



CITY OF MORRO BAY PUBLIC WORKS ADVISORY BOARD AGENDA

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.

**Regular Meeting - Wednesday, August 21, 2019
Veterans' Memorial Hall - 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
MOMENT OF SILENCE
PLEDGE OF ALLEGIANCE
BOARD MEMBERS ANNOUNCEMENTS AND PRESENTATIONS

PUBLIC COMMENT PERIOD

Members of the audience wishing to address the Board on City business matters not on the agenda may do so at this time. For those desiring to speak on items on the agenda, but unable to stay for the item, may also address the Board at this time.

Public comment is an opportunity for members of the public to provide input to the advisory body. To increase the effectiveness of the Public Comment Period, the City respectfully requests the following guidelines and expectations be followed:

- When recognized by the Chair, please come forward to the podium to speak. Though not required, it is helpful if you state your name, city of residence and whether you represent a business or group. Unless otherwise established by the Chair, comments are to be limited to three minutes.
- All remarks should be addressed to Board, as a whole, and not to any individual member thereof.
- The Board respectfully requests that you refrain from making slanderous, profane or personal remarks against any elected official, commission and/or staff.
- Please refrain from public displays or outbursts such as unsolicited applause, comments or cheering.
- Any disruptive activities that substantially interfere with the ability of the Board to carry out its meeting will not be permitted, and offenders will be requested to leave the meeting.
- Your participation in Board meetings is welcome and your courtesy will be appreciated.
- The Board in turn agrees to abide by its best practices of civility and civil discourse according to Resolution No. 07-19.

A. CONSENT CALENDAR

Unless an item is pulled for separate action by the Board, the following actions are approved without discussion.

A-1 Approval of Minutes for the June 19, 2019 Public Works Advisory Board Special Meeting
Recommendation: Approve minutes.

A-2 Approval of Minutes for the July 17, 2019 Joint Public Works Advisory Board and Recreation & Parks Commission Special Meeting
Recommendation: Approve minutes.

B. BUSINESS ITEMS

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

Recommendation: Information item for discussion, no action needed.

B-2 City Park Transit Hub Improvements Study

Recommendation: Review the study and recommend the City Council 1) review and accept the Morro Bay Transit Hub Study, 2) select the Existing Site option for vehicle pull in/out and passenger shelter area improvements outlined in the staff report, and 3) direct staff to pursue transportation grants to fully fund the improvements outlined in the staff report.

C. FUTURE AGENDA ITEMS

D. ADJOURNMENT

This agenda is subject to amendment up to 72 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.

Materials related to an item on this Agenda submitted to the Public Works Advisory Board after distribution of the agenda packet are available for public inspection at the Public Works office located at 955 Shasta Avenue; Morro Bay Library located at 625 Harbor Street; and Mill's Copy Center located at 495 Morro Bay Boulevard during normal business hours.

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 insure reasonable arrangements can be made to provide accessibility to the meeting.

- | | | |
|----------|---|---|
| PRESENT: | Ric Deschler
Janith Goldman
John Erwin
Steve Shively
Torrey Byles
Chris Erlendson
Stewart Skiff | Chair
Vice Chair
Board Member
Board Member
Board Member
Board Member
Board Member |
| STAFF: | Rob Livick
Janeen Burlingame
Damaris Hanson
Robbie Victor
Gina Gregory | Public Works Director
Management Analyst
Environmental Program Manager
Lead Utility Operator
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

<https://youtu.be/2gbos71VuQU?t=1m15s>

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

A. CONSENT AGENDA

A-1 Approval of Minutes of May29, 2019 Special Meeting
<https://youtu.be/2gbos71VuQU?t=1m34s>

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/2gbos71VuQU?t=2m14s>

Rob Livick presented the Directors Report.

B-2 Recertification of the Updated Sewer System Management Plan.
<https://youtu.be/2gbos71VuQU?t=52m40s>

Damaris Hanson and Robbie Victor presented the Recertification of the Updated Sewer System Management Plan

Discussion, comments and questions amongst Board members and staff.

MOTION: Steve Shively made a motion to recommend the recertification of the Sewer System Management Plan. The motion was seconded by John Erwin and carried 7-0-0 unanimously.

B-3 PG&E LED Street Light Retrofit for Embarcadero and Cloisters Landscape Lighting.
<https://youtu.be/2qbos71VuQU?t=1h31m45s>

Rob Livick presented the PG&E LED Street Light Retrofit for Embarcadero and Cloisters Landscape Lighting.

Discussion, comments and questions amongst Board members and staff.

ADJOURNMENT

The meeting adjourned at 7:22 P.M. to a Public Works Advisory Board and Recreation & Parks Commission Special Joint meeting at the Public Works Department, 955 Shasta Avenue, July 17, 2019.

Recorded by:

Gina Gregory
Office Assistant

MINUTES - PUBLIC WORKS ADVISORY BOARD (PWAB), RECREATION & PARKS COMMISSION (R&P)
SPECIAL JOINT MEETING – JULY 17, 2019
PUBLIC WORKS DEPARTMENT – 4:15 PM

- PWAB
PRESENT: Ric Deschler Chair
Steve Shively Vice Chair
Torrey Byles Board Member
John Erwin Board Member
Christian Erlendson Board Member
Janith Goldman Board Member
Stewart Skiff Board Member
- R&P
PRESENT: Kevin Carroll Chair
Mike Espino Commissioner
Robert Swain Commissioner
- R&P
ABSENT: Drew Sidaris Vice Chair
Skip Sorich Commissioner
- STAFF: Rob Livick Public Works Director
Joe Mueller Utilities Division Manager
Mike Wilcox Consolidated Maintenance Superintendent
Janeen Burlingame Management Analyst
Damaris Hanson Environmental Programs Manager
Kirk Carmichael Recreation Division Coordinator

ESTABLISH QUORUM AND CALL TO ORDER

The meeting was called to order at 4:15 PM. A quorum was present for the Public Works Advisory Board and a quorum was not present for the Recreation & Parks Commission. Board Members, Commissioners and Staff walked to the first location on the tour, Bocce Ball/Greenhouse project site at Shasta Avenue/Dunes Street, then boarded the City Trolley and travelled to the remaining locations on the tour.

I. ANNUAL PARKS TOUR

The Board Members, Commissioners and Staff toured and discussed the following City facilities and parks: Bocce Ball and Greenhouse site on Shasta Avenue/Dunes Street, City Park on Harbor Street/Morro Bay Boulevard, WRF site on South Bay Boulevard/Teresa Drive, Cloisters Park on Coral Avenue, and the Pocket Park project site at Tideland Park on Embarcadero Road.

ADJOURNMENT

The meeting adjourned at 6:00 PM.

Recorded by:

Gina Gregory
Office Assistant



AGENDA NO: B-1

MEETING DATE: August 21, 2019

MEMORANDUM

TO: Public Works Advisory Board
CC: City Manager
DATE: August 13, 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 (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 SERVICE REQUESTS AND WORK ORDERS
6/19/2019 TO 8/9/2019
 Staff Contact: Mike Wilcox

Service Requests Completed		Work Orders Completed	
Maintenance Request	5	Facilities	
Other - Street Lights	1	Appliance Repair	1
Pavement Replace or Repair	3	Bldg. Envelope Other	1
Pothole/Sinkhole	4	Core Duties	3
Sidewalk Issue	1	Electrical	1
Sign or Banner Missing/Damaged	1	Facilities Other	1
Street Cleaning/Sweeping	1	General Maintenance	2
Street Light Out/Broken	1	Maintenance	2
Traffic Control Device Request	2	Painting	1
Tree Evaluation	1	Plumbing	3
Tree Pruning/Trimming	4	Repair	2
Tree Removal Request	2	Weed Abatement	2
Tree Replacement	3	Window	1
Service Requests Total	29	Fleet	
		Tire Work	1
		Landscape Areas	
		Other	1
		Parking Lots	
		Grading	1
		ROW-Sidewalks-Paths	
		Clean/Clear Debris	1
		Clear Debris	1
		Repair	2
		Parks	
		Bench/Table Repair	2
		Fencing	1
		Graffiti Removal	1
		Irrigation Repair	3
		Maintenance	7
		Other	2
		Plumbing	7
		Tree Hazard Reduction	3
		Weed Abatement	1
		Street Trees	
		Hazard Reduction	4
		Install	9
		Other	2
		Removal	1
		Tree Hazard Reduction	1
		Trim Bushes/Trees	1
		Streets	
		Berm Repair	2
		CMA Patch	1
		Dig Out	5
		Install	2
		Other	3
		Repair	1
		Right of Way Obstruction	2
		Striping/Painting	1
		Weed Abatement	2
		Work Orders Total	91

CONSOLIDATED MAINTENANCE
OUTSTANDING SERVICE REQUESTS AND WORK ORDERS
6/19/2019 TO 8/9/2019
 Staff Contact: Mike Wilcox

Outstanding Service Requests		Outstanding Work Orders	
Curb Repair	1	Facilities	
Graffiti	1	Core Duties	1
Maintenance Request	17	Electrical	1
Other - Street Lights	1	General Core Duties	1
Pavement Replace or Repair	46	General Maintenance	1
Pothole/Sinkhole	11	Plumbing	3
Safety Issue	2	Furniture	
Sidewalk Issue	2	Install	1
Sign or Banner Missing/Damaged	3	Parks	
Street Cleaning/Sweeping	1	Bench/Table Repair	2
Tree Evaluation	2	Maintenance	1
Tree Fallen Across Road	1	Park Facilities Other	5
Tree Pruning/Trimming	4	Park Facility Maintenance	1
Tree Removal Request	2	Parks Bench or Table Repair	2
Service Requests Total	94	Parks Tree Hazard Reduction	2
		ROW-Sidewalks-Paths	
		Other	1
		Repair/Add Signage	1
		Street Trees	
		Evaluation	1
		Grind Stump	1
		Hazard Reduction	2
		Install	1
		Removal	2
		Tree Evaluation	1
		Tree Hazard Reduction	1
		Streets	
		ADA Work	2
		Berm Install	1
		Berm Repair	1
		Crack Seal	1
		Dig Out	8
		HMA Patch	8
		Other	1
		Repair	2
		Replace	2
		Replace Sign	1
		Right of Way Obstruction	1
		Street Berm Repair	1
		Street CMA Patch	1
		Street Dig Out	50
		Street HMA Patch	3
		Street Sign Other	1
		Street Striping	1
		Streets Other	2
		Striping/Painting	3
		Sweeping/Cleaning	3
		Work Orders Total	125

CONSOLIDATED MAINTENANCE PROJECT PICTURES

Staff Contact: Mike Wilcox

Staff re-surfaced and re-striped the parking lot at 714 Embarcadero, relocated the ADA stalls to the correct location closest to the crosswalk, and was able to add one additional parking stall with the new layout.



CONSOLIDATED MAINTENANCE PROJECT PICTURES

Staff Contact: Mike Wilcox

Staff worked with Negranti, a local contractor, to haul tailins and base for this large digout on Jamaica. Negranti donated time and materials to complete the work. The Asphalt overlay will be installed after the adjacent property owner completes reconstruction of their home.



CONSOLIDATED MAINTENANCE PROJECT PICTURES

Staff Contact: Mike Wilcox

Staff also worked on a more standard size dig out with Asphalt replacement on Zanzibar



Street Trees

Staff Contacts: Damaris Hanson, Mike Wilcox



- As of July 1st Bird Nesting season has ended
- City staff planted 12 new street trees
- Special thanks to volunteers who help water these trees!

ADOPT MORRO BAY

Staff Contact: Janeen Burlingame

Adopt Morro Bay Program

The Adopt Morro Bay program is a collaborative effort among residents, merchants and community groups and the City to improve and maintain City public areas such as parks, sidewalks and landscaped areas, and to create a brighter, more pleasant environment for everyone who lives, works, and shops in adopted areas while strengthening ties, as the community works together to keep the City attractive to all.

The City has many parks and public sidewalks and landscaped areas available for those interested in volunteering their time to work on a variety of tasks such as planting, watering trees, maintaining flower beds, weeding, litter collection, etc.

For more information on the Adopt Morro Bay program, including an application, please visit <http://morrobayca.gov/adoptmorrobay>.

July 2019 Call for Projects

With the adoption of the FY2019/2020 budget, \$5,000 was budgeted for reimbursements to Adopters for materials and supplies it provides for previously approved and pre-authorized projects. A Call for Projects was held in July with proposed project submittals due by July 31, 2019. Staff received five project proposals from Morro Bay in Bloom and one from Morro Bay Beautiful.

Staff reviewed all project submissions and have allocated funds for the following projects:

- Winter Holiday Themed Downtown Planter Boxes (Morro Bay in Bloom) - up to \$2,000
- Spring/Summer Themed Downtown Planter Boxes (Morro Bay in Bloom) - up to \$2000
- Wine Barrel Replacement Project (Morro Bay Beautiful) - up to \$1000 (pending approvals from individual business owners and additional information from Morro Bay Beautiful relating to maintenance plan and map of barrel locations)

WATER – OPERATIONS

Staff contacts: Joe Mueller
Damaris Hanson

Operations and Maintenance July 2019:

Distribution

- Exercised 63 water valves throughout the city.
- Responded to one after-hour callout to 1254 Berwick for an emergency water turn off.
- Responded to 14 minor water leaks, located and repaired as needed. All leaks and corrective action taken is logged and tracked through the Cityworks software and database.
- Utility Services performed 40 hours of annual leak detection testing .
- Performed 43 water service turn-offs and 82 water service turn-ons.
- Located and marked 47 Underground Service Alerts.
- Installed nine new water services.

