

FEE \$	10.00
TCP \$	—
SIF \$	—

PLANNING CLEARANCE

(Single Family Residential and Accessory Structures)

Community Development Department

BLDG PERMIT NO. _____

13899-8699

Building Address 745 HORIZON DRIVE

Parcel No. 2701-364-00-122

Subdivision _____

Filing _____ Block _____ Lot _____

No. of Existing Bldgs 1 No. Proposed 1

Sq. Ft. of Existing Bldgs 2162' Sq. Ft. Proposed 44'

Sq. Ft. of Lot / Parcel 58806.0'

Sq. Ft. Coverage of Lot by Structures & Impervious Surface (Total Existing & Proposed) 58806.0'

Height of Proposed Structure 5.0'

OWNER INFORMATION:

Name WESTERN STATES MOTEL OPERATIONS INC

Address 755 HORIZON DRIVE

City / State / Zip GRAND JUNCTION, CO 81506

DESCRIPTION OF WORK & INTENDED USE:

New Single Family Home (*check type below)

Interior Remodel Addition

Other (please specify): GREEN INJECTION HOUSING UNIT

APPLICANT INFORMATION:

Name ENVIRONMENTAL AUDIT & ASSESSMENT, INC

Address 225 W 5TH STREET, SUITE #8

City / State / Zip GRAND JUNCTION CO 81501

Telephone 970-245-5897

***TYPE OF HOME PROPOSED:**

Site Built Manufactured Home (UBC)

Manufactured Home (HUD)

Other (please specify): GREEN INJECTION HOUSING TRAILER

NOTES: see attached

REQUIRED: One plot plan, on 8 1/2" x 11" paper, showing all existing & proposed structure location(s), parking, setbacks to all property lines, ingress/egress to the property, driveway location & width & all easements & rights-of-way which abut the parcel.

THIS SECTION TO BE COMPLETED BY COMMUNITY DEVELOPMENT DEPARTMENT STAFF

ZONE C-1 process

Maximum coverage of lot by structures _____

SETBACKS: Front _____ from property line (PL)

Permanent Foundation Required: YES _____ NO

Side _____ from PL Rear _____ from PL

Parking Requirement no change

Maximum Height of Structure(s) _____

Special Conditions state how long trailer will be at location. - it will be removed April-2007

Voting District _____ Driveway Location Approval _____
(Engineer's Initials)

Modifications to this Planning Clearance must be approved, in writing, by the Community Development Department. The structure authorized by this application cannot be occupied until a final inspection has been completed and a Certificate of Occupancy has been issued, if applicable, by the Building Department (Section 305, Uniform Building Code).

I hereby acknowledge that I have read this application and the information is correct; I agree to comply with any and all codes, ordinances, laws, regulations or restrictions which apply to the project. I understand that failure to comply shall result in legal action, which may include but not necessarily be limited to non-use of the building(s).

