2. INFRASTRUCTURE

Introduction
Infrastructure planning incorporates the services and facilities provided by a municipality or privately provided including roads, water, sewer, emergency services, etc.

Infrastructure is important to the development of any community. Without an adequate sewer and water network, residential, commercial, and industrial growth will be inhibited. Infrastructure development is costly, and, therefore, these networks must be adequately designed and maintained. Infrastructure planning deals with the future as well as the present. An important task for infrastructure planners is to keep good figures on current system capacity and demand.

Process
Civic Alliance members reviewed public feedback on community issues and then met with or surveyed a number of key stakeholders in the community. After further research and discussion they decided on the following as key issues for this topic area. City staff provided technical support.

Statement 1

Combined Sewer Overflows (CSO) in South Bend fall short of meeting the Environmental Protection Agency's CSO Control Policy, a national framework for the control of CSO's.

Facts and Supporting Information

- The CSO system allows storm water to fill the combined sewers where it combines with raw sewage to overflow into streams and rivers, with some back-ups into private residences.
- Communities with combined sewer systems are expected to develop long-term CSO control plans that will ultimately provide for full compliance with the Clean Water Act, including attainment of water quality standards. *(Source: Environmental Protection Agency. 2004. Enforcement, Compliance, and Assistance. Retrieved from www.epa.gov)*
- CSO discharges contain municipal and industrial wastes, floating debris, and disease causing pathogens, among other contaminants. These pollutants are harmful to the environment, human health, and detract from our ability to use the water where the discharges occur to the full extent possible. *(Source: Environmental Protection Agency. 2004. Enforcement, Compliance, and Assistance. Retrieved from www.epa.gov)*
- Some sanitary pipes in South Bend are over 100 years old. *(Source: Department of Public Works. City of South Bend)*
- South Bend lies within a 40 sq miles radius but the City serves about 80 sq miles of waste water areas. *(Source: Department of Public Works. City of South Bend)*
- 5 out of 14 municipalities within the St. Joseph River Watershed have CSO's. South Bend has 35 CSO's, Elkhart has 22 CSO's, Mishawaka has 19 CSO's, Goshen has 6 CSO's and Wakarusa has 6 CSO's. The total number of CSO's in the Watershed is 88. *(Source: 2003 IDEM Total Maximum Daily Load Report)*
- 88 CSO's located along the River are considered the main source of E. coli. (2003 IDEM Total Maximum Daily Load Report)
- CSO separation in South Bend would be very costly ($600 million) and it is not believed to be able to resolve the problem completely. *(Source: South Bend Environmental Services)*

Strengths and Opportunities

- Engineers are looking at new, less costly, ways to address this problem.
- In December 2004, the City submitted its Long Term Control Plan to IDEM for review. Phase I will install storm sewers at locations that are prone to backup and basement flooding during rain events. It will cost $118 million and take 7-10 years to implement. This action will reduce CSO events by 40%. *(Source: State of the City Address.2005)*
- Two Notre Dame Graduates are pursuing alternate ideas to solve the CSO issue. Their concept involves the design and manufacture of low-cost radio-enabled devices, called Sensor Nodes. These devices will be distributed throughout the sewer network to provide real-time readings of the actual status of waste water systems. These readings will be used to monitor and aid in the control of Combined Sewer Overflows (CSO).
- An Advisory Committee for Combined Sewer Overflow and Storm Water Management is working to raise awareness about CSO's and to solicit public input. *(Source: Department of Public Works, City of South Bend)*
- St. Joseph River is cleaner than it used to be 10 years ago. *(Source: Department of Public Works, City of South Bend)*
- City of South Bend is offering a free Downspout Disconnect Program to help alleviate excessive drain water in the sewer system.
- Wastewater plant's upgrade provides increased capacity to process sewage. On February 17, 1999 the City of South Bend received a loan for $24.1 million dollars from the State Revolving Fund to upgrade the Wastewater Treatment Facilities. The money is being used on projects that will increase the capacity and treatment capability of the Wastewater Treatment Plant
- City of South Bend's CSO Notification Program. The goals of the public notification program are to notify interested residents when wet weather sewer overflows are likely to occur, to educate them about the health hazards associated with wet weather overflows in our streams, and to enable them to protect themselves and their families from those hazards. *(Source: City of South Bend)*
- City ordinance requires that storm and sanitary sewers be separate for any new development.

