

**Part II**

# Introduction

# Telegraph Avenue

*a survey/analysis of the South Campus  
business district with emphasis on access for  
wheelchair users and people with other disabilities.*

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# Introduction

**T**he Telegraph Avenue area of Berkeley is a bustling center of colorful street artists, students, panhandlers, political activists, tourists, and, yes, full-time Berkeley residents. Getting to this area can be a frustrating experience for the auto worshipper invading pedestrian turf.

There is something for almost everyone on "the Avenue": clothing, grocery, variety, and specialty stores, as well as coffee houses and affordable eateries. In a single hour one can easily bank, get a haircut, and meet a friend for ice cream in this four block area (if one doesn't become entranced in the slow meandering crowds and often festive atmosphere).

Many people, however, find wading through street and sidewalk garbage, and panhandlers offensive and annoying. The unique "anything goes" atmosphere of Telegraph Avenue leaves a lasting impression on even the most seasoned of travelers,

usually love or hate.

Historically, the south of University campus area has been the place of many a controversy. The fight for disabled people's civil rights started here. Now, in 1984, we are taking a look at the architectural and attitudinal accessibility of our city, a physical and philosophical model for many Independent Living Movements in other cities.

As Telegraph Avenue attracts many disabled as well as non-disabled visitors and provides services to a large portion of the disabled population in Berkeley, we have chosen this area as a starting point.

Surprisingly, Berkeley is not the perfect model. It is a misconception that there is no room for improving accessibility and actually destroying the architectural and attitudinal barriers that still exist. Hopefully, this survey will stimulate some discussion of these very important issues.

# Getting Oriented to the Report

**T**his survey report is divided into four main sections: Definitions, Generic Accessibility Suggestions, Examining the Physical Model—Telegraph Avenue, and a Conclusion.

The *Definitions* section explains terms we have used to describe various architectural conditions and price scales.

The *Generic Accessibility Suggestions* section discusses suggested dimensions of such architectural features as dressing rooms and service counters in commercial buildings for wheelchair maneuverability and access for non-wheelchair using people with disabilities.

The *Examining the Physical Model* section is a block by block, store by store survey. Each store, restaurant, or service center is discussed in terms of a general description, access and layout, and shortcomings (accessibility-wise). The access and layout portion examines the establishment's basic entrance, circulation, bathrooms, service counter, and possibly seating and display accessibility. Both access and layout and shortcomings are discussed in terms of the previous *Definitions* and *Generic Accessibility Suggestions* sections.

Lastly, this report was researched by two people (one a wheelchair user) visiting the businesses as customers, not consultants. The store owners were not contacted in advance of our visits.

As you read this report, you will notice we are addressing the disabled person who has never experienced Telegraph. We did not expend much energy in examining why some architectural barriers exist or in trying to explain their origins; instead, we simply state how people with different disabilities may experience Telegraph Avenue.

# Definitions

*A key to terms used in the report.*

**R**ather than include exact measurements in the survey report, the following terms are used to describe measurements or a range of measurements.

**Ramp**—any sloped path of travel used to connect two distinct vertical levels at an incline of 1:20 or more.

**Slope**—the ratio defining a ramp's steepness. The inch:inch or foot:foot relationship with respect to height:length of the ramp (i.e., 1:12 = 1 inch height to a 12 inch length.) We have defined:

shallow ramp as 1:20-1:16

moderate ramp as 1:16-1:11

steep ramp as 1:11-1:6

**Clear Door Width**—the measurement between the door surface and the opposite door stop when the door is in a 90° open position.

**Clear Floor Space**—three dimensional area 0-32" continuous above floor that allows wheelchair maneuverability.

**Turnabout Space**—minimum 5' radius required for a wheelchair user to make a 360° turn.

**Wedge**—a short steep incline less than a foot long and steeper than 1:6.

With our limited knowledge as consumers we have priced all goods and services on Telegraph Avenue quite subjectively.

All restaurants on Telegraph seem inexpensive compared to restaurants in other areas of Berkeley, so we have priced them cheap, reasonable, and expensive for Telegraph (e.g., The Villa Hermosa as a "cheap" Mexican food restaurant is "cheap" for Telegraph making it "very cheap" for Berkeley).

In contrast, the retail and clothing stores on Telegraph seem competitively priced with other similar stores in the San Francisco area with respect to the type and quality of merchandise sold.

We have included some miscellaneous abbreviations to conserve space in the text:

D.P.—disabled person

(N)—north

(S)—south

(E)—east

(W)—west

# Generic Accessibility Suggestions:

*A detailed description of the criteria used to evaluate businesses on Telegraph. More abbreviated references will be made to this criteria in the main text.*

The following descriptions outline spatial suggestions for businesses to provide adequate minimum access for wheelchair users and other people with disabilities. These suggestions are not design solutions but parameters by which we have evaluated the establishments on Telegraph. (These suggestions may or may not be included in established building codes).

## Entrance

**Ramp**—Ramps should be no steeper than 1:12 with a level landing at each ramp end. A ramp should not end at a door without a level landing in front of it unless the door is always open with no bump at the doorway.

**Doorway**—Doors should allow a minimum 32" clearance. A set of doors should have at least one door that allows 32" clearance. Also doors should be maximally weighted at 8½ lbs (Title 24 Access Codes).

## Circulation

As movement inside a store, or restaurant, is usually dictated by display shelf units/racks, or seating, respectively, we have discussed circulation in terms of displays and seating.

## Displays

**Types**—Merchandise should not be hung on racks over 4' high, or stacked on shelves over 4½' high, so as to allow merchandise access to people sitting in wheelchairs where stores allow browsing and self service. Racks should not be jammed with items such as

clothing that will make separating individual items for browsing difficult.

**Positioning**—If shelving or rack units are used to create perpendicular aisles the following minimum aisle width combinations should be employed to allow easy wheelchair maneuvering (more in crowded businesses where waiting or browsing is in order):

3' aisle x 5' cross aisle

4' aisle x 4' cross aisle

5' aisle x 3' cross aisle

Given the aisle widths above, no other movable displays should reduce these aisles. Turnabout spaces should be provided at aisle beginnings and ends.

## Service counter

Counters or desks where customers order food or pay for merchandise should be no higher than 3' from the floor. No displays on top of this counter should alter the 3' high functioning height. No displays in front of the counter should impede wheelchair access.

## Seating

Fixed seating clearly discriminates against wheelchair users. Wheelchair users should be able to sit in every section of a restaurant as each section has a different atmosphere. Designated wheelchair seating in a restaurant with fixed seating does not allow wheelchair users freedom of choice. Therefore, we suggest no fixed seating unless all or some of the tables in every section have half fixed seats or benches and half

movable seats (i.e., a table for four would have a bench attached to a wall with two movable seats).

Round tables with movable seats are the easiest seating arrangement for many wheelchair users, as one doesn't need to "square-up" to the table.

However, square or round, ample space should be left between tables to allow wheelchair maneuverability.

## Dressing rooms

**Entrance**—32" width clearance minimum.

**Interior**—turnabout space plus maneuvering room for wheelchair users, not including doors/curtains intruding on interior space.

**Bench**—start no lower than 18" from floor.

**Clothing Hooks**—no higher than 4' from floor.

**Door Handles**—levered.

## Bathrooms

All restaurants and coffee shops should have wheelchair accessible bathrooms. All other establishments that have bathrooms should have wheelchair accessible bathrooms. Basically the bathroom should be on a wheelchair accessible level of the business and have room for a wheelchair user to easily reach and use all fixtures. (General guidelines are given below; for specific minimum access requirements, consult Title 24 Access Codes.)

**Entrance**—32" width clearance minimum (main door and stall door); door handles levered.

**Toilet**—room to transfer from wheelchair, grab bars behind and aside toilet.

**Urinal**—low enough to use from a wheelchair.

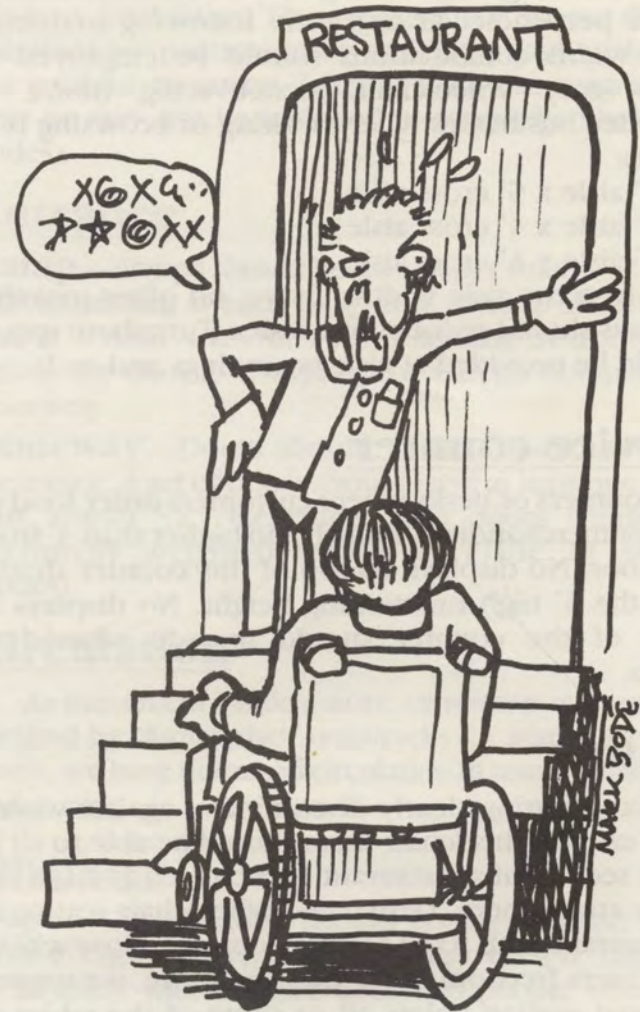
**Sink**—wheelchair user knee space below; faucet handles levered.

