

# VERNON ROAD FIRE STATION FOR CITY OF LAGRANGE LAGRANGE, GEORGIA

(MECHANICAL)

## **PROJECT NUMBER 1731**

## FOR BIDDING AND PERMIT

07 MAY 2018

smith Lesign group 206 W Haralson Street LaGrange GA 30240 706.882.5511 www.SDGarch.net



## DESIGN / BID / BUILD HVAC CRITERIA

## **MECHANICAL CRITERIA-BASIC MATERIALS & METHODS**

1. GENERAL- Provide a complete Mechanical/HVAC system, left in proper working order. Provide herein means installed completely, including labor & materials.

2. INCLUSION- The Mechanical work is portion of the overall project requirements and as such shall comply with the conditions and the requirements of the General Conditions, Supplementary Conditions and all applicable requirements of the overall project.

- 3. CODES, UTILITIES, REGULATIONS- Secure & Pay for all fees, licenses, permits, inspections. Coordinate with power &communication utilities. Meet & comply with all Federal, State, County & City codes. Provide complete submittals & shop drawings on all items.
- 4. CONTRACTORS REQUIRMENTS- The installing contractor providing for this work shall be a firm licensed for this type work and shall provide copies of licenses, business licenses, bonding limits, and insurance coverage. The contractor's field personnel shall be under the direct supervision of a listened contractor at all times.
- 5. COORDINATION- This contractor is responsible for coordinating with all other trades for the proper installation of this work, maintaining required clearances. Confirm & coordinate, in writing with electrical trade electrical trade the electrical characteristics and power requirement of item requiring power, prior to finalizing equipment order.
- 6. SUBMITTALS- Provide complete submittals on Contractors qualifications, all items, equipment, products, etc. For review, prior to finalizing equipment order.
- 7. PROVISIONS TO BE INCLUDED- Labor, supplies and materials, tools, equipment etc.; installation of all Mechanical equipment & connections; coordination with other trades; material shipping, delivery, receiving, storage, & protection; excavation, backfilling to 95% compaction.
- 8. MATERIALS- All materials shall be new, currently manufactured, UL. Labeled, and meet all industry standards. Label all equipment. Provide 3000 PSI class concrete for bases and backfill. Provide 3/4" thick A/D fire retardant grade backboards. Provide all support hardware. Paint all material exposed to view as directed by architect.
- 9. FIRE & SMOKE SEALS-Provide fire/smoke seal of each penetration of any rated barrier.
- 10. MOTOR & CONTROLS-All equipment shall be factory pre-wired complete, and provided with equipment disconnect, starters, over-load relays, etc. including all controls and low-voltage wiring. All equipment motors shall meet current energy efficiency requirements. Provide all control and interlock wiring.
- 11. EQUIPMENT SUPPORT, CLEARANCES & ACCESS-Equipment shall be properly supported as instructed by the manufacturer. Provide vibration isolation devices for each item. Equipment shall be located to maintain proper clearances and required access. Verify and coordinate prior to installation.
- 12. SESIMIC REQUIRMENTS-Support all items in accordance with the sesimic zoning requirement.
- 13. STRUCTURAL COORDINANCE-Review & coordinate with the structural conditions prior to the start of any work. Any attachments, welding and/or cutting of the building structure must first be approved, in wiring, by the building structure engineer. Locate slab penetrations to avoid conflict & damage. Sleeve & seal each penetration.
- 14. ROOF PENETRATIONS-Any roof modifications shall be by the building owner's designated roofing installer/supplier to maintain the roofing warranty. Provide all necessary components (curbs, pitch pockets, etc.) and pay all related cost for a complete penetration.
- 15. CLOSE OUT/INSPECTIONS-This contractor shall assist with an on-site review of this work. At completion of the project, demonstrate in the presence of the Owner/Tenant, Architect & Engineer to proper operation of all components, systems, devices, etc.
- 16. WARRANTY-This contractor shall warrant all materials, labor & installation for one full year from date of Certificate of Occupancy. Any extended product warranties shall be passed onto the owner

END OF MECHANICAL BASIC MATERIALS & METHODS

## **MECHANICAL CRITERIA-AIR DISTRIBUTION**

- DIAGRAMMATIC DRAWINGS-Drawings are diagrammatic to indicate the intended requirements for the HVAC system. Every fitting & detail is not necessarily indicated. The contractor shall provide for and install for a complete and properly functioning system(s) in a professional manner. All work shall be installed so that working components are accessible for service.
- 2. DUCTWORK STANDARDS-All duct work, fittings, support, etc. shall comply with the latest SMACNA standards, and be in conformance with NFPA and UL requirements.
- 3. ACCESS PANELS-Provide flush mounted hinged cover access panels for access to any concealed devices requiring maintenance or adjustment, etc.
- 4. FIRE DAMPERS-The contractor shall review the architectural & structural drawings and provide UL listed fire-dampers at each fire rated barrier, in accordance with its labeling, to match the barrier rating (at minimum) and where required by the AHJ. Provide access to any concealed unit.
- GENERAL DUCTWORK-All duct work is to be concealed unless otherwise indicated. Contractor shall coordinate and field verify exact duct routes and clearances prior to duct fabrication. Provide for duct modifications to adjust to field conditions and maintain proper air flow & pressures.
- 6. DUCT SIZES & SHAPES-Duct sizes are shown for clear inside diminutions, increase duct size to maintain clear diminutions where interior duct restrictions occur. Duct shape may be changed, however the equivalent air carrying capacity, area and pressure drops are to be maintained.
- 7. LOW PRESSURE DUCT DESIGN BASIS-The low pressure duct layout & design is based on sheet metal duct system, Class 2, 0.08 to 0.10 Inch WG friction rate.
- 8. DUCT-TO-EQUIPMENT ISOLATION-Connections between ductwork and equipment shall be UL labeled heavy glass fiber fabric duct connection, at least four inches long with metal collar on each side. The gap between the equipment & metal duct work shall be a minimum of two inches to avoid transmission of vibrations.
- 9. DUCTWRAP INSULATION-All supply, return exhaust, outside air and make-up-air ducts shall insulate. Utilize aluminum foil vapor barrier, fiber-glass insulation. Secure isolation to duct with annealed stainless steel wire at spacing not to exceed Two Foot on-centers. Seal all joints and punctures with foil backed tape. John Mansville LinaTex or equal. Duct linear shall be 1 Inch thick, 1.5 PCF densities.
- 10. SHEET METAL DUCTWORK-Sheet metal ductwork shall be Class 2, galvanized steel of gauge and construction per SMACNA, with sealed connections, joints & fittings. Bends shall utilize turning vanes or be long radius elbows per SMACNA.
- 11. TAKE OFFS-Low pressure take-offs from truck duct to air devices shall be scoop type with adjustable damper.
- 12. FLEX DUCT RUN-OUTS-Flexible run-outs to individual supply diffusers are allowed, full size, insulated with interior support spring, U.L. listed for use in environmental air plenums. Each end shall be taped & banded. Flex lengths shall not exceed 7 feet. U.L. 181 listed, NFPA 90A & 90B complaint. Thermaflex M-KE or equal. Provide elbow/bend supports to maintain radius bends.

13. REGISTERS, DIFFUSERS, GRILLS, ETC.-Refer to schedule for items & criteria

END OF MECHANICAL CRITERIA-AIR DISTRIBUTION

## **MECHANICAL CRITERIA-TEST & BALANCE/CLOSEOUT**

- 1. TEST & BALANCE CERTIFICATION-Provide a complete test & balance report, prepared by an independent NEBB or AABC certified company.
- 2. START UP & ADJUSTMENTS-Contractor shall provide for the final lubrication of all equipment, adjustments, and setting of dampers, registers and air distribution devices for proper air distribution.
- 3. DUCT TESTING-Test the duct system for leaks and problems, correct any deficiencies.
- 4. TEST-REPORT-Provide a fully documented test report, including tester, testing equipment data, all air quantities, and operating points of the HVAC equipment. Provide three copies, minimum.
- 5. ADJUSTMENTS & CORRECTIONS-Should the test fail, the tester shall provide written recommendations for the correction, to the contractor for corrective action. Restart the system after corrections.
- 6. REVIEWS & INSPECTIONS-The contractor shall make a complete review of the work-in-progress and final working review with the AHJ, owner and owner's designated representatives at each stage of work, before items are covered up. Provide all necessary labor & tools for review & inspections.
- 7. SYSTEM DEMONSTRATION-At project completion provide a complete working demonstration of each system, all components and proper interface with other trades.
- 8. FILTERS & CLEANING-Replace all filters, clean all equipment & ductwork, check coils for obstructions.
- 9. PROGRAMMING & SETPOINTS-Review and program complete system operation, temperature set-points, timing & sequence of operation as directed by owner.
- 10. INSTRUCTION & TRAINING-Instruct & train the owner's designated personnel in the proper programming, operation, & maintenance of each system. Provide a follow-up on-site session at 30, 90 & 180 days after C.O.
- 11. MANUALS & FIELD DOCUMENTS-Provide two complete sets of 3-ring bound manuals to include equipment submittals & data, operation & maintenance data, all permits & approvals, warranty certificates & contract information. Provide two sets of field record "as-built" documents that reflect the actual installed layouts & related information. Also provide same in a scanned PDF format on CD, s.

END OF MECHANICAL CRITERIA-TEST & BALANCE/CLOSEOUT

## GAS FIRED UNIT HEATERS

SYMBOL	HEATER TYPE	INPUT BTUH	OUTPUT BTUH	AFUE	FLUE Ø	FAN HP	MODEL	
GUH-1	GAS FIRED UNIT HEATER	100,000	80,000	80%	4"	1/10	REZNOR FE-100 (OR EQUAL)	

			ANS							
MARK	HEATER TYPE	ТҮРЕ	CFM	ESP IN W.C.	MAX. RPM	MAX. HP	DRIVE	MAX. SONES	CONTROLLED BY	MODEL
F-1	TOILET EXHAUST	CEILING FAN	150	0.15	1,350	1/10	DIRECT	3.2	LIGHT SWITCH	COOK GC-:
F-2	VENTILATION	WALL PROP	4,000	0.25	650	1/3	BELT	12.8	WALL SWITCH	COOK 30X



SCALE: NONE

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	BREVATIONS
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
AUTO	AUTOMATIC
AFC	ABOVE FINISHED CEILING
AP BC	
BEC	BALANCE COUR BELOW FINISHED CEILING
BLDG	BUILDING
BV	BALL VALUE
CONN	CONNECT
CLG	CEILING
CTR	CENTER
CV	CHECK VALUE
CW	
DIA	DIAMETER
DN	DOWN
DP	DROP
DS	DOWN SPOUT
DWGS	DRAWINGS
EDH	ELECTRIC DUCT HEATER
EMG	EMERGENCY
EXIST	EXISTING
FCU	FAN COIL UNIT OR AHU
FD	FLOOR DRAIN
FH	FIRE HYDRANT
FIXT	FIXTURE
FS	FLOOR SINK
FT	FOOT/FEET
G	GAS
GC	GAS COCK
GRND	GROUND HTDRANT
GV	GATE VALVE
HD	HUB DRAIN
HP	HORSE POWER
HTR	HEATER
HW	HOT WATER
HWR	HOT WATER RETURN
ΙΝV Κ\/Δ	
KW	KILOWATTS
LT	LIQUID-TIGHT
MANUF	MANUFACTURER
MH	MAN HOLE
MIN	MINIMUM
MTD	MOUNTED
NFHB	NONFREEPE HOSE BIB
	PRESSURE REDUCING VALV
P&T	PRESSURE & TEMPERATURE
QTY	QUANTITY
RD	ROOF DRAIN
RW	RAIN WATER
S	STACK/SANITY
SA	SHOCK ABSORBER
TYP	TYPICAL
UG	UNDER-GROUND
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WCO	WALL CLEAN OUT
WG	WATER GAUGE
WH	WALL HYDRANT
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FOR BID AND PERMIT

07 MAY 2018

VERNON ROAD FIRE STATION

VERNON ROAD

LAGRANGE GEORGIA

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JOB NO:

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## **KEYNOTES**

- THE	ARCHITECT'S STAMP	
8	SIGNATURE REQUIRED	Seg
	SMITH DESIG	N GROUP, INC.
-	LAGRANGE, ( 706-882-5511	GEORGIA 30240 www.SDGarch.net
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	FOR BID AND PERMIT 07 MAY 2018	SHEET: M-3



# VERNON ROAD FIRE STATION FOR CITY OF LAGRANGE LAGRANGE, GEORGIA

(PLUMBING)

## **PROJECT NUMBER 1731**

## FOR BIDDING AND PERMIT

07 MAY 2018

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## DESIGN / BID / BUILD PLUMBING SYSTEM CRITERIA

## PLUMBLING CRITERIA-BASIC MATERIALS & METHODS

- 1. GENERAL-Provide a complete Plumbing system, left in proper working order. Provide herein means installed completely, including labor and materials.
- 2. INCLUSION- The Plumbing work is a portion of the overall project requirements and as such shall comply with the conditions and requirements of the General Conditions, Supplementary Conditions and all applicable requirements of the overall project.
- 3. CODES, UTILITIES, REGULATIONS-Secure and pay for all fees, licenses, permits, inspection. Coordinate with power and communication utilities. Meet and comply with all Federal, State, County, and City Codes.
- 4. CONTRACTOR REQUIRMENTS-The installing contractor providing for this work shall be a firm licensed for this type work and shall provide copies of licenses, business licenses, bonding limits and insurance coverage. The contractor's field personnel shall be under direct supervision of a licensed plumber(s).
- 5. COORDINATION-This contractor is responsible for coordinating with all other trades for the proper installation of this work, maintaining required clearances. Confirm and coordinate, in writing with electrical trade the electrical characteristics and power requirement of item requiring power, prior to finalizing equipment order.
- 6. SUBMITTALS-Provide complete submittals on Contractor qualifications, all items, equipment, products, etc. For review, prior to finalizing orders. Submit a minimum of three sets, more if required by the General Conditions.
- 7. PROVISIONS TO BE INCLUDED-Labor, supplies and materials, tools, equipment, etc.; material shipping, delivery, receiving, storage, and protection; installation of all Mechanical equipment and connections; coordination with other trades.
- 8. MATERIALS-All materials shall be new, currently manufactured, U.L. labeled, and meet all industry standards. Label all equipment. Provide 300 PSI class concrete for bases an backfill. Provide 3/4" thick A/D fire retardant grade backboards. Provide all support hardware. Paint all material exposed to view as directed by architect.
- 9. CUTTING/TRENCHING/PATCHING-Contractor shall provide for all necessary cutting, trenching, backfilling, and patching related to this work. Backfill to 95% compaction. Patch and finish, to match original conditions. Contact "Call-Before-You-Dig" services prior to any excavation work.
- 10. FIRE AND SMOKE SEALS-Provide fire/smoke seals of each penetration of any rated barrier.
- 11. EQUIPMENT AND CONTROLS-All equipment shall be factory pre-wired complete, and provided with equipment disconnect, starters, over-load relays, etc. including all controls and low-voltage wiring. All equipment motors shall meet current energy efficiency requirements. Provide all control and interlock wiring.
- 12. EQUIPMENT SUPPORT, CLEARANCES, AND ACCESS-Equipment shall be properly supported as instructed by the manufacturer. Provide vibration isolation devices for each item. Equipment shall be located to maintain proper clearances and required access. Verify and coordinate prior to the installation.
- 13. SEISMIC REQUIRMENTS-Support all items in accordance with the seismic zoning requirements.
- 14. WORKMANSHIP-All work shall be installed in a coordinated, organized, neat, and professional manner. 15. STRUCTURAL COORDINATION-Review and coordinate with the structural conditions prior to the start of any work. Any attachments, welding and/or cutting of the building structure must first be approved, in
- writing, by the building structural engineer. Locate slab penetrations to avoid conflict and damage. Sleeve and seal each penetration.
- 16. ROOF PENETRATIONS-Any roof modifications shall be by the building owner's designated roofing installer/supplier to maintain the roofing warranty. Provide all necessary components (curbs, pitch pockets, etc.) and pay all related cost for a complete installation.
- 17. CLOSE OUT/INSPECTIONS-This contractor shall assist with on-site reviews of this work. At completion of the project, demonstrate in the presence of the Owner/Tenant, Architect, and Engineer to proper operation of all components, systems, devices, etc.
- 18. WARRANTY-This contractor shall warrant all materials, labor, and installation for one full year from date of Certificate of Occupancy. Any extended product warranties shall be passed onto the owner.

END OF PLUMBING BASIC MATERIALS AND METHODS

## PLUMBING CRITERIA-PIPING SYSTEMS GENERAL

- 1. DIAGRAMMATIC DRAWINGS-Drawings are diagrammatic to indicate the intended requirements for the Plumbing system. Every fitting and detail is not necessarily indicated. The contractor shall provide for and install for a complete and properly functioning system(s) in a professional manner. All work shall be installed so that working components are accessible for service.
- 2. ACCESS PANELS-Provide flush mounted hinged cover access panels for access to any concealed valves, devices, or other components requiring maintenance, adjustments, etc.
- 3. FIRE STOP-The contractor shall review the architectural and structural drawings and provide UL listed Fire-Stop at each fire rated barrier, in accordance with it labeling, to match the barrier rating (at minimum) and where required by the AHJ. Provide access to any concealed unit.
- 4. GENERAL PIPING-All piping work is to be concealed unless otherwise indicated. Contractor shall coordinate and field verify exact duct routes and clearances prior to fabrication. Provide for modifications to adjust to field conditions and maintain power flows and pressures. Any piping in counters and cabinets work shall be located out-of-the-way to the rear and well secured. Coordinate fully with the Architect/Cabinet Manufacturer.
- 5. EXPOSED PIPING-Any exposed piping work is to be protected from physical damage. All piping exposed below sinks, lavatories, etc. shall be insulated and protected in accordance with ANSI/ADA requirements utilizing McGuire ProWrap, TrueBro INC. or equivalent.
- 6. STUB-UP AND OUTS-Field coordinate the final exact location of each stub-up and stub-out location prior to rough-in. Floor slab penetrations shall be sleeved and sealed. Coordinate sloping of floor to drains with Architect and General Contractor. All floor drains, floor sinks, clean-outs, etc. shall be flashed to the waterproofing membrane and sealed.
- 7. PIPING SUPPORT-Utilize pipe hangers and supports with wide saddles to avoid crushing insulation. Each wall penetration shall have wall sleeve. Install chrome-plated escutcheons at each stub-out to the waterproofing membrane and sealed.
- 8. PIPING INSULATION-1/2" thick, foil backed preformed insulation, UL listed for use in environmental air plenums. Armaflex Type AP or equal. Insulate all CW, HW, P-Traps and any waste/soil piping exposed to unconditioned environment.
- 9. PIPING MATERIALS-Utilize the same manufacturer for all piping of the same type material. All fittings and related components and materials shall be per the piping manufacturer's written data. Handle, store, and install per the manufacturer's written data.
- 10. RETURN AIR PLENUMS-ABS/PVC/CVPC piping product can not be used in environmental return-air plenums.