Benefits of Addressing the Issue

- Reduced health risks in area residents and fish in St. Joseph River.
- Increased opportunity to utilize the St. Joseph River for recreation and fishing.
- Cleaner St. Joseph River.
- Opportunity to replace old deteriorating pipes.
- Further reduction in sewer backups in homes.

Stakeholders

The following stakeholders were consulted:

- City of South Bend, Department of Public Works
- Project Future
- Common Council Representatives

General stakeholder reaction:

All stakeholders agreed that this problem needs to be fixed. Stakeholders mentioned that the St. Joseph River, which is a big community asset, is polluted because of the CSO discharge. City representatives mentioned that the City was developing a CSO Long Term Control Plan.

Statement 2
The local roadway network lacks sufficient yearly funding for its maintenance and upgrading.

Facts and Supporting Information
- South Bend budgets about $2,000,000.00 every year to pave approximately 500 miles of streets.
- If South Bend were to rely only on State and Federal funding for roadway maintenance then there would be a shortfall.
- South Bend relies on TIF to fund the shortfall. Lottery profits, cigarette tax, gas tax, property tax and hydrant tax are all used to make up the deficit.
- South Bend and St. Joseph County are treated as separate accounts and do not share in allotments made to their respective departments.
- Total population and motor vehicle registration (within South Bend city limits) have been shrinking while straight line miles of street have increased, so there is a shortfall every year.

Strengths and Opportunities
- Wheel tax money is helping improve road conditions.
- In 2004 the City acquired a second Road Patcher unit to respond more quickly and effectively to potholes. 60,000 tons of material was used to pave over 30 miles of streets. This was a 30% increase from 2003. *(Source: State of the City Address.2005)*
- There have been some other major roadway improvements recently.

Benefits of Addressing the Issue
- Better maintained roads provide a positive first impression for visitors as they come to South Bend.
- Provides ease in transportation of goods.
- People's ability to move more efficiently throughout the city.
- Additional encouragement for business relocation to South Bend with better road infrastructure.

Stakeholders
The following stakeholders were consulted:
- Project Future
- City of South Bend, Department of Public Works
- Michiana Area Council of Governments (MACOG)
- TRANSPO

General stakeholder reaction:
All stakeholders expressed concern about roadways in South Bend. TRANSPO said that their bus drivers usually report roadway problem when they come across any. City officials would like to see the roadways upgraded to higher standards.

Statement 3
South Bend does not have a parking plan for the downtown.

Facts and Supporting Information
- There are 11 parking garages in the downtown (DTSB, Inc. boundaries). Three of these parking garages are owned by the city. *(Source: Department of Community & Economic Development,* City of South Bend)
- Downtown is defined by the DTSB, Inc. boundaries. These boundaries are: Eddy Street (east), Northshore Boulevard (north), Chapin Street (west), and Sample Street (south). The total acreage for the Downtown area as defined by DTSB, Inc. is 1380 acres.
- Anticipated growth will lead to a shortage of parking in approximately 2 years. *(Source: Department of Public Works & DTSB, Inc)*
- Currently there is no Downtown Plan.
- In the last few years, downtown revitalization activities have been gaining momentum with some new businesses moving to the city center raising parking needs.
- There has been a temporary decline in the number of parking spaces downtown with the recent demolition of the parking garage on the intersection of Jefferson and St. Joseph Streets. The City expects to replace this garage.

Strengths and Opportunities
- The City of South Bend has contracted with Walker Parking Consultants to do a detailed study of parking spaces and structures in the downtown. A draft of this study (*South Bend Downtown Parking Study*) has been completed. *(Source: Department of Community & Economic Development, City of South Bend)*
- "Out lot parking" and TRANSPO Trolleys can help relieve the parking issue in the downtown.
- Stephanos Polyzoides, one of the speakers in "An American City" discussed the advantages of shared parking as a solution to the growing need for more parking spaces in the downtown areas (Day/night alternative uses).
- The development of mixed use parking garages with commercial or retail at the first floor is more attractive and beneficial to downtown activity.

Benefits of Addressing the Issue
- A parking plan will determine the operational capacity of an area and the most effective way to accommodate future needs.
- Planning for projected growth will help in unnecessary demolitions of buildings to create parking lots.
- Adequate parking (through mixed use garages, off-site parking etc) may encourage more downtown development.