**Other Items**—towels, toilet seat cover dispenser, soap dispenser, toilet paper, feminine product dispenser, garbage cans, and mirrors should all be reachable from a wheelchair and sensibly located.

**Interior**—turnabout plus wheelchair maneuvering space.

### Multi-levelled businesses

Often businesses divide services because of a multi-levelled building or vice versa. All levels of a business should be accessible to people with mobility limitations by ramp or elevator. Usually restaurants create environment changes by a level change and retail stores offer different types of merchandise on separate levels. Staff assistance to compensate for architectural barriers is separate, not equal access.



# Examining the Physical Model— Telegraph Avenue:

*An examination of the built environment and businesses functioning for people with disabilities.*

**T**elegraph Avenue area of Berkeley near the U.C. Berkeley campus is one of the most congested spots in the city. Auto traffic, bicyclists, moped riders, wheelchair users, dogs, and people walking are often competing for the same paths of travel. So, getting to and traveling on the Avenue can be an adventure in itself for disabled people.

## Getting to the Avenue

**Autos versus pedestrians**—Most people moving on Telegraph by foot, wheelchair, or bicycle play havoc with the motorists' nerves by ignoring traffic lights, jaywalking, or traveling in the street to avoid sidewalk traffic. This holds true for most of the streets crossing Telegraph. Here, more than in other cities, the pedestrians push their right-of-way rights to the limit.

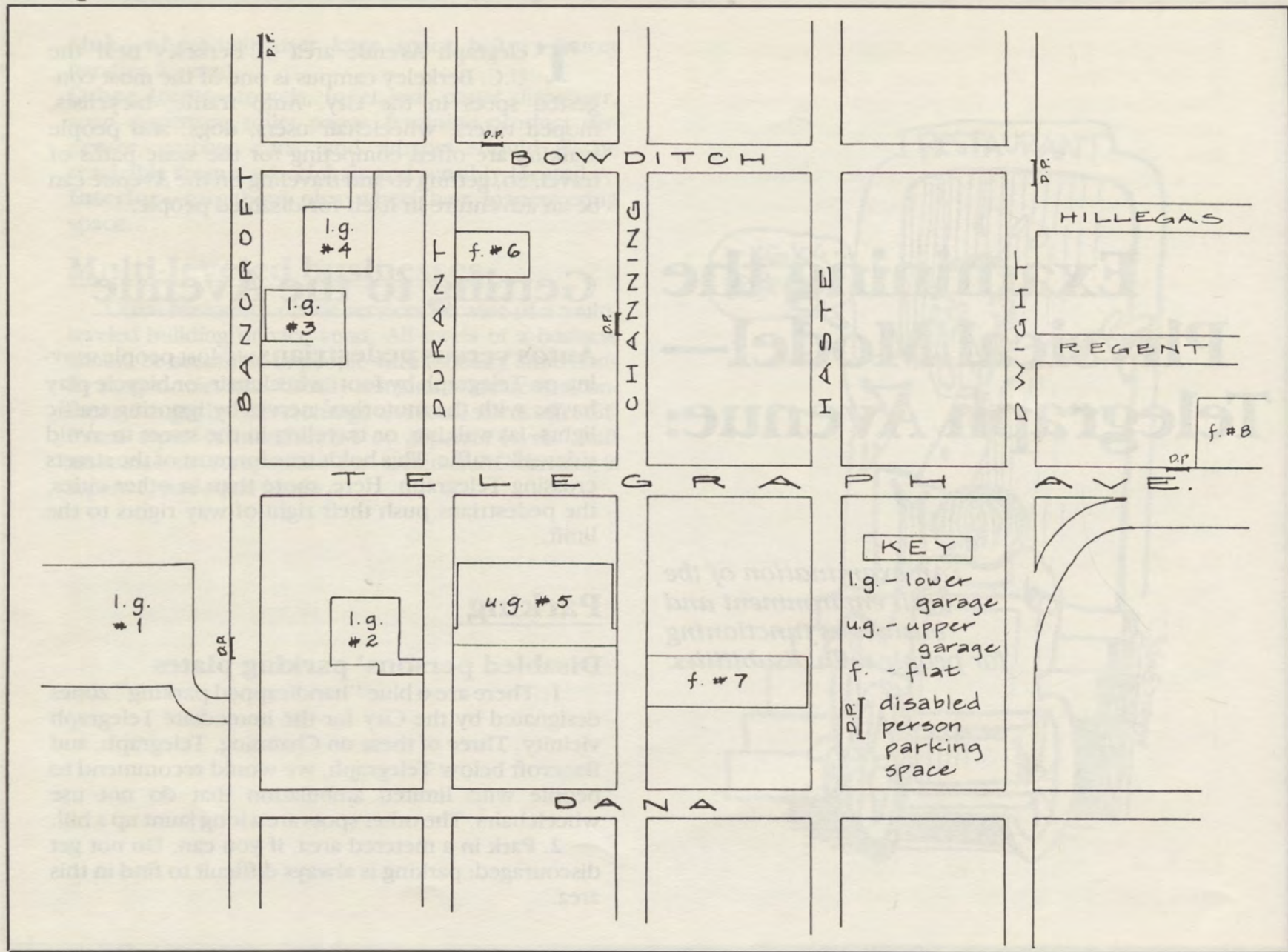
## Parking

### **Disabled persons' parking plates**

1. There are 6 blue "handicapped parking" zones designated by the City for the immediate Telegraph vicinity. Three of these on Channing, Telegraph, and Bancroft below Telegraph, we would recommend to people with limited ambulation that do not use wheelchairs. The other spots are a long jaunt up a hill.

2. Park in a metered area, if you can. Do not get discouraged; parking is always difficult to find in this area.





3. Do not park in U.C. Berkeley's controlled lot blue zones. These parking spaces are reserved for disabled students and employees of U.C. Berkeley with special permits. You will be ticketed parking in these lots.

4. Do not park in the white or yellow zones. While you may have gotten away with this trick in other cities, we know from experience, Berkeley meter maids treat disabled person's vehicles equal to non-disabled person's vehicles.

### **Residential**

Again, parking in the residential area of south Berkeley near Telegraph during school session is almost impossible. Also, there are several measures before the city council that will restrict residential parking for more than two hours to residents only. So, finding a non-metered parking space just below Telegraph may soon become a luxury of the past.

### **Public pay parking**

There are 9 public pay parking lots in the immediate Telegraph Avenue vicinity. (See map. Numbers below correspond to numbers on map.)

#### **Below street garages—**

#1. A U.C. controlled lot open to public use. No validations. Exit garage through driveway (no curb cuts to sidewalk) or elevator to Associated Students Union Building on U.C. campus. Garage open at night, elevator closed. Stairway to Bancroft from garage open 24 hours.

#2. Durant entrance steep with 6'9" clearance. Validations. Exit garage by elevator to a mall between Durant and Bancroft accessible only by stairs.

#3. Bancroft entrance steep (approx. 1:7) with 10' clearance. Validations. Exit garage by stairway or driveway to Bancroft.

#4. Bowditch entrance steep (approx. 1:8) with 6'6" clearance. Validations. Exit garage by stairway to courtyard elevated by ramp above Bancroft street or by Bowditch driveway.

#### **Above street garages—**

#5. Durant or Channing entrances. Gradual slope with 7' clearance. Validations. Exit by elevator to mall between Channing and Durant. Exit to Channing with no steps. Exit also by driveway or stairs.

#### **Street Level lots—**

#6. Durant entrance. Validations.

#7. Channing entrance. No validations.

#8. Telegraph entrance. No validations.

### **Parking shortcomings**

1. There are *only* 6 designated disabled person's parking spots. (see map)

a. Many of the public pay parking lots do not have designated parking for disabled people. Designated spaces allow ample room for back and side wheelchair lifts and wheelchair transfers from non-lift vehicles. Standard parking spaces can not always accommodate disabled people's needs.

b. The existing 6 spots are not adequately protected by City authorities. Vehicles not identified by D.P. plates or placards should be ticketed immediately and perhaps towed. There are often white, yellow, or red zones behind blue zones. Illegal parkers in these zones may block a disabled person's access to a vehicle parked in a blue zone by leaving no room for operating rear or side lift.

c. With the Center for Independent Living located near Dwight/Telegraph and the U.C. Disabled Students Program located near Channing/Telegraph, two of three D.P. spaces closest to Telegraph are often occupied by disabled employees' or these organizations' vehicles, making them unavailable for their own clients or other Telegraph visitors.

2. Four of the 8 public parking lots do not provide safe or accessible exits from garages. A 1:8 sloped driveway, a stairway, or an elevator leading to a mall elevated above the street is not providing safe or acceptable access for wheelchair users or people with ambulatory limitations.

