

# THE CORRADINO GROUP

John Gilbert  
Village Manager  
88 West McIntyre Street, Suite 220  
Key Biscayne, Florida 33149

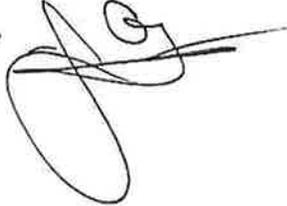
RE: Safe Routes to School

Manager Gilbert.

Please accept this proposal from The Corradino Group to provide the Village of Key Biscayne a Safe Routes To School Study and Application.

This can be done in a time frame of 60 days for a lump sum fee of \$8,300. Should you wish to proceed please accept this proposal.

I look forward to working with you again.

Approved - 12/23/14 

  
Joseph M. Corradino, AICP  
President  
The CORRADINO Group

# THE CORRADINO GROUP

## INTRODUCTION

For the purposes of re-introduction, the Corradino Group (Corradino) has been located in Miami Dade County since 1971. Today the firm has nearly 150 people in offices located in Doral, Fort Lauderdale, Orlando, Louisville, Nashville, and Indianapolis, providing services in the fields of Planning, Civil Engineering, Roadway Design, Environmental Planning and Construction Management. Anything that a municipal government needs to operate.

Corradino is a municipal expert, focusing on servicing local governments needs relative to land use, zoning, traffic, development review, staffing, roadway design and water and waste water management. As a multi-disciplinary organization, Corradino is adept at handling the myriad of issues faced by cities of all sizes and all stages of development. Having practiced these services in South Florida the firm understands the enormous pressures that our municipalities are under as they try to keep pace with growth or spur the economy.

Corradino's practice is diverse, and focused on planning, design, and construction management. The firm has worked on a great variety of similar projects, and understands how to move a project from its initial concept to a capital improvement program and through to implementation. The collection of data, the performance of analysis, and the presentation of facts and recommendations in a concise, graphic, and interesting format are integral to the firm's success over its 40 years.

We have evaluated traffic plans, transit plans, intermodal transportation plans and bicycle and pedestrian studies for a multitude of cities. In doing so, Corradino has earned a position as a long standing, valued and trusted component of many highly successful municipal teams.

The firm has worked on developing the data and analysis for economic development initiatives, capital improvement programs, and local government bond issues, which have not only formed new communities but played critical roles in their reformation and redevelopment enabling them to attract outside investment.

For Miami Beach, Miami, Sarasota, Hialeah, Miami Gardens, Coral Gables, and a number of other clients Corradino has evaluated the impact that development has on a community.

Currently Mr. Corradino is the Development Services Director for the City of Homestead, managing the business licensing division, so he has a detailed understanding of how local taxes (sales, property, hotel, etc.), business tax receipts, permitting fees, impact fees, expenditures, etc. fit into the economic development and budgeting strategies of our communities.

As part of multiple annexation and incorporation requests the firm has evaluated the economic impact of a variety of plans, projects and other efforts on budgets. The firm has conducted complex transportation related surveys, whether it be ridership on transit routes, attitudes of drivers or users of our transportation system, or the origin and destination of

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local commuters. The firm is familiar with doing this in the field, via mail, telephone or electronic media. We have conducted dozens of mobility studies, involving pedestrian, bicycle, transit and passenger vehicle data collection and analysis including, bike/pedestrian, vehicular and transit mode-split data, daily peak ridership analysis, origin and destination studies, parking demand analysis. The firm's plans are typically multimodal, and focus on providing capacity for each mode of travel. Today this is called "complete streets". These efforts are integral to the firms' prominence in the transportation planning industry.

For many communities sustainability is a burgeoning concern. Corradino has looked at case studies and best practices that promote efficiency, conservation and infrastructure, cost benefit analyses for almost every initiative that it evaluates. Of course no issue can be adequately decided upon until an analysis of funding is completed. Corradino is expert at the review and analyses of allocated and available local, state and federal appropriated and discretionary funding programs for public realm improvements including fixed rail, enhanced bus, circulators, bicycle infrastructure, congestion management, as well as funding for enhanced streetscape improvements that promote walk-ability and public safety.