Treatment

- Installed a chlorine feed station with redundant feed pumps and chemical secondary containment.
- Refilled calcium carbonate tanks at the brackish water plant.
- Changed oil in the system air compressor at the brackish water plant..

Sampling for permit requirements:

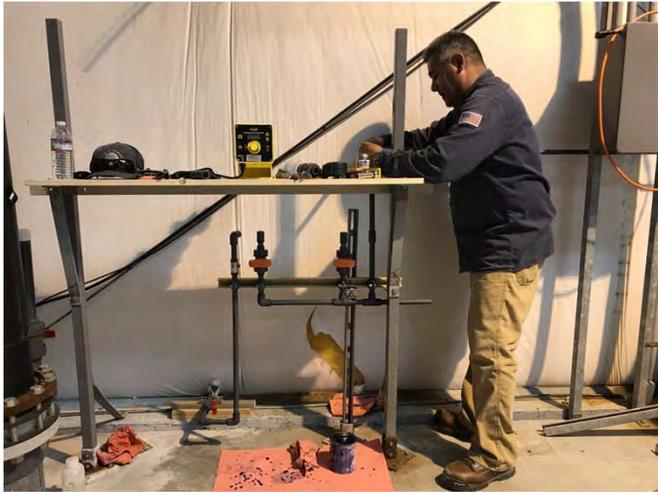
- Conducted weekly water sampling at various sample points in the distribution system and sent samples to a certified lab for analysis.

Completed Reports:

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



Service line leak repair at Tide and Yerba Buena



New chlorination feed station installation



Refilling calcium carbonate tanks

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

August 6, 2019
(Released Thursday, Aug. 8, 2019)
Valid 8 a.m. EDT

For the month of July water conservation was 20% lower compared to July 2013.



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

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

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

STORMWATER

Staff Contact: Damaris Hanson



Please consider volunteering for the SLO County Creeks to Coast Cleanup!

There are several sites in Morro Bay.

Go to Eventbrite to register to be a volunteer!

<http://bit.ly/volunteer-c2c-2019>

WASTEWATER – COLLECTIONS

Staff Contacts: Joe Mueller
John Gunderlock

Operation & Maintenance June and July 2019

- Performed pH spot checks at Mission Linen.
- Tested Lift Station alarms for failures.
- Performed routine lift station maintenance
- Hydro cleaned approximately 60,317 feet of city main line.
- Hydro cleaned root treated main lines.
- Performed routine pipeline video inspections of 3,962 feet.
- On-Call staff responded to four afterhours call-outs.
 - Lift Station #2 utility power phase loss.
 - Possible Main line blockage, staff cleaned line with hydrojetter
 - Lift Station #1 power fail
 - Lift Station #2 pump overcurrent, pulled and cleared pumps.
- Received and completed 10 service requests.
- Performed ten Fats, Oils, and Grease source control inspections.
- Flow meter maintenance at Lift Station #3
- Replaced a low level float on the back-up control system at lift station #3.



Biannual flowmeter maintenance and cleaning at lift station #3.

WASTEWATER – TREATMENT

Staff Contacts: Joe Mueller
John Gunderlock

Operation & Maintenance May 2019

- Flow for the month of June averaged 1.165 Million Gallons per Day (MGD) and totaled 34.938 million gallons.
- Flow for the month of July averaged 1.223 Million Gallons per Day (MGD) and totaled 37.909 million gallons.
- <0.01 inches of rain was recorded during the months of June and July.
- Staff sampled the once per year effluent testing requirements in July
- Responded to four after hour callouts in June and two in July, five for plant chlorine adjustments and one for a power outage.
- Ryan Roberts was hired to fill a vacant Operator position.
- The facility laboratory passed the 2019 quality assurance study (WP291) with 100% acceptable results.
- Cleaned headworks channel and performed headworks bar screen maintenance.
- Replaced corroded 120V receptacle in the lower headworks.
- Sprayed weeds and housekeeping around the facility.
- Replaced seal water tubing throughout the facility.
- Staff created four new Standard Operating Procedures (SOP's).
- Changed main control board on residual chlorine analyzers #1.
- Replaced sampler pump tube and cleaned influent composite sampler cabinet.
- Tightened packings and cleaned grit pump drains.
- Installed tap into digester #3 sludge pipe for flushing clogged junction box.
- Replace shear pin on the chlorine contact chamber drive unit.
- Drove sludge drying beds with the front-end loader to speed drying time.
- Moved dried sludge to the sludge storage area.
- Unplugged sludge drying beds decant pipe with collections hydro-jetter.
- Porter diving replaced the two ocean outfall buoys.
- Flushed digester #3 and #2 gas systems as preventative maintenance.
- Outside contractor performed quarterly maintenance on the emergency generator.
- Drained, cleaned and inspected the chlorine contact chamber, primary #2 and the grit chamber.



Chlorine contact chamber maintenance

Staff attended the following training:

- Asbestos cement pipe initial course

Submitted reports to the State, [electronically](#):

- May 2019 Monthly Self-Monitoring Reports (eSMR)
- May 2019 Monthly Discharge-Monitoring Reports (eDMR)
- June 2019 Monthly Self-Monitoring Reports (eSMR)
- June 2019 Monthly Discharge-Monitoring Reports (eDMR)
- Second Quarter Receiving Water Report (eSMR)
- Second Quarter Effluent Bacteria Report (eSMR)



Removed bar screen motor #1 for rebuild



Removed influent pump #1 for rebuild



Flushing Digester Gas System

ENGINEERING/CAPITAL PROJECTS

Staff contact: Rob Livick

Highway 41/Main/Highway 1 – No Change

- Project construction is still financially constrained
- Working with the City's funding partners the San Luis Obispo Council of Governments (SLOCOG) and Caltrans on funding and design options

Pavement Management

- 2018/19 Work complete
- FY 19/20 program includes a complete revision to Plan to incorporate sealing techniques not anticipated with 2011 Pavement Management Plan
- Preparing Request for Proposal for Professional Services to Update Pavement Management plan including a reassessment of the Pavement Condition Index
- 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 with preliminary design and environmental review in 2019/2020

Collection System Repairs

- Addressed in the OneWater – Wastewater Collection System Capital Improvement Plan
- Project Scheduled to begin with preliminary design and environmental review in 2019/2020
- Project for lining and pipe bursting in off San Jacinto in North Morro Bay is scheduled to begin 26 August 2019

North Point Parking Lot

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

Cloisters Landscaping Improvements – Concept Plan

- Consultant Incorporating results of comments from the Community and Staff into Plan
- Concept plan will go to City Council in the fall for approval

- **Operating and Capital Improvement Program is online at http://www.morro-bay.ca.us/DocumentCenter/View/13292/Proposed-FY-2019_20-Operating-and-Capital--Budget**

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.**
- Harborview Hotel/Commercial: Planning Review
- Dollar Store (at old Cookie Crook location)
- Hotel Development – NW corner Atascadero Road West and Highway 1: Planning Review
- Sonic Restaurant – Main and Highway 41: Plancheck – Waiting for resubmittal from applicant (Permit Extension Granted)
- Harbor Hut Docks: In Plancheck
- Rose's Landing Upstairs Hotel - Plancheck
- US Coast Guard Addition: In Plancheck
- /Boatyard (Formerly Otter Rock) Remodel: Finaled
- Morro Bay Landing: Under Construction

- 50 Residential remodels and construction: Various Citywide

Engineering/Alternative Transportation

Staff contact: Rob Livick

The City reapplied for renewal of its Bicycle Friendly Community (BFC) status through the League of American Bicyclists. The City currently is at the Bronze level.

Now that the Fall 2019 application deadline has passed, the BFC review process is officially underway. To help the league gain a better understanding of local bicyclists' experiences in your community, we would greatly appreciate your help in completing a survey.

Public Survey Link: https://www.surveymonkey.com/r/app_BFC_FA19

WASTEWATER – NEW WRF

Staff contact: Rob Livick

- Work continues in accordance with City Council direction.
- State Water Resources approved their intended use plan (IUP) for the Clean Water State Revolving Fund Loan which included Morro Bay's project for up to \$5M in grant and \$100M in Loan. The state is reviewing the environmental documentation and financial plan for the project. Loan agreements could be executed as soon as March 2020.
- Latest update is item [C-2 on the 13 August 2019, Council Meeting](#)
- Coastal Commission Consolidated Permit was unanimously approved July 10.
- Additional Information at www.morrobaywrf.com and www.morrobayca.gov

Staff Report

TO: Public Works Advisory Board

DATE: August 13, 2019

FROM: Janeen Burlingame, Management Analyst

SUBJECT: City Park Transit Hub Improvements Study

RECOMMENDATION

Staff recommends the PWAB review the City Park Transit Hub Improvements Study and recommend the City Council do the following:

1. Review and accept the Morro Bay Transit Hub Study;
2. Select the Existing Site option for vehicle pull in/pull out and passenger shelter area improvements as outlined on page 4 of the staff report; and
3. Direct staff to pursue transportation grants to fully fund the improvements outlined on page 4 of the staff report.

FISCAL IMPACT

There is no fiscal impact to the General Fund for the study or recommended improvements. The study was funded with a \$30,000 Rural Transit Fund grant the City received in FY18/19. As for a project for transit hub improvements outlined on page 4 of the staff report, there would be no fiscal impact to the General Fund for the \$382,629 cost estimate as these improvements would be funded with transportation grants (Rural Transit Fund and/or State of Good Repair), the City's Local Transportation Funds, and the City's State of Good Repair (SGR) transit operator allocation.

BACKGROUND

The City Park transit hub is served by the City's Morro Bay Transit program (which includes the year round deviated fixed route and seasonal Trolley services), as well as the San Luis Obispo Regional Transit Authority (RTA) and San Luis Coastal Unified School District (SLCUSD).

The City was awarded a \$30,000 Rural Transit Fund grant to conduct a focused study regarding potential improvements to the City Park transit hub. Staff worked with transportation consultant, LSC Transportation Consultants Inc., to study the existing conditions and identify potential improvements at three locations surrounding City Park (Attachment 1).

DISCUSSION

The study is broken into three parts: 1) review of existing transit services and usage, 2) review of existing deficiencies and recommended improvements, and 3) evaluation of potential sites.

Existing Transit Services and Usage

As noted previously, the facility is used by passengers from Morro Bay Transit and RTA, in addition to being used as a pickup/drop off for students from SLCUSD (see Table 1 from the study below for service usage from all three agencies). This hub is a key connection between local and regional transit services.

TABLE 1: Summary of Transit Service at Morro Bay Park

Service/Route	Season	Span of Service		Service Times		Daily Bus Arrivals					
		From	To	Arrive	Depart	M	T-Th	F	Sa	Su	
Morro Bay Transit											
Fixed-Route/Call-A-Ride	Year-Round	6:25 AM	6:45 PM	:58	:00	12	12	12	8	0	
North Morro Bay Trolley	Memorial Day to Oct 7th	11:00 AM	Mon - 5 PM	Varies -- Every 45 Minutes		8	-	11	11	9	
			Sun - 6 PM								
			Fri,Sat - 7 PM								
Downtown Trolley	Memorial Day to Oct 7th	11:00 AM	Mon - 5 PM	Varies -- Every 30 Minutes		12	-	16	16	14	
			Sun - 6 PM								
			Fri,Sat - 7 PM								
Subtotal: MBT						32	12	39	35	23	
RTA											
Route 12	SLO > Los Osos	Year-Round	6:59 AM	8:59 PM	:59	:59	16	16	16	5	5
	Los Osos > SLO		6:55 AM	9:39 PM	:39	:39	17	17	17	5	5
Route 15		Year-Round	6:43 AM	6:00 PM	:33	:00	5	5	5	5	3
Subtotal: RTA						38	38	38	15	13	
San Luis Coastal Unified School District											
Route 1 - Del Mar Elementary School	School Year	Monday	9:05 AM, 3:04 PM			2	2	2	2	2	
		Tue-Friday	8:05 AM, 3:04 PM								
Route 2 - Los Osos Middle School	School Year	Monday	8:24 AM, 3:27 PM			2	2	2	2	2	
		Tue-Friday	7:24 AM, 3:27 PM								
Route 6 - Teach Elementary School	School Year	Monday	8:20 AM, 3:33 PM			2	2	2	2	2	
		Tue-Friday	7:20 AM, 3:33 PM								
Subtotal: School District						6	6	6	6	6	
TOTAL						76	56	83	56	42	

Site Deficiencies and Recommended Improvements

The current bus passenger shelter at City Park was constructed in the early 1980's and has not been significantly updated or improved since its initial construction. The transit hub and passenger amenities have operational and design issues the City would like to improve. While the City Park transit stop functions reasonably well, there are deficiencies identified that could be addressed to improve the transit hub and address ADA issues with the sidewalk and wheelchair loading area.

In addition, there is a mural that was created on the passenger shelter through a project by the Morro Bay Art Association and donated to the City under the Public Art Policy. Any improvements to the transit hub would include a new passenger shelter and staff would like to retain a public art component and the opportunity for some form of public art when the passenger shelter is replaced. The study while identifying space for a public art component, does not specify what type of art (mural, sculptural, etc.). The City would work with the Morro Bay Art Association to identify what type of public art component could be installed in the future when the transit hub improvements are constructed.

The following are deficiencies identified that could be addressed to enhance the transit hub:

- Current site does not provide an adequate place for driver breaks. While there is a nearby public restroom in the park, this does not give drivers a respite from the public or space to take their breaks in private. As a result, drivers take breaks at the Community Center, which can create an inconvenient break in the trip for passengers.

