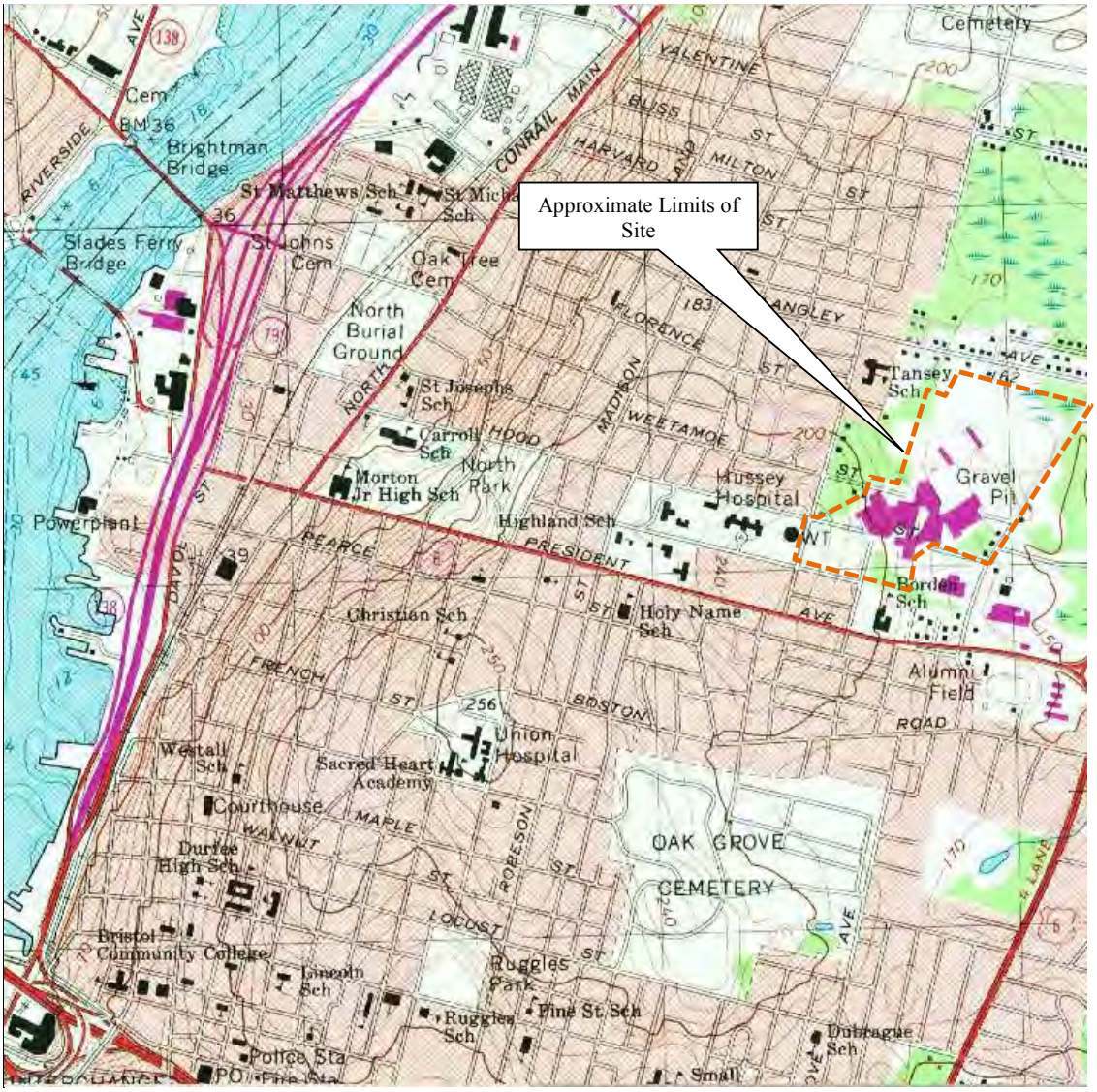
Contour intervals: 3 meters

N

Figure based on USGS historic topographic map of Fall River from https://ngmdb.usgs.gov

Client:	Project:	Figure 3 – 1985 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017



Contour intervals: 10 feet

N

Figure based on historic USGS topographic map of Fall River from https://ngmdb.usgs.gov

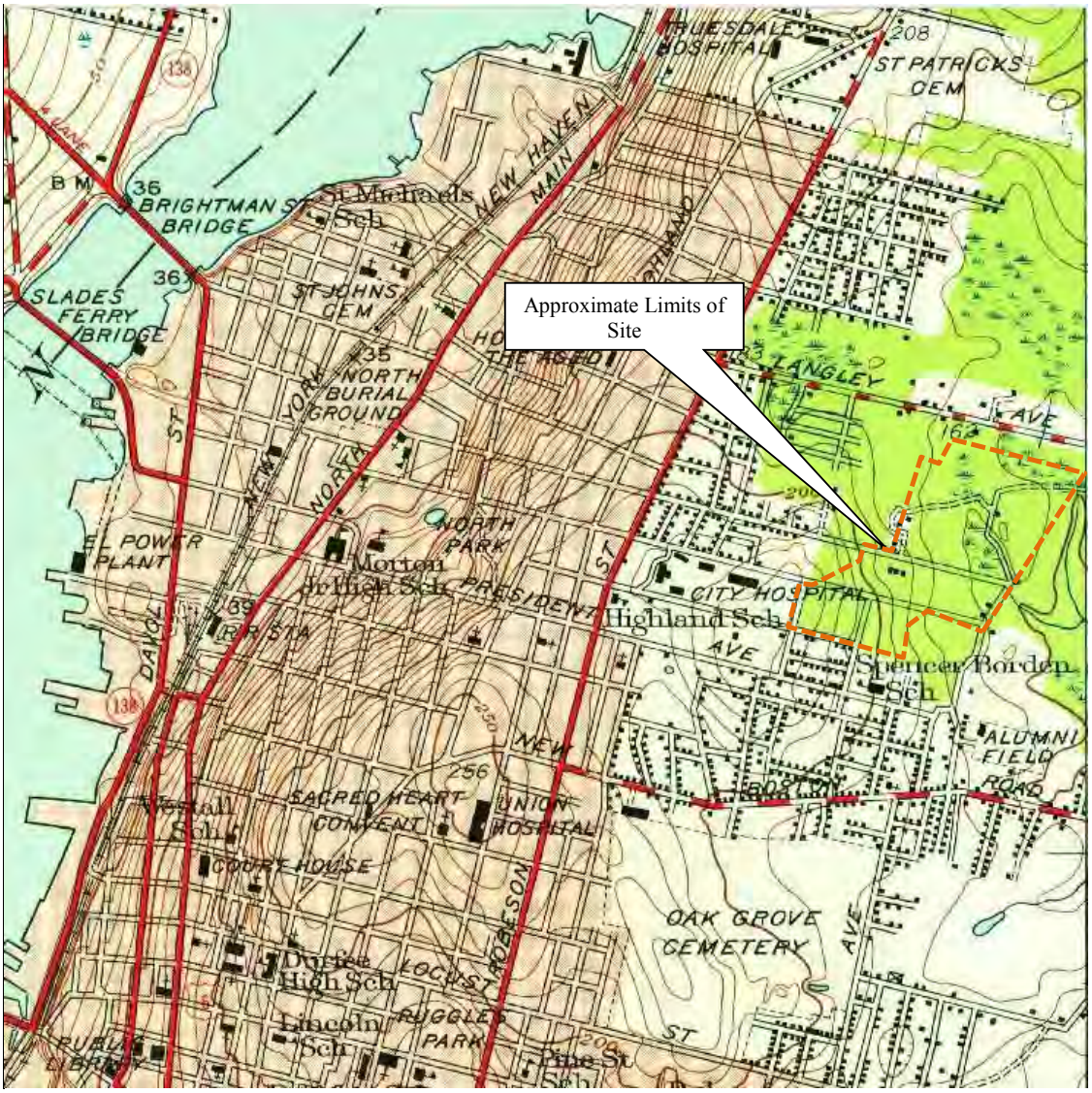
Client:	Project:	Figure 4 – 1979 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017

Contour intervals: 10 feet

N

Figure based on historic USGS topographic map of Fall River from https://ngmdb.usgs.gov

Client:	Project:	Figure 5 – 1967 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017



Contour intervals: 10 feet

N

Figure based on historic USGS topographic map of Fall River from https://ngmdb.usgs.gov

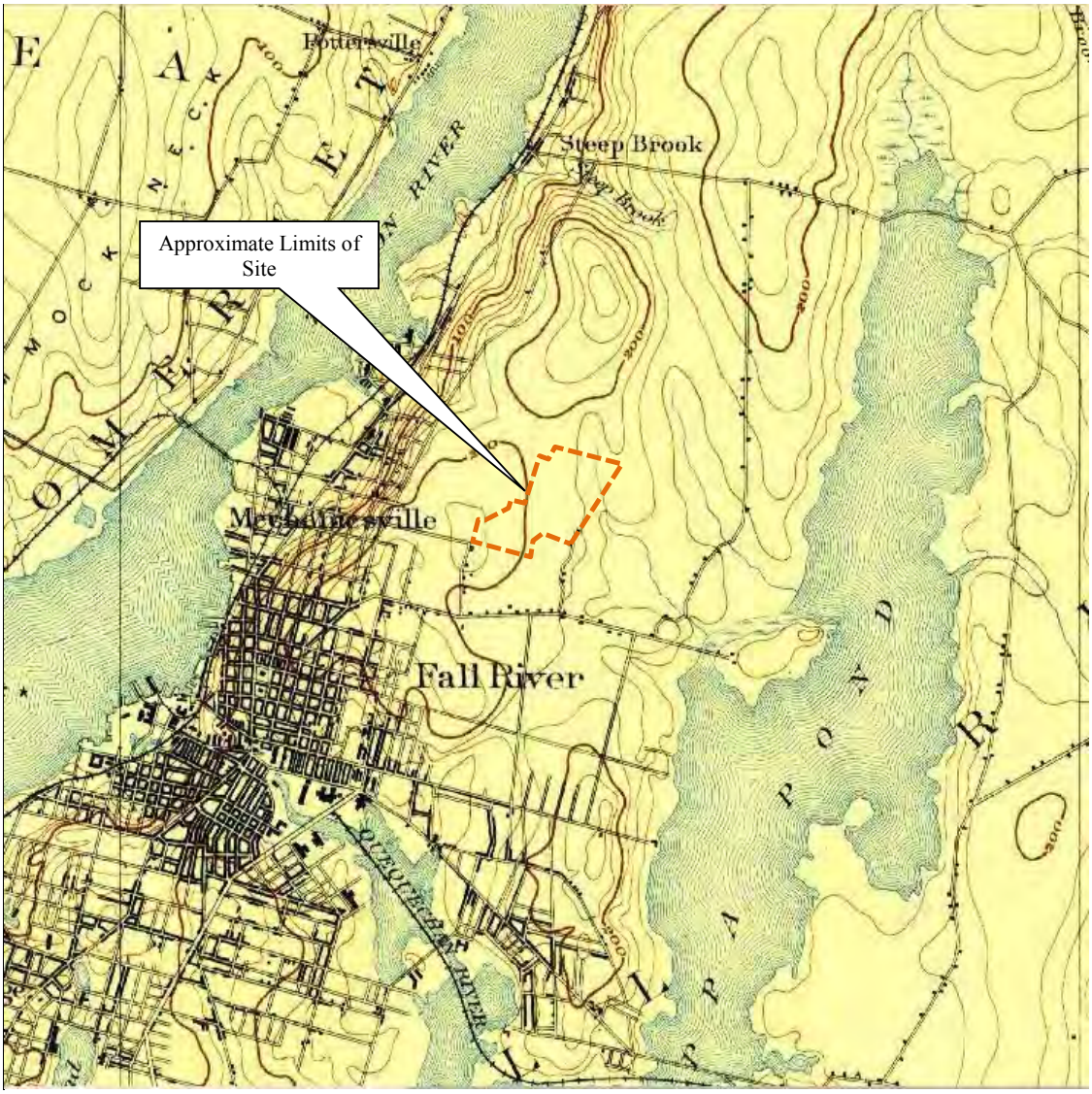
Client:	Project:	Figure 6 – 1949 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017

Contour intervals: 10 feet

N

Figure based on historic USGS topographic map of Fall River from https://ngmdb.usgs.gov

Client:	Project:	Figure 7 – 1944 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017



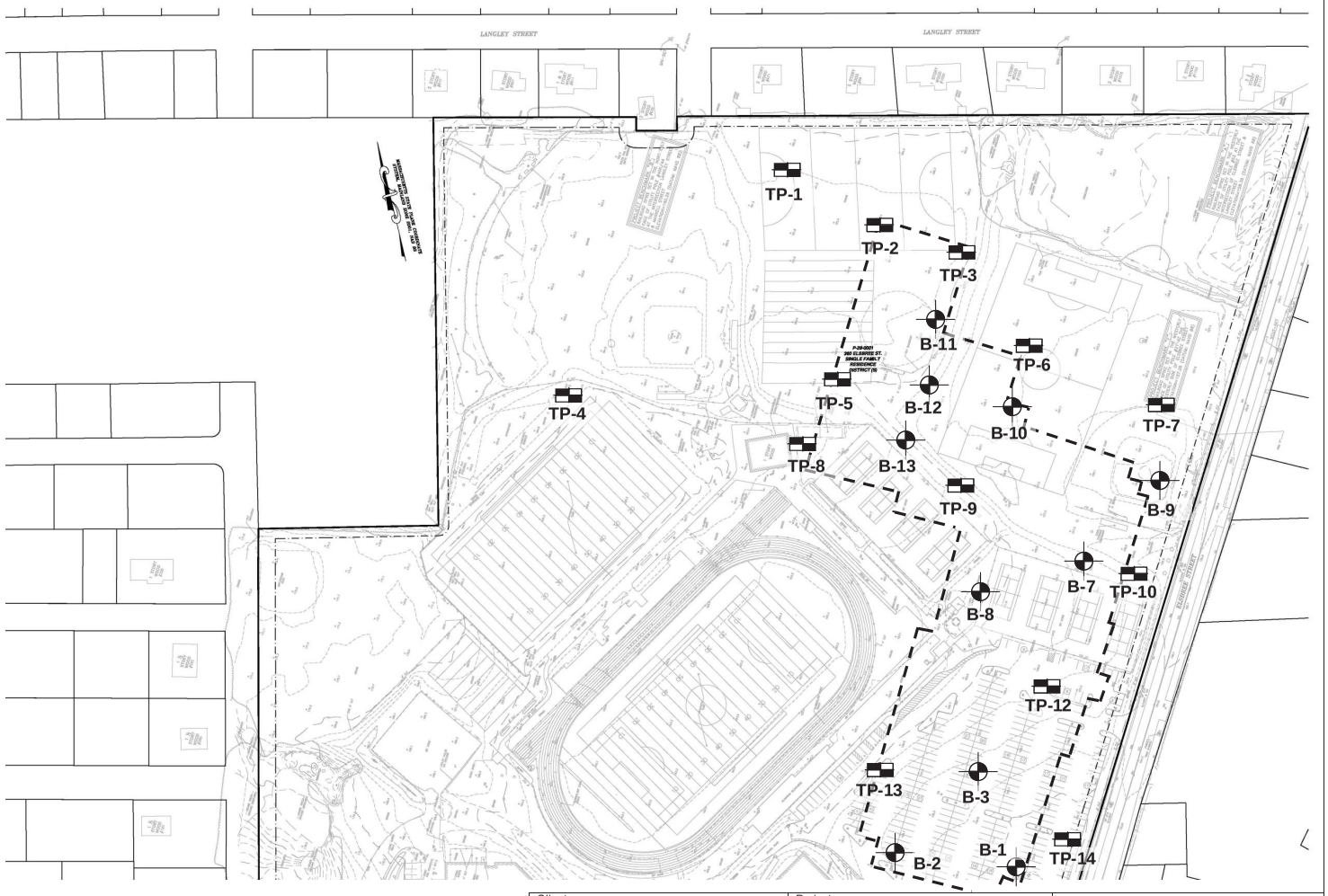
Contour intervals: 20 feet

Figure based on historic USGS topographic map of Fall River from https://ngmdb.usgs.gov

Client:	Project:	Figure 8 – 1893 Historic Topo Map	
Ai3 Architects, LLC	Proposed B.M.C. Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017

Legend:

- Boring advanced by Northern Drill Service, Inc. (NDS) of Northborough, MA between July 10 and 13, 2017 and observed by LGCI.
- Test pit advanced by NDS on July 18 and 19, 2017 and observed by LGCI.
- Footprint of proposed building



40 0 80
Approximate scale (feet)

Note - Figure based on a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts", provided to LGCI by Pare Corporation via email on July 31, 2017.

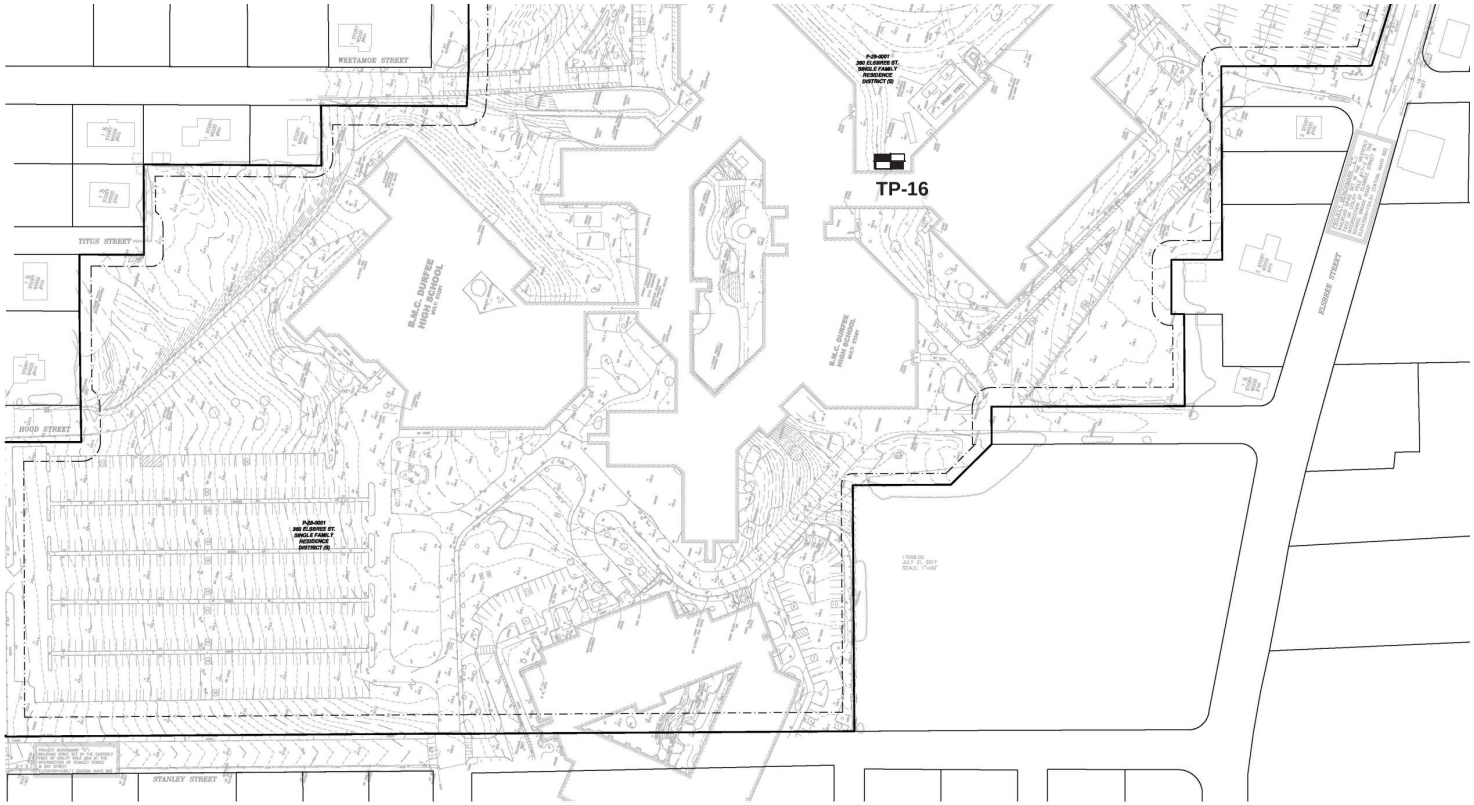
Client:	Project:	Figure 9A – Boring and Test Pit Location Plan – Existing Fields	
Ai3 Architects, LLC.	Proposed B.M.C Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1721	Date: Oct. 2017

BMC DURFEE HIGH SCHOOL

Legend:

Boring advanced by Northern Drill Service, Inc. (NDS) of Northborough, MA between July 10 and 13, 2017 and observed by LGCI.

Test pit advanced by NDS on July 18 and 19, 2017 and observed by LGCI.

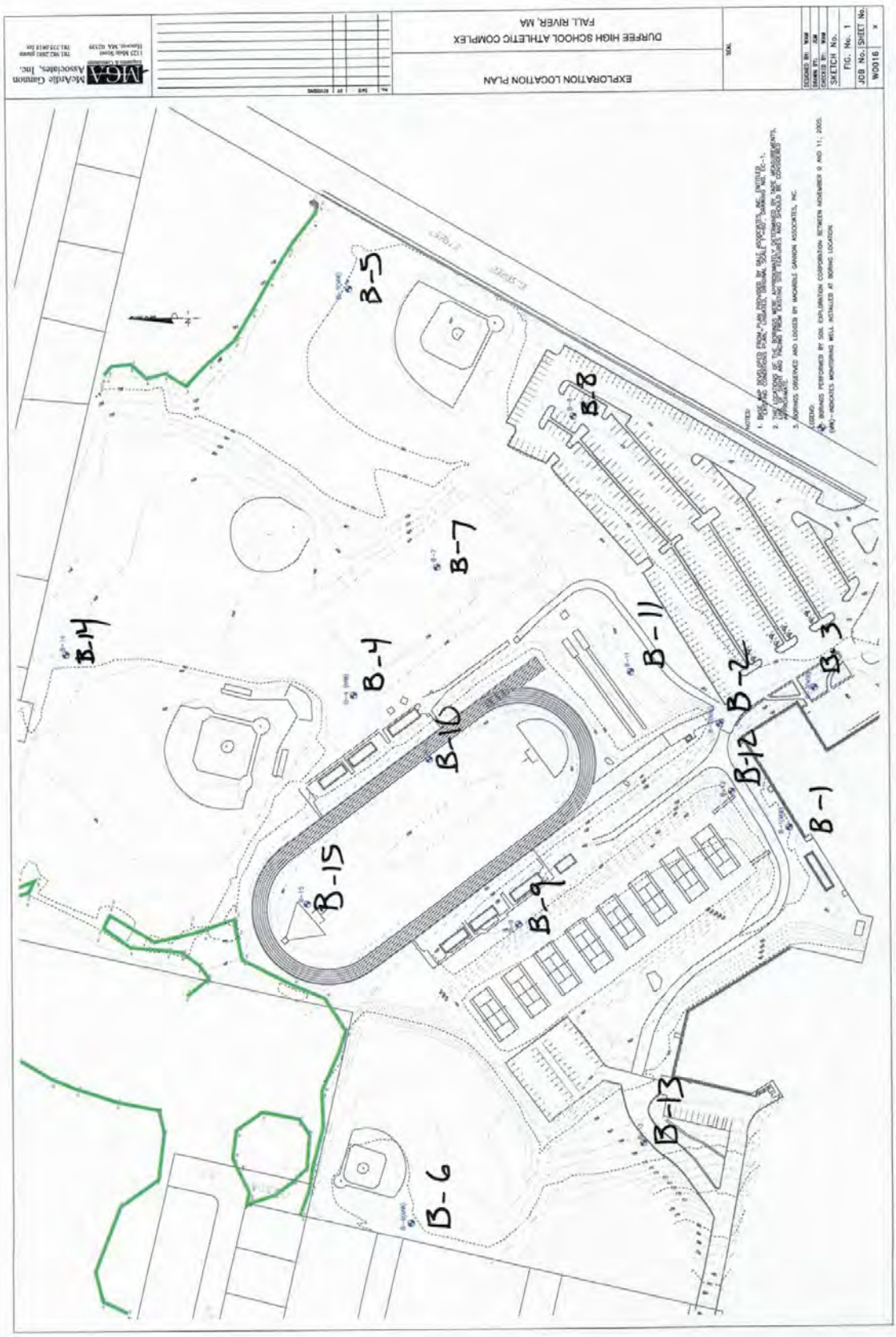


40 0 80
Approximate scale (feet)

Note - Figure based on a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts", provided to LGCI by Pare Corporation via email on July 31, 2017.

Client:	Project:	Figure 9B – Boring and Test Pit Location Plan – Existing Building	
Ai3 Architects, LLC.	Proposed B.M.C Durfee High School		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Fall River, MA	LGCI Project No.: 1712	Date: Oct. 2017

APPENDIX A - Logs and Location of Previous Borings


EXPLORATION LOCATION PLAN
DURFEE HIGH SCHOOL ATHLETIC COMPLEX
FALL RIVER, MA
McAfee Cannon Associates, Inc.
JOB No. W0016
SHEET No.
FIG. No. 1
SKETCH No.
B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
B-9
B-10
B-11
B-12
B-13
B-14
B-15

MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-1 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 160.0±
DATE START : 11/9/2005
END : 11/9/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-09-2005	1030	8.9		13.0	Size I.D.	4 1/2"	1 3/8"	--
11-10-2005	1300	7.6			Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0			2 10 10 12	S-1	0.0 2.0	15	160.0 0.0	Medium dense, tan-brown, fine to medium SAND, some (-) fine to coarse Gravel, little Silt.	
4			15 7 9 12	S-2	5.0 7.0	12		-BOULDERY FILL- Medium dense, gray-brown, fine to medium SAND, some fine to coarse Gravel, little Silt.	
8			13 17 20 16	S-3	10.0 12.0	14	152.0 8.0	Strata change noted with augers at about 8.0 feet Dense, gray, fine to medium SAND, some fine to coarse Gravel, some (-) Silt. -GLACIAL TILL-	
12							147.0 13.0	AUGER REFUSAL AT 13.0 FEET	
16									
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 13.0'
Rock: --
Samples: S3

BORING B-1 (MW)

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McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-2 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 158.0±
DATE START : 11/9/2005
END : 11/9/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:		
Date	Time	Water	Casing	Hole
11-09-2005	1230	6.9		15.0
11-10-2005	1310	6.5		

EQUIPMENT	CASING	SAMPLER	CORE
Type	HSA	SS	--
Size I.D.	4 1/2"	1 3/8"	--
Hammer Wt.	--	140#	----
Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0			4 4	S-1	0.0 1.0	6	158.0 0.0	Dark brown, fine to medium SAND and SILT, little fine Gravel, trace Roots.	
			7 7	S-1A	1.0 2.0	10	157.0 1.0	-TOPSOIL- Brown, fine to medium SAND, some (-) fine to coarse Gravel, little Silt.	
4			7 7 3 2	S-2	5.0 7.0	5		-BOULDERY FILL- Loose to medium dense, brown-gray, fine to coarse Gravel, some fine to medium Sand, little (+) Silt.	
8			8 13 14 16	S-3	10.0 12.0	17	150.0 8.0	Strata change noted with augers at about 8.0 feet Medium dense, gray, fine to medium SAND, some Silt, little fine Gravel.	
12								-GLACIAL TILL-	
							143.0 15.0	AUGER REFUSAL AT 15.0 FEET	
16									
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 15.0'
Rock: --
Samples: S3

BORING B-2 (MW)

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MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-3 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 159.0±
DATE START : 11/9/2005
END : 11/9/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-09-2005	1430	12.4		17.0	Size I.D.	4 1/2"	1 3/8"	--
11-10-2005	1320	10.6			Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0							159.0 0.0	-BOULDERY FILL-	
4			10 19 16 17	S-1	5.0 7.0	20		Dense, brown-gray, fien to medium SAND, some fine to coarse Gravel, some (-) Silt.	
8								-BOULDERY FILL-	
			13 100/5"	S-2	10.0 10.9	0		(NO RECOVERY)	
12							147.0 12.0	Strata change noted with augers at about 12.0 feet -GLACIAL TILL-	
16			12 27 32 68	S-3	15.0 17.0	12		Very dense, gray, fine to medium SAND, some Silt, some (-) fine to coarse Gravel.	
							142.0 17.0	AUGER REFUSAL AT 17.0 FEET	
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 17.0'
Rock: --
Samples: S3

BORING B-3 (MW)

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McArdle Gannon Associates, Inc. — Engineers & Consultants

TEST BORING LOG

BORING B-4 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 158.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-11-2005	1230	6.8		17.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0							158.0 / 0.0	-TOPSOIL-	
							157.0 / 1.0	-BOULDERY FILL-	
4							153.0 / 5.0	Dense, gray, fine to medium SAND, some fine Gravel, some Silt. -GLACIAL TILL-	
			15 14 18 19	S-1	5.0 7.0	13			
8								Medium dense, gray, fine to medium SAND, some (+) Silt, some fine to coarse Gravel. -GLACIAL TILL-	
			2 6 11 26	S-2	10.0 12.0	14			
12								Medium dense, gray, fine to medium SAND, some (+) Silt, some (-) fine Gravel.	
16			7 11 17 18	S-3	15.0 17.0	8	141.0 / 17.0	BOTTOM OF BORING AT 17.0 FEET	
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 17.0'
Rock: --
Samples: S3

BORING B-4 (MW)

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MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-5 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 155.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-11-2005	1530	5.5		12.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recov-ery (in)	Elev-ation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0			3 5	S-1	0.0 1.0	5	155.0 0.0	Dark brown, fine to medium SAND, some Silt, some (-) fine Gravel, trace Roots. -TOPSOIL-	
			10 12	S-1A	1.0 2.0	3	154.0 1.0	Gray-tan, fine to coarse GRAVEL, some (+) fine to medium Sand, little Silt. -BOULDERY FILL-	
4							150.0 5.0	Dense, gray, fine to coarse GRAVEL, some fine to coarse Sand, little (+) Silt. -GLACIAL TILL-	
			29 30 17 11	S-2	5.0 7.0	10			
8									
			5 8 8 12	S-3	10.0 12.0	9		Medium dense, gray-tan, fine to medium SAND, some Silt, some (-) fine to coarse Gravel.	
12							143.0 12.0	BOTTOM OF BORING AT 12.0 FEET	
16									
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 12.0'
Rock: --
Samples: S3

BORING B-5 (MW)

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McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-6 (MW)

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 170.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-11-2005	1500	3.8		12.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS	Well Schematic
0							170.0 0.0	-TOPSOIL-	
			AFS	S-1	1.0 3.0		169.0 1.0	Tan-brown, fine to medium SAND, some (+) Silt, trace fine Gravel. [Auger Flight Sample]	
4							167.0 3.0	-BOULDERY FILL-	
			25 20 17 24	S-2	5.0 7.0	13		Dense, gray, wet, fine to medium SAND, some (+) fine to coarse Gravel, some Silt.	
8								-GLACIAL TILL-	
			12 15 15 14	S-3	10.0 12.0	15		Medium dense to dense, gray, fine to medium SAND, some fine to coarse Gravel, some (-) Silt.	
12							158.0 12.0	BOTTOM OF BORING AT 12.0 FEET	
16									
20									
24									

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 12.0'
Rock: --
Samples: S3

BORING B-6 (MW)

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MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-7

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 159.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-11-2005	1100	7.2	OUT	20.5	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			3 10	S-1	0.0 1.0	4	158.0	Dark brown, fine to medium SAND, some (+) fine to coarse Gravel, Some Silt, trace Roots.
			23 19	S-1A	1.0 2.0	4	1.0	-TOPSOIL- Gray-brown, fine to medium SAND and fine to coarse GRAVEL, some (-) Silt.
								-BOULDERY FILL-
4								
			35 120	S-2	5.0 6.0	0		(NO RECOVERY) [split spoon bouncing o ff refusal at 6. 0 feet]
8								
			11 21 16 11	S-3	10.0 12.0	12		Dense, brown-gray, fine to medium SAND and fine to coarse GRAVEL, little (+) Silt. -BOULDERY FILL-
12								
			16	S-4	13.0	3	145.5	Gray-brown, fine to medium SAND, some (+) fine to coarse Gravel, some Silt.
			9 9 9	S-4A	13.5 13.5 15.0	8	13.5	Medium dense, gray, fine to medium SAND, some fine to coarse Gravel, some Silt.
			10 13 16 21	S-5	15.0 17.0	8		Medium dense, gray-brown, fine to medium SAND, some (-) fine to coarse Gravel, some Silt. -GLACIAL TILL-
16								
			49 29 29 120/0"	S-6	19.0 20.5	8		Very dense, gray, fine to medium SAND, some (+) fine to coarse Gravel, some (-) Silt. [split spoon bouncing of refusal at 20.5 feet]
20							138.5 20.5	BOTTOM OF BORING AT 20.5 FEET
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 20.5'
Rock: --
Samples: S6

BORING B-7

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McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-8

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 154.0±
DATE START : 11/9/2005
END : 11/9/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-9-2005	0815	4.5	OUT	10.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recov-ery (in)	Elev-ation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0							153.7	-ASPHALT-
			3	S-1	0.5	11	0.3	Medium dense, brown-gray, fine to medium SAND, some (-) fine to coarse Gravel, little Silt.
			13		2.5			-BOULDERY FILL-
			12					
4			13					Loose, brown-black, fine to coarse GRAVEL, some fine to medium Sand, little Silt.
			4	S-2	5.0	9		
			2		6.5		147.5	
			5				6.5	Gray, fine to medium SAND, some Silt, little fine Gravel.
			18	S-2A	6.5	6		-GLACIAL TILL-
8					7.0			
							144.0	
			120/0"	S-3			10.0	AUGER AND SPLIT SPOON REFUSAL AT 10.0 FEET
12								
16								
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 10.0'
Rock: --
Samples: S3

BORING B-8

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MGA McArdle Gannon Associates, Inc. Engineers & Consultants

TEST BORING LOG

BORING B-9

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 159.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:		
Date	Time	Water	Casing	Hole
11-11-2005	0900	11.0	OUT	17.0

EQUIPMENT	CASING	SAMPLER	CORE
Type	HSA	SS	--
Size I.D.	4 1/2"	1 3/8"	--
Hammer Wt.	--	140#	----
Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			4 5	S-1	0.0 1.0	4	158.0	Dark brown, fine to medium SAND, some Silt, little fine to coarse Gravel, trace roots.
							1.0	-TOPSOIL-
			8 12	S-1A	1.0 2.0	2		Gray-brown, fine to medium SAND, some (-) fine to coarse Gravel, little (+) Silt.
4								
			5 8 7 13	S-2	5.0 7.0	12		Medium dense, gray-brown, fine to medium SAND, some fine to coarse Gravel, some(-) Silt.
								-BOULDERY FILL-
8								
			14 11 16 11	S-3	10.0 12.0	0		[NO RECOVERY]
12			8 12 6 10	S-4	12.0 14.0	10		Medium dense, gray-brown, fine to medium SAND, some fine to coarse Gravel, some Silt.
								Gray-brown, fine to medium SAND, some fine to coarse Gravel, some Silt.
			10 7	S-5	15.0 16.0	5	143.0	
16			16 22	S-5A	16.0 17.0	8	16.0	Gray, fine to medium SAND, some fine to coarse Gravel, some (+) Silt.
							142.0	-GLACIAL TILL-
							17.0	BOTTOM OF BORING AT 17.0 FEET
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 17.0'
Rock: --
Samples: S5

BORING B-9

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TEST BORING LOG

BORING B-10

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 161.5±
DATE START : 11/10/2005
END : 11/10/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-10-2005	1000	[1]	OUT	17.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			3 7	S-1	0.0 1.0	4	160.5	Dark brown, fine to medium SAND, some (+) Silt, little fine to coarse Gravel, trace roots.
			12 20	S-1A	1.0 2.0	5	1.0	-TOPSOIL- Brown-gray, fine to coarse GRAVEL, some (+) fine to coarse Sand, little Silt.
4								-BOULDERY FILL-
			4 7 50 20	S-2	5.0 7.0	4		Very dense, brown, fine to medium SAND, some fine to coarse Gravel, some (-) Silt, some (-) organics. -BOULDERY FILL-
8							151.5	
			8 13 17 19	S-3	10.0 12.0	7	10.0	Medium dense to dense, wet, gray-tan, fine to medium SAND, some Silt, some (-) fine to coarse Gravel. -GLACIAL TILL-
12								
			14 43 20 19	S-4	15.0 17.0	9		Very dense, gray, fine to medium SAND, some (+) Silt, some (-) fine Gravel.
16							144.5 17.0	BOTTOM OF BORING AT 17.0 FEET [1] Hole colapsed at 6 feet. No groundwater measurement taken.
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 17.0'
Rock: --
Samples: S4

BORING B-10

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MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-11

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 157.0±
DATE START : 11/10/2005
END : 11/10/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:		
Date	Time	Water	Casing	Hole
11-10-2005	0830	6.9	OUT	12.0

EQUIPMENT	CASING	SAMPLER	CORE
Type	HSA	SS	--
Size I.D.	4 1/2"	1 3/8"	--
Hammer Wt.	--	140#	----
Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recov-ery (in)	Elev-ation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			3 6	S-1	0.0 1.0	11	156.0	Dark brown, fine to medium SAND and SILT, little fine Gravel, trace roots.
			14 22	S-1A	1.0 2.0	7	1.0	-TOPSOIL- Gray-brown, fine to medium SAND, some (+) fine to coarse Gravel, some Silt.
4								-BOULDERY FILL-
			8 4 13	S-2	5.0 6.5	5	150.5	Medium dense, dark brown-gray-black, fine to medium SAND, some Silt, some fine to coarse Gravel, trace organics.
			22	S-2A	6.5 7.0	5	6.5	Gray, fine to medium SAND, some Silt, some (-) fine to coarse Gravel.
8								-GLACIAL TILL-
			5 13 16 20	S-3	10.0 12.0	8	145.0 12.0	Medium dense, gray-tan, fine to medium SAND, some Silt, little fine to coarse Gravel. BOTTOM OF BORING AT 12.0 FEET
12								
16								
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 12.0'
Rock: --
Samples: S3

BORING B-11

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McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-12

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 159.0±
DATE START : 11/9/2005
END : 11/9/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-9-2005	1115	9.0	OUT	11.5	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			5 4	S-1	0.0 1.0	11	158.0	Dark brown, fine to medium SAND, little fine Gravel, some (-) Silt, trace roots. -TOPSOIL-
			7 12	S-1A	1.0 2.0	10	1.0	Brown, fine to medium SAND, little (+) fine to coarse Gravel, little Silt. -BOULDERY FILL-
4			13 13 10 15	S-2	5.0 7.0	12		Medium dense, dark brown, fine to medium SAND, some fine to coarse Gravel, little (+) Silt.
							151.5 7.5	Strata change noted with augers at about 7.5 feet.
8			10 19 36 38	S-3	9.0 11.0	16		Very dense, gray, fine to medium SAND, some fine to coarse Gravel, some (-) Silt. -GLACIAL TILL-
12							147.5 11.5	AUGER REFUSAL AT 11.5 FEET
16								
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 11.5'
Rock: --
Samples: S3

BORING B-12

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MGA Engineers & Consultants — McArdle Gannon Associates, Inc.

TEST BORING LOG

BORING B-13

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 168.0±
DATE START : 11/10/2005
END : 11/10/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-10-2005	1230	NE [1]	OUT	2.5	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recov-ery (in)	Elev-ation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			14 25 34 42	S-1	0.0 2.0	16		Very dense, brown, fine to medium SAND, some (+) fine to coarse Gravel, some (-) Silt. -BOULDERY FILL-
							165.5 2.5	AUGER REFUSAL AT 2.5 FEET
4								[1] NE=Not Encountered
8								
12								
16								
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION

- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY

Overburden: 2.5'
Rock: --
Samples: S1

BORING B-13

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McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-14

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 159.0±
DATE START : 11/11/2005
END : 11/11/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:		
Date	Time	Water	Casing	Hole
11-11-2005	1300	6.2	OUT	12.0

EQUIPMENT	CASING	SAMPLER	CORE
Type	HSA	SS	--
Size I.D.	4 1/2"	1 3/8"	--
Hammer Wt.	--	140#	----
Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recovery (in)	Elevation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			2 2	S-1	0.0 1.0	11	158.0 1.0	Dark brown, fine to medium SAND, some (+) Silt, trace (+) fine gravel, trace roots. -TOPSOIL-
			11 16	S-1A	1.0 2.0	8		Brown-black, fine to medium SAND, some Silt, some (-) fine to coarse Gravel, trace asphalt. -BOULDERY FILL-
4			1 2 1 4	S-2	5.0 7.0	2		Very loose, gray-brown, fine to medium SAND, some (-) Silt, trace fine Gravel.
8			26 35 24 32	S-3	10.0 12.0	9	151.0 8.0 147.0 12.0	Strata change noted with augers at about 8.0 feet. Very dense, gray, fine to medium SAND, some fine to coarse Gravel, some Silt. -GLACIAL TILL- BOTTOM OF BORING AT 12.0 FEET
12								
16								
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 12.0'
Rock: --
Samples: S3

BORING B-14

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MGA McArdle Gannon Associates, Inc.
Engineers & Consultants

TEST BORING LOG

BORING B-15

PROJECT: Durfee High School Athletic Complex
CLIENT: Gale Associates, Inc.
CONTRACTOR: Soil Exploration Corporation

MGA NO. : W0016
SHEET NO. : 1 of 1
LOCATION N : See Plan
E :
ELEVATION : 162.0±
DATE START : 11/10/2005
END : 11/10/2005
DRILLER : G. Guinto
ENGINEER : W. McArdle P.E.

GROUNDWATER		DEPTH (ft) OF:			EQUIPMENT	CASING	SAMPLER	CORE
Date	Time	Water	Casing	Hole	Type	HSA	SS	--
11-10-2005	1145	NE [1]	OUT	12.0	Size I.D.	4 1/2"	1 3/8"	--
					Hammer Wt.	--	140#	----
					Hammer Fall	--	30"	----

Depth in Feet	Strata Change	Case BPF (Drill) (min/ft)	Sampler Blows Per 6" (RQD%)	Sample Number/ Type	Sample Depth Range (ft)	Sample Recov-ery (in)	Elev-ation/ Depth (ft)	FIELD CLASSIFICATION AND REMARKS
0			3 3	S-1	0.0 1.0	7	161.0	Dark brown, fine to medium SAND, some (+) Silt, little fine gravel, trace roots.
			7 6	S-1A	1.0 2.0	6	1.0	-TOPSOIL- Brown, fine to medium SAND, some fine to coarse Gravel, some (-) Silt.
4							157.0	-BOULDERY FILL-
			10 17 23 20	S-2	5.0 7.0	17	5.0	Dense, gray, fine to medium SAND, some Silt, some (-) fine Gravel.
8								-GLACIAL TILL-
			14 22 18 19	S-3	10.0 12.0	0		[NO RECOVERY]
12							150.0 12.0	BOTTOM OF BORING AT 12.0 FEET
16								[1] NE=Not Encountered
20								
24								

BLOWS/FT.	DENSITY
0 - 4	Very Loose
4 - 10	Loose
10 - 30	Medium Dense
30 - 50	Dense
50 +	Very Dense

BLOWS/FT.	CONSISTENCY
0 - 2	Very Soft
2 - 4	Soft
4 - 8	Medium Stiff
8 - 15	Stiff
15 - 30	Very Stiff
30+	Hard

SAMPLE IDENTIFICATION
- S - Split Spoon
- T - Thin Wall Tube
- U - Undisturbed Piston
- C - Diamond Core
- W - Wash Sample

SUMMARY
Overburden: 12.0'
Rock: --
Samples: S3

BORING B-15

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KEY TO SYMBOLS

Symbol	Description
Strata symbols	
	Bouldery Fill
	Glacial Till
	Topsoil
	Paving
Soil Samplers	
	Split Spoon
Monitor Well Details	
	flush-mount cover
	protective casing set in concrete
	bentonite pellets
	silica sand, blank PVC
	slotted pipe w/ sand
	endcap on pipe packed in sand
	assorted cuttings

Symbol	Description
	silica sand, no pipe (end plug)

Notes:

1. Test borings performed by Soil Exploration Corporation between November 9 and Novemebr 11, 2005.
2. Observed and Logged by McArdle Gannon Associates, Inc.
3. Elevations shown were estimated from ground surface contours shown on the "Existing Conditions Plan" provided by Gale Associates, Inc. drawing EC-1, undated.

