PROJECT NAME: ADDRESS:	CHICAGO PUBL 3401 WEST FO	IC LIBRARY –						
	-	II. LINKAKI —	VIDVVIA DVDI	/ DDVVIOL 1	IDDADV			
NUDINEOU.					וחואורו			
		, , , , , , , , , , , , , , , , , , ,	1110/100, 12 00					
TYPE OF SERVICE:	3	PHASE	4	WIRE	208/120	VOLT	1,200	AMPS
SEVICE O.C.P:	_	MLO	1,200	— MAIN OPE	80%	RATED		
SERVICE FEEDER:	4 #350 KCM					65,000 	K AIC. SYM.	
BUILDING COMMON LIGHTING LOAD			18-27-220.3	3(a)				
TIRST FLOOR COMMON SQ.FT. AREA =		16,654	SQ.FT. X	3.0	VA PER S.F.	= -	49,962	VA
TOTAL BUILDING COMMON SQ. FT. AREA =		16,654	SQ.FT.		TOTAL LIGHTING	DEMAND LOAD:	49,962	VA
GENERAL RECEPTACLE LOAD		94	QTY. X	180	VA		16,920	VΑ
COMPUTER RECEPTACLE LOAD		164	- QTY. X	300	VA	_ =	49,200	
John Oten Neoli Mole Lond		107			v / \		.0,200	v / 1
FIRST 10 KVA OR LESS AT 100%				10.	,000 VA X	100% =	10,000	VA
REMAINDER OVER 10 KVA AT 50%					120 VA X	50% =	28,060	
2.2 13 11 111 30.0						<u>-</u>		
BUILDING COMMON EQUIPMENT LOADS		T.,	T		\neg			
QUIPMENT	Qty.	Volt-amps		factor (%)			05.700	
air Handling Unit Condensing Unit	1	65,700		00%		=.	65,700	
	1	58,700		00%		= _	58,700	
Boiler	2	200		00%		= -	400	
Toilet exhaust fans	3	640		00%		= -	1,200	
General Exhaust fans Electric Unit Heater	3	3,000		00%		= _	9,000	
Init Heater Jnit Heater	3	500		00%		_ _ =	1,500	
Pump	4	2,000		00%		_ _ =	8,000	
Air Conditioning Unit	1	3,000		30% 30%		 =	2,400	
Glycol Fill Station	1	80		00%	(winter load)	_	80	
/ariable Air Terminal	2	2,000		30%	(' <u>-</u> =	3,200	
Electric Cabinet Heater	1	10,000		25% 25%		=	2,500	
	1	1	1			_		
				TOTAL BU	ILDING COMMON EC	QUIPMENT LOAD:	153,320	VA
TOTALS					TOTAL LICUTING	NEMAND LOAD:	49,962	\/A
					TOTAL LIGHTING TOTAL RECEPTACLE	G DEMAND LOAD: _ F DEMAND LOAD:	38,060	
					ILDING COMMON E	-	153,320	
				. 5 ., (L DO				* / · 1
				TOTAL	COMMON BUILDING	; DEMAND LOAD:[241,342	KVA
TOTAL BUI	LDING SERVICE D	EMAND LOAD:	241,342	VA	÷ 360	=	670	AMPS
MAIN SERVICE OVERCURRENT PROTECTION D	EVICE (OCPD)							
	, ,				OCPD (TOTAL DE	EMAND x 125%):	838	AMPS
						_ / L SERVICE SIZE:	1,200	
	ELECT	RICAL SERVIC	E FEEDER SIZE	<u>:</u> 4 #350 H	KCM			

SWITCHBOARD SCHEDULE	MSB		
LOCATION: MAIN ELECTRICAL ROOM		FED FROM:	POLE MOUNTED UTILITY TRANSFORMER
SERVICE: 120/208V 3-PHASE 4-WIRE	208 V	NEUTRAL BUS:	100% RATED FULL COPPER WITH BUS DISCONNECT LINK
MAIN BUS RATING: 1,200A COPPER		GROUND BUS:	100% RATED FULL COPPER
INTERRUPT RATING: 100,000 RMS AIC (VERIFY WITH COMED)		MOUNTING:	FLOOR (FRONT ACCESSABLE ONLY)
MAIN CIRCUIT BREAKER: 1200A		ENCLOSURE:	NEMA 1, SERVICE ENTRANCE-RATED
		OTHER:	DROVIDE 1" HICH CONCRETE DAD

