



# **The Green Infrastructure Plan Requirement: shifting from gray to green infrastructure**

**June 14, 2016**

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Community Design + Architecture



# Green Infrastructure (GI) Requirements

- **Develop a Green Infrastructure Plan (GIP)**
- Promote GI; education and outreach
- Tracking and reporting process
- Conduct “early implementation”
  - Construct planned and funded projects
  - Review public project lists and assess opportunity for incorporating GI elements

# Green Infrastructure Plan

- *The Green Infrastructure Plan ... should describe how the Permittees will change over time infrastructure that directs runoff directly into storm drains and receiving waters to green infrastructure that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to treat stormwater runoff.*



# Green Infrastructure Plan

- Prioritize and map Green Infrastructure projects
- Track and map completed projects
- Green Infrastructure guidelines, standard specifications, and details
- Hydromodification or other accepted sizing requirements
- Planning document updates and integration into new documents
- Workplan to complete prioritized projects
- Evaluate funding options
- Adopt mechanisms to implement GIP



Photo: Greg Raisman – [flickr.com/photos/gregraisman/](https://www.flickr.com/photos/gregraisman/)

## Green Infrastructure Plan additional benefits

- Link to other community priorities
  - Complete Streets and active transportation
  - Open space and habitat
  - Economic development
  - Community identity
- Increase effectiveness of capital and O&M investment
  - Address multiple needs
  - Selecting appropriate GI approach for specific conditions
  - Detailing design for efficient O&M



Bergamot Area Plan, Santa Monica, CA

# Green Infrastructure Plan Support for Member Agencies

- Technical Advisory Committee Support
  - Quarterly meetings
  - Desire for high level of jurisdiction involvement
  - Recommended a Green Infrastructure Working Group in each jurisdiction
    - Stormwater
    - Transportation (Engineering & Planning)
    - Landscape
    - Parks
    - Land Use/Development Services
    - Sustainability
    - Planning, Design, Construction, and Operations & Maintenance
    - Sometimes Fire, Police, and Jurisdiction Manager





## Green Infrastructure Plan Workplans

- Workplans to include statement of purpose, tasks, and time frames to complete GIP requirements
- MRP 2.0 deadline of June 30, 2017 for jurisdiction adoption of Green Infrastructure Plan workplans
- Develop model workplan with jurisdiction input
  - Draft and final annotated outline (FY 15-16)
  - Draft and final model document (FY 16-17)
- Support jurisdictions in preparing their workplans
- Support jurisdictions' approval process – background materials & presentations

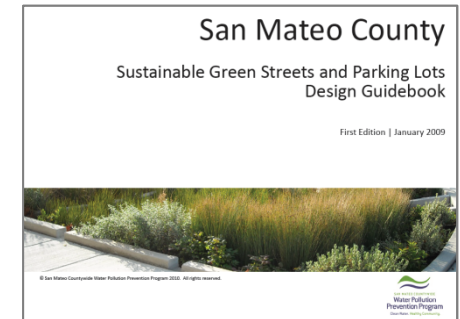


# Guidelines, Standard Specifications and Design Details

Core element of MRP 2.0 requirements for the 2019 Annual Report

## ■ Guidelines

- Build from *San Mateo County Sustainable Green Streets and Parking Lots Design Guidebook* and the City of San Mateo *Sustainable Streets Guidelines*
- Reference Best Practice and Model Documents
- Coordinate with BASMAA Development Committee and GI Design Charrette



- Best Practices
- New Custom Guidance
- Local Experience

**Green Infrastructure  
Plan Guidelines**



# Constrained Sites/Retrofitting Streets

- Pavements
- Modular pavement support systems
  - Silvacell, Stratacell
- Bulbouts and curb extensions



Source: Green Infrastructure for Southwest Neighborhoods



Source: nacto.org



Source: Deeproot.com

# Multi-modal Complete & Green Streets

- Pedestrian
- Bike
- Transit



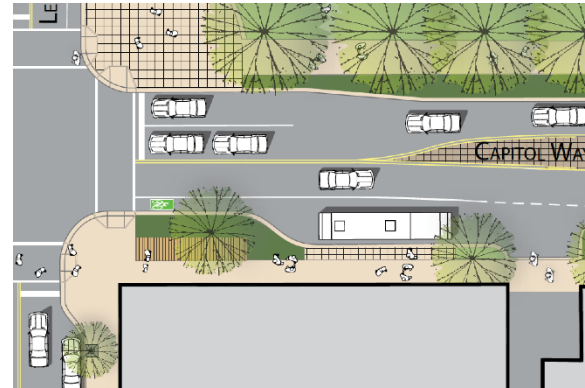
Source: [legal-planet.org/Nell Green Nylen](http://legal-planet.org/Nell-Green-Nylen)



Source: [thisoldcity.com](http://thisoldcity.com)



