41st Annual State Construction Conference









March 3, 2022







DHHS Campus Phase I GMP / DD / SCIF Project Case Study



DHHS Campus History

- 2015 the General Assembly conveyed the 307-acre Dorothea Dix Park property to the City of Raleigh with 10-Year and 25-Year Leases
- General Assembly required DHHS to study development of a new DHHS campus to relocate all DHHS Greater Triangle area staff
- 2017 DHHS study identified 1.7 million Gross Square Feet at a cost of over \$900 million
- 2018 Department of Administration proposed a 2-Phase solution plan



DHHS Dorothea Dix Park Campus





DHHS Campus Phase I



2022 State Construction Conference

NC*DOA

DHHS Campus Phase I



RALEIGH, NC | AUGUST 2012

Blue Ridge Road District Study



DHHS Campus Phase I

• The largest single State capital project in the history of North Carolina

- This total SCIF project budget exceeds \$250 Million and will relocate 2,400 DHHS staff currently located on the Dorothea Dix Park Campus in Raleigh
- Construction will begin Spring 2022-Occupancy scheduled before July 2025
- Phase II of the DHHS Campus project development will relocate over 2,700 DHHS staff in the Greater Triangle Area and will be delivered as a Public Private Partnership



Team Building 101

• **DESIGNER** selection stressed <u>4 DOA priorities</u>:

- 1. Total Project Funding is **FIXED**.
- 2. A Guaranteed Maximum Price based on Design Development Documents.

3. Phase I occupancy by DHHS will be before July 2025 in compliance with the City of Raleigh 10-Year Lease on Dorothea Dix Park property.

4. No reinventing the wheel.



Team Building 102

• **CONSTRUCTION MANAGER AT RISK** selection stressed <u>4 DOA priorities</u>:

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- 2. A Guaranteed Maximum Price based on Design Development Documents.

3. Phase I occupancy by DHHS will be before July 2025 in compliance with the City of Raleigh 10-Year Lease on Dorothea Dix Park property.

4. No reinventing the wheel.











Lessons Learned

- 1. Align Budget and Scope early
- 2. GMP at DD is best for projects that need to expedite their schedule... it is NOT for the faint of heart
- 3. Simplify separate bid packages as much as possible
- 4. Communicate, Communicate, Communicate... early and often



















1 2 .

#1 Key to Success: Early Investigations



- Issue: Early site survey, CMAR site investigation, revealed the Mail Center Building (to be demolished) fed all major utilities services to Motor Fleet Building (to remain)
- 2. Effect: 6-month project delay to project in order to separate building systems

3. Solution:

- Unique funding approval
- Unique SCO project ID Designer CD Package
- Unique CMAR contract and bidding process

4. Result:

- Design and Constructability reviews concurrent to design new package in 30 days
- SCO and NCDEQ approval in 30 days
- CM contracting, bidding, and construction supports original DHHS project schedule



#2 Key to Success: Cost Estimate

- Three targeted cost checks between SD and DD
- Specific areas of the design that needed more development
- Looked at escalation pressures on major systems





#2 Key to Success: Cost Estimate

*CMAR-Designer 1 hour design discipline meetings: Q & A design scope

*Alignment with project specification materials and ASTM testing requirements to what CMAR was pricing in the subcontractor market

*CMAR-Designer proactive with estimating process using a VE tracker

*Deep Dive Leadership meeting to make key construction cost decisions

- Unit pricing validation design to current dollars vs. market escalation
- Real-time VE ideas yielded design modifications for cost savings
- Real-time Owner decisions and approval

*=Key differentiators



#3 Key to Success: GMP

Construction Manager at Risk SECTION II – GENERAL PROVISIONS Paragraph C.1.1:

"Upon agreement of the Owner, Construction Manager-at-Risk and the State Construction Office, the **Guaranteed Maximum Price** may be submitted by the Construction Manager-at-Risk at any time after completion and approval of the **Design Development Phase**..."



