PROJECT

JUVENILE DETENTION CENTER LOBBY REMODELING

5530 NORTHROCK DRIVE,
ROCKFORD, ILLINOIS 61103

OWNER

WINNEBAGO COUNTY

404 ELM STREET,
ROCKFORD, ILLINOIS 61101

STATE MAP
SCALE: N.T.S.

SITE LOCATION MAP
SCALE: N.T.S.

ARCHITECT OF RECORD	MECHANICAL / ELECTRICAL / PLUMBING			
RICHARD L. JOHNSON ASSOCIATES 4703 Charles Street Rockford IL. 61108 PHONE: 815/398-1231 FAX 815/398-1280 www.rljarch.com IL. Design Firm No. 187-000524 DRAWINGS: G101 thru A502 01-18-2018 STATE OF ILLINOIS RICHARD LEE JOHNSON 01-6141 LICENSED ARCHITECT EXPIRES 11-30-2018	SYSTEM DESIGN SERVICE 3600 EAST STATE STREET, SUITE 215 Rockford IL. 61108 PHONE: 815/399-3381 FAX 815/399-3383 www.SDSEGROUP.COM IL. Design Firm No. 184.004999 DRAWINGS: M101 thru M106, P101 thru P106, E101 thru E108 LICENSED PROFESSIONAL ENGINEER SCOTT JAY BAIER 062-059748 STATE OF ILLINOIS 18 JAN 2018 EXP 30 NOV 2019			

SHEET INDEX

TITLE SHEET

ARCHITECTURAL

MECHANICAL

ELECTRICAL

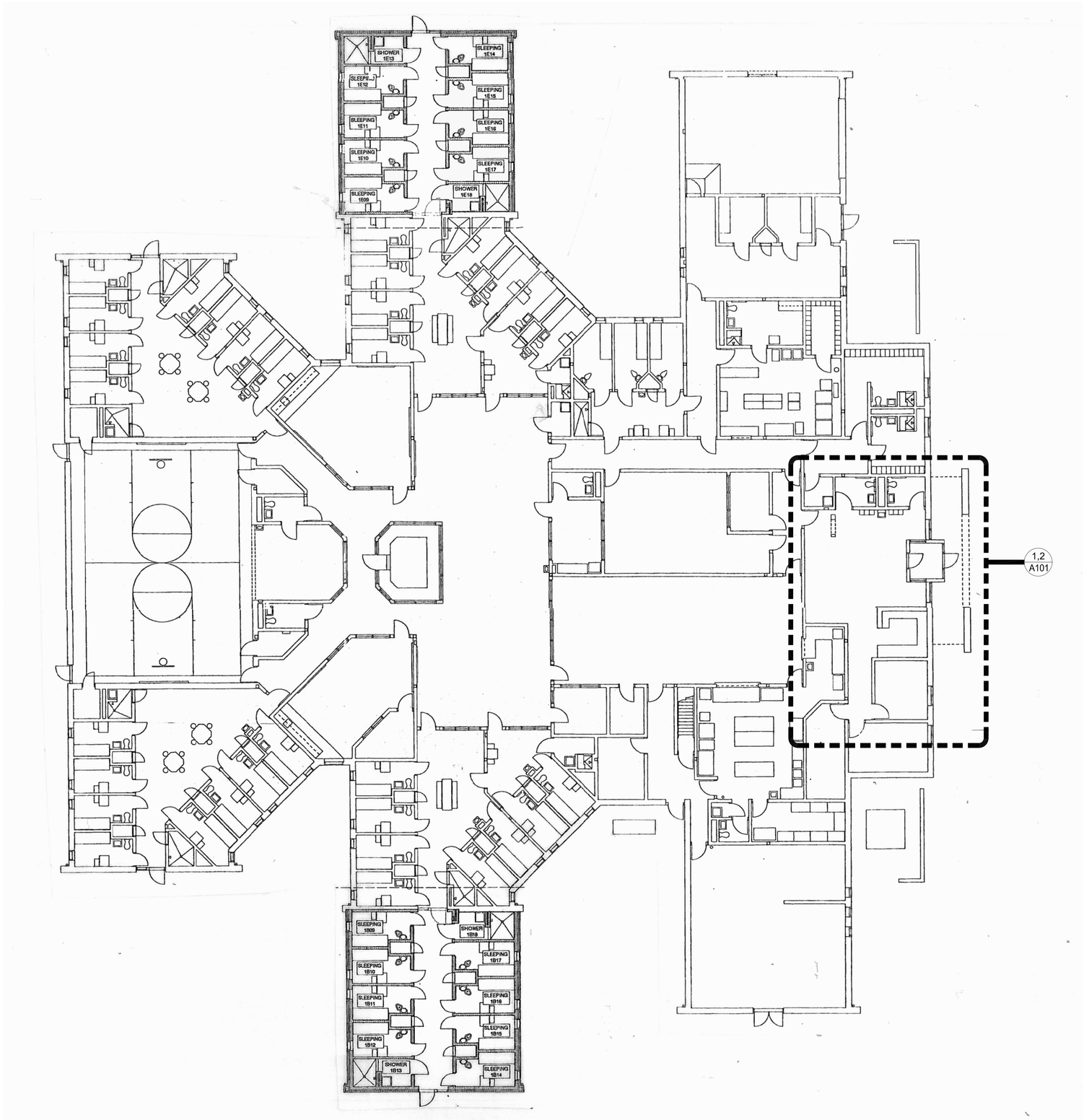
JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
TITLE SHEET

PROJECT INFORMATION			
Date	January 18, 2018		
Rev. Date			
RLJA Proj	2017-084		

SHEET NUMBER
T101
OF
1



1 OVERALL FLOOR PLAN - EXISTING

SCALE: 3/32"=1'-0"

CITY OF ROCKFORD	CODE ANALYSIS

APPLICABLE CODES

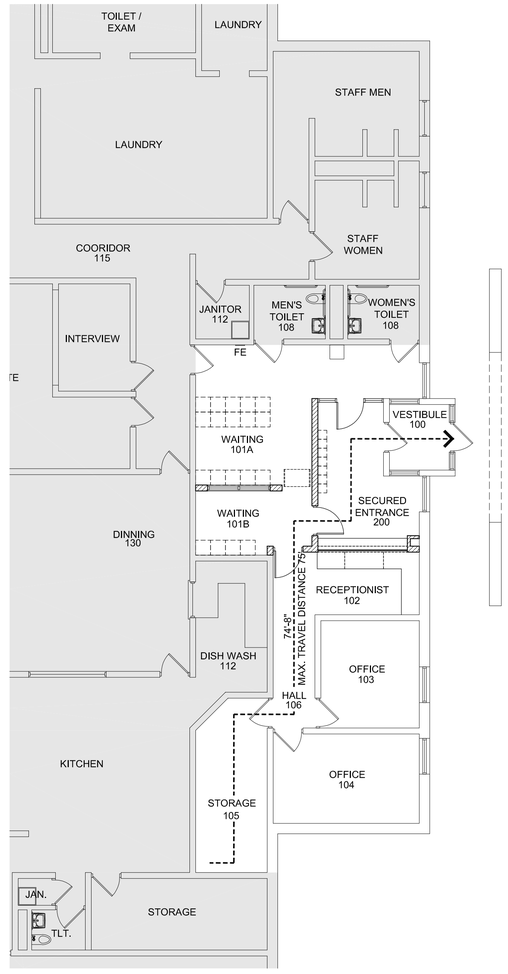
2015 ICC (IBC)	INTERNATIONAL BUILDING CODE (with local amendments)
2015 ICC (IFC)	INTERNATIONAL FIRE CODE (with local amendments)
2015 ICC (IECC)	INTERNATIONAL ENERGY CONSERVATION CODE
2015 ICC (IMC)	INTERNATIONAL MECHANICAL CODE(with local amendments)
2014 NFPA 70 (IFC)	NATIONAL ELECTRIC CODE (with local amendments)
2014 IDPH (IPC)	ILLINOIS PLUMBING CODE (with local amendments)
2010 ADA	STANDARD FOR ACCESSIBLE DESIGN
1997 CDB (IAC)	ILLINOIS ACCESSIBILITY CODE (April 24,1997)

CODE COMPLIANCE NOTES

1. BUILDING USE: INSTITUTIONAL (I-3)
2. TYPE OF PROJECT: ALTERANTION
3. TYPE OF CONSTRUCTION: 2B
4. BUILDING SQUARE FOOTAGE:
   EXISTING
5. BUILDING OCCUPANT LOAD:
   EXISTING
6. MAXIMUM TRAVEL DISTANCE: ALTERATION AREA ONLY

COMMON PATH OF TRAVEL	75' MAX.
DEAD END CORRIDORS	MAX. 50' "with sprinklers" (SECT. 1020.4)

7. SPRINKLER:
   FULLY SUPPRESSED
8. PLUMBING FIXTURES:
   EXISTING



2 CODE PLAN - PARTIAL

SCALE: 1/8"=1'-0"

JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
OVERALL FLOOR PLAN, CODE PLAN AND CODE ANALYSIS

PROJECT INFORMATION

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ABBREVIATIONS

ACT	ACOUST. CEILING TILE SYSTEM	CTOP	COUNTERTOP	FAAP	FIRE ALARM ANNUNCIATOR PANEL	IN	INCH	PR	PAIR	STRUC	STRUCTURAL
ACU	AIR CONDITIONING UNIT	CTR	COUNTER	FACP	FIRE ALARM CONTROL PANEL	INSUL	INSULATION	PT	PAINT	SUH	SUSPENDED UNIT HEATER
ADJ	ADJACENT	CUH	CABINET UNIT HEATER	FB	FACE BRICK	INT	INTERIOR	PLYWD	PLYWOOD	SUSP	SUSPENDED
ADS	ADJUSTABLE SHELVES	CUV	CABINET UNIT VENTILATOR	FBO	FURNISHED BY OWNER/OTHERS	JAN	JANITOR	QT	QUARRY TILE	SV	SHEET VINYL
AFF	ABOVE FINISH FLOOR	DEF	DEFIBRILLATOR	FD	FLOOR DRAIN	KEH	KITCHEN EXHAUST HOOD	QTZ	QUARTZ TILE	TB	TACK BOARD
AHU	AIR HANDLING UNIT	DF	DRINKING FOUNTAIN	FDTN	FOUNDATION	LAM	LAMINATE	R	RISER	TERR	TERRAZZO
AL	ALUMINUM	DIA	DIAMETER	FE	FIRE EXTINGUISHER	LAV	LAVATORY	RAD	RADIATION	T/O	TOP OF
ALT	ALTERNATE	DIM	DIMENSION	FEC	FIRE EXTINGUISHER CABINET	LF	LATERAL FILE	RB	RUBBER BASE	TP	TACK PANEL
AVG	AVERAGE	DN	DOWN	FH	FIRE HYDRANT	LK	LOCK/LOCKABLE CABINET	RD	ROOF DRAIN	TS	TACK STRIP
BD	BOARD	DP	DEEP	FHC	FIRE HOSE CABINET	LP	LIGHT POLE	REINF	REINFORCEMENT	TYP	TYPICAL
BITUM	BITUMINOUS	DR	DOOR	FIN	FINISH	LVT	LUXURY VINYL TILE	REQ'D	REQUIRED	UE	UNDERGROUND ELECTRICAL
BLDG	BUILDING	DS	DOWNSPOUT	FLR	FLOOR	MAS	MASONRY	RFT	RUBBER FLOOR TILE	UC	UNDERGROUND CABLE
BM	BEAM	DTL	DETAIL	FP	FOLDING PARTITION	MAX	MAXIMUM	RM	ROOM	UG	UNDERGROUND GAS
B/O	BOTTOM OF	DWG	DRAWING	FRP	FIBERGLASS REINFORCED PANEL	MB	MARKER BOARD	RST	RUBBER STAIR TREAD	UH	UNIT HEATER
BRG	BEARING	EA	EACH	FS	FLOOR SINK	MECH	MECHANICAL	RTU	ROOFTOP UNIT	U.N.O.	UNLESS NOTED OTHERWISE
BS	BACKSPLASH	EEW	EMERGENCY EYE WASH	FT	FEET	MEZZ	MEZZANINE	SAN	SANITARY SEWER	UV	UNIT VENTILATOR
CAB	CABINET	EF	EXHAUST FAN	FTG	FOOTING	MFR	MANUFACTURER	SB	SMART BOARD	VAT	VINYL ASBESTOS TILE
CB	CHALKBOARD	EIFS	EXTERIOR INSULATION & FINISH SYSTEMS	FURN	FURNACE	MH	MANHOLE	SC	SEALED CONCRETE	VCT	VINYL COMPOSITION TILE
CJ	CONTROL JOINT			G	GAS	MIN	MINIMUM	SECT	SECTION	VERT	VERTICAL
CLG	CEILING	EJ	EXPANSION JOINT	GA	GAUGE	MISC	MISCELLANEOUS	SF	SQUARE FOOT	V.I.F.	VERIFY IN FIELD
CLR	CLEAR	EL	ELEVATION	GALV	GALVANIZED	MLB	MAIL BOXES	SG	SINGLE	W	WATER
CMU	CONCRETE MASONRY UNIT	ELEC	ELECTRIC	GL	GLASS	MTL	METAL	SGT	STRUCTURAL GLAZED TILE	WC	WATER CLOSET
CO	CLEANOUT	ELEV	ELEVATOR	GMT	GROMMET	NTS	NOT TO SCALE	SIM	SIMILAR	WD	WOOD
COL	COLUMN	EMRG	EMERGENCY	GYP	GYPSUM WALL BOARD	OC	ON CENTER	SK	SINK	WDW	WINDOW
CONC	CONCRETE	EPDM	ETHYL. PROPYL. DIENE MONOMER	HC	HANDICAP	OE	OVERHEAD ELECTRICAL	SM	SMARTBOARD BY OWNER	WH	WATER HEATER
CONT	CONTINUOUS	EPT	EPOXY PAINT	HDWR	HARDWARE	OH	OVERHEAD	SQ	SQUARE	WS	WATER SOFTENER
CORR	CORRIDOR	EQ	EQUAL	HM	HOLLOW METAL	OPP	OPPOSITE	SS	STAINLESS STEEL	WT	WEIGHT
CPT-1	CARPET TILES	EXP	EXPOSED/EXPANSION	HORIZ	HORIZONTAL	P.LAM	PLASTIC LAMINATE	ST	STORM SEWER	WWF	WELDED WIRE FABRIC
CPT-2	WALK-OFF CARPET TILES	EXT	EXTERIOR	HR	HOUR	PCC	PRECAST CONCRETE	STD	STANDARD	W/	WITH
CR	COAT ROD	EXTG	EXISTING	HT	HEIGHT	PL	PLATE	STL	STEEL	W/O	WITHOUT
CT	CERAMIC TILE	FA	FIRE ALARM	HVAC	HEATING/VENTILATION/AIR COND.	PLAS	PLASTER	STP	STONE PANEL	YR	YEAR

MATERIAL / CONSTRUCTION LEGEND

CASEWORK ELEVATION
- 1 — ELEVATION NUMBER
- 3 A-7 9 — SHEET NUMBER
- 2

BUILDING SECTION
- 1 / A-6 — DETAIL NUMBER / SHEET NUMBER

BUILDING ELEVATION
- 1 / A-6 — DETAIL NUMBER / SHEET NUMBER

DETAIL SYMBOL
- 1 / A-6 — DETAIL NUMBER / SHEET NUMBER

DOOR IDENTIFICATION
- 102 — NEW DOOR AND FRAME; DOOR NUMBER
- EXISTING DOOR

PLAN SYMBOLS
- 1 — KEY NOTE
- A — PARTITION INDENTIFICATION
- 12 — DEMOLITION BOX NOTE
- 211 — ROOM IDENTIFICATION

STANDARD WALL IDENTIFICATION
- NEW MASONRY PARTITION
- NEW DRYWALL PARTITION W/BATT. INSUL. ABOVE CEILING
- EXISTING WALL PARTITION
- EXISTING ITEMS TO BE DEMOLISHED

ROOM FINISH SCHEDULE

ROOM NO.	ROOM	FLOOR	BASE	WALLS				CEILING	REMARKS
				NORTH	SOUTH	EAST	WEST		
100	VESTIBULE	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	-
200	SECURED ENTRANCE	LVT	RB	CMU/EPT	CMU/EPT	EXTG/EPT	CMU/EPT	EXTG	-
101A	WAITING	LVT	RB	EXTG/EPT	EXTG/CMU/EPT	EXTG/CMU/EPT	EXTG/EPT	EXTG	NOTE 1
101B	WAITING	LVT	RB	CMU/EPT	EXTG/CMU/EPT	CMU/EPT	EXTG/EPT	EXTG	-
102	RECEPTIONIST	LVT	RB	CMU/EPT	EXTG/EPT	EXTG/EPT	EXTG/EPT	EXTG	-
103	OFFICE	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	EXTG	-
106	HALL	LVT	RB	CMU/EPT	EXTG/PT	EXTG/EPT	EXTG/EPT	EXTG	NOTE 1

ROOM FINISH NOTES

NOTE 1: PAINT EXISTING HOLLOW METAL DOORS AND DOOR FRAMES

DOOR SCHEDULE

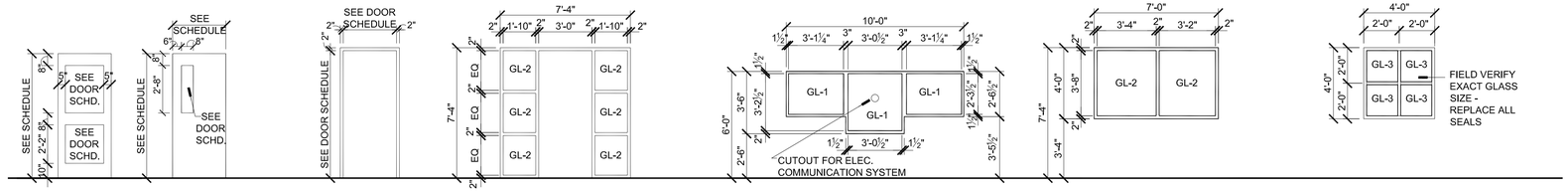
DOOR NO.	DOORS				DOOR TYPE		FRAMES		GLAZING		DETAILS			HDWR GROUP	LABEL	REMARKS
	SG/PR	WIDTH	HEIGHT	THICK	MTL	ELEV.	MTL	ELEV.	DOOR	FRAME	HEAD	JAMB	SILL			
200A	SG	3'-0"	7'-2"	2"	AL	D1	AL	F1	GL-2	-	H2	J2	-	2	-	-
200B	SG	3'-0"	7'-2"	2"	AL	D2	AL	F2	GL-2	-	H2	J2	-	3	-	-
103	SG	3'-0"	7'-2"	1-3/4"	HM	D2	HM	F1	GL-1	-	H1	J1	-	1	-	BULLET RESISTANT

DOOR SCHEDULE GENERAL NOTES

NOTE: ALL NEW AND EXISTING HOLLOW METAL FRAMES IN SCHEDULE ABOVE SHALL BE PAINTED AS REQUIRED - BOTH SIDES - SEE SPECIFICATIONS
NOTE: ALL NEW WOOD DOOR(S) SHALL BE FACTORY STAINED - SEE SPECIFICATIONS

GLASS TYPES

GL-1	1 3/8" SECURITY GLASS - LEVEL 2
GL-2	1/4" TEMPERED GLASS
GL-3	1" INSULATED GLASS TO MATCH EXISTING



D1 D2 F1 F2 BL-1 BL-2 W-1

BL-1: BULLET RESISTANT ALUMINUM FRAME

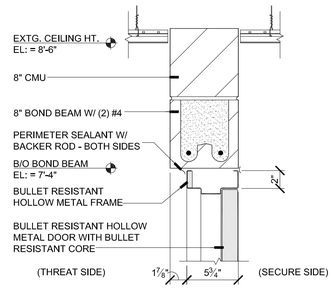
W-1: EXISTING ALUMINUM FRAME

DOOR TYPES
SCALE: 1/4"=1'-0"

FRAME TYPES
SCALE: 1/4"=1'-0"

BORROWED LIGHTS
SCALE: 1/4"=1'-0"

WINDOW TYPES
SCALE: 1/4"=1'-0"