APPENDIX B - Logs of LGCI's Borings

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-1
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/12/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/13/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Southeastern corner of parking lot
Ground Surface El:	~El. 154.5 feet (See Remark 1)	Total Depth:	15 feet
Groundwater Depth:	~4.9', 16 hrs after end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
	~6' at end of drilling	Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	NX
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0.5-2	S1	16	22	18		18	8		Asphalt	~8" of Asphalt S1 - Top 2" : Asphalt
											Bot. 6" : Silty Gravel (GM), fine, ~15% fines, 10-15% fine to medium sand, gray, moist
	2-4	S2	11	13	15	20	24	6		Boulder Fill	S2 - Top 3": Poorly Graded SAND (SP), medium to coarse, black, moist
5ft	4-4.7	S3	43	72/2			8	6	2		Bot. 3" : Silty SAND (SM), fine, ~25% fines, gray, wet S3 - Poorly Graded Gravel with SAND (GP), fine, ~20% fine to medium sand, gray, wet
										~6'	
	6-8	S4	25	26	23	17	24	11		Sand	S4 - Poorly Graded SAND with Gravel (SP), fine to medium, ~30% fine gravel, gray, wet
									3	~8.0'	
	8-8.1	S5	50/1				1	0			
10ft											C1- 3,3,3.5,3,3 , Rec= 70%,RQD =53% Hard, slightly weathered to fresh, slightly fractured to sound, coarse grained, pink with black mottles GRANITE.
	10-15	C1					60	42		Bedrock	
15ft										~15'	
											Bottom of boring at 15 feet. Backfilled borehole with drill cuttings and ground surface restored with asphalt cold patch.
20ft											

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Encountered boulders at ~4.5'. Drill rig chattered from 4.5' to 6'.
3. Advanced roller bit 2 feet into the rock and cored 5 feet in the rock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-2
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/13/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/13/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Southeastern corner of parking lot
Ground Surface El:	~El. 157 feet (See Remark 1)	Total Depth:	8 feet
Groundwater Depth:	~5.7 feet at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
		Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0.5-2	S1	14	12	22		18	8		Asphalt	S1 - Top 3" : Asphalt
											Bot. 5" : Silty GRAVEL with SAND (GM), fine, ~25% fines, ~20% fine to coarse sand, gray, wet
	2-4	S2	23	19	26	36	24	6			S2 - Silty SAND with Gravel (SM), fine to medium, ~30% fines, ~20% fine gravel, wet
										Boulder Fill	
5ft	4-6	S3	7	2	2	5	24	1			S3 - Piece of wood at the tip of sampler
	6-8	S4	16	16	48	27	24	8	2		S4 - Silty GRAVEL with Sand (GM), ~20% fines, ~20% fine sand, traces of organics, wood, gray, wet
									3	~8'	
											Bottom of boring at 8 feet. Backfilled borehole with drill cuttings and ground surface restored with asphalt cold patch.
10ft											
15ft											
20ft											

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Casing penetrated the ground in an angle due to possible boulders.
3. Casing broke at 8 feet. Casing refusal.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-3
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/13/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/13/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Middle of parking lot
Ground Surface El:	~El. 156.5 feet (See Remark 1)	Total Depth:	11 feet
Groundwater Depth:	~6.6 feet at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
		Drilling Method:	Drive and Wash (3" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0.5-2	S1	14	12	22		18	8	2	Asphalt	S1 - 4" of Asphalt
	2-4	S2	23	19	26	36	24	6			S2 - Silty SAND (SM), fine, ~25% fines, light brown, moist
5ft	4-6	S3	7	2	2	5	24	8		Boulder Fill	S3 - Top 3" : Silty GRAVEL with Sand (GM), fine, ~20% fines, ~20% fine to medium sand, gray, moist Bot. 5" : Silty SAND with Gravel (SM), fine, ~15% fines, ~25% fine gravel, dark brown, moist
	6-8	S4	16	16	48	27	24	13			S4 - Poorly Graded SAND with Gravel (SP), fine to coarse, ~30% fine gravel, light brown to gray, wet
									2,3	~9'	
10ft	9-	S5	55/0				0	0		Bedrock ~11'	S5 - No recovery, possible top of rock
15ft											Bottom of boring at 11 feet. Backfilled borehole with drill cuttings and ground surface restored with asphalt cold patch.
20ft											

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Encountered boulders at ~7.8' while drilling. Drilled 1' through boulder.
3. Refusal of 55 blows and 0 penetration. Advanced roller bit from 9' to 11' through possible bedrock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-7
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/13/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/13/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	South of athletic field, by tennis court
Ground Surface El:	~ El. 158.5 feet (See Remark 1)	Total Depth:	19 feet
Groundwater Depth:	~3.1 feet at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
		Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	5	16	17	19	24	17		Topsoil	S1 - Top 4" : Silty SAND (SM), fine, ~35% fines, traces of organics, roots, grass, dark brown, moist
											Mid 6" : Silty SAND (SM), fine, ~30% fines, trace of roots and organics, trace of fine gravel, trace of coal, brown to gray, moist
	2-4	S2	15	22	23	19	24	14			Bot. 7" : Silty SAND (SM), fine to medium, ~20% fines, trace of fine gravel, light brown, moist
5ft	4-6	S3	12	12	9	6	24	9		Fill	S2 - Silty SAND (SM), fine to medium, 15-20% fines, trace of fine gravel, coal, light brown, moist
											S3 - Silty SAND (SM), fine to medium, ~35% fines, traces of organics, wood, gray to brown, wet
	6-8	S4	3	3	4	3	24	8			S4 - Silty SAND (SM), fine to coarse, ~35% fines, 5-10% fine gravel, gray, wet
	8-10	S5	2	1	1	2	24	6			
10ft										~10.0'	S5 - Silty SAND (SM), fine, ~35% fines, gray, wet
	10-12	S6	16	17	20	33	24	8		Sand and Gravel	S6 - Silty SAND (SM), fine to coarse, ~30% fines, ~10% fine gravel, gray, wet
15ft	14-16	S7	25	27	88	41	24	8	2		S7 - Silty GRAVEL with SAND (GM), fine, ~20% fines, ~25% fine to coarse sand, gray, wet
										~17'	
										Bedrock	See note 2
20ft										~19'	
											Bottom of boring at 19 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Advanced roller bit from 17' to 19' through possible bedrock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-8
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/11/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/11/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	South of athletic field, by the tennis court
Ground Surface El:	~El. 160.5 feet (See Remark 1)	Total Depth:	20.6 feet
Groundwater Depth:	~6.3 feet at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
		Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	5	14	43	64	24	11		Topsoil	S1 - Top 2" : Silty SAND (SM), fine, ~35% fines, traces of organics, roots, grass, dark brown, moist
	2-4	S2	27	36	65/2		14	5		Fill	Mid 4" : Silty SAND (SM), fine to medium, ~15% fines, traces of roots, organics, light brown, moist Bot. 5" : Poorly Graded Gravel (GP), fine, ~5% fines, traces of coal, ash, gray, moist
5ft	4-6	S3	26	48	45	60	24	12			S2 - Silty GRAVEL with Sand (GM), fine, ~15% fines, ~15% fine to coarse sand, gray, moist
	6-8	S4	32	32	23	19	24	8			S3 - Silty Gravel with Sand (GM), fine, ~20% fines, ~25% fine to coarse sand, gray, wet
	8-10	S5	13	10	9	8	24	9			S4 - Silty SAND with Gravel (SM), fine to medium, ~30% fines, ~20% fine gravel, gray, wet
10ft										~10.0'	S5 - Silty SAND (SM), fine to medium, ~15% fines, gray, wet (possible fill)
	10-12	S6	8	6	7	8	24	7		Sand and Gravel	S6 - Similar to S5 (natural)
15ft	14-16	S7	6	8	6	7	24	5			S7 - Silty GRAVEL (GM), fine, ~15% fines, ~10% fine to medium sand, gray, wet
20ft	19-20.6	S8	8	6	4	50/1	19	6	2	~20.6'	S8 - Silty SAND (SM), fine to coarse, ~15% fines, trace of fine gravel, gray, wet
											Bottom of boring at 20.6 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Sampler refusal in the last 6 inches of sample S8 on possible bedrock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-9
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/10/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/10/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Baseball in-field
Ground Surface El:	~El. 158 feet (See Remark 1)	Total Depth:	17.5 feet
Groundwater Depth:	2.3 feet at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
	~6' based on sample moisture	Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	3	4	7	7	24	18		Topsoil	S1 - Top 6" : Silty SAND (SM), fine to medium, ~35% fines, traces of organics, roots, dark brown, moist
										Fill	Bot. 12" : Poorly Graded Gravel (GP), fine, trace of coal, ash, gray, moist
	2-4	S2	7	9	9	9	24	20			S2 - Similar to bot. 12" of S1
										~4'	
5ft	4-6	S3	17	18	34	29	24	17			S3 - Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, ~15% fine gravel, gray to brown, moist
	6-8	S4	19	20	22	28	24	15			S4 - Similar to S3, ~15% fines, gray
	8-10	S5	14	15	34	62	24	8			S5 - Similar to S3, ~15% fines, 20-25% fine gravel, gray, wet
10ft										Sand and Gravel	
	10-12	S6	4	27	16	16	24	6			S6 - Similar to S3, ~15% fines, 20-25% fine round gravel, gray, wet
	12-14	S7	31	25	18	38	24	22			S7 - Silty SAND with Gravel (SM), fine to coarse, ~15-20% fines, 25-30% fine to coarse subangular gravel, gray, wet
15ft	14-14.5	S8	100				6	4	2	~14.5'	S8 - Silty GRAVEL with SAND (GM), fine to coarse, angular, ~20% fines, ~20% fine to coarse sand, gray, wet
										Bedrock	
										~17.5	
20ft											Bottom of boring at 17.5 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Advanced roller bit from 14.5' to 17.5' through possible bedrock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-10
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/10/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/10/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Grass soccer field
Ground Surface El:	~El. 156 feet (See Remark 1)	Total Depth:	18.7 feet
Groundwater Depth:	~4.2' at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
	~4' based on sample moisture	Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	6	7	10	12	24	14		Topsoil / Fill ~2.0'	S1 - Top 8" : Silty SAND (SM), fine to medium, 30-35% fines, traces of organics, roots, dark brown, moist
											Bot. 6" : Silty SAND (SM), fine to medium, trace coarse, 30-35% fines, 10-15% fine gravel, light brown, moist
	2-4	S2	11	29	35	30	24	22			S2 - Top 12" : Similar to bot. 6" of S1, 35-40% fines, ~5% gravel, gray, moist
5ft	4-6	S3	15	16	20	18	24	19			Bot. 10" : Silty SAND with Gravel (SM), fine to medium, trace coarse, ~25% fines, 20-25% fine subangular gravel, grayish brown, moist
	6-8	S4	12	13	9	14	24	14			S3 - Silty SAND (SM), fine to medium, trace coarse, 20-25% fines, 10-15% fine gravel, brown, wet
	8-10	S5	25	31	19	33	24	3			S4 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, ~20% fine gravel, brown, wet
10ft											S5 - Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 20-25% fine gravel, brown, wet
	10-12	S6	16	16	17	12	24	10		Sand and Gravel	S6 - Similar to S5
	12-14	S7	27	9	8	8	24	6			S7 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, grayish brown, wet
15ft	14-16	S8	7	10	8	9	24	4			S8 - Silty SAND with Gravel (SM), fine to medium, trace coarse, 20-25% fines, ~20% fine to coarse gravel, grayish brown, wet
	16-18	S9	16	44	35	16	24	12			S9 - Similar to S8, ~20% fines, ~25-30% gravel
	18-18.7	S10	38	100/3			9	6		~18.7'	S10 - Silty GRAVEL with Sand (GM), fine to coarse, angular, ~20% fines, 30-35% fine to coarse sand, brown, wet
20ft											Bottom of boring at 18.7 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-11
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/11/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/11/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Softball field
Ground Surface El:	~El. 161 feet (See Remark 1)	Total Depth:	20 feet
Groundwater Depth:	~4.8' at end of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
	~5.8' based on sample moisture	Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	3	5	5	14	24	19		Topsoil	S1 - Top 4" : Silty SAND (SM), fine, ~35% fines, traces of organics, roots, dark brown, moist
											Mid 4" : Similar to top 4" of S1,~20% fines
	2-4	S2	11	7	8	29	24	14			Bot. 11" : Silty SAND with Gravel (SM), fine to medium ~15% fines, light brown, moist
											S2 - Poorly Graded SAND with Silt and Gravel (SM), fine to medium, ~10% fines, ~15% fine gravel, light brown, moist
5ft	4-6	S3	3	2	9	9	24	1		Fill	S3 - Similar to S2, wet
	6-8	S4	5	7	7	5	24	2			S4 - Silty GRAVEL (GM), fine, ~15% fines, ~10% fine sand, gray, wet
	8-10	S5	7	8	13	14	24	7	2		S5 - Silty SAND (SM), fine to coarse, ~15% fines, ~10% fine gravel, light brown, wet
10ft										~10.0'	
	10-12	S6	33	23	17	19	24	0			S6 - No recovery
	12-14	S7	24	28	14	17	24	12			S7 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to coarse, ~10% fines, ~15% fine gravel, gray, wet
15ft	14-16	S8	55	14	11	14	24	1		Sand and Gravel	S8 - Gravel at tip of sampler
	16-18	S9	14	14	12	13	24	1			S9 - Gravel at tip of sampler
	18-20	S10	10	6	6	11	24	8			S10 - Silty SAND with Gravel (SM), fine to medium, ~20% fines, ~5% fine gravel, gray, wet
20ft										~20'	
											Bottom of boring at 20 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Casing penetrated at an angle due to possible boulders in the fill.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-12
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/10/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/10/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Softball field
Ground Surface El:	~El. 158.5 feet (See Remark 1)	Total Depth:	21 feet
Groundwater Depth:	~4.8' upon completion of drilling	Drill Rig Type:	Mobile Drill B-48 (ATV)
		Drilling Method:	Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	3	16	11	9	24	12		Topsoil	S1 - Top 4" : Silty SAND (SM), fine, ~35% fines, traces of roots and organics, dark brown, moist
	2-4	S2	15	11	13	10	24	10		Fill	Bot. 8" : Silty SAND (SM), fine, ~25% fines, 5-10% fine gravel, light brown, moist S2 - Silty SAND (SM), fine to medium, ~15% fines, ~10% fine gravel, light brown, moist
5ft	4-6	S3	6	6	11	15	24	11			S3 - Silty SAND with Gravel (SM), fine to coarse, ~15% fines, ~15% fine gravel, light brown, wet
	6-8	S4	30	17	23	23	24	14		~6.0'	S4 - Silty SAND (SM), fine to coarse, ~15% fines, ~10% fine gravel, light brown, wet
	8-10	S5	24	9	10	9	24	15			S5 - Poorly Graded SAND (SP), fine to coarse, 5-10% fines, 10-15% fine gravel, light brown to gray, wet
10ft	10-12	S6	10	9	10	9	24	15		Sand and Gravel	S6 - Similar to S5
15ft	14-16	S7	19	15	14	21	24	1			S7 - Gravel at the tip of sampler
20ft	19-21	S8	50/0"				0	0		~19' Bedrock ~21'	S8 - Pieces of rock at tip of sampler
											Bottom of boring at 21 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Sampler refusal of sampling at 19 feet. 50 blows and 0 penetration. Advanced roller bit from 19' to 21' through possible bedrock.

LGCI Lahlaf Geotechnical Consulting, Inc.

BORING LOG

Boring B-13
Page 1 of 1

Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Drilling Subcontractor:	Northern Drill Service, Inc.	Date Started:	7/10/2017
Drilling Foreman:	Tim Tucker	Date Completed:	7/11/2017
LGCI Engineer:	Hadi Kazemiroodsari	Location:	North of tennis court
Ground Surface El:	~El. 160 feet (See Remark 1)	Total Depth:	21.1 feet
Groundwater Depth:	~ 6.1', 18 hours after end of drilling ~14' at end of drilling	Drill Rig Type: Drilling Method:	Mobile Drill B-48 (ATV) Drive and Wash (4" casing)
Hammer Weight:	140 lbs	Split Spoon Diameter:	ID - 1.375", OD - 2"
Hammer Type:	Automatic	Rock Core Barrel Size:	N/A
Drop:	30 inches		

Depth Scale	Sample Depth (ft)	Sample No	Blows per 6 inches 0-6	6-12	12-18	18-24	Pen (in)	Rec (in)	Remarks	Strata	Sample Description
	0-2	S1	4	6	8	5	24	8		Topsoil / Sub soil ~2.0'	S1 - Top 2" : Silty SAND (SM), fine, ~35% fines, traces of roots and organics, dark brown, moist Bot. 6" : Silty SAND (SM), fine, ~25% fines, traces of roots, light brown, moist
	2-4	S2	10	13	24	38	24	16		Fill ~4.0'	S2 - Silty SAND (SM), fine to medium, ~15% fines, ~10% fine gravel, light brown, moist
5ft	4-6	S3	11	23	53	32	24	13			S3 - Silty SAND with Gravel (SM), fine to coarse, ~15% fines, ~15% fine gravel, light brown, wet
	6-8	S4	27	28	26	26	24	8			S4 - Silty SAND with Gravel (SM), fine to medium, ~20% fines, ~15% fine gravel, light brown, wet
	8-10	S5	36	42	21	30	24	9			S5 - Silty SAND (SM), fine to medium, ~15% fines, trace of fine gravel, light brown, wet
10ft	10-12	S6	38	18	19	27	24	5			S6 - Poorly Graded GRAVEL with Sand and Silt (GP-GM), fine, 5-10% fines, ~20% fine to coarse sand, gray, wet
										Sand and Gravel	
15ft	14-16	S7	7	10	13	20	24	7			S7 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine, ~10% fines, ~15% fine gravel, gray, wet
20ft	19-20.2	S8	16	16	62/2		14	2		~20.1'	S8 - Pieces of rock at tip of sampler
										Bedrock ~21.1'	See note 3.
											Bottom of boring at 21.1 feet. Backfilled borehole with drill cuttings.

Remarks:

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.
2. Drill rig chattered at 3 feet.
3. Sampler refusal. Advanced roller bit from 20.1' to 21.1' through possible bedrock.

APPENDIX - Logs of LGCI's Test Pits

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Northwest of soccer field
Ground Surface El:	~El. 161 feet (See Remark 1)	Total Depth:	9.4 feet
Groundwater Depth:	~7.3 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions:	3.1' x 14'

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~1.1'	0' - 1.1': Silty SAND (SM), fine, ~35% fines, ~5% fine gravel, traces of organics, roots, dark to light brown, moist
	M	Fill ~9.4'	1.1' - 9.4': Silty SAND with Gravel (SP), fine to coarse, ~20% fines, ~20% fine to coarse gravel, brick, concrete, construction debris, gray, moist
	M		
	M		
5 ft	M		
	M		
	M		
	M		
	M		
	M		
10 ft	M		Bottom of test pit at 9.4 feet. Hole was collapsing. Backfilled test pit with the excavated material and compacted it with th e excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: “Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	North of soccer field
Ground Surface El:	~El. 161.5 feet (See Remark 1)	Total Depth:	13.3 feet
Groundwater Depth:	~9.3 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions:	3.5' x 9.4'

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1.4'	0' - 1.4': Silty SAND (SM), fine, ~35% fines, ~5% fine gravel, traces of organics, roots, dark to light brown, moist
	M		
	M		1.4' - 9.4' : Silty SAND with Gravel (SM), fine to coarse, ~20% fines, ~20% fine to coarse gravel, boulders, asphalt, brick, construction debris, trash, light brown to gray, moist
	M		
	M		
5 ft	M		
	M	Fill	* More boulders and less construction debris observed from 5' to 9.4'.
	M		
	M		
	M		
	M	~9.4'	
10 ft	M	Buried Organics ~10.1'	9.4' - 10.1' : Silty SAND (SM), fine to medium, ~35% fines, trace fine gravel, traces of organics, roots, dark brown to black, moist
	M		10.1' - 13.3' : Silty SAND (SM), fine, ~30% fines, gray, wet (Natural)
	M	Silty Sand	
	M		
	M	~13.3'	
15 ft			Bottom of test pit at 13.3 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	North of soccer field
Ground Surface El:	~El. 160.5 feet (See Remark 1)	Total Depth:	10.2 feet
Groundwater Depth:	~10 feet	Excavator Type:	Komatsu PC 120
	(perched water at ~5 feet)	Test Pit Dimensions: 3.3' x 12.9'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~2'	0' - 2': Silty SAND (SM), fine, ~35% fines, ~5% fine gravel, traces of organics, roots, dark to light brown, moist
	E		
	M	Fill ~4.7'	2'- 4.7': Silty SAND with Gravel (SM), fine to coarse, ~20% fines, ~20% fine to coarse gravel, boulders, asphalt, brick, construction debris, trash, light brown to gray, moist
	M		
5 ft	M		
	M	Silty Sand ~10.2'	4.7'-10.2' : Silty SAND (SM), fine, ~30% fines, gray, wet (Natural)
	M		
	M		
	M		
	M		
10 ft	M		* Possible bedrock at 10.2'.
	M		Bottom of test pit at 10.2 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Southwest of athletic field
Ground Surface El:	~El. 164.5 feet (See Remark 1)	Total Depth:	10.5 feet
Groundwater Depth:	~6.1 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.3' x 8.5'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~0.9'	0' - 0.9': Silty SAND (SM), fine to medium, ~25% fines, traces of organics, roots, dark brown, moist
	E	Fill ~7.1'	0.9'-7.1' : Poorly Graded SAND with Silt and Gravel (SP-SM), fine to coarse, ~10% fines, ~30% fine to coarse gravel, boulders, light brown to dark brown, moist
	M		
	M		
5 ft	M		
	M		
	M		
	M	Silty Sand ~10.5'	7.1'-10.5' : Silty SAND (SM), fine, ~30% fines, gray, wet (Natural)
	M		
10 ft	M		
	M		
			Bottom of test pit at 10.5 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Near SW corner of existing building
Ground Surface El:	~El. 160 feet (See Remark 1)	Total Depth:	7.7 feet
Groundwater Depth:	~7 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3' x 16'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1.3'	0' - 1.3': Silty SAND (SM), fine to medium, ~25% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	V	Boulder Fill ~7.7'	1.3'-7.7' : Poorly Graded SAND with Silt and Gravel (SP-SM), fine to coarse, ~10% fines, ~30% fine to coarse gravel, light brown to gray, moist * Encountered boulders of larger than 3 feet diameter from 1.3'-7.7'
	V		
	V		
5 ft	V		
	V		
	V		
	V		
			Bottom of test pit at 7.7 feet. Unable to excavate due to large boulders. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
10 ft			
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Middle of soccer field
Ground Surface El:	El. 156.5 feet (See Remark 1)	Total Depth:	11.5 feet
Groundwater Depth:	~10 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.3' x 10'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~0.9'	0' - 0.9': Silty SAND (SM), fine to medium, ~25% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~4.8'	0.9'-4.8' : Silty SAND with Gravel (SM), fine to medium, 20-25% fines, ~25% fine gravel, trace of roots, light brown, moist * Encountered larger boulders from 0.9' to 4.5'.
	M		
	M		
5 ft	M		
	M	Silty Sand ~11.5'	4.8'-11.5' : Silty SAND with Gravel (SM), fine to coarse, 15% fines, ~20% fine gravel, gray, moist (Natural)
	M		
	M		
	M		
	M		
10 ft	M		
	M		
	M		
			Bottom of test pit at 11.5 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	East of athletic field
Ground Surface El:	El. 157 feet (See Remark 1)	Total Depth:	11.9 feet
Groundwater Depth:	~10.2 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.2' x 13'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~1.1'	0' - 1.1': Silty SAND (SM), fine to medium, ~25% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Sand and Gravel	1.1'-7' : Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 25-30% fine to coarse gravel, light brown, moist (Natural)
	M		
	M		
5 ft	M		
	M		
	M		
	M		7'-11.9' : Poorly Graded SAND with Silt and Gravel (SP-SM), medium to coarse, 5-10% fines, ~20% fine to coarse gravel, gray, wet
	M		
	M		
10 ft	M		
	M	~11.9'	
	M		Bottom of test pit at 11.9 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/19/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/19/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	West of tennis courts
Ground Surface El:	~El. 162.5 feet (See Remark 1)	Total Depth:	13.5 feet
Groundwater Depth:	~5.5 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.7' x 13.5'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~0.5'	0' - 0.5': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~6'	0.5'-6' : Silty SAND with Gravel (SM), fine to coarse, ~15% fines, ~30% fine to coarse gravel brown, moist * Encountered construction debris at 1.5'. * Encountered boulders of ~1' in diameter from 1' to 6'.
	D		
	D		* Encountered boulders 2' in diameter from 3' to 6'
5 ft	D		
	D		
	M	Silty Sand ~13.5'	6'-13.5' : Silty SAND with Gravel (SM), fine to coarse, ~20% fines, ~20% fine gravel, gray, wet (Natural)
	M		
	M		
10 ft	M		
	M		
	M		
	M		
	M		
15 ft			Bottom of test pit at 13.5 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	South of athletic field
Ground Surface El:	~El. 157.5 feet (See Remark 1)	Total Depth:	11.3 feet
Groundwater Depth:	~11 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.4' x 11.3'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1'	0' - 1': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	V	Boulder Fill ~4'	1'-4' : Poorly Graded SAND with Silt and Gravel (SP-SM), medium to coarse, 5-10% fines, ~30% fine to coarse gravel, brown, moist * Encountered boulders larger than 2' in diameter from 2' to 4'
	V		
	V		
5 ft	V	Sand ~11.3'	4'-4.5' : Silty SAND with Gravel (SM), fine to medium, ~30% fines, ~20% fine gravel, light brown, moist (Natural) 4.5'-11.3' : Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, ~25% fine gravel, gray, moist
	D		
	D		
	D		
	D		
10 ft	D		
	D		
	D		
			Bottom of test pit at 11.3 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Southeast of athletic field
Ground Surface El:	~El. 157 feet (See Remark 1)	Total Depth:	9 feet
Groundwater Depth:	~8.8 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3' x 11.5'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~2.3'	0' - 2.3': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	E		
	E	Boulder Fill ~5.9'	2.3'-5.9' : Poorly Graded SAND with Silt and Gravel (SP-SM), medium to coarse, 10-15% fines, 35-40% fine to coarse gravel, gray, moist * Encountered boulders larger than 1' in diameter and trace of wood at 4'.
	D		
5 ft	D		
	D		
	D	Sand ~9'	5.9'-9' : Silty SAND with Gravel (SM), fine to coarse, ~15% fines, ~20% fine to coarse gravel, light brown to gray, moist
	D		
	D		
			Bottom of test pit at 9 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
10 ft			
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Southeast of athletic field
Ground Surface El:	~El. 158 feet (See Remark 1)	Total Depth:	13 feet
Groundwater Depth:	NE	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 5' x 12'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1.5'	0' - 1.5': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~10.9'	1.5'-10.9' : Silty GRAVEL with Sand (GM), fine to coarse, ~15% fines, 35-40% fine to coarse sand, traces of trash, roots, wood, gray, wet
	D		* Encountered boulders larger than 2' diameter and trace of wood at 4'.
	D		
5 ft	D		
	D		
	D		
	D		
	D		
	D		
10 ft	D		
	D	Silty Sand ~13'	10.9'-13' : Silty SAND with Gravel (SM), fine to medium, ~35% fines, ~15% fine gravel, gray, moist
	D		* Possible bedrock at 13'.
			Bottom of test pit at 13 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	North of parking lot
Ground Surface El:	~El. 159 feet (See Remark 1)	Total Depth:	10 feet
Groundwater Depth:	NE	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 5.8' x 8.3'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1.1'	0' - 1.1': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~7.1'	1.1'-7.1' : Silty GRAVEL with Sand (GM), fine to coarse, ~15% fines, ~35% fine to coarse sand, gray, moist
	M		
	D		* Encountered boulders ~1' diameter at 4 feet.
5 ft	V		
	V		* Encountered boulders larger than 2 feet diameter at 5 feet.
	V		
	V		
	V	Silty Sand ~10'	7.1'-10' : Silty SAND (SM), fine, ~35% fines, ~10% fine gravel, moist
	D		
10 ft	D		
			Bottom of test pit at 10 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	East of parking lot
Ground Surface El:	~El. 154.5 feet (See Remark 1)	Total Depth:	6.1 feet
Groundwater Depth:	NE	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 4.8' x 10.3'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil/ Subsoil ~1.3'	0' - 1.3': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~6.1'	1.3'-6.1' : Silty Gravel with Sand (GM), fine to coarse, ~15% fines, 25% sand, gray, moist
	M		* Encountered boulders of larger than 2 feet diameter from 3' to 6.1'.
	D		
5 ft	V		
	V		* Encountered bedrock at 6.1
	V		Bottom of test pit at 6.1 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
10 ft			
15 ft			

Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

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Project:	**Proposed B.M.C Durfee High School, Fall River, MA**		
Client:	**Ai3 Architects, LLC**		LGCI Project No.: 1712
Excavation Subcontractor: Northern Drill Service, Inc.		Date Started:	07/18/17
Excavation Foreman : Dave Edileberti		Date Completed:	07/18/17
LGCI Engineer:	Hadi Kazemiroodsari	Location:	Grass area by the building
Ground Surface El:	~El. 167.5 feet (See Remark 1)	Total Depth:	10.5 feet
Groundwater Depth:	~9.8 feet	Excavator Type:	Komatsu PC 120
		Test Pit Dimensions: 3.1' x 11'	

Depth Scale	Exc. Effort	Strata	Soil Description
	E	Topsoil ~1'	0' - 1': Silty SAND (SM), fine to medium, ~20% fines, trace fine gravel, traces of organics, roots, dark brown, moist
	M	Boulder Fill ~7.1'	1'-7.1' : Silty SAND with Gravel (SM), fine to medium, ~25% fines, ~30% fine to coarse gravel, traces of organics, roots, wood, light brown moist * Encountered cobbles of ~6" diameter below 1.5' * Encountered boulders larger than 1' diameter from 3' to 7'.
	D		
	D		
5 ft	D		
	V		
	V		
	V	Silty Sand ~10.5'	7.1'-10.5' : Silty SAND with Gravel (SM), fine to medium, ~30% fines, ~35% fine gravel, light brown to gray, wet
	D		
10 ft	D		
	D		Bottom of test pit at 10.5 feet. Backfilled test pit with the excavated material and compacted it with the excavator bucket.
15 ft			

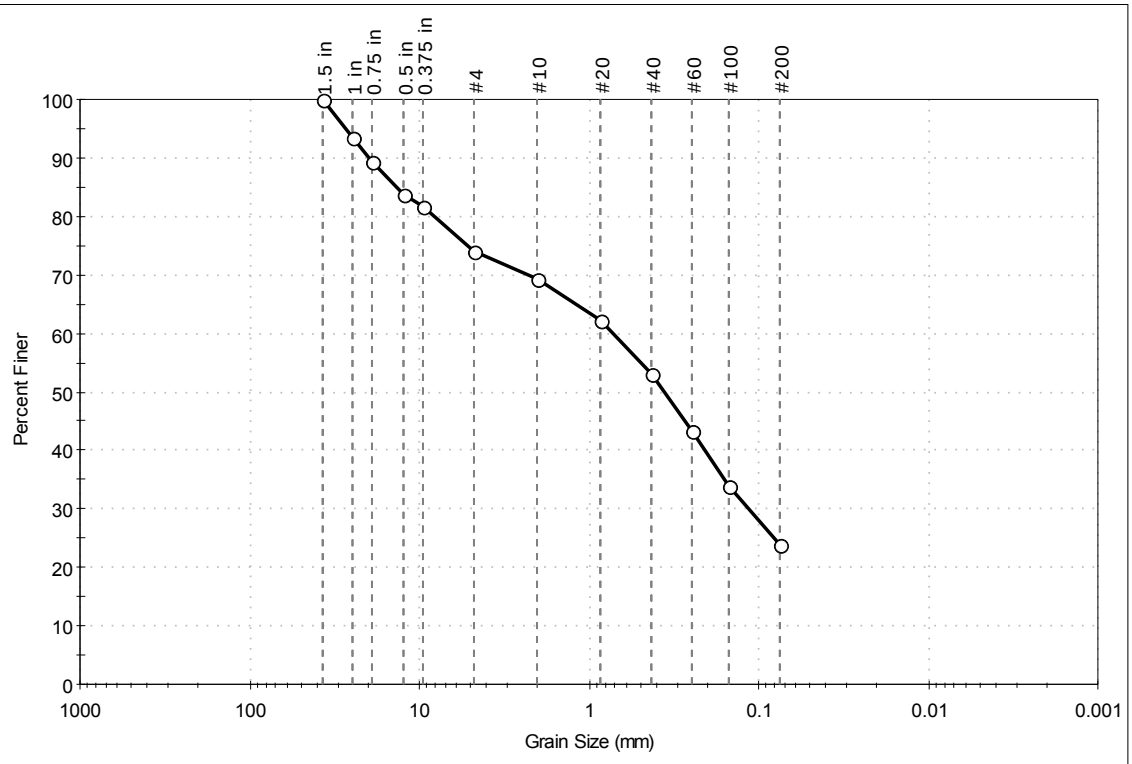
Remarks: E = Easy, M = Moderate, D = Difficult, V = Very Difficult

1. The ground surface elevation was interpolated to the nearest 1/2 foot using a drawing titled: "Aerial Mapping Survey B.M.C Durfee High School Fall River, Massachusetts," provided to LGCI by Pare Corporation via email on July 31, 2017.

APPENDIX D - Laboratory Test Results

Client:	Lahlaf Geotechnical Consulting				
Project:	Durfee High School				
Location:	Fall River, MA			Project No:	GTX-306751
Boring ID:	TP6	Sample Type:	bag	Tested By:	jbr
Sample ID:	S3	Test Date:	07/31/17	Checked By:	emm
Depth :	20"-4'9"	Test Id:	418227		
Test Comment:	---				
Visual Description:	Moist, brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	26.1	50.0	23.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	93		
0.75 in	19.00	90		
0.5 in	12.50	84		
0.375 in	9.50	82		
#4	4.75	74		
#10	2.00	69		
#20	0.85	62		
#40	0.42	53		
#60	0.25	43		
#100	0.15	34		
#200	0.075	24		

Coefficients

D_{85} = 13.7158 mm D_{30} = 0.1146 mm
D_{60} = 0.7212 mm D_{15} = N/A
D_{50} = 0.3574 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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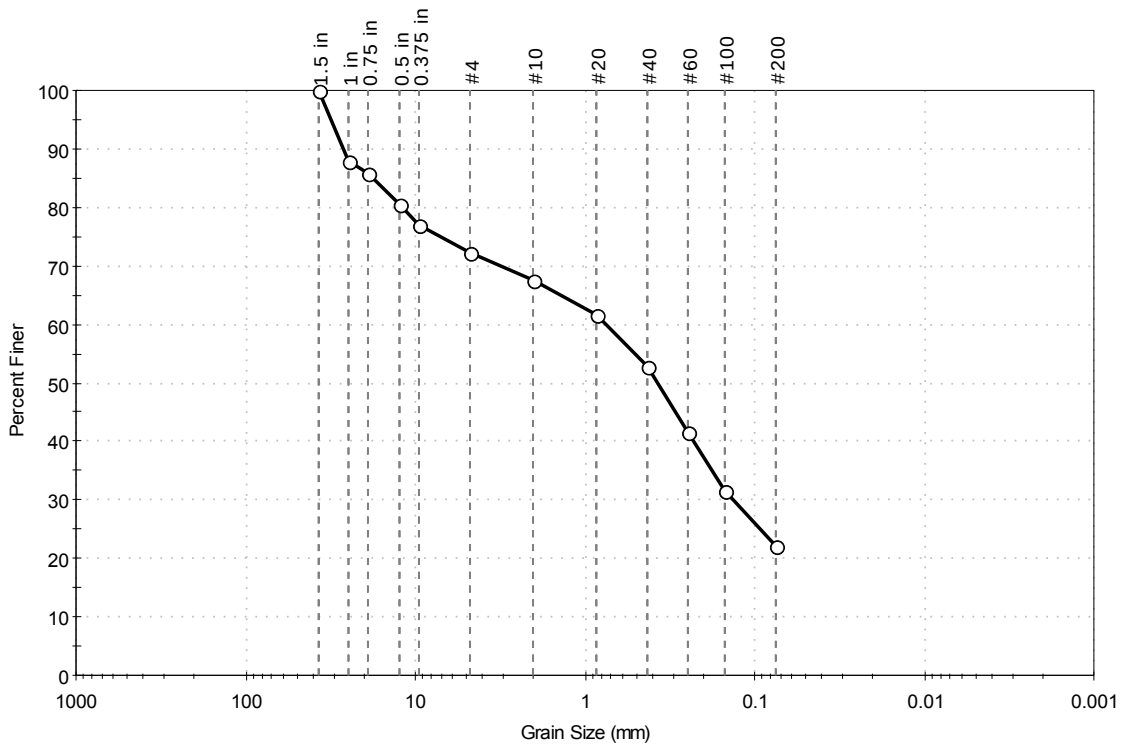
GeoTesting EXPRESS

Client:	Lahlaf Geotechnical Consulting				
Project:	Durfee High School				
Location:	Fall River, MA			Project No:	GTX-306751
Boring ID:	TP7	Sample Type:	bag	Tested By:	jbr
Sample ID:	S2	Test Date:	07/31/17	Checked By:	emm
Depth :	1'11"-7'	Test Id:	418226		
Test Comment:	---				
Visual Description:	Moist, brown silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	27.8	50.0	22.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	88		
0.75 in	19.00	86		
0.5 in	12.50	81		
0.375 in	9.50	77		
#4	4.75	72		
#10	2.00	68		
#20	0.85	62		
#40	0.42	53		
#60	0.25	42		
#100	0.15	32		
#200	0.075	22		

Coefficients

D_{85} = 17.7360 mm D_{30} = 0.1339 mm
D_{60} = 0.7543 mm D_{15} = N/A
D_{50} = 0.3735 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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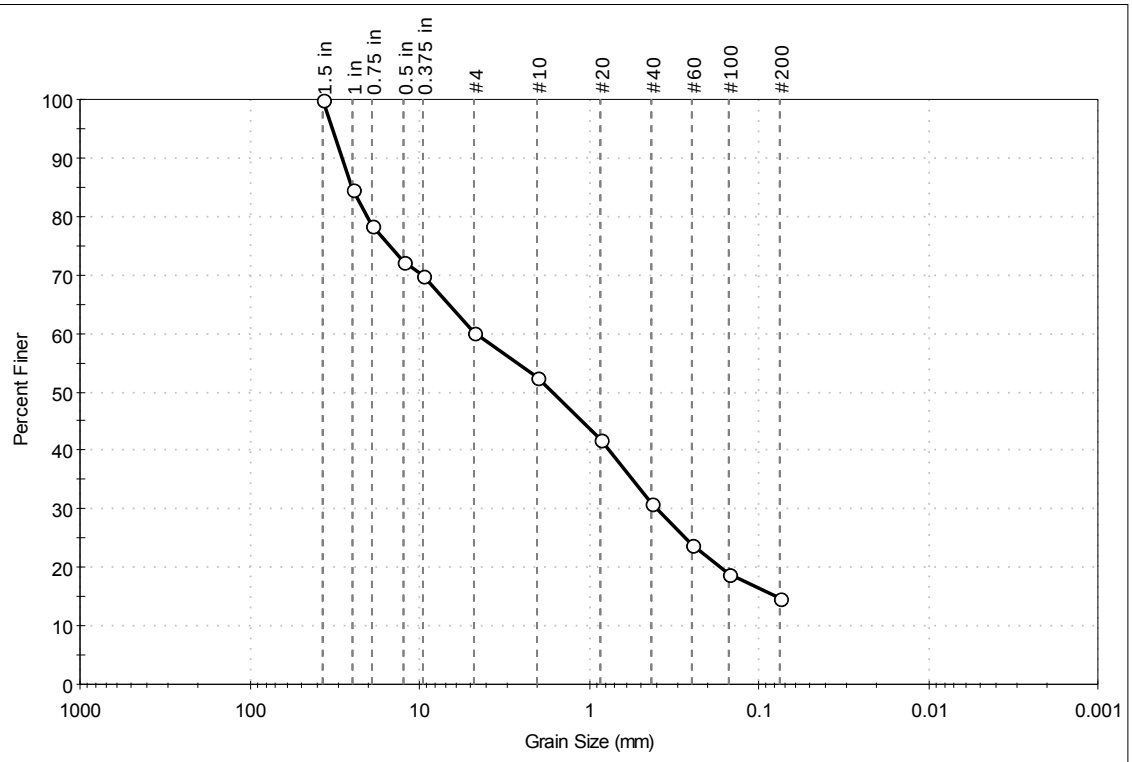
Client:	Lahlaf Geotechnical Consulting				
Project:	Durfee High School				
Location:	Fall River, MA			Project No:	GTX-306751
Boring ID:	TP10	Sample Type:	bag	Tested By:	jbr
Sample ID:	S2	Test Date:	07/31/17	Checked By:	emm
Depth :	2'4"-5'10"	Test Id:	418229		
Test Comment:	---				
Visual Description:	Moist, gray silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	39.8	45.4	14.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	85		
0.75 in	19.00	78		
0.5 in	12.50	72		
0.375 in	9.50	70		
#4	4.75	60		
#10	2.00	52		
#20	0.85	42		
#40	0.42	31		
#60	0.25	24		
#100	0.15	19		
#200	0.075	15		

Coefficients

D_{85} = 25.2676 mm D_{30} = 0.3973 mm
D_{60} = 4.6737 mm D_{15} = 0.0781 mm
D_{50} = 1.6354 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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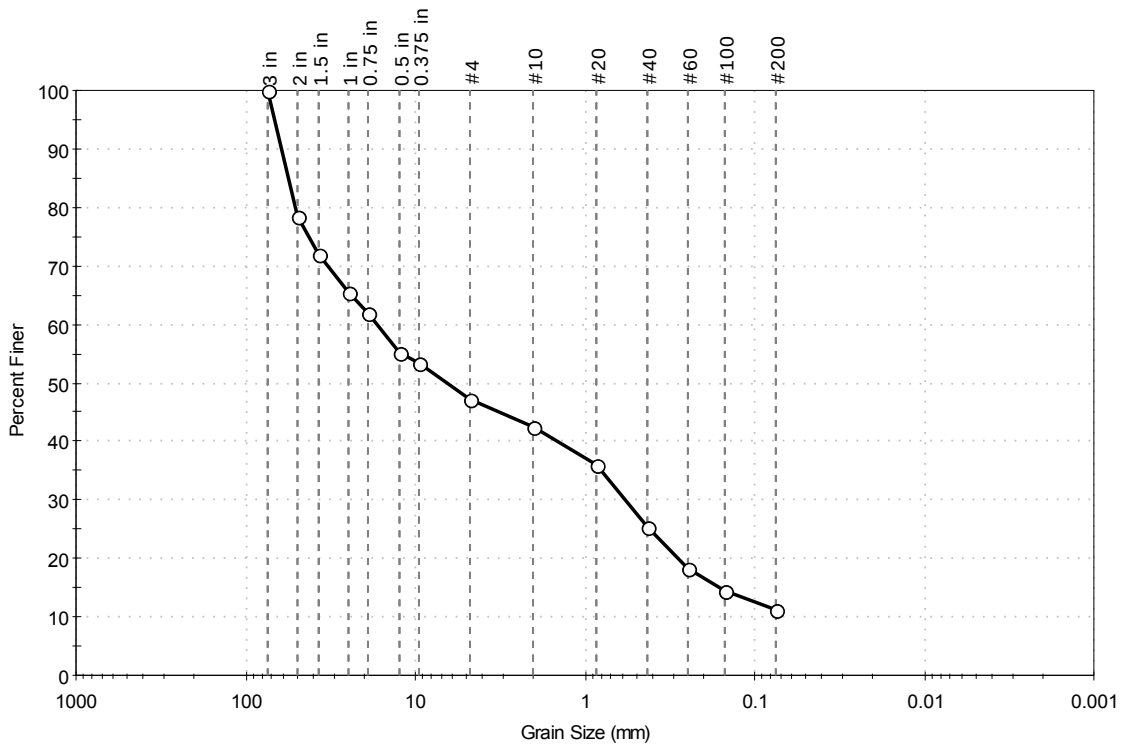
GeoTesting EXPRESS

Client:	Lahlaf Geotechnical Consulting				
Project:	Durfee High School				
Location:	Fall River, MA			Project No:	GTX-306751
Boring ID:	TP13	Sample Type:	bag	Tested By:	jbr
Sample ID:	S2	Test Date:	07/31/17	Checked By:	emm
Depth :	1'11"-4'2"	Test Id:	418228		
Test Comment:	---				
Visual Description:	Moist, brown gravel with silt and sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	52.7	36.2	11.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3 in	75.00	100		
2 in	50.00	79		
1.5 in	37.50	72		
1 in	25.00	65		
0.75 in	19.00	62		
0.5 in	12.50	55		
0.375 in	9.50	53		
#4	4.75	47		
#10	2.00	43		
#20	0.85	36		
#40	0.42	25		
#60	0.25	18		
#100	0.15	14		
#200	0.075	11		

Coefficients

D_{85} = 56.4558 mm D_{30} = 0.5750 mm
D_{60} = 16.7457 mm D_{15} = 0.1614 mm
D_{50} = 6.5212 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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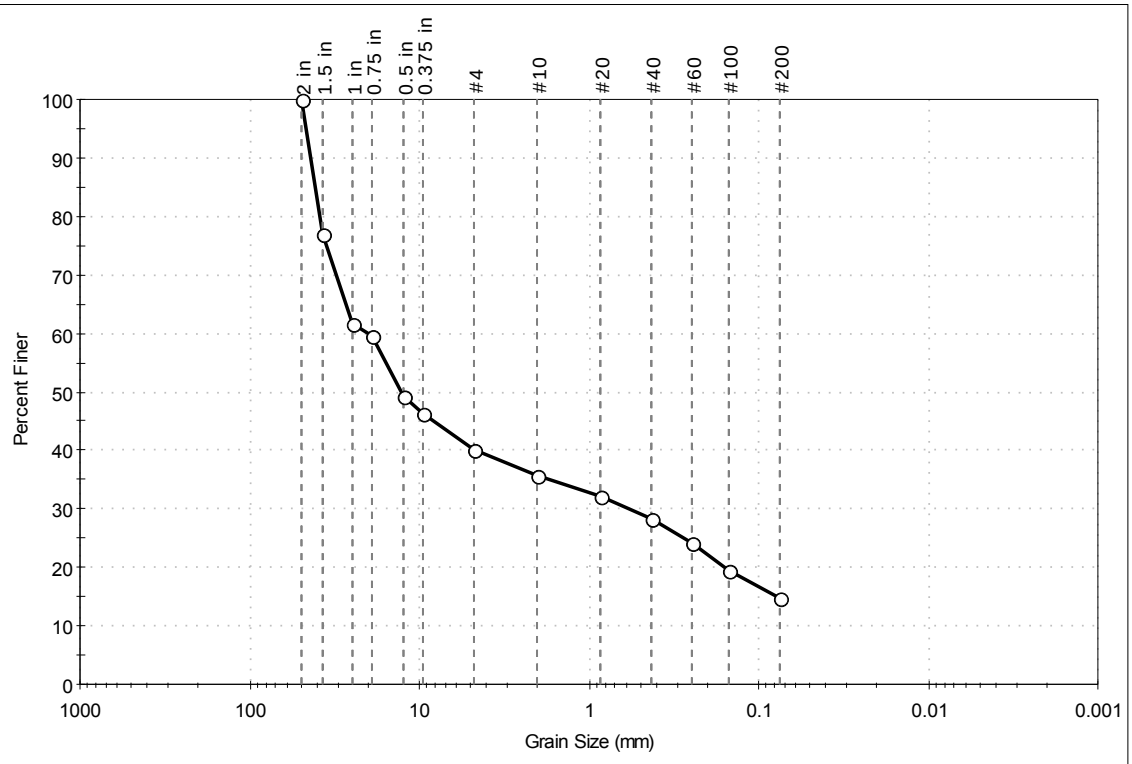
Client:	Lahlaf Geotechnical Consulting				
Project:	Durfee High School				
Location:	Fall River, MA			Project No:	GTX-306751
Boring ID:	TP14	Sample Type:	bag	Tested By:	jbr
Sample ID:	S2	Test Date:	07/31/17	Checked By:	emm
Depth :	1'3"-6	Test Id:	418230		
Test Comment:	---				
Visual Description:	Moist, brown silty gravel with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	59.9	25.4	14.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
2 in	50.00	100		
1.5 in	37.50	77		
1 in	25.00	62		
0.75 in	19.00	60		
0.5 in	12.50	49		
0.375 in	9.50	46		
#4	4.75	40		
#10	2.00	36		
#20	0.85	32		
#40	0.42	28		
#60	0.25	24		
#100	0.15	20		
#200	0.075	15		

Coefficients

D_{85} = 41.4772 mm D_{30} = 0.5844 mm
D_{60} = 19.9384 mm D_{15} = 0.0786 mm
D_{50} = 12.8613 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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CODE ANALYSIS / ADA and MAAB COMPLIANCE

January 3, 2018

Massachusetts School Building Authority (MSBA)
40 Broad Street
Suite 500
Boston, MA 02109
ATTN: Chris Alles, Project Manager

Re: Code Analysis / ADA and MAAB Compliance
BMC Durfee High School – Fall River, MA

Dear Mr. Alles,

A Schematic Design Building Code Analysis has been completed for the new BMC Durfee High School. Please refer to the Schematic Design Drawings included in this submittal, verifying compliance.

The Building Code and Fire Safety Analysis Drawings (G0.01, G0.02, G0.03 & G0.04) have been reviewed by our independent building code consultant, Cosentini Associates, Inc. All recommendations from Cosentini will be incorporated into the building design and the Building Code Analysis. The building will comply with the Massachusetts State Building Code, 780 CMR, 9th Edition (2015 International Building Code, 2015 International Existing Building Code and 780 CMR: Massachusetts Amendments to the International Building Code 2015).

A complete Accessibility Review will be completed for the new BMC Durfee High School project. The design will be reviewed by our independent accessibility consultant, Kessler McGuinness & Associates, LLC (KMA). All recommendations from KMA will be incorporated into the building design.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Troy L. Randall, AIA, LEED AP BD+C
Principal, Ai3 Architects LLC

Cosentini
A TETRA TECH COMPANY
CODE & FIRE ENGINEERING GROUP

101 Federal Street, 6th Floor
Boston, MA 02110

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www.cosentini.com

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Special Inspections and Commissioning
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Smoke Control System Design
Due Diligence and 3rd Party Reviews

December 18, 2017

Troy Randall
AI3
526 Boston Post Road
Wayland, MA 01778

Re: Durfee High School – Code Compliance
Fall River, MA

Dear Mr. Randall:

Cosentini Associates has reviewed the drawings dated November 20, 2017 for the above referenced project. The drawings reviewed included the following:

Drawing G0.01, General Information and Code Analysis
Drawing G0.02, First Floor Fire Safety Plan
Drawing G0.03, Second Floor Fire Safety Plan
Drawing G0.04, Third Floor Fire Safety Plan

The drawings were reviewed for compliance with the major fire protection, life safety, and accessibility criteria of the applicable codes. In our opinion, the Durfee High School drawings reviewed (as noted above) are in compliance with the requirements of the Massachusetts State Building Code, Ninth Edition.

Sincerely,

COSENTINI ASSOCIATES, INC.

Rockwood J. Edwards, PE | **Vice President**
Code and Fire Engineering Group
Phone: 617-748-7800 | Fax: 617-748-7801 | Direct: 617-748-0021
redwards@cosentini.com

Cosentini Associates, Inc. - A Tetra Tech Company
101 Federal Street – Suite 600
Boston, MA 02110
www.cosentini.com

UTILITY AND SOILS ANALYSIS

Existing conditions utility information was collected through communications with the Engineering Department and the Water Department. Record plans were reviewed at City Hall. A meeting was held with the Water Department on November 6, 2017 to discuss existing conditions and the proposed development. Future development will require that the existing utilities be surveyed and included in the design plans.

The current schematic design plans propose to protect and maintain two parts of the existing building: the performing arts center to the south of the site, and the field house to the east of the site. The new school building is proposed on the northeast side of the site with a connection to the existing fieldhouse. The existing concessions building will also be protected and maintained.

Sewer

A record plan for the Fall River High School titled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City to review. Based upon this plan, wastewater from the existing building is conveyed to two discharge locations in Elsbree Street via gravity sewer lines. There is one 12-inch diameter sewer service on the north side of the building and one 10-inch diameter sewer service on the south side of the building.

A 4-inch diameter sewer force conveys wastewater from the south side of the existing building to the southern sewer service line. There are two 4-inch diameter acid-resistant sewer service pipes discharging to the south service line. Available plans do not indicate the presence of an exterior grease trap.

A record As-Built Plan entitled "Elsbree Street Plan and Profile of Sewer" by "Whitman & Howard Inc." dated December 1965 was also available at the City for review. The record drawing shows an 8-inch vitrified clay sewer main in Elsbree Street flowing north from President Avenue to Hood Street and a 12-inch vitrified clay sewer main flowing south from Langley Street to Hood Street. The 12-inch high school sewer service ties into the sewer main in Elsbree Street north of Hood Street. The 10-inch high school sewer service ties into the sewer main in Elsbree Street south of Hood Street. At manhole 102, located on Hood Street, the two flows combine into a 15-inch vitrified clay pipe flowing east to a sewer pump station owned and operated by the City of Fall River.

The schematic design plans propose to provide new services for the proposed building. The schematic design plans propose replacement of the sewer main serving the existing performing arts building and the field house. New sewer lines are proposed for connections to the new school and existing concessions building. A grease trap is proposed adjacent to the new kitchen and cafeteria. All proposed service lines are PVC. All proposed sewer services connect into existing sewer manholes in Elsbree Street. As the design develops, the capacity of the existing sewer line will need to be evaluated to confirm whether it can handle the proposed flows.

Water

A record plan for the Fall River High School entitled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City for review. Public water mains are located in Elsbree Street, Weetamoe Street, and Hood Street. There are two public water mains that cross the School Property. There is an 8-inch water main in Weetamoe Street, which cuts across the north side of the site and connects to the 20-inch main in Elsbree Street. There is a 20-inch water main in Hood Street that traverses through the south side of the site and connects to the 20-inch main in Elsbree Street. The drawings do not indicate the pipe material on-site, or in Elsbree Street, Weetamoe Street, or Hood Street.

Fire hydrants are located along Elsbree Street and there are six hydrants distributed throughout the site on all sides of the building. Three hydrants are serviced from the 8-inch Weetamoe Street main and the other three are serviced from the 20-inch Hood Street main.

The record drawings depict a total of 16 water service connections to the existing building: two 10-inch, six 6-inch, and one 4-inch water service off the Hood St line; three 4-inch, three 6-inch, and one 8-inch water services off the Weetamoe Street line.

Information as to the existence, design, and location of an irrigation system in any of the on-site athletic fields is unknown. Record plans of the existing irrigation system and its components would be required to determine whether this system could be used in the future.

Existing water services serving the existing buildings will remain. The majority of the existing 20" water main located along the southern end of the site will be maintained. A portion of the 20" water main will be relocated as necessary to accommodate the new development. A new 8" ductile iron water main loop is proposed around the new building with connections to the existing 20" main on-site, within Elsbree Street, and to the 8" main in Weetamoe Street. New domestic and fire services are proposed to connect to the new building.

Fire flow tests were obtained from the City from recent developments near the high school site. The tests show there is adequate pressure and flow to accommodate the new domestic and fire services. During the next design phase, a site specific hydrant flow test will be required to determine available flow for the fire suppression system design.

Drainage

A record plan for the Fall River High School entitled "Site Utilities Plan" by "Hallwell Engineering Associates, Designers, and Consultants" dated May 4, 1973 was available at the City for review. The record drawings depict a 30" dia. drainage pipe that conveys runoff from the site across Elsbree Street. The drawings do not specify the pipe material. The onsite drainage system appears to include collection structures and a closed pipe conveyance system. There are no stormwater best-management practices providing water quality treatment, groundwater recharge, or peak flow management.

The stormwater conveyance system within the Durfee High School Site includes two separate discharge points. There is a 36" diameter drain that outfalls to the wetland at the northeast corner of the site. The area contributing to this outfall includes a majority of the northern portion of the site, the synthetic turf fields, portions of the existing roof runoff, and paved areas to the north of the building. The second discharge point is a 30" drain line within Elsbree Street. The catchment area that drains to this discharge point includes the two major parking lots on-site to the south along Ray Street and to the east along Elsbree Street, as well as portions of the existing roof and a majority of the southern portions of the site. Stormwater runoff directed to both discharge points ultimately converge and then discharges east to the Watuppa Pond.