## **Buses**

The AC Transit 51 and 40 lines are wheelchair accessible and stop on Telegraph Avenue. For the most current information concerning accessible buslines and schedules, call 839-2882, 465-5295 (TTY).

## **Bus shortcomings**

The AC Transit system is still coping with providing public transportation to disabled people (wheelchair users):

1. The wheelchair lifts often break or malfunction. The bus drivers can contact a supervisor to send out another bus, but this could add an extra 30-60 minutes to your travel time.

2. If you spot a bus with a lift or blue wheelchair symbol on it, the bus may not be an "accessible bus line." No matter how much you beg, plead, or try to bribe the bus driver s/he probably will not let you on the bus.

3. If you have ambulatory limitations but do not use a wheelchair, the bus drivers will not let you use the lift to climb into the bus.

## **Strolling down the Avenue**

### **Crossing the street**

All of the corners on Telegraph between Bancroft and Dwight have curb cuts. Wheelchair users need not resort to using driveways for street access as in other cities.

### **Crossing problems**

1. Currently "new" curb cuts are being installed on some corners between Bancroft and Dwight:

a. Very smooth 1:12 or less slope. (Good).

b. Ridges on some curb cut edge and street connection is ½ inch. (Bad for wheelchair users).

c. Positioned poorly. Placed at intersection corners between crosswalks putting wheelchair user in intersection traffic.

2. The “old” curb cuts are also dysfunctional or hazardous for some wheelchair users:

a. Some curb cuts have steep slopes, steeper than 1:12, that can cause a wheelchair user to tip backwards dangerously.

b. No noticeable ridge at curb cut/street edge connection. (Bad for blind people).

c. Positioned poorly. Placed *near* north or south going crosswalks putting wheelchair user in traffic rather than crosswalks.

## Sidewalk architecture

The sidewalks on Telegraph are usually lined with street artists between the trees and street, and garbage by the storefronts (often obscured by the multitudes cruising in both directions). The sidewalks are 10'-15' wide.

### **Sidewalk architecture shortcomings**

1. Self-standing sandwich board signs, usually about 2' wide by 4' tall, positioned either adjacent to storefronts or curbside. They are a hazard to wheelchair users and people with low vision or blindness who are negotiating an already crowded sidewalk. Businesses with these advertisements have included:

Coffee Source

Best of Two Worlds

Reza's

Kashi Printers

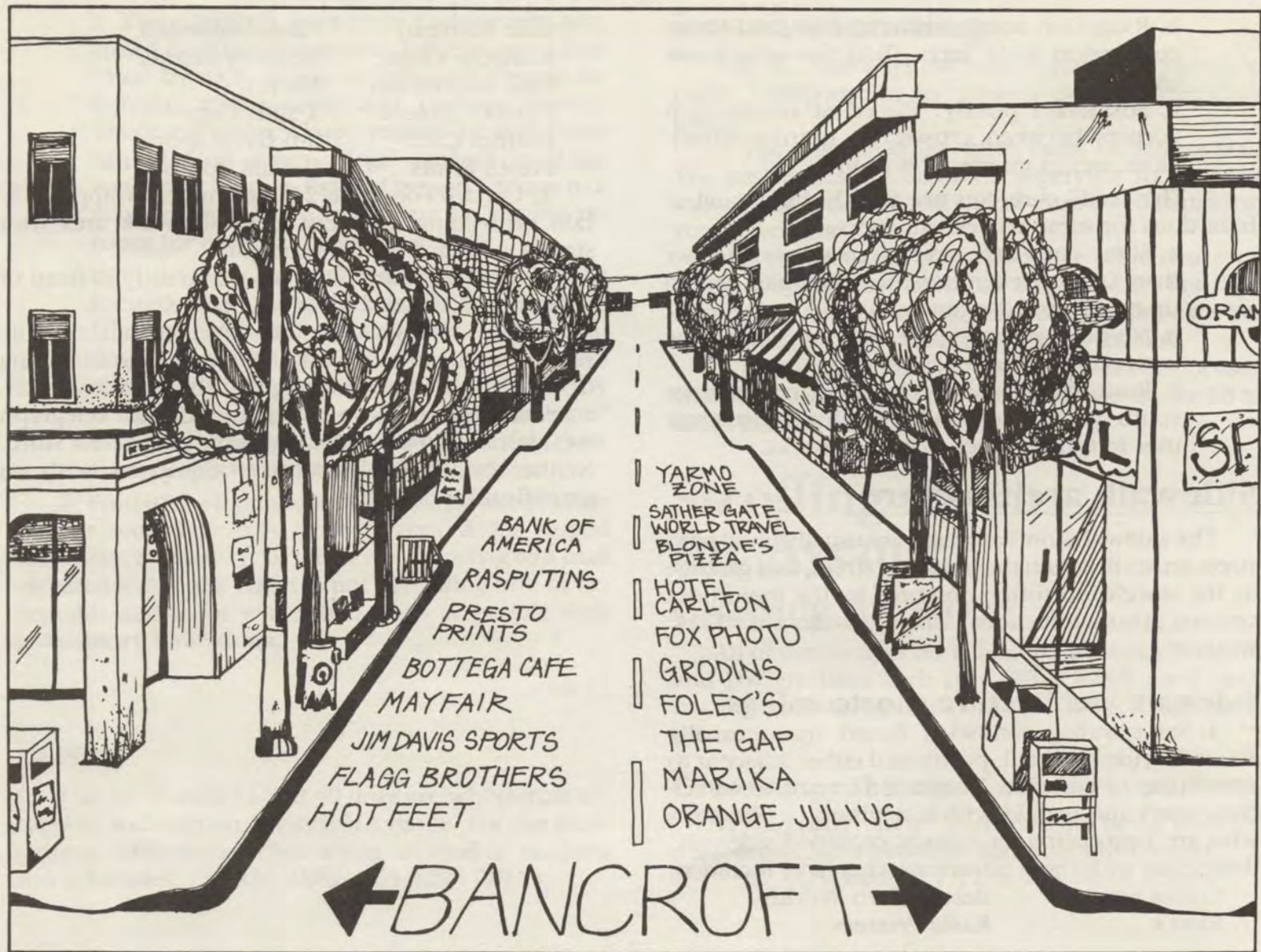
Cafe Sorrento  
Rainbow's End  
Cafe Intermezzo  
Denevi Camera  
Bottega Cafe  
Presto Prints

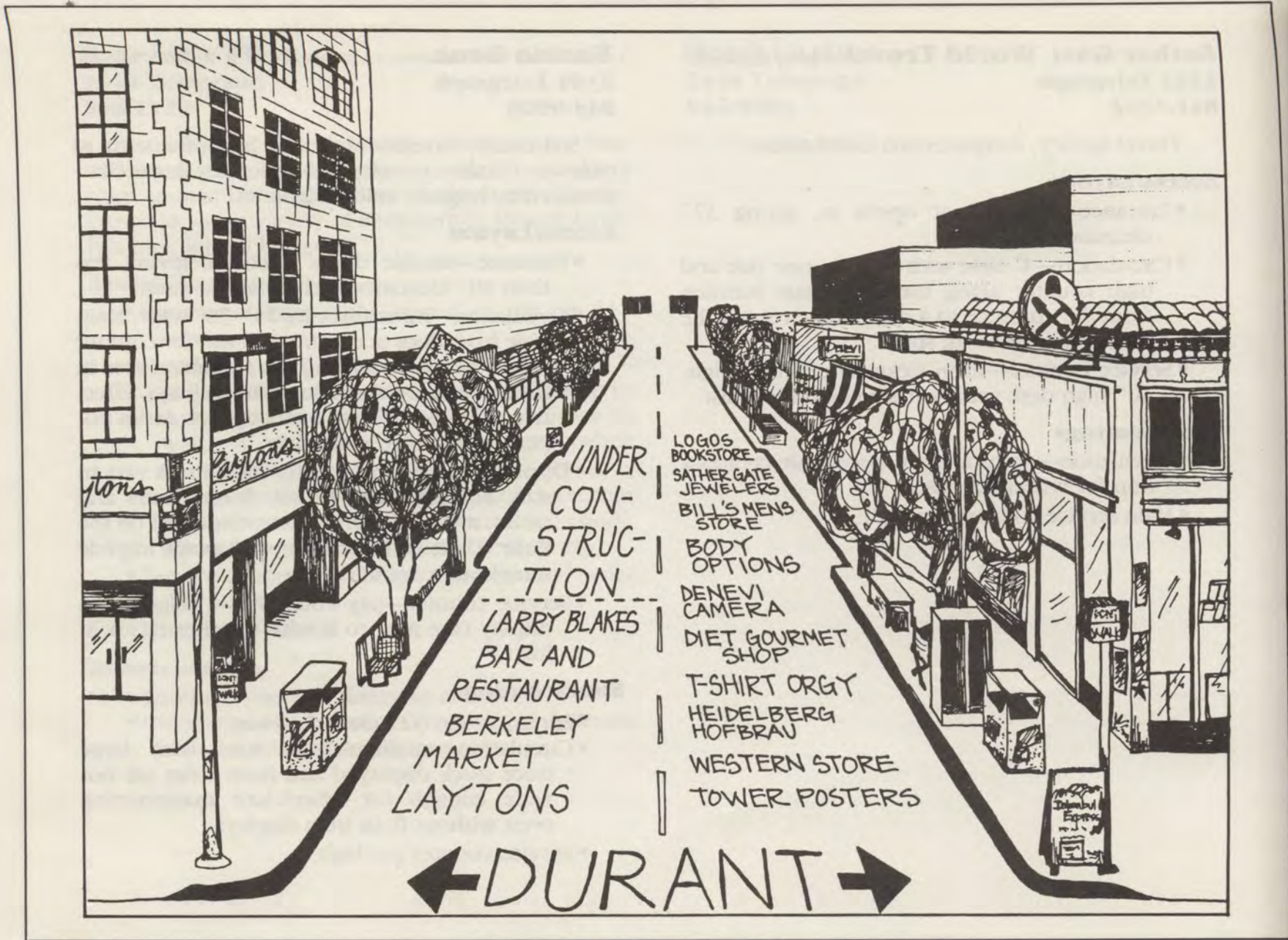
Pants Unlimited  
Berkeley Market  
Marika  
T-shirt Orgy  
Jim Davis Sports  
Certain Foods

2. Certain Foods has 2 large umbrellas (approx. 5' tall) protruding 3'-4' out onto sidewalk area fruit stands: a hazard for blind people.