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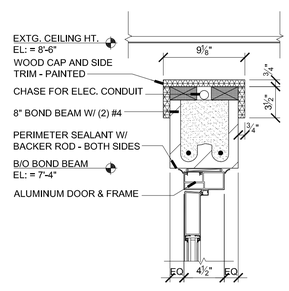
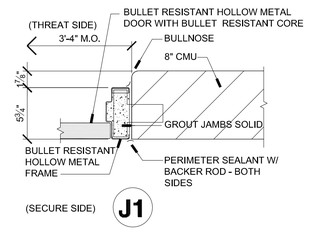
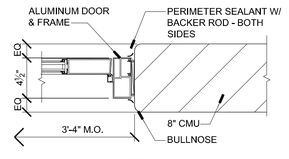


H2

HEAD DETAILS
SCALE: 11/2"=1'-0"



J1



J2

JAMB DETAILS
SCALE: 11/2"=1'-0"

JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
GENERAL INFORMATION, DOOR FRAME, BORROWED LIGHT, WINDOW TYPES AND NOTES

PROJECT INFORMATION
Date: January 18, 2018
Rev. Date:
RLJA Proj: 2017-084

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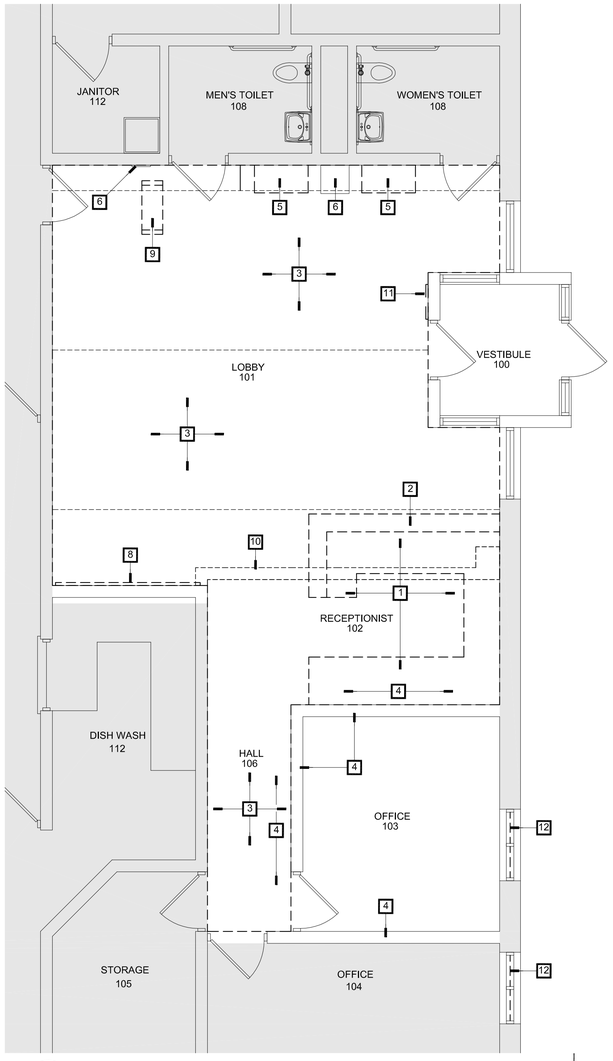


1 PARTIAL FLOOR PLAN - DEMOLITION

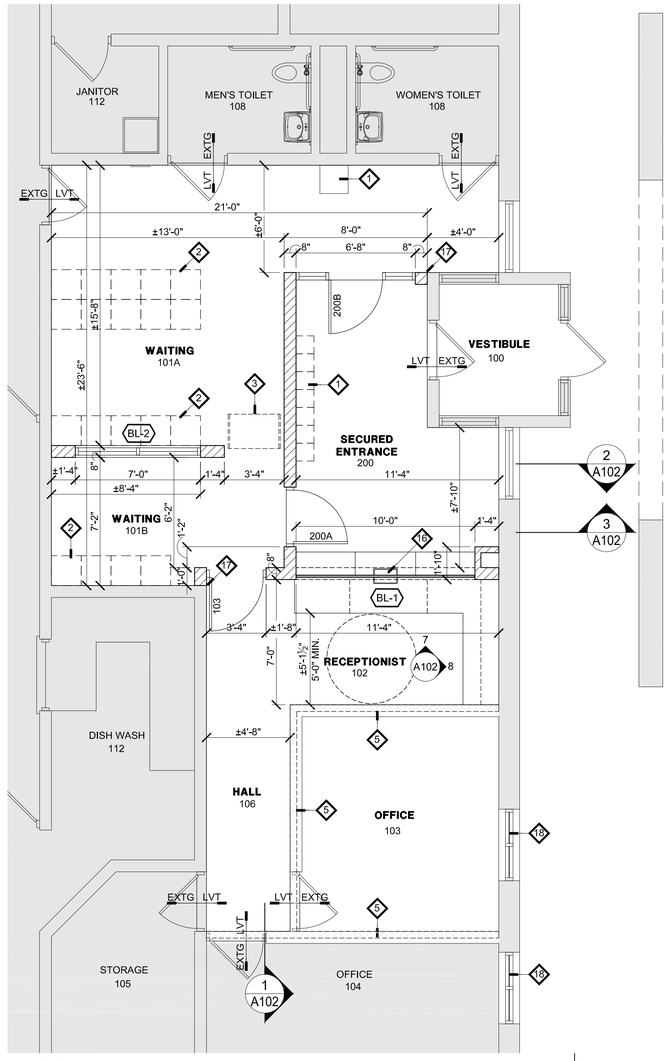
SCALE: 1/4"=1'-0"

DEMOLITION GENERAL NOTES

1. THE GENERAL CONTRACTOR IS TO COORDINATE AND PROVIDE ALL DEMOLITION AND REMOVAL OF DEBRIS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION
2. THE DEMOLITION PLAN IS PROVIDED AS AID IN PLANNING AND DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY IN FIELD VERIFYING THE EXISTING JOB SITE
3. PROVIDE ALL TEMPORARY SHORING AS REQUIRED TO SUPPORT STRUCTURES AND FINISHES TO REMAIN
4. ALL AREAS, FINISHES AND ITEMS NOT REQUIRING DEMOLITION MUST BE PROTECTED DURING DEMOLITION AND CONSTRUCTION WORK
5. THIS DEMOLITION PLAN IS TO BE USED IN CONJUNCTION WITH THE REST OF THE SHEETS IN THE SET
6. EACH CONTRACTOR IS RESPONSIBLE TO PATCH AND MATCH EXISTING TO REMAINING OPENINGS CREATED FROM DEMOED PENETRATIONS THRU WALLS, CEILINGS AND FLOORS
7. ALL ITEMS TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE
8. REFERENCE HVAC, PLUMBING, AND ELECTRICAL SHEETS FOR ITEMS TO BE REMOVED AND/OR RELOCATED
9. PRIOR TO DEMOLITION THE CONTRACTOR SHALL VERIFY WITH THE OWNER OF ITEMS TO BE SALVAGED IN THE PROJECT AREAS IDENTIFIED FOR DEMOLITION - SALVAGED ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO THE OWNER - ANY ITEMS NOT WANTED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR

DEMOLITION BOX NOTES

1. REMOVE EXISTING CASEWORK COMPLETE
2. REMOVE ALL EXISTING CMU WALL BELOW CASEWORK
3. REMOVE EXISTING CARPET AND RUBBER BASE
4. REMOVE AND REINSTALL EXISTING CEILING SYSTEM AS REQUIRED FOR NEW CONSTRUCTION ABOVE EXISTING WALL
5. REMOVE EXISTING LOCKER AND LOCKER BASE COMPLETE - SALVAGE LOCKERS AND RELOCATE - VERIFY WITH OWNER FOR EXACT LOCATION
6. EXISTING DRINKING FOUNTAIN TO REMAIN
7. EXISTING RECESSED FIRE EXTINGUISHER CABINET TO REMAIN
8. REMOVE EXISTING WALL MOUNTED COAT RACK - VERIFY WITH OWNER IF IT SHALL BE SALVAGED
9. REMOVE EXISTING METAL DETECTION SYSTEM
10. REMOVE EXISTING CEILING SYSTEM AS REQUIRED FOR NEW CONSTRUCTION ABOVE EXISTING WALL
11. REMOVE EXISTING WALL MOUNTED BRONZE PLAQUE AND RELOCATE - VERIFY WITH OWNER FOR EXACT LOCATION
12. EXISTING WINDOW FRAME TO REMAIN - REMOVE EXISTING GLASS AND SEALS

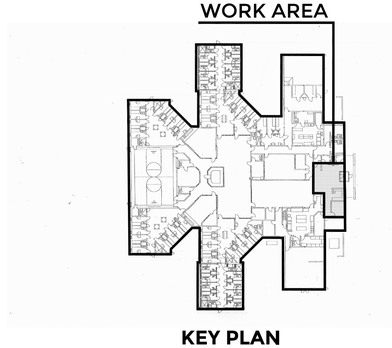


2 PARTIAL FLOOR PLAN - RENOVATION

SCALE: 1/4"=1'-0"

KEY NOTES

1. TWO TIER 12X12X36 LOCKER W/ METAL BASE - SUPPLIED AND INSTALLED BY CONTRACTOR
2. FUTURE BY OWNER
3. WALK THROUGH SECURITY SCANNING EQUIPMENT SUPPLIED AND INSTALLED BY CONTRACTOR - POWER SHALL BE TIED TO EXISTING GENERATOR - SEE ELECTRICAL
4. WOOD CAP AND SIDE TRIM - PAINTED - SEE DETAIL H2/G101
5. PROVIDE NEW DRYWALL PARTITION ABOVE EXISTING MASONRY WALL - SEE DETAIL 6/A102
6. SEE MECHANICAL DRAWINGS FOR RETURN DUCT PENETRATION
7. EXISTING SUSPENDED CEILING SYSTEM TO REMAIN
8. EXISTING MASONRY WALL CONSTRUCTION BEYOND
9. EXISTING WINDOW BEYOND
10. NEW MASONRY WALL PARTITION - COURSING AND CENTER SCORED BLOCK TO MATCH EXISTING
11. NEW COUNTERTOP AND CASEWORK - SEE LARGE SCALE CASEWORK ELEV.
12. EXISTING DRINKING FOUNTAIN TO REMAIN
13. REWORK EXISTING CEILING SYSTEM AS REQUIRED FOR NEW CONSTRUCTION
14. LEVEL 2 - BULLET RESISTANT GLASS, ALUMINUM FRAMING, ELECTRONIC COMMUNICATION SYSTEM AND RECESS CURRENCY TRAY
15. MASONRY SPANNING OPENING OVER SCANNING EQUIPMENT
16. S/S RECESSED CURRENCY DEAL TRAY 16" X10" X 1 1/2"
17. HOLD NEW CMU BACK FROM EXISTING BULLNOSE CORNER
18. EXISTING WINDOW TO RECEIVE NEW GLASS AND SEALS - SEE WINDOW ELEVATION W-1 ON SHEET G101
19. DOOR KICK PLATE - SEE DOOR HARDWARE FOR SIZE



KEY PLAN

JUVENILE DETENTION CENTER LOBBY REMODELING FOR

WINNEBAGO COUNTY

ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION

LARGE SCALE PLANS AND BUILDING SECTIONS

PROJECT INFORMATION

Date	January 18, 2018
Rev. Date	
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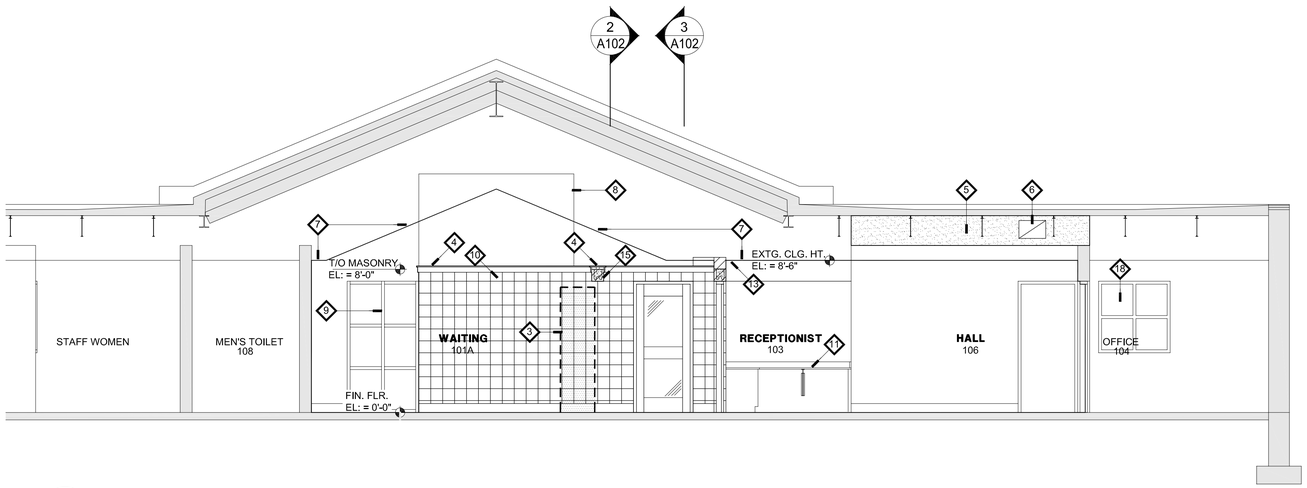
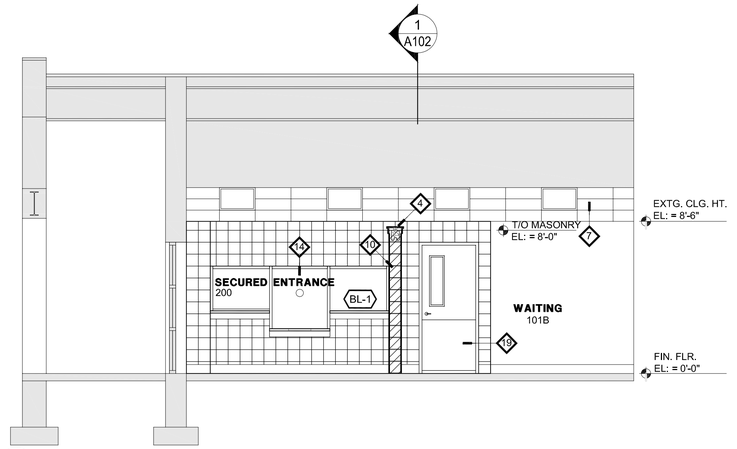
A101

OF **2**



1 BUILDING SECTION - PARTIAL

SCALE: 1/4"=1'-0"



2 BUILDING SECTION - PARTIAL

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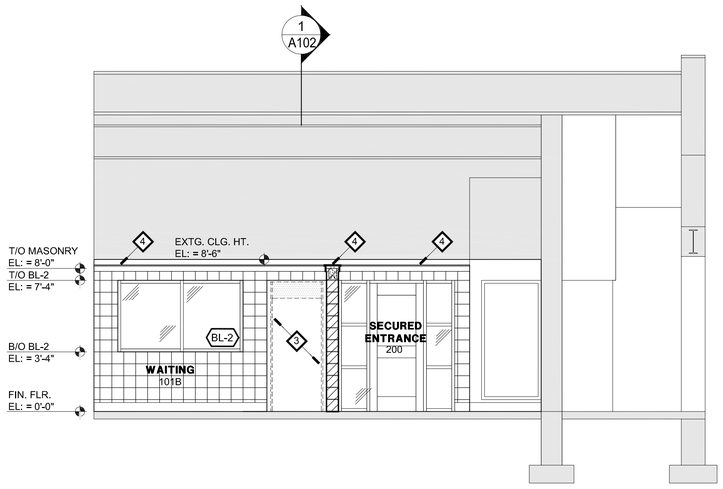
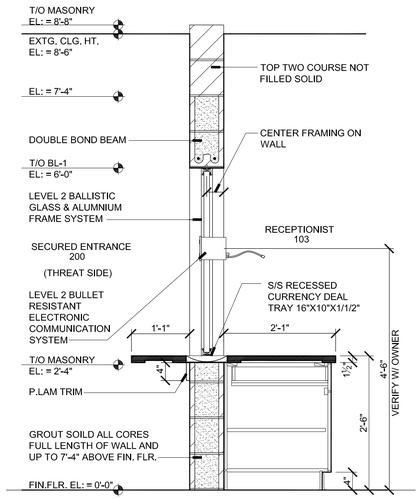


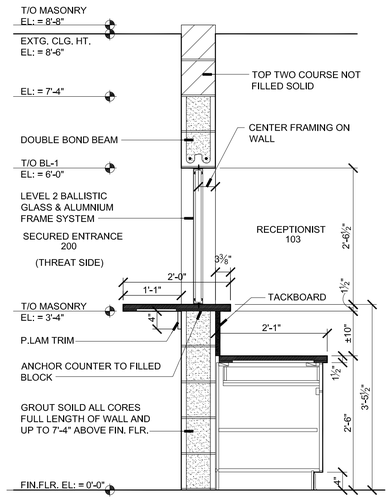
3 BUILDING SECTION - PARTIAL

SCALE: 1/4"=1'-0"



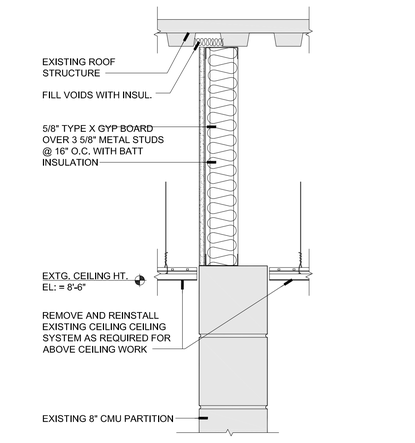
4 CASEWORK SECTION

SCALE: 3/4"=1'-0"



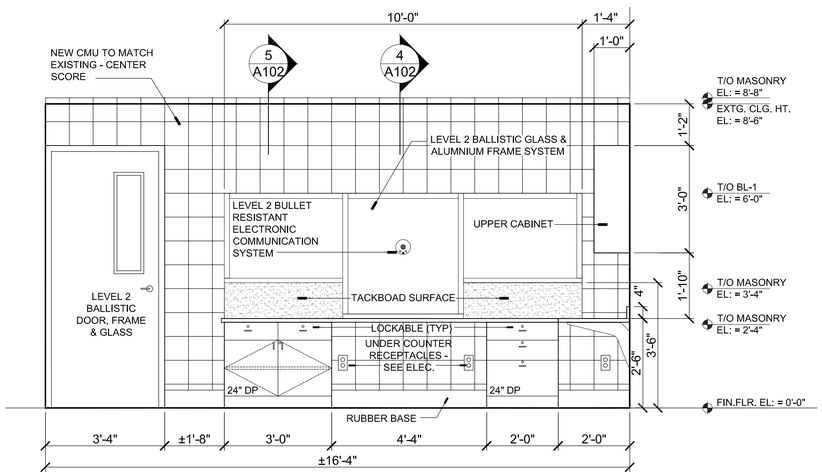
5 CASEWORK SECTION

SCALE: 3/4"=1'-0"



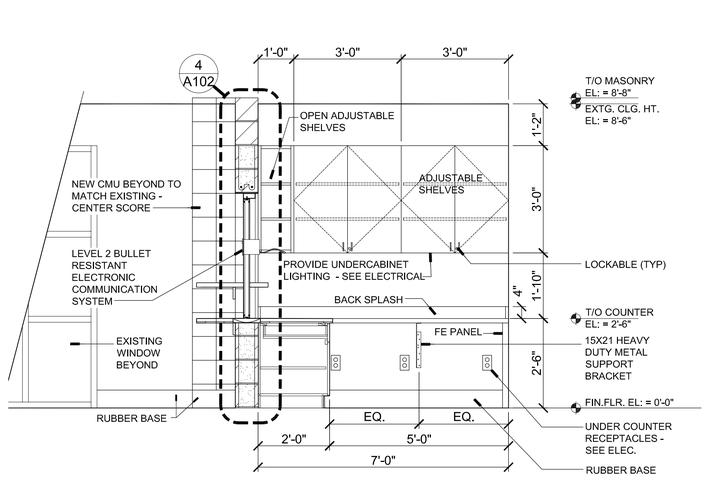
6 DETAIL

SCALE: 1 1/2"=1'-0"



7 CASEWORK ELEVATION

SCALE: 3/4"=1'-0"



8 CASEWORK ELEVATION

SCALE: 3/4"=1'-0"

GENERAL NOTES - CASEWORK

1. PROVIDE VERTICAL AND HORIZONTAL FILLER STRIPS AT CABINETS AND WALLS. PROVIDE BACKSPLASH AND RETURNS AT CONNECTIONS BETWEEN VERTICAL WALLS AND A COUNTERTOP.
2. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
3. PROVIDE BACKSPLASH WHEN COUNTERTOPS MEET A WALL.
4. ALL CASEWORK DRAWINGS THIS SHEET TO BE INCLUDED IN SPECIFICATION SECTION 061000.
5. ALL EXPOSED SIDES AND SURFACES OF CABINETS TO BE FINISHED IN LAMINATE UNLESS OTHERWISE NOTED.
6. ALL CASEWORK TO HAVE ADJUSTABLE SHELVES.
7. PROVIDE LOCKS FOR CABINETS AND DRAWERS AS SHOWN PER ELEVATION
8. PROVIDE 5 MOCKETT GROMMET XG 3" . PLACE PER OWNERS DIRECTION ON SITE.
9. PROVIDE WORK STATION SUPPORT BRACKETS EVERY 3' UNDER COUNTERTOP BY A & M HARDWARE, INC. SIZE INDICATED ON DRAWINGS
10. CUT OUT BACK OF CASEWORK IN SHELVING UNITS FOR OUTLETS AS NEEDED.
11. FE = FINISHED END.
12. WHERE FILLERS ARE SHOWN CLOSE OFF THE TOP AND BOTTOM WITH FILLER PANEL.

