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The Houston Health Department Office of Chronic Disease, Health Education & Wellness (OCDHEW) is invested in ensuring transformative improvements in the built environment to encourage physical activity. The 2040 Regional Pedestrian and Bicycle Plan identified policies, programs, operations, safety, and design approaches to support long-term pedestrian and bicyclist mobility in Houston. In 2017, OCDHEW embarked on an intra-department collaboration with the City’s Planning & Development Department (PDD) and Department of Public Works and Engineering (PWE) to remove barriers to creating end-of-trip facilities along key regional pedestrian and bicycle routes.

**COMMUNITY CONTEXT**

Houston, Texas is the 4th largest city in the United States with an estimated population of 2.2 million individuals. Houston spans over 627 square miles with approximately 500 centerline miles of existing biking facilities. Houston's sprawl development and the sporadic disconnections in local bicycle and pedestrian networks are key challenges to the built environment inhibiting active transportation.

Barriers to active transportation can lead to increased risk of obesity and chronic disease. Chronic Disease is prevalent in Houston. Adults who are sedentary are at an increased risk of many serious chronic disease health conditions including obesity, heart disease, diabetes, and high blood pressure. The percentage of adults who are sedentary in Houston (29.5%) is higher than the national average (24.2%). It is estimated that 32% of Houston adults are challenged with obesity and 30% have high blood pressure. Policies affecting the built environment and lack of access also serve as key obstacles preventing many Houstonians from being physically active on a regular basis. Active living is critical for physical and mental wellbeing. Physical activity benefits include weight control and a reduction of risks for cardiovascular diseases, type 2 diabetes, osteoporosis and some cancers.

**CHALLENGE**

Lack of connections in localized networks and the need for community-based capacity building were some of the key regional needs identified by the Houston-Galveston Area Council (H-GAC) Pedestrian and Bicyclist Subcommittee. Disconnections in the pedestrian and bicycle networks present a barrier to active transportation and increase chronic diseases and obesity risk factors. Capital improvement projects such as the distribution of end-of-trip facilities—bike racks at key community destinations improve localized networks, safety, and increase opportunities for active transportation.

The Houston Bike Racks (HBR) program is a free bike racks distribution program aiming to support the vision and strategies identified in the Houston – Galveston Area Council (H-GAC) 2040 Regional Pedestrian and Bicycle Plan and the Houston Bike Plan to improve local bike and pedestrian network connectivity. End-of-trip facilities, bicycle parking—bike racks are recommended as a design strategy to accommodate safety and comfort of pedestrians and bicyclists.

The installation of bike racks at desirable end locations is an evidence-based practice to maximize connections to existing bicycle networks and support biking infrastructure. It encourages biking, physical activity, economic vitality, bicycle safety, and improvements to the built environment in marginalized neighborhoods.

The Houston Health Department (HHD) planned and implemented the program in partnership with local health coalition Go Healthy Houston, the Planning & Development Department (PDD) and the Department of Public Works and Engineering (PWE). During the planning stages, research and detailed reviews of bike racks program best practices were conducted in addition to internal and external planning meetings. HHD staff developed a cross-city department bike rack distribution process and protocols (including a standard operating procedure, work plan, website page, application, partnerships, social media messages, flyers and other collateral materials) needed to implement and promote the HBR Program. The PDD and PWE departments provided technical assistance on best practices for bike parking in addition to coordination support. The HBR program was originally designed to have two priority areas – Sunnyside and Near Northside. Upon the launch of the Mayor’s Complete Communities Initiative and the growing interest in the program, the HBR program successfully adopted the additional Complete Community’s areas as priority areas (Acres Home, Gulfton, Second Ward and Third Ward).

The Houston Bike Racks program (HBRP) was piloted in January 2017 in Near Northside, Houston. The pilot in Near Northside allowed Health Department staff the ability to gather feedback, identify bottlenecks in the newly developed HBR application process, and establish performance targets. With its growing momentum and partnership support, the Houston Bike Racks program officially launched citywide in April 2017 and operated until the Fall of 2019.