3. Trash cans are often placed directly in front of crosswalks: a hazard for blind people.

4. Even though there are wheelchair accessible phone booths ½ block off of Telegraph on Channing or Haste, it is a bit annoying that there are two non-accessible phone booths side-by-side on Telegraph west between Tower Posters and the Western Store. Neither booth has a receiver equipped with an amplification device.



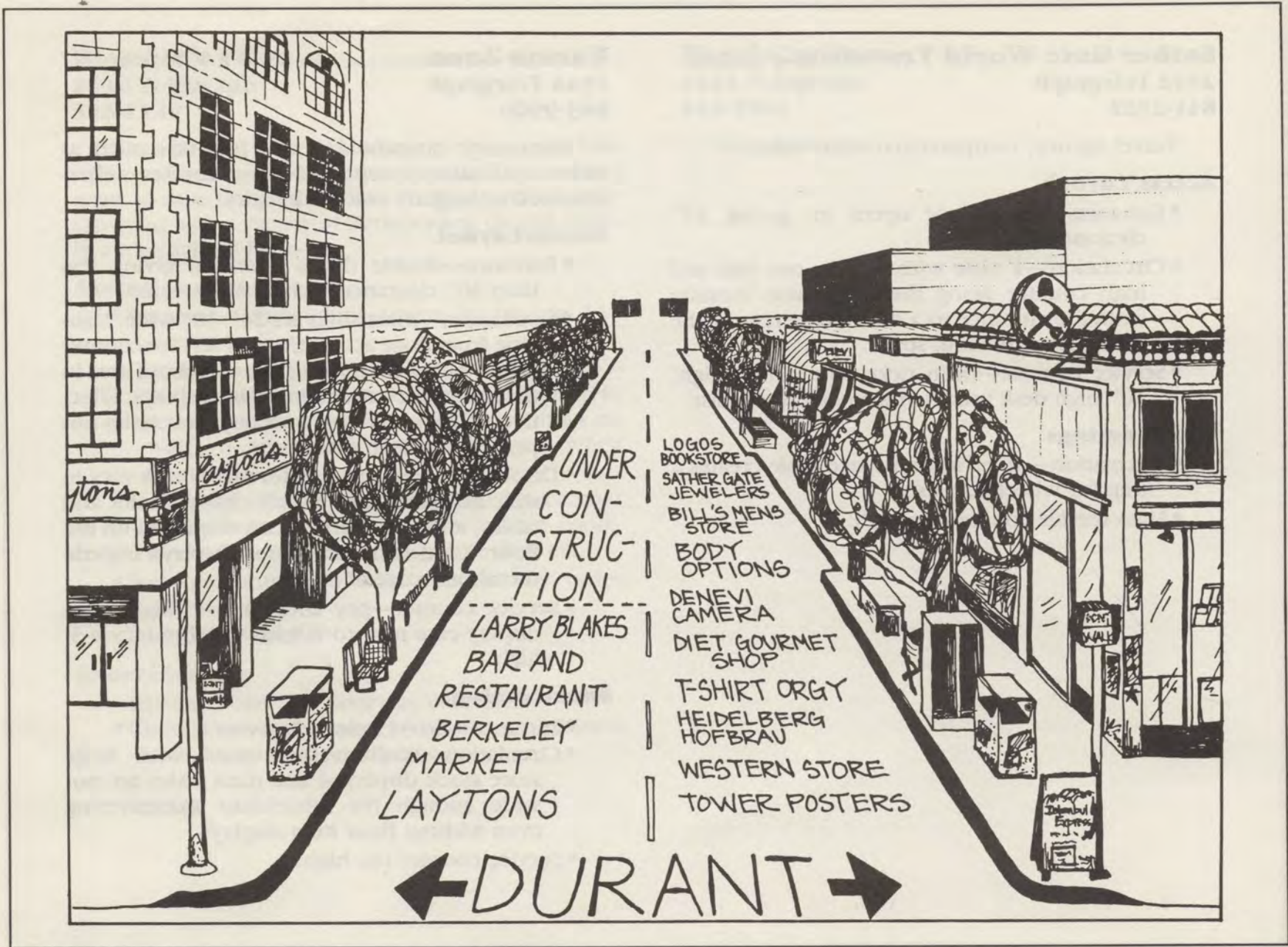


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TOWER POSTERS

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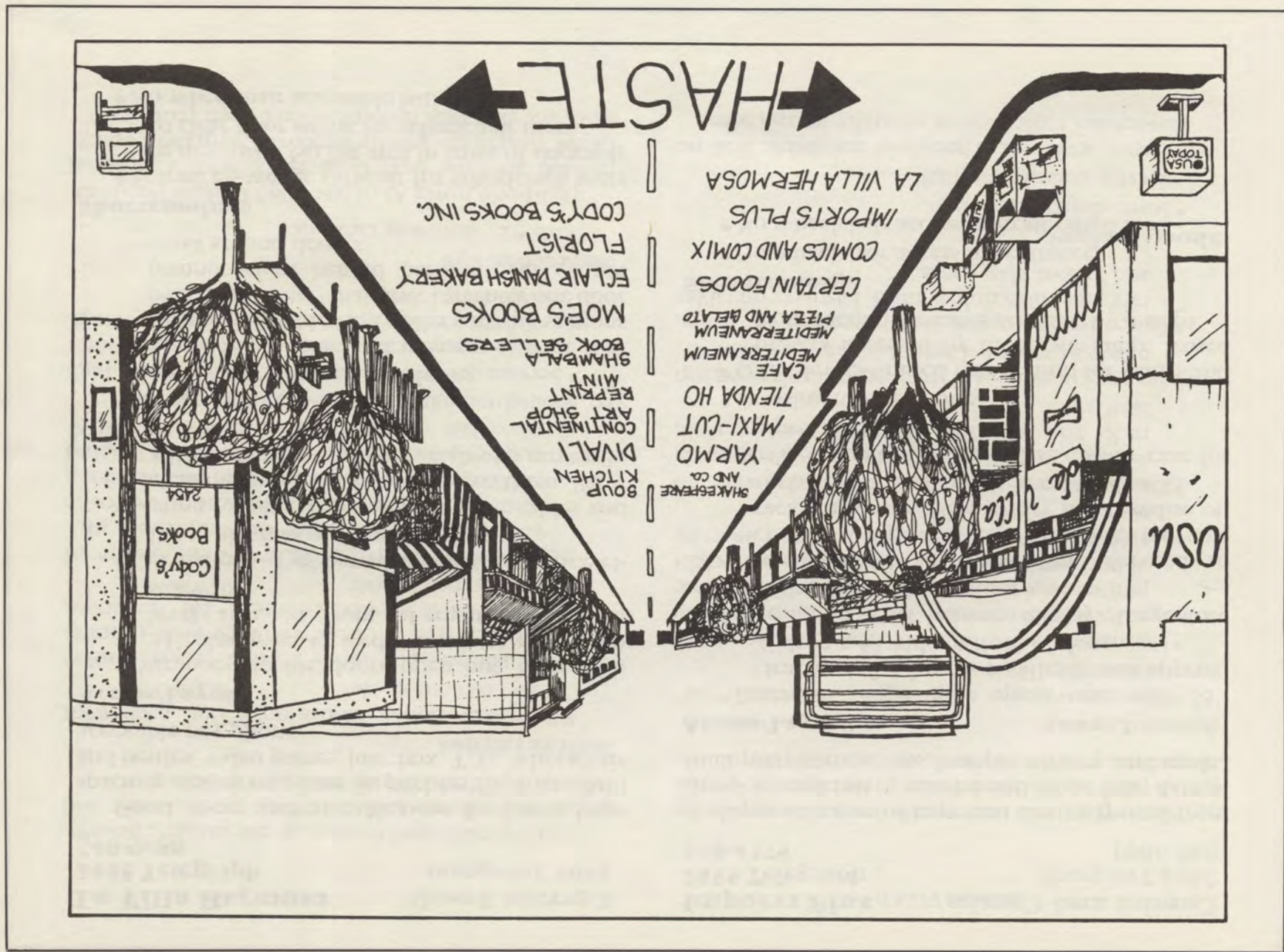
Miller's  
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HOUSE  
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PRINTERS  
BEST OF  
TWO WORLDS  
SUNSET GOLD  
MILLER'S OUTPOST

MARIO'S  
LA FIESTA  
CAFE  
INTERMEZZO  
CAFE  
SORRENTO  
MIKI  
VORTMAN'S  
JEWELERS  
KABOB HOUSE  
REZAS GARDEN  
RESTAURANT  
LA BELLE  
COFFEE SOURCE  
ANNAPURNA  
SULTANA  
NICOLE  
BLUEBEARD'S

← CHANNING →





**Moe's Books**  
2476 Telegraph  
849-2087

Very large selection of new and used books; maps; magazines; song books; sheet music; and cards. Buys used books.

