



**CITY OF MORRO BAY
PUBLIC WORKS ADVISORY BOARD
NOTICE OF SPECIAL MEETING**

*The City of Morro Bay provides essential public services and infrastructure to maintain
a safe, clean and healthy place for residents and visitors to live, work and play.*

**AMENDED
SPECIAL MEETING AGENDA
Wednesday, May 29, 2019
Morro Bay Veterans Memorial Building- 5:30 P.M.
209 Surf Street, Morro Bay, CA**

Ric Deschler, Chair
Christian Erlendson

Janith Goldman, Vice-Chair
John Erwin
Stewart Skiff

Torrey Byles
Steven Shively

ESTABLISH QUORUM AND CALL TO ORDER

COMMITTEE MEMBERS ANNOUNCEMENTS AND PRESENTATIONS

PUBLIC COMMENT FOR ITEMS ON THE AGENDA

I APPROVAL OF MINUTES

- I-1 Approval of Minutes of April 17, 2019 Regular Meeting
Recommendation: Approve minutes.

II BUSINESS ITEMS

- II-1 Directors Report - Informational summary of current Public Works Activities
Recommendation: Information item for discussion, no action needed.
- II-2 Cloisters Landscape Evaluation, Recommendations, and Report
Recommendation: Review draft of "Cloisters Landscape Evaluation, Recommendations and Report" and provide comments to staff.
- II-3 Annual Water Report
Recommendation: Review "Annual Water Report" and provide recommendations to City Council.

ADJOURN

DATED: May 28, 2019

Not Available
Ric Deschler, PWAB Chair

This agenda is subject to amendment up to 24 hours prior to the date and time set for the meeting. Please refer to the agenda posted at the Public Works Department, 955 Shasta Avenue, for any revisions or call the department at 772-6262 for further information.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Public Works Department at (805) 772-6262 at least 24 hours prior to the meeting to ensure reasonable arrangements can be made to provide accessibility to this meeting.

PRESENT:	Ric Deschler John Erwin Janith Goldman Steve Shively Torrey Byles Stewart Skiff Chris Erlendson	Chair Board Member Vice Chair Board Member Board Member Board Member Board Member
STAFF:	Rob Livick Gina Gregory	Public Works Director Office Assistant

ESTABLISH QUORUM, CALL TO ORDER
MOMENT OF SILENCE
PLEDGE OF ALLEGIANCE

The meeting was called to order at 5:30 p.m. A quorum was present.

ANNOUNCEMENTS – None

PRESENTATIONS – None

PUBLIC COMMENT PERIOD

The public comment period was opened, seeing none, the public comment period was closed.

A. CONSENT AGENDA

<https://youtu.be/0Q--cCZMr-o?t=62>

A-1 APPROVAL OF MINUTES OF JANUARY 16, 2019 MEETING

MOTION: Steve Shively moved to approve Item A-1. The motion was seconded by Janith Goldman and carried 7-0-0 unanimously.

B. BUSINESS ITEMS

B-1 Directors Report – Informational summary of current Public Works Activities

<https://youtu.be/0Q--cCZMr-o?t=105>

Rob Livick presented the staff report.

Discussion, comments, and questions continued amongst the Board and staff.

C. POTENTIAL FUTURE AGENDA ITEMS

<https://youtu.be/0Q--cCZMr-o?t=3886>

Rob Livick stated there will be more details on Transit, possibly the Capital Budget/Capital Projects List at a future meeting.

D. ADJOURNMENT

The meeting adjourned at 6:39 P.M. to a regular Public Works Advisory Board meeting at the Veteran's Memorial Building, 209 Surf Street, May 29, 2019.

Recorded by:

Gina Gregory
Office Assistant



AGENDA NO: II-1

MEETING DATE: May 29, 2019

MEMORANDUM

TO: Public Works Advisory Board
CC: City Manager
DATE: May 24, 2019
FROM: Rob Livick, PE/PLS - Public Works Director/City Engineer
SUBJECT: Director's Report / Information Items

Please contact the individual staff members prior to the meeting, if possible, for more detailed information.

Notify Me: Sign up for Notify Me on the City's Website www.morrobayca.gov/notifyme to be notified by email when Council, Board's and Commission's agendas and minutes are posted on the website.

Service Requests: Citizens can report a concern to the City for predetermined issues without the need to phone the City during business hours (for example: reporting a pothole) by using a feature on the City's website, Service Requests www.morrobayca.gov/905/Service-Requests, or the mobile App "My Morro Bay" (available on both Android and IOS operating systems).

Staff can also add Service Requests for someone over the phone or in the office if they do not have access to a computer. Each category in Service Requests is assigned to the appropriate staff member to handle so citizens don't have to figure out what department to contact for an issue they need to report on.

CONSOLIDATED MAINTENANCE COMPLETED REQUESTS AND WORK ORDERS

Staff Contact: Mike Wilcox

Public Works Department Monthly Report

4/17/2019 to 5/23/2019



Monthly Service Requests Completed

	# of SR
Emergency After Hours Call Out	2
USA	155
# SR in Category	157
CM	# of SR
Bike Path Issues	1
Curb Painting Request	2
Custodial Request	2
Graffiti	1
Harborwalk/Boardwalk Issue	1
Maintenance Request	10
Pavement Replace or Repair	5
Pothole/Sinkhole	8
Sign or Banner Missing/Damaged	3
Street Light Out/Broken	1
Stump Removal Request	1
Tree Fallen Across Sidewalk	1
Tree Pruning/Trimming	5
# SR in Category	41
SEWER	# of SR
Emergency After Hours Call Out	2
Sewer Issue	3
Water Issue	4
# SR in Category	9
WATER	# of SR
Emergency After Hours Call Out	3
Water Billing Issue	1
Water Issue	13
Water Leak	6
Water Meter Turn Off	26
Water Meter Turn On	64
Water Other	17
# SR in Category	130

Monthly Work Orders Completed

	# of Work Orders
Sewer	
Gravity Main Hydraulic Cleaning - Enhanced	12
# Work Orders in Category	12
CM	# of Work Orders
Facilities	
Electrical	4
Facilities Other	4
General Core Duties	3
General Maintenance	5
General Repair	3
HVAC	1
Painting	1
Patching/Repair	1
Plumbing	1
Parks	
Park Facilities Other	3
Parks Bench or Table Repair	16
Parks Core Duties	1
Parks Electrical system	2
Parks Inspection	1
Parks Irrigation Repair	1
Parks Maintenance	1
Parks Other	4
Parks Tree Hazard Reduction	1
Parks Weed Abatement	8
Street Trees	
Tree Hazard Reduction	1
Trees Other	1
Streets	
Clean / clear debris	2
Clear bike path debris	3
Curb Other	2
Install Sign	2
Install Street Sign	3
Repair path surface	1
Sidewalks Other	4

CONSOLIDATED MAINTENANCE COMPLETED REQUESTS AND WORK ORDERS

Staff Contact: Mike Wilcox

Public Works Department Monthly Report

4/17/2019 to 5/23/2019



Total Service Requests Completed	337		
		Street CMA Patch	1
		Street Dig Out	2
		Street HMA Patch	1
		Street Sweeping / Cleaning	1
		Streets Other	1
		Trim bushes / trees	2
		# Work Orders in Category	88
		SEWER	# of Work Orders
		Sewer	
		Gravity Main CCTV Inspection	5
		Gravity Main Hydraulic Cleaning - Enhanced	9
		Gravity Main Hydraulic Cleaning - Extra	4
		Gravity Main Hydraulic Cleaning- Routine	140
		Inspect Sewer Lateral	1
		Lift Station Power Failure	1
		Monthly Generator Testing	3
		Weekly Lift Station Alarm Testing	4
		# Work Orders in Category	167
		WATER	# of Work Orders
		Water Distribution	
		Exercise Water Valves	54
		Install Construction Meter	2
		Install Water Meter	1
		Meter Exchange	1
		Remove Construction Meter	1
		Repair Water Lateral	1
		Replace Water Lateral	1
		Replace Water Meter	1
		# Work Orders in Category	62
		Total Work Orders Completed	329

TRANSIT

Staff Contact: Janeen Burlingame

Triennial Performance Audit

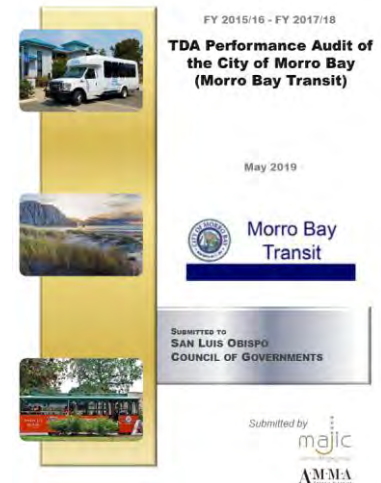
Over the past seven months, transportation consultants Majic Consulting Group and AMMA Transit Planning have been working on the State required Transportation Development Act Triennial Performance Audit of the City's transit services for the three-year period FY2015/2016 through FY2017/2018. In May, the consultants submitted a draft audit for San Luis Obispo Council of Governments and City staff review. Once the final audit report is submitted to the City, staff will post it to the Transit website and provide a link to it in a future Director's Report.

Short Range Transit Plan

Staff has reviewed and provided comments to the consultant on the draft plan both from the City and the San Luis Obispo Council of Governments and they were working on updating the draft plan to address comments received. Unfortunately, the plan is not ready yet as the consultant staff member working on the project has been on Jury Duty for over a month, delaying completion of the updated plan. That staff member has completed Jury Duty service and has resumed working on the updated plan. Staff anticipates receiving the final plan within the next month.

City Park Transit Hub Study

Staff have been working with a transportation consultant to conduct a focused study of the transit hub site and develop potential improvements. The consultant submitted its final report of existing conditions and potential improvements at three locations surrounding the park, and subsequent to that, staff developed a fourth location. Staff has reviewed the study and various options with the main users of the transit hub, Morro Bay Transit, RTA and members from Art in the Park, the most physically intensive user of the park for their three annual events, to obtain feedback before presenting the study to PWAB and the City Council. During the meeting with Art in the Park members, some issues relating to spacing for their booths was raised for a couple of the Harbor Street locations, and they presented to staff an alternative option to review and consider. Once that review has been completed, staff will bring an item to the Board for review and recommendation to the City Council for selection of a location for the transit hub improvements.



WATER – OPERATIONS

Staff contacts: Joe Mueller

Damaris Hanson

Operations and Maintenance:

- To maintain water quality staff flushed numerous hydrants and dead-end lines throughout the water distribution system.
- Responded to 4 after-hour callouts:
 1. Water turn-on at 1255 Main Street,
 2. Cal Fire text alert about flooding at 2830 Ironwood Avenue (no evidence of flooding).
 3. PG&E power outage throughout City.
 4. Water leak at 560 Embarcadero.
- Investigated a noisy pump at the Elena Booster Station and ultimately removed the pump motor due to failed bearings and sent it out for repair/rebuild.
- Responded to 9 water leaks, located and repaired as needed.
- Performed 25 water service turn-offs and 64 water service turn-ons.
- Located and marked 72 Underground Service Alerts (USA).
- Operated and maintained the water treatment plant on a regular schedule.
- Responded to a variety of customer requests, such as leaks on customer side of water service, broken meter lids, water pressure testing at building, and contractor meetings about water service and meter locations.
- Held a Utility Division safety meeting (Normalization of Deviance, part 4).
- Repaired a leaking hydrant at the corner of Tahiti and Panorama Drive.

Sampling for permit requirements:

- Conducted weekly water sampling at various sample points in the distribution system and sent samples to a certified lab for analysis.
- Sampled the distribution system per the Unregulated Contaminant Monitoring Rule for this year's list of testing. Samples were sent to a certified outside lab for analysis.

Submitted Reports:

- Monthly water report to State Water Resources Control Board
- Monthly water report to Division of Drinking water
- Water conservation report



Elena Booster Station Pump motor repair

WATER – CONSERVATION

Staff contact Damaris Hanson

Please remember to make water conservation a way of life!

City water conservation rebates available; Cash for grass, rain barrel, irrigation retrofit, SMART irrigation controller, toilet retrofit and Energy star washing machine. State rebates now available for removing grass, add replacing a toilet that flushed more than 1.6 gallons per flush (\$100).

U.S. Drought Monitor California

May 21, 2019

(Released Thursday, May. 23, 2019)

Valid 8 a.m. EDT

For the month of April
water conservation
was 5% lower
compared to April
2013.



