Palmer Elementary School

5051 N Kenneth Ave
Chicago, IL 60630

CONCEPT PHASE ANALYSIS REPORT

October 5, 2018

FGM ARCHITECTS

OWNER
City of Chicago School District #299
South Clark St., Suite 14
Chicago, IL 60603

PREPARED BY
Jim Woods, AIA, REFP
Vada Kornegay, AIA, LEED AP
Mike Denz, AIA

FGM Job No: 18-2589.01

Professional Design Firm #184-000350

ARCHITECT
FGM Architects, Inc.
200 West Jackson Blvd., Suite 1330
Chicago, Illinois 60606

CIVIL
TERRA Engineering
225 W Ohio St,
Chicago, Illinois 60654

STRUCTURAL
Rubinos & Mesia Engineers Inc.
200 S Michigan Ave., Suite 1500
Chicago, Illinois 60604

MEP
BdHMS
303 W Erie St, Suite 510
Chicago, IL 60654






FGM ARCHITECTS

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PROJECT INFORMATION

John M. Palmer Elementary School Annex and Renovations [5051 N. Kenneth Ave., Chicago IL 60630]
A new approximate 33,000 sq. ft., two-story annex to an existing two-story school intended to alleviate overcrowding as well as eliminate one existing classroom modular units. The proposed annex will include (7) standard classrooms, (1) special needs classrooms for 3 age groups, (1) computer classroom, (2) art classroom with storage and Kiln, (2) admin offices, a new library/media center, new student dining/multi-purpose room, hybrid kitchen and kitchen servery, kitchen office with (1) staff toilet/locker rooms, building storage, student toilets, utility rooms, an elevator with building support spaces.

The project will also include site improvements for a new parking lot, loading area, refuse w/enclosure, stormwater management infrastructure, landscaping, new green space, and a new outdoor 3-12 playground. The foundation demolition and removal of utilities with the existing flat-roofed (TBD) classroom modular building, in preparation for the new site scope. Work within the existing school building will include conversion of the existing kitchen and lunchroom into two (2) typical classrooms, converting existing art classroom into a typical classroom, and renovating the existing computer lab to provide added power/data. Additionally, exterior envelope repairs will occur along with replacement of the roof of the existing school building. The FTE is projected to increase to a total of 75 after the annex is completed. The existing student enrollment is 806 and is projected to increase for an ideal capacity of 960 students. The school has a current capacity of 690 students.

Project design follows CPS Design Guidelines, CPS Updated Design Guidelines & Prototype Designs dated October 7, 2016 and newly released standard specifications.

PROJECT SCHEDULE

FGM ARCHITECTS

Pre-Planning, Planning, Design and Construction

1. FY19 SCHOOLS: FALL 2020 DELIVERY SCHEDULE
    a. PROCUREMENT ACTIVITIES:
        i. FY19 SCHOOLS TRANSFER MTG .....7/27/18 ANX: See Above Project Listing
        ii. PROJECT AUTHORITY
            1. BUDGET: CAPITAL .....7/25/18 BOE Capital Projects Approval
            2. BUDGET: FORMULATION .....8/14/18 PBC Board Approval (8 CPS Projects per above List)
            3. BUDGET: PARTIAL UNDERTAKING .....9/11/18 PBC Board Approval (8 CPS Projects per above List)
        iii. PBC PRE-PLANNING / SITE DUE DILIGENCE
            1. SPECIALTY CONSULTANTS .....9/6/18 – 11/26/18 Assess: Geotech, Environmental Engineering, Survey, Traffic, Cost
            2. DA – DESIGN ARCHITECT .....9/6/18 – 10/12/18 PBC Pre-Qualified Architects: FGM, LEGAT, SMNGA
        iv. PBC DESIGN
            1. AOR LIQ INFO SESSION .....9/20/18 All AOR/EOR LIQ Participants
            2. AOR PROCUREMENT .....10/16 – 11/12/18
            3. PBC BOD APPROVAL .....11/13/18 AOR – ARCHITECT OF RECORD (Engagement w/CM)
            4. AOR ENGAGEMENT/KICK-OFF .....11/14 – 11/20/18 NOA: DD, 60%, 90%/PERMIT, 100%/IFC, IFC
        v. CM @ RISK – CONSTRUCTION MANAGER
            1. PHASE - I RFP REQUEST .....Oct 2018
            2. PHASE - I INFO SESSION .....TBD
            3. PHASE - I RFP RESPONSES .....TBD
            4. CM INTERVIEWS .....TBD
            5. CM SELECTION .....Dec 2018 (CPS/PBC Approved) Engagement @ Start of DD Design w/AOR
            6. PBC BOD APPROVAL/NTP .....12/11/18 TBD CM Approval / Refer to Preconstruction Activities below
            7. CM PRELIM DELIVERABLES .....12/13 – 12/28 (Pay App Strategy, Cash Flow, Engagement Plans)
        vi. GENERAL CONTRACTOR
            1. GC PROCUREMENT .....May/June 2019 Per PBC Pre-Qualified GC Classification
            2. BIDDING PHASE .....June/July 2019 Per IFB Design Documents
            3. PBC BOD MEETING APPROVAL .....7/9/19 General Contractor Approval
            4. NOA .....7/10/19 PBC Ltr of Engagement to CM
            5. NTP .....July/Aug 2019 Refer to Preconstruction Activities below by CM

2. DESIGN ACTIVITIES
    a. DESIGN ARCHITECT PRE-PLANNING KICK-OFF.....09/06/18 Design Engagement of DA's
    b. CONCEPT PRG. EVAL/CONFIRMATION .....9/7 - 10/05//18 Prelim Cost Estimate (if applicable) – Scope Verification
        i. ISSUE CONCEPT DESIGN/REVIEW .....10/5/18 (CPS, PBC, Peer Review)
        ii. CNPT DESIGN APPROVAL .....TBD
    c. SCHEMATIC DESIGN .....Oct – Nov 2018
        i. ISSUE FOR SCHEMATIC DESIGN .....11/21/18 (CPS, PBC, Peer Review, Cost Estimate)
        ii. SD MILESTONE REVIEW .....TBD (Milestone Meeting TBD)
    d. ARCHITECT OF RECORD KICK-OFF .....11/14 – 11/20/18 DD PHASE - Design Engagement
    e. DESIGN DEVELOPMENT .....Nov 2018 – Jan 2019
        i. ISSUE FOR TRADE BIDDING #1 ..... TBD Trade Package #1: Foundations & Long Lead Items
        ii. TRADE PKG #1REVIEW .....TBD (Stakeholder Review, Comment Review Mtg TBD) If Req'd
        iii. ISSUED FOR DESIGN DEVELOPMENT .....1/11/19 Trade Package #2: Excavation and Earthwork, Concrete, Utilities
        iv. DD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Meeting TBD)
        v. UPDATED GMP ESTIMATE .....TBD Per DB, Including Trade Pkg #1 and #2 Costs Reconciliation
    f. CONSTRUCTION DOCUMENT PHASE .....Jan – April 2019
        i. ISSUE FOR TRADE BIDDING #3 ..... TBD Trade Package #3: Building Material Components
        ii. TRADE PKG #3REVIEW .....TBD (Stakeholder Review, Comment Review Mtg TBD) If Req'd
        iii. ISSUE FOR 60%CD – TRADE PKG #4 ..... 2/26/19 Trade Package #4: Interior/Exterior Components & Equipment
        iv. 60%CD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Meeting TBD)
        v. ISSUE FOR 90%CD/PERMIT ..... 4/11/18 Trade Package #4: Interior/Exterior Components & Equipment
        vi. 60%CD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Meeting TBD)
        vii. ISSUE FOR 100%CD – VERTICAL/BLDG ..... 5/13/18 Trade Package #5: Balance of Project Procurement (As Req'd)
        viii. 100%CD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Mtg TBD)

PROJECT SCHEDULE (CONT)

FGM ARCHITECTS

ix. PRELIM FINAL GMP DRAFT .....TBD (Preliminary Final GMP Submittal & Review – TBD)
x. FINAL GMP APPROVAL ..... July/Aug 2019 (PBC Aug Board Meeting
xii. 60%CD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Meeting TBD)
xiii. ISSUE FOR 100%CD – VERTICAL/BLDG ..... 5/13/18 Trade Package #5: Balance of Project Procurement (As Req'd)
xiv. 100%CD MILESTONE REVIEW .....TBD (Stakeholder Review, Milestone Mtg TBD)
xv. PRELIM FINAL GMP DRAFT .....TBD (Preliminary Final GMP Submittal & Review – TBD)
xvi. FINAL GMP APPROVAL ..... July/Aug 2019 (PBC Aug Board Meeting Reporting – GMP Full Undertaking)
xvii. ISSUED FOR CONSTRUCTION ..... July 2019 Includes ALL Permit & Milestone Comments w/Trade Pkg Coord.

3. PERMIT PROCESS: DDS – DIRECT DEVELOPER SERVICES (PBC Recommended Dates, Subject to Change)
   a. PERMIT #1 - SHALLOW FOUNDATIONS .....Mar 01, 2019 TBD Site Preparation Scope: Per 100%DD Dwgs DOB Submittal
   b. PERMIT #1A - DEEP FOUNDATIONS (Only) [Decatur ES ANX]
      i. OUC INTAKE MEETING (AVIKAM) .....Dec 2018 (3 Days) Projected 90 Day Max, Goal for Reduction
      ii. PREPARE CAISSONS ONLY PACKAGE .....Dec/Jan 2019 Includes Engineered Procedures for Sub-Contractor Acceptance
      iii. OUC SUBMITTAL (REVIEW & COMMENT).. ...Jan 2019 Permit: Caissons only for OUC Process (2 Wks)
      iv. OUC SEARCH .....Jan/Feb 2019 Typical 30 Calendar Days (Goal for 2-3Wks)
      v. OUC SEARCH COMMENT RESPONSES .....Feb 2019 (1 Wk) If applicable, for found conflicts only
      vi. READY FOR OUC APPROVAL .....Mar 2019 Prior to Site Prep Construction Phase #1
   c. PERMIT #2 - FULL BLDG .....June/July 2019 Annex Building, Site Development and Modular Demo: 90%CD

4. PRE CONSTRUCTION ACTIVITIES:
   a. NTP - NOTICE TO PROCEED .....Dec 2018 Procurement, Sub-Guard, Estimating,
      i. INTERIOR RENOVATIONS .....Jun - Aug 2021 (2 Mo) Summer Critical Scope Reporting – GMP Full Undertaking)
      xi. ISSUED FOR CONSTRUCTION ..... July 2019 Includes ALL Permit & Milestone Comments w/Trade Pkg Coord.

   Peer/Constructability
      i. Review, 3/4D BIM Coordination, Lead Items (Elevator/Roofing)
   b. PRINCIPAL LOGISTICS/PHAZING MTG #1 .....Feb 2019 Project Phasing
   c. PRE-CONSTRUCTION PERIOD (Trade Bid Packages: Issuance to Award)
      i. PRE-CONSTR CONF KICKOFF MTG… .....Feb 2019 CM Quality and Safety Plans
      ii. PRELIMINARY SUBMITTALS REVIEW .....Mar 2019 Site Utilization, Waste Management, Baseline Schedule,
      iii. ITL PLAN - TRADE PACKAGE #1 & #2 .....Mar 2019 For PBC Procurement of project ITL Services
   d. EXCAVATIONS PRE-CONSTRUCTION MTG .....Mar 2019
   e. SITE UTILITIES PRE-CONSTRUCTION MTG .....Apr 2019
   f. P6 BASELINE SCHEDULE SUBMITTAL .....Apr 2019 After 60%CD submittal

5. CONSTRUCTION ACTIVITIES: PHASE #1 - Site Prep Abatement & Demolition, Foundations and Steel Erection Package
   a. SITE PREP MOBILIZATION .....Mar 01, 2019 TBD Site Control, Fencing, CPS Temp Parking, Temp Utilities
   b. SITE PREP CONSTRUCTION:
      i. DEMO/EXC./GRUBBING .....Apr 2019
      ii. EXC. FTGS/UNDERGROUND MEP…….. .....May/June 2019

6. CONSTRUCTION ACTIVITIES: PHASE #2 – Vertical/Full Bldg Construction & Site Development
   a. MOBILIZATION (CONTINUED PER SITE PREP)... ..May/June 2019 (For Vertical/Full Building Construction: Site Control, Fencing)
   b. VERTICAL CONSTRUCTION .....July/Aug 2019 (13 Months)
   c. SITE DEVELOPMENT .....Mar 2020 (Parking Lot, Green Space)
   d. CPS FF&E MOVE-IN .....Aug 2020 6 Weeks Required, Typ.
   e. SUBSTANTIAL COMPLETION .....Aug 2020 (Fall School Calendar)
   f. FACILITY OPENING/START OF SCHOOL .....Sept 2020 Final Acceptance (6 mo after SC) Feb 2021

7. CONSTRUCTION ACTIVITIES: PHASE #3 – Existing School Renovations & Site Development
   a. INTERIOR CONVERSION
   b. MODULAR DEMOLITION/PARKING .....Mar – Jun 2021 (4 Mo) Foundations, Util, Modular Components (Salvage TBD)

Date: 2018.09.27
By: JW / FGM

ZONING ANALYSIS

PROIJECT NAME: John M. Palmer Elementary School Annex and Renovations
PROJECT ADDRESS: 5051 Kenneth Ave., Chicago, IL 60630
WARD: 39, Alderman Margaret Laurino

