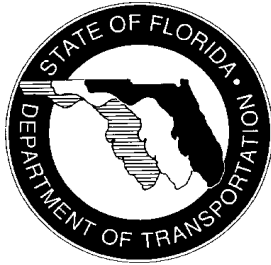


Walkable Communities

Florida
Department
of
Transportation

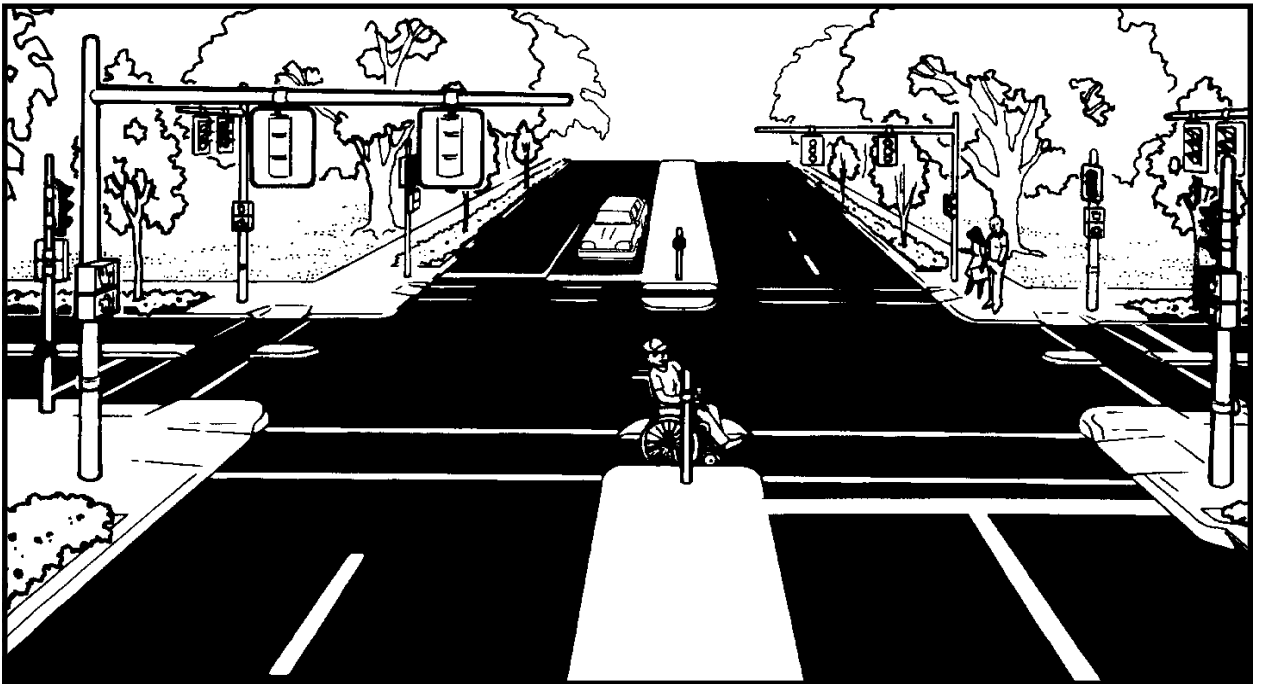
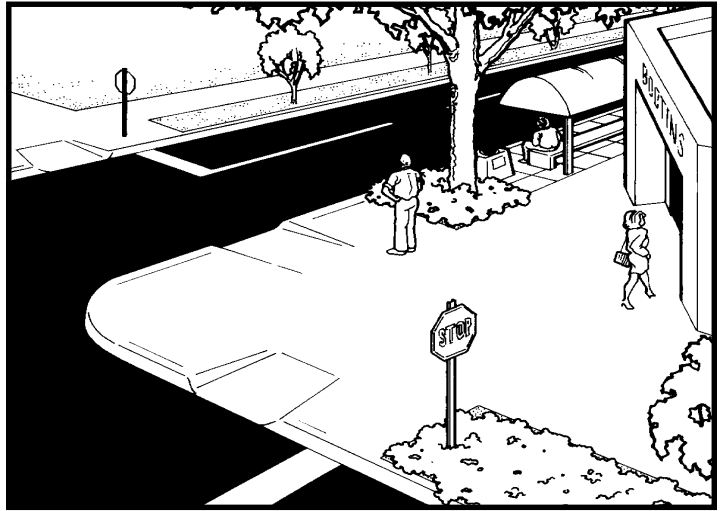
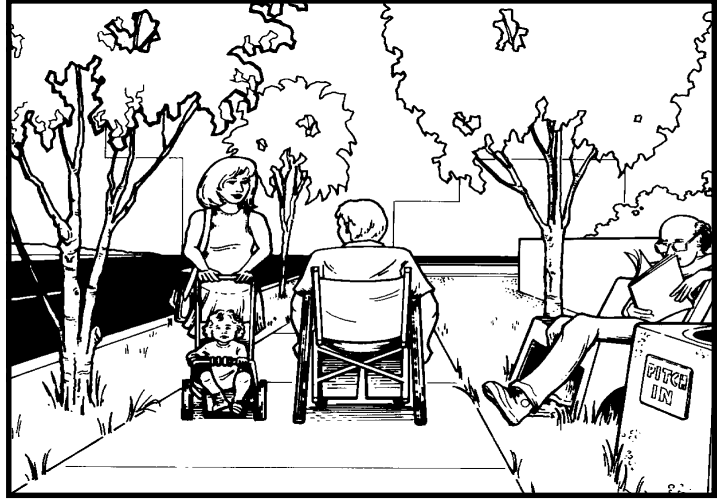
State
Safety
Office

*Pedestrian and
Bicycle Program*



April 1995

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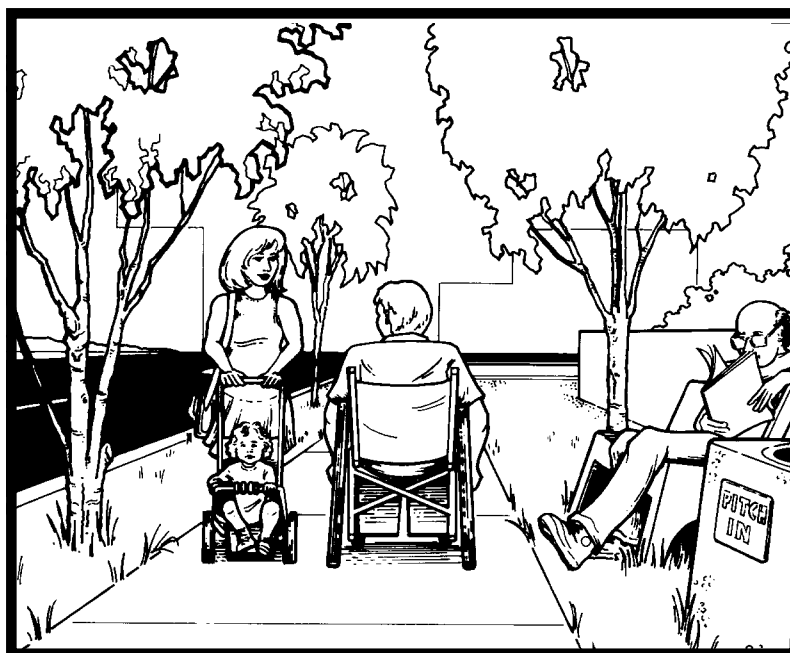
Twelve Steps for an Effective Program

