

Decatur Elementary School Annex

7030 W. Sacramento Avenue
Chicago, IL 60645

Conceptual Design Submission
October 05, 2018



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DATE: October 5, 2018

SMNG-A PROJECT NO.: 1813

Conceptual Design Submission 10.05.2018

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EXISTING CONDITIONS ASSESSMENT

Decatur Classical Elementary School

Architectural, Civil, Landscape, Mechanical, Electrical and Plumbing

10.05.2018

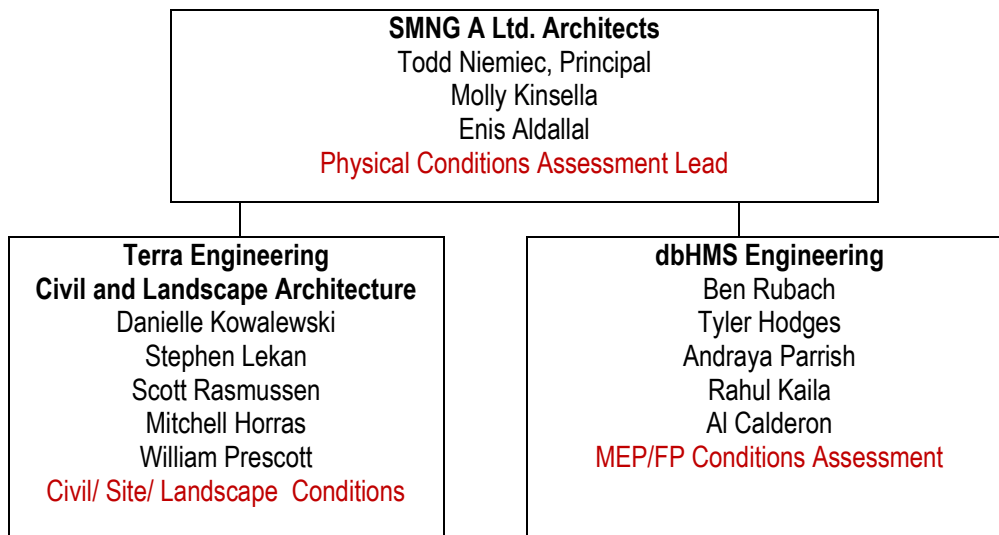
Assessment Summary

Stephen Decatur Classical Elementary School is a selective enrollment neighborhood school located in the West Rogers Park neighborhood of Chicago. Its existing facilities include a one story building on an approximate 5 acre site. Chicago Public Schools has requested a new two story annex to the existing building in order to increase building capacity to two classrooms per grade, add two grades (7th and 8th), add a new Dining Room/ Warming Kitchen, and provide a combined Gym/ Small Stage. .

The Public Building Commission of Chicago has engaged SMNG A Architects and their consultant team to evaluate the existing site and structure to ensure that the proposed improvements interface efficiently and effectively with the existing conditions. Additional observations have been provided in this summary in order to identify deficiencies that may impact the proposed scope of work or that may be impacted by the proposed scope.

Assessment Methodology

The assessment team and personnel for this effort were organized as follows:



The assessment focused primarily on the evaluation of the physical conditions of the facility and grounds. It did not include an evaluation of existing space and program uses, or feedback from the existing staff and students.

Observations

Site observations were performed on September 20, 2018 with a focus on the readily visible physical conditions and existing infrastructure, including:

- **Site Conditions**
Review of the condition of paving, grading, drainage, building access, landscape, fencing and visible utility connections.
- **Architectural Conditions**
Review of path of travel elements, visible building envelope systems (masonry, fenestration) and limited accessibility items. The site review did not include roof observations other than those visible from grade. Per communication with the PBC and CPS, roof assessment reports are in progress by others.
- **Mechanical, Electrical & Plumbing (MEP) System Conditions**
Review of mechanical, electrical, plumbing and fire alarm systems condition.

Due-Diligence

Due-diligence / documentation review was performed to supplement the on-site observations. These included a review of the archive drawings provided by CPS and a preliminary review of applicable codes, including:

- A. Chicago Building Code
- B. Illinois Accessibility Code
- C. Chicago Zoning Ordinance

Limitations

This assessment was not an exhaustive investigation. The assessment did not include any destructive or non-destructive testing of materials and assemblies, testing of equipment, subsurface investigation, or roof investigation. The assessment was limited to readily visible equipment and systems to provide a basic assessment of the buildings materials and systems.

Historic drawings and documents related to the building, site and systems made available were not comprehensive or conclusive in all cases, and these systems may have been subsequently modified. Environmental reports were not furnished by CPS or the PBC, and environmental observations, testing or inspections were not performed.

The site review occurred for the most part while the building was fully occupied by students and staff. As such, most classrooms, toilet rooms, and offices were not individually investigated. Rather, observations were made on the overall condition of the building materials and assemblies.

Site Description

Decatur Classical School is located in West Rogers Park on a 5.02 acre property at 7030 N. Sacramento Avenue, Chicago, 60645. The neighborhood is bounded to the north by Touhy Avenue, to the west by the North Branch of the Chicago River, to the east by N. California Avenue and to the south by W. Pratt Avenue. The neighborhood is primarily residential with multi-family residential towers to the immediate west, a community center, Bernard Horwich Jewish Community Center to the north, single family residences to the east and Chicago Park District's Lerner Park immediately south of the school boundary. Light commercial activity is along W. Touhy Avenue and a large commercial development, Lincoln wood Town Center, is approximately a half mile to the west.

The site is within a residential RS-3 zoning district and is adjacent to two existing Planned Developments to the north and west which have interrupted the standard street grid, specifically W. Estes and N. Albany Avenues. As such the school has a public right of way along only one street, N. Sacramento Avenue.

Two primary consequences of this site's adjacencies include:

1. limited access to emergency vehicles. As required per Chicago Building Code CBC 13-84-030 Frontage Requirements. The projected new occupancy for the existing school with new annex is 932, which will result in an approximate code defined occupancy of 1,000 occupants. As such, per CBC 13-84-030, two street frontages are required and one 'open space' frontage is required for a total of three frontages.
2. limited student drop-off and pick-up access. The majority of students arrive to and from school via bus. The limited street frontage restricts bus stacking and student drop-off/ pick-up as well as impacts through traffic along N. Sacramento Avenue.

In addition to the single-story elementary school building, there are two storage garages on site and one container storage. Gross square footage is as follows:

- Existing one-story elementary school: 22,150 GSF
- Existing Garage (east): 600 GSF (estimated)
- Existing Garage (west): 650 GSF (estimated)
- Storage Container: 160 GSF (estimated)

Pending receipt of a site survey, the size of these structures have been estimated at this time.

The existing school building is a linear configuration, oriented north-south and justified toward N. Sacramento Avenue. The Main Office and Main accessible entry is located at the north, with additional service entries at the north and student entries/ exits along the west, south and east elevations.



Aerial

The site specifically includes the following:

- A. Asphalt-paved parking for approximately 238 vehicles including (3) ADA;
- B. Two garages and one storage container along the south edge of the parking lot;
- C. Small playground and covered play seating adjacent to the storage garages;
- D. Large asphalt-paved play area with striped track immediately adjacent to the building;
- E. Play equipment and surfacing at the south end of the school
- F. Large expanse of unimproved and ungraded turf to the south and west and segregated from the play area by ornamental fencing.
- G. Well-defined garden path and plantings between the school structure and N. Sacramento Avenue parkway.

Preliminary Zoning Findings

Pending receipt of a survey, the following preliminary zoning findings are listed below. See also the Preliminary Zoning Matrix dated 10.05.2018.

- The site is located in residential zoning districts RS-3.
- School Use is permitted for this district.
- Per CZO (17-8-0506) project parameters meet mandatory Planned Development thresholds, i.e., a PD review and approval is required for development of land to be used for schools, safety services and other governmental buildings on sites with a net site area of 2 acres or more.
- Per CZO (17-8-515) Expansions of Existing Development, part B, proposed expansions of any other existing development that will result in an increase in building height, lot area or number of dwelling units shall be reviewed and approved in accordance with the Planned Development procedures (18-13-0600) if the expanded development meets the threshold for a mandatory planned development. The existing building height is approximately 20'-4" (+/-). An annex that exceeds this height and encroaches more than

50% into the required setbacks of the existing zoning district will meet the threshold for a mandatory Planned Development.

- The existing Floor Area Ratio (FAR) is 0.10 and the projected FAR, based on the proposed CPS program and two-story annex, will be approximately 0.33, well within the maximum allowable FAR of 0.90.
- The FAR is based on preliminary floor area quantities and will require confirmation when floor areas are further developed.
- The minimum required off-street parking is required to be 1 space for 3 full time employees. Based on a preliminary FTE of 60, twenty spaces are required. Exceptions will require specific review in the Planned Development application. Additionally, the parking may not encroach within a side setback of 50% of the building height, or approximately 22'-0" based on a projected 45'-0" annex.
- The minimum off-street loading required is (1)10'x50' space based on a projected square footage threshold as outlined in CZO (17-10-1101). An exception to this requirement will also review specific review and approval in the Planned Development application.
- The proposed 45'-0" height annex will likely meet the existing rear (50'-0") and side setbacks (50% of building height). If a fire lane is located along the rear boundary, this may encroach on the required Rear yard Open Space.

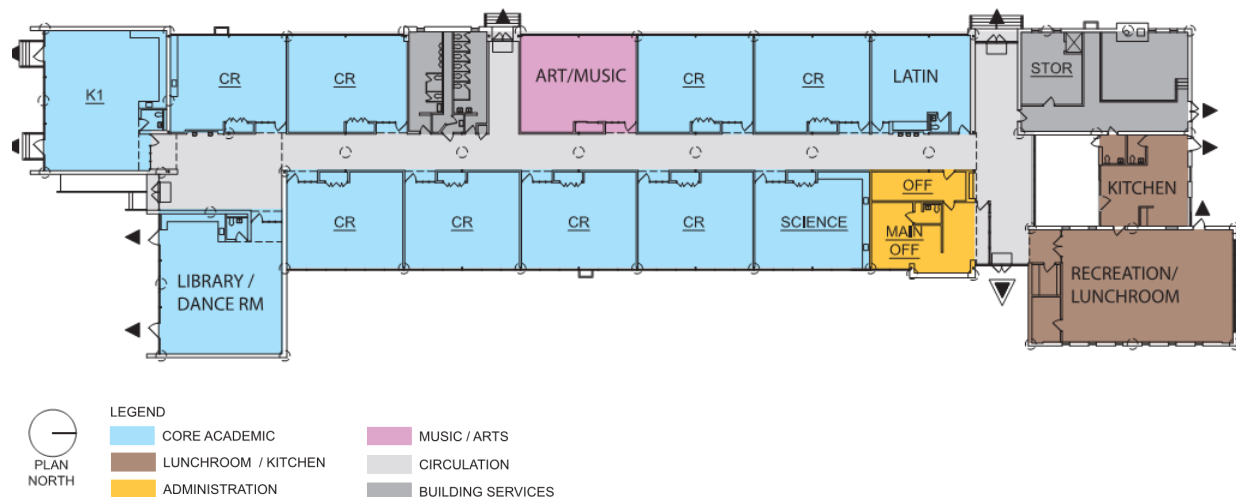
Based on the above, a Planned Development application and approval is required to fulfill the proposed CPS program for the new annex.

Building Organization

The existing school building is a one-story structure with a linear configuration with typical classrooms on each side of the primary north-south corridor and specialty spaces accessed off this corridor via circulation 'nodes.' The specialty spaces are further defined as larger volumes. Adjacent to the Main Lobby is a small landscaped courtyard that provides additional natural daylight to the lobby and Kitchen.

The building was designed in 1956 and there have been minimal alternations.

First Floor Plan



First Floor: 22,500 GSF

- (11) Classrooms approximately 800 NSF each with a built-in teacher's closet, entry door and side-lites. The north classroom additionally has a single user toilet room.
- (2) Kindergarten Classrooms approximately 1150 NSF each with a single use toilet room, built-in casework and sink in each. The east Kindergarten Classroom is presently used as a combined Library/ Dance Classroom.
- (1) Recreation Room/ Lunch Room, 1500 NSF, with Storage
- (1) Kitchen, 500 NSF
- (1) Main Office with Waiting Room, Office, Conference Room, single user Toilet Room for a total 800 NSF.
- (1) Boiler Room of 900 NSF
- (1) Large Storage Room, 340 NSF
- (3) single user Staff Toilet Rooms, one each within the Boiler Rm, Kitchen, and Main Office
- (1) large group toilet room, 6 WCs each in Boys and Girls

Building Construction

The structure consists of:

- Bell caisson foundation, design depth of 48'-0" below grade
- Cast-in-place concrete structural grade beams, floor slab and floor joists
- Steel columns, girders, roof bar joists.
- Poured gypsum roof deck at the Classrooms and 3-1/2" precast concrete roof slab at the Multi-Purpose/ Dining Room.