Stakeholders
The following stakeholders were consulted:
- Downtown South Bend, Inc. (DTSB)
- City of South Bend, Department of Public Works
- Common Council Representatives
- TRANSPO

General stakeholder reaction:
Stakeholders commented that having sufficient parking keeps people downtown. They recognized that parking demand may increase in the future and creative solutions will be needed to address it. TRANSPO officials expressed concern over too much free parking available downtown and that it discourages use of public transit.

Statement 4
Physical infrastructure plans for South Bend are not well coordinated and have different service area boundaries.

Facts and Supporting Information
- Physical infrastructure plans include:
  - The Stormwater Management Master Plan
  - The South Bend Wastewater Treatment Plan
  - Water Systems Master Plan
  - Wastewater Facility Plan

- All the above plans were not created as part of one infrastructures master plan.
- Service area and growth area boundaries for each of these plans are separate. *(Source: Department of Public Works, City of South Bend)*

Strengths and Opportunities
- The City has a waterworks improvement program to accommodate development to the Northwest, West and South. There is a Water Systems Master Plan that addresses the next 20 years. There is a Wastewater Facility Plan and its many subordinate studies such as the CSO Long Term Control Plan and the Stormwater Management Master Plan.
- There is a Transportation Improvement Plan, an Annexation Policy and Plan and numerous corridor plans and localized area plans for Model Blocks or Partnership Areas.
- The City of South Bend has 35 deep wells at 9 well fields. They are typically over 100 feet deep in a lower confined aquifer. Most have an impermeable clay layer over the screened elevation of the well intake. This acts as a roof that protects the water supply from potential surface spills or other environmental hazards caused by land uses or management.
- A report by APA titled, "Planning for Smart Growth: 2002 State of the States," explains that, in many cases, outdated planning laws are preventing states from effectively implementing smart growth measures to address urban sprawl, scattered rural development, farmland protection and other growth issues. (Source: American Planning Association)

Benefits of Addressing the Issue
- Coordinated planning will occur for physical infrastructure resulting in increased efficiencies.
- Future growth will reflect the capacity of infrastructure to handle it.
- Increased ability to focus on repairing and upgrading infrastructure in neglected parts of the city.
- Uniform infrastructure at the City boundaries.
- Well established policies for extending infrastructure.

Stakeholders
The following stakeholders were consulted:
- City of South Bend, Department of Public Works
- Common Council Representatives

General stakeholder reaction:
City officials expressed concern over service area boundaries for infrastructure plans. A coordinated effort would ensure the best use of resources and increase efficiency.

Statement 5

Alleys in some areas of South Bend are unpaved, dirty, and require expensive alley grading.

Facts and Supporting Information

- South Bend has 400 miles of alleys.
- Currently it is the City's policy to not pave alleys. *(Source: City of South Bend)*
- Unpaved alleys are often dirty, dusty, and unkempt, receiving little maintenance.
- Bad weather often erodes the alleys, making them difficult to maneuver.
- Poorly maintained or unpaved alleys in strong, vibrant, neighborhoods have a negative impact.

Strengths and Opportunities

- A 20 year plan for alley improvements has been developed by the Department of Public Works.
- In 2004, the City graded 136 miles of alleys and completed five miles of alley base stabilization. *(Source: State of the City Address.2005)*
- The City of South Bend currently has a budget to grade existing alleys, which require frequent maintenance. *(Source: City of South Bend)*

Benefits of Addressing the Issue

- Alleys would be cleaner.
- Alleys would be more drivable, especially in winter.
- Neighborhoods would be more attractive.
- Increased safety for the neighborhood.

Stakeholders

The following stakeholders were consulted:

- City of South Bend, Department of Public Works

General stakeholder reaction:

Alley paving would be beneficial to the city. The results of paving the alleys would give South Bend cleaner, more drivable alleys. The city would avoid alley grading expenses, and dusty, dirty, alleys within our neighborhoods.

Statement 6

Sidewalk infrastructure is inconsistently available throughout the city and is poorly maintained in some areas.