Twelve Steps Toward Walkable Communities

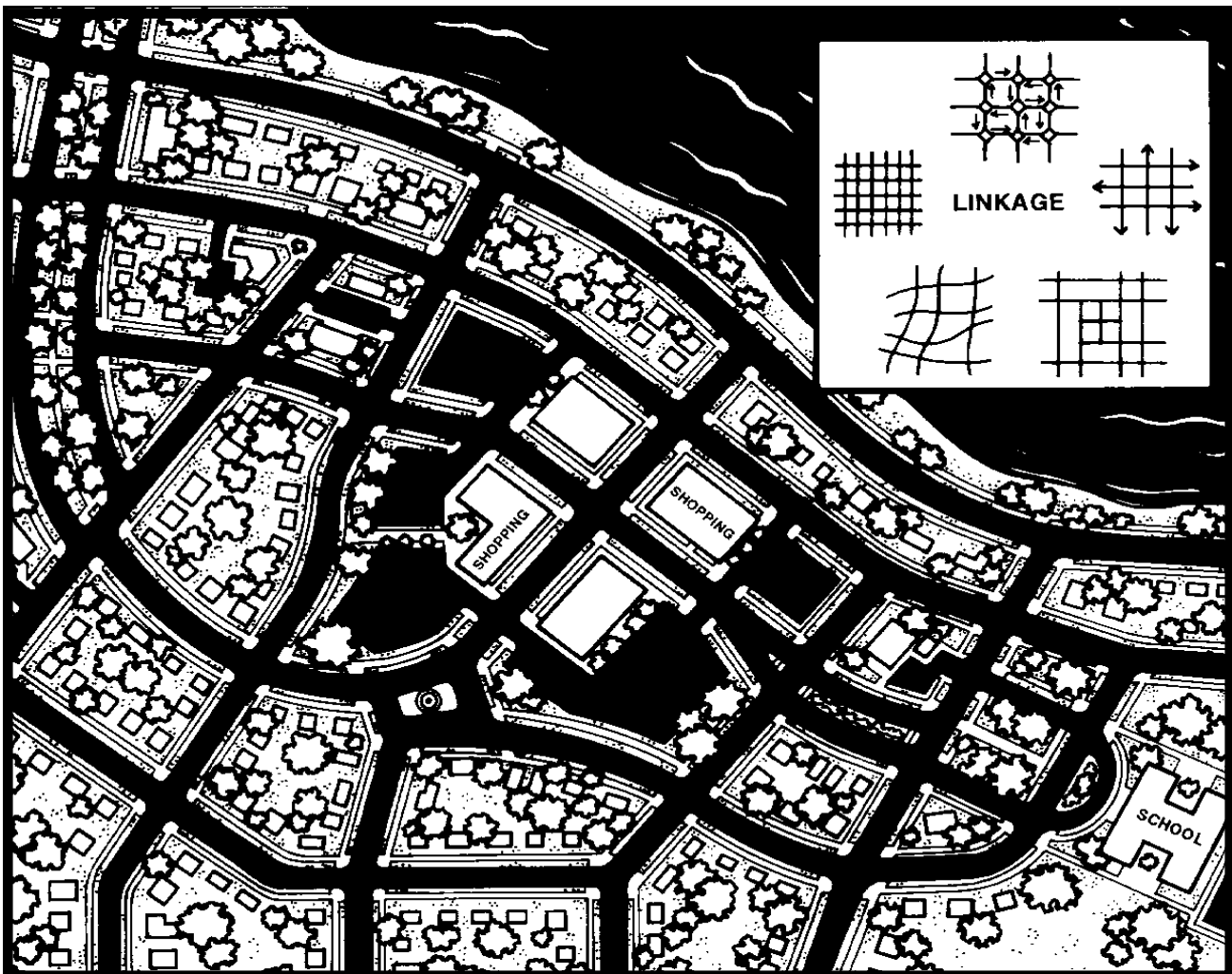
*A summary of key planning, zoning, engineering and development recommendations
from the Florida Department of Transportation
Pedestrian Facilities Planning and Design Training Course*

This document does not constitute a standard, but rather a guide for building our communities to give due consideration to pedestrians. Additional details are contained in the Florida Pedestrian Safety Plan, Transportation Research Board Report 294A and other documents. Please contact us for additional information.

