

PROJECT SCOPE & BUDGET
VALUE ENGINEERING

6B.2.3 - 07

NEMTS (Northeast Metropolitan Technical School)

Value Management Log

8/1/2022

Current Sqft =				382,610			
A	Construction Budget	=	\$	244,922,412	- includes utility co distribution		
B	Current Estimate	=	\$	252,663,570	Final Reconciled Estimate Dated 12-23-22		
C	Recommended (#1) & Alts	=		(\$3,333,093)	-1.36%		
D	Subtotal +Accepted	=	\$	249,330,477	\$	651.66	
E	Variance	=	\$	4,408,065	1.80%		
F	Possible (No.2 below)	=	\$	(2,618,834)	-1.07%	(\$5,951,928)	\$1,789,230

Item #	Description	Date Identified	Current Estimated Cost	Status	A Alternates	No. 1 Recommended	No.2 Possible	No. 3 Reject	Comments
G01	General Items / Multi-discipline	3-Jan-23			0	0	0	N.A.	Major redesign, are the savings worth it?
	Change Geometry of Media Center from round to rectangular / square & reduce height		N.A.	3					
	Civil / Landcaping								
C01	Raise dropped footing (info pending)	3-Jan-23	(\$25,001)	1	0	(25,001)	0	0	Need Design Input / Info - all footings within 5' depth
C02	Potential for CCB - Per Zoning Board Requirement	3-Jan-23	(\$30,250)	3	0	0	0	(30,250)	Target 5%
C03	Videotape results of relining existing sewer line (verify if costs carried, potential contingency exposure)	3-Jan-23	TBD	0	0	0	0	0	Was deleted at last estimate pending videotaped results - prior value at DD was 1,550 lnft at \$180 / lnft or \$279k - Nitsch reviewing, consider maintenance
C04	Delete Sewer line at Maintanence Bulding (force main and pump station) - See Also Plumbing for remaining \$	3-Jan-23	(\$234,052)	1	0	(234,052)	0	0	
L01	Urethene track vs resilient	3-Jan-23	(\$52,000)	2	0	0	(52,000)	0	Keep as possible
L02	Reduce planting budget -target 15%	1-Aug-22	(\$49,483)	2	0	0	(49,483)	0	Was on prior list
L03	Reduce width of vehicular walkway to lower fields from 16' to 12'	10-Jan-23	(\$18,414)	3	0	0	0	(18,414)	
L04	Delete Boulder Seating (11 remain) make add alternate	3-Jan-23	(\$55,000)	2	0	0	(55,000)	0	Potential for repurposed wood working with Students
Structural									
S01	Use Fiber Mesh ILO Welded Wire Fabric at Slab on Grade	17-Jun-21	(\$43,226)	2	0	0	(43,226)	0	
S01a	- Reduction in Concrete Costs based on Sub Budget	9-Jan-23	(\$250,000)	1	0	(250,000)	0	0	Estimate Adjustment
S02	Some reduction of tonnage (verify per the model) - target .25# / sqft reduction	3-Jan-23	(\$268,125)	2	0	0	(268,125)	0	
S03	- Reduction in Steel Cost per Ton based on Sub Budgets	9-Jan-23	(\$500,000)	1	0	(500,000)	0	0	GBCo
S04	Review current sqft of Mezzanines based on current design progression	3-Jan-23	(\$67,538)	1	0	(67,538)	0	0	Includes CMU changed to GWB at those walls supporting plank
Architectural									
A01	Review Back-up Systems 8" Back-up CMU vs 12" CMU @ Gym / team rm (design progression)	3-Jan-23	(\$45,500)	1	0	(45,500)	0	0	~4500 sqft
A02	Arriscraft ilo granite (Arriscraft is base, granite is add alternate)	3-Jan-23	(\$298,125)	1	0	(298,125)	0	0	

