Hawaii Interagency Council for Transit-Oriented Development

Halawa-Stadium Permitted Interaction Group [June 2018] Summary Report and Recommendations

March 12, 2019

(as amended & adopted April 9, 2019)

This written report supplements the presentation of activities and findings from the Halawa-Stadium Permitted Interaction Group to the Hawaii Interagency Council for Transit-Oriented Development (TOD Council) at its March 12, 2019 meeting. Slides from the presentation can be found in *Attachment A*.

I. Permitted Interaction Group Purpose and Members

The Halawa-Stadium (Halawa) Permitted Interaction Group (PIG) is one of three PIGs formed by the TOD Council on June 12, 2018, to address TOD implementation issues on State lands in the three TOD priority areas along the Honolulu rail corridor—East Kapolei, Halawa-Stadium, and Iwilei-Kapalama. The PIG was established to provide a forum for input, discussion, and deliberation on infrastructure conditions, improvements required, and financing issues being studied under the State TOD Planning and Implementation Project (State TOD Project), managed by the Office of Planning (OP). (*Refer to Attachment B for more information about the project.*)

TOD Council members selected to serve on the PIG include State landowning agencies in the area, State and county support agencies, and stakeholder group representatives. Additional representatives from PIG member agencies and other public stakeholders with major landholdings in the station area were invited to participate in PIG activities, to ensure that the resulting infrastructure plan represented the cumulative public improvements required to accommodate planned TOD growth in the area over the 30- to 40-year development period. PIG members, designees, and representatives that participated in the PIG activities are listed in *Attachment C*.

Leo Asuncion and Rodney Funakoshi/OP and Chris Kinimaka/DAGS served as co-chairs for the PIG. The PIG was staffed by Rodney Funakoshi and Ruby Edwards, assisted by PBR Hawaii, the prime consultant for the State TOD Project.

TOD COUNCIL PIG MEMBERS

(1) Office of Planning Director
(2) Hawaii Housing Finance and Development Corporation (HHFDC) Executive Director
(3) Stadium Authority (SA) Chairperson
(4) Department of Accounting & General Services (DAGS) Comptroller
(5) Hawaii Public Housing Authority (HPHA) Executive Director
(6) Department of Education (DOE) Superintendent
(7) Department of Public Safety (PSD) Director
(8) Department of Transportation (DOT) Director
(9) Hawaii Community Development Authority (HCDA) Executive Director
(10) City and County of Honolulu (City) Mayor
(11) Housing Advocate
(12) Developer Representative

II. Tasks Assigned and Activities in Performance of Tasks

The Halawa PIG was specifically charged with assisting in the following tasks for Phase I of the State TOD Implementation Project:

(1) Develop a preferred master land use plan for State TOD projects in the Halawa-Stadium TOD priority area to identify infrastructure requirements;
(2) Identify infrastructure deficiencies and requirements for the preferred plan;
(3) Identify potential CIP budget requests for TOD Council recommendation to the 2019 Legislature, as needed; and
(4) Identify a public outreach strategy for State TOD implementation, and refine evaluative criteria and develop performance metrics for project implementation.

Since the focus of the State TOD Project is on the infrastructure investments that will be needed to accommodate State TOD project development in the TOD priority areas, the outreach strategy, evaluative criteria, and performance metrics tasks will be tackled later when additional time and resources can be devoted to them.

Context for State TOD Project and PIG Effort. The PIG activities for the State TOD Project aim to flesh out how individual State TOD projects will be developed in the context of the City's Halawa Area TOD Plan (TOD Plan) for this TOD priority area. The City TOD Plan lay the groundwork for the character and intensity of TOD within their plan areas, based on land use and capacity analyses and community input as to how these communities may evolve over time. The State TOD Project is intended to determine what State infrastructure investments will be needed as State TOD projects build out as part of this community vision.

Phase I of the State TOD Project involves: (1) the compilation of information on State TOD projects in the area, existing infrastructure system conditions, and known infrastructure challenges; and (2) the development of a preferred land use scenario based on agency plans for State lands in the TOD priority area. The preferred land use scenario developed with the PIG will be used in Phase II to determine infrastructure requirements needed to realize State TOD potential in the area, and to inform the development of potential infrastructure financing strategies.

Phase I PIG tasks and activities completed are summarized below.

A. PIG Meeting 1, July 20, 2018—Project kick-off and review of project and plan information compiled to date

The initial PIG meeting was held in July 2018 to orient PIG members to the State TOD Project. PBR Hawaii staff briefed the PIG on information compiled to date for the project from the City Halawa Area TOD Plan (Halawa TOD Plan or TOD Plan), existing studies, and agency project plans. The PIG was asked to identify information gaps and needs for master plan charrettes scheduled for September 2018, as well as concerns and opportunities related to infrastructure and financing for the area that needed to be examined in the study. PIG members were asked to provide any project plans and information to the consultant team to compile for the master plan design workshops (charrettes) and the land use model that would be developed to determine regional or local infrastructure needs.

B. PIG Meeting 2, September 20, 2018—Land use workshop/charrette for TOD priority area

The second PIG meeting was a master plan/land use design charrette that was designed to explore existing project plans in relation to the proposed land use pattern, densities, and character of TOD envisioned in the City Halawa TOD plan. Within this context, charrette participants discussed proposed land use plans and options with consideration of: existing conditions; proposed land uses and density of individual TOD projects; opportunities to align or coordinate development efforts; public realm and access improvements needed; and the implications of proposed project plans and land uses for public infrastructure systems and infrastructure delivery. PIG members were presented examples of urban design features that could be considered in the development of land use scenarios, as well as sustainable infrastructure design and delivery approaches that could be considered in the development of an infrastructure implementation and financing strategy in Phase II of the project. PIG groups generated different broad land use schemas for the area that were used to formulate alternative land use scenarios.

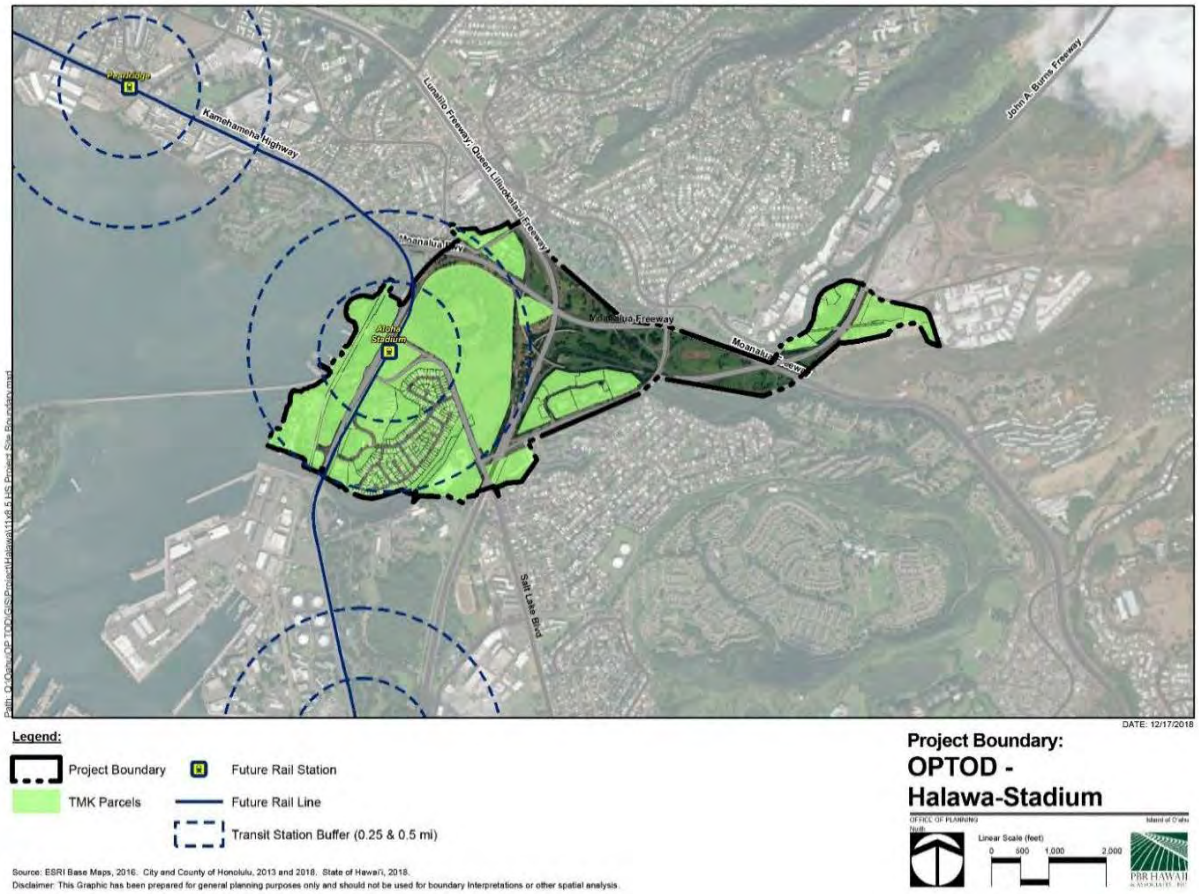
PIG agencies were tasked with providing the consultant team with as much information as possible on their current project plans. The alternative land use scenarios developed from information gathered and the charrette discussions were to be reviewed by the PIG to select a preferred land use scenario for the infrastructure assessment to be conducted in Phase II.

Materials from the charrettes are provided in *Attachment D*; charrette outcomes are summarized in the Oahu PIGs report presentation.

C. PIG Meeting 3, February 26, 2019—Review/selection of preferred land use scenario for infrastructure needs assessment

The third PIG meeting was convened to review the parameters developed for the land use scenarios for the TOD priority area, review maps of existing infrastructure conditions for the area, and to identify a preferred land use scenario for Phase II infrastructure assessment and financing strategy development. The first task for the PIG was affirming a proposed boundary for the priority area that encompassed State sites planned for TOD. The second task was to get agreement on the preferred land use scenario for potential buildout of the priority area, including existing plans for State facilities and State TOD projects in the priority area.

Project Area Boundary: Halawa-Stadium TOD Priority Area



The boundary for the Halawa-Stadium TOD priority area was selected in line with the City's draft Halawa TOD Plan (2017) and proposed public property development in the area that may require shared regional infrastructure improvements. The project area has one rail station, Halawa Station.

Planned Development. The City's Halawa TOD Plan is founded on principles that seek to create a sports, entertainment, and retail destination with a strong connection between the Stadium and the rail station—a working district that would offer residential opportunities, community and cultural gathering places, and a green network for active connections within the district. State and other development projects that would contribute to realization of the City's TOD Plan principles and need to be accounted for in assessing infrastructure needs for TOD in this area include:

- **Redevelopment of Aloha Stadium**, the priority project in the area
- **Ancillary sports/entertainment and other mixed-use development** on Stadium lands around the station area
- **HPHA public housing at Puuwai Momi**
- **Potential redevelopment of the Department of Agriculture Animal Quarantine**

Station at Halawa, due to the potential relocation of Oahu Community Correction Center (OCCC) to this parcel

- **Potential redevelopment of other properties identified in the City TOD Plan area**, in proximity to the station and proposed redevelopment of State lands

▶Infrastructure Maps: Existing Conditions (Attachment E)

PIG members were updated on information compiled on existing facilities and conditions and known plans for various infrastructure systems in the TOD priority area, as seen in the maps in *Attachment E*. These form the basis for determining where system expansion or redevelopment will be required to support planned TOD in the area.

Land Use Scenarios Considered

- **Land Use Scenario: Existing City TOD Plans and Current Conceptual Plans for State Lands**

  This scenario represents planned TOD as presented in the City's draft Halawa TOD Plan, incorporating existing plans being developed for State-owned parcels and redevelopment assumptions from the City TOD Plan for nearby private lands. This scenario assumes that the stadium is redeveloped onsite and OCCC is relocated to the Halawa Animal Quarantine Site. No change is anticipated for existing single-family neighborhoods within the project boundary or for federal parcels makai of Kamehameha Highway. It is assumed that some existing multi-family residential units will be replaced in the development process. Under this scenario, potential buildout of residential units in 30-40 years could be around 5,300 units, with potentially 2 million square feet of commercial, office, hotel, sports/entertainment, and other institutional space being developed in the TOD project boundary area.

- **Alternate Land Use Scenario: Schema for maximum residential use of Stadium lands**

  This alternate scenario is built upon the first scenario, with the main difference being a focus on maximizing residential development on the site of the existing Aloha Stadium. Several factors would have to be assumed with this alternative, including a reduction in onsite parking requirements, relocation of Aloha Stadium, and/or allowable increases in density in the TOD Plan area. Potential residential buildout under this alternate scenario would be around 7,500 units.

Estimates of potential buildout of residential units and commercial, office, and other ancillary development space are subject to change as the land use numbers are finetuned for the preferred land use scenario.

The project area lies outside Sea Level Rise Exposure Areas mapped in conjunction with the *Hawaii Sea Level Rise Vulnerability and Adaptation Report* (Hawaii Climate Change Mitigation and Adaptation Commission, 2017), and at this time, appears to be at lower risk of potential impacts from sea level rise.

School capacity. Under either scenario, public school capacity would need to be increased to accommodate additional residential development in the area. DOE expects that at least one new elementary school would be needed to accommodate residential growth in this area. PIG members discussed the possibility of consideration of a vertical school adjacent to park space under either land use scenario, which would be subject to DOE approval of a vertical school in this area. If a vertical school is not possible, approximately 12 acres of State land would need to be set aside for an elementary school site.

III. Results / Outcomes for Consideration: Preferred Land Use Scenario

The PIG supported the defined boundary and **Existing City TOD Plan and Current Conceptual Plans for State Lands Land Use Scenario** for the Phase II infrastructure assessment work. The preferred land use scenario will include consideration of the siting of a vertical school on State lands in this area. The PIG also supported further refinement of the scenario by the consultant team, as needed, to verify project plan information with individual agencies. This scenario represents the most plausible land use pattern and density for State TOD projects in the area, and provides a reasonable baseline for identifying infrastructure needs and costs for State TOD buildout over time. The preferred land use scenario will be finalized by the consultant team in the coming month.

A preliminary map of the preferred land use scenario is provided on the following page. Assumptions for assessment of infrastructure needs for the preferred land use scenario include:

- Stadium redeveloped onsite with additional ancillary mixed-use development;
- Puuwai Momi will be developed at maximum density for site;
- Additional school capacity need equivalent to one DOE elementary school; and
- OCCC will be relocated to Halawa.

IV. Recommendations

The Halawa-Stadium PIG co-chairs recommend the following for TOD Council action:

(1) At the TOD Council's April 9, 2019 meeting, re-form the Halawa-Stadium Permitted Interaction Group, constituted of the same members, to perform the tasks listed below and report back to the TOD Council at a date to be determined.

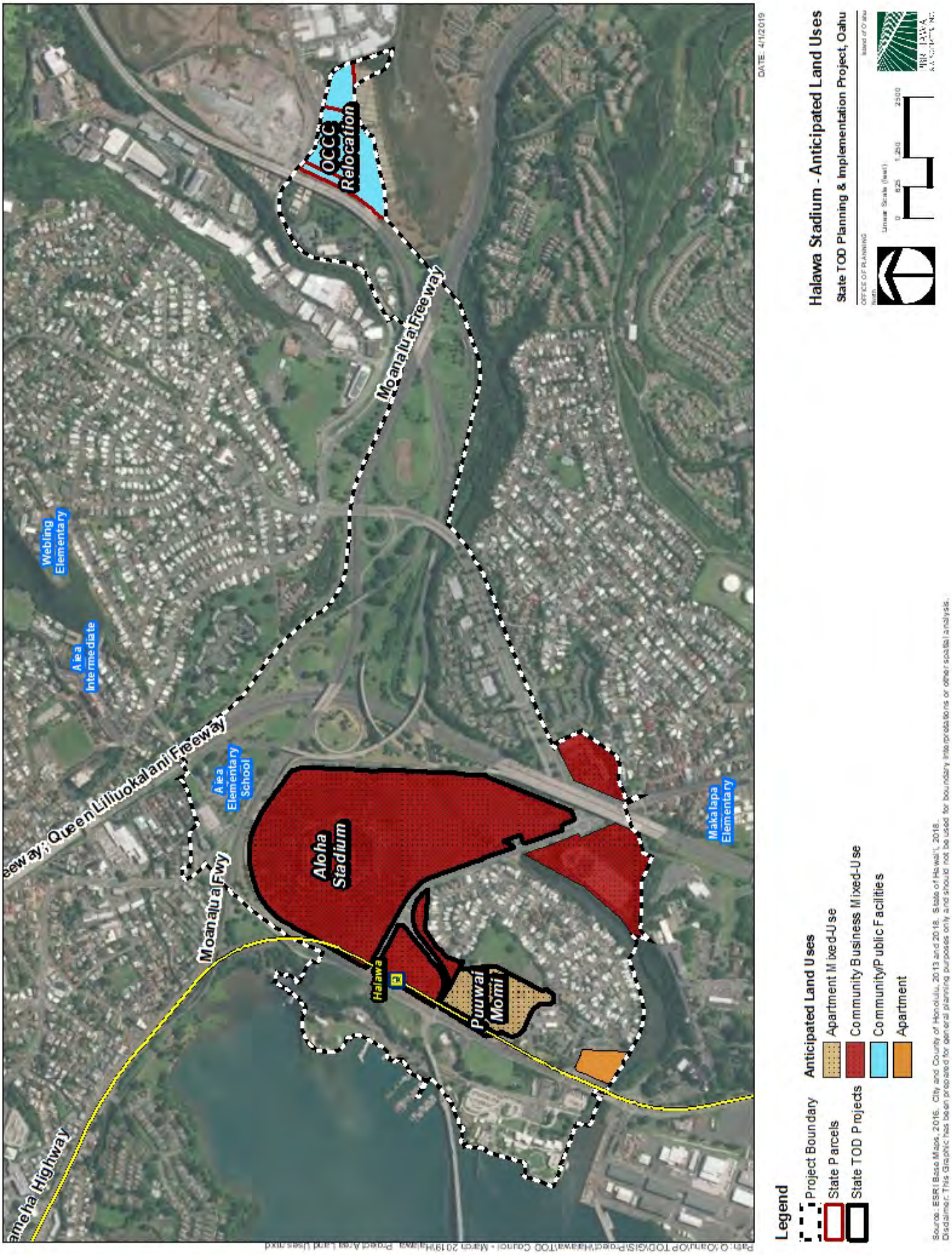
a. Provide input to Phase II of the State TOD Implementation Plan (Oahu) Project for the Halawa-Stadium TOD priority area and coordinate recommendations on the following with findings and recommendations from the DAGS/SA Stadium master planning and environmental impact statement process now underway:

1. Identifying infrastructure costs, financing options, and phasing for infrastructure improvements required for the preferred TOD land use scenario for the Halawa-Stadium area;
2. Developing a preferred infrastructure implementation plan, phasing, and financing strategy for the TOD priority areas; and
3. Developing recommendations for TOD-related CIP or other budget requests to [~~implement infrastructure implementation~~] <u>fund infrastructure</u>

improvements required for the TOD priority areas, including CIP and budget requests for TOD Council recommendation to the 2020 Legislature, as needed;

b. Identify near-term infrastructure and State TOD project implementation issues to be addressed by the PIG or other entities, develop and implement strategies to address these near-term issues as needed, and ensure that actions taken are integrated with options being considered and recommendations being developed in Phase II of the State TOD Project; and

c. Develop recommendations, as needed, for a public outreach strategy for State TOD implementation in the priority area.


