

Avenida de la Playa Storm Drain Upgrades

(SD IRWMP Project #178)

Attachment 4: Budget

The *Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion* project (Project) is being implemented to address the persistent problem of flooding along Avenida de la Playa and also reduce bacteria loads to the ASBS as a result of stagnation of low urban runoff flows to the existing storm drain system. Funding for this project is needed for construction/implementation and construction/implementation contingency.

The total cost associated with the *Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion* project is \$4,007,470. Of these total costs, \$1,803,361 is being requested for grant funding through the IRWM Implementation Grant Program, and the project will not involve other sources of State funding. The remaining \$2,204,109 will be funded by non-state funding sources, which will come from the City of San Diego Storm Water Department, Watershed Capital Improvement Projects (Watershed CIP/ACC00001, WBS: B009009 and Federal EPA STAG Grants Nos.: XP-97998201 & XP-97991601). This amount constitutes 55% of the total project cost, meaning that the non-State share of the total project cost (funding match) is 45%. Table 4-1 below provides a more detailed break-down of the total project budget.

Table 4-1: Total Project Budget
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion project

| Budget Category | | (a) Non-State Share* (Funding Match) | (b) Requested Grant Funding | (c) Other State Funds Being Used | (d) Total | (e) % Funding Match |
|-----------------|--|---|--------------------------------------|---|--------------------|------------------------------|
| (a) | Direct Project Administration Costs | \$0 | \$0 | \$0 | \$0 | 0% |
| (b) | Land Purchase/Easement | \$0 | \$0 | \$0 | \$0 | 0% |
| (c) | Planning/Studies/ Design/ Environmental Documentation | \$369,673 | \$302,459 | \$0 | \$672,132 | 55% |
| (e) | Construction/Implementation | \$1,658,801 | \$1,357,200 | \$0 | \$3,016,001 | 55% |
| (f) | Environmental Compliance/ Mitigation/Enhancement | \$0 | \$0 | \$0 | \$0 | 0% |
| (g) | Construction Administration | \$0 | \$0 | \$0 | \$0 | 0% |
| (h) | Other Costs | \$0 | \$0 | \$0 | \$0 | 0% |
| (i) | Construction/Implementation Contingency | \$175,635 | \$143,702 | \$0 | \$319,337 | 55% |
| (j) | Grand Total | \$2,204,109 | \$1,803,361 | \$0 | \$4,007,470 | 55% |

* Sources of funding: *City of San Diego Storm Water Department, Watershed Capital Improvement Projects (Watershed CIP / ACC00001, WBS: B00909, <http://www.sandiego.gov/fm/annual/fy11vol3.shtml>).*

This Implementation Grant Proposal is requesting funding for one project task identified within the *Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion* project (refer to Attachment 3).

**Table 4-2: Cost Breakdown by Work Plan Task and Subtask
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion**

| Row/Task | Category | Total |
|-----------------|---|--------------------|
| Row (c) | Planning/Studies/ Design/ Environmental Documentation | \$672,132 |
| Task 5 | 30% ; 60%; 90% & 100% Design | \$672,132 |
| Row (e) | Construction/Implementation | \$3,016,000 |
| Task 9 | Construction | \$3,016,000 |
| Subtask 9.1 | Mobilization and Site Preparation & Demolition | \$419,018 |
| Subtask 9.2 | Project Construction/Implementation | \$2,272,733 |
| Subtask 9.3 | Performance Testing and Demobilization | \$324,250 |
| Task 13 | Contingency | \$319,337 |
| Row (j) | Grand Total | \$4,007,470 |

Row (a) Direct Project Administration Costs

The City of San Diego will carry out project administration tasks relating to direct project administration, a labor compliance program, and reporting for this project. However, staff costs for those tasks are not included within the proposed budget.

Row (b) Land Purchase/Easement

Not applicable.