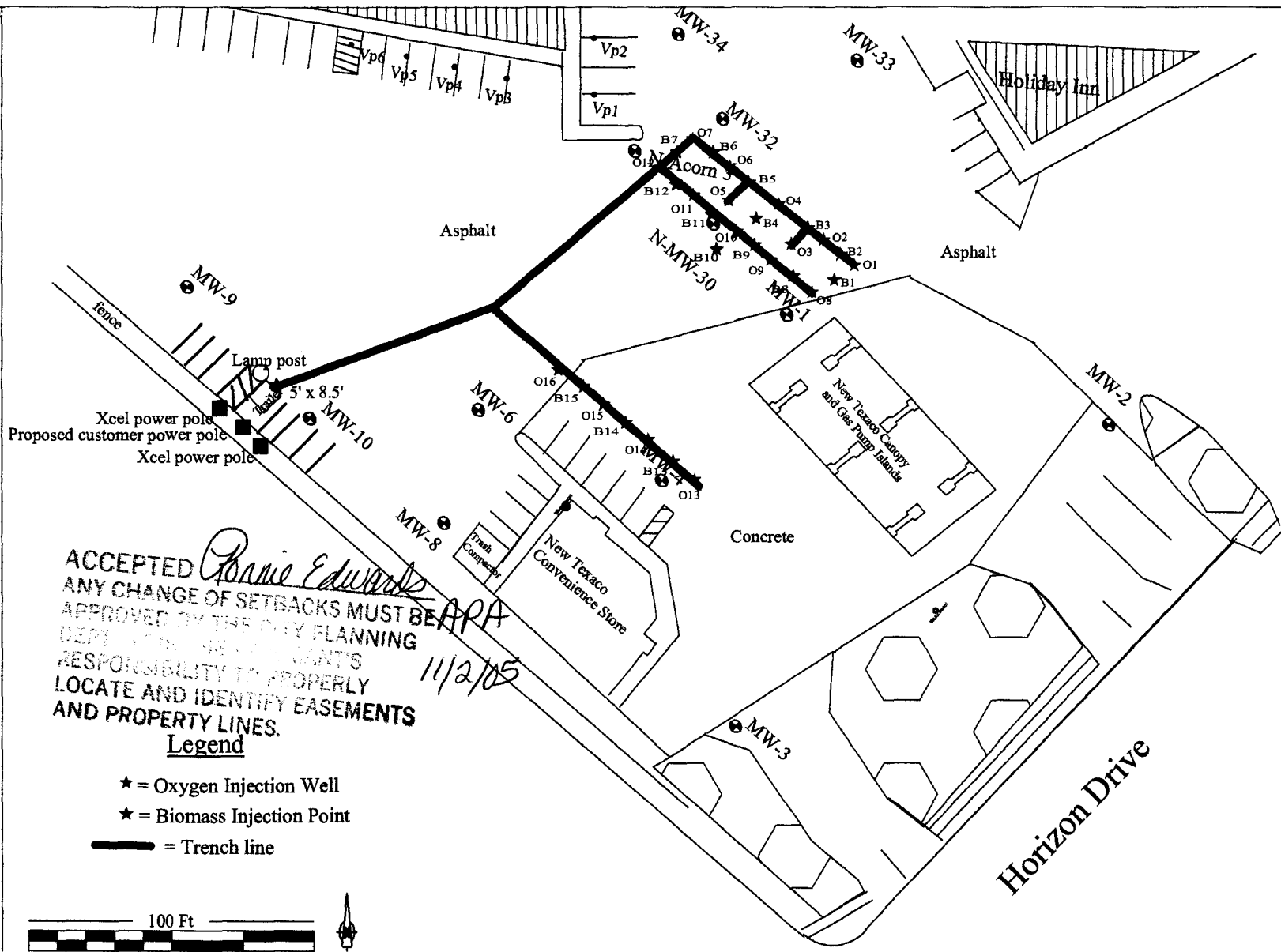
Applicant Signature [Signature] Date Nov 2, 2005

Department Approval Ronnie Edwards APA Date 11/2/05

Additional water and/or sewer tap fee(s) are required:	YES	NO <input checked="" type="checkbox"/>	W/O No. <u>injects oxygen to clean groundwater</u>
Utility Accounting <u>CM Cole</u>	Date <u>11/2/05</u>		

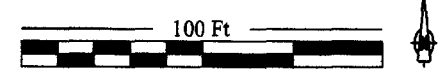
VALID FOR SIX MONTHS FROM DATE OF ISSUANCE (Section 2.2.C.1 Grand Junction Zoning & Development Code)

(White: Planning) (Yellow: Customer) (Pink: Building Department) (Goldenrod: Utility Accounting)



ACCEPTED *Ronnie Edwards*
 ANY CHANGE OF SETBACKS MUST BE
 APPROVED BY THE CITY PLANNING
 DEPARTMENT. THE CITY HAS NO
 RESPONSIBILITY TO PROPERLY
 LOCATE AND IDENTIFY EASEMENTS
 AND PROPERTY LINES.
 11/2/05

- Legend**
- ★ = Oxygen Injection Well
 - ★ = Biomass Injection Point
 - = Trench line



Environmental, Audit & Assessment, Inc.
 225 N 5th St. Suite #8
 Grand Junction, CO 81501
 Phone: (970) 245-5897