Halawa Stadium - Anticipated Land Uses
State TOD Planning & Implementation Project, Oahu
OFFICE OF PLANNING
State of Hawaii
Linear Scale (feet)
0 625 1,250 2,500
DATE: 4/1/2019
Aloha Stadium
Halawa
Puuwai Momi
OCCC Relocation
Moanalua Freeway
Moanalua Fwy
Queen Liliuokalani Freeway
Aiea Elementary School
Aiea Intermediate
Webling Elementary
Makalapa Elementary
Legend
Project Boundary
State Parcels
State TOD Projects
Anticipated Land Uses
Apartment Mixed-Use
Community Business Mixed-Use
Community/Public Facilities
Apartment
Source: ESRI Base Maps, 2016. City and County of Honolulu, 2013 and 2018. State of Hawai'i, 2018.
Disclaimer: This Graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Attachment A.
Presentation to TOD Council: Oahu PIGs Report, March 12, 2019

STATE TOD PLANNING & IMPLEMENTATION FOR THE ISLAND OF O'AHU

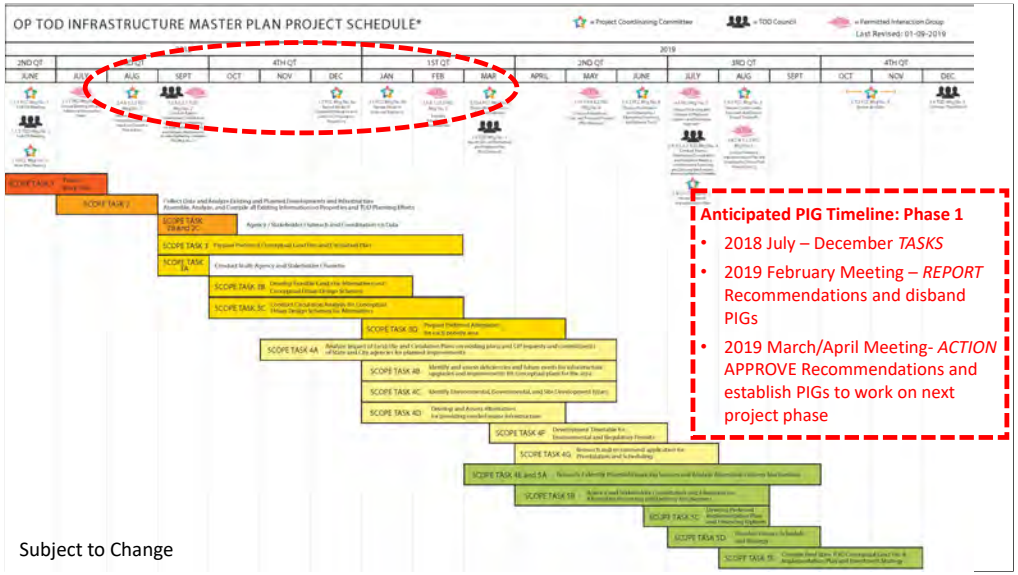
TOD COUNCIL REPORT BACK
Tuesday, March 12, 2019
HCDA Community Room

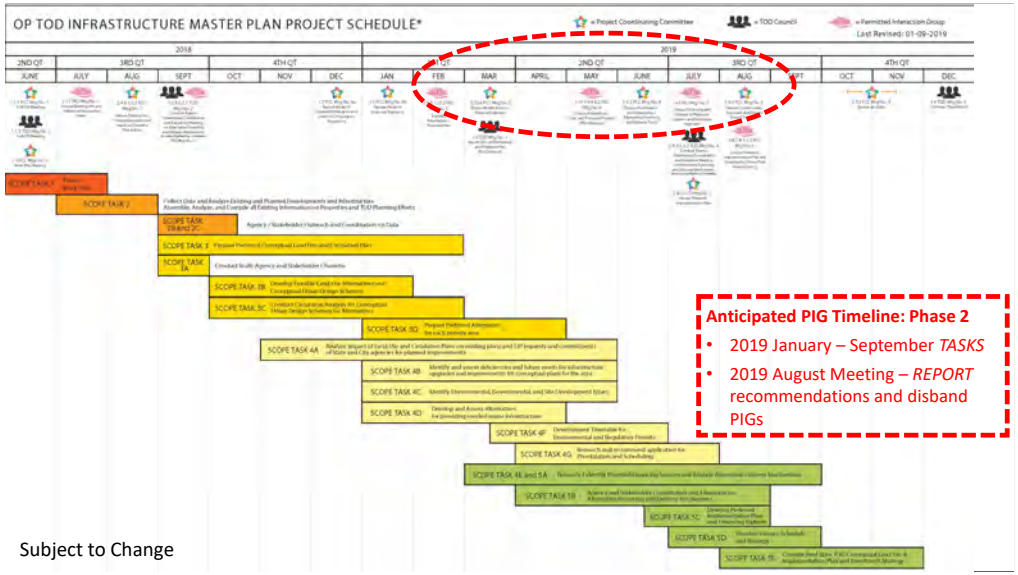
OFFICE OF PLANNING
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT, & TOURISM

PBR HAWAII & ASSOCIATES INC. · DTA DAVID TAUSSIG & ASSOCIATES · CALLISONRTKL · R. M. TOWILL CORPORATION · ARUP

Project Purpose

- Coordinate approach between all stakeholders
- Coordinate regional infrastructure investments
- Identify source(s) of financing and best practices for TOD Implementation
- Consider incentives for landowner participation
- Identify sustainable development practices





Phase 1: Process

- Compile existing planning documents
- Finance overview and presentation of information gathered
- Confirm landowner plans and incorporate any updates available
- Charrette
  - Review, refine, and enhance plans
  - Presentations on Urban Design and Sustainability
- Determine preferred conceptual land use scenario to inform infrastructure needs and cost estimates

Phase 1: Meetings Held to Date

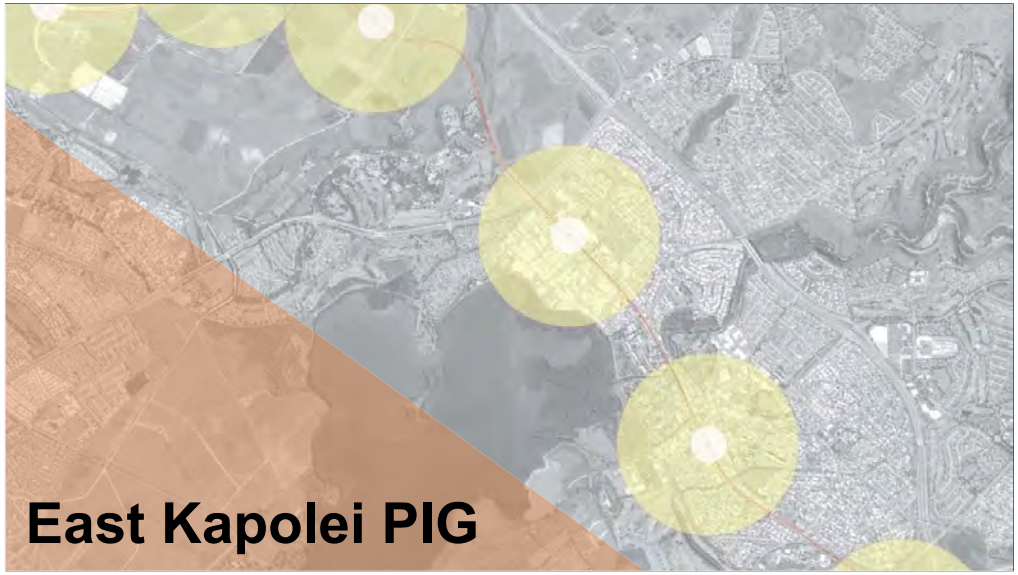
Group	Date(s)	Topics Covered
Project Coordinating Committee (PCC)	• June 1 • June 22 • August 16 • September 21 • November 2 • December 4 and January 23	• Kick-off meeting • Work Plan • Charrette Preparation • Charrette Summary • Project Boundary • Land Use Scenario Review – PIG 3
Permitted Interaction Groups (PIGs)	• July 12 – 20 • July 30 • September 20 & 21 • **February 26**	• Info Compiled to Date • Farrington Widening • Charrettes • **Preferred Conceptual Land Use Scenario**

Conceptual Land Use Scenarios

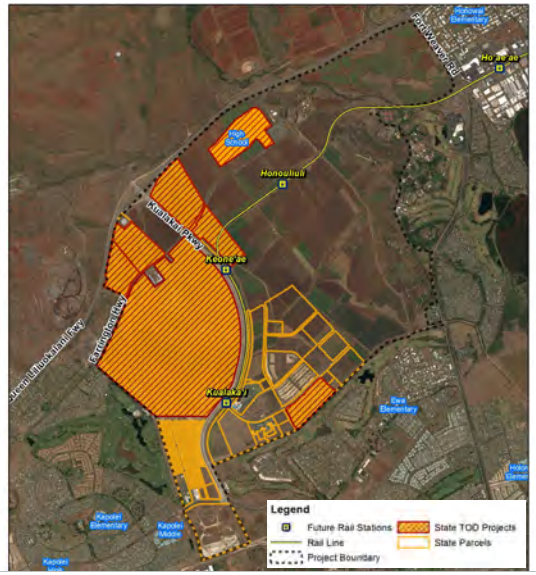
Conceptual Land Use Scenarios: Background Information

- City and County Neighborhood TOD Plans
- Plans and Studies shared by the State, City, and private entities
- Stakeholder input from the:
  - September Charrette
  - Homework and follow-up

Reminder: The project is focused on infrastructure needs and financing. The discussions in this meeting are based on conceptual land use scenarios to identify density and infrastructure needs. We are looking at density, phasing, and impacts of urban design features to inform the needs and costs.



PROJECT AREA BOUNDARY: EAST KAPOLEI STATE LANDS



Charrette Input: East Kapolei

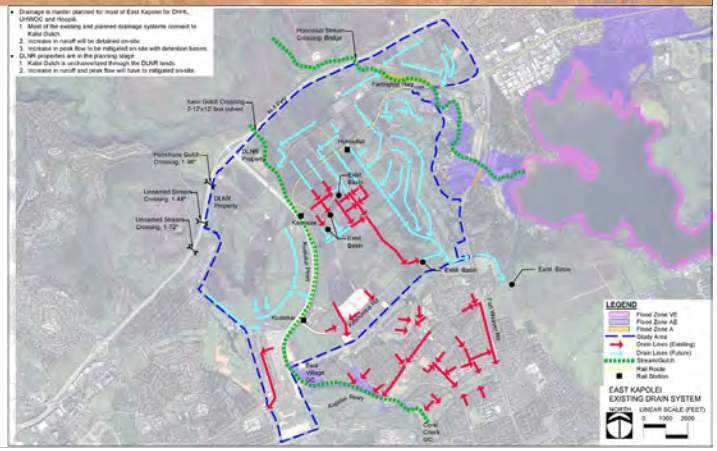
Charrette Input: East Kapolei Summary

Frequency	Major Categories	Examples of Comments
17	Infrastructure	Access, no grade separation
12	Connectivity	Distribute traffic, complete streets, ped/bike crossings
10	Development/Planning	Don't turn backs on Kualakai
8	Community Atmosphere	Opportunities to reduce sound so no sound walls
5	Environment	Bridge/Incorporate Gulches – green corridors, cooling interpretive
3	Rail Stations	Commercial Hubs
Tied at 2	Residential	Mixed Use Town/Gown Hub
	Ownership	Common vision for key development zone
	Economy	Create a commercial hub/center of action

Infrastructure: East Kapolei Drainage

R. M. TOWILL CORPORATION

- Master Planned for most of East Kapolei
  - Most of the existing and planned drainage systems connect to Kaloi Gulch
  - Increase in runoff will be detained on-site
  - Increase in peak flow to be mitigated on site with detention basins
- DLNR properties are in the planning stage
  - Kaloi Gulch unchannelized through the DLNR lands
  - Increase in runoff and peak flow will have to be mitigated on-site



Infrastructure: East Kapolei Sewer

R. M. TOWILL CORPORATION

- Master Planned for most of East Kapolei
  - Underground sewer infrastructure will be constructed with the project roadways
  - Regional sewer allocation approved for DHHL, UHWO, and Hoopili
  - Regional trunk sewers do not have excess capacity
- DLNR properties are in the planning stage

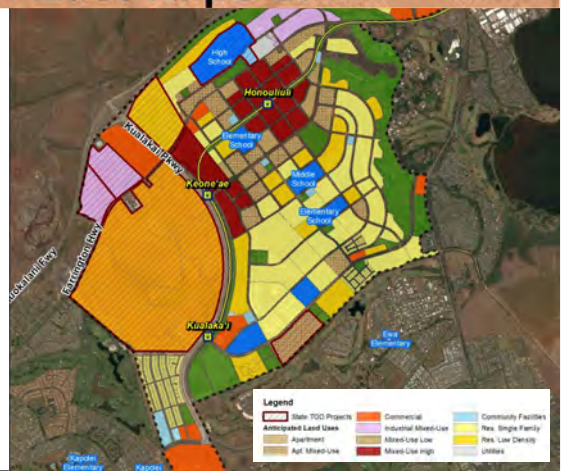
Infrastructure: East Kapolei Water

R. M. TOWILL CORPORATION

- Master Planned for most of East Kapolei
  - Underground water infrastructure will be constructed with the project roadways
  - Water reservoirs and booster pump stations will be constructed as development progresses
  - Regional sewer allocation approved for DHHL, UHWO, and Hoopili
  - Water sources are adequate for more new developments but the Ewa Shaft is the next water source required to meet the needs of the Ewa Development Plan
- DLNR properties are in the planning stage

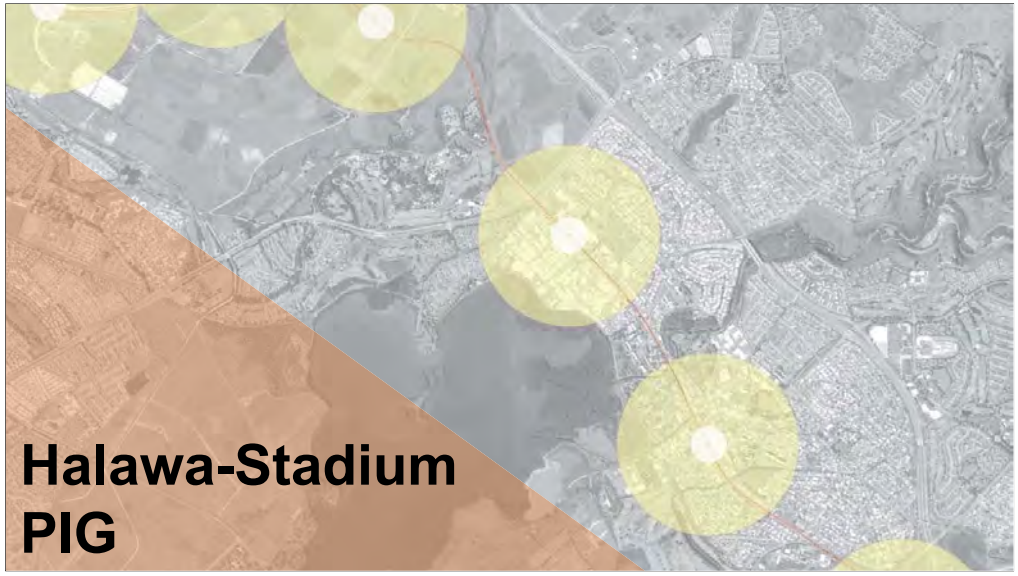
Preferred Land Use Scenario PIG Recommendations: East Kapolei

- ✓ Proceed with current conceptual land use scenarios for each of the various landowners
- ✓ Do not incorporate additional intersections along Kualakai
- ✓ Improve currently planned connections/intersections



Preferred Land Use Scenario Refinement: East Kapolei

- ✓ Update estimated development, conceptual land uses, and estimated phasing for landowners
- ✓ Further coordination with City on TOD Neighborhood Plan



Halawa-Stadium PIG

Project Area Boundary: Halawa-Stadium State Lands

Charrette Input: Halawa-Stadium

Charrette Input: Halawa-Stadium Summary

Frequency	Major Categories	Examples of Comments
42	Development/Planning	Dense Core Avoid Bifurcation of Housing types
36	Connectivity	Get across major thoroughfares Bus loops, Trails, multimodal
30	Infrastructure	Central utility systems Schools
14	Community Atmosphere	Community Plaza Adequate Green Space
Tied at 8	Environment	Connect to water
	Residential	Service Local Population
7	Ownership	Work with Federal Landowners
6	Economy	Differentiate Products

Infrastructure: Halawa-Stadium Drainage

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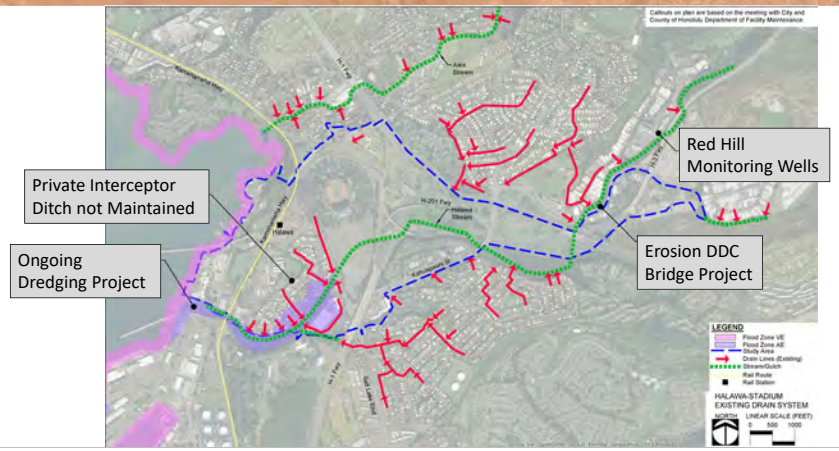

Infrastructure: Halawa-Stadium Sewer

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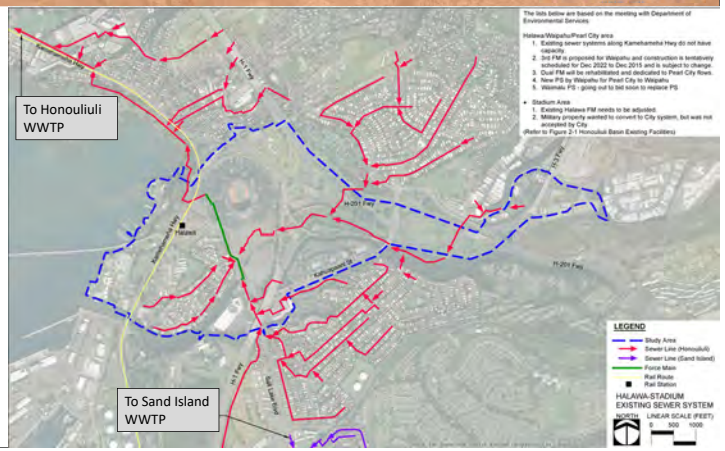
Halawa / Waipahu / Pearl City

- Existing systems along Kam Hwy do not have capacity
- 3rd FM is proposed for Waipahu; construction tent. scheduled for Dec. 2022 (subject to change)
- Dual FM will be rehabilitated and dedicated to Pearl City flows
- New PS by Waipahu for Pearl City to Waipahu
- Waimalu PS going out to bid soon



Infrastructure: Halawa-Stadium Sewer (cont.)