Exterior wall and roof envelopes include:

- exterior face brick, 3 wythes (anticipated) or one wythe solidly grouted to concrete masonry unit back-up construction exterior walls;
- aluminum curtain wall with glazing with aluminum-faced 2" th. insulated panels at top and bottom units;
- tar with gravel ballast roofing over 1" thick continuous insulation and tapered insulation at the perimeter;
- aluminum fascia and gravel stop roof perimeter;

Interior partitions are typically concrete masonry units with glazed tile or plaster finish. Ceilings are dropped acoustical grid and tile.

Existing Façade and Roof Envelope

Please reference the 2018 Roof Assessment Report dated 09.26.2018 provided by RRK Associates.

Based on the team's preliminary observations on the following pages, we recommend exterior wall envelope repairs to occur in conjunction with the roofing repairs recommended in the roof assessment. Observations of specific assemblies include the following:

1. Face Brick: While the existing face brick is generally in good condition there are numerous areas where the following deficiencies were noted:
 - small areas of open mortar joints
 - raked pointing
 - small diagonal cracking, particularly at the corners
 - failed or missing sealant joints where at locations where new penetrations were made for wall mounted conduit, fixtures, window guards, etc.
2. Cast-in-Place Concrete:
 - The top of the perimeter grade beams have spalls and cracks. The joint between the concrete and masonry has failed in numerous locations, particularly along the west elevation.

- Cast-in-place entry/ exit stairs have several spalls and cracks which in some cases continue through the adjacent construction.
- 3. Exposed steel curtain wall support: Steel angles that run continuous below the curtain wall sill are rusted. These will increasingly deteriorate and impact the sill and flashing.
- 4. Curtain Wall: Perimeter joints appear to be in good shape. Access to operable windows was not possible and thus were not tested. Infill panels were dented at some locations but were in good shape.
- 5. Exterior soffits at curtain wall and entry/ exit assemblies: The surface of these panels are mottled and moisture-stained/ damaged. Per the archive drawings the soffit panels are an asbestos-based cement panel.

Accessibility

The existing building is pre-ordinance and does not fully meet current ADA standards.

Path of Travel:

- The main entry was recently repaved and provided with automatic door hardware.
- Entries and exits along the west, south, and north entry/ exits are not fully compliant.
- Pending receipt of a survey, the existing parking paving does not appear to have compliant grading.
- Classroom entries typically have maneuvering clearances and lever hardware.

Toilet Rooms:

There do not appear to be updated and fully compliant staff toilet rooms. Additional investigation is required when the building is not fully occupied.

Architecture Observation Photos



Photo 1

View of main entry on N. Sacramento looking west. Note that paving up to this main entry had been replaced within the last 6 months for ADA upgrades, per conversation with building staff. This entry includes an automatic operated door and AIPhone system.



Photo 2

View of main entry and existing Dining Room volume from N. Sacramento looking northwest. Note that paving up to this main entry had been replaced within the last 6 months for ADA upgrades, per conversation with building staff.



Photo 3

View of existing Dining Room volume from N. Sacramento looking northwest. Existing masonry joints are quite raked and some joints are partially open.



Photo 4

View of existing parking lot from N. Sacramento driveway looking west. Per CPS program, the driveway will be slightly reconfigured to accommodate a wider drive aisle. Pending receipt of a survey, the existing topography will require review for ADA compliance.



Photo 5

View of South Elevation, exterior of Kitchen service exit, and overhead electrical service. Overhead clearance for future emergency vehicle access will be required.



Photo 6

View of power poles from driveway looking north. Location of both pole and overhead wires will require review relative to new driveway and fire lane configuration.



Photo 7

View of West Elevation looking southeast at non-accessible NW exit from Main Lobby. Building has been altered since its 1956 construction with new window guards, air conditioner units, and fascia/gravel stop. Note exterior face brick and top of concrete foundation grade beam deterioration. Note also that existing play area asphalt paving grading requires review for ADA compliance pending survey receipt.



Photo 8

View of play area looking south east. An ornamental fence runs N-S. Turf expanse on west side of fence is within school property but is not used due to pits and uneven grading.



Photo 9

View of South Elevation entry/ exit from southwest Kindergarten classroom. Several of the existing concrete stoops have spalled and/or cracked concrete. Per the building staff, these exits are used daily by the Kindergarten students.



Photo 10

View of South Elevation entries/ exits from the southeast Kindergarten classroom that is presently used as the Library/ Dance Room. Note cracked stoops.



Photo 11

View of South Elevation curtain wall base. Steel angle curtain wall support and sill assembly appear to be original and show signs of rust deterioration. Concrete spalling was consistently observed at the top of the exterior face of grade beams.



Photo 12

View of South Elevation curtain wall assembly, including aluminum insulated panels, retrofit window guards, glazing and Cemesto (cement and asbestos) soffit panels. All materials show signs of deterioration but sealant and joints between surfaces appear relatively tight.



Photo 13

View of South Elevation entry and entry ramp from the east. The new annex link is proposed at this location. The location curtain wall base. Steel angle curtain wall support and sill assembly appear to be original and show signs of rust deterioration.



Photo 14

View of South Elevation curtain wall assembly, including aluminum insulated panels, retrofit window guards, glazing and Cemesto (cement and asbestos) soffit panels. All materials show signs of deterioration but sealant and joints between surfaces appear relatively tight.



Photo 15

View of concrete grade beams and exterior masonry at base of wall. Note cracking extended into paving. Note open masonry joints.



Photo 16

View of South Elevation Kindergarten exits. Note spalled concrete grade beam, cracked stoops and cracked paving.



Photo 17

View of exterior face brick and concrete grade beams at East Elevation adjacent to flag pole. Cracks extend from concrete grade beams to exterior masonry at several locations.



Photo 18

View of garden along East Elevation. Garden and landscaping provides shades to all of the east classrooms and main office.



Photo 19

View of small north play area adjacent to the parking lot. Equipment appears to be in good condition but do not include ADA components.



Photo 20

View of large playground at south end of site. Equipment and surface tiles appears to be in relatively good condition but do not include ADA components.

Photos

Interior



Photo 21
View of main entry looking east. Entry includes an ADA automatic door operator and AI Phone equipment.



Photo 22
View of glazed lites into the Main Office. Note that the school interior does not include any ADA compliant signage.



Photo 23

View of Main Lobby looking west. Main corridor to classrooms is to the left; small day-lighting courtyard is to the right.



Photo 24

View from Mail Lobby looking northwest at entry to Dining Room and internal day-lighting courtyard.



Photo 25
View from Mail Lobby looking northwest into day-lighting courtyard.



Photo 26
View of existing Dining Room/ Multi-Purpose Room looking northeast. Room appears to have been recently painted and finishes appear in good condition.



Photo 27
View of Dining Room looking northwest towards entry to Kitchen.



Photo 28
View of Dining Room looking south into Main Lobby.



Photo 29
View of Kitchen looking south.



Photo 30
View of main corridor looking south. Interior partitions walls are typically CMU typically with dropped hard ceiling soffits at the classroom entries. See also Roof Assessment Report as corridor ceiling shows significant signs of leaking.



Photo 31
View of typical classroom exterior wall.



Photo 32
View of typical classroom teaching wall. Note that CMU demising walls abut steel column perimeter framing. This joint has typically failed and requires sealant.



Photo 33
View of typical classroom exterior wall steel framing.



Photo 34
View of corridor ceiling leaks.



Photo 35
Spalled and deteriorated pointing at the glazed CMU at the student toilet rooms.



Photo 36
View of Kindergarten south elevation.



Photo 37
View of north elevation of Kindergarten classroom.



Photo 38
View of classroom signage. Interior signage is not ADA compliant.

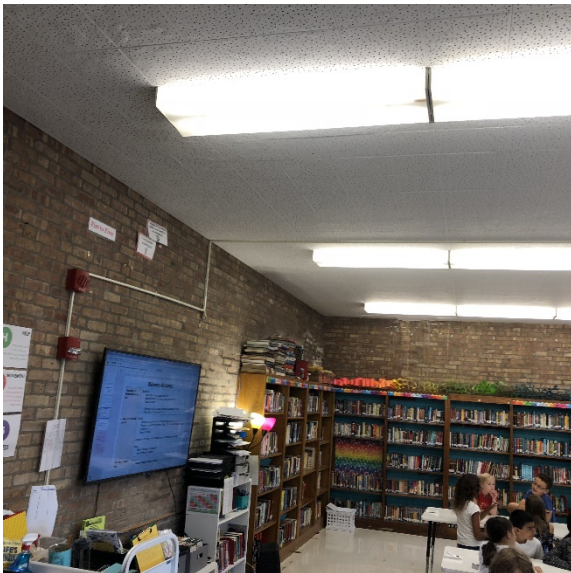


Photo 39
View of Library/ Dance Room (previously Kindergarten Rm.)



Photo 40
View of overhead fire door at south classrooms.



Photo 31
View of typical classroom exterior wall.



Photo 32
View of typical classroom teaching wall. Note that CMU demising walls abut steel column perimeter framing. This joint has typically failed and requires sealant.



Photo 41
View of roof joists above corridor ceiling. Roof leaks were visible at numerous locations along the corridor.



Photo 42
View of roof joists and drain above corridor ceiling.

Existing Mechanical

Utilities

- The gas service comes in at the northwest part of the building, and the meter is located in the building staff office adjacent to the boiler room (see photo M1).

Main Systems

- The building is heated by two (2) natural gas fired steam boilers (see photo M2). Each steam boiler has a capacity of 1805 MBH. The maximum working pressure of the steam system is 15 psi, although staff typically operates the system at 5 psi.
- There is one 5-hp compressed air system in the mechanical room.

Distribution

- Steam piping runs under the building in a crawl space. Building staff notes that there are significant condensate leaks in the crawl space.

Terminal Equipment

- Unit ventilators with steam coils provide heat and ventilation to the classrooms and exterior offices. The unit ventilators appear to be in good condition (see photos M3 and M4).
- Two (2) window air conditioners are installed in each classroom to provide cooling (see photo M5).
- Seven (7) steam unit heaters are located in the building corridors, with four (4) near in the central classroom corridor, one (1) near the northeast entrance, and one (1) near the northwest entrance, and one (1) in the corridor adjacent to the courtyard (see photo M6).
- Each toilet room has a unit heater in the space and is connected to an exhaust fan on the roof. There are six (6) individual toilet rooms, and larger boy's and girl's toilet rooms along the west wall of the building with a shared exhaust.
- The multipurpose room has steam baseboard heat.
- The warming kitchen has hooded cooking equipment as well as a 20-inch shutter-mounted exhaust fan on an exterior wall.

Issues

- There is significant condensate leakage in the crawl space underneath the building from the steam piping. This area is very wet according to building staff.
- Existing steam boilers are old and inefficient compared to modern condensing hot water boilers.
- Window air-conditioning units are inefficient and cause poor building envelope performance in the panels where they have been installed.
- Existing building roof replacement will affect exhaust vents and flues. All of these will need to be tested prior to removal for the new roof installation, and the operational pieces can be reinstalled after the new roof is installed.

Existing Electrical

Utilities

- Incoming Electrical Service
 - Power is supplied to the building from an overhead feed from pole mounted ComEd transformer.
 - The main power distribution to the building is from a main switchboard rated at 800A, 208/120V, 3-phase, 4-wire.
- Outdoor Equipment
 - The only outdoor equipment associated with the electrical system is a wall mounted meter and CTs located outside the door to the main electrical/boiler room.

- Emergency Electrical Service
 - Emergency power is supplied to the building from a separate overhead feed from a pole mounted Com Ed transformer.
 - The emergency power distribution system includes an indoor meter, disconnect switch, and automatic transfer switch. All located in the main electrical/boiler room.
 - Emergency power is distributed to the emergency lights and exit signs from a 100A fuse panel.

Main Systems

- Fire Alarm System:
 - The fire alarm control panel (FACP) for the building is located in boiler room. All fire alarm devices including horns, strobes, pull stations, alarm bells, and other system components are controlled from this panel. The fire alarm system is manufactured by Simplex 4100.
 - The fire alarm annunciator panel (FAAP) and city tie are located at the building main entrance.
- HVAC and Plumbing Electrical Power:
 - There are unit ventilators located in the classrooms and offices throughout the building. These are all fed from panel HP-1 (225A, MLO, 208/120V, 3-phase, 4-wire).
 - Cooling in the classrooms and offices is provided from window mounted air conditioning units. These units fed from panel AC-1 (200A, 208/120V, 3-phase, 4-wire).
 - All other fan and motor loads in the building are fed from panel PP-1 (208/120V, 3-phase, 4-wire).
- Telecommunications:
 - The MDF room for the building telecommunications system is located in Multipurpose Room.
 - Distribution of low voltage power is via panels CP-1 which is located in the boiler room and CP-2 which is located in classroom adjacent to the computer lab.
- Distribution:
 - General Power and Lighting Systems
 - Distribution panels located in the boiler room and corridor feed general power and lighting throughout the building.