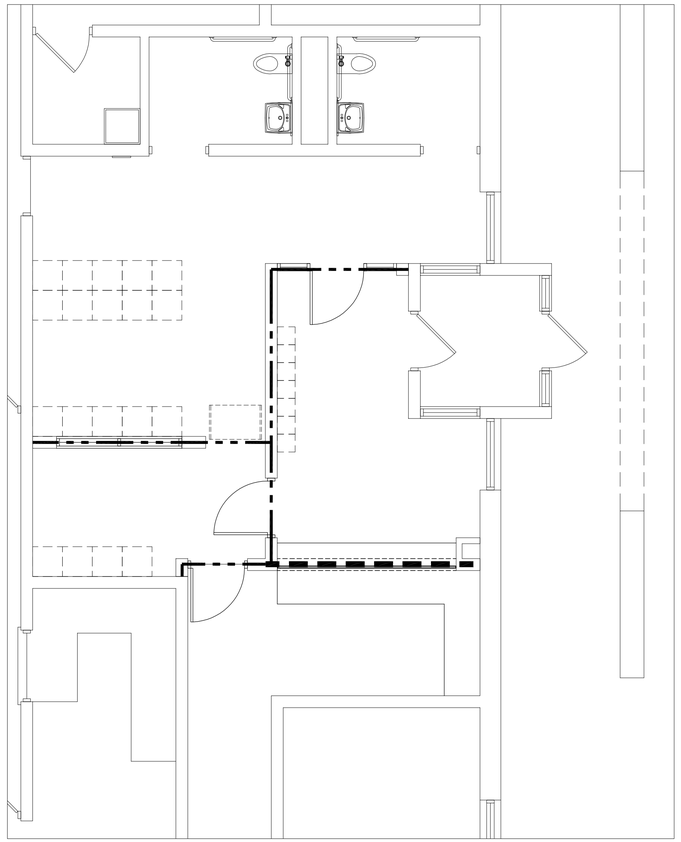
JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
INTERIOR SECTIONS, CASEWORK ELEVATIONS DETAILS AND NOTES

PROJECT INFORMATION
Date January 18, 2018
Rev. Date
RLJA Proj 2017-084

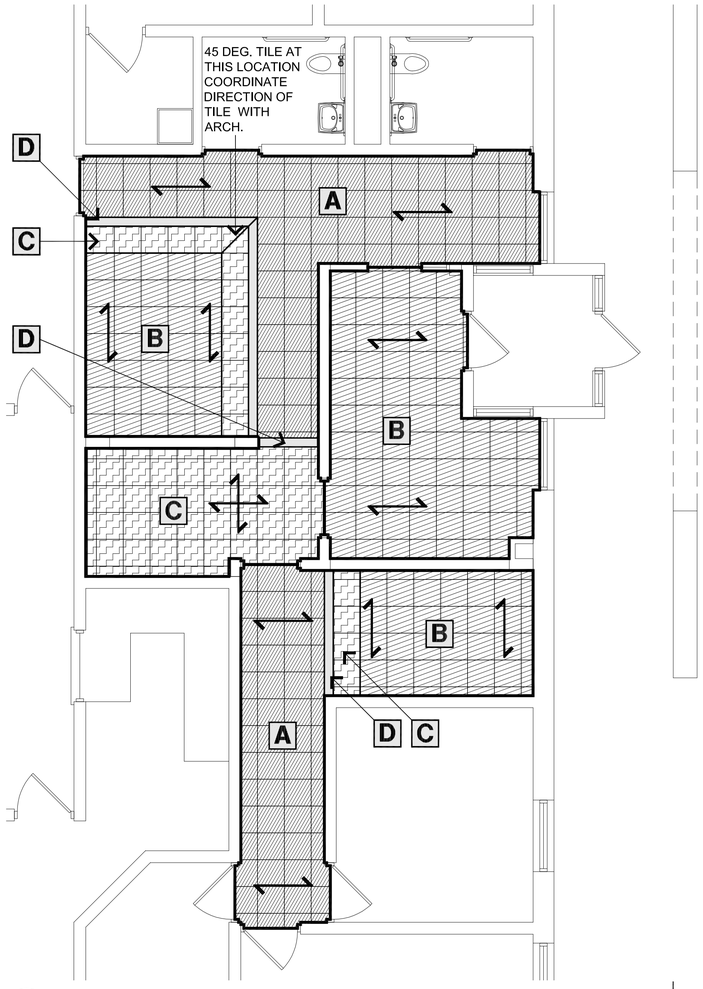
SHEET NUMBER
A102
OF
2



BOND BEAM - LEDGEND	
CONTINUOUS 8" BOND BEAM WITH (2) #4 BARS	8" X16" DEEP BOND BEAM WITH (2) #5 BARS 8" BEARING

1 STRUCTURAL PLAN

SCALE: 1/4"=1'-0"



1 FLOOR FINISH PLAN

SCALE: 1/4"=1'-0"

INTERIOR FINISH NOTES

1. PROVIDE TRANSITION STRIPS AT ALL LOCATIONS OF TRANSITION BETWEEN TWO FLOORING TYPES. SEE FLOORING SPECIFICATIONS 096519 RESILIENT FLOORING AND 096813 CARPET FOR SPECIFIC TYPES.
2. FLOORING TYPES AND FINISHES LISTED BELOW ARE FOR REFERENCE. SEE SPECIFICATION SECTIONS FOR FLOOR PREP, ADHESIVES AND INSTALLATION GUIDELINES.

INTERIOR FINISH KEY

A	MYSTIX STREAM: NA891 BRACKEN	FLOOR FINISHES - SEE SPECIFICATIONS ACCEPTABLE PRODUCTS & MANUFACTURERS FOR LUXURY VINYL TILE (LVT) : ARMSTRONG ARMSTRONG NATURAL CREATIONS - MYSTIX, 18"X18 LVT TILE
B	MYSTIX JET: NA851 BRACKEN	SYMBOL SHOWING TILE DIRECTION
C	MYSTIX ARIA: NA796 BRACKEN	SYMBOL SHOWING TILE QUARTER TURN
D	MYSTIX JET: NA851 BRACKEN IN PLANK	

INTERIOR PAINT - NOTES

1. PAINT COLORS: TO BE SELECTED DURING CONSTRUCTION
2. PAINT PLAN: CONTRACTOR MUST COORDINATE PAINT LAYOUTS WITH INTERIOR DESIGNER (2) WEEKS PRIOR TO PAINTING COMMENCING

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ROCKFORD, ILLINOIS

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STRUCUTRAL PLAN, FLOOR FINISH PLAN AND NOTES

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Rev. Date	
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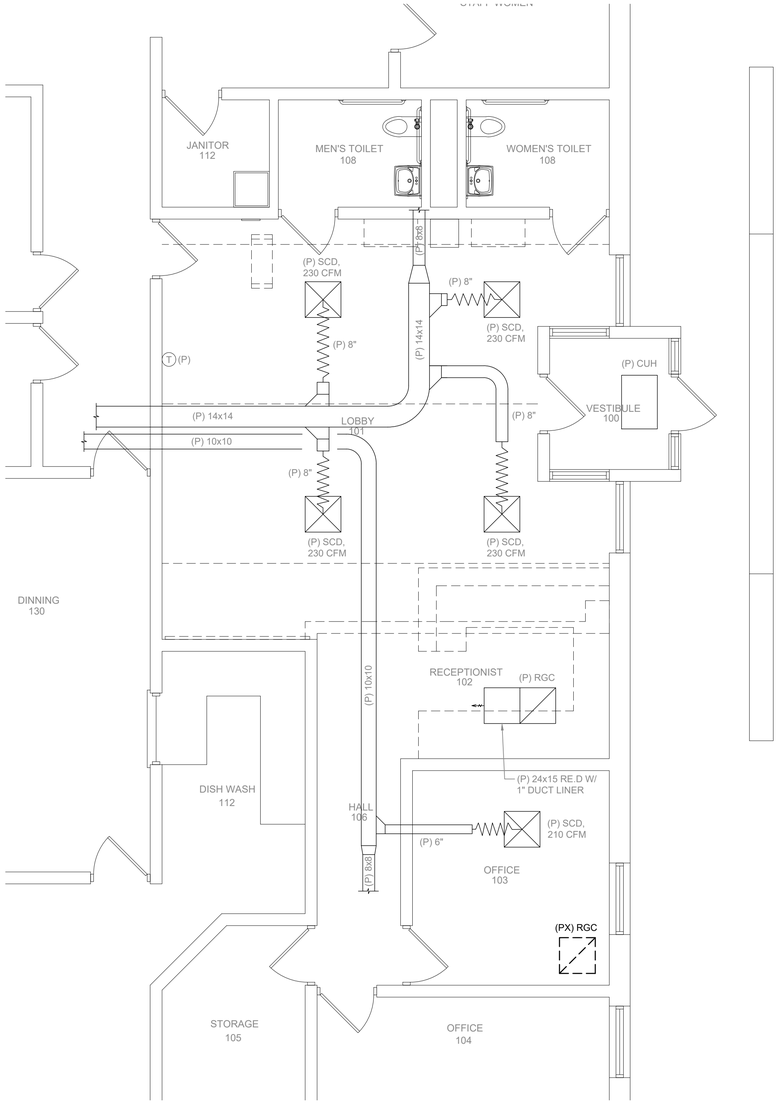
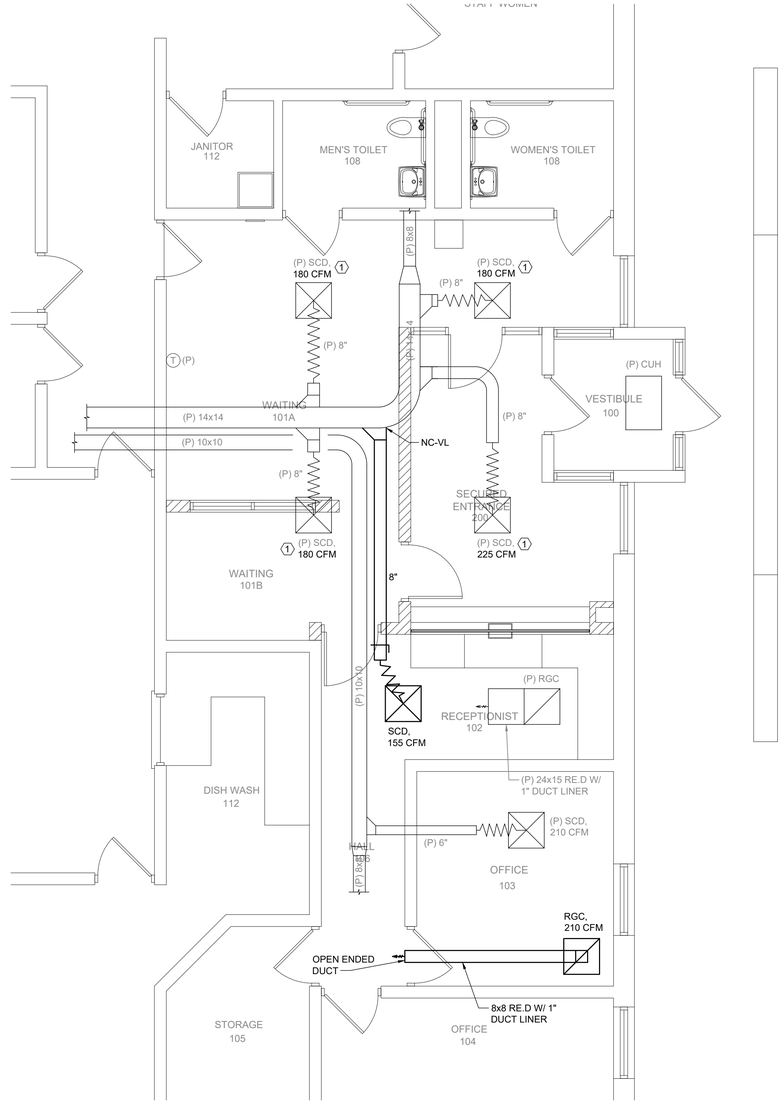


DEMO PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"



NEW WORK PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

DRAWING NOTES:

1. RE-BALANCE SUPPLY DIFFUSER TO MATCH AIRFLOW AS SHOWN.

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3600 EAST STATE STREET • SUITE 215 • ROCKFORD, ILLINOIS • 61108
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JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
DEMO & NEW WORK PLANS - MECHANICAL

PROJECT INFORMATION

Date	January 18, 2018		
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PRESENT EQUIPMENT AND DEMOLITION NOTES

A. THE FOLLOWING REMOVED PRESENT EQUIPMENT AND MATERIALS WHICH ARE IN GOOD OPERATING CONDITION (OR ARE PLACED IN GOOD CONDITION), SUITABLE, MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS, AND ARE APPROVED IN WRITING BY ENGINEER, OR CALLED FOR MAY BE REUSED (PXR, PXN, AND PN).
B. REMOVED DUCTWORK MUST NOT BE REUSED.
C. ANY OF ABOVE EQUIPMENT WHICH IS NOT REUSED AND FOLLOWING REMOVED PRESENT EQUIPMENT SHALL BECOME PROPERTY OF CONTRACTOR, AND SHALL BE REMOVED FROM PREMISES (PX).
1. EQUIPMENT SO DESIGNATED ON DRAWINGS.
C. CONTRACTOR SHALL:
1. PROVIDE NEW FLOORS UNDER REMOVED PRESENT EQUIPMENT AND WHERE CALLED FOR
2. REPAIR FLOORS UNDER AND WALLS ADJACENT TO REMOVED EQUIPMENT, TO MATCH ADJACENT CONSTRUCTION.
3. FILL IN PRESENT CHASES WHICH ARE NO LONGER REQUIRED AND NEATLY PATCH TO MATCH ADJACENT CONSTRUCTION.
4. CUT OPENINGS REQUIRED FOR:
A. HIS WORK;
B. ADMISSION OF NEW EQUIPMENT;
C. REMOVAL OF PRESENT EQUIPMENT;
D. NEW CONNECTION TO PRESENT CONSTRUCTION.
5. PATCH AND REPAIR UNUSED PRESENT HOLES AND OPENINGS, AND THOSE LEFT BY THE REMOVAL OF PRESENT EQUIPMENT AND ADMISSION OF NEW EQUIPMENT.
6. PATCH AND REPAIR PRESENT EQUIPMENT, AND BUILDING CONSTRUCTION WHICH HAS NOT BEEN CUT, REMOVED, DISTURBED OR MARRED, AS REQUIRED, TO RESTORE IT TO ORIGINAL CONDITION BEFORE BEING DISTURBED.
F. UNUSED OPENINGS IN EQUIPMENT, WALLS, CEILING, FLOOR, ETC. SHALL BE FILLED.
G. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAIRED SAME AS NEW CONSTRUCTION.
H. CERTAIN ABBREVIATIONS OR SYMBOLS, WHEN APPLIED TO PRESENT (TO EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE THE FOLLOWING MEANINGS:

NC NEW CONNECTIONS TO PRESENT DUCTWORK, EQUIPMENT, PIPING, ETC. INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK.

P TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.

PX TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., TO EQUAL ORIGINAL CONDITION. REMOVED MATERIAL MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.

I. WORK OF EVERY DIVISION SHALL BE COORDINATED WITH ALL OTHER WORK AND PRESENT CONDITIONS, SO THAT
1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED DURING PERIODS WHEN THOSE SERVICES ARE NEEDED.
2. SPECIAL SYSTEMS SUCH AS FIRE ALARM, SOUND, ETC., OF EVERY KIND TO PRESENT BUILDINGS WILL NOT BE INTERRUPTED DURING WORKING AND/OR OCCUPIED HOURS, EXCEPT AS APPROVED BY THE OWNER.
J. DUCTWORK SERVING NEW AND/OR PRESENT MECHANICAL DEVICES IN FINISHED PRESENT ROOMS OR SPACES SHALL BE CONCEALED IN FINISHED ROOMS, WHERE POSSIBLE OR SHALL BE RUN IN ADJOINING UNFINISHED ROOMS, SHAFTS, CHAMBERS, CLOAK ROOMS, ETC., EXCEPT WHERE EXPOSED DUCT IS PERMITTED IN FINISHED PRESENT ROOMS BY ARCHITECT IN WRITING, PRESENT DIFFUSERS, GRILLS, REGISTERS, SWITCHES, ETC. SHALL BE REMOVED AS PER NOTE "PX" UNLESS ANOTHER SYMBOL IS SHOWN ON DRAWINGS OR THE DEVICES ARE SERVING OTHER EQUIPMENT. WHERE SPECIFICALLY APPROVED BY ARCHITECT IN WRITING, OPENINGS MAY BE PERMITTED TO REMAIN AND BE PROVIDED WITH NEAT FLUSH COVERS, EXTENDING OVER ENTIRE WALL OPENING.
K. UNNEEDED EQUIPMENT, DUCTWORK, ETC., SHALL BE COMPLETELY REMOVED; AND CONSTRUCTION PATCHED AS PER NOTE "PX". NEW CONNECTIONS TO PRESENT DUCTS/EQUIPMENT, SHALL BE MADE, TESTED, COVERED, PAINTED, ETC., SAME AS NEW EQUIPMENT. PRESENT EQUIPMENT, AND OTHER COVERING DISTURBED BY CONTRACTOR SHALL BE REPAIRED TO EQUAL NEW CONDITION AND PAINTED SAME AS NEW COVERING.
L. WORK SHALL BE COORDINATED SO THAT HEATING, PLUMBING, ELECTRICAL, INTERNET AND TELEPHONE SERVICES TO THE PRESENT BUILDING WILL NOT BE INTERRUPTED, EXCEPT AS APPROVED BY THE OWNER/ARCHITECT.

MECHANICAL GENERAL NOTES:

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICT. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES, ETC., SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLEARNESS OF PRESENTATION.

   CONTRACTOR IS ALLOWED TO MAKE MINOR CHANGES TO THE PIPING TO AVOID FIELD CONFLICTS AT NO ADDITIONAL COST TO THE OWNER AND AS LONG AS THE RELOCATION DOES NOT AFFECT THE PERFORMANCE OF THE SYSTEM.

   EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER CONTRACTORS TO VERIFY SPACES IN WHICH THEIR WORK WILL BE INSTALLED IS CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION.

   FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS NEEDED FOR WORK, AND ALSO FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.

   WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS.

   CONTRACTOR TO REVIEW, PRIOR TO BIDDING, ALL DRAWINGS TO COORDINATE VARIOUS WORK AS CALLED FOR. CONTRACTOR SHALL CAREFULLY CHECK ALL DRAWINGS FOR ALL TRADES, AND ANY LACK OF COORDINATION BETWEEN HIS WORK AND DRAWINGS FOR JOB CONDITIONS SHALL BE IMMEDIATELY REPORTED TO ARCHITECT.

   CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE DRILLING, SAW CUTTING, ETC., AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

   CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/ELECTRICAL ITEMS SHALL BE THE RESPONSIBILITY OF THE APPLICABLE MECHANICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE MECHANICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

2. HEATING, VENTILATING, AIR CONDITIONING, AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. CONDUITS, DISCONNECTS, BREAKERS, FUSES, AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER. INCREASED CURREPNT REQUIREMENTS NECESSITATING LARGER WIRE, BREAKERS, FUSES, SWITCHES, ETC. TO ACCOMMODATE ANY ALTERNATE OR SUBSTITUTE MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR FURNISHING EQUIPMENT. WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT.

3. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ALL CEILING DIFFUSERS, REGISTERS, AND/OR GRILLES AS TO LOCATION, QUANTITIES AND PROPER TYPES FOR SURFACE MOUNT AND/OR LAY-IN SUSPENDED CEILINGS AND LIGHT PATTERNS. OPENINGS SHALL BE IN CENTER OF TILES OR AS DIRECTED BY ARCHITECT/ENGINEER.

4. CONTRACTOR SHALL INCLUDE IN HIS WORK THE RELOCATION OF ALL CROSS BRACING, AS REQUIRED TO FIT DUCTS BETWEEN JOISTS. THIS WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR WITH ARCHITECTURAL APPROVAL.

5. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.

6. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC. AS CLEARANCE IS MINIMAL. COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT. ALL DUCTWORK IS ABOVE SUSPENDED CEILINGS, UNLESS NOTED OTHERWISE.

7. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREAS MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING. INSULATE DUCTWORK AS NOTED.

8. INSTALL 1" OF NON-SHRINK GROUT AROUND DUCTWORK ON EACH WALL FACE TO SEAL OPENINGS AND ELIMINATE SOUND TRANSFER WITH AIR-TIGHT CONNECTIONS.

9. CONTRACTOR SHALL INCLUDE IN HIS WORK (1) SET OF FILTERS TO BE USED DURING CONSTRUCTION FOR ALL AIR HANDLING EQUIPMENT, FURNACES, ENERGY RECOVERY VENTILATORS, ROOFTOP UNITS, RETURN FANS, FILTER BOXES, FAN OPERATED VAV BOXES, ETC. CONTRACTOR PRIOR TO AIR BALANCING AND BUILDING OCCUPANCY SHALL INSTALL A COMPLETE SET OF CLEAN FILTERS. PROVIDE TO OWNER (1) COMPLETE SPARE/REPLACEMENT SET OF FILTERS FOR EACH PIECE OF EQUIPMENT. PROVIDE ALSO TO OWNER IN WRITING REPLACEMENT SIZES, TYPE, NUMBER PER EQUIPMENT, LOCATIONS, ETC.

10. SCHEDULE OF DUCT INSULATION:

    A. RECTANGULAR RE.D. W/1" DL, MINIMUM INSTALLED R FACTOR OF 6.

11. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAINTED SAME AS NEW CONSTRUCTION.

12. THE ENGINEER IS NOT PROVIDING PROJECT ADMINISTRATION OR ANY FORM OF PROJECT MANAGEMENT FOR THE CONSTRUCTION OF THIS BUILDING. THE USE OF THESE DRAWINGS BY ANY CONTRACTOR, SUB-CONTRACTOR, BUILDERS, TRADESMEN OR WORKER SHALL INSTIGATE A HOLD HARMLESS AGREEMENT BETWEEN THE DRAWING USER AND THE ENGINEER.

13. THE USER OF THE DRAWINGS AGREES TO HOLD THE ENGINEER HARMLESS FOR ANY RESPONSIBILITY IN REGARD TO CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES AND FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AND FURTHER SHALL HOLD THE ENGINEER HARMLESS FOR COST AND PROBLEMS ARISING FROM THE NEGLIGENCE OF THE CONTRACTOR, SUBCONTRACTOR, TRADESMEN OR WORKMEN. THE USE OF THESE DRAWINGS ALSO IMPLIES THAT THE ENGINEER SHALL TAKE NO RESPONSIBILITY FOR THE PLANNED USER'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS OR CONTRACT DOCUMENTS.

14. SEE SPECIFICATIONS FOR ADDITIONAL NOTES, SYMBOLS, ABBREVIATIONS, PREFIXES AND SUFFIXES.

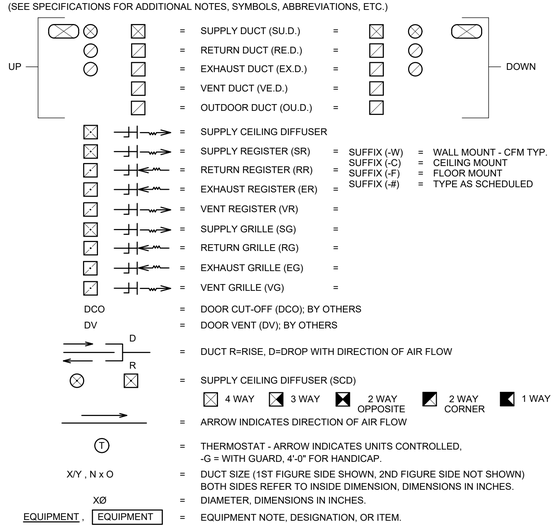
BASIC ABBREVIATIONS

MARK	DESCRIPTION	MARK	DESCRIPTION
AAD	AUTOMATIC ALUMINUM DAMPERS	MC	MECHANICAL CONTRACTOR
ACCU	AIR COOLED CONDENSING UNIT	MTD	MOUNTED
AD	ACCESS DOOR	NC	NEW CONNECTION
AFC	ADJUSTABLE FLEXIBLE CONNECTION	OA	OUTDOOR AIR
AFF	ABOVE FINISH FLOOR	OAD	OUTDOOR AIR DAMPER
ALUM	ALUMINUM	OAI	OUTDOOR AIR INTAKE
AP	ACCESS PANEL	OU.D.	OUTDOOR AIR DUCT
ASC	ABOVE SUSPENDED CEILING	P	PRESENT
BOD	BOTTOM OF DUCT	PC	PLUMBING CONTRACTOR
BDD	BACK DRAFT DAMPER	PRE	POWER ROOF EXHAUSTER
BJA	BETWEEN JOISTS ABOVE	RAD	RETURN AIR DAMPER
CAD	COMBUSTION AIR DAMPER	RE.D.	RETURN AIR DUCT
CD	CEILING DIFFUSER (S) SUPPLY (R) RETURN	REF	REFERENCE
CFM	CUBIC FEET PER MINUTE	REFRIG.	REFRIGERANT-LIQUID,SUCTION,HGBP
CLG	CEILING	RG	RETURN GRILLE
CTC	CLOSE TO CEILING (EXPOSED)	RR	RETURN REGISTER
CTF	CLOSE TO FLOOR	RTU	ROOFTOP UNIT
CTW	CLOSE TO WALL (EXPOSED)	SCD	SUPPLY CEILING DIFFUSER
D	DRAIN	SIM	SIMILAR
DC	DUCT COVERING	SG	SUPPLY GRILLE
DCO	DOOR CUTOFF (BY OTHERS)	SLD	SUPPLY LINEAR DIFFUSER
DL	DUCT LINING	SM	SHEET METAL
DS	DISCONNECT SWITCH	SR	SUPPLY REGISTER
DV	DOOR VENT (BY OTHERS)	SS	STAINLESS STEEL
EC	ELECTRICAL CONTRACTOR	STW	SLEEVE THRU WALL AND SEAL
EH	EXHAUST HOOD	SU.D.	SUPPLY DUCT
ER	EXHAUST REGISTER	TBF	TO BELOW FLOOR
EF	EXHAUST FAN	TC	TEMPERATURE CONTROL
EG	EXHAUST GRILLE	TFA	TO FLOOR ABOVE
EX.D.	EXHAUST DUCT	TFB	TO FLOOR BELOW
EXP	EXPOSED	TF.D.	TRANSFER DUCT
FBF	FROM BELOW FLOOR	TG	TRANSFER GRILLE
FBO	FURNISHED BY OTHERS	TJA	THRU JOIST ABOVE
FFA	FROM FLOOR ABOVE	TOD	TOP OF DUCT
FFB	FROM FLOOR BELOW	TR	THROUGH ROOF
FI.D.	FIRE DAMPER	TYP	TYPICAL
G	GAS PIPING	VE.D.	VENT AIR DUCT
GC	GENERAL CONTRACTOR	VD	VOLUME DAMPER
HGBP	HOT GAS BYPASS PIPING	VG	VENT GRILLE
HVAC	HEATING, VENTILATING & AIR CONDITION.	VTR	VENT THRU ROOF
IWS	IN WALL SPACE, CONCEALED	W/	WITH

SEE SPECIFICATIONS FOR ADDITIONAL ABBREVIATIONS, PREFIXES, SUFFIXES, ETC.

HVAC SHEET METAL SYMBOLS:

(SEE SPECIFICATIONS FOR ADDITIONAL NOTES, SYMBOLS, ABBREVIATIONS, ETC.)



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SHEET IDENTIFICATION
MECHANICAL SYMBOLS, ABBREVS., GENERAL NOTES, & DEMO NOTES

PROJECT INFORMATION
Date: January 18, 2018
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DIVISION 23 - MECHANICAL

SECTION 230100 - BASIC MECHANICAL REQUIREMENTS:

1. CONDITIONS:

THIS SECTION SHALL APPLY TO ALL SECTIONS IN DIVISION 23.

GENERAL CONDITIONS OF THE CONTRACT AND THE ARCHITECTURAL SUPPLEMENTARY AND GENERAL CONDITIONS APPLY TO THIS SECTION/DIVISION. THE SUPPLEMENTARY GENERAL CONDITIONS FOR DIVISION 26 - ELECTRICAL, ALSO APPLY TO THIS SECTION/DIVISION.

2. SCOPE OF WORK:

PROVIDE COMPLETE SYSTEMS AS CALLED FOR, AND/OR SHOWN, AND/OR SPECIFIED. HVAC, PLUMBING, OR RESPECTIVE SUBCONTRACTORS SHALL FURNISH AND COMPLETELY INSTALL THE SYSTEM, SERVICE, EQUIPMENT, OR MATERIAL NAMED, TOGETHER WITH OTHER ASSOCIATED DEVICES, EQUIPMENT, MATERIALS, WIRING, PIPING, ETC., AS REQUIRED FOR A COMPLETE SATISFACTORY OPERATING INSTALLATION BY THE RESPECTIVE CONTRACTOR. OTHER SUBCONTRACTORS, AS REQUIRED TO PERFORM WORK CALLED FOR, SHALL BE RESPONSIBLE TO THE HVAC OR PLUMBING CONTRACTOR RESPECTIVELY. SECURE ALL PERMITS FOR WORK AND INSPECTIONS AS REQUIRED.

3. BASIC SYSTEMS:

SYSTEMS PROVIDED SHALL INCLUDE BUT SHALL NOT BE LIMITED TO:

A. CONDITIONS, SCOPE OF WORK, BASIC SYSTEMS, PERMITS AND FEES, CODES, STANDARDS AND REGULATIONS.
B. MATERIALS AND EQUIPMENT, WORK PRIORITY OVER OTHER TRADES, COORDINATION, WIRING, OPENINGS, SLEEVES AND CHASES, EQUIPMENT INSTALLATION (FBO)-FURNISHED BY OTHERS, ACCESS PANELS, EQUIVALENT MAKE EQUIPMENT, SHOP DRAWINGS.
C. VERIFICATION, SUPERVISION AND INSTRUCTION, IDENTIFICATION, PAINTING, CLEANING, TESTING AND BALANCING, GUARANTEE, RECORD DOCUMENTS.

4. PERMITS AND FEES:

HVAC AND PLUMBING CONTRACTORS SHALL BE RESPONSIBLE FOR THE OBTAINING OF THEIR RESPECTIVE PERMITS, AND THEIR COSTS, AS WELL AS OTHER FEES NECESSARY TO THE PROJECT INCLUDING INSPECTIONS. PERMITS AND FEES SHALL ALL BE INCLUDED FOR ALL BUILDING DEPT. REQUIREMENTS, ETC.

5. CODES, STANDARDS, AND REGULATIONS:

EQUIPMENT, DEVICES, APPARATUS AND INSTALLATIONS TO BE IN FULL COMPLIANCE WITH CURRENT (LATEST EDITION) APPLICABLE LOCAL, CITY, COUNTY, STATE AND GOVERNMENT REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OWNER'S INSURANCE COMPANY STANDARDS, AMERICANS WITH DISABILITIES ACT, LATEST EDITION OF ILLINOIS ACCESSIBILITY CODE, LATEST EDITION AND AMENDMENTS OF ILLINOIS STATE PLUMBING CODE, NATIONAL ASSOCIATION OF ROOFING CONTRACTORS, LOCAL GAS AND ELECTRIC UTILITY COMPANIES, LABOR REGULATIONS, AND OTHER STATE OF ILLINOIS DEPARTMENT OF PUBLIC HEALTH RULES. CHANGES REQUIRED TO CONFORM TO REQUIREMENTS SHALL BE MADE WITHOUT INCREASE IN CONTRACT PRICE AS APPROVED BY THE ARCHITECT.

ELECTRICAL EQUIPMENT, WIRING, GAS BURNING EQUIPMENT, HANDLING AND STORAGE EQUIPMENT, ALL WATER/STEAM/DRAIN/WASTE/VENT PIPING, REFRIGERATION PIPING, GAS VALVES AND PIPING, INSULATING MATERIALS, ETC., SHALL COMPLY WITH REQUIREMENTS OF NFPA, NEC, UL, AGA, OSHA, EPA, ICC, STATE AND FEDERAL SAFETY CODES FOR A PARTICULAR TYPE INSTALLATION AND SHALL BE SO LABELED WHERE APPLICABLE.

ELECTRICAL DESIGN FOR NUMBER OF WIRES AND SIZES, CONDUIT SIZES, CIRCUIT BREAKER SIZES, ETC., ARE BASED ON ELECTRICAL CHARACTERISTICS OF EQUIPMENT SCHEDULED OR SPECIFIED. IF ELECTRICAL CHARACTERISTICS OF EQUIPMENT TO BE USED DIFFER FROM THOSE SPECIFIED, ALL CHANGES (IF REQUIRED) RELATIVE TO CIRCUIT BREAKER SIZES, NUMBER OF WIRES AND SIZES, CONDUIT SIZES, ETC., SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE EQUIPMENT FURNISHING OR INSTALLING CONTRACTOR. CHANGES RELATIVE TO THE ABOVE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, ENGINEER, AND TRADES INVOLVED, IN WRITING AND SHALL BE APPROVED BEFORE INSTALLATION TO AVOID CONFLICT. CHANGES SHALL BE MADE WITHOUT INCREASE OF CONTRACT PRICE TO THE OWNER.

6. MATERIALS AND EQUIPMENT:

MATERIALS AND EQUIPMENT SHALL BE OF NEW CONSTRUCTION, AND QUALITY SPECIFIED.

7. WORK PRIORITY OVER THE OTHER TRADES:

ALL CONTRACTORS FOR THE MECHANICAL-PLUMBING-ELECTRICAL TRADES ARE TO BE GOVERNED AS FOLLOWS AND WORK IN COOPERATION WITH ONE ANOTHER TO FIT PIPING AND DUCTWORK INTO THE STRUCTURE AS JOB CONDITIONS MAY DEMAND. ALL FINAL DECISIONS AS TO RIGHT OF WAY AND RUN OF PIPE, DUCTS, ETC., TO BE MADE BY ARCHITECT.

IN GENERAL, PRIORITY IS TO BE ARRANGED AS FOLLOWS:

A. RECESSED LIGHTING FIXTURES.
B. SHEET METAL DUCT WORK/HVAC UNITS.
C. PLUMBING WASTE LINES.
D. ELECTRICAL CONDUITS.

8. COORDINATION:

COORDINATE WORK OF HVAC, TEMPERATURE CONTROLS, PLUMBING WORK, FIRE PROTECTION WORK, ELECTRICAL WORK, GENERAL CONTRACTOR TYPE WORK, ETC., TO AVOID INTERFERENCES AND CONFLICTS OF WORK INDICATED. WORK MUST BE COMPLETED AS SCHEDULED BY THE ARCHITECT. VERIFY AT TIME OF BIDDING TO AVOID MISUNDERSTANDING. ANY DISCREPANCIES NOTICED AT TIME OF PRE-BID MEETING AND/OR INSPECTION OF SITE BY THOSE INSPECTING FOR BIDDING THE PROJECT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY SO THAT CORRECTIONS CAN BE MADE BY ADDENDUM PRIOR TO BID DATE.

9. EQUIVALENT MAKE EQUIPMENT:

EQUIVALENT MAKE EQUIPMENT FOR EQUIPMENT MANUFACTURERS NOT LISTED IN SPECIFICATIONS ARE SUBJECT TO REVIEW OF SAID EQUIPMENT BEFORE BIDDING. PRIOR TO BIDDING, ANY COMPANY WHO EXPECTS TO BE NAMED BY CONTRACTOR AS A SUPPLIER OF EQUIPMENT SPECIFIED AND/OR CALLED FOR ON PLANS OR IN SPECIFICATIONS, SHALL HAVE ON FILE WITH THE DESIGN ENGINEER COPIES OF COMPLETE PUBLISHED TECHNICAL DATA.

IT SHALL BE THE MANUFACTURER'S RESPONSIBILITY TO CERTIFY THE FOLLOWING:

A. SHOW PERFORMANCE CHARACTERISTICS OF SELECTED EQUIPMENT, SIZES INDICATED AND DIMENSIONAL DATA TO SHOW THAT EQUIPMENT WILL FIT INTO SPACE ALLOWED.
B. INDICATE EQUIPMENT CONSTRUCTION AND MATERIALS USED IN SAME.
C. INDICATE APPLICATION AS CALLED FOR.
D. INDICATE ELECTRICAL REQUIREMENTS THAT ARE EQUAL TO OR LESS THAN EQUIPMENT SPECIFIED, COMPLETE SEQUENCE OF OPERATION AND COMPLETE INSTALLATION INSTRUCTIONS AS REQUIRED BY MANUFACTURER FOR INTENDED USE.
E. SHOW DATA, ITEM FOR ITEM, FOR EQUIPMENT SPECIFIED.

DATA SUBMITTED MUST BE RECEIVED BY THE DESIGN ENGINEER NOT LATER THAN TEN (10) WORKING DAYS PRIOR TO THE BID DATE TO ALLOW SUFFICIENT TIME FOR REVIEW OF SUBMITTALS. AN ADDENDA WILL BE ISSUED IF EQUIPMENT IS TO BE CONSIDERED AS AN "EQUIVALENT MAKE."

EQUIPMENT NOT CONFORMING TO THE ABOVE WILL NOT BE CONSIDERED.

10. SHOP DRAWINGS:

EACH RESPECTIVE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL, BEFORE CONSTRUCTION IS STARTED, SHOP DRAWINGS FOR EQUIPMENT, DEVICES, MATERIAL, CONTROLS, ACCESSORIES, WIRING DIAGRAMS, ETC., FOR RESPECTIVE INSTALLATION. SUBMITTALS SHALL BE IN ACCORDANCE WITH DIVISION 1 REQUIREMENTS.

11. VERIFICATION:

VERIFICATION OF MECHANICAL ITEMS FOR PROJECT SHALL BE INCLUDED. CONTRACTOR, PRIOR TO BIDDING, SHALL SECURE ALL NECESSARY INFORMATION, POINTS FOR NEW CONNECTIONS TO ANY TYPE OF SERVICE AS REQUIRED AND SHALL INCLUDE NECESSARY COST FOR FEE AS REQUIRED IN HIS BID FOR THESE CONNECTIONS. CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE FOR THE WORK TO ELIMINATE MISCONCEPTIONS OF FACT, TO VERIFY AND DETERMINE DIMENSIONS, ELEVATIONS, LOCATION OF EXISTING EQUIPMENT, SERVICES, PIPING, AND TO OBSERVE FEATURES AFFECTING WORKING CONDITIONS, TRANSPORTATION AND STORAGE FACILITIES. CONTRACTOR SHALL GIVE DUE CONSIDERATION TO SAME IN PREPARING PROPOSALS AS NO EXCEPTIONS WILL BE CONSIDERED AFTER AWARDING OF CONTRACT, NOR WILL CONTRACTOR BE ENTITLED TO ANY EXTRA COMPENSATION FOR HIS FAILURE TO VERIFY CONDITIONS AT THE SITE OR AT POINTS OF CONNECTION.

