

24TH ANNUAL



24TH LCI CONGRESS
OCTOBER 18-21

Pressure Cooker:

Target Value Design for a Stipulated Price Tender

Jason Russell, University of Alberta

TJ Williams, Clark Builders

Aaron Corser, Clark Builders

LEAN GUMBO: THE RIGHT INGREDIENTS FOR PROJECT SUCCESS

OCTOBER 19, 2022

LEAN GUMBO: THE RIGHT INGREDIENTS FOR PROJECT SUCCESS

Meet the Chefs



**CLARK
BUILDERS**



**UNIVERSITY
OF ALBERTA**



Aaron

TJ

Jason



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*Start with an
appetizer...*



	36 hrs
	7+ hrs
	2,436 mi

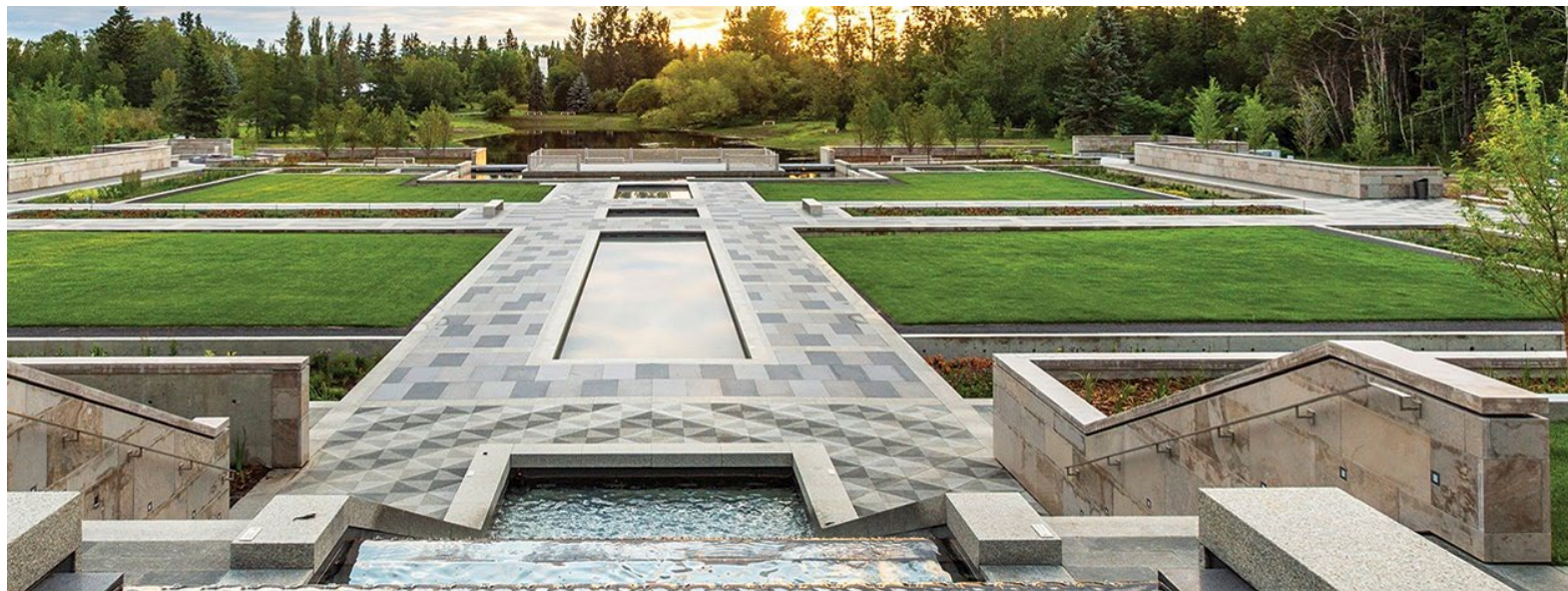
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Edmonton, Alberta, Canada



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The University of Alberta & Botanic Garden











BAM!
Let's Kick it
Up a Notch

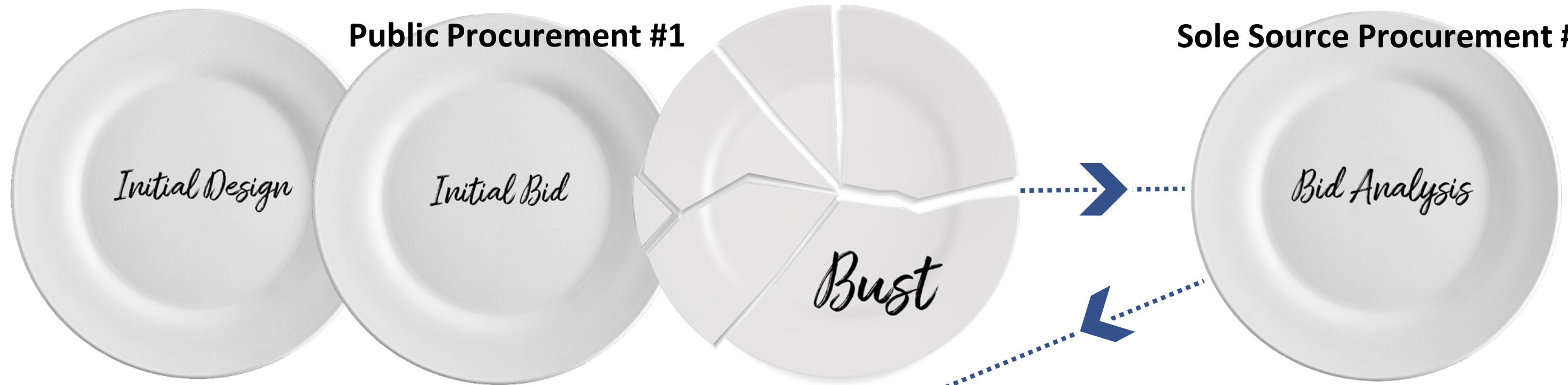


1.