**Access/Layout**

- Entrance—single door opens out, with 42'' clearance. Flat.
- Circulation—enter on mezzanine level mainly for buying and selling books. Elevator to 4 levels of displays. Aisles mostly 4'-6' wide, some 30'' cross aisles.
- Displays—various tables and shelves display most books within 4½' of floor. Some shelves to 7' high.
- Service counter—3' high, buy and sell books. Some cards and books displayed. Phone near elevator on each floor for information and staff assistance, 4½' high.
- Bathrooms—yes, a bookstore with a bathroom! And it's wheelchair accessible! Toilet, urinal, and sink in one room with 5'x6' of clear floor space. Grab bars aid front transfer. 42'' high door knob. 3rd floor.
- Other levels—access by large elevator/stairs.

**Shortcomings**

- Some merchandise too high.
- Information phone too high for wheelchair users.
- Bathroom—no levered door handle.

**Shambhala Booksellers**  
2482 Telegraph  
848-8443

Spiritual, metaphysical, religious (Eastern), astrological books, tapes, calendars. Chart interpretation and reading referrals.

**Access/Layout**

- Entrance—single heavy door opens in, with 30'' clearance. Flat.
- Circulation—3' wide entrance aisle leads past pay counter to 3-3' wide aisles separated by a 2' wide bench and a display table. Turnabout spaces in front and rear of aisles.
- Displays—wall shelves up to 7' high along 3 walls. 32'' high tables display books and calendars. Records in 3' high bins. Tapes in glass case.
- Service counter—3' high, pay; some displayed items; community event notices.

**Shortcomings**

- Entrance—no 32'' doorway clearance. Door heavily weighted.
- Stepping stools sometimes block aisle.
- Stock stored under display tables reduces clear floor space.
- Some merchandise displayed too high.

# CIL Access Study

**Editor's note:** The Center for Independent Living commissioned this analysis of access at CIL because what CIL—a nonprofit, social service agency with no reserve funds or money-generating businesses—can resolve, with regards to inaccessibility of a received structure, will be a guide for others. A structural architectural barrier demands a structural solution. And CIL's strength lies in striving for solutions. CIL's membership, board, and administration are working hard at raising funds to remodel and retrofit 2539 Telegraph Ave.

**D**uring the month of June 1985, we (Susan Ferreyra and Joe Marsh) conducted a study of the building at 2539 Telegraph Ave, which is occupied by the Center for Independent Living, in order to analyze the accessibility of the building and to suggest improvements.

CIL is a nonprofit service organization providing support services to people with all types of disabilities. These services include housing counseling, residential access retrofitting, deaf and blind services, attendant referral, job counseling, wheelchair repair, independent living peer counseling, and mental disabilities independent living program.

## Bathrooms

None of the four bathrooms in CIL fully conform to Title 24 accessibility standards. We can say that these bathrooms do not conform to *any* accessibility standards, despite the fact that the building is used

by a high number of employees and clients with physical disabilities.

## Problems

1. Wheelchair maneuvering space:
  - 5' turnaround space provided only in eastmost bathroom.
  - 4' space in front of toilet is not provided in any bathroom.
  - 32" space for side transfer to toilet is not provided in any bathroom.
2. Grab bars:
  - None are up to code.
  - The grab bars in the west bathrooms are bordering on dangerous.
3. Safety:
  - Ventilation not provided; health codes require ventilation either by means of an openable window, or a fan connected to the light switch. None of the bathrooms meet this requirement.
  - Lever handles not provided on all faucets and door handles.
  - Door of the eastmost bathroom sticks creating a potential trap.

## Program offices

Overall there is an acute shortage of space. While programs are attempting to increase and improve

services, the physical space has become progressively constricted. Increasing numbers of volunteers are being employed and work space for them is at a premium.

## Problems

1. General overcrowding.
2. Lack of private space for meetings and administrative or quiet work.
3. More special equipment needed, and space to put them, e.g., sensory aids, wheelchair accessible desks, and reachable files/shelves.

## General

1. Doors:
  - All doorways don't have 32" clearance.
  - All doors don't have levered handles and kick-plates on both sides.
2. Wall protection:
  - More is needed as indicated by wall damage above existing protection and where none was installed.
3. Windows:
  - Side windows not openable by a wheelchair user.
4. Passageways:
  - Often blocked by file cabinets and other furniture, especially adjacent to doorways.
5. Parking:
  - Inadequate; none for clients.

## Health

Lighting and ventilation become an access issue when they are inadequate. Many employees and clients of CIL have visual impairments or respiratory disabilities, so these issues become especially important for CIL.

## Problems

1. Lighting:
  - Fluorescent lights, while more economical than incandescent, increase visual impairment. Full spectrum bulbs can be purchased to fit existing fixtures; they do not increase energy use. Current lighting system not maintained in good repair, results in disturbing background buzz and blinking lights.
2. Ventilation:
  - Inadequate in front and rear of building where there are no openable windows.
3. Temperature control:
  - This is a problem in the front of the building in the afternoon when the sun shines in with enough heat for a tomato farm. Window shades would greatly increase the comfort of clients and employees in the afternoons.

# Analysis

After close study of Telegraph Avenue, we must conclude that it is usable and fairly accessible to disabled persons. There are a wide range of services and goods available to any of Berkeley's residents and visitors on Telegraph.

Buildings as old as those on Telegraph usually have many more physical barriers. Most business owners and managers have recognized the market of Berkeley's sizable disabled population and have made "adjustments," physical and attitudinal to serve and please this portion of the population. We hope this progress continues.

Telegraph Avenue is an established business area. It is not like many business districts or shopping centers that need to sell themselves as a "good place to shop." Students, local residents, and tourists come here for atmosphere, street artists, and known stores and restaurants.

What other area could support such a dense population of coffee shops? Businesses do not need to think up gimmicks to attract new customers, they need to think up ways to provide better service and higher quality products. New customers will stop in and become regular customers if the service and/or product is good.

This survey report should give store owners and workers a better idea of the needs of disabled people so they can serve us, all people, better and we may become regular customers. We hope that business owners, workers, and customers all recognize their part in the progress towards full and equal access for all persons.

The following are discussions by business type of overall problems people may have in using some

businesses and ways these establishments may change to provide full access for all people:

## Restaurants

Not one restaurant on the Avenue has a wheelchair accessible bathroom. Some restaurants do not even have bathrooms, or the bathrooms are located in an obscure place (behind pay counters or in kitchen areas).

If food or beverages are served, an establishment should have a well marked wheelchair accessible bathroom for the comfort of all customers.

Some restaurants crowd as many tables as possible in an area, which can make access difficult for customers (wheelchair as well as non-wheelchair users), waiters and waitresses, and buspersons. Customers carrying packages, using wheelchairs, or accompanied by a child in a baby stroller, or who are fairly large may not be able to sit comfortably at crowded tables. Carrying a tray of food through a crowded seating area is not fun.

Removing two tables per seating area will often greatly improve customer comfort and provide wheelchair access to more tables.

Restaurants with fixed seating do not allow customers freedom of seating choice or flexibility of party size.

Movable chairs and tables allow more flexibility for all customers. A wheelchair user may require chairs removed from a table or large parties may want to sit 6 to a prescribed 4 seating table (if allowed). As tables often dictate aisle widths in a restaurant, movable tables can be adjusted to allow

wheelchair users easier maneuvering room while seating, when aisle widths are narrow.

## Clothing stores

With the self-service routine most stores employ, there is a tendency for store owners to display every piece of clothing they have in every size. Can you imagine what a shoe store would look like, if every pair of shoes it owned were displayed?

Many stores display more merchandise than is actually necessary for customers to get an idea of what styles are available. In many stores on the Avenue; this results in racks of clothes, tiered up to 7' high, located very close together with items jammed onto racks so tightly it may take a crowbar to separate them and months to iron out the wrinkles.

There should be at least 32" between racks so wheelchair users do not have to part clothes to get through (or leave tire tracks on clothes). More room between displays would allow easier browsing for more people without feeling cramped.

The clothes should be neatly and loosely arranged to allow viewing of individual items. Clothes will stay neater. Having no racks over 4' high would make more clothing reachable by people using wheelchairs or by people of short stature.

If a store building is small, owners should decide how much merchandise they can conveniently display and let customers know that more is available.

The Gap is the only clothing store on the Avenue with a wheelchair accessible dressing room. Most other stores require customers to negotiate a 3'x3'

cubical. Some dressing rooms do not have mirrors, this forces customers to step out of rooms for public viewing.

Dressing rooms should provide access for wheelchair users. Many customers would like larger rooms for easier viewing, and privacy. Many people would prefer mirrors *in* rooms. Access features such as a seating bench benefit all people who prefer changing clothes in a sitting position or need a place to put bags or clothes they are wearing.