THE RUN OF ALL LINES SHOWN ON DRAWINGS IS TO BE REGARDED AS DIAGRAMMATIC AND TENTATIVE. CONTRACTOR SHALL CAREFULLY VERIFY LOCATION, DEPTH, AND SIZE OF LINE OR SEWER TO WHICH CONNECTION IS PROPOSED. BEFORE INSTALLING ANY LINES, CONTRACTOR SHALL ASSURE THAT THEY CAN BE RUN AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH FOOTING, OTHER PIPING, FIXTURES, ETC. ANY NECESSARY DEVIATION SHALL BE REFERRED TO ARCHITECT FOR APPROVAL BEFORE ANY LINES OR SERVICE ARE RUN, AT NO INCREASE IN CONTRACT PRICE.

12. PAINTING:

COORDINATE PAINTING REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.

13. CLEANING, TESTING, AND BALANCING:

EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF THEIR EQUIPMENT AND SYSTEMS AND SHALL REMOVE ALL DEBRIS CREATED BY THEMSELVES FROM THE PREMISES, PRIOR TO FINAL ACCEPTANCE.

EACH HEATING, AIR CONDITIONING, VENTILATING, EXHAUST, AIR MOVING SYSTEM, ETC., SHALL BE TESTED AND BALANCED (REBALANCE AS NECESSARY) TO APPROPRIATE AIR QUANTITIES, SOUND LEVELS, TEMPERATURE AND HUMIDITY AS CALLED FOR, TO GIVE UNIFORM OWNER ACCEPTABLE AIR DISTRIBUTION AND COMFORT. UPON BALANCING IF SYSTEM CANNOT BE SUCCESSFULLY BALANCED AS AGREED BY OWNER/ARCHITECT/ENGINEER THEN ADDITIONAL DAMPERS, BELTS, SHEAVES, OR PULLEYS WILL BE INSTALLED TO PROVIDE PROPER AIR QUANTITIES, ACCEPTABLE SOUND LEVELS AND TEMPERATURE/HUMIDITY REQUIREMENTS BY THE HVAC CONTRACTOR WITHOUT INCREASE IN CONTRACT PRICE WITHIN THE GUARANTEE PERIOD.

BALANCING TO BE DONE IN ACCORDANCE WITH AABC, ASHRAE, SMACNA, NEBB, SMARTA, OR EQUIVALENT STANDARDS. ALL AIR QUANTITIES OR SETTINGS SHALL BE RECORDED ON "AS-BUILT" DRAWINGS.

FINAL CERTIFIED REPORTS SHALL BE SUBMITTED IN THE FORM OF SHOP-DRAWINGS FOR REVIEW AND FINAL ACCEPTED SIGNATURES BY OWNER/ARCHITECT/ENGINEER.

14. GUARANTEE:

HVAC AND PLUMBING CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, APPARATUS, MATERIALS AND WORKMANSHIP ENTERING INTO THIS CONTRACT AND SHALL REPLACE ALL PARTS AT HIS OWN EXPENSE WHICH HAVE PROVEN DEFECTIVE WITHIN ONE (1) YEAR FROM FORMAL ACCEPTANCE. INDIVIDUAL ITEMS SHALL BE GUARANTEED AS CALLED FOR IN ADDITION TO THE ABOVE.

15. RECORD DOCUMENTS:

CONTRACTOR SHALL MAINTAIN ONE (1) COMPLETE MARKED UP SET OF "AS-BUILT" PROJECT PRINTS DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT "AS-BUILTS" FOR REVIEW BY GENERAL CONTRACTOR AND ARCHITECT OR ENGINEER AT EACH WEEKLY PROJECT MEETING. AT COMPLETION OF PROJECT, "AS-BUILTS" SHALL BE SUBMITTED FOR REVIEW, SAME AS REQUIRED FOR SHOP DRAWINGS. UPON ACCEPTANCE, CONTRACTOR SHALL PROVIDE TWO (2) SEPARATE SETS OF REPRODUCIBLES OF THESE "AS-BUILT" PRINTS, ONE (1) SET FOR THE OWNER AND ONE (1) SET FOR THE ARCHITECT. CONTRACTOR SHALL RETAIN COPY OF PROJECT FOR HIS RECORDS. REFER TO DIVISION 1 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

END OF SECTION 230100

DIVISION 23 - MECHANICAL

SECTION 235000 - HVAC SPECIFICATIONS/NOTATIONS

1. CONDITIONS:

GENERAL CONDITIONS OF THE CONTRACT AND THE ARCHITECTURAL SUPPLEMENTARY AND GENERAL CONDITIONS APPLY TO THIS SECTION/DIVISION. THE SUPPLEMENTARY GENERAL CONDITIONS FOR DIVISION 26 - ELECTRICAL, ALSO APPLY TO THIS SECTION/DIVISION.

SECTION 230100 - BASIC MECHANICAL REQUIREMENTS ALSO APPLIES TO THIS SECTION.

2. SYSTEMS:

MECHANICAL SYSTEM PROVIDED SHALL INCLUDE BUT NOT BE LIMITED TO:

A. CONDITIONS, SYSTEMS.
B. SHEET METAL DUCTWORK AND ACCESSORIES, DIFFUSERS/GRILLES/REGISTERS.

3. SHEET METAL DUCTWORK AND ACCESSORIES:

SHEET METAL DUCTWORK TO BE INSTALLED, CONSTRUCTED, FABRICATED, ETC., IN ACCORDANCE WITH LATEST SMACNA MANUAL, ALL LOCAL CODES; GALVANIZED SHEET STEEL OR 2S OR 3S ALUMINUM SHEETS. FURNISH VOLUME DAMPERS WITH EXTERNAL LOCKING QUADRANTS. BRANCH SU.D., RE.D., EX.D., BY-PASS DUCTS, VENT DUCTS, OU.D. TO HAVE VOLUME DAMPERS. PROVIDE SEALED HINGED-REMOVABLE ACCESS DOORS WHERE CALLED FOR AND/OR REQUIRED FOR ACCESS TO CONTROLS, OPERATORS, SENSORS, FILTERS, ETC. SEE PLANS FOR ADDITIONAL NOTES.

SHEET METAL DUCTWORK FOR VARIABLE VOLUME DAMPER SYSTEMS SHALL BE SEALED IN ACCORDANCE WITH SMACNA SEAL CLASS C. SEE DUCT SEALING REQUIREMENTS AND COMMENTARY IN SMACNA STANDARDS MANUAL FOR LOW PRESSURE APPLICATION. OTHER DUCTS SHALL BE CONSTRUCTED AND INSTALLED TO MINIMIZE LEAKAGE AS RECOMMENDED BY SMACNA STANDARDS.

HANGING, INSTALLATION, CONSTRUCTION AND SUPPORT OF ALL DUCTWORK THROUGHOUT SHALL BE IN ACCORDANCE WITH SMACNA LOW VELOCITY-PRESSURE DUCT CONSTRUCTION AND INSTALLATION PROCEDURES, UNLESS OTHERWISE NOTED. HANGERS ON ALL DUCTS, 24" AND WIDER, SHALL BE STEEL RODS WITH BOTTOM ANGLES. STRAPS WILL NOT BE ACCEPTABLE. ALL HORIZONTAL DUCTS SHALL BE TRUE, STRAIGHT, PARALLEL TO WALL AS HIGH AS POSSIBLE. SEAL DUCTS TO PREVENT AIR LEAKAGE.

ELBOWS AND TURNS SHALL HAVE INSIDE RADIUS NOT LESS THAN ONE-HALF WIDTH OF DUCTS, OTHERWISE SHALL HAVE TURNING VANES (LSE). SUPPLY DUCT BRANCHES SHALL HAVE VOLUME DAMPERS. MAIN SU.D THAT SPLITS SHALL HAVE SPLITTER DAMPERS. RETURN DUCT BRANCHES AND EXHAUST DUCT BRANCHES SHALL HAVE VOLUME DAMPERS. PROVIDE ADDITIONAL DAMPERS AS REQUIRED TO ASSURE DESIGNED AIR DISTRIBUTION. DAMPERS SHALL HAVE ACCESSIBLE EXTERNAL INDICATING LOCKING QUADRANTS. QUADRANTS EXPOSED ON FINISHED CEILING SHALL BE EQUAL TO "YOUNG" REGULATORS, CHROMIUM PLATED.

GALVANIZED STEEL AND ASSOCIATED ACCESSORIES TO BE USED IN ALL LOCATIONS EXCEPT WET LOCATIONS OR AS OTHERWISE CALLED FOR. ALUMINUM AND ASSOCIATED ACCESSORIES TO BE USED IN ALL WET LOCATIONS SUCH AS SHOWER ROOMS, TOILET ROOMS ADJACENT TO SHOWER/LOCKER/SAUNA/DAMP AREAS, LOCKER ROOMS, SAUNAS, SPAS, DAMP AREAS, ETC., TO BE WATERPROOF CONSTRUCTION, ARRANGED TO DRAIN TO LOW POINTS IF WATER EVIDENCED.

4. DIFFUSERS/GRILLES/REGISTERS:

REGISTERS, GRILLES, CEILING DIFFUSERS TO BE TYPE AS MANUFACTURED BY AIRMATE, ANEMOSTAT, CARNES, HART & COOLEY, J&J, KEES, KRUEGER, METALAIRE, NAILOR, PRICE, TITUS, TUTTLE & BAILEY, OR EQUIVALENT MAKE.

SUPPLY CEILING DIFFUSERS: CARNES MODEL SFTB/SFTA OR EQUAL, LOUVER FACE, WITH FRAME, FOR SQUARE DIFFUSERS, VOLUME DAMPER, FINISHED STEEL OR ALUMINUM, BAKED ON OFF-WHITE ENAMEL, FOR LAY-IN OR SURFACE MOUNTING AS INDICATED ON ARCHITECTURAL DRAWINGS.

RETURN CEILING DIFFUSERS: CARNES MODEL SPJB OR EQUAL, PERFORATED, WITH FRAME, SQUARE NECK VOLUME DAMPER, FINISHED STEEL OR ALUMINUM, BAKED ON OFF-WHITE ENAMEL, FOR LAY-IN OR SURFACE MOUNTING, AS INDICATED ON ARCHITECTURAL DRAWINGS.

STEEL PRODUCTS TO BE USED IN ALL LOCATIONS EXCEPT WET LOCATIONS OR AS OTHERWISE CALLED FOR. ALUMINUM PRODUCTS TO BE USED IN ALL WET LOCATIONS SUCH AS SHOWER ROOMS, ROOMS, TOILET ROOMS ADJACENT TO SHOWER/LOCKER/SAUNA/DAMP AREAS, LOCKER ROOMS, SAUNAS, SPAS, DAMP AREAS, ETC. OR AS OTHERWISE CALLED FOR.

END OF SECTION 235000

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WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
MECHANICAL SPECS

PROJECT INFORMATION
Date: January 18, 2018
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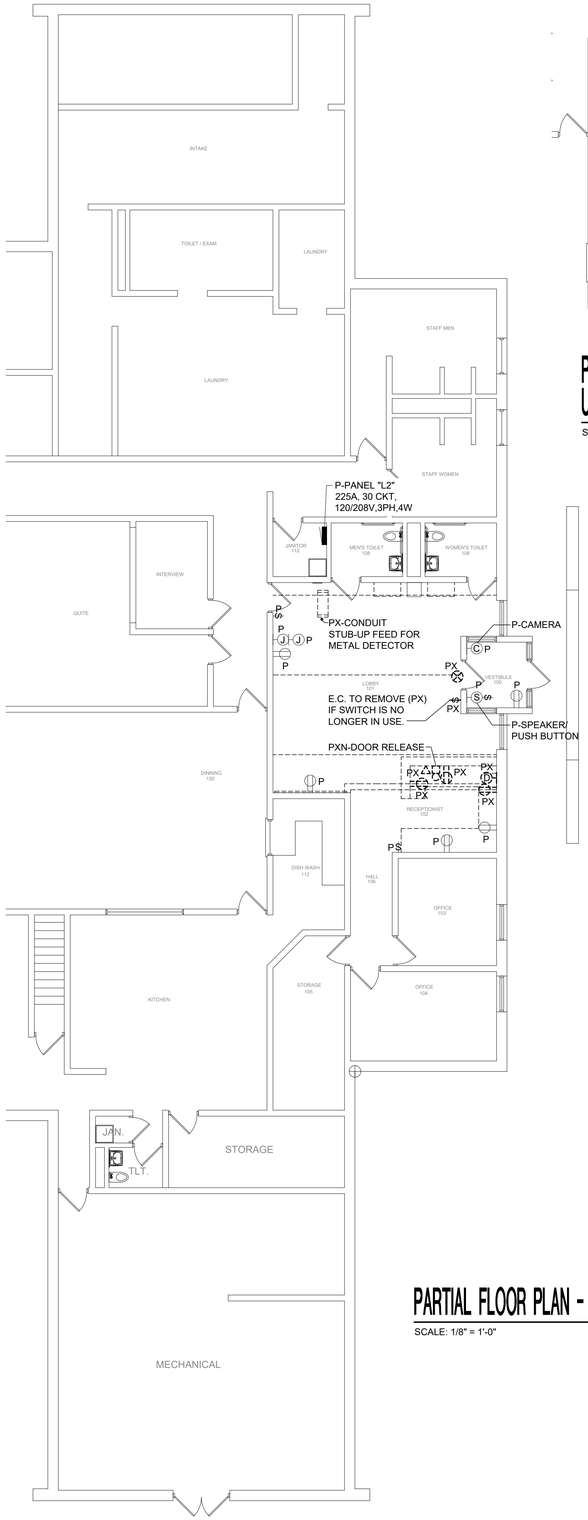
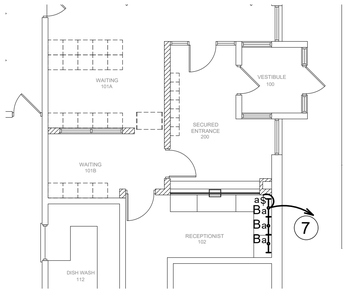
3



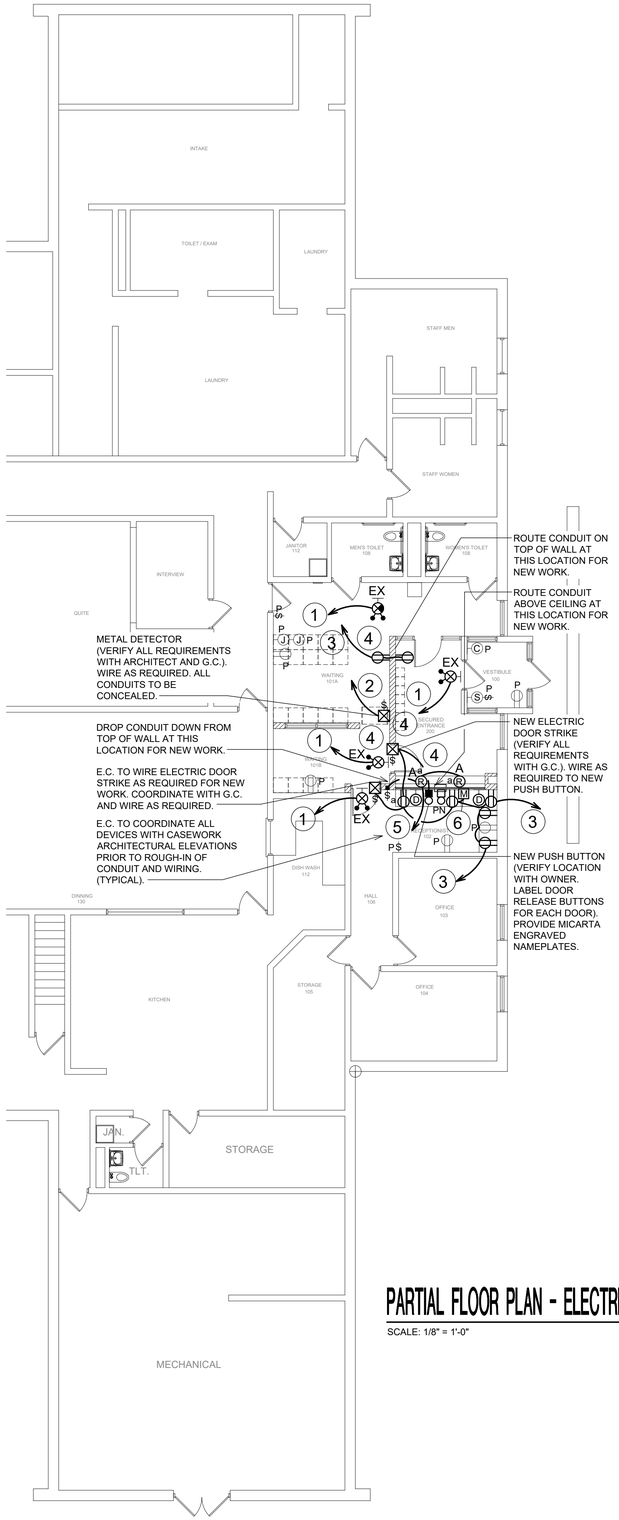
PARTIAL FLOOR PLAN - ELECTRICAL DEMOLITION

SCALE: 1/8" = 1'-0"



PARTIAL FLOOR PLAN - UNDERCABINET LIGHTING

SCALE: 1/8" = 1'-0"



PARTIAL FLOOR PLAN - ELECTRICAL NEW WORK

SCALE: 1/8" = 1'-0"

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	LAMP SIZE AND TYPE	MOUNTING	MANUFACTURER'S NUMBER	REMARKS
A	80 CRI L.E.D., 4000K LP840, 1000 LUMENS (13 WATTS)	RECESSED IN CEILING (VERIFY)	LITHONIA NO. EVO-40/10-4AR-LS-MD-EZ1-MVOLT PROVIDE BAR HANGER IF REQUIRED FOR INSTALLATION.	4" RECESSED ROUND L.E.D. DOWNLIGHT FIXTURE WITH SPECULAR FINISH, ELECTRONIC LED DRIVER, MVOLT
B	90 CRI L.E.D., 656/746/755 LUMENS 10.7 WATTS	SURFACE UNDER UPPER CABINET. (COORD).	AFX NO. NLLP22-WH-120 VOLT	22"L X 3-3/4"W SURFACE MOUNTED LED UNDER CABINET FIXTURE. PROVIDE ALL REQUIRED TRANSFORMERS, CONNECTORS AND HARD WIRE BOXES AS REQUIRED FOR INSTALLATION.
EX	L.E.D. LAMPS FURNISHED WITH FIXTURE - VERIFY	CEILING OR WALL AS REQUIRED (VERIFY)	LITHONIA NO. LHQM-S-W-R 120 VOLT OR EQUAL	UNIVERSAL SELF-POWERED EMERGENCY L.E.D. "EXIT" SIGN WITH 6" HIGH RED LETTERS, WHITE HOUSING WITH SIDE-MOUNT LAMPS, 120 VOLT AC INPUT
NOTES:	ALL FIXTURE SELECTIONS AND FINISHES MUST BE APPROVED BY THE OWNER PRIOR TO ORDERING FIXTURES SPECIFIED ON THIS SCHEDULE. THE FIXTURE SCHEDULE DOES NOT NECESSARILY LIST ALL ACCESSORIES AND HARDWARE NECESSARY FOR THE COMPLETION OF INSTALLATION, NOR DOES IT DETAIL THE CEILING CONSTRUCTION TO BE ENCOUNTERED FOR THIS PROJECT. IT IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO PROPERLY DETERMINE AND PROVIDE THE CORRECT COMPONENTS, ACCESSORIES AND HARDWARE AS REQUIRED FOR THE INSTALLATION. ALL ADDITIONAL HARDWARE FOR MOUNTING FIXTURES SHALL BE PROVIDED AT NO EXTRA COST.			

DRAWING NOTES

1. TIE INTO TO PRESENT BRANCH CIRCUIT CURRENTLY SERVING THE LIGHTING IN THIS AREA. ELECTRICAL CONTRACTOR SHALL WIRE NEW EXIT/EM LIGHT FIXTURES AS REQUIRED FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED FOR COMPLETELY NEW FIXTURES AS INDICATED. ALL ITEMS MUST BE INCLUDED FOR A COMPLETE OPERATIONAL SYSTEM. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING TO INCLUDE ALL MATERIALS AND LABOR REQUIRED FOR NEW WORK.

