

LA-UR-04-6061

Upgrades to TA-33-87, -88, and -89

Historic Building Survey Report No. 230

Los Alamos National Laboratory

August 27, 2004

Survey No. 944

Prepared for the Department of Energy,
National Nuclear Security Administration,
Los Alamos Site Office

prepared by

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RRES-ECO Heritage Resources and Environmental Policy Compliance (HREPC) Team
Risk Reduction and Environmental Stewardship Division
LOS ALAMOS NATIONAL LABORATORY

Introduction

The Department of Energy, National Nuclear Security Administration, Los Alamos Site Office proposes to upgrade a complex of three historic Los Alamos National Laboratory (LANL) properties located on Department of Energy land at Technical Area (TA) 33: buildings TA-33-87, TA-33-88, and TA-33-89.

The following information has been prepared as part of a notification of potential adverse effect to buildings TA-33-87, TA-33-88, and TA-33-89, located at the East Site/Area 1 firing site. The proposed modifications described below are upgrades to Laboratory facilities in support of LANL's ongoing scientific mission. The upgrades will adversely affect the attributes that make this small complex of buildings eligible for the National Register of Historic Places (Register). Work processes carried out at TA-33 supported Cold War weapon component testing activities from 1948 to 1972.

This report contains a description of the proposed action, historical background information, a description of the East Site/Area 1 firing site, property descriptions, building integrity information, and recommendations for Register eligibility. LANL historic building survey forms, photographs, and building drawings are contained in Appendix A.

The State Historic Preservation Officer (SHPO) is requested to concur with the eligibility determinations contained in this report and also to concur that the proposed upgrades will adversely affect buildings TA-33-87, TA-33-88, and TA-33-89.

Project Description

TA-33-87, TA-33-88, and TA-33-89 are scheduled for upgrades as part of the revitalization of TA-33. Planned interior upgrades include the refurbishment of electrical, plumbing, lighting, and HVAC systems for all three buildings. Although the exterior concrete surfaces of buildings TA-33-87, TA-33-88, and TA-33-89 will be refinished as necessary, the most significant exterior upgrades will involve building TA-33-87 and its immediate vicinity. A steel-frame Butler building will be added to the front of building TA-33-87 for use as an electronics laboratory. A new concrete apron will be added on the east side of the building and concrete retaining walls will be added on the building's north and south sides. Additionally, a concrete transformer pad and a small prefabricated metal storage building will be installed to the north of TA-33-87.

In 2003 and 2004, a historic building survey was conducted by Kari Garcia and Ellen McGehee, Risk Reduction and Environmental Stewardship Division, Ecology Group (RRES-ECO), LANL, and John Ronquillo, consulting engineer, Sigma Science, Inc. The building survey was accomplished by first conducting a field visit to TA-33. LANL historic building survey forms were completed and photographs were taken (Appendix A). Records research at LANL was also carried out, and existing drawings were compiled for the buildings (Appendix A).