Stormwater runoff is collected by catch basins and conveyed via a closed drainage system to the discharge points. It appears that the stormwater management system provides minimal water quality treatment or total suspended solids (TSS) removal.

The existing drainage patterns will be maintained in future development conditions to minimize impacts to downstream areas. The proposed stormwater management system includes the removal and replacement of a majority of the stormwater conveyance system to accommodate the future development. The existing drain lines and structures in the parking lot adjacent to Ray Street will be maintained and will be connected into the new proposed system. The new proposed drainage system is configured such that it maintains the two separate discharge points at the existing wetland and Elsbree Street.

The future development drainage design will need to be re-designed to meet the Massachusetts Department of Environmental Protection (MassDEP) stormwater standards, the City of Fall River Stormwater and Construction Site Management Ordinance, and will require quantity and quality mitigation

measures. This is proposed to be achieved with subsurface detention and infiltration where possible as well as Low Impact Development BMPs such as bioretention areas and tree box filters.

Gas

Liberty Utilities is the supplier of natural gas to the City of Fall River. Based upon available information, there are four gas connections on the project site. One gas connection is provided to each of the existing buildings, schematically routed around the north side of the site. The gas is metered individually at each building.

The schematic design plans propose the schematic routing of new gas services within the site. Future development would require that the existing system be located and analyzed for capacity. Coordination should occur with Liberty Utilities regarding any service improvements.

Electric

National Grid is the supplier of electricity to the City of Fall River. Electricity is not shown on the record drawings. Future development options would require that the existing system be located and analyzed for capacity. Coordination should occur with National Grid regarding any service improvements.

MASSING STUDY

The Schematic Design process for the BMC Durfee High School included three-dimensional massing studies of the new school building, which are included herein. These studies identify how the new school facility will be integrated within the adjacent residential and commercial area, as well as how the three-story structure of the building will include reference to the much-admired original 1887 BMC Durfee High School located on Rock Street.

The three-dimensional evaluation also allowed the design team to blend the building program appropriately with the existing site topography, placing the building's main entrance at a slightly elevated, monumental elevation relative to Elsbree Street.

The site is bound to the east by Elsbree Street, to the north and west by a residential neighborhood and protected wetland, and to the south by commercial property, Spencer Borden Elementary School property, and a residential neighborhood.

SUSTAINABLE DESIGN

Building Systems Narratives

BUILDING SUMMARY

The new BMC Durfee High School will be 501,330 square feet and designed for 2,570 students. The project will consist of constructing a new three-story academic core and renovating/re-using the existing athletic building. The school will be anchored by the centrally located atrium that will connect all three floors of the building. It will include a state-of-the-art 750-seat Auditorium, a centrally-located Library Media Center that can become a hub for learning, a modern Large Group Seminar room that will enable distance learning, and the renovation of the existing gymnasium and pool facility.

There are a number of enhanced "smart building" systems included in the new school. The HVAC systems will automatically detect the number of occupants and adjust heating, tempered air, and ventilation systems accordingly. Facilitative Learning Centers within classrooms will include control panels where teachers can energize integrated technology tools such as interactive displays, document scanners, and video broadcasting with the touch of a button. Hallways will include LED TV screens and wireless data communication. The building's indoor and outdoor security monitoring system will allow staff to monitor the entire campus from a single control point, and strategically located fob entry systems will automatically register the faculty ID at key identification points throughout the building.

SUSTAINABLE DESIGN SUMMARY

The design team is working closely with the Fall River School District, School Building Committee, City Officials, and Owner's Project Manager to develop an energy efficient, sustainable, state-of-the-art facility. The design team is currently targeting a LEED Certified rating for the new school. As the project progresses, the City and design team will begin to work with National Grid and their "Integrated Design Path Incentives" program to maximize the project's energy efficiency incentive rebate points.

The sustainability begins with the building placement, building massing, and building orientation/organization on the site. The proposed building is sited to accomplish many sustainable and educational goals:

- Locate and minimize building footprint to reduce disturbance of existing landscape
- Maximize natural daylighting
- Minimize solar exposure
- Minimize direct glare sunlight
- Minimize passive heat gain
- Re-use of an existing building structure on the site

The new high school will be constructed primarily with a steel framing system but will utilize an exposed timber structure frame with steel connections in the atrium as part of the connection back to the historic mill structures of Fall River. There are many sustainable attributes related to the use of steel and wood components, including (as examples):

- Low embodied energy
- Renewable
- Reusable & Recyclable

The new school is designed to ensure excellent indoor environmental quality. The school will feature improved ventilation systems, which include a Building Management System that monitors and manages air contaminants such as carbon dioxide and particulate matter, as well as provides the ability to control systems. Ductwork and all absorptive materials will be protected during construction to ensure that no mold or contamination is established in the building. After substantial completion of construction and before the Owner's occupancy, the school will receive a full flush-out. The school will also feature

enhanced acoustical design features in all classrooms for sound transmission and background noise levels. The design offers daylight and views throughout, which studies have shown to increase productivity and test scores.

The data collected from the sustainable design features will be available at the teacher's workstation. This information will be accessible to the Science Department for inclusion into the curriculum.

The building is designed to optimize energy usage and improve energy efficiency by a minimum of 20% over a base building designed to meet the 2015 International Building Code (IBC) and 2015 International Energy Conservation Code. The new facility will be constructed with a minimum of 20% recycled materials, and 10% of all materials will be regional materials.

The new Durfee High School site development is designed to promote responsible, innovative, and practical design strategies that are sensitive to wildlife, plants, and water and air quality. The site design reduces emissions associated with transportation, planting sustainable landscapes, managing stormwater runoff, reducing heat island effects for roof surfaces, and eliminating light pollution. Sustainable site provisions include provisions for bicycling, walking, carpool parking, and refueling/recharging facilities for alternative fuel/electric vehicles.

BUILDING STRUCTURE

Building Systems Narratives

SUBSTRUCTURE

Foundations

Based on the foundations of the existing structure and discussions with the Geotechnical Engineer, the columns of the proposed structure would bear on reinforced concrete spread footings and the perimeter foundation walls would bear on continuous reinforced concrete strip footings extending at least 4'-0" below grade. With an assumed bearing capacity of the soil of 2 tons/sf, a typical interior footing would be 10 ft. – 0 in. x 10 ft. - 0 in. x 24 in. deep and the typical exterior footings would be 9 ft. x 9 ft. x 24 in. deep for the four story structure. The typical exterior foundation walls would be 14 in. to 16 in. thick, reinforced cast-in-place concrete walls on 24 to 36 in. wide continuous reinforced concrete strip footings around the perimeter of the building extending a minimum of 4 ft. – 0 in. below finished grade.

The interior and exterior foundations supporting the columns of the single story, pre-engineered steel structure would be 6 ft. – 0 in. x 6 ft. – 0 in. x 2 ft. – 0 in. deep.

Slabs-on-Grade

Based on the existing school construction, the lowest level of the proposed structure would be a 5 in. thick concrete slab-on-grade reinforced with welded wire fabric over a vapor barrier on 2 in. thick rigid insulation on 8 in. of compacted granular structural fill and a base course of 8 in. of compacted gravel.

SUPERSTRUCTURE

Floor Construction

Typical Floor Construction
A 5 ¼ in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. The weight of the structural steel is estimated to be 13 psf for the typical framing.

Typical Wood Framed Floor
The corridor floor open to the Atrium would be typical floor construction supported on a mix of structural steel and glue laminated and engineered wood beams, girders and columns. Allow for 12 psf for structural steel framing supporting the floor.

Roof Construction

Typical Roof Construction
The roof construction would be galvanized, corrugated 1 ½ in. deep, Type 'B' metal roof deck spanning between wide flange steel beams and girders. At locations of roof supported mechanical equipment, a concrete slab will be provided similar to the typical supported slab. The weight of the structural steel is estimated to be 13 psf.

Typical Wood Framed Roof
The roof of the Atrium would be galvanized, corrugated 3 in. deep, Type 'N' metal roof deck spanning between glue laminated timber beams on pre-engineered timber columns. Allow for 8 psf of structural steel to support the wood framing.

Low Roof Structure
The typical roof would be a continuation of the adjacent floor and would be similar to the typical floor construction of 5 ¼ in. light weight concrete composite metal deck slab reinforced with welded wire fabric on wide flange steel beams spanning between steel girders and columns. This roof will be supporting the mechanical units or green plantation. The units would be screened by a screen comprised of structural steel posts and beams. The weight of the structural steel is estimated to be 15 psf. Note that the low roofs above the four shop areas will be long span, metal roof deck construction.

VERTICAL FRAMING ELEMENTS

Columns
Columns will be hollow structural steel columns. Typical columns would be HSS 12 x 12 columns due to the height of the lowest level. Columns at the Atrium would be engineered timber columns.

Lateral Load-Resisting System
The proposed school structure will be divided into two parts separated by way of an expansion joint.

The lateral load resisting system for the portion housing the Gymnasium and other spaces north of the commons would be ordinary concentric braced frames comprised of HSS structural steel members.

The typical lateral load resisting system for the remainder of the structure would be ordinary concentric braced frames comprised of HSS structural steel members.

Pre-Engineered Superstructure
The pre-engineered superstructure would be a steel framed structure supported on reinforced concrete foundations. The structure would be comprised of steel bents with tapered columns and beams. The roof deck would be a composite deck spanning between steel 'Z' shaped purlins. The lateral loads would be resisted by ordinary steel moment frames and ordinary concentric braced frames.

PLUMBING
Building Systems Narratives

The following is the Plumbing system narrative, which defines the scope of work and capacities of the Plumbing system as well as the Basis of Design. The Plumbing Systems shall be designed and constructed for LEED for Schools where indicated on this narrative.

CODES

1. All work installed under Section 220000 shall comply with the MA Building Code, MA Plumbing Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

DESIGN INTENT

1. All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Plumbing work and all items incidental thereto, including commissioning and testing.

GENERAL

1. The Plumbing Systems that will serve the project are cold water, hot water, tempered water, sanitary waste and vent system, special waste systems, grease waste system, storm drain system, and natural gas.

2. The Building will be serviced by Municipal water and Municipal sewer system.

3. All Plumbing in the building will conform to Accessibility Codes and to Water Conserving sections of the Plumbing Code.

DRAINAGE SYSTEM

1. Soil, Waste, and Vent piping system is provided to connect to all fixtures and equipment. System runs from 10 feet outside building and terminates with stack vents through the roof.

2. A separate Grease Waste System starting with connection to an exterior concrete grease interceptor running thru the kitchen and servery area fixtures and terminating with a vent terminal through the roof. Point of use grease interceptors are to be provided at designated kitchen fixtures. The grease interceptor is provided under Division 22 scope.

3. Storm Drainage system is provided to drain all roofs with roof drains piped through the building to a point 10 feet outside the building.

4. A separate Special Waste System shall be provided starting with a connection to an interior limestone chip acid neutralizer, running thru the building to collect science classroom fixtures and terminating with vent terminals through the roof. Special Waste and Vent piping will be Schedule 40 electric heat fused polypropylene piping, fittings and traps, flame retardant above grade and non-flame retardant below ground.

5. Drainage system piping will be service weight cast iron piping; hub and spigot with gaskets for below grade; no hub with gaskets, bands and clamps for above grade 2 in. and larger. Waste and vent piping 1-1/2 in. and smaller will be type 'L' copper.

WATER SYSTEM

1. A new 4 inch domestic water service from the municipal water system will be provided to each of (2) two new zones. One domestic service shall serve the the middle Classroom wing and one domestic water service shall serve the Kitchen/ Auditorium wing. The existing 4 inch domestic water service serving the existing Gymnasium wing being renovated shall be replaced due to its' age and condition. A meter and backflow preventer, if required, will be provided at each of the (3) three

locations.

2. Cold water distribution main is provided. Non-freeze wall hydrants with integral back flow preventers are provided along the exterior of the building.

3. Each of the (2) two new wings shall be equipped with a Domestic hot water system provided with a pair of gas fired, high efficiency, direct fired, storage type, condensing water heaters (800,000 BTUH input each), with the storage capacity of 130 gallons each. The existing Gymnasium wing hot water will also be served by a pair of gas fired, high efficiency, direct fired, storage type, condensing water heaters (800,000 BTUH input each), with the storage capacity of 130 gallons each. Each domestic hot water system is to be equipped with thermostatically controlled mixing devices to control water temperature to the fixtures.

4. A pump at each system will re-circulate hot water from the piping system. Water temperature will be 120 deg. to serve general use fixtures. A 140 deg. F hot water will be supplied to the kitchen dishwasher.

5. Water piping will be type 'L' copper with wrot copper sweat fittings, silver solder or press-fit system. All piping will be insulated with 1 in. thick high density fiberglass.

NATURAL GAS SYSTEM

1. Two (2) new Natural gas services will be provided for the new building wings and will serve the boilers, domestic water heaters, kitchen cooking equipment and roof top equipment. One existing gas service will remain to serve the existing Gymnasium wing being renovated. The new natural gas system serving the Kitchen/Auditorium wing shall re-feed the existing Concessions building gas system from new building.

2. Natural gas piping will be Schedule 40 black steel pipe with threaded gas pattern malleable fittings for 2 in. and under and butt welded fittings for 2-1/2 in. and larger.

FIXTURES LEED FOR SCHOOLS CREDIT WEP1 & WEC3

1. Furnish and install all fixtures, including supports, connections, fittings, and any incidentals to make a complete installation.

2. Fixtures shall be the manufacturer's guaranteed label trademark indicating first quality. All acid resisting enameled ware shall bear the manufacturer's symbol signifying acid resisting material.

3. Vitreous china and acid resisting enameled fixtures, including stops, supplies and traps shall be of one manufacturer by Kohler, American Standard, or Eljer, or equal. Supports shall be Zurn, Smith, Josam, or equal. All fixtures shall be white. Faucets shall be Speakman, Chicago, or equal.

4. Fixtures shall be as scheduled on drawings.

   A. Water Closet: High efficiency toilet, 1.28 gallon per flush, wall hung, vitreous china, siphon jet. Manually operated 1.28 gallon per flush-flush valve.

   B. Urinal: High efficiency 0.13 gallon per flush urinal, wall hung, vitreous china. Manually operated 0.13 gallon per flush-flush valve.

   C. Lavatory: Wall hung/ countertop ADA lavatory with 0.5 GPM metering mixing faucet programmed for 10 second run-time cycle.

   D. Sink: Elkay ADA stainless steel countertop sink with Chicago 201A faucet and 0.5 GPM aerator.

   E. Drinking Fountain: Halsey Taylor hi-low wall mounted electric water cooler, stainless steel basin with bottle filling stations.

   F. Janitor Sink: 24 x 24 x 10 Terrazo mop receptor Stern-Williams or equal.

   G. Laboratory Sinks: Faucets with vacuum breakers and 0.74 GPM aerators.

   H. Roof Hydrants: Woodward with

vacuum breakers.

DRAINS

1. Drains are cast iron, caulked outlets, nickaloy strainers, and in waterproofed areas and roofs shall have galvanized iron clamping rings with 6 lb. lead flashings to bond 9 in. in all directions. Drains shall be Smith, Zurn, Josam, or equal.

VALVES

1. Locate all valves so as to isolate all parts of the system. Shutoff valves 3 in. and smaller shall be ball valves, solder end or screwed, Apollo, or equal.

INSULATION

1. All water piping shall be insulated with snap-on fiberglass insulation and PVC jacketing, Type ASJ-SSL, equal to Johns Manville Micro-Lok HP.

CLEANOUTS

1. Cleanouts shall be full size up to 4 in. threaded bronze plugs located as indicated on the drawings and/ or where required in soil and waste pipes.

2. Cleanouts for Special Waste System shall be Zurn #Z9A-C04 polypropylene cleanout plug with Zurn #ZANB-1463-VP nickel bronze scoriated floor access cover.

ACCESS DOORS

1. Furnish access doors for access to all concealed parts of the plumbing system that require accessibility. Coordinate types and locations with the Architect.

WATER HEATERS

1. Three domestic hot water systems, each with a pair of gas fired, high efficiency, condensing water heaters (800,000 BTUH total input), with a storage capacity of 130 gallons each.

PLUMBING LIFE-CYCLE COST ESTIMATE

1. Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the Plumbing systems in this particular school project. *It should be noted that the following estimates are based on schematic level plans and system sizes and will most likely change as the project design develops more completely.*

2. The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated utilizing typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

3. Summary of Costs for the Domestic Hot Water Systems:

    - Plumbing Construction Cost: $226,000.00
    - Plumbing Systems Annual Electric Energy Cost: $4,320.00
    - Plumbing Systems Annual Gas Energy Cost: $15,600.00
    - Plumbing Systems Annual Maintenance Cost: $2,600.00

HVAC
Building Systems Narratives

DESIGN CRITERIA

1. Interior environmental conditions will be based on Massachusetts Code 780 CMR 12 and ASHRAE Standard 55-2004.

2. Ventilation of spaces will be designed to meet or exceed the requirements of the latest edition of the Massachusetts State Building Code, the ICC International Mechanical Code and ASHRAE Standard 62-2010, Ventilation for Acceptable Indoor Air Quality.

3. HVAC equipment will be selected to comply with the 2012 edition of the International Energy Conservation Code and ASHRAE 90.1-2007.

4. The HVAC systems will be designed to meet the acoustical requirements of ANSI S12.60-2002. The American National Standards Institute developed this standard specification and design guideline to help eliminate acoustical problems in the design stage of a project. Essentially, the steady background noise level in core learning areas should not exceed an NC of 35.

HEATING SYSTEM

1. This facility will feature two (2) separate boiler plants. One boiler plant will be included in the new construction, while the second boiler plant will replace the existing outdated plant within the existing gymnasium/natatorium building.

2. Each boiler plant will be outfitted with high efficiency, gas fired, condensing boilers, which will produce hot water to meet the heating needs of each section served. Preliminary load calculations indicate the following:
   - Gymnasium/natatorium: Two (2) boilers each having an input of 3,300 MBH. Each boiler will be sized to handle 2/3 of the peak heating load. The boilers will be manufactured by Cleaver-Brooks, Model CFC-3300 or approved equal and will have a maximum efficiency of 96%. Exact size of boilers will be determined during the design phase of the project.
   - New construction: Four (4) boilers each having an input of 6,000 MBH. Each boiler will be sized to handle ¼ of the peak heating load. The boilers will be manufactured by Cleaver-Brooks, Model CFLC-6000 or approved equal and will have a maximum efficiency of 96%. Exact size of boilers will be determined during the design phase of the project.

3. Due to the fact that the specified boilers do not have a minimum flow requirement, the boiler system will be piped in a primary configuration with the hot water reset schedule being maintained by the boilers. Each boiler will be furnished with an automatic two-way control valve to isolate the boiler when not firing.

4. The facility will be divided into four (4) separate hot water system zones. Hot water will be circulated through each zone by a dedicated pair of hot water circulating pumps. Each pair of pumps will be designed to operate in a lead/lag configuration such that the lag pump shall automatically start should the lead pump fail. The lead/lag assignment shall be reversible through the automatic temperature control system. Preliminary calculations indicate that each pump set should be sized to provide 800 GPM at 100 feet of head. The speed of the pumps will be controlled by variable frequency drives (VFD). Exact size of pumps will be determined during the design phase of the project.

CHILLED WATER SYSTEM

1. As part of the base design the following spaces will be provided with air conditioning:
   - Student Dining.

- Administration area including Principal's Office, Assistant Principal's Office, School Psychologist's Office, Counselor's Office, Adjustment Counselor's Office, Pre-School Coordinator's Office, Nurse's Office and conference rooms.
- Teacher's planning/work rooms.
- Multipurpose rooms.
- Sped PT/OT spaces.
- Media Center/Media center.
- Classrooms.
- Music/performing arts areas.
- Computer classrooms.

2. Locker Rooms, kitchen, gymnasium, electric rooms, and shop areas will not be air-conditioned unless specifically directed by School department representatives.

3. Preliminary calculations indicate that two (2) 500-ton centrifugal chillers will be required to produce chilled water to meet the cooling needs of the School on a design day. Each chiller will be furnished with a variable frequency drive for increased energy efficiency. The chillers will be located in the main mechanical room. Exact chiller size to be determined. Specified chiller shall be compliant with ASHRAE 90.1. The chilled water plant will also require the installation of two (2) induced draft cooling towers, each sized for 500 tons.

4. The chilled water system will be piped in a primary/secondary configuration. This will permit the use of two-way control valves and variable frequency drives while maintaining constant flow through the chiller as recommended by the chiller manufacturer.

5. The facility will be divided into four (4) chilled water system zones. Chilled water will be circulated through each zone by a dedicated pair of chilled water circulating pumps. The chilled water pumps will be designed to operate in a lead/lag configuration such that the lag pump shall automatically start should the lead pump fail. The lead/lag pump assignment shall be reversible through the automatic temperature control system. Preliminary calculations indicate that each pump should be sized to provide a maximum of 500 GPM at 75 feet of head. The speed of the pumps will be controlled by VFD's. Exact size of pumps will be determined.

SUMMARY OF HVAC SYSTEMS

1. Classrooms

   A. Energy recovery rooftop units will supply the classrooms with tempered air via a system of ductwork and ceiling mounted induction units. Energy recovery rooftop units are an effective way of reducing the overall energy consumption of a building. Energy recovery rooftop units will be furnished with the following components:
      - Double-wall insulated casings.
      - Supply and exhaust fans.
      - MERV 13 air filters for superior indoor air quality.
      - Energy recovery wheel.
      - Hot water heating coil.
      - Chilled water cooling coil to dehumidify and cool the supply air.
      - Variable frequency drives.

   B. Each classroom will be furnished with induction units. The induction units will utilize dry primary air provided by the energy recovery units, the code required ventilation air needed, at an inlet static pressure of 0.6" and distributes this air through a bank of specially designed aerodynamic nozzles that discharges the air at high velocity into a mixing chamber that creates a lower pressure. This lower pressure draws room air over a coil that imparts either sensible cooling or heating as it passes over the coil. This induces room air, then mixes with the primary air and is discharged through a grille. This air circulates throughout the room and is gently drawn back up to the return grille of the induction unit. This air circulation produces even and consistent temperatures throughout the room.

   C. A portion of the room air is exhausted to the outside as a relief for the primary air entering through the induction unit. This energy of the exhaust air leaving the classrooms

is recovered at the energy recovery rooftop units.

D. The room thermostat controls water flow through the coil via the automatic temperature control system to maintain individual space temperature control.

2. Administration, Media Center, Multipurpose Rooms, Music Room, Computer Classrooms, and Teachers Workrooms.

A. Energy recovery rooftop units will supply these spaces with tempered air via a system of ductwork and ceiling mounted induction units. The energy recovery units used in these spaces will be very similar to those used for the classrooms.

B. Each space will be furnished with at least one (1) induction unit. The exact number of induction units per space will be determined during the design phase. The induction units will take this source of dry primary air, the code required ventilation air needed, at an inlet static pressure of 0.6" and distributes this air through a bank of specially designed aerodynamic nozzles that discharges the air at high velocity into a mixing chamber that creates a lower pressure. This lower pressure draws room air over a coil that imparts either sensible cooling or heating as it passes over the coil. This induces room air, then mixes with the primary air and is discharged through a grille. This air circulates throughout the room and is gently drawn back up to the return grille of the induction unit. This air circulation produces even and consistent temperatures throughout the room.

C. A portion of the room air is exhausted to the outside as a relief for the primary air entering through the induction unit. The total energy (both latent and sensible) of the exhaust air leaving the spaces is recovered at the energy recovery rooftop units.

D. The room thermostat controls water flow through the coil via the automatic temperature control system to maintain individual space temperature control.

3. Existing Fieldhouse

A. The existing air handling equipment and ductwork that serves the existing fieldhouse will be removed and replaced with new air handling equipment. Air will be distributed throughout the space via new ductwork and supply diffusers.

B. The heating and ventilating units will be fitted with a hot water coil only. As an alternate, these units may be furnished with chilled water cooling coils and connected to the chilled water system to provide air conditioning during summer months as needed by the owner.

C. The new air handling units will utilize the demand controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO2 in the space.

D. Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

4. Existing Natatorium

A. A new pool dehumidification unit will be installed to serve the existing natatorium. This unit will provide the recommended air quantity at the recommended relative humidity suitable for a pool environment.

B. All deteriorated ductwork will be replaced with new, including stainless steel ductwork in areas of high humidity.

5. Student Dining

A. A dedicated rooftop air-handling unit will handle the Student Dining.

B. This unit will provide both heating and cooling. The rooftop

unit will utilize the demand controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO2 in the space.

C. Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

6. Kitchen

A. The kitchen areas will be handled by a roof mounted, gas fired make-up air handling unit specifically designed to provide tempered air to the kitchen in order to offset the amount of air being exhausted through the kitchen hood.

B. The kitchen hood exhaust system shall be provided with a Mellink kitchen hood exhaust control system, which is designed to vary the speed of the kitchen hood exhaust fan in response to the intensity of the cooking operations taking place. Essentially, the fan will operate at higher speeds when higher heat and smoke producing cooking is taking place. The Mellink system will also modulate the outside air damper and fan speed of the make-up air unit.

7. Auditorium

A. The HVAC needs of the auditorium will be accommodated by a dedicated rooftop air handling unit. The rooftop unit will be furnished with a hot water heating coil and chilled water cooling coil.

B. This unit will provide both heating and cooling. The rooftop unit will utilize the demand controlled ventilation sequence of operation. This strategy permits the modulation of the outside air dampers and fan speed based on the level of CO2 in the space.

C. Space temperature will be sensed with remote space mounted sensors and controlled through the building management system.

CONTROLS

1. Griffith & Vary, Inc. recommends this facility be furnished with a completely new Building Management System. Per the direction provided by the owner, this system shall be furnished and installed by ENE. This system will feature full Digital Direct Controls (DDC). This system will be capable of controlling the following:

A. Space temperature set point.
B. Start and stop of all energy recovery rooftop units and air-handling units.
C. Start and stop of chillers.
D. Enable/Disable boilers.
E. Start and stop of chilled water pumps.
F. Start and stop of hot water pumps.
G. Schedule occupied/unoccupied times for various spaces.
H. Monitoring of supply and return temperatures for hot water and chilled water.
I. Optimization of plant efficiency.
J. Monitoring of mechanical equipment (fans, pumps, boilers, chiller, etc.) and indication of any alarms, which may result from equipment failures.

2. To save energy required to heat or cool outdoor air, carbon dioxide sensors will be employed in the gymnasium, auditorium, and Student Dining to allow a reduction of outdoor air during periods of low occupancy and motion sensors will also be utilized to allow closure of outdoor air dampers when assembly areas are unoccupied. Classrooms will also have occupancy sensors to modulate dampers in the supply air duct branches as a means of saving energy during periods when the classrooms are unoccupied.

HVAC LIFE-CYCLE COST ESTIMATE

1. Pursuant to the requirements of MGL Chapter 149, Section 44M, the following schematic level life-cycle cost estimates have been prepared, which will define the cost associated with the installation and energy consumption related to the HVAC systems in this particular school project. *It should be noted that the following estimates are based on schematic level plans and system*

sizes and will most likely change as the project design develops more completely.

2. The construction costs were calculated using the latest edition of the RS Means Mechanical Cost Data book combined with the latest sub-bid results from similar projects. Energy costs were calculated with the aid of the latest version of the Hourly Analysis Program published by the Carrier Corporation, which utilized typical natural gas and electric rates published by the Energy Information Administration. Maintenance costs were also obtained from RS Means.

3. Summary of Costs:
   - HVAC Construction Cost: $14,743,000.00
   - HVAC Systems Annual Electric Energy Cost: $348,700.00
   - HVAC Systems Annual Gas Energy Cost: $50,000.00
   - HVAC Systems Annual Maintenance Cost: $15,300.00

FIRE PROTECTION
Building Systems Narratives

The following is the Fire Protection system narrative, which defines the scope of work and capacities of the Fire Protection system as well as the Basis of Design.

CODES

1. All work installed under Section 210000 shall comply with the MA Building Code and all state, county, and federal codes, laws, statutes, and authorities having jurisdiction.

DESIGN INTENT

1. All work is new and consists of furnishing all materials, equipment, labor, transportation, facilities, and all operations and adjustments required for the complete and operating installation of the Fire Protection work and all items incidental thereto, including commissioning and testing.

GENERAL

1. In accordance with the provisions of the Massachusetts Building Code, a School building of greater than 12,000s.f. must be protected with an automatic sprinkler system.

DESCRIPTION

1. The new building will be served by (2) two new 8 inch fire services, each with a double check valve assembly, wet alarm valve complete with electric bell, and fire department connection meeting local thread standards. One fire service shall serve the middle Classroom wing and one fire service shall serve the Kitchen/Auditorium wing. An existing 8 inch fire service shall be replaced serving the existing Gymnasium wing being renovated due to its' age and condition.

2. System will be a combined standpipe/sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2013.

3. Control valve assemblies shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain. Standpipes meeting the requirements of NFPA 14-2013 shall be provided in the egress stairwells and in the Stage area.

4. All areas of the building, including all finished and unfinished spaces, combustible concealed spaces, all electrical rooms and closets will be sprinklered.

5. All sprinkler heads will be quick response, pendent in hung ceiling areas and upright in unfinished areas.

6. Fire department valves and cabinets will be provided on each side of the Stage in the Building.

BASIS OF DESIGN

1. The mechanical rooms, kitchen, science classrooms, and storage rooms are considered Ordinary Hazard Group 1; stage is considered Ordinary Hazard Group 2; all other areas are considered light hazard.

2. Required Design Densities:

Light Hazard Areas	0.10 GPM over 1,500 s.f.
Ordinary Hazard Group 1	0.15 GPM over 1,500 s.f.
Ordinary Hazard Group 2	0.20 GPM over 1,500 s.f.

3. Sprinkler spacing (max.):

Light Hazard Areas:	225 s.f.
Ordinary Hazard Areas:	130 s.f.

4. A flow test shall be performed to determine whether there is adequate water to serve the project without a fire pump for

each of the (3) three service locations.

PIPING

1. Sprinkler piping 1-1/2 in. and smaller shall be ASTM A-53, Schedule 40 black steel pipe. Sprinkler/standpipe piping 2 in. and larger shall be ASTM A-135, Schedule 10 black steel pipe.

FITTINGS

1. Fittings on fire service piping, 2 in. and larger, shall be Victaulic Fire Lock Ductile Iron Fittings conforming to ASTM A-536 with integral grooved shoulder and back stop lugs and grooved ends for use with Style 009-EZ or Style 005 couplings. Branch line fittings shall be welded or shall be Victaulic 920/920N Mechanical Tees. Schedule 10 pipe shall be roll grooved. Schedule 40 pipe, where used with mechanical couplings, shall be roll grooved and shall be threaded where used with screwed fittings. Fittings for threaded piping shall be malleable iron screwed sprinkler fittings.

JOINTS

1. Threaded pipe joints shall have an approved thread compound applied on male threads only. Teflon tape shall be used for threads on sprinkler heads. Joints on piping, 2 in. and larger, shall be made up with Victaulic, or equal, Fire Lock Style 005, rigid coupling of ductile iron and pressure responsive gasket system for wet sprinkler system as recommended by manufacturer.

DOUBLE CHECK VALVE ASSEMBLY

1. Double check valve assembly shall be MA State approved, U.L./F.M. approved, with iron body bronze mounted construction complete with supervised OS & Y gate valves and test cocks. Furnish two spare sets of gaskets and repair kits.

2. Double check valve detector assembly shall be of one of the following:

   A. Watts Series 757-OSY
   B. Wilkins 350A-OSY
   C. Conbraco Series 4S-100
   D. Or equal

ELECTRICAL
Building Systems Narratives

ELECTRIC SERVICE:

1. The building electric services will be provided via three pad mounted transformers located on site as provided by the electric utility company; one for each of the three wings of the building. Primary service conduits in concrete duct bank will be provided from an electric utility pole to three transformers via electric utility co. standard manholes. Secondary service feeders and conduits in concrete duct bank will be provided from the three transformers to three switchboards. The electric utility co. meters will be mounted on the transformers.

2. The building fire pump electric service will be provided via one of the pad mounted transformers located on site as provided by the electric utility company. Secondary service feeders and conduits in concrete duct bank will be provided from the transformer to the fire pump.

3. The existing pad mounted transformer for the Football Stadium will have to be refed as the underground primary electric service to the said transformer runs under where the new School will be built. Primary service conduits in concrete duct bank will be provided from an electric utility pole to the existing Football Stadium transformer via electric utility co. standard manholes.

4. The existing Concession Building electric service will have to be refed.

TELEPHONE SERVICE:

1. Two dedicated sets of telephone service conduits will be provided from two different utility poles on different streets to the building demarcation point (MDF Room) as the School acts as the Technology hub for the District.

CABLE TV SERVICE:

1. Cable TV service conduits will be provided from a utility pole to the building demarcation point (MDF Room).

POWER DISTRIBUTION:

1. Three switchboards will be provided; one for each of the Main Electric rooms. Preliminary load calculations indicate that the two switchboards for the Field House and the Auditorium/ Student Dining wing will be rated at 2000 amperes, while the switchboard for the Classroom wing will be rated at 5000 amps, all at 277/480 volt, three phase, four wire. The switchboards will be provided with surge protection devices. Switchboard distribution sections will feed 277/480 volt panelboards and major Mechanical and Plumbing equipment. Dry-type transformers will be provided to distribute 120/208 volt power for branch circuit panelboards and the Kitchen panelboards. One of the kitchen panelboards will be provided with a shunt trip main circuit breaker which will trip if fire suppression under hoods in initiated, shutting down all circuits under hoods. Panelboards with surge protection devices for computers will be provided, fed from computer grade K-rated transformers. Zero sequence harmonic filters connected to the computer panelboards will be provided to reduce neutral currents. Shops with equipment will be provided with panelboards including shunt trip main circuit breakers and mushroom type shut off switches which can be pushed to shut down power to the panelboards in event of an emergency. Other shops will be provided with dedicated panelboards.

EMERGENCY POWER SYSTEM:

1. Three diesel fuel generators with sound attenuated, weatherproof enclosures will be provided; one for each of the

wings. Preliminary load calculations indicate that the Field House and the Classroom wing generators will be rated at 300kW, while the generator for the Auditorium/Student Dining wing will be rated at 500kW, all at 277/480 volt, three phase, four wire. The generators will supply loads as selected by the Owner, however the following is anticipated; emergency power automatically upon loss of normal power to emergency egress, exterior building mounted, select areas, and windowless rooms lighting, elevators, heating system equipment, water heating equipment, fire alarm system, bi-directional amplifier, flush valves and sink sensors, select receptacles, generator block heater and battery charger, access control system, security system, telephone system, FRED TV Studio lighting and power, kitchen walk in cooler and freezer, and coolers and freezers. Two automatic transfer switches (ATS's) per building for a total of six will be provided to separate emergency from optional standby loads. The emergency ATS's and associated emergency panelboards will be located in two hour rated closets with two hour rated feeders. The optional standby ATS's and associated panelboards will be located in normal electric rooms. Emergency panelboards will be provided with surge protection devices as required by the National Electrical Code.

FIRE ALARM SYSTEM:

1. An addressable manual and automatic fire alarm system will be provided. The fire alarm system will call the Fire Department or a Central Station via radio master box and antenna. The specifications for the fire alarm system will be proprietary as manufactured by Notifier. The fire alarm control panel will be located in the Main Electric Room or an area as so directed by the Fire Department. A remote annunciator panel will be provided in the Vestibule at the Main Lobby and where required by the Fire Department. A map of the entire building will be framed and mounted adjacent to the annunciator. Keyed boxes will be provided outside the Fire Department entries. Manual pull stations will be located within five feet (5') of each egress door and at the entrance to each Stair. Additional pull stations will be provided as required by Code. Heat detectors will be provided at the top of the elevator shaft and any other areas not provided with protection by the fire suppression system. Smoke detectors will be provided in the Corridors, in Stairs at each floor level, in the Elevator Machine Room, and at all elevator landings for early detection of smoke for recall. All devices including tamper, flow, pressure switches, and PIV, associated with the fire suppression system will be connected to the fire alarm system. Audio/visual appliances will be provided in the Corridors, Classrooms and all large areas such as the Auditorium, Gymnasium, Student Dining, and Media Center. Visual devices will be provided in Toilet and Conference rooms. Mechanical equipment shall be shut down by the fire alarm system as required by code.

LIGHTING:

1. Interior:

   A. In general, highly efficient LED lighting fixtures will be provided throughout the building. Lighting levels will be in accordance with I.E.S. (Illuminating Engineering Society of North America) recommendations and the Massachusetts State Building Code energy requirements. Classrooms will be provided with direct/indirect, pendant mounted lighting fixtures. Office areas, Corridors, and Conference rooms will be provided with volumetric lighting fixtures. The Gymnasium will be provided with high bay lighting fixtures. Storage, Mechanical, and Electrical rooms will be provided with strip lighting fixtures. The Main Lobby, Media Center, and Student Dining will be provided with decorative lighting. The Kitchen and Locker rooms will be provided with gasketed wet location lighting fixtures. The Auditorium will be provided with surface cylinders, recessed down lights, step lighting, and wall sconces. The Stairs will be provided with vandal resistant wall mounted lighting fixtures. The pool with be provided with non-corrosive lighting fixtures. Down lights will be provided at various locations. The Stage will be provided with theatrical lighting fixtures and a dimming system. The dimming system will be connected to the fire

alarm system bringing the house lights to full brightness upon initiation of fire alarm system. Edge lit exit signs will be provided at all egress doors and at additional locations as required to identify exit discharge routes. Vandal resistant exit signs will be provided in the Gymnasium.

2. Exterior:

   A. Wall and pole mounted site lighting fixtures will be LED type.

SWITCHING:

1. Lighting fixtures in rooms less than 900 square feet, will be controlled primarily by room occupancy sensors and local low voltage override dimmers. Lighting fixtures within primary side lighted areas as defined by the 2015 IECC and ASHRAE 90.1 2010 will be daylight harvested via dimming drivers and photosensors. Larger areas not controlled by occupancy sensors and exterior lighting will be controlled through lighting relay panels and low voltage override switches.

DEVICES:

1. General convenience receptacles will be located throughout the building as required. Receptacles provided in Toilet rooms, near sinks, the Kitchen, and outdoors will be provided with ground fault protection. Circuiting will be provided to Kitchen, Mechanical, and Plumbing equipment, and miscellaneous loads as required.

2. Automatic receptacle control for at least 50% of all 120 volt 15 and 20 amp receptacles in Private Offices, Open Offices, and Computer Classrooms will be provided.

LIGHTNING PROTECTION:

1. The building will be provided with a lightning protection system made up of air terminals on the roof with downlead conductors to ground.

BI-DIRECTIONAL AMPLIFIER SYSTEM:

1. A bi-directional amplifier with coaxial cabling above accessible ceilings will be provided to amplify Fire Department and Police frequencies to ensure that there are no "dead" spots in the building for communication within building.

TECHNOLOGY SYSTEMS BACK BOX AND CONDUIT SYSTEM:

1. A telephone/data/video/security/clock/speaker conduit system consisting of empty back boxes and conduit with pull strings to above accessible ceilings will be provided for technology. Cable tray will be provided above the Corridor ceilings and MDF and IDF rooms for low voltage wiring.

PV SYSTEM CONDUIT SYSTEM:

1. An empty conduit system with pull strings will be provided for the PV system consisting of photovoltaic panels and an inverter. Conduits will be provided from the switchboard to an exterior mounted disconnect switch for shutting.

INFORMATION TECHNOLOGY

Building Systems Narratives

The technology labs will be capable of accommodating an entire class of students (28). Network access in the technology labs will be hard wired. Four ceiling data jacks shall be provided, and wireless access points will be provided. In addition, the equipment specified below for a typical classroom shall be included in each lab.

271000 STRUCTURED CABLING
The new network design will support up to a 100GHZ backbone over single mode and/or multi-mode fiber and up to 10GHZ over Category 6A to the desktop.

Twelve (12) pairs of single mode fiber and twelve (12) pairs of multi mode fiber will be provided from the MDF to each IDF, to be utilized for data, voice, security systems, etc.

Cat 6A cabling will be provided for data, voice, CCTV, and wireless access points (four data drops at each wireless access point location). Wireless access point outlet placements are intended to provide the capability for complete wireless coverage throughout the school.

Each teacher location will be wired with 4 data ports and one voice port. Category 6A cabling will be provided for the owner provided phone system (support for Voice over IP).

272100 NETWORK SWITCHES
Network electronics (switches) shall be provided and installed by the Owner.

272133 WIRELESS ACCESS POINTS
Wireless access points, and a controller if applicable, will be provided, one access point in each classroom, and three in each large group space. Office suites shall have an access point. Access points will be proprietary, Meraki, to ensure compatibility with existing district infrastructure.

273000 VOICE COMMUNICATIONS EQUIPMENT
The phone system and handsets shall be provided and installed by the owner. The building shall be cabled to support a voice over IP phone system using Cat 6A.

274000 AUDIO-VISUAL COMMUNICATIONS
Classrooms and Science Labs: video and audio presentation equipment (wall mounted 80"-84" interactive display (Cleartouch), voice lift system with microphones and amplifier, and up to 4 ceiling speakers) will be permanently installed in classrooms, labs and designated rooms. The PC/laptop in each classroom shall be provided by the owner. A presentation cameras will be provided in each interactive classroom and in designated spaces.

The Auditorium shall have a high lumen (min 14k lumen) theater level projector provided. A sound system, assistive listening system, video recording system, and mixer board shall be provided. An intuitive touch screen control system shall be provided. Wired and wireless microphones shall be provided.

A sound system shall be provided in the Gym. An assistive listening system shall be provided. Wired and wireless microphones shall be provided. Two LED HD panels, min 10'x6', shall be provided.

Student dining, two locations, shall contain a sound system, min 14k lumen projector and assistive listening system.

The Seminar room shall have an IP based teleconference system, sound system and 10k lumen projector.

275000 DISTRIBUTED COMMUNICATIONS & MONITORING
A public address system shall be provided. Digital messaging clocks synchronized with a master clock shall be provided in every classroom and conference room, and where designated on the drawings. The PA system shall be ethernet based, integrated with the owner provided phone system to allow the use of the phone system for paging within the building. A call button with plastic guard cover shall be placed at the back of each room for emergency notification purposes. The PA system shall be supervised, and

emergency notification software shall be included. The system shall be proprietary, Telecor E-Series, by Telecor, with AssureCom.

277000 VIDEO DISTRIBUTION SYSTEM

A high definition, 1080p, 9 channel IPTV system shall be provided. TVs with set top boxes shall be provided at designated locations. Coax shall not be run for video distribution purposes within the school. The capability and devices necessary to broadcast three (3) high definition "live" video streams to the IPTV system from any data port within the school shall be provided. A video on demand system shall be provided. A set top box shall be included in every classroom.

A digital signage package shall be included. Digital signage shall be proprietary, Carousel by Tightrope.

280000

An access control system shall be provided. Card readers shall be located as designated on the drawings. Main entries shall be equipped with a video entry system.

Intrusion detection system and related components shall be provided. Every first floor room with a window shall have a motion sensor. Motion sensors shall also be placed within the hallways and in vestibules.

An indoor/outdoor CCTV system (IP based) will be provided. Coverage shall include entrances, hallways, stairwells, building perimeter, and parking (parking surveillance shall utilize both building mounted cameras as well as pole mounted cameras). Other areas, such as the gym, auditorium, café, and admin area and press box shall be included. The system shall be proprietary, Meraki. All cameras shall be outdoor models, MV71.

DESIGNER CERTIFICATION LETTER

Sustainable Building Design Guideline Documents

January 3, 2018

Massachusetts School Building Authority (MSBA)
40 Broad Street
Suite 500
Boston, MA 02109
ATTN: Chris Alles, Project Manager

Re: LEED v4 for Schools Project Checklist
BMC Durfee High School – Fall River, MA

Dear Mr. Alles,

Ai3 Architects hereby acknowledges that BMC Durfee High School identified a goal of 0% additional reimbursement from the MSBA High Efficiency Green School Program. As the District's Project Architect, I have submitted a draft version of the completed LEED v4 for Schools checklist showing 48 attempted points and 21 possible points, which will meet, at a minimum, LEED Certified certification.

To the best of our ability and to the extent of the information we have produced and researched during the Schematic Design phase, the scope of work for this project will include the construction elements and performance tasks to achieve this goal. All subsequent documents including the project specifications, schematic design drawings, and cost estimates will match the scope of work indicated in the submitted scorecard.

Sincerely,

Troy L. Randall, AIA, LEED AP BD+C
Principal, Ai3 Architects LLC

SUSTAINABLE BUILDING DESIGN SCORECARD

Sustainable Building Design Guideline Documents

LEED v4 for BD+C: Schools
Project Checklist

Project Name: BMC Durfee High School
Date: 1.3.2018

DRAFT

Y	?	N			
		X	Credit	Integrative Process	1

8	2	0	**Location and Transportation**		**15**
		X	Credit	LEED for Neighborhood Development Location	15
1			Credit	Sensitive Land Protection	1
		X	Credit	High Priority Site	2
4			Credit	Surrounding Density and Diverse Uses	5
2	1		Credit	Access to Quality Transit	4
	1		Credit	Bicycle Facilities	1
		X	Credit	Reduced Parking Footprint	1
1			Credit	Green Vehicles	1

6	4	0	**Sustainable Sites**		**12**
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	Environmental Site Assessment	Required
1			Credit	Site Assessment	1
	2		Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
2	1		Credit	Rainwater Management	3
		X	Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1
	1		Credit	Site Master Plan	1
1			Credit	Joint Use of Facilities	1

5	2	0	**Water Efficiency**		**12**
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
2			Credit	Outdoor Water Use Reduction	2
2	2		Credit	Indoor Water Use Reduction	7
		X	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

13	7	0	**Energy and Atmosphere**		**31**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
4			Credit	Enhanced Commissioning	6
8	2		Credit	Optimize Energy Performance*(8 min. (20%) for additional MSBA funding)*	16
		X	Credit	Advanced Energy Metering	1
	2		Credit	Demand Response	2
	2		Credit	Renewable Energy Production	3
1			Credit	Enhanced Refrigerant Management	1
	1		Credit	Green Power and Carbon Offsets	2

5	1	0	**Materials and Resources**		**13**
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
		X	Credit	Building Life-Cycle Impact Reduction	5
1			Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
1			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

6	4	0	**Indoor Environmental Quality**		**16**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
Y			Prereq	Minimum Acoustic Performance	Required
1			Credit	Enhanced Indoor Air Quality Strategies	2
2			Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
1	1		Credit	Indoor Air Quality Assessment	2
		X	Credit	Thermal Comfort	1
1	1		Credit	Interior Lighting	2
	1		Credit	Daylight	3
	1		Credit	Quality Views	1
		X	Credit	Acoustic Performance	1

3	0	0	**Innovation**		**6**
2			Credit	Pilot Credit: No Cooling Tower	5
1			Credit	LEED Accredited Professional	1

2	1	0	**Regional Priority *(4 max)***		**4**
1			Credit	Regional Priority: SS Rainwater Management *(2 point min)*	1
1			Credit	Regional Priority: WE Indoor Water Use Reduction *(4 point min)*	1
		X	Credit	Regional Priority: WE Cooling Tower Water Use *(2 point min)*	1
	1		Credit	Regional Priority: EA Optimized Energy Performance *(8 point min)*	1
	1		Credit	Regional Priority: EA Renewable Energy Production *(2 point min)*	1
		X	Credit	Regional Priority: MR Building Life-Cycle Impact Reduction *(2 point min)*	1

48	21	0	**TOTALS**	Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110

ROOM DATA SHEETS

The following Room Data Sheets provide a basic understanding of the various spaces in the new BMC Durfee High School as a result of preliminary programming. The spaces will continue to develop through additional programming sessions with the Owner and the development of the project.