**Oxygen & Biomass
 Injection Layout Map**
 745 Horizon Drive
 Grand Junction, CO

Drawn By: Sean Norris
Revised by: Elisa Dunning
Scale: Bar Scale as shown
Date: September 2004

To be in place until April of 2007 -

specific conditions. Dissolved oxygen and oxidation-reduction potential (ORP) are monitored for system optimization and as indicators of biomass growth and contaminant utilization. Dissolved inorganics, such as ferrous iron, are often found at high concentrations at contaminated sites and will precipitate in an aerobic environment. However, ferrous iron is formed by obligate anaerobic bacteria, which are intolerant of oxygen and become inhibited once oxygen is introduced to groundwater. The available ferrous iron that precipitates in the formation does not result in fouling because the mass is not concentrated as with pumping systems.

Remediation System Specifications

Oxygen injection is proposed for biostimulation of the groundwater VOC plume with injection points located within an estimated 70 foot square area encompassing monitoring well MW30. Based on the geologic conditions, described as silty sand and weathered shale, injection points will be installed at the top of competent bedrock, located at approximately 17 feet bgs, using hollow stem auger drilling. A total of 16 oxygen injection points will be spaced in a 15 foot grid pattern. The close spacing is proposed for an aggressive cleanup and to compensate for the low permeability of the soils. In addition to oxygen injection, bioaugmentation is also proposed as discussed in a proceeding section.

Each injection point will consist of one-inch diameter SCH40 PVC pipe with a one foot section of .010 slotted screen above a one foot sump. A silica sand pack will be installed to a depth of two feet above the screened interval. A bentonite seal will be placed from the top of the sand pack to the groundwater interface for sealing the point.

Oxygen will be delivered to each point through ½ -inch ID HDPE tubing rated for 125 PSI. The tubing will be installed below ground in shallow trenches (2 fbg) and terminate in a two-foot square well vault located beneath the trailer. The injection points will be finished below grade with a PVC male adaptor, threaded tee and riser to the ground surface as shown in the attached construction detail. The top of the riser will be capped and a flush mount curb box will be installed for protection. A concrete pad will be installed around each curb box using 18-inch diameter sonotubes. Surface access to the injection points is required for monitoring and flushing of the points, if necessary.

Oxygen Injection System

Matrix Environmental will provide a turnkey oxygen injection system with an oxygen production capacity of 30 standard cubic feet per hour (SCFH) and oxygen delivery system for 16 injection points. Purchase or lease of the system includes an unlimited use license which means the owner of the system has the right to use the system at any remediation site in compliance with our patent. The power requirement is 50-amp 120-volt single-phase electric supply.

