

National Aeronautics and
Space Administration
Dryden Flight Research Center
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Edwards, CA 93523-0273



Reply to Attn. of: SH

May 7, 2007

TO: NASA Headquarters
Attn: Mike McNeil, Deputy Director, Environmental Management
Division

FROM: Environmental Officer

SUBJECT: Exemption from Environmental Assessment

The Dryden Flight Research Center (DFRC) requests exemption from preparing an Environmental Assessment for an addition to Building 4838, Data Analysis Facility (DAF). A Record of Environmental Consideration (REC) will provide adequate review.

The addition consists of three Construction of Facilities projects beginning in 2008 resulting in a new Consolidated Information Technology Center (CITC). The total footprint for all three projects is about 16,000 square feet, costing about \$13.5 million.

Phase 1 is a two-story DAF addition to provide the basic CITC office and service spaces. Phase 2 is a two-story addition to the CITC for shop and office space for the remainder of the Information Technology (IT) team and relocation of an IT cable path and gateway. Phase 3 is a renovation of the existing DAF. Please see Enclosures 1 through 5 for photographs of the location of the new CITC facility.

The salient environmental issues in this proposed project are:

1. The Affected Environment:

- a) The construction would be in a developed area in the midst of several major facilities. Building 4820, Flight Loads Lab, is to the east and Building 4840, Research Aircraft Integration Facility (RAIF), is to the north. In addition, the construction zone is bounded by a street on the west, the main employee parking lot on the south, a service drive and hangar apron on the east, and the RAIF parking lot on the north. The construction zone is partially paved and crisscrossed with ten separate underground utility lines.
- b) The building additions are designed to seismic standards.
- c) The site is almost level and near finish grade.
- d) Since this is a highly developed and utilized site, there are no existing native plants or animals. The nearest natural area is over 1200 feet to the west, outside the fenced complex. The nearest active Desert Tortoise (Environmental Species Act-threatened) burrow is approximately one-third mile away to the northwest outside a fence barrier.

- e) The Kern County Air Pollution Control District (KCAPCD) regulates air quality at DFRC. DFRC operates under a Synthetic Minor permit, which means we limit our potential to emit less than major stationary source thresholds. The proposed building would not affect that status. The project would require installation of a diesel-powered 1.5 megawatt (MW) emergency generator; therefore, DFRC would need to obtain an Authority to Construct from the KCAPCD. A recently completed 7.0 MW Central Emergency Generator Plant is in auto operation mode. As the Center gains confidence in the plant's reliable performance over the next year, several existing generators would be removed, resulting in a net reduction of 3.25 MW to offset the impact of the proposed new generator. During construction, there would be short-term air quality degradation due to operation of construction equipment. Dust control measures would be used during grading.
- f) There are no wetlands or water sources at DFRC. The proposed building site is about five feet above the 100-year flood level. There is a contaminated groundwater plume approximately 350 feet to the southeast. Because the proposed construction is outside the area affected by the Land Use Controls mandated by the Operable Unit 6 Record of Decision, the plume would not affect this project.
- g) Due to DFRC's extremely dry climate, there is little stormwater. The design for the proposed location would retain and recycle local stormwater on site via retention ponds for use in landscaping. In the event of heavy rainfall, excess stormwater would flow east via existing water channel and culvert routes to a large evaporation pond. This pond has a valved discharge directly onto the large Rogers Dry Lakebed.
- h) The total new sewage load would be from 161 fixture units, less than 1.0% of the Center's total sewage flow. The new connections would require permits from the Edwards Air Force Base Federally Owned Treatment Works.
- i) As reported in the Phase I Cultural Resources Survey, 1999, there are no archeological resources at DFRC. The two major cultural resources, Building 4802 (eligible for National Register of Historic Places nomination) and the Shuttle Mate/Demate Device (under consideration for eligibility) are both a considerable distance away and outside the building's visual sightlines.
- j) The proposed building would be designed to save energy and earn Leadership in Energy and Environmental (LEED) points to the maximum extent possible, with the goal of reaching a Silver certification. The design would pay particular attention to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. The building would utilize natural day lighting. Heating, ventilating, and air conditioning systems would be super-efficient using LEED passive cooling strategies and technologies. Passive solar systems would pre-heat water, and additional space and water heaters and chillers would use natural gas fuel. This facility would not increase the Center's current total energy consumption more than 1.0%.

