CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

LOCATION

2007 MTFP

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

LOCATION

Hillcroft Avenue

Hillcroft Transit Center

US 59

Interchange

WESTPARK TOLL
WESTPARK Drive

Harwin Drive

Savoy Drive

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

LAND USE

- Industrial
- Commercial /office
- Vacant

Major Commercial complex

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

SCOPE OF WORK

- Identifying the major driveways and to observe the existing roadway conditions
- Documenting the traffic delays and Level of Service for the intersections and driveways
- Identifying possible deficiencies in the existing circulation system and to provide alternative improvements plans
- Recommending traffic improvement plans

Planning & Development Department, City of Houston
Traffice Study by Gunda Co.

Recommendation

- Retime the existing five signals
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION

- Close the median on Hillcroft adjacent to the Udipi café Driveway
RECOMMENDATION

• Extend the right turn only lane to 400 feet on the southbound approach of Hillcroft at the US 59 and Hillcroft intersection

• Extend the existing striping of the left turn only lane on the southbound approach of Hillcroft at the US 59 and Hillcroft intersection
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION

- Extend the existing left turn storage lane to 150 feet on the northbound approach of Hillcroft at the Sonic restaurant driveway and Hillcroft intersection
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION

• Extend the existing left turn storage lane to 175 feet on the northbound approach of Hillcroft at the Harwin and Hillcroft intersection
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION
• Add left turn storage lanes of 100 feet on both south and northbound approaches of Hillcroft at the Hot Breads/Balaji Bhavan Driveways and Hillcroft intersection

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION

• Add left turn storage lane of 100 feet on eastbound approach of Harwin at the Savoy and Harwin intersection
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

TRAFFIC STUDY BY GUNDA Co.

RECOMMENDATION

- Add right turn storage lane of 100 feet on westbound approach of US 59 at the Harwin and US 59 intersection

Planning & Development Department, City of Houston
## PROPOSED RESULTS

### Signalized Intersection

<table>
<thead>
<tr>
<th>Intersection Name</th>
<th>Current Level of Service of Intersection</th>
<th>Level of Service of Intersection with Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hillcroft Avenue @ US 59 ESR</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>2. Hillcroft Avenue @ US 59 WSR</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>3. Hillcroft Avenue @ Westpark Drive</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>4. Hillcroft Avenue @ Harwin Drive</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>5. Harwin Drive @ Savoy Drive</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>
# PROPOSED RESULTS

## Un-signalized Intersection

<table>
<thead>
<tr>
<th>Intersection Name</th>
<th>Current Level of Service of Intersection</th>
<th>Level of Service of Intersection with Recommendations</th>
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</thead>
<tbody>
<tr>
<td>1. Harwin Drive @ Forney Drive</td>
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<td>D</td>
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<tr>
<td>2. Harwin Drive @ Parkersburg Drive</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>3. Savoy Drive @ US 59 WSR</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>4. Harwin Drive @ US 59 WSR</td>
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<td>C</td>
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</tbody>
</table>
**PROPOSED RESULTS**

**Arterial Level Of Service**

<table>
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<tr>
<th>Arterial Name</th>
<th>Direction</th>
<th>From</th>
<th>To</th>
<th>Current Level of Service of Arterial</th>
<th>Level of Service of Arterial with Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hillcroft Avenue</td>
<td>NB</td>
<td>US 59 ESR</td>
<td>Westpark Drive</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>2. Hillcroft Avenue</td>
<td>SB</td>
<td>US 59 ESR</td>
<td>Westpark Drive</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>3. Harwin Drive</td>
<td>EB</td>
<td>US 59 WSR</td>
<td>Savoy Drive</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>4. Harwin Drive</td>
<td>WB</td>
<td>US 59 WSR</td>
<td>Savoy Drive</td>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>5. Savoy Drive</td>
<td>NB</td>
<td>Harwin Drive</td>
<td>US 59 WSR</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>6. Savoy Drive</td>
<td>SB</td>
<td>Harwin Drive</td>
<td>US 59 WSR</td>
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</table>
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
SECTION C / D

Planning & Development Department, City of Houston
PILOT STUDY

TRAFFIC OBSERVATION

Hillcroft Avenue @ Harwin Drive

Source: Gunda Co.

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY

TRAFFIC OBSERVATION

Sonic / Hillcroft Shop Driveway @ Hillcroft Avenue

Planning & Development Department, City of Houston
PILOT STUDY

TRAFFIC OBSERVATION

Bijan Persian Grill / Udipi Cafe Driveway @ Hillcroft Avenue

Source: Gunda Co.
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Parking

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Internal Driveway

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Pedestrian Crossing
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Public Sidewalk

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Private Sidewalk
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Landscape
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Public Transit
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION
Land use

Parking
Sidewalk
Driveway
Landscape
Retail
Commercial
Hotel/Motel

Planning & Development Department, City of Houston
PILOT STUDY

EXISTING CONDITION

Internal Vehicle Circulation

1. **Inefficient driveway access management**
2. **Lack of internal connectors**
   - Dead-end driveways
   - Separation between properties
   - Obstructions between driveways (ex. Garbage dumpster)

Existing Internal driveways
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
EXISTING CONDITION

Internal Vehicle Circulation

1. **Inefficient driveway access management**
2. **Lack of internal connectors**
   - Dead-end driveways
   - Separation between properties
   - Obstructions between driveways (ex. Garbage dumpster)

Existing Internal driveways
PILOT STUDY

EXISTING CONDITION

Pedestrian Circulation

1. **Lack of pedestrian connections between**
   - C and D sections
   - Public and private sidewalks
   - Adjacent complexes

2. **Lack of pedestrian environment**
   - Inconsistent landscapes
   - Anti-pedestrian parking design (ex. front parking)
PILOT STUDY

VISION

PRIVATE STREET CONNECTORS

PEDESTRIAN CONNECTIONS

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
VISION

PRIVATE STREET CONNECTORS
PEDESTRIAN CONNECTIONS

Hillcroft transit Center

Planning & Development Department, City of Houston
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY

VISION

PRIVATE STREET CONNECTORS

PEDESTRIAN CONNECTIONS
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
VISION

PRIVATE STREET CONNECTORS
PEDESTRIAN CONNECTIONS
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
STREET SECTION

Planning & Development Department, City of Houston
PILOT STUDY

DRIVEWAY/PRIVATE STREET SECTION
CIRCULATION STUDY
The Area adjacent to Hillcroft Avenue and Harwin Drive

PILOT STUDY
DRIVEWAY/PRIVATE STREET SECTION

Planning & Development Department, City of Houston