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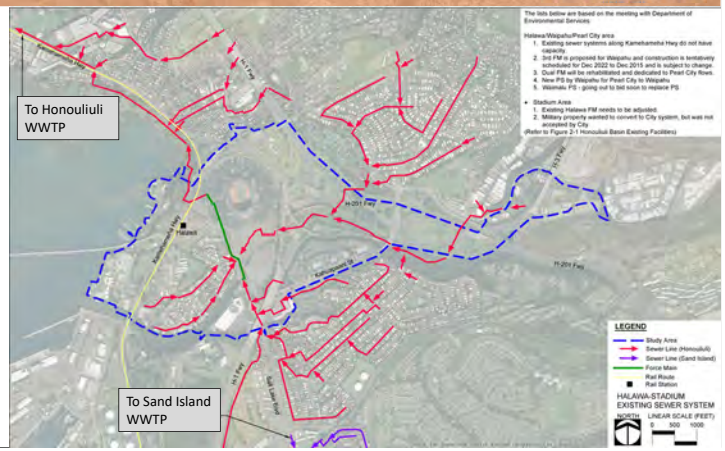
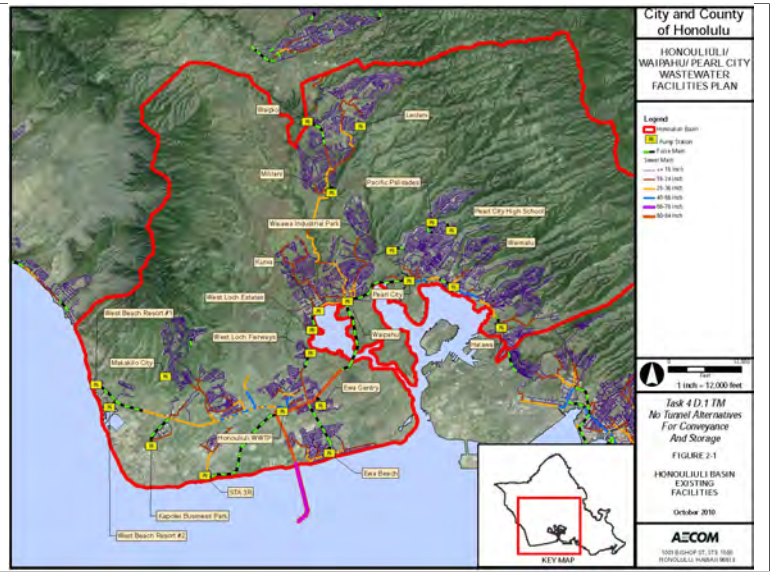
Stadium Area

- Existing FM needs to be adjusted
- Military property wanted to convert City system, but was not accepted by City

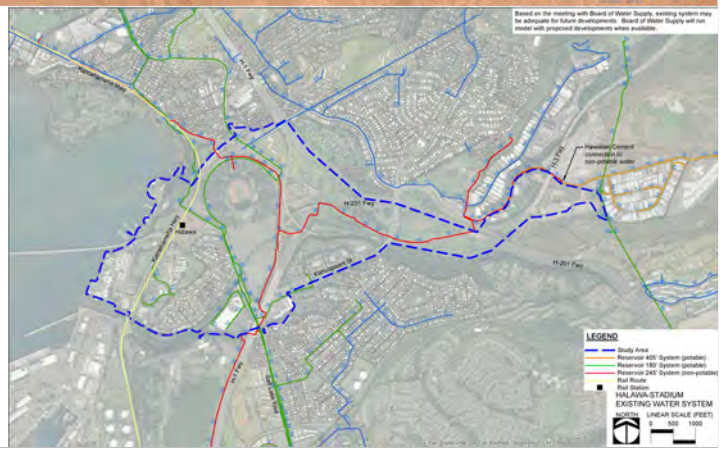


INFRASTRUCTURE: HALAWA-STADIUM WASTEWATER



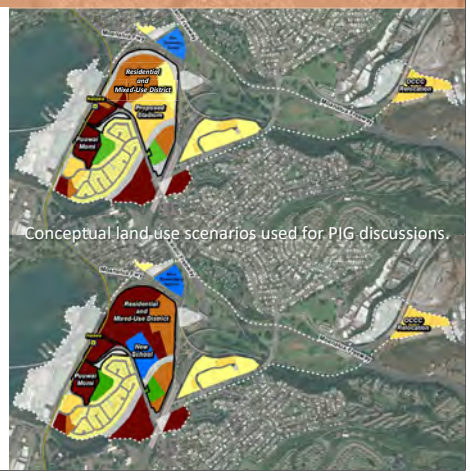
Infrastructure: Halawa-Stadium Water

- Existing system may be adequate for future developments
- BWS will model with proposed developments when development information is available



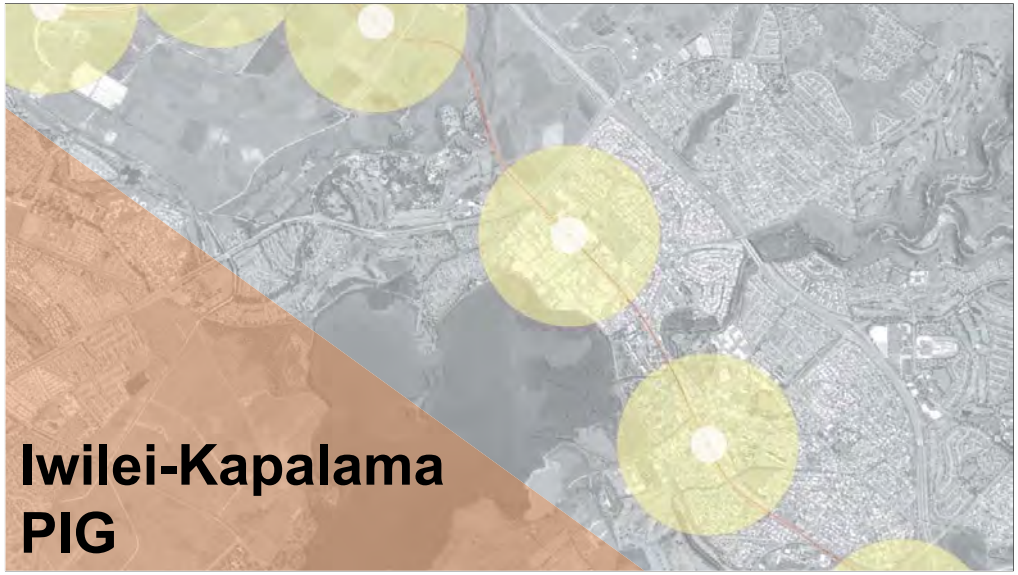
Preferred Land Use Scenario PIG Recommendations: Halawa-Stadium

- ✓ Stadium redevelopment on site with additional ancillary mixed-use development
- ✓ Pu'uwai Momi at maxed out density
- ✓ At least one new DOE School
- ✓ Assume OCCC Relocates to Halawa



Preferred Land Use Scenario Refinement: Halawa-Stadium

- ✓ Update estimated development, conceptual land uses, and estimated phasing for landowners
- ✓ Combine concepts from TOD Neighborhood Plan
- ✓ Connectivity with region
- ✓ What can currently be accommodated, timing for additional facilities
- ✓ Vertical School vs current BOE standards
- ✓ Pearl Harbor Security



Iwilei-Kapalama PIG

Project Area Boundary: Iwilei-Kapalama State Lands

Charrette Input: Iwilei-Kapalama

Charrette Input: Iwilei-Kapalama Summary

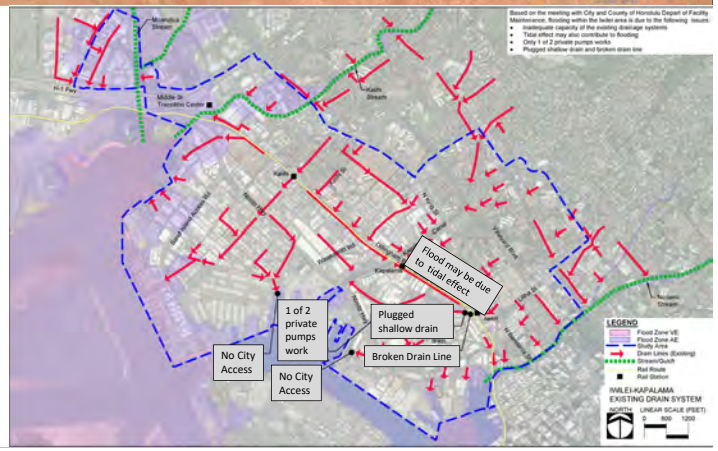
Frequency	Major Categories	Examples of Comments
53	Development/Planning	Sea level rise strategy applied Green spaces
30	Infrastructure	Control sea level rise Challenge to finance district
24	Connectivity	Hierarchy of streets Improve connections
14	Community Atmosphere	Focal point for community Programmatic connection
10	Economy	Fishing and Artisan villages
8	Residential	Mixed use with housing above other uses
7	Environment	Bioswales; Green corridors for flood retention
3	Ownership	District wide collaboration
2	Natural Hazards	Sea level rise underutilized
1	Rail Station	Retail / amenities at transit stations

Infrastructure: Iwilei-Kapalama Drainage

R. M. TOWILL CORPORATION

Flooding in the Iwilei area is due to the following issues:

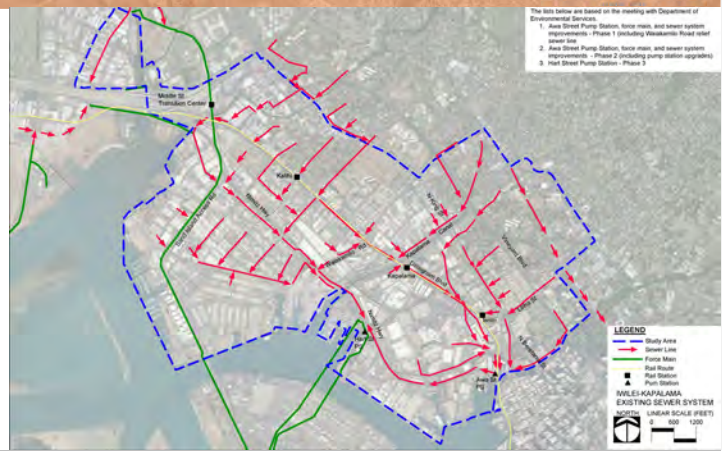
- Inadequate capacity of the existing drainage system
- Tidal effect may also contribute to flooding
- Only 1 of 2 private pumps works
- Plugged shallow drain and broken drain line



Infrastructure: Iwilei-Kapalama Sewer

R. M. TOWILL CORPORATION

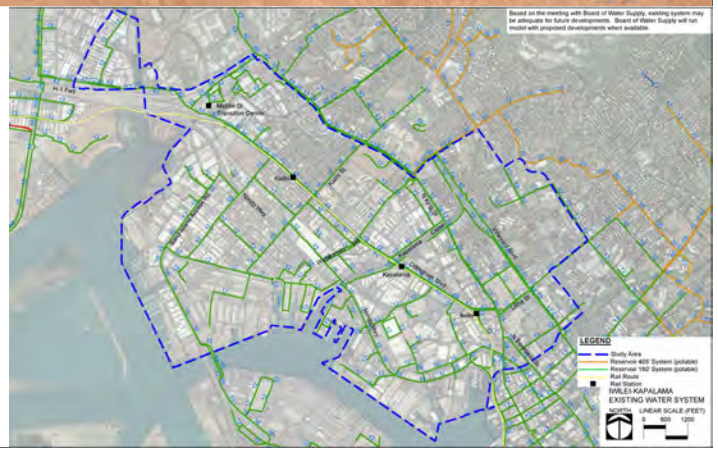
- Awa Street Pump Station, force main, and sewer system improvements
  - Phase 1 (including Waiakamilo Road relief sewer line)
  - Phase 2 (including pump station upgrades)
- Hart Street Pump Station, Phase 3



Infrastructure: Iwilei-Kapalama Water

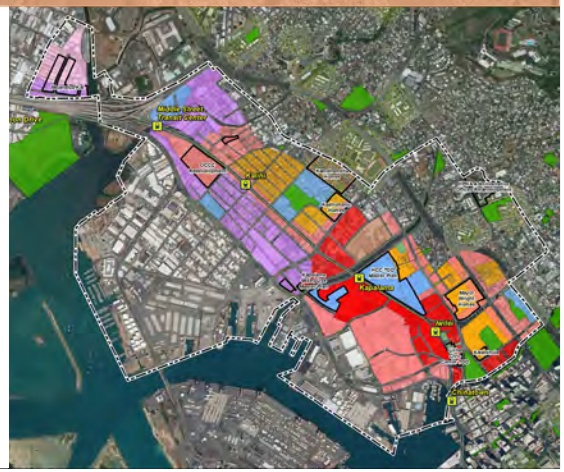
R. M. TOWILL CORPORATION

- Existing system capacity may be adequate for future developments
- Frequent main breaks due to its age and condition
- BWS will model with proposed developments when development information is available



Preferred Land Use Scenario PIG Recommendations: Iwilei-Kapalama

- ✓ Baseline = TOD identified zoning without Sea Level Rise
- ✓ Order of magnitude costs for the region, assuming TOD Zoning is not applied to the portion impacted by SLR
- ✓ Two 3-acre DOE sites
- ✓ Assume OCCC Relocates to Halawa and the property is rezoned for TOD



Preferred Land Use Scenario Refinement: Iwilei-Kapalama

- ✓ Update estimated development, conceptual land uses, and estimated phasing for landowners
- ✓ Lifecycles of horizontal infrastructure versus buildings
- ✓ Consequences of not providing infrastructure for areas impacted by SLR
- ✓ How do you prioritize?

Next Steps

NEXT STEPS / SCHEDULE

Next Steps:

- Land Use Scenario Refinement for Phase 2

Schedule for Phase 2:

- May 2019, Discuss Preferred Land Use Scenario, Cost, and Timing of Projects (PIGs Regrouped)
- July 2019, Discuss Financing and delivery of Preferred Land Use Scenario and Determine Approach
- August 2019, Discuss Preferred Implementation Plan and Schedule for Critical Path Analysis

For requests for materials and project or PIG-related questions, please contact dbedt.op.lud@hawaii.gov or Rodney Funakoshi at: rodney.y.funakoshi@hawaii.gov

If you have additional comments, thoughts, or materials to share, please e-mail Nathalie Razo at: nrazo@pbrhawaii.com

Thank you, any questions?

Attachment B.

State TOD Planning and Implementation Project

Sponsor: Office of Planning, State of Hawai'i

June 12, 2018

East Kapolei

Aloha Stadium / Hālawa

Iwilei-Kapālama

Project Description

The project will produce a State Transit Oriented Development (TOD) Plan for project implementation and investments on State lands along the Honolulu Rail Transit Project corridor, particularly for projects that are beyond the scope and resources of any individual State agency to provide. In building off work that has already been done, development of the plan will require extensive coordination and collaboration with State and City agencies, as well as other stakeholders in each priority area.

The process will focus on conceptual area / site planning, infrastructure assessment, and access improvements analysis to determine shared investments, funding, and timeframes for critical infrastructure and other improvements necessary to enable development of State TOD projects. The plan will also serve as a critical tool for the State to assist and track actions needed to facilitate shared infrastructure investments and individual State agency project development along the rail corridor.

Such investments include, for example, wastewater system improvements in the Iwilei-Kapālama area that currently constrain TOD development potential for agencies such as HHFDC, DAGS, UH Honolulu Community College, as well as future phases of HPHA's Mayor Wright Homes redevelopment. While each of the priority areas are likely to have different infrastructure needs and timelines, the project as a whole will identify opportunities for collaboration on infrastructure investments and an overall strategy for infrastructure delivery that will benefit TOD project implementation on State lands and in surrounding neighborhoods.

Project Timeframe

June 2018–December 2019

Phase 1: Jun 2018–Dec 2018	Development of conceptual land use plan for State lands & identification of infrastructure requirements
Phase 2: Jan 2019–Dec 2019	Identification of infrastructure costs/financing & development of an infrastructure implementation plan, phasing & financing strategy

Project Consultant Team

PBR Hawaii (Prime)	Master planning, project management, and stakeholder outreach and engagement
RM Towill	Civil engineering
David Taussig & Associates	Development financing and alternative delivery methods
Fehr & Peers	Transportation engineering and multi-modal system planning
Callison RTKL	TOD master planning and urban design
Ron Ho & Associates	Electrical engineering and communications
ARUP	Green infrastructure and sustainable systems design

Attachment C.
Permitted Interaction Group Meeting Attendees

David DePonte, Department of Accounting & General Services
Christine Kinimaka, Department of Accounting & General Services
Ryan Andrews, Stadium Authority
Scott Chan, Stadium Authority
Charles Vitale, Stadium Authority
Ross Yamasaki, Stadium Authority
Deepak Neupane, Hawaii Community Development Authority
Carson Schultz, Hawaii Community Development Authority
Craig Hirai, Hawaii Housing Finance & Development Corporation
Leo Asuncion, Office of Planning
Ruby Edwards, Office of Planning
Rodney Funakoshi, Office of Planning
Robyn Loudermilk, Department of Education, Office of School Facilities & Support Services
Kenneth Masden, Department of Education, Office of School Facilities & Support Services
Heidi Meeker, Department of Education, Office of School Facilities & Support Services
Barbara Arashiro, Hawaii Public Housing Authority
Kevin Auger, Hawaii Public Housing Authority
Benjamin Park, Hawaii Public Housing Authority
Wayne Takara, Department of Public Safety
Terry Visperas, Department of Public Safety
Harold Alejandro, Department of Public Safety
Clayton Shimazu, Department of Public Safety
Lynette Kawaoka, Department of Transportation, Airports
David Rodriguez, Department of Transportation
Herman Tuiolosega, Department of Transportation, Airports
Robert Miyasaki, Department of Transportation, Statewide Transportation Planning Office
Cathi Ho Schar, University of Hawaii at Manoa, School of Architecture
Noelle Cole, City and County of Honolulu, Department of Planning & Permitting
Renee Espiau, City and County of Honolulu, Department of Planning & Permitting
Franz Kraintz, City and County of Honolulu, Department of Planning & Permitting
Harrison Rue, City and County of Honolulu, Department of Planning & Permitting
Kathy Sokugawa, City and County of Honolulu, Department of Planning & Permitting
Mark Fujihara, Naval Facilities Engineering Command Hawaii
Susan Kim, Naval Facilities Engineering Command Hawaii
Tyler Tsubota, Naval Facilities Engineering Command Hawaii
William Brizee, Architects Hawaii Ltd.
Joel Ganotisi, Architects Hawaii Ltd.
Terry McFarland, Architects Hawaii Ltd.
Betty Lou Larson, Catholic Charities Hawaii
Jillian Okamoto, Catholic Charities Hawaii

Attachment D.
September 2018 Charrette Materials

Hawaii Interagency Council for Transit Oriented Development

Halawa - Stadium Permitted Interaction Group Workshop / Charrette

Thursday, September 20, 2018

Aloha Stadium, Hospitality Room

8:30 a.m. – 12:00 p.m.

