



TECHNICAL ASSIGNMENT ONE

The Pennsylvania State AE Senior Thesis

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Duval County Unified Courthouse Facility

Jacksonville, Florida

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Construction Management

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EXECUTIVE SUMMARY

Construction Project Management is the in-depth research analysis behind the Technical Assignment One. After implementing a thorough investigation, this project theme has sparked the notion of existing standards and their role with project delivery phases. This notion was examined with the 798,000 square foot Duval County Unified Courthouse Facility (DCUCF) construction project and its obstacle to find financial prosperity. While the construction industry was in turmoil from rising material costs, the DCUCF sought guidance under its city government and Turner Construction Company's project management team. Through positive measures, this team was able to construct a financially stable estimate and an efficient schedule. Along with overcoming this hardship, Turner Construction Company had to deal with the Duval County Unified Courthouse Facility's site logistics and the surrounding community. The project location is in the heart of the mainstream intersection of Monroe Street and Clay Street. Alternate routes had to be devised while maintaining vehicular traffic flow to keep the Jacksonville City operable.

Data and Reports displaying effective schedule breakdowns utilizing a three and four phase method to meet the projected completion date are presented within this research narrative. A building systems summary allowed for an outside view at the projects components that aid in the development of quality assurance and primary LEED assertions for the new construction checklist. Estimating programs permitted a step-by-step comparison to further analyze cost procedures from an average national level and suggested project standard. Coordination is explored on the site logistics plan to see the cooperation of working on a larger project size with congestion being at stake while keeping up with the demanding community. Lastly, as much as the actual work is important, the people behind the workforce are studied due to their influence on the project itself. Their unique form of communication within a work relationship is tremendous on the outlook of the client's expectation and project growth. These characteristics are described on the project delivery system and staffing plan sections.

With comprehensive research of the Duval County Unified Courthouse Facility construction project management, a concentration will be targeted at site logistics and sequencing phases of the project. Examining these topics will provide a knowledgeable base focus on both preconstruction and construction relationships. A secondary subtopic of human relations and their effects on construction will allot a firm stance to back-up relevant information assigned by the primary application.

PROJECT SCHEDULE SUMMARY

***See APPENDIX A for the Project Summary Schedule Analysis**

Turner Construction Company implemented a four phase construction procedure for the building of the foundation, structural, and finishing systems of the project. These phases were broken up into sections of center, east, west, and colonnade. For the construction of the foundation, a three phase process was only required due to the colonnade sitting on the center section foundation. The center section started first and was followed by the east and west section respectively within a two to three day gap. By starting with the center section, an allowance for future work on the colonnade would be provided. The superstructure is then erected with the exception that the colonnade can start before foundation work without interference. The structural sequence follows an order of colonnade section, center section, west section, and east section. Each phase is operable within one another which saves project time. The enclosure systems are separate from one another and won't start until the proceedings of the previous section is on a finishing inspection task. While these systems are in progress the first operable section that commenced starts again with interior finishes. The center section starts work first so that the colonnade can start in operation proceeding the west and east section on time. The project sequencing has a flow of starting on the inside and working towards the outside and then reversing itself to maximize work productivity. This flow effort makes the Duval County Unified Courthouse Facility a dependent task schedule.

BUILDING SYSTEMS SUMMARY

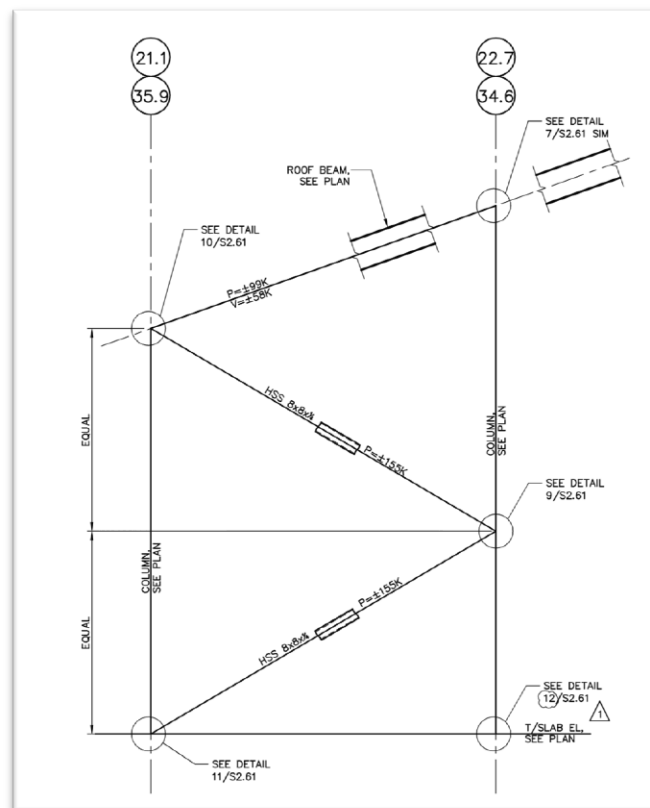
DEMOLITION:

There is an order for the removal of all existing water meter and box assemblies, that are typical at all occurrences of abandoned water service lines. Remaining service lines must have plugged ends. The contractor is responsible for the removal of the fencing on the property lines. The intersection of Monroe Street and Clay Street is to be demolished for site preparation.

STRUCTURAL STEEL FRAME:

The structural framing system consists of lateral bracing and chevron bracing that support the upper roof system from ultimate tension and shear forces. Reference Figure 1 for a chevron bracing roofing example that is frequently used throughout the building. The beam channel is held together by moment connections that are done both on the field and before jobsite delivery. The floor system is made up of composite slab which is consistent on each floor. Crane locations for steel lifting can be referenced in the site logistics plan in relation to west, east, and center section picks.

Figure 1. Chevron Bracing System



CAST-IN-PLACE CONCRETE:

Cast-in-place concrete consists of footings at 3,000 psi, floor slabs for composite decking at 3,000 psi, and interior columns at 5,000 psi.