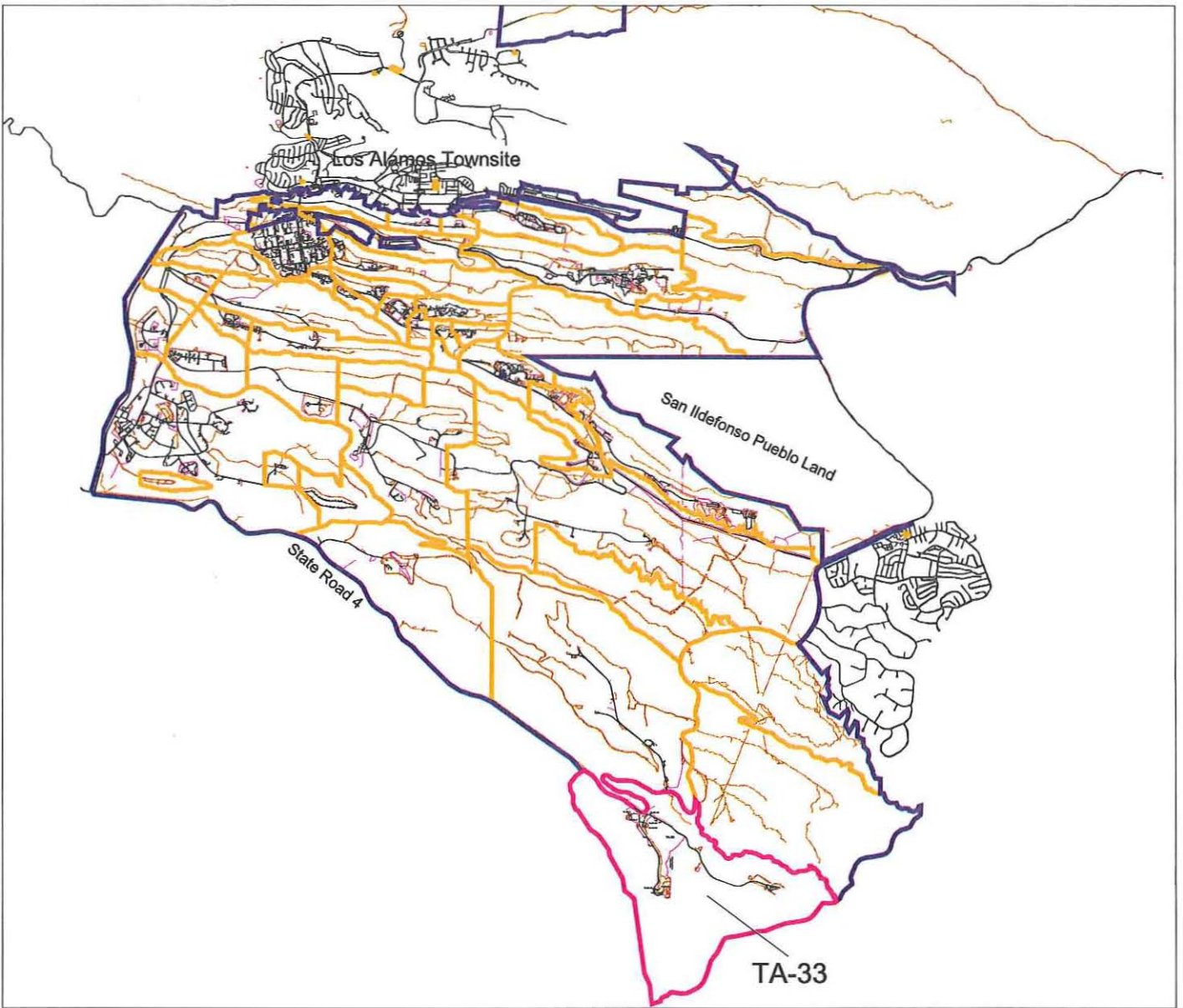


Fig. 1. Technical Area (TA) 33, Hot Point (HP) Site

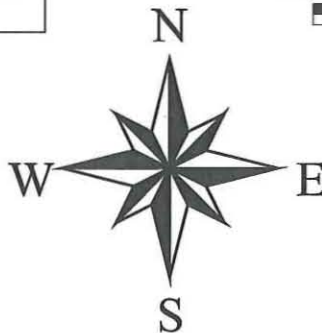
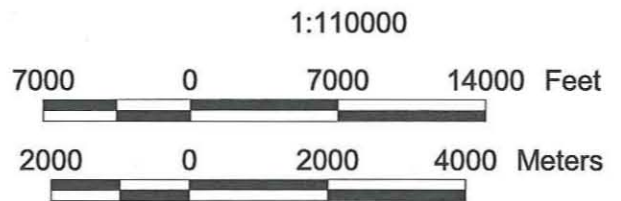
Historical Background

TA-33 is an isolated technical area located in the southeastern corner of the Laboratory. Situated near Bandelier National Monument, this technical area was historically known as Hot Point (HP) Site (Map 1).

TA-33 was established in 1947 and has functioned primarily as a test site for weapons components called initiators. Nuclear weapons rely on initiator devices to supply a source of neutrons that will quickly enhance the chain reaction at exactly the right moment. Over the years, weapon component tests have been conducted at various locations within TA-33 and have included underground and surface experiments, many using large guns that fire experimental projectiles into bermed areas. Firing tests were discontinued at TA-33 in 1972. Other significant facilities at TA-33 include a high-pressure tritium facility, which was operated at TA-33 from the mid 1950s until late 1990, and an antenna of the National Radio Astronomy Observatory Very Long Baseline Array radiotelescope, which was sited at TA-33 in 1985 and is still in operation (Los Alamos National Laboratory 1992). TA-33 includes five main sites: East Site/Area 1 (the eastern firing site), Area 6 (the western firing site), South Site (the southern firing site), Main Site (the central administrative area), and the NRAO Site (the radiotelescope site) (Maps 2 and 3).



