Field law enforcement services represent one of the areas of law enforcement operations in which staffing and service levels can be clearly quantified. Several factors determine the level of patrol staffing required in a community, including:

- Community generated call for service demand, by time of day and day of week.
- How units are utilized and deployed. As shown in the preceding section, the project team utilized CAD data to document the actual number of patrol units on duty each day over a one-year period.
- How calls for service are managed by a law enforcement agency. Many departments throughout the United States "manage" calls for service in a number of ways. This may include the use of telephone or internet reporting, or the use of civilian responders. What these methods of handling calls for service have in common is that they free up time of trained professional officers from handling lower priority calls (i.e., routine calls) so that more of their available time can be spent on calls requiring a higher level of expertise and training.
- The level of service desired by communities varies, for example, in the amount of "proactive" time, or "uncommitted" time a community desires. This is another factor impacting required patrol staffing levels. This involves time not spent handling community-generated calls for service and "proactive" time for which a officer is available for preventive patrol, self-initiated activity (i.e., observations including suspicious pedestrians or vehicles, etc.), special or directive patrol, and other approaches for addressing crime problems, quality of life issues, etc.

The project team employed a model based on these decision points in evaluating officer field staffing for the Coral Gables Police Department, in terms of workload, service levels, and overall operations. The following section identifies and discusses the various characteristics and elements of the field staffing model, and how proactive time is calculated.

(2) Workload and Data Elements Utilized in Patrol Staffing Model

Officers dedicate time to responding and handling community-generated calls for service, as well as related activities, including reports (particularly the more serious reports not completed during the initial handling of the call for service), arrests / bookings, back-up assistance, etc., and the associated times for these elements, as

identified in the following table. These elements are all utilized to calculate total field commitments (i.e., proactive time) in our model, as follows:

Reactive Factor in Calculation of Proactive Time	Summary Discussion
Calls for Service	As shown in the preceding sections, patrol units handled a total of 18,967 calls from October 14, 2010 to October 13, 2011.
Call Handling Time	As shown in the preceding sections, handling time for the primary unit (1 st unit) is approximately on average 38 minutes.
Back-Up Frequency / Number of Units per Call	Based on interviews and the number of two unit calls responded to, the average number of units sent to community generated calls for service was 1.5. This means that approximately 50% of calls for service received a back-up unit.
Duration of Time on Scene by Back-Up	The time spent at the scene of an incident by a back-up unit is captured in the project team's calculation of actual committed time. Based on the back-up rate and the average committed time for all units, the time spent by back-up units on scene is 19 minutes.
Number of Reports	During October 14, 2010 to October 13, 2011, patrol units prepared 3,105 Incident reports and 5,386 other reports.
Time to Complete a Report	Based on discussions with the Police Department, actual availability of patrol units, and call for service workload, the project team assumed the average time needed to complete reports is 45 minutes.
Number of Arrests / Bookings	As shown in a previous section, patrol units made 450 arrests from October 14, 2010 to October 13, 2011.
Time to Complete an Arrest / Booking	Based on discussion with patrol personnel, the project team allowed an average of 1.5 hours to process an arrest.
Proactivity Target	The project team utilized a range of 45% to 50% proactive time to evaluate patrol staffing.

Reactive Factor in Calculation of Proactive Time	Summary Discussion				
Available Time of Patrol Officers on Duty	The project team used duty rosters to document the number of patrol units on duty each day for a one-year period. In addition, the project team estimated the amount of time spent on administrative and other activities which impact officer availability. We used the following estimates for administrative, breaks, maintenance, and other activities: - Briefings: 15 minutes - Maintenance: 15 Minutes - Meals: 60 minutes - Breaks: 15 minutes - Court: 30 minutes - Training 60 minutes - Total Admin Time per shift: 195 minutes				
	It is important to note that Wednesdays are typically training days, where overlap officers are not available for calls, which is why there is a high number of average training hours per shift.				

The next section discusses the project team's findings based on our patrol staffing and deployment model.

5. ANALYSIS OF WORKLOADS AND PROACTIVE TIME LEVELS SHOWS THAT THE CITY FACES A TRADE OFF BETWEEN OFFICER UTILIZATION AND RESPONSE TIME.

This section provides the project team's analysis of the minimum patrol staffing needed to achieve recommended service level targets as well as opportunities to redeploy personnel to improve service levels.

(1) Analysis Shows That the CGPD Has a Very High Level of Proactive Time.

The project team used the data from the previous sections, including officer availability, call for service workload, and estimates for time not available due to briefings, meals, preventive maintenance, etc. These data were then used to determine the amount of uncommitted or proactive time available within patrol. The table, that follows, shows the percentage of time spent by on-duty patrol units handling community-generated workloads or on administrative time, over the one-year period:

Coral Gables Police Department Percentage of Time Spent By On-Duty Units on Community Generated Workload

Hour	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Avg.
00-01	13%	5%	6%	5%	4%	5%	8%	7%
01-02	12%	6%	5%	10%	9%	7%	10%	8%
02-03	13%	7%	8%	4%	3%	12%	15%	9%
03-04	10%	5%	5%	3%	10%	5%	13%	7%
04-05	8%	7%	2%	5%	10%	13%	15%	9%
05-06	10%	7%	3%	5%	7%	7%	6%	6%
06-07	6%	8%	8%	12%	12%	6%	6%	8%
07-08	7%	11%	7%	10%	5%	14%	6%	9%
08-09	9%	11%	15%	14%	14%	10%	12%	12%
09-10	16%	22%	20%	16%	52%	15%	20%	23%
10-11	15%	19%	21%	22%	15%	16%	18%	18%
11-12	21%	20%	20%	22%	17%	19%	19%	20%
12-13	29%	16%	21%	18%	17%	16%	27%	21%
13-14	21%	17%	19%	16%	16%	21%	28%	20%
14-15	22%	17%	17%	25%	20%	22%	23%	21%
15-16	15%	16%	15%	19%	13%	36%	20%	19%
16-17	15%	13%	20%	12%	13%	11%	14%	14%
17-18	26%	16%	21%	17%	14%	19%	21%	19%
18-19	20%	25%	26%	19%	19%	28%	31%	24%
19-20	18%	23%	18%	28%	24%	25%	27%	23%
20-21	19%	21%	13%	25%	19%	20%	24%	20%
21-22	18%	15%	22%	15%	19%	23%	25%	20%
22-23	11%	15%	11%	12%	11%	11%	18%	13%
23-00	8%	9%	9%	7%	9%	15%	12%	10%
Avg.	15%	14%	14%	14%	15%	16%	17%	15%

The following points highlight the information presented in the table, above:

- As shown in the table, on average, approximately 15% of available time within patrol is spent handling community generated calls for service after considering administrative time and other duties. This means that approximately 85% of patrol time is available for proactive activities. This is a very high level of available time, well above the 40% to 50% typically recommended range.
- Proactive time is relatively evenly distributed by time of day and day of week.
 Proactive time is highest during the hour of 0400 to 0500, which is common amongst law enforcement agencies across the country. However, most hours of the day fall between 78 and 87% proactive time.