A03	Different sound iso ceiling - kinectics (send DRA exact product name)	3-Jan-23	(\$250,000)	1	0	(250,000)	0	0	
A04	Review Flat-lock tile Unit \$ and Qty - Interior - change to tile	3-Jan-23	(\$122,030)	1	0	(122,030)	0	0	
A05	Review Flat-lock tile Unit \$ and Qty - exterior - change to alucabond or dri Design	3-Jan-23	(\$174,160)	2	0	0	(174,160)	0	
A06	Use LVT everywhere - ILO of Sheet Vinyl, linoleum and rubber tile (add alternate)	11-Aug-22	(\$417,770)	2	0	0	(417,770)	0	Operational Concerns - at next round of estimaitng consider breaking out corridors vs classrooms, by level - keep possible for now
A06A	Use Linoleum ILO of Sheet Vinyl (cannot take w item above)	10-Jan-23	(\$90,000)	0	0	0	0	0	
A07	At upper level Events Lobby provide cable guardrail in leu of glass guardrail system	15-Aug-22	Incorporated	2	0	0	Incorporated	0	Was incorporated in the 60% CD Estimate, \$35k
A08	Move Manual window shades to FF&E	16-Aug-22	(\$352,219)	2	0	0	(352,219)	0	
A09	Reduce exterior cornices (overhang) - GBCo has ~\$2.2 mil, RLB has \$2 mil	3-Jan-23	NA	3	0	0	0	NA	RLB VE Suggestion
A10	Reduce Cafeteria curtain walls? = 1,800 sqft	3-Jan-23	NA	3	0	0	0	NA	RLB VE Suggestion
A11	Reduce or remove Courtyard curtain walls (CW31)? ~2,000 sqft - target 25% changed to CMU	3-Jan-23	(\$29,000)	2	0	0	(29,000)	0	RLB VE Suggestion
A12	Glazing Product Change - Check Unit Pricing	3-Jan-23	(\$120,000)	3	0	0	0	(120,000)	RLB VE Suggestion - GBCo Note - \$100 / sqft verified by Cheviot
A13	Remove curved folding partition at Lobby (A119)?	3-Jan-23	(\$50,000)	3	0	0	0	(50,000)	RLB VE Suggestion
A14	Reduce glazed partitions 7 replace with CMU or GWB?	3-Jan-23	reduced	0	0	0	0	0	RLB VE Suggestion
A15	Reduce wall tiles (ceramic & porcelain)? - Target 10%?	3-Jan-23	(\$80,326)	1	0	(80,326)	0	0	RLB VE Suggestion
A16	Reduce sound isolator ceiling?	3-Jan-23	TBD	0	0	0	0	0	RLB VE Suggestion
A17	Change Interior Linear Metal Ceiling W Woodlook to 2x6 tegular	3-Jan-23	(\$452,375)	2	0	0	(452,375)	0	
A18	Change ACM / Aluminum Composite Ceiling - delete double up to exterior ACM Soffit	3-Jan-23	(\$134,480)	1	0	(134,480)	0	0	Estimate Correction
EQ1	Equipment Stainless Steel Netting - check unit pricing and qty (Div 10 and 11) - this can be taken as a double up in estimate. Unit pricing ~\$55 / Inft for remainnig item is ok	3-Jan-23	(\$93,664)	2	0	0	(93,664)	0	
	MEP								
P01	Remove urinals and FD's from single occupancy toilet rooms. Current layout has a toilet and urinal in each single occupancy toilet room, requiring a floor drain.	1-Aug-22	(\$85,000)	1	0	(85,000)	0	0	Review cost, savings appear to be low. Bala 8/25/22:School would have to approve of the change knowing that it will be more difficult to maintain and to service these bathrooms with no urinals in them.
P02	Delete toilet room at Maintenance Building (see also sanitary)	3-Jan-23	(\$20,000)	1	0	(20,000)	0	0	
P03	Consider Point of use HW Heaters vs central system	1-Aug-22	(\$20,000)	2	0	0	(20,000)	0	Remote toilet rooms only - not labs / shops
P04	Local Point of Use Chip Tanks in lieu of central pH System Serving Science Classrooms	1-Aug-22	(\$70,000)	2	0	0	(70,000)	0	Check design intent and estimator assumption - is it limited to just chem labs?
	Check to see if we included gas piping to labs?								
FP1	Schedule 10 for larger pipe sizes?	3-Jan-23	(\$225,000)	1	0	(225,000)	0	0	Value adjusted to reflect the latest FP Estimate, which was increased
M01	Fabric Duct Sock @ Gym (previously rejected) - Was M08	1-Aug-22	(\$37,340)	3	0	0	0	(37,340)	

