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OWNER'S PROJECT ADVISOR:
MOSES TUCKER REAL ESTATE, INC.

CIVIL ENGINEER:
MCLELLAND ENGINEERS

LANDSCAPE ARCHITECT:
LANSARNE BURNS SMITH

STRUCTURAL ENGINEER:
CROMWELL ENGINEERS INC.

MECH., ELEC., PLUMB. ENGINEER:
CROMWELL ENGINEERS INC.

SUSTAINABLE CONSULTANT:
BNIM / ELEMENTS

GLOBAL VILLAGE CONSULTANT
CAMBRIDGE SEVEN ASSOCIATES

INTERIOR DESIGNER:
POLK STANLEY YEARY

GENERAL CONTRACTOR:
CDI

GENERAL NOTES:

NOTES:

ISSUE DATE:
DECEMBER 15, 2003
CORE/SHELL
PACKAGE #5

REVISIONS:

#	DATE	DESCRIPTION
1	01/16/04	PKG. 5/ADD.#1
2	07/01/04	Package 7, 100% Roll-up

HEIFER INTERNATIONAL CENTER OFFICE BUILDING

LITTLE ROCK, ARKANSAS

PSY PROJECT NUMBER:
431C

CONTENTS:
PLUMBING NOTES
and SCHEDULES
SHEET NUMBER:

Plumbing General Notes

- BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SOLUTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.) IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTOR'S OPTION.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING, OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. EQUIPMENT SCHEDULES SHALL TAKE PRECEDENCE OVER CONFLICTING DRAWING INFORMATION. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
- EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- EXACT LOCATION OF ALL EQUIPMENT AND PIPING SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL REQUIREMENTS.
- ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES.
- INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES, HVAC, STRUCTURAL, ETC. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
- REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS AND MODELS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.
- PROVIDE CLEANOUTS IN ALL SANITARY, STORM DRAINAGE & OVERFLOW LINES, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH DIRECTION 45 DEGREES AND GREATER, AND ON ALL VERTICAL RISERS AT A HEIGHT OF 30' A.F.F. AT THE BASE OF EACH STACK.
- PROVIDE PRESSURE REDUCERS IN WATER SUPPLY LINES TO KEEP PRESSURE BELOW 70 PSI AT ALL OUTLETS. MINIMUM PRESSURE ACCEPTABLE AT WATER OUTLETS IS 15 PSI AT DIRECT SUPPLY FLUSH VALVES, AND 8 PSI AT ALL OTHER OUTLETS.
- INSULATE ALL WATER LINES ABOVE FLOOR. INSULATE ALL HORIZONTAL STORM LINES ABOVE FLOOR.
- INSULATE ALL CONDENSATE LINES INSIDE BUILDING AS PER INSULATION REQUIREMENTS FOR COLD WATER LINE, IN SPECIFICATIONS.
- ALL SANITARY LINES ARE 1/4" PER FOOT WHERE POSSIBLE, AND NOT LESS THAN 1/8" PER FOOT IN ANY CASE. VERIFY INVERTS WITH SITE DRAWINGS AND COORDINATE INSTALLATION TO ASSURE PROPER FLOW.
- SEAL ALL PIPE PENETRATIONS THRU RATED WALLS.
- PROVIDE WATER HAMMER ARRESTORS IN BRANCH WATER LINES AS REQUIRED BY GOOD PRACTICE OR MINIMUM OF ONE ARRESTOR FOR EACH FIXTURE OR BANK OF FIXTURES.
- PROVIDE STOP VALVES AT EVERY FIXTURE ON BOTH HOT AND COLD WATER SUPPLY LINES, VALVES, ESCUTCHEONS, FITTINGS, ETC. SHALL BE CHROMIUM PLATED WHERE EXPOSED CHROME PLATED PIPE IS USED.
- ALL FLOOR DRAINS TO HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM.
- PROVIDE TRAP PRIMERS ON ALL RESTROOM FLOOR DRAINS, AS WELL AS FLOOR DRAINS IN FAN ROOMS, COIL ROOMS, SPRINKLER ROOMS, OR WHERE ANY DRAIN IS FOR INFREQUENT DISCHARGE OF WASTE WATER. LOCATE TRAP PRIMER VALVES IN ACCESSIBLE LOCATION OR PROVIDE ACCESS PANEL. DO NOT LOCATE TRAP PRIMER VALVES OR PIPING IN PUBLIC ACCESSIBLE AREAS.
- ALL PIPE DROPS FROM CEILING PLENUM TO BELOW FLOOR SHALL BE MADE IN FURR-OUTS AT COLUMNS, IN WEBB OF BEAMS AT COLUMNS, OR IN WALLS UNLESS SHOWN OTHERWISE.
- ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- PROVIDE INSULATION AT ALL EXPOSED HOT WATER & DRAIN PIPING FOR HANDICAP FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE ALL SANITARY SEWER, STORM DRAIN, FIRE AND DOMESTIC WATER LINES AND NATURAL GAS LINES WITH CIVIL DRAWINGS. SEE CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITY LINES.
- ALL SEWER, WASTE, DRAIN, STORM DRAIN PIPING IS BELOW FLOOR OF THE PLAN SHOWN, UNLESS OTHERWISE INDICATED.