Issues

- The existing electrical service switchboard will not have enough capacity to serve the new annex building. Main electrical equipment area is being used for storage. All items in this area should be removed from blocking access to the electrical equipment.

Existing Plumbing

Utilities

- Water
 - There is an existing 4-inch domestic water service entering into the existing building from North Sacramento Avenue.
 - The incoming service first passes through a crawl space, and then connects to the water meter assembly which is located in the boiler room. (see photo P1)
- Sewer
 - The building has four existing sanitary sewer lines, two 4-inch and two 6-inch. These all exit the east side of the building to North Sacramento Avenue.
 - Four storm lines exit the east side of the building to North Sacramento Avenue.

Main Systems

- Building domestic water system is distributed by city pressure alone.

- Hot water is provided by a gas fired domestic hot water heater located in the boiler room. It is a 78-gallon storage type gas water heater, with maximum input of 156,000 BTUH. The Water heater appears to be in good condition. (Manufacturer/Model No – RHEEM/ G82-156). (see photo P2)

Distribution

- Domestic water piping distribution runs within the crawl space. Incoming pipe material for domestic cold-water line to water meter was galvanized and transitions to copper for distribution to bathroom groups and fixtures.
- All sewer lines are routed through the crawl space to the exterior and are typically cast iron where observable.
- All vent pipes are routed through the ceiling and terminate above the roof. Vent pipe requires inspection by telescoping to verify existing condition.
- Existing roof drains require inspection by telescoping. Building facilities personnel reported pooling water at the roof during rain events.

Terminal Equipment

- All observed plumbing fixtures were in fair to good condition and appeared to be functional where tested.
 - Existing water closet and urinals are manual flush-valve type. (see photo P4)
 - All lavatories, mop sinks, classroom and kitchen sinks are manual type faucets.
 - Existing floor drains in boiler room and restrooms were in good condition. (see photo P6)
 - There were no floor drains in unisex restrooms. Code requires to have a floor drain in unisex restrooms. (see photo P3)
 - Existing drinking fountains are bi-level ADA height fountains and appear to be in good condition.

Issues

- Observed water leakage from plumbing pipes in chase near the main restroom and janitor closet. (see photo P5)
- Existing roof drains require inspection by telescoping and verify existing condition. Building facilities personnel reported pooling water at the roof during rain events. Refer to “Decatur Roof Report” for the conditions of existing roof drains and VTR.

Mechanical, Electrical, Plumbing Observation Photos



Photo M1



Photo M2

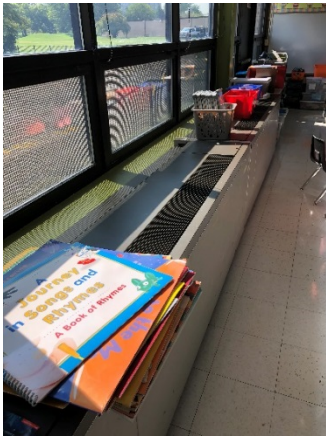


Photo M3



Photo M4



Photo M5



Photo M6



Photo E1



Photo E2



Photo E3



Photo E4



Photo P1



Photo P2



Photo P3



Photo P4

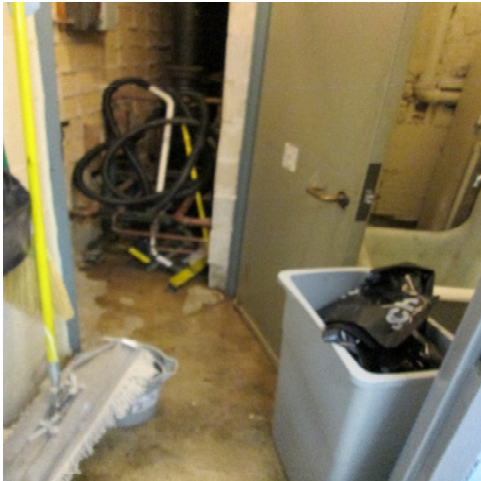


Photo P5



Photo P6

Existing Civil and Landscape Description and Observation Photos

1. Project Summary

A. Existing Parcel

1. The referenced project is located at the Southwest corner of the intersection of W Estes Avenue and N Sacramento Avenue. The project encompasses roughly 3.84 acres. The site is comprised of an existing asphalt parking lot and play lot, single-story school building, playground area and lawn areas covering roughly 50% of the proposed project site. Some interior and perimeter landscaping exist on site.

2. Pavement

A. On Site

1. Existing pavement on site includes asphalt pavement parking lot and a large play asphalt pavement area to the south and west of the existing school. The parking lot was recently restored and re stripped and is in good condition. The play area asphalt has longitudinal cracking but seems to be in fair condition.



2. It is anticipated that all existing pavement on site will be removed for the proposed improvements.

B. Right of way

1. The existing right of way concrete sidewalk is in fair condition. Some panels have experienced large cracking/heaving and need replacement. ADA ramps crossing N Sacramento Ave from W Estes Ave to W Lunt Ave are in good condition and seem to be compliant. Ramps compliance will need to be verified upon receipt of Survey topographic information.
2. It is anticipated that curb to curb resurfacing of N Sacramento Ave from E Estes to W Lunt will be required by the Office of Underground.

3. Curbs / Walls

A. On Site

1. There are multiple curbs / walls on site. There is a large curb 12" + at the west side of the play area. Reasoning behind the curb is not clear. The curb was installed after the adjacent asphalt pavement. The curb is in great condition.



There are segmented block walls along the eastern property line. Many portions of the wall are falling over, and the wall is in a general bad condition.



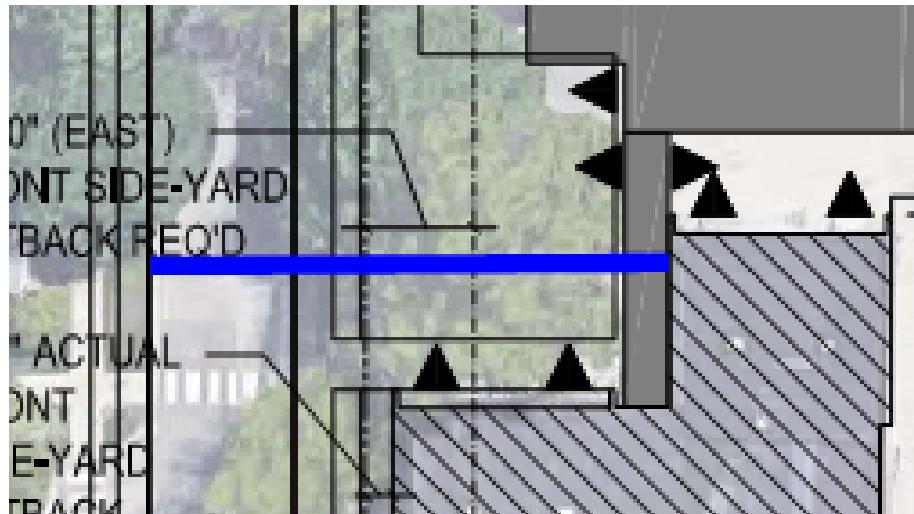
2. It is anticipated to remove portions of the curb at the west side of the play lot. It is anticipated that the segmented block wall will be removed where it conflicts with proposed improvement and repaired elsewhere.

B. Right of way

1. The property only abuts one right of way, N Sacramento Ave. This B.12 curb and gutter are in fair condition. There are low spots that were observed holding water.



2. All curb and gutter adjacent to the new annex will need to be verified, using survey topographic information, against the City of Chicago Department of Transportation requirements. It is anticipated that curb and gutter will need to be replaced to meet CDOT requirements.
4. Utilities – All Utilities described herein need to be verified with survey utility data and Office of Underground Coordination.
 - A. Sewer – On Site
 1. Existing sewer connection is to N Sacramento Ave. at the existing parking lot entrance. Connection point was determined based on as built drawings. Further investigation and verification via survey utility information is needed to determine condition of sewer pipes and structures. No on-site detention has been observed or documented.
 2. It is anticipated that the existing connection at the north side of the building will be reused. All other sewers will be removed as part of the development. The existing building sanitary and storm services are anticipated to be rerouted as part of the proposed development.
 - B. Sewer – Right of Way
 1. N Sacramento Ave has a 30" diameter brick sewer running south to north about 9' below grade (DWM Sewer atlas 41-1-31). Sewer pipe size, condition, location, and inverts are to be verified via survey utility data.
 - C. Water – On Site
 1. The existing water service is a 4" service connecting on the east side of N Sacramento Ave.



2. It is anticipated that the existing water service will need to be terminated during the proposed development. A new water service will be provided to serve the new annex and existing building.

D. Water – Right of Way

1. Water pavement markings were observed on site. City water line is anticipated to be located in the parkway on the east side of N Sacramento Ave.
2. Water pipe size, condition, location, and inverts to be verified via survey utility data and OUC water atlas.

E. Electric – On Site

1. The existing electric service is at the north side of the building. The service enters the boiler room at the northwest corner of the existing building. Drawings E-2, date 10-30-56, Sheet Title “Electrical” shows the existing connection location. Service comes from pole mounted overhead lines north of parking lot pavement.
2. Existing Electrical service is anticipated to remain.

F. Electric – Right of Way

1. Location is unknown at this time. Survey and OUC information required.

G. Gas – On Site

1. Gas service is also located at the northwest corner of the building. Service is shown on HV2 drawing from 10-30-56, Sheet title “Heating and Ventilating.”
2. Existing gas service is anticipated to remain. Existing oil storage tank located west of the boiler room at the building exterior is shown on drawing HV2. Environmental coordination for tank removal maybe required if tank exist.

H. Gas – Right of Way

1. Location is unknown at this time. Survey and OUC information required.

I. Landscape – Site

1. The existing trees along the south side of the playground area will need to be removed for the development of the new building annex.
2. The existing trees and vegetation along the south property line is in good to poor condition. It is anticipated that the ash trees, poor quality plant materials and underbrush will be removed. Tree in good condition should be saved if possible.
3. Existing plant material on the east side of the existing building is in good condition and should remain.

J. Landscape – Right of Way

1. The existing parkway width along N. Sacramento Ave is roughly 12' from property line to the back of curb. The parkway treatment does not vary greatly from North to South, with 18 existing parkway trees ranging in caliper size from approx. 4" to 24" in fair to good

condition and consist of Elm, Honey Locust, Maple, Hackberry and Linden trees, which are all typical for parkway plantings. These trees are located in a 5' grass parkway adjacent to the back-of-curb.

K. Furnishing – Site

1. The existing north play lot and surfacing is in good condition and could be retained depending on the final design of the new play lot and asphalt play area.
2. Portions of the ornamental fence and curb line along the western edge of the asphalt play surface could be retained depending on the final design of the new play lot.
3. The existing south play lot, surfacing and portions of the ornamental fence will be removed for the development of the new building annex.
4. The existing shade structure, basketball hoops and triple hoops within the asphalt play area are in good to fair condition and could be retained depending on the final design of the new play lot.
5. Existing arbors, bike racks and benches on the east side of the existing building are in good condition and should remain.

BASIS OF DESIGN – PRELIMINARY

Decatur Elementary School Annex

Architectural, Structural, Mechanical, Electrical, Plumbing, Fire Protection, Civil and Landscape

Conceptual Design

10.05.2018

Project Description

The Decatur ES Annex project is a planned Annex (addition) to the existing Stephen Decatur Chicago Public Elementary School and original annex located at 7030 W. Sacramento Ave. Chicago, Illinois 60645.

This Annex (addition) to the existing building is conceived as a permanent solution to address overcrowding and to eliminate the use of temporary mobile classrooms. The "Linked Annex" provides expanded program space with contiguous weather-protected connection to the existing building. The design of the new Annex and site improvements strive to provide spaces which can contribute to ensuring that every child is educated and prepared for success; the ultimate goal of CPS. In order to achieve this goal, the building and site design seeks to provide a non-institutional child-centered learning environment that can foster integration and cooperation among students, encourage learning through an array of spaces and visual connections, allow for interactive play and learning, and encourage independence of students. Importantly, the architecture should have an inherent and understandable order and offer visual cues and orientation aids for all students.

The building and site will be designed and constructed to achieve a LEED v4 for Schools Silver rating for the Annex components as defined by the U.S. Green Building Council. Requirements for green building items that are part of the LEED process will be incorporated into the drawings and specifications to provide direction to the construction team. The project shall comply, in all respects, with requirements of the CPS Design Guidelines including all amendments and memoranda. Deviations, where required, shall be requested in writing. Additional specifications, where required, shall be authored by the design team to support the objectives of the project. Additional specifications shall be presented to PBC & CPS representatives as the design is developed.