Row (c) Planning/Design/Engineering/Environmental Documentation

The City of San Diego will carry out assessment and evaluation tasks relating to assessment and evaluation, feasibility studies, concept design, final design environmental documentation, and permitting for this project. Planning studies that have been completed or will be completed include the following:

- Strategic Plan for Watershed Activity Implementation
- *Weston Studies for Baseline Assessment & Studies*
- Tier II and Tier III Storm Water Best Management Practices Conceptual Designs
- Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion Feasibility Studies & Concept Design and Drawings (10%)
- Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion Preliminary Engineering Report
- Preliminary Drainage Analysis
- Stormwater Pipe Preliminary Analysis
- Avenida de la Playa Stormwater Alternative Analysis
- 30%, 60%, 90%, and 100% Final Design Drawings
- MND Addendum for Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion,
- City of San Diego, Site Development Permit per the MND Addendum
- California Coast Commission, Coastal Development Permit per the MND Addendum
- Water Pollution Control Plan and Traffic Control Plan per the MND Addendum

Most studies have already been completed or will be completed using other funding sources; costs for those tasks are not included within the proposed budget. Costs for the Engineering & Final Design component detailed as Task 5 (Final Design) in Attachment 3, Work plan will be managed by the City of San Diego and contracted to a locally based Environmental Consulting Firm with expertise in both storm water drainage design and storm water pollution prevention. The detailed cost estimate for Task 5; final

design which includes the 30%, 60%, 90% and final design package deliverables is included as Table 4.3 below.

**Table 4-3: Cost Breakdown by Work Plan Task and Subtask
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion**

| Job Category | Total Hours | Cost Per hour | Total Estimated Cost |
|--------------------------------------|--------------|---------------|----------------------|
| Principal | 220 | \$198.98 | \$43,775.60 |
| Project Manager | 520 | \$170.56 | \$88,691.20 |
| Senior Civil Engineer | 400 | \$153.50 | \$61,400.00 |
| Associate Civil Engineer | 1374 | \$119.39 | \$164,041.86 |
| Junior Civil Engineer | 1250 | \$85.23 | \$106,537.50 |
| Senior Water Resources Specialist | 0 | \$139.22 | \$0.00 |
| Associate Water Resources Specialist | 0 | \$105.18 | \$0.00 |
| Junior Water Resources Specialist | 0 | \$76.75 | \$0.00 |
| Senior Planner | 0 | \$139.29 | \$0.00 |
| Associate Planner | 0 | \$105.15 | \$0.00 |
| Senior Environmental Scientist | 0 | \$130.76 | \$0.00 |
| Associate Environmental Scientist | 0 | \$102.33 | \$0.00 |
| Junior Environmental Scientist | 0 | \$65.38 | \$0.00 |
| Senior Hydrologist | 0 | \$142.13 | \$0.00 |
| Staff Hydrologist | 200 | \$113.70 | \$22,740.00 |
| Senior Hydrogeologist | 0 | \$127.92 | \$0.00 |
| Staff Hydrogeologist | 0 | \$105.18 | \$0.00 |
| Surveyor | 0 | \$99.49 | \$0.00 |
| Assistant Surveyor | 0 | \$56.85 | \$0.00 |
| Drafting Technician | 0 | \$71.06 | \$0.00 |
| Contract Administrator | 0 | \$85.28 | \$0.00 |
| Administrative/Clerical | 120 | \$51.17 | \$6,140.40 |
| Subtotal Labor | 4,084 | | \$493,326.56 |

| Reproduction | Copies | City of San Diego Approved Rate | Total Estimated Cost |
|------------------------------|--------|---------------------------------|----------------------|
| Black and White | 1000 | \$0.10 | \$100.00 |
| Color | 400 | \$1.00 | \$400.00 |
| Subtotal Reproduction | | | \$500.00 |

| Travel | | City of San Diego Approved Rate | Total Estimated Cost |
|------------------------|------|---------------------------------|----------------------|
| a. Transportation | | \$525 /RT Airfare | 1,050.00 |
| b. Per Diem | | \$ 100/Day | 600.00 |
| c. Mileage | 2000 | \$0.55/Mile | 1,100.00 |
| Subtotal Travel | | | \$2,750.00 |

Other ODC Total **\$48,750.00**

| Subconsultant | Hours | Total Estimated Cost |
|-------------------------------------|--------|----------------------|
| Allied Geotechnical Engineers, Inc. | 96.00 | 10,040.00 |
| Platte/Whitelaw Architects | 354.00 | 36,336.00 |
| RECON environmental, Inc. | 606.00 | 80,430.00 |
| Subtotal Subconsultant | | \$126,806.00 |

| | |
|----------------------------|---------------------|
| Total Proposed Cost | \$672,132.56 |
|----------------------------|---------------------|