The preceding analysis shows that there is a large amount of proactive time available within patrol.

(2) After Considering Proactive Activities, Total Patrol Utilization Is Approximately 56%.

The following table shows the percentage of available time spent on communitygenerated workloads, administrative time, and self-initiated activities.

Coral Gables Police Department
Percentage of Time Spent By On-Duty Units on Community Generated Workload
and Proactive Activities

Hour	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Avg.
00-01	61%	66%	67%	62%	62%	66%	56%	63%
01-02	15%	23%	50%	38%	45%	46%	34%	36%
02-03	34%	33%	40%	39%	26%	13%	8%	28%
03-04	35%	33%	43%	38%	2%	40%	21%	30%
04-05	39%	51%	51%	46%	42%	38%	35%	43%
05-06	44%	65%	71%	63%	35%	57%	51%	55%
06-07	65%	31%	42%	18%	20%	34%	56%	38%
07-08	83%	78%	82%	77%	78%	69%	81%	78%
08-09	85%	80%	74%	67%	57%	76%	73%	73%
09-10	74%	62%	65%	44%	13%	52%	51%	52%
10-11	76%	63%	60%	42%	45%	54%	51%	56%
11-12	70%	68%	66%	43%	49%	55%	54%	58%
12-13	63%	72%	67%	40%	51%	58%	29%	54%
13-14	68%	66%	67%	43%	47%	48%	42%	55%
14-15	65%	69%	69%	35%	52%	46%	60%	57%
15-16	77%	79%	75%	58%	71%	53%	66%	69%
16-17	75%	78%	73%	71%	74%	75%	78%	75%
17-18	65%	68%	67%	56%	75%	70%	70%	67%
18-19	65%	57%	59%	46%	65%	61%	56%	58%
19-20	63%	62%	65%	41%	62%	65%	59%	59%
20-21	65%	66%	76%	50%	61%	61%	60%	63%
21-22	53%	61%	52%	51%	53%	50%	40%	51%
22-23	77%	64%	78%	62%	69%	67%	68%	69%
23-00	73%	73%	72%	59%	67%	59%	70%	68%
Avg.	62%	61%	64%	49%	51%	55%	53%	56%

As shown above, approximately 56% of available patrol time is spent on community-generated workloads as well as proactive activities. As with proactive time, total utilization is fairly consistently distributed by time of day and day of week. The period with the highest utilization time is between the hours of 0700 and 0900 with an

average utilization rate of 76%. The lowest utilization rate is between 0200 and 0400, with an average utilization rate of 29%.

(3) Analysis of Service Level Targets Shows That Patrol Could Provide High Quality Service With Fewer Staff Than Are Currently Authorized.

As illustrated in the preceding section, proactive time levels within patrol are higher than typically recommended by the project team. We typically recommend a proactive time level of 40% to 50%. Proactive time levels above these targets make accountability for available patrol time difficult to manage. However, the current level of proactive time available within patrol is a consequence of several decisions about patrol deployment. This includes:

- An administrative decision to staff a minimum of 9 patrol officers at all times.
- The geography of the southern portion of the City results in higher proactive time levels in order to ensure that officers are deployed for a five-minute response to emergency calls.

As shown in the preceding section, the CGPD is currently available to provide a rapid response to emergency calls for service given the number of patrol officers on duty. As a result of the current staffing however, proactive time levels are higher than typically recommended by the project team. The preceding sections also show that overall utilization is fairly low – approximately 56%.

As an illustration of the trade off between the number of patrol officers needed under the current approach and alternative service levels, the project team calculated the number of officers needed under several different service levels. The starting point for this analysis is to identify the number of units needed per hour to provide targeted service levels.

The project team next calculated the number of hours available for each officer, after deducting for leaves and lost shift time. This calculation is shown below:

Leave Taken by Police Officers by Type	Hours
Comp Time	7,117
Military	740
Annual Leave	9,455
Sick Leave	5,473
Total Leaves	22,785
PO's in dataset	82
Average Leave per PO	278
Scheduled Hours	2,080
Average Leave	278
Court Time	82
Training Time	102
Arrest Processing	6
Subtotal	1,612
·	
Shifts (Schedule Time less leaves, training, and court / 10)	161.2
Meal time per shift (hours)	1.0
Breaks	0.25
Briefing	0.25
Total Admin Time per Shift	1.25
Total Admin Time per Year	201.5
Net Available Time	1,169

As shown above, the project team determined that officers are available 1,169 hours each year for patrol duties. Based on this, the project team calculated the number of officers needed under the current approach to shift staffing and under alternative service level targets.

Patrol Officers Needed Under Different Scenarios

Total	74			
POD Officers	3			
Bike Officer	5			
Current Patrol Officers	66			
	42			
Officers Needed to Meet 45% Proactive Time Target (w/ 7% turnover)				
Officers Needed to Meet 50% Proactive Time Target (w/ 7% turnover)				
Total Officers Needed under Current Approach with turnover (approx. 7%)	70			
Officer Hours Needed to Meet 45% Proactive Time Target	33,934			
Officer Hours Needed to Meet 50% Proactive Time Target	37,327			
Officer Hours Needed under Current Approach (9 per shift)	78,840			

The following points highlight the information in the table, above:

- Based on the current staffing plan, which calls for a minimum of 9 officers on duty at all times, the CGPD needs 70 patrol officers. Please note this does not include the 3 officers assigned to the POD or the bike officers, who typically work in Specialized Enforcement.
- As shown previously, based on current staffing levels and workloads, patrol personnel have an average of 85% of their time available for proactive activities. At a 50% proactive time level, approximately 46 Officers would be needed. At 45%, approximately 42 Officers would be needed.
- By comparison, based on the current approach to patrol staffing and scheduling, the Department needs 70 Patrol Officers assigned to Patrol.