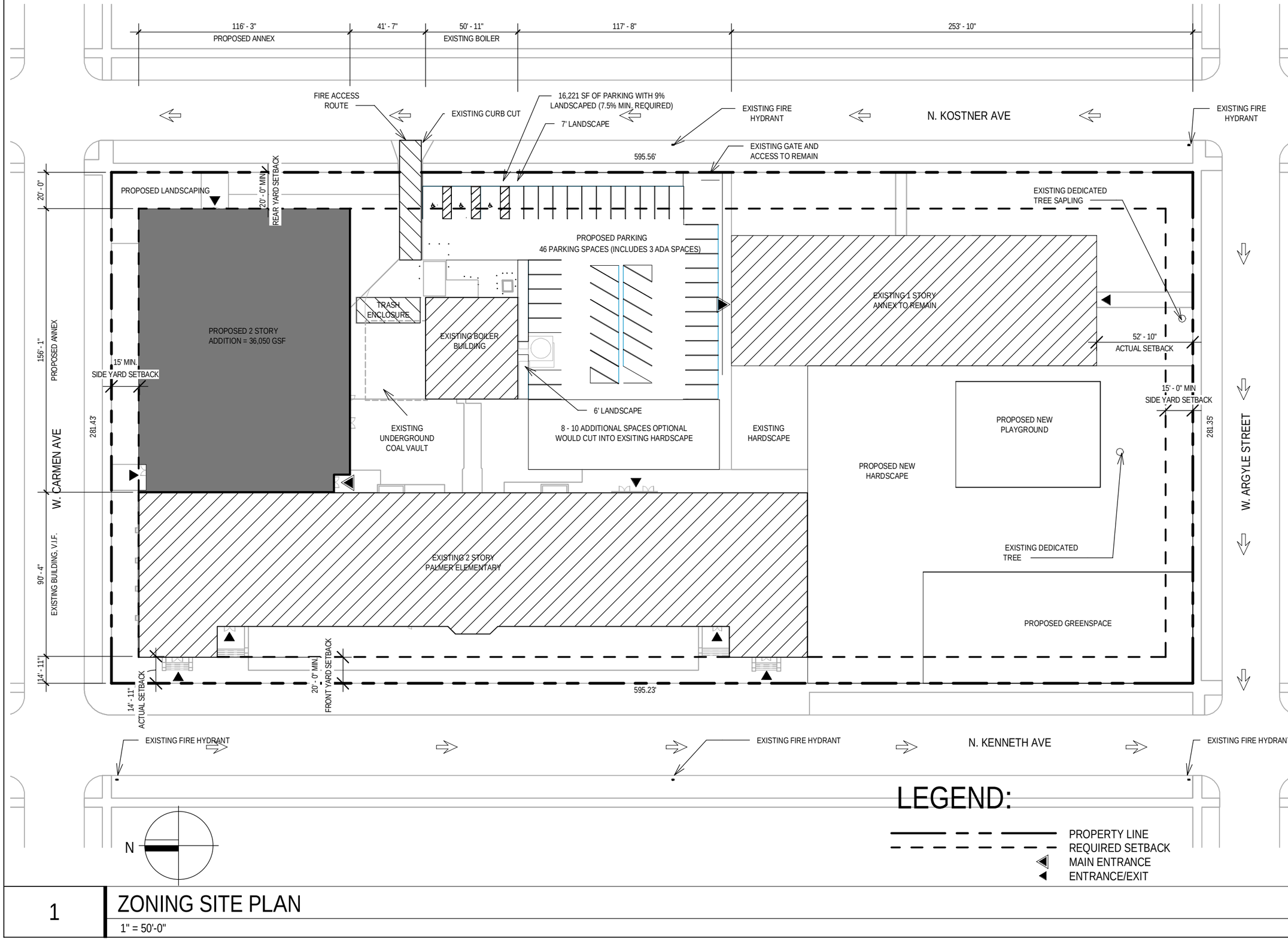
Zoning Information			Underlying Zoning	Proposed Project	Notes
Zoning District:			RS-2	No Change	
Residential Units:			N/A	N/A	
Off-Street Parking Spaces: (17-10-0101-B(1)a) (17-10-0207)			Existing: (59) spaces including (1) accessible	75 FTE / 3 = 25 spaces req'd 46 spaces proposed including (2) accessible	Parking provided exceeds requirement but some spaces are shown in front/rear yard setback which is not permissable. Need Existing FTE from CPS Access to off-street parking is not restricted in Rs-1 and RS-2 District per 17-20402-A; cannot encroach in front/rear yard setback
Maximum F.A.R.: (17-2-0304-A)			0.65	Existing F.A.R.: .46 Proposed: .60	**NEED UPDATED SURVEY!** Site Area: 167,539 SF / 3.85 Acres per boundary survey prepared by dated site area approx. 167,539 SF Ex Bldg. to remain: 68,283 SF Proposed Annex: 33,060 SF
Floor Area Ratio of Public & Civic Uses (17-13-1003-C)			The Zoning Administrator is authorized to approve and administrative adjustment to all any permitted Public and Civic use in an R district to exceed the applicable F.A.R. by up to 10% over the otherwise applicable maximum.		
Minimum Lot Area (MLA): (17-2-0301-A)			5,000 SF	Complies, No Change	
Automobile Parking: (17-10-0101-B(1)a) (17-10-0207) (17-10-0601) prohibited in front 20"			parking/loading stds. apply when existing non-residential bldg/use is expanded or enlarged by 15% or more (25% for uses in excess of 50 years old). Applies to addition of floor area, seating capacity, employees or other measurement used for off-street parking & loading requirements 1 per 3 empl = addtnl determined by DZ/LUP		Proposed parking exceeds minimum requirements, however, FTE is being increased - confirm this does not mandate more off-street parking. Parking must be set back min. 20' in front yard per 17-10-0601
Bicycle Parking: Table (17-10-0207)			min. 1 per 10 off-street parking spaces req'd; 2'Wx6'Lx7'H ea; may use up to (2) req'd. parking spaces per 17-100302-C	existing, complies	A minimum of 5 will be provided to meet code requirement regardless of final FTE
Loading Berths: (17-10-1101)			0-24,999 GSF = 0 25,000-199,999 GSF = (1) 10'x50' for buildings over 50,000 SF	(1) 10'x50' loading berth required	Existing/New exceeds 50,000 SF, locate loading berth where truck can maneuver
Uses: (17-2-0207)			Schools permitted by right (existing)	No Change	
Setbacks	Front: (17-2-0305)	Kenneth Ave.	set back distance equal to the avg front yd depth on nearest 2 lots on either side of the subject lot, excl lot w/least front yd depth by right: lesser of 20' or 16% of lot depth		Existing building is non-conforming, Annex will conform
	Side: (17-2-0309)	Carmen Ave.	greater of: 15' or 50% of building height	15'	Conforms
	Side: (17-2-0309)	Argyle St.	greater of: 15' or 50% of building height		Conforms
	Rear: (17-2-0306-C)	Kostner Ave.	20' (per 17-2-0309-C for through-lot)	20'+	Conforms
Other Setbacks, Admin. Adjustment (17-13-1003-I)			The Zoning Administrator is authorized to approve an administrative adjustment to permit a reduction of up to 50% in the depth of any setback required by the applicable zoning district regulations when such reduction would match the predominate yard depth of existing buildings on the block.		
Site Coverage (if applicable):				Existing: 53,750 SF / 32% Proposed 63,600 SF / 38%	
Height: (17-2-03011-A)			No maximum Requirement (principal non-residential bldg.)	Underside of roof structure: Existing Bldg Ht: 38'-3" Proposed Bldg Ht: 30'-0" to be confirmed	
Open Space: (17-2-0307)			Greater of: 400 SF/DU or 6.5% of lot area	Existing: 68% open space Proposed: 62% open space	
Green Roof / Features:			Green roof required	White reflective roof proposed	To be confirmed
Total Project Costs:				TBD (EST $20M)	
Construction Jobs Created:					
No. Permanent Jobs Created:					
Reason for PD: (mandatory, elective, why)			17-8-0506; site exceeds 2 acres requiring PD subject to Zoning Administrator review of exception 17-8-0515-C(1); when determined that modification of existing development will have no adverse effect to neighborhood, traffic, bulk, scale, other measurable impacts	Request PD waiver: Schedule requires construction start fall 2019	**PD WAIVER REQUESTED**
Questions / Zoining Issues:			What does the stripe designation on the zoning map Zoning Board of Appeals mean? (ZBA Ordinance 356-96-Z) Impact of being in the North Mayfair Bungalow Historic District (Chicago Bungalow MPS) Is a reducation in the number of parking spaces on-site permissable even though required number is exceeded?		
Other Concerns, Info, Notes:					

FGM: updated 09/26/2018 **PRELIMINARY**

ZONING WORKSHEET				
BUILDING	**BUILDING SQUARE FOOTAGE**		**BUILDING FOOTPRINT**	
	EXISTING	**PROPOSED modular removed**	**EXISTING**	**PROPOSED modular removed**
Exsting Bldg. 1st Floor SF:	28197	28197	28197	28197
Existing Bldg. 2nd Floor SF:	22821	22821		
Existing Annex SF:	14414	14414	14414	14414
Existing Boiler Building SF:	2851	2851	2851	2851
Existing Bldg. Total SF:	68283	68283	45462	45462
Existing modular 1 SF:	8108	0	8108	
Existing modular 2 SF:				
Total Existing Modular(s) SF:	8108	0	8108	0
Proposed New Annex 1st Floor SF:		18138		18138
Proposed New Annex 2nd Floor SF:		14922		
Proposed New Annex Total SF*:		33060		18138
GRAND TOTALS:	76391	101343	53570	63600
* Design is in progress, SF subject to change				

Total Site Area (SF):	167539	167539	167539	167539
Allowable FAR:	0.65	0.65		
Max FAR SF (site area * allowable):	108900	108900		
Calculated FAR:	0.46	0.60		
Site Coverage(%; ground floor only)			32%	38%
Open Space (%; site area - gfa):			68%	62%

Notes:
1. Estimated new scheme total, planning is in progress and subject to change.
2. Modular classroom SF based on mfr. Dimensions, verify with survey, add when available
3. All existing building SF areas are to be verified with new forthcoming survey and are subject to change.



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ZONING SITE PLAN

1" = 50'-0"

BUILDING SCHOOLS ACROSS CHICAGO
CHICAGO PUBLIC SCHOOLS | CPS
PUBLIC BUILDING COMMISSION OF CHICAGO

PALMER ES ANNEX

10/5/2018

ZONING INFORMATION:

INSTITUTIONAL PD:	PD WAIVER REQUESTED
GROSS SITE AREA:	167,539 SF (3.846 ACRES) PER SURVEY
EX. OFF STREET PRKG.:	59/ CONFIRM W/ PBC
PROP. OFF STREET PRKG:	46, APPRX. NCL. (2) ACCSSBL
BUILDING FLRS./ HT.:	EX. 2-STORY 38'-3" / PROP. 2-STORY 30'-0" RF.ST.
MIN. REQ'D SETBACKS:	N. KENNETH 20'-0", SIDE 15'-0", N KOSTNER 20'-0"
PROPOSED SETBACKS:	N. KENNETH 14'-11", CARMEN AVE 15'-6", N KOSTNER 20'-0" (ANX)
	NOTE: PROPOSED PARKING ENCROACHES IN FRONT YARD
FLOOR AREA RATIO:	RS-2; 0.46 / 0.60 PRPSD (NO MOD.)
ALLEY / UTIL VACATION:	N/A
EXISTS TOTAL BLDG. SF:	68,283 GSF (1ST+2ND)
PROPOSED TOTAL SF:	101,343 (NEW ANNEX W / EXS. BLDG)
EXIST'G SITE COVERAGE:	32% (EXCL. MODULARS)
PROPOSED SITE COVER:	38% (MODULARS REMOVED)

PROJECT:
ADDRESS:
WARD:
ALDERMAN:

JOHN M. PALMER ES ANNEX AND RENOVATIONS
5051 KENNETH AVE., CHICAGO, IL 60630
WARD 39
MARGARET LAURINO

PROGRAM:

EXIST'G STUDENTS:	806/ PER CPS PROGRAM SHEET
EXIST'G FTE STAFF:	TBD/PBC TO CONFIR
PROPOSED STUDENTS:	990/ PER CPS PROGRAM SHEET
PROPOSED FTE STAFF:	TBD/PBC TO CONFIR

REPORTS:

ALTA SURVEY W/UTIL.:	TBD
ENVIRONMENTAL PHASE I:	TBD/PBC TO CONFIRM
ENVIRONMENTAL PHASE II:	TBD/PBC TO CONFIRM
GEOTECHNICAL:	TBD/FORTHCOMING (PBC)

FGM ARCHITECTS

1211 22nd St #700
Oak Brook, IL 60523
(630) 574-8300
https://fgmarchitects.com/

FGM ARCHITECTS
Design Architect

BUILDING CODE MATRIX - PALMER ELEMENTARY SCHOOL ANNEX						
Address: 5051 N KENNETH AVE CHICAGO, IL 60630						
BLD'G REQUIREMENTS		CHICAGO BLD'G CODE				
ITEM	ISSUE	CHAPTER	ORDINANCE REQUIREMENT	ACTUAL	DWG	REMARKS
2.01	OCCUP. CLASSIFICATION(S)	3(13-56-100)	CLASS C-3; TYPE 1A	CLASS C-3; TYPE 1A		
2.02	HEIGHT AND AREA LIMITATIONS	5(13-48)				
	HEIGHT	5(13-48-030)	4 STORIES, 55 FEET MAX.	2 STORIES < 55'		
	AREA	5(13-48-080)(B)	1C: 16,000 SF	18,075 1ST FLR 18,075 2ND FLR.		
	EXCEPTIONS TO AREA LIMITATIONS	5(13-48-090)	FLOOR AREAS MAY BE INCREASED 100% IF BUILDING IS EQUIPPED THROUGHOUGHT WITH AN AUTOMATIC SPRINKLER SYSTEM	SPRINKLER SYSTEM TO BE PROVIDED; TO INCREASE TO 32,000 SF/FLR.		
2.03	TYPES OF CONST	6(13-60-020)	FIRE-RESISTIVE CONSTRUCTION	TYPE 1C		
2.04	MIXED OCCUP. SEPARATIONS	3(13-56-230)	N/A	N/A		
2.05	ADDITIONS	34(13-200-250)				
	FLOOR AREA INCREASE	34(13-200-250)(A)	IF INCREASED BY LESS THAN 25%, ONLY NEW CONSTRUCTION MAY COMFORM TO ALL EQUIREMENTS OF THE CBC. IF INCREASED BY MORE THAN 25%, ENTIRE BUILDING MUST CONFORM TO ALL REQUIREMENTS OF THE CBC UNLESS A FIREWALL IS PROVIDED BETWEEN THE EXISTING BUILDING AND THE ADDITION.	36,150 > 25%		4HR FIREWALL REQUIRED, AREA INCREASE EXCEEDS 25% OF EXISTING BUILDING AREA
	FIRE WALL	34(13-200-250)(B)	4HR REQ'D	4 HR TO BE PROVIDED		
	EXISTING LOADS	34(13-200-250)(C)	NO ADDITION SHALL IMPOSE EXITING LOADS WHICH EXCEED THE CAPACITY OF THE EXISTING BUILDING EXITS WITHOUT PROVISION OF ADDITIONAL EXITS.	WILL COMPLY		
	STRUCTURAL LOADS	34(13-200-250)(D)	NO ADDITION SHALL IMPOSE STRUCTURAL LOADS, EITHER VERTICAL OR HORIZONTAL, WHICH WOULD CAUSE THE EXISTING BUILDING TO BE SUBJECTED TO STRESSES EXCEEDING THOSE PERMITED BY THE NEW CONSTRUCTION.	WILL COMPLY		
2.06	OCCUPANT LOAD					
	CONCURRENT OCCUP.	3(13-84-020)	TOTAL CAPACITY DETERMINATION	758 OCCUPANTS		ANNEX ONLY; EXCLUDES OCCUPANT LOAD FROM EXISTING BUILDING
	NON-CONCURRENT OCCUP.	3(13-56-310)	NON-CONCURRENT OCCUP. DETERMINATION	1049 OCCUPANTS		ANNEX ONLY; EXCLUDES OCCUPANT LOAD FROM EXISTING BUILDING
2.07	REQ'D HOURS OF FIRE-RESIST.					
	EXT: BEARING WALLS	6(13-60-100)	2 HR REQ'D	N/A		
	EXT: NON-BEARING WALLS					
	1. OUTSIDE EXPOSURE	6(13-60-100)	2 HR, REDUCED TO 1 HR PER EXCEPTION (D)(3) WHERE FACING A STREET, PUBLIC OPEN SPACE, YARD OR COURT NOT LESS THAN 30' IN WIDTH	1 HR TO PROVIDED AT ALL LOCATIONS		
	2. INSIDE EXPOSURE	6(13-60-100) (C) ASSEMBLY	1 HR REQ'D	N/A		
	3. INTERIOR BEARING WALLS	6(13-60-100)	2 HR REQ'D	4 HR TO BE PROVIDED		
	4. INTERIOR NON-BEARING WALLS	6(13-60-100) (G)	SEE SECTIONS 7(15-8-120) TO 7(15-8-250), INCLUSIVE.	WILL COMPLY		
	5. EXTERIOR COLUMNS	6(13-60-100) (NOTES O,P)	2 HR, REDUCED TO 0 HR IF EXCEPTION (O) OR (P) APPLY	N/A		(K) FIRE PROT SHALL NOT BE REQ'D FOR CONST LOCATED > 20 FEET ABOVE ANY FLOOR, MEZZ. OR BALCONY. 1-HOUR CONST ONLY SHALL BE REQ'D FOR CONST LOCATED 14 FEET OR MORE ABOVE ANY FLOOR, MEZZ. OR BALCONY. (O) FIRE PROT SHALL NOT BE REQ'D FOR EXT STRUCT MEMBERS OF BUSINESS, RESIDENTIAL AND ASSEMBLY (OTHER THAN EXHIBITION HALLS) OCCUPANCIES WHEN THE BLD'G IS EQUIPPED WITH A SUPERVISED STD AUTO SPRINKLER SYSTEM AS DEFINED IN CBC 15-16 AND < 55 FEET IN HEIGHT. FIRE PROT SHALL NOT BE REQ'D FOR EXT COLUMNS OR PORTIONS OF BEAMS OR GIRDERS WHICH ARE OUTSIDE OF THE BLD'G ENVELOPE, FACE A PUBLIC WAY > 30 FEET AND DO NOT SUPPORT EXT FLOORS OR WALKWAYS INTENDED FOR OCCUP. (P) FIRE PROT SHALL NOT BE REQ'D FOR ROOF CONST INCL COLUMNS. BEAMS, GIRDERS, AND RUSSES SUPPORTING THE ROOF ONLY OF AREAS CLASSIFIED PER CHAPTER 15-16 AS "LIGHT HAZARD OCCUP." IN BUSINESS, RESIDENTIAL AND ASSEMBLY (OTHER THAN EXHIBITION HALLS) OCCUPANCIES IN BLD'GS EQUIPPED WITH A SUPERVISED STD AUTO SPRINKLER SYSTEM DEFINED IN CBC 15-16
	6. INTERIOR COLUMNS					
	A. SUPPORTING ROOFS ONLY	6(13-60-100) (NOTES K,P)	1 HR, REDUCED TO 0 HR IF EXCEPTION (K) OR (P) APPLY	0 HR; SPRINKLER SYSTEM TO BE PROVIDED		
	B. OTHER COLUMNS	6(13-60-100)	2 HR REQ'D	2 HR TO BE PROVIDED		
	7. BEAMS, GIRDERS, TRUSSES					
	A. SUPPORTING ROOFS ONLY	6(13-60-100) (NOTES K,O,P)	1 HR, REDUCED TO 0 HR PER EXCEPTIONS (K), (O) AND (P)	0 HR; SPRINKLER SYSTEM TO BE PROVIDED		
	B. OTHER BEAMS	6(13-60-100) (NOTE O)	1 HR REQ'D	1 HR TO BE PROVIDED		
	8. FLOOR CONSTRUCTION	6(13-60-100) (NOTE O)	1 HR REQ'D	2 HR TO BE PROVIDED		
	ROOF CONST	6(13-60-100) (NOTES K,O,P)	1 HR, REDUCED TO 0 HR PER NOTES (K), (O) AND (P)	0 HR; SPRINKLER SYSTEM TO BE PROVIDED		