The full process included an online application, letter of agreement and 1-year follow up. Eligible applicants for the program included: Businesses and Worksites, Civic Associations, Super Neighborhoods, Commercial Properties, Community-based Organizations, Management Districts and public right away locations. OCDHEW managed and tracked applicant and program data, deliveries, website content, and other administrative functions.
HBR PROGRAM STRATEGIC APPROACH

- **Partnership** – develop cross-sectoral collaborations between community organizations, businesses, and the Go Healthy Houston Taskforce to increase population reach and sustainability of the Houston Bike Racks Program.

- **Prioritization** – ensure equitable access and promote equity by prioritizing underserved neighborhoods with higher prevalence of physical inactivity and gaps in bike and pedestrian connectivity.

- **Capital Improvement** – infrastructure support and investment in local organizations and businesses.

- **Health In All Policies** – collaborate with planning, transportation, and public works divisions.

- **Goal Alignment** – address community-based strategies in the established Regional Pedestrian and Bicyclist Plan.

- **Policy Development** – advocate for updates to city codes that present barriers to bike rack installations.

- **Infrastructure Improvement** – support and invest in local and regional capital improvement and bike plan objectives to improve localized bike and pedestrian network.

- **Technical Assistance** – provide technical assistance to approve locations; deliver bike racks.

- **Tracking and Monitoring** – develop mapping opportunities to track bike racks donations and initiate mapping strategy for local bike parking network.

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**PROMOTION**

Promotional material for the HBR program includes a Bike Racks website page, Bike Racks Flyer, Bike Racks Water bottles, and postings on various internal and external communication newsletters and social media. Community and City Department partners assisted with HBR promotion by sharing the program's flyer, application link, and providing technical assistance when applicable. Flyers were shared at neighborhood meetings, Complete Community meetings in addition to community events such as Cigna Sunday Streets, Go Walk Houston events, Bike to Work Day, Health fairs, Mayoral Complete Communities Initiatives, and other Houston events.

**EVALUATION**

The goal of the Houston Bike Racks (HBR) program was to promote access to physical activity opportunities by increasing end-of-trip facilities, such as bike racks in underserved communities. Applicant data was collected and tracked via the online application form, Bike Rack Delivery Form and Letter of Agreement form. A data spreadsheet was used to monitor and summarize the data collected. Frequencies, reach, and other summative data was calculated on the distributed bike racks and delivery locations. The data collected helped ensure tracking and dissemination of the bike racks to Houston priority areas. A post-bike rack installation survey was created to be sent out to ensure compliance with the 1-year installation period and to gather satisfaction and additional impact data. This process is ongoing, scaled to staff capacity and will be included in future updates and reports related to the program.
FROM 2017-2019 THE HOUSTON BIKE RACKS PROGRAM:

- Distributed **180 BIKE RACKS** to agencies across Houston, with **53 BIKE RACKS** going to Houston priority areas.

- Reached a potential of **43,200 HOUSTONIANS** across **21 Houston zip codes** through its distributed bike racks*.

*A map of applicant zip codes showing HBR bike racks distribution is available in the Appendix.

Figure 1: Percentages of bike racks distributed at various applicant sites of HBR program racks across Houston, Texas.

ACCOMPLISHMENTS

- Established 7 collaborative partnerships for the dissemination of bike racks
- Presented to the City of Houston Bicycle Advisory Committee in 2018 upon request
- Highlighted via poster presentation at the 2018 NACCHO Annual Conference and NNPHI conference
- Implemented an innovative 2018 youth summer project consisting of a bicycle parking workshop and community bike parking audits engaging over 35 Houston area youth

IMPACT

The Houston Bike Racks (HBR) program demonstrated the ability to increase the availability of bike parking in designated priority areas in order to encourage biking and physical activity in routine short distance trips. The program prioritized historically underserved neighborhoods and responded to communities’ needs indicated from stakeholders and community members via community assessments. Over 50 free bike racks (1 out of every 3) were requested from and delivered to priority target areas. Prioritizing low-income and disadvantaged communities for street-scale interventions helps reduce disparities in safety, use of active transportation modes, and corresponding health outcomes such as obesity and mental health.