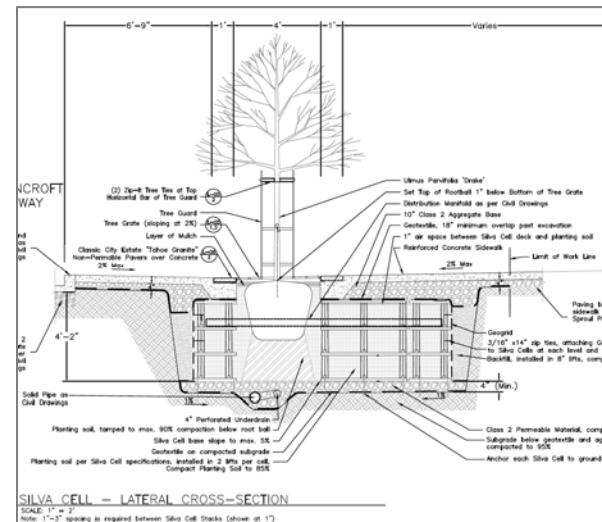
Source: [nacto.org](http://nacto.org)



# Guidelines, Standard Specifications and Design Details

## ■ Standard Specifications and Design Details

- Increasing number of recently developed model standards and details to build and learn from
- Coordinate with BASMAA Development Committee and GI Design Charrette
- Focus on cost effective balance of construction and O&M costs





# Water Flow and Grades

- Get runoff into GI
- Low points, flow lines



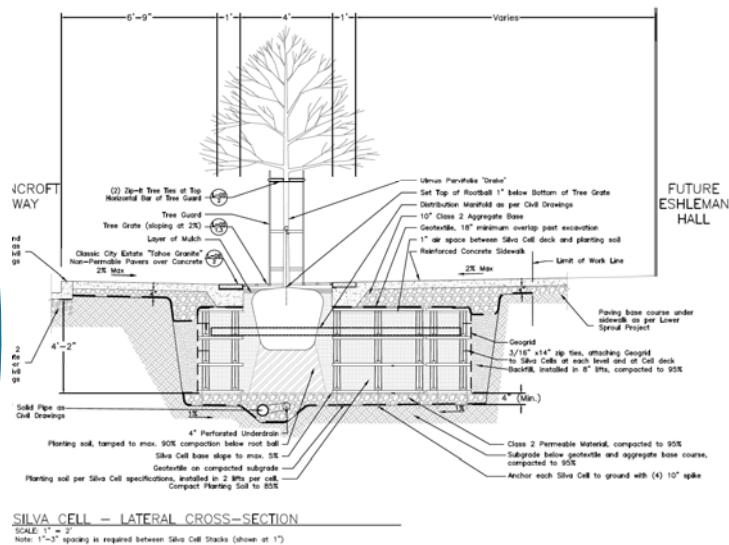
Source: la.blogspot.org

# Soil Mix and Root Soil Volume

- Moisture retaining
- Support healthy plants
- Room for roots



Source: [www.landscapeonline.com](http://www.landscapeonline.com)





## Model Plan Update Materials

- Identify/review existing and planned policy documents during MRP period, such as:
  - General and specific plans
  - Climate action/resiliency plans
  - Urban forestry plan
  - Complete streets/active transportation plans
  - Storm drain master plans
  - Flood control/management plans
- Develop model goals, policies, practices, and illustrations
- Jurisdictions to update their planning documents by 2019 Planning Report submittal deadline













## Green Infrastructure Opportunities, Prioritization, PCB Reductions, and Implementation Tracking Tool

- Building from Stormwater Resource Plan and Mercury and PCBs Load Reduction modeling tools and project identification
  - Identify public and private opportunities for Green Infrastructure
  - Set prioritization criteria
  - Define phasing strategy
  - Develop and employ Implementation Tracking Tool



# Green Infrastructure Plan Schedule

Task	FY '15-'16	FY '16-'17				FY '17-'18				FY '18-'19
On-going TAC	 									
Frameworks/Workplans					<b>Prepare Workplan</b>					
Guidelines and Standards										
Model Plan Update Materials	<b>Gather Documents</b>						<b>Update Planning Documents By 2019 Annual Report</b>			
GI Opportunities & Prioritization										
Periodic Education & Outreach										
Identify GI Projects for PCBs reduction										
Identify PCB Targets for Impervious Surface Retrofits										
GI Implementation Tracking Tool										<b>Data Upload</b>

TAC Meeting



Consultant Work



Jurisdiction Review



Jurisdiction Work/Adoption



SAN MATEO COUNTYWIDE  
Water Pollution  
Prevention Program  
Clean Water. Healthy Community.

# Measuring Success

- Meeting MRP 2.0 deadlines
- Meeting or exceeding MRP 2.0 goals and thresholds
- Local Jurisdiction Implementation
  - Integration of GI into standard practices
    - Street design
    - Other capital projects
    - Private development review
    - Cross departmental planning, operations and maintenance
    - Construction practices
  - Ease of access and updating of web-based data and mapping

