NORTHERN
Analytical Services, LLC.
ENVIRONMENTAL CONSULTANTS

November 19, 2019 Project No: 190224

Terry Larkin
New Branches Charter Academy
3662 Poinsettia Avenue SE
Grand Rapids, Michigan 49508

Re: Water Testing
New Branches Charter Academy

Dear Mr. Larkin:

Please find the enclosed laboratory results from water samples Northern Analytical Services, LLC. (NAS) collected at the site. Samples were collected to determine the levels of the lead and copper present in drinking water at each of the fixtures tested. Testing was limited to those fixtures that tested above the detection limit in previous testing. Testing was performed as part of an annual inspection of your building.

Samples were collected on July 24, 2019 by Juston Rehkopf, a State of Michigan accredited Lead Based Paint Inspector (P05558) of NAS. Samples were collected by filling a single 250 milliliter container, pre-treated by the laboratory with acid, at each faucet/drinking fountain and delivering them to the laboratory for analysis. Sample collection was conducted in the morning prior to the water being used by occupants as a "first draw" sample. NAS did not flush or otherwise run each faucet or fountain prior to sample collection; to our knowledge each faucet and fountain sat dormant for at least 6 hours prior to sample collection.

Once delivered to the laboratory (Pace Analytical), samples were analyzed for the presence of copper and lead in accordance with US EPA method 200.8. A copy of the laboratory report is attached.

According to the US EPA's Lead and Copper rule, which applies to schools and child care facilities that meet the definition of a public water system, the practical quantitation limit (PQL) for lead is 0.005 micrograms of lead per liter of water (mg/L) and 0.050 mg/L for copper. The PQL is the concentration of lead or copper that can be reliably measured within specified limits during routine laboratory operating conditions using approved methods. The action level is the concentration of lead or copper in potable water which determines whether a system may be required to install corrosion control treatment, collect water quality parameter samples, collect source water samples, replace lead service lines, and /or deliver public education about lead. The action level for lead is 0.015 mg/L and 1.3 mg/L for copper.

Essentially the PQL is the limit of detection and the Action Level is the level at which steps should be taken in order to minimize or eliminate exposure to lead or copper. Actions to be taken when the action level is exceeded include the following:

- Public education-provide information to building occupants about the water quality.
- Water quality parameter (WQP) monitoring-establish a routine monitoring program.
- Source water monitoring and source water treatment if necessary.
- Corrosion control treatment (CCT).

14870 225th Ave., Big Rapids, Michigan 49307
Phone : 231-268-0004 Fax : 866-214-4739 Web : www.northernas.com

Choice Schools Associates
New Branches Charter Academy
Water Quality Testing
Project No. 190224
November 19, 2019

The following is a summary of our findings by fixture:

NB-32 (See Attached Drawing)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
10/04/18	0.24*	0.0019
7/24/19	0.0556*	ND

NB-37 (See Attached Drawing)

Sample Date	Copper Concentration (mg/L)	Lead Concentration (mg/L)
7/24/19	0.0728*	ND

* exceeds the PQL for lead or copper.
**exceeds the action level for lead or copper.

Based on the attached results, NAS recommends the following actions:

- Immediately post the public education poster found in appendix A of the Lead and Copper Rule near each faucet/fountain that exceeded the PQL for lead and distribute a copy of this information in pamphlet form to all building occupants.
- Immediately take the faucets/fountains described off line. Flush each of these units (allow water to run for at least 5 minutes) and re-test no sooner than 8 hours after flushing.
- Test the water source to determine the level of lead and copper present; copper levels appear to be elevated in most of the fixtures tested which suggests the water source may be responsible.
- Consider replacing these units if the re-test results exceed the PQL level.
- Consider the installation of point source (faucet/drinking fountain) water filtration for lead.
- Consider the replacement of all water pipes and fixtures as a permanent solution.
- Re-test all fixtures at least annually and following any major changes to the system.

