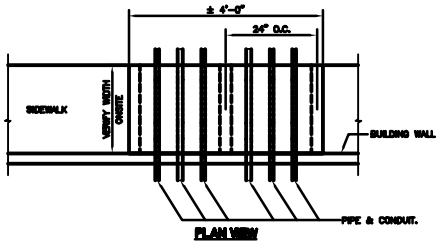
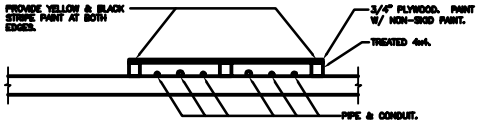
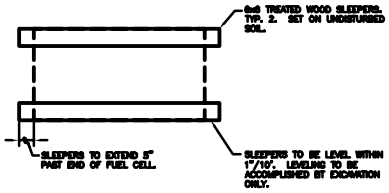


PLAN VIEW



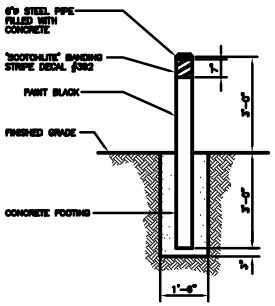
SIDE VIEW

1/1A PIPE AND CONDUIT WALK-OVER DETAIL
SCALE: NONE



NOTE: SEE FUEL CELL INSTALLATION INSTRUCTIONS FOR COMPLETE INFORMATION ON MOUNTING.

2/1A FUEL CELL MOUNTING
SCALE: NONE



3/1A BOLLARD DETAIL
SCALE: NONE

MECHANICAL SPECIFICATIONS

15050 BASIC MATERIALS AND METHODS

1. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING INSTALLATION AS INDICATED IN DRAWINGS, SPECIFICATIONS, REQUIREMENTS AND INSTRUCTIONS TO BIDDERS.
2. ANY QUESTIONS CONCERNING SCOPE OF WORK SHALL BE SUBMITTED TO OWNER PRIOR TO BID.
3. ALL WORK AND MATERIALS SHALL CONFORM TO APPLICABLE CODES, REGULATORY AGENCIES, AND STANDARDS, INCLUDING BUT NOT NECESSARILY LIMITED TO UBC, IMC, UPC, UFC, NEC, OSHA, NFPA, ETC. INFORM OWNER OF CONFLICTS PRIOR TO BID. WHERE TWO CODES OR STANDARDS DIFFER, THE MORE STRICT OF THE TWO SHALL BE FOLLOWED.
4. CONTRACTOR SHALL SUPPLY AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS REQUIRED BY PUBLIC AUTHORITIES HAVING JURISDICTION.
5. COORDINATE AND SCHEDULE ALL WORK WITH THE OWNER AND OTHER TRADES PRIOR TO START. THE LOCATION OF WORK IS WITHIN AN OCCUPIED AND FULLY OPERATIONAL BUILDING. ALL EFFORTS OF INSTALLATION WORK MUST BE COMMUNICATED, REVIEWED, APPROVED, AND SCHEDULED. CONTRACTOR SHALL LIMIT NOISE, DUST, FUMES, SHUT DOWNS, WORKING HOURS, ETC. AS REQUIRED BY OWNER.
6. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS, BENDS, ELBOWS, TURNS, EXISTING CONDITIONS, ETC. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DRAWINGS, INSTALLATION CONDITIONS AND COORDINATION WITH OTHER TRADES AS REQUIRED. PROVIDE ADDITIONAL BENDS AND OFFSETS REQUIRED FOR COMPLETE INSTALLATION AT NO ADDITIONAL COST TO OWNER.
7. CONTRACTOR RESPONSIBLE TO REPLACE ANY DAMAGED ITEMS WITH NEW MATERIAL TO MATCH EXISTING WHEN DAMAGE RESULTS DURING THE PROCESS OF INSTALLATION.
8. ALL WORK SHALL BE DONE IN FIRST CLASS, WORKMANLIKE MANNER. ALL EQUIPMENT AND MATERIALS PROVIDED SHALL BE NEW AND CONFORM TO ALL CURRENT CODES AND APPROVAL AGENCIES HAVING JURISDICTION. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. PERFORM ALL LUBRICATION REQUIREMENTS PRIOR TO STARTING EQUIPMENT.
9. COMPLETE MATERIAL AND LABOR WARRANTY SHALL APPLY FOR NO LESS THAN ONE YEAR FROM DATE OF OWNER ACCEPTANCE, UNLESS OTHERWISE REQUIRED BY TERMS OF CONTRACT.
10. PROVIDE OWNER INSTRUCTION BY QUALIFIED PERSONNEL ON EQUIPMENT AND SYSTEMS AT OWNER'S REQUEST.
11. ELECTRIC MOTORS SHALL HAVE BUILT-IN THERMAL OVERLOAD PROTECTION OR BE PROTECTED EXTERNALLY WITH SEPARATE THERMAL OVERLOAD DEVICES, WITH LOW-VOLTAGE RELEASE OR LOCK OUT AS REQUIRED.
12. SUBMIT 8 COPIES OF SUBMITTAL LITERATURE ON ALL MATERIAL AND EQUIPMENT FOR REVIEW PRIOR TO INSTALLATION.
13. SUBMIT 4 COMPLETE, INDEXED COPIES OF OPERATION AND MAINTENANCE LITERATURE INCLUDING PARTS LISTS, AND WIRING DIAGRAMS.

15400 PLUMBING

1. PIPE, FITTINGS AND VALVES: DOMESTIC WATER, HEAT RECOVERY & CONDENSATE DRAIN: TYPE L COPPER WITH BRAZED JOINTS WITH 95/5 SOLDER JOINTS ALLOWED IN MECH. ROOM. GAS: STEEL PIPE SCHEDULE 40 JOINTS: SCREWED.
2. PIPE INSTALLATION: CONNECT TO EXISTING HOT AND COLD WATER SYSTEM AS SHOWN. GRADE MAINS AND RUNOUTS TO DRAIN WHERE POSSIBLE. PIPE INSULATION: WRAP ALL PIPES WITH FIBERGLASS INSULATION AND ALUMINUM JACKET TO MEET CURRENT CODE REQUIREMENTS. HEAT TRACED RAY-CHEM 5W/FT SELF REGULATING OR EQUAL.

REGISTERED PROFESSIONAL ENGINEER
EDWARD A. CARLILE
EXPIRES 12/31/05

R&W ENGINEERING, INC.
Engineering Integrated Systems

PROJECT NUMBER
147.008.001
CONTACT: ED CARLILE

REV	DATE	DESCRIPTION	BY

HARKINS HOUSE
PLUG POWER FUEL CELL

DESIGNED	EAC
DRAWN	SMB
CHECKED	EAC
DATE	05/08/03

DRAWING NO.
M2

SHEET 2 OF MSHT