Hurricane Shelter Planning Approaches During the Coronavirus Pandemic

Council Board Meeting
July 17, 2020

Indian River, Martin, St. Lucie, Palm Beach
2020 Hurricane Season

June 1- November 30

The 2020 season is the 6th year of above average storm predictions

2020 Atlantic Hurricane Season Outlook

- **Named storms**: 13-19
- **Hurricanes**: 6-10
- **Major hurricanes**: 3-6

*Source: National Oceanic and Atmospheric Administration 2020*
2020 Season Assumptions with COVID

- Predicted 13 to 19 named storms (winds of 39 mph or higher), of which 6 to 10 could become hurricanes
- All storms are different - A stationary tropical storm could potentially cause more damage than a Cat 2 storm depending on it’s specific attributes (rain, wind, direction, speed)
- Staffing county shelters – Health Departments, County staff, Volunteers, and Red Cross personnel + Security/law enforcement, and fire rescue, doctors/nurses on call Delay in recovery operations
- Capacity of resident populations to react has been severely impaired: unemployment and income stress will hamper most in hardening homes, buying supplies or the costs associated with evacuation (fuel, water, food, lodging). MAY lead to increased general sheltering usage.
- Positive/Negative Shelters should be considered to support and separate healthy from positive with symptoms, asymptomatic, and/or exposed.
- Reduction of Useable Space due to social distancing requirements could cause additional sites to be opened to provide for space.
Services & Mutual Aid Assumptions

- **Power** capabilities are essential – Power company convoys may not be available
- **Transportation** of commodities is interrupted
- **State-to-State** support will not be reliable. Resources will be held close to home
- **Vendor** supplies tenuous – demand may have depleted supplies;
- **Resources** are strained or depleted staff, water, food, etc.,
- **Volunteers** are unpredictable and not guaranteed;
Hurricane Shelter Options - Prioritized

1. Shelter-in-Place: consider this option if your home is to code, not in flood zone, no evacuation orders have been issued.
   - Evacuation is not necessary
   - Functional and health needs are served
   - Home is safe, up to code, hardened; and not in flood zone

2. Friends & Family: in/out of town - consider if your home is not safe, you’re in a flood zone, health or mobility concerns;

3. Hotel/Motel: if your home is not safe, flood zone, health or mobility concerns, and you can afford;

4. Public Shelters: emergency managers strongly encourage this option as a last resort; and

Special Needs (SpNs) Shelters: Requires early registration, transportation, equipment, therapy animal, caregiver, and electrical power.
Shelter Definitions

- **General Populations or Public Shelter**: local government provided hardened facilities (usually schools) that protect people short-term during and immediately after a storm or other emergency/disaster event – 20 sq.ft. per person/space

- **Special Needs Shelter (SpNs)**: facilities that provide power, and protection, supervision/monitoring for persons impaired physically, mentally, or cognitively; have sensory or physical challenges, and require assistance to function. A caregiver is also accounted 60-110 sq. ft. per person and accommodates caregiver, therapy animal(s), and essential equipment. Generally requires advance registration with county emergency management for planning purposes.
Methodology for Determining Regional & County Shelter Capacity (Demand/Space)

Florida Division of Emergency Management updates County shelter capacity data annually working with county emergency management staff.

- **General/Public shelter space:** Determine square footage of usable space, divide by 20 sq. ft. (per person). Ex: 2,500 sq. ft. divided by 20 sq. ft. = 125 spaces.

- **Special Needs spaces** are determined by dividing by square feet by 60 sq. ft. per client and extended to 100 sq. ft. to accommodate caregivers, therapy animals, and equipment. Ex: 7,500 sq. ft. divided by 60 sq. ft. = 125 spaces. 7,500 sq. ft. divided by 100 sq. ft. = 75 spaces.
Shelter space is dynamic. Counties routinely choose shelters that serve the appropriate communities during a disaster. Pet friendly and special needs shelters are often static however additional space may be developed when in need.