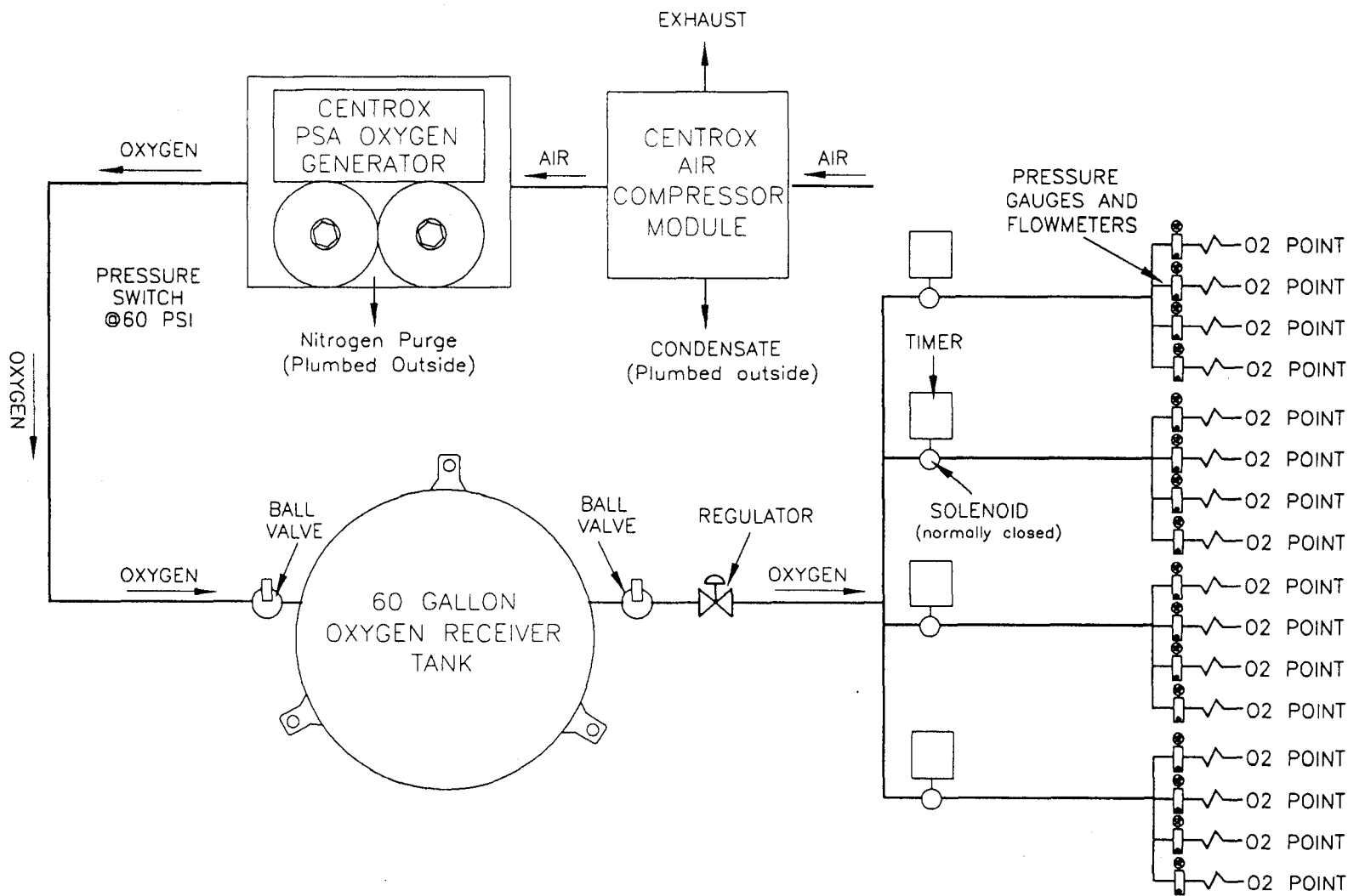
- Five foot by 8.5 foot insulated cargo trailer with rear double doors, heating, ventilation and inside lighting.

- AirSep Centrox oxygen generator with a 60-gallon surge tank and regulator. The generator produces 30 SCFH of oxygen at 90-95% purity. Single phase/60 Hz/120 volts.
- Compressor assembly included with oxygen generator (two oil-less compressors rated for 15,000 hours).
- Oxygen purity alarm and oxygen analyzer (real-time percent oxygen meter).
- Manifold for 16 injection points to include individual pressure gauge (0-30 PSI) and Dwyer variable area flow meter (10-100 SCFH).
- Four adjustable timers and solenoid valves (per set of four points) to control oxygen flow for pulse injection.
- 125-amp electrical panel (NEMA 1 load center) with breakers located inside the trailer. All wiring is copper in Liquid-Tight flexible conduit (steel jacket) or UL listed SCH40 PVC rigid electrical conduit.
- Fully integrated remediation system with all plumbing, electrical, and mechanical components installed.
- All pressure tanks are ASME National Board Certified.
- One-year warranty on AirSep PSA and any defective component (i.e. solenoid valves, timers, flow meters etc.).
- Operations manual with plumbing and instrumentation diagrams.

On-Site Installation and Startup

The following tasks will be completed by Matrix Environmental after EAA installs the injection points, oxygen delivery tubing and power supply:

- Shipping system to the site by common carrier. Unloading with forklifts is the responsibility of EAA.
- Inspection of the all major components and connections for proper operation and safety.
- Connection of the underground oxygen delivery tubing to the oxygen delivery manifold using flexible tubing and quick disconnects.
- A certified electrician, if required by the local electrical code, **is not included** for connection of the 120-volt single-phase power supply to the electrical panel supplied with the system.
- Startup of the system and testing of all major components (i.e. pressure, voltage etc.).