2. Socioeconomic Factors

- a) The new construction would house existing personnel relocated from other buildings on the Center. Therefore, there would be no change in Center or local community population dynamics or changes in existing social institutions.
- b) The proposed facility is part of the DFRC Master Plan and is being constructed in a location zoned for its purpose. There would be no land use issues.

- c) This project would revise and improve the existing RAIF parking and driveway, provide additional parking spaces compared to the existing layout, and meet all the LEED requirements for Sustainable Sites pertaining to parking and alternative transportation. Preferred parking would be provided for low-emitting and fuel-efficient vehicles, carpools, and vanpools.

3. Other Factors

- a) No hazardous building materials would be used in this project and no existing asbestos, lead paint, or polychlorinated biphenyls would need to be abated. Every product and material used on this project would be required to meet federal, state, and regional safety, health, and environmental standards. All chemicals would require an MSDS, and would be pre-approved by the DFRC Safety, Health, and Environmental Office.
- b) As a spill control measure during construction, heavy equipment would be parked in earth-bermed areas.
- c) CITC activities are inherently quiet and would not generate noise levels in excess of existing ambient levels. There would be a short-term increase in noise levels during construction from construction equipment.
- d) No mitigation measures are expected to be required, since no significant impacts have been identified.
- e) This would be a one-time project that is included in the DFRC Master Plan. No specific follow-on actions have been determined at this time, so no cumulative environmental impact is expected.

From a review of the above issues, it is evident that the project presents no potential for adverse environmental impact. Therefore, it would not serve NASA's interests to develop an Environmental Assessment. It is our opinion that the project should be considered minor construction and that a REC discussing all of the above information would provide adequate NEPA documentation.

Please notify me if you concur with the exemption from preparing an Environmental Assessment.