<table>
<thead>
<tr>
<th>County</th>
<th>2020 Max Shelter Demand (Spaces)</th>
<th>2020 Shelter Deficit / Sufficiency (Spaces)</th>
<th>2020 Maximum Shelter Demand (Clients)</th>
<th>2020 Shelter Deficit / Sufficiency (Clients)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian River</td>
<td>5,805</td>
<td>9,148</td>
<td>501</td>
<td>514</td>
</tr>
<tr>
<td>Martin</td>
<td>5,331</td>
<td>14,382</td>
<td>400</td>
<td>409</td>
</tr>
<tr>
<td>Palm Beach</td>
<td>29,754</td>
<td>51,846</td>
<td>1,260</td>
<td>1,275</td>
</tr>
<tr>
<td>St. Lucie</td>
<td>7,833</td>
<td>17,348</td>
<td>650</td>
<td>666</td>
</tr>
<tr>
<td><strong>Region Total</strong></td>
<td><strong>48,723</strong></td>
<td><strong>92,724</strong></td>
<td><strong>2,811</strong></td>
<td><strong>2,864</strong></td>
</tr>
</tbody>
</table>

*Source: Florida Division of Emergency Management, 2020 Statewide Emergency Shelter Plan*
Then Came COVID-19
Businesses Impacted
San Antonio, April 2020, waiting for food bank distribution site to open
Hurricane Impact Planning

- How do you evacuate coastal areas and open shelters with social distancing? What about supplies of food and medical equipment?

- Exercise scenarios don’t involve a 4 month long pandemic expending resources globally from aid groups and governments while so much of the nation is shut down, self-isolating and unemployed.

- Response equipment and supplies in high demand and in dwindling supply.

- Responders overwhelmed
Evacuation Assumptions & Impediments

Evacuations are ordered to protect at risk populations (flooding and wind). COVID-19 complicates ordered evacuation operations for public and staff. Emergency management, county department staff, and rescue responders must weigh risks carefully. Resources are strained and mutual aid is not assumed:

- Fiscal distress will determine for many the ability to leave – cost of fuel, water, food, and lodging;
- Work may prevent leaving – could lose needed income; mandatory service;
- Special-needs persons require more trips and/or vehicles; movement of at risk, positive, and exposed persons;
- Coronavirus patients going on or coming off ventilators will require action well before a storm approaches; and
- Shelters viewed as ground zero for COVID-19 – many may avoid public shelters with fear of contracting virus.
Transportation Impacted
Food Distribution Sites

May 2020 - Palm Beach
COVID Testing Waiting Lines
And MoreTesting
How Do We Shelter Safely?
Shelter Operations & COVID-19

County Emergency Management are strongly encouraging shelter-in-place, family & friends, or out of town. Shelters are a last resort and St. Lucie County: "shelters are a last resort, you may be running from one hazard just to “catch” another hazard at the shelter”

Florida Health Departments will employ CDC and FEMA guidance to contain the virus and protect sheltered populations by:

- **Monitoring** daily for virus symptoms;
- **Temperature** taking on arrival, monitoring during stay at periodic intervals;
- **Non-congregate Sheltering:** Positive for COVID-19 who do not require hospitalization but need isolation. Exposed to COVID-19 who do not require hospitalization; Asymptomatic high-risk individuals needing social distancing as a precautionary measure, such as people over 65 or with certain underlying health conditions (respiratory, compromised immunities, chronic disease).
COVID - Safe Shelter Operations

- Public Shelter entry processes should include COVID screening (interview, observation, and monitoring);
- Family isolation/spacing 6ft. Distancing from other families;
- Public bathrooms, water fountains, common areas;
- Clear public messaging on distancing, masks, washing, and interactions with other families;
- Daily monitoring wellness checks, temperatures, and symptoms;
- Transfer of symptomatic persons; and
- Exit Counseling – quarantining, cleaning, etc.
Alternate Shelter Facility Options

- Colleges
- Airports
- Hotels/Motels
- Churches
- Auditoriums
Additional County Planning

- All counties will reduce space availability within shelters
- Coordination with hotels, college, etc., for non-congregate sheltering of those persons exposed or positive
- PPE will be distributed to staff and evacuees
- All clients and staff will undergo screening for COVID symptoms
- Have requested staffing resources and response from the State IMT (Incident Management Team)
- Working with schools to augment staff at shelters
COVID and Special Needs Shelters (SpNs)

