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in creative parking solutions

PROGRESS REPORT:
CONDITION ASSESSMENT

**HONOLULU URBAN
CORE PARKING
MASTER PLAN**
HONOLULU, HAWAII

Prepared For:
CITY AND COUNTY OF HONOLULU

August 11, 2010



WALKER
PARKING CONSULTANTS

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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PARKING CONSULTANTS

AUGUST 11, 2010

WRC PROJECT NO. 37-8151.00

1 CONDITION ASSESSMENT

1.1 OVERVIEW

As part of the City/County of Honolulu's Urban Core Parking Master Plan project, Walker Parking Consultants performed a condition assessment at eleven parking structures that are included as part of the City and County of Honolulu's (City) overall parking system (System).

This report provides our findings, as well as our opinion of capital expenditures recommended over a 50-year planning horizon to complete structural repairs and maintenance on the structures that comprise the System.

The eleven facilities reviewed include the following:

Facilities

1. Chinatown Gateway Plaza – 1031 Nuuanu St
2. Marin Tower – 60 N. Nimitz Hwy
3. Harbor Court – 55 Merchant St
4. Harbor Village – 901 River St
5. Kekaulike Courtyard – 1016 Maunakea St
6. Smith-Beretania – 1170 Nuuanu St
7. Hale Pauahi – 155 N. Beretania
8. Kukui Plaza – 1255 Nuuanu St
9. Civic Center - 650 S. King St.
10. Neil S. Blaisdell Center - 777 Ward Ave.
11. Lani Huli (Kailua) - 45 Aulike St.

The associated costs of this plan are listed in Tables I through V.

TABLE I – OPINION OF 50 YEAR COST SUMMARY

Honolulu Parking Structures	Recommended Repairs
50 Year Structure Repair/Maintenance	\$65,444,450
50 Year Structure Replacement Cost	\$29,940,000
50 Year Total Cost	\$95,384,450

1. The estimated costs are in 2010 dollars and do not include the cost of phasing, impact of inflation, or financing.
2. Costs may vary due to time of year, local economy, or other factors.
3. Does not include lost revenue.

This report was funded in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation. The views and opinions of the agency expressed herein do not necessary state or reflect those of the U.S. Department of Transportation.



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1.1.1 FACILITY OVERVIEW

Our field crews conducted on-site observations at each of the eleven structures during the week of May 17, 2010. Visual observations were completed and select acoustical testing (hammer tapping, chain dragging, etc.) was performed to document existing conditions observed in each of the structures. The documented existing conditions form the basis of our independent repair and maintenance recommendations and the associated 50-year cost opinions.

The conditions observed throughout the facilities varied greatly based upon the age of the structure, amount of previous repair and maintenance work performed and in some cases, the unique or somewhat unexpected deterioration issues observed that are specific to an individual structure. For all structures, we evaluated the overall condition patterns as well as any unique existing condition factors that will affect future repair and maintenance recommendations and costs. Using this information, we developed a basis for modeling future capital expenditures for each of the structures.

Generally, the recommended items consist of both repair and maintenance work. Structural repair work is comprised of concrete slab, beam, wall, façade, and column repair. Mechanical, electrical, and plumbing repair work typically comprises work to the ventilation systems, elevator systems, lighting systems, and floor drains. These items include existing deterioration and projected future deterioration. Maintenance work generally consists of waterproofing and /or weatherproofing to prevent or slow future deterioration and associated repair costs. Recommendations for routine maintenance are not included, but a discussion is included in the Appendix.

Typical items in need of repair and maintenance include:

- Patching of delaminated or spalled concrete
- Repair or replacement of expansion joints
- Replacement of control joint sealants
- Repairs to the mechanical ventilation systems
- Supplemental floor drains to collect ponding water
- Repair or replacement of the interior lighting fixtures

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The typical duration for these types of repairs and maintenance is presented in Table II below.

TABLE 2 – ESTIMATE OF REPAIR SERVICE LIFE

Repair Approach	Typical Service Life (Years)
Concrete Patching	3 - 8
Sealants	5 – 10
Expansion Joints	Up to 15
Traffic Bearing Membranes	5-10
Floor Drains	15 – 20
Lighting Fixtures	20
Parking Access and Revenue Control Equipment	20

The overall approach assumes the Owner will fix what is broken and invest in preventative work to minimize future repair costs with minimal disruption to the revenue producing element of each facility. The net effect is to develop the most cost-effective approach to repair and maintain each facility over the next 50 years.

Many of the parking structures serve mixed-use developments that include residential, retail, office, and open plaza space. During our review it was observed that most of the structures that had plaza spaces exhibited significant deterioration under that exposed level. This deterioration has resulted in water penetrating into the parking structure levels below with additional concrete deterioration and corrosion. Although a review of these plaza spaces was beyond our scope of services, we strongly recommend that these areas be separately assessed to determine long-term costs and maintenance. In our experience, plaza related costs, over the fifty year evaluation period, can exceed the parking structure repair/maintenance costs if the plaza system is not regularly maintained. These parking structures will not remain in serviceable condition over the 50 year period unless a similar repair and maintenance program is undertaken for the plazas.

In addition, disagreements can frequently evolve from uncertainty about repair and maintenance responsibility related to the delineation between the parking structure and the plaza spaces.



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We obtained construction documents from the City/County for most of the parking facilities in the System. We have made the assumption that these facilities were built in the year after the date shown on the drawings; therefore, actual dates of construction could vary and have been approximated.

1.1.2 FACILITY DESCRIPTIONS

Hale Pauahi Parking Structure

The Hale Pauahi parking structure was built in 1986 and has a slab-on-grade and four supported levels under a residential tower and plaza. The floors are constructed of shallow precast tees (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has four stair towers and one elevator that serve the public parking. The vehicular circulation is accommodated by one-way speed ramps and provides parking for 595 cars. The structure has metal halide lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, access card readers, and gate arms at the entries and occupied payment booths and access card readers at the exits. The structure is part of a residential and commercial complex.

During our walk-through we observed spalling of concrete, leaking floor joints, and failed expansion joints. The largest repair cost within the first five years of our recommended program is estimated to be expansion joint replacement. Over a fifty-year time period, the largest repair cost is estimated to be light fixture replacement.

Marin Tower Parking Structure

The Marin Tower parking structure was built in 1992 and has a slab-on-grade and seven supported levels under a residential tower and commercial space. The floors are constructed of shallow precast tee (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has three stair towers and two elevators that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 426 cars. The structure has fluorescent and high pressure sodium lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and an occupied payment booth at the exit. The structure is part of a residential and commercial complex.



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During our walk-through we observed spalling of concrete, wide-spread cracking of the floor slabs, and non-operating lights. The largest repair cost within the first five years of our recommended program is estimated to be concrete floor repair. Over a fifty year time period, the largest repair cost is estimated to be light fixture replacement.

Smith-Beretania Parking Structure

The Smith-Beretania parking structure was built in 2001 and has a slab-on-grade and one supported level under a plaza. It is constructed of cast-in-place, conventionally-reinforced concrete slabs, beams and columns. The structure has two stair towers and one elevator that serve the public parking. The vehicular circulation is accommodated by one-way speed ramps and provides parking for 129 cars. The structure has metal halide lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and an occupied payment booth at the exit.

During our walk-through we observed leaking at joints and cracks coming from the exposed plaza above. The largest repair cost within the first five years of our recommended program is estimated to be mechanical repairs of the ventilation system. Over a fifty-year time period, the largest repair cost is estimated to be light fixture replacement.

Civic Center Parking Structure

The Civic Center parking structure was built in 1978 and has a slab-on-grade and one supported level under a mixed-use plaza. The floors are constructed of shallow precast concrete tees (with a cast-in-place concrete topping), supported by cast-in-place concrete beams and columns. The structure has four stair towers that serve the parking areas. The vehicular circulation is accommodated by one-way speed ramps and provides parking for 939 cars. The structure has fluorescent lighting and mechanical fans for ventilation. Individual meters are located at the front of each parking stall for public parking.

During our walk-through we observed leaking at joints and cracks coming from the exposed plaza above. The largest repair cost within the first five years of our recommended program is estimated to be for expansion joint replacement. Over a fifty-year



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time period, the largest repair cost is estimated to be light fixture replacement.

Chinatown Gateway Parking Structure

The Chinatown Gateway parking structure was built in 1990 and has a slab-on-grade and two supported levels under a residential tower and commercial space. The floors are constructed of shallow precast tees (with cast-in-place concrete topping) supported by cast-in-place concrete beams and columns. The structure has two stair towers and one elevator that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 278 cars. The structure has induction lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and an occupied payment booth at the exit.

During our walk-through we observed spalling of concrete, wide-spread cracking of the floor slabs, and deteriorated signage/paint. The largest repair cost within the first five years as well as fifty years of our recommended program is estimated to be for traffic bearing membranes.

Harbor Court Parking Structure

The Harbor Court parking structure was built in 1993 and has a slab-on-grade and 12 supported levels under a residential and commercial tower. The floors are constructed of shallow precast tee (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has four stair towers and one elevator that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 1,048 cars. The structure has fluorescent lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and occupied payment booths at the exits. The structure is part of a residential and commercial complex.

During our walk-through we observed spalling of concrete, leaking floor joints, and deteriorated paint. Although not required by code, we observed areas where lack of bumper wall protection creates a liability potential. The largest repair cost within the first five years of our recommended program is estimated to be replacement of the parking access and revenue control system. Over a fifty year time



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period, the largest repair cost is estimated to be light fixture replacement.

Neil S. Blaisdell Parking Structure

The Neil S. Blaisdell parking structure was built in 1991 and has a slab-on-grade and two supported levels and has no mixed-use. The floors are constructed of shallow precast tees (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has six stair towers that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 1,467 cars. The structure has high pressure sodium lighting. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and occupied payment booths at the exits.

This structure has deteriorated at a faster rate than any of the structures in the system. During our walk-through we observed spalling of concrete, leaking floor joints, and deteriorated asphalt slab-on-grade. The elevated perimeter planter boxes are in a severe state of corrosion and should be either repaired or removed from the structure. The largest repair cost within the first five years of our recommended program is estimated to be the repair of the perimeter planter boxes. In Year 25, we recommend the demolition and replacement of this parking facility. As a result, over a fifty-year time period, the largest repair cost is estimated to be the structure replacement.

Lani Huli Parking Structure

The Lani Huli parking structure was built in 1993 and has a slab-on-grade and one supported levels under a residential tower and plaza. The floor is constructed of shallow precast tee (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has four stair towers that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 167 cars. The structure has fluorescent lighting and mechanical fans for ventilation. Individual meters are located at the front of each parking stall for public parking. The structure is part of a residential complex.