TYPICAL GENERAL CLASSROOM

FUNCTIONAL DATA

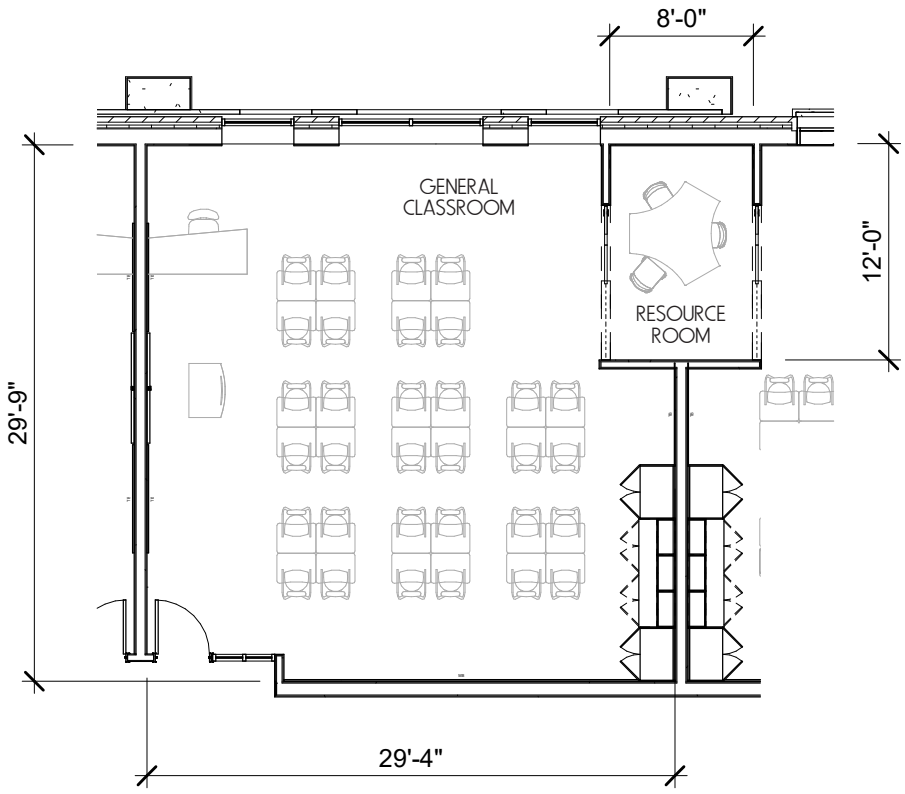
Description: General instructional classroom
Quantity: 76
Users: 1 teachers, 32 students

SPATIAL DATA

Floor Area: 825 Net Square Feet
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on all floors within the academic core.
Adjacencies: Located adjacent additional typical general classrooms, SPED student support rooms, resource rooms.
Orientation: Classrooms will be off of the North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Two (2) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- Two (2) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets

Specialties: Two (2) 6'-0" wide markerboard surfaces; One (1) 7'-8" wide markerboard surface; One (1) 17'-7" wide markerboard surface; Framed glass sliding door partition

Furniture: 32 student desks with one (1) chair each; One (1) teacher desk with chair; One (1) teaching lecturn; One (1) group learning table with three (3) chairs

Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

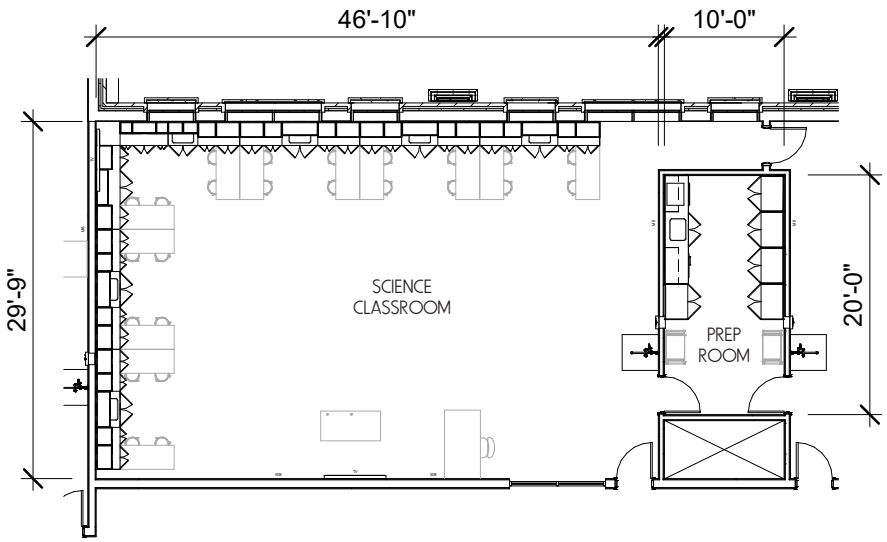
SCIENCE CLASSROOM WITH PREP ROOM

FUNCTIONAL DATA

Description: General instructional science classroom
Quantity: 23
Users: 1 teachers, 24 students

SPATIAL DATA

Floor Area: 1,440 sq. ft. classroom
180 sq. ft. prep room
Ceiling Height: 10'-0"



MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Eyewash station, emergency shower station, six (6) lab sinks and one (1) accessible lab sink; science sinks include cold water, gas, air and/or vacuum
Fire Protection: Fully sprinklered fire protection system
Electrical: Power supply for various appliances, drop down supply for demonstration table
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the second & third floors within the academic core.
Adjacencies: Located adjacent additional science classrooms, planetarium, other general education classrooms.
Orientation: Science classrooms will be oriented to all cardinal directions. South, West, and East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Twelve (12) built-in, 18" wide, 24" deep solid wood base cabinets with epoxy counter top
- Fourteen (14) built-in, 24" wide, 24" deep solid wood base cabinets with epoxy counter top
- Eleven (11) built-in, 18" wide, 16" deep solid wood high storage cabinets
- Thirteen (13) built-in, 24" wide, 16" deep solid wood high storage cabinets
- Six (6) built-in, 36" wide, 16" deep solid wood high storage cabinets
- Five (5) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinets
- Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets

Specialties: Three (3) 8'-0" wide markerboard surfaces; Two (2) mobile laptop carts; One (1) autoclave sterilizer; Built-in fire blanket and fire extinguisher cabinet; Built-in goggle cabinet; Fume hood; Distiller; Dishwasher; Under counter fridge; Two (2) mobile laptop carts

Furniture: Twelve (12) mobile student lab tables with two (2) stools each; One (1) teacher's desk and chair; One (1) mobile teacher's demonstration table

Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

PLANETARIUM WITH STORAGE

FUNCTIONAL DATA

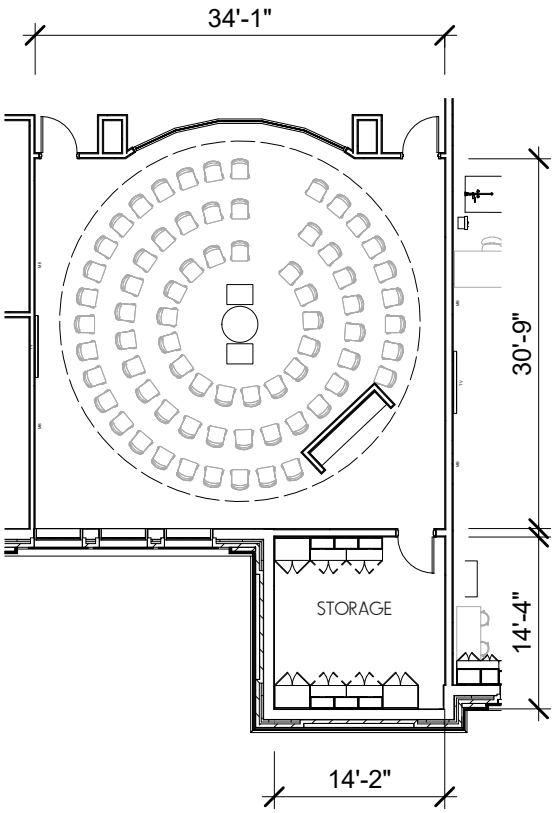
Description:	Planetarium
Quantity:	1
Users:	1 teacher, up to 70 students

SPATIAL DATA

Floor Area:	1000 sq. ft. Planetarium 150 sq. ft. Storage
Ceiling Height:	Varies, curved dome

MATERIALS/ FINISH DATA

Floors:	Carpet
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile, planetarium dome
Doors:	Solid core flush wood doors
Windows:	Insulated, single-hung aluminum operable window
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power supply for planetarium dome, control booth, stargazer projector
Lighting:	Task lighting at teaching wall, specialty cove lighting, planetarium LED lighting
Communications:	Telephone, digital clock, internet access wireless access, PA speakers
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Double height space on second floor
Adjacencies:	Located adjacent science classrooms, observatory, other general education classrooms
Orientation:	The planetarium will be off the North-South axis. East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Four (4) built-in, 36" wide, 24" deep solid wood base cabinets with epoxy counter top - Six (6) built-in, 24" wide, 12" deep solid wood high storage cabinets - Three (3) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinets
Specialties:	Two (2) 8'-0" wide markerboard surfaces; Specialty planetarium projector system with speakers
Furniture:	Seventy (70) theater style seats; One (1) teacher's desk and chair/control booth
Technology Equipment:	- Interactive classroom display - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

OBSERVATORY

FUNCTIONAL DATA

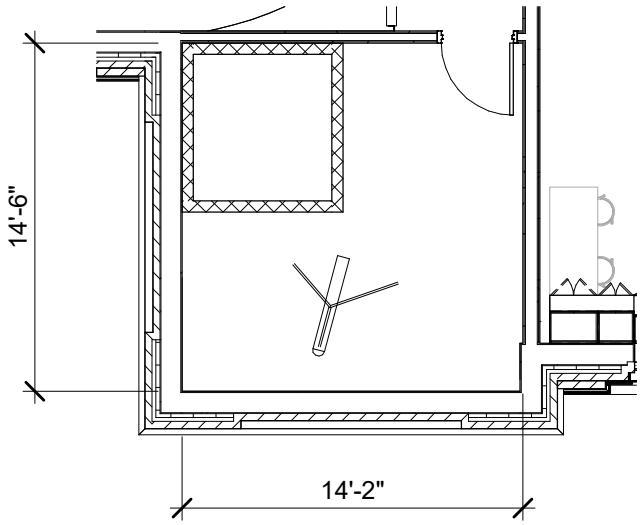
Description: Observatory for astronomical viewing
Quantity: 1
Users: Science Teacher, Students, Community

SPATIAL DATA

Floor Area: 825 Net Square Feet
Ceiling Height: Curved dome

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Exposed
Doors: Solid core flush wood door
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect Pendant light fixtures
Communications: Telephone, digital clock, internet access, wireless access, PA Speakers, CATV School broadcasts
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the third floor within the "Public Space" area above the planetarium.
Adjacencies: Located adjacent to the Planetarium and third floor Science Classroom (Physics).
Orientation: The Observatory will have a South/ South West Orientation and will be accessible to the planetarium.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: N/A
Specialties: Telescope, Wheelchair Lift
Furniture: N/A
Technology Equipment: N/A

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

LARGE GROUP SEMINAR

FUNCTIONAL DATA

Description:	Lecture Instruction, Group Presentations, Small Performances, Collaborative Learning
Quantity:	1
Users:	1 faculty, 96 students

SPATIAL DATA

Floor Area:	2500 Net Square Feet
Ceiling Height:	24'-0"

MATERIALS/ FINISH DATA

Floors:	Carpet with painted concrete at seating
Walls:	Painted gypsum wallboard, wood veneer acoustic panels
Ceiling:	Acoustic ceiling tiles, suspended acoustic ceiling clouds, gypsum wallboard soffits
Doors:	Solid core flush wood doors
Windows:	Insulated, single hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power in work surfaces at all work stations
Lighting:	Dimmable LED light fixtures, specialty lighting
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School Broadcasts, 4 speaker amplification, local sound system
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the second and third floors within the "academic core" of the building south west of the student commons
Adjacencies:	Located adjacent to world language classroom and SPED english/reading classroom
Orientation:	The large group seminar will be oriented on the east and will include appropriate light filtering and/or blocking devices

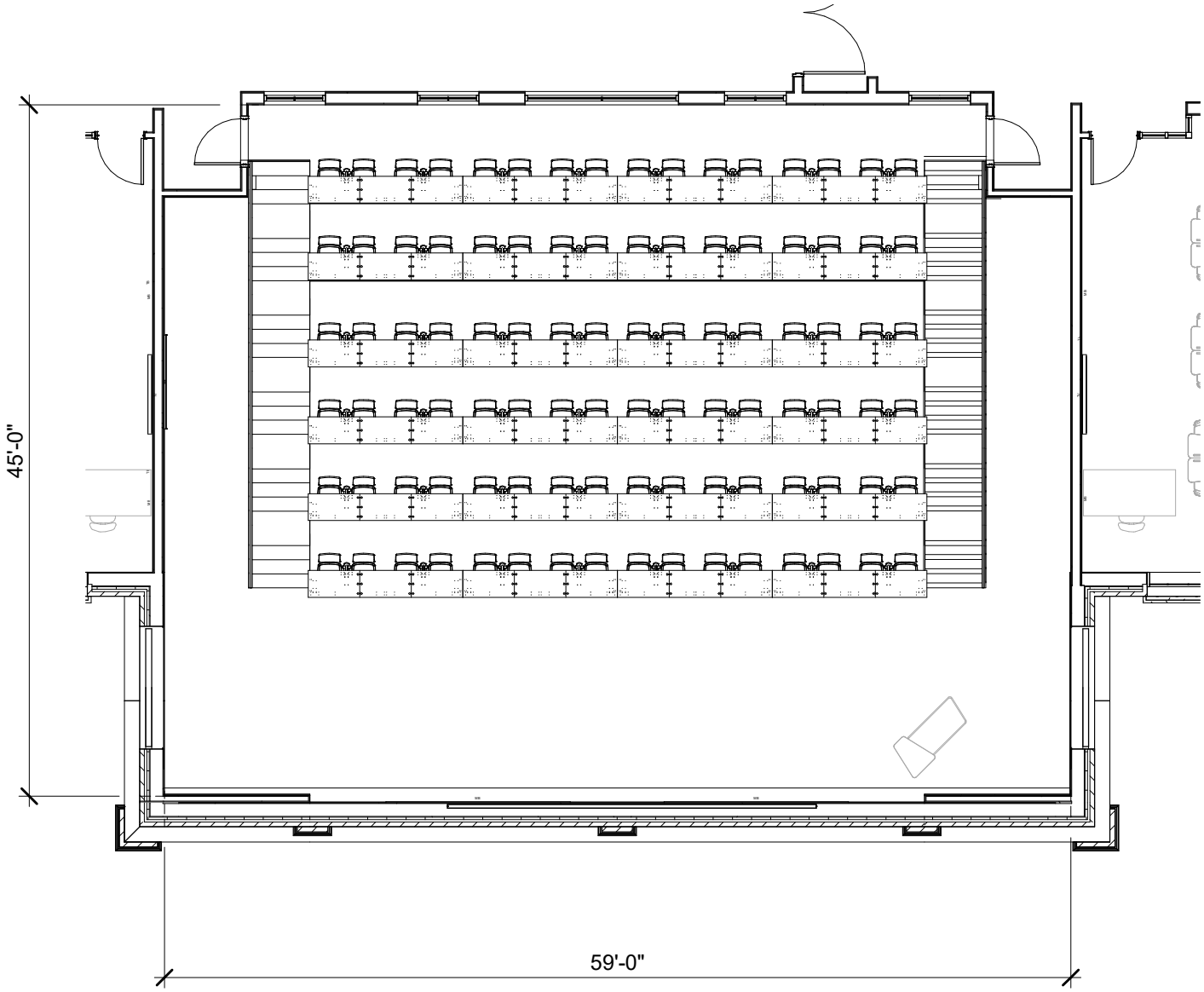
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	One (1) 12'-0" wide; Interactive white board; Acoustical wall panels; Railings
Furniture:	Continuous work surfaces with attached fixed seats; one (1) teacher desk with chair
Technology Equipment:	- Interactive classroom display - Presentation camera - Video Switching Unit - Video teleconferencing - Room Projector - Wire and wireless microphones - Assisted listening system - Video projection screen - Wireless access points - Integrated power to accommodate 96 students

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

LARGE GROUP SEMINAR



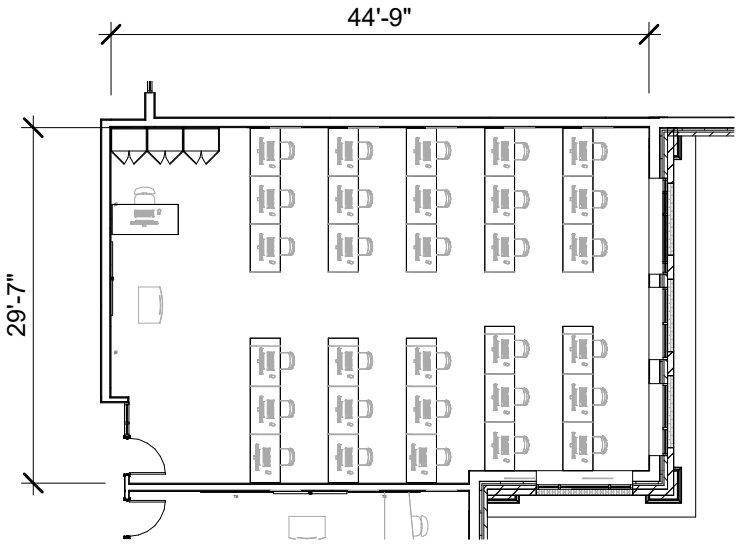
LANGUAGE LAB

FUNCTIONAL DATA

Description:	Instructional language based learning lab
Quantity:	1
Users:	1 teacher, 30 students

SPATIAL DATA

Floor Area:	1350 Net square feet
Ceiling Height:	10'-0"



MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors with transom and side light glazing
Windows:	insulated, aluminum curtain wall system
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the third floor of the "public space" directly above the secondary entrance.
Adjacencies:	Located adjacent to the Media Center, a typical classroom, & secondary lobby stair.
Orientation:	The language lab will be oriented on the North-South axis and will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	Three (3) built-in, 36" wide, 24" deep, 84" high storage cabinets
Specialties:	Two (2) 6'-0" wide Tackboard surfaces
Furniture:	32 student desks with one (1) chair each, One (1) teacher desk with one (1) chair, One (1) teaching lecturn
Technology Equipment:	- Interactive classroom display - Presentation Camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers - Integrated stereo system

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

TEACHER PLANNING

FUNCTIONAL DATA

Description:	Teacher planning and break room
Quantity:	5
Users:	All faculty

SPATIAL DATA

Floor Area:	One (1) 410 sq. ft. teacher planning suite Four (4) 850 sq. ft. teacher planning suites Eight (8) 80 sq. ft. small conference rooms
Ceiling Height:	10'-0"

MATERIALS/ FINISH DATA

Floors:	Carpet in offices and conference rooms, vinyl composite tile in all other locations
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors for offices, sliding glass doors
Windows:	Insulated, single hung, aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	One (1) accessible sink, plumbing connection for domestic refrigerator/freezer
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power for various appliances including refrigerator & copier
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, CATV/School broadcasts, 4 speaker sound amplification, PA speakers, Document camera
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first, second, and third floor in the core academic area of the building.
Adjacencies:	Located adjacent to the core academic classrooms, one (1) located adjacent to art & visual design classrooms.
Orientation:	Teacher planning suite will be oriented off of an East-West axis. All south and north facing windows will include appropriate light filtering and/or blocking devices.

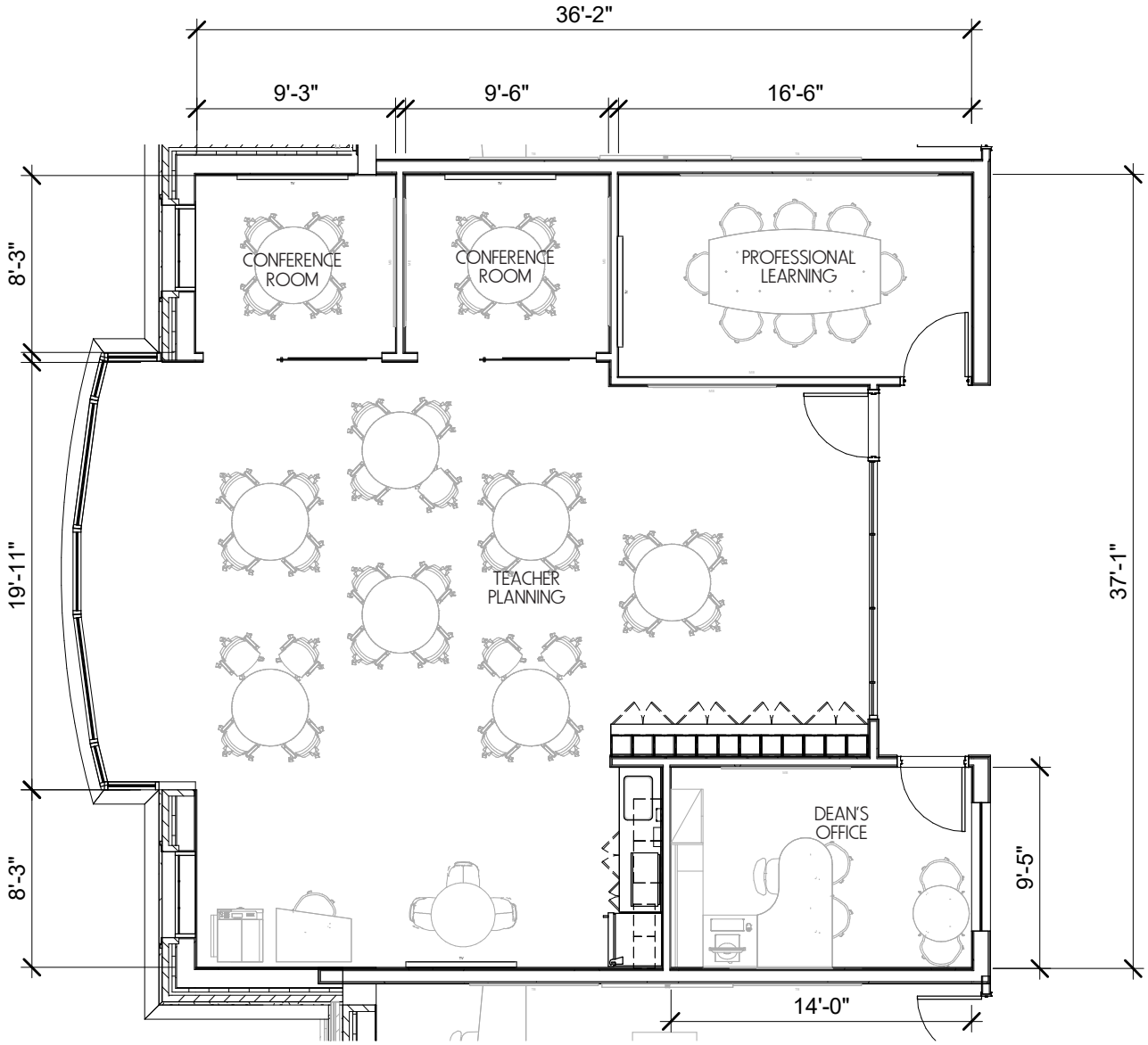
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Four (4) built-in, 36" wide, 18" deep solid wood base cabinets with counter top - One (1) built-in, 28" wide, 24" deep solid wood base cabinets with counter top - One (1) built-in, 18" wide, 24" deep solid wood base cabinets with counter top - Two (2) built-in, 24" wide, 18" deep, 72" high storage cabinets - Two (2) built-in, 18" wide, 18" deep, 72" high storage cabinets
Specialties:	Four (4) 6'-0" wide markerboard surfaces; One (1) 8'-0" wide markerboard surface; One (1) 12'-0" wide markerboard surface; One (1) domestic microwave; One (1) domestic refrigerator/freezer; One (1) copier; Forty eight (48) custom mail cupboards;
Furniture:	One (1) medium conference table with eight (8) chairs; Eight (8) work tables with four (4) chairs each; One (1) small work table with one (1) chair; One (1) office desk with one (1) chair; One (1) small coffee table with two (2) chairs; One (1) high top table with three (3) chairs
Technology Equipment:	- Four (4) Interactive television displays - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

TEACHER PLANNING



SPED SELF-CONTAINED CLASSROOM

FUNCTIONAL DATA

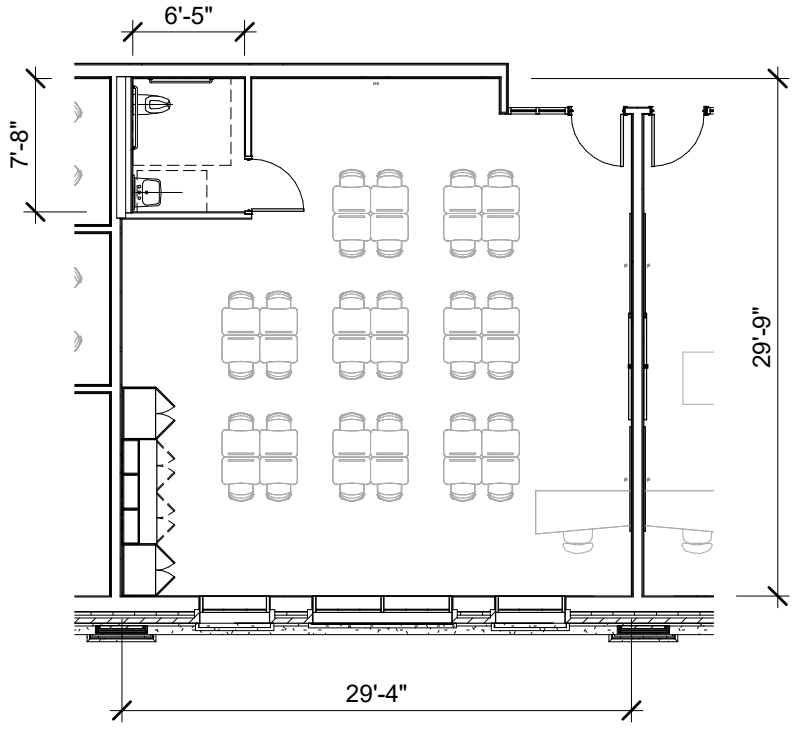
Description: Special education classroom with accessible toilet room
Quantity: 17
Users: 1 teacher, 32 students

SPATIAL DATA

Floor Area: 825 Net Square Feet
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile, porcelain tile in toilet room
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: One (1) accessible sink, One (1) accessible toilet
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera. CATV/School Broadcasts, PA speakers
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on all floors, within the academic core
Adjacencies: Located adjacent additional SPED classrooms, and core academic classrooms
Orientation: Classrooms will be oriented on a North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Two (2) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- Two (2) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Three (3) built-in, 24" wide, 12" deep, 24" high solid wood upper cabinets

Specialties: Two (2) 6'-0" wide marker board surfaces; One (1) 12'-0" wide marker board surface
Furniture: 32 student desks with one (1) chair each; One (1) teacher desk with chair
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

SPED SUB-SEPARATE CLASSROOM

FUNCTIONAL DATA

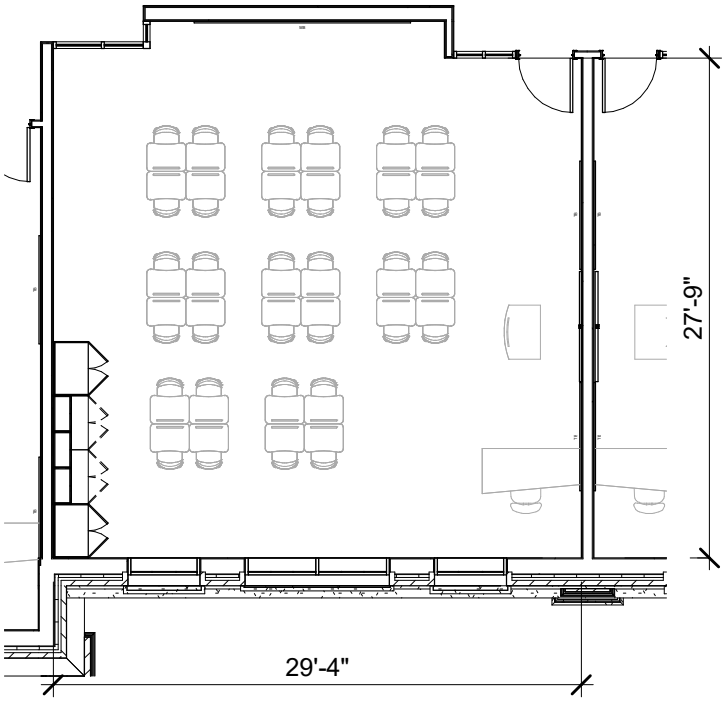
Description: Instructional SPED sub-separate classroom
Quantity: 7
Users: 1 teachers, 32 students

SPATIAL DATA

Floor Area: 825 Net Square Feet
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on all floors within the academic core.
Adjacencies: Located adjacent additional typical general classrooms, SPED student support rooms, resource rooms.
Orientation: SPED classrooms will be oriented on a North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Two (2) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- Two (2) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets

Specialties: Two (2) 6'-0" wide marker board; One (1) 12'-0" wide marker boards
Furniture: 32 student desks with one (1) chair each; One (1) teacher desk with chair; One (1) teaching lectern
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

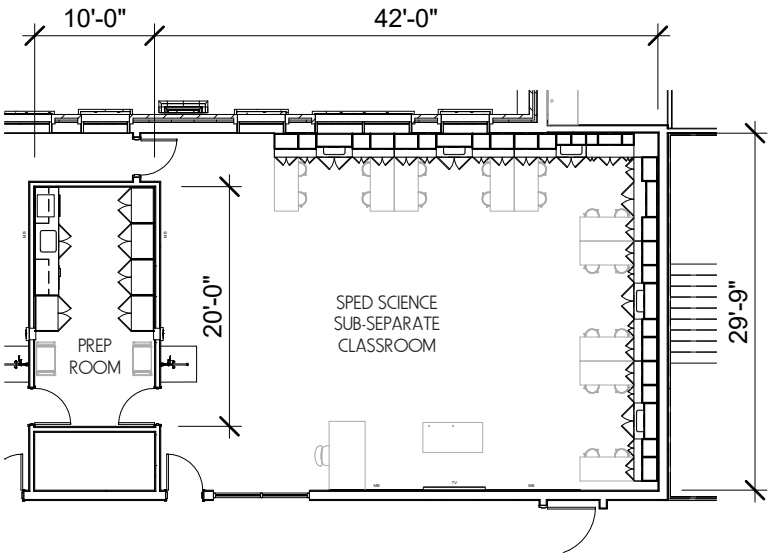
SPED SCIENCE CLASSROOM WITH PREP ROOM

FUNCTIONAL DATA

Description: Instructional SPED sub-seperate science classroom
Quantity: 3
Users: 1 teachers, 20 students

SPATIAL DATA

Floor Area: 1250 Net Square Feet
Ceiling Height: 10'-0"



MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Eyewash station, emergency shower station, six (6) lab sinks and one (1) accessible lab sink; science sinks include cold water, gas, air and/or vacuum
Fire Protection: Fully sprinklered fire protection system
Electrical: Power supply for various appliances, drop down supply for demonstration table
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on all floors within the academic core.
Adjacencies: Located adjacent to additional science classrooms, planetarium, other general education classrooms
Orientation: SPED science classrooms will be oriented to all cardinal directions. South, West, and East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Nine (9) built-in, 18" wide, 24" deep solid wood base cabinets with epoxy counter top
- Twelve (12) built-in, 24" wide, 24" deep solid wood base cabinets with epoxy counter top
- Five (5) built-in, 36" wide, 24" deep solid wood base cabinets with epoxy counter top
- Two (2) built-in, 12" wide, 24" deep solid wood base cabinets with epoxy counter top
- One (1) built-in, 30" wide, 24" deep solid wood base cabinets with epoxy counter top
- Nine (9) built-in, 18" wide, 16" deep solid wood high storage cabinets
- Twelve (12) built-in, 24" wide, 16" deep solid wood high storage cabinets
- Four (4) built-in, 36" wide, 14" deep solid wood high storage cabinets
- Five (5) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinets

Specialties: Three (3) 8'-0" wide marker boards; Two (2) mobile laptop carts; One (1) autoclave sterilizer; Built-in fire blanket and fire extinguisher cabinet; Built-in goggle cabinet; Fume hood; Distiller; Dishwasher; Under counter fridge; Two (2) mobile laptop carts

Furniture:
- Ten (10) mobile student lab tables with two (2) stools each; One (1) teacher's desk and chair; One (1) mobile teacher's demonstration table

Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

SPED OT/PT SEVERE DISABILITIES

FUNCTIONAL DATA

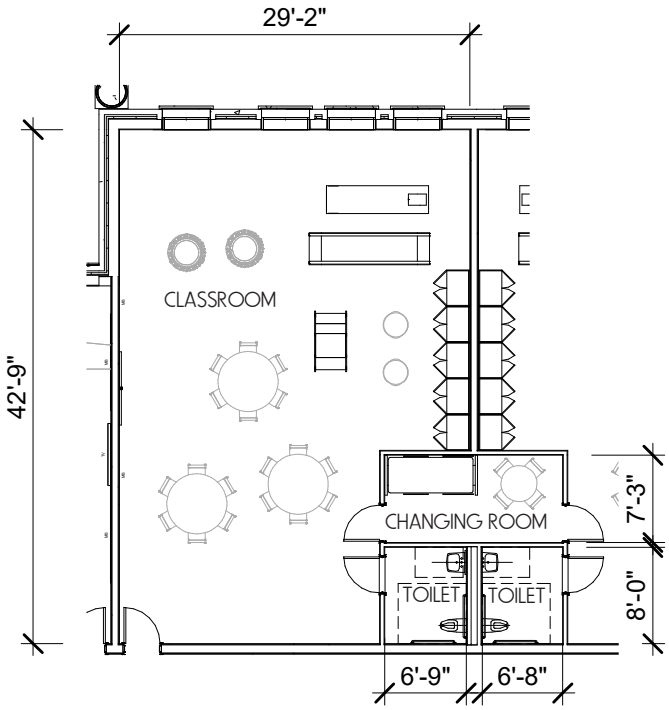
Description:	SPED classroom for students with severe disabilities
Quantity:	2
Users:	1 teacher, 12 students

SPATIAL DATA

Floor Area:	1250 Net Square Feet
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors
Windows:	Insulated, single-hung, aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	Accessible toilet room with sink
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Located on the first floor
Adjacencies:	Located adjacent to the Nurse suite, SPED community based program
Orientation:	Classrooms will be oriented on a North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Five (5) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
Specialties:	Two (2) 6'-0" wide marker boards
Furniture:	Three (3) group learning tables with six (6) chairs each; One (1) small round table with four (4) chairs; Two (2) therapeutic small trampolines; Two (2) balance training bosu balls; One (1) set of therapeutic parallel bars; One (1) therapeutic 2-step wooden staircase; One (1) OT/PT massage table; One (1) OT/PT patient bed
Technology Equipment:	- Interactive classroom display - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

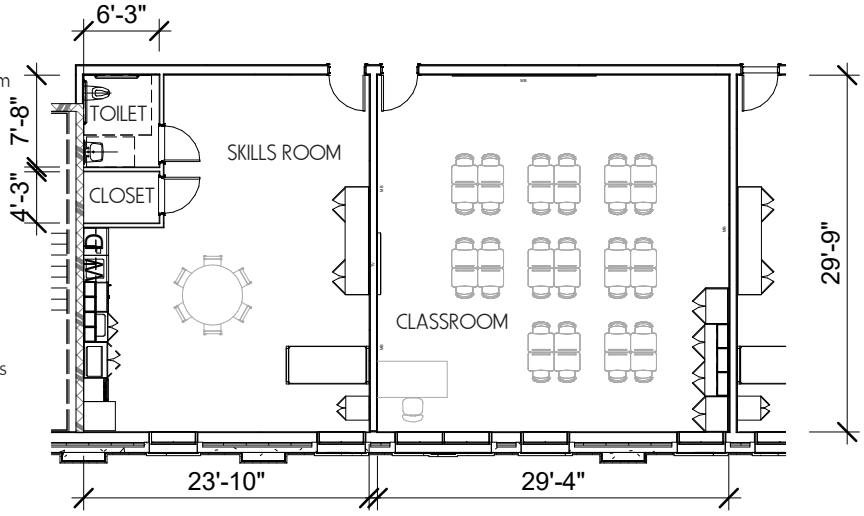
SPED AGES 18-22 SELF-CONTAINED SKILLS & CLASSROOM

FUNCTIONAL DATA

Description: SPED classroom for adult students with a focus on life-skills to foster independence
Quantity: 1
Users: 1 teacher, 12-32 students

SPATIAL DATA

Floor Area: Two (2) 600 sq. ft. self contained SPED skills room
One (1) 825 sq. ft. ages 18-22 classroom
Two (2) toilet rooms
Two (2) 25 sq. ft. closet spaces
Ceiling Height: 12'-0"



MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors
Windows: Insulated single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall, ventilation at toilet rooms
Plumbing: Accessible toilet room with sink
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures
Communications: CATV/School broadcasts, 4 speaker sound amplification Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor near building exit.
Adjacencies: Located adjacent to community based learning classrooms, severe disabilities.
Orientation: Classrooms will be oriented on a North-South axis. All East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Two (2) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Five (5) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- One (1) built-in, 24" wide, 24" deep solid wood base cabinets with counter top
- One (1) built-in, 30" wide, 24" deep solid wood base cabinets with counter top
- Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets
- Four (4) built-in, 15" wide, 12" deep, 72" high storage cabinets
- Three (3) built-in, 18" wide, 12" deep, 72" high storage cabinets

Specialties: One (1) wall mounted conventional oven, One (1) clothes washing machine, One (1) dryer, One (1) dishwasher, One (1) microwave, one (1) residential style sink with counter top
Furniture: Thirty two (32) student desks with one (1) chair each, One (1) teacher's desk with chair, One (1) residential style bed, One (1) round table with six (6) chairs
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

RESOURCE ROOM

FUNCTIONAL DATA

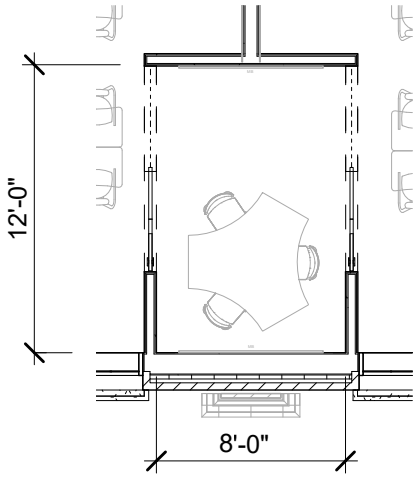
Description:	SPED support breakout space for independent study/outside class work
Quantity:	26
Users:	3-4 Students

SPATIAL DATA

Floor Area:	95 Net Square Feet
Ceiling Height:	9'-6"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Frameless sliding glass door
Windows:	N/A
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Dispersed throughout the academic wings.
Adjacencies:	Located in-between academic classrooms and self contained SPED rooms.
Orientation:	Resource rooms will be off of the North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	Two (2) 6'-0" markerboard surface
Furniture:	One (1) group work table with three (3) chairs
Technology Equipment:	Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

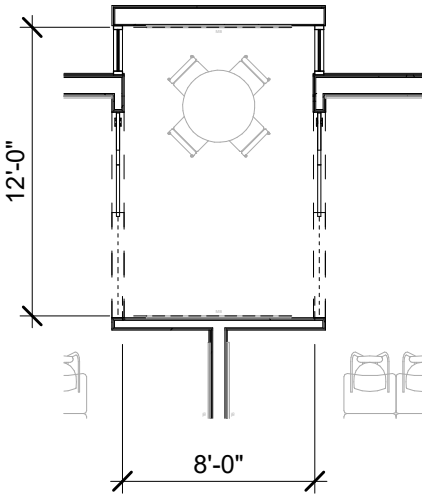
SMALL GROUP SUPPORT

FUNCTIONAL DATA

Description: Small Group Support
Quantity: 12
Users: 4-6 Students

SPATIAL DATA

Floor Area: 100 Net Square Feet
Ceiling Height: 10'-0"



MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tiles
Doors: Sliding glass doors
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures
Communications: Digital clock, internet access, wireless access, PA speakers
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located within each academic neighborhood on all floors between general instructional classrooms.
Adjacencies: Located adjacent to instructional classrooms.
Orientation: Small Group Support spaces will be oriented along the East-West axis & will include appropriate sun shading/light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - N/A
Specialties: - Two (2) 6'-0" wide marker board surfaces
Furniture: - One (1) table to seat 4-6 students
Technology Equipment: - N/A

OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the districts current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

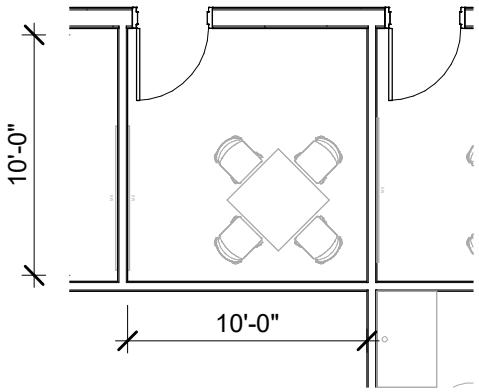
SPED TESTING

FUNCTIONAL DATA

Description:	Private room for SPED testing
Quantity:	7
Users:	1 teachers, 1 student

SPATIAL DATA

Floor Area:	100 Net Square Feet
Ceiling Height:	10'-0"



MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors
Windows:	N/A
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation.
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	2x4 recessed light fixture
Communications:	Digital clock, internet access wireless access, PA speakers
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on all floors adjacent to the atrium in the academic core
Adjacencies:	Located adjacent to atrium, SPED suite, general education classrooms, speech observation
Orientation:	N/A

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	One (1) 6'-0" wide markerboard surface
Furniture:	One (1) small work table with four (4) chairs
Technology Equipment:	N/A

OTHER

Security:
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

SPED SPEECH / OBSERVATION / CONFERENCE

FUNCTIONAL DATA

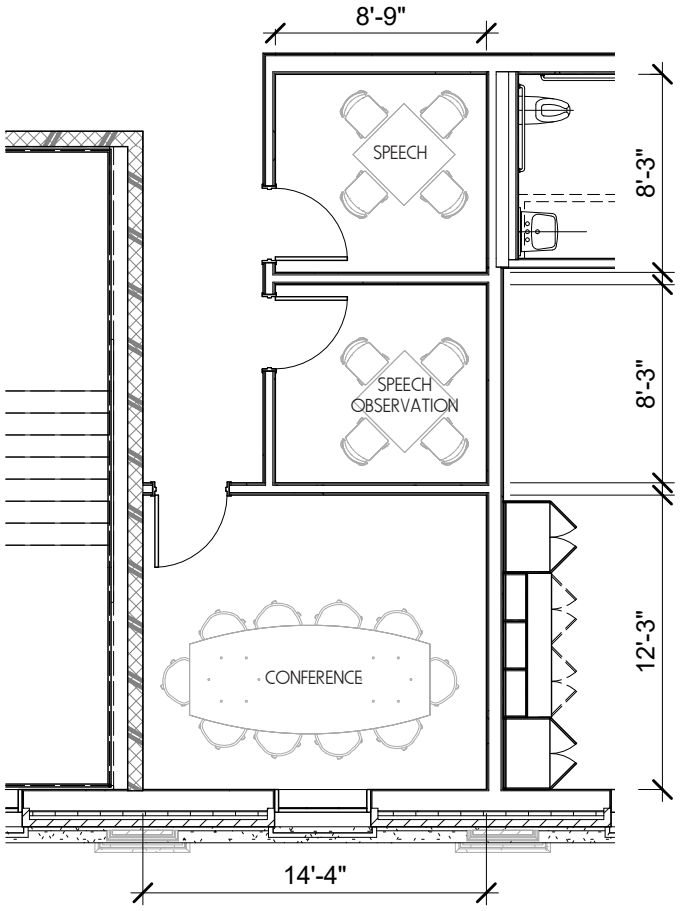
Description:	SPED speech & observation suite
Quantity:	4 Suites
Users:	1 teacher, 2-4 students

SPATIAL DATA

Floor Area:	100 sq. ft. SPED speech 100 sq. ft. SPED observation 200 sq. ft. SPED conference
Ceiling Height:	10'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors
Windows:	Insulated, single-hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	2' x 4' recessed light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Located on the second and third floors near the East stairwells.
Adjacencies:	Located adjacent the stairwells, general education classrooms & SPED spaces.
Orientation:	SPED suites will be oriented East - West. All East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	One (1) 8'-0" wide markerboard surface
Furniture:	One (1) large conference room table with ten (10) chairs; Two (2) small work tables with four (4) chairs each
Technology Equipment:	- Interactive classroom display - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

SPED SUITE

FUNCTIONAL DATA

Description:	Administrative suite for all SPED offices, testing rooms, speech, and the Dean's office
Quantity:	1
Users:	6 faculty, 4-8 students

SPATIAL DATA

Floor Area:	One (1) 200 sq. ft. SPED Dean's office One (1) 150 sq. ft. SPED office (Transition Specialist) Two (2) 150 sq. ft. SPED team chair offices One (1) 200 sq. ft. SPED conference room Two (2) 125 sq. ft. school psychologist offices Four (4) 100 sq. ft. SPED testing rooms
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Carpet
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows:	Insulated, single-hung, aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	One (1) ADA accessible toilet room
Fire Protection:	Fully sprinklered fire protection system
Electrical:	CATV/School broadcasts, 4 speaker sound amplification
Lighting:	2' x 4' Recessed lights
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor located off the atrium
Adjacencies:	Located adjacent to community based program: Self-Contained SPED, Atrium, Main office/entry
Orientation:	SPED suite will be oriented off of a North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices

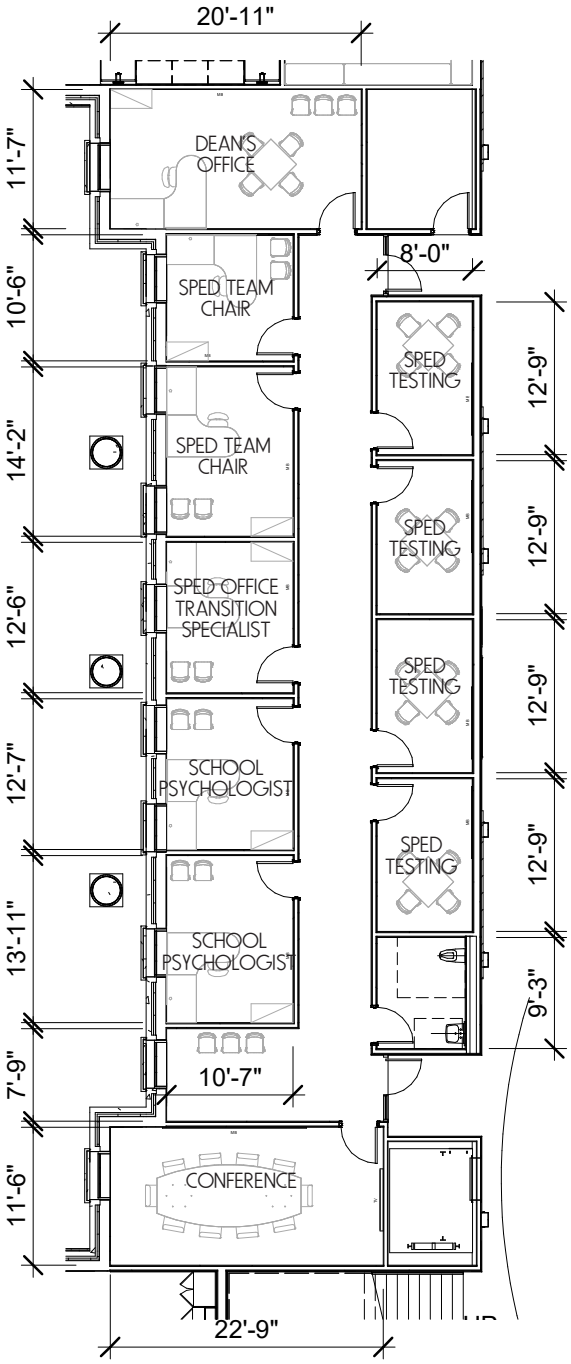
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	Ten (10) 6'-0" wide markerboards; one (1) 12'-0" wide markerboard; six (6) 42" wide file cabinets
Furniture:	One (1) Large 10 seat conference room table; Five (5) small work tables with four (4) chairs each; Sixteen (16) individual chairs; Six (6) office desks with one (1) chair each
Technology Equipment:	- Interactive conference room display - Interactive white board or projector infrastructure - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

SPED SUITE


20'-11"
DEAN'S OFFICE
11'-7"
8'-0"
SPED TEAM CHAIR
10'-6"
SPED TESTING
12'-9"
SPED TEAM CHAIR
14'-2"
SPED TESTING
12'-9"
SPED OFFICE TRANSITION SPECIALIST
12'-6"
SPED TESTING
12'-9"
SCHOOL PSYCHOLOGIST
12'-7"
SPED TESTING
12'-9"
SCHOOL PSYCHOLOGIST
13'-11"
9'-3"
10'-7"
7'-9"
CONFERENCE
11'-6"
22'-9"

ART: CERAMICS CLASSROOM

FUNCTIONAL DATA

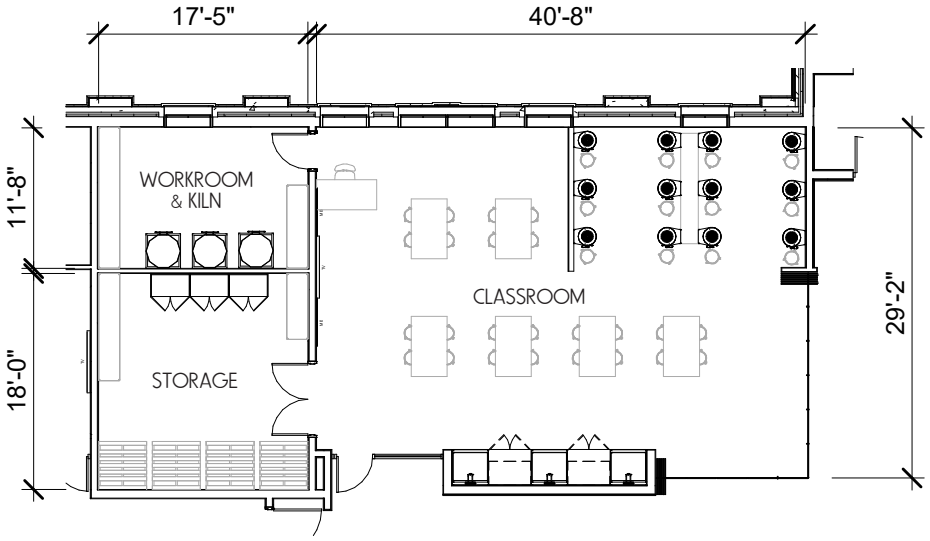
Description: Art instructional/Ceramics Classroom
Quantity: One (1) Classroom
One (1) Workroom & kiln
One (1) Storage
Users: 1 teacher, up to 24 students

SPATIAL DATA

Floor Area: 1,200 sq. ft. classroom
250 sq. ft. workroom & kiln
250 sq. ft. storage
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring
Walls: Painted gypsum wallboard
Ceiling: Acoustic Ceiling Tile
Doors: Solid core flush wood doors with side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall, exhaust for kilns
Plumbing: Three (3) stainless steel deep art sinks. Hot & cold water available at all sinks. Sediment traps at all sinks.
Fire Protection: Fully sprinklered fire protection system
Electrical: Power for pottery wheels & kilns
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcast, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the arts & visual design portion of the building.
Adjacencies: Located adjacent the Atrium & Sculpture classroom.
Orientation: The Ceramics classroom will be West facing & will include appropriate sun shading/light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Built-in, 36" deep base cabinets with counter top
- Built-in, 24" deep wall cabinets above base cabinets
- Three (3) 39" wide, 24" deep, 72" tall storage cabinets

Specialties: Three (3) 6'-0" wide marker board surfaces; Three (3) kilns; Drying racks; Damp storage cabinet; Operable folding glass partition
Furniture: Six (6) student work tables with 4 stools each; One (1) teachers desk with chair; Twelve (12) pottery throwing wheels; Mobile open shelving storage
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

ART: SCULPTURE CLASSROOM

FUNCTIONAL DATA

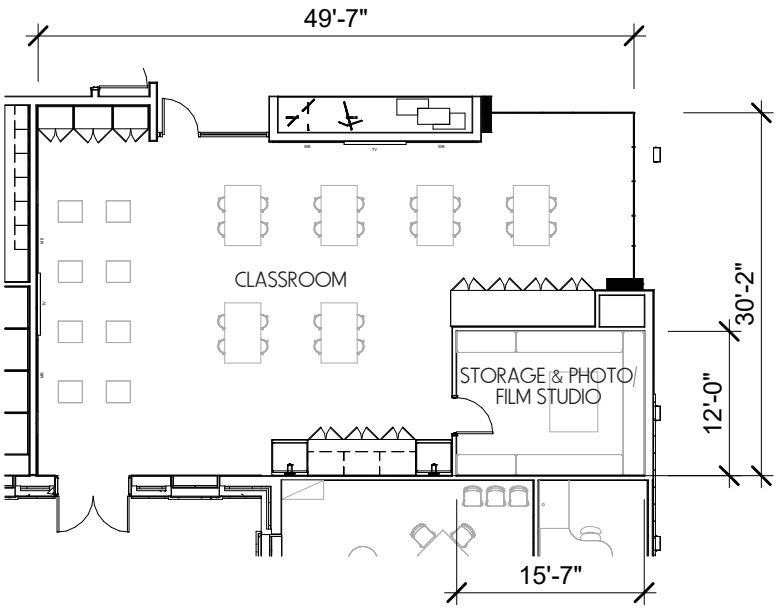
Description:	Art instructional/Sculpture classroom
Quantity:	One (1) Classroom One (1) Storage & documentation space
Users:	1 teacher, up to 24 students

SPATIAL DATA

Floor Area:	1,200 sq. ft. classroom 200 sq. ft. storage space
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Linoleum sheet flooring
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic Ceiling Tile
Doors:	Solid core flush wood doors with side light glazing
Windows:	Insulated, single-hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	Two (2) stainless steel deep art sinks. Hot & cold water available at all sinks. Sediment traps at all sinks.
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, presentation camera, CATV/School broadcast, 4 speaker sound amplification
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Located on the first floor within the arts & visual design portion of the school.
Adjacencies:	Located adjacent the Atrium & Ceramics classroom.
Orientation:	The Sculpture classroom will be oriented on the North-South axis with East facing windows & will include appropriate sun shading/light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Windows:	The Sculpture classroom will include exterior rough openings for 40 square feet of window insertion. This will occur in the form of operable windows.
Casework/Cabinetry:	- Built-in, 36" deep base cabinets with counter top - Built-in, 24" deep wall cabinets above base cabinets - Two (2) 39" wide, 24" deep, 72" tall storage cabinets
Specialties:	Four (4) 6'-0" wide marker board surfaces; Operable folding glass partition
Furniture:	Six (6) student work tables with 4 stools each; One (1) mobile work/documentation table; Mobile open storage shelving
Technology Equipment:	- Two (2) Interactive classroom displays - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

ART: HISTORY CLASSROOM AND STORAGE

FUNCTIONAL DATA

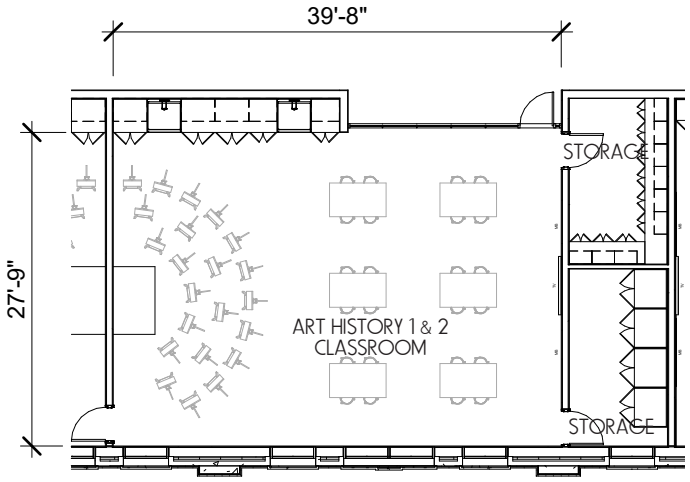
Description: Instructional Art History classroom
Quantity: 2 classrooms, 2 storage spaces
Users: 1 teachers, 32 students

SPATIAL DATA

Floor Area: Two (2) 1200 sq. ft. classrooms
Two (2) 200 sq. ft. storage spaces
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Rubber flooring
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: One (1) stainless steel deep art sink and one (1) accessible stainless steel art sink. Hot and cold water at all sinks. Sediment traps at all sinks.
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor in the art & visual design wing.
Adjacencies: Located adjacent the sculpture classroom, ceramics classroom, and DV & C classrooms.
Orientation: The art classrooms will be oriented on a North-South axis. All East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Three (3) built-in, 36" wide, 36" deep solid wood base cabinets with counter top
- Two (2) built-in, 30" wide, 36" deep solid wood base cabinets with counter top
- Three (3) built-in, 36" wide, 24" deep, 72" high storage cabinets
- Two (2) built-in, 30" wide, 24" deep, 72" high storage cabinets
- Four (4) built-in, 42" wide, 36" deep, 84" high solid wood cabinets
- Nine (9) built-in, 24" wide, 14" deep, 72" high storage cabinets
- Nine (9) built-in, 24" wide, 24" deep solid wood base cabinets with counter top

Specialties: Two (2) 6'-0" wide marker boards; Twenty-two (22) student art easels; Two (2) stainless steel art sinks, one accessible
Furniture: Six (6) group work tables with four (4) chairs each
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

MUSIC SUITE

FUNCTIONAL DATA

Description: Band and choral classrooms, MIDI and piano labs, offices, music practice

Quantity: One (1) piano lab, one (1) MIDI lab, two (2) ensemble practice rooms, one (1) practice room, one (1) music office space, one (1) instrument repair and storage, one (1) band classroom, one (1) chorus (orchestra) classroom, one band/music storage room

Users: 4-8 teachers, 124-224 students

SPATIAL DATA

Floor Area:
- 825 sq. ft. Piano lab
- 825 sq. ft. MIDI lab
- 120 sq. ft. Instrument repair and storage
- 250 sq. ft. ea Two (2) Ensemble practice rooms
- 430 sq. ft. Music office
- 1500 sq. ft. Band classroom
- 1500 sq. ft. Choral (orchestra) classroom
- 250 sq. ft. Practice room

Ceiling Height: Varies, 12'-0" in offices, practice rooms, storage, and labs
24'-0" in band and chorus

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile

Walls: Painted gypsum wallboard

Ceiling: Acoustic ceiling tile, acoustical deck, acoustical clouds

Acoustical: Acoustic ceiling tiles, wall treatments, directional baffles, sound absorption & reflection, sound reinforcement

Doors: Solid core flush wood doors with side light glazing, Solid core flush wood doors

Windows: Insulated, single-hung aluminum operable windows

HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall

Plumbing: Two (2) accessible counter top sinks

Fire Protection: Fully sprinklered fire protection system

Electrical: N/A

Lighting: Direct/ indirect pendant light fixtures

Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification

Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor in the north west wing of the building.

