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Part 1 Report for Case 09-M-0243:

**Comprehensive Investigative Accounting
Examination of Consolidated Edison
of New York, Inc.**

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1 EXECUTIVE SUMMARY

1.1 OVERVIEW

- 1.1.1 Charles River Associates was retained in September 2009 to perform an investigative accounting audit on the construction program of Consolidated Edison of New York, Inc. (“CECONY”) for the period 2000 to 2009. This Audit was initiated by the PSC Order 09-M-0243 as a result of arrests and alleged fraudulent activity by certain CECONY employees and a contractor related to work associated with street utility activities.
- 1.1.2 The scope of this investigative audit was delineated by the PSC in the Request for Proposal (“RFP”) dated April 21, 2009 in two parts. Part 1 analysis focused on only the arrested employees and the participating contractor(s), which turned out to be only Felix Associates. Depending on the investigation and observations secured during the initial Part 1 effort, Part 2 of the analysis would include a broader examination of all contractors and boroughs/regions. The focus of this Part 1 Report is limited to determining with reasonable certainty how the alleged fraudulent activities were perpetrated by the arrested employees, what controls were compromised and what vulnerabilities or weaknesses existed in CECONY’s related control system during the period. Based on this examination, a Quantitative Indicator Model was developed to determine the magnitude of the potential “at-risk” transactions.
- 1.1.3 It is the intention from the RFP that this Model will be subsequently expanded and utilized in Part 2 of the analysis to evaluate the larger population of contractors and projects during the period. It is important to recognize that this Model only provides an indication of potential problems. There is the ability to apply a level of subjective confidence in its findings; however, to improve this confidence level, a much deeper audit of the underlying contemporaneous documents is necessary and even at that level, limitations exist to prove fraud with 100% certainty. These limitations will be further addressed below and in Sections 5 and 6. Appendix 1 provides a Glossary of acronyms used throughout the Report. Observations and conclusions in this Part 1 Report are limited to this initial phase of the investigation. Part 2 analysis will entail investigation of a broader population, and hence observations and opinions presented herein might be subject to revision depending on the results of Part 2 analysis and to that extent, should be considered provisional.
- 1.1.4 Government agents traced the deposit of governmental payments to a corporate contractor into a personal bank account and identified a “dummy” company as a potential money laundering operation involving two CECONY employees who confessed

to their culpability and became cooperators for the government. Their cooperation assisted the government agents in gaining the cooperation of a principal of a contractor, named Felix Associates, who was involved in bribery and kickback schemes with a number of CECONY employees. The cooperation of Felix Associates' principal assisted the government agents in recording incriminating conversations with CECONY employees involved in bribery and kickback schemes.

- 1.1.5 Ten projects, which comprise the focus of this Part 1 Report, were identified by the arrested CECONY employees. Eight of the projects were related to work managed and overseen by the street/utility Construction Management group and the other two managed and overseen by the Public Improvement group, both groups reporting to the CECONY Construction Organization. All 10 projects were performed by Felix Associates; hence, the observations and opinions rendered in this Part 1 Report are limited to Felix Associates activities.

1.2 THE FRAUDULENT ACTIVITIES AND BREAKDOWN IN INTERNAL CONTROLS

- 1.2.1 An analysis of the project files and affidavits, and prior work performed by KPMG, shows that the fraudulent transactions were carried out by a series of data manipulations and falsifications of records perpetrated at various stages of the contract administration process, particularly the payment requisition and approval process, including:
- (a) Falsification of source documents such as Daily Log Reports, Field Data Forms¹, and T+E (“Time & Equipment”) sheets by the relevant Construction Inspectors and Chief Construction Inspectors (“CCI”);
 - (b) Manipulation of Worksheet items in Construction Management Payment and Support System (“COMPASS”, i.e., a software tool used by CECONY to process contractor payments) by the reviewing CCI responsible for the project;² and
 - (c) Processing of Worksheet items in COMPASS by the Technical Reviewer of the SysBill (i.e., official invoice recognized for payment purposes by CECONY).
- 1.2.2 An analysis of CECONY internal control processes and systems showed that there were breakdowns in the controls and that these breakdowns provided opportunities for the arrestees to perpetrate fraud. The breakdowns observed included (1) the lack of an audit

¹ Maher (M-29 Bronx pipeline).

² DiRoma (South Westchester area contract); Panagi (Manhattan Vaults); Zebler (Manhattan 4000ft gas pipeline and Manhattan Gas Regulator).

trail in the COMPASS database and the ability for the arrestees to manipulate worksheet items in COMPASS, (2) the failure to perform periodic contractor cost audits (3) the quality of the Trenching Manual, (4) the lack of a formal employee rotation policy, and (5) the failure to coordinate follow through on reported allegations.

- 1.2.3 Some of the cost effective tools that existed in CECONY's systems to mitigate fraud, waste, and abuse³ were not utilized fully, and the related process and systems controls thus appeared to be ineffective. A significant control tool that was not utilized was the periodic construction contract inspection and audit of a contractor's books and records and random "on the job" audits⁴ or "post job" audits. This is a common industry standard control mechanism that appears to be embedded in the Standard Terms and Conditions of CECONY construction purchase orders. The article states, "Contractor shall make and cause to be made said books, records and accounts available for inspection and audit by Con Edison..." Such audits were not performed by CECONY management.
- 1.2.4 The COMPASS database did not keep an audit trail of users; any changes to the database records the last user as the responsible official and deleted the information on others' involvement. The lack of audit trail functionality meant that it would not be possible to verify the accuracy of user details.
- 1.2.5 Further, the configuration, quantity and quality of the descriptions in the Trenching Manual, which dictates various types and methods of work for which the contractor will be paid, facilitated the perpetration of the alleged frauds.
- 1.2.6 At the time of the arrests and earlier, CECONY did not have a stated staffing policy that required rotation of CECONY construction management personnel, increasing the risk that CECONY construction management personnel who were in the role of contractor oversight and payment could collude with a contractor to seek personal monetary gains.
- 1.2.7 Although fraud prevention mechanisms, such as the Ethics Helpline and Office of the Ombudsman, led Corporate Security and Internal Audit groups to investigate reports about certain arrestees, they did not appear to run joint investigations or develop a corrective actions approach. It appears that tips about those who were eventually

³ The RFP states, "Part One should focus on the known fraudulent, illegal or improper transactions that were part of the indictment capital projects described in the affidavits supporting the January, 2009 arrests of the CECONY employees." The use of the phrase "fraud, waste and abuse" within this Report is meant to cover "fraudulent, illegal or improper transactions" as described in the RFP. Ultimately, a legal determination will establish as to whether an act or omission is fraudulent or illegal.

⁴ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

arrested were deemed as being “without merit” with no further follow-up (i.e., cold case reviews).

- 1.2.8 Consistent with this lack of coordination, there appeared to be a lack of a formal and regular fraud risk management system across CECONY during the perpetration of the arrestees’ fraudulent activities.
- 1.2.9 The arrestees, using their knowledge of the controls surrounding construction contract procurement and payment and the weaknesses and enforcement of these controls, were able to falsify source documentation, effectively override invoice and payment controls, and facilitate overpayments to the contractor for their own personal monetary gain. Further, CECONY failed to employ certain controls (i.e., formal employee rotation policy, independent contractor cost audits and “on the job” audits⁵ of work installed, and coordination and more robust follow up on reported allegations) in a pro-active manner. The aggregation of these control breakdowns created an environment -- sometimes referred to as a “culture” -- within CECONY construction management whereby the arrestees could perpetrate the fraud.
- 1.2.10 Overall, and as explained in this report and especially in this section 5, the control environment surrounding the mitigation of construction fraud risk during the period examined facilitated the observed fraud. As per the RFP, Part 2 of this audit will expand the investigation beyond the transactions identified in the US Attorney’s investigation, and endeavor to estimate the damages associated with non-indictment contract transactions.

1.3 OTHER VULNERABILITIES IN INTERNAL CONTROLS

- 1.3.1 Within Construction Management, there did not appear to be a systematic or periodic assessment of fraud risk exposure or an identification of particular fraudulent schemes, events, and risks that are pertinent to construction.
- 1.3.2 There appears to be no independent monitoring of requests and approvals for an extension or increase in time and/or money above a pre-determined threshold above the original purchase order.

⁵ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced “on the job” audit program.

- 1.3.3 Key fraud risk indicators did not appear to be emphasized in variance reports, trend analyses, process, risk and controls documentation as part of CECONY's internal reporting. Further, it did not appear that materiality thresholds (e.g., lack of indicators triggered when change orders exceed an established metric) for potential fraud risk existed.
- 1.3.4 A review of monthly management reports did not indicate that, at the layout level, budget to actual variances are monitored, analyzed, or reviewed by Senior Construction Management staff.
- 1.3.5 It was observed that CEI Corporate Policy Manual, Code of Ethics, Standards of Business Conduct, Ethics and Compliance Program, General Rules and Regulations, and The Way We Work Program have been in force for a number of years. Employee annual acknowledgements and compliance monitoring statements were not observed within the Human Resources files of certain arrested employees.
- 1.3.6 There is insufficient evidence that there is clarity of organizational responsibility and accountability between some CECONY divisions related to the cost of the work performed as compared to the budget on the Layout level.
- 1.3.7 Section 2.4 of Appendix 5.1 provides a high level review of CECONY's construction contractor procurement policy and, in particular, the conditions that dictate fact finding reviews surrounding submitted bids to ensure the contractor fully understands the scope of work to be performed. Although these policies contain specified percentages above or below which reviews of bids shall be conducted, there were vulnerabilities with the broadness of the established low range as contractors could potentially be awarded contracts based on unusually low bids and subsequently increase their price through purchase order modifications.
- 1.3.8 In an effort to improve controls and procedures in response to the arrests in 2009 (or earlier) of certain CECONY employees as well as employees and management of a major construction contractor associated with CECONY projects, there have been a number of initiatives undertaken at CECONY whose aim is to provide structural changes that will enhance the controls framework of CECONY.

1.4 THE QUANTITATIVE INDICATOR MODEL

- 1.4.1 A Quantitative Indicator Model ("QIM", the "Model") was developed to test transactions for indicators of fraud, waste and abuse.

- 1.4.2 The model was applied on data from the Construction Management Payment and Support System (“COMPASS”) database and selective data from the Procurement Management System (“PMS”) database. The available data for analysis by the QIM is limited at present to the data resident in COMPASS and selected data secured from PMS for the period of examination. The analysis of the above extended only to the population of payments within this database (comprising \$205.2 million out of the total \$252.1 million⁶ payments to Felix Associates).
- 1.4.3 Based on an evaluation of the CECONY processes, arrest warrants, and control tools, an initial series of 136 queries were developed to apply against the resident data. The results of a number of these queries produced several indicators to assist with identifying populations of transactions at risk for fraudulent, wasteful, or abusive conduct. The most significant results from these queries were captured in the following four categories:
- (a) Macro/Micro items: Macro items are “all-inclusive” pay items that should not be charged in combination with other Micro items in the same cut to avoid overpayment.
 - (b) Upcoding: Involves the charging of items at more expensive item codes than actually applicable.
 - (c) Net Debits: Involves lump sum payments described as a debit⁷ and may be entered into a COMPASS worksheet in lieu of any descriptive item of work, or as a partial payment. Un-reconciled debit items (i.e., those not off-set by a subsequent credit within the layout) may represent potentially unwarranted payments.
 - (d) Time and Equipment (“T+E”) charges: T+E are used in specific circumstances where appropriate pay items may not be specified under the contractor’s purchase order. A high proportion of T+E in a layout compared to the overall layout cost may indicate an increased likelihood of overcharging relating to a particular layout.
- 1.4.4 The results of the QIM analysis were enhanced with “fingerprint”⁸ data and other information within CECONY’s electronic systems. This data, indicating employee involvement, provides an additional overlay in identifying populations of “at-risk” transactions.

⁶ As per CECONY’s submission to PSC dated June 15, 2009.

⁷ See Section 4.4.2.

⁸ A “fingerprint” is electronic evidence of employee involvement in the creation, review, or approval of contractor invoices as recorded in the COMPASS system.

- 1.4.5 We were offered an opportunity to interview one of the arrested CECONY employees. The interview was limited to logistics for advancing further interviews. These interviews, if they take place, could provide potentially valuable information to improve the Model.

1.5 MAGNITUDE OF THE “AT-RISK” TRANSACTIONS

- 1.5.1 Between 2003, the inception year of Felix Associates, and the end of 2008, payments to Felix Associates increased from 0.4% to 10.5% of all CECONY construction contractor payments. During the period 2000-2008, the several Felix entities collectively were the largest CECONY contractor by amount paid.

- 1.5.2 “At-risk” transactions within subsets of the total population of payments to Felix Associates were identified as follows:

- 1.5.3 At the COMPASS level (\$205.2 million):

(a) Transactions totaling between \$21.7 million and \$29.0 million within the population of \$205.2 million in relation to item codes:

(i) Macro/micro duplication – \$0.2-\$4.9 million in relation to “all-inclusive” items and \$0.0-\$0.1 million in relation to “mutually exclusive” items

(ii) Upcoding – \$1.1 million in relation to inappropriate use of weekend codes

(iii) Net Debits – \$5.2-\$7.8 million

(iv) T+E charges – \$15.7 million in relation to T+E

(b) Transactions totaling \$125.8 million within the population of \$205.2 million where involvement of the arrested employees has been identified.⁹

- 1.5.4 At the PMS level (\$242.6 million):

(a) Transactions totaling \$54.4 million within the population of PMS payments totaling \$190.9 million¹⁰ (excluding PI work, as no purchase orders are raised in respect of such work) where purchase order modifications have been processed, in particular:

⁹ As well as \$63.8 million within the population of \$85.4 million worth of layouts included in LOT, although limited reliability should be placed on this data.

¹⁰ Refer to Table 6-3: \$242.6 million less \$51.7 million paid in respect of PI work. Also refer to Table 6-11 and Table 6-12; \$33,212 of payments under Spot Buy contracts and \$157,532 under Blanket Order contracts.

(i) \$9.6 million in relation to spot buy contracts within a total population of \$33.2 million of payments or approximately 30%.¹¹

(ii) \$44.8 million in relation to blanket order contracts within a population of \$157.7 million of payments or approximately 30%.¹²

1.5.5 The “at-risk” transactions listed in 1.5.3 (b) and 1.5.4 (a) above are not necessarily additive to 1.5.3 (a) and may have some overlapping with 1.5.3 (a).

1.5.6 An indication of the accounting for the “at-risk” transactions identified based on the Quantitative Indicator Model is summarized in Table 1-2.

Table 1-1: “Low” End and “High” End of “At-Risk” Payments

	Assets & Other Debits – Electric Plant in Service	O&M Electric	O&M Gas	O&M Steam	“Other”	“Split”	“Not Yet Known”	Total
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
“Low” End	9,061	3	1,478	794	2,571	737	7,029	21,674
“High” End	13,675	3	1,479	877	2,991	942	9,026	28,993

1.5.7 These amounts were recorded in CECONY’s accounts and the non-O&M portions of these amounts have been used as an input to the calculation of the rate base. Further analysis is required to determine whether other CECONY overhead costs, such as materials, are also “at-risk.”

1.5.8 The RFP requires an estimate of the extent of illegal or improper contract overcharges included in the total payments made to Felix Associates. As such, we have been asked to provide an initial assessment of CECONY’s potential liability exposure in respect of the transactions examined in this report (i.e., within the total paid to Felix Associates). In this context, “liability exposure” means an evaluation of the magnitude of items that appear to relate to fraud, waste, and abuse in the population examined. The following table summarizes an assessment of such liability exposure:

¹¹ Excluding Purchase Orders 436606 (Felix Gas Corrosion Project) and 437003 (Felix Associates LLC 4-37003), the initial authorization amounts of the remaining Spot Buy Purchase Orders with amendments were increased by an average of 33%. The initial authorized amounts of Purchase Orders 436606 and 437003 increased by 488% and 266% respectively. Refer to Appendices 6.9 and 6.10.

¹² The initial authorization amounts of the Blanket Purchase Orders with amendments were increased by an average of 60%.

Table 1-2: Provisional Assessment of Potential Liability Exposure

		At-Risk Value	Proportion Variable	Assessed Component
		\$'000	%	\$'000
(a)	KPMG Calculated Loss	1,982	100	1,982
(b)	Bounded T+E	15,694	70	10,986
(c) (i)	Unreconciled Net Debits	7,826	100	7,826
(c) (ii)	Unreconciled Net Credits	(2,604)	0	0
(d) (i)	Trenching Manual Duplication at Cut Level	198	100	198
(d) (ii)	Weekend Work Code	1,123	100	1,123
(e)	Trenching Manual Duplication at Bearing and Layout Level	4,971	0	0
(f)	Overlap	(853)	100	(853)
Total		28,337		21,262

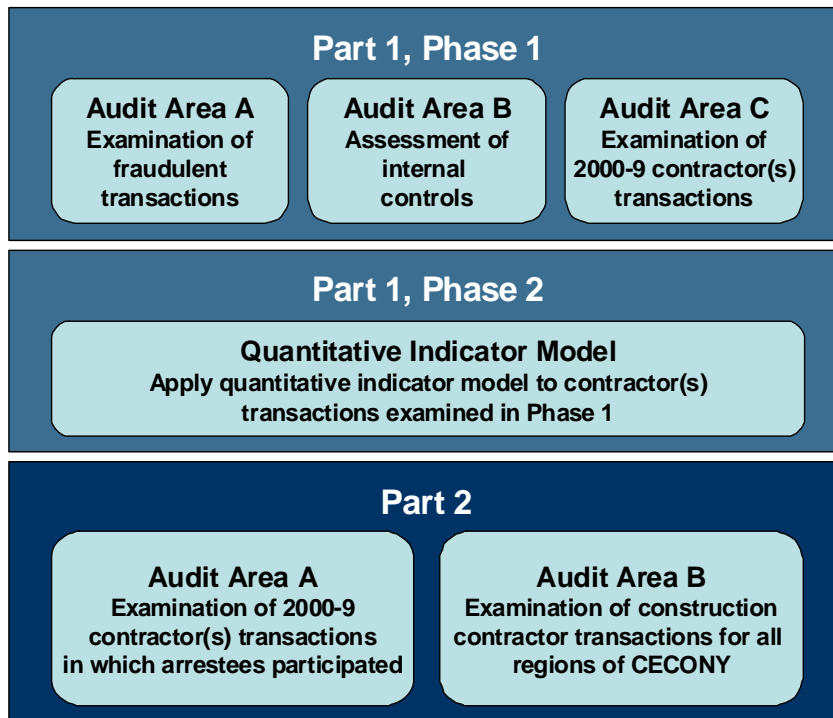
1.5.9 The above table does not include any estimate for the amount of overcharges related to “upcoding” (except for inappropriate use of weekend codes), “contractual exclusions,” or “phantom items,” except as found by KPMG from analysis of source documentation, since such overcharges are not discernable from data analytics alone.

2 INTRODUCTION

2.1 OVERVIEW OF PART 1 REPORT

2.1.1 Consistent with our Workplan for Part 1 investigation, the analysis to be presented in this Part 1 Report was broken into several audit areas as shown below in Figure 2-1.

Figure 2-1: Audit Areas



2.1.2 Part 1 Phase 1 includes the examination of the fraudulent transactions identified in the arrest affidavits, an assessment of the internal controls surrounding the fraudulent transactions, and the examination of potential overcharges associated with the projects listed in the affidavit. These are set out in Sections 4 and 5.

2.1.3 Part 1, Phase 2 uses the knowledge gained in the Part 1, Phase 1 to develop a Quantitative Indicator Model to further identify “at-risk” transactions for the contractor(s) identified in the arrest affidavits. It turned out that Felix Associates LLC (“Felix Associates”) was the only contractor involved in the alleged fraudulent activities identified by the arrest affidavits. This analysis is set out in Section 6.

2.1.4 Part 1 investigation also includes an examination of what actions could have been employed by CECONY to have prevented, detected, or mitigated the extent of the fraud.

- 2.1.5 Part 2 of the RFP is not part of this Report. However, the Quantitative Indicator Model developed in Part 1 can be applied to other contractors in other regions of the CECONY network as well as applied against the arrested employees and/or others related to the construction management process.
- 2.1.6 Within each audit area of Part 1, the report considers the following, as appropriate:
- (a) The purpose, mission, planning, goals and objectives, and strategies used by CECONY to manage construction, personnel, contractors, change orders, expenditures, and stakeholder expectations
 - (b) Construction, purchasing, finance, human resources, internal audit, external audit, corporate governance, Board interaction, corporate security, and other corporate policies processes, practices, and systems
 - (c) Organizational design for each functional area that touches on the contracts
 - (d) Staffing, including responsibilities and accountabilities
 - (e) Cost control/cost oversight
 - (f) Efficiency and effectiveness of controls
 - (g) Quantification of “at-risk” transactions
 - (h) Opportunities for improvements
- 2.1.7 This audit assesses the amount of “at-risk” transactions that CECONY may have made between 2000 and 2009 relative to the alleged fraudulent activities identified in the arrest affidavits.

2.2 BUSINESS CONTEXT FOR INVESTIGATION OF AUDIT ISSUES

- 2.2.1 For the purposes of this investigation and given the scope set out above, the following elements were considered as they relate to CECONY performance:
- (a) Construction activity performed in New York City during the period of the arrestees’ fraudulent activities, namely 2000 through 2009
 - (b) Construction services procurement, construction contract management, and invoice payment processes at CECONY during the period 2000-2009
 - (c) Certain aspects of legal, corporate security, internal audit, human resources, corporate policy and reporting, accounting and finance, control assessment and

compliance processes where these inform the discussion of construction process, arrestee involvement, and the fraudulent transactions

(d) Certain aspects of information systems that CECONY used to support construction processes and transactions

(e) Other processes may be indicated for future inquiry in this investigation.

2.2.2 The analysis focused on the Construction Management function within the Construction organization in CECONY Central Operations. Other functions within the Construction organization, such as Public Improvements, facilities, and others, are discussed insofar as these were specifically identified in the arrest affidavits or aided the Part 1 investigation and may be indicated for future inquiry in Part 2 of this investigation. Further, the procurement and oversight of construction services by other organizations within CECONY (i.e., outside the Construction organization) have not been reviewed in Part 1 of this investigation.

2.2.3 The analysis focused on the inputs, activities, and outputs of two transaction systems during Part 1: Construction Management Payment and Support System (“COMPASS”) and Procurement Management System (“PMS”). Other systems, such as Contract Oversight System (“COS”), Materials Management System (“MMS”), and ad hoc logging and reporting systems (e.g., Internal Audit’s spreadsheets for the tracking of investigations) were treated as ancillary to Part 1 of this investigation and may be indicated for future inquiry in Part 2 of this investigation.

2.2.4 The Part 1 analysis focused on one contractor, Felix Associates, as they were the immediate subject of arrestees’ fraudulent activities and transactions. A case study of a select project within a multi-contractor program – the Manhattan Vaults project – that included Felix Associates was developed. Other contractors may be indicated for future inquiry during Part 2 of this investigation.

2.2.5 The Part 1 analysis focused on three CECONY regions where Felix Associates contracts were performed: Manhattan, Westchester, and the Bronx. Other geographic regions may be indicated for future inquiry during Part 2 of this investigation.

3 METHODOLOGY & APPROACH

3.1 OVERVIEW

- 3.1.1 The analysis undertaken regarding the investigation of certain fraudulent transactions, arrestees, and others associated with CECONY employed the following principles: retrospective analysis, prudence standard, observations, and indications for potential further inquiry.
- 3.1.2 The analysis is retrospective. Documents produced by CECONY¹³ during the period of interest (2000-2009) were reviewed and personnel at CECONY with knowledge of processes, systems, transactions authority, governance, and procedures relevant to the period under review were interviewed. This analysis considered events in their temporal context rather than events from the vantage point of today's capabilities, standards, guidance, and expertise.
- 3.1.3 The analysis and evaluation applied a "prudence standard." By this, data was considered as a reasonable person would consider to be prudent confronted by the situation under review. The situation under review was a complex deployment of field construction practices, existing transactions processes, systems and controls, existing policies and procedures, existing corporate governance, and existing organization. A "reasonable person" would be thought to manage this type of business in a prudent, discrete, and intelligent manner with proper regard to the organization's mandates and values in the management of its assets and resources. Several factors could be considered by the prudent person in the provision of electric, gas and steam supply and service: the needs of ratepayers relative to the conduct of the prudent personnel; the need to ensure that capital is deployed to provide reliable and safe service; and the amount and timing of rates that emanate from the conduct of prudent personnel are just.
- 3.1.4 Within the context of "prudence," observations based on probable antecedents and consequences of arrestee and CECONY activity were used. Antecedents are those things that necessarily (e.g., construction contractor service procurement necessarily precedes trenching operations) or habitually (e.g., Chief Construction Inspectors generally visit trench cuts daily) precede (i.e., not necessarily cause) the subject of inquiry (e.g., arrestee bribes). Consequences are those things that necessarily or

¹³ Most of the documents were posted by CECONY to a secure, portal-based document repository website; other large file size documents were delivered by CECONY as CDs at various times.

habitually follow (without being caused by) the subject. By “probable” is meant the following: if a sufficient motive for, or habitual conduct consistent with an act, can be established, it can be presumed that the effect has or will have occurred. In the context of this investigation, an example of a “sufficient” motive is an arrestee’s statement in an affidavit that he wanted to skim 4% of a contractor’s invoiced payment; an example of “habitual” conduct is that the arrestee routinely relied upon existing construction management controls to perpetrate his fraudulent activity; an example of an “effect” is the act of bribery itself.

3.1.5 The term “indications” is used to denote investigative areas that were judged to be gaps in data, analysis, and understanding relative to various issues raised during the investigation. These indications may lead the Staff to consider further specific inquiry in Part 2 of this investigation.

3.1.6 The noun “observation” is used to denote a judgment of fact, based on review of documents, interviews with personnel, and analysis of data relevant to the investigation at the time during which the investigation was conducted. Considering: 1) the available timeframe to complete Part 1 of the investigation; 2) the ability to have the data immediately available and organized; and 3) the complex nature of the CECONY organization, the observations are limited to this initial phase of the investigation and are subject to revision should new and material information come to light in Part 2 analysis.

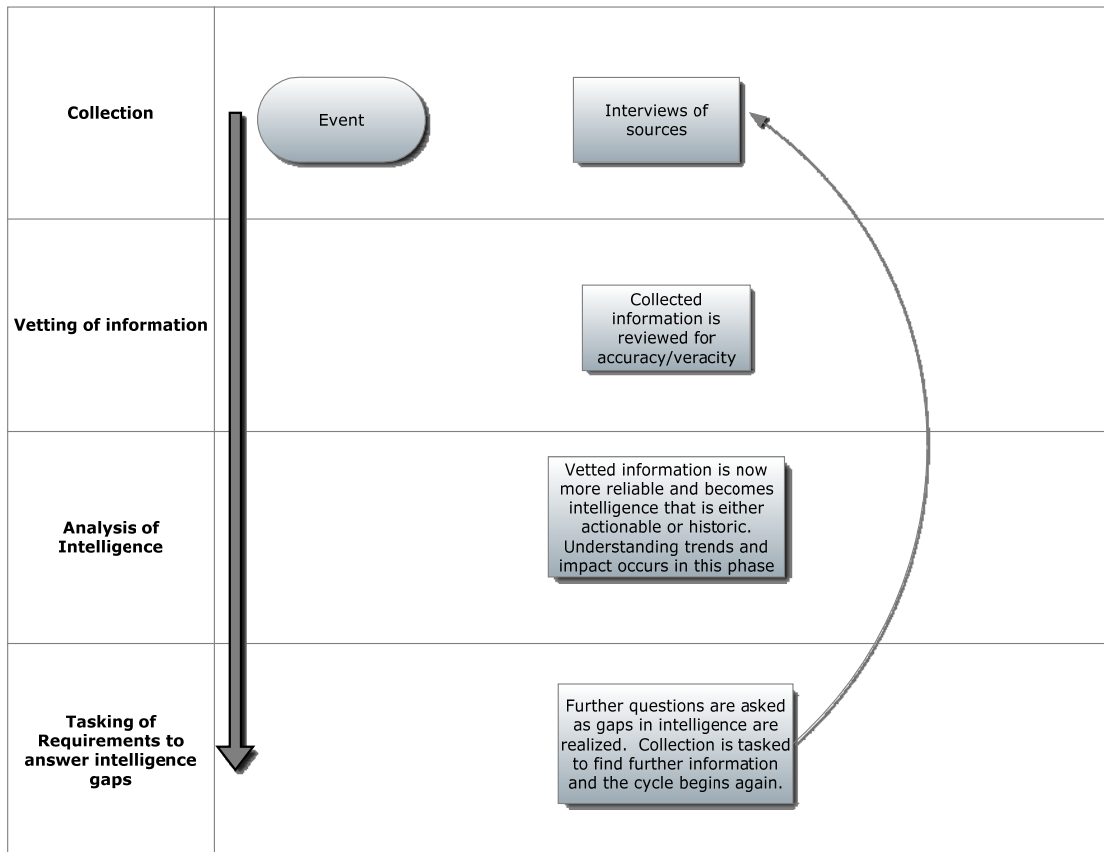
3.1.7 For the same reason as stated above, opinions expressed in this Report are subject to revision should new and material information come to light in Part 2 analysis.

3.2 INTELLIGENCE-LED APPROACH

3.2.1 An intelligence-led approach to the collection, vetting, analysis, and presentation of observations for this investigation was applied.

3.2.2 The process depicted in Figure 3-1 to collect, vet, and analyze data was used. The analysis yielded further questions to fill gaps in understanding of questions posed by PSC Audit Issues.

Figure 3-1: Workflow Process



3.2.3 Analytical and Investigative Methodology (“AIM”) used the collection methodology and performed the following:

- (a) Review of affidavits, court documents, and intelligence information to develop an understanding of the violations of law and CECONY standards of conduct on the part of all the named CECONY defendants. We were able to access and review a number of court documents filed in the Eastern District of New York.
- (b) The investigative process drives the analysis of the allegations facing employees of CECONY. The process is a step-by-step, fact-based endeavor.
- (c) Interviews were conducted using the following investigative guidelines:
 - organizationally critical personnel, personnel who were not arrested in association with the current CECONY investigation, members of the Construction Management Business Unit (“CMBU”) (some of whom were present during the period of interest). Interviews were also conducted with persons involved in administering information received from the ethics helpline, security services and investigations, the Ombudsman, HR-Labor relations, and others regarding their functional role, actions,

and treatment of potential breaches of the CECONY Standards of Conduct. A complete list of persons interviewed and meetings attended is available in Appendix 3.

- (d) CECONY Internal Audit log of all allegations and complaints forwarded from certain sources and referred for investigation by Internal Audit were reviewed. Investigative reports on the Manhattan and Bronx Construction Management allegations of wrongdoing and investigative folders on allegations of wrongdoing on the part of any of the named or developed CECONY defendants and contractors were reviewed.
- (e) CECONY Security log of allegations and complaints forwarded from various sources and referred to Security for investigation were reviewed. Investigative reports on the Manhattan and Bronx Construction Management allegations of wrongdoing. The investigative folders on allegations of wrongdoing on the part of any of the named or developed CECONY defendants and contractors were reviewed.
- (f) Allegations contained in the files of Internal Audit and Security Services-identified CECONY employees and contractors were thoroughly reviewed for details and, when possible, interviews with the investigators were conducted to determine their conduct in the investigation.

3.3 COMMITTEE OF SPONSORING ORGANIZATIONS (“COSO”) FRAMEWORK

- 3.3.1 Various elements of the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) framework were used to perform the internal control assessment. This section outlines aspects of the COSO framework.
- 3.3.2 Over 15 years ago, the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) issued “Internal Control – Integrated Framework” to help businesses and other entities assess and enhance their internal control systems. That framework has since been incorporated into policy, rule, and regulation, and used by thousands of enterprises to better control their activities in moving toward achievement of their established objectives.
- 3.3.3 After a series of high-profile business scandals and failures where investors, company personnel, and other stakeholders suffered tremendous loss during the early part of the decade, the Sarbanes-Oxley Act of 2002 was enacted in the United States. This law extends the long-standing requirement for public companies to maintain systems of internal controls requiring management to certify and the independent auditor to attest to the effectiveness of those systems. “Internal Control – Integrated Framework” served as

the broadly accepted standard for satisfying Sarbanes-Oxley Act of 2002 reporting requirements. Similar legislation has been enacted in other countries.

- 3.3.4 In 2004, COSO published the Enterprise Risk Management – Integrated Framework in an effort to reinforce key principles and concepts and provide a common language and clear direction and guidance for enhanced corporate governance and risk management with the new laws, regulations, and listing standards. Enterprise Risk Management – Integrated Framework expands on internal control, providing a more robust and extensive focus on the broader subject of enterprise risk management. While it is not intended to and does not replace the internal control framework (but rather incorporates the internal control framework within it), companies may decide to look to this enterprise risk management framework both to satisfy their internal control needs and to move toward a fuller risk management process, including the risk of fraud, waste, and abuse.
- 3.3.5 In this framework, the underlying premise of Enterprise Risk Management (“ERM”) is that every entity exists to provide value for its stakeholders. All entities face uncertainty; the challenge for management is to determine how much uncertainty is acceptable as it strives to grow stakeholder value. Uncertainty presents both risk and opportunity, with the potential to erode or enhance value. ERM enables management to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value. As a subset of ERM, fraud risk management and the attending internal control framework form the basis of the CECONY Construction Management Business Unit investigation.
- 3.3.6 Value is maximized when management sets strategy and objectives to strike an optimal balance between growth, return, and related risks while it efficiently and effectively deploys resources in pursuit of the entity’s objectives. ERM generally encompasses the following six capabilities which were applied to CECONY’s management of transactions that are the subject of Part 1 of this investigation:
- (a) Aligning risk appetite and strategy: Management considers the entity’s risk appetite in evaluating strategic alternatives, setting related objectives, and developing mechanisms to manage related risks.
 - (b) Enhancing risk response decisions: ERM provides the rigor to identify and select among alternative risk responses, including risk avoidance, reduction, sharing, and acceptance.

- (c) Reducing operational surprises and losses: Entities gain enhanced capability to identify potential events and establish responses, thereby reducing surprises and associated costs or losses.
- (d) Identifying and managing multiple and cross-enterprise risks: Every enterprise faces a myriad of risks affecting different parts of the organization; ERM facilitates effective response to the interrelated impacts and integrated responses to multiple risks.
- (e) Seizing opportunities: By considering a full range of potential events, management is positioned to identify and proactively realize opportunities.
- (f) Improving deployment of capital: Obtaining robust risk information allows management to effectively assess overall capital needs and enhance capital allocation.

3.3.7 These capabilities inherent in ERM help management achieve the entity's performance and profitability targets and prevent loss of resources. ERM helps ensure effective reporting and compliance with laws and regulations, and helps avoid damage to the entity's reputation and associated consequences. In sum, ERM helps an entity get to where it wants to go and avoid pitfalls and surprises along the way.

3.3.8 This process is aimed at providing reasonable assurance regarding achievement of key objectives in the areas of:

- (a) Reliability of financial reporting
- (b) Effectiveness and efficiency of operations
- (c) Compliance with applicable laws and regulations

3.4 EXCLUSIONS, CONDITIONS, CAVEATS

3.4.1 During the course of Part 1 investigation, the following was observed:

3.4.2 Since Part 2 is expected to cover a broader population, some observations and opinions presented in this Part 1 Report are subject to revision should new and material information comes to light in Part 2 analysis, and to that extent, should be considered provisional.

3.4.3 Observations are retrospective in nature in that they are conditioned by practices at the time of the conduct, namely from 2000 to 2009.

- 3.4.4 All observations are based on information provided, which information has assumed to be an accurate representation by CECONY.
- 3.4.5 The integrity of data was not tested, and it was assumed that all data that were input into books and records was of sufficient integrity to rely upon, in the same way that external auditors relied upon such data.
- 3.4.6 Part 1 of this investigation did not purport to test CECONY's assertions, made by management or by employees, or as represented in data provided.
- 3.4.7 Part 1 of this investigation did not purport to replicate or evaluate KPMG's analysis or data that was provided for this Report.
- 3.4.8 Time needed to analyze systems and process data was compromised by the need to reconstruct accounts, transactions, process flows, and other aspects of CECONY's books and records for the purpose of answering questions surrounding the PSC's audit issues.
- 3.4.9 Assurance will not be provided around the integrity of CECONY systems, processes, transactions, or books and records.
- 3.4.10 A Quantitative Indicator Model was developed and employed; however, models by their nature are abstractions from actual situations and thus can only provide indicators of potential anomalous activity as might be observed in the transactional data.
- 3.4.11 Part 1 of this investigation focused on the 12 CECONY arrestees and their associated activities with the initial 7 projects plus the 3 additional projects identified by KPMG, all of which involved the contractor Felix Associates.
- 3.4.12 Notwithstanding the above exclusions, caveats, and conditions, professional skepticism in the collection, preparation, analysis, and examination of data provided by CECONY was employed.

4 PART 1, AUDIT AREA A: DETAILED EXAMINATION OF FRAUDULENT TRANSACTIONS

4.1 INTRODUCTION

4.1.1 Starting on January 14, 2009, the US Attorney's office announced a series of arrests of 12 CECONY employees, including one retired former employee, ("the 12 CECONY employees"). The arrests related to alleged criminal enterprise involving CECONY employees, a construction contractor, and the award and progress of construction contracts in Manhattan, Westchester, and the Bronx. Specific allegations included the payment of bribes for the award of contracts and the expedition of payments.

4.1.2 In addition to the 12 CECONY employees whose arrests were announced in and subsequent to January 2009, other former CECONY employees had been cooperating with the US Attorney's investigation since at least 2007. Additionally, a principal of the contractor had also been cooperating with the US Attorney's investigation.

4.1.3 The US Attorney's case against the 12 CECONY employees involved contracts awarded to and payments to Felix Associates. Felix Associates was a company organized in the State of New York that provided construction services to CECONY involving site work related to the installation and repair of various gas, steam, and electrical service infrastructure. It is the fraudulent transactions in connection with the US Attorney's case against the 12 CECONY employees that are considered in the following sections.

4.2 ANALYSIS OF AFFIDAVITS

4.2.1 An in-depth review of the relevant affidavits filed in connection with the arrests of the CECONY employees and detailed research of court records associated with the defendants was carried out. Furthermore, forms of action and status updates of the CECONY cases, referred to by the courts as "The Con Ed Cases," were also retrieved and analyzed. A comprehensive understanding of the criminal activities¹⁴ of the CECONY employees and Felix Associates was developed through the following activities:

(a) Reviewed and analyzed the facts of each case as outlined in the original affidavits.

¹⁴ A number of the arrestees have pleaded guilty to their criminal activity.

- (b) Researched and reviewed the federal court documents in the Eastern District of New York (“EDNY”) associated with the affidavits to identify related CECONY cases uncovered by the government’s investigation but not known to CECONY at the inception of the PSC investigation. This review and research also provided information as to the role and relationship of the CECONY employees in criminal activities, the role of CECONY employees and Felix Associates played in the Government’s investigation, and the current status of the cases against CECONY employees and Felix Associates. These documents were secured by accessing the PACER¹⁵ system and personal Court visits at the State and Federal level to ensure such documents were current.
- (c) Applied experience in federal investigations to the facts presented in the affidavits and the court records to determine law enforcement and prosecution activities and their strategy to understand the role of the CECONY cooperators/defendants in the Government’s undercover investigation.
- (d) Assessed the affidavits and court documents statements, and other intelligence information and evidence, indicative of the scope of the criminal activity across other CECONY projects, contracts, and time parameters of the criminal activity.
- (e) Assessed the affidavits and court documents investigative leads to identify potential witnesses and key documents in respect to possible fraud, waste, or abuse in other geographical areas of New York that may involve other persons and further criminal activity.
- (f) Assessed the affidavits and court records patterns of criminal activity and manipulation of CECONY internal processes to be applied to the auditing, internal controls, and construction data mining phases of this investigation.

4.2.2 The 12 CECONY employees, all employees within the Construction organization of CECONY, were as follows:

- (a) James Coffin (“Coffin”), Project Specialist, Public Improvement, Manhattan and Queens
- (b) Kevin Cook (“Cook”), Senior Specialist, Construction Management, Westchester County

¹⁵ PACER is an electronic public access service that allows users to obtain case and docket information from Federal Appellate, District and Bankruptcy courts, and the U.S. Party/Case Index via the internet upon registration and a subscription online. Relevant case documents, except those “sealed” by the Judge, were obtained from PACER.

- (c) Leonard DiRoma (“DiRoma”), Construction Representative, Construction Management, Westchester County
- (d) Rocco Fassacesia (“Fassacesia”), Construction Manager, Construction Management, Manhattan
- (e) Thomas Fetter (“Fetter”), Retired employee, formerly Construction Representative, Public Improvement, Manhattan
- (f) Richard Giannetto (“Giannetto”), Senior Specialist, Public Improvement, Bronx
- (g) Brendan Maher (“Maher”), Chief Construction Inspector, Substation & Transmission Construction
- (h) Joseph Lioi (“Lioi”), Chief Construction Inspector, Construction Management, Westchester County
- (i) Abraham Panagi (“Panagi”), Senior Specialist, Construction Management, Manhattan
- (j) Paul Sanabria (“Sanabria”), Construction Manager, Construction Management, Bronx
- (k) Anthony Villano (“Villano”), Senior Specialist, Construction Management, Bronx
- (l) Richard Zebler (“Zebler”) Chief Construction Inspector, Construction Management, Manhattan

4.2.3 The process of conducting an in-depth examination of court records in the Eastern District of New York (“EDNY”) revealed additional details associated with “Conspiracy 1”, discussed in section 4.2.6 below, and a potentially wider scope of criminal activity than originally contemplated by the PSC investigation.

4.2.4 The development of the roles that these cooperating witnesses played in the bribery schemes advanced the understanding of the identified bribery/kickback schemes and how they related to CECONY’s procurement/inspection/approval process. This information enabled effective data mining of contracts, change orders including Purchase Order Change Request (“POCR”) and Purchase Order Change Authorization (“POCA”), additional items added to invoices, and potential fraud, waste, and abuse activity.

4.2.5 Government agents traced the deposit of governmental payments to a corporate contractor into a personal bank account and identified a “dummy” company as a potential money laundering operation involving two CECONY employees who confessed to their culpability and became cooperators for the government. Their cooperation assisted the government agents in gaining the cooperation of a principal of Felix

Associates (“Felix Associates Principal”), who was involved in bribery and kickback schemes with a number of CECONY employees. The cooperation of the Felix Associates Principal assisted the government agents in recording incriminating conversations with CECONY employees involved in bribery and kickback schemes.

4.2.6 The Government's inquiry was grouped into two main conspiracies and a third group of specific criminal acts of bribery and corrupt agreements.

(a) **Conspiracy 1** involved the alleged agreement between former CECONY employees, an employee of a third party contractor, and an unnamed member of a Board of Directors of an unnamed bank. This was identified as a bribery/kickback/money laundering conspiracy. This conspiracy was not considered under Part 1 investigation.

(b) **Conspiracy 2** involved an illicit agreement between CECONY employees and the Felix Associates Principal. This was a bribery/kickback conspiracy that covered work done on a government project in lower Manhattan from 2004-2007. This conspiracy involved a project with \$39 million of CECONY payments to Felix Associates.

(c) **“Other acts of bribery and corruption”** were a series of criminal acts, some of which were conspiratorial. These illicit activities were individual agreements made between the Felix Associates Principal and some of the 12 CECONY employees. The Felix Associates Principal was the epicenter of these bribery/kickback schemes whereby bribes were routinely offered to and accepted by some of the 12 CECONY employees on individual work projects in which Felix Associates, the Felix Associates Principal, and CECONY were involved. The Felix Associates Principal was allegedly aided and abetted in some of these illicit acts by another former Felix Associates senior employee.

4.2.7 The affidavits supporting the arrests of the CECONY employees identified specific projects on which Felix Associates and the Felix Associates Principal were involved and which were the subject of the criminal schemes. For convenience, these are listed in Table 4-1.

Table 4-1: Construction Projects Identified in Arrest Affidavits Involving Felix Associates and the Felix Associates Principal

Ref	Project	Description	Date	Project Type	Arrested Employee Implicated ¹⁶
1	Manhattan gas area contract	Install and maintain gas facilities in Manhattan	March 2005 to Jan 2009	Construction	Fassacesia (CM) Panagi (SS) Zebler (CCI)
2	Manhattan Vaults	Replace manhole vaults near 45 th St, Manhattan	Summer 2008	Construction	Panagi (SS)
3	Manhattan 4000 ft gas pipeline	Installation of 4,000 ft gas pipe in Lower Manhattan	Dec 2006	Construction	Zebler (CCI)
4	Manhattan gas regulator	Installation of gas regulator station in Manhattan	Aug 2007	Construction	Fassacesia (CM) Zebler (CCI)
5	41st/Lexington steam emergency restoration	Emergency repair work at intersection of 41 st /Lexington	July 2007	Construction	Fassacesia (CM)
6	South Westchester area contract	Install and maintain electric and empty gas pipes	Aug 2006 ¹⁷ to Jul 2009	Construction	Cook (SS) Lioi (CCI) DiRoma (CR)
7	Holland Avenue	Installation of a gas main at Holland Avenue, Bronx	June 2006	Construction	Sanabria (CM) Villano (SS)
8	M-29 Bronx pipeline	Installation of oil static pipes and electric lines from Manhattan through Bronx to Yonkers	June 2008	Construction	Maher (CCI)
9	EDC Yankee Stadium	Installation of water mains in park near Yankee Stadium	Feb 2008	PI	Giannetto (SS)
10	DDC project	Installation and repair work on highway project south of Canal Street, Manhattan	2004-2008 ¹⁸	PI	Coffin (PS) Fetter (CR)
11	138 th Street	Moving a water main along 138 th St, Bronx	n/a	Construction	Sanabria (CM) Villano (SS)
12	Westchester gas renewal	Renewal of the South Westchester Gas Area contract	n/a	Construction	Cook (SS)

4.2.8 Work was actually performed by Felix Associates on Projects 1 through 10 above. Projects 11 and 12 were in pre-bidding stages at the time of the arrests and were therefore not awarded to Felix Associates. These two projects fall outside of the scope of Part 1 analysis.

4.2.9 Detailed summaries of the two conspiracies and the “Other” cases including chronologies and summaries of evidence are presented in Appendix 4.1.

¹⁶ CM is “Construction Manager,” SS is “Senior Specialist,” PS is “Project Specialist,” CCI is “Chief Construction Inspector,” CR is “Construction Representative”.

¹⁷ Cook, Lioi, and DiRoma arrest affidavits state March 2007; however, the purchase order was actually dated June 16, 2006 with a commencement date of August 1, 2006.

¹⁸ Payments were made on this project between July 2004 and April 2008; however, it is not presently clear over what period the work was performed.

4.3 CECONY'S INVESTIGATION

- 4.3.1 Following the arrests of the CECONY employees, CECONY instructed Davis Polk & Wardwell LLP ("Davis Polk") to conduct an independent investigation. It is understood that material comprising Davis Polk's investigation is legally privileged.
- 4.3.2 As part of Davis Polk's investigation, KPMG LLP ("KPMG") was appointed. According to the terms of their engagement letter dated March 2, 2009, KPMG was instructed to "quantify the amount of losses to the Company, as well as the amount(s) of improper enrichment by former employees, resulting from the instances of alleged misconduct that have already been identified [and to] [a]scertain and provide this information in a form sufficient to support (1) restitution and forfeiture claims by the US attorney; (2) civil actions for recoupment and other appropriate relief against former employees and contractor(s) identified; and (3) proof(s) of claim for insurance purposes." Additionally, KPMG would "identify the particulars of the misconduct identified, and identify evidence of, and potential leads to, other instances of misconduct beyond those previously identified [and] [i]dentify any immediately needed amendments to the Company's policies, procedures and processes." Such work was said to comprise "Phase I."
- 4.3.3 "Phase II" of KPMG's work was envisaged to include quantifying losses in respect of any instances of similar misconduct identified as well as to "conduct a thorough review of the Company's existing policies, procedures and processes [to] recommend any further needed amendments..." On July 31, 2009, "Phase II" was redefined in the following terms.

"A Follow up on the evidence and leads developed in Phase 1 identifying other instances of misconduct, and ascertain the scope of such additional alleged misconduct by: (a) initially assessing a sample of approximately one hundred layouts that received the highest scores based on the K-Trace scoring methodology using custom data analytics performed by KPMG in Phase I and then evaluating the results of such assessment; (b) conducting a review, based upon an initial sample of construction and service projects contained in the Company's non-COMPASS systems (such sample to be selected on a basis to be determined by KPMG and Counsel after consultation with the Company) (this review is not currently included in the fee estimate below); and (c) meeting with Counsel and Company on a regular basis or upon the request of any of them, to review the results of each initial and subsequent assessment of sample layouts and re-evaluating the value of the assessment of such layouts, After each such re-evaluation, continue with Phase II to the extent determined by Counsel after recommendations from KPMG and discussion with the Company.

"B To the extent practicable, quantify the amount of losses (including documented

overcharges) to the Company as well as the amounts(s) of improper enrichment by former or current employees resulting from any instances of similar misconduct identified as a result of the review performed in Phase II, updating the results as appropriate based upon any additional reviews as they are performed, Ascertain and report this information in a form sufficient to support (1) restitution and forfeiture claims by the US, Attorney, if warranted; (2) civil actions for recoupment and other appropriate relief against the former or current employees and contractor(s); and (3) further proof of claim for insurance purposes.

“C Identify and recommend any further needed amendments or additions to policies, procedures and processes, including audit processes, not previously identified in Phase I.”

4.3.4 KPMG has been onsite at CECONY since March 2009. It is understood that as of this Report, “Phase I” of KPMG’s work has been completed and “Phase II” is in progress.

4.3.5 The information and analysis presented in the following sections regarding KPMG’s work reflects information and data provided as of January 12, 2010.¹⁹

4.4 ANALYSIS OF WORK DONE BY KPMG FOR CECONY’S INVESTIGATION

4.4.1 KPMG’s draft Calculation of Loss in respect of seven out of 10 projects was reviewed. Details of KPMG’s scope, approach, and findings are set out below.

4.4.2 To assist the reader in understanding terminology used by CECONY, the following table summarizes common terms and their definitions.

¹⁹ CECONY notes in comments advanced through the factual accuracy check of this Report that KPMG has since progressed its work. These figures will be updated during Part 2 of this investigation.

Term	Definition
Bearing	Project location identifier (e.g., between street intersections)
Blanket Order	Contract whereby the quantity of work is indefinite, but contract terms and conditions are fixed, such as unit rates for payment, and the nature of the work are set forth with a contractor who is available at any time to perform the work as directed by CECONY
Credit	Accounting/payment adjustment that reduces the amount of monies paid to the contractor
Cut	Street opening. Typically represents a day's work effort in the field by the contractor.
Debit	Accounting/payment adjustment that increases the amount of monies paid to the contractor
Fixed Asset Base	Aggregation of the components that make up the infrastructure and distribution network
Layout	Representation of work scope prepared by Engineering for work to be performed (e.g., replacement of manholes and relocation of utilities). For the most part, a layout is a unique project.
Public Improvement (PI)	Utility work performed in support of a City of New York project. Contractor is selected by the City of New York.
Purchase Order	Contract
Spot Buy	Contract whereby the scope of work is specified for a definite quantity and price
SysBill	COMPASS generated invoice that serves as the official basis for payment
Time and Equipment (T+E)	Reimbursement policy for hour incurred ("time") and equipment utilized ("equipment") when a price to perform the work is not mutually agreeable in advance of performing the work. Unit rates for time and unit rates for equipment are set forth in advance; reimbursement is based on recorded number of hours worked for each labor class and recorded number and type of equipment utilized.
Trenching Manual	Instructions and requirements for installation of facilities in accordance with CECONY Standards and Standard Terms and Conditions of construction contracts. Provides listing of payment items ("Trenching Manual items") describing the scope of work, nature of the work and associated unit of payment. (i.e., a la carte menu)
Worksheet Item	Quantity and pricing calculation for a scope of work within COMPASS

KPMG'S SCOPE AND APPROACH

4.4.3 KPMG's initial work was directed at quantification of the identifiable losses arising from the specific allegations set out in the January 2009 employee arrest affidavits and that are the subject of the criminal prosecutions of the 11 employees arrested in January

2009.²⁰ The quantification also serves for insurance purposes and to assist in civil prosecution.

4.4.4 Following a review of the arrest affidavits, KPMG, with the assistance of CECONY Internal Audit and Construction Management staff, as well as guidance provided by the US Attorney's office during the plea process of one of the arrested employees, identified the specific layouts relating to the projects referred to in the affidavits.²¹

4.4.5 The identified layouts were found to relate to 10 individual contract purchase orders; however, the layouts did not encompass all work performed under each purchase order. Accordingly, KPMG's work was limited to those payments under the purchase order that related to the identified layout and not the complete population of payments made to Felix Associates under the contract purchase order. The total payments under the purchase orders and the payments reviewed by KPMG as of January 12, 2010 are summarized in Table 4-2.

²⁰ The scope of KPMG Phase 1 did not extend to employee Lioi who was arrested in April 2009 in connection with the South Westchester area contract.

²¹ In relation to the Manhattan gas area contract, the layouts were identified using certain data mining techniques (discussed in further detail at paragraph 4.4.7(b) below).

Table 4-2: Total Payments under Contracts and Reviewed by KPMG as of January 12, 2010

Ref	Project/Contract	Total Payments Under Contract PO ²² (\$'000)	Payments Reviewed by KPMG ²³ (\$'000)	Reviewed Payments Date Range		Portion Reviewed %
				From	To	
1	Manhattan gas area contract	53,219	3,776	10/17/05	12/01/08	7.1%
2	Manhattan electric backup service (including Manhattan Vaults project)	2,181	881	04/24/08	12/11/08	40.4%
3	Manhattan 4000 ft gas pipeline	1,446	1,446	03/12/07	01/09/08	100%
4	Manhattan gas regulator	300	300	11/26/08	11/26/08	100%
6	South Westchester area contract	23,200	297	12/24/08	12/24/08	1.3%
7	Holland Avenue	496	496	11/13/06	02/27/07	100%
8	M-29 Bronx pipeline	7,140	1,614	8/12/08	12/22/08	22.6%
9	EDC Yankee Stadium	223	223	07/28/08	12/12/08	100%
Subtotal		88,205	9,034			
5	41st/Lexington steam emergency restoration ²⁴	10,320				
10	DDC project ²⁵	39,063				
Total		137,588	9,034			

4.4.6 As of January 12, 2010, payments in respect of four out of the 10 projects (Projects 3, 4, 7, and 9) were reviewed by KPMG in full.

²² Total payments under contract PO are based on data within COMPASS; actual payments released are contained within the A/P database and may differ from vouchered amounts in COMPASS. The A/P database was not used for the purpose of this Part 1 report.

²³ Total payments reviewed by KPMG are as of information provided through January 12, 2010.

²⁴ This work was procured by the Purchasing organization and, CECONY considers that no evidence was identified that arrested employee Fassacesia had any involvement in awarding this work to Felix Associates. Fassacesia arrest affidavit states he received \$20,000 following the award of this contract to Felix. CECONY notes in comments put forth during the factual accuracy check of this Report that KPMG has reviewed payments totaling \$1,032,933 related to the 41st/Lexington steam emergency restoration. The analysis presented in this section reflects information provided through January 12, 2010. Payments in respect of the 41st/Lexington steam emergency were made directly through PMS/Accounts Payable, not through COMPASS, and are therefore excluded from further analysis. Amounts will be updated as necessary during Part 2 of this investigation.

²⁵ This PI work was conducted on behalf of the City and was subject to an audit by the Empire State Development Corp. As part of the audit, all payments had been reconciled to the source documentation. CECONY notes in comments put forth during the factual accuracy check of this Report that KPMG has reviewed payments totaling \$7,049,018 with layouts related to Platt Street. The analysis presented in this section reflects information provided through January 12, 2010. Amounts will be updated as necessary during Part 2 of this investigation.

- 4.4.7 Further, KPMG identified selected payments on four contracts for review. The relevant layouts and corresponding payments were:
- (a) South Westchester area contract (Project 6) – KPMG reviewed one layout, corresponding to the “College” layout, which is the subject of the US Attorney’s prosecution of defendant DiRoma.²⁶
 - (b) Manhattan Gas area contract (Project 1) – Due to the large number of layouts performed under this contract during the period 2005 to 2009 (2,827 layouts in total), KPMG reviewed a sample of 100 layouts,²⁷ which were identified by data mining using the KPMG proprietary software “K-Trace.” In essence, the data mining performed consisted of running a series of queries regarding certain identifiable traits on the total population of layouts, and from the results, selecting a sample of those that scored the highest based on a scoring system within K-Trace.
 - (c) Manhattan electric back-up service (Project 2) – The layouts reviewed by KPMG comprised the “Manhattan Vaults Project,” a job package performed under the blanket purchase order issued for electric back-up support services in the Manhattan region. The relevant layouts were identified with the assistance of Construction Management and Internal Audit staff. The Manhattan Vaults Project was reviewed in detail and the observations resulting from this review are presented in Section 5 of this Report.
 - (d) M-29 Bronx pipeline (Project 8) – KPMG reviewed payments in respect of that portion of the work that was said to have been overseen by the relevant arrested employee, Maher, in the capacity of CCI.

KPMG’S FINDINGS

- 4.4.8 KPMG’s quantification exercise yielded the quantification of losses, by project, identified in Table 4-3.

²⁶ KPMG advised that the US Attorney’s office identified two layouts, “College” and “Midland,” for KPMG to review; however, no work was found to have been performed on the “Midland” layout so the review was limited to the “College” layout.

²⁷ KPMG initially identified 100 layouts for review; documentation could not be located in respect of six of these so a further six layouts were identified, resulting in 106 layouts having been requested for review by KPMG but only 100 actually reviewed.

Table 4-3: Losses Identified by KPMG as of January 12, 2010

Ref	Project/Contract	Project type	Total Payments Under Contract PO ²⁸ (\$'000)	Total Payments Reviewed by KPMG ²⁹ (\$'000)	Portion Reviewed %	Total Loss Quantified by KPMG (\$'000)	Overall Loss %
1	Manhattan gas area contract	Construction	53,219	3,776	7.1%	612	16.2%
2	Manhattan electric back-up service (including Manhattan Vaults project)	Construction	2,181	881	40.4%	217	24.6%
3	Manhattan 4000 ft gas pipeline	Construction	1,446	1,446	100%	482	33.3%
4	Manhattan Gas Regulator	Construction	300	300	100%	-	-
6	South Westchester area contract	Construction	23,200	297	1.3%	93	31.3%
7	Holland Avenue	Construction	496	496	100%	221	44.6%
8	M-29 Bronx pipeline	Construction	7,140	1,614	22.6%	269	16.7%
9	EDC Yankee Stadium	PI	223	223	100%	87	39.1%
Total			88,205	9,034	10.2%	1,982	21.9%

4.4.9 In respect of the Manhattan Gas Regulator project, KPMG identified two lump sum payments for \$150,000 each had been made to Felix Associates for this project (which was lower than the accepted bid amount of \$354,657). Richard Zebler originally entered an invoice for approval in the amount of \$750,000, which was denied due to lack of funds. A further \$104,589 had been entered into a COMPASS worksheet; however, as of the date of the arrests and as of the date of KPMG's review, this amount had not been paid. Accordingly, KPMG concluded that no overpayments had been made to Felix Associates for this project.

4.4.10 The losses identified by KPMG in respect of the remaining seven projects comprised of overcharges by the contractor to CECONY and may be classified into the following categories:

(a) Discrepancies relating to Trenching Manual items such as

²⁸ Total payments under contract PO are based on data within COMPASS; actual payments released are contained within the A/P database and may differ from vouchered amounts in COMPASS. The A/P database was not used for the purpose of this Part 1 report.

²⁹ Total payments reviewed by KPMG are as of information provided through January 12, 2010.

- (i) Charges for items which are already included within another item charged in respect of the same cut (“all-inclusive macro/micro duplication”)
 - (ii) Charges for items that should not be included in conjunction with other items (“mutually exclusive macro/micro” items)
 - (b) Item Upcoding
 - (i) Lower cost items being charged at more costly rates by the use of a more expensive item code (“item upcoding”)
 - (c) Supplemental Items
 - (i) Charges for items that were not identified on the Inspector’s original Daily Log Reports
 - (ii) Charges for labor by the use of a more expensive labor rate than applicable (“T+E upcoding”)
 - (ii) Charges that do not reflect the actual work performed (“timesheet discrepancies”)
 - (d) Manipulation of multiplier factor in COMPASS
 - (e) Contractual exclusions
 - (i) Charges for items that are already included within the contractual Lump Sum, or are not permitted or already included in other unit prices pursuant to individual Job Specifications
 - (f) Other overcharges, such as duplicate charges
- 4.4.11 An analysis of the KPMG quantified losses as of January 12, 2010 by type of overcharge is included as Appendix 4.2 and is summarized in Table 4-4.

Table 4-4: KPMG Loss Quantification as of January 12, 2010 Analyzed by Type of Overcharge

Ref	Project/Contract	Macro /micro (\$'000)	Upcoding (\$'000)	Supplemental Items (\$'000)	Multiplier Manipulation (\$'000)	Contractual Exclusions (\$'000)	Other Overcharges (\$'000)	Total (\$'000)
1	Manhattan gas area contract	10	121	216	92	129	44	612
2	Manhattan Vaults	-	107	108	-	-	2	217
3	Manhattan 4000 ft gas pipeline	-	-	80	-	402	-	482
6	South Westchester area contract	27	67	-	-	-	-	93
7	Holland Avenue	2	-	71	-	140	8	221
8	M-29 Bronx pipeline	-	-	269	-	-	-	269
9	EDC Yankee Stadium	-	4	27	5	-	51	87
	Total	39	298	770	97	672	106	1,982

LIMITATIONS OF KPMG ANALYSIS

4.4.12 KPMG’s draft calculation of loss reflects identifiable overcharges in respect of work performed on certain layouts. KPMG advised that this was not to be interpreted as the total loss.

4.4.13 Firstly, KPMG’s engagement required quantification of the identifiable losses arising from the specific allegations set out in the January 2009 employee arrest affidavits and which are the subject of the criminal prosecutions of the 11 employees arrested in January 2009. As such, it should be noted that the KPMG review as of January 12, 2010 considered just \$9.0 million of the \$137.5 million paid to Felix Associates under the 10 contracts. Of particular note are payments not reviewed by KPMG including payments for the South Westchester area contract totaling \$18.0 million specifically identifying the involvement of Cook and/or Lioi³⁰; the balance of payments made in respect of the Manhattan Area contract totaling \$49.1 million; payments totaling \$10.3 million in respect

³⁰ It is understood that Lioi transactions have been subsequently reviewed by KPMG.

of the 41st/Lexington emergency restoration work^{31,32}; and payments totaling \$39.1 million in respect of the DDC project.³³

- 4.4.14 Further, KPMG's quantification of loss methodology was employed to establish an insurance claim and the restitution requirements of the US government. KPMG's methodology focuses on identifying overcharges in payments made to Felix Associates by comparing the paid items with the items set out on the source documents such as Daily Log Reports, T+E sheets, etc. Therefore, to the extent that source documents were not available (i.e., missing) or were falsified, no loss would be quantifiable.

4.5 ACCOUNTING

- 4.5.1 For each of the projects identified in the arrest affidavits (and for all of the projects included within COMPASS), individual items within a purchase order (or project) are allocated to either work order numbers or internal CECONY account numbers by the Engineering Department when the project or layout is initiated. Items that are allocated to work orders map to internal CECONY account numbers.³⁴ After invoices are paid, the amounts are automatically added to the relevant internal CECONY accounts.
- 4.5.2 The internal CECONY account numbers map to Major Accounting Groups ("MAG") and PSC Uniform System of Accounts ("USOA") descriptions. Payments under the MAGs and the PSC USOA accounting groups have been determined for the entirety of the 10 identified projects, and also for the layouts that have been identified (and losses quantified) by KPMG, as follows in Table 4-5.³⁵

³¹ See Table 4-2.

³² These payments were not made through COMPASS.

³³ See Table 4-2.

³⁴ There are a small number of work orders which do not map directly to account numbers. This has not been investigated in this Part 1 report.

³⁵ Some of the categories have been grouped in this table. The complete table is included at Appendix 4.3.

**Table 4-5:
 Mapping of Payments for Identified Projects to MAG and PSC USOA Descriptions³⁶**

Ref	Project/Contract	Assets & Other Debits – Electric Plant in Service (\$'000)	O&M Electric (\$'000)	O&M Gas (\$'000)	O&M Steam (\$'000)	Other (\$'000)	Total (\$'000)
1	Manhattan gas area contract	48,771	175	3,891	-	382	53,219
2	Manhattan electric back-up service	2,137				44	2,181
3	Manhattan 4000 ft gas pipeline	1,446					1,446
4	Manhattan gas regulator	300					300
5	41st/Lexington steam emergency restoration	n/a	n/a	n/a	n/a	n/a	10,320
6	South Westchester area contract	21,242	27	1,637	-	294	23,200
7	Holland Avenue	496					496
8	M-29 Bronx pipeline	7,445				(305)	7,140
9	EDC Yankee Stadium	-	167	56			223
10	DDC project	27,643	214	42	58	11,105	39,063
	Total	109,481	584	5,626	58	11,520	137,588

4.5.3 The Continuing Property Records (“CPR”) of CECONY represent its fixed asset base. The process for work performed by contractors to enter the CPR is as follows:

- (a) A layout is completed and details of work completed are returned to the Engineering Department. Each layout has associated work orders and/or accounts to accumulate all charges. Work orders generally relate to capital and retirement charges.
- (b) Corporate Accounting’s Property Record group compiles a calculation of all of the costs involved with a layout (including all relevant overheads and material costs) that are applicable to be capitalized into the appropriate asset categories.
- (c) Upon confirmation that a layout is complete or equipment has been placed in service, the calculated cost for each asset category included in the project is forwarded to CPR where it is recorded as “Plant in Service.”

³⁶ Total payments under contract PO are based on data within COMPASS; actual payments released are contained within the A/P database and may differ from vouchered amounts in COMPASS. The A/P database was not used for the purpose of this Part 1 report.

(d) At the end of the year, the overall cost for each asset category is broken down into appropriate units of property. Based on the total cost and the number of units installed for each unit of property, the average cost is calculated and recorded in the Company's CPR systems.

4.5.4 Therefore, although the cost of contractor work for the identified transactions is included within the CPR systems, it is not possible to trace individual payments to specific fixed assets. However, all of the payments to contractors will be recorded in the financial statements and for non-O&M activities in the asset base shown in Table 4-5 above.

4.6 IMPLICATIONS

4.6.1 A review of the arrest affidavits and KPMG's work findings, together with a limited review of the project files made available, shows that fraudulent transactions were carried out by a series of data manipulations perpetrated at various stages of the contract performance, invoicing and payment process including:

(a) Falsification of source documents such as Daily Log Reports, Field Data Forms³⁷, and T+E sheets by the relevant Construction Inspectors and Chief Construction Inspectors ("CCI")

(b) Manipulation of Worksheet items in COMPASS by the reviewing CCI responsible for the project³⁸

(c) Processing of Worksheet items in COMPASS by the Technical Reviewer of the SysBill³⁹

4.6.2 In respect of (a) above, the overcharges were identified by KPMG based on an analysis of the original source documents retained by the arrested employee at his desk (which were seized following the arrest). In the absence of such documentation or other intelligence, it would be extremely difficult to detect and identify overcharges incorporated at the source document level.

4.6.3 In respect of (b) and (c) above, the overcharges were identified by KPMG by a review of the source documents and with the assistance of miscellaneous documents identified on the files (such as hard copy printouts of prior versions of COMPASS worksheets, which

³⁷ Maher (M-29 Bronx pipeline).

³⁸ DiRoma (South Westchester area contract); Panagi (Manhattan Vaults); Zebler (Manhattan 4000 ft gas pipeline and Manhattan Gas Regulator).

³⁹ Villano (Holland Avenue, Bronx); Giannetto (EDC Yankee Stadium).

identified the changes that had been made). The absence of a worksheet audit trail in COMPASS whereby no evidence of prior versions of the data remained in the system eliminates the ability to review changes made. Interviews with CECONY have suggested that the audit trail functionality was not programmed by the original vendor.