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Richard Heim
NCEI/NOAA



droughtmonitor.unl.edu

WASTEWATER – COLLECTIONS

Staff Contacts: Joe Mueller
John Gunderlock

Operation & Maintenance

For the month of April 2019

- Removed the portable flow meters from manholes throughout the Collections system.
- Tested lift station alarms.
- Performed routine lift station maintenance.
- Hydro cleaned approximately 25,362 feet of city main line.
- Routine video inspection of sewer mains.
- On-Call staff received (3) after hours call-outs.
 1. Lift station power outage.
 2. Rock restroom backup due to power outage.
 3. Private lateral blockage at 940 Morro Bay Blvd (customer responsibility).
- Completed several service requests for noisy manhole covers and customer lateral back-ups.
- Performed (5) Fats, Oils, and Grease source control inspections.
- Conducted two inspections on customer lateral connections to the city main sewer line.
 1. 745 Alta
 2. 205 Bradley



Assisted the Fire Dept. in containment of water used to extinguish a trash truck fire.
No contaminated water made it to the storm drain.

WASTEWATER – TREATMENT

Staff Contacts: Joe Mueller
John Gunderlock

Operation & Maintenance

- Flow for the month of April averaged 1.155 Million Gallons per Day (MGD) and totaled 34.637 million gallons.
- 0.01 inches of rainfall was recorded during the month April.
- Responded to (3) after hour callouts in April for plant chlorine adjustments.
- Ran emergency generator for routine switch gear testing and performance monitoring.
- Responded to a power outage at the treatment facility; emergency generator functioned as designed.
- Interviewed applicants for a Utilities Operator job opening.
- San Luis Powerhouse performed quarterly maintenance on emergency generator.
- The Utility Supervisor and Facility Lead worker performed the quarterly inspection of the facility.
- Changed oil and cleaned discharge ports on the trickling filters.
- Sprayed weeds and performed housekeeping around the facility.
- Verified programming on headworks emergency sump pumps.
- Replaced effluent sample pump and hoses on composite sampler.
- Downloaded stored data from influent and secondary flow meters.
- Installed new emergency eye wash in the Sodium Bisulfite chemical containment area.
- Ran hydraulic emergency bypass pump and removed from headworks influent channel.
- Repaired digester #3 ports used to drain excess water from the roof.
- Installed recertified digester gas pop-off valves on all three digesters.
- Unplugged solar drying beds decant piping with collections hydro-jetter.
- Replaced burner controller on boiler #2.
- Disassembled and unclogged primary #1 scum and sludge pump.
- Performed maintenance on headworks screening unit and sump pumps.



Front end loader hydraulic leak repair

Staff attended the following training:

- Annual CWEA training conference
- Safety training on normalization of deviance

Submitted reports:

- March 2019 Monthly Self-Monitoring Reports (eSMR)
- March 2019 Monthly Discharge-Monitoring Reports (eDMR)
- First Quarter Interim Time Schedule Order (TSO)



PG&E Transformer Replacement at the treatment Plant



Check valve maintenance



Staff performing trickling filter maintenance

ENGINEERING/CAPITAL PROJECTS

Staff contact: Rob Livick

Highway 41/Main/Highway 1

- Project construction is still financially constrained
- If funding gap cannot be closed, look at interim signal alternative

Pavement Management

- 2018/19 Work complete
- Next years program will include a complete revision to Plan to incorporate sealing techniques not anticipated with 2011 Pavement Management Plan
- Work to be performed in the Spring of 2020 to take advantage of better weather and new Rubberized Asphalt Grant Cycle

Water System Improvements

- Addressed in the OneWater – Water System Capital Improvement Plan
- Project Scheduled to begin in 2019/2020

Collection System Repairs

- Addressed in the OneWater – Wastewater Collection System Capital Improvement Plan
- Program Scheduled to begin in 2019/20
- Assessing segments for lining and pipe bursting in North Morro Bay

North Point Parking Lot

- Survey completed, working on design in-house
- Lighting, Access Control Improvements as funding is available

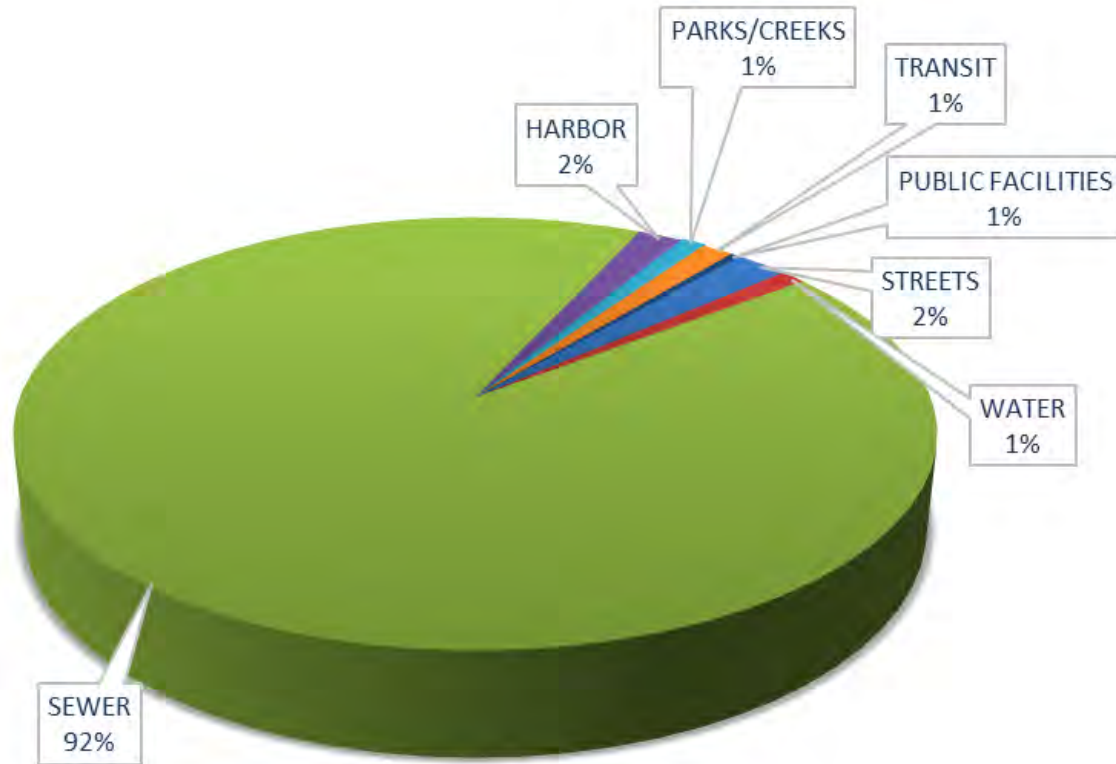
Cloisters Landscaping Improvements

- On this Agenda

Draft Capital Improvement Program Summary Follows

(see http://www.morro-bay.ca.us/DocumentCenter/View/13292/Proposed-FY-2019_20-Operating-and-Capital--Budget for complete details)

Capital Projects



■ STREETS ■ WATER ■ SEWER ■ HARBOR ■ PARKS/CREEKS ■ TRANSIT ■ PUBLIC FACILITIES

CAPITAL IMPROVEMENT PLAN

Streets Program Summary

- Street Reconstruction & Resurfacing
- Street Maintenance, Repair & Safety
- Storm Drains

Parks and Creek Summary

- Park Improvements
- Creek Improvements

Public Facilities Program

- Infrastructure
- Equipment

CAPITAL IMPROVEMENT PLAN

Water Capital Projects Summary

- Infrastructure
- Equipment

Sewer Capital Projects Summary

- Infrastructure
- Equipment

Harbor Capital Projects Summary

- Infrastructure
- Equipment

Transit Capital Projects Summary

- Infrastructure
- Equipment

Capital Projects

City of Morro Bay Project Summary by Program FY 2019/20- 2023/24

STREETS PROGRAM SUMMARY

	Expended Through 2017/18	2018/19 Estimated Actuals	Estimated Carryfwd to 2019/20	2019/20 Budget Including Carryforward	2020/21 Budget	2021/22 Budget	2022/23 Budget	2023/24 Budget	Total Budgeted	Total Unfunded
<i>Street Reconstruction & Resurfacing</i>										
9614 Annual Pavement Management Plan		\$ 789,354	\$ -	\$ 762,686	\$ 735,721	\$ 749,435	\$ 763,424	\$ 777,693	\$ 3,788,959	
8229 Highway 1 & 41 Interchange	136,725	4,098	167,000	189,500	441,000	7,167,500	-	-	-	\$ 7,798,000
<i>Street Maintenance, Repair & Safety</i>										
New Street Signs Refractometer (Unfunded)				15,000						\$ 15,000
<i>Storm Drains (unfunded)</i>										
New Pipeline Along Kern & Anchor Streets SD-01A				9,900	56,100				\$ 9,900	\$ 56,100
New Pipeline Along Kern & Anchor Streets SD-01B				22,950	1,507,050				\$ 22,950	\$ 1,507,050
New Pipeline West of Main Along Hwy 1 SD-06A					170,100	963,900				\$ 1,134,000
New Pipeline West of Main Along Hwy 1 SD-06B					372,450	2,110,550				\$ 2,483,000
New Pipeline at Morro Bay Blvd and Quintana Road SD-04						6,750	38,250			\$ 45,000
New Pipeline Along Main Street SD-07A							16,950	96,050		\$ 113,000
New Pipeline at Beach Stret Btwn Morro Ave & Embarcadero SD-05						70,800	401,200			\$ 472,000
New Pipeline Along Main Street SD-07B							16,350	92,650		\$ 109,000
New Pipeline Along Main Street SD-07C							2,550	14,450		\$ 17,000
New Pipeline Along Laurel Street SD-11							3,450	19,550		\$ 23,000
New Pipeline Along Avalon Street SD-12							14,100	79,900		\$ 94,000
New Pipeline Along Elena Street SD-16							49,200	278,800		\$ 328,000
New Pipeline Along Marina Street SD-02A								15,900		\$ 15,900
New Pipeline Along Marina Street SD-02B								28,350		\$ 28,350
New Pipeline Along Harbor Street SD-03								63,150		\$ 63,150
STREETS	\$ 136,725	\$ 793,452	\$ 167,000	\$ 795,536	\$ 3,282,421	\$ 11,068,935	\$ 1,305,474	\$ 1,466,493	\$ 3,821,809	\$ 14,301,550

PROPOSED CAPITAL BUDGET

Streets Program Summary

- Pavement Management Plan (\$762,686)
 - Cal Recycle Grant
 - SB1 Gas Tax
 - Measure Q
- Storm Drains: Pipeline Along Kern & Anchor Streets SD-01A (\$9,900)
 - Government Impact Fees – Storm Drains & Streets
- Storm Drains: Pipeline Along Kern & Anchor Streets SD-01B (\$22,950)
 - Government Impact Fees – Storm Drains & Streets

PROPOSED CAPITAL BUDGET

Park Improvements Summary

- Bocce Ball Court/Greenhouse – Shasta Street Pocket Park (\$30,000)
 - Donation
 - Government Impact Fees - Parks
- Cloisters Park Landscape Assessment (\$16,160)
 - Fund Balance – Cloisters Assessment District Accumulation Fund
- North Point Parking Lot Improvements (\$61,000)
 - Fund Balance – Special Assessment Districts Fund
- Tidelands Stormwater Pocket Park (\$47,000)
 - Grant Funds

PROPOSED CAPITAL BUDGET

Park Improvements Summary Cont.

