

From the Roots

Growing a Holistic Project Team
with Lean Tools



Jeff Schroder

AVP Planning, Design and Construction
Methodist Health System







Keyan Zandy

Chief Operating Officer
Skiles Group

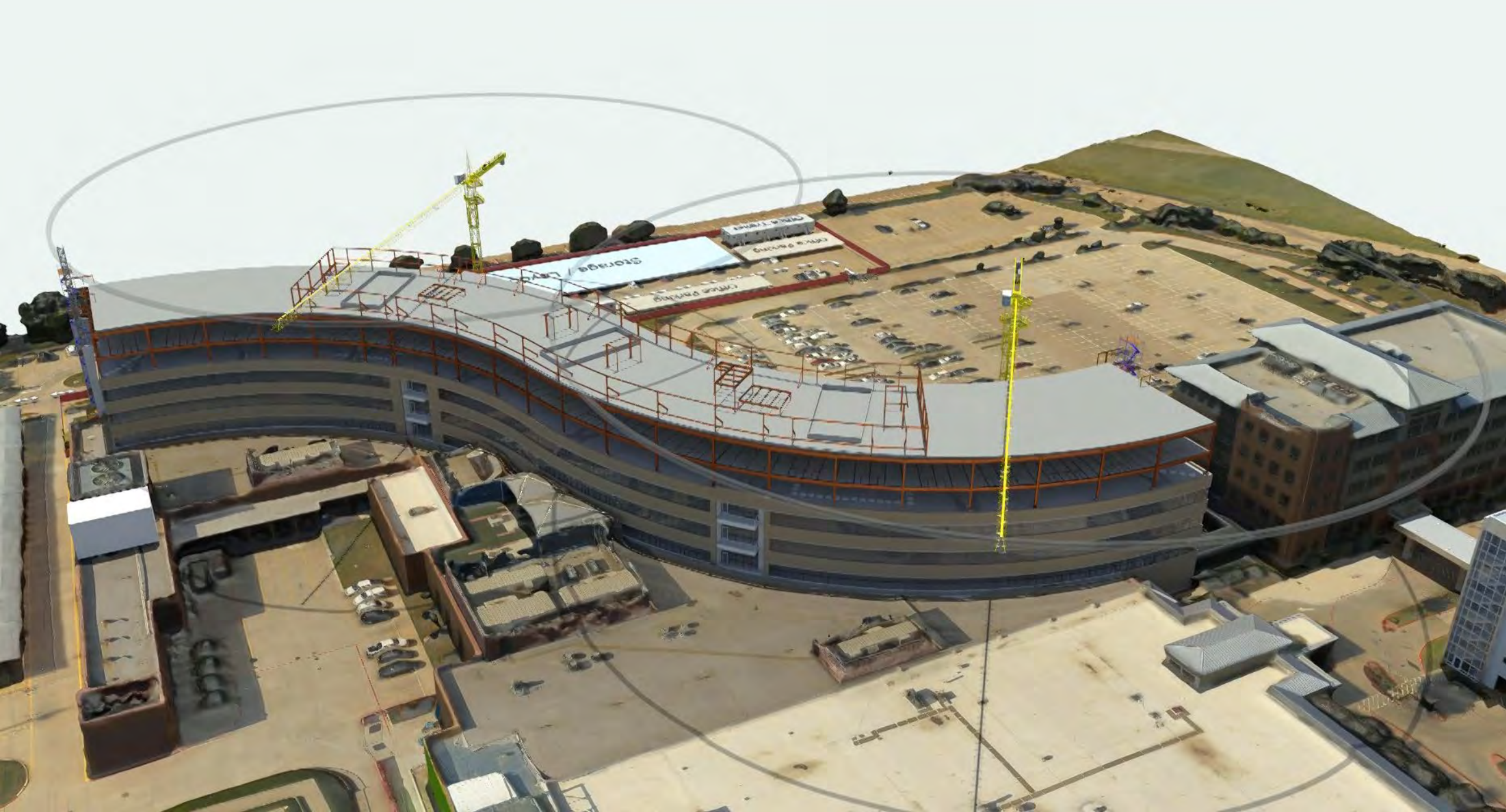


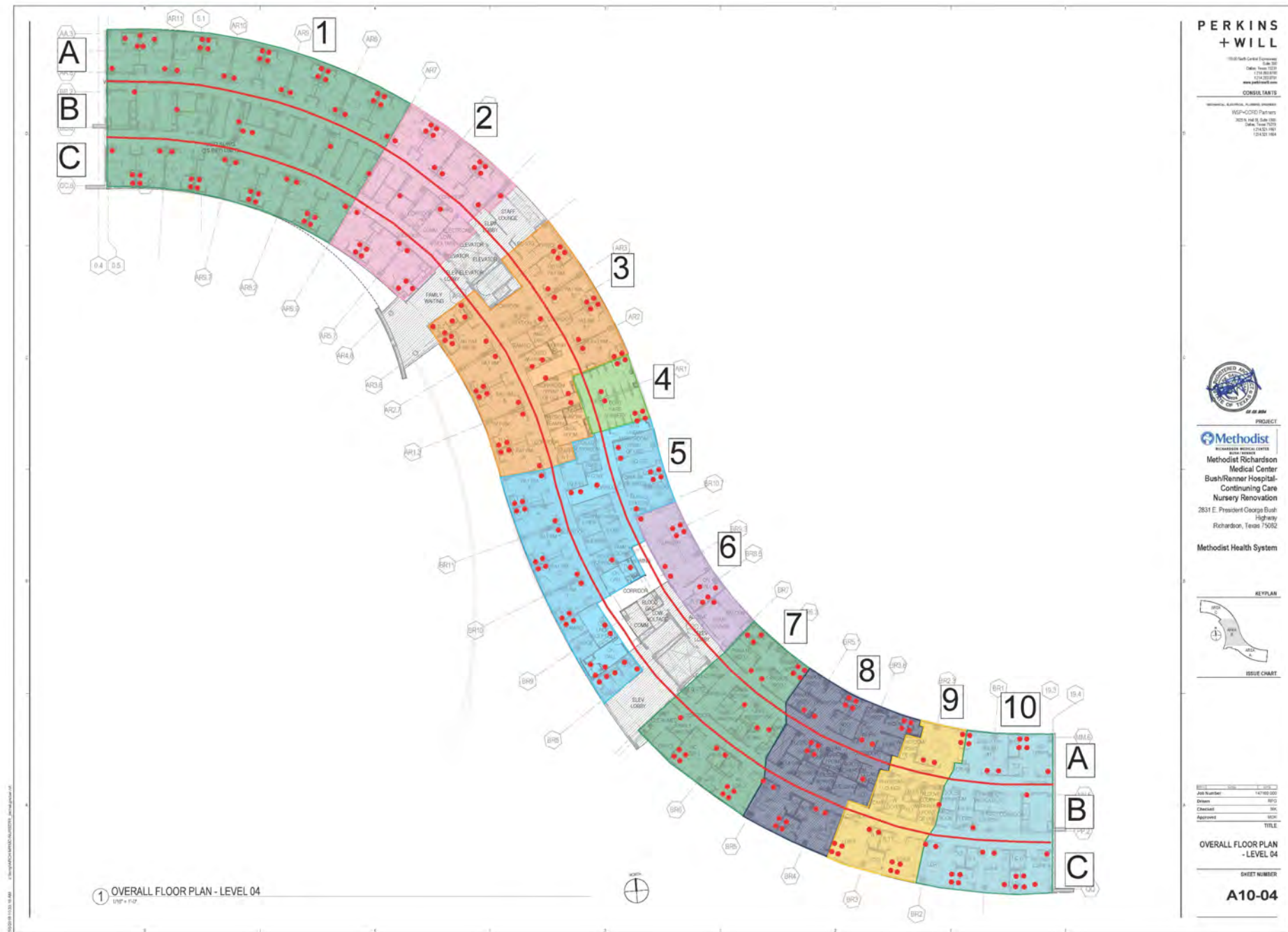












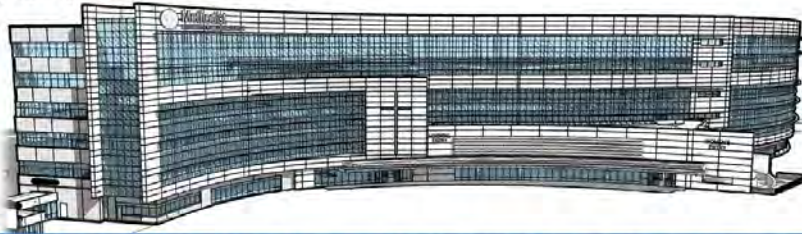


Selling Lean

CBAs Big Room **Pull** **Planning**



1 | BACKGROUND



THE PURPOSE OF THIS A3 IS TO PROVIDE A REQUEST FOR QUALIFICATIONS FROM SELECT GENERAL CONTRACTORS TO ASSIST METHODIST HEALTH SYSTEM IN THE DESIGN AND CONSTRUCTION OF THE MASTER PLAN PHASE I EXPANSION AT METHODIST RICHARDSON MEDICAL CENTER.

2 | CURRENT CONDITIONS

Existing Bed Count: 219
Existing Hospital SF: 308,603 SF
Future Floors: YES
Penthouse(s): YES
Is construction to be phased? YES
Date of original structure: 2014
Existing as-built drawings available? YES
Is building fully sprinklered? YES

3 | GOAL

The Scope of the Project includes a two floor vertical expansion of the existing bed tower, a new parking structure, and the finish out of a new operating room in the existing Shell space.

LINK TO FILES: [CLICK HERE](#)

Summary of Work Areas:

Bed Tower Expansion

Total New Construction= 103,750 BGsf

Parking Garage

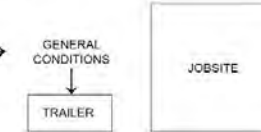
Total New Construction= 242,550 BGsf

TOTAL SF= 346,300 BGsf

4 | ANALYSIS

Please address the following topics that are listed below in alphabetical order:

- Collaboration / Communication
- GMP (estimate with emphasis on General Conditions and Fee) →
- Lean
- Minority and Women Owned Business Enterprises