UPDATED: 10.04.2018

ITEM	ISSUE	CHAPTER	ORDINANCE REQUIREMENT	ACTUAL	DWG	REMARKS
2.08	SUPPORTING MEMBERS	6(13-60-120)	NO LESS THAN THE REQ'D FIRE-RESISTIVE RATING OF CONST SUPPORTED BY SUCH MEMBER	WILL COMPLY		4-HR VESTIBULE SHALL BE SELF-SUPPORTING
2.09	ELEVATOR FRAMING	6(13-60-130)	STRUCTURAL MEMBERS FOR ELEVATORS LOCATED WHOLLY WITHIN ELEVATOR SHAFT ENCLS OR PENTHOUSES, ARE NOT REQ'D TO BE FIRE PROTECTED	STRUCTURAL MEMBERS LOCATED WITHIN ELEVATOR SHAFT		
2.10	LINTELS	6(13-60-140)	LINTELS OVER MASONRY WALL OPEN'GS NOT EXCEEDING 5' IN WIDTH SHALL ARE NOT REQ'D TO BE FIRE PROTECTED.	WILL COMPLY		PER EXCEPTION "LINTELS, FIRE PROTECTION"; THE BOTTOM FLANGE OF THE LINTEL OVER THE EXT WALL WINDOW OPEN'G NEED NOT BE FIRE PROTECTED REGARDLESS OF THE EXT WALL OPEN'G SIZE.
2.11	SHELF ANGLES	6(13-60-150)	FIRE PROT NOT REQ'D	WILL COMPLY		MUST SUPPORT WALL FACING NO GREATER THAN 4.5" IN THICKNESS; AND BE PROPERLY SUPPORTED BY SPANDREL BEAMS OR LINTELS THAT ARE FIRE PROTECTED.
2.12	MEZZANINE FLOORS	6(13-60-160)	N/A	N/A	N/A	
2.13	BASEMENT CONST	6(13-60-170)	N/A	N/A	N/A	
2.14	DRIVEWAYS + LOADING SPACES	6(13-60-210)	N/A	N/A	N/A	
2.15	FIRE RESISTIVE REQUIREMENTS					
	FIRE WALLS - CONST	7(15-8-010)	NON-COMBUSTIBLE, 4-HR RATING PER SUB-PARAGRAPH (B), ALL SUPPORTING STRUCTURE SHALL NOT BE LESS THAN WALL SUPPORTED. SHALL EXTEND NOT LESS THAN 36" ABOVE ROOF	WILL COMPLY		
	PARAPETS	7(15-8-100)	PARAPETS WITH A FIRE-RESIST. RATING OF 3 OR 4 HOURS SHALL EXTEND NOT LESS THAN 3' ABOVE THE ROOF, PARAPETS ON FIRE WALLS SHALL EXTEND AT LEAST TO THE SAME HEIGHT AS ANY PART OF THE ROOF THROUGH WHICH THE FIRE WALL PASSES WITHIN 15' OF THE PARAPET.	4HR PARAPET TO BE PROVIDED		
	PROTECTION OF OPEN'GS	7(15-8-110)	NOT REQ'D WHERE OPEN'G IS LOCATED GREATER THAN 12' FROM THE ADJACENT BLD'G OR ADJACENT TO SMOKE PROOF TOWERS, HORIZ. EXITS, EXT. STAIRWAYS.	WILL COMPLY	N/A	NO OPEN'GS LESS THAN 12' FROM ADJACENT BLD'G AT DISTANCE MORE THAN 60-DEGREES FROM PLANE OF WALL
	ENCL PARTITIONS	7(15-8-130)(A)	ENCL PARTITIONS SUPPORTING LOADS SHALL COMPLY WITH PROVISIONS OF CHAPTER 13-60 FOR BEARING PARTITIONS.	WILL COMPLY		
		7(15-8-130)(B)	THE BOTTOMS OF ENCLS AND THE TOPS OF ENCLS NOT EXTENDING TO THE ROOF SHALL BE OF CONST PROVIDING FIRE RESIST. NOT LESS THAN THAT REQ'D FOR THE ENCL WALLS.	WILL COMPLY		
		7(15-8-130)(C)	STRUCTURAL MEMBERS SUPPORTING ENCL WALLS OR PARTITIONS SHALL BE OF CONST PROVIDING FIRE PROT NOT LESS THAN REQ'D FOR THE ENCL.	WILL COMPLY		
	STAIRWAY ENCLS	7(15-8-140)	2 HR IN BLD'GS EXCEEDING 3 STORIES IN HEIGHT, 1 HR FOR LESS THAN 3-STORIES	4 HR TO BE PROVIDED		B-LABEL OPENING PROTECTIVES AND 2 HR PROVIDED TO COMPLY WITH FIRE PROTECTION OF LOAD BEARING WALLS 6(13-60-100)
	ELEVATOR ENCLS	7(15-8-150)	2 HR REQ'D	4 HR TO BE PROVIDED		
	ENCLS OF SHAFTS	7(15-8-160)	OPEN'GS NOT EXCEEDING 9 SF DO NOT REQUIRE AN ENCL. 1-HR WHERE EXCEEDING 9SF	1 HR TO BE PROVIDED WHEN >9 SF		
	ENCLS OF WELLS AND CHUTES	7(15-8-170)	DOES NOT APPLY	DOES NOT APPLY	N/A	
	ENCLS OF HEATING PLANTS AND BOILER RMS	7(15-8-190/230)	2 HR REQ'D FOR RMS CONTAINING HEATING PLANTS IN BLDGS > 200 OCCUPANTS	2 HR TO BE PROVIDED		PROVIDE B-LABEL FIRE DAMPERS AT ALL 2-HR WALLS

BUILDING SCHOOLS ACROSS CHICAGO
CPS CHICAGO PUBLIC SCHOOLS
PUBLIC BUILDING COMMISSION OF CHICAGO

PALMER ES
ANNEX
10/5/2018

CODE MATRIX

FGM ARCHITECTS
1211 22nd St #700
Oak Brook, IL 60523
(630) 574-8300
https://fgmarchitects.com/

FGM ARCHITECTS
Design Architect

BUILDING CODE MATRIX - PALMER ELEMENTARY SCHOOL ANNEX						
Address: 5051 N KENNETH AVE CHICAGO, IL 60630						
BLD'G REQUIREMENTS		CHICAGO BLD'G CODE				
ITEM		ISSUE	CHAPTER	ORDINANCE REQUIREMENT	ACTUAL	DWG	REMARKS
		OTHER ENCLOSURES					
		1. PUBLIC CORRIDORS	7(15-8-240) 3(13-84-050)	1 HR REQ'D	1 HR TO BE PROVIDED		DOUBLE LAYER GYPSUM BOARD PROVIDED EACH SIDE OF PARTITIONS FOR ACOUSTICAL PURPOSES, NOT LIFE-SAFETY.
		2. AREA SEPARATIONS	7(15-8-240)	PER NOTE (4), REFER TO 3(13-84-050): SPECIAL ENCLS AND SEPARATIONS. SEE BELOW.	SEE BELOW		
		3. STORAGE RMS	7(15-8-240)	2 HR AT STORAGE RMS GREATER THAN 100 SF	2 HRS TO BE PROVIDED WHEN > 100 SF		PROVIDE B-LABEL FIRE DAMPERS AT ALL 2-HR WALLS
		ASSEMBLY SPACES					
		1. SPECIAL ENCLS AND SEPARATIONS	3(13-84-050)	2 HR CONST FLOOR AND ENCLOSING PARTITIONS IN SPACES > 300 OCCUPANTS; 1 HR CONST IN SPACES < 300 OCCUPANTS.	WILL COMPLY		
		2. PUBLIC CORRIDORS	3(13-84-050)	1 HR REQ'D	1 HR TO BE PROVIDED		DOUBLE LAYER GYPSUM BOARD PROVIDED EACH SIDE OF PARTITIONS FOR ACOUSTICAL PURPOSES, NOT LIFE-SAFETY.
		3.STAGE AREA AT GYMNATORIUM	3(13-84-070)	TYPE 2 STAGE PER DEFINITIONS	N/A	N/A	
		STAGE TYPE 2 REQUIREMENTS	3(13-84-090)	NON-COMBUST. ENCL MIN. 1-HR RATING; TYPE 1-C STAGE FL ASSEMBLY; TYPE 1-C AUX RMS; EQUIP = TYPE 1 STAGE	N/A	N/A	
		ROOF COVERINGS	7(15-8-360)	CLASS A	CLASS A TO BE PROVIDED		
		INT WALLS AND CEILING FINISHES	7(15-8-380)	CLASS 1; FLAME SPREAD RATING 0-25; SMOKE DEVELOPED 200	CLASS 1; FLAME SPREAD RATING 0-25; SMOKE DEVELOPED 200 PROVIDED		
		FLOOR COVERINGS	7(15-8-440)	CLASS A	CLASS A TO BE PROVIDED		
		ROOF STRUCTURES	7(15-8-510)	ALL ROOF STRUCTURES ON BLD'GS EXCEEDING 55 FEET SHALL BE NONCOMBUSTIBLE MATERIALS + SUPPORTED BY NONCOMBUSTIBLE MATERIALS	N/A		
2.16		OPEN'G PROTECTIVE ASSEMBLIES - DOORS	7(15-12-070)	SEE REMARKS	TO COMPLY		CLASS B DOORS FOR OPEN'GS IN VERTICAL SHAFTS (1-1/2 HOURS PER 7(15-8-180); CLASS C DOORS FOR OPEN'GS BTWN RMS OR BTWN RMS AND CORRIDORS; CLASS D & E DOORS FOR OPEN'GS IN EXT WALLS WHERE REQ'D PER 10(13-160). OPEN'G PROTECTIVE ASSEMBLIES NOT REQ'D IN EXT WALLS WHERE FACING A LOT LINE/OPPOSITE SIDE OF A PROW > 12 FEET PER 7(15-8-110).
2.17		OPEN'G PROTECTIVE ASSEMBLIES - WINDOWS	7(15-12-160)	SEE REMARKS	NOT REQUIRED		OPEN'G PROTECTIVE ASSEMBLIES NOT REQ'D IN EXT WALLS OPPOSITE SIDE OF A PUBLIC WAY GREATER THAN 12 FEET AWAY PER 7(15-8-110).

2.18		FIRE PROTECTION EQUIPMENT					
		SPRINKLER SYSTEMS	9(15-16-010)	REQ'D FOR TYPE 1 SCHOOLS	AUTOMATIC AND SUPERVISED SPRINKLER SYSTEM PROVIDED		ANNEX ONLY
		STANDPIPE SYSTEMS	9(15-16-090)	STANDPIPE REQ'D ON EACH SIDE OF STAGE BLOCK AND WITHIN 50' OF ALL PROPERTY RMS, STORE RMS OR WORK RMS.	N/A	N/A	
		FIRE ALARM SYSTEMS	9(15-16-110)	CLASS 1 SYSTEM REQ'D FOR ALL TYPE 1 SCHOOLS	CLASS 1 SYSTEM TO BE PROVIDED		CONNECT TO EXISTING SYSTEM, UPGRADE AS REQUIRED
		FIRE EXTINGUISHERS	9(15-16-640)	ONE 2A-RATED AND ONE C-RATED FIRE EXTINGUISHERS REQ'D ON EACH SIDE OF STAGE.	N/A		
			9(15-16-640)	NOT LESS THAN ONE 2A-RATED FIRE EXTINGUISHER REQ'D FOR ASSEMBLY RMS WITH 300 OR MORE OCCUPANTS.			FIRE EXTINGUISHERS INSTALLATION SHALL BE PROVIDED IN A MANNER THAT COMPLIES WITH NFPA 10

UPDATED: 10.04.2018

ITEM		ISSUE	CHAPTER	ORDINANCE REQUIREMENT	ACTUAL	DWG	REMARKS
EXIT REQUIREMENTS							
3.01		TYPES OF EXITS FOR STORY ABOVE OR BELOW GRADE	10(13-160-040)	INTERIOR STAIRWAYS, SMOKEPROOF TOWERS, HORIZONTAL EXITS, ESCALATORS, EXTERIOR STAIRWAYS, RAMPS, SLIDE POLE, ELEVATORS	INTERIOR STAIRWAYS, HORIZONTAL EXITS & ELEVATOR		
3.02		MINIMUM NUMBER OF EXITS	10(13-160-050)	2 EXITS FROM EVERY BUILDING, FLOOR SPACE OR ROOM	CLASSROOMS AND STORAGES < 2 DOORS		
		1 EXIT PERMITTED	10(13-160-050) (A)	IN ALL OCCUPANCIES EXCEPT HAZARDOUS USE UNITS, FROM ANY ROOM OR SPACE DESIGNED OR USED FOR AN OCCUPANCY OF NOT MORE THAN FIFTY PERSONS AND: HAVING AN AREA NOT EXCEEDING 1,200 SQ.FT. OR USED FOR STORAGE NOT EXCEEDING 400 SQ.FT.	CLASSROOMS < 50 PERSONS AND < 1,200 SQ.FT. STORAGES < 400 SQ.FT.		
		1 EXIT PERMITTED	10(13-160-050) (B)	IN ALL OCCUPANCIES FROM ANY ROOM OR SPACE HAVING AN AREA NOT EXCEEDING 2000 SQ.FT. AND USED EXCLUSIVELY FOR STORAGE PURPOSES WITH ONLY INCIDENTAL HUMAN OCCUPANCY	MECHANICAL ROOM < 2000 SQ.FT. AND INCIDENTAL HUMAN OCCUPANCY		
3.03		TRAVEL DISTANCE TO EXITS	10(13-160-110)	PER SECTION 10(13-160-140) ASSEMBLY UNITS' TRAVEL DISTANCE SHALL NOT EXCEED 150'	-		
		DEAD END CORRIDOR	10(13-160-160)	SHALL NOT EXCEED 20'	N/A	N/A	
3.04		CAPACITY OF EXITS	10(13-160-210)	STAIRS = 100 PERSONS PER UNIT OF EXIT WIDTH DOORWAYS = 115 PERSONS PER UNIT OF EXIT WIDTH	WILL COMPLY		
3.05		MINIMUM WIDTH OF EXITS	10(13-160-220)	DOORS > OR = 36" WIDE STAIRS AND CORRIDORS > OR = 60" WIDE	DOORS > OR = 36" STAIRS > OR = 66" CORRIDORS > OR = 86"		
3.06		SWING OF EXIT DOORS	10(13-160-250)	ALL DOORS REQUIRED AS EXIT DOORS SHALL SWING IN THE DIRECTION OF EXIT TRAVEL	WILL COMPLY		
3.07		HARWARE	10(13-160-260)				
		DOORS IN CONNECTION WITH EXITS	10(13-160-260) (A)	ALL DOORS USED IN CONNECTION WITH EXITS SHALL BE SO ARRANGED AS TO BE READILY OPENED WITHOUT THE USE OF A KEY FROM THE SIDE FROM WHICH EGREES IS MADE	WILL COMPLY		
		ASSEMBLY UNITS	10(13-160-260) (B)	EXIT DOORS SERVING MORE THAN 200 PERSONS SHALL BE EQUIPPED WITH APPROVED LATCHES OR BOLTS WHICH RELEASE UNDER A PRESSURE OF 15 POUNDS	WILL COMPLY		
		PUBLIC BUILDINGS	10(13-160-260) (D)	DOORS IN PUBLIC BUILDINGS OPENING INTO MECHANICAL OR ELECTRICAL EQUIPMENT ROOMS, STAIRS OR ENTRANCES TO VEHICULAR TRAFFIC AREAS, SHALL HAVE KNURLED HANDLES TO ALERT THE BLIND	WILL COMPLY		
3.08		LANDINGS	10(13-160-310)	MAXIMUM VERTICAL RISE = 9' LENGTH OF LANDING = WIDTH OF STAIRS BUT NEED NOT EXCEED 4'			
3.09		HANDRAILS	10(13-160-320)	ALL STAIRWAYS SHALL HAVE WALLS, RAILINGS OR GUARDS ON BOTH SIDES	WILL COMPLY		
		WALL MOUNTED HANDRAILS	10(13-160-320) (B)	HANDRAIL MOUNTED ON WALL SHALL HAVE ITS ENDS RETURNED AND JOINED TO THE WALL	WILL COMPLY		
3.10		CONSTRUCTION	10(13-160-330)	STAIRS SHALL BE CONSTRUCTED ENTIRELY OF NON-COMBUSTIBLE MATERIALS	WILL COMPLY		
		THREADS AND LANDINGS	10(13-160-330) (D)	FINISH SURFACE TO BE OF MATERIALS WHICH WILL NOT CAUSE DANGER OF SLIPPING	WILL COMPLY		
		CLOSETS AND STORAGE	10(13-160-330) (E)	NO CLOSET OR STORAGE SPACE SHALL BE LOCATED BENEATH STAIRS	WILL COMPLY		
3.11		STAIRWAY ENCLOSURES	7(15-8-140)	IN BUILDINGS NOT EXCEEDING THREE STORIES IN HEIGHT, INTERIOR STAIRWAYS SHALL BE ENCLOSED WITH 1 HR PARTITIONS	2HR PROVIDED		
3.12		HEAD ROOM	10(13-160-350)	NOT LESS THAN 7'	WILL COMPLY		

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SPECIFICATION

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS – JOC PROJECTS

DIVISION 01 - GENERAL REQUIREMENTS

DIVISION 02 - EXISTING CONDITIONS

DIVISION 03 - CONCRETE

DIVISION 04 - MASONRY

DIVISION 05 - METALS

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

06 10 00	ROUGH CARPENTRY	00_09/17/18
06 20 00	FINISH CARPENTRY	00_09/17/18
06 61 16	SOLID SURFACING FABRICATIONS	00_09/17/18