- City Park Play Structure (\$150,000)
 - Park In-Lieu Fees
 - Carryforward Project
- Morro Creek Restoration (FEMA) - \$66,185
 - FEMA Grant
 - Carryforward Project

Public Facilities Program

- Veteran's Hall Refurbishment – Audio/Visual Phase (\$148,200)
 - Project Fund Balance
 - PEG Fees
 - Carryforward Project

PROPOSED CAPITAL BUDGET

Water Capital Projects Summary

- New OneWater System Improvement – Nutmeg Pressure Zone (\$382,000)
 - Accumulation Fund

Sewer Capital Projects Summary

- OneWater Project – Wastewater Collections Main St & Atascadero Rd (\$171,000)
 - Accumulation Fund
- OneWater Project – Wastewater Collections Upstream LS1/Beachcomber (\$114,500)
 - Accumulation Fund
- WRF Project (\$33.6M)
 - Accumulation Funds (water & sewer)
 - SRF Planning Loan
 - WIFI/SRF Loan/COPS

WRF CAPITAL BUDGET

Funding Source:

- \$6.9M Sewer Accumulation Funds
- \$6.4M Water Accumulation Funds
- \$14.2M WIFIA Proposed Financing
- \$6.1M SRF Planning Loan

\$33.6 M Project Costs

WRF CAPITAL BUDGET

Expenditures:

- \$211.5K Salaries and Benefits
- \$257 Supplies/Services/Equipment
- \$4M Construction Soft Costs
- \$29.2M Construction Costs

\$33.6 M Project Costs

PROPOSED CAPITAL BUDGET

Transit Capital Projects Summary

- MBT – Route Signage & Information Display Cases (\$8,000)
 - Rural Transit Funds
- Replace MTB Trolley (\$395K)
 - FTA \$
 - Rural Transit Funds
 - Accumulation
 - Carryforward
- Replace MBT Bus (\$83,540)
 - FTA \$
 - Rural Transit Funds
 - PTMISEA \$
 - SB1 State of Good Repair Funds
 - Accumulation
 - Carryforward

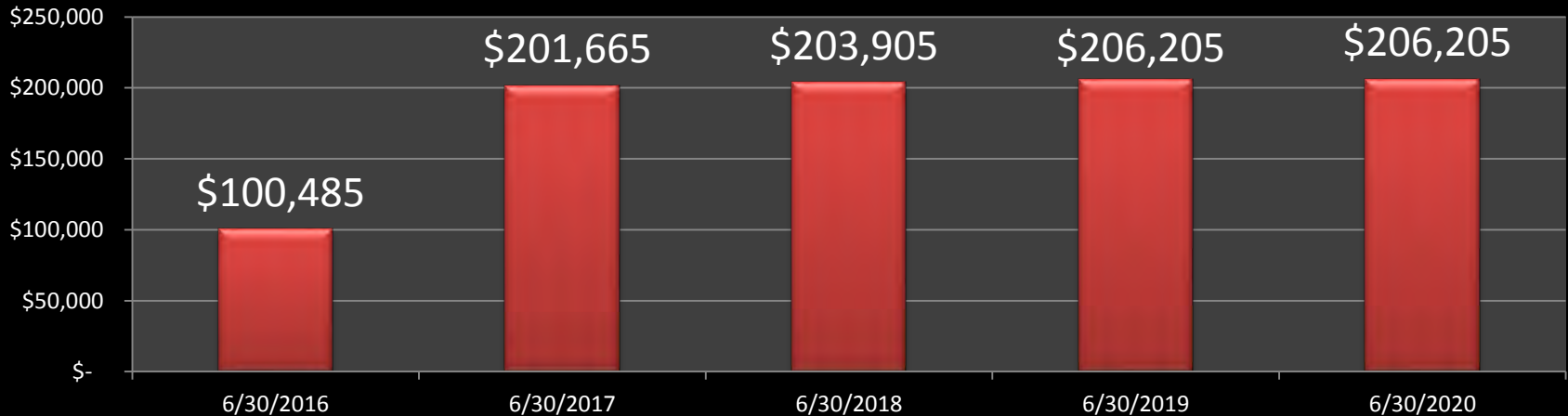
PROPOSED CAPITAL BUDGET

Harbor Capital Projects Summary

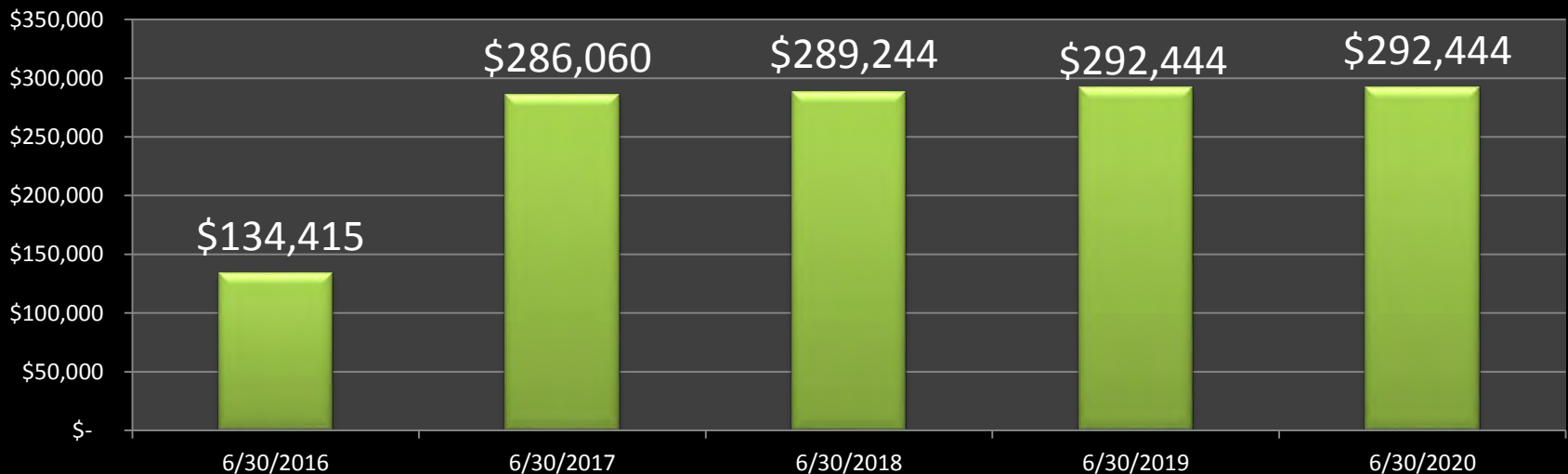
- Beach Street Slips – North & South (\$370,000)
 - Carryforward
 - Accumulation
- South T-Pier Renovations (\$42,052)
 - Carryforward
 - Accumulation
- North T-Pier Renovations (\$10,000)
 - Carryforward
 - Accumulation
- DBW Boat Launching Facility Rehab (\$250,000)
 - Grant Funds

FUNDS AVAILABLE FOR CAPITAL

Capital Replacement – Cash Balance



Project Accumulation– Cash Balance



Engineering/Development Review

Staff contact: Rob Livick

Staff is working on the following projects:

- Morro Mist 23 Lot Subdivision (Bonita and Main): Under Construction – Frontage Improvements complete. Sidewalk Opened
- Harborview Hotel/Commercial: Planning Review
- Hotel Development – NW corner Atascadero Road West and Highway 1: Planning Review
- Sonic Restaurant – Main and Highway 41: Plancheck – Waiting for resubmittal from applicant
- Harbor Hut Docks: In Plancheck
- Rose's Landing Upstairs Hotel - Plancheck
- US Coast Guard Addition: Approved by Council, In Plancheck
- Otter Rock/Boatyard Remodel: Under Construction
- Morro Bay Landing: Under Construction
- Front Street (North) Hotel: Complete
- Residential remodels and construction: Various Citywide

WASTEWATER – NEW WRF

Staff contact: Rob Livick

- Work continues in accordance with City Council direction.
- City Council approved approximately \$1.8M change orders for Design Build – Facility Project
- The conceptual design of the offsite facilities, including the pump stations, pipelines and injection wells, is complete. Alignment alternatives were reviewed, and the project team is working toward the 60 percent project design. In January 2019, the Morro Bay City Council directed project staff to proceed with design of the Quintana Road pipeline alignment. Starting in April 2019, crews began the site investigation work that establishes the basis for the project design by confirming existing utilities in the right-of-way, learning more about the subsurface soils, and performing the topographic survey. Traffic impacts during this design phase will be minimal, and traffic control will be in place immediately adjacent to the work sites.
- Coastal Commission Consolidated Permit Hearing tentatively scheduled for July 9, 10, or 11 in San Luis Obispo
- Additional Information at www.morrobaywrf.com



Staff Report

TO: Public Works Advisory Board **DATE:** May 24, 2019

FROM: Rob Livick, PE/PLS – Public Works Director/City Engineer
Pamela Newman – Assistant Engineer

SUBJECT: DRAFT “CLOISTERS LANDSCAPE EVALUATION, RECOMMENDATIONS AND REPORT”

RECOMMENDATION

Review the draft “Cloisters Landscape Evaluation, Recommendations and Report” and provide comments to staff.

BACKGROUND/ DISCUSSION

The landscaping in the Cloisters development was installed in the mid-1990's. While, current maintenance practices have helped keep the park in relatively good condition, there is the need of an assessment of the existing landscaping materials and improvements. Due to the age of the landscaping improvements potential upgrades may be required. The “Cloisters Landscape Evaluation, Recommendations and Report” provides this evaluation to the existing general site conditions, irrigation and plantings within the following areas:

1. Coral Avenue Medians
2. Coral Avenue Parkways
3. Cloisters Park Planters
4. Cloisters Park Turf
5. Highway 1 Buffer
6. Neighborhood Parkways

The Report will be used to identify and create projects for future upgrades and long-term maintenance goals.

CONCLUSION

Using the feedback received from the community and the Public Works Advisory Board on the draft “Cloisters Landscape Evaluation, Recommendations and Report” a final report will be created. This final report will be used to develop construction plans for future installations and upgrades.

ATTACHMENT

1. Draft of “Cloisters Landscape Evaluation, Recommendations and Report”.



THE CLOISTERS PHASE-1: LANDSCAPING EVALUATION, RECOMMENDATIONS & REPORT

FOR

the Cloisters

LANDSCAPING AND LIGHTING MAINTENANCE ASSESSMENT DISTRICT
MORRO BAY, CA

PREPARED BY:



OASIS ASSOCIATES
LANDSCAPE ARCHITECTURE + PLANNING

3427 Miguelito Court
San Luis Obispo, CA 93401
805.541.4509

www.oasisassoc.com

MAY 29, 2019

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Project Overview
Evaluation, Recommendations & Report
Overall Site Plan

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CORAL AVENUE PARKWAYS

Existing Conditions
Recommendations
Implementation & Phasing
Existing Conditions Imagery

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PLAY FIELD

Existing Conditions
Recommendations
Implementation & Phasing
Existing Conditions Imagery

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NEIGHBORHOOD PARKWAYS

Existing Conditions
Recommendations
Implementation & Phasing
Existing Conditions Imagery

5

CORAL AVENUE MEDIANS

Existing Conditions
Recommendations
Implementation & Phasing
Landscape Design Vignette
Plant Palette
Conceptual Landscape Enlargement
Landscape Section

8

PARK PLANTER AREAS

Existing Conditions
Recommendations
Implementation & Phasing
Landscape Design Vignette
Plant Palette
Conceptual Landscape Enlargements
- North & South Planter Areas

12

HIGHWAY 1 TREE BUFFER

Existing Conditions
Recommendations
Implementation & Phasing
Landscape Design Vignette
Plant Palette

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APPENDIX

Plant Palettes
Overall Irrigation Plan Evaluation

INTRODUCTION

A. PROJECT OVERVIEW

The Cloisters residential development was conceived and constructed over time starting in the mid-1990's. The July 1997 *Cloisters Design Guidelines* provided specific guidance for architecture and landscape architecture to enable residents and their design professionals to create unique homes, while providing for a cohesive and complementary neighborhood. Based upon this evaluation, certain aspects of the Guidelines are relevant to date (e.g., maintaining view corridors), while others should be modified (e.g., plant palettes should expand to include non-native, drought tolerant, longer lived species).

The existing park and general landscaping are now 25-years± old and in need of assessment and resultant upgrades. The backbone design and infrastructure have withstood the test of time, while the more dynamic aspects of the landscape – use areas and plantings require refreshing and enhancements. Current maintenance practices have helped to keep the well-used park in relatively good condition. While some aspects of the park have outlived their original purpose (e.g., the demonstration gardens), this assessment will enable the new design to better serve the Cloisters neighborhood and community at large in the 21st century.



B. EVALUATION, RECOMMENDATIONS, AND REPORT

The Phase 1 Landscape Evaluation, Recommendations, and Report represents an effort to evaluate the existing general site conditions, and irrigation and plantings within the following areas: Cloisters Park; Coral Avenue Medians; Indio Circle – entry monument area and parkways; and Emerald Circle – roundabout and parkways. Based upon the evaluation phase, recommendations are included to guide the Phase 2 design development and implementation phase.