2. WIRE TO PRESENT BRANCH CIRCUIT CURRENTLY SERVING THE METAL DETECTOR BEING REPLACED WITH NEW. ELECTRICAL CONTRACTOR SHALL WIRE NEW DETECTOR AS REQUIRED FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY MOCP DEVICE SIZE AND ENSURE CAPACITY OF EXISTING BRANCH CIRCUIT. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED TO BE OPERATIONAL. COORDINATE WIRING DEVICE REQUIRED FOR DETECTOR CONNECTION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING TO INCLUDE ALL MATERIALS AND LABOR REQUIRED FOR NEW WORK.

3. TIE INTO TO PRESENT BRANCH CIRCUIT CURRENTLY SERVING THE RECEPTACLES IN THIS AREA. (AT DESK AREA RE-USE PRESENT BRANCH CIRCUITS FEEDING DEVICES REMOVED). ELECTRICAL CONTRACTOR SHALL WIRE NEW RECEPTACLES AS REQUIRED FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED FOR COMPLETELY NEW DEVICES AS INDICATED. ALL ITEMS MUST BE INCLUDED FOR A COMPLETE OPERATIONAL SYSTEM. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING TO INCLUDE ALL MATERIALS AND LABOR REQUIRED FOR NEW WORK.

4. CUT AND PATCH WALLS AS REQUIRED TO ENTEND AND ROUTE NEW BRANCH CIRCUIT WIRING DOWN THROUGH NEW WALLS. COORDINATE ROUTING IN THE FIELD. REFER TO NEW CONDUIT ROUTING NOTES ON NEW WORK PLAN.

5. TIE INTO TO PRESENT BRANCH CIRCUIT CURRENTLY SERVING THE EXISTING LIGHTING IN THIS AREA. ELECTRICAL CONTRACTOR SHALL WIRE NEW LIGHT FIXTURES AS REQUIRED FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED FOR NEW WORK AS INDICATED. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING TO INCLUDE ALL MATERIALS AND LABOR REQUIRED FOR NEW WORK.

6. PROVIDE ALPHA COMMUNICATIONS 2-WAY TALK-THRU ELECTRONIC SYSTEM MODEL # TTU-1AB (BULLET-RESISTANT OPTION). E.C. TO WIRE COMMINICATIONS SYSTEM AS REQUIRED BY MANUFACTURER FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED FOR NEW WORK AS INDICATED. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BIDDING TO INCLUDE ALL MATERIALS AND LABOR REQUIRED FOR NEW WORK. COORDINATE INSTALLATION WITH ARCHITECT AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN. TIE INTO NEAREST AVAILABLE POWER SOURCE FOR POWER SUPPLY UNIT.

7. TIE INTO TO PRESENT BRANCH CIRCUIT CURRENTLY SERVING THE EXISTING ELECTRICAL IN THIS AREA. ELECTRICAL CONTRACTOR SHALL WIRE NEW LIGHT FIXTURES AS REQUIRED FOR OPERATION. ELECTRICAL CONTRACTOR SHALL FURNISH, INSTALL AND WIRE AS REQUIRED FOR NEW WORK AS INDICATED. ELECTRICAL CONTRACTOR SHALL COORDINATE CABINET CONSTRUCTION WITH THE ARCHITECT PRIOR TO ROUGH-IN.

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SHEET IDENTIFICATION
DEMOLITION AND NEW WORK ELECTRICAL PLANS

PROJECT INFORMATION			
Date	January 18, 2018		
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SHEET NUMBER
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3

ELECTRICAL SYMBOLS

F1ⓐ#a	RECESSED CEILING FIXTURE ( )=WALL WASHER)	NUMBER=CIRCUIT LETTER=SWITCH F1,F2,F3=FIXTURE SEE SPECIFICATIONS AND FIXTURE SCHEDULE
●	SURFACE OR PENDANT CEILING FIXTURE	
●—	BRACKET FIXTURE	
	RECESSED LED FIXTURE	
	SURFACE OR PENDANT LED FIXTURE	
	WALL LED FIXTURE (VERIFY HEIGHT)	
⊗→	BRACKET EXIT LIGHT (→ DIRECTIONAL ARROW)	
⊗	CEILING EXIT LIGHT	
	LIGHT TRACK	
	EXTERIOR POLE FIXTURE	
●	BOLLARD FIXTURE	
E	BATTERY EMERGENCY FIXTURE (R=REMOTE HEAD)	
$	SINGLE POLE SWITCH	UP 4'-0", UNLESS NOTED OTHERWISE
3 $	THREE WAY SWITCH	
4 $	FOUR WAY SWITCH	
P $	SWITCH WITH PILOT LIGHT	
K $	KEY OPERATED SWITCH	
OS $	OCCUPANCY SENSOR SWITCH (EQUAL TO LEVITON DECORA INFRARED ODS15-ID,UNO)	
$■	DIMMER CONTROL SWITCH	
$	SWITCH WITH GROUNDED DUPLEX RECEPTACLE	
C■	REMOTE CONTROL SWITCH	
	GROUNDED DUPLEX RECEPTACLE	
	GROUNDED SINGLE RECEPTACLE	
	SPECIAL GROUNDED RECEPTACLE, SIZE AND TYPE AS SPECIFIED	
	GROUNDED FLUSH FLOOR RECEPTACLE	
—WM—	PLUGMOLD (VERIFY TYPE AND MOUNTING)	
P D T	POWER, DATA AND TELEPHONE FLUSH FLOOR BOX WITH COVER. PROVIDE EMPTY CONDUIT FOR DATA/TELEPHONE TO ABOVE SUSPENDED CEILING AS REQUIRED. SEE LOW VOLTAGE CONDUIT SIZING TABLE. (VERIFY)	
⊠	OUTLET WITH FINAL CONNECTIONS TO EQUIPMENT. EQUIPMENT FURNISHED BY OTHERS (FBO). PROVIDE NECESSARY RECEPTACLE, SAFETY SWITCH, WIRING ETC. FOR COMPLETE INSTALLATION VERIFY EXACT LOCATION AND HEIGHT BEFORE ROUGH-IN.	
J	CEILING JUNCTION BOX (WITH FLUSH COVER)	
J	WALL JUNCTION BOX (WITH FLUSH COVER)	
F	SAFETY SWITCH (F=FUSED)	
	SURFACE ELECTRICAL PANELBOARD	
	RECESSED ELECTRICAL PANELBOARD	
M	MOTOR CONTROLLER	
R	CONTROL RELAY (LETTER=FLOOR, NUMBER=NO. OF RELAY)	
T	TRANSFORMER	
	CONDUIT RUN CONCEALED (OR PARTIALLY CONCEALED) IN CEILINGS OR WALLS	CHARACTER MARKS= NUMBER OF WIRES, IF NONE ARE SHOWN TWO ARE REQUIRED
	CONDUIT RUN CONCEALED IN OR UNDER FLOORS	
— X —	CONDUIT RUN EXPOSED, IN STRAIGHT LINES	
– – U – –	CONDUIT RUN UNDERGROUND	
E	EMERGENCY WIRING, IN CONDUIT, CONCEALED	
	HOMERUN TO PANEL, IN CONDUIT, CONCEALED ARROWS INDICATE NUMBER OF CIRCUITS	
T	TELEPHONE CONDUIT RUN ABOVE CEILINGS OR IN WALLS	EMPTY CONDUIT, CONCEALED
T	TELEPHONE CONDUIT RUN IN OR UNDER FLOORS	
ⓓ▼	TELEPHONE/DATA OUTLET BOX SEE TELECOMM DETAILS FOR ADDITIONAL REQUIREMENTS.	WITH COVERPLATE AND 1" CONDUIT TO JUNCTION BOX PER SCHEDULE- PULL STRING

NOTES:

ELECTRICAL OUTLET BOXES INSTALLED IN FIRE RATED ASSEMBLIES SHALL COMPLY WITH LATEST IBC, SECTION 712 (NOT LESS THAN 24" O.C.)

ELECTRICAL DEVICES INSTALLED IN ACCORDANCE WITH ADA SPECIFICATIONS. VERIFY HEIGHTS AND SPECIFIC DIMENSIONS.

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY LIGHTING CONTROLS AS TO COMPLY WITH LOCAL ENERGY CODE REQUIREMENTS. ENERGY MANGAGEMENT PRODUCTS SHALL BE EQUAL TO SENSORSWITCH. E.C. TO DETERMINE IF WALL OR CEILING OCCUPANCY DEVICE TYPE IS REQUIRED BASED ON PROJECT DESIGN AND IDEAL USE OF DEVICE. PROVIDE CONTROL DEVICE WITH SUITABLE FEATURES FOR INSTALLATION LOCATIONS OF THE CONTROL DEVICES REQUIRED FOR ENERGY CODE COMPLIANCE.

ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTER	HP	HORSEPOWER
AFF	ABOVE FINISHED FLOOR	IWS	IN WALL SPACE
ASC	ABOVE SUSPENDED CEILING	JB	JUNCTION BOX
C	CONDUIT	KW	KILOWATTS
CF	CARPET FLANGE	LTG	LIGHTING
CTC	CLOSE TO CEILING	MAX	MAXIMUM
CTF	CLOSE TO FLOOR	MFG	MANUFACTURER
CTW	CLOSE TO WALL	MIN	MINIMUM
E	EMERGENCY	MOB	MOTOR OUTLET BOX
EBBC	ELECTRIC BASEBOARD CONVECTOR	MTD	MOUNTED
		NEC	NATIONAL ELECTRICAL CODE
EDH	ELECTRIC DUCT HEATER	NL	NIGHT LIGHT
ESUH	ELECTRIC SUSPENDED UNIT HEATER	OS	OCCUPANCY SENSING DEVICE
		PH	PHASE (Ø)
EWC	ELECTRIC WATER COOLER	PNL	PANEL
EWH	ELECTRIC WATER HEATER	SW	SWITCH
FAAP	FIRE ALARM ANNUNCIATOR PANEL	TFA	TO FLOOR ABOVE
FACP	FIRE ALARM CONTROL PANEL	TFB	TO FLOOR BELOW
FBO	FURNISHED BY OTHERS	TTC	TELEPHONE TERMINAL CABINET
FFA	FROM FLOOR ABOVE	UNO	UNLESS NOTED OTHERWISE
FFB	FROM FLOOR BELOW	V	VOLTS
FLA	FULL LOAD AMPS	W	WIRE
GFI	GROUND FAULT INTERRUPTER	WP	WEATHER PROOF

PRESENT EQUIPMENT AND DEMOLITION NOTES

A. FOLLOWING REMOVED PRESENT EQUIPMENT AND MATERIALS WHICH ARE IN GOOD OPERATING CONDITION (OR ARE PLACED IN GOOD CONDITION), SUITABLE, MEET REQUIREMENTS OF THESE SPECIFICATIONS, AND ARE APPROVED IN WRITING BY ENGINEER, OR CALLED FOR MAY BE REUSED (PXN-PN).
1. LIGHTING FIXTURES

B. REMOVED PIPE AND WIRE MUST NOT BE REUSED.

C. ANY OF ABOVE EQUIPMENT WHICH IS NOT REUSED AND FOLLOWING REMOVED PRESENT EQUIPMENT SHALL BECOME PROPERTY OF CONTRACTOR, AND SHALL BE REMOVED FROM PREMISES BY HIM (PX).
1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

D. FOLLOWING PRESENT EQUIPMENT SHALL BE CAREFULLY REMOVED, INTACT, MATCH MARKED, INSOFAR AS IS PRACTICAL, SHALL REMAIN PROPERTY OF OWNER, AND SHALL BE DELIVERED TO OWNER OUTSIDE OF BUILDING WHERE DIRECTED BY THE ENGINEER (PX-DO).
1. EQUIPMENT SO DESIGNATED ON DRAWINGS.

E. CONTRACTOR SHALL:
1. PROVIDE NEW FLOORS UNDER REMOVED PRESENT EQUIPMENT AND WHERE CALLED FOR
2. REPAIR FLOORS UNDER AND WALLS ADJACENT TO REMOVED EQUIPMENT, TO MATCH ADJACENT CONSTRUCTION.
3. FILL IN PRESENT CHASES WHICH ARE NO LONGER REQUIRED AND NEATLY PATCH TO MATCH ADJACENT CONSTRUCTION.
4. CUT OPENINGS REQUIRED FOR:
A. HIS WORK;
B. ADMISSION OF NEW EQUIPMENT;
C. REMOVAL OF PRESENT EQUIPMENT;
D. NEW CONNECTION TO PRESENT CONSTRUCTION.
5. PATCH AND REPAIR UNUSED PRESENT HOLES AND OPENINGS, AND THOSE LEFT BY THE REMOVAL OF PRESENT EQUIPMENT AND ADMISSION OF NEW EQUIPMENT.
6. PATCH AND REPAIR PRESENT EQUIPMENT, AND BUILDING CONSTRUCTION WHICH HAS NOT BEEN CUT, REMOVED, DISTURBED OR MARRED, AS REQUIRED, TO RESTORE IT TO ORIGINAL CONDITION BEFORE BEING DISTURBED.

F. UNUSED OPENINGS IN ENCLOSURES, IN CONDUITS, BOXES, CABINETS, AND PANELS SHALL BE FILLED.

G. PRESENT PAINTED CONSTRUCTION WHICH IS MARRED SHALL BE REPAIRED SAME AS NEW CONSTRUCTION.

H. CERTAIN ABBREVIATIONS OR SYMBOLS, WHEN APPLIED TO PRESENT (TO EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE THE FOLLOWING MEANINGS.

NC	NEW CONNECTIONS TO PRESENT PIPING, DEVICE WIRING, EQUIPMENT, ETC. INSTALL, TEST, COVER, PAINT, ETC., SAME AS NEW WORK.
P	TO REMAIN UNCHANGED, IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.
PX	TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC., OF EVERY KIND. UNUSED OPENINGS PLUGGED OR CAPPED, TESTED, COVERED, PAINTED SAME AS NEW WORK. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC., TO EQUAL ORIGINAL CONDITION. REMOVED MATERIAL MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ENGINEER.
PX-DO	SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED INTACT, AS FAR AS PRACTICAL, MATCHED MARKED, AND OTHERWISE IDENTIFIED AS REQUIRED AND DELIVERED TO OWNER OUTSIDE OF BUILDING AS DIRECTED BY ENGINEER.
PXR	SAME AS "PX", EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED, SAME AS NEW WORK, IN ORIGINAL POSITION. IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.
PXN ETC.	SAME AS "PXR" EXCEPT REMOVED, CLEANED AND RESTORED TO GOOD OPERATING CONDITION AND REINSTALLED SAME AS NEW WORK, IN NEW POSITION MARKED "PN". IF RECONDITIONING IS IMPRACTICAL, PROVIDE NEW DEVICE, AS APPROVED BY ENGINEER, AT NO INCREASE IN CONTRACT PRICE.
PN ETC.	COMPLETELY REINSTALL DEVICE, LINE OR EQUIPMENT REMOVED, AT NEW LOCATION, SAME, AS NEW WORK.

I. WORK OF EVERY DIVISION SHALL BE COORDINATED WITH ALL OTHER WORK AND PRESENT CONDITIONS, SO THAT
1. ELECTRICAL SERVICES TO PRESENT BUILDINGS OR PORTIONS OF BUILDING WILL NOT BE INTERRUPTED DURING PERIODS WHEN THOSE SERVICES ARE NEEDED.
2. SPECIAL SYSTEMS SUCH AS FIRE ALARM, SOUND, ETC., OF EVERY KIND TO PRESENT BUILDINGS WILL NOT BE INTERRUPTED DURING WORKING AND/OR OCCUPIED HOURS, EXCEPT AS APPROVED BY ENGINEER.

J. NEW CONDUIT SERVING NEW AND/OR PRESENT ELECTRICAL DEVICES IN FINISHED PRESENT ROOMS OR SPACES SHALL BE CONCEALED IN FINISHED ROOMS, WHERE POSSIBLE OR SHALL BE RUN IN ADJOINING UNFINISHED ROOMS, SHAFTS, STORAGE ROOMS, ETC., WHERE EXPOSED CONDUIT IS PERMITTED IN FINISHED PRESENT ROOMS BY ARCHITECT IN WRITING, IT SHALL BE WIREMOLD, WITH MATCHING BOXES, RUN INCONSPICUOUSLY AS POSSIBLE, IN STRAIGHT LINES, PARALLEL TO WALLS AND CEILINGS, WITH NEAT BENDS, UNNEEDED BOXES, SWITCHES AND WIRING SHALL BE COMPLETELY REMOVED AND OPENINGS PATCHED. IN PRESENT ROOMS OR LOCATIONS WHERE NEW LIGHTING EQUIPMENT IS SHOWN. PRESENT FIXTURES, BOXES, WIRING, SWITCHES, ETC. SHALL BE REMOVED AS PER NOTE "PX" UNLESS ANOTHER SYMBOL IS SHOWN ON DRAWINGS. WHERE SPECIFICALLY APPROVED BY ARCHITECT IN WRITING, BOXES MAY BE PERMITTED TO REMAIN AND BE PROVIDED WITH NEAT FLUSH COVERS, EXTENDING OVER ENTIRE WALL OPENING.

K. UNNEEDED ELECTRICAL FIXTURES, SWITCHES, STARTERS, DEVICES, ETC., SHALL BE COMPLETELY REMOVED; AND CONSTRUCTION PATCHED AS PER NOTE "PX" NEW CONNECTIONS TO PRESENT EQUIPMENT, SHALL BE MADE, TESTED, COVERED, PAINTED, ETC., SAME AS NEW EQUIPMENT. PRESENT EQUIPMENT, AND OTHER COVERING DISTURBED BY CONTRACTOR SHALL BE REPAIRED TO EQUAL NEW CONDITION AND PAINTED SAME AS NEW COVERING.

L. WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES, ON THE SAME CIRCUIT AND/OR CONDUIT RUN, SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO REMAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.

M. LIGHTING FIXTURES WHICH ARE REUSED SHALL HAVE LENS AND REFLECTORS CLEANED. ALL FIXTURES SHALL BE PROVIDED WITH NEW LAMPS.

N. WORK SHALL BE COORDINATED SO THAT HEATING, PLUMBING, ELECTRICAL, AND TELEPHONE SERVICES TO THE PRESENT BUILDING WILL NOT BE INTERRUPTED, EXCEPT AS APPROVED BY THE ARCHITECT.

GENERAL NOTES APPLY TO ALL SHEETS:

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, BEAMS, DOOR SWINGS, WINDOWS, COORDINATION, ADDITIONAL INFORMATION, ETC. AND REPORT ANY DESCREPANCIES, CONFLICTS, ETC. TO ARCHITECT PRIOR TO SUBMITTING BID.

ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S WIRING DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

CONTRACTOR SHALL VERIFY FINAL LOCATIONS AND CEILING TYPES FOR ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL REFLECTED CEILING PLAN AND ALL TRADES BEFORE ORDERING OR ROUGH-IN OF EQUIPMENT TO AVOID CONFLICTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING, INCLUDING CORE DRILLING, SAW CUTTING, ETC. , AS REQUIRED TO ACCOMMODATE HIS WORK. CUTTING AND PATCHING AND PAYMENT OF SAID WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR REQUIRING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF PATCHING REQUIREMENTS TO A GENERAL CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, LIGHT FIXTURES, DIFFUSERS, DUCTWORK, PIPING, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF HIS WORK. REMOVAL, REPLACEMENT AND PAYMENT FOR MECHANICAL/PLUMBING ITEMS SHALL BE THE RESPONSIBILITY OF THE APPLICABLE ELECTRICAL CONTRACTOR. REMOVAL AND REPLACEMENT OF PRESENT CEILINGS, ETC., SHALL BE THE RESPONSIBILITY OF CONTRACTOR MAKING THE DISTURBANCE BUT SAME SHALL BE DONE BY A GENERAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE APPROPRIATE ELECTRICAL CONTRACTOR TO GIVE QUANTITIES OF REMOVAL/REPLACEMENT REQUIREMENTS TO A GENERAL CONTRACTOR.

ELECTRICAL COORDINATION NOTE

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS ASSOCIATED WITH ALL OTHER TRADES THAT INVOLVE THE ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING FOR DEVICES AND SYSTEMS PROVIDED BY OTHER TRADES. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ASPECTS OF WORK RELATED TO THESE SYSTEMS AND DEVICES PRIOR TO SUBMITTING FINAL BID. INCLUDE ALL NECESSARY LABOR AND MATERIALS ASSOCIATED WITH OTHER TRADES AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS THAT REQUIRE THE ELECTRICAL CONTRACTOR TO WIRE.