## Retail stores

As with clothing stores the self-service routine can cause over-display of merchandise in stock, crowded displays, and, sometimes, limited aisle space.

Consider how much stock a store can conveniently display. If a store is too small to provide comfortable circulation for customers because of displayed stock, perhaps a larger store is in order. Having no shelf displays over 4½ feet high would make more merchandise accessible to wheelchair users and short people.

Often aisles, dictated by fixed or movable shelf units, provide adequate wheelchair access and browsing room for many customers; but then displays are placed at aisle ends or interiors that block access. With no turnabout space in an aisle that dead ends, a wheelchair user is forced to back up the aisle to its beginning.

Aisle dimensions listed in the Generic Accessibility Suggestions section should be used; no displays should impede access by reducing these dimensions.

## **Service centers**

Most "service centers" on Telegraph have a process set up to serve customers with maximum efficiency. Moving people quickly is usually the primary criterion. This usually means people walk through prescribed aisles to store employees waiting at "standing height" counters. However, this process is often not possible for wheelchair users who are never "on their feet."

Also, people with sensory impairments such as low vision, or communication impairments such as deafness, speech impairments, or low language skills, may need to have information delivered in a format that may require a bit more time than is prescribed for the "ideal" customer.

Service processes should be flexible to the needs of all people. Wheelchair users and short people will need low counters. Comfortable waiting areas would benefit everyone.

## **Common considerations**

Only one-third of the establishments on Telegraph Avenue provide an acceptable easy entrance for wheelchair users. Many doors have space-wasting hinges which reduce doorway entrance clearance by 4".

Ramps without a landing in front of the doorway

make entrance for a wheelchair user difficult or impossible. Many service counters do not serve wheelchair users or short people.

Consideration should be taken of items discussed in the Generic Accessibility Suggestions section. Doorways and circulation should allow wheelchair users, large people, and people with strollers or packages to enter and move through the establishment comfortably. Service counters should allow comfortable, easy use for everyone with low, clear counter space unimpeded by displays (or a multi-height counter to accommodate people of varying heights.)

When "setting-up" or designing a business, it is a mistake to consider only the ideal, absentee customer. Most customers fall short of the energetic buyer, who knows exactly what s/he wants, has plenty of money to spend, and can scale walls to reach products, or squeeze down narrow aisles on a regular basis.

People are fat or thin; have heart disease, pregnancies, arthritis, chronic athletic injuries, hypertension, spinal cord injuries, blindness, deafness, short stature; use crutches or wheelchairs; carry packages or children . . .

These are real every day customers that are not thought of, or identified as, "disabled" but will want, need, or enjoy what are physical necessities for the commonly identified disabled person such as a ramp or elevator; easy to open, wide door; movable seating; spacious aisles; etc.

After reading the surveys, would a linebacker for the 49er's football team go to the Cafe Bottega or the



Caffe Mediterraneum for coffee? Comfortable seating is an issue for large people that can be easily ignored.

Finally, the only stereotype that can apply to the buying population that visits Telegraph (from what we have seen) is that they are humanoid. Whatever size, shape, or color of the rainbow a person is, expect to see her/him shopping or eating at some business on Telegraph Avenue.



# Design Solutions

**Part III**

• susan ferreyra

• joe marsh

# Designing ideal retail

or restaurant space for the absentee disabled consumer is difficult as needs vary with the type and severity of an individual's disability.

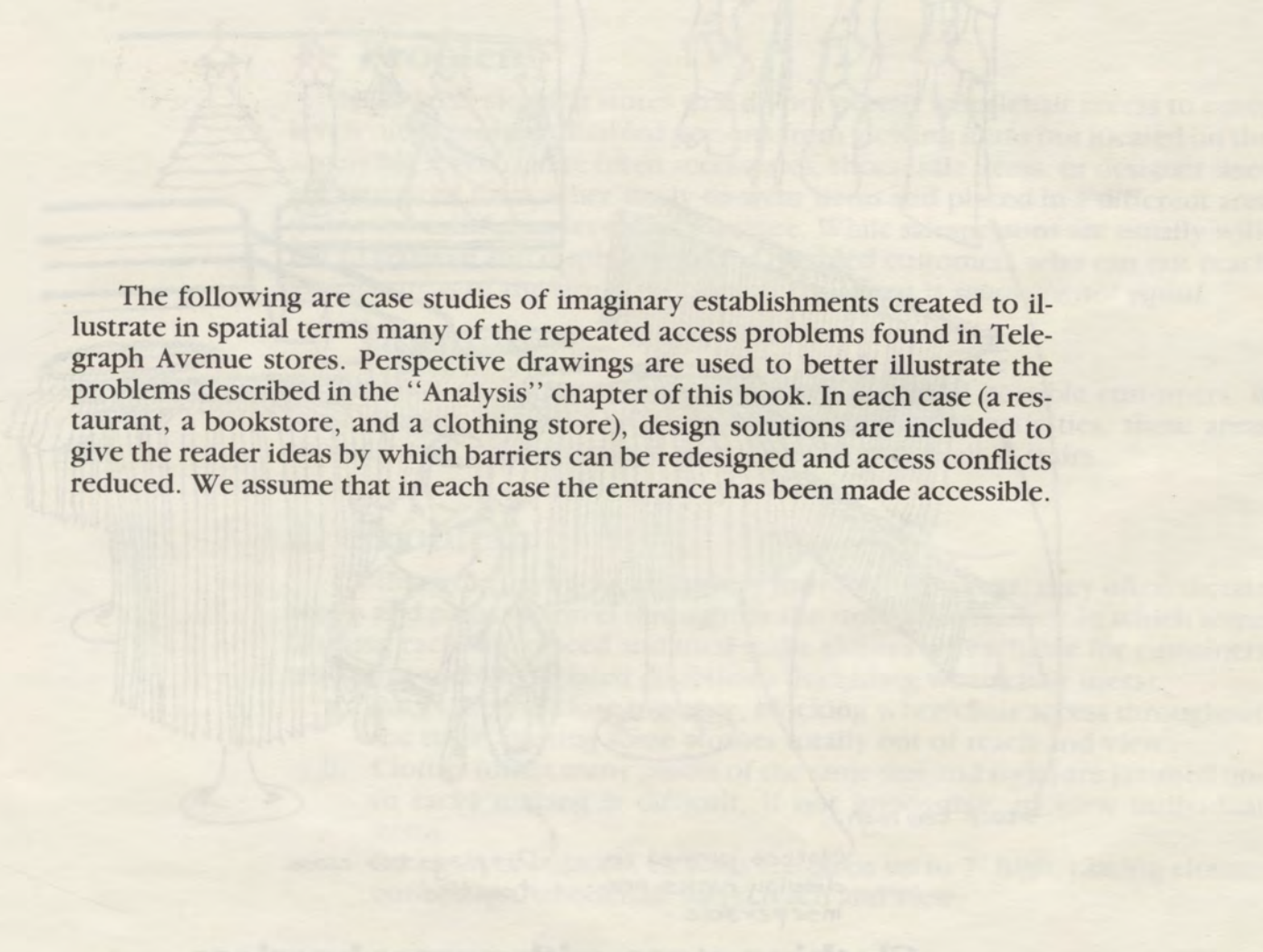
The needs of manual and electric wheelchair users will differ, and both will often conflict with those of individuals with mobility impairments who walk, as will all three from the needs of individuals who have visual impairments.

When designing an environment for such varied users, the designer must consciously strive to reduce the number of architectural barriers for people in all disability categories while minimizing the conflicts created by certain access features. For example, a very smooth, gradually sloped path of travel into a wide hallway from a building may best accommodate a wheelchair user but may disorient a blind individual, if there were no other clues to indicate a distinct environment change.

In the same fashion, an ideal wheelchair accessible store would require placing all existing displayed merchandise at a level reachable from a wheelchair and have 5' wide aisles to allow turnabout space at all times. This store would then have many very long aisles that could greatly fatigue a person who uses a crutch, cane, or leg braces for assisted walking. Many of the lower items may be out of reach for persons who could not bend from a standing position and a fully lowered counter area could make writing checks difficult for these individuals.

However, there are many access features such as ramps with grippable handrails that accommodate both wheelchair users and many persons with mobility impairments. Clear floor space can reduce tripping hazards for persons with visual impairments and remove obstacles for wheelchair users and persons who use assisted walking devices.

Designing spaces to accommodate *as many people as possible without creating major access barriers for one particular group of disabled people is the major objective in designing usable environments.*



The following are case studies of imaginary establishments created to illustrate in spatial terms many of the repeated access problems found in Telegraph Avenue stores. Perspective drawings are used to better illustrate the problems described in the "Analysis" chapter of this book. In each case (a restaurant, a bookstore, and a clothing store), design solutions are included to give the reader ideas by which barriers can be redesigned and access conflicts reduced. We assume that in each case the entrance has been made accessible.



# Clothing Stores

## 1. Problem

Multi-level clothing stores that do not permit wheelchair access to other levels often prohibit disabled persons from viewing items not located on the accessible levels. Quite often accessories, shoes, sale items, or designer lines are separated from other ready-to-wear items and placed in a different area (sometimes different levels) of the store. While salespersons are usually willing to retrieve and display items for disabled customers who can not reach various areas of the store, this special treatment is *separate not equal*.

## Solution

All areas of the store should be accessible to all possible customers. If level changes are used to separate merchandise or activities, these areas should be accessed by ramps and/or elevators as well as stairs.