This report is divided into six (6) key sections that relate to specific areas within the park. They are arranged in order of priority for future implementation.

- 1| Coral Avenue Medians
- 2| Coral Avenue Parkways
- 3| Park Planter Areas
- 4| Play Field
- 5| Highway 1 Tree Buffer
- 6| Neighborhood Parkways



The overall site plan depicts each key area graphically noted with unique colors and keynotes. A narrative describes the existing conditions and makes recommendations for the individual components in each area. Recommendations for plant palettes and hardscape materials are included and enhanced by vignettes and photographic images for each area of the park development. Additional resources and project-related details are organized in the Appendix for reference.



This report is a DRAFT document that can be modified to reflect additional input from the users - The Cloisters neighborhood and the community and City staff, who are responsible for the park's care and maintenance.

OVERALL SITE PLAN

SPECIFIC AREA KEY

 NOT A PART

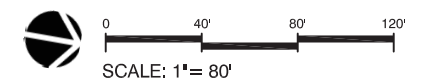
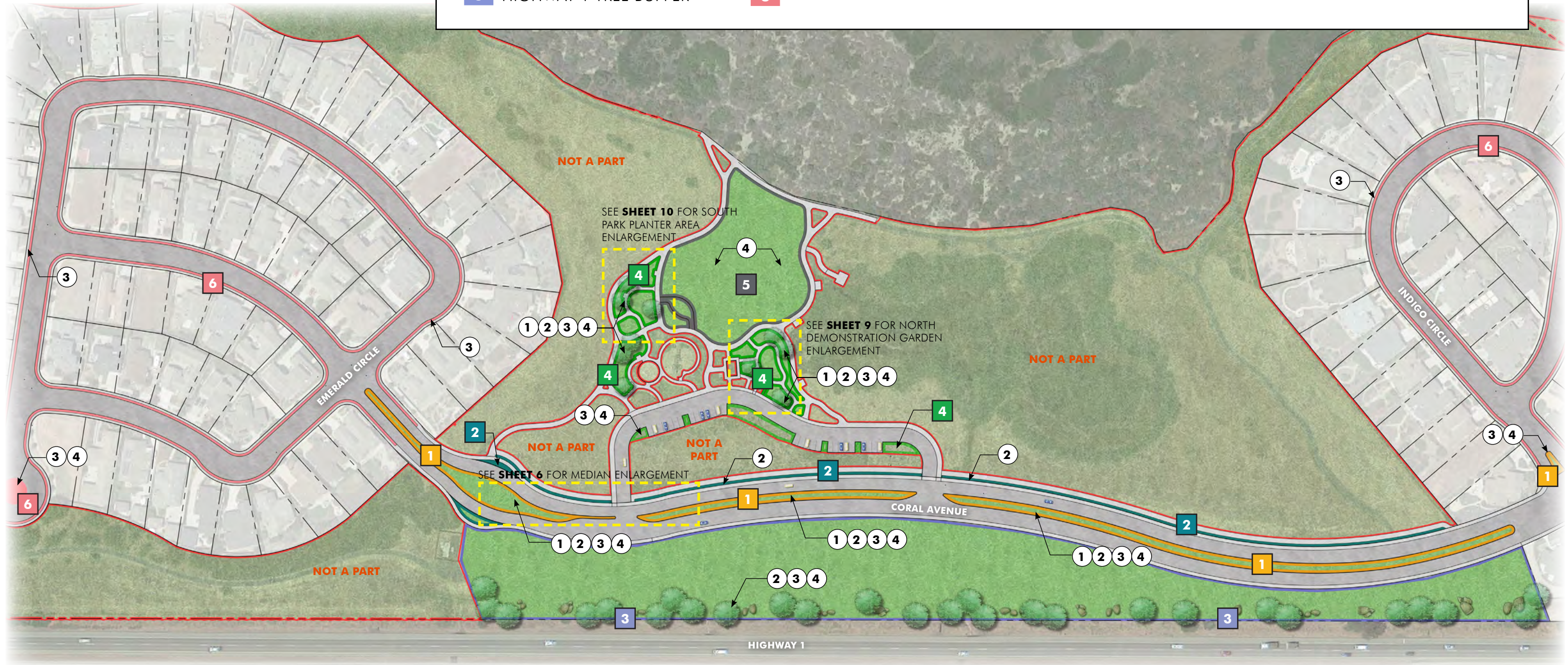
- 1 CORAL AVE. MEDIANS
- 2 CORAL AVE. PARKWAYS
- 3 HIGHWAY 1 TREE BUFFER

- 4 PARK PLANTER AREAS
- 5 PLAY FIELD
- 6 NEIGHBORHOOD PARKWAYS

RECOMMENDATIONS

REFER TO EACH SECTION'S PAGE FOR ADDITIONAL COMMENTS

- ① GRADING/DRAINAGE
- ③ SOFTSCAPE/PLANTING
- ② HARDSCAPE
- ④ IRRIGATION



| 01 | CORAL AVENUE MEDIANS

A. EXISTING CONDITIONS:

Currently, there are three (3) median islands in Coral Avenue. The majority of the median plant material has become overgrown, woody, and in need of removal and replacement. Earth mounds prevent a clear line of sight and pose overall visibility and safety concerns. There is a lack of cohesive planting with many bare soil areas requiring infill plantings. Planting areas located at the traffic turning pockets are very narrow, difficult to irrigate and not conducive for long-term plant survival.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

Lower the center earth mounding at least 1.5 feet to improve visibility. Remove soil directly adjacent to and behind the concrete curbs, by approximately 3- to 4-inches deep, to provide additional freeboard and eliminate potential erosion.

| 2 | HARDSCAPE

Introduce mortar set cobbles and/or pavers in the small finger planter areas. Add cobble and/or gravel in a meandering design within the planters to reduce water use and overall maintenance costs. See enlargement, Sheet 6.

| 3 | SOFTSCAPE/PLANTING

Remove all overgrown plant material. Choose replacement plant material from the recommended planting palette. See enlargement, Sheet 6.

Apply pre- and post-emergent herbicide around newly installed plant material and bare soil areas. Install a weed barrier that allows both air and water infiltration. Apply a minimum 3-inches of organic mulch over the weed barrier.

| 4 | IRRIGATION

Replace existing automatic irrigation valves and include drip filters and pressure regulators. Change spray systems to drip emitter systems. All existing controllers, wires, and irrigation mainlines shall be maintained and protected in place. See Sheet 19.

C. IMPLEMENTATION AND PHASING:

The median island project can be implemented in three (3) separate phases or concurrently, based upon priorities and budget constraints.

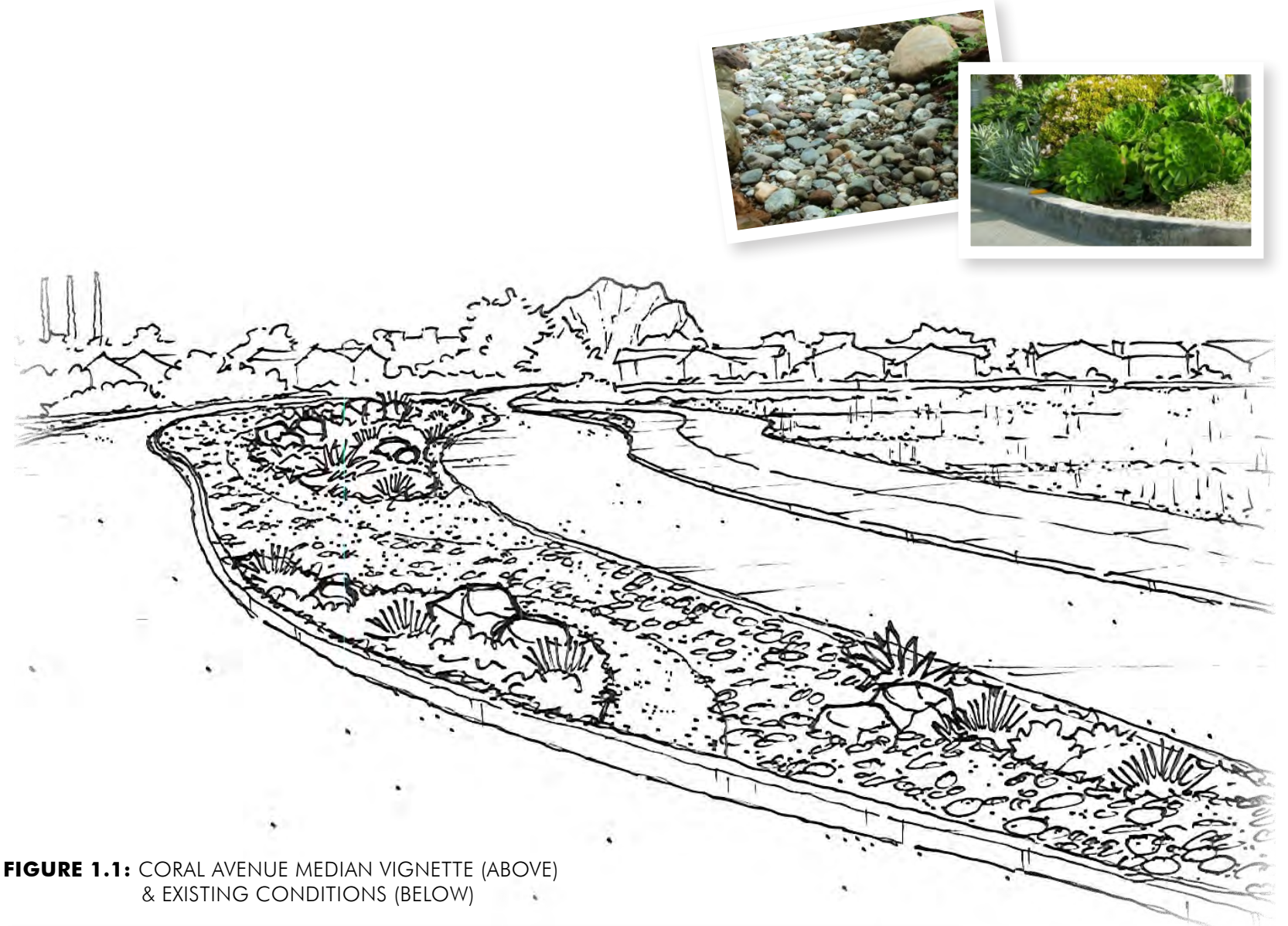
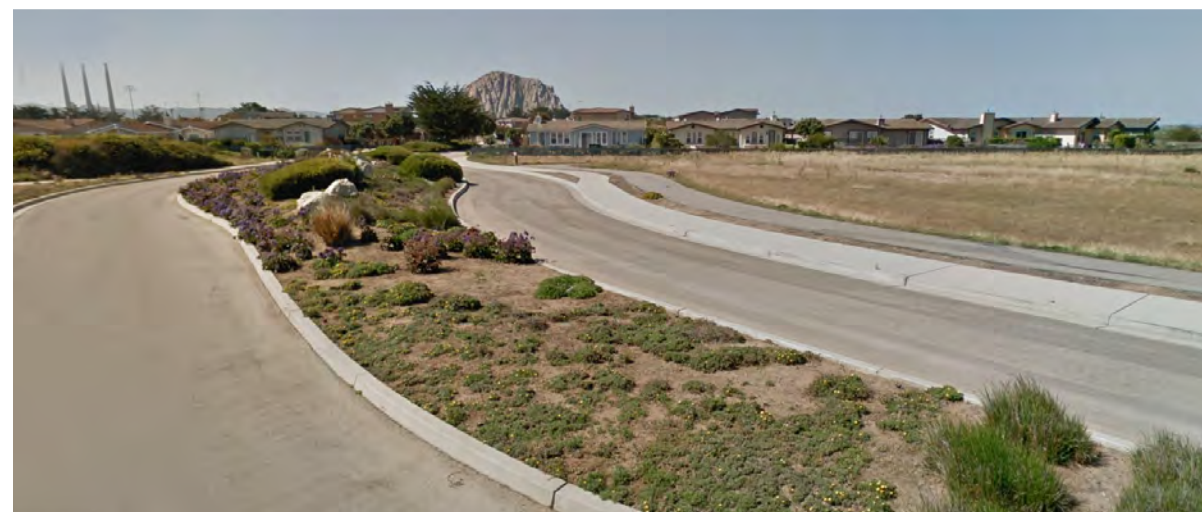