History of the Diwan Project

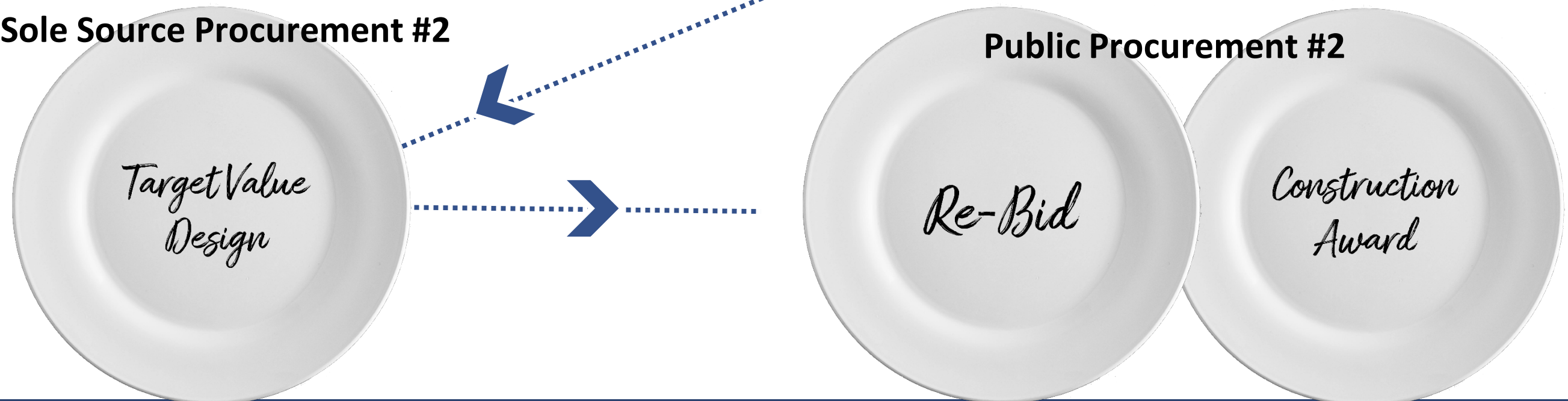
Public Procurement #1

Sole Source Procurement #1



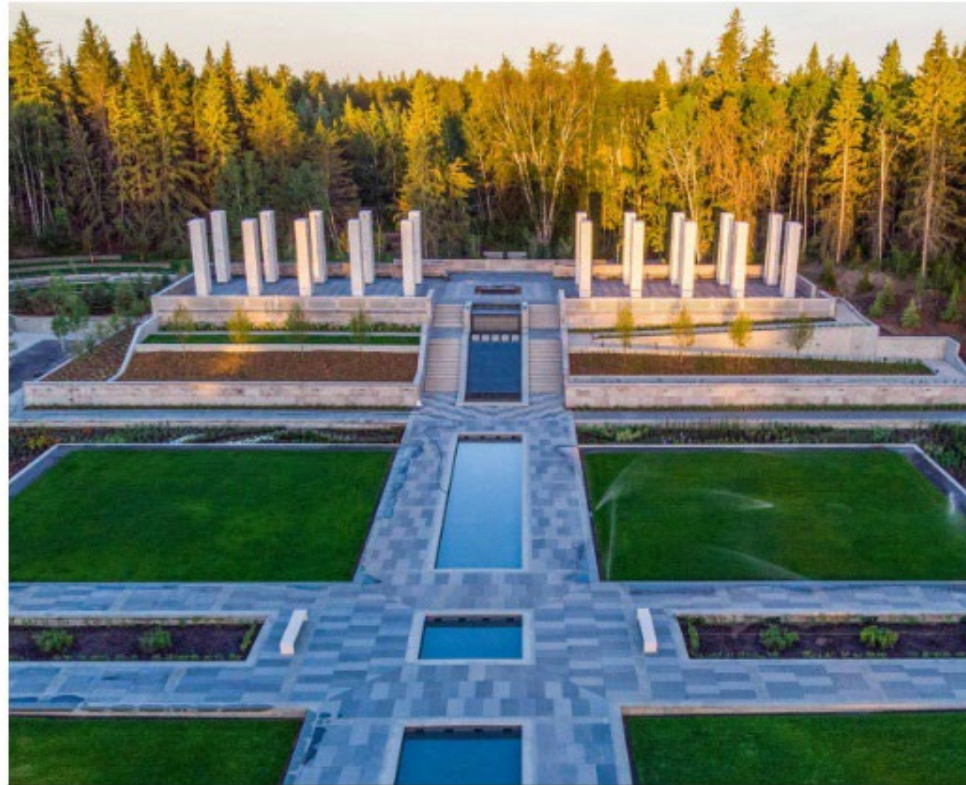
Sole Source Procurement #2

Public Procurement #2



2.

Bid Results & Target Value Analysis



University of Alberta

BOTANICAL GARDEN DIWAN

PRE-CONSTRUCTION TENDER ANALYSIS REPORT

MARCH 3, 2021



800, 5555 CALGARY TRAIL NW EDMONTON, AB, CANADA T6H 5P9

SPECIFIC SCOPE	BIDS	HIGH BID VARIANCE	LOW BID VARIANCE	TENDER AVERAGE COST (\$/SF)
Screw Piles	4	15%	16%	\$15.63
Site Services	5	12%	21%	\$11.08
Earthwork & Detail Excavation	7	62%	40%	\$50.06
Masonry	1	0%	0%	\$167.26
Structural Steel & Deck	6	19%	13%	\$70.68
Alum Screens & Stainless	2	5%	5%	\$20.67
Millwork	3	32%	20%	\$12.76
Stone & Tile Cladding	1 + 3	n/a	n/a	n/a
Roofing	5	9%	8%	\$28.74
Alum Framing & Glass	6	21%	27%	\$30.70
Drywall	7	34%	24%	\$42.09
Flooring	4 + 2	8%	8%	\$16.72
Mechanical	11	4%	13%	\$83.29
Electrical	11	20%	10%	\$47.09





Proposed UABG Diwan Project - Parametric Analysis Reference Project Summaries																
Costs Proportionally Distributed: Profit Change Order Costs Owner Allownaces PC Sums	Project Type: Religious Building Reno/Addition				Project Type: Religious Building Reno/Addition				Project Type: Community Service Building				Project Type: Community Service Building			
	Size (sf): 7,416				Size (sf): 6,873				Size (sf): 13,896				Size (sf): 10,990			
	Size (sm): 689				Size (sm): 639				Size (sm): 1,291				Size (sm): 1,021			
	Year Completed: 2009				Year Completed: 2011				Year Completed: 2017				Year Completed: 2016			
	Church Reno / Addition				Church Reno / Addition				Daycare & Wellness Centre				Remote Northern Youth Centre			
	SM Cost	SF Cost	% of OA	TOTAL	SM Cost	SF Cost	% of OA	TOTAL	SM Cost	SF Cost	% of OA	TOTAL	SM Cost	SF Cost	% of OA	TOTAL
01 - General Requirements	744.12	\$ 69.13	14.3%	\$ 512,700	754.63	\$ 70.16	12.3%	\$ 482,207	228.00	\$ 21.18	8.1%	\$ 294,346	1,447.97	\$ 134.52	17.7%	\$ 1,478,376
02 - Site Work & Piling	698.10	\$ 64.86	13.4%	\$ 480,992	664.20	\$ 61.75	10.8%	\$ 424,423	533.06	\$ 49.52	18.9%	\$ 688,185	663.52	\$ 61.64	8.1%	\$ 677,459
03 - Concrete	392.04	\$ 36.42	7.5%	\$ 270,119	644.73	\$ 59.94	10.5%	\$ 411,985	113.78	\$ 10.57	4.0%	\$ 146,886	484.95	\$ 45.05	5.9%	\$ 495,136
04 - Masonry	72.09	\$ 6.70	1.4%	\$ 49,667	83.69	\$ 7.78	1.4%	\$ 53,477	19.42	\$ 1.80	0.7%	\$ 25,069	594.85	\$ 55.26	7.3%	\$ 607,342
05 - Metals	427.63	\$ 39.73	8.2%	\$ 294,635	737.73	\$ 68.59	12.0%	\$ 471,409	2.85	\$ 0.26	0.1%	\$ 3,682	395.42	\$ 36.74	4.8%	\$ 403,719
06 - Woods + Plastic	389.68	\$ 36.20	7.5%	\$ 268,487	463.36	\$ 43.08	7.5%	\$ 296,090	117.05	\$ 10.87	4.2%	\$ 151,114	389.62	\$ 36.20	4.8%	\$ 397,807
07 - Thermal + Moisture	237.51	\$ 22.07	4.6%	\$ 163,643	355.24	\$ 33.03	5.8%	\$ 226,999	9.98	\$ 0.93	0.4%	\$ 12,883	998.87	\$ 92.80	12.2%	\$ 1,019,847
08 - Doors + Windows	266.01	\$ 24.71	5.1%	\$ 183,278	323.24	\$ 30.05	5.3%	\$ 206,553	153.67	\$ 14.28	5.5%	\$ 198,382	426.90	\$ 39.66	5.2%	\$ 435,869
09 - Finishes	1,023.88	\$ 95.13	19.7%	\$ 705,453	1,132.87	\$ 105.33	18.4%	\$ 723,906	307.59	\$ 28.58	10.9%	\$ 397,100	740.77	\$ 68.82	9.1%	\$ 756,329
10 - Specialties	140.24	\$ 13.03	2.7%	\$ 96,624	20.52	\$ 1.91	0.3%	\$ 13,112	36.52	\$ 3.39	1.3%	\$ 47,147	54.05	\$ 5.02	0.7%	\$ 55,189
11 - Equipment	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -	5.03	\$ 0.47	0.1%	\$ 5,131
12 - Furnishings	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -	8.82	\$ 0.82	0.3%	\$ 11,383	22.25	\$ 2.07	0.3%	\$ 22,720
13 - General Building Items	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -	470.48	\$ 43.71	16.7%	\$ 607,393	10.84	\$ 1.01	0.1%	\$ 11,072
14 - Conveying Systems	161.53	\$ 15.01	3.1%	\$ 111,294	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -	0.00	\$ -	0.0%	\$ -
15 - Mechanical	637.82	\$ 59.26	12.2%	\$ 439,456	730.87	\$ 67.95	11.9%	\$ 467,025	387.84	\$ 36.03	13.8%	\$ 500,695	1,100.25	\$ 102.22	13.5%	\$ 1,123,356
16 - Electrical	10.88	\$ 1.01	0.2%	\$ 7,493	231.14	\$ 21.49	3.8%	\$ 147,700	254.86	\$ 23.68	9.1%	\$ 329,028	448.90	\$ 41.70	5.5%	\$ 458,329
17 - Inspections, Freight, Sustainability, BIM	8.19	\$ 0.76	0.2%	\$ 5,646	8.60	\$ 0.80	0.1%	\$ 5,497	169.65	\$ 15.76	6.0%	\$ 219,020	377.87	\$ 35.10	4.6%	\$ 385,802
Total Project	5,209.71	\$ 484.02	100.0%	\$ 3,589,487	6,150.83	\$ 571.86	100.0%	\$ 3,930,383	2,813.57	\$ 261.39	100.0%	\$ 3,632,313	8,162.08	\$ 758.28	100.0%	\$ 8,333,483
Genral Notes:	Project Specific Notes:				Project Specific Notes:				Project Specific Notes:				Project Specific Notes:			
No Adjustment for Inflation	Construction Management Delivery				Construction Management Delivery				Design-Build Delivery				Construction Management Delivery			
	Added Gymnasium				Added Basement, Main, & 2nd Floor				Pre-Engineered Building Structure				Remote Northern Site & Logistics			
	Coffee Area, Playschool, Classroom Renos				Upgrade & Refurbish Mech & Elec Systems				Extensive Natural Lighting				Movie Room, Computer Room, Games Rooms			
					Elevator				Efficient Energy & Air Systems				Radio Station			
					Kitchen Upgrades				Mixed Metal Cladding Exterior Finish				Commercial Kitchen			
					Stucco Exterior Finish				Kitchen / Coffee Area							