- Preconstruction / Estimating Process
- Schedule
- Site Logistics / Construction Impacts
- Similar Projects (Vertical Expansion of an existing Hospital and Precast Garage)
- Team
- Technology



5 | RECOMMENDATION

Address and Prioritize items listed above in an effort to demonstrate the quality and expertise that can be brought to the project.

6 | PLAN

Submit a response to this RFQ via a link (Dropbox, etc) by noon on June 30th, 2017.

Submit link to Cathy Middleton at CathyMiddleton@mhd.com

Limit RFQ response to 748 square inches and project team resumes.

Include 3 options for a Precast Concrete subcontractor for the Garage scope of work.

7 | FOLLOW UP

Interviews will be held on July 28th, 2017.

MRMC EXPANSION TRADE PARTNER SURVEY

Survey Questions

1. Communication- How effective is the contractor's communication with subcontractors?
2. Collaboration- Rate the contractor's team when it comes to collaboration. IS your voice / input truly valued?
3. Lean- Rate each contractor on their knowledge of and Implementation of Lean.
 - a. Lean Knowledge
 - b. Lean Implementation
4. Pre-Con/Estimating- Rate each contractor on their Pre-Con/Estimating abilities.
5. Schedule- Rate the effectiveness of the general contractor's scheduling process.
6. Technology- Rate the general contractor's technology.
7. Safety- Rate the general contractor's company as it relates to their safety culture.
8. Proactive/Reactive- Rate the contractor on their ability to be proactive.
9. Overall Experience- Rate the general contractor at having the projects best interest vs. self-interest.

