

Audit Exhibit A

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Richard Patton
Chief Audit Executive, Internal Audit Office
HOUSTON INDEPENDENT SCHOOL DISTRICT
Hattie Mae White Educational Support Center
4400 West 18th Street | Houston, TX 77092-8501

Dear Mr. Patton:

This memo contains our analysis and assessment of the DRAFT Bond Program Inflation Worksheet prepared by HISD Facilities Services for the HISD Board to consider for approval of an increase of approximately \$211 million in bond program construction costs.

Specifically we analyzed the historical construction cost indexes published by RSMeans and Engineering News Record to establish an independent base line for assessing the level of construction cost inflation used by HISD in their recent calculation of their proposed \$211 million budget increase.

The following is a summary of the results of our analysis of the data published by those two organizations:

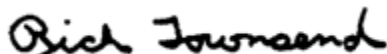
Total National Average Construction Cost Increase from 2012 thru 2015	
R. S. Means - See attached Appendix "1"	7.89%
Engineering News Record - See attached Appendix "2"	8.33%
Calculated Average of Both Historical Cost Indexes for the Period Analyzed	8.11%

HISD's proposed \$211 million budget increase is based on the assumption that actual new school construction costs in Houston increased from the 2012 base line estimate amount of \$160 per square foot (SF) to \$210 per SF in 2014 (i.e. a 31.3% increase) then escalating the 2015 estimated costs by 5.7% or \$222 per SF and then escalating the 2016 estimated costs by another 5.7% to reach an estimate for 2016 costs at \$235 per SF.

As part of this review, we collaborated with the HISD Internal Audit Office to evaluate the assumptions, cost projections, and future construction inflation factors when compared to similar construction projects and economic indicators in Houston, Texas. Our analysis included a review of the amounts of actual construction contracts awarded by HISD during 2014 and 2015 compared to original and proposed budgeted funds.

Our conclusion is that the current HISD cost projections and related calculations and allocations of the requested \$211 million may be flawed. We agree with the recommended process improvement opportunities identified in the report prepared by the HISD Internal Audit Office in connection with this review. Effective implementation of those recommendations should help mitigate the increased construction costs that HISD may otherwise incur. We also recommend that HISD re-forecast probable costs for each campus bond project and that proposed budget increases be approved separately as necessary based on the proposed revised scope and funding source for each project.

Submitted by,
R. L. Townsend & Associates, LLC



Rich Townsend
Senior Construction Cost Control Consultant

Exhibit A

Appendix "1"

Analysis of Historical Cost Index Data Published by RSMMeans in the Beginning of 2015

	RS Means Published National Average Cost Index Number Using 1-1-1993 as 100	Annual Increase or (Decrease)	% of Annual Increase (or Decrease)	Published Index Based on 1-1-2015 = 100	Annual Increase or Decrease	% of Annual Index Increase of Decrease
RSMeans Estimate for 01/2015	206.7	1.80	0.88%	100.0	0.9	0.91%
RSMeans Index for 07/2014	204.9	3.70	1.84%	99.1	1.8	1.85%
RSMeans Index for 07/2013	201.2	6.60	3.39%	97.3	3.2	3.40%
RSMeans Index for 07/2012	194.6	3.40	1.78%	94.1	1.6	1.73%
RSMeans Index for 07/2011	191.2	7.70	4.20%	92.5	3.7	4.17%
RSMeans Index for 07/2010	183.5	3.40	1.89%	88.8	1.7	1.95%
RSMeans Index for 07/2009	180.1	(0.30)	-0.17%	87.1	-0.2	-0.23%
RSMeans Index for 07/2008	180.4	11.00	6.49%	87.3	5.3	6.46%
RSMeans Index for 07/2007	169.4			82.0		

A summary of the cost index data from 2012 thru 2015 as published by RSMMeans shows accumulative national rate inflation totaling approximately 7.89% as summarized below:

	Index	Annual Diff.	Increase	Index	Increase	Increase
RSMeans Data 01/2015	206.7	1.80	0.88%	100.0	0.9	0.91%
RSMeans Data 07/2014	204.9	3.70	1.84%	99.1	1.8	1.85%
RSMeans Data 07/2013	201.2	6.60	3.39%	97.3	3.2	3.40%
RSMeans Data 07/2012	194.6	3.40	1.78%	94.1	1.6	1.73%
Totals			7.89%			7.89%

RS Means also publishes quarterly City Cost Indexes which are expressed as a percentage of the published National Average Costs. The following is an analysis of the published City Cost Index Data published by RSMMeans for the last few years:

Quarter	Houston City Cost Index for Both Material and Labor		Houston City Cost Index for Both Material and Labor
2013 1Q	87.0	2013 Average	88.5
2013 2Q	87.7		
2013 3Q	89.5		
2013 4Q	89.8		
2014 1Q	87.5	2014 Average	87.9
2014 2Q	87.8		
2014 3Q	88.4		
2014 4Q	88.0		
		2014 & 2014 Average	88.2

Note: The RSMMeans City Cost index does not reflect the level of inflation specific to Houston. It only shows they estimate Houston's construction costs to anywhere from 87% to 88% of the RS Means published Nationally Averaged Construction Costs.

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Appendix "2"

Analysis of Historical Cost Index Data Published by Engineering News Record as of October 2015

	Building Cost Index History	Annual Increase or (Decrease)	% of Annual Increase (or Decrease)
ENR Building Cost Index 07/2015	5510	127.00	2.36%
ENR Building Cost Index 07/2014	5383	102.00	1.93%
ENR Building Cost Index 07/2013	5281	97.00	1.87%
ENR Building Cost Index 07/2012	5184	110.00	2.17%
ENR Building Cost Index 07/2011	5074	164.00	3.34%
ENR Building Cost Index 07/2010	4910	148.00	3.11%
ENR Building Cost Index 07/2009	4762	39.00	0.83%
ENR Building Cost Index 07/2008	4723	230.00	5.12%
ENR Building Cost Index 07/2007	4493		

Engineering News Record Building Cost Index History shows a national rate of inflation totaling approximately 8.33% as summarized below:

	Building Cost Index History	Annual Increase or (Decrease)	% of Annual Increase (or Decrease)
ENR Building Cost Index 07/2015	5510	127.00	2.36%
ENR Building Cost Index 07/2014	5383	102.00	1.93%
ENR Building Cost Index 07/2013	5281	97.00	1.87%
ENR Building Cost Index 07/2012	5184	110.00	2.17%
Total from 2012 to 2015			8.33%