END OF PLUMBING BASIC MATERIALS AND METHODS

## PLUMBING CRITERIA-SOIL/WASTE/VENT (SWV) PIPING SYSTEMS

- smooth pipe.

- owner approval.

- Pro-Set Trap-Guard in each drain (UNO).

- Lead" components, materials, fittings, etc.

- Owner, Architect, and Engineer.
- AHJ, Owner, Architect, and Engineer.

15. MISC. HARDWARE-Refer to the symbols and hardware schedule fro other items and criteria. END OF PLUMBING BASIC MATERIALS AND METHODS

1. BASIS OF DESIGN-The soil waste and vent piping design is generally based on inch per foot slope,

2. UTILITY COORDINATION-Prior to start of work, coordinate and verify in writing, the utility tie-in, location, size(s), invert, etc. Copy to Owner, Architect and Engineer.

3. IN GRADE S&W-Service weight cast iron with hub and spigot joints, or where permitted by code, schedule 40 DWV PVC pipe utilizing manufactured approved fittings and solvents.

4. ABOVE GRADE S&W-Hub less cast iron pipe with positive-seal, one-piece elastomeric compression type gasket no-hub fitting with stainless steel clamps. Schedule 40 DWV PVC pipe with manufacture approved fittings and solvents may be utilized in non-return air environments, where allowed by code and written

5. VENTING (V)-Hub less iron pipe with positive seal, one-piece elastomeric compression type gasket no-hub fitting stainless steel clamps. Plenum-rated schedule 40 DWV PVC pipe with manufacture approved fitting and solvents may be utilized where allowed by code and written owner approval.

6. CAST IRON PIPE-No hub/hub less pipe and matching components. Pipe shall comply with ASTM A-888, CISPI-301, IAPMO listed, ISO 9001-2000 certified. Coupling shall be stainless steel type complying with ASTM C-1277 (Standard) and ASTM C-1540 (Heavy Duty).

7. DWV PVC PIPE AND FITTING-PVC schedule 40 solid wall pipe, conforming to NSF 14, 12454 cell class per ASTM D-1784, iron pipe size per ASTM D-1785 and D-2665, fittings per ASTM D-2665. Note PVC can not be utilized in return/environmental air plenums.

8. P TRAPS-Provide each fixture, drain, etc. with a P-Trap in accordance with the code. Utilize chrome-plated, joint P-Trap where exposed under fixtures, etc.

9. CLEAN OUT-Provide clean outs as shown and/or required by code. Utilize flush-in-floor or wall type, cast, water, and gas tight, with nickel bronze cover and plug.

10. FLOOR DRAIN-Where shown or required, general service, light duty (UNO) nickel bronze top, adjustable height head, with drain grid, strainer and sediment bucket. Flush mount in floor. Provide

END OF PLUMBING BASIC MAATERIALS AND METHODS

## **PLUMBING CRITERIA-WATER DISTRIBUTION SYSTEMS**

1. BASIS OF DESIGN-The Water Distribution System piping design is generally based on PVC piping. 2. UTILITY COORDINATION-Prior to start of work, coordinate and verify in writing, the utility connection,

metering, location size(s), invert, pressure, etc. Copy to Owner, Architect, and Engineer.

3. PRESSURE REDUCTION/BACK FLOW PREVENTION-provide adjustable pressure reduction valve and back flow prevention valve on each incoming water supply. Sized for required pressure and flow. PRV valve shall be adjustable and have strainer. BFP valve shall be UL/AWWA listed, double-gate type.

4. WATER DISTRIBUTION GENERAL-All materials shall be approved for portable water service. Utilize "No

5. IN/BELOW GRADE WATER PIPING-Utilize ASTM B-88 Type L annealed temper copper tubing, seamless and joint less, with ASME b16.18/22/26/50 fittings.

6. ABOVE GRADE PIPING-Utilize ASTM B-88 Type M Hard Temper copper tubing with soldered, brazed or flared ioints and ASME b16.18/22/26/50 fittings and connectors. Ant copper-to-steel connections shall utilize insolation unions. Fitting shall be cast iron and approved for the purpose.

7. SOLDER-Utilize no-lead solder, 95% tin/5% Antimony and water based flux.

8. FIXTURE CONNECTIONS-Provide chrome escutcheon and chrome shut-off valve with stainless steel flexible tubing, with slack, for each fixture pipe connection.

9. VALVES-Provide line size, brass or bronze body gate valves, rated for 125 PSI shock water pressure. Crane, Nibco, or Hammond. Tag or label each value.

10. HOSE BIBBS-Utilize brass or bronze body, with bronze interior components, replaceable seat and seal, and vacuum breaker hardware. Location subject to freeze shall be no-freeze wall hydrant type.

11. SHOCK ABSORBERS-Sized and installed per P.D.I. standards.

12. PRESSURE AND TEMPERATURE GAUGES-Stainless steel case and ring with balanced adjustable pointer and brass socket, 4.5 inch dial with piston type pressure snubber and brass needle valve. 0-200 PSI for utility water service, 0-100 PSI for water distribution piping. Temperature gauges shall be adjustable angle type with red pointer and contrasting temperature scale.

13. PRESSURE TESTING-Each piping system shall be pressure tested with water, per piping manufacturer, before insulated or concealed, at 125 PSI for 24 hours with NO pressure loss. Copy test results to AHJ,

14. DISINFECTING-Each piping system shall be completely disinfected in accordance with the code, then flushed clean. Each fixture shall be cleaned prior to disinfecting piping. A water sample for the farthest outlet shall be taken and tested by an independent lab to certify the water copy. Send copies of test results to

## PLUMBING CRITERIA-GAS PIPING SYSTEMS

- 1. DESIGN BASIS-The gas piping design is generally based on natural gas, and smooth steel piping.
- 2. UTILITY COORDINATION-Prior to start of work, coordinate and verify in writing, the utility tie-in, location, size(s), pressure, elevation, etc. Copy to Owner, Architect, and Engineer.
- 3. METERING-Coordinate with the owner/tenant regarding any metering requirements, choices, etc.
- 4. GAS DISTRIBUTION GENERAL-All materials, fitting components, etc. shall be approved for the type gas utilized. Utilize only UL listed and labeled components.
- 5. ABOVE GRAD PIPING-Schedule 40, black steel piping with threaded joints, connector and fittings. Threaded connections shall be sealed and tight. Weld a;; joints, fittings and connections on piping system with pressure greater than 5.0 PSIG.
- 6. SHUT OFF GAS COCK VALVES-Provide guarter-turn cast ball shut-off gas valve at each gas appliance.
- 7. APPLIANCE CONNECTION LINES-Utilize UL labeled stainless steel flexible type connector at each appliance connection. Provide with at least one loop of slack, and drip leg in gas piping.
- 8. APPLIANCE SAFETY VALVES-Each appliance is to be equipped with a UL labeled automatic shut-off valve. Notify AHJ and owner immediately of any appliance not equipped with safety valve.
- 9. GAS REGULATION-Provide pressure reducing regulators where shown or as required. Sized for the proper flow and inlet and outlet pressure.
- 10. PRESSURE TESTING-Each gas piping system shall be pressure tested, before being concealed. Close all appliance gas cocks or cap ends. Test at 150%, but r less than 3 PSIG, per code. Copy test results to AHJ, Owner, Architect, and Engineer.

END OF PLUMBING BASIC MATERIALS AND METHODS

	HVAC A	BBREVATIONS	ARCHITECT	'S STAMP GEORGIA	
	AC	AIR CONDITIONING	// / <sup>8</sup> -	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
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	DIA	DIAMETER			
	DN	DOWN			
	DP	DROP			
	DS	DOWN SPOUT			
	DWGS	DRAWINGS			
	EDH	ELECTRIC DUCT HEATER			
	EMG	EMERGENCY			
re	EXIST	EXISTING			
not	FA	FRESH AIR			
	FCO	FLOOR CLEAN OUT			
	FCU	FAN COIL UNIT OR AHU			
	FD	FLOOR DRAIN			
	FH	FIRE HYDRANT			
	FIXT	FIXTURE			
	FS	FLOOR SINK			
	FT	FOOT/FEET			
	G	GAS			
	GC	GAS COCK			
	GH	GROUND HYDRANT			
	GRND	GROUND			
	GV	GATE VALVE			
	HD	HUB DRAIN			
	HP	HORSE POWER			
	HTR	HEATER			
	HW	HOT WATER			
	HWR	HOT WATER RETURN			
	HPU	HEAT PUMP UNIT			
	INV	INVERT ELEVATION			
	KVA	KILO-VOLT-AMPERES			
	KW	KILOWATTS			
	LT	LIQUID-TIGHT			
	MANUF	MANUFACTURER			
	MH	MAN HOLE			SIONS
	MIN	MINIMUM		DESCRIF	PTION
	MTD	MOUNTED			
	NFHB	NONFREEPE HOSE BIB			
	NIC				
	PNL	PANEL			
	PRV	PRESSURE REDUCING VALVE			
	P&T	PRESSURE & TEMPERATURE			
	QTY	QUANTITY			
	RD	ROOF DRAIN			
	RW	RAIN WATER			
	S	STACK/SANITY			
	SA				
	SCHD	SCHEDULE			
		THROUGH	PROJECT:		
	UG		VERNO		J FIRE STATION
				VERNC	N ROAD
				LAGRANG	E GEORGIA
	WCO				
	wG \w/ц				
			TITLE:		
		WATER HAIMMER ARRESTOR			
	VVQV	WASTE & VENT			
					G SPEUS
			MODIFIED DAT	⊑:	
					1731
			ISSUED DATE:		
			FOR BID AND F	PERMIT	SHEET:
			07 MAY	<u>í</u> 2018	P-1







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	DATE	REVIS	SIONS
PR V	OJECT: ERNON L/	I ROAI	D FIRE STATION N ROAD E GEORGIA
	PL SE		NG PLAN O FLOOR
ISSI FOF	UED DATE: R BID AND PEI 07 MAY 2	RMIT 2018	JOB NO: 1731 SHEET: <b>P-3</b>



## PLUMBING SPECIFICATIONS: (DESIGN - BID - BUILD)

## PLUMBING GENERAL

Work covered by this document includes labor, material, products and services for, and incidental to, installation of plumbing systems drawn or specified.

Work shall be complete, tested, adjusted and ready for operation.

## REGULATIONS AND REQUIREMENTS

Install work to comply with local, state and federal applicable regulations.

Secure necessary permits and inspections, paying all costs and fees involved.

SHOP AND RECORD DRAWINGS

Furnish shop drawings for manufactured products, 4 (four) copies minimum.

## DRAWINGS

Except where dimensions are specifically indicated, mechanical drawings are diagrammatic and shall not be scaled. However, size and location of equipment is shown to scale where possible. Drawings indicate required size and routes of system elements. It is not the intention to indicate all off-sets, risers and drops. It is the contractor's responsibility to install system elements in a manner to conform to structure and avoid obstructions.

Refer to architectural drawings for building dimensions.

Refer to electrical drawings for voltage and system characteristics supplied to mechanical equipment.

Visit project site, survey existing conditions, and coordinate work to comply with the documents.

## FIXTURES

Refer to plumbing fixture schedule.

Water Heaters: vertical electric design, PVC jacket, immersion element, anode rod, thermostat, high temperature cut-off, ASME rated combination temperature and relief valve, glass lined tank, 150 psi working pressure, 75 watt per square inch heating element, UL listed, three year commercial warranty. Heater shall be A.O. Smith complying with ASHRAE-90 standards. Water heater shall be as indicated, State Stove, Ruud or approved substitute.

## PIPING

Sanitary waste and vent pipe shall be schedule 40 PVC DWV pipe and fittings, ASTM D2665-78. (Use cast iron in return air plenum spaces.

Domestic water pipe shall be CPVC.

VALVES

Gate Valves: Bronze body, 235 psi minimum working pressure, rising stem, soldered or screwed ends. Valves shall be Jenkins No.47, Kennedy No.425, Crane, NIBCO, Hammond, Milwalkee, Stockham or approved equal.

## INSTALLATION

Producta shall be installed in accordance with manufacturer's printed installation and maintenance literature. Components requiring periodic maintenance or adjustment shall be located or installed as to permit access without damage to building structure, finishes or other equipment.

## F9 - UTILITY SIN ADJUSTABLE LE WITH GOOSENE MODEL FL-1. OR 895-GN2AE3ABC

F12 - WASHER B COLD WATER H B200C, OR EQUA

## PLUMBING FIXTURE SCHEDULE

(OTHER SIMILAR MANUFACTURERS ARE ACCEPTABLE)

MARK	DESCRIPTION	S	W	CW	HW	REMARKS / MOUNTING	MODEL NUMBER
P1	WATER CLOSET	4"		1/2"		15" SEAT HEIGHT	KOHLER K-3428, 1.0
P2	WATER CLOSET	4"		1/2"		18" SEAT HEIGHT	KOHLER K-3427, 1.0
P3	URINAL		2"	3/4" (VERIFY)		17" MAX LIP HEIGHT	ELJER 161-1090 W/ SLOAN FLUSH VAL
P4	LAVATORY		1 1/4"	1/2"	1/2"	IN COUNTER UNDERMOUNT	ELJER 053-0364 W/ FAUCET ZURN, Aqu WITH MCGUIRE OF MODEL PW2125 OF
P5	LAVATORY		1 1/4"	1/2"	1/2"	WALL HUNG	ELJER 051-2344 W/ FAUCET ZURN, Aqu WITH MCGUIRE OF MODEL PW2125 OF
P6	BREAKROOM SINK (20" X 35") OWNER VERIFY		1 1/4"	1/2"	1/2"	16 GA. STAINLESS STEEL SINK. SUBMIT CUT SHEET TO OWNER.	UNDERMOUNT SIN
P7	SINK (18" X 14") OWNER VERIFY		1 1/4"	1/2"	1/2"	16 GA. STAINLESS STEEL SINK. SUBMIT CUT SHEET TO OWNER.	UNDERMOUNT SIN
P8	COMPOSITE STONE FLOOR SINK 24"X36"		1 1/4"	1/2"	1/2"		PROVIDE FRP PAN PROVIDE MOP SINI
P9	UTILITY SINK		1 1/4"	1/2"	1/2"	FLOOR MOUNTED	
P10	ACCESSIBLE SHOWER		2"	1/2"	1/2"	PROVIDE WITH SPEC'D SHOWER FITTINGS AND HEADS	62"X33" FREEDOM A
P12	ACCESSIBLE SHOWER		2"	1/2"	1/2"	PROVIDE WITH SPEC'D SHOWER FITTINGS AND HEADS	ELLA STANDARD 42" CENTER DRAIN

	AF	RCHITECT'S STAMP	
SUB-CONTRACTOR: DE AND INSTALL ALL SANITARY, WATER LINES, PIPING, CLEANOUTS, ETC. TO INSTALL NEW PLUMBING AS INDICATED ON THE DRAWINGS. CONNECT EXISTING PLUMBING IN THE AREA OF NEW PLUMBING FIELD VERIFY ALL EXISTING S PRIOR TO BIDDING. PROVIDE HOT AND COLD ALL SINKS.	SIG	T575 T575	N GROUP, INC.
AUTOMATIC TRAP PRIMERS FOR ALL FLOOR DRAINS. AINS TO BE J.R. SMITH 2010-A ND REPLACE EXISTING WALLS, FLOORS, CEILINGS RED FOR NEW PLUMBING LINES AND FIXTURES. AS-BUILT DRAWINGS; TWO HARD COPIES, TWO PDF IC COPIES. AS-BUILT DRAWINGS TO SHOW EXACT G OF ALL PIPING.		206 WEST HAF LAGRANGE, ( 706-882-5511	GEORGIA 30240 www.SDGarch.net
DSET (ACCESSIBLE): FLOOR MOUNTED WITH FLUSH ATED WHITE VITREOUS CHINA, 17" HIGH RIM, 1.28 GPF VALVE, OPEN FRONT SEAT WITH CHECK HINGE, ADA IERICAN STANDARD, KOHLER, ELJER, OR CRANE.			
(ACCESSIBLE): COMMERCIAL GRADE WHITE VITREOUS OUNTED WITH BACKSPLASH, ADA COMPLIANT. NDARD, KOHLER, ELIJER, OR CRANE. FAUCET SHALL ATED BRASS, SINGLE LEVER TYPE WITH STANDARD A AERATOR AND GRID DRAIN. AMERICAN STANDARD, LER, OR MOEN. PROVIDE STOP VALVES, FLEXIBLE R SUPPLIES, DRAIN TAILPIECE, ADN P-TRAP WITH			
ER: (SHOWER ENCLOSURE IS ACRYLIC) PROVIDE ADA ESSURE BALANCED SHOWER VALVE, FIXED-POSITION HOWER HEAD, HAND-HELD ADJUSTABLE SHOWER DE BAR, LEVER ACTIVATED SHOWER HEAD SELECTOR D DRAIN MAXIMUM 2.5 GPM FLOW RATE AT 60 PSIG IGS SHALL BE CHICAGO MODEL 1907-TK600CP WITH ELD SHOWER HEAD AND SLIDE BAR, OR EQUAL EN, AMERICAN STANDARD OR KOHLER. (LINEAR IS SHALL BE AS SPECIFIED ABOVE.)			
YTOR: FLOOR MOUNTED, MOLDED STONE BASIN, 4"X12" DEEP, WITH RIM GUARD AND GRID DRAIN. BE WALL MOUNTED AT 3'-0" AFF AND SHALL INCLUDE YS, VACUUM BREAKER, HOSE THREADS, BUCKET HOOK LL BRACE. BASIN SHALL BE FLORESTONE OR FIAT. BE AMERICAN STANDARD, KOHLER, CHICAGO, OR			
K: MOLDED STONE BASIN, FLOOR MOUNTED ON EGS, WITH FAUCET SHELF, BLADE HANDLE FAUCET ECK SPOUT, GRID DRAIN. FIXTURE SHALL BE FIAT R EQUAL. FAUCET SHALL BE CHICAGO MODEL CP, OR EQUAL.			
OX: GALVANIZED STELL HOUSING WITH HOT AND OSE BIBBS AND 2" DRAIN OUTLET. GUY GRAY MODEL AL.		DATE DESCRI	SIONS PTION
6 GPF OR EQUAL (Note- other similar manufacturers are acceptable)			
GPF OR EQUAL			
3/4" TOP SPUD 1.0 GPF VE 180-K OR EQUAL GRID DRAIN Ia Sped "Z"812A4. 4" center set faucet, POLISHED CHROME FSET PROWRAP P-TRAP	PRO VE	JECT: ERNON ROA	D FIRE STATION
GRID DRAIN MTD. FLUSH TO WALL a Sped "Z"812A4. 4" center set faucet, POLISHED CHROME FSET PROWRAP P-TRAP R EQUAL		VERNO LAGRANO	ON ROAD SE GEORGIA
K - 10" DEEP WITH DISPOSAL	TITL	E:	
K - 10" DEEP ELS ON THREE SIDES OF WALL F MOP SINK UP TO 48" A.F.F. K FAUCETS MOUNTED ON BACK WALL @ 36" A.F.F.		PLUN FIXTURE \$	/IBING SCHEDULE
DA ROLL-IN SHOWER 1-PIECE CONSTRUCTION	MOD	IFIED DATE:	JOB NO:
X42"X80" 1-PIECE LOW THRESHOLD STALL IN WHITE WITH	16011		1731
	FOR	BID AND PERMIT	SHEET: <b>P-4</b>

## WATER HEATER SPECIFICATION

HWH-1 DESIGN BASED ON COMMERCIAL MEDIUM DUTY 100 GAL 75K BTU NATURAL GAS, LOW NOX TANK WATER HEATER AS MANUFACTURERED BY RHEEM. MODEL G100-80N.