Adjacencies: Located directly adjacent to the Tradewinds restaurant/ kitchen and the auditorium/stage.

Orientation: Located on the east west axis facing north east, and will include appropriate sun shading/ light filtering devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Six (6) built in 36" wide, 24" deep, 84" high storage cabinets
- Two (2) built in 36" wide, 18" deep, 72" high storage cabinets
- Two (2) built in 36" wide, 24 deep, 30" high storage cabinets
- One (1) built in 33" wide, 24 deep, 30" high storage cabinets
- Two (2) built in 30" wide, 24 deep, 72" high storage cabinets
- Two (2) 36" deep base cabinets
- Ten (10) 12" solid wood wall cabinets above base cabinets and work spaces

Specialties: Eight (8) cantilever pianos; One (1) grand piano; Forty nine (49) music stands with forty nine (49) chairs; Forty nine (49) music cabinets; Ten computer work stations with twenty (20) computers and twenty (20) chairs; Two (2) 4'-0" markerboard surfaces; Twelve (12) 6'-0" markerboard surfaces; Two (2) 16'-0" markerboard surfaces; Two (2) 10'-0" markerboard surfaces; Eight (8) 4'-0" tackboard surfaces; One (1) 6'-0" tackboard surface; Choral risers; Two (2) 24" deep display cases

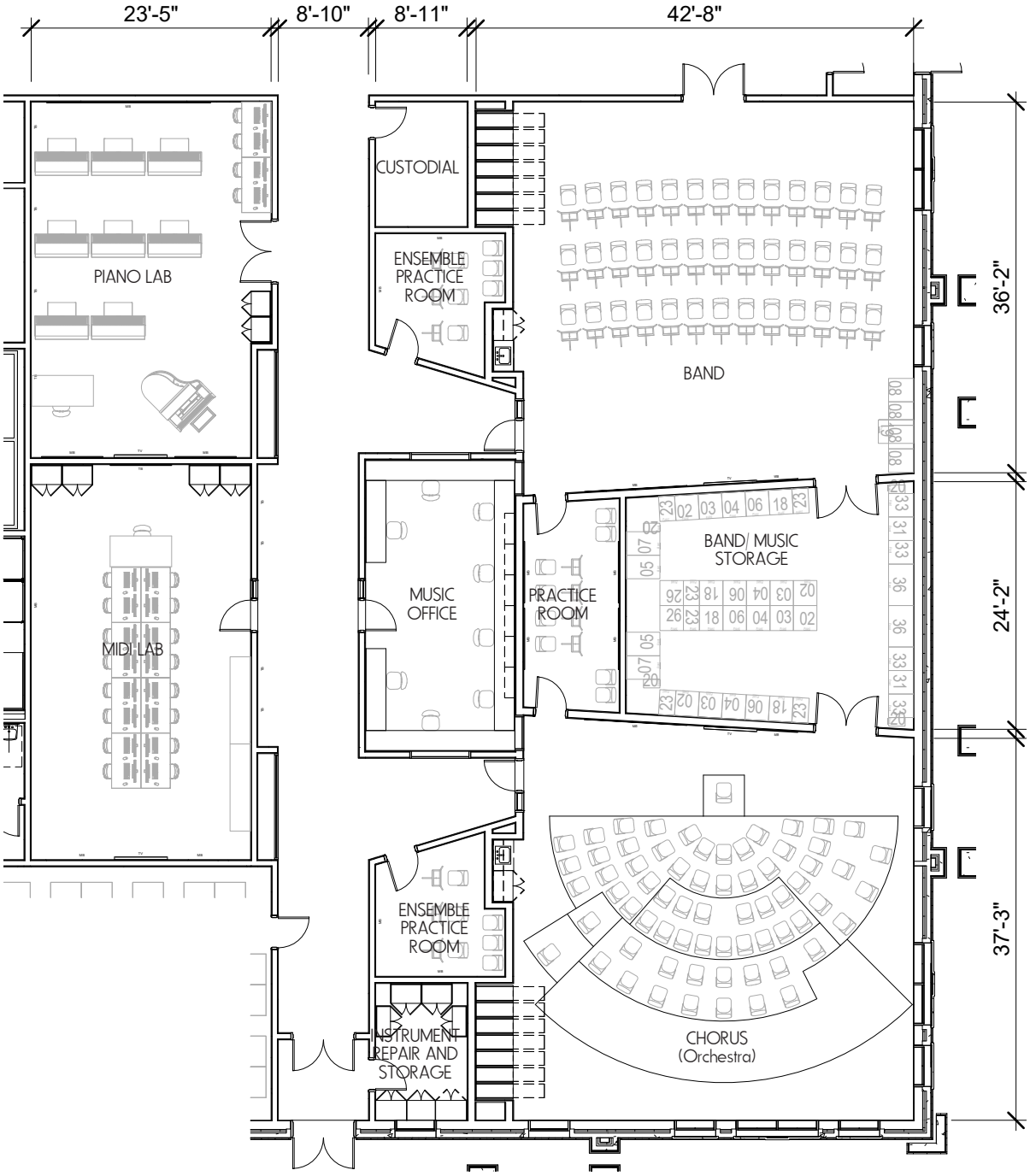
Furniture: Seventy seven (~~77~~) individual chairs; Fourteen (14) music shelves; Continuous work surfaces with eight (8) chairs; Two (2) teacher desks with two (2) chairs

Technology Equipment: (4) LCD/Data projector; Four (4) interactive displays; Presentation Camera; Amplified voice system with two (2) microphones and up to four ceiling speakers; Integrated stereo system.

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

MUSIC SUITE


23'-5"
8'-10"
8'-11"
42'-8"
36'-2"
24'-2"
37'-3"
PIANO LAB
MIDI LAB
CUSTODIAL
ENSEMBLE PRACTICE ROOM
MUSIC OFFICE
PRACTICE ROOM
BAND
BAND/ MUSIC STORAGE
ENSEMBLE PRACTICE ROOM
INSTRUMENT REPAIR AND STORAGE
CHORUS (Orchestra)

ENVIRONMENTAL SCIENCE & TECHNOLOGY

FUNCTIONAL DATA

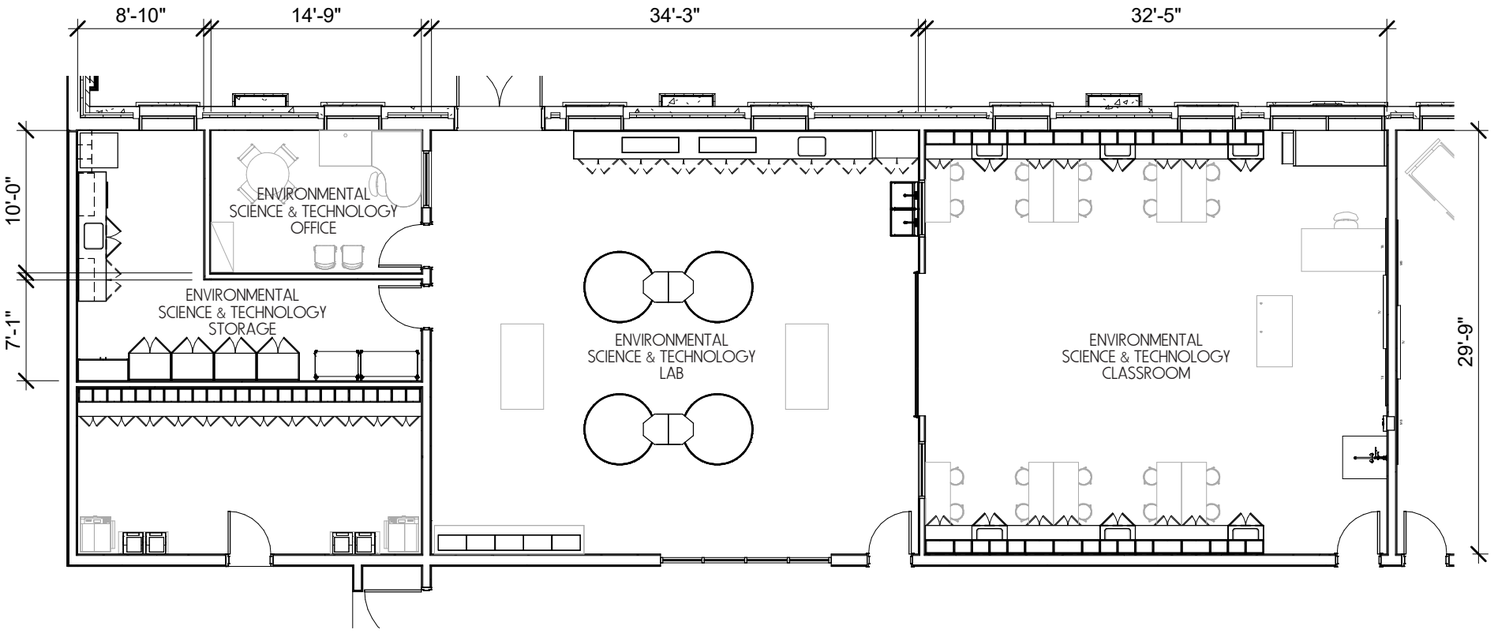
Description: Instructional Environmental Science classroom
Quantity: 1
Users: 1 faculty, 20 students

SPATIAL DATA

Floor Area: One (1) 2,000 net sq. ft. classroom & lab space
One (1) 150 sq. ft. office space
One (1) 300 sq. ft. storage space
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing, one (1) overhead coiling door
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Two (2) utility sinks, Six (6) lab sinks, one (1) Accessible lab sink, eyewash station, emergency shower station. Science sinks include cold water, gas, air and/or vacuum.
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor.
Adjacencies: Located adjacent the health assisting suite, atrium & main lobby.
Orientation: Environmental science will be oriented off of a North-South axis. All West facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Nine (9) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- Six (6) built-in, 30" wide, 24" deep solid wood base cabinets with counter top
- Ten (10) built-in, 24" wide, 24" deep solid wood base cabinets with counter top
- Ten (10) built-in, 15" wide, 24" deep solid wood base cabinets with counter top
- Four (4) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Ten (2) built-in, 24" wide, 12" deep, 72" high storage cabinets
- Twenty two (22) built-in, 15" wide, 12" deep, 72" high storage cabinets
- Three (3) built-in, 12" wide, 12" deep, 72" high storage cabinets

Specialties: One (1) biosafety cabinet; Four (4) 200 gallon culture tank; Two (2) 60 gallon fish tanks; Five (5) 20 gallon tanks; Two (2) aluminum shelving units; One (1) flammable storage cabinet; Two (2) mobile aluminum shelving units; One (1) refrigerator; One (1) under counter dishwasher
Furniture: Ten (10) mobile student lab tables with two (2) stools each; One (1) teacher's desk and chair; One (1) mobile teacher's demonstration table; Two (2) 72" wide, 36" deep desk; One (1) small work table with four (4) chairs; Two (2) individual chairs; One (1) office desk with chair
Technology Equipment:
- Two (2) Interactive classroom displays
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

D&VC: GRAPHIC ARTS

FUNCTIONAL DATA

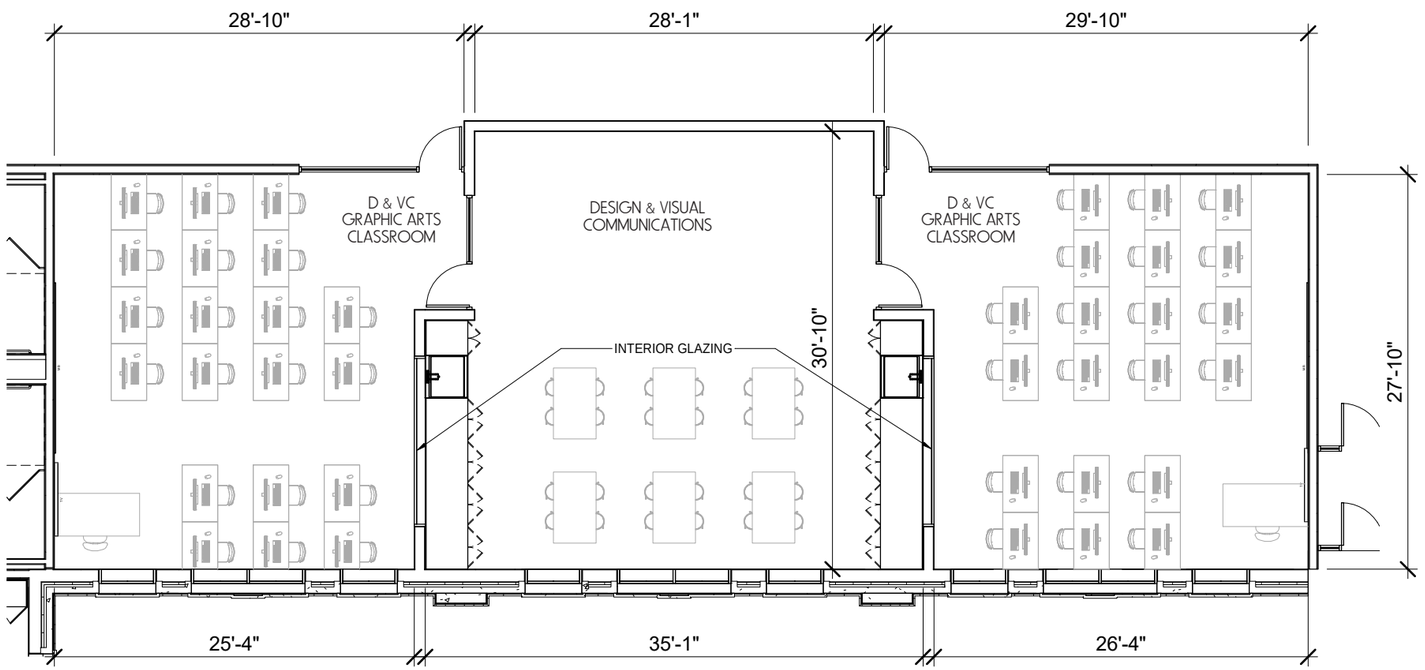
Description: Art Instructural Classrooms & Workshop
Quantity: 2 Art Classrooms, 1 Work Shop
Users: 2 faculty, 40 students

SPATIAL DATA

Floor Area: One (1) 1,000 sq. ft. design and visual communications room
Two (2) 750 sq. ft. D&VC classrooms
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Hollow metal frame door with side light glazing
Windows: Insulated, single-hung, aluminum windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Two (2) accessible stainless steel deep art sinks with hot & cold water & sediment traps
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures; task lighting at teaching wall; specialty lighting
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the arts & visual design wing.
Adjacencies: Located adjacent art classroom & athletic building connector.
Orientation: The Graphic Arts spaces will be oriented on a North-South Axis. All East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Eight (8) built-in, 36" deep, 36" wide, base cabinets with counter top
- Two (2) built-in, 36" deep, 30" wide, base cabinets with counter top

Specialties: Two (2) 12'-0" wide markerboards; Green screen; Photo studio; flat file storage cabinet for 24x36 prints
Furniture: Forty (40) student desks (equipped with computers) with chairs; Two (2) teachers desks with chairs; Six (6) work tables with 4 stools each
Technology Equipment:
- Presentation Camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers
- Integrated stereo system
- Two (2) 60" HDTV televisions

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

D&VC: FASHION DESIGN & INTERIOR DESIGN

FUNCTIONAL DATA

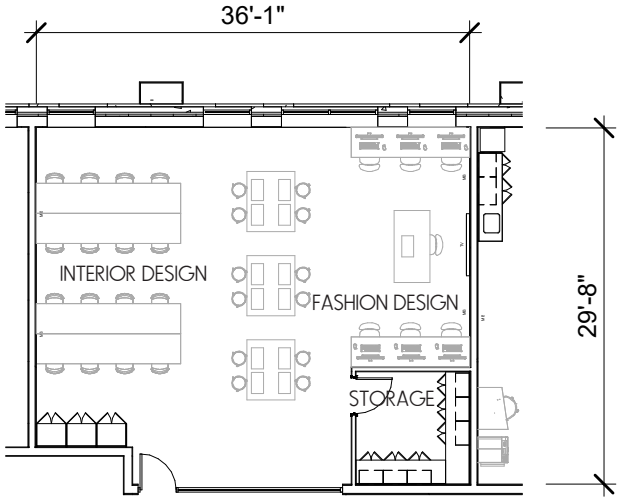
Description:	Design instructional/Fashion Design & Interior Design classrooms
Quantity:	One (1) shared classroom space One (1) storage space
Users:	1 teacher, up to 24 students

SPATIAL DATA

Floor Area:	800 sq. ft. classroom 90 sq. ft. storage space
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composition tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic Ceiling Tile
Doors:	Solid core flush wood door with side light glazing
Windows:	Insulated, single-hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power supply for sewing machines
Lighting:	Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcast, 4 speaker sound amplification
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Located on the first floor within the arts & visual design portion of the school.
Adjacencies:	Located adjacent the art & visual design classroom.
Orientation:	The Fashion Design & Interior Design classroom will be West facing & will include appropriate sun shading/light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Built-in, 24" deep base cabinets with counter top - Built-in, 14" deep wall cabinets above base cabinets - Three (3) 30" wide, 24" deep, 72" tall storage cabinets
Specialties:	Four (4) 6'-0" wide marker board surfaces; Table sewing machines
Furniture:	Three (3) student work tables with 4 stools each; Four (4) long student work tables with 4 chairs each; One (1) teachers desk with chair; Six (6) computer stations with chairs
Technology Equipment:	- Interactive classroom display - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

COSMETOLOGY

FUNCTIONAL DATA

Description:	Cosmetology instructional space
Quantity:	1
Users:	2 faculty, 24 students

SPATIAL DATA

Floor Area:	One (1) 825 sq. ft. cosmetology classroom One (1) 665 sq. ft. cosmetology facials area One (1) 130 sq. ft. cosmetology prep room One (1) 1750 sq. ft. cosmetology hair/nail area One (1) 50 sq. ft. cosmetology storage area One (1) 215 sq. ft. cosmetology lockers/break room One (1) 120 sq. ft. cosmetology waiting area
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile, porcelain tile in toilet room
Walls:	Painted gypsum wallboard, porcelain tile in toilet room
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors and aluminum storefront door
Windows:	Insulated, single-hung, aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	One ADA accessible toilet room
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power for various appliances & equipment, floor boxes for stand alone hair & nail stations
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor of the "public space" area of the school
Adjacencies:	Located adjacent to the Secondary Lobby Entrance and security office
Orientation:	Cosmetology will be oriented on an East-West axis.

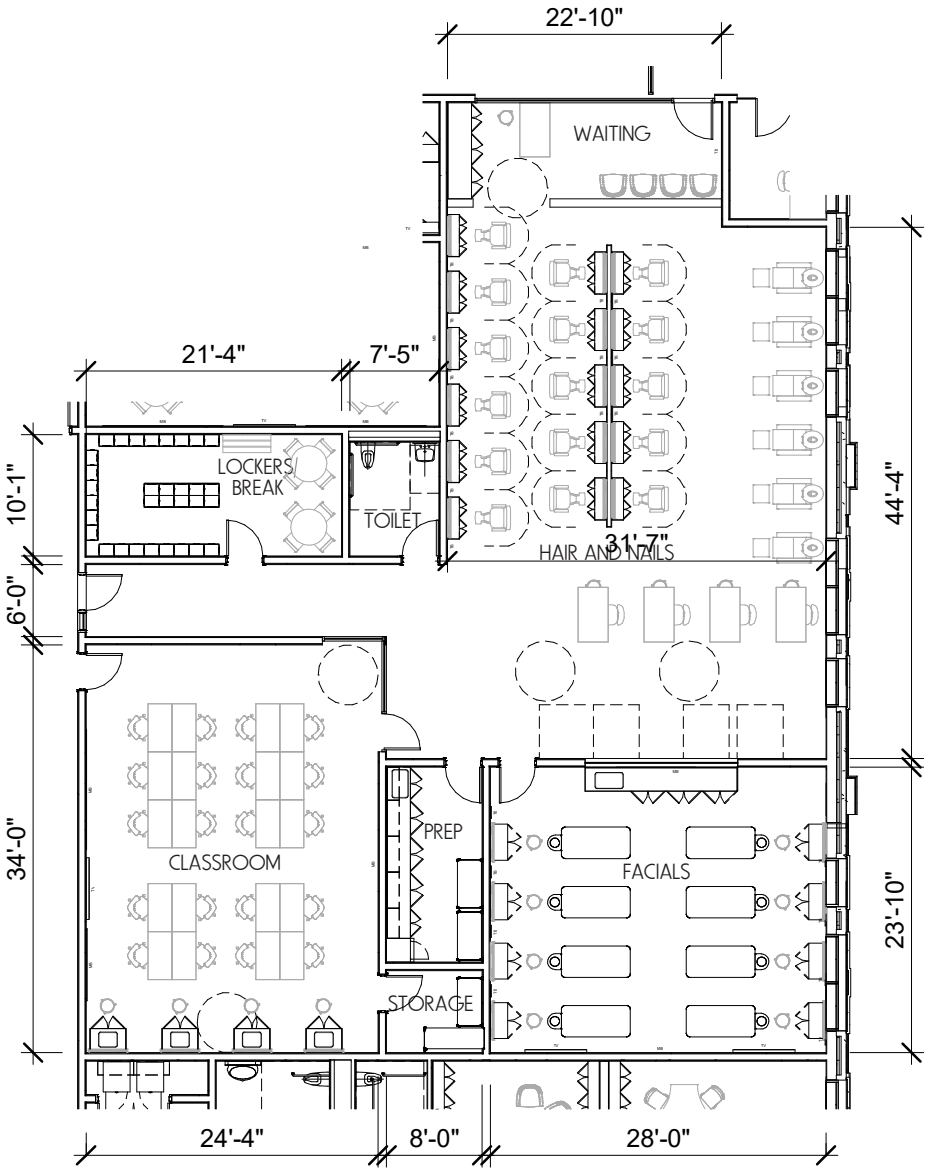
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Built-in, 12" deep work counters with storage below - Built-in, 18" deep work counters with storage below - Built-in, 24" deep work counters with sink & storage below - Built-in 24" deep base cabinets with counter top & sink - Built-in 12" deep upper cabinets - Built-in display case with transaction counter
Specialties:	Three (3) 10'-0" wide markerboards; Twenty-eight (28) 3'-0" wide, mirrors; Twenty-four (24) 1'-0" wide, tack boards; Six (6) drying stations; Four (4) gel nail stations; One (1) domestic stackable washer/dryer; Lockers
Furniture:	Sixteen (16) salon chairs; Four (4) nail stations with chair & stool; Eight (8) facial beds; Twenty (20) student desks with chairs; Two (2) round meeting tables with chairs; Open wire shelving
Technology Equipment:	- LCD/Data projector - Presentation Camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers - Integrated stereo system

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

COSMETOLOGY



EARLY EDUCATION & CARE

FUNCTIONAL DATA

Description: Early Education instructional space, observation space, kitchen & toilet rooms
Quantity: 1
Users: 8 faculty, up to 24 students

SPATIAL DATA

Floor Area: 1,200 net sq. ft. Early education & care: Preschool Lab
150 sq. ft. Early Education & Care: Kitchen
1,200 sq. ft. Early Education & Care: Youth parents learning center
255 net sq. ft. toilet rooms
665 sq. ft. Early education & Care: Theory/Planning/Observation room
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring in kitchen, preschool lab, youth learning center, vinyl composite tile in observation space, porcelain tile in toilet rooms
Walls: Painted gypsum wallboard, epoxy painted gypsum wallboard in toilet rooms
Ceiling: Acoustic ceiling tile, epoxy painted gypsum wallboard in toilet rooms
Doors: Solid core flush wood doors with side light glazing, Solid core flush wood doors for offices
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Four (4) ADA accessible toilet room, two (2) accessible sinks, connection for one (1) domestic refrigerator, connection for one (1) washing machine & one (1) drying machine
Fire Protection: Fully sprinklered fire protection system
Electrical: Power supply for various appliances including domestic dryer
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching walls, specialty accent lighting
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor within the "public space" area of the school.
Adjacencies: Located adjacent to the cosmetology suite & secondary lobby.
Orientation: Early education & care suite will be oriented on a East-West axis. All North facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Seven (7) built-in 36" wide, 24" deep solid wood base cabinets with counter top
- Thirty-two (32) built-in 30" wide, 12" deep solid wood base cabinets with counter top-
- Two (2) built-in 30" wide, 24" deep solid wood base cabinets with counter top
- One (1) built-in, 24" wide, 12" deep solid wood high storage cabinets
- Five (5) built-in 36" wide, 14" deep solid wood high storage cabinets
- One (1) built-in 36" wide, 24" deep, 84" high solid wood cabinet

Specialties: Three (3) 6'-0" wide markerboards; Three (3) 10'-0" wide markerboards; One (1) 6'-0" wide tackboard; One (1) 4'-0" wide tackboard; Thirty-one (31) single tier lockers; Six (6) baby cribs; One (1) baby changing station; Two (2) baby rocking chairs; One (1) domestic microwave; One (1) domestic washing machine; One (1) domestic dryer; One (1) domestic refrigerator

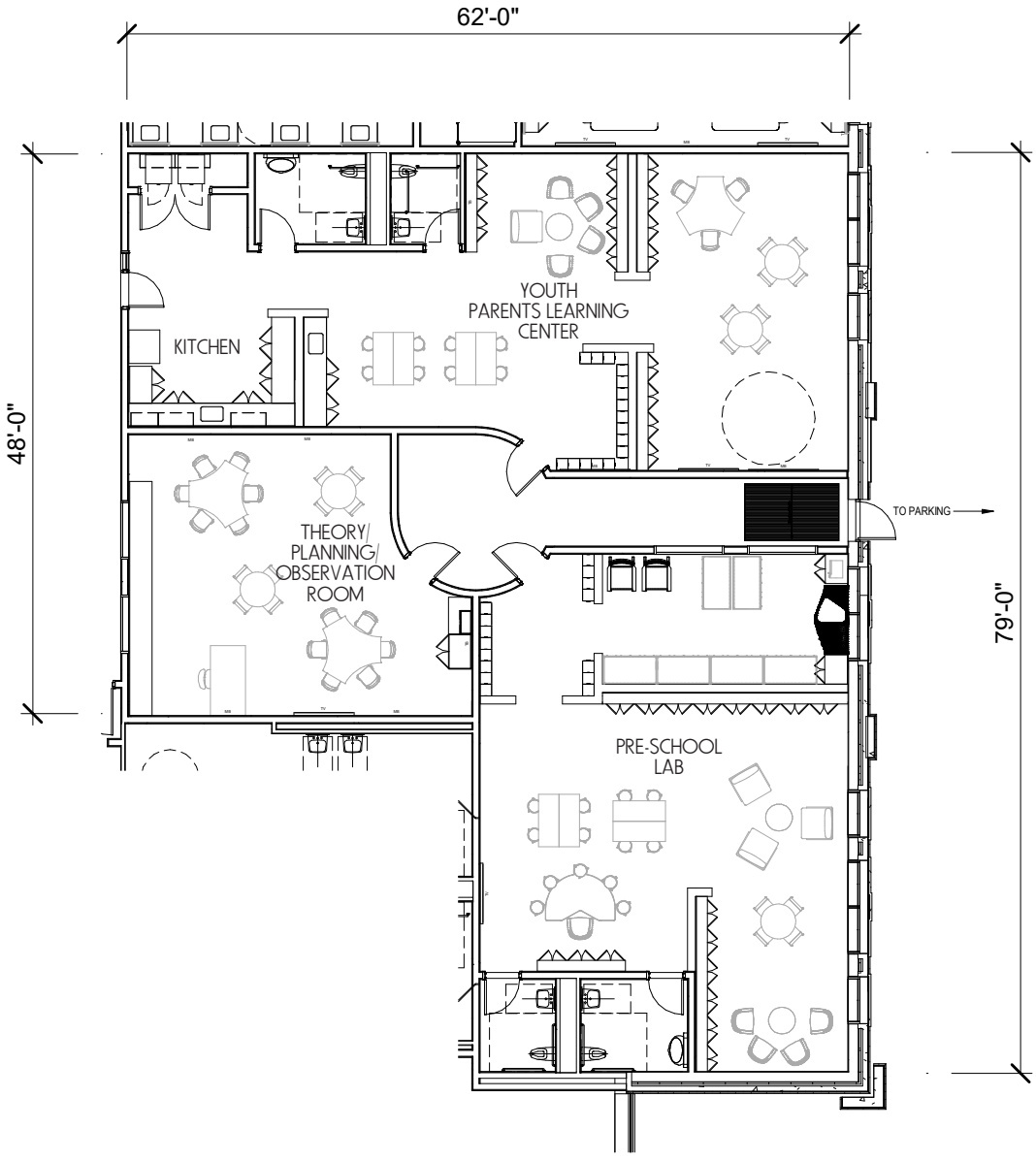
Furniture: Twelve (12) arm chairs; Three (3) small coffee tables; Eight (8) small work tables with two (2) chairs each; Five (5) round tables with four (4) chairs each; One (1) teacher's station with one (1) chair; Two (2) large work tables with six (6) chairs each; One (1) medium work table with three (3) chairs; One (1) kidney activity table with five (5) chairs

Technology Equipment:
- Two (2) interactive displays
- LCD/Data projector
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

EARLY EDUCATION & CARE



CULINARY ARTS

FUNCTIONAL DATA

Description:	Culinary serving/eating, preparing & teaching spaces
Quantity:	1
Users:	2 faculty, 24 students

SPATIAL DATA

Floor Area:	2,235 net sq. ft. restaurant/cafe space 825 sq. ft. classroom 1,200 sq. ft. kitchen/food prep space 300 sq. ft. dishwashing/storage space 125 sq. ft. mop & laundry space 300 net sq. ft. student lockers space 1,200 sq. ft. bakery space 500 sq. ft. storage space 150 sq. ft. office Four (4) accessible toilet rooms at 60 sq. ft.
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Linoleum sheet flooring in restaurant/cafe, quarry tile in kitchen/food prep, porcelain tile in toilet rooms
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic Ceiling Tile, sanitary acoustic ceiling tile in kitchen/food prep spaces
Doors:	Solid core flush wood doors with side light glazing, Solid core flush wood doors
Windows:	Insulated, single-hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning (no air conditioning in culinary prep spaces), heating and ventilation
Plumbing:	Four (4) ADA compliant toilet rooms, plumbing for various food prep equipment
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power supply for culinary prep equipment, display & transaction equipment
Lighting:	Direct/ indirect pendant light fixtures, specialty accent lighting
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor with the "public space" area of the school.
Adjacencies:	Located adjacent the Secondary Lobby entrance, Student Commons & Security Office
Orientation:	The Culinary Suite will be oriented on the North-South axis and will include appropriate sun shading/light filtering devices.

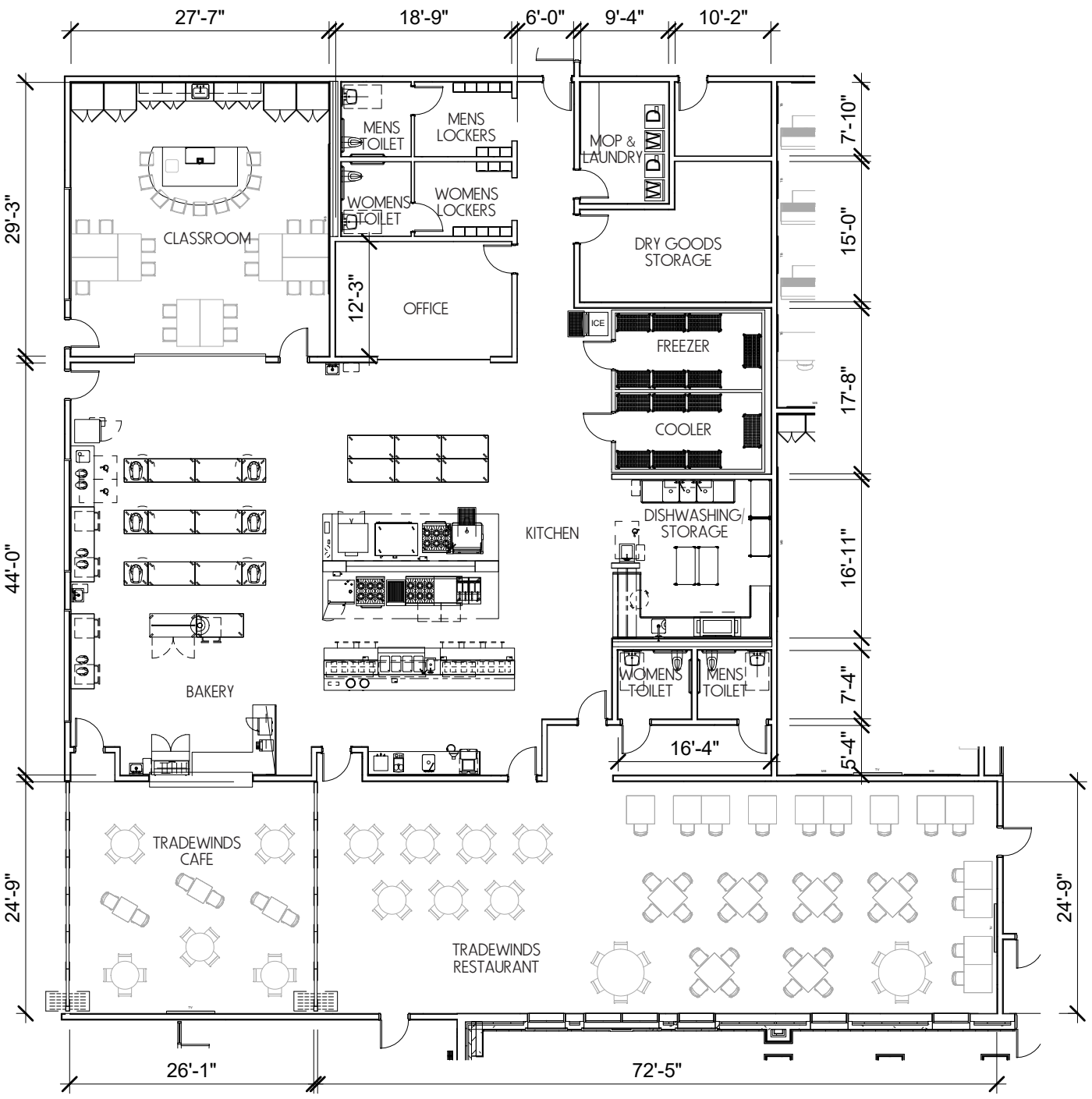
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Built-in, 24" deep base cabinets with sink & storage below - Built-in 12" deep upper cabinets above base cabinets - Built-in transaction/display counters - Four (4) 36" deep, 42" wide, 72" tall storage cabinets
Specialties:	One (1) 16'-0" marker board; Culinary prep cooking & baking equiptment; Transaction counters; Refrigerated food display; Non-refrigerated food display; Monitor display; Student lockers; Various food prep equipment; Industrial refrigerator & freezer; Industrial dishwasher; Domestic washing machines & dryers
Furniture:	Two (2) work stations style desks with chairs; Eight (8) student prep/work stations with chairs; Cafe tables with chairs; Restaurant tables with chairs
Technology Equipment:	- LCD/Data projector - Interactive classroom display - Presentation Camera - Two (2) 60" HDTV television screens - Amplified voice system with two (2) microphones and four (4) ceiling speakers - Integrated stereo system

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

CULINARY ARTS



RADIO & TELEVISION BROADCASTING (FRED TV)

FUNCTIONAL DATA

Description:	Student broadcasting suite and classroom
Quantity:	1
Users:	5 faculty, 18-24 students

SPATIAL DATA

Floor Area:	One (1) 825 sq. ft. FRED TV classroom One (1) 1400 sq. ft. FRED TV television studio One (1) 275 sq. ft. FRED TV control room Three (3) 200 sq. ft. FRED TV offices
Ceiling Height:	10'-0"

MATERIALS/ FINISH DATA

Floors:	Carpet in offices, Vinyl composite tile all other locations
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows:	Insulated, single hung, operable aluminum windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	One (1) ADA accessible toilet room, one (1) sink
Fire Protection:	Fully sprinklered fire protection system
Electrical:	CATV/School broadcasts, 4 speaker sound amplification
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor
Adjacencies:	Located adjacent to direct exterior access
Orientation:	FRED TV suite will be oriented off of a East-West axis. All south facing windows will include appropriate light filtering and/or blocking devices

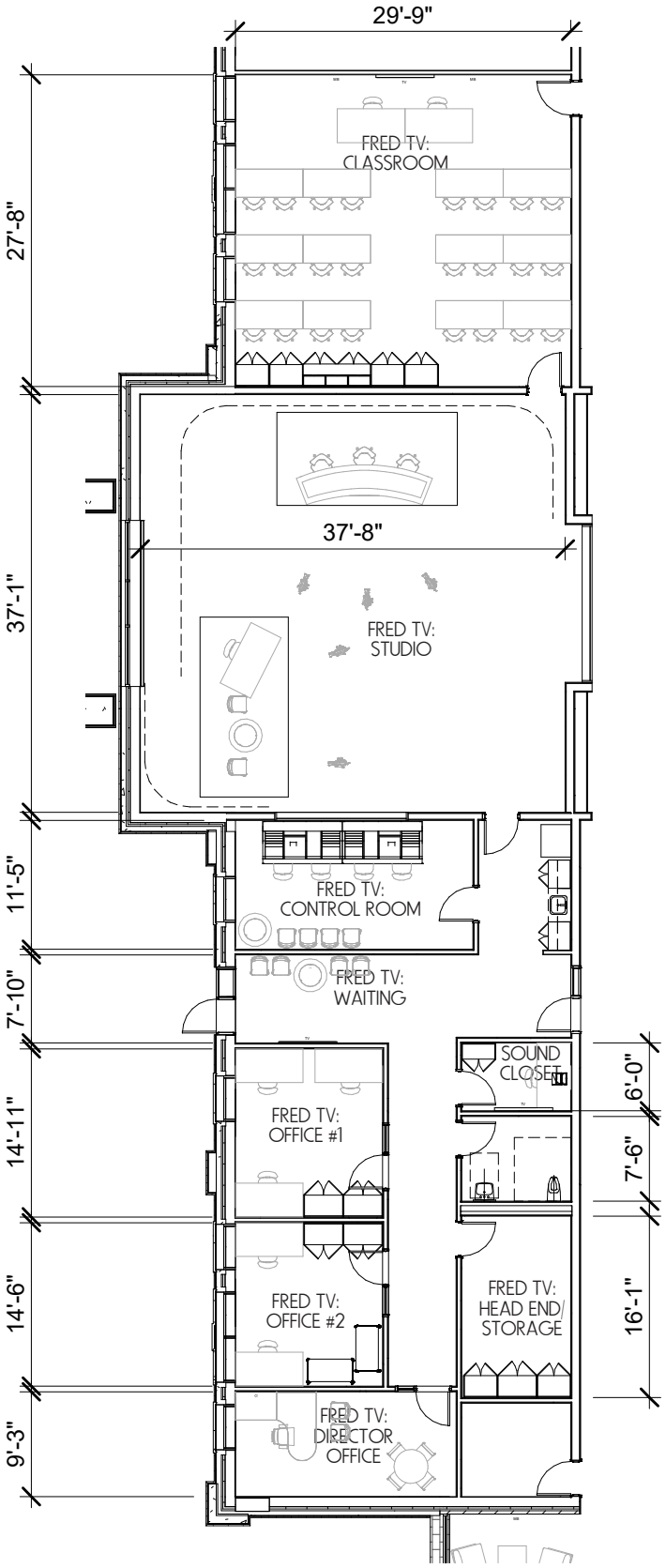
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Two (2) built-in, 36" wide, 24" deep solid wood base cabinets with counter top - Six (6) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet - Five (5) built-in, 42" wide, 24" deep, 84" high solid wood storage cabinet - One (1) built-in, 36" wide, 18" deep, 84" high solid wood storage cabinet - Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets - Two (2) built-in, 30" wide, 14" deep, 72" high storage cabinets
Specialties:	Two (2) 6'-0" wide markerboard surfaces; One (1) custom news anchor desk with three (3) anchor chairs; Five (5) broadcasting style television cameras; Two (2) green screens with curved bottoms; One (1) professional quality control room board, One (1) stainless steel domestic refrigerator, Blackout shades in TV studio
Furniture:	Twenty four (24) computer stations with chairs; Two (2) teacher's desks with chairs; sixteen (16) individual chairs; three (3) end tables; Six (6) office style desks with chairs; One (1) small work table with four (4) chairs; Two (2) aluminum shelving units
Technology Equipment:	- Two (2) Interactive displays - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers - Audio output to T.V. control room

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

RADIO & TELEVISION BROADCASTING (FRED TV)



HEALTH ASSISTING

FUNCTIONAL DATA

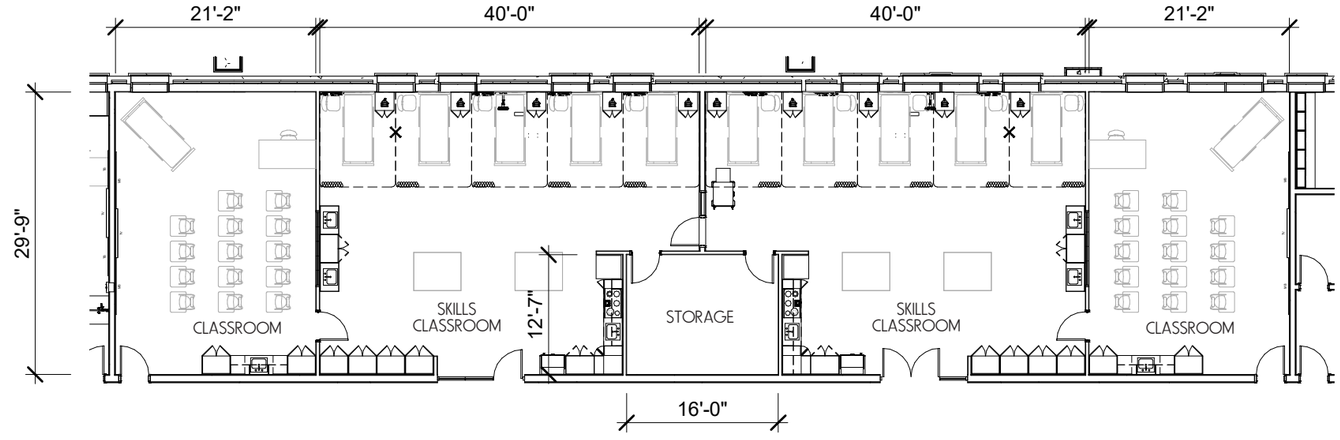
Description: Instruction Health Assisting classrooms & Skill classrooms
Quantity: Two (2) classrooms
Two (2) skills classroom spaces
One (1) storage space
Users: 2 Faculty, up to 28 students

SPATIAL DATA

Floor Area: Two (2) 625 sq. ft. classrooms
Two (2) 1,100 sq. ft. skills classrooms
200 sq. ft. storage space
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic Ceiling Tile
Doors: Solid core flush wood doors with side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Seven (7) accessible counter top sinks
Fire Protection: Fully sprinklered fire protection system
Electrical: Power for various appliances including refrigerators
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching walls
Communications: Telephone, digital clock, internet access, wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the core academic area.
Adjacencies: Located adjacent the Administration suite & Early Education & Care suite.
Orientation: The Health Assisting classrooms will East facing on an East-West axis. All East facing windows will include appropriate sun shading/light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Built-in 24" deep, solid wood base cabinets with counter top
- Built-in 12" deep, solid wood wall cabinets
- Twelve (12) 36" wide, 24" deep, 84" tall storage cabinets

Specialties: Four (4) 6'-0" marker boards; Ceiling mounted curtains; Patient beds; Wall mounted ophthalmoscopes; Medical bed side carts; Domestic refrigerator/freezers; Wall ovens; Stove-tops; Refrigerators
Furniture: Bedside chairs; Twenty-eight (28) student desks with chairs, Two (2) teachers desks with chairs; Bedside drawers/storage
Technology Equipment:
- Two (2) Interactive classroom displays
- Presentation Camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Rooms shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

ENGINEERING TECHNOLOGY

FUNCTIONAL DATA

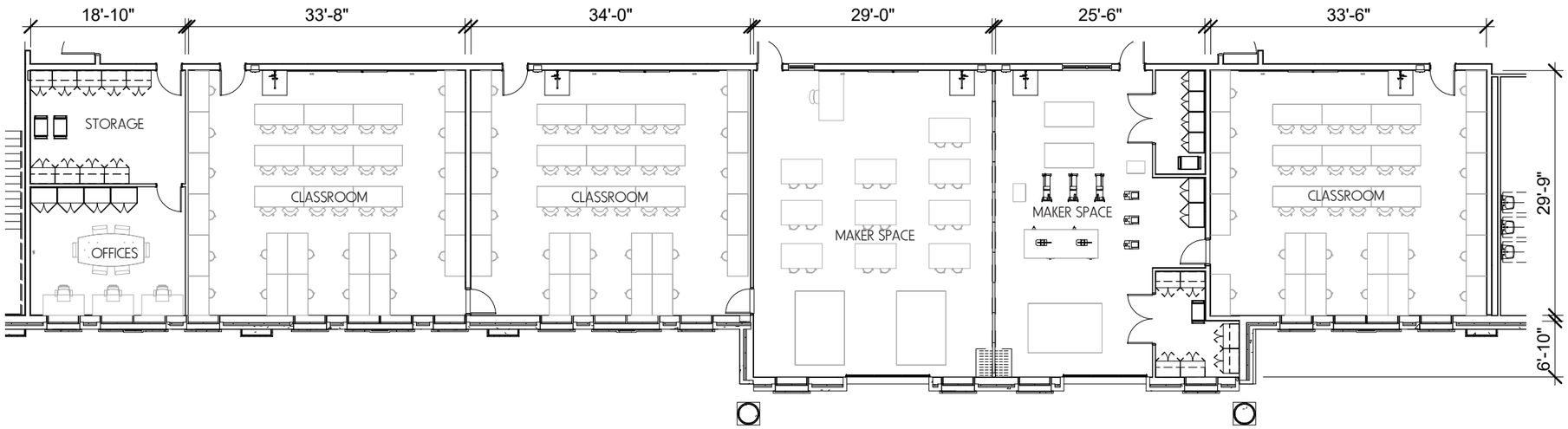
Description: Instructional classrooms & maker spaces
Quantity: Three (3) classrooms, two (2) maker spaces, three (3) storage spaces, one (1) office
Users: 3 Faculty, up to 24 students per classroom

SPATIAL DATA

Floor Area: 450 sq. ft. Storage room
300 sq. ft. Offices
1800 sq. ft. Maker space
Three (3) 1000 sq. ft. Classrooms
Ceiling Height: Exposed in classrooms & maker spaces 12'-0" acoustic ceiling tile at office

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile in classrooms and offices, polished concrete in maker spaces and storage room
Walls: Painted gypsum wallboard, porcelain tile, operable folding panel partitions at maker spaces
Ceiling: Exposed painted white, Acoustic ceiling tile at office
Doors: Solid core flush wood doors, overhead coiling doors
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Emergency shower/ eye washing station, exterior spigot connection
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access,
wireless access, PA speakers, Document camera,
CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the core academic area.
Adjacencies: Located adjacent the atrium and the secondary lobby.
Orientation: Engineering technology will be oriented facing east and will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Built-in 24" deep, solid wood base cabinets with counter top
- Built-in 12" deep, solid wood wall cabinets above base cabinets
  - Four (4) 39" wide, 24" deep, 72" high tall cabinets
  - Four (4) 30" wide, 24" deep, 72" high tall cabinets

Specialties: Eight (8) 6'-0" wide marker boards; portable storage carts; Five (5) fire extinguisher cabinets; Folding operable partition wall
Furniture: Nine (9) student work stations with two (2) chairs per classroom; Eight (8) student desks with eight (8) stools per classroom; One (1) 8'-0" conference table with six (6) chairs; Three (3) work style desks with three (3) chairs; Ten (10) student work tables with twenty (20) chairs; One (1) teacher's desk with one (1) chair.
Technology Equipment: LCD/Data Projector; Presentation Camera; Amplified voice system with two (2) microphones and four (4) ceiling speakers; Four (4) interactive classroom displays

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

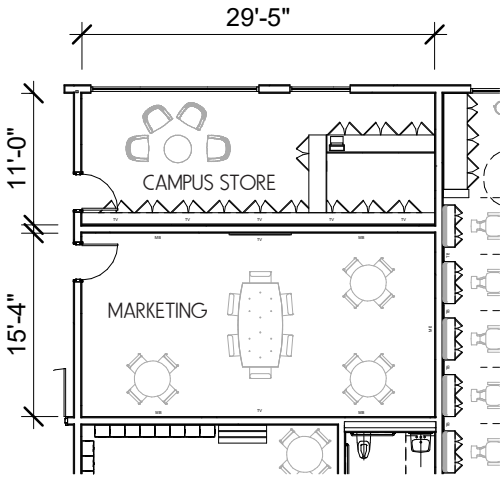
CAMPUS STORE / MARKETING

FUNCTIONAL DATA

Description: Campus store with marketing classroom
Quantity: 1
Users: 1 teacher, 12-18 students

SPATIAL DATA

Floor Area: One (1) 350 sq. ft. campus store
One (1) 250 sq. ft. marketing room
Ceiling Height: 12'-0"



MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall, specialty lighting in campus store
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcast, 4 speaker sound amplification
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor within the "public space" portion of the school.
Adjacencies: Located adjacent to the Secondary Lobby entrance and student commons.
Orientation: The Campus Store and Marketing Classroom will be oriented off of a North-South axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Nine (9) built-in, 36" wide, 12" deep solid wood base cabinets with counter top
- Four (4) built-in, 36" wide, 18" deep solid wood base cabinets with counter top
- Built-in display case/transaction counter

Specialties: Five (5) 10'-0" wide marker boards
Furniture: One (1) conference table with six (6) chairs; Three (3) round meeting tables with 4 chairs; Soft seating, One (1) round coffee table
Technology Equipment:
- Interactive classroom display
- Seven (7) 60" HDTV television screens
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

CONSTRUCTION CRAFT & LABORER

FUNCTIONAL DATA

Description:	Construction shop instructional & classroom space
Quantity:	Two (2) workshop spaces One (1) classroom space One (1) design build studio One (1) finishing room One (1) tool storage space Two (2) caged tool storage spaces
Users:	2 faculty, up to 24 students

SPATIAL DATA

Floor Area:	Two (2) 2,500 sq. ft. workshop spaces 550 sq. ft. classroom space 825 sq. ft. design build space 200 sq. ft. finishing room space 500 net sq. ft. storage space
Ceiling Height:	30'-0" to structural deck

MATERIALS/ FINISH DATA

Floors:	Polished concrete
Walls:	Painted gypsum wallboard
Ceiling:	Exposed, painted white
Doors:	Solid core flush wood doors with transom and side light glazing, overhead coiling doors and aluminum storefront door
Windows:	Insulated, single-hung aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing:	Two (2) utility sinks, Two (2) emergency shower/eye washing station. Sinks to have hot & cold water with sediment trap
Fire Protection:	Fully sprinklered fire protection system
Electrical:	Power supply for shop machines & dust collectors
Lighting:	Direct/ indirect pendant light fixtures, task lighting at teaching walls
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Presentation camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor within the pre-engineered portion of the building.
Adjacencies:	Located adjacent the Auditorium, exterior access
Orientation:	Construction Craft Laborer will be West & North facing & will include appropriate sun shading/light filtering devices.