- 4.6.4 In relation to the Holland Avenue and Manhattan 4000 ft gas pipeline projects, where the authorized value on the purchase order was limited to the contractor's bid value, change orders were processed to allow for the inflated payments to be made, justified by "additional work due to unexpected field conditions" (Manhattan 4000 ft gas pipeline projects) and "change in scope due to unexpected field conditions" (Holland Avenue). The change orders were approved in accordance with the CECONY's change order processes and delegation of authority ("DOA") levels involving personnel exclusively from the Construction organization,⁴⁰ however, further review of the supporting field documentation would be necessary to establish whether the increases were justified and valued accordingly.
- 4.6.5 In relation to the projects carried out under blanket area purchase orders, no triggering flags to identify significant cost increases over layout budgets during the period of review were observed. This is a vulnerability of the blanket orders given the absence of any systematic budget to actual variance analysis at the layout level. When the authorized budgets under blanket purchase orders were exhausted earlier than originally anticipated, additional funds were approved and justified with documented reasons such as "additional work," "revised estimated costs," and "unanticipated increase in volume of work." This is a weakness in the controls at the layout level.
- 4.6.6 As discussed above for the 10 projects, there are a number of risk areas in the CECONY processes that warrant further investigation. In some instances, the technical reviews conducted did not identify discrepancies between worksheet items in COMPASS and Daily Log Reports and Field Data Forms. To the extent that the Technical Reviewer for these 10 projects was not complicit in the fraud, the lapse of thorough review contributed to the perpetration of the fraud. Specifically of concern are the macro/micro duplication of Trenching Manual items that resulted in overpayments and use of weekend working codes on weekdays.

⁴⁰ Manhattan 4000 ft gas pipeline – POCA prepared and approved on behalf of Employee 114 (pursuant to DOA) by Fassacesia, and subsequently approved by Employee 2; Holland Avenue – POCA prepared by Villano, approved by Sanabria and subsequently approved by Employee 114.

- 4.6.7 Further, worksheet items described as “Debit” were entered into COMPASS with limited rationale. Debit items provided an opportunity to enter lump sum amounts that may not be reconciled to purchase order pay items. The latter represent potentially unwarranted payments and constitute contravention of processes requiring details of item codes, (although based on the prevalence of unreconciled debit items, as discussed at Section 6, further review of project files is required to determine the appropriateness of these charges.
- 4.6.8 A significant portion of the overcharges identified by KPMG related to T+E timesheet discrepancies. In general, T+E is charged in circumstances where (1) the scope of work is undefinable; (2) completing the work necessitates performing additional work scope (“change work”) that was not previously identified and the work must be completed before a lump sum price negotiation is concluded; (3) the common method of performing the original scope of work is not feasible given unexpected physical constraints and the contractor’s price to perform the work using a different method seems overly expensive; or (4) time constraint beyond the control of the contractor interrupts the contractor’s planned work and requires the contractor to have a crew standby awaiting to complete its work and thereby incur the cost of unproductive time. High levels of T+E charges on a particular project may indicate potentially suspect payments worthy of further investigation. In addition, as KPMG identified, there can be discrepancies between the T+E sheets and the amounts paid.
- 4.6.9 Further, the processing of the POCAs with respect to both spot buy and blanket orders is controlled and administered by the Construction Management Business Unit. Except when new unit work items and pricing is involved, the Purchasing Department had no involvement in controlling the number or value of the Purchase Order amendment, thus eliminating a justification on the merits of the amendments and whether a re-procurement would be warranted.

5 PART 1, AUDIT AREA B: REVIEW OF CECONY'S INTERNAL CONTROLS RELATIVE TO ALL CONTRACTS

5.1 INTRODUCTION

- 5.1.1 This section details a review and assessment of CECONY's internal controls related to construction.
- 5.1.2 Consolidated Edison, Inc.'s ("CEI") internal control environment is comprised of approximately 29 CEI policies and instructions at the corporate level and approximately 136 policies and instructions at the CECONY level. Many of the policies governing corporate business invitations, gifts, awards, and expense accounting pre-date the introduction of COSO's Internal Controls – Integrated Framework and had been in implementation since 1970 and as a formal Code of Conduct since 1974.⁴¹
- 5.1.3 Key corporate functions supported CECONY's internal controls framework as they relate to construction-related activities. These include the following. A detailed review of these functions is included in Appendix 5.1.
- (a) Board of Directors
 - (b) Auditing Department and Audit Committee
 - (c) Security Services
 - (d) Corporate Ombudsman
 - (e) Independent Monitor
 - (f) Human Resources
 - (g) Law Department
 - (h) Delegation of Authority

⁴¹ This statement is from CECONY document. A high level review of this and other documents was performed. The oldest document reviewed is the 1988/12/12 version of CI 330-6, Capital Tools and Work Equipment. Of the 165 policies and instructions, the following four documents are most relevant with the fraud/bribe in the Construction service; a) CEI-009 Code of Ethics; b) CEI-010 Standards of Business Conduct; c) CEI-011 Ethics and Compliance Program; and d) C-7 Sensitive Positions. Of the 14 arrested, other than Brendan Maher who joined Con Ed in 1999, all 13 employees would have been notified of the Code of Conduct for over 35 years.

- (i) Ethics and Compliance Program
- (j) Risk Assessment

5.1.4 Further, a review of high level process elements for contract procurement, construction contract performance and oversight, construction contract administration and invoice payment was performed and is included in Appendix 5.1.

5.2 SUMMARY OF OBSERVATIONS

5.2.1 On various dates in early 2009, 12 CECONY employees were arrested in connection with several schemes to defraud CECONY with the collaboration of certain construction contractors. The “victims” include the employees and stakeholders of CECONY, investors, ratepayers, regulators, and the families of the arrested employees. The acts and omissions that constituted the fraud included kickbacks, inflated invoices, and phantom work.

5.2.2 Fraud is any intentional act or omission designed to deceive others, resulting in the victim suffering a loss and/or the perpetrator achieving a gain.⁴² Loss and gain may be monetary or non-monetary. Occurrences of fraud may include fraudulent disclosures and statements, misappropriation of assets, bribery, and corruption. Risk is the potential for loss and the failure to meet an organization’s goals. Considering the total construction spend is close to \$5,362 million⁴³, an undetermined amount of at-risk transactions may exist given the state of mitigation and controls in CECONY construction management during the audit period.⁴⁴

5.2.3 The following attributes of internal controls were considered during the performance of this audit:

- (a) Fraud is typically difficult to detect, and control systems have their limitations that cannot guarantee complete assurance that fraud is eliminated. Thus, preventive controls are extremely important in a fraud risk management program integrated with performance and other management goals.

⁴² Ultimately, a legal determination will establish as to whether an act or omission is fraudulent or illegal.

⁴³ As per the CECONY submission to PSC dated June 15, 2009, \$5,362 million paid by CECONY to construction contractors during the period between 2000 and 2009.

⁴⁴ The focus of this investigation was the Construction Management function within the Construction organization in CECONY Central Operations.

- (b) As part of an organization's governance structure, a fraud risk management program should be in place, including a written policy (or policies) to convey the expectations of the board of directors and senior management regarding managing fraud risk. This program should be an integral part of an enterprise risk management program and be coordinated with other governance, risk, and compliance operations across the organization.
- (c) Fraud risk exposure should be assessed periodically by the organization to identify specific potential schemes and events that the organization needs to mitigate. Inherent impact should be assessed based on monetary and non-monetary effects of fraud on meeting the organization's obligations. Along with inherent impact, the pervasiveness, complexity, and commonality of fraud channels, vehicles, and capabilities should be assessed.
- (d) Prevention techniques to avoid potential key fraud risk events should be established, where feasible, to mitigate possible impacts on the organization.
- (e) Detection techniques should be established to uncover fraud events when preventive measures fail or unmitigated risks are realized.
- (f) Reporting processes should be in place to solicit input on potential fraud, waste, and abuse, and a coordinated approach to investigation and corrective action should be used to help ensure potential fraud is addressed appropriately and timely.

5.2.4 There appeared to be a lack of a formal and regular fraud risk management system across CECONY during the perpetration of the arrestees' fraudulent activities.⁴⁵

5.2.5 It was observed that formal Internal Audit and Corporate Security policies, ethics policies, labor and contractor relations policies, and gift and gratuity policies served a preventive control function during the time of the arrestees' involvement. However, not all of the arrestees acknowledged, per policy compliance requirements, certain of these policies.

5.2.6 There did not appear to be a systematic or periodic assessment of fraud risk exposure by CECONY, or an identification of particular fraudulent schemes, events, and risks that

⁴⁵ It is noted that CECONY has recently initiated an upgrade to its enterprise risk management program results from which are used by Internal Audit for planning.

are pertinent to construction and construction procurement during the perpetration of the arrestees' fraudulent activities.

- 5.2.7 Key fraud risk indicators did not appear to be emphasized in variance reports, trend analyses, process, risk and controls documentation as part of CECONY's internal reporting. Further, it did not appear that materiality thresholds (e.g., lack of indicators triggered when change orders exceed an established metric) for potential fraud risk existed.
- 5.2.8 There appeared to be no independent monitoring of requests and approvals for an extension or increase in time and/or money above a pre-determined threshold above the original purchase order.
- 5.2.9 There did not appear to be planning for spot fraud detection operations such as stings, integrity checks, audit trail examination, attribution samples of unsubstantiated contract modifications, compliance audits of certified payrolls, or audits of contractors, except after the fact of a report of error, omission, or wrongdoing.
- 5.2.10 There did not appear to be other substantive prevention activities such as systems integrated to deny or discourage fraudulent usage during the time of the arrestees' fraudulent activities.
- 5.2.11 Breakdowns within the CECONY processes and systems were also observed. These breakdowns in controls provided opportunities for the arrestees to perpetrate fraud and included (1) the lack of an audit trail in the COMPASS database and the ability for the arrestees to manipulate worksheet items in COMPASS, (2) the failure to perform periodic contractor cost audits (3) the quality of the Trenching Manual, (4) the lack of a formal employee rotation policy, and (5) the failure to coordinate follow through on reported allegations.
- 5.2.12 The COMPASS database did not keep an audit trail of users; any changes to the database records the last user as the responsible official and deleted the information on others' involvement. The lack of audit trail functionality meant that it would not be possible to verify the accuracy of user details.
- 5.2.13 Some of the cost effective tools that existed in CECONY's systems to mitigate fraud, waste, and abuse were not utilized fully, and the related process and systems controls

thus appeared to be ineffective. A significant control tool that was not utilized was the periodic construction contract inspection and audit of a contractor's books and records and random "on the job" audits⁴⁶ or "post job" audits.

- 5.2.14 Further, the configuration, quantity and quality of the descriptions in the Trenching Manual, which dictates various types and methods of work for which the contractor will be paid, facilitated the perpetration of the alleged frauds.
- 5.2.15 At the time of the arrests and earlier, CECONY did not have a stated staffing policy that required rotation of CECONY construction management personnel, increasing the risk that CECONY construction management personnel who were in the role of contractor oversight and payment could collude with a contractor to seek personal monetary gains.
- 5.2.16 Although fraud prevention mechanisms, such as the Ethics Helpline and Office of the Ombudsman, led Corporate Security and Internal Audit groups to investigate reports about certain arrestees, they did not appear to run joint investigations or develop a corrective actions approach. It appears that tips about those who were eventually arrested were deemed as being "without merit" with no further follow-up (i.e., cold case reviews).
- 5.2.17 The arrestees, using their knowledge of the controls surrounding construction contract procurement and payment and the weaknesses and enforcement of these controls, were able to falsify source documentation, effectively override invoice and payment controls, and facilitate overpayments to the contractor for their own personal monetary gain. Further, CECONY failed to employ certain controls (e.g., formal employee rotation policy, independent contractor cost audits and "on the job" audits⁴⁷ of work installed, and coordination and more robust follow up on reported allegations) in a pro-active manner. The aggregation of these control breakdowns created an environment -- sometimes referred to as a "culture" -- within CECONY construction management whereby the arrestees could perpetrate the fraud.
- 5.2.18 Overall, and as explained in this report and especially in this section, the control environment surrounding the mitigation of construction fraud risk during the period examined facilitated the observed fraud. As per the RFP, Part 2 of this audit will expand

⁴⁶ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

⁴⁷ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

the investigation beyond the transactions identified in the US Attorney's investigation, and endeavor to estimate the damages associated with non-indictment contract transactions.

5.3 BREAKDOWN OF CECONY INTERNAL CONTROLS SPECIFIC TO CONSTRUCTION MANAGEMENT

- 5.3.1 Four categories of internal control documents were reviewed in order to ascertain potential breakdowns of CECONY controls that were relied upon in perpetrating the fraud: (a) Affidavits supporting the January 2009 arrests of CECONY employees and one contractor; (b) Policies and Procedures of Consolidated Edison Inc. ("CEI"); (c) Policies and Procedures of CECONY; and (d) Construction Management specific documents.
- 5.3.2 In order to achieve its control objectives, CECONY has at least several layers of controls pertaining to construction management. These controls include (a) Field Construction Management Program (the contractor's foreman)/Qualified Vendor Management Program; (b) First-line Field Supervisor (Construction Inspector on job site); (c) Chief Construction Inspector; (d) Senior Specialist/Technical Reviewer; and e) Construction Manager (See Figure 1-1 in Appendix 5.1). However, in all 10 projects, several layers of internal controls were breached without setting off an alarm to the CECONY Management as evidenced by the investigations and arrests that were conducted and made by agencies outside of CECONY.
- 5.3.3 Even when internal controls are effective, fraud could still occur. However, there were breakdowns within the CECONY processes and systems that provided opportunities for the arrestees to perpetrate fraud. These breakdowns included (1) the lack of an audit trail in the COMPASS database and the ability for the arrestees to manipulate worksheet items in COMPASS, (2) the failure to perform periodic contractor cost audits despite this tool being available within all the purchase orders, (3) the quality of the Trenching Manual, (4) the lack of a formal employee rotation policy, and (5) the failure to coordinate follow through on reported allegations.
- 5.3.4 The arrestees, using their knowledge of the controls surrounding construction contract procurement and payment and the weaknesses and enforcement of these controls, were able to falsify source documentation, effectively override invoice and payment controls, and facilitate overpayments to the contractor for their own personal monetary gain. Given that this fraud was perpetrated by a number of people in different boroughs over a significant period of time, this raises serious concerns regarding Construction

Management's maintenance of the effectiveness of the controls as well as the enforcement of these controls. CECONY failed to employ certain controls (e.g., formal employee rotation policy, independent contractor cost audits and "on the job" audits⁴⁸ of work installed, and coordination and more robust follow up on reported allegations) in a proactive manner. The aggregation of these control breakdowns created an environment -- sometimes referred to as a "culture" -- within CECONY construction management whereby the arrestees could perpetrate the fraud. These internal control breakdowns are detailed in the following sections.

LACK OF AUDIT TRAIL IN COMPASS DATABASE

- 5.3.5 Due to a lack of an audit trail, it was possible that the responsible official recorded in the respective databases for procurement, contract oversight, modification, and payment was not necessarily the person who actually performed or approved the action. Often times employees involved in the initial approval of payments (prior to technical review or Construction Manager review) were not recorded within the COMPASS database kept by CECONY.
- 5.3.6 The COMPASS database did not at the time of frauds keep an audit trail of authorized users accessing the database; any changes to the database recorded the last user as the responsible official and deleted all knowledge of others' involvement. Unless hard copies of input material were kept for analysis, it would not be possible to verify either the accuracy of user details or the accuracy of payment data inputted into the database.⁴⁹
- 5.3.7 The absence of an audit trail within the COMPASS database eliminated the ability to review modifications made to the system, allowing the arrestees the ability to manipulate Worksheet items and subsequently overwrite initial data inputs. This control weakness was significant in facilitating the fraudulent activities perpetrated by the arrestees as evidenced in both the arrest affidavits and KPMG's work findings.

⁴⁸ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

⁴⁹ CECONY notes in comments advanced during the factual accuracy check of this Report that full audit controls with audit trails have been implemented in COMPASS and Layout Tracking as of June 2010. The effectiveness of these implementations has not been reviewed in this Part 1 report.

LACK OF PERIODIC CONTRACTOR COST AUDITS

- 5.3.8 A significant compliance and control tool that was not utilized absent a dispute was the periodic construction contract inspection and audit of a contractor's books and records and random "on the job" audits⁵⁰ or "post job" audits. This is a common industry-standard control that is embedded in the Standard Terms and Conditions of CECONY construction purchase orders. The article states, "*Contractor shall make and cause to be made said books, records and accounts available for inspection and audit by Con Edison...*" Despite the availability of this control tool, such audits appear not to have been performed.⁵¹
- 5.3.9 Periodic audits of a contractor's books and records would have improved the ability to uncover overcharges, unusual or suspect payments, and any circumvention of processes and procedures earlier than the arrests in January of 2009. Further, considering the lack of an audit trail in the databases mentioned above, random "on the job"⁵² or "post job" audits would have provided an ability to verify and ensure payment data entered into COMPASS were accurate representations of work performed. The failure by CECONY to perform such random audits combined with the lack of an audit trail in the databases created an environment whereby the arrestees could falsify source documentation, manipulate Worksheet items in COMPASS, facilitate overpayments to the contractor, and perpetrate fraud. The deployment of periodic independent contractor audits would greatly increase the deterrence level for some fraudulent activity.

QUALITY OF THE TRENCHING MANUAL

- 5.3.10 The Trenching Manual provided a listing of payment items describing the scope of work, nature of the work and associated unit of payment. To reimburse the contractor for the work performed, field inspectors match the work performed to the appropriate Trenching Manual item. Field inspectors have prior experience in the industry and receive training at the Learning Center prior to working in the field. Promotions require a certain amount of in the field training as well as classroom training. There are sufficient procedures in

⁵⁰ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

⁵¹ CECONY notes in comments advanced during the factual accuracy check of this Report that a new section in Auditing focused on Construction projects and other contractor activity has been established. CECONY also noted that Construction implemented an independent field verification requirement for high value units like rock removal and that Auditing and Construction Quality Assurance are conducting unannounced field visits of various Construction and Energy work sites. The effectiveness of these implementations has not been evaluated in this Part 1 report.

⁵² CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced "on the job" audit program.

place to educate the field inspectors in the preparation of Daily Log Reports and Field Data Forms; however, the “real” training is gained through experience working in the field.

- 5.3.11 A detailed review and analysis of the Trenching Manual was performed. The analysis shows that the configuration, quantity and quality of the descriptions in the Trenching Manual provided an opportunity to overpay the contractor by either referencing items with more expensive unit rates than the more appropriate item (“upcoding”) or by charging two items together that should not be (“macro / micro” or “mutually exclusive”). The opacity that was inherent in the Trenching Manual, combined with the failure by CECONY to perform “on the job” audits⁵³ to verify the accuracy and applicability of item codes being referenced, allowed the arrestees to perpetrate fraud.⁵⁴
- 5.3.12 Knowledge gained from the review of the Trenching Manual, coupled with known weaknesses resident in the COMPASS database, formed the basis of the Quantitative Indicator Model used in this audit to identify populations of transactions at risk of potential acts of fraud, waste, or abuse.

LACK OF A FORMAL ROTATION POLICY

- 5.3.13 At the time of the arrests and earlier, CECONY did not have a stated staffing policy that required periodic rotation of CECONY construction management personnel. A review of the employment history of the arrested CECONY employees indicated what appeared to be promotions to more senior positions within the Construction Management group and occasional transfers to other boroughs. However, the lack of a prescribed staffing rotation policy suggests the moves were elected by the employees or the result of promotions and not the result of a formal process to ensure the personnel remained objective and independent.⁵⁵
- 5.3.14 The lack of a formal rotation policy permitted an environment -- sometimes referred to as a “culture” -- whereby CECONY construction management personnel who were in the

⁵³ CECONY notes in comments advanced through the factual accuracy review of this Report that Public Improvement conducted an unannounced “on the job” audit program.

⁵⁴ CECONY notes in comments advanced during the factual accuracy check of this Report that it issued a revised Trenching Manual in late 2009 as a result of the criminal conduct by several Company and contractor employees. The effectiveness of this revised manual has not been reviewed in this Part 1 report.

⁵⁵ CECONY notes in comments advanced during the factual accuracy check of this Report that Construction has implemented an Employee Rotation Policy requiring personnel work assignments to be reviewed on an annual basis. CECONY also notes that rotation policies have been implemented for management personnel in Energy Services and that Purchasing has begun rotation of its employees. The effectiveness of this policy has not been reviewed in this Part 1 report.

role of contractor oversight and payment could develop a relationship and collude with a contractor to seek personal monetary gains.

LACK OF COORDINATION OF REPORTED ALLEGATION

- 5.3.15 The policy and procedure relating to the collection, collation, and assignment of investigations of allegations of criminal misconduct and/or ethics violations is not consistently adhered to. There appeared to be a lack of transparency and communication between the responsible units, e.g., Internal Audit and Security Services.
- 5.3.16 CECONY has a comprehensive policy - CECONY 500-2, dated March 20, 2008 - regarding the direction of information flow among the internal units, Internal Audit and Security Services, regarding responsibility for violations of allegations of misconduct as were outlined in the criminal affidavits and in the Internal Audit and Security Services reports cited above. The policy appeared to be according to prevailing practices at the time of the fraudulent transactions, but there were weaknesses in directing the information according to the policy and in the coordination of the information and investigative results between Internal Audit and Security Services. For example two allegations of bribery/kickback against Richard Giannetto were not listed on Internal Audit's log, and Security Services was not aware of the bribery/kickback allegations against the other CECONY employees cited above.
- 5.3.17 Further, the whistleblower hotline (called the "Ethics Helpline"), Anonymous Suggestion Box, and variations of "Confidential Complaint" reporting programs should provide safe and confidential channel for all interested parties to maintain sound checks and balances. How well the organization follows up on the reported incident demonstrates the organization's commitment to excellence and safe and sound working environment.
- 5.3.18 Through various inputs received, including the Ethics Helpline and the Office of the Ombudsman, Security Services and Internal Audit investigated reports about certain arrestees. Internal Audit and Security Services did not appear to run joint investigations or corrective actions approach. In the case of the reports of arrestee and other employee wrongdoing, the investigation of allegations concluded that there was no support for any wrongdoing. No follow-up to investigations or further corrective action was observed. Currently, monthly information meetings are held by Corporate Security and Internal Audit. Regular whistleblower and investigation report logs were kept by Internal Audit and Corporate Security. However, they did not appear to be part of a systematic program of fraud assessment, preventive and detective control, corrective management

response, or proactive enterprise monitoring of ongoing and potential fraudulent activity in CECONY during the 2000 to 2009 period.

- 5.3.19 Consistent with this lack of coordination, there appeared to be a lack of a formal and integrated fraud risk management system across CECONY during the perpetration of the arrestees' fraudulent activities.
- 5.3.20 Although policies, procedures and reporting mechanisms existed to deal with reported allegations of misconduct, the failure by CECONY to promote a coordinated and proactive investigative strategy allowed the arrestees to continue to perpetrate their frauds despite reported allegations.

OTHER CONTROL VULNERABILITIES

- 5.3.21 Within Construction Management, there did not appear to be a systematic or periodic assessment of fraud risk exposure or an identification of particular fraudulent schemes, events, and risks that are pertinent to construction.
- 5.3.22 There appeared to be no independent monitoring of requests and approvals for an extension or increase in time and/or money. Also, established metrics were not in place which would trigger when purchase order amendments exceeded a specified threshold above the original authorized purchase order amount.
- 5.3.23 Key fraud risk indicators did not appear to be emphasized in CECONY's internal reporting.
- 5.3.24 Procurement Management System ("PMS"), Construction Management Payment and Support System ("COMPASS"), and Construction Layout Tracking System ("LOT"), Purchase Order Change Authorization ("POCA") System, Contractor Oversight System ("COS"), and Accounts Payable ("AP") are the six major systems used to manage the lifecycle of construction work in CECONY. A review of monthly management reports did not indicate that, at the layout level, budget to actual variances are monitored, analyzed, or reviewed by Senior Construction Management staff.
- 5.3.25 The COMPASS and LOT systems serve as the central role between Project Planning and Project Management leading to eventual contractor payment. Information in COMPASS and LOT must be accurate and complete in order to provide effective and prudent construction management. It did not appear that CECONY had a systematic program containing formal training material, training schedules and certification procedures in place to ensure that trainees fully comprehend the COMPASS and LOT

applications and the consequences of information not being entered truthfully, accurately, completely, and in a timely manner.

- 5.3.26 It was observed that CEI Corporate Policy Manual, Code of Ethics, Standards of Business Conduct, Ethics and Compliance Program, General Rules and Regulations, and The Way We Work Program have been in force for a number of years. A short summarized version of these control objectives is included as a part of every “Composite Purchase Order Document” for construction contracts. Employees who are in job functions that interface with outside parties and in positions of influence should be held at a higher standard and therefore are subject to more frequent surveillance for proper compliance with the ethics. Employee annual acknowledgements and compliance monitoring statements were not observed within the Human Resources files of certain arrested employees.
- 5.3.27 There is insufficient evidence that there is clarity of organizational responsibility and accountability between some CECONY divisions related to the actual cost of the work performed as compared to the budget on the Layout level.
- 5.3.28 Section 2.4 of Appendix 5.1 provides a high level review of CECONY’s construction contractor procurement policy and, in particular, the conditions that dictate fact finding reviews surrounding submitted bids to ensure the contractor fully understands the scope of work to be performed. Although these policies contain specified percentages above or below which reviews of bids shall be conducted, there were vulnerabilities with the broadness of the established low range as contractors could potentially be awarded contracts based on unusually low bids and subsequently increase their price through purchase order modifications.

5.4 PROCESS AND THE INTERNAL CONTROL ENVIRONMENT: MANHATTAN VAULT PROJECT CASE STUDY

5.4.1 In addition to the overall review of the projects that arrestees participated, a comprehensive case study of transactions, processes, and controls using the Manhattan Vault project was developed. This project is one of those in which arrestees participated. This section summarizes a review of this project and its associated processes, controls, contractor participation, and transactions.

CONTRACT PROCUREMENT

5.4.2 Electrical trenching work for the installation and repair of electric facilities in Manhattan was provided by two area contractors: Contractor 1 on the West side of Manhattan and Contractor 2 on the East side. Contractor 3 was providing these services in the Bronx.

5.4.3 In early 2007, it was deemed necessary to procure back-up support contractors to these area contractors. Purchasing solicited bids for multipliers that would be applied to unit prices provided by CECONY.

5.4.4 Several bids were received, including Bid Check's⁵⁶ "bid," which was a multiplier of 1.1. Four purchase orders were awarded as a result of the bidding. The Request for Authorization to Purchase ("RAP") and its supporting backup suggests these four purchase orders would be administered as ladder-style purchase orders. Based on the bids submitted and each bidder's bidding factor the bidders were ranked in the following order: Contractor 4, Felix, Contractor 2, and Contractor 5.

5.4.5 Contractor 4, Felix, and Contractor 2 each received a 15-month purchase order with an authorization level of \$3 million. Contractor 5 received a 15-month purchase order with an authorization level of \$700,000. All four original purchase orders contained 164 Trenching Manual items with unit prices calculated based on their submitted multiplier. These four purchase orders would be in effect until June 30, 2008. *Note:* Appendix 5.2 contains a summary of the Trenching Manual items and descriptions.

5.4.6 At approximately the same time as these four purchase orders were issued, the existing area contracts were about to expire. A separate procurement event solicited bids for area contracts in Manhattan and the Bronx. The result of that procurement was the awarding of Manhattan West side area purchase order to Contractor 1 (the incumbent

⁵⁶ "Bid Check" is a function that reports directly to Cost Management.

area contractor), Manhattan East side area purchase order to Contractor 6 (where previously Contractor 2 was the area contractor), and the Bronx to Contractor 3 (the incumbent area contractor). The sum total of these three new area contracts was \$178.5 million, which was approved by the Board in April 2007. These three purchase orders were executed on April 17, 2007 and would be in effect until April 30, 2010.

5.4.7 Ladder-style contracts are intended to be administered by asking the contractor on the first rung of the ladder (having the most competitive price) whether it is able and willing to perform the work. If it rejects the offer to perform the work, the contractor on the next rung of the ladder is offered the work. Moreover, as they are backup contractors, the primary area contractor should first be offered the work and only when the primary area contractor rejects the offer to perform the work, the backup support contractors on the ladder are approached.

5.4.8 In the case of the Manhattan Vaults project, there appeared to be no documentation in the project files for the offers to perform the work and the corresponding rejections from the contractors which ultimately led to Felix performing the work. Documentation would have been expected for the initial offer to Contractor 1, a Contractor 1 rejection, an offer to Contractor 4, and a rejection from Contractor 4.

5.4.9 The original purchase orders issued to Contractor 4, Felix, Contractor 2, and Contractor 5 were in effect until June 30, 2008. On or about June 18, 2008, a purchase order change authorization was initiated to increase the authorization level from \$3 million to \$3.45 million. The expiration was also extended for 12 months to June 30, 2009. The Contract Administration Manual (“CAM”) suggests an appropriate time to consider increasing the authorization level is when the payments approach 75% of the authorization level. In this case, the amounts paid would be \$2.25 million. However, as of June 30, 2008, this threshold had not yet been exceeded and it is not clear what conditions necessitated the POCA and subsequent modification to the PO prior to reaching the 75% threshold. As of the date of this Report, the total payments against this purchase order total \$2.18 million.

5.4.10 A review of the documentation contained in the CECONY files relating to the procurement process for purchase order #727734 under which the Manhattan Vault project was carried out, shows the following:

- (a) There is an absence of formal procedure regarding allocation of layouts or job packages to a particular purchase order, which is “said” to be conducted “in the field.”⁵⁷
- (b) No documentation appeared to have been retained to substantiate whether (and if not, the reasons why) the work was or was not initially offered to Contractor 4, the first contractor on the ladder or to Contractor 1, the relevant primary area contractor.
- (c) There is an absence of formal procedure to monitor the actual cost to budget at the layout or “job package” level where work is performed under blanket orders (e.g., area term contracts).
- (d) Systems did not record changes in database fields. Certain dates and other fields could be overwritten. Certain database fields did not require entries. There did not appear to be a well-controlled record of layouts.

5.4.11 Construction Management staff did not seem involved directly in the bidding process, although Construction Management staff are said to often assist in identifying contractors for inclusion on the bidder’s list for the purpose of distributing requests for bid. The Contract Administration Manual (“CAM”) outlined this process. While the Construction Management staff assisted Purchasing with the development of the bidder’s list, Purchasing had the final say regarding the selection and placement of bidders on the list. While not directly impacting the bidding process, Contractor Evaluation Reports (“CER”) prepared by the CI/CR are used to calculate the contractor’s performance rating that has an impact on the award of future work. The Contractor Oversight System (COS) was developed to capture performance and EH&S information on contractors. User input through COS is used to rate and document contractor performance, which is used to maintain a qualified bid list.

5.4.12 From an analysis of project documentation of certain layouts in the Manhattan Vaults Project, it appears that Layout #S06-02121-002M was first assigned to Contractor 1, who was one of the primary area contractors.⁵⁸ There appeared to be no documentation in the files to support the decision to reassign the layout to Felix, the third ranking contractor in the ladder. The documentation showed only that the work was paid under a blanket purchase order awarded to Felix. From interviews, it appeared that the layouts

⁵⁷ CECONY notes in comments advanced during the factual accuracy check of this Report that subsequent to the arrests, Construction Procedure CONST-016, Vault Direct Bid Procedure, covering both new electrical vault installation as well as repairs to existing vaults, was established to formalize the process for award of contracts by the local areas.

⁵⁸ A copy of an undated printout from Layout Tracking has Contractor 1 printed in the Contractor field. Additionally, a spreadsheet in the file also listed Contractor 1 as the designated contractor.

were assigned by Construction Management staff—most often the CCI—who would have known the workloads of the various contractors.

- 5.4.13 Detailed process flow diagrams were developed to document both CECONY's procurement process, including requirements development, requisition and bidding, layout assignment, job package creation and POCA/POCR administration, and, specific procurement process steps taken in the case of the Manhattan Vaults project. These process flow diagrams are presented in Appendix 5.3. Where possible, the diagrams identify the CECONY employees that were involved in the Manhattan Vaults procurement process.

CONTRACT PERFORMANCE, OVERSIGHT, AND ADMINISTRATION

- 5.4.14 According to the project records—specifically the Daily Log Reports prepared by CECONY and T+E sheets prepared by Felix—the work in the field for Layout #S06-02121-002M/003M started on March 10, 2008 and was substantially completed in mid-May 2008. The major scope of work was the installation of four precast “V14” vaults, installation of one precast “BV13-8” bus compartment, replacement of an existing manhole with a field-constructed “M14” vault, and replacement of an existing service box with a field-constructed “M11-6” vault. These are sizable vaults that measure 14-feet, 13-feet, and 11-feet in length as indicated by the name of the vault. Daily Log Reports and T+E sheets indicate work was often performed during the evening shift and as well as over weekends. A match-up of the forms showed that the project file was incomplete, i.e., missing several Daily Log Reports (as a T+E sheet is within the project file) and missing several T+E forms (as a Daily Log Report is within the project file).
- 5.4.15 Several CI/CRs oversaw the contractor's performance and prepared the Daily Log Reports: Employee 69, Employee 38 (who worked the nightshift), Employee 57, Employee 17, Employee 67, and Employee 82. In accordance with the Contract Administration Manual (“CAM”) the CI/CRs generally completed the Daily Log Reports with pertinent and sufficient information to oversee the work performed by the contractors. Interviews revealed that CI/CRs have a specialty—paving, small retail, complex jobs—and are assigned each day to a particular contractor and move with the contractor's crew if they move to another job (layout). They are often assigned based on proximity for logistics and efficiency purposes. Contractors schedule their jobs and send over a schedule everyday to CECONY as to where the crews will be working the following day. The contractors' schedules are used to schedule the work for the CI/CR.

- 5.4.16 In accordance with the CAM, a Field Data Form was prepared and appeared to be complete with sufficient information including references to Trenching Manual items as applicable. However, in this case, it was observed that three different versions of the Field Data Form existed: one unsigned version that appears to be the original, one version signed by Employee 38, and a third version signed by Abe Panagi, which seems to support the final payment. Three separate and different versions of the same project documents raises a concern as to which version is the accurate representation of the work completed and which should be the basis for the appropriate payment to the contractor. Moreover, it seemed easy to replace the original (paper-based) Field Data Form with a mocked up version (also paper-based) created after the fact. The true representation of the work completed which is the basis to appropriately pay the contractor may be lost and easily replaced with falsified project records.⁵⁹
- 5.4.17 A comparison of the work put in place against the contract specifications was not possible due to the inability to see the vaults, conduits, and cables that were installed for the Manhattan Vaults project. An attempt to view and inspect the work would require excavating and uncovering the work in place, which would be more disruptive and costly than necessary. The contractor was obligated to perform the work in accordance with the contract specifications; the CI/CR was responsible to oversee the contractor's work and if he/she observes work not in conformance with the contract specifications, should notify the contractor and document the non-conformance in a report. Based on the project documentation made available, there is no reason to suspect the work was not in conformity with the contract specifications. The project documentation made available included invoices and delivery slips in respect to vaults related to the Manhattan Vaults project. These support the inference that the work was put in place as outlined in the layout prepared by Engineering.
- 5.4.18 A detailed process flow diagram was developed that documents CECONY's contract administration and vendor/contractor payment process and outlines the administration and payment steps taken on the Manhattan Vaults project. This is presented in Appendix 5.4. Where possible, the flow diagram identifies the CECONY employees that were involved in the Manhattan Vaults administration and payment process. The following section provides a review of invoice payments on the Manhattan Vaults project.

⁵⁹ CECONY notes in comments advanced during the factual accuracy check of this Report that after the arrests, Construction Management implemented an electronic field observation form in Mobile Office to capture work observed with the appropriate user ID and timestamp.

INVOICE PAYMENT

- 5.4.19 Approximately 26% of the total amount paid to Felix for the Manhattan Vaults project represented T+E item numbers. The majority of the T+E work represents the inability to start work due to traffic stipulations on this project; however, there was limited written explanation as to why there was a need to perform other work on a T+E basis. It would have been reasonable to increase the budget for this layout based on the permit restrictions known before the layout was assigned. To better manage the T+E work, a purchase order pay item for permit restrictions can be added to capture the T+E work performed under a traffic stipulation impact. This in turn would give better understanding of other T+E work that is outside the anticipated scope of the layout.⁶⁰
- 5.4.20 A number of system limitations might impact the usefulness of the COMPASS data. In instances where the Technical Reviewer amended items in a worksheet and effectively created a new SysBill, COMPASS deleted the original SysBill from the database and did not retain a record of its existence (i.e., there did not appear to be an audit trail). Further, no record is retained in COMPASS of any of the Worksheets created in the system. The first fingerprint that is retained in the COMPASS database is at the point of creation of the SysBill. Thereafter, the identity of the TR and the CM, together with the approval date of each, are retained in the system.⁶¹
- 5.4.21 An analysis of the COMPASS data shows a prevalence of payments made where the creation and technical review of an invoice was performed by the same individual. In regions other than Manhattan,⁶² this may indicate original SysBills being amended and therefore superseded by new SysBills created by the individual performing the technical review.⁶³

⁶⁰ CECONY notes in comments advanced during the factual accuracy review of this Report that CECONY's current practice incorporates the use of a stipulation factor that eliminates the need to use T+E to pay contractors for standby time. This stipulation factor applies a premium based on the reduced working hours to units of work completed for the day. This implementation has not been reviewed in this Part 1 report.

⁶¹ CECONY notes in comments advanced during the factual accuracy review of this Report that full audit controls are expected to be added to track any changes to the worksheet once a dollar value is established. CECONY has also noted during the factual accuracy review of this Report that full audit controls with audit trails have been implemented in COMPASS as of June 2010. The effectiveness of these implementations has not been reviewed in this Part 1 report.

⁶² Manhattan policy has one individual (Employee 24) creating all SysBills and performing technical review.

⁶³ CECONY notes in comments advanced during the factual accuracy review of this Report that the enhanced audit trail being implemented will track at a worksheet line level the additions, changes, and deletions of any worksheet item once a dollar value is established for that item. CECONY has also noted during the factual accuracy review of this Report that full audit controls with audit trails have been implemented in COMPASS as of June 2010. This audit trail will include reports that can be used by Quality Control and Auditing to review these transactions on a regular basis. Further, CECONY has noted that Construction has formed independent Technical Review groups outside the CM chain of command which have aided in standardizing the Technical Review across all operating areas. The effectiveness of these enhancements has not been reviewed in this Part 1 report.

- 5.4.22 For the Manhattan Vaults project, the project files contained printouts of the COMPASS worksheets that had been stamped and signed for approval for final payment by two individuals in the Construction Management Group (Abraham Panagi and Employee 46). There were only a few handwritten adjustments on certain of the draft printouts. The documents did not contain a full narrative that would support the review process or an explanation justifying the utilization of various payment items.
- 5.4.23 A review of the payments made to Felix for its work on the Manhattan Vaults project showed that a debit item was used in place of Trenching Manual item T138 that had not been part of the purchase order that could have been used to pay for this work. The debit appeared to be a circumvention of the process through which Purchasing adds Trenching Manual item T138 to the purchase order.

5.5 PROCESS AND INTERNAL CONTROL ENVIRONMENT: INVOLVEMENT OF ARRESTED EMPLOYEES

- 5.5.1 The following section provides a review of the arrested employees' involvement in contract procurement, contract oversight and administration, and invoice review and approval.

CONTRACT PROCUREMENT

- 5.5.2 Eight of the 10 projects identified in Section 4 on which work was performed by arrestees were Construction Management projects and the remaining two (Projects 7 and 10) were Public Improvement ("PI"). PI works are performed by the City's contractor and are subject to a separate process (Section U bidding with "baseball arbitration" or joint bidding) regarding the setting of scope and agreement of pricing. This process has not been reviewed in any detail for the purpose of Part 1 of this investigation.
- 5.5.3 The procurement process for Construction Management work commenced with identification of a business requirement and a requisition from the relevant section. According to documents identified in the Purchasing organization files, the eight Construction Management contracts associated with the affidavits all originated with a requisition from a section/department within the Construction organization. Table 5-1 sets out the origin of the requisitions, including the requisitioner, for the eight identified construction management contracts.

Table 5-1: Origin of Requisition of Identified Projects

Ref	Project	Requisitioner	Section	Department
1	South Westchester area contract	Employee 109	Westchester Const	Const Mgmt Street Ops
2	Manhattan gas area contract	Fassacesia	Manhattan Const	Const Mgmt Street Ops
3	Manhattan electric back-up service ⁶⁴	Fassacesia	Manhattan Const	Const Mgmt Street Ops
4	Manhattan 4000 ft gas pipeline	Fassacesia	Manhattan Const	Const Mgmt Street Ops
5	M-29 Bronx pipeline	Employee 5	Transmission Const	Substation & Trans Construction
6	Holland Avenue	Sanabria	Bronx Const	Const Mgmt Street Ops
7	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Manhattan gas regulator	Fassacesia	Manhattan Const	Const Mgmt Street Ops
9	41st/Lexington steam emergency restoration	Employee 10	Building & Env Const	Const Mgmt Street Ops

5.5.4 The contract purchase orders in respect of seven of the eight construction management (i.e., non-PI) contracts were issued following a formal bidding process conducted by the Purchasing Department, as prescribed under Operating Procedures 2-0 and 3-0. The construction work performed on the 41st/Lexington steam emergency restoration work (Project 9) was procured on a sole source basis by the Purchasing Department, as prescribed under Operating Procedures 2-0 and 3-0.

5.5.5 Purchasing conducted the bidding process. Documentation of the bidding process showed that a formal selection process was conducted in respect of the seven contracts with Felix submitting the lowest bid for each.⁶⁵ Outcomes of the bidding process are set out in Table 5-2.

⁶⁴ As set out in Section 5.8, the Manhattan Vault project referred to in the Fassacesia/Sanabria arrest affidavit was a job package consisting of four layouts that were performed under the blanket purchase order for Manhattan electric back-up services.

⁶⁵ Except for Project 4, where Felix's bid was \$1,000 higher than the net lowest bidder; however, after adjustment by the bid multiplier, Felix's evaluated bid was lower.

Table 5-2: Summary of Bids Received on Identified Projects

Ref	Project	Requisition Type ⁶⁶	No. of Bids Rec'd	Felix Bid (excl bid multiplier) \$'000	Felix Bid as a % of Bid Check Estimate	Felix Bid as a % of Next Lowest Bidder
1	South Westchester area contract	Blanket	5	14,459	83.1%	93.7%
2	Manhattan gas area contract	Blanket	3	30,688	120.6%	82.7%
3	Manhattan electric back-up service	Blanket	9	n/a ⁶⁷	n/a	n/a
4	Manhattan 4000 ft gas pipeline	Spot buy	6	940	83.0%	99.1%
5	M-29 Bronx pipeline	Spot buy	7	7,676	84.6%	91.7%
6	Holland Avenue	Spot buy	6	270	51.7%	86.4%
7	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Manhattan gas regulator	Spot buy	5	355	66.1%	83.6%

- 5.5.6 The procurement bidding process culminated in the Request for Authorization to Purchase (“RAP”), prepared by the buyer, which documents the outcome of the bidding process and makes a recommendation as to the award of the contract. The RAP was approved in accordance with the CECONY Delegation of Authority (“DOA”).
- 5.5.7 Following authorization of the RAP, the contract purchase order was raised in PMS and approved in accordance with the CECONY DOA. The purchase orders raised for the seven contracts procured by Purchasing are summarized in Table 5-3.

⁶⁶ The requisitions in respect of Projects 3, 4, 5, and 6 were denoted as a Spot Buy; however, blanket contract purchase orders raised in respect of all of these. The requisition for Project 3 appears to have been erroneously denoted as a Spot Buy.

⁶⁷ The bid required submission of a single “multiplier factor” applicable to a set of unit prices provided by CECONY. Felix Associates submitted a multiplier of 0.99.

Table 5-3: Summary of Purchase Orders Raised on Identified Projects

Ref	Project	PO Type ⁶⁸	PO No.	Date	Total Original Auth Dollars \$'000	Buyer	Approved By
1	South Westchester area contract	Blanket	626324	6/16/06	15,900	Employee 79	Employee 42
2	Manhattan gas area contract	Blanket	519561	2/11/05	31,000	Employee 36	Employee 42
3	Manhattan electric back-up service	Blanket	727734	3/14/07	3,000	Employee 36	Employee 2
4	Manhattan 4000 ft gas pipeline	Blanket	629159	12/1/06	1,000	Employee 36	Employee 2
5	M-29 Bronx pipeline	Blanket	828266	3/6/08	8,444	Employee 5	Employee 31
6	Holland Avenue	Blanket	626383	6/22/06	297	Employee 36	Sanabria
7	Not Applicable						
8	Manhattan gas regulator	Spot Buy	730483	8/9/07	215 ⁶⁹	Employee 31	Employee 31

5.5.8 Differences in documentation of the procurement process for the six⁷⁰ remaining projects were noted based on a review of the Purchasing files:

- (a) The “Notice to Proceed” for the M-29 Bronx Pipeline project predates the RAP; and
- (b) There is no formal requirement to submit a RAP when the approval level is less than \$350,000. RAPs were not submitted for the Holland Avenue and Manhattan Gas Regulator projects. The purchase orders subsequently raised appeared to have been processed in accordance with the DOA).

CONTRACT PERFORMANCE, OVERSIGHT, AND ADMINISTRATION

5.5.9 The involvement of the arrested employees as CI/CR or CCI in the oversight of the 10 projects, to the extent that it is indicated in the Layout Tracking database, is summarized in Table 5-4 and set out in further detail in Appendix 5.5:

⁶⁸ The requisitions in respect of Projects 3, 4, 5, and 6 indicated spot buy contracts. It is not clear why the purchase orders were converted into blanket orders (except for Project 3, which was an area contract and should therefore have been a blanket type requisition).

⁶⁹ This figure was an error by the Purchasing Department: Lump sum component value only was entered. Subsequently, Purchasing amended this amount to \$340,010 although the increase still did not reflect the \$360,000 referred to in the narrative justification, which was based on the \$354,657 bid value.

⁷⁰ Section 5.4 discusses the procurement document review of purchase order #727734.

Table 5-4: Involvement of Arrested Employees in Oversight of Identified Projects

Ref	Project	DiRoma CR \$'000	Lioi CCI \$'000	Cook CCI \$'000	Zebler CCI \$'000	Panagi CCI \$'000	Total payments Under PO \$'000
1	South Westchester area contract	1,346 ⁷¹	6,693	236			23,200
2	Manhattan gas area contract				49,302		53,219
3	Manhattan electric back-up service ⁷²				1,013	879	2,181
4	Manhattan 4000 ft gas pipeline				1,446		1,446
8	Manhattan gas regulator				300		300

5.5.10 Changes to contract purchase orders (modifications or “mods”) are processed in the Procurement Management System (“PMS”). Changes requiring increases in total authorized dollars under a purchase order, or extension of the term under a blanket order, are processed by the relevant business organization rather than by Purchasing. In the Construction organization, modifications are processed using a Purchase Order Change Authorization (“POCA”). Other modifications to purchase orders, such as adding items; adjusting unit prices; amending errors; and changing specifications are normally processed by Purchasing. Where the request for a modification to be processed by Purchasing originates outside the Purchasing Department, a Purchase Order Change Request (“POCR”) is required to substantiate the need for the change.

5.5.11 Further, in the case of the eight identified construction contracts, POCA modifications were processed to increase the authorized value of the purchase orders. Table 5-5 summarizes the POCA modifications, specifically the preparer, POCA amount, and reason on the identified projects:

⁷¹ Lioi was the CCI in respect of \$692,778 of this total (i.e., these are a subset of the \$6,692,964).

⁷² As set out in Section 5.4, the Manhattan Vault project referred to in the Fassacesia/Sanabria arrest affidavit was a job package consisting of four layouts, which was performed under the blanket purchase order for Manhattan electric back-up services.

Table 5-5: POCA Modifications to Identified Projects

Ref	Project	Prepared by	Original Auth \$ (\$'000)	POCA Amt (\$'000)	Reason	Total Auth \$ (\$'000)
1	South Westchester area contract	Employee 61	15,900	7,500	Additional work	
		Cook		7,000	Revised estimated costs	30,400
2	Manhattan gas area contract	Fassacesia	31,000	9,400	Additional work	
		Fassacesia		6,000	Time extension	
		Employee 85		174	Remediation work	
		Fassacesia		8,300	Unanticipated increase in volume of work	54,874
3	Manhattan electric back-up service	Fassacesia	3,000	430		3,430
4	Manhattan 4000 ft gas pipeline	Fassacesia	1,000	447	Additional work due to unexpected field conditions	1,447
6	Holland Avenue	Villano	297	200	Change in scope of work due to engineering changes in the field	
		Villano		32	Additional items and labor	529

5.5.12 Based on the above analysis, the POCA change orders for the identified projects appear to have been processed in accordance with the CECONY Delegation of Authority. However, a key concern is the level of investigation undertaken into the reasons for the significant variances between the bid amount (reflected in the original authorized amount) and actual cost, particularly in respect of spot buy contracts such as the Manhattan 4000 ft gas pipeline and the Holland Avenue projects. There did not appear to be a substantive variance analysis for these projects prior to approval of the POCAs. However, had the review and approval process been undertaken by an independent organization (such as Estimating⁷³), the identification of any impropriety of the additional costs would have been more likely.

⁷³ Estimating performs an independent check for POCA's for fixed price work over \$25,000; therefore amounts under \$25,000 are not reviewed unless requested. All POCA requests to add a new work unit to a purchase order are reviewed by Estimating regardless of dollar value.

INVOICE PAYMENT

5.5.13 The COMPASS data identified the arrested employees' involvement in the creation and approval of payments for the identified contracts as set out in Table 5-6.⁷⁴ The employees implicated in the projects according to the arrest affidavits but not identified by "fingerprints" in the data are also indicated in the table.

Table 5-6: Involvement of Arrested Employees in Identified Projects

Ref	Project	Arrested Employee	Capacity	Value Approved (\$'000)	Total Value of Payments (\$'000)	Other Implicated Employees
1	South Westchester area contract	Sanabria	CM	2,601	23,200	DiRoma (CCI)
		Cook	Creator/TR	9,738		
		Lioi	Creator/TR	4,041		
		Lioi	Creator	1,905		
2	Manhattan gas area contract	Fassacesia	CM	53,099	53,219	Panagi (SS) Zebler (CCI)
3	Manhattan electric back-up service (Manhattan Vaults)	Fassacesia	CM	2,181	2,181	Panagi (SS)
4	Manhattan 4000 ft gas pipeline	Fassacesia	CM	1,446	1,446	Zebler (CCI)
6	Holland Avenue	Sanabria	CM	496	496	
		Villano	TR	496		
7	EDC Yankee Stadium	Giannetto	Creator/TR	223	223	
8	Manhattan Gas Regulator	Fassacesia	CM	300	300	Zebler (CCI)
10	DDC project	Cooperating Witness		10,356	39,063	Fetter (CR)
		Coffin	TR	17,189		
		Cooperating Witness		35,773		
				Total (\$'000)	120,128	

5.5.14 While the above analysis highlights the extent of involvement of Fassacesia (in his capacity as Construction Manager for the Manhattan region), the data did not provide a complete picture of the individuals involved in the invoicing and contractor payment

⁷⁴ Does not include 41st/Lexington steam emergency payments as these were made directly through PMS/Accounts Payable, not through COMPASS.

process for the reasons outlined above. For example, no arrested employee fingerprints have been identified in the data for the M-29 Bronx pipeline project (where Maher falsified the source documents) or for employees Panagi (CCI/SS on Manhattan Vault project and parts of the Manhattan gas area contract work), DiRoma (CCI on certain Westchester area contract work), Zebler (CCI on the Manhattan 4000 ft gas pipeline, the Manhattan gas regulator, and parts of the Manhattan gas area contract work) or Fetter (CR on the PI DDC project).

6 PART 1, AUDIT AREA C: EXAMINATION OF 2003-2009 TRANSACTIONS OF FELIX ASSOCIATES

6.1 INTRODUCTION

6.1.1 A total sum of approximately \$252 million was paid by CECONY to Felix Associates, the contractor involved in the projects identified in the arrest affidavits, during the period 2003 through 2009.

6.1.2 The global population of payments to Felix Associates was established in the context of all CECONY construction contractor payments during the period, which is set out at Section 6.2. The scope of the work performed by Felix Associates for the various CECONY organizations and the boroughs in which the company operated are set out in Section 6.3.

6.1.3 Further, Sections 6.4 through 6.10 set out a series of analyses conducted on the data available in respect of the contracts and the payments made to Felix Associates pursuant to those contracts to understand and identify “at-risk” transactions. The results of the analyses are discussed in Section 6.11.

6.2 PAYMENTS TO FELIX ASSOCIATES RELATIVE TO OTHER CONTRACTORS

6.2.1 Felix Associates was founded in 2003, following the bankruptcy of the predecessor firm Felix Equities, Inc. (aka Felix Industries, Inc.).

6.2.2 The CECONY submission to the PSC dated June 15, 2009 identified payments to construction contractors during the period 2000 through 2008 totaling \$5,362 million, increasing from \$306 million in 2000 to \$801 million in 2008. It was further summarized from CECONY books and records the annual payments to all construction contractors compared to all Felix entities (\$396 million) and Felix Associates only (\$252 million) in Table 6-1.

Table 6-1: Payments to Felix Associates in Context

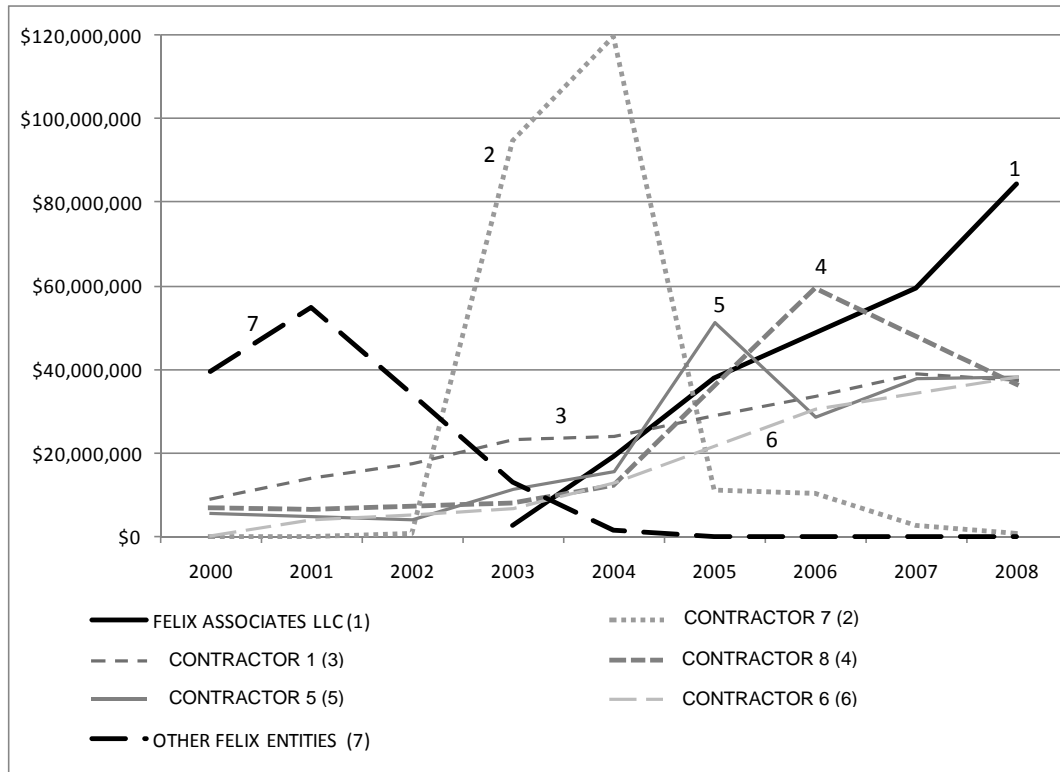
Year	Total Amount Paid to Construction Contractors (\$'000)	Total Amount Paid to All Felix Entities (\$'000)	Total Amount Paid to Felix Associates (\$'000)	% of Total Paid to Felix Associates
2000	306,417	39,666	-	
2001	438,738	54,756	-	
2002	513,215	34,208	-	
2003	641,058	15,808	2,570	0.4%
2004	647,057	20,704	19,083	2.9%
2005	611,658	38,140	38,140	6.2%
2006	664,907	48,702	48,702	7.3%
2007	738,217	59,313 ⁷⁵	59,301	8.0%
2008	800,751	84,298	84,310	10.5%
Total	5,362,018	395,595	252,106	

6.2.3 Since its inception in 2003, payments to Felix Associates increased from 0.4% to 10.5% of all CECONY construction contractor payments by 2008. During the period 2000-2008, the Felix Entities collectively were the largest CECONY contractor by amount paid. CECONY terminated its business relationship with Felix Associates on January 16, 2009 following the announcement of the employee arrests on January 14, 2009.⁷⁶ Figure 6-1 compares the payments received by the top six contractors between 2000 and 2008:

⁷⁵ Payments to Felix Equities Inc ceased in 2004; however, a payment of \$11,687 was recorded in 2007 and subsequently reversed in 2008.

⁷⁶ According to COMPASS, CECONY made payments totalling \$2.4 million to Felix Associates in January 2009; the final payment to Felix Associates was made on January 13, 2009. CECONY provided evidence that it recovered \$2.5 million from Felix Associates in January 2009 relating to payments that it had previously made. However, since these payments were for work performed and payment authorized in COMPASS, these payments have not been removed from the analysis presented later in this section.

Figure 6-1: Payments Received by Major Contractors 2000-2008



Note: The spike in payments for Contractor 7 in 2003 and 2004 is related to a single project worth \$234.8 million, of which \$213.5 million was paid in 2003 and 2004.

6.2.4 In 2008, Felix Associates received almost double the amount earned by any other contractor. The amount paid to Felix Associates in 2007 to 2008 increased by approximately \$25 million from \$59.3 million to \$84.3 million, whereas the other top five contractors saw their revenue increase marginally or fall during the period 2000 to 2008.

6.2.5 The projects identified in the arrest affidavits of the CECONY employees all relate to contracts performed by Felix Associates in the period between 2005 and 2009 (although for only a short period of time in 2009). Accordingly, for the purposes of Part 1 of this investigation, the Felix Associates transactions for the period between 2003 and 2008, totaling \$252 million, have been reviewed. These transactions include the 10 projects identified in the arrest affidavits.

6.3 PAYMENTS TO FELIX ASSOCIATES IN COMPASS

6.3.1 The payments to Felix Associates identified in the CECONY submission to the PSC dated June 15, 2009 totaling \$252 million comprised payments for work undertaken by several organizations within CECONY including the Construction organization.

6.3.2 The COMPASS application is used to track items of work performed by contractors and to initiate and approve payments for completed work. The database contains details of items of work performed in respect of each individual payment made to a contractor. To the extent that payments were made to Felix Associates for work performed for organizations outside of Construction, the processing of invoices and payments is performed outside the COMPASS system.

6.3.3 The Procurement Management System (“PMS”) application, the primary tool for procurement of goods and services, contains details of purchase orders including the total value of payments made to contractors for each purchase order or contract. This database extends across all CECONY organizations (i.e., beyond the Construction organization); however, it does not contain details of individual payments such as layouts, bearings, cuts, and items paid, or payment approval information, as available in COMPASS.

6.3.4 Based on the data made available in the course of the investigation to date, payments to Felix Associates are contained within the various data sets included in Table 6-2.

Table 6-2: Payments Identified to Felix Associates

Organization	Total Payments per CECONY Submission (\$'000)	Payments in PMS			Contracts Identified in the Arrest Affidavits (\$'000)
		Total Payments In PMS 2003-2009 ⁷⁷ (\$'000)	Payments In COMPASS 2003-2009 (\$'000)	Payments Outside COMPASS 2003-2009 (\$'000)	
Construction		177,887	167,567	10,320 ⁷⁸	137,589
Steam Operations		45,483	37,633	7,850	
Gas Operations		18,561		18,561	
System & Transmission Ops		386		386	
Engineering & Planning		263		263	
Substation Operations		31		31	
Facilities		2		2	
Total	252,106⁷⁹	242,613	205,200⁸⁰	37,413	137,589

⁷⁷ Payments identified to Felix Associates in PMS have been adjusted by \$291,690 for PI work undertaken on behalf of the Construction organization in 2009; these payments did not appear in the PMS database due to the cut-off point of the data but appear in COMPASS made available for this study. It is understood that all payments in COMPASS are recorded in PMS.

⁷⁸ Relates to the 41st/Lexington emergency steam restoration work, which was paid outside of COMPASS.

⁷⁹ As of the date of this report, there is a current difference between the total value of payments recorded by CECONY in PMS and the CECONY submission to PSC dated June 15, 2009 of \$11.9 million – based on the difference between \$252.1 million per the CECONY Submission to the PSC and total payments in PMS between 2000 and 2008 of

- 6.3.5 Table 6-2 shows that the Construction organization accounted for over 70%⁸¹ of the value of payments to Felix Associates. In addition to projects procured directly by the Construction organization, the Construction Management group oversaw two projects undertaken by the Steam Operations organization (denoted by the \$37.6 million of payments processed via COMPASS) resulting in a total of \$205.2 million of payments to Felix Associates being processed by the Construction Management group via COMPASS. A further \$37.4 million was paid outside the Construction organization, most significantly Gas Operations (\$18.6 million) and other Steam Operations projects (\$7.8 million), and \$11.9 million⁸² of payments predominantly represents amounts paid on contracts that were assigned to Felix Associates subsequent to Felix Equities' bankruptcy and were in the A/P database and not included in the PMS data reviewed. At this stage, the differences between the A/P database and the PMS database have not been fully reconciled.⁸³ It is not clear to what extent, if any, Construction Management staff was involved in the day-to-day management, invoicing, and payment approval processes for the payments made to Felix Associates for projects undertaken by other organizations.
- 6.3.6 Payments for nine of the 10 contracts identified in the arrest affidavits were made via COMPASS for projects undertaken by the Construction organization and involving Construction Management employees and payments for the tenth project were made through PMS.
- 6.3.7 Felix Associates performed work for both Construction Management and Public Improvement ("PI") projects for CECONY, with the PI component contributing significantly to the growth of Felix payments. Construction Management work was performed pursuant to 36 individual contracts (i.e., purchase orders), predominantly in

\$240.2 million (\$242.6 million less payments made in 2009 of \$2.4 million). CECONY explained this difference by citing two POs (321460 and 933836) which were originally assigned to Felix Equities and were later moved to Felix Associates. Since the designated payee for a PO cannot be updated in PMS, these POs were not included in the POs reviewed for PMS or COMPASS. Accounts Payable records indicate that the amount of these POs paid to Felix Associates was \$12.6 million. There are also several other credits in the Accounts Payable data offsetting a portion of this difference, but the differences have not been fully reconciled and, therefore, these amounts are not included in the analysis of PMS and COMPASS in this Part 1 report.

⁸⁰ CECONY identified \$2.5 million of credits to Felix Associates in January 2009. While evidence has been provided that these credits were received, we have not been able to match these credits to the original payments at this stage. Therefore, the total amount paid to Felix Associates may need to decrease accordingly.

⁸¹ 70% = Total Payments in PMS for Construction Organization (\$177.8 million) / Total Payments per CECONY Submission (\$252.1 million).

⁸² This is calculated as the difference between the amounts in the CECONY submissions plus payments made in 2009 (\$252.1 million + \$2.4 million) less the payments recognised in PMS (\$242.6 million).

⁸³ Possibly relating to emergency works, which are overseen by Construction Management. These have not been investigated further for the purposes of this Part 1 report.

Manhattan (\$128.5 million⁸⁴) and Westchester (\$27.2 million). PI work was carried out on 15 projects, predominantly in Manhattan (\$48.4 million, of which \$39.1 million relates to the DDC project identified in the arrest affidavits). The payments by region and work type are detailed at Appendix 6.1 and are summarized in Table 6-3.

Table 6-3: Payments to Felix Associates (Region and Work Type)

Organization	Region	Construction Work		PI Work		Total Paid (\$'000)
		No. of POs	Total Paid (\$'000)	No. of Projects	Total Paid (\$'000)	
Construction	Manhattan	7	61,788	11	48,367	110,155
	Westchester	3	27,192			27,192
	Bronx	1	496	2	235	731
	General ⁸⁵	8	26,342	2	2,902	29,244
	Queens			1	137	137
	Brooklyn			1	108	108
	Manhattan	2	37,633			37,633
Payments In COMPASS		21	153,451	15⁸⁶	51,749	205,200
Construction	General	1	10,320			10,320
Engineering & Planning	Manhattan	3	263			263
Facilities	General	1	2			2
Gas Operations	Bronx	2	7,349			7,349
	Manhattan	1	10,649			10,649
	Queens	1	563			563
Steam Operations	Steam	4	7,850			7,850
Substation Operations	General	1	31			31
System & Transmission Ops	General	1	386			386
Payments Outside COMPASS		15	37,413			37,413
Total		36	190,864	15	51,749	242,613

6.3.8 The total amount of \$242.6 million paid to Felix Associates based on PMS records has not been reconciled with the CECONY submission to the PSC dated June 15, 2009 as noted above.

⁸⁴ Includes Construction Management's Manhattan region (\$61.8 million); all "Steam" contracts (\$37.6 million+\$7.9 million); Gas operations (\$10.6 million); Engineering & Planning (\$0.3 million); and contract denoted as "General," which is the 41/Lexington restoration work (\$10.3 million).

⁸⁵ "General" includes work undertaken on behalf of organizations that do not appear to have a fixed geographical location such as Transmission Construction and Substation Operations.

⁸⁶ The total of 15 does not cast as two Public Improvement projects have some invoices that are classified as "General" and some that are classified as "Manhattan".

6.4 INDICATORS OF TRANSACTIONS “AT-RISK”

6.4.1 Based on the schemes employed to perpetrate the inappropriate transactions identified in the arrest affidavits, it is not feasible to determine precisely the full extent of overpayments resulting from fraud made by CECONY to Felix Associates over the period 2003-2009. A manual review and reconciliation of all payments to the available source documents (such as that performed by KPMG for a portion of the contracts discussed in Section 4) would provide only the value of identifiable overcharges within those payments. Determining the actual overpayments resulting from fraud would require access to not only perfect information but also an assessment of the reasonableness of judgments made in the field regarding the extent of falsified source documents or a means by which to identify such falsified documents (for example, by excavation and inspection of the work performed, which usually proves to be entirely impractical after the fact).

6.4.2 Working within the confines of the available electronic data, a Quantitative Indicator Model was developed and utilized to investigate several indicators to assist with identifying populations of transactions at risk of potential fraudulent, wasteful, or abusive conduct. The details of these analyses are presented in the following subsections of this document:

- (a) Macro/Micro items (Section 6.5)
- (b) Upcoding (Section 6.6)
- (c) Net Debits (Section 6.7)
- (d) Time and Equipment (“T+E”) charges (Section 6.8)

6.4.3 Data enabling analysis of the above are recorded in COMPASS and, as such, analysis of the above extended only to the population of payments within that data (i.e., \$205.2 million out of the total \$252.1 million payments to Felix Associates).⁸⁷

6.4.4 Increases in authorized values of purchase orders may have facilitated payment of inflated amounts in relation to the projects identified in the arrest affidavits. Accordingly, the extent of modifications processed in respect of a purchase order may indicate “at-risk” payments. An analysis of the modifications processed for all Felix Associates

⁸⁷ The \$205.2 million may need to be adjusted for refunds (of approximately \$2.5 million) that CECONY received from Felix Associates that were not recorded in COMPASS and amounts that were originally recorded under Felix Equities. However, at this stage, it has not been possible to do this and all analysis is based on the COMPASS database made available for this study.

contracts (i.e., the population of \$242.6 million identified in PMS) is set out at Section 6.9.

- 6.4.5 Working with the data and considering its inherent process limitations, which were discussed previously in Section 5, in respect of the individuals responsible for the invoicing and approval of contractor payments, the results were reinforced with “fingerprint”⁸⁸ data and other information within CECONY’s electronic systems indicating employee involvement that provides an additional overlay in identifying populations of “at-risk” transactions. Analyses in this regard are set out at Section 6.10.

6.5 MACRO/MICRO ITEMS

- 6.5.1 Instances of macro/micro duplication of Trenching Manual⁸⁹ items within the projects referred to in the arrest affidavits, involving all-inclusive and mutually exclusive items, were identified as discussed below. The Trenching Manual and associated processes are discussed previously in Section 5.

ALL-INCLUSIVE ITEMS

- 6.5.2 Based on a review and analysis of the Trenching Manual, some items within the Trenching Manual are composites or “all-inclusive” items and should not be charged in combination with other items in the same cut in order to avoid overpayment. For example, item T2AI (Special Care All Inclusive), which includes sheeting, should not be charged in the same cut as T101 (furnish, install, and remove solid sheeting).
- 6.5.3 A total of 136 queries were developed⁹⁰ to test the payments to Felix Associates for instances of such macro/micro duplication. These queries were performed on the total population of payments to Felix Associates in COMPASS. The results of all queries are included as Appendix 6.2.
- 6.5.4 Of the queries run, 51 of the queries produced “hits”⁹¹ ranging from 350 hits to 1 hit, based on the items (which should not have been included) having been charged in the same cut, bearing, or layout. The queries were then sorted by the number of hits

⁸⁸ A “fingerprint” is electronic evidence of employee involvement in the creation, review, or approval of contractor invoices as recorded in the COMPASS system.