Dan M. Morgan

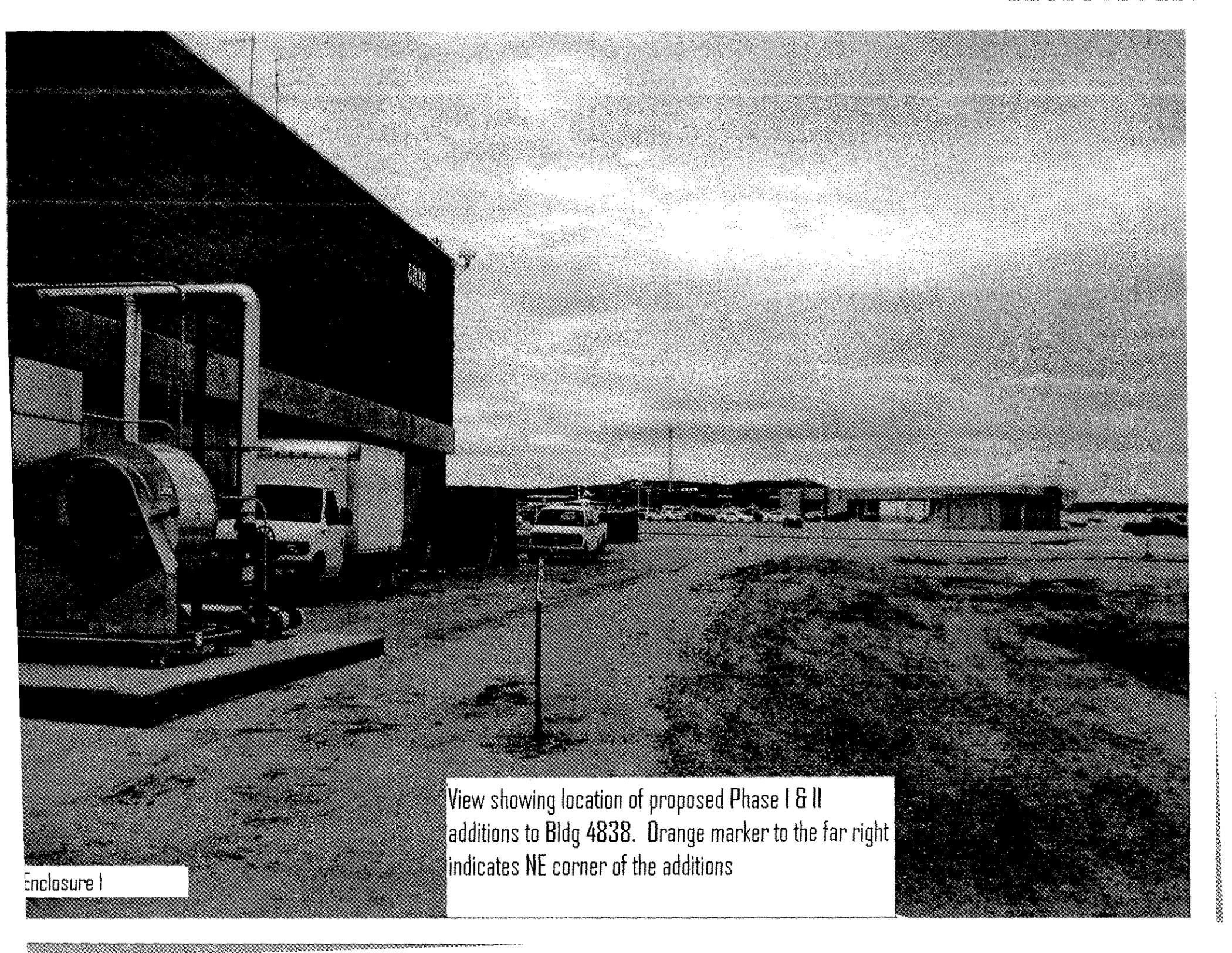
Enclosures

cc:

F/Mr. Roy Tryon,

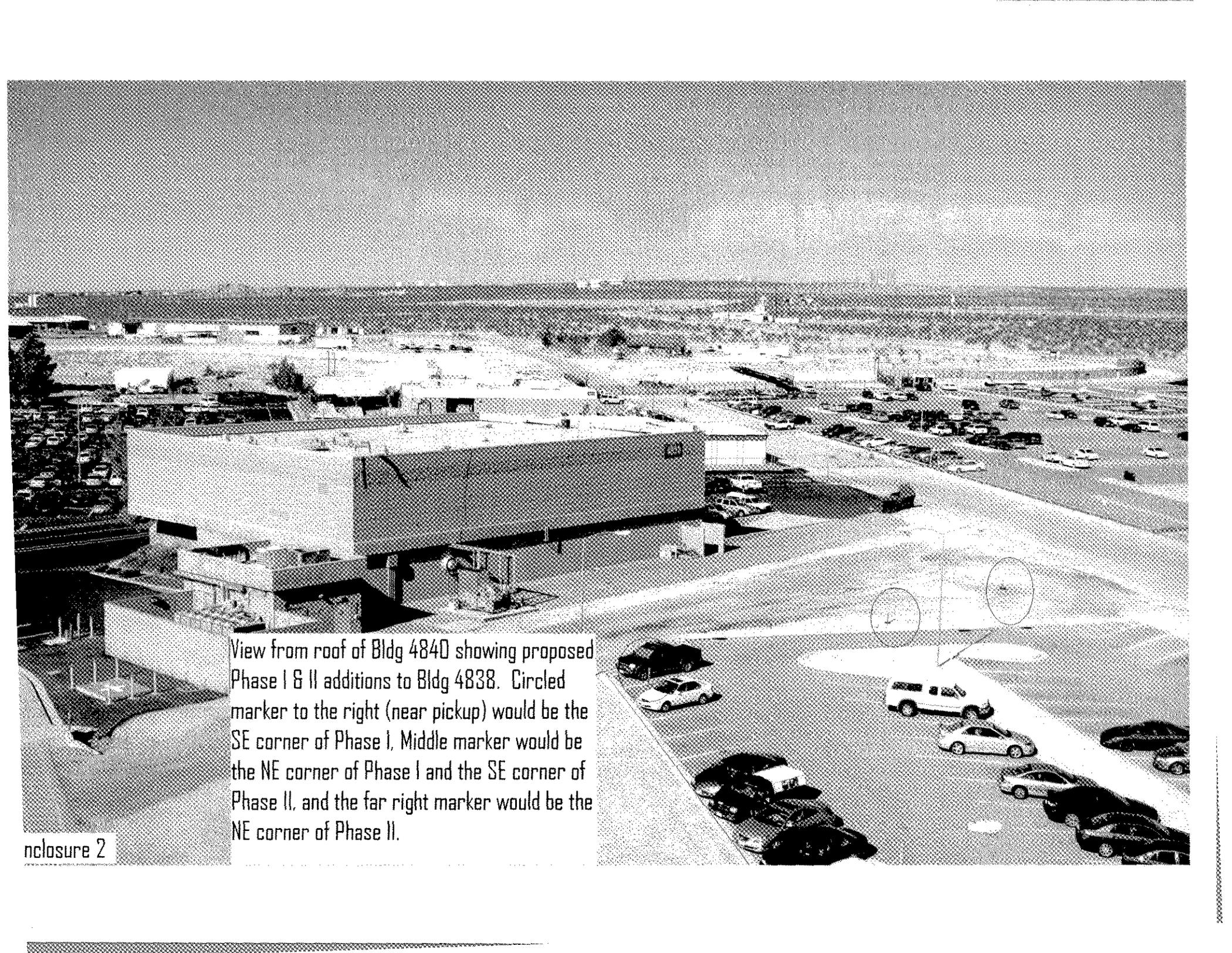
SH/Mr. Dan Mullen

HQ NEPA Representative to Science & Aeronautics Mission Directorates/Mr. Ken Kumor