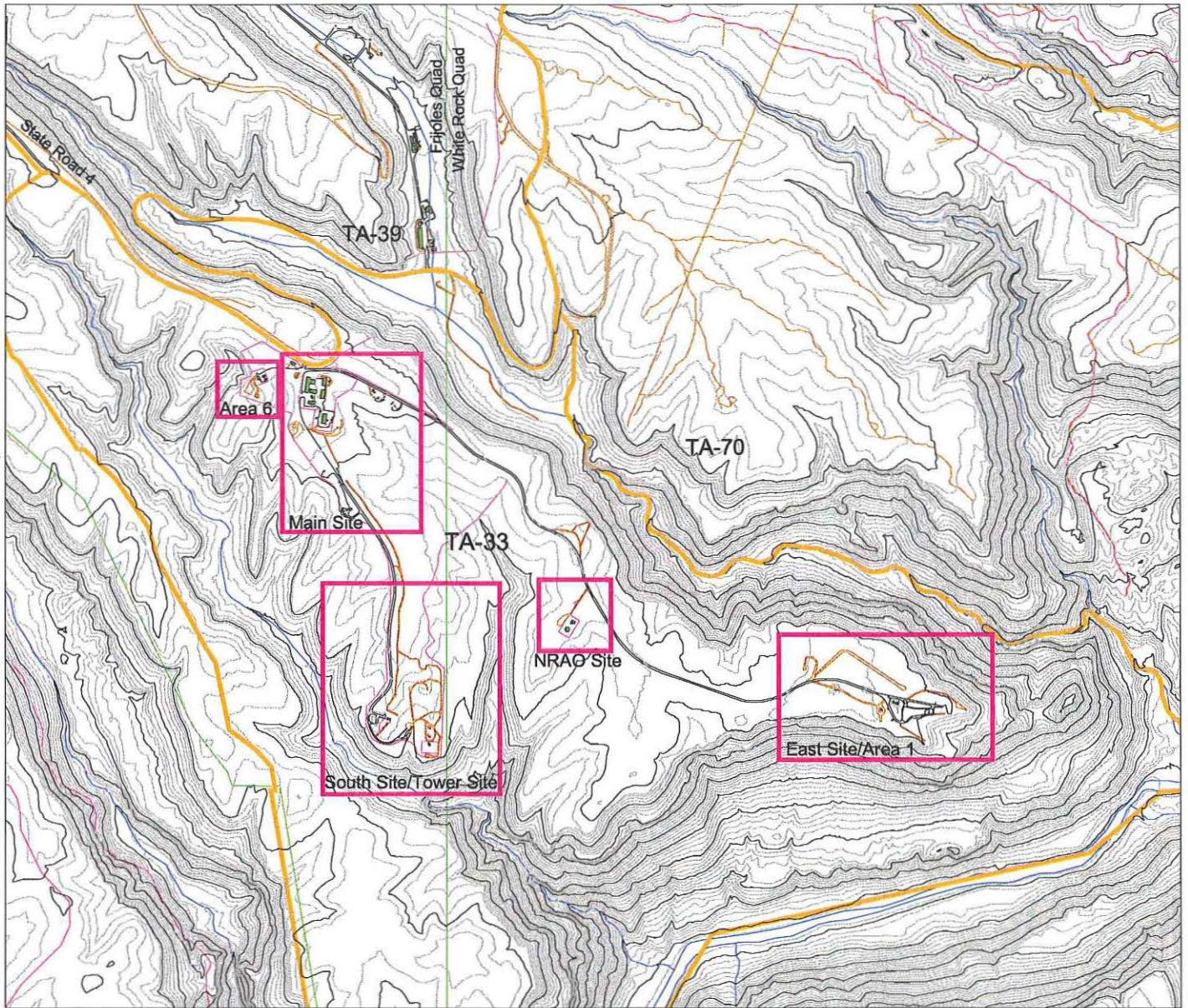
**Los Alamos
National Laboratory**
Heritage Resources and
Environmental Policy Compliance Team
RRES-ECO Ecology Group