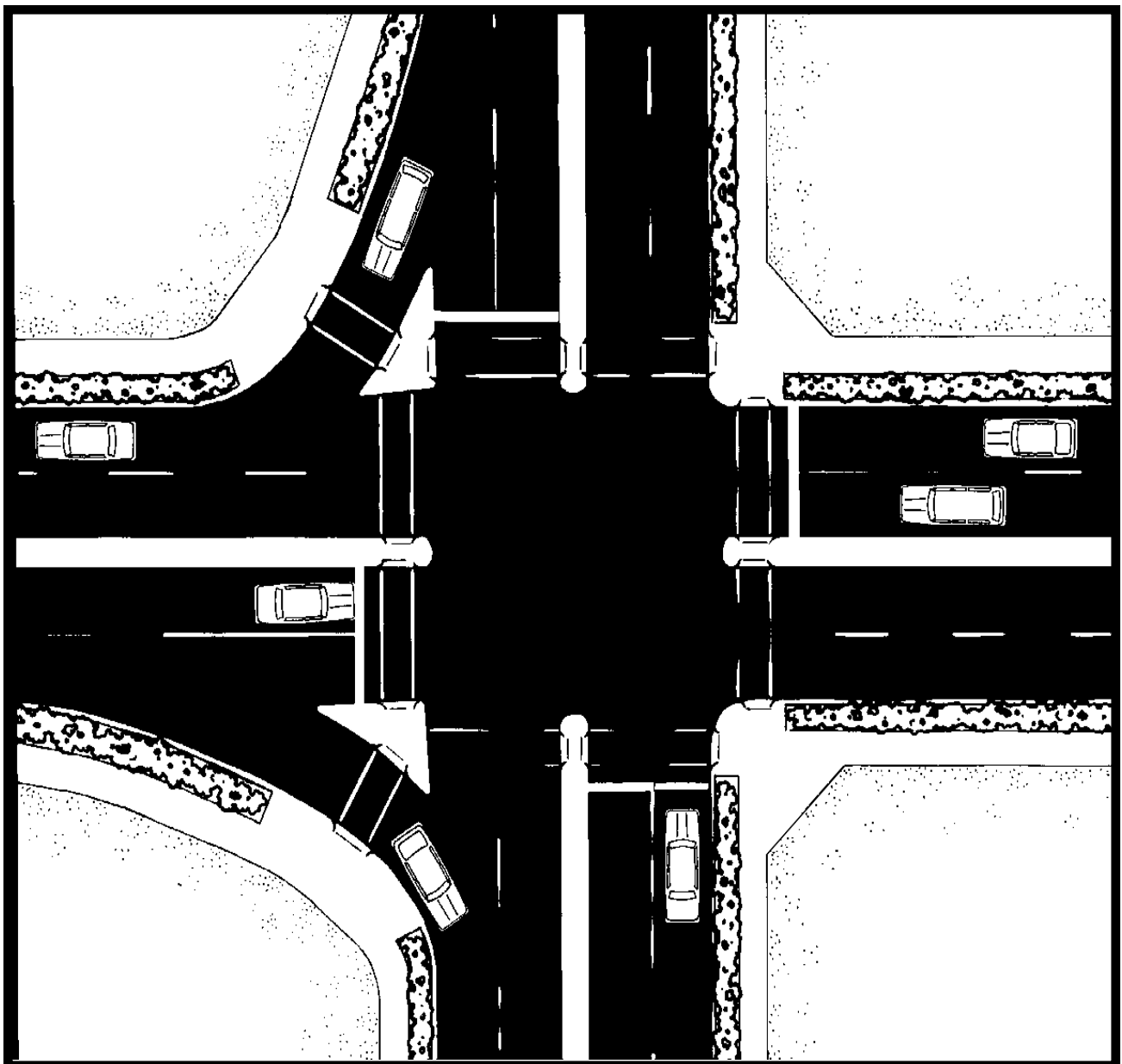
Pedestrian Preamble: This community, in providing for trip making, grants pedestrians and motorists of all ages and abilities rights, privileges, safety, mobility and access. To increase walkability, land use should feature clusters of homes, parks, schools, shops and employment centers within a 1/2 mile (1 k) radius of one another. Intersections should not favor either motorist or pedestrian, but give equal service and support to both. Landscaping, site design and land use patterns should reward those choosing to make a trip by foot, transit or bike. Public transit, with stops and stations linked with walkways, should be available to complement and extend walking trips.



- 1. Provide Continuously Linked Walkways** To accommodate people walking, and many with disabilities 5' (1.5 m) or greater width sidewalks or walkways with a separation from the roadway should be provided on both sides of all urban area roadways. A separation of 6 - 7' (1.8 -2.1 m) is recommended to meet proposed Americans with Disabilities Act Accessibility Guidelines (ADAAG). TRB 284A recommends 7' (2.1 m) with trees. In residential neighborhoods, there should be sidewalks along streets and walkway easements where appropriate. At least 36" (1 m) of the walkway should be clear of obstructions. Consideration should be given to clear sight distances. The walkway environment should include landscaping and streetscaping features such as shade trees and plantings, trash receptacles, street vending machines, utility poles, lighting fixtures, benches, transit stop shelters, directions to places of interest and kiosks. Codes and regulations as well as implementation and enforcement practices should promote street furniture placement so they do not impede or complicate movement for pedestrians. Wide walkways should be constructed in high pedestrian activity generator areas, such as retail centers, government buildings, other employment centers and transit stops and stations. Successful downtowns, beach frontages and entertainment districts often find a 50/50 ratio of walking space to vehicle space ideal for maximum economic development. Special care should be taken in designing and constructing walkways in campus environments.



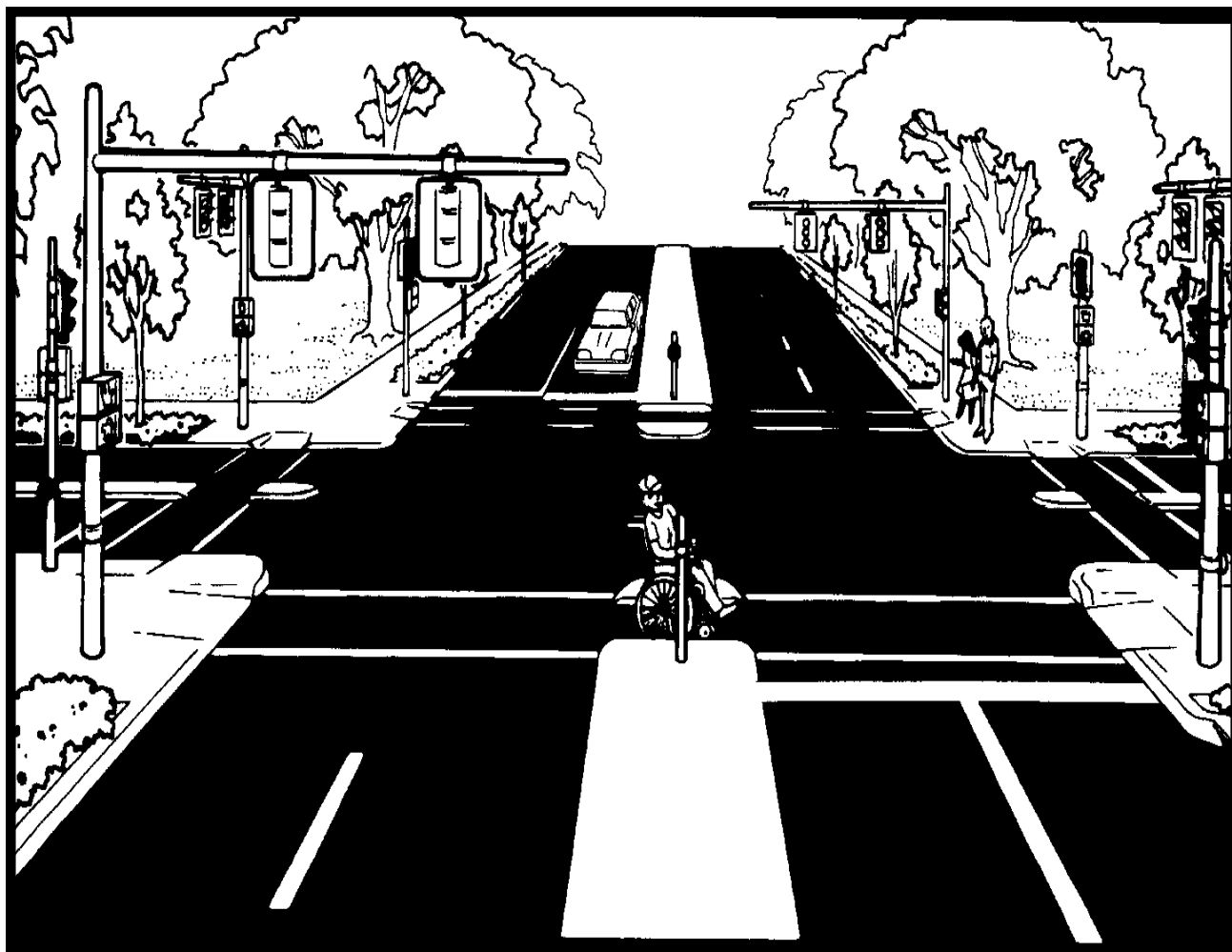
2. **Pedestrianize Intersections** To provide street crossings which accommodate the physical abilities of pedestrians, intersection design and mechanisms should be clear and understandable. The maximum crossing width should be 48' (14.4 m). Slip lanes, medians and bulbouts should be used effectively to reduce street crossing exposure, especially at complex intersections. Roadway geometry should dictate turning speeds of motorized vehicles to acceptable levels [below 20 mph (32 km/hr) on left turns, and below 10 mph (16 km/hr) on right turns]. Adequate sight triangles should be provided. Left turns should be minimized, if not eliminated, in downtowns and in other places of high volume pedestrian use. Pedestrian signalization, for a 3.5' (1 m) per second walking speed, should be provided.