CDC and ARC recommendations

- The 60 sq. ft. includes an room for oversized cot, medical equipment and supplies, access for medical staff or care-giver;
- Stay at least 6 feet (about 2 arms’ length) from other people outside of your household;
- Hotels/dormitories and smaller shelters (fewer than 50 residents) should be prioritized over larger shelters;
Safe Public Sheltering - Functions

- Staggered head to toe cot arrangements allow safer breathing room
- The center area is reduced but maximizes floor space.
- Provides pathways for staff/client traffic flow and egress routes.
Special Needs Shelters (SpNs)

340 sq. ft.
Includes CDC 6ft social distancing at each cardinal point (N,S,E,W) for SpNS Dormitory/sleeping space

408 sq. ft.
Includes CDC 6ft social distancing at each cardinal point (N,S,E,W) for SpNS Dormitory/sleeping space

506 sq. ft.
Includes CDC 6ft social distancing at each cardinal point (N,S,E,W) for SpNS Dormitory/sleeping space
PODs provide location to pick up food, water, ice, tarps, etc. to the public after hurricane – and in some cases prior to storm impacts;

COVID POD planning considerations:
- Provision of masks, sanitizers, wipes, and gloves;
- Combine testing and tracing option – divert line to another area;
- Public messaging opportunity – testing options, safety measures,
Focus on Management
On-Going & Upcoming

What is facing our communities

- Census
- Elections & Voting
- Vaccine distribution
- Schooling
- Flu Season
End in sight?
Guidance & Information

Florida Division of Emergency Management: https://www.floridadisaster.org/
Florida Department of Health: http://www.floridahealth.gov
County Emergency Management Websites
  ➢ Indian River https://www.irces.com/em/
  ➢ Martin County https://www.martin.fl.us/EM
  ➢ Palm Beach http://discover.pbcgov.org/publicsafety/Pages/default.aspx
  ➢ St. Lucie www.stlucieco.gov/eoc
Centers for Disease Control: www.cdc.gov
Treasure Coast Regional Planning Council: www.tcrpc.org
Questions ?
Treasure Coast Regional Planning Council

Treasure Coast
Local Emergency Planning Committee (TCLEPC)
Kathryn E. Boer
Emergency Programs Director
kboer@tcrpc.org
PROJECT FACILITATED BY TREASURE COAST REGIONAL PLANNING COUNCIL
IN PARTNERSHIP WITH ALTA PLANNING & DESIGN AND NORTHSTAR GEOSCIENCES
What are Complete Streets?

Complete Streets are streets for everyone.

They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, transit riders, and motorists of all ages and abilities.
Complete Streets Make Access to Transit ...

... safer and more convenient, comfortable, predictable & enjoyable.
One Size Doesn’t Fit All ...

Different Contexts → Design Variations
Consideration of Typical Users

THE FOUR TYPES OF BICYCLISTS

<1% STRONG and FEARLESS

7% ENTHUSED and CONFIDENT

60% INTERESTED but CONCERNED

33% NO way NO how
What Drivers See ...

30 mph  
40 mph  
35 mph  
30 mph  
20 mph
COMPLETE STREETS: ACCESS TO TRANSIT STUDY
CATALOG OF POSSIBLE INTERVENTIONS

TRANSPORT ZONE
- TRANSIT STOP - CHARGING
- TRANSIT SHELTER - BASIC
- TRANSIT SHELTER - ENHANCED
- "FLOATING" BUS STOP
- TRANSIT STOP - MEDIAN
- REAL-TIME ARRIVAL INFO

PEDESTRIAN ZONE
- MEDIAN REFUGE
- LIGHTED CROSSWALK
- PROTECTED CROSSWALK
- TEXTURED CROSSWALK
- MULTI-USE PATH
- EXTENDED CURB

BIKEWAY ZONE
- SHARROW
- STANDARD BIKE LANE
- BUFFERED BIKE LANE

TRAFFIC CALMING
- ROUNDABOUT
- MEDIAN
- BULB-OUT
- ON-STREET PARKING
- SPEED TABLE
- ROTARY (SMALL)

FURNISHING ZONE
- WATER FOUNTAINS
- SIDEWALK DESIGNS
- STREET TREES
- PARKLET
- STREET FURNITURE
- PUBLIC ART
- BOLLARDS
- PEDESTRIAN LIGHTING
- SIDEWALK DINING
- BIKE PARKING