TA-33

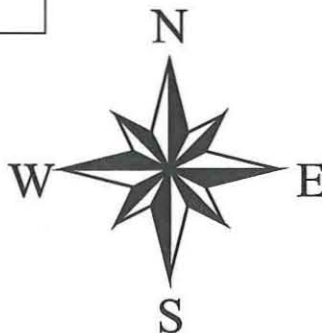
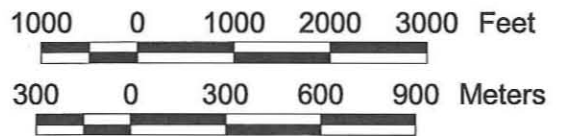
- Tech Area 33
- LANL Boundary
- LANL Technical Areas
- Roads
- Road dirt
- Parkpave
- Parkdirt
- Fences

Map 1



**Los Alamos
National Laboratory**
Heritage Resources and
Environmental Policy Compliance Team
RRES-ECO Ecology Group

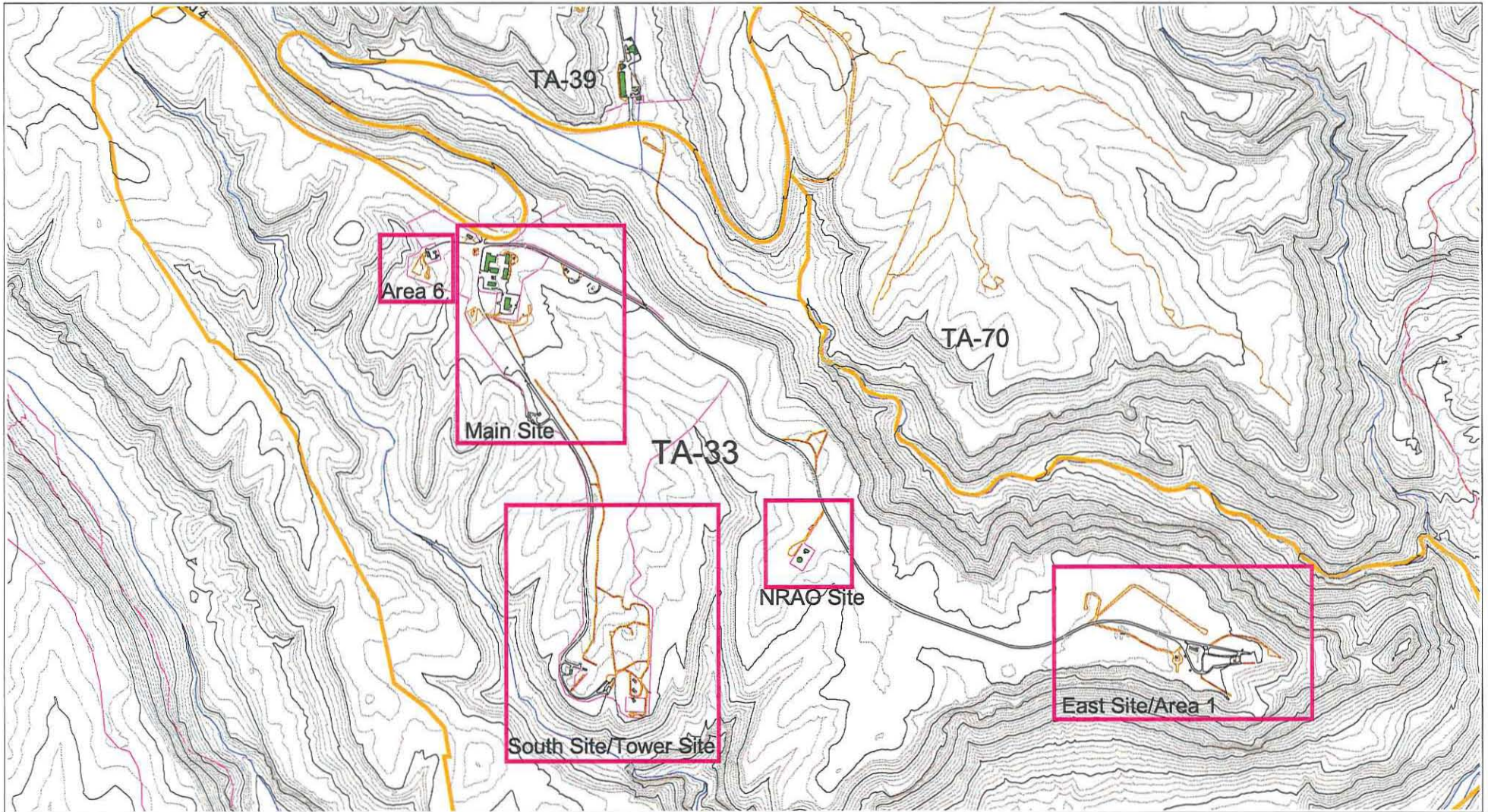
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**TA-33
Site Areas**