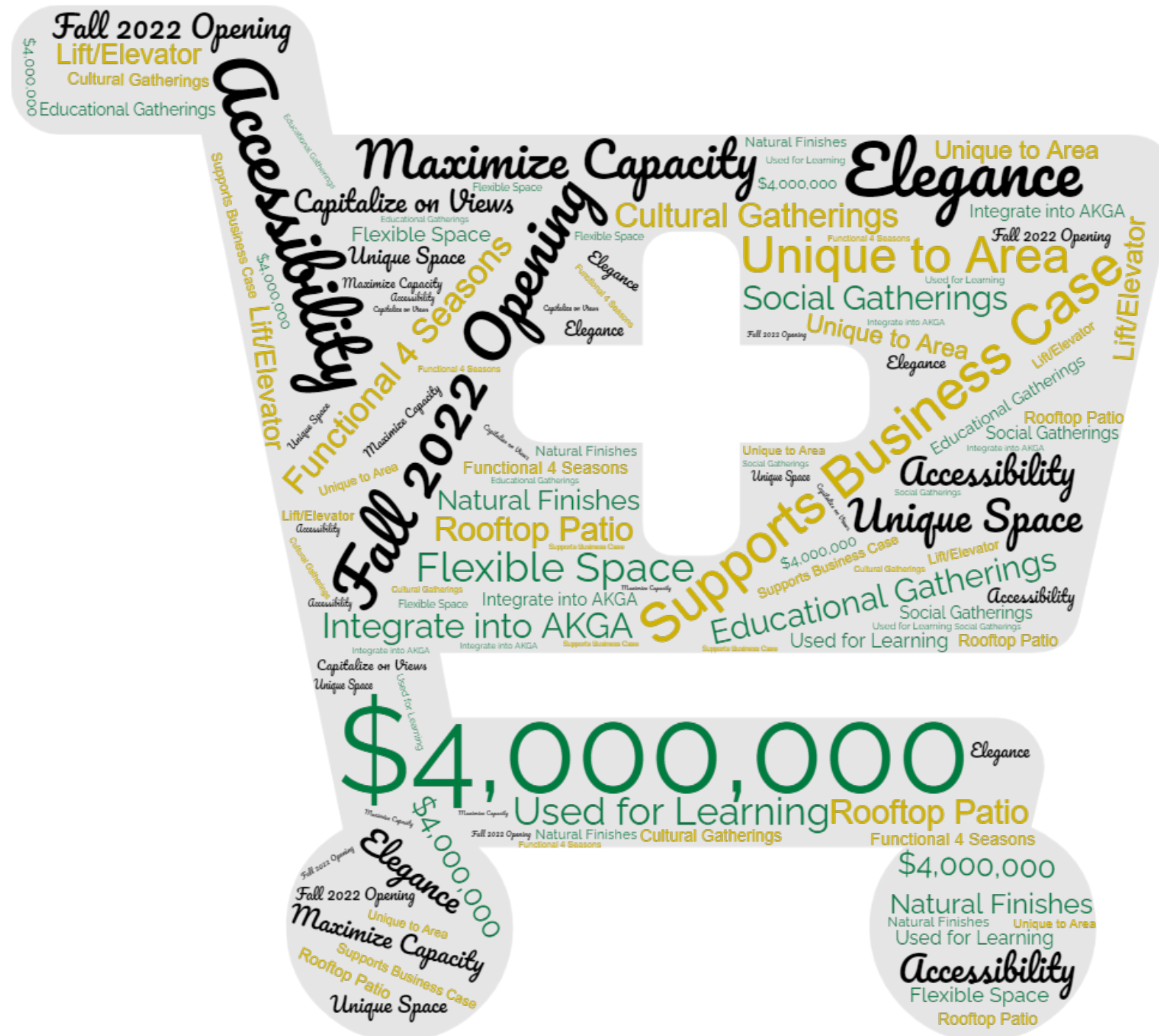


Proposed UABG Diwan Project - Internal Tender, Parametric Analysis, & Target Value Design Metrics																	
			Project Type:		Community Hall						Community Hall				Community Hall		
			Size (sf):			8,048					8,048				8,048		
			Size (sm):			748					748				748		
			Clark Builders Tender Summary				Parametric Analysis Summary				Target Value Design Metrics						
			SM Cost	SF Cost	% of OA	TOTAL		SM Cost	SF Cost	% of OA	TOTAL		SM Cost	SF Cost	% of OA	TOTAL	
01 - General Requirements			1,034.42	\$ 96.14	13.4%	\$ 773,744.00		793.68	73.75	13.1%	\$ 593,532		\$ 716.08	66.55	13.4%	\$ 535,630	
02 - Site Work & Piling			587.94	\$ 54.64	7.6%	\$ 439,779.00		639.72	59.44	12.8%	\$ 478,410		\$ 407.01	37.83	7.6%	\$ 304,440	
03 - Concrete			421.89	\$ 39.21	5.5%	\$ 315,576.00		408.88	38.00	7.0%	\$ 305,804		\$ 292.06	27.14	5.5%	\$ 218,460	
04 - Masonry			1,460.97	\$ 135.79	18.9%	\$ 1,092,805.00		192.51	17.89	2.7%	\$ 143,949		\$1,011.37	94.00	18.9%	\$ 756,502	
05 - Metals			770.94	\$ 71.65	10.0%	\$ 576,663.00		390.91	36.33	6.3%	\$ 292,380		\$ 533.69	49.60	10.0%	\$ 399,199	
06 - Woods + Plastic			183.22	\$ 17.03	2.4%	\$ 137,052.00		339.93	31.59	6.0%	\$ 254,228		\$ 126.84	11.79	2.4%	\$ 94,875	
07 - Thermal + Moisture			891.56	\$ 82.86	11.5%	\$ 666,885.00		400.40	37.20	5.7%	\$ 299,423		\$ 617.19	57.36	11.5%	\$ 461,656	
08 - Doors + Windows			321.99	\$ 29.93	4.2%	\$ 240,852.00		292.45	27.18	5.3%	\$ 218,711		\$ 222.90	20.72	4.2%	\$ 166,731	
09 - Finishes			561.51	\$ 52.19	7.3%	\$ 420,008.00		801.28	74.46	14.5%	\$ 599,271		\$ 388.71	36.13	7.3%	\$ 290,753	
10 - Specialties			17.50	\$ 1.63	0.2%	\$ 13,087.00		62.83	5.84	1.2%	\$ 46,983		\$ 12.11	1.13	0.2%	\$ 9,060	
11 - Equipment			0.00	\$ -	0.0%	\$ -		1.26	0.12	0.0%	\$ 939		\$ -	0.00	0.0%	\$ -	
12 - Furnishings			28.65	\$ 2.66	0.4%	\$ 21,430.00		7.77	0.72	0.1%	\$ 5,808		\$ 19.83	1.84	0.4%	\$ 14,835	
13 - General Building Items			0.00	\$ -	0.0%	\$ -		120.33	11.18	4.2%	\$ 89,971		\$ -	0.00	0.0%	\$ -	
14 - Conveying Systems			63.16	\$ 5.87	0.8%	\$ 47,244.00		40.38	3.75	0.8%	\$ 30,195		\$ 43.72	4.06	0.8%	\$ 32,705	
15 - Mechanical			868.09	\$ 80.68	11.2%	\$ 649,330.00		714.19	66.36	12.8%	\$ 534,098		\$ 600.94	55.85	11.2%	\$ 449,503	
16 - Electrical			489.69	\$ 45.51	6.3%	\$ 366,287.00		236.45	21.97	4.6%	\$ 176,819		\$ 338.99	31.51	6.3%	\$ 253,565	
17 - Inspections, Freight, Sustainability, BIM			23.34	\$ 2.17	0.3%	\$ 17,459.00		141.08	13.11	2.7%	\$ 105,484		\$ 16.16	1.50	0.3%	\$ 12,086	
Total Project			\$7,724.87	\$ 717.97	100.0%	\$ 5,778,201		\$5,584.05	518.89	100.0%	\$ 4,176,005		\$5,347.59	497.02	100.0%	\$ 4,000,000	



3.
Pre-Con 2.0
"Leaning Out"
Analysis

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4.

*TVD in a Hard
Bid Mindset*

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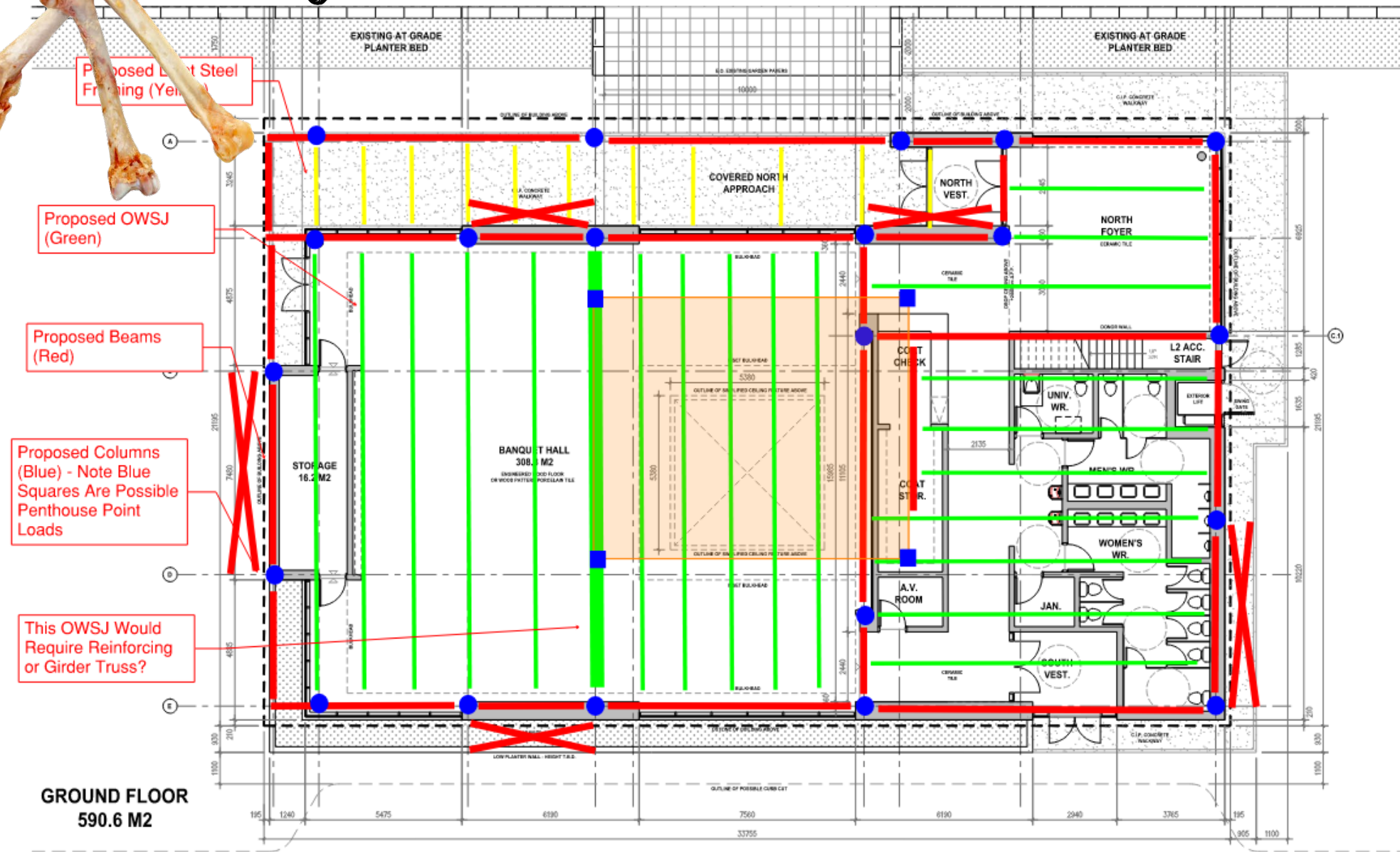
Cutting Through the Crust