## 2. Problem

Clothing display racks are mostly movable. However, they often dictate access and paths of travel throughout the store. The manner in which some clothing racks are placed and used make clothes unreachable for customers who have mobility-related disabilities (including wheelchair users).

- a. Racks are too close together, blocking wheelchair access throughout the store, putting some clothes totally out of reach and view.
- b. Clothes (often many pieces of the same size and style) are jammed onto racks making it difficult, if not impossible, to view individual items.
- c. Racks on/or adjacent to walls are often up to 7' high, placing clothes out of most wheelchair users' reach and view.

## **Solution**

If clothing racks are placed at perpendiculars to clearly delineated aisles, the minimum aisle width combinations should be employed to allow easy wheelchair maneuvering:

- a. 3' aisle x 5' cross aisle.
- b. 4' aisle x 4' cross aisle.
- c. 5' aisle x 3' cross aisle.

Given the aisle widths above, no other movable displays should reduce these aisle widths. Turnabout spaces should be, minimally, provided at aisle beginnings and ends.

All clothes racks not set at perpendiculars should have at least 36" of clear space between them, so wheelchair users do not have to part a sea of clothes in order to move through the store. Even more room between displays would allow easier browsing for more people without feeling cramped, and also easier viewing of clothes on racks over 4'6" high.

## **3. Problem**

Counters for pay and/or service are unreachable:

- a. The counter is too high for wheelchair users (over 36" above the floor).
- b. Movable displays placed in front of the counters block wheelchair access.
- c. Movable displays placed on top of the counter increase its functional height.

## **Solution**

A clear 36" high counter area with a 12" deep section that has clear floor space below should be provided at all service and pay areas so wheelchair users can easily conduct business. Movable or permanent displays should not clutter this floor or counter area and impede wheelchair access. A 48" high counter should also be provided for disabled individuals who cannot use the 36" high counter. In general, ample wheelchair maneuvering room more

than a 5' turnabout space around service counters is necessary as these areas often become highly congested.

#### **4. Problem**

Security sensors regularly create an additional 32" passage or aisle directly inside the store entrance, a condition difficult for a wheelchair user to negotiate. A wheelchair user must negotiate the entrance door and then try to pass through a 32" aisle (sensor) without having enough space to clear the door swing.

#### **Solution**

If a door opens into the store, the security system should be located 42" beyond the door swing so a wheelchair user can get inside the door onto a level 60"x60" area and travel beyond the door before passing through another door-type space. Also, for safer, easier passage, the security sensors should be thought of as an aisle and placed a minimum 36" apart.

#### **5. Problem**

Dressing rooms are not usable by disabled customers. They are:

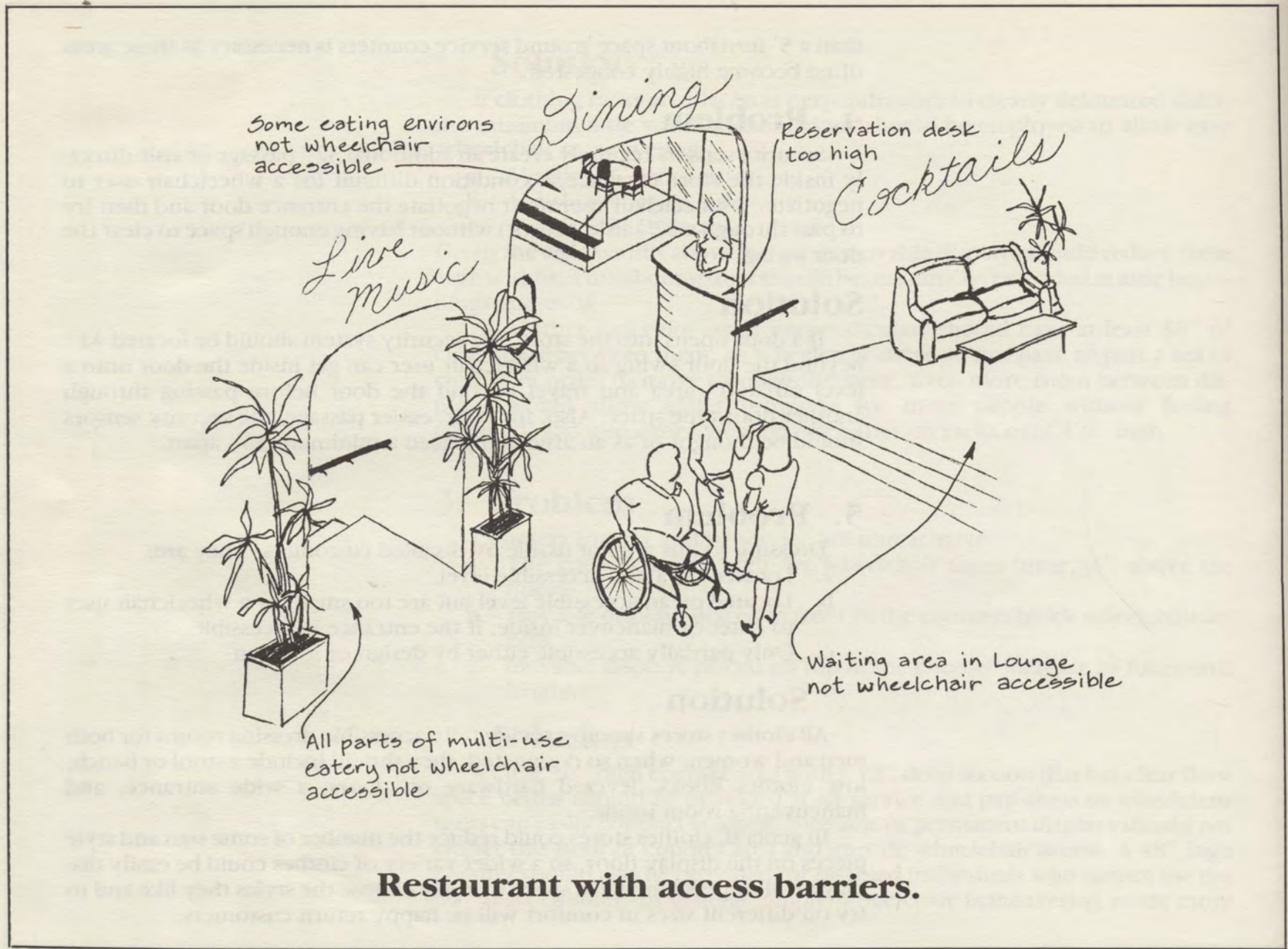
- a. Located on a non-accessible level.
- b. Located on an accessible level but are too small for a wheelchair user to enter or maneuver inside, if the entrance is accessible.
- c. Only partially accessible either by design or location.

#### **Solution**

All clothes stores should provide fully accessible dressing rooms for both men and women; when so designated, they should include a stool or bench, low clothes hooks, levered hardware on doors, a wide entrance, and maneuvering room inside.

In general, clothes stores could reduce the number of some sign and style pieces on the display floor, so a wider variety of clothes could be easily displayed. Shoppers who have space to easily choose the styles they like and to try on different sizes in comfort will be happy return customers.





**Restaurant with access barriers.**

# Restaurants

## 1. Problem

Multi-level establishments that do not permit wheelchair access restrain customers to specific environs and often prevent disabled persons from enjoying experiences not available at the accessible levels:

- a. Specific environments, window views, or smoking/non-smoking sections may be in non-accessible areas.
- b. A different menu, such as a short menu or cocktails, may be offered on a non-accessible level.
- c. Live music or a dance floor may be located on a non-accessible level.

## Solution

Access for wheelchair users and persons with mobility impairments should be provided to all areas of an eatery. If level changes are used to give various dining areas a different and specific atmosphere, each level should be accessed by ramps or an elevator.

Level changes used to separate activities such as smoking, music, and alcohol consumption should be accessed as stated above so all customers can participate in these activities where they are designated by the restaurant's management.

Some restaurants allow disabled customers, who can not reach the inaccessible levels that are designated as lounges or cafes, to drink alcohol, smoke, or order from a short menu in the regularly designated dining areas.

This practice not only prohibits the disabled customer from sitting in the environment specifically designated for these activities, but can make a disabled person feel uncomfortable explaining "special treatment" to other customers and management staff who are not aware of special policies.

Taking a broader view, "special treatment" policies offer a false facade of accessibility to customers and management. "Special treatment" does not solve the problems of architectural inaccessibility, but perpetuates the idea that the grey areas of equal facilitation mean equal rights.

## **2. Problem**

Crowding movable tables and chairs into small areas create extremely narrow aisles that make circulation impossible for wheelchair users, people who use mobility aides, or large people.

### **Solution**

Arrange dining furniture sensibly to allow wheelchair access to and around tables. (Many restaurants with head waiters note the number of wheelchair users who will be sitting in their wheelchairs during the meal and "set-up" the table before escorting the party to the table.)

Reduce the number of tables per seating area to allow more room in general for people to circulate.

## **3. Problem**

Fixed seating and table units are often not usable by wheelchair users and other people with disabilities:

- a. Symmetrically placed fixed seating units leave no areas for wheelchair users to get close to the table.
- b. Fixed seats require all people to sit a specific distance away from the table with a specific posture. This is not always possible for a disabled person.
- c. Fixed furniture once improperly placed can permanently block wheelchair access, if aisle widths are dictated by furniture placement.

