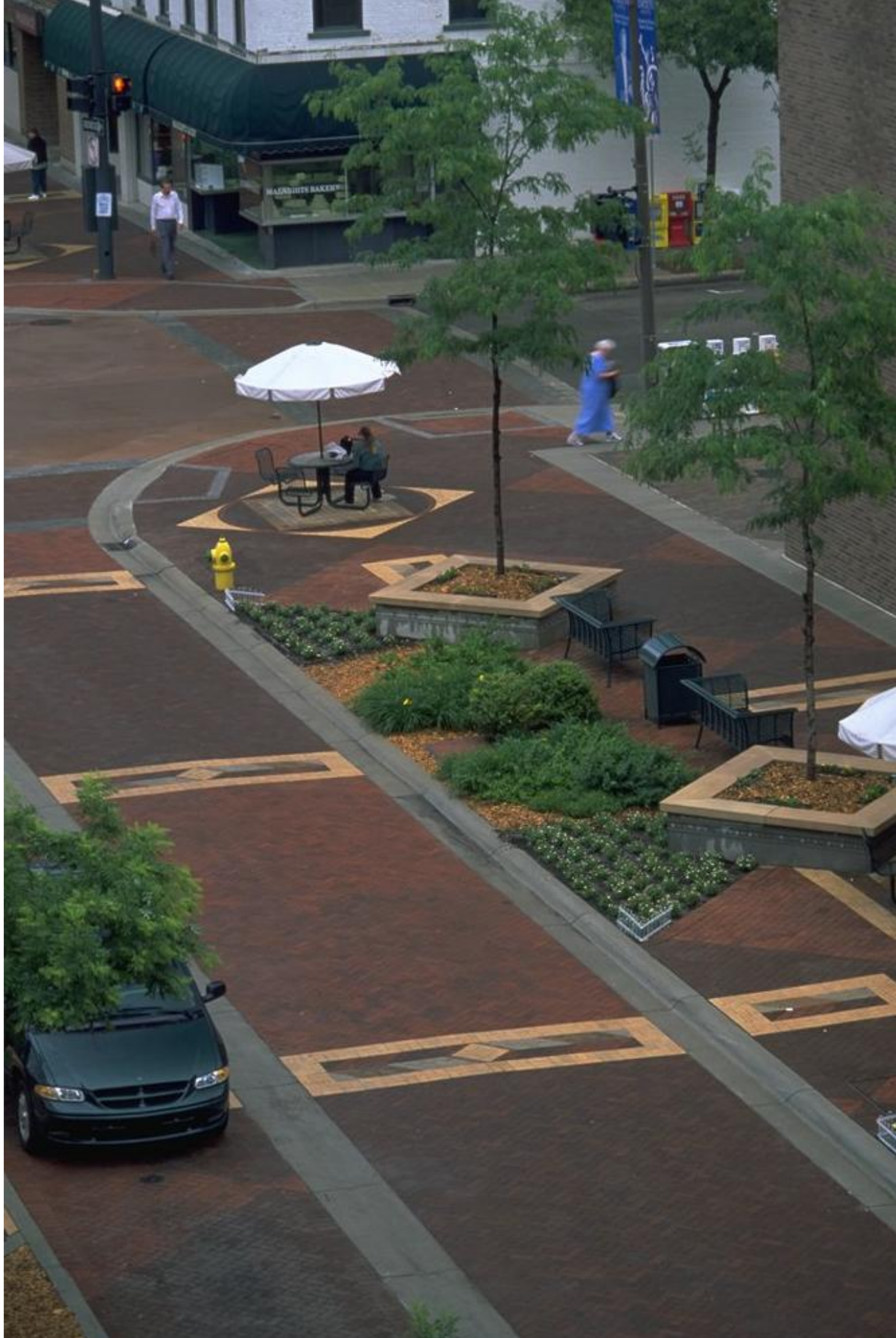
Reflective Color Light Values

- Concrete/AC Colorings and Applied Coatings can Lower Surface Temperature 28°F (15°C)

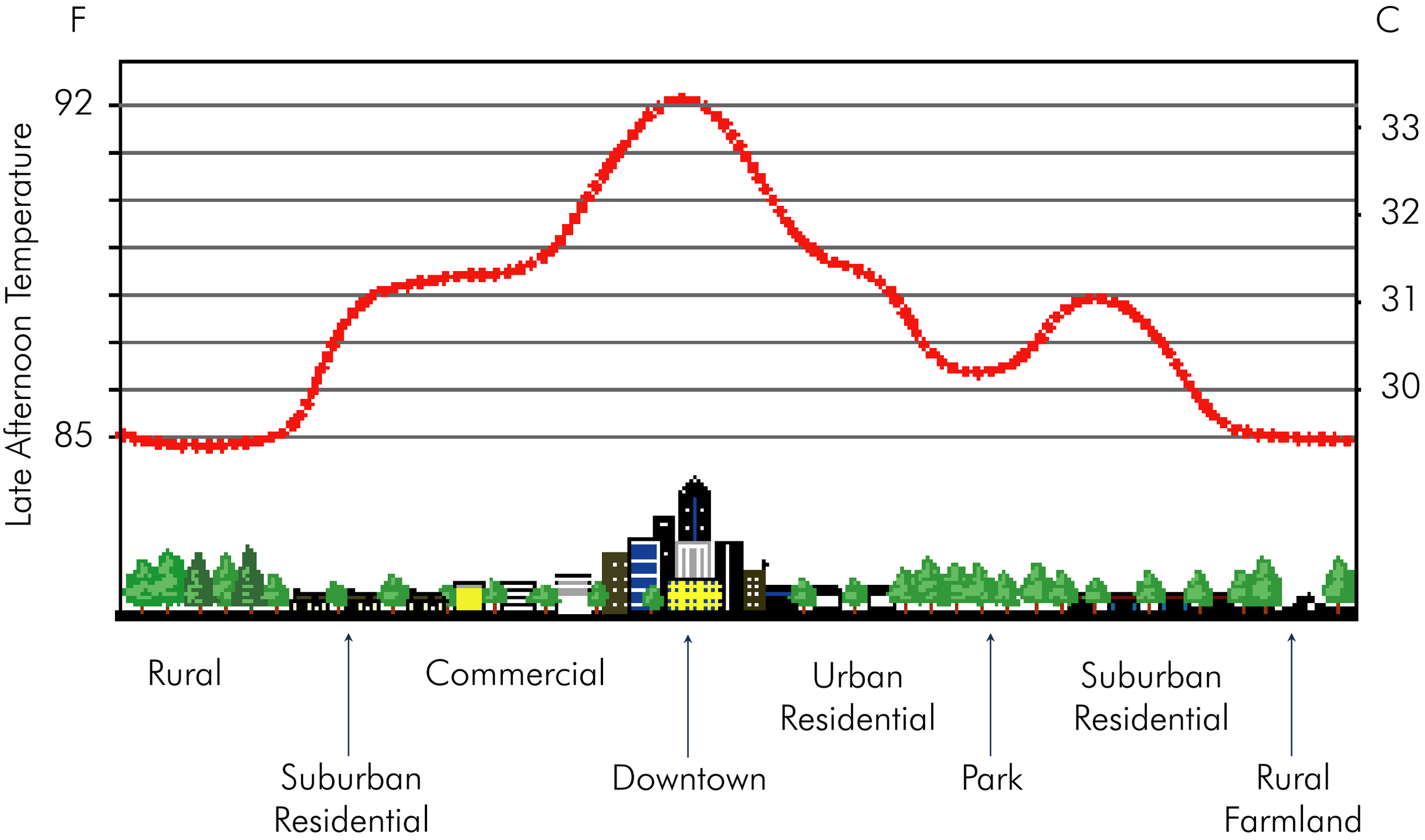
- Reduce Heat Island Effect & Extend Pavement Life

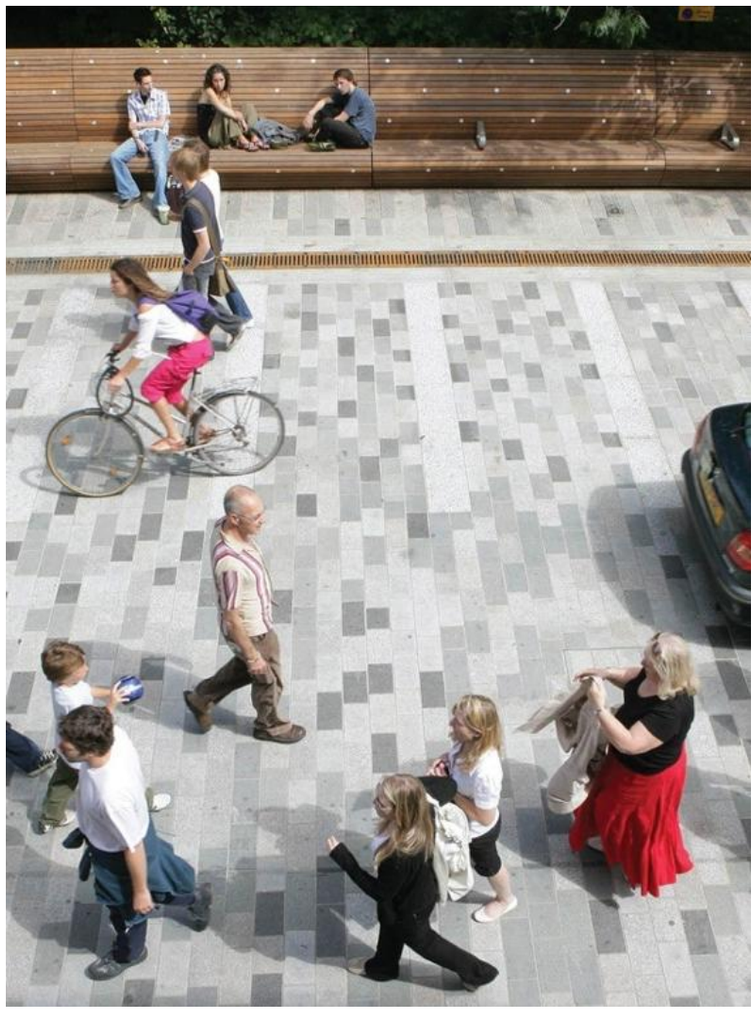
- Improve Recognition of Street Features (Crosswalks, Bus Turnouts, Bikeway, Etc.)

- Improve Aesthetics for Street as "Public Place"

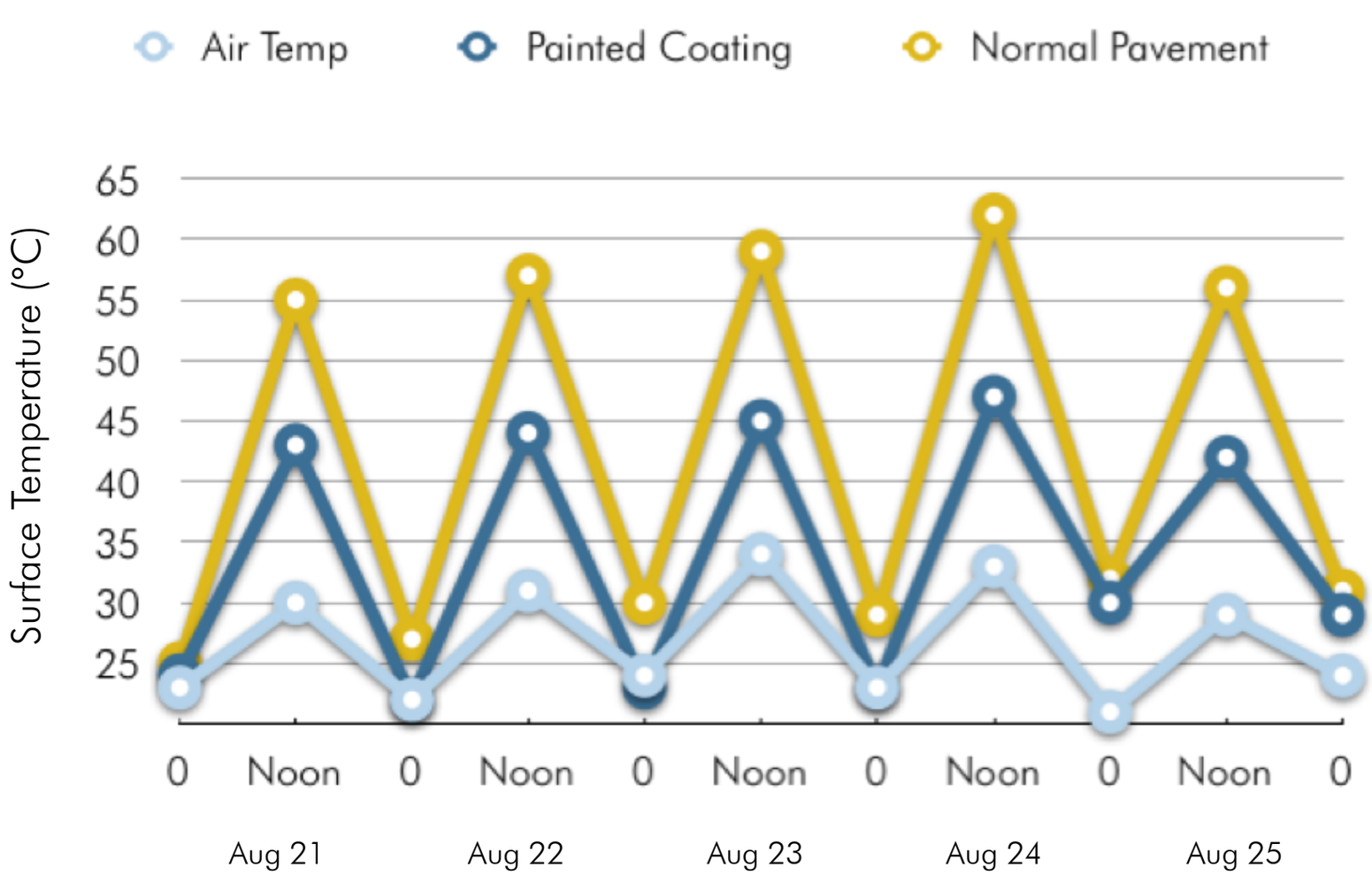


LA Study Shows .25 Increase in Albedo Saves $15M/Year in Energy





Temperature Swings Contribute to Pavement Failure



Multi-Modal Travel

- Integrated Neighborhood Electric Vehicle (NEV) Paths or Joint Use (Palm Desert Allows Golf Carts on Sidewalks!)