ADA Requirements

This applies to Handicapped Accessible fixtures only.

Water Closets: The height of water closets shall be 17" to 19" measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position. The water closet shall be located 18" from the side wall to the center line of the bowl. Hand operated flush controls shall be mounted on the wide side of toilet areas no more than 29" above the finish floor. See architectural drawings for grab bar locations.

Urinals: The urinals shall be wall hung with rim at a maximum of 17" above the finish floor. Hand operated flush controls shall be mounted no more than 44" above finish floor.

Lavatories: Lavatories shall be mounted with the rim or counter surface no higher than 34" above the finish floor. Provide a clearance of at least 29" above the finish floor to the bottom of the apron. Knee space shall be 6" from bottom edge of apron to the leading edge of the bottom of the bowl. The bottom of the bowl shall be a minimum of 27" above the finish floor. All water and drain piping under lavatories shall be insulated with a foam insert, covered with a 1/8" vinyl outer shell. Angle stops shall have a flip top access.

Faucets - Shower controls: Controls shall be lever handles operable with one hand and shall not require light grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb.

Shower: A seat shall be provided in shower stalls 36"x36". The seat shall be mounted on the wall opposite of the controls and 17" to 19" from the bathroom floor and shall extend the full depth of the stall. Shower controls shall be mounted on the wall opposite of the seat and shall be located on the same wall as the shower head, at minimum height of 38" and a maximum height of 48". In addition to the fixed shower head provide a hand held shower spray unit with a hose at least 60" long that can be used both as a fixed shower head and as a hand held shower head. In a 30"x60" shower unit a fixed seat shall be provided, it shall be a folding type and shall be mounted on the wall adjacent to the controls. See architectural drawings for grab bar locations.

Sinks: Sinks shall be mounted with the rim or counter surface no higher than 34" above the finish floor. Provide a knee clearance of at least 27" high, 30" wide, and 19" deep. Sinks shall be a maximum of 6 1/2" deep. All water and drain piping under sinks shall be insulated with a foam insert, covered with a 1/8" vinyl outer shell. Angle stops shall have a flip top access.

Drinking Fountains / Water Coolers: Where only one drinking fountain is provided on a floor there shall be a drinking fountain which is accessible to individuals who use wheel chairs and one accessible to those having difficulty bending or stooping. This can be accomplished by using a "4-in-1" fountain. Lowest spout shall be no higher than 36" above finished floor and highest spout shall be mounted at 40" above finish floor. Spouts shall be at front of the unit and shall direct the water flow in a trajectory that is parallel or nearly parallel to the front of the unit. The spout shall provide a flow of water at least 4" high. Controls shall be front mounted or side mounted near the front edge. Controls shall be operable with one hand and shall not require light grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lb. Wall mounted units shall have a clear knee space of between the bottom of the apron and the finished floor at least 27" high, 30" wide, and 17" to 19" deep. Fountains shall not protrude more than 4" out into walkways.