NAS appreciates the opportunity to provide these services and looks forward to assisting you with any re-testing needed. Please do not hesitate to contact me with any questions.

Sincerely

John J. Rehkopf
President

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

August 19, 2019

John Rehkopf
Northern Analytical Services
14870 225th Avenue
Big Rapids, MI 49307

RE: Project: Drinking Water Testing
Pace Project No.: 50232362

Dear John Rehkopf:
Enclosed are the analytical results for sample(s) received by the laboratory on August 07, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melanie Booms

Melanie Booms
melanie.booms@pacelabs.com
(616)975-4500
Project Manager

Enclosures

Pace Analytical Services, LLC
5560 Corporate Exchange Ct. SE
Grand Rapids, MI 49512
(616)975-4500

CERTIFICATIONS

Project: Drinking Water Testing
Pace Project No.: 50232362

Indiana Certification IDs

7726 Moller Road, Indianapolis, IN 46268
Illinois Certification #: 200074
Indiana Certification #: C-49-06
Kansas/NELAP Certification #: E-10177
Kentucky UST Certification #: 80226
Kentucky WW Certification #: 98019
Michigan Department of Environmental Quality, Laboratory #9050
Ohio VAP Certification #: CL0065
Oklahoma Certification #: 2018-101
Texas Certification #: T104704355
West Virginia Certification #: 330
Wisconsin Certification #: 999788130
USDA Soil Permit #: P330-16-00257

Pace Analytical Services, LLC
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(616)975-4500

SAMPLE SUMMARY

Project: Drinking Water Testing
Pace Project No.: 50232362

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50232362001	**NB32 sink**	Drinking Water	07/24/19 11:58	08/07/19 08:30
50232362002	**NB37 sink**	Drinking Water	07/24/19 11:46	08/07/19 08:30

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Grand Rapids, MI 49512
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SAMPLE ANALYTE COUNT

Project: Drinking Water Testing
Pace Project No.: 50232362

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50232362001	**NB32 sink**	EPA 200.8	CAW	2	PASI-I
50232362002	**NB37 sink**	EPA 200.8	CAW	2	PASI-I

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ANALYTICAL RESULTS

Project: Drinking Water Testing
Pace Project No.: 50232362

Sample: NB32 sink **Lab ID: 50232362001** Collected: 07/24/19 11:58 Received: 08/07/19 08:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Copper	**55.6**	ug/L	1.0		1	08/11/19 21:03	08/14/19 21:39	7440-50-8	N2
Lead	ND	ug/L	1.0		1	08/11/19 21:03	08/14/19 21:39	7439-92-1	N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: Drinking Water Testing
Pace Project No.: 50232362

Sample: NB37 sink **Lab ID: 50232362002** Collected: 07/24/19 11:46 Received: 08/07/19 08:30 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8								
Copper	**72.8**	ug/L	1.0		1	08/11/19 21:03	08/14/19 21:43	7440-50-8	N2
Lead	ND	ug/L	1.0		1	08/11/19 21:03	08/14/19 21:43	7439-92-1	N2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
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QUALITY CONTROL DATA

Project: Drinking Water Testing
Pace Project No.: 50232362

QC Batch: 515383 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 50232362001, 50232362002

METHOD BLANK: 2377313 Matrix: Water
Associated Lab Samples: 50232362001, 50232362002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	ND	1.0	08/14/19 20:41	N2
Lead	ug/L	ND	1.0	08/14/19 20:41	N2

LABORATORY CONTROL SAMPLE: 2377314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	40	37.9	95	85-115	N2
Lead	ug/L	40	38.3	96	85-115	N2

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2377315 2377316

Parameter	Units	50232353001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	57.1	40	40	89.6	86.7	81	74	70-130	3	20	N2
Lead	ug/L	2.6	40	40	40.6	40.9	95	96	70-130	1	20	N2

MATRIX SPIKE SAMPLE: 2377317

Parameter	Units	50232363005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	101	40	132	77	70-130	N2
Lead	ug/L	3.6	40	41.7	95	70-130	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
(616)975-4500