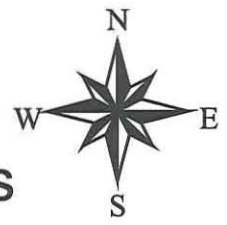
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- 100 Foot Contours
- Techarea
- Drainage
- Township, Section, Range
- USGS 7.5 Minute Quad
- Trails
- Roaddirt
- Parkpave
- Parkdirt
- Fences
- Buildings/Structures

Map 2



**Los Alamos
National Laboratory**
*Heritage Resources and
Environmental Policy Compliance Team
RRES-ECO (Ecology Group)*

**TA-33
Site Areas**



Map 3

- 20 Foot Contours
- 100 Foot Contours
- Techarea
- Drainage
- Trails
- Roads
- Roaddirt
- Parkpave
- Parkdirt
- Fences
- Buildings/Structures

1:18000





Figure 2. Area 6

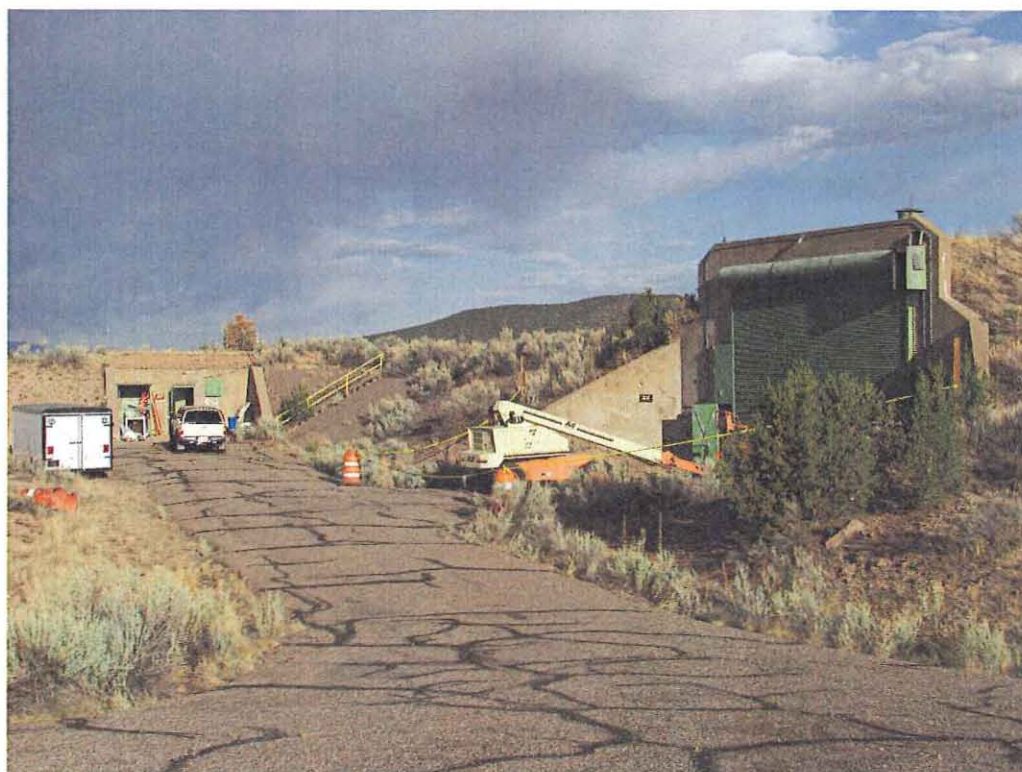


Fig. 3. South Site

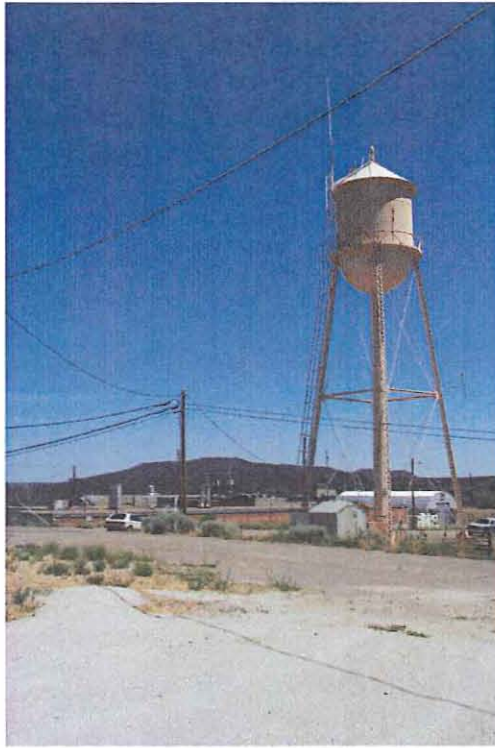


Fig. 4. Main Site