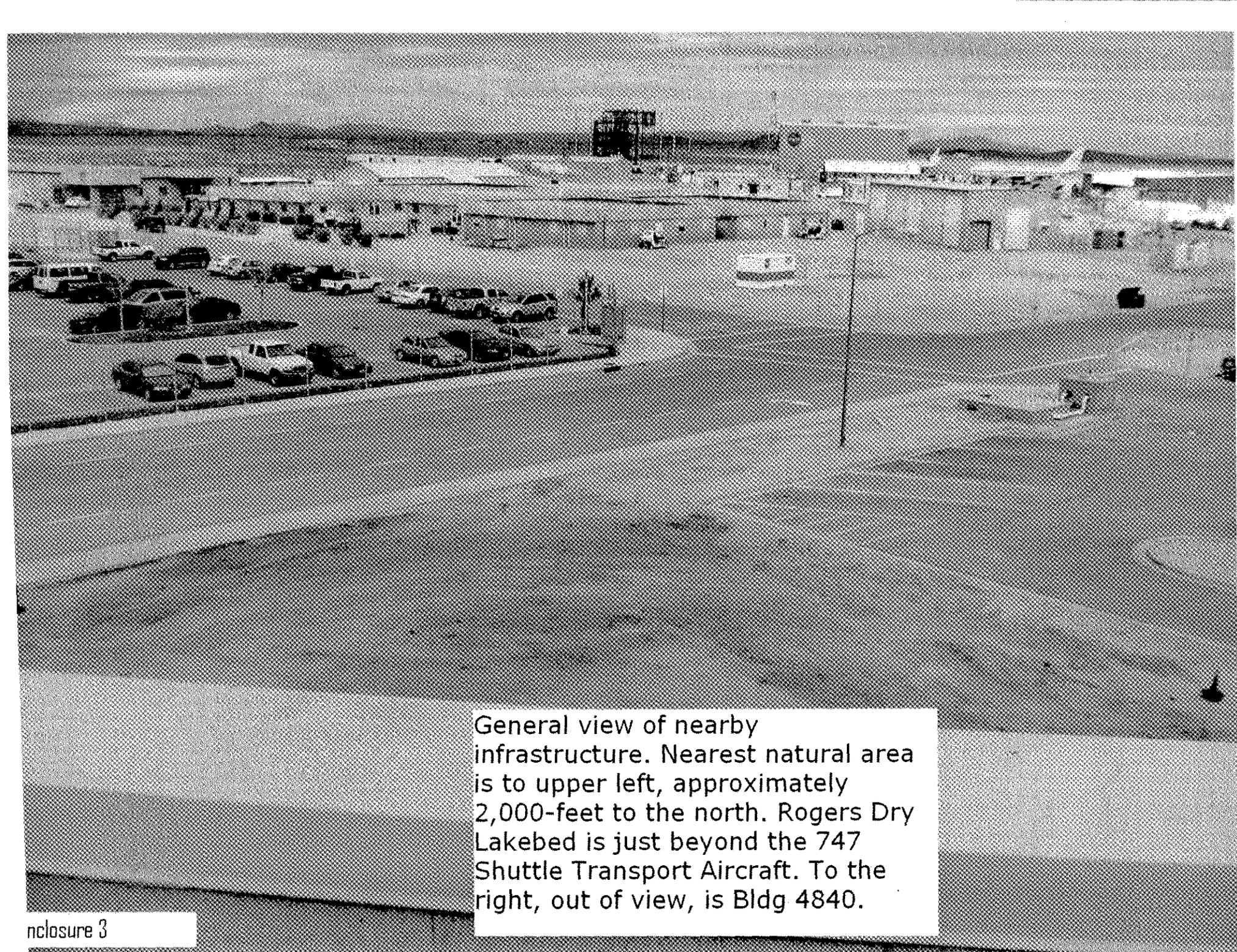


View showing location of proposed Phase I & II additions to Bldg 4838. Orange marker to the far right indicates NE corner of the additions