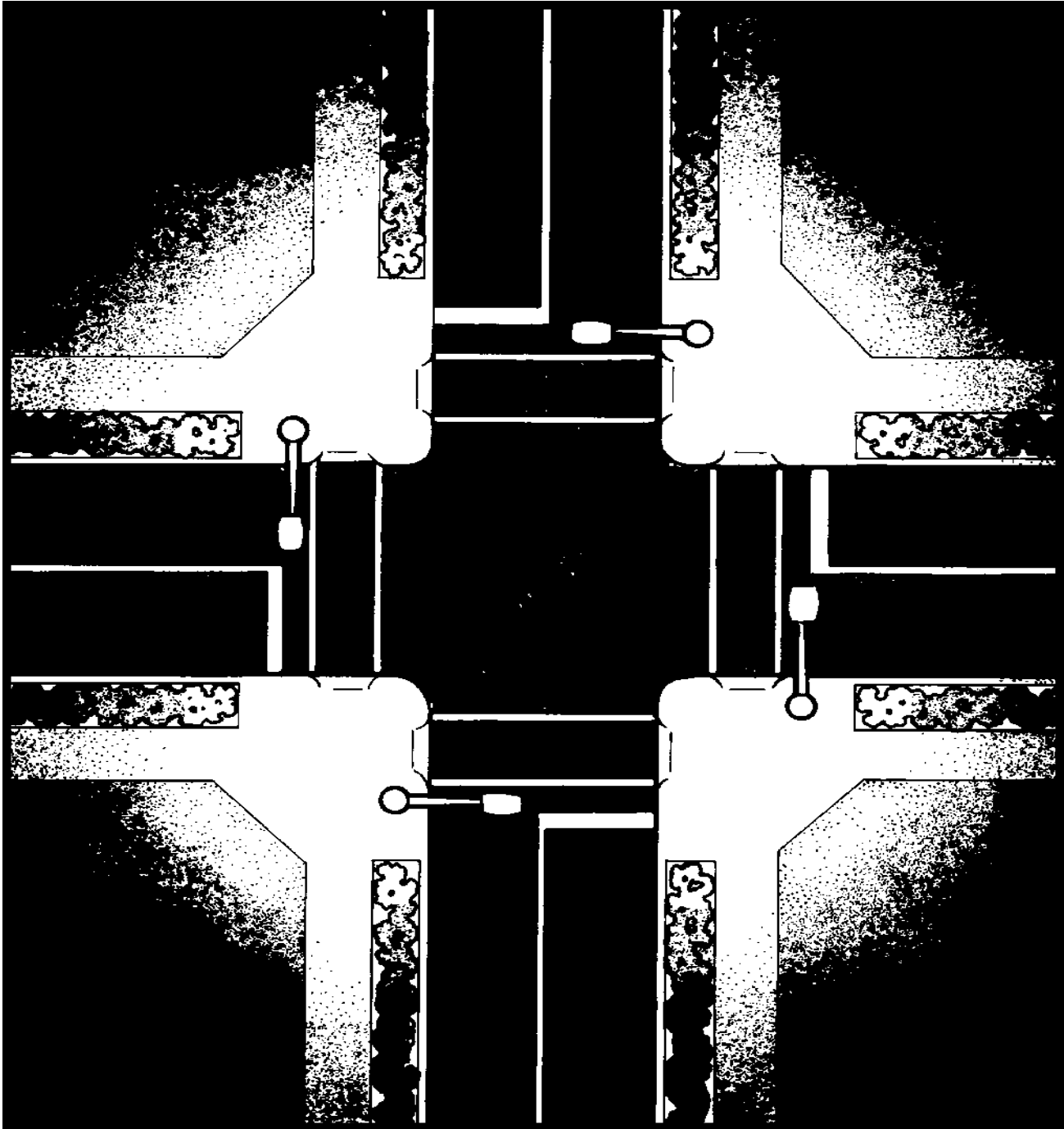
- 3. Americans with Disabilities Act (ADA)** To aid in the independent mobility of people who cannot drive, special accommodations should be provided. References should be made to the ADAAG, Part 3 from the Architectural and Transportation Compliance Board. Two (2) curb ramps should be constructed on each street corner. One (1) curb ramp should be constructed at each side of marked mid-block crossings. Or, as an alternative treatment, the crosswalk area should be raised to curb height. When pedestrian demand signals are used independent call poles should be appropriately placed at the top of each ramp on all signalized intersections. All corners should have adequate sight triangles and sufficient depth for controller box, signal pole and other hardware to be located out of the walk zone. Audio/tactile pedestrian signal systems should be used in areas with large elder and disabled populations. Minimum walk speeds [3-3.5' (.9-1 m) per second], sidewalk cross slopes, grades, drainage inlets and minimum widths should be considered in constructing new and retrofitting existing walkways.