FIGURE 1.1: CORAL AVENUE MEDIAN VIGNETTE (ABOVE) & EXISTING CONDITIONS (BELOW)



CORAL AVE. MEDIAN PLANT PALETTE (SEE APPENDIX FOR COMPLETE PLANT LIST & DESCRIPTIONS)



KEYNOTE LEGEND #

1

2"-6" DIA. COBBLES SET IN CONCRETE BASE

2

3/4" DIA. DECORATIVE GRAVEL (1" DEEP) OVER WEED BARRIER FABRIC

3

18"-4' DIA. LANDSCAPE BOULDERS

4

+18" (MAX) LANDSCAPE BERM

5

PLANTER AREA (APPROX. 50% OF MEDIAN)

6

STONE VERTICALLY SET INTO SLOPE

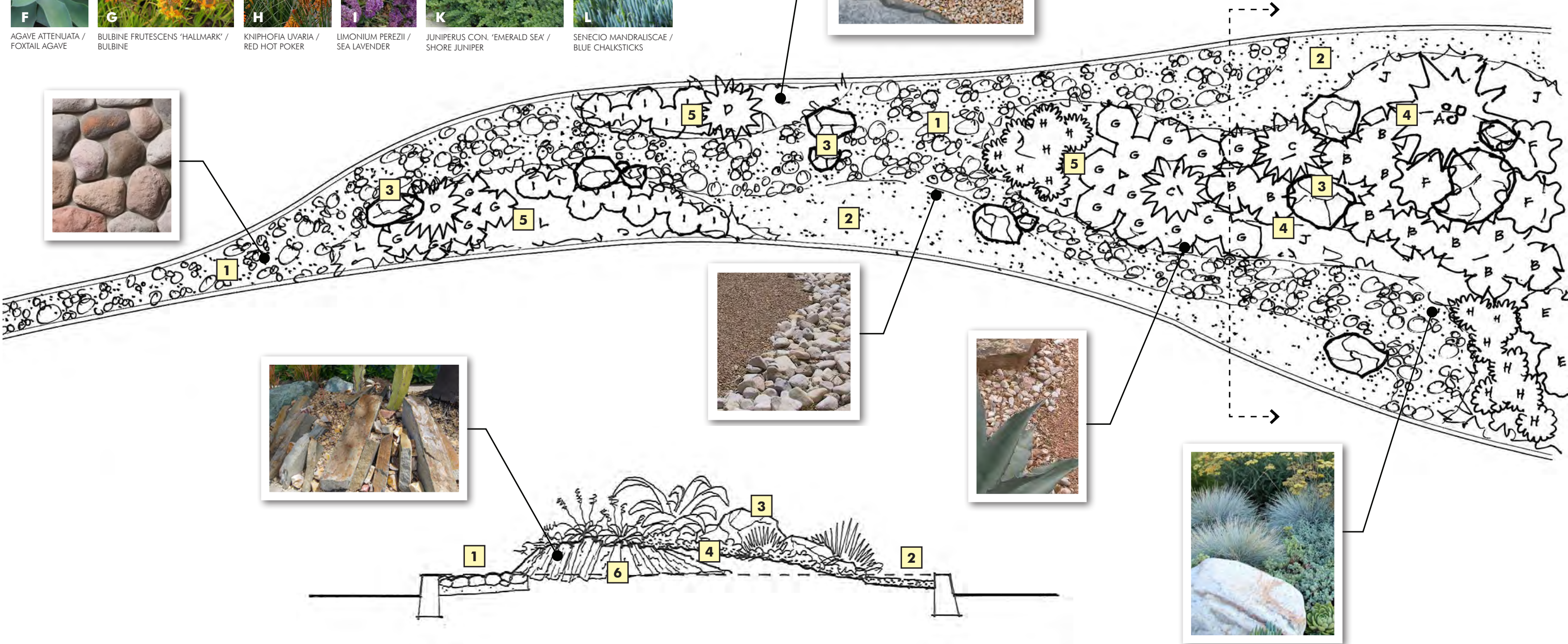


FIGURE 1.2: CORAL AVENUE MEDIAN LANDSCAPE SECTION

| 02 | CORAL AVENUE PARKWAYS

A. EXISTING CONDITIONS:

Currently the planting areas between the concrete pedestrian sidewalk and the adjacent existing asphalt bike path is an approximately 18" planter of weeds and are either sprayed out and or mowed annually. This planter area was originally planted and irrigated when the park was built but over time plants have died and the planter has been basically abandoned. Planting and irrigating these very narrow areas are hard for plant survival and difficult to irrigate.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

Remove all soil between the asphalt bike path and concrete sidewalk and install Class II base in preparation for new asphalt pavement. The previously approved plans specify the section of base.

| 2 | HARDSCAPE

Install asphalt concrete in the area and enlarge the bike path to extend to the edge of concrete sidewalk. Apply seal coat to the newly installed asphalt concrete.

| 3 | SOFTSCAPE/PLANTING

Remove all plant material.

| 4 | IRRIGATION

Remove of all irrigation, marking the mainline and wires for possible use in another location on the site if needed and if they are still functional.

C. IMPLEMENTATION AND PHASING:

For the sake of efficiency, this project should be implemented in one (1) phase.



FIGURE 2.1: EXISTING CORAL AVENUE PARKWAYS

| 03 | PARK PLANTER AREAS

A. EXISTING CONDITIONS:

The existing park planter areas were originally conceived as ‘demonstration gardens’ to showcase a variety of plant material combinations. Residents visiting the site could gain ideas for their own residential lot landscapes.

The park planter areas have outlived their usefulness and are in need of upgrades and/or repurposing. The existing decomposed granite pathways are eroding and overgrown with weeds. Also, the plant material is either dead and overgrown, resulting in large gaps in the landscape. The area is unattractive and no longer serves its original purpose.

The park planter areas have been separated into the ‘North Planter Area’ and the ‘South Planter Area’ for the purpose of this document.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

There are areas that pond and will, therefore, require regrading. This can be incorporated into the overall redesign of the north and south gardens. See Sheets 9 and 10 for enlargements of both gardens.

| 2 | HARDSCAPE

Repurposing the park planter areas would entail a redesign of the landscape. Decorative pavers should be used to replace the decomposed granite pathways to enhance the aesthetics and minimize maintenance. For example, the north garden could be transformed into a group gathering area for community events and enhanced with amphitheater-style type seating. See enlargements, Sheets 9 and 10. The south garden could be converted to a group barbeque area, including an overhead structure and raised planters.

| 3 | SOFTSCAPE/PLANTING

All existing plantings would be removed to accommodate the proposed new use areas. Raised planters would be incorporated into the new design for a “tidier” look and ease of maintenance. Plant material and related plant associations will be chosen from the updated plant palette. See enlargement, Sheets 9 and 10.

| 4 | IRRIGATION

Remove the existing irrigation system. New irrigation should be installed including valves, drip filters, pressure regulators, and drip emitters. The existing irrigation mainlines and controllers shall be protected in place.

C. IMPLEMENTATION AND PHASING:

Implementation of both the north and south garden areas should be completed in one (1) phase to provide for a cohesive final product. Overhead structures could be constructed in a later phase, if budgetary constraints dictate.

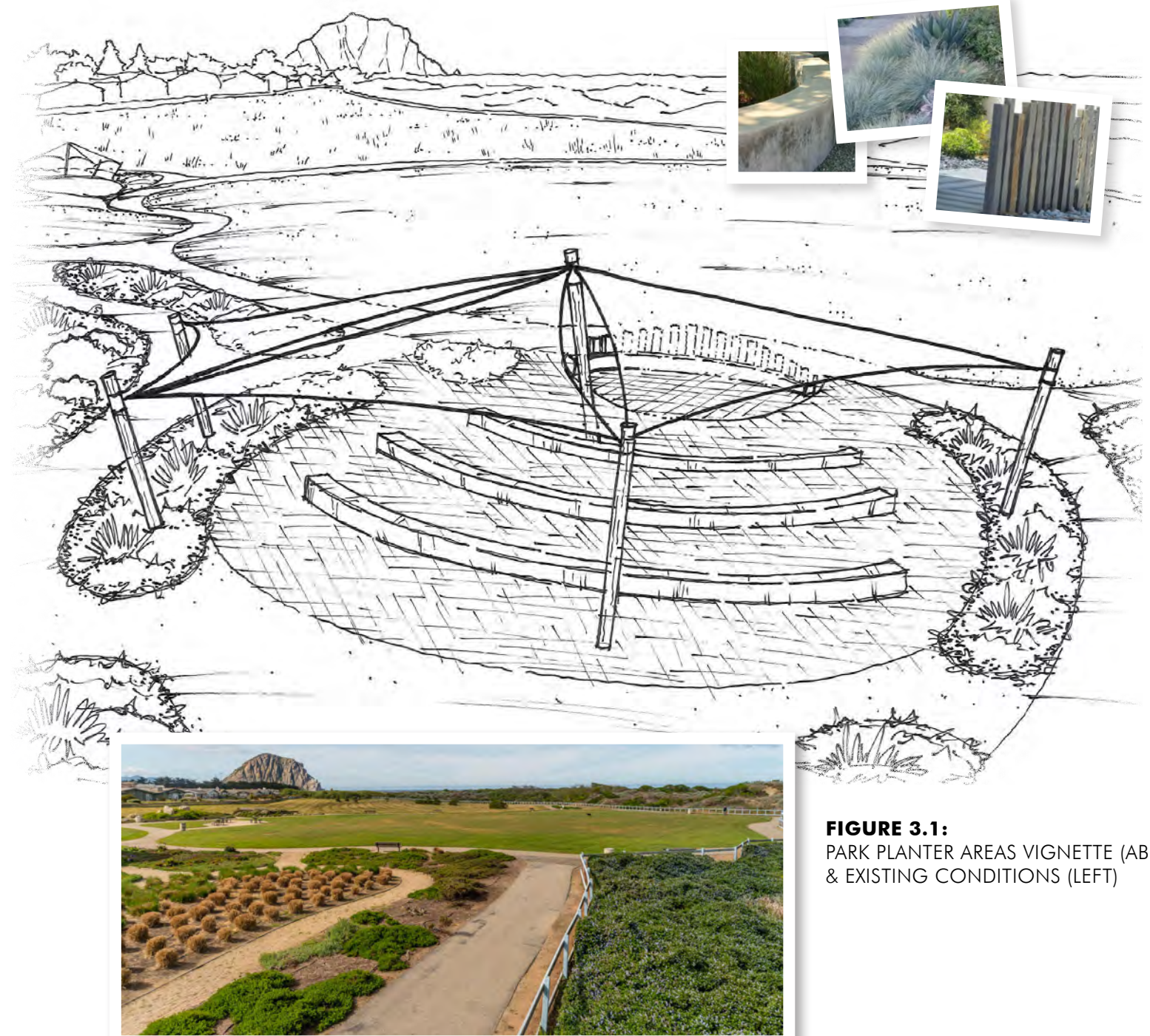


FIGURE 3.1:
PARK PLANTER AREAS VIGNETTE (ABOVE)
& EXISTING CONDITIONS (LEFT)

PLANT PALETTE (SEE APPENDIX FOR COMPLETE PLANT LIST & DESCRIPTIONS)