DETAIL – GAS FIRED WATER HEATER 1 DETAIL -AP-5 NOT TO SCALE



ARCHITECT'S STAMP







# FOR CITY OF LAGRANGE LAGRANGE, GEORGIA

## (ELECTRICAL)

## **PROJECT NUMBER 1731**

## FOR BIDDING AND PERMIT

07 MAY 2018

smith Lesign group 206 W Haralson Street LaGrange GA 30240 706.882.5511 www.SDGarch.net



	7. <u>GEN</u>
1. ELECTRICAL CRITERIA - PART 1 DESCRIPTION:	A)Ge
1) This contractor shall provide the following:	fac
a) Complete design, based on these criteria and documents.	B)Re
b) Complete installed, proper functioning electrical system(s).	8. <u>ELEC</u>
c) Related work as described herein and indicated on the plans and other documents.	A)GE
d) Complete one-year warranty on all material and work.	per
e) Provide any manufacturer extended warranties to the owner.	wit Co
<ol> <li>The General &amp; Supplement Conditions, Agenda &amp; related items are included as part of this scope-of-work criteria.</li> </ol>	B)PR
3) The contractor shall refer to and base any quotations of the complete criteria, including but not limited	sul
to, all drawings, written criteria, / scope-of-work and related documents.	sto plu
2. QUOTATION DOCUMENTATION	C)MI
1) This contractor's quote shall be based on the criteria as require in these documents.	lab
2) The quotation shall include a statement that pricing is based on & covers / includes the scope-of-work	bas har
2) Any elternates shall be fully itemized, listing the base quete price, the add / deduction price and	wa
supported with documentation of the alternate.	D)SU
3. ELECTRICAL EXISTING CONDITIONS	pro sur
1) The contractor shall make an on-site review of any existing conditions and shall include all necessary	sha
cost involved and / or associated with the existing conditions. This shall include, but not be limited to	acc ma
uernolition & removal, temporary power, repair & restoration including floors, walls, and ceilings.	oth
and shall be removed from the site.	COI
4. <u>ELECTRICAL CONSTRUCTION DOCUMENT (DR</u> AWINGS, SPEC, CALCULATIONS)	ste
1) Provide a complete set of electrical construction documents for owner review, permitting and use as	E)LA
construction documents.	ser att:
2) Documents shall be Cad based utilizing AutoCadd or MicroStation Cadd software.	des
3) The documents shall be prepared and bear the PE stamp, name, address, phone and e-mail address	the the
or the engineer responsible. The engineer shall be a trained and experienced on electrical engineering and be a licensed engineer in the project state.	loa
4) Drawings shall bear the complete project name & address, the electrical contractors' name, address,	9. FINIS
telephone number, and license information.	appea
5) The documents shall include "to scale" plans, risers, symbols & legends, details, notes & all	10 EIE
necessary schedules. The document shall be fully coordinated with the works of the other trades for correct equipment locations, power characteristics & requirements.	10. <u>ELE</u> Alec
6) The lighting plans shall include lighting fixture schedule(s) with fixture description(s), finishes, etc.	A) <u>SU</u> 1) Dra
lamps type and color, voltages, input wattage, mounting and the manufacturers name and catalog	the
number.	fut
<ul> <li>r) i ne electrical shall include the location of each device requiring an electrical connection, complete with all wire sizes, conduit sizes, disconnect, breaker and other required items. Voltage drop</li> </ul>	B) <u>SE</u>
calculation shall be performed where needed or required.	1) Co
8) The Electrical Riser Diagram shall indicate the complete electrical distribution system layout &	a) .
interconnections. Also include detailed panel schedules; complete with schedules, feeder sizes, transformers and related work shall be included. Schedules shall be complete listing each circuit	b) /
number with its description, load type, connected load wattage, phase, OCP amps/poles, including a	c)
load summary and calculation indicating the load totals by phase and by load types (ltg/recpt/etc.), voltages/phase/wire, buss amps, main OCP, and the minimum A/C ratings required	d) (
9) The contractor shall provide written copies of all coordination with the telephone company cable TV	2) <u>Ele</u>
and other utilities serving this project. The coordination shall indicate how the services are to come	a)
on-site and enter the facility. The characteristics of each service are to be spelled out or detailed. The names and telephone number of each utility contact is to be listed	b) (
5. SUBMITTAL REQUIREMENTS	c) (
1) Submit six complete conjes of the completed construction documents for review by the owner &	d) :
designated parties. All submittals shall be fully marked to indicate the exact item(s) being submitted.	e)
The submittals shall include, but not be limited to, conduit & fittings, wire & cables, panels, boards, transformers, lighting fixtures & lamps, system equipment, etc. Submittals for panels and other	f)
uansionners, lighting lixtures & lamps, system equipment, etc. Submittals for panels and other build-up items shall be the manufacturers fabrication submittal; use of standard catalog data is not	g)
acceptable.	h) .
2) The contractor shall also provide copies of all building permits and a listing of all suppliers,	i)
sub-contractors and others who will be providing materials or services on the contractor's behalf. This listing shall include the company name, the contact(s), and phone & fax numbers and e-mail address.	j) <sup>-</sup>
6. PROJECT COMPLETION & CLOSE-OUT	k)
A) The contractor shall make work-in-progress and final working reviews / inspections with the owner &	
the owner's designated representatives. The contractors shall provide all necessary labor & tools for	3) <u>Gr</u>
reviews & inspections.	a) :
B) At project completion the contractor shall provide a complete working demonstration of all systems and components and proper interface with system of other trades. Boview and program ( set all	I
equipment operating timing & sequences as directed by owner.	b)
C)Provide three copies of complete bound equipment data, instruction and operation manuals. Include	
copies of all permits & approvals, warranty certificates and contact information. Contractor shall	
provide two sets of as-dulit construction documents on reproducible mylar and two copies of "as-built" cad drawings on CD's.	
D)Contractor shall return 30 days, 90 days, and 180 days after C.O.to review system operation with	4) <u>Fa</u>
owner and make adjustments as required.	a)
	,

## ERAL PROJECT DESCRIPTION

nerally this project consists of the conversion of an existing facility into a multi-tenant office / retail cility

efer to the architectural plans for specific building information, extent-of-work, etc.

## CTRICAL BASIC CRITERIA

ENERAL- provide a complete electrical system, left in proper working order. Provide herein means stalled correctly, including labor and materials. This contractor shall be a properly licensed to rform the required work. Secure and pay for all fees, licenses, permits, and inspections. Coordinate ith power and communication utilities. Meet and comply with all Federal, State, and County & City des

ROVISIONS TO BE INCLUDED- Labor, supplies and materials, tools, equipment, etc.; complete bmittals & connections; coordination with other trades; material shipping, delivery, receiving, brage, & protection; excavation, backfilling, cutting, patching and cleaning; guarantee for one year, us any extended manufacturer's warranties; as-built reproducible mylar record documents.

SC. MATERIALS- all materials shall be new, and currently manufactured. All materials shall be U.L. eled, and meet all industry standards. Label all equipment. Provide 3000 PSI class concrete for ses and backfill. Provide " thick A/D fire retardant grade backboards. Provide all support rdware and systems for electrical work. Fire/smoke seal each penetration of any rated barrier (floor, all, etc.)

IPPORT-All materials, equipment, devices, etc. installed by this contractor shall be provided with oper study support. All building support attachments shall be made to the building structure. No pport attachments shall be made to the ceiling system, gypsum wall boards, etc. Electrical devices all not be mounted onto other equipment panels or housings, where the panel or housing will limit cess & servicing. All attachment to the building structure shall be compatible with the building terials and not cause damage. Where free-standing supports, trapeze-type supports, racks or ner similar support is needed or required Unistrut (or equal) framing channel and related mponents shall be utilized. Where located out-doors or subject to wet environments (kitchens, eas, etc.) the support material shall have a finish equal to Unistrut "Perma-Green II" finish. Utilize el threaded rod with lock-nuts and double-nuts for pendant supports.

BELING & MARKING- All electrical distribution equipment shall be labeled with the name or itemed rved, voltage/phase/wire/fuse. Labels for distribution equipment shall be engraved bake-a-lite label ached with weather-proof adhesive. All j-boxes shall be marked with the circuit number (panel signation & ckt ), or other system designation (FA/PA/etc.). Utilize a permeate type marker to label e device cover (only on concealed boxes ie-above clg.). A complete directory shall be attached to e inside of each panel or distribution board. The directory shall include the device , space served, ad service and breaker rating.

SHES- Prior to ordering, the contractor shall coordinate all colors, finishes, and other material arances with owner/tenant. This shall include all wiring devices, lighting fixtures, and other onents.

## ECTRICAL SERVICE, METERING & DISTRIBUTIONS SYSTEM

## OPE-OF-WORK

e utility source of all panels, equipment, appliances, & items requiring power and / or provision for ture power.

### RVICE, METERING & DISTRIBUTION ELECTRICAL CRITERIA

## onductors & Raceways:

All conductors shall be copper, XHHW or THWN/THHN.

- Aluminum can be quoted as an add / deduct.
- Raceways shall be PVC underground, EMT or IMC for above grade.
- Use of prefabricated modular busway allowed as contractors option if desired.

## ectrical Panels

- Labeled UL 67 and 50; NEMA 250 and PB1; NFPA 70-384 and 373.
- Commercial grade (residential equipment/load centers, etc. is prohibited).
- Voltage, Phase & NO. Wire is required.
- SCAIC rated to match Fault Current Calculations, but no less than 22K AIC.
- Flush mounted except where mounted in utilitarian service spaces.
- Dead front design with hinged & locking front cover door.
- NEMA 1 cabinet for indoor, NEMA 3R for wet location.
- All lugs & terminals 60/75 deg. C rated.
- Factory assembled, double row construction, staggered numbering, sequenced phased.
- Tin-plated copper or aluminum busing. 100% rated phase & neutral, 50% ground.
- Refer to over-current protective devices. Provide main breaker were served from transformers or remotely located. Match or exceed up-stream AIC rating, but no less than 22K AIC.

### rounded

- Service Grounding- Provide per code, plus not less than (1) ground rod field consisting of three 10 ft rods, spaced 10 Ft apart triangularly & loop connected; (2) Bond to concrete rebar; (3) bond to building steel; (4) bond to metal cold water main pipe (if available).
- Distribution System Grounding
  - (1)Provide grounding of entire electrical system per code.
  - (2)Provide green ground conductor in each feeder, sized per code.
  - (3)Each separately derived system (i.e. transformers, generators, etc.)
- ult Current Study
- Provide a complete Fault Current Study of the entire distribution system.
- b) Indication the available fault current at each point in the distribution system, including all motor, generator and other fault current contributors.
- c) Provide (on power company letterhead) copies of the electrical service characteristics, including transformer size & type, available fault current, secondary voltage & phase, metering arrangements and any power company requirements, etc.

## ELECTRICAL SPECS

## 11. LIGHTING & ELECTRICAL SYSTEMS SCOPE-OF-WORK

- 1) GENERAL ELECTRICAL REQUIRMENTS:
- Landlord electrical requirements.

## 2) EXTERIOR LIGHTING

- lamps, supports, wiring & controls.

### 3) INTERIOR LIGHTING

## lamps, supports, wiring & controls).

- occupancy sensors with manual over-ride feature.

(2)Egress Lighting Public Common Areas- Utilize emergency battery inverter feature in selected public area lighting, otherwise utilize self-contained wall/ceiling

## mounted units.

## 4) OUTLETS & WIRING DEVICES:

- circuiting
- etc.).

## 5) APPLIANCE & EQUIPMENT CONNECTIONS:

## a) Provide electrical power & connect to all Landlord;

- operators, appliances,, etc.)

## 13. VOICE/DATA (VID) TELECOMMUNICATIONS SYSTEM(S):

### A) V/D GENERAL REQUIRMENTS:

- 2) Provide pull-string in each empty conduits
- 3) Label & Tag each conduit & pull string.
- 4) All conduits bends shall be long radius bends.

## mount with bottom 18" AFF.

## NOTE:

## DATA CABLING, SERVER, WIFI AND ROUTERS ARE NOT IN SCOPE.

a) Provide a complete system of lighting, outlets, wiring, equipment & appliance connections for all

a) Provide all lighting complete as indicated an the documents, including but not limited to fixtures,

b) Refer to the lighting fixture schedule for fixture Manuf., Models, Lamps, Etc.

c) Provide all related mounting bases & supports (i.e. concrete pole bases, etc.).

d) Exterior lighting control shall consist of electrically-operated/mechanically-help multi-pole lighting contractor(s), with front mounted H-O-A switch, controlled by two-channel astronomic programmable time switch(s) (Tork DZM200A or equal). Program schedule as directed by owner.

a) Provide al lighting complete as indicated on the documents, including but not limited to fixtures,

b) Individual spaces (i.e. closets, equipment rooms, etc.) shall be controlled via wall mounted

c) Common public spaces shall be controlled via lighting contractors controlled with programmable time controls (Tork DAM200A series or equal). Program per owner.

d) Security/Night Lights, circuit approximately 1/5 of the common public space lighting fixtures on "security/night light" circuit. These fixtures shall be switched via contractor(s) controlled by key operated momentary contact switche(s) located at each public entrance.

e) Provide a complete system of emergency egress lighting and exit signage per code requirements.

(1)Exit signage- LED lamp, edge-lit style (Chloride Symmetry Series or equal).

a) Provide all outlets & wiring devices as indicated on the documents, complete with wiring &

b) Provide any code required devices that may not be indicated on the documents.

c) Where required by code, provide devices of the proper type & ratings (i.e. -GFCI, hospital grade

(1)Appliances as indicated on the documents.

(2)All HVAC equipment per the mechanical contractor requirements

(3)All plumbing equipment per the plumbing requirements.

(4)All architectural equipment per the general contractor requirments (i.e. door

1) Utilize PVC conduits for underground and EMT for above grade work

5) Backboard shall be "thick A/D grade plywood, painted light-gray with fire-retardant paint. Wall



## SMITH DESIGN GROUP, INC.

### 206 WEST HARALSON STREET LAGRANGE, GEORGIA 30240

706-882-5511 www.SDGarch.net

NOTES:

1. AN EXTERIOR MAIN DISCONNECT IS

- REQUIRED FOR EACH SERVICE ENTRY. 2. ALL BRANCH CIRCUIT CONDUCTORS ARE
- TO BE MINIMUM 12 COPPER. 3. INSTALLATION OF NON-METALLIC (ROMEX)
- IS NOT ALLOWED. 4. IF ALUMINUM SERVICE AND FEEDER CONDUCTORS ARE USED, THE CONDUCTORS MUST BE SERIES 8000, COMPACT STRAND, WITH INSULATION TO
- COMPLY WITH NEC AND FIELD CONDITIONS. COMPLY WITH THE REQUIREMENTS OF
- THE 2014 NEC, ARTICLE 517, AS IT APPLIES TO THE USE OF THIS FACILITY

## REVISIONS

$\triangle$	DATE	DESCRIPTION

## PROJECT:

## VERNON ROAD FIRE STATION

VERNON ROAD LAGRANGE GEORGIA

TITLE:

## **ELECTRICAL SPECS**

MODIFIED DATE:

JOB NO: 1731

SHEET:

ISSUED DATE: FOR BID AND PERMIT 07 MAY 2018

E-1





## **TV COAX DISTRIBUTION RISER DIAGRAM**

	PA SOUND SYSTEM CRITERIA	
	PA SOUND DISTRIBUTION SYSTEMS	REV
1	GENERAL ITEMS, SUBMITTALS & DOCUMENTATION	
	THIS PROJECT INVOLVES PROVIDING PUBLIC ADDRESS AUDIO SOUND SYSTEM AND RELATED COMPONENTS TO	
1A	PROVIDE SOUND DISTRIBUTION AT LOCATION AS SHOWN ON THE DOCUMENTS.	
	THIS PA SYSTEM INCLUDES BUT IS NOT LIMITED TO PROVIDING COMPLETE AND PROPERLY FUNCTIONING PA AUDIO	
	SOUND SYSTEM, INCLUDING SPEAKERS, AMPLIFIERS & MIXERS, INPUT COMPONENTS, WIRING & RELATED	
1B	COMPONENTS, START-UP, CHECK-OUT & CERTIFICATION, MANUALS, TRAINING OF OWNER'S PERSONNEL.	
1C	THIS SOUND DISTRIBUTION SYSTEM DESIGN IS BASED ON 70 VOLT DISTRIBUTION SYSTEM.	
	THE CONTRACTOR SHALL UTILIZE THE DESIGN SERVICE OF THE FACTORY AUTHORIZED SYSTEM VENDOR TO OBTAIN	
	THE COMPLETE AND PROPER SYSTEM DESIGN, LAYOUT(S), FUNCTION, INTEROPERABILITY WITH SYSTEMS OF OTHER	
1D	TRADES, WIRING & OPERATION, AS REQUIRED BY THE PROJECT DOCUMENTS.	
2	MANUFACTURERS:	
	THE COMPLETE SYSTEM SHALL BE PROVIDED BY A SINGLE VENDOR / INSTALLER WHO SHALL HAVE UNIT	
	RESPONSIBILITY FOR THE ENTIRE SYSTEM. THE VENDOR SHALL BE A FACTORY AUTHORIZED AGENT OF THE	
2A	MANUFACTURER AND SHALL PROVIDE EVIDENCE THERETO.	
3	COMPONENTS - AMPLIFIER / MIXER DESIGN BASED ON - BOGEN POWER VECTOR WV150 SERIES	
4	COMPONENTS - SPEAKERS CEILING TYPE DESIGN BASED ON - BOGEN S86T725G8U SERIES	
5	COMPONENTS - SPEAKERS HORN TYPE DESIGN BASED ON - BOGEN SPT15A SERIES	
6	COMPONENTS - MICROPHONES & JACKS	
	MICROPHONE DESK TYPE - PROVIDE PRE-ASSEMBLED, READY TO USE DESK TYPE MICROPHONE, CARDIOID PICKUP	
6A	PATTERN, PUSH TO TALK OPERATION WITH LOCKING MECHANISM, COMPLETE WITH 15 FT. CORD SET. (PROVIDE TWO	)
7	SYSTEM INSTALLATION	
	CONCEAL ALL WIRING IN FINISHED AREAS, UNLESS SPECIFICALLY NOTED OTHERWISE. WIRING IN AREAS WHERE IT IS	
	EXPOSED TO VIEW (I.E. UNFINISHED AREAS, WAREHOUSE, INDUSTRIAL, ETC) ALL CABLING SHALL BE IN EMT	
7A	CONDUITS (MINIMUM) WITH MATCHING BOXES, FITTING AND HARDWARE.	
8	SYSTEM TEST, VERIFICATION, DOCUMENTATION & SERVICE	
	THE MANUFACTURERS' FACTORY AUTHORIZED & TRAINED REPRESENTATIVE SHALL PROVIDE A TOTAL SYSTEM	
	CHECK-OUT (OF EVERY DEVICE) AND TESTING, AND SHALL SEND WRITTEN VERIFICATION OF THE SYSTEM(S)	
8A	PROPER OPERATION TO THE OWNER, ARCHITECT, ENGINEER AND FIRE MARSHAL.	
8B	PROVIDE OWNER WITH UP TO ONE FULL DAY OF ON-SITE OPERATION AND MAINTENANCE TRAINING.	
	END OF SOUND DISTRIBUTION SYSTEMS	



EXCEPT HOMERUN IS 3/4"



## TV COAX DISTB SYSTEM CRITERIA

APARTMENT TV COAXIAL DISTRIBUITON SYSTEM SPECIFICATIONS

## **GENERAL ITEMS:**

A) This Scope-Of-Work consist of providing a Coaxial Distribution System for the distribution of SUB / VHF / CATV / UHF band signals. This work shall include, but not be limited to, the related raceway system, wall boxes, coax cables, wall taps with coverplates, labeling & tagging, and related components. The Head-End equipment will be provided & installed by the owner, and is not a part of this contract.