- Current position and design of the shelter restricts the ability of passengers waiting in the shelter to have advance notice of arriving buses, as well as the ability of drivers to have advance notice if passengers are waiting for the bus.
- Passenger seating capacity is inadequate, both inside and outside.
- There is only one location with adequate (8 feet) sidewalk width to load/unload wheelchairs.
- There is no opportunity for real-time traveler information displays.
- Lighting is limited.
- Located on a low-volume street with trees blocking the view from busy Morro Bay Boulevard, the existing site does not provide good visibility of the transit services to non-transit riders so as to alert non-transit users to the available service.
- Current location requires all routes to circle the block to serve the stop.

Based on the review of the existing City Park transit stop condition and transit services using the transit hub, the following improvements were recommended to consider:

- Increase Curb Space: increase curb space to 173 linear feet (accommodate peak vehicle use; allows more independent operation of individual buses for easier pull in/pull out)
- Increase Wheelchair Loading/Unloading Area: increase sidewalk length to 8' in width (ADA compliance; increase flexibility and ease of use)
- Passenger Waiting Space: increase seating capacity inside and outside to accommodate peak use (up to 30 persons; 15 seated inside and 15 seated outside)
- Ticket Vending Machine: provide space for future ticket vending machine for RTA and Regional Passes (currently sold out of the Public Works office only during business hours)
- Bike Racks and Bike Tool Station: provide bike racks with capacity for up to 4 bikes and a bike tool station
- 110 Volt Power & Internet Connection: install power and internet connection for real time travel information displays (indicate time when next RTA or Morro Bay Transit bus would arrive)
- Electrical Upgrade: install conduit and an electrical box pedestal for potential future Battery Electric Buses (BEBs) charging capability in anticipation for when all transit systems will be required by the California Air Resources Board's Innovative Clean Transit Rule to start purchasing BEBs if available on the market
- Transit Employee Break Area: provide break area with staff only restroom (current driver breaks are taken at Community Center)
- Public Art Space: provide at least 100 square foot area for public art (sculpture, mural, etc.)
- Maintenance Storage Closet: Consolidated Maintenance identified desirability of a small maintenance closet for storing supplies and tools used at the park

Staff forwarded the draft study to the RTA for review and comments. RTA provided some comments that led to the addition of a few improvements to the transit hub that over time would be helpful to have, including capacity for charging electric buses, ticket vending machine, and real time travel information displays.

Some of these improvements identified in the study could be scheduled for a near term project, while others would need to be scheduled for a future project(s) when they are more fully developed and ready to be brought online (example: the RTA will need space in the future for a ticket vending machine) or evaluated further in conjunction with a future parks grant opportunity relating to the playground and restroom areas (transit employee break area).

Recommended Transit Hub Improvements

Staff reviewed the various improvements and have identified those which are recommended to be scheduled for a near term project to improve the vehicle pull in/out and passenger shelter areas:

- Increase curb space for vehicle pull in/out
- Increase wheelchair loading/unloading area
- Replace passenger shelter
- Increase passenger waiting space and benches
- New bike racks and bike tool station
- Real time bus information display
- 110 volt power and internet connection
- Include space for future ticket vending machine
- Electrical upgrade for future BEBs charging capability

Evaluation of Potential Sites

The study evaluated potential sites surrounding City Park and provided a concept design: Existing (north west corner of City park on Harbor Street), Eastern (north east corner on Harbor Street), and Morro Bay Boulevard, noting advantages and disadvantages to each. Cost estimates were developed by the transportation consultant for all improvements it identified. As it is not recommended to implement all these improvements at one time, new cost estimates were developed for the improvements staff identified above for a near term project to begin later this year.

When reviewing the concept designs and site impacts, staff wanted to make sure there would be no major impacts to the existing transit service providers, as well as Art in the Park who is one of the most physically intensive users of the park with its weekend long events happening 3 times a year (Memorial Day, 4th of July, and Labor Day weekends).

In order to identify potential impacts to Art in the Park, staff created a site concept design that incorporated Art in the Park's vendor booth layout over the park to see if there were any booth spaces that would need to be either moved or eliminated based on the site improvements. Staff met with Art in the Park three times to review and discuss the various site options and logistics with their booth spaces.

During these meetings, two other potential locations were discussed (in between the Existing and Eastern site, and to the west of the Existing site in front of the playground). As a result of those discussions, a fourth site option was evaluated by staff to the west of the Existing site.

All four site options with the Art in the Park overlay are included in Attachment 2. Each outlines the advantages and disadvantages for that location, as well as a cost estimate for the transit hub improvements outlined above (does not include transit employee break area or maintenance storage closet).

Site Options Not Being Recommended

The Morro Bay Boulevard and Eastern sites are not being recommended as there are too many disadvantages to them, most notably a loss of revenue to Art in the Park ranging between \$7000-\$15,750 due to lost booth spaces resulting from proposed improvements to increase the wheelchair loading/unloading area and increased area for a new passenger shelter, seating, and various amenities (bike racks, bike tool station, ticket vending machine). Over the course of an Art in the Park season (3 events per year), this would total between \$21,000-\$47,250 in lost revenue. As such, staff and Art in the Park is not supportive of either of these site options for transit hub improvements.

For the Morro Bay Boulevard site, there would be a loss of two parking spaces used by retail shops, higher traffic volume causing delay for bus pull out, traffic back up six times a day if the school district moved their stop to this location, and if the school district continues to stop at the Harbor Street location, the school bus would stop in the driving lane while school kids would have to cross through the parking lane to board and exit the bus.

For the Eastern site, there would be a visual impact at the narrow point of the park that is the gateway to the City from Morro Bay Boulevard and would have an impact on the park as it would extend into the open grass play area.

The Playground site is not being recommended as well. Art in the Park supports this site location as it would result in no loss of booth space or revenue for their events, and while the group has offered a \$2,000 donation to purchase additional playground equipment and proposed a child oriented chalk wall to be provided by Art in the Park, there are disadvantages that would impact the transit operations and would increase expenditures that are not required for the other three site options. With the passenger shelter located at the back end of the vehicle pull in/out area, riders waiting at the shelter would have to walk further to get to the bus than they currently do at the Existing site. With cutting into the playground area for the passenger shelter area/amenities, it would result in additional unknown expenditures to relocate the irrigation mainline and playground structures that are not required by the improvements in the other three site options.

In addition, there is a Proposition 68 Parks and Water Bond Act grant fund opportunity next year that the City will be evaluating potential improvements to the City Park playground and restroom areas over the next year in order to develop a grant application and any loss of current park space in this area could potentially impact the ability to develop a viable project for the Parks grant.

Site Option Being Recommended

The site option being recommended by staff is the Existing location. This location would address ADA deficiencies related to the sidewalk for wheelchair loading/unloading, improve visibility between driver and riders, the neighbors are already used to having transit operations at this location, and it would have the least impact on the overall park as it would be contained within the existing footprint. Additionally, there would be no impact to Art in the Park as there would be no loss of booth spaces and Art in the Park is supportive of this location.

It would be necessary to remove two trees on Harbor Street that currently are causing issues with the breaking and raising the sidewalk and would also need to be removed to address ADA deficiencies for the wheelchair loading/unloading areas. Staff is proposing to replace one and possibly both trees somewhere else in the park with trees that are of a more appropriate type and size to mitigate the removal of the two existing trees.

Cost Estimate and Funding for Transit Improvements

The cost estimate for the transit improvements outlined on page 4 for the Existing site is \$382,629.

Full funding for the transit improvements will come from various transit grants (SGR and/or Rural Transit Fund), a portion of the City's State allocated Transportation Development Act Local Transportation Funds, and the City's SGR transit operator apportionment. No General Funds will be used. Staff will apply for the necessary grant funds and it is anticipated full funding would be secured by summer 2020.

Since the cost estimate for the project would be more funding that would be available to apply for in one grant cycle, the City broke the project down into two phases. Phase 1 activities include: pre-development planning/engineering and frontage improvements (permitting, construction plans/specifications, bus turnout, sidewalk, curb/gutter, bus shelter and pads). Phase 2 includes: on-site improvements (passenger shelter, benches, bike amenities, light poles, electrical, landscaping, internet/real time information display, demolition/removal of existing shelter).

In February 2019, the City submitted an application for the FY SGR grant for Phase 1 activities and in June 2019 was awarded a SGR FY19/20 discretionary grant for \$193,866. In addition, the City will also contribute \$35,000 of LTF as well as its \$490 FY SGR operator apportionment towards the project.

The City intends to apply for the remaining \$153,273 needed for Phase 2 in the FY20/21 grant funding cycle with applications due in February 2020 and award of grant funding to occur by June 2020. Should the City be successful in obtaining full funding by summer 2020 and as Art in the Park will have events occurring over the 4th of July and Labor Day weekends, staff would not begin construction until the end of September/beginning of October 2020.

CONCLUSION:

Staff recommends the PWAB review the City Park Transit Hub Improvements Study and recommend the City Council do the following:

1. Review and accept the Morro Bay Transit Hub Study;
2. Select the Existing Site option for vehicle pull in/pull out and passenger shelter area improvements as outlined on page 4 of the staff report; and
3. Direct staff to pursue transportation grants to fully fund the improvements outlined on page 4 of the staff report.

ATTACHMENTS

1. City Park Transit Hub Improvements Study
2. Site Options with Art in the Park Overlay and Cost Estimates



Morro Bay Transit Hub Study

Prepared for the
City of Morro Bay Public Works

Morro Bay Transit Hub Study

*Prepared for the
City of Morro Bay*

*Prepared by
LSC Transportation Consultants, Inc.
Auerbach Engineering, Inc.*

April 2, 2019

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Chapter 1 Introduction

Public transit service is an important element of Morro Bay's mobility network. The community is served both by the Morro Bay Transit (MBT) program (including both fixed route / call-a-ride and rubber-tired trolley services) as well as the San Luis Obispo Regional Transit Authority (RTA), which provides services east to San Luis Obispo, south to Los Osos and north to San Simeon. The key connection point for these services is currently a bus shelter in the northwest corner of Morro Bay Park, where transfers are provided between the various routes. This stop has a number of operational and design limitations, as discussed in following chapters. The City of Morro Bay has therefore engaged in a focused study regarding potential improvements to this transit hub. Transit planning and site design services have been provided by LSC Transportation Consultants, Inc., while cost estimating was conducted by Auerbach Engineering, Inc.

The following chapter provides a review of existing transit services and bus stop conditions. This is followed by a recommended program for a new transit hub. Options for three potential options are then developed and explored, including estimated construction costs.

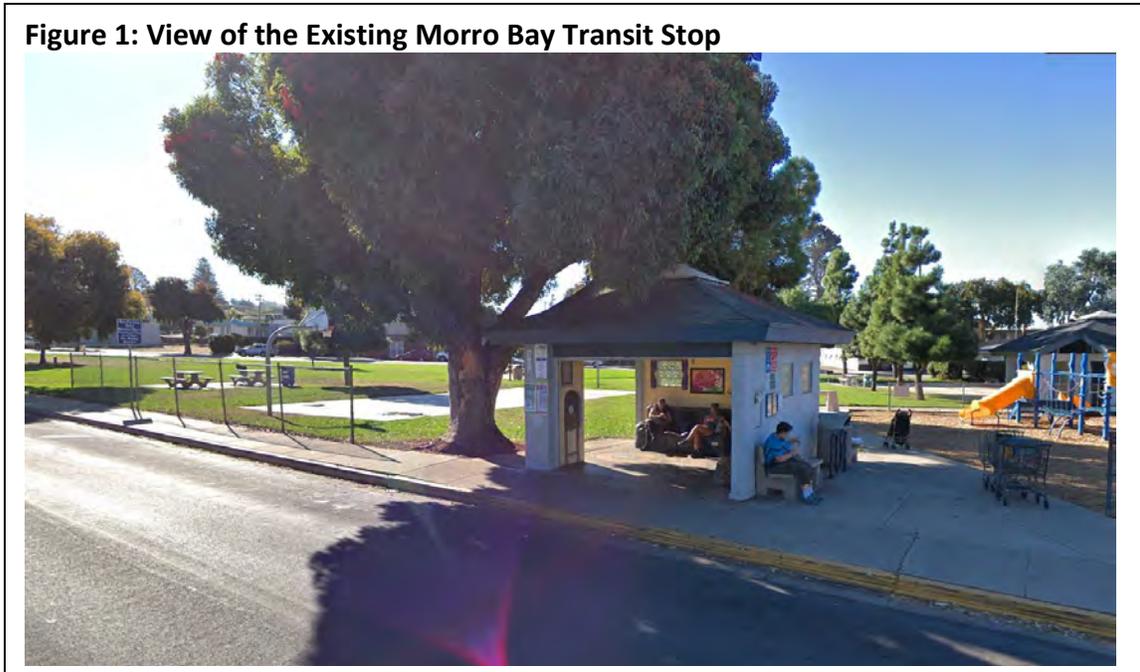
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Existing Transit Services and Stop Conditions

This chapter first presents a review of the Morro Bay Park transit stop. This is followed by a discussion of existing transit services (and potential changes in services) as well as existing ridership levels.

CURRENT TRANSIT FACILITY

The existing City Park transit stop is located along the south side of Harbor Street between Piney Way and Morro Bay Blvd, in the northwest corner of Morro Bay Park. Figure 1 presents a view of this existing stop, while Figure 2 provides a map of the location. There is an existing concrete open-air shelter, approximately 15 feet by 15 feet, with benches both inside and outside. These benches provide seating for three persons each. Public information consists of posted schedules. A public art project created murals and a “living room” theme for the shelter. The presence of a nearby public restroom as well as park facilities and mature trees provide an attractive location to wait for buses.