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

07 01 60	MAINTENANCE OF FLASHING AND SHEET METAL	PENDING
07 11 13	BITUMINOUS DAMPPROOFING	PENDING
07 13 00	SHEET WATERPROOFING	PENDING
07 18 00	TRAFFIC COATINGS	PENDING
07 21 00	THERMAL INSULATION	PENDING
07 21 29	SPRAYED INSULATION	PENDING
07 25 00	WEATHER BARRIERS	PENDING
07 42 13.23	METAL COMPOSITE MATERIAL WALL PANELS	PENDING
07 52 00	MODIFIED BITUMINOUS MEMBRANE ROOFING	PENDING
07 54 33	FLEXIBLE MEMBRANE ROOFING	PENDING
07 62 00	SHEET METAL FLASHING AND TRIM	PENDING
07 71 00	ROOF SPECIALTIES	PENDING
07 72 00	ROOF ACCESSORIES	PENDING
07 81 00	APPLIED FIREPROOFING	PENDING
07 81 23	INTUMESCENT MASTIC FIREPROOFING	PENDING
07 84 00	FIRESTOPPING	PENDING
07 92 00	JOINT SEALANTS	PENDING
07 95 13	EXPANSION JOINT COVER ASSEMBLIES	PENDING

DIVISION 08 - OPENINGS

08 11 13	HOLLOW METAL DOORS AND FRAMES	PENDING
08 14 16	FLUSH WOOD DOORS	PENDING
08 31 00	ACCESS DOORS AND PANELS	PENDING
08 33 13	COILING COUNTER DOORS	PENDING
08 33 26	OVERHEAD COILING GRILLES	PENDING
08 42 29	AUTOMATIC DOOR OPENERS	PENDING
08 43 13	ALUMINUM-FRAMED STOREFRONTS	PENDING
08 51 13	ALUMINUM WINDOWS	PENDING
08 56 56	WINDOW GUARDS - INTERIOR	PENDING
08 56 57	WINDOW GUARDS - EXTERIOR	PENDING
08 71 00	DOOR HARDWARE	PENDING
08 71 01	DOOR HARDWARE SCHEDULE	PENDING
08 80 00	GLAZING	PENDING
08 87 17	SAFETY AND SECURITY GLAZING FILMS	PENDING
08 83 00	MIRRORS	PENDING
08 91 00	LOUVERS	PENDING

DIVISION 09 - FINISHES

09 01 22	GYPSUM PLASTER PATCHING	PENDING
09 01 24	PLASTER RENOVATION	PENDING
09 01 33	TILING RENOVATION	PENDING
09 01 63	TERRAZZO FLOORING RENOVATION	PENDING
09 01 65	WOOD ATHLETIC FLOORING RENOVATION	PENDING
09 05 61	COMMON WORK RESULTS FOR FLOORING PREPARATION	PENDING
09 21 16	GYPSUM BOARD ASSEMBLIES	PENDING
09 22 16	NON-STRUCTURAL METAL FRAMING	PENDING
09 22 36	LATH	PENDING
09 30 00	TILING	PENDING
09 51 00	ACOUSTICAL CEILINGS	PENDING
09 64 29	WOOD STRIP AND PLANK FLOORING	PENDING
09 64 66	WOOD ATHLETIC FLOORING	PENDING
09 65 00	RESILIENT FLOORING	PENDING
09 65 66	RESILIENT ATHLETIC FLOORING	PENDING
09 68 13	TILE CARPETING	PENDING
09 84 30	FABRIC-WRAPPED SOUND-ABSORBING WALL UNITS	PENDING
09 91 03	SURFACE PREPARATION FOR RENOVATION PAINTING	PENDING
09 91 05	RENOVATION PAINTING	PENDING
09 91 13	EXTERIOR PAINTING	PENDING
09 91 23	INTERIOR PAINTING	PENDING
09 96 00	HIGH-PERFORMANCE COATINGS	PENDING

DIVISION 10 - SPECIALTIES

10 11 01	VISUAL DISPLAY BOARDS	00_09/17/18
10 11 03	CHALKBOARD TO MARKERBOARD CONVERSION	00_09/17/18
10 14 00	SIGNAGE	00_09/17/18
10 21 13.19	PLASTIC TOILET COMPARTMENTS	00_09/17/18
10 22 13	WIRE MESH PARTITIONS AND PANELS	00_09/17/18
10 22 39	FOLDING PANEL PARTITIONS	00_09/17/18
10 26 01	WALL AND CORNER GUARDS	00_09/17/18
10 28 00	TOILET, BATH, AND LAUNDRY ACCESSORIES	00_09/17/18
10 44 00	FIRE PROTECTION SPECIALTIES	00_09/17/18
10 44 03	INSTALLATION OF FIRE EXTINGUISHERS AND CABINETS	00_09/17/18
10 51 12.11	LOCKERS – ELEMENTARY SCHOOL	00_09/17/18
10 75 00	FLAGPOLES	00_09/17/18
10 82 19	EXTERIOR SOUND SCREENS	00_09/17/18

DIVISION 11 - EQUIPMENT

11 40 00	FOODSERVICE EQUIPMENT	00_09/17/18
11 52 13	PROJECTION SCREENS	00_09/17/18
11 68 13	PLAYGROUND EQUIPMENT	00_09/17/18
11 68 23.13	EXTERIOR BASKETBALL EQUIPMENT	00_09/17/18
11 82 27	FACILITY WASTE COMPACTORS	00_09/17/18

DIVISION 12 - FURNISHINGS

12 24 00	WINDOW SHADES	00_09/17/18
12 32 00	MANUFACTURED WOOD CASEWORK	00_09/17/18
12 36 00	COUNTERTOPS	00_09/17/18
12 48 13	ENTRANCE FLOOR MATS AND FRAMES	00_09/17/18

DIVISION 13 - SPECIAL CONSTRUCTION

13 48 20	ARCHITECTURAL ACOUSTIC ISOLATION	00_09/17/18

DIVISION 14 - CONVEYING EQUIPMENT

14 24 23	HYDRAULIC PASSENGER ELEVATORS	00_09/17/18

DIVISION 21 - FIRE SUPPRESSION

21 05 00	COMMON WORK RESULTS FOR FIRE SUPPRESSION	00_xx/xx/xx
21 05 13	COMMON MOTOR REQUIREMENTS FOR FIRE SUPPRESSION EQUIPMENT	00_xx/xx/xx
21 05 53	IDENTIFICATION FOR FIRE SUPPRESSION PIPING AND EQUIPMENT	00_xx/xx/xx
21 11 00	FACILITY FIRE-SUPPRESSION PIPING	00_xx/xx/xx
21 13 00	FIRE SUPPRESSION SPRINKLER SYSTEMS	00_xx/xx/xx
21 31 13	ELECTRIC-DRIVE CENTRIFUGAL FIRE PUMPS	00_xx/xx/xx

DIVISION 22 - PLUMBING

22 05 00	COMMON WORK RESULTS FOR PLUMBING	00_xx/xx/xx
22 05 13	COMMON MOTOR REQUIREMENTS FOR PLUMBING EQUIPMENT	00_xx/xx/xx
22 05 16	EXPANSION FITTINGS AND LOOPS FOR PLUMBING	00_xx/xx/xx
22 05 19	METERS & GAGES FOR PLUMBING PIPING	00_xx/xx/xx
22 05 23	GENERAL-DUTY VALVES FOR PLUMBING PIPING	00_xx/xx/xx
22 05 29	HANGERS & SUPPORTS FOR PLUMBING PIPING & EQUIPMENT	00_xx/xx/xx
22 05 48	VIBRATION CONTROLS FOR PLUMBING PIPING AND EQUIPMENT	00_xx/xx/xx
22 05 53	IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT	00_xx/xx/xx
22 07 00	PLUMBING INSULATION	00_xx/xx/xx
22 11 16	DOMESTIC WATER PIPING	00_xx/xx/xx
22 11 19	DOMESTIC WATER PIPING SPECIALTIES	00_xx/xx/xx
22 11 23	DOMESTIC WATER PUMPS	00_xx/xx/xx
22 11 23.13	DOMESTIC WATER PACKAGED BOOSTER PUMPS	00_xx/xx/xx
22 13 16	SANITARY WASTE, VENT AND STORM DRAINAGE PIPING	00_xx/xx/xx
22 13 19	SANITARY WASTE PIPING SPECIALTIES	00_xx/xx/xx
22 14 13	FACILITY STORM DRAINAGE PIPING	00_xx/xx/xx
22 14 23	DRAINAGE PIPING SPECIALTIES	00_xx/xx/xx
22 34 00	FUEL-FIRED DOMESTIC WATER HEATERS	00_xx/xx/xx
22 36 00	COMMERCIAL FUEL-FIRED WATER HEATERS	00_xx/xx/xx
22 40 00	PLUMBING FIXTURES	00_xx/xx/xx
22 47 00	DRINKING FOUNTAINS & WATER COOLERS	00_xx/xx/xx

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

23 01 30.51	HVAC AIR-DISTRIBUTION SYSTEM CLEANING	00_09/17/18
23 05 13	COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT	00_09/17/18
23 05 16	EXPANSION FITTINGS AND LOOPS FOR HVAC PIPING	00_09/17/18
23 05 19	METERS AND GAGES FOR HVAC PIPING	00_09/17/18
23 05 23	GENERAL-DUTY VALVES FOR HVAC PIPING	00_09/17/18
23 05 48	VIBRATION CONTROLS FOR HVAC PIPING AND EQUIPMENT	00_09/17/18
23 05 53	IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT	00_09/17/18
23 05 93	TESTING, ADJUSTING, AND BALANCING FOR HVAC	00_09/17/18
23 07 13	DUCT INSULATION	00_09/17/18
23 07 16	HVAC EQUIPMENT INSULATION	00_09/17/18
23 07 19	HVAC PIPING INSULATION	00_09/17/18
23 09 XX	BUILDING AUTOMATION SYSTEM (BAS)	PENDING
23 21 13	HYDRONIC PIPING	00_09/17/18
23 21 14	HYDRONIC SPECIALTIES	00_09/17/18
23 21 23	HYDRONIC PUMPS	00_09/17/18
23 23 00	REFRIGERANT PIPING	00_09/17/18
23 25 00	HVAC WATER TREATMENT	00_09/17/18
23 31 00	HVAC DUCTS AND CASINGS	00_09/17/18
23 33 00	AIR DUCT ACCESSORIES	00_09/17/18
23 34 16	CENTRIFUGAL HVAC FANS	00_09/17/18
23 36 00	AIR TERMINAL UNITS	00_09/17/18
23 37 00	AIR OUTLETS AND INLETS	00_09/17/18
23 40 00	HVAC AIR CLEANING DEVICES	00_09/17/18
23 51 00	BREECHINGS, CHIMNEYS, AND STACKS	00_09/17/18
23 52 16	CONDENSING BOILERS	00_09/17/18
23 73 13	MODULAR INDOOR CENTRAL AIR HANDLER	00_09/17/18
23 81 26.13	SMALL-CAPACITY SPLIT-SYSTEM AIR CONDITIONERS	00_09/17/18
23 82 23	UNIT VENTILATORS	00_09/17/18

DIVISION 26 - ELECTRICAL

26 05 05	SELECTIVE DEMOLITION FOR ELECTRICAL	PENDING
26 05 19	LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES	PENDING
26 05 26	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	PENDING
26 05 29	HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS	PENDING
26 05 33.13	CONDUIT FOR ELECTRICAL SYSTEMS	PENDING
26 05 33.16	BOXES FOR ELECTRICAL SYSTEMS	PENDING
26 05 33.23	SURFACE RACEWAYS FOR ELECTRICAL SYSTEMS	PENDING
26 05 48	NOISE AND VIBRATION CONTROL FOR ELECTRICAL SYSTEMS	PENDING
26 05 53	IDENTIFICATION FOR ELECTRICAL SYSTEMS	PENDING
26 05 83	WIRING CONNECTIONS	PENDING
26 08 13	TESTING OF ELECTRICAL SYSTEMS	PENDING
26 09 23	LIGHTING CONTROL DEVICES	PENDING
26 09 43	LIGHTING CONTROLS	PENDING
26 21 00	LOW-VOLTAGE ELECTRICAL SERVICE ENTRANCE	PENDING
26 22 00	LOW-VOLTAGE TRANSFORMERS	PENDING
26 24 13	SWITCHBOARDS	PENDING
26 24 16	PANELBOARDS	PENDING
26 27 23	INDOOR SERVICE POLES	PENDING
26 27 26	WIRING DEVICES	PENDING
26 28 13	FUSES	PENDING
26 28 16.13	ENCLOSED CIRCUIT BREAKERS	PENDING
26 28 16.16	ENCLOSED SWITCHES	PENDING
26 29 13	ENCLOSED CONTROLLERS	PENDING
26 29 23	VARIABLE FREQUENCY MOTOR CONTROLLERS	PENDING
26 32 13	ENGINE GENERATORS	PENDING
26 36 00	TRANSFER SWITCHES	PENDING
26 43 00	SURGE PROTECTIVE DEVICES	PENDING
26 51 00	INTERIOR LIGHTING	PENDING
26 51 00.01	INTERIOR LIGHTING FIXTURE SCHEDULE	PENDING
	FOR REFERENCE – INCLUDE SCHEDULE ON DRAWINGS, EDIT PER PROJECT	
26 56 00	EXTERIOR LIGHTING	PENDING
26 56 00.01	EXTERIOR LIGHTING FIXTURE SCHEDULE	PENDING *FOR REFERENCE – INCLUDE SCHEDULE ON DRAWINGS, EDIT PER PROJECT*

DIVISION 27 - COMMUNICATIONS

27 05 03	COMMUNICATIONS GENERAL REQUIREMENTS	00_09/17/18
27 05 38	CABLE TRAYS FOR STRUCTURED CABLING SYSTEMS	00_09/17/18
27 05 53	IDENTIFICATION FOR COMMUNICATION SYSTEMS	00_09/17/18
27 05 53.01	IDENTIFICATION FOR COMMUNICATION SYSTEMS LABELING	00_09/17/18
27 08 00	COMMISSIONING OF COMMUNICATIONS	00_09/17/18
27 11 16	COMMUNICATIONS CABINETS, RACKS, AND ENCLOSURES	00_09/17/18
27 13 13	COMMUNICATIONS COPPER BACKBONE CABLING	00_09/17/18

CIVIL

FGM ARCHITECTS

Palmer ES Civil Utility and Stormwater Items

Site work for the project will consist of new parking, playground, paved pedestrian open space, and greenspace. An alternate is currently proposed to change greenspace near the playground to artificial turf, as such there are two stormwater detention options provided.

With respect to existing utilities the following shall be noted:

1) Gas – The existing gas service feeds into the boiler room from Carmen Avenue. The proposed location of the new building addition will require relocation of the existing service. Location of new gas service will be coordinated with mechanical engineer and utility provider.

2) Telecommunications – The existing telecommunications service is fed from a utility pole located in the southern parkway of Carmen Avenue. The proposed location of the new building addition will require relocation of the existing telecommunications service. Location and routing to be determined and coordinated with the utility provider.

3) Electrical – There are two existing transformers on the site, one at the existing modular at the SE corner of the school and the other near the boiler building. Primary and secondary routing from these transformers needs to be determined.

Stormwater

The preliminary site layout provided by FGM Architects will fall under the City of Chicago Department of Water Management, Stormwater ordinance as a "regulated development". It is anticipated the site will require approximately 20,564 cubic feet of storm water detention and 2,520 cubic feet of runoff volume control. It is anticipated the detention system will utilize a subsurface detention vault, and the volume control for stormwater runoff will be stored beneath the permeable playground. Location of detention system is anticipated to be located under the hardscape area south of the playground. The stormwater will discharge into the existing 18" sewer on Argyle Street.

Detention and volume control requirements will increase if artificial turf is selected to be used in place of landscape at the southwest corner of the site. The artificial turf alternate site plan will require approximately 26,047 cubic feet of storm water detention and 3,300 cubic feet of runoff volume control. It is anticipated the detention system will utilize a subsurface detention vault. The volume control for stormwater runoff will be stored beneath the permeable playground and artificial turf surface.

*Note: Please reference MEP narrative for additional information on proposed utility connections for the project.