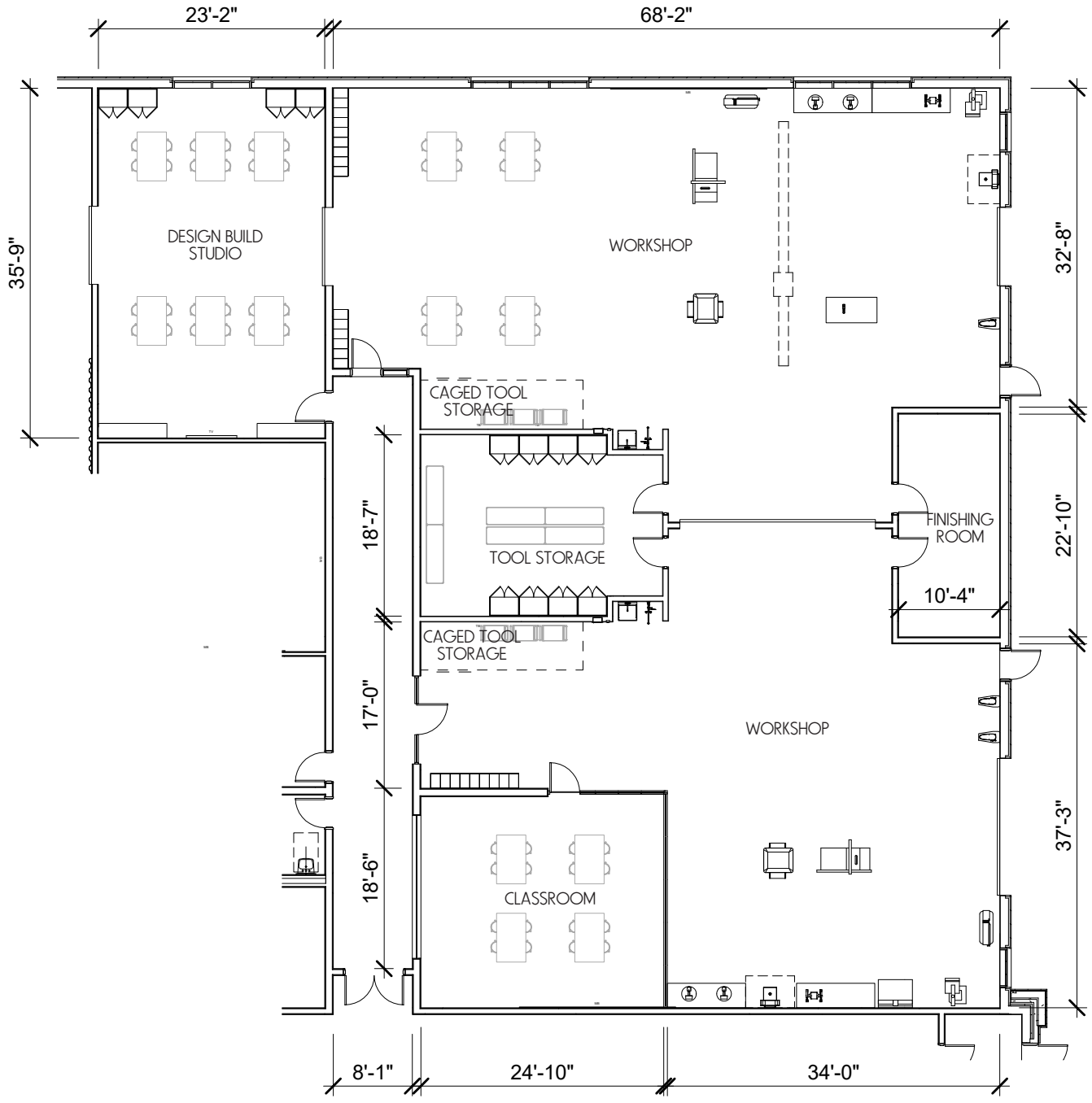
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Built-in, solid wood book shelves - Twelve (12) 36" wide, 24" deep, 84" tall storage cabinets
Specialties:	Two (2) 6'-0" wide marker boards; Two (2) 16'-0" wide marker boards; Two (2) 6'-0" wide tack boards; peg boards for tool storage; Heavy-duty storage shelving; Portable Tool/storage carts; Fire extinguisher cabinets; Student lockers; Finishing/spray booth; Wood working tools; Lumber storage; Dust collectors
Furniture:	Fourteen (14) student work tables with 4 stools each; Work tables with tools
Technology Equipment:	- LCD/Data projector - Interactive classroom display - Presentation Camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

CONSTRUCTION CRAFT & LABORER



ROTC

FUNCTIONAL DATA

Description:	ROTC Suite
Quantity:	2 Classrooms, 1 Office, 1 Storage Room
Users:	2-3 Faculty, 30-36 Students

SPATIAL DATA

Floor Area:	Two (2) 825 sq. ft. ROTC classrooms One (1) 500 sq. ft. ROTC storage room One (1) 375 sq. ft. ROTC offices/kitchen
Ceiling Height:	12'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic Ceiling Tile
Doors:	Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows:	Insulated, single-hung, aluminum operable windows
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	One (1) accessible sink
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures, task lighting at teaching walls
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School Broadcasts, PA speakers
Lockset:	TBD

ORGANIZATIONAL DATA

Location:	Located on the first floor close to the Athletic building connector
Adjacencies:	Located adjacent to the courtyard, gymnasium
Orientation:	ROTC suite will be oriented on a North-South axis.

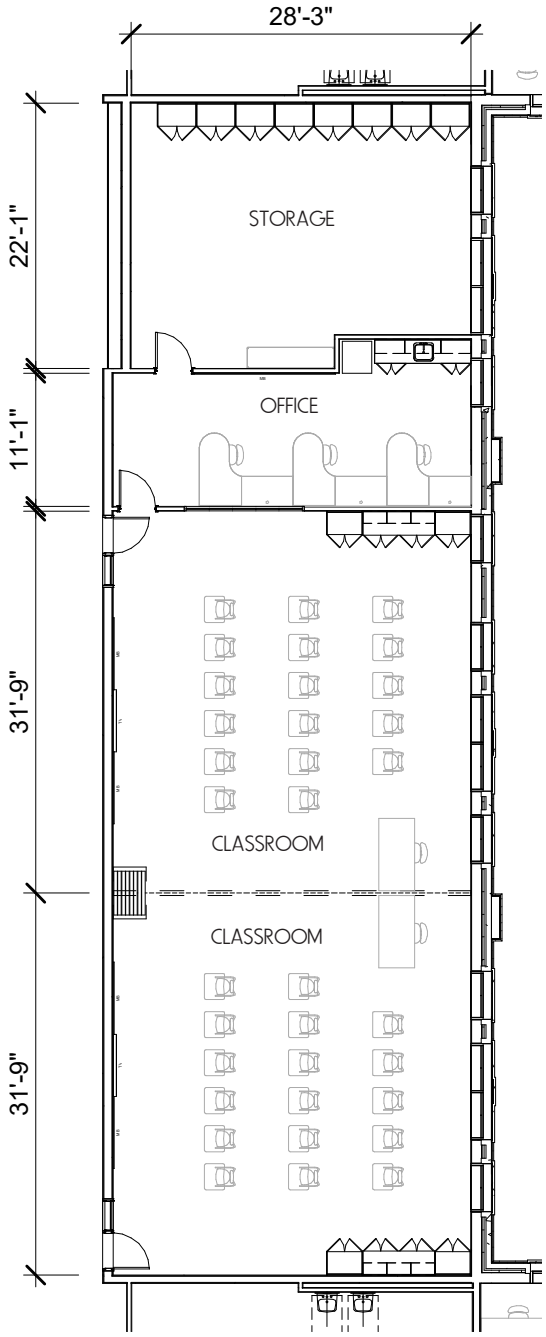
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	- Four (4) built-in, 36" wide, 24" deep solid wood base cabinets with counter top - Six (6) built-in, 36" wide, 12" deep, 24" high solid wood upper cabinets - Eight (8) built-in, 39" wide, 24" deep, 72" high solid wood storage cabinet - Two (2) built-in, 30" wide, 24" deep solid wood base cabinets with counter top and sink - Three (3) built-in, 30" wide, 14" deep, 24" high solid wood upper cabinets - Four (4) built-in, 36" wide, 24" deep, 84" high storage cabinets
Specialties:	Four (4) 6'-0" wide marker board surfaces; One (1) 12'-0" wide marker board surface; Operable partition wall
Furniture:	Thirty four (34) student desks with chairs; Two (2) teacher desks with chairs; Three (3) office desks with chairs; One (1) metal open shelf; One (1) under counter safe; One (1) domestic refrigerator/freezer
Technology Equipment:	- Two (2) interactive classroom displays - Presentation camera - Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol

ROTC



GYMNASIUM

FUNCTIONAL DATA

Description: Seating, performance, and athletic space for 2500 users, including students, staff, public
Quantity: 1
Users: Fixed seating for approximately 2500 students, faculty, and public

SPATIAL DATA

Floor Area: 25,~~477~~ net square feet
Ceiling Height: Exposed 31'-4" to structural deck

MATERIALS/ FINISH DATA

Floors: Urethane athletic flooring
Walls: Concrete masonry units, painted veneer plaster on gypsum wall board, wall pads
Ceiling: Exposed structural deck
Doors: Hollow metal doors & solid core flush wood doors
Windows: Insulated, aluminum curtain wall
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: Scoreboards
Lighting: High bay pendant fixtures
Communications: Telephone, digital clock, internet access wireless access, distributed sound system, assisted listening system
Lockset: TBD

ORGANIZATIONAL DATA

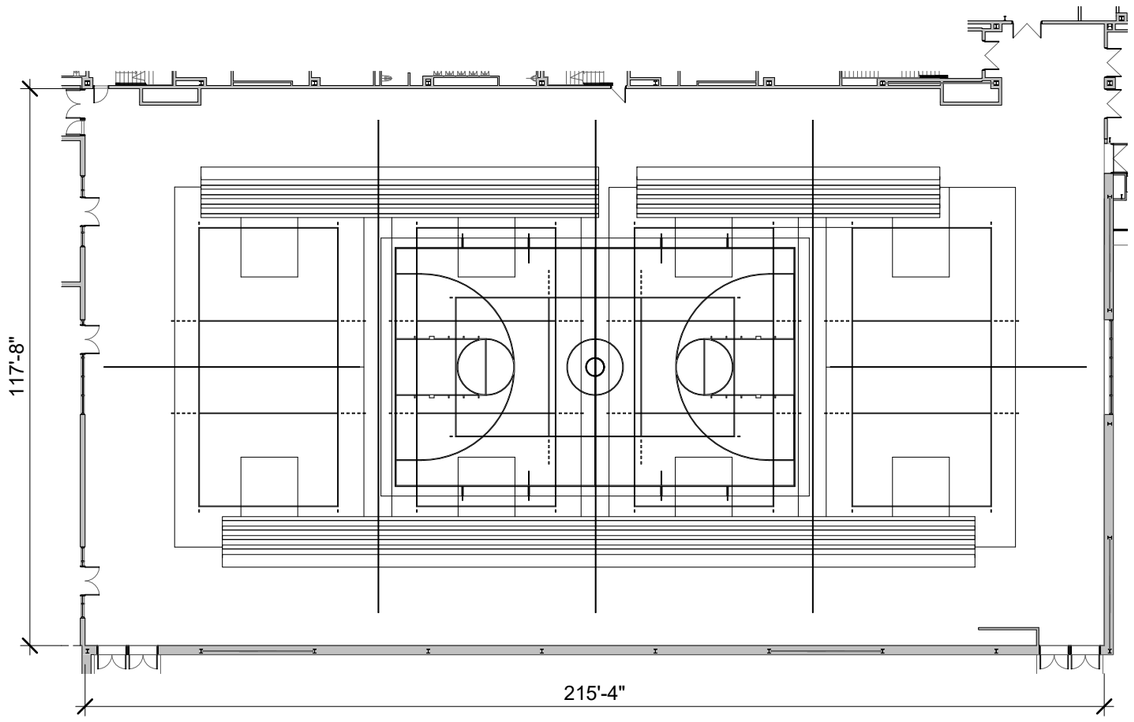
Location: Located on the first floor within the "public space" portion of the building as part of the existing athletic building
Adjacencies: Located in the north-east side of the existing athletic building adjacent to the main existing athletic building entry and the fitness rooms
Orientation: The gymnasium is oriented along the north-south axis and will include appropriate sun shading/ light filtering devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - N/A
Specialties: - Acoustic wall panels; Wall pads; Bleachers; Gym equipment; Divider curtains; Basketball hoops
Furniture: - N/A
Technology Equipment: - Interactive white board or projector infrastructure; Amplified voice system with two (2) microphones and up to four (4) ceiling speakers; Audio output to T.V. control room; Ten (10) interactive displays

OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol



POOL

FUNCTIONAL DATA

Description: Indoor athletic pool for 317 users, including students, staff, public
Quantity: 1
Users: Fixed seating for approximately 317 students, staff, and public

SPATIAL DATA

Floor Area: 6,742 net square feet
Ceiling Height: Exposed 31'-4" to structural deck

MATERIALS/ FINISH DATA

Floors: Porcelain Tile
Walls: Concrete masonry units
Ceiling: Exposed structural deck
Doors: Hollow metal doors
Windows: Insulated, aluminum curtain wall system
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: Pool filling/ drainage systems
Fire Protection: Fully sprinklered fire protection system
Electrical: Scoreboards
Lighting: High bay pendant fixtures
Communications: Telephone, digital clock, internet access wireless access, distributed sound system, assisted listening system
Lockset: TBD

ORGANIZATIONAL DATA

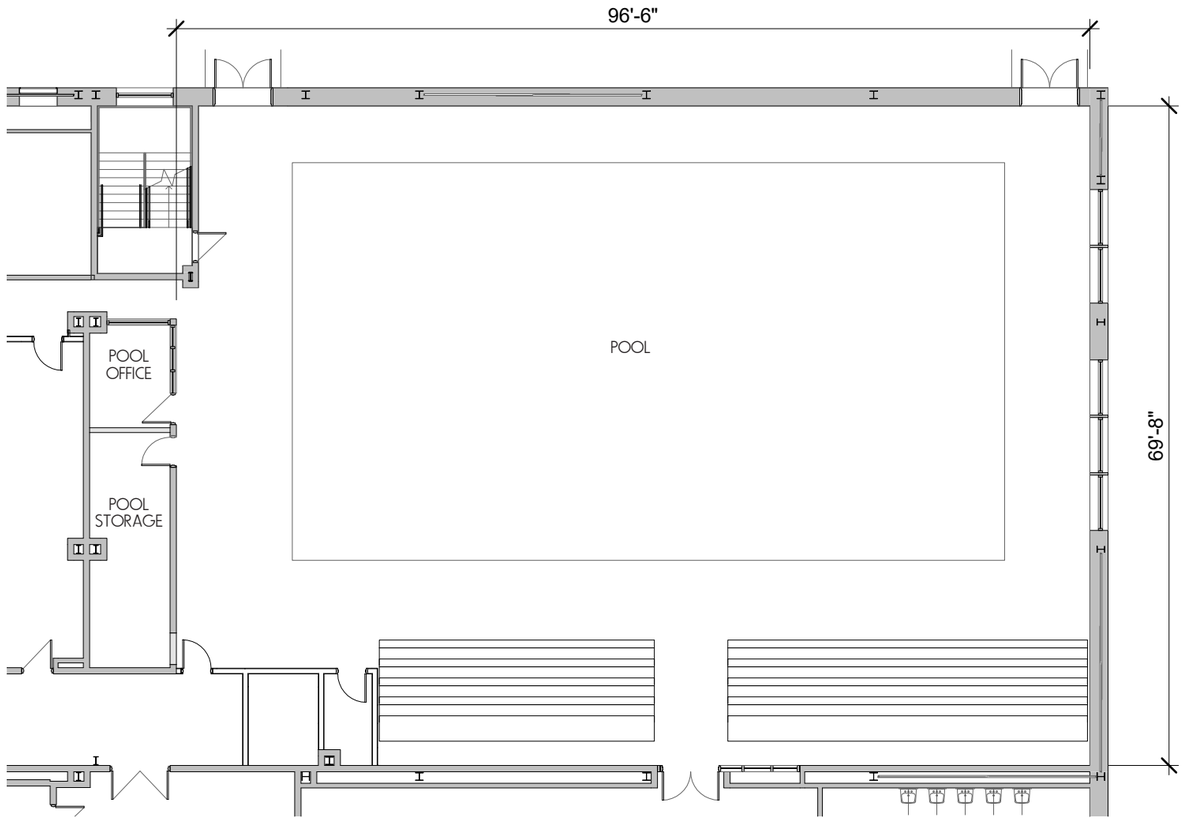
Location: Located in the "public space" area of the building as part of the existing athletic building.
Adjacencies: Located in the north-west corner of the existing athletic building directly adjacent to the main existing athletic building entry.
Orientation: The pool is oriented along the north-south axis and will include appropriate sun shading/ light filtering devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - N/A
Specialties: - Bleachers; Pool equipment
Furniture: - N/A
Technology Equipment: - Interactive white board or projector infrastructure; Presentation camera; Amplified voice system with two (2) microphones and up to four (4) ceiling speakers; Audio output to T.V. control room; Ten (10) interactive displays

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol



FITNESS ROOMS

FUNCTIONAL DATA

Description:	Fitness and weight training space
Quantity:	2
Users:	Up to 50 students

SPATIAL DATA

Floor Area:	2300 sq. ft. at fitness room #1, 1116 sq. ft. at fitness room #2
Ceiling Height:	22'-0" At fitness room #1 10'-0" At fitness room #2

MATERIALS/ FINISH DATA

Floors:	Rubber floor
Walls:	Epoxy painted gypsum wallboard
Ceiling:	Acoustic ceiling tile, painted gypsum wallboard soffits
Doors:	Solid core flush wood doors
Windows:	Interior curtain wall system
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures
Communications:	Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcast, 4 speaker sound amplification
Lockset:	TBD

ORGANIZATIONAL DATA

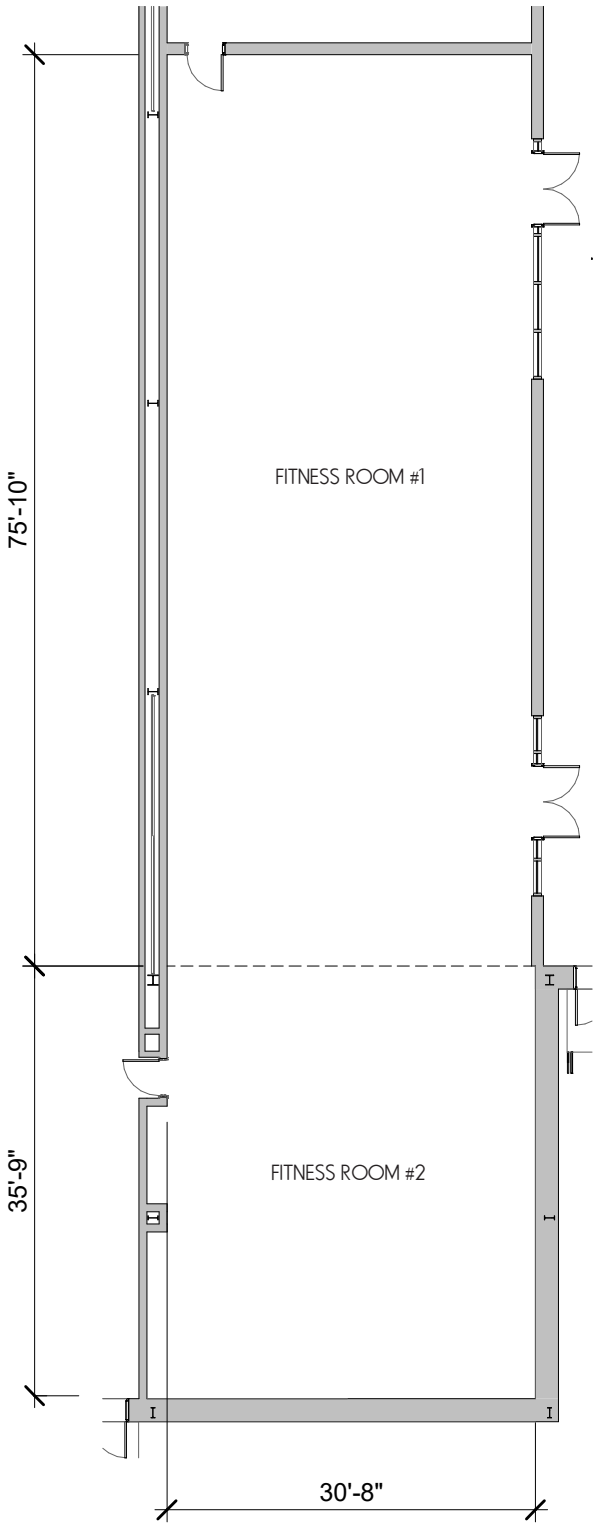
Location:	Located on the first floor of the existing athletic building.
Adjacencies:	Located adjacent to the gymnasium and health classrooms.
Orientation:	The fitness rooms will be oriented on a North-South axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	One (1) 8'-0" wide; markerboard; One (1) 6'-0" wide, marker board; Six (6) 8'-0" wide mirrors
Furniture:	Free weight equipment; Exercise bicycles; Treadmills; Elliptical machines; Universal weight machines; Exercise benches; Rowing machines
Technology Equipment:	- Sound system - Two (2) interactive displays - LCD/ data projectors

OTHER

Security:	- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards - Room shall have public address speaker & secondary means of communication - Hardware to be compatible with district's lock down protocol



WELLNESS CENTER - DANCE STUDIO

FUNCTIONAL DATA

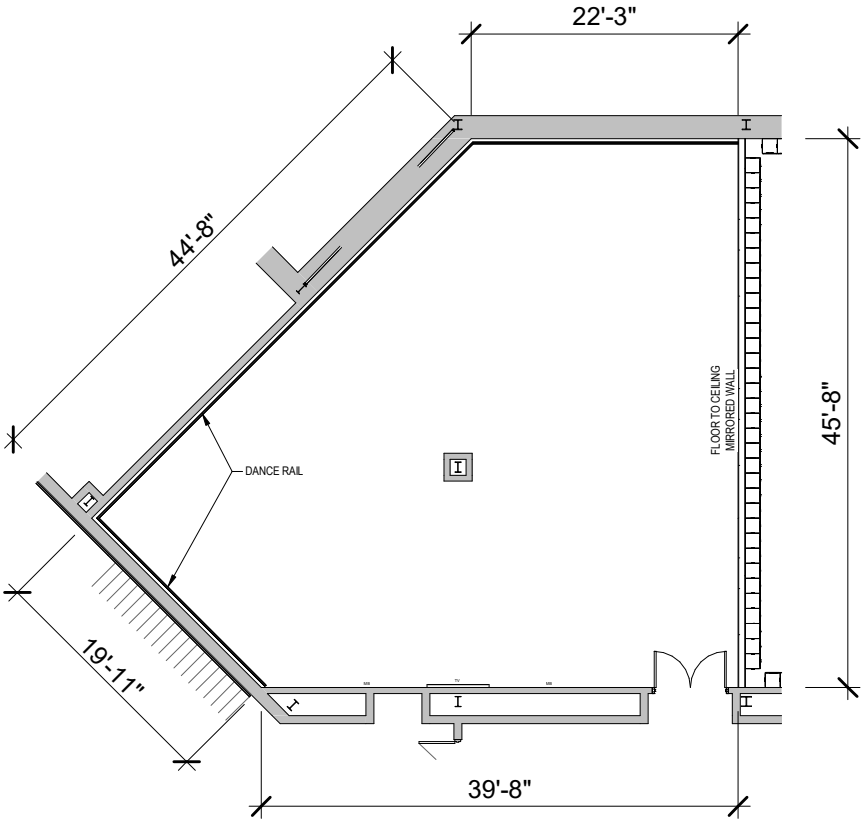
Description: Instructional dance studio
Quantity: 1
Users: 1 teacher, 24 students

SPATIAL DATA

Floor Area: 2,304 Net Square Feet
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Laminate wood floor
Walls: Painted gypsum wallboard, mirror walls
Ceiling: Acoustic Ceiling Tile
Doors: Solid core flush wood doors
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcast, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the second floor of the existing Athletic Building
Adjacencies: Located adjacent to the girls locker room & stairway to the Gymnasium
Orientation: The wellness center - dance studio will be oriented on a North-South axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - N/A
Specialties: Continuous dance rail; Full height mirrored walls; Two (2) 8'-0" wide markerboard surfaces
Furniture: - N/A
Technology Equipment: - Presentation camera
- One (1) 60" interactive classroom display
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the district's current visibility standards.
- Room shall have public address speaker & secondary means of communication.
- Hardware to be compatible with district's lock down protocol.

BOYS LOCKER & SHOWER ROOMS

FUNCTIONAL DATA

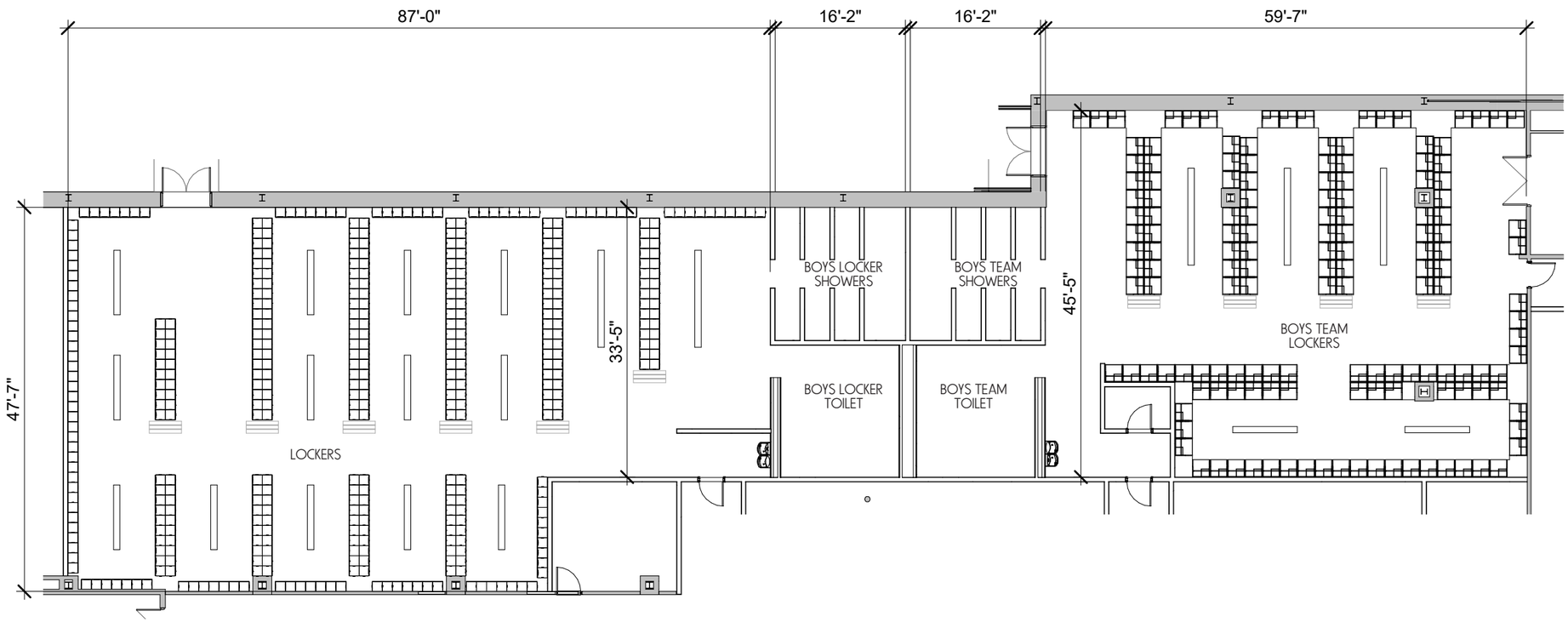
Description: Boys locker rooms, showers, and toilet rooms for sport education & activity
Quantity: 1 Boys team lockers space, 1 general locker room, 2 boys locker showers, 2 boys team toilets
Users: Students and visiting school teams; staff

SPATIAL DATA

Floor Area: 6849 net sq. ft. of boys locker room
488 net sq. ft. of boys shower and drying area
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Rubber flooring in the locker rooms, porcelain tile in the shower/toilet rooms
Walls: Epoxy painted gypsum wallboard in locker and toilet rooms, porcelain tile in shower rooms
Ceiling: Acoustic Ceiling Tile, epoxy painted gypsum wallboard
Doors: Solid core flush wood doors, hollow metal exterior door
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ventilation for shower and toilet rooms
Plumbing: Include plumbing for two (2) group toilet rooms and two (2) group shower rooms; two (2) drinking fountains
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: 2'x4' Recessed lights.
Communications: Telephone, digital clock, internet access, wireless access, PA speakers, CATV/School broadcasts
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor of the existing athletic building.
Adjacencies: Located adjacent to the gymnasium and P.E. storage.
Orientation: The boys locker room will be oriented on a North-South axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: N/A
Specialties: One (1) 6'-0" wide white board and one (1) 4'-0" white board per locker room
Furniture: Benches in locker rooms; Four hundred and fifteen (415) standard 15" wide, 15" deep double tier lockers; One hundred and forty-nine (149) team style lockers
Technology Equipment: N/A

OTHER

Security: - Rooms to have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

GIRLS LOCKER & SHOWER ROOMS

FUNCTIONAL DATA

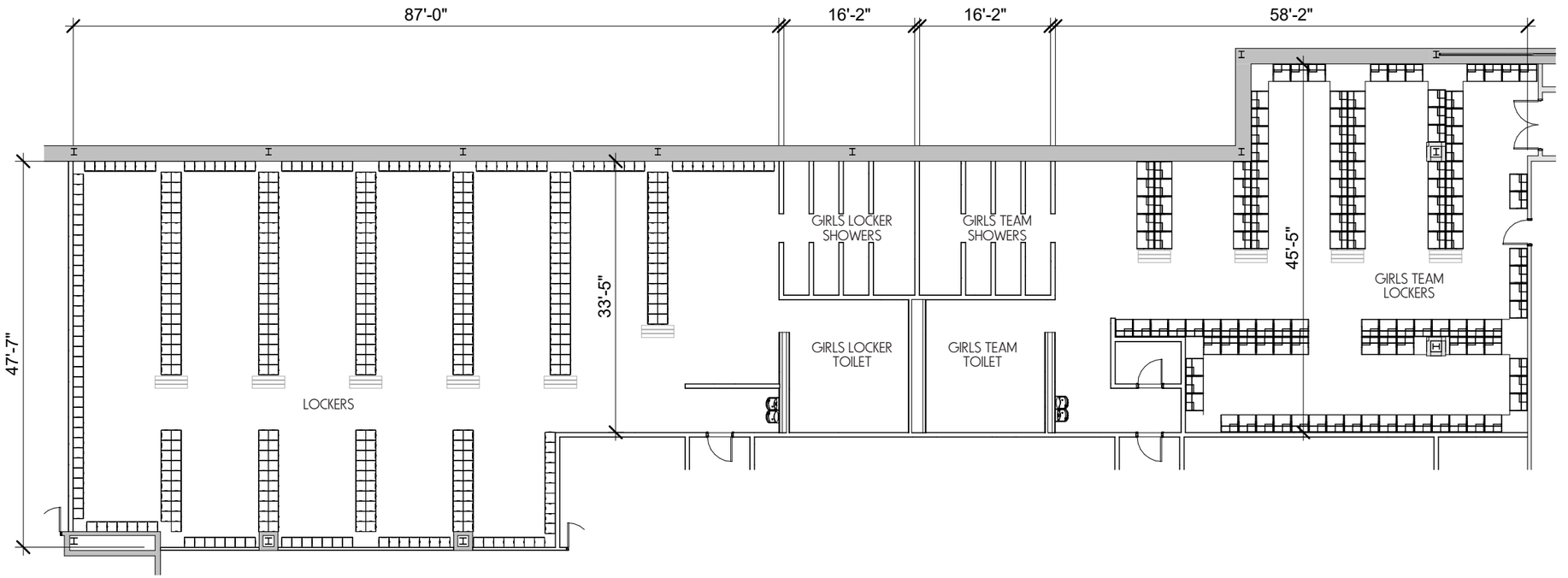
Description: Girls locker rooms, showers, and toilet rooms for sport education & activity
Quantity: 1 Girls team lockers space, 1 general locker room, 2 girls locker showers, 2 girls team toilets
Users: Students and visiting school teams; staff

SPATIAL DATA

Floor Area: 6500 net sq. ft. of girls locker room
488 net sq. ft. of girls shower and drying area
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Rubber flooring in the locker rooms, porcelain tile in the shower/toilet rooms
Walls: Epoxy painted gypsum wallboard in locker and toilet rooms, porcelain tile in shower rooms
Ceiling: Acoustic Ceiling Tile, epoxy painted gypsum wallboard
Doors: Solid core flush wood doors,
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ventilation at toilet & shower rooms
Plumbing: Include plumbing for two (2) group toilet rooms and two (2) group shower rooms, two (2) drinking fountains
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: 2'x4' Recessed lights.
Communications: Telephone, digital clock, internet access, wireless access, PA speakers, CATV/School broadcasts
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the second floor of the existing athletic building.
Adjacencies: Located adjacent to the wellness center/dance studio & gymnasium.
Orientation: The girls locker room will be oriented on a North-South axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: N/A
Specialties: One (1) 6'-0" wide white board and one (1) 4'-0" white board per locker room
Furniture: Benches in locker rooms; Four hundred and fifteen (440) standard 15" wide, 15" deep double tier lockers; One hundred and forty-nine (128) team style lockers
Technology Equipment: N/A

OTHER

Security: - Rooms to have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

HEALTH CLASSROOM

FUNCTIONAL DATA

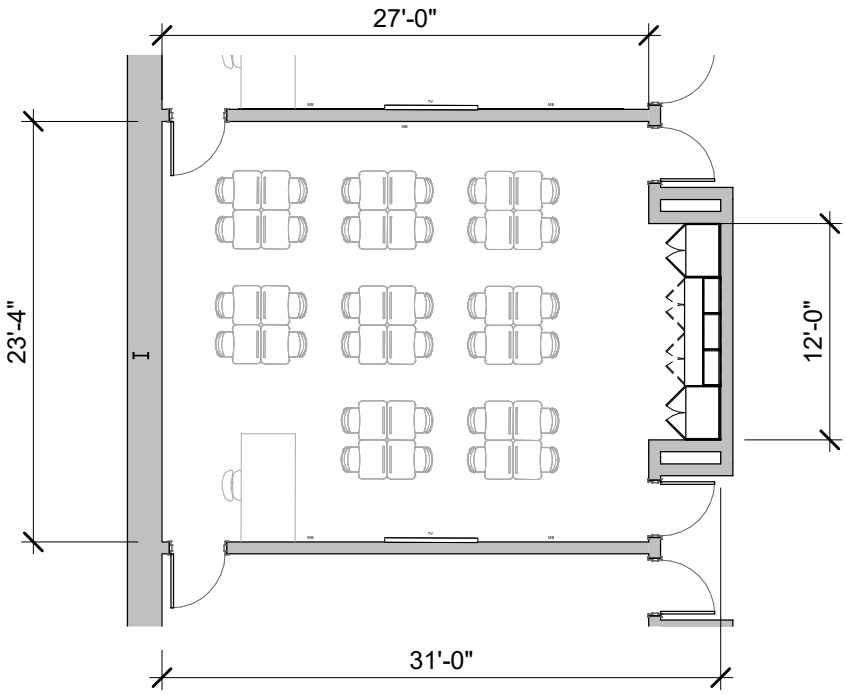
Description: Instructional health classroom
Quantity: 5
Users: 1 teachers, 32 students

SPATIAL DATA

Floor Area: 815 Net Square Feet
Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching wall
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor of the athletic building.
Adjacencies: Located adjacent the gymnasium & fitness rooms.
Orientation: Health classrooms will be oriented on a North-South axis. All West and East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Two (2) built-in, 36" wide, 24" deep solid wood base cabinets with counter top
- Two (2) built-in, 36" wide, 24" deep, 84" high solid wood storage cabinet
- Three (3) built-in, 24" wide, 12" deep, 72" high storage cabinets

Specialties: Three (3) 6'-0" wide marker boards
Furniture: 32 student desks with one (1) chair each, one (1) teacher desk with chair
Technology Equipment:
- Interactive classroom display
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

MEDIA CENTER

FUNCTIONAL DATA

Description: Reading, classroom & research area for students, staff & faculty, adjoining workroom/office, professional library, cyber cafe & presentation/conference space
Quantity: 1
Users: Seating for approximately 180 students, staff & faculty

SPATIAL DATA

Floor Area: 12788 sq. ft. Library media center
800 sq. ft. Cyber cafe
400 sq. ft. Assessment center/training lab
125 sq. ft. Assessment coordinator office
100 sq. ft. Assessment storage
800 sq. ft. Presentation/conference room
500 sq. ft. Professional library/archives
200 sq. ft. Audio/visual storage/workroom
250 sq. ft. Library media office
Ceiling Height: 9'-0" Acoustic ceiling tile, typical
22'-0" At library/ media center

MATERIALS/ FINISH DATA

Floors: Vinyl composite tile in history lab and assessment center, carpet in all other locations
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile, painted gypsum wallboard soffits
Doors: Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows: Insulated, aluminum curtain wall system
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: One (1) accessible sink
Fire Protection: Fully sprinklered fire protection system
Electrical: Power for various appliances, including printers, copiers & floor boxes for centrally located computers
Lighting: Direct/ indirect pendant light fixtures, task lighting at teaching walls, specialty accent lighting fixtures
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification, distributed sound system, assisted listening system
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the second floor within the "public space" area of the building.
Adjacencies: Located adjacent to the upper auditorium and secondary lobby.
Orientation: The library media center will be oriented on a East-West axis. All North and East facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- Four (4) built-in 36" wide, 24" deep solid wood base cabinets with counter top
- Two (2) built-in 28" wide, 24" deep solid wood base cabinets with counter top-
- Two (2) built-in, 18" wide, 12" deep solid wood high storage cabinets
- Three (3) built-in 24" wide, 18" deep solid wood high storage cabinets
- Six (6) built-in 24" wide, 12" deep solid wood high storage cabinets
- Fifteen (15) built-in 36" wide, 24" deep, 84" high solid wood cabinet

Specialties: Thirteen (13) 6'-0" wide markerboards; Fifty-two (52) computer stations with one (1) chair each; One (1) copier; One (1) domestic refrigerator; Four (4) laptop carts; One (1) custom circulation desk; Two (2) aluminum shelving units; One (1) domestic microwave

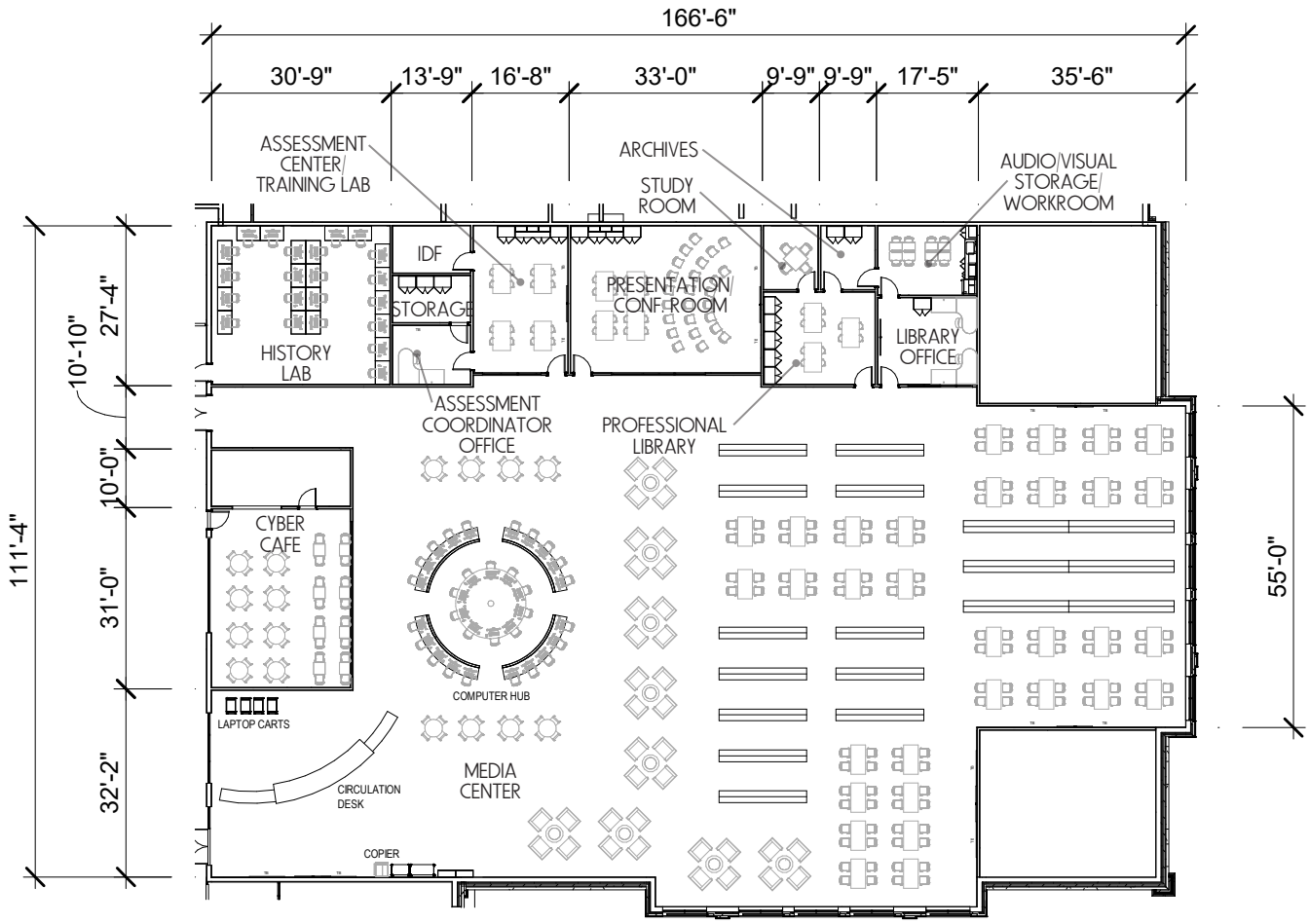
Furniture: Eleven (11) work tables with four (4) stools each; Eight (8) small tables with two (2) chairs each; Seventeen (17) medium round tables with four (4) chairs each; Nine (9) coffee tables with four (4) lounge chairs each; Twenty-five (25) individual chairs; Three (3) office desks with one (1) chair each; Thirty-two medium tables with four (4) seats each; Eight (8) student desks with one (1) chair each Twelve (12) tall book stacks; Twenty-four (24) short book stacks; Soft seating

Technology Equipment:
- Seven (7) interactive displays
- LCD/Data projector
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