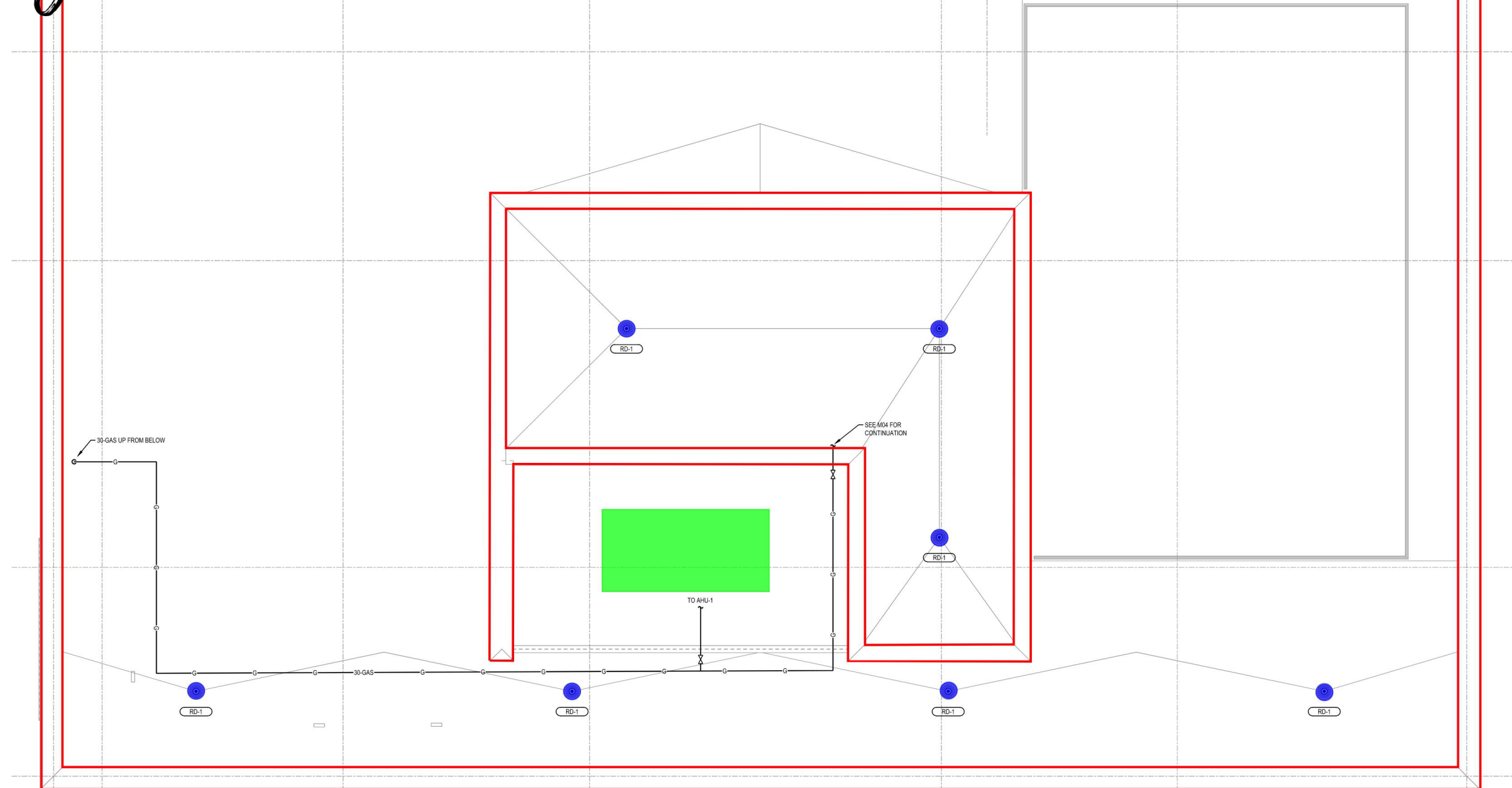
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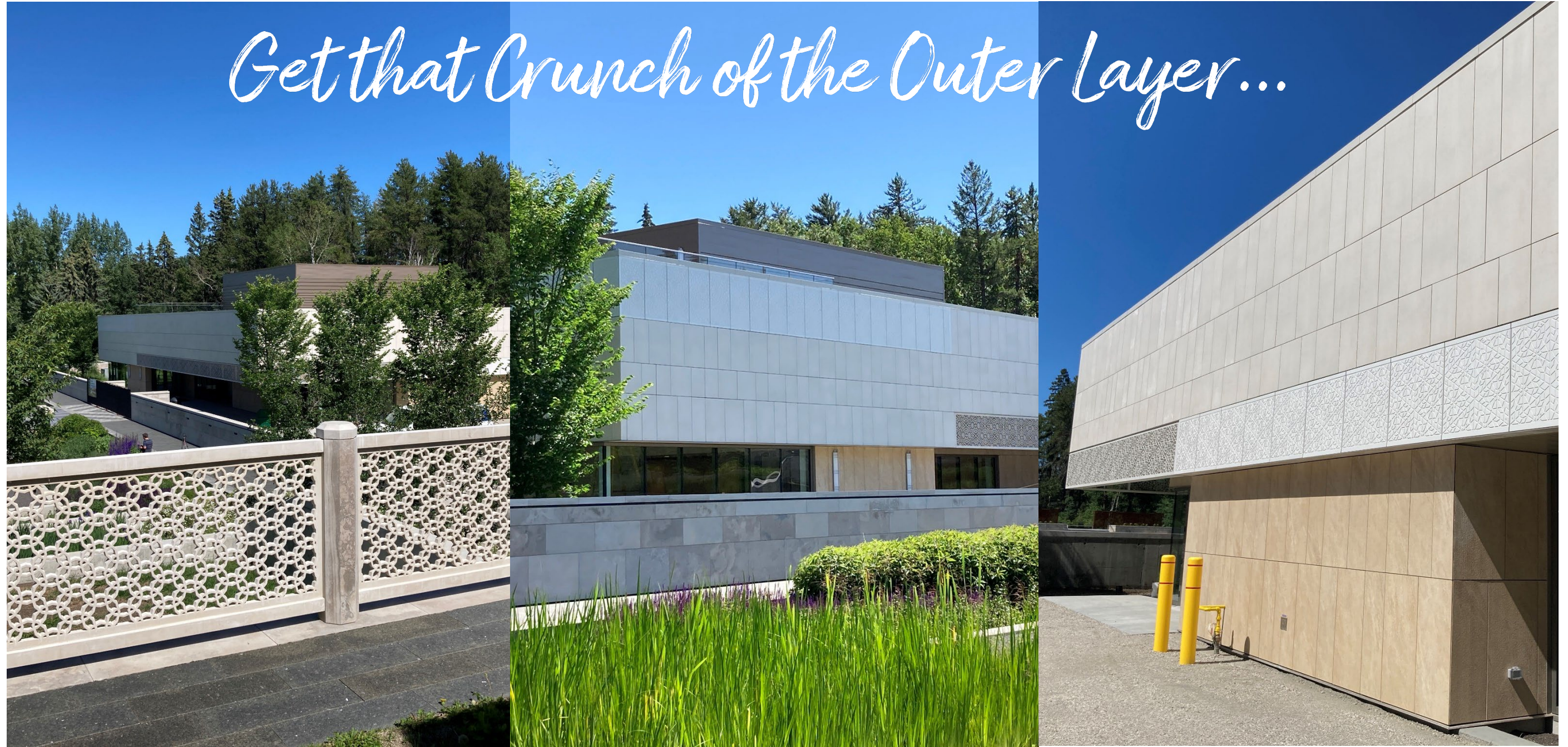
Right down to the bone...