Programming: The specific spatial programming requirements are as follows:

New Annex:

- 4-hour fire-separation vestibule on first floor
- (10) New Academic Classrooms, approximately 760 GSF each
- (1) Art Classroom, approximately 1,230 GSF with kiln / art storage
- (2) special needs (3-age group) 760 GSF each
- (1) science classroom w/ storage 1080 GSF
- (2) Administrative offices remote from main school office, approximately 150 GSF each
- (2) faculty work room 370 GSF
- (1) student dining room 3,150 GSF
- (1) Kitchen prep. And servery 1,740 GSF
- (1) Dining storage and accessory spaces for kitchen staff 2,090 GSF
- (1) Library 2,280 GSF
- (2) General Storages 290 GSF each
- (1) Gymnasium, Gym office, and storages 7,955 GSF; with 6,972 GSF for gymnasium
- (1) Stage (can be used by music room) 630 GSF
- (1) MDF/IDF (CPS stated this can be storage if existing overhead service is not disrupted), approx. 280 GSF
- Student and Staff toilets at each floor to support code-calculated annex population
- Custodial rooms at each floor
- Engineer's office and engineer's building operations
- Exit stairs; number and design to meet requirements of egress and accessibility
- (1) elevator
- Trash enclosure
- Utility spaces as required (plumbing, sprinkler pump, electrical)
- LULA to provide barrier-free access to all levels

Site:

- Replacement of existing sheds, item is pending CPS final decision.
- New replacement playground, ages 3-12.
- Re-route existing utilities that conflict with new work

- Temporary off-site staff and construction parking to be reviewed / resolved by PBC and CPS

Existing Building:

- Convert existing library back to kindergarten classroom
- Convert existing multi-purpose room to a music room, and existing kitchen into music storage.
- Provide accessible directional signage
- Low-voltage interconnections of public-address /intercom, security system, fire alarm, MDF/IDF
- Environmental remediation in areas affected by work

Schedule: The design and construction of the annex facility as well as renovation of existing building, completing all site elements to be complete in Aug 2020.

Budget: \$20,000,000 (refer to CPS program)

Building Envelope

The building will be a modified two-story Annex prototype with a four-hour vestibule connection to the existing building and a double-loaded corridor enclosing a total gross area of approximately 50,000 square feet of floor area (approximately 25,000 GSF on each floor).

The two-story structure will be a steel frame with steel beams joists with composite metal deck at elevated slabs. Exterior walls will be constructed of brick veneer with 6" cold-formed framing back-up. The typical masonry veneer assembly will include 4" nominal exterior masonry veneer, 2" air cavity, insulation, continuous air-and water barrier, exterior gypsum sheathing, cold-formed framing, and interior gypsum board. Masonry anchors will exceed 4.5", exceeding the empirical design criteria, requiring structural design of the anchor size and spacing. Glazing systems will be a combination of thermally broken aluminum frame windows and storefront systems with both fixed and operable lites of insulated, low-E, clear glazing.

The first floor will be constructed as a reinforced concrete structural slab. Poor bearing soils are anticipated and as such deep foundations are likely. The second floor of the Annex will be constructed of 6-1/2" normal weight concrete and composite metal deck. Spray-applied fireproofing material will be provided to all second floor supporting steel as required by the building code. A shelf angle will be required to support brick veneer and parapet at the roof deck to permit roof scupper flashings to be accommodated without differential movement at mid-span.

The Annex entry vestibules will consist of aluminum storefront and insulated, low-E glazing, laminated to a height of approximately 9'-0" above finished-floor for enhanced vandal resistance. Glazing at the corridor nodes will also be of storefront and low-e glazing assembly. All windows shall receive limestone or precast concrete sills with drip-edges secured with appropriate anchorage to prevent overturn. Walls shall be fully flashed and weeped at all terminations (base of wall, shelf angles, below sills, above lintels, wall offsets, etc. Cell vents will be provided to convey water from the cavity to the exterior. Where spacing of cell vents exceeds recommended distances cotton sash rope weeps shall be specified.

Envelope enclosing roofs will be constructed of steel beams, joists, and insulated metal deck with a modified-bituminous membrane system and reflective coating meeting LEED criteria. Normal weight concrete shall be installed beneath all roof mounted air-handling units and chillers as recommended by the AOR's acoustical consultant. It is routine for the concrete to be required to extend eight to ten feet beyond the footprint of the equipment to mitigate sound transfer into core learning areas (classrooms) below.

Acoustics

The AOR will engage an acoustical consultant for assistance in the design of appropriate assemblies to meet the CPS Facilities Performance Standards; http://cps.edu/About_CPS/Policies_and_guidelines/Pages/facilitystandards.aspx, LEED prerequisite acoustical design requirements, and requirements of the City of Chicago relating to sound levels in the public way.

Prior to transfer of the project the Design Architect has not engaged an acoustical consultant, however, certain aspects of the schematic design anticipate requirements of the acoustical consultant that are routinely requested to assist in compliance with CPS and LEED prerequisite acoustic requirements. Partitions will, in many cases, require multiple layers of gypsum board that exceed the minimum fire-separation requirements of the Chicago Building Code. The SD package indicates normal-weight concrete-filled deck beneath the roof top equipment. Design team should evaluate whether, sound-control barriers at the roof will be required to mitigate sound at the lot line, or whether this can be addressed via equipment specification.

Mechanical equipment shall be installed on acoustical / vibration isolators and all return ductwork shall be offset in a manner to reduce fan noise in the core learning areas.

LEED Requirements

- A. This Section includes general requirements and procedures for compliance with U.S. Green Building Council's (USGBC) LEED prerequisites and credits needed for the project to obtain LEED for Schools Silver Certification.
- B. In addition to the outlined LEED Requirements, the project shall comply with the Department of Planning and Development's Zoning Sustainability Matrix, meeting a minimum of 100 credits. The AOR shall coordinate with CPS to determine the most cost effective means to obtain these credits.
- C. LEED submittals are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated LEED requirements.
- D. Products used on this project will have additional requirements which are required to comply with the USGBC LEEDv4 for BD+C: Schools rating system:
 - 1. Reduced Urban Heat island effect.
 - 2. Water use reduction.
 - 3. Optimize energy performance.
 - 4. Construction waste management.
 - 5. Environmental Product Declarations
 - 6. Low VOC-emitting materials.
 - 7. Zero use of CFC-based refrigerants.
 - 8. Low Ozone Depletion and Global Warming Potential refrigerants.
- E. General Commissioning (Cx) Requirements
 - 1. This Section includes general and USGBC LEED for Schools requirements that apply to implementation of commissioning without regard to systems, subsystems, and equipment being commissioned. Project specific MEP requirements will be identified in individual specification sections.
 - 2. Commissioning Plan: A document, prepared by the Commissioning Authority (CxA), that outlines the schedule, allocation of resources, and documentation requirements of the commissioning process, and shall include, but is not limited to the following:
 - a. Overview of the Cx Plan describing the purpose, scope, abbreviations and list of applicable forms.
 - b. General description of the project and salient design features related to successful commissioning of

the project.

- c. Commissioning team information including communication matrix identifying members appointed by the Owner including Owner's representative, CxA and Architect/Engineer and Contractor including representatives of the prime and sub-contractors, construction superintendant and specialists deemed appropriate by the CxA..
- d. Description of roles, responsibilities and authority of commissioning team members.
- e. Commissioning process requirements including, but not limited to:
 - 1) Commissioning kick-off meeting guideline and requirements.
 - 2) Site observation guidelines and requirements.
 - 3) Miscellaneous meeting guidelines and requirements.
 - 4) Miscellaneous management protocols for the Cx team.
 - 5) Progress reporting issue log guidelines and requirements.
 - 6) Guidelines for initial submittals and documentation including equipment shop drawing submittals, operations and maintenance manuals, certifications and warranties and guidelines for special submittals, notifications and clarifications.
 - 7) Verification and testing overview including development and completion of construction checklists and completion of functional performance tests.
 - 8) Construction checkout procedures and guidelines for contractor review and completion of checklists, verification of information by the CxA and correction of deficiencies.
 - 9) Procedures for development, coordination and completion of all applicable functional performance forms and tests including correction of deficiencies.
 - 10) Guidelines and procedures for preparation of Operation and Maintenance Manuals and Commissioning Record.
 - 11) Detailed guidelines and procedures for training of Owner's personnel.
 - 12) All extended warranty period activities typically provided for successful completion and credit for enhanced commissioning activities.
- f. Detailed matrix of written work products including Cx Plan, schedule, submittals, checklists, testing, adjusting and balancing (TAB) documents and procedures, issue logs and corrective action reports. The matrix describes the author, product description, due dates, and who receives/ approves the products.
- g. Schedule of Cx activities with specific dates coordinated with overall construction schedule.
- h. Appendices including Owners Design Criteria and MEP Engineer's basis of design

Architectural

THERMAL AND MOISTURE PROTECTION

The envelope will be designed in accordance with the City of Chicago Energy Conservation Code, Section 18-13, *Table 13*, or the ASHRAE 90.1-2004, *TABLE 5.5-5 Building Envelope Requirements for Climate Zone 5A*, whichever is stricter.

- A. Insulation
 - 1. Rigid Wall Insulation. Extruded Polystyrene, 2 ½" overall. Minimum R-value of R-12.5.
- B. Membrane Roofing System
 - 1. Two-ply SBS Modified Bitumen roofing system, white coating or cap sheet with Solar Reflectance Index (SRI) of 78 minimum. Install in compliance with roofing manufacturer's printed instructions. Comply with USGBC LEED for Schools Sustainable Sites Credit for Heat Island Effect: Roof.
 - 2. Provide insulation with an aged R-Value of 30, first and second layer fully adhered over a substrate board (thermal barrier) and a vapor retarder.
- C. Roof Coating
 - 1. Comply with USGBC LEED for Schools Sustainable Sites Credit Heat Island Effect: Roof.
- D. Sealants and Adhesives
 - 1. Interior sealants and adhesives shall meet or exceed South Coast Air Quality Management District (SCAQMD) Rule #1168. Comply with USGBC LEED for Schools Indoor Environmental Quality Credit Low-Emitting Materials.

DOORS AND WINDOWS

- A. Fiber-Reinforced Polymer (FRP) Doors and Aluminum Frames
 - 1. Insulated FRP doors and thermally broken aluminum frames at all service exterior doors.
- B. All-Glass Entrances and Aluminum Window Wall:
 - 1. Main Entrances: Provide pair of all glass entrance doors as scheduled on the drawings. Install all-glass systems and associated components according to manufacturer's written instructions.
 - a. Glass: As indicated in the CPS specifications, enhanced for energy performance.
 - b. Aluminum: As indicated in the CPS specifications.
 - c. Patch Fittings: As indicated in the CPS specifications.
- C. Aluminum Windows
 - 1. Provide aluminum windows, that comply with AAMA/NWWDA 101/I.S.2 for performance class and performance grade which includes a complete system for assembling components and anchoring windows.
 - 2. Provide windows with an integral, concealed, low-conductance thermal barrier; located between exterior materials and window members exposed to interior side, in a manner that eliminates direct metal to metal contact.
- D. Provide windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches.
- E. Glass and Glazing
 - 1. Exterior and Interior Glazing: As indicated in the CPS Specifications and as shown on the Drawings.
 - 2. Laminated assemblies where required for acoustical mitigation.

Structural

The structural system was selected based on the current project schedule, the ease of construction, the recommendations from CPS regarding slab thicknesses (to mitigate moisture conditions) and the suitability of the structural system for future modifications. No provisions have been made for future expansion in this phase of the design as CPS has not requested any considerations for future additions.

Floor Framing

The floor framing of the building will consist of 2" composite metal deck with 4 1/2" Normal weight concrete slab supported on composite steel beams spaced at 7' to 8'-6" on centers with girders spaced at 25'(+/-) on centers. The portion of the second floor, above the dining room, will consist of 2" composite metal deck with 6" Normal weight concrete slab supported on composite steel beams spaced at 6'-8" on centers. The composite beam spans vary from 30' (typical) to 48' over the dining area. The floor framing will be supported on W10 wide flange steel columns. The column locations and the spacing will be determined as the design is further developed.

The stairs will be metal pan with concrete infill per the Architectural requirements.

Roof

The roof structure will consist of composite metal deck with concrete floor, similar to the floor framing. The composite slab will be supported by composite bar joist or non-composite bar joists or wide flange beams.

Lateral System

Currently the lateral load resisting system is envisioned to be steel braced frames in either direction. The location of the bracing will be determined as the design progresses.

Foundations and On Grade Slab

A comprehensive Geotechnical Report needs to be obtained prior to structural foundation design. Based on review of previous foundation construction deep foundations are anticipated. Belled Caissons (Drilled piers) will support each of the columns. Grade beams will be required around the perimeter of the building as well as in the interior around the bracing locations. Due to the anticipated poor soil conditions a two way reinforced concrete structural slab will be used at the on grade condition. The slab will be supported on caissons and grade beams.