During our walk-through we observed widespread leaking at joints and mechanical penetrations, deterioration of the concrete stairs, and lack of ventilation fan controls. The largest repair cost within



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the first five years of our recommended program is estimated to be replacement of ventilation fans. Over a fifty year time period, the largest repair cost is estimated to be light fixture replacement.

Kekaulike Parking Structure

The Kekaulike parking structure was built in 1995 and has a slab-on-grade and three supported levels under a residential and commercial tower. The floors are constructed of shallow precast floor tees (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has two stair towers and one elevator that serve the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 138 cars. The structure has induction lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and occupied payment booths at the exits. The structure is part of a residential and commercial complex.

During our walk-through we observed spalling of concrete, failure of expansion joints, and deterioration of paint. The largest repair cost within the first five years of our recommended program is estimated to be replacement of the parking access and revenue control system. Over a fifty-year time period, the largest repair cost is estimated to be light fixture replacement.

Kukui Plaza Parking Structure

The Kukui Plaza parking structure was built in 1975 and has a slab-on-grade and three supported levels under a residential tower and plaza. The floors are constructed of shallow precast tees (with cast-in-place concrete topping) supported by cast-in-place beams and columns. The structure has three stair towers and three elevators that serve the public parking. The vehicular circulation is accommodated by one-way speed ramps and provides parking for 772 cars. The structure has fluorescent lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers, card readers, and gate arms at the entries and occupied payment booths at the exits. The structure is part of a residential complex.

During our walk-through we observed spalling of concrete, failure of expansion joints, and deterioration of paint. The largest repair cost within the first five years of our recommended program is



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estimated to be concrete repair. Over a fifty-year time period, the largest repair cost is estimated to be light fixture replacement.

Harbor Village Parking Structure

The Harbor Village parking structure was built in 1989 and has a slab-on-grade and three supported levels under a residential and commercial tower. It is constructed of short span cast-in-place concrete floor slabs supported by cast-in-place concrete beams and columns. The structure has one stair tower that serves the public parking. The vehicular circulation is accommodated by two-way speed ramps and provides parking for 140 cars. The structure has fluorescent and high pressure sodium lighting and mechanical fans for ventilation. Vehicular access is by ticket dispensers and gate arms at the entries and occupied payment booths at the exits. The structure is part of a residential and commercial complex.

During our walk-through we observed failure of traffic bearing membranes, inadequate lighting, and broken ventilation fans. The largest repair cost within the first five years of our recommended program is estimated to be light fixture replacement. Over a fifty year time period, the largest repair cost is estimated to be light fixture replacement.

1.2 OPINION OF 50-YEAR COSTS

Tables that summarize our opinion of probable costs in regard to capital expenditures ("CAPEX") for structural repairs and System maintenance over the 50-year term are included in the Appendix (Table 3 through Table 14).

APPENDIX



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Table 3: HALE PAUAAHI

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$25,000	\$35,000	\$12,000	\$11,000	\$17,000	\$19,000	\$29,000	\$14,000	\$39,000	\$33,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$11,250	\$0	\$22,500	\$0	\$67,500	\$0	\$135,000	\$0	\$270,000	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$0	\$0	\$8,500	\$0	\$17,000	\$0	\$51,000	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 23.00	\$460	\$0	\$920	\$0	\$2,760	\$0	\$11,040	\$0	\$55,200	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 125.00	\$0	\$0	\$1,250	\$0	\$2,500	\$0	\$7,500	\$0	\$30,000	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS											0	0	0
5.0	CONCRETE BEAM AND JOIST REPAIR										0	0	0
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$300	\$0	\$600	\$0	\$1,800	\$0	\$7,200	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$600	\$0	\$1,200	\$0	\$3,600	\$0	\$14,400	\$0
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$3,000	\$0	\$3,000	\$0	\$6,000	\$0	\$18,000	\$0	\$18,000	\$0
PART IV: CRACKS AND JOINTS													
10.0	EXPANSION JOINT REPAIR AND REPLACEMENT												
10.3	Expansion Joint - Elastomeric Edged Concrete	L.F.	\$ 200.00	\$100,000	\$0	\$0	\$100,000	\$0	\$0	\$100,000	\$0	\$0	\$100,000
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$5,500	\$0	\$12,500	\$0	\$12,500	\$0	\$17,500	\$0	\$17,500	\$0
11.2	Replace Construction Joint Sealant	L.S.	\$ 1,000.00	\$0	\$2,000	\$0	\$3,000	\$0	\$3,000	\$0	\$3,000	\$0	\$3,000
11.5	Epoxy Injection	L.F.	\$ 30.00	\$9,000	\$0	\$4,500	\$0	\$5,400	\$0	\$6,300	\$0	\$7,200	\$0
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$0	\$0	\$17,500	\$0	\$0	\$0	\$0	\$0	\$17,500	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$12,500	\$0	\$0	\$0	\$12,500	\$0	\$12,500	\$0	\$0	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 800.00	\$0	\$5,600	\$0	\$3,200	\$0	\$5,600	\$0	\$3,200	\$0	\$5,600
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$0	\$0	\$0	\$6,000	\$0	\$0	\$0	\$6,000	\$0	\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$10,000	\$13,000	\$16,000	\$19,000	\$22,000	\$26,000	\$29,000	\$32,000	\$35,000	\$38,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$1,200	\$2,400	\$3,600	\$4,800	\$4,800	\$6,000	\$7,200	\$8,400	\$9,600	\$10,800
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$0	\$2,000	\$0	\$4,000	\$0	\$12,000	\$0	\$48,000	\$0	\$240,000

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Table 3: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
27.0 MECHANICAL - HVAC													
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00	\$20,000	\$15,000	\$0	\$0	\$0	\$35,000	\$0	\$0	\$0	\$35,000
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$0	\$6,000	\$0	\$13,000	\$0	\$26,000	\$0	\$51,000	\$0	\$103,000
29.0 ELEVATORS													
30.1	Elevator - Cab Repair	EA	\$ 1,000.00	\$0	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$4,000	\$0
30.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0
30.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$0
30.4	Electrical - Controls Replacement	EA	\$ 60,000.00	\$60,000	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0
30.0 ELECTRICAL													
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$0	\$604,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$10,000	\$13,000	\$16,000	\$19,000	\$22,000	\$26,000	\$29,000	\$32,000	\$35,000	\$38,000
31.0 PARKING ACCESS AND REVENUE CONTROL (PARCS)													
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$8,000	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$33,000	\$0	\$0	\$0	\$0	\$33,000	\$0	\$0	\$0	\$0
31.3	PARCS - New Fee Computer	EA	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0
31.4	PARCS - New Parking Booth	EA	\$ 12,500.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
31.5	PARCS - New Concrete Island	EA	\$ 3,500.00	\$7,000	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0	\$0	\$0
PART IX: METAL WORK													
42.0 STAIR TOWERS													
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$18,000	\$18,000	\$36,000	\$36,000	\$54,000	\$54,000	\$72,000	\$72,000	\$90,000	\$90,000
42.15	Replace Doors	EA	\$ 1,500.00	\$0	\$15,000	\$0	\$0	\$15,000	\$0	\$0	\$15,000	\$0	\$0
43.0 MISCELLANEOUS													
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$4,000	\$0	\$0	\$0	\$0	\$0	\$4,000	\$0	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$91,950	\$0	\$91,950	\$0	\$91,950	\$0	\$91,950	\$0	\$91,950	\$0
43.3	Architectural Wall Repair	L.S.	\$ 8.00	\$3,200	\$0	\$4,000	\$0	\$4,800	\$0	\$5,600	\$0	\$6,400	\$0
45.0 PAINTING													
45.1	Painting Traffic Markings	EA	\$ 10.00	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950	\$5,950
SUB-TOTAL				\$523,010	\$736,950	\$252,570	\$233,950	\$360,960	\$406,550	\$607,940	\$290,550	\$813,900	\$702,350
15% Contingency				\$78,452	\$110,543	\$37,886	\$35,093	\$54,144	\$60,983	\$91,191	\$43,583	\$122,085	\$105,353
10%Engineering				\$52,301	\$73,695	\$25,257	\$23,395	\$36,096	\$40,655	\$60,794	\$29,055	\$81,390	\$70,235
TOTAL				\$653,763	\$921,188	\$315,713	\$292,438	\$451,200	\$508,188	\$759,925	\$363,188	\$1,017,375	\$877,938

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Table 4: MARIN TOWER:

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$23,000	\$33,000	\$11,000	\$19,000	\$20,000	\$22,000	\$20,000	\$38,000	\$35,000	\$29,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$51,750	\$0	\$22,500	\$0	\$45,000	\$0	\$135,000	\$0	\$270,000	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$3,400	\$0	\$6,800	\$0	\$20,400	\$0	\$81,600	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 23.00	\$0	\$0	\$4,600	\$0	\$0	\$6,900	\$0	\$0	\$0	\$9,200
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 15.00	\$225	\$0	\$300	\$0	\$450	\$0	\$750	\$0	\$1,200	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS													
5.0	CONCRETE BEAM AND JOIST REPAIR												
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$9,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$18,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
7.2	Wall Repair - Concrete Masonry Unit	S.F.	\$ 45.00	\$1,350	\$0	\$450	\$0	\$450	\$0	\$450	\$0	\$450	\$0
PART IV: CRACKS AND JOINTS													
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.S.	\$ 1,000.00	\$1,000	\$2,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000
11.2	Replace Construction Joint Sealant	L.F.	\$ 3.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$3,000	\$0	\$3,000	\$0	\$3,000	\$0	\$3,000	\$0	\$3,000	\$0
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$25,669	\$381,409	\$0	\$0	\$0	\$0	\$25,669	\$381,409	\$0	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$0	\$0	\$18,335	\$272,435	\$18,335	\$272,435	\$0	\$0	\$18,335	\$272,435
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 800.00	\$2,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$7,000	\$9,000	\$11,000	\$13,000	\$15,000	\$18,000	\$20,000	\$22,000	\$24,000	\$26,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$825	\$1,650	\$2,475	\$3,300	\$3,300	\$4,125	\$4,950	\$5,775	\$6,600	\$7,425
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$440	\$1,760	\$0	\$2,640	\$0	\$5,280	\$0	\$21,120	\$0	\$56,360
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 10,000.00	\$0	\$20,000	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$20,000
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$80,000	\$4,000	\$0	\$9,000	\$0	\$18,000	\$0	\$35,000	\$0	\$70,000
29.0	ELEVATORS												
30.1	Elevator - Cab Repair	EA	\$ 1,000.00	\$8,000	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$0	\$0
30.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$0	\$60,000	\$0	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0
30.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$10,000	\$0	\$0	\$0	\$10,000	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - Controls Replacement	EA	\$ 60,000.00	\$0	\$120,000	\$0	\$0	\$0	\$0	\$0	\$120,000	\$0	\$0