Average Response by Question				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	8	9	6.2	8.2
Q2	6.5	8.8	5.8	8
Q3A	7.75	9.2	6.2	8.4
Q3B	6.75	8.8	5	8
Q4	8	9	6	7
Q5	8	8	5.4	7
Q6	8.25	9.2	7.6	7.6
Q7	8.5	8.8	6.6	7.2
Q8	7.25	8.2	5.6	7
Q9	7.75	8.8	6.8	7.2
	Contr. A	Contr. B	Contr. C	Contr. D
Summary	7.675	8.78	6.12	7.56

Respondent #1				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	9	9	5	7
Q2	9	9	5	7
Q3A	10	10	7	7
Q3B	9	9	5	7
Q4	10	10	5	7
Q5	8	8	5	5
Q6	10	10	8	7
Q7	10	10	7	7
Q8	8	8	5	5
Q9	10	10	7	6
Mean	9.3	9.3	5.9	6.5
Q10	Contr. A or B			

Respondent #2				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	9	9	7	9
Q2	7	9	7	8
Q3A	8	9	7	8
Q3B	7	9	5	8
Q4	8	8	7	7
Q5	7	8	6	7
Q6	9	9	9	9
Q7	9	9	7	7
Q8	8	8	7	7
Q9	8	8	7	8
Mean	8	8.6	6.9	7.8
Q10	Contr. B			

Respondent #3				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	N/A	9	6	9
Q2	N/A	9	7	9
Q3A	N/A	9	7	9
Q3B	N/A	9	7	9
Q4	N/A	9	7	9
Q5	N/A	9	6	8
Q6	N/A	9	7	8
Q7	N/A	9	7	8
Q8	N/A	9	6	9
Q9	N/A	9	7	8
Mean	0	9	6.7	8.6
Q10	Contr. B			

Respondent #4				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	6	10	7	8
Q2	2	9	3	9
Q3A	5	9	3	10
Q3B	3	8	2	9
Q4	5	9	4	5
Q5	8	6	4	6
Q6	5	9	7	6
Q7	6	7	5	6
Q8	4	7	3	6
Q9	5	9	5	6
Mean	4.9	8.3	4.3	7.1
Q10	Contr. B or D			

Respondent #5				
	Contr. A	Contr. B	Contr. C	Contr. D
Q1	8	8	6	8
Q2	8	8	7	7
Q3A	8	9	7	8
Q3B	8	9	6	7
Q4	9	9	7	7
Q5	9	9	6	9
Q6	9	9	7	8
Q7	9	9	7	8
Q8	9	9	7	8
Q9	8	8	8	8
Mean	8.5	8.7	6.8	7.8
Q10	Contr. A or B			



CHOOSING BY ADVANTAGES (CBA)

Methodist Richardson Medical Center's 5 th and 6 th Floor Expansion Project 5 th Floor Finish-out Versus 6 th Floor				OPTION #1 5 th Floor		OPTION #2 6 th Floor			
#	POINTS								
1		FACTOR:	Schedule	ATTRIBUTE:	Removal of existing roof drives start date		Building dry in drives start date		
		CRITERIA:	Faster is better	ADVANTAGE:			Dry in is 6 weeks earlier than removal of existing roof	✓	
2		FACTOR:	Tie-Ins	ATTRIBUTE:	Must coordinate closures of each room below		Must coordinate closures of only vertical riser locations below		
		CRITERIA:	# of tie-ins - fewer is better	ADVANTAGE:			Tie-ins in fewer areas	✓	
3		FACTOR:	Impacts to facility	ATTRIBUTE:	Construction activity in each room		Construction activity at chase and riser locations		
		CRITERIA:	Less construction activity on 4 th floor is better	ADVANTAGE:			Limits construction areas on 4 th floor	✓	
4		FACTOR:	Future impacts to facility	ATTRIBUTE:	Only the 4 th floor is occupied now		The 6 th floor would be occupied at time the 5 th floor is built out		
		CRITERIA:	Less construction activity in occupied areas is better	ADVANTAGE:	Limits the impact to occupied areas	✓			
5		FACTOR:	Man hours required from contractors	ATTRIBUTE:	Infection control and off hours work required in MEP underfloor				
		CRITERIA:	Less man hours is better	ADVANTAGE:			All underfloor work can be performed in normal working hours	✓	
6									
7									
8									
9									



CATEGORY #1: Preconstruction Services

What process will you use to establish roles & responsibilities with the engineer?

CATEGORY #2: Team

Why do you think you're a good fit for this project?

CATEGORY #3: Firm

Describe your firm's experience w/ healthcare work/overbuilds/working in occupied campuses.

CATEGORY #4: Lean Processes

Describe what Lean means to you.
What do you think the benefits are?

CATEGORY #5: M/WBE

Are there any scopes of work that you will not consider for MWBE participation? If yes: why?

CATEGORY #6: Communication & Collaboration

Describe how you deal with conflict resolution?

CATEGORY #7: Constructability

What challenges/opportunities do you see for this project?

