



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

February 12, 2004

**MEMORANDUM – MANDATORY REFERRAL**

**TO:** Montgomery County Planning Board

**VIA:** John A. Carter, Chief, Community-Based Planning Division

**FROM:** Sue Edwards, I-270 Corridor Team Leader (301) 495-4518 *SE*  
Community-Based Planning Division

**SUBJECT:** Mandatory Referral No. MR-03306-DPWT-2, Compressed Natural Gas Facility, 16630 Crabbs Branch Way, Shady Grove Sector Plan

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**STAFF RECOMMENDATION:** APPROVAL to transmit comments to the Montgomery County Department of Public Works and Transportation.

1. The proposed fueling station will not create a constraint to the possible relocation of the Equipment Maintenance Operations Center if portions of the County Service Park are approved for relocation by the County Council;
2. The proposed fueling facility will not generate more than 65 dBA at the property line adjoining the Metro station where future residential development is planned;
3. The proposed natural gas line to be constructed by the Washington Gas Company will protect trees and landscaping and follow County standards for tree preservation within the project limits.

**PROJECT DESCRIPTION**

The Montgomery County Department of Public Works and Transportation proposes to construct a Compressed Natural Gas Fueling Facility in the Equipment Maintenance Operations Center (EMOC) located in the County Service Park at Shady Grove. EMOC serves the County's vehicle fleet providing daily fueling, servicing and maintenance. The Compressed Natural Gas Facility (CNG) will service large diesel-powered vehicles, principally the 24 Ride-On buses that use compressed natural gas as clean burning fuel. The County anticipates expanding the fleet to 79 buses by the year 2005.

**Site Description** – The subject site is within the EMOC property of approximately 26 acres. EMOC shares the property with the County’s Highway Maintenance Building and Garage as well as the Montgomery County Public Schools Food Production Center. Two salt storage domes and a covered storage structure are located behind the Highway Maintenance Building.

The site is trapezoidal in shape, bordered by Crabbs Branch Way and the CSX tracks. The EMOC is located on the southeastern side of Crabbs Branch Way. Immediately adjacent to the EMOC is the Washington Metropolitan Area Transit Authority (WMATA) Shady Grove Metro Station and parking garage (see Aerial Photo for MR-03306).

The property is zoned I-1, Light Industrial, and is nearly entirely covered by parking and maneuvering areas, storage structures and buildings. There are five entrances to the EMOC, all from Crabbs Branch Way. Landscaping with hardwoods and evergreens occurs on the northwest and southeast property boundaries.

**Project Elements-** The new CNG facility consists of two components: the extension of the natural gas pipeline from a tie-in located within the grass median strip on Shady Grove Road west of Oakmont Avenue to the new facility, and a new fueling station with pumping stations.

In the early 1990’s, the Washington Gas Company began promoting the use of vehicles powered by compressed natural gas as a mechanism to meet air quality objectives. State and Federal air quality regulations encourage state and local governments to develop and deploy vehicles using alternative fuels. Washington Gas and Montgomery County formed a partnership to provide two “temporary” CNG fueling stations. A slow-fill station was provided for buses and a fast-fill station for automobiles and other work vehicles. The temporary status of the stations was used to evaluate the feasibility of using CNG fueled buses. Montgomery County has determined that CNG buses provide a significant long-term solution towards reducing air pollution.

These two stations are owned and operated by the Washington Gas Company with the County purchasing the fuel from Washington Gas. The County has made a significant investment in acquiring buses that use alternative fuels. These temporary stations are now at the end of their useful life and Washington Gas desires to close these facilities by transferring the ownership and operation of the CNG fueling stations to the County.

The proposed pipeline will extend approximately 4,000 linear feet from the tie-in at Shady Grove Road west of Oakmont Avenue. The pipe construction includes a 6-inch diameter pipe. Inspection of this pipeline will include 100 percent radiography of welded joints and a qualifying pressure test to permit maximum operating pressure of 300 pounds per square inch. The design, construction, and operation of the pipeline will be in accordance with the requirements of the *Code of Federal Regulations Title 49, Department of Transportation, Part 192 Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards*. In the event that the pipeline is abandoned, the pipe will be disconnected, purged of natural gas and the ends sealed.