OTHER: PROVIDE 4" HIGN CONCRETE PAD									
FEEDER/		LOAD (KVA)		CIRCUIT BREAKER					NOTES
BREAKER NO.	DESCRIPTION	TOTAL CONNECTED	TOTAL DEMAND	FRAME SIZE	TRIP SETTING	BRKR. TYPE	BRKR. RATING	POLES	
NMETERED	SECTION		ı	l					
1	AHU-1	65.7	65.7	400A	250A	ТМ	80%	3	1, 3
2	CU-2	58.7	58.7	225A	175A	ТМ	80%	3	1, 4
3	MP-1	30.2	30.2	225A	225A	ТМ	80%	3	1, 4
4	RP-1	32.3	26.5	225A	225A	ТМ	80%	3	1, 4
5	RP-2	38.6	25.8	225A	150A	ТМ	80%	3	1, 4
6	LP-1	15.8	15.8	225A	150A	ТМ	80%	3	1, 4
7	ITP	45.3	22.7	225A	150A	ТМ	80%	3	1, 4
8	SPD	_	_	100A	60A	ТМ	80%	3	1, 4
9	ITP-MDF	14.2	7.1	225A	150A	TM	80%	3	1, 4
10	SPARE	-	_	225A	200	ТМ	80%	3	1,4
11	SPARE	-	_	225A	200	TM	80%	3	1, 4
	TOTAL KVA =	300.8	252.5						
	TOTAL AMPS=	835.0	700.9						

NOTES:	

- 1 65K AIC BREAKER RATING AT 208 VOLTS.
- 2 PROVIDE ONE 4" EMPTY SPARE CONDUIT.
- 3 BREAKER EQUIPPED WITH GROUND FAULT PROTECTION.
- 4 REFER TO ELECTRICAL ONE—LINE RISER DIAGRAM FOR FEEDER SIZE.

	LIGHTI	ng re	ELAY SCH	HEDULE	LRP-1	
	LOCATION:	ADJACEN	T PANEL LP-1			
	NEUTRAL BUS:					
	MAIN CIRCUIT BREAKER:	200A			GROUND BUS:	STANDARD, COPPER
	SURFACE					
	INTERRUPT RATING:	42,000	AIC		ENCLOSURE:	NEMA 1
		1	1	T	_	I
RELAY	DESCRIPTION	CCT. NO.	CONTACT RATING	PANEL	CONNECTED LOAD	CONTROL INTERFACE
1	EXTERIOR LIGHTING	2	20A-1P	LP-1	700	PC
2	LOBBY	4	20A-1P	LP-1	700	4B
3	READING CORRIDOR	6	20A-1P	LP-1	1100	4B
4	READING 107	8	20A-1P	LP-1	600	4B
5	READING 107	10	20A-1P	LP-1	600	4B
6	READING 107	12	20A-1P	LP-1	600	4B
7	CHILDREN'S AREA	14	20A-1P	LP-1	500	4B
8	READING 110	16	20A-1P	LP-1	600	4B
9	READING 110	18	20A-1P	LP-1	600	4B
10	READING 110	20	20A-1P	LP-1	900	4B
11	READING 110	22	20A-1P	LP-1	400	4B
12	STACKS	24	20A-1P	LP-1	500	4B
13	STACKS	26	20A-1P	LP-1	500	4B
14	SITE LIGHTING	36	20A-1P	LP-1	300	PC
15	SPARE					
16	SPARE					
17	SPARE					
18	SPARE					
19	SPARE					
20	SPARE					
21	SPARE					
22	SPARE					
23	SPARE					
		I				

LIGHTING RELAY NOTES:

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/ARCHITECT PRIOR TO PROGRAMMING OF SCHEDULES. CORRIDNATE WITH OWNER/ARCHITECT FOR CONTROL INTEFRACE LOCATIONS.