PRECAST CONCRETE:

Precast parapet framing is added to support North face column connection on the eastside of the building. The precast concrete paneling on the façade is connected by a wing grit framing connection to transfer loads to exterior wall columns. These panels are also supported by panel to panel connections to resist horizontal loading. Lower roof slabs have been designed to temperature support one story of precast. Exterior columns have been designed to resist horizontal wind loads with embedded connections manufacturer. Crane locations for these lifts can be referenced in the photo site logistics plan in relation to west, east, and center section picks. Sixteen shear wall systems exist within the structure and is designed for 4,000 psi.

MECHANICAL SYSTEM

The main mechanical rooms – fire pump, domestic water boost pump, boiler, and compressor- are located on the first floor. A separate additional shed houses two chiller pumps from outside the building. Floors first through sixth contain a separate secondary room to maintain maintenance for that specific section. The primary system is represented by twenty-five Variable Air Volume Systems ranging from 3, 300-50,000 CFM. Three Make-Up Air Handling Units at 40,000 CFM represent the recovery system for the building. Eleven pump systems and two boilers also contribute to the mechanical layout.

Fire suppression comes in the form of smoke and fire dampers divided into three to five zones per floor. Each zone covers approximately 30,000-50,000 square feet. Quick response sprinkler types include – semi-recessed pendants, upright, recessed, concealed, correctional, sidewall, dry pendant, and deluge. These sprinklers are based on requirements of occupancy space dependent on theme of space. Dry pipe, wet pipe, and stand pipe support water flow to this fire protection system. Each floor is equipped with fire shutters to aid in emergency control. The fire suppression frame is backed up by a fire pump and jockey pump. Fire ratings for project components are as followed – structural frame (3hr /2hr), interior and exterior bearing walls (4hr/3hr), interior and exterior bearing walls (0hr), floor construction (3hr/2hr), and roof construction (1 ½ hr /1hr).

ELECTRICAL SYSTEM:

Main room located on first floor near North-West corner. Transformers valuing at 2,500 kVA are on the exterior wall adjacent to electrical room for proper feeding. A secondary electrical room can be found on North-East corner. All seven floors maintain a separate electrical room for routing and maintenance control of the electrical layout. A Back-up source generator valuing at 277/480V with 1,875 kVA is located in the main electrical room.

MASONRY:

Load bearing walls shall be constructed with Type II hollow concrete masonry units with ASTM C270, Type "S" mortar. This wall system is composed of masonry control joints, two vertical wall joint reinforcements, dowels, and masonry bond beams. All cells are filled with vertical reinforcing solid. Concrete masonry wall connection to precast concrete beam shall use a bolt connection on a steel plate with one-inch clearing to deck above.

CURTAIN WALL:

The curtain wall system utilizes spandrel and curtain wall vision. A three-coat high-performance organic finish of inhibitive primer fluoropolymer and clear fluoropolymer topcoat shall be applied. This unit is fabricated, assembled, and sealed in the factory until delivered on site for erection. The wall make-up consists of alloy and temper extrusions, vertical mullions, and exterior elastometric glazing. A 120 degree Fahrenheit temperature range shall be met by all provisions and material components. Reference Figure 2 for curtain wall system description.

Figure 2. Curtain Wall System Description	
Feature	Requirement
Air Infiltration	Not exceed 0.06 cfm/SF at 6.24 psf differential air pressure.
Water Resistance (static)	No leakage at static air pressure of 12 psf.
Water Resistance (dynamic)	No leakage at differential air pressure of 12 psf.
Uniform Load	No deflection in excess of L/175 of framing member span.
Thermal Transmittance (U-value)	U-value shall not be more than 0.74 for captured system.
Condensation Resistance Factor	Value shall not be less than 59 for captured system.
Seismic	Meets design displacement of 0.010 x story height.
Sound Transmission Loss	Value shall not be less than 32.
Incidental Water Management Option	Head member capable of directing condensation.

SUPPORT EXCAVATION:

Temporary support systems consisting of filter fences and block and gravel inlet sediment filter will be used during excavation activities. The filter fence involves wire mesh covered with cloth tied to a fence to catch sediment and create a protective shield. The block and gravel curb inlet sediment filter system prevents excessive ponding. The contractor is responsible for the removal of these temporary systems at the end of their duration. For excavations less than three feet deep, the excavation can temporarily stand with vertical cut slopes from the cohesion of soil moisture. Excavations of greater than three feet need temporary side slopes in sandy soils of 1 ½: 1 (H:V) or flatter should be maintained or braced support. Encountered groundwater involves temporary excavation slopes of 2:1 (H:V) or flatter should be maintained for deeper than about four feet.

LEED VERIFICATIONS:

The City of Jacksonville wanted to achieve a new sustainable site that would be beneficial to the surrounding community. For this achievement to be met, the project would be advised by two complementary plans – Construction IAQ Management Plan and Construction Waste Management Plan. These procedures aid in the contractor's responsibilities for both onsite and offsite operations, to lead to a "Going Green" project.

***See APPENDIX B for LEED owner goals and LEED contractor achievements.**

PROJECT COST EVALUATION

PROJECT PARAMETERS:

Total Building Square Footage:	798,000 SF
Total Building Perimeter:	2440 LF
Actual Building Costs:	\$224,836,000
Actual Building Costs/SF:	\$281.45
Building System Costs:	\$94,836,000
Building System Costs/SF:	\$162.50

R.S. MEANS-COSTWORKS:

Building Cost:	\$112,038,500
Building Cost/SF:	\$140.40

***See APPENDIX C for the R.S. Means-CostWorks Analysis**

D4COST:

New Castle County Courthouse:

Project Cost: \$135,791,853

County/City Criminal Courthouse:

Project Cost: \$108,418,651

***See APPENDIX D for the D4Cost Analysis**

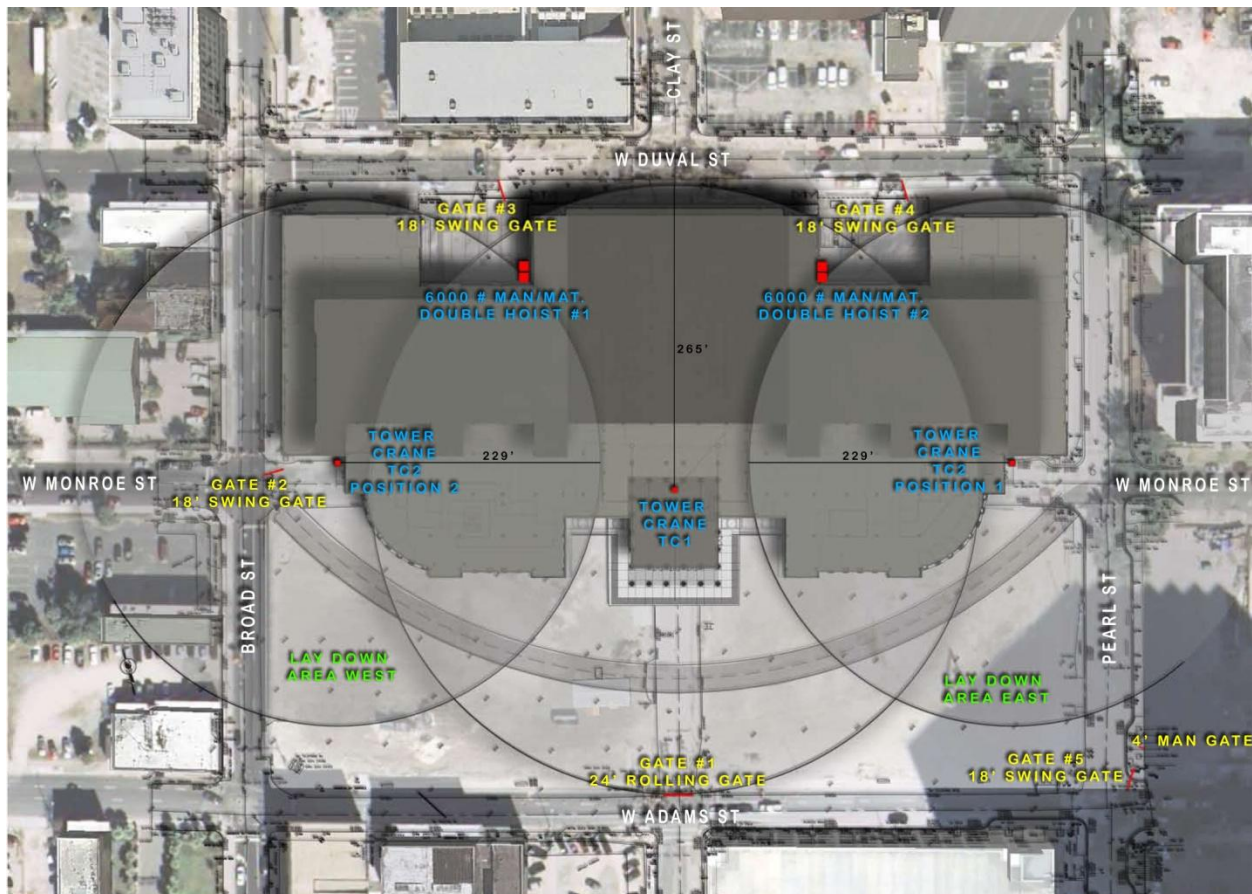
Turner Construction Company was able to predict an actual project cost for the Duval County Unified Courthouse Facility (DCUCF) to be \$224, 836.00. This estimate was carefully analyzed from every phase of construction from their professional estimate team. With the use of R.S. Means-CostWorks, I was able to develop a square foot project estimate to be \$112,038,500.00. My research involved a national average comparison of a standard courthouse being from two-three stories. Assumed values for site-work, foundation, superstructure, enclosure, and finishes can be noted in APPENDIX D. I was able to input the general building information to make my estimate as accurate as possible. I took my calculations to assume a zero contractor and architectural fee for a gross project value before salary is paid. This could be a factor of why my estimate is half of the actual project cost. Another difference factor could have resulted from my base values not accommodating for Florida's financial expenses on construction and material. I believe that the main contributor to difference and similarities comes from the national standard comparison. Even though I was able to insert some construction information to be based of the estimate, the ending result doesn't yield Florida's and Turner Construction Company's exact contract cost flow agreements.

Using the D4Cost system, two related project deliverables- New Castle County Courthouse and County/City Criminal Courthouse- were encountered. The New Castle County Courthouse project was based out of Delaware and was roughly in the same square foot and cost range. Once I placed the Duval County Unified Courthouse Facility values in for this structure, a \$135,791,853 project cost was obtained. The County/City Criminal Courthouse is located in the state of New York and also had a similar square foot analysis and cost range. This project concluded with a total cost of \$108,428,651 when the DCUCF building information was applied. A system breakdown of data for both buildings can be referenced in APPENDIX D. Both structures differed from the actual cost by half due to assumed project values of phases and systems.

EXISTING CONDITIONS SITE PLAN SUMMARY

*See APPENDIX E for the Existing Conditions Site Plan

Figure 3. Photo Site Logistics Plan



The Duval County Unified Courthouse Facility's site is featured on the intersection of Monroe Street and Clay Street. Routine procedure to ease vehicular traffic congestion through alternative road detours was implemented. This procedure allowed for the project team to move and transport around the entire site and surrounding exterior environment with five monitored gate access routes. Crane locations were placed strategically to apply site efficiency within picks and laydown areas. Even though crane locations are within reach of the community environment, the lifts were maintained in the project boundary. As seen in Figure 3, the project building is able to function off of existing utilities because of its location due North of the site. Locate APPENDIX E to see the relationship of the project building and existing utilities.

LOCAL CONDITIONS

The Duval County Unified Courthouse Facility is dignified in its rating of LEED Certification and it owes some gratification to its means of recycling. Currently jobsite materials of steel and cardboard are being urged to be recycled to increase a “greener” job productivity. Wood was stated to be recycled but actions were ceased due to the business loss of the recycling company. Recycling centers were scouted out but no local suppliers within a 500 mile radius were encountered. Internal practices of recycling aluminum and plastic products are still in action within the construction trailers of the site. Along with these recycling habits, green cleaning products are being executed to cut back on jobsite contaminants. All recycling efforts brought on by Turner Construction Company are helping to promote a brighter, leaner, and greener jobsite to future Jacksonville area projects.