#3 Key to Success: GMP

- GMP is based on Design Development Drawings
- Design Development "on steroids"
- Imperative to right-size the project scope at Schematic Design
- SCO Discipline Reviewers meetings held prior to DD submittal



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#4 Key to Success: Post GMP Cost Change Tracking Matrix

Update since previous:	Item #	Description	0	Design Team Review by:	Review Status	GMP Package	Cost Increase	No-Cost	Cost Reduction	Add to COR	Add to Change Order	Comments
	Civil											
1	C1	Mail Service Center Demo Set	No Change	CER	Approved	E		\$0				
	C2	Added piped Connections to downspouts on the North side of the	Coordination	CER	Revise as Noted	В	\$46,370					See separate doc for notes. Should probably be about half this cost.
	C2.1	Added Storm RCP and Structures	Coordination	CER	Revise as Noted	В	\$137,151					See separate doc for notes. Cost for 36" RCP went up from DD to CD. I count 37 CB's at DD vs 38 at CDs, but BBE breakdown shows 20 at DD and 40 at CDs. BBE to confirm counts.

- **1. Issue:** DD Phase Cost Items change during production of Construction Documents/Bid Documents and SCO review.
- **2. Effect:** Updated cost data to reflect design scope changes.
- **3. Solution:** <u>Cost Change Tracking Matrix</u> by discipline identifies scope cost increase or decrease Works as a 2nd VE exercise to remain in budget
- **4. Result:** GMP modified by Change Order is tied to each individual Bid Package

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Bid Packages

- A Demolition & Abatement of Mail Service Center
- B Early Site, Foundations & Structural Steel
- C Central Utility Plant & Parking Deck
- D Office Core & Shell
- E Interior Upfit