TOD Council Permitted Interaction Groups

Purpose

- "more in-depth and targeted discussions of regional and project implementation issues among directly affected agencies needed to advance project development"

8 Permitted Interaction Groups

East Kapolei Halawa-Stadium Iwilei-Kapalama	Kauai Maui West Hawaii East Hawaii	Neighbor Islands

TOD Council Permitted Interaction Groups: Addressing Challenges and Needs for State TOD

Challenges/needs identified by TOD Council

- Need for unified, coordinated approach that melds State, County, private sector & community interests and provides strategic direction on investments & project specific coordination
- Coordination/sharing of regional infrastructure investments
- Committed source(s) of funding
- Incorporating best practices for TOD & financing
- Incentives for TOD to allow private & smaller land owner participation
- Incorporating sustainable development practices to address climate change
- Ensuring equitable development & providing affordable housing

PIGs: means to address challenges/needs in particular region

STATE TOD PLANNING & IMPLEMENTATION FOR THE ISLAND OF O'AHU

Halawa-Stadium – Workshop / Charrette
Thursday, September 20, 2018
Aloha Stadium, Hospitality Room
8:30 a.m. – 12:00 p.m.

OFFICE OF PLANNING
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT, & TOURISM

PBR HAWAII & ASSOCIATES, INC. · DTA DAVID TAUSSIG & ASSOCIATES · CALLISONRTKL · R. M. TOWILL CORPORATION · ARUP

Agenda

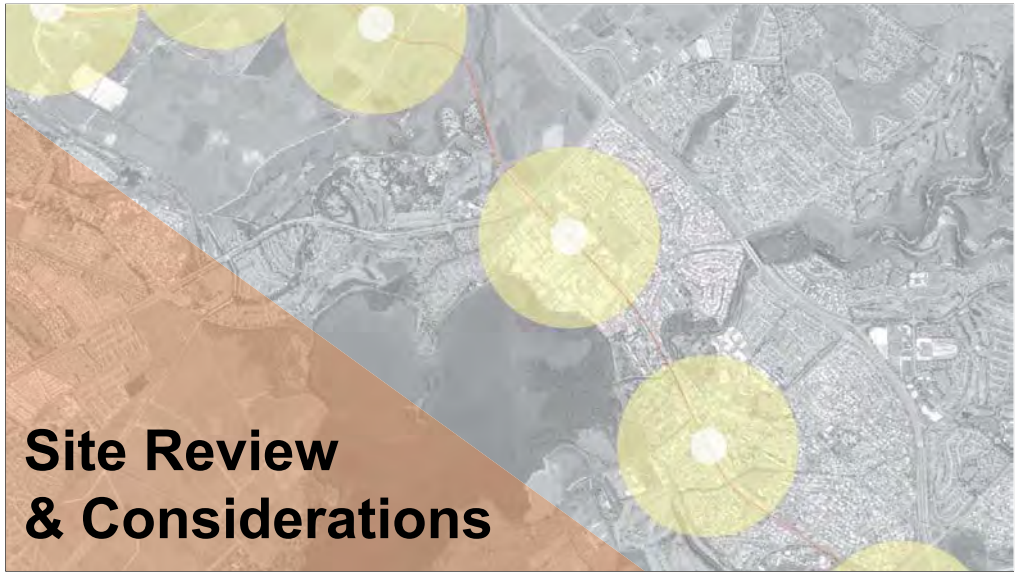
1. Introductions
2. Meeting Agenda, Objectives, and Ground Rules
3. Site Review and Considerations
4. Urban Design
5. Exercise 1: Teams Review Regional Plan
6. Infrastructure and Environmental Considerations
7. Exercise 2: Teams Enhance Design Concepts
8. Teams Report Back
9. Finance Considerations
10. Wrap-Up / Questions / Next steps

Objectives

- Consider regional synergies and conflicts and how they relate to the City's Neighborhood TOD Plans
- Advance regional plans acknowledging infrastructure
- Introduce potential financing tools relevant to projects and/or landowners

Ground Rules

1. Work together
2. Look at the long term
3. Be honest about self interests
4. Be open to "showing your cards"
5. We're here to brainstorm
6. Idea is to get good ideas on the table

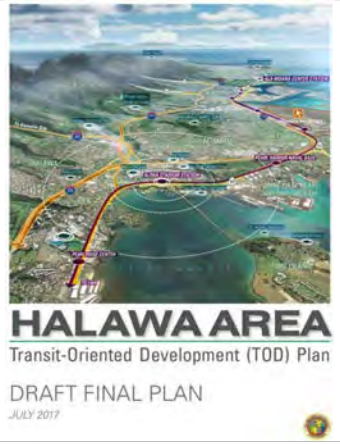


Site Review & Considerations

Project

TOD STATION ANALYSIS: HALAWA-STADIUM

Halawa Area TOD Plan Vision:



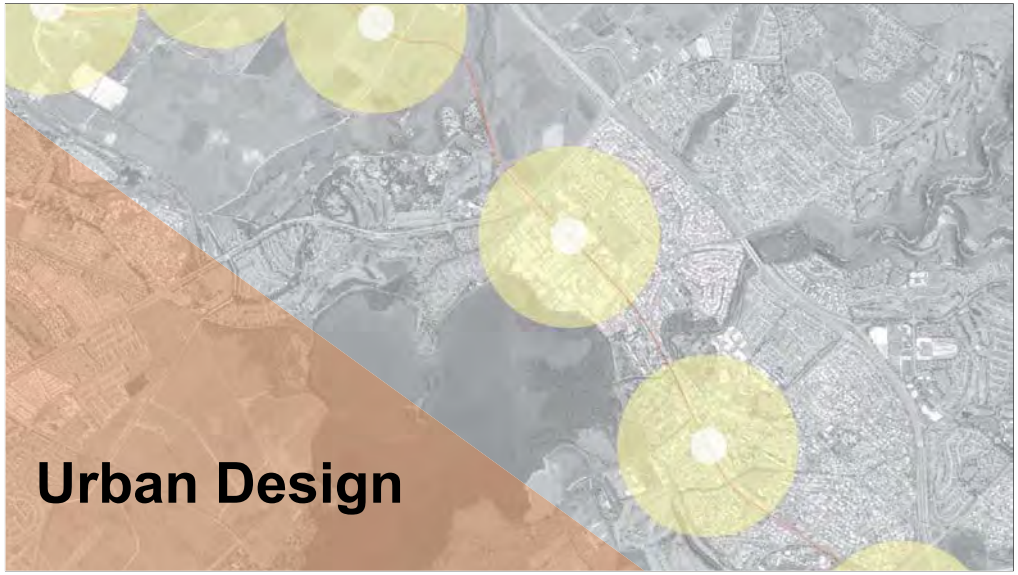
"With the new Aloha Stadium Station, the Halawa area can become one of Oahu's most interesting and livable transit communities, combining mixed-uses around compact, walkable blocks and community-oriented open spaces. The Halawa area will embody the Aloha spirit and become a place with state-wide attractions as well as providing a setting for thriving, diverse residential lifestyles and work environment."

WHAT WE'VE HEARD TO DATE

- School capacity
- Expansion of TOD Special District
- Halawa Stream
- Connectivity
- Environmental
- Development
- Infrastructure

GROUP INPUT

Anything we've missed?



State TOD Planning & Implementation for the Island of O'AHU

SEP 19-21 CHARRETTE

CALLISONRTKL
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SMART GROWTH + TRANSIT ORIENTED DEVELOPMENT

CALLISONRTKL
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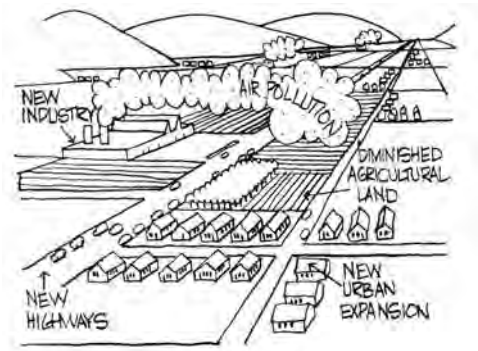
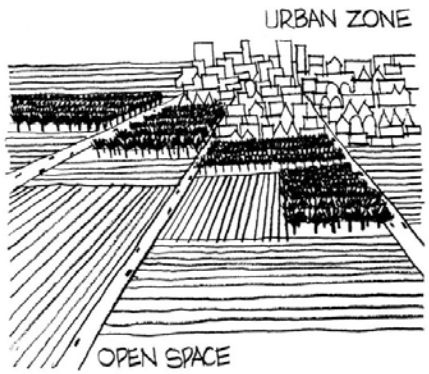
AVOIDING SPRAWL

SPRAWL



COMPACT URBAN DEVELOPMENT



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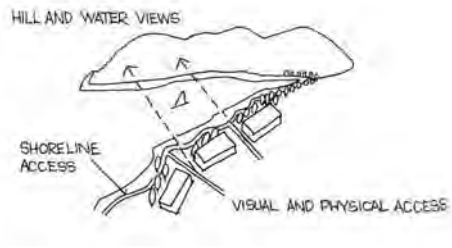
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

CONNECTION TO NATURE

✓ *PRESERVE NATURAL BEAUTY, OPEN SPACE, AND CRITICAL ENVIRONMENTAL AREAS*

✓ *IMPROVED ACCESS / INCREASE APPRECIATION*



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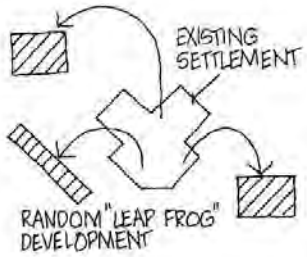
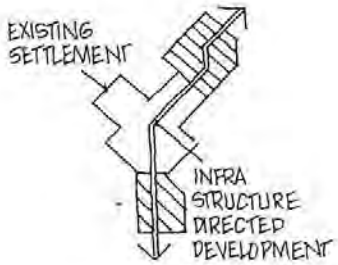
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

DEVELOPMENT LINKED TO INFRASTRUCTURE INVESTMENT

✗ *"LEAP FROG" DEVELOPMENT*



✓ *DIRECT DEVELOPMENT TOWARDS EXISTING COMMUNITIES*



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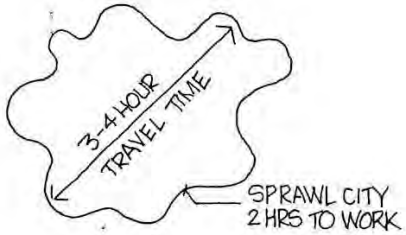
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

LESS TIME COMMUTING

✗ *LONGER TRAVEL TIME*



✓ *LINK BETWEEN JOB AND HOME*

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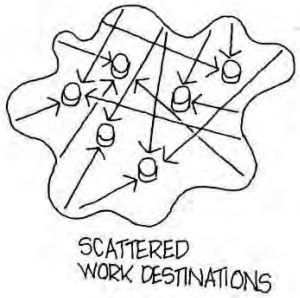
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

INCREASED COLLEGIALITY

✓ *CONCENTRATED DESINATIONS + SERVICE*

✗ *SCATTERED DISTNATIONS WITH LOWER EFFICIENCY OF SERIVCE*



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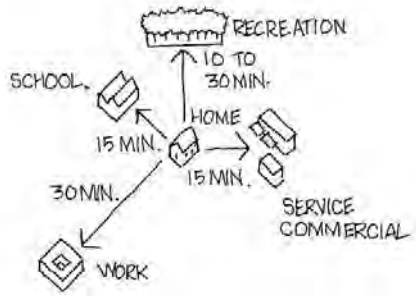
A DESIGN CONSULTANCY OF ARCADIS

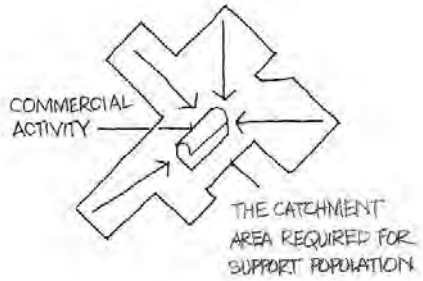
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

MORE CONVENIENCE

ADJACENT AMENITIES + SERVICES



CRITICAL MASS OF LOCAL POPULATION



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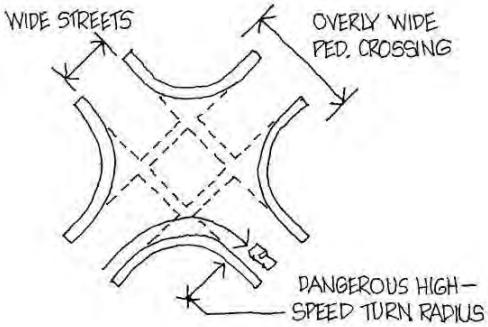
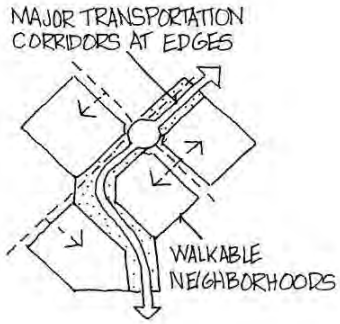
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

FOCUS ON PEDESTRIAN

CAR DOMINANT



WALKABLE NEIGHBORHOOD



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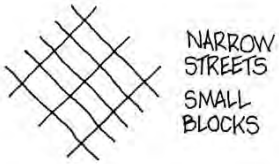
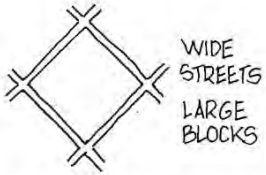
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

COMPACT BLOCK STRUCTURE

SMALL BLOCKS WITH DIVERSITY AND HIGHER EFFICIENCY



GIANT BLOCK WITH LOWER EFFICIENCY



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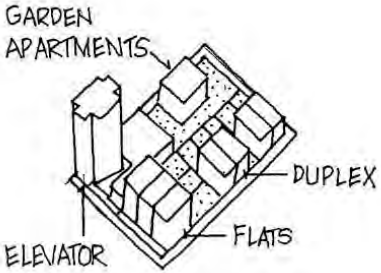
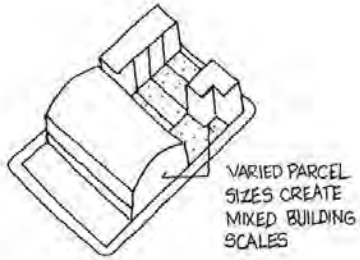
DIVERSITY OF LAND USE AND HOUSING

MIXE OF HOUSING TYPES



VARIOUS PARCEL SIZES AND BUILDING SCALES



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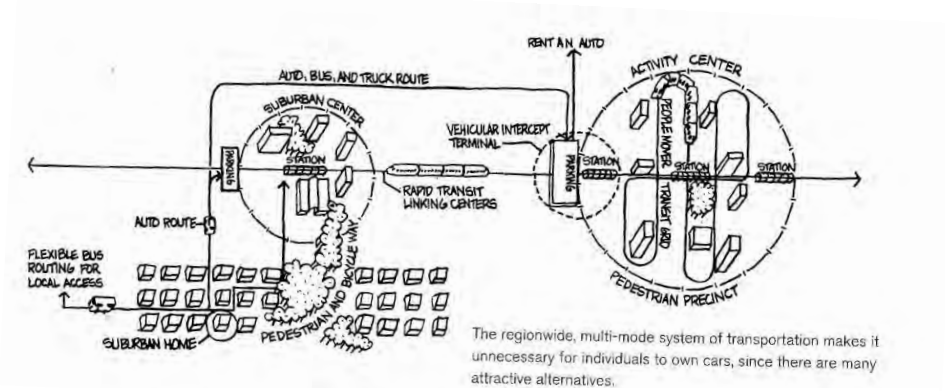
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

COORDINATE DEVELOPMENT WITH INFRASTRUCTURE

REGIONAL DEVELOPMENT DIRECTED TO TRANSIT CORRIDORS



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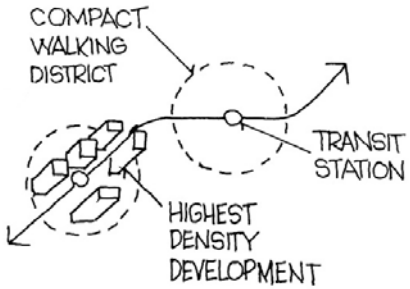
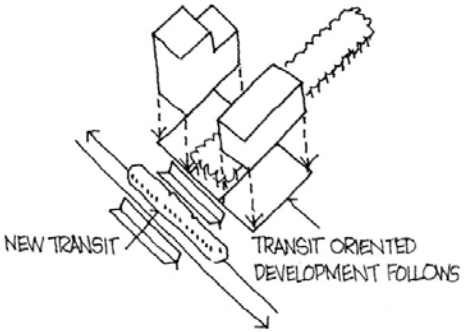
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

HIGHEST DENSITY AT STATIONS

HIGH DENSITY WITHIN WALKING DISTANCE OF STATION



HIGHEST DENSITY AT STATION AREA



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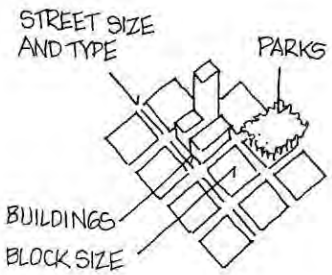
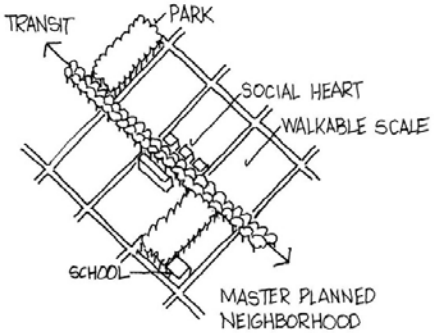
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

NEIGHBORHOOD CONNECTED TO THE REGION

APPEALING NEIGHBORHOOD SCALE



ACCESSIBLE AMENITIES+SERVICES

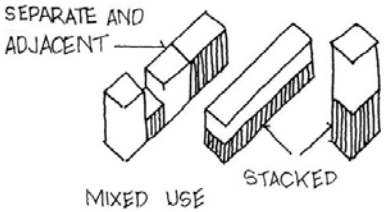


CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

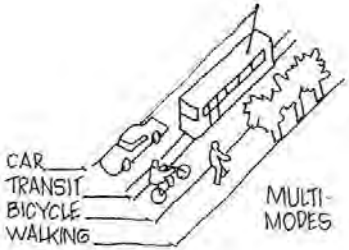
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