B) The contractor shall utilize the design service of the factory authorized system vendor to obtain the proper system layout(s), function, wiring & operation, as required by this specification, drawings, prevailing codes and owner's requirements.

C) Coordinate with all other trades for the proper coordination and interfacing with their work, systems & control(s).

D) Submit complete product data including all devices, wiring and related items. All wiring & connection shall be labeled and identified. Submit plans and related data to other related trades and vendors for proper final coordination. Submit the name and phone number of the manufacturer, vendor, and the individual who prepared the drawings & NECIT certification. Submit complete product data on each component.

### MANUFACTURERS: 2.

•

- A) All components shall be of the same manufacturer to provide unit responsibility and uniformity of operation & performance. The vendor shall be a factory authorized agent of the manufacturer,
- and shall provide evidence thereto.
- B) Provide a full one-year, on-site, parts & labor warranty for the complete system.
   C) Acceptable manufacturer(s) are Blonder Tongue laboratories Inc.
   D) Other manufactures by 14-day prior approval with complete submittal only.

CODES & STANDARDS:
 A) The system design, equipment & material, function & operation shall comply with - National Fire Protection Association Standards; National Electrical Code; Underwriters Laboratory Labeled; Standards; Local Codes & Authority Having Jurisdiction

### 4. COAX CABLE:

Provide conduit raceway for all cabling. All bends shall be long radius bends (10 times diameter). Drop Cable - RG-6, low loss.

- 5. WALL TAPS:
  A) Provide wall-mounted backbox for each tap.
  B) Provide matching coverplate for each tap, labeled on backside with room #.
  C) Single Tap(s)- "G / F" style connector, single tap wall plate on metal mounting strap, 75 Ohm impedance, 4dB RF isolation, BT Versatap TF-GF-FT Series
  D) Feed Thru Tap(s)- "G / F" style connector, feed-thru type tap wall plate on metal mounting strap, 75 Ohm impedance, 4dB RF isolation, BT Versatap 3889 Series

## 6. SYSTEM INSTALLATION:

- All wining shall be installed in conduit or UL. Listed system cable. A)
- **C**)
- All wring shall be installed in conduct of OL. Listed system cable. All boxes, mountings & supports shall be labeled and approved for the purpose. All cabling shall meet NEC 820 & NFPA requirements. All devices shall be mounted and installed in accordance with the applicable codes & ADA. Color code, number & label all wring & conductors per point-to-point wring diagram.

### SYSTEM TEST & VERIFICATION: 7

The manufacturer's factory authorized & trained representative shall provide installation support. The system shall be fully tested in the presence of the owner's representative(s). B)

END OF TV COAX DISTRIBUTION SPECIFICATIONS

**DOOR MONITORING & ACCES** GENERAL ITEMS: This Scope-Of-Work consi / installer for the monitoring & se Provide for conduits / race C) Coordinate with all other tr ems & control(s). Specifical SYSTEM INSTALLATION: All winng shall be installed in
 All boxes, mountings & supp
 All cabling shall meet NEC in D) Label all boxes & raceways

DOO

APARTMEN

END OF DOOR MONITORING

SYMBOL	SE MTG. HTG	CUR
AS	48" AFF	ACCESS 5 4"SQ. BC 3/4"C UP
Ô	NA	DOOR MON 3/ 4"C F FLEX IN
ø	48″ AFF	DDOR REI 4" SQ. 3/4"C UI
<b>DR</b>	NA	DOOR REI 3/ 4"C I FLEX IN
	18" AFF	OVERHEAD 4" SQ. LEAVE PI
P	48" AFF	PANIC AI 4" SO. 3/4"C UI
<b>OH</b>	PER SPEC	DOOR HOU 4" SQ. FLEX IN
Û	PER SPEC	CLOSED 4" SO. FLEX IN
NOTES	ALL CABLE ALL HARDW	TRAY, CI ARE, CABI

TE-TYP. DOUBLE DOOR SHOWN LE DOOR IS THE SAME EXECEPT LY ONE HOLDER AND CONTACT. TYP. DOOR RELEASE ACCESS STATION MTD @ 48* AFF		A SIG	RCHITECT'S STATE OF GI STATE OF GI STATE	STAMP	N GROUP, INC. ALSON STREET EORGIA 30240 www.SDGarch.net
WALL         WALL         WALL         DP         Provide         DP         TYP. 4" SQUARE JBOX, FLUSH MTD,         WITH BLANK COVER ABOVE ACCESSIBLE         CEILING OR JUST BELOW NON ACCESSIBLE         CEILINGS. PAINT TO MATCH WALL.					
ESS & CONTROL DETAIL TYPICAL EACH UNIT	• •				
RENTRY SYSTEM SRACEWAY SYSTEM st of providing raceways for use by the owners security system vendor curing of building entry & other doors. ways & backboxes, with pull strings, for use by others. ades for the proper coordination and interfacing with their work, the door hardware & security vendor / installer.					
20 & NFPA requirements. s to match reference drawings, and any security drawings. & ACCESS RACEWAY SYSTEM			DATE	REVIS	IONS TION
STATION- FLUSH MOUNTED BACKBOX SOX W/1-GANG COVER, FLUSH MTD. JP TO JBOX OR SECURITY PNL AS REQUIRED DNITORING CONTACTS- VERIFY MTD TOP OF DOOR FRAME FROM DOOR FRAME TO JBOX OR SECURITY PNL. N WALL TO DOOR FRAME, LEAVE PULL STRING					
LLEASE BUILTUN JBOX W/ 1-GANG COVER, FLUSH MOUNTED UP TO JBOX OR SECURITY PNL AS REQUIRED ELEASE DEVICE- VERIFY REQUIRMENTS FROM DOOR FRAME TO JBOX OR SECURITY PNL. N WALL TO DOOR FRAME, LEAVE PULL STRING AD DOOR ALARM CONTACTS AT BASE OF DOOR. & 3/ 4"C TO SECURITY PANEL PULL STRING ALARM BUTTON- VERIFY REQUIRMENTS JBOX W/ 1-GANG COVER, FLUSH MOUNTED	-	PRO	DJECT: ERNON	I ROAE VERNO AGRANGI	D FIRE STATION N ROAD E GEORGIA
UP TO JBOX OR SECURITY PNL AS REQUIRED DLD OPEN / RELEASE DEVICE JBOX ABOVE CLG. & 3/ 4"C TO SECURITY PANEL N WALL TO DOOR FRAME. LEAVE PULL STRING CIRCUIT SECURITY CAMERA JBOX ABOVE CLG. & 3/ 4"C TO SECURITY PANEL N WALL TO CAMERA POPSITION. LEAVE PULL STRING CONDUIT. BOXES. PULL STRINGS BY E.C.		ТІТІ	LE: S` D	YSTEN ISTRIE	/I RISER BUTION
BLING, COVERS & INSALLATION BY OWNERS VENDOR.	- -	MOE	DIFIED DATE:		JOB NO: <b>1731</b>
		ISSL FOR	IED DATE: BID AND PE 07 MAY 2	<sup>RMIT</sup> 2018	SHEET: E-2

## GENERAL NOTES

- 1. VERIFY ALL DEVICE LOCATIONS AND MOUNTING HEIGHTS.
- 2. VERIFY LOCATIONS OF ALL MECHANICAL EQUIPMENT.
- 3. ALL EQUIPMENT USED SHALL BEAR THE LABEL OF A RECOGNIZED STANDARD SETTING LABOR (i.e. UL, ETC.)
- 4. ALL SWITCHES AND RECEPTACLES TO BE IVORY.
- 5. ALL EQUIPMENT AND ACCESSORIES SHALL BE NEW AND UNUSED, UNLESS OTHERWISE NOTED.
- 6. ALL EXTERIOR OUTLETS SHALL BE WP, GFCI.
- 7. NOT USED.
- 8. SEAL ALL PENETRATIONS OF FIRE RATED SURFACES TO MAINTAIN THE FIRE RATED INTEGRITY.
- 9. PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
- 10. MATERIALS AND INSTALLATIONS SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
- 11. PROVIDE LOCAL DISCONNECT SWITCHES FOR ALL MOTORS.
- 12. SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
- 13. NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, OR IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- 14. PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION.
- 15. ALL MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
- 16. ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT THIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS, MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT, DESIGNER OR THEIR REPRESENTATIVE.
- 17. PROVIDE "AS-BUILT" DRAWINGS AND SUBMIT TO THE OWNER.
- 18. IN SUSPENDED CEILINGS, SUPPORT JUNCTION AND CONDUIT BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK OR FRAMING PROVIDED FOR THAT PURPOSE.
- 19. COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS AND INFORM ARCHITECT/ENGINEER OF ANY CONFLICTS/DISCREPANCIES.
- 20. WHERE FLOOR FITTINGS REQUIRE PENETRATION OF THE FLOOR SLAB, THEY SHALL BE STANDARD DEVICE LISTED BY UL FOR THAT PURPOSE AND HAVE A UL FIRE RATING EQUAL TO THE FLOOR RATING.
- 21. NUMBERED CIRCUITS AND RACEWAY ROUTINGS ARE FOR CONVENIENCE OF DESIGN ONLY. ACTUAL FIELD CONDITIONS WILL VARY. INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
- ELECTRICAL EQUIPMENT INSTALLED IN PLENUMS SHALL BE APPROVED FOR USE AS SUCH.
   E.C. TO COORDINATE WITH LOCAL UTILITY COMPANY: TRANSFORMER, C.T. AND METER LOCATIONS AND CONNECTION REQUIREMENTS.

## LIGHTING FIXTURE SCHEDULE (SIMILAR MANUFACTURERS

(VERIFY ALL FINISHES WITH OWNER)

SINGLE NUMERAL PREFIX IN LAMP COLUMN INDICATES NUMBER OF LAMPS IN FIXTURE (3-F40WW). NO PREFIX INDICATES SINGLE LAMP (150A-A19)
MOUNTING HEIGHTS AND DETAILED INFORMATION ARE INDICATED IN REMARKS COLUMN.
USE THE FOLLOWING MOUNTING ABBREVIATIONS: C=CEILNG R=RECESSED S=SURFACE W=WALL T=TRACK

SYMBOL	TYPE	MANUFACTURER	CATALOG NUMBER	VOLTS	LAMP	MTG		RE
0	D	LITHONIA		120	4100 K (LED)	R	DOWNLI	GHT FIXTURE
●	D1	LITHONIA		120	4100 K (LED)	R	WALL W	ASH FIXTURE
	н	LITHONIA	NARROW BAND VANITY - 24" HIGH	120		W	MOUNT	ONE EACH SI
$\rightarrow \rightarrow \leftarrow \langle$	UC	LITHONIA	UCEL (12IN TO 36IN) 40K 90CRI WH	120	4000 K (LED)	S	UNDERC HARD W	ABINET LED ( IRED TO WAL
占	WS	LITHONIA - GATEWAY	Y VGR5C 40LED 120 DDBT PE LFI	120	LED	S	WALL SC	ONCE
	CF	CASA VIEJA	STYLE 7D657	120	N/A	S	44" INN LED HU	OVATOR BRU GGER CEILIN
	X2	LITHONIA OR DUAL LITE	EXIT SIGN AND EMERGENCY LIGHT COMBO	120	FURNISHED	W/C	LED EXIT	SIGN AND E
<b> </b>	SL	SHOP LITE	4'-0" WITH REFLECTOR		2-BULB	S		
4	X1	LITHONIA	QUANTUM ELM SERIES	120/ 277	FURNISHED	S	SELF-COI TWIN HEA COMPLET 90 MINUT HALOGEN WALL FO	NTAINED NON AD EMERGEN FE WITH AUTO E LEAD CALC N LAMPS. MOU R WIDE COVE
0	L	LITHONIA	4" RECESSED LED CAN LIGHT	120	4000 K LED	R	ON DIMI	MER SWITCH
Ť	GN	BARNLIGHT.COM	BLE-G-WHS-PC	120 4000 K LED S		S	GOOSENECK - VERIFY	
	EE	LITHONIA	AFN-B-EXT	120		S	S WET LOCATION - EM	
ו <del>ע ע ע</del> ד1	T1	JUNO	8' SURFACE TRACK UNIT (4 LIGHTS) T252L-40K-N-BL 120		Ρ	TRACK C	N 24" HIGH P	
FLAG	WSF	SPAULDING	FLAG & POLE FLOOD LT., LED, WET LOCATION LABELED, TEMPERED GLASS LENS, DARK BRONZE FINISH, GLARE SHIELD. YOK / KNUCKLE MOUNT, BEAM-SPREAK NEMA 3X3	UNV 120	LED, 4,692 LUMEN OUTPUT, 30k 80 CRI	CON BASE AIM	CRETE E	LED DRIVER
SIGN	WSS	SPAULDING	SIGNAGE FLOOD LT., LED, WET LOCATION LABELED, TEMPERED GLASS LENS, DARK BRONZE FINISH, GLARE SHIELD. YOK / KNUCKLE MOUNT, BEAM-SPREAK NEMA 6X6	UNV 120	LED, 4,692 LUMEN OUTPUT, 30k 80 CRI	CON BASE AIM	CRETE E	LED DRIVER
WALL	WSW	SPAULDING	BUILDING FLOOD LT., LED, WET LOCATION LABELED, TEMPERED GLASS LENS, DARK BRONZE FINISH, GLARE SHIELD. YOK / KNUCKLE MOUNT, BEAM-SPREAK NEMA 6X6	UNV 120	LED, 9,535 LUMEN OUTPUT, 30k 80 CRI	CON BASE AIM	CRETE E	LED DRIVER
	G	LITHONIA	DESIGN BASED ON LITHONIA LIGHTING EPA	AN 24, 40	L, 40K, 4000 K			
	G2	SAME AS TYPE 'G' EX	(CEPT 2'X2'					
OE	Е	WET LOCATION EXTE	ERIOR LED RECESSED CAN FIXTURE (TO BE DE	TERMINI	ED) 200 CASH ALLC	OWANC	E	
SP	SP	EXTERIOR SPOT LIG	HT ON SWITCH. ECO-STAR 13" WIDE LED SECU	RITY FLC	OOD LIGHT - STYLE	IG655		
$\stackrel{P}{\bigodot}$	Р	SEAGULL LIGHTING -	PAINTED SHADE PENDANT LED-6519 WITH ME	TAL ROD	SUPPORT			
	w	LITHONIA 4'-0", 41-WA	ATT WHITE INTEGRATED LED LOW PROFILE WR	APAROL	IND SURFACE MOUN	NT 4000	Ж	
$\bigcirc$	Ι	RECESSED WET LOC	CATION - SHOWER LIGHT - LED					

	ARCHITECT'S	STAMP	
ACCEPTABLE)	★ 7575	1214 14 14 14 14 14 14 14 14 14	Seg
9).	SIGNATURE RE	OUIRED	$\mathcal{T}$
	SMITH F	)ESIGI	N GROUP INC
EMARKS	206	WEST HAR	ALSON STREET
	LA 706-	GRANGE, G 882-5511 w	EORGIA 30240 /ww.SDGarch.net
ON DIMMER			
DE OF MIRROR			
(2' LONG) (3' LONG) VERIFY W/ CABINETS, L SWITCH			
ISHED NICKEL IG FAN			
MERGENCY LIGHT			
N-ADJUSTABLE ICE LIGHTING UNIT OMATIC CHARGER, CIUM BATTERY & UNT HIGHT ON ERAGE.			
(TYPICAL)			
Y FINISH WITH OWNER			
RGENCY EGRESS LIGHT			
ENDANT SUPPORTS		REVIS	IONS
R AND POWER SUPPLY PER MANUFACTURER :: ARF2-Y/K-42L-30L-070-N-Unv-DB		DESCRIP	TION
R AND POWER SUPPLY PER MANUFACTURER i: ARF2-Y/K-42L-30L-070-W-Unv-DB			
R AND POWER SUPPLY PER MANUFACTURER :: ARF3-Y/K-42L-30L-070-W-Unv-DB			
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	VERNON	ROAL	D FIRE STATION
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![](_page_17_Figure_0.jpeg)

![](_page_17_Figure_1.jpeg)

![](_page_18_Figure_0.jpeg)

![](_page_18_Figure_2.jpeg)

1/2" WATER RESISTANT GYPSUM BOARD CEILING ON 2X6'S @ 16" O.C.