Codes and Technical References

- Governing Building Code: **Chicago Building Code (CBC), 2018**
- ANSI-A58.1 & ASCE 7: Minimum Design Loads for Buildings
- Structural Steel: AISC Specification for Structural Steel Buildings
- Concrete: ACI - 318 Building Code Requirements for Structural Concrete
- Precast Concrete: PCI – Design Handbook Latest Edition
- Masonry: ACI - 530 – Building Code Requirements for Concrete Masonry Structures
- Cold Formed: AISI – North American Specification for the Design of Cold Formed Steel Structures
- Steel Deck: SDI – Diaphragm Design Manual
- Elevators and Escalators: ASME A17.1 Safety Code for Elevators and Escalators

Design Load Criteria

Dead Load

- 2" Metal Deck + 4 1/2" N. WT. Concrete Slab = 69 psf
- 2" Metal Deck + 6" N. WT. Concrete Slab = 88 psf
- Structure = 7 psf
- Partitions = 20 psf
- MEP = 15 psf
- Roofing + Insulation = 12 psf
- Misc = 5 psf
- RTUs = Per Mechanical Data

Live Load

- Classrooms (Typ.)= 40 psf + Partitions
- Public Areas = 100 psf
- Corridors = 100 psf
- Stairs, Lobbies = 100 psf
- Library Stacks = 150 psf
- Mechanical Rooms = 150 psf
- Storage = 125 psf

Snow Load

- Uniform = 25 psf
- Drift = 60 psf (16' width)

Wind Load

- Structure = 20 psf
- Cladding = 25 psf (Typical)
- Cladding = 30 psf (Corners)
- Uplift (Canopy) = 40 psf

Thrust on

- Handrails and Stairway Railings = 50 plf (on top horiz. and vert. or 200 lbs at any point)

Mechanical

1. Utilities

- A new gas service is expected to be required to provide natural gas for the building heating, hot water heater, and kitchen equipment, however the available gas capacity of existing service will be confirmed with the utility to determine if a new service is required for the new building. The expected gas load for the new building is approximately 650 CFH for water heating, 500 CFH for kitchen equipment and 2,250 CFH for heating for a total load of 3,400 CFH.

2. Main Systems

- Primary Heating System
 - The annex building will be served via a hot water heating system. The system will consist of two (2) high efficiency condensing hot water boilers. An estimate of the heating load at 45 BTU/h/SF gives a total heating load of 2,250 MBH. Each boiler will be sized at 1,500 MBH for approximately 66% of the heating load.
 - Primary cooling system
 - An air-cooled chiller will provide chilled water for cooling the building. The chiller will be located on the roof of the new building and is estimated to be 125 tons.
 - Air side system
 - Three variable air volume (VAV) air handling units (AHUs) will be located on the roof of the new annex. One unit will serve the kitchen and dining areas on the first floor, the second unit will serve the multipurpose room and stage, and the third unit will serve the remainder of the building. The AHUs will have a chilled-water cooling coil and a hot-water heating coil.
 - The dedicated unit for the kitchen and dining area will have a significant quantity of outdoor air as makeup for the hooded cooking equipment in the kitchen.
 - Additional systems
 - Each of the toilet rooms shall have a hot water unit heater and an exhaust fan.
 - Each entry vestibule shall be provided a hot water cabinet unit heater.
- ## 3. Distribution
- The AHU's supply and return fans will be equipped with variable frequency drives.
 - Air will be distributed via medium pressure ductwork to VAV boxes with reheat coils.
 - Hot water will be circulated to heating coils in the AHU and VAV terminal boxes via circulation pumps with VFD in a 100% standby configuration.
- ## 4. Terminal Equipment
- Each zone will be supplied fresh air, heating, and cooling through the airside distribution system of VAV boxes each with a motorized damper connected to low-pressure ductwork and diffusers.
 - Return air will be transferred back to the rooftop AHU via plenum return, which will be blended with the code required outdoor air at each unit.

Interface with Existing Building

- As long as the existing gas service capacity is sufficient (to be verified by utility), the annex gas service will tap into the existing service.

5. LEED Mechanical Issues

- All ventilation systems will be designed to meet ASHRAE 62.1 – 2010 as well as the Chicago Mechanical Code in order to comply with the LEED prerequisite Minimum Indoor Air Quality Performance.
- Installing high-efficiency condensing boilers and an efficient chiller will contribute positively towards the prerequisite Minimum Energy Performance, which requires a 5% energy reduction compared to an ASHRAE 90.1-2010 baseline building. It will also help for earning points under the credit Optimize Energy Performance, in which similar recent projects have earned 5-7 points.
- Selection of a chiller with an appropriate refrigerant may allow 1 point to be earned in the Credit Enhanced Refrigerant Management.

Electrical

1. 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 integral 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 Simplex 4100 and is currently located in the existing 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.

2. 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 inner ducts, 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

1. Utilities
 - Proposing a new 8" ductile iron incoming combined water and fire 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.
 - New sanitary and storm line is recommended for the new school addition as noted below.
2. 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 system will be sized at approximately 280 GPM/10 HP.
 - Two 80 gallon condensing gas water heaters will be provided with a master thermostatic mixing valve.
3. Distribution
 - 3" Domestic cold water and 2 1/2" domestic hot water distribution will be routed in the ceiling 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 system. The building storm sewer shall be approximately 10" diameter.
4. Terminal Equipment
 - The new annex building will be provided with new plumbing fixtures as follows
 - Toilets and urinals will be flush- valve type.
 - Student lavatories will be either manual or sensor metering type faucets.
 - Staff lavatories will be manual faucets.
 - Mop sinks, classroom sinks and kitchen sinks will be provided with manual faucets.
 - Floor drains will be all placed in all restrooms, janitor's closet, mechanical rooms, and other spaces required by code.
 - Roof drains and overflow drains will be placed on the new annex building roof.
5. 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 or crawl space within the existing building.
6. LEED Plumbing Issues
 - Plumbing fixture flow rates to be chosen to meet minimum reduction requirement of 35% for Indoor Water Use.

Civil

1. Existing Parcel: The referenced project is located at the Southwest corner of the intersection of W Estes Avenue and N Sacramento Avenue. The project encompasses roughly 3.84 acres. The site is comprised of an existing asphalt parking lot and play lot, single-story school building, playground area and lawn areas covering roughly 50% of the proposed project site. Some interior and perimeter landscaping exist on site.
2. Basis of design for civil site improvements:
 - A. Earthwork: Excavation shall be performed in accordance with IDOT Standard Specifications for Road and Bridge Construction (latest edition) and shall also include the following:
 1. Excavation to design subgrade $\pm 0.1'$.
 2. Hauling, placement, and compaction of excavated material to 95% Standard Proctor Density, in fill areas.
 3. Discing and drying of suitable materials to obtain proper compaction.
 4. Borrow excavation to obtain suitable material.
 5. Undercutting, hauling, and placement of unsuitable materials to non-structural fill areas.
 6. Handling, hauling, and placement of all excess spoil, to fill areas.
 7. Import or export of material necessary to bring site to final grade.
 8. Fill to obtain desired subgrade shall be coordinated with stormwater management objectives.
 - B. Underground Utility Improvements:
 1. All underground utility improvements shall be constructed in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois, and the City of Chicago Department of Water Management (CDWM).
 2. Select granular trench backfill will be required for all storm sewer trenches lying under existing or proposed streets, loading dock or sidewalks, and within 24" thereof. Trench materials shall be Illinois Department of Transportation CA-6 gradation.
 3. Manholes, catch basins, and inlets shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with ASTM C-478.
 - C. Sanitary/Combined sewer shall be installed in accordance with the following:
 1. Pipe material shall be of water main quality, Ductile Iron Pipe (DIP), Class 56 or equivalent or Extra Strength Vitrified Clay Pipe, ASTM C-700 specification, with PVC compression collar seal type joints conforming to ASTM Specification D 1784.
 2. Pipe bedding shall consist of compacted aggregate, CA-11, placed 6" below to springline of pipe, and compacted FA-6 from springline of the pipe to 12" above for the width of the trench. Up to 25% RAP allowable for base course aggregate as long as required gradation is maintained.
 3. Frames and lids shall be as specified by the DWM and shall include an external 10" elastomeric band extending from the frame to the manhole.
 4. Testing and televising of sanitary sewer shall be in accordance with the Standard Specifications for Sewer and Water Main Construction and City of Chicago Department of Water Management.
 - D. Storm Sewer shall be installed in accordance with the following:
 1. Pipe material shall be reinforced concrete pipe for pipes greater than 21 inches, ASTM C-76, Class III, Wall-B O-ring joints is the minimum requirement. Pipe material shall be DIP, Extra Strength Vitrified Clay Pipe [ESVCP] or PVC-SDR-26 for pipes 21" and smaller in diameter.
 2. Pipe bedding shall consist of Illinois Department of Transportation CA-11 gradation compacted from 6" below to the spring line of the pipe and compacted CA-11 or CA-16 from springline of the pipe to 12" above, over the trench width. Up to 25% RAP allowable for base course aggregate as long as required gradation is maintained.
 3. Frame and lids shall be as specified by the City of Chicago Department of Water Management.

- E. Paving Improvements:
1. Subgrade preparation shall include final grading of the pavement subgrade to $\pm 1"$ with an average subgrade elevation of $\pm 0.02'$ from the proposed subgrade elevation.
 2. Aggregate base course for concrete and asphalt pavements shall be constructed in conformance with Section 351. It shall be type "B" with a CA-6 gradation, unless otherwise specified. Up to 25% RAP allowable for base course aggregate as long as required gradation is maintained.
 3. Hot mix asphalt aggregate base course shall be constructed in accordance with Section 311 of the Standard Specifications for Road and Bridge Construction. It shall have a minimum Marshall Stability of 1,700 or greater.
 4. Hot mix asphalt binder course shall conform to IDOT SSRBC, latest edition.
 5. Hot mix asphalt surface course shall conform to IDOT SSRBC, latest edition. A prime coat will be required prior to surfacing.
 6. Concrete sidewalks shall be 5" thick with a 6" aggregate base. The concrete shall be 3,500 psi air entrained. A $\frac{1}{2}"$ premoulded expansion joint shall be provided at minimum 30' intervals and tooled contraction joints at 5' centers will be required. Maximize recycled content for concrete; substitute fly-ash and slag for up to 40% of cementitious material.
 7. Combination concrete curb and gutter shall be B6.12. Construction will conform to Section 606 of the Illinois Standard Specifications. The concrete shall be Class SI in accordance with Section 720. Maximize recycled content for concrete. Substitute fly-ash and slag for up to 40% of cementitious material.
 8. Concrete pavement for driveways shall be 8" thick with 6" CA-6 granular base. The concrete shall be equivalent to IDOT class PV concrete and conform to Section 1020. Provide $\frac{3}{4}"$ premoulded expansion joints at 30' intervals and tooled contraction joints at 10' centers.
 9. Pavement markings shall be thermoplastic in accordance with Illinois Department of Transportation T501 of the Standard Specifications for Traffic Control Items.
3. Demolition/Site Clearing/Erosion Control:
- A. Earthwork removal will be in accordance with the environmental investigation reports and shall be in accordance with IEPA regulations for Subtitle D, CCCD, or any other landfill identified in the anticipated environmental investigation report.
 - B. All at-grade paving within the limits of the project boundary will be removed in full. This includes removing the existing asphalt parking lot, play area and concrete sidewalks, and utility structures. The rubber surfaced playground area has also been proposed to be removed. It will be determined by the Landscape Architect, which existing trees located on site will be removed for the proposed improvements. Some work will be performed on the surrounding public right-of-way which includes sidewalk and curb and gutter reconstruction as necessary. All existing trees within the right-of-way will be assessed in detail by the Landscape Architect.
 - C. Existing utilities will be either removed or abandoned in place, if necessary, Utility removal and demolition will include, but is not limited to the following: Catch basins, drainage structures, and associated storm lines
 - D. Removal of site electrical lines for existing light poles, and parking security gates. Possible water service tap termination within the right-of-way
 - E. Coordination with CPS is required to determine whether the maintenance sheds at the rear of the existing building shall remain, be relocated or demolished to accommodate the proposed improvements.
 - F. Coordination with ComEd will need to take place during the design process for any impacts to the overhead line that is currently entering the site at the northeast corner.
 - G. Erosion control measures anticipated for the project are as follows:
 1. Construction fence with dust screening at property boundary
 2. Silt fence at property boundary
 3. Inlet filters at all proposed and existing catch basins
 4. Temporary seeding at all stock piles
 5. Permanent erosion control blankets and seeding at all berms

4. At Grade Improvements

A. Pavement

1. Proposed, on-site new paving improvements within the project site are planned as follows, pending coordination with geotechnical engineer and their forthcoming report:

- a) Two-lane paved access drive with 90 Degree parking.
 - a. 8" compacted CA-6 subbase
 - b. 3.5" HMA Binder Course IL-4.75, N50
 - c. 2.5" HMA Surface Course Mix D, N70
- b) Parking stalls: Non-ADA
 - a. Permeable paver
 - b. 2" CA-16
 - c. 6" CA-7
 - d. 12" CA-1
- c) Parking Stall: ADA
 - a. 8" compacted CA-6 subbase
 - b. 3.5" HMA Binder Course IL-4.75, N50
 - c. 2.5" HMA Surface Course Mix D, N70
- d) Concrete barrier curb and gutter shall line the access drive and landscape islands.
- e) 5" concrete walk with 6" base between the access drive and existing building and proposed annex.