Under investigation of a CPTu test of the subsurface, groundwater was discovered in depths ranging from one to seven feet below the ground surface. This varying in groundwater was anticipated from factors of seasonal climatic changes, rainfall variations, construction activity, surface water runoff, and other site-specific factors. Soil compaction must support this moisture content due to soil expansion. All specifications and drawings are expected to reflect this variance due to its observed characteristics for future references. With this said, Turner Construction Company accommodated for groundwater levels to be decreased to one foot below the bottom of any excavation during construction and two feet below surface for vibratory compactions procedures. Several soil classifications were discovered during a lateral pile capacity test. During a depth analysis, the following data was recorded:

WPC6208.00063 Lateral Pile Capacity Design Parameters

Depth (ft)	Soil Type	Submerged γ' (pcf)	ϕ (degrees)	c (psf)	Unconfined Compressive Strength, (psf)	k (pci)	ϵ_{50}
0 to 12	Sands, Silty Sands	48	30	--		90	--
12 to 20	Sands, Silty Sands	53	34	--		120	
20 to 24	Sands, Silty Sands	48	30	--		60	
24 to 30	Silty Clay	38	0	250	500	10	0.01
30 to 45	Limestone	73	0	20,000	40,000	--	--
45 -	Marl	53	0	4,000	8,000	50	0.005

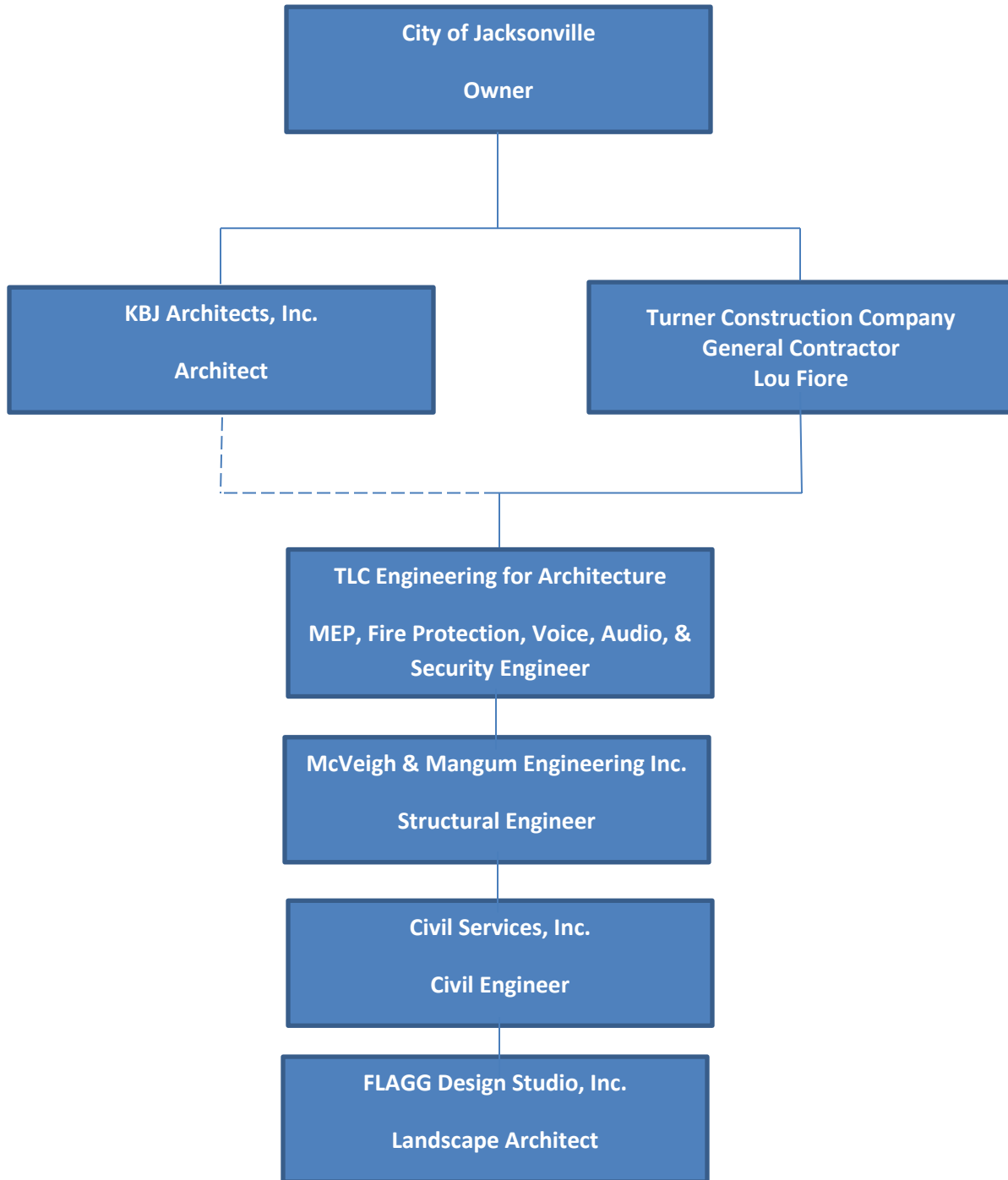
CLIENT INFORMATION

Sponsored development and the idea of the Duval County Unified Courthouse Facility are credited to its owner-the City of Jacksonville. The City of Jacksonville saw its previous 1958 courthouse facility in disarray and disrepair and seized the opportunity to unify the building itself and the community that revolved around it. This plan was utilized and dubbed the Better Jacksonville Plan (BJP) under Mayor John Delaney and approved by the city voters. Budget analysis seemed to be prevailing in the economy and looked promising for construction but unforeseen influences shifted winds. Building materials skyrocketed due to China's building boom, oil price increase, and asphalt price increase causing construction efforts to be put on hold until a better commission was pursued. Once a plan was generated, the new Mayor Peyton approved it and the project could then be resumed.