As shown above, the City and the CGPD can meet recommended service level targets with fewer resources. It should be noted that the total number of officers needed under the current approach (9 per shift), with turnover, is 70. There are currently 62 Patrol Officers, 4 K-9 Officers and 5 Bicycle Officers from Specialized Enforcement providing Uniform Patrol services for a total of 71 officers. It is important to note that the number of officers required above to meet the proactive targets does not take into account the unique service area of Coral Gables, particularly the southern portion of the City which has many areas not quickly accessible. The Uniform Patrol Division staffing recommendations, with those situations figured, are shown later in the report.

The current staffing plan may also satisfy other desired services, including:

- The ability to handle two incidents requiring backup (e.g., domestic disputes, robbery or burglary in progress, etc.) simultaneously, while still maintaining a patrol presence.
- The ability to provide regular specialized training to officers (e.g., SWAT, K-9).
- The ability to utilize officers for special assignments bike patrol, walking beats, directed patrol etc.

Given the current level of resources available within patrol, the City and the Department should ensure that personnel are effectively utilized. This includes focusing on targeted enforcement and additional traffic enforcement activities.

6. THERE ARE OPPORTUNITIES TO IMPROVE THE UTILIZATION OF UNIFORM PATROL UNITS.

This section provides the project team's analysis of overall utilization of Uniform Patrol units.

(1) Uniform Patrol Units Are Impacted by the Service Level Demands of Coral Gables.

It is important to place any analysis of police officer utilization in the context of local community service level demands and expectations. The City of Coral Gables places a number of unique service demands upon the Police Department, including traffic control, dignitary visits, and a number of special events. The City is a destination spot for many travelers and has a high profile image due to its close proximity and access as a major travel route to the City of Miami. As a result, the Police Department faces several demands that most cities do not. In addition, the Department has not historically tracked the amount of time spent handling these special assignments. Consequently, it is difficult to get a comprehensive picture of overall utilization of field services units.

The City of Coral Gables is also unusual in how different the north and south portions of the City are in terms of ease of travel and service demands. The northern portion of the community is more urban in nature, while the southern portion is occupied by high-end residential neighborhoods and estate homes. Making emergency response more problematic in the southern portions of the City, are the number of canals for the waterfront homes, gated communities, and Dixie Highway—which is a major travel route through Coral Gables for commuters traveling to and from the City of Miami. Congestion on Dixie Highway impacts adjacent roadways as commuters seek alternative routes through the City.

At minimum staffing levels, three officers are deployed North of Bird, two officers South of Bird, two officers North of Kendall and two officers South of Kendall. The justification for the deployment is based on call volume and the ability to meet 05:00 minute average response time goals to high priority calls.

The following table illustrates the response times in the four response zones in the City.

Response Area	Number of Calls for Service	Average Response Time
North of Bird	11,107	05:13
South of Bird	3,539	05:11
North of Kendall	3,174	05:18
South of Kendall	889	07:27

As shown above, the area North of Bird receives the highest number of calls requiring an officer response at 11,107 calls annually. The area with the least number of calls is South of Kendall, which receives 889 calls annually. While three of the areas are fairly close to meeting the five-minute response time goal, the area South of Kendall has an average response time of 7 minutes 27 seconds. Given the difficulty of rapid response, the area South of Kendall should continue to have no less than two officers

assigned despite the low call volume. The higher call volume North of Bird also indicates that the current deployment of three officers is appropriate.

Recommendation: Staffing reallocations should begin with a reduction in minimum staffing of one officer.

Recommendation: The CGPD should begin tracking the amount of time spent by officers handling special assignments such as special details, special events, and other activities.

(2) The Utilization of Uniform Patrol Units Can Be Improved.

As shown in the preceding sections, the overall utilization rate for patrol units is approximately 50%. This means that 50% of available officer time is spent handling calls for service, working on administrative matters, or conducting proactive activities. The other 50% of time is available for other activities, or is currently underutilized. Given the amount of time available within patrol, the CGPD should target additional activities for personnel or consider reducing the staffing levels to a minimum required staffing of eight (8) patrol officers per shift.

(3) The Impact of Shift Schedules on Staff Utilization in Uniform Patrol.

Various patrol shift schedules can be implemented in a Department, from a five-day / 8-hour work week, to the four-day / 10-hour work week currently in place for patrol at the CGPD, to a 12-hour deployment schedule. There are several advantages associated with the Department's current 10-hour shift schedule:

- A 4/10 work schedule's primary benefits are the additional days off provided to staff compared to an 8-hour schedule.
- The ability to have overlap coverage during peak workloads as well as to better accommodate shift briefing.
- The ability to have an additional staff contingent available during overlap days for training or other activity.

There are several disadvantages associated with a 10-hour shift schedule, including the following:

- All shift schedules which are not divisible into 24 hours in a day suffer from cost inefficiencies. A 4/10 plan requires three shift deployments totaling 30 hours of paid time to cover a 24-hour day.
- The daily overlaps often do not coincide with peak call loads and, as a result, excessive numbers of officers are deployed compared to the work requirements.
- The weekly overlap does not always get utilized for training or other priority activity and, as a result, excessive numbers of officers are deployed compared to the work requirements.

The cost and service disadvantages of the 10-hour schedule outweigh the advantages for the City of Coral Gables and the Department should move to a 12-hour shift schedule.

For comparative purposes, the table below takes a targeted staffing level of eight (8) officers, 24 hours a day, and shows the number of staff required for each of the common patrol work schedules.

Shift Schedule Comparison

Shift Schedule	8-Hour	10-Hour	12-Hour
Staffing Target	7	7	7
Teams / Day	3	3	2
Staff Hours / Day (Shift Schedule x Teams)	24	30	24
Shift Efficiency	100.0%	125.0%	100.0%
Staff Hours / Year (Actual x Staff Hours x 365 Days per Year)	61,320	76,650	61,320
FTE Required @ 1,169 Net Hours per Position	52.5	65.6	52.5
Current Regular Patrol FTE Authorization	62	62	62
Variance	9	(4)	9

While an 8-hour schedule would result in the loss of one day off per week compared to the 10 plan, a 12-hour shift would keep that day in one week of a two week cycle and increase it by another day in the second week of a two week cycle. This shift schedule has been implemented in many places in Florida and around the country. Among the departments in Florida which utilize a 12 hour shift for patrol are the following:

- Boca Raton
- Daytona Beach
- Marco Island
- Naples
- Orlando
- Plantation

As the table above illustrates, it would require the CGPD to have a total allocation of 53 field patrol personnel in order to achieve a minimum staffing level of seven (7) regular Patrol Officers per hour. As a result, since 2008, the City would have been better served with a different schedule than the 10-hour shift.