From a historic perspective, Corradino had gained a reputation as a "Can Do" firm from its early work in the development of the Metro Rail, and other large scale transit systems across nation. Subsequently in the 1980's the firm led the only system wide restructuring of Miami Dade Transit routes until the mid-2000's. As the program manager for the Louisville Airport Improvement Program, Corradino led the largest economic development project in the history of the State of Kentucky. Working with the Florida Department of Transportation, the firm has led the largest roadway re-construction projects in the state, with the I-95 Reconstruction in Palm Beach County, and the reconstruction of I-595. Corradino is the program manager on the Fort Lauderdale Airport Expansion Project, and the author of the regions official MPO transportation model. Many major pieces of transit infrastructure have been built in this region with the input of Corradino; from Metro Rail, and the Busway, to the I-95 Express Project.

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## APPROACH

The Corradino Group has produced multiple Safe Routes To School Studies and Applications. We Understand that the purpose of a study of this nature is two fold. The first is to prepare a Safe Routes to School plan for the school that has identified the need for a Safe Route within the school attendance boundary. This will include infrastructure improvements along the Safe Route to and from the school, as well as cost estimates. The second phase is to prepare the FDOT Safe Routes to School Infrastructure Funding Application.

As background the Safe Routes to School Program is a national program that was developed to encourage children to walk and bicycle to school. Planners acknowledge that to be successful the program would have to develop safer and more appealing transportation alternatives for children. Without incentives provided by the SAFETEA-LU legislation, which will contribute well over \$600 million in Federal-aid highway funds to State governments, it is unlikely much impact would be made. The



money is focused on making it safer and easier for children to walk or bicycle to and from school. It will facilitate the planning, development, and implementation of projects and activities to improve safety, reduce traffic conflicts, and mitigate environmental considerations. As such local governments across the nation have begun developing and implementing programs.

The desired outcomes of such a program are wide ranging, dealing with congestion, health, environmental and other quality of life issues. They include:

- Increased bicycle, pedestrian, and traffic safety
- More children walking and bicycling to and from schools
- Decreased traffic congestion
- Improved childhood health
- Reduced childhood obesity
- Encouragement of healthy and active lifestyles
- Improved air quality
- Improved community safety
- Reduced fuel consumption
- Increased community security
- Enhanced community accessibility
- Increased community involvement
- Improvements to the physical environment that increase the ability to walk and bicycle to and from schools
- Increased interest in bicycle and pedestrian accommodations throughout a community

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- Improved partnerships among schools, local municipalities, parents, and other community groups, including non-profit organizations

There are any number of issues that generally exist around schools that make them hazardous for pedestrians. During tour of one local elementary school a hand full of issues were spotted. Photo, number 1 is an example of multiple issues on a block directly connecting to an elementary school. This neighborhood has a 50' right of way, but only 20' of pavement as a driving surface. The swale has been encroached on by several plantings, which have not left adequate space for parking. Vehicles are forced to park on an angle, which leaves them partially blocking the travel lanes. There is no room for children to walk to the school, except for in the travel lane, which has now been encroached on by parked vehicles. As traveling vehicles enter the blocked travel lanes, with limited site distance, a real live/safety hazard is created.

**Photo 1: Swale Encroachments, No Sidewalk, Blocked Travel Lanes, Limited Site Distance**



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Photo number two shows a similar condition where residential plantings have encroached upon the swale, eliminating the space for a sidewalk. This condition also happens at a corner. Pedestrians walk very close to the street, at a blind corner, creating the potential for horrible accidents.

**Photo 2: Swale Encroachment at Corner**



Photo number three shows that the area a pedestrian would walk on the swale to connect with the sidewalk leading to the school is blocked by a utility pole and guy wires, forcing pedestrians into a situation where they need to walk in the street, during the busy arrival period.