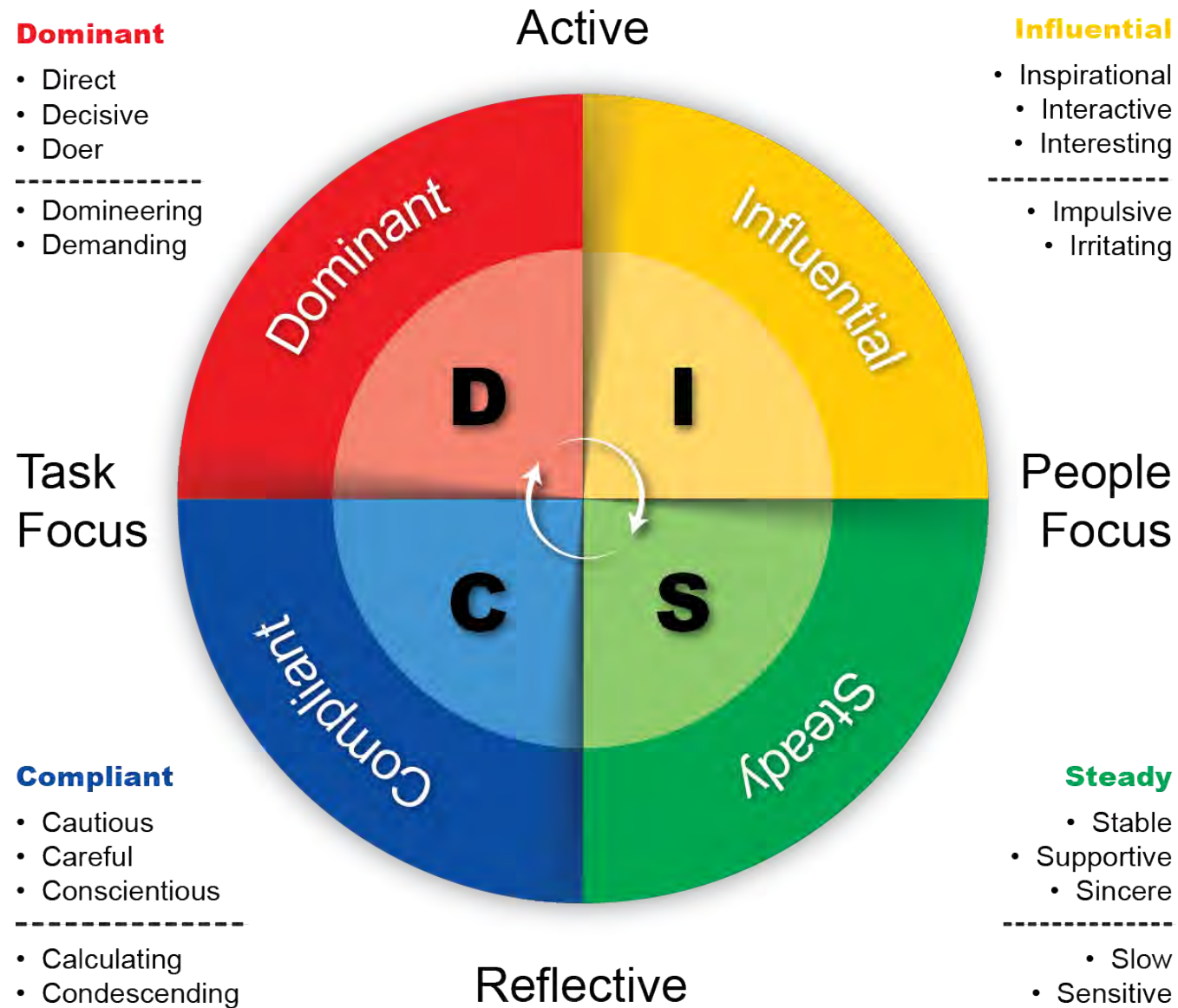
CATEGORY #8: Budget

What are your thoughts on Methodist buying equipment direct?

CATEGORY #9: QA/QC

How do you look out for the safety of others in occupied facilities?

CATEGORY #10: "WOW Factor"









D relating to...



Mutual respect must exist to avoid conflict. Both people must understand one another's realms and boundaries of authority.



Must have direct communication; deal with issues in a straightforward manner, negotiate commitments and goals on an equal basis.



Avoid pushing; recognize with sincerity the high S's good work; be friendly, more easygoing, and steady paced.



Slow down; avoid the tendency to omit or minimize the details. Expect the high C to ask questions. Don't view the high C's need for information as opposition.





D Kenneth Hutchenrider – DC
Keyan Zandy – DI
Mark Conard – DC
Scott Brady – DI

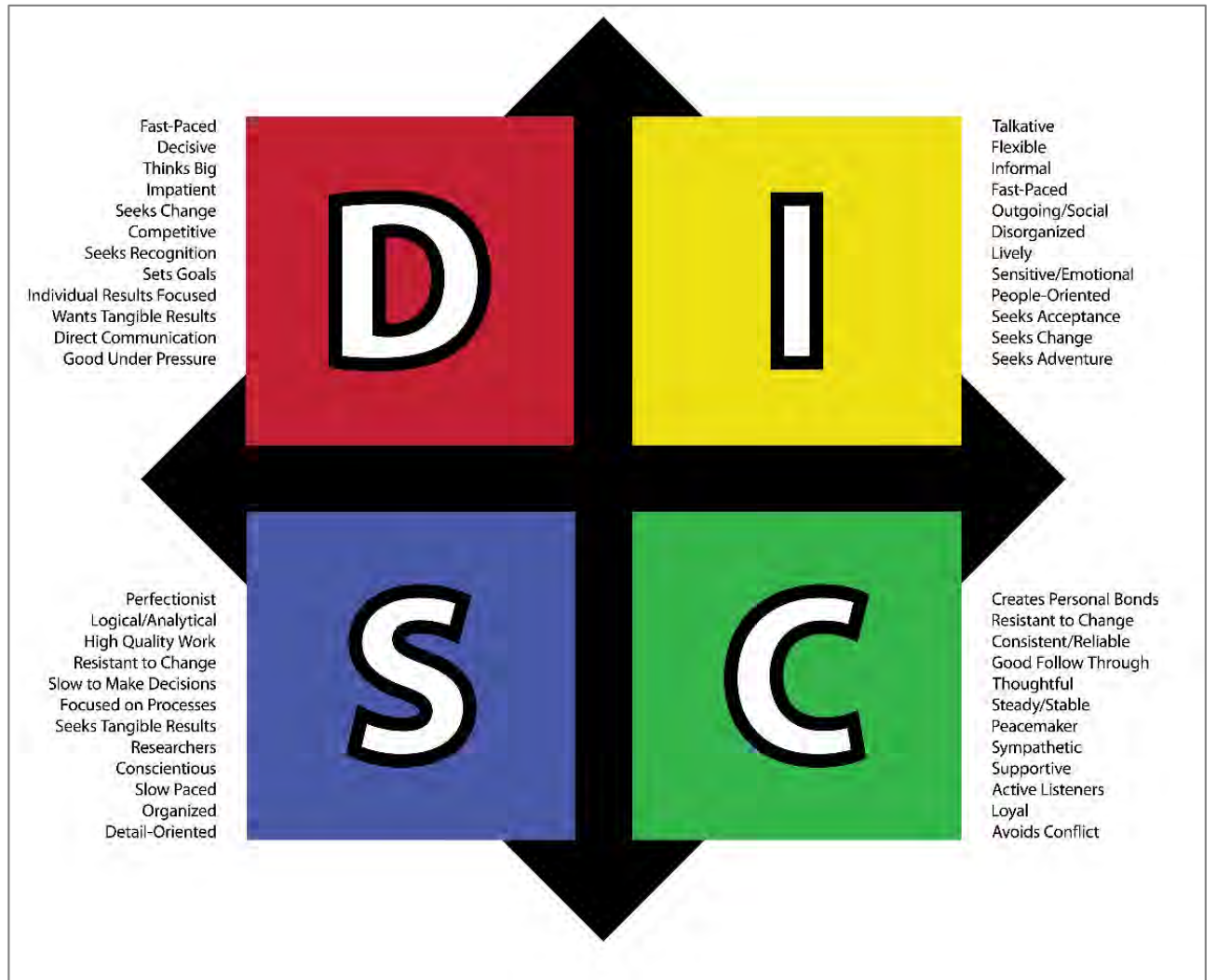
I David Ojeda – ID
Jeff Schroder – ID
Kevin Miller – ID