With respect to 12-hour shift programs, there are a wide variety of potential schedules that can be implemented, ranging from alternating time blocks off (3 days-on, 3 days-off), to "flipped" schedules – 3 days on, 4 days off then 4 days on, 3 days off – to what is known as the Pitman schedule (2-on, 2-off, 3-on, 2-off, 2-on 3-off), to frequently rotating shifts (regular movement between Day and Night shift). Additionally, there are alternative shift schedules that combine 12-hour patrol operations with other schedules.

(4) The 12-Hour Shift Schedules Have Some Perceived Health Advantages

The 12-hour deployment schedule that is receiving increasing popularity with many law enforcement agencies is a scheduling option worth considering. There has also been much interest relating to the potential impact of extended work schedules on the physical and mental well-being of those employees subject to lengthier shifts.

A recent study performed by Lincoln, Nebraska, included an officer survey of the Police patrol regarding potential issues associated with its implementation of a 3/12 schedule, focused on many health related questions. The survey noted:

- 100% of the respondents felt they were able to perform all police functions on the 3/12 schedule.
- 87% disagreed that they had become so tired during a shift that they were unable to function normally or safely.
- When asked about how rested they felt after returning from days off, 82% of officers said they were "very rested," 9% percent felt "somewhat rested," and an additional 9% found no difference from previous scheduling alternatives.

- When queried about their ability to work additional hours beyond a 12-hour shift, 42% felt there was no difference, 40% said they were "somewhat less able" to work, and 18% were "significantly less able" to work overtime.
- Positive mood and disposition changes had been noticed by the families of 77% of the respondents.²

In effect, a very recent survey of a large metropolitan police department found overall positive physical as well as mental health benefits associated with implementing a 12-hour shift program. It should be noted, however, that the survey respondents were pre-disposed to a 12-hour schedule, as they were voluntarily participating in a pilot study. Nevertheless, the results are statistically favorable with regard to this program.

(5) The Department Should Implement a 12-Hour Shift Program.

Because of the variety of 12-hour shift options, the project team has developed a 12-hour shift program within the following conceptual framework:

- Similar to present 4/10 shift schedules, the same number of patrol officers are scheduled throughout the week, regardless of day of week.
- Patrol personnel would work a 3 day / 4 day rotation of shifts in a two week period.
- Such a two week cycle would still result in 4 hours of overtime each cycle assuming that the Department schedules one day in the 48 hour week to an 8 hour shift rather than a 12 hour shift. This approach is becoming increasingly common to reduce the payment of overtime.
- If the City implemented a fourteen day work cycle, it could eliminate the payment of overtime for scheduled deployments.

It should be noted that from a purely operational standpoint, 12-hour schedules that have rotating days off – whether 3/3 programs, 4/4 programs, the Pitman Schedule, etc. – will always have the same field deployment profiles, as one-half of the field resources are always scheduled for duty and one-half are off. Given that the present

² All results found in the August, 2008 article from *The Police Chief* magazine.

culture at the CGPD has the same level of patrol resources scheduled for deployment regardless of day (except barrel day), this concept will be carried forward in the development of optional 12-hour schedule.

The project team recommends the following 12-hour shift schedule to ensure employees are equally distributed and have equal numbers of days off. For illustrative purposes a two-week schedule is depicted.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Day / Night						
2	1	1	2	2		1
Day / Night						
1	2	2	1	1	2	2

As shown over the two-week period, each officer will work the same days and have the same days off on a rotating basis. The twelve-hour shifting schedule would result in the following staffing levels by position to maintain the current high service levels by the Coral Gables Police Department to the Community.

Proposed 12-hour Shift Staffing Levels

Position	Total	Total / Shift	Minimum / Shift	Change
Lieutenant	4	1	0	1
Sergeant	12	3	2	
MPO	4	1	0	-1
Police Officer	48	12	8	-9

The Uniform Patrol Division would continue to be under the direction of a Major. There would be an additional Lieutenant assigned to ensure a Lieutenant manages each shift. This would improve operations, as a Watch Commander would be available on a 24-hour basis. Each shift would have three (3) Sergeants assigned for field supervision with minimum staffing levels of two (2) field supervisors on each shift. The shifts would also continue to have an MPO on each shift as well as 12 officers, with

minimum staffing levels of eight (8) officers per shift to ensure continuation of high service levels, while officer time is more fully utilized.

It should be noted that the efficiencies gained by changing the shift schedule from the current 10 hour shift to the 12 hour shift could be achieved through adoption of an 8-hour schedule.

Recommendation: Change Uniform Patrol operations from the current 4-10 shift schedule to a 12-hour shift schedule.

Recommendation: If a 12-hour shift schedule is adopted, increase Lieutenant staffing by one (1), reallocate MPO staffing by one (1) and reallocate Patrol Officer staffing by nine (9).

Recommendation: All reallocated positions should be assigned to a new "Strategic Initiatives Team" as described in a later chapter of the report.

(6) The Utilization of K-9 Units Can Be Improved.

The project team utilized data, which showed K-9 units on duty, calls for service, and self initiated activity, to evaluate the utilization of K-9 personnel within the CGPD. K-9 personnel work on designated patrol shifts, but work one less hour per shift to compensate for caring for the canine. The following tables show the time in minutes spent on self-initiated and community generated calls and the percentage of on duty hours spent handling community generated or self-initiated workload from October 14, 2010 to October 13, 2011. Please note that the project team excluded hours where K-9 Units were not typically scheduled.