Buses stop along a 160-foot-long straight curb that is painted yellow and signed for “Bus Parking Only Between Signs Monday-Friday 6AM-10PM Saturday Sunday 8AM-7PM.” Little illegal parking is reported to occur in the bus zone, as there is plenty of available other on-street parking in the area. A 6’ wide sidewalk extends along this bus zone, while a paved area near the bus shelter provides adequate space to load and unload wheelchairs. This means that only one bus is accessible at a time.

CURRENT TRANSIT SERVICES

Morro Bay Fixed Ride/Call-A-Ride Service

The primary transit service in Morro Bay is a year-round, deviated Fixed-Route/Call-A-Ride operated within the city limits for the general public. Service is operated Monday through Friday from 6:25 AM to 6:45 PM and on Saturdays from 8:25 AM to 4:25 PM. The route operates on hourly headways, departing at City Park at the top of the hour and arriving back at 0:58 after the hour. The City Park stop is served between 6:58 AM and 6:00 PM on weekdays, and 8:58 AM to 4:00 PM on Saturdays.

This route currently serves the City Park stop in the southbound direction only. The current Transit Development Plan identifies that, with improvements to the City Park stop, this route should be revised to provide a north loop and a south loop. The south loop would depart at 49 past the hour and return to serve the City Park northbound at 59 after the hour, providing the opportunity for improved direct bus-to-bus connections at City Park. The TDP also recommends that the span of service be extended by one hour on both weekdays (to 7:45 PM) and Saturdays (to 5:25 PM).

This service is operated using a 23-foot, 12-passenger small transit bus, equipped with a front bike rack. The buses provide seating for up to 12 passengers, and provide two wheelchair positions.

Morro Bay Trolley

The City of Morro Bay also provides three trolley routes from the Memorial Day weekend through the first weekend of October. This service is available Friday and Saturday from 11 AM to 7 PM, Sundays from 11 AM to 6 PM and Mondays from 11 AM to 5 PM. After Labor Day, service is not operated on Fridays or Mondays. Two of these trolleys serve City Park:

- North Morro Bay Trolley: This route is operated approximately every 45 minutes and serves the Morro Strand State Beach campground on the north end, south through downtown along Main Street, west on Harbor Street, south on Market Street, east on Morro Bay Boulevard, north on Morro, and then east on Harbor Street to City Park, returning to Main via Harbor Street, and north again to Morro Strand State Beach.
- Downtown Trolley: This route is operated approximately every half hour. Starting at Shasta and Kennedy Way, the bus heads east to City Park, then takes Morro Bay Boulevard west to Main Street, then south on Main Street to Morro Bay State Park, returning north on Main, west on Harbor, south on Market, east on Morro Bay Boulevard, and north on Shasta to Kennedy Way.

Note that, due to varying traffic delays, these services are not operated on a set schedule. The trolley routes are operated using rubber-tired trolley replica buses, 30 to 35 feet in length. They

have seating capacity of 30 to 34 passengers plus two wheelchair loading positions, and do not have bike racks.

The recent Morro Bay TDP recommends starting Trolley services at 10 AM (one hour earlier) on Saturdays.

San Luis Obispo Regional Transit Authority

The RTA operates regional transportation throughout the County. Specific routes which serve the City of Morro Bay consist of the following:

- **RTA Route 12:** This route connects San Luis Obispo with Los Osos, via Morro Bay. The key stop in Morro Bay is at City Park. The first run of the day begins in Los Osos rather than San Luis Obispo, and the last run ends in Los Osos during the weekends and in San Luis Obispo during the weekdays. Weekdays, the service is hourly, with several additional express runs at peak times. Service at City Park starts at 6:55 AM and ends at 9:39 PM. On Saturdays, five round trips are operated with service to City Park starting at 8:00 AM and ending at 8:00 PM. Sunday service consists of three round trips, serving City Park between 9:00 AM and 6:00 PM. This route is typically operated using 40-foot buses, with 3-position bike racks on both the front and the rear.
- **RTA Route 15:** This route operates between San Simeon and Morro Bay City Park, serving the communities of Cambria and Cayucos in route. It operates as a deviated fixed route on weekdays, and as a traditional fixed route (with Runabout providing paratransit trips) on weekends. Schedules at Morro Bay City Park are as follows:
 - Weekdays - Five round trips providing arrivals at 6:43 AM, 8:33 AM, 11:33 AM, 2:33 PM and 5:33 PM, with departures at 7:00 AM, 10:00 AM, 12:00 Noon, 3:00 PM and 6:00 PM.
 - Saturdays -- Five trips providing arrivals at 7:55 AM, 10:55 AM, 12:55 PM, 3:55 PM and 6:55 PM, with departures at 9:00 AM, 12:00 Noon, 2:00 PM, 5:00 PM and 8:00 PM.
 - Sundays – Three trips providing arrivals at 8:55 AM, 12:55 PM and 4:55 PM, and departures at 10:00 AM, 2:00 PM and 6:00 PM.

This route is operated using mid-sized buses, 26 feet in length, with seating for up to 20 passengers and two wheelchair positions. A 3-position bike rack is provided on the front of the vehicles.

The 2016 *RTA Short Range Transit Plan* calls for an additional weekday later evening run departing San Luis Obispo at 9:33 PM that would serve City Park at 9:59 PM and 10:50 PM.

San Luis Coastal Unified School District

The School District provides three routes serving the City Park stop:

- Route 1 – Serving Del Mar Elementary School
Mondays: Pick up - 9:05 AM / Drop off – 3:04 PM
Tuesday-Friday: Pick up - 8:05 AM / Drop off - 3:04 PM
- Route 2 – Serving Los Osos Middle School
Mondays: Pick up - 8:24 AM / Drop off – 3:27 PM
Tuesday-Friday: Pick up – 7:24 AM / Drop off - 3:27 PM
- Route 6 – Serving Teach Elementary School
Mondays: Pick up - 8:20 AM / Drop off – 3:33 PM
Tuesday-Friday: Pick up – 7:20 AM / Drop off - 3:33 PM

Buses are approximately 38 feet in length.

Summary of Existing Transit Services at Morro Bay Park

Table 1 presents a summary of the existing transit services at Morro Bay Park. As shown, overall buses serve the site on weekdays as early as 6:25 AM and as late as 9:39 PM. As many as 83

TABLE 1: Summary of Transit Service at Morro Bay Park											
Service/Route	Season	Span of Service		Service Times		Daily Bus Arrivals					
		From	To	Arrive	Depart	M	T-Th	F	Sa	Su	
Morro Bay Transit											
Fixed-Route/Call-A-Ride	Year-Round	6:25 AM	6:45 PM	:58	:00	12	12	12	8	0	
North Morro Bay Trolley	Memorial Day to Oct 7th	11:00 AM	Mon - 5 PM	Varies -- Every 45 Minutes	8	--	11	11	9		
			Sun - 6 PM								
			Fri,Sat - 7 PM								
Downtown Trolley	Memorial Day to Oct 7th	11:00 AM	Mon - 5 PM	Varies -- Every 30 Minutes	12	--	16	16	14		
			Sun - 6 PM								
			Fri,Sat - 7 PM								
Subtotal: MBT						32	12	39	35	23	
RTA											
Route 12	SLO > Los Osos Los Osos > SLO	Year-Round	6:59 AM	8:59 PM	:59	:59	16	16	16	5	5
			6:55 AM	9:39 PM	:39	:39	17	17	17	5	5
Route 15		Year-Round	6:43 AM	6:00 PM	:33	:00	5	5	5	5	3
Subtotal: RTA						38	38	38	15	13	
San Luis Coastal Unified School District											
Route 1 - Del Mar Elementary School	School Year	Monday		9:05 AM, 3:04 PM		2	2	2	2	2	
		Tue-Friday		8:05 AM, 3:04 PM							
Route 2 - Los Osos Middle School	School Year	Monday		8:24 AM, 3:27 PM		2	2	2	2	2	
		Tue-Friday		7:24 AM, 3:27 PM							
Route 6 - Teach Elementary School	School Year	Monday		8:20 AM, 3:33 PM		2	2	2	2	2	
		Tue-Friday		7:20 AM, 3:33 PM							
Subtotal: School District						6	6	6	6	6	
TOTAL						76	56	83	56	42	

buses arrive (and depart) from the stop over the course of a day (when both schools and trolleys are in operation). Of these, 47 percent are Morro Bay Transit vehicles, 46 percent are RTA vehicles, and the remaining 7 percent are school district vehicles.

An important consideration in designing a future transit hub is the peak number of vehicles on-site at any one time. Table 2 presents a summary of when buses are on-site for each minute over the course of a peak hour when all services are in operation. As shown, the peak time

TABLE 2: Peak Hour Bus Activity at Morro Bay Park

Minutes Past the Hour	Morro Bay Transit			SLORTA		San Luis Coastal School Dist.		
	Fixed Rt / Call-A-Ride	North Trolley	Downtown Trolley	Rt 12	Rt 15	Rt 1	Rt 2	Rt 6
:01								
:02								
:03								
:04						PM		
:05						AM		
:06								
:07								
:08								
:09								
:10								
:11								
:12								
:13								
:14								
:15								
:16								
:17								
:18								
:19								
:20								AM
:21								
:22								
:23								
:24							AM	
:25								
:26								
:27							PM	
:28								
:29								
:30								
:31								
:32								
:33					From S. Sim.			PM
:34								
:35								
:36								
:37								
:38								
:39					To SLO			
:40								
:41								
:42								
:43								
:44								
:45								
:46								
:47								
:48								
:49								
:50								
:51								
:52								
:53								
:54								
:55								
:56								
:57								
:58								
:59					To Los Os.			
:00					To San Sim.			

occurs at 59 minutes after the hour, when the MBT fixed route, RTA Route 12 and RTA Route 15 buses are all scheduled to be on-site. In addition, the North Trolley and Downtown Trolley could also potentially be on-site (as they do not operate on a fixed schedule). Note that there is only minimal interaction between school district and other vehicles under the current schedules, and the use of the site by the school district does not increase the peak number of vehicles at any one time.

EXISTING RIDERSHIP ACTIVITY AT CITY PARK

Data regarding existing transit ridership activity at City Park is provided by the 2018 draft *Morro Bay Short Range Transit Plan*, the 2017 *RTA Short Range Transit Plan*, and the 2013 *North Coast Transit Survey*. (Data for the school services for individual stops is not recorded.) This data is summarized in Table 3. As indicated, approximately 46,800 public transit passengers use the stop (total of those boarding and those alighting) over the course of a year, and 375 over the course of a busy day. Of these, approximately 94 percent are boarding or alighting on RTA buses, the large majority of which are using Route 12. The remaining 6 percent are Morro Bay Transit passengers, the large majority of which are on the Fixed Route/Call-A-Ride service.

TABLE 3: Summary of Existing Passenger Activity at Morro Bay Park Transit Stop

	Daily	Annual	
		#	%
<u>Morro Bay Transit</u>			
Fixed Route/Call-A-Ride	17	2,684	5.7%
North Trolley	5	135	0.3%
Downtown Trolley	9	155	0.3%
<i>Subtotal</i>	31	2,974	6.4%
<u>RTA</u>			
Route 12	302	39,310	84.0%
Route 15	42	4,511	9.6%
<i>Subtotal</i>	344	43,821	93.6%
Total	375	46,796	100.0%

For any one specific run, RTA records indicate that up to 22 persons can be waiting for a Route 12 departure, and up to 6 for a Route 15 departure. While detailed records are not kept for MBT, a reasonable estimate given the available passenger survey data and total ridership by run indicates that up to 8 passengers can be waiting for an MBT departure.

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Chapter 3

Recommended Project Program

Based on the functions and demands on the site, a recommended program is presented, including the number of buses at one time that should be accommodated as well as the level and size of passenger amenities. This program is used as the basis for conceptual site design alternatives.

REVIEW OF EXISTING SITE DEFICIENCIES

While the existing stop functions reasonably well, there are several deficiencies that could be addressed in an improved Transit Hub:

- The current site does not provide an adequate place for driver breaks. While there is a nearby public restroom in the park, this does not give drivers a respite from the public or space to take their breaks in private. As a result, drivers take breaks at the Community Center, which creates an inconvenient break in the trip for many passengers.
- The current position and design of the shelter restricts the ability of passengers waiting in the shelter to see arriving buses, as well as the ability of drivers to see if passengers are waiting for the bus.
- Passenger seating capacity is inadequate, both inside and outside.
- There is only one location with adequate (8 feet) sidewalk width to load/unload wheelchairs.
- There is no opportunity for real-time traveler information displays.
- Lighting is limited, and could be improved.
- Located on a low-volume street with trees blocking the view from busy Morro Bay Boulevard, the existing site does not provide good visibility of the transit services to non-transit riders.
- The current location requires all routes to circle the block to serve the stop.

RECOMMENDED SITE PROGRAM

Based on the information presented above, the following program is recommended for an improved Transit Hub:

- Curb space for up to four vehicles at a time:

- MBT Fixed Route (23 feet in length)
- RTA Route 12 (40 feet in length)
- RTA Route 15 (26 feet in length, potentially 40 feet in the future)
- MBT Trolley (up to 35 feet in length)

The required curb space also needs to accommodate the bike racks and passengers loading/unloading bikes. This adds 10 feet for the RTA Route 12 buses (with racks on both the front and rear), and 5 feet for the RTA Route 15 and MBT Fixed Route buses (with racks on the front only). Including an additional 5 feet between bike racks (15 feet total) for circulation, a minimum total of 173 linear feet of curb is required to accommodate these four transit vehicles. Additional length allows more independent operation of the individual buses.