S Buddy Brumley – SC
Don Lee – SC
Jeremy Hersom – SC
Jim Guntorius – SC
Mark Roan – SC
Mary Connolly-Smith – SC
Mike Jolly – SD
Wayne Teague – SID

C Ben Lasater – CSD
Clay Harrison – CD
David Collins – CD
Jerod Lakey – CSD
Justin Klaus – CS
Kevin Chow – CS
Lucas Wilke – CDS
Manual Aranda – CS
Mark Kitchens – CS
Michael Knapp – CS
Ross Brindle – CD
Scott R. Simons – CSD
Sheree Levy – CS
Wayne Hendrix – CS



Methodist Richardson Medical Center
Vertical Expansion Team

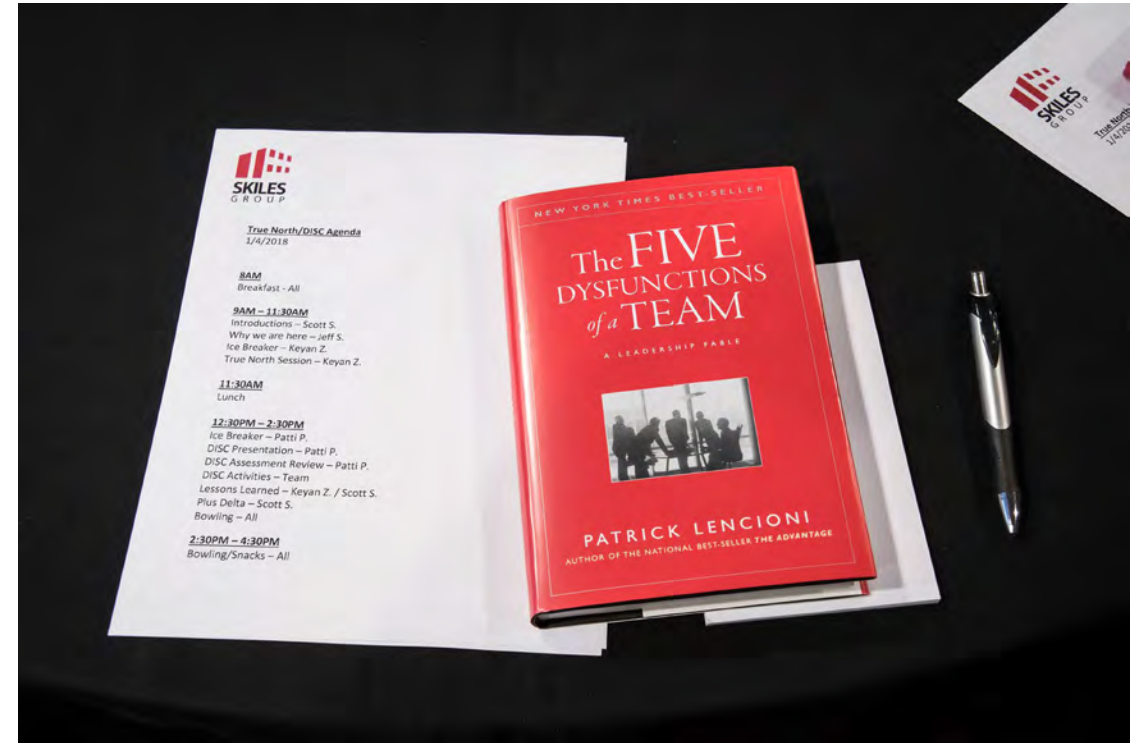




22	1	2	3	4	5	6	7	8	9	10	1:32
Scott	5 4 9	3 / 29	X 45	- 6 51	1 6 58	8 - 66	7 2 75	5 3 83	6 1 90		90
Mark	7 - 7	3 4 14	4 2 20	4 - 24	9 - 33	7 2 42	9 / 60	8 - 68	X		78
Mike											89

WINE DOWN WEDNESDAYS
50% off all wine bottles all day Wednesday





Team Assessment Report

BASED ON THE MODEL IN THE BEST-SELLING BOOK,
THE FIVE DYSFUNCTIONS OF A TEAM

MRMC GARAGE VERTICAL EXPANSION TEAM
SKILES GROUP
APRIL 17, 2018



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TEAM SUMMARY

- HIGH (3.75 AND ABOVE)
- MEDIUM (3.25 TO 3.74)
- LOW (LESS THAN 3.25)



Your assessment scores indicate that results, commitment, conflict and trust are likely areas of strength for your team, while accountability is potentially an area for improvement.