Prepared by: Treasure Coast Regional Planning Council - September 2019
## Project Selection Criteria

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>MEASUREMENT</th>
<th>WEIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRANSIT NODE</strong></td>
<td>Is the project on a transit route with stops on the project corridor?</td>
<td>Within half-mile* of existing transit stop = 5 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Within half-mile* of planned transit stop = 3 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*within 2 miles in CRAs</td>
</tr>
<tr>
<td><strong>TRANSIT NEED</strong></td>
<td>Does the area (households) have limited or no access to vehicles?</td>
<td>Above-average density of households with access to one or no vehicles = 2 points</td>
</tr>
<tr>
<td><strong>LIVE</strong></td>
<td>Does the area have higher than average population density?</td>
<td>Above-average population density = 1 point</td>
</tr>
<tr>
<td><strong>WORK</strong></td>
<td>Does the area have higher than average job density?</td>
<td>Above-average job density = 1 point</td>
</tr>
<tr>
<td><strong>PLAY</strong></td>
<td>Are there parks and recreational areas nearby (within a half-mile)?</td>
<td>Within a half-mile of parks and recreational areas = 1 point</td>
</tr>
<tr>
<td><strong>LEARN</strong></td>
<td>Are there schools, colleges or libraries nearby (within a half-mile)?</td>
<td>Within a half-mile of schools, colleges or libraries = 1 point</td>
</tr>
<tr>
<td><strong>SAFETY</strong></td>
<td>Is the area a crash hot-spot?</td>
<td>Crash hot-spot over past five years = 1 point</td>
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<tr>
<td><strong>ECONOMIC HUB</strong></td>
<td>Is the area within a CRA?</td>
<td>Within a CRA = 2 points</td>
</tr>
<tr>
<td>DJ</td>
<td>SEGMENT NAME</td>
<td>SEGMENT DETAILS</td>
</tr>
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</tr>
<tr>
<td>286</td>
<td>S CEDARSOLO AVE</td>
<td>CONFUSION CORNER 1975 SW (US 1) 17</td>
</tr>
<tr>
<td>211</td>
<td>SAVGREy EAVY (US 27)</td>
<td>SAVGREEN RIVER RAW</td>
</tr>
<tr>
<td>217</td>
<td>SAVGREy EAVY &amp; S CEDARSOLO AVE</td>
<td>SAVGREEN RIVER RAW</td>
</tr>
<tr>
<td>224</td>
<td>DEPAM BEACH RD</td>
<td>DEPAM BEACH RD</td>
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<tr>
<td>276</td>
<td>SNAMA BEACH RD</td>
<td>SE DIXE RAY</td>
</tr>
<tr>
<td>284</td>
<td>TIER 1 (14-15 points)</td>
<td>19 segments</td>
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<tr>
<td>204</td>
<td>SAVGREy EAVY (SR 74)</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>212</td>
<td>SAVGREy EAVY (SR 74)</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>247</td>
<td>SAVGREy EAVY (SR 74)</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>287</td>
<td>SE EMBRACE AVES</td>
<td>SE EMBRACE AVES</td>
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<tr>
<td>230</td>
<td>SAVGREEN RIVER RAW</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>209</td>
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<tr>
<td>223</td>
<td>SAVGREEN RIVER RAW</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>282</td>
<td>TIER 2 (12-13 points)</td>
<td>19 segments</td>
</tr>
<tr>
<td>213</td>
<td>SAVGREEN RIVER RAW</td>
<td>SAVGREEN RIVER RAW</td>
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<tr>
<td>222</td>
<td>SAVGREEN RIVER RAW</td>
<td>SAVGREEN RIVER RAW</td>
</tr>
<tr>
<td>282</td>
<td>TIER 2 (11 points)</td>
<td>18 segments</td>
</tr>
<tr>
<td>147</td>
<td>SAVGREEN RIVER RAW</td>
<td>SAVGREEN RIVER RAW</td>
</tr>
</tbody>
</table>
Public Engagement
Complete-the-Street