#5 Key to Success: Project Schedule

Designer and CMAR Joint Preconstruction Schedule

SK ID	TASK	DAYS	DATE	FINISH	Total Float	COMMENTS	D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
HHS DE	SIGN SCHEDULE	1184	01-Feb-21 A	21-Aug-25	0		
NON-SCO	PERMITTING REQUIREMENTS	822	03-Dec-21 A	27-Jan-25	148		
PERMITTI	NG - CITY OF RALEIGH	124	68-Dec-21 A	30-May-22	99		
	ATED COR - FINAL SITE REVIEW (SPR) - 3 MONTHS	73	08-Dec-21 A	18-Mar-22	10		
1035	SUBMITTAL TO COR - REVIEW 1 (3 WEEKS)	23	08-Dec-21 A	07-Jan-22	10	12/85-1/7F	SUBMITTAL TO COR - REVIEW 1 (3 WEEKS)
	RESPONSE TO COR - REVIEW 1 (2 WEEKS)	9	10-Jan-22	20-Jan-22	10		6 RESPONSE TO COR - REVIEW 1 (2 WEEKS)
	COR EXPRESS REVIEW (OPTIONAL)	0		20-Jan-22	10		el COR EXPRESS REVIEW (OPTIONAL)
	SUBMMITTAL TO COR - REVIEW 2 (2 WEEKS) RESPONSE TO COR - REVIEW 2 (2 WEEKS)	10	21-Jan-22 04-Feb-22	03-Feb-22 17-Feb-22	10		37 SUBMITTAL TO COR - REVIEW 2 (2 WEEKS) 10 B RESPONSE TO COR - REVIEW 2 (2 WEEKS)
	SUBMITTAL TO COR - REVIEW 2 (2 WEEKS)	10	18-Feb-22	03-Mar-22	10	-	139 B SUBMITAL TO COR - REVENS (2 WEEKS)
	CITY OF APPROVAL LETTER (2 WEEKS)	11	04-Mar-22	18-Mar-22	10		1040 CITY OF APPROVAL LETTER (2 WEEKS)
1041	COR UTILITY PERMITS RECIEVED	0		18-Mar-22	10		1041 COR UTILITY PERMITS RECIEVED
ACCELER	ATED COR - FINAL PLAT (EASTMENTS & ROW) - 2 TO 3 MONTHS	51	21-Mar-22	30-May-22	99		
	SUBMITTAL TO COR - REVIEW 1 (2 WEEKS)	10	21-Mar-22	01-Apr-22	99		1043 SUBMITTAL TO COR - REVIEW 1 (2 WEEKS)
	RESPONSE TO COR - REVIEW 1 (2 WEEKS)	10	04-Apr-22	15-Apr-22	99		1044 E RESPONSE TO COR - REVIEW 1 (2 WEEKS)
	COR EXPRESS REVIEW (OPTIONAL)	0		15-Apr-22	99		1988 + COR EXPRESS REVIEW (OPTIONAL)
	SUBMITTAL TO COR - REVIEW 2 (2 WEEKS) RESPONSE TO COR - REVIEW 2 (2 WEEKS)	10	18-Apr-22 02-May-22	29-Apr-22 13-May-22	99 99		1045 B SUBMITTAL TO COR - REVIEW 2 (2 WEEKS) 1046 B RESPONSE TO COR - REVIEW 2 (2 WEEKS)
	SUBMITTAL TO COR + REVIEW 3 (2 WEEKS)	10	16.Map.22	13-May-22 27-May-22	99		1045 RESPONDE TO CONTREMENTAL TO CONTREMENTA (2 WEEKS)
	COR - FINAL PLAT RECORDED	1	30-May-22	30-May-22	99		1048 COR - FINAL PLAT RECORDED
	NG - NCDEQ (GRADING PERMIT)	21	31-Dec-21 A	28-Jan-22	22		
	NOTICE OF MPACT LETTER	11	31-Dec-21 A	14-Jan-22	22	1/14F	D NOTCE OF MPACT LETTER
	GRADING (EROSION) PERMIT ISSUED BY NCDEQ (1 WEEK)	10	17-Jan-22	28-Jan-22	22		83 GRADING (EROSIDN) PERMIT ISSUED BY NCDEG (1 WEEK)
PERMITTI	NG - NCDOT	120	03-Dec-21 A	19-May-22	850		
NCDOT PE	RMITTING	120	03-Dec-21 A	19-May-22	850		
1182	NCDOT - DESIGNER NOTIFICATION OF PERMIT DELAYS	120	03-Dec-21 A	19-May-22	850	12/35	NCDOT - DESIGNER NOTIFICATION OF PERMIT DELAYS
1292	BBC SOIL NAILING DESIGN	28	08-Dec-21 A	14-Jan-22	9		BBC SOIL NALING DESIGN
1102	NCDOT - ENCROCHMENT AGREEMENT FOR SOIL NAILING WALLS	19	17-Jan-22	10-Feb-22	9		22 MCDOT- ENCROCHMENT AGREEMENT FOR SOIL NAILING WALLS
	NG - DUKE POWER	5	21-Jan-25	27-Jan-25	148		
094	RECORDING OF EASMENT	5	21-Jan-25	27-Jan-25	148	TIE DUKE PWR INSTALL	094 RECORDING OF EASMENT
DESIGN	ACTIVITIES			28-Feb-22	908		
DESIGN C	OORDINATION	276	01-Feb-21 A	28-Feb-22	908		
	ERVICES PROVIDER - FIBER / PHONE	543	09-Aug-21 A	28-Feb-22	10		