5. Site Grading:

A. Grading of site pavements will follow Chicago Department of Water Management (CDWM) requirements for drainage, with a minimum slope of 1.0%. All pedestrian paving onsite will meet the Mayor's Office for People with Disabilities (MOPD) and Illinois Accessibility Code (IAC) requirements for grading and slopes for accessibility. Drainage of site areas will consist of routing landscape and pavement areas to a series of catch basins, trench drains, and inlets that will connect to the site detention storage areas and ultimately outfall to a sewer connection in N Delphia Ave.

6. Stormwater Detention:

A. Requirements:

1. The proposed project is a regulated development as defined by the City of Chicago Department of Water Management (CDWM). As such, stormwater detention will be required for the project.
2. The CDWM requires two different stormwater components: Rate Control and Volume Control. Rate control is stormwater that will be temporarily stored in an onsite detention system, and volume control is stormwater that will be retained on site.
3. At this time the project has not determined if it will upgrade the detention and volume control systems to achieve the requirements set out by The Sustainable Development Policy.

B. Stormwater Assumptions:

1. School Project:

- a) We have assumed +/-1.8 acres of disturbed site area.
- b) Preliminary calculations have been completed to determine the site sewer capacity. Based on the City of Chicago's sewer infrastructure the site has a release or 0.20 cfs/ac. This is a low release rate compared to other areas of the City. The release rate is based on the areas outfall at basin 'Foster West'.
- c) We estimated areas of impervious site and pervious (landscape) in order to calculate the detention per CDWM code requirements. Areas will be updated once a survey is received.
- d) We assume there is no off-site drainage flowing into the School property.

C. Rate Control:

1. School Annex and parking lot.

- a) Based on the above assumptions, the preliminary stormwater detention required for the access road is 33,000 cubic feet.

2. North Play Lot

- a) Based on the above assumptions, the preliminary stormwater detention required for the access road is 2,000 cubic feet.

3. Volume Control: We will be able to confirm volume control required once we receive the survey and geotechnical report, however the site will require a volume control component based on CDWM regulations. Due to site constraints the most suitable option for the site is to utilize the parking stalls for a best management practice. Permeable pavers are anticipated to be used in the non-ADA parking stalls.
- D. Detention
 1. Detention is anticipated to be handled in a subsurface detention tank. Due to the limited amount of site area, a tank is the best economical option for this development. Other detention options such as permeable paver, oversized RCP would generate an already large amount of haul off.
7. Underground Utility Improvements
 - A. The new Annex will require sanitary, storm, electrical, gas, and water services.
 - B. Electric Service is anticipated to be pulled from the existing city line at the east property line. The primary will be pulled to will be feed to a new transformer. Location of transformer and service is to be determined.
 - C. Gas Service. A new gas service will be provided. Location of service is to be determined. Coordination with Peoples Gas will be required.
 - D. Water. The existing water service at the Northeast corner of the existing building is to be upsized to accommodate the new annex. The new Annex will require its own service connection. The City Water main is located in the west sidewalk of Sacramento Ave. It is anticipated that the service will be greater than 100' long. Coordination with the Department of Water Management is required for the service to determine if a Hot Box and above ground RPZ is required for this service. Coordination with the Department of Water Management will be required for all water service taps and terminations.
 - E. Storm Service. It is assumed that all roof drains and existing pavement drainage is in good condition and will remain as is. A new connection from the proposed detention system(s) will be provided to the 12" sewer at Delphia Ave.
8. Outstanding Items Required for Civil Engineering Design:
 - A. A boundary and topographic survey with 3D, digital, topographic information and underground utility information, in .dwg format.
 - B. Geotechnical report outlining soil profiles, water table, pavement/earthwork recommendations, etc.
 - C. Environmental Remedial Action Plan.
 - D. OUC Atlases sent to Surveyor by City of Chicago.
 - E. Ground Penetrating Radar.

Landscape

Project Summary

- A. Existing Parcel
 - A. The referenced project is located at the Southwest corner of the intersection of W Estes Avenue and N Sacramento Avenue. The project encompasses roughly 3.84 acres. The site is comprised of an existing asphalt parking lot and play lot, single-story school building, playground area and lawn areas covering roughly 50% of the proposed project site. Some interior and perimeter landscaping exist on site.
 - B. Proposed Project
 - A. The scope of the school project is to construct a new Annex to the south of the existing school, removing the playground and a portion of the asphalt play area. The project will add a new parking lot and fire lane around the building's west side with access at two locations from N Sacramento Ave.
 - B. The landscape design shall be in accordance with the Chicago Public School Program, Public Building Commission of Chicago Site Development Guidelines, and the Chicago Landscape Ordinance. Landscaping shall be designed to complement the adjacent setting and proposed annex and is anticipated to include code required parkway and parking lot landscape, building foundation landscape around the annex, and landscape restoration for disturbed areas of the site. Additionally, pedestrian hardscape and landscape planters are included to blend the new and existing site improvements while improving pedestrian safety and paths of travel across the central portion of the site to the parking lot and playlot if necessary.
2. Basis of design for landscape architecture improvements:
- A. Site Plantings
 - A. All proposed plantings within the limit of construction will be adaptive and drought tolerant species. Plantings shall include shrubs, ornamental grasses, perennials, and ground covers. Trees shall be min. 4" caliper for shade trees, 10' ht. for ornamental trees and evergreen trees. Tree pit areas shall be dug 2x the size of the rootball and backfilled with amended topsoil. Shrub, perennial and groundcover planting beds shall be backfilled with 24" of pulverized topsoil with required amendments.
 - B. Parkway Planting:
 - A. The existing parkway planting shall be assessed in detail by the Landscape Architect and additional trees provided as needed to meet the requirements of the Chicago Landscape Ordinance. Pending receipt of the final topographic survey, we estimate the following will be required:
 - Two (2) – 4" caliper shade trees will be required to supplement the existing parkway trees along North Sacramento Ave.
 - Two (2) existing street trees will need to be removed. One due to the new vehicular access drive and one poor quality.
 - C. Parking Area:
 - A. The proposed parking lot will be designed to comply with the requirements of the Chicago Landscape Ordinance. This will include the following:

Parking Lot and Vehicular Use Area Screening Requirements:

 - The proposed parking lot will be designed to comply with the requirements of the Chicago Landscape Ordinance. Since proposed parking is not adjacent to public ROW, perimeter trees, hedge screening and ornamental fence are not required.
 - Provide 655' of 6' wood board on board fence along the west property line.
 - Provide a 20' wide manual slide gate at the two (2) parking lot entrances.

Internal Parking Lot Landscape Requirements:

- Required internal landscape area of parking lots and vehicular use areas vary as a function of size. Parking lots over 30,000 square feet: Internal landscaped area equal to 10% of total area, which will be approximately 3,277 square feet of internal landscape.
- One (1) tree per 125 SF of required internal landscaped area, exclusive of tree planting required in perimeter landscaped area, for a total of 27 interior trees.
- Minimum two-foot (2'-0") excavation below the parking surface.
- Backfill internal islands with topsoil to top of curb, and mound topsoil up another six (6) inches above top of surrounding curb.
- Use spreading canopy trees, to increase shade and reduce "urban heat island" effect.

D. Irrigation:

- A. Hose bibs will be installed at the new annex building and parking lot to water site landscape during plant establishment period and extreme periods of drought. Assume a minimum of six hose bibs spaced around the annex and parking lot to ensure coverage as required by the Landscape Ordinance.

E. Site Furnishings:

- A. Site furnishings will be distributed throughout the site and adjacent the annex to accommodate programming for the facility as well as user needs and comfort. Furnishings may include benches, bicycle racks and trash receptacles.
- B. Provide a 2,500 SF curbed playground area with a 3-12 playground structure and poured in place rubber surfacing.

F. Green Roof:

- A. No green roof is proposed as part of this project.

3. LEED:

- A. LEED certification requirements to be determined by PBC and architect.

4. Permits / Approvals:

- A. It is anticipated that the landscape scope of this project will be permitted through the following agencies:
 - City of Chicago Department of Buildings – Landscape Zoning Review
 - City of Chicago Department of Streets and Sanitation – Bureau of Forestry

Decatur ES Annex**SD Specification Table of Contents**

Note: AOR to edit/update as project progresses

BOOK 3: Volume 1**DIVISION 00 - INTRODUCTORY INFORMATION**

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
00 00 00	PBC Project Manual Cover Page	PBC	01_01/01/14	Place-holder - Confirm if updated specification available from PBC
00 01 10	Table of Contents	PBC	01_08/18/14	
00 30 00	Information Available to Bidders	AOR	N/A	Added back titles of environmental reports per PBC review comment, referenced location in Division 2.
00 30 00A	Attachment A - Subsurface Exploration, Geotechnical Report & Percolation Tests <i>(Hard Copy - Printed on Yellow Paper)</i>	Geotech	N/A	Environmental report information included with Division 2, by CCA

DIVISION 01 - GENERAL REQUIREMENTS

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
01 14 10	Pre-Construction Mockup	PBC	01_07/31/10	Provide detail on project drawings
01 14 11	Construction Operations and Site Utilization Plan	CPS	09_04/04/16	PBC PM to edit after initial drafting by AOR
01 35 60.1	LEED Requirements	PBC	04_09/06/12	Edit for LEED v4 - master is set up for LEED 2009
01 35 60a	Attachment A – Materials Credit Documentation Sheet	PBC	04_08/17/08	Edit for LEED v4 - master is set up for LEED 2009
01 35 60b	Attachment B – Low Emitting Mtls. Credits Documentation Sheet	PBC	01_05/15/13	Edit for LEED v4 - master is set up for LEED 2009
01 35 60b ALT	Attachment B ALT - Low Emitting Mtls. Credits Documentation Sheet	PBC	01_05/15/13	Edit for LEED v4 - master is set up for LEED 2009
01 35 60c	Attachment C – LEED Checklist for Schools v.2009	PBC	01_01/01/09	Edit for LEED v4 - master is set up for LEED 2009
01 35 60d	Attachment D – LEED BD+C Calculator v.2012	PBC	04_08/01/12	Edit for LEED v4 - master is set up for LEED 2009
01 35 61	LEED Coordinator	PBC	01_09/10/12	
01 35 62	Erosion and Sedimentation Control	PBC	01_09/14/12	
01 35 66	Commissioning (Cx) Submittal Procedures	CPS	01_08/17/08	CxA to author / edit - coordinate as req'd
01 35 67	Commissioning (Cx) Project Record Documents	CPS	01_08/17/08	CxA to author / edit - coordinate as req'd
01 35 68	Commissioning (Cx) Operation and Maintenance Data	CPS	01_02/28/06	CxA to author / edit - coordinate as req'd
01 35 69	Commissioning (Cx) Process	CPS	01_08/17/08	CxA to author / edit - coordinate as req'd
01 35 70	Commissioning (Cx) Pre-Functional Checklists	CPS	01_08/17/08	CxA to author / edit - coordinate as req'd
01 35 71	Commissioning (Cx) Functional Performance Testing	CPS	01_08/17/08	CxA to author / edit - coordinate as req'd
01 50 10	Commission Representative Field Office	PBC	03_11/24/09	
01 52 40	Construction Waste Management and Disposal	PBC	02_09/18/13	Environmental Consultant to review when drafted by AOR
01 56 11	General Dust, Fume, and Odor Control	CPS	01_01/21/10	Revise all references of "Board" to "Commission"
01 56 39	Temporary Tree and Plant Protection	PBC	01_05/15/13	
01 57 15	Integrated Pest Management	PBC	01_09/11/11	Missing from PBC TOC in transfer
01 70 71	Final Cleaning - Schools	PBC	01_10/20/10	
01 73 29	Cutting and Patching	CPS	03_07/20/09	
01 79 00	Demonstration and Training	CPS	03_07/20/09	
	Vibration Monitoring			Confirm if required
	Settlement Monitoring			Confirm if required

DIVISION 02 – EXISTING CONDITIONS

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
02 24 00	Environmental Assessment	EC		Authored by EC
02 24 00-A	Phase I Environmental Property Assessment	EC		To be available on CD
02 24 00-A	Phase II Limited Subsurface Investigation	EC		If required, to be available on CD
02 24 00-A	Ground Penetrating Radar Survey	EC		If required, To be available on CD
02 24 00-A	Phase I Environmental Site Assessment	EC		To be available on CD
02 24 00-A	Comprehensive Site Investigation / Remedial Objectives Report / Remedial Action Plan	EC		If required, to be available on CD
02 26 00	Hazardous Materials Assessment	EC		
02 41 19	Selective Demolition	CPS	02_01/21/08	
02 46 60	Drilled Piers (Caissons)	CPS	02_01/21/08	
02 82 14	Asbestos Abatement - Interiors	EC		If required.
02 82 115	Asbestos Abatement - Exteriors	EC		If required.
02 83 19.13	Lead-Based Paint Abatement	EC		If required.
02 86 13	Hazardous and Universal Waste Management	EC		If required.