Once the project definition could commence, the owner displayed expectations dealing with cost, quality, schedule, and safety. Cost was expected to be reasonable within the basis of the new economic path that was presented since it needed approval. Along with project cost, construction material and equipment was another concern. The City of Jacksonville was awarded the Florida Consumer's Certificate of Exemption for sales tax by the Florida Department of Revenue. This exemption allowed the Duval County Unified Courthouse Facility construction to be exempt from Florida's sales tax from making purchases for materials and equipment directly from its suppliers. Quality of work was expected to reflect its original design and cost provided for budget. Project to be completed on time was a guiding factor for work progression. Safety expectations were oversaw with a safety plan and orientation developed by Turner Construction Company. This plan involved an OSHA 30 Hour required competent person holding pre-construction and weekly safety meetings and frequent and regular inspections. The owner had no sequencing issue because that discretion of work was assigned to the design team to deal with. Dual occupancies were utilized within this project because of the structure being a Unified Courts Facility that contains Civil, Criminal, and Family Judiciary components. Turner Construction Company had many key factors in completing the project to the owner's satisfaction consisting of- city requirements, local participants, security, and the end result users. These factors are currently driving to project success from which the owner had expected in short term and long term goals of this facility and its outreach to the community.

PROJECT DELIVERY METHOD

Figure 4. Design-Build Project Delivery Method



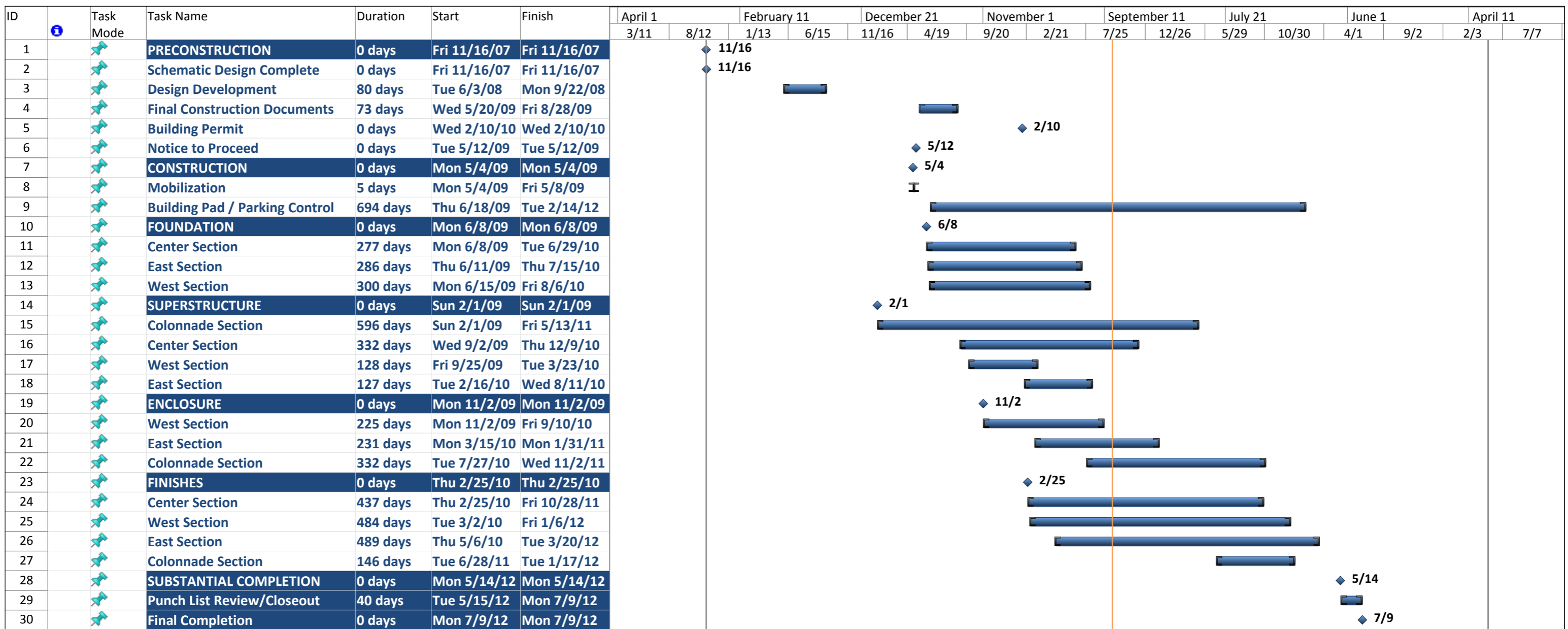
The City of Jacksonville declared the Duval County Unified Courthouse Facility project to be a design-build project delivery method as illustrated in Figure 4. This system is defined by an agreement to perform both design and construction under one contract between an owner and a design-build contractor. Benefits of an incorporated GMP, quicker project process, minimize owner's risk and minimal conflicts were sought out for this project. The owner especially chose this project delivery method because of the control of project "destiny" throughout the development of its growth through a reputable company. A critical factor of cost control with no outside agendas played a secondary role for this decision. Overall, this system permits freedom to have input applied with a structure control by the owner.

STAFFING PLAN

***See APPENDIX F for Staffing Plan Organizational Chart**

The organizational chart within the Turner Construction Company for the Duval County Unified Courthouse Facility follows a strong communication and coordination relationship. The main component of the structure is led by a vice president, principal in charge, and senior project executive. Project operations and are overseen by the senior project manager who coordinates with a staff of fellow senior project manager, Jacksonville Small and Emerging Business (JSEB) coordinator, and general superintendent. Administrative responsibilities for the project are given to the JSEB coordinator and this division has interaction with the second organizational structure division with the senior project manager through these tasks. The senior project manager takes on tasks of leading field engineering work and has correlation through MEP implementation with the general superintendent. Field superintendent aspects of structural, interior and MEP are supervised by the general superintendent for project success. Safety operations are relayed by all units of field work to the safety director to ensure jobsite safety. .This unique organizational structure spotlights effective technical communication between divisions to properly organize work responsibilities and team collaboration skills. With these factors being followed project error can be better avoided and project quality, safety, and cost can be efficiently employed.