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Table 4: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	EA	\$ 400.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - CCTV Replacement	EA	\$ 1,000.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - Intercom Replacement	EA	\$ 1,000.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$7,000	\$9,000	\$11,000	\$13,000	\$15,000	\$18,000	\$20,000	\$22,000	\$24,000	\$26,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$8,000	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$8,000	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$16,500	\$0	\$0	\$0	\$16,500	\$0	\$0	\$0	\$16,500	\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$50,000	\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	\$25,000	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0	\$25,000	\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	\$3,500	\$0	\$0	\$0	\$3,500	\$0	\$0	\$0	\$3,500	\$0
PART IX: METAL WORK													
42.0	STAIR TOWERS												
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$14,000	\$14,000	\$26,000	\$26,000	\$40,000	\$40,000	\$52,000	\$52,000	\$52,000	\$52,000
42.15	Replace Doors	EA	\$ 1,500.00	\$12,000	\$0	\$0	\$0	\$4,500	\$0	\$0	\$0	\$0	\$0
43.0	MISCELLANEOUS												
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$0	\$0	\$1,000	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$78,450	\$0	\$78,450	\$0	\$78,450	\$0	\$78,450	\$0	\$78,450	\$0
43.3	Architectural Wall Repair	L.S.	\$ 8.00	\$15,000	\$0	\$15,000	\$0	\$15,000	\$0	\$15,000	\$0	\$15,000	\$0
45.0	PAINTING												
45.1	Painting Traffic Markings	EA	\$ 10.00	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140	\$4,140
			SUB-TOTAL	\$485,249	\$683,959	\$240,650	\$390,515	\$418,425	\$456,880	\$428,809	\$789,444	\$744,775	\$600,560
			15% Contingency	\$72,787	\$102,594	\$36,098	\$58,577	\$62,764	\$68,532	\$64,321	\$118,417	\$111,716	\$90,084
			10%Engineering	\$48,525	\$68,396	\$24,065	\$39,052	\$41,843	\$45,688	\$42,881	\$78,944	\$74,478	\$60,056
			TOTAL	\$606,561	\$854,949	\$300,813	\$488,144	\$523,031	\$571,100	\$536,011	\$986,805	\$930,969	\$750,700

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Table 5: SMITH-BERETANIA

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$1,000	\$7,000	\$5,000	\$2,000	\$3,000	\$6,000	\$10,000	\$6,000	\$12,000	\$10,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$2,250	\$0	\$4,500	\$0	\$4,500	\$0	\$9,000	\$0	\$13,500	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$0	\$0	\$1,700	\$0	\$3,400	\$0	\$10,200	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 23.00	\$460	\$0	\$920	\$0	\$2,760	\$0	\$11,040	\$0	\$55,200	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 125.00	\$0	\$0	\$1,250	\$0	\$2,500	\$0	\$7,500	\$0	\$30,000	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS													
5.0	CONCRETE BEAM AND JOIST REPAIR												
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$480	\$0	\$900	\$0	\$2,700	\$0	\$10,800	\$0	\$43,200	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$600	\$0	\$1,200	\$0	\$3,600	\$0	\$14,400	\$0
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$600	\$0	\$1,200	\$0	\$3,600	\$0	\$14,400	\$0
PART IV: CRACKS AND JOINTS													
11.0	CRACK AND JOINT REPAIR												
11.2	Replace Construction Joint Sealant	L.S.	\$ 1,000.00	\$0	\$1,000	\$0	\$2,000	\$0	\$2,000	\$0	\$2,000	\$0	\$2,000
11.5	Epoxy Injection	L.F.	\$ 30.00	\$750	\$0	\$1,140	\$0	\$1,710	\$0	\$2,580	\$0	\$3,870	\$0
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 2.50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 1.50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 4,000.00	\$0	\$8,000	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$8,000
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$0	\$4,500	\$0	\$0	\$0	\$4,500	\$0	\$0	\$0	\$4,500
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$3,000	\$4,000	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	\$11,000	\$12,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$375	\$750	\$1,125	\$1,500	\$1,500	\$1,875	\$2,250	\$40	\$3,000	\$3,375
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$800	\$0	\$800	\$0	\$800	\$0	\$800	\$0	\$800	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$200	\$800	\$0	\$1,200	\$0	\$2,400	\$0	\$9,600	\$0	\$25,600
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00	\$0	\$0	\$10,000	\$0	\$0	\$0	\$10,000	\$0	\$0	\$0
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$0	\$2,000	\$0	\$4,000	\$0	\$8,000	\$0	\$16,000	\$0	\$32,000
29.0	ELEVATORS												
30.1	Elevator - Cab Repair	L.S.	\$ 1,000.00	\$1,000	\$0	\$0	\$0	\$0	\$4,000	\$0	\$0	\$4,000	\$0
30.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0
30.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$5,000	\$0
30.4	Electrical - Controls Replacement	EA	\$ 60,000.00	\$0	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0

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Table 5: CONTINUE

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	EA	\$ 400.00	\$1,200	\$2,400	\$3,600	\$4,800	\$9,600	\$1,200	\$1,200	\$1,200	\$2,400	\$2,400
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$1,000	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0	\$1,000
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$3,000	\$4,000	\$5,000	\$6,000	\$7,000	\$8,000	\$9,000	\$10,000	\$11,000	\$12,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$0	\$8,000	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$0	\$33,000	\$0	\$0	\$0	\$0	\$33,000	\$0	\$0	\$0
31.3	PARCS - New Fee Computer	EA	\$ 50,000.00	\$0	\$50,000	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0
31.4	PARCS - New Parking Booth	EA	\$ 12,500.00	\$0	\$12,500	\$0	\$0	\$0	\$0	\$12,500	\$0	\$0	\$0
31.5	PARCS - New Concrete Island	EA	\$ 3,500.00	\$0	\$7,000	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0	\$0
PART IX: METAL WORK													
42.0	STAIR TOWERS												
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$2,000	\$2,000	\$4,000	\$4,000	\$6,000	\$6,000	\$8,000	\$8,000	\$10,000	\$10,000
42.15	Replace Doors	EA	\$ 1,500.00	\$0	\$0	\$3,000	\$0	\$0	\$0	\$3,000	\$0	\$0	\$0
43.0	MISCELLANEOUS												
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$1,000
43.5	Rolling Grill Replacement	L.S.	\$ 15,000.00	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0
45.0	PAINTING												
45.1	Painting Traffic Markings	EA	\$ 10.00	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290	\$1,290
			SUB-TOTAL	\$17,805	\$149,240	\$113,725	\$33,790	\$54,460	\$122,265	\$216,560	\$129,130	\$245,260	\$125,165
			15% Contingency	\$2,671	\$22,386	\$17,059	\$5,069	\$8,169	\$18,340	\$32,484	\$19,370	\$36,789	\$18,775
			10%Engineering	\$1,781	\$14,924	\$11,373	\$3,379	\$5,446	\$12,227	\$21,656	\$12,913	\$24,526	\$12,517
			TOTAL	\$22,256	\$186,550	\$142,156	\$42,238	\$68,075	\$152,831	\$270,700	\$161,413	\$306,575	\$156,456

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Table 6: CIVIC CENTER

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$27,000	\$27,000	\$33,000	\$22,000	\$22,000	\$14,000	\$62,000	\$45,000	\$35,000	\$50,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$6,750	\$13,500	\$22,500	\$36,000	\$54,000	\$76,500	\$103,500	\$135,000	\$171,000	\$211,500
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$2,550	\$0	\$5,100	\$0	\$15,300	\$0	\$30,600	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 23.00	\$0	\$920	\$0	\$1,840	\$0	\$5,520	\$0	\$22,080	\$0	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 15.00	\$150	\$0	\$450	\$0	\$900	\$0	\$1,800	\$0	\$3,600	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS													
5.0	CONCRETE BEAM AND JOIST REPAIR												
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$6,000	\$0	\$12,000	\$0	\$24,000	\$0	\$48,000	\$0	\$96,000	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$1,200	\$0	\$2,400	\$0	\$4,800	\$0	\$9,600	\$0	\$19,200
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$1,500	\$0	\$3,000	\$0	\$6,000	\$0	\$12,000	\$0	\$24,000	\$0
PART IV: CRACKS AND JOINTS													
10.0	EXPANSION JOINT REPAIR AND REPLACEMENT												
10.3	Expansion Joint - Elastomeric Edged Concrete	L.F.	\$ 200.00	\$224,000	\$0	\$0	\$224,000	\$0	\$0	\$224,000	\$0	\$0	\$224,000
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$50,000	\$50,000	\$0	\$50,000	\$50,000	\$0	\$50,000	\$50,000	\$0	\$50,000
11.2	Replace Construction Joint Sealant	L.F.	\$ 3.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$105,000	\$0	\$0	\$0	\$0	\$0	\$105,000	\$0	\$0	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$0	\$0	\$75,000	\$0	\$75,000	\$0	\$0	\$0	\$75,000	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 800.00	\$8,000	\$0	\$12,000	\$0	\$12,000	\$0	\$12,000	\$0	\$12,000	\$0
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$18,000	\$0	\$27,000	\$0	\$27,000	\$0	\$36,000	\$0	\$36,000	\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$15,000	\$20,000	\$25,000	\$30,000	\$35,000	\$40,000	\$45,000	\$50,000	\$55,000	\$60,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$1,875	\$3,750	\$5,700	\$7,575	\$7,575	\$9,450	\$11,325	\$13,200	\$15,150	\$17,025
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$6,000	\$0	\$6,000	\$0	\$6,000	\$0	\$6,000	\$0	\$6,000	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$1,000	\$4,040	\$4,800	\$6,040	\$6,400	\$12,080	\$8,000	\$48,360	\$9,600	\$129,000
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$8,000	\$10,000	\$0	\$20,000	\$0	\$40,000	\$0	\$81,000	\$0	\$161,000
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$0	\$370,000	\$370,000	\$0	\$0	\$0	\$370,000	\$370,000	\$0	\$0
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$1,500	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$1,500
30.3	Electrical - Allowance	L.S.	\$ 1,000.00	\$15,000	\$20,000	\$25,000	\$30,000	\$35,000	\$40,000	\$45,000	\$50,000	\$55,000	\$60,000