- Light Rail, Trolleys and Shuttles

- Reduce Pollution, Noise & Traffic

- Select Street Corridors With Destinations or Favored Travel Routes

Alternative Lighting

- Full Cut-Off Fixtures
- Reduces Power Grid Demand
- Reduces Light Trespass
- LED Street Lighting Offers Savings of 40% and Higher
- LED Bulbs Last up to 4x Longer than Standard Bulbs
- LA Program to Install 140,000 LED Lights Over Next 5 Years

6th Street Viaduct Before & After

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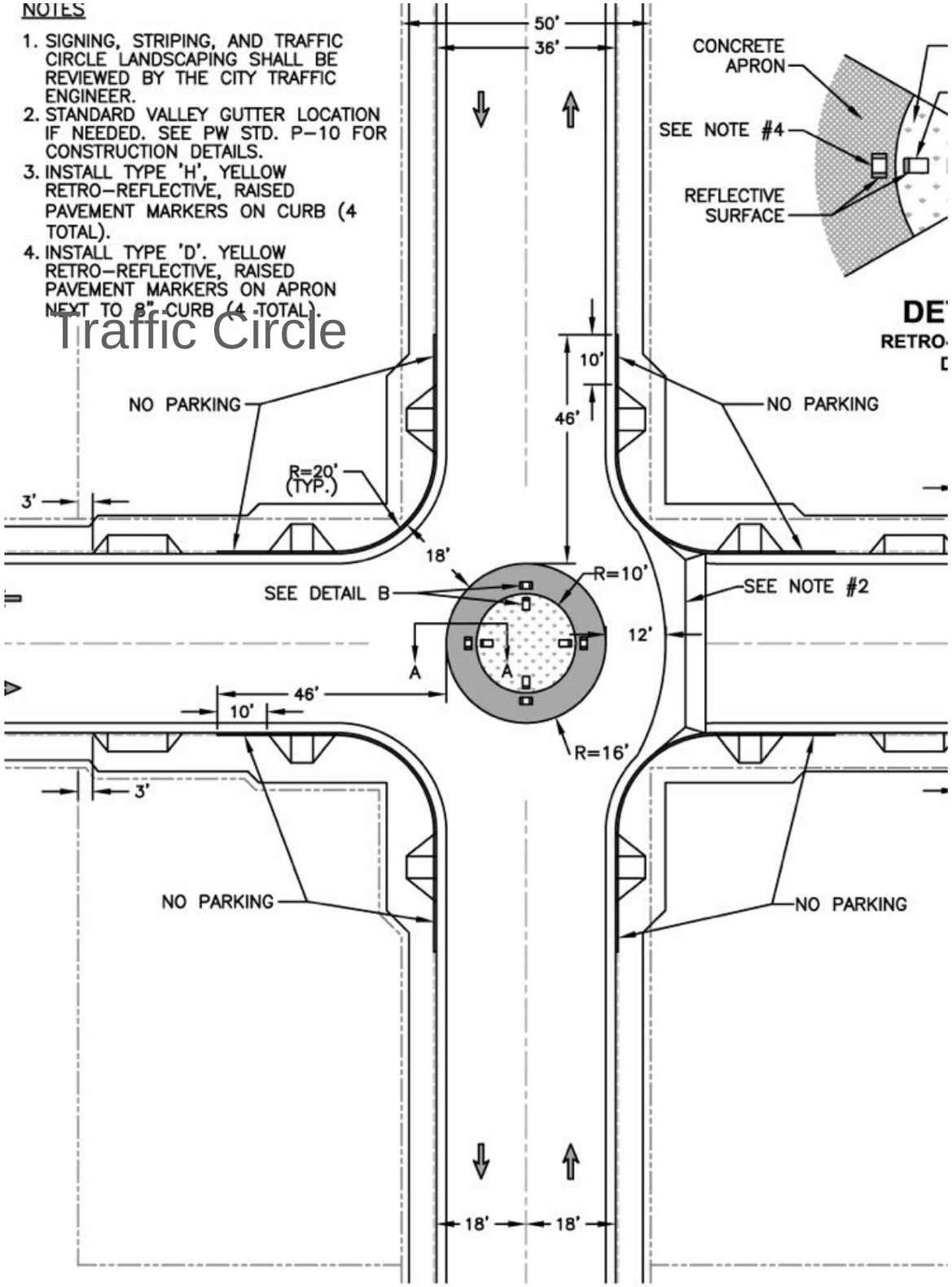
Traffic Calming Features

- Round-A-Bouts, Medians, Chokers, Pavers, Vegetation…
- Offer Improved Driver and Pedestrian Safety
- (1) Less Fatality per 10mph Reduction at $900K
- Reduce Emissions and Noise Pollution
- Improve Aesthetics & Enhance Streets as “Public Places”

NOTES

1. SIGNING, STRIPING, AND TRAFFIC CIRCLE LANDSCAPING SHALL BE REVIEWED BY THE CITY TRAFFIC ENGINEER.
2. STANDARD VALLEY GUTTER LOCATION IF NEEDED. SEE PW STD. P-10 FOR CONSTRUCTION DETAILS.
3. INSTALL TYPE 'H', YELLOW RETRO-REFLECTIVE, RAISED PAVEMENT MARKERS ON CURB (4 TOTAL).
4. INSTALL TYPE 'D'. YELLOW RETRO-REFLECTIVE, RAISED PAVEMENT MARKERS ON APRON NEXT TO 8" CURB (4 TOTAL).



Traffic Circle

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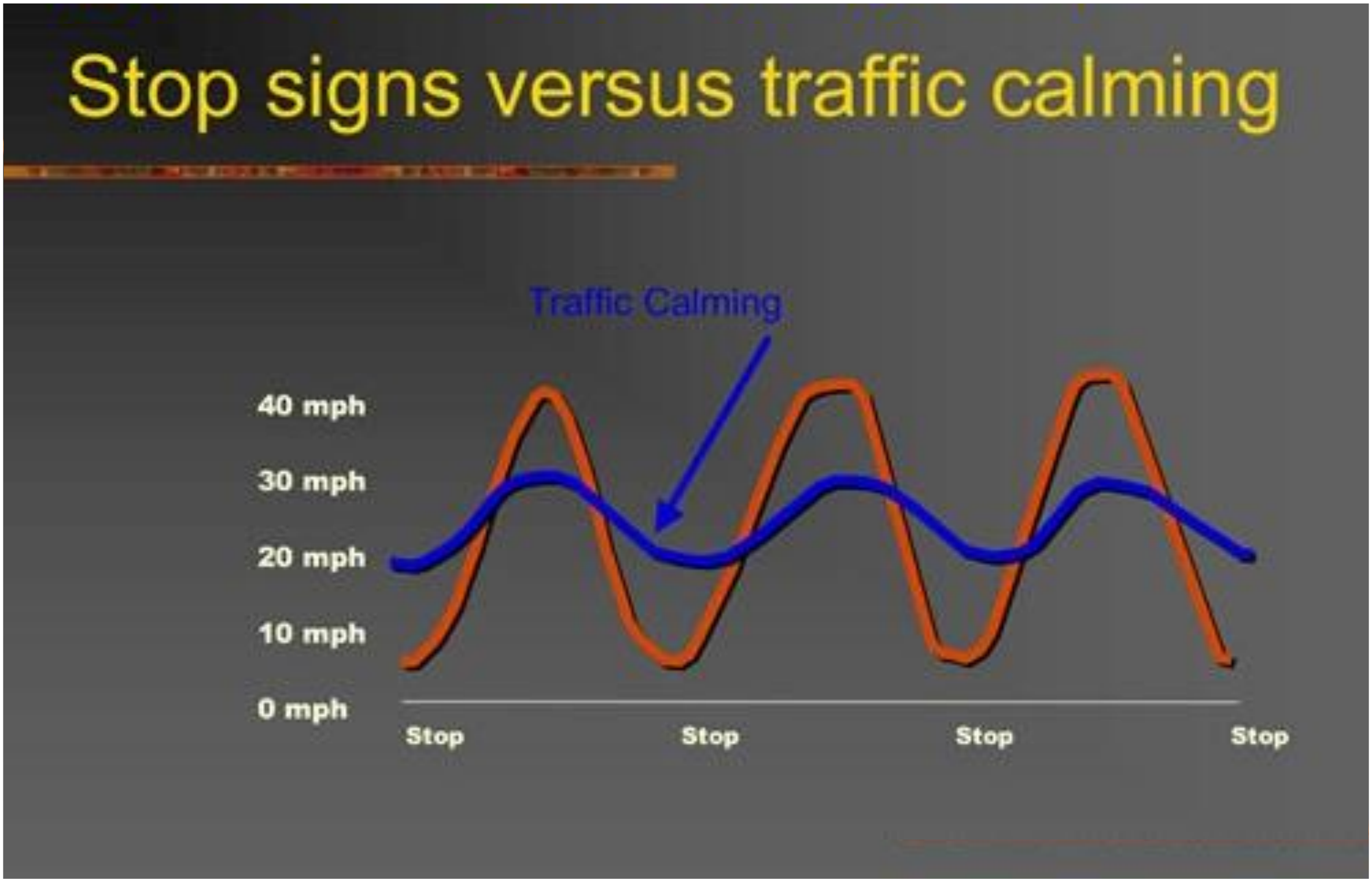
Principles of Healthy Streets

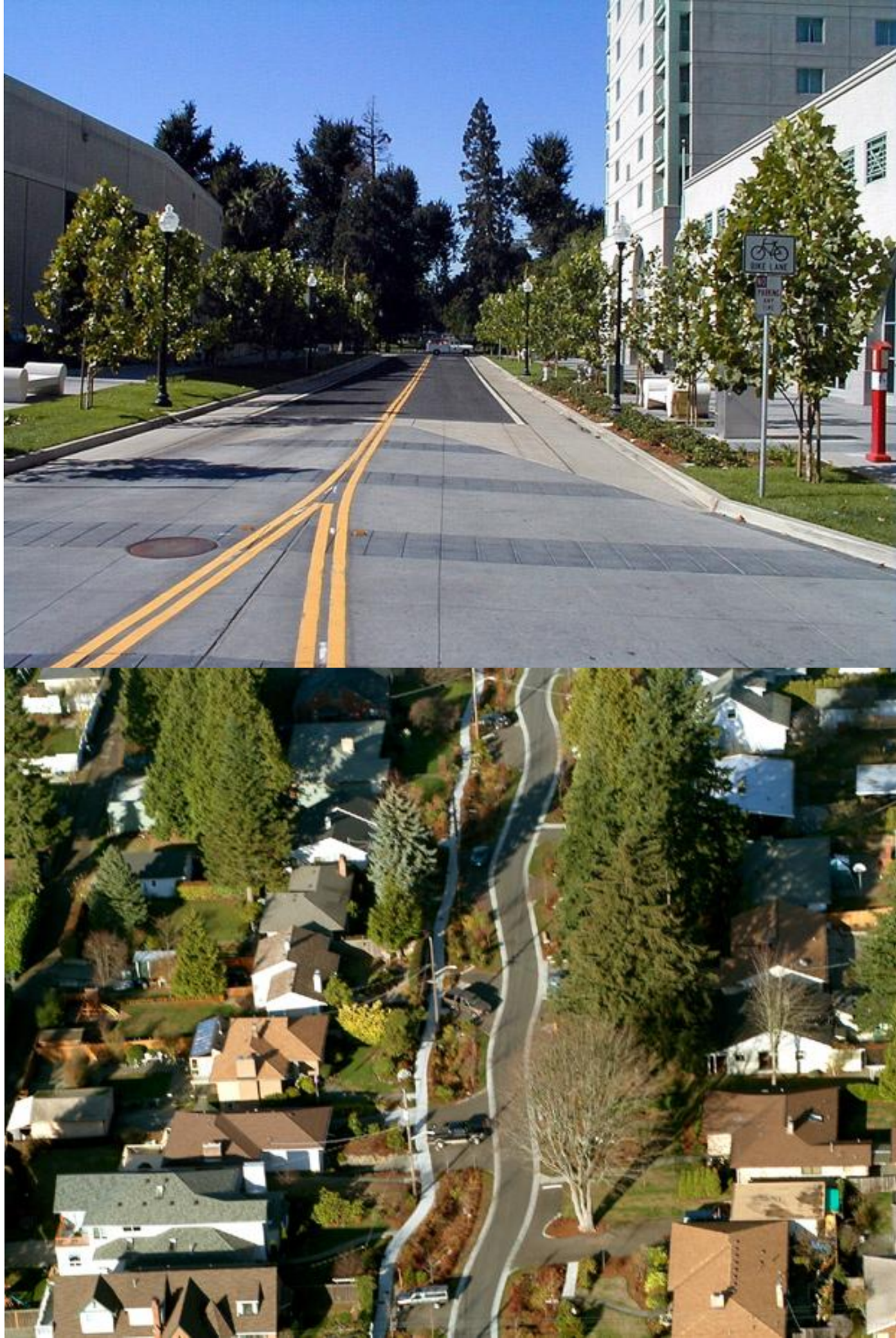
- Slow streets are safer streets
  - What happens when a vehicle hits a pedestrian

Stop signs versus traffic calming



Reduced Pavement Widths

- Traffic Calming
- Reduce Emissions & Noise Pollution
- Reduce Impervious Surfacing
- Allow for More Area for Sustainable Features
- Enhance a Pedestrian Friendly Environment



New York City Street Design

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Lake Street, Burbank

Project Example

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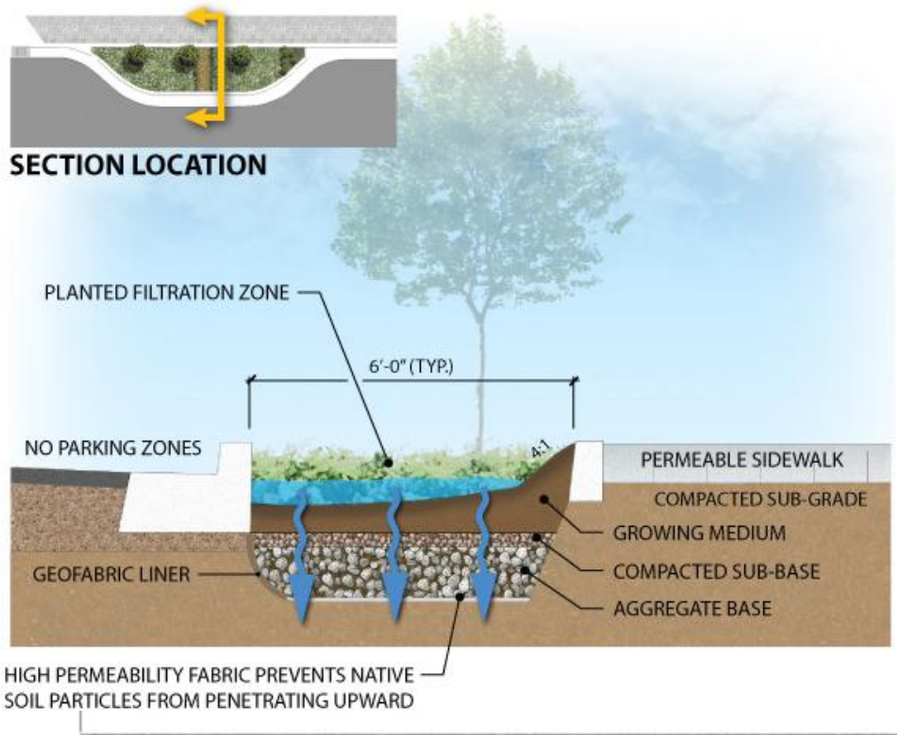