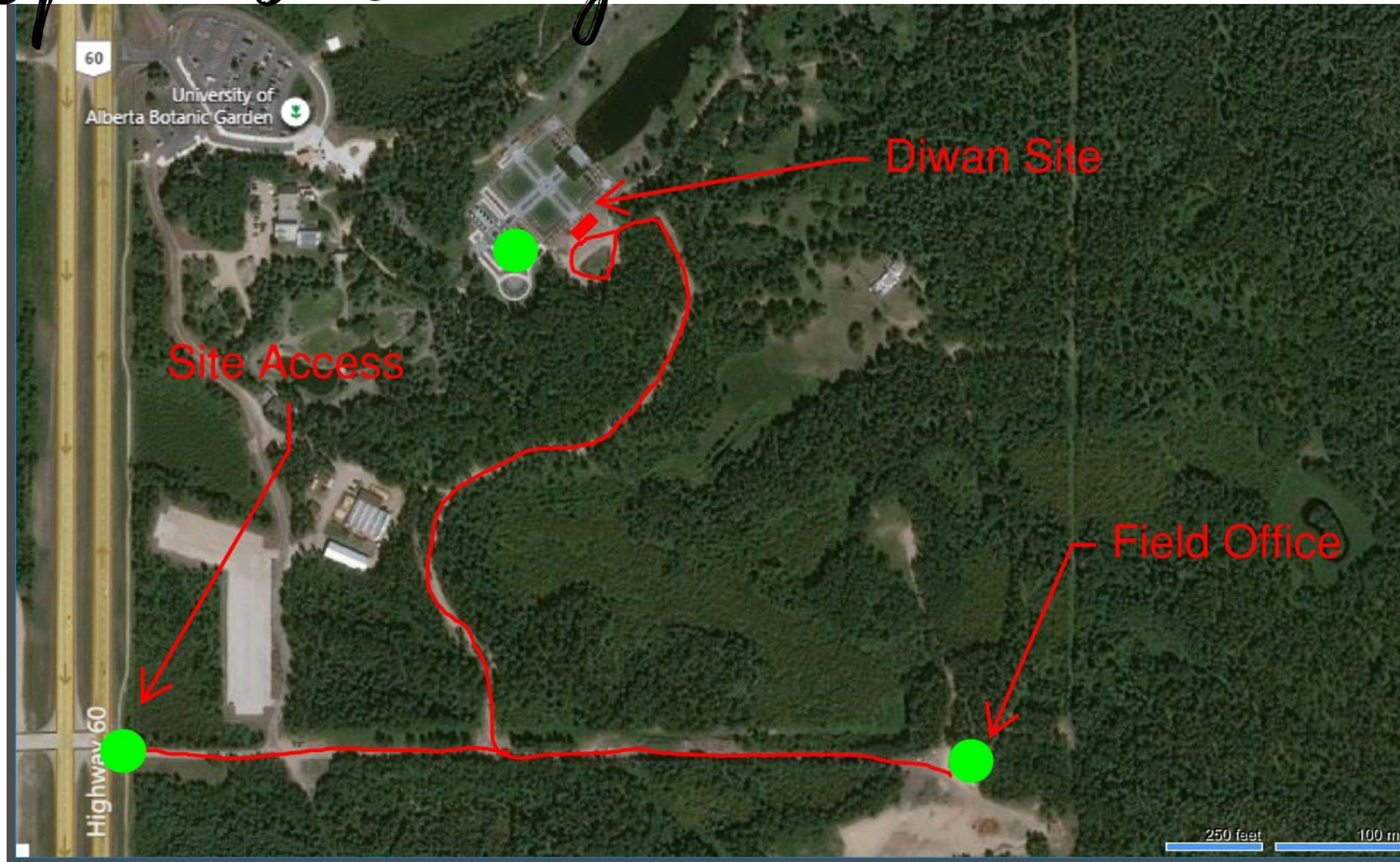
Bring the Heat & Wash it All Down



Get that Crunch of the Outer Layer...



Pick Up or Delivery...

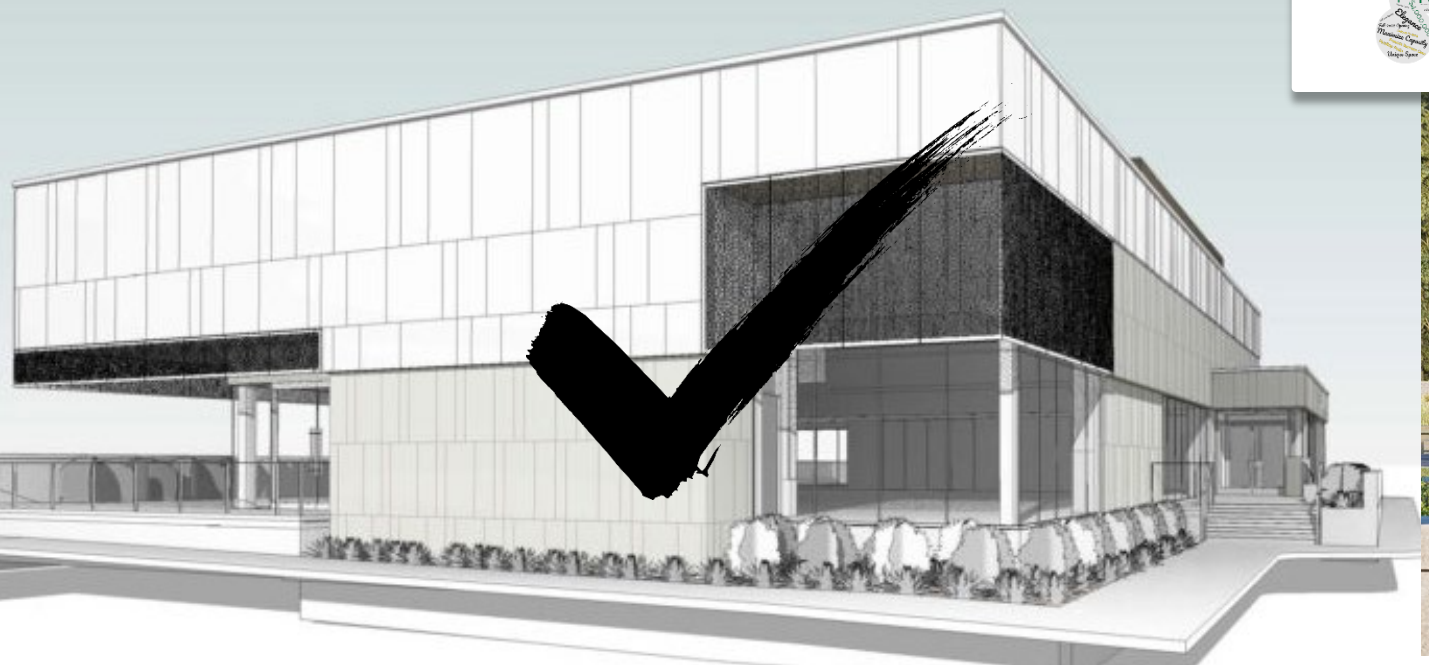
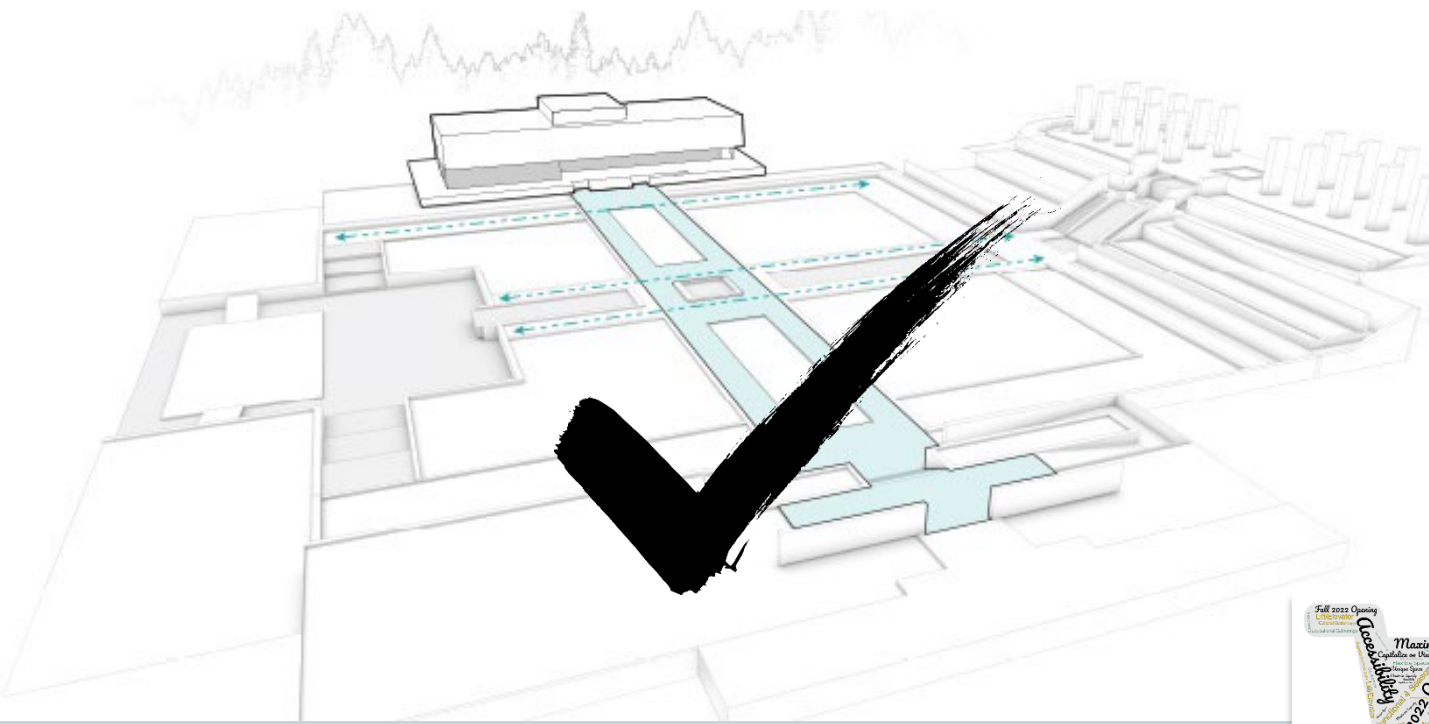