- Wheelchair loading/unloading areas (a minimum of 8' perpendicular to the curb by 5' parallel to the curb) located to accommodate wheelchair lift locations on four buses. Providing a sidewalk at least 8' in width the entire length of the bus bays increases flexibility and ease of use.
- Passenger waiting space adequate for up to 30 persons at a time. The typical floor area required for waiting passengers is 15 square feet for every seated passenger and 10 square feet for every standing passenger. It is also common to plan to seat half of the peak passengers on site. This indicates an overall need for 375 square feet of covered passenger waiting area, and seating for 15 persons.
- Space for a ticket vending machine.
- Outdoor bench seating for at least 15 persons.
- Bike racks with capacity for four bikes. Given the observed level of bike parking at the site, there does not appear to be a need for bike lockers. A bike tool station could also potentially be provided.
- A transit employee break area, including a staff-only restroom. This would be available to drivers, supervisors and administrative staff. A minimum ADA-standard single bathroom is 8' X 8'. Including an 8' X 12' sitting area, total floor area of the break area is 160 square feet.
- 110 volt power and internet connection for real-time travel information displays.
- By 2026, all transit systems (including MBT) will effectively be required by the California Air Resources Board under the Innovative Clean Transit Rule to start purchasing Battery Electric Buses (BEBs), if available on the market. Conduit and an electrical box pedestal for potential future Battery Electric Bus charging capability should therefore be provided.

- Public art space, including at least a 100 square foot area for a potential sculpture piece.
- The Morro Bay Parks Department indicates the desirability of a small (approximately 6' X 10') storage closet for storing maintenance supplies and tools, trash cans, etc.).

Including a 4' X 10' area for building utilities, the total floor area of a combined building accommodate the passenger waiting area, driver break area and utility spaces is 635 square feet.

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Chapter 4

Evaluation of Potential Sites

Per the scope of this study, three sites were considered, all within Morro Bay Park:

- The existing site along Harbor Street in the northwest corner of the park;
- A site farther southeast along Harbor Street; and
- A site along Morro Bay Boulevard (two layout options)

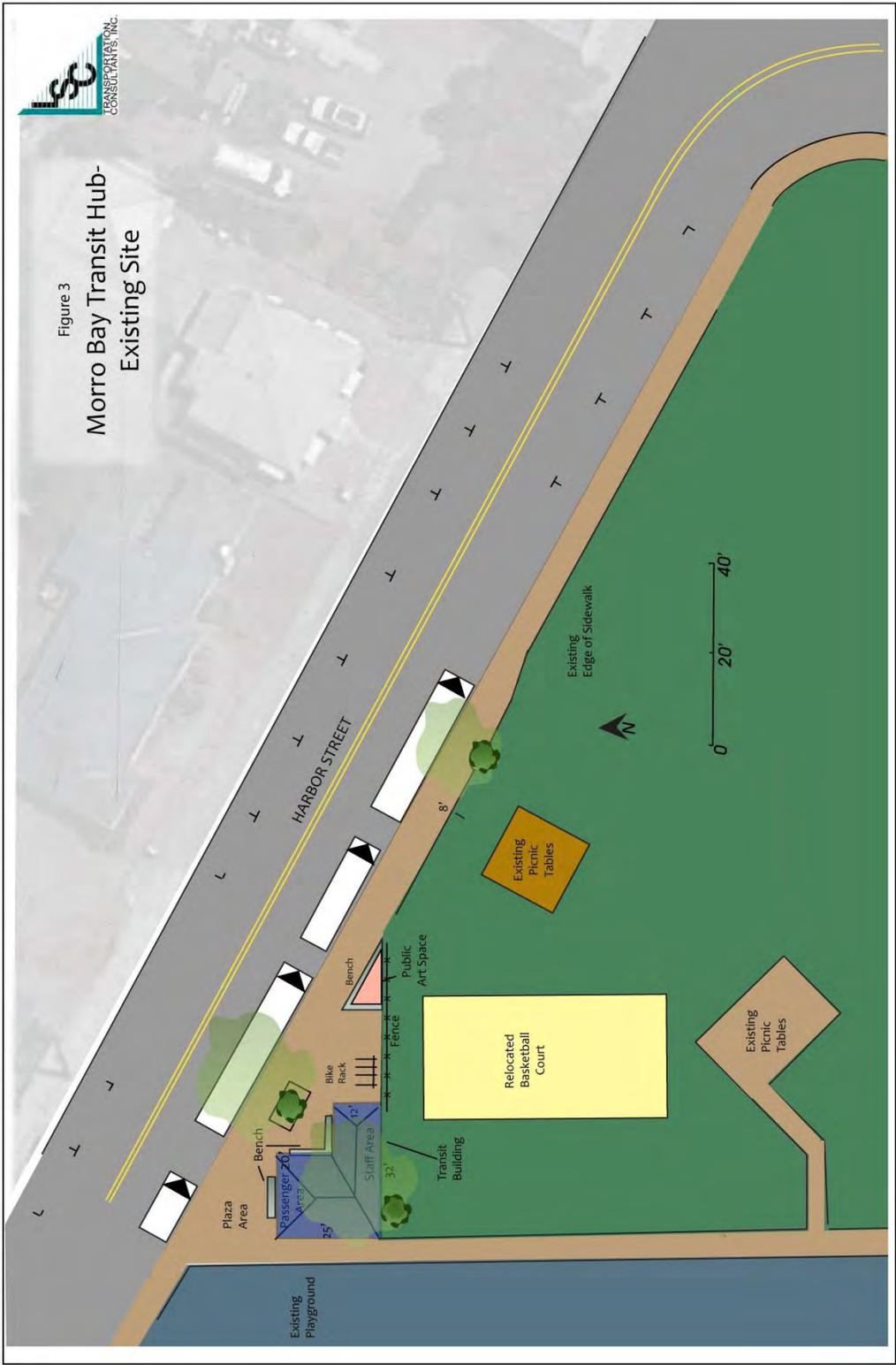
In addition, this chapter presents a discussion regarding bus loading area design, specifically the advantages/disadvantages of straight curb bus loading areas versus “sawtooth” bays.

Cost estimates for all three sites are discussed below, and detailed in Appendix A. Note that these costs include site preparation and construction costs, along with a 20 percent contingency, but exclude “soft costs” such as any necessary design, permitting, project management, or environmental review costs.

Existing Site

A conceptual site plan for the existing site in the northwest corner of Morro Bay Park is shown in Figure 3. This plan has the following elements:

- A building would replace the existing bus shelter. This would be approximately 25’ by 32’ and turned to provide passengers waiting in the northern area of the building to be able to observe arriving buses. This passenger waiting area would be largely glass walled to provide the ability for passing motorists (including public safety staff) and pedestrians to see into the waiting area, would not have doors and would not be heated. The southern portion of the building would house the staff areas and utility space.
- Outside bench seating would be provided for passengers wishing to wait outside.
- A triangular area approximately 15’ by 10’ would be available for public art. The external walls of the staff/utility space would also be available for murals.
- A bike parking rack would be provided.
- The existing trees in the vicinity could be maintained.
- While specific locations are not shown, outdoor lighting with cut-off shields to minimize off-site glare should be provided.



- A bus loading zone with a total length of 155 feet would be provided, along the existing curb. The existing asphalt pavement should be replaced with dark-colored dyed concrete (10' in width adjacent to concrete gutter pan) to minimize long-term maintenance costs. While the maximum of four buses are shown, this would only occur very infrequently when a trolley happens to show up at the peak times. At typical peak times, two or three buses would be on-site, and would tend to use the northwestern portion of the loading area closest to the building.
- All of the bus loading zone would be bordered by at least 8' of sidewalk, with the exception of a small planter zone near the existing tree roughly half-way along the block. This width will allow wheelchair lifts and ramps to be deployed virtually anywhere along the loading zone, addressing one of the key limitations of the existing site. To provide sufficient length to accommodate four buses, two existing on-street parking spaces (the spaces on the south side of Harbor Street closest to the transit stop) would be eliminated.
- This site plan would require relocation of the existing basketball court. While one option is shown, there are other configurations that could be considered.

As presented in Appendix A, construction of the recommended program on this site is estimated to be \$756,469

Advantages

- Has the least “presence” and impact on the overall Morro Bay Park. The existing trees and location in the corner of the park behind the basketball court reduces the visibility from the large lawn area.
- Neighbors are used to having transit operations at this location.
- The existing trees in this area provide shade.
- Construction of a new building with increased glass could improve safety/security.

Disadvantages

- Requires relocation of the basketball court, impacting the existing park.
- As the first buses arriving will tend to use the near (northwestern) end of the bus lane first, subsequent buses will need to pass the parked buses and end up spaced farther apart along the curb. There would therefore be more of a need for drivers to use the “far” end of the bus lane first at times when four vehicles are expected to be on site. While this could be addressed by moving the transit building to the far end of the bus

bay, this would intrude more on the park and would be similar to the next site alternative.

- Does not increase the visibility of the transit program for “on the street” marketing benefits as well as to enhance personal safety on the site.
- Requires all routes to circle the block.

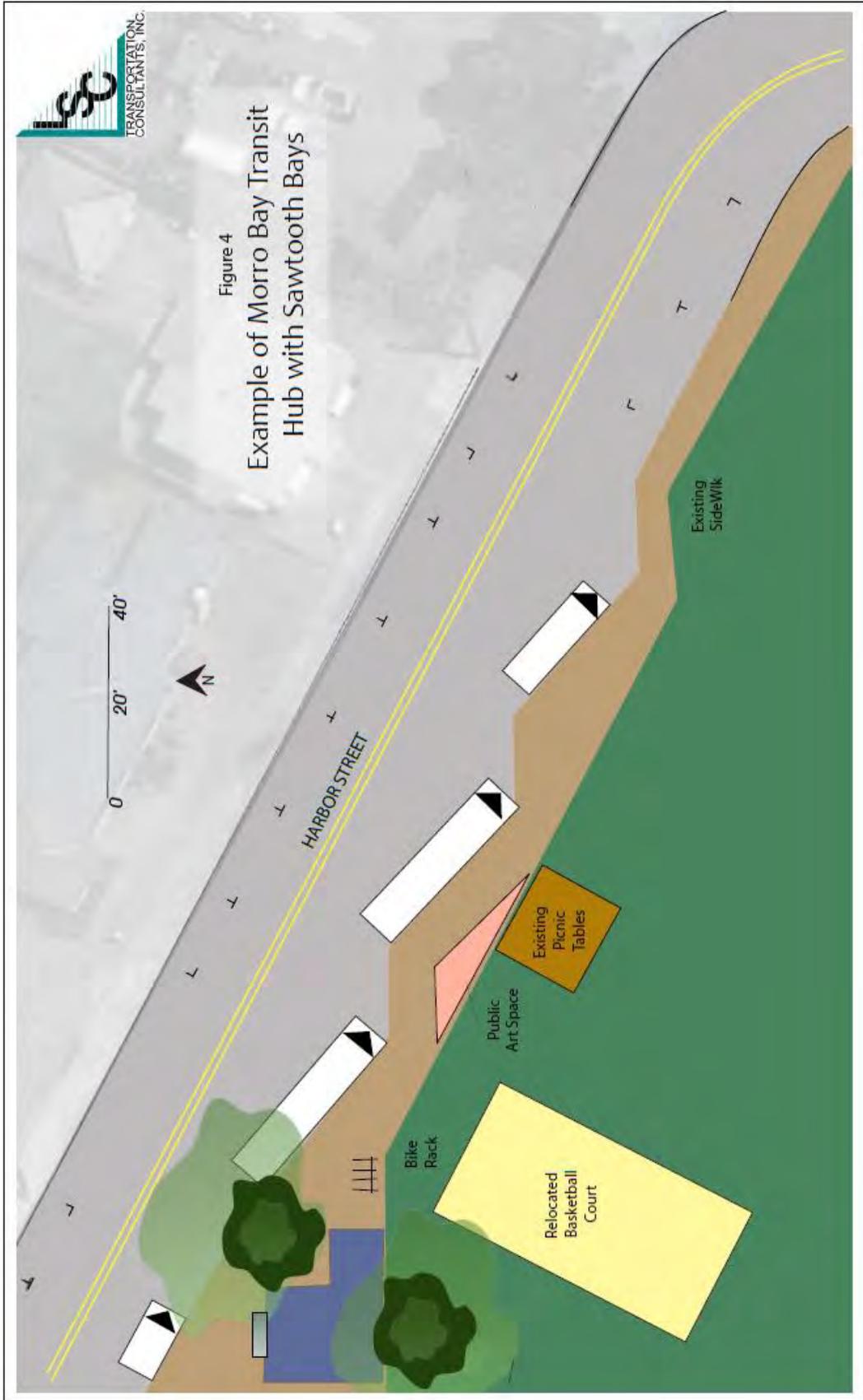
Sawtooth Versus Straight Curb Bus Bays

While Figure 3 depicts the buses lined up along a straight curb, another typical configuration of bus bays is “sawtooth” bays. This provides bus loading zones diagonal to the adjacent street, resulting in a zig-zag curb configuration. A nearby example is the transit center for the San Luis Obispo Transit system along the west side of Osos Street between Palm Street and Mill Street in downtown San Luis Obispo. This configuration allows all buses to operate independently of each other – all buses can enter and exit the transit center regardless of the presence of buses in adjacent bays – while minimizing the overall length of the bus zone. It allows bus bays to be designated for specific routes, which can be a convenience for passengers in that they know where their bus will be.