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Table 6: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
PART IX: METAL WORK													
42.0 STAIR TOWERS													
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$14,000	\$14,000	\$28,000	\$28,000	\$42,000	\$42,000	\$56,000	\$56,000	\$56,000	\$56,000
42.15	Replace Doors	EA	\$ 1,500.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.0 MISCELLANEOUS													
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$6,000	\$0	\$0	\$0	\$0	\$0	\$6,000	\$0	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$36,300	\$0	\$36,300	\$0	\$36,300	\$0	\$36,300	\$0	\$36,300	\$0
43.3	Architectural Wall Repair	L.S.	\$ 8.00	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.5	Rolling Grill Replacement	L.S.	\$ 15,000.00	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
45.0 PAINTING													
45.1	Painting Traffic Markings	EA	\$ 10.00	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390	\$9,390
SUB-TOTAL				\$559,045	\$575,300	\$697,690	\$467,245	\$453,665	\$295,240	\$1,292,615	\$939,630	\$725,640	\$1,048,615
15% Contingency				\$83,857	\$86,295	\$104,654	\$70,087	\$68,050	\$44,286	\$193,892	\$140,945	\$108,846	\$157,292
10%Engineering				\$55,905	\$57,530	\$69,769	\$46,725	\$45,367	\$29,524	\$129,262	\$93,963	\$72,564	\$104,862
TOTAL				\$698,806	\$719,125	\$872,113	\$584,056	\$567,081	\$369,050	\$1,615,769	\$1,174,538	\$907,050	\$1,310,769

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 7: CHINATOWN GATEWAY

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$17,000	\$12,000	\$11,000	\$10,000	\$17,000	\$15,000	\$20,000	\$10,000	\$20,000	\$20,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$11,250	\$0	\$22,500	\$0	\$31,500	\$0	\$40,500	\$0	\$49,500	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 45.00	\$0	\$450	\$0	\$1,350	\$0	\$2,700	\$0	\$4,050	\$0	\$5,400
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 85.00	\$0	\$0	\$0	\$8,500	\$0	\$0	\$8,500	\$0	\$0	\$8,500
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 15.00	\$150	\$0	\$450	\$0	\$750	\$0	\$1,050	\$0	\$1,350	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS													
5.0	CONCRETE BEAM AND JOIST REPAIR												
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$6,000	\$0	\$12,000	\$0	\$18,000	\$0	\$24,000	\$0	\$30,000	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$6,000	\$0	\$12,000	\$0	\$18,000	\$0	\$24,000	\$0	\$30,000
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$24,000	\$0	\$18,000	\$0	\$24,000	\$0	\$30,000	\$0	\$36,000	\$0
7.2	Wall Repair - Concrete Masonry Unit	S.F.	\$ 45.00	\$1,350	\$0	\$450	\$0	\$900	\$0	\$1,800	\$0	\$2,250	\$0
PART IV: CRACKS AND JOINTS													
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$5,000	\$0	\$6,000	\$0	\$7,500	\$0	\$9,000	\$0	\$10,500	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$10,500	\$0	\$0	\$10,500	\$0	\$0	\$10,500	\$0	\$0	\$10,500
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$105,000	\$105,000	\$0	\$0	\$105,000	\$105,000	\$0	\$0	\$105,000	\$105,000
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$0	\$0	\$75,000	\$75,000	\$0	\$0	\$75,000	\$75,000	\$0	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 3,000.00	\$0	\$3,000	\$0	\$0	\$0	\$3,000	\$0	\$0	\$0	\$3,000
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$0	\$1,500	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$1,500
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$5,000	\$7,000	\$9,000	\$10,000	\$12,000	\$14,000	\$16,000	\$17,000	\$19,000	\$21,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$675	\$1,275	\$1,950	\$2,625	\$2,625	\$3,225	\$3,900	\$4,575	\$5,250	\$5,850
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$360	\$1,400	\$800	\$2,080	\$1,200	\$4,160	\$1,600	\$16,680	\$2,000	\$44,480
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$8,000	\$3,000	\$0	\$7,000	\$0	\$14,000	\$0	\$28,000	\$0	\$56,000
29.0	ELEVATORS												
30.1	Elevator - Cab Repair	EA	\$ 5,000.00	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000
30.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0
30.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,000
30.3	Electrical - Controls Replacement	EA	\$ 60,000.00	\$0	\$60,000	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0	\$0

Table 7: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$0	\$0	\$0	\$60,000	\$60,000	\$0	\$0	\$0	\$60,000	\$60,000
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$1,000	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0	\$1,000
30.3	Electrical - Allowance	L.S.	\$ 1,000.00	\$5,000	\$7,000	\$9,000	\$10,000	\$12,000	\$14,000	\$16,000	\$17,000	\$19,000	\$21,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$8,000	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$16,500	\$0	\$0	\$0	\$0	\$16,500	\$0	\$0	\$0	\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	\$12,500	\$0	\$0	\$0	\$0	\$12,500	\$0	\$0	\$0	\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	\$7,000	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0	\$0	\$0
PART IX: METAL WORK													
42.0	STAIR TOWERS												
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$4,000	\$4,000	\$8,000	\$8,000	\$12,000	\$12,000	\$16,000	\$16,000	\$16,000	\$16,000
43.0	MISCELLANEOUS												
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$0	\$1,000	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$37,200	\$0	\$37,200	\$0	\$37,200	\$0	\$37,200	\$0	\$37,200	\$0
43.3	Architectural Wall Repair	L.S.	\$ 1,000.00	\$10,000	\$0	\$10,000	\$0	\$10,000	\$10,000	\$10,000	\$0	\$10,000	\$0
45.0	PAINTING												
45.1	Painting Traffic Markings	EA	\$ 10.00	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750	\$2,750
SUB-TOTAL				\$346,085	\$243,625	\$222,950	\$217,055	\$363,275	\$311,585	\$412,650	\$213,305	\$424,650	\$419,230
15% Contingency				\$51,913	\$36,544	\$33,443	\$32,558	\$54,491	\$46,738	\$61,898	\$31,996	\$63,698	\$62,885
10%Engineering				\$34,609	\$24,363	\$22,295	\$21,706	\$36,328	\$31,159	\$41,265	\$21,331	\$42,465	\$41,923
TOTAL				\$432,606	\$304,531	\$278,688	\$271,319	\$454,094	\$389,481	\$515,813	\$248,051	\$491,098	\$484,865

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 8: HARBOR COURT

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$32,000	\$27,000	\$41,000	\$21,000	\$26,000	\$23,000	\$52,000	\$36,000	\$49,000	\$26,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$13,500	\$0	\$22,500	\$0	\$31,500	\$0	\$40,500	\$0	\$49,500	\$0
3.3a	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$3,400	\$0	\$5,100	\$0	\$6,800	\$0	\$8,500	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 15.00	\$0	\$1,200	\$0	\$1,800	\$0	\$2,400	\$0	\$3,000	\$0	\$3,600
PART III: STRUCTURAL CONCRETE FRAME REPAIRS											0	0	0
5.0	CONCRETE BEAM AND JOIST REPAIR										0	0	0
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$9,000	\$0	\$6,000	\$0	\$9,000	\$0	\$12,000	\$0	\$15,000	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$6,000	\$0	\$4,800	\$0	\$9,600	\$0	\$14,400	\$0	\$19,200	\$0
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$6,000	\$0	\$12,000	\$0	\$18,000	\$0	\$24,000	\$0	\$30,000	\$0
7.2	Wall Repair - Concrete Masonry Unit	S.F.	\$ 45.00	\$18,000	\$0	\$18,000	\$0	\$27,000	\$0	\$36,000	\$0	\$72,000	\$0
7.3	Wall Repair - Planter Boxes	L.S.	\$ 45.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.4	New Bumper Walls	L.S.	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PART IV: CRACKS AND JOINTS													
10.0	EXPANSION JOINT REPAIR AND REPLACEMENT												
10.3	Expansion Joint - Elastomeric Edged Concrete	L.F.	\$ 200.00	\$0	\$18,000	\$0	\$0	\$0	\$18,000	\$0	\$0	\$0	\$18,000
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$10,500	\$1,500	\$2,500	\$3,500	\$4,500	\$5,500	\$6,500	\$7,500	\$8,500	\$9,500
11.2	Replace Construction Joint Sealant	L.F.	\$ 3.00	\$12,000	\$0	\$12,000	\$0	\$12,000	\$0	\$12,000	\$0	\$12,000	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$0	\$0	\$0	\$0	\$63,000	\$0	\$0	\$0	\$0	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$45,000	\$0	\$45,000	\$0	\$0	\$0	\$45,000	\$0	\$45,000	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 800.00	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0	\$4,000	\$0
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 40.00	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0
25.5	Mechanical - Allowance	L.S.	\$ 1,000.00	\$14,000	\$18,000	\$23,000	\$28,000	\$32,000	\$37,000	\$42,000	\$46,000	\$51,000	\$55,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$675	\$1,275	\$1,950	\$2,625	\$2,625	\$3,225	\$3,900	\$4,575	\$5,250	\$5,850
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$14,000	\$0	\$14,000	\$0	\$14,000	\$0	\$14,000	\$0	\$14,000	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$920	\$3,680	\$7,200	\$5,520	\$10,400	\$11,080	\$13,600	\$44,280	\$16,800	\$118,080
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00	\$0	\$0	\$20,000	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$0	\$9,000	\$0	\$18,000	\$8,000	\$37,000	\$0	\$74,000	\$10,000	\$148,000

HONOLULU URBAN CORE PARKING MASTER PLAN

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Table 8: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
29.0	ELEVATORS												
30.1	Elevator - Cab Repair	EA	\$ 5,000.00	\$0	\$15,000	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0	\$0
30.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$0	\$0	\$0	\$90,000	\$0	\$0	\$0	\$0	\$90,000	\$0
30.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$0	\$15,000	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0	\$0
30.3	Electrical - Controls Replacement	EA	\$ 60,000.00	\$0	\$0	\$0	\$180,000	\$0	\$0	\$0	\$0	\$180,000	\$0
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$0	\$400,000	\$400,000	\$0	\$0	\$0	\$400,000	\$400,000	\$0	\$0
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$12,500	\$0	\$0	\$0	\$12,500	\$0	\$0	\$0	\$12,500
30.3	Electrical - Allowance	L.S.	\$ 1,000.00	\$14,000	\$18,000	\$23,000	\$28,000	\$32,000	\$37,000	\$42,000	\$46,000	\$51,000	\$55,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$24,000	\$0	\$0	\$0	\$0	\$24,000	\$0	\$0	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 18,500.00	\$111,000	\$0	\$0	\$0	\$0	\$111,000	\$0	\$0	\$0	\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	\$25,000	\$0	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0	\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	\$14,000	\$0	\$0	\$0	\$0	\$14,000	\$0	\$0	\$0	\$0
PART IX: METAL WORK													
42.0	STAIR TOWERS												
42.5	Stair Repair Allowance	L.S.	\$ 2,000.00	\$22,000	\$22,000	\$42,000	\$42,000	\$64,000	\$64,000	\$86,000	\$86,000	\$86,000	\$86,000
42.15	Replace Doors	EA	\$ 1,500.00	\$12,000	\$0	\$0	\$0	\$4,500	\$0	\$0	\$0	\$0	\$0
43.0	MISCELLANEOUS												
43.1	Façade Fabrication Repair	L.S.	\$ 500.00	\$10,000	\$0	\$15,000	\$0	\$25,000	\$0	\$40,000	\$0	\$60,000	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$120,450	\$0	\$120,450	\$0	\$120,450	\$0	\$120,450	\$0	\$120,450	\$0
43.3	Architectural Wall Repair	L.S.	\$ 20.00	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45.0	PAINTING												
45.1	Painting Traffic Markings	EA	\$ 10.00	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480	\$10,480
SUB-TOTAL				\$664,025	\$574,135	\$859,780	\$432,425	\$544,655	\$486,685	\$1,087,130	\$759,335	\$1,019,180	\$549,510
15% Contingency				\$99,604	\$86,120	\$128,967	\$64,864	\$81,698	\$73,003	\$163,070	\$113,900	\$152,877	\$82,427
10%Engineering				\$66,403	\$57,414	\$85,978	\$43,243	\$54,466	\$48,669	\$108,713	\$75,934	\$101,918	\$54,951
TOTAL				\$830,031	\$717,669	\$1,074,725	\$540,531	\$680,819	\$608,356	\$1,358,913	\$883,715	\$1,182,537	\$642,417