⁸⁹ Section 4.4.2 provides a definition of the Trenching Manual.

⁹⁰ The queries were based on the overcharges identified in relation to the 10 projects in the arrest affidavits and with reference to the Trenching Manual.

⁹¹ A “hit” is defined as an instance of macro/micro duplication occurring in the same cut or, if the cut is not identified, an instance of macro/micro duplication in the same bearing or layout.

produced, and 12 of the top 14 queries were selected for analysis of overpayment.⁹² Due to limitations within the data whereby the bearing and/or cut is not identified, the analysis extends to macro/micro duplication at the bearing and layout level, with the degree of certainty of “at-risk” transactions reducing from cut (which is typically one day’s worth of work), to bearing, to layout. Details of the identified “at-risk” payments are set out at Appendix 6.3, and are summarized in Table 6-4.

Table 6-4: At-Risk: All-Inclusive (Macro/Micro)

Organization	Region	Cut (\$'000)	Bearing (\$'000)	Layout (\$'000)	Total “at-risk” Payment (\$'000)	Total Payment for Related Layouts (\$'000)
Construction	Manhattan	21	645	7	673	12,759
Construction	Westchester	159	993	3,029	4,181	13,416
Total		180	1,638	3,036	4,854	26,175

6.5.5 A possible overpayment of \$4.9 million for macro/micro items has been identified based on the queries performed to date. While the duplication of \$0.2 million at the cut level appears likely, further review of field documentation and conditions would be necessary to further inform the extent of potential overcharging at the bearing and layout level (\$1.6 million and \$3.0 million respectively).

MUTUALLY EXCLUSIVE ITEMS

6.5.6 An additional 17 queries, identifying items of like kind, which should be mutually exclusive within a given cut, were developed and run on the data. An example of mutually exclusive items includes items T101 (furnish, install, and remove solid sheeting), T103 (furnish and place tongue and groove pressure treated sheeting) and T104 (place tongue and groove sheeting to be furnished by others). It would seem that these should not be charged in the same cut. A number of queries produced “at-risk” transactions within the Felix Associates payments. The details of the identified “at-risk” payments are set out at Appendix 6.4, and are summarized in Table 6-5.

⁹² Two queries (query 43 and 59) were excluded relating to the incremental cost of furnishing and delivering fill. It was determined that these items were appropriately used in conjunction with the item code for placing fill.

Table 6-5: At-Risk: Mutually-Exclusive (Macro/Micro)

Organization	Region	Cut (\$'000)	Bearing (\$'000)	Layout (\$'000)	Total "at-Risk" Payment (\$'000)	Total Payment for Related Layouts (\$'000)
Construction	Manhattan	2	6	14	22	1,826
Construction	Westchester	15	6	8	29	6,049
Total		17	12	22	51	7,875

6.5.7 As with the all-inclusive items analysis, the degree of certainty as regards impropriety of the charges reduces from cut, to bearing, to layout. Further investigation of the field documentation would be necessary to confirm the extent of overcharging, particularly at the bearing and layout level.

6.6 UPCODING

6.6.1 Potential overcharges could relate to upcoding of T+E and unit price items, involving the charging of items at more expensive item codes than actually applicable, were identified by KPMG within the projects referred to in the arrest affidavits. Such upcoding included the use of weekend working codes on weekdays, charging for removal of hard rock under more expensive item code T50 instead of T51 for removal of hard rock by line drilling and splitting method which was actually performed, and the use of other premium time codes.

INAPPROPRIATE USE OF WEEKEND CODES

6.6.2 Contractors are entitled to premium pay rates when working on the weekend. The Trenching Manual states:

"Weekend Premium factor "W"...Contractors premium bid factor to be applied to regularly scheduled weekend stipulated work as well as emergencies started within weekends only. Factor "W" will be applied to all jobs started after midnight Friday night (into Saturday morning) and completed before midnight Sunday night (into Monday morning)".

Work performed on the weekend is normally (but not always) designated with a suffix "W," and a multiplier is applied to the applicable pay item.

6.6.3 Approximately \$5.6 million of payments to Felix Associates charged to weekend work item codes were identified in COMPASS where the date of work identified in COMPASS was not a weekend. To the extent these items were incorrectly charged to the weekend

code, the loss relating to these items would be the increased mark-up charged to CECONY. Based on the standard mark-up on weekend work of 25%,⁹³ the value of payments “at-risk” is \$1.1 million.⁹⁴ Details of this analysis are set out at Appendix 6.5, and are summarized in Table 6-6.

Table 6-6: At-Risk: Weekend Work Codes (Upcoding)

Organization	Region	T+E (\$'000)	Unit Price (\$'000)	Total (\$'000)	20% of Total (\$'000)
Construction	Manhattan	659	3	661	132
Construction	Westchester	800	1,542	2,342	468
Steam		2,609	5	2,614	523
Total		4,068	1,549	5,616	1,123

6.6.4 However, further work involving a review of the source documents such as the Daily Log Reports and T+E sheets would be required to determine whether these charges were in fact inappropriate as the “date of work” field in COMPASS is not controlled and may have been manually entered incorrectly.

OTHER UPCODING

6.6.5 After several attempts to parse the COMPASS data and perform meaningful upcoding tests, it appeared that further inquiry would be required to verify anomalies for this area of quantification. Such inquiry would entail detailed review of hand-written Daily Logs Reports and other documents that emanated from field observation of contractor performance by CECONY personnel. An example of suspicious upcoding is related to rock excavation item codes and exclusive use of hand excavation.

6.7 NET DEBITS

6.7.1 Items described as debit may be entered into a COMPASS worksheet in lieu of any item that is not specified on the purchase order (and therefore not available in the drop-down menu), or as a partial payment (as in the case of Manhattan Vaults project) or a lump sum payment as in PO 626741. Some Unreconciled debit items (i.e., those not off-set by a subsequent credit within the layout) may represent unwarranted payments.

6.7.2 An analysis of the Felix Associates payments in COMPASS relating to Construction Management and Public Improvement type work identified a total of \$7.8 million of

⁹³ Email from F. Ptaszowski, dated November 25, 2009.

⁹⁴ A premium of 25% would result in a potential overpayment of 20% (0.25/1.25).

unreconciled net debit payments (\$6.1 million within the contracts identified in the arrest affidavits), as well as a total of \$2.6 million of net credit payments. Details of this analysis are set out at Appendix 6.6, and are summarized in Table 6-7.

Table 6-7: At-Risk: Net Unreconciled Debits

Organization	Region	Total Outstanding Net Debits (\$'000)	Total Outstanding Net Credits (\$'000)	Net Outstanding Debits and Credits (\$'000)
Construction	Manhattan	3,128	(207)	2,920
Construction	Westchester	1,986	(622)	1,363
Steam		915	(1,692)	(777)
Public Improvement		1,798	(82)	1,715
Total		7,826	(2,604)	5,222

6.7.3 This amount is provisional, and further analysis would be required to determine whether these amounts are in fact overcharges and whether any of the net credits relate to the net debits.

6.8 TIME AND EQUIPMENT CHARGES

6.8.1 A significant portion of the overcharges identified by KPMG related to T+E timesheet discrepancies, including the Manhattan Vaults project where T+E items comprised of approximately 30% of the total cost of one of the layouts (and 45% of the T+E charges were found to have been improper overcharges, as calculated by KPMG and discussed in Section 4).

6.8.2 In the normal course of performing work on behalf of CECONY, T+E is used in specific circumstances where appropriate pay items may not be specified under the contractor's purchase order. A high proportion of T+E in a layout compared to the overall layout cost may therefore indicate an increased likelihood of overcharging relating to a particular layout. This does not hold for PI (or emergency) work, which tends to be performed on a T+E basis.

6.8.3 An analysis of the Felix Associates payments in COMPASS relating to Construction Management work identified the proportion of T+E per layout, as set out in detail at Appendix 6.7 and summarized in Table 6-8.

Table 6-8: Proportion of T+E within Layouts

% of T+E per Layout	Total payments (\$'000)	% Pop.	Region				
			Manh (\$'000)	Westr (\$'000)	General (\$'000)	Steam (\$'000)	Total (\$'000)
0%	34,986	23%	-	-	-	-	-
>0-10%	31,660	21%	945	627	57	282	1,911
>10-20%	34,023	22%	3,085	1,268	-	766	5,119
>20-30%	20,732	14%	2,676	361	50	2,019	5,106
>30-40%	14,172	9%	1,609	536	83	2,616	4,844
>40-50%	8,361	5%	914	120	-	2,696	3,730
>50-60%	2,275	1%	78	204	-	952	1,234
>60-70%	1,219	1%	396	138	-	246	780
>70-80%	1,175	1%	90	52	-	750	892
>80-90%	1,603	1%	16	226	-	1,125	1,367
>90-100%	3,246	2%	223	93	-	3,047	3,364
Total	153,451		10,033	3,625	189	14,500	28,347

6.8.4 Table 6-8 shows that almost a quarter of layouts (by value) do not include any T+E costs, and approximately 4% have T+E costs of over 70% (which may relate to predominantly T+E based contracts – this would require further review to confirm). A significant population of layouts indicates T+E proportions of between 20% and 70% totaling approximately \$46.7 million, of which \$15.7 million relates to T+E, which warrants further investigation.⁹⁵ For the purpose of this analysis, the T+E cost component of layouts with a T+E proportion in the range of 20-70% of the total layout cost, totaling \$15.7 million, is considered “at-risk.” The \$15.7 million is split between regions, as identified in Table 6-9. This range was chosen since most projects have some level of T+E due in a large part to Traffic Stipulations. Based on interviewing it was acknowledged that below 20% would be within reason and, similarly, the 70% and above range was reasonable considering that some projects due to site related conditions were best performed with a majority of T+E. Therefore, the range between the two was chosen as a potential risk area.

⁹⁵ CECONY's Construction Management reports indicate a corporate goal of maintaining T+E expenditures at a level of 18.3% for 2008. Construction Management Goals and Financial Performance Report for 12/2008 published 1/23/2009, Section 1 – Corporate Goals, Construction Management Productivity Indicator, made available for this study on 11/30/2009.

Table 6-9: At-Risk: T+E

Region	T+E (\$'000)
Construction – General	132
Construction – Manhattan	5,673
Construction – Westchester	1,360
Steam ⁹⁶	8,529
Total	15,694

6.8.5 This amount is provisional. A detailed review of the purchase order contract terms would need to be undertaken in order to determine the eligibility for T+E charges under each of the relevant contracts, the conditions that gave rise to the use of T+E charges, whether the work could have been paid for using pay items established in the contract and the cost of using T+E versus established pay items.

6.9 MODIFICATIONS TO AUTHORIZED VALUES OF PURCHASE ORDERS

6.9.1 It was observed that payment of “at-risk” amounts for several of the projects identified in the arrest affidavits was partly facilitated by the processing of POCAs to increase the authorized value of the purchase order.

6.9.2 For spot buy contracts, the authorized value of the purchase order should reflect the bid submitted and approved by the Purchasing Department in the course of the procurement process and therefore the contractually agreed price in respect of a specific job package. An increase in the authorized dollars would be expected only in exceptional circumstances and as such, the extent of change orders in respect of spot buy contracts serves as an indicator that would warrant further investigation.

6.9.3 For blanket orders, normally raised for area contracts, a change order increasing the authorized dollars may not trigger a flag as the authorized purchase order values are based on estimates of work at agreed upon prices (specific contractual prices) to be performed rather than firm, contractually agreed job package values. Therefore, increases in authorized values may be justified on the grounds of differences between the original estimate and the actual volume of work required to be performed.

6.9.4 An analysis of the payments to Felix Associates for the 36 construction work projects⁹⁷ shows the majority, being \$157.7 million of the total of \$190.9 million, were made

⁹⁶ There is a high incidence of T&E payments within the Steam division. The Steam division’s payments have not been investigated in any detail and it should be noted that none of the arrested employees worked in that organization.

pursuant to blanket orders.⁹⁸ The analysis is set out at Appendix 6.8 and is summarized in Table 6-10.

Table 6-10: Payments to Felix Associates (Construction Management, Excluding PI)

Organization	Region	Spot Buy POs ⁹⁹		Blanket POs		Total POs		Total for Arrest Affidavit Projects (\$'000)
		No. of POs	Total Paid (\$'000)	No. of POs	Total Paid (\$'000)	No. of POs	Total Paid (\$'000)	
Construction	Bronx	1	496			1	496	496
	Manhattan	5	6,388	2	55,400	7	61,788	57,146
	Westchester			3	27,192	3	27,192	23,200
	General	7	26,158	1	184	8	26,342	7,140
		13	33,043	6	82,775	19	115,818	87,983
Steam Ops	Manhattan			2	37,633	2	37,633	
Payments In COMPASS		13	33,043	8	120,409	21	153,451	87,983
Construction	Manhattan			1	10,320	1	10,320	10,320
Engineering & Planning	Manhattan	2	168	1	94	3	263	
Facilities	General			1	2	1	2	
Gas Operations	Bronx			2	7,349	2	7,349	
	Manhattan			1	10,649	1	10,649	
	Queens			1	563	1	563	
Steam Ops	Manhattan			4	7,850	4	7,850	
Substation Ops	General			1	31	1	31	
System & Transmission	General			1	386	1	386	
Payments Outside of COMPASS		2	168	13	37,244	15	37,413	10,320
Total		15	33,211	21	157,653	36	190,864	98,303

6.9.5 Table 6-10 shows 13 of the 15 spot buy contracts (totaling \$33.0 million) were managed by Construction Management and two spot buy contracts (totaling \$0.2 million) were managed by Engineering and Planning. Conversely, blanket purchase order contracts

⁹⁷ This analysis does not extend to PI work as this is not subject to the same procurement process as Construction Management work.

⁹⁸ Following adjustment for an anomaly identified in the process of this analysis whereby five of the 26 purchase orders denoted as blanket orders (all in Construction) were raised pursuant to spot buy requisitions, and the description of the work indicates the contract to have been a spot buy contract. This anomaly appears to warrant further investigation to determine whether such changes have any implications for subsequent contract administration issues (for example, whether change orders in respect of blanket orders are subject to less scrutiny than those in respect of spot buy contracts).

⁹⁹ Includes the five blanket purchase orders raised pursuant to spot requisitions.

were issued by all organizations: nine of the 21 blanket contracts (totaling \$130.7 million or 83% by value)¹⁰⁰ were managed by Construction Management and a further 12 blanket contracts (totaling \$26.9 million or 17% by value) were raised by the other six organizations.

SPOT BUY CONTRACTS

6.9.6 A review of the 15 spot buy contracts has identified 11 contracts that were modified to increase the authorized value of the purchase orders. Modifications to the 11 spot buy contracts almost doubled the authorized value for these contracts by adding \$10.1 million to the initial authorized value of \$11.3 million. The remaining four spot buy contracts remained at their initial authorization value of \$17.2 million. Details of the modifications to the spot buy contracts are set out at Appendix 6.9 and are summarized in Table 6-11.

Table 6-11: Spot Buy Contracts

Organization	Region	Increase in Auth Amt	No. of POs	Initial Auth Amt (\$'000)	Addn (\$'000)	Final Auth Amt (\$'000)	Amount Paid (\$'000)	
Construction	Manhattan	Yes	5	2,897	3,528	6,424	6,388	
	Bronx	Yes	1	297	232	529	496	
	General	Yes	4	7,922	6,323	14,245	13,775	
		No	3	17,147		17,147	12,383	
Payments In COMPASS			13	28,261	10,084	38,344	33,042	
Engineering & Planning		Yes	1	135	22	157	154	
		No	1	19		19	15	
Payments Outside COMPASS			2	154	22	176	169	
Total			15	28,415	10,105	38,520	33,211	
			Yes	11	11,250	10,105	21,356	20,814
			No	4	17,165	-	17,165	12,398
				15	28,415	10,105	38,521	33,212

6.9.7 The increases processed in respect of the Holland Avenue and Manhattan 4000 ft gas pipeline were processed to facilitate the payment of "at-risk" amounts. A detailed review of the documentation supporting the remaining modifications would be required to establish whether the increases were justified and valued accordingly. At present,

¹⁰⁰ Includes the eight blanket orders managed in COMPASS plus the additional Construction blanket order, totalling \$10.3 million, raised in respect of the 41/Lexington restoration work paid via PMS.

amounts totaling \$10.0 million¹⁰¹ paid in excess of the initial authorized values are considered “at-risk” for the purpose of this analysis (\$9.9 million relates to projects managed by Construction Management, and \$0.02 million relates to projects undertaken by other organizations).

BLANKET CONTRACTS

6.9.8 Seven out of 21 blanket purchase order contracts were modified to increase the authorized value of the purchase orders. Modifications to the seven blanket contracts increased the authorized value for these contracts by \$57.4 million from \$85.5 million to \$142.9 million. The remaining 14 blanket contracts remained at their initial authorization value of \$65.2 million. Details of the modifications to the blanket contracts are set out at Appendix 6.10 and are summarized in Table 6-12.

¹⁰¹ This is calculated as the difference between the Amount paid and the initial authorized amount for those POs where the initial authorized amount was increased and the total payments were greater than the initial authorized amount (See Appendix 6.9).

Table 6-12: Blanket Contracts

Organization	Region	Increase in Auth Amt	No. of POs	Initial Auth Amt (\$'000)	Addn (\$'000)	Final Auth Amt (\$'000)	Amount Paid (\$'000) ¹⁰²
Construction	Manhattan	Yes	2	34,000	24,304	58,304	55,400
	Westchester	Yes	1	15,900	14,500	30,400	23,200
	Westchester	No	2	10,000		10,000	3,991
	General	No	1	2,000		2,000	184
Steam Ops	Steam	Yes	1	17,600	14,000	31,600	30,616
	Steam	No	1	15,000		15,000	7,017
Payments In COMPASS			8	94,500	52,804	147,304	120,409
Construction	Manhattan	Yes	1	7,500	3,500	11,000	10,320
Engineering & Planning		Yes	1	100	100	200	94
Facilities		No	1	2		2	2
Gas Operations		Yes	1	10,400	1,000	11,400	10,649
		No	3	18,721		18,721	7,912
Steam Operations		No	4	14,460		14,460	7,850
Substation Operations		No	1				31
System & Transmission Ops		No	1	5,000		5,000	386
Payments Outside COMPASS			13	56,183	4,600	60,783	37,244
Total			21	150,683	57,403	208,087	157,653
			Yes	7	85,500	57,403	142,903
			No	14	65,183	-	65,183
			21	150,683	57,403	208,087	157,653

- 6.9.9 In certain instances, increases in authorized values were processed to accompany time extensions. Other recorded reasons for the increases included additional work and changes in scope.
- 6.9.10 Given the nature of blanket orders/area contracts (i.e., indefinite quantity of work), changes to the authorized values of blanket purchase orders are easier to facilitate than, in respect of spot buy contracts, facilitating overpayments for work performed.
- 6.9.11 In the absence of further details clarifying the basis for, and calculation of, the initial authorized values of the purchase orders, it is not possible to comment on the validity of the increases. As with spot buy contracts, a detailed review of the documentation supporting the modifications to blanket orders would be required to establish whether the increases were justified and valued accordingly. However, it is notable that modifications

¹⁰² Final authorized amounts may not be fully exhausted due to the nature of the contract type.

were processed to increase authorized values of all four blanket orders within the population of the 10 projects identified in the arrest affidavits, and five of the nine blanket orders managed by the Construction Management group overall (modifications totaling \$56.3 million); whereas, modifications were only processed in respect of two of the remaining 12 blanket orders raised and managed by other organizations (modifications totaling \$1.1 million).

- 6.9.12 As discussed previously, blanket orders are also more vulnerable to overcharges even in the absence of change orders modifying the authorized values as the values of funds allocated to a particular blanket or area contract may be exhausted on improper charges. Given that CECONY lacked any systematic budget to actual variance management reports at the layout level, such charges would go undetected.
- 6.9.13 At present, amounts totaling \$45.6 million paid in excess of the initial authorized values (\$45.4 million in respect of projects managed by Construction Management and \$0.2 million in respect of projects managed by other organizations) are considered “at-risk” for the purpose of this analysis.

6.10 INVOLVEMENT OF ARRESTED EMPLOYEES

- 6.10.1 The arrested employees included CMs, SSs, CCIs, and CRs who were, by the nature of their roles and responsibilities, involved in various aspects of construction contract procurement, contract administration, and payment.
- 6.10.2 The responsible official recorded in the respective databases for procurement, contract oversight, modification, and payment is not necessarily indicative of the person who actually performed or approved the action. There are often employees involved in the initial approval of payments (prior to technical review or Construction Manager review) who will not be recorded within the databases kept by CECONY.
- 6.10.3 Furthermore, the databases did not at the time of frauds keep an audit trail of users; any changes to the databases recorded the last user as the responsible official and deleted all knowledge of others’ involvement. Unless hard copies of the inputted material had been kept, it will not be possible to verify the accuracy of user details.¹⁰³

¹⁰³ CECONY notes in comments advanced through the factual accuracy check that full audit controls with audit trails have been implemented in COMPASS and Layout Tracking as of June 2010. The effectiveness of these implementations has not been reviewed in this Part 1 report.

6.10.4 Despite the above limitations to data identities, the involvement of the arrested employees in construction procurement, contract oversight, and the creation and approval of payments of Felix Associates contracts are discussed below. It should be noted however that that in order to fully appreciate the involvement and working relationships between the arrested employees, it would be necessary to compare and examine activities with contractors other than Felix Associates in order to confirm trends and anomalies, and control weaknesses that may indicate “at-risk” contracts and payments.

PROCUREMENT

6.10.5 There are two levels of involvement, the requisition process and the subsequent approval of contracts, identifiable in PMS. As discussed previously in Section 5, none of the arrested employees were involved in the approval of the initial requisition; however, Cook, Fassacesia, Giannetto, Sanabria, and two cooperating CECONY witnesses are identified as the requisitioners for projects with an estimated cost of \$126.4 million (of which \$84.6 million Construction work and \$41.8 million Public Improvement work). The level of involvement of arrested individuals does not appear inappropriate given their positions and responsibilities within CECONY; however, further work involving a comparison to their involvement in the requisition of contracts that were awarded to other contractors would be necessary to identify any unusual behavior.

CONTRACT PERFORMANCE AND OVERSIGHT

6.10.6 The Layout Tracking System (“LOT”) is used only for unit price contracts for Construction Management work¹⁰⁴ and does not include jobs performed by Substation & Transmission Construction and Steam Operations. LOT records the percentage of work completed, estimated quantities, cost estimates, and actual costs, as well the CR and CCI assigned to work on each layout. Typically, the percentage of work completed and the actual costs are maintained and updated on a regular basis, whereas the other fields are not as regularly updated. The reliability of LOT is undermined by inaccurate and incomplete data fields. In addition, it is not clear that a designated CCI or CR would remain the

¹⁰⁴ Layouts under Public Improvement are not included in LOT.

same throughout the course of a layout; therefore, the limited information held within LOT may not be reliable.¹⁰⁵

6.10.7 To the extent it is determinable from the data in LOT, details of the CRs and CCIs assigned to the layouts completed by Felix Associates are set out at Appendix 6.11 and the involvement of the arrested employees is summarized in Tables 6-13 and 6-14.

Table 6-13: Involvement of Arrested Employees as CR

Assigned CR	Bronx \$'000	Manhattan \$'000	Westchester \$'000	General \$'000	Steam \$'000	Total \$'000
DiRoma			1,358			1,358
Non-arrested		57,011	24,687	-		81,698
Not identified in LOT		1,229	1,134			2,363
Layouts not included in LOT	496	3,548	13	26,342	37,633	68,033
Total	496	61,788	27,192	26,342	37,633	153,451

Table 6-14: Involvement of Arrested Employees as CCI

Assigned CCI	Bronx \$'000	Manhattan \$'000	Westchester \$'000	General \$'000	Steam \$'000	Total \$'000
Cook			236			236
Lioi			6,703			6,703
Panagi		879				879
Zebler		55,291				55,291
Total of Arrested	-	56,170	6,939	-	-	63,109
Non-arrested		1,306	20,207			21,513
	-	57,476	27,146	-	-	84,622
Not identified in LOT		765	32			797
Layouts not included in LOT	496	3,548	13	26,342	37,633	68,033
Total	496	61,788	27,192	26,342	37,633	153,451

6.10.8 The total value of payments with identified involvement of the arrested employees in a contract oversight capacity is \$63.8 million¹⁰⁶ and is considered “at-risk” in the context of this analysis.

¹⁰⁵ Further, in the Manhattan Vaults case study, the contractor on the Layout form for S06-021021-002M is recorded as Contractor 1 rather than Felix Associates, although this may be an indicator of another issue, i.e., diversion of contracts toward specific contractors.

INVOICE PAYMENT

6.10.9 A total of 62 individual CECONY employees are identified in the COMPASS system to have been involved in the invoicing and payment process in respect of the payments to Felix Associates from 2003 to 2009 processed via that system (i.e., \$205.2 million). As discussed above, there are significant limitations to the “fingerprint” data in COMPASS as it does not necessarily identify the individual responsible for inputting or amending the worksheet item details into the system.

6.10.10 Nevertheless, details of the employees identified in COMPASS are set out at Appendix 6.12 and the involvement of the nine arrested employees whose “fingerprints” are identified in the data summarized in Table 6-15.

Table 6-15: Total Per Arrested Employee “Fingerprints” from 2003 - 2009

Arrested Employee	Construction Management Work			PI Type Work (\$'000)	Total (\$'000)	Role			
	Bronx (\$'000)	Manhattan (\$'000)	Westchester (\$'000)			CM	TR/Creator	TR Only	Creator Only
Fassacesia		60,712	-	-	60,712	60,712			
Sanabria	496		2,816	-	3,313	3,313			
Villano	496			-	496			496	
Lioi			6,543		6,543		5,447		1,095
Cook			12,596		12,596		11,001	1,595	
Giannetto				223	223		223		
Cooperating Witness		835		16,585	17,420	11,212		6,101	107
Cooperating Witness				42,025	42,025				42,025
Coffin				19,098	19,098			19,098	

6.10.11 Based on the above analysis, a total of \$75.2 million of payments were ultimately approved by an arrested employee in the capacity of the Construction Manager, and an additional \$50.5 million¹⁰⁷ was prepared and/or reviewed by an arrested employee. Of particular concern are the payments where the same individual is identified as having created and conducted the technical review of a SysBill, totaling \$16.7 million. All of

¹⁰⁶ This is calculated as \$63.1 million where the CCI was an arrested individual plus \$1.4 million where DiRoma was the CR less \$0.7 million for those layouts where DiRoma was the CR and the CCI was an arrested individual (i.e., there would be double-counting).

¹⁰⁷ Of the \$75.2 million reviewed by an arrested employee as the CM, there was an overlap of \$13.3 million, which represents the same charges reviewed by another arrested employee (and is not included in the \$50.5 million).

these transactions would be considered “at-risk” and warranting further investigation. The total value of the transactions with identified arrested employee involvement at some level is \$125.8 million¹⁰⁸, of which \$111.4 million relates to the 10 projects identified in the arrest affidavits and discussed in Section 4.

6.11 SUMMARY OF OBSERVATIONS

6.11.1 The work performed during Part 1 of this investigation was directed toward a population of payments to Felix Associates in the period 2000-2009 comprising the following:

Table 6-16: Payments to Felix Associates

Organization	Payments in PMS			Total Payments per CECONY Submission (\$'000)
	Payments In COMPASS (\$'000)	Payments Outside COMPASS (\$'000)	Total Payments In PMS (\$'000)	
Construction	167,567	10,320 ¹⁰⁹	177,887	
Steam Operations	37,633	7,850	45,483	
Gas Operations		18,561	18,561	
System & Transmission Ops		386	386	
Engineering & Planning		263	263	
Substation Operations		31	31	
Facilities		2	2	
Total	205,200¹¹⁰	37,413	242,613	252,106¹¹¹

6.11.2 As detailed in Table 6-16, a total of \$205.2 million was paid via COMPASS, primarily relating to Construction organization projects (plus two Steam projects managed by the Construction organization). A further \$37.4 million of payments was identified within PMS

¹⁰⁸ This does not match the totals in Table 6-15 as the table includes an element of double counting.

¹⁰⁹ Relates to the 41st/Lexington emergency steam restoration work, which was paid outside of COMPASS.

¹¹⁰ CECONY identified \$2.5 million of credits to Felix Associates in January 2009. While there is evidence that these credits were received, it has not been possible to match these credits to the original payments at this stage. Therefore, the total amount paid to Felix Associates may need to decrease accordingly.

¹¹¹ There is currently a difference between the total value of payments in PMS and the CECONY submission to PSC dated June 15, 2009 of \$11.9 million – based on the difference between \$252.1 million per the CECONY Submission to the PSC and total payments in PMS between 2000 and 2008 of \$240.2 million (\$242.6 million less payments made in 2009 of \$2.4 million). CECONY explained this difference by citing two POs (321460 and 933836) which were originally assigned to Felix Equities and were later moved to Felix Associates. Since the designated payee for a PO cannot be updated in PMS, these POs were not included in the POs reviewed for PMS or COMPASS. Accounts Payable records indicate that the amount of these POs paid to Felix Associates was \$12.6 million. There are also several other credits in the Accounts Payable data offsetting a portion of this difference, but the differences have not been fully reconciled and, therefore, these amounts are not included in the analysis of PMS and COMPASS in this Part 1 report.

that were not processed via COMPASS; with the exception of the 41st/Lexington Steam restoration project (\$10.3 million); these payments totaling \$37.4 million related to projects managed by other organizations that do not use COMPASS. Based on the CECONY submission to the PSC dated June 15, 2009, an additional \$11.9 million¹¹² predominantly represents amounts paid on contracts that were assigned to Felix Associates subsequent to Felix Equities' bankruptcy and were in the A/P database and not included in the PMS data reviewed. At this stage, it has not been possible to fully reconcile the differences between the A/P database and the PMS database.

- 6.11.3 The analysis was performed (i) at the COMPASS level (i.e., in respect of \$205.2 million) and (ii) at the PMS level (i.e., in respect of \$242.6 million). Whereas the COMPASS system contains details of payments enabling application of the Quantitative Indicator Model as well as performance of analyses evidencing employee involvement in the creation, review and approval of invoices, it is not possible to apply the Model or to perform such analyses in respect of the payments made outside COMPASS and recorded only in PMS. However, analyses of change orders were performed at the PMS level.

“AT-RISK” TRANSACTIONS

- 6.11.4 The analyses identified “at-risk” transactions within subsets of the total population of payments to Felix Associates as follows:

- 6.11.5 At the COMPASS level (\$205.2 million):

- (a) Transactions totaling between \$21.7 million and \$29.0 million within the population of \$205.2 million in relation to item codes:
- (i) Macro/micro duplication – \$0.2-\$4.9 million in relation to “all-inclusive” items and \$0.0-\$0.1 million in relation to “mutually exclusive” items
 - (ii) Upcoding – \$1.1 million in relation to inappropriate use of weekend codes
 - (iii) Net Debits – \$5.2-\$7.8 million

¹¹² This is calculated as the difference between the amounts in the CECONY submission for the period 2000 to 2008 plus payments made in 2009 (\$252.1 million + \$2.4 million), less the PMS payments of \$242.6 million. CECONY explained this difference by citing two POs (321460 and 933836) which were originally assigned to Felix Equities and were later moved to Felix Associates. Since the designated payee for a PO cannot be updated in PMS, these POs were not included in the POs reviewed for PMS or COMPASS. Accounts Payable records indicate that the amount of these POs paid to Felix Associates was \$12.6 million. There are also several other credits in the Accounts Payable data offsetting a portion of this difference, but the differences have not been fully reconciled and, therefore, these amounts are not included in the analysis of PMS and COMPASS in this Part 1 report.

(iv) T+E charges – \$15.7 million in relation to T+E

(b) Transactions totaling \$125.8 million within the population of \$205.2 million where involvement of the arrested employees has been identified.¹¹³

6.11.6 At the PMS level (\$242.6 million):

(a) Transactions totaling \$54.4 million within the population of PMS payments totaling \$190.9 million¹¹⁴ (excluding PI work, as no purchase orders are raised in respect of such work) where purchase order modifications have been processed, in particular:

(i) \$9.6 million in relation to spot buy contracts within a total population of \$33.2 million of payments or approximately 30%¹¹⁵

(ii) \$44.8 million in relation to blanket order contracts within a population of \$157.7 million of payments or approximately or approximately 30%¹¹⁶

6.11.7 The above populations are represented graphically in Figure 6-2.

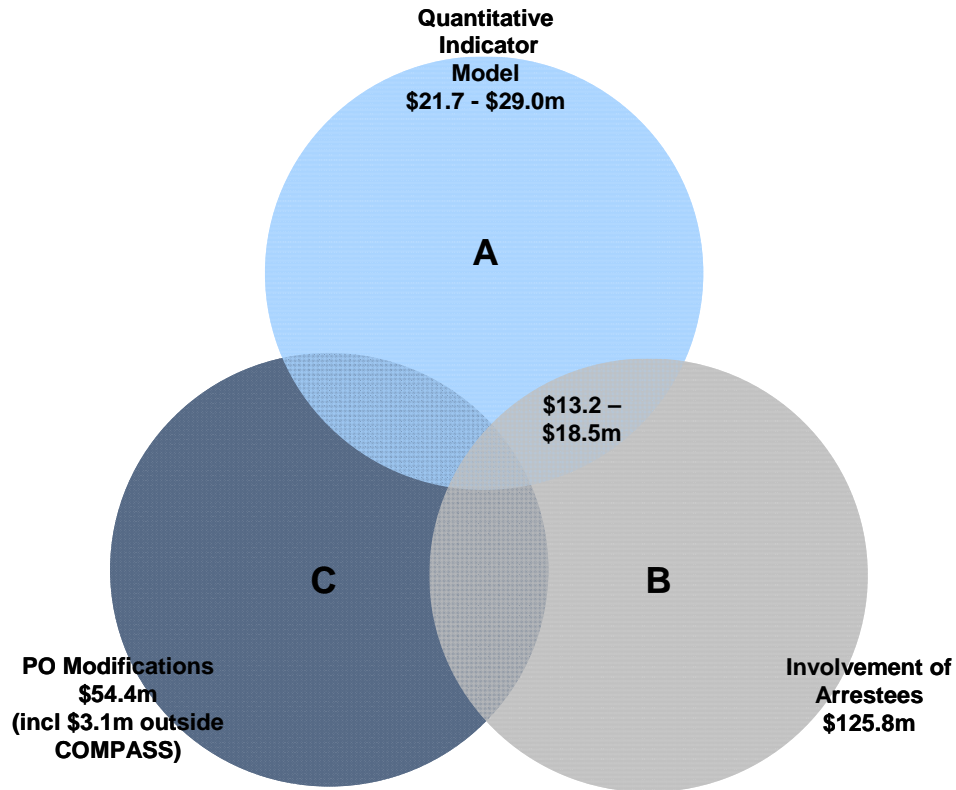
¹¹³ As well as \$63.8 million within the population of \$85.4 million worth of layouts included in LOT, although limited reliability should be placed on this data.

¹¹⁴ Refer to Table 6-3: \$242.6 million less \$51.7 million paid in respect of PI work. Also refer to Table 6-11 and Table 6-12; \$33,212 of payments under Spot Buy contracts and \$157,532 under Blanket Order contracts.

¹¹⁵ Excluding Purchase Orders 436606 (Felix Gas Corrosion Project) and 437003 (Felix Associates LLC 4-37003), the initial authorization amounts of the remaining Spot Buy Purchase Orders with amendments were increased by an average of 33%. The initial authorized amounts of Purchase Orders 436606 and 437003 increased by 488% and 266% respectively. Refer to Appendices 6.9 and 6.10.

¹¹⁶ The initial authorization amounts of the Blanket Purchase Orders with amendments were increased by an average of 60%.

Figure 6-2: Identified “At-risk” Transactions



ACCOUNTING

6.11.8 An indication of the accounting for the “at-risk” amounts identified based on the Quantitative Indicator Model is set out in Appendix 6.13 and is summarized in Table 6-17.

Table 6-17: “Low” End and “High” End of “At-Risk” Payments

	Assets & Other Debits – Electric Plant in Service	O&M Electric	O&M Gas	O&M Steam	“Other”	“Split”	“Not Yet Known”	Total
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)	(\$'000)
“Low” End	9,061	3	1,478	794	2,571	737	7,029	21,674
“High” End	13,675	3	1,479	877	2,991	942	9,026	28,993

6.11.9 At present, there are a number of outstanding issues regarding these allocations, as follows:

- (a) A significant portion of the payments (included within “Other” above) are allocated to “Clearing accounts.”
- (b) At present, there are a large number of transactions where it has not been possible to allocate the “at-risk” amounts. This is due to the need to manually identify the allocation for each layout, which are included on multiple SysBills or those SysBills with allocations to multiple accounts.
- (c) There are a number of instances where it is not possible (without making assumptions) to identify the precise account within which the “at-risk” payments are included (these are included within the category “Split” above). This is due to the data that was obtained concerning account allocation resulting from an undocumented split of the total of the SysBill, rather than by individual item codes.

6.11.10 These amounts were recorded in CECONY’s accounts and the non-O&M portions of these amounts have been used as an input to the calculation of the rate base. However, further analysis is required to determine whether other CECONY overhead costs, such as materials, are also “at-risk.”

6.11.11 The “at-risk” transactions listed above are presented graphically by region in Appendix 6.14.

POTENTIAL LIABILITY EXPOSURE

6.11.12 The RFP requires an estimate of the extent of illegal or improper contract overcharges included in the total payments made to Felix Associates. As such, we have been asked to provide an initial assessment of CECONY’s potential liability exposure in respect of the transactions examined (i.e., within the total paid to Felix Associates). In this context, “liability exposure” means an evaluation of the magnitude of items that appear to relate to fraud, waste, and abuse in the population examined. Such an assessment of liability can only be provisional at this stage because, as detailed previously and summarized below, in many cases, certainty can only be established from the detailed audit and comparison of records at the source document level, such work is in progress by CECONY and its accountants KPMG.

6.11.13 To determine the amount of CECONY’s potential liability exposure, a methodology was developed and applied to the population of “at-risk” payments above, utilizing the findings from the KPMG audit, the results of the Quantitative Indicator Model, and the in-depth examination of the Manhattan Vault Project.

6.11.14 The methodology and the components included in this liability exposure analysis are presented below:

- (a) **KPMG Calculated Loss** - The projects and methodology used by KPMG were reviewed as to the identified overcharges. The overcharges calculated by KPMG included a “bottoms up” audit of the field source data and contract documents in respect of approximately \$9.6 million of transactions. 100% of the KPMG calculated overcharges has been included as a component of potential liability exposure.
- (b) **Bounded T+E** – A reasonable “rule” based on the above review was applied to the total amount of T+E identified in each layout. As previously discussed in Section 6.8, the “at-risk” payments were determined to be those layouts in which the percentage of T+E ranged between 20% and 70% of the total amount paid. Furthermore, based on an examination of the Manhattan Vault Project¹¹⁷, the “at-risk” payments were further reduced by 30% to account for T+E charges related to traffic stipulations resulting from street permit restrictions. Traffic stipulations are conditions set-forth in the street opening permits for the vast majority of CECONY projects subject to this examination. The associated T+E charges are typically incurred on a daily basis and specifically tracable to the street opening permit. The likelihood of abuse of traffic stipulation related T+E appears to be low; as long as work is underway it is reasonable that a daily T+E cost would be incurred. Accordingly, 70% of the at risk payments in this area are assessed as part of potential liability exposure.
- (c) **Net Debits/Net Credits**
 - (i) **Un-reconciled Net Debits** - As previously discussed in Section 6.7, net debits represent lump sum amounts without reconciliation to the scope of work performed. Certain net debits may indicate an over-payment to the contractor. Proper controls and cost accounting would require these payments to be reconciled upon contract close-out. Therefore, the entire “at-risk” population of net debits has been assessed as a component of potential liability exposure.
 - (i) **Unreconciled Net Credits** – As previously discussed in Section 6.7, a population of “at-risk” payments that relate to outstanding net credits has been identified. Credits represent reductions to payments made to a contractor, and may represent payment penalties for poor performance. A credit can offset a debit, but

¹¹⁷ Analysis of the T+E work recorded in COMPASS for the Manhattan Vaults Project indicated that approximately 30% of all T+E work were driven by traffic stipulations. These amounts can be easily audited to determine whether they are indicators for fraud, waste, or abuse. For additional traffic stipulation analysis, see Appendix 6.15.

the net credit calculation is the residual (net) amount at the layout level, which suggests the total amount paid to the contractor was reduced for either poor performance, reduced quantities of work scope from that in the original contract, or back-charges as a result to third party impacts. For this reason, the net credit has not been allocated to potential liability exposure since it does not factor in to a potential overcharge since the net credits are within a specific layout.

- (d) Items in the data population that can be computed with a high degree of certainty from data analytics alone:
- (i) **Trenching Manual Duplication at the Cut Level** - As previously discussed in Section 6.5, certain queries (i.e., “Macro/Micro” and “Mutually Exclusive”) were developed and applied to the COMPASS data to identify reasonably strong indications for “at-risk” payments. An evaluation of the results indicates that the confidence level that potential overpayment exposure exists is highest at the “cut level,” which is therefore included in full as a component of potential liability exposure.
 - (ii) **Weekend Work Code** – As previously discussed in Section 6.6, a population of “at-risk” payments charged to weekend work item codes was identified where the date of work recorded in COMPASS was not a weekend. Accordingly, the weekend work premium is included in full as a component of potential liability exposure.
- (e) **Trenching Manual Duplication at the Bearing and Layout Level** – Section 6.5 outlines the queries developed and applied to the COMPASS data (i.e., “Macro/Micro” and “Mutually Exclusive”) to identify reasonably strong indications for “at-risk” payments. As previously discussed, the degree of certainty regarding the impropriety of the charges reduces from cut to bearing to layout. There could be a reasonable explanation for “Macro/Micro” or “Mutually Exclusive” at the bearing or layout level. Therefore, the amounts calculated at the “bearing level” or “layout level” have not been allocated to the potential liability exposure.
- (f) **Overlap** – A downward adjustment was applied for identified double counting between items (a) to (e) above. Layouts where double counting could occur (such as different macro/micro queries identifying the same item or items charged under macro/micro queries also being captured under weekend work being performed on a weekday) were identified, and items within each layout were then tested to determine whether the same item codes had been identified as “at-risk” in a separate routine.

Where they had been identified, these were then quantified and applied on a layout by layout basis to eliminate them.

6.11.15 The aforementioned components of potential liability exposure are summarized in Table 6-18 below:

Table 6-18: Assessment of Potential Liability Exposure

		At-Risk Value	Proportion Variable	Assessed Component
		\$'000	%	\$'000
(a)	KPMG Calculated Loss	1,982	100	1,982
(b)	Bounded T+E	15,694	70	10,986
(c) (i)	Unreconciled Net Debits	7,826	100	7,826
(c) (ii)	Unreconciled Net Credits	(2,604)	0	0
(d) (i)	Trenching Manual Duplication at Cut Level	198	100	198
(d) (ii)	Weekend Work Code	1,123	100	1,123
(e)	Trenching Manual Duplication at Bearing and Layout Level	4,971	0	0
(f)	Overlap	(853)	100	(853)
Total		28,337		21,262

6.11.16 It should be noted that the potential liability exposure methodology extends at present to amounts at the COMPASS level where the Model can be applied and does not extend to assessing a potential liability exposure in respect of the population of “at-risk” transactions where purchase order modifications have been processed (B at Figure 6-2) or where involvement of the arrested employees has been identified (C at Figure 6-2) because identification of such exposure is dependent on detailed review of source documentation and/or intelligence.

6.11.17 Further, it does not include any estimate for the “at-risk” amounts related to “upcoding” (except for inappropriate use of weekend codes), “contractual exclusion,” or “phantom items,” except as found by KPMG from analysis of source documentation, since such overcharges are not discernable from data analytics. Additionally, it should be noted that such overcharges may be difficult to identify through a review of the source documents in the event that source documents have been falsified or fraudulently produced. In such a case, any overcharges may only be identified with the discovery of un-doctored documents or the help of reliable intelligence.

- 6.11.18 While the simple arithmetic sum of the items in Table 6-18 suggests a potential liability exposure in the order of \$21.3 million, based on the work done so far, such an amount may vary after further review of the source documents.
- 6.11.19 Separate from the aforementioned analysis, a source document review of two individual layouts performed by Felix, Layout #MG05-07341 and #S04-12449-WCY, which were not previously reviewed by KPMG, was conducted. Details of this analysis are set out in Appendix 6.16 and 6.17 and are summarized in Table 6-19 below.

Table 6-19: Identified overpayments and other questionable payments during source document review.

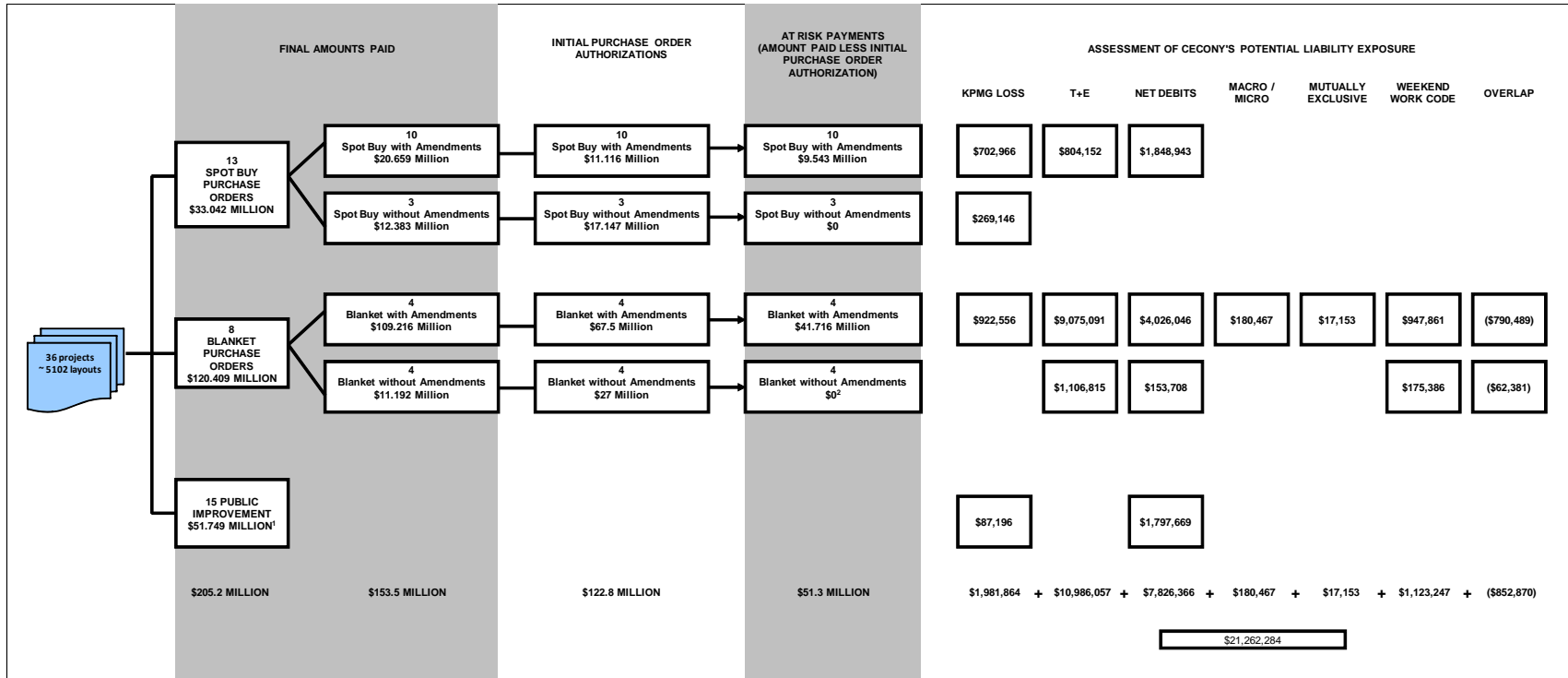
Purchase Order	Layout	Type / Area	Total Paid on Layout (\$'000)	QIM Identified "At-Risk" Transactions (\$'000)	Overpayments Identified during Layout Review (\$'000)	Questionable Payments Identified during Layout Review (\$'000)
519561	MG05-07341	Construction / Manhattan	62	0.4	1	11
626324	S04-12449-WCY	Construction / Westchester	47	28	16	1

- 6.11.20 The overpayments and questionable payments identified during the review of these two layouts are consistent with the previously discussed results of the Quantitative Indicator Model. These overpayments and questionable payments may be classified as follows:
- (a) Use of weekend premium factor "W" wherein the work was performed on a weekday;
 - (b) Use of more expensive trenching manual items;
 - (c) Use of escalated unit prices prior to contractually allowed date;
 - (d) Charges for items not identified on Inspector's original Daily Log Report;
 - (e) Timesheet discrepancies on T+E work;
 - (f) Net Debits which do not reconcile with project records; and
 - (g) Additionally, the use of T50 Rock Removal item code appears unusual and warrants further review.
- 6.11.21 At this stage, nothing can be said about potential liability exposure in respect of populations outside of the payments to Felix Associates—either payments to other Felix companies or to other contractors. As noted, the arrested employees had authority over

payments to contractors other than Felix Associates and corrupt acts with respect to other contractors are inferred from the review of the arrest affidavits.

- 6.11.22 It would be more efficient to first identify the populations to be examined across the whole payment population and to stratify the findings in order to direct meaningful work to stratified populations assessed to have high risk. By way of illustration, as can be seen in Figure 6-3, stratification of potential liability exposure by contract type suggests the greatest exposure potential is in respect to Blanket Purchase Orders with Amendments (i.e., change orders) to the initial authorization amount, suggesting priority be directed there.
- 6.11.23 Finally, standard audit procedures commonly used by other companies or public entities were not performed by CECONY. The lack of audits is a weakness that warrants further investigation into the reasons why CECONY did not exercise its rights. Periodic audits would have improved the ability to uncover overcharges and any circumvention of policies and procedures at an earlier time than the arrests in January 2009.
- 6.11.24 Based on the findings presented herein, the scope of the Part 2 investigation should include an examination of the broader population of contracts where the arrested employees participated, as well as other non-fingerprinted contracts or contractors.

Figure 6-3: Assessment of CECONY's Potential Liability Exposure



Note: 1. Based on initial investigations, original budget amounts for PI work can not be determined (i.e., CECONY Purchase Requisition amounts match invoices received).
 Note: 2. Even though the Initial Authorized Payments were not exceeded hence producing no "at-risk" payments, certain layouts did contain specific overcharges (i.e. T+E greater than 20% in a given layout)

APPENDIX 1: GLOSSARY

Source: Con Edison Company of New York Acronym Catalogue

Acronym	Definition	Description	Organization
10-K	--	A report of a corporation's year-end financial results and operations filed annually with the Securities and Exchange Commission (SEC).	Finance
10-Q	--	A financial report submitted on a quarterly basis to the Securities and Exchange Commission (SEC).	Finance
4IP	4 Irving Place	The corporate headquarters for Con Edison, Inc. (CEI) as well as Con Edison Company of New York (CECONY).	Corporate
8-K	--	A report that must be filed with the Securities and Exchange Commission (SEC) by any company whose securities are traded on a national or over-the-counter market, giving details on any material event, such as a change in external auditors.	Finance
A/D	Accumulated Depreciation	The total depreciation from the start of the life of a plant asset to any point in time.	Finance
A/P	Accounts Payable	Amounts owed to others, often restricted to amounts due to vendors. A/P is a current liability with a normal credit balance.	Finance
A/R	Accounts Receivable	Amounts due from others, including both customers and vendors. A/R is a current asset with a normal debit balance.	Finance
AAA	American Accounting Association	An organization that seeks to advance accounting education and accounting research, largely through the publication of the quarterly journal, "The Accounting Review," sponsorship of research, and working committees.	Finance
ABF	Alive on Backfeed	Occurs when the Network Protector on Distribution transformers fails to prevent backfeed current from Secondary Side of Distribution to the Primary Side of Distribution on a feeder. Neons at Area Substation indicate Alive on Backfeed status.	Electric Operations
ABO	Accumulated Benefit Obligation	An approximate measure of the liability of a plan in the event of a termination at the date the calculation is performed.	Finance
AC	Alternating Current	An electric current that periodically reverses its direction. The standard current used by utilities in the U.S. is 60 cycles per second; in Europe and other parts of the world it is 50 cycles per second	Electric Operations
ACGIH	American Conference of Governmental Hygienists, Inc.	An organization open to all practitioners in industrial hygiene, occupational health, environmental health, or safety. ACGIH publishes over 400 titles in occupational and environmental health and safety and sets new threshold limit values for chemicals.	Environmental, Health and Safety
ACH	Automated Clearing House	A secure payment transfer system that acts as the central clearing facility for all Electronic Fund Transfer (EFT) transactions that occur nationwide. It is basically "holds" payments while they are awaiting clearance for their final banking destination.	Finance
ACM	Asbestos Containing Material	A material that contains 1% or more asbestos by weight.	Environmental, Health and Safety
ACP5	Asbestos Control Program Form 5	"Not An Asbestos Project" form which is filed for those projects involving one of the following: no ACM; ACM disturbance of less than or equal to 10 square feet or 25 linear feet; or, if normally non-friable, Asbestos Containing Material (ACM) present in any amount.	Environmental, Health and Safety
ACP7	Asbestos Control Program Form 7	"Asbestos Inspection Report" form which serves as the notification of an asbestos abatement that does not meet the ACP 5 form description	Environmental, Health and Safety
ACP8	Asbestos Control Program Form 8	"Amendment Form" used to modify a previously submitted ACP 7 form.	Environmental, Health and Safety
ACP9	Asbestos Control Program Form 9	"Asbestos Variance Form" used to seek a variance from specific NYCDEP Asbestos Control Program regulation(s).	Environmental, Health and Safety
ADAMS	Automated Data Acquisition Meter System	The gas and electric versions of ADAMS are electronic databases that contain information, such as test results, for every meter owned by CECONY.	Electric Operations
ADR	Asset Depreciation Range	Upper and lower limits set by the Internal Revenue Service for asset lives.	Finance
AFDC	Allowance for Funds Used During Construction	See AFUDC.	Finance
AFDUC	Allowance for Funds Used During Construction	A non-cash credit which represents the estimated cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete.	Finance

Acronym	Definition	Description	Organization
AFUE	Annualized Fuel Utilization Efficiency	Measures the average annual seasonal efficiency of a gas furnace or boiler and may be expressed as total heating output divided by total energy (fuel) input. AFUEs for furnaces can range from 55% to 97%.	Gas Operations
AHAR	Activity History Aging Report	A monthly report used to monitor the aging of Account Investigation Orders (AIOs).	Customer Operations
AICPA	American Institute of Certified Public Accountants	The national, professional organization for all Certified Public Accountants (CPAs).	Finance
AIL	Account Investigation Listing	A form of citation produced by the Customer Service System (CSS).	Customer Operations
AIO	Account Investigation Order	A citation initiated by the processing of cycle meter readings used to investigate special conditions.	Customer Operations
AJE	Adjusting Journal Entry	A journal entry made at the end of an accounting period to record previously unrecognized changes in assets, liabilities, revenue, and expenses.	Finance
AMD	Automated Monitoring Device	Each Metscan device contains an AMD with wired memory that enables it to store meter readings over a user-defined time period. The AMD is programmed to call the data collection computer, transfer the collected data, and receive instructions about when to make the next call.	Customer Operations
AMM	Asbestos Management Manual	The Manual specifies the administrative policy and operating procedures to be followed for safe handling and disposal of asbestos-containing materials. The manual applies to all Company operations involving asbestos activities to be conducted at Company facilities or properties.	Environmental, Health and Safety
Amp	Ampere	A unit of measure for the flow of electricity. Often referred to as load.	Electric Operations
APB	Accounting Principles Board	A group appointed by the American Institute of Certified Public Accountants (AICPA) to establish acceptable accounting principles. The Financial Accounting Standards Board (FASB) replaced the APB in 1973.	Finance
APR	Air Purifying Respirator	Worn to cleanse the contaminated atmosphere by drawing air through chemical cartridges to remove gases and vapors, and mechanical filters to remove particulates including dusts, mists, or fumes. The two basic types of APRs are negative-pressure respirators and powered air-purifying respirators (PAPRs).	Environmental, Health and Safety
APS	Accounts Payable System	The CECONY accounts payable system.	Finance
APxpress	APxpress	This application gives O&R employees the ability to approve invoices to generate vendor payments through the Walker accounts payable system.	Finance
AQL	Acceptance Quality Level	A sample test conducted at the Electric Meter Shop on many types of new electric meters when they are received from a manufacturer.	Electric Operations
ARCO	Account Record Change Order	A code used to change account information in the Customer Service System (CSS).	Customer Operations
ASAI	Average Service Availability Index	A measurement, in percentage, that relates the average degree of service continuity experienced by customers served during a year.	Electric Operations
ASB	Auditing Standards Board	A committee of the American Institute of Certified Public Accountants (AICPA) designated to issue auditing, attestation, and quality control standards and guidance.	Auditing
ASS	Area Substation	A substation that reduces voltage from transmission levels to distribution levels.	Electric Operations
ATIP	Annual Team Incentive Program	O&R's employee bonus program.	Finance
AWG	American Wire Gauge	A cable/ conductor size standard.	Electric Operations
AWU	Associated Work Unit	A productivity tool is used to capture work hours and specific work tasks.	Finance
B/O	Burnout	An electrical fault caused by the breakdown of the insulation on cable.	Electric Operations
BAV	Billed after vacate	A customer continues to receive a bill for service after the customer has vacated that premises.	Customer Operations
BBO	Billed before occupancy	A customer receives a bill for service that occurred prior to the customer moving into that location.	Customer Operations
BBP	Blood Borne Pathogen	Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).	Environmental, Health and Safety
BLR	Boiler	Steam generation equipment in a power plant	Central Operations
BO	Business office	Company locations that accept customer payments. See CAC.	Customer Operations
BONY	Bank of New York	Among other things, BONY is appointed by CEI to maintain records of stock and bond owners, cancel and issue stock certificates, and resolve problems arising from lost, destroyed or stolen certificates.	Finance
BOW	Billed on Wrong	A customer's account is assigned to, and billed based on, an incorrect location.	Customer Operations
B-Ticket	--	The second carbon copy of a trouble ticket before they were computerized; the second copy of a Emergency Control System (ECS) trouble report form.	Electric Operations
C/O	Cutout	The opening of a switching device to de-energize cable or equipment.	Electric Operations

Acronym	Definition	Description	Organization
CAA	Clean Air Act	A federal law that established air quality standards, air quality control regions, implementation plans to meet the standards, emission monitoring for industries, and performance standards for new air emission sources.	Environmental, Health and Safety
CAC	Customer Assistance Center	Company locations that accept customer payments.	Customer Operations
CAG	Corporate Account Group	Former title of Corporate Customer Group. See CCG.	Customer Operations
CAIDI	Customer Average Interruption Duration Index	This is the average interruption duration time for those customers that experience a service interruption during the year. It approximates the average length of time required to complete service restoration. It is determined by dividing the annual sum of all customer interruption durations by the sum of customers experiencing an interruption over a one-year period.	Electric Operations
CAM	Contract Administration Manual	Provides guidelines and procedures for Company personnel in the administration of contracts to ensure the efficient utilization of Company and contractor resources and compliance with Corporate Instruction CI-280-4 (ref. Appendix A) and Corporate Environmental Procedure (CEP) 12.03 (ref. Appendix F). This manual is applicable to all Company organizations when utilizing contractors to perform lump sum projects greater than \$100,000	Central Operations
CAM	Computer Aided Manufacturing	The use of computers to program, direct and control production equipment in the fabrication of manufactured items.	Central Services
CAR	Character Amount Read	A process performed during customer check payment processing. The system reads the characters written on the customer's check to verify that it is the amount owed by the customer.	Finance
CAR	Chemical Approval Request	Prior to purchase or use, all hazardous chemicals materials must be reviewed and approved by the local EH&S Manager and EH&S. A request for review is initiated by completing and submitting a Chemical Approval Request form with a copy of the Material Safety Data Sheet (MSDS) to the local EH&S Manager.	Environmental, Health and Safety
CARE	Cost Analysis Reporting Environment	Financial Database that provides access to Capital, Retirement and Operating budgets and expenditures on a historical, monthly and annual basis, at a variety of levels -organizational, departmental, etc.	Finance
CAS	Customer Accounting System	A subset of the Customer Service System (CSS), CAS is a batch system that posts orders, cycle readings, and cash to customer accounts, updates records, and produces customer bills, reports, and other documents.	Customer Operations
CC	Critical Correspondence	Correspondence or other documents to be sent to a regulatory agency that has as its primary subject any EH&S matter for which an agency can hold the Company responsible under law. It includes matters of corporate environmental policy, legal enforcement, and required reporting to the government but does not cover routine reporting or similar correspondence.	Environmental, Health and Safety
ccf	100 cubic feet	A measurement of gas consumption.	Gas Operations
CCG	Corporate Customer Group	A group consisting of Senior Customer Service Representatives that handle billing issues for CECONY's largest customers.	Customer Operations
CEC	Con Edison Communications	An unregulated subsidiary of Con Edison, Inc. that delivers state-of-the art communications solutions to enterprises, carriers, and small and medium business throughout the Northeast.	Corporate
CECONY	Con Edison Company of New York	As a regulated subsidiary of Con Edison, Inc., CECONY supplies electric, gas, and steam service to customers in New York City and Westchester.	Corporate
CED	Con Edison Development	An unregulated subsidiary of Con Edison, Inc. that supplies invests in and manages energy infrastructure products, including independent power, transmission, and distribution systems. The company works closely with its affiliate, Con Edison Energy, to optimize assets both technically and financially.	Corporate
CEE	Con Edison Energy	An unregulated subsidiary of Con Edison, Inc. that markets specialized energy, capacity, and risk management services to wholesale electric customers.	Corporate
CEI	Con Edison, Inc.	A holding company that owns Con Edison Company of New York (CECONY), Orange and Rockland Utilities (O&R), Con Edison Energy (CEE), Con Edison Development (CED), Con Edison Communications (CEC), and Con Edison Solutions (CES).	Corporate
CENTS	Con Edison Natural Gas Transaction System	Generates transactions that are used to create pipeline invoices for major customers that buy natural gas fuel and incur transportation charges.	Gas Operations
CEP	Corporate Environmental Procedure	A Company-wide environmental policy or procedure.	Environmental, Health and Safety
CEQRA	City Environmental Quality Review Act	A New York City requires the consideration of environmental, social, and economic factors for certain proposed development actions in the city.	Environmental, Health and Safety

Acronym	Definition	Description	Organization
CER	Contractor Evaluation Report	A "report card" given to contractors at end of project or every 6 months.	Central Operations
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980	More commonly known as Superfund, this law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.	Environmental, Health and Safety
CERP	Comprehensive Emergency Response Plan for Hazardous Substance Releases	An organizational framework for response activities as well as procedures that will foster prompt and effective responses to Company incidents and emergencies involving uncontrolled releases of hazardous substances as well as potential uncontrolled releases of hazardous substances.	Environmental, Health and Safety
CES	Con Edison Solutions	As an unregulated subsidiary of Con Edison, Inc., it is an energy service company (ESCO) that offers competitively-priced energy products and services throughout the Northeast.	Corporate
CFA	Central Final Accounts	A section in Customer Operations that is responsible for following up on final (closed) customer accounts and taking collection actions if necessary.	Customer Operations
CFA	Chartered Financial Analyst	A professional designation awarded by the Institute of Chartered Financial Analysts to persons who have passed a series of three examinations, subscribe to the Institute's Code of Ethics and Professional Conduct, and have five years of experience in financial analysis related to securities investment.	Finance
CFOR	Contractor Field Observation Report	A checklist of items for overseeing contractors hired by Con Edison.	Central Operations
CFR	Code of Federal Regulations	A compilation of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government.	Central Operations
CFR	Customer Field Representative	A field Customer Operations employee whose responsibilities include but are not limited to meter reading, turn-ons and turn-offs, and collections.	Customer Operations
CFR	Code of Federal Regulations	Section 29 has the OSHA regulations.	Environmental, Health and Safety
CFS	Central Field Services	A department within Central Services that provides materials, supplies, and support to all organizations in the company.	Central Services
CHCO	Credit History Change Order	One of many codes used to update/change an account in the Customer Service System (CSS).	Customer Operations
CI	Corporate Instruction	A Company-wide policy or procedure that affects all or a large segment of Con Edison employees.	Corporate
CIA	Certified Internal Auditor	A professional designation awarded by the Institute of Internal Auditors to persons who have three years of experience in internal auditing, a bachelor's degree or its equivalent, and have passed an examination covering principles of internal auditing, internal auditing techniques, principles of management, and disciplines related to internal auditing.	Auditing
CIB	Construction Inspection Bureau	Oversees contractors performing work on the electric and gas systems.	Central Operations
CIG	Central Information Group	A group that acquires and distributes information on reportable incidents to all affected Company organizations.	Corporate
CIMS	Customer Information Management System	The O&R customer billing system.	Customer Operations
CIS	Customer Information System	A subset of CSS, the Customer Service System (CSS) is the method used by employees for data entry and for viewing customer account information on display screens.	Customer Operations
CMA	Certificate in Management Accounting	A professional designation awarded by the National Association of Accountants' Institute of Management Accounting, granted to an accountant who has met the requirements of the institute.	Finance
CMG	Call Monitoring Group	A quality assurance group within the call center that monitors the Customer Service Representative (CSR) interaction with customers.	Customer Operations
CMS	Case Management System	The Law department's system used to track incidents and cases against the company.	Law
COB	Close of Business	The end of the business day.	General Vocabulary
CoF	Certificate of Fitness	A written statement from the Fired Department of New York (FDNY) certifying that the person to whom it is issued has passed an examination as to his or her qualifications to perform a regulated work activity during a specified term.	Central Operations
Co-gen	Cogeneration	The use of what would be waste heat from a boiler or gas turbine in an electric generating facility to produce steam.	Steam Operations
COGS	Cost of Goods Sold	The cost of product that is sold to a customer. The cost includes the resources used, e.g. labor and raw materials used, to produce the product.	Finance
COMPASS	Construction Management Payment and Support System	Accomplishes interference payments through the Accounts Payable System by passing required information to the Procurement Management System (PMS) to create a requisition and purchase order.	Central Services
COMPASS	Construction Management Payment/Support System	A construction management and tracking system that sends transactions to the accounts payable system for vendor payments for materials and services related to construction projects	Finance
Comshare	Comshare Financial Consolidations	Creates transactions used in the preparation of financial statements.	Finance