The image shows a series of strips illustrating different street configurations, such as sidewalks, shade trees, buffered bike lanes, travel lanes, and multi-use paths. The strips are arranged to show various widths and designs, focusing on pedestrian and cyclist safety and accessibility.
Complete-the-Street
Complete-the-Street
Complete-the-Street
Complete-the-Street
SE Palm Beach Road (Stuart)
Martin MPO Complete Streets: Access to Transit

Existing Conditions of SE Palm Beach Road
View Looking North (Near 10th Street)

ROW Varies from 70'-80'
Martin MPO Complete Streets: Access to Transit

Existing Conditions of SE Cove Road

View Looking West (Near 48th Avenue)

- Single Family Residential
- Vacant Lot

- Sidewalk
- Swale
- Travel Lane
- Travel Lane
- Swale

- 6'
- 18'
- 12'
- 12'
- 17'

- 65' ROW
SE Dixie Hwy (Port Salerno)

**EXISTING CONDITIONS:**
2-LANE URBAN ROADWAY - SE DIXIE HIGHWAY

1. IMAGE 1 - NEAR THE INTERSECTION OF SE DIXIE HIGHWAY AND SE SALERNO ROAD
2. IMAGE 2 - SE DIXIE HIGHWAY NEAR THE ENTRANCE OF MANATEE MARINA
3. IMAGE 3 - INTERSECTION OF SE DIXIE HIGHWAY AND SE ANCHOR AVENUE
4. IMAGE 4 - INTERSECTION OF SE DIXIE HIGHWAY AND SE COMPASS WAY

**COMPLETE STREETS:**
POSSIBLE INTERVENTIONS

1. BUFFERED BIKE LANE
   Credit: TIG & SCALETIC
2. BIOSWALE
   Credit: SCALETIC
3. SHADE TREES
   Credit: CQO
4. ENHANCED TRANSIT SHELTER
   Credit: SCALETIC
5. STANDARD BIKE LANES
   Credit: MANATEE SAFE STREETS SUMMIT
6. MULTI-USE PATH
   Credit: CITY OF PORT LACOURDALE
SW Palm City Road (Stuart)

**EXISTING CONDITIONS:**
2-LANE SUBURBAN ROADWAY - SW PALM CITY ROAD

1. IMAGE 1 - APPROACHING THE INTERSECTION OF SW PALM CITY ROAD AND US 1
2. IMAGE 2 - SW PALM CITY ROAD JUST BEFORE PLAZA ENTRANCE
3. IMAGE 3 - SW PALM CITY ROAD AND POPPLETON CREEK
4. IMAGE 4 - SW PALM CITY ROAD SOUTH OF POPPLETON CREEK

**COMPLETE STREETS:**
POSSIBLE INTERVENTIONS

1. PEDESTRIAN LIGHTING
CREDIT: CITY OF STUART
2. ROUNDABOUT
CREDIT: CITY OF STUART
3. TRAFFIC CALMING PINCH POINT
CREDIT: CITY OF WEST PALM BEACH
4. LIGHTED CROSSWALK
CREDIT: HOWARD INDUSTRIES
5. MULTI-USE PATH
CREDIT: CITY OF FORT LAUDERDALE
6. BUFFERED BIKE LANE
CREDIT: FLORIDA BIKING
Martin MPO Complete Streets: Access to Transit

Conceptual Diagram of SE Palm City Road

View Looking North (Near SW Halpatiokee Street)
**EXISTING CONDITIONS:**
5-LANE COMMERCIAL CORRIDOR - MONTEREY ROAD

**COMPLETE STREETS:**
POSSIBLE INTERVENTIONS

1. INTERSECTION OF SE MONTEREY ROAD AND SWP LIVING
2. SW MONTEREY ROAD APPROACHING THE INTERSECTION OF RANIER HIGHWAY
3. INTERSECTION OF SE MONTEREY ROAD AND RANIER HIGHWAY
4. SW MONTEREY ROAD APPROACHING SW PALM CITY ROAD

PEDESTRIAN LIGHTING
CREDIT: STUART MAIN STREET

BIOSWALE
CREDIT: STUART

PROTECTED BIKE LANE
CREDIT: CITY OF STUART, FL

LIGHTED CROSSWALK
CREDIT: FORT LAUDERDALE

MULTI-USE PATH
CREDIT: CITY OF FORT LAUDERDALE

BUFFERED BIKE LANE
CREDIT: FORT LAUDERDALE
Martin MPO Complete Streets: Access to Transit