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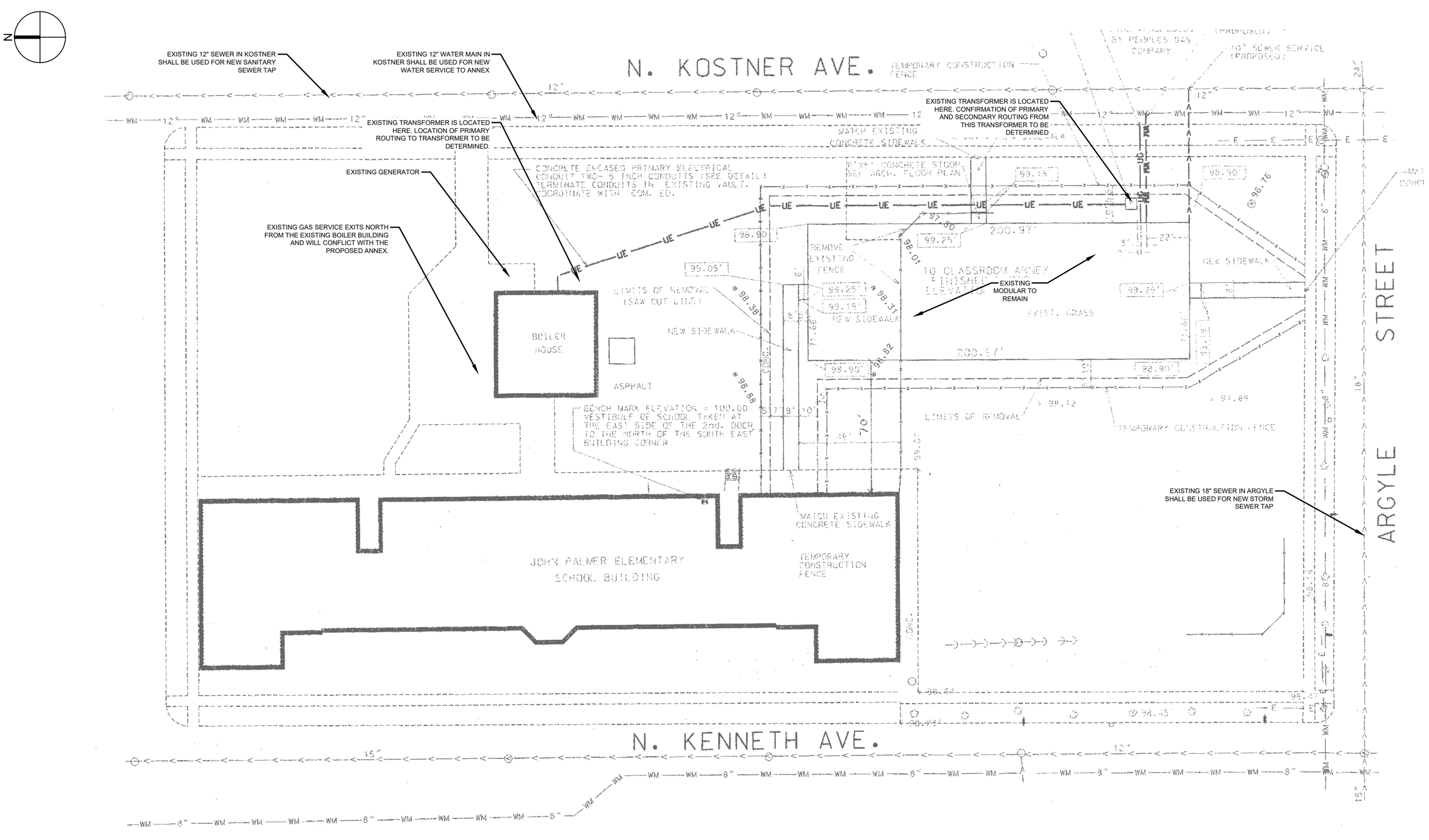
225 W Ohio Street - Suite 400, Chicago, IL 60654
(T) 312-467-0123 | (F) 312-467-0220



1 Palmer Annex Existing Infrastructure

SCALE: NTS

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N

EXISTING ENTRY INTO PARKING

PROPERTY LINE

N KOSTNER AVE

NEW GREEN SPACE

NEW SIDEWALK

NEW PARKING LOT
46 PARKING SPACES WITH
3 ADA SPACES

EXISTING GENERATOR

EXISTING GREEN SPACE

DETENTION TANK AND PERMEABLE RUBBER SYSTEM WITH 2' OF STORAGE AGGREGATE BELOW SURFACE TO PROVIDE A MINIMUM 23,100 C.F. STORAGE VOLUME.

SYSTEM TO CONNECT TO EXISTING 18" SEWER IN W. ARGLYE ST.

W CARMEN AVE

LIBRARY/ INNOVATION LAB

VEST

DINING

ART CLASSROOM

KILN

ART STORAGE

TABLE STORAGE

SERVERY

EGRESS STAIR

STORAGE

CLASSROOM

HYBRID KITCHEN

COOLER

FREEZER

UNISEX TOILET

STAFF VEST LOCKERS

STAFF OFFICE

BOILER BUILDING

NEW TRASH ENCLOSURE

EXISTING PAVED HARDSCAPE PLAY

NEW PAVED HARDSCAPE PLAY

NEW PLAYGROUND

EGRESS STAIR

FIRE PUMP

ELEC

ELEV VEST

4 HOUR VESTIBULE

DANCE ROOM

W ARGYLE ST

STAGE

ASSEMBLY HALL

BOY'S TOILET

OFFICE

STORAGE

CLASS ROOM

CLASSROOM

NEW CLASSROOM

NEW CLASSROOM

CORRIDOR

GIRLS TOILET

OFFICE

GYM OFFICE

BOYS TOILET

GYMNASIUM

COUNSELOR

RENOVATE CLASSROOM

CLASSROOM

STORAGE

KINDERGARDEN

CLASSROOM

CLASSROOM

CLASSROOM

TEACHERS REST

TOILET

NEW PAVED BASKETBALL COURT

NEW TURF FIELD

EXISTING GREEN SPACE

N KENNETH AVE

1 Palmer Annex Stormwater Management Concept Plan

SCALE: 1" = 40'

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CSK-2
Palmer ES - Chicago, IL
10/05/2018 MH

N

EXISTING ENTRY INTO PARKING

PROPERTY LINE

N KOSTNER AVE

NEW GREEN SPACE

NEW SIDEWALK

NEW PARKING LOT
46 PARKING SPACES WITH
3 ADA SPACES

EXISTING GENERATOR

BOILER BUILDING

NEW TRASH ENCLOSURE

EXISTING PAVED HARDSCAPE PLAY

NEW PAVED HARDSCAPE PLAY

EXISTING GREEN SPACE

DETENTION TANK, TURF FIELD WITH 2.75' OF STORAGE AGGREGATE BELOW SURFACE, AND PERMEABLE RUBBER SYSTEM WITH 1.75' STORAGE AGGREGATE BELOW SURFACE TO PROVIDE A MINIMUM 29,400 C.F. STORAGE VOLUME.

SYSTEM TO CONNECT TO EXISTING 18" SEWER IN W. ARGLYE ST.

NEW PLAYGROUND

NEW TURF FIELD

NEW PAVED BASKETBALL COURT

W CARMEN AVE

W ARGYLE ST

N KENNETH AVE

EXISTING GREEN SPACE

LIBRARY/ INNOVATION LAB

VEST

DINING

ART CLASSROOM

KILN

ART STORAGE

TABLE STORAGE

SERVERY

EGRESS STAIR

STAFF

OFFICE

VEST

STORAGE

CLASSROOM

HYBRID KITCHEN

COOLER

FREEZER

UNISEX TOILET

STAFF VEST LOCKERS

EGRESS STAIR

FIRE PUMP

ELEC

ELEV VEST

4 HOUR VESTIBULE

DANCE ROOM

STAGE

ASSEMBLY HALL

BOY'S TOILET

GIRL'S TOILET

OFFICE

STORAGE

CLASS ROOM

CLASSROOM

CORRIDOR

NEW CLASSROOM

NEW CLASSROOM

GIRLS TOILET

OFFICE

GYM OFFICE

GYM TOILET

GYMNASIUM

COUNSELOR

RENOVATE CLASSROOM

CLASSROOM

STORAGE

KINDERGARDEN

CLASSROOM

CLASSROOM

CLASSROOM

TEACHERS REST

TOILET

VESTIBULE

MEN'S TOILET

WOMEN'S TOILET

1 Palmer Annex Stormwater Management Concept Plan - Alternate

SCALE: 1" = 40'

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CSK-3
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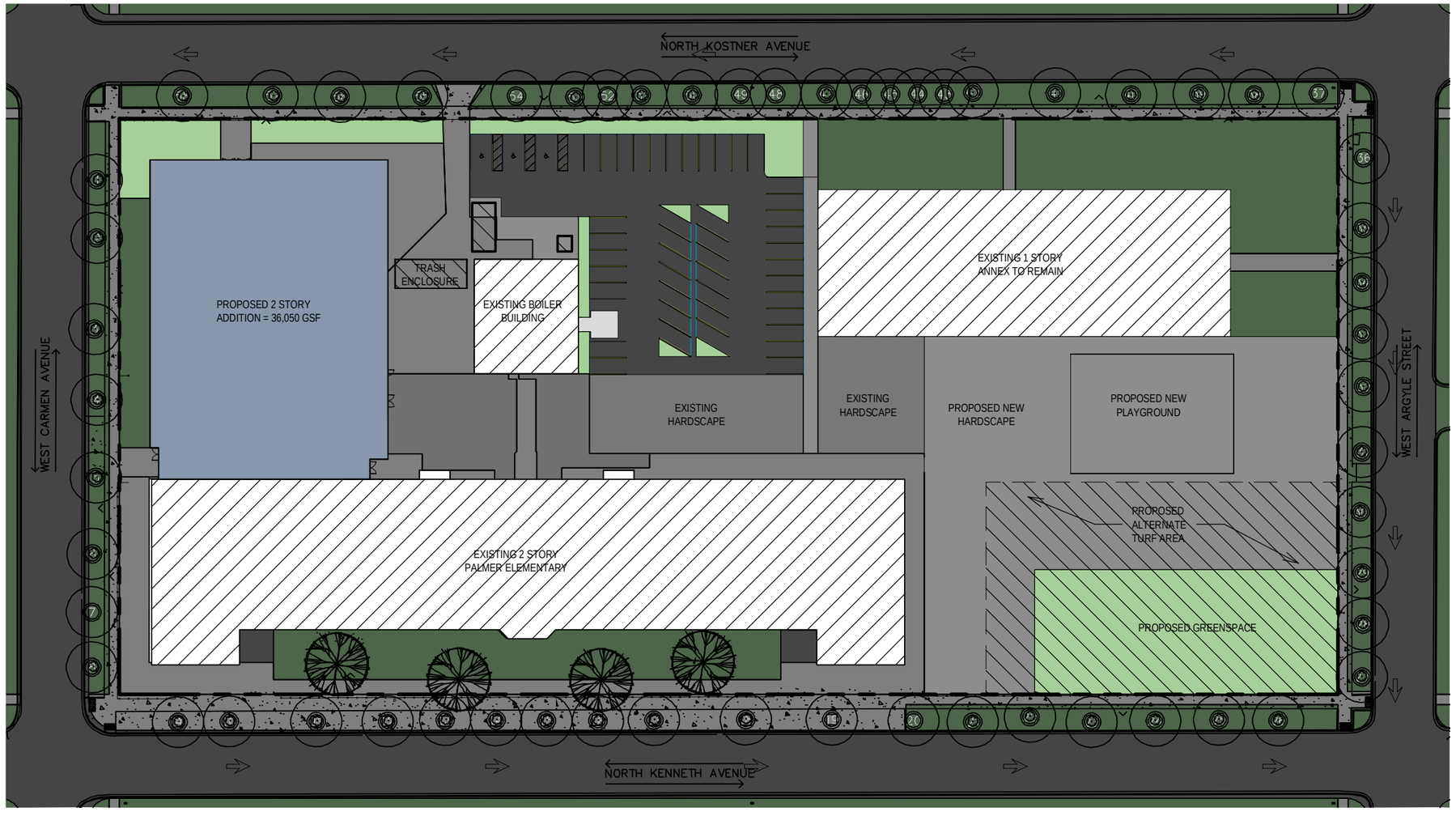
LANDSCAPE

FGM ARCHITECTS

Landscape Narrative

- Landscaping is an important element in the exterior design of any facility and can enhance the overall visual appeal and value of a property. Proposed plant materials will provide a quality, cost-effective and functional landscape that will enhance the new areas of construction, while complying with applicable City of Chicago landscape requirements.
- Hardy, low-maintenance, drought-tolerant plant materials will be proposed for the projects. Invasive plants that threaten local ecosystems will not be utilized. Thornless and non-toxic plant materials will be utilized and plant materials with fruit and nuts will be avoided. Final selections will take into account seasonal interest, disease-resistance, ability to thrive in a typical urban environment and will require minimal pruning.
- All existing trees will be preserved to the greatest extent possible. The landscape design will complement the existing landscape in the vicinity. New groupings of similar plants will be installed for greatest visual impact.
- Minimum sizes of proposed plant materials shall be as follows:
    - Deciduous Shade Tree: 2 ½" caliper
    - Deciduous Ornamental Tree: 6' height
    - Evergreen Tree: 6' height
    - Shrubs utilized for screening purposes: 30" height
    - Shrubs not utilized for screening purposes: #5 container
    - Perennials and Ornamental Grasses: 1 gal. container
- Shade trees will be incorporated throughout the parking lots in islands. These trees will help mitigate the heat island effect by cooling the environment through shade and transpiration, while helping to reduce on-site pollution.
- Requirements for the balling and burlapping, measurement, branching, quality and size of plants shall follow the latest edition of the American Standard for Nursery Stock by the American Association of Nurserymen, Inc.
- All non-paved site areas inside the project limits, or outside the project limits disturbed by construction operations, not containing plantings, will be seeded and/or sodded.
- New landscaping shall be guaranteed for a one-year period.
- Three inches (3") of shredded hardwood will be utilized on all planting beds and around all trees to conserve moisture, reduce soil temperature fluctuation, improve the soil through decomposition and minimize weed growth.
- Since an irrigation system is not part of this program, reducing the amount of outdoor water use through appropriate techniques is very important. Turf variety selection will require minimal additional irrigation and water-efficient plants utilizing natives that have demonstrated long-term landscape value through hardiness, availability and minimal maintenance requirements will further reduce the reliance on supplemental watering.
- The play area at Palmer Elementary School will serve as a primary exterior activity center. The play area will utilize CPS design standards and will comply with CPSC guidelines, applicable ASTM standards and ADA guidelines for accessibility. For obvious reasons, equipment with lead-based paint, bare metal platforms, slides or steps and sharp points, corners and edges will be avoided. The equipment will provide multiple play options and challenges, sensory panels and interactive activities. Safety surfacing will be utilized beneath the equipment and will extend, at a minimum, to the required perimeter safety zones. Consideration for protective shade opportunities will also be explored.
- Consideration will be given to the inclusion of site furniture, such as benches, waste receptacles and bike racks. Proposed furniture, if included, will be durable and well-constructed.



N

1 LANDSCAPE-SITE PLAN

1" = 60'-0"

BUILDING SCHOOLS ACROSS CHICAGO
PUBLIC BUILDING COMMISSION OF CHICAGO
CPS CHICAGO PUBLIC SCHOOLS

PALMER ES
ANNEX
10/5/2018

LANDSCAPE

1" = 60'-0"