Row (d) Construction/Implementation

The Construction/Implementation costs for the project are estimated to be \$3,016,000. Table 4-3 below provides a detailed listing of all applicable costs. This cost total is based on the following:

Task 9 - Construction

- Subtask 9.1 Mobilization and Site Preparation:** The costs associated with mobilization and site preparation include demolition of the concrete and asphalt pavement and base and concrete and gutter, as well as disposal and hauling activities. This task also includes removing the existing headwall, the existing 51" and 71" storm drain and transition structure. In addition, these costs include all actions necessary to mobilize and prepare the site, and preparatory activities that must be undertaken to ensure that construction progresses quickly and efficiently. The costs associated with this subtask are \$419,018.
- Subtask 9.2 Project Construction/Implementation:** The costs associated with project construction/implementation include installation of dual 51-inch-high by 90-inches-wide reinforced concrete box culverts under Avenida de la Playa installation of dual 72-inch-high by 72-inch-wide reinforced concrete box culverts between Camino del Sol and Paseo del Ocaso, R\replacing the existing outfall structure with a new 25-foot by 25-foot outfall structure to accommodate a 70-foot-long weir, constructing a new weir overflow structure approximately 100 feet west of the existing outfall structure in line with Avenida de la Playa, to obtain an additional foot of weir depth. This task also includes the installation of five (5) Continuous Deflective Separator (CDS) or hydrodynamic separators at specific points throughout the drainage area to remove gross solids.
- Subtask 9.3 Performance Testing and Demobilization:** The costs associated with performance testing include \$324,250 for a consultant contract, estimated based on agency experience managing such contracts.

Construction costs for this project were estimated from the Concept Plan Estimate prepared from Tetrtech Solutions (November 2010) and the City of San Diego, Engineering Department Design Manual and Development Services Unit Price List (www.sandiego.gov/development-services/industry/pdf/pricelist.pdf).

**Table 4-4: Row (e) Construction/Implementation Costs
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion**

| Materials | Unit Costs (\$) | Qty | Unit | Total (\$) | Funding Match | Grant Request |
|--|-----------------|--------|------|------------------|------------------|-----------------|
| Subtask 9.1 Demolition and Site Preparation | | | | | | |
| Remove existing dual 51" RCP storm drain | \$28 | 635 | LF | \$17,780 | \$17,780 | \$8,001 |
| Remove existing headwall structure | \$5,000 | 1 | EA | \$5,000 | \$5,000 | \$2,250 |
| Remove existing transition structure | \$2,500 | 1 | EA | \$2,500 | \$2,500 | \$1,125 |
| Remove existing 72" storm drain | \$18 | 717 | LF | \$12,906 | \$12,906 | \$5,808 |
| Sawcut | \$5 | 2,590 | LF | \$12,950 | \$12,950 | \$5,828 |
| Remove existing pavement | \$3 | 28,489 | SF | \$96,863 | \$96,863 | \$43,588 |
| Remove existing sidewalk and curb | \$23 | 200 | SF | \$4,600 | \$4,600 | \$2,070 |
| Site Demolition Subtotal | | | | \$152,599 | \$152,599 | \$68,669 |
| Subtask 9.2 Project Construction/Implementation | | | | | | |
| Structural backfill | \$11.50 | 3,212 | CY | \$36,938 | \$36,938 | \$16,622 |
| AC pavement | \$4.75 | 28,489 | SF | \$135,323 | \$135,323 | \$60,895 |
| Slurry seal | \$0.99 | 28,489 | SF | \$28,204 | \$28,204 | \$12,692 |
| Road Outfall Reinforcement | \$25.00 | 2,000 | SF | \$50,000 | \$50,000 | \$22,500 |
| Misc. surface improvements and landscaping | \$100,000 | 1 | LS | \$100,000 | \$100,000 | \$45,000 |
| PCC sidewalk (4" standard) | \$7.00 | 1,900 | SF | \$13,300 | \$13,300 | \$5,985 |
| Curb and gutter | \$34.00 | 200 | LF | \$6,800 | \$6,800 | \$3,060 |
| Outlet structure | \$19,500 | 1 | EA | \$19,500 | \$19,500 | \$8,775 |
| RCB (51" X 90") | \$575 | 1,270 | LF | \$730,250 | \$730,250 | \$328,613 |