Coral Gables Police Department Time in Minutes Spent by K-9 Units on CFS and Self Initiated Activities

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Avg.
00-01	152	47	40					79.67
01-02	115		181					148.00
02-03	131	13	112	9				66.25
03-04	118		143					130.50
04-05	101	10	181					97.33
05-06	66		84					75.00
06-07	29		107					68.00
07-08	87	75	210					124.00
08-09	146	330	264					246.67
09-10	143	493	531				6	293.25
10-11	256	377	395			16		261.00
11-12	188	249	353				14	201.00
12-13	181	376	249	28	38		58	155.00
13-14	147	265	290	120			44	173.20
14-15	309	138	114	51		30		128.40
15-16	354	185	178		87	173	281	209.67
16-17	73	263	225	27	1559	796	834	539.57
17-18	303	422	191	16	1727	1317	861	691.00
18-19	386	355	350		466	555	498	435.00
19-20	358	333	241	0	101	202	52	183.86
20-21	338	559	345		176	1045	438	483.50
21-22	163	303	206	2	1283	917	929	543.29
22-23	228	206	191		900	729	795	508.17
23-00	131	214	115		235	170	228	182.17
Avg.	187.63	260.65	220.67	31.63	657.20	540.91	387.54	250.98

Coral Gables Police Department
Percentage of Time Spent by K-9 Units on CFS and Self Initiated Activities

Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Avg.
00-01	4.87%	1.51%	1.28%	0.00%				1.92%
01-02	3.69%	0.00%	5.80%	0.00%				2.37%
02-03	4.20%	0.42%	3.59%	0.29%				2.12%
03-04	3.78%	0.00%	4.58%	0.00%				2.09%
04-05	3.24%	0.32%	5.80%	0.00%				2.34%
05-06	2.12%	0.00%	2.69%	0.00%				1.20%
06-07	0.93%	0.00%	3.43%	0.00%				1.09%
07-08	1.39%	1.20%	3.37%	0.00%				1.49%
08-09	4.68%	10.58%	8.46%	0.00%				5.93%
09-10	4.58%	15.80%	17.02%	0.00%				9.35%
10-11	8.21%	12.08%	12.66%	0.00%				8.24%
11-12	6.03%	7.98%	11.31%	0.00%				6.33%
12-13	5.80%	12.05%	7.98%	0.90%				6.68%
13-14	4.71%	8.49%	9.29%	3.85%			4	6.59%
14-15	9.90%	4.42%	3.65%	1.63%				4.90%
15-16	5.67%	2.96%	2.85%	0.00%	2.79%	5.54%	9.01%	4.12%
16-17	1.17%	4.21%	3.61%	0.29%	49.97%	25.51%	26.73%	15.93%
17-18	9.71%	13.53%	6.12%	0.26%	55.35%	42.21%	27.60%	22.11%
18-19	12.37%	11.38%	11.22%	0.00%	14.94%	17.79%	15.96%	11.95%
19-20	11.47%	10.67%	7.72%	0.00%	3.24%	6.47%	1.67%	5.89%
20-21	10.83%	17.92%	11.06%	0.00%	5.64%	33.49%	14.04%	13.28%
21-22	5.22%	9.71%	6.60%	0.03%	41.12%	29.39%	29.78%	17.41%
22-23	7.31%	6.60%	6.12%	0.00%	28.85%	23.37%	25.48%	13.96%
23-00	2.10%	3.43%	1.84%	0.00%	7.53%	5.45%	7.31%	3.95%
Avg.	5.58%	6.47%	6.59%	0.30%	23.27%	21.03%	17.51%	7.14%

As shown above, approximately 7% of available K-9 officer time was spent handling community-generated calls for service or self initiated activity during the one-year period. The table shows that K-9 units are most productive during the hours of 1600 to 2300. Overall, however, K-9 officer utilization levels are relatively low.

The current approach to K-9 officer deployment is based on several considerations. Currently, four dogs are deployed, to provide one K-9 officer on Alpha shift (Squad 2), one K-9 officer on Bravo shift (Squad 2) and two K-9 officers on Charlie

shift (one per Squad). This explains the higher activity during the 1500-0000 hours. This also allows K-9 personnel time to attend and conduct training exercises.

K-9 units, like patrol, conducted a large number of area checks over the one-year period. Of the 1,676 CAD entries for K-9 units, 788 or 48% were area checks. K-9 personnel should be involved in crime prevention presentations, continue to participate in SWAT exercises, and be part of tactical and operational plans developed by the Specialized Enforcement Division.

As an alternative, the Department could interchange K-9 and Uniform Patrol positions and retain K-9 staff recommended to be reallocated here.

Recommendation: K-9 Officer utilization is low. The CGPD should ensure that K-9 Officers are utilized for additional duties including: crime prevention programming, participation in SWAT exercises and training, and participation in tactical and operational plans developed by SED.

Recommendation: Reduce K-9 staffing to three (3) police officers serving as K-9 officers.

4. ANALYSIS OF THE CRIMINAL INVESTIGATIONS DIVISION

This chapter provides an analysis of the staffing, operations and workload of the Criminal Investigations Division. The workload information used in this section was obtained from interviews with Division supervisory and line personnel, and a review of documents and information from the Department's case management system. This Division is responsible for various investigative and special enforcement services including criminal investigations, vice and narcotics enforcement, gang tracking and suppression efforts, covert investigations and various other supportive investigative efforts to serve a demanding community. The Division also provides victim and witness services, provides school resources officers to public schools in the City, and provides officers to various task and strike forces supported by the Department. The analysis in this chapter begins with the Criminal Investigation Section.

1. VARIOUS CASES ARE ASSIGNED TO DIFFERENT UNITS WITHIN THE CRIMINAL INVESTIGATIONS SECTION.

The Criminal Investigations Section is managed by a Lieutenant who reports directly to the Division Major. This Section is responsible for various investigative and special services.

The following sections of the study pertain to the organizational and staffing analysis of the Details (Units) with an investigative operations focus, as described in the CGPD Profile. These include the following:

- Crimes Against Persons
- Crimes Against Property
- Economic Crimes

- Youth Resource
- Crime Scene Unit
- Victim//Witness Coordinator

These investigative units comprise the Criminal Investigations Section. The following table summarizes the major activities performed by each Unit.

Cases Assigned to Various Investigative Units

Unit	Case Types Assigned	Notes
Economic Crimes Unit	Typically assigned various financial cases for investigative follow-up that include check and credit card fraud, extortion, forgery, embezzlement, nonsufficient fund checks, internet fraud, identity theft, and suspicious circumstances.	Two detectives currently staff the Economic Crimes Unit. Authorized staffing is three.
Crimes Against Property Unit	Typically assigned various property cases for investigative follow-up that include residential and commercial burglary, grand and petty theft, lost and found property, trespass, vandalism and suspicious circumstances.	Six detectives currently staff the Crimes Against Property Unit.
Crimes Against Persons Unit	Assigned various cases for investigative follow-up that generally include person crimes to include assaults, suicides, suspicious deaths, homicides, robberies, sex crimes, harassing phone calls, criminal terrorist threats, domestic violence, disputes, elder abuse, hate crimes, missing persons, and suspicious circumstances.	Six detectives currently staff the Crimes Against Persons Unit. The Victim Advocate also reports to the Crimes Against Persons Sergeant.
Youth Resource Unit	Investigates all felonious crimes committed against or by children up to 18 years of age with the following exceptions: 1) Homicides, and 2) Generally person crimes perpetrated by youth against adults. Investigative follow-up includes the following Child abuse, sex crimes runaways, found/stolen bicycles, graffiti (Vandalism), and other property crimes performed by youth.	Three detectives currently staff the Youth Services Unit.