*How'd it
all taste...*





LEAN GUMBO: THE RIGHT INGREDIENTS FOR PROJECT SUCCESS





Takeaways for Today

Les Salades

Salade des halles 9,80
Salade verte, tomates, pommes de terre, jambon fumé. Green salad, tomatoes, potatoes, cheese, smoked ham

Salade des gourmands Salade verte, 9,80
poulet, tomates, œufs, maïs. Green salad, chicken, tomatoes, eggs, corn

Salade parisienne Salade verte, 9,80
emmental, jambon, tomates. Green salad, cheese, ham, tomatoes

Salade de chèvre chaud Salade 9,80
verte, chèvre sur toasts. Roasted goat cheese, salad

Les Quiches

Quiche campagnarde Salade 10,90
Quiche with bacon, green salad

Les Planches

Planche de charcuterie 14,50
Assortment of charcuterie

Planche de fromages 14,50
Assortment of cheese

Les Omelettes

Omelette nature 10,50
Omelet

Omelette jambon fromage 12,00
Ham and cheese omelet

Menu à 12€

1 entrée + 1 plat + 1 dessert
1 starter + main course + 1 dessert

Entrées au choix

Terrine de campagne • Pâté terrine
Potage ou velouté du jour • soup of the day
Œufs mayonnaise • Eggs and mayonnaise