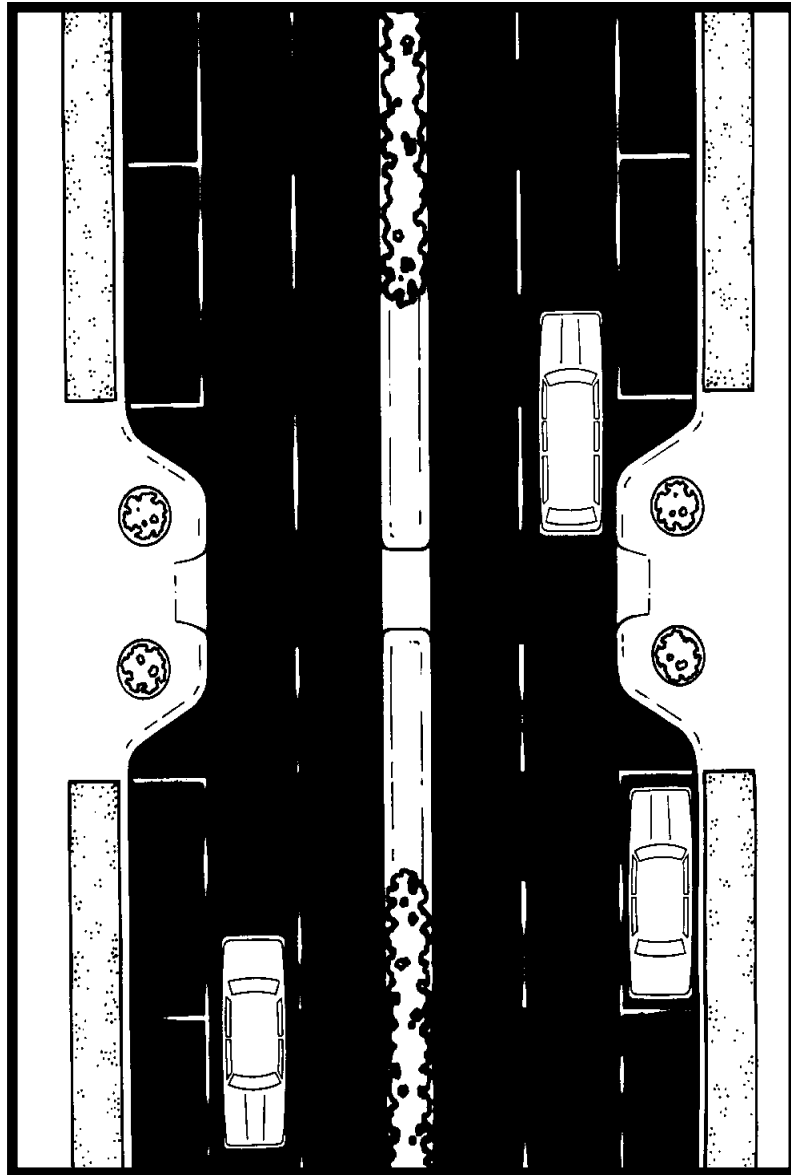
- Signal Placement** To forewarn both pedestrians and motorists of the hazard potential of left turns into crosswalks, signals should be placed for optimum visibility during critical movements. Box span, mast arm, and corner pole signal placements should be used. Diagonal span signals should not be used because they cause motorists to look up rather than in front and to the side and pedestrians cannot see them at some intersections. Corner pole signals with left turn arrows are recommended to keep the driver focused on the pedestrian entry and travel path, especially in dense urban commercial areas and near schools. If appropriate at mid-block crossings, controls should be placed on the median particularly where the ADAAG is relevant or large numbers of elderly pedestrians travel by foot.



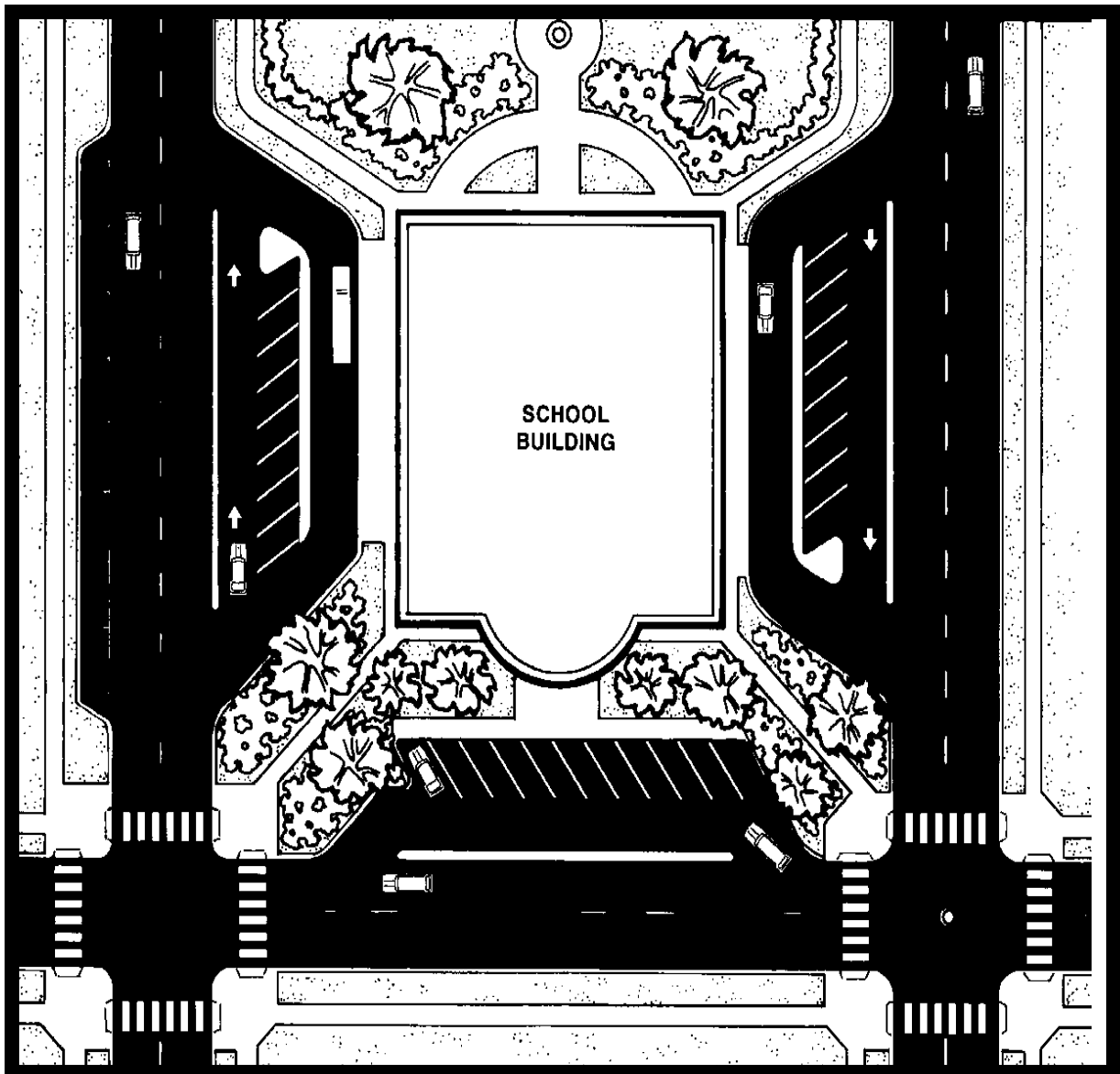
5. Illumination To provide clear visibility of pedestrians approaching intersection crosswalks at night, the approaches to and all street corners should be well illuminated. All intersection lighting should illuminate the crossing and waiting areas and/or create backlighting to make the pedestrian silhouette clearly visible on approach. All commercial, entertainment, school and other pedestrian traffic generating corridors and spaces should be well illuminated.