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 9: NEIL S. BLAISDELL CENTER

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$178,000	\$34,000	\$44,000	\$25,000	\$0	\$1,000	\$8,000	\$21,000	\$18,000	\$43,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$67,500	\$112,500	\$202,500	\$112,500	\$0	\$0	\$0	\$1,125	\$0	\$2,250
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$46,750	\$106,250	\$46,750	\$0	\$0	\$0	\$0	\$0	\$0
3.5	Floor Repair - Shallow Depth Overlay	S.F.	\$ 55.00	\$330,000	\$11,000	\$27,500	\$13,750	\$0	\$0	\$0	\$0	\$0	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 105.00	\$0	\$105,000	\$157,500	\$157,500	\$0	\$0	\$0	\$1,050	\$0	\$2,100
PART III: STRUCTURAL CONCRETE FRAME REPAIRS											0	0	0
5.0	STEEL BEAM REPAIR										0	0	0
5.1	Beam Repair - Partial Depth	S.F.	\$ 85.00	\$34,000	\$42,500	\$42,500	\$42,500	\$0	\$0	\$0	\$850	\$0	\$1,700
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Fiber Wrap Repair	S.F.	\$ -	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$48,000	\$0	\$60,000	\$0	\$0	\$0	\$0	\$1,200	\$0	\$2,400
PART IV: CRACKS AND JOINTS													
10.0	EXPANSION JOINT REPAIR AND REPLACEMENT												
10.3	Expansion Joint - Elastomeric Edged Concrete	L.F.	\$ 200.00	\$144,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$144,000	\$0
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$1,500	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11.2	Replace Construction Joint Sealant	L.F.	\$ 4.00	\$4,000	\$4,000	\$4,000	\$4,000	\$0	\$0	\$8,000	\$0	\$16,000	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.1	Replace Floor Drains / Supplemental	EA.	\$ 3,500.00	\$56,000	\$14,000	\$14,000	\$0	\$0	\$0	\$0	\$7,000	\$0	\$0
25.2	Mechanical - Pipe and Hangers	L.F.	\$ 75.00	\$456,000	\$7,500	\$15,000	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0
25.3	Mechanical - Replace Wall Unit A/C	EA	\$ 2,000.00	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$19,000	\$25,000	\$32,000	\$38,000	\$0	\$3,000	\$5,000	\$7,000	\$9,000	\$11,000
26.0	MECHANICAL - FIRE PROTECTION												
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$3,600	\$0	\$3,600	\$0	\$0	\$0	\$3,600	\$0	\$3,600	\$0
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$500,000	\$250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$750,000
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000
30.3	Electrical - CCTV Replacement	EA	\$ 1,000.00	\$0	\$15,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$19,000	\$25,000	\$32,000	\$38,000	\$0	\$5,000	\$10,000	\$20,000	\$30,000	\$50,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$28,000	\$0	\$0	\$0	\$0	\$0	\$0	\$28,000	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$66,000	\$0	\$0	\$0	\$0	\$0	\$0	\$66,000	\$0	\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	\$200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$0	\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Table 9: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
PART VIII: ARCHITECTURAL REPAIRS													
36.0 LANDSCAPING													
36.1	Concrete Planter Box on Grade Repair	EA	\$ 7,000.00	\$42,000	\$0	\$21,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36.2	Supported Concrete Planter Box Repair	EA	\$ 10,000.00	\$1,040,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35.0 BRICK / MASONRY REPAIRS													
PART IX: METAL WORK													
42.0 STAIR TOWERS													
42.5	Stair Repair Allowance	L.S.	\$ 2,000.00	\$12,000	\$12,000	\$24,000	\$24,000	\$0	\$0	\$8,000	\$16,000	\$16,000	\$24,000
43.0 MISCELLANEOUS													
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$118,200	\$0	\$118,200	\$0	\$0	\$0	\$118,200	\$0	\$118,200	\$0
43.3	Floor Repair - Asphalt Partial Depth	S.F.	\$ 2.00	\$304,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45.0 PAINTING													
45.1	Painting Traffic Markings	EA	\$ 10.00	\$14,670	\$14,670	\$14,670	\$14,670	\$0	\$14,670	\$14,670	\$14,670	\$14,670	\$14,670
SUB-TOTAL				\$3,746,470	\$718,920	\$933,220	\$516,670	\$0	\$23,670	\$175,470	\$448,895	\$369,470	\$906,120
15% Contingency				\$561,971	\$107,838	\$139,983	\$77,501	\$0	\$3,551	\$26,321	\$67,334	\$55,421	\$135,918
10%Engineering				\$374,647	\$71,892	\$93,322	\$51,667	\$0	\$2,367	\$17,547	\$44,890	\$36,947	\$90,612
TOTAL				\$4,683,088	\$898,650	\$1,166,525	\$645,838	\$0	\$29,588	\$219,338	\$530,899	\$439,561	\$1,056,708

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 10: LANI HULI

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 COST	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS												
1.1	Project Mobilization	L.S.	5%	\$9,000	\$8,000	\$10,000	\$0	\$10,000	\$10,000	\$10,000	\$0	\$10,000	\$10,000
3.0	CONCRETE FLOOR REPAIR												
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$450	\$0	\$1,350	\$0	\$2,250	\$0	\$3,150	\$0	\$4,050	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$0	\$850	\$0	\$1,700	\$0	\$2,550	\$0	\$3,400	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 23.00	\$0	\$0	\$460	\$0	\$690	\$0	\$920	\$0	\$1,150	\$0
4.0	CONCRETE CEILING REPAIR												
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 15.00	\$150	\$0	\$300	\$0	\$450	\$0	\$600	\$0	\$750	\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS											0	0	0
5.0	CONCRETE BEAM AND JOIST REPAIR										0	0	0
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$600	\$0	\$1,200	\$0	\$1,800	\$0	\$2,400	\$0
6.0	CONCRETE COLUMN REPAIR												
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$0	\$900	\$0	\$1,500	\$0	\$2,100	\$0	\$2,700	\$0
7.0	CONCRETE WALL REPAIR												
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$600	\$0	\$1,200	\$0	\$1,800	\$0	\$2,400	\$0	\$3,000
7.2	Wall Repair - Concrete Masonry Unit	S.F.	\$ 45.00	\$0	\$1,350	\$0	\$2,250	\$0	\$3,150	\$0	\$4,050	\$0	\$4,950
PART IV: CRACKS AND JOINTS													
11.0	CRACK AND JOINT REPAIR												
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$5,000	\$0	\$10,000	\$0	\$15,000	\$0	\$15,000	\$0	\$15,000	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
16.0	WATERPROOFING MEMBRANE												
16.1	Traffic Topping - New System	S.F.	\$ 3.50	\$0	\$0	\$70,000	\$0	\$0	\$0	\$0	\$0	\$70,000	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$50,000	\$0	\$0	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS													
25.0	MECHANICAL - DRAINAGE												
25.2	Replace Floor Drains	EA.	\$ 800.00	\$6,400	\$0	\$0	\$0	\$6,400	\$0	\$0	\$0	\$6,400	\$0
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 30.00	\$18,000	\$0	\$0	\$0	\$18,000	\$0	\$0	\$0	\$18,000	\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$15,000	\$5,000	\$6,000	\$7,000	\$8,000	\$10,000	\$11,000	\$12,000	\$13,000	\$14,000
26.0	MECHANICAL - FIRE PROTECTION												
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$450	\$900	\$1,350	\$1,800	\$1,800	\$2,250	\$2,700	\$3,150	\$3,600	\$4,050
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0	\$1,600	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$4,000	\$960	\$8,000	\$1,440	\$12,000	\$2,880	\$16,000	\$11,480	\$20,000	\$30,640
27.0	MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 3,000.00	\$21,000	\$18,000	\$0	\$0	\$21,000	\$18,000	\$0	\$0	\$21,000	\$18,000
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$4,000	\$2,000	\$12,000	\$5,000	\$20,000	\$10,000	\$28,000	\$19,000	\$36,000	\$38,000
30.0	ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$0	\$104,000	\$0	\$0	\$0	\$104,000	\$0	\$0	\$0	\$104,000
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$0	\$3,000	\$0	\$0	\$0	\$3,000	\$0	\$0	\$0	\$3,000
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$20,000	\$12,000	\$14,000	\$16,000	\$18,000	\$20,000	\$22,000	\$24,000	\$26,000	\$28,000
PART IX: METAL WORK													
42.0	STAIR TOWERS												

Table 10: CONTINUED

43.0 MISCELLANEOUS													
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$4,000	\$0	\$0	\$0	\$0	\$0	\$4,000	\$0	\$0	\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$11,250	\$0	\$11,250	\$0	\$11,250	\$0	\$11,250	\$0	\$11,250	\$0
45.0 PAINTING													
45.1	Painting Traffic Markings	EA	\$ 10.00	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670	\$1,670
SUB-TOTAL				\$191,970	\$161,480	\$158,330	\$44,360	\$216,510	\$200,750	\$202,340	\$95,750	\$285,970	\$277,310
15% Contingency				\$28,796	\$24,222	\$23,750	\$6,654	\$32,477	\$30,113	\$30,351	\$14,363	\$42,896	\$41,597
10%Engineering				\$19,197	\$16,148	\$15,833	\$4,436	\$21,651	\$20,075	\$20,234	\$9,575	\$28,597	\$27,731
TOTAL				\$239,963	\$201,850	\$197,913	\$55,450	\$270,638	\$250,938	\$252,925	\$110,113	\$328,866	\$318,907