| | | | | | | |
|--|-----------|-----|----|--------------------|--------------------|--------------------|
| RCB (72" X 72") | \$520 | 717 | LF | \$372,840 | \$372,840 | \$167,778 |
| Architectural Treatment | \$250 | 15 | SF | \$3,750 | \$3,750 | \$1,688 |
| Transition structure | \$2,500 | 2 | EA | \$5,000 | \$5,000 | \$2,250 |
| Manhole / Flow equalization structure | \$10,000 | 1 | EA | \$10,000 | \$10,000 | \$4,500 |
| Curb ramp w/steel truncated domes | \$2,500 | 13 | EA | \$32,500 | \$32,500 | \$14,625 |
| Dry weather diversion pump and controls | \$25,000 | 1 | EA | \$25,000 | \$25,000 | \$11,250 |
| CDS Unit (large) | \$112,000 | 5 | EA | \$560,000 | \$560,000 | \$252,000 |
| PVC diversion line | \$98 | 136 | LF | \$13,328 | \$13,328 | \$5,998 |
| Traffic Control | \$20,000 | 1 | LS | \$20,000 | \$20,000 | \$9,000 |
| Relocate existing utilities | \$100,000 | 1 | LS | \$100,000 | \$100,000 | \$45,000 |
| SWPPP BMP's (Erosion Control) | \$10,000 | 1 | LS | \$10,000 | \$10,000 | \$4,500 |
| Subtotal | | | | \$2,425,331 | \$2,425,331 | \$1,091,399 |
| Subtask 9.3 Performance Testing and Demobilization | | | | | | |
| demobilization and Performance Testing | \$324,250 | 1 | LS | \$324,250 | \$324,250 | \$145,913 |
| Total | | | | \$2,749,581 | \$2,749,581 | \$1,237,312 |
| Base (Ex Erosion Control & Traffic Control) | | | | \$2,128,912 | \$2,128,912 | -- |
| Contingency (15% of Base) included as a Separate Task | | | | \$319,337 | \$319,337 | \$143,702 |
| Mobilization & Bonds | | | | \$266,419 | \$266,419 | \$119,889 |
| Total | | | | \$3,335,337 | \$1,823,068 | \$1,357,200 |

* Units: LF = linear feet; SF = square feet; CY = cubic yards

Row (e) Environmental Compliance/Mitigation/Enhancement

Not applicable.

Row (f) Construction Administration

The City of San Diego will carry out construction administration tasks for this Project. However, staff costs for those tasks are not included within the proposed budget.

Row (g) Other Costs

This task includes the monitoring the of effectiveness of the *Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion* project to determine the extent to which the Project will improve water quality and enhance the beneficial uses of the ASBS. To assess Project effectiveness, a Before-After-Control-Impact (BACI) design will be used, wherein monitoring assessments will be made before the Project is initiated and after construction is completed. The assessments will take place during dry weather conditions, to assess the effectiveness of the dry weather diversion, and during wet weather conditions, to assess changes in flooding impacts, water quality, and trash removal. These data will be compared and assessed to other effectiveness assessment data collected in the watershed for other projects to assist in the overall assessment of pollution reduction and source abatement projects.

Row (h) Construction/Implementation Contingency

Construction/Implementation Contingency is typically estimated for City of San Diego Capital Improvements Projects in the public right-of-way and on public facilities at 15% of the total construction cost less mobilization, erosion control, and traffic control lump sum costs. The costs associated with this subtask are \$319,337.

Row (i) Grand Total

The Grand Total for the *Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion* project (\$4,344,437) was calculated as the sum of rows (a) through (h) for each column. The grand total for this project is summarized in Table 4-4 below.

Table 4-4: Row (j) Grand Total Costs
Avenida de la Playa Storm Drain Upgrades and Dry Weather Diversion

| Row | Budget Category | Total Costs |
|------------|--|--------------------|
| (a) | Direct Project Administration Costs | \$0 |
| (b) | Land Purchase/Easement | \$0 |
| (c) | Planning /Engineering/ Environmental Documentation | \$0 |
| (d) | Final Design | \$672,132 |
| (e) | Construction/Implementation | \$3,016,000 |
| (f) | Environmental Compliance/ Mitigation/Enhancement | \$0 |
| (g) | Construction Administration | \$0 |
| (h) | Other Costs (Including Legal Costs, Permitting and Licenses) | \$0 |
| (i) | Construction/Implementation Contingency | \$319,337 |
| (j) | Grand Total | \$4,007,470 |