![](_page_18_Picture_4.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_20_Figure_0.jpeg)

![](_page_21_Figure_0.jpeg)

## **FEATURES & SPECIFICATIONS**

INTENDED USE — Ideal one-for-one replacement of conventional HID and fluorescent high bay systems. Applications include warehousing, manufacturing, gymnasiums, and other large indoor spaces with mounting heights  $up to 60 {\rm ``Certainairborne contaminants can diminish the integrity of a crylic and {\rm `orpoly carbonate.}$ <u>Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.</u>  ${f CONSTRUCTION}$  — Lightweight aluminum heat sink designed to perform in ambient temperatures up to 55  $^\circ$ C with lumen droop less than fluorescent due to precision thermal engineering for maximum naturally convective cooling. Structural elements such as the channel and end caps are fabricated from steel for maximum rigidity.

Hard-tooled reflectors, utilizing reflective Alanod® MIRO-5® aluminum, for precise and repeatable photometry. Semi-diffuse lens optional to provide glare control - may be inverted for gloss or matte side down. Wireguard attachment points provided. OPTICS — Narrow and wide distributions available to meet both horizontal and vertical light level requirements. Reflectors feature precision-formed optics utilizing reflective Alanod® MIRO-5® aluminum to achieve

narrow distribution and white polyester powder coat to achieve wide distribution. Semi-diffuse lens optional to provide glare control and LED protection. ELECTRICAL — L95 at 60,000 hours (only 5% loss) with a predicted life of more than 100,000 hours. Utilizes a 90°C case temperature driver for maximum life at high temperatures. 0.90 power factor and 10kA/10kV level

of surge protection is standard. Available as 120-277V or 347-480V input. 0-10V dimming standard for a dimming range of 100% to 10%; dimming source current is 150 microA. WIRELESS NETWORKING — XPoint™ Wireless technology creates a mesh network to ensure communication between fixtures, sensors and wall stations facility-wide. This option provides superior lighting management capabilities including granular control, configuration and custom grouping for increased energy savings.

INSTALLATION — Suitable for suspension by chain, cable, surface-mounting bracket, hook monopoint or single (pendant) monopoint. Surface mounting not recommended without optional surface mounting bracket. To maintain high ambient listing, fixture should be mounted at a minimum plenum height of 24". LISTINGS — CSA certified to US and Canadian safety standards. Damp location listed. Suitable for ambient temperatures from -40°F (-40°C) to 131°F (55°C) when suspended 24" from ceiling. Patent pending. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms and conditions.aspx

### Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

**LITHONIA LIGHTING**<sup>•</sup> **FIXTURE "B"** LED High Bay **BEAM** IBL Unlensed (standard) 12–30L pictured Patent Pending Lensed (optional) 48-60L pictured **DLC** 

## Standard Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

• All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency

• This luminaire is part of an A+ Certified solution for nLight<sup>®</sup> or XPoint<sup>™</sup> Wireless control networks marked by a shaded background\*

To learn more about A+, visit <u>www.acuitybrands.com/aplus</u>.

\*See ordering tree for details

Page 1 of 8

## INDUSTRIAL

### IBL LED High Bay 5 7

## FIXTURE " B"

<b>OPERAT</b>	OPERATIONAL DATA									
Lumen package	Ambient rating (120V - 277V)	Ambient rating (347V / 480V)	Distribution	Delivered lumens 70CRI 5000K	Delivered lumens 80CRI 5000K	Lumen multiplier @ 104°F (40°C) ambient temperature	Lumen multiplier @ 104°F (40°C) ambient w/ SD125 lens kit			
121	-40°F to 131°F	-40°F to 104°F	ND	12,492	10,862	0.97	0.88			
12L	(-40°C to 55°C)	(-40°C to 40°C)	WD	12,968	11,276	0.97	0.88			
151	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F	ND	15,897	13,824	0.97	0.87			
IJL		(-40°C to 40°C)	WD	16,500	14,352	0.97	0.87			
241	-40°F to 131°F (-40°C to 55°C)	-40°F to 131°F	-40°F to 104°F	ND	24,983	21,725	0.97	0.88		
24L		(-40°C to 40°C)	WD	25,938	22,554	0.97	0.88			
201	-40°F to 131°F	-40°F to 104°F	ND	31,798	27,650	0.97	0.87			
SUL	(-40°C to 55°C)	(-40°C to 40°C)	WD	33,012	28,706	0.97	0.87			
401	-40°F to 131°F	-40°F to 104°F	ND	49,975	43,082	0.97	0.88			
40L	(-40°C to 55°C)	(-40°C to 40°C)	WD	51,876	45,110	0.97	0.87			
601	-40°F to 131°F	-40°F to 104°F	ND	63,594	55,300	0.97	0.87			
OUL	(-40°C to 55°C)	(-40°C to 40°C)	WD	66,025	57,413	0.97	0.87			

## **CHARACTERISTICS**

Luman	Wattage				Length	Width	Depth	Weight		
package	120V	277V	347V	480V	V Dimensions are shown in inches (centimeters) unless otherwise noted.	entimeters)	(Lens kit adds approx. 7 lbs.)	Comparable light source		
12L	100	95	98	97	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	12.5 lbs. (5.7 kg)	2-lamp T5H0	
15L	125	122	126	125	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	12.5 lbs. (5.7 kg)	4-lamp T8, 250W HID	
24L	197	192	198	197	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	17.5 lbs. (7.9 kg)	4-lamp T5H0, 6-lamp T8, 400W HID	
30L	245	241	248	246	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	17.5 lbs. (7.9 kg)	6-lamp T5H0, 8-lamp T8	
48L	394	388	400	396	45 (114.3)	31-1/3 (79.5)	3-1/4 (8.3)	35 lbs. (15.9 kg)	8-lamp T5H0, 750 HID	
60L	489	471	485	480	45 (114.3)	31-1/3 (79.5)	3-1/4 (8.3)	35 lbs. (15.9 kg)	10-lamp T5H0,1000W HID	

## **PROJECTED LUMEN MAINTENANCE**

Operating hours	0	10,000	20,000	25,000	35,000	50,000	60,000	75,000	100,000
Lumen maintenance factor	1	0.98	0.98	0.97	0.96	0.96	0.95	0.94	0.93

## LUMENS VS. AMBIENT TEMPERATURE

Ambient °C	Ambient °F	Lumen multiplier
0	32	1.02
5	41	1.015
10	50	1.01
15	59	1.008
20	68	1.005
25	77	1
30	86	0.995
35	95	0.985
40	104	0.98
45	113	0.97
50	122	0.965
55	131	0.96

### PHOTOMETRICS See <u>www.lithonia.com</u>.

INDUSTRIAL

## **IBL** LED High Bay

## FIXTURE "B"

## A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.								ample: IBL 15L WD LP740		
IBL										
Series	Lumens		Distribut	ion I	Lens		Voltage		Color tempe	erature
IBL	12L         12,000 lui           15L         15,000 lui           24L         24,000 lui           30L         30,000 lui           48L         48,000 lui           60L         60,000 lui	mens mens mens <sup>1</sup> mens <sup>1</sup> mens <sup>1</sup>	WD N ND M	Vide Iarrow	(blank) SD125	No shielding Semi-diffuse acrylic	(blank) HVOLT 120 277	MVOLT; 120-277V 347V-480V 120V 277V	LP735 LP740 LP750 LP835 LP840 LP850	70 CRI, 3500K CCT 70 CRI, 4000K CCT 70 CRI, 5000K CCT 80 CRI, 3500K CCT 80CRI, 4000K CCT 80 CRI, 5000K CCT
Options	1									Finish
GLR Ini fu OUTCTR W pu ba fix OCS RE S' IMP Ini lan RRL RE lui pa ini lan I2412 IO LE fo (0' WGX St gu	nternal fast-blow use <sup>2,3</sup> Viring leads ulled through ack center of xture (ELOC® OnePass® 'installed <sup>2</sup> ntegrated modu- ar plug <sup>4,5</sup> (ELOC®-ready uminaire. See age 5 for order- ng information <sup>6</sup> OTA emergency ED battery pack or 32°F to 104°F 0°C to 40°C) mbient <sup>2,7</sup> tandard wire uard, installed <sup>8</sup>	Cord sets: <sup>9</sup> CS1W         Str           12C         Str           CS3W         Tw           12C         STW           CS7W         Str           CS1W         Tw           277         Str           CS1W         Tw           347         Str           CS97W         Tw           488         CS93W           600         cor           cor         cor           cor         cor	aight plug, IV <sup>10</sup> aight plug, IV <sup>10</sup> ist-lock, IV <sup>10</sup> ist-lock	Controls: LCOZU LCHOSZU LAOZU LAOZU LAPZU MSE360 MSE360LB MSI6XADL DS LAMOSZU LCMOSZU ICMOSZU NPP16D nMSI nMSI360 nMSID nMSI360D XPW	5CXADL	Aisle motion sensor, pre-wired <sup>2,1</sup> Aisle motion sensor, pre-wired <sup>2,1</sup> Aisle motion sensor with photoco 360° motion sensor, pre-wired <sup>2,1</sup> 360° motion sensor, pre-wired; p 360° motion sensor, embedded, 360° motion sensor, embedded, 360° Xpoint wireless motion sen 360 motion sensor, dimming an Aisle motion sensor, dimming an nLight <sup>®</sup> , aisle motion sensor, pre nLight <sup>®</sup> , aisle motion sensor, pre nLight <sup>®</sup> , aisle motion sensor w/d nLight <sup>®</sup> , aisle motion sensor w/d NLight <sup>®</sup> , 360° motion sensor w/d	1,12 rogramma ell; pre wire ll; pre wire ell, pre-wire high bay 2,12,1 low bay 2,12,1 low bay 2,12,1 low bay 2,12,1 low bay 2,12,14 sor with phi switching d switching lule 2,12,14 -wired 2,12,14 -wired 2,12,14 -wired 2,12,14 -wired 2,12,14 -wired 2,12,14	ble dimming <sup>2,11,12</sup> d <sup>2,11,12</sup> ble dimming <sup>2,11,12</sup> ed <sup>2,11,12</sup> td <sup>2,11,12</sup> td <sup>2,11,12</sup> s otocell <sup>2,11,12</sup> photocell, pre-wired (T24 comp photocell, pre-wired (T24 comp photocell, pre-wired (T24 comp e-wired <sup>2,12,17</sup> e-wired <sup>2,12,17</sup>	liant) <sup>2,11,12</sup> pliant) <sup>2,11,12</sup>	(blank) Gloss white with textured dark gray accents DWH Gloss white

Accessories: C	Accessories: Order as separate catalog number.										
Mounting: IBAC120 M20 IBAC240 M20 IBHMP ZACVH IBLPMP IBLPMPHB IBLPMPHB48 IBLPMPHB48 HC36 THUN	Aircraft cable 10' with hook (one pair) Aircraft cable 20' with hook (one pair) Hook monopoint Aircraft 10' V hanger (one pair) <sup>20</sup> Pendant monopoint splice box, includes side covers for use with 12-30L Pendant monopoint splice box, includes side covers (3/4" hub)for use with 12-30L Pendant monopoint splice box, includes side covers for use with 48L and 60L Pendant monopoint splice box, includes side covers (3/4" hub) for use with 48L and 60L Pendant monopoint splice box, includes side covers (3/4" hub) for use with 48L and 60L Pendant monopoint splice box, includes side covers (3/4" hub) for use with 48L and 60L Hanger chain, 36" (one pair) <sup>20</sup>	Cord sets and CS1WIMP CS3WIMP CS7WIMP CS11WIMP CS25WIMP CS93WIMP CS93WIMP MSIIMP MSIIMP	d sensors for IMP option: Straight plug, 120V <sup>8,9,22</sup> Twist-lock, 120V <sup>8,9,22</sup> Straight plug, 277V <sup>8,9,22</sup> Twist-lock, 277V <sup>8,9,22</sup> Twist-lock 347V <sup>8,9,22</sup> 600V S0 white cord, no plug (no voltage required) <sup>8,22</sup> Twist-lock 480V <sup>8,9,22</sup> Aisle sensor <sup>5,22</sup> 360° sensor <sup>5,22</sup>	Field-installable DLIBL SD125 DLIBL48 SD125 <u>Wire guards:</u> WGIBL WGIBL48	e door and lens assemblies: Semi-diffuse acrylic lens for use 12-30L Semi-diffuse acrylic lens for use with 48L and 60L Wire guard for use with 12-30L <sup>8</sup> Wire guard for use with 48L and 60L <sup>8</sup>						

INDUSTRIAL

SINGLE RELAY

Page 2 of 8

See footnotes on next page.

## FIXTURE "B"

## LSXR - Fixture Mount Sensor (see <u>www.sensorswitch.com</u> for additional information)

 Four interchangeable lenses. Integrated mounting bracket drops lens down 3" from chase nipple.

• Single or dual relay versions — designed with robust protection from the harsh switching requirements of T5 and LED loads.

 Photocell and 0-10VDC dimming options. No PIR field calibration or sensitivity adjustments required.

IBL LED High Bay

LSXR configuration	Comparable CMRB sensor	Old style sensor nomenclature					
For shortest lead times use one of the following LSXR configurations							
LCOZU	CMRB 50	MSI					
LCHOSZU	CMRB 50 D	MSID					
LCPZU	CMRB 50 P	MSIPED					
LAOZU	CMRB 6	MSI360					
LAHOSZU	CMRB 6 D	MSI360D					
LAPZU	CMRB 6 P	MSI360PED					

![](_page_22_Picture_43.jpeg)

## **SELECTIONS BELOW WILL EXTEND ORDER LEAD TIME.** CONSULT YOUR SALES REPRESENTATIVE FOR DETAILS.

ORDERING INFORMATI	DRDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.									
Series	Lens option	Dimming/Photocell	Max. dim Level	Min. dim level	Temp/Humidity	Default time delay				
L LSXR passive infrared indoor occupancy sensor	<ul> <li>A High mount, 360°</li> <li>B Low mount, 360°</li> <li>C High mount aisleway</li> </ul>	<ul> <li>None<sup>1</sup></li> <li>High/low occupancy operation</li> <li>Switching photocell(on/off)</li> <li>Dimming and switching photocell</li> <li>Dimming and switching photocell with high/low occupancy operation</li> </ul>	0 10 VDC 9 9 VDC 8 8 VDC 7 7 VDC	<ul> <li>S Minimum dimming level of ballast</li> <li>1 VDC</li> <li>2 VDC</li> <li>3 VDC</li> <li>4 4 VDC</li> <li>5 5 VDC</li> <li>6 6 VDC</li> </ul>	Z None T Low temperature	I       30 seconds         D       2.5 minutes         X       5 minutes         R       7.5 minutes         U       10 minutes (with minimum 15 minutes on time)         V       15 minutes         W       20 minutes         Y       30 minutes				

### DUAL RELAY (Available with 120, 277, and 347V only)

ORDERING INFORMATION         Lead times will vary depending on options selected. Consult with your sales representative.         Example: LA2KZU									
Series Lens option Poles Operating mode Temp/Humidity Default time delay									
L LSXR passive infrared indoor occupancy sensor	A High mount, 360° B Low mount, 360° C High mount aisleway	2 Dual relay	<ul> <li>J None</li> <li>K Alternating off relays (promotes even lamp wear)</li> <li>O Alternating off relays w/photocell</li> <li>P Switching photocell(on/off)</li> <li>E Photocell on/off (pole 1 only)</li> <li>F Photocell on/off - both poles (dual set-point)</li> </ul>	Z None T Low temperature	I       30 seconds         D       2.5 minutes         X       5 minutes         R       7.5 minutes         U       10 minutes (with minimum 15 minutes on time)         V       15 minutes         W       20 minutes         Y       30 minutes				

## IBL LED High Bay

- Notes
  1 Fixtures more than 24" wide can interfere with the operation of some fire sprinkler systems. Verify specific installation requirements with local fire official and insurance carrier. Emergency battery packs are not available with 48L or 60L. Specify voltage. Not available with 34T voltage. Must be factory-installed.
- Must be factory "instance.
   Must have "IMP" power cord to power fixture.
   Requires Reloc RRL compatible cable to power fixture.
   Must specify voltage. 120V or 277V only. Not available with cordset w/plug or OUTCTR option. Not available with 48. or 60L lumen packages.
   Choice Lument in the specific packages.
- SD125 lens option recommended when wire guard is used.
  All cord sets are 18/3, 6', white.
- 9 All cord sets are 18/3, 6', white.
  10 Cord sets are voltage specific. Specify voltage. Other configurations available. Consult factory.
  11 Other configurations available, see page four for additional options.
  12 Sensors are rated for 14°F(-10°C) to 122°F(50°C) operation.
  13 Not available with battery pack. Not field installable.
  14 Available 120 or 277V only. Not for use with THUN.
  15 nMSI option utilizes a nPP16 and a nCMB 50, CATSe cable also included. Available 120 or 277V only.
  16 nMSI 300 ontion utilizes a nP16 and a nCMB 50, CATSe cable also included. Available 120 or 277V only.

- MNSIS60 option utilizes a nPP16 and a nCMB 6, CATSe cable also included. Available 120 or 277V only.
   nMSID option utilizes a nPP16D and a nCMB 50, CATSe cable also included. Available 120 or 277V only. MMSI360D option utilizes a nPP16D and a nCMB 6, CAT5e cable also included. Available 120 or 277V only.
   XPW option utilizes XPA CMRB0.
- 20 Not for use with 48L or 60L.
   21 95°F (35°C) maximum ambient temperature when using the THUN. Not for use with NPP16D.
   22 Must have IMP option on fixture.