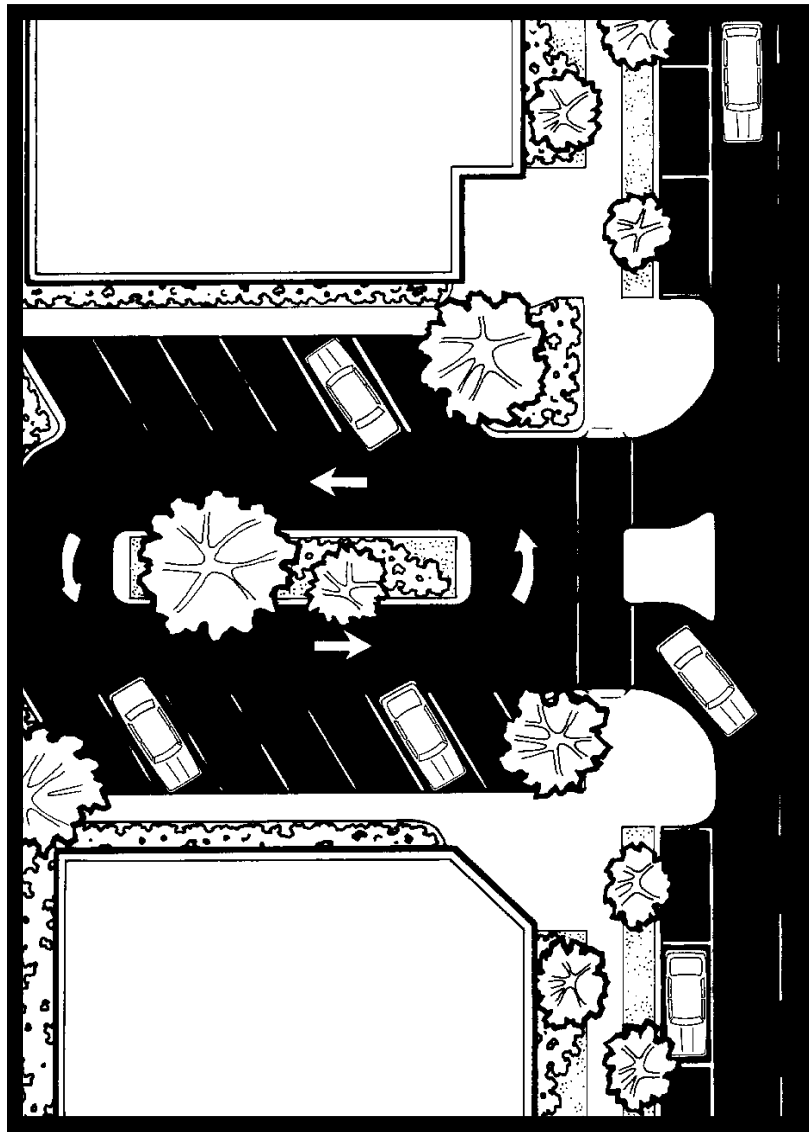
- 6. Simplify Median Crossings** To allow pedestrians to cross roads with a sense of safety, raised medians should be constructed to provide refuge (remember to cut medians at crossing for compliance ADAAG). Modern roads often have signalized intersections spaced 1320' (.4 k) apart. All current 5 and 7 lane cross sections should be retrofitted with raised medians. Landscaped medians should be built in existing as well as new roadways in tourist zones, entertainment districts, school zones, residential neighborhoods and other high volume pedestrian areas.