M02		3-Jan-23	(\$116,510)	1	0	(116,510)	0	0	Bala 1/5/23: Provide one supply and exhaust VAV terminal unit per group of classrooms (maximum of 3 classrooms per group) and a CO2 sensor in each classroom. Supply and exhaust VAV will be size 12 for each group of 3 classrooms. This will result in a reduction of approximately 30 supply and 30 exhaust VAV terminal units.
M03	Reduce VAVs by grouping (1 side of school only)	3-Jan-23	\$0	0	0	0	0	0	
E01	Adjust estimate based on Tech / Security Consultant Feedback	3-Jan-23	(\$165,000)	1	0	(165,000)	0	0	Bala 1/5/23: District to review with insurance carrier to verify lighting preventor system is acceptable.
E02	Utilize Lightning Preventor System in lieu of Lightning Protection (was E14 at DD)	1-Aug-22	(\$100,000)	1	0	(100,000)	0	0	
E03	Coordinate Stage Lighting Dimming	3-Jan-23	(\$25,000)	1	0	(25,000)	0	0	Taking this would leave \$100k in estimate
E04	Have Single ended Switchboard would remove set of Secondaries and remove Secondary Duct Bank reduces redundancy (was VE 17)	1-Aug-22	(\$175,000)	1	0	(175,000)	0	0	Bala 1/5/23: The tie between the two switchboards was removed in the 60%CD cost estimate set.
E05	VE06 Shorten Duct Bank Primary, Telcom and Generator to more in the range of to in the range of 500 lf	3-Jan-23	(\$200,000)	3	0	0	0	(200,000)	Not Incorporated but not possible VE08 incorporated but VE09 was not Bala 1/5/23: This following is Bala's response to this DD VM item, "Bala 8/25/22: This cannot be done because of voltage drop considerations. Voltage drop will require unusual wire sizing for phase and ground conductors, and MC cable only come in standard sizes."
E06		3-Jan-23	(\$20,000)	3	0	0	0	(20,000)	
E07	VE09 Utilize Aluminum MC Feeders for feeds 100 amps to 225 amps can be added to above VE11 Reduce Cord Reel Quantity in shops reduce by 10 overall - Coordinate Locations, assume some reduction	3-Jan-23	(\$16,000)	1	0	(16,000)	0	0	Total of 253 currently in estimate
E08	- Further reduce Cord Reel (not only was VE not incorporated but qty close to tripled)	3-Jan-23	See above	3	0	0	0	See above	
E09A	VE18 Reduce Parking EV charging Stations conduit, wire ,panels transformer and charging station (delete 2 of the 4 interior stations)	3-Jan-23	(\$15,864)	3	0	0	0	(15,864)	Keep the infrastructure for the EV, reject this for now and keep 4
E09B	Adjust the estimate for the 5 site charging stations furnished by others	13-Jan-23	(\$45,311)	1	0	(45,311)	0	0	Site Stations furnished by others
E10	VE19 Re-evaluate conduit and Service going from Maintenance Building to Main Building(reduce spares and shorter conduits)	3-Jan-23	Incorporated	2	0	0	Incorporated	0	Check w Rob to see if already incorporated
E11	VE21 Revaluate Conduit and how site Lighting is powered for entrance near School Sign and power and communication for sign potentially wirless	3-Jan-23	(\$20,000)	1	0	(20,000)	0	0	Bala 1/5/23: 60% CD Cost estimate set revised site lighting at entrance to be fed from a local 208V service from the street.
E12	Optimize Camera Layout	3-Jan-23	(\$40,000)	3	0	0	0	(40,000)	Slight Increase from prior estimate, design reflects the intent
E13	General Lighting Design Coordination - \$1 / sqft	3-Jan-23	(\$280,000)	2	0	0	(280,000)	0	Lighting take-off and pricing per drawings, target not achieved Bala 1/5/23: Per Bala review of the 60%CD cost estimate the design team received a fixture cost budget goal for the 60% CD Cost Estimate set of \$2,605,115. Lighting was designed to align with this budget. Cost estimator to verify if the fixture costs align with the fixture budget provided.
	Totals		(\$5,978,763)		0	(2,999,873)	(2,357,021)	(531,868)	
	Design / Estimating Contingency		2.50%		0	(74,997)	(58,926)	(13,297)	
	Escalation		4.50%		0	(138,369)	(108,718)	(24,532)	
	Sub-contractor bonds		1.20%		0	(38,559)	(30,296)	(6,836)	
	CM Contingency		2.50%		0	(81,295)	(63,874)	(14,413)	
	Summary Factors (Contingencies& Escalation.)		10.70%		0	(333,220)	(261,813)	(59,079)	
	Total Costs		(\$6,618,490.16)		0	(3,333,093)	(2,618,834)	(590,947)	

Project information								
MSBA ID	Calendar Year of sub bid date	District	School	OPM	Designer	CM\GC	Procurement Type (DBB/CMR)	PS&B Executed Date
201708530605	2023	Northeast Metropolitan Regional Vocational School District	Northeast Metropolitan Regional Vocational High School	PMA Consultants	DRA Architects	Gilbane	CMR	12/15/2021

SD Submittal				
PSR Construction Budget	PSR Total Budget	SD Construction Budget	SD Total Budget	Delta between PSR and SD
\$ 243,514,418	\$ 317,422,620	\$ 244,041,092	\$ 317,422,620	\$0
		Includes \$450K in Precon services		

PFA or PSBA data					
PS&B/PFA Construction Estimate W\ Pre-Con & Alts -	Design & Pricing Contingency (\$)	Design & Pricing Contingency (% of Construction Budget)	Escalation to mid point of construction (\$)	Escalation to mid point of construction (%)	Total Project Budget
\$244,041,092	\$13,379,255	5.48%	\$18,218,085	7.47%	\$317,422,620

[illegible]

[illegible]