![](_page_22_Picture_58.jpeg)

## IBL LED High Bay

### LSXR COVERAGE PATTERNS

### HIGH MOUNT 360° LENS (#6)

![](_page_22_Picture_62.jpeg)

Best choice for 15 to 45 ft (4.57 to 13.72 m)

best childe for 15 to 45 ft (4.57 to 15.72 ft)) mounting heights
15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
Excellent detection of large motion (e.g. walking) up to a 35 ft (10.76 m) mounting height
Excellent detection of extra large motion (e.g. forklift) up to a 25 ft (12.72 m) mounting height forklifts) up to a 45 ft (13.72 m) mounting 15 4.6 height

## HIGH MOUNT AISLEWAY LENS (#50)

![](_page_22_Picture_66.jpeg)

 Provides a bi-directional coverage pattern ideal for warehouse racking 1.2x mounting height equals approximate detection range in either direction Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction Superior aisleway coverage compared to a masked 360° lens

### LOW MOUNT 360° LENS (#10)

![](_page_22_Picture_70.jpeg)

walking) • 360° conical shaped pattern • Provides ~24 ft (7.32 m) radial coverage 0 ft 0 m  $(\sim 2000 \text{ ft}^2)$  when mounted at 9 ft (2.74 m) 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial

coverage Detection range improves when walking across beams compared to into beams

![](_page_22_Picture_73.jpeg)

Lens type

Package quantity <u>Series</u> 6 High mount 360° U Unit 10 Low mount 360° J10 10-pack 50 High mount aisleway J100 100-pack

Example: LENS 50 J100

INDUSTRIAL

1 Dimming level fields not required when this option is chosen. IBL

Page 5 of 8

Notes

INDUSTRIAL

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<complex-block><complex-block></complex-block></complex-block>		
	REVIS	PTION
SIDE VIEW 0, 0 m 0 3 0 9.1 10 122 15.2 7.6 0 m 7.6 15.2 50 25 0 ft 25 50	PROJECT: VERNON ROAI VERNO LAGRANGI	D FIRE STATION IN ROAD E GEORGIA
SIDE VIEW       TOP VIEW         9       2.7         8.5       6.4       4.3       2.1       0.m       2.1       4.3       6.4       8.5         28       21       14       7       0.t       7       14       2.1       2.8	TITLE: LIGHTING CUT-S	FIXTURE HEETS
IBL Page 6 of 8	MODIFIED DATE: ISSUED DATE: FOR BID AND PERMIT 07 MAY 2018	JOB NO: 1731 SHEET: <b>E-10</b>

![](_page_23_Picture_0.jpeg)

## IBL LED High Bay

## **OPTIONS AND ACCESSORIES**

## The I-BEAM LED fixture offers numerous options for almost every electrical and optical component, including a long list of field-installable accessories.

![](_page_23_Picture_4.jpeg)

REFLECTORS Wide distribution is formed with 93% reflective white paint. Narrow distribution is formed with Alanod<sup>®</sup> MIRO<sup>®</sup>.

WIRE GUARD (external)

Factory-installed option

Field-installed options:

Factory-installed option:

URFACE MOUNT BRACKET

Rigidly attach I-BEAM LED to a hard ceiling.

THUN (not for use in ambient temperatures xceeding 95°F (35°C), or on the 40L or 60L)

Available in several lengths with or without

molded plug. White is standard.

information on page 1

For available options, see ordering

Can be placed anywhere along fixture.

MSE360

MSE360LB

rder as:

CORD SETS

included.

WGX

WGIBL

WGIBL48

Field- or factory-installed. Protects light

engine from impact. Mounting hardware

BEDDED OCCUPANCY SENSOR

actory installed Sensor Switch® SFR30

(MSE360) or SFR7 (MSE360LB) placed in

the channel cover which reduces the risk of

sensor damage compared to non-embedded

sensors. Recommended mounting height for

MSE360 is over 15' and MSE360LB under 15'.

![](_page_23_Picture_6.jpeg)

FIXTURE "B"

INTEGRATED ELECTRICAL OPTIONS

protector, fusing and embedded sensors.

Channel sized to accept emergency components, surge

Field- or factory-installed. Available in semi-diffuse

acrylic. Mounting hardware included.

Factory-installed option:

Field-installed option

DLIBL SD125

DLIBL48 SD125

![](_page_23_Picture_7.jpeg)

![](_page_23_Picture_8.jpeg)

![](_page_23_Picture_9.jpeg)

## **IBLPMPHB** IBLPMP48 IBLPMPHB48

ixture to offset weight variance from end to end.

Several lengths of aircraft cables and chains available: with or without V-hooks. BAC120 M20 For others, see accessories on page 1

INTEGRATED MODULAR PLUG (IMP)

Must be factory-installed and allows for field installation of various modular accessories including cordsets, motion sensors, photocells and LC&D X-point<sup>™</sup> relays. Fixture must be ordered with IMP option. Requires IMP power cord to operate fixtures.

## 🖊 🖊 LITHONIA LIGHTING

INDUSTRIAL: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4963 Fax: 770-929-8789 www.lithonia.com © 2012-2017 Acuity Brands Lighting, Inc. All rights reserved. Rev. 07/03/17

### Fixture "D"-**WF6** 6" LED Wafer Module exterior can PHOTOMETRICS recessed Illuminance Data at 30″ Above Floor for Output Data Coefficient of Utilization Distribution Curve Distribution Data a Single Luminaire WF6 LED 35K, 3500K LEDs, input watts: 13.4, delivered lumens: 1158, LM/W=86, test no. ISF 35161 pf 20%

		рс	80%	70%	50%			
Ave Lumens	Zone Lumens % Lamp	pw	50% 30% 10%	50% 30% 10%	50% 30% 10%			
80° 0 456	0° - 30° 348.8 30.1	0	119 119 119	116 116 116	111 111 111		50% beam -	10% beam -
5 455 43	0° - 40° 560.0 48.3	1	104 100 96	102 98 95	98 95 92		62.2°	105.9°
HT X 15 436 123	0° - 60° 939.4 81.1	2	91 85 79	90 84 78	86 81 77	Inital FC		
	0° - 90° 1158.6 100.0	3	81 73 66	79 72 66	76 70 65	Mounting Center		
	90° - 120° 0.1 0.0	4	72 63 57	71 63 56	68 61 56	Height Beam	Diameter FC	Diameter FC
45 267 206	90° - 130° 0.1 0.0	5	64 56 49	63 55 49	61 54 48	8.0 15.1	6.6 7.5	14.6 1.5
	90° - 150° 0.1 0.0	õ	58 49 43	57 49 43	55 48 43	10.0 8.1	9.0 4.1	19.9 0.8
	90° - 180° 0.1 0.0	7	53 44 38	52 44 38	51 43 38	12.0 5.1	11.5 2.5	25.2 0.5
	0° - 180° 1158 7 *100 0	â	49 40 34	48 40 34	46 20 24	14.0 3.4	13.9 1.7	30.5 0.3
	*Efficiency	0	45 96 91	40 40 34	40 33 34	16.0 2.5	16.3 1.3	35.8 0.3
	Enclency	10	40 00 00	44 30 31	43 30 31	1010 210	1010 110	0010 010
40° 90 0		10	41 33 28	41 33 28	40 33 28			
400 10								
0° 20°								

WF6 LED 40K, 4000 K LEDs, input watts: 13.6, delivered lumens: 1200, LM/W=88.2, test no. ISF 30376

![](_page_23_Figure_19.jpeg)

🖊 LITHONIA LIGHTING

DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com © 2016-2018 Acuity Brands Lighting, Inc. All rights reserved. Rev. 01/10/18

LITHONIA LIGHTING®

### FEATURES & SPECIFICATIONS

INTENDED USE — The 6" Wafer-Thin LED recessed downlight with remote driver box combines high quality light output and efficiency while eliminating the pot light housing for competitive affordability. This innovative wafer-slim Type IC design allows easy installation for new construction or remodel from below the ceiling without the requirement of a pot light housing. The LED module maintains at least 70% light output for 36,000 hours. These LED Wafer downlights are intended for closets, attics, hallways, bathrooms, kitchens, basements, soffits, entry ways, porches, garages, stairwells, corridors, nursing/retirement homes, condos, elevators, apartments, and any other small areas.

CONSTRUCTION — Ideal for shallow ceiling plenum since a pot light housing is NOT required. IC rated driver and fixture - approved for direct contact with insulation. Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. Round fixture with integral edge-lit LED's. Steel spring clip for easy installation. Plenum rated cable connector to connect from module to remote driver box. Isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for pryout. Suitable for pulling wires with the 12 cubic-inch wiring compartment to accommodate up to (8) 14 gauge insulated conductors, or (6) 12 gauge insulated conductors; making the Wafer LED Downlights much easier to wire in 2in/2out (plus ground) daisy-chain applications and contractor friendly.

## PATENT PENDING.

**INSTALLATION** — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 6" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 6 1/4 inches for this product. Suitable for installation in t-grid and drop ceiling applications. 2" plenum space required for installation of the remote driver box. **OPTICS** — Wafer-Thin downlight edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space. Utilized 2700K, 3000K, 3500K, 4000K, and 5000K color temperature LEDs.

ELECTRICAL — Connect directly to 120V power supply via provided UL recognized driver. High efficient driver with power factor > 0.9. Ambient operating temperature:  $-40^{\circ}F(-40^{\circ}C)$  to  $+104^{\circ}F(+40^{\circ}C)$ . Dimming down to 10% (See page 2 for recommended dimmers). Standard input wattage is 13W, 79 lumens per watt. Replaces 75W incandescent for 865 lumens and 100W incandescent for 1020 lumens.

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® certified product. Wet location. Air Tight certified in accordance with ASTM E283-2004. NOM Certified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms and conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

DOWNLIGHTING

### **WF6** 6" LED Wafer Module

## PHOTOMETRICS Distribution Curve Distribution Data Output Data WF6 LL LED 30K, 3000 K LEDs, input watts: 12.6, delivered lumens: 865, LM/W=68.7, test Ave Lumens 0 322 31 5 322 31 15 311 88 25 285 131 35 248 155 45 199 154 55 148 132 65 99 98 75 54 58 85 17 19 90 1 1 WF6 LL LED 35K, 3500K LEDs, input watts: 12, delivered lumens: 959, LM/W=80, test no. I Ave Lumens Zone Lumens % Lamp pc 0 367 0° - 30° 283.4 29.6 0 11 5 367 35 0° - 40° 457.4 47.7 1 10 15 353 100 0° - 60° 772.5 80.6 2 9 25 324 149 0° - 120° 0.1 0.0 3 8' 35 279 174 90° - 120° 0.1 0.0 5 6 55 162 144 90° - 150° 0.1 0.0 6 5 65 106 105 90° - 180° 959.0 \*100.0 8 4 85 17 19 \*Efficiency 9 4 9 9 4 WF6 LL LED 40K, 4000 K LEDs, input watts: 12.9, delivered lumens: 944, LM/W=73.2, test in

![](_page_23_Figure_36.jpeg)

🖊 LITHONIA LIGHTING

WF6

DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129

![](_page_23_Picture_39.jpeg)

![](_page_23_Picture_40.jpeg)

Catalog NumberFixture "D"-Notesexterior canTyperecessed	ARCHITE	T'S STAMP	Seg
Wafer LED Recessed Downlight WF6 6" LED Module IC/Non-IC New Construction/Remodel	SMIT	LAGRANGE, G 706-882-5511	N GROUP, INC. ALSON STREET GEORGIA 30240 www.SDGarch.net
Image: A constrained of the second of the			
SpecificationsAperture:4.9 (12.4)Ceiling opening:6 (15.2)Overlap trim:6.7 (17)Height:1.1 (2.8)Image: triangle of the system o			
WF6			
Fixture "D"- exterior can recessed			
a Single Luminaire			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	DATE	DESCRIF	PTION
 SE 25160			
80%       70%       50%         80%       70%       50%         90%30%       10%       50%30%         19       19       116       116       116         19       19       116       116       116       111         04       100       96       102       98       95       92       63.0°       106.5°         10       98       95       98       95       92       63.0°       106.5°         91       85       79       88       83       76       Inital FC         80       72       66       79       71       65       76       70       64         Height       Beam       Diameter       FC       Diameter       FC       54         84       55       48       61       54       84       12.1       6.7       6.1       14.7       1.2         58       49       43       57       49       34       55       48       42       10.0       6.5       9.2       3.3       20.1       0.7         54       40       34       39       34       14.0       2.8       14.1       1.4			
+1 33 20 40 33 20 39 32 20			
no. ISF 32780		UN KUAL VERNC	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	TITLE:	LAGRANG	E GEORGIA
40 32 27 40 32 27 39 32 27			
ISF 35159           20%           80%         70%         50%           00% 30% 10%         50% 30% 10%           109         119         116         116         111         111         111         50% beam -         10% beam -           104         100         96         102         98         94         91         62.6°         106.8°           101         116         116         111         111         111         62.6°         106.8°           11         84         79         89         83         78         86         80         76         Inital FC           80         72         66         79         71         65         76         69         64         Mounting Center         FC         Diameter         FC           71         63         54         48         61         53         48         8.0         12.2         6.7         61         14.8         1.2           58         49         42         57         48         42         55         47         42         10.0         6.6         9.1         3.3		GHTING CUT-S	FIXTURE HEETS
48 39 34 47 39 33 46 38 33 14.0 2.8 14.0 1.4 31.0 0.3 44 36 30 43 36 30 42 35 30 16.0 2.0 16.4 1.0 36.3 0.2 41 33 28 40 33 27 39 32 27	MODIFIED D	ATE:	
WF6 www.lithonia.com © 2016-2018 Acuity Brands Lighting, Inc. All rights reserved. Rev. 01/10/18	ISSUED DAT FOR BID AND	E: ) PERMIT	1/31 Sheet:
	07 MA	Y 2018	E-11

## WF6 6" LED Wafer Module

## **ENERGY DATA & DIMMING CAPABILITY**

6" ENERGY DATA									
Color Temperature	2700K	3000K	3500K	4000K	5000K				
Lumens	1000	1020	1100	1200	1210				
CRI	80	80	80	80	80				
Lumens/Watt	72.5	78.5	82	88.2	84				
Min. starting temperature	-40°C (-40°F)								
EMI/RFI	FCC Title 47 CFR, Part 15, Class B								
Sound rating	Class A Standards								
Input voltage	120V	120V	120V	120V	120V				
Min. power factor	.99	.99	.99	.99	.99				
Input frequency	50/60 Hz								
Rated wattage	13.8W	13W	13.4W	13.6W	14.4W				
Input power	13.8W	13W	13.4W	13.6W	14.4W				
Input current	0.12A	0.11A	0.12A	0.11A	0.12A				
6" LOW LUMEN ENERGY DATA									

Color Temperature	2700K	3000K	3500K	4000K	5000K
Lumens	780	800	840	850	900
CRI	80	80	80	80	80
Lumens/Watt	61.3	63.5	70	65.9	75
Min. starting temperature	-40°C (-40°F)				
EMI/RFI	FCC Title 47 CFR, Part 15, Class B				
Sound rating	Class A Standards				
Input voltage	120V	120V	120V	120V	120V
Min. power factor	0.99	0.99	.99	0.99	0.99
Input frequency	50/60 Hz				
Rated wattage	12.7W	12.6W	12W	12.9W	12W
Input power	12.7W	12.6W	12W	12.9W	12W
Input current	0.11A	0.11A	0.10A	0.11A	0.10A

COMPATIBLE DIMMERS							
Leviton	Lutron	Sensorswitch	Synergy/Leviton				
6633-PA	DV-603P-LA	nSP5 PCD 2W	ISD 600 I 120/IPI06				
IPL06-LED/INC mode	CT-603PR-WH	nSP5 PCD ELV 120	ISD 400 ELV 120/IPE04				
6615-P	DVELV-300P						
	NTELV-300P						
	NLV600						
	300P-SELV						
	DV-600P						
	Caseta PD-6WCL*						
*Requires Lutron Smart Bridg	e L-BDG2-WH (sold separately)		· · · · · · · · · · · · · · · · · · ·				

### 🖊 LITHONIA LIGHTING

Reflector: WPLS16 - 16" Metro Wall Mounted

Application: A contemporary fixture design which

Commercial, Retail & Restaurant. Indoor/Outdoor Use. Side

Max Wattage: 150W, Colored glass will reduce maximum

Coating: Finished in thermally cured high quality polyester

LampType - LVE01-1800LM-35K - 1800 Lumens, 35K

Certification: Manufactured and built to UL standard

BCW6 - SC Gooseneck Ballast Box, CFL, LED

powder coat paint. Reflector is available in a variety of

accentuates modern architectural schemes. For

Material: Reflector is precision spun aluminum.

Dimensions: Diameter: 16" Height: 11¼"

Manufactured: Made in USA

different color options.

Color: GXX - Color TBD

Color: GXX-Color TBD

WPLS16

mounted arm.

wattage.

NO 8750

DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com © 2016-2018 Acuity Brands Lighting, Inc. All rights reserved. Rev. 01/10/18

WF6

![](_page_24_Picture_8.jpeg)

![](_page_24_Picture_9.jpeg)

![](_page_24_Picture_10.jpeg)

![](_page_24_Picture_11.jpeg)

Color: -E41COP - 41 Opal 41 Opal

Bock

-

Product Code: WPLS16-GXX / LVE01-1800LM-35K / BCW6-GXX / GN14I-GXX / E41COP

0K.