	LIGHT FIXTURE SCHEDULE								
	FIXTURE NO.	DESCRIPTION	LAMP TYPE	LAMP	BALLAST	VOLTAGE	MOUNTING	MANUFACTURER	
2	F1 F2	NOT USED 35" DIAMETER INDIRECT/DIRECT PENDANT WITH FLAT ACRYLIC LENS, SUSPENDED AT 9' AFF HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(3) 40W BX	ELEC	120V	SUSPENDED	LITECONTROL P-ID-36-3-BX40-21- 2D-FP	
	F2D	SIMILAR TO F2, EXCEPT PROVIDE WITH LUTRON ECO SYSTEM DIMMING BALLAST OR EQUAL	FL	(3) 40W BX	DIM	120V	SUSPENDED	LITECONTROL P-ID-36-3-BX40-21- 2D-FP	
	F3	CLYINDER TUBE PENDANT, SUSPENDED AT 9 AFF HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(2) 28W T5	ELEC	120V	SUSPENDED	VISA CP5219	
	F4	4' WALL OR CEILING MOUNTED CLOSET LIGHT WITH INTEGRAL OCCUPANCY SENSOR	FL	(1) 28W T5	ELEC	MVOLT	WALL/ CEILING	LITHONIA WT5-1-28T5-MVOLT- GEB10IS-NES7	
	F4A	2' WALL OR CEILING MOUNTED CLOSET LIGHT WITH INTEGRAL OCCUPANCY SENSOR	FL	(1) 14W T5	ELEC	MVOLT	WALL/ CEILING	LITHONIA WT5-1-14T5-MVOLT- GEB10IS-NES7	
2	F5	SUSPENDED LINEAR DIRECT/INDIRECT FLUORESCENT FIXTURE, REFER TO PLANS FOR CONTINUOUS ROW LENGTH, SUSPENDED AT 9' AFF HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(2) 28W T5	ELEC	120V	SUSPENDED	LITECONTROL PID-82M-2-T5-SGL	
	F5D	SIMILAR TO F5, EXCEPT PROVIDE WITH LUTRON ECO SYSTEM DIMMING BALLAST OR EQUAL	FL	(2) 28W T5	DIM	120V	SUSPENDED	LITECONTROL PID-82M-2-T5-SGL	
	F5A	SIMILAR TO F5, BUT PROVIDE 80% DIRECT/20% INDIRECT DISTRIBUTION		(2) 28W T5	ELEC	120V	SUSPENDED	LITECONTROL PID-82M-2-T5-SGL - MOD	
	F5AD	SIMILAR TO F5A, EXCEPT PROVIDE WITH LUTRON ECO SYSTEM DIMMING BALLAST OR EQUAL	FL	(2) 28W T5	DIM	120V	SUSPENDED	LITECONTROL PID-82M-2-T5-SGL - MOD	
	F6D	8' SUSPENDED LOW PROFILE HORIZONTAL TUBE FLUORESCENT WITH ECO SYSTEM DIMMING BALLAST OR EQUAL, FROSTED PRISMATIC ACRYLIC DIFFUSER, REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(2) 28W T5	DIM	120V	SUSPENDED	DELRAY ST48228.421-1	
	F6AD	SIMILAR TO F6D, EXCEPT WITH BLUE COLOR TUBE ACCESSORY	FL	(2) 28W T5	DIM	120V	SUSPENDED	DELRAY ST48228.421-1-B	
	\F7\^	4' ÎNDUSTRIAL FIXTURE WITH 10% UPLICHT, SUSPENDED AT 9' AFF	\FL\\	(2) 28W T5	VELECY	1201	^SUSPENDED_^	LITHIONIA 2EJ-2-28T5 DAY-BRITE IA228 METALUX IA-228	
	F8	RECESSED NARROW LINEAR FLUORESCENT WITH SOFT GLOW LENS, REFER TO PLAN FOR CONTINUOUS ROW LENGTH HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(1) 28W T5	ELEC	120V	RECESSED	LITECONTROL LG-D-44-T5-SGL	