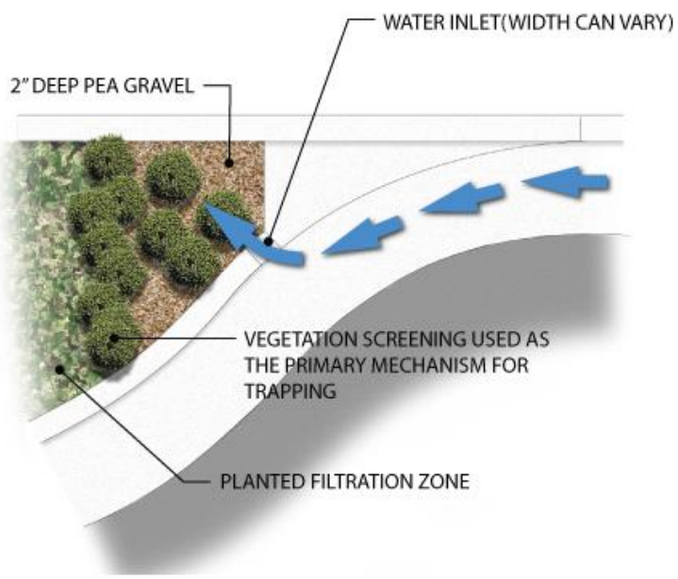

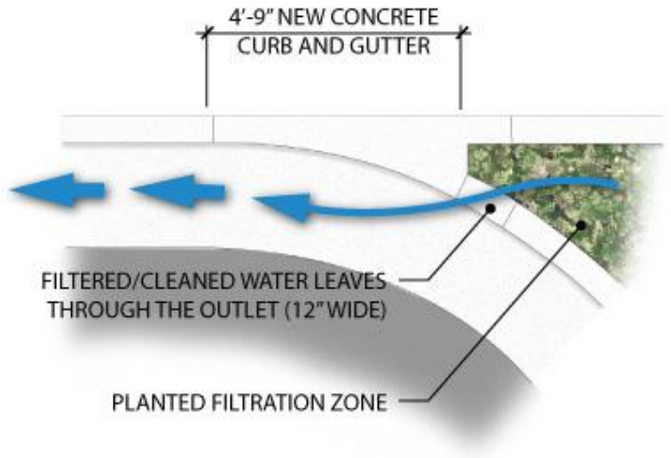

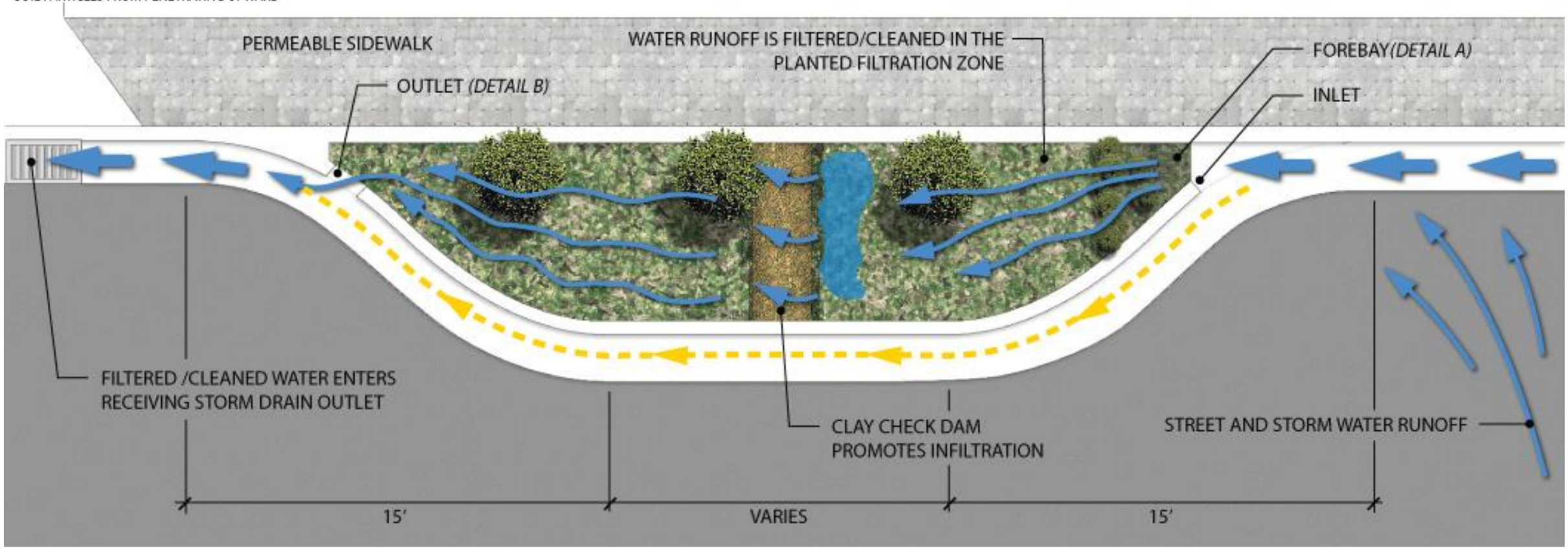

Lake Street – Curb Extension Details

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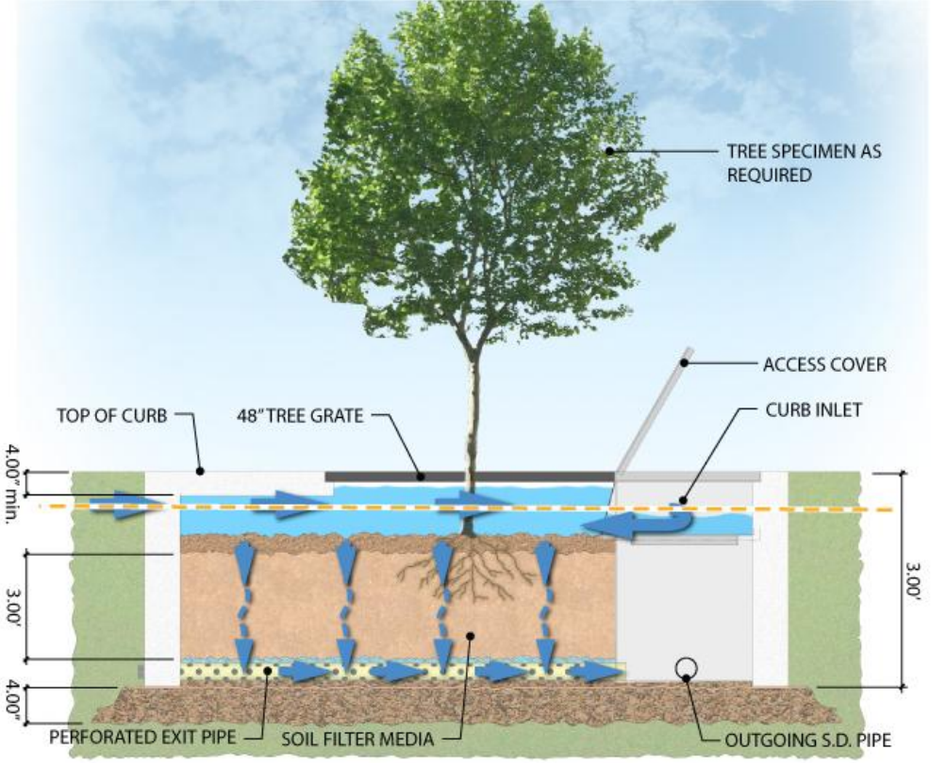
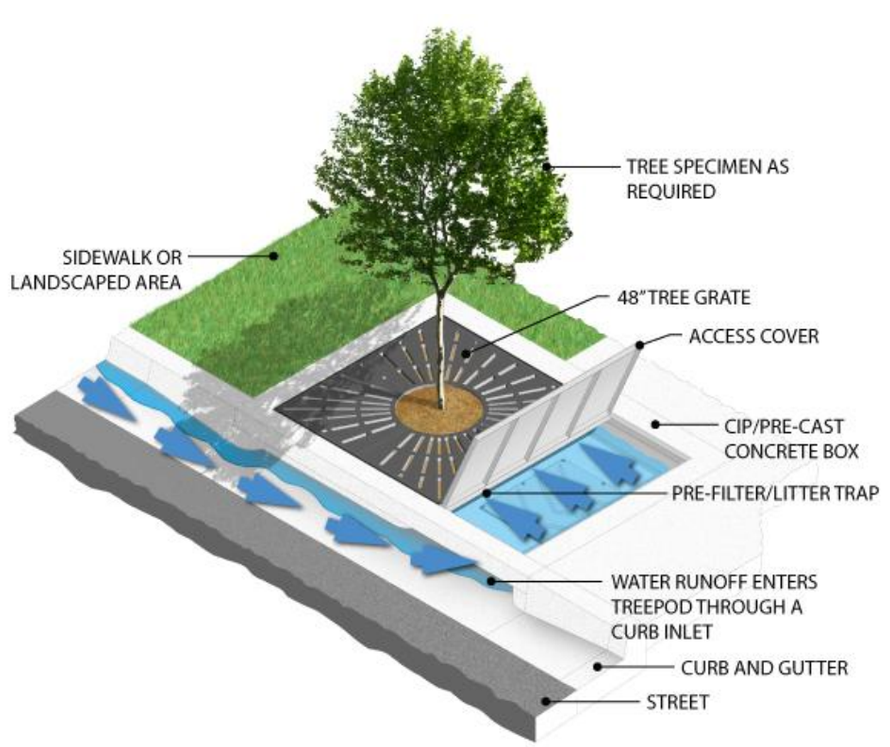
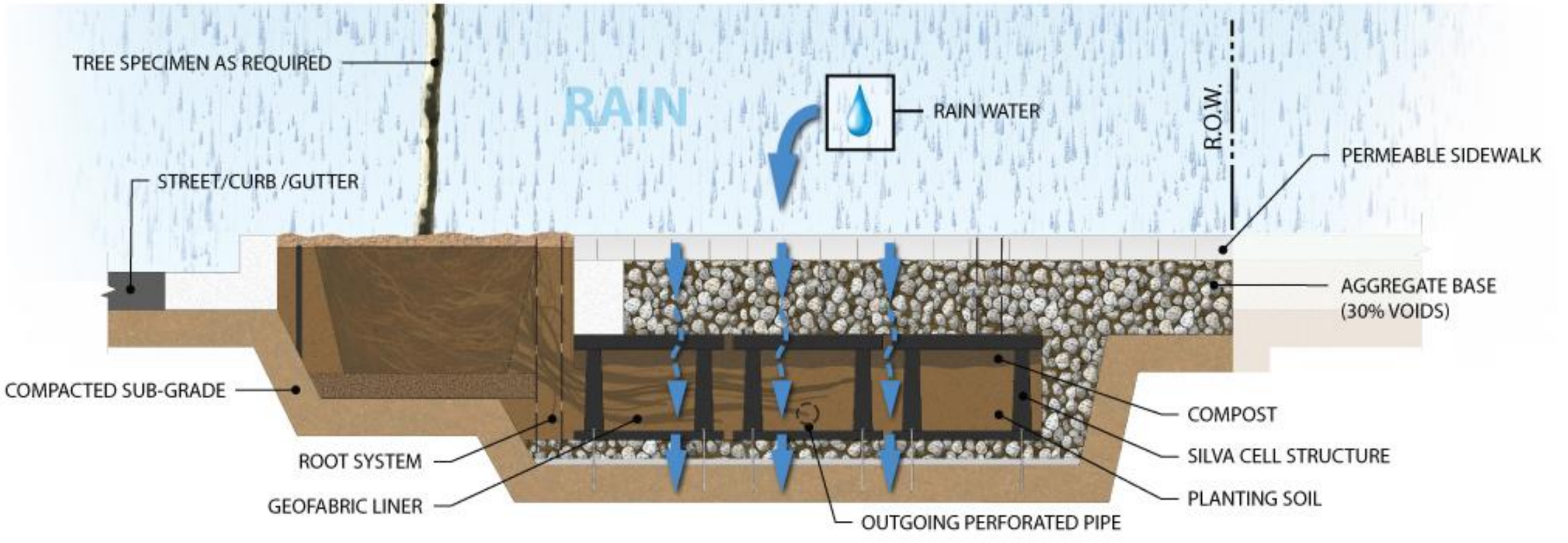

TREE SPECIMEN AS REQUIRED
ACCESS COVER
TOP OF CURB
48" TREE GRATE
CURB INLET
4.00" min.
3.00'
3.00'
4.00"
PERFORTATED EXIT PIPE
SOIL FILTER MEDIA
OUTGOING S.D. PIPE


TREE SPECIMEN AS REQUIRED
SIDEWALK OR LANDSCAPED AREA
48" TREE GRATE
ACCESS COVER
CIP/PRE-CAST CONCRETE BOX
PRE-FILTER/LITTER TRAP
WATER RUNOFF ENTERS TREEPOD THROUGH A CURB INLET
CURB AND GUTTER
STREET


TREE SPECIMEN AS REQUIRED
RAIN
RAIN WATER
R.O.W.
PERMEABLE SIDEWALK
STREET/CURB /GUTTER
AGGREGATE BASE (30% VOIDS)
COMPACTED SUB-GRADE
COMPOST
SILVA CELL STRUCTURE
PLANTING SOIL
ROOT SYSTEM
GEOFABRIC LINER
OUTGOING PERFORATED PIPE

Lake Street – Burbank, CA

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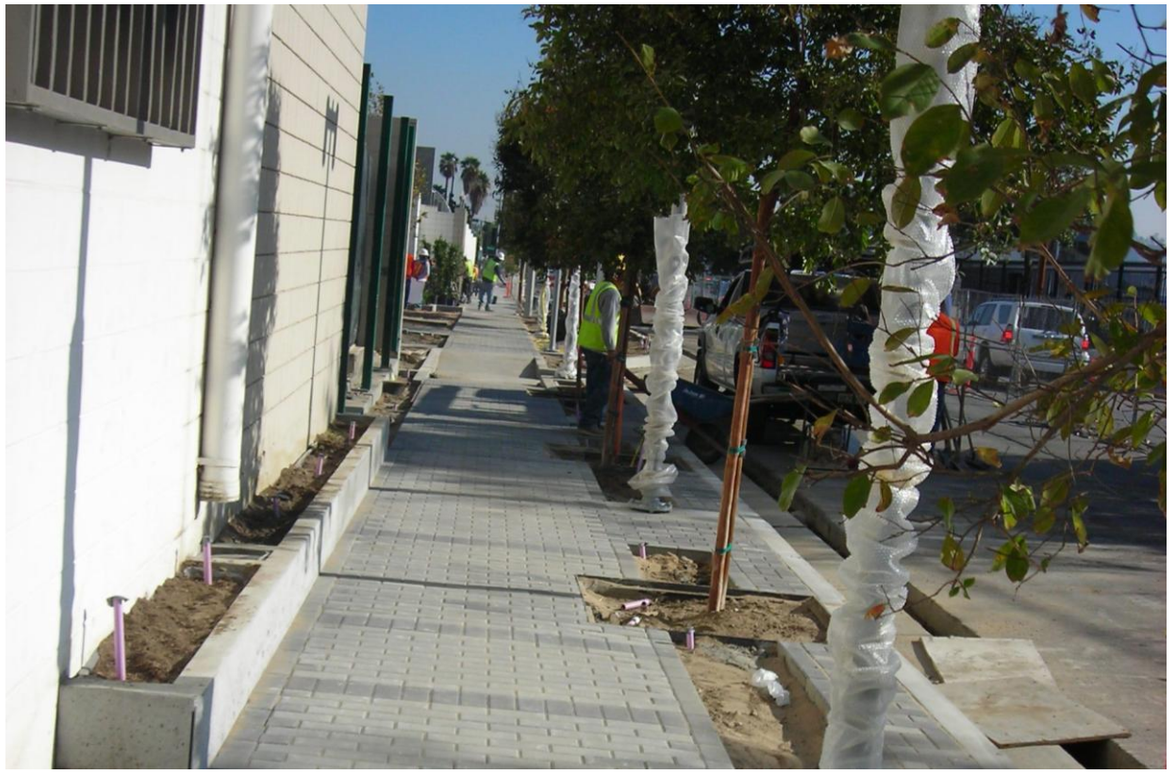