FGM ARCHITECTS

1211 22nd St #700
Oak Brook, IL 60523
(630) 574-8300
https://fgmarchitects.com/

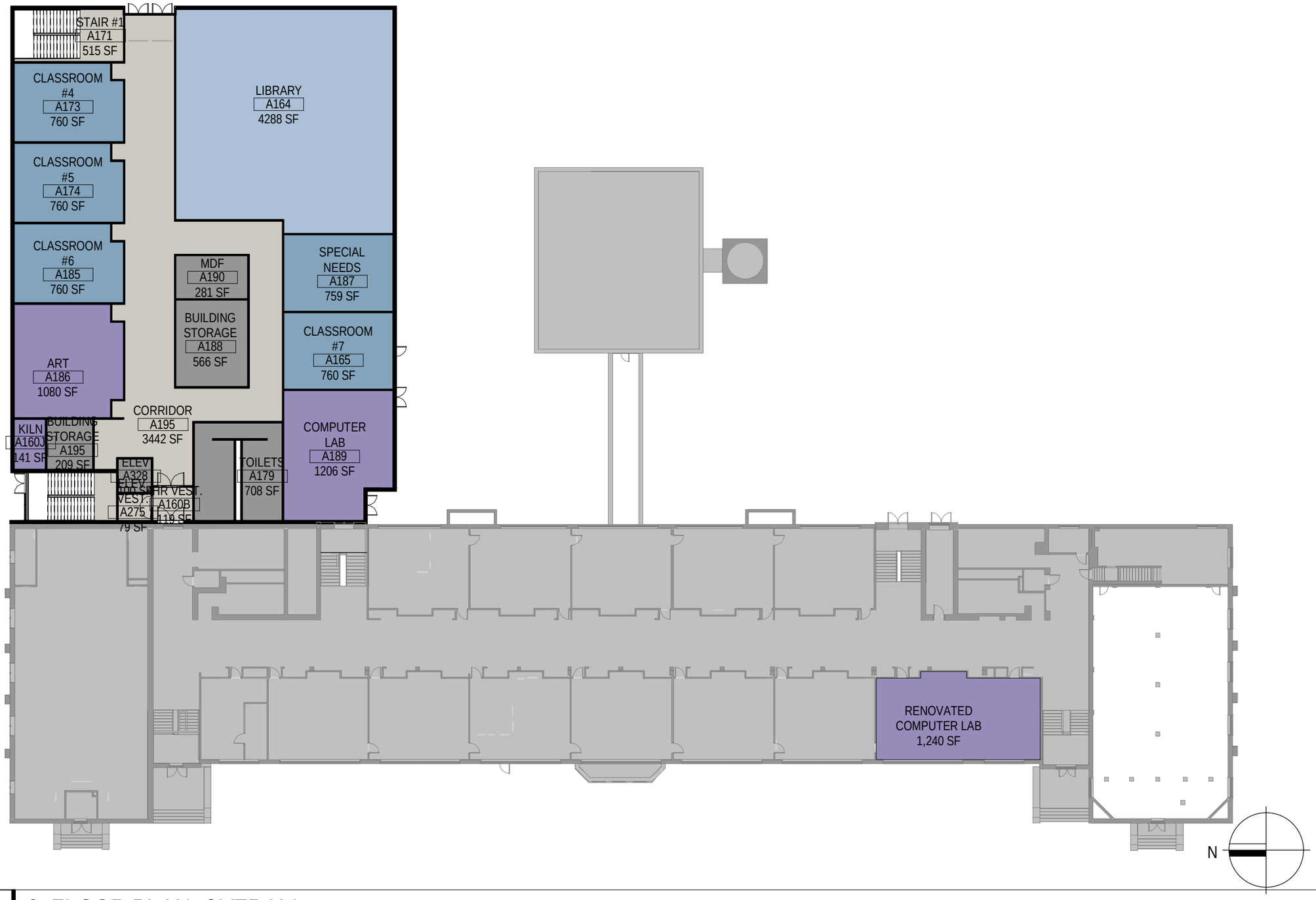
FGM ARCHITECTS
Design Architect

PALMER ELEMENTARY SCHOOL — FGM ARCHITECTS

10/5/2018

QTY	Space Category	Square Footage/ Area	Total Program Area	Actual Quantity	Actual Area	Total Actual Area
	** DENOTES PROGRAMMED SPACE NOT IDENTIFIED IN THE ORIGINAL CPS SPACE PROGRAM					
	TEACHING STATION				760	5320
7	Typical 720 sf Academic Classroom	760	5320	7	760	760
1	Special Needs (3 age Groups) Not to exceed 17 students	760	760	1		
0	New Cluster Program	760	0			
0	Pull-out space for individual students w/ Special Needs	760	0			
0	Pre-K & Kindergarten (am/pm pre-k) incl toilet & storage	1180	0			
0	Science Classroom w/ storage	1080	0		1206	1206
1	Computer Classroom (1 teacher & 30 student workstations)	1040	1040	1		
0	Music Room with storage	1520	0		1080	2160
2	Art Classroom with storage (1 regular art & 1 dance studio)	1080	2160	2	140	140
1	Art Kiln Area in mechanical room adj to art room	90	90	1		
	Multi - Purpose Room -Replace existing windows with rated windows					
						9586
	TOTAL		9370			
	ADMINSTRATION CENTER					
0	Administration Reception	190	0			
0	School Business Office (3 clerk workstations)	250	0			
0	Conference Room	220	0			
0	School Vault / Workroom/Pantry	80	0			
0	Faculty Mailboxes	80	0			
0	Principal's Office	150	0		150	300
2	Administrative remote from office	150	300	2		
0	Business Manager Office	100	0			
0	Coat Storage	30	0			
0	Pantry	100	0			
0	Faculty Work Room (not contiguous w/ admin center)	225	0			
						300
	TOTAL		300			
	NURSE'S SUITE/ STUDENT SERVICES Shared					
0	Open Office	0	0			
0	Exam/Counseling Room	100	0			
0	Laundry stack	15	0			
0	Shower and Toilet	90	0			
0	Storage for Inclusion Students (not req'd to be contiguous)	75	0			
0	Locked Storage	75	0			
0	Waiting Area	90	0			
						0
	TOTAL		0			
	DINING CENTER / MULTI-PURPOSE ROOM				3802	3802
1	Student Dining Room (Ideal Capacity x 15.5 sf/person/4 lunch periods)	3720	3720	1	1000	1000
1	Hybrid Kitchen	1000	1000	1	1129	1129
1	Servery (houses three serving lines)	1125	1125	1	100	100
1	Kitchen Office	100	100	1	75	75
1	Kitchen Staff Toiletrooms: Men & Women / Unisex	75	75	1	150	150
1	Kitchen Staff Lockers	150	150	1		0
0	Dishwashing	400	0		100	100
1	Recycling	100	100	1	200	200
1	Storage	200	200	1	500	500
1	Dining Storage (table storage)	500	500	1		
						7056
	TOTAL		6970			
	SPECIAL AREAS				4288	4288
1	Library	4260	4260	1		
0	Gymnasium	3480	0			
0	Gymnasium Office	150	0			
0	Gymnasium Storage	420	0			
0	Stage (Music Room uses stage)	1800	0		566	566
1	General Building Storage	290	290	1	209	209
	**General Building Storage			1		
						5063
	TOTAL		4550			
	BUILDING SUPPORT				115	115
1	Main Entrance Vestibule / Annex Link	780	780	1	180	180
1	Elevator 1st Floor	200	200	1	100	100
1	Elevator 2nd Floor and above (100 sf per floor)	100	100	1	2862	2862
1	150' long Corridor with Lockers 15' wide (1ST FLOOR)	2250	2250	1	3442	3442
1	**150' long Corridor with Lockers 15' wide (2ND FLOOR)			1	1416	2832
2	Toilet Rooms: Boys, Girls Staff/Unisex & Janitors Closet	900	1800	2		
0	Toilet Rooms: Boys, Girls Staff/Unisex	690	0			
0	Stairs Main Center	690	0		914	914
2	Stairs	400	800	2		
0	2nd Grade stair	400	0		1022	1022
1	Mech Rooms	1110	1110	1	280	280
1	MDF	280	280	1	210	210
1	Electrical Room	200	200	1		
0	Chair Storage for Gymnasium / Multipurpose	200	0			
0	Engineer's Office	100	0			
0	Engineer's / Building Operations storage	500	0			
0	Yard Storage	250	0			
					10541	11957
	TOTAL		7520			

	AREA ALLOCATION SUMMARY					
	Program Total @ 80%		28710			33962
	Envelope, Partition & Shafts @ 20 %		5742			2018
	TOTAL BUILDING AREA		34452			35980
	Gross Square Footage Per Student (Total Capacity)					
	Gross Square Footage Per Student (Planned Capacity)					
	VARIANCE FROM CPS SPACE PROGRAM					**1528**



1

2_FLOOR PLAN_OVERALL

1" = 30'-0"

BUILDING SCHOOLS ACROSS CHICAGO
CPS
CHICAGO PUBLIC SCHOOLS
PUBLIC BUILDING COMMISSION OF CHICAGO

PALMER ES
ANNEX
10/5/2018

Department Legend

- ART
- BUILDING SUPPORT
- CIRCULATION
- CLASSROOM SUPPORT
- CLASSROOMS
- COMPUTER LAB
- LIBRARY

OVERALL 2ND FLOOR PLAN

1" = 30'-0"

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Oak Brook, IL 60523
(630) 574-8300
https://fgmarchitects.com/

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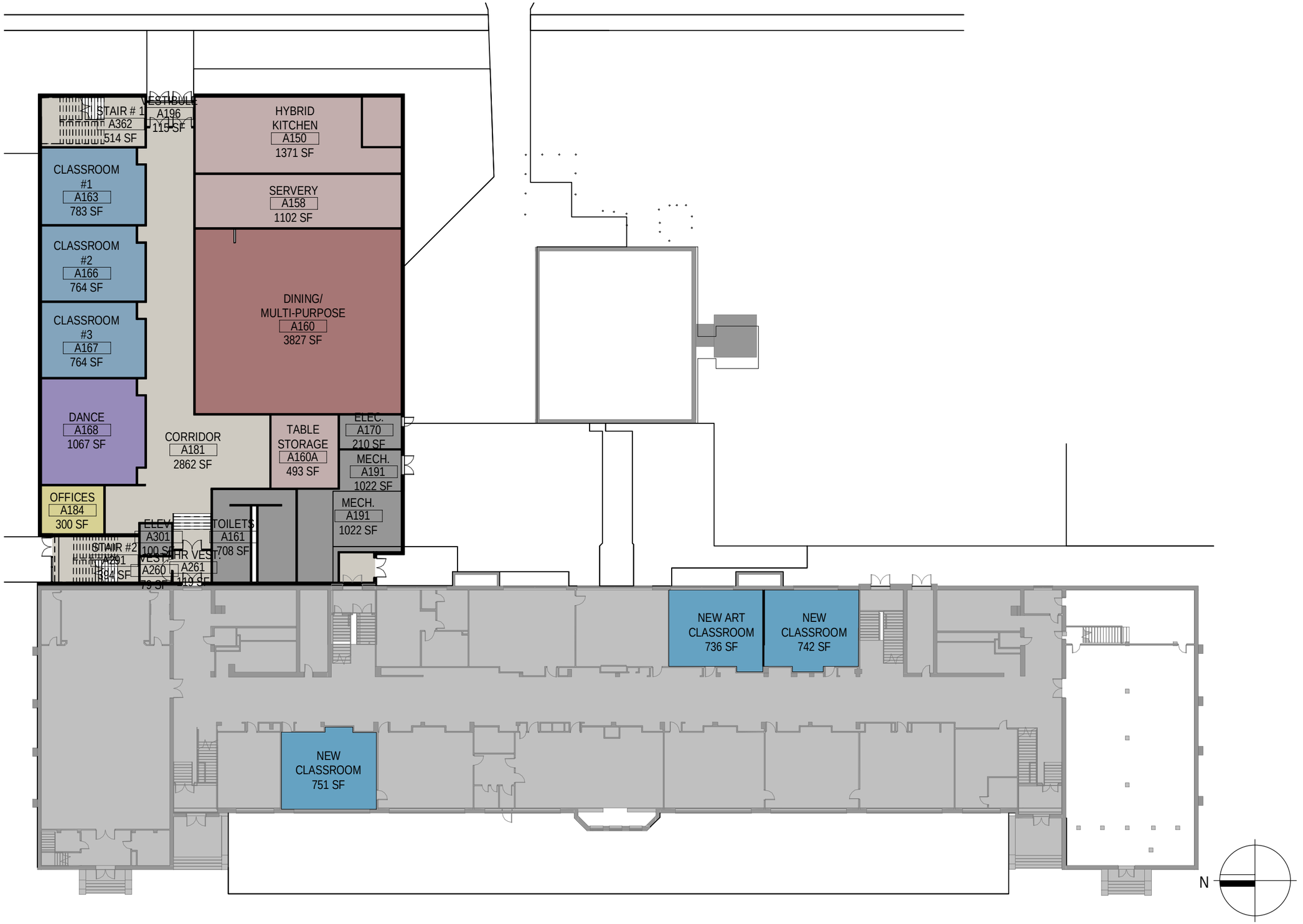
Design Architect



1 FLOOR PLAN - FIRST FLOOR OVERALL

1" = 30'-0"

BUILDING SCHOOLS ACROSS CHICAGO
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CHICAGO PUBLIC SCHOOLS
PUBLIC BUILDING COMMISSION OF CHICAGO

PALMER ES ANNEX

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- DINING SUPPORT
- OFFICE

OVERALL 1ST FLOOR PLAN

1" = 30'-0"

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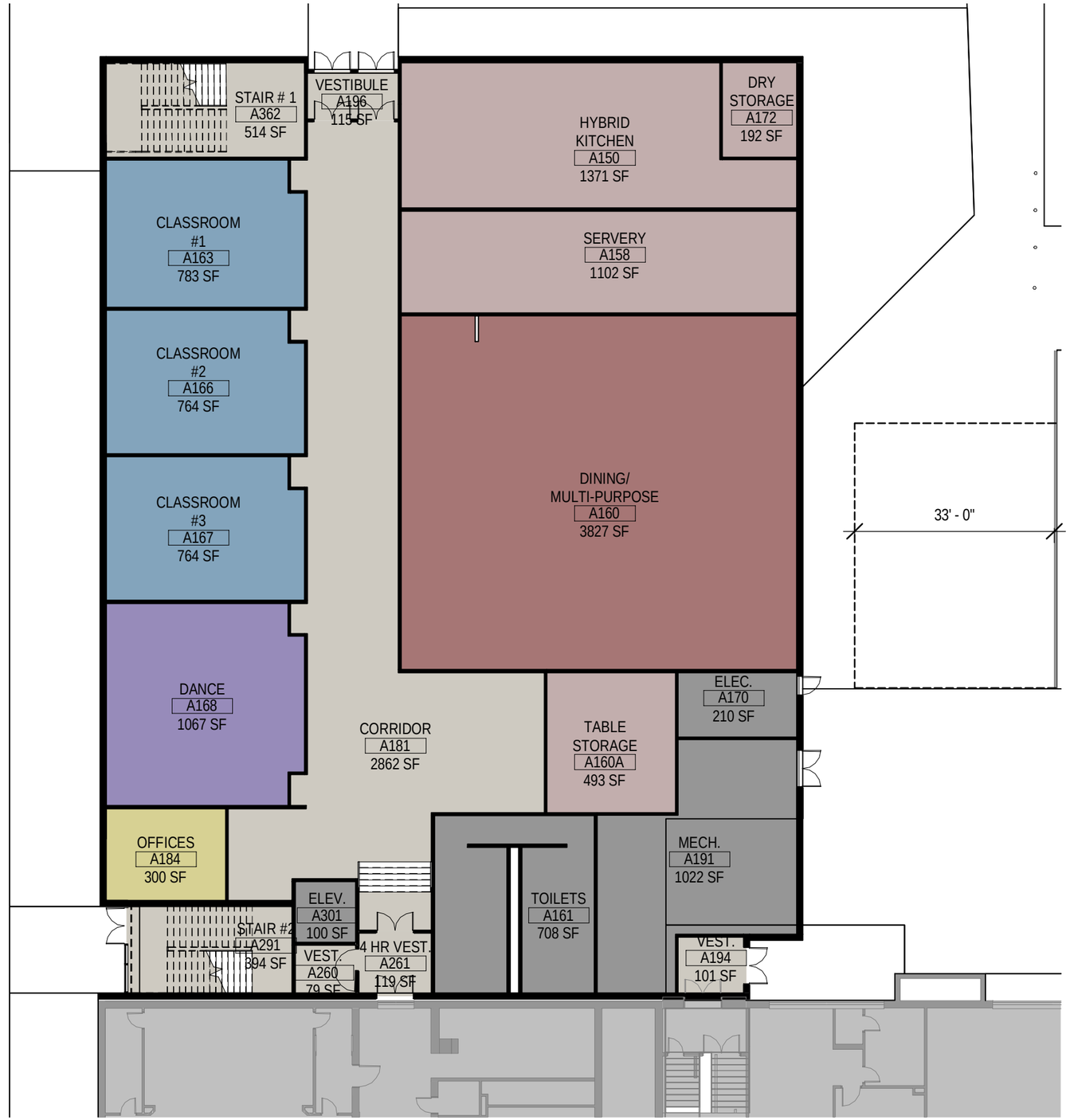

BUILDING SCHOOLS ACROSS CHICAGO
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10/5/2018

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- BUILDING SUPPORT
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ANNEX 1ST FLOOR PLAN

1" = 20'-0"

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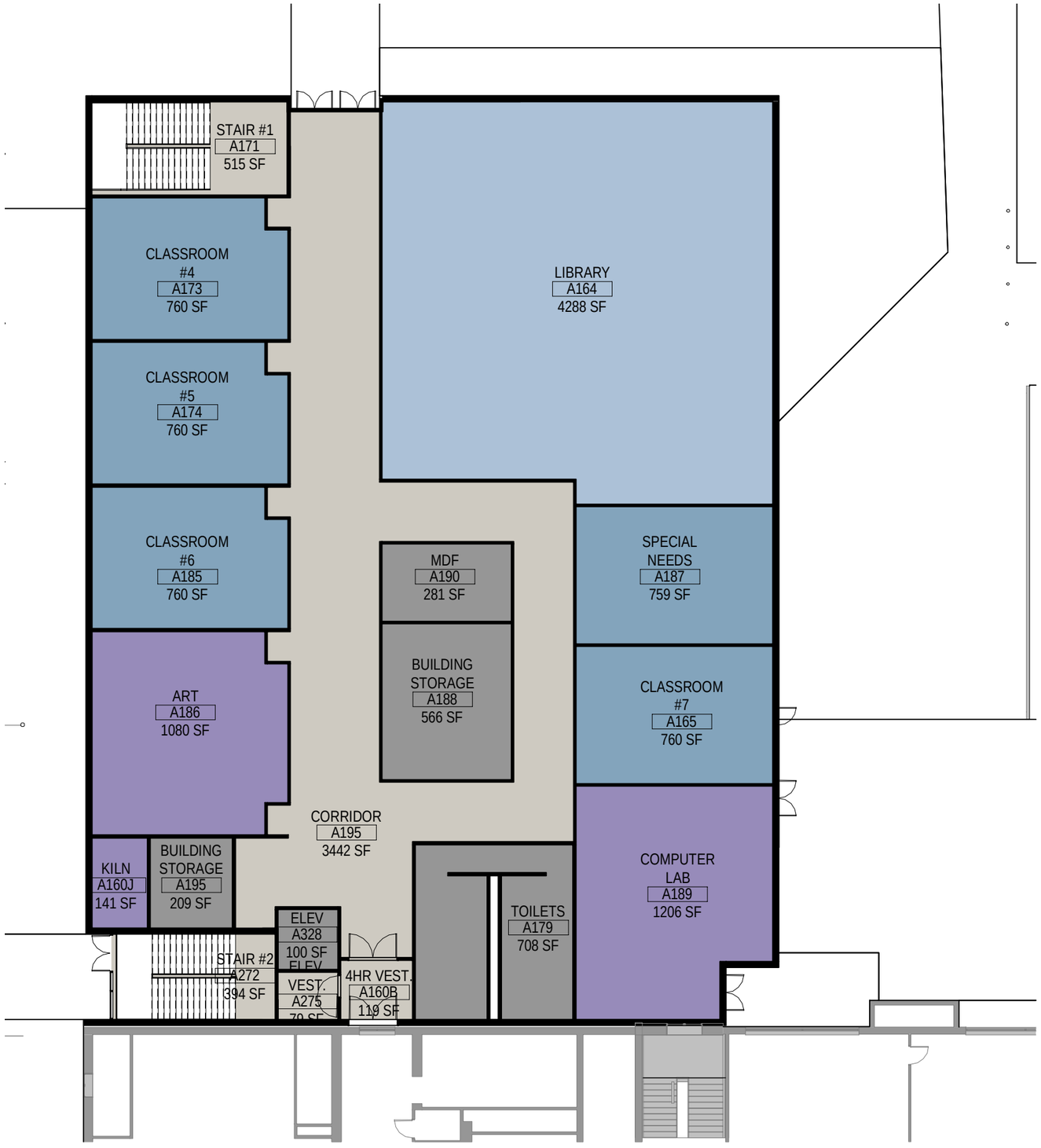
1

FLOOR PLAN - FIRST FLOOR

1" = 20'-0"



N

1 FLOOR PLAN- SECOND FLOOR

1" = 20'-0"

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CHICAGO PUBLIC SCHOOLS | CPS

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10/5/2018

Department Legend

- ART
- BUILDING SUPPORT
- CIRCULATION
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ANNEX 2ND FLOOR PLAN

1" = 20'-0"

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1211 22nd St #700
Oak Brook, IL 60523
(630) 574-8300
https://fgmarchitects.com/

FGM ARCHITECTS
Design Architect

Structural Design Conceptual Narrative
New Annex at Palmer Elementary School

FGM ARCHITECTS

1. **BUILDING SUMMARY**

   A. New 2-Story annex at Palmer Elementary School. The annex will be linked to the existing building on the North-East corner.

