

GENERAL TRADES SPECIFICATIONS

1.) INSULATION - UNDER SLABS-ON-GRADE
Extruded polystyrene board insulation to comply with ASTM C-578, type IV, 1.5 lb/cu. ft. minimum density, thickness as indicated.

2.) CONCRETE
Concrete shall develop strength in 28 days as follows.

Table with 2 columns: Location, Strength (PSI). Rows: Foundations (3000), Slabs (4000).

All reinforcing steel bars shall conform to ASTM A-615, GRADE 60. All welded wire fabric shall conform to ASTM A-185.

Compressible filler to be preformed strips of asphalt saturated fiberboard complying with ASTM D1751.

3.) PRECAST CONCRETE MUD/GREASE TRAP WITH INTEGRAL TOP

Precast concrete MUD/GREASE TRAP complete with integral top cast with one (1) NEENAH No. R-1690 manhole frame, solid self-sealing lid with recessed lift ring - medium traffic and one (1) NEENAH No. R-4899 angle frame, & No. R-4859-C drainage grate. Size of precast unit as shown.

3A.) PRECAST EXTERIOR TRENCH DRAIN

Trench drain shall be ACO Drain, Channel Slope

- 2 #W 100-9 Channels
2 #W 100-10 Channels
2 #900C Catch Basins
2 #106 Closing End Caps
10 #460 Cast Iron Half Length Grates
10 #B11 Locking devices

Manufacturer: ACO Polymer Products, Inc.
57 E. Washington St.
Chagrin Falls, OH. 44022
Tel. No. (216) 247-2033

4.) MISCELLANEOUS STEEL

All structural shapes, plates and bars shall conform to ASTM A-36

5.) SEALANTS

FLOOR:
One part non acid-curing silicone, color to match substrate.
Manufacturer: Dow Corning 888
PREFAB BUILDING:
Prefabricated building envelope sealants by manufacturer.

6.) PAINTING

INTERIOR:

MISCELLANEOUS STEEL, HOLLOW METAL CONDUIT

Preparation: Point only clean, dry surfaces. Remove all grease, oil, dirt or other foreign matter by solvent or detergent washing. Must conform to SSPC - SP1.
Finish: Primer - Porter Paint Co. 4336 M.C.R. - 43 High Build Epoxy Primer @ 3.0 - 5.0 mils D.F.T.
Topcoat - Porter Paint Co. 46 Series Aliphatic HYTHANE @1.5 - 2.0 mils D.F.T. Color to be White.

EXTERIOR:

MISCELLANEOUS STEEL AND HOLLOW METAL DOORS AND FRAMES

Preparation: Point only clean, dry surfaces. Remove oil, grease, oil, dirt or other foreign matter by solvent or detergent washing. Must conform to SSPC - SP1.
Finish: Primer - Porter Paint Co. 4336 M.C.R. - 43 High Build Epoxy Primer @ 3.0 - 5.0 mils D.F.T.
Topcoat - Porter Paint Co. 46 Series Aliphatic HYTHANE @1.5 - 2.0 mils D.F.T. Color to be #25988 Dark Gray

MECHANICAL TRADES SPECIFICATIONS

1.) AIR FILTER, REGULATOR AND SOLATION PADS

Filter: Watts Model #F602-04-BJ or Milton Model #1120-B-1/2"
Regulator: Watts Model #R119-04-CG or Milton Model #1115-B-1/2"
Isolation Pads: 4"x4"x5/8" thick Fabripryl - By Karlund Dynamics Corp.
Address: Cantigue Road
P.O. Box 235
Westbury, N.Y. 11590
Tel. No. (516) 333-7580

2.) DOUBLE CHECK BACK FLOW PREVENTER

Double check backflow preventer shall be Watts, model no. 909 or approved equal manufacturer - Rockwell.

3.) WATER SHOCK ABSORBER

Watts Regulator Model No. 15-1 1/2"

4.) ELECTRIC WALL HEATER

Electric wall heater to be 1500 watt, 120 volt, single phase with built-in thermostat, over temperature cut-out, and automatic reset.

Manufacturers: Electromode Inc. Morley Electric Heating Co.
Cat. No. EWA-151 Q'mark Cat. No. CWH-151-1
Surface Mtg. Box Cat. No. 8754 Surface Mtg. Frame Cat. No. CMH-SM1

5.) RAY HEATER - CEILING HUNG

Contractor to consult owner's field representative to determine whether gas or electric heaters should be installed.