MEDIA CENTER



AUDITORIUM

FUNCTIONAL DATA

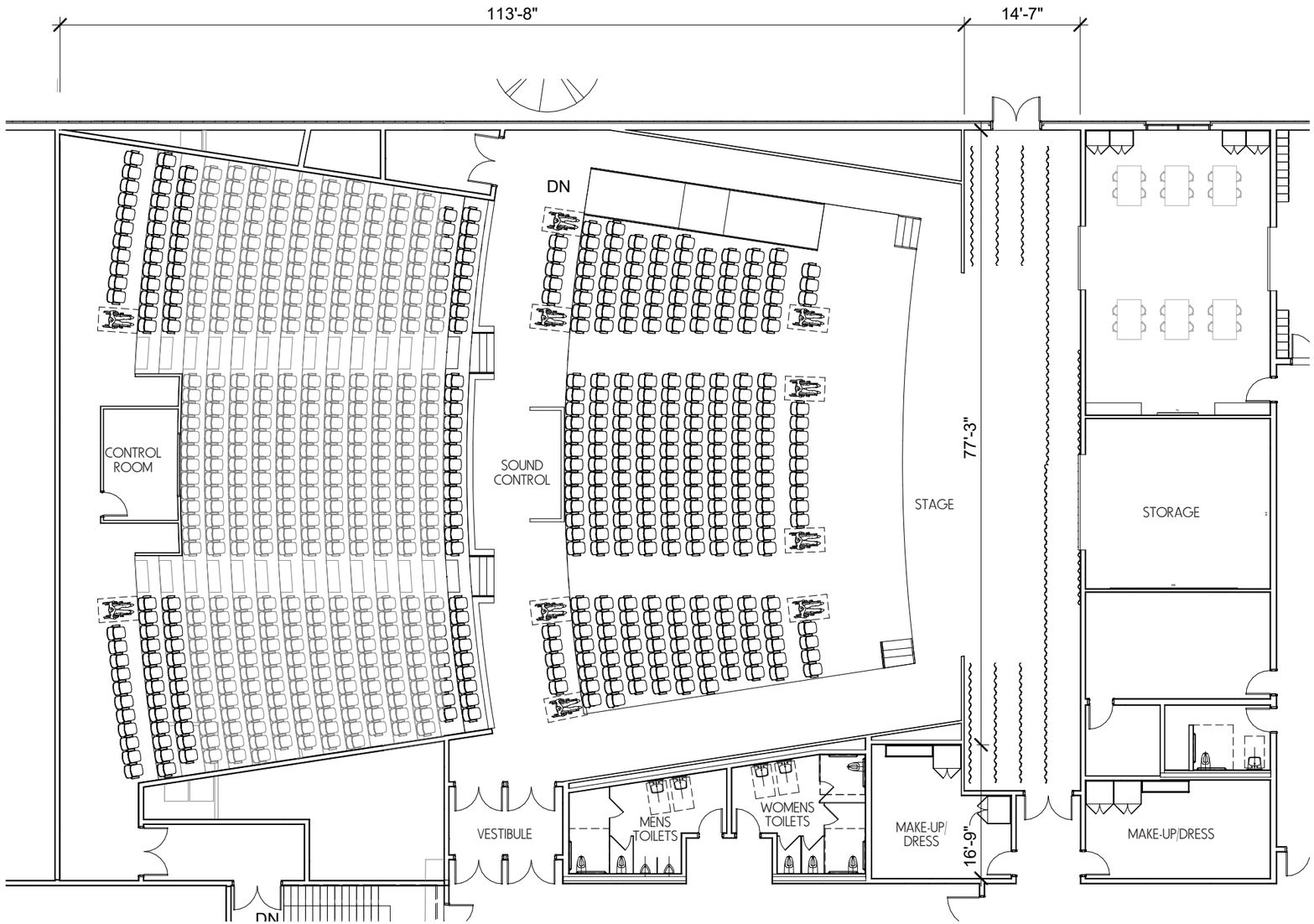
Description: Seating & performance observation for approximately 750 students, staff, public, etc.
Quantity: 1
Users: Seating for approximately 750 occupants

SPATIAL DATA

Floor Area: 7,500 net square feet of auditorium space with 1,600 net square feet of stage space
Ceiling Height: Varies. 30'-0" to structural deck, 22'-0" to acoustical clouds in seating area

MATERIALS/ FINISH DATA

Floors: Carpet, painted concrete, wood floor at stage
Walls: Painted gypsum wallboard, wood paneling
Ceiling: Acoustical clouds, acoustical deck, gypsum wallboard ceiling soffits
Acoustical: Acoustic ceiling tiles, wall treatments, fabric at seats, stage curtain, directional baffles, sounds absorption & reflection, sound reinforcement
Doors: Solid core flush wood doors
Windows: N/A
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Performance lighting, dimmable house lighting
Communications: Telephone, clock, internet access, wireless access, performance sound, assisted listening system, CATV/School broadcasts
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the "public core" of the building.
Adjacencies: Located adjacent the Secondary Lobby & Student Commons
Orientation: The Auditorium will be oriented on the North-South axis & will face west.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: Solid wood, built-in sound & lighting control station
Specialties: Wall panels; acoustical baffles, railings
Furniture: Fixed seating, fabric covered chairs
Technology Equipment:
- LCD/Data Projector
- 48 channel sound board; wired & wireless microphones
- Video recording cameras
- Audio/video output to T.V. control room

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

STUDENT COMMONS & FOOD SERVICE

FUNCTIONAL DATA

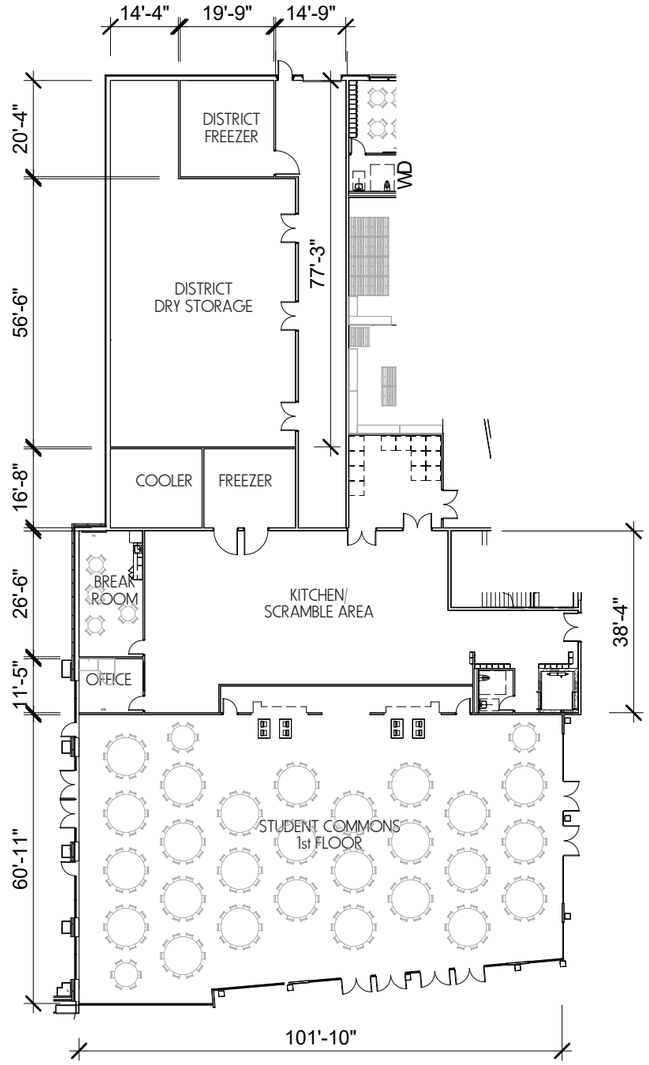
Description: Dining area for students with adjacent kitchen & scramble area
Quantity: Two (2) student common spaces
Two (2) kitchen/scramble spaces
Two (2) offices
One (1) break room
One (1) district storage space
Users: Seating for approximately 460 occupants per common space

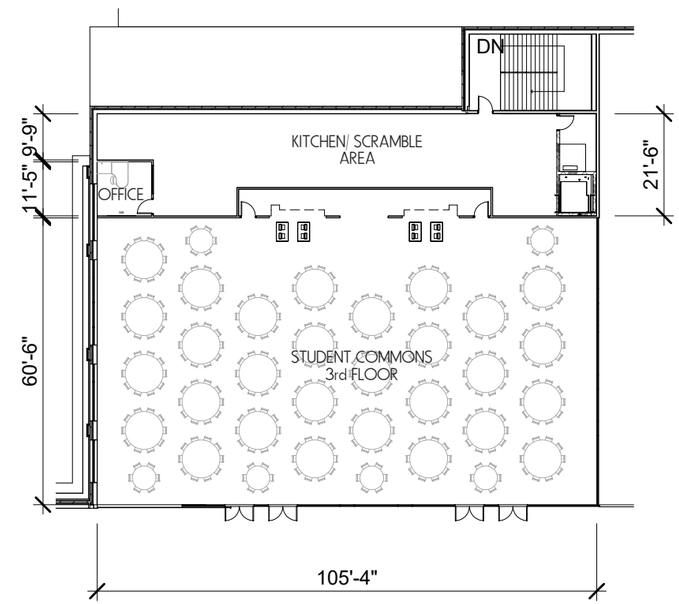
SPATIAL DATA

Floor Area: 12,850 net sq. ft. common space
5,263 net sq. ft. kitchen/scramble area space
(2) 100 sq. ft. offices
4,000 net sq. ft. district storage space
65 sq. ft. toilet room
Ceiling Height: 26'-0" in 1st floor student commons
10'-0" in 3rd floor student commons
10'-0" in storage spaces
10'-0" in kitchen/food prep spaces

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring in commons, quarry tile in kitchen/food prep & storage
Walls: Painted gypsum wallboard, porcelain wall tile, epoxy painted gypsum wallboard
Ceiling: Acoustic Ceiling Tile, painted gypsum wallboard, sanitary ceiling tiles in kitchen/food prep
Doors: Solid core flush wood doors, aluminum storefront entrances, overhead coiling doors
Windows: Insulated, aluminum curtain wall system, interior windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: Accessible drinking fountains, connections to various kitchen/food prep appliances, accessible counter top sink, one (1) ADA compliant toilet room
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, specialty accent lighting
Communications: Telephone, digital clock, internet access, wireless access, PA speakers, CATV/School broadcasts, sound system
Lockset: TBD





ORGANIZATIONAL DATA

Location: Located on the first & third floor within the public space portion of the building
Adjacencies: Located adjacent the secondary lobby & culinary suite
Orientation: The Student Common spaces will be south facing and will include appropriate sun shading/light filtering devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - Built-in 24" deep, solid wood base cabinets with counter top
- Built-in 12" deep, solid wood wall cabinets above base cabinets
Specialties: Two (2) 6'-0" marker boards; Domestic refrigerator/freezer; Food service equipment
Furniture: Four (4) small gathering tables with 4 chairs each; Two (2) work style desks with chairs; faculty lockers; Fifty-five (55) student dining tables with 10 seats each; Nine (9) student dining tables with 6 seats each
Technology Equipment: Interactive displays

OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

NURSE SUITE

FUNCTIONAL DATA

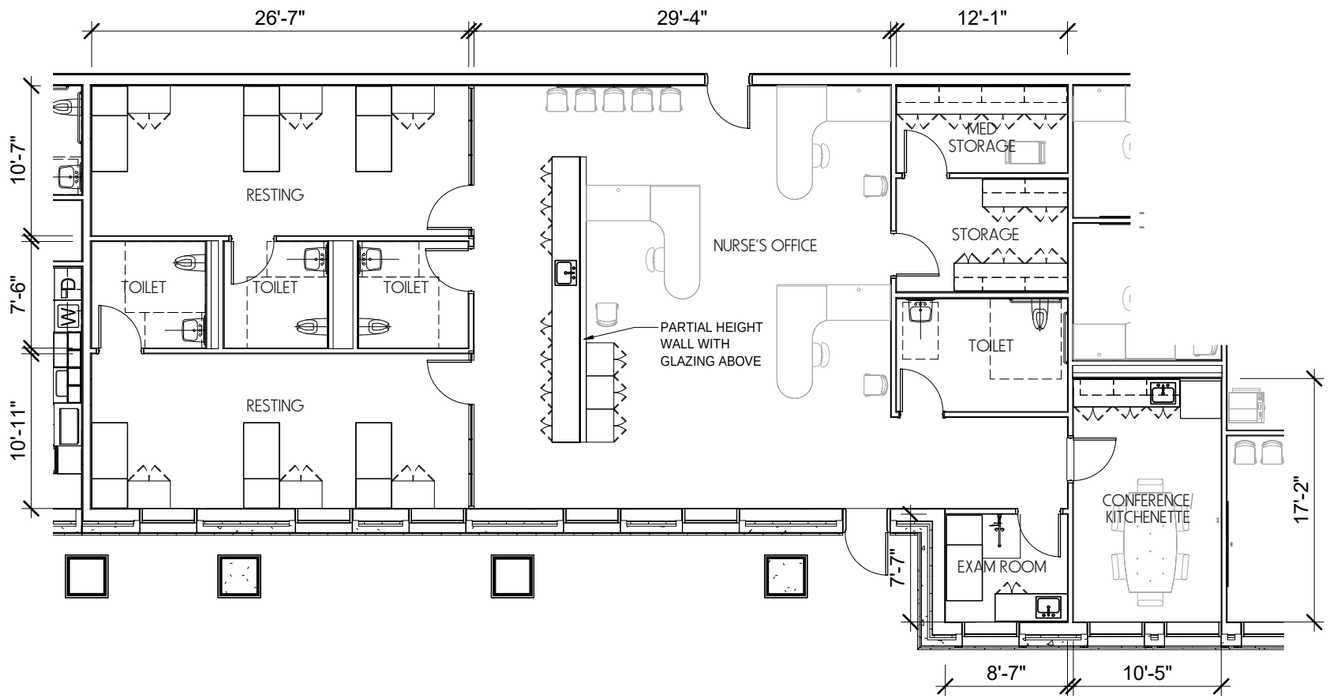
Description: Nurse's Office, Resting Stations & Exam Room
Quantity: 1 Nurse's office, 2 resting rooms, 3 student toilet rooms, 1 faculty toilet room, 1 storage and medical room, 1 exam room & 1 conference/kitchenette space
Users: 3 Faculty, up to 12 students

SPATIAL DATA

Floor Area: 945 sq. ft. Office Space
Two (2) 285 sq. ft. Resting Areas
Three (3) 55 sq. ft. Toilet rooms
95 sq. ft. Toilet Room
65 sq. ft. Exam Room
170 sq. ft. Storage & Medical Room
180 sq. ft. Conference/Kitchenette
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum & sheet flooring porcelain tile in toilet rooms
Walls: Painted gypsum wallboard, porcelain tile in toilet rooms
Ceiling: Acoustic ceiling tile, painted gypsum wallboard
Doors: Solid core flush wood doors, aluminum storefront entrance with side light glazing
Windows: Insulated, single-hung aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: Four (4) ADA compliant toilet rooms; Two (2) accessible counter top sinks; emergency shower/eye washing station
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures
Communications: Telephone, digital clock, internet access, wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor within the core academic area.
Adjacencies: Located adjacent the guidance suite & community based SPED program, exterior access, main entry
Orientation: The Nurse's Suite will be oriented on the North-South axis. All East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: - Built-in 24" deep, solid wood base cabinets with counter top
- Built-in 12" deep, solid wood wall cabinets
Specialties: Partial height wall with glazing above; Portable med cart; Domestic refrigerator/freezer; Shredders; Printers; Two (2) 4'-0" tackboard surfaces: one (1) 10'-0" markerboard surface
Furniture: Work station style desks with chairs; Standard chairs; Conference table with 6 chairs; Horizontal filing cabinet; Resting beds
Technology Equipment: One (1) 80" LCD TV

OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

ADMINISTRATION SUITE

FUNCTIONAL DATA

Description: Administrative offices, duplicating station, conference rooms, administration storage

Quantity: One (1) General office/ waiting room/ principals secretary, one (1) security desk, one (1) security Workroom, one (1) records room, two (2) admin conference room(s), one (1) attendance office, one (1) attendance clerk, one (1) director of operations office, one (1) mail/ duplicating room, one (1) principals office with conference area, one (1) custodian's office

Users: Administrative Staff, custodial staff, security

SPATIAL DATA

Floor Area: 1285 sq. ft. General office/ waiting room/ principals secretary
250 sq. ft. Security desk
150 sq. ft. Security Workroom
446 sq. ft. Records room
250 sq. ft. Admin conference room #1
100 sq. ft. Attendance office
100 sq. ft. Attendance clerk
250 sq. ft. Director of operations office
300 sq. ft. Mail/ duplicating room
375 sq. ft. Principals office with conference area
100 sq. ft. Custodian's office
425 sq. ft. Admin conference room #2

Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Carpet, vinyl composite tile

Walls: Painted gypsum wallboard

Ceiling: Acoustic ceiling tile, painted gypsum wallboard soffits

Doors: Solid core flush wood doors, one (1) half door, solid core flush wood door with sidelight, aluminum storefront entrance

Windows: Insulated, single-hung aluminum operable window

HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall, ventilation at toilet room

Plumbing: Two (2) accessible countertop sinks, two (2) accessible lavatories, two (2) accessible toilet fixtures, plumbing connection to domestic refrigerator/freezer

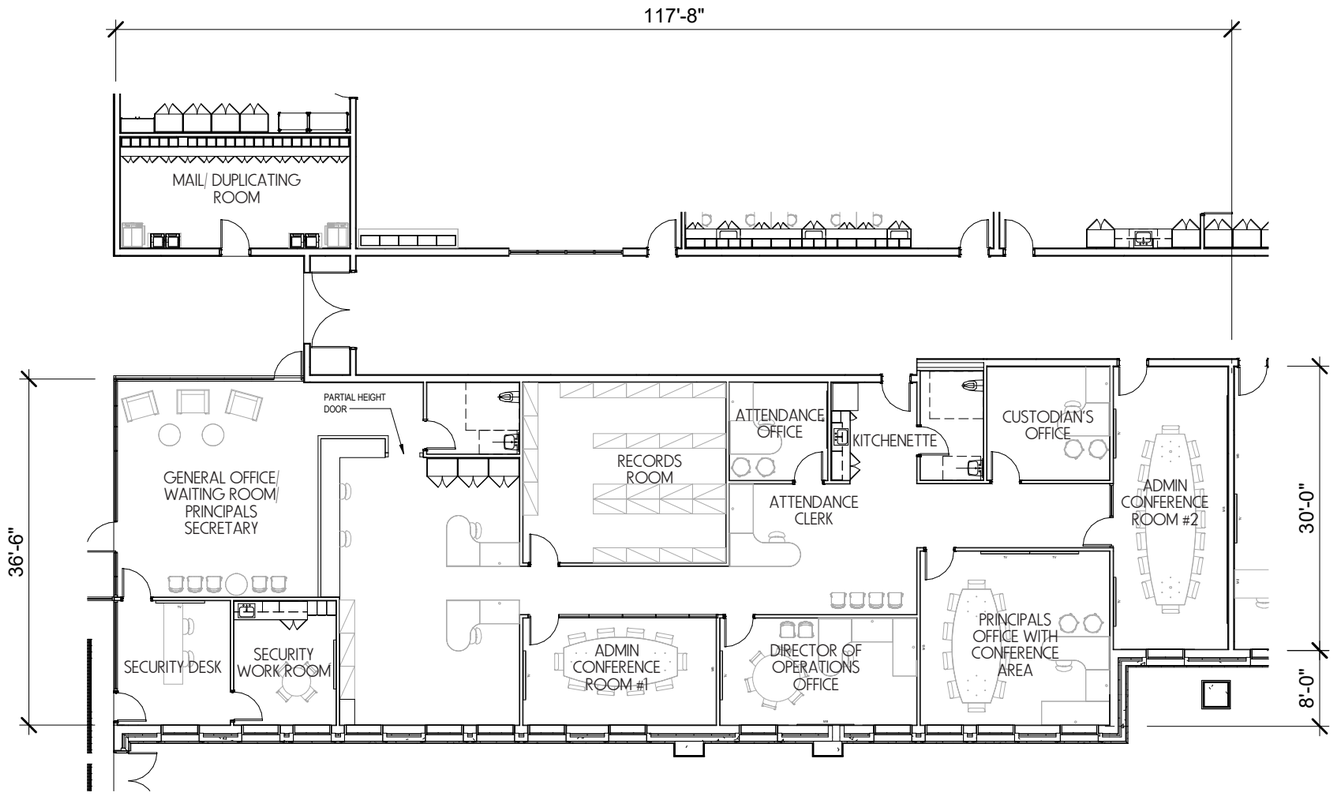
Fire Protection: Fully sprinklered fire protection system

Electrical: Power supply for various appliances including domestic refrigerator, copiers, & printers

Lighting: 2'x4' Recessed lights.

Communications: Telephone, digital clock, internet access wireless access, PA speakers, CATV/School broadcasts, 4 speaker sound amplification Document camera

Lockset: TBD



ORGANIZATIONAL DATA

Location: Located on the first floor in the eastern most "public space" of the building.

Adjacencies: Located directly off the main entry/ lobby & atrium.

Orientation: Oriented along th north-south access. All east facing windows will include appropriate light filtering and/or blocking devices.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:
- One (1) built-in, solid wood, administration reception desk with two (2) chairs
- Three (3) built in 39" wide, 24" deep, 72" high storage cabinets
- Twenty (20) 24" deep, solid wood base cabinets
- Six (6) 14" solid wood wall cabinets above base cabinets and work spaces
- +/- 250 built-in, solid wood mail slots

Specialties: Three (3) 6'-0" wide marker board; One (1) 24'-0" wide marker board; One (1) 12'-0" wide marker board; One (1) 10'-0" wide marker board; copy machine; two (2) printers; various appliances; three (3) storage lockers

Furniture: Fifteen (15) individual chairs; Two (2) 12'-0 conference tables with ten (10) chairs; One (1) 18'-0" conference table with sixteen (16) chairs; One (1) round 3' dia conference table with four (4) chairs; One (1) round 5' dia conference table with six (6) chairs; Twenty seven (27) horizontal file cabinets; Six (6) work station style desks with chairs; Three (3) soft seating waiting chairs; One (1) 2'-0" wide, 8'-9" long security desk with two (2) chairs; Three (3) base tables in waiting area

Technology Equipment:
- Interactive white board or projector infrastructure
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers
- Audio output to T.V. control room
- Ten (10) interactive displays

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Rooms shall have public address speakers & secondary means of communication
- Hardware to be compatible with district's lock down protocol

ATRIUM

FUNCTIONAL DATA

Description: Central spine, Atrium; circulation space
Quantity: 1
Users: Students, faculty, general public

SPATIAL DATA

Floor Area: 9,350 sq. ft. on first floor level
4,800 sq. ft. on second floor level
4,650 sq. ft. on third floor level
Ceiling Height: 48'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring
Walls: Painted gypsum wallboard, wood paneling, brick veneer
Ceiling: Painted gypsum wallboard, specialty ceilings
Doors: Solid core flush wood doors with side light glazing, aluminum storefront entrance
Windows: Insulated, extruded aluminum curtain wall system
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, smoke evacuation system
Plumbing: N/A
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: Direct/ indirect pendant light fixtures, accent lighting, recessed can lighting
Communications: Wireless access, PA speakers, CATV/School broadcasts
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first, second and third floor with in the academic core of the building.
Adjacencies: Located adjacent the main entry, administration and guidance suite.
Orientation: The atrium will be oriented along the East-West axis and will include appropriate sun shading/light filtering devices.

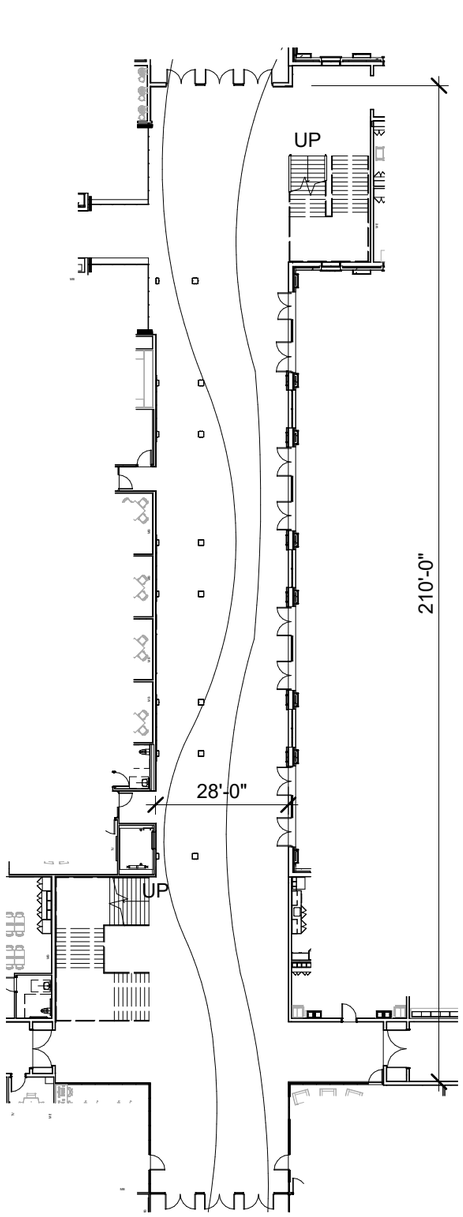
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: N/A
Specialties: Etched glass with graphics; Wall graphics; Timber frame construction; Fiberglass trim; Railings
Furniture: N/A
Technology Equipment: Interactive displays

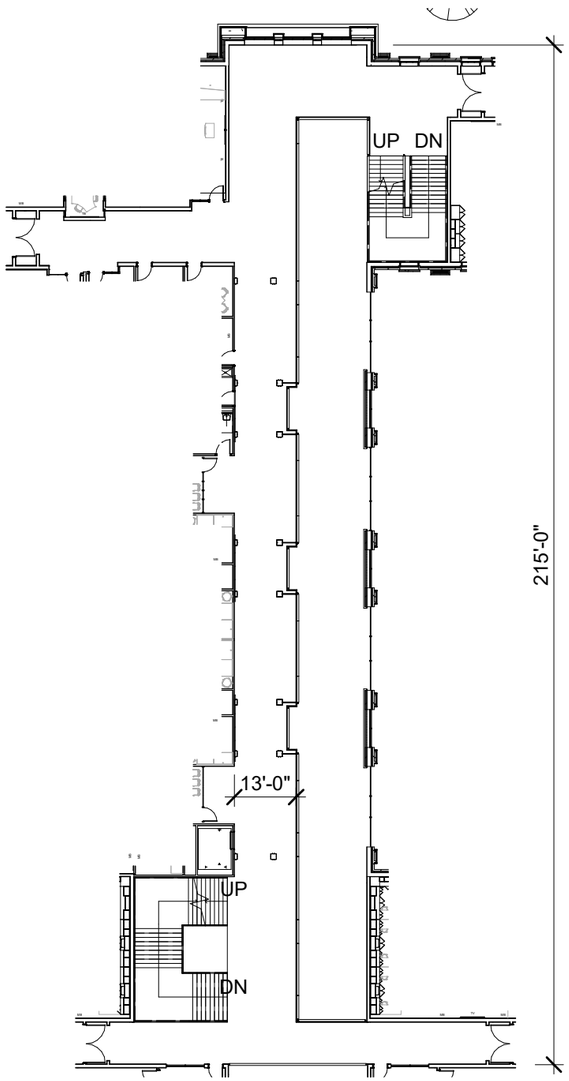
OTHER

Security: - Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Spaces shall have a public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

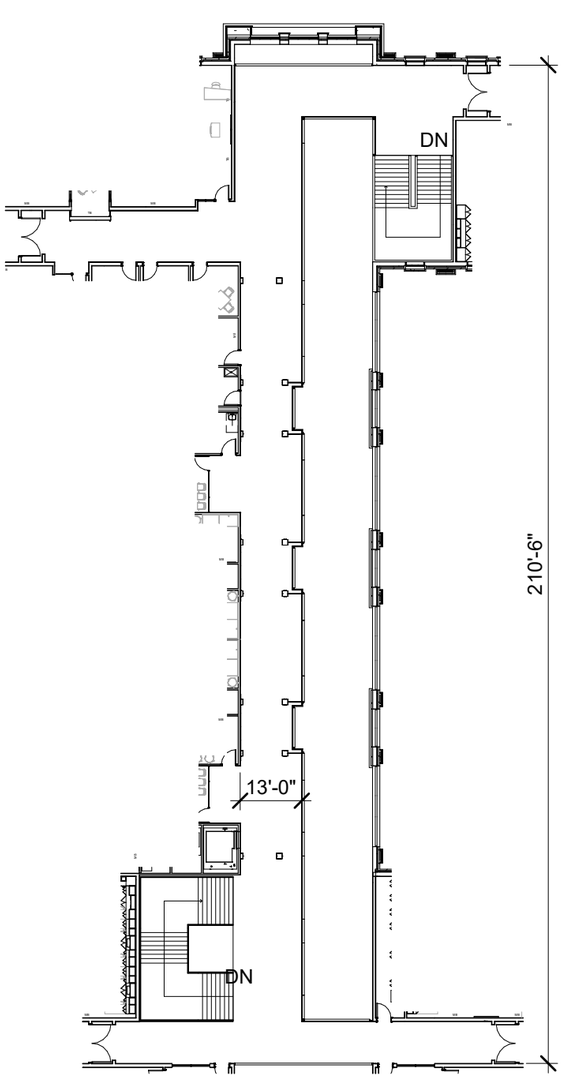
ATRIUM:
FIRST FLOOR



ATRIUM:
SECOND FLOOR



ATRIUM:
THIRD FLOOR



INDEPENDENT STUDY

FUNCTIONAL DATA

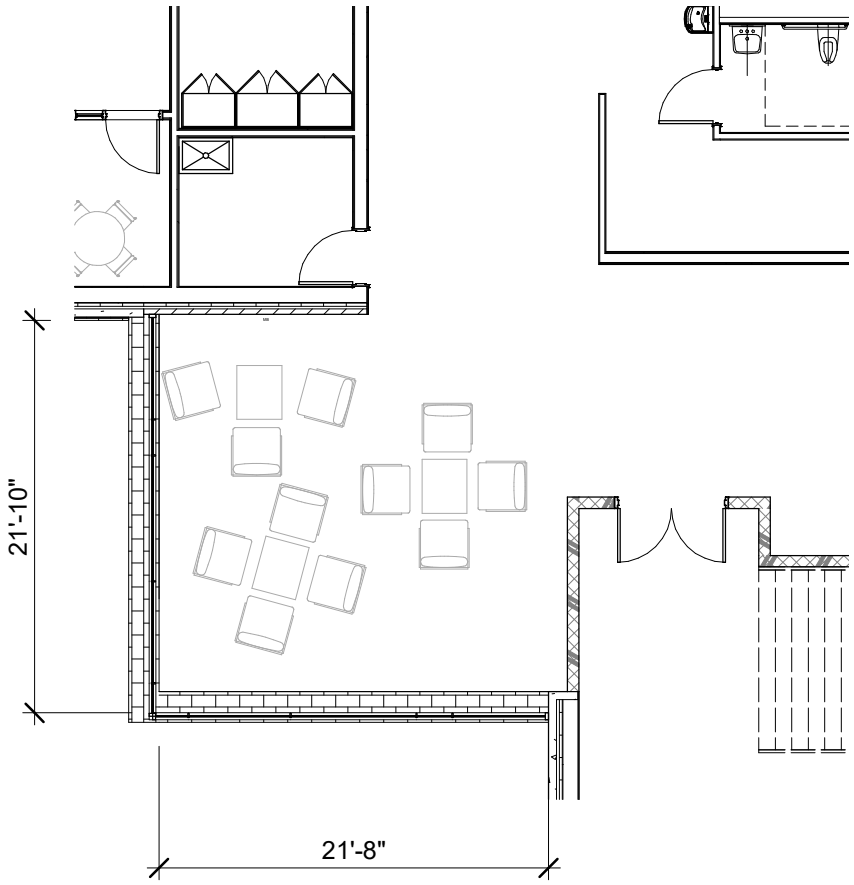
Description:	Independent learning space
Quantity:	10
Users:	11 students

SPATIAL DATA

Floor Area:	640 sq. ft.
Ceiling Height:	10'-0"

MATERIALS/ FINISH DATA

Floors:	Vinyl composite tile
Walls:	Painted gypsum wallboard
Ceiling:	Acoustic ceiling tile
Doors:	N/A
Windows:	Insulated, aluminum curtain wall system
HVAC:	Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing:	N/A
Fire Protection:	Fully sprinklered fire protection system
Electrical:	N/A
Lighting:	Direct/ indirect pendant light fixtures
Communications:	N/A
Lockset:	TBD



ORGANIZATIONAL DATA

Location:	Located on all three floors near the stairwells
Adjacencies:	Located adjacent the stairwells, Classrooms, Sped Classrooms
Orientation:	Independent studies will be oriented in all cardinal directions. All windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry:	N/A
Specialties:	N/A
Furniture:	Three (3) small tables; Eleven (11) individual soft seating
Technology Equipment:	N/A

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker

GUIDANCE SUITE

FUNCTIONAL DATA

Description: Guidance Suite
Quantity: 1
Users: 10 Faculty

SPATIAL DATA

Floor Area: One (1) 550 sq. ft. Career Center
Three (3) 150 sq. ft. class conference offices
One (1) 125 sq. ft. BCC office
One (1) 250 sq. ft. guidance conference room
One (1) 200 ft. sq. school to career office
One (1) 120 sq. ft. u-aspire office
One (1) 200 ft. sq. guidance director office
One (1) 125 sq. ft. registrar office
Two (2) 100 sq. ft. guidance offices
One (1) 125 ft. sq. evening school office
Ceiling Height: 12'-0"

MATERIALS/ FINISH DATA

Floors: Linoleum sheet flooring in career center, carpet at all other locations
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows: Insulated, single hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ceiling mounted radiant panels at exterior wall
Plumbing: One ADA accessible toilet room
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: 2' x 4' Recessed lighting, specialty lighting in career center
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor near the main entrance
Adjacencies: Located adjacent to the main lobby and Nurse's suite
Orientation: Class offices will be oriented slightly off of a North-South axis. All East facing windows will include appropriate light filtering and/or blocking devices

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

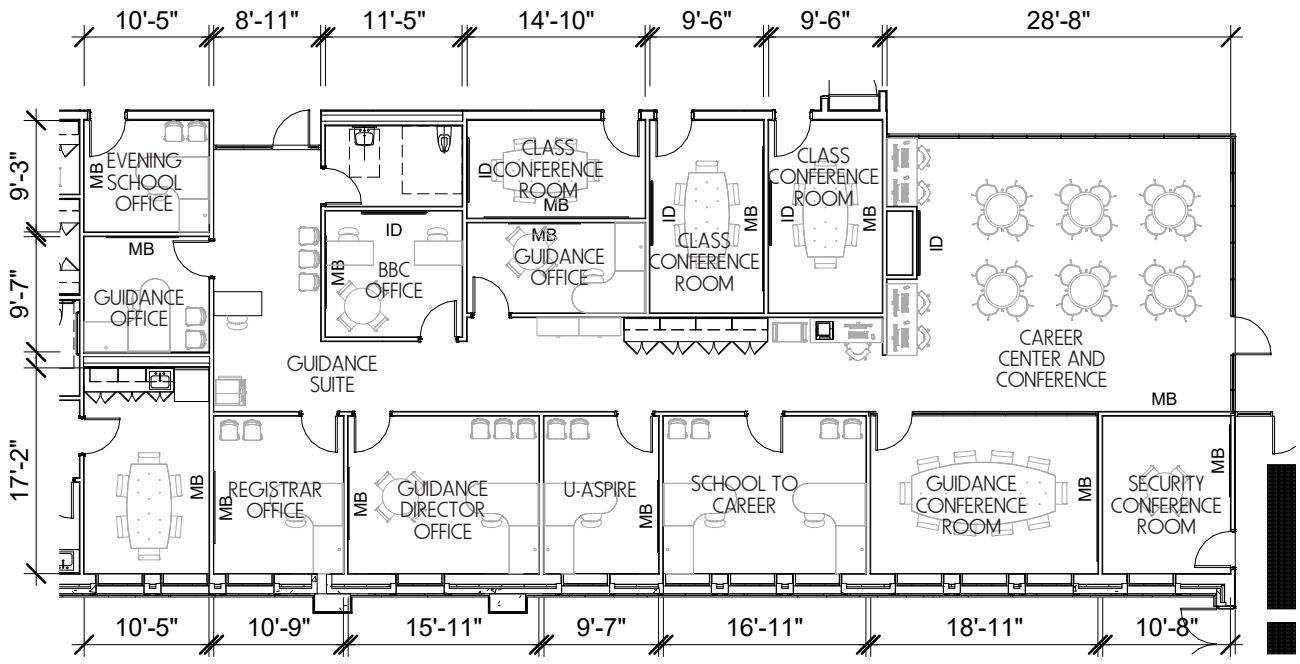
Casework/Cabinetry:
- Four (4) built-in 36" wide, 24" deep solid wood base cabinets with counter top
- Four (4) built-in, 36" wide, 14" deep solid wood high storage cabinets

Specialties: Five (5) 6'-0" wide markerboards; four (4) 12'-0" wide markerboards; five (5) computer stations with chairs; one (1) copier
Furniture: Eight (8) office desks; Three (3) working tables with chairs; Twenty-one (21) individual chairs; Five (5) 42' wide filing cabinets; One (1) mobile cart; Two (2) 42" wide; 18" deep 5 drawer cabinets; Two (2) small work tables with four (4) chairs each; Three (3) small conference tables with six (6) chairs; One (1) large conference table with ten (10) chairs; Four (4) small cafe tables with four (4) chairs each
Technology Equipment:
- Five (5) interactive displays
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

GUIDANCE SUITE



CLASS OFFICES SUITE

FUNCTIONAL DATA

Description: Administrative suite for all class offices and the Vice Principals' offices
Quantity: 1
Users: 14 faculty at 2nd floor, 12 faculty at 3rd floor

SPATIAL DATA

Floor Area:

Freshman Academy:
150 sq. ft. vice principal office
100 sq. ft. student support specialist
300 sq. ft. Freshman class office area/office clerk
100 sq. ft. behavior specialist office
Two (2) 100 sq. ft. adjustment counselor offices
Two (2) 100 sq. ft. guidance offices

Sophomore Academy:
150 sq. ft. vice principal office
100 sq. ft. student support specialist office
300 sq. ft. Sophomore class office area/office clerk
100 sq. ft. adjustment counselor office
Two (2) 100 sq. ft. guidance counselor offices

Junior Academy:
150 sq. ft. vice principal office
300 sq. ft. Sophomore class office area/office clerk
100 sq. ft. adjustment counselor office
Three (3) 100 sq. ft. guidance counselor offices

Senior Academy:
150 sq. ft. vice principal office
300 sq. ft. Sophomore class office area/office clerk
100 sq. ft. adjustment counselor office
100 sq. ft. school resource officer
150 sq. ft. kitchenette
Three (3) 100 sq. ft. guidance counselor offices

Ceiling Height: 10'-0"

MATERIALS/ FINISH DATA

Floors: Carpet
Walls: Painted gypsum wallboard
Ceiling: Acoustic ceiling tile
Doors: Solid core flush wood doors with transom and side light glazing, Solid core flush wood doors for offices
Windows: Insulated, single-hung, aluminum operable windows
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation
Plumbing: Two (2) ADA accessible toilet rooms
Fire Protection: Fully sprinklered fire protection system
Electrical: N/A
Lighting: 2' x 4' Recessed light fixtures
Communications: Telephone, digital clock, internet access wireless access, PA speakers, Document camera, CATV/School broadcasts, 4 speaker sound amplification
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the second and third floors directly off the atrium.
Adjacencies: Located adjacent to the atrium.
Orientation: Class offices will be oriented on a East-West axis. All South facing windows will include appropriate light filtering and/or blocking devices.

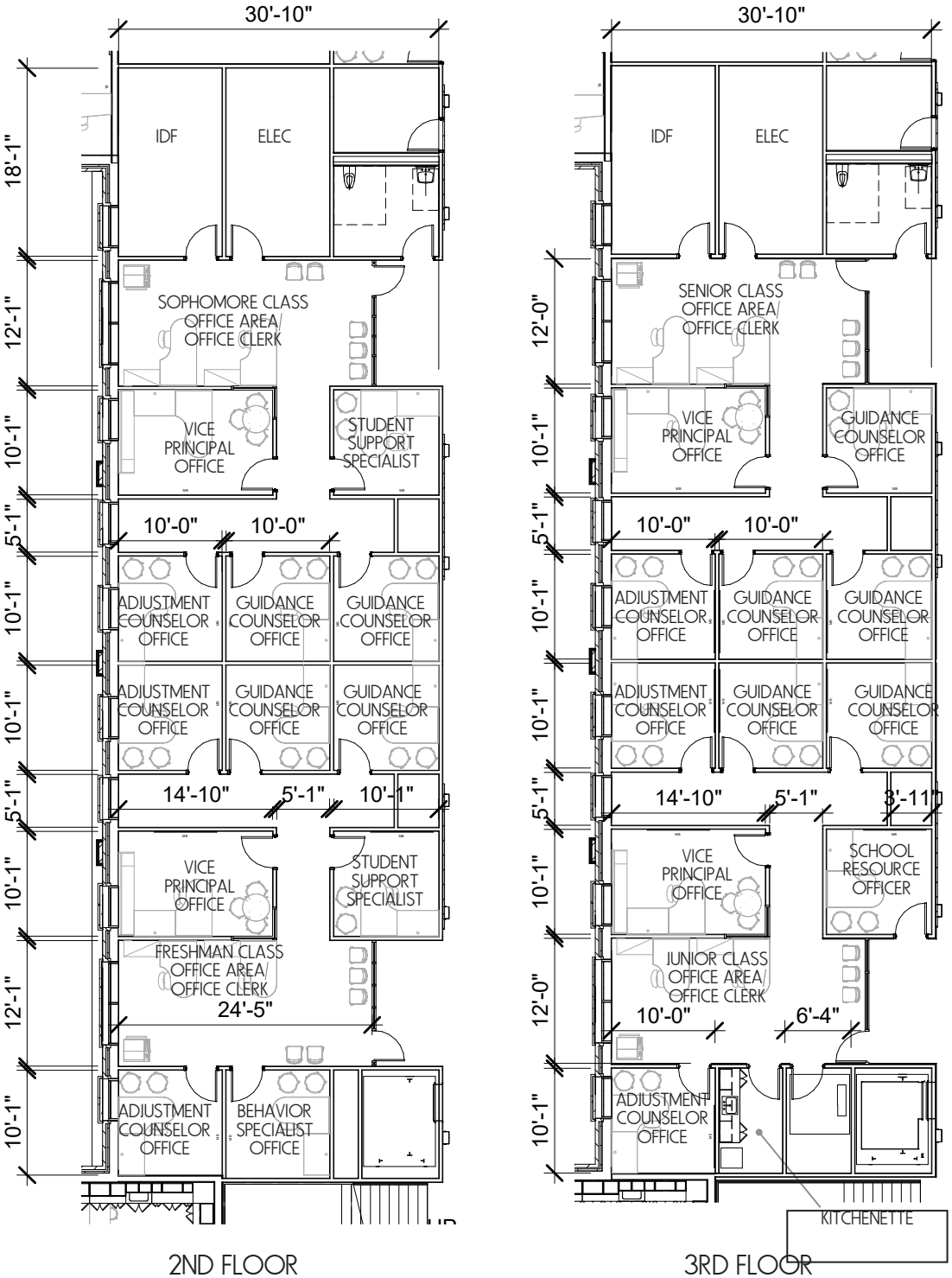
FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

Casework/Cabinetry: N/A
Specialties: Twenty-two (22) 6'-0" wide markerboards; Eight (8) 42" wide file cabinet; Two (2) copiers
Furniture: Thirty (30) office desks; Twenty (20) individual chairs; Thirty-six (36) meeting chairs; Four (4) small coffee tables with three (3) chairs each
Technology Equipment:
- Interactive classroom displays
- Presentation camera
- Amplified voice system with two (2) microphones and up to four (4) ceiling speakers

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall include public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

CLASS OFFICES SUITE



CUSTODIAL SUITE

FUNCTIONAL DATA

Description: Custodial break room, storage, trash/recycling area
Quantity: One (1) break room, one (1) storage area, one (1) caged storage area, one (1) trash/recycling area
Users: 15-20 Custodial Staff

SPATIAL DATA

Floor Area:
- 376 sq. ft. break room
- 77 sq. ft. toilet room
- 1978 sq. ft. Storage area
- 400 sq. ft. recycling/trash room

Ceiling Height: Varies, exposed in storage & break room, 8'-0" in toilet room

MATERIALS/ FINISH DATA

Floors: Sealed & painted concrete; porcelain tile in toilet room
Walls: Painted gypsum wall board
Ceiling: Exposed (painted white); epoxy painted gypsum wall board in toilet room
Doors: Solid core flush wood doors
Windows: Insulated, single hung aluminum window
HVAC: Forced air, ceiling diffused air conditioning, heating and ventilation, ventilation for toilet/recycling & trash areas, ventilation for commercial dryer
Plumbing: One (1) accessible lavatory, one (1) accessible toilet room, one (1) domestic refrigerator/freezer, one (1) commercial washer
Fire Protection: Fully sprinklered fire protection system
Electrical: Power supply for various appliances including commercial dryer
Lighting: Direct/ indirect pendant light fixtures
Communications: Telephone, digital clock, internet access wireless access, PA speakers CATV/School broadcasts
Lockset: TBD

ORGANIZATIONAL DATA

Location: Located on the first floor of the "private space" area of the school
Adjacencies: Located adjacent to the auditorium and student commons
Orientation: The custodial suite is oriented on the East-West axis.

FURNITURE, FURNISHINGS, AND EQUIPMENT DATA

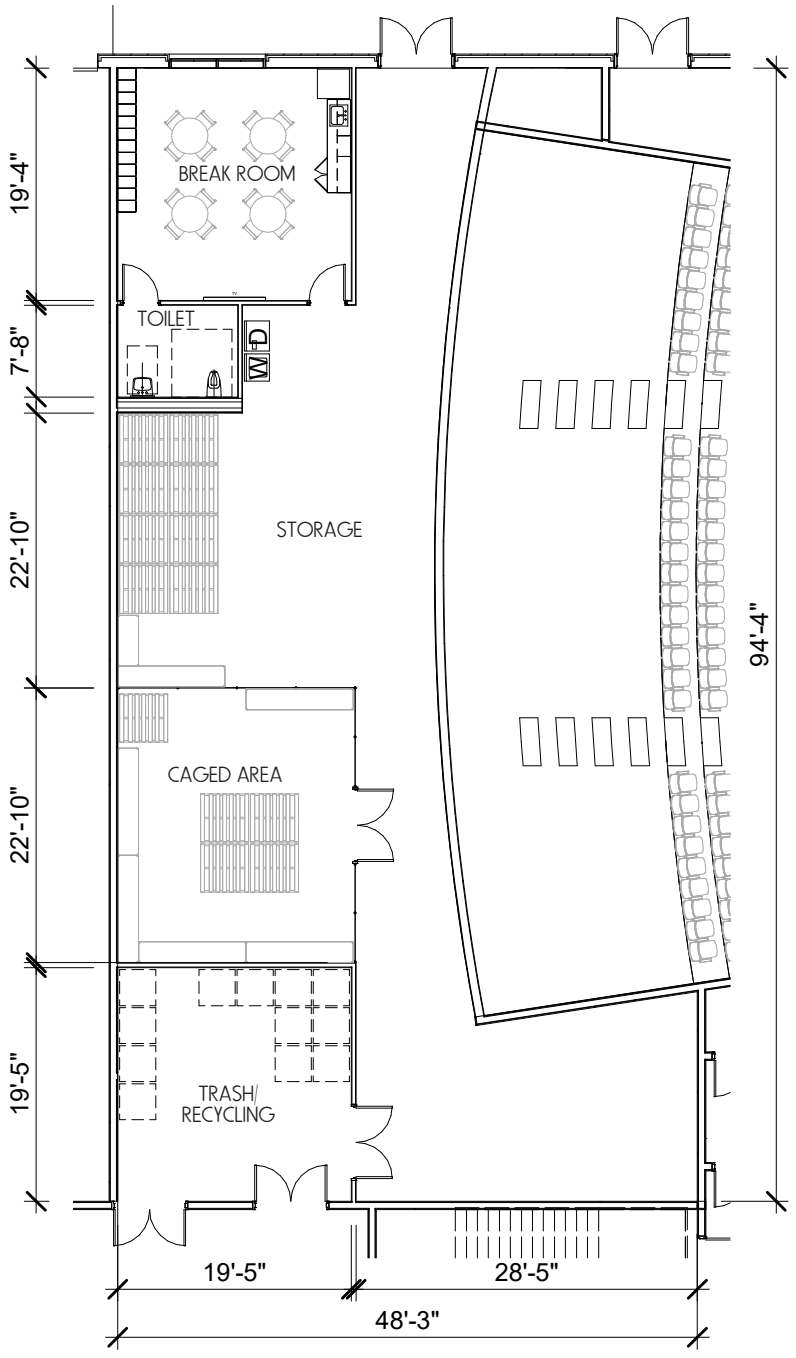
Casework/Cabinetry:
- Built-in, 24" deep work counters with storage below
- Built-in 24" deep base cabinets with counter top & sink
- Built-in 14" deep wall cabinets

Specialties: Twelve (12) trash/recyclying bins; Twelve (12) personal storage lockers; Seven (7) storage shelving units; 45 linear feet of fencing material with fence door; Various appliances; One (1) commercial washer; One (1) commercial dryer
Furniture: Four (4) 3' dia tables with four (4) chairs each
Technology Equipment: N/A

OTHER

Security:
- Operable shades on all windows/ sidelights that do not meet the district's current visibility standards
- Room shall have public address speaker & secondary means of communication
- Hardware to be compatible with district's lock down protocol

CUSTODIAL SUITE



PROPOSED CONSTRUCTION METHODOLOGY

The District has decided to pursue Public Construction Manager (CM) at Risk Services instead of a traditional Design-Bid-Build (DBB) construction delivery method. The advantages and disadvantages of both construction delivery methods were reviewed over the course of two School Building Committee (SBC) Meetings. There were many reasons for choosing the CM at Risk construction delivery method for the new BMC Durfee High School, the primary reasons identified were:

Complex Construction Logistics

Construction of the proposed new BMC Durfee High School Project will occur on an extremely tight, existing, occupied site. The Project entails new construction on the occupied site of the existing high school and includes major renovation of the existing Field House which is to remain and be connected to the new school construction. The existing Durfee High School including the Field House and Athletic Fields will need to remain operational throughout construction. The location of the new school is situated between Elsbree Street and the existing to remain Athletic Fields and Stadium. The front façade of the new school is within 60 feet of Elsbree Street. The close proximity to Elsbree Street and the fact that the construction will occur in a high density residential/ light commercial neighborhood will require close coordination, scheduling and monitoring of all construction activities. Additionally, there are two elementary schools, Spencer Borden and James Tansey, adjacent to the school site with the Bishop Connolly High School directly across Elsbree Street and Bristol Community College further down Elsbree Street which all add to the logistical complexities.