**Photo 3: No Room For A Sidewalk**



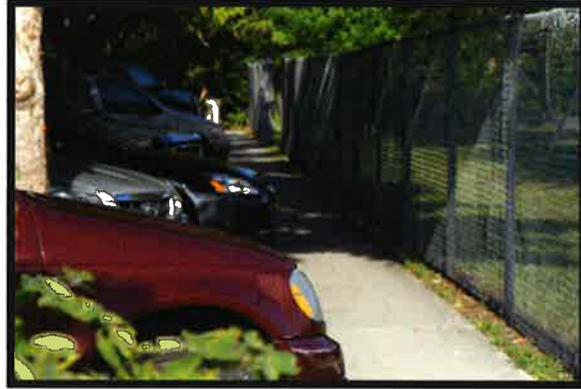
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Other issues include sidewalks that are not to code, and potentially nothing more than haphazard asphalt trails. Often where sidewalks do exist, they are encroached upon by poorly parked vehicles, which are left to park in inadequate parking areas. All these situations can be remedied care mandated through the Safe Routes Program.

**Photo 4: Asphalt Trail**



**Photo 5: Blocked Sidewalk**



**Photo 6: Inadequate Parking**



## TASKS

### **Task 1: Background**

The Corradino Group is already familiar with and has extensively work with both the MPO's Safe Routes to School Procedure Manual and FDOT Safe Routes to School application and guidelines.

#### Procedures Manual

The initial procedures manual set forth in 2005, is most important to the long term success of the program, because it was developed based on the research conducted for this study and tested with the experience gained from the pilot study. The procedures manual defined the recommended methodology for developing the program in our county, which include:

- Establishing a Technical Advisory Committee
- Conducting user surveys
- Data collection and field reviews

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- Evaluation of alternative routes
- Development of preliminary safe routes, reviews and final designation
- Production and distribution of Safe Routes maps

The manual developed a procedure for establishing Safe Routes to School for elementary schools in Miami-Dade County. The impacts of this report probably will be comparable to those of the *Street Closure and Traffic Flow Modification Study* produced nearly a decade earlier, in the sense that it sets forth a clear, easily followed procedure for implementing a project. It essentially takes the guesswork out of the process so that projects can be implemented efficiently and effectively with consensus of the multiple parties that need to be involved. The manual primarily focused on the engineering aspects of the program and subsequently involved development of a pilot project consisting of 15 elementary schools.

The manual also focused on creating physical improvements to the area surrounding a school, reducing speeds, and establishing safer crosswalks and viable pathways as well as improvements on those pathways such as: sidewalks, school zone signing, flashing signals, crosswalk striping, pedestrian signal and push buttons.

A procedure was established to aid in developing a Safe Routes to School program. It is this procedure that will be used to identify and create Safe Route maps for schools during this analysis.

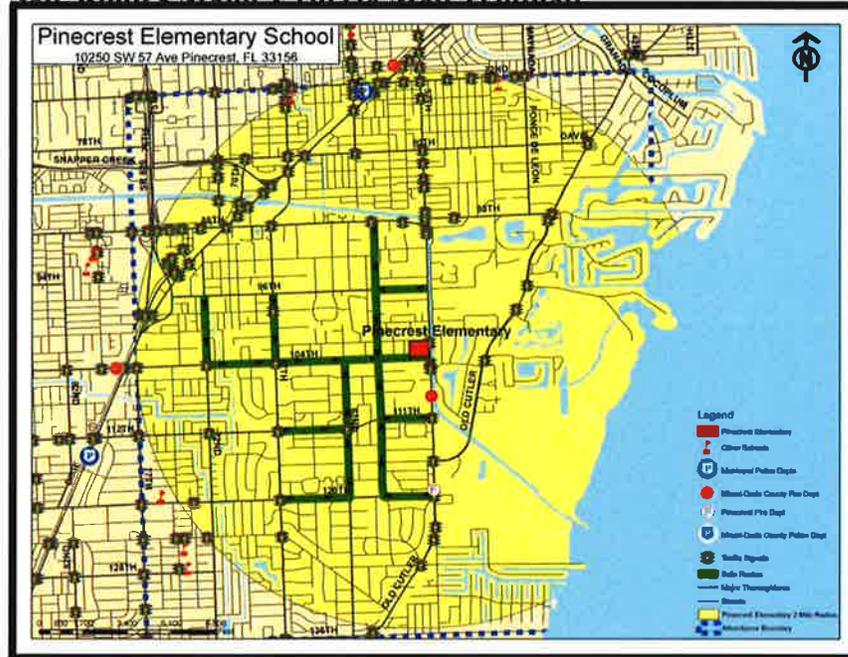
It recommends undertaking an attitudinal and mode split survey, examining the existing physical conditions, contacting the stakeholders, coordination with various governmental agencies both at the local and county levels. It determined the appropriate size of the study area, and specified the basic data that needed to be collected within that area. Data to be collected includes information on:

- Roadway facilities
- Pedestrian facilities
- Traffic control devices
- Land use
- Traffic volumes
- Pedestrian crashes

All this data is to be verified through extensive on sight inspections and then displayed on a GIS base map.

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## Safe Routes Major Criteria Map Template



Criteria was also developed for actual Safe Route selection. This specifies that the routes should be designed from the outer school project limit inwards to the school, yet be cognizant of the fact that different routes may be needed to and from a facility. Routes need to be evaluated based on a set of desirable major and other criteria that were established. The

criteria considered in the evaluation included:

### Major Criteria

- Major arterial crossings
- Speeds in adjacent travel lanes
- Proximity of adjacent traffic and/or physical barrier protection
- Major obstacles (e.g. railroad tracks and canals)
- Security issues
- Pedestrian facilities, including ADA compliance
- Sight distance
- Traffic control devices

### Other Criteria

- Number of crossings, (driveways and street crossings)
- Proximity of police stations or other prominent government/community buildings
- Street lighting
- Other specific locational criteria

Safe Route maps templates were developed which included:

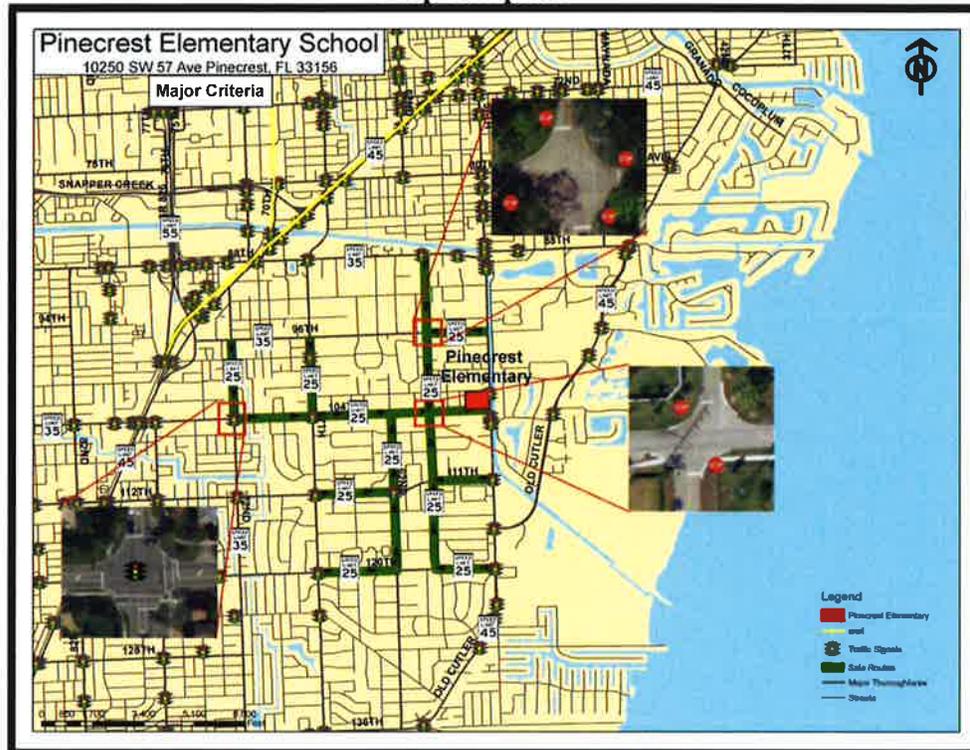
- School location
- Attendance boundary
- Arrows depicting the safe routes
- Street names
- Traffic signals
- Railroads