In comparison, a straight curb either requires more spacing between adjacent buses to avoid any potential for conflicts, or runs the risk of one bus being blocked from pulling into or out of the curb space due to the presence of other buses.

Figure 4 shows an example of a sawtooth bus bay configuration at the existing site. As shown, the same capacity of four buses is provided. However, the sawtooth bay option has several disadvantages:

- It intrudes further into Morro Bay Park, extending 12 additional feet into the park. It would also require removing the existing tree mid-way along the park.
- It is relatively inflexible, as the bays must be constructed for a specific bus length. The various vehicles serving the Morro Bay Park stop have a range of sizes, and there is the potential for these bus sizes to change in the future.
- Each of the bus bays creates a low point along the curb, which requires a drop inlet and resulting in increased costs.
- It doesn’t prove as much reduction in length for smaller buses (such as those used for the MBT Fixed Route / Call-A-Ride route service).
- It can be considered to be more “industrial” in look and not as compatible with the largely low scale and residential character of the area.



For these reasons, and given that the frequency of four buses being onsite at any one time (which would increase the potential for bus drivers to have to wait for other buses to depart) is low, a straight curb configuration is recommended, regardless of which site is selected.

Eastern Site

This site is also along Harbor Street in Morro Bay Park, but is moved to the eastern end of the street. A potential site plan is shown in Figure 5, and consists of the following elements:

- The building is approximately 15' by 50', parallel with the street, with a diagonal wall in the northwest corner to provide waiting passengers with a large window to watch for arriving vehicles and to provide more ability for others to see into the passenger waiting area. The northwestern end of the building would be used for open-air passenger waiting, while the southeastern end would house the staff and utility functions.
- A plaza and seating area would be provided to the northwest of the building. This would include outdoor bench seating, a bike rack, and an area approximately 15' by 10' that would be available for planting or public art. A potential mural wall would also be available on the southeastern end of the street side of the building.
- Buses would stop along the edge of the existing curb for a length of approximately 180 feet. The existing asphalt pavement would be replaced with a 10' wide concrete pad. The majority of this bus loading area would have a 10' wide sidewalk, allowing pedestrians to walk around a wheelchair user being loaded onto a ramp or lift, narrowing to 8' northwest of the planting area around the tree halfway along the block.
- The existing seven on-street parking spaces along the eastern end of Harbor Street would be eliminated. Six new spaces could be provided in the existing bus loading area, resulting in a net reduction of one space.
- Additional benches provide outdoor seating for passengers desiring to wait closer to specific bus loading areas.

Construction on this site is estimated to cost a total of \$705,469, or 7 percent less than construction at the existing site. Lower site preparation and utility costs along with the avoidance of relocating the basketball court helps to reduce the project cost.

Advantages

- As the first bus driver to arrive will pull to the far end of the bus lane, this will result in less need for coordination of buses at peak times.



Figure 5
Morro Bay Transit Hub-
Eastern Site

- This site is more visible to drivers along Morro Bay Boulevard, raising public awareness of the transit hub. With an open facility with glass panels, safety/security would also be enhanced.
- Relatively inexpensive construction costs.

Disadvantages

- Would have a “presence” impact on the existing park, intruding in the large central open grass play area.
- Creates bus activity in a new area.
- Requires all routes to circle the block.

Morro Bay Boulevard Site

The final site to be considered is along the south side of Morro Bay Park, on the north side of Morro Bay Boulevard. As shown in Figure 6, the overall layout is very similar to that of the Eastern Site, consisting of a 15’ by 50’ building at the far end of the transit bus bay, with an adjacent plaza area that provides public art space, outside seating and a bike rack. A short section of sidewalk would also provide a connection to the existing picnic area just to the north.

The eight on-street spaces along the north side of Morro Bay Boulevard west of the Harbor Street intersection would be eliminated. As six new spaces could be provided along Harbor Street, a net reduction of two spaces would result. There are striped cross-walks on both ends of the block within a 200-foot walk of any bus location to address safe pedestrian access consistent with the *California Manual on Uniform Traffic Control Devices*.

Construction costs on this site are estimated to total \$723,768. This is four percent (\$32,701) less than construction on the existing site, but 3 percent more than the cost of construction on the Eastern Site.

Advantages

- Has the highest visibility (along a street with 11,400 vehicles per day), raising public awareness of the transit hub and services. This also increases the ability of police and the public to monitor the site. It also increases the public awareness of any public art.
- As the first bus driver to arrive will pull to the far end of the bus lane, this will result in less need for coordination of buses at peak times or conflict between bus movements than at the existing stop.

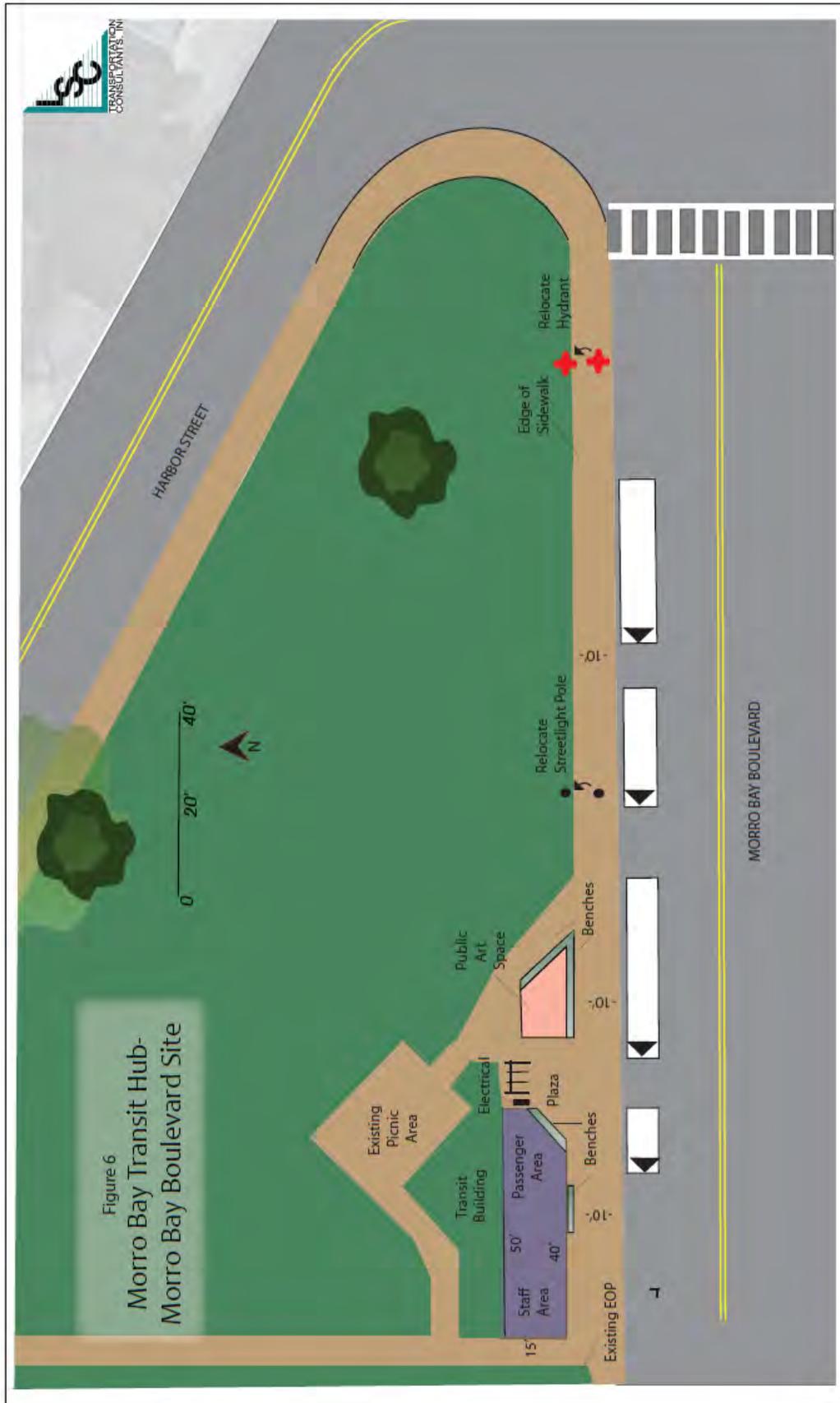


Figure 6
 Morro Bay Transit Hub-
 Morro Bay Boulevard Site

- The building and plaza area would fit in the small grass area between the street and the existing picnic area in the southwestern portion of the park. As a result, it would not impact the functionality of the park, though it would be more of a presence to park users in this location than at the current site.
- While this site location would not change the overall routes for the RTA buses and the MBT trolleys, it would reduce the route length for the MBT Fixed Route/Call-A-Ride bus that would no longer need to circle the block.
This route currently approaches the park on Morro Bay Boulevard from the east and uses Piney Way and Harbor Street to reach the transit stop, then departs on Harbor Street, west on Morro Bay Boulevard and south on Piney Way. With a stop along Morro Bay Boulevard, this MBT bus could instead simply travel west along Morro Bay Boulevard, serve the stop, and then depart with a left turn onto southbound Piney Way. Over the course of a year, this would reduce mileage on MBT vehicles by an estimated 870 miles. Using the cost equation developed in the *Morro Bay Short Range Transit Plan*, this would reduce the City's annual operating costs by an estimated \$570.

Disadvantages

- While there would only be a net loss of two existing parking spaces and there is overall adequate available parking in the area, the spaces lost along Morro Bay Boulevard are more convenient to commercial uses than are the new spaces along Harbor Boulevard.
- With higher traffic volumes along Morro Bay Boulevard than along Harbor Street, there would be slightly more delay for buses pulling out of the bus loading area. However, this is not considered to be significant.
- If the School District were to choose to keep the school bus loading/unloading stop on Harbor Street, the buses would stop in the eastbound travel lane. As by state law all traffic must stop during school bus loading/unloading, this would not change the delays to through motorists from the current conditions. However, it would require the students to walk across the parking lane to/from the curb.
- If the School District were to choose to move the school bus loading/unloading stop to the Morro Bay Boulevard transit hub, traffic flow on this busy street would be stopped three times in the morning and three times in the afternoon on school days. Traffic counts indicate that the peak hourly one-way volume on Morro Bay Boulevard is 558 vehicles per hour in the westbound direction. A typical school bus stop will stop traffic for 2 to 3 minutes. This would generate a queue of up to 28 vehicles. In the westbound direction, this queue would extend back to roughly halfway from the park to the Morro Bay roundabout. It would also result in school children waiting (and being dropped off/picked up) along a busier street.

Summary of Alternative Sites

This evaluation indicates that all three sites are viable ... none have a clear “fatal flaw”. Table 4 presents a simple comparison of the relative advantages/disadvantages of the three sites.

**TABLE 4: Summary of Morro Bay Transit Hub
Relative Site Impacts**

Legend			
-	Relatively Large Negative Impact		
-	Relatively Small Negative Impact		
0	No or Negligible Impact		
+	Relatively Small Positive Impact		
+	Relatively Large Positive Impact		
Factor	Existing Site	Eastern Site	Morro Bay Blvd. Site
Impact on Functionality of Morro Bay Park	-	-	-
Impact on Parking for Adjacent Uses	0	0	-
Impact on Traffic Flow	0	0	-
Safety/Security	+	+	-
Visibility of Transit Systems	0	+	+
Transit Operations	0	0	+
Construction Costs	-	+	0

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APPENDIX A
Cost Estimate

Proj. #: 23.00

MEMORANDUM

To: Gordon Shaw, PE, AICP, LSC Transportation Consultants, Inc.
From: Alex Hagen, EIT
Date: April 1, 2019
Re: City of Morro Bay Transit Hub – Preliminary Cost Estimate

This memorandum summarizes the results of the preliminary cost estimate of the Transit Hub at Morro Bay City Park in Morro Bay, California. Three alternative layouts for the new Transit Hub were prepared by LSC Transportation Consultants, Inc and provided to Auerbach Engineering Corporation (AEC).

- Alternative 1: Existing Site
- Alternative 2: Eastern Site
- Alternative 3: Morro Bay Blvd. Site

Based on the conceptual sketches provided, AEC completed a quantity take off for each alternative in preparation of a preliminary itemized cost estimate. A general description of each cost item and key assumptions are included in the discussion below. Preliminary cost estimates follow the memorandum.

Line Item Discussion

No. 1: Mobilization/Demobilization

This item includes obtaining bonds, insurance and financing, movement of equipment, materials, and personnel, supervision, certificates, permits, submittals, utilities, site maintenance, cleanup, dust control and all other work incidental to the contract not specifically identified under the remaining items or costs incurred prior to the beginning of the work and after completion of the work. The cost for this work is estimated to be five (5) percent of the total of all other items estimated for this project.

No. 2: Temporary Erosion Control/Tree Protection

This item includes drainage inlet protection, gravel bags, fiber rolls, erosion control fencing, tree protection, and any other temporary erosion control measures as may be required by the permits or permitting agencies. Variation in pricing for each alternative is due to the different number of trees being protected.

MEMORANDUM

April 1, 2019

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No. 3: Site Preparation

Site Preparation includes clearing and grubbing, removing existing improvements, protecting existing improvements, salvaging existing improvements, and miscellaneous demolition including disposal.

Alternative 1: Includes removal of the existing basketball hoops and the existing basketball court.

Alternative 3: Includes removal of the existing light pole.

It is assumed that the existing building is being demolished in all three of the alternatives.

No. 4: Site Grading

Site grading includes rough and finish grading, processing of onsite materials, export and disposal of any excess material or spoil material that is not suitable for use on site. Given the sites are all relatively level, this item is estimated based on the total disturbed area of the site.