Lake Street – Building a Green Street

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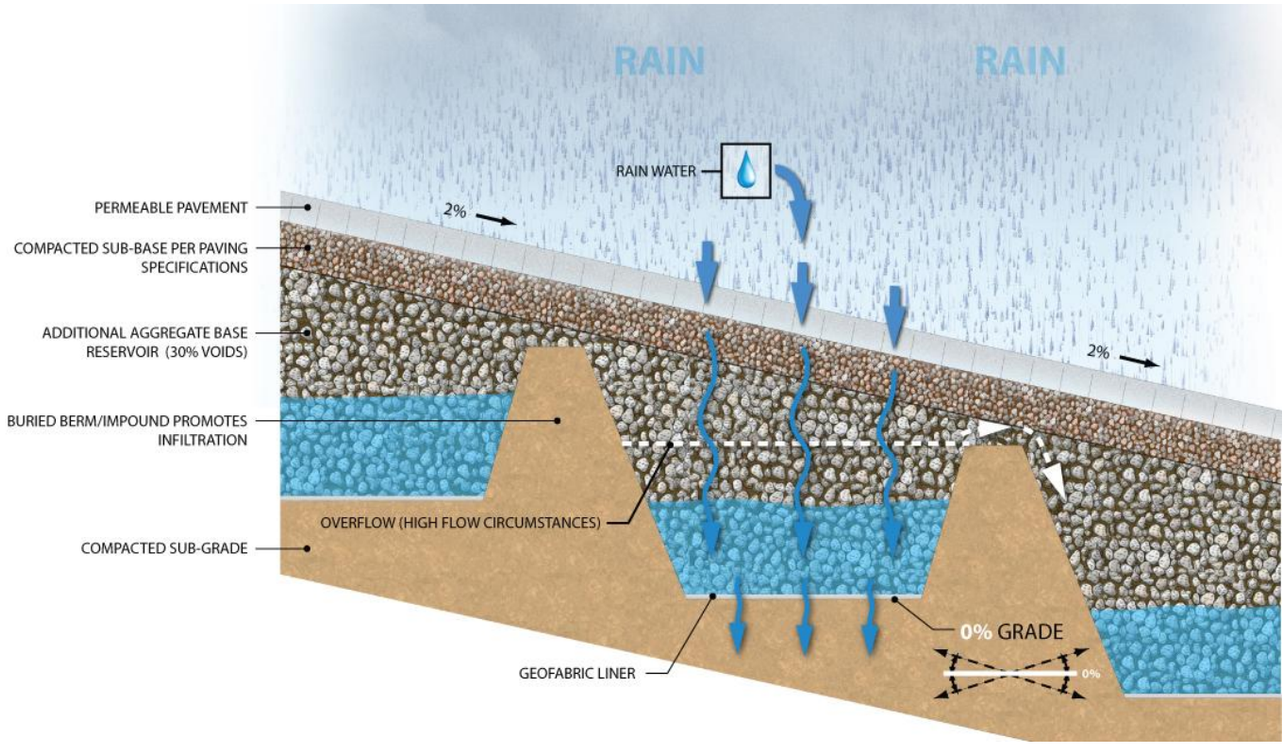

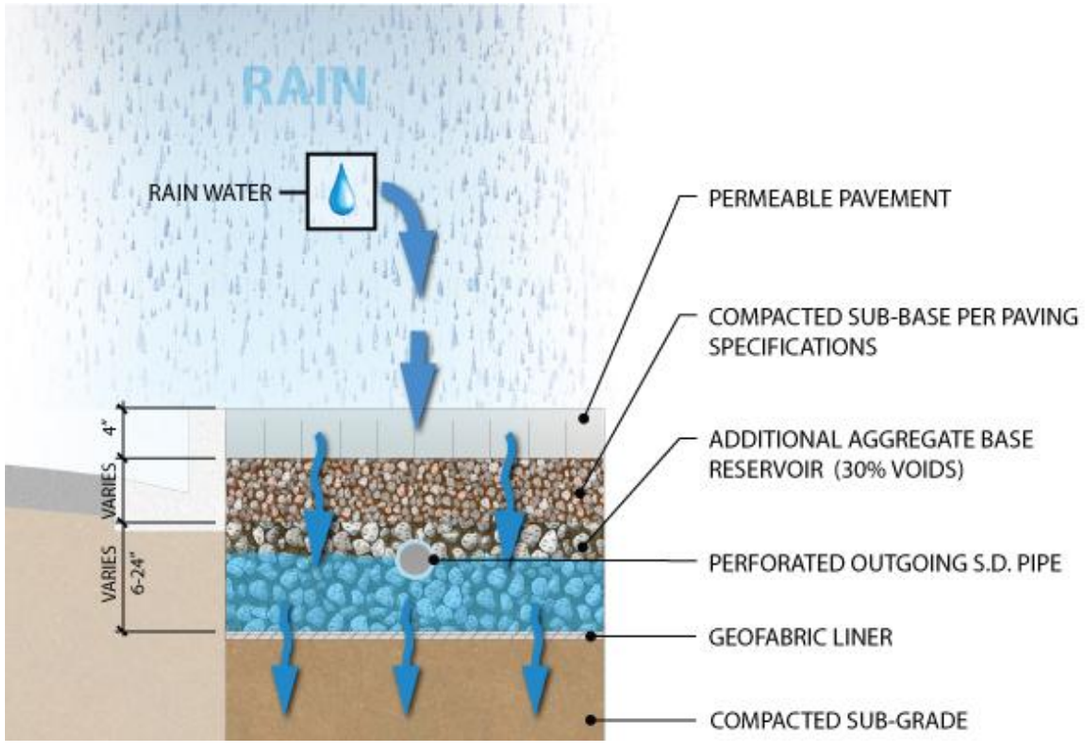

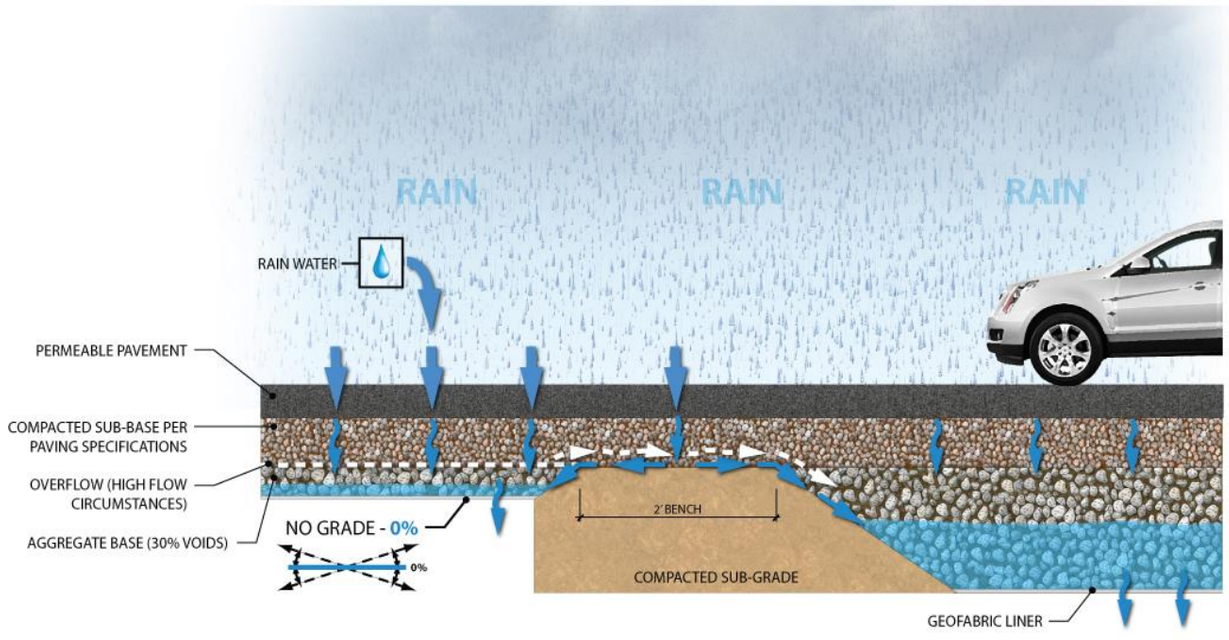

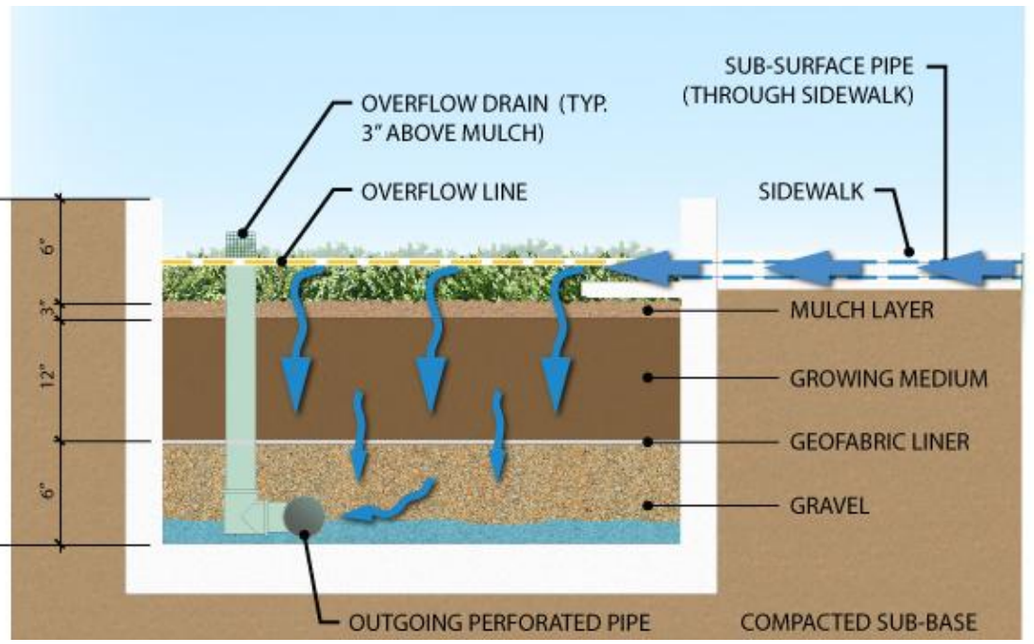

Lake Street Permeable Pavers & Planters

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Burbank Water & Power EcoCampus

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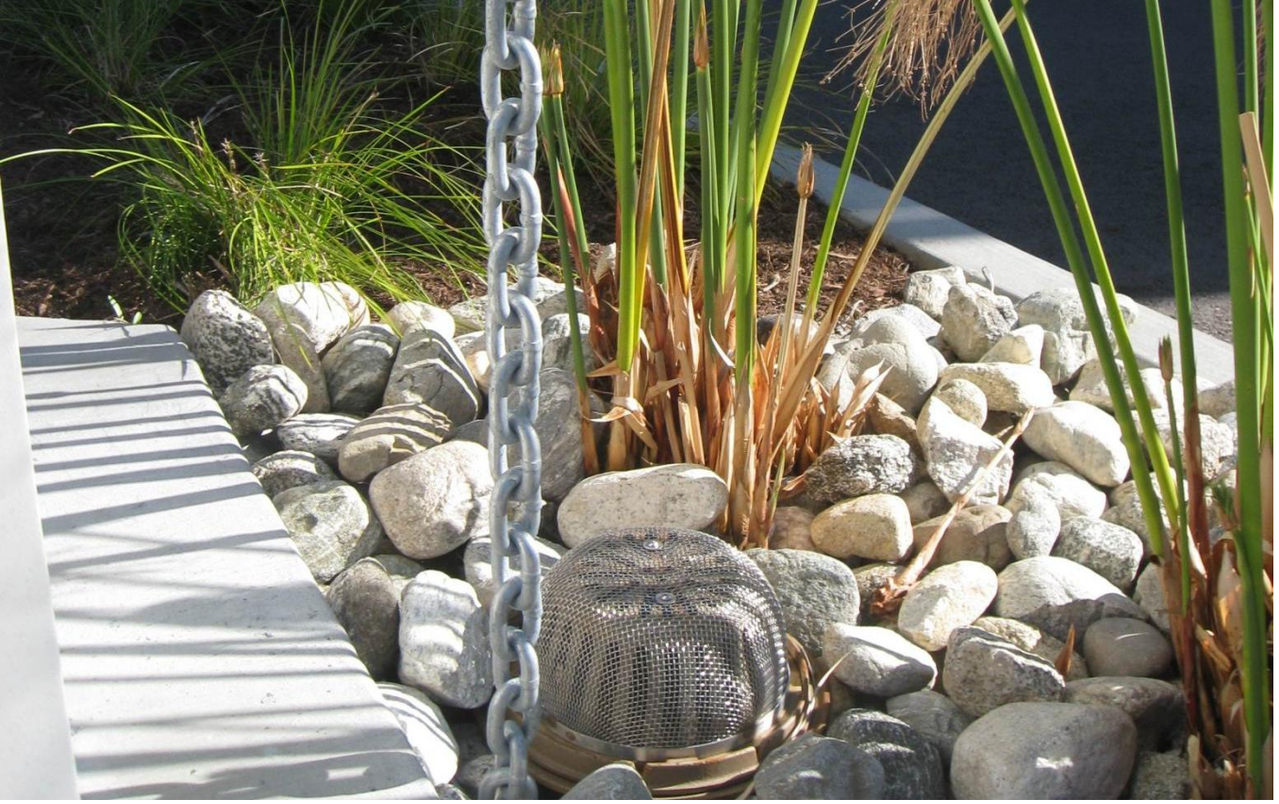
full circle thinking®



Burbank Water & Power EcoCampus

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Burbank Water & Power EcoCampus

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Cesar Chavez Blvd., Boyle Heights