Unit	Case Types Assigned	Notes
Crime Scene Unit	Responds to active crime scenes to fully process and document the crime scene and process and prepare evidence for lab submittal.	Two Technicians and one Supervisor are assigned to the Unit.

In calendar year 2010 the Criminal Investigations Section was assigned the following:

- A total of 1,266 Part I, Part II and miscellaneous cases.
- 319 Crimes Against Persons.
- 816 Crimes Against Property.
- 118 Economic & Commercial Crimes.

This workload will be examined in much further detail in the following sections.

Additionally, the project team will evaluate the organization, staffing and case assignment philosophy related to the above investigative Units throughout this chapter.

2. CRIMINAL INVESTIGATIONS WORKLOAD, STAFFING, AND EFFECTIVENESS ARE EVALUATED DIFFERENTLY THAN FIELD OPERATIONS.

It is more difficult to evaluate the staffing levels required by criminal investigations because, unlike patrol operations, more subjective and qualitative determinants of workload and work practices need to be considered. Patrol services have the benefit of several quantitative measures, such as calls for service and proactive time, to assist in the evaluation of staffing requirements, whereas investigative services have fewer such reliable measures. Comparisons with other agencies are often made, but given differences in the way investigations are conducted, as well as the type of crime in a community, such comparisons are not very useful. Factors making comparative analyses difficult include:

- What is actually investigated varies by agency. The extent to which agencies assign misdemeanor level property crime cases to Detectives varies. Also, the extent to which patrol performs preliminary investigations varies widely and thereby impacts Detective caseloads. The Coral Gables Police Department assigns all misdemeanors, various informational, and all felony cases to the Detectives, thereby maximizing Detective caseload compared to many other agencies where caseloads are screened, through various methods, prior to assignment to a follow-up Detective.
- Approaches used to screen, assign, and monitor cases are different among law enforcement agencies. For example, Coral Gables largely relies on a Crime Analyst to screen cases and determine the appropriate unit sergeant to whom cases should be sent for assignment, whereas other departments may use detectives to self-screen or dedicated Detective Sergeants to read and initially screen cases based on various solvability factors.
- Work practices vary tremendously among agencies, relating to interviewing techniques, mix of telephone and in-person interviews, use of computer technologies, time devoted to administrative tasks, etc.
- Complexity of caseloads is also a factor to consider when examining quantitative
 factors relating to investigative activity. Each case is different in terms of
 workable leads, suspect description, evidence availability, victim/witness
 cooperation, quality of information provided by the original report taker, and
 numerous other factors. The way information in a single case may combine with
 information on other cases (e.g., serial crime) also impacts investigative actions.
- Additional duties and responsibilities performed by detectives beyond their caseload work. Such activities may include being a specialized trainer, assisting on warrant arrests or various other administrative duties that may detract from casework.
- Finally, the nature of the community itself is a factor in evaluating investigative workload and staffing needs. Citizen expectations translate into service levels impacting detectives in terms of what is investigated and how investigations are conducted. An agency such as the CGPD, may provide follow-up on all crimes, whether there are available leads or not, whereas another agency may rely on the victim to take the initiative as to case progress for "unsolvable" crimes.

As it relates specifically to the Coral Gables Police Department, there are certain expectations placed upon Detective staff that could be considered somewhat atypical in a variety of other law enforcement agencies. These expectations are largely two-fold:

- Cases assigned to Detectives exceed those of many other agencies which have implemented a case-screening process to minimize the number of "unsolvable" or "minor" cases forwarded to investigative staff. Many cases are suspended at this case screening stage in other law enforcement agencies.
- Personnel within the Section, such as Sergeants, perform a number of administrative duties outside of investigative workload as detailed in the Profile section of this report. Such work detracts from managing investigative case work.

As noted in prior pages, investigative workloads have numerous qualitative considerations when compared to that which depicts typically quantitative-driven patrol workload. In patrol, workload can be characterized broadly by the following factors:

- High volume/fast turnaround work and deployment practices designed to result in a rapid response of personnel. These can be linked to such metrics as response time and on-scene time.
- Work is typically oriented not toward a solution of a complex case, but toward documenting available evidence at the crime scene and initiating contacts with victims and witnesses.
- Appropriate availability and use of non-call-for-service time characterized as proactive time.

Unlike patrol, investigative workload does not have a wealth of specific measures that can be converted into quantitative methodologies to arrive at required staffing levels. There are some important metrics available, yet qualitative issues must also be considered. Investigative staffing requirements need to be examined from a variety of perspectives in order to obtain an overall portrait of staffing issues, case handling issues, and operational philosophies that have an impact on overall staffing needs. The project team performed the following steps in the analysis of the Criminal Investigations Section:

 Reviewed case management practices through interviews with unit supervisory and other line staff and obtained available caseload data for each of the Units.

- Compared the CGPD's Detective staffing and workload with investigative benchmarks from other law enforcement agencies.
- Examined other qualitative measures of workload, as appropriate, to determine the effectiveness of Section services.
- Examined organizational and supervisory spans of control.

The sections, which follow, provide a description of how the project team conducted its analysis relative to the aforementioned approaches.