Acronym	Definition	Description	Organization
CONCUR	Concur Expense	Management employee petty cash reimbursement system.	Finance
COP	Central Operating Procedures	A Company document that defines the rules and guidelines for Central Operations organizations.	Central Operations
COS	Contractor Oversight System	An intranet application used by Con Edison employees to reward or penalize contractors based on EH&S compliance and project performance.	Central Operations
CPA	Certified Public Accountant	A person who has met state statutory requirements including passage of the Uniform Certified Public Accountants Examination prepared by the American Institute of Certified Public Accountants (AICPA).	Finance
CPE	Continuing Professional Education	Educational activities such as courses, seminars, and workshops undertaken by professional accountants beyond formal academic degree programs. CPE credits are required annually in order to retain a license to practice as a Certified Public Accountant (CPA).	Finance
CPU	Central Processing Unit	In a computer system, the component that contains the arithmetic and logical elements, transfers data among the system components, and controls the input-output units.	Central Operations
CRM	Customer Relationship Management	A marketing philosophy based on putting the customer first.	Customer Operations
CRP	Capacity Requirements Planning	The function of establishing, measuring, and adjusting limits or levels of capacity.	Central Services
CRT	Cathode Ray Tube	A type of monitor. The same technology used in TV.	Central Operations
CSOL	Customer Service Online	A website used by customers to view their account information and pay their bills online.	Customer Operations
CSP	Customer Service Procedure	A Company document that describes various topics dealing with providing service to and interacting with our customers.	Customer Operations
CSP	Corporate Safety Procedure	A Company-wide safety policy or procedure.	Environmental, Health and Safety
CSR	Customer Service Representative	A Customer Operations employee that interacts directly with customers either by phone or at one of our walk-in centers.	Customer Operations
CSS	Customer Service System	The CECONY customer billing system. It contains account information for all electric and gas customers.	Customer Operations
CTG	Combustion Turbine Generator	An apparatus consists of a gas turbine and electric generator	Central Operations
CUBS	Consolidated Utility Billing	A CECONY system that creates a single bill for delivery and supply for customers who receive their energy supply from an alternate supplier (see ESCO).	Customer Operations
CV	Control valve	As in CV Station	Central Operations
CWA	Clean Water Act	Federally established discharge permit program and regulations for discharging of pollutants. CWA addresses pollution from oil and hazardous substance releases, providing the Environmental Protection Agency (EPA) and the U.S. Coast Guard with the authority to establish a program for preventing, preparing for, and responding to oil spills and hazardous substance releases that occur in navigable waters of the United States.	Environmental, Health and Safety
CWE	Current Working Estimate	A projection of the total cost of a project/task upon it's completion. The CWE is updated on a regular basis in order to provide an up to date financial status.	Corporate
CWIP	Construction Work in Progress	Those expenditures incurred in relation to the construction, rehabilitation or renovation of assets that have yet to be commissioned or are not yet ready for use. Upon completion, CWIP costs are transferred to the relevant asset classification.	Finance
DB	Duct Burner	A component of the steam generator that increases the temperature gradient within to increase steam generating capacity	Central Operations
DBA	Database Administrator	The person in charge of designing, implementing, and managing a database.	Central Services
DBA	Doing Business As	A formal notice that an individual, company or organization is conducting business under a different name.	General Vocabulary
DBSO	Database Security Officer	A member of management within each operating area who is authorized to add, change and delete individual employee names within classifications.	Central Services
DBSS	Database Security System	A system that establishes operating limits for personnel who are authorized to gain access and/or input transactions to customer records.	Central Services
DC	Direct Current	A fixed polarity power supply with a positive and negative terminal that remains constant.	Electric Operations
DCAR	Daily Crew Activity Report	Field work documentation filled out by employees.	
DCRD	Demand Cycle Reading	The monthly reading of a large commercial customer's demand. Demand is the customer's highest usage for one half- hour during the month.	Customer Operations
DCS	Distributed control system	As in Controllers	Central Operations
DEC	Department of Environmental Conservation	A New York State agency that protects the state's environment and manages its natural resources.	Environmental, Health and Safety

Acronym	Definition	Description	Organization
DEC	Department of Environmental Conservation	Agency responsible for administration and enforcement of Environmental Conservation Law. Some of responsibilities include: regulating the disposal, transport and treatment of hazardous and toxic wastes in an environmentally sound manner; managing the state program for oil and chemical spills; and monitoring environmental conditions and testing for contaminants.	External Organization
DEP	Department of Environmental Protection	A New York City agency that is centered on managing the City's water supply and wastewater treatment systems, along with handling hazardous materials emergencies and toxic site remediation, overseeing asbestos removal, managing citywide water conservation programs, and collecting water and sewer fees.	Environmental, Health and Safety
DFIS	Distribution Facilities Information System	A system used by Property Record to track Outside Plant Company assets, This asset management system tracks Company assets used in the electric, gas and steam distribution lines of business.	Finance
DFTA	Department for the Aging	A New York City agency that works for the empowerment and quality of life of New York City's older adults and their families.	Customer Operations
DG	Distributed Generation	A system that involves small amounts of generation located on a utility's distribution system for the purpose of meeting local peak loads and/or preventing the need for additional distribution lines.	Electric Operations
DIP	Debtor in Possession	After a company is bought or reconstructed after a bankruptcy, the successor company must negotiate and/or pay the arrears of the bankrupt company. The successor company is known as a DIP.	Law
DIP	Deferred Income Plan	A retirement account created for employee's whose annual salary exceeds \$200,000. All money up to \$200,000 is eligible for a 401K calculation. All dollars exceeding that will be covered under the DIP.	Finance
DO	District Operator	Responsible for directing and coordinating switching on the Company's transmission, distribution and interconnected generating systems in the 5 boroughs of New York and Westchester County to ensure safety to personnel, and continuity of service to customers.	Central Operations
DOCS	Division Operations Control System	Work measurement information system, which provides statistical data in a pyramid format of work performances by units and hours and compares productivity against engineered standards	
DOE	Direct Order Entry	Customer account transactions entered directly on-line into the Customer Service System (CSS) through CSS Workstations or CSS display terminals.	Customer Operations
DOH	Department of Health	New York State agency designed to protect and promote the health of New Yorkers through prevention, science and the assurance of quality health care delivery.	External Organization
DOL	Department of Labor	New York State's primary advocate for job creation and economic growth through workforce development. The department administers New York's unemployment insurance system, labor exchange system, Welfare-To-Work programs, oversees state worker protection programs, including enforcement of safety and health regulations in the public sector, state labor laws and federal statutes related to working conditions, wages and hours, and laws related to Public Work. The Department of Labor serves as the State's principal source for labor market information and offers a variety of services designed to help businesses find workers and people find jobs.	External Organization
DOS	Diversion of Service	Temporary unmetered service provided to a customer with the approval of the Company or metered service being billed to another customer.	Customer Operations
DOT	Department of Transportation	The Department of Transportation manages much of the city's transportation infrastructure, including city streets, highways, sidewalks, and bridges. DOT is responsible for installing and maintaining street signs, traffic signals, and street lights, resurfacing streets, repairing potholes and other street defects, installing and maintaining parking meters, managing municipal parking facilities, and operating the Staten Island Ferry.	External Organization
DPP	Direct Payment Program	Customers may choose to pay their bill through an automatic monthly deduction from their bank account.	Customer Operations
DRIP	Dividend Reinvestment Plan	An investment plan that enables shareholders to automatically reinvest cash dividends and capital gains distributions, thereby accumulating more stock without paying brokerage commissions.	Finance
DSM	Demand-Side Management	Implementation of utility-sponsored programs to influence the amount or timing of customers' energy use. Energy Services is responsible for many of Con Edison's DSM programs.	Electric Operations
DSS	Department of Social Services	New York State is divided into fifty-eight local social services districts that provide or administer publicly funded social services and cash assistance programs.	Customer Operations
DVC	Direct Vendor Program	A program in which qualified customers receive funds from the Human Resources Administration (HRA) to pay their monthly utility bills. For a customer on DVC, bill payment occurs for an undetermined period of time.	Customer Operations

Acronym	Definition	Description	Organization
DYCD	Department of Youth and Community Development	A New York City agency that develops and coordinates youth programs and activities, promotes services and resources available to youth and communities, and administers city, state and federal funds to youth and community programs.	Customer Operations
e.g.	exemplum gratii	Means "for example" in Latin. Do not confuse with "i.e."	General Vocabulary
E2MIS	Environmental Excellence Management Information System	Data management system for any spills or releases.	Environmental, Health and Safety
EAG	Emergency Assistance Grant	A financial benefit provided by the Department of Social Services (DSS) to a customer in order to prevent termination of utility service or to have utility service restored if it was terminated for non-payment. The EAG will cover up to four months of utility bills that are in arrears.	Customer Operations
ECAR	East Central Area Reliability Council	Established in 1967, ECAR's purpose is to increase the reliability of its members' electricity supply systems through coordinated planning and operation of the members' generation and transmission facilities. ECAR membership includes 29 major electricity suppliers located in nine east-central states.	External Organization
ECC	Energy Control Center	Control center responsible for monitoring, controlling and balancing energy sources with loads for the electric transmission, electric distribution, steam and gas transmission systems.	Central Operations
ECRD	Electric Cycle Reading	The monthly reading of a large commercial customer's electric usage.	Customer Operations
ECS	Emergency Control System	A mainframe computer system that is used to record, track, assign, refer trouble work. Each record is considered Con Edison legal document.	Electric Operations
EDFIS	Electric Distribution Facility Information System	A mapping system for Staten Island.	Electric Operations
EDI	Electronic Data Interchange	A standard electronic format used by Energy Service Companies (ESCOs), the Public Service Commission (PSC), and utilities in New York State to communicate with each other through various hardware and software.	Customer Operations
EDP	Electronic Data Processing	The recording, storage, manipulation, transmission, and reporting of information using computers or other electronic equipment.	Central Services
EEL	Edison Electric Institute	An association of electric companies formed in 1933 "to exchange information on industry developments and to act as an advocate for utilities on subjects of national interest." Con Edison is a member.	External Organization
EFOR	Employee Field Observation Report	A checklist of items used to evaluate Con Edison field forces.	Central Operations
EFT	Electronic Fund Transfer	The transfer of funds from one account to another electronically, instead of by check or cash.	Finance
EH&S	Environmental Health & Safety	Department within the company responsible for encouraging healthy and safe practices by employees and the company as a whole.	Environmental, Health and Safety
EITF	Emerging Issues Task Force	Formed in 1984, the EITF assists the Financial Accounting Standards Board (FASB) in improving financial reporting through the timely identification, discussion, and resolution of financial accounting issues within the framework of existing authoritative literature.	External Organization
EMF	Electromagnetic Field	The space near electric currents, magnets, etc., in which electric and magnetic forces may act.	Electric Operations
ENDRO	Equivalent Number of Days of Revenue Outstanding	The cost of a project translated into the value, in operating days, of Company revenue.	Finance
EPA	Environmental Protection Agency	A federal agency whose mission is to protect human health and to safeguard the natural environment.	External Organization
EPCRA	Emergency Planning and Community Right-to-Know Act	(1986) Requires states to designate emergency planning districts; industry to retain a Material Safety Data Sheet (MSDS) for Hazardous Materials (HAZMAT) used and report releases.	Environmental, Health and Safety
EPPS	Employee Payroll Personnel System	The CECONY payroll system.	Finance
EPR	Ethylene Propylene Rubber	Solid dielectric cable currently existing in our electric distribution system.	Electric Operations
EPS	Earnings per Share	Net income for the year, divided by the average number of common shares outstanding during that year.	
ERISA	Employee Retirement Income Security Act of 1974	A federal law designed to protect employees by setting minimum standards for most voluntarily established pension and health plans in private industry.	Central Services
ERRP	East River Re-Powering Project	The primary purpose of the East River Repowering Project (ERRP) is to ensure that Con Edison can continue to supply, reliable, reasonably priced steam by replacing the Waterside Generating Station with highly efficient, low emissions combustion technology.	Steam Operations
ERT	Environmental Response Team	Provides the initial response to all emergency environmental incidents by dealing with regulatory agencies and assisting field crews with proper methods for handling emergencies. In addition, the ERT responds to questions from the field that demand an immediate response.	Environmental, Health and Safety
ESCO	Energy Service Company	An energy supplier/marketer. In our service territory, Con Edison continues to deliver the energy for a customer whose energy is supplied by an ESCO.	Customer Operations

Acronym	Definition	Description	Organization
ESD	Energy Services Department	A department within Electric Operations.	Electric Operations
ETRM	Energy Trading and Risk Management	A CECONY system that creates electric trading transactions that are sent to Henwood Accounting Interfaces system, which generates payable and receivable transactions that are sent to Accounts Payable system and J.D. Edwards accounts receivable system for electric trades not part of NYISO.	Electric Operations
FAS	Financial Accounting Standard	Accounting standards issued by the Financial Accounting Standards Board (FASB).	Finance
FASB	Financial Accounting Standards Board	A nongovernmental body created by the accounting profession that establishes and improves standards of financial accounting and reporting that guide the public, including issuers, auditors, and users of financial information.	Finance
FCDB	Financial Control Database	CECONY's General Ledger.	Finance
FCPA	Foreign Corrupt Practices Act	An act of Congress, passed in 1977, that requires all publicly held companies to maintain accurate records and adequate systems of internal control, whether involved in international trade or not. The act also sets fines and penalties for any corporation and its officers and directors engaging in foreign bribery.	Finance
FDA	Financial Data Warehouse	Forms the basis for the Cost Analysis Reporting Environment (CARE) system.	Finance
FICA	Federal Insurance Contribution Act	The law that established the Social Security system. FICA tax is an amount withheld from an employee's gross pay, or the employer's required contribution under FICA.	Finance
FICS	Financial Input Control System	This application edits and validates certain types of transactions [Accounts Payable, Customer Service System (CSS), etc.] and sends to the META system.	Finance
FIE	Finaled in Error	An account is mistakenly closed out on the customer billing system, although the customer's power may remain on.	Customer Operations
FIFO	First In First Out	A method of inventory management that assumes that the first unit making its way into inventory is the first sold.	Central Services
FIN	FASB Interpretation Number	Interpretation of an accounting standard by the Financial Accounting Standards Board (FASB).	Finance
FIT	Federal Income Tax	Income taxes paid by the company to the federal government.	Finance
FMS	Financial Management System	Information Management System (IMS)-based system used in the generation of financial statements.	Finance
FNA	For Necessary Action	A request that an employee complete a referenced task.	General Vocabulary
FOB	Free on Board	A term used with a location (e.g., free on board New York) to indicate the point at which title to shipped goods changes hands; shipping costs are borne by the seller to the fob point, by the buyer from there on.	General Vocabulary
FPA	Federal Power Act of 1935	Established guidelines for federal regulation of interstate energy sales. It is the primary statute governing Federal Energy Regulatory Commission (FERC) regulation of the electric sector.	
FPET	Field Portable Electronic Terminal	A system used by Customer Field Representatives when processing non-routine field activity such as turn-ons, turn-offs, and collections.	Customer Operations
FRA	First Responder- Awareness Level	Occupational Safety and Health Administration (OSHA)-required Hazardous Waste Operations and Emergency Response (HAZWOPER) response level. These are individuals who are likely to witness or discover a hazardous substance incident/release and initiate the response by notifying the appropriate Company personnel. Individuals trained to this level are not expected to take any further actions other than keeping the general public and non-essential personnel out of the incident area.	Environmental, Health and Safety
FRO	First Responder- Operations Level	Occupational Safety and Health Administration (OSHA)-required Hazardous Waste Operations and Emergency Response (HAZWOPER) response level. These individuals respond to releases or potential releases of hazardous substances as part of the initial response to the scene for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive manner without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures.	Environmental, Health and Safety
FRP	Facility Response Plan	Facility Response Plans are required for non-transportation-related facilities that could cause "substantial harm" to the environment by a release of oil into or on navigable waters or adjacent shorelines. The primary function of a FRP is to ensure that a facility (also vessel or pipeline) owner/operator has the personnel and equipment resources to respond to worst case (and smaller) discharges, has a plan and organization to manage the response, trains personnel in the management of the response, and exercises all of the above to make certain that the plan will work.	Environmental, Health and Safety
FRR	Field Results Referral	When following up on an Account Investigation Order (AIO), if a Customer Field Representative (CFR)'s findings do not meet the criteria for the AIO in question, the Customer Service System (CSS) triggers a FRR. FRRs are then reviewed by a Customer Service Representative (CSR).	Customer Operations

Acronym	Definition	Description	Organization
FWT	Federal Withholding Tax	A portion of an employee's gross earnings that is usually determined by the reference to Internal Revenue Service tax tables and based on the employee's income and number of dependents, and is deducted from the employee's earnings each pay period and deposited in a federal depository.	
G&A	General and Administrative Expense	A current deduction from revenue to reflect a cost of an organizations central office and general support services. Examples include office salaries and rent.	Finance
g/cc	Grams per Cubic Centimeter	A measure of density.	Environmental, Health and Safety
G/L	General Ledger	The collection of an entity's accounts. Entries into the G/L are used as a record of all the Company's financial transactions. The G/L is used as a basis for our financial statements.	Finance
GA	General Accounts	A department within Corporate Accounting that is responsible for entries into the General Ledger (G/L).	Finance
GAAP	Generally Accepted Accounting Principles	A set of rules, conventions, standards, and procedures for reporting financial information.	Finance
GAAS	Generally Accepted Auditing Standards	A set of rules, conventions, standards, and procedures issued by the American Institute of Certified Public Accountants (AICPA) to guide Certified Public Accountants (CPAs) in performing audits of financial statements.	Auditing
GAO	General Accounting Office	An agency established by the U.S. Congress that audits or reviews management performance, operations, and financial reports of federal agency. The GAO is headed by the Comptroller General and is responsible to Congress.	
GAP	General Accounting Procedure	Company procedures that provide guidance on processing a variety of transactions, ensuring that an organization's activities are properly documented and reflected in the company's financial records according to the requirements established by the company, the Public Service Commission, or other regulatory bodies.	Finance
GAS	General Accounting System	CECONY General Ledger.	Finance
GASMIS	Gas Information Management System	Creates transactions that are sent to Con Edison Natural Gas Transaction System (CENTS) application for major fuel and transportation charges for pipeline customers.	Gas Operations
GEI	General Environmental Instruction	Targeted for use by field personnel in each operating department, these instructions provide "user friendly" guidance readily accessible to the Operating Departments.	Environmental, Health and Safety
GEMS	Gas and Electric Meter System	An electronic database that contains information for every meter owned by O&R including such information as the results of meter tests.	Electric Operations
GEMS	General Equipment Management System	Used by Property Records to track Company assets classified as general equipment. This asset management system tracks Company assets such as vehicles and all general equipment (\$500 and above) classified as capital equipment (life expectancy of more than one year)	Finance
GFCI	Ground Fault Circuit Interrupter	A fast-acting device that monitors the flow of current in a line and quickly shuts off the power when a leak is detected before a serious shock can occur.	Electric Operations
GHG	Greenhouse Gases	Gases that contributes to increasing the insulating properties of the earth's atmosphere. Carbon dioxide (CO2), methane (CH4) and oxides of nitrogen (NOx) are the three main greenhouse gases.	Environmental, Health and Safety
GIGO	Garbage In, Garbage Out.	An expression meaning that the output of a process can be no better than the quality of the input.	General Vocabulary
GOI	General Office Invoice	A document used to record and approve a non-routine transaction. After the form is completed, it is sent to Accounts Payable.	Finance
GOLD	Growth Opportunities for Leadership Development	A management training program in which associates complete 3 6-month rotations in various assignments. Upon completion of the program, they assume a management position.	Central Services
GPBS	Gas Penalty Billing System	GPBS is used to bill interruptible customers who did not curtail their gas usage when required.	Customer Operations
GRT	Gross Receipts Tax	GRT is similar to a sales tax, but it is paid by the seller of good or service rather than the buyer.	Finance
GSI	General Safety Instruction	Company documents targeted for use by field personnel in each operating department, these instructions provide "user friendly" guidance readily accessible to the Operating Departments.	Environmental, Health and Safety
GTO	Gas Turn-On (Special)	A turn-on for a gas heating account on a trouble ticket.	Customer Operations
HASP	Health and Safety Plan	A plan that integrates environmental, health and safety issues into the work function process being performed.	Environmental, Health and Safety
HAZWOPER	Hazardous Waste Operations and Emergency Response	Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.	Environmental, Health and Safety
HEAP	Home Energy Assistance Program	The HEAP program is a federally funded program that assists eligible low income customers to meet the cost of fuel and utility bills.	Customer Operations
HEFPA	Home Energy Fair Practice Act	HEFPA is the New York State utility customer "bill of rights."	Customer Operations
HELB	High energy line break	A type of isolation valve to isolate (plant) from the overall steam/gas system	Central Operations
Hi-Pot	High Potential	A high voltage direct current (DC) test of the integrity of the insulation of cable or equipment.	Electric Operations

Acronym	Definition	Description	Organization
HMS	Hazardous Materials Specialist	Occupational Safety and Health Administration (OSHA)-required Hazardous Waste Operations and Emergency Response (HAZWOPER) response level. These individuals provide support to the Hazardous Material Technicians (HMTs). Although the HMS duties parallel those of the HMT, they require more directed or specified knowledge of the various substances.	Environmental, Health and Safety
HMT	Hazardous Materials Technician	Occupational Safety and Health Administration (OSHA)-required Hazardous Waste Operations and Emergency Response (HAZWOPER) response level. These individuals respond to a potential release for the purpose of stopping the release; the approach the point of release in order to plug, patch, or otherwise stop the release of the hazardous substance.	Environmental, Health and Safety
HR	Human Resources	The department responsible for hiring and training and placing employees and for setting policies for personnel management.	Central Services
HRA	Human Resources Administration	The HRA helps New Yorkers in need find work to support themselves and their families. In collaboration with a network of service providers, HRA assesses the skills of its clients and assigns them to activities that will move them towards employment.	External Organization
HRA	Human Resource Accounting	The systemic recognition in an organization's accounting system of the value of employees. HRA is not acceptable for public financial reporting under GAAP but may be used for internal decision making, planning, and control.	
HVAC	Heating, Ventilating, and Air Conditioning	The heating, ventilation and air-conditioning system or systems that condition air in a building.	
i.e.	id est	Means "in other words" in Latin. Do not confuse with "e.g."	General Vocabulary
IAC	Intell-A-Check	An application that coordinates and stores electronic payment information.	Customer Operations
IAD	Internal Audit Department	IAD is responsible for testing operations and controls for all of Consolidated Edison, Inc.	Auditing
IC	Incident Commander	Occupational Safety and Health Administration (OSHA)-required Hazardous Waste Operations and Emergency Response (HAZWOPER) response level.	Environmental, Health and Safety
ICAP	Installed Capacity	The total capacity of electrical generation devices in a power station or system.	Electric Operations
ICS	Incident Command System	A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries.	Central Services
IDL	Interactive Distance Learning	Online courses offered by The Learning Center (TLC).	Central Services
IDLH	Immediate Danger to Life and Health	Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a dangerous atmosphere.	Environmental, Health and Safety
IDLH	Immediately Dangerous to Life and Health	A condition that "poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment."	Environmental, Health and Safety
IGBT	Insulated Gate Bipolar Transistor	A type of semiconductor device used in amplifiers, oscillators, and control circuits in which current flow is modulated by voltage or current applied to electrodes.	Electric Operations
IIA	Institute of Internal Auditors	A professional organization that promotes standards, professional education, and research in internal auditing.	Auditing
IMC	Irregular Meter Condition	A case that reveals an irregular meter condition where there is neither theft of service nor diversion of service.	Customer Operations
IMS	Information Management System	CECONY's mainframe computer system.	Central Services
IOU	Investor Owned Utility	A company, owned by stockholders for profit, that provides utility services.	
IPP	Independent Power Producer	An private entity that operates a generation facility and sells power to electric utilities for resale to retail customers.	
IPPRS	Inside Plant Property Record System	Used by Property Record to track inside Plant Company assets. This asset management system tracks Company assets such as land, buildings and improvements.	Finance
IR	Information Resources	The procedures, equipment, facilities, software and data which are designed, built, operated and maintained to collect, record, process, store, retrieve, display and transmit information.	Central Services
IRC	Independent Risk Controller	The IRC is physically located at the trading site and reports to the Treasurer of CEI on risk management and control issues. The IRC is the head of the daily risk control function and is responsible for the day-to-day risk monitoring, measurement, and risk evaluation. The IRC is independent of trading and related functions. The IRC oversees implementation of the risk policies associated with commodity, credit, and liquidity risks arising from trading activities. The IRC for the unregulated subsidiaries will be CEE's Director of Risk Management and for the regulated subsidiaries it will be the Director, Energy Risk Management.	Central Operations

Acronym	Definition	Description	Organization
IRS	Internal Revenue Service	The agency of the Treasury Department that administers and enforces federal tax law.	Finance
ISO	International Organization for Standardization	A network of the national standards institutes of 148 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. ISO is a non-governmental organization; certifies Con Edison in the 14000 category.	External Organization
ISO	Independent System Operator	An organization created to control the operation of the power system, monitor reliability and coordinate the supply of electricity in a region.	Electric Operations
IVR	Interactive Voice Response Unit	An automated phone system. In CECONY, customer can use the IVR to make a bill payment.	Customer Operations
JE	Journal Entry	The method used to enter the details of a transaction or event into an accounting system, such as the General Ledger (G/L).	Finance
JElectric	"Software trademark"	Software used in the simulator for electric	Central Operations
JFlow	"Software trademark"	Software used in the simulator for pressure	Central Operations
JV	Journal Voucher	Entry used to update the General Ledger (G/L).	Finance
kL/r	Slenderness Ratio	A comparison of the length of the column to the radius of gyration of the column	Measurement
KPI	Key Performance Indicator	A statistical measure of how well a company is doing financially.	Finance
kW	Kilowatt	A measurement of electricity, 1 kW is equal to 1,000 watts.	Electric Operations
kwhr	Kilowatt hour	A measurement of electric consumption.	Electric Operations
LAN	Local Area Network	A group of computers and other devices in a relatively limited area (such as a single building) that are connected by a communications link, which enables any device to interact with any other device on the network.	Central Services
LBP	Level Billing Plan	Customers can opt to pay the same amount all-year long instead of received bills based on monthly rates.	Customer Operations
LCTOD	Large Commercial Time of Day	A large commercial customer which, instead of operating during the usual business hours, receives a lower rate for operating off-hours. This helps the Company shift consumption away from peak periods.	Customer Operations
LDC	Local Distribution Company	The utility company that provides the distribution, customer and energy services for natural gas and electricity.	Corporate
LEC	Live End Cap	A sealed housing installed on a primary cable end for the purpose of allowing the cable to be energized after removing defective cable or equipment beyond the live end cap point.	Electric Operations
LEL	Lower Explosive Limit	The same as the Lower Flammable Limit (LFL), except in a confined area, LEL is the minimum concentration of liquid fuel or fuel vapor that will support combustion.	Environmental, Health and Safety
LFL	Lower Flammable Limit	The minimum concentration of liquid fuel or fuel vapor that will support combustion.	Environmental, Health and Safety
LIFO	Last In First Out	A method of inventory management that assumes that the last unit making its way into inventory is the first sold.	Central Services
LIPA	Long Island Power Authority	A non-profit electric utility that LIPA owns the retail electric system on Long Island, and provides electric service to customers in Nassau and Suffolk counties, and the Rockaway Peninsula in Queens.	External Organization
LNG	Liquefied Natural Gas	Natural gas that has been liquefied by reducing its temperature to minus 260 degrees Fahrenheit at atmospheric pressure. It remains a liquid at -116 degrees Fahrenheit and 673 psig. In volume, it occupies 1/600 of that of the vapor at standard temperature and pressure.	Gas Operations
LPC	Late Payment Charge	Customer accounts are subject to the imposition of a late payment charge at the rate of one and one-half percent (1 ½%) per monthly billing period. When bills are rendered, late payment charges are assessed on any previous balance that is 20 days or greater.	Customer Operations
LSE	Life Sustaining Equipment	Any electrically operated equipment that is essential to sustaining the life of the individual user of that equipment. (e.g. iron lung). These customers require special arrangements in the event of a power outage.	Customer Operations
M&CS	Maintenance and Construction Services	Plans, organizes and directs the activities of contractor and maintenance and construction crews performing outside plant construction, contractor crews performing permanent street and sidewalk restorations.	Central Operations
M&T	Meter and Test	M&T installs, exchanges, and tests electric and gas meters on a periodic and an as needed basis.	Electric Operations
MAC	Monthly Adjustment Clause	Customers are charged/reimbursed on their bills to account for fluctuations in electric and gas prices during the previous billing cycle.	Customer Operations
MAG	Meter Action Group	MAG is the department that sets, exchanges, and removes meters on CSS.	Customer Operations
MAIFI	Momentary Average Interruption Frequency Index	The average frequency of momentary interruptions per customer occurring during the analysis period. It is calculated by dividing the total number of momentary customer interruptions by the total number of customers served.	Electric Operations

Acronym	Definition	Description	Organization
MD&A	Management Discussion and Analysis of Financial Condition and Results of Operations	A high level overview of the financial results and health of a company included in the financial statements.	Finance
mdths	Thousand dekatherms	A measure of the heat content of gas.	Gas Operations
META	Metafile system for CECONY General Accounting System	Sits in-between systems such as payroll, accounts payable, the Customer Service System (CSS), J.D. Edwards, etc. and the CECONY General Ledger (G/L); it re-formats, sorts, and classifies transactions from feeder systems and sends them to General Accounting System (GAS).	Finance
Metscan	--	Interruptible customers have a dedicated phone line and a Metscan device installed at their location. Metscan tracks, stores, and reports gas consumption at a meter.	Customer Operations
MGP	Manufactured Gas Plant	MGPs existed from the early-1800s to the mid-1900s, prior to the development of natural gas systems, to convert coal, oil and water into gas for lighting city streets and heating homes. They produced byproducts such as coal tar, ash and cinders that may still reside in the soil. Environmental experts have determined that former MGP sites should be investigated, tested for possible contamination, and remediate where necessary.	Environmental, Health and Safety
MM#	Same as MMlb	Steam's unit of measurement	Central Operations
MMlb	Million pounds	Steam's unit of measurement	Measurement
MOP	Meter Operations	The section within Customer Operations responsible for customer meters, including meter reading and turn-ons and turn-offs.	Customer Operations
MORD	Meter Order	Used by CECONY employees to request a new meter at a location.	Customer Operations
MPARE	Management Pay and Reimbursement System	MPARE is the time entry system for management employees and is used as a basis for calculating employee pay.	Finance
MSDS	Material Safety Data Sheets	An information packet prepared by a chemical manufacturer that lists specific information on a chemical product, such as physical properties, chemical composition, degree of hazard, and emergency response information.	Environmental, Health and Safety
MSG	Madison Square Garden	One of our largest customers.	Customer Operations
MTA	Metropolitan Transit Authority	The MTA maintains New York State's network of subways, buses, railroads, bridges, and tunnels.	External Organization
MTD	Month-to-Date	Used to refer to a numerical amount compiled from the beginning of the month to the current date.	General Vocabulary
MV90	--	System used to collect data from interval meters and post the data to CSS.	Customer Operations
MVA	Mega Volt Amp	A million volt amps; a unit of electrical power in an AC circuit equal to the power dissipated when 1 volt produces a current of 1 ampere	Electric Operations
N/A	Not Applicable or Not Available	Used to indicate that data that are not available or are not applicable.	General Vocabulary
NAESB	North American Energy Standards Board	Replacing GISB	Central Operations
NEPOOL	New England Power Pool	Formed in 1971, NEPOOL is a voluntary association of companies in the electric power business in New England. NEPOOL members include investor-owned utility systems, municipal and consumer-owned systems, joint marketing agencies, power marketers, load aggregators, generation owners and end users.	External Organization
NERC	North American Electric Reliability Council	Meets and makes electric reliability rules that participants are supposed to follow; no fines or fees are charged.	Electric Operations
NIOSH	National Institute for Occupational Safety and Health	The NIOSH, U.S. Public Health Service, U.S. Department of Health and Human Services (DHHS), among other activities, tests and certifies respiratory protective devices and air sampling detector tubes, recommends occupational exposure limits for various substances, and assists OSHA and MSHA in occupational safety and health investigations and research.	Environmental, Health and Safety
NIST	National Institute of Standards and Technology	NIST is a non-regulatory federal agency within the U.S. Commerce Department that develops and promotes measurement, standards, and technology.	Electric Operations
NJBPU	New Jersey Board of Public Utilities	A New Jersey regulatory authority that ensures safe, adequate, and proper utility services at reasonable rates for customers. NJBPU regulates natural gas, electricity, water and telecommunications and cable television service.	External Organization
NL	Non-Lead	Cable that does not contain lead.	Electric Operations
NO CASH	No Cash	An account that has one or no payments.	Customer Operations
NOPR	Notice of Proposed Rulemaking	A designation used by the Federal Energy Regulatory Commission (FERC) for some of its dockets.	Law
NOV	Notice of Violation	A notice issued by a regulatory agency (e.g., NYSDEC, NYCDEP, FDNY) alleging a violation of one or more specific regulations.	Environmental, Health and Safety
NPRS	Net Plant Record System (Property Records)	Used by Property Record to match all inside Plant Assets to General Ledger (G/L) accounts. This asset management system sends transactions to the General Accounting System (GAS).	Finance

Acronym	Definition	Description	Organization
NSPS	New Source Performance Standards	Criteria pollutant regulations enforced by the Environmental Protection Agency (EPA).	Environmental, Health and Safety
NTOS	Non-Theft of Service	A case which upon investigation reveals no irregularities.	Customer Operations
NUG	Non-Utility Generator	A generation facility owned and operated by an entity who is not defined as a utility in that jurisdictional area.	Electric Operations
NYAG	New York Attorney General	The chief law officer and legal counsel of the New York State government.	Law
NYCDDC	New York City Department of Design and Construction	The Department uses in-house resources and private consultants and contractors to perform design and construction services related to streets and highways, sewers, water mains, correctional and court facilities; cultural institutions; libraries; schools; and other public buildings, facilities and structures.	External Organization
NYCDEP	New York City Dept. of Environmental Protection	See DEP.	External Organization
NYCDOB	New York City Dept. of Buildings	Agency that ensures the safe and lawful use of buildings and properties by enforcing the Building Code and the Zoning Resolution. We facilitate development with integrity, efficiency and professionalism.	External Organization
NYCDOT	New York City Dept. of Transportation	See DOT.	External Organization
NYCRR	State of New York Official Compilation of Codes, Rules & Regulations	The official collection of New York State Public Service Commission (PSC) rules and regulations.	Corporate
NYISO	New York Independent System Operator	See ISO.	Electric Operations
NYP&A	New York Power Authority	America's largest state-owned power organization, providing low-cost electricity in New York State through 17 generating facilities and more than 1,400 circuit-miles of transmission lines.	Customer Operations
NYSERDA	New York State Energy Research and Development Association	A public-benefit corporation that helps the state's businesses and municipalities with their energy and environmental problems. It derives its research revenues from an assessment on the intrastate sales of New York State's investor-owned electric and gas utilities and voluntary annual contributions by the New York Power Authority and the Long Island Power Authority.	Electric Operations
NYSRC	New York State Reliability Council	Entity responsible for promoting and preserving the reliability of electric service on the New York State Power System by developing, maintaining, and, from time-to-time, updating the Reliability Rules.	Electric Operations
O&E	Outreach and Education	Customer-focused efforts expected of the Company on several fronts, including demand response, PowerYourWay (PYW), marketing & sales, and customer programs/messages.	Customer Operations
O&M	Operation and Maintenance	As in O&M expense, it is a non-capital; an expense related to the operation and maintenance of the Company.	Finance
O&R	Orange and Rockland Utilities	A regulated subsidiary of Con Edison, Inc. O&R supplies electric and gas service to seven counties in New York, northern New Jersey, and northeastern Pennsylvania.	Corporate
O/A	Open-Auto	System equipment removed from service automatically by protective relay or systems action. An example would be a trip out of a feeder breaker in a substation due to a fault condition or overload on the feeder cable or equipment.	Central Operations
OCCS	Operating Control Center Supervisor	No longer in use. Used to be the Power Generation "War Room" supervisor.	Central Operations
OCI	Other Comprehensive Income	The change in net assets of the company from transactions and other events from non-owner sources.	Finance
ODBC	Open Database Connectivity	An open standard interface used to access databases. With ODBC, applications can access databases from multiple database vendors. For example, an application can use ODBC to access a Microsoft SQL server or an Oracle database server.	
OJT	On the Job Training	Training outside of the classroom environment, usually at a job site.	General Vocabulary
OOR	Other Operating Revenue	Incoming revenue not generated by the Con Edison core businesses of electric, gas, and steam service.	Finance
ORU	Orange and Rockland Utilities	See O&R.	Corporate
OSHA	Occupational Safety and Health Administration	A government agency that monitors and takes action for safety and health in the work place.	External Organization
P&L	Profit and Loss	P&L is another name for an Income Statement.	Finance
P/E	Price-Earnings Ratio	The market price of a share of stock divided by the company's earnings per share for the preceding year.	Finance
PA	Public Assistance	Financial aid that is provided to an individual or family by the New York City Human Resources Administration (HRA) or the Westchester County Department of Social Services (DSS).	Customer Operations
PAC	Public Assistance Central	This group, a division of Customer Operations, deals with Low Income customers and the Human Resources Administration (HRA) and the Department of Social Services (DSS).	Customer Operations
PACER	Public Access to Court Electronic Records System	An electronic public access service that allows users to obtain case and docket information from Federal Appellate, District and Bankruptcy courts, and from the U.S. Party/Case Index.	Law

Acronym	Definition	Description	Organization
PACM	Presumed Asbestos Containing Material	It is Con Edison's policy that any material of unknown composition be treated as Presumed Asbestos Containing Material (PACM) until testing or historical documentation proves otherwise. PACM is treated exactly the same as Asbestos Containing Material (ACM) in all regards.	Environmental, Health and Safety
PAPR	Powered Air-Purifying Respirator	Designed as full-face piece usints, this headpiece covers the eyes, nose, and mouth, and is connected by a flexible airline to a battery-powered, filtered air blower.	Environmental, Health and Safety
PASNY	Power Authority of the State of New York	See NYPA.	External Organization
PBP	Pay-By-Phone	Customers have the option to pay their bills by phone using their bank account.	Customer Operations
PCAOB	Public Company Accounting Oversight Board	The PCAOB is a private-sector, non-profit corporation, created by the Sarbanes-Oxley Act of 2002 to oversee the auditors of public companies.	Auditing
P-Card	Corporate Procurement Card	Used in place of petty cash for large purchases. The use of the card is restricted.	Central Services
PCB	Polychlorinated Biphenyl	Chemical compounds, which are toxic, persistent (i.e., do not break down in the environment) chemicals used in transformers, capacitors, and other electrical equipment for insulating purposes, and in gas pipeline systems as a lubricant. PCBs were generally banned by law for sale in 1974.	Environmental, Health and Safety
PEL	Permissible Exposure Limit	A Time Weighted Average (TWA) concentration that must not be exceeded during any 8-hour work shift of a 40-hour workweek. PELs are published and enforced by OSHA as a legal standard.	Environmental, Health and Safety
PET	Portable Electronic Terminal	PET is a hand-held device used to read electric and gas meters.	Customer Operations
PFJ	Power For Jobs	A program created through legislation to help retain jobs and expand employment in New York State by making low-cost power available from the New York Power Authority (NYPA).	Customer Operations
PFJBS	Power For Jobs Billing System	System used to bill Power For Jobs (PFJ) customers.	Customer Operations
PI	Pressure indicator	A gauge of the pressure in an equipment, system, etc.	Central Operations
PIKE	Pike County Light & Power Company	One of two utility subsidiaries of O&R.	Corporate
PILC	Paper Insulated Lead Cable	Older cable using pre-manufactured oil impregnated paper as insulation.	Electric Operations
PJM	PJM Interconnection	PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of electricity through all or parts of Delaware, Maryland, New Jersey, Ohio, Pennsylvania, Virginia, West Virginia and the District of Columbia.	External Organization
PLT	Plant Accounting	Used to track all transactions for O&R plant assets in service. This asset management system sends transactions to Walker General Ledger (G/L).	Finance
PLUS	Plant Unitization	This is the Continuing Property Records system for O&R. This asset management system sends transactions to Walker General Ledger (G/L).	Finance
PMS	Procurement Management System	CECONY purchasing system.	Central Services
PO	Purchase Order	A document used to record and approve large, routine company purchases. After the form is completed, it is sent to Accounts Payable.	Central Services
POLR	Provider of Last Resort	A legal obligation given to utilities to provide energy supply to a customer when other energy suppliers (ESCOs) have decided they do not want that customer's business.	Customer Operations
PP&E	Property Plant and Equipment	See Property, Plant, and Equipment (PPE).	Finance
PPE	Personal Protective Equipment	Clothing and equipment worn by personnel to prevent contact with hazards present in the work area. PPE includes safety glasses, face shields, gloves, safety shoes, hearing protection, hard hats, etc.	Environmental, Health and Safety
PPE	Property, Plant, and Equipment	A category of assets used to produce products or to carry on the administrative and selling functions of a business. The category includes machinery and equipment, buildings, and land.	Finance
ppm	Parts Per Million	A measure of solubility, the ability of a solid, liquid, gas, or vapor to dissolve in a solvent.	Environmental, Health and Safety
PPUC	Pennsylvania Public Utility Commission	An organization that ensures safe, reliable and reasonably priced electric, natural gas, water, telephone and transportation service for Pennsylvania consumers by regulating public utilities and by serving as a facilitator of competition.	External Organization
PRP	Potentially Responsible Party	Any individual or company, including owners, operators, transporters, or generators, potentially responsible for, or contributing to, the contamination problems at a Superfund site.	Environmental, Health and Safety
PRV	Pressure Reducing Valve	As in PRV Stations	Central Operations
PSC	Public Service Commission	A New York State agency that regulates the state's utilities to encourage competition and to protect the public.	External Organization
psiA	pounds per square inch absolute	Pressure defined from absolute conditions.	Measurement
PST	Protective System Testing	Department/organization name - responsible for relay and instrumentation on electrical transmission and distribution equipment.	Electric Operations

Acronym	Definition	Description	Organization
PUHCA	Public Utility Holding Company Act of 1935	This act prohibits acquisition of any wholesale or retail electric business through a holding company unless that business forms part of an integrated public utility system when combined with the utility's other electric business. The legislation also restricts ownership of an electric business by non-utility corporations.	
PURPA	The Public Utility Regulatory Policy Act of 1978	Among other things, this law requires utilities to buy electric power from private "qualifying facilities," at an avoided cost rate. This avoided cost rate is equivalent to what it would have otherwise cost the utility to generate or purchase that power themselves.	
PV	Photovoltaic	Refers to the conversion of light into electrical energy.	Electric Operations
PY	"Medium select control algorithm"	A logic process used in DCS	Central Operations
PYW	PowerYourWay	PowerYourWay is a service-ally approach to marketing customer choice in the deregulated electric and gas markets.	Customer Operations
QTD	Quarter-to-Date	Used to refer to a numerical amount compiled from the beginning of the quarter to the current date.	General Vocabulary
R&D	Research and Development	Research is the discovery of fundamental new knowledge. Development is the application of new knowledge to develop a potential new service or product.	
RADEX	Retail Access Data Exchange	Sits in-between the Transportation Customer Information System (TCIS) and the Retail Access Information System (RAIS) and external Energy Service Companies (ESCOs).	Customer Operations
RAIS	Retail Access Information System	RAIS is a CECONY system used by CECONY and energy suppliers (ESCOs) to keep track of customers who are receiving their electric supply from a supplier other than CECONY.	Customer Operations
RCRA	Resource Conservation and Recovery Act	(1976) Development of solid waste management plans, regulations for facilities in treatment, storage, and transportation of solid wastes.	Environmental, Health and Safety
RCWG	Risk Control Working Groups	The RMC and RRMC may each form RCWGs from time to time to evaluate the respective risks of various wholesale activities of the unregulated and regulated subsidiaries, respectively. RCWGs are intended to provide a link among the business operations or front-office function, which is responsible for sales, trading, and planning; the mid-office risk control function, which is responsible for daily risk monitoring; and the back-office functions, which are responsible for billing and financial reporting. These RCWGs will be a risk planning and analysis group working for management. The primary role of these RCWGs is to evaluate the risk exposures and performance of specific strategies and transactions.	Central Operations
RE	Retained Earnings	Earnings not paid out as dividends.	Finance
RECO	Rockland Electric Company	One of two utility subsidiaries of O&R.	Corporate
RFI	Request for information	A form that asks engineers for design/installation clarification	Central Operations
RIC	Report of Irregular Condition	A code entered by a Customer Field Representative (CFR) into the Portable Electronic Terminal (PET) device that denotes that there is a condition (e.g., blocked meter) preventing a meter reading.	Customer Operations
RMC	Risk Management Committee	Provides an overall assessment of risks, performance, and compliance related to commodity trading to support the unregulated subsidiary Board(s) in making business decisions and to inform the ROC on the components of enterprise-wide risk related to the unregulated subsidiaries.	Central Operations
RO	Reverse Osmosis	A process for the removal of dissolved ions from water in which pressure is used to force the water through a semi-permeable membrane.	
ROC	Risk Oversight Committee	Oversees Corporate risk strategy and establishes risk policies from an enterprise-wide perspective.	Central Operations
ROI	Return on Investment	The amount earned per year on an investment, usually expressed as a percentage.	Finance
RPP	Respiratory Protection Program	(Ref. CEP 4.0) This procedure applies to the use of respiratory protection by Con Edison employees. Following this program will minimize the potential for workplace inhalation hazards and chemical exposures, and will prevent injuries to persons working at the facility. Respiratory protection shall be used by personnel to prevent unnecessary exposure to airborne concentrations of toxic materials equal to or greater than any or all of the criteria listed in Section 4.1.	Environmental, Health and Safety
RQ	Reportable Quantity	An amount of a hazardous substance that, when released in a specified manner, must be reported to at least one regulatory agency.	Environmental, Health and Safety
RRMC	Regulated Risk Management Committee	Provides an overall assessment of portfolio performance, risks, and compliance with the policies and procedures governing wholesale activities of the regulated companies. The RRMC provides advice and counsel to management responsible for overseeing wholesale activities with regard to supply and hedging strategies and informs the ROC on the components of enterprise-wide risk related to these activities.	Central Operations
RTG	Regional Transmission Group	A voluntary organization of transmission owners, users, and other entities interested in coordinating transmission planning, expansion, operation, and use on a regional and inter-regional basis.	Electric Operations

Acronym	Definition	Description	Organization
RTO	Regional Transmission Organizations	Independent entities, established by the Federal Energy Regulatory Commission (FERC) Order 2000 issued in December 1999, that control and operate regional electric transmission grids free of any discriminatory practices.	Electric Operations
RTON	Reconnection of turned off service	When a customer's service is physically turned back on.	Customer Operations
RVS	Rate Verification System	A system that calculates customer bills using information in the Customer Service System (CSS) in order to verify the CSS bill calculation. Differences are investigated.	Customer Operations
S&TO	System and Transmission Operations	Comprised of the System Operation Department and the Transmission Operation Department.	Central Operations
S/S	Substation	A facility used for switching and/or changing or regulating the voltage of electricity.	Central Operations
SAIDI	System Average Interruption Duration Index	The average forced sustained interruption duration per customer served per year (measured in minutes).	Electric Operations
SAIFI	System Average Interruption Frequency Index	This index is the average number of times that a customer is interrupted during a year. It is determined by dividing the total annual number of customers interrupted by the average number of customers served during the year.	Electric Operations
SARA	Superfund Amendment Re-Authorization Act	(1986) Re-authorized the Superfund Amendment. In addition, Title 126 establishes Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation.	Environmental, Health and Safety
Sarbox	Sarbanes-Oxley Act of 2002	See SOX.	Finance
SAS	Statement on Auditing Standards	One of a series of statements issued by the American Institute of Certified Public Accountants (AICPA) to define and describe preferred auditing standards and practices.	Auditing
SBC	System Benefits Charge	A mandatory fee collected from all electricity customers used to fund programs aimed at the public good that a utility is unable to provide in a competitive electricity market. These programs include low-income assistance and research and development.	Customer Operations
SBS	Summary Billing System	The SBS produces summary bills that offer our multi-account customers the opportunity to receive one bill and make one payment each month for all their accounts in our service territory.	Customer Operations
SBU	Steam Business Unit	Department/organization name - responsible for steam generation and distribution.	Steam Operations
SC	Service Classification	An SC denotes a type of service, e.g., residential or non-residential, and is used to determine a customer's rate.	Customer Operations
SCADA	Supervisory Control and Data Acquisition	Remote control and metering of system equipment.	Central Operations
SCH	Scheduled	Scheduled Feeder Outage.	Electric Operations
SCR	Silicon Control Rectifier	A power-switching device commonly used for lighting control, motor speed control and other variable power applications.	
SCSR	Senior Customer Service Representative	A weekly employee job title in Customer Operations.	Customer Operations
SCSS	Steam Customer Service System	SCSS is a customer billing system. It contains account information for all steam customers.	Customer Operations
SDS	Steam Distribution Services	group in charge of maintaining the steam distribution system	Central Operations
SEC	Securities and Exchange Commission	The SEC oversees participants in the U.S. securities world, including stock exchanges, broker-dealers, investment advisors, mutual funds, and public utility holding companies in order to protect investors and maintain the integrity of the securities markets.	Finance
Section U	--	The section in NYC construction contracts that permits utility interference work to be included within the contract on a non competitive basis. Contractors are obliged to perform the work but the pricing for it is negotiated or arbitrated if an agreement can not be reached. This protocol replaced "Joint bidding" in 1998.	Central Operations
SEQRA	State Environment Quality Review Act	SEQRA requires the consideration of environmental, social, and economic factors for certain proposed development actions in NYS.	Environmental, Health and Safety
SF6	Sulfur Hexafluoride	A colorless, odorless, nontoxic, nonflammable gas used as an insulating gas in electrical equipment.	
SHIMS	Safety and Health Information Management System	Data management system for incidents involving Con Edison employees, contractors working for the Company or members of the public. All entries must be made within 24 hours of notification.	Environmental, Health and Safety
SKU	Stockkeeping Unit	An inventory item.	Central Services
SMC	Switched Meter Condition	A SMC occurs when the meter at a location 1 is mistakenly assigned to another location 2, and vice versa, either physically or through the customer billing system.	Customer Operations
SO	System Operator	Coordinates the operation of electric transmission system to ensure balance between electrical system sources and loads. They monitor the equipment performance and respond to any electrical transmission abnormalities or emergencies that arise.	Central Operations
SOCCS	System Operations Computer Controlled System	Electrical transmission system remote control and metering system (a type of SCADA system).	Central Operations
SOCCSX	System Operations Computer Controlled System Extended	Area substation remote control and metering system (a type of SCADA system).	Central Operations

Acronym	Definition	Description	Organization
SOX	Sarbanes-Oxley Act of 2002	SOX is a public company accounting reform and investor protection act passed by Congress in 2002 as a result of corporate scandals in the late 1990s and early 2000s. It mandates the documentation and evaluation of internal controls over financial reporting.	Finance
SPCC	Spill Prevention, Control and Countermeasure	A comprehensive plan that describes the oil storage equipment and spill prevention equipment and procedures for a given facility. SPCC Plans are required for facilities that store oil in quantities greater than those specified in CEP 3.04.	Environmental, Health and Safety
SPDES	State Pollutant Discharge Elimination System	A SPDES permit is issued by NYSDEC for the discharge of wastewater to the surface waters and groundwater of the state.	Environmental, Health and Safety
SPE	Special Purpose Entity	An entity organized for the purpose of issuing securities that entitle the holders to receive payments that depend primarily on the cash flow from qualifying assets, but does not include a registered investment company.	Finance
SpG	Specific Gravity	The ratio of the density of a substance at a given temperature to the density of water at the temperature of its maximum density. Numerically, SpG is equal to the density in grams per cubic centimeter (g/cc) but is expressed as a pure number without units.	Environmental, Health and Safety
SPP	Stock Purchase Plan	A corporation's program that allows its employees to purchase shares of stock.	Finance
SSI	Supplemental Security Income Program	Financial aid that is provided through the Federal Social Security Administration to the elderly, blind or disabled.	Customer Operations
SSO	Steam send out	As in SSO Control Valve	Central Operations
SSR	Solid State Recorders	Various large electric accounts use SSRs to measure energy consumption.	Customer Operations
STAAD	Structural Analysis and Design	Finite element structural modeling used to validate designs by apply various loading conditions on a structure	Central Operations
STAR	Stop, Think, Act, Review	A behavioral safety program focusing on potentially unsafe acts to improve human performance	Central Operations
Superfund	Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 and similar state statutes	See CERCLA.	Environmental, Health and Safety
T Account	--	An account in the form of a T with a debits section of the left and a credits section on the right.	Finance
T&D	Transmission and Distribution	Transmission is the transport of electricity at high voltages across long distances. The transmission system carries power from generating stations to various substations. For consumers needing lower voltages, electricity is reduced in voltage at a substation and delivered over primary distribution lines extending throughout the area where the electricity is distributed. Distribution is the network of wires and equipment that delivers electricity to customers. T&D can apply to transmission and distribution of gas and steam systems also.	Central Operations
T&E	Time and Equipment	Time & Equipment (a.k.a. Time & Material or T&M) - a type of purchase order or purchase order modification in which the contractor agrees to perform work and bill for these services at pre-determined hourly labor and material rates plus a nominal mark up for overhead and profit - usually around 10%. This type of order is commonly used when commencement of work is needed immediately or on an emergency basis and a fixed price contract can not be negotiated in time.	Central Operations
T&M	Time and Material	See T&E.	Finance
T&T	Turn-ons and Turn-offs	The field office which turns service off and on.	Customer Operations
T/OFF	Turn-off	When a customer's meter is physically turned off.	Customer Operations
T/On	Turn- on	When a customer's meter is physically turned on.	Customer Operations
TB	Trial Balance	A total of debit balances and credit balances to ensure that total debits equal total credits. A trail balance is usually prepared at the end of an accounting period just before preparing the adjusting entries and the financial statements.	Finance
TBIS	Traction Billing Information System	An electric traction system applies to service for light, heat, and power for operating a railroad or rapid transit system where the customer's requirements exceed 10 kilowatts. The high-tension portion of a traction account is billed in TBIS, while the low-tension portion is billed via the Customer Service System (CSS).	Customer Operations
TC	Temperature-Compensated	A type of gas meter that accounts for the affect of temperature on gas volume readings.	Gas Operations
TCIS	Transportation Customer Information System	TCIS is main billing system for interruptible natural gas customers; also is the system that processes transactions for CECONY natural gas retail customers to send to Energy Services Companies (ESCOs).	Customer Operations
TDES	Time Data Entry System	TDES is the time entry system for weekly employees and is used as a basis for calculating employee pay.	Finance

Acronym	Definition	Description	Organization
TFA	Transaction Flow Analysis	A TFA details the flow of transactions in a particular cycle or department via diagrams and/or narratives for the purpose of identifying the associated internal controls.	General Vocabulary
TLC	The Learning Center	Centralized Company training facility located in Long Island City, Queens.	Central Services
TOIE	Turned off in error	When a customer's power is physically turned-off in error.	Customer Operations
TONP	Turned off for non-payment	When a customer's power is physically turned-off for non-payment of their bills.	Customer Operations
TOS	Theft of Service	A case of meter tampering, unauthorized bypassing or unauthorized reconnect of service.	Customer Operations
TOU	Time-of-Use	A type of rate in which the pricing of electricity based on the estimated cost of electricity during a particular time block.	Electric Operations
TRI	Toxic Release Inventory	(1989) Allows people to find out which toxic chemicals are being released from specific industrial facilities.	Environmental, Health and Safety
TRM	Treasury - Risk Management	The Risk Management Section within Treasury is responsible for overseeing the various risk activities on an enterprise-wide basis and providing reports to the ROC and to the RMC and/or RRMC where appropriate.	Central Operations
TSCA	Toxic Substances Control Act	(1976) Gave the Environmental Protection Agency (EPA) the power to "control development, manufacture and distribution of substances that may result in an unreasonable risk to health or environment." In addition, the regulation required the phasing out of production and sales of Polychlorinated Biphenyl (PCBs).	Environmental, Health and Safety
TWA	Time Weighted Average	TWA is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.	Environmental, Health and Safety
UB	Uncollectible Bills	Customer bills that will not be paid and are therefore written off by the Company.	Customer Operations
UEL	Upper Explosive Limit	The same as the Upper Flammable Limit (UFL), except in a confined area, UEL is the maximum concentration of liquid fuel or fuel vapor that will support combustion.	Environmental, Health and Safety
UFL	Upper Flammable Limit	The maximum concentration of liquid fuel or fuel vapor that will support combustion.	Environmental, Health and Safety
UGC	Utility Guarantee Program	UGC is a program in which qualified customers receive funds from the Human Resources Administration (HRA) to pay their monthly utility bills. For a customer on UGC, bills are paid for 6 months.	Customer Operations
UGS	Underground Service	UGS refers to the Company's cables and pipes beneath the street.	Corporate
UMS	Unmetered Service	Charges imposed on a customer due to a faulty meter condition.	Customer Operations
UNID	Unidentified Cash	Payments received that are unable to be matched to a particular customer account.	Customer Operations
USA	Unit Substation Automation	Unit substation remote control and metering system (a type of SCADA system).	Central Operations
USEPA	United States Environmental Protection Agency	See EPA.	External Organization
USS	Unit Substation	Comprises a large step-down transformer that transforms voltage levels from 33kV, 27kV, or 13kV to the 4kV level for the purpose of distribution on primarily overhead wires to supply mostly residential load at the 120/28V or 120/240V level.	Electric Operations
V#	Vault	An enclosure occupied by electrical distribution equipment.	Electric Operations
v/v	Percent by Volume	A measure of solubility, the ability of a solid, liquid, gas, or vapor to dissolve in a solvent.	Environmental, Health and Safety
VIE	Variable Interest Entity	An entity used for business purposes that either does not have equity investors with voting rights or has equity investors that do not provide sufficient financial resources for the entity to support its activities.	Finance
VIT	Variable Interval Test	PSC-mandated testing of commercial electric meters in the field. Electric Operations Meter and Test (M&T) does most VITs.	Electric Operations
VRU	Voice Response Unit	See IVR.	Customer Operations
w/v	Percent by Weight	A measure of solubility, the ability of a solid, liquid, gas, or vapor to dissolve in a solvent.	Environmental, Health and Safety
Walker	--	CEI's General Ledger System	Central Services
WDPF	Westinghouse Distribution Processing family	Computer control system	Central Operations
WFM	Work Flow Manager	An exception/ edit report generated by the Customer Information Management System (CIMS).	Customer Operations
WIIFM	What's In It For Me	Concept used to guide business writers; business writing should always answer the reader's questions, "What's in it for me?"	General Vocabulary
XFMR	Transformer	An electrical device used for converting voltage or current levels by either stepping up or down the level.	Electric Operations
XLP	Crossed Link Polyethylene	Solid Dielectric Cable still existing in our Electric Distribution System.	Electric Operations
YTD	Year-to-Date	Used to refer to a numerical amount compiled from the beginning of the year to the current date.	General Vocabulary

APPENDIX 2

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CASE 09-M-0243
PART 1 REPORT

APPENDIX 3

List of meetings

Reference	Subject	Date	Con Ed Participants	CRA Participants	PSC Participants	Other
9.8/1	Orientation	9/8/2009	Bevilacqua, Cancel, Lubling, Heslin	Helmes, Foote, Brennan, Steadman, Snell, Fredericks, Kautz, Kim, Fulewider	Scherer, Glor	KPMG team
9.8/2	IA Information Session	9/8/2009	Bevilacqua, Cancel	Helmes, Foote, Brennan, Steadman	Scherer, Glor	NA
9.18/1	Construction Information Session	9/18/2009	Bevilacqua, Cancel, Heustis, Kelly, Adoffini, Gancerelli, Boyle, PLUS	Helmes, Foote, Fulewider, Snell, Vitale	Katz et al.	NA
9.23/1	Project management meeting	9/23/2009	NA	Helmes, Foote, Vieira	Katz	NA
9.28/1	DR clarification discussion	9/28/2009	Bevilacqua, Cancel	Foote	NA	NA
9.30/1	Procurement Information Session	9/30/2009	Bevilacqua, Cavallero, De La Bastide, Derman, Strata, et al. Purchasing	Foote, Kautz, Snell	Katz, Glor	NA
9.30/2	DR status, privilege, et al.	9/30/2009	NA	Helmes, Foote, Vieira	Katz, Glor, Lecakes	NA
10.1/1	Project management meeting	10/1/2009	NA	Helmes, Foote, Vieira	Katz, Glor, Scherer, Lecakes	NA
10.2/1	KPMG Information Session	10/2/2009	NA	Foote, Snell	NA	Dooley, Curtin, et al.
10.7/1	KPMG Information Session #2	10/7/2009	NA	Foote, Fredericks, Vail, Et al.	NA	Dooley, Curtin, et al.
10.8/1	Project management meeting	10/8/2009	NA	Helmes, Foote, Vieira	Katz	NA
10.8/2	MMS overview	10/8/2009	Woodason, Iocco, Derman	Kautz, Kim		
10.9/1	Incident Information Session	10/9/2009	Bevilacqua et al.	Foote et al.	NA	NA
10.9/2	PMS Information Meeting	10/9/2009	Meyers, Afonso	Kim, Kautz, Snell		
10.13/1	PMS/MMS Database Information Meeting	10/13/2009		Snell		
10.14/1	Bid Check Information Meeting	10/14/2009	Scotto	Helmes, Fulewider	Katz	
10.15/1	KPMG Compass Information meeting	10/15/2009	Cavallaro	Snell, Fulewider, Kim		Doyle, Curtin
10.15/2	Project management meeting	10/15/2009		Foote	Katz	
10.15/3	Construction Procurement Information Meeting	10/15/2009		Glowka		
10.15/4	Contractor Vetting Packages Information Meeting	10/15/2009	Stratta	Helmes, Fulewider	Katz	
10.22/1	COMPASS meeting	10/22/2009	Marcotrigiano, Ptaszowski	Fineston, Kim, Glowka, Snell		
10.23/1	Prudency Standards	10/23/2009	n/a	Kautz, Kim, Foote	LeCakes	
10.29/1	Procurement re Event #10890	10/29/2009	Hemmerich, Ferranti, Dunkley	Kautz, Glowka		
11.2/1	PMS meeting	11/2/2009	Lomas, Silbermitz	Glowka, Fineston		
11.2/2	Document request discussion	11/2/2009	Bevilacqua	Snell		
11.3/1	Demonstration of photographic database	11/3/2009	Derman	Emilio		
11.3/2	Demonstration of access to computer systems	11/3/2009	Governanti	Kim		
11.3/3	PMS Data follow-up	11/3/2009	Silbermitz	Fineston, Glowka		
11.4/4	MMS data request	11/4/2009	Latimer	Snell		
11.5/2	Layout Tracking	11/5/2009	Alvarez, Ptaszowski	Helmes, Fineston, Fulewider, Snell		
11.5/3	Procurement follow-up re Event #10890	11/5/2009	Hemmerich, Ferranti, Dunkley	Glowka, Kautz		
11.6/3	Discussion of submissions to PSC	11/6/2009	Alvarez, McGrath, Fowley, Hesslin, Wheeler, Stratta, Murray, McCarthy, Afonso	Glowka, Fineston		
11.12/1	Meeting with KPMG	11/12/2009		Glowka, Fineston		Doyle
11.13/1	Continuing Property Record	11/13/2009	Cappiello, Cavallaro	Snell		

List of Interviews

Reference	Interviewee(s)	Date	Subject	Con Ed Participants	CRA Participants	PSC Participants	Other
10.20/1	Colonna	10/20/2009	Interview with Nick Colonna	Colonna	Helmes, Fulewider		
10.26/1	Campanella	10/26/2009	ICE Agent		Fredericks, Brennan		
11.3/1	Clemens	11/3/2009	Security		Fredericks, Emilio		
11.4/1	Bailey	11/4/2009	Interview with IT director	Stephanie Bailey	Kautz, Helmes	Katz	
11.4/2	Yaroshevskaya	11/4/2009	Interview with Technical reviewer	Yaroshevskaya	Helmes, Fulewider, Fineston		
11.4/3	Marcotrigiano	11/4/2009	Interview with IT manager	Marcotrigiano	Helmes, Fulewider	Katz	
11.5/1	Santos	11/5/2009	Contract Administrator	Santos	Glowka		
11.6/1	Ingravallo	11/6/2009	CCI interview	Ingravallo	Helmes, Fulewider		
11.6/2	Paul	11/6/2009	CR interview	Paul	Helmes, Fulewider		
11.9/1	Woram	11/9/2009	Ed Woram	Woram	Fredericks, Emilio		
11.10/1	Gallo	11/10/2009	Richard Gallo		Fredericks, Emilio		
11.10/2	Campanella	11/10/2009	Head of Security	Campanella	Fredericks, Emilio	Katz, Gloor	
11.12/2	McGuire	11/12/2009	Ombudsman		Foote, Fredericks		
11.20/1	Bevilacqua, O'Brien	11/20/2009	Internal Auditing informational meeting	Bevilacqua, O'Brien	Foote	Katz	
11.24/1	Daly	11/24/2009	Informational meeting with Deirdre Daly	Deirdre Daly	Foote, Brennan, Fredericks	Katz	
11.30/1	Deliso	11/30/2009	Technical review of invoices	Deliso	Snell, Fulewider	Katz	
11.30/2	Banks	11/30/2009	Government Relations	Banks, Hajaree	Foote, Snell	Katz	
12.17/1	Burke	12/17/2009	CEO	Cancel	Foote, Helmes	Katz	
12.21/1	CW2	12/21/2009	CW2		Fredericks, Emilio		Aronson attorney, another attorney, ICE agent
1.27/1	CW1	1/27/2010	CW1		Fredericks, Emilio		Investigators-Maino, Doyle

CONSOLIDATED EDISON of NEW YORK AFFIDAVITS REVIEW

CRA carried out an in depth review of the relevant affidavits. The analysis of the affidavits led to extensive research of court records associated with the defendants. Furthermore, forms of action and status updates of the Consolidated Edison Company of New York (CECONY) cases, referred to by the Courts as "The Con Ed Cases", were also retrieved and analyzed. CRA thus developed a comprehensive understanding of the criminal activities of the CECONY employees, third party contractors and contractor employees involved through the following processes:

- Reviewed and analyzed the facts of each case as outlined in the original affidavits.
- Researched and reviewed the federal court documents in the Eastern District of New York (EDNY) associated with the affidavits to uncover details regarding related CECONY cases publicized soon before the inception of this investigation. This review and research also provided information as to the role and relationship of the CECONY employees in criminal activities, the role of CECONY employees and the third party contractors played in the Government's investigation and the current status of the cases against the CECONY employees and contractors.
- Applied experience in federal investigations to the facts presented in the affidavits and the court records to determine law enforcement and prosecution activities and their strategy to understand the role of the CECONY cooperators/defendants in the Government's undercover investigation.
- Ascertained from the affidavits and court documents statements, and other intelligence information and evidence, indicative of the scope of the criminal activity across other CECONY projects, contracts and time parameters of the criminal activity.
- Deduced from the affidavits and court documents, investigative leads to identify potential witnesses and key documents in respect to possible fraud, waste or abuse in other geographical areas of New York that may involve other actors and further criminal activity.
- Derived from the affidavits and court records, patterns of criminal activity and manipulation of CECONY internal processes to be applied to our auditing, internal controls and construction data mining phases of our investigation.

The process of conducting an in depth examination of court records in EDNY revealed details regarding critical new defendants, former CECONY employees, who are cooperating witnesses, and a CECONY third party contractor, associated with the offenses who were not identified in the original affidavits and who came to light upon the arrest of the third party contractor's employee in late February of 2009.

The review of court documents indicated a wider scope of activity than represented by the activities in the projects in question.

The identification of these additional defendants was critical to the analysis of all the affidavits involved in these criminal activities. The development of the roles that these cooperating witnesses played in the bribery schemes advanced the understanding of the identified bribery/kickback schemes and the extent to which the criminal activities may be part of the culture within CECONY's procurement/inspection/approval process. This information added to the intelligence gained by other members of the CRA task force team enabled an effective data mining exercise to be carried out in the areas of change orders including Purchase Order Change Request (POCR) and Purchase Order Change Authorization (POCA), additional items, fraudulent activity and other procurement and construction activities to include abuses and wastefulness.

The new CECONY defendants identified were:

- Cooperating Witness 1 (CW1) – identified as a defendant/cooperating witness.
- Cooperating Witness 2 (CW2) – identified as a defendant/cooperating witness.
- Joseph Lioi – identified as a defendant.

The employees of the third party companies were identified as follows:

- Russell Ball (RB), Roadway Contracting, Inc. – identified as a defendant.
- A Felix Associates principal – identified as a defendant/cooperating witness.
- John Connelly (JCY) – Felix Associates – identified as a defendant.

Government agents traced the deposit of governmental payments to a corporate contractor into a personal bank account and identified a “dummy” company as a potential money laundering operation involving two CECONY employees who confessed to their culpability and became cooperators for the government. Their cooperation assisted the government agents in gaining the cooperation of a principal of a contractor, named Felix Associates (Felix), who was involved in bribery and kickback schemes with a number of CECONY employees. The cooperation of Felix Associates principal assisted the government agents in recording incriminating conversations with CECONY employees involved in bribery and kickback schemes.

The Government's inquiry can be grouped into two main conspiracies and a number of specific criminal acts of bribery and corrupt agreements.

1. **Conspiracy 1** involved the alleged agreement between former CECONY employees, an employee of a third party contractor, and an unnamed member of the Board of Directors of an unnamed bank. This was identified as a bribery/kickback/money laundering conspiracy.

2. **Conspiracy 2** involved an illicit agreement between CECONY employees and the Felix Associates principal. This was a bribery/kickback conspiracy that covered work done on a government project in lower Manhattan from 2004-2007. This conspiracy involved US \$39,000,000 of CECONY payments to Felix Associates.
3. **“Other acts of bribery and corruption”** These were a series of criminal acts, some of which were conspiratorial. These illicit activities were individual agreements made between the Felix Associates principal and numerous CECONY employees. The Felix Associates principal was the epicenter of these bribery/kickback schemes whereby bribes were routinely offered to and accepted by CECONY employees on individual work projects in which Felix, the Felix Associates principal, and CECONY were involved. The Felix Associates principal was aided and abetted in some of these illicit acts by another former Felix senior employee, John Connelly (JCY).