A

AGONIS FLEXUOSA /
PEPPERMINT TREE

B

CHAMAEROPS HUMILIS /
MEDITERRANEAN FAN PALM

C

MELALEUCA QUINQUENERVIA /
CAJUPUT TREE

D

CISTUS X PURPUREUS /
ORCHID ROCKROSE

E

LEUCOSPERMUM 'YELLOW BIRD' /
PINCUSHION

F

LEUCADENDRON 'SAFARI SUNSET' /
CONEBUSH

G

WESTRINGIA FRUT. 'MORNING LIGHT' /
COAST ROSEMARY

H

AGAVE ATTENUATA /
FOXTAIL AGAVE

I

ALOE STRIATA /
CORAL ALOE

J

EUPHORBIA 'STICKS ON FIRE' /
FIRE STICKS

K

ACHILLEA 'MOONSHINE' /
YARROW

L

BULBINE FRUT. 'HALLMARK' /
BULBINE

M

LAVANDULA ANGUSTIFOLIA /
ENGLISH LAVENDER

N

FESTUCA GLAUCA 'ELIAH BLUE' /
BLUE FESCUE

O

GREVILLEA LANIGERA 'COASTAL GEM' /
WOOLLY GREVILLEA

P

JUNIPERUS CON. 'EMERALD SEA' /
SHORE JUNIPER

Q

MALEPHORA LUTEA /
ROCKY POINT ICE PLANT

R

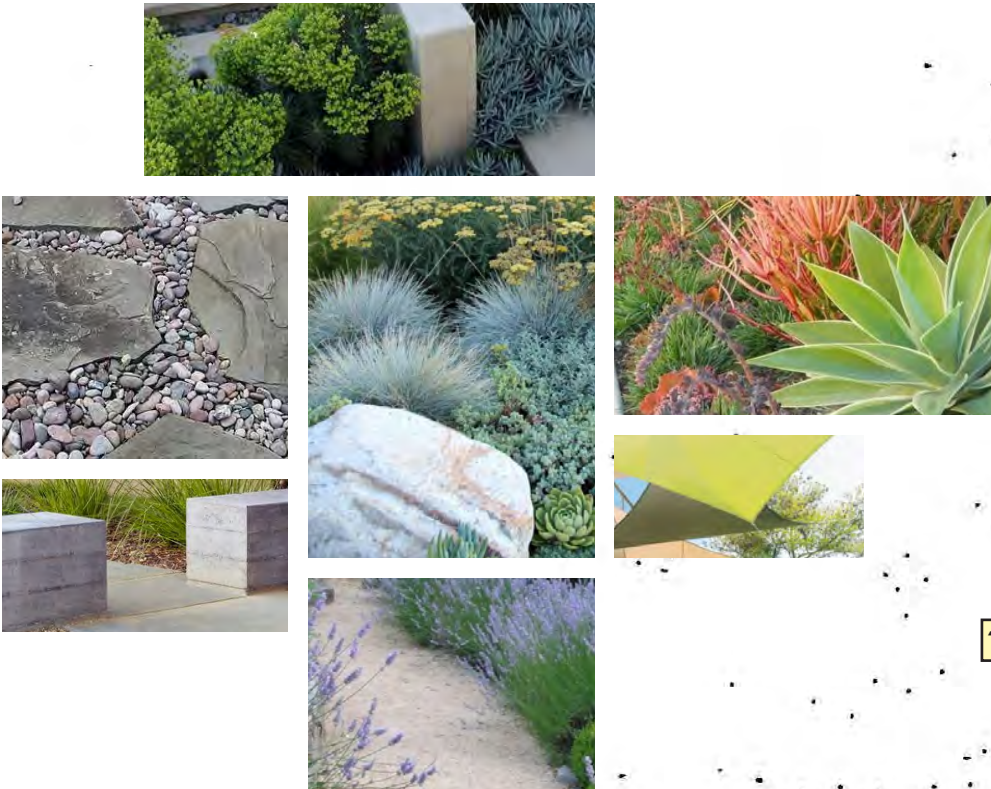
SENECIO MANDRALISCAE /
BLUE CHALKSTICKS

NORTH PLANTER AREA

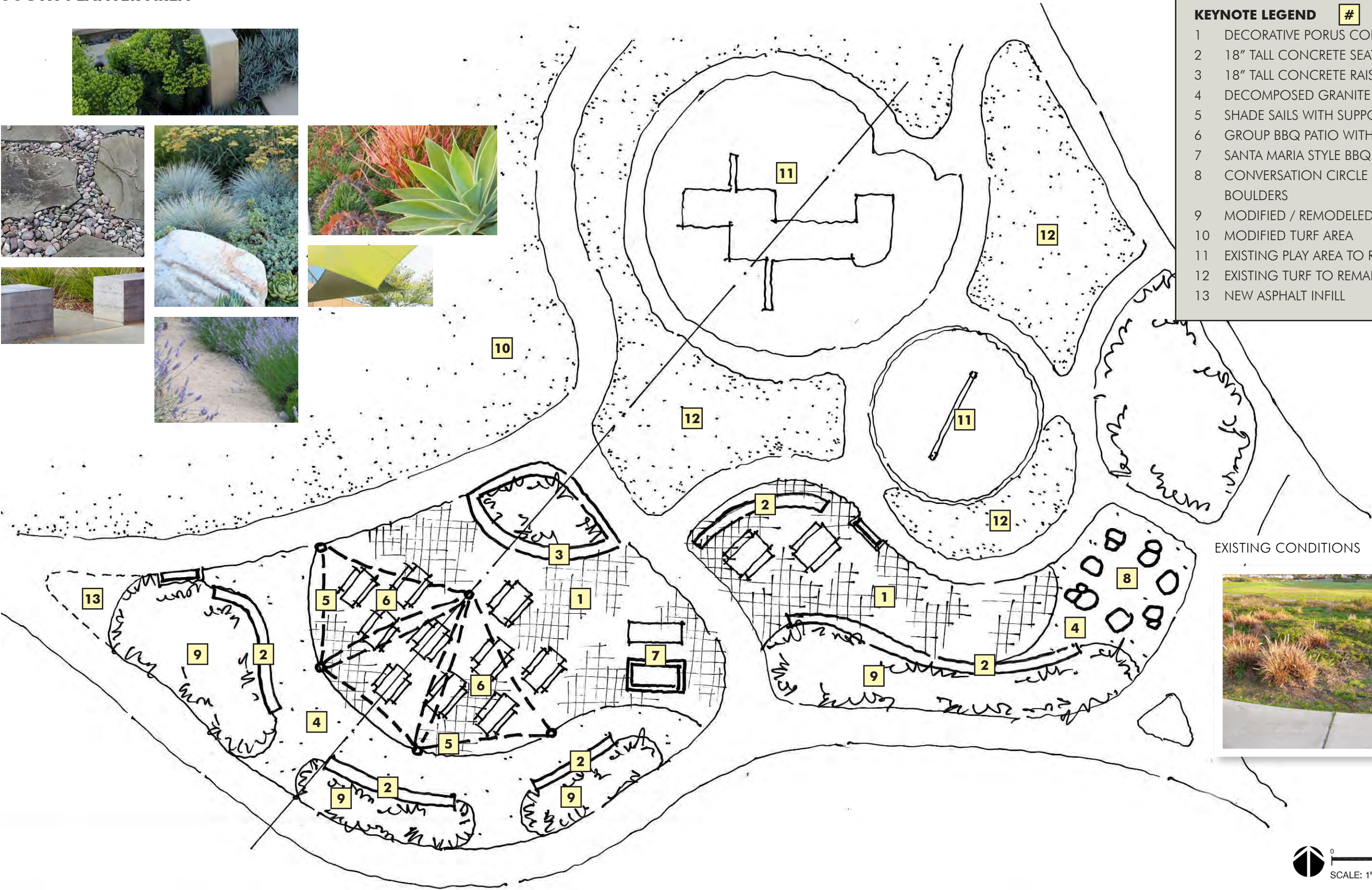
KEYNOTE LEGEND #

- 1 AMPITHEATER WITH FIXED SEATING (POURED-IN-PLACE CONCRETE)
- 2 SHADE SAILS WITH SUPPORT POSTS
- 3 DECORATIVE POROUS PAVERS
- 4 DECOMPOSED GRANITE WITH STABILIZER
- 5 MODIFIED/UPGRADED PLANTER
- 6 VIEW TOWARDS MORRO ROCK
- 7 STAGE AREA
- 8 VERTICAL STONE COLUMN BACKDROP

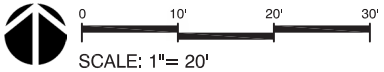
SOUTH PLANTER AREA



- KEYNOTE LEGEND** #
- 1 DECORATIVE PORUS CONCRETE PAVERS
 - 2 18" TALL CONCRETE SEATWALL
 - 3 18" TALL CONCRETE RAISED PLANTER
 - 4 DECOMPOSED GRANITE
 - 5 SHADE SAILS WITH SUPPORT POSTS
 - 6 GROUP BBQ PATIO WITH PICNIC TABLES
 - 7 SANTA MARIA STYLE BBQ W/SERVING TABLE
 - 8 CONVERSATION CIRCLE / KID'S HOPPING BOULDERS
 - 9 MODIFIED / REMODELED PLANTER
 - 10 MODIFIED TURF AREA
 - 11 EXISTING PLAY AREA TO REMAIN
 - 12 EXISTING TURF TO REMAIN
 - 13 NEW ASPHALT INFILL



EXISTING CONDITIONS



| 04 | PLAY FIELD

A. EXISTING CONDITIONS:

The open turfed play field is in very good condition and is well maintained, although there are signs of rodent activity in certain areas of the turf. The south east quadrant of the play field includes BBQs and picnic tables located on decomposed granite. The decomposed granite area is low and is ponding water.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

Remove the BBQ, picnic tables and regrade the decomposed granite area to eliminate the low spot(s) and to connect the turf areas together. This improvement will provide for easier maintenance of the turf with no further maintenance of the picnic area. The proposed new group BBQ space is adjacent to this location, see page 10 .

| 2 | HARDSCAPE

Not Applicable

| 3 | SOFTSCAPE/PLANTING

After replacement of the decomposed granite area, amend and fertilize the soil pursuant to the original planting specifications for the project and seed and/or sod the new turf area.

| 4 | IRRIGATION

Redesign the south east end of the turf irrigation system, and add and/or move spray heads to provide full coverage of the new turf. Apply a fertilizer It is highly recommended that a rodent control treatment system (e.g., EZ-FLO with Critter Max) be installed to assist in controlling the rodents. This is a liquid applied via the irrigation system. See Sheet 18.

C. IMPLEMENTATION AND PHASING:

For the sake of efficiency, this project should be implemented in one (1) phase.



FIGURE 4.1: EXISTING PLAY FIELD

| 05 | HIGHWAY 1 TREE BUFFER

A. EXISTING CONDITIONS:

The area located between Coral Avenue and Highway 1 is currently devoid of any planting and irrigation. Concentrated stormwater runoff from the highway has created rill erosion and, in some cases, a number of deep and unsightly ruts. The soil in this area appears to be highly compacted due to earlier construction phase activities. It is noteworthy that there is a maximum tree height limitations of 4 feet for any tree plantings proposed along this view corridor area, per the *Cloister Design Guidelines* dated July 1997.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

Install large boulders and/or rocks in the existing erosion areas to retain the soil and create plant pockets. Install rock-lined channels and swales to carry the highway runoff to the existing channel and existing culvert crossing Coral Avenue

| 2 | HARDSCAPE

Installing large boulders and or rocks for a natural rock wall to create planting pockets.

| 3 | SOFTSCAPE/PLANTING

Amend the soil in the newly created rock plant pockets pursuant to the soils report recommendations and related specifications. Install planting chosen from the proposed plant palette. Refer to plant palette on this page.

| 4 | IRRIGATION

Install a new irrigation mainline and wires from the center median of Coral Avenue. Install new drip valves, filters, pressure regulators, and emitters for the new plantings.

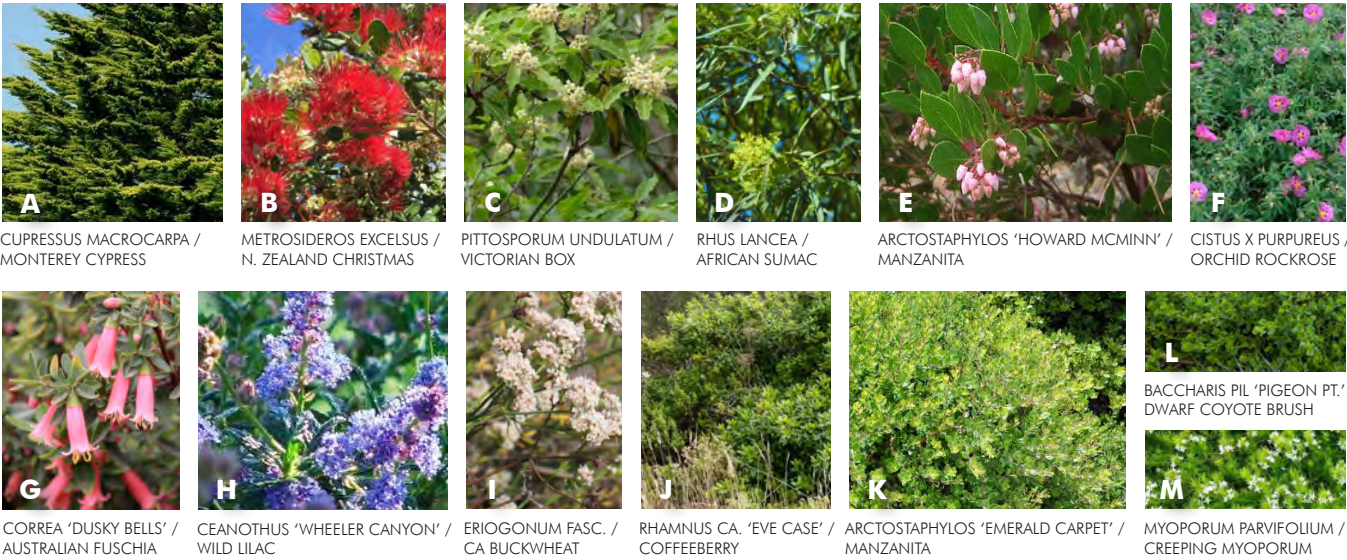
C. IMPLEMENTATION AND PHASING:

For the sake of efficiency, this project should be implemented in one (1) phase.