Existing Conditions of SE Indian Street

View Looking East (Near FEC Railway Corridor)

Existing Context
Sidewalk
Landscape
Curb & Gutter
Travel Lane
Travel Lane
Center Turn Lane
Travel Lane
Travel Lane
Curb & Gutter
Landscape
Sidewalk
Existing Context

70' (Existing Edge of Curb Dimension)

98' (Existing Rear of Sidewalk Dimension)
MARTIN COUNTY

COMPLETE STREETS: ACCESS TO TRANSIT STUDY

FOR MORE INFORMATION:

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Sustainable Neighborhood Planning For The Region

Streets, Blocks, and Alleyways

Achieving a Network of Walkable Streets

July 17, 2020

TREASURE COAST REGIONAL PLANNING COUNCIL
Nearly 30% of all Developed Areas are Roadways...

And they are ALWAYS a Community’s Front Door
Network of Walkable Streets

**Traditional Form**
- Network of streets
- Alternate routes
- Slower speeds, safer streets
- Detailed streets (trees, sidewalks and buildings)
- Pedestrian friendly environment

**Suburban Form**
- High proportion of cul-de-sacs
- Lack of connectivity
- Few collector roads
- Roads are wide, unsafe and discouraging of pedestrian activity
- Creates a disregard for the public environment

Now what?
The Power of Connected Streets

35 Routes
The Power of Connected Streets

- Exponential Opportunities
- Freedom of Choice
- Added Safety
- Enhanced Modal Options
- Dispersion of Congestion

12,870 Routes
Beaufort, S.C.
Circulation

Arterial Roads  
(Arteries)

Collector Roads  
(Veins)

Local Roads  
(Capillaries)

Without a Dense Network of Capillaries, Your Extremities would Fall Off

The Roadway Network is not Unlike the Body’s Circulatory System
A Cross-Section Through Recent Planning History

- SR 7 / 441
- I-95
- LWL
- Forest Hill Boulevard

1.3 Miles
26 N-S Lanes
(20 Lanes/Mile)
A Cross-Section Through Recent Planning History
A Cross-Section Through Recent Planning History

SR 7 / 441

I-95

LWL

Forest Hill Boulevard

8.3 Miles
36 N-S Lanes
(4 Lanes/Mile)

1.3 Miles
26 N-S Lanes
(20 Lanes/Mile)

More Than 6 Times the Distance with 1/5th of the Connectivity
The Less Connected, The Bigger The Streets *Must Be.*

The More Connected, the Smaller the Streets *Can Be.*
On the “inside”

Two Miles to get to the Gate

Limited Access requires Arterial Connections

Limited Access inhibits Public Safety, Transit, and School pick-up
What happens when local roadways are “improved” to the point that they become micro-highways?...
The Adjacent Communities Demand Separation

Limited Block Structure = Limited Access

The daily walk home
Block Size

- 300' to 500' (not to exceed 750')
The height-to-width ratio of the space generates spatial enclosure, which is related to the physiology of the human eye. If the width of a public space is such that the cone of vision encompasses less street wall than sky opening, the degree of spatial enclosure is slight. The ratio of 1 increment of height to 6 of width is the absolute minimum, with 1 to 3 being an effective minimum if a sense of spatial enclosure is to result. As a general rule, the tighter the ratio, the stronger the sense of place and, often, the higher the real estate value. Spatial enclosure is particularly important for shopping streets that must compete with shopping malls, which provide very effective spatial definition. In the absence of spatial definition by facades, disciplined tree planting is an alternative. Trees aligned for spatial enclosure are necessary on thoroughfares that have substantial front yards.
Street Width & Building Height
Street Width & Building Height
Street Width & Building Height
Retrofitting Corridors
Retrofitting Corridors
Retrofitting Corridors

Detailed Street Sections
Retrofitting Corridors

Detailed Street Sections
Benefits of Alleys

- Separation of uses
- Shielding of unsightly elements (trash, utilities, deliveries)
- Servicing of utilities with no intrusion of private property
- Increase of privacy
- On-street parking (by eliminating curb-cuts on public right of way)
- Independent access to ancillary units (alley surveillance)
- Complements the network of streets

Next Time: Public Open Space