1. **Conspiracy 1**

Between 2002 and 2005, CECONY employees entered into an agreement with Roadway Contracting Inc. (RCI) to accept kickbacks and bribes to expedite payments and to approve payments of RCI invoices that included inflated and/or fraudulent charges.

The Participants

- Russell Ball (RB), CEO of RCI.
- Cooperating Witness 1, CECONY.
- Cooperating Witness 2, CECONY.
- Unnamed CECONY employees.
- Unnamed bank official.

Chronology

- Post 09-11, CECONY received US \$65.5m to perform work in lower Manhattan related to the 09/11 terrorist attack.
- 2001 RCI was hired to perform “interference” work in lower Manhattan.
- Contracts awarded by job site; specifications and costs.
- Invoices included contracted work, supplemental work and change orders.
- CW2 and RB agreed to a system of kickbacks and bribes to be paid to CW2 who would “share with other CECONY officials”.

- CW2 and other CECONY conspirators agreed to expedite payments to RCI and approved fraudulent and/or inflated charges.
- CECONY paid RCI “hundreds of thousands of dollars” for work performed under these projects.
- 2002 – mid 2004 – RB paid CW2 US \$20,000 - US \$30,000 cash in kickbacks.
- RB told CW2 he could no longer make the bribery payments in cash.
- CW2 through an unnamed bank director, “John Doe” (JD) set up a shell company (Company 1).
- July 2004 – early 2005, CW2 invoiced RCI with “dummy” invoices for construction services CECONY allegedly rendered to RCI.
- RB delivered checks for the invoices to CW2 who in turn delivered them to JD, who deposited them in his personal account. JD later withdrew the funds in cash.
- JD cashed the invoiced checks in his personal account, deducted a small percentage for himself, and gave the remainder to CW2.
- CW2 shared the remainder with “the other CECONY conspirators”.
- JD told CW2 that officials at the bank asked questions about Company 1 and that he could no longer cash the checks in his personal account.
- Late 2005 – early 2006, RB and CW2 had a meeting in which RB told CW2 that federal agents were at RCI asking questions about the checks that RCI had issued to Company 1.
- RB stopped paying kickbacks/bribes to CW2.
- 11/2005 – Immigration and Customs Enforcement (ICE) agents attached to the “El Dorado Task Force” (a money laundering task force made up of various agents from numerous agencies) traced RCI checks payable to Company 1 of US \$9,100, US \$8,800, and US \$9,900 to JD’S personal account at Company 1.
- November 2005 - ICE Agents interviewed RCI’s attorney relative to the above-noted checks.

Current Status of Players

- 03/15/2007 – CW1 arrested.
- 03/19/2007 – CW2 arrested.
- 03/19/2007 – Agents seized \$88,000 from CW2’s residence.
- 02/28/2009 – RB arrested.
- 07/13/2009 – CW1 pleaded guilty, EDNY one count information – money laundering.
- 07/14/2009 – CW2 pleaded guilty – two count information – one count money laundering, one count tax evasion.
- 04/16/2009 – RB appeared to answer complaint M09-0184, EDNY, charges pending no record of indictment or information filed.
- No EDNY record of any other defendants charged in this conspiracy to date.
- 07/26/2010 – Civil Action filed against CW1 and CW2 by CECONY.

- 09/08/2010 – RB sentenced to one year probation.
- Note: Although arrested on 03/15/2007 and 03/19/2007, no court records before 07/13/2009 and 7/14/2009 exist for CW1 and CW2 which indicated their cooperation with the Government.

Conspiracy 1 and its relationship to Conspiracy 2 and Felix

Subsequent to the arrests of CW1 and CW2, federal agents obtained their cooperation to outline other bribery/kickback schemes of which they had information and in which they had participated. CW1 and CW2 agreed to make consensual conversations with their co-conspirators and provide testimony. The most important conspiracy involved the World Trade Center Platt Street Project that involved a contract of US \$34,000,000 awarded to Felix.

2. Conspiracy 2

The conspiracy involved routine, scheduled bribes to the participating employees at CECONY from the Felix Associates principal. The bribes were intended to expedite operations, accelerate the payment of invoices, and to direct additional work to Felix that did not actually need to be done. Furthermore Felix was part of a bribery/kickback scheme from which they benefitted. Bribery payments were calculated based on a percentage (4%) of the total of CECONY's payments to Felix under the project Contract.

The Participants

- Cooperating Witness 1, (CW1), CECONY.
- Cooperating Witness 2, (CW2), CECONY.
- James Coffin, (JC) a Project Specialist, CECONY.
- Thomas Fetter, (TF) a Construction Representative, CECONY.
- The Felix Associates principal

Chronology

It should be noted that the Government's investigation was conducted utilizing statements made by the cooperators, CW1 and CW2 and a series of consensual, recorded conversations between all participants.

- March 2004 - Felix was awarded a contract to perform work on a highway project in lower Manhattan. The contract was expanded over time in both area and in its duration. However, no new rates were established and CECONY was reimbursed at the rates originally agreed upon.
- In 2004, JC and CW2 arranged with the Felix Associates principal for Felix to kick back 4% of CECONY's charges on the project to be split between CW1, CW2, JC and TF.

- For the 4% kickback, Felix would have extra work directed to them that did not actually have to be done. Further, the CECONY employees ensured preferential awards to Felix for work that was not within Felix's specialization. It was also agreed that the CECONY conspirators would insure that CECONY paid Felix's invoices on a timely basis.
- CW1, CW2, JC, and TF had a similar arrangement with Felix on other CECONY projects dating back to 2000. However the percentage on this arrangement was 3%.
- Between June 2004 and September 2007, CECONY paid Felix approximately US \$34,000,000
- CW2 stated that a significant amount of the money was paid for unnecessary work.
- TF as a Construction Representative would obtain approval for the unnecessary work, CW1 would promptly process the invoices for approval by CW2, and JC would pass it up CECONY's chain of command for payment.
- Since 2004, CW1, CW2, JC, and TF received US \$20,000 – US \$30,000 every four to six weeks from Felix (via the Felix Associates principal).
- Typically, CW1 advised CW2 that the time had come to collect a payment from the Felix Associates principal. CW2 or TF contacted the Felix Associates principal and request a payment.
- The Felix Associates principal then contacted CW2 or TF and arranged to meet and provided a cash payment to one or the other, depending who was present to JC and TF. The payment was later divided among CW1, CW2, TF, and JC

Recorded Conversations

CW1 and CW2 consensually recorded conversations between themselves and TF, JC and the Felix Associates principal.

- 03/29/07 – JC gave CW2 an envelope from the Felix Associates principal with US \$30,000. They discussed that the Felix Associates principal was behind in his payments.
- 03/30/07 – CW2 gave TF two envelopes with US \$7600, his cut and CW1's cut from the US \$30,000. Later TF gave CW1 his envelope with US \$7,600. TF stated "I used to have a check" referring to prior kickbacks.
- 05/15/07 – CW2 and JC met to discuss the money that the Felix Associates principal was behind in his payment to the CECONY conspirators. JC recalled prior kickbacks paid for in check form. They also discussed creating a bogus company to facilitate the bribery scheme but the Felix Associates principal did not want to go down that route. The Felix Associates principal was asked by CW2 and JC, "are you ready to catch up to us". The Felix Associates principal responded that he was not ready at that time, but would be catching up.
- 07/28/07 – JC told CW2 that the Felix Associates principal gave him US \$30,000 that morning for the CECONY co-conspirators.

- 07/30/07 – CW2 received US \$7200 as his share of the US \$30,000.
- 08/03/07 – CW1 received US \$7200 as his share of the US \$30,000.
- 09/06/07 – JC, CW2 and the Felix Associates principal met at Felix’s place of business and received US \$30,000. JC gave CW2 US \$7,500 and took US \$22,500 downtown for the other CECONY conspirators TF and CW1.
- 10/25/07 – CW1 and TF voiced concerns that JC was not dividing the money equally and that the Felix Associates principal had fallen behind in his payments to them all. TF stated that he knew for a fact that JC was living over his head. TF stated that – “from a couple of assholes shaking down fucking contractors we did pretty good”. TF and CW1 talked about the benefits that were given to the contractor in the Platt Street job – unnecessary work was used as an example.
- 01/31/08 – CW2, JC and the Felix Associates principal met to discuss the money owed to the group. The amount discussed was US \$700k - \$800k. They also discussed additional, unnecessary work that had been given to the contractor. The 4% deal was also remarked upon. They discussed that JC was retiring and wanted the money owed made good. The Felix Associates principal stated that he wanted to cut TF and CW1 out. The Felix Associates principal also stated that he was concerned that someone had talked about the illegal arrangement. The Felix Associates principal and CW2 talked about the total money involved in the contracts being US \$34,000,000 and that all of the CECONY conspirators had only received half of what they had coming from the 4% kickback.

It should be noted that the Felix Associates principal was arrested on September 18, 2008. TF and JC were not arrested until 01/14/2009. CRA established that the Government did not take any action against JC and TF because it did not want any official actions being taken against them while the Felix Associates principal was cooperating and acting as a cooperating witness.

3. Other acts of bribery and corruption

Subsequent to the arrest of the Felix Associates principal he cooperated with the Government and revealed other bribery activities that he had been engaged in with other CECONY employees. The Felix Associates principal (sometimes acting with CW2 but predominantly acting alone) met with CECONY employees at the behest of the Government and made consensual recordings, gathering evidence for the Government on individual bribery schemes with numerous CECONY employees. Some of these acts are conspiratorial in nature; others are CECONY project related between the Felix Associates principal and a CECONY employee.

The Rocco Fassacescia (RF) and Abraham Panangia (AP) Schemes

The Participants

- RF was a Construction Manager for CECONY.
- RF was the last person in the Delegation of Authority (DOA) at CECONY to scrutinize and give final approval on all invoice payments.
- AP was a Senior Specialist for CECONY.
- AP reviewed third party contractor's invoices and passed them up the CECONY chain of command for payment.
- AP reported directly to RF.
- The Felix Associates principal.
- John Connelly (JCY) a former Felix employee, was the site supervisor mentioned below.

Contracts Affected

The following contracts were affected by the RF and AP Scheme:

- 03/05 - the Felix Associates principal/Felix awarded a two year "area contract" with CECONY to install and maintain various gas facilities throughout the Borough of Manhattan.
- 03/07 – "area contract" extended without bidding or notification to other contractors.
- 03/08 – "area contract" extended without bidding or notification to other contractors.
- 06/08 – CECONY solicited bids for an "area contract" for 2009 with other contractors. The Felix Associates principal/Felix was awarded the contract.
- 07/08 – the Felix Associates principal/Felix was awarded "ladder contract" for replacing manhole vaults near 45th street in Manhattan.
- 07/07 – the Felix Associates principal/Felix was awarded emergency contract for a steam pipe explosion.
- 08/07 the Felix Associates principal/Felix was awarded a "spot buy" contract to install a gas regulator.

Chronology

- Spring 2007 – the Felix Associates principal and RF met and agreed that the Felix Associates principal would make regular payments to RF with respect to the Felix Associates principal' "area contract" to install and maintain various gas facilities throughout Manhattan.
- Spring 2007 – September 2008 the Felix Associates principal paid RF \$10,000 for work on the Manhattan gas projects. On one occasion, RF received \$20,000 after Felix Associates principal/Felix was awarded an emergency contract for a steam pipe explosion.

Recorded Conversations

- CW2 and RF met. CW2 complained that he was retiring and the Felix Associates principal owed a group of CECONY employees (CW1, CW2, TF, AP) back kickback/bribery payments. CW2 asked RF's advice believing that RF was also receiving money from the Felix Associates principal.
- RF stated that "we did weekly shit" referring to RF's and the Felix Associates principal's arrangement.
- RF stated "some guys are very regular with it, some guys you have to chase....they usually don't chase them, they tend to let it balloon maybe to a month or two before you..... gotta talk to them.....".
- RF stated, "...you know I never got into him for that kind of a number.... But he is one of the slower guys."
- CW2 stated to RF, "..... I didn't know how he was doing everything with you". The pair then discussed the money owed to CW2 and his pending retirement, CW2 stated, ".....he's (the Felix Associates principal) is going to want to cut me out..." RF replied, "...sure they are..." CW2 stated, "They all do it". RF stated, ".....sure, everyone of them do it....especially them guys".
- RF told CW2 to talk to the Felix Associates principal about giving him \$5000 per week.
- RF told CW2, "...I never was owed nowhere near that, they usually all work, ain't that big....maybe they fall behind a little bit, couple of weeks...months you just have to bust their balls a little... but to be owed that kind...the Felix Associates principal is a nice guy, we get along...he does good work for us, but I wouldn't trust him. Once you retire....what are you going to do? Send him a nasty note?.... you can't call the cops, you can't.... sue him."
- RF told CW2 that RF was not that far behind with the Felix Associates principal....a couple of grand...maybe US \$10,000.
- RF told CW2 that he avoided being transferred to another borough because ".....I got a lot of contracts. I got seven or eight contractors working."

- RF told CW2 that he only told AP about his arrangements to accept payments from other contractors.
- RF explained that unlike others who accepted payments from contractors and have side businesses to move (the cash) all around – he did not have that option.
- RF related to CW2 how he was able, in the past, to pay for his daughter's tuition at school in cash with \$100 bills. RF complained about how hard it had become to accept bribery payments in cash.
- On 09/18/2009, RF accepted US \$5,000 from the Felix Associates principal. RF had expected US \$10,000.
- The Felix Associates principal complained about the problem of using cash and asked RF if he (the Felix Associates principal) could write a check for the payment.
- On 10/28/2008 - the Felix Associates principal learned from one of his "site supervisors", that RF had requested four tickets for the NY Giants football game. On 10/30/2008, the Felix Associates principal gave RF the tickets. On 11/2/2008 RF attended the game.
- 11/11/2008 - the Felix Associates principal spoke with his "on site supervisor" and discovered that while US \$400,000 of legitimate change orders for the vault project had been approved and paid, US \$300,000 worth of extras that did not reflect legitimate costs had been added to the invoice with AP's approval had not been paid. The site supervisor told the Felix Associates principal that he had given AP US \$8,000 toward for AP's "assistance" on the project. The additional unnecessary "extras" included payment for the removal of rock and concrete piers from the construction area that had never been removed, nevertheless the invoices were approved for payment.
- 11/14/2008 - AP told the Felix Associates principal that he received money from the site supervisor. AP stated that he had added in US \$350,000 of extras into the original project and he was trying to get the project up to US \$900,000. AP stated the site supervisor said he was going to get an additional US \$12,000 for a total of US \$20,000.
- AP told the Felix Associates principal that the site supervisor told him that "Rocky is being covered". AP stated that he didn't think RF wanted AP to know what he was doing. AP stated "..... I do a lot of business with RF and if he is doing different....it is his thing."
- The Felix Associates principal assured AP that the pay-offs the Felix Associates principal was making to RF were separate from the payoffs being made to AP.
- 11/21/2008 - the Felix Associates principal gave AP US \$5,000. The Felix Associates principal and AP discussed RF, and the Felix Associates principal assured AP again that he was taking care of RF separately.
- AP stated (about RF), ".....sometimes we do things separately and sometimes we do things together".

- On 12/15/2008 - AP and the Felix Associates principal discussed and confirmed RF's knowledge of the inflated costs of the vault project invoice, the payoff by the site supervisor and RF's knowledge about the scheme. AP admitted that he had not told RF all of the details because RF may have wanted to increase the kickback.
- AP told the Felix Associates principal that RF would probably accept US \$10,000.
- AP stated that although he and RF had agreed to work the vault project together, since the site supervisor said that the Felix Associates principal was taking care of RF separately he didn't think it would be an even split of the bribe.
- AP stated, "I was gonna split everything because we usually do".
- 12/21/2008 RF met the Felix Associates principal and discussed the vault project and that he needed to make sure he hadn't stepped on his (RF's) toes by dealing through AP. RF stated "we had this previous arrangement" and that he doesn't like anybody knowing his business. RF confirmed that he knew about it and wanted to talk directly to the Felix Associates principal about it, but hadn't had the chance.
- RF stated that "...we kinda just did it based on the fact that the supervisor (the Felix Associates principal' site supervisor) was involved and he knows us and we know him for a long period of time." RF stated that he would come up with a number in early January when they go over all the "nuts and bolts". RF stated that "Abe", the site supervisor and he had lunch at Carmine's a month ago and had worked it all out.
- RF and the Felix Associates principal talked about losing track of details in these operations – RF stated "...because it is dangerous – I don't ever want to have anything written with – like a name or a company name or a person's name or anything. I have been doing this for a long time "RF and the Felix Associates principal then tried to remember the last time RF was paid by the Felix Associates principal.
- RF stated "Alright, so you want me to let you know what I think we've gone over so far....just since the last time I saw you-just you and I, not to do with the vault job... and then also the vault job, two separate issues. "
- RF received US \$4,000 from the Felix Associates principal.

Current Status of Players

- 01/14/2009 AP arrested, Complaint M09-0029, EDNY.
- 01/14/2009 RF arrested, Complaint M09-0029, EDNY.
- 07/14/2009 RF pled guilty to a one count information 09cr458, bribery.
- 07/14/2009 AP indicted - 09Cr 0477.
- 09/17/2009 AP files for discovery.
- 05/05/10 - AP pleaded guilty

The Leonard Diroma (LD) Scheme

The Participants

- LD was a CECONY Construction Representative.
- The Felix Associates principal was the CEO of Felix.

Contract/Project Affected

The Felix Associates principal, as Felix, was awarded a two year area contract for southern Westchester County to install and maintain various electrical and “dead gas” pipes. Diroma was a CECONY Construction Representative on the project.

Chronology

In August 2008, LD sent the Felix Associates principal, through a Felix site supervisor, a photograph of a pair of sunglasses and a Seiko watch together worth approximately US \$2,000. The Felix Associates principal recognized this as a request for a kickback payment and sent LD US \$2,000 in an envelope through the site supervisor.

Recorded Conversations of Meetings

- 11/05/08 – LD and the Felix Associates principal discussed a falling out that LD had with the Felix Associates principal’s site supervisor – the Felix Associates principal stated he didn’t want LD to be angry about the Felix Associates principal’s bills. LD stated that it was not good for anybody to be “pissed off”.
- LD told the Felix Associates principal that he was always willing to work with him, but he had to be careful who he talked to.
- The Felix Associates principal and LD discussed US \$2,000 forwarded to LD by the Felix Associates principal, LD stated he only got US \$1,500. LD and the Felix Associates principal agreed to deal directly with each other in the future.
- The Felix Associates principal and DR discussed the particulars of the kickback scheme specifically that LD would receive a % of the extras added to Felix’ bill.
- The Felix Associates principal and LD agreed to a figure of 20% and LD provided suggestions as to how the amount could be broken up between cash and tangibles. LD asked for a Blackberry Curve with everything service as a means to avoid cash payments.

- 11/20/2008 the Felix Associates principal gave LD an envelope containing US \$5,000.
- LD showed the Felix Associates principal CECONY reports demonstrating and quantifying the inflation of costs in Felix' favor.
- The Felix Associates principal asked for the reports to keep track of the kickback payments.
- LD warned the Felix Associates principal that he didn't want anyone looking at the reports and showed how the inflated costs were written in different color ink.
- LD and the Felix Associates principal agreed to meet once a month to keep the kickback payment arrangements.
- On January 6, 2009 the Felix Associates principal had a conversation with LD in which he asked if LD had a rough number for him on what the Felix Associates principal should bring as a kickback payment for their meeting the next week. LD provided a number later in a second call. LD stated there was US \$55,000 in extras and he was owed US \$11,000 for his help.

Current Status of Player

- 01/14/2009 – LD arrested.
- 07/14/2009 – LD enters a guilty plea, EDNY, one count information.

Paul Sanabria (PS) and Anthony Villano (AV) Schemes

The Participants

- PS was a Construction Manager; he oversaw all construction projects for CECONY in the Bronx. PS supervised all CECONY Construction Supervisors, Senior Specialist, and those subordinate to the Senior Specialist.
- AV was a Senior Specialist at CECONY.
- AV reported directly to PS.

Contracts Affected

- Bronx Holland Avenue Project.
- June 2006 "Spot Buy" contract awarded to Felix.

Chronology

- The Felix Associates principal met with AV to try to alleviate problems that he was having getting change orders approved and charged. AV told him to speak to PS.
- PS and the Felix Associates principal agreed that the Felix Associates principal would pay US \$10,000 to PS to insure that the Felix Associates principal's invoices would be reviewed favorably and that the Felix Associates principal's payments would not be cut.
- PS told the Felix Associates principal that next time they had a job together they should "get together early" to "resolve things".
- In the summer of 2006, the Felix Associates principal paid PS US \$10,000. Subsequently the above mentioned costs were approved as well as various other payments that had been withheld. The withheld payments totaled US \$250,000.
- Approximately two months after paying PS US \$10,000, the Felix Associates principal was approached by AV demanding a payment of US \$25,000, equivalent to 10% of the extras. The Felix Associates principal told AV that he had already "taken care of" PS.
- The Felix Associates principal convinced AV to take a lesser amount and eventually paid AV US \$20,000 in three or four installments.

Recorded Conversations

- 12/29/2008 – the Felix Associates principal met with AV and told AV he wanted to get more work in the Bronx.
- AV told the Felix Associates principal that the Felix Associates principal needed to speak to PS.
- AV and the Felix Associates principal discussed the previous situation, telling AV that he felt it hurt their relationship that he had not paid AV off sooner on the Holland Avenue Project.
- AV and the Felix Associates principal discussed the inspector on the Holland Avenue Project – AV stated that the inspector had made things difficult in terms of denying payments for change orders. AV stated if the Felix Associates principal had come to him earlier he could have done something about the inspector. AV and the Felix Associates principal discussed the US \$20,000 that AV had received on the Holland Avenue Project.
- 12/30/2008 – the Felix Associates principal and PS met in the Bronx. The Felix Associates principal told PS he wanted to do more work in the Bronx. The Felix Associates principal told PS he wanted to meet "in advance" of being awarded a contract because he learned on the first job that he came to PS too late – so "let's talk ahead of time".
- Referring to AV, PS stated that, "Tony and I are pretty close, but we don't divulge the business we do...I give him full responsibility to do whatever he has to do to make the job work".

- The Felix Associates principal and PS had a conversation where PS acknowledged receiving US \$10,000 for the Holland Avenue Project.
- PS told the Felix Associates principal that he can give information up front “.....so you can start looking at it....get ahead of everybody else” with respect to forming a bid... PS told him to not include excavation to lower his bid....later he could include as an extra excavation of contaminated soil to increase the payments on the contract.
- PS accepted US \$5,000 from the Felix Associates principal as a kickback payment.
- The Felix Associates principal wanted assurances that he would be given a “good inspector” and PS stated that he always will and then PS told the Felix Associates principal that he had given AV the authority to override the Construction Inspector.
- On January 8, 2009, the Felix Associates principal and AV met and discussed how the Felix Associates principal should submit bids for the 138th Street Project to give the Felix Associates principal the advantage. AV confirmed to PS he told them not to include the excavation – and they will “make it up” in the change orders. AV quoted a price of 20% due to him as a kickback for the approval of the extras. AV told the Felix Associates principal that PS and he “never discussed what each did, but they don’t get together to discuss it. There will never be a threesome between him, you (the Felix Associates principal) and me (AV). “
- The Felix Associates principal and AV discussed the problem with assigning a Construction Inspector and AV assured the Felix Associates principal that he would assign a favorable Construction Inspector.

Current Status of Players

- 01/14/2009 - AV arrested, Complaint # M-09-0027, EDNY.
- 01/14/2009 - PS arrested, Complaint # M-09-0027, EDNY.
- 07/14/2009 – the Felix Associates principal and PS Indicted, 09Cr0478, EDNY, conspiracy and bribery.
- 05/05/2010 – AV pleaded guilty.
- 05/07/2010 – PS pleaded guilty.
- 06/30/2010 – Civil actions started against PS.
- 07/08/2010 – Civil actions started against AV.

The Brendan Maher (BM) Scheme

The Participants

- BM was a Chief Construction Inspector for CECONY.
- The Felix Associates principal was the CEO of Felix.

Contract Affected

June 2008, spot buy contract for the installation of oil static pipes and high voltage electrical lines. BM was the CCI on the project.

Chronology

- Shortly after June, 2008 BM sent word via a Felix on-site supervisor that he was looking for money.
- The Felix Associates principal and BM met and the Felix Associates principal agreed to pay BM cash payments to insure that the Felix Associates principal's invoices would be reviewed favorably and the total payment to the Felix Associates principal would not be cut. The Felix Associates principal and BM agreed on a kickback amount of 10% of the total amount increased in the invoices.
- July 2008 BM received US \$5,000 as part of the kickback scheme.
- 09/30/2008 – BM met the Felix Associates principal and received US \$1,000. The Felix Associates principal told BM that he knows it should be US \$3,000-US \$5,000.
- The Felix Associates principal told BM that he appreciated all he was doing for him with the rock. The Felix Associates principal asked if he could pay him by check and asked BM if he had someone he trusted. BM told the Felix Associates principal that he had a person in mind that he had done stuff with.
- The Felix Associates principal told BM – “I will catch up to you” to which BM replied, “no sweat...I talked to the site supervisor as long as you guys know what's what, I don't have a problem.”
- 11/06/2008 – BM, received US \$4,000 from the Felix Associates principal, they agreed to pay in cash at 10% of the inflated invoices. BM stated “it is ten points on the difference, on the Delta ...if you give me 100, I send it back it is 120, I am looking for two grand.” BM and the Felix Associates principal calculated the inflated invoices, agreed on US \$200,000 and agreed that BM was looking for US \$20,000.

Current Status of Player

- 01/14/2009, BM arrested, Complaint 09M-00026, EDNY.
- 01/20/2009, BM terminated by CECONY.
- 07/13/2009, pled guilty, one count felony information for commercial bribery.
- 08/10/2009 – Civil Action filed by CECONY.

The Richard Zebler (RZ) Scheme

The Participants

- RZ was a Chief Construction Inspector at CECONY.
- The Felix Associates principal.

RZ entered into an agreement beginning in 12/2005 with the Felix Associates principal, acting for Felix, in which the Felix Associates principal would pay RZ US \$2,000 monthly. The payment was to ensure that the Felix Associates principal's invoices would be reviewed favorably and not be cut. RZ would also advise the Felix Associates principal as to how the invoices should be presented to ensure payment by CECONY.

Contracts Affected

- March 2005, two year area contract to install and maintain various gas facilities throughout Manhattan.
- March 2007 and March 2008, the contract was extended – without soliciting bidders other than Felix.
- Summer of 2009 – area contract awarded, but other bidders were solicited.
- December 2006, spot buy contract for the installation of 4,000 feet of gas pipe in lower Manhattan.
- August 2007, spot buy contract to install a gas regulator in Manhattan.

Chronology

- December 2005 – RZ told the Felix Associates principal that they needed to talk about some extras for RZ. RZ and the Felix Associates principal agreed that the Felix Associates principal would make cash payments to RZ in exchange for RZ ensuring that the Felix Associates principal's invoices would be viewed favorably and that payments to the Felix Associates principal

would not be cut. RZ would further advise the Felix Associates principal how best to present the Felix Associates principal costs to ensure approval for payment.

- 03/2006 – the Felix Associates principal paid RZ a kickback payment.
- 04/2006 - Continuing forward, the Felix Associates principal would pay RZ US \$2,000 per month.
- The Felix Associates principal paid RZ US \$20,000 “to look at the bills” relating to the spot buy contract of 4,000 feet of gas pipe in lower Manhattan. This was in addition to the US \$2,000 per month.
- 09/2008 – the Felix Associates principal had not made a payment to RZ for a few months.
- RZ and the Felix Associates principal had a conversation about being cautious. RZ stated, “... you have got a lot to lose....I’ve... we have all got a lot to lose.....we are making good money, you know what I mean?”
- The Felix Associates principal gave him an invoice for the gas regulator spot buy project – asking for a price for a kickback – RZ told him US \$10,000.
- RZ agreed stating he knew the problem with tracing cash and he didn’t want it traced to him. They discussed how much RZ can get approved for the job.
- RZ told the Felix Associates principal that one of the Felix Associates principal’s site supervisors (John Connelly (JCY)) had been taking care of him out of his pocket – giving him US \$500 per week.
- 10/24/2008 – the Felix Associates principal gave RZ \$5,000. They discussed RZ’s monthly payment and agreed, at RZ’s suggestion, to make it US \$3,000 per month.
- 10/29/2008 – the Felix Associates principal was advised by one of his site supervisors that AZ wanted N.Y. Giant football tickets for the 11/2/08 Giant/Cowboy game. The Felix Associates principal provided the tickets, through the site supervisor to RZ.

Current Status of Player

- 01/14/2009 - RZ arrested Complaint M09-0025, EDNY.
- 06/14/2009 – RZ indicted 09-CR-00479 trial pending.
- 07/27/2009 – RZ pleads not guilty.
- 10/19/2009 – RZ pleaded guilty.

The Kevin Cook (KC) Scheme

The Participants

- Kevin Cook (KC) was a Senior Specialist at CECONY.
- The Felix Associates principal.

The Kevin Cook (KC), Senior Specialist of CECONY and the Felix Associates principal came to an agreement that Felix, acting through the Felix Associates principal, will pay KC US \$8,000 per month to ensure that the Felix Associates principal's invoices would be reviewed favorably and that they the Felix Associates principal's invoices would not be cut.

Contract/Project Affected

March 2007, the Felix Associates principal was awarded a two-year area contract with CECONY to install various electric and "dead gas" pipes throughout southern Westchester County.

Chronology

- July 2007 – the Felix Associates principal spoke to KC by phone regarding invoices that the Felix Associates principal had submitted that had been cut in half.
- Subsequent to this call, the Felix Associates principal and KC met. KC told the Felix Associates principal that he needed to be more pro-active and the Felix Associates principal apologized for not calling KC sooner.
- One week later the Felix Associates principal and KC met and KC gave the Felix Associates principal a note requesting US \$150,000 to provide assistance to the Felix Associates principal.
- 11/25/2008 – the Felix Associates principal and KC met. The Felix Associates principal gave KC US \$5,000. KC and the Felix Associates principal discussed the Felix Associates principal recouping some of the payments previously cut by KC. The Felix Associates principal gave KC a list of invoices. KC told the Felix Associates principal that "nothing is too old", when the Felix Associates principal expressed his concern over the time since the payments were reviewed and cut. KC stated he would pull them out and take a look at them.
- One week later the Felix Associates principal and KC met and the Felix Associates principal agreed to pay KC US \$8,000 per month to ensure that the Felix Associates principal's invoices would be viewed favorably and would not be cut.

- Between July 2007 and September 2008, the Felix Associates principal paid KC US \$8,000 on approximately ten occasions. The Felix Associates principal's invoices had not been reduced as much as they had been before the payments to KC began.
- The Felix Associates principal and KC met and the Felix Associates principal gave KC US \$5,000 rather than the US \$8,000 and asked KC to be patient. KC stated, "I am patient".
- The Felix Associates principal asked KC if he could get back payment for some of the cuts made from the original invoices before their agreement.
- KC agreed to take a look at the old invoices and requested the layout numbers telling the Felix Associates principal that he could do that. KC told him whatever he gets back is extra.
- KC told the Felix Associates principal that he was not the person who made the cuts on the listed jobs. The Felix Associates principal told KC that he thought he was because after he began paying KC he never got another cut like it. KC told him he would revisit the bill. The Felix Associates principal expressed concern that some of the bills were over one year old, KC told him that he can play with it. KC also stated that it is easier late in the year to accomplish this.
- The Felix Associates principal and KC also discussed the upcoming bidding for the extension of the two year area contract and KC told him he would get the all the numbers for the bid in advance.
- On 01/06/2009 KC and the Felix Associates principal met again to discuss the previous cuts and possible payments to the Felix Associates principal. The Felix Associates principal brought additional paperwork on some of the disputed invoices and KC and the Felix Associates principal discussed the best way to get some of the money that had been cut. KC stated he would go over the invoices again and would create whatever paperwork was required and would get additional payments to the Felix Associates principal.

Current Status of Player

- 01/14/2009 – KC arrested, Complaint M09-00024, EDNY.
- 07/14/2009 – KC indicted, one count bribery, EDNY.
- 05/05/2010 – KC pleaded guilty.
- 06/30/2010 – Civil action filed by CECONY.

The Richard Giannetto Scheme

Richard Giannetto (RG), a CECONY Senior Specialist, made contact with the Felix Associates principal, through a job site supervisor, to discuss increased payments that he made on a bill that the job site supervisor thought was too low. The Felix Associates principal and RG made an agreement that the Felix Associates principal would pay RG for the increases that RG made to the Felix Associates principal's bills including "extras" or payment for work that was not done.

Contract/Projects Affected

February 2008 – Economic Development Corporation project to install water mains in a park near Yankee Stadium. Felix negotiates with CE the rates of reimbursement to move any CE utility lines as it performed the contracted work.

Chronology

- In 12/2008 - RG reached out to the Felix Associates principal through one of the Felix Associates principal's site supervisors and indicated that he increased payments on a bill that the job site supervisor had previously thought was too low. (Note: the Felix Associates principal's site supervisor on this incident is unknown.)
- 12/19/2008 – the Felix Associates principal and RG discussed the increases that RG had made to the bill for a part of the project. RG had been referred to the Felix Associates principal through the Felix Associates principal's on site supervisor. RG told the Felix Associates principal that the CECONY inspector on the job didn't know what he is doing. RG told the Felix Associates principal that when he saw that the job came to US \$82,000 he knew it was wrong. RG told the Felix Associates principal that RG added a "phantom" water main to the bill and a couple of other things to get the job to US \$141,000 or US \$143,000.
- After discussing what charges he had added to the bill, RG told the Felix Associates principal that he told the Felix Associates principal's job site supervisor that he - "usually gets ten". The job site supervisor referred RG to the Felix Associates principal to discuss the kickback.
- The Felix Associates principal asked RG if there was anyone else he had to pay and RG said not. RG stated he had a lot of work potentially available for the Felix Associates principal and they should talk later.
- 12/22/2008 RG and the Felix Associates principal met and the Felix Associates principal showed RG a list of payments so that RG could identify the payment that RG had inflated. RG identified a US \$146,494 payment. He identified the payment by the offset that he had added – saying that it was "bullshit." RG and the Felix Associates principal discussed future work and the kickback

schemes that they could use - whether at a % of the total or at a % of the inflated costs. RG wanted to do 20% of the total of inflated costs. RG itemized what inflated costs he had put in as US \$15,000 for the water main and US \$7,000 for the 1012 and then other items that he eliminated bringing the total to US \$50,000. RG stated “.....people do 20% of that – we do ten percent”.

Current Status of Player

- 01/14/2009 – RG arrested, Complaint M09-0025, EDNY.
- 01/20/2009 – RG terminated from employment at CECONY.
- 07/28/2009 – RG pleads guilty to a Criminal Information, EDNY.
- 08/20/2009 – CECONY files civil action against RG in NYS Supreme Court.

The Joseph Lioi Scheme

The Participants

- Joseph Lioi (JL) was a Chief Construction Inspector at CECONY.
- The Felix Associates principal.

JL entered into an agreement with the Felix Associates principal to receive regular payments of US \$500 weekly to ensure that the Felix Associates principal's invoices would be reviewed favorably.

Contract/Project Affected

March 2007 – two year area contract to install and maintain various electrical and dead gas (empty pipes with no live gas) facilities throughout Southern Westchester County.

Chronology

- 12/2006 – JL and the Felix Associates principal met to discuss the then current Westchester County contract. JL and the Felix Associates principal agreed that the Felix Associates principal would make regular cash kickback payments to JL of US \$500 per week. JL promised that the Felix Associates principal's invoices would be reviewed favorably by CECONY.
- 04/2007 the Felix Associates principal called a CECONY Senior Specialist (believed to be Kevin Cook) concerning a number of invoices submitted by the Felix Associates principal that he believed had been reduced by the Senior Specialist. As a result of this conversation the Felix

Associates principal agreed to pay regular kickback payments to the Senior Specialist of US \$500 per week – in addition to the US \$500 per week that the Felix Associates principal gave to JL.

- Shortly after this meeting between the Felix Associates principal and the SS, the Felix Associates principal met with JL and confirmed the arrangement.
- 04/2007- fall of 2007 – the Felix Associates principal paid the Senior Specialist US \$4,000 on four or five occasions. The Felix Associates principal understood that one half of the total of these payments were for JL kickbacks.

Recorded Conversations

- 01/14/2009 – the Felix Associates principal called JL to meet. The Felix Associates principal told JL that Government agents had come to his company and served a subpoena for the CECONY Westchester Projects. JL asked if they had mentioned his name. The Felix Associates principal confirmed they did and asked JL what he had done with the money he had received that made it traceable. JL acknowledged receiving the money and said that he had done nothing to make it traceable. The Felix Associates principal also asked JL if the Government's review of CECONY records on invoices that JL had inflated could reveal their kickback scheme. JL told the Felix Associates principal, "..... they probably could".

Current Status of Player

- 12/01/2007 – JL retired from CECONY.
- 04/15/2009 – JL arrested complaint M09-0311, EDNY.
- 12/10/2009 – JL pleaded guilty.
- Civil suit filed by CECONY on or about 02/04/2010.

The John Connelly Scheme

The Participants

- John Connelly (JCY) was a site supervisor for Felix.
- The Felix Associates principal.
- Various CECONY employees.

JCY worked closely with CECONY Construction Representatives, Construction Inspectors, Senior Specialists, and Construction Managers on projects on which Felix was the contractor, particularly Manhattan projects. JCY had been employed by Felix since 2003 his duties included managing Felix

foreman, overseeing the work performed and reviewing invoices for discrepancies and omissions. JCY, at times, would take it upon himself to make kickback arrangements without the Felix Associates principal and at other times would work with the Felix Associates principal on kickback agreements, including making the actual kickback payments himself.

Contract/Projects Affected

- April 2007 – a one year “ladder contract” to install electrical distribution facilities at various locations in Manhattan.
- August 2007 – a “spot buy” contract to install a gas regulator station in Manhattan.

Felix Kickback Schemes Operating Involving JCY

- Spring 2007 – Felix, acting through the Felix Associates principal, had been paying RF and AP cash payments in exchange for favorable treatment with respect to the Felix Associates principal's contracts with CECONY to install and maintain various gas facilities throughout Manhattan.
- Spring 2007-September 2008 – the Felix Associates principal made payments US \$10,000 to RF representing US \$500-\$1,000 per week of work on various Manhattan CECONY projects. The Felix Associates principal paid RF an additional US \$20,000 to RF after the Felix Associates principal is awarded an emergency contract as a result of a steam explosion on East 41st Street in Manhattan.

Chronology

- March 2006 – the Felix Associates principal, acting as Felix, had been paying RZ cash payments to ensure that his invoices would be viewed favorably and that the payment would not be cut with respect to various Manhattan gas projects that RZ supervised. Typically the Felix Associates principal paid RZ US \$2,000 per month representing US \$500 per week. The Felix Associates principal had also paid RZ an additional US \$20,000 over several payments “to look at the bills” on a contract for the installation of 4,000 feet of gas pipe in lower Manhattan.
- the Felix Associates principal and JCY had a conversation in which JCY told the Felix Associates principal that US \$400,000 of invoices on the CECONY vault project that represented legitimate charges had been paid, but US \$300,000 that represented “extras” that were not legitimate had not been paid. JCY told the Felix Associates principal that JCY had added these charges with AP's knowledge and approval. These charges included charges for the removal of rock from the construction area that had not been removed. JCY told the Felix Associates principal that he has

already paid AP \$8,000 to date for his assistance on the vault project. JCY told the Felix Associates principal that AP wanted to meet with him.

- 11/19/2008 the Felix Associates principal and AP met and AP told the Felix Associates principal that JCY gave him some money. AP told the Felix Associates principal that JCY and AP have added US \$350,000 in extras to the original invoice. AP told the Felix Associates principal that JCY told him that the Felix Associates principal was going to give him an additional US \$12,000 to bring the total to US \$20,000. AP told the Felix Associates principal that they were going to inflate the Vault Project invoice to US \$900,000 from US \$500,000. AP stated the inflated charges included payments for removing rock and concrete piers that were fraudulent and for allowing night work which resulted in higher hourly billing costs. AP told the Felix Associates principal that he told JCY that he would “play with the numbers”. AP stated that JCY also told him that RF was being covered.
- 11/21/2008 – the Felix Associates principal gave AP US \$5,000. AP admitted that he had already received US \$8,000 from JCY.
- 12/5/2008 – the Felix Associates principal and AP discussed the amount of money that AP would ask of JCY. AP related a conversation that he had with AP in which he stated that he and RF had a conversation in which RF asked AP, “...how much are you going to ask JCY for?” AP told RF, “Maybe twenty” - . Note: conversations that involve AP and JCY are noted as “working at it on the street”.
- The Felix Associates principal and RF met in Manhattan. RF told the Felix Associates principal that he wanted to speak to him about the vaults on 45th Street. The Felix Associates principal told RF that he knew that the vault job was a good job for him and that AP was able to pad it for almost double. RF told the Felix Associates principal that the relationship that RF and AP had with JCY was essential, “We kinda did it based on the fact that JCY was involved and he knows us and we know him for a long period of time”.
- RF told the Felix Associates principal that he and AP would sit down with JCY and come up with a number in early January – “after they sit down with JCY and go over the nuts and bolts, make sure we have a final number..... This way it’s locked in, pay you the balance...and then talk about...whatever help there was”.
- 10/16/2008 – the Felix Associates principal and RZ met in Queens, N.Y. to discuss how much of a kickback RZ wanted in exchange for his assistance with the payment of the invoice on the gas regulator project. RZ told the Felix Associates principal that JCY was paying him off on a weekly basis, “John has been taking care of me out of his pocket – he has been giving me US \$500 per week” RZ told the Felix Associates principal that JCY told him that he (RZ) is his guy and he wants to take care of him. The Felix Associates principal stated, “So JCY had been doing the right thing”.

- 01/12/2009 – the Felix Associates principal and JCY met in the Bronx. JCY told the Felix Associates principal that he gave AP US \$8,000 “...to keep him going – so the total job should be around US \$20,000”.
- The Felix Associates principal and JCY discussed paying off RZ. The Felix Associates principal stated “what’s wrong with the guy – I am going to square him away.” JCY stated, “He comes across stupid, but he is not a stupid guy. Believe me the guy goes over every fucking bill with a fine toothed comb...he looks at everything and he knows we’re robbing the shit out of him...we take care of him, but we are hitting him hard too. I was (*paying him off*) but I stopped... you told me that November, December you were going to take over”.
- JCY told the Felix Associates principal that he got RZ tickets to the Giants game. JCY told the Felix Associates principal that RZ “gives away the store... he denies the little stupid shit but he gives..... It is a home run with him... he is worth his weight in gold.”

Current Status of Player

- 01/16/2009 JCY arrested, Complaint M09-00039, EDNY.
- 07/14/2009 JCY indicted, Indictment 2009cr0477, EDNY.
- 08/13/2010 JCY convicted at trial.
- No civil actions pending.

In summary, the following table identifies the current status of the arrestees.

Arrested Employee/ Contractor	Employee/ Contractor	Date Arrested	Date Plea Entered	Charge
Fassacesia	Employee	14-Jan-09	14-Jul-09	Bribery
Sanabria	Employee	14-Jan-09	07-May-10	Bribery
Villano	Employee	14-Jan-09	05-May-10	Bribery
Lioi	Employee	15-Apr-09	10-Dec-09	Bribery
Cook	Employee	14-Jan-09	05-May-10	Bribery
Giannetto	Employee	14-Jan-09	28-Jul-09	Bribery
Cooperating Witness 2	Employee	19-Mar-07	14-Jul-09	Money Laundry, Tax Evasion
Cooperating Witness 1	Employee	15-Mar-07	13-Jul-09	Money Laundry
Coffin	Employee	14-Jan-09	20-Oct-09	Bribery, Tax Evasion
DiRoma	Employee	14-Jan-09	14-Jul-09	Bribery
Fetter	Employee	14-Jan-09	20-Oct-09	Bribery, Tax Evasion
Maher	Employee	14-Jan-09	13-Jul-09	Bribery
Panagi	Employee	14-Jan-09	05-May-10	Bribery, Conspiracy
Zebler	Employee	14-Jan-09	19-Oct-09	Bribery
Ball	Contractor	10-Apr-09	08-Sep-10	Bribery
Felix Associates Principal	Contractor	17-Sep-08	13-Jul-09 Convicted	Bribery, Filing False Taxes
Connelly	Contractor	16-Jan-09	13-Aug-10	Bribery, Conspiracy

CASE 09-M-0243
PART 1 REPORT

APPENDIX 4.2

Analysis of KPMG calculation of losses as of January 12, 2010 in respect of the projects identified in the arrest affidavits

COMPASS Project Id	Construction type work								Public Improvement	Total	
	Manhattan				Westchester	Bronx	General	Other			
	Manhattan Gas Area	Manhattan Vault Project	Manhattan 4,000ft gas pipeline	Manhattan Gas Regulator	South Westchester Gas Area	Holland Avenue	M-29 Bronx Pipeline	41st / Lexington St Steam restoration			
	FELIX ASSOCIATES - 519561	FELIX - 727734	FELIX - 629159	FELIX 730483 MADISON ST	FELIX AREA - 2006	FELIX 626383 - BRONX	FELIX (8-28266)	n/a (NOT IN COMPASS)	EDC 25810003 nr Yankee Stadium	DDC WTC Project HWM WTC A4-R	
PO number	519561	727734	629159	730483	626324	626383	828266	799062	n/a	n/a	
Total payments (\$)	53,219,195	2,180,740	1,446,398	300,000	23,174,979	496,488	7,140,206	10,319,799	222,836	39,062,595	137,563,236
Payments reviewed by KPMG (\$)	3,776,410	880,889	1,446,398	300,000	296,874	496,488	1,613,780	-	222,846	-	9,033,685
% of Total payments	7.1%	40.4%	100.0%	100.0%	1.3%	100.0%	22.6%	n/a	100.0%	n/a	6.6%
KPMG QUANTIFIED LOSSES (\$)											
1 Macro/micro											
(i) All-inclusive duplication											
a) T2 & T31 (removal of street & base excavation) charged when included in T134											
b) T110 (vehicle plates) charged when included in T134											
c) T101 (sheeting) charged when included in T2AI											
d) GT-60 (vehicle plates) charged when included in T2AI											
e) T91 & T95 (backfill and excess dirt removal) charged when included in T44											
(ii) Mutually exclusive items											
a) T101 (sheeting) charged when excavation was solid rock or item T134 charged (which includes sheeting)											
					(14,448)	(1,521)					
	(5,532)										
	(4,743)										
						(1,848)					
					(10,557)						
	(10,275)	-	-	-	(26,526)	(1,848)	-	-	-	-	(38,649)
2 Upcoding											
(i) Inappropriate use of weekend codes											
(ii) Other item upcoding											
a) Items billed at GT-1 instead of GT-2, GT-5 or GT-26											
b) Items billed at GT-18BS instead of GT-18B											
c) Items billed at T2AI rather than T46/T47											
d) Items billed at T2HA rather than T2AIA (excavation > 5 CY rather than < 5 CY)											
e) Rock removal billed at T50 instead of T51											
f) Unspecified "upcoding"											
	(66,413)										
	(24,136)										
	(3,687)										
	(26,821)										
		(106,496)									
					(66,728)						
	(121,057)	(106,496)	-	-	(66,728)	-	-	-	(4,100)	-	(298,381)
3 Supplemental items											
(i) "Phantom"/additional items (subsequently added to Field Activity Reports)											
(ii) T+E timesheet discrepancies											
a) Unsubstantiated claims (COMPASS ≠ T+E sheets or Daily Log Report, as required)											
b) Manipulation of time sheets (following original completion/submission)											
c) T+E labour claims per original COMPASS ≠ final COMPASS											
d) Traffic stipulations overclaim (T+E: codes T301-T306)											
	(135,559)	(73,353)	(79,819)			(70,978)					
	(38,694)										
	(41,348)	(34,687)								(13,868)	
	(215,601)	(108,040)	(79,819)	-	-	(70,978)	(269,146)	-	(4,100)	-	(770,251)
4 Manipulation of multiplier factor in COMPASS (QtyXn)											
	(91,989)								(5,529)		(97,518)
5 Contractual exclusions											
(i) Items charged included in LUMPSUM contract unit price											
(ii) Not permitted or included in other unit prices in accordance with Job Specifications											
	(129,532)		(401,845)			(137,257)					
	(129,532)	-	(401,845)	-	-	(140,169)	-	-	-	-	(671,546)
6 Other overcharges											
Charge for vaults (but not installation)											
Double payments for items also paid by EDC											
Items claimed twice											
Miscellaneous											
	(43,869)	(2,443)				(8,307)			(50,900)		
	(43,869)	(2,443)	-	-	-	(8,307)	-	-	(50,900)	-	(105,519)
Total KPMG quantified losses	(612,323)	(216,979)	(481,664)	-	(93,254)	(221,302)	(269,146)	-	(87,196)	-	(1,981,864)
% of total reviewed	16.2%	24.6%	33.3%	n/a	31.4%	44.6%	16.7%	n/a	39.1%	n/a	21.9%

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PART 1 REPORT

APPENDIX 4.3
Mapping of identified projects to MAG and PSC USOA descriptions

Population tested All sysbills related to Felix Associates for projects identified by KPMG and paid within COMPASS
 Size of Population 134,768 items. \$127,268,839
 Methodology Identify all sysbills related to projects identified by KPMG.
 Identify whether account number linked to sysbill in COMPASS is a CECONY account number or a Work Order number. If it is a Work Order number, identify relevant account number.
 Look up PSC account description and MAG from accounting database.
 The 41 St/Lexington Steam Emergency Restoration Project is not included as it was not paid through COMPASS.

Project/Contract	MAG	PSC Account Description														Total
		Unknown	Assets & Other Debits	Clearing Accounts - Group 1	Clearing Accounts - Group 3	Job Orders Clearing to More than 1 Account	Liabilities & Other Credits	Maintenance - Distribution - Electric	Maintenance - Distribution - Gas	Maintenance - Distribution - Steam	Maintenance - Transmission - Gas	Operation - Distribution - Electric	Operation - Distribution - Gas	Operation - Transmission - Gas		
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
EDC Yankee Stadium	Maintenance of Mains	-	-	-	-	-	-	-	55,709	-	-	-	-	-	-	55,709
	Maintenance of Underground Lines	-	-	-	-	-	-	167,127	-	-	-	-	-	-	-	167,127
		-	-	-	-	-	-	167,127	55,709	-	-	-	-	-	-	222,836
Manhattan 4000ft gas pipeline	Electric Plant in Service	-	1,446,398	-	-	-	-	-	-	-	-	-	-	-	-	1,446,398
Manhattan electric back-up service	Electric Plant in Service	-	2,137,010	-	-	-	-	-	-	-	-	-	-	-	-	2,137,010
	Operation Services-Manhattan	-	-	-	(16,250)	-	-	-	-	-	-	-	-	-	-	(16,250)
	Other Accounts Receivable	-	59,981	-	-	-	-	-	-	-	-	-	-	-	-	59,981
		-	2,196,990	-	(16,250)	-	-	-	-	-	-	-	-	-	-	2,180,740
Manhattan gas regulator	Electric Plant in Service	-	300,000	-	-	-	-	-	-	-	-	-	-	-	-	300,000
Manhattan gas area	Customer Installations Expenses	-	-	-	-	-	-	-	-	-	-	-	-	1,497	-	1,497
	Electric & Gas Engineering	-	-	162,342	-	-	-	-	-	-	-	-	-	-	-	162,342
	Electric Plant in Service	-	48,771,073	-	-	-	-	-	-	-	-	-	-	-	-	48,771,073
	Mains & Services Expenses	-	-	-	-	-	-	-	-	-	-	-	25,005	-	-	25,005
	Mains Expenses	-	-	-	-	-	-	-	-	-	-	-	-	45,252	-	45,252
	Maintenance of Mains	-	-	-	-	-	-	-	2,963,764	-	41,175	-	-	-	-	3,004,940
	Maintenance of Services	-	-	-	-	-	-	-	401,222	-	-	-	-	-	-	401,222
	Maintenance of Underground Lines	-	-	-	-	-	-	115,045	-	-	-	-	-	-	-	115,045
	Operation Services-Manhattan	-	-	-	(167,804)	-	-	-	-	-	-	-	-	-	-	(167,804)
	Other Accounts Receivable	-	42,174	-	-	-	-	-	-	-	-	-	-	-	-	42,174
	Other Expenses	-	-	-	-	-	-	-	-	-	-	-	152,074	-	-	152,074
	Unknown	-	135,437	-	-	168,739	9,379	60,450	244,106	-	-	-	16,503	-	-	666,375
			31,760	48,948,684	162,342	(167,804)	168,739	9,379	175,495	3,609,092	-	41,175	-	195,079	45,252	53,219,195
M-29 Bronx pipeline	Accounts Payable	-	-	-	-	-	(305,064)	-	-	-	-	-	-	-	-	(305,064)
	Electric Plant in Service	-	7,445,270	-	-	-	-	-	-	-	-	-	-	-	-	7,445,270
		-	7,445,270	-	-	-	(305,064)	-	-	-	-	-	-	-	-	7,140,206
Holland Avenue	Accounts Payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Electric Plant in Service	-	496,488	-	-	-	-	-	-	-	-	-	-	-	-	496,488
		-	496,488	-	-	-	-	-	-	-	-	-	-	-	-	496,488
South Westchester Area	Electric & Gas Engineering	-	-	39,107	-	-	-	-	-	-	-	-	-	-	-	39,107
	Electric Plant in Service	-	21,241,646	-	-	-	-	-	-	-	-	-	-	-	-	21,241,646
	Mains Expenses	-	-	-	-	-	-	-	-	-	-	-	-	374,326	374,326	
	Maintenance of Mains	-	-	-	-	-	-	-	951,189	-	-	-	-	-	951,189	
	Maintenance of Services	-	-	-	-	-	-	-	80,605	-	-	-	-	-	80,605	
	Maintenance of Underground Lines	-	-	-	-	-	-	16,424	-	-	-	-	-	-	16,424	
	Other Expenses	-	-	-	-	-	-	-	-	-	-	138,761	-	-	138,761	
	Unknown	-	-	-	-	-	255,247.7	-	60,911.1	-	-	10,595.6	31,569.8	-	358,324.2	
	-	21,241,646	39,107	-	-	255,248	16,424	1,092,705	-	-	10,596	170,330	374,326	23,200,381		
DDC project	Electric Plant in Service	-	27,643,336	-	-	-	-	-	-	-	-	-	-	-	-	27,643,336
	Maintenance of Mains	-	-	-	-	-	-	-	41,901	-	-	-	-	-	41,901	
	Maintenance of Underground Lines	-	-	-	-	-	-	141,977	-	-	-	-	-	-	141,977	
	Unknown	10,722,723	-	-	-	382,591	-	72,184	-	57,883	-	-	-	-	11,235,381	
	10,722,723	27,643,336	-	-	382,591	-	214,160	41,901	57,883	-	-	-	-	39,062,595		
Total		10,754,483	109,718,812	201,449	(184,054)	551,331	(40,438)	573,206	4,799,407	57,883	41,175	10,596	365,410	419,578	127,268,839	

APPENDIX 5.1 – INTERNAL CONTROLS REVIEW

1 KEY CORPORATE FUNCTIONS OF CECONY'S INTERNAL CONTROLS

1.1 THE BOARD OF DIRECTORS

1.1.1 The primary function of the Board of Directors ("the Board") is one of oversight and governance. Its oversight functions and responsibilities include a review of the Company's strategic plans, objectives, and risks, and providing oversight of compliance by the Company with applicable laws and regulations, including public reporting obligations.

1.1.2 The Board of Directors has eight standing committees, some of which contribute directly to the support of various internal controls of CECONY. The standing committees are:

- (a) Audit Committee
- (b) Corporate Governance and Nominating Committee
- (c) Environment, Health and Safety Committee
- (d) Executive Committee
- (e) Finance Committee
- (f) Management Development and Compensation Committee
- (g) Operations Oversight Committee
- (h) Planning Committee

1.1.3 The VP and General Auditor of CECONY reports directly to the Chairman of the Audit Committee on matters related to the Ethics and Compliance Program. As part of its oversight of the Ethics and Compliance Program, the Board formally reviews this program with the General Auditor on a periodic basis and provides comments and feedback on any aspect of the program.

1.1.4 The entire Audit Committee meets with CECONY management and the General Auditor as well as the external auditor several times a year to review and discuss matters concerning internal controls as well as accounting issues, results of the reviews by the external auditor, and reviews by the Auditing Department of CECONY. The committee is also responsible for appointing (subject to shareholder approval) the external auditor.

- 1.1.5 The Audit Committee is also chartered to discuss with the CEO and CFO any significant deficiencies in the design or operation of internal controls, any fraud (whether material or not) that involves management or other employees who have a significant role in CECONY's internal controls; and the adequacy and effectiveness of CECONY's disclosure controls and procedures.
- 1.1.6 Two other committees that play an important role in connection with controls for construction management at CECONY are the Corporate Governance and Nominating Committee and the Environment, Health and Safety Committee. Among other duties, the Corporate Governance Committee annually reviews the Corporate Governance Guidelines adopted by the Board and makes recommendations for revisions or additions. It is also charged with assessing whether any potential Audit Committee members meet the applicable SEC definition of Audit Committee "financial expert."
- 1.1.7 The Environment, Health, and Safety Committee provide oversight on CECONY's compliance with environment, health and safety laws and regulations. This charter includes providing reviews and recommendations for action to the Board as it deems necessary or desirable to help promote the protection of the environment and the health and safety of Company employees and the public.

1.2 **AUDITING DEPARTMENT AND AUDIT COMMITTEE**

- 1.2.1 The Auditing Department¹ provides the internal auditing function at CECONY. It is chartered to review, test, verify, document, and investigate all operating, financial, information technology, environmental, health and safety, human resources, and governance functions for all subsidiaries of CECONY. In addition, the Auditing Department is tasked with providing professional investigation services in the course of monitoring various operating areas of CECONY for compliance with applicable laws and regulations and adherence to internal policies, including support of the Ethics Helpline and other reporting channels.
- 1.2.2 The Auditing Department's scope of services in audit, investigations, and compliance reviews is comprehensive. Audits cover all financial, information technology, operating, environmental, health and safety ("EH&S"), human resources, and governance functions. They also cover significant risk exposure areas determined from risk assessments aimed at both quantitative and qualitative compliance with control standards, laws, and regulations. Internal audits are subject to follow-up regarding all recommendations and findings of deficiency.

¹ See CEI-020, "Functions of the Auditing Operation".

- 1.2.3 The Auditing Department's reports to the Audit Committee summarize all audits as well as investigations stemming from CECONY's channels for reporting wrongdoing. These reports also reflect annual audit activity by business unit for comparison with applicable activity summaries for the two prior years. In addition to audit reports, the Audit Department produces reports on ethical compliance activities pertaining to the Ethics Helpline and other sources involved in compliance, including selected findings of the Corporate Ombudsman and Independent Monitor.
- 1.2.4 The activities of the Audit Department are intended to provide critical input to support management's representations to the external auditors pursuant to the PCAOB requirements under the Sarbanes-Oxley Act ("SOX"). The Audit Department is also an important liaison in the interface between the Independent Monitor and the Corporate Ombudsman in the process of verifying and authenticating findings in all areas of concern.
- 1.2.5 Internal Audit conducts annual SOX Section 404 Certification assessments. However, it appears that the control weaknesses in Construction Management did not rise to the significance levels used by auditors for reporting to the Board or to the investors.

1.3 **SECURITY SERVICES**

- 1.3.1 CECONY has a full-service Security Services department staffed by law enforcement and technically experienced professionals. As described in 860-1, "Security Services Responsibilities," the department is responsible for protecting equipment and facilities while also promoting a secure environment for employees, customers, visitors, and guests. The charter of the department includes identifying deficiencies in physical security and adopting programs and policies aimed at improving the overall function of the various business units of CECONY. Among its other responsibilities, the department maintains relationships with law enforcement agencies, and assists in investigations and documentation of findings related to allegations of misconduct by employees and criminal acts committed against CECONY by anyone.
- 1.3.2 With regard to acts of fraud or other criminal activity, Security Services is a mandated referral point for evaluating such acts and supporting prosecution in collaboration with the appropriate law enforcement authorities. Although the initial reporting may be received through channels not directly managed or monitored by Security Services (such as the Whistleblower Line monitored and overseen by the General Auditor, or reporting channels to the Ombudsman), the involvement of Security Services in the assessment and follow-up on possible criminal activity is a requirement under the current policy guidelines of CECONY.

1.4 **CORPORATE OMBUDSMAN**

- 1.4.1 The Office of the Ombudsman at CECONY has been in existence for more than 10 years. The Office is available to all employees on all issues on a confidential basis and is intended to function as a source for self-examination and recommendations for improvements. The Corporate Ombudsman reports to the CEO.
- 1.4.2 The Ombudsman's office reviews and manages a wide range of sensitive work and business related issues. The office issues periodic reports (available to all CECONY employees) on compliance issues. Recommendations made in these reports are intended to trigger action by CECONY promptly upon their release. The Ombudsman also makes presentations to the Board of Directors on the progress with these issues and makes various other presentations to all employees at work locations throughout CECONY.
- 1.4.3 The Ombudsman's office makes periodic presentations to employees in a sequence of related sessions, including a general overview session followed by separate breakouts to promote full and frank discussion. In these meetings, private confidential interviews on an individual level are openly encouraged in the process of encouraging open, confidential, and timely communication at any level appropriate to individual circumstances. Confidential interviews and discussions with employees are held at other times on an as-needed basis.
- 1.4.4 The Ombudsman's office also takes a public stance in support of "whistle blowing" (facilitated by the Whistleblower Line that links directly to the General Auditor of CECONY). This practice is encouraged as correct, rightful, and positive whenever there is a need that, for any reason, cannot be satisfied through other avenues. Presentations are geared to the particular circumstances and sensitive situations that may arise in everyday work situations applicable to specific departments, work functions, and activities.

1.5 **INDEPENDENT MONITOR**

- 1.5.1 The position of Independent Monitor was created in April 2001. The Monitor reports directly to the CEO and has full access to all CECONY employees, records, and facilities.
- 1.5.2 In contrast to the Corporate Ombudsman, the Monitor focuses on discrete incidents. In-depth investigations of such incidents performed by the Monitor are focused on fact-finding but with an eye toward revealing potential organizational and operational issues that may have broader implications for CECONY. In these cases, the Monitor serves as a resource for identifying fundamental organizational and operational issues at CECONY with an emphasis on core principles and concepts to be used in developing and maintaining effective controls (such as an effective environmental and safety compliance program).

1.5.3 The Monitor has full discretion to determine which incidents or issues to examine, and priority is assigned to those with the most potential for impacting environmental and safety compliance, including CECONY's reporting of and response to environmental and safety incidents as well as allegations of retaliation and harassment for raising environmental and safety concerns. The Monitor also focuses on firm-wide practices and obstacles to compliance.

1.5.4 Employees may contact the Monitor confidentially or anonymously. The Monitor reports the factual findings of investigations and recommendations to the CEO and other CECONY management as appropriate. Reports by the Monitor may be oral or written and issued periodically according to the demands of the mandate as an independent fact finder.

1.6 HUMAN RESOURCES

1.6.1 The Human Resources ("HR") Department, previously known as Employee Relations, has several sections that are responsible for monitoring and oversight functions for employees and contractors, several of which bear directly on the performance and administration of construction contracts. The departmental sections of HR currently are:

- (a) Occupational Health ("OH")
- (b) Employee Benefits and Compensation ("EBC")
- (c) The Learning Center ("TLC")
- (d) Human Resource Support ("HRS")
- (e) Talent Management ("TM")
- (f) Employee and Labor Relations ("ELR")

1.6.2 Each of these sections contributes to the controls framework for contract establishment, contract administration, and contract payment.

1.6.3 One important role of HR and IR in this regard is in the control of employee authorizations and access to various company systems. A long-standing process for the control of system access is that when an employee is terminated or transferred, the employee's system authorization transactions are automatically suspended by IR Computer Security. In order to reestablish access, the organization would need to re-approve the employee's authorization transaction(s) for the appropriate system(s). Each CECONY department's Computer Resource Coordinator (CRC) performs yearly checks as administered by Information Resources. Purchasing, for example, performs periodic checks of functional authorizations held by departmental employees to ensure proper segregation of tasks. Information

Resources, on notification by Human Resources of an employee's termination of employment, eliminates authorizations within the various systems in Purchasing and Construction. In addition, Construction performs a yearly COMPASS Roles verification.

- 1.6.4 In support of various communications concerning ethics compliance and controls, actual case studies of significant disciplinary decisions are disseminated by Human Resources and used to enhance face-to-face ethics training sessions. This information is distributed on a regular basis to reinforce the content of the “Standards of Business Conduct” with employees and provide concrete examples of CECONY’s expectations and standard of behavior with respect to conduct in the workplace and the consequences that result from serious violations of these standards.

1.7 **LAW DEPARTMENT**

- 1.7.1 The Law Department is tasked with maintaining a staff of attorneys to handle CECONY’s legal affairs, with certain exceptions for which outside counsel is used, as documented in the Law Department’s “Operating Procedure - Outside Counsel.”
- 1.7.2 With regard to the Law Department’s role in support of construction contract activities, the department is required to review all purchase orders with a value greater than or equal to \$3 million. The Law Department may also be required to review terms and conditions as well as any insurance provisions in certain procurement situations on an as-needed basis. The Law Department also reviews purchase orders when the vendor has taken an exception to the Con Edison Terms and Conditions, regardless of the purchase order’s value.
- 1.7.3 During the bid cycle of a construction project where the contractor/vendor responds to any question on the disclosure form with a "Yes" response, then the responsible Purchasing employee, the section manager (or next higher authority), and the Vendor Qualification group would review the response in an effort to determine if the "Yes" response would disqualify the contractor's bid. In such cases, the Law Department may be asked to assist in the determination.
- 1.7.4 The Law Department may also become involved in construction projects when it is apparent that an irreconcilable dispute or other obstacle exists that prevent CECONY from obtaining a final invoice from the contractor. In such cases, the situation will be documented to the contractor and resolved accordingly.

1.8 **DELEGATION OF AUTHORITY**

1.8.1 CECONY has a formal and detailed Corporate Policy Statement 000-1 “Delegation of Authorities” that delineates and specifies the authorization required for all major actions. The Board and CECONY require strict adherence to this “Delegation of Authorities,” which contains documented instructions to ensure that assets are properly acquired and safeguarded, and that approvals are in place and evidenced for commitments, capital expenditures, expense items, obligations, binding financial instruments, transactions, payments, personnel actions, and other significant matters. This exact and detailed authorization procedure is a major deterrent against fraudulent behavior, involving not only misappropriation of assets but also including incurrence of unauthorized liabilities, contractual obligations, and commitments. Each of the Company’s other subsidiaries has a Delegation of Authorities Policy that specifies the authorization required for actions to ensure that the assets are properly acquired and safeguarded.

1.8.2 CECONY’s “Delegation of Authorities” policy document is supported by a comprehensive CECONY Corporate Policy Manual that contains 136 documented policies and instructions that further govern behavior and actions. The CECONY Corporate Policy Manual is further supported by organizational policies and procedures, such as General Accounting Procedures and Corporate Environmental Procedures, maintained by every operating organization to provide detailed guidance to employees on the day-to-day conduct of the business.

1.8.3 In addition to Corporate Policy 000-1, “Delegation of Authorities,” there are several corporate policies and instructions that are applicable to contract administration activities. These include:

- (a) Corporate Instruction 320-1 1 (P-Card Purchases)
- (b) Corporate Policy Statement 300-5 (Statement of Procurement Policies and Procedures)
- (c) Corporate Instruction 540-1 (Engaging Individual Consultants or Temporary Workers)
- (d) Corporate Instruction 510-4 (Notifications Required Upon Contractor Authorization and Separation from Con Edison)
- (e) General Accounting Procedure 404A (Accounts Payable Accruals)

1.9 **ETHICS AND COMPLIANCE PROGRAM**

1.9.1 Consolidated Edison, Inc’s (“CEI”) Ethics and Compliance Program covers its directors, officers, and employees. Corporate Policy Statement CEI-009 - “Code of Ethics” sets forth

the basic principles of business conduct that CEI requires all of its directors, officers, and employees to follow. In addition, all Con Edison employees including officers are responsible for knowing and complying with Corporate Policy Statement CEI-010, “Standards of Business Conduct”, which provide employees with further guidance for addressing specific situations that they may confront in their day-to-day jobs.

1.9.2 As part of their oversight of the Company’s Ethics and Compliance Program, the Board of Directors formally reviews the program with the General Auditor and provides feedback and recommendations on various aspects of the program.