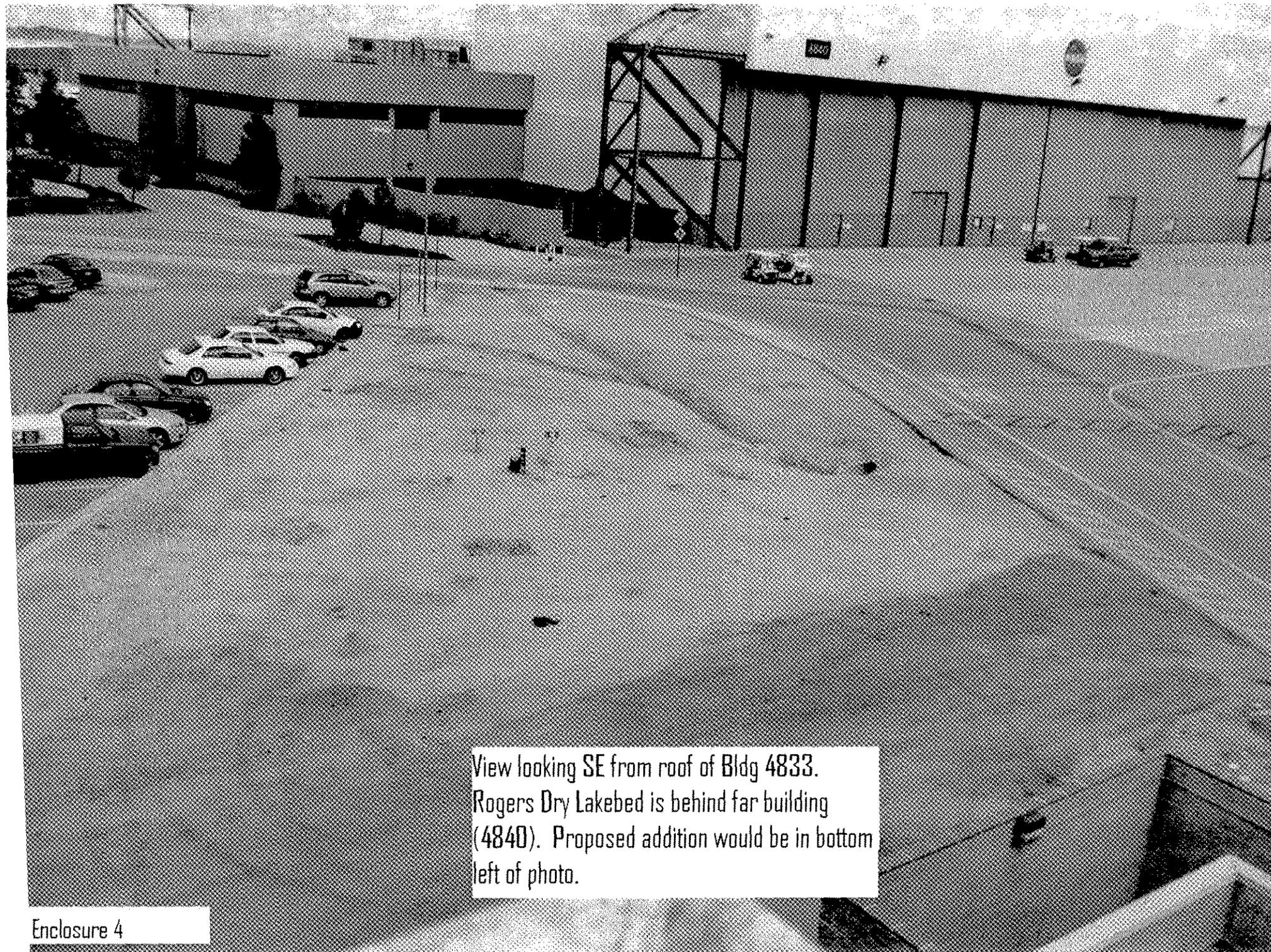
Enclosure 1

An aerial photograph of an industrial complex. In the foreground, a large, rectangular building (Bldg 4840) is visible. To its right, a large parking lot contains several vehicles, including a white pickup truck. Three circular markers are drawn on the ground in the parking lot area, indicating proposed construction phases. The background shows a vast, flat landscape with various industrial structures and a clear sky.