2. **FOUNDATIONS**

   A. No geotechnical information is available at this time so the following information is based on foundation system of the existing building and previous experiences with annexes for Chicago Public Schools. Foundation assumptions will be confirmed upon receipt of the geotechnical report.

      1) Typical shallow foundations to be utilized as the building foundation system. Geotechnical engineer to provide recommendations for footings near the existing building foundation walls. Potential use of grade beams and caissons depending on quality of soil found by the Geotechnical Engineer. City of Chicago Office of Underground Coordination (OUC) permit will be required to drill caissons deeper than 12 feet.

      2) 4,000 psi concrete will be used for frost walls, footings and grade beams if required.

      3) The net allowable bearing at this elevation will be provided by the Geotechnical Engineer. Additionally, the bottom of footing should be minimum 3’-6” from top of exterior grade.

   B. Special Foundation Requirements

      1) Geotechnical testing and inspection will be required during the construction to verify the actual on-site soil conditions prior to concrete placement.

      2) Temporary ERS required protecting Alley and Boiler House due to open cut excavation for undercuts under footings may be required (Geotechnical Engineer to confirm extent of undercuts). For any ERS work OUC permit will be required by the EOR/contractor.

3. **First Floor**

   A. Slab on Grade

      1) Typical slab on grade will be 5” thick reinforced with welded wire fabric

      2) 4,000 psi concrete will be used for the slab on grade.

      3) The slab on grade will be thickened at highly loaded areas, below CMU interior partitions and at locations with depressed slab locations.

      4) Membrane type vapor barriers will be provided below the slab as recommended by the soils consultant.

      5) Unsuitable fill can be assumed to extend under the proposed slab-on-grade to an average depth of 2 feet below existing grade; assume that first floor will be set, on average, 12” above average existing grade. The unsuitable material will be replaced with a compacted well-graded engineered fill. Geotechnical engineer to confirm. Final elevation of first floor to be determined by the Architect and Civil Engineer during the Schematic Design.

4. **Elevated Floor Framing**

   A. Typical Floor Structure

      1) The typical floor structure is anticipated to be conventional composite steel framing consisting mainly of W-shaped steel beam/girders and 6 1/2” total thickness normal weight concrete on metal deck. The metal floor deck will be 2” deep, 18 gage galvanized composite metal deck.

      2) To ensure composite action of the steel beams and girders they will be connected to the deck via shear studs.

      3) The floor structure will be supported on W-shaped steel columns.

      4) All connections between the steel members are assumed to be welded or bolted.

5) Floor deck above cafeteria may be thicker for acoustical purposes. Acoustical engineer to provide final design requirements.

6) Shelf angle will be provided at 2nd floor level to support brick above if final height of building is greater than CPS standard for continuous wall.

B. Roof Structure

1) Typical roof deck will be 1 ½" Metal Roof Deck.
2) Composite Metal Deck with 2" Deck + 4 ½" Concrete Fill will be provided under Roof Top Units.
3) The typical roof structure will consist of W-shaped steel beams and girders under composite slab and steel joists under the roof metal deck.
4) The roof structure will be supported on W-shaped columns.
5) All connections between the steel members are assumed to be welded or bolted.

C. Lateral Framing – Steel Braced Frames

1) Steel Braced Frames will be used for the lateral support of the structure. Locations of the Steel Bracing will be coordinated during the Schematic Design phase.

D. Column

1) The columns are anticipated to be structural W10 hot rolled structural steel shapes with steel base plates.

5. LINK TO EXISTING BUILDING

A. **Expansion Joint**

1) New annex building and existing building will be separated by a new CMU wall supported at the new annex. There will be an expansion joint between the existing and new building ranging in size of 1 to 2 inches pending final design.

B. **Existing Wall**

1) New openings will have to be made at the existing wall building. During SD phase Design Architecture team will confirm if existing lintels are available for use or if new steel masonry lintels will need to be provided for the new openings in the existing building.

6. BUILDING/STRUCTURAL DESIGN CODES

A. Building Code: 2018 Chicago Building Code

B. Structural Design Codes:

1) American Concrete Institute, Building Code Requirements for Structural Concrete (ACI 318-11)
2) American Institute of Steel Construction 360-10
3) Structural Welding Code (AWS D1.1)

C. Design Live Loads:

1) Corridors - 100 psf (1st Floor) 80 psf (Above 1st Floor)
2) Public Stairways - 100 psf
3) Classrooms - 40 psf

4) Dining Room - 100 psf

5) Multi-purpose Room - 100 psf

6) Kitchen - 100 psf

7) Music Room - 100 psf

8) Light Storage Area - 125 psf

9) Science Lab - 75 psf

10) Mechanical room - 150 psf or weight of equipment

D. Roof Snow Load:

1) Flat roof - 25 psf + Drift

E. Lateral Loads: Wind loads per CBC 2015

1) Main Wind Force Resisting System - 20 psf

2) Components and Cladding:

a. Non-corner wall conditions - 25 psf

b. Corner wall conditions - 30 psf

3) Roofing Materials (at edges) - -40 psf

4) Projecting Elements - +/-40 psf

F. Other Structural Design Criteria:

1) Deflections (Floors) – span/360 for superimposed live loads or span/240 for total load.

2) Deflections (Roof) – span/240 for superimposed live loads or span/180 for total load.

3) Deflection of members supporting masonry – smaller of span/600 or 0.3”

Mechanical

- Existing Conditions
  - Utilities
    - The current gas service enters the Boiler Building underground on the north end, below an existing drive. Two gas pressure booster pumps are also located underground at the north end of the Boiler Building in an area currently undergoing structural repairs.
  - Main Systems
    - Two steam boilers located in the Boiler Building provide steam to multizone units and radiators in the main building.
    - Cooling in the main building is provided by window units in each room.
    - Dedicated economizer rooftop units on the main building roof provide ventilation to the main building.
    - The main building had a Siemens Building Automation System for mechanical equipment, but this system is not currently available.
    - The existing annex to remain is served by a separate hot water boiler, corridor ventilator, and unit ventilator in each classroom.
  - Distribution
    - Steam piping from the Boiler Building is routed through an underground tunnel to the main building.
  - Issues
    - Building management system is currently offline and is undergoing repairs. We recommend a new BAS be provided and the user interface loaded onto the existing workstation in the engineer's office.

- New Construction
  - Utilities
    - Provide new gas meter. Available gas capacity of existing service will be confirmed with the utility to determine if a new service is required for the new Annex.
  - Main Systems
    - The Annex will be served via an indoor air handling unit with a hot water heating system, DX cooling coil, and a remote condenser (estimated 100 tons) on the roof of the Annex. The unit will be equipped with variable-frequency drives for both supply and return fans. The unit will be provided with outside-air monitoring station, and minimum MERV 11 filters.
    - The hot-water system will consist of two (2) high efficiency condensing hot water boilers (estimated output capacity of 1,100 MBH each, for 2/3 redundancy). Hot water will be circulated to variable air volume (VAV) boxes and heating coils via circulation pumps with VFD and 100% standby configuration. The boilers and the pumps will be located in the second floor Mechanical Room.
    - A separate building management system shall be provided for the new annex, with consideration given to integration with the existing Siemens Building Automation System based on cost-effectiveness.
  - Distribution

        - Air will be distributed via medium pressure ductwork with VAV boxes and reheat coils. The VAV minimum airflow will be the greater of the zone minimum outside air requirement per ASHRAE 62.1-2010, 1/3 the Chicago code supply air requirement, or the airflow rate of the zone continuous direct exhaust.
        - Code required exhaust will be provided for kitchen and toilets. Toilet exhaust fans will be controlled via time of day schedule. The kitchen exhaust will be controlled manually via a switch.
        - Separate exhaust will be provided for innovation lab (pending final equipment selection; if 3-D printers are provided, the exhaust or filtration at the printers will be required), electrical distribution rooms, and elevator machine rooms which will be controlled via local thermostat setting as per CPS guidelines.
    - Terminal Equipment
        - Electric cabinet unit heaters will be provided for new vestibules.
- Interface with Existing Building
    - Civil engineer shall confirm whether existing gas service shall be relocated to accommodate the new Annex, and utility to confirm if existing size is adequate or if new service is required.
- LEED Considerations
    - Provide high-efficiency condensing boilers (95%+), high-efficiency DX condensing units (11 EER or greater), and comply with ASHRAE 62.1-2010 for ventilation.

Electrical

- Existing Conditions
    - Utilities
        - Main Electrical Services
            - There two separate electrical services feeding four buildings on the school property.
            - Service #1 is an underground feed to supply 208/120V power to the boiler building and main building. Power is distributed to the buildings from a main switchboard. Main switchboard MSB is rated at 1,600A, 208/120V, 3-phase, 4-wire with an indoor ComEd meter.
            - Service #2 is an overhead feed to supply 208/120V power to the existing annex and modular building. Power is distributed to the buildings from a main switchboard. Main switchboard PP-1 is rated at 800A, 208/120V, 3-phase, 4-wire.
        - Outdoor Equipment
            - Service #1 outdoor equipment is an outdoor pad mounted transformer located at southwest corner of building exterior.
            - Service #2 has an outdoor wall-mounted meter.
        - Emergency Electrical Service
            - Emergency power is supplied to the boiler and main buildings from an outdoor generator. The generator feeds emergency power to transfer switches and an emergency power distribution switchboard. The switchboard feeds emergency panels that provide emergency power to the buildings.

- The emergency power for the existing annex is via an automatic transfer switch. The transfer switch is fed from utility and generator power and feeds a main EM disconnect switch and distributes emergency power to the building from a fuse panel.
- Emergency power for the existing modular building is via a secondary tap at the pole mounted transformer. This feeds an outdoor meter and indoor panel which provides emergency power to the building.

- Main Systems
  - Fire Alarm Systems
    - The existing FACP (non-addressable system) located in boiler room area and FAAP located at east vestibule of main building
    - FACP (addressable system) and duct-detection panel in existing annex, FAAP in modular building.
    - City tie, trouble bells, notification and detection devices throughout the buildings
  - HVAC and Plumbing Electrical Power Boiler Building
    - Power to air-handling units, gas booster, boiler, and other fan, electric heating, and motor loads are fed from distribution switchboards DP-1 andDP-2.
  - HVAC and Plumbing Electrical Power Main Building
    - Power to air-handling units serving the gym and auditorium, exhaust fans, hand dryers, and other fan and motor loads are fed from panels UHDP (400A, 208/120V, 3-phase, 4-wire) and UDP (200A, 208/120V, 3-phase, 4-wire).
    - Rooftop units are fed from panel DP-3
  - HVAC and Existing Annex and Modular Building
    - All fan, electric heating, and motor loads are fed from panel PP-2 and PP-3.
  - Telecommunications Boiler and Main Buildings
    - Main MDF room located in boiler room area.
    - Point of entry for AT&T.
    - MDF room equipment and A/C unit fed from panel CP-2 (200A, 120/208V, 3-phase, 4-wire) located in the MDF room.
    - IDF room near the auditorium mostly feeds camera security system
  - Telecommunications Existing Annex and Modular Building
    - All telephone outlets, data outlets, and any wireless access points are fed from the main MDF room located in this building.
- Distribution Main Building
  - Lighting System
    - Panels located in the corridors feed classroom and corridor lighting
- Distribution Existing Annex and Modular Building
  - Lighting System
    - Panels located in the corridors feed classroom and corridor lighting

- New Construction
  - Utilities
    - Main Electrical Service:

- Provide new 800 amp, 277/480V, 3-phase, 4-wire electrical service to serve the new annex building. Provide a new switchboard MSB-2 to be located in a new 2-hour fire rated dedicated electrical room within new annex building. This new electrical service shall be fed from a new ComEd utility service transformer located along the alley.
- The new proposed main electrical room located within the new annex building shall be 2-hour rated room with minimum 2 exit doors with panic hardware at each end of the switchboard which open in the direction of egress from the room.

- Fire Pump Electrical Service:
  - The fire pump electrical service shall be fed directly from the secondary side of the pole mounted ComEd transformer via underground secondary electrical service conductors to the fire pump controller via a ComEd utility service meter socket located within the fire pump room, dedicated for the fire pump service. The incoming underground fire pump service feeders to be rated at 277/480 V 3-Phase, 4-Wire. A C/T cabinet with meter socket will be located directly adjacent to the fire pump controller.

- Life Safety System:
  - The life safety system will be a class II system which consists of individual emergency battery units with internal 90-minute batteries and battery unit exit signs. All life safety lighting (emergency battery units and exit signs) shall be provided with integral Chicago approved 90-minute battery complete with internal test push-button and indicator lamp. All exit signs shall be LED type. Emergency Life Safety Lighting System shall be sized for 0.1 watt per square foot based on the programmed facility size and 1-foot candle lighting levels as required by the Chicago Building Code. Exit and emergency lights will be provided as required by City of Chicago Fire Prevention Bureau. Per energy code all exit signs shall have a minimum source efficacy of 35 lm/W. All exit signs shall be wall mounted where possible.
  - Wall pack emergency lighting fixtures will be provided throughout the rooms and spaces as per code in order to provide the required 1-foot candle lighting levels. Lighting fixtures with intergral battery packs shall NOT be acceptable per CPS standards.
  - A master control switch shall be provided to shut off the emergency lights within the new annex building when the building is not occupied. The switch shall be disabled by the security camera system upon activation.

- Emergency Means of Egress Lighting:
  - The following areas shall have emergency illumination whether having natural illumination or not:
    - Egress corridors and stairways
    - Assembly areas
    - Locker rooms

- Gymnasium
- Student rest rooms
- Main and other dedicated electrical rooms
- Mechanical rooms
- Administration and other building control areas
- Kitchen/student dining
- Interior instructional space without natural illumination
- Rooms with areas exceeding 1000 sq. ft.
- Exterior side of exterior exit doors

- Grounding and Bonding:
  - Grounding: System and equipment grounding will be provided. All switchboards, transformers, motor starters, panel boards, wiring systems, etc., will be effectively grounded via a code compliant Ground Bus System.
  - Telecommunications Ground Bus System: The building shall have a reference "telecommunication ground bus" (TGB) within each telecommunications and systems closets (MDF room and IDF rooms/closets). Each TGB shall be bonded to the Main Building Grounding point. The Standard for this system shall be: EIA/TIA Standard 607: Commercial Building Grounding (Earthing) And Bonding Requirements for Telecommunications.
  - All MDF and IDF rooms shall be provided with static dissipative tile which is to be bonded to the local MDF/IDF ground bus bar.

- Distribution:
  - Electrical distribution equipment shall be located in dedicated electrical rooms or mechanical rooms. Main electrical service (switchboards) distribution equipment shall be located in a separate electrical room with fire ratings as required by the Chicago Building Code. Branch circuit distribution panel boards shall be located in dedicated electrical closets. Mounting electrical distribution equipment and panels within classroom or corridor walls shall not be acceptable.
  - Electrical distribution panels shall be designed with a 15 percent spare amperage capacity and 30 percent spare space capacity. Panel boards shall be designed up to 70 percent of capacity and be provided with a minimum of 6 spare over-current protection devices. Provide 10 spare spaces in branch distribution panel boards and (4) 3 pole spaces on the main distribution boards.
  - Dedicated distribution equipment shall be provided for all mechanical equipment. Electrical branch circuits to 5 horsepower, 3-phase, and larger motors for air-handling units, exhaust fans, pumps, chillers, and condensing units shall be provided with phase loss protection. Phase loss protection equipment shall be integral to starters or variable frequency drives serving the equipment.
  - All mechanical and plumbing equipment shall be fed from 277/480V distribution panels, particularly all equipment loads rated 1/2 hp and larger and 2kW and greater.