1.10 **RISK ASSESSMENT**

1.10.1 The Auditing Department performs a risk analysis each year in the preparation of the Annual Audit Program. The risk assessment for internal controls over financial reporting is an integral part of the process to help determine the areas to be included in the Sarbanes-Oxley Section 404 Audit Plan that is presented to the CEO and the Audit Committee for approval. This ongoing assessment, based on a continuous review of the financial functions, includes assessments of the potential for fraudulent financial reporting, misappropriation of assets, and unauthorized or improper receipts and expenditures.

1.10.2 A comprehensive compliance risk assessment was undertaken recently by the Auditing Department and CECONY’s management team for all CECONY subsidiaries to evaluate the risks of violations of federal and New York State laws or regulations. CECONY’s results indicated that the identified risks for fraudulent financial reporting, misappropriation of assets, and unauthorized or improper receipts and expenditures appeared relatively low.

1.10.3 CECONY utilizes an Enterprise Risk Management (“ERM”) process to manage and mitigate operating/operational and administrative risks on a firm-wide basis. Operating/operational risks as viewed by CECONY in this context result from the operation of the electric, gas, and steam systems. All other risks are considered administrative. The ERM-based risk assessment has been performed annually since 2005. Programs and projects designed to mitigate these risks are documented and prioritized once the major operating and administrative risks are identified. A final report on operating risks is discussed with the Operations Committee of the Board, and administrative risks are reported and discussed with the Audit Committee in October of each year.

1.11 **FUNCTIONS OF THE AUDITING DEPARTMENT ACCORDING TO POLICY**

1.11.1 The functions of the Auditing Department, embodied in CEI-020, were first issued on January 2, 1998 and updated on February 17, 2004, July 11, 2005, March 23, 2009 and

June 30, 2009. The CECONY Corporate Policy Statement identifies the mission and responsibilities of the Auditing Department and provides guidelines for its interaction with all subsidiaries and affiliates.

- 1.11.2 High level process elements for contract procurement, construction contract performance and oversight, construction contract administration, and invoice payments are described next.

2 CONTRACT PROCUREMENT

2.1 CONTRACT ADMINISTRATION MANUAL

- 2.1.1 The Contract Administration Manual (“CAM”), whose version dated December 18, 2008, was reviewed, provides the administrative procedures and standard forms to be used by CECONY personnel in the administration of construction contracts to ensure compliance with CECONY’s Corporate Instruction CI-280-4, “Contract Management.” The CAM sets out procedures and guidelines for requisition and procurement of construction contracts, changes to construction contracts, construction contract payments, contract planning and scheduling, budgeting and cost control, field operations, site environmental and health and safety plans, project closeout, contractor performance evaluations, administration of various contract types, permit and inspection requirements, and developer and reimbursement payment process.
- 2.1.2 This manual is applicable to all CECONY organizations using contractors to complete construction projects or perform service contracts. Such projects are to be managed according to the requirements in the CAM.
- 2.1.3 Section 1.3 of the CAM outlines the responsibilities of CECONY personnel as it relates to the implementation of the requirements of the CAM. The General Manager of Construction Management is responsible for the administration and maintenance of the CAM. Construction Managers/Contract Administrators/appropriate user department representative and/or their designee are responsible for implementing the practices and procedures contained in the manual.²
- 2.1.4 Given the timeframe for certain events of interest that are the subject of this study, the 2004 edition of the CAM was also reviewed to assess any significant differences in comparison with the 2008 CAM that could have impacted the policy or process framework for these events. There were no material differences between the 2008 and 2004 editions.

² Section 1.3, Contract Administration Manual.

2.2 PURCHASING OPERATING PROCEDURES

2.2.1 The guidelines and procedures by which Contractors/Vendors are qualified to provide services to CECONY are contained in Operating Procedure 6-0, “Vendor Management.” Contractors who are approved or qualified to provide services to CECONY are listed on the “List of Frequently Bid or Purchased Materials or Services” (“List”). To approve a new vendor, a vendor request for approval is to be transmitted to the Purchasing Department either by directly submitting or electronically submitting a qualification form on Purchasing’s web site. Approval of new vendors or removal of existing vendors from the List occurs by one of two approval methods listed below:

- (a) For materials, services, and equipment requiring Material Safety Data Sheets (“MSDS”) information or where a EH&S review is required, Commercial, EH&S and/or subject matter expert (“SME”) approval is required.
- (b) For materials, services, and equipment transactions less than or equal to \$100,000 and not requiring either MSDS sheets or EH&S review, commercial approval only is required.³

2.2.2 Considering that both an EH&S Hazard Analysis is required for construction procurements and that construction contracts require job- or task-specific Environmental Health and Safety Plan (“eHASP”) submittals, it is our understanding that for construction contractor qualification approvals, a commercial, EH&S and/or SME approval is required. Commercial reviews of vendor applications are to be performed by Section Managers.⁴

2.2.3 Operating Procedure 6-0 outlines instances wherein a Section Manager may place a vendor on a material or services bid list and/or issue a purchase order to a vendor without completing a commercial review. For purchases greater than \$350,000, a Section Manager’s signature on the “Request for Authorization” (“RAP”) constitutes approval to use a vendor that has not had prior commercial approval. For purchases greater than \$100,000 or less than \$350,000, buyers will be responsible for obtaining written permission from their Section Managers prior to making an award. Section 4.2 of the Operating Procedure lists the cases wherein a vendor can be placed on the List without prior commercial approval. Such instances include:⁵

- (a) Low cost/low risk transactions (generally below \$100,000)
- (b) One time Spot buys

³ Section 4.2, Operating Procedure 6-0 Vendor Management.

⁴ Section 4.1, 4.2, Operating Procedure 6-0 Vendor Management.

⁵ Section 4.2, Operating Procedure 6-0 Vendor Management.

- (c) Specialized goods or services where qualifications of the vendor are reviewed as part of the bid process
- (d) Vendor specifically requested in writing by requisitioning organization based on the organization's knowledge of the vendor
- (e) Goods or services where the vendor's qualification is well-known in the industry or from company experience.

2.2.4 Vendor evaluation is based on a variety of factors including information supplied by the vendor, relevant industry experience, financial and operating viability, the adequacy of facilities and the organizational structure. Section Managers are responsible for reviewing commercial data and coordinating with the primary user of the material or service offered and obtaining their input. Further, vendor qualification can take place in parallel with the bid process due to time constraints and/or other considerations.⁶

2.2.5 Contractors can be suspended or removed from the List and/or be precluded from bidding or being awarded contracts. Suspension of contractors and other disciplinary actions are discussed in later sections. Suspension or removal from the List can result from the following:

- (a) Unsatisfactory performance, including poor quality or environment and safety infractions
- (b) Commercial issues (e.g., financial instability, lack of technical competence, lack of appropriate insurance)
- (c) Failure to respond to requests for disclosure and or/disclosures that raise ethics, environment, health or safety or business-related concerns
- (d) Vendor requested removal
- (e) Failure to participate in bidding activity, e.g., infrequent bidding or bids substantially in excess of the winning bid
- (f) Repeated errors in bid submissions
- (g) Determination by contractor compliance committee or by internal customer and purchasing to suspend or permanently remove vendor⁷

⁶ Section 4.2.c, 4.2.d of Operating Procedure 6-0 Vendor Management.

⁷ Section 4.2.g of Operating Procedure 6-0 Vendor Management.

2.3 BID EXECUTION AND EVALUATION

2.3.1 The process of executing a bid and evaluating the bidder responses is central to the effective execution of construction projects for CECONY. The key steps in the bid process and the related infrastructure that supports the bid process as it concerns construction were reviewed, and are described below.

2.3.2 A list of qualified suppliers for construction work is to be maintained by Purchasing. According to the CAM, Purchasing shall supply the Construction Manager (“CM”) with the list of potential qualified suppliers for determination of which suppliers are acceptable to perform the specified work. The CM will communicate to Purchasing any recommended exclusions or additions to the list. Also, as stated in Operating Procedure 2-0, the Requisitioner can include suggested bidders on its requisition for Purchasing’s consideration. If the Procurement Specialist chooses not to include a suggested supplier, he or she must advise the Requisitioner of such action.

2.3.3 According to Exhibit B of Operating Procedure 2-0, the Procurement Specialist shall consider the following items as well as others that may be relevant, prior to soliciting bids for a procurement action:

- (a) Proposed method of contracting
- (b) Minority business participation
- (c) Prior contract methodology
- (d) Incumbent and past supplier who bid
- (e) Trends/patterns of past contracts
- (f) Supplier performance
- (g) Exclusions/additions to list of qualified suppliers
- (h) How this solicitation maintains or improves upon prior contract.

2.3.4 Although the bid list is developed jointly between Purchasing and the CM, ultimately, Purchasing makes the final decision on the bid list.^{8 9} Section 3.0 of Exhibit B of Operating Procedure 2-0 states that the Procurement Specialist shall select bidders for specific projects from the list of qualified suppliers based on criteria that include: the estimated value of the procurement, vendor delivery or service performance, bidder history, prevailing market

⁸ Section 2.4, Contract Administration Manual.

⁹ Operating Procedure 2-0.

conditions, vendor history of responding to invitations, environmental qualifications, and vendor capability.¹⁰

- 2.3.5 For actions less than \$100,000, the bid list may be limited to three bidders; however, for actions greater than \$100,000, all qualified suppliers should be invited to bid. Bid lists are to be approved in accordance with the approval levels for purchase authorization. For actions requiring approval of a RAP, approval of the RAP shall signify approval of the associated bid list for that action. Copies of the bid lists for procurement actions over \$1 million should be provided to the Requisitioner.
- 2.3.6 Further, for procurement actions, including modifications greater than \$2.5 million, the Section Manager responsible for the procurement action shall submit to the Director/Department Manager and VP of Purchasing a synopsis of the proposed action prior to soliciting bids including but not limited to a listing of the proposed bidders, and rationale for sole source/non-competitive actions and/or utilization of an informal bid as applicable. For actions less than \$2.5 million, a formal presentation is not required; however, the same guidelines shall apply.
- 2.3.7 Purchasing is responsible for assembling the proposal and bid information and soliciting proposals or bids from qualified contractors. Documentation relative to work scope and bid due dates is to be maintained in the purchase order file. Operating Procedure 2-0 outlines two types of invitation formats: formal and informal bids. Formal bids establish a specific place, date and time for which responses are due and are to be received by Purchasing; whereas, informal bids may be used for all non-competitive purchases and for competitive purchases generally valued less than a value established in Purchasing's procedures.¹¹
- 2.3.8 No specific documentation shall be required to justify the use of an informal bid for competitive actions below the value established in Purchasing's procedures; however, for competitive actions greater than that value the Procurement Specialist shall document the reasons for using an informal bid and approvals are required to solicit and process procurements on the same level of authority as the procurement action. Informal bids can be received by the Procurement Specialist in any communication format, i.e., email, fax, mail, etc.¹²
- 2.3.9 On a non-competitive basis, the Procurement Specialist may place orders up to a value established in Purchasing's procedures without a separate justification document if the

¹⁰ Section 3.0, Exhibit B, Operating Procedure 2-0.

¹¹ Section 6.0, Operating Procedure 2-0, Preparation and Approval of Bid Lists, Invitations for Bids, and Procurement and Process Cycle Times.

¹² Section 6.0, Operating Procedure 2-0, Preparation and Approval of Bid Lists, Invitations for Bids, and Procurement and Process Cycle Times.

description contained in the requisition is self-evident; time constraints warrant a non-competitive action; or in the judgment of the Procurement Specialist, competition would derive no significant benefit.¹²

2.3.10 Non-competitive actions greater than a value established in Purchasing's procedures shall be authorized by the Section Managers and the reasoning for authorizing such non-competitive procurement shall be documented. For actions requiring a RAP, approval of the RAP shall signify approval of the use of sole source/non-competitive action.

2.3.11 The CAM also provides guidance on expedited bidding. On projects containing time constraints, the following steps should be taken to obtain bids from qualified suppliers:

(a) Department Manager and Purchasing Manager shall decide if bidding shall proceed on an expedited basis.

(b) Purchasing will provide a list of qualified suppliers.

(c) Construction Manager will review bid list and suggest additions or exclusions to the list.

(d) Work scope, schedule, and EH&S checklist shall be distributed to all bidders.

(e) Field visit

(f) Bid submission

(g) Pre-award meeting

(h) If successful bidder has an existing purchase order, the Construction Manager has two options: (1) Work can be awarded to contractor with a fixed price purchase order change request ("POCR") against an active purchase order, or (2) A new requisition may be issued to award a separate purchase order.¹³

2.3.12 If work is awarded through a POCR, an out of scope work form must be attached and approved by the General Manager.

2.3.13 Regardless of whether the work is awarded through a POCR or a new purchase requisition, all documentation including work scope, bid check estimate, out of scope form, etc. shall be attached to the Finding of Fact or purchase requisition. Further, a chronological log of all expedited bids shall be maintained by the Construction Manager.

¹³ Section 2.6, Contract Administration Manual.

2.4 BID EVALUATION

- 2.4.1 For all designed construction projects with contracts valued at more than \$300,000, an estimate from Bid Check is required prior to receiving and opening of the bids. This estimate is presented as a sealed bid and is used as by Purchasing as a baseline for comparison of all other submitted bids.¹⁴ This function is a valuable control function. Although an assessment of the department's effectiveness has not been performed, the demand and reliance on this department appears to be quite high.
- 2.4.2 A bid comparison sheet shall be prepared displaying the data to be evaluated. The comparison sheet should include where applicable:
- (a) Company actual or estimated requirements
 - (b) Quoted prices from each bidder and prior contract prices
 - (c) Safety and environmental-related factors
 - (d) Adjustments for discounts, escalation, payment terms, freight, etc.
 - (e) Technical or commercial consideration as evaluated by Engineering, the Requisitioner, or Purchasing
 - (f) Adjustments for installation, operational, and maintenance cost factors evaluated in present value dollars (life cycle cost evaluations are usually performed in conjunction with engineering or requisitioning organizations)
 - (g) Lead time or delivery schedule
 - (h) Vendor inventory capability or proposals
 - (i) Terms and conditions
 - (j) Any other information that in the judgment of the evaluator may be pertinent to the evaluation¹⁵
- 2.4.3 If a company estimate is prepared, it should also be shown on the bid comparison form.
- 2.4.4 Upon completion of the bid comparison sheet, the buyer shall develop an evaluated bid price for each vendor resulting from consideration of all the factors that may influence total cost. Bid multipliers ranging between 0.95 (excellent) through 1.05 (unacceptable), which are generated by the Contractor Oversight System, are multiplied against a contractor's price

¹⁴ Section 4.1, Exhibit D, Operating Procedure 2-0.

¹⁵ Section 1.0, Exhibit A, Operating Procedure 3-0.

proposal to produce a final bid price for each contractor.¹⁶ If a contractor is a new vendor to CECONY, it will receive a bid multiplier of 1.00. Contractors returning from suspension receive bid multipliers of 1.05 for a six-month period.¹⁶

- 2.4.5 For actions that exceed the buyer's authorization, Procurement Section Managers shall conduct a review of the completed bid comparison sheet including technical and commercial evaluations. This review shall ensure appropriate documentation of methodologies, weighting factors, or pricing models and approvals.
- 2.4.6 If bids received are materially different from the Bid Check estimate, a Fact-Finding review takes place. When the lowest contractor's bid is more than a specified percentage above the Bid Check estimate, it is necessary to review the estimate with the Requisitioner, Bid Check, and possibly with the bidder. The difference in price can be eliminated by either revising the estimate or the price. Regardless, the action may be re-bid, negotiated, or awarded, whichever is in the best interest of the company and reasons for such action must be documented in writing. If the recommendation is to award notwithstanding the Bid Check estimate, such recommendation shall be signed by the requisitioning approval authority and retained in the purchase order file.¹⁷
- 2.4.7 The Procurement Specialist shall also review bids for construction to determine if the amount of the difference between the first low bidder and second low bidder and the amount between the low bidder and the Bid Check estimate exceeds a specified percentage. If such a case arises, the contractor is to be notified and Bid Check, the user and the contractor and the Procurement Specialist will meet to ensure the contractor fully understands the scope of work to be performed and other conditions of the invitation. Further, a review will occur to determine if, based on knowledge of the marketplace conditions, existing bidding patterns, contractor workload and a review with the Bid Check estimator or user department, the low bid represents a fair and reasonable price. The contractor may be directed to review the scope of work and its bid price for accuracy. An award may be recommended after an authorized representative of the vendor states the bid has been reviewed and is correct.¹⁷
- 2.4.8 If the contractor states that its bid is incorrect, it may be necessary to review its estimate sheets to confirm the extent of the mistake. Depending on the extent of the mistake, the contractor may withdraw its bid, or the Procurement Section Manager may accept a revised price.¹⁷

¹⁶ Section 3.9, Operating Procedure 11-0.

¹⁷ Section 2.0, Exhibit A, Operating Procedure 3-0.

2.4.9 If a contractor elects to withdraw its mistaken bid, it may not be permitted to participate in a subsequent re-bid and may be excluded from the approved bidder's list if the Procurement Specialist believes that the mistaken bid is an attempt by the vendor to gain a bidding advantage or there is a pattern of such errors. Under normal circumstances, no penalties would be assessed against a low bidder after its first bidding error.¹⁷

2.4.10 Significant price variations should be noted by the Procurement Specialist during the evaluation of unit price or time and material bids. If prices are deemed unreasonable, the Procurement Specialist may in his/her judgment negotiate or reject the specific price or the entire bid. The actions taken, however, shall be documented in the Purchasing file.¹⁸

2.5 **PRE-AWARD MEETING**

2.5.1 According to Operating Procedure 3-0, a pre-award meeting may be required to clarify outstanding items with respect to the proposed award, or to ensure that the recommended vendor fully understands the requirements of the procurement. A pre-award meeting notification is prepared by the Procurement Specialist and distributed to the appropriate company personnel. During the meeting, the commercial terms and all bid documents should be reviewed. The vendor should be asked to discuss any remaining questions relative to the procurement and the Engineering representative should clarify any points in the drawings and specifications and answer any technical questions. The using department should also be present to review the schedule and any last minute on site permit approval, work coordination, or delivery questions. Pre-award meeting minutes to be filed in the contract folder should be prepared after a complete understanding of the procurement is achieved by all. Pre-award meeting minutes may not be relied upon concerning changes to the bid documents. The contractor will return a signed copy of the pre-award minutes signifying acceptance of the conditions presented. Such changes must be confirmed in writing and referenced in the purchase order.¹⁹

2.5.2 When the evaluation process has been completed and a vendor selected for award, the recommendation will be processed.

2.6 **CONTRACT AWARD AND NOTICE TO PROCEED**

2.6.1 Purchasing will award the contract/purchase order after the Request for Authorization to Purchase ("RAP") is approved. A "Notice to Proceed" is issued by the Construction Manager after a review of both the contractor's eHASP by the Construction Manager's EH&S representative and a review of the contractor's Work Plan/Schedule. A purchase order

¹⁸ Section 4.0, Exhibit A, Operating Procedure 3-0.

¹⁹ Section 5.0, Exhibit A, Operating Procedure 3-0.

("PO") is placed by Purchasing upon the receipt of an approved requisition. The requisition is approved in accordance with the Delegation of Authorities. If the requisition precedes the appropriation, the requisition should clearly state that the funds have not been appropriated and it is the responsibility of the requisition approver to notify Purchasing in writing that an appropriation is approved prior to Purchasing issuing a RAP/Board Memo. Sole source or non-competitive contract requests require a memo of justification signed by the required approval level of the user department.

2.6.2 Alternatively, should it be necessary for the company to enter into a contract with a contractor to perform some of the services of the contractor prior to placing the purchase order, Purchasing with the concurrence of construction will issue a "Limited Notice of Award" pending issuance of a formal purchase order. A limited notice of award can only be done after the approval of the RAP.

2.6.3 A Letter of Intent ("LOI") can also be issued by Purchasing when a commitment must be made prior to the issuance of a formal purchase. An LOI can be used to obtain a seller's commitment to begin a transaction prior to resolution of open items such as terms and conditions, and unit prices.

2.6.4 Based on the contractor procurement processes and policies, it appears that CECONY maintained a sufficient qualified bidder's list. There are vulnerabilities with the current policy, as contractors may be awarded contracts based on "low ball" bids. But for the most part, the current policies and procedures support procurement of contractors who are well qualified to perform the work, appropriately reward the incumbent contractors who do good work, and have a system in place to maintain a pool of qualified contractors for future work.

3 CONTRACT PERFORMANCE AND OVERSIGHT ACTIVITIES

3.1 CONTRACTOR OVERSIGHT SYSTEM

3.1.1 Construction Contractor Performance is documented in the Contractor Oversight System ("COS"). The COS is a management system used to track and report EH&S and work performance.²⁰ The field inspector is to complete a Contractor Field Observation Report ("CFOR") on an as needed basis noting the performance of a contractor (Satisfactory, Unsatisfactory, or Not Observed) on a variety of performance areas including Quality/Specification Compliance, Worksite Conditions, Personal Protective Equipment,

²⁰ Section 11, Page 2 of 13 of CAM.

Environmental, Tools/Equipment, Vehicles/Trailers, and Administrative and submit it into COS.^{21, 22}

3.1.2 A Contractor Evaluation Report (“CER”) is a report completed by the field inspector to document a contractor’s performance during a given period of time. Operating Procedure 11-0 states that the CER must be completed by June 30th and/or December 31st of a given year if, during the preceding six-month period, at least one CFOR was submitted. The CAM, however, stated that the field inspector shall complete an evaluation semi-annually for long term contracts and at the end of each spot buy at the time of final payment or on an interim basis as needed. A note in the CAM stated, “A Contractor Evaluation Report (CER) can be completed at any time during the course of a project. It is not mandatory to do only semi-annual or end of contract evaluations.”

3.1.3 Operating Procedure 11-0 notes that the CER summarizes and weights contractor’s performance in the following areas: EH&S (35%), Quality of Work (30%), Timeliness (20%), Administration (10%), and Conduct of Work (5%).²³ A contractor’s performance rating ranging from 1 (unacceptable) to 5 (excellent) is then generated by weighting CERs submitted over the preceding 36-month period against contract value.²⁴

3.2 ACTION LINE

3.2.1 In the case of a violation (e.g., unsafe work conditions, unauthorized deviations from the contract requirements, poor workmanship, etc.), the field inspector is to record the violation on the CFOR and verbally direct the contractor to take corrective action. The field inspector should review its CFOR with the contractor.

3.2.2 If the contractor fails to respond to a verbally noted violation, the field inspector will issue an infraction report formally documenting the condition and requesting a corrective action plan from the contractor. An infraction report shall be retained in the contractor’s project file.

3.2.3 In the case where a contractor fails to respond to conditions noted in an infraction report or if a pattern of unsatisfactory performance exists, the CAM directs the field inspector to immediately issue an Action Line complaint, which documents the detailed complaint information and keeps a running log of notes to document conversations, meetings held,

²¹ Figure 7-1 of CAM “Field Observation Report”.

²² Operating Procedure 11-0.

²³ Section 3.7, Operating Procedure 11-0.

²⁴ Section 3.8, Operating Procedure 11-0.

actions taken, etc.²⁵ Operating Procedure 11-0 notes that Purchasing must consider infraction reports and action lines when putting together bid lists.

- 3.2.4 Generally, a contractor upon receipt of an Action Line complaint is required to submit a Corrective Action Plan (“CAP”) documenting the contractor’s detailed plan (steps to take and schedule to complete) to correct deficiencies in the performance of their work. CECONY may also send the Contractor a “letter of admonition” documenting the violation and the corrective action taken.
- 3.2.5 Violations greater than those requiring a CAP submittal, or a letter of admonition, are brought to the Contractor Compliance committee for determination of disciplinary action and corrective actions.²⁶ The Committee, after evaluating the findings of an incident investigation conducted, issues disciplinary action based on the severity of the violation and the contractor’s previous performance. These actions can include suspension from the current job, suspension from bidding new jobs, suspension from bidding jobs in the field where the infraction occurred, cancellation of the contract, and removal from the List of Qualified Bidders. The committee can also require the contractor to take corrective actions, which typically includes submitting a CAP but may also including paying the cost of correcting the violation and/or the cost of a third-party to oversee.²⁷
- 3.2.6 Disciplinary decisions are communicated by Purchasing to Health and Safety Managers and Staff, Safety Administrators, Purchasing staff, and other appropriate personnel. Also, Purchasing is responsible for meeting with the contractor to communicate the disciplinary decision and basis for the decision.
- 3.2.7 Upon the contractor’s compliance with the disciplinary action, Purchasing’s Administration Section shall remove any limitations on the contractor’s status with the company and notify all relevant parties via Purchasing’s Environmental notice posted on the Purchasing’s public folder – Environmental Notices.
- 3.2.8 If contractor compliance is not achieved, Purchasing in coordination with the compliance committee may consider and approve a modification to the CAP including extension of current suspension durations, termination of contracts, cessation of all work, and removal from List of Qualified Suppliers.

²⁵ Figure 7-2, CAM, “Action Line Form”.

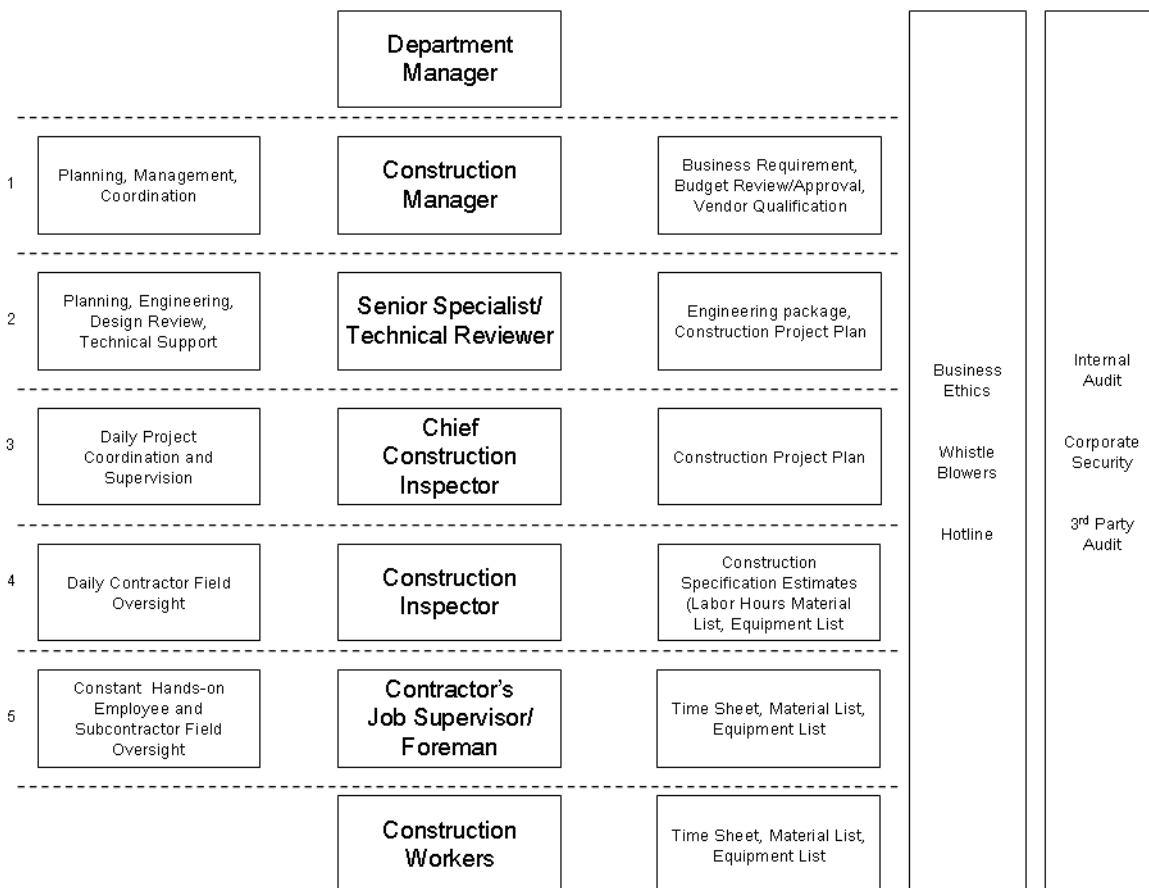
²⁶ Section 6.0, Operating Procedure 11-0.

²⁷ Section 7.6, Operating Procedure 11-0.

3.3 CONTRACT OVERSIGHT ACTIVITIES FOR UNIT PRICE WORK

3.3.1 CECONY’s Construction Management group is responsible for overseeing the work performed by the contractors. The Construction Management group is illustrated in Figure 1-1.

Figure 1-1: Construction Management and Controls



3.3.2 For fixed price work, the contractor will commence work upon notice to proceed. For indefinite quantity (scope), the contractor will be available to perform the work once notified that work needs to be performed. The discussion contained in the following paragraphs relates primarily to indefinite quantity unit price contract work.

3.3.3 At the outset of a job, a Chief Construction Inspector (“CCI”) along with the Planner will review the scope of work and assign an appropriate contractor to perform the work. The CCI and Planner should ensure that the selected contractor and the selected purchase order have the requisite pay items to perform the work.

- 3.3.4 If the purchase order lacks the appropriate pay items to accomplish the required work, it is expected that the CCI/Planner will initiate a POCR to add the pay item to the purchase order. Based on interviews conducted, the expected turnaround time for adding a new pay item to an existing purchase order is approximately four weeks. The POCR process requests a price from the contractor that is checked against a price provided by the Bid Check Group.
- 3.3.5 When the work is ready to proceed, the layout prepared by Engineering is placed in a job package. The Planner will request the appropriate permits. Upon receipt of the appropriate permits, the Planner will create an entry in Layout Tracking (“LOT”). At the time the entry is made in LOT, the Planner must assign an active purchase order to the layout. The Planner will also enter the quantity of structures and trench feet of utilities that are part of the layout as well as the estimated value of the layout (if a value is provided). The quantities are important from a corporate perspective and progress is measured on a daily basis against these quantities. From a drop-down menu, the Planner will select a person to serve in the role of CI/CR and the CCI.
- 3.3.6 In general, the Planner should have a good feel for which CI/CR and CCI will be assigned to the layout. This is in part due to CI/CRs and CCIs having a general specialty, such as paving, small retail project, and large complex projects. The assignment of the CI/CR, however, will occur the day before the work is expected to be performed in the field, and in large part the CI/CR is assigned based on the proximity of work assignments for a given day. The CI/CR will typically oversee several jobs, so the assignment of work will try to be mindful of the travel times between the job sites.
- 3.3.7 Two copies of the job package, which contains the layout and the permit, are made; one copy is given to the contractor, and one copy is given to the CI/CR. The job package is picked up each morning and typically returned the following day, when the next day’s job packages are picked up.
- 3.3.8 At the field level, a CI or CR will observe the contractor’s work and on a daily basis record the work performed. The CI/CR is responsible for preparing the Daily Log Report (otherwise known as the “Green Sheets”) for each job the CI/CR is assigned to oversee. This log includes a record of the number of workers, the types of equipment, and remarks with respect to the work performed on site each day. Other information, such as the EH&S checklist items and weather may be provided at the discretion of the CI/CR. If the CI/CR expects the contractor will request additional compensation, the CI/CR should make reference to such on the “Potential T+E Claims” section of the Daily Log Report.

- 3.3.9 A CCI supervises several CI/CRs. On a typical day, a CCI will first speak with the CI/CRs in the morning, review where they will be working, perform some office work, and then may visit the work in the field. When a CCI visits the field, the CCI will ask the “most competent responsible person,” which is either the CI/CR or the contractor’s foreman, what work is being performed and whether there are any issues to discuss. The CI/CR will check in with the CCI each day. The CCI must co-sign the Daily Log Reports each day.
- 3.3.10 One of the CCI’s responsibilities is to update the accruals in the Layout Tracking system on a daily basis. This information feeds the corporate accounting system. Units of work completed are added to the system (update the cumulative number).
- 3.3.11 At the end of a job, the CI/CR completes the documentation and returns the job folder to the CCI. The CI/CR is responsible to collect all the Daily Log Reports and prepare the Field Data Form (also called the Cut Form), which records the number of cuts made by the contractor and the nature of the work performed at each cut (or active work zone). The CI/CR is required to document the applicable Trenching Manual item that will be referenced for payment purposes. *Note:* Appendix 5.2 contains a summary of the Trenching Manual items and descriptions.
- 3.3.12 The completed job folder submitted by the CI/CR is commonly received by a clerk in the office. The clerk will send a copy of the Field Data Form to the contractor, which the contractor will use for inputting the information in COMPASS to receive payment for its work. The contractor would likely have its own records of the work performed, but the Field Data Form would be the record of the work documented by the CI/CR.
- 3.3.13 After inputting the information for payment purposes, the contractor submits its documentation, which may include T+E sheets to support its payment requests, to the CCI or clerk in the office. If the payment request does not reconcile with the information provided by the CI/CR, the CCI documents the discrepancy and will attempt to reach resolution between the contractor and CI/CR. The CCI or clerk is responsible to ensure the support documentation is complete for payment purposes and sends the job folder to the Technical Reviewer (“TR”).
- 3.3.14 The TR is responsible for thoroughly reviewing the payment request and reviewing the supporting documentation. If a contractor is requesting more than is supported by the CI/CR/CCI, the TR may recommend payment for the work that is not in dispute and hold back the questionable amounts until the TR has a chance to resolve the payment request. After the TR has completed its review (which may be a partial payment requested by the CCI), the TR creates and “locks” the SysBill. Thereafter, the Construction Manager reviews

the SysBill. If the CM disagrees, the CM contacts the TR to discuss the disagreement. The CM cannot change a SysBill entry; the TR is the most senior person who can modify a SysBill before payment. The TR can add/delete/modify entries as requested/needed.

3.3.15 If the CM agrees with the SysBill amounts, the CM “vouchers” the SysBill, which is sent to the PMS system, which is then sent to the Accounts Payable system. The PMS and AP system will check the vouchered amount to ensure the purchase order has sufficient funds to pay the SysBill. If sufficient funds exist, the SysBill is paid in accordance with the payment terms established in the purchase order (specified time period, check, wire transfer, etc.). If there are insufficient funds in the purchase order, PMS/AP system sends back a notification regarding the same and the SysBill is not paid.

3.3.16 The final job folder is maintained by the Construction Management Department.

3.3.17 The following activities were noted based on the process described above:

(a) The Layout Tracking database is the planning and monitoring system that interfaces with the corporate accounting system.

(b) The Planning Department creates a new record in Layout Tracking. Baseline quantities and the resultant baseline accrual values are applied to the record. If Construction Management has estimated the total cost of the layout (which is a different calculation than the calculation performed for the accruals), the estimated value may also be added to the record.

(c) On a daily basis, work performed in the field is reported back to the Construction Management staff—either to the CCI or to a clerk in the office—who will update the quantity of work performed in Layout Tracking for the purpose of correctly tracking the accrual information.

(d) As needed, the baseline accrual value can be adjusted to reflect the expected cost of performing the work. The historical cost of work is used to annually reset the accrual assumptions.

3.3.18 The Layout Tracking database contains a CCI and CI/CR field that should reflect the staff assigned to the layout. However, the data field is not compulsory, and we observed that it was not complete in all instances. Further, the CCI and CI/CR may change over the course of a project, and multiple CI/CRs may be assigned to a layout over its lifetime, reducing the reliability of the data contained in Layout Tracking. To the extent that layouts are not included in the Layout Tracking database, no data on the assigned CI/CR and CCI will be available. The Layout Tracking database may therefore serve as an indicator of layouts and

projects that individuals have been involved with rather than a complete and reliable data set for identifying individual involvement in projects at the CI/CR and CCI level.

4 CONTRACT ADMINISTRATION

4.1.1 Several aspects of the contract administration process were observed and reviewed, and detailed in this section. The understanding gained during this review was applied to an analysis of the projects under review and the Manhattan Vaults Project, which is presented hereafter.

4.2 CONTRACT/PURCHASE ORDER CHANGES

4.2.1 Contract changes, as discussed in Section 3.2 of the CAM, should be “related to the original scope of the contract or be a natural extension of the work, schedule, and conditions that are representative of that contract.” Contemplated changes could include engineering modifications, field conditions, user requests, etc. Where changes significantly modify the level of effort or price of the contract, resolution can include renegotiating the contract or the use of competitive bidding.

4.2.2 The CAM identifies and provides guidelines for executing five types of contract changes. These five types of changes include:

- (a) Fixed Price changes lump sum contracts
- (b) TME changes for lump sum contracts
- (c) Premium time changes for lump sum contracts
- (d) Unit price changes lump sum contracts
- (e) Unit price contract changes

4.2.3 Chapter 7 of the CAM outlines the field inspector’s responsibilities as it relates to the execution of change orders in the field. The CAM states that field inspectors are responsible for the implementation of changes to the base contract and requires the field inspectors to be thoroughly familiar with the reason for a change, its scope and effect on schedule. For design changes, the field inspector should sufficiently coordinate with Engineering to ensure timely completion of the change with minimal impact and consideration of EH&S. Unforeseen field conditions should be addressed prior to continuation of the work in the field and must include proper review and approval by Engineering and assurance that EH&S has been considered in the implementation of the change.

4.2.4 If the change is based on quantities and unit prices established in the contract, the CAM requires the field inspector to monitor the installation of each item on a daily basis and verify contractors' quantities by field measurements. This should be performed for both base bid items and additional items that are not included in the original contract scope. The Daily Log Book, which will be discussed in a later section, must include documentation of all changes. Further, the Construction Manager as required by the CAM is to maintain a Construction Contract Change Record, including details on the cost of the base contract and all changes to the base contract.

4.3 **FINDING OF FACT**

4.3.1 Finding of Fact ("FOF") form is used to initiate a change order either in the form of a POCR or a POCA.²⁸ The FOF is to be completed by the field inspector and shall include critical supporting information such as the change Classification Code depending on the nature of the change, a detailed description of the change, cause of the change, schedule implications (i.e., time extensions), Estimate from Bid Check if the value of the change is greater than \$25,000 or if a new unit item is to be established (or range estimate prepared by the field inspector if Bid Check is not required) and the necessary approval signatures. The detailed instructions for completing an FOF are included in Figure 3-6 of the CAM.²⁸

4.4 **FIELD REPORTS AND WORK PLANS**

4.4.1 Chapter 7 of the CAM outlines the standards of performance for assigned field personnel and provides procedures for their execution of field activities. CECONY's field operations oversight of contractors includes the following personnel, which are defined in Chapter 7 of the CAM:

- (a) Field inspectors
- (b) EH&S representative
- (c) Construction manager
- (d) Project manager
- (e) Contractor

4.5 **FIELD SURVEYS**

4.5.1 Reference lines and benchmarks will normally be established by the field inspector through contract or company surveyors. The contractor will then be responsible for the layout of the work and all measurements. The field inspector should check all major layout points

²⁸ Figure 3-6, Contract Administration Manual.

throughout the work and spot check locations and elevations of various elements such as drains, street ties, and anchor bolt settings, etc. and should notify engineering of any deviations from the specified plan.

4.5.2 The CAM also establishes that quantity surveys may be used for earthwork, rock excavations, etc. for which payment is made on a unit price basis as established in the contract. The CAM states, that generally, CECONY shall perform initial and final measurements and make intermediate surveys to document the work. Surveys should be verified as necessary with the contractor to substantiate them.

4.6 **DAILY LOG BOOK**

4.6.1 The CAM defines the Daily Log Book as “a basic source of record information that can be used in the evaluation of a contractor and Con Edison job performance.” Each Daily Log Book is to begin on page 001 with the mobilization of the contractor. Instructions for preparing the daily log are included in Figure 7-5 of the CAM and instruct CECONY field staff to completely fill in each Daily Log Report page with specific information.²⁹ These instructions are appropriate for the nature of the work the field inspector is overseeing, and the information captured in the Daily Log Reports is appropriate for the nature of the work performed by the contractors.

4.6.2 The Daily Log Report is to be signed by the field inspector, and the Daily Log Book will be periodically reviewed by the field inspector’s supervisor. The supervisor is to initial the log book pages reviewed to indicate that the review was performed.

4.6.3 The Special Conditions for a given contract may also include specific clauses directing the contractor to track work. For instance, the Manhattan Construction Operations 2007 Ladder/Supplementary Trenching Contract Special Conditions dated January 24, 2007 require the contractor to provide Location Sheets, Job Briefing Sheets, Plate Location Logs, Manhole Inspection Requests, and Contract Status Reports. Location Sheets are to be emailed daily detailing the contractors planned work schedule for the following work day. Job Briefing Sheets shall be signed by a CECONY representative and shall document the contractor’s foreman discussion with his/her crew. Information noted on a job briefing sheet shall include the scope of the work on the layout and associated facilities, potential hazards and proper Personal Protective Equipment (“PPE”). Plate Location Logs shall be emailed daily and shall document the locations and numbers of traffic/sidewalk plates being used. Manhole Inspections shall identify the manhole number and exact location for submission to

²⁹ Figure 7-5 of CAM, “Instructions for Preparing the Daily Log”.

Maintenance Services.³⁰ Finally, Contract Status reports shall be submitted by the second Wednesday of each month to the Senior Specialist, Section Manager, and Department Manager detailing the amount of the purchase order, payments made, payments pending, and the value of work in progress.³¹

4.7 PERMITS AND INSPECTIONS

4.7.1 Section 15.0 of the CAM titled “Permit and Inspection Requirements” sets out the procedures to be followed for construction of CECONY facilities. Depending on the scope of work to be performed, there are a number of regulating agencies within New York City that the company must coordinate with. Such agencies may include the Department of Buildings, Department of Small Business Services, the Department of Environmental Protection, the Department of Transportation, and the Fire Department.

4.7.2 Inspection and Permit requirements and specifications for a given scope of work are defined on addenda sheets provided by Engineering. These specifications form the basis for applications and approvals and guidance for field requirements.³² The filing and monitoring of all necessary CECONY applications and certifications is the responsibility of Engineering and Construction's Permit Administration Manager. This responsibility includes obtaining necessary signatures, notarizing forms, and certifications for controlled inspections, engineering calculations, and cost estimates, and for maintaining a status report of all filings. For construction and street work permits, Engineering is to provide advice and counsel and the needed interface with city and local agencies.

4.7.3 The Contractor is to review with CECONY and be made aware of responsibilities regarding all permit, certification, and inspection requirements during the bid phase and at the pre-award meeting.³³

5 INVOICE PAYMENT FOR UNIT PRICE CONTRACTS

5.1 COMPASS

5.1.1 The Construction Management Payment and Support System (“COMPASS”) is an application that provides for the daily management of construction and public improvement work on CECONY electric, gas, and steam facilities. Construction Management uses COMPASS to track work items performed on CECONY facilities, to initiate and control

³⁰ Manhattan Construction Operations 2007 Ladder / Supplementary Trenching Contract Special Conditions do not specify to whom location sheets or plate location logs shall be emailed.

³¹ Special Conditions, Manhattan Construction Operations 2007 Ladder/Supplementary Trenching Contract, 1/24/2007.

³² Section 15.3.b, Contract Administration Manual.

³³ Section 15.3.c, Contract Administration Manual.

procurement of contractor services and materials, and to initiate and approve payments to contractors for completed work.

5.1.2 The COMPASS system supports Construction's business functions through the following modules:

- (a) Header: Used to create a project and define basic information about the project's users, accounts, purchase orders, and types of facilities, as well any additional information
- (b) Worksheet: Allows the entry and tracking of items of labor, equipment, and material work
- (c) Procurement: Enables the creation and approval of purchase requisitions and purchase orders; this module interfaces with the corporate Procurement Management System ("PMS").
- (d) Receipts: Enables the creation and approval of receipts for payment of vendors. A receipt serves as both the common vendor invoice and CECONY's receipt. Receipt payment is processed automatically via a direct link to the Accounts Payable system.
- (e) Reports: Allows the user to generate hardcopy forms where a signature is required as well as produce summaries of data for analysis
- (f) Reference Tables: Enables the user to define standard items used by other modules in the system (e.g., trenching work items, accounts used by Construction Management, vendors commonly contracted)
- (g) Customized Prices: Provides the user with the ability to create and approve negotiated prices for work items

5.1.3 The Construction Manager ("CM") or designee is responsible for obtaining approval of vendor invoices and preparing/processing of the applicable payment certificate and/or PMS receipt required to effect payment. Construction Management and Public Improvement utilize COMPASS to execute these payments. The CM or designee maintains detailed files of contract payments and conducts follow-up actions with the appropriate departments to assure payments are made. CECONY's policy is to pay all approved invoices within the time period specified in the contract. The payment cycle starts on the day that an approved vendor invoice is received by the CM or designated representative.

5.1.4 It is understood that the payment process in COMPASS commenced with the creation of a Worksheet of items (and T+E where applicable) for a layout or a part thereof.³⁴ A review of

³⁴ In the case of progress payments where a lump sum progress payment is made, the COMPASS item may be entered as "debit," with a corresponding offsetting "credit" being incorporated on a subsequent worksheet also detailing the actual items of work completed.

the COMPASS worksheet is performed, with approvals stamped on the paper document (by CCI and Section Manager). A SysBill is subsequently created on the basis of the worksheet (or numerous worksheets) by the responsible Technical Reviewer (“TR”) and receives the final approval by the CM.

- 5.1.5 It appears that the processes differed between regions during the audit timeframe. In Manhattan, the Construction Management TR created the Sysbill in addition to reviewing it; whereas in other regions, the CCI (or equivalent) creates the SysBill prior to technical review. It further appears that if a TR was told to “pay the bill” by a CCI or CM, the TR may still have reviewed the layout against the invoice, but may or may not have signed off in approval.³⁵

6 RECENT INITIATIVES IN RELATION TO CONTROLS OVER CONSTRUCTION ACTIVITIES

- 6.1.1 In an effort to improve controls and procedures in response to the arrests in 2009 (or earlier) of certain current and former CECONY employees as well as employees and management of a major construction contractor associated with CECONY projects, there have been a number of initiatives undertaken at CECONY whose aim is to provide structural changes that will enhance the controls framework of the firm. Some of these are described below. (The effectiveness of these recent initiatives has not been reviewed for Part I Report.)

6.2 CONTRACT PROCESS TEAM

- 6.2.1 CECONY has formed a Contract Process team to improve controls over the contract payment process and provide more comprehensive oversight. This team is tasked with examining several areas including improvements to contract payment processing controls, modifications to contract terms and conditions that will restrict the use of recently retired employees for certain categories of Consolidated Edison Inc. (“CEI”) work, and improvements to training, benchmarking, and contractor monitoring.

6.3 RESTRUCTURING OF CONSTRUCTION MANAGEMENT

- 6.3.1 Construction Management has been split into two organizations as of May 1, 2009. The aim of this restructuring is to facilitate more direct oversight by the General Manager. In combination with other corrective measures, the objective is to provide more effective management oversight of street construction operations.

³⁵ CECONY notes in comments advanced during the factual accuracy check of this Report that with the reorganization in June 2009 and January 2010, the processes have been consistent among all regions.

6.4 REVISED PERSONNEL POLICY FOR CONSTRUCTION MANAGEMENT

6.4.1 Revised personnel policies for Construction Management have been implemented that include a requirement for annual reviews of personnel assignments. An important provision in the new policy for management personnel is the mandatory rotation every five years of those employees with contractor oversight or payment responsibility. The policy helps reinforce independence guidelines and anti-fraud provisions in other parts of the overall control framework and reduces the likelihood of collusion between employees and contractors. The policy for union field personnel includes controlled work assignments within the same job in addition to rotation options to limit the timeframe that employees oversee individual contractors. The combination of these options allows Construction to retain its existing field knowledge base at the local level.

6.5 REALIGNMENT OF SENIOR SPECIALIST FINANCIAL ANALYSIS AND PAYMENT OVERSIGHT FUNCTION

6.5.1 To further reinforce independence and segregation of duties, in June 2009, the Administrative Services group assumed the responsibility for contractor payment for Construction Management work and the Engineering Services group of Public Improvement for PI work. Within Administrative Services – Contract Administration, the manager of Technical Review is responsible to ensure consistency and adherence to guidelines as per Construction procedures. The Senior Specialist has oversight of financial unit costs for comparison of budget vs. actual work performed.

6.6 NEW AUDITING SECTION FOCUSED ON CONSTRUCTION PROJECTS AND CONTRACTOR ACTIVITY

6.6.1 The Auditing Department has created a new section to be responsible for performing audits of construction projects and contractor activity as well as Energy Services. This new section will be staffed with full-time (or equivalent) employees and have a section specifically dedicated to handling investigations.

6.7 AUDITING DEPARTMENT PILOT STUDY IN RISK MONITORING AND FRAUD DETECTION

6.7.1 The Auditing Department has embarked on a risk management and fraud detection pilot study that went active in 2009. If the pilot is judged successful, permanent licenses for the associated software will be purchased and integrated into the processes of the Auditing Department as well as selected Quality Assurance areas within CEI.

6.8 ESTABLISHMENT OF A CONSTRUCTION QUALITY ASSURANCE ORGANIZATION

6.8.1 A Construction Quality Assurance Department has been established in Construction Management with a charter to conduct comprehensive reviews and assessments of work processes, management control and oversight, field operation inspections, and the effectiveness of procedure implementations. The results of these reviews and assessments will be provided to the VP of Construction Management and the areas of Construction under review for the effectiveness of internal controls. The Auditing Department will also receive the results of such reviews. This is also the new department to which the Senior Specialists reports.

6.9 UNIT PRICE CONTRACT PROCESS STANDARDIZATION

6.9.1 A new written procedure standardizing the process for reviewing and approving unit price contract payments has been established across all regions. The new procedure details the roles and responsibilities of each employee and provides workflow diagrams and checklists. The procedure also institutionalizes independent technical review, high value unit verification, and the field log / invoice reconciliation process.

6.10 JOB SITE VERIFICATION

6.10.1 Construction has implemented an independent field verification requirement for high-value units like rock removal, contaminated soil, piers, dewatering, etc.

6.11 INVOICE / FIELD LOG RECONCILIATION

6.11.1 Construction has implemented a reconciliation process that requires any changes that increase a contractor's payment following submittal of the field inspector's field log to be reviewed and concurred upon by the field personnel, technical review personnel, and the Construction Manager prior to authorizing payment.

6.12 DOCUMENTATION OF TIME AND EXPENSES (T&E)

6.12.1 Construction now requires inspectors to record names of contractor personnel associated with T&E charges along with the previously tracked information concerning the number and type of craft labor utilized.

6.13 DOCUMENT SECURITY

6.13.1 Physical security and filing standards have been established for unit price contract payment documentation. The standards will appropriately limit access to and secure documents.

6.14 DELEGATION OF AUTHORITY

6.14.1 The level of dollars that can a Construction Managers can authorize for payment has been restricted to provide improved control and oversight of contract payments.

6.15 POST EMPLOYMENT LIMITATIONS

6.15.1 Contractors are restricted from assigning former Con Edison employees, who were involved in contract administration or purchasing activities within the last three years of their Con Edison employment, to Con Edison projects that require physical work, for a period of five years after their separation from the Company.

6.16 VENDOR EMPLOYEE IDENTIFICATION

6.16.1 All contractor employees are required to carry valid identification to facilitate improved invoice verification while working on Con Edison projects.

6.17 ETHICS CERTIFICATION

6.17.1 All contractors are required to certify that they understand Con Edison's Standards of Business Conduct and will not put our employees in a position that will cause them to violate the Standards. They are also required to certify that they will inform the Company when they observe an employee violating one of the Standards.

6.18 CONTRACT REQUIREMENTS

6.18.1 The contractor disclosure form was modified to require contractors to notify Con Edison when a material change in ownership or business structure has occurred. Contractors are also required to notify the Company of any significant litigation or change in financial status.

6.19 ASSET CHECKS

6.19.1 Auditing has developed a procedure to conduct periodic asset checks of Company personnel that have responsibility for overseeing construction projects and other contractor activity.

6.20 COMPASS PAYMENT SYSTEM ENHANCEMENTS

6.20.1 Enhanced audit trail capabilities, mechanisms to capture data about T&E work and rules to enforce proper invoicing are being incorporated into COMPASS. Target completion for all enhancements is January 2011. Full audit controls with audit trails have been implemented in COMPASS as of June 2010.

6.21 **ETHICS TRAINING**

- 6.21.1 An e-learning module, focused on improving contract administration ethics awareness, was developed and made available to all personnel. In addition, targeted ethics review for all construction employees and energy services employees has been conducted.

APPENDIX 5.2

Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
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15.1 Pavement Street, Sidewalk, Temporary Pavement and Curbs

Cut, break, remove and dispose of various types and thickness' of roadway and sidewalk materials as indicated by items listed below. Set aside blocks or bricks, where existing, if they are to be used for restoration. Transport blocks and bricks to storage site or dispose of them, as ordered, if they are not to be used for restoration. Dispose of surplus material. "R" suffix denotes restoration to be included in item of work and includes any and all required saw cutting, expansion joints and sealing. Each Construction Management Section shall specify what is included in "R" suffix, i.e. base only or base and wearing course.

Pavement Street, Sidewalk, Temporary Pavement and Curbs

T1	CY	Street surface pavement with no concrete base or less than 8" of asphalt material	
T1R	CY	Street surface pavement where no concrete paving base exists.	
T2	CY	Street surface pavement with any base concrete including base that contains block, brick, or asphalt material greater than 8".	
T2R	CY	Street surface pavement with any base concrete or greater than 8" of asphalt material of brick or block not included.	
T2AI	CY	Special care Item (all-inclusive); Hand breakout and removal of all types and thickness of pavement. This work to be performed with a pneumatic gun using a bit 3" or larger. Place broken pavement by hand into backhoe, load on to truck, and dispose. Item also includes, 100% hand excavation, sheeting, installation of new facilities, furnishing and installing of sand fill, proper compaction and restoring base, binder and sidewalk.	
T2AIX	CY	Same as item T2AI, but with no permanent restoration.	
T2AIA	CY	Same as above item, T2AI, but for work on a protected street.	
T2AIX	CY	Same as item T2AIA, but with no permanent restoration.	
T2C	CY	Break out, remove and dispose by hand all types and thickness of pavement. This work to be performed with a pneumatic gun.	
T2CR	CY	Same as item T2C with restoration.	
T2SC	CY	Hand breakout and removal of all types and thickness of pavement. This work to be performed with a pneumatic gun. Remove broken pavement by hand, load on to truck and dispose. Item also includes 100% hand excavation, installation of new facilities, backfill, proper connection and installing all base in trenches exceeding 5 cubic yards, (i.e. carbon monoxide, heat criteria prior and to markouts).	
T2SCA	CY	Same as above item T2SC, but for work on a protected street.	
T2H	CY	100% hand excavation, installation of new facilities, backfill, proper compaction and installing all base in trenches exceeding 5 cubic yards.	No machinery allowed
T2HA	CY	Same as above item T2H, but for work on a protected street.	No machinery allowed
T3	CY	Block surface and all decorative brick, including Z-brick, flagstone and bluestone with base.	
T3R	CY	Block surface and all decorative brick, including Z-brick, flagstone and bluestone with base.	

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Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
T4	CY	Block surface pavement that has been resurfaced with some other surface pavement such as asphalt, macadam, etc., no concrete base.	
T4R	CY	Block surface pavement that has been resurfaced with some other surface pavement such as asphalt, macadam, etc., no concrete base.	
T5	CY	Light reinforced (mesh) or plain concrete roadway.	
T5R	CY	Light reinforced (mesh) or plain concrete roadway.	
T6	CY	Heavy reinforced concrete roadway.	
T6R	CY	Heavy reinforced concrete roadway.	
T7	CY	Plain concrete driveways or sidewalks.	
T7R	CY	Plain concrete driveways or sidewalks.	
T8	CY	Concrete driveways or sidewalk with all types of reinforcement.	
T8R	CY	Concrete driveway or sidewalk with all types of reinforcement.	
T9	SQFT	Block surface and all decorative flagstone, brick, including Z brick, bluestone without base.	
T9R	SQFT	Block surface and all decorative flagstone, brick, including Z brick, bluestone without base.	
T10	LF of Outside Edge Cutback	Local Law #14 restoration in asphalt and concrete street with a maximum depth of 12 inches. Cutback asphalt and concrete 6 inches wide by up to 12 inches in depth. Furnish and install epoxy bonding agent and base concrete. Saw cut asphalt 6 inches wide by up to 6 inches deep. Furnish and install reflective membrane, tack coat sealer and asphalt surface pavement. Remove and dispose of spoils. This item shall include compaction testing as required under NYC Rule and Regulations and in conformity with Local Law #14. Contractor will be required to submit test results to the C.A.R. before payment will be made. There will be no separate payment made to plate cutback areas.	
T11	LF of Outside Edge Cutback	Local Law #14 restoration in asphalt and concrete street with a maximum depth of 12 inches. Cutback asphalt and concrete 6 inches wide by up to 12 inches in depth. Furnish and install epoxy bonding agent and base concrete. Saw cut asphalt 6 inches wide by up to 6 inches deep. Place temporary asphaltic composition or leave down for paving operations (see special conditions of Customer Service Area additional applications, i.e. 2" binder cushion on top of base concrete). Remove and dispose of spoils. This item shall include compaction testing as required under NYC Rules and Regulations and in conformity with Local Law #14. Contractor will be required to submit test results to the C.A.R. before payment will be made. There will be no separate payment made to plate cutback areas.	

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Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
T12	LF of Outside Edge Cutback	Local Law #14 restoration in asphalt/binder base street with a maximum depth of 12 inches. Saw cut asphalt 6 inches wide by up to 6 inches in depth. Break remove and dispose of spoils. Furnish and install binder base, tack coat sealer and asphalt surface pavement of at least 6 inches in thickness on 6 inches of crushed stone aggregate. This item shall include compaction testing as required under NYC Rules and Regulations and in conformity with Local Law #14. Contractor will be required to submit test results to the C.A.R. before payment will be made. There will be no separate payment made to plate cutback areas.	
T13	LF of Outside Edge Cutback	Local Law #14 restoration in asphalt/binder base street with a maximum depth of 12 inches. Saw cut asphalt 6 inches wide by up to 6 inches in depth. Break remove and dispose of spoils. Place temporary asphaltic composition or leave down for paving operations. This item shall include compaction testing as required under NYC Rules and Regulations and in conformity with Local Law #14. Contractor will be required to submit test results to the C.A.R. before payment will be made. There will be no separate payment made to plate cutback areas.	
T14	Each Test	Contractor compaction testing as required under NYC Rules and Regulations and in conformity with Local Law #14. Contractor will be required to submit test results to the C.A.R. before payment will be made.	

Curb Removal and Restoration

Cut, break, remove and dispose of various types of curbs as indicated by items listed below, restoration by others. Items designated with the "R" suffix denotes that restoration is included in the item of work.

T21	LF	Concrete curbs, any depth (standard depth 18"). Restoration by others.	
T21R	LF	Concrete curbs, any depth (standard depth 18"). Restoration included.	
T22	LF	Granite, stone or similar curbs. Restoration by others.	
T22R	LF	Granite, stone or similar curbs. Restoration using existing materials included.	
T23	LF	Steel or steel nosed curbs. Restoration by others.	
T23R	LF	Steel or steel nosed curbs. Restoration included.	

Temporary Macadam

T30	CY	Furnish, place and maintain temporary pavement of asphaltic composition.	
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Base Restoration

T31	CY	Furnish and place binder base.	
T32	CY	Furnish and place concrete various thickness base.	

Saw Cutting

T33	LF	Saw cut concrete all depths inclusive, roadway and sidewalk. Includes any asphalt or other type overlay.	
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Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
T33A	LF of bevel cut	Bevel cut concrete base, furnish and install dowels and make asphalt cutback as per Local Law 14 and NYC DOT drawing H-1042C.	Need to check: Local Law 14 and NYC DOT drawing H-1042C
T34	LF	Saw cut reinforced concrete all depths inclusive, roadway and sidewalk.	
T35	LF	Saw cut asphalt only, all depths inclusive, roadway and sidewalk.	

15.2 Excavation, Backfill, Sheeting and Excess Removal

No credits shall be taken for facilities installed, or material substitutions

Excavation measured in terms of CY

T40A	CY	Earth excavation only by machine and hand.	
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Backfill measured in terms of CY

T40B	CY	Backfill only by machine and hand.	Item does not specify whether the backfill material is from excavated material or clean backfill
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Excavation and Backfill measured in terms of CY

T41	CY	Earth excavation only by machine and hand, load and haul away, and disposal. Furnish and install sand or clean backfill. This item will be used in openings up to 10 feet in depth.	
T41A	CY	Same description as Item T41 except this item will be used in openings with depth 10.1 feet and greater. Item to include any double handling of excavated material that may be required.	
T42	CY	Earth excavation by 100% hand only, load and haul away, and dispose of debris. Furnish and install sand or clean backfill by hand and machine. This item will be used in openings up to 10 feet in depth.	
T42A	CY	Same description as Item T42 except this item will be used in openings with depth 10.1 feet and greater. Item to include any double handling of excavated material that may be required.	
T42M	CY	Earth excavation by 100% hand at point of entry (POE) under multiple interferences, load and haul away, and dispose of debris. Furnish and install sand or clean backfill by hand and machine. This item will be used in openings up to 10 feet in depth.	
T42AM	CY	Same description as Item T42M except this item will be used in openings with depth 10.1 feet and greater. Item to include any additional handling of excavated material that may be required.	
T43	CY	Earth excavation by machine and hand, backfill and excess removal. This item will be used in openings with depths up to 10 feet in depth.	
T43A	CY	Same description as Item T43 except this item will be used in openings with depth 10.1 feet and greater. Item to include any double handling of excavated material that may be required.	
T44	CY	Earth excavation by 100% hand only, backfill and excess removal. This item will be used in openings with depth up to 10 feet in depth.	

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Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
T44A	CY	Same description as Item T44 except this item will be used in openings with depths 10.1 feet and greater. Item to include any double handling of excavated material that may be required.	
T45A	CY	Excavate, haul away 100% and backfill with clean fill and sand furnished by the contractor. The contractor shall excavate, by hand, to locate the main, using the main, as a centerline extend the openings to the designated dimensions. Actual dimensions and location of the opening shall be as ordered by the C.A.R. Any initial or subsequent enlargement of an opening required due to field conditions shall be paid on an "each opening" basis under Item T45B, T45C or T45D. Pavement removal, temporary or permanent restoration, plates, maintenance and removal sheeting installation/removal, pavement cutback, removal and restoration requirements (Local Law 14) will be paid at the applicable Trenching Manual items. Each opening 0.1 to 4.0 cubic yards.	
T45B	CY	[Same as T45A, but] each opening 4.1 to 8.0 cubic yards.	
T45C	CY	[Same as T45A, but] each opening 8.1 to 15.0 cubic yards.	
T45D	CY	[Same as T45A, but] each opening 15.1 to 25.0 cubic yards. All openings that exceed 25 CY will be paid at the applicable Trenching Manual items.	

Service Connection

T45G	Each Service	Make initial contact with customer for service installation appointment. Excavate for 2 pits, (one at service valve and one at main), as required. Cut and cap existing service, from live main, insert service pipe through existing service pipe, disconnect and reconnect at meter, tap at main and pressure test backfill and compact. Pavement break, temporary restoration, plates and sheeting work will be paid at the applicable Trenching Manual items.	
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Trench Work measured in terms of LF

T46	LF of Trench with average trench depth less or equal to 3'-0"	Cut, break and remove all types and thickness' of pavement, excavate to the required widths and depth, sheet excavation as required, install facilities, backfill, compact and restore concrete base pavement or binder base, place temporary macadam, and restore concrete sidewalks permanently where applicable. Protect excavation and work site, truck and dispose of all excess debris and or spoiled materials. Return unused material to Company or Contractor designated yard.	
T46A	LF of Trench with average trench depth less or equal to 3'-0"	Same as Item T46 except [work is] on protected streets, pavement removal, restoration and backfill compaction, must be in accordance with the requirements set forth in Local Law #14. Contractor will be required to supply copies of compaction testing results that are certified by an agency approved by the city prior to payment.	
T46B	LF	All inclusive trenching, 100% hand excavation, unpaved area.	

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Trenching Manual Descriptions

Item No.	Unit of Measure	Item Description	CRA Remarks
T47	LF of Trench with average trench depth between 3.1' and 5'-0"	Same description as Item No. T46 except for trench depth.	
T47A	LF of Trench with average trench depth between 3.1' and 5'-0"	Same description as Item No. T46A except for trench depth.	
T48	CY	Excavate receiving and sending pits associated with trenchless technology. The unit price includes excavation, backfill and 100% haul away. The contractor will excavate, by hand, to locate existing facilities i.e. gas, electric, water and sewer, and extend the opening to the predetermined dimensions using hand and machine methods. Breaking pavement and base, plates, sheeting, and required back fill material, will be paid for separately at the applicable Trenching Manual items. Each [opening] 0.1 to 4.0 cubic yards.	
T48R	CY	Same as T48 and includes pavement and base restoration. Each [opening] 0.1 to 4.0 cubic yards.	
T49	CY	Underground Residential Development (URD) repair requiring excavation in an unpaved area. Excavate 100% by hand to expose live cable. Store excavated material on site. Provide protection including barricades and plates. Demobilize. Remobilize for backfill operation. Furnish and install sand backfill 6" around cable. Backfill with existing material. Provide landscaping, as required, including topsoil and seed. Each [opening] 0.1 to 2.0 cubic yards.	
T49A	CY	Same as T49. Each [opening] 2.1 to 4.0 cubic yards.	

Rock and Masonry

All units are incremental in cost, therefore no voids shall be credited.

T50	CY	Rock excavation and disposal from site. If backfill material must be furnished, it will be paid for separately as required.	
T51	CY	Rock excavation utilizing line drilling or splitting method as approved by C.A.R. and disposal from site. If backfill material must be furnished, it will be paid for separately as required.	
T52	CY	Remove and dispose of rock, intact masonry and boulders that cannot be removed by normal earth excavating equipment. Item is an incremental unit.	
T53	CY	Break, remove and dispose of intact masonry (removal of abandoned ducts or ducts with dead cables, boxes, etc.), layers of pavement surface and or base only when separated from initial roadway and plain or reinforced concrete, including backfill. If backfill material must be furnished, it will be paid for separately.	

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Item No.	Unit of Measure	Item Description	CRA Remarks
T54	CY	Break, remove and dispose of duct enclosures, encasements, wooden ducts and ducts which contain live cables. Maintain and support cable. (Note: Breaking, removing and disposing of duct enclosures and ducts which do not contain cables will be paid for under Item No. T53 and T56).	
T55	CY	Break, remove and dispose of concrete and masonry in car or trolley track area, including removal (any required burning also) and disposal of all associated structural members and associated materials, backfill openings and trenches with suitable material. If backfill material must be furnished, it will be paid for separately as provided for herein.	
T56	CY	Break out remove and dispose concrete encased steel pipe.	
T57	Each tie	Cut, remove and dispose of existing wood ties in car track area where trolleys were fed from an overhead wire so that underground third rail slots, yokes etc. do not exist.	
T58	Each complete tie	Remove and dispose wood ties intact in car track area where trolleys were fed from an overhead wire so that underground third rail slots, yokes, etc. do not exist.	
T59	FT of rail removed	Remove and dispose of trolley rails in car track area where trolleys were fed from an overhead wire so that underground third rail slots, yokes, etc. do not exist.	
T61	EA	Furnish, install and remove wooden tree guard.	

Removal of Dead Pipe

Cut, remove and dispose of all types abandoned metallic pipe. Due to potential environmental impact, this work shall not commence without approval of the C.A.R.

T70	LF of pipe removed	2" through 6" steel pipe.	
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Fill

Costs for placement shall not be included in items since such costs are specified for inclusion in the items for "Excavation, Backfill, Sheeting and Excess Removal." These items will be considered incremental and are to be used in conjunction with appropriate excavation items.

T90	CY	Truck and store backfill material away from site and return to site when required.	
T91	CY	Furnish and deliver Type I or II clean earth backfill that conforms to the requirements of EO-8085, EO-1181 or G-8005.	
T92	CY	Furnish and deliver sand backfill in accordance with EO-8085.	
T93	CY	Furnish and deliver control density material to fill trench. Item includes movement of plates.	
T94	CY	Furnish and deliver backfill material which conforms with New York State Specification Item #4.	
T95	CY	Truck from site and dispose of the excavated material other than rock, boulders and masonry.	
T96	CY	Furnish, deliver and place crushed stone.	
T97	CY	Furnish and deliver clean backfill or sand as appropriate. Truck and dispose excess material created by displacement of clean backfill or sand.	

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Sheeting

Square foot of contact surface.

T101	SQFT	Furnish, install and remove solid sheeting, in accordance with EO-16954-B Rev. 3	
T103	SQFT	Furnish and place tongue and groove pressure treated sheeting to be left in place.	
T104	SQFT	Place tongue and groove pressure treated sheeting to be left in place furnished by others.	