APPENDIX A – PROJECT SCHEDULE SUMMARY ANALYSIS



Project: Tech 1 - Project Schedule Date: Sat 10/2/10	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			

APPENDIX B – LEED OWNER GOALS AND LEED CONTRACTORS ACHIEVEMENTS

LEED Goals and Accomplishments		
Owner's Goals	Met	Not Met
Handling Construction Waste	X	
Use of Low Emitting Materials	X	
Use of Locally Manufactured Items	X	
Design and Implementation of Energy Efficient Systems	X	
Use of Materials Having Recycled Content	X	
Indoor Air Quality Requirements	X	
Conservation of Materials During Phases of: Design, Construction, Commissioning, and Maintenance	X	

Contractor LEED Achievements	
Category	Points
Site Selection	1
Development Density & Community Connectivity	1
Alternative Transportation (Public Access)	1
Alternative Transportation (Low-Emitting & Fuel Efficient)	1
Site Development (Protect or Restore Habitat)	1
Site Development (Maximize Open Space)	1
Stormwater Design (Quantity Control)	1
Heat Island Effect (Non-Roof)	1
Water Efficient Landscaping (Reduced by 50%)	1
Innovative Wastewater Technologies	1
Water Use Reduction (20% Reduction)	1
Water Use Reduction (30% Reduction)	1
Optimize Energy Performance	2
Construction Waste Management (Divert 50% from Disposal)	1
Construction Waste Management (Divert 75% from Disposal)	1
Recycled Content (10%)	1
Recycled Content (20%)	1
Regional Materials (20% Extracted)	1
Outdoor Air Delivery Monitoring	1
Construction IAQ Management Plan (During Construction)	1
Low-Emitting Materials (Adhesives & Sealants)	1
Low-Emitting Materials (Paints & Coatings)	1
Low-Emitting Materials (Carpet Systems)	1
Low-Emitting Materials (Composite Wood & Agrifiber Products)	1
Indoor Chemical & Pollutant Source Control	1
Thermal Comfort (Design)	1
Thermal Comfort (Verification)	1
Innovative in Design: Sustainable Education	1
Innovative in Design: Low Mercury Lamps (from LEED EB)	1
Innovative in Design: Exemplary Performance WEC3 40% Water R	1
LEED® Accredited Professional	1
Project Total	32
Accomplished: LEED CERTIFIED: 26-32 points	

APPENDIX C – R.S. MEANS COSTWORKS ANALYSIS

Square Foot Cost Estimate Report	
Estimate Name:	Courthouse Estimate
Building Type:	Courthouse, 2-3 Story with Face Brick with Concrete Block Back-up / Steel Frame
Location:	National Average
Story Count:	7
Story Height (L.F.):	18
Floor Area (S.F.):	798000
Labor Type:	Union
Basement Included:	No
Data Release:	Year 2010 Quarter 3
Cost Per Square Foot:	\$140.40
Building Cost:	\$112,038,500



Costs are derived from a building model with basic components.
Scope differences and market conditions can cause costs to vary significantly.

		% of Total	Cost Per S.F.	Cost
A Substructure		1.40%	\$1.89	\$1,511,000
A1010	Standard Foundations		\$0.95	\$755,500
A1030	Slab on Grade		\$0.68	\$544,000
A2010	Basement Excavation		\$0.03	\$20,500
B Shell		29.90%	\$41.94	\$33,471,000
B1010	Floor Construction		\$21.46	\$17,124,000
B1020	Roof Construction		\$2.41	\$1,926,500
B2010	Exterior Walls		\$9.41	\$7,510,500
B2020	Exterior Windows		\$7.57	\$6,038,000
B2030	Exterior Doors		\$0.32	\$257,000
B3010	Roof Coverings		\$0.77	\$615,000
C Interiors		32.50%	\$45.65	\$36,431,500
C1010	Partitions		\$12.50	\$9,976,500
C1020	Interior Doors		\$5.76	\$4,596,500
C1030	Fittings		\$0.30	\$240,000
C2010	Stair Construction		\$0.21	\$171,500
C3010	Wall Finishes		\$4.70	\$3,749,000
C3020	Floor Finishes		\$12.88	\$10,276,500
C3030	Ceiling Finishes		\$9.30	\$7,421,500
D Services		36.30%	\$50.91	\$40,625,000
D1010	Elevators and Lifts		\$13.90	\$11,092,000
D2010	Plumbing Fixtures		\$3.87	\$3,091,500
D2020	Domestic Water Distribution		\$0.28	\$226,500
D2040	Rain Water Drainage		\$0.04	\$35,000
D3050	Terminal & Package Units		\$18.40	\$14,683,000
D4010	Sprinklers		\$2.81	\$2,244,500
D4020	Standpipes		\$0.36	\$286,000
D5010	Electrical Service/Distribution		\$0.09	\$72,500
D5020	Lighting and Branch Wiring		\$9.44	\$7,535,000
D5030	Communications and Security		\$1.49	\$1,188,000
D5090	Other Electrical Systems		\$0.21	\$171,000
E Equipment & Furnishings		0.00%	\$0.00	\$0
E1090	Other Equipment		\$0.00	\$0
F Special Construction		0.00%	\$0.00	\$0
G Building Sitework		0.00%	\$0.00	\$0
SubTotal		100%	\$140.40	\$112,038,500
Contractor Fees (General Conditions,Overhead,Profit)		0.00%	\$0.00	\$0
Architectural Fees		0.00%	\$0.00	\$0
User Fees		0.00%	\$0.00	\$0
Total Building Cost			\$140.40	\$112,038,500

APPENDIX D - D4COST ANALYSIS

New Castle County Courthouse

Case Number	Case Number
Project Name	New Castle County Courthouse
Project Cost	135791853
Site Size	900580
Building Use	Civic/Gov.
Bid Date	2/1/1999
Num Floors	7
Read Only	False
Historic	False
Base Month	Feb
Base Year	1999
Base Location	FL - Jacksonville
Projected Month	Feb
Projected Year	1999
Projected Location	FL - Jacksonville
Building Size	798000
Auto Calc	True
Num Buildings	1
Project Height	225.6
1st Floor Height	18
1st Floor Size	178400
Foundation	CON
Exterior Wall	CON
Interior Wall	CON
RoofType	MET
Floor Type	CON
Project Type	NEW