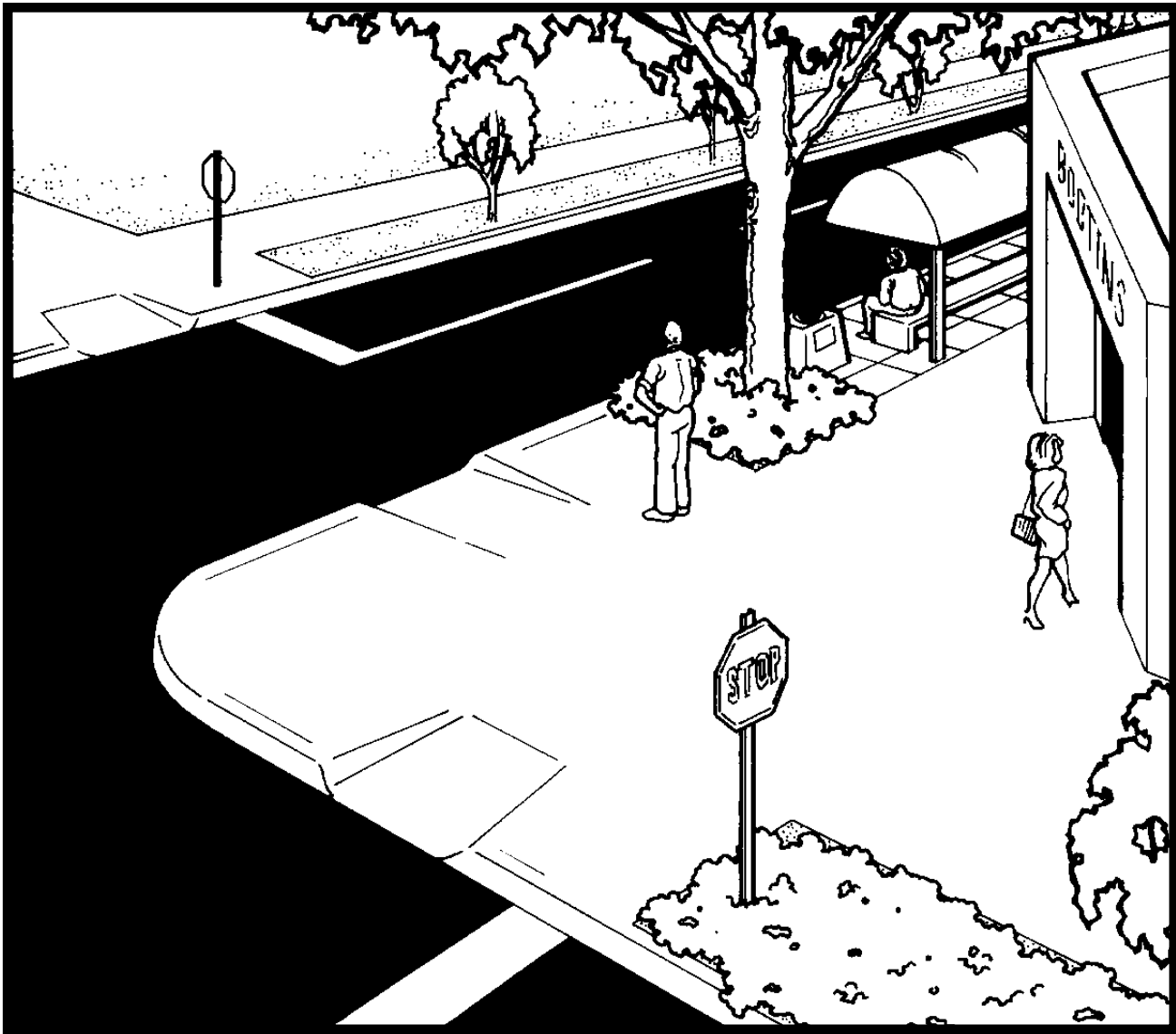
7. **Schools** To provide safe access for children on their approaches to schools, school sites should have specific pedestrian access points. Roadway geometry should minimize travel speeds to 15-20 mph (24-32 km/hr). Slowing or calming vehicle traffic may be accomplished with raised crossings, traffic diverters, roundabouts, on-street parking and other land use and engineering designs. School sites should have pedestrian access points which do not require crossing points with vehicles. The approaches to all schools should have curb and gutter sections except in unusual circumstances. Streetscaping should assure maximum sight distance on all access, crossings and intersections. School zone designations for speed limits should be an element of a comprehensive "circulation" plan which also includes crossing guard programs and identification of "safe routes" for bicycling and walking to school.



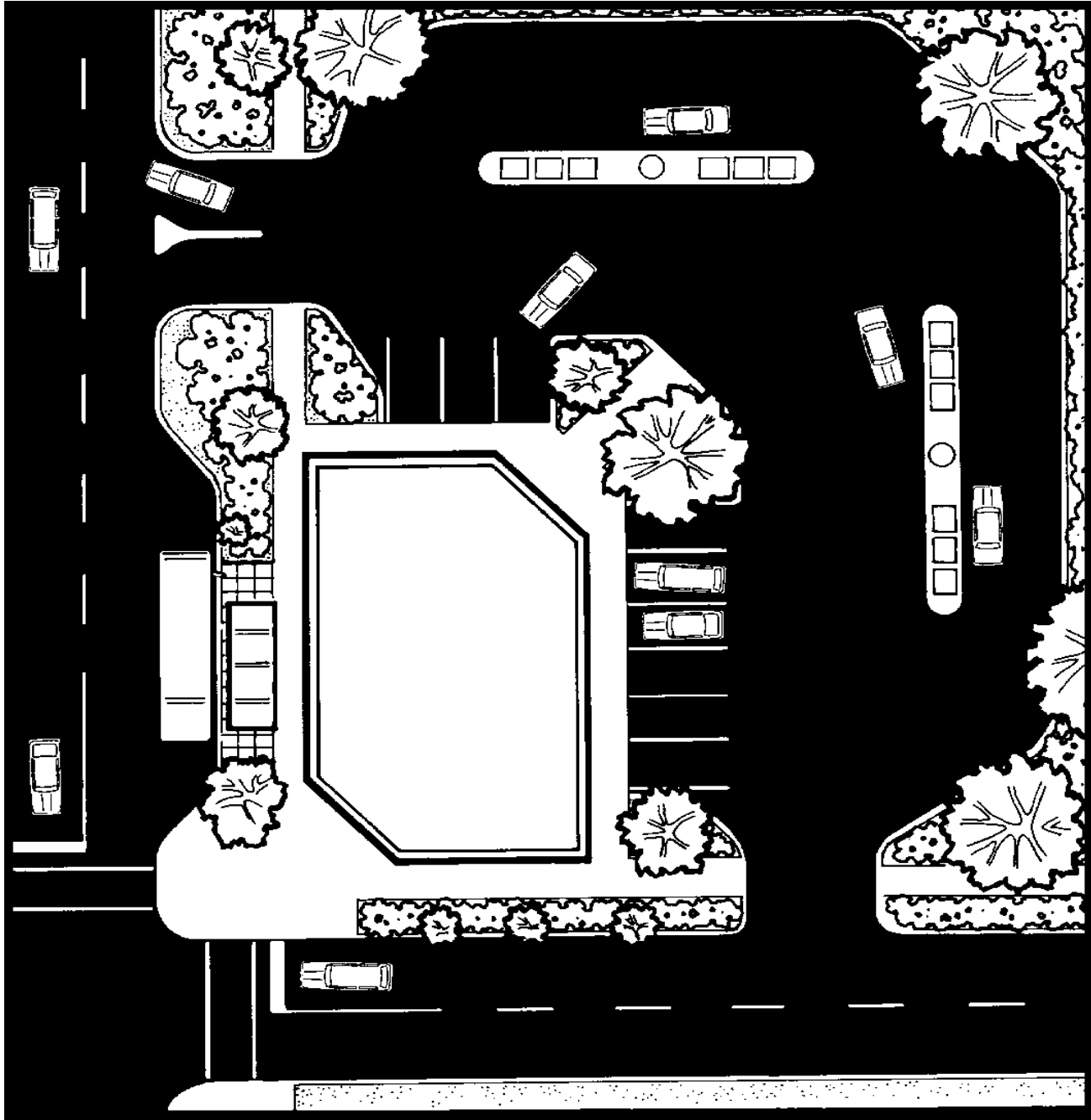
- 8. Eliminate Backing** To eliminate the potential hazard of crashes occurring as motorists back out of parking spaces, site plans should minimize walking in vehicle spaces. Side lot, on-street and pocket parking should be included in zoning regulations to eliminate opportunities for backing over walkways. To reduce conflicts between pedestrians and vehicles in parking areas, center walkways in landscaped areas, "U" pattern dropoffs, and long throat driveways lined with sidewalks should be considered. Parking garages and lots should be given special design attention to protect pedestrians as they travel from automobiles to their destinations.