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- Bodies of water
- Parks
- Fire/police stations
- Other government and community buildings

Once this information has been gathered and analyzed an application to FDOT can be undertaken. Corradino has developed examples of the mapping that would be produced as part of this study.

## Safe Routes “Other Criteria” Map Template



## FDOT Application and Guidelines

Following Federal Highway Administration (FHWA) recommendations, FDOT has developed an application and application guidelines to instruct potential recipients in the approval process.

Federal Highway Administration recommends that efforts incorporate five components, called the “5 E’s”. They are:

- Engineering – Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.

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- Education – Teaching children about the transportation choices, instructing them in important bicycling and walking safety skills, and launching driver safety campaigns in the vicinity of schools.
- Encouragement – Using events and activities to promote walking and bicycling.
- Enforcement – Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), and initiating community enforcement such as crossing guard programs.
- Evaluation – Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention.

Eligible schools are public and private schools serving Kindergarten through 8th grade. Applications can be entered by the School Board, which is encouraged to partner with a government agency, who is able to enter into a legal agreement with Florida Department of Transportation and provide the initial funding before being reimbursed. Legal agreements which might be used include: Local Area Program (LAP) Agreements, Local Funding Agreements, or Joint Participatory Agreements (JPAs, for non-infrastructure activities only). Each of these options is used with regularity in Miami Dade County.

Projects and activities that have the best chance of being selected for funding under the program are those that incorporate all of the key elements referred to in the five E's.

Applicants are required to summarize in their application what they have already done and what they plan to do to address each of the E's. Evaluation is an integral part of the process, and is required both in the application phase and the implementation phase, for projects and activities selected. The pre-application data-gathering includes such information as:

- How students currently travel to and from school
- What conditions in the school zone or immediately around the school site discourage children from walking or bicycling to or from school
- What conditions within a two-mile radius of the school discourage children from walking or bicycling to or from the school
- Opinions of parents: about these conditions and allowing children to walk or bicycle to or from school
- What solutions the evaluators recommend to solve identified problems

Eligible projects include:

- Pedestrian facilities: Includes new sidewalks and other pathways, sidewalk widening, and sidewalk gap closures.
- Traffic calming: Includes roundabouts, bulb-outs, speed humps, raised crosswalks, raised intersections, median refuges, narrowed traffic lanes, lane reductions, full- or half-street closures, and other speed reduction techniques.
- Traffic control devices: Includes new or upgraded traffic signals, crosswalks, pavement markings, traffic signs, flashing beacons, bicycle-sensitive signal

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actuation devices, pedestrian countdown signals, pedestrian activated signal upgrades, and all other pedestrian- and bicycle related traffic control devices.

- Bicycle facilities: Includes new or upgraded bike lanes, and shared-use paths.

Important points to remember are that:

- Proposed projects must be designed to meet an identified need that is preventing children from walking or bicycling safely to and from school.
- Proposed projects must be within a two-mile radius of the participating school. Generally, the closer the project is to the school, the more likely it is to increase the numbers of children bicycling or walking to and from school.
- Proposed projects must be located on public property.
- Construction materials used must be on FDOT's Approved Product List (for traffic signals and other electronic devices)
- For use of any traffic control devices that require minimum 'warrants' to be satisfied prior to their installation, warrant sheets must be attached to the application.
- Use of traffic control devices must be consistent with the current Manual of Uniform Traffic Control Devices, unless the applicant receives experimental approval from Federal Highway Administration.
- Each school requires separate application.