Phased Occupied Construction

Renovation of the existing Athletic Complex/Field House will require coordination and planning in advance with the School Administration in order to orchestrate a plan that will allow for the School's programs to be maintained while phased renovation is occurring. Likewise, the new school will likely be occupied prior to completion of the Field House renovation, site work and demolition of the existing high school and this work will need to be closely coordinated with the use of the new school.

Subsurface Conditions

An extensive amount of ledge exists on the site and while the new school was located to avoid the ledge to the extent possible, there is the potential of encountering ledge, buried boulder farms from the construction of the existing high school, urban fill material and unsuitable soils, etc. Early enabling work can commence prior to completion of the construction documents to mitigate any scheduling impact of unforeseen/unknown site conditions.

Construction Schedule

The ability to jump start construction through the potential release of early design packages will help to reduce the overall construction duration and thereby construction costs due to escalation.

Pre-construction Services

Due to the size and complexities of the Project, the ability to work with the Design, OPM and CM Teams to plan for and coordinate as the design is developing will be beneficial to the Project. The CM will be intimately familiar with the Project prior to the start of construction and will have been able to provide design phase assistance with budgeting, planning, constructability and detailing throughout the design process. Having the CM on board during the pre-construction time frame allows the CM to pre-plan construction activities and logistics so that the Bid Documents can include a more realistic and well thought out construction master plan and schedule which aids in bidding.

In summary due to the anticipated construction and renovation activities on an occupied site, the complications of the aforementioned adjacencies and the existing site conditions, special construction logistics will be a necessity. The Project Team plans to take advantage of being able to bring on a CM during the design phase of the project to plan for and include in the design process the coordination and phasing of the construction and renovation activities around the operations of the existing school. Early release packages will also be utilized to align construction with the most advantageous calendar months and to accelerate completion of the new building prior to the 2021-2022 school year. Renovation of the Field House and site work will extend into the 2021-2022 school year and complete by summer 2022 or earlier.

The School Building Committee (SBC) voted to proceed with Construction Management (CM) at Risk services at their October 12, 2017 Meeting and established a Prequalification/Selection Committee composed of six members of the SBC with experience in construction along with members of Ai3 and Leftfield. An Application to Proceed with CM at Risk Services was submitted to the Office of the Inspector General on December 20, 2017 and we are awaiting approval to proceed with Construction Management at Risk services. Contingent upon all necessary approvals, it is anticipated that the CM procurement process will begin in March 2018 and a CM Contract will be awarded in April 2018.

EXHIBIT C - MSBA REIMBURSEMENT RATE CALCULATION

Anticipated Reimbursement Rate with Incentive Points

The following Exhibit C - MSBA Reimbursement Rate before Incentives indicates a rate of 79.58% for the City of Fall River's BMC Durfee High School Project (MSBA Project Number 201400950505). The Project intends to utilize a Construction Management at Risk (CM at Risk) construction delivery method. With the incentive points gained from use of a CM at Risk should allow the City to achieve the maximum reimbursement rate of 80%.

Exhibit C

Calendar Year 2015

Fall River

B.M.C. Durfee High School - 201400950505

MSBA Reimbursement Rate Calculation	
Base Points	31.00
Income Factor	9.47
Property Wealth Factor	22.11
Poverty Factor	17.00
Subtotal: Reimbursement Rate Before Incentives	79.58
Incentive Points	
Maintenance (0-2)	-
CM @ Risk (0-1)	-
Newly Formed Regional District (0-6)	-
Major Reconstruction or Reno/Reuse (0-5)	-
Overlay Zoning 40R & 40S (0-1)	-
Overlay Zoning 100 units or 50% of units for 1, 2 or 3 family structures (0-0.5)	-
Energy Efficiency - "Green Schools" (0 or 2)	-
Model Schools (5)	-
Total Incentive Points	-
MSBA Reimbursement Rate	79.58

TAX RATE IMPACT

Anticipated Reimbursement Rate with Incentive Points

City of Fall River, Massachusetts

$40,000,000 General Obligation State Qualified Bonds dated February 15, 2018

Durfee High School

30 year bonds - Level Debt Service - Interest Estimated at 4.50% (Subject to Change)

				Tax Rate Impact (Assumes No Growth in FY18 Assessed Value)		
Fiscal Year	Principal	Interest	Total P+I	Residential Tax Rate Impact per $100,000 of Assessed Value	Commercial/ Industrial/ Personal Property Tax Rate Impact per $100,000 of Assessed Value	Impact on Average Single Family Home Valued at $212,852
06/03/2019	$ 135,000.00	$ 2,326,962.50	$ 2,461,962.50	$ 36.95	$ 78.66	$ 78.65
06/03/2020	685,000.00	1,778,512.50	2,463,512.50	36.98	78.71	78.70
06/03/2021	715,000.00	1,747,012.50	2,462,012.50	36.95	78.66	78.66
06/03/2022	745,000.00	1,714,162.50	2,459,162.50	36.91	78.57	78.56
06/03/2023	780,000.00	1,679,850.00	2,459,850.00	36.92	78.59	78.59
06/03/2024	820,000.00	1,643,850.00	2,463,850.00	36.98	78.72	78.71
06/03/2025	855,000.00	1,606,162.50	2,461,162.50	36.94	78.63	78.63
06/03/2026	895,000.00	1,566,787.50	2,461,787.50	36.95	78.65	78.65
06/03/2027	935,000.00	1,525,612.50	2,460,612.50	36.93	78.61	78.61
06/03/2028	980,000.00	1,482,525.00	2,462,525.00	36.96	78.67	78.67
06/03/2029	1,025,000.00	1,437,412.50	2,462,412.50	36.96	78.67	78.67
06/03/2030	1,070,000.00	1,390,275.00	2,460,275.00	36.93	78.60	78.60
06/03/2031	1,120,000.00	1,341,000.00	2,461,000.00	36.94	78.63	78.62
06/03/2032	1,170,000.00	1,289,475.00	2,459,475.00	36.92	78.58	78.57
06/03/2033	1,225,000.00	1,235,587.50	2,460,587.50	36.93	78.61	78.61
06/03/2034	1,280,000.00	1,179,225.00	2,459,225.00	36.91	78.57	78.57
06/03/2035	1,340,000.00	1,120,275.00	2,460,275.00	36.93	78.60	78.60
06/03/2036	1,405,000.00	1,058,512.50	2,463,512.50	36.98	78.71	78.70
06/03/2037	1,465,000.00	993,937.50	2,458,937.50	36.91	78.56	78.56
06/03/2038	1,535,000.00	926,437.50	2,461,437.50	36.94	78.64	78.64
06/03/2039	1,605,000.00	855,787.50	2,460,787.50	36.93	78.62	78.62
06/03/2040	1,680,000.00	781,875.00	2,461,875.00	36.95	78.65	78.65
06/03/2041	1,755,000.00	704,587.50	2,459,587.50	36.92	78.58	78.58
06/03/2042	1,840,000.00	623,700.00	2,463,700.00	36.98	78.71	78.71
06/03/2043	1,920,000.00	539,100.00	2,459,100.00	36.91	78.57	78.56
06/03/2044	2,010,000.00	450,675.00	2,460,675.00	36.93	78.62	78.61
06/03/2045	2,105,000.00	358,087.50	2,463,087.50	36.97	78.69	78.69
06/03/2046	2,200,000.00	261,225.00	2,461,225.00	36.94	78.63	78.63
06/03/2047	2,300,000.00	159,975.00	2,459,975.00	36.92	78.59	78.59
06/03/2048	2,405,000.00	54,112.50	2,459,112.50	36.91	78.57	78.56
Total	$ 40,000,000.00	$ 33,832,700.00	$ 73,832,700.00			

City of Fall River, Massachusetts

$80,000,000 General Obligation State Qualified Bonds dated February 15, 2018

Durfee High School

30 year bonds - Level Debt Service - Interest Estimated at 4.50% (Subject to Change)

				Tax Rate Impact (Assumes No Growth in FY18 Assessed Value)		
Date	Principal	Interest	Total P+I	Residential Tax Rate Impact per $100,000 of Assessed Value	Commercial/ Industrial/ Personal Property Tax Rate Impact per $100,000 of Assessed Value	Impact on Average Single Family Home Valued at $212,852
06/03/2019	$ 270,000.00	$ 4,653,925.00	$ 4,923,925.00	$ 73.90	$ 157.31	$ 157.31
06/03/2020	1,365,000.00	3,557,137.50	4,922,137.50	73.88	157.26	157.25
06/03/2021	1,430,000.00	3,494,250.00	4,924,250.00	73.91	157.32	157.32
06/03/2022	1,495,000.00	3,428,437.50	4,923,437.50	73.90	157.30	157.29
06/03/2023	1,560,000.00	3,359,700.00	4,919,700.00	73.84	157.18	157.17
06/03/2024	1,635,000.00	3,287,812.50	4,922,812.50	73.89	157.28	157.27
06/03/2025	1,710,000.00	3,212,550.00	4,922,550.00	73.88	157.27	157.26
06/03/2026	1,790,000.00	3,133,800.00	4,923,800.00	73.90	157.31	157.30
06/03/2027	1,870,000.00	3,051,450.00	4,921,450.00	73.87	157.23	157.23
06/03/2028	1,955,000.00	2,965,387.50	4,920,387.50	73.85	157.20	157.19
06/03/2029	2,045,000.00	2,875,387.50	4,920,387.50	73.85	157.20	157.19
06/03/2030	2,140,000.00	2,781,225.00	4,921,225.00	73.86	157.23	157.22
06/03/2031	2,240,000.00	2,682,675.00	4,922,675.00	73.89	157.27	157.27
06/03/2032	2,345,000.00	2,579,512.50	4,924,512.50	73.91	157.33	157.33
06/03/2033	2,450,000.00	2,471,625.00	4,921,625.00	73.87	157.24	157.23
06/03/2034	2,565,000.00	2,358,787.50	4,923,787.50	73.90	157.31	157.30
06/03/2035	2,680,000.00	2,240,775.00	4,920,775.00	73.86	157.21	157.21
06/03/2036	2,805,000.00	2,117,362.50	4,922,362.50	73.88	157.26	157.26
06/03/2037	2,935,000.00	1,988,212.50	4,923,212.50	73.89	157.29	157.29
06/03/2038	3,070,000.00	1,853,100.00	4,923,100.00	73.89	157.29	157.28
06/03/2039	3,210,000.00	1,711,800.00	4,921,800.00	73.87	157.25	157.24
06/03/2040	3,360,000.00	1,563,975.00	4,923,975.00	73.91	157.31	157.31
06/03/2041	3,515,000.00	1,409,287.50	4,924,287.50	73.91	157.32	157.32
06/03/2042	3,675,000.00	1,247,512.50	4,922,512.50	73.88	157.27	157.26
06/03/2043	3,845,000.00	1,078,312.50	4,923,312.50	73.90	157.29	157.29
06/03/2044	4,020,000.00	901,350.00	4,921,350.00	73.87	157.23	157.23
06/03/2045	4,205,000.00	716,287.50	4,921,287.50	73.87	157.23	157.22
06/03/2046	4,400,000.00	522,675.00	4,922,675.00	73.89	157.27	157.27
06/03/2047	4,600,000.00	320,175.00	4,920,175.00	73.85	157.19	157.19
06/03/2048	4,815,000.00	108,337.50	4,923,337.50	73.90	157.29	157.29
Total	$ 80,000,000.00	$ 67,672,825.00	$147,672,825.00			

City of Fall River, Massachusetts

$84,000,000 General Obligation State Qualified Bonds dated February 15, 2018

Durfee High School

30 year bonds - Level Debt Service - Interest Estimated at 4.50% (Subject to Change)

				Tax Rate Impact (Assumes No Growth in FY18 Assessed Value)		
Date	Principal	Interest	Total P+I	Residential Tax Rate Impact per $100,000 of Assessed Value	Commercial/ Industrial/ Personal Property Tax Rate Impact per $100,000 of Assessed Value	Impact on Average Single Family Home Valued at $212,852
06/03/2019	$ 280,000.00	$ 4,886,700.00	$ 5,166,700.00	$ 77.55	$ 165.07	$ 165.06
06/03/2020	1,435,000.00	3,735,112.50	5,170,112.50	77.60	165.18	165.17
06/03/2021	1,500,000.00	3,669,075.00	5,169,075.00	77.58	165.15	165.14
06/03/2022	1,570,000.00	3,600,000.00	5,170,000.00	77.60	165.17	165.17
06/03/2023	1,640,000.00	3,527,775.00	5,167,775.00	77.56	165.10	165.10
06/03/2024	1,715,000.00	3,452,287.50	5,167,287.50	77.56	165.09	165.08
06/03/2025	1,795,000.00	3,373,312.50	5,168,312.50	77.57	165.12	165.12
06/03/2026	1,880,000.00	3,290,625.00	5,170,625.00	77.61	165.19	165.19
06/03/2027	1,965,000.00	3,204,112.50	5,169,112.50	77.58	165.15	165.14
06/03/2028	2,055,000.00	3,113,662.50	5,168,662.50	77.58	165.13	165.13
06/03/2029	2,150,000.00	3,019,050.00	5,169,050.00	77.58	165.14	165.14
06/03/2030	2,250,000.00	2,920,050.00	5,170,050.00	77.60	165.18	165.17
06/03/2031	2,350,000.00	2,816,550.00	5,166,550.00	77.55	165.06	165.06
06/03/2032	2,460,000.00	2,708,325.00	5,168,325.00	77.57	165.12	165.12
06/03/2033	2,575,000.00	2,595,037.50	5,170,037.50	77.60	165.18	165.17
06/03/2034	2,690,000.00	2,476,575.00	5,166,575.00	77.55	165.07	165.06
06/03/2035	2,815,000.00	2,352,712.50	5,167,712.50	77.56	165.10	165.10
06/03/2036	2,945,000.00	2,223,112.50	5,168,112.50	77.57	165.11	165.11
06/03/2037	3,080,000.00	2,087,550.00	5,167,550.00	77.56	165.10	165.09
06/03/2038	3,225,000.00	1,945,687.50	5,170,687.50	77.61	165.20	165.19
06/03/2039	3,370,000.00	1,797,300.00	5,167,300.00	77.56	165.09	165.08
06/03/2040	3,525,000.00	1,642,162.50	5,167,162.50	77.56	165.08	165.08
06/03/2041	3,690,000.00	1,479,825.00	5,169,825.00	77.60	165.17	165.16
06/03/2042	3,860,000.00	1,309,950.00	5,169,950.00	77.60	165.17	165.17
06/03/2043	4,035,000.00	1,132,312.50	5,167,312.50	77.56	165.09	165.08
06/03/2044	4,220,000.00	946,575.00	5,166,575.00	77.55	165.07	165.06
06/03/2045	4,415,000.00	752,287.50	5,167,287.50	77.56	165.09	165.08
06/03/2046	4,620,000.00	549,000.00	5,169,000.00	77.58	165.14	165.14
06/03/2047	4,835,000.00	336,262.50	5,171,262.50	77.62	165.22	165.21
06/03/2048	5,055,000.00	113,737.50	5,168,737.50	77.58	165.13	165.13
Total	$ 84,000,000.00	$ 71,056,725.00	$155,056,725.00			

City of Fall River, Massachusetts

$98,000,000 General Obligation State Qualified Bonds dated February 15, 2018

Durfee High School

30 year bonds - Level Debt Service - Interest Estimated at 4.50% (Subject to Change)

				Tax Rate Impact (Assumes No Growth in FY18 Assessed Value)		
Date	Principal	Interest	Total P+I	Residential Tax Rate Impact per $100,000 of Assessed Value	Commercial/ Industrial/ Personal Property Tax Rate Impact per $100,000 of Assessed Value	Impact on Average Single Family Home Valued at $212,852
06/03/2019	$ 330,000.00	$ 5,701,075.00	$ 6,031,075.00	$ 90.52	$ 192.69	$ 192.68
06/03/2020	1,670,000.00	4,357,575.00	6,027,575.00	90.47	192.57	192.57
06/03/2021	1,750,000.00	4,280,625.00	6,030,625.00	90.52	192.67	192.66
06/03/2022	1,830,000.00	4,200,075.00	6,030,075.00	90.51	192.65	192.65
06/03/2023	1,915,000.00	4,115,812.50	6,030,812.50	90.52	192.68	192.67
06/03/2024	2,000,000.00	4,027,725.00	6,027,725.00	90.47	192.58	192.57
06/03/2025	2,095,000.00	3,935,587.50	6,030,587.50	90.52	192.67	192.66
06/03/2026	2,190,000.00	3,839,175.00	6,029,175.00	90.49	192.62	192.62
06/03/2027	2,290,000.00	3,738,375.00	6,028,375.00	90.48	192.60	192.59
06/03/2028	2,395,000.00	3,632,962.50	6,027,962.50	90.48	192.59	192.58
06/03/2029	2,510,000.00	3,522,600.00	6,032,600.00	90.55	192.73	192.73
06/03/2030	2,625,000.00	3,407,062.50	6,032,062.50	90.54	192.72	192.71
06/03/2031	2,745,000.00	3,286,237.50	6,031,237.50	90.52	192.69	192.68
06/03/2032	2,870,000.00	3,159,900.00	6,029,900.00	90.50	192.65	192.64
06/03/2033	3,000,000.00	3,027,825.00	6,027,825.00	90.47	192.58	192.57
06/03/2034	3,140,000.00	2,889,675.00	6,029,675.00	90.50	192.64	192.63
06/03/2035	3,285,000.00	2,745,112.50	6,030,112.50	90.51	192.65	192.65
06/03/2036	3,435,000.00	2,593,912.50	6,028,912.50	90.49	192.62	192.61
06/03/2037	3,595,000.00	2,435,737.50	6,030,737.50	90.52	192.67	192.67
06/03/2038	3,760,000.00	2,270,250.00	6,030,250.00	90.51	192.66	192.65
06/03/2039	3,935,000.00	2,097,112.50	6,032,112.50	90.54	192.72	192.71
06/03/2040	4,115,000.00	1,915,987.50	6,030,987.50	90.52	192.68	192.68
06/03/2041	4,305,000.00	1,726,537.50	6,031,537.50	90.53	192.70	192.69
06/03/2042	4,500,000.00	1,528,425.00	6,028,425.00	90.48	192.60	192.59
06/03/2043	4,710,000.00	1,321,200.00	6,031,200.00	90.52	192.69	192.68
06/03/2044	4,925,000.00	1,104,412.50	6,029,412.50	90.50	192.63	192.63
06/03/2045	5,155,000.00	877,612.50	6,032,612.50	90.55	192.73	192.73
06/03/2046	5,390,000.00	640,350.00	6,030,350.00	90.51	192.66	192.66
06/03/2047	5,640,000.00	392,175.00	6,032,175.00	90.54	192.72	192.71
06/03/2048	5,895,000.00	132,637.50	6,027,637.50	90.47	192.58	192.57
Total	$ 98,000,000.00	$ 82,903,750.00	$180,903,750.00			

CITY DEBT LIMIT

Anticipated Reimbursement Rate with Incentive Points

CITY OF FALL RIVER
MASSACHUSETTS

DEPARTMENT of FINANCIAL SERVICES
TREASURER • COLLECTOR • AUDITOR • ASSESSOR

JASIEL F. CORREIA II
Mayor

PAULIANNE MARTINS-TEIXEIRA
Treasurer

November 29, 2017

Mary L. Sahady, CFO
City of Fall River
1 Government Center
Fall River, MA 02722

Re: City Debt Limit Information Requested

Dear Mary,

The summary of the City of Fall River's Debt Information is as follows:

CITY DEBT LIMIT, ALSO REFERRED TO AS DEBT LIMIT as of 6/30/17

The inside debt limit is based on five percent (5%) of the equalized calculation of the City.

Equalized Valuation	5,421,691,200.00
Inside Debt Limit (5%)	271,084,560.00
Existing Inside Debt	(64,977,800.00)
Authorized Debt but Unissued	78,184,509.00
Current Debt Capacity	284,291,269.00

OUTSIDE DEBT

Current Outside Debt related to schools	7,006,180.00

If you need further information, please do not hesitate to call.

Best Regards,

Paulianne Martins Teixeira

Paulianne Martins Teixeira

One Government Center Fall River, MA 02722
TEL: (508) 324-2260 FAX (508) 324-2040

CASH FLOW

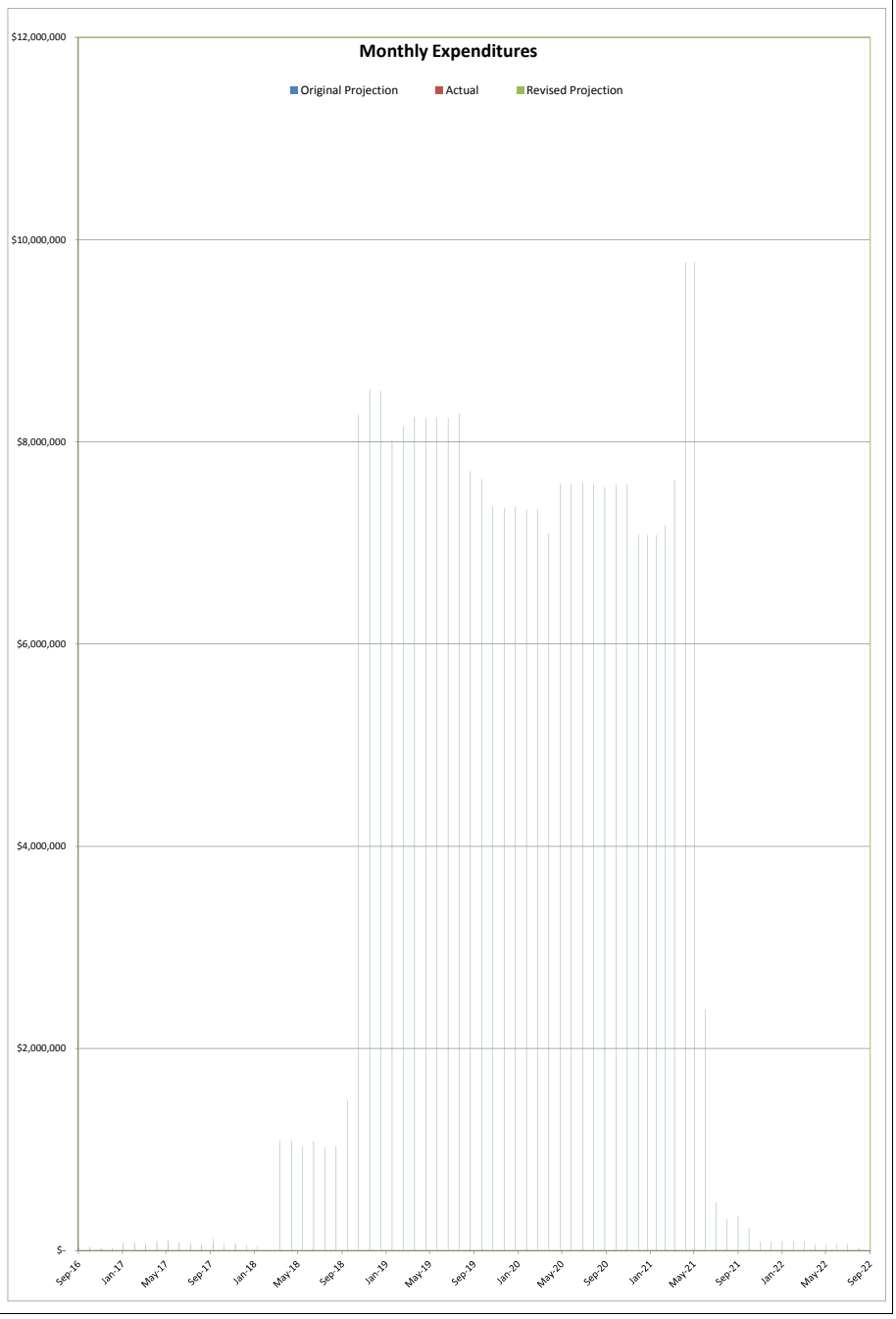
Anticipated Reimbursement Rate with Incentive Points

LEFTFIELD
THE RIGHT CHOICE IN PROJECT MANAGEMENT

BMC Durfee High School - Fall River, MA — **December 2017**

Monthly Cash Flow

Date	Original Projection	Actual	Revised Projection
Sep-16	$ 32,812	$ 32,812	
Oct-16	$ 32,813	$ 32,813	
Nov-16	$ 21,875	$ 21,875	
Dec-16	$ 21,875	$ 21,875	
Jan-17	$ 67,745	$ 78,272	
Feb-17	$ 67,705	$ 81,759	
Mar-17	$ 73,179	$ 63,425	
Apr-17	$ 82,705	$ 97,946	
May-17	$ 87,705	$ 107,633	
Jun-17	$ 87,705	$ 73,341	
Jul-17	$ 82,705	$ 54,466	
Aug-17	$ 77,705	$ 58,223	
Sep-17	$ 77,705	$ 125,988	
Oct-17	$ 77,705	$ 38,265	
Nov-17	$ 67,705	$ 70,950	
Dec-17	$ 48,000		$ 48,000
Jan-18	$ 42,356		$ 42,356
Feb-18	$ -		$ -
Mar-18	$ 1,089,430		$ 1,089,430
Apr-18	$ 1,085,510		$ 1,085,510
May-18	$ 1,023,010		$ 1,023,010
Jun-18	$ 1,083,010		$ 1,083,010
Jul-18	$ 1,023,010		$ 1,023,010
Aug-18	$ 1,033,010		$ 1,033,010
Sep-18	$ 1,483,010		$ 1,483,010
Oct-18	$ 8,272,425		$ 8,272,425
Nov-18	$ 8,517,425		$ 8,517,425
Dec-18	$ 8,502,425		$ 8,502,425
Jan-19	$ 8,012,425		$ 8,012,425
Feb-19	$ 8,152,425		$ 8,152,425
Mar-19	$ 8,247,425		$ 8,247,425
Apr-19	$ 8,237,425		$ 8,237,425
May-19	$ 8,237,425		$ 8,237,425
Jun-19	$ 8,237,425		$ 8,237,425
Jul-19	$ 8,282,604		$ 8,282,604
Aug-19	$ 7,710,099		$ 7,710,099
Sep-19	$ 7,630,099		$ 7,630,099
Oct-19	$ 7,361,522		$ 7,361,522
Nov-19	$ 7,346,522		$ 7,346,522
Dec-19	$ 7,356,522		$ 7,356,522
Jan-20	$ 7,331,522		$ 7,331,522
Feb-20	$ 7,331,522		$ 7,331,522
Mar-20	$ 7,091,522		$ 7,091,522
Apr-20	$ 7,581,522		$ 7,581,522
May-20	$ 7,581,522		$ 7,581,522
Jun-20	$ 7,591,522		$ 7,591,522
Jul-20	$ 7,581,522		$ 7,581,522
Aug-20	$ 7,551,123		$ 7,551,123
Sep-20	$ 7,581,522		$ 7,581,522
Oct-20	$ 7,581,522		$ 7,581,522
Nov-20	$ 7,081,522		$ 7,081,522
Dec-20	$ 7,076,522		$ 7,076,522
Jan-21	$ 7,076,522		$ 7,076,522
Feb-21	$ 7,176,522		$ 7,176,522
Mar-21	$ 7,623,548		$ 7,623,548
Apr-21	$ 9,771,522		$ 9,771,522
May-21	$ 9,776,522		$ 9,776,522
Jun-21	$ 2,386,522		$ 2,386,522
Jul-21	$ 479,522		$ 479,522
Aug-21	$ 311,522		$ 311,522
Sep-21	$ 340,643		$ 340,643
Oct-21	$ 220,642		$ 220,642
Nov-21	$ 89,121		$ 89,121
Dec-21	$ 89,121		$ 89,121
Jan-22	$ 89,121		$ 89,121
Feb-22	$ 89,121		$ 89,121
Mar-22	$ 89,121		$ 89,121
Apr-22	$ 59,121		$ 59,121
May-22	$ 59,121		$ 59,121
Jun-22	$ 59,121		$ 59,121
Jul-22	$ 59,121		$ 59,121
Aug-22	$ 29,121		$ 29,121
Sep-22	$ -		
Total:	$ 263,811,726	$ 959,644	$ 262,852,082



TOTAL PROJECT BUDGET

LEFTFIELD
THE RIGHT CHOICE IN PROJECT MANAGEMENT

BMC Durfee High School - Fall River, MA — **January 3, 2018**

Total Project Budget Status Report

ProPay Code	Description	Total Project Budget	Authorized Changes	Revised Total Budget	Total Committed	% Cmtd to Date	Actual Spent to Date	% Spent to Date	Balance To Spend	Comments
	FEASIBILITY STUDY AGREEMENT									
0001-0000	OPM Feasibility Study/Schematic Design	$ 280,000	$ 50,500	$ 330,500	$ 330,500	100%	$ 303,250	92%	$ 27,250	*FSA 1, 2
0002-0000	A&E Feasibility Study/Schematic Design	$ 570,000	$ 99,500	$ 669,500	$ 669,500	100%	$ 656,394	98%	$ 13,106	*FSA 1, 2
0003-0000	Environmental & Site	$ 120,000	$ (120,000)	$ -	$ -		$ -		$ -	*FSA 1, 2
0004-0000	Other	$ 30,000	$ 20,000	$ 50,000	$ -		$ -		$ 50,000	*FSA 2, 3
	SUB-TOTAL	$ 1,000,000	$ 50,000	$ 1,050,000	$ 1,000,000	95%	$ 959,644	91%	$ 90,356	
	ADMINISTRATION									
0101-0000	Legal Fees	$ 20,000		$ 20,000	$ -				$ 20,000	
	Owner's Project Manager	$ 6,955,000	$ -	$ 6,955,000	$ -	0%	$ -	0%	$ 6,955,000	
0102-0400	Design Development	$ 560,000		$ 560,000	$ -	0%	$ -	0%	$ 560,000	
0102-0500	Construction Documents	$ 800,000		$ 800,000	$ -	0%	$ -	0%	$ 800,000	
0102-0600	Bidding	$ 300,000		$ 300,000	$ -	0%	$ -	0%	$ 300,000	
0102-0700	Construction Administration	$ 4,995,000		$ 4,995,000	$ -	0%	$ -	0%	$ 4,995,000	
0102-0800	Closeout	$ 300,000		$ 300,000	$ -	0%	$ -	0%	$ 300,000	
0102-0900	Extra Services	$ -		$ -	$ -		$ -		$ -	
0102-1000	Reimbursable Services	$ -		$ -	$ -		$ -		$ -	
0201-1100	Cost Estimates	$ -		$ -	$ -		$ -		$ -	
0103-0000	Advertising & Printing	$ 50,000		$ 50,000	$ -	0%	$ -	0%	$ 50,000	
0104-0000	Permitting	$ -	$ -	$ -	$ -		$ -		$ -	
0105-0000	Owner's Insurance	$ -	$ -	$ -	$ -		$ -		$ -	
0199-0000	Other Administrative Costs	$ 100,000	$ -	$ 100,000	$ -	0%	$ -	0%	$ 100,000	
	SUB-TOTAL	$ 7,125,000	$ -	$ 7,105,000	$ -	0%	$ -	0%	$ 7,105,000	
	A&E									
	A/E Basic Services	$ 19,923,179	$ -	$ 19,923,179	$ -	0%	$ -	0%	$ 19,923,179	
0201-0400	Design Development	$ 5,866,067		$ 5,866,067	$ -	0%	$ -	0%	$ 5,866,067	
0201-0500	Construction Documents	$ 9,074,425		$ 9,074,425	$ -	0%	$ -	0%	$ 9,074,425	
0201-0600	Bidding	$ 667,155		$ 667,155	$ -	0%	$ -	0%	$ 667,155	
0201-0700	Construction Administration	$ 3,891,080		$ 3,891,080	$ -	0%	$ -	0%	$ 3,891,080	
0201-0800	Closeout	$ 349,452		$ 349,452	$ -	0%	$ -	0%	$ 349,452	
0201-9900	Other Basic Services	$ 75,000		$ 75,000	$ -		$ -		$ 75,000	
	Extra/Reimbursable Services	$ 1,020,000	$ -	$ 820,000	$ -	0%	$ -	0%	$ 820,000	
0203-9900	Printing (over minimum)	$ 200,000		$ 200,000	$ -	0%	$ -	0%	$ 200,000	
0203-9900	Other Reimbursables	$ 150,000		$ 150,000	$ -	0%	$ -	0%	$ 150,000	
0204-0200	HazMat (incl. monitoring)	$ 350,000		$ 350,000	$ -	0%	$ -	0%	$ 350,000	
0204-0300	Geotechnical/Geo-Environmental	$ 150,000		$ 150,000	$ -	0%	$ -	0%	$ 150,000	
0204-0400	Site Survey & Site Requirements	$ 45,000		$ 45,000	$ -	0%	$ -	0%	$ 45,000	
0204-0500	Wetlands	$ 100,000		$ 100,000	$ -		$ -		$ 100,000	
0204-1200	Traffic Studies	$ 25,000		$ 25,000	$ -	0%	$ -	0%	$ 25,000	
	SUB-TOTAL	$ 20,943,179	$ -	$ 20,743,179	$ -	0%	$ -	0%	$ 20,743,179	
	SITE ACQUISITION									
0301-0000	Land/Bldg. Purchase/Associated Services	$ -		$ -	$ -	0%	$ -	0%	$ -	
	SUB-TOTAL	$ -	$ -	$ -	$ -	0%	$ -	0%	$ -	

LEFTFIELD
THE RIGHT CHOICE IN PROJECT MANAGEMENT

BMC Durfee High School - Fall River, MA — **January 3, 2018**

Total Project Budget Status Report

ProPay Code	Description	Total Project Budget	Authorized Changes	Revised Total Budget	Total Committed	% Cmtd to Date	Actual Spent to Date	% Spent to Date	Balance To Spend	Comments
	PRE CONSTRUCTION COSTS									
0501-0000	CMR Pre-Con Services	$ 270,000		$ 270,000	$ -	0%	$ -	0%	$ 270,000	
	SUB-TOTAL	$ 270,000	$ -	$ 270,000	$ -	0%	$ -	0%	$ 270,000	
	CONSTRUCTION COSTS									
0502-0001	Construction Budget	$ 214,392,026	$ -	$ 214,392,026	$ -	0%	$ -	0%	$ 214,392,026	
0508-0000	Change Orders	$ -	$ -	$ -	$ -		$ -		$ -	
	SUB-TOTAL	$ 214,392,026	$ -	$ 214,392,026	$ -	0%	$ -	0%	$ 214,392,026	
	ALTERNATES									
0506-0000				$ -	$ -	0%	$ -	0%	$ -	
	SUB-TOTAL	$ -	#REF!	$ -	$ -	0%	$ -	0%	$ -	
	OTHER PROJECT COSTS									
0507-0000	Construction Contingency	$ 10,719,601	$ -	$ 10,719,601	$ -	0%	$ -	0%	$ 10,719,601	
	Miscellaneous Project Costs	$ 1,000,000	$ -	$ 1,000,000	$ -	0%	$ -	0%	$ 1,000,000	
0601-0000	Utility Company Fees	$ 250,000		$ 250,000	$ -	0%	$ -	0%	$ 250,000	
0602-0000	Testing Services	$ 300,000		$ 300,000	$ -	0%	$ -	0%	$ 300,000	
0699-0000	Other Project Costs	$ 450,000		$ 450,000	$ -		$ -		$ 450,000	
	Furnishings and Equipment	$ 6,168,000	$ -	$ 6,168,000	$ -	0%	$ -	0%	$ 6,168,000	
0701-0000	Furnishings	$ 3,084,000		$ 3,084,000	$ -	0%	$ -	0%	$ 3,084,000	
0702-0000	Equipment	$ -		$ -		0%		0%	$ -	
0703-0000	Technology Equipment	$ 3,084,000		$ 3,084,000	$ -	0%	$ -	0%	$ 3,084,000	
0801-0000	Owner's Contingency	$ 2,143,920		$ 2,143,920	$ -	0%	$ -	0%	$ 2,143,920	
	SUB-TOTAL	$ 20,031,521	$ -	$ 20,031,521	$ -	0%	$ -	0%	$ 20,031,521	
	TOTAL PROJECT BUDGET	$ 263,811,726	$ 50,000	$ 263,591,726	$ 1,000,000	0%	$ 959,644	0%	$ 262,632,082	

FUNDING SOURCES	Max w/ Conting.	Max w/o Conting.
Maximum State Share	$ 209,766,296	$ 199,529,506
Local Share *	$ 53,825,430	$ 64,062,220
SUB-TOTAL	$ 263,591,726	$ 263,591,726

Project Budget	Scope Items Excluded	Contingencies	Basis of Total Facilities Grant	Reimbursement Rate
$ 263,811,726	$ -	$ 12,863,521	$ 250,948,205	79.58%

CONSTR. COST ESTIMATES	Date	Estimator	Amount	SF	Cost Per SF
Designer FS Cost Estimate	06/13/17	PM&C	$197,067,802	501,330	$393.09
Designer SD Cost Estimate	12/14/17	PM&C	$214,392,026	501,330	$427.65
OPM SD Cost Estimate	12/14/17	AM Fogarty	$214,162,579	501,330	$427.19

LEFTFIELD
THE RIGHT CHOICE IN PROJECT MANAGEMENT

BMC Durfee High School - Fall River, MA — **January 3, 2018**

Total Project Budget Status Report

ProPay Code	Description	Total Project Budget	Authorized Changes	Revised Total Budget	Total Committed	% Cmtd to Date	Actual Spent to Date	% Spent to Date	Balance To Spend	Comments

Feasibility Study Agreement Budget Transfers:

FSA BRR 01	7/7/2016	Transfer $50,000 from Environmental & Site to OPM Feasibility Study/Schematic Design; transfer $20,000 from A/E Feasibility Study/Schematic Design to OPM Feasibility Study/Schematic Design. **APPROVED by MSBA 11/8/16**
FSA BRR 02	2/3/2017	Transfer $70,000 from Environmental & Site, transfer $30,000 from Other , and transfer $19,500 from OPM Feasibility Study/Schematic Design to to A/E Feasibility Study/Schematic Design to fulfill A/E Contract Requirements. **APPROVED by MSBA 8/10/17**
FSA BRR 03	12/18/2017	Increase Feasibility Study Budget by $50,000 as approved by the City Council. **Council Order to be Submitted to MSBA for FSA Amendment**

Project Funding Agreement Budget Transfers:

Total Project Budget

City of Fall River, MA
B.M.C. Durfee High School

School Building Committee Reviewed on: **12/19/2017**

	Total Project Budget: All costs associated with the project are subject to 963 CMR 2.16(5)	Estimated Budget	Scope Items Excluded from the Estimated Basis of Maximum Facilities Grant or Otherwise Ineligible	Estimated Basis of Maximum Total Facilities Grant[1]	Estimated Maximum Total Facilities Grant[1]
1	Feasibility Study Agreement				
2	*OPM Feasibility Study*	$330,500	$0	$330,500	
3	*A&E Feasibility Study*	$669,500	$0	$669,500	
4	*Environmental & Site*	$0	$0	$0	
5	*Other*	$50,000	$0	$50,000	
6	**Feasibility Study Agreement Subtotal**	**$1,050,000**	**$0**	**$1,050,000**	**$840,000**
7	Administration				
8	**Legal Fees**	$20,000	$20,000	$0	**$0**
9	**Owner's Project Manager**				
10	*Design Development*	$560,000	$0	$560,000	
11	*Construction Contract Documents*	$800,000	$0	$800,000	
12	*Bidding*	$300,000	$0	$300,000	
13	*Construction Contract Administration*	$4,995,000	$173,785	$4,821,215	
14	*Closeout*	$300,000	$0	$300,000	
15	*Extra Services*	$0	$0	$0	
16	*Reimbursable & Other Services*	$0	$0	$0	
17	*Cost Estimates*	$0	$0	$0	
18	*Advertising*	$50,000	$0	$50,000	
19	*Permitting*	$0	$0	$0	
20	*Owner's Insurance*	$0	$0	$0	
21	*Other Administrative Costs*	$100,000	$0	$100,000	
22	**Administration Subtotal**	**$7,125,000**	**$193,785**	**$6,931,215**	**$5,544,972**
23	**Architecture and Engineering**				
24	**Basic Services**				
25	*Design Development*	$5,866,067	$0	$5,866,067	
26	*Construction Contract Documents*	$9,074,425	$0	$9,074,425	
27	*Bidding*	$667,155	$0	$667,155	
28	*Construction Contract Administration*	$3,891,080	$497,820	$3,393,260	
29	*Closeout*	$349,452	$0	$349,452	
30	*Other Basic Services*	$75,000	$0	$75,000	
31	**Basic Services Subtotal**	**$19,923,179**	**$497,820**	**$19,425,359**	
32	Reimbursable Services				
33	*Construction Testing*	$0	$0	$0	
34	*Printing (over minimum)*	$200,000	$0	$200,000	
35	*Other Reimbursable Costs*	$150,000	$0	$150,000	
36	*Hazardous Materials*	$350,000	$0	$350,000	
37	*Geotech & Geo-Env.*	$150,000	$0	$150,000	
38	*Site Survey*	$45,000	$0	$45,000	
39	*Wetlands*	$100,000	$0	$100,000	
40	*Traffic Studies*	$25,000	$0	$25,000	
41	**Architectural/Engineering Subtotal**	**$20,943,179**	**$497,820**	**$20,445,359**	**$16,356,287**
42	**CM & Risk Preconstruction Services**				
43	Pre-Construction Services	$270,000	**$6,746**	$263,254	**$210,603**
44	Site Acquisition				
45	Land / Building Purchase	$0	$0	$0	
46	Appraisal Fees	$0	$0	$0	
47	Recording fees	$0	$0	$0	
48	**Site Acquisition Subtotal**	**$0**	**$0**	**$0**	**$0**
49	Construction Costs				
50	SUBSTRUCTURE				
51	Foundations	$10,040,225	$0		
52	Basement Construction	$0	$0		
53	SHELL				
54	SuperStructure	$15,066,451	$0		
55	Exterior Closure	$20,698,812	$0		
56	Exterior Walls	$0	$0		
57	Exterior Windows	$0	$0		
58	Exterior Doors	$0	$0		
59	Roofing	$4,560,237	$0		
60	INTERIORS				
61	Interior Construction	$20,205,272	$0		
62	Staircases	$1,007,076	$0		
63	Interior Finishes	$10,228,828	$0		
64	SERVICES				
65	Conveying Systems	$394,300	$0		
66	Plumbing	$6,886,573	$0		
67	HVAC	$19,355,818	$0		
68	Fire Protection	$2,193,247	$0		
69	Electrical	$21,210,335	$0		
70	EQUIPMENT & FURNISHINGS				
71	Equipment	$3,932,462	$0		
72	Furnishings	$3,364,986	$0		
73	SPECIAL CONSTRUCTION & DEMOLITION				
74	Special Construction	$3,092,050	$0		
75	Existing Building Demolition	$2,881,415	$0		
76	In-Bldg. Hazardous Material Abatement	$2,363,000	$0		
77	Asbestos Cont'g Floor Mat'l Abatement	$192,000	$192,000		
78	Other Hazardous Material Abatement	$0	$0		
79	BUILDING SITEWORK				
80	Site Preparation	$3,116,961	$0		
81	Site Improvements	$8,783,373	$0		
82	Site Civil / Mechanical Utilities	$4,346,370	$0		
83	Site Electrical Utilities	$833,350	$0		
84	Other Site Construction	$0	$0		
85	Scope Excluded Site Cost		$5,948,484		
86	**Construction Trades Subtotal**	$164,753,141	$6,140,484		
87	Contingencies (Design and Pricing)	$16,475,314	$614,048		
88	D/B/B Sub-Contractor Bonds	$0	$0		
89	D/B/B Insurance	$0	$0		
90	D/B/B General Conditions	$0	$0		
91	D/B/B Overhead & Profit	$0	$0		
92	GMP Insurance & Bonds	$4,055,810	$151,163		
93	GMP Fee (Include. Gen. Req, & Gen. Cond.)	$18,864,235	$703,085		

Total Project Budget

City of Fall River, MA
B.M.C. Durfee High School

School Building Committee Reviewed on: **12/19/2017**

	Total Project Budget: All costs associated with the project are subject to 963 CMR 2.16(5)	Estimated Budget	Scope Items Excluded from the Estimated Basis of Maximum Facilities Grant or Otherwise Ineligible	Estimated Basis of Maximum Total Facilities Grant[1]	Estimated Maximum Total Facilities Grant[1]
94	GMP Contingency	$2,829,635	$105,463		
95	Escalation to Mid-Point of Construction	$7,413,891	$276,322		
96	Overall Excluded Construction Cost		$49,664,126		
97	**Construction Budget**	**$214,392,026**	**$57,654,692**	**$156,737,334**	**$125,389,867**
98	**Alternates**				
99	Ineligible Work Included in the Base Project	$0	$0	$0	
100	Alternates Included in the Total Project Budget	$0	$0	$0	
101	Alternates Excluded from the Total Project Budget	$0		$0	
102	**Subtotal to be Included in Total Project Budget**	**$0**	**$0**	**$0**	**$0**
103	Miscellaneous Project Costs				
104	*Utility Company Fees*	$250,000	$0	$250,000	
105	*Testing Services*	$300,000	$0	$300,000	
106	*Swing Space / Modulars*	$0	$0	$0	
107	*Other Project Costs (Mailing & Moving)*	$450,000	$0	$450,000	
108	**Misc. Project Costs Subtotal**	**$1,000,000**	**$0**	**$1,000,000**	**$800,000**
109	*Furnishings and Equipment*				
110	*Furniture, Fixtures and Equipment*	$3,084,000	$0	$3,084,000	
111	*Technology*	$3,084,000	$0	$3,084,000	
112	**FF&E Subtotal**	**$6,168,000**	**$0**	**$6,168,000**	**$4,934,400**
113					
114	Soft Costs that exceed 20% of Construction Cost		$0		
115	**Project Budget**	**$250,948,205**	**$58,353,043**	**$192,595,162**	**154076129.5**

	Board Authorization	
116	Design Enrollment	2,570
117	Total Building Gross Floor Area (GSF)	501,330
118	Total Project Budget (excluding Contingencies)	$250,948,205
119	Scope Items Excluded or Otherwise Ineligible	$58,353,043
120	Third Party Funding (Ineligible)	$0
121	Estimated Basis of Maximum Total Facilities Grant[1]	$192,595,162
122	Reimbursement Rate	80.00%
123	Est. Max. Total Facilities Grant (before recovery)[1]	$154,076,130
124	Cost Recovery[2]	$0
125	Estimated Maximum Total Facilities Grant[1]	$154,076,130

126	Construction Contingency[3]	$10,719,601
127	Ineligible Construction Contingency[3]	$8,575,681
128	"Potentially Eligible" Construction Contingency[3]	$2,143,920
129	Owner's Contingency[3]	$2,143,920
130	Ineligible Owner's Contingency[3]	$0
131	"Potentially Eligible" Owner's Contingency[3]	$2,143,920
132	Total Potentially Eligible Contingency[3]	$4,287,840
133	Reimbursement Rate	80.00%
134	Potential Additional Contingency Grant Funds[3]	$3,430,272
135	Maximum Total Facilities Grant	$157,506,402
136	Total Project Budget	$263,811,726

79.58	Reimbursement Rate Before Incentive Points	
0.42	Total Incentive Points	
80.00%	MSBA Reimbursement Rate	

NOTES

This template was prepared by the MSBA as a tool to assist Districts and consultants in understanding MSBA policies and practices regarding potential impact on the MSBA's calculation of a potential Basis of Total Facilities Grant and potential Total Maximum Facilities Grant. This template does not contain a final, exhaustive list of all evaluations which the MSBA may use in determining whether items are eligible for reimbursement by the MSBA. The MSBA will perform an independent analysis based on a review of information and estimates provided by the District for the proposed school project that may or may not agree with the estimates generated by the District using this template.

1. Does not include any potentially eligible contingency funds and is subject to review and audit by the MSBA.

2. The proposed demolition of the _____ School is expected to result in the MSBA recovering a portion of state funds previously paid to the District for the ____ project at the existing facilities completed in ___. The MSBA will perform an independent analysis based on a review of information and estimates provided by the District for the proposed school project that may or may not agree with the estimated cost recovery generated by the District and its consultants using this template.

3. Pursuant to Section 3.20 of the Project Funding Agreement and the applicable policies and guidelines of the Authority, any project costs associated with the reallocation or transfer of funds from either the Owner's contingency or the Construction contingency to other budget line items shall be subject to review by the Authority to determine whether any such costs are eligible for reimbursement by the Authority. All costs are subject to review and audit by the MSBA.

DESIGNER'S CONSTRUCTION COST ESTIMATE

Schematic Design Estimate

Durfee High School
New School and Renovation

Fall River, MA

PM&C LLC
20 Downer Ave, Suite 1C
Hingham, MA 02043

(T) 781-740-8007
(F) 781-740-1012

Prepared for:

AI3 Architects

December 14, 2017

PM&C

Durfee High School
New School and Renovation
Fall River, MA

14-Dec-17

Schematic Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	$/sf	Estimated Construction Cost
High School				
Construct New High School (Core Academic Building) - Trade Costs	Jun-19	388,152	$297.88	$115,620,833
Athletic Building - Renovation		84,475	$203.91	$17,224,894
Prefabricated Building		28,703	$354.04	$10,162,081
Demolish Existing Building		383,687	$5.50	$2,110,279
Allowance for HazMat removals at existing building per UEC estimate [1]				$2,555,000
Sitework - Trade Costs	Jun-19			$17,080,054
SUBTOTAL TRADE COSTS BUILDING and SITEWORK		501,330	$328.63	$164,753,141
Design and Estimating Contingency	10.0%			$16,475,314
Escalation Allowance	4.5%			$7,413,891
SUBTOTAL INCLUDING CONTINGENCIES				**$188,642,346**
General Conditions	5.0%			$9,432,117
General Requirements	2.5%			$4,716,059
Insurances	1.25%			$2,358,029
Bond	0.90%			$1,697,781
Fee	2.5%			$4,716,059
Building Permit				Waived
CM Contingency	1.5%			$2,829,635
TOTAL ESTIMATED CONSTRUCTION COST		501,330	$427.65	**$214,392,026**