PLUMBING FIXTURES

MARK	DESCRIPTION	MFR. & MDL.	ACCESSORIES	FAUCET & FITTINGS	STOPS	TRAP	WASTE ROUGH-IN	WATER ROUGH-IN		REMARKS
								HOT	COLD	
P-1a	WATER CLOSET, FLUSH VALVE, A.D.A., WALL HUNG, TRAP PRIMER	KOHLER #K-4330 "KINGSTON"	CHURCH #9500SSC SEAT	SLOAN "ROYAL" #111ES-S TP INFRARED FLUSH VALVE	INTEGRAL	INTEGRAL	4"	--	1"	EXTEND TRAP PRIMER LINE TO FLOOR DRAIN AS INDICATED ON PLANS, PROVIDE CHAIR CARRIER.
P-1b	WATER CLOSET, FLUSH VALVE, STANDARD, WALL HUNG	KOHLER #K-4330 "KINGSTON"	CHURCH #9500SSC SEAT	SLOAN "ROYAL" #111ES-S INFRARED FLUSH VALVE	INTEGRAL	INTEGRAL	4"	--	1"	PROVIDE CHAIR CARRIER
P-1c	WATER CLOSET, FLUSH VALVE, STANDARD, WALL HUNG, TRAP PRIMER	KOHLER #K-4330 "KINGSTON"	CHURCH #9500SSC SEAT	SLOAN "ROYAL" #111ES-S TP INFRARED FLUSH VALVE	INTEGRAL	INTEGRAL	4"	--	1"	EXTEND TRAP PRIMER LINE TO FLOOR DRAIN AS INDICATED ON PLANS, PROVIDE CHAIR CARRIER
P-1d	WATER CLOSET, FLUSH TANK A.D.A., FLOOR MOUNT	KOHLER #K-3427	CHURCH #9500SSC SEAT	--	McGUIRE #H-2166	INTEGRAL	4"	--	1/2"	
P-2a	URINAL, WATERLESS, A.D.A., WALL HUNG	SLOAN FALCON #U1	--	--	--	INTEGRAL	2"	--	--	PROVIDE CHAIR CARRIER
P-3a	LAVATORY DROP-IN STAINLESS STEEL	KOHLER #K-2603-S	McGUIRE #155 GRID DRAIN	SLOAN #ET-88-B; #MFG-60-A MIXING VA.; #ET-510-A TRIM PLATE	McGUIRE #H-2165	McGUIRE #8872	1/4"	1/2"	1/2"	PROVIDE INSULATION ON TRAP, DRAIN AND SUPPLIES. PROVIDE ALL FITTINGS RECD BY FAUCET MFR.
P-3c	LAVATORY CHINA, WALL HUNG INFRARED FAUCET, A.D.A.	KOHLER #K-2605	--	SLOAN #ET-88-B; #MFG-60-A MIXING VA.; #ET-510-A TRIM PLATE	McGUIRE #H-2165	McGUIRE #8872	1/4"	1/2"	1/2"	PROVIDE INSULATION ON TRAP, DRAIN AND SUPPLIES. PROVIDE ALL FITTINGS RECD BY FAUCET MFR.
P-4a	JANITOR SINK, FLOOR MOUNT, TERRAZO	STERN-WILLIAMS #SB-802	--	CHICAGO #956-R	INTEGRAL	McGUIRE #8872	3"	1/2"	1/2"	
P-5a	S.S. SINK, 2-COMP.	JUST #DL-1933-ADA-A-GR	JUST #J-35 BASKET STRAINER DWASH INDIRECT DRAIN FITTING	JUST #JWF-101	McGUIRE #H-2165	McGUIRE #8912	1/2"	1/2"	1/2"	PROVIDE INSULATION ON TRAP, DRAIN AND SUPPLIES; IN-SINK-ERATOR "BADGER 5" DISPOSER IN L.H. COMPARTMENT
P-5b	S.S. SINK, 1-COMP.	JUST #SL-1515-ADA-A-GR	JUST #J-35 BASKET STRAINER	JUST #JWF-100	McGUIRE #H-2165	McGUIRE #8912	1/2"	1/2"	1/2"	PROVIDE INSULATION ON TRAP, DRAIN AND SUPPLIES
P-5c	S.S. SINK, 1-COMP.	JUST #SL-1515-ADA-A-GR	JUST #J-35 BASKET STRAINER DWASH INDIRECT DRAIN FITTING	JUST #JWF-100	McGUIRE #H-2165	McGUIRE #8912	1/2"	1/2"	1/2"	PROVIDE INSULATION ON TRAP, DRAIN AND SUPPLIES. PROVIDE TAILPIECE WITH DISHWASHER DRAIN FITTING
P-6a	SHOWER - A.D.A.	STERN-WILLIAMS #WDA-3620, 60"x36"	--	POWERS #E426-A-X-X-3-X-V	INTEGRAL	CAST IRON	2"	1/2"	1/2"	
P-6b	SHOWER - A.D.A.	--	--	POWERS #E426-A-X-X-3-X-V	--	--	--	1/2"	1/2"	
P-7a	FLOOR DRAIN - STANDARD	WADE #W-1102-STD5	--	--	--	CAST IRON	AS SHOWN	--	--	TRAP PRIMER CONNECTION
P-7b	FLOOR DRAIN - EXTENDED RIM	WADE #W-1102-ERS5	--	--	--	CAST IRON	AS SHOWN	--	--	TRAP PRIMER CONNECTION
P-7c	FLOOR DRAIN - MECHANICAL ROOM	WADE #W-1240	--	--	--	CAST IRON	AS SHOWN	--	--	PROVIDE DEEP SEAL TRAP AND TRAP PRIMER
P-7d	FLOOR DRAIN - 3/4 NICKEL-BRONZE GRATE	WADE #W-9114-16 LESS DOME	--	--	--	--	AS SHOWN	--	--	TRAP PRIMER CONNECTION
P-7e	FLOOR DRAIN - 1/2 NICKEL-BRONZE GRATE	WADE #W-9154-15 LESS DOME	--	--	--	--	AS SHOWN	--	--	TRAP PRIMER CONNECTION
P-8a	HOSE FAUCET, NON-FREEZE AREA	WOODFORD #21P-3/4	--	--	--	--	--	--	3/4"	
P-8c	HOSE FAUCET, FREEZELESS	WOODFORD #865	--	--	--	--	--	--	3/4"	
P-9a	TRAP PRIME w/ELECTRONIC DOSING MANIFOLD	PRECISION PLUMBING PRODUCTS #PT-12	--	--	--	VALVE	--	--	3/4"	MOUNT TOP OF UNIT AT 48" A.F.F.
P-9b	TRAP PRIME w/ELECTRONIC DOSING MANIFOLD	PRECISION PLUMBING PRODUCTS #MPB-500	--	--	--	VALVE	--	--	3/4"	MOUNT TOP OF UNIT AT 48" A.F.F.
P-10a	DRINKING FOUNTAIN, BI-LEVEL	OASIS #P8ACSL	--	--	McGUIRE #157	McGUIRE #8872	--	--	1/2"	
P-11a	APPLIANCE CONNECTION	GUY GRAY #BIM 875	--	--	--	--	--	--	1/2"	
RD	ROOF DRAIN	WADE #3000-52-53-AE	--	--	--	--	2'-8"	--	--	

