



Transmittal Memorandum

Date: September 26, 2017
To: City of San Luis Obispo
Freddy Otte, Jennifer Rice, Brian Nelson, Hal Hannula, Luke Schwartz,
From: Dr. Darla Inglis, Central Coast Low Impact Development Initiative (LIDI)
Re: Transmittal of green Infrastructure concept designs for the City of City of San Luis Obispo

This memorandum describes the completion of green infrastructure concept designs completed by LIDI in collaboration with AmeriCorps CivicSpark, Cannon Corp and staff from the City of San Luis Obispo. Transmittal of the concept designs includes files for concept design siting, sizing, performance and cost estimates. Project renderings (images, photos, drawings) are also included for each design and vary in detail depending on design complexity. All project files will be provided via a Dropbox link. Files should be downloaded in a timely manner to avoid complications in file availability. In addition to the direct transmittal of project information, all materials will be located on the LIDI website project page (centralcoastlidi.org).

The Central Coast Low Impact Development Initiative is a program designed to support stormwater mitigation through LID designs and hydromodification controls with the broader vision of a healthy watershed in mind. As part of the 2016-2107 LIDI Work Plan, LIDI developed green infrastructure (e.g., LID) designs to improve stormwater management and provide ancillary economic, social and environmental benefits. Selection of design projects was focused primarily on the municipalities existing Capital Improvement Program to identify opportunities to cost-effectively integrate stormwater quality improvements using a green infrastructure approach.

In collaboration with the City of San Luis Obispo, five projects were selected for green infrastructure concept design:

1. Mitchell Park
2. California and Taft roundabout
3. Fire Station No. 2
4. Victoria Avenue
5. Meadow Park

Additionally, engineering details were created for bulb-out pedestrian crossings that provide improved public safety, stormwater management and urban greening. A brief description of each project is provided in this memorandum. Detailed information including sizing, performance calculations and cost estimates

are included as part of the transmittal files. In addition to any supporting files, a master Excel is provided for each project to allow for project design adjustments.

Mitchell Park Bioretention Project

Located at Osos St. and Buchon St. in San Luis Obispo, this bioretention project will manage stormwater runoff from the surrounding residential neighborhood. Stormwater infrastructure in this area is generally of inadequate capacity resulting in localized flooding. Additionally, runoff flows and pollutants impact the downstream creek habitat and beneficial uses. This project will capture and infiltrate approximately 25% of the 85th percentile, 24-hour storm event from the contributing 4 acres. Mitchell Park provides an opportunity to cost-effectively support the City's stormwater management objectives while maintaining current park uses. The high visibility of the park location is suitable for educational efforts such as signs offering information on Green Infrastructure and Low Impact Development.

California and Taft Bioretention Project

A planned roundabout at California and Taft provides an opportunity to evaluate green infrastructure design to address roadway stormwater runoff. Initially, the green infrastructure opportunity was thought to be a voluntary option, however, the project will trigger post-construction requirements. As such, the LIDI support offered as part of this Green Infrastructure design project included working with the County and their consultant (Omni Means) to review and discuss stormwater quality compliance options. Review of the preliminary design resulted in several recommendations on how the LID design can be improved for cost-effective compliance. Deliverables for this effort include a summary memorandum and an annotated version of Omni Mean's preliminary design.

Fire Station No. 2 Biofiltration Project

This project design provides capture, treatment, and infiltration of stormwater roof runoff from City of San Luis Obispo Fire Station No. 2. The existing roof downspout discharges runoff directly onto the fire station driveway where runoff migrates beneath the concrete slab driveway causing collection of stormwater, which adversely impacts the structural integrity and function of the driveway (e.g., water spurts out of the concrete crevices with vehicle heavy loads). The existing downspout provides an opportunity to construct a bioretention facility to address stormwater roof runoff. The bioretention facility footprint is defined by an existing landscape planter area. The available space in the existing landscape planter exceeds the amount needed to manage the 85th percentile, 24-hr storm event runoff from the roof. Therefore, the actual stormwater management volume infiltrated and treated will be higher.

Stormwater Management on Victoria Avenue

The City's South Broad Street Specific Plan includes the concept of a "Village Street" for Victoria Avenue. Redevelopment of adjacent parcels includes multi-family housing and mixed live/work redevelopment. The Specific Plan did not include evaluation of green infrastructure within the street right-of-way. Because Victoria Avenue is relatively narrow, requires ample parking and the native soils are not conducive to significant infiltration, a targeted approach to integration of stormwater facilities was the focus of the concept design. The concept includes use of the intersection to create bulb outs that provide pedestrian safety and accommodate bioretention facilities. Additionally, a mid-block crossing provides another opportunity to integrate stormwater management. While not a full green street overhaul, the concept design provides stormwater benefit, including the potential to address stormwater quality control requirements triggered by post-construction activities on the private parcels. The design is consistent with the original Village Street vision and adds additional ancillary community benefit.

Meadow Park Stormwater Capture and Use Project

Stormwater runoff from South Broad Street and the surrounding neighborhoods is conveyed via curb/gutter/pipe to Meadow Park where an outfall discharges runoff to Meadow Creek. High stormwater volumes, rates and associated pollutants adversely impact both Meadow and San Luis Obispo creeks. While decentralized measures can support stormwater management goals (e.g., Victoria Avenue), the enormity of the fully built out conditions makes a fully decentralized approach ineffective. Use of “mini-regional” facilities (e.g. retention, detention ponds) are often technically effective but the lack of available land and/or cost of land can negate this approach. However, subsurface systems can provide significant stormwater management performance and can be located beneath play fields, parks and parking lots. The Meadow Park Stormwater Capture and Use design takes advantage of Meadow Park to locate a subsurface retention system. The design involves a proprietary system manufactured by the StormTrap company however, other “off-the-shelf” systems are also available. StormTrap was used for the concept design development based on the number of successful projects implemented in California. The concept design involves the re-routing of some stormwater flows from the outfall pipe to the StormTrap system where runoff is captured. The design option includes an open bottom system that can facilitate infiltration. However, the design completed for this project includes a storage element that provides a source of irrigation water for the park. The use of stormwater “capture and use” is a priority in California given recent drought conditions and this project supports creek protection, public benefit and urban greening.