- All general use power receptacle and equipment circuits shall be fed from normal 120/208V branch circuit receptacle panels. These panelboards shall be provided with 10% spares minimum.
- All receptacle devices located in kindergarten classrooms shall be “tamper resistant” type.
- All computer use power receptacle and equipment circuits shall be fed from “Isolated Ground” type 120/208V branch circuit panels. These panels shall be provided with a type 2 surge protection device, externally mounted adjacent to panel. These panelboards shall be provided with 10% spares minimum.
- All lighting circuits shall be fed from 120/208V branch circuit panelboard dedicated for lighting circuits only.
- Voltage drop for feeders between the service entrance equipment and the branch circuit distribution equipment shall conform to the requirements of the city of Chicago Electrical Code and LEED as follows: 2% at full connected load for feeders and 3% at full connected load for branch circuits. All branch circuits shall be loaded to a maximum of 60% as per CPS design guidelines.
- Branch circuits for the voice and data system receptacles shall contain an isolated ground wire. Neutral conductors for shared neutral multi-wire circuits shall be minimum No. 10 AWG.
- All branch circuit panel boards supplying voice and data systems circuits shall be supplied from a separate feeder over current protective device (OCPD) in the main switchboard, or from a separate distribution panel supplied by its own feeder in the main switchboard.
- Feeders supplying the branch circuit panel board for voice and data systems circuits shall contain three phase conductors, sized in accordance with Code requirements, a 200% neutral conductor(s), and an isolated ground conductor. The isolated ground conductor system shall be kept separate from the receptacle or branch circuits to the main switchboard ground bus or separately derived system. The isolated ground conductor and equipment ground system shall be connected only at the main switchboard or separately derived system, and shall have a surge suppression device.
- Transformers serving all computer receptacle distribution panelboard shall be, K4 rated type complete with 200% neutral bus capacity and isolated ground bus.
- Transformers serving all normal receptacle distribution panelboards and lighting distribution panelboards shall be standard rated type.
- All dry type transformers shall be energy efficient type and compliant with DOE (Department of Energy 2016) regulations.
- All unisex toilet rooms shall be provided with hard-wired electronic, infrared flush valves for water closets and urinals only. All banked restrooms and unisex toilet rooms shall be provided with electric hand dryers and switched power GFI receptacles for future changing tables.

▪ Lighting Systems:

- The building will consist of 120 volt LED, 3500 degrees kelvin, wall and ceiling mounted lighting fixtures throughout.
- Controls shall abide to ASHRAE 90.1, 2013 and LEED requirements for achieving certification level. Ceiling mounted vacancy sensors shall be dual technology with 30 minute maximum delay. All rooms with vacancy sensors and associated manual wall switches shall be programmed to operate on a manual on/automatic off (vacancy) basis. Light fixtures shall be controlled on a per room basis where fixtures are located in accordance with individual control schemes outlined in the room level section. Circuit breakers will not be acceptable for turning lighting "on" and "off". All lighting fixtures located within 15 feet from exterior windows shall be provided with integral automatic daylight sensors.
- The building automation system shall be solely responsible for holding schedules; the lighting control systems shall receive schedule-based on/off inputs from the BAS.
- Utility space (boiler room, electrical room, janitor closets, storage rooms etc.) lighting shall be controlled via local manual wall mounted timer switch.
- All assembly spaces, corridors and lobbies shall be controlled via Network Low Voltage Relay System with Integral Time Clock Function, programmed for shut-off of lights between 11 pm and 5 am.
- All classrooms shall be locally controlled via four manual 0-10 volt digital dimmer switches for video presentation and daylighting scene control as per CPS design guidelines. All interior lights located within daylight harvesting zones to be provided with integral automatic daylight sensors. All lights within these rooms shall be automatically shut off via ceiling mounted vacancy sensors after 30 minute time delay.
- The new proposed link connection between the new annex building and existing building to be provided with new LED lighting fixtures.

- Exterior Lighting:
  - Site Lighting:
    - Provide site lighting for the new proposed parking lot. Pole lights shall be energy efficient LED, 4000 degrees kelvin, full cutoff fixtures on 20 foot poles for parking areas. No light trespass will be allowed to adjacent properties. The new proposed pole lights to be fed from the existing main building.
  - Building Perimeter:
    - Exterior building perimeter lighting shall be provided and mounted every 60 feet and at all exterior doors for safety and security. Perimeter lighting shall spotlight the building mounted school signage. Provide an exterior, weatherproof ground fault protected duplex receptacle outside each main exterior door. Provide weatherproof ground fault interrupter receptacles on all outdoor locations for rooftop maintenance, and same with lockable covers on all exterior wall mounted receptacles.
    - All exterior lighting shall be controlled via building automation interface as per CPS design guidelines.

- Fire Alarm System
  - The existing fire alarm control panel for the existing main building is class 1, non-coded, zoned, supervised fully addressable type detection, with initiation and notification devices throughout and is manufactured by Notifier and is currently located in the existing main building.
  - Provide new fire alarm system devices and associated NAC (power supply) panels for the new annex building and connect to the existing main fire alarm control panel located within the existing main building. Provide magnetic door-hold open devices and associated smoke detectors at each double-door access between the existing and new building.
  - All new fire alarm devices and equipment shall be the of the addressable type, incorporating activation devices such as pull stations, smoke detectors, flow switches, duct detectors, etc., and audio visual devices such as horns and strobes and shall match the existing building's fire alarm system equipment manufacturer in order to ensure full compatibility with the existing system. Photoelectric type smoke detectors at the following locations:
    - Electrical, MDF and IDF Rooms.
    - Storage Areas.
    - Duct smoke detectors on all supply and return fans including HVAC equipment serving the Kitchen Area.
  - A complete fire alarm and detection system shall be provided in accordance with the City of Chicago Building Code, National Fire Protection Association and the requirements of the Bureau of Fire Prevention and the Americans with Disabilities Act whichever is more stringent. All fire alarm and detection system wiring shall be installed in its own dedicated conduit system.

- TECHNOLOGY

  - Design Criteria: The design of the Technology systems shall conform to the following codes:
    - Chicago Building Code
    - National Electric Code
  - The design of the Technology systems shall conform to the following standards:
    - Standard for Safety of Information Technology Equipment
    - Standard for Safety of Telephone Equipment
    - BICSI Network Design Reference Manual
    - IEEE 802.1 - Telecommunications and information exchange between systems--IEEE standard for local and metropolitan area networks--Common specifications
    - IEEE 802. - Telecommunications and information exchange between systems--Local and metropolitan area networks—Specific requirements--Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications

- IEEE 802.11 - Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
- IEEE 802.15 - Telecommunications and Information Exchange between Systems - LAN/MAN Specific Requirements - Part 15: Wireless Medium Access Control (MAC) and Physical Layer (PHY) specifications for Wireless Personal Area Networks (WPAN)
- IEEE 802.16 - Telecommunications and Information Exchange between Systems - LAN/MAN Specific Requirements - Part 16: Air Interface for Fixed Broadband Wireless Access Systems
- CPS design guidelines and master specifications

- Structured Cabling System:
  - The new annex building cable infrastructure will be served via a copper and fiber backbone. The cable infrastructure shall provide transport to support voice/data, video and other systems residing on the CPS network. The fiber backbone shall consist of multimode fiber optic cables in protective innerducts, cable tray, conduit, sleeves and cores. Copper cabling shall consist of UTP type cable for backbone or horizontal distribution.

- Access Control System:
  - Contractor to upgrade existing Access Control System to accommodate new annex building. The system will control or limit access through card reader controlled doors based on the card user's access levels to an area, floor or the building.

- Intrusion Detection System:
  - Contractor to upgrade existing Intrusion Detection System to accommodate new annex building. The system will monitor after hour entry into any area of the building by microwave PIR motion detection.

- Two-way Intercom System:
  - The system will provide two-way communication between visitors, students or faculty. The system shall have the capability to release secured doors as defined by CPS.

- Video Surveillance System:
  - The system will be a digital IP base video monitoring system. The system will monitor internal and external movement to be captured, compressed and stored. The system will have the capability to review archived images (remotely or on-site) providing an instant video source of an incident or annunciated alarm through the CPS-OTS network via the WAN. The cable infrastructure will resemble the UTP structured cabling system.

- Master Antenna TV System:

- The system will be a star topology two-way coaxial video cabling system capable of passing reverse channels. The cable infrastructure will be a combination of coaxial and UTP. Contractor to upgrade existing Master Antenna TV system to accommodate new annex building.

- Public Address System & (ALS):
  - Contractor to upgrade existing Public Address System to accommodate new annex building. Provide new public address system speaker devices and associated conduit and wiring that are fully compatible to the existing main building ALS system.

- Interface with Existing Building
  - The existing fire alarm system will interface with the new annex. The fire alarm control panel in the existing building will be used to feed the new annex. The new PA/Intercom system will also interface with the existing building. The master station for the PA/Intercom will be located in the existing building and be connected to devices in both the existing building and the new annex.
- LEED Electrical Issues
  - All new lighting systems will be designed to better ASHRAE 90.1-2010 lighting power density requirements by a minimum of 30%.
  - Lighting controls will comply with the requirements of the *Indoor Lighting* credit.

Plumbing

- Existing Conditions
  - Utilities
    - Main Building
      - There is an existing 4-inch incoming domestic water service entering the existing Boiler Building.
      - The incoming service enters into the basement mechanical room and then connects to the 2 1/2-inch water meter assembly. (See Photo P1)
      - The building has existing sewer line and storm line exiting the building on east side of the building and boiler room, going towards Kostner Ave.

    - Existing Annex Building
      - There is an existing 6-inch incoming combined domestic water service entering into the mechanical room. Combined service splits into a 2-1/2-inch domestic service and 4" fire service with a double detector check valve.
      - The incoming service enters into the mechanical room and then connects to the 2 1/2-inch water meter assembly.
      - The building has four existing sewer line exiting the building exiting the building going towards Kostner Ave.
      - The building has gutters and downspouts system. (See Photo P10 & P11)

    - Demobilization building
      - Building not surveyed. Full demolition anticipated.

- Main Systems
  - Main Building
    - The building domestic water is served with a simplex in-line booster pump system without a tank. (See Photo P1)
    - The building hot water is provided by a gas fired domestic hot water located in the boiler rooms. It is a 70 gallons storage type gas water heater, with maximum input of 119,000 BTUH. (Manufacture/Model No – AO Smith/ BTR 119 118). (See Photo P2)
    - Building has existing sump pump appears to be in fair condition but is close to the end of their typical lifespan. (See Photo P3)
    - Observed water infiltration in utility tunnel.
  - Existing Annex Building
    - Building domestic water system is distributed by city pressure.
    - The building hot water is provided by a gas fired domestic hot water located in the boiler rooms. It is an 30gallons storage type gas water heater, with maximum input of 30 MBTUH. (Manufacture/ Model No – Lochinvar/ ETN030). (See Photo P9)
    - Building fire protection system is served by city pressure. Building is fully sprinkled. (See Photo P13)

  - Demobilization building
    - Building not surveyed. Full demolition anticipated.

- Distribution
  - Main Building
    - Domestic water piping distribution runs through boiler room, tunnel and ceiling. Incoming pipe material for domestic cold-water line to water meter was galvanized and transition to copper for distribution to bathroom group and fixtures.
    - All Sewer lines are routed through basement to the exterior and are typically cast iron where observable.
    - All vent pipes are routed through the ceiling and terminate above the roof.
    - Existing roof drains appears to good condition. There were no reported or observable problems regarding water pooling on the roof.
  - Existing Annex Building
    - Domestic water piping distribution runs through ceiling. Incoming pipe material for domestic cold-water line to water meter was galvanized and transition to copper for distribution to bathroom group and fixtures.
    - All Sewer lines are routed underground and exits the building. They are typically cast iron where observable.
    - All vent pipes are routed through the ceiling and terminate above the roof.
    - The building has gutters and downspouts. They appear to be in good condition.

        - Demobilization building
            - Building not surveyed. Full demolition anticipated.

    - Terminal Equipment
        - Main building
            - All Plumbing fixtures were in good condition and it all appeared to be functional. (See Photo P6)
            - Existing water closet and urinals are manual flush-valve type.
            - All lavatories, mop sinks, classroom and kitchen sinks are manual type faucets.
            - Existing floor drains in restrooms were in good condition.
            - Existing floor drains in boilers rooms appears to be in fair condition. Inspection for floor drains in boilers room may be required. (See Photo P4)
            - There were no floor drains in unisex restrooms. Floor drains are required by code in unisex restroom.
            - Existing drinking fountain are bi-level ADA height fountains and appear to be in good condition.

        - Existing Annex building
            - All Plumbing fixtures were in good condition and it all appeared to be functional.
            - Existing water closet and urinals are manual flush-valve type.
            - All lavatories, mop sinks, classroom and kitchen sinks are manual type faucets.
            - Existing floor drains in mechanical room and restrooms were in good condition. (See Photo P12)
            - Existing drinking fountain are bi-level ADA height fountains, with bottle filling station and appear to be in good condition.
    - Issues
        - Building engineer reported that water infiltration near south west corner in the existing main utility building tunnel. (See Photo P5)

- New Construction
    - Utilities
        - Proposing a new 8” ductile iron incoming combined water service.
            - Combined service to split into a new 4” domestic service to serve both the new annex and existing building, and a new 6” fire service with a double detector check valve assembly for new annex building.
        - New sanitary and storm line is recommended for the new school addition.
    - Main Systems
        - A new fire pump is recommended to ensure adequate flow and pressure to the building sprinkler system. Fire pump system will be sized at approximately 500 GPM/ 20 HP.
        - A new domestic water booster pump is recommended due to low and fluctuating city pressure, to guarantee building domestic water pressure always

meets code requirements. Booster pump will be sized at approximately 160 GPM/ 5 HP.
        - Two 120 gallons condensing gas water heaters will be provided with a master thermostatic mixing valve.
    - Distribution
        - 3" domestic cold water and 2 1/2" domestic hot water distribution will be routed in the ceiling of the new annex to all the plumbing equipment and fixtures. All piping will be type L copper.
        - Building will be provided with new sanitary waste and vent system. The building main sewer shall be approximately 6" diameter.
        - Building will be provided with a new storm water. The Building storm sewer shall be approximately 10" diameter.

    - Terminal Equipment
        - The new annex building will be provided with new plumbing fixtures, adhering to Chicago Plumbing Code.
            - Toilets and urinals will be flush-valve type.
            - Restroom lavatories will be either manual or sensor metering type faucets.
            - Mop sinks and kitchen sinks will be provided with manual faucets.
            - Electric water cooler will be provided near the gym.
        - Floor drains will be all placed in all restrooms, janitor's closets, mechanical rooms, and other spaces required by code.
        - Roof and overflow drain will be provided on the roof.
- Interfaces with Existing Building
    - Existing building will be back-fed with new 4" domestic water line from new domestic water service. Domestic water will be extended to existing building boiler rooms through the ceiling and tunnel.

- LEED Plumbing Issues
    - Plumbing fixture flow rates to be chosen to meet minimum reduction requirement of 35% for *Indoor Water Use*.

MECHANICAL

M1

CONDITION:
Condition of existing gas meter and booster pumps is acceptable.

CORRECTIVE ACTION:
Replace existing gas meter and connections with new service.

M2

CONDITION:
Existing steam boilers are in good condition, installed in 2008.

M3

CONDITION:
Cooling is provided via window AC units in the main building.

M4

CONDITION:
Heating is provided to the main building via multi-zone AHUs, some of which appear to be currently under repair.

M5

CONDITION:
Ventilation in the main building is provided via economizer rooftop units.

M6

CONDITION:
Boilers in the existing annex to remain appear to be in fair condition.

ELECTRICAL

E1

EQUIPMENT DESCRIPTION:
Outdoor pad mounted transformer for boiler and main building power feed.

E2

EQUIPMENT DESCRIPTION:
Incoming feed to existing annex and modular building

E3

EQUIPMENT DESCRIPTION:
MSB main 1600A switchboard feeding boiler and main buildings.

E4

EQUIPMENT DESCRIPTION:
PP-1 main 800A switchboard feeding existing annex and modular building.

E5

EQUIPMENT DESCRIPTION:
Generator providing emergency power to boiler building, main building, and existing annex.

E6

CONDITION:
FACP located in boiler building. Not an addressable system.

CORRECTIVE ACTION:
Expand existing FACP located in existing annex to accommodate new devices in all existing buildings and the new annex.

E7

EQUIPMENT DESCRIPTION:

Existing MDF room.

PLUMBING

P1

CONDITION:

Existing incoming water service, water meter, and simplex in-line booster pump for main building.

CORRECTIVE ACTION:

P2

CONDITION:

Existing gas-fired water heater in boiler room for the main building. It appears to be in good condition.

P3

CONDITION:

Existing sump pump in boiler room. It appears to be in fair condition but are close to the end of their typical lifespan.

P4

CONDITION:

Existing floor drain in the boilers room.

CORRECTIVE ACTION:

Floor drain in the boiler room may be required. Replace with new floor drain and piping.

P5

CONDITION:

Water infiltration near south west corner of existing main utility building tunnel.

P6

CONDITION:

Existing urinal with manual flush valve faucet.

P7

CONDITION:

Existing water meter in existing annex building.

P8

CONDITION:

Existing “DCDA” for fire protection system in existing annex building.

P9

CONDITION:

Existing gas fired water heater. It appears to be in good condition.

P10

CONDITION:

Downspout location going underground and connecting to storm line underground.

P12

CONDITION:

Existing Unisex restroom

P13

CONDITION:

Fire protection system in existing annex building.