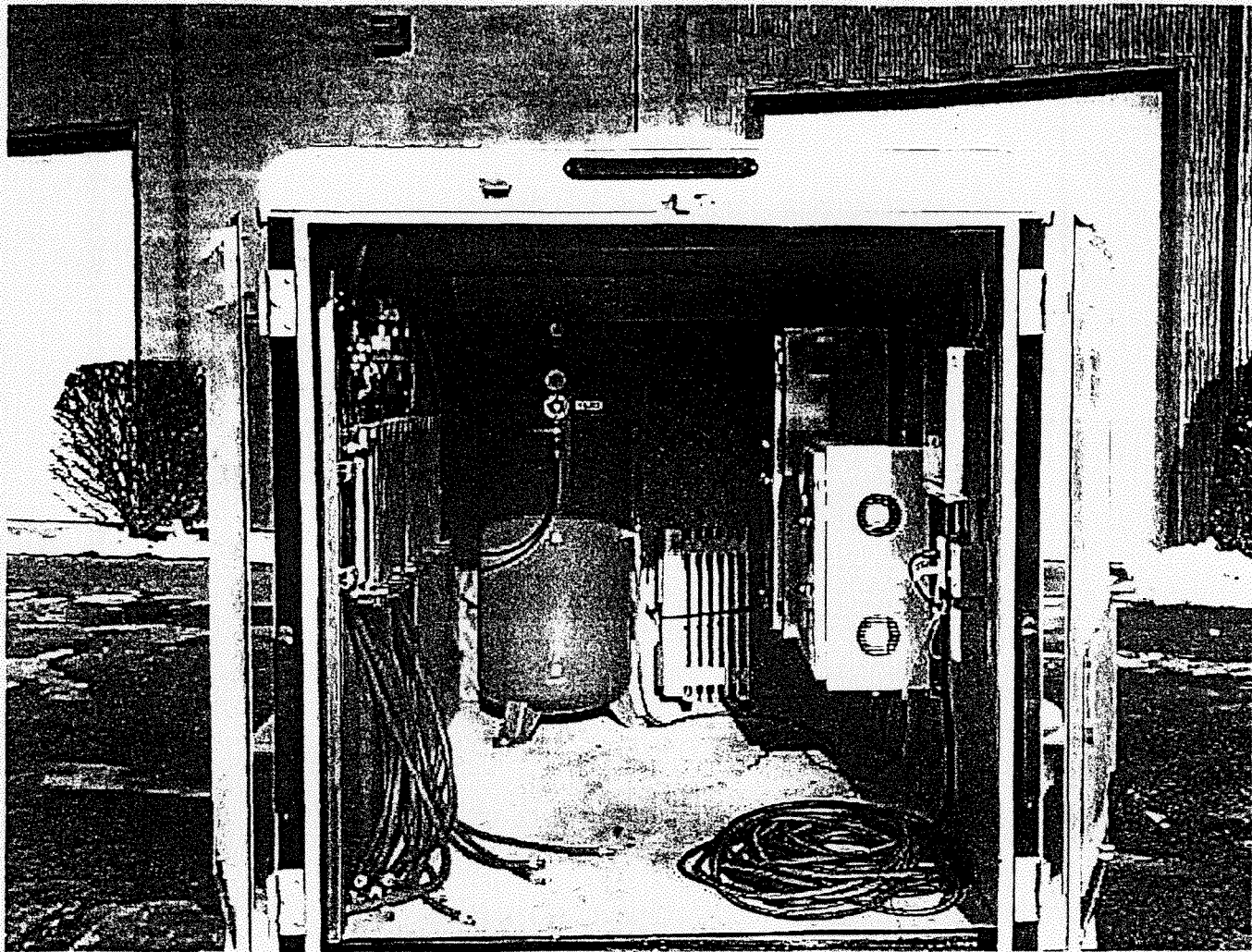
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DATE:	01/29/04
DRAWN BY:	S. MARCHETTI
CHK'D BY:	S. CARTER
REVISED BY:	S. CARTER

MATRIX
ENVIRONMENTAL TECH. INC.