Tomate mozzarella
Mozzarella cheese and tomato salad

Plats au choix

Main courses at your choice

Poulet, pommes sautées
Chicken, roasted potatoes

Penne carbonara

Plat ou Poisson du jour
Dish or Fish of the day

Crêpe au fromage

Desserts au choix

Crêpe au sucre ou confiture
Crêpe and sugar or jam

Glace 2 boules
Ice cream 2 flavours

Fromage blanc, confiture

Prix nets TVA 10%

Les Gourmands de Notre-Dame

Les Entrées

Potage ou velouté du jour 6€
Soup of the day

Œufs mayonnaise 6€
Eggs and mayonnaise

Terrine de campagne 9,80
Pâté terrine

Tomate mozzarella et pesto 6,50
Tomato mozzarella and pesto

Soupe à l'oignon 6€
Onion soup

Tranche de foie gras et chutney 14,00
Foie gras and chutney

Poêlon d'escargots les 6 7,50

Poêlon d'escargots les 12 13,50

Les Pâtes

Penne napolitaine 12,50

Pasta tomato sauce

Penne carbonara 12,50

Pasta bacon and cream sauce

Penne au pesto tomates cerise 11,50

Penne with pesto sauce

Lasagnes, salade verte 12,50

Lasagna, green salad

Garnitures 5,50

On the side

Les Plats

Steack haché à cheval frites 14,90
Beef steak with a fried egg on the top, fries

Carpaccio de boeuf frites, salade 13,90
Beef carpaccio, french fries, salad

Pièce du boucher frites 14,90