INCREASED CHOICE IN MOBILITY AND LAND USE

ADJACENT AND VERTICALLY INTEGRATED MIXED USES



MULTIPLE TRANSPORTATION CHOICES

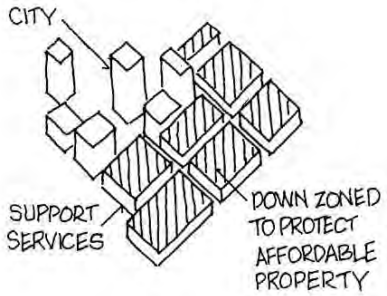


CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

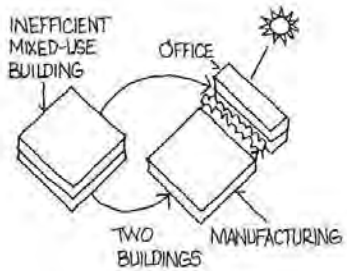
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

ADAPTIVE STRATEGIES

AFFORDABILITY



ADAPTABILITY

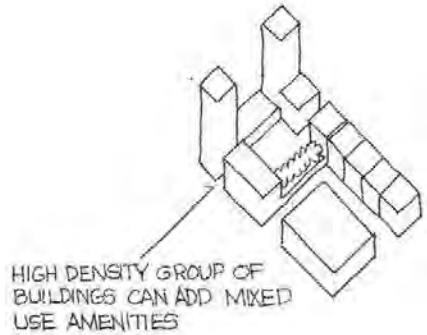


CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

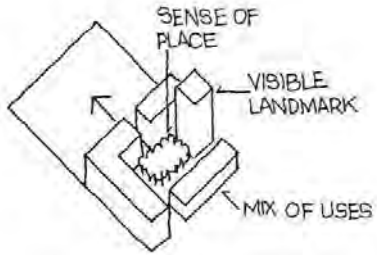
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

CLUSTERED DEVELOPMENT

COMPACT BUILDING DESIGN



A STRONG SENSE OF PLACE

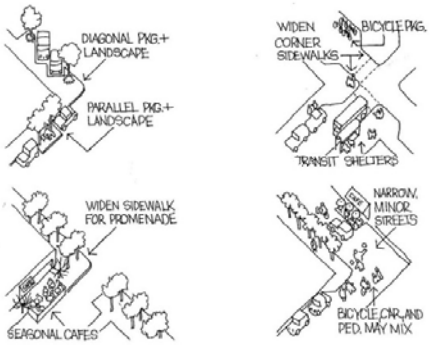


CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

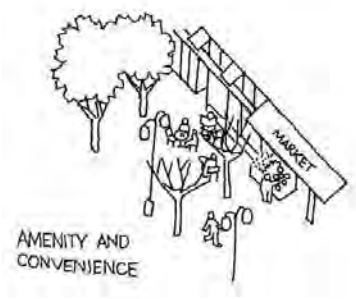
Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

APPEALING STREETSCAPE AND INTIMATE SPACES

STREETS FOR PEOPLE



PROVIDE 'ASSETS' OF LIVABILITY



CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

Source: John Lund Kriken. City Building – Nine Planning Principles for the Twenty-first Century.

ALOHA STADIUM – HALAWA

CALLISONRTKL
A DESIGN CONSULTANCY OF ARCADIS

AREA CHARACTERS

- Adjacent to world-known tourism destination - Pearl Harbor
- Old stadium with large area of surface parking
- Pearlridge Center w/ high dense residential
- Military base and housing
- Natural resources – creeks, shoreline, mountains, parks, trails, etc.
- Close to H1 & H3 freeway access
- Community events – swap meet, etc.

CALLISONRTKL
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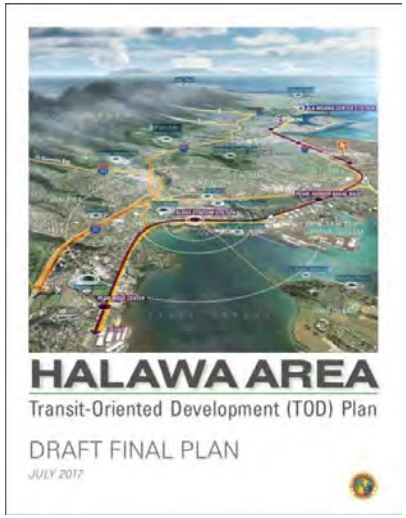
HALAWA AREA TOD PLAN



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HALAWA AREA TOD PLAN VISION

VISION:

"With the new Aloha Stadium Station, the Halawa area will become one of Oahu's most interesting and livable transit communities, combining dense, mixed-uses around compact, walkable blocks and community-oriented open spaces. It will complement the anchor uses of Aloha Stadium, Pearl Harbor Visitors Center, nearby Joint Base Pearl Harbor-Hickam, as well as the surrounding neighborhoods of Aiea, Foster Village, and Halawa."

CALLISONRTKL

A SYNERGY THAT TRIGGERS HALAWA AREA REVITALIZATION

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STREETS FOR PEOPLE: COMPLETE STREETS NETWORK

FIGURE 3-17: KAMEHAMEHA HWY (MAUKA VIEW) - TOD VISION

FIGURE 3-19: SALT LAKE BLVD (EWA VIEW) - TOD VISION

FIGURE 3-22: STADIUM LOOP ROAD (EWA VIEW) - TOD VISION

FIGURE 3-21: TYPICAL RESIDENTIAL STREET - TOD VISION

HALAWA STREAM ACTIVIATION

Halawa Stream may be utilized as a public amenity

HALAWA TOD PLAN PROPOSED INFRASTRUCTURE COST

HALAWA AREA

~$495-675 Million

ESTIMATED INFRASTRUCTURE COSTS

~$295-475 Million
TRANSPORTATION INFRASTRUCTURE

~$200 Million
UTILITY INFRASTRUCTURE

FIGURE 5-1: PROPOSED TRANSPORTATION INFRASTRUCTURE

HALAWA TOD PLAN ZONING AMENDMENTS

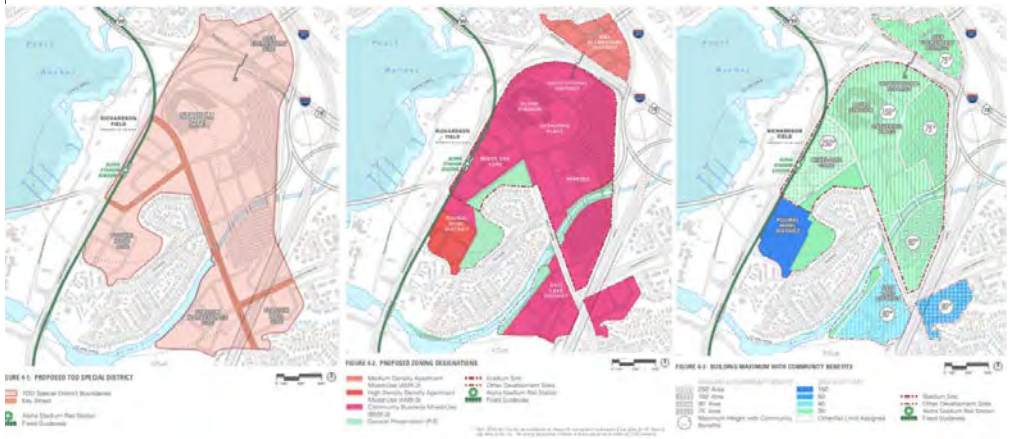

FIGURE 6-1: PROPOSED TOD SPECIAL DISTRICT

FIGURE 6-2: PROPOSED ZONING DESIGNATIONS

FIGURE 6-3: BUILDING MAXIMUM WITH COMMUNITY BENEFITS

TOD PLAN PRINCIPLES

CONNECTIVITY

- ***Stadium and Station*** – *Make a Strong Connection*
- ***Accessibility*** – *Comfortable Multimodal Access*

LAND USE

- ***Retail and Entertainment*** – *Create a Destination*
- ***Residential and Housing Diversity*** – *Reflects A Variety of Lifestyles*
- ***Working District*** – *Encourages More Visitation*
- ***Sustainability*** – *Efficiency and Economy*

OPEN SPACE

- ***Community Gathering*** – *Cultural Programs and Public Events*
- ***Green Network*** – *Active, Open, Community Spaces*

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1 STADIUM & STATION

- *Strong Connections*
- *Mixed-Use Core*
- *Sports and Entertainment District*
- *Wayfinding and open spaces*

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Mockingbird Station

DALLAS, TX

A Mixed Use Community Hub Facilitates Connectivity to Adjacent University and Stadium.

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KEY CHARACTER & LESSONS LEARNED

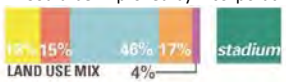
LOCATION: Adjacent Mockingbird Rail Station

TOTAL GSF: ~ 1.2 MILLION (211 upscale loft residences, 140,000 sf of office space, and 180,000 sf of space for retail, theaters, and restaurants.)

GROSS FAR: ~ 2.5

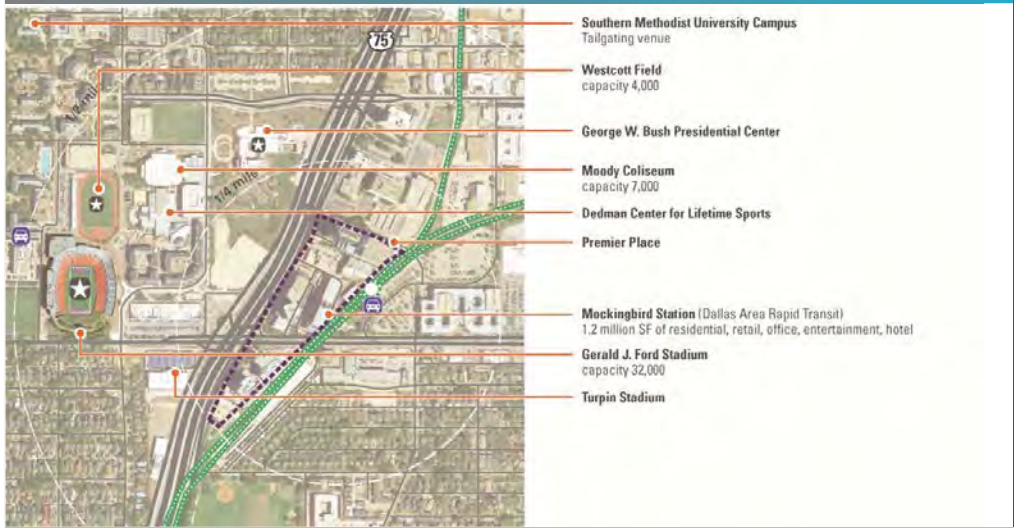
LESSONS LEARNED:

- Direct pedestrian connection between the Station and the Stadium
- "Front door" active use faces rail station
- Shuttle service link SMU and the Station
- TOD caters to university and surrounding neighborhoods
- Branding and wayfinding
- Could be improved by incorporating complete street



~1.2 million square feet* of development

SITE AREA CONTEXT



MIX OF RESIDENTIAL, RETAIL, OFFICE, ENTERTAINMENT & HOTEL

Retail/Entertainment

Office, Residential above Shops

Office Tower

Loft

DIRECT PEDESTRIAN CONNECTION FROM STATION TO STADIUM

Station Pedestrian Overpass

LEGEND

- Stadium / Arena
- Open Space
- Car Share
- Major Attraction
- Intersection
- Primary Arterial
- Local Street
- Pedestrian / Bike Path
- Pedestrian Circulation
- Rail Station
- Study Area Boundary

0' 250' 500' 1000' 2000'

2 ACCESSIBILITY

- Multiple transportation modes
- Pedestrian improvements and connectivity
- "Complete Streets"

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KEY CHARACTER & LESSONS LEARNED

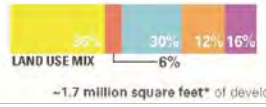
LOCATION: Downtown Austin, 2nd Street – 4th Street

TOTAL GSF: ~ 1.7 MILLION

AVG FAR: ~ 1.6

LESSONS LEARNED:

- Dense urban infill mixed-use development
- Walkable district + multiple transportation choices: bike share, car share, BRT, etc.
- Complete streets - wide sidewalks, street furniture, bike facilities, tree canopy, wayfinding, etc.
- Mix of significant civic features, entertainment venues, chic retail stores, coffee shops, restaurants, wine bars and living spaces
- Continuous retail frontage activates street life
- Parking provided in individual blocks



SITE AREA CONTEXT

A NEW VIBRANT DOWNTOWN CORE


Residential above Entertainment Venue


Hotel


Civic - City Hall


Retail + Restaurants

WALKABLE BLOCKS

Small Blocks w/ Pedestrian & Bike-Friendly Streets

MULTIPLE TRANSPORATION CHOICES

Downtown Metro Rail Station

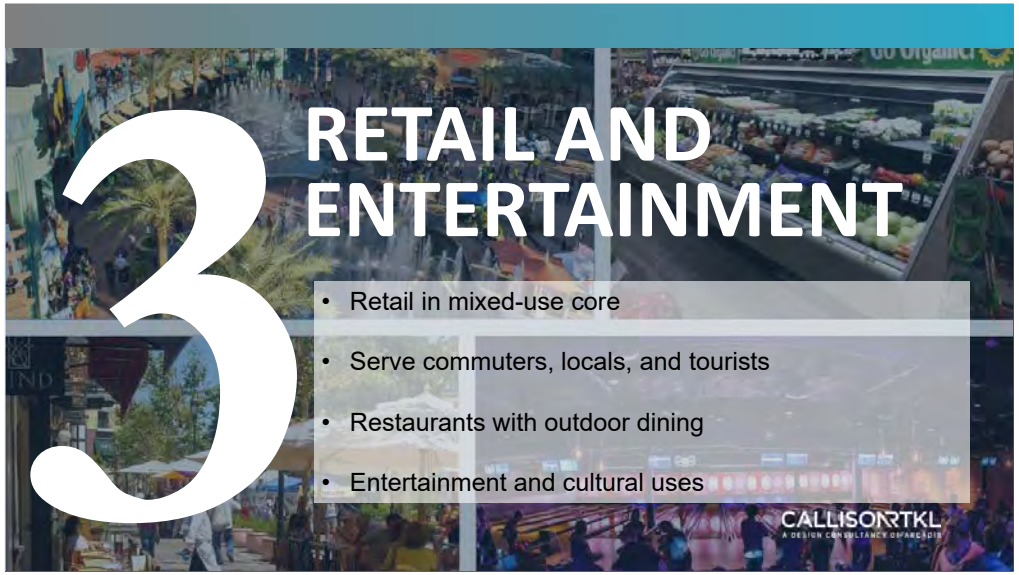
Car2go: Car Share System

Bike Route

Wide Sidewalk/Outdoor Dining + Canopy

Designated Bike Lane

Urban Trail



3 RETAIL AND ENTERTAINMENT

- Retail in mixed-use core
- Serve commuters, locals, and tourists
- Restaurants with outdoor dining
- Entertainment and cultural uses

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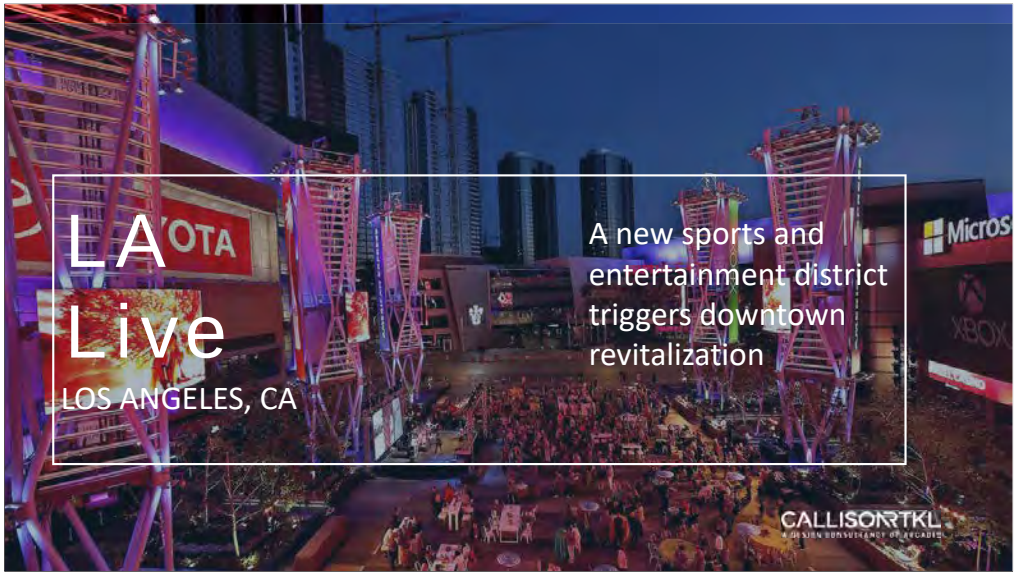

LA Live

LOS ANGELES, CA

A new sports and entertainment district triggers downtown revitalization

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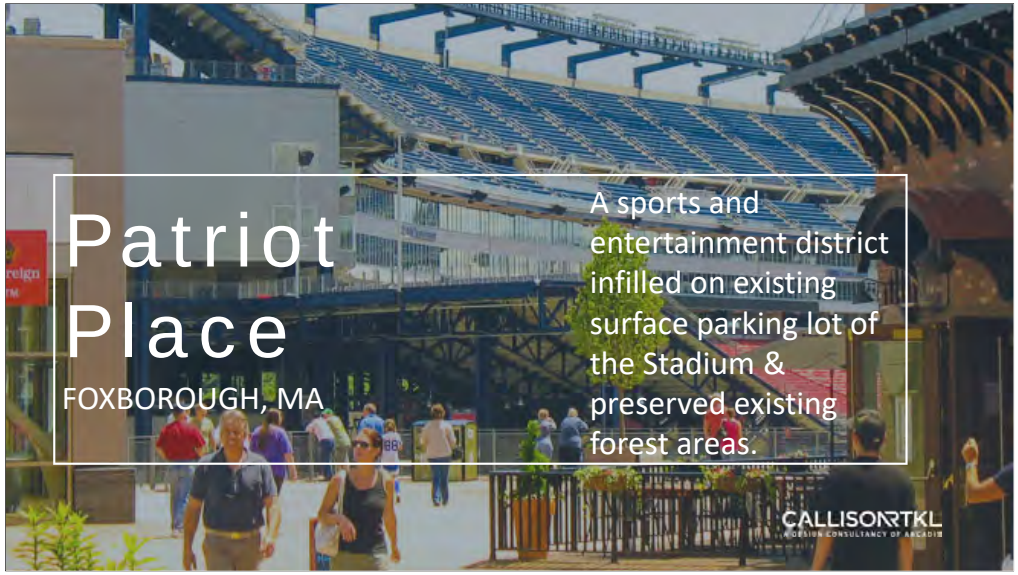
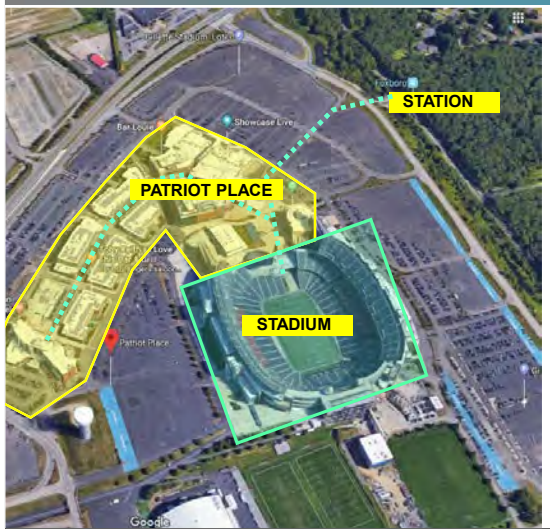
SPORTS AND ENTERTAINMENT DISTRICT CATALYZE DOWNTOWN REVITALIZATION