FIGURE 5.1:
HWY. 1 TREE BUFFER VIGNETTE (ABOVE)
& EXISTING CONDITIONS (RIGHT)

PLANT PALETTE (SEE APPENDIX FOR COMPLETE PLANT LIST & DESCRIPTIONS)



| 06 | NEIGHBORHOOD PARKWAYS

A. EXISTING CONDITIONS:

While the parkways (i.e., areas between the back of curb and sidewalk) are commonly irrigated, they have traditionally been planted by individual homeowners. Not all of the irrigation in the parkways appear to be functioning, as many have been taken over by the individual residences. Most, if not all of the parkways, have none of the original plantings and for the most part have been modified to the individual homeowner preferences.

The roundabout on Emerald Circle is currently overgrown and/or devoid of plant material, while the existing Monterey cypress is worth retaining. The entry/monument sign area on Indigo Circle requires some replanting and upgrades to the existing planting. The entry parkways along Indigo Circle appear to have been taken over by the adjacent residences and are well maintained.

There are a number of vacant parcels and the City’s policy now is to conduct weed abatement only in the parkways. Street trees are not a part of the Assessment District and are maintained under the City’s Street Tree Program.

B. RECOMMENDATIONS:

| 1 | GRADING/DRAINAGE

Not applicable.

| 2 | HARDSCAPE

Not applicable.

| 3 | SOFTSCAPE/PLANTING

Amend the soil in the planting areas and choose replacement plant material from the recommended planting palette.

Apply pre- and post-emergent herbicide around newly installed plant material and bare soil areas. Install a weed barrier that allows both air and water infiltration. Apply a minimum 3-inches of organic mulch over the weed barrier.

| 4 | IRRIGATION

Replace existing automatic irrigation valves and include drip filters and pressure regulators. Change spray systems to drip emitter systems. All existing controllers, wires, and irrigation mainlines shall be maintained and protected in place.

C. IMPLEMENTATION AND PHASING:

For the sake of efficiency, this project should be implemented in one (1) phase.

FIGURE 6.1: EXISTING NEIGHBORHOOD PARKWAYS



PLANT PALETTE (SEE APPENDIX FOR COMPLETE PLANT LIST & DESCRIPTIONS)



| APPENDIX |

PLANT PALETTES

CORAL AVE. MEDIANS

TREES (24" BOX)	SIZE (H X W)	WUCOLS*	NOTES
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM	10' X 10'	L	SILVERY, WAXY LEAVES
SHRUBS (5 GAL)			
EUPHORBIA CHARACIAS SUBSP. WULFENII / SPURGE	4' X 4'	L	GREEN-YELLOW BLOOMS
PHORMIUM 'BRONZE BABY' / NEW ZEALAND FLAX	4' X 3'	L	MAROON FOLIAGE
WESTRINGIA 'MORNING LIGHT' / COAST ROSEMARY	3' X 3'	L	CREAM VARIEGATION
YUCCA FILAMENTOSA 'COLOR GUARD' / ADAM'S NEEDLE	3' X 3'	L	YELLOW-GREEN LEAVES
SUCCULENTS (5 GAL)			
AGAVE ATTENUATA / FOXTAIL AGAVE	3' X 3'	L	SMOOTH, GREEN ROSETTES
PERENNIALS (1 GAL)			
BULBINE FRUTESCENS 'HALLMARK' / BULBINE	2' X 4'	L	ORANGE FLOWERS
KNIPHOFIA UVARIA / RED HOT POKER	3' X 2'	L	ORANGE STALKS
LIMONIUM PEREZII / SEA LAVENDER	2' X 2'	L	EVERGREEN
GROUNDCOVER (1 GAL)			
FESTUCA GLAUCA 'ELIJAH BLUE' / BLUE FESCUE	1' X 1'	L	BLUE-GRAY FOLIAGE
JUNIPERUS CONFERTA 'EMERALD SEA' / SHORE JUNIPER	1' X 5'	L	CONIFER, EVERGREEN
SENECIO MANDRALISCAE / BLUE CHALKSTICKS	1' X 5'	L	BLUE, PENCIL-LIKE LEAVES

PARK PLANTER AREAS

TREES (24" BOX)	SIZE (H X W)	WUCOLS*	NOTES
AGONIS FLEXUOSA / PEPPERMINT TREE	30' X 20'	L	EVERGREEN, WILLOW-LIKE
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM	10' X 10'	L	SILVERY, WAXY LEAVES
MELALEUCA QUINQUENERVIA / CAJEPUT TREE	30' X 20'	L	EVERGREEN, PEELING BARK
SHRUBS (5 GAL)			
CISTUS X PURPUREUS / ORCHID ROCKROSE	5' X 5'	L	PURPLISH-PINK FLOWERS
LEUCOSPERMUM CORD. 'YELLOW BIRD' / PINCUSHION	5' X 5'	L	YELLOW DOME FLOWERS
LEUCADENDRON 'SAFARI SUNSET' / CONEBUSH	5' X 5'	L	RED, GREEN FOLIAGE
WESTRINGIA 'MORNING LIGHT' / COAST ROSEMARY	3' X 3'	L	CREAM VARIEGATION
SUCCULENTS (5 GAL)			
AGAVE ATTENUATA / FOXTAIL AGAVE	3' X 3'	L	SMOOTH GREEN ROSETTES
ALOE STRIATA / CORAL ALOE	3' X 2'	L	ORANGE BLOOMS
EUPHORBIA TIRUCALLI 'STICKS ON FIRE' / FIRE STICKS	3' X 5'	L	BRIGHT, PENCIL-LIKE STEMS
PERENNIALS (1 GAL)			
ACHILLEA MILLEFOLIUM 'MOONSHINE' / YARROW	2' X 1'	L	YELLOW FLOWERS
BULBINE FRUTESCENS 'HALLMARK' / BULBINE	2' X 4'	L	ORANGE FLOWERS
LAVANDULA ANGUSTIFOLIA / ENGLISH LAVENDER	2' X 2'	L	AROMATIC
GROUNDCOVER (1 GAL)			
FESTUCA GLAUCA 'ELIJAH BLUE' / BLUE FESCUE	1' X 1'	L	BLUE-GRAY FOLIAGE
GREVILLEA LAN. 'COASTAL GEM' / WOOLLY GREVILLEA	1' X 4'	L	PINK SPIDER-LIKE FLOWERS
JUNIPERUS CONFERTA 'EMERALD SEA' / SHORE JUNIPER	1' X 5'	L	CONIFER, EVERGREEN
MALEPHORA LUTEA / ROCKY POINT ICE PLANT	1' X 6'	L	YELLOW DAISY-LIKE FLOWERS
SENECIO MANDRALISCAE / BLUE CHALKSTICKS	1' X 5'	L	BLUE, PENCIL-LIKE LEAVES

*WUCOLS (WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES) IS A GUIDE TO HELP IDENTIFY IRRIGATION WATER NEEDS OF PLANT SPECIES. DEVELOPED BY THE UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION, CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2000.

HIGHWAY 1 TREE BUFFER

TREES (24" BOX)	SIZE (H X W)	WUCOLS*	NOTES
CUPRESSUS MACROCARPA / MONTEREY CYPRESS	50' X 40'	M	CONIFEROUS, EVERGREEN
METROSIDEROS EXCELSUS / N. ZEALAND CHRISTMAS TREE	30' X 30'	L	EVERGREEN
PITTOSPORUM UNDULATUM / VICTORIAN BOX	30' X 30'	L	EVERGREEN
RHUS LANCEA / AFRICAN SUMAC	25' X 30'	L	WEeping, EVERGREEN
SHRUBS (5 GAL)			
ARCTOSTAPHYLOS 'HOWARD MCMINN' / MANZANITA	7' X 8'	L	GLOSSY GREEN LEAVES
CISTUS X PURPUREUS / ORCHID ROCKROSE	5' X 5'	L	PURPLE-PINK FLOWERS
CORREA 'DUSKY BELLS' / RED AUSTRALIAN FUSCHIA	2' X 3'	L	GRAY-GREEN LEAVES
CEANOTHUS 'WHEELER CANYON' / WILD LILAC	5' X 7'	L	SHOWY BLUE FLOWERS
ERIOGONUM FASCICULATUM / CA BUCKWHEAT	3' X 3'	L	PINK, WHITE FLOWERS
RHAMNUS CALIFORNICA 'EVE CASE' / COFFEEBERRY	7' X 7'	L	EVERGREEN
GROUNDCOVER (1 GAL)			
ARCTOSTAPHYLOS 'EMERALD CARPET' / CARPET MANZANITA	<1' X 4'	L	GLOSSY, GREEN LEAVES
BACCHARIS PIL. 'PIGEON POINT' / DWARF COYOTE BRUSH	2' X 6'	L	EVERGREEN
MYOPORUM PARVIFOLIUM / CREEPING MYOPORUM	<1' X 8'	L	WHITE FLOWERS

NEIGHBORHOOD PARKWAYS

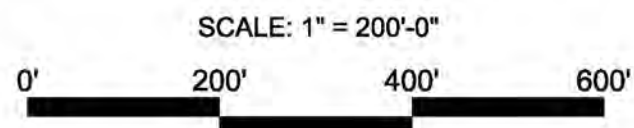
TREES (24" BOX)	SIZE (H X W)	WUCOLS*	NOTES
ARBUTUS 'MARINA' / STRAWBERRY TREE	15' X 15'	L	PEELING BARK, EVERGREEN
METROSIDEROS EXCELSUS / N. ZEALAND CHRISTMAS TREE	20' X 20'	L	RED BLOOMS
SHRUBS (5 GAL)			
KNIPHOFIA UVARIA / RED HOT POKER	3' X 2'	L	ORANGE STALKS
PHORMIUM SPS./ NEW ZEALAND FLAX	3' X 3'	L	BLADE-LIKE FOLIAGE
SUCCULENTS (5 GAL)			
AGAVE ATTENUATA / FOXTAIL AGAVE	3' X 3'	L	SMOOTH GREEN ROSETTES
ALOE STRIATA / CORAL ALOE	3' X 2'	L	ORANGE BLOOMS
PERENNIALS (1 GAL)			
ACHILLEA MILLEFOLIUM 'MOONSHINE' / YARROW	2' X 1'	L	YELLOW FLOWERS
LAVANDULA ANGUSTIFOLIA / ENGLISH LAVENDER	2' X 2'	L	AROMATIC
GROUNDCOVER (1 GAL)			
FESTUCA GLAUCA 'ELIJAH BLUE' / BLUE FESCUE	1' X 1'	L	BLUE-GRAY FOLIAGE
SENECIO MANDRALISCAE / BLUE CHALKSTICKS	1' X 5'	L	BLUE, PENCIL-LIKE LEAVES

*WUCOLS (WATER USE CLASSIFICATIONS OF LANDSCAPE SPECIES) IS A GUIDE TO HELP IDENTIFY IRRIGATION WATER NEEDS OF PLANT SPECIES. DEVELOPED BY THE UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION, CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2000.

#

- KEY NOTE LEGEND (#)

- KEY NOTE LEGEND (#)



Staff Report

TO: Public Works Advisory Board **DATE:** May 24, 2019

FROM: Rob Livick, PE/PLS – Public Works Director/City Engineer
Damaris Hanson, Environmental Program Manager

SUBJECT: Annual Water Report 2018 and Recommendation for Allocation of Water Equivalency Units (WEU) for FY2019/20

RECOMMENDATION

Staff recommends the PWAB review the annual water report for 2018 and the FY 2019/20 Water Equivalency Unit Allocation and forward the following recommendations to the City Council:

1. Allocate 50 Water Equivalency Units (WEUs) for residential development and 65 for commercial development for a total of 115 WEUs for FY2019/20

ALTERNATIVES

As an alternative to authorizing development that creates new WEUs, PWAB could recommend to Council to place a moratorium on the establishment of any new WEU.