1 PROVIDE ONE (1) "SLOAN" #EL-154 TRANSFORMER ABOVE CEILING FOR EACH BATTERY OF INFRARED FLUSH VALVES.

Plumbing Equipment Schedule

RPZ-1 and 2: REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY Febco 860 2-2" Reduced pressure zone backflow preventer assemblies with gate valves and flanged bronze strainers. Mount valves inside mechanical room. Provide 2" inlet and outlet headers for RPZ assembly connections, 12" min. to 30" max. aft. See detail.

SP-1: SUMP PUMP (elevator pit) Myers #SSM331, cast iron pump body, 15 gpm @ 19 ft. hd., 1/2 HP, 115 v/10 Thermoplastic impeller. Oil filled motor in sealed waterproof housing, has built in overheat protection. Mechanical shaft seal has hard ceramic seal and carbon rotating element. Motor shaft is stainless steel. Automatic mercury-free vertical level control switch.

SP-2: SEWAGE EJECTOR (Mechanical Room Drain) Myers #3MN (provide two, duplex) non-clog sewage ejectors, 2 1/2" solids handling, cast iron body, 60 gpm @ 20 ft. hd., 1750 rpm, 1 HP each, 208 V/30. Provide #CE-235W control panel. Provide 48" x 60" deep fiberglass basin with steel top. See detail.

SP-3: SUMP PUMP (Rainwater Tower Drain) Myers #ME-150 (provide two, primary / auxiliary) effluent pump, cast iron body, 115 gpm @ 20 ft. hd., 1750 rpm, 1/2 HP EACH, 208 V/30. Provide float switch for auxiliary pump. Provide 48" x 60" deep fiberglass basin with steel top. See detail. Provide a #CE23-DW control panel. Main pump shall turn "ON" with manual switch in lower stairway (see plan), interlocked thru control panel. Auxiliary pump shall be "ON-OFF" with float switch in tank basin, interlocked thru control panel.