Project Example

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Cesar Chavez Blvd. - Boyle Heights

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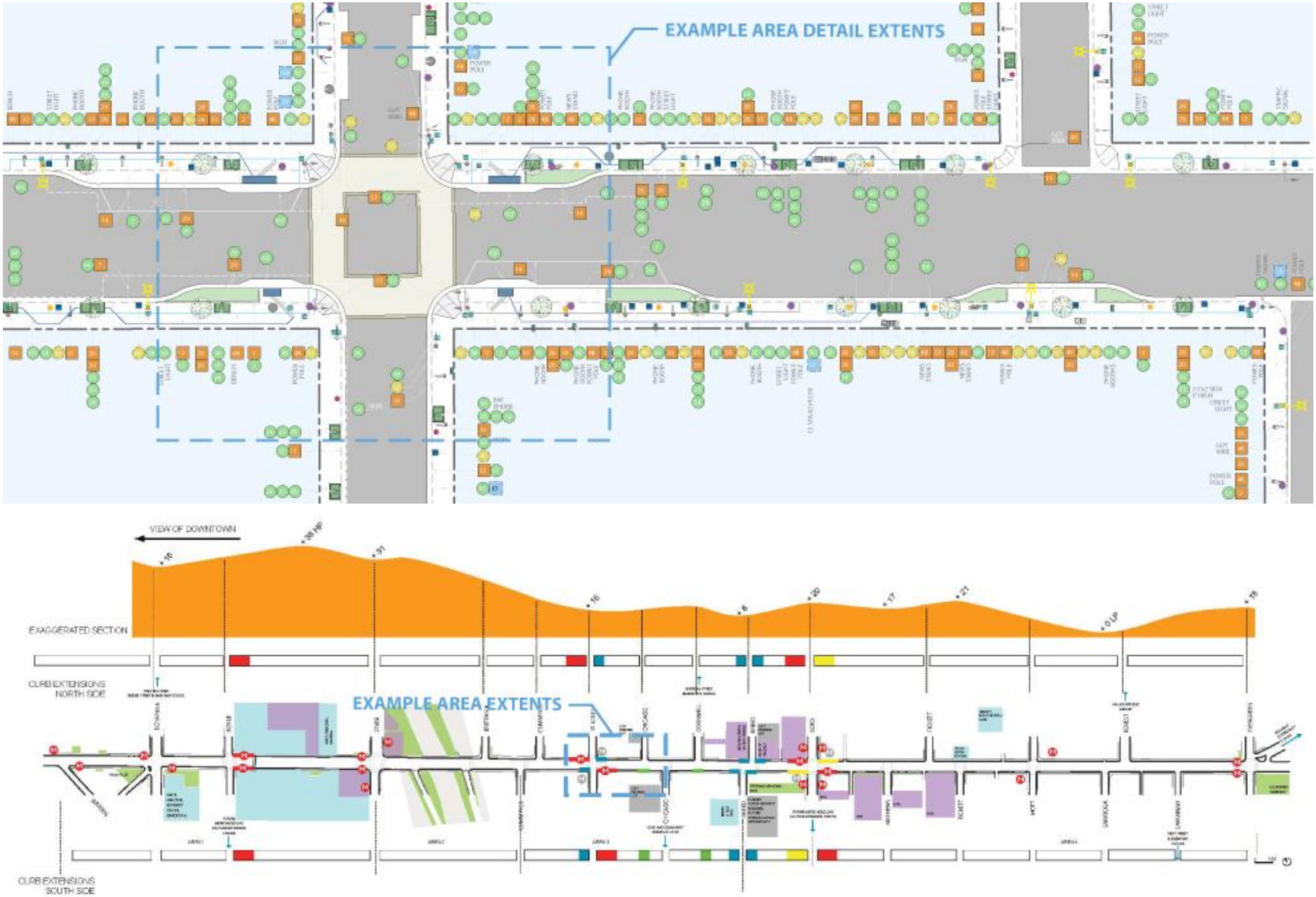

Cesar Chavez Blvd. – Project Area Improvements

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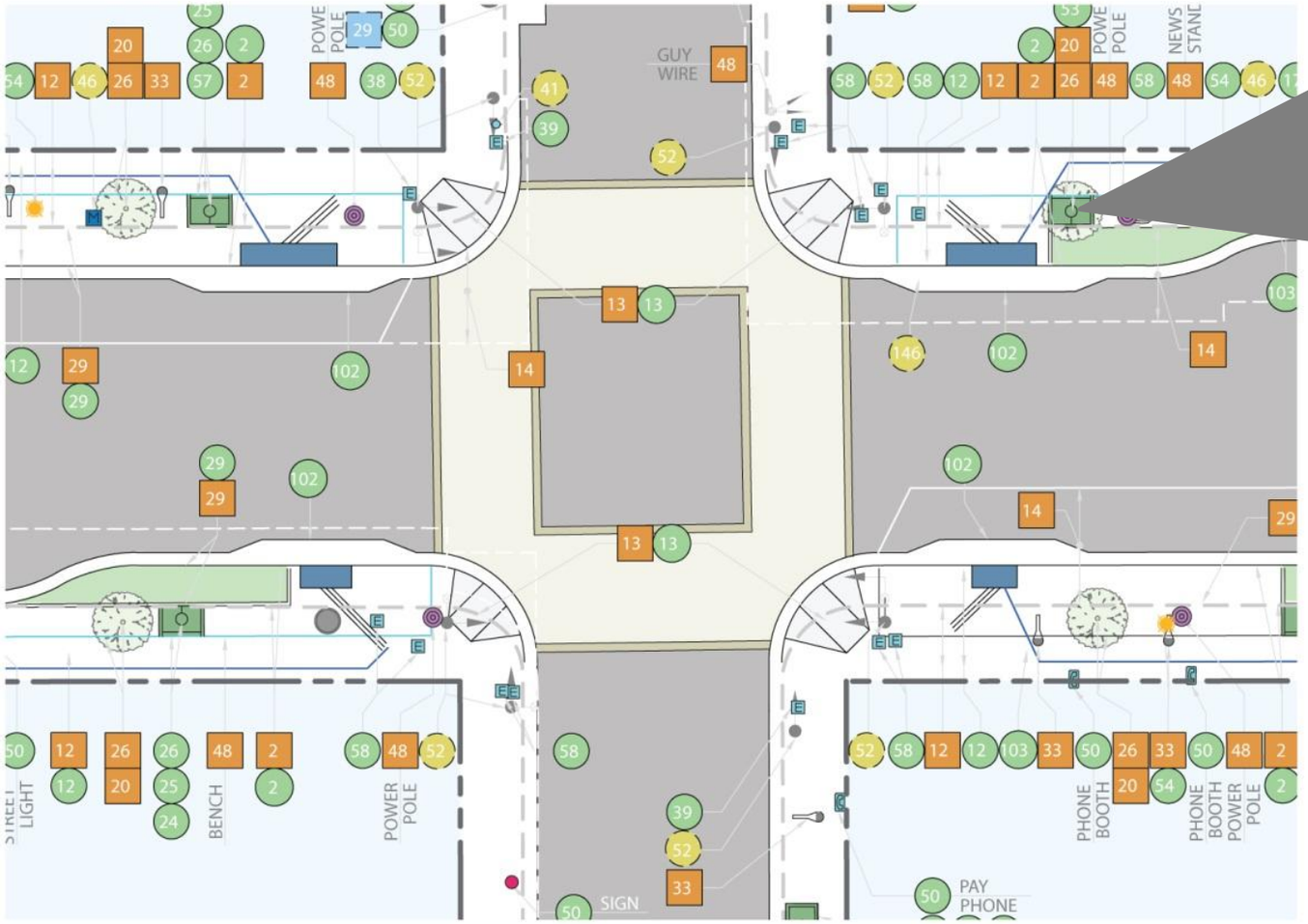
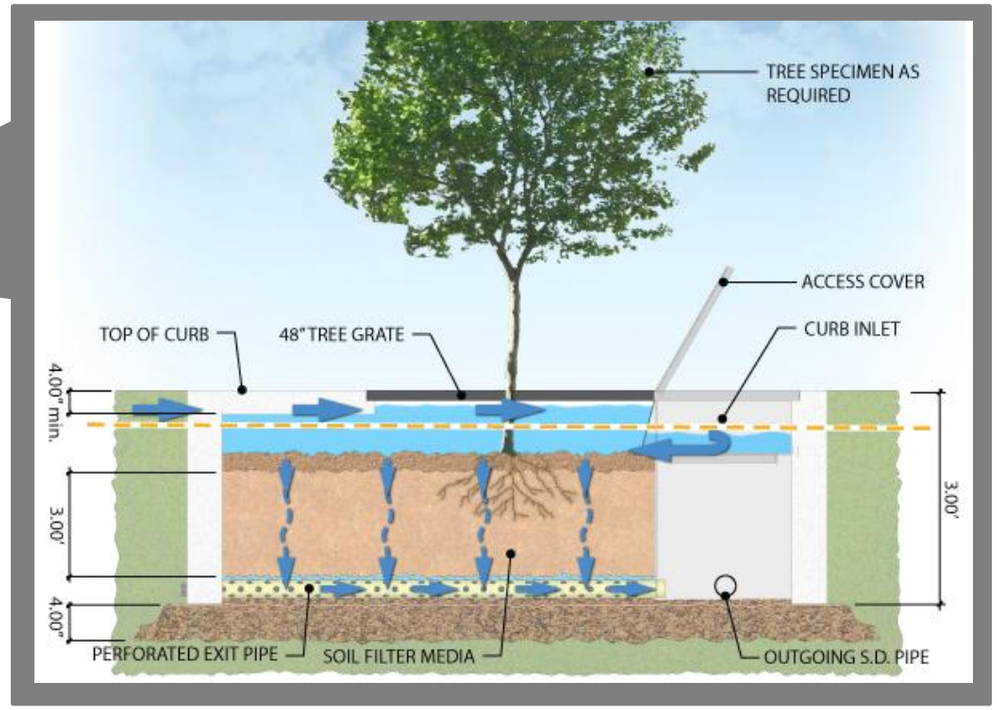
PEDESTRIAN IMPROVEMENTS EXAMPLE AREA DETAIL