The location of the new pipeline is shown in the figure enclosed. Construction will include both open cut and trenchless methods. Direct burial is the preferred method; this method uses 3 to 4 feet of cover. The trenchless methods include horizontal directional drilling and jack-and-bore burial from 4-7 feet deep.

The design and construction of this CNG facility will be conducted with the understanding that the equipment will probably need to be relocated at some time in the future when the EMOC moves to a new location. The proposed CNG facility will be modular construction to accommodate relocation in the future.

The new CNG facility will occupy a 200 x 43 foot lot located behind the EMOC. The station consists of three compressors, two storage vessels, a gas desiccant dryer, metering and monitoring system equipment, two fuel dispensers, and related pipes and valves. A de-fueling system with the capacity to empty fuel from a bus in less than 30 minutes is also included in the construction.

The construction schedule is predicated on minimizing disruption to the daily fueling, servicing, and maintenance operations of the Ride-On fleet. The schedule proposed in the Mandatory Referral submittal anticipates all testing and final inspections completed by May 2004.

## **ANALYSIS**

**Master Plan** – The Shady Grove Sector Plan (1977) and the Gaithersburg Vicinity Master Plan (1985) designate the County Service Park for industrial uses such as manufacturing and warehousing.

The proposed CNG facility conforms to the current 1985 Master Plan. Current planning for the area envisions a significant transformation from the existing industrial character to a new mixed-use community within walking distance of the Shady Grove Metro Station. For this reason, the CNG facility is being proposed as modular construction that could be transported to a new location. The costs incurred by any new facility in the future would be factored into the total cost of relocation but would not be considered a constraint to future relocation proposals.

**Environmental Resources** – The County Service Park is located within the Crabbs Branch sub-watershed of the Upper Rock Creek watershed. Upper Rock Creek is classified as a Use IV watershed. The nearest stream is Crabbs Branch, a tributary of Rock Creek that connects to it just south of Lake Needwood. Stormwater quantity and quality management were addressed in the original building construction and should not be impacted by the proposed facility. The applicant must comply with the stormwater and sedimentation control regulations of the Montgomery County Department of Permitting Services.

Construction of the gas line must not impact the drainage swale and stream banks between Shady Grove Road and the U.S. Postal Service building. If directional drilling techniques are used in this location, the drilling should pass beneath the stream.

The proposed gas alignment crosses several properties with approved Forest Conservation Plans. An approved Natural Resource Inventory/Forest Stand Delineation covers the pipeline alignment. This project is exempt from Forest Conservation Plan requirements because the proposal involves modifications to existing developed properties.

Tree protection measures are required and should be depicted on all construction plans. Every effort must be made to protect existing trees from damage along the proposed pipeline. Protective measures should include, but not be limited to, signage, sturdy fencing, trunk protection, branch and root pruning.

Equipment for the CNG facility is quiet except for the cooler in each of the three compressors to be used on site. These coolers emit intermittent noise levels of 79 decibels dBA which is higher than the levels set by the Adopted County Noise Control Ordinance for properties adjoining existing or future residential uses.

The nearest existing residences are 2,000-2,500 feet away and would not be impacted by operations of the CNG. Future residences at the WMATA property are nearer. The applicant has performed a noise study that depicts the extent of 65 dBA levels generated by the CNG (see figure titled Sound Levels at Property Lines). This area does not extend beyond the EMOC property boundaries and would not create unacceptable noise levels for future residences.

**Transportation** – The Equipment Maintenance Operations Center at the Montgomery County Service Park is an existing land use already accounted for in the staging ceiling numbers. Currently, the Shady Grove Policy Area (Metrorail Station) has a positive 785 jobs remaining in the staging ceiling, as of November 30, 2003, under the *FY 2004 Annual Growth Policy*.