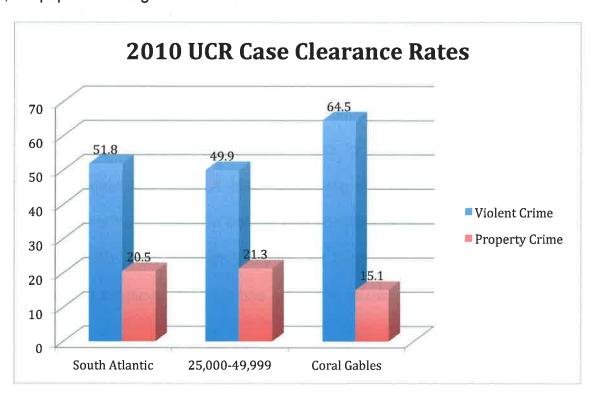
As stated above, investigative workload and staffing requirements can employ a series of indicators to determine the extent to which core investigative staffing and general workload in the Section compare to ranges observed in other police agencies. This information is used to determine if the Coral Gables PD is within the ranges measured by those indicators. Investigative workloads vary depending on the number and types of cases a Detective is assigned, their complexity, and also the level of service desired by an agency. Generally speaking, however, the comparative measures that can be used to determine staffing, efficiency and effectiveness are displayed in the following table:

Comparative Measures	Comparative Industry Patterns
Part I Offenses per "line" Detective in core investigative functions such as persons and property crimes Detectives. This does not include those assigned to "pro-active" units such as narcotics or vice.	The Average distribution of Part I Offenses per "line" Detective developed in recent police services studies in the U.S. generally ranges from 400-500 Part I Offenses per investigator.
Case Clearance for Part I Crimes.	The Uniform Crime Report provides data on average case clearance by major crime type for various sized jurisdictions.
Active cases assigned to "property" crimes Detectives (e.g., burglary/theft).	15 to 20 active cases per month based on a survey of dozens of law enforcement agencies performed by the Matrix Consulting Group over the last several years.
Active cases assigned to white collar crimes Detectives (e.g., fraud).	These have a broader range due to their varied complexity, from 10 to 20 active cases per month each.
Active cases assigned to "person" crimes Detectives.	8 to 12 active cases per month based on the same survey. 3 to 5 active cases for complex person crimes such as felony assaults (shootings) to include homicides.
Active cases assigned to "generalist" crimes Detectives.	12 to 15 active cases per month based on the same survey.

There is no caseload standard for specialized detective units (e.g., vice and narcotics), because these types of cases are more proactive in nature. They can consume many weeks of staff time generating leads, contacts and suspect information, and they may often require surveillance and related activities. Furthermore, caseload standards have yet to be developed for computer forensic work, given the extreme variance in the potential complexity of a case and the tools available to the computer forensics investigator(s).

3. A COMPARISON WITH NATIONAL CRIME CLEARANCE DATA SHOWS THE CGPD IS BELOW THE AVERAGE CLEARANCE FOR CITIES OF SIMILAR SIZE AND THOSE IN THE SOUTH ATLANTIC REGION FOR PROPERTY CRIMES, BUT HAS HIGHER CLEARANCE RATES FOR VIOLENT CRIMES.

One approach to evaluating investigative effectiveness is to benchmark case clearances³ versus other law enforcement agencies in similar sized communities. Information available from the Uniform Crime Reports (UCR) provides case clearance statistics for Part I crimes. The following graph shows the CGPD's case clearance performance as compared to other law enforcement agencies in the United States. The graph depicts overall case clearance for violent and property crime, comparing Coral Gables to other communities in the South Atlantic Region and Nationally in the 25,000 – 49,999 population range.



³ Cases are cleared through an arrest or exceptional circumstances.

It should be noted that UCR data should be viewed with some caution; that is why it is only one method by which the project team evaluates investigative services.

The following is abstracted directly from the FBI's website:

"Each year when *Crime in the United States* is published, many entities – news media, tourism agencies, and other groups with an interest in crime in our Nation—use reported figures to compile rankings of cities and counties. These rankings, however, are merely a quick choice made by the data user; they provide no insight into the many variables that mold the crime in a particular town, city, county, state, region, or other jurisdiction. Consequently, these rankings lead to simplistic and/or incomplete analyses that often create misleading perceptions adversely affecting cities and counties, along with their residents."

The following points regarding the above graphs are noted:

- Based on the UCR data provided in 2010 by the Federal Bureau of Investigation, the CGPD clears a higher percentage of violent crimes, but lower percentage of property crimes when compared to the national average (calendar year 2010) for other jurisdictions in the 25,000 – 49,999 population range.
- Similarly, based on the UCR, the CGPD clears a higher percentage of violent crimes, but a lower percentage property crimes when compared to the average for reporting communities in the South Atlantic region of the United States.

Clearance rates can be impacted by a number of factors, and should not be considered an exclusive measure of investigative productivity. It is, however, one measure that can allude to several operational characteristics. For example, these UCR data can provide a broad indicator of investigative staffing and workload balance. Case clearance rates dramatically below or above national averages could be indicative of staffing issues in the respective investigative areas. The project team does not believe lower clearance rates reflect a staffing issue but reflect the methods in which investigative services are conducted. Beyond the reasons for lower clearance rates, achieving national averages for cities of similar size should be strived for as a

noteworthy goal, as it reflects an important law enforcement agency core business function – the investigation and ultimate clearance of criminal cases.

4. USING UNIFORM CRIME REPORTING PART I CRIME DATA, THE RATIO OF PART I CRIMES PER DETECTIVE IS SIGNIFICANTLY LOWER THAN OTHER BENCHMARK AGENCIES.

The number of Part I crimes per Detective in many other law enforcement agencies in the United States averages between 400 and 500 crimes per Detective. Part I Crimes are taken from the annual Uniform Crime Report and compared to actual detective staffing levels in an agency. The following reflects information gathered by the project team over the last several years related to this staffing pattern:

Range of Part I Offenses per Investigative Staff

Range of Part I Offenses Per Core Investigator	Percent of Departments Surveyed with Part I Offenses Ratios in the Range
Less than 300	5.3%
300 to 400	31.6%
400 to 500	42.1%
More Than 500	21.0%
TOTAL:	100%

Based on Detective staffing levels of 12 detectives in Persons and Property Crimes, and based on 2010 UCR data of 93 violent crimes and 1,953 property crimes, the ratio of Part I Offenses per Detective is 171:1. This is well below the agencies surveyed for this study.

This metric is telling, as it relates to the number of Detectives fielded in comparison to Part I crimes, particular since the ratio is well below the low end of the noted 400 – 500 range as well as recently compared agencies. As any standalone metric, this performance measurement is inconclusive in and of itself; however, it does point to a potential operational issue deserving further analysis.