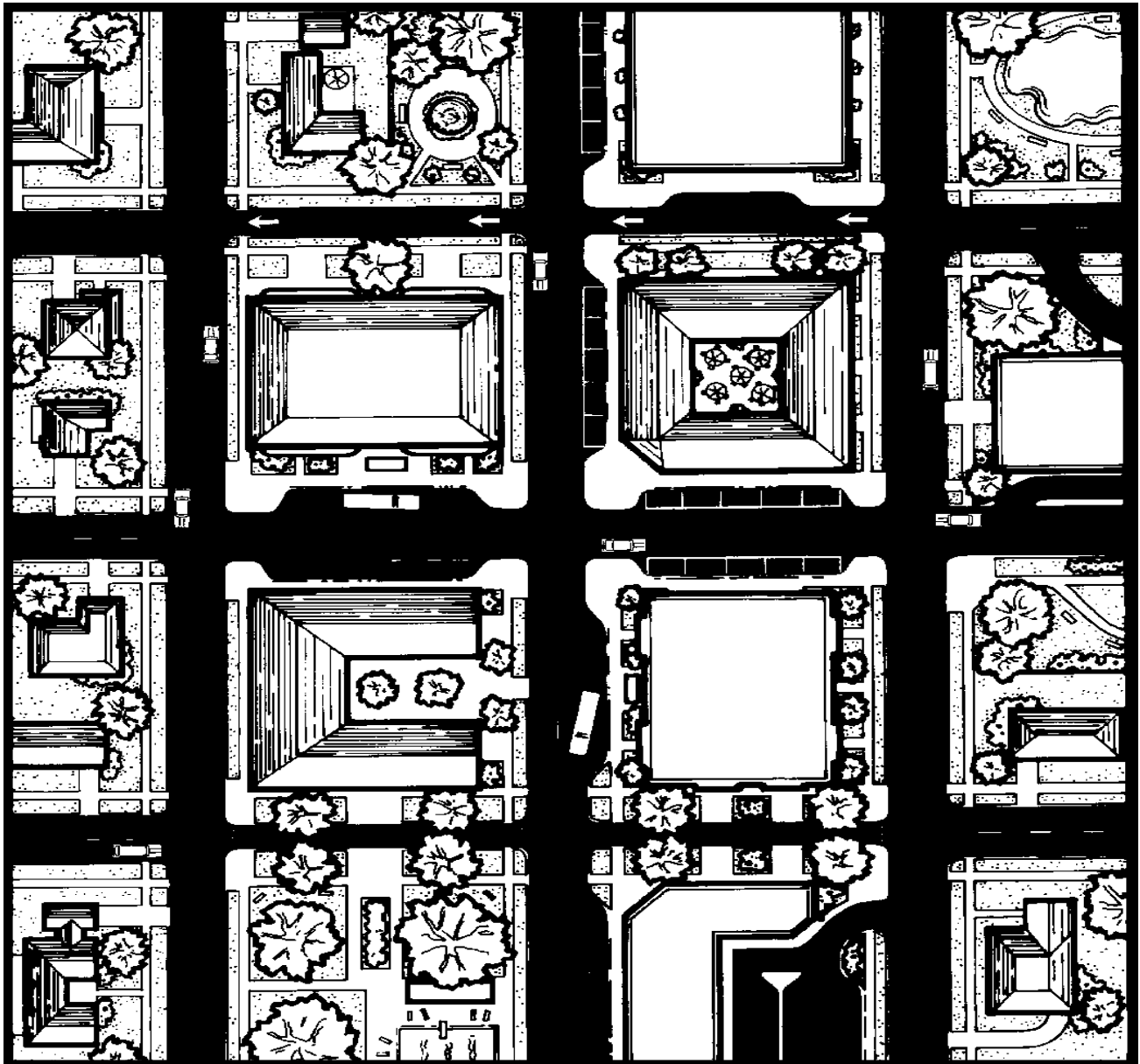
9. **Access Management** To provide safe pedestrian access to commercial developments, pedestrians should have access ways independent from vehicle access to all commerce. Left turns into unsignalized commercial access driveways should be minimized. Commercial developments should have shared driveways from main roads. Side street driveways should be at least 230' (70 m) from intersections. Commercial areas should have access ways into adjacent neighborhoods. Reduced building setback requirements should be used to encourage streetside window shopping and store front pedestrian street entries, with side lot and rear lot parking .



- 11. Combine Walking with Transit** To increase travel distances for the pedestrian mode, access to and linkages with transit should be provided. One half mile (1 k) radius should be used for acceptable walking distances between trip origins and transit stops (5 to 10 minute walk). Transit should be convenient, inviting and efficient. As a general rule, bus stops should be at the “far-side” of intersections so the bus does not become a visual obstruction for motorists and disembarking passengers trying to cross the street. All transit stops should be easy to reach by walkways, and be provided with shaded, visible, comfortable sitting/ waiting space set back from the walkways. Planning and zoning should encourage development which enhances transit use and its access.



- 12. Walkable Scale Land Use Planning** New and "in-fill" land use development should favor walking over driving. Traditional Neighborhood Design (TND), grid, Planned Mixed Unit Development (PMUD) roadway systems, Transit Oriented Development (TOD) designs, neighborhood schools, pocket parks and neighborhood stores should predominate land use codes, ordinances and regulations. Places to sit should be provided on retail blocks and along corridors where people walk throughout their communities. Businesses should front on side-walks with parking located alongside or behind stores. Shared use parking lots should be emphasized wherever possible.



Funding for this document was provided by a grant from the National Highway Traffic Safety Administration through the Florida Department of Transportation, Safety Office, June 1993. For further information on this topic, contact the Florida Pedestrian/Bicycle Program at (904) 487-1200.