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PAGE 4

THE FIVE FUNDAMENTALS



Trust: Your score in this area was high, which indicates that your team has created an environment where vulnerability and openness are the norm.

Conflict: Your score in this area was high, which indicates that your team is comfortable engaging in unfiltered discussion around important topics.

Commitment: Your score in this area was high, which indicates that your team is able to buy-in to clear decisions leaving little room for ambiguity and second-guessing.

Accountability: Your score in this area was medium, which indicates that your team may be hesitating to confront one another about performance and behavioral concerns.

Results: Your score in this area was high, which indicates that your team values collective outcomes more than individual recognition and attainment of status.

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PAGE 5



THE WEAKEST AREAS

The questions listed below represent the bottom 6 areas where your team scored lowest relative to other questions. To improve the cohesiveness of your team, it is critical that you understand and address these areas. Please note that questions with an average score below a 3.00 are areas where your team scored particularly low.

	FUNDAMENTAL	AVG. SCORE
8. Team members point out one another's unproductive behaviors.	ACCOUNTABILITY	2.59
6. Team members acknowledge their weaknesses to one another.	TRUST	3.17
21. The team ensures that poor performers feel pressure and the expectation to improve.	ACCOUNTABILITY	3.48
25. Team members are slow to seek credit for their own contributions.	RESULTS	3.59
16. Team members are quick to confront peers about problems in their respective areas of responsibility.	ACCOUNTABILITY	3.62
23. Team members communicate unpopular opinions to the group.	CONFLICT	3.62



THE STRONGEST AREAS

The questions listed below represent the top 6 areas where your team scored highest relative to other questions. Understanding and continuing to leverage your team's strengths is as important as identifying and correcting its weaknesses. Please note that questions with an average score above a 4.50 are areas where your team scored particularly high.

	FUNDAMENTAL	AVG. SCORE
24. The team is clear about its direction and priorities.	COMMITMENT	4.38
28. The team is aligned around common objectives.	COMMITMENT	4.34
31. Team members value collective success more than individual achievement.	RESULTS	4.28
19. Team members end discussions with clear and specific resolutions and calls to action.	COMMITMENT	4.28
5. During team meetings, the most important and difficult issues are discussed.	CONFLICT	4.21
38. Team members support group decisions even if they initially disagreed.	COMMITMENT	4.21



ESCAPE
EXPERT

Welcome to the MRC Garage & Vertical Expansion
Team Building Event @ 11:00AM - May 29th
Enjoy the Largest Escape Room Experience in Tucson

WWW.ESCAPEEXPERT.COM

**WINNER
WINNER
CHICKEN
DINNER**





**TRUE
NORTH
PROVIDES
THE VISION
OF OUR
IDEAL
OUTCOME.**



SAFETY

- Creation of Site Safety Committee with monthly meetings
 - Daily huddles for foreman
- Weekly trade partner-led safety huddles
- Weekly trade partner project inspections
- Bi-monthly 3rd party safety inspections
- Milestone safety stand down lunches
- Monthly survey gauging site cleanliness

MORALE

- Monthly surveys to Core Team, Steering Committee, supply chain, IT, and hosp. administration
 - Monthly check-in at OAC on survey results
 - 100% survey participation goal
- Bi-monthly team bonding activity with 70% participation goal
- Monthly OAC RTTD Log update

DELIVERY

- Bi-weekly Core Team review of Percent Plan Complete and Root Cause Analysis
 - Quarterly review of pre-fab log
- Milestone pull plan sessions with “strong” participation
- Real-time schedule updates to PDC and Facilities

COST

- All pay applications to be issued and paid on time
- Monthly Core Team review of change order log
- Monthly Core Team review of value add log

QUALITY

- Monthly QA/QC walk with Facilities, GC, and design team
- Bi-weekly review of water infiltration log and Root Cause Analysis
 - Building’s aesthetic conveys it was built at one time
 - Provide quality and timely O&M documentation

ENVIRONMENT

- Monthly review of Core team HCAP comments
- Monthly update to volunteers on construction progress
 - Monthly hospitality to hospital staff