DIVISION 03 - CONCRETE				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
03 30 00	Cast-In-Place Concrete	CPS	02_04/10/08	

DIVISION 04 - MASONRY				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
04 20 00	Unit Masonry	CPS	04_04/02/10	Confirm exterior doors adjusted to masonry module, floor-to-floor is not on masonry module if stair shafts are CMU Edit-in new masonry anchors for deeper wall cavity.

DIVISION 05 - METALS				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
05 12 00	Structural Steel Framing	CPS	02_04/10/08	
05 21 00	Steel Joist Framing	CPS	02_04/10/08	
05 31 13	Steel Floor Decking	CPS	02_04/10/08	
05 31 23	Steel Roof Decking	CPS	02_04/10/08	
05 40 00	Cold-Formed Metal Framing	CPS	02_04/10/08	
05 50 00	Metal Fabrications	CPS	04_03/22/13	
05 51 10	Metal Stairs	AOR	N/A	If not included in Metal Fabrications

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
06 10 53	Miscellaneous Rough Carpentry	CPS	03_04/10/08	
06 16 43	Gypsum Sheathing	CPS	02_04/10/09	
06 40 23	Interior Architectural Woodwork	CPS	03_04/10/08	There are several outdated mfrs/products in this spec that need review / edit by AOR
06 65 00	Solid Surface Cladding	AOR	N/A	All first floor corridors and in dining room

DIVISION 07 - THERMAL AND MOISTURE PROTECTION				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
07 01 50.63	Roof Patching and Repair	AOR	N/A	As required for work at existing building
07 11 13	Bituminous Dampproofing	CPS	02_08/20/07	
07 21 00	Thermal Insulation	CPS	03_04/10/08	Delete BATT insulation, edit-in spray-polyurethane foam; low-rise & thermal barrier materials
07 27 00.1	Self-Adhering Air and Vapor Barrier	PBC	01_02/28/10	
07 27 00.2	Fluid-Applied Air and Vapor Barrier	PBC	01_02/28/10	
07 52 00	Modified Bituminous Membrane Roofing	CPS	04_11/08/10	Edit in new CPS address
07 62 00	Sheet Metal Flashing and Trim	CPS	04_01/21/10	
07 72 00	Roof Accessories	CPS	02_08/20/07	
07 72 01	Manufactured Roof Specialties	AOR	N/A	Edit and include at AOR's discretion
07 81 16	Spray-Applied Fire-Resistive Materials	CPS	02_08/20/07	Change name to spray-applied fire-resistive materials, was
07 84 13	Penetration Firestopping	CPS	03_04/10/08	
07 84 14	Fire Resistive Joint Systems	AOR	N/A	
07 92 00	Joint Sealants	CPS	03_04/10/08	Numerous updates required.
07 95 13	Expansion Joint Assemblies	CPS	02_08/20/07	Numerous updates required.

DIVISION 8 - OPENINGS				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
08 11 13	Hollow Metal Doors and Frames	CPS	03_04/10/08	
08 14 16	Flush Wood Doors	CPS	03_04/10/08	
08 15 00	Fiberglass Reinforced Polyester (FRP) Flush Door Assemblies	CPS	01_02/28/06	Electrical, pump room doors
08 31 13	Access Doors and Frames	CPS	02_08/20/07	
08 41 13	Aluminum-Framed Entrances and Storefronts	CPS	03_04/10/08	
08 51 13	Aluminum Windows	CPS	04_01/16/14	
08 56 57	Window Guards - Exterior	CPS	02_01/05/07	
08 71 00	Door Hardware	CPS	04_04/10/09	
08 71 13	Automatic Door Operators	CPS	01_07/27/07	
08 80 00	Glazing	AOR	N/A	Consider AOR authored stand-alone spec (in lieu of glass
08 91 00	Louvers	CPS	02_02/20/07	

DIVISION 9 - FINISHES				
<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
09 01 22	Plaster Patching	CPS	02_08/20/07	At new link connection

09 21 16	Gypsum Board Assemblies	CPS	03_04/10/08	
09 21 19	Gypsum Board Shaft Wall Assemblies	CPS	03_04/10/08	
09 30 00	Tiling	CPS	03_04/10/08	Numerous mfr/product edits required
09 51 13	Acoustical Panel Ceilings	CPS	03_01/13/14	
09 65 13	Resilient Base and Accessories	CPS	03_04/10/08	
09 65 19	Resilient Tile Flooring and Moisture Mitigation System	AOR	N/A	Edit moisture-mitigation system into CPS standard product spec
09 65 20	Solid Vinyl Flooring And Moisture Mitigation System	AOR	N/A	Edit moisture-mitigation system into CPS standard product spec
09 68 13	Carpet Tile	AOR	N/A	
09 77 23	Fabric-Wrapped Panels	CPS	02_08/20/07	Coordinate requirements with acoustic consultant as required to meet LEED acoustic req'mts
09 91 00	Painting	CPS	02_01/16/14	
09 91 03	Surface Preparation for Renovation Painting	CPS	01_02/28/06	
09 91 05	Renovation Painting	CPS	01_02/28/06	
09 96 30	Silicone Elastomeric Coating	AOR	N/A	May be needed at roof parapets
09 97 24	Epoxy Floor Coating Systems	AOR	N/A	Storage rooms, mechanical rooms

DIVISION 10 - SPECIALTIES

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
10 11 00	Visual Display Units	CPS	02_04/10/08	
10 14 03	Interior Signage	CPS	02_08/20/07	
10 14 05	Exterior Signage	CPS	02_08/20/07	
10 14 07	Exterior Signage - Emergency	CPS	02_08/20/07	
10 14 19	Dimensional Letter Signage	CPS	02_08/20/07	
10 21 13	Toilet Compartments	CPS	02_04/10/08	
10 28 13	Toilet Accessories	CPS	03_01/27/11	
10 44 03	Installation of Fire Extinguishers and Cabinets	CPS	01_02/28/06	Specify and tag on architectural drawings reference location on this specification.
10 51 13	Metal Lockers - Elementary Schools	CPS	04_04/10/08	

DIVISION 11 - EQUIPMENT

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
11 14 00	Food Service Equipment	Consultant	N/A	Elevation drawings of food line required, 1/4"=1'-0"
11 52 13	Projection Screens	CPS	02_08/20/07	
11 68 00	Playground Equipment	Landscape	N/A	
11 82 26	Facility Waste Compactors	CPS	03_01/21/10	

DIVISION 12 - FURNISHINGS

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
12 24 13	Roller Window Shades - Manual	CPS	03_08/22/07	
12 32 00	Manufactured Wood Casework	CPS	03_04/10/08	
12 35 53	Wood Laboratory Casework	CPS	03_04/28/10	
12 48 13	Entrance Floor Mats	CPS	02_08/20/07	CPS requested alternate products to be proposed in lieu of standard spec: Proposed mfr/model: 1) Nystrom: Rugged Scrub M-600RS with F-3 aluminum recessed frame. 2) Construction Specialties: Pedimat AA M2EC with aluminum level base frame. Coordinate / provide latex screed and slab depression as per mfr. requirements
12 93 00	Site Furnishings	CPS	01_03/18/14	

DIVISION 13 - SPECIAL CONSTRUCTION (NOT USED)

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
13 48 25	Sound Control Panel System	AOR	N/A	Confirm if needed to meet acoustic criteria.

DIVISION 14 - CONVEYING EQUIPMENT

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
14 26 00	Limited-Use/Limited-Application (LULA) Elevators	CPS	02_09/30/10	CPS is updating this specification, obtain latest drawing and specification information from CPS.

DIVISION 21 - FIRE SUPPRESSION

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
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21 05 00	Common Work Results For Fire Suppression	EOR
21 05 13	Common Motor Requirements For Fire Suppression	EOR
21 10 00	Water-Based Fire-Suppression Systems	EOR
21 32 13	Electric-Drive, Vertical-Turbine Fire Pumps	EOR

DIVISION 22 - PLUMBING		Author	Ctrl Rev	Notes
22 05 00	Common Work Results For Plumbing	EOR		
22 05 13	Common Motor Requirements For Plumbing Equipment	EOR		
22 05 16	Expansion Fittings And Loops For Plumbing	EOR		
22 05 19	Meters And Gages For Plumbing Piping	EOR		
22 05 23	General-Duty Valves For Plumbing Piping	EOR		
22 05 29	Hangers And Supports For Plumbing Piping And Equipment	EOR		
22 05 53	Identification For Plumbing Piping And Equipment	CPS	02_05/10/13	
22 07 00	Plumbing Insulation	CPS	04_05/22/08	
22 11 16	Domestic Water Piping	CPS	01_02/28/06	
22 11 19	Domestic Water Piping Specialties	CPS	01_02/28/06	
22 11 23	Domestic Water Pumps	CPS	01_02/28/06	
22 13 16	Sanitary Waste And Vent Piping (Hub & Spigot Cast Iron)	CPS	01_02/28/06	
22 13 19	Sanitary Waste Piping Specialties	EOR		
22 14 13	Facility Storm Drainage Piping	CPS	01_02/28/06	
22 14 23	Storm Drainage Piping Specialties	CPS	01_02/28/06	
22 14 29	Sump Pumps	CPS	01_02/28/06	
22 34 00	Fuel-Fired Domestic Water Heaters	EOR		
22 40 00	Plumbing Fixtures	CPS	02_02/06/09	
22 47 00	Drinking Fountains And Water Coolers	EOR		

DIVISION 23 - HEATING VENTILATION AND AIR CONDITIONING		Author		
23 05 03	General Provisions For Hvac Work	EOR		
23 05 05	Basic Hvac Materials And Methods	CPS	03_08/20/10	
23 05 13	Common Motor Requirements For Hvac Equipment	CPS	01_02/28/06	
23 05 15	Motors - Variable Frequency Controllers	CPS	02_03/18/11	
23 05 16	Expansion Fittings And Loops For Hvac Piping	CPS	01_02/28/06	
23 05 19	Meters And Gauges For Hvac Piping	CPS	03_08/20/10	
23 05 23	General-Duty Valves For Hvac Piping	CPS	01_02/28/06	
23 05 29	Hangers And Supports For Piping And Equipment	CPS	01_02/28/06	
23 05 48	Vibration Controls For Hvac	CPS	01_02/28/06	
23 05 53	Identification For Hvac Piping And Equipment	CPS	02_05/10/13	
23 05 93	Testing, Adjusting, And Balancing For Hvac	CPS	03_03/18/11	
23 07 00	Hvac Insulation	CPS	07_05/31/13	
23 09 20	Building Automation System-Bas	CPS	06_03/18/11	
23 09 21	Building Automation System-Basic Materials, Interface Devices, and Sensors	CPS	06_04/27/10	
23 09 26	Building Automation System - Sequence Of Operation	CPS	04_02/28/08	
23 11 23	Facility Natural-Gas Piping	EOR		
23 21 13	Hydronic Piping	CPS	05_08/20/10	
23 21 23	Hydronic Pumps	CPS	01_02/28/06	
23 23 00	Refrigerant Piping	CPS	02_08/20/10	
23 25 00	Hvac Water Treatment	CPS	02_03/18/11	
23 31 13	Metal Ducts	CPS	03_08/20/10	
23 33 00	Air Duct Accessories	CPS	02_12/06/09	
23 34 23	Hvac Power Ventilators	CPS	01_02/28/06	
23 36 00	Air Terminal Units	CPS	02_12/03/09	
23 37 13	Diffusers, Registers, And Grilles	CPS	01_02/28/06	
23 38 13	Commercial-Kitchen Hoods	EOR		
23 52 16	Condensing Boilers	CPS	06_04/13/10	
23 64 23	Scroll Water Chillers	CPS	03_12/06/09	
23 74 14	Custom-Packaged Outdoor, Central-Station Air-Handling	CPS	05_11/06/09	
23 81 26	Split-System Air-Conditioners	CPS	01_08/20/10	
23 82 39.13	Cabinet Unit Heaters	CPS	01_02/28/06	
23 82 39.16	Propeller Unit Heaters	CPS	01_02/28/06	

DIVISION 26 - ELECTRICAL		Author		
26 05 03	General Requirements For Electrical Systems	CPS	01_02/28/06	
26 05 05	Basic Electrical Materials and Methods	CPS	03_07/23/14	