KEY CHARACTER & LESSONS LEARNED



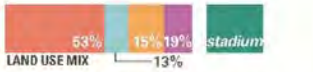
LOCATION: Within ¼ - ½ mile walking radii of Foxboro/Gillette Stadium MBTA station

TOTAL GSF: ~ 1.3 MILLION

AVG FAR: ~1.2

LESSONS LEARNED:

- Infill development on surface parking lot
- Green field preservation
- Mix of retail, hospitality, entertainment, sports training, healthcare and office uses
- Retail and entertainment venues are regional and sports based on game days
- No supporting residential population on site
- Shared parking strategy
- No direct pedestrian connection between station and stadium



~1.3 million square feet* of development

SITE AREA CONTEXT

- **Surface Parking Lot** — Tailgating venue
- **Foxboro/Gillette Stadium MBTA Station**
- **Cinema**
- **CBS Scene** — 15,000 SF Sports & Entertainment venue
- **Hall at Patriot Place** — (Patriots Hall of Fame)
- **Patriot Place** — 1.3 million SF of Retail and Entertainment venues
- **Hotel and Conference Facility**
- **Gillette Stadium** — capacity 69,000
- **Surface Parking Lot** — Tailgating venue
- **Big Box Retail Center**

SED W/ OFFICE & INSTITUTIONS, NO RESIDENTIAL COMPONENT INFILL

HOF + Team Store

Shops + Restaurant

Hotel

Entertainment Venue

Medical Office

NO DIRECT CONNECTION FROM THE STATION TO THE RETAIL COMPONENT

Commuter rail only opens on game days

LEGEND

- Hotel
- Retail/Mixed Use
- Entertainment
- Office/Institutional/Civic
- Stadium / Arena
- Hardscape Plaza
- Open Space
- Parking
- Major Attraction
- Pedestrian Circulation
- Rail Station
- Study Area Boundary

0' 250' 500' 1000' 2000'

4 DIVERSE HOUSING

- Residential in mixed-use core
- Singles, empty nesters, young families, seniors
- For-sale and rental housing
- Island-oriented design

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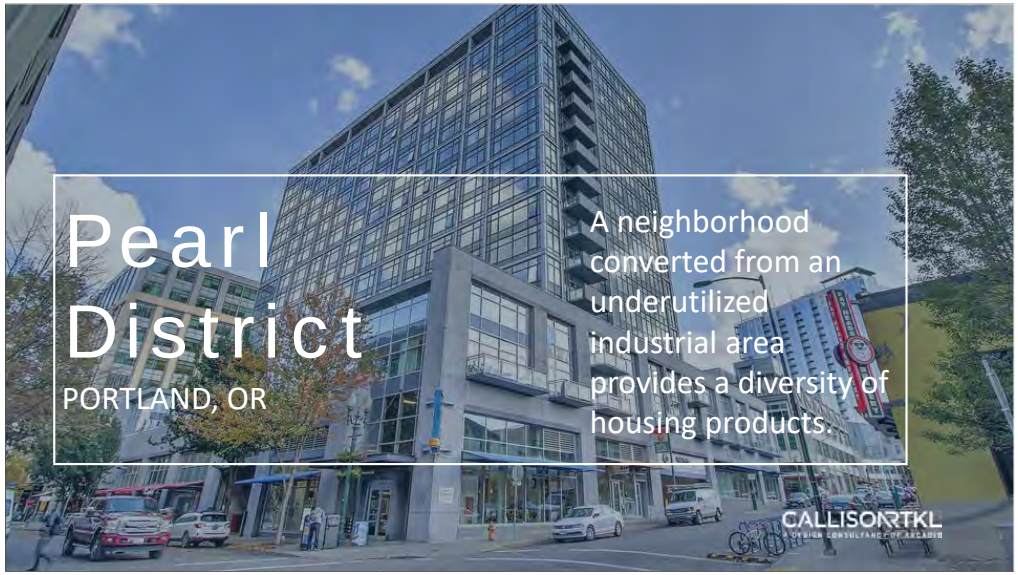

Pearl District

PORTLAND, OR

A neighborhood converted from an underutilized industrial area provides a diversity of housing products.

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KEY CHARACTER & LESSONS LEARNED

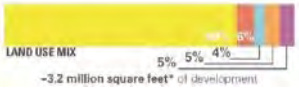
LOCATION: Within ¼ - ½ mile walking radii of Portland Union Station

TOTAL GSF: ~ 3.2 MILLION

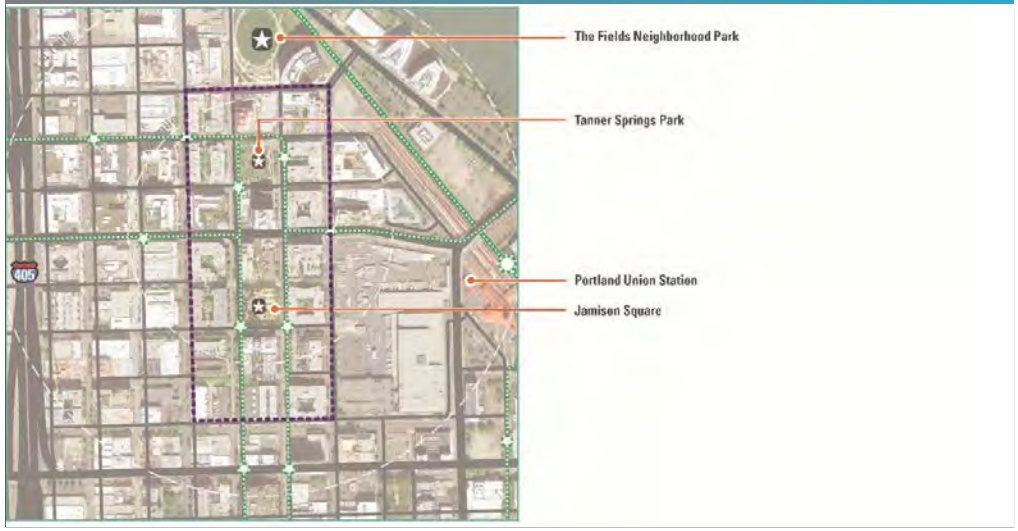
AVG FAR: ~ 2.0

LESSONS LEARNED:

- Dense mixed-use development with supporting commercial, cultural venues and open spaces
- A diversity of housing types provides many choices
- Small block grid enables infill development
- Significant amount of affordable housing
- Pedestrian-oriented street grid with convenient transit access
- Wayfinding and branding



SITE CHARACTER CONTEXT



MULTIPLE HOUSING CHOICES

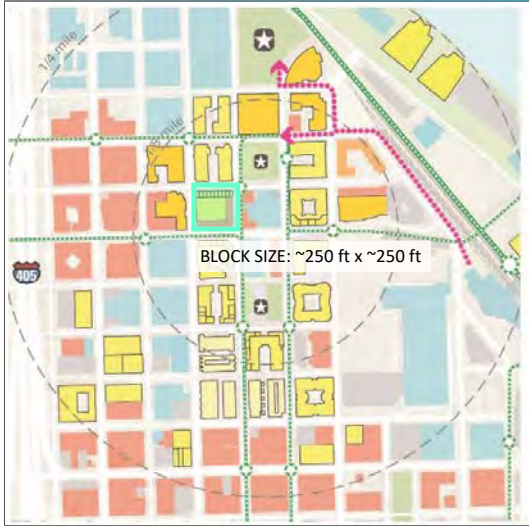
Mid-rise Residential

High-rise Residential

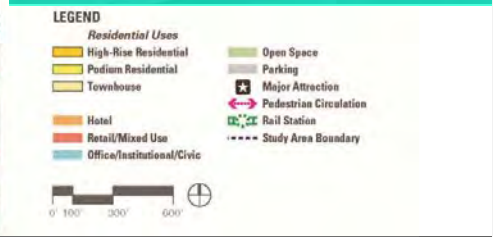
Townhomes

Lofts

SMALL BLOCKS W/ ACTIVE GROUND FLOOR USES + WALKABLE STREETS



Pedestrian-Oriented Grid + Convenient Transit Access



5 WORKING DISTRICT

- Additional ridership near Station
- Class A, creative office, or institutional and academic uses
- Business Hotel
- Retail can support daytime uses

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Hayden's Ferry/Marina Heights

TEMPE, AZ

Office/mixed-use development emphasizes live-work-play environment along waterfront.

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KEY CHARACTER & LESSONS LEARNED

LOCATION: Within ¼ - ½ mile walking radii of Valley Metro ASU Tempe Station

TOTAL GSF: ~ 3.7 MILLION

AVG FAR: ~ 1.5

LESSONS LEARNED:

- Office mixed-use development is attracted by uses such as academic or other institutional anchors
- Mix of class-A office, creative office, retail, hospitality, residential and recreational amenities
- Live-work-play environment
- Office campus structured parking shared to accommodate ASU home games nearby
- No direct pedestrian connection between station and office campus development

SITE CHARACTER CONTEXT

Hayden's Ferry Lakeside Complex
1.7 million SF of Office, Retail, and Residential

Marina Heights
2 million SF of Office and Retail

Tempe Beach Park

Hayden Flour Mill (historic)

Tempe Butte

Sun Devil Stadium
capacity 64,200

Tempe Transportation Center

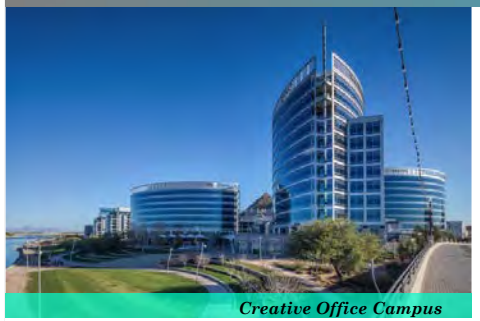
Wells Fargo Arena
capacity 10,700

Arizona State University Campus

Mill Avenue District

Centerpoint on Mill
126,000 SF of Office, Retail, & Entertainment venues

OFFICE CAMPUS MIXED WITH RESIDENTIAL , RETAIL AND RECREATIONAL


Creative Office Campus


Class-A Office


Active Ground Floor Uses


For-sale Condos

OFFICE DISTRICT MIXED W/ RESIDENTIAL, RETAIL AND HOTEL COMPONENT

LEGEND

Office / Institutional

- Class A Office
- Creative Office
- Academic Campus
- Civic
- Residential
- Hotel
- Retail/Mixed Use
- Entertainment
- Stadium / Arena
- Open Space
- Parking
- Major Attraction
- Pedestrian Circulation
- Rail Station
- Study Area Boundary

0' 250' 500' 1000' 2000'

6 GREEN NETWORK

- Central gathering space
- Passive and active open spaces
- Tree-lined streets
- Improve connections to Pearl Harbor and Halawa Stream

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Exposition Park

LOS ANGELES, CA

Multi-purpose open space mixed w/ sports and museum venues acts as regional destination.

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KEY CHARACTER & LESSONS LEARNED

LOCATION: Adjacent to Expo Line Expo Park/USC Station and Expo Park/Vermont Station

TOTAL GSF: ~ 0.45 MILLION

AVG FAR: ~ 0.1

LESSONS LEARNED:

- Open space mix includes passive green and active fields
- Several pedestrian linkages connect station to stadium
- Use of open space extends to sports and other events
- Wayfinding elements are integrated into pedestrian network
- Parking lots are utilized for community events

SITE CHARACTER CONTEXT

MIX OF PASSIVE AND ACTIVE GREEN AND URBAN TRAILS

OPEN SPACE MIX W/ PEDESTRIAN LINKAGES TO THE STATION/STADIUM/CAMPUS

Pedestrian Linkage to the Station

7 COMMUNITY GATHERING

- More community events and services
- Fill out events calendar
- Maintain swap meet and tailgating

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Westgate City Center

Glendale, AZ

Multi-purpose open space mixed w/ sports and museum venues acts as regional destination.

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A DESIGN CONSULTANCY OF AECOM

KEY CHARACTER & LESSONS LEARNED

LOCATION: Adjacent to Fwy 101

TOTAL GSF: ~ 2 MILLION

AVG FAR: ~ 0.75

LESSONS LEARNED:

- Sports and entertainment district sites as island on large surface park lot away from other development
- Grid layout supports future infill development
- Multipurpose plazas for community events and activities
- Regional retail anchor and sports based
- Primary vehicle access from nearby highways
- No transit access
- Lack of bike/pedestrian network

SITE CHARACTER CONTEXT

Tanger Outlet Mall
400,000 SF retail

Westgate City Center
2 million SF Retail, Office, & Entertainment venue

Gila River Arena
capacity 19,000

Multifamily Residential

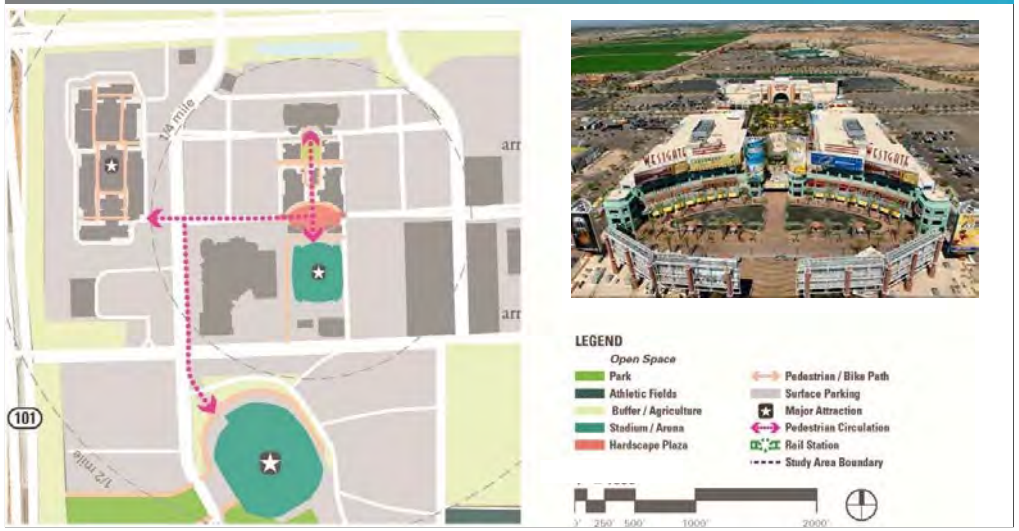
Hotel and Conference Facility

The Great Lawn
Primary tailgating venue

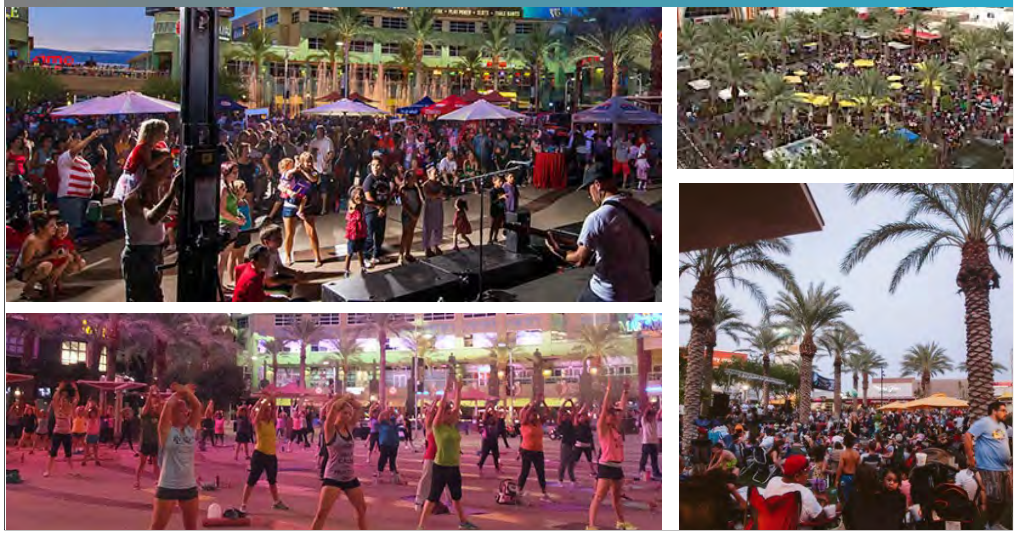
University of Phoenix Stadium
capacity 63,400

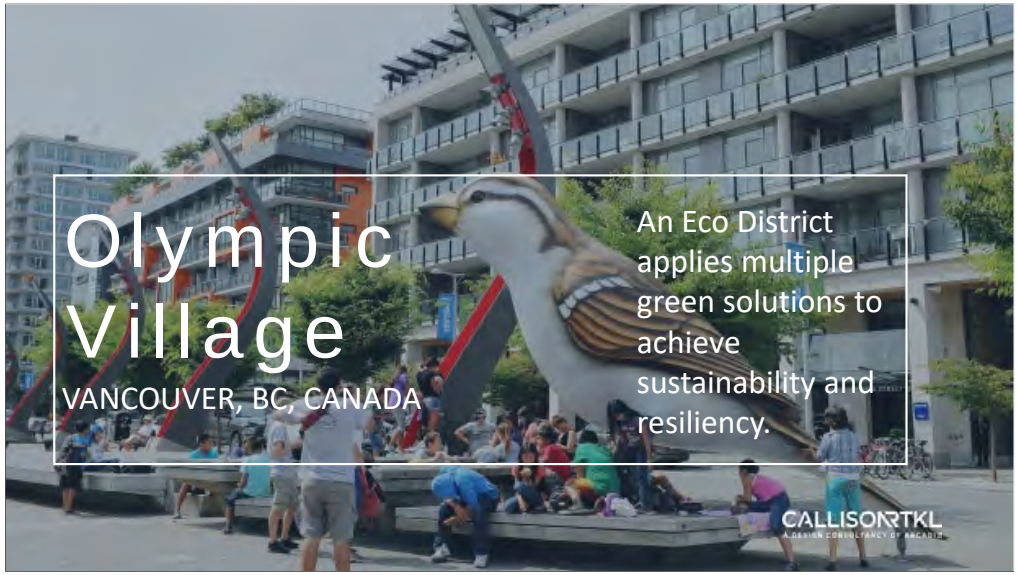
Sportman's Park

PEDESTRIAN LINKAGES TO SURROUNDING RETAIL/HOTEL DEVELOPMENT



MULTIPURPOSE EVENT SPACE FOR COMMUNITY GATHERING





KEY CHARACTER & LESSONS LEARNED

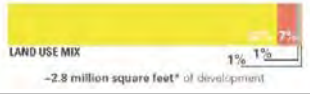
LOCATION: Located within ¼ mile of Main Street-Science World Train Station