2	F8D	SIMILAR TO F8, EXCEPT PROVIDE WITH ECO SYSTEM	FL	(1) 28W	DIM	120V	RECESSED	LITECONTROL LG-D-44-T5-SGL	
		DIMMING BALLAST OR EQUAL. HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST		T5					
	F9	NOT USED							
	F10	RECESSED PERIMETER FLUORESCENT WALL WASHER, REFER TO PLANS FOR CONTINUOUS ROW LENGTHS HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(1) 28W T5	ELEC	120V	RECESSED	LITECONTROL 21-1-T5	
	F11	2' WALL MOUNTED FLUORESCENT WITH ACRYLIC DIFFUSER	FL	(1) 17W T8	ELEC	120V	WALL	LIGHTOLIER VLW4X24 LIHTONIA 11872	
	F12	6" DIAMETER OPEN DOWNLIGHT WITH HORIZONTAL LAMP HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	CF	(1) 32 W TRT	ELEC	120V 277V	RECESSED	PRESCOLITE CFT6HEB-STF602 PORTFOLIO C6132-6151 LITHONIA LF6 1/26-42TRT MVOLT	
	F13	NOT USED							
	F14	2' UNDERCABINET FIXTURE, PROVIDE WITH ROCKER SWITCH	FL	(1) 17W T8	ELEC	120V	UNDERCABINET	ALKCO SF317RSW FAIL—SAFE MTS—17RSW LITHONIA N2S—17SWR	
	F15	EXTERIOR RECESSED ASSYMETRICAL WALL WASHER HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(1) 28W T5	ELEC	120V	RECESSED	BEGA 6814P	
	F16	EXTERIOR RECESSED SYMMETRICAL FIXTURE HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	FL	(1) 28W T5	ELEC	120V	RECESSED	BEGA 6810P	
	F17	EXTERIOR WALL MOUNTED FULL CUTOFF FIXTURE, HALF HATCHED FIXTURES SHALL BE PROVIDED WITH 90 MINUTE EMERGENCY BATTERY BALLAST	LED	28W LED		120V	WALL	LUMARK LDWP-FC-2A-120V-PE	
	S1	LED FULL CUTOFF AREA LIGHT, PROVIDE WITH 15' ROUND STEEL POLE WITH PHOTOCONTROL	LED	27W LED		120V	POLE	LUMARK LDRV-T3-C01-E-OA/RA1014	
	S2	SINGLE LED FLAGPOLE DOWNLIGHTER	LED	20W LED		120V	POLE	EAGLE MOUNTAIN DL-FLKTSLED	
	S3	LED BOLLARD	LED	10W LED		120V	BOLLARD	FORMS+SURFACES LBLCO-504	
	ЕМ	EMERGENCY WALL PACK LIGHT FIXTURE WITH METALLIC ENCLOSURE; SEALED LEAD—CADMIUM 90 MINUTE BATTERY AND INTEGRAL TEST SWITCH. CITY OF CHICAGO APPROVED	INC	(2) 24W INC	ЕМ	120V	WALL	HIGH LITE NB3-C-V-SX-VERS	
	X1	CHICAGO APPROVED EDGE GLOW SINGLE FACED EXIT SIGN. PROVIDE WITH LEAD-CADMIUM 90 MINUTE EMERGENCY BATTERY AND INTEGRAL TEST SWITCH	LED	3.3W LED	EM	120V	RECESSED/ CEILING	ALKCO EDGE-GLO T-1 LIGHTING XTRABRIGHT EXITRONIX CXE	
	X2	CHICAGO APPROVED EDGE GLOW DOUBLE FACED EXIT SIGN. PROVIDE WITH LEAD—CADMIUM 90 MINUTE EMERGENCY BATTERY AND INTEGRAL TEST SWITCH	LED	5W LED	ЕМ	120V	RECESSED/ CEILING	ALKCO EDGE-GLO T-1 LIGHTING XTRABRIGHT EXITRONIX CXE	