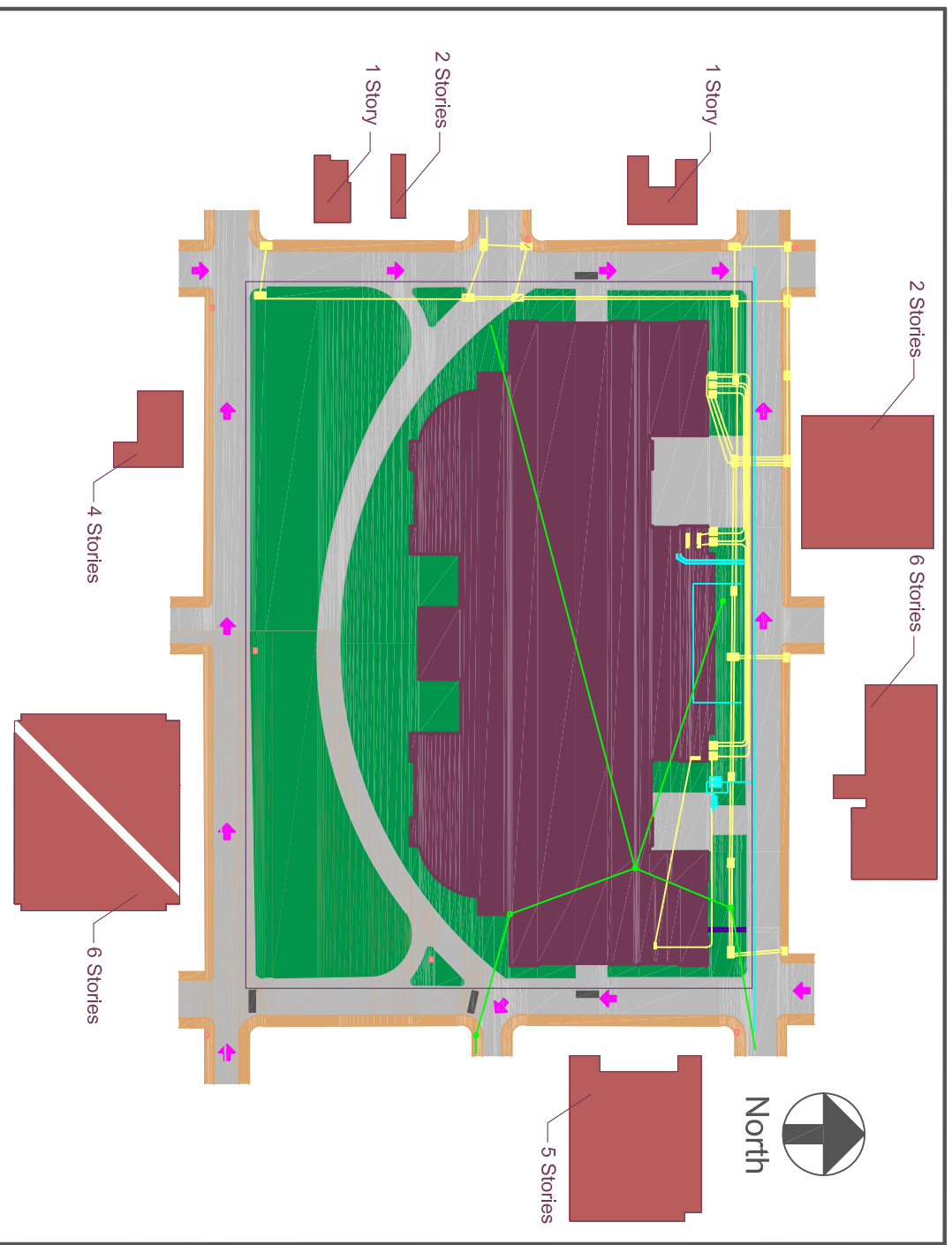
Code	Division Name	%	Sq. Cost	Projected
00	Bidding Requirements	3.36	5.71	4,560,222
03	Concrete	3.94	6.70	5,350,362
04	Masonry	8.08	13.74	10,967,160
05	Metals	13.09	22.28	17,781,355
06	Wood & Plastics	13.46	22.91	18,281,428
07	Thermal & Moisture Protection	2.07	3.53	2,815,302
08	Doors & Windows	8.36	14.23	11,358,339
09	Finishes	10.73	18.25	14,564,860
10	Specialties	2.04	3.48	2,775,752
11	Equipment	0.84	1.42	1,134,288
13	Special Construction	6.04	10.28	8,206,270
14	Conveying Systems	5.43	9.24	7,369,537
15	Mechanical	12.55	21.36	17,043,633
16	Electrical	10.00	17.02	13,583,345
	Total Building Costs	100.00	170.17	135,791,853

Criminal Courthouse

Case Number	5
Project Name	Criminal Courthouse
Project Cost	108418651
Site Size	850340
Building Use	Civic/Gov.
Bid Date	6/1/2009
Num Floors	7
Base Month	Jun
Base Year	2009
Base Location	NY - Syracuse
Projected Month	May
Projected Year	2012
Projected Location	FL - Jacksonville
Building Size	798000
Auto Calc	True
Num Buildings	1
Project Height	80
1st Floor Height	18
1st Floor Size	178400
Foundation	CON
Exterior Wall	CON
Interior Wall	CON
RoofType	MET
Floor Type	CON
Project Type	NEW

Code	Division Name	%	Sq. Cost	Projected
01	General Requirements	3.51	7.35	5,864,984
03	Concrete	7.93	16.62	13,262,720
04	Masonry	8.65	18.13	14,466,031
05	Metals	11.07	23.19	18,504,802
06	Wood, Plastics, and Composites	2.94	6.15	4,909,229
07	Thermal and Moisture Protection	3.27	6.85	5,468,425
08	Openings	5.43	11.37	9,076,555
09	Finishes	14.26	29.87	23,840,030
10	Specialties	0.34	0.72	576,822
11	Equipment	0.55	1.16	925,146
12	Furnishings	1.76	3.68	2,934,584
14	Conveying Systems	2.86	5.98	4,775,469
21	Fire Suppression	2.33	4.89	3,900,651
22	Plumbing	4.03	8.45	6,739,319
23	HVAC	14.99	31.42	25,070,820
26	Electrical	9.69	20.30	16,201,805
27	Communications	2.80	5.87	4,685,461
28	Electronic Safety and Security	3.59	7.52	6,004,071
	Total Building Costs	100.00	209.53	167,206,923