TOTAL GSF: ~ 2.8 MILLION

AVG FAR: ~ 1.75

LESSONS LEARNED:

- Converted from a former industrial area and an underutilized waterfront
- LEED Platinum development
- Mix of residential, parks and a small number of retail and entertainment venues
- Small blocks for development
- Rehabilitated shoreline
- Passive building features
- Comprehensive pedestrian linkages tie development to waterfront and other open spaces



SITE CHARACTER CONTEXT

BC Place
capacity 54,500

Edgewater Casino

Creekside Park

TELUS Science World

Habitat Island

Community Center

Olympic Village Square

Olympic Village
2.8 million SF of residential, retail, office, and hotel

Hinge Park

GREEN SOLUTIONS FOR LOW IMPACT DEVELOPMENT


Green Roof


Rain Garden


PV Roof


Waste-to-energy Plant


Habitat Island

RESIDENTIAL MIXED-USE DISTRICT W/ WATERFRONT ACCESS

LEGEND

Open Space

- Park
- Athletic Fields
- Buffer / Agriculture
- Green Roof
- Stadium / Arena
- Hardscape Plaza
- Pedestrian / Bike Path
- Surface Parking
- Major Attraction
- Pedestrian Circulation
- Rail Station
- Study Area Boundary
- Water Taxi

0' 100' 300' 600'

Exercise 1: Review Regional Plans

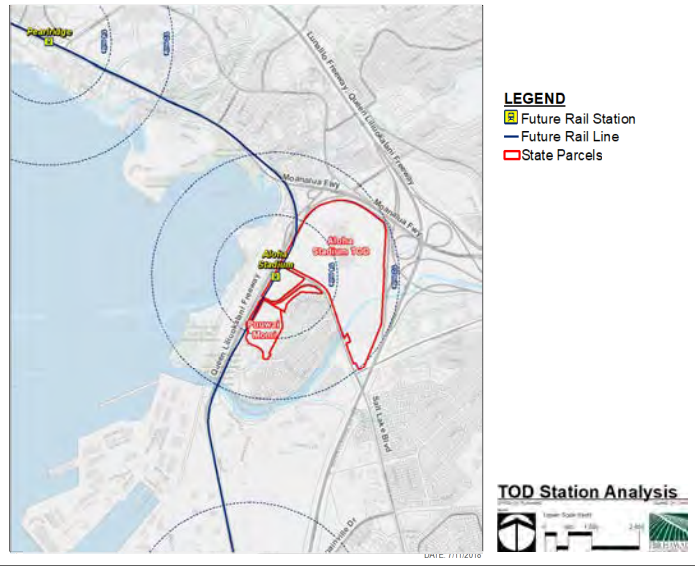
Infrastructure & Environmental Considerations

Area Overview
HALAWA-STADIUM

Infrastructure and Regional Needs

- Existing utilities can service stadium requirements and **some** residential / commercial / retail uses
- Full buildout will require additional wastewater and water facility improvements
- Additional school capacity
- New urban street network with pedestrian amenities
- Improved highway on- and off-ramp operations
- Environmental Concerns
  - Military fuel pipeline
  - Former dry cleaning facility

State Parcels



Hawaii becomes first state to pass laws supporting Paris Climate Accord (June 2017)

*"climate change… is the **overriding challenge of the 21st century** [and] ...poses immediate and long-term threats to the State's economy, sustainability, security, and way of life.*

*…The State shall expand strategies… to **reduce greenhouse gas emissions** statewide through the reduction of energy use, adoption of renewable energy, and control of air pollution **among all agencies, departments,** industries, and sectors, including transportation."*

Gov. Ige signed SB 559 (Act 032), June 2017

ARUP

Recognize a problem

Choose to act to remedy or avoid the problem

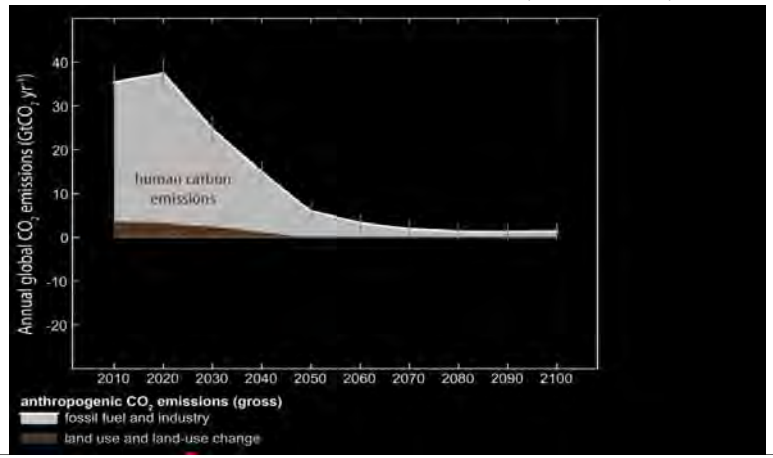
Act effectively

***Adapted from Collapse** – How Societies Choose to Fail or Succeed, Jared Diamond*

ARUP

A 66% chance *if we act effectively*

Science 2017, Stockholm Resilience Center, Johan Rockstrom



ARUP

Optimism at the 2018 Global Climate Summit

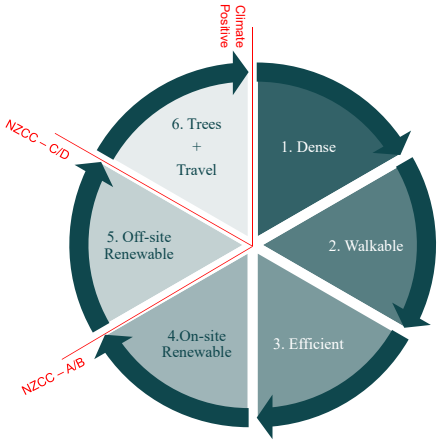
- The mayors of 19 cities presiding over 130 million city-dwellers including Copenhagen, Johannesburg and Tokyo, made a net-zero carbon pledge for all new buildings by 2030.
- 400 investor members, representing $32 trillion in assets, committed "to accelerate and scale up" climate action to support the Paris Agreement.
- $15 million in pro-bono legal services by 2020 toward climate-related causes, as nine law firms formed the new Lawyers for a Sustainable Economy Initiative.
- The Under2 Coalition now represents 1.3 billion souls and 43 percent of the planet's economy.
- The We Are Still In campaign now counts 3,540 corporate signatories pledging to uphold the Paris Agreement.

ARUP

Affordable, Resilient, and Healthy

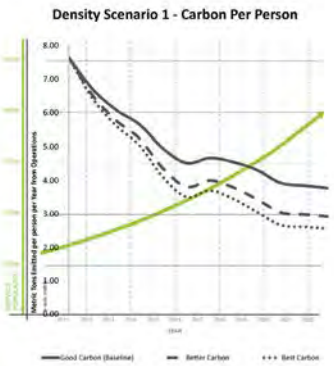
Climate Positive Communities

Effective Action – Climate Positive Community



ARUP

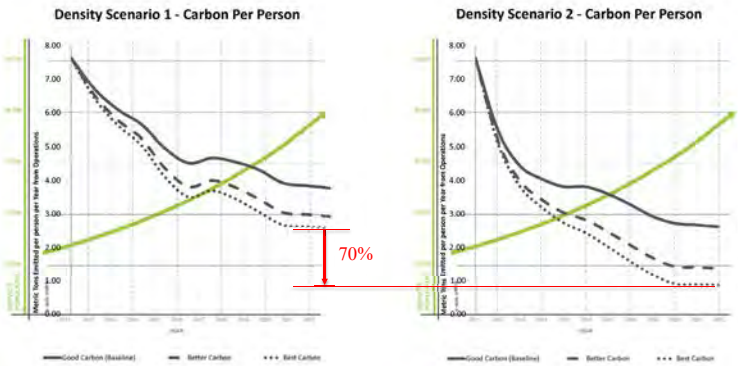
Density Enables Deep Improvements



Density
(FAR of 1x)

ARUP

Density Enables Deep Improvements

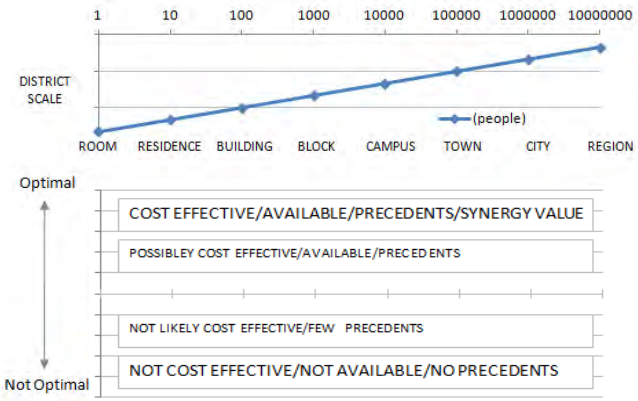


Density
(FAR of 1x)

2x Density
(FAR of 2x)

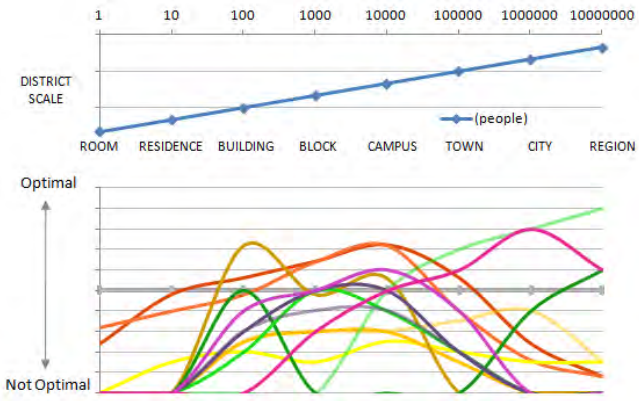
ARUP

Optimal Scales



ARUP

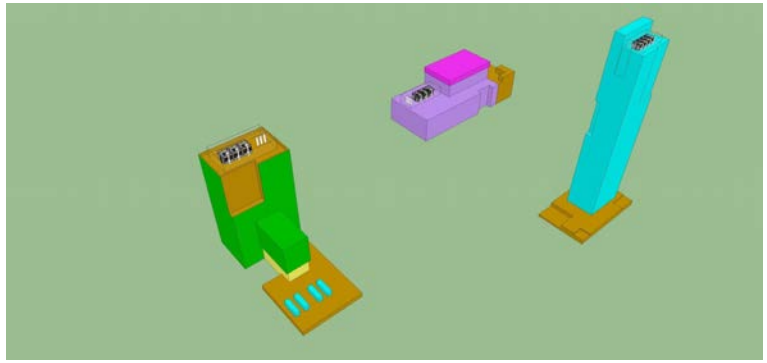
Optimal Scales



ARUP

Optimal Scales

ARUP



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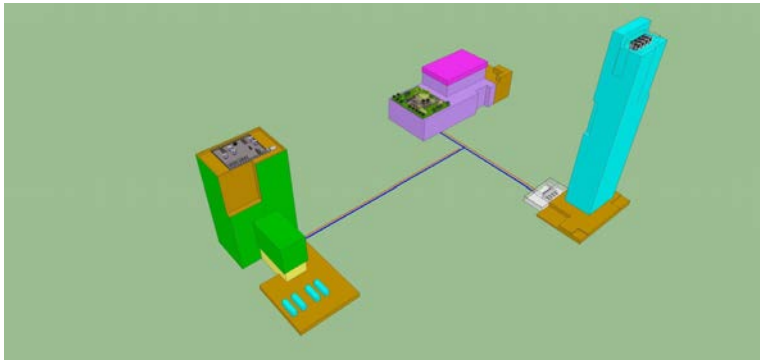

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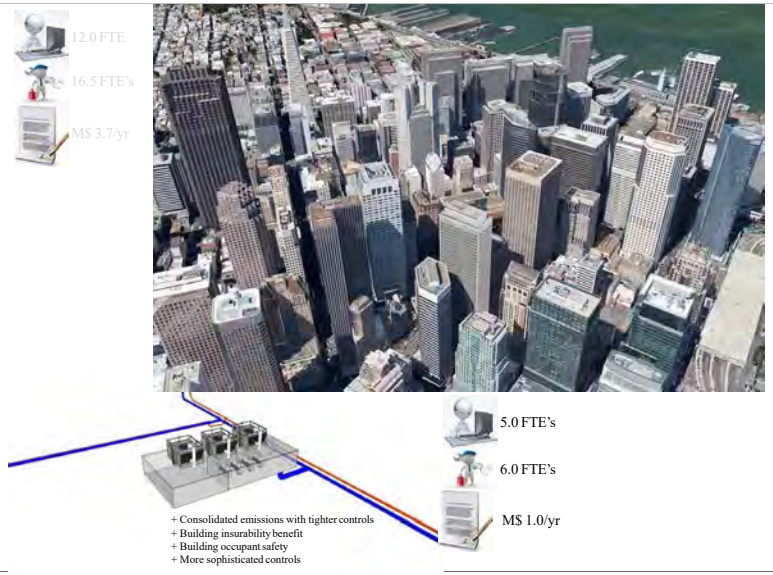
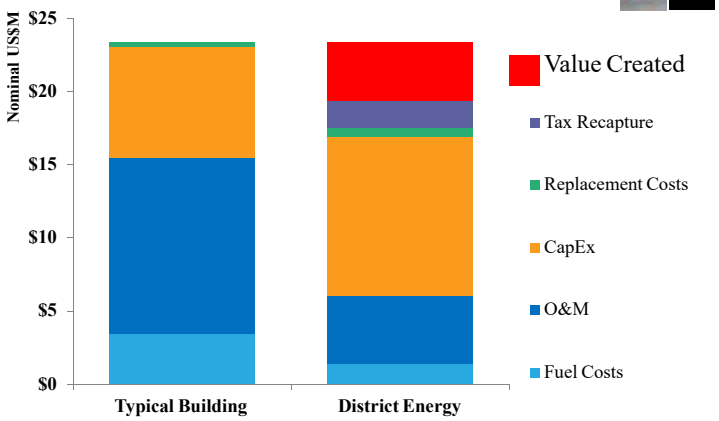


ARUP

Saving millions of dollars per year



ARUP SKANSKA SF Environment PERKINS+WILL SHERWOOD

ARUP

Establish, Expand, Optimize, Maximize

ARUP

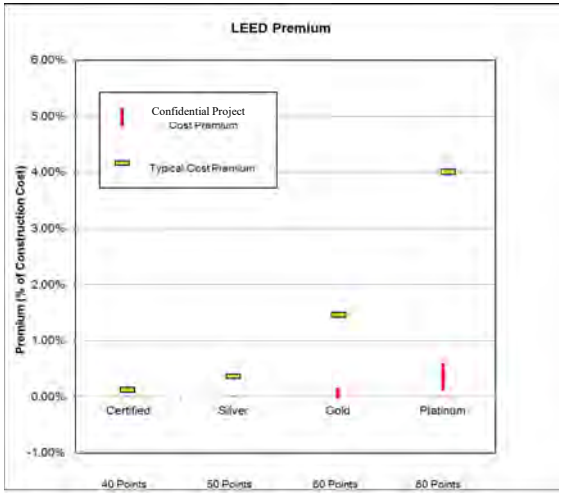
The Default Condition is…

- **Safe** since others did it (think protection in groups)
- **Easy** since we've done it before (think existing tools)
- **Known** since we can see it (think existing data)
- **Inexpensive** since anything better or new should always cost more (think marketing)
- **Hard to change** (think existing city streets)
- **Politically nonconfrontational** (think NIMBY'ism)
- **Appropriate** since it reflects our culture (think the sexy automobile)
- **Financeable** since the financial system knows how to pay for it (think loan underwriting)

ARUP

ARUP

Building Performance Standards

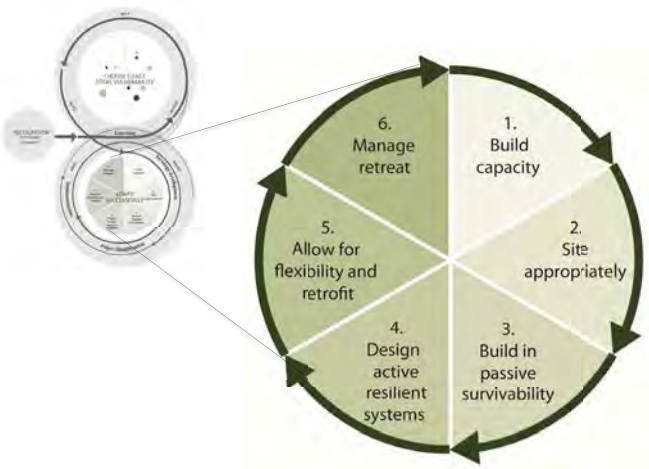


ARUP

Adaptation

Resistance & Resilience

Act Successfully: Comprehensive + Time Based



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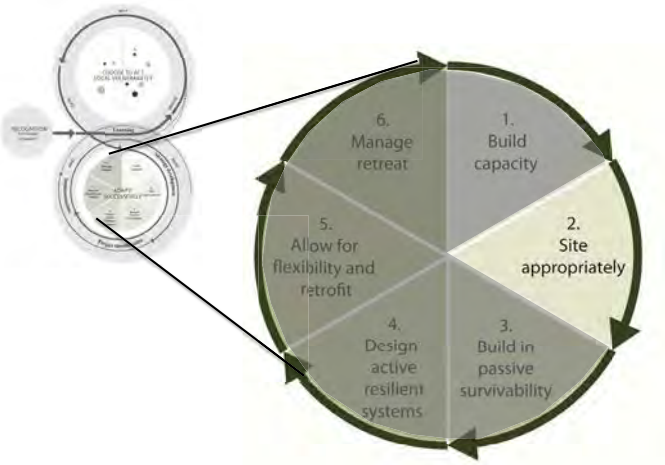
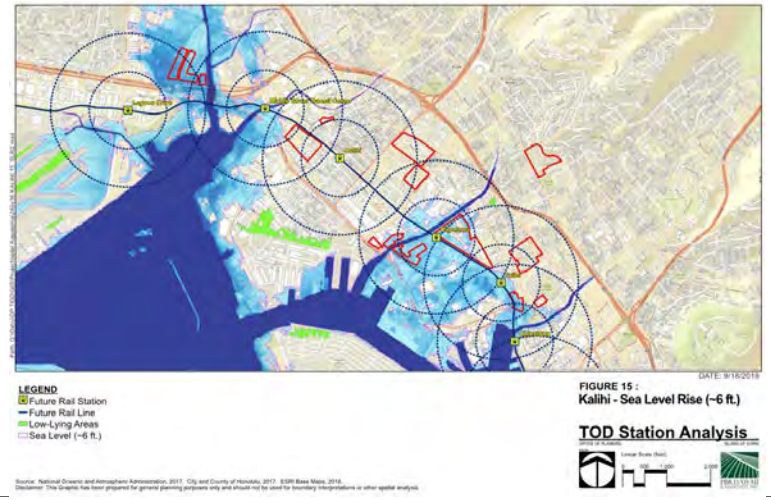