Plates

T110	SQFT of opening ordered plated for first 30 calendar days	Furnish, place, secure, maintain, protect and remove steel plates for vehicular traffic.	
T112	SQFT of opening ordered plated for first 30 calendar days	Same as Item T110 except plates must be strap welded.	
T113	SQFT of opening ordered plated for first 30 calendar days	Same as Item T110 except plates require installation of intermediate support beams and also must be strap welded.	
T114	SQFT of opening ordered plated	Rental and maintenance of plate covered under Item T110 left in place after first 30 days and for each 30 day interval thereafter that plate is required on opening, installation and removal cost are not included, see Item T110.	
T115	SQFT of opening ordered plated	Same as Item T114 except applies to Item T112.	
T116	SQFT of opening ordered plated	Same as Item T114 except applies to Item T113.	
T117	SQFT of opening ordered bridged for first 30 calendar days	Furnish, place, maintain, protect and remove steel plates or wooden bridges for pedestrian bridging.	
T118	SQFT of opening [ordered bridged]	Rental and maintenance of pedestrian bridging after first 30 days and for each 30 day interval thereafter that bridging is required on the opening, installation and removal cost are not included, see Item T117.	
T119	SQFT of trench opening	The Contractor will pick up, place, maintain, remove and return to the yard vented gratings and panels (waffle plates).	

Protective Plates

T120	SQFT of area covered	Unload, store and install steel protective plates of various thickness' over backfilled trenches for permanent protection due to shallow cover. Plates will be furnished by Company.	
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Test Pits

[Excavation to expose subsurface facilities.] Test pit volumes in excess of 25 cubic yards will be reimbursed under applicable excavation items.

T125	Each Location	Excavate by hand to expose all subsurface facilities or as directed by C.A.R. Backfill after required information has been taken. Roadway and sidewalk removal, restoration, local law 14 requirements, or any additional work required shall be paid for separately under the applicable items. [Excavated quantity equals] 0.1 to 4.0 cubic yards.	Susceptible to "phantom work." Work as directed by C.A.R. Quantity subject to C.A.R. judgement and record keeping.
T126	Each Location	Same as Item T125 except 4.1 to 8.0 cubic yards.	Susceptible to "phantom work." Work as directed by C.A.R. Quantity subject to C.A.R. judgement and record keeping.
T127	Each Location	Same as Item T125 except 8.1 to 15.0 cubic yards.	Susceptible to "phantom work." Work as directed by C.A.R. Quantity subject to C.A.R. judgement and record keeping.
T128	Each Location	Same as Item T125 except 15.1 to 25.0 cubic yards.	Susceptible to "phantom work." Work as directed by C.A.R. Quantity subject to C.A.R. judgement and record keeping.
T129	Each Location	Same as Item T125 except excavation is performed using vector type equipment.	Susceptible to "phantom work." Work as directed by C.A.R. Quantity subject to C.A.R. judgement and record keeping.

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15.3 Installation of Structures

The installation of all manholes, boxes and vaults whether precast, slotted or field poured shall include all necessary manpower, material and equipment necessary for each item of work to be accomplished, including unfinished or finished concrete restoration.

[From Section 11.3 of the Trenching Manual: Construction or installation of structures shall include removal and restoration of all sidewalk or roadway, excavating, disposal of excavated material, sheeting, support of existing facilities, plating, installing frames, castings covers and dewatering. Work such as rock, boulder, intact masonry removal and break out and removal of existing structures will be paid separately.]

[From Section 11.4 of the Trenching Manual: Structure installations in New York City shall include removal and restoration of all sidewalks in unit prices submitted and the maintenance of any temporary restoration of sidewalk or roadway. The inclusion or exclusion of permanent roadway restoration shall be determined by the C.A.R. Decorative type sidewalks and pavements are excluded. Westchester installations shall not include sidewalk or roadway restoration. These items will be paid for separately at applicable unit prices.

Installation of Precast Manholes, Boxes and Vaults

Install precast manholes, vaults and boxes which do not have slotted end walls, all items include installation of precast roofs, floors and castings.

T130	EA	Precast structures for the following combinations: B3-6 Box Categories; S Box Categories; and TS Box Categories.	
T131	EA	Precast structures for following combinations: DB-6 Box Categories.	
T132	EA	Precast structures for following combinations: BV7-8 Bus Compartments and TM11-6 Vault Categories.	
T133	EA	Precast structures for following combinations: M11-6 Manhole Categories; TM12 Vault Categories and CV8-6 Bus Compartments.	
T134	EA	Precast structures for following combinations: M14 Manhole Categories; V13-6 Vault Categories; BV13-2 Bus Compartments; M16X5-6 Manhole Categories and TM16-6 Vault Categories.	
T135	EA	Precast structures for following combinations: M15 Manhole Categories and V15-6 Vault Categories.	
T136	EA	Precast structures for following combinations: V10 Vault Categories; V11 Vault Categories and V12 Vault Categories.	
T137	EA	Installation of round or square URD splice or HT boxes and associated frames and covers. Includes the installation of Sub-Surface "T" tap box, frame and cover. To be installed over 6" compacted gravel fill base. Minor landscaping is included. Refer to DWG. 305043, E/O 16026-B, E/O 15687, E/O 15643-B.	

Installation of Precast Slotted Manholes and Boxes

Install manholes and boxes with slotted end walls over existing facilities including field poured floor and placing of roof and casting.

T139	EA	Slotted structures for following combinations: B3-6 Box Categories; S Box Categories and TS Box Categories.	
T140	EA	Slotted structures for following combinations: DB-6 Box Categories.	

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Item No.	Unit of Measure	Item Description	CRA Remarks
T140A	EA Stantions	Installation of all sized rack arms ands stantions in structures.	
T141	EA	Slotted structures for following combinations: M11-6 Manhole Categories.	
T142	EA	Slotted structures for following combinations: M14 Manhole Categories.	

Installation of Field-Constructed Manholes Boxes, and Vaults

Furnish and install all material necessary and construct manholes, vaults and boxes which shall include installation of precast roofs, frames and castings.

T146	EA	Field constructed structure for following combinations: B3-6 Box Categories; S Box Categories including S-2MB; and TS Box Categories.	
T147	EA	Field constructed structure for following combinations: S-2C and S-3C Categories; DB-6 Box Categories and S3-MB.	
T148	EA	Field constructed structure for following combinations: BV7-8 Bus Compartments and TM11 Vault Categories.	
T149	EA	Field constructed structure for following combinations: M11 Manhole Categories; TM12 Vault Categories and CV-8 Bus Compartments.	
T150	EA	Field constructed structure for following combinations: M14 Manhole Categories; V13-6 Vault Categories and BV13-2 Bus Compartments.	
T151	EA	Field constructed structure for following combinations: M15 Manhole Categories and V15-6 Vault Categories.	
T153	EA	Field constructed structure for following combinations: TM17-10 Categories.	
T155	EA	Install hinged curb panel only, sidewalk restoration to be paid under separate items.	

[Extras]

The following items will be paid, in addition to the installation item, whenever conduit, secondary box or manhole is required to be removed in conjunction with a new structure installation.

T156	Each Location	Break out and dispose of existing secondary box and conduits in new structure area, including maintenance and support of cable.	
T157	Each Location	Break out and dispose of concrete encased conduit in new structure area, including maintenance and support of cable.	
T158	Each Location	Break out and dispose of conduit in new structure area, including maintenance and support of cable.	
T159	Each Location	Break out and dispose of existing manhole and conduits in new structure area, including maintenance and support of cable.	

Frame and Grating Disposal and Vault Abandonment

T160	EA	Furnish labor and equipment to remove and dispose of frame and gratings from existing transformer structures prior to abandonment. Unit price to include breaking out existing walls one foot below grade, furnishing and backfilling with clean fill and restoring sidewalk.	
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Sewer Connections

T165	LF of external pipe furnished, installed and connected	Furnish and install external sewer drain materials, when existing city sewer cover is 13'-0" or less, including connections to the manhole or vault and to the street sewer. Excavating work shall not be included, but will be paid for separately under the applicable item numbers which cover such work. Installation shall conform to current EO-16972 and New York City Sewer Standards or agencies having jurisdiction.	
T166	LF of external pipe furnished, installed and connected	Furnish and install external sewer drain materials, when existing city sewer cover is 13'-1" or greater, including connections to the manhole or vault and to the street sewer. Excavating work shall not be included, but will be paid for separately under the applicable item numbers which cover such work. Installation shall conform to current EO-16972 and New York City Sewer Standards or agencies having jurisdiction.	
T167	Each vault with sump pump	Furnish, install and connect all internal vault sewer drain materials in accordance with the EO-13027-B, EO-13274-B, EO-16972-B, EO-17079-B and EO-17091-D.	

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Regrade, Replacement of Existing Castings

The unit price for the items of work for regrade or replacement of castings on existing Company structures will include the cost of material (concrete, etc.) and all contractor labor and equipment required to perform this work except castings and covers. Sidewalk or roadway breakout and restoration including unfinished or finished concrete, shall also be included. Area of breakout and restoration will be 18 inches and measured from the outside edge of flanges. Ranges are based on square foot of measurement taken from outside edges of flanges. Collars exceeding 12" in height, will be paid using structural concrete items.

T170	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Excavate and adjust gas valve box to proper grade. Key test to verify that it is centered and accessible. Furnish and install permanent base, binder cushion and temporary asphaltic pavement as required. Dispose of surplus materials. Frame or flange not to exceed 18" x 18".	
T170A	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Excavate, reset and or replace gas valve box to proper grade. Key test to verify that it is centered and accessible. Dispose of existing valve box and surplus material if required. Frame or flange not to exceed 18" x 18".	
T170C	EA	Breakout, reset vault roofs, permanent restoration separate.	
T171	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Remove existing frames and covers. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Reset existing frame and covers. Furnish and install permanent base, binder cushion and temporary asphaltic pavement as required. Range 0.0' square feet to 35.0' square feet.	
T171C	EA	Breakout, replace vault roofs, permanent restoration separate.	
T172	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Remove existing frames and covers. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Dispose of existing frame and gratings. Set new frame and covers. Furnish and install permanent base, binder cushion and temporary asphaltic pavement as required. Range 0.0' square feet to 35.0' square feet.	
T172C	EA	Breakout, replace castings 0' SF - 35' SF (includes concrete to surface).	
T173	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Remove existing frames and covers. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Reset existing frame and covers. Furnish and install permanent base, binder cushion and temporary asphaltic pavement as required. Range 35.1' square feet and greater.	
T173C	EA	Breakout, regrade castings 35' SF or greater (includes concrete to surface).	

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Item No.	Unit of Measure	Item Description	CRA Remarks
T174	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Remove existing frames and covers. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Dispose of existing frame and gratings. Set new frame and covers. Furnish and install permanent base, binder cushion and temporary asphaltic pavement as required. Range 35.1' square feet and greater.	
T174C	EA	Breakout, replace casting 35' SF or greater (includes concrete to surface).	
T175	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Reset existing concrete and steel roofs for TM-10, 11, V13-6 and V15-6 vaults or equivalent. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Furnish temporary asphaltic pavement as required.	
T176	EA	Cut, break, remove and dispose of various depths of surface and base pavements. Remove existing concrete and steel roofs for TM-10, 11, V13-6 and V15-6 vaults or equivalent. Excavate, furnish and install bricks and or grading blocks with cement mortar joints as required, to a maximum height of twelve inches. Dispose of existing roof. Set new roof, boom truck included. Furnish temporary asphaltic pavement as required.	

Installation of Conduit

T180	LF of conduit intalled	Install 2" through 5" conduit (steel, precast, PVC, HDPE)	
T181	LF of conduit intalled	Rod, Mandrel and Rope existing conduit.	
T182	CY of encasement	Install 2" through 5" fiberglass reinforced epoxy (FRE) conduit with concrete encasement. (no void credited)	
T183	LF of conduit intalled	Install 4" and 5" split conduit, splitting of conduit shall be performed by Contractor.	
T184	Each bend	Install 2" steel bends to street lamp base including cost of channeling in concrete foundation of street lamp base.	
T185	LF of run	Install one 2" HDPE conduit using trenchless technology.	
T185A	LF of run	Install two 2" HDPE conduits, trenchless, by the piercing method.	
T185B	LF	Install 6" directional boring and installation of plastic pipe.	
T185C	LF	Install 8" directional boring and installation of plastic pipe.	
T185D	LF	Install 12" directional boring and installation of plastic pipe.	
T186A	LF of run	Install one 4" or 5" HDPE conduit using trenchless technology.	
T186B	LF of run	Install two 4" or 5" HDPE conduits, trenchless, by piercing or boring method.	
T186	LF of conduit intalled	Install 4" HDPE conduit using boring machine.	
T187	LF of conduit intalled	Install 6" HDPE conduit using boring machine.	

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Item No.	Unit of Measure	Item Description	CRA Remarks
T188	Each riser	Install complete 2" through 5" bends and riser pipe (steel, plastic or fiberglass) to overhead poles, including installation of straps and adapters.	
T189	LF	Excavate, install duct and cable provided by the Company, and provide full restoration for all types of surfaces and depths regardless of protection/ non-protected streets. Work scope includes all costs associated with obtaining all required NYCDOT permits for the performance of the work. This is telecommunications work.	
T189A	EA	Remobilize crew to complete point of entry work when access to the structure has been initially denied. This work is in conjunction with that performed under item T189 only.	

Furnish and Place Concrete

T190	CY	Furnish all labor, materials and equipment including concrete, forms and epoxy coated reinforcing steel required for walls, collars, floors, roofs, piers, pads or any similar load bearing structural concrete (five cubic yards or less) that may be required, where such work is not covered in the other items of work provided for herein. Doweling in reinforcing steel into existing concrete shall also be included.	
T191	CY	Same as Item T190 except price shall be adjusted for concrete quantity greater than five (5) cubic yards.	
T192	CY	Furnish all labor, materials and equipment non-reinforced structural concrete. Item includes the construction of simple forms for encasements of split ducts, mats and base under pipes.	

Lump Sum Payment

T200	Each layout	This item will apply to all electric trenching layouts that have a total trench length of 20'-0" or less. This item will be primarily used for service jobs with a maximum of four conduits at a depth of 3' to subgrade.	
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Special Conditions Dated January 24, 2007

Manhattan Linear Foot Items (all-inclusive)

No additional compensation based on trench widths. Depth parameters and Protected Streets are the only factors for distinguishing between the four linear foot items. No additional compensation based on type of conduit installed (for Primary or Secondary cable) width of trench, or P.O.E. position in manhole.

T46L	LF of Trench (0' to 4'-11" in depth)	Cut, break and remove all types and thickness' of pavement/sidewalk, excavate to the required widths and depth, sheet excavation as required, place vehicular/pedestrian protection, install facilities, install protection plates if required, backfill, compact and restore concrete base pavement and/or binder base, place temporary macadam if necessary, and permanently restore all sidewalks. Protect excavation and worksite, truck and dispose of all excess debris and/or spoiled materials. Return unused material to Company or Contractor designated yard.	
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Item No.	Unit of Measure	Item Description	CRA Remarks
T47L	LF of Trench (5' or greater in depth)	Cut, break and remove all types and thickness' of pavement/sidewalk, excavate to the required widths and depth, sheet excavation as required, place vehicular/pedestrian protection, install facilities, install protection plates if required, backfill, compact and restore concrete base pavement and/or binder base, place temporary macadam if necessary, and permanently restore all sidewalks. Protect excavation and worksite, truck and dispose of all excess debris and/or spoiled materials. Return unused material to Company or Contractor designated yard.	
T46LA	LF of Trench (0' to 4'-11" in depth)	Cut, break and remove all types and thickness' of pavement/sidewalk, excavate to the required widths and depth, sheet excavation as required, place vehicular/pedestrian protection, install facilities, install protection plates if required, backfill, compact and restore concrete base pavement and/or binder base, place temporary macadam if necessary, and permanently restore all sidewalks. Protect excavation and worksite, truck and dispose of all excess debris and/or spoiled materials. Return unused material to Company or Contractor designated yard. Protected Street restoration includes compaction tests.	
T47LA	LF of Trench (5' or greater in depth)	Cut, break and remove all types and thickness' of pavement/sidewalk, excavate to the required widths and depth, sheet excavation as required, place vehicular/pedestrian protection, install facilities, install protection plates if required, backfill, compact and restore concrete base pavement and/or binder base, place temporary macadam if necessary, and permanently restore all sidewalks. Protect excavation and worksite, truck and dispose of all excess debris and/or spoiled materials. Return unused material to Company or Contractor designated yard. Protected Street restoration includes compaction tests.	
T46D	LF of Trench	Additional \$5 per L.F. of trench for conduit trenches containing more than 8 conduits.	

Additional Items not listed in Trenching Manual

T46E	LF	Trenching for street light and service shunts only on a non protected street shall include, cut, break and remove all types and various thickness' of pavement, excavate to various widths and depths, sheet excavation as required, install facilities, backfill, compact and restore concrete base pavement, place temporary macadam where applicable, and permanently restore all sidewalks and roadways. Protect excavation and work site, including all vehicular and pedestrian plating, truck and dispose of all excess debris and or spoiled materials. When restored pavement is less than original pavement removed, contractor will furnish, deliver and place clean backfill or sand for the difference in depths (at no additional cost, see special conditions)	
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Item No.	Unit of Measure	Item Description	CRA Remarks
T46F	LF	Trenching for street light and service shunts on a protected street shall include, cut, break and remove all types and various thickness' of pavement, excavate to various widths and depths, sheet excavation as required, install facilities, backfill, compact and restore concrete base pavement, place temporary macadam where applicable, and permanently restore all sidewalks and roadways. Protect excavation and work site, including all vehicular and pedestrian plating, truck and dispose of all excess debris and or spoiled materials. When restored pavement is less than original pavement removed, contractor will furnish, deliver and place clean backfill or sand for the difference in depths (at no additional cost, see special conditions). On Protected Street, pavement removal and backfill compaction must be in accordance with the requirements set forth in Local Law #14. Contractor will be required to supply copies of compaction testing results that are certified by	
T200CA	EA	Clear obstructed streetlight and service shunts on protected streets (including compaction testing). Item includes all pavement break-out and removal, excavation, plating, installation of new facility, excess removal and restoration. Maximum length of trench 10' after which LF price applies. The area where 200C applies will be deducted from total LF payment.	
T200CB	EA	Clear obstructed streetlight and service shunts on non-protected streets. Item includes all pavement break-out and removal, excavation, plating, installation of new facility, excess removal and restoration. Maximum length of trench 10' after which LF price applies. The area where 200CB applies will be deducted from total LF payment.	
T42MQ	CY	Cut, break and remove all types and thickness of pavement, excavate by 100% hand at Point of Entry (POE), install facilities, sheet excavation as required, compact and restore base pavement or binder base, load and haul away, and dispose of debris. Furnish and install sand or clean backfill by hand and machine. This item will only be used when a contractor is sent back to a location that was previously trenched and resurfaced to complete a POE that could not be completed due to a structure that failed inspection or otherwise directed by C.A.R. It shall only be used in openings up to 10 feet in depth.	
T42AMQ	CY	Same description as item T42MQ except this item will be used on a protected street.	
T44M	CY	Same description as item T42MQ except this item will be used in openings greater than 10 feet in depth.	
T44AM	CY	Same description as item T44M except this item will be used on a protected street.	

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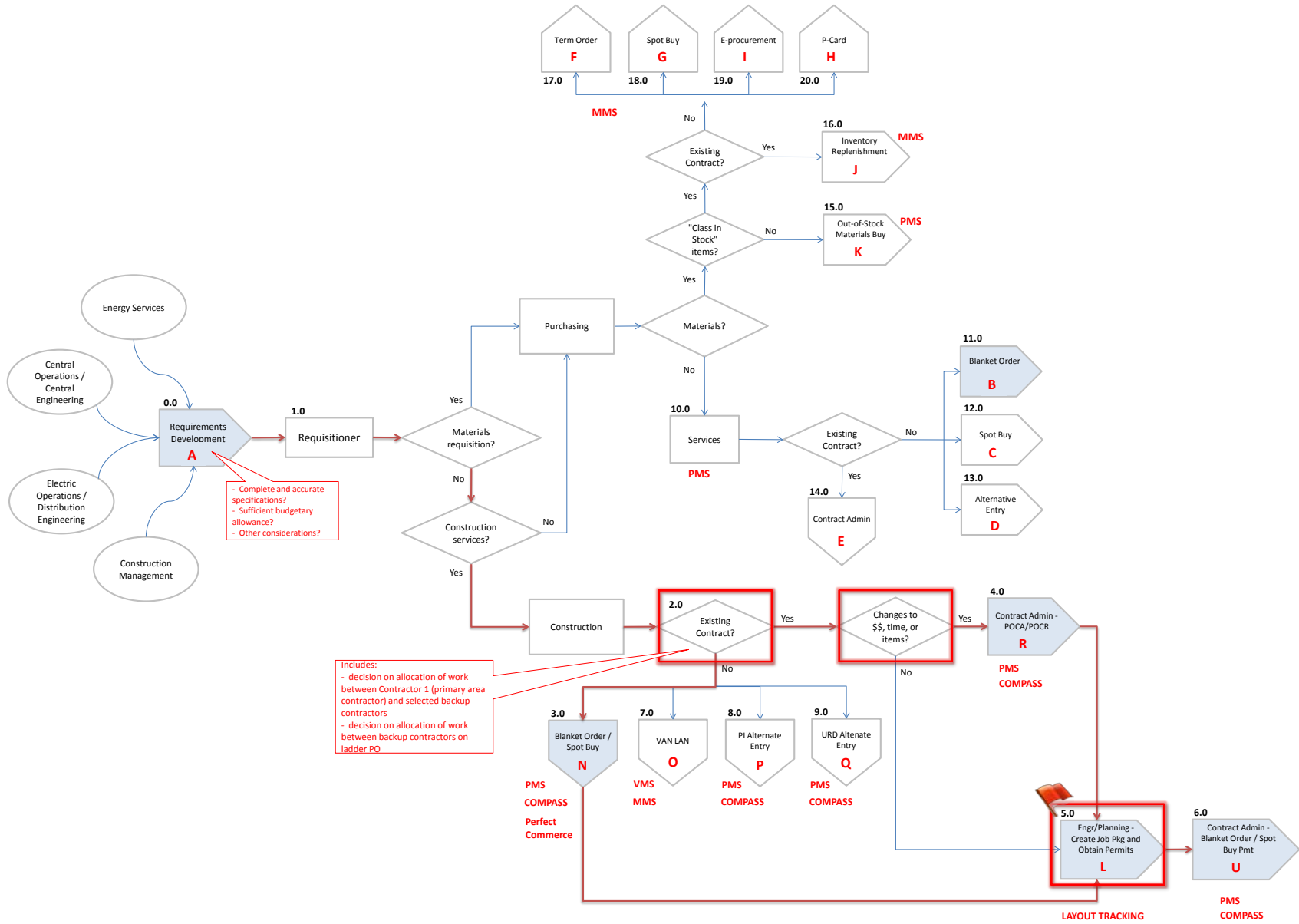
Item No.	Unit of Measure	Item Description	CRA Remarks
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Installing Piles and Placing Pile Mats

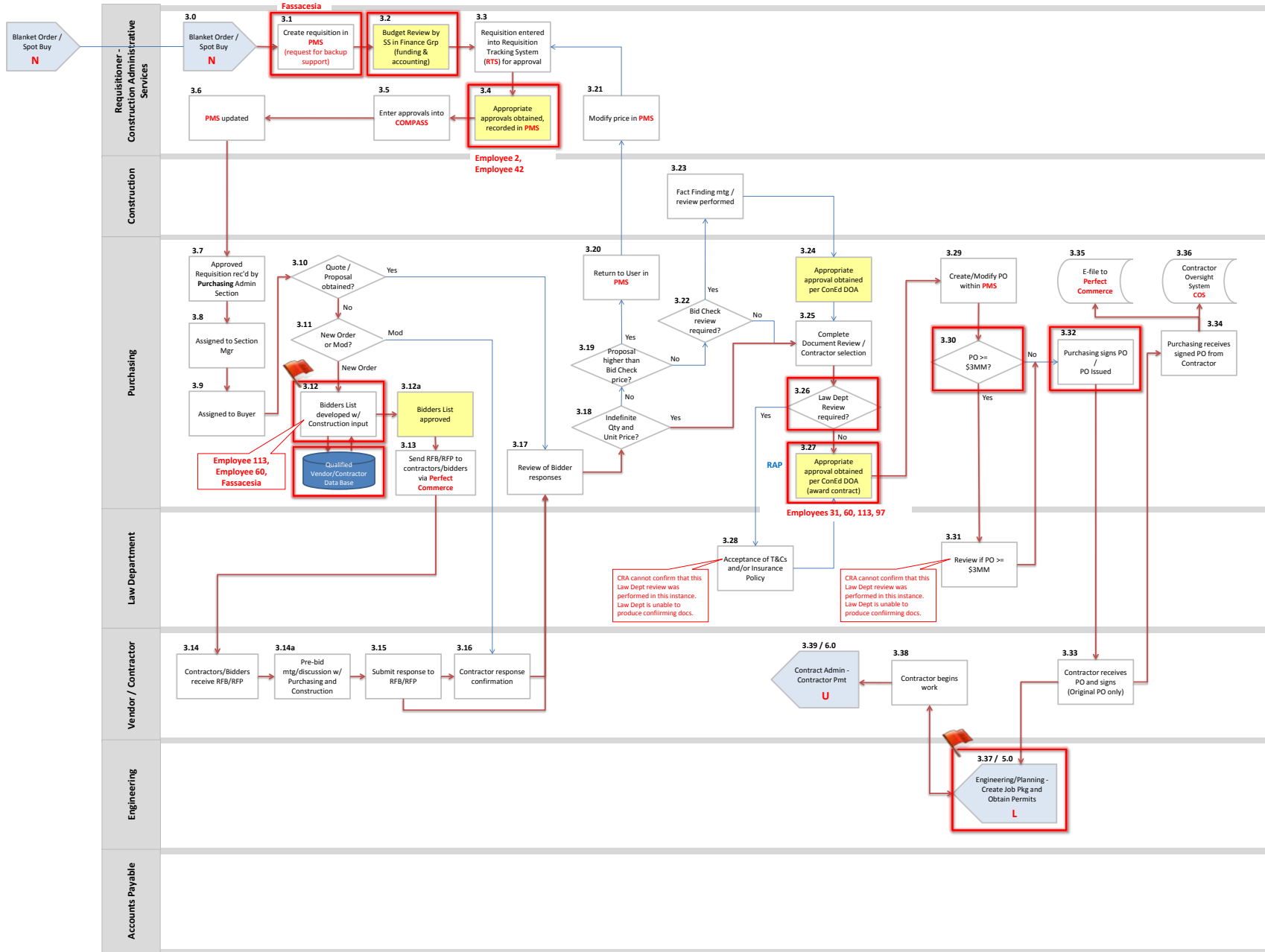
Items for the installation and construction of various types of piles and pile mats. For all furnish and install pile items, the item includes final cut and any required splicing of piles. For pricing the install pile items, the bidder is to assume 30' installed as the standard length for timber piles and 40' installed as the standard length for steel piles. Existing Trenching Manual items to be used with piles and pile mat installations Items T103 (furnish and install T+G sheeting, S.F. contact surface) and T96 (furnish and install crushed stone, unit CY). T192 (furnish and place non-structural concrete, unit CY) to fill voids between structures and sheeting, are already included in the estimated quantities and will be applied as per the Trenching Manual.

T220	EA	Mobilize and De-mobilize pile rig and associated equipment. One mobilization and demobilization per each job, to include Professional engineer's time and report.	
T221	EA	Furnish and install wood piles. Diameter 8" tip / 12" butt.	
T222	LF	Same as T221 for additional foot of pile installed beyond the standard length.	
T223	EA	Furnish and install steel pipe piles. Up to and including 10" diameter.	
T224	LF	Same as T223 but to include 4000 psi concrete fill inside pipe pile.	
T225	EA	Same as T224 plus 4000 psi concrete fill inside pipe pile.	Confusing item description
T226	LF	Same as T225 for additional feet of pile installed beyond the standard length.	
T227	EA	Furnish and install steel beam piles. Up to and including 14" beam.	
T228	LF	Same as T227 for additional feet of pile installed beyond the standard length.	
T229	EA	Furnish and install auger cast piles. Up to and including 8" diameter filled with minimum 4000 psi grout.	
T230	LF	Same as T229 for additional feet of pile installed beyond the standard length.	
T231	SQFT of contact area plus embedment	Furnish and install steel interlocking sheeting (to be left in place). Includes cutting off top of sheeting.	
T232	SQFT of contact area plus embedment	Furnish, install, and remove steel interlocking sheeting.	
T233	LB of steel	Furnish, install, and remove steel whalers.	
T234	CY of reinforced concrete placed	Furnish and place reinforced concrete pile mat with forms. Thickness of mat is to range between 2' to 3.5' in depth, minimum of 3500 psi concrete and include a range of 300 pounds of steel rebar per cubic yard of reinforced concrete placed.	
T235	CY of reinforced concrete placed	Furnish and place reinforced concrete pile mat without forms. Thickness of mat is to range between 2' to 3.5' in depth, minimum of 3500 psi concrete and include a range of 300 pounds of steel rebar per cubic yard of reinforced concrete placed.	

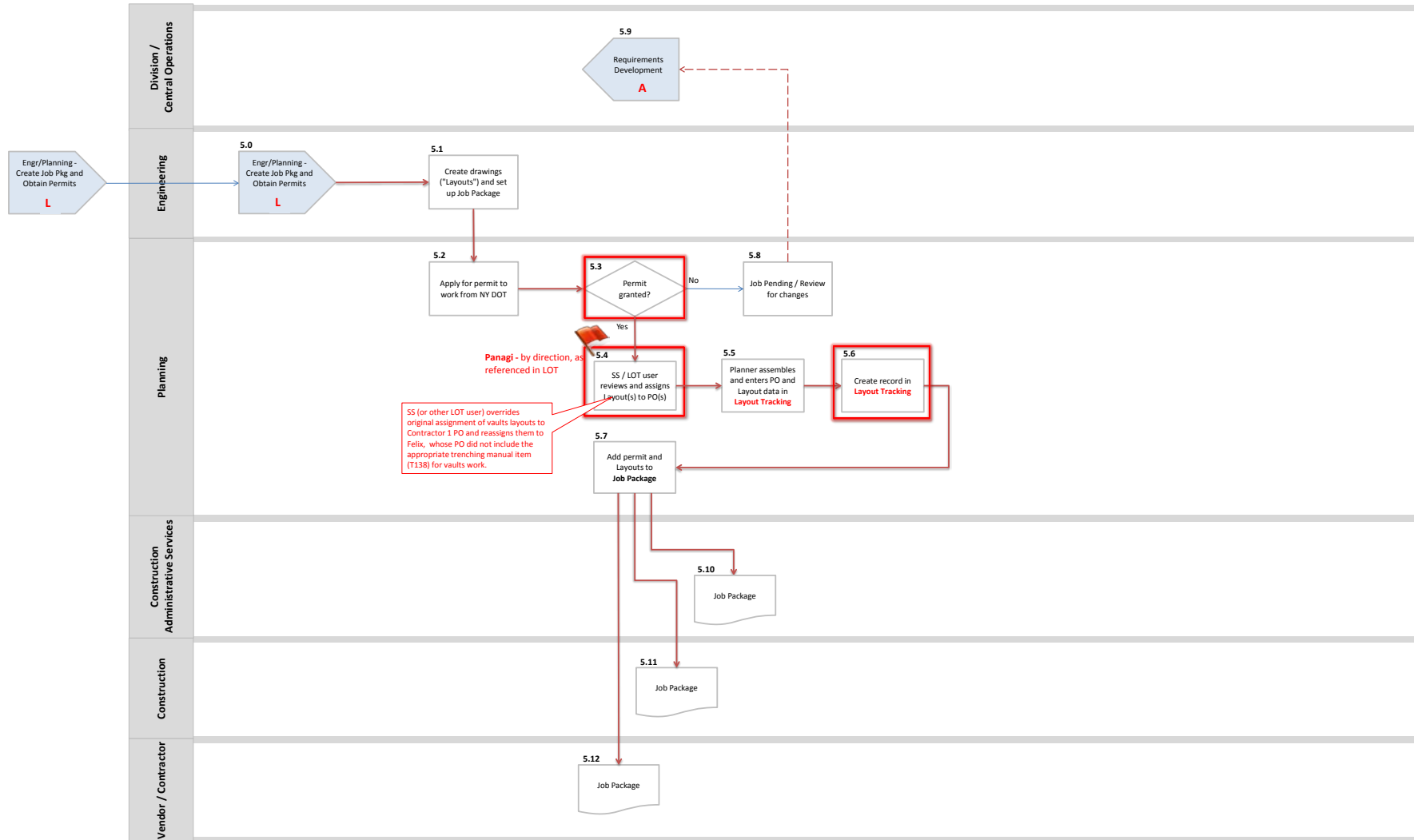
Purchasing Process Flow



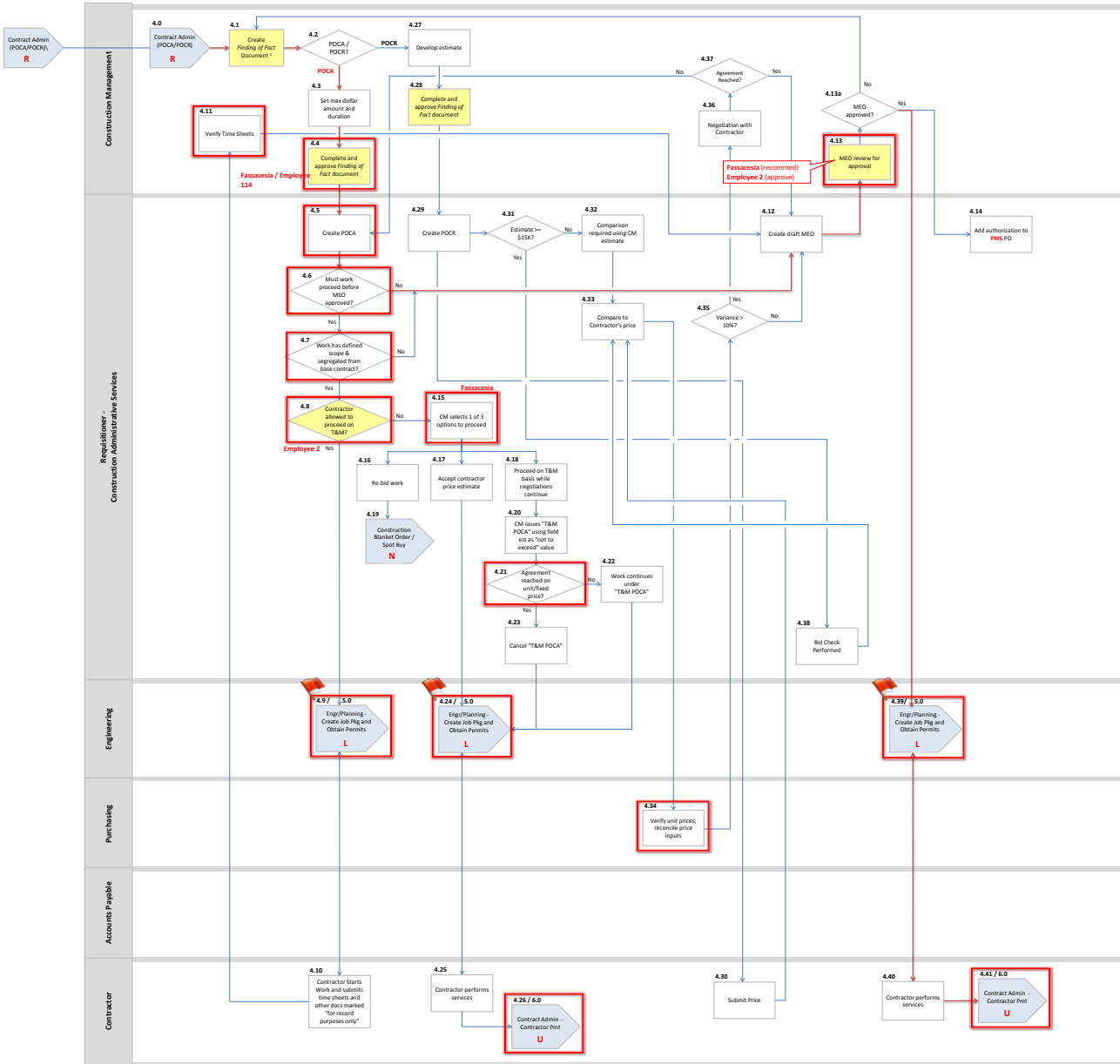
Construction - Blanket Order & Spot Buy



Engineering/Planning - Create Job Package and Obtain Permits

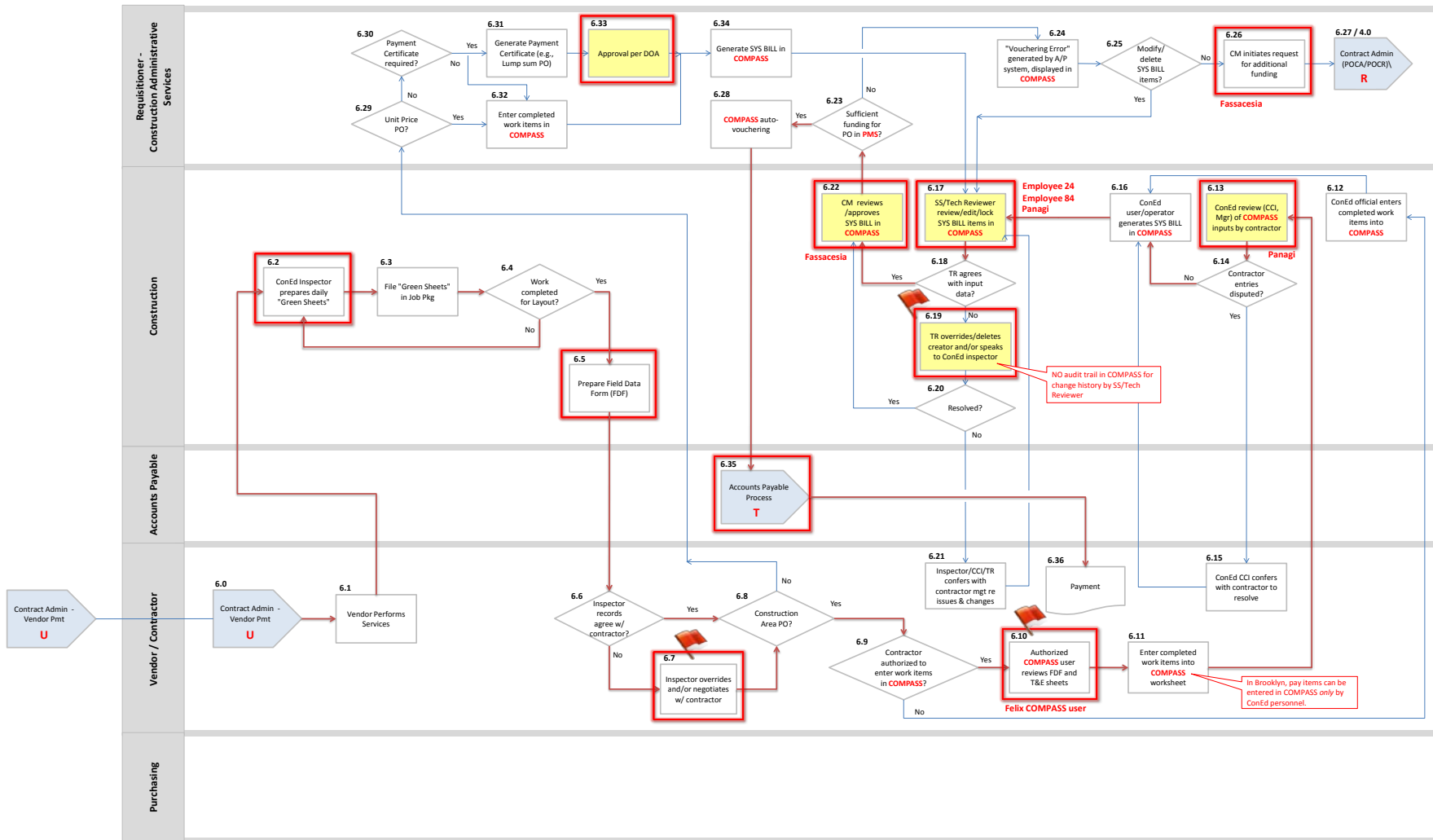


Contract Administration - POCA / POCR



¹ Findings of Fact specifies (a) reason for changes, (b) proposed changes (time extension, dollar amount, etc.), (c) POCA/POCR category (e.g., POCR - Fixed Price; POCA - Time & Material). Process includes generation of POCA/POCR Support Sheet and Construction Contract Change Record.

Contract Administration - Blanket Order / Spot Buy - Vendor/Contractor Payments



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APPENDIX 5.5

Analysis of Involvement of employees in Layout Tracking for projects identified by KPMG

CCI	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Construction - Westchester \$	Public Improvement \$	Total \$
	-	-	764,965	31,570	-	796,535
Employee 4	-	-	77,536	-	-	77,536
COOK KEVIN	-	-	-	236,388	-	236,388
Employee 30	-	-	-	13,397	-	13,397
Employee 41	-	-	49,136	16,226,063	-	16,275,199
Employee 46	-	-	385,050	-	-	385,050
Employee 53	-	-	31,271	-	-	31,271
LIOI JOSEPH	-	-	-	6,692,963	-	6,692,963
PANAGI ABRAHAM	-	-	878,612	-	-	878,612
Employee 72	-	-	20,975	-	-	20,975
Employee 93	-	-	266,208	-	-	266,208
ZEBLER RICHARD	-	-	52,060,935	-	-	52,060,935
	496,488	7,140,206	2,611,644	-	39,285,431	49,533,769
Total	496,488	7,140,206	57,146,334	23,200,381	39,285,431	127,268,839

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PART 1 REPORT

APPENDIX 5.5

Analysis of Involvement of employees in Layout Tracking for projects identified by KPMG

CR	Construction - Bronx	Construction - General	Construction - Manhattan	Construction - Westchester	Public Improvement	Public Improvement
	\$	\$	\$	\$	\$	\$
Not Identified	-	-	1,229,400	969,965	-	2,199,365
Employee 1	-	-	2,549	-	-	2,549
Employee 7	-	-	-	50,579	-	50,579
Employee 8	-	-	39,235	-	-	39,235
Employee 9	-	-	-	9,238	-	9,238
Employee 13	-	-	-	718,335	-	718,335
Employee 22	-	-	208,021	-	-	208,021
Employee 28	-	-	-	466,894	-	466,894
DIROMA LEONARD	-	-	-	1,346,206	-	1,346,206
Employee 32	-	-	-	1,900,170	-	1,900,170
Employee 37	-	-	-	47,607	-	47,607
Employee 38	-	-	1,674,193	-	-	1,674,193
Employee 45	-	-	-	174,684	-	174,684
Employee 48	-	-	9,478,894	-	-	9,478,894
Employee 50	-	-	-	1,668,828	-	1,668,828
Employee 51	-	-	31,019,055	-	-	31,019,055
Employee 58	-	-	-	139,156	-	139,156
Employee 62	-	-	-	10,526,259	-	10,526,259
Employee 63	-	-	-	29,782	-	29,782
Employee 65	-	-	130,000	-	-	130,000
Employee 66	-	-	4,605,411	-	-	4,605,411
Employee 69	-	-	69,922	-	-	69,922
Employee 71	-	-	81,811	-	-	81,811
Employee 76	-	-	-	2,696,330	-	2,696,330
Employee 77	-	-	5,800,086	-	-	5,800,086
Employee 78	-	-	-	1,142,454	-	1,142,454
Employee 80	-	-	-	25,177	-	25,177
Employee 81	-	-	-	498,498	-	498,498
Employee 82	-	-	81,264	-	-	81,264
Employee 86	-	-	31,814	-	-	31,814
Employee 88	-	-	-	790,219	-	790,219
Employee 91	-	-	851	-	-	851
Employee 105	-	-	16,767	-	-	16,767
Employee 107	-	-	16,280	-	-	16,280
Employee 110	-	-	49,136	-	-	49,136
Not included in Layout Tracking	496,488	7,140,206	2,611,644	-	39,285,431	49,533,769
Grand Total	496,488	7,140,206	57,146,334	23,200,381	39,285,431	127,268,839

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PART 1 REPORT

APPENDIX 6.1
Construction and PI work undertaken by Felix Associates

Organization	Region	PO Number	Project ID	Construction		PI		Total amount paid (\$)	Total amount paid for projects reviewed by KPMG (\$)	Note
				No. of POs	Amount paid (\$)	No. of Projects	Amount paid (\$)			
Construction	Manhattan		801NYSE - Broad Street Turntables			1	20,861	20,861		
	Manhattan		Barclay Street 16 Gas			1	282,072	282,072		
	Manhattan	626741	FELIX - 626741	1	505,398			505,398		
	Manhattan		Felix -- Catch Basins North of Canal			1	107,664	107,664		
	Manhattan	629159	FELIX - 629159	1	1,446,398			1,446,398	1,446,398	
	Manhattan	727734	FELIX - 727734	1	2,180,740			2,180,740	2,180,740	
	Manhattan	730483	FELIX 730483 MADISON ST	1	300,000			300,000	300,000	
	Manhattan	519561	FELIX ASSOCIATES - 519561	1	53,219,195			53,219,195	53,219,195	
	Manhattan	436606	FELIX GAS CORRISION PROJECT	1	3,230,736			3,230,736		
	Manhattan		Felix- Maiden Lane			1	177,426	177,426		
	Manhattan		Felix- TA-A-36024 Cortlandt St			1	85,446	85,446		
	Manhattan		Felix-William St Reconstruction			1	6,357,448	6,357,448		
	Manhattan		HWK-472-W PH/1			1	145,161	145,161		
	Manhattan		HWMWTC4R - Beaver Street			1	848,230	848,230		
	Manhattan		HWMWTC4R-Felix Resurf s/o Canal St			1	39,062,595	39,062,595	39,062,595	
	Manhattan		HWMWTC6-A Bway Phase 1			1	449,295	449,295		
	Manhattan	431568	Lenox 147 H.P.Gas G-03-911	1	905,807			905,807		
	Manhattan		QED-988-Felix Water Mains			1	830,417	830,417		
	Subtotal Manhattan			7	61,788,275	11	48,366,616	110,154,891	96,208,929	
	Westchester	626324	FELIX AREA - 2006	1	23,200,381			23,200,381	23,200,381	
	Westchester	728835	FELIX TURNKEY - 728835	1	692,497			692,497		
	Westchester	828006	FELIX W RATE CASE 828006	1	3,298,725			3,298,725		
	Subtotal Westchester			3	27,191,603			27,191,603	23,200,381	
	Bronx		Bronx Terminal Market Extra Work			1	12,162	12,162		
	Bronx		EDC 25810003 Felix			1	222,836	222,836	222,836	
	Bronx	626383	FELIX 626383 - BRONX	1	496,488			496,488	496,488	
	Subtotal Bronx			1	496,488	2	234,999	731,486	719,324	
	General		801NYSE - Broad Street Turntables			1	411,255	411,255		
	General	522762	Felix - 21455-05	1	270,468			270,468		
	General	628340	FELIX (6-28340)	1	4,965,012			4,965,012		
	General	828266	Felix (8-28266)	1	7,140,206			7,140,206	7,140,206	
	General	731409	FELIX ASSOCIATES (7-31409)	1	4,439,993			4,439,993		
	General	437003	FELIX ASSOCIATES LLC (4-37003)	1	7,817,035			7,817,035		
	General	831012	FELIX ASSOCIATES LLC (8-31012)	1	722,592			722,592		
	General	731857	FELIX L/M LADDER	1	183,594			183,594		
	General	831030	Felix PO 8-31030	1	802,712			802,712		
	General		HWMWTC4R - Beaver Street			1	2,491,171	2,491,171		
	Subtotal General			8	26,341,611	2	2,902,427	29,244,037	7,140,206	
	Queens		QED-988			1	136,776	136,776		
	Brooklyn		HWK-693W KENT AVE			1	108,300	108,300		
Steam Operations	Manhattan	829491	Steam annual Felix 829491	1	7,017,364			7,017,364		
	Manhattan	520499	STEAM UNIT PRICE - FELIX	1	30,616,032			30,616,032		
	Subtotal Manhattan			2	37,633,396			37,633,396		
Payments in COMPASS				21	153,451,372	15	51,749,117	205,200,489	127,268,839	1

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PART 1 REPORT

APPENDIX 6.1
Construction and PI work undertaken by Felix Associates

Organization	Region	PO Number	Project ID	Construction		PI		Total amount paid (\$)	Total amount paid for projects reviewed by KPMG (\$)	Note
				No. of POs	Amount paid (\$)	No. of Projects	Amount paid (\$)			
Construction	General	799062		1	10,319,799			10,319,799	10,319,799	2
Engineering & Planning	Manhattan	434146		1	14,612			14,612		
	Manhattan	434215		1	153,747			153,747		
	Manhattan	521830		1	94,382			94,382		
Subtotal Engineering & Planning				3	262,741			262,741	10,319,799	
Facilities	General	433183		1	2,178			2,178		
Gas Operations	Bronx	729577		1	1,011,235			1,011,235		
	Bronx	731972		1	6,338,014			6,338,014		
Subtotal Gas Operations				2	7,349,249			7,349,249		
	Manhattan	519829		1	10,648,829			10,648,829		
	Queens	729576		1	562,933			562,933		
Subtotal Steam Operations				4	18,561,011			18,561,011		
Steam Operations	Manhattan	435375		1	5,773,782			5,773,782		
	Manhattan	435574		1	1,905,778			1,905,778		
	Manhattan	726873		1	63,982			63,982		
	Manhattan	937956		1	106,418			106,418		
Subtotal Steam Operations				4	7,849,961			7,849,961		
Substation Operations	General	628852		1	30,917			30,917		
System & Transmission Ops	General	730248		1	386,087			386,087		
Payments outside COMPASS				15	37,412,692			37,412,692	10,319,799	
Total				36	190,864,065	15	51,749,117	242,613,182	137,588,638	3

Note

1. Total number of PI projects in COMPASS (15) does not cast because two projects (801NYSE - Broad Street Turntables and HWMWTC44R - Breaver Street) are invoiced under more than one region (ie Manhattan and General).
2. Project managed by Construction Management but processed through PMS not COMPASS.
3. KPMG looked at certain layouts within projects (one project can have more than one layout). The total of all the projects was \$138 million.

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APPENDIX 6.2
Macro/Micro Queries

Population tested All Felix Associates cuts
Size of Population All items included in Normal trenching manual - \$55,512,078
Methodology Items are identified in the Trenching Manual that should not be included in the same cut as with other items
A unique identifier is applied to each cut (this may be at the bearing or layout level if individual cuts are not identified).
Search each cut for any items in the identified routines that should not be together.

List of routines The items in Column A should not be included in the same cut as the items in Column B.
The number of "cuts" where this has occurred is then listed

Routine number	A	B	Number of hits
1	T1	T1R	-
2	T2	T2R	-
3	T2C	T2CR	-
4	T2SC	T2SCA	-
5	T2H	T2HA	-
6	T3	T3R	-
7	T4	T4R	-
8	T5	T5R	-
9	T6	T6R	-
10	T7	T7R	-
11	T8	T8R	-
12	T9	T9R	-
13	T21	T21R	-
14	T22	T22R	-
15	T23	T23R	-
16	T41	T41A	-
17	T43	T43A	-
18	T44	T44A	-
19	T47	T47A	-
20	T48	T48R	-
21	T49	T49A	-
22	T57	T58	-
23	T117	T118	43
24	T171	T171C	-
25	T172	T172C	-
26	T173	T173C	-
27	T174	T174C	-
28	T175	T176	-
29	T46E	T46F	-
30	T200CA	T200CB	-
31	T1R, T2R, T3R, T4R, T10, T11, T12, T13	T31, T32	-
32	T10, T11, T12, T13, T2AIA, T2SCA, T2HA	T14	-
33	T5R, T6R, T7R, T8R	T31, T32, T190, T191, T192	1
34	T1, T1R, T2, T2R, T3, T3R, T4, T4R, T5, T5R, T6, T6R, T7, T7R, T8, T8R, T9, T9R, T10, T11, T12, T13	T33, T33A, T34, T35, T21, T21R, T22, T22R, T23, T23R	17
35	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R, T10, T11, T12, T13	T30	-
36	T2AI, T2AIX, T2AIA	T33, T33A, T34, T35	7
37	T2C, T2CR, T2SC, T2SCA, T2H, T2HA	T33, T33A, T34, T35, T21, T21R, T22, T22R, T23, T23R	-
38	T2AI, T2AIX, T2AIA, T2AIX	T21, T21R, T22, T22R, T23, T23R, T40A, T40B, T41, T41A, T42, T42A, T42M, T42AM, T43, T44, T44A, T45A, T45B, T45C, T45D	1
39	T2SC, T2SCA, T2H, T2HA	T40A, T40B, T41, T41A, T42, T42A, T42M, T42AM, T43, T44, T44A, T45, T45A, T45B, T45C, T45D	-
40	T2AI, T2AIX, T2AIA, T2AIX, T2SC, T2SCA, T2H, T2HA	T101, T103, T104, T180, T181, T182, T183, T184, T185, T185A	102
41	T2AI, T2AIX, T2AIA, T2AIX, T2SC, T2SCA, T2H, T2HA	T185B, T185C, T185D, T186A, T186B, T186, T187, T188, T189, T189A, T90, T91, T92, T93, T94, T95, T96, T97, T30, T31, T32	1
42	T40A, T40B	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T45A, T45B, T45C, T45D	10
43	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D	T90, T91, T92, T93, T94, T95, T96, T97	350
44	T46, T46A, T47, T47A, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	3
45	T46, T46A, T46B, T47, T47A, T48, T48R, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T33, T33A, T34, T35	1
46	T46, T46A, T47, T47A, T48, T48R, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T21, T21R, T22, T22R, T23, T23R	-
47	T46, T46A, T46B, T47, T47A, T48, T48R, T49, T49A, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	2

Routine number	A	B	Number of hits
48	T46, T46A, T47, T47A, T48, T48R, T49, T49A, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB, T232	T101, T103, T104	16
49	T46, T46A, T46B, T47, T47A, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB, T42MQ, T42AMQ, T44M, T44AM	T180, T181, T182, T183, T184, T185, T185A, T185B, T185C, T185D, T186A, T186B, T187, T188, T189, T189A	3
50	T46, T46A, T46B, T47, T47A, T48, T48R, T49, T49A, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T40B, T90, T91, T92, T93, T94, T95, T96, T97	50
51	T46A, T47A, T46LA, T47LA, T189, T46F, T200CA	T14	-
52	T46, T46A, T47, T47A, T48R, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R, T30, T31, T32	3
53	T46, T46A, T47, T46L, T47L, T46LA, T46D, T46E, T46F, T200CA, T200CB	T110, T112, T113, T114, T115, T116, T117, T118, T119, T120	13
54	T130, T131, T132, T133, T134, T135, T136, T37	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	8
55	T130, T131, T132, T133, T134, T135, T136, T37	T33, T33A, T34, T35	-
56	T130, T131, T132, T133, T134, T135, T136, T37	T21, T21R, T22, T22R, T23, T23R	3
57	T130, T131, T132, T133, T134, T135, T136, T37	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	11
58	T130, T131, T132, T133, T134, T135, T136, T37	T101, T103, T104	11
59	T130, T131, T132, T133, T134, T135, T136, T37	T40B, T90, T91, T92, T93, T94, T95, T96, T97	11
60	T130, T131, T132, T133, T134, T135, T136, T37	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R	-
61	T130, T131, T132, T133, T134, T135, T136, T37	T30, T31, T32	11
62	T130, T131, T132, T133, T134, T135, T136, T37	T110, T112, T113, T114, T115, T116, T117, T118, T119, T120	12
63	T139, T140, T140A, T141, T142	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	7
64	T139, T140, T140A, T141, T142	T33, T33A, T34, T35	-
65	T139, T140, T140A, T141, T142	T21, T21R, T22, T22R, T23, T23R	2
66	T139, T140, T140A, T141, T142	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	7
67	T139, T140, T140A, T141, T142	T101, T103, T104	7
68	T139, T140, T140A, T141, T142	T40B, T90, T91, T92, T93, T94, T95, T96, T97	7
69	T139, T140, T140A, T141, T142	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R	-
70	T139, T140, T140A, T141, T142	T30, T31, T32	7
71	T139, T140, T140A, T141, T142	T110, T112, T113, T114, T115, T116, T117, T118, T119, T120	7
72	T146, T147, T148, T149, T150, T151, T153, T155	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	7
73	T146, T147, T148, T149, T150, T151, T153, T155	T33, T33A, T34, T35	-
74	T146, T147, T148, T149, T150, T151, T153, T155	T21, T21R, T22, T22R, T23, T23R	2
75	T146, T147, T148, T149, T150, T151, T153, T155	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	8
76	T146, T147, T148, T149, T150, T151, T153, T155	T101, T103, T104	7
77	T146, T147, T148, T149, T150, T151, T153, T155	T40B, T90, T91, T92, T93, T94, T95, T96, T97	8
78	T146, T147, T148, T149, T150, T151, T153, T155	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R	-
79	T146, T147, T148, T149, T150, T151, T153, T155	T30, T31, T32	8
80	T146, T147, T148, T149, T150, T151, T153, T155	T110, T112, T113, T114, T115, T116, T117, T118, T119, T120	10
81	T160	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T33, T33A, T34, T35, T21, T21R, T22, T22R, T23, T23R, T30, T31, T32	4
82	T160	T40A, T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	4
83	T160	T40B, T90, T91, T92, T93, T94, T95, T96, T97	4
84	T160	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R, T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T33, T33A, T34, T35, T30, T31, T32	4
85	T170, T170A, T170C, T171, T171C, T172, T172C, T173, T173C, T174, T174C, T175, T176	T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D, T40A	11
86	T170, T170A, T170C, T171, T171C, T172, T172C, T173, T173C, T174, T174C, T175, T176	T40B, T90, T91, T92, T93, T94, T95, T96, T97	11
87	T170, T170A, T170C, T171, T171C, T172, T172C, T173, T173C, T174, T174C, T175, T176	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R	-
88	T170, T170A, T170C, T171, T171C, T172, T172C, T173, T173C, T174, T174C, T175, T176	T110, T112, T113, T114, T115, T116, T117, T118, T119, T120	10
89	T42MQ, T42AMQ, T44M, T44AM	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13	-
90	T42MQ, T42AMQ, T44M, T44AM	T33, T33A, T34, T35	-

Routine number	A	B	Number of hits
91	T42MQ, T42AMQ, T44M, T44AM	T40A, T41, T41A, T42, T42A, T42M, T42AM, T43, T43A, T44, T44A, T45A, T45B, T45C, T45D	-
92	T42MQ, T42AMQ, T44M, T44AM	T40B, T90, T91, T92, T93, T94, T95, T96, T97	-
93	T42MQ, T42AMQ, T44M, T44AM	T1R, T2R, T3R, T4R, T5R, T6R, T7R, T8R, T9R	-
94	T42MQ, T42AMQ, T44M, T44AM	T30, T31, T32, T101, T103, T104	-
95	T165	T166	-
96	T2AI	T90N,T91N,T92N,T97N, T90P,T92P,T97P, T90W,T92W,T97W	-
97	T41, T41A, T42, T42M, T42AM, T45A, T45B, T45C, T45D	T90N,T91N,T92N,T95N,T97N, T90P,T91P,T92P,T95P, T97P, T90W,T91W,T92W,T95W,T97W	-
98	T2AIN, T2AIP, T2AIW, T41N, T41P, T41W, T41AN, T41AP, T41AW, T42N, T42P, T42W, T42MN, T42MP, T42MW, T42AMN, T42AMP, T42AMW, T45AN, T45AP, T45AW, T45BN, T45BP, T45BW, T45CN, T45CP, T45CW, T45DN, T45DP, T45DW	T90,T91,T92,T95,T97, T90N,T91N,T92N,T95N,T97N, T90P,T91P,T92P,T95P, T97P, T90W, T91W, T92W, T95W, T97W	-
99	T46, T47, T48R, T48	T95N,T95P,T95W	-
100	T46N, T46P, T46W, T47N, T47P, T47W, T48RN, T48RP, T48RW, T48N, T48P, T48W	T95,T95N,T95P,T95W	-
101	T2AI, T2H, T2HA, T2SC,T46B, T49, T49A	T44N, T44P, T44W	-
102	T2AIN, T2AIP, T2AIW, T2HN, T2HP, T2HW, T2HAN, T2HAP, T2HAW, T2SCN, T2SCP, T2SCW, T46BN, T46BP, T46BW, T49N, T49P, T49W, T49AN, T49AP, T49AW, T125, T125N, T125P, T125W, T126, T126N, T126P, T126W, T127, T127N, T127P, T127W, T128, T128N, T128P, T128W	T44, T44N, T44P, T44W	3
103	T2AI, T2AIA	T31W, T32W, T31N, T32N, T31P,T32P	-
104	T2AIN, T2AIP, T2AIW, T2AIAN, T2AIAP, T2AIAW	T31, T32, T31W, T32W, T31N, T32N, T31P, T32P	-
105	T2HN, T2HP, T2HW, T2AIN, T2AIP, T2AIW, T2AIR, T2AIRN, T2AIRP, T2AIRW, T2AIAN, T2AIAP, T2AIAW	quantity <=5 cu yds	-
106	T1R, T2R, T2CR, T3R, T4R, T5R, T6R, T7R, T8R	T33N, T33P, T33W	-
107	T1RN, T1RP, T1RW, T2RN, T2RP, T2RW, T2CRN, T2CRP, T2CRW, T2AIR, T2AIRN, T2AIRP, T2AIRW, T3RN, T3RP, T3RW, T4RN, T4RP, T4RW, T5RN, T5RP, T5RW, T6RN, T6RP, T6RW, T7RN, T7RP, T7RW, T8RN, T8RP, T8RW	T33, T33N, T33P, T33W	-
108	T2AI, T2AIN, T2AIP, T2AIW, T2AIR, T2AIRN, T2AIRP, T2AIRW	T1, T2, T1N, T2N, T1P, T2P, T1W, T2W	-
109	T2AI, T2AIR	T46, T46A, T46B, T47, T47A	91
110	T2AIN, T2AIP, T2AIW, T2AIR, T2AIRN, T2AIRP, T2AIRW	T40A, T40B, T41A, T42, T42A, T42AM, T42M, T43, T43A, T44, T44A, T46, T46A, T46B, T47, T47A	-
111	T2AI	T101N, T101P, T101W, T103P, T104P,T103N, T104N,T103W, T104W	-
112	T2AIN, T2AIP, T2AIW, T2AIR, T2AIRN, T2AIRP, T2AIRW	T101,T101N, T101P, T101W, T103, T104, T103P, T104P,T103N, T104N,T103W, T104W	-
113	T46, T47	T180P, T182P, T183P,T180N, T182N, T183N,T180W, T182W, T183W	-
114	T46N, T46P, T46W, T47N, T47P, T47W	T180, T182, T183, T180P, T182P, T183P, T180N, T182N, T183N, T180W, T182W, T183W	-
115	T46, T47	T31P, T32P,T31N, T32N,T31W, T32W	-
116	T46N, T46P, T46W, T47N, T47P, T47W	T31, T32,T31P, T32P,T31N, T32N,T31W, T32W	-
117	T130 - T153	T2AI, T2AIX, T2AIA, T2AIAX, T2C, T2CR, T2SC, T2H,T46, T46A, T46B, T47, T47A, T48	3
118	T130, T130N, T130P, T130W	T125, T126, T127, T128, T129,T125P, T126P, T127P, T128P, T129P,T125N, T126N, T127N, T128N, T129N,T125W, T126W, T127W, T128W, T129W	2
119	T131, T131N, T131P, T131W	T125, T126, T127, T128, T129,T125P, T126P, T127P, T128P, T129P,T125N, T126N, T127N, T128N, T129N,T125W, T126W, T127W, T128W, T129W	-
120	T132, T132N, T132P, T132W	T125, T126, T127, T128, T129,T125P, T126P, T127P, T128P, T129P,T125N, T126N, T127N, T128N, T129N,T125W, T126W, T127W, T128W, T129W	-
121	T133, T133N, T133P, T133W	T125, T126, T127, T128, T129,T125P, T126P, T127P, T128P, T129P,T125N, T126N, T127N, T128N, T129N,T125W, T126W, T127W, T128W, T129W	-
122	T134, T134N, T134P, T134W	T125, T126, T127, T128, T129,T125P, T126P, T127P, T128P, T129P,T125N, T126N, T127N, T128N, T129N,T125W, T126W, T127W, T128W, T129W	-

Routine number	A	B	Number of hits
123	T135, T135N, T135P, T135W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
124	T136, T136N, T136P, T136W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
125	T137, T137N, T137P, T137W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
126	T139, T139N, T139P, T139W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
127	T140, T140N, T140P, T140W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
128	T141, T141N, T141P, T141W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
129	T142, T142N, T142P, T142W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
130	T146, T146N, T146P, T146W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
131	T147, T147N, T147P, T147W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
132	T148, T148N, T148P, T148W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
133	T149, T149N, T149P, T149W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
134	T150, T150N, T150P, T150W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
135	T151, T151N, T151P, T151W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-
136	T153, T153N, T153P, T153W	T125, T126, T127, T128, T129, T125P, T126P, T127P, T128P, T129P, T125N, T126N, T127N, T128N, T129N, T125W, T126W, T127W, T128W, T129W	-

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APPENDIX 6.3
Quantification of Macro/Micro Queries

Population tested All Felix Associates cuts
Size of Population All items included in Normal trenching manual - \$55,512,078
Methodology The routines with the most hits in Appendix 6.2 were refined as set out below and the "upcharge" item was quantified. The quantification was split dependent on whether the lowest level identified in COMPASS was a layout, a bearing or a cut. The routines were inspected (at the cut level) to identify if there was any double counting. These potential upcharges were then split by project.