MRMC Vertical Expansion - True North Scorecard

ON THIS PROJECT, OUR TEAM IS COMMITTED TO:	Frequency	8/15/2018	8/22/2018	8/29/2018	9/5/2018	9/12/2018	9/19/2018	9/26/2018	10/3/2018	10/10/2018	10/17/2018	xx/xx/xx	xx/xx/xx	xx/xx/xx	xx/xx/xx	xx/xx/xx
WEEKLY																
Safety - Daily huddles for foreman	Weekly	Y	Y	Y	Y	Y	Y	Y	Y	Y						
Safety - Weekly trade partner-led safety huddles	Weekly	N	Y	Y	Y	Y	Y	Y	N	Y						
Safety - Weekly trade partner project inspections	Weekly	N	Y	Y	Y	Y	Y	Y	Y	Y						
Delivery - Real-time schedule updates to PDC and Facilities	Weekly	Y	Y	Y	Y	N	Y	Y	N	Y						
BI-WEEKLY																
Delivery - Bi-weekly Core Team review of Percent Plan Complete and Root Cause Analysis	Bi-Weekly	NA	Y	NA	Y	NA	Y	NA	Y	NA						
Quality - Bi-Weekly review of water infiltration log and Root Cause Analysis	Bi-Weekly	NA	Y	NA	Y	NA	Y	NA	Y	NA						
MONTHLY																
Safety - Creation of Site Safety Committee with monthly meetings	Monthly	Y	NA	NA	NA	NA	Y	NA	NA	NA						
Safety - Monthly survey gauging site cleanliness	Monthly	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Morale - Monthly surveys to Core Team, Steering Committee, Supply Chain, IT, and Hosp. Administration	Monthly	NA	NA	NA	Y	NA	NA	NA	Y	NA						
Morale - Monthly check-in at OAC on survey results	Monthly	NA	NA	NA	NA	Y	NA	NA	NA	Y						
Morale - 100% survey participation goal	Monthly	NA	NA	NA	N	NA	NA	NA	N	NA						
Morale - Monthly OAC RTTD Log Update	Monthly	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Cost - All pay applications to be issued and paid on time	Monthly	Y	NA	NA	Y	NA	NA	NA	Y	NA						
Cost - Monthly Core Team review of Change Order Log	Monthly	Y	NA	NA	NA	Y	NA	NA	NA	Y						
Cost - Monthly Core Team review of value add log	Monthly	Y	NA	NA	NA	NA	NA	NA	NA	NA						
Quality - Monthly QA/QC walk with Facilities, GC, and design team	Monthly	Y	NA	NA	NA	NA	NA	NA	NA	Y						
Environment - Monthly review of Core Team HCAP comments	Monthly	Y	NA	NA	Y	NA	NA	NA	NA	NA						
Environment - Monthly update to volunteers on construction progress	Monthly	NA	Y	NA	NA	NA	NA	NA	Y	NA						
Environment - Monthly hospitality to hospital staff	Monthly	Y	NA	NA	Y	NA	NA	Y	NA	Y						
BI-MONTHLY																
Safety - Bi-monthly 3rd party safety inspections	Bi-Monthly	N	Y	NA	NA	NA	NA	NA	NA	Y						
Morale - Bi-monthly team bonding activity with 70% participation goal	Bi-Monthly	NA	NA	NA	NA	NA	NA	NA	Y	NA						
QUARTERLY																
Safety - Milestone safety stand down lunches	Quarterly	N	NA	NA	NA	NA	NA	NA	Y	NA						
Delivery - Quarterly review of pre-fab log	Quarterly	NA	Y	NA	NA	NA	NA	NA	NA	NA						
Delivery - Milestone pull plan sessions with "strong" participation	Quarterly	Y	Y	NA	NA	NA	NA	Y	NA	NA						
ONE TIME																
Quality - Building's aesthetic conveys it was built at one time	One Time	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Quality - Provide quality and timely O&M Documentation	One Time	NA	NA	NA	NA	NA	NA	NA	NA	NA						

Monthly True North Morale Survey

On a scale of 1 (*never*) to 5 (*always*), tell us:

1. How much you feel you can hold team members accountable for their actions
2. How often the work environment allows for individual team members to be empowered
3. How often the work environment is collaborative
4. How much you feel you can trust your other team members
5. How hard the team works to provide the best product at fair value
6. How clear our communication is, both amongst the team and to outside parties
7. How respectful the team is of the work life/balance



Monthly True North Morale Survey

On a scale of 1 (*never*) to 5 (*always*), tell us:

1. How much you feel you can hold team members accountable for their actions = **4.50**
2. How often the work environment allows for individual team members to be empowered = **4.55**
3. How often the work environment is collaborative = **4.40**
4. How much you feel you can trust your other team members = **4.55**
5. How hard the team works to provide the best product at fair value = **4.70**
6. How clear our communication is, both amongst the team and to outside parties = **4.20**
7. How respectful the team is of the work life/balance = **4.30**