APPENDIX E – EXISTING CONDITIONS SITE PLAN



LEGEND:

- Existing Utilities:**
- Electric —
 - Water —
 - Telecommunication —
 - Gas —
- Symbols:**
- Road Closed —
 - Vehicular Traffic ↔
 - Construction Fence —
 - Telecommunications Manhole ●
 - Fire Hydrant ■
 - Transformer ■
 - Electrical Manhole ■
 - Chill Water to Main ■
 - Water Meter ■
 - Switchboard ■

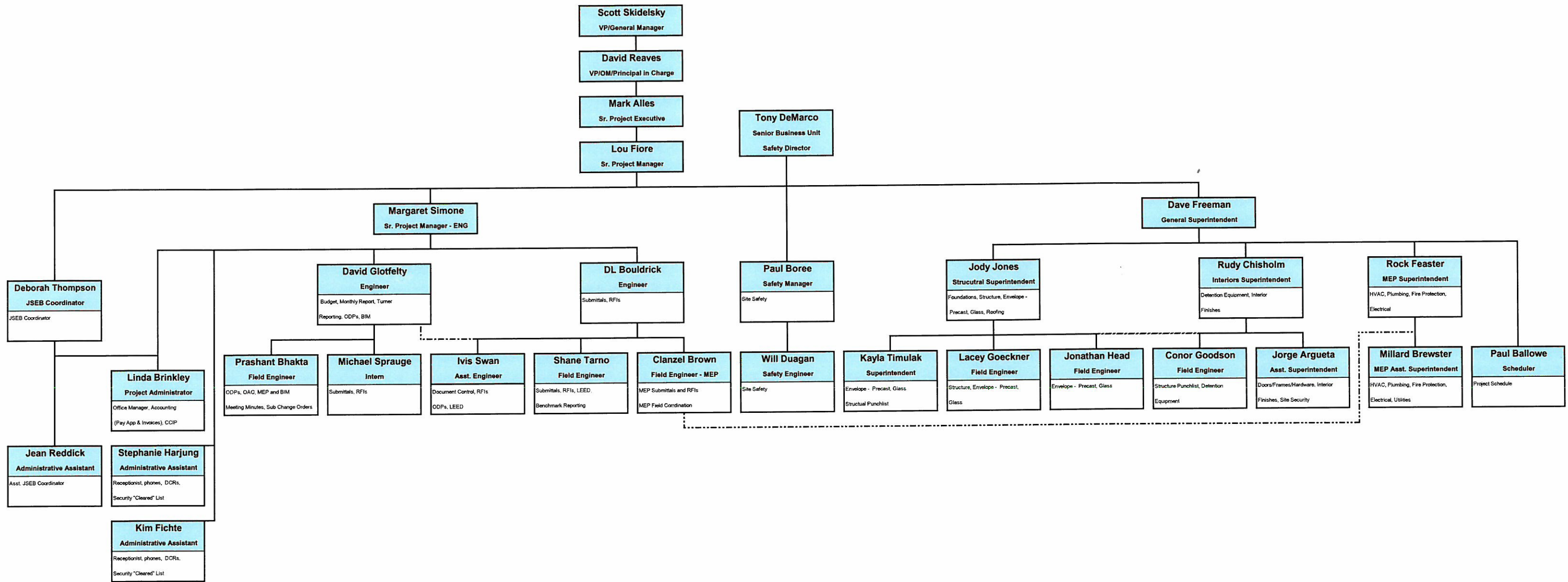
Duval County Unified Courthouse Facility

Existing Conditions Site Plan

October 9, 2010

Darrell Alston

APPENDIX F – STAFFING PLAN ORGANIZATIONAL CHART



Deborah Thompson
JSEB Coordinator
JSEB Coordinator

Jean Reddick
Administrative Assistant
Asst. JSEB Coordinator

Linda Brinkley
Project Administrator
Office Manager, Accounting
(Pay App & Invoices), CCIP

Stephanie Harjung
Administrative Assistant
Receptionist, phones, DCRs,
Security "Cleared" List

Kim Fichte
Administrative Assistant
Receptionist, phones, DCRs,
Security "Cleared" List

Margaret Simone
Sr. Project Manager - ENG

David Glotfelty
Engineer
Budget, Monthly Report, Turnover
Reporting, ODPs, BIM

Prashant Bhakta
Field Engineer
ODPs, OAC, MEP and BIM
Meeting Minutes, Sub Change Orders

Michael Sprauge
Intern
Submittals, RFIs

Ivis Swan
Asst. Engineer
Document Control, RFIs
ODPs, LEED

Shane Tarno
Field Engineer
Submittals, RFIs, LEED
Benchmark Reporting

Clanzel Brown
Field Engineer - MEP
MEP Submittals and RFIs
MEP Field Continuation

DL Boultrick
Engineer
Submittals, RFIs

Paul Boree
Safety Manager
Site Safety

Will Duagan
Safety Engineer
Site Safety

Kayla Timulak
Superintendent
Envelope - Precast, Glass
Structural Punchlist

Lacey Goeckner
Field Engineer
Structure, Envelope - Precast,
Glass

Jonathan Head
Field Engineer
Envelope - Precast, Glass

Conor Goodson
Field Engineer
Structure Punchlist, Detention
Equipment

Jorge Argueta
Asst. Superintendent
Doors/Frames/Hardware, Interior
Finishes, Site Security

Rudy Chisholm
Interiors Superintendent
Detention Equipment, Interior
Finishes

Millard Brewster
MEP Asst. Superintendent
HVAC, Plumbing, Fire Protection,
Electrical, Utilities

Paul Ballowe
Scheduler
Project Schedule

Rock Feaster
MEP Superintendent
HVAC, Plumbing, Fire Protection,
Electrical

Tony DeMarco
Senior Business Unit
Safety Director

Dave Freeman
General Superintendent

Scott Skideisky
VP/General Manager

David Reaves
VP/OM/Principal in Charge

Mark Alles
Sr. Project Executive

Lou Fiore
Sr. Project Manager