SCHOOL DISTRICT PRELIMINARY SCOPE OF WORK

Project:	Preliminary Scope of Work for High School Facilities
Project No.:	-
By:	AV
Date:	02.01.16
Re:	Central High School
	Centennial High School
Distribution:	file

STATISTICS	ENROLLMENT (2015-16)	Stories	Years of Construction	SQUARE FEET	SITE ACRES
Central High School	1220	3 plus basement	1935, 1956, 1998	205,276	5.9
Centennial High School	1422	2 plus basement and penthouse	1963, 1967	202,577	23.3
Centennial Portable*			2014	1,776	
(2 classrooms)					

Numbers are from September 30, 2015 Fall Housing Report and do not include students at alternative placement sites. Student enrollment numbers can fluctuate on a daily basis.

^{*}The District is considering the need for one (1) additional portable at Centennial and one (1) at Central for the 2016-17 school year. Each portable provides two (2) classrooms.

GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH SCHOOL	CENTENNIAL HIGH SCHOOL
SITE DEVELOPMENT		
Utilities		
 New fire service at unsprinkled buildings and/or additions will likely be needed New construction will need to be fire sprinkled 	The 1998 addition is fully sprinkled. There are some local sprinklers in select areas (under stairs, in a storage room, conference room, vestibule and electrical room).	Building is not sprinkled
Increase sanitary service size for additions as needed	To be determined	To be determined
Existing gas service improvements may be needed for addition/renovation work	Has gas service currently but needs to be upgraded	Has gas service currently. Ameren changed the meter in 2012-13. It is sized for the water heater, boiler and kitchen equipment at the building now. Upgrades will be needed.
BUILDING ENVELOPE IMPROVEMENTS		
Doors and Windows		
Replace exterior windows with new aluminum windows		
 New window treatments Replace exterior doors, frames and hardware (hollow metal at service areas, aluminum storefront at entries) 		
Replace exterior door lock cores with new 39AD security keyway cores	Needs to be upgraded	Needs to be upgraded



GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH SCHOOL	CENTENNIAL HIGH SCHOOL
Concrete and Masonry		
Masonry repairs as needed (tuckpointing, cleaning, sealing)		
Moisture sealing at foundation walls as needed	Needs to be	
	reviewed	
Exterior Walls		
Air infiltration sealing (foam insulation)		
Soffit and fascia repairs		
Downspout drainage improvements		
Drainage improvements		
At existing perimeter foundation drain tiles if needed	There are various	Few known issues,
	drainage issues	if any
	around the whole	
	building that need	
	to be reviewed.	
Roofing restoration	Roof installation	Roof installation
	dates range from	dates range from
	1980-2010. The	2000-2009. The
	oldest roof areas	age of the
	are small canopy	penthouse roof is
	areas. Most of the	unknown. The
	roof areas date to	pool roof is from 2000. The 2009
	2000, 2003, 2004, 2006 and 2010.	roof areas include
	There are no roof	the gym and locker
	overflow drains on	rooms. Most of
	the 1998 addition.	the other roof
	the 1998 addition.	areas date to 2004.
		There are no roof
		overflow drains.



are wood. Plan on door frame replacement throughout. Electrical New lighting with occupancy sensors throughout and daylighting controls New lighting with occupancy sensors throughout and daylighting controls Possible of the property o	GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH	CENTENNIAL HIGH
Full interior door and hardware replacement Replace outdated building switchgear		SCHOOL	SCHOOL
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are wood. Plan on door frame replacement throughout. Electrical New lighting with occupancy sensors throughout and daylighting controls New lighting with occupancy sensors throughout and daylighting controls 2012 lighting retrofit T12 to T8 lamps throughout. No occupancy sensors in classrooms. Gym lighting retrofit done. Increased power and data throughout Separate circuits for netbook charging carts Replace outdated building switchgear There are 2 main distribution panels to the building feeding 120/208 volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be	Doors and Hardware		
New lighting with occupancy sensors throughout and daylighting controls 2012 lighting retrofit T12 to T8 lamps throughout. No occupancy sensors in classrooms. Gym lighting retrofit done. Increased power and data throughout Separate circuits for netbook charging carts Replace outdated building switchgear There are 2 main distribution panels to the building feeding 120/208 volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be		are wood. Plan on door frame replacement	Reuse existing hollow metal door frames if possible
retrofit T12 to T8 lamps throughout. No occupancy sensors in classrooms. Gym lighting retrofit done. Increased power and data throughout Separate circuits for netbook charging carts Replace outdated building switchgear There are 2 main distribution panels to the building feeding 120/208 volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be			
Separate circuits for netbook charging carts Replace outdated building switchgear There are 2 main distribution panels to the building feeding 120/208 The volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be	New lighting with occupancy sensors throughout and daylighting controls	retrofit T12 to T8 lamps throughout. No occupancy sensors in classrooms. Gym lighting retrofit	2009-10+/- classroom and office/corridor lighting retrofit completed T12 to T8 lamps. Occupancy sensors in classrooms. Gym lighting T5 retrofit done.
Separate circuits for netbook charging carts Replace outdated building switchgear There are 2 main distribution panels to the building feeding 120/208 The volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be	Increased power and data throughout		
distribution panels to the building feeding 120/208 Th volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be	Separate circuits for netbook charging carts		
		distribution panels to the building feeding 120/208 volt. 277/480 volt service is recommended for a building of this size. Parts no longer available and needs to be	There is 1 main distribution panel to the building. The panel does not have ground fault protection. The service is 277/480 volt. Parts no longer available and needs to be upgraded.
Provide additional exterior GFI electrical outlets	Provide additional exterior GFI electrical outlets	, 5	



GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH SCHOOL	CENTENNIAL HIGH SCHOOL
Provide additional exterior hose bibs		
Plumbing		
 Existing toilet room improvements – finishes only – does NOT trigger ADA code upgrades 		
(existing fixtures remain, existing water piping remains)		
Existing toilet room upgrades – will trigger ADA code upgrades		
New or renovated SPED toilet room		
New student group toilets adjacent to cafeteria		
New staff toilets		
Replace old drinking fountains with electric water coolers, including ADA fixtures		
Fire Protection		
Fire alarm – complete replacement to fully addressable system	Replaced in 2015	Replaced in 2012
Mechanical		
New air conditioning to eliminate window A/C units (geothermal or other appropriate system)	Majority of facility	The building has
	has no A/C. There	A/C. There are 2
	is a VAV/reheat	chillers in the
	system in the 1998	boiler room with 2
	addition. There is	cooling towers on
	a split DX system in	the roof. In 2009-
	the admin area. A	10+/- the cooling
	rooftop cooling	towers were
	unit was added in	changed out. The
	2011 to air condition the	control unit for both chillers is
	Academy.	being upgraded
	Academy.	summer 2016, as
		parts are no longer
		available. All 18
		AHUs are original
		to the building,
		rusting out and
		need to be
		replaced.



GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH	CENTENNIAL HIGH
	SCHOOL	SCHOOL
Replace pneumatic controls with DDC controls (direct digital controls) and tie into existing BAS system (building automation system) The District is working on 1 building/year to slowly change these out. Next up are Early Childhood Center, Barkstall and Stratton. Stratton.	The controls are pneumatic retrofitted with DDC overlay. A head end controller is needed. Complete replacement of the actuators, valves and valve tops is needed.	The controls are pneumatic retrofitted with DDC overlay. A head end controller was installed in 2008 - 10+/ Complete replacement of the actuators, valves and valve tops is needed.
Replace water heater	Domestic water heater installed is 30+ years old. There is an abandoned in place 1500 gallon storage tank in the boiler room. There are 3 water heaters for the dishwashers that are 30+ years old.	Domestic water heater installed in 2012. Pool heater installed in 2012. There is an electric booster heater for the dishwasher.
 Add carbon monoxide detectors (new 2016 State requirement) where required 		
Boiler	The south boiler was retubed in 2010+/	
Kitchen upgrades will be needed		Cooking kitchen for the whole district currently at Centennial HS



TECHNOLOGY AND COMMUNICATIONS New voice and data cabling throughout New intercom paging and clock system throughout New intercom paging and clock system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system throughout New VolP (voice over internet protocol) Toshiba phone system in 2013 with VolP Toshiba phones. Phone system is limited to offices. Classrooms do not have phones. Has new fob system was prequired Install multiple cell repeaters to enable improved cellular coverage within new and existing building areas New PolE (power over ethernet) switches as required New non PolE (power over ethernet) switches as required Expand existing security (burglar alarm) system New security cameras There are cameras in select corridors, stairs, lobbies and the cafeteria. Additional servers for IDF room(s) in addition for network	GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH SCHOOL	CENTENNIAL HIGH SCHOOL
New voice and data cabling throughout Needs to be done Installed 2013 New intercom paging and clock system throughout Needs to be done installed 2013. Clocks were not changed out with new paging system. Clocks still need to be upgraded. New VoIP (voice over internet protocol) Toshiba phone system throughout Replaced old Panasonic system in 2015 with VoIP Toshiba phones. Phone system is limited to offices. Classrooms do not have phones. New VoIP Toshiba phones. Phone system is limited to offices. Classrooms do not have phones. New card access key fob system throughout Has new fob system Has new fob system Install multiple cell repeaters to enable improved cellular coverage within new and existing building areas Has new fob system New PoE (power over ethernet) switches as required Update system New non PoE (power over ethernet) switches as required Update system New security cameras in select corridors, stairs, lobbies and the caftetria. There are cameras in select corridors, stairs, lobbies and the caftetria.			
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Additional servers for IDF room(s) in addition for network		the cafeteria.	the cafeteria.
	Additional servers for IDF room(s) in addition for network		



GENERAL SYSTEMS COMMENTS AND NEEDS TO CONSIDER	CENTRAL HIGH SCHOOL	CENTENNIAL HIGH SCHOOL
	30.1001	30.1.001
OWNER SOFT COSTS		
Technology Equipment		
New smart boards and projectors in addition		
New projection screens and projectors in gym and cafeteria		
New netbook charging carts in addition		
New netbooks in addition		
OPERATIONS AND MAINTENANCE COSTS		
Custodial		
Additional custodial staff for expanded building SF.		
Rule of thumb = 1 custodian per 23,000 SF of space is needed.		
Additional custodial closets will be needed for expanded facilities		
Additional cleaning equipment will be needed for expanded facilities		
Grounds		
 Additional grounds staff may be needed for expanded or new building campus. 		
 Additional grounds equipment for expanded or new building campus. 		
Additional grounds storage will be needed		
Maintenance		
 Additional maintenance staff (minimum of 2) will be needed for expanded facilities 		