2476 Edison Blvd. Twinsburg, OH 44087 P: (216) 912-7050 F: (216) 912-7051 w: http://www.BockLighting.com

![](_page_24_Picture_16.jpeg)

WF6 6" LED Wafer Module	E E E E E E E E E E E E E E E E E E E	ixture "D"- xterior can	WF6 6" LED Wafer Module		
LIGHTING FACTS		recessed			
Lithonia Lighting	LITHONIA LIGHTING	Lithonia Lighting	Litter		
Light Output (Lumens) 1000 Watts 13.8 Lumens per Watt (Efficacy) 72.46	Light Output (Lumens) 1020 Watts 13 Lumens per Watt (Efficacy) 78.46	Light Output (Lumens) 1100 Watts 13.4 Lumens per Watt (Efficacy) 82.09	Light Output (Lumens) Watts 1 Lumens per Watt (Efficacy) 6		
Color Accuracy Color Rendering Index (CRI) 80	Color Accuracy Color Rendering Index (CRI) 80	Color Accuracy Color Rendering Index (CRI) 80	Color Accuracy Color Rendering Index (CRI)		
Light Color Correlated Color Temperature (CCT) 2700 (Warm White) Warm White Bright White Daylight 700K 3000K 4500K 6500K	Light Color Correlated Color Temperature (CCT)         3000 (Bright White)           Warm White         Bright White         Daylight           2700K         3000K         4500K         6500K	Light Color Correlated Color Temperature (CCT)     3500 (Bright White)       Warm White     Bright White       2700K     3000K	Light Color         2700 (Warm Wh           Correlated Color Temperature (CCT)         2700 (Warm Wh           Warm White         Bright White         Daylight           2700K         3000K         4500K		
If results are according to IESNA LM-79-2008: Approved Method for the Electrical and Andonestric Testing of Solid-State Lighting The U.S. Department of Energy (DOE) verifies product test data and results.	All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.	All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Saluf-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.	All results are according to IESNA LM-79-2008: Approved Method for the Electric Pholometric Testing of Solid-State Lighting. The U.S. Department of Energy (DC product test data and results.		
sit www.lightingfacts.com for the Label Reference Guide.	Visit www.lightingfacts.com for the Label Reference Guide.	Visit www.lightingfacts.com for the Label Reference Guide.	Visit www.lightingfacts.com for the Label Reference G		
legistralian Number: NJSM-QRE1B3 (6/20/2017) lodell Number: VVF6 LED 27K ype: Luminaire - Downlight	Registration Number: NJSM-DA1SC6 (3/15/2016) Model Number: WP6 LED 30K Type: Luminaire - Downight	Registration Number: NJSM-ZZFOTV (6/28/2017) Model Number: WF6 LED 35K Type: Luminaire - Downlight	Registration Number: NJSM-QBTASU (1/5/2017) Modell Number: WP6 LLLED 27K Type: Luminaire - Downlight		
LITHONIA LIGHTING AProgram of the U.S. DOE Light Output (Lumens) Watts Lumens per Watt (Efficacy) 88.24	Light Output (Lumens) Watts Lumens per Watt (Efficacy)		Litter Litter Light Output (Lumens) Watts Lumens per Watt (Efficacy) Color Accuracy		
Color Rendering Index (CRI)     80       Light Color Correlated Color Temperature (CCT)     4000 (Bright White)       Warm White     Bright White     Daylight       2700K     3000K     4500K     6500K	Color Accuracy Color Rendering Index (CRI)     80       Light Color Correlated Color Temperature (CCT)     5000 (Daylight)       Warm White     Bright White     Daylight       2700K     3000K     4500K     6500K		Color Rendering Index (CRI)  Light Color Correlated Color Temperature (CCT)  Warm White Bright White Daylight 2700K 3000K 4500K All results are according to ISSNA LM-79-2008. Approved Method for the Electeds		
All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Floatametric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.	All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) ventiles product test data and results.		Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DC product test data and results.		
Visit www.lightingfacts.com for the <i>Label Reference Guide.</i> Registration Number: NJSM-WQ6E6W (3/15/2016) Model Number: WF6 LED 40K	Visit www.lightingfacts.com for the Label Reference Guide. Registration Number: NJSM-C14WHV (6/20/2017) Model Number: WF6 LED 50K		Visit www.lightingfacts.com for the Label Reference Gu Registration Number: NJSM-PKWQC4 (12/1/2016) Model Number: WP6 LLLED 40K Type: Luminaire - Downlight		

![](_page_24_Picture_18.jpeg)

LISTINGS — CSA certified to meet US and Canadian standards. DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. Damp location listed. IC rated. IP5X rated.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms\_and\_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

in js. on ng m		1' x 4', 2' x 2'and 2' x 4
LC 1p		DI CONTRACTORIO
	[2.19 in] 55.50 mm	2.19 in [55.50 mm]

------23.70 in [602.00 mm]-------

ORDERING INFORMATION										
Catalog Number	UPC	Description	Lumens	Color Temperature	CRI	Voltage	Wattage	Efficacy	Pallet Qty.	Standard Carton Qty
EPANL 14 40L 35K <sup>1</sup>	190887602739	1x4 Flat Panel	3905	3500K	>80	120-277V	38.6W	101	39	1
EPANL 14 40LHE 35K <sup>1</sup>	190887602746	1x4 Flat Panel	3922	3500K	>80	120-277V	30.6W	128	39	1
EPANL 14 40L 40K	190887602753	1x4 Flat Panel	4397	4000K	>80	120-277V	38.5W	114	39	1
EPANL 14 40LHE 40K <sup>1</sup>	190887602760	1x4 Flat Panel	3857	4000K	>80	120-277V	30.2W	128	39	1
EPANL 22 34L 35K1	190887602647	2x2 Flat Panel	3285	3500K	>80	120-277V	31.3W	105	26	1
EPANL 22 34LHE 35K <sup>1</sup>	190887602661	2x2 Flat Panel	3357	3500K	>80	120-277V	26.0W	129	26	1
EPANL 22 34L 40K	190887602678	2x2 Flat Panel	3479	4000K	>80	120-277V	30.8W	113	26	1
EPANL 22 34LHE 40K <sup>1</sup>	190887602685	2x2 Flat Panel	3361	4000K	>80	120-277V	25.9W	130	26	1
EPANL 24 40L 35K1	190887602692	2x4 Flat Panel	4039	3500K	>80	120-277V	38.8W	104	13	1
EPANL 24 40LHE 35K <sup>1</sup>	190887602708	2x4 Flat Panel	3953	3500K	>80	120-277V	30.3W	130	13	1
EPANL 24 40L 40K	190887602715	2x4 Flat Panel	4351	4000K	>80	120-277V	38.9W	112	13	1
EPANL 24 40LHE 40K <sup>1</sup>	190887602722	2x4 Flat Panel	4013	4000K	>80	120-277V	30.7W	131	13	1

## ACCESSORIES

Accessories: Order as separate catalog number.						
DGA14	Drywall grid adapter for 1x4 recessed fixture.					
DGA22	Drywall grid adapter for 2x2 recessed fixture.					
DGA24	Drywall grid adapter for 2x4 recessed fixture.					

Notes: 1 Extended lead-time. EPANL 14 40L 40K, 4397 delivered lumens, tested in accordance to IESNA LM-79. Coefficients of Utilization 20% 70% pc 80% CP Summary 50% X 40° **\_\_\_** 0° **\_\_\_\_** 90° EPANL 22 34L 40K, 3479 delivered lumens, tested in accordance to IESNA LM-79. Coefficients of Utilization pf 20% pc 80% 70% 50% CP Summary **\_\_\_** 0° **\_\_\_\_** 90° EPANL 24 40L 40K, 4351 delivered lumens, tested in accordance to IESNA LM-79. Coefficients of Utilization pf 20% pc 80% 70% 50%

EPANL

🖊 LITHONIA LIGHTING°

LED: One Lithonia Way Conyers, GA 30012

**\_\_\_** 0° **\_\_\_\_** 90°

<u>\</u>

Phone: 800-858-7763 www.acuitybrands.com

LED

Fixture "D"- exterior can		ARCHITECT'S STAMP		
Indhting facts	Lithonia Lighting	* 7575 *	Seg	
Ingregement like US. DOE         Ingregement like US. DOE         Light Output (Lumens)       800         Watts       12.6         Lumens per Watt (Efficacy)       63.49         Color Accuracy Color Accuracy Color Rendering Index (CRI)       80         Light Color Correlated Color Temperature (CCT)       3000 (Bright White)       Light Color Correlated Color Temperature (CCT)       3500 (Bright	840 12 70 80 ht White)	SIGNATURE REQUIRED	N GROUP, INC. ALSON STREET GEORGIA 30240	
Warm White       Bright White       Daylight         2700K       3000K       4500K       6500K         All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.       All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.         Visit www.lightingfacts.com for the Label Reference Guide.       Visit www.lightingfacts.com for the Label Reference Registration Number: NJSM-6465S (12/1/2016) Model Number: WF6 LLED 30K	vlight 6500K he Electrical and nergy (DOE) verifies nce Guide.	706-882-5511 \	www.SDGarch.net	
<complex-block></complex-block>				
4935       Fax: 770-860-3129       www.lithonia.com <b>GENERAL TYPEE "GE"a FIXTURE TYPEE "GE"a "G2" SD</b>	WF6         Rv. 01/10/18	REVIS	SIONS	
Solution           20%           Zonal Lumen Summary           Zonal Colspan="4">Conal Lumen Summary           Zonal Lumen Summary           Zonal Colspan= Solution           90         83         78         86         81         76         0° - 60°         3158         79.0         77.4         43.8         90° - 120°         26         0.7         0.6         62         54         47         90° - 120°         26         0.7         0.6         64         90° - 130°         37         0.9         0.9         54         43         34         43         35         29         0° - 180°         72         1.8         1.8         1.8           A         A         A         A         A         A           A <td colspa<="" th=""><th></th><th></th><th></th></td>	<th></th> <th></th> <th></th>			
Display="1">Constrained by the second system of t		PROJECT: VERNON ROAI VERNO LAGRANG	D FIRE STATION IN ROAD E GEORGIA	
ISSNA LM-79.         20%         70%       50%       Zonal Lumen Summary $00309(10)^{6}$ $50\%30\%10\%$ $0^{\circ} \cdot 30^{\circ}$ 116       116       111       111       111       26.1       26.0         101       97       94       91       0° - $40^{\circ}$ 1845       43.3       43.2         88       82       76       85       79       74       0° - $60^{\circ}$ 3227       78.0       78.0         68       60       53       66       58       53       90° - $120^{\circ}$ 3       0.1       0.1         55       46       40       53       90° - $130^{\circ}$ 3       0.1       0.1         55       46       40       35       90° - $130^{\circ}$ 4       0.1       0.1         55       46       40       35       90° - $180^{\circ}$ 4       0.1       0.1         45       37       31       44       36       31       0° - $180^{\circ}$ 4267       100.0       100.0         88       31       25       37       30       25       40       33       28		LIGHTING CUT-S	6 FIXTURE HEETS	
	EPANL	MODIFIED DATE: ISSUED DATE:	JOB NO: 1731	
•858-7763 www.acuitybrands.com © 2017 Acuity Brands Lighting, Inc. All rights reserved. Rev. 08,	/14/17	07 MAY 2018	E-12	

![](_page_25_Figure_0.jpeg)

## WF4 4" LED Wafer Module

## **Fixture "I"- shower**

Illuminance Data at 30" Above Floor for

a Single Luminaire

## PHOTOMETRICS

Coefficient of Utilization Distribution Curve Distribution Data Output Data WF4 LED 50K, 5000 K LEDs, input watts: 10.4, delivered lumens: 796, LM/W=77, test no. ISF 30027P3

![](_page_25_Figure_5.jpeg)

## **ENERGY DATA & DIMMER COMPATIBILITY**

4" ENERGY DATA	2700K	3000K	3500K	4000K	5000K
Lumens	660	675	740	765	780
Color temperature	2700K	3000K	3500K	4000K	5000K
CRI	80	80	80	80	80
Lumens/Watt	62.2	70.3	72.5	76.5	75
Min. starting temperature	-40°C (-40°F)				
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A standards				
Input voltage	120V	120V	120V	120V	120V
Total Harmonic Distortion	15.3%	15.3%	15.3%	15.3%	15.3%
Min. power factor	0.99	0.97	0.98	0.98	0.98
Input frequency	50/60 Hz				
Rated wattage	10.6W	9.6W	10.2W	10W	10.4W
Input power	10.6W	9.6W	10.2W	10W	10.4W
Input current	0.09A	0.08A	0.09A	0.08A	0.09A

COMPATIBLE DIMMERS							
Leviton	Lutron	Sensorswitch	Synergy/Leviton				
6633-PA	DV-603P-LA	nSP5 PCD 2W	ISD 6001 120/IPI06				
IPL06-LED/INC mode	CT-603PR-WH	nSP5 PCD ELV 120	ISD 400 ELV 120/IPE04				
6615-P	DVELV-300P						
	NTELV-300P						
	NLV600						
	300P-SELV						
	DV-600P						
	Caseta PD-6WCL*						

\*Requires Lutron Smart Bridge L-BDG2-WH for wireless applications (sold separately)

## 🖊 LITHONIA LIGHTING

DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com © 2016-2018 Acuity Brands Lighting, Inc. All rights reserved. Rev. 01/09/18

![](_page_25_Picture_12.jpeg)

## WF4 4" LED Wafer Module

Light Output (Lumens)

or Accuracy

il Number: WF4 6ED 40K : Cuminaire - Downlight

WF4

Lumens per Watt (Efficacy)

White Bright White

sit www.lightingfacts.com for the Label Reference Guid

Int Output (Lumens)     660     Light Output (Lumens)       itts     10.6     Watts       mens per Watt (Efficacy)     62.26     Lumens per Watt (Efficacy)
Ior Accuracy r Rendering Index (CRI) 80 Color Rendering Index (CRI)
pht Color Netated Color Temperature (CCT) 2700 (Warm White) Colored Color Temperature (CCT) 3000 (B
arm White Bright White Daylight DK 3000K 4500K 6500K 2700K 3000K 4500K 2700K 3000K 4500K Altrauba are seconding to (ESNA LM.79-2008, Approved Method for dire Electrical and: Desting Tables at New State Calment, Tractical direkt State Calman, Tables at State Calman, Tabl
d led suit and results. productiesd data and results. trwww.lightingfacts.com.for the Label Reference Guide. Visit www.lightingfacts.com.for the Label Reference Guide.
idation Number, NuSMINU4X8N24292977X Number: NuSMINU4X8N24292977X Number: WF4 EED 27X, Ljuminaire: IDstynight Type: Luminaire : Downight
Same Visite         Bright White           DK         3000K         4500K         6500K           2016 are according to ESNA LM/Th/2008, Approved Method to the Electrical and member facting of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sourd State Lighting. The U.S. Department of Energy: IDDE / vendes relating of Sour

76.5

4000 (Bright W

![](_page_25_Picture_15.jpeg)

Light Output (Lumens)

olor Accuracy

I Number: WF4 LED 50K Luminaire : Downlight

Lumens per Watt (Efficacy)

/arm White Bright White Daylight

Visit www.lightingfacts.com for the Label Reference Guid

5000 (Daylig

![](_page_25_Picture_16.jpeg)

![](_page_25_Picture_17.jpeg)

![](_page_25_Picture_18.jpeg)

A LITHONIA LIGHTING®

Distribution Curve	Distribution Data	Output Data	Co
<b>4 LED 27K</b> , 2700 K LEDs,	input watts: 10.5, deliver	red lumens: 708, LM/W=67.	4, test no. ISF 3
			pf pc
	Ave Lumens 80° 0 259	Zone Lumens % Lamp 0°- 30° 198.1 27.9	<u>pw 50%</u> 0 119
	5 258 24 15 248 70	0°-40° 321.0 45.3 0°-60° 558.3 78.8	1 104 2 90
$    \times 1 > 1$	25 226 104	0°-90° 708.6 100.0	3 79
KA//T	60° 35 197 123 45 163 126	90°-120° 0.1 0.0 90°-130° 0.1 0.0	4 70 5 63
$1 \land 1 \land$	55 125 112 65 86 85	90°-150° 0.1 0.0 90°-180° 0.1 0.0	6 57 7 51
	75 48 50 85 12 15	0°-180° 708.7 *100.0	8 47
	85 13 15 90 1 40°	-Eπiciency	9 43 10 40
• <u>20</u> • 2000 K I FDs.	input watts: 9.6. delivere	ed lumens: 675. 1 M/W=70.3	test no. ISE 30
	input nution of a circle		pf pc 8
	Ave Lumens 80° 0 251	Zone Lumens % Lamp 0° - 30° 191.7 27.9	pw 50%3 0 119 1
	5 250 24 15 240 68	0° - 40° 310.8 45.3 0° - 60° 540 5 78.8	1 104 1 2 on
	25 218 101	0° - 90° 686.0 100.0	3 79
K A / / T t	60° 35 190 119 45 158 122	90° - 120° 0.1 0.0 90° - 130° 0.1 0.0	4 70 5 63
$  \rangle / X \times$	55 121 108	90° - 150° 0.1 0.0	6 57
	75 46 49	0° - 180° 686.1 *100.0	7 51 8 47
++1	85 12 14 90 1	*Efficiency	9 43 10 40
	40°		15 40
IED 35K 3500 K IEDc	innut watte: 10.1. deliver	ed lumenc: 820 I M/W—82	tact na ICE 25
LLD JJR, JJ00 K LLD3,	input watts. 10.1, uenver	eu iumens. 829, Ewi/ W—82,	pf
	Ave Lumens	Zone Lumens % Lamp	pw 50%
	80° 0 326 5 326 31	0°- 30° 249.5 30.1 0°- 40° 400.6 48.3	0 119
X A X	15 312 88	0°-60° 672.0 81.0	2 91
///N	25 284 131 60° 35 242 151	90°-120° 0.0 0.0	3 81 4 72
$   \times  $	45 191 147	90°-130° 0.0 0.0	5 64
HTA >	65 91 90	90°-180° 0.0 0.0	7 53
$( ) X \times$	75 49 52 85 14 16	0°-180° 829.8 *100.0 *Efficiency	8 48 9 44
HT)	90 0 40°	Lindenby	10 41
	l		test as ICE 20
<b>LED 40K</b> , 4000 K LEDS,	input watts: 10, delivere	d lumens: 765, LM/W=76.5,	test no. ISF 30
	Ave Lumens	Zone Lumens % Lamp	pc 8 pw 50%3
	80° 0 272 5 271 26	0° - 30° 210.1 27.3 0° - 40° 342 5 44 5	0 119 1
	15 261 74	0° - 60° 601.1 78.1	2 90
H / / / /	25 240 111 60° 35 212 132	u° - 90° 770.1 100.0 90° - 180° 0.0 0.0	3 79 4 70
	45 177 136	0° - 180° 770.1 *100.0	5 63
X	65 96 94	Emciency	o 56 7 51
++1	75 54 57 85 16 17		8 47 9 43
	90 0 40°		10 39
20°			
LITHONIA	LIGHTING	6	
	N C	000 21E 402E - E 774	0/0 2120
WNLIGHTING: One Lithonia	Way, Conyers, GA 30012 Pi	none: 800-315-4935 Fax: 770-	860-3129 WW
		_	
			XT
(2) gothar	n°		

![](_page_25_Picture_21.jpeg)

•	Eleven optimized distribution patterns allow designers to achieve tallored
	effects.
•	Self-flanged semi-specular or matte-diffuse, metal-clad lower reflector utilized
	in combination with a highly transmissive lens.

- Patented Bounding Ray<sup>™</sup> Optical Principle design (U.S. Patent No. 5,800,050)
   S70% lumen maintenance at 60,000 hours. provides smooth and continuous transition from lensed source to the top of the • Tested in accordance with LM-79 and LM-80 standards. reflector down to the bottom of the reflector. Field interchangeable optics.
- MECHANICAL SYSTEM Light engine and driver are accessible from above or below ceiling. 16-gauge black painted steel mounting frame with mounting bars included. Post-installation adjustment possible from above or below ceiling.
- Galvanized steel junction box with hinged access covers and spring latch. Three combination 1/2"-3/4" and one 1/2" knockout for straight-through conduit runs.
- Capacity: 8 (4 in, 4 out) No. 12 AWG conductors rated for 90°C. Accommodates up to 1½"-thick ceilings.