Facts and Supporting Information

- The City has 500 miles of streets, most of which have sidewalks on both sides. Most of those sidewalks have a curb or separation between the vehicle travel lanes and the sidewalk. *(Source: Department of Public Works, City of South Bend)*
- The City of South Bend policy is not to pave sidewalks. Property owners are responsible for the maintenance of their sidewalks.
- During the City Plan visioning sessions (Oct – Dec '03), residents mentioned the need for better connectivity throughout the city.
- According to the Neighborhood Development Guide (City of South Bend, 2003), there are 34 neighborhood based organizations in the city. Each organization has a distinct boundary. These recognized based neighborhoods cover approximately 60% of all residential land uses in the city.
- The Department of Parks has no official policy on the inclusion of sidewalks in their existing parks or while developing new parks. *(Source: Department of Parks and Recreation, City of South Bend)*
- The condition and design of sidewalks and related amenities discourages or does not allow pedestrian activity in some parts of the city.
- Areas where foot traffic is limited are often inaccessible or dangerous to the handicapped, elderly, those with poor health, and those without a car.
- Mentioned several times during City Plan outreach meetings.

Strengths and Opportunities

- City of South Bend's cost sharing program "Good neighbors/good neighborhoods". 3,161 property owners have shared in nearly $6 million worth of improvements since the program began in the mid 1990's. *(Source: Department of Public Works, City of South Bend)*
- In 2005 the City spent $1.5 million for curb & sidewalk work for Corridors, Model Block, NPC and neighborhood areas. In addition, $500,000 helped 151 customers in the shared cost curb and sidewalk program. *(Source: State of the City Address.2005)*
- Some neighborhoods of the city have sidewalks and traffic controls, and are pedestrian friendly.
- Neighborhood revitalization programs in recent years have focused on curb and sidewalk improvements.
- The City of South Bend Commercial Corridor program has helped improve the curbs and sidewalks along the entrance corridors (such as Mishawaka Ave, Miami Street, Michigan St.).
- TRANSPO recommended becoming an advocate with local governments in the improvement of the pedestrian infrastructure to help support transit usage.

Benefits of Addressing the Issue

- Creates a positive image of the community.
- Pedestrian activity and experience may be enhanced.
- Offers more opportunity for recreation: walking, bike-riding, running etc.
- Offers more safety for pedestrian activity.
- Allows greater access to alternate transportation.

Stakeholders

The following stakeholders were consulted:

- City of South Bend, Department of Public Works
- Downtown South Bend, Inc. (DTSB)
- Michiana Area Council of Governments (MACOG)
- TRANSPO

General stakeholder reaction:
All stakeholders consulted by the Panel recommend that South Bend should have a consistent system of sidewalks to improve walkability and marketability of the city. Money would be the issue for such massive infrastructure improvements.

Statement 7
South Bend does not have a high tech communication infrastructure plan

Facts and Supporting Information
- Indiana's economy is moving from a manufacturing base to an information base.
- Adequate broadband capacity is a prerequisite for IT growth. In today's "e-economy" businesses demand high-tech infrastructure and look for it before relocating.
- "Ultimately, the most successful communities will be those that employ a rich and varied mix of economic development strategies that capitalize upon local industries and assets. These small and medium-sized regions have a real opportunity to build a niche for themselves in the high tech economy, and to reap some of the benefits such development can generate." (Brookings Institute, October 2003)
- Availability of infrastructure is often a key deciding factor for relocating businesses.
- Technology improvements will continue to grow rapidly in the near future, and will begin to assume that a basic infrastructure is in place.
- According to an article in *Progressive Planning Policy (Urban Economic Prospects in The New Knowledge Economy; by Rob Atkinson.2001)*:
    - High-tech industry is growing quickly relative to other parts of the economy and it is driving overall metro growth rates;
    - High-tech industry tends to cluster in metropolitan regions;
    - Attracting and retaining talent is a critical factor to a region's success;
    - Within metropolitan regions, high-tech development remains, for the most part, a suburban phenomena;
    - High-tech products and services are transforming the rest of the economy, putting a greater share of the metropolitan and urban economy "in play."
    - The key to creating a higher skilled, higher paid workforce is to "support and enhance high quality research universities and institutions; boost technology transfer; invest in fast and low-cost telecommunications infrastructure; and expand access to the Internet."