IMPROVEMENT SYMBOLS

- CONSTRUCT
- EXISTING
- REMOVE
- WORK BY OTHERS
- REMODEL EXISTING
- REMOVE AND CONSTRUCT







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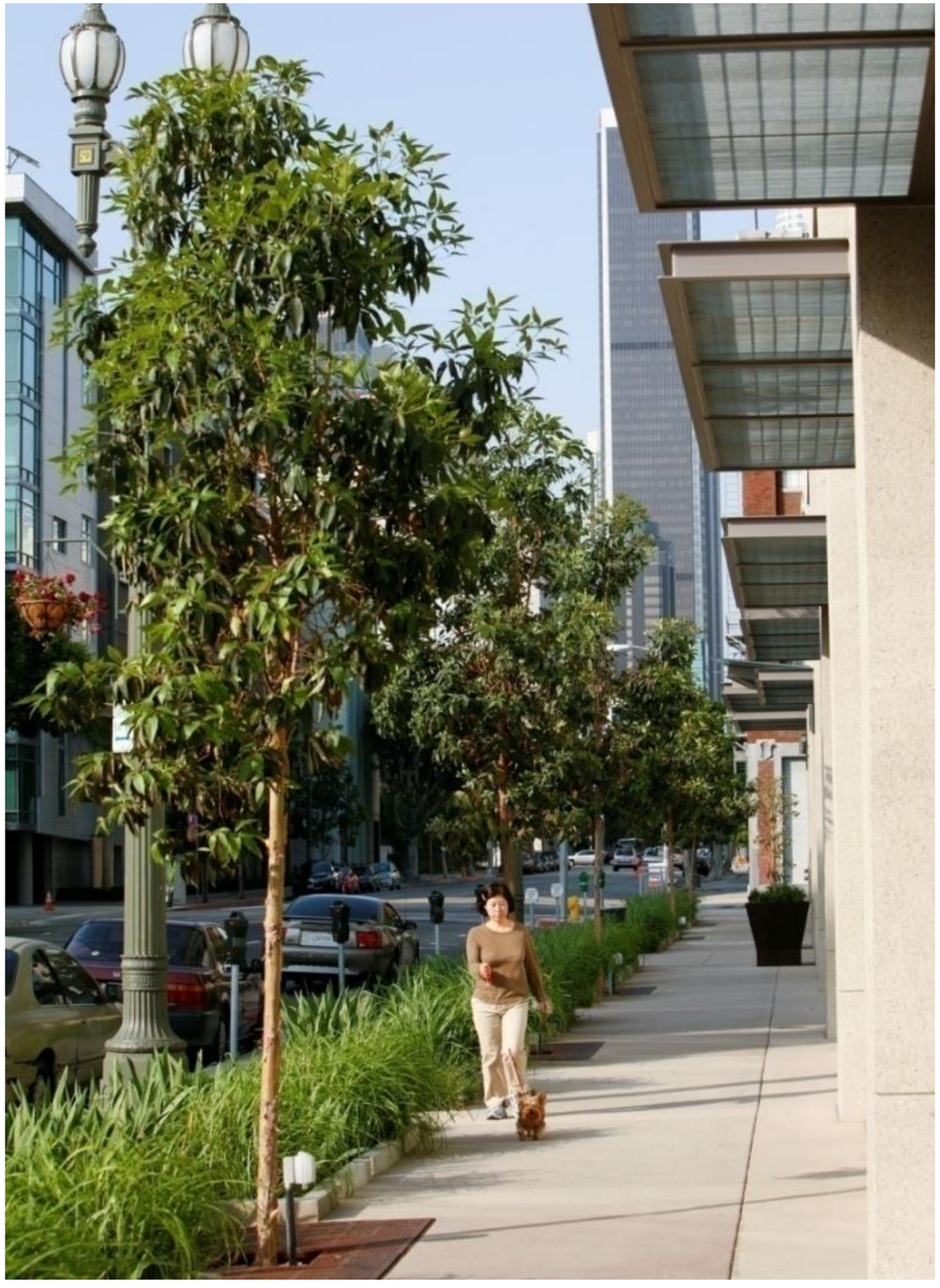
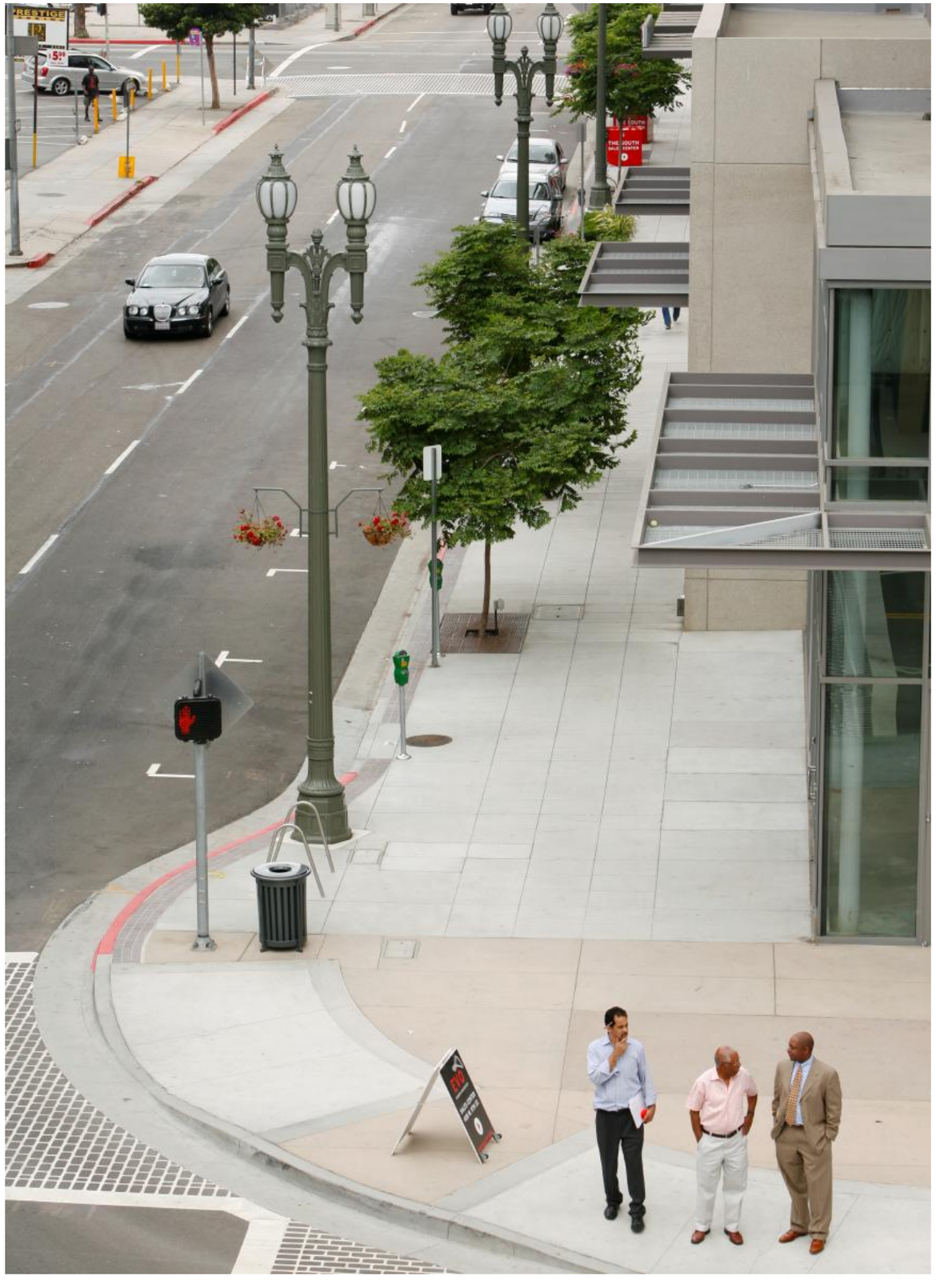
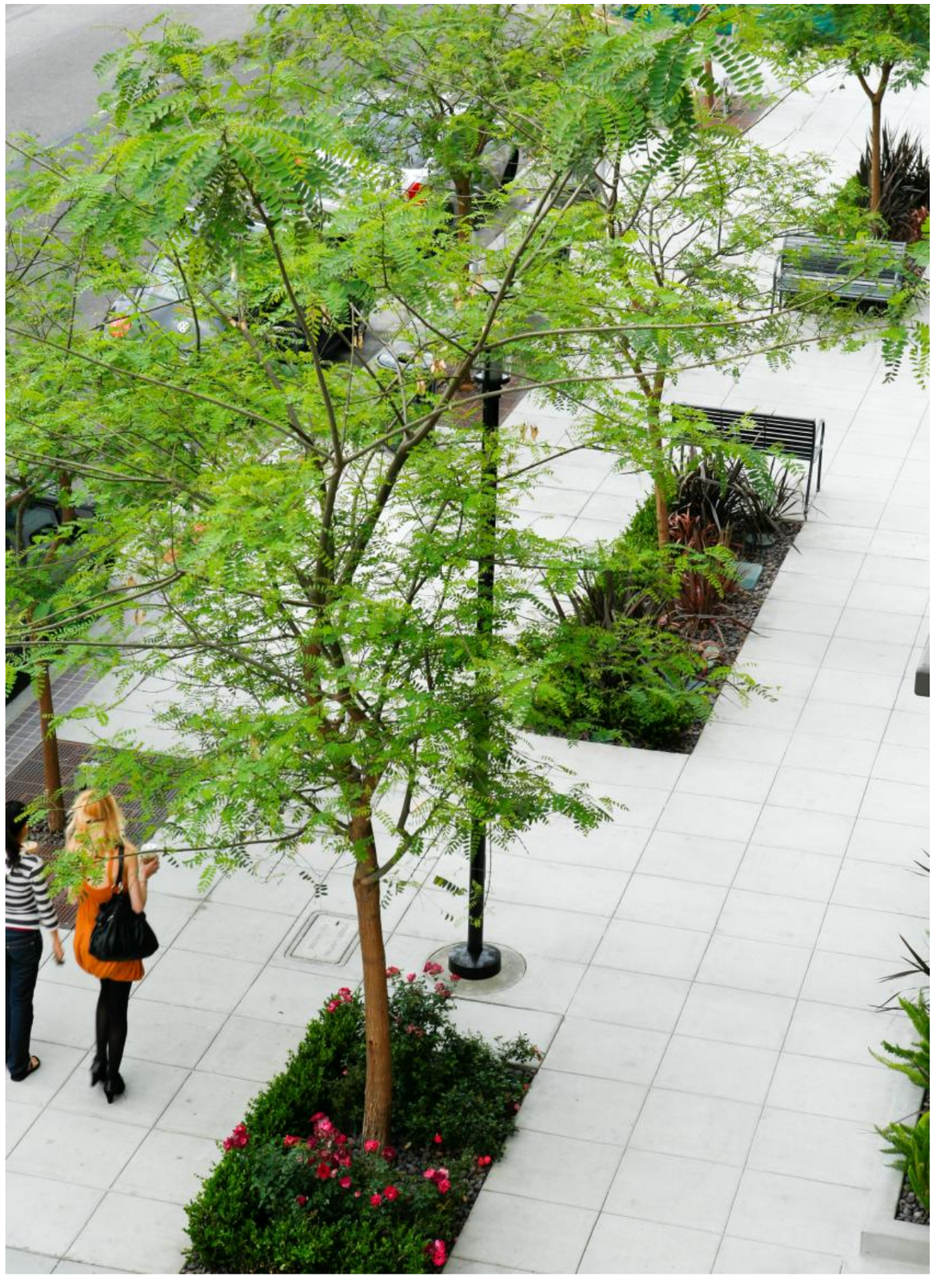
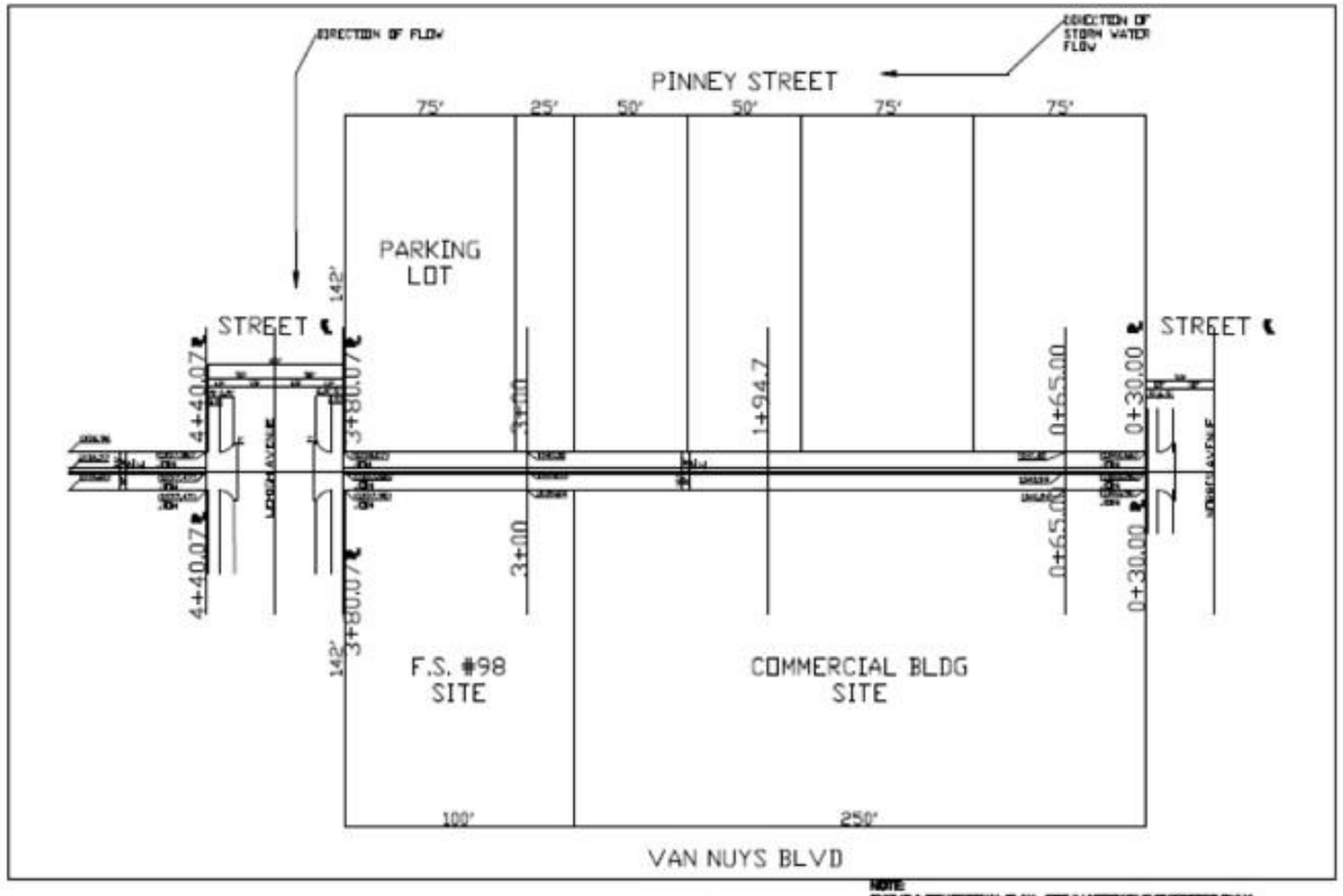






BUREAU OF SANITATION
DEPARTMENT OF PUBLIC WORKS
CITY OF LOS ANGELES

ALLEY NW/O VAN NUYS BOULEVARD FROM NORRIS AVENUE TO LEHIGH IMPROVEMENT PROJECT



NOTE:
THIS IS A CONCEPTUAL PLAN - FOR ILLUSTRATIVE PURPOSES ONLY

PROJECT TEAM

CLIENT: CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF STREET SERVICES
WILLIAM A. ROBERTSON
DIRECTOR
RON OLIVE
ASSISTANT DIRECTOR

DESIGN BY: BUREAU OF SANITATION
WATERSHED PROTECTION DIVISION
ENRIQUE G. ZALDIVAR
DIRECTOR
SHAHRAM KHARAGHANI
DIVISION MANAGER

N
(THOMAS GUIDE PAGE 500, GRID D-6)
VICINITY MAP
NOT TO SCALE

Green Alley Design

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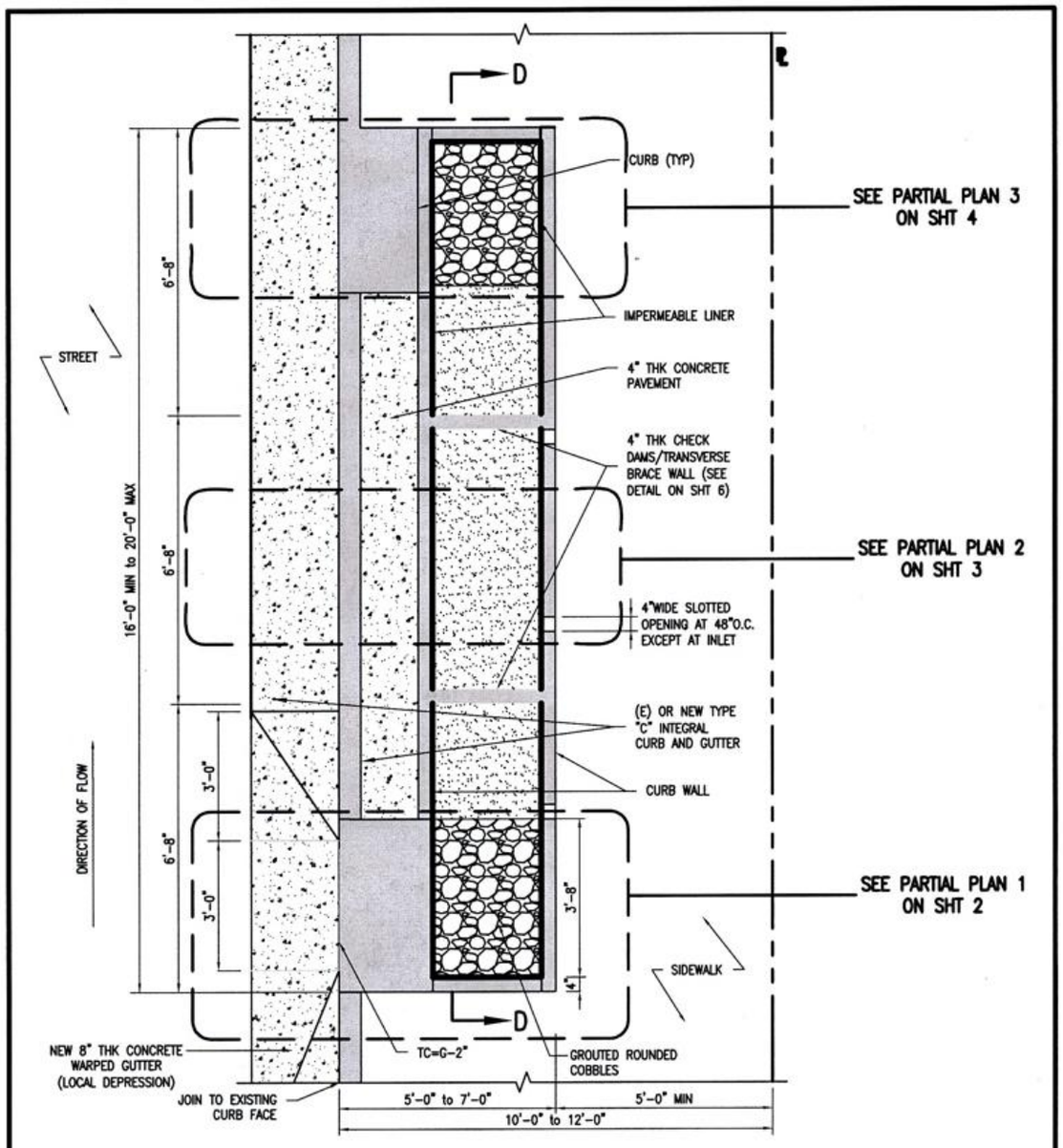