ARUP

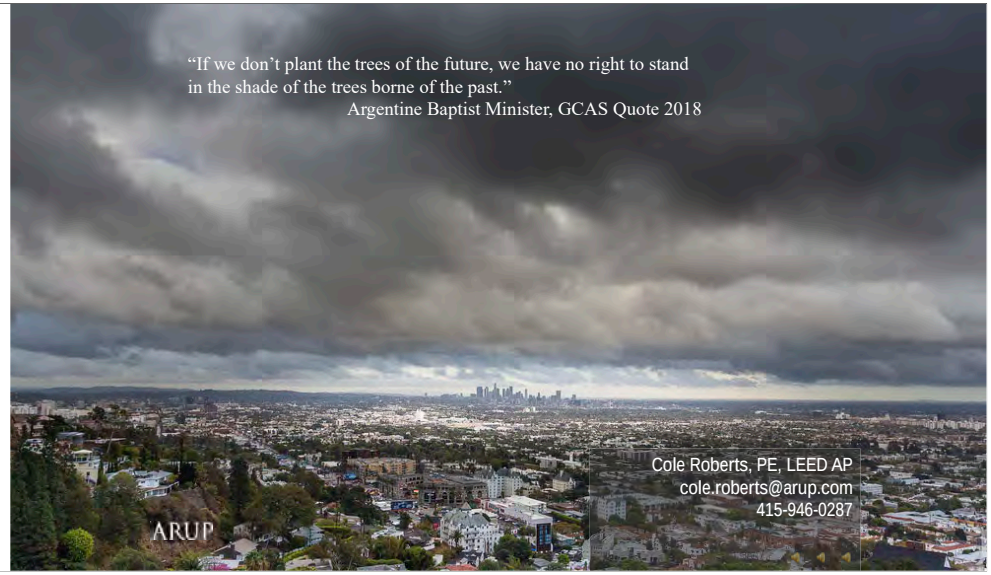
Site Appropriately – Priority Dev. Areas

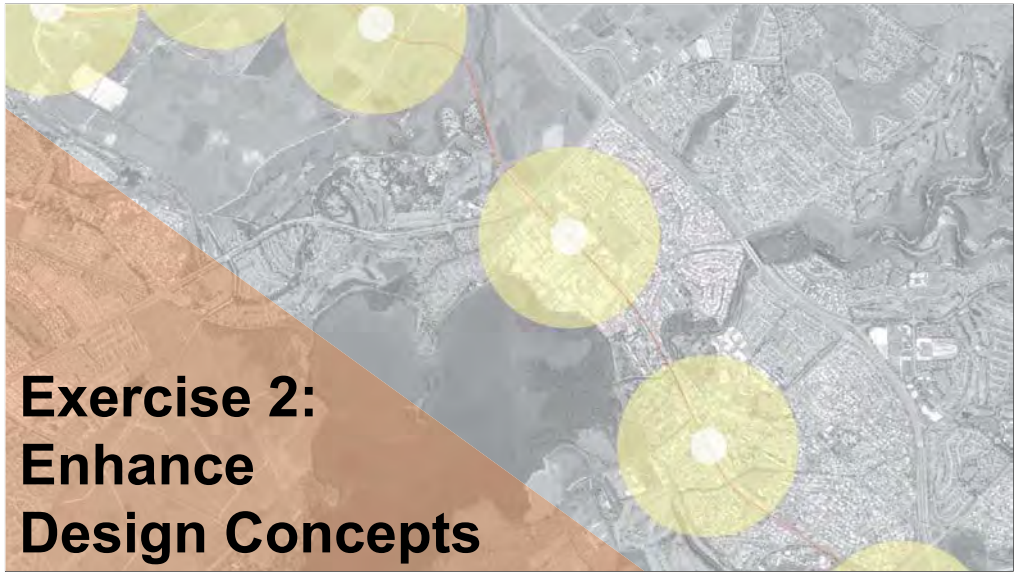


ARUP

De-site – Cheonggyecheon Stream

ARUP





Exercise 2: Enhance Design Concepts

Report Back

- "Homework"
- Compilation of alternatives
- We'll keep in touch!

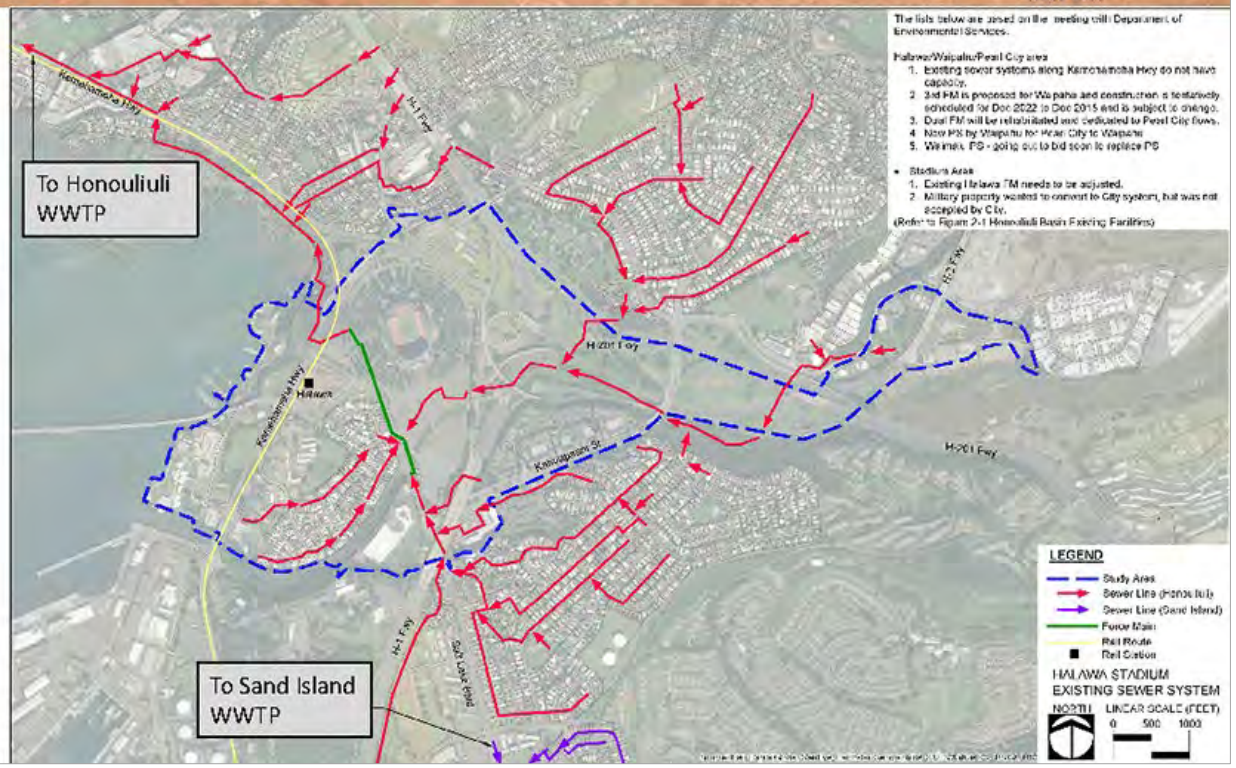
Attachment E.
Key Infrastructure Conditions in Halawa-Stadium TOD Priority Area

Infrastructure: Sewer

R. M. TOWILL CORPORATION

Stadium Area

- Existing FM needs to be adjusted
- Military property wanted to convert City system, but was not accepted by City

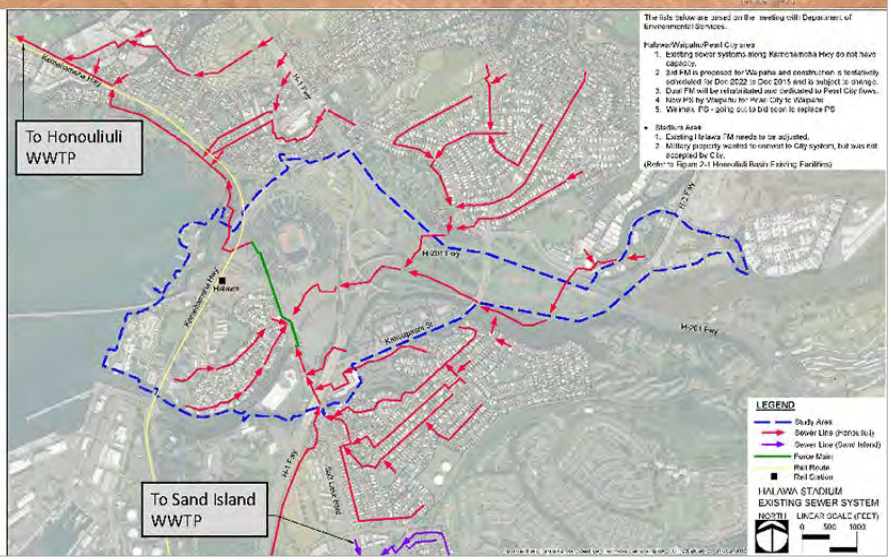


Infrastructure: Sewer

R. M. TOWILL CORPORATION

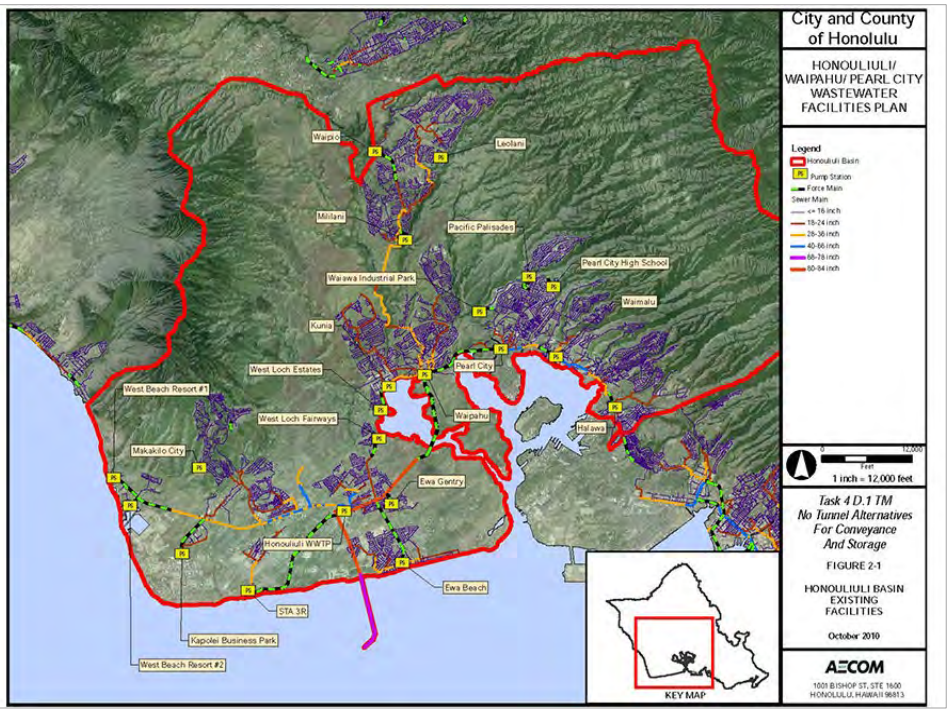
Halawa / Waipahu / Pearl City

- Existing systems along Kam Hwy do not have capacity
- 3rd FM is proposed for Waipahu; construction tent. scheduled for Dec. 2022 (subject to change)
- Dual FM will be rehabilitated and dedicated to Pearl City flows
- New PS by Waipahu for Pearl City to Waipahu
- Waimalu PS going out to bid soon



INFRASTRUCTURE: WASTEWATER

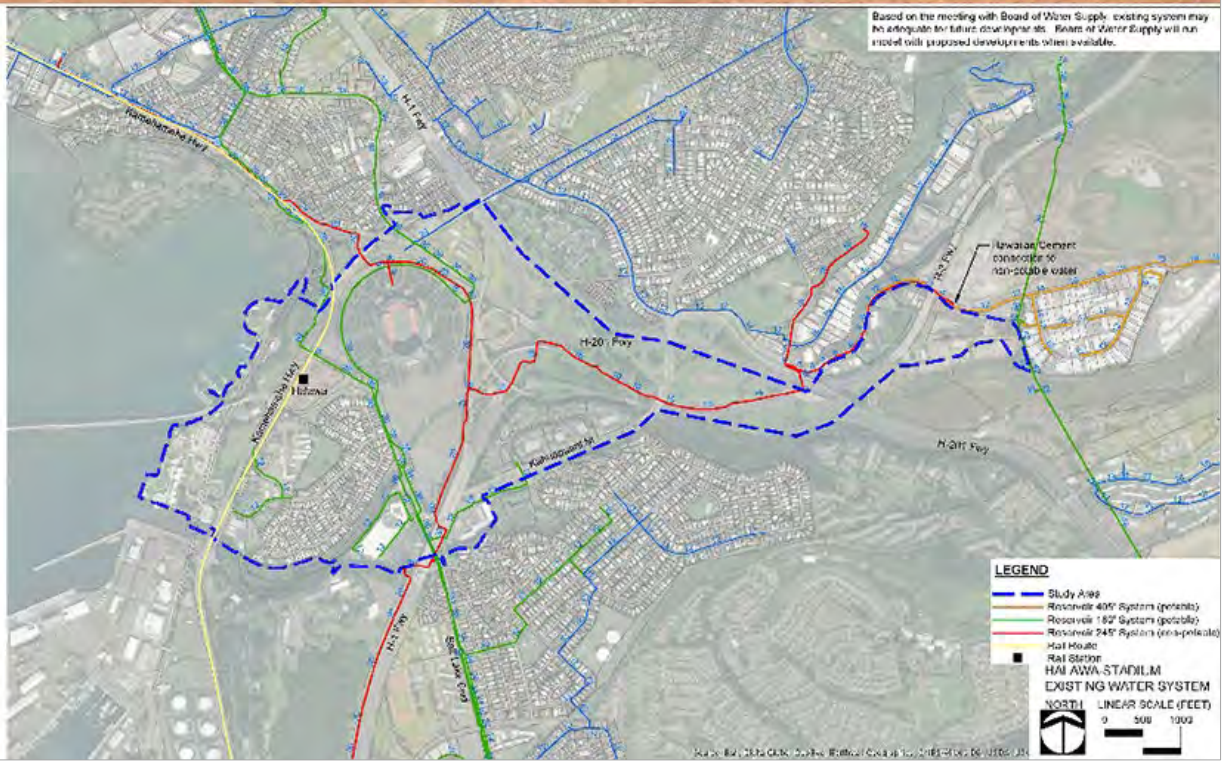
R. M. TOWILL CORPORATION

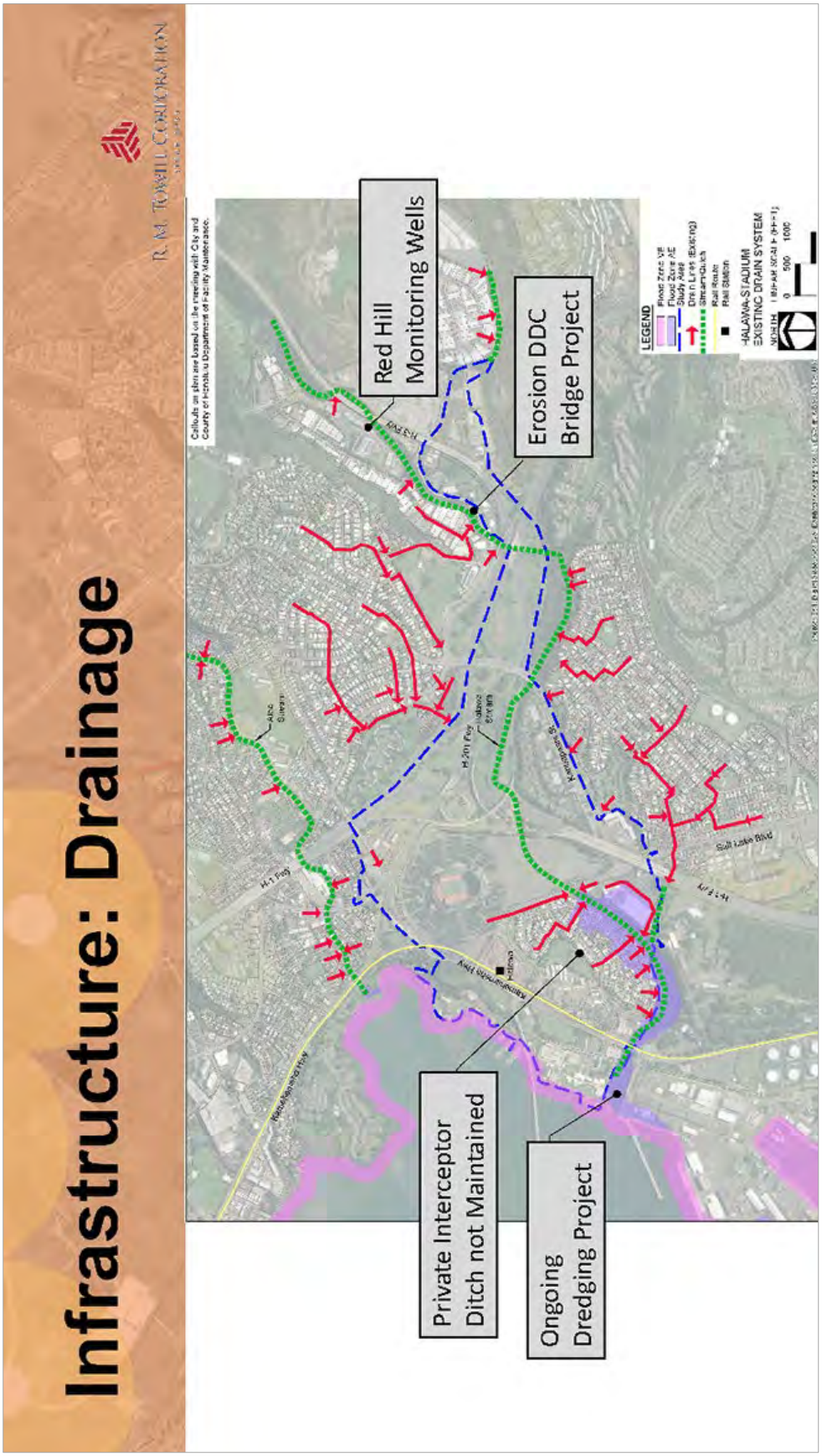


Infrastructure: Water

R. M. Towill Corporation

- Existing system may be adequate for future developments
- BWS will model with proposed developments when development information is available




Infrastructure: Drainage
R. M. TOWILL CORPORATION
Red Hill Monitoring Wells
Erosion DDC Bridge Project
Private Interceptor Ditch not Maintained
Ongoing Dredging Project
LEGEND
HALAWA-STADIUM EXISTING DRAIN SYSTEM