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 11: KEKAULIKE COURTYARD

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 QUANTITY	2011- 2015 COST	2016-2020 QUANTITY	2016- 2020 COST	2021-2025 QUANTITY	2021- 2025 COST	2026-2030 QUANTITY	2026- 2030 COST	2031-2035 QUANTITY	2031- 2035 COST	2036-2040 QUANTITY	2036- 2040 COST	2041-2045 QUANTITY	2041- 2045 COST	2046-2050 QUANTITY	2046- 2050 COST	2051-2055 QUANTITY	2051- 2055 COST	2056-2060 QUANTITY	2056- 2060 COST
1.0	GENERAL REQUIREMENTS																						
1.1	Project Mobilization	L.S.	5%	1	\$8,000	1	\$26,000	1	\$5,000	1	\$14,000	1	\$6,000	1	\$18,000	1	\$19,000	1	\$15,000	1	\$9,000	1	\$21,000
3.0	CONCRETE FLOOR REPAIR																						
3.1	Floor Repair - Partial Depth	S.F.	\$ 25.00	160	\$4,000		\$0	300	\$7,500		\$0	400	\$10,000		\$0	500	\$12,500		\$0	600	\$15,000		\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00		\$0		\$0	10	\$850		\$0	20	\$1,700		\$0	30	\$2,550		\$0	40	\$3,400		\$0
3.4	Floor Repair - Slab-On-Grade	S.F.	\$ 45.00	40	\$1,800		\$0	10	\$450		\$0	20	\$900		\$0	30	\$1,350		\$0	40	\$1,800		\$0
4.0	CONCRETE CEILING REPAIR																						
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 60.00	250	\$15,000		\$0	200	\$12,000		\$0	300	\$18,000		\$0	400	\$24,000		\$0	500	\$30,000		\$0
5.0	CONCRETE BEAM AND JOIST REPAIR																	0		0		0	
5.1	Beam Repair - Partial Depth	S.F.	\$ 60.00	50	\$3,000		\$0	50	\$3,000		\$0	50	\$3,000		\$0	50	\$3,000		\$0	50	\$3,000		\$0
6.0	CONCRETE COLUMN REPAIR																						
6.1	Column Repair - Partial Depth	S.F.	\$ 60.00	100	\$6,000		\$0	200	\$12,000		\$0	200	\$12,000		\$0	200	\$12,000		\$0	200	\$12,000		\$0
7.0	CONCRETE WALL REPAIR																						
7.1	Wall Repair - Partial Depth	S.F.	\$ 50.00	70	\$3,500		\$0	50	\$2,500		\$0	100	\$5,000		\$0	150	\$7,500		\$0	200	\$10,000		\$0
16.0	WATERPROOFING MEMBRANE																						
16.1	Traffic Topping - New System	S.F.	\$ 3.50		\$0	64000	\$224,000		\$0		\$0		\$0		\$0		\$0	64000	\$224,000		\$0		\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 2.50		\$0		\$0		\$0	64000	\$160,000		\$0	64000	\$160,000		\$0		\$0		\$0	64000	\$160,000
25.0	MECHANICAL - DRAINAGE																						
25.2	Replace Floor Drains	EA.	\$ 800.00		\$0	4	\$3,200		\$0		\$0		\$0	8	\$6,400		\$0		\$0		\$0	8	\$6,400
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 40.00		\$0	400	\$16,000		\$0		\$0		\$0	800	\$32,000		\$0		\$0		\$0	800	\$32,000
25.5	Mechanical - Allowance	L.S.	\$ 1,000.00	3	\$3,000	4	\$4,000	5	\$5,000	6	\$6,000	7	\$7,000	8	\$8,000	9	\$9,000	10	\$10,000	11	\$11,000	12	\$12,000
26.0	MECHANICAL - FIRE PROTECTION																						
26.3	Sprinkler Head Replacement	EA	\$ 75.00	5	\$375	10	\$750	16	\$1,200	21	\$1,575	21	\$1,575	26	\$1,950	31	\$2,325	36	\$2,700	41	\$3,075	47	\$3,525
26.4	Replace Fire Extinguishers	EA	\$ 200.00	15	\$3,000		\$0	15	\$3,000		\$0	15	\$3,000		\$0	15	\$3,000		\$0	15	\$3,000		\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	5	\$200	21	\$840	100	\$4,000	31	\$1,240	150	\$6,000	62	\$2,480	200	\$8,000	248	\$9,920	300	\$12,000	662	\$26,480
27.0	MECHANICAL - HVAC																						
27.1	Replace Ventilation Fans	EA.	\$ 3,000.00		\$0	6	\$18,000		\$0		\$0		\$0	6	\$18,000		\$0		\$0		\$0	6	\$18,000
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	4	\$4,000	2	\$2,000	8	\$8,000	4	\$4,000	12	\$12,000	8	\$8,000	16	\$16,000	17	\$17,000	20	\$20,000	33	\$33,000
29.0	ELEVATORS																						
29.1	Elevator - Cab Repair	EA	\$ 5,000.00		\$0	1	\$5,000		\$0		\$0		\$0		\$0	1	\$5,000		\$0		\$0		\$0
29.2	Elevator - Cab Replacement	EA	\$ 30,000.00		\$0		\$0		\$0	1	\$30,000		\$0		\$0		\$0		\$0		\$0	1	\$30,000
29.3	Electrical - Controls Repair	EA	\$ 5,000.00		\$0	1	\$5,000		\$0		\$0		\$0		\$0	1	\$5,000		\$0		\$0		\$0
29.3	Electrical - Controls Replacement	EA	\$ 60,000.00		\$0		\$0		\$0	1	\$60,000		\$0		\$0		\$0		\$0		\$0	1	\$60,000
30.0	ELECTRICAL																						
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00		\$0	115000	\$230,000		\$0		\$0		\$0		\$0	115000	\$230,000		\$0		\$0		\$0
30.3	Electrical - Allowance	EA	\$ 1,000.00	3	\$3,000	4	\$4,000	5	\$5,000	6	\$6,000	7	\$7,000	8	\$8,000	9	\$9,000	10	\$10,000	11	\$11,000	12	\$12,000
31.0	PARKING ACCESS AND REVENUE CONTROL (PARCS)																						
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	2	\$8,000		\$0		\$0		\$0		\$0	2	\$8,000		\$0		\$0		\$0		\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	1	\$16,500		\$0		\$0		\$0		\$0	1	\$16,500		\$0		\$0		\$0		\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	1	\$50,000		\$0		\$0		\$0		\$0	1	\$50,000		\$0		\$0		\$0		\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	1	\$12,500		\$0		\$0		\$0		\$0	1	\$12,500		\$0		\$0		\$0		\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	1	\$3,500		\$0		\$0		\$0		\$0	1	\$3,500		\$0		\$0		\$0		\$0

HONOLULU URBAN CORE PARKING MASTER PLAN

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Table 11: CONTINUED

42.0 STAIR TOWERS																							
42.5	Stair Repair Allowance	L.S.	\$ 2,000.00	2	\$4,000	2	\$4,000	5	\$10,000	5	\$10,000	7	\$14,000	7	\$14,000	9	\$18,000	9	\$18,000	9	\$18,000	9	\$18,000
42.15	Replace Doors	EA	\$ 1,500.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
43.0 MISCELLANEOUS																							
43.1	Repair Interior Signage	L.S.	\$ -		\$0		\$0	1	\$0		\$0		\$0		\$0	1	\$0		\$0		\$0		\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	9100	\$13,650		\$0	9100	\$13,650		\$0	9100	\$13,650		\$0	9100	\$13,650		\$0	9100	\$13,650		\$0
43.3	Architectural Wall Repair	L.S.	\$ 20.00	100	\$2,000		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
43.5	Rolling Grill Replacement	L.S.	\$ 10,000.00		\$0		\$0	1	\$10,000		\$0		\$0		\$0		\$0		\$0	1	\$10,000		\$0
45.0 PAINTING																							
45.1	Painting Traffic Markings	EA	\$ 10.00	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380	138	\$1,380
SUB-TOTAL					\$166,405		\$544,170		\$104,530		\$294,195		\$122,205		\$368,710		\$402,255		\$308,000		\$187,305		\$433,785
15% Contingency					\$24,961		\$81,626		\$15,680		\$44,129		\$18,331		\$55,307		\$60,338		\$46,200		\$28,096		\$65,068
10%Engineering					\$16,641		\$54,417		\$10,453		\$29,420		\$12,221		\$36,871		\$40,226		\$30,800		\$18,731		\$43,379
TOTAL					\$208,006		\$680,213		\$130,663		\$367,744		\$152,756		\$460,888		\$502,819		\$385,000		\$234,131		\$542,231

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 12: KUKUI PLAZA

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
1.0	GENERAL REQUIREMENTS											
1.1	Project Mobilization	L.S.	5%	\$108,000	\$33,000	\$6,000	\$23,000	\$110,000	\$32,000	\$28,000	\$31,000	\$126,000
3.0	CONCRETE FLOOR REPAIR											
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	\$0	\$22,500	\$0	\$27,000	\$0	\$31,500	\$0	\$36,000	\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00	\$0	\$3,400	\$0	\$5,100	\$0	\$6,800	\$0	\$8,500	\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 35.00	\$0	\$1,400	\$0	\$2,100	\$0	\$2,800	\$0	\$3,500	\$0
4.0	CONCRETE CEILING REPAIR											
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 125.00	\$2,500	\$0	\$5,000	\$0	\$10,000	\$0	\$20,000	\$0	\$40,000
PART III: STRUCTURAL CONCRETE FRAME REPAIRS												
CONCRETE BEAM AND JOIST REPAIR												
5.0												
5.1	Beam Repair - Partial Depth	S.F.	\$ 105.00	\$2,100	\$0	\$4,200	\$0	\$8,400	\$0	\$16,800	\$0	\$33,600
6.0	CONCRETE COLUMN REPAIR											
6.1	Column Repair - Partial Depth	S.F.	\$ 95.00	\$950	\$0	\$1,900	\$0	\$3,800	\$0	\$7,600	\$0	\$15,200
7.0	CONCRETE WALL REPAIR											
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00	\$0	\$1,800	\$0	\$3,600	\$0	\$7,200	\$0	\$14,400	\$0
PART IV: CRACKS AND JOINTS												
EXPANSION JOINT REPAIR AND REPLACEMENT												
10.0												
10.3	Expansion Joint - Elastomeric Edged Concrete	L.F.	\$ 200.00	\$680,000	\$0	\$0	\$0	\$680,000	\$0	\$0	\$0	\$680,000
11.0	CRACK AND JOINT REPAIR											
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00	\$0	\$15,000	\$0	\$30,000	\$0	\$30,000	\$0	\$30,000	\$0
11.2	Replace Construction Joint Sealant	L.F.	\$ 4.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11.5	Epoxy Injection	L.F.	\$ 30.00	\$0	\$9,000	\$0	\$18,000	\$0	\$36,000	\$0	\$36,000	\$0
16.0	WATERPROOFING MEMBRANE											
16.1	Traffic Topping - New System	S.F.	\$ 5.00	\$0	\$25,000	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 3.00	\$0	\$0	\$0	\$15,000	\$0	\$15,000	\$0	\$0	\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS												
25.0	MECHANICAL - DRAINAGE											
25.2	Replace Floor Drains	EA.	\$ 2,000.00	\$20,000	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0	\$20,000
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 70.00	\$70,000	\$0	\$0	\$0	\$70,000	\$0	\$0	\$0	\$70,000
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	\$18,000	\$23,000	\$27,000	\$32,000	\$36,000	\$41,000	\$45,000	\$50,000	\$55,000
26.0	MECHANICAL - FIRE PROTECTION											
26.3	Sprinkler Head Replacement	EA	\$ 75.00	\$3,375	\$5,100	\$6,825	\$6,825	\$8,550	\$10,200	\$11,925	\$13,650	\$15,300
26.4	Replace Fire Extinguishers	EA	\$ 200.00	\$0	\$8,000	\$0	\$8,000	\$0	\$8,000	\$0	\$8,000	\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	\$3,640	\$16,000	\$5,440	\$24,000	\$10,920	\$32,000	\$43,600	\$40,000	\$116,280