Piece of beef, french fries, pepper sauce

Tartare de boeuf frites, salade 13,90
Beef tartare, fries, salad

Poulet pommes sautées 13,90
Chicken, potatoes and salad

Boeuf bourguignon, 12,50
pommes grenailles

Beef bourguignon's way, gratin

Le cassoulet 13,90
The famous cassoulet

Poisson du jour 12,50
Fish of the day

Les Crêpes salées

Fromage 4,20

Cheese

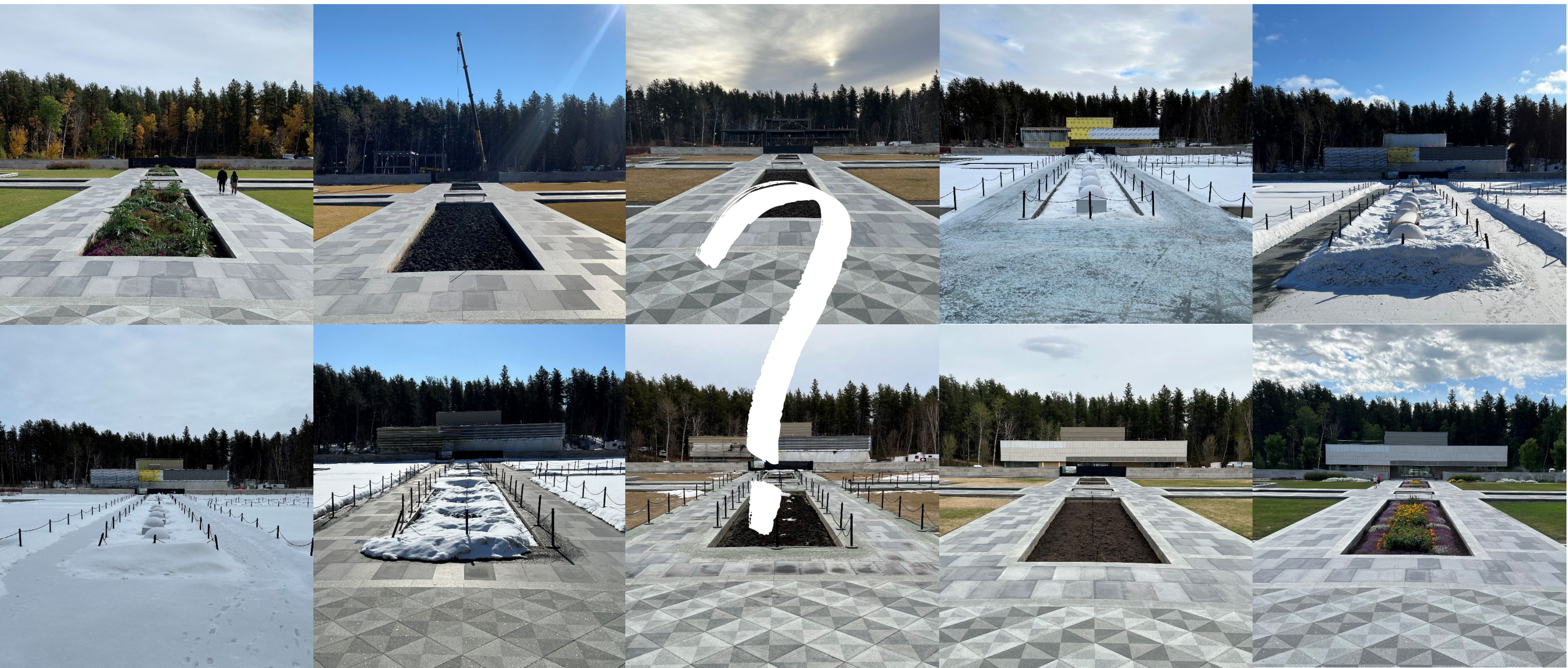
Fromage, pomme de terre 4,80

Cheese and potato

Jambon fromage 5,50

Ham and cheese

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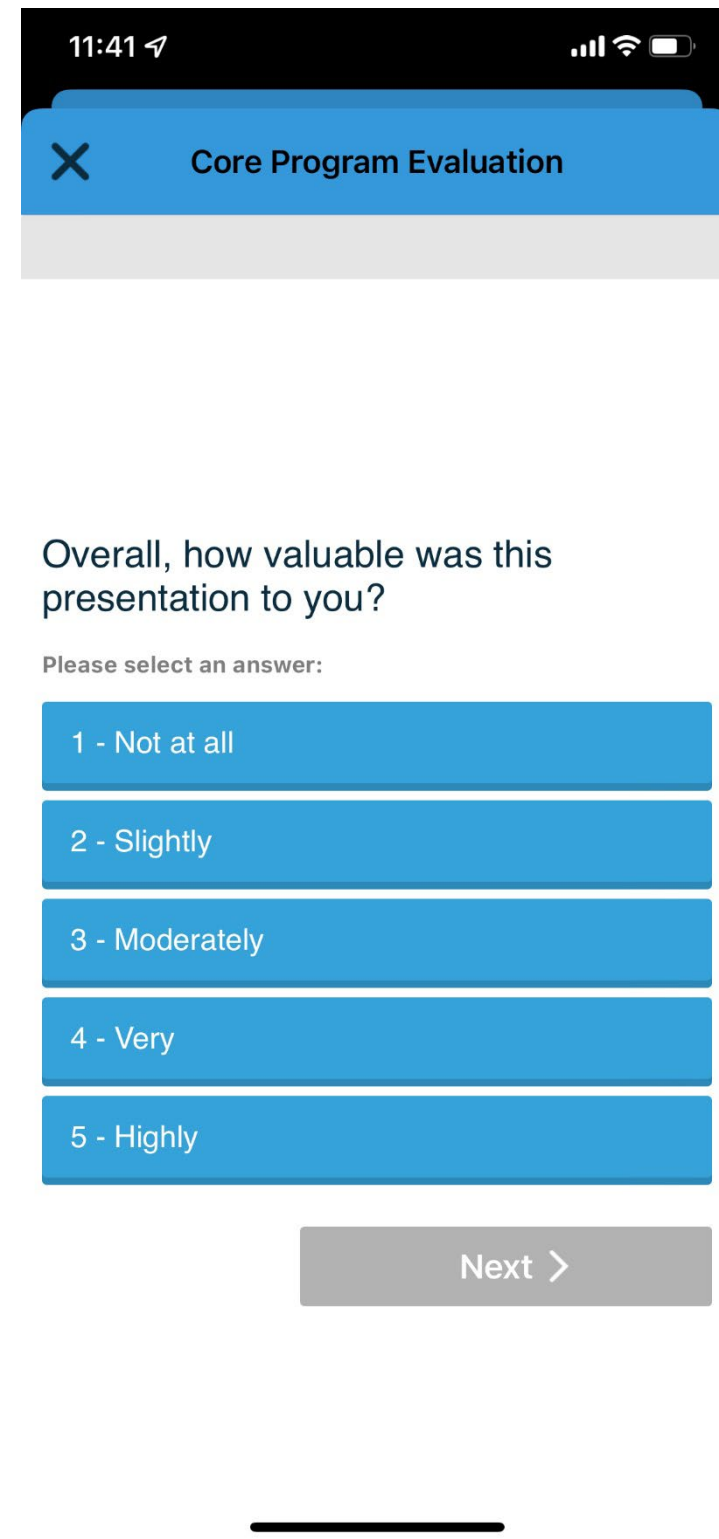
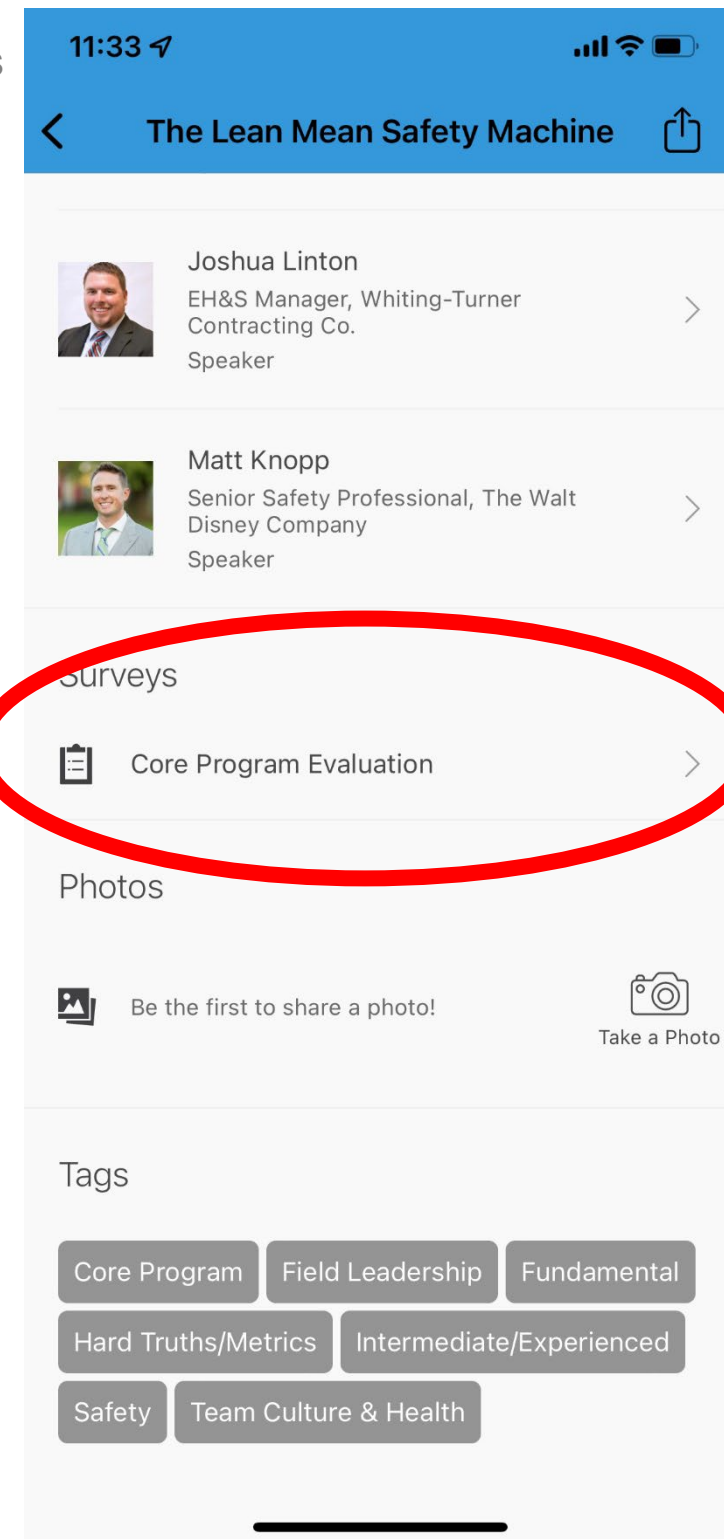


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1. Find the session under “schedule”
2. Click on it then scroll down
3. Click “core program evaluation”
4. Complete the 5-question evaluation

This information will determine the top 5 presentation teams and the top Live Lab





24TH LCI CONGRESS
OCTOBER 18-21



In the spirit of continuous improvement, we would like to remind you to complete this session's survey! We look forward to receiving your feedback.



Contact Us

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Thank you for attending this presentation. Enjoy the rest of the 24th Annual LCI Congress!