PLAN

BUREAU OF ENGINEERING — DEPARTMENT OF PUBLIC WORKS — CITY OF LOS ANGELES

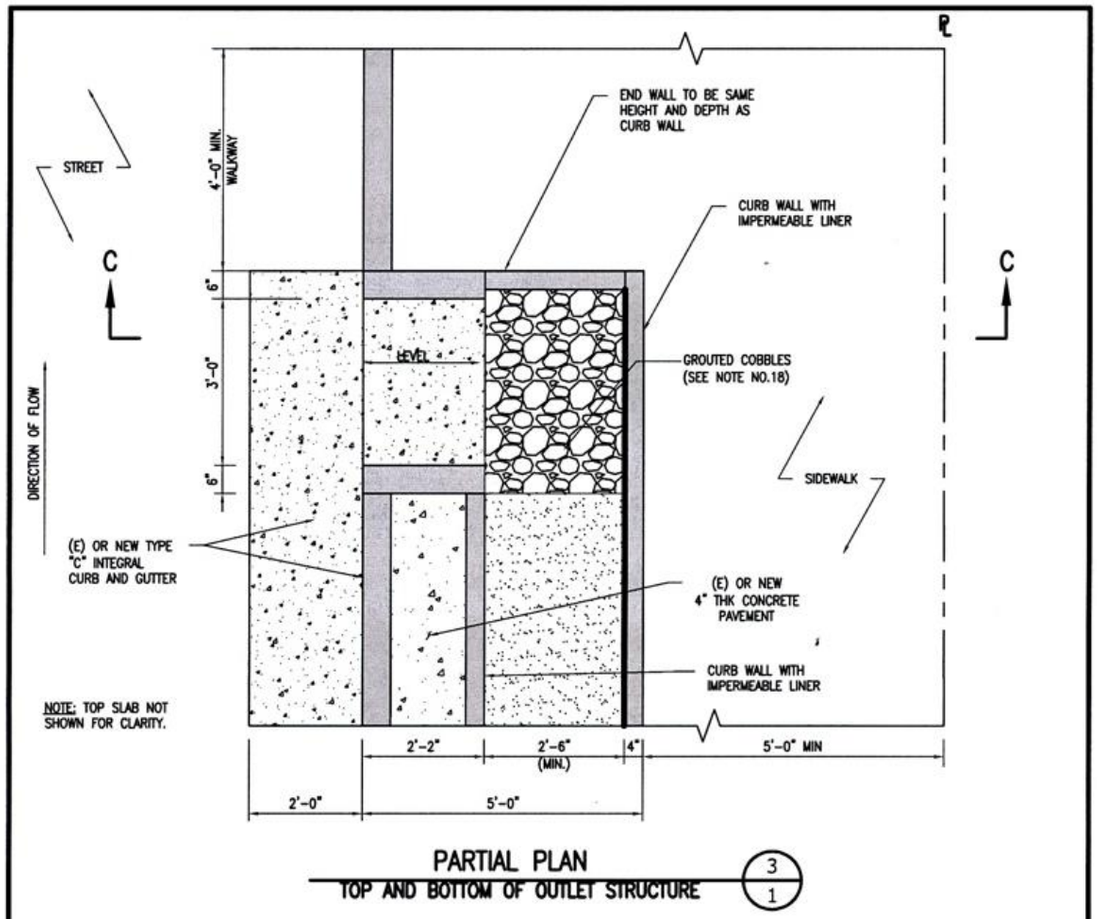
PARKWAY SWALE IN MAJOR/SECONDARY HIGHWAYS

STANDARD PLAN S-481-0

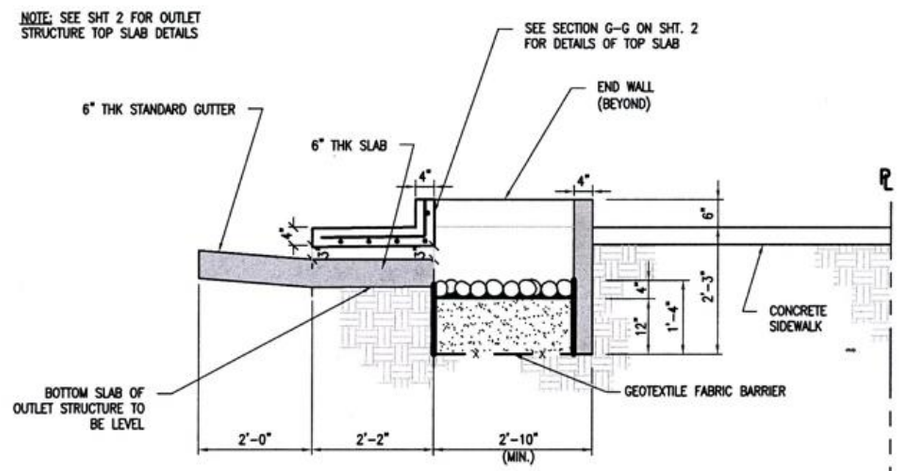
PREPARED	SUBMITTED	APPROVED	SUPERSEDES	REFERENCES
ALICE GONG, CE49107 BUREAU OF SANITATION ENRIQUE C. ZALDIVAR, P.E., DIRECTOR CHECKED PATRICK LEE, CE42448 BUREAU OF ENGINEERING	JEONG PARK, S.E. DATE ENGINEER OF DESIGN BUREAU OF ENGINEERING KEN REDD, P.E. DATE ACTING DEPUTY CITY ENGINEER	GARY LEE MOORE, P.E. DATE CITY ENGINEER REGISTERED PROFESSIONAL ENGINEER GARY LEE MOORE No. C-49446 Exp. CIVIL STATE OF CALIFORNIA		S-410 S-480 S-484

VAULT INDEX NUMBER:

SHEET 1 OF 8 SHEETS



PARTIAL PLAN
TOP AND BOTTOM OF OUTLET STRUCTURE (3/1)



SECTION C-C
TOP AND BOTTOM OF OUTLET SECTION

STANDARD PLAN NO. S-481-0

SHEET 4 OF 8 SHEETS

Schematic for Parkway Swale

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Built Examples

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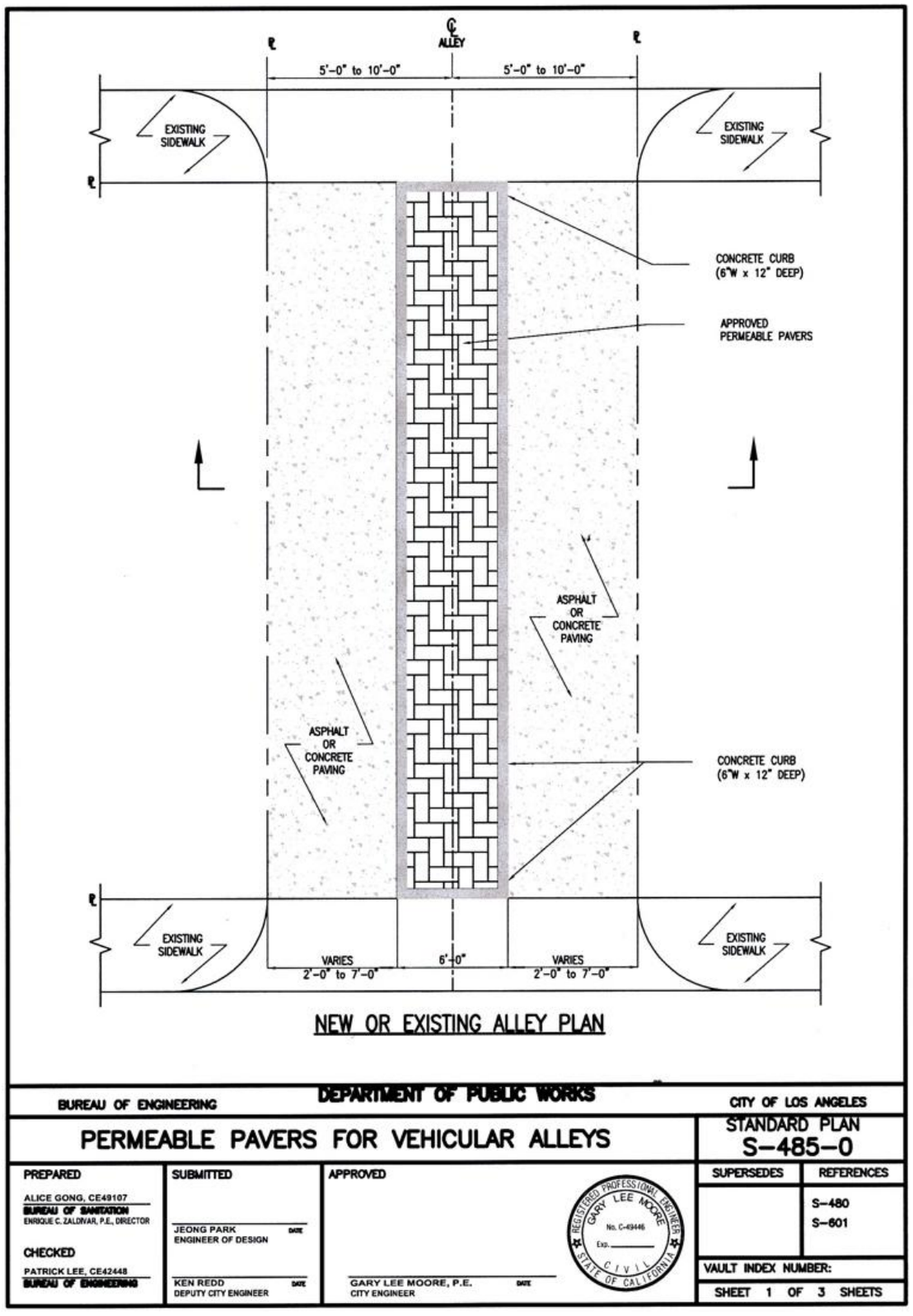

NEW OR EXISTING ALLEY PLAN

BUREAU OF ENGINEERING — DEPARTMENT OF PUBLIC WORKS — CITY OF LOS ANGELES

PERMEABLE PAVERS FOR VEHICULAR ALLEYS

STANDARD PLAN S-485-0

PREPARED	SUBMITTED	APPROVED	SUPERSEDES	REFERENCES
ALICE GONG, CE49107 BUREAU OF SANITATION ENRIQUE C. ZALDIVAR, P.E., DIRECTOR CHECKED PATRICK LEE, CE42448 BUREAU OF ENGINEERING	JEONG PARK DATE ENGINEER OF DESIGN KEN REDD DATE DEPUTY CITY ENGINEER	GARY LEE MOORE, P.E. DATE CITY ENGINEER REGISTERED PROFESSIONAL ENGINEER GARY LEE MOORE No. C-49446 Exp. CIVIL STATE OF CALIFORNIA		S-480 S-601

VAULT INDEX NUMBER:

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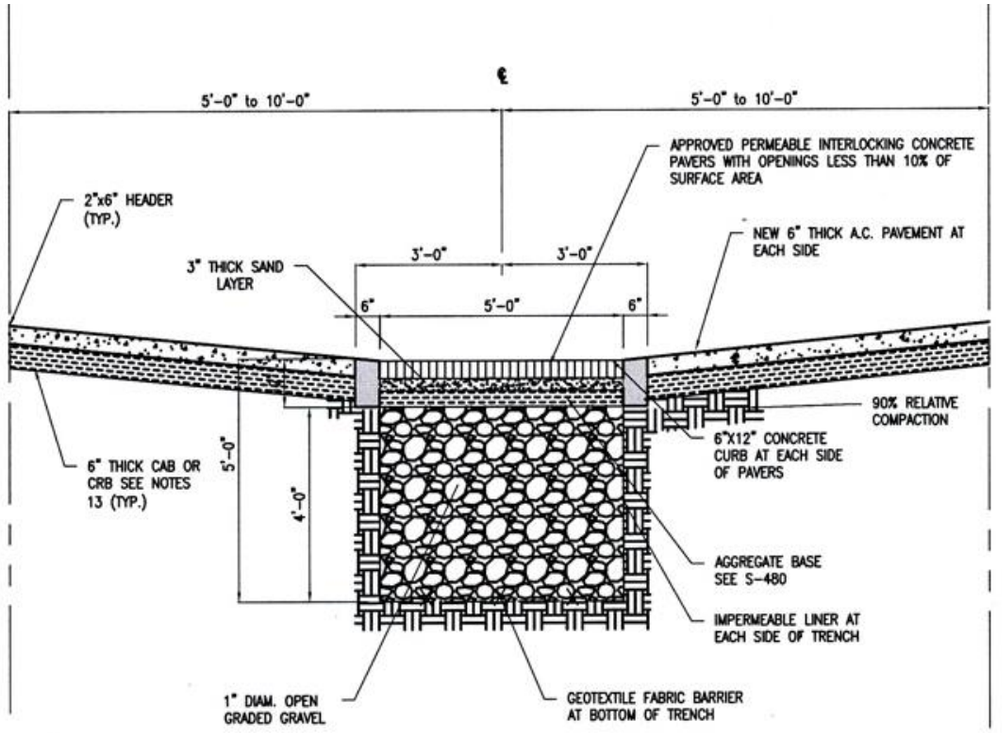
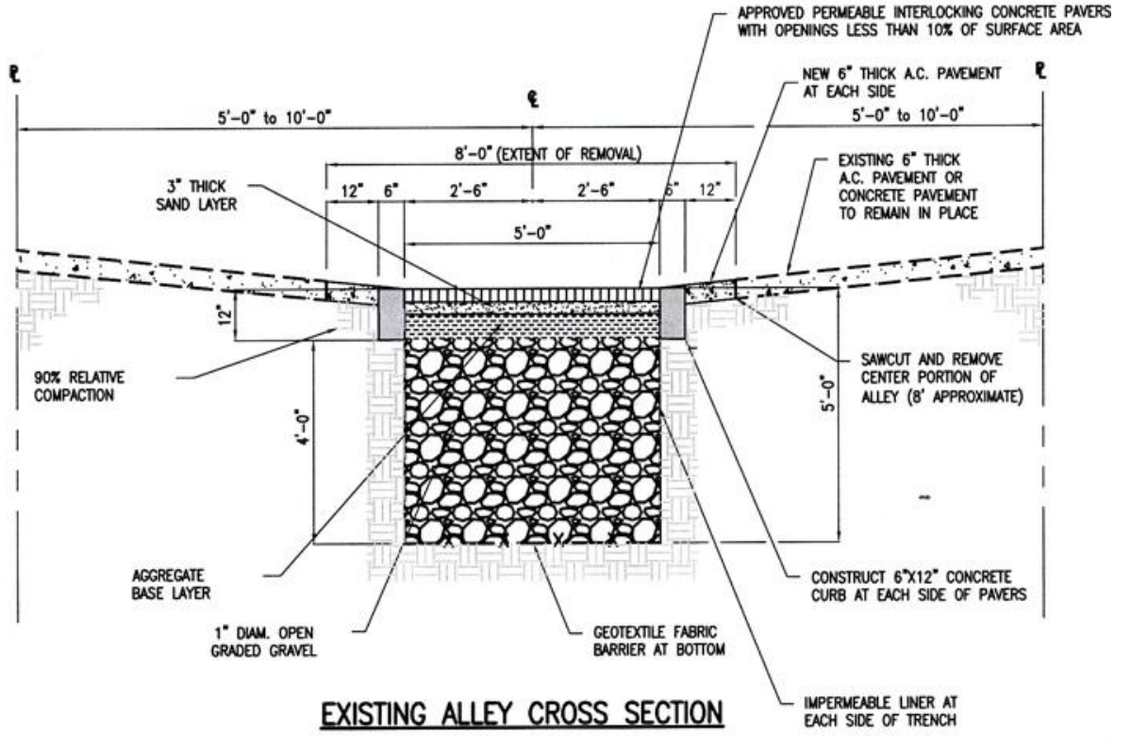