Refined Query	A	B	Upcharge Item	Layout \$	Bearing \$	Cut \$	Total \$
40.1	T2AI	T101	T101	-	123,349	-	123,349
40.2	T2AIX	T101	T101	-	1,968	-	1,968
40.3	T2AIW	T101W	T101W	-	1,255	-	1,255
50.1	T46	T93	T93	503	-	-	503
50.2	T46	T94	T94	-	-	-	-
50.3	T46L	T97	T97	1,882	-	20,839	22,722
50.4	T46LA	T97	T97	-	-	140	140
23.1	T114	T110, T110W, T130, T131, T132, T133, T134, T135, T136, T137, T139, T140, T140A, T141, T142, T146, T147, T148, T149, T150, T151, T153, T170, T170A, T46L, T46LA, T46LA, T47LA, T46E, T46F, T200CA, T200CB, T46, T46A, T47, T47A, T49, T49A = 0	T114 when all B items =0	8,412	306,413	1,097	315,922
23.2	T115	T112, T112W, T130, T131, T132, T133, T134, T135, T136, T137, T139, T140, T140A, T141, T142, T146, T147, T148, T149, T150, T151, T153, T170, T170A, T46L, T46LA, T46LA, T47LA, T46E, T46F, T200CA, T200CB, T46, T46A, T47, T47A, T49, T49A = 0	T115 when all B items =0	-	-	-	-
23.3	T116	T113, T113W, T130, T131, T132, T133, T134, T135, T136, T137, T139, T140, T140A, T141, T142, T146, T147, T148, T149, T150, T151, T153, T170, T170A, T46L, T46LA, T46LA, T47LA, T46E, T46F, T200CA, T200CB, T46, T46A, T47, T47A, T49, T49A = 0	T116 when all B items =0	-	-	-	-
23.4	T118	T117, T117W, T130, T131, T132, T133, T134, T135, T136, T137, T139, T140, T140A, T141, T142, T146, T147, T148, T149, T150, T151, T153, T170, T170A, T46L, T46LA, T46LA, T47LA, T46E, T46F, T200CA, T200CB, T46, T46A, T47, T47A, T49, T49A = 0	T118 when all B items =0	8,629	1,237	-	9,867
34.1	T2, T7R	T33	T33	2,622	308	-	2,930
34.2	T7R	T33A	T33A	-	25,080	-	25,080
34.3	T2, T2W	T21	T21	915	-	-	915
34.4	T2, T6, T6W	T22R	T22R	7,405	14,101	805	22,310
48.1	T46L, T46LA, T47LA	T101	T101	-	13,258	-	13,258
53.1	T46	T110	T110	375	-	-	375
53.2	T46L, T46LA	T114	T114	-	-	-	-
62.1	T133	T110	T110	17,807	-	10,222	28,029
62.2	T133	T113B	T113B	24,509	-	13,077	37,585
62.3	T133	T117	T117	2,401	-	-	2,401
62.4	T134	T110	T110	134,946	61,118	-	196,064
62.5	T134	T13B	T13B	546,660	117,967	-	664,626
62.6	T135	T110	T110	-	-	261	261
62.7	T135	T113B	T113B	-	-	9,470	9,470
62.8	T135	T117	T117	-	-	1,558	1,558
62.9	T135W	T110	T110	1,887	-	-	1,887
62.10	T135W	T113B	T113B	29,979	-	-	29,979
62.11	T135W	T117	T117	2,510	-	-	2,510
57.1	T133	T41	T41	99,006	-	31,180	130,187
57.2	T134, T134W	T41, T41W	T41	1,255,348	552,857	-	1,808,206
57.3	T135, T135W	T41	T41	46,817	-	22,588	69,405
58.1	T133, T133W	T101, T101W	T101, T101W	16,267	-	35,727	51,995
58.2	T134, T134 W	T101, T101W	T101, T101W	344,273	167,819	-	512,092
58.3	T135, T135W	T101, T101W	T101, T101W	14,860	-	5,608	20,467
61.1	T133	T30	T30	8,630	-	10,384	19,013
61.2	T133	T31	T31	36,733	-	-	36,733
61.3	T134, T134W	T30, T30W	T30, T30W, T32	160,288	65,287	-	225,575
61.4	T134, T134W	T31, T31W	T31	7,852	-	-	7,852
61.5	T135, T135W	T30, T30W, T32	T30, T30W, T32	3,882	-	483	4,365
85.1	T171	T41, T41W, T42, T42W	T41, T41W, T42, T42W	22,808	-	-	22,808
85.2	T174	T41, T41W, T42, T42W	T41, T41W, T42, T42W	830,547	-	-	830,547
85.3	T175	T41, T41W, T42, T42W, T45A, T45C	T41, T41W, T42, T42W, T45A, T45C	608,684	-	-	608,684
85.4	T176	T41, T41W, T42, T42W, T45A, T45C	T41, T41W, T42, T42W, T45A, T45C	169,458	-	17,787	187,244
109.1	T2AI, T2AIR	T46, T46A, T46B, T47, T47A	T46, T46A, T46B, T47, T47A	-	176,972	-	176,972
Double Counting				(1,373,192)	-	-	(1,373,192)
				3,043,703	1,628,989	181,225	4,853,916

Project ID	Area	Layout \$	Bearing \$	Cut \$	Total \$
FELIX - 727734	Construction - Manhattan				20,979
FELIX ASSOCIATES - 519561	Construction - Manhattan		758	20,221	652,398
FELIX AREA - 2006	Construction - Westchester	7,319	643,982	1,097	4,175,718
FELIX TURNKEY - 728835	Construction - Westchester	3,025,767	990,802	159,149	1,968
FELIX W RATE CASE 828006	Construction - Westchester	2,853	1,968		2,853
Total		3,035,939	1,637,510	180,467	4,853,916

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**APPENDIX 6.4
Quantification of Mutually Exclusive Queries**

Population tested All Felix Associates cuts
Size of Population All items included in Normal trenching manual - \$55,512,078
Methodology Items that should not be included together were identified at a cut level.
The only set of items to identify significant results was items T50, T51, T52, T53, T54, T55 and T56 should not be included in the same cut.
The lowest of these charges was deemed to be at risk.

Results

Row Labels	Layout	Bearing	Cut	Total
Construction - Manhattan	14,443	6,193	2,295	22,930
Construction - Westchester	7,634	5,745	14,715	28,094
Total	22,077	11,938	17,009	51,024

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APPENDIX 6.5

Analysis of "at risk" payments for inappropriate use of weekend codes

Population tested All Felix Associates items paid within COMPASS
Size of Population 134,768 items. \$205,200,489
Methodology Identify all item codes with a "W" suffix with a date of work that is not a Saturday or Sunday

Results

	T&E Weekend Work not on a weekend \$	Unit Price Weekend Work not on a weekend \$	Total \$	Number of affected layouts
Construction - Manhattan	658,648	2,512	661,159	324
Construction - Westchester	800,001	1,541,504	2,341,505	65
Steam	2,608,852	4,719	2,613,571	567
Total	4,067,501	1,548,734	5,616,235	956

Markup	T&E Weekend Work not on a weekend \$	Unit Price Weekend Work not on a weekend \$	Total \$
Construction - Manhattan	131,730	502	132,232
Construction - Westchester	160,000	308,301	468,301
Steam	521,770	944	522,714
Total	813,500	309,747	1,123,247

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APPENDIX 6.6

Analysis of "at risk" payments for net unreconciled Debits

Population tested All Felix Associates layouts within COMPASS
Size of Population 5,102 layouts. \$205,200,489
Methodology Allocate all costs to one of the following categories:
 Debit/Credit
 Lump sum
 Retain (an amount retained on a lump sum job prior to completion)
 T&E
 Unit Price
 Void
 Identify all layouts where there is either an overall net debit or an overall net credit.

Results

	Total Net Debits \$	Total Net Credits \$	Sum of Net Debits and Credits \$
Construction - Manhattan	3,127,722	(207,298)	2,920,423
Construction - Westchester	1,985,548	(622,214)	1,363,334
Public Improvement	1,797,669	(82,441)	1,715,228
Steam	915,428	(1,692,094)	(776,666)
Total	7,826,366	(2,604,048)	5,222,319

	Number of layouts with Net Debits	Number of layouts with Net Credits	Number of layouts with Net Debits or Credits
Construction - Manhattan	31	38	69
Construction - Westchester	43	11	54
Public Improvement	58	11	69
Steam	526	664	1190
Total	658	724	1382

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APPENDIX 6.7

Analysis of proportion of T+E within layouts

Population tested All Felix Associates layouts classified as Construction within COMPASS
Size of Population 4,978 layouts. \$153,451,372
Methodology Allocate all costs to one of the following categories:
Debit/Credit
Lump sum
Retain (an amount retained on a lump sum job prior to completion)
T&E
Unit Price
Void
Calculate the percentage of the total spend on each layout that is constituted by T&E

Results

Percentage of T&E	Total amount paid for invoices \$	Amount paid for T&E within invoice \$	Percentage of population	Number of Layouts
0%	34,985,841	28,423	23%	882
0-10%	31,659,591	1,911,067	21%	935
10-20%	34,023,325	5,119,065	22%	1,237
20-30%	20,731,504	5,106,415	14%	755
30-40%	14,172,168	4,844,282	9%	423
40-50%	8,360,834	3,729,674	5%	200
50-60%	2,274,749	1,233,728	1%	78
60-70%	1,218,851	780,269	1%	56
70-80%	1,175,252	891,593	1%	144
80-90%	1,603,014	1,367,163	1%	167
90-100%	3,246,242	3,335,446	2%	101
Total	153,451,372	28,347,124	100%	4,978

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APPENDIX 6.8

Contract types for Construction (excluding Public Improvement) work undertaken by Felix Associates

Organization	Region	PO Number	Project ID	Spot		Blanket		Total No. of POs	Total amount paid (\$)	Total amount paid for projects reviewed by KPMG (\$)	Note
				No. of POs	Amount paid (\$)	No. of POs	Amount paid (\$)				
Construction	Bronx	626383	FELIX 626383 - BRONX	1	496,488			1	496,488	496,488	2
	Manhattan	431568	Lenox 147 H.P.Gas G-03-911	1	905,807			1	905,807		
	Manhattan	436606	FELIX GAS CORRISION PROJECT	1	3,230,736			1	3,230,736		
	Manhattan	519561	FELIX ASSOCIATES - 519561			1	53,219,195	1	53,219,195	53,219,195	
	Manhattan	626741	FELIX - 626741	1	505,398			1	505,398		2
	Manhattan	629159	FELIX - 629159	1	1,446,398			1	1,446,398	1,446,398	2
	Manhattan	727734	FELIX - 727734			1	2,180,740	1	2,180,740	2,180,740	3
	Manhattan	730483	FELIX 730483 MADISON ST	1	300,000			1	300,000	300,000	
	Subtotal Manhattan			5	6,388,340	2	55,399,935	7	61,788,275	57,146,334	
	Westchester	626324	FELIX AREA - 2006	1		1	23,200,381	1	23,200,381	23,200,381	
	Westchester	728835	FELIX TURNKEY - 728835			1	692,497	1	692,497		
	Westchester	828006	FELIX W RATE CASE 828006			1	3,298,725	1	3,298,725		
	Subtotal Westchester					3	27,191,603	3	27,191,603	23,200,381	
	General	437003	FELIX ASSOCIATES LLC (4-37003)	1	7,817,035			1	7,817,035		
	General	522762	Felix - 21455-05	1	270,468			1	270,468		2
	General	628340	FELIX (6-28340)	1	4,965,012			1	4,965,012		
	General	731409	FELIX ASSOCIATES (7-31409)	1	4,439,993			1	4,439,993		
	General	731857	FELIX L/M LADDER			1	183,594	1	183,594		3
	General	828266	Felix (8-28266)	1	7,140,206			1	7,140,206	7,140,206	2
	General	831012	FELIX ASSOCIATES LLC (8-31012)	1	722,592			1	722,592		
	General	831030	Felix PO 8-31030	1	802,712			1	802,712		
	Subtotal General			7	26,158,017	1	183,594	8	26,341,611	7,140,206	
Subtotal Construction				13	33,042,845	6	82,775,132	19	115,817,976	87,983,408	
Steam Operations	Manhattan	520499	STEAM UNIT PRICE - FELIX			1	30,616,032	1	30,616,032		
	Manhattan	829491	Steam annual Felix 829491			1	7,017,364	1	7,017,364		
						2	37,633,396	2	37,633,396		
Subtotal Steam Operations						2	37,633,396	2	37,633,396		
Payments in COMPASS				13	33,042,845	8	120,408,528	21	153,451,372	87,983,408	
Construction	General	799062				1	10,319,799	1	10,319,799	10,319,799	1, 3
Engineering & Planning	Manhattan	434146		1	14,612			1	14,612		
	Manhattan	434215		1	153,747			1	153,747		
	Manhattan	521830				1	94,382	1	94,382		3
Subtotal Engineering & Planning				2	168,359	1	94,382	3	262,741		
Facilities	General	433183				1	2,178	1	2,178		3
Gas Operations	Bronx	729577				1	1,011,235	1	1,011,235		
	Bronx	731972				1	6,338,014	1	6,338,014		
	Subtotal Bronx					2	7,349,249	2	7,349,249		
	Manhattan	519829				1	10,648,829	1	10,648,829		
	Queens	729576				1	562,933	1	562,933		
Subtotal Gas Operations						2	18,561,011	2	18,561,011		
Steam Operations	Manhattan	435375				1	5,773,782	1	5,773,782		
	Manhattan	435574				1	1,905,778	1	1,905,778		
	Manhattan	726873				1	63,982	1	63,982		3
	Manhattan	937956				1	106,418	1	106,418		
Subtotal Steam Operations						4	7,849,961	4	7,849,961		
Substation Operations	General	628852				1	30,917	1	30,917		
System & Transmission Ops	General	730248				1	386,087	1	386,087		
Payments outside COMPASS				2	168,359	13	37,244,333	15	37,412,692	10,319,799	
Total				15	33,211,203	21	157,652,861	36	190,864,065	98,303,207	

Note

1. Project managed by Construction Management but processed through PMS not COMPASS.
2. Spot Buy according to the requisition but Blanket Order according to the PO. Contract treated as Spot Buy.
3. Spot Buy according to the requisition but Blanket Order according to the PO. Contract treated as Blanket Order.

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APPENDIX 6.9

Modifications to Spot Buy contracts for construction work undertaken by Felix Associates

Organization	Region	PO Number	Project ID	Modified						Not modified			Total amount paid for KPMG projects (\$)	
				No. of POs	Initial auth amount (\$)	Additional amount (\$)	Final auth amount (\$)	Amount paid (\$)	Excess of amount paid over initial auth amount (\$)	No. of POs	Auth amount (\$)	Amount paid (\$)		Total amount paid (\$)
Construction	Manhattan	431568	Lenox 147 H.P.Gas G-03-911	1	824,000	73,260	897,260	905,807	81,807				905,807	
	Manhattan	436606	FELIX GAS CORRISSION PROJECT	1	550,000	2,684,220	3,234,220	3,230,736	2,680,736				3,230,736	
	Manhattan	626741	FELIX - 626741	1	308,000	198,000	506,000	505,398	197,398				505,398	
	Manhattan	629159	FELIX - 629159	1	1,000,000	447,000	1,447,000	1,446,398	446,398				1,446,398	1,446,398
	Manhattan	730483	FELIX 730483 MADISON ST	1	214,510	125,500	340,010	300,000	85,490				300,000	300,000
	Subtotal Manhattan			5	2,896,510	3,527,980	6,424,490	6,388,340	3,491,830				6,388,340	1,746,398
	Bronx	626383	FELIX 626383 - BRONX	1	297,000	232,000	529,000	496,488	199,488				496,488	496,488
	General	437003	FELIX ASSOCIATES LLC (4-37003)	1	2,397,415	5,419,626	7,817,041	7,817,035	5,419,620				7,817,035	
	General	522762	Felix - 21455-05	1	260,000	10,470	270,470	270,468	10,468				270,468	
	General	628340	FELIX (6-28340)	1	4,149,010	857,695	5,006,705	4,965,012	816,002				4,965,012	
	General	831012	FELIX ASSOCIATES LLC (8-31012)	1	1,115,370	35,630	1,151,000	722,592	-				722,592	
	General	731409	FELIX ASSOCIATES (7-31409)							1	4,745,380	4,439,993	4,439,993	
	General	828266	Felix (8-28266)							1	8,444,000	7,140,206	7,140,206	7,140,206
	General	831030	Felix PO 8-31030							1	3,957,262	802,712	802,712	
	Subtotal General			4	7,921,795	6,323,421	14,245,216	13,775,107	6,246,090	3	17,146,642	12,382,910	26,158,017	7,140,206
Payments in COMPASS				10	11,115,305	10,083,401	21,198,706	20,659,934	9,937,407	3	17,146,642	12,382,910	33,042,845	9,383,092
Engineering & Planning	Manhattan	434215		1	135,000	21,872	156,872	153,747	18,747				153,747	
	Manhattan	434146								1	18,500	14,612	14,612	
Payments outside COMPASS				1	135,000	21,872	156,872	153,747	18,747	1	18,500	14,612	168,359	
Total				11	11,250,305	10,105,273	21,355,578	20,813,681	9,956,154	4	17,165,142	12,397,522	33,211,203	9,383,092

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APPENDIX 6.10

Modifications to Blanket contracts for construction work undertaken by Felix Associates

Organization	Region	PO Number	Project ID	Modified						Not modified			Total amount paid for KPMG projects (\$)	Reason for modification	Note	
				No. of POs	Initial auth amount (\$)	Additional amount (\$)	Final auth amount (\$)	Amount paid (\$)	Excess of amount paid over initial auth amount (\$)	No. of POs	Auth amount (\$)	Amount paid (\$)				Total amount paid (\$)
Construction	Manhattan	519561	FELIX ASSOCIATES - 519561	1	31,000,000	23,873,801	54,873,801	53,219,195	22,219,195				53,219,195	53,219,195	Time extension (12 mths and 10 mths), unexpected volume of work and remediate work	
	Manhattan	727734	FELIX - 727734	1	3,000,000	430,000	3,430,000	2,180,740	-				2,180,740	2,180,740	Time extension (12 mths)	
	Subtotal Manhattan			2	34,000,000	24,303,801	58,303,801	55,399,935	22,219,195				55,399,935	55,399,935		
	Westchester	626324	FELIX AREA - 2006	1	15,900,000	14,500,000	30,400,000	23,200,381	7,300,381				23,200,381	23,200,381	Additional work	
	Westchester	728835	FELIX TURNKEY - 728835							1	1,000,000	692,497	692,497			
	Westchester	828006	FELIX W RATE CASE 828006							1	9,000,000	3,298,725	3,298,725			
	Subtotal Westchester			1	15,900,000	14,500,000	30,400,000	23,200,381	7,300,381	2	10,000,000	3,991,222	27,191,603	23,200,381		
	General	731857	FELIX L/M LADDER							1	2,000,000	183,594	183,594			
Subtotal Construction				3	49,900,000	38,803,801	88,703,801	78,600,316	29,519,576	3	12,000,000	4,174,816	82,775,132	78,600,316		
Steam Operations	Manhattan	520499	STEAM UNIT PRICE - FELIX	1	17,600,000	14,000,000	31,600,000	30,616,032	13,016,032				30,616,032		Time extension (12 mths)	
	Manhattan	829491	Steam annual Felix 829491							1	15,000,000	7,017,364	7,017,364			
Subtotal Steam Operations				1	17,600,000	14,000,000	31,600,000	30,616,032	13,016,032	1	15,000,000	7,017,364	37,633,396			
Payments in COMPASS				4	67,500,000	52,803,801	120,303,801	109,216,348	42,535,608	4	27,000,000	11,192,180	120,408,528	78,600,316		
Construction	Manhattan	799062		1	7,500,000	3,500,000	11,000,000	10,319,799	2,819,799				10,319,799	10,319,799	Unknown	
Engineering & Planning		521830		1	100,000	99,654	199,654	94,382	-				94,382		Unknown	
Facilities		433183								1	2,180	2,178	2,178			
Gas Operations		729577								1	2,513,400	1,011,235	1,011,235			
		731972								1	15,000,000	6,338,014	6,338,014			
		519829		1	10,400,000	1,000,000	11,400,000	10,648,829	248,829				10,648,829		Additional work	1
		729576								1	1,207,701	562,933	562,933			
Subtotal Gas Operations				1	10,400,000	1,000,000	11,400,000	10,648,829	248,829	3	18,721,101	7,912,182	18,561,011			
Steam Operations		435375								1	14,400,002	5,773,782	5,773,782			
		435574								1		1,905,778	1,905,778			
		726873								1	60,000	63,982	63,982			
		937956								1		106,418	106,418			
Subtotal Steam Operations				4						14,460,002	7,849,961	7,849,961				
Substation Operations		628852								1		30,917	30,917			
System & Transmission Ops		730248								1	5,000,000	386,087	386,087			
Payments outside COMPASS				3	18,000,000	4,599,654	22,599,654	21,063,009	3,068,627	10	38,183,283	16,181,324	37,244,333	10,319,799		
Total				7	85,500,000	57,403,455	142,903,455	130,279,357	45,604,235	14	65,183,283	27,373,504	157,652,861	88,920,115		

Note

1. Authorized amount increased by \$1 or \$2.

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APPENDIX 6.11
Involvement of employees in Layout Tracking for Felix Associates projects

Population tested All Felix Associates layouts within COMPASS
Size of Population 5,102 layouts. \$205,200,489
Methodology Match all layouts within COMPASS to the layout within LOT and identify the CR and CCI
Arrested employees are in **bold**.

CCI	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
COOK, KEVIN	-	-	-	-	236,388	-	236,388
LIOI, JOSEPH	-	-	-	-	6,703,172	-	6,703,172
PANAGI, ABRAHAM	-	-	878,612	-	-	-	878,612
ZEBLER, RICHARD	-	-	55,291,141	-	-	-	55,291,141
Arrested Employees	-	-	56,169,753	-	6,939,560	-	63,109,313
Employee 4	-	-	77,536	-	-	-	77,536
Employee 18	-	-	-	-	2,462,848	-	2,462,848
Employee 30	-	-	-	-	13,397	-	13,397
Employee 39	-	-	-	-	518,716	-	518,716
Employee 41	-	-	49,136	-	16,809,360	-	16,858,496
Employee 46	-	-	385,050	-	-	-	385,050
Employee 53	-	-	506,712	-	-	-	506,712
Employee 72	-	-	20,975	-	-	-	20,975
Employee 93	-	-	266,208	-	-	-	266,208
Employee 96	-	-	-	-	402,762	-	402,762
Non-Arrested Employees	-	-	1,305,618	-	20,207,083	-	21,512,701
Not identified in Layout Tracking	-	-	764,965	-	31,570	-	796,535
Total included in Layout Tracking	-	-	58,240,336	-	27,178,213	-	85,418,549
Layouts not included in Layout Tracking	496,488	26,341,611	3,547,939	37,633,396	13,390	51,749,117	119,781,940
Total	496,488	26,341,611	61,788,275	37,633,396	27,191,603	51,749,117	205,200,489

CR	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
DIROMA, LEONARD	-	-	-	-	1,357,576	-	1,357,576
Arrested Employees	-	-	-	-	1,357,576	-	1,357,576
Employee 1	-	-	2,549	-	-	-	2,549
Employee 7	-	-	-	-	50,579	-	50,579
Employee 8	-	-	39,235	-	-	-	39,235
Employee 9	-	-	-	-	923,298	-	923,298
Employee 13	-	-	-	-	792,927	-	792,927
Employee 22	-	-	208,021	-	-	-	208,021
Employee 26	-	-	-	-	116,745	-	116,745
Employee 28	-	-	-	-	2,266,472	-	2,266,472
Employee 32	-	-	-	-	1,908,609	-	1,908,609
Employee 34	-	-	-	-	196,234	-	196,234
Employee 37	-	-	-	-	47,607	-	47,607
Employee 38	-	-	1,697,368	-	-	-	1,697,368
Employee 40	-	-	-	-	360,184	-	360,184
Employee 43	-	-	-	-	33,677	-	33,677
Employee 45	-	-	-	-	174,684	-	174,684
Employee 48	-	-	9,863,689	-	-	-	9,863,689
Employee 50	-	-	-	-	1,668,828	-	1,668,828
Employee 51	-	-	33,680,451	-	-	-	33,680,451
Employee 58	-	-	-	-	139,156	-	139,156
Employee 62	-	-	-	-	10,532,134	-	10,532,134
Employee 63	-	-	-	-	29,782	-	29,782
Employee 65	-	-	130,000	-	-	-	130,000
Employee 66	-	-	4,736,293	-	-	-	4,736,293
Employee 69	-	-	69,922	-	-	-	69,922
Employee 71	-	-	81,811	-	-	-	81,811
Employee 76	-	-	-	-	2,716,070	-	2,716,070
Employee 77	-	-	6,305,484	-	-	-	6,305,484
Employee 78	-	-	-	-	1,147,912	-	1,147,912
Employee 80	-	-	-	-	25,177	-	25,177
Employee 81	-	-	-	-	498,498	-	498,498
Employee 82	-	-	81,264	-	-	-	81,264
Employee 86	-	-	31,814	-	-	-	31,814
Employee 88	-	-	-	-	790,219	-	790,219
Employee 91	-	-	851	-	-	-	851
Employee 95	-	-	-	-	148,442	-	148,442
Employee 105	-	-	16,767	-	-	-	16,767
Employee 106	-	-	-	-	119,559	-	119,559
Employee 107	-	-	16,280	-	-	-	16,280
Employee 110	-	-	49,136	-	-	-	49,136
Non-Arrested Employees	-	-	57,010,936	-	24,686,792	-	81,697,729
Not identified in Layout Tracking	-	-	1,229,400	-	1,133,844	-	2,363,244
Total included in Layout Tracking	-	-	58,240,336	-	27,178,213	-	85,418,549
Not included in Layout Tracking	496,488	26,341,611	3,547,939	37,633,396	13,390	51,749,117	119,781,940
Total	496,488	26,341,611	61,788,275	37,633,396	27,191,603	51,749,117	205,200,489

APPENDIX 6.12
Involvement of employees in COMPASS for Felix Associates projects

Population tested All Felix Associates layouts within COMPASS
Size of Population 3,309 sysbills. \$205,200,489
Methodology Identify Construction Manager, Technical Reviewer and Creator for each Felix Associates sysbill in COMPASS.
 Identify sysbills where Technical Reviewer and Creator are the same individual.
 Arrested employees are in **bold**.

Construction Manager	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Construction - Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
R Fassacesia	-	-	60,712,290	-	-	-	60,712,290
P Sanabria	496,488	-	-	-	2,816,165	-	3,312,652
Cooperating Witness	-	-	-	-	-	11,211,501	11,211,501
Total Arrested Employees	496,488	-	60,712,290	-	2,816,165	11,211,501	75,236,444
Employee 3	-	636,517	-	-	-	-	636,517
Employee 5	-	258,718	-	-	-	-	258,718
Employee 6	-	-	-	-	-	26,763,826	26,763,826
Employee 20	-	-	905,807	-	-	7,909,514	8,815,321
Employee 25	-	-	-	-	-	245,076	245,076
Employee 33	-	-	-	37,633,396	-	-	37,633,396
Employee 49	-	-	-	-	-	234,999	234,999
Employee 61	-	-	-	-	24,375,438	-	24,375,438
Employee 64	-	183,594	-	-	-	5,384,201	5,567,794
Employee 68	-	46,370	-	-	-	-	46,370
Employee 87	-	21,286,127	170,177	-	-	-	21,456,304
Employee 90	-	2,161,126	-	-	-	-	2,161,126
Employee 94	-	1,384,646	-	-	-	-	1,384,646
Employee 111	-	384,513	-	-	-	-	384,513
Total	496,488	26,341,611	61,788,275	37,633,396	27,191,603	51,749,117	205,200,489

Technical Reviewer	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Construction - Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
J Coffin	-	-	-	-	-	19,097,632	19,097,632
K Cook	-	-	-	-	12,596,263	-	12,596,263
R Giannetto	-	-	-	-	-	222,836	222,836
J Lioi	-	-	-	-	5,447,173	-	5,447,173
Cooperating Witness	-	-	834,832	-	-	5,266,442	6,101,274
A Villano	496,488	-	-	-	-	-	496,488
Total Arrested Employees	496,488	-	834,832	-	18,043,436	24,586,910	43,961,666
Employee 11	-	-	70,975	-	-	1,279,750	1,350,725
Employee 12	-	258,718	-	-	-	-	258,718
Employee 15	-	183,594	-	-	-	3,090,562	3,274,155
Employee 18	-	-	-	-	958,983	-	958,983
Employee 19	-	-	49,718	-	-	-	49,718
Employee 23	-	-	-	96,863	-	-	96,863
Employee 24	-	-	54,573,972	-	-	-	54,573,972
Employee 27	-	-	-	2,892,531	-	-	2,892,531
Employee 29	-	24,763,873	120,459	-	-	-	24,884,331
Employee 35	-	-	-	-	-	21,875,543	21,875,543
Employee 39	-	-	-	-	811,828	-	811,828
Employee 41	-	-	-	-	6,575,309	-	6,575,309
Employee 44	-	-	-	-	-	79,020	79,020
Employee 47	-	-	-	-	-	361,923	361,923
Employee 56	-	1,123,676	-	-	-	-	1,123,676
Employee 52	-	-	-	-	-	34,319	34,319
Employee 54	-	-	-	10,177,544	-	-	10,177,544
Employee 55	-	11,750	-	-	-	-	11,750
Employee 59	-	-	-	-	-	108,300	108,300
Employee 73	-	-	-	1,834,085	-	-	1,834,085
Employee 74	-	-	-	-	-	57,756	57,756
Employee 75	-	-	-	2,506,781	-	-	2,506,781
Employee 78	-	-	-	-	802,047	-	802,047
Employee 83	-	-	-	-	-	12,162	12,162
Employee 84	-	-	6,138,319	-	-	-	6,138,319
Employee 89	-	-	-	11,415,233	-	-	11,415,233
Employee 99	-	-	-	2,066,519	-	-	2,066,519
Employee 101	-	-	-	2,034,808	-	-	2,034,808
Employee 102	-	-	-	-	-	262,871	262,871
Employee 104	-	-	-	45,043	-	-	45,043
Employee 108	-	-	-	4,563,989	-	-	4,563,989
Total	496,488	26,341,611	61,788,275	37,633,396	27,191,603	51,749,117	205,200,489

APPENDIX 6.12
Involvement of employees in COMPASS for Felix Associates projects

Creator	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Construction - Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
K Cook	-	-	-	-	11,000,973	-	11,000,973
R Giannetto	-	-	-	-	-	222,836	222,836
J Lioi	-	-	-	-	6,542,666	-	6,542,666
Cooperating Witness	-	-	-	-	-	42,024,608	42,024,608
Cooperating Witness	-	-	-	-	-	106,706	106,706
Total Arrested Employees	-	-	-	-	17,543,639	42,354,150	59,897,789
Employee 11	-	-	905,807	-	-	145,161	1,050,969
Employee 12	-	258,718	-	-	-	-	258,718
Employee 15	-	183,594	-	-	-	2,964,885	3,148,479
Employee 16	-	-	-	-	-	1,637,115	1,637,115
Employee 18	-	-	-	-	1,379,922	-	1,379,922
Employee 19	496,488	-	49,718	-	-	-	546,206
Employee 21	-	-	-	-	-	79,511	79,511
Employee 23	-	-	-	96,863	-	-	96,863
Employee 24	-	-	54,573,972	-	-	-	54,573,972
Employee 27	-	-	-	2,892,531	-	-	2,892,531
Employee 29	-	9,778,704	120,459	-	-	-	9,899,163
Employee 35	-	-	-	-	-	3,556,998	3,556,998
Employee 39	-	-	-	-	811,828	-	811,828
Employee 41	-	-	-	-	6,654,167	-	6,654,167
Employee 44	-	-	-	-	-	79,020	79,020
Employee 56	-	238,275	-	-	-	-	238,275
Employee 54	-	-	-	10,149,983	-	-	10,149,983
Employee 55	-	11,750	-	-	-	-	11,750
Employee 59	-	-	-	-	-	108,300	108,300
Employee 70	-	87,519	-	-	-	-	87,519
Employee 73	-	-	-	1,802,884	-	-	1,802,884
Employee 74	-	-	-	-	-	57,756	57,756
Employee 75	-	-	-	2,506,781	-	-	2,506,781
Employee 78	-	-	-	-	802,047	-	802,047
Employee 84	-	-	6,138,319	-	-	-	6,138,319
Employee 89	-	-	-	11,490,734	-	-	11,490,734
Employee 92	-	9,810,971	-	-	-	-	9,810,971
Employee 98	-	5,972,080	-	-	-	-	5,972,080
Employee 99	-	-	-	2,093,310	-	-	2,093,310
Employee 100	-	-	-	-	-	445,021	445,021
Employee 101	-	-	-	2,034,808	-	-	2,034,808
Employee 102	-	-	-	-	-	309,037	309,037
Employee 103	-	-	-	-	-	12,162	12,162
Employee 104	-	-	-	45,043	-	-	45,043
Employee 108	-	-	-	4,520,458	-	-	4,520,458
Total	496,488	26,341,611	61,788,275	37,633,396	27,191,603	51,749,117	205,200,489

Creator and TR	Construction - Bronx \$	Construction - General \$	Construction - Manhattan \$	Construction - Steam \$	Construction - Westchester \$	Public Improvement \$	Total \$
R Giannetto	-	-	-	-	-	222,836	222,836
J Lioi	-	-	-	-	5,447,173	-	5,447,173
Total Arrested Employees	-	-	-	-	5,447,173	222,836	5,670,009
Employee 11	-	-	70,975	-	-	145,161	216,137
Employee 12	-	258,718	-	-	-	-	258,718
Employee 15	-	183,594	-	-	-	2,964,885	3,148,479
Employee 18	-	-	-	-	958,983	-	958,983
Employee 19	-	-	49,718	-	-	-	49,718
K Cook	-	-	-	-	11,000,973	-	11,000,973
Employee 23	-	-	-	96,863	-	-	96,863
Employee 24	-	-	54,573,972	-	-	-	54,573,972
Employee 27	-	-	-	2,892,531	-	-	2,892,531
Employee 29	-	9,778,704	120,459	-	-	-	9,899,163
Employee 35	-	-	-	-	-	3,195,074	3,195,074
Employee 39	-	-	-	-	811,828	-	811,828
Employee 41	-	-	-	-	6,575,309	-	6,575,309
Employee 44	-	-	-	-	-	79,020	79,020
Employee 56	-	238,275	-	-	-	-	238,275
Employee 54	-	-	-	10,149,983	-	-	10,149,983
Employee 55	-	11,750	-	-	-	-	11,750
Employee 59	-	-	-	-	-	108,300	108,300
Employee 73	-	-	-	1,754,062	-	-	1,754,062
Employee 74	-	-	-	-	-	57,756	57,756
Employee 75	-	-	-	2,506,781	-	-	2,506,781
Employee 78	-	-	-	-	802,047	-	802,047
Employee 84	-	-	6,138,319	-	-	-	6,138,319
Employee 89	-	-	-	11,409,053	-	-	11,409,053
Employee 99	-	-	-	2,017,697	-	-	2,017,697
Employee 101	-	-	-	2,034,808	-	-	2,034,808
Employee 102	-	-	-	-	-	262,871	262,871
Employee 104	-	-	-	45,043	-	-	45,043
Employee 108	-	-	-	4,514,279	-	-	4,514,279
Total	-	10,471,041	60,953,443	37,421,100	25,596,313	7,035,904	141,477,802

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APPENDIX 6.13

Allocation of "at-risk" amounts to accounting codes

Population tested
Size of Population
Methodology

All amounts identified as "at-risk" from the routines run on COMPASS items
\$29,375,100
Identify at-risk amounts from previous work
Identify the sysbills on which these amounts were paid
Identify whether account number linked to sysbill in COMPASS is a CECONY account number or a Work Order number. If it is a Work Order number, identify relevant account number.
Look up PSC account description and MAG from accounting database.
If the layout contains more than one account code, identify as "split" as it is not possible to identify which account
If the layout is spread across many sysbills, look at each sysbill in order to identify whether it is possible to identify specific amounts in each account.
This task has not been completed as yet.

Low end of "At-risk" payments

MAG	PSC Account Description													Split	Unknown	Grand Total
	Assets & Other Debits	Job Orders		Liabilities & Other Credits	Maintenance - Distribution - Gas	Maintenance - Distribution - Steam	Maintenance - Transmission - Electr	Operation - Distribution - Gas	Operation - Distribution - Steam	Operation - Production - Steam	Operation - Transmission - Gas					
		Clearing Accounts - Group 3	Clearing to More than 1 Account													
Electric Plant in Service	8,834,650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,834,650
Mains Expenses	-	-	-	-	-	-	-	-	-	-	1,087,181	-	-	-	1,087,181	
Maintenance of Mains	-	-	-	-	79,152	705,171	-	-	-	-	-	-	-	-	784,322	
Operation of Distribution Lines	-	-	-	-	-	-	-	-	40,600	-	-	-	-	-	40,600	
Split	-	-	-	-	-	-	-	-	-	-	-	736,855	-	-	736,855	
Station Supplies & Expenses	-	-	-	-	-	-	-	-	-	10,061	-	-	-	-	10,061	
Unknown	226,849	2,261,228	79,115	230,000	-	34,994	2,922	311,416	3,502	-	-	-	-	7,030,021	10,180,048	
Total	9,061,499	2,261,228	79,115	230,000	79,152	740,164	2,922	311,416	44,102	10,061	1,087,181	736,855	7,030,021	21,673,717		

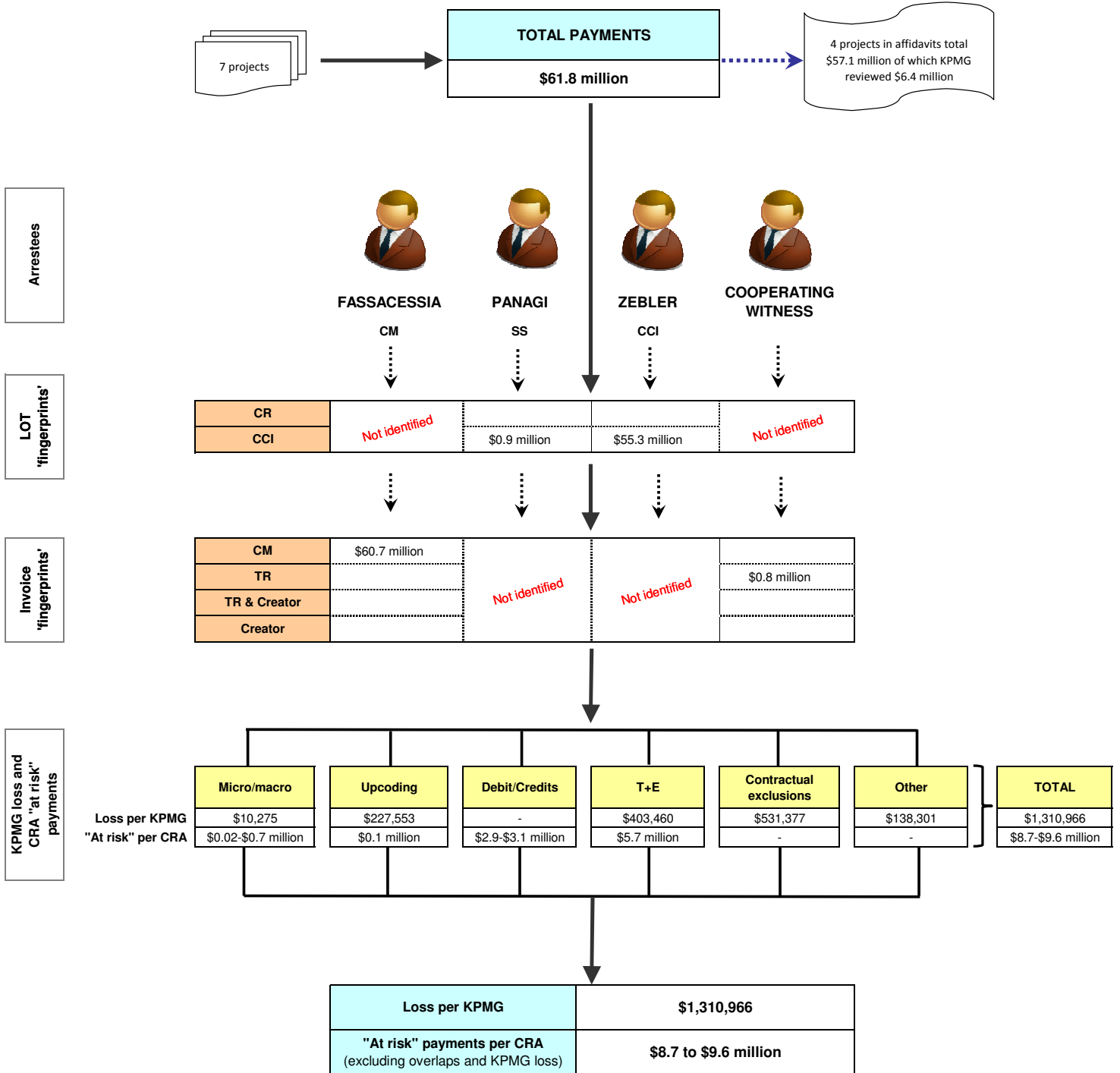
High end of "At-risk" payments

MAG	PSC Account Description													Split	Unknown	Grand Total
	Assets & Other Debits	Job Orders		Liabilities & Other Credits	Maintenance - Distribution - Gas	Maintenance - Distribution - Steam	Maintenance - Transmission - Electr	Operation - Distribution - Gas	Operation - Distribution - Steam	Operation - Production - Steam	Operation - Transmission - Gas					
		Clearing Accounts - Group 3	Clearing to More than 1 Account													
Electric Plant in Service	13,433,843	-	-	-	-	-	-	-	-	-	-	-	-	-	13,433,843	
Mains Expenses	-	-	-	-	-	-	-	-	-	-	1,088,435	-	-	-	1,088,435	
Maintenance of Mains	-	-	-	-	79,166	716,176	-	-	-	-	-	-	-	-	795,342	
Operation of Distribution Lines	-	-	-	-	-	-	-	-	88,146	-	-	-	-	-	88,146	
Split	-	-	-	-	-	-	-	-	-	-	-	942,334	-	-	942,334	
Station Supplies & Expenses	-	-	-	-	-	-	-	-	-	10,061	-	-	-	-	10,061	
Unknown	241,060	2,677,937	81,797	230,000	-	55,179	2,922	311,416	7,739	-	-	-	-	9,027,021	12,635,072	
Total	13,674,903	2,677,937	81,797	230,000	79,166	771,355	2,922	311,416	95,885	10,061	1,088,435	942,334	9,027,021	28,993,233		

APPENDIX 6.14

MANHATTAN

Construction work undertaken by Felix Associates for Construction Management



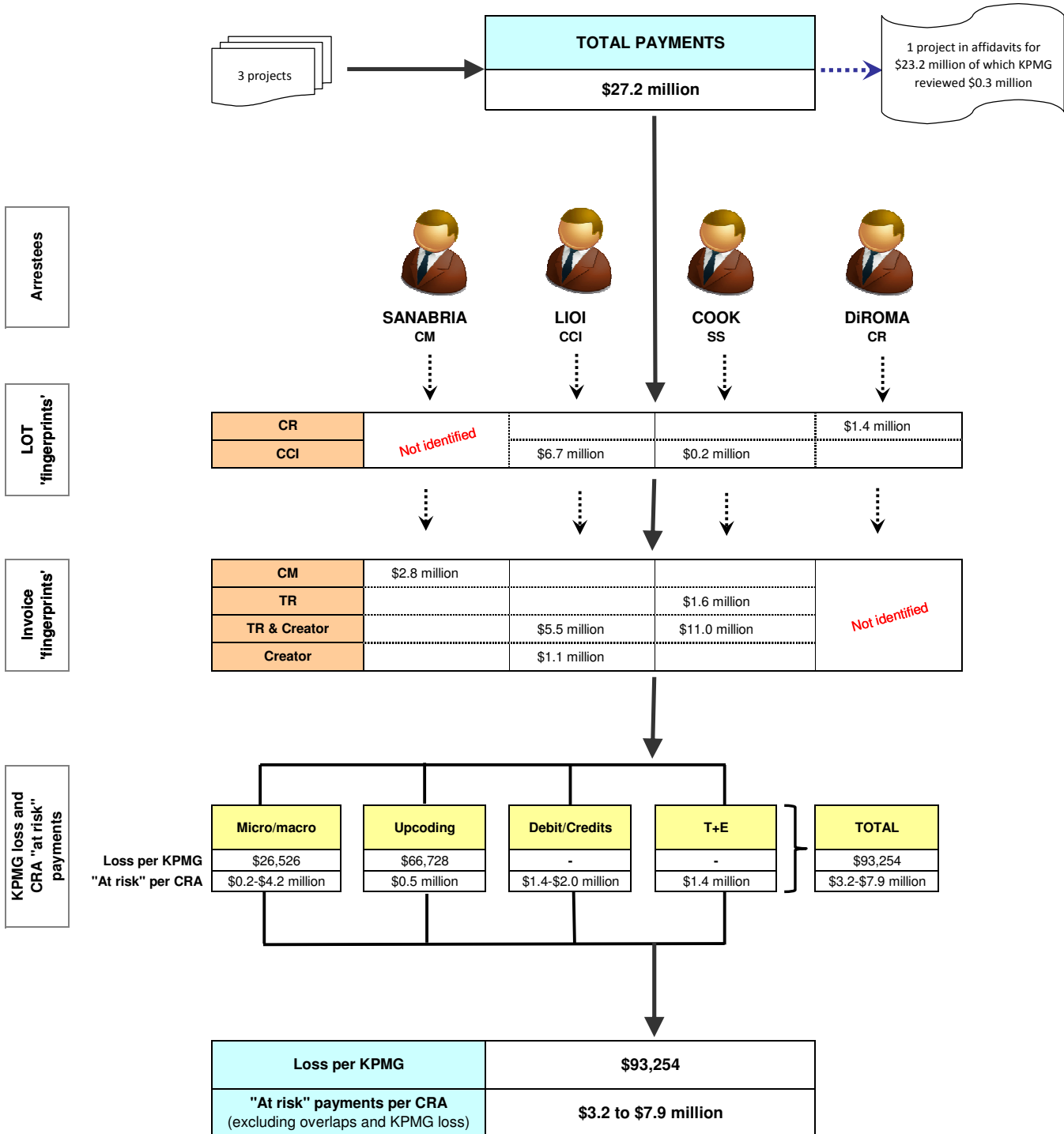
Comments

- Manhattan projects consist of 5 spot buys and 2 blanket orders (2 of the 5 spot buys were requisitioned as blanket orders).
- The Authorized Amount was increased for each project: spot buys increased by \$3.5 million to \$6.4 million and blankets increased by \$24.3 million to \$58.3 million.
- "At risk" payments for Spot buys is \$3.5 million (not adjusted for potential overlap with above "at risk" payments).
- "At risk" payments for Blanket orders is \$24.2 million (not adjusted for potential overlap with above "at risk" payments).

APPENDIX 6.14

WESTCHESTER

Construction work undertaken by Felix Associates for Construction Management



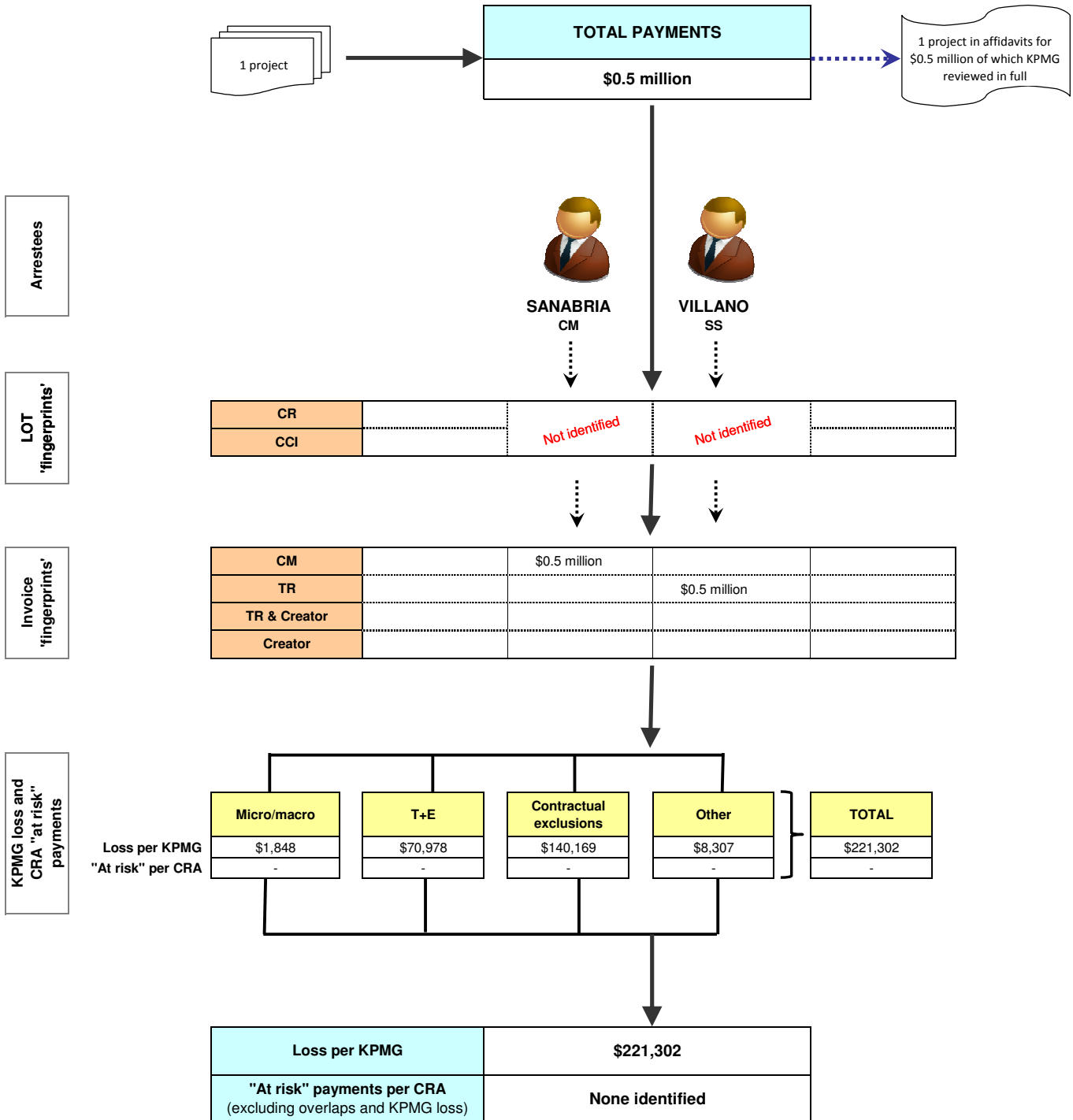
Comments

- Westchester projects consist of 3 blanket orders.
- The Authorized Amount was increased by \$14.5 million to \$30.4 million for 1 project; the remaining 2 projects were not increased.
- "At risk" payments for Blanket orders is \$7.3 million (not adjusted for potential overlap with above "at risk" payments).

APPENDIX 6.14

BRONX

Construction work undertaken by Felix Associates for Construction Management



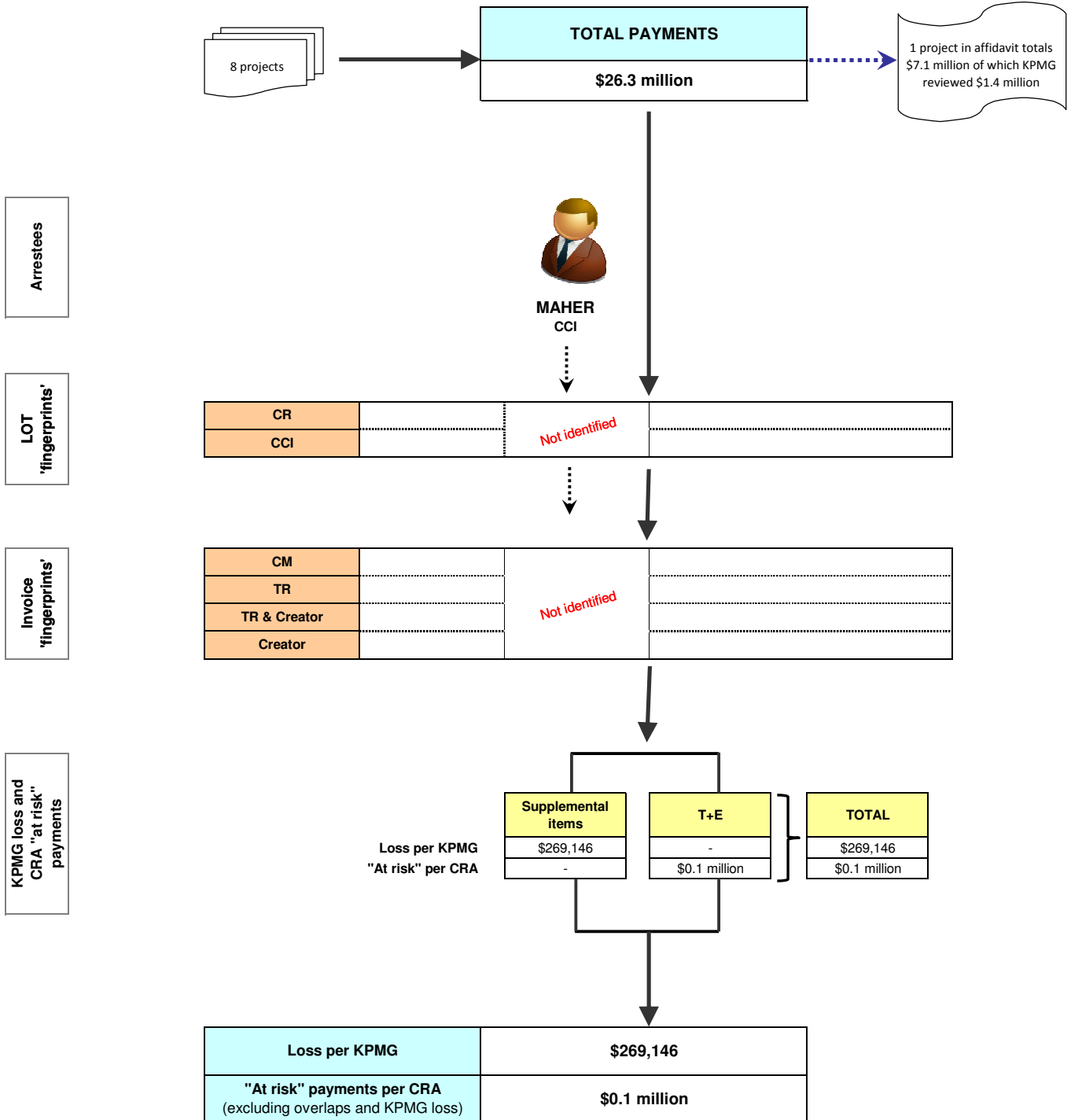
Comments

- 1 Bronx projects consist of 1 spot buy.
- 2 The Authorized Amount was increased by \$0.2 million to \$0.5 million.
- 3 "At risk" payments for Spot buys is \$0.2 million (not adjusted for potential overlap with above "at risk" payments).

APPENDIX 6.14

GENERAL

Construction work undertaken by Felix Associates for Construction Management



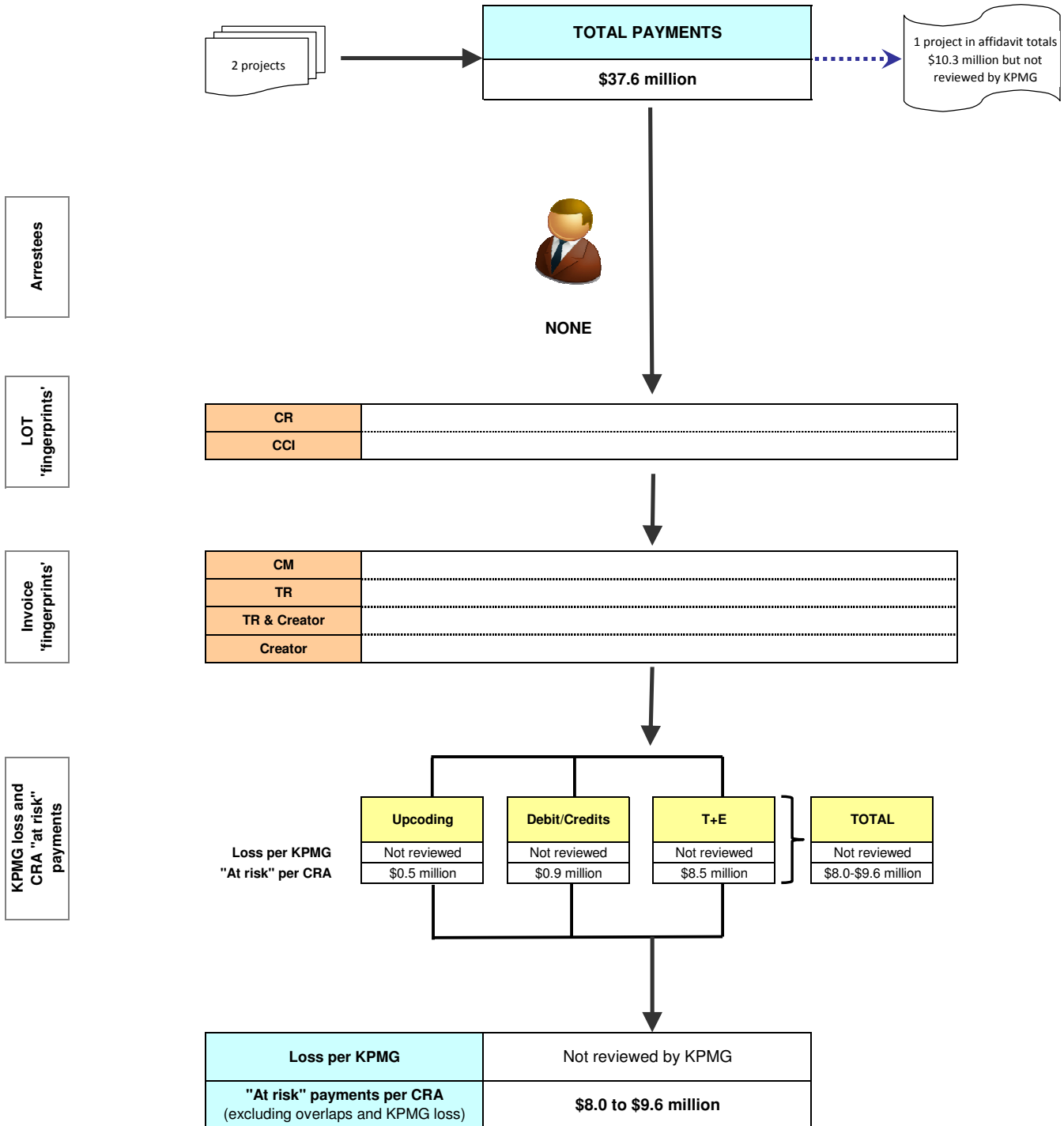
Comments

- 1 General projects consist of 7 spot buys and 1 blanket order.
- 2 The Authorized Amount was increased by \$6.3 million to \$14.2 million for 4 of the 7 spot buys; the authorized amount for the blanket order was not increased.
- 3 "At risk" payments for Spot buys is \$5.9 million (not adjusted for potential overlap with above "at risk" payments).

APPENDIX 6.14

STEAM

Construction work undertaken by Felix Associates for Construction Management



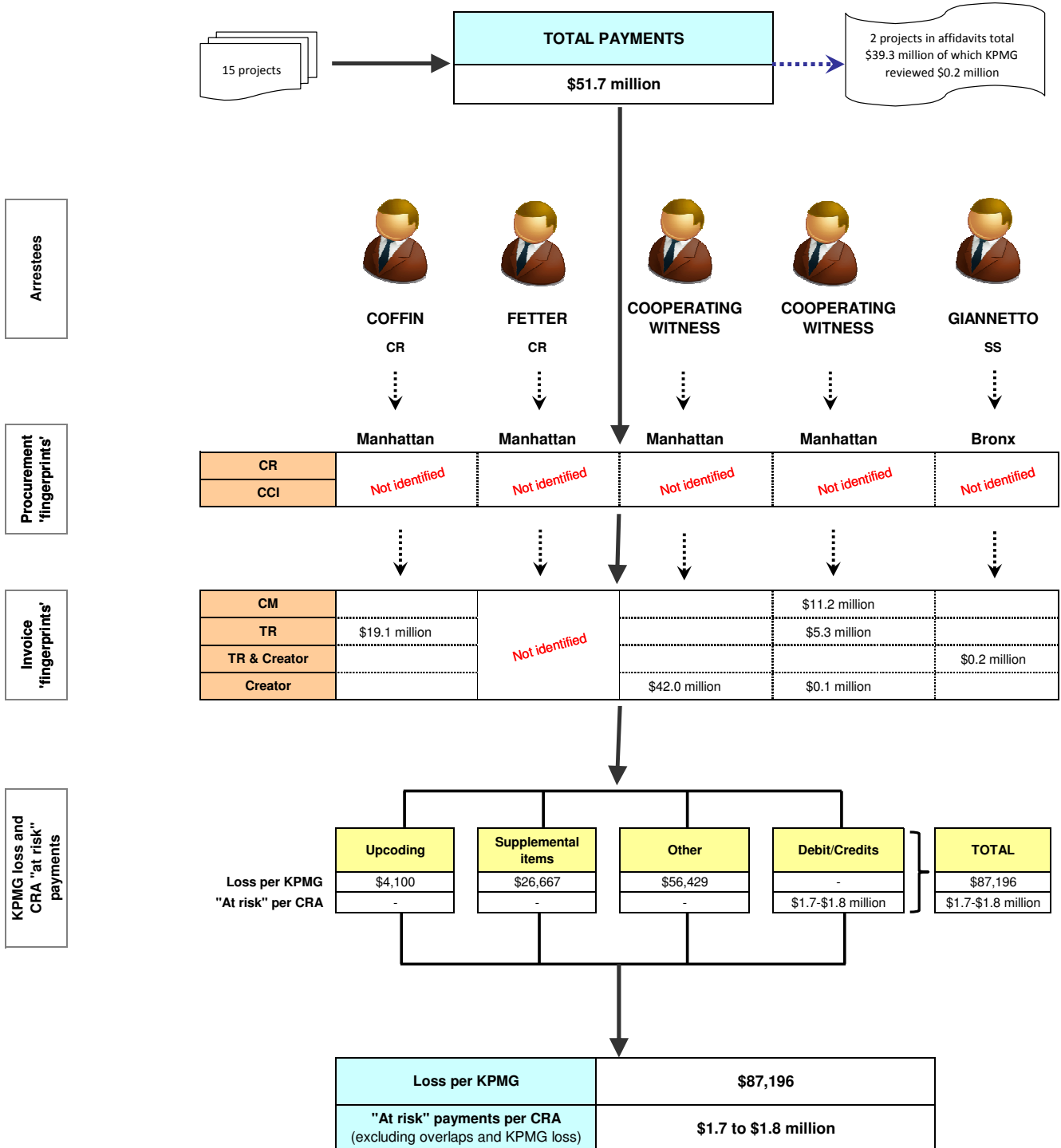
Comments

- 1 Steam projects consist of 2 blanket orders.
- 2 The Authorized Amount was increased by \$14 million to \$31.6 million for 1 blanket order.
- 3 "At risk" payments for Blanket orders is \$13.0 million (not adjusted for potential overlap with above "at risk" payments).

APPENDIX 6.14

PI (various regions)

PI work undertaken by Felix Associates for Construction Management



Comments

1 None of the additional "at risk" payments relate to EDC Water Mains/Yankee Stadium identified in the affidavits.

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PART 1 REPORT

APPENDIX 6.15
Analysis for Daily Log Reports, T+E Sheets and Reported Traffic Stipulations

Date	CRA CALCULATION OF T301	CRA CALCULATION OF T302	CRA CALCULATION OF T303	CRA CALCULATION OF T304/T305	CRACALCULATION OF T306	CRA TOTAL STIP T&E CALCULATION	TOTAL T&E BY DAY PER COMPASS	% STIP OF TOTAL T&E
3/10/2008	\$ 1,663.26	\$ 510.84	\$ 449.06	\$ 1,064.45	\$ 237.60	\$ 3,925.21	\$ 4,020.25	98%
3/11/2008	\$ 1,663.26	\$ 510.84	\$ 449.06	\$ 1,064.45	\$ 237.60	\$ 3,925.21	\$ 4,020.25	98%
3/12/2008	\$ 476.73	\$ 178.20	\$ -	\$ -	\$ 237.60	\$ 892.53	\$ 987.57	90%
3/13/2008	\$ 953.46	\$ 178.20	\$ 481.14	\$ 285.12	\$ 237.60	\$ 2,135.52	\$ 2,230.56	96%
3/14/2008	\$ 2,220.50	\$ 444.31	\$ 359.25	\$ 1,421.80	\$ 237.60	\$ 4,683.46	\$ 4,992.60	94%
3/16/2008	\$ 264.85	\$ 74.25	\$ 100.24	\$ 118.80	\$ 99.00	\$ 657.14	\$ 2,090.21	31%
3/17/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 2,321.13	97%
3/18/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 2,321.13	97%
3/19/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 2,321.13	97%
3/20/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ -	\$ 2,024.13	\$ 2,083.53	97%
3/21/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 2,321.13	97%
3/24/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ -	\$ 1,783.56	\$ 3,715.79	48%
3/25/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ -	\$ 1,783.56	\$ 3,715.79	48%
3/26/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ 237.60	\$ 2,021.16	\$ 3,953.39	51%
3/27/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 4,193.96	54%
3/28/2008	\$ 794.55	\$ 178.20	\$ 481.14	\$ 570.24	\$ 237.60	\$ 2,261.73	\$ 4,193.96	54%
3/31/2008	\$ 317.82	\$ 178.20	\$ 240.57	\$ 570.24	\$ 237.60	\$ 1,544.43	\$ 2,579.52	60%
4/1/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ 237.60	\$ 2,021.16	\$ 3,040.28	66%
4/2/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ 237.60	\$ 2,021.16	\$ 3,173.33	64%
4/3/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 570.24	\$ 237.60	\$ 2,021.16	\$ 3,173.33	64%
4/4/2008	\$ 794.55	\$ 178.20	\$ 240.57	\$ 1,425.60	\$ 237.60	\$ 2,876.52	\$ 9,775.61	29%
4/14/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 4,127.32	32%
4/15/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 5,857.53	23%
4/16/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,439.29	39%
4/17/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 1,375.17	97%
4/18/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,439.29	39%
4/21/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,439.29	39%
4/22/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 4,127.32	32%
4/23/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 7,730.32	17%
4/24/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 5,006.68	27%
4/25/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 6,822.44	20%
4/28/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,439.29	39%
4/29/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 1,375.17	97%
4/30/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 8,351.25	16%
5/1/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 8,351.25	16%
5/2/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 8,351.25	16%
5/5/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 8,351.25	16%
5/6/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 7,354.66	18%
5/7/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 6,035.62	22%
5/8/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,705.40	36%
5/9/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 1,375.17	97%
5/12/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 3,705.40	36%
5/13/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 4,364.92	31%
5/14/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 4,364.92	31%
5/15/2008	\$ 3,008.70	\$ 710.42	\$ 959.07	\$ 1,988.24	\$ -	\$ 6,666.43	\$ 6,879.48	97%
5/16/2008	\$ 635.64	\$ 178.20	\$ 240.57	\$ 285.12	\$ -	\$ 1,339.53	\$ 951.41	141%
5/18/2008	\$ 331.06	\$ 74.25	\$ 100.24	\$ 118.80	\$ 99.00	\$ 723.35	\$ -	
Grand Total	\$ 37,278.70	\$ 9,631.12	\$ 13,964.29	\$ 22,313.49	\$ 4,237.20	\$ 87,424.79	\$ 193,545.51	45%

36.11% OF TOTAL T&E

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PART 1 REPORT

APPENDIX 6.16
Review of Layout MG05-07341 Source Documentation

Indicator	Description	Overpayment
Macro / Micro	Per Trenching Manual, Item number T110 is to furnish, place, secure, maintain, protect and remove steel plates for vehicular traffic measured by square foot of opening ordered plated for first 30 calendar days. Item No. T114 is for rental and maintenance of plates covered under Item T110 left in place after first 30 days and for each 30 day interval thereafter that plate is required on opening, installation and removal cost are not included, see Item T110. Per Compass data, plating was only charged at Item T114 and should have been charged at both T110 and T114.	\$833
Upcoding	Trenching Manual section 15.10 states "Premium crew hour is generally defined as the first eight hours after a scheduled shift. Weekend premium factor "W" Contractors premium bid factor to be applied to regularly scheduled weekend stipulated work as well as emergencies started within weekends only. Factor "W" will be applied to all jobs started after midnight Friday night (into Saturday morning) and completed before midnight Sunday night (into Monday morning). No other premium factor shall be applied. If Time and Equipment work is required during premium crew hour period, it will be paid on straight time rates." Factor W was applied to weekday overtime T+E work.	\$517

Total Overpayment \$1,350

Indicator	Description	Questionable Payment
Rock	Although both the Daily Log Reports and Field Data Form support the charges for Rock Removal, CRA considers these charges as "at-risk" considering the depths at which this rock was recorded to be removed.	\$11,100

Total Questionable Payment \$11,100

Notes:

- a) COMPASS only has 11 of 13 entries for T2AI (missing Cut 12 and 16)
- b) Length of gas main according to COMPASS equals 257 feet while;
- c) Length of gas main according to FDF equals 285 feet
- d) Number of cuts and location / identification of cuts does not match on Field Data Form and Report of Street and/or Sidewalk Openings - Street Segment
- e) Field Data Form and Report of Street and/or sidewalk openings have differing trench opening, and backfilling dates

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PART 1 REPORT

APPENDIX 6.17
Review of Layout S04-12449-WCY Source Documentation

Indicator	Description	Overpayment
Upcoding	PO 626324 states that "Unit Prices shall be firm for the term of the Contract except as noted below: Escalation of 3.50% will be effective from 08/01/07 and the increased prices will remain firm for the remaining 24 months." According to the Daily Log Reports, work on this layout was performed between 7/18/2007 and 08/07/07. The escalation rate of 3.5% was applied to pay items for work completed prior to 08/01/07.	\$386
Net Debits	Source documentation states \$16,585 debit was paid for "yonkers pd". Daily Log Reports show one (1) police officer on site for five (5) days totalling thirty-six (36) hours. No City of Yonkers Police Department Invoice in file to reconcile this debit. Yonkers Police Department Invoice for a separate layout (Layout F06-07024-1WCY) in May of 2007 shows City of Yonkers Police officer unit price of \$80.45 per hour. Based on this rate, CECONY payment should have been \$2,896 for 36 hours. Adjustment for overpayment for Police services.	\$13,689
T+E	Hours paid for T+E do not reconcile with Con Edison Time Sheets. Total hours paid for Labor and Equipment total 200 hours; source documentation only shows 162 hours.	\$2,123

Total Overpayment \$16,197

Indicator	Description	Questionable Payment
Unsubstantiated Claims	Adjustments for Item Code T210. Although Dewatering is noted on Westchester Report of Street and/or Sidewalk Openings, there is no mention of dewatering in Daily Log Reports.	\$1,688

Total Questionable Payment \$1,688