The HBR program also aided in addressing equity by removing some of the financial barriers to businesses providing bike parking by providing free bike racks and allocating resources to the communities that could benefit the most from improvements to their built environment. The Houston Bike Racks (HBR) program successfully distributed 180 free bike racks to schools, apartments, businesses, and community organizations reaching thousands of Houstonians across Houston. In addition to aiding Houston bicycle networks and mobility strategies, the program served to support local Houston built environment and active living policy level strategies such as Complete Streets, Vision Zero, and the Houston Bike Plan.
Planning: Aligning program planning goals to existing plans is essential for buy-in and success.

Partnering: Develop collaborative partnerships with local transportation stakeholders and city departments to help serve as parking ordinance and subject matter experts. This project required staff to be well versed in city policies and procedures. Relationships across departments and civic organizations are key to program success and sustainability.

Leverage Resources: Collaborate with public and private partners to merge funds, in-kind staff, and human and political capital.

Communications: Conduct branding and marketing activities to promote the program. Utilize all forms of earned media reach the intended target audience. Grassroots outreach and promotion are essential. Provide health education messaging and cues to encourage biking and bike safety.

Evaluation: Prioritize evaluation and quality improvement activities during all stages of planning. Evaluate participant survey data and communications analytic data to measure success. Starting small scale, such as through a pilot program, provides evidence and feedback useful for decision making and gaining support.

HBR FUTURE DIRECTION
• Share results & lessons learned from the Houston Bike Racks program to stakeholders and the public via email, online websites and social media
• Continual support of the H-GAC 2040 Regional Ped/Bike Plan, Houston Bike Plan, Vision Zero, and the Mayor’s Complete Communities Initiative and emerging built environment projects
• Maintain relationships between public, private, and non-profit entities and stakeholders
Continue to promote health equity and built environment policies to institutionalize healthy community design

ACKNOWLEDGEMENTS

This program was made possible through a collaborative effort between the Houston Health Department, Houston Public Works and Engineering Department, Go Healthy Houston Taskforce, the COH Planning and Development Department. We would also like to thank our many community partners for helping to spread awareness and support for the program. We are thankful for the subject matter expertise, consultation, support and innovation in the development of the Houston Bike Racks program. Special thanks to the HHD OCDHEW staff for program development and implementation.

Funding support for the HBR program was provided by the Center of Disease Control and Prevention (CDC) Racial and Ethnic Approaches to Community Health (REACH) Grant and the Texas Department of State Health Services (DSHS) Texas Healthy Communities Grant.
DEFINITIONS

**HBR Program** – The Houston Health Department’s Houston Bike Racks Program.

**Access** – Having the personal and/or environmental ability to fulfill a targeted need; in this case, purchasing healthy food.

**Active Transportation** – Self-propelled, human-powered mode of transportation, such as walking or bicycling.

**Public Right of Way** – Any part of the right-of-way that is not privately owned or controlled and that is the responsibility of the city or other similar agency to maintain.

**Right of Way (ROW)** – The property fronting on, immediately adjacent and on either side of a public street or a nonpublic street.

**Private Property** – Means private property; not in the public right of way.

**Bicycle** – A belt-, chain-, or gear-driven device with two tandem wheels, either of which is more than 14 inches in diameter, that is propelled by human power and on which a person may ride.

**Bicycle Parking** – An area on or projective on any public right-of-way upon which one or more bicycle racks may be affixed.

**Bicycle Rack** – A fixture upon which one or more bicycles may be parked.

**Underserved** – A designation tied to a set of circumstances which may cause certain demographic groups to experience greater challenges in terms of health and other basic necessities.

**MSC Multi-Service Center** – A City of Houston- operated community facility that provides various resources and social services to nearby community members.
APPENDIX A: HOUSTON BIKE RACKS PROGRAM REACH
MAP SHOWING 21 ZIP CODES WHERE 180 BIKE RACKS WERE DISTRIBUTED.
THE COMPLETE COMMUNITY PRIORITY AREAS ARE LIGHTLY SHADED IN BLUE.

Source: Google maps & Planning & Development Department Complete Communities Map