FISCAL IMPACT

There are no fiscal impacts directly associated with the allocation of the WEUs. Staff prepares the annual water report and makes the recommendation on the authorization of WEUs as a routine annual task. Although, a moratorium on new WEUs would reduce the amount of revenue the City receives through building and planning fees, property taxes, sales taxes, and other property related revenues.

BACKGROUND

Pursuant to Morro Bay Municipal Code (MBMC) Section 13.20, the Annual Water Report has been prepared by the Public Works Department and is being brought to PWAB then will be forwarded to the Planning Commission for review and recommendation on June 4, 2019 and finally to City Council on June 11, 2019.

A WEU is defined as a unit of measure for water use equal to the average amount of water used by a single-family residence over the period of one year. Starting in 1977 one WEU was equal to 10,780 cubic feet of water or 166 gallons per capita per day (GPCD) per year. In 2016 this was updated to 8,732 cubic feet of water or 90 GPCD due to the historical trend of lower water use compared to previous years. The intent of the WEU allocations are to regulate the addition of new water users to the City's water system and to ensure the demand for water shall not exceed available water supply.

In 1984 the citizens adopted Measure F (Codified as Ordinance 266 in MBMC as Chapter 13.20), a “Growth Management System”. This measure set a maximum population of 12,200 by the year 2000. To accomplish the housing needs of this population growth, Measure F set a maximum number of housing unit limit of 70 new units per year with a maximum variation in the number of units in a year cannot exceed 10 percent or 77 WEUs for residential units. City Council took action on August 27, 2007 to reduce the number of allocated housing units to 50 new housing units. Ordinance No. 266 requires allocation mix of 60-percent SRF and 40-percent MFR. Since housing and population growth has not increased as projected, i.e. the City has yet to reach Measure F population of 12,200, new housing units can still be issued. The population growth estimates in the proposed General Plan predict reaching the Measure F established population in 2040.

DISCUSSION

Current Drought Conditions

For the first time since December 20, 2011, California is drought free as of Mid-March according to the U.S. Drought Monitor with less than 7% of the State remaining abnormally dry. While 2019 started off dry and warm but as of the end of March the State is above normal with some areas 150-300% of normal and the threat of drought is low.

Water Conservation

Statewide Conservation Requirements:

The State lifted the drought Emergency in April of 2017, but the State Water Resources Control Board will continue to require reporting requirements and prohibitions on wasteful practices such as watering during or after rainfall, hosing off sidewalks and irrigating ornamental turf on public street medians. Governor Brown has stated “Conservation must remain a way of life”.

Local Conservation Requirements:

The current water conservation requirements implemented by the Council are Mandatory Water Conservation Requirements with do not restrict outdoor water on specific day but does restrict specific times, no outdoor irrigation between the hours of 10am and 4pm. These restrictions also include no excessive gutter runoff and no washing of hardscapes except where necessary to protect the public health of safety. These regulations are inline with the Statewide Conservation Requirements.

Water Management Planning

The City's Water Management Plan is included in the OneWater Plan which was finalized in October 2018. The OneWater concept is to view all the City's water resources (Potable water, Wastewater and Stormwater) holistically so the community can understand the complete water resources picture. The OneWater Plan completed a water supply alternatives analysis to identify reliable, drought tolerant water supplies sufficient to provide water to the City through 2050. The OneWater Plan looked at six main alternatives with sub-alternatives identified related to treatment. The OneWater Plan recommends the City move forward with Water Supply Alternative 4A. Alternative 4A would construct the advanced treatment facilities as part of the Water Reclamation Facility (WRF) project to facilitate Indirect Potable Reuse (IPR) within the Morro groundwater basin and utilize the City's existing facilities for groundwater extraction. This future water supply option was identified as the most reliable, drought tolerant and provide sufficient water supply to the City through 2050. The City also currently receives State Water through San Luis Obispo County Flood Control and Water Conservation District and will continue to receive State Water at least through the end of the current contract, 2035.

Projected Water Supply FY18/19

In March 2019, the California Department of Water Resources (DWR) informed the State Water Project (SWP) contractors the allocation for 2019 would be 70-percent of the contracted amount. This allocation in combination with the drought buffer is available to make up the difference between delivery requests and demand. Therefore, the City will be receiving 100-percent of the State Water Requested for 2019 (940 ac-ft). State Water allocation is determined every year, therefore should another dry year occur or several dry years in a row the City's allocation could be reduced a 0-percent allocation. State Water is an interruptible source of water. If there is a line break/repair or an emergency Morro Bay could be without water from this source. State Water does "shut down" once a year for maintenance, typically in October and/or November and has typically been anywhere from 1-2 weeks to a month. During time of State Water shut down the City supplements the water supply with the Morro Valley wells through the BWRO water treatment plant.

Potable Water Production Data

As shown in Attachment 1, Water production from 1980-2018 no water was extracted from Chorro and Morro Basins for direct distribution into the water supply, 960 acre-feet were delivered from the State Water Project (SWP), and 92 acre-feet of treated Morro Basin well water from the BWRO treatment plant. Attachment 2 provides an historical record of water production and use from 1960 through 2018. Beginning in 1997, per capita water use has been re-calculated, based upon the amount of water delivered to customers (metered/sold) rather than gross production, to closely reflect actual community consumption practices. Both attachments 1 and 2 show a trend for the City water consumption to be decreasing over time while the City's population has slightly increased.

WEU Summary of FY 2017-2018 activity:

The Council authorized 115 WEUs for FY 2017/18. Thirty WEUs to be used for single-family dwellings and 20 for multiple-family dwellings with 65 allowed for commercial/Industrial uses. Those WEUs were allocated on a first-come, first-served basis. The tracking of the WEUs utilized for FY 2017/18 indicates 37 of the 115 WEUs allocated were used as follows:

- 0.59 Commercial (Virg's Landing)
- 15 Single-Family, (2 more SFR possible before July 1st)
- 0 Multi-Family

The reason for an increase in SFR this fiscal year is due to two larger subdivisions that were approved several years prior, have recently recorded their subdivision map and are moving forward with building. This is not a comprehensive list of all building activity, but rather a list of those activities which required a WEU allocation.

Conclusion:

Staff recommends PWAB recommend to City Council to allocate 115 WEU for FY 2019/20. Fifty WEUs, 30 for SFR and 20 for MFR. Also allocate 65 WEUs for Commercial/Industrial development for a total of 115 WEUs.

ATTACHMENTS

1. Table 1: Water Production by source
2. Table 2: Per Capita Water Use

TABLE 1

WATER PRODUCTION DATA 1980 - 2018
(Acre Feet - AF)

Year	Chorro Basin	Morro Basin	** R/O Plant	State Water	TOTAL (AF)
1980	1079	672	*	*	1751
1981	1143	584	*	*	1727
1982	1061	526	*	*	1587
1983	995	537	*	*	1532
1984	1097	572	*	*	1669
1985	1108	582	*	*	1690
1986	1059	552	*	*	1611
1987	1124	531	*	*	1655
1988	1120	528	*	*	1648
1989	1047	512	*	*	1559
1990	963	564	*	*	1527
1991	808	449	*	*	1257
1992	1049	270	*	*	1319
1993	994	397	*	*	1391
1994	954	460	*	*	1414
1995	986	420	*	*	1406
1996	1261	240	*	*	1501
1997	985	249	*	301	1535
1998	38	*	*	1288	1326
1999	34	*	*	1359	1393
2000	4	*	*	1396	1400
2001	11	*	*	1399	1410
2002	1	32	48	1373	1454
2003	1	28	13	1379	1421
2004	49	213	10	1205	1477
2005	204	150	0	1007	1361
2006	257	80	25	1009	1371
2007	276	35	19	1116	1446
2008	184	52	28	1175	1439
2009	235	80	64	1069	1448
2010	74	54	258	873	1259
2011	14	0.5	84	1144	1243
2012	0	3.9	70	1129	1203
2013	0	27	107	1137	1271
2014	0	0	41	1141	1183
2015	0	0	138	952	1088
2016	0	0	36	958	994
2017	0	0	106	925	1031
2018	0	0	93	960	1053

** R/O Plant Production numbers include both Morro Groundwater treated via Brackish Water Reverse Osmosis (BWRO) as well as Sea Water Reverse Osmosis (SWRO).

TABLE 2

TOTAL HISTORIC WATER PRODUCTION & RAINFALL FOR THE CITY OF MORRO BAY						
Year	Rainfall	City Population	Production in acre feet	Production in millions of gallons	Average daily production in millions of gallons	Average use in gallons per capita per day
1960	10.48	5,599	894	291	0.8	142
1961	8.6	*	842	274	0.75	*
1962	17.22	*	999	326	0.89	*
1963	18.52	*	840	274	0.75	*
1964	11.26	*	881	287	0.79	*
1965	16.08	6,400	1000	326	0.89	140
1966	11.24	6,500	1188	387	1.06	163
1967	20.09	6,600	1194	389	1.07	161
1968	9.64	6,750	1298	423	1.16	172
1969	28.74	6,900	1255	409	1.12	162
1970	9.84	7,109	1534	500	1.37	193
1971	14.2	7,450	1533	500	1.37	184
1972	7.41	7,517	1547	504	1.38	184
1973	27.51	7,725	1424	464	1.27	165
1974	22.35	7,942	1482	483	1.38	167
1975	14.43	8,165	1510	492	1.35	165
1976	11.38	8,394	1574	513	1.41	167
1977	8.35	8,525	1249	407	1.12	131
1978	29.68	8,625	1430	466	1.28	148
1979	17.06	9,150	1614	526	1.44	157
1980	20.99	9,064	1651	538	1.47	162
1981	13.11	9,206	1727	563	1.54	168
1982	20.01	9,297	1586	517	1.42	152
1983	35.01	9,435	1534	500	1.37	145
1984	10.08	9,599	1669	544	1.49	155
1985	10.02	9,747	1691	551	1.51	155
1986	17.17	9,881	1614	526	1.44	146
1987	12.29	9,819	1655	539	1.48	150
1988	15.01	9,975	1648	537	1.47	147
1989	10.88	10,133	1559	508	1.39	137
1990	8.78	9,664	1527	498	1.36	139
1991	16.01	9,806	1256	410	1.12	114
1992	19.63	9,736	1319	430	1.18	121
1993	24.21	9,979	1391	452	1.24	124
1994	11.05	10,071	1414	462	1.26	126
1995	40.01	9,518	1418	462	1.27	133
1996	15.47	9,687	1501	462	1.34	138
1997	18.56	9,696	1535	489	1.37	141
1998	18.01	9,845	1326	432	1.18	120
1999	13.11	9,871	1393	454	1.24	126
2000	19.63	10,410	1400	456	1.25	120
2001	16.04	10,486	1410	459	1.26	118
2002	9.36	10,510	1454	474	1.3	123
2003	13.75	10,485	1421	466	1.28	122
2004	9.48	10,522	1477	481	1.32	125
2005	30.19	10,270	1361	444	1.22	118
2006	18.9	10,491	1371	447	1.23	117
2007	7.24	10,436	1446	471	1.29	118
2008	13.34	10,548	1439	469	1.23	122
2009	12.25	10,555	1448	472	1.29	120
2010	17.26	10,608	1259	410	1.12	106
2011	12.99	10,234	1243	405	1.11	108
2012	10.16	10,327	1203	392	1.07	105
2013	4.05	10,370	1349	440	1.21	117

TABLE 2

TOTAL HISTORIC WATER PRODUCTION & RAINFALL FOR THE CITY OF MORRO BAY						
Year	Rainfall	City Population	Production in acre feet	Production in millions of gallons	Average daily production in millions of gallons	Average use in gallons per capita per day
2014	12.62	10,234	1183	385	1.05	103
2015	8.55	10,544	1088	354	0.97	92
2016	18.79	10,284	994	324	0.88	86
2017	18.73	10,284	1031	336	0.92	89.5
2018	15.1	10,581	1053	342	0.94	88.6

a: [average] determined from metered water sold, not water produced

Population from US Census estimates