No. 5: Sawcutting

Sawcutting includes cutting of existing pavement necessary for demolition, preserving and protecting, and ensuring correct tie in points for proposed improvements.

No. 6: Water Service

This item is measured by the linear foot as deemed necessary by the Engineer to connect the proposed building to the existing water main. The water main locations were estimated based on the data provided by the City of Morro Bay. Water Service includes excavation, lateral pipe, fittings, locator wire, warning tape, bedding, initial and intermediate backfill, compaction, disinfection and testing.

No. 7: Sanitary Sewer Service

This item is measured by the linear foot as deemed necessary by the Engineer to connect the proposed building to the existing sewer main. The sewer main locations were estimated based on the data provided by the City of Morro Bay. Sanitary Sewer Service includes excavation, lateral pipe, fittings, warning tape, bedding, initial and intermediate backfill, compaction, and testing.

No. 8: Electrical/Communication Service

Electrical/Communication Service includes all work necessary to extend or relocate dry utility services to the building. Additionally, Electrical/Communication Service includes the cost for conduit, pedestal, and electrical box in all four of the alternatives.

No. 9: Hydrant Relocation

This item includes excavation, extending the existing hydrant service lateral, installing the salvaged fire hydrant, fittings, mechanical joint restraint glands, thrust blocks, drain rock, locator wire, warning tape, bedding, initial and intermediate backfill, compaction, disinfection, and testing.

No. 10: Light Pole Installation

Light Pole Installation includes the light pole foundation, pole, fixture, conduit, and electrical connection.

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April 1, 2019

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No. 11: 4" AC on 8" AB

It is assumed the roadway section is 4" asphalt concrete on 8" aggregate base. The unit price includes subgrade preparation, aggregate base, asphalt concrete, and compaction. This item was estimated by the square feet necessary to repair the existing roadway after water and sewer laterals are connected to the mains. Four feet was assumed for the width of these patches. We anticipate a high unit price for asphalt given the small quantity of asphalt.

No. 12: PCC Bus Pad

Portland Cement Concrete (PCC) Bus Pad includes subgrade preparation, aggregate base, compaction, rebar reinforcement, PCC concrete, and temporary framing required. It is assumed that the bus pad width of 10' begins at the edge of the proposed curb and gutter.

No. 13: PCC Curb and Gutter

PCC Curb and Gutter includes subgrade preparation, aggregate base, compaction, rebar reinforcement, PCC concrete, and temporary framing required. PCC Curb and Gutter is necessary only along the 155' of curb adjacent to the installation of PCC Bus Pad for alternatives 1-3. It is assumed the proposed curb will match the profile of the existing curb and gutter.

No. 14: 4" PCC Sidewalk on 6" AB

4" PCC Sidewalk on 6" AB includes subgrade preparation, aggregate base, compaction, PCC concrete, and temporary framing required.

No. 15: PCC Basketball Court

PCC Basketball Court includes subgrade preparation, aggregate base, compaction, PCC concrete, and temporary framing required.

No. 16: Reinstall Basketball Hoops

Reinstall Basketball Hoops includes the reinstallation of basketball hoops that were salvaged from the existing basketball court in bid item no. 3: Site Preparation.

No. 17: Signage and Striping

Signage and Striping includes the marking of the bus lane, curb markings, bus signage, and basketball court markings where applicable.

No. 18a: Enclosed Transit Building

Enclosed Transit Building per square foot price assumes much of the outside walls consist of glass based on feedback from the City. Price includes the enclosed areas, internal utilities, and internal seating. The proposed building is 644 SF for alternatives 1-3, it is assumed half will be enclosed and the other half remain open.

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April 1, 2019

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No. 18b: Open Transit Building

Open Transit Building per square foot price assumes much of the outside walls consist of glass based on feedback from the City. Price includes unheated passenger waiting area with internal seating.

No. 19: Sod

Sod includes the replacement of grass in the areas anticipated to be disturbed during construction. Total disturbed area is based on Engineer's best judgement.

No. 20: Irrigation

Irrigation includes the provision of irrigation to the area of disturbed vegetation. This bid item is directly related to the area of sod required in Item 19.

No. 21: Public Art Space

A place holder of \$10,000 was used for this bid item. The City of Morro Bay should confirm this budget is adequate.

No. 22: Bike Rack

Bike Rack includes furnishing and installing a manufactured bike rack, capable of holding four bikes.

No. 23: Bike Tool Station

Bike Tool Station includes furnishing and installing a manufactured bike tool station.

No. 24: Benches

We assumed the benches shown on the sketch were cast-in-place structures. The unit price includes excavation, subgrade preparation, aggregate base, compaction, formwork, rebar reinforcement, PCC concrete, and any finishing required.

No. 25: Internet/Real Time Travel Display

Internet/Real Time Travel Display includes the provision of internet utility and the installation of the real time travel display per the manufacturer's instructions.

No. 26: Fence

Fence is included in alternative 1 to prevent balls from the basketball court from rolling into the street.

No. 27: PCC Curb

PCC Curb includes the subgrade preparation, aggregate base, compaction, rebar reinforcement, PCC concrete, and temporary framing required. It is assumed the proposed PCC Curb will require a grading plan.

MEMORANDUM

April 1, 2019

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Cost Estimate Summary

The itemized cost estimate for all three alternatives can be seen in the following table. As can be seen, the most affordable design is alternative 2, with alternative 1 being the least affordable. Please see the attached tables showing the breakdown of the cost estimation.

Alternative 1: Existing Site	\$ 756,469
Alternative 2: Eastern Site	\$ 705,853
Alternative 3: Morro Bay Blvd. Site	\$ 723,768

Table 1. Total Updated Bid Amount Estimate Sum

Note: Soft costs (grant administration, environmental review, design, permitting, project management, construction administration, material testing) or the project are not included in this estimate. We anticipate these costs to be 30% - 50% construction costs.

City of Morro Bay
Transit Hub Construction Cost Estimate
Alternative 1: Existing Site

PRELIMINARY

Prepared on: 1/24/2019
Updated on: 2/26/2019

Bid Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization / Demobilization (5%)	1	LS	\$ 30,330	\$ 30,330
2	Temporary Erosion Controls/Tree Protection	1	LS	\$ 6,500	\$ 6,500
3	Site Preparation	1	LS	\$ 39,272	\$ 39,272
4	Site Grading	1	LS	\$ 15,744	\$ 15,744
5	Sawcutting	283	LF	\$ 3	\$ 848
6	Water Service	50	LF	\$ 200	\$ 9,940
7	Sewer Service	45	LF	\$ 200	\$ 9,040
8	Electrical/Communication Service	1	LS	\$ 10,000	\$ 10,000
9	Hydrant Relocation	0	LS	\$ 5,000	\$ -
10	Light Pole Installation	3	EA	\$ 10,000	\$ 30,000
11	4" AC on 8" AB	153	SF	\$ 25	\$ 3,835
12	PCC Bus Pad	1,550	SF	\$ 20	\$ 31,000
13	PCC Curb and Gutter	155	LF	\$ 50	\$ 7,750
14	4" PCC Sidewalk on 6" AB	1,833	SF	\$ 9	\$ 16,496
15	PCC Basketball Court	1,740	SF	\$ 9	\$ 15,660
16	Reinstall Basketball Hoops	2	EA	\$ 1,000	\$ 2,000
17	Signage and Striping	1	LS	\$ 7,000	\$ 7,000
18	Transit Building	1	LS	\$ 354,200	\$ 354,200
19	Sod	4,038	SF	\$ 3	\$ 12,114
20	Irrigation	1	LS	\$ 6,057	\$ 6,057
21	Public Art Space	1	LS	\$ 10,000	\$ 10,000
22	Bike Rack	1	EA	\$ 2,000	\$ 2,000
23	Bike Tool Station	1	EA	\$ 1,500	\$ 1,500
24	Benches	53	LF	\$ 200	\$ 10,680
25	Internet/ Real Time Travel Information Display	1	LS	\$ 5,000	\$ 5,000
26	Fence	50	LF	\$ 100	\$ 5,000
27	PCC Curb	0	LF	\$ 50	\$ -
28	PCC Valley Gutter	0	LF	\$ 70	\$ -
Base Bid Total					\$ 641,966
20% Contingency					\$ 128,393
TOTAL BID AMOUNT					\$ 770,359

Notes

1. Cost Estimate is based on sketches provided by LSC Transportation Consultants, Inc.

City of Morro Bay
Transit Hub Construction Cost Estimate
Alternative 2: Eastern Site

PRELIMINARY

Prepared on: 1/24/2019
Updated on: 2/26/2019

Bid Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization / Demobilization (5%)	1	LS	\$ 28,560	\$ 28,560
2	Temporary Erosion Controls/Tree Protection	1	LS	\$ 6,000	\$ 6,000
3	Site Preparation	1	LS	\$ 32,581	\$ 32,581
4	Site Grading	1	LS	\$ 9,753	\$ 9,753
5	Sawcutting	166	LF	\$ 3	\$ 498
6	Water Service	43	LF	\$ 200	\$ 8,600
7	Sewer Service	30	LF	\$ 200	\$ 6,000
8	Electrical/Communication Service	1	LS	\$ 20,000	\$ 20,000
9	Hydrant Relocation	0	EA	\$ 5,000	\$ -
10	Light Pole Installation	3	EA	\$ 10,000	\$ 30,000
11	4" AC on 8" AB	143	SF	\$ 25	\$ 3,575
12	PCC Bus Pad	1,550	SF	\$ 20	\$ 31,000
13	PCC Curb and Gutter	155	LF	\$ 50	\$ 7,750
14	4" PCC Sidewalk on 6" AB	1,939	SF	\$ 9	\$ 17,451
15	PCC Basketball Court	0	SF	\$ 9	\$ -
16	Reinstall Basketball Hoops	0	EA	\$ 1,000	\$ -
17	Signage and Striping	1	LS	\$ 5,500	\$ 5,500
18	Transit Building	1	LS	\$ 354,200	\$ 354,200
19	Sod	1,644	SF	\$ 3	\$ 4,932
20	Irrigation	1	LS	\$ 2,466	\$ 2,466
21	Public Art Space	1	LS	\$ 10,000	\$ 10,000
22	Bike Rack	1	EA	\$ 2,000	\$ 2,000
23	Bike Tool Station	1	EA	\$ 1,500	\$ 1,500
24	Benches	62	LF	\$ 200	\$ 12,420
25	Internet/ Real Time Travel Information Display	1	LS	\$ 5,000	\$ 5,000
26	Fence	0	LF	\$ 100	\$ -
27	PCC Curb	0	LF	\$ 50	\$ -
28	PCC Valley Gutter	0	LF	\$ 70	\$ -

Base Bid Total \$ 599,786
20% Contingency \$ 119,957
TOTAL BID AMOUNT \$ 719,743

Notes

1. Cost Estimate is based on sketches provided by LSC Transportation Consultants, Inc.

City of Morro Bay
Transit Hub Construction Cost Estimate
Alternative 3: Morro Bay Blvd. Site