## A+ Capable options indicated by this color background.

Color empera 27/ 270 30/ 300	ture	Nor	ninal delivere			Apert	ure/		
27/ 270	)0 K		innar denvere	d lun	nen values	Trim c	olor	Trim Sty	/le
<b>5/</b> 350 <b>0/</b> 400	00 K 00 K 00 K	05 07 10 12 15 20	500 lumens 750 lumens 1000 lumens 1250 lumens 1500 lumens 2000 lumens	25 30 35 40 45	2500 lumens 3000 lumens 3500 lumens 4000 lumens 4500 lumens	4AR 4PR 4WTR 4WR <sup>1</sup> 4BR <sup>1</sup>	Clear Pewter Wheat White Black	(blank) FL	Self- flanged Flangeless
Driver							Option	S	
EZ10 EZ1 EZB EDAB <sup>4</sup> EDXB <sup>5</sup>	eldoL eldoL eldoL <1% eldoL eldoL mana termi	ED 0- ED 0- ED 0- ED SO ED PO age me natior	10V ECOdrive. Li 10V ECOdrive. Li 10V SOLOdrive. LOdrive DALI. Lo WERdrive DMX w ent). Square Law resistor. Refer t	near d near d Logari garith vith RE dimm o <u>DMX</u>	limming to 10% limming to 1% r thmic dimming mic dimming to DM (remote devic ting to <1%. Inc <u>R Manual</u> .	min. nin. to <1%. ce :ludes	SF TRW <sup>6</sup> TRBL <sup>7</sup> ELR <sup>8</sup> CP <sup>9</sup> CRI90	Single fu White pai Black pai Emergene pack with switch, C Chicago High CRI	se inted flange inted flange cy battery n remote test EC compliant plenum (90+)
RIES or	rder a	s sep	arate catalog	; num	nbers (shippe	d separ	ately)		
Additiona	al optic:	s for fi	eld installation.						
	Driver EZ10 EZ1 EZB EDAB <sup>4</sup> EDXB <sup>5</sup>	Driver EZ10 eldoL EZ1 eldoL EZB eldoL <1% EDAB <sup>4</sup> eldoL EDXB <sup>5</sup> eldoL mana termi RIES order a Additional optic	EZIO eldoLED 0- EZIO eldoLED 0- EZI eldoLED 0- EZB eldoLED 0- <1%. EDAB <sup>4</sup> eldoLED SO EDXB <sup>5</sup> eldoLED PO manage me termination RIES order as sep Additional optics for fi	15       1500 lumens         20       2000 lumens         Driver       2000 lumens         EZ10       eldoLED 0-10V ECOdrive. Li         EZ1       eldoLED 0-10V ECOdrive. Li         EZB       eldoLED 0-10V SOLOdrive. Li         eldoLED 0-10V SOLOdrive DALI. Lo       eldoLED POWERdrive DMX v         manage ment). Square Law       termination resistor. Refer         RIES order as separate catalog       Additional optics for field installation.	15       1500 lumens       45         20       2000 lumens       45         Driver       EZ10       eldoLED 0-10V ECOdrive. Linear d         EZ1       eldoLED 0-10V ECOdrive. Linear d         eldoLED 0-10V SOLOdrive. Linear d       eldoLED 0-10V SOLOdrive. Logarith         EDAB4       eldoLED SOLOdrive DALI. Logarith         eldoLED POWERdrive DMX with RI       manage ment). Square Law dimm         termination resistor. Refer to DMX       DMX         RIES order as separate catalog nurr       Additional optics for field installation.	15       1500 lumens       45       4500 lumens         20       2000 lumens       45       4500 lumens         Driver       EZ10       eldoLED 0-10V ECOdrive. Linear dimming to 10%         EZ1       eldoLED 0-10V ECOdrive. Linear dimming to 1% r         EZ8       eldoLED 0-10V SOLOdrive. Logarithmic dimming to 21%.         EDAB4       eldoLED SOLOdrive DALI. Logarithmic dimming to eldoLED POWERdrive DMX with RDM (remote device manage ment). Square Law dimming to <1%. Inc. termination resistor. Refer to DMXR Manual.         RIES order as separate catalog numbers (shippe Additional optics for field installation.	15       1500 lumens       45       4500 lumens       48R1         20       2000 lumens       45       4500 lumens       48R1         Driver       EZ10       eldoLED 0-10V ECOdrive. Linear dimming to 10% min.       EZ1       eldoLED 0-10V ECOdrive. Linear dimming to 1% min.         EZ8       eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	15       1500 lumens       45       4500 lumens       48R1       Black         Driver       Options         EZ10       eldoLED 0-10V ECOdrive. Linear dimming to 10% min.       SF         EZ1       eldoLED 0-10V ECOdrive. Linear dimming to 1% min.       FRU%         EZ8       eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.	15       1500 lumens       45       4500 lumens       48R <sup>1</sup> Black         Driver       Options         EZ10       eldoLED 0-10V ECOdrive. Linear dimming to 10% min.       SF       Single fu         EZ1       eldoLED 0-10V ECOdrive. Linear dimming to 1% min.       FRBL?       Black pai         EZ8       eldoLED 0-10V SOLOdrive. Logarithmic dimming to <1%.

DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com © 2016-2018 Acuity Brands Lighting, Inc. All rights reserved. Rev. 01/09/18

## **Fixture "I"- shower**

![](_page_25_Figure_32.jpeg)

Luminaire Type:
Catalog Number
(autopopulated).

![](_page_25_Picture_34.jpeg)

- eldoLED ecoDrive 0-10V driver available with 10% dimming level.
- eldoLED ecoDrive 0-10V driver available with 1% dimming level. eldoLED SOLOdrive 0-10V driver available with <1% dimming level. eldoLED SOLOdrive DALI driver available with <1% dimming level.
- eldoLED POWERdrive DMX with RDM (remote device management) available ٠
- with <1% dimming level.
- Emergency battery pack with remote test switch available.
- LISTINGS • Fixtures are CSA certified to meet US and Canadian standards; wet location,
- covered ceiling. WARRANTY
- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms\_and\_conditions.aspx
- Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

![](_page_25_Figure_44.jpeg)

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SI	GNATURE RI		N GROUP, INC
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![](_page_26_Figure_0.jpeg)

ELECTRICAL									
Primary Cire	cuit								
			Innut			Output		Watts	(
Туре	Volts	;	amps	Watts		volts	1-1/	'2 hrs.	I
FLMCLED	120		.11	1.2				10	Î
ELM6 LED	277		.12	1.5		6		12	
RATTERV									-
Sealed Lead	Acid (SLA)								
			<u>.</u>				-	C	)r
Voltage	Shelf lif	fe <sup>1</sup>	Туріса	al life¹		Maintenan	ce²	ten	n
6	12 mont	ha	2.5					6	0
0		ns	3-5	years		none		(1	6
Notes									
At 77°F (25°C)									
2 All life safety e tested in accor required main	equipment, inc dance with all tenance, servi	luding Nation ce or tes	emergency al Fire Prot sting could	lighting for ection Assor jeopardize t	r pat ciati the s	th of egress, mi ion (NFPA) and safety of occup	ust be m local cor ants and	aintained des. Failur d will void	, e a
3 Optimum amb	ient temperat	ure rang	ge where u	nit will prov	ide	capacity for 90	minute	s. Higher	aı

	7.5′	10'	12′	16	
1 FC Average	53'	48'	45'	36'	
1 FC Minimum	17′	22′	30′	24'	
SINGLE UNIT MAX SPACIN	IG - WALL-MOU	JNT			
	7.5′	10'	12′	16	
1 FC Average	40'	38′	30'	20	
1 FC Minimum	10'	12'	18′	N/A	

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FXIT	<b>CUANTUM</b> ® Thermoplastic Exits
	HQM LED
EXII	LED Lamp Head Nickel-Cadmium Battery
HO RO	
— Top, end or back mounting. Housing snap	os to canopy with positive-locking tabs. Cam
ounting knockouts. Conduit entry knockout for 1/ . damp location listed standard 50°-104°F (10° C and OSHA illumination standards.	2" flexible conduit. J-box pattern on back panel. -40°C). Meets UL 924, NFPA 101 (current Life
5-year limited warranty. (Battery is prorated).	Complete warranty terms located at

![](_page_26_Picture_20.jpeg)

![](_page_27_Figure_0.jpeg)

## FEATURES & SPECIFICATIONS

**INTENDED USE** — LBL provides a digital lighting platform to deliver general ambient lighting for surface-mount applications . Light engine delivers long life and excellent color to ensure a sound quality, low-maintenance light installation. CONSTRUCTION — Metal parts are die formed from code-gauge steel. Prismatic diffuser is 100% acrylic

with sonically welded luminous ends. Continuous side flanges on fixture body provide light trap and continuous diffuser support to prevent accidental opening and simplify maintenance.

Finish: Five-stage iron phosphate pretreatment assures superior paint adhesion and rust resistance. Painted parts finished with high-gloss, high-reflectivity baked white polyester enamel (low VOC).

**OPTICS** — Curved prismatic diffuser with linear side prisms and highly transmissive overlay minimizes lamp image and provides high-angle brightness control. Luminous end plates soften appearance for

improved aesthetics. **ELECTRICAL** — Long-life LEDs, coupled with high-efficiency drivers, provide extended service life. LBL

is rated to deliver L70 performance at 50,000 hours. LISTINGS — CSA certified to U.S. and Canadian standards. Damp listed.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are

qualified. WARRANTY — 5-year limited warranty. Complete warranty terms located at

www.acuitybrands.com/CustomerResources/Terms and conditions.aspx Note: Specifications subject to change without notice.

## **LED Wraparound**

![](_page_27_Picture_14.jpeg)

2' and 4'

**Contractor Select** 

SQ

1B

**\_\_\_** 0° **\_\_\_\_** 90°

![](_page_27_Figure_16.jpeg)

ORDERING INFORMAT	TION								
Catalog Number	UPC	Description	Lumens	Color temperature	Lens type	Voltage	Wattage	Pallet qty	Standard carton qty
LBL2 LP835	753573917564	2' LED Wraparound	2,000	3500K	Patterned #12 acrylic	120-277	26	112	1
LBL2 LP840	753573917595	2' LED Wraparound	2,000	4000K	Patterned #12 acrylic	120-277	26	112	1
	752572017601	ALLED Warman and	4,000	2500%	Dettermed #12 could	120.277	50		1
LBL4 LP840	753573917632	4' LED Wraparound	4,000	4000K	Patterned #12 acrylic	120-277	50	56	1
LBL4 347 LP835	753573917649	4' LED Wraparound	4,000	3500K	Patterned #12 acrylic	347	50	56	1
LBL4 347 LP840	820476010279	4' LED Wraparound	4,000	4000K	Patterned #12 acrylic	347	50	56	1

![](_page_27_Picture_18.jpeg)

CONTRACTOR SELECT / LED

![](_page_27_Picture_20.jpeg)

## ITEM#: 18106855

The Sea Gull Lighting Painted Shade Pendants light indoor pe in antique brushed copper enhances the beauty of your home ample light and style to match today's trends. The Painted Sha pendant collection by Sea Gull Lighting features steel constru and is available in seven outer colors including White, Red, Pa Brushed Stainless, Emerald Green and Painted Antique Brushe Copper ay all with a White interior. Inspired by a classic wareh light, they use globe shaped bulbs for increased light output a finished look. 54ay of cuttable cord is included for customizin installation. All of these fixtures easily convert to LED by purch LED replacement lamps sold separately.

- Lighting Type: Pendants
- Product Features: UL Listed
- Material: Steel
- Lighting Style: Transitional
- Dimensions: 15.75inches in diameter,8.25 inches high

**Seagull lighting- painted shade** Pendant, led 6519 with metal downrods.

LBL LED Wraparound

![](_page_27_Figure_30.jpeg)

![](_page_27_Figure_31.jpeg)

![](_page_27_Figure_32.jpeg)

Individual Installation – Two single-stem hangers required. Row Installation — One hanger per fixture plus one row required.

Specifications

48 (122.0)

Length: 24 (61.0)

1. 347V option not available. 2. Non-stock standard manufacturing lead times apply. Step-down transformer will not fit in LBL2.

## FIXTURE TYPE "W"

		171 22742				
ens,	test no.	LIL22/12,	tested in	accordance	O IESNA LM-79.	

						Coe	efficie	ents c	of Ut	ilizat	ion						
٥n٥				pf				2	20%								
90	CP S	Sumr	nary	рс		80%			70%		;	50%		Zon	al Lume	n Summa	ry
30°		0°	90	_pw	70%	50%	30%	50%	30%	10%	50%	30%	10%	Zone	Lumens	% Lamp	% Fixture
	0°	796	796	0	116	116	116	112	112	112	105	105	105	0° - 30°	601	29.9	29.9
	5°	791	796	1	106	102	98	98	95	91	92	89	86	0° - 40°	947	47.1	47.1
suo	15°	756	763	2	97	90	83	87	81	76	82	77	73	0° - 60°	1472	73.2	73.2
50	25°	678	685	3	90	80	72	77	70	65	73	67	62	0° - 90°	1773	88.2	88.2
	35°	555	557	~ <sup>4</sup>	83	71	63	69	62	56	65	59	54	90° - 120°	120	6.0	6.0
	45°	395	406	ີ່ 💭 5	76	64	56	63	55	49	59	53	47	90° - 130°	156	7.8	7.8
	55°	240	276	6 ۳	71	58	50	57	49	43	54	47	42	90° - 150°	211	10.5	10.5
	65°	123	186	7	66	53	45	52	44	39	49	43	38	90° - 180°	238	11.8	11.8
40°	75°	67	136	8	62	49	41	48	40	35	45	39	34	0° - 180°	2010	100.0	100.0
	85°	23	92	9	58	45	37	44	37	32	42	35	31				

10 54 42 34 41 34 29 39 33 28

## LBL4 LP835, 4050.9 delivered lumens, test no. LTL22675, tested in accordance to IESNA LM-79.

90 3 74

						Coe	efficie	ents d	of Ut	ilizat	ion						
000				pf				2	20%								
90	CF	<sup>o</sup> Sumn	nary	рс	80%		70%		50%		Zonal Lumen Summary						
80°		0°	90	_pw	70%	50%	30%	50%	30%	10%	50%	30%	10%	Zone	Lumens	% Lamp	% Fixture
	0°	1620	1620	0	116	<b>1</b> 16	116	112	112	112	105	105	105	0° - 30°	1223	30.2	30.2
	5°	1609	1608	1	107	102	98	99	95	92	92	89	87	0° - 40°	1929	47.6	47.6
e0°	15°	1541	1538	2	98	90	84	87	81	77	82	77	73	0° - 60°	2995	73.9	73.9
00	25°	1389	1384	3	90	80	72	78	71	65	73	67	63	0° - 90°	3595	88.7	88.7
	35°	1132	1128	~ <sup>4</sup>	83	72	64	70	62	56	66	59	54	90° - 120°	235	5.8	5.8
	45°	811	814	005	77	65	56	63	55	49	60	53	48	90° - 130°	303	7.5	7.5
	55°	509	544	6 ۳	71	59	50	57	49	44	54	47	42	90° - 150°	401	9.9	9.9
	65°	295	358	7	66	53	45	52	44	39	50	43	38	90° - 180°	456	11.3	11.3
40°	75°	155	262	8	62	49	41	48	40	35	46	39	34	0° - 180°	4051	100.0	100.0
	85°	51	174	9	58	45	37	44	37	32	42	36	31				
	90	6	140	10	54	42	34	41	34	29	39	33	28				

FIX	
Home / Lighting & Ceiling Fans / Commercial Lighting / Wraparound Lights Model # LBL 4 Internet #203839057 Store SKU #1000001686	24
EZ	

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LITHONIA LIGHTING® An **Acuity**Brands Company

CONTRACTOR SELECT / LED: One Lithonia Way Conyers, GA 30012 Phone: 800-858-7763 Fax: 770-929-8789 www.lithonia.com © 2012-2013 Acuity Brands Lighting, Inc. All rights reserved. Rev. 12/09/13

LED-WRAPAROUND

## ▶ conv = → •••○ Verizon 중 FIXTURE TYPE "P"

Q & A

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Tips & Inspiration Shipping & Returns

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Features	English (English)	<b>V 9</b> <sup>1</sup>
Style		Transitional
Material		Metal, Steel
Туре		Globe
Finish		Antique
Light Bulb	Туре	LED
Lighting St	yle	Transitional
Lighting Ty	ре	Pendant Lighting
Product Fe	atures	UL Listed
Dimension	S	15 3/4 inches in diameter,8 1/4 inches high
Warranty		5 year Limited Manufacturer
Model Nun	nber	651991S-63
Country of	Origin	China

![](_page_27_Picture_49.jpeg)

## FEATURES & SPECIFICATIONS

### INTENDED USE

Provides task or accent lighting in commercial, retail, hospitality and residential applications. Ideal for use under and over cabinets, display cases, task lighting, office lighting, coves and utility/work areas. CONSTRUCTION

Low profile design, with on/off rocker switch. Can be direct wired or powered by 5' cord-and-plug (not included, see accessories). Connect up to 354 watts of fixtures with 13" connector cord or 7/8" end row connector (Included).

Rugged post-painted low-profile steel housing with white finish. Acrylic white diffuser provides soft widespread illumination with zip-lock design for easy installation, cleaning, and superior retention. ELECTRICAL

Long-life LEDs, coupled with a high-efficiency driver, provide extended service life. Fixture is rated to deliver L70 performance at 50,000 hours and operates at 120 volts, 60Hz. Minimum starting temp -20F. Can direct-wire

through rear access plate/knockout by utilizing the included Romex connector or by utilizing the optional UCD JBJunction/Splice box (sold separately).

Works with most standard incandescent dimmers (see list of approved dimmers).

INSTALLATION All mounting hardware included.

Lumens per watt:

LISTINGS

UL listed to US and Canadian safety standards. ENERGY STAR® certified product (3000K and 4000K only) and Title 24 qualified. Listed for damp locations.

WARRANTY 5-year limited warranty. Complete warranty terms located at:

www.acuitybrands.com/CustomerResources/Terms\_and\_conditions.aspx

67

Specifications subject to change without notice.

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C.

SPECIFICATIONS 4' 2' 3' 1' 742 1162 1603 Lumens (3000K): 388 Watts (3000K): 5.8 10.2 14.8 19.5

73

Length: 12 (30.5) 24 (61) 36 (91.4) 48 (121.9)

79

82

		AF	CHITECT'S STAMP	5
		SIC	SNATURE REQUIRED	
TUF	RETYPE "W"		MIIH DESIG 206 WEST HAR LAGRANGE, C 706-882-5511	N GROUP, IINC. ALSON STREET 3EORGIA 30240 www.SDGarch.net
	Lithonia Lighting 4 ft. 41-Watt White Integrated LED Low Profile Wraparound Flushmount (336) Write a Review Questions & Answers (130) Integrated LEDs produce 4000 lumens of light Bright white (4000K) color temperature Provides 50,000 hours of maintenance-free operation			
	<b>\$109</b> <sup>00</sup> /each Choose Your Options			
	Product Depth (in.) 48			
	Actual Color Temperature (K)			
	Package Quantity			
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![](_page_28_Figure_0.jpeg)

	ARCHITECTS		
KEYNOTES	SATE OF GE	2RGE	
TWO (2) - 3" CONDUITS WITH LONG RADIUS BENDS UP POWER POLE	S Save in	Ϋ́́Į	
2 PAD MOUNTED TRANSFORMER (PAD BY G.C.)	* 7575	)*)	5/0
3 SECONDARY FEEDERS FROM TRANSFORMER TO BUILDING BY ELECTRICAL SUBCONTRACTOR	And Conge, Geo		
SITE LIGHTING PROVIDED BY CITY OF LAGRANGE	PERED AR	SHI	
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