## **Task 2: Form Study Advisory Committee and Coordination**

Corradino will work with the Miami-Dade County Public Schools Community Traffic Safety Team to assure interagency coordination. Additional coordination will be required at the school level with each principal, PTA chairman, municipal police department and municipal public works department, as necessary.

## **Task 3: Project Mailing List**

The Corradino Group will develop a mailing list for the school that will include the principal, PTA president, district County Commissioner, district School Board

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member, and local municipal representative (if necessary). Each will be notified of the project in writing, and met with individually to discuss the projects within their area. Each will be kept updated on the projects progress.

## **Task 4: Data Collection**

Integral to understanding travel patterns and actual local attitudes toward walking and bike riding to school, Corradino will prepare and distribute a survey on student travel and parental attitudes and tabulate the results. It is well noted that many parents are concerned with allowing their children to travel to school unattended. Through the development of many local transportation master plans which have addressed the subject, Corradino understands that parents fear may be less due to vehicular safety than to personal security. This survey will be designed to understand parent's thoughts toward this mode of travel. If the schools Safe Routes map and improvements are selected, the travel patterns shall be resurveyed several months after projects are implemented to measure changes in the travel patterns. The survey shall be the one specified in the MPO Procedures Manual as displayed on the following page.

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## SURVEY FORM TEMPLATE

*In an effort to improve student safety in and around our schools, the Miami-Dade County Metropolitan Planning Organization, in collaboration with Miami-Dade County Public Schools and other governmental agencies, is looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions.*

1. What grade is your child in? \_\_\_\_\_

2. Approximately how far does your child travel to school?

\_\_\_ 1/2 mile or less \_\_\_ 1/2 mile to 1 mile \_\_\_ between 1 to 2 miles \_\_\_ over 2 miles

3. How does your child usually travel to and from school: (put a check in the appropriate box)

Arrival Dismissal

a. walk

b. bicycle

c. car

d. school bus

e. private bus

f. city bus

g. other (please explain) \_\_\_\_\_

4. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. **Please circle YES(Y) or NO(N).**

a. Schools provided walking and bicycling route maps to parents and students. Y N

b. Additional crossing guards were provided at busy intersections. Y N

c. There were continuous sidewalks or bike paths from my neighborhood to the school. Y N

d. Bicycle/pedestrian pathways separated from traffic. Y N

e. There were fewer cars around where children are walking to school. Y N

f. Speed limits were strictly enforced in school speed zones. Y N

g. School speed zones were marked with flashing signals. Y N

h. There was better street lighting along routes to school. Y N

i. A greater presence of police officers and safety monitors along safe routes. Y N

j. Designated safe route signs along safe route paths at children's eye level. Y N

k. There were painted footsteps designating safe routes along sidewalks. Y N

5. Please identify specific safety problems of concern to you in your neighborhood or around your child's school (i.e. broken sidewalks, dangerous street crossings, crime areas, railroad crossing, high-speed vehicles) and indicate their locations.

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6. Please write down any additional factors that might influence your decision to let your child walk or bicycle to school:

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*Thank you for your participation. Please return this survey to your child's teacher.*

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For the initial GIS Map for the Safe Routes program Corradino will collect the major criteria, other criteria and basic Safe Routes information including:

## Major Criteria

- Major arterial crossings
- Speeds in adjacent travel lanes
- Proximity of adjacent traffic and/or physical barrier protection
- Major obstacles (e.g. railroad tracks and canals)
- Security issues
- Pedestrian facilities, including ADA compliance
- Sight distance
- Traffic control devices

## Other Criteria

- Number of crossings, (driveways and street crossings)
- Proximity of police stations or other prominent government/community buildings
- Street lighting
- Other specific locational criteria

Safe Route maps templates were developed which included:

- School location
- Attendance boundary
- Arrows depicting the safe routes
- Street names
- Traffic signals
- Railroads
- Bodies of water
- Parks
- Fire/police stations
- Other government and community buildings

## **Task 5: Site Assessment**

All data collected in the previous task will be verified through extensive field investigation and modified as necessary. Corradino will assess the areas deficiencies as they relate to pedestrian facilities, traffic calming, traffic control devices, and bicycle facilities.