5. THE DETECTIVE UNITS WERE EVALUATED BASED ON CASELOAD INFORMATION FROM A VARIETY OF SOURCES.

In brief, caseload and staffing data are provided for each work Unit in the following format:

Case Workload and Performance

Measurement Type	Description
Assigned Staffing Level	The actual staffing level in the Unit as of this study.
FTE Staffing Level, 2011	Based on investigative logs, the actual number of detectives assigned cases to that Unit either temporarily, a portion of the year prior to transfer, etc. Detectives assigned only a very minor number of cases to the Detail were not counted.
Annual Cases <i>Assigned</i> to Unit	Total cases assigned to the Unit in calendar 2010.
Average Monthly Cases Assigned to Each Detective	The average number of monthly cases assigned to each Detective in the Unit. If a Detective worked the Detail less than one year, the monthly average reflects this based on the number of Detective FTE's assigned as reflected in the FTE Staffing Level, 2010 column above.
Average Monthly "Minor" or "Minimal Work" Cases Assigned to Each Detective	The average number of monthly minor/minimal work cases assigned to each Detective in the Unit. See FTE comment above.
Average Monthly Active Cases for Each Detective	The total monthly cases worked in September 2011 based on the Desk Audits conducted.
Benchmark Targets for <i>Active</i> Monthly Caseload per Detective	A range showing the number of monthly cases that should be actively worked based on Matrix Consulting Group methodologies.
Does Unit Meet the Benchmark?	Comments regarding if the Unit meets benchmark targets.

Utilizing the approaches noted, the project team analyzed each unit as presented below.

(1) Crimes Against Property Unit.

The Crimes Against Property Unit is currently staffed with four full-time Detectives, but is authorized six detectives. Workload metrics as defined above are shown as follows:

Crimes Against Property Unit Caseload Performance Metrics - Calendar 2010

Assigned Staffing Level	Full-time Equivalents (FTEs)
FTE Staffing Level, 2011	4, 6 Authorized
Annual Cases Assigned to Unit	324
Average Monthly Cases <i>Assigned</i> to Each Detective	11.2
Average Monthly <i>Active</i> Cases (September 2011) for Each Detective	7
Benchmark Targets for <i>Active</i> Monthly Caseload per Detective	15-20 (property crimes)
Does Unit Meet the Benchmark?	Active cases are below Benchmark

(2) Economic Crimes Unit.

The Economic Crimes Unit is currently staffed with two full-time Detectives, but is authorized three detectives. Based on vacation schedules for all three staff, the self-reporting exercise performed in September 2011 is not applicable to this Unit. Workload metrics are shown as follows:

Economic Crimes Unit Caseload Performance Metrics – Calendar 2010

Staffing Level	Full-time Equivalents (FTEs)
FTE Staffing Level, 2011	2, 3 Authorized
Annual Cases <i>Assigned</i> to Unit	94
Average Monthly Cases <i>Assigned</i> to Each Detective	3.9
Average Monthly <i>Active</i> Cases (September 2011) for Each Detective	3
Benchmark Targets for <i>Active</i> Monthly Caseload per Detective	10 (white collar crimes)
Does Unit Meet the Benchmark?	Active cases are below Benchmark

Recommended staffing levels for the Economic Crimes Unit and the entire Division will be placed in further context later in this chapter.

(3) The Crimes Against Persons (CAP) Unit.

The CAP is currently staffed with three full-time Detectives, but authorized six Detectives. Workload metrics are noted as follows:

Crimes Against Persons Caseload Performance Metrics - Calendar 2010

Staffing Level	Full-time Equivalents (FTEs)
FTE Staffing Level, 2011	3, 6 authorized
Annual Cases Assigned to Unit	131
Average Monthly Cases <i>Assigned</i> to Each Detective	4.5
Average Monthly <i>Active</i> Cases (September 2011) for Each Detective	28.7
Benchmark Targets for <i>Active</i> Monthly Caseload per Detective	8-12 (person crimes)
Does Unit Meet the Benchmark?	Active cases are above Benchmark

The following points summarize relevant data regarding the CGPD Crimes Against Persons Unit.

With the current staffing of three detectives, the unit is above benchmark levels. If staffing is brought back up to five (5) authorized and staffed positions, active cases would be brought in line with benchmarks once case clearance practices are improved. The Detectives should improve processes for closing cases where it is obvious no leads exist to continue to consider a case "open/active".

Recommended staffing levels for the CAP and the entire Division will be placed in further context later in this chapter.

(5) The Youth Resource Unit.

The Youth Resource Unit is currently staffed with three full-time Detectives.

Workload metrics are noted as follows:

Youth Services Caseload Performance Metrics – Calendar 2010

Staffing Level	Full-time Equivalents (FTEs)
FTE Staffing Level, 2011	3, 4 authorized
Annual Cases Assigned to Unit	140
Average Monthly Cases <i>Assigned</i> to Each Detective	3
Average Monthly <i>Active</i> Cases (September 2011) for Each Detective	3
Benchmark Targets for <i>Active</i> Monthly Caseload per Detective	No Benchmark
Does Unit Meet the Benchmark?	No Benchmark due to ancillary duties and programs

The following points summarize relevant data regarding the CGPD Youth Resources Unit.

The Youth Resources Unit handles the cases involving youth in Coral Gables and provides a number or youth related programs, including Police Athletic League activities as well as SRO services, which makes benchmarking difficult.

(6) Vice and Intelligence Unit.

The Vice and Intelligence Unit is staffed with two (2) Sergeant and eight (8) detectives – one (1) Sergeant and four (4) detectives are assigned to regional strike and task forces; one (1) Sergeant and four (4) detectives work within the City on vice, narcotics and other proactive investigations. These are highly proactive investigative efforts and do not adhere to the traditional method for determining staffing, but should be evaluated on outcomes associated with its undercover and investigative efforts.

6. CERTAIN WORK PRACTICES RESULT IN CASELOADS THAT ARE DIFFICULT TO EFFECTIVELY MANAGE.

Data in the prior section showing caseloads assigned to various Detective Units is particularly telling as it relates to the way in which Coral Gables PD performs investigations and the level of service provided to the community. The following subsections discuss our recommended operational changes.

(1) The Criminal Investigation Bureau Should Improve the Case Screening Process to Ensure Detectives Receive Cases in a Timely Fashion.

The current practice in the Coral Gables Police Department is to have the cases reviewed by the Crime Analyst using an established solvability index. Based on the solvability and case prioritization the recommendation to assign cases is forwarded to the Sergeant of the appropriate Unit who determines final assignment and which detective will be assigned the case. The Sergeant makes the final decision to assign or not assign cases if assignment is questionable.