Almost all of the bus fleet should be on the road during the weekday morning peak period from 6:30 a.m. to 9:30 a.m. and the weekday evening peak period from 4:00 p.m. to 7:00 p.m. to provide public transportation as an alternative mode of transport to driving the single-occupant car. CNG-powered buses, therefore, are typically refueled at night during the weekdays.

The existing and the proposed replacement CNG fueling facilities are within the County Service Park adjacent to the Metrorail station. A traffic study is not required to satisfy Local Area Transportation Review because trips by CNG-powered buses would remain the same using either the existing slow-filled fueling facility or the new replacement fast-fill fueling facility.

**Access and Parking** – Access to the facility by alternative fuel buses will be from existing driveways on Crabbs Branch Way. Buses awaiting fueling will queue within the confines of EMOC. This use generates no new demand for parking.

**Landscaping** –The proposed project is within the industrial uses of the EMOC site. Construction documents for the project specify that the gasoline contractor must protect existing landscaping and trees within the EMOC site and on all public rights of way.

**Operations** – The transit service area and maintenance bays are in operation 24 hours per day. Most vehicle activity takes place from 4:00-7:00 a.m. and from 7:00 p.m. to 2:00 a.m.

## **COMMUNITY CONCERNS**

Staff has coordinated with the adjacent community represented by the Shady Grove Civic Alliance. The enclosed correspondence from the Civic Alliance raises concerns over adding industrial uses within an area planned for a mix of land uses including residential. To address these concerns, the applicant performed a noise analysis that depicts the extent of the noise impacts from the fueling systems. These noise levels (above 65 dB) do not extend to the property boundary where residences may be built. With the understanding that the investment in a new CNG facility does not preclude relocation in the future and that noise levels at the property boundary will not exceed County standards, the Shady Grove Civic Alliance does not object to the proposal.

## **CONCLUSION**

Staff recommends approval of the proposed Compressed Natural Gas Fueling Facility at the Equipment Maintenance Operations Center.

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### **Attachments:**

Aerial Photograph for MR-03306

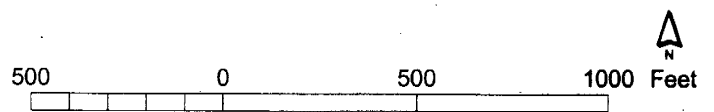
Installation of New Gas Pipeline for MR-03306