Fig. 5. NRAO Site

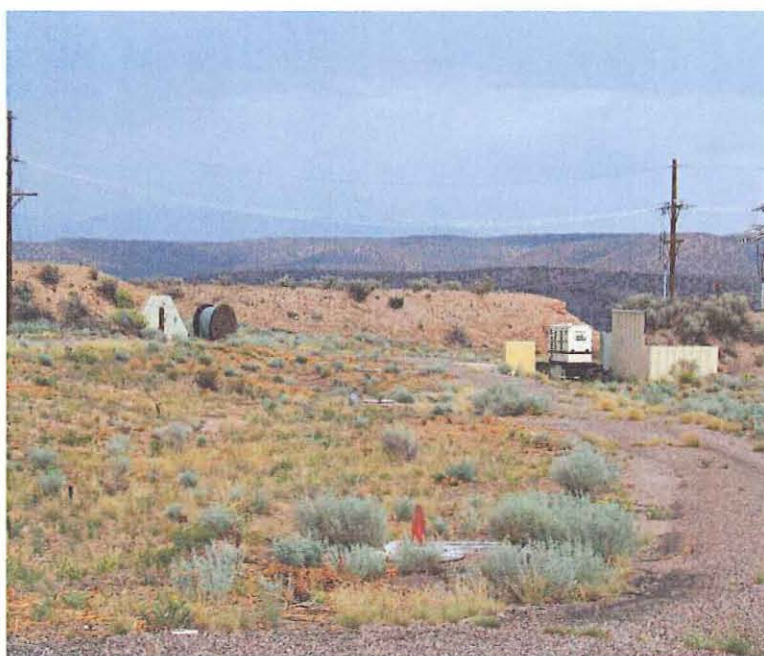


Fig. 6. East Site (looking east toward TA-33-88)

East Site/Area 1

East Site (formerly known as Area 1) is a firing site located at the easternmost point of a mesa overlooking the Rio Grande (Los Alamos National Laboratory 1992). After the end of WWII, two bomb designs were being developed for use in the United States stockpile: a plutonium “implosion” device and a uranium “gun-type” device. The implosion design used shaped high explosives to compress a subcritical mass of plutonium-239 and cause a critical reaction (Los Alamos National Laboratory 1995). “Area 1” was developed in the late 1940s as a test site for underground tests on implosion-type initiators.