PRELIMINARY

Prepared on: 1/24/2019
Updated on: 2/26/2019

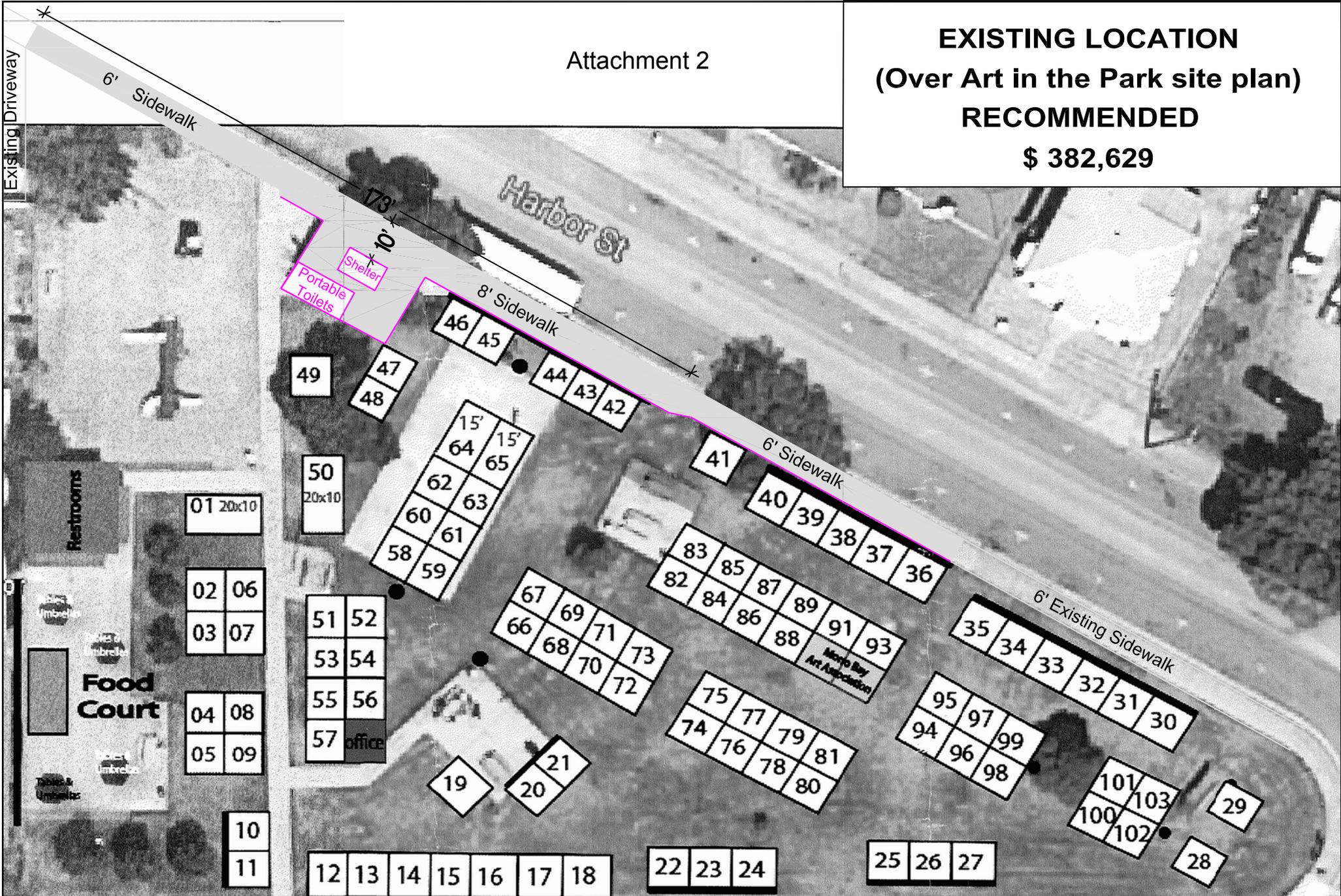
Bid Item	Description	Quantity	Unit	Unit Price	Total
1	Mobilization / Demobilization (5%)	1	LS	\$ 29,270	\$ 29,270
2	Temporary Erosion Controls/Tree Protection	1	LS	\$ 5,000	\$ 5,000
3	Site Preparation	1	LS	\$ 34,485	\$ 34,485
4	Site Grading	1	LS	\$ 11,701	\$ 11,701
5	Sawcutting	343	LF	\$ 3	\$ 1,029
6	Water Service	19	LF	\$ 200	\$ 3,740
7	Sewer Service	61	LF	\$ 200	\$ 12,200
8	Electrical/Communication Service	1	LS	\$ 15,000	\$ 15,000
9	Hydrant Relocation	1	EA	\$ 5,000	\$ 5,000
10	Light Pole Installation	3	EA	\$ 10,000	\$ 30,000
11	4" AC on 8" AB	240	SF	\$ 25	\$ 6,000
12	PCC Bus Pad	1550	SF	\$ 20	\$ 31,000
13	PCC Curb and Gutter	155	LF	\$ 50	\$ 7,750
14	4" PCC Sidewalk on 6" AB	2534	SF	\$ 9	\$ 22,802
15	PCC Basketball Court	0	SF	\$ 9	\$ -
16	Reinstall Basketball Hoops	0	EA	\$ 1,000	\$ -
17	Signage and Striping	1	LS	\$ 5,500	\$ 5,500
18	Transit Building	1	LS	\$ 354,200	\$ 354,200
19	Sod	2195	SF	\$ 3	\$ 6,585
20	Irrigation	1	LS	\$ 3,293	\$ 3,293
21	Public Art Space	1	LS	\$ 10,000	\$ 10,000
22	Bike Rack	1	EA	\$ 2,000	\$ 2,000
23	Bike Tool Station	1	EA	\$ 1,500	\$ 1,500
24	Benches	58	LF	\$ 200	\$ 11,660
25	Internet/ Real Time Travel Information Display	1	LS	\$ 5,000	\$ 5,000
26	Fence	0	LF	\$ 100	\$ -
27	PCC Curb	0	LF	\$ 50	\$ -
28	PCC Valley Gutter	0	LF	\$ 70	\$ -
Base Bid Total					\$ 614,715
20% Contingency					\$ 122,943
TOTAL BID AMOUNT					\$ 737,658

Notes

1. Cost Estimate is based on sketches provided by LSC Transportation Consultants, Inc.

**EXISTING LOCATION
(Over Art in the Park site plan)
RECOMMENDED**

\$ 382,629



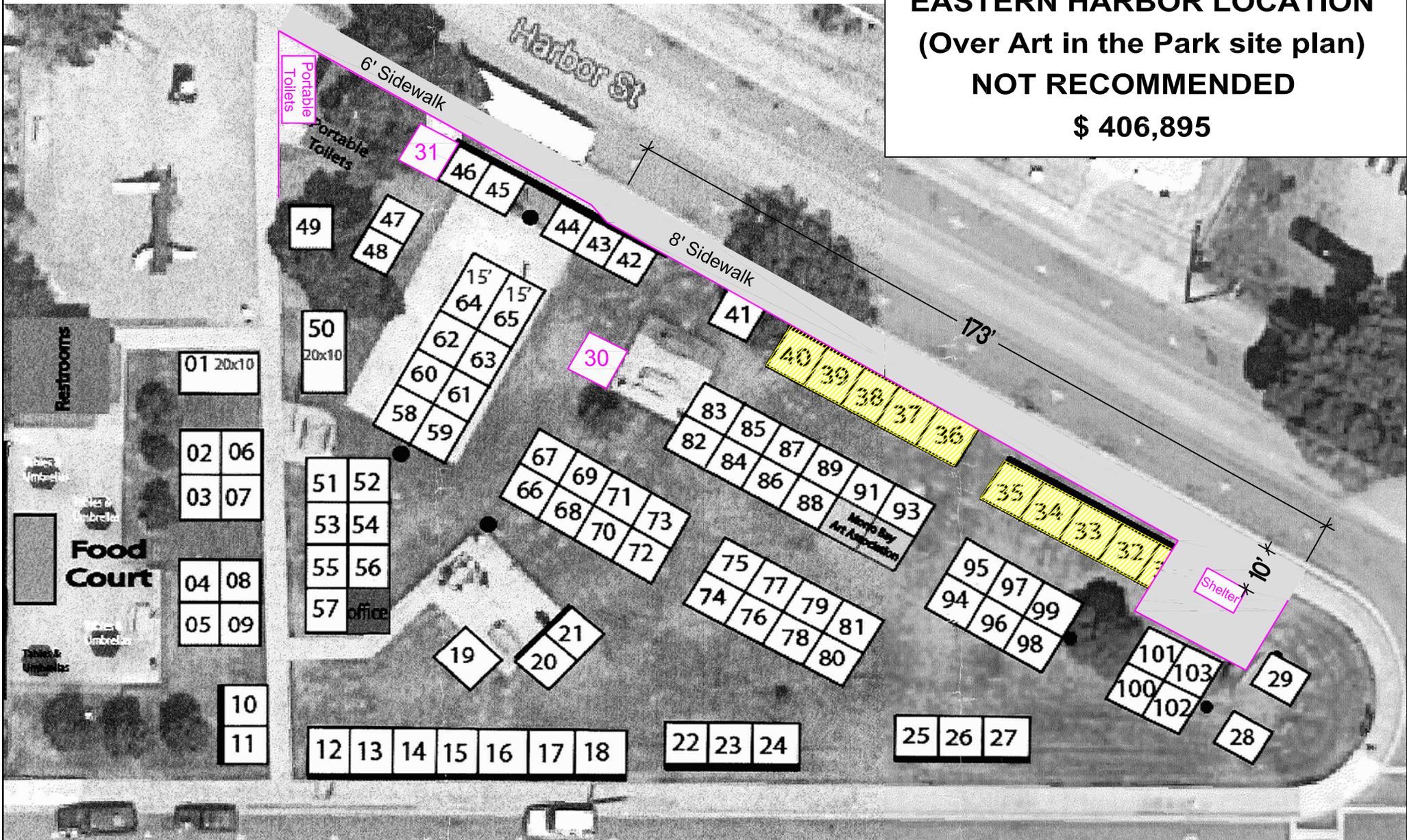
ADVANTAGES

- Addresses ADA deficiencies.
- Improved visibility between driver and riders.
- Contained within existing footprint.
- Least "presence" and impact on overall park.
- Neighbors are use to having transit operations at this location.
- No impact to Art in the Park.
- Supported by Art in the Park.

DISADVANTAGES

- Removal of two trees off Harbor. Possible replacement of one or both trees.
- Transit routes must circle block.
- No additional "on the street" marketing benefits.
- One lost parking space.

**EASTERN HARBOR LOCATION
(Over Art in the Park site plan)
NOT RECOMMENDED
\$ 406,895**



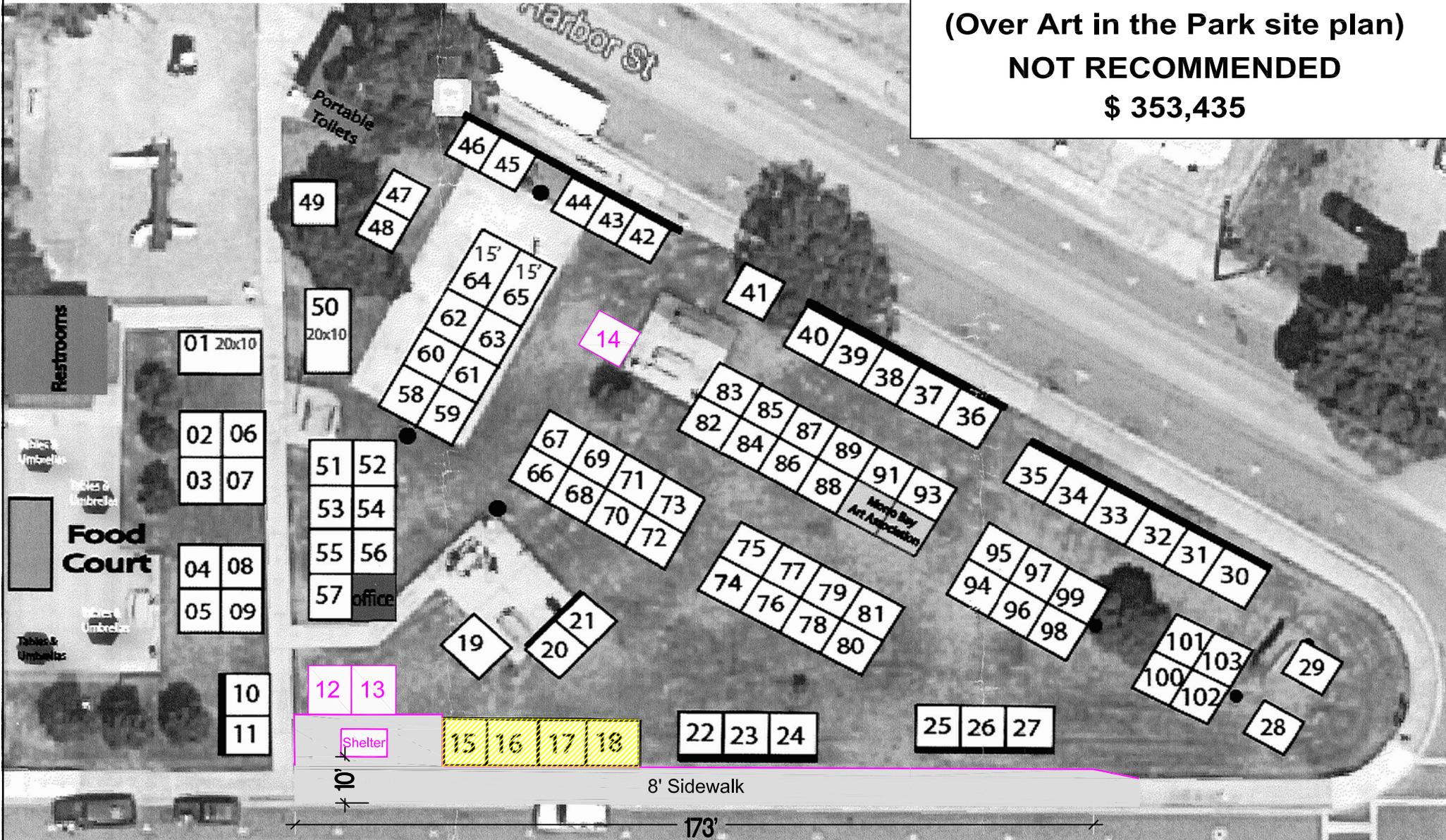
ADVANTAGES

- Addresses ADA deficiencies.
- Improved visibility between driver and riders.
- More visible to drivers along MBB - increased public awareness of transit services.

DISADVANTAGES

- Removal of two trees off Harbor. Possible replacement of one tree.
- Nine lost vendor spaces for Art in the Park - \$15,750 in lost revenue (\$1,750 per space).
- Would have a "presence" impact on park; intruding in large central open grass play area.
- Visual impact at narrow point of park that is gateway to City from Morro Bay Blvd.
- Transit routes must circle block.
- Not supported by Art in the Park.

**MORRO BAY BLVD. LOCATION
(Over Art in the Park site plan)
NOT RECOMMENDED
\$ 353,435**



ADVANTAGES

- Improved visibility between driver and riders.
- Addresses ADA deficiencies.
- "Increase "Presence" in park, but in area not impacting main central grass play area.
- Reduces route length for Morro Bay Transit Bus.
- High visibility raises public awareness of transit service.

DISADVANTAGES

- Two lost parking spaces used by retail shops.
- Higher traffic volumes causing delay for bus pullout.
- If School bus stops off MBB (6 times a day) requires stopping in both directions and would cause traffic back-up of approx. 28 cars.
- If school bus stops off Harbor requires stopping in driving lane and kids crossing parking lane.
- Aside from Morro Bay Transit, all transit routes must circle block.
- Commuters may park across street and use space in front of existing retail shops.
- Four lost vendor spaces for Art in the Park - \$7,000 in lost revenue (\$1,750 per space).
- Not supported by Art in the Park.