Sound Levels at Property Lines Will Not Exceed 65 dBA

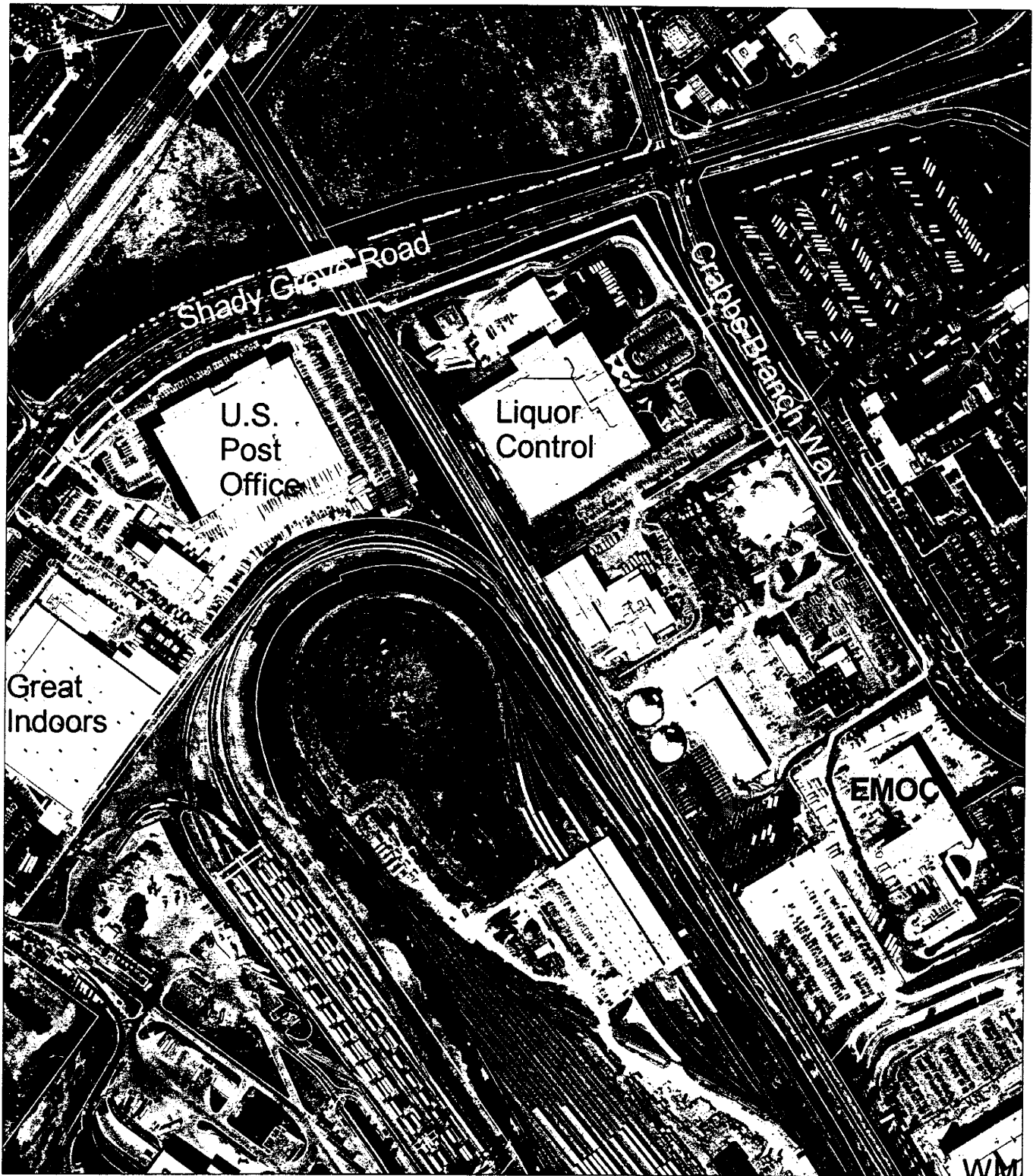
Aerial Photo for MR-03306



Compressed Natural Gas Fuel Facility  
County Service Park



# Installation of New Gas Pipeline MR-03306



Compressed Natural Gas Fuel Facility  
County Service Park

Proposed Pipeline

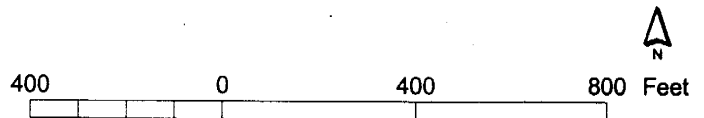
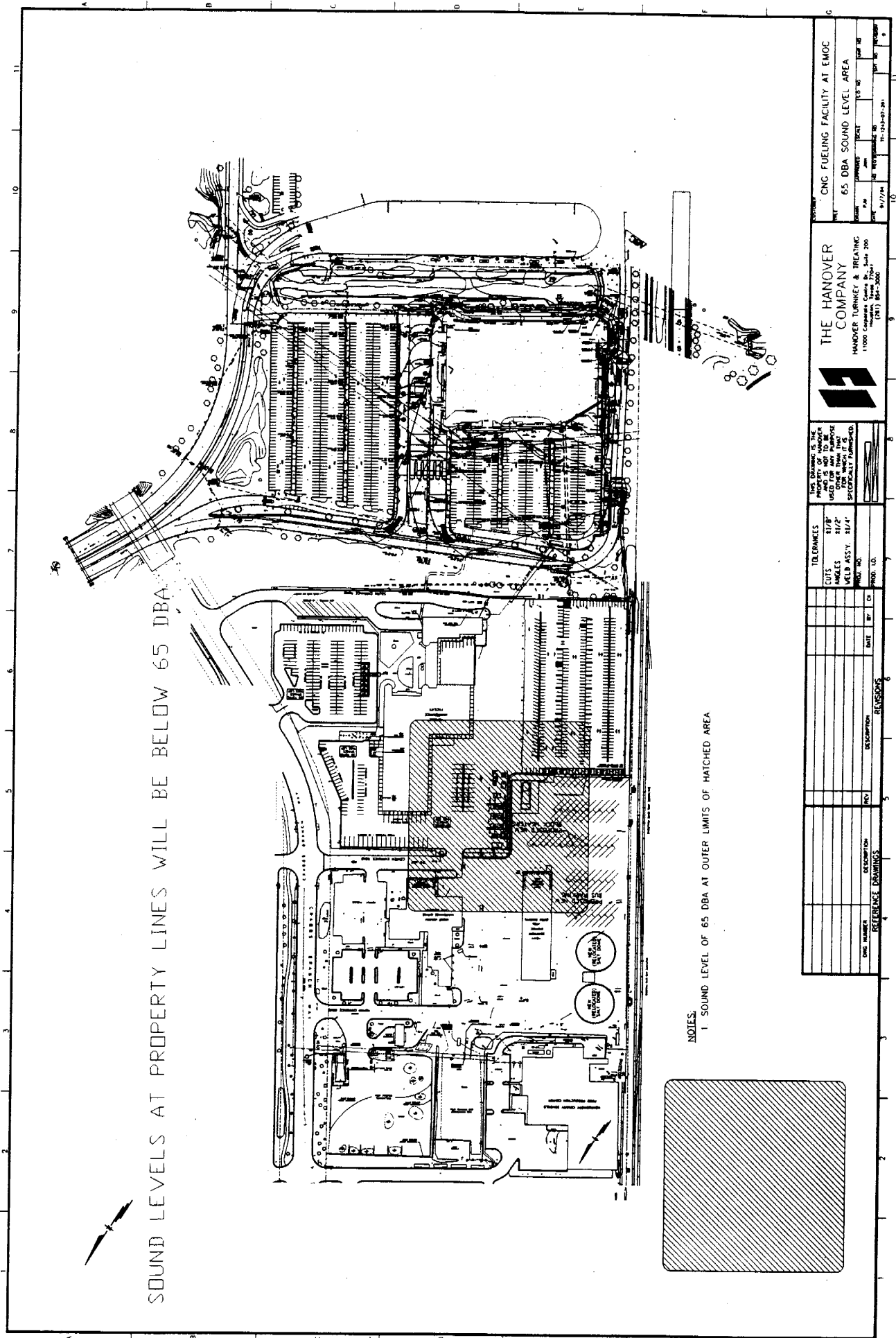


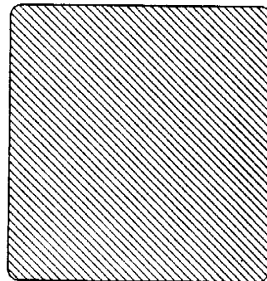
Figure 3



SOUND LEVELS AT PROPERTY LINES WILL BE BELOW 65 DBA

NOTES:

- 1. SOUND LEVEL OF 65 DBA AT OUTER LIMITS OF HATCHED AREA



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TOLERANCES UNLESS OTHERWISE SPECIFIED SHALL BE AS FOLLOWS:  
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 ANGLES: ±0.005"  
 HOLE DIA: ±0.005"  
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DATE: 11/17/04  
 BY: [Signature]  
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DESCRIPTION: CNG FUELING FACILITY AT EMOG

PROJECT NO: 65 DBA SOUND LEVEL AREA

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CNG FUELING FACILITY AT EMOG  
 65 DBA SOUND LEVEL AREA