Electric Unit Heaters:

Electric bay heater to be Inceeco Triad series, 2-7.5 KW with built-in controls, UL listed for corrosive areas and NEMA 4x hose down requirements. Heater to be forced fan type with voltage and phase as follows:

A.) For single phase service
240 volt, single phase heater, 32 amps
240 volt, single phase motor, 2 amps
Inceeco Cat. No. 234-U11N-0080J

B.) For three phase service
208 volt, three phase heater, 21 amps
120 volt, single phase motor, 3 amps
Inceeco Cat. No. 234-U11N-0080D

Heating elements to be type 304 stainless steel of finned tube construction with stainless steel fittings, shroud and covered outlet grille.

The following controls are to be built-in and factory pre-wired in the NEMA 4x enclosure:

- A. Thermostat with external adjustable knob - Set #1040T, set #2045F
B. Three position selector switch
C. Pilot light to indicate when heating elements are energized
D. Secondary manual reset thermal cutoff

Gas Unit Heaters:

Gas units to be Modine #PA50SF0108 115 Volt single phase 50K BTU/HR heaters which include a combination automatic gas valve and spark ignition controller, overhead control, low voltage transformer, fan timer, and an intermittent pilot without lockout. Unit to have stainless steel heat exchanger, TEFC motors, horizontal and vertical louvers.

6.) PIPING AND ACCESSORIES

A1.) All storm and vent piping above and below ground shall be schedule 40 polyvinyl chloride plastic pipe, type DWV; PVC plastic type DWV socket type fittings, solvent cement joints. Do not run pipes under drains. Color of pipe to be White.

A2.) All sanitary piping below ground shall be CAST-IRON soil pipe, ASTM A74, extra-heavy weight, RUB-AND-SP/GOT soil pipe and fittings. Pipe to concrete mud/grease trap resilient connector, to meet ASTM C-923.

B. All cold water piping and pipe fittings size 2" and smaller above ground shall be copper tube type L, hard-drawn temper, wrought copper fittings with solder joints.

C. All cold water piping and pipe fittings size 2" and smaller below ground shall be copper tube type K, soft-tempered temper, wrought copper fittings with solder joints. Do not run pipes under drains.

D. All cold water shutoff valves 2" and smaller shall be gate valves, class 150, bronze with solid wedge disc, rising bronze stem, solder joint, screwed bonnet as manufactured by Crane Cat. no. 1324 or Niaco.

E. All cold water ball valves 2" and smaller shall be class 150, bronze with solder ends as manufactured by Crane No. 9322 or equal.

F. Hose bibb shall be 3/4" cast brass Watts Regulator Co. Model No. SC-6 w/hex shoulder and tee handle.

G. All compressed air piping shall be schedule 40, seamless black steel with threaded pipe fittings for minimum 300 psig. Shut-off valve for compressed air service shall be ball valves, 200 psi as manufactured by Crane no.2180 or approved equal.

H. All storm and cold water pipe insulation shall be 1-1/2" Armstrong Armaflex II pipe insulation provided with Armstrong 520 adhesive for joints, Armaflex protective finish and additional vapor barrier protection for high humidity conditions.

I. All spaces around pipes passing through wall shall be tightly sealed for leakproof conditions.

J. The contractor shall perform all testing prior to operation of cold water, san, sewer, and air piping system in order to provide proper operation. All piping shall be checked for any leaks. All systems shall be installed in accordance with federal, state, local, codes, ordinances, or laws having jurisdiction. Testing shall be per owners specifications.

ELECTRICAL TRADES SPECIFICATIONS

1.) The electrical contractor shall visit the site to familiarize himself with existing conditions. No additional compensation shall be awarded due to unfamiliarity.

2.) The electrical work shall be installed in accordance with the national electrical code, laws and ordinances of city, county, and state authority.

2A.) It is the responsibility of the contractor to inform the owner's representative of any hazardous situation that may result from implementation of these plans, so that corrective measures may be taken.

2B.) It is the responsibility of the contractor to clearly and permanently label each breaker in the new panel.

3.) The electrical contractor shall secure and pay for all permits and inspections required to perform the electrical work.

4.) Co-ordinate work with the other trades for space requirements, discrepancies or conflict of work. The electrical contractor shall be responsible for cutting and patching required for the installation of the electrical work.