	DESIGN FOR RELOCATION REEDY CREEK AT&T PHONE LINE & GUIDEWIRE	143	09-Aug-21 A		16	2/28F	DESIGN FOR RELOCATION REEDY CREEK AT&T PHONE LINE & GUIDEWIRE
	ERVICES PROVIDER - ELECTRIC	265	01-Feb-21 A		919	No. Contraction of the second s	
	UTLITY SERVICE - ELECTRICAL DESIGN	250	01-Feb-21 A	21-Jan-22	919		UTLITY SERVICE - ELECTRICAL DESIGN
1265	NCDOT / STATE RIGHT OF ENTRY APPROVAL FOR REEDY CREEK POLE RELOCATION	40	01-Dec-21 A	25-Jan-22	-14		NCDOT / STATE RIGHT OF ENTRY APPROVAL FOR REEDY CREEK POLE RELOCATION
1144	RIGHT OF ENTRY APPROVAL - FOR MAIN NEW SERVICE	15	24-Jan-22	11-Feb-22	919		44 RIGHT OF ENTRY APPROVAL - FOR MAIN NEW SERVICE
	ERVICES PROVIDER - GAS	56	13-Dec-21 A	28-Feb-22	908		
	UTILITY SERVICE - GAS DESIGN	36		31-Jan-22	908		THUTY SERVICE - GAS DESIGN
	NCDOT / STATE RIGHT OF ENTRY APPROVAL	20	01-Feb-22	28-Feb-22	908		34 CDDT/STATE RIGHT OF ENTRY APPROVAL
FAA PERW	FIA 7460 FORM & APPROVAL FOR BUILDING	117	02-Aug-21 A	14-Jan-22	83		
		117	02-Aug-21 A 18-Oct-21 A	14-Jan-22 26-Sep-22	83	1/14F	FAA 7460 FORM & APPROVAL FOR BUILDING
	IGN PACKAGES						
CD DOCU		244		26-Sep-22	758		
	B - EARLY SITE & STRUCTURES (SCO PACKAGE # 19-21089-2B)	96	18-Oct-21 A		906		
	CD DESIGN DOCUMENTS	58	18-Oct-21 A	07-Jan-22		1/7F	CD DESIGN DOCUMENTS
	DESIGNER TO ISSUE BID DOCUMENTS	4	04-Jan-22 A	07-Jan-22	3	1/7F	DESKNER TO ISSUE BD DOCUMENTS
	SUBMIT PACKAGE TO SCO ISOLATE STRUCTURAL STEEL PACKAGE FOR BIDDING	1	07-Jan-22 10-Jan-22	07-Jan-22 10-Jan-22	170	1/7SF	5 SUBMIT PACKAGE TO SCO 9 I ISOLATE STRUCTURAL STEEL PACKAGE FOR BIDDING
	IBOLATE STRUCTURAL STEEL PACKAGE FOR BIDDING DESKINER - CM CD COST RECONCILIATION VS GMP	1	10-Jan-22 10-Jan-22	10-Jan-22 21-Jan-22	913	1/105	ISOLATE STRUCTURAL STIBLE / ACAGE FOR BIDDING Solate Structural Structural Structural State DESIGNER - CM CD COST RECORDILIATION VS GMP
	SCO REVIEW & APPROVAL (SCO AGREEMENT FOR 30 DAY REVIEW VS 60)	20	10-Jan-22 10-Jan-22	04-Feb-22	170	1/105	BESINGER VIEW & APPROVAL (SO AGREEMENT FOR 30 DAY REVIEW VIS 60)
	DESIGNER RESPOSE TO SCO COMMENTS	8	07-Feb-22	16-Feb-22	170		118 B DESIGNER RESPOSE TO SCO COMMENTS
1199	SCO RE-REVIEW & APPROVAL	10	17-Feb-22	02-Mar-22	170		199 E SCORE-REVIEW & APPROVAL
	DESIGNER PROVED "ISSUED FOR CONSTRUCTION" DOCUMENTS	0		25-Feb-22	909		197 DESIGNER PROVED "ISSUED FOR CONSTRUCTION" DOCUMENTS
	C - CENTRAL UTILITY PLAN & PARKING DECK COMPLETE (SCO PAC⊁	164	18-Oct-21 A		838		
1202	CD DESIGN DOCUMENTS	104	18-Oct-21 A	14-Mar-22	25	3/14F	CD DESIGN DOCUMENTS
ERSION 28-						SCHEDULE CT SCHEDUL	Balfour Beatty

1. Key Activities to Track

- Design Packages
- SCO Approval Process
- City of Raleigh Permitting
- NCDOT/NCDEQ Permitting
- Utility Company Design Coordination
- Owner Decisions

2. Monthly Updating

- Designer keeps CMAR Scheduler updated from agencies throughout the process
- Scheduler holds monthly teams call to update schedule with Designer, and CMAR
- 3. Results after 15 months since schedule was developed, project remains on original plan















What Does the Future Hold?





What Does the Future Hold?





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Questions?





Thank You !

