QUALIFIERS

Project: Drinking Water Testing
Pace Project No.: 50232362

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-I	Pace Analytical Services - Indianapolis

ANALYTE QUALIFIERS

N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Drinking Water Testing
Pace Project No.: 50232362

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50232362001	**NB32 sink**	EPA 200.8	515383	EPA 200.8	515829
50232362002	**NB37 sink**	EPA 200.8	515383	EPA 200.8	515829

WO# : 50232362

50232362

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

2202024

Section A Required Client Information:

Company: Northern Analytical Services	Report To: John Rehkopf
Address: 14870 225th Ave. Big Rapids, MI 49307	Copy To:
Email To: John@northernas.com	Purchase Order No.:
Phone: 231-679-0005 Fax:	Project Name: New Branch charter Academy
Requested Due Date/TAT:	Project Number: 190224

Section C Invoice Information:

Attention: Refer to section A	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☒ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MI

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	NB 32 sink	DW	G	7-2-19	11:58				1											
2	NB 37 sink	"	"	"	11:46				1											
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Justin Rehkopf NAS	8-7-19	8:30am		8-7-19	830	

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Justin Rehkopf

SIGNATURE of SAMPLER: Justin Rehkopf

DATE Signed (MM/DD/YY): 8-7-19

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Conditions Upon Receipt Form (SCUR)