PIPING AND INSTRUMENTATION DIAGRAM
16 POINT SYSTEM OXYGEN INJECTION SYSTEM
U.S. Patent No. 5,874,001



FEE \$ 10.00
 TCP \$ —
 SIF \$ —

PLANNING CLEARANCE

BLDG PERMIT NO. _____

(Single Family Residential and Accessory Structures)
Community Development Department

13899-8699

Building Address 745 HORIZON DRIVE

No. of Existing Bldgs 1 No. Proposed 1

Parcel No. 2701-314-00-122

Sq. Ft. of Existing Bldgs 21162' Sq. Ft. Proposed 44'

Subdivision _____

Sq. Ft. of Lot / Parcel 58806.0'

Filing _____ Block _____ Lot _____

Sq. Ft. Coverage of Lot by Structures & Impervious Surface (Total Existing & Proposed) 58806.0'

Height of Proposed Structure 5.0'

OWNER INFORMATION:

Name WESTERN STATES MOBILE OPERATIONS INC

DESCRIPTION OF WORK & INTENDED USE:

Address 755 HORIZON DRIVE

- New Single Family Home (*check type below)
- Interior Remodel Addition
- Other (please specify): GREEN JACKSON HOUSING UNIT

City / State / Zip GRAND JUNCTION, CO 81506

APPLICANT INFORMATION:

Name ENVIRONMENTAL AUDIT & ASSESSMENT, INC

***TYPE OF HOME PROPOSED:**

Address 225 W 5TH STREET, SUITE #E

- Site Built Manufactured Home (UBC)
- Manufactured Home (HUD)
- Other (please specify): GREEN JACKSON HOUSING TRAILER

City / State / Zip GRAND JUNCTION CO 81501

NOTES: see attached

Telephone 970-245-5897

NO PLUMBING / DRY TRAILER
 DOES NOT REQUIRE WATER FOR

REQUIRED: One plot plan, on 8 1/2" x 11" paper, showing all existing & proposed structure location(s), parking, setbacks to all property lines, ingress/egress to the property, driveway location & width & all easements & rights-of-way which abut the parcel.

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Voting District _____ Driveway Location Approval _____

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Applicant Signature _____ Date Nov. 2, 2005

Department Approval Ronnie Edwards APA Date 11/2/05

Additional water and/or sewer tap fee(s) are required: YES _____ NO X W/O No. injects oxygen to clean groundwater

Utility Accounting Call Date 11/2/05

VALID FOR SIX MONTHS FROM DATE OF ISSUANCE (Section 2.2.C.1 Grand Junction Zoning & Development Code)
 (White: Planning) (Yellow: Customer) (Pink: Building Department) (Goldenrod: Utility Accounting)



Environmental, Audit & Assessment, Inc.

225 North 5th St. Suite #8, Grand Junction, CO 81501, (970) 245-5897, Fax 245-0259, Email info@eaa-co.com
Web Site: www.eaa-co.com

April 27, 2007

City of Grand Junction
Planning & Zoning Department
ATTN: Nishi Aragon
250 N 5th Street
Grand Junction, CO 81501

RE: 745 Horizon Drive Temporary Building Permit

Ms. Aragon:

In November of 2005, Environmental, Audit & Assessment, Inc. requested the placement of a temporary building at 745 Horizon Drive in Grand Junction, Colorado. The building houses the components of an oxygen injection system being used to remediate soil and groundwater contamination on site. It was originally anticipated that within eighteen months of installing the system the concentrations of benzene contamination would be reduced below the Division of Oil and Public Safety's acceptable regulatory guidelines and the system could be removed. However, due to the amount of contamination and configuration of the subsurface soils, three monitoring wells are showing benzene concentrations above 5 µg/L. Therefore, I respectfully request an extension of the temporary building permit for an additional eighteen months. This would allow the system to remain on site until October of 2008. I would like to thank you in advance for your time and consideration in this matter. Should you have any questions or concerns, please do not hesitate to call.

Sincerely,

Jana Sanders
Project Manager, Environmental Scientist
Environmental, Audit & Assessment, Inc.