GENERAL DEMOLITION NOTE:

FOR ALL WALLS, CEILINGS, FLOORS, ETC. REQUIRED FOR CONSTRUCTION DEMOLITION WORK OR NEW CONSTRUCTION WORK, INCLUDING, BUT NOT LIMITED TO ITEMS SHOWN: REMOVE (PX) AND/OR REMOVE AND RELOCATE (PXN-PN) ALL ELECTRICAL EQUIPMENT, DEVICES, BOXES, CONDUIT, WIRING, ETC., AS REQUIRED, FOR DEMOLITION OF PRESENT CONSTRUCTION AND TO AVOID INTERFERENCE WITH NEW CONSTRUCTION. (VERIFY BEFORE BIDDING TO INCLUDE ALL NECESSARY MATERIALS AND LABOR)

JUVENILE DETENTION CENTER LOBBY REMODELING FOR
WINNEBAGO COUNTY
ROCKFORD, ILLINOIS

RICHARD L. JOHNSON ASSOCIATES | ARCHITECTS

SHEET IDENTIFICATION
ELECTRICAL SYMBOLS AND NOTES

PROJECT INFORMATION
Date: January 18, 2018
Rev. Date:
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SHEET NUMBER
E102
OF
3

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DIVISION 26 ELECTRICAL SPECIFICATIONS

SECTION 262000 INTERIOR DISTRIBUTION SYSTEM

PART 1 GENERAL

THE SUPPLEMENTARY GENERAL CONDITIONS ALONG WITH THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS GOVERN WORK UNDER THIS SECTION. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO PROVIDE FOR A COMPLETE OPERATING SYSTEM. THE OMISSION OF REFERENCE TO MINOR SYSTEM COMPONENTS WHICH ARE REASONABLY REQUIRED FOR THE PROPER FUNCTIONING AND/OR SAFE OPERATION OF THE SYSTEM SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SAME AT NO ADDITIONAL COST TO THE OWNER. IT IS THE FURTHER INTENT THAT THE SYSTEM SHALL BE TURNED OVER TO THE OWNER IN A FUNCTIONAL AND OPERATING CONDITION. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE ELECTRICAL SYSTEM INCLUDING, BUT NOT LIMITED TO, SERVICE, LIGHTING, POWER, DEVICES, PANELS, CIRCUIT BREAKERS, CONDUIT AND WIRING. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND PAY FOR TEMPORARY AND NEW SERVICE. (VERIFY BEFORE BIDDING TO INCLUDE ALL WORK AS REQUIRED). THE WORK SHALL BE IN ACCORDANCE WITH THE REFERENCES LISTED BELOW AND ALL LOCAL CODES, LAWS, ORDINANCES AND STATE REGULATIONS WHICH GOVERN THE INSTALLATION.

1.1 REFERENCES

THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. THE PUBLICATIONS ARE REFERRED TO WITHIN THE TEXT BY THE BASIC DESIGNATION ONLY.

ASTM D 709	(2001; R 2007) LAMINATED THERMOSETTING MATERIALS
EIA 480	(1981) TOGGLE SWITCHES
IEEE STDS DICTIONARY	(2009) IEEE STANDARDS DICTIONARY: GLOSSARY OF TERMS & DEFINITIONS
ICC/ANSI A117.1	(2009) ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
ICC	(2012) INTERNATIONAL ENERGY CONSERVATION CODE
ANSI Z535.1	(2006) AMERICAN NATIONAL STANDARD FOR SAFETY--COLOR CODE
ANSI/NEMA FB 1	(2007; AMD 2010) STANDARD FOR FITTINGS, CAST METAL BOXES, AND CONDUIT BODIES FOR CONDUIT, ELECTRICAL METALLIC TUBING, AND CABLE
ANSI/NEMA OS 1	(2008; AMD 2010) SHEET-STEEL OUTLET BOXES, DEVICE BOXES, COVERS, AND BOX SUPPORTS
ANSI/NEMA OS 2	(2008; AMD 2010) NONMETALLIC OUTLET BOXES, DEVICE BOXES, COVERS, AND BOX SUPPORTS
NEMA 250	(2008) ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM)
NEMA KS 1	(2001; R 2006) ENCLOSED AND MISCELLANEOUS DISTRIBUTION EQUIPMENT SWITCHES (600 V MAXIMUM)
NEMA PB 1	(2006; ERRATA 2008) PANELBOARDS
NEMA RN 1	(2005) POLYVINYL-CHLORIDE (PVC) EXTERNALLY COATED GALVANIZED RIGID STEEL CONDUIT AND INTERMEDIATE METAL CONDUIT
NEMA TC 2	(2003) STANDARD FOR ELECTRICAL POLYVINYL CHLORIDE (PVC) CONDUIT
NEMA TC 3	(2004) STANDARD FOR POLYVINYL CHLORIDE (PVC) FITTINGS FOR USE WITH RIGID PVC CONDUIT AND TUBING
NEMA WD 1	(1999; R 2005; R 2010) STANDARD FOR GENERAL COLOR REQUIREMENTS FOR WIRING DEVICES
NEMA WD 6	(2002; R 2008) WIRING DEVICES DIMENSIONS SPECIFICATIONS
NFPA 70	(2008; TIA 11-1; ERRATA 2008) NATIONAL ELECTRICAL CODE
NFPA 70E	(2015) STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE
UL 1	(2005; REPRINT JUL 2007) STANDARD FOR FLEXIBLE METAL CONDUIT
UL 1242	(2006; REPRINT JUL 2007) STANDARD FOR ELECTRICAL INTERMEDIATE METAL CONDUIT -- STEEL
UL 489	(2009; REPRINT JUN 2011) MOLDED-CASE CIRCUIT BREAKERS, MOLDED-CASE SWITCHES, AND CIRCUIT-BREAKER ENCLOSURES
UL 6	(2007; REPRINT NOV 2010) ELECTRICAL RIGID METAL CONDUIT-STEEL
UL 797	(2007) ELECTRICAL METALLIC TUBING -- STEEL
UL 870	(2008) STANDARD FOR WIREWAYS, AUXILIARY GUTTERS, AND ASSOCIATED FITTINGS

1.2 DEFINITIONS

A. UNLESS OTHERWISE SPECIFIED OR INDICATED, ELECTRICAL AND ELECTRONICS TERMS USED IN THESE SPECIFICATIONS, AND ON THE DRAWINGS, SHALL BE AS DEFINED IN IEEE STDS DICTIONARY.
B. THE TECHNICAL SECTIONS REFERRED TO HEREIN ARE THOSE SPECIFICATION SECTIONS THAT DESCRIBE PRODUCTS, INSTALLATION PROCEDURES, AND EQUIPMENT OPERATIONS AND THAT REFER TO THIS SECTION FOR DETAILED DESCRIPTION OF SUBMITTAL TYPES.
C. VERTICAL ASSEMBLY: A VERTICAL ASSEMBLY IS A POLE, TOWER OR OTHER SUCH SUPPORT, MOUNTING HARDWARE, ARMS, BRACKETS AND THE LOAD. LOAD CAN BE A LUMINAIRE, SIREN, LOUDSPEAKER OR OTHER DEVICE. ALL COMPONENTS OF A VERTICAL ASSEMBLY WILL BE RATED BY THE MANUFACTURER TO WITHSTAND 135 MPH WIND LOADING.

1.3 SUBMITTALS

SUBMIT THE FOLLOWING IN ACCORDANCE WITH SECTION SUBMITTAL PROCEDURES:
PRECONSTRUCTION SUBMITTALS (SHOP DRAWINGS): SUBMIT PRODUCT DATA FOR THE FOLLOWING: CONDUITS, RACEWAYS AND FITTINGS, WIRE AND CABLE, SPLICES AND CONNECTORS, SWITCHES, RECEPTACLES, OUTLETS, OUTLET BOXES, AND PULL BOXES, CIRCUIT BREAKERS, PANELBOARDS, LAMPS AND LIGHTING FIXTURES, AND DRY-TYPE DISTRIBUTION TRANSFORMERS. COORDINATE COLOR OF DEVICES AND COVERPLATES WITH ARCHITECT/OWNER PRIOR SUBMITTING SHOP DRAWING SUBMITTALS FOR APPROVAL. CLOSEOUT SUBMITTALS (O&M INSTRUCTIONS): SUBMIT TEST REPORTS FOR THE FOLLOWING: FIRE ALARM TEST, LOW VOLTAGE CABLE TEST, CONTINUITY TEST, PHASE-ROTATION TESTS, INSULATION RESISTANCE TEST, SUBMIT MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S START-UP AND CHECK-OUT CHECKLISTS, SUBMIT STATE FIRE ALARM CERTIFICATION, AND PRE-ENERGIZATION CHECKLISTS.

1.4 GENERAL REQUIREMENTS

SUBMIT MATERIAL, EQUIPMENT, AND FIXTURE LISTS FOR THE FOLLOWING ITEMS SHOWING MANUFACTURER'S STYLE OR CATALOG NUMBERS, SPECIFICATION AND DRAWING REFERENCE NUMBERS, WARRANTY INFORMATION, AND FABRICATION SITE.
SUBMIT MANUFACTURER'S INSTRUCTIONS INCLUDING SPECIAL PROVISIONS REQUIRED TO INSTALL EQUIPMENT COMPONENTS AND SYSTEM PACKAGES. SPECIAL NOTICES SHALL DETAIL IMPEDANCES, HAZARDS AND SAFETY PRECAUTIONS.SUBMIT CERTIFICATION REQUIRED TO INSTALL EQUIPMENT COMPONENTS AND SYSTEM PACKAGES.

1.5 MANUFACTURER'S NAMEPLATE

EACH ITEM OF EQUIPMENT SHALL HAVE A NAMEPLATE BEARING THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER SECURELY AFFIXED IN A CONSPICUOUS PLACE; THE NAMEPLATE OF THE DISTRIBUTING AGENT WILL NOT BE ACCEPTABLE.

1.6 FIELD FABRICATED NAMEPLATES

ASTM D 709. PROVIDE LAMINATED PLASTIC NAMEPLATES FOR EACH EQUIPMENT ENCLOSURE, RELAY, SWITCH, AND DEVICE; AS SPECIFIED IN THE TECHNICAL SECTIONS OR AS INDICATED ON THE DRAWINGS. EACH NAMEPLATE INSCRIPTION SHALL IDENTIFY THE FUNCTION AND, WHEN APPLICABLE, THE POSITION. NAMEPLATES SHALL BE MELAMINE PLASTIC, 0.125 INCH THICK, WHITE WITH BLACK CENTER CORE. SURFACE SHALL BE MATTE FINISH. CORNERS SHALL BE SQUARE. ACCURATELY ALIGN LETTERING AND ENGRAVE INTO THE CORE. MINIMUM SIZE OF NAMEPLATES SHALL BE ONE BY 2.5 INCHES. LETTERING SHALL BE A MINIMUM OF 0.25 INCH HIGH NORMAL BLOCK STYLE.

1.7 WARNING SIGNS

PROVIDE WARNING SIGNS FOR THE ENCLOSURES OF ELECTRICAL EQUIPMENT INCLUDING SUBSTATIONS, PAD-MOUNTED TRANSFORMERS, PAD-MOUNTED SWITCHES, GENERATORS, AND SWITCHGEAR HAVING A NOMINAL RATING EXCEEDING 600 VOLTS.

A. WHEN THE ENCLOSURE INTEGRITY OF SUCH EQUIPMENT IS SPECIFIED TO BE IN ACCORDANCE WITH IEEE C57.12.28 OR IEEE C57.12.29, SUCH AS FOR PAD-MOUNTED TRANSFORMERS, PROVIDE SELF-ADHESIVE WARNING SIGNS ON THE OUTSIDE OF THE HIGH VOLTAGE COMPARTMENT DOOR(S). SIGN SHALL BE A DECAL AND HAVE NOMINAL DIMENSIONS OF 7 BY 10 INCHES WITH THE LEGEND "DANGER HIGH VOLTAGE" PRINTED IN TWO LINES OF NOMINAL 2 INCH HIGH LETTERS. THE WORD "DANGER" SHALL BE IN WHITE LETTERS ON A RED BACKGROUND AND THE WORDS "HIGH VOLTAGE" SHALL BE IN BLACK LETTERS ON A WHITE BACKGROUND. DECAL SHALL BE PANDUIT NO. PPSO710D72 OR APPROVED EQUAL.

1.8 VERIFICATION OF POINTS

BEFORE SUBMITTING THEIR BID, THE CONTRACTOR SHALL VISIT THE SITE AND CONTACT THE CITY AND ALL UTILITIES TO CAREFULLY VERIFY ALL EXPOSED, CONCEALED AND BURIED POINTS OF CONNECTIONS, AS TO LOCATIONS, SIZE, TYPE, DEPTH, OPERATING CHARACTERISTICS ,ETC. INCLUDING BUT NOT LIMITED TO: PRESENT SITE CONDITIONS, PRESENT UTILITY COMPANY ELECTRICAL DISTRIBUTION SYSTEM, WORK ASSOCIATED WITH EQUIPMENT BY OTHERS, NEW CONNECTIONS TO PRESENT EQUIPMENT OR CONSTRUCTION, PRESENT EQUIPMENT TO BE REMOVED AND/OR RELOCATED. IF THE CONTRACTOR FINDS THAT PRESENT POINTS OF CONNECTION ARE INCORRECTLY SPECIFIED, THEY SHALL NOTIFY THE ARCHITECT, IN WRITING, AT LEAST 7 CALENDAR DAYS BEFORE BIDS ARE TO BE SUBMITTED. THE ARCHITECT WILL ISSUE AN ADDENDUM TO ADDRESS THE REVISED POINTS OF CONNECTION. IF THE CONTRACTOR FAILS TO NOTIFY THE ARCHITECT, IN WRITING, AS OUTLINED ABOVE, IT WILL BE ASSUMED THEIR BID INCLUDES EVERYTHING REQUIRED TO PROVIDE CONNECTIONS AS THEY ACTUALLY EXIST, OR AS THEY WILL BE REQUIRED BY THE UTILITY OR AUTHORITY HAVING JURISDICTION WITHOUT INCREASE TO THE CONTRACT PRICE.

1.9 COORDINATION

CERTAIN MOTORS, EQUIPMENT, CONTROLS, ETC ARE PROVIDED BY THE HEATING, VENTILATION, PLUMBING AND/OR OTHER CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED MOTOR STARTERS, SAFETY SWITCHES, VARIABLE FREQUENCY DRIVES, CONTROLS, ETC AND COMPLETELY WIRE ALL EQUIPMENT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CODES. SEE SPECIFICATIONS AND DRAWINGS FOR ALL OTHER TRADES TO AVOID CONFLICTS OR DUPLICATING WORK TO BE PROVIDED BY OTHERS. (VERIFY PRIOR TO ROUGH-IN).

BEFORE BIDDING, THE CONTRACTOR SHALL CAREFULLY CHECK ALL PLANS AND SPECIFICATIONS FOR EVERY TRADE AND SHALL INCLUDE IN THEIR BID ALL ASSOCIATED ELECTRICAL WORK TO BE PROVIDED FOR THE PROJECT. BEFORE ANY WORK IS INSTALLED OR ANY EQUIPMENT IS PURCHASED, THE CONTRACTOR SHALL CAREFULLY CHECK PLANS AND SPECIFICATIONS FOR EVERY TRADE AS WELL AS THE JOB CONDITIONS. ANY LACK OF COORDINATION BETWEEN THE WORK OF THE EC AND THEIR SUBS, SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT. THE ARCHITECT WILL WORK OUT CONFLICTS AND ADJUSTMENTS IN CONTRACT PRICE, IF WARRANTED. CHANGES IN EQUIPMENT SHALL BE INCORPORATED IN THE SHOP DRAWINGS.

IF CONFLICTS ARISE DURING THE CONSTRUCTION PERIOD, THEY SHALL BE REPORTED TO THE ARCHITECT, IN WRITING, AND THEY SHALL BE WORKED OUT BETWEEN THE ARCHITECT, GENERAL CONTRACTOR, AND OTHER ASSOCIATED TRADE AT NO INCREASE TO THE CONTRACT PRICE.

PART 2 PRODUCTS

2.1 MATERIALS

MATERIALS AND EQUIPMENT TO BE PROVIDED SHALL BE NEW, UL LISTED FOR THE REQUIRED LOCATION/USE, AND BEAR THE MANUFACTURER'S NAME, MODEL NUMBER, AND OTHER IDENTIFICATION MARKINGS. THE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE PRODUCTS. MATERIALS AND EQUIPMENT SHALL BE OF THE SAME MANUFACTURER THROUGHOUT THE PROJECT TO PROVIDE A UNIFORM APPEARANCE, OPERATION AND MAINTENANCE.

2.1.1 RIGID STEEL CONDUIT: RIGID STEEL CONDUIT SHALL COMPLY WITH UL 6 AND BE GALVANIZED BY THE HOT-DIP PROCESS. RIGID STEEL CONDUIT SHALL BE POLYVINYLCHLORIDE (PVC) COATED IN ACCORDANCE WITH NEMA RN 1, WHERE UNDERGROUND AND IN CORROSIVE AREAS, OR MUST BE PAINTED WITH BITUMASTIC. FITTINGS FOR RIGID STEEL CONDUIT SHALL BE THREADED. GASKETS SHALL BE SOLID. CONDUIT FITTINGS WITH BLANK COVERS SHALL HAVE GASKETS, EXCEPT IN CLEAN, DRY AREAS OR AT THE LOWEST POINT OF A CONDUIT RUN WHERE DRAINAGE IS REQUIRED. COVERS SHALL HAVE CAPTIVE SCREWS AND BE ACCESSIBLE AFTER THE WORK HAS BEEN COMPLETED.

2.1.2 ELECTRICAL METALLIC TUBING (EMT): EMT SHALL BE IN ACCORDANCE WITH UL 797 AND BE ZINC COATED STEEL. COUPLINGS AND CONNECTORS SHALL BE ZINC-COATED, RAINTIGHT, GLAND COMPRESSION WITH INSULATION THROAT. CRIMP, SPRING, OR SETSCREW TYPE FITTINGS ARE NOT ACCEPTABLE.

2.1.3 FLEXIBLE METALLIC CONDUIT: FLEXIBLE METALLIC CONDUIT SHALL COMPLY WITH UL 1 AND BE GALVANIZED STEEL. FITTINGS FOR FLEXIBLE METALLIC CONDUIT SHALL BE SPECIFICALLY DESIGNED FOR SUCH CONDUIT. PROVIDE LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT WITH A PROTECTIVE JACKET OF PVC EXTRUDED OVER A FLEXIBLE INTERLOCKED GALVANIZED STEEL CORE TO PROTECT WIRING AGAINST MOISTURE, OIL, CHEMICALS, AND CORROSIVE FUMES. SPECIFICALLY DESIGN FITTINGS FOR LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.

2.1.4 INTERMEDIATE METAL CONDUIT: INTERMEDIATE METAL CONDUIT SHALL COMPLY WITH UL 1242 AND BE GALVANIZED.

2.1.5 RIGID NONMETALLIC CONDUIT: RIGID NONMETALLIC CONDUIT SHALL COMPLY WITH NEMA TC 2 AND NEMA TC 3 WITH WALL THICKNESS NOT LESS THAN SCHEDULE 40.

2.1.6 WIREWAYS AND AUXILIARY GUTTERS: WIREWAY AND AUXILIARY GUTTERS SHALL BE A MINIMUM 4- BY 4 INCH TRADE SIZE CONFORMING TO UL 870.

2.1.7 SURFACE RACEWAYS AND ASSEMBLIES: SURFACE METAL RACEWAYS AND MULTI-OUTLET ASSEMBLIES SHALL CONFORM TO NFPA 70. RECEPTACLES SHALL CONFORM TO NEMA WD 1, TYPE 5-20R.

2.2 WIRE AND CABLE

CONDUCTORS INSTALLED IN CONDUIT ABOVE GROUND SHALL BE COPPER 600-VOLT TYPE THWN-2, CONDUCTORS INSTALLED UNDERGROUND SHALL BE TYPE XHHW. ALL CONDUCTORS AWG NO. 8 AND LARGER, SHALL BE STRANDED. ALL CONDUCTORS SMALLER THAN AWG NO. 8 SHALL BE SOLID. FLEXIBLE CABLE SHALL BE TYPE SO AND CONTAIN A GROUNDING CONDUCTOR WITH GREEN INSULATION. CONDUCTORS INSTALLED IN PLENUMS SHALL BE MARKED PLENUM RATED.