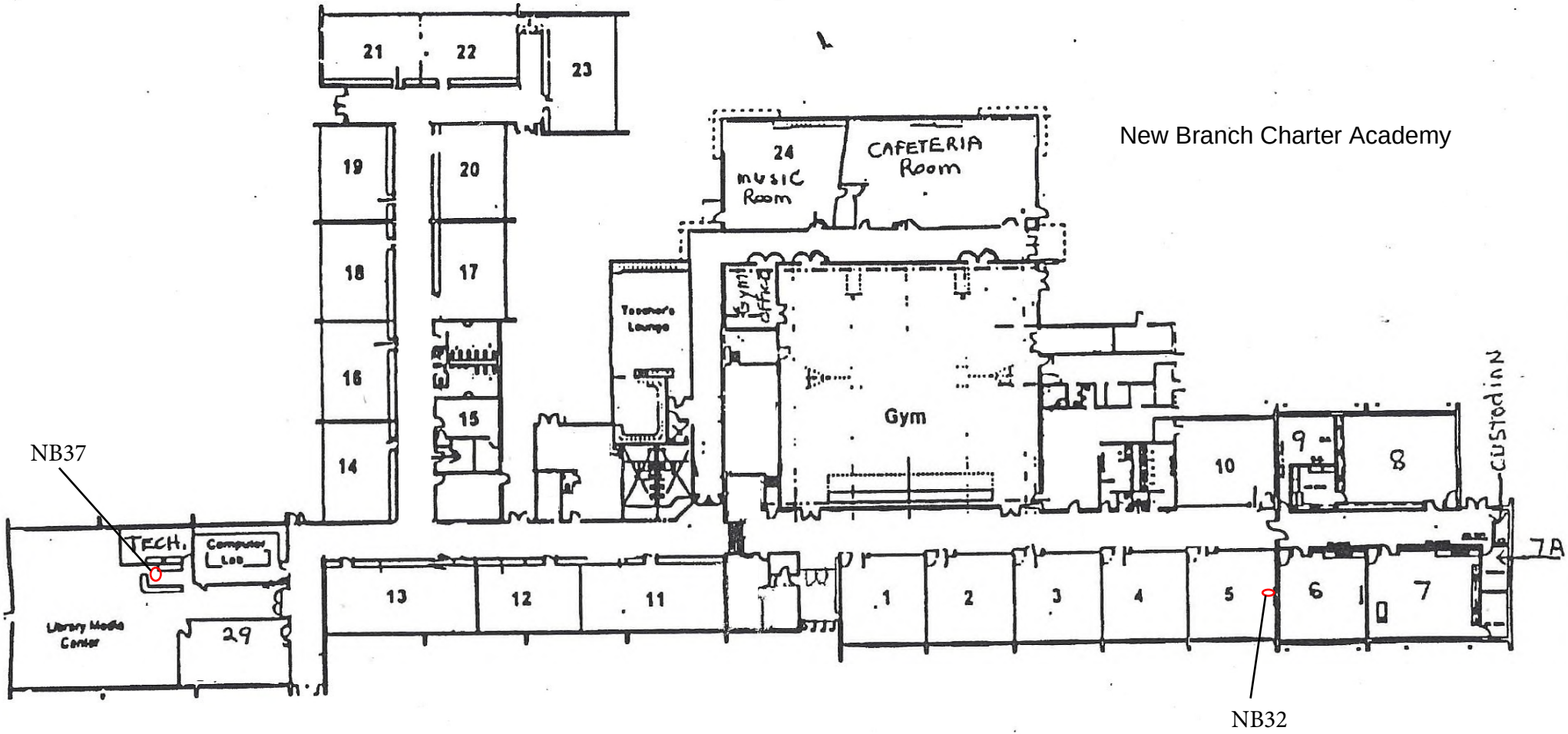
Pace Analytical
www.pacelabs.com

WO# : 50232362
PM: MSB Due Date: 08/21/19
CLIENT: GR-NAS

Date: 8/7/19	**Evaluated by:** AW	A	List Pace ber
Client: Northern A-1 New Branch			
Profile ID:	**Project Manager:** MSB		
Rush TAT Requested: YES NO	**Due Date:**		
Lab Notified of Rush or Short Holds: YES NO		**Non Conformance Form Required:** YES NO	

Samples Received Via: FedEx UPS	Client	Pace Courier		**Comments:**
Custody Seals Present and Intact:	YES	NO	NA	
USDA Regulated Soils: (AL, AR, CA, FL, GA, ID, LA, MS, NM, NY, NC, OK, OR, SC, TN, TX, WA or Puerto Rico)	YES	NO	N/A	
Short Holds Present (< 72 Hours):	YES	NO		
Samples Received in Hold:	YES	NO		
Custody Signatures Present:	YES	NO		
Collector Signature Present:	YES	NO		
Packing Material Used:	YES	NO		
Samples Collected Today and On Ice:	YES	NO	N/A	

IR Gun #: 280 281	**Digital Thermometer #:** 282 283			
Ice Type: WET Bagged / WET Loose BLUE NONE	**1.** Cooler Temp Upon Receipt: 20.6 / 20.2 °C			
Ice Location: TOP BOTTOM DISPERSED	Temp should be 0-6°C (Initial/Corrected)			
Temp Blank Received:	YES	NO		
Containers Intact:	YES	NO		
Correct Containers:	YES	NO		
Sufficient Volume:	YES	NO		
Sample pH Acceptable: All containers needing preservation are found to be in complaince with EPA recommendation Exceptions are VOA, coliform, LLHg, O&G, or any container with a septum cap or preserved with HCl	YES	NO	N/A	pH Strip Lot Number: HC857466
Residual Chlorine Absent: (SVOC 625, Pest, PCB 608, Total/Amenable/Available Cyanide)	YES	NO	N/A	Chlorine Strip Lot Number:
VOA Headspace Acceptable (<6mm):	YES	NO	N/A	
Trip Blank Received: HCL MeOH TSP OTHER	YES	NO		
Comments:	**2.** Cooler Temp Upon Receipt: ____ °C			
	3. Cooler Temp Upon Receipt: ____ °C			
	4. Cooler Temp Upon Receipt: ____ °C			


New Branch Charter Academy
NB37
NB32
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16
15
14
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MUSIC Room
CAFETERIA Room
Teacher's Lounge
Gym
Gym Office
10
9
8
CUSTODIAN
7A
TECH.
Computer Lab
Library Media Center
29
13
12
11
1
2
3
4
5
6
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