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 12: CONTINUED

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2016-2020 COST	2021-2025 COST	2026-2030 COST	2031-2035 COST	2036-2040 COST	2041-2045 COST	2046-2050 COST	2051-2055 COST	2056-2060 COST
27.0 MECHANICAL - HVAC												
27.1	Replace Ventilation Fans	EA.	\$ 10,000.00	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0	\$50,000
27.2	Ventilation Allowance	L.S.	\$ 1,000.00	\$9,000	\$40,000	\$18,000	\$60,000	\$36,000	\$80,000	\$73,000	\$100,000	\$145,000
29.0 ELEVATORS												
29.1	Elevator - Cab Repair	EA	\$ 5,000.00	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0	\$0	\$0
29.2	Elevator - Cab Replacement	EA	\$ 30,000.00	\$0	\$90,000	\$0	\$0	\$0	\$0	\$90,000	\$0	\$0
29.3	Electrical - Controls Repair	EA	\$ 5,000.00	\$0	\$0	\$0	\$0	\$15,000	\$0	\$0	\$0	\$0
29.4	Electrical - Controls Replacement	EA	\$ 60,000.00	\$0	\$180,000	\$0	\$0	\$0	\$0	\$180,000	\$0	\$0
30.0 ELECTRICAL												
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	\$1,168,000	\$0	\$0	\$0	\$1,168,000	\$0	\$0	\$0	\$1,168,000
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	\$11,250	\$0	\$0	\$0	\$11,250	\$0	\$0	\$0	\$11,250
30.3	Electrical - Allowance	EA	\$ 1,000.00	\$18,000	\$23,000	\$27,000	\$32,000	\$36,000	\$41,000	\$45,000	\$50,000	\$55,000
31.0 PARKING ACCESS AND REVENUE CONTROL (PARCS)												
31.1	PARCS - New Gate Arm	EA	\$ 4,000.00	\$8,000	\$0	\$0	\$0	\$0	\$8,000	\$0	\$0	\$0
31.2	PARCS - New Ticket Dispenser	EA	\$ 16,500.00	\$16,500	\$0	\$0	\$0	\$0	\$16,500	\$0	\$0	\$0
31.2	PARCS - New Fee Computer	EA	\$ 50,000.00	\$50,000	\$0	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0
31.3	PARCS - New Parking Booth	EA	\$ 12,500.00	\$12,500	\$0	\$0	\$0	\$0	\$12,500	\$0	\$0	\$0
31.4	PARCS - New Concrete Island	EA	\$ 3,500.00	\$3,500	\$0	\$0	\$0	\$0	\$3,500	\$0	\$0	\$0
PART IX: METAL WORK												
42.0 STAIR TOWERS												
42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	\$6,000	\$12,000	\$12,000	\$18,000	\$18,000	\$24,000	\$24,000	\$24,000	\$24,000
42.15	Replace Doors	EA	\$ 1,500.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.0 MISCELLANEOUS												
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	\$5,000	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0	\$5,000
43.2	Façade Repair Allowance	L.S.	\$ 1.50	\$0	\$170,100	\$0	\$170,100	\$0	\$170,100	\$0	\$170,100	\$0
43.3	Architectural Wall Repair	L.S.	\$ 8.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.4	Architectural Window Replacement	L.S.	\$ 8.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43.5	Rolling Grill Replacement	EA	\$ 8.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
45.0 PAINTING												
45.1	Painting Traffic Markings	EA	\$ 10.00	\$7,720	\$7,720	\$7,720	\$7,720	\$7,720	\$7,720	\$7,720	\$7,720	\$7,720
			SUB-TOTAL	\$2,274,035	\$686,020	\$121,085	\$482,445	\$2,319,640	\$665,820	\$592,645	\$647,870	\$2,637,350
			15% Contingency	\$341,105	\$102,903	\$18,163	\$72,367	\$347,946	\$99,873	\$88,897	\$97,181	\$395,603
			10%Engineering	\$227,404	\$68,602	\$12,109	\$48,245	\$231,964	\$66,582	\$0	\$0	\$0
			TOTAL	\$2,842,544	\$857,525	\$151,356	\$603,056	\$2,899,550	\$832,275	\$681,542	\$745,051	\$3,032,953

HONOLULU URBAN CORE PARKING MASTER PLAN

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Table 13: HARBOR VILLAGE

WORK ITEM	DESCRIPTION	UNITS	UNIT PRICE	2011-2015 QUANTITY	2011- 2015 COST	2016-2020 QUANTITY	2016- 2020 COST	2021-2025 QUANTITY	2021- 2025 COST	2026-2030 QUANTITY	2026- 2030 COST	2031-2035 QUANTITY	2031- 2035 COST	2036-2040 QUANTITY	2036- 2040 COST	2041-2045 QUANTITY	2041- 2045 COST	2046-2050 QUANTITY	2046- 2050 COST	2051-2055 QUANTITY	2051- 2055 COST	2056-2060 QUANTITY	2056- 2060 COST
1.0	GENERAL REQUIREMENTS																						
1.1	Project Mobilization	L.S.	5%	1	\$0		\$10,000	1	\$0	1	\$0	1	\$10,000	1	\$10,000	1	\$0	1	\$0	1	\$10,000	1	\$10,000
3.0	CONCRETE FLOOR REPAIR																						
3.1	Floor Repair - Partial Depth	S.F.	\$ 45.00	10	\$450		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
3.3	Floor Repair - Full Depth	S.F.	\$ 85.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
3.5	Floor Repair - Slab-On-Grade	S.F.	\$ 35.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
4.0	CONCRETE CEILING REPAIR																						
4.1	Ceiling Repair - Partial Depth	S.F.	\$ 125.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
PART III: STRUCTURAL CONCRETE FRAME REPAIRS																			0	0		0	
5.0	CONCRETE BEAM AND JOIST REPAIR																		0	0		0	
5.1	Beam Repair - Partial Depth	S.F.	\$ 105.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
6.0	CONCRETE COLUMN REPAIR																						
6.1	Column Repair - Partial Depth	S.F.	\$ 95.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
7.0	CONCRETE WALL REPAIR																						
7.1	Wall Repair - Partial Depth	S.F.	\$ 60.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
7.2	Wall Repair - Concrete Masonry Unit	S.F.	\$ 85.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
PART IV: CRACKS AND JOINTS																							
11.0	CRACK AND JOINT REPAIR																						
11.1	Route / Seal Floor Cracks	L.F.	\$ 5.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
11.2	Replace Construction Joint Sealant	L.F.	\$ 4.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
11.5	Epoxy Injection	L.F.	\$ 30.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
16.0	WATERPROOFING MEMBRANE																						
16.1	Traffic Topping - New System	S.F.	\$ 5.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
16.4	Traffic Topping - Recoat	S.F.	\$ 3.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
PART VII: MECHANICAL / ELECTRICAL SYSTEMS																							
25.0	MECHANICAL - DRAINAGE																						
25.2	Replace Floor Drains	EA.	\$ 2,000.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
25.3	Mechanical - Pipe and Hangers	L.F.	\$ 70.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
25.4	Mechanical - Allowance	L.S.	\$ 1,000.00	4	\$4,000	5	\$5,000	6	\$6,000	7	\$7,000	9	\$9,000	10	\$10,000	11	\$11,000	12	\$12,000	14	\$14,000	15	\$15,000
26.0	MECHANICAL - FIRE PROTECTION																						
26.3	Sprinkler Head Replacement	EA	\$ 75.00	6	\$450	12	\$900	19	\$1,425	25	\$1,875	25	\$1,875	31	\$2,325	37	\$2,775	43	\$3,225	50	\$3,750	56	\$4,200
26.4	Replace Fire Extinguishers	EA	\$ 200.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
26.5	Sprinkler Line Repair	L.F.	\$ 40.00	6	\$240	25	\$1,000		\$0	37	\$1,480		\$0	75	\$3,000		\$0	298	\$11,920		\$0	795	\$31,800
27.0	MECHANICAL - HVAC																						
27.1	Replace Ventilation Fans	EA.	\$ 5,000.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
27.2	Ventilation Allowance	L.S.	\$ 1,000.00		\$0	2	\$2,000		\$0	5	\$5,000		\$0	10	\$10,000		\$0	20	\$20,000		\$0	40	\$40,000
30.0	ELECTRICAL																						
30.1	Electrical - Light Fixture Replacement	S.F.	\$ 2.00	10000	\$20,000	57600	\$115,200		\$0		\$0	10000	\$20,000	57600	\$115,200		\$0		\$0	10000	\$20,000	57600	\$115,200
30.2	Electrical - Exit Sign Replacement	EA	\$ 250.00	16	\$4,000		\$0		\$0		\$0	16	\$4,000		\$0		\$0		\$0	16	\$4,000		\$0
30.3	Electrical - Allowance	EA	\$ 1,000.00	4	\$4,000	5	\$5,000	6	\$6,000	7	\$7,000	9	\$9,000	10	\$10,000	11	\$11,000	12	\$12,000	14	\$14,000	15	\$15,000
PART IX: METAL WORK																							
42.0	STAIR TOWERS																						