Area 1 (1948-1955)

Underground test chamber work was carried out at Area 1 in 1948 after post-war initiator tests at Trinity Site in southern New Mexico were discontinued. The underground tests were one-time events, and a new pit facility was dug for each test. Typically, an octagonal pit structure and its associated entrance shaft were constructed underground. Neutron counters and the initiator experimental apparatus were placed in the reinforced concrete pit or “chamber,” and electronic cables were routed from the pit structure to a distant control room. A portable elevator building was placed over the shaft until just before the test was conducted. Instrumentation in the control room received the completed test data via electronic cables (Los Alamos National Laboratory Archives; U.S. Department of Energy 1986).

The construction of Chamber #1 was completed January 21, 1948, and tested April 14, 1948. Another underground chamber (Chamber #2) was completed October 8, 1948, and tested in December of the same year. Both underground test chambers were located approximately 30 ft below grade and had 4 ft by 6 ft elevator shafts. Chamber 2, larger in size and situated deeper

than the first test chamber, was not completely destroyed as a result of the 1948 experiment. The damaged chamber was retested and ultimately destroyed in 1952 as part of a high-explosives experiment. Mothballed after the end of underground chamber testing, Area 1 was reactivated for the testing of gun-type initiators in 1955 (Los Alamos National Laboratory 1992; Los Alamos National Laboratory Archives; U.S. Department of Energy 1986).

East Site (1955 to 1972)

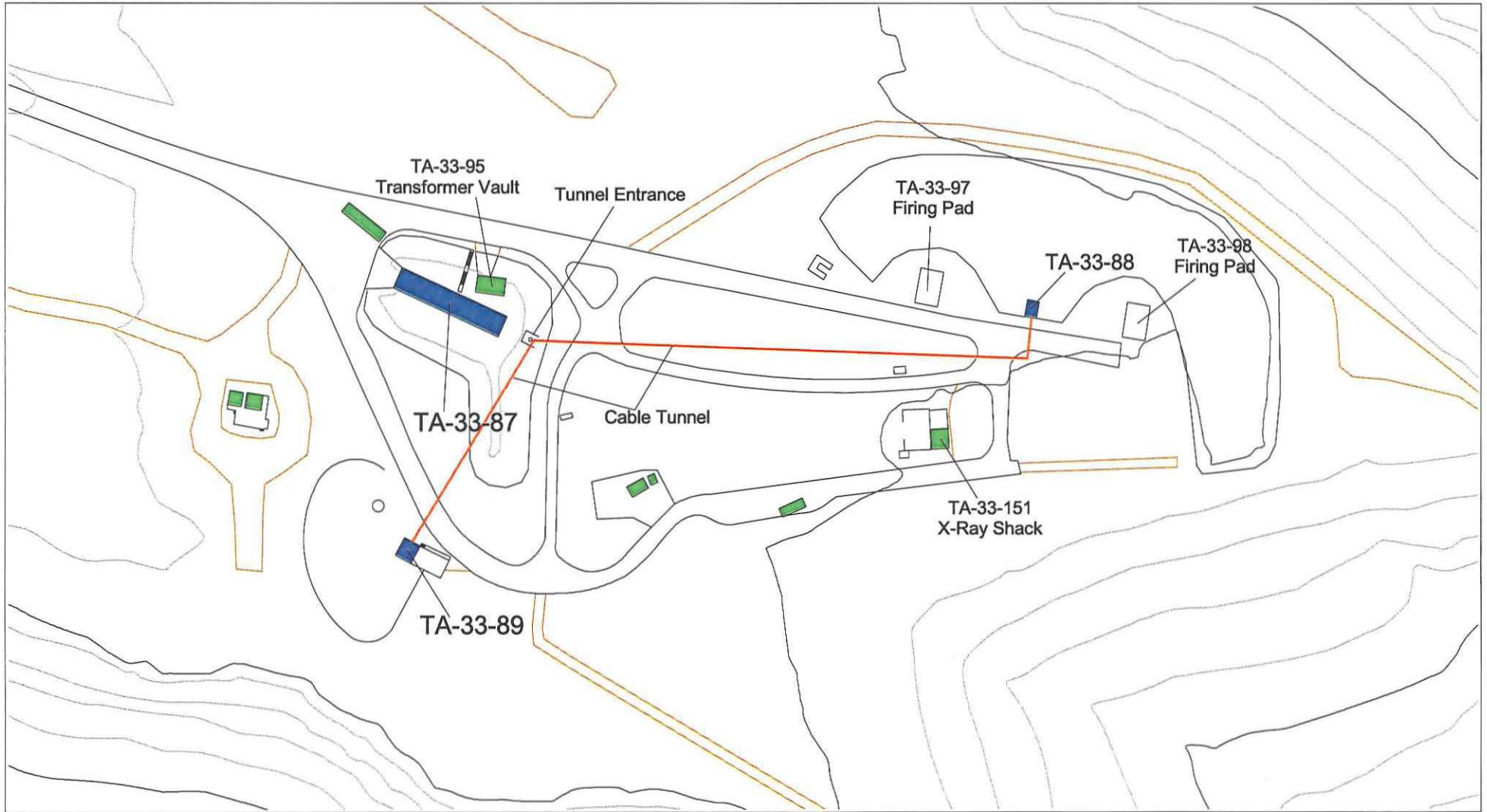
Beginning in 1955, the new “East Site” (formerly Area 1) grew to include a number of firing areas used for a variety of experiments relating to gun-type weapons. In one series of experiments, neutrons were measured in a large, doughnut-shaped, liquid scintillation counter. In another series, projectiles were X-rayed as they were shot past a recording setup. Uranium projectiles containing beryllium and polonium-210 or cobalt-60 were used in gun tests. The projectiles were not detonated: some were shot into berms and others were shot into catcher boxes for recovery and later sectioning (Los Alamos National Laboratory 1992; U.S. Department of Energy 1986).