Strengths and Opportunities
- Fiber optic trunk lines owned by many of the long distance carriers operating in North America run through St. Joseph County.
- St. Joe Valley Metronet, Inc., a non-profit corporation, will provide the "Metronet", which is a dark fiber network linking local users to long-haul trunk line points-of-presence ("POPs"). The value of a dark fiber network comes from the POPs to which it connects. The Metronet will connect to POPs where many telecommunications vendors are accessible. Availability of more vendors gives users a greater array of service choices and better pricing. The Metronet will be vendor neutral: it will provide infrastructure only; no telecommunications services; and it will be open to all telecommunications service vendors and users who want to subscribe. *(Source: Project Future. 2004. St. Joseph Valley Metronet Established. Retrieved from http://www.projectfuture.org/)*
- The St. Joseph County Public Library is in the process of establishing a pilot wireless mesh network downtown. The service will be free during a three-month trial period. Wireless Internet service -- known as Wi-Fi will be available primarily outdoors, although some access might be available inside buildings if users are near windows. *(Source: Margaret Fosmoe. March 1, 2005. Library Board OK's Wi-Fi Pilot Project. South Bend Tribune)*
- The City of South Bend is working with the Chamber's Technology Task Force to ensure that South Bend has the appropriate infrastructure to support technology driven and technology dependent companies. Project Future is actively pursuing Metronet.
- MACOG is conducting studies of existing infrastructure.

Benefits of Addressing the Issue
- South Bend would meet the communications needs of its citizens and businesses.
- Ability to attract young high skilled workers to South Bend.
- Cost saved in planning for high tech infrastructure upfront.

Stakeholders

The following stakeholders were consulted:

- Project Future
- City of South Bend, Department of Public Works

General stakeholder reaction:

Stakeholders agreed that to make South Bend attractive to newer businesses and retain highly educated professionals in the community, a plan for high tech communications was needed. Stakeholders also commented on the work already being done in that field by the City and Project Future.

Statement 9

There is underutilized infrastructure within city limits, due to brownfield sites and vacant properties.

Facts and Supporting Information

- There are 223 potential brownfields in South Bend with 72 of them (32%) measuring less than one acre. *(Source: City of South Bend's brownfields database)*
- Potential brownfields of various sizes comprise 3,069.72 acres or 12% of the city area (25,642.101 acres). *(Source: City of South Bend's brownfields database)*
- Brownfields have a negative impact on the image of the city and the areas they are in, especially commercial corridors, neighborhood commercial areas and former industrial sites.
- Regulatory and liability issues complicate brownfield redevelopment.
- Expansion of infrastructure into Greenfield sites adds to the burden of existing infrastructure, and the amount of infrastructure that will need to be maintained.
- According to the *Cambridge Scientific Abstracts* (2000), benefits of brownfields redevelopment include:
  - Tax base growth
  - Job creation
  - Improved population capacity (through neighborhood revitalization)
  - Preservation of farmlands and "greenfields" (untouched, pristine land) as a tangible means of curbing sprawl
  - Removal of potentially harmful chemical elements from urban communities

Strengths and Opportunities

- Public support of brownfields redevelopment.
- South Bend Mayor's Smart Growth and Clean City Initiatives promote brownfields redevelopment within the City.
- Team of city staff is exclusively working on brownfield development.
- Studebaker/Oliver corridor project is an example of inner city redevelopment.
- Rehab work done on properties such as Central High and Stephenson Mills downtown to convert them into apartments is an example.
- South Bend Commercial Corridor Program complementing brownfields redevelopment programs.
- South Bend's Brownfields Inventory is complete and a database has been created for brownfield properties.
- Availability of federal and state funds.
- City's efforts to apply for various funding and provide leverage to assess and remediate sites.
- The EPA's Resource Conservation and Recovery Act (RCRA) Brownfields Prevention Initiative and The Comprehensive Environmental Response, Compensation and Liability Act provide grants and funding to help with the redevelopment of brownfields.
- EPA's procedures and policies are more user-friendly than in previous years.
- Cooperation among various federal agencies, including EPA, HUD, Department of Agriculture and Department of Transportation.

Benefits of Addressing the Issue

- A balance between inner city development and Greenfield development.
- City's image enhanced as an attractive place to live and work.
- Increase in property values
- Neighborhoods and commercial corridors revitalized.
- Efficient use of prime commercial and industrial land.
- Encouragement of infill development

Stakeholders

The following stakeholders were consulted:

- City of South Bend, Department of Public Works
- Downtown South Bend, Inc. (DTSB)

General stakeholder reaction:

Stakeholders mentioned that a balance should be created in the development of Greenfield infrastructure and Brownfield infrastructure. Adequate funding and incentives should be made available for brownfield development.