GW-1: GREY WATER FILTER / TREATMENT Reclaim Filters and Systems SYSTEM III with self purging vortex filter particulate separator, 25 micron cleanable inlet basket strainer primary filter, 5 micron replaceable micro-pore bag filter secondary filter, 5 hp/65 gpm @ 65 psi primary pump, 3" FNPT water inlet, 2" FNPT water outlet.

System includes: Ozone Recirculation System providing 99% transfer rate of ozone to reaction tank, 1.5 hp/30gpm @40 psi recirculation pump, cleanable basket strainer inlet filtration, 20 gpy ozone injection fed thru venturi injector, high efficiency corona discharge method of ozone generation, 1" ozonated water outlet to reaction tank.

Provide filtration treatment unit with a 6.7 cfm @ 125 psi air compressor, 1.5 hp, 8 gallon tank, 208v/30.

Entire package shall be single point electrical connection for 208v/30. Unit shall have integral step down transformer for 115 volt electrical requirements.

DWS-1: DEDICATED DRINKING WATER SYSTEM Filtrine #ES-25-RFC, 4,000 btuh cooling, fan cooled, 45" discharge water, 1/2 hp hermetic compressor, 25 gallon stainless steel cooling tank and evaporator with immersion coil evaporator, 1/2 hp pump motor rated at 8 gpy @ 35 psi, adjustable thermostat, insulated tank and water lines, 18 ga. enameled aluminum cabinet, biodegradable element and deep bed carbon purifier filter, UV sterilizer, dial thermometer, filter change light, UV intensity meter, 115v/10.

GI-1: OIL INTERCEPTOR WADE #RS0-25, fabricated steel, integral 50 gallon storage compartment, anti-skid gasketed cover, removable baffles, acid resisting coating, threaded inlet and outlet. Verify depth required and provide extension as required.

GAS WATER HEATERS

MARK	MFR. & MDL.	BTUH INPUT	RECOVERY		STORAGE CAP. GAL.	FLUE SIZE	REMARKS
			GPH	RISE			
GWH-1	A.O. SMITH #BTR-180	180,000	170	100	80	6"	PROVIDE CORRECT T&P RELIEF VA.; ALL REQUIRED CONTROLS; AUXILIARY DRAIN PAN
GWH-2	A.O. SMITH #PCGC-40	40,000	75	90	40	3"	PROVIDE CORRECT T&P RELIEF VA.; ALL REQUIRED CONTROLS; AUXILIARY DRAIN PAN

NOTE: PROVIDE MFR'S. THERMAL EXPANSION TANK ON EACH HEATER COLD WATER INLET. PROVIDE AUXILIARY DRAIN PAN UNDER EACH HEATER.

NOTES:

PROVIDE RAYCHEM "HWAT" #Y-2 HOT WATER TEMPERATURE MAINTENANCE SYSTEM FOR DOMESTIC HOT WATER PIPING.

PROVIDE TWO (2) CIRCUITS - (EAST RISER AND WEST RISER). BEGIN SYSTEM #1 AT WATER HEATER GWH-1 AND EXTEND THRU BUILDING TO SERVE WEST SIDE MAIN LAVATORIES. BEGIN SYSTEM #2 AT TEE-OFF TO EAST RISER IN BASEMENT AND EXTEND UP THRU BUILDING TO SERVE EAST SIDE MAIN LAVATORIES.

TERMINATE "HWAT" SYSTEMS AT TOP OF RISERS AND AS INDICATED ON PLANS.

WATER HEATER GWH-3 SHALL HAVE "HWAT" (CIRCUIT #3) INSTALLED FROM THE HEATER, FOR THE ENTIRE LENGTH OF THE H.W. RISER ONLY (INCLUDING BRANCHES).

WATER HEATER GWH-2 SHALL HAVE "HWAT" (CIRCUIT #4) INSTALLED FROM THE HEATER, FOR THE ENTIRE LENGTH OF THE H.W. RISER AND THE BRANCH RUN-OUT ON THE 4th FLOOR.

SEE ELECTRICAL FOR POWER CONNECTION.