2.3 SPLICES AND CONNECTORS

MAKE ALL SPLICES IN AWG NO. 8 AND SMALLER WITH APPROVED INSULATED ELECTRICAL TYPE OR INDENTOR CRIMP-TYPE CONNECTORS AND COMPRESSION TOOLS. MAKE ALL SPLICES IN AWG NO. 6 AND LARGER WITH BOLTED CLAMP-TYPE CONNECTORS. JOINTS SHALL BE WRAPPED WITH AN INSULATING TAPE THAT HAS AN INSULATION AND TEMPERATURE RATING EQUIVALENT TO THAT OF THE CONDUCTOR.

2.4 SWITCHES

ALL WIRING DEVICES SHALL BE HUBBELL, P & S, BYRANT, G.E. OR LEVITON UNDERWRITER'S APPROVED, NEC RATED AND SPECIFICATION GRADE

2.4.1 SAFETY SWITCHES: SAFETY SWITCHES SHALL COMPLY WITH NEMA KS 1, AND BE THE HEAVY-DUTY TYPE WITH ENCLOSURE, VOLTAGE, CURRENT RATING, NUMBER OF POLES, AND FUSING AS INDICATED. MAKE PROVISIONS TO LOCK THE HANDLE IN THE "OFF" POSITION, BUT THE SWITCH SHALL NOT BE CAPABLE OF BEING LOCKED IN THE "ON" POSITION. PROVIDE SWITCHES OF THE QUICK-MAKE, QUICK-BREAK TYPE. APPROVE TERMINAL LUGS FOR USE WITH COPPER CONDUCTORS. SAFETY COLOR CODING FOR IDENTIFICATION OF SAFETY SWITCHES SHALL CONFORM TO ANSI Z535.1.

2.4.2 TOGGLE SWITCHES: TOGGLE SWITCHES SHALL COMPLY WITH EIA 480, CONTROL INCANDESCENT, MERCURY, AND FLUORESCENT LIGHTING FIXTURES AND BE OF THE HEAVY DUTY, GENERAL PURPOSE, NONINTERCHANGEABLE FLUSH-TYPE. TOGGLE SWITCHES SHALL BE COMMERCIAL GRADE TOGGLE TYPE, SINGLE, DOUBLE-POLE, THREE/FOUR-WAY TWO-POSITION DEVICES RATED 20 AMPERES AT 120 OR 277 VOLTS, 60 HERTZ ALTERNATING CURRENT (AC) ONLY. ALL TOGGLE SWITCHES SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

2.5 RECEPTACLES

RECEPTACLES SHALL BE COMMERCIAL GRADE, 20A, 125 VAC, 2-POLE, 3-WIRE DUPLEX CONFORMING TO NEMA WD 6, NEMA 5-20R.

2.6 OUTLETS, OUTLET BOXES, AND PULL BOXES

OUTLET BOXES FOR USE WITH CONDUIT SYSTEMS SHALL BE IN ACCORDANCE WITH ANSI/NEMA FB 1 AND ANSI/NEMA OS 1 AND BE NOT LESS THAN 1-1/2 INCHES DEEP. FURNISH ALL PULL AND JUNCTION BOXES WITH SCREW-FASTENED COVERS.

2.7 CIRCUIT BREAKERS

CIRCUIT-BREAKER INTERRUPTING RATING SHALL BE NOT LESS THAN THOSE INDICATED AND IN NO EVENT LESS THAN THE MAXIMUM AVAILABLE FAULT CURRENT AT THE LOCATION. MULTIPOLE CIRCUIT BREAKERS SHALL BE THE COMMON-TRIP TYPE WITH A SINGLE HANDLE. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE CONFORMING TO UL 489. PROVIDE GFCI TYPE BREAKERS FOR ALL 15A AND 20A, 120 VOLT KITCHEN RECEPTACLES.

2.8 LAMPS AND LIGHTING FIXTURES

MANUFACTURERS AND CATALOG NUMBERS SHOWN ARE INTENDED TO RESTRICT THE SELECTION TO FIXTURES OF THE PARTICULAR MANUFACTURER UNLESS STATED AS "OR EQUAL" IN THE SCHEDULE. FIXTURES WITH THE SAME SALIENT FEATURES AND EQUIVALENT LIGHT DISTRIBUTION AND BRIGHTNESS CHARACTERISTICS, OF EQUAL FINISH AND QUALITY, MAY BE ACCEPTABLE. PROVIDE LAMPS OF THE PROPER TYPE AND WATTAGE FOR EACH FIXTURE. BALLASTS SHALL BE HIGH POWER FACTOR AND BE ENERGY EFFICIENT. BALLASTS SHALL HAVE A CLASS P TERMINAL PROTECTIVE DEVICE FOR 120 OR 277-VOLT OPERATION AS INDICATED AND BE RAPID-START FLUORESCENT. BALLASTS SHALL BE "A" SOUND RATED. FLUORESCENT LAMPS SHALL BE STANDARD REDUCED WATTAGE TYPE. HIGH INTENSITY DISCHARGE (HID) LIGHTING FIXTURES SHALL HAVE PREWIRED INTEGRAL BALLASTS AND CAST ALUMINUM HOUSINGS COMPLETE WITH TEMPERED GLASS LENSES SUITABLE FOR INSTALLATION IN DAMP OR WET LOCATIONS. PROVIDE FIXTURES AND LAMPS.

PART 3 EXECUTION

ALL WORK SHALL BE PERFORMED BY TRAINED, EXPERIENCED PERSONNEL SKILLED IN THEIR VARIOUS CRAFTS, UNDER THE FULL TIME SUPERVISION OF AN APPROVED ENGINEER OR FOREMAN.

3.1 CONDUITS, RACEWAYS AND FITTINGS

PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES. CONDUIT RUNS BETWEEN OUTLET AND OUTLET, BETWEEN FITTING AND FITTING, OR BETWEEN OUTLET AND
FITTING SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE 90-DEGREE BENDS, INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE OUTLET OR FITTING. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE OR AS APPROVED BY THE ARCHITECT. RACEWAYS SHALL BE GALVANIZED STEEL, UNLESS REQUIRED OTHERWISE OR AS NOTED AND SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS NOTED OTHERWISE. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION. DO NOT INSTALL CRUSHED OR DEFORMED CONDUIT. AVOID TRAPPED CONDUIT RUNS WHERE POSSIBLE. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. TAKE CARE TO PREVENT THE LODGMENT OF FOREIGN MATERIAL IN THE CONDUIT, BOXES, FITTINGS, AND EQUIPMENT DURING THE COURSE OF CONSTRUCTION. CLEAR ANY CLOGGED CONDUIT OF OBSTRUCTIONS OR BE REPLACED. CONDUIT AND RACEWAY RUNS CONCEALED IN OR BEHIND WALLS, ABOVE CEILINGS, OR EXPOSED ON WALLS AND CEILINGS 5 FEET OR MORE ABOVE FINISHED FLOORS AND NOT SUBJECT TO MECHANICAL DAMAGE SHALL BE ELECTRICAL METALLIC TUBING (EMT). WIRE INSTALLED IN A PLENUM RATED CEILING SHALL BE INSTALLED IN CONDUIT OR SHALL BE TEFLON COATED PLENUM RATED AS REQUIRED TO COMPLY WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODE REQUIREMENTS.

3.1.1 RIGID STEEL CONDUIT: MAKE FIELD-MADE BENDS AND OFFSETS WITH APPROVED HICKEY OR CONDUIT BENDING MACHINE. CONDUIT ELBOWS LARGER THAN 2-1/2 INCHES SHALL BE LONG RADIUS. PROVIDE ALL CONDUIT STUBBED-UP THROUGH CONCRETE FLOORS FOR CONNECTIONS TO FREE-STANDING EQUIPMENT WITH THE EXCEPTION OF MOTOR-CONTROL CENTERS, CUBICLES, AND OTHER SUCH ITEMS OF EQUIPMENT, WITH A FLUSH COUPLING WHEN THE FLOOR SLAB IS OF SUFFICIENT THICKNESS. OTHERWISE,PROVIDE A FLOOR BOX SET FLUSH WITH THE FINISHED FLOOR. CONDUITS INSTALLED FOR FUTURE USE SHALL BE TERMINATED WITH A COUPLING AND PLUG SET FLUSH WITH THE FLOOR.

3.1.2 ELECTRICAL METALLIC TUBING (EMT): EMT SHALL BE GROUNDED IN ACCORDANCE WITH NFPA 70, USING PRESSURE GROUNDING CONNECTORS ESPECIALLY DESIGNED FOR EMT.

3.1.3 FLEXIBLE METALLIC CONDUIT: USE FLEXIBLE METALLIC CONDUIT TO CONNECT RECESSED FIXTURES FROM OUTLET BOXES IN CEILINGS, TRANSFORMERS, AND OTHER APPROVED ASSEMBLIES. BONDING WIRES SHALL BE USED IN FLEXIBLE CONDUIT AS SPECIFIED IN NFPA 70, FOR ALL CIRCUITS. FLEXIBLE CONDUIT SHALL NOT BE CONSIDERED A GROUND CONDUCTOR. ELECTRICAL CONNECTIONS TO VIBRATION-ISOLATED EQUIPMENT SHALL BE MADE WITH FLEXIBLE METALLIC CONDUIT. LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED IN WET AND OILY LOCATIONS AND TO COMPLETE THE CONNECTION TO MOTOR-DRIVEN EQUIPMENT.

3.1.4 INTERMEDIATE CONDUIT: MAKE ALL FIELD-MADE BENDS AND OFFSETS WITH APPROVED HICKEY OR CONDUIT BENDING MACHINE. USE INTERMEDIATE METAL CONDUIT ONLY FOR INDOOR INSTALLATIONS.

3.1.5 RIGID NONMETALLIC CONDUIT: RIGID PVC CONDUIT SHALL BE DIRECT BURIED. A GREEN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE IN CONDUIT WITH CONDUCTORS AND BE SOLIDLY CONNECTED TO GROUND AT EACH END. GROUNDING WIRES SHALL BE SIZED IN ACCORDANCE WITH NFPA 70.

3.1.6 WIREWAY AND AUXILIARY GUTTER: STRAIGHT SECTIONS AND FITTINGS SHALL BE BOLTED TOGETHER TO PROVIDE A RIGID, MECHANICAL CONNECTION AND ELECTRICAL CONTINUITY. DEAD ENDS OF WIREWAYS AND AUXILIARY GUTTERS SHALL BE CLOSED. PLUG ALL UNUSED CONDUIT OPENINGS. WIREWAYS FOR OVERHEAD DISTRIBUTION AND CONTROL CIRCUITS SHALL BE SUPPORTED AT MAXIMUM 5-FOOT INTERVALS. AUXILIARY GUTTERS USED TO SUPPLEMENT WIRING SPACES FOR EQUIPMENT NOT CONTAINED IN A SINGLE ENCLOSURE SHALL CONTAIN NO SWITCHES, OVERCURRENT DEVICES, APPLIANCES, OR APPARATUS AND BE NOT MORE THAN 30 FEET LONG.

3.1.7 SURFACE RACEWAYS AND ASSEMBLIES: SURFACE RACEWAYS SHALL BE MOUNTED PLUMB AND LEVEL, WITH THE BASE AND COVER SECURED. MINIMUM CIRCUIT RUN SHALL BE THREE-WIRE WITH ONE WIRE DESIGNATED AS GROUND.

3.2 WIRING

CONDUCTORS UP TO AND INCLUDING AWG NO. 2 SHALL BE MANUFACTURED WITH COLORED INSULATING MATERIALS. CONDUCTORS LARGER THAN AWG NO. 2 SHALL HAVE ENDS IDENTIFIED WITH COLOR PLASTIC TAPE IN OUTLET, PULL, OR JUNCTION BOXES. SPLICE IN ACCORDANCE WITH THE NFPA 70. PROVIDE CONDUCTOR IDENTIFICATION WITHIN EACH ENCLOSURE WHERE A TAP, SPLICE, OR TERMINATION IS MADE AND AT THE EQUIPMENT TERMINAL OF EACH CONDUCTOR. TERMINAL AND CONDUCTOR IDENTIFICATION SHALL MATCH AS INDICATED. WHERE SEVERAL FEEDERS PASS THROUGH A COMMON PULLBOX, THE FEEDERS SHALL BE TAGGED TO CLEARLY INDICATE THE ELECTRICAL CHARACTERISTICS, CIRCUIT NUMBER, AND PANEL DESIGNATION.

3.3 SAFETY SWITCHES

SECURELY FASTEN SWITCHES TO THE SUPPORTING STRUCTURE OR WALL, UTILIZING A MINIMUM OF FOUR 1/4 INCH BOLTS. DO NOT USE SHEET METAL SCREWS AND SMALL MACHINE SCREWS FOR MOUNTING. DO NOT MOUNT SWITCHES IN AN INACCESSIBLE LOCATION OR WHERE THE PASSAGEWAY TO THE SWITCH MAY BECOME OBSTRUCTED. MOUNTING HEIGHT OF HANDLE SHALL BE 5 FEET ABOVE FLOOR LEVEL, WHEN POSSIBLE.

3.4 WIRING DEVICES

3.4.1 WALL SWITCHES AND RECEPTACLES: INSTALL WALL SWITCHES AND RECEPTACLES SO THAT WHEN DEVICE PLATES ARE APPLIED, THE PLATES WILL BE ALIGNED VERTICALLY TO WITHIN 1/16 INCH. GROUND TERMINAL OF EACH FLUSH-MOUNTED RECEPTACLE SHALL BE BONDED TO THE OUTLET BOX WITH AN APPROVED GREEN BONDING JUMPER WHEN USED WITH DRY WALL TYPE CONSTRUCTION.

3.4.2 DEVICE PLATES: DEVICE PLATES FOR SWITCHES THAT ARE NOT WITHIN SIGHT OF THE LOADS CONTROLLED SHALL BE SUITABLY ENGRAVED WITH A DESCRIPTION OF THE LOADS. DEVICE PLATES AND RECEPTACLE COVER PLATES FOR RECEPTACLES OTHER THAN 125-VOLT, SINGLE-PHASE, DUPLEX, CONVENIENCE OUTLETS SHALL BE SUITABLY MARKED, SHOWING THE CIRCUIT NUMBER, VOLTAGE, FREQUENCY, PHASING, AND AMPERAGE AVAILABLE AT THE RECEPTACLE. REQUIRED MARKING SHALL CONSIST OF A SELF-ADHESIVE LABEL HAVING 1/4 INCH EMBOSSED LETTERS. DEVICE PLATES FOR CONVENIENCE OUTLETS SHALL BE SIMILARLY MARKED INDICATING THE SUPPLY PANEL AND CIRCUIT NUMBER.

3.5 BOXES AND FITTINGS

FURNISH AND INSTALL PULLBOXES WHERE NECESSARY IN THE CONDUIT SYSTEM TO FACILITATE CONDUCTOR INSTALLATION. CONDUIT RUNS LONGER THAN 100 FEET OR WITH MORE THAN THREE RIGHT-ANGLE BENDS SHALL HAVE A PULLBOX INSTALLED AT A CONVENIENT INTERMEDIATE LOCATION. SECURELY MOUNT BOXES AND ENCLOSURES TO THE BUILDING STRUCTURE WITH SUPPORTING FACILITIES INDEPENDENT OF THE CONDUIT ENTERING OR LEAVING THE BOXES. MOUNTING HEIGHT OF WALL-MOUNTED OUTLET AND SWITCH BOXES, MEASURED BETWEEN THE BOTTOM OF THE BOX AND THE FINISHED FLOOR, SHALL BE IN ACCORDANCE WITH ICC/ANSI A117.1 AND AS FOLLOWS:

LOCATION	MOUNTING HEIGHT
SWITCHES FOR LIGHT CONTROL	42 INCHES

3.6 LAMPS AND LIGHTING FIXTURES

INSTALL NEW LAMPS OF THE PROPER TYPE AND WATTAGE IN EACH FIXTURE. SECURELY FASTEN FIXTURES AND SUPPORTS TO STRUCTURAL MEMBERS AND INSTALL PARALLEL AND PERPENDICULAR TO MAJOR AXIS OF STRUCTURES.

3.7 IDENTIFICATION PLATES AND WARNINGS

FURNISH AND INSTALL IDENTIFICATION PLATES FOR LIGHTING AND POWER PANELBOARDS, MOTOR CONTROL CENTERS, ALL LINE VOLTAGE HEATING AND VENTILATING CONTROL PANELS, FIRE DETECTOR AND SPRINKLER ALARMS, DOOR BELLS, PILOT LIGHTS, DISCONNECT SWITCHES, MANUAL STARTING SWITCHES, AND MAGNETIC STARTERS. PROCESS CONTROL DEVICES AND PILOT LIGHTS SHALL HAVE IDENTIFICATION PLATES. FURNISH IDENTIFICATION PLATES FOR ALL LINE VOLTAGE ENCLOSED CIRCUIT BREAKERS, IDENTIFYING THE EQUIPMENT SERVED, VOLTAGE, PHASE(S) AND POWER SOURCE. CIRCUITS 480 VOLTS AND ABOVE SHALL HAVE CONSPICUOUSLY LOCATED WARNING SIGNS IN ACCORDANCE WITH OSHA REQUIREMENTS. EACH IDENTIFICATION NAMEPLATE SHALL INCLUDE BUILDING NAME, PANELBOARD DESIGNATION, VOLTAGE AND WHERE PANELBOARD IS FED FROM.

3.8 FIELD TESTING

SUBMIT TEST REPORTS IN ACCORDANCE WITH REFERENCED STANDARDS IN THIS SECTION. AFTER COMPLETION OF THE INSTALLATION AND SPLICING, AND PRIOR TO ENERGIZING THE CONDUCTORS, PERFORM WIRE AND CABLE CONTINUITY AND INSULATION TESTS AS HEREIN SPECIFIED BEFORE THE CONDUCTORS ARE ENERGIZED. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST EQUIPMENT, LABOR, AND PERSONNEL TO PERFORM THE TESTS, AS HEREIN SPECIFIED. ISOLATE COMPLETELY ALL WIRE AND CABLE FROM ALL EXTRANEOUS ELECTRICAL CONNECTIONS AT CABLE TERMINATIONS AND JOINTS. SUBSTATION AND SWITCHBOARD FEEDER BREAKERS, DISCONNECTS IN COMBINATION MOTOR STARTERS, CIRCUIT BREAKERS IN PANEL BOARDS, AND OTHER DISCONNECTING DEVICES SHALL BE USED TO ISOLATE THE CIRCUITS UNDER TEST.

PERFORM INSULATION-RESISTANCE TEST ON EACH FIELD-INSTALLED CONDUCTOR WITH RESPECT TO GROUND AND ADJACENT CONDUCTORS. APPLIED POTENTIAL SHALL BE 500 VOLTS DC FOR 300 VOLT RATED CABLE AND 1000 VOLTS DC FOR 600 VOLT RATED CABLE. TAKE READINGS AFTER 1 MINUTE AND UNTIL THE READING IS CONSTANT FOR 15 SECONDS. MINIMUM INSULATION-RESISTANCE VALUES SHALL NOT BE LESS THAN 25 MEGOHMS FOR 300 VOLT RATED CABLE AND 100 MEGOHMS FOR 600 VOLT RATED CABLE. FOR CIRCUITS WITH CONDUCTOR SIZES 8AWG AND SMALLER INSULATION RESISTANCE TESTING IS NOT REQUIRED.

PERFORM CONTINUITY TEST TO INSURE CORRECT CABLE CONNECTION (I.E CORRECT PHASE CONDUCTOR, GROUNDED CONDUCTOR, AND GROUNDING CONDUCTOR WIRING) END-TO END. ANY DAMAGES TO EXISTING OR NEW ELECTRICAL EQUIPMENT RESULTING FROM CONTRACTOR MIS-WIRING WILL BE REPAIRED AND RE-VERIFIED AT CONTRACTOR'S EXPENSE. ALL REPAIRS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO ACCEPTANCE OF THE REPAIR.

CONDUCT PHASE-ROTATION TESTS ON ALL THREE-PHASE CIRCUITS USING A PHASE-ROTATION INDICATING INSTRUMENT. PERFORM PHASE ROTATION OF ELECTRICAL CONNECTIONS TO CONNECTED EQUIPMENT CLOCKWISE, FACING THE SOURCE.

END OF SECTION 262000

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ROCKFORD, ILLINOIS

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SHEET IDENTIFICATION
ELECTRICAL SPECIFICATIONS

PROJECT INFORMATION	
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