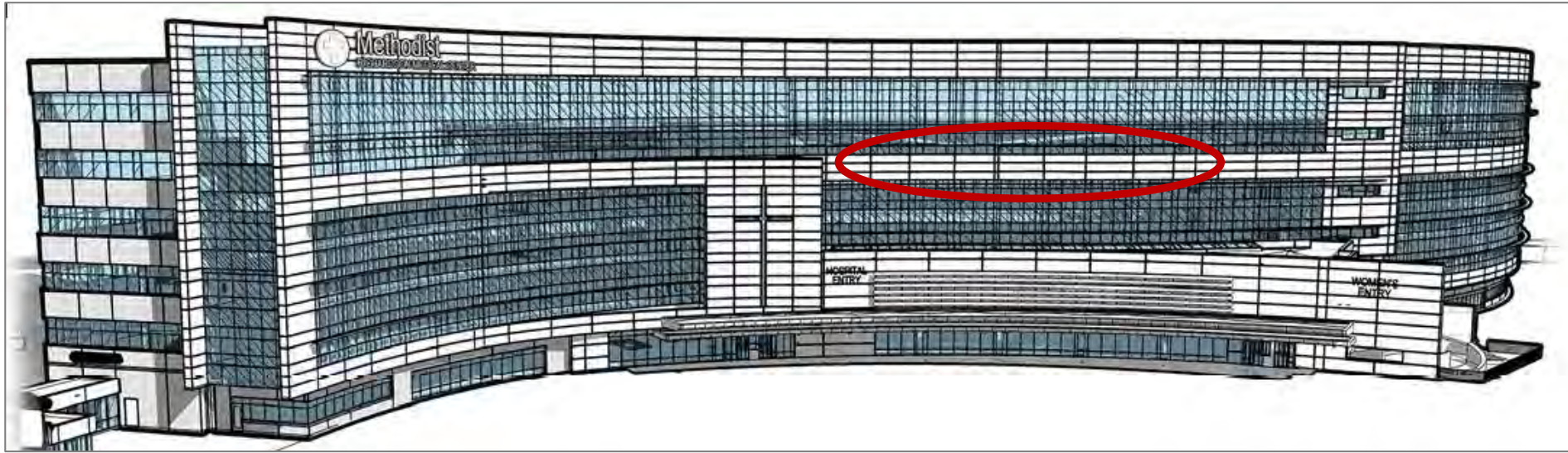


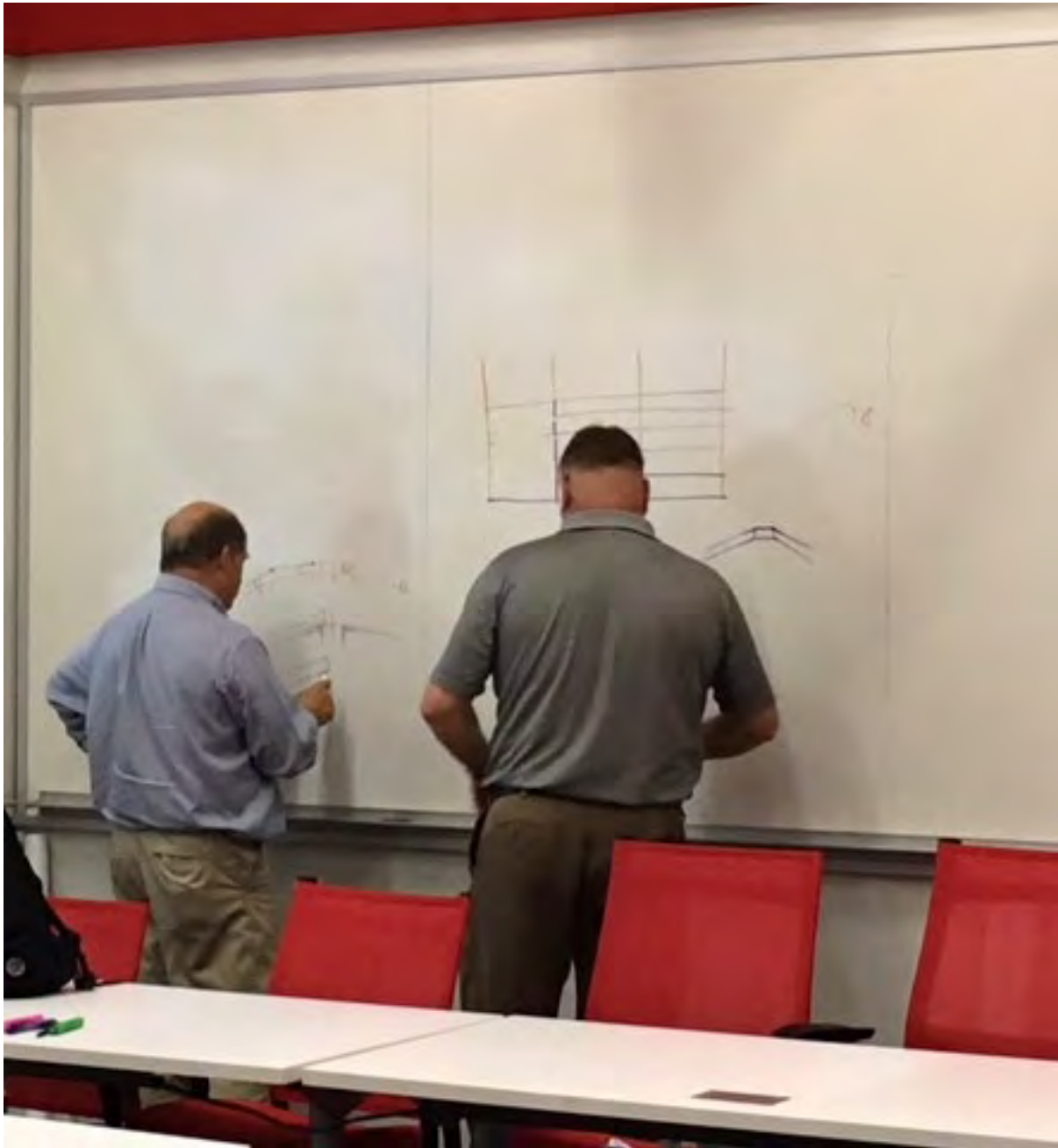




Metrics









\$2,100,000 | Skin & Glass Details
Skin and glass details achieved savings on both construction costs (\$1M) as well as in operation revenue (\$1.1M). Additional savings related to risk mitigation (water infiltration, ICRA, energy efficiency, and patient satisfaction) are extremely valuable, but unquantifiable.



\$50,000 | Mechanical Units

Early release and coordination allowed the new HVAC units to be split into pieces, which eliminated the need for an additional crane to lift equipment.

\$250,000 | Early Release Packages

Early design release packages achieved savings on material & equipment escalation for items like chiller, HVAC, generator, copper, switchgear, metal, structural steel.

\$20,000 | Electrical Coordination

Running emergency power through the MOB instead of having to connect all the way back at the central plant achieved cost savings and significantly reduced hospital impact.



\$300,000 | Early Investigation

A 10% savings on labor/man-hours was achieved due to early (non-reactive) investigation.

\$70,000 | Alternates

Collaboration — built through trust and team-building — ultimately resulted in a modification to the architect's specifications, allowing an alternate TAB contractor.



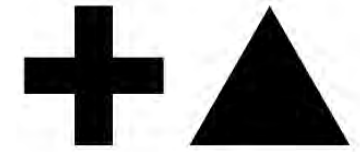
\$11,800,000 | Facility Revenue Gained

A significant gain in facility revenue was achieved through schedule reductions. The original scope of the project included a finish-out of the 5th floor, and a shell of the 6th. This would require waiting until the air was on before construction could begin on the 5th floor finish-out (which is the hospital's current roof).

If we followed the traditional approach where design was completed during bidding, an additional six months would have been added to the schedule to accommodate this requirement. By using a collaborative approach, we were able to flip the shell space and the finish-out, allowing construction to begin six months early — and opening the floor six months sooner. This strategy yielded significant time and cost savings, allowing MRMC to achieve an additional \$11.8M in revenue.



Q&A



Thank you!