## **Task 6: Identification of Safe Routes**

Safe routes to the school from the surrounding residential neighborhoods and back will be developed based on the collected data and site assessments and focused on the physical improvements as noted above. This identification will take care to address the 5 E's :Engineering, Education, Encouragement, Enforcement, and Evaluation.

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## Safe Routes Map Example



All proposed projects will be designed to meet the identified need that is preventing children from walking or bicycling safely to and from school, as seen from the survey or collected data. Each will be within a two-mile radius of the participating school, placing an emphasis on projects closer to the school. Each project will be located on public property. As each is designed, the construction materials specified will be on FDOT or County Approved Product Lists. Any traffic control devices will have warrant analysis performed and attached to

the application. These devices will be consistent with the current Manual of Uniform Traffic Control Devices, unless the applicant receives experimental approval from Federal Highway Administration.

### Task 7: Recommendation of Necessary Improvements

The recommended improvements will be listed and costed in terms of their design and construction.

### Safe Routes to School, Individual Project Cost Template

Number	Project	Extents	Cost
1	New Sidewalk	104 St. 58 Ct to 57 Ave	\$45,000
2	Miniature Traffic Circle	60 <sup>th</sup> Ave, South of 102 St	\$200,000
3	Pedestrian Countdown Signal	57 Ave / 102 St	\$85,000
TOTAL			\$330,000

### Task 8: Safe Route Map

A GIS Safe Route Map will be prepared consisting of the consultant will prepare a safe route map in an approved GIS format that includes:

- School location
- Attendance boundary
- Arrows depicting the safe routes
- Street names
- Traffic signals
- Railroads
- Bodies of water
- Parks
- Fire/police stations
- Other government and community buildings
- Actual Safe Route and noted recommendations

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Each map will be reviewed and approved by MDCPS, MDCPW, Local municipal representatives, School Principal and School PTA representative, prior to becoming final and an application submitted.

## **Task : Safe Routes to School Funding Application**

Once the map is accepted by the stakeholders and the MDCPS, Corradino will prepare an FDOT “Safe Routes to School Infrastructure Improvement” funding application for each studied school. The application will describe what has action and what action is to be taken and how those improvements will address each of the 5 E’s. The application will be filled out in a concise manner within the prescribed limitation of 20 pages, and shall be geared to adequately address the following selection criteria:

- Potential of the proposed project to increase the number of children walking and bicycling to school
- High numbers of students walking or bicycling to school in hazardous conditions
- Schools that demonstrate a high level of interest in supporting walking and bicycling to school
- Schools that are willing to participate fully in the project
- Schools that need financial assistance to complete feasible bikeway or pathway connections to neighborhoods or parks
- Potential of the proposed project to reduce child injuries and fatalities
- Identification of safety hazards
- Demonstrated need for the project
- Demonstrated school and community support for the project
- Constructability, including right of way constraints
- Possible alternative locations for projects facing constructability problems
- Consideration is also given to the means of addressing Education, Encouragement, Enforcement, and Evaluation, as well as other factors relating to the proposed project, which are deemed necessary to promote the pedestrian and bicycle safety of children in and around school areas.

## **Task 10: Prepare Draft and Final Reports and Executive Summary**

Corradino will summarize the project in a brief report that includes the data collected, field reviews, surveys, recommended safe routes, detailed individual improvements, cost estimates, Safe Routes map, and applications

This can be completed within 60 days from the notice to proceed for a lump sum fee of \$8,300.

ACCEPTED:  
John Gilbert  
Village Manager

Village of Key Biscayne

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