### **Solution**

Do not limit furniture to fixed seating. If an establishment wishes to install fixed seating, it should be interspersed with movable seating.

#### **4. Problem**

Restrooms are not adequate for disabled customers because they are:

- a. Located on an inaccessible level.
- b. Located on an accessible level, but are not designed so disabled persons can use them.
- c. Only partially accessible to disabled customers either by design or location.

#### **Solution**

All establishments serving food and/or beverages should have a fully accessible restroom for both men and women.

#### **5. Problem**

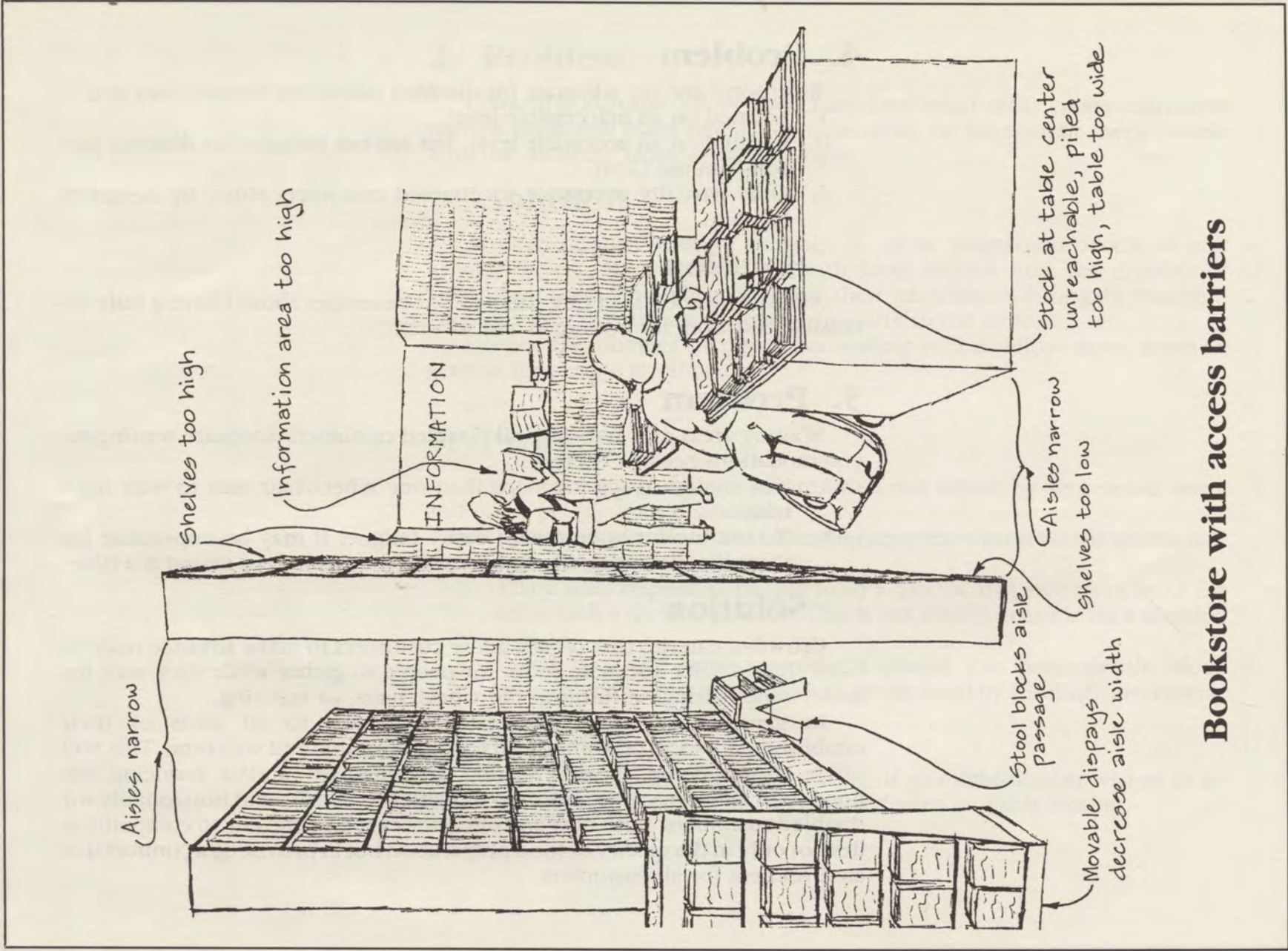
Waiting areas may not offer all disabled customers adequate waiting accommodations because there is:

- a. Not enough space for more than one wheelchair user to wait for a table.
- b. No seating for people who easily fatigue. It may be impossible for some disabled persons to stand while they wait to be seated at a table.

#### **Solution**

Crowded eateries that do not allow customers to make advance reservations should offer adequate room for people to gather while they wait for tables either sitting on furniture, in wheelchairs, or standing.

In general, eateries should provide access to all areas of their establishments so all customers can feel comfortable and welcome. This will often require more flexible seating arrangements and/or reducing the number of table spaces to increase circulation vertically and horizontally for disabled customers. Both new and old eateries realize the key to competition lies not only in the quality of food preparation but in providing a comfortable environment for all customers.



## Bookstore with access barriers

# Bookstores

## 1. Problem

Aisle widths and configurations do not allow wheelchair passage:

- a. Aisles are too narrow (less than 36'' wide).
- b. One aisle of 36'' leads to another aisle of 36''.
- c. Aisles lead to a dead end (no 5' turnabout space).
- d. Movable displays at the aisle ends narrow aisles' functional width.

## Solution

When walls, shelving, or rack units are used to create perpendicular aisles the following minimum aisle width combinations should be employed to allow easy wheelchair maneuvering (more in crowded waiting or browsing areas):

- a. 3' aisle x 5' cross aisle.
- b. 4' aisle x 4' cross aisle.
- c. 5' aisle x 3' cross aisle.

Given the aisle widths above, no other movable displays should reduce these aisle widths. Turnabout spaces should be provided at aisle beginnings and ends.

## 2. Problem

Many books are out of reach:

- a. Shelving units place books very high.
- b. Shelving units place books very low.
- c. Aisles do not allow wheelchair passage.
- d. Wide display tables put books at table center out of wheelchair users' reach.

## **Solution**

Once book display aisles are arranged so a wheelchair user can move close to the books, consideration should be given as to how books can be displayed on the shelves.

As invariably any shelving configurations/types will be inaccessible to someone (wheelchair user, person of short stature, or a walking person with a mobility impairment), books should be arranged to accommodate as many people as possible. Locate the majority of the books between 1'-4'6" from the floor, a reasonable height for most wheelchair users.

Books placed lower or higher than this should be visible for browsing by a wheelchair user with reasonable neck motion. In order for the book titles to be visible, aisles may need to be wider than 5'. However, common sense is advised. If a wheelchair user wanted to view a book on a 7' high shelf, s/he would have to move back from the shelving unit to a distance where most titles would be illegibly small.

Placing some books out of a wheelchair users reach but still within view will put the "unreachable" books within the reach of someone with short stature or someone who cannot bend from a standing position.

Display tables should have some clear floor space below to allow wheelchair users to roll under the table and closer to books on the table center. In general, tables should not be wider than 4'6".

## **3. Problem**

Counters for pay and/or service are unreachable:

- a. Counter is too high for wheelchair users (over 36" above the floor).
- b. Movable displays are placed in front of the counters blocking wheelchair access.
- c. Movable displays are placed on counter's top thus increasing its functional height.

## **Solution**

A clear 36'' high counter area should be provided, with a 12'' deep section that has clear floor space below, at all service and pay areas so wheelchair users can easily conduct business. Movable or permanent displays should not clutter this floor or counter area impeding wheelchair access. A 48'' high counter should also be provided for disabled individuals who cannot use the 36'' high counter. In general, ample wheelchair maneuvering room more than a 5' turnabout space is necessary around service counters as these areas often become highly congested.

## **4. Problem**

Information counters and reference books are located at a high level for people who can stand, which makes them unreachable for wheelchair users.

## **Solution**

Locating reference books on tilted, swivelling pedestals—on a 36'' high shelf with knee clearance—would make them usable by most wheelchair users and standing persons as well. Chairs may be provided so people who are very tall may sit to use the books. Computer terminals with similar information should be placed on a 32'' high table—with chairs available for non-wheelchair users.

## **5. Problem**

Security sensors regularly create an additional 32'' passage or aisle directly inside the store entrance, a condition difficult to negotiate for wheelchair users. A disabled person must negotiate the entrance door and then try to pass through a 32'' aisle (sensor) without enough room to clear the door swinging.



## Solution

If a door opens into the store, the security system should be located 42'' beyond the door swing so a wheelchair user can get inside the door and onto a level 60''X60'' area and travel beyond the door before passing through another door-type space. Also, for safer, easier passage, the security sensors should be thought of as an aisle and placed a minimum 36'' apart.

## 6. Problem/Solution

Aisles should maintain their functional minimum widths. This may or may not include step stools, stacked books, or movable temporary displays.

In general, bookstores could reduce the *number of copies* of books displayed so that a *wide variety* of books could be accessibly displayed. Wide aisles allow more people to browse comfortably and a variety of shelving units give almost everyone access to some of the books in the store.

Over are the days of the musty library-like bookstore with bookworms combing the 28'' wide aisles and climbing up a 10' ladder to reach the last dusty copy of *War and Peace*.