5.) Conduit shall be galvanized rigid steel or type 40 heavy wall PVC where permitted by local jurisdiction. Final motor connections shall be in liquidtight flexible metal conduit.

5A.) All outside and underground conduits to be heavy metal wall galvanized pipe fitted with appropriate seal-off devices, # of wires and wire sizes as indicated on drawings. The minimum burial depth to be 24" below finished grade. A layer of sand backfill must be applied to surround and cover the conduits before soil backfill is used to fill conduit trenches. All trench backfill must be mechanically tamped and leveled prior to surface finishing.

5B.) The contractor will have the responsibility to route conduits to avoid excessive heat from heaters.

6.) Seal openings around conduit penetrations of roofs and walls.

7.) Wire #12 AWG minimum except where noted otherwise, shall have stranded copper conductors with type THWN/THHN oil and gas resistant insulation.

8.) Wiring device cover plates shall be stamped sheet metal, unless indicated otherwise.

9.) Verify service entrance requirements with local utility company and owners representative, if not fed from Kiosk Building.

10.) Lighting Fixtures:

A Metal halide fixture, corner mounted, Whiteway catalog no. RL-250-SMH-WT 120 volts, furnished by owner; installed and connected by electric contractor.

B Incandescent fixture, surface mounted w/ 1-100w lamp Porcelain lampholder by G.E., or equal.

C Fluorescent fixture, strip type, mounted in light box, Whiteway #6 ESL-1HO-WHT-120 volts, furnished by owner; installed and connected by electrical contractor. Install F96T12/CW/1HO lamp included w/fixture.

D Fluorescent fixture, strip type, mounted in light box, Whiteway #6 ESL-1HO-WHT-120 volts, furnished by owner; installed and connected by electrical contractor. Install F72T12/CW/1HO lamp included w/fixture.

E Area Fixtures: Whiteway Lebaron LR-400-SMH fixture with solar lens, 240V, 400W with lamp, silver finish with a 16 foot pole #502-511-SGL/SILVER, a 1 foot arm/SILVER and a base plate cover.

11.) Switches:

S Switch, SPST, 20A-120/277 V-A.C., Hubbell catalog no. 1221-Gray, mounted 4"-0" A.F.F.

12.) Receptacles:

R Receptacle, duplex, 20A-125 V-A.C., Hubbell catalog no. 5362-Gray, mounted 4"-0" A.F.F.

Rwp Receptacle, duplex, 20A-125 V-A.C., Hubbell catalog no. 5362-Gray, with weatherproof cover, mounted 4"-0" A.F.F.

Rbr Receptacle, duplex, 20A-125 V-A.C., Hubbell catalog no. GF-5362-GY, gray, mounted 4"-0" A.F.F. ground fault type.

13.) Junction Box's:

KILL Switch JB: 3 1/2"H x 3 1/4"W x 2 3/4"D Water Proof Chem. Inj Syst.: 4"H x 4"W x 2 1/8"D Standard Kiosk JB: Manufactured by Wiegmann 1 JB Mod. No. B12126 w/ 2 #WA 12 JBR terminal block strips & 2 WA 12 JMA bracket assemblies Treadle/Air Switch JB: 4" x 4" x 2 1/8" Water Proof Code-a-Wash II JB: 4" x 4" x 2 1/8" Water Proof Lighting Circuit JB'S: 4" x 4" x 2 1/8" Water Proof

14.) Lighting Contactor:

Square "D" #LG-40

15.) Lighting Contactor:

ARCO Type R 240 Volt Arco Electric P.O. Box 278 Shelbyville, Indiana 46176 1-800-428-4370 NOT TO BE USED AT VOYAGER INSTALLATION LOCATIONS

BP OIL COMPANY
RETAIL MARKETING
DESIGN AND ENGINEERING
200 PUBLIC SQUARE
CLEVELAND, OHIO 44114
3620 ROLLOVER CAR WASH
RIGHT HAND ENTRANCE
CONSTRUCTION SPECIFICATIONS
DWG. No.: 4-3620'S 1/7 REV.: 3
SCALE: AS NOTED MADE BY: BMD (92%)
DATE: APRIL 25, 1989 CHECKED BY: R.C.B.
REVISIONS DATE DWN CKD
COMBINATION VOYAGER AND NON-VOYAGER PACKAGE 4-17-89
MUD/GREASE TRAP 4-28-89
ELECTRICAL REVISIONS 6-1-89