26 05 11	Conductors and Cables for Electrical Systems	CPS	02_07/23/14
26 05 26	Grounding and Bonding for Electrical Systems	CPS	02_03/30/06
26 05 29	Hangers and Supports for Electrical Systems	CPS	01_02/28/06
26 05 33	Raceways and Boxes for Electrical Systems	CPS	03_04/13/09
26 05 36	Communications Optical Fiber Backbone Cabling	EOR	
26 05 43	Communications Horizontal Cabling	EOR	
26 05 53	Identification for Electrical Systems	CPS	02_03/30/06
26 05 73	Overcurrent Protective Device Coordination Study	CPS	01_02/28/06
26 08 00	Distributed Audio-Video Communications Systems	EOR	
26 08 13	Testing of Electrical Systems	CPS	01_02/28/06
26 09 23	Lighting Control Devices	CPS	01_02/28/06
26 22 00	Low-Voltage Transformers	CPS	01_02/28/06
26 24 13	Switchboards	CPS	01_02/28/06
26 24 16	Panelboards	CPS	01_02/28/06
26 27 13	Electricity Metering	EOR	
26 27 26	Wiring Devices	CPS	02_12/04/08
26 28 13	Fuses	CPS	01_02/28/06
26 28 16	Enclosed Switches And Circuit Breakers	CPS	01_02/28/06
26 29 13	Enclosed Controllers	CPS	01_02/28/06
26 29 23	Variable Frequency Motor Controllers	EOR	
26 43 00	Surge Protection Devices	CPS	02_08/20/10
26 51 00	Interior Lighting	CPS	02_02/26/14
26 56 00	Exterior Lighting	CPS	02_02/26/14

DIVISION 27 - COMMUNICATIONS

		<i>Author</i>	
27 05 03	Communications General Requirements	CPS	02_07/23/14
27 05 53	Identification For Communication Systems	CPS	02_07/23/14
27 08 00	Commissioning Of Communications	CPS	02_07/23/14
27 11 16	Communications Cabinets Racks And Enclosures	CPS	06_07/23/14
27 13 00	Communication Backbone Cabling	EOR	
27 13 13	Communications Copper Backbone Cabling	CPS	02_03/30/10
27 13 23	Communications Optical Fiber Backbone Cabling	CPS	04_07/23/14
27 15 00	Communications Horizontal Cabling	EOR	
27 15 00.19	Data Communications Horizontal Cabling	CPS	03_07/23/14
27 41 33	Master Antenna Television System	EOR	
27 51 00	Distributed Audio-Video Communications Systems	CPS	01_02/28/06
27 51 16	Public Address Systems	CPS	01_02/28/06
27 53 13	Master Clock Systems	CPS	03_07/23/14
27 53 15	Intercom Master Clock And Program Equipment Interface	CPS	05_07/23/14
27 60 13	Wireless Access Points For Data Communications	CPS	02_07/23/14

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

		<i>Author</i>	
28 13 13	Access Control System (Small Installation)	CPS	02_07/23/14
28 16 00	Intrusion Detection	CPS	03_07/23/14
28 23 03	Cctv System And Components	CPS	02_03/10/10
28 23 09	Digital Video Surveillance System And Components (For New Schools)	CPS	05_08/15/12
28 31 00	Fire Detection And Alarm	CPS	03_11/08/10
28 35 00	Refrigerant Detection And Alarm	CPS	01_11/06/09

DIVISION 31 - EARTHWORK

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
31 13 00	Tree and Landscape Protection	Landscape	N/A	
31 22 14	Earthwork	CPS	05_01/21/10	
31 23 17	Excavating, Backfilling and Compacting for Utilities	CPS	03_06/30/08	

DIVISION 32 - EXTERIOR IMPROVEMENTS

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
32 12 16	Hot Mix Asphalt paving	CPS	01_11/08/10	
32 31 19	Decorative Metal Fences and Gates	CPS	04_04/05/10	
32 92 23	Sodding	CPS	02_08/17/07	
32 93 11	Plantings	CPS	04_06/30/08	
32 31 20	View Blocking Fences and Gates	AOR	N/A	Landscape ordinance required gates at refuse / compactor enclosure

DIVISION 33 - SITE UTILITIES

<i>Section</i>	<i>Title</i>	<i>Author</i>	<i>Ctrl Rev</i>	<i>Notes</i>
33 10 13	Water Service	CPS	03_01/21/08	
33 41 00	Sewerage and Drainage	CPS	03_08/28/14	

Key Phrases Authorized Commission Representative
For Spec Edit: Commission Representative
Board Representative
Authorized Board Representative
Substantial Completion
Preliminary Acceptance
Pre-installation Conference
Book 2 Section 11.03(9).



LEED v4 for BD+C: Schools

Project Checklist

Project Name: Decatur Elementary School Annex

Date: 10.05.2018

Y ? N



Credit Integrative Process

1

10	1	19	Location and Transportation	15
		15	Credit LEED for Neighborhood Development Location	15
1			Credit Sensitive Land Protection	1
		2	Credit High Priority Site	2
4	1		Credit Surrounding Density and Diverse Uses	5
4			Credit Access to Quality Transit	4
		1	Credit Bicycle Facilities	1
1			Credit Reduced Parking Footprint	1
		1	Credit Green Vehicles	1

3	2	7	Sustainable Sites	12
Y			Prereq Construction Activity Pollution Prevention	Required
Y			Prereq Environmental Site Assessment	Required
	1		Credit Site Assessment	1
	2		Credit Site Development - Protect or Restore Habitat	2
	1		Credit Open Space	1
	3		Credit Rainwater Management	3
2			Credit Heat Island Reduction	2
1			Credit Light Pollution Reduction	1
	1		Credit Site Master Plan	1
1			Credit Joint Use of Facilities	1

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

10	0	21	Energy and Atmosphere	31
Y			Prereq Fundamental Commissioning and Verification	Required
Y			Prereq Minimum Energy Performance	Required
Y			Prereq Building-Level Energy Metering	Required
Y			Prereq Fundamental Refrigerant Management	Required
3		3	Credit Enhanced Commissioning	6
6		10	Credit Optimize Energy Performance	16
	1		Credit Advanced Energy Metering	1
	2		Credit Demand Response	2
	3		Credit Renewable Energy Production	3
1			Credit Enhanced Refrigerant Management	1
	2		Credit Green Power and Carbon Offsets	2

5	3	5	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
Y			Prereq Construction and Demolition Waste Management Planning	Required
		5	Credit Building Life-Cycle Impact Reduction	5
1	1		Credit Building Product Disclosure and Optimization - Environmental Product Declarations	2
1	1		Credit Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
1	1		Credit Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit Construction and Demolition Waste Management	2

7	4	5	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
Y			Prereq Minimum Acoustic Performance	Required
		2	Credit Enhanced Indoor Air Quality Strategies	2
1	1	1	Credit Low-Emitting Materials	3
1			Credit Construction Indoor Air Quality Management Plan	1
1	1		Credit Indoor Air Quality Assessment	2
1			Credit Thermal Comfort	1
2			Credit Interior Lighting	2
	2	1	Credit Daylight	3
1			Credit Quality Views	1
	1		Credit Acoustic Performance	1

2	1	0	Innovation	6
1	1		Credit Innovation	5
1			Credit LEED Accredited Professional	1

0	0	4	Regional Priority	4
		1	Credit Regional Priority: Specific Credit	1
		1	Credit Regional Priority: Specific Credit	1
		1	Credit Regional Priority: Specific Credit	1
		1	Credit Regional Priority: Specific Credit	1

42	11	69	TOTALS	Possible Points: 110
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Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

Concept Design – Code Status Report

PROJECT:	Decatur Classical (Elementary) School Annex 7030 N. Sacramento Ave. Chicago, IL 60645
DATE:	October 5, 2018
SMNG-A PROJECT NO.:	1813

1. After preparing a program test-fit SMNG A Ltd. prepared a preliminary zoning analysis. The findings were provided to PBC for review by the zoning attorney. A meeting between the zoning attorney (Neal & Leroy) and DA (Todd Niemiec, SMNG A Ltd.) occurred on 9/28, we presented to Noah Szafrenic and Emily Thrun with the Department of Planning and Development (DPD). Below are the salient points of the meeting:
 - a. Site is over 2-acres triggering a PD, however, existing use is established and subject to consideration for PD waiver for the new development.
 - b. PD is required by zoning, the project does not meet the requirements for a PD waiver; the planned facility exceeds the bulk and area and height of the principal building.
 - c. DPD requests CPS/PBC to investigate and propose acceptable interim (temporary) parking arrangement as a condition of the PD. This information has been conveyed to both PBC and CPS for follow-up.
 - d. Noah confirmed that the rear-yard open space requirement for the underlying district does not apply to non-residential developments such as this project.
 - e. Project to be reviewed, on a preliminary basis by John Javorka for fire access evaluation.
2. Team corresponded with John Javorka, Chief Engineer for the Chicago Fire Department. A concept site plan was sent for his review. Below are the salient points of the meeting:
 - a. Based upon occupancy calculations the building requires frontage on one street plus two others; the proposed fire lane around the building satisfies the fire access requirement for the project.
 - b. John Javorka confirmed the turning radius for fire apparatus (fire-truck tower ladder type) is a nominal 50', however, an "auto-turn" analysis for the vehicle is required. Terra, our civil consultant for the DA phase has performed a preliminary auto turn analysis.
 - c. CFD will accept 'flipping' the parking lot to the inside of the fire lane along the west edge (between the fire lane and field) provided that access is maximized (do not park the entire frontage).
 - d. The existing building is not sprinklered, the annex shall be separated from the existing building with a 4-hour fire vestibule.
 - e. The existing building and annex shall be served by a single fire-alarm system.
 - f. The existing 'garage' / 'shed' structures may remain if the design permits, CFD takes no exception, however grading, access to and other considerations must be evaluated.
 - g. Survey should identify nearby public fire hydrants; CFD requires them to be within 300' of hydrant. Javorka will review when survey is provided but does not anticipate that additional private hydrants will be required.
 - h. Additional review is required when design progresses and will be required for PD.
3. At this time no meetings have yet been conducted with DOB regarding temporary exiting or other clarifications.
4. CPS has provided an EAC/ERC report to the design team which is in review. At this time no MOPD meetings have yet been scheduled or conducted.
5. A preliminary plumbing fixture calculation has been performed and is enclosed with this submission.

SCHEME A

1813 - DECATUR

10.05.2018

PLUMBING:

TOILETS:

CLASSROOMS + STAFF:

FIRST TOTAL: 218
 SECOND TOTAL: 273
BUILDING TOTAL: 491 OCCUPANTS

1 TO 10 1
 11 TO 25 2
 466 / 25 19

22 FIXTURES REQUIRED**11** REQUIRED PER SEX

11 Toilets 1st Floor
 11 Toilets 2nd Floor
 2 Unisex Staff Toilets
24 TOTAL PROVIDED

22 TOTAL FIXTURES REQUIRED**19 TOTAL FIXTURES PROVIDED**LAVATORIES:

CLASSROOMS + STAFF:

BUILDING TOTAL: 491 OCCUPANTS

1 LAVATORY REQUIRED PER 40 OCCUPANTS

10 Lavatories 1st Floor
 9 Lavatories 2nd Floor
19 TOTAL

13 LAVATORIES REQUIRED**19 LAVATORIES PROVIDED**DRINKING FOUNTAINS:

CLASSROOMS + STAFF:

BUILDING TOTAL: 491

1 DRINK. FOUNT. F OCCUPANTS 100 OCCUPANTS

5 Drinking Fountains 1st Floor
 3 Drinking Fountains 2nd Floor
8 TOTAL

5 DRINKING FOUNTAINS REQUIRED**8 DRINKING FOUNTAINS PROVIDED**

EXISTING BUILDING

1813 - DECATUR

10.05.2018

PLUMBING:

TOILETS:

CLASSROOMS + STAFF:

FIRST	TOTAL:	531	
	BUILDING TOTAL:	531 OCCUPANTS	
		1 TO 10	1
		11 TO 25	2
		506 / 25	21
			24 FIXTURES REQUIRED
			12 REQUIRED PER SEX

17	Toilets 1st Floor		
0	Toilets 2nd Floor		
1	Unisex Staff Toilets		
18	TOTAL PROVIDED	24 TOTAL FIXTURES REQUIRED	18 TOTAL FIXTURES PROVIDED

LAVATORIES:

CLASSROOMS + STAFF:

BUILDING TOTAL:	531 OCCUPANTS	
	1 LAVATORY REQUIRED PER	40 OCCUPANTS

9	Lavatories 1st Floor		
0	Lavatories 2nd Floor		
9	TOTAL	14 LAVATORIES REQUIRED	9 LAVATORIES PROVIDED

DRINKING FOUNTAINS:

CLASSROOMS + STAFF:

BUILDING TOTAL:	531	
	1 DRINK. FOUNT. F OCCUPANTS	100 OCCUPANTS

5	Drinking Fountains 1st Floor		
0	Drinking Fountains 2nd Floor		
5	TOTAL	6 DRINKING FOUNTAINS REQUIRED	5 DRINKING FOUNTAINS PROVIDED