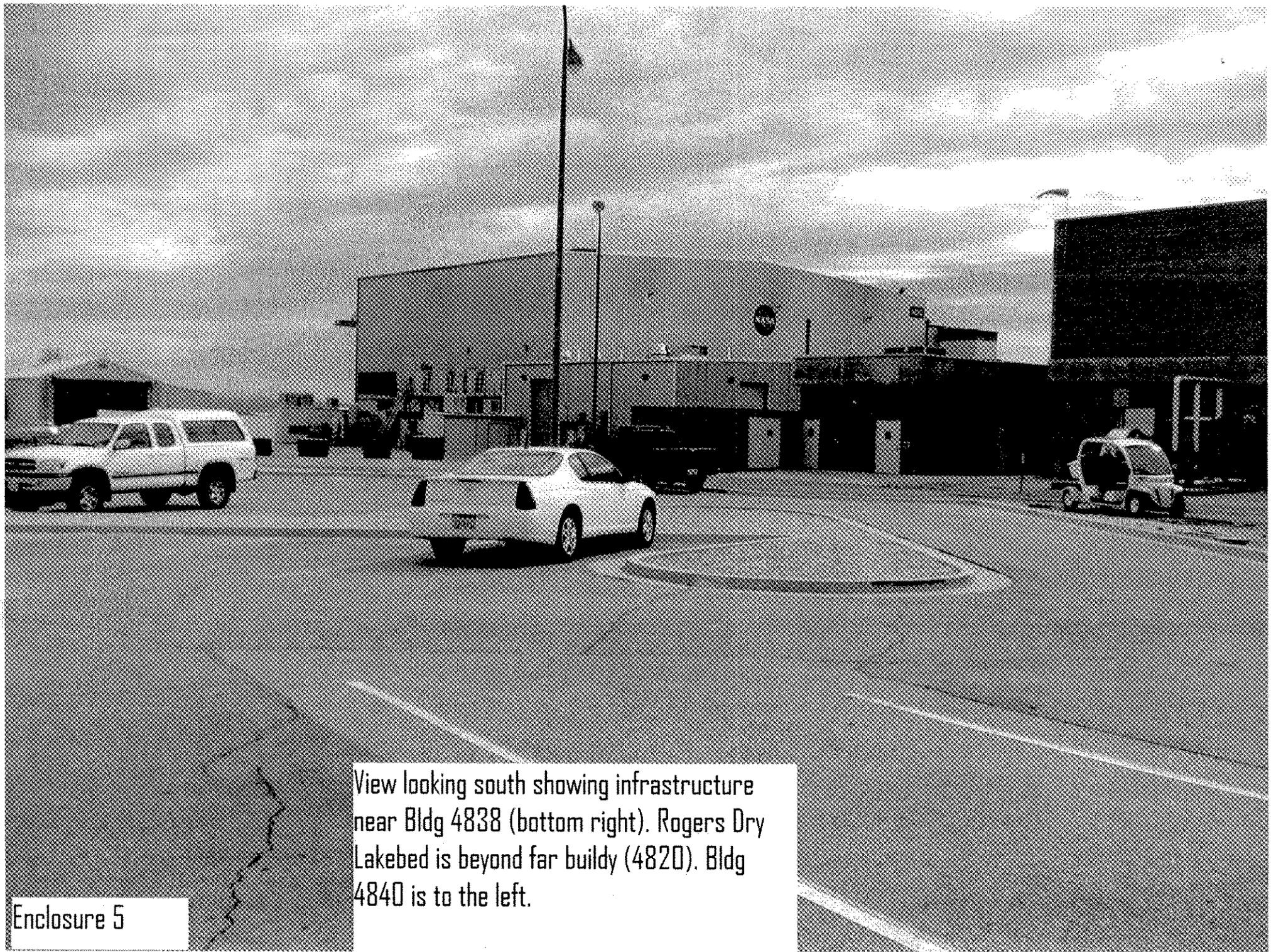
View from roof of Bldg 4840 showing proposed Phase I & II additions to Bldg 4838. Circled marker to the right (near pickup) would be the SE corner of Phase I, Middle marker would be the NE corner of Phase I and the SE corner of Phase II, and the far right marker would be the NE corner of Phase II.



General view of nearby infrastructure. Nearest natural area is to upper left, approximately 2,000-feet to the north. Rogers Dry Lakebed is just beyond the 747 Shuttle Transport Aircraft. To the right, out of view, is Bldg 4840.



View looking SE from roof of Bldg 4833.
Rogers Dry Lakebed is behind far building
(4840). Proposed addition would be in bottom
left of photo.



View looking south showing infrastructure near Bldg 4838 (bottom right). Rogers Dry Lakebed is beyond far buildy (4820). Bldg 4840 is to the left.

Enclosure 5

Callister, Kathleen E. (HQ-LD020)

From: Callister, Kathleen E. (HQ-LD020)
Sent: Wednesday, May 30, 2007 4:15 PM
To: McNeill, Mike A (HQ-LD020)
Subject: DFRC Exemption from an EA (ACTION NEEDED)

Importance: High

Mike - I have reviewed DFRC's request for an exemption from preparing an Environmental Assessment for an addition to Building 4838, Data Analysis Facility (DAF). The analysis and background information provided by DFRC (Dan Morgan) adequately evaluates the project and it is apparent that there is very minimal or no potential for environmental impact. Preparing an EA would not serve NASA's interests and would add unnecessary time and cost to the project.

I concur with DFRC's assessment that a REC provides adequate NEPA review and documentation for the proposed minor construction. If you need any additional information, please let me know - Kathy

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