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Table 13: CONTINUED

42.9	Stair Repair Allowance	L.S.	\$ 2,000.00	3	\$6,000	3	\$6,000	6	\$12,000	6	\$12,000	8	\$16,000	8	\$16,000	11	\$22,000	11	\$22,000	11	\$22,000	11	\$22,000
42.15	Replace Doors	EA	\$ 1,500.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
43.0 MISCELLANEOUS																							
43.1	Repair Interior Signage	L.S.	\$ 1,000.00	1	\$1,000		\$0		\$0		\$0	1	\$1,000		\$0		\$0		\$0	1	\$1,000		\$0
43.2	Façade Repair Allowance	L.S.	\$ 1.50	20700	\$31,050		\$0	20700	\$31,050		\$0	20700	\$31,050		\$0	20700	\$31,050		\$0	20700	\$31,050		\$0
43.3	Architectural Wall Repair	L.S.	\$ 1,000.00	3	\$3,000		\$0	10	\$10,000		\$0	10	\$10,000		\$0	20	\$20,000		\$0	25	\$25,000		\$0
43.4	Architectural Grill Replacement	L.S.	\$ 8,000.00		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
45.0 PAINTING																							
45.1	Painting Traffic Markings	EA	\$ 10.00	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400	140	\$1,400
SUB-TOTAL					\$75,590		\$146,500		\$67,875		\$35,755		\$113,325		\$177,925		\$99,225		\$82,545		\$146,200		\$254,600
15% Contingency					\$11,339		\$21,975		\$10,181		\$5,363		\$16,999		\$26,689		\$14,884		\$12,382		\$21,930		\$38,190
10%Engineering					\$7,559		\$14,650		\$6,788		\$3,576		\$11,333		\$17,793		\$9,923		\$0		\$0		\$0
TOTAL					\$94,488		\$183,125		\$84,844		\$44,694		\$141,656		\$222,406		\$124,031		\$94,927		\$168,130		\$292,790

AUGUST 11, 2010

Table 14: HONOLULU PARKING SYSTEMS BUDGET SHEET

HONOLULU PARKING SYSTEMS BUDGET SHEET 50 YEAR BUDGET FORECAST												
Project # 37-8151.00												August 3, 2010
Garage Number		2011 to 2015	2016 to 2020	2021 to 2025	2026 to 2030	2031 to 2035	2036 to 2040	2041 to 2045	2046 to 2050	2050 to 2055	2056 to 2060	Category Total
	Facility											
1	Chinatown Gateway Plaza	\$430,000	\$300,000	\$280,000	\$270,000	\$450,000	\$390,000	\$520,000	\$250,000	\$490,000	\$480,000	\$ 3,860,000
2	Marin Tower	\$610,000	\$850,000	\$300,000	\$490,000	\$520,000	\$570,000	\$540,000	\$990,000	\$930,000	\$750,000	\$ 6,550,000
3	Harbor Court	\$830,000	\$720,000	\$1,070,000	\$540,000	\$680,000	\$610,000	\$1,360,000	\$880,000	\$1,180,000	\$640,000	\$ 8,510,000
4	Harbor Village	\$90,000	\$180,000	\$80,000	\$40,000	\$140,000	\$220,000	\$120,000	\$90,000	\$170,000	\$290,000	\$ 1,420,000
5	Kekaulike Courtyard	\$208,006	\$680,213	\$130,663	\$367,744	\$152,756	\$460,888	\$502,819	\$385,000	\$234,131	\$542,231	\$ 3,664,450
6	Smith-Beretania	\$20,000	\$190,000	\$140,000	\$40,000	\$70,000	\$150,000	\$270,000	\$160,000	\$310,000	\$160,000	\$ 1,510,000
7	Hale Pauahi	\$650,000	\$920,000	\$320,000	\$290,000	\$450,000	\$510,000	\$760,000	\$360,000	\$1,020,000	\$880,000	\$ 6,160,000
8	Kukui Plaza	\$400,000	\$2,840,000	\$860,000	\$150,000	\$600,000	\$2,900,000	\$830,000	\$680,000	\$750,000	\$3,030,000	\$ 13,040,000
9	Civic Center	\$700,000	\$720,000	\$870,000	\$580,000	\$570,000	\$370,000	\$1,620,000	\$1,170,000	\$910,000	\$1,310,000	\$ 8,820,000
12	Neil S. Blaisdell Center	\$4,680,000	\$900,000	\$1,170,000	\$650,000	\$0	\$30,000	\$220,000	\$530,000	\$440,000	\$1,060,000	\$ 9,680,000
	Neil S. Blaisdell Center - Demolition/Replacement					\$29,940,000						\$ 29,940,000
13	Lani Huli (Kailua)	\$240,000	\$200,000	\$200,000	\$60,000	\$270,000	\$250,000	\$250,000	\$110,000	\$330,000	\$320,000	\$ 2,230,000
												\$ 95,384,450
Opinion of 5-Year Budget for Structure Repair and Maintenance		\$ 8,858,006	\$8,500,213	\$ 5,420,663	\$ 3,477,744	\$ 33,842,756	\$ 6,460,888	\$ 6,992,819	\$ 5,605,000	\$ 6,764,131	\$ 9,462,231	
										50 Year Budget - Structure Repair and Maintenance		
Notes: 1. All costs show in 2010 Dollars. 2. Includes 15% contingency, 10% engineering/design/soft costs												



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1.3 TYPES OF MAINTENANCE

The purpose of parking structure maintenance program is to assure proper and timely preventive actions to reduce premature deterioration of structural elements and equipment failures. The restoration requirements outlined in this report have been adapted from the book titled "Parking Structures" written by Walker professionals and from the maintenance manual "Parking Garage Maintenance Manual, Fourth Edition," published by the National Parking Association.

An important objective in restoring existing structures is to reduce future operating and restoration costs. This report addresses improvement actions required to extend the life of the parking structures. Maintenance must be performed at regular intervals if the full benefit of the effort is to be realized. Irregular or incomplete improvements will provide a marginal return on investment. To ensure that a maintenance program is functional, establish a schedule and follow appropriate restoration procedures. Maintenance actions include:

- **Preventive Maintenance** – Preventive maintenance includes actions that tend to extend the facility service life. These items include reapplication of membranes, joint sealants and expansion joints. Preventive maintenance does not usually include the capital expenditures associated with structural repairs.
- **Replacement** – Replacement actions include replacement of structural and operational items at the end of their service lives. Items such as lighting, elevators, plumbing are included. Replacement maintenance includes the capital expenditures associated with structural repairs.
- **Routine Maintenance** – Routine maintenance includes aesthetic and other housekeeping actions such as cleaning and washing down floor surfaces. Routine maintenance can also include annual or ongoing repairs to structural and operational elements. This could include restoration of portions of a preventive or replacement improvement systems such as: repairing leaking joint sealant, clearing plugged drain lines, replacing damaged light fixtures, small area repairs to spalled or delaminated concrete, replacing expansion joint seals and other similar work.

WHY IS MAINTENANCE IMPORTANT?

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



WALKER
PARKING CONSULTANTS

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We have evaluated the maintenance requirements based on our assessment of the facilities and limited nondestructive testing to qualify construction materials and as-built conditions. The assessment review assists in developing the conceptual maintenance program based on factors such as:

- Age and geographic location.
- Structural system and the design details involved.
- Quality of construction material specified.
- Construction quality or deficiencies.
- Existing distress in structural elements, such as spalling, cracking, scaling, or excessive deformations.
- Corrosion-protection system specified or implemented.
- Operational elements.

The cost tables identify relevant maintenance elements, procedures and schedules for maintaining the structure. The cost tables include costs for preventive restoration and replacement. Routine maintenance is not included in the cost tables because these items involve details of the daily operation that are beyond the scope of this overall maintenance evaluation. Regularly scheduled walk-through inspections would monitor the effectiveness of the maintenance programs.

The purpose of facility maintenance is to assure proper and timely preventive actions to reduce premature deterioration of structural elements and equipment failures. Routine maintenance actions that include periodic repairs and/or corrective actions are necessary to maintain serviceability and facility operations.

Regular inspections of the parking structures by a qualified engineer to evaluate if progressing deterioration poses a life safety risk to the patrons or compromise the structural integrity of the structures are recommended.



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STATEMENT OF LIMITING CONDITIONS

This report is subject to the following limiting conditions:

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7. Our agreement to allow any party to use and rely upon this report is expressly subject to and limited by such party's agreeing to and abiding by the same terms and conditions



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9. The projections presented in the analysis assume responsible ownership and competent management. Any departure from this assumption may have a negative impact on the conclusions.



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REPAIR WORK GLOSSARY

The following glossary briefly explains in non-technical terms some of the more common types of repairs required in parking structures.

FLOOR REPAIR

Floor Repair – Partial Depth: remove unsound areas of concrete on top side of slab (typically 2 to 4 inches deep) and pour back replacement concrete.

Floor Repair – Full Depth: saw-cut and remove unsound concrete for the full slab depth, replace deteriorated reinforcing and/or install supplemental reinforcing and pour back replacement concrete.

CEILING REPAIR

Ceiling Repair – Partial Depth: sawcut and remove areas of unsound concrete on the underside of the slab (typically 2 to 4 inches deep) and pour back replacement concrete.

BEAM, COLUMN, WALL AND TEE STEM REPAIR

Local saw-cutting and removal of deteriorated sections of these concrete elements, and placement of repair concrete. Repair depth is typically 2 to 5 inches.

EXPANSION JOINT REPAIR

Expansion Joint Replacement – remove and replace existing leaking/failed expansion joints. Expansion joints are gaps between different sections of a building that accommodate normal building expansion and contraction movement, and should be waterproofed to keep water and salt out.

SEALANT (CAULK) INSTALLATION

Route / Seal Floor Cracks: fill cracks in concrete to keep water and salt out.

HONOLULU URBAN CORE PARKING MASTER PLAN

PROGRESS UPDATE – CONDITION ASSESSMENT



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Replace joint sealant: remove existing joint sealant, grind sides of joint to bare concrete and replace joint sealant to keep water and salt out.

WATERPROOFING MEMBRANE

Traffic Topping Membrane – New System: install waterproofing membrane over supported concrete surfaces that will stop water and salt infiltration into the concrete slab .

Traffic Topping Recoat: partial re-application of new waterproofing membrane over the existing membrane to maintain waterproofing effectiveness.

MECHANICAL AND PLUMBING

Mechanical – Allowance: allowance money for handling field conditions related to repairing concrete and waterproofing elements around existing mechanical items that have to be moved in order to complete repair work such as piping, electrical conduit, signs, etc.

Mechanical – Replacement / Supplementary Floor Drains: replacement of deteriorated / broken floor drains or installation of supplementary floor drains in areas where water puddles form on floors.

Mechanical – Pipe and Hangers: replace damaged or deteriorated drain pipes.

TRAFFIC MARKINGS

Paint Traffic Markings: repaint traffic markings on floor slab surface. Work is required after application of penetrating sealer, new traffic topping system or when existing traffic markings fade.