

DESIGN NARRATIVE

Electrical

GENERAL

The work performed and materials used in this project shall be furnished and installed in accordance with all applicable Codes and Ordinances of the Cochise County, AZ and any County Construction Standards as if herein written.

UTILITY SERVICES

- The electrical service shall be 400-amp meter.
- Main and distribution on the exterior of the building coordinated with existing APS facilities and shall include the pad for the service transformer.
- There shall be 2 - 200 amp / 3 pole over current devices to feed 2 - 200 amp panels, one each adjacent to the entry doors. The left panel shall serve the Wood Shop, Metal Shop, HVAC Shop and Paint Shop and the right panel shall serve the balance of the building.
- Fault current calculations for service and distribution shall be based on the APS fault current calc's and all feeders shall be copper, no aluminum permitted.

TELEPHONE And DATA

- Provide a 4' X 8' x 3/4" plywood backboard with ground and 3 - 2" empty conduits stubbed out of building to a point of connection as directed by the respective utility company.

LIGHTING

- All of the light fixtures in the building shall be chain hung to the height as directed except in the areas with ceiling including Plans, HVAC Office, Break Room, Toilets and hallway.
- In the Shop spaces use 4 foot long industrial light fixtures, similar to Lithonia # UTIF-L48-SEF-6000LM-MVOLT-35K-80CRI-WH.
- In shop spaces, provide one fixture for approximately every 60 square feet rounded up to the next even quantity.
- In the Storage and Supply spaces use 4 foot long strip light fixtures, similar to Lithonia # ZL1D-L48-SMR-5000LM-FST-MVOLT-35K-80CRI-WH WITH 148 REFLECTOR.
 - In the Storage and Supply spaces, provide one fixture for approximately every 80 square feet rounded up to the next even quantity.
- In the area with ceiling use 2' X 4' surface light fixtures, similar to Lithonia # CPX-2X4-4000LM-MVOLT-35K-80CR-A12-ZTI-WH.
- In the area with ceiling provide one fixture for approximately every 50 square feet round up to the next even quantity.
- In the Hallway, Toilet Rooms, etc (what does etc mean?). use 11" diameter surface light fixtures, similar to Juno # JSF-11IN13LM-35K-90CRI-120FRPC-WH.

- In the Hallway, Toilet Rooms, other rooms where applicable, a fixture for approximately every 25 square feet rounded up to the next even quantity.
- Controls and maximum light fixture quantity shall meet the requirement of 2018 I.E.C.C. energy code.
- The lighting controls shall be bi-level switching or vacancy sensor control as required in Section C405.2 including automatic building shut-off as required.
- The exterior security lighting shall include 5 full cut-off wall pack light fixtures similar to Lithonia # WSTM LED-2A-30K-120-PE-COLOR mounted at approximately 15 feet above the finished ground uniformly along the wall with doors and walkways.

POWER & COMMUNICATIONS

- In the Shop Spaces provide duplex receptacles around the entire perimeter of the space approximately 12 feet on center and at 3'-6' above the floor to allow for work benches.
- In the Storage and Supply Spaces provide a duplex receptacle adjacent to the entry door and around the perimeter of the space at 25 feet on center and at 1'-6" above the floor.
- In the Office, Plans, and Break rooms provide duplex receptacles around the entire perimeter of the space approximately 15 feet on center and at 1'-6' above the floor.
- Provide one duplex receptacle in each toilet room and the janitor closet, 8 duplex receptacles spaced throughout the corridors & shipping/receiving areas and one weatherproof GFIC duplex receptacle on the exterior of the building at each doorway.
- Include power connection to owner's furnished equipment including:
 - Quantity 2 – 50 amp welders
 - Quantity 1– 30 amp compressor
 - Quantity 2– 30 amp table saws
- Include 10 communications outlets consisting of:
 - A box with blank plate and 3/4" conduit only stubbed up to within 6" of roof located throughout the building as directed.

Refer to Design Narrative for the Mechanical and Plumbing systems and include the complete electrical connection to all equipment described therein