FIXTURE SCHEDULE NOTES

- 1 ELECTRICAL CONTRACTOR SHALL PROVIDE SUBMITTAL ON FULL LIGHTING FIXTURE PURCHASE FOR ARCHITECT'S APPROVAL PRIOR TO ORDER. SUBMIT THREE (3) SETS OF CATALOG CUTS TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING LIGHTING FIXTURES.
- CUTS TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING LIGHTING FIXTURES.

 2 UNLESS NOTED OTHERWISE, ALL BALLASTS SHALL BE PROGRAMMABLE RAPID START, ELECTRONIC ENERGY SAVING TYPE. FIXTURES SHALL BE ORDERED WITH THE APPROPRIATE BALLASTS THAT HAVE UL AND CBM LABELS. BALLASTS SHALL BE ADVANCE ELECTRONIC BALLASTS WITH MULTI-VOLT. BALLASTS SHALL CONFORM TO LOCAL CODE REQUIREMENTS
- 3 ALL LIGHTING FIXTURES SHALL INCLUDE, BULBS/LAMPS.
 4 FIXTURES SHALL HAVE APPROPRIATE ULLIABEL, DAMP, OR WET AS REQUIRED BY LOCAL CO.

FOR PERFORMANCE, SWITCHING, AND WIRING (I.E. TANDEM).

- 4 FIXTURES SHALL HAVE APPROPRIATE UL LABEL, DAMP, OR WET AS REQUIRED BY LOCAL CODES.
 5 WALLS DIRECTLY ILLUMINATED SHALL BE INSTALLED AND FINISHED IN A MANNER TO ELIMINATE SHADOWS OR BLEMISHES (I.E. HANG DRY WALL VERTICALLY).
- THE ARCHITECT AND ENGINEER SHALL APPROVE FIXTURE SUBSTITUTIONS PRIOR TO BID. CONTRACTOR SHALL SUPPLY A SAMPLE AND/OR PHOTOMETRIC DATA IF REQUESTED. IF SUBSTITUTION IS REJECTED, CONTRACTOR SHALL PROVIDE SPECIFIED PRODUCT.
- 7 FIXTURES SHALL INCLUDE ACCESSORIES FOR INSTALLATION ACCORDING TO LOCAL AND NATIONAL CODES.
- 8 PRIOR TO ORDERING LIGHTING EQUIPMENT, THE CONTRACTOR SHALL VERIFY LOCATIONS AND RECESS DEPTHS.
- 9 LAMPS SHALL BE PROVIDED AND INSTALLED ACCORDING TO THE ATTACHED FIXTURE SCHEDULE.
- 10 VERIFY EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES WITH ARCHITECT PRIOR TO ROUGH—IN.
 11 UNLESS NOTED OTHERWISE, PROVIDE 3500 KELVIN LAMPS FOR ALL FLUORESCENT FIXTURES FROM: OSRAM SYLVANIA OR PHILIPS.
- 11 UNLESS NOTED OTHERWISE, PROVIDE 3500 KELVIN LAMPS FOR ALL FLUORESCENT FIXTURES.

 12 CONTRACTOR SHALL VERIFY CEILING TRIM COMPATIBILITY PRIOR TO ORDERING FIXTURES.
- 12 CONTRACTOR SHALL VERIFY CEILING TRIM COMPATIBILITY PRIOR TO ORDERING FIXTURES.

 13 CEILING THICKNESS IN EXCESS OF 3/4" SHALL BE IDENTIFIED IN WRITING BY CONTRACTOR/ARCHITECT.
- 14 FIXTURES LOCATED IN AN INSULATED CEILING AREA, SHALL HAVE AN IC HOUSING (ELECTRICAL CONTRACTOR TO COORDINATE).
- PROVIDE APPROVED FIRE—RATED ENCLOSURES FOR LIGHTING FIXTURES LOCATED IN A FIRE—RATED CEILING.
 PROVIDE EXIT SIGN FACES (SINGLE OR DOUBLE) AND ARROW AS DIRECTED ON FLOOR PLANS AND EXIT SIGN SCHEDULE.





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DAVID MASON & ASSOCIATES CHICAGO, IL CIVIL ENGINEER

TERRY GUEN DESIGN ASSOCIATES
CHICAGO, IL
LANDSCAPE, CIIVIL ENGINEER

Issuance					
Mark	Description	Date			
2	ADDENDUM 2	04-29-13			
<u> </u>	ADDENDUM 1	04-22-13			
6	ISSUE FOR BID & PERMIT	03-21-13			
5	100% PRE-BID REVIEW	03-13-13			
4	90% CONST. DOCUMENTS	02-14-13			
3	60% CONST. DOCUMENTS	11-30-12			
2	DESIGN DEVELOPMENT	09-28-12			
1	SCHEMATIC DESIGN	07-13-12			

PBC Project Name: Albany Park Branch Library

PBC Project No.: 08130

AOR Project No.: 1203

ELECTRICAL SCHEDULES

Sheet

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