NEW ALLEY CROSS SECTION



EXISTING ALLEY CROSS SECTION

Permeable Pavers for Vehicular Alleys

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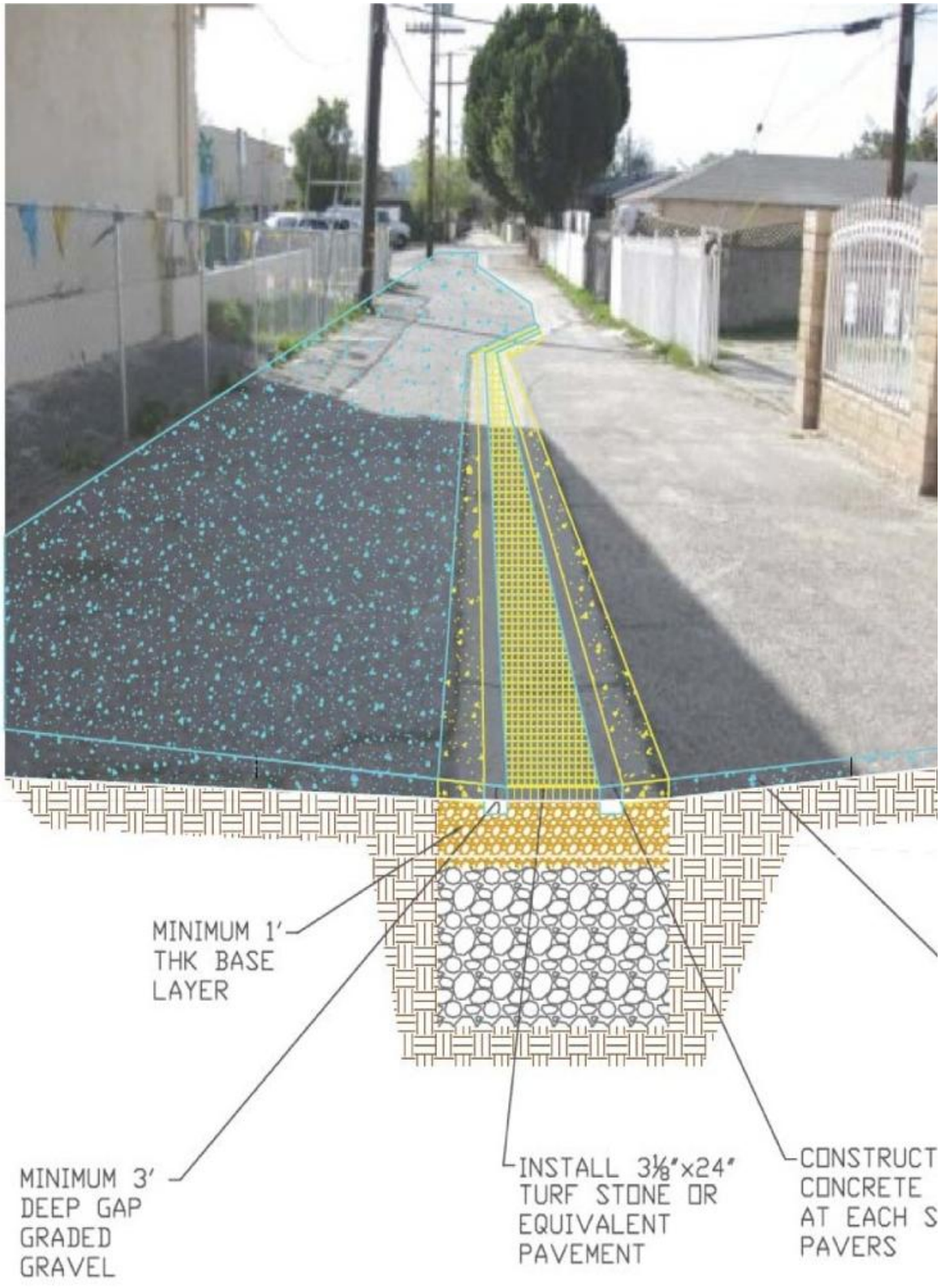

Permeable Alleyways

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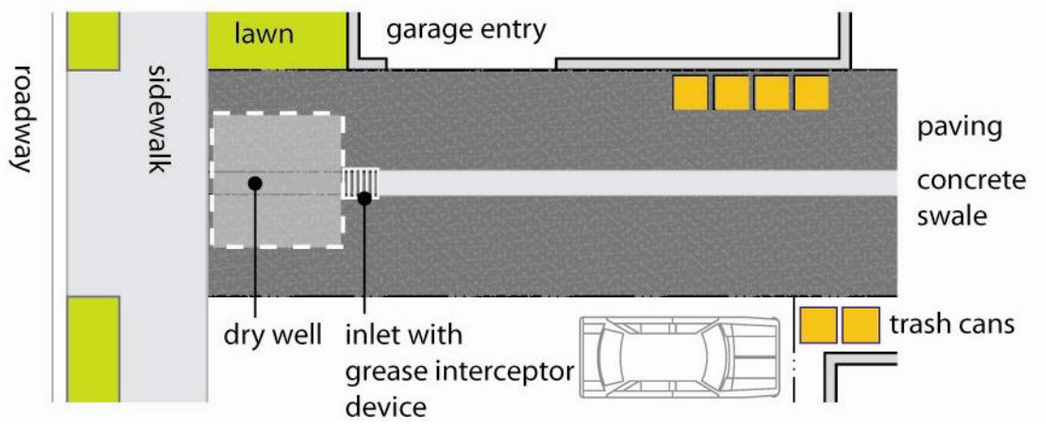
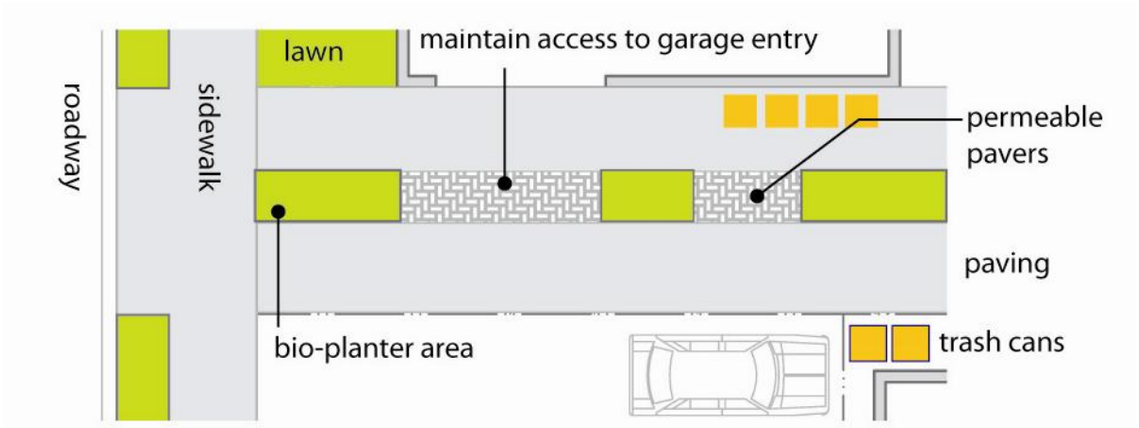
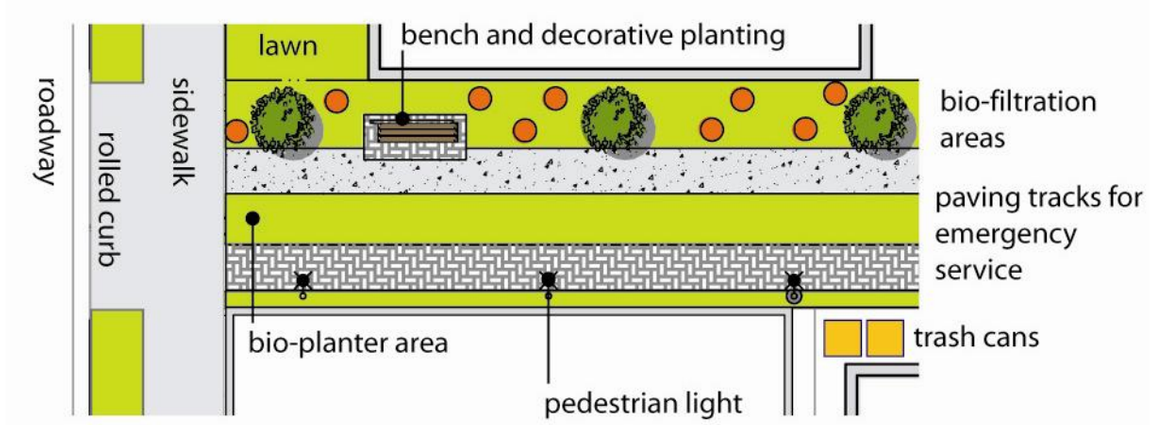
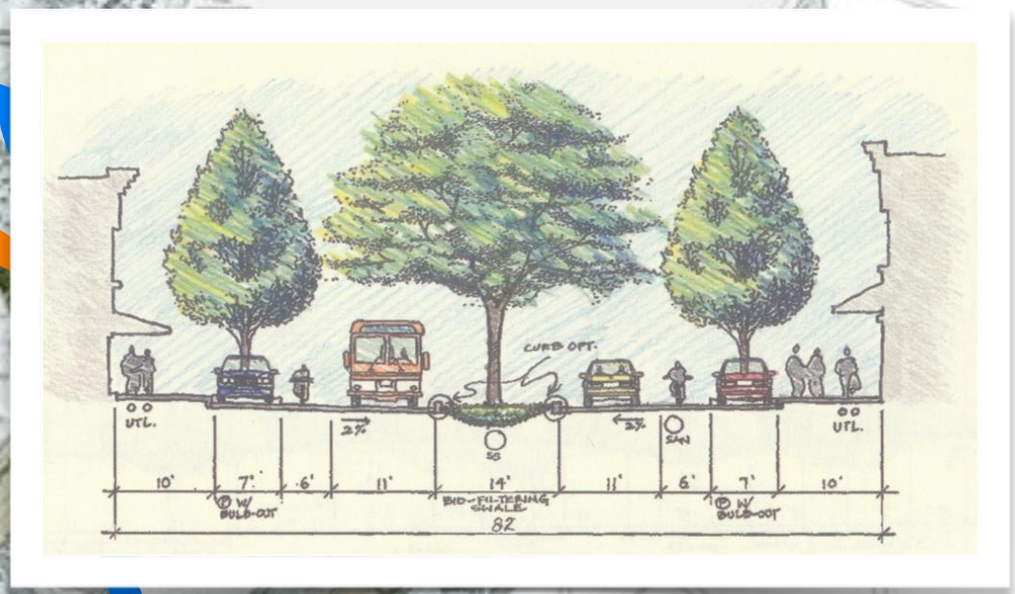

roadway
sidewalk
lawn
garage entry
paving
concrete
swale
dry well
inlet with
grease interceptor
device
trash cans


roadway
sidewalk
lawn
maintain access to garage entry
permeable
pavers
paving
bio-planter area
trash cans


roadway
rolled curb
sidewalk
lawn
bench and decorative planting
bio-filtration
areas
paving tracks for
emergency
service
bio-planter area
pedestrian light
trash cans

AHBE



3 Tiered Green Street Implementation

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Streets As a "Public Place"

- In 1969 Over 40% of Kids Walked to School, Today It's Only About 12% - Less Than 5% in Some Areas

- Select Candidate Streets for Watershed Function & Proximity to Schools, Retail, & Other Destinations

Green Features in 3 Distinct Zones

- Vehicle Parking & Roadway Zone
- Pedestrian Travelway & Furnishings Zone
- Storefront & Patio Zone

Top 3 Implementation Issues

- No Enabling Policy or Guidelines
- No Standard Plans and O & M Resistance
- No “Room” & Other Site Constraints

Streets As a "Public Place"

Multiple Benefits

- Water Quality Compliance
- Storm Detention & Peak Reduction
- Water Conservation/Aquifer Recharge
- GHG & Carbon Reduction
- Energy Savings
- Aesthetics as Public Place
- Property Value & Business Improvements

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Hydromodification

- Intended to protect downstream creeks and channels from scour, channel instability and habitat degradation due to increases in peak flow rates and volumes related to development
- Projects are exempt that drain directly into tidally influenced water bodies (Newport Bay) or from storm drains into tidally influenced water bodies (Jamboree SD system to Newport Dunes)

Hydromodification

- Redevelopment sites not likely to trigger N. OC Hydromod requirements, only raw land conversion
- Only involves investigation of 2-year hydrographs for N. OC; S. OC significantly more detailed, expensive and results in significantly more on-site detention/retention
- LID features can do much of the work for the hydromod if it's required

Buck Gully Hydromodification

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Copper Reduction in Newport Bay Coastal/Bay Water Quality Committee Update March 2012

presentation by Ray Hiemstra

What has and is being done in Newport Bay

- 2008 Newport Bay Copper Reduction Project begins. Project runs through the end of 2012
- 2009 City passes resolution encouraging the use of non-biocide boat bottom paints
- 2010 City sponsors boat bottom cleaner training with Ca. professional Divers Assn.

Newport Bay Copper TMDL

- USEPA promulgated a Toxics TMDL for San Diego Creek and Newport Bay in 2000 that includes Copper.
- Draft of a state Copper TMDL/w implementation schedule will be released this summer. Will cover water and sediment.
- Estimates suggest 90% reduction in copper inputs to the bay will be necessary to meet current water quality standards.

Biologic Ligand Model

- Freaswater adopted by USEPA in 2010, saltwater under development, Release scheduled for May
- May or may not be useful for Newport Bay
- Adoption by USEPA is critical for use of the BLM in CA. Not a priority for them at this time.

Copper Bill
SB 623

- Introduced by Kehoe in 2011, held over for 2012 at request of state agencies
- Requires use of low leach rate copper paints followed by ban if water quality goals are not met.
- Ban does not go into effect until 2019 allowing time for alternate paints to work or to change WQ standards.