Facilities at East Site

The first permanent buildings at East Site were completed by June of 1955. Other East Site facilities included two adjacent crescent-shaped berms, each 10 ft high and 200 ft across the face, with concrete shot pads located in the center of each crescent. Reinforced concrete gun mounts were located at the west end of the firing area. An X-ray shack, building TA-33-151, was located near the two shot pads (Los Alamos National Laboratory 1992; Hoard 1991) (Map 4).

TA-33-87 was completed in 1955 to support shot testing at East Site. The building was primarily used as a control room and had a darkroom for film processing (Ahlquist 1983; Los Alamos National Laboratory 1992). TA-33-89, “the X-unit vault,” was built as a storage building for X-units used to set off the test shots at East Site (an X-unit is an electronic firing unit used to fire detonators) (U.S. Department of Energy 1986).

A cable tunnel connected the control room (TA-33-87) to an instrumentation building located further to the east (TA-33-88). Cabling also extended to the X-unit vault (TA-33-89) and to the X-ray shack discussed above. The cables were housed in a 36-inch diameter corrugated metal pipe running along the length of the 6 ft 10 in high tunnel. The cable tunnel was designed to be accessed through a series of manholes (Fig. 7). According to a former site worker, the tunnel is big enough to walk through (Hoard 1991).



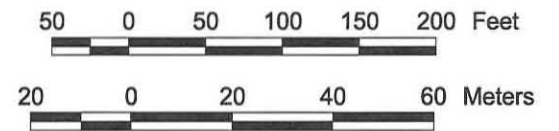
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Heritage Resources and Environmental Policy Compliance Team
RRES-ECO (Ecology Group)

TA-33 East Site/Area 1
Buildings 87, 88, and 89



- Cable Tunnel
- Buildings/Structures
- 20 Foot Contours
- 100 Foot Contours
- Techarea
- Drainage
- Township, Section, Range
- USGS 7.5 Minute Quad
- Trails
- Roads
- Road/dirt
- Park/pave
- Park/dirt
- Fences

1:1500



Map 4



Fig. 7. Cable Tunnel Entrance with Manhole, Near TA-33-87

A berm-covered transformer vault, TA-33-95, is also located at East Site. The vault was constructed to withstand explosive blast effects in order to protect the power transformer (LANL 1992).



Fig. 8. Transformer Vault, TA-33-95

Property Descriptions

(Complete architectural descriptions are contained in the historic building survey forms located in Appendix A.)

Building Identification and Numbering

The buildings discussed in this report are identified using the current LANL system of placing the TA prefix before each building number. Historically, however, the “HP” prefix (for Hot Point Site) was used before each building number and some of the drawings included in this report may use the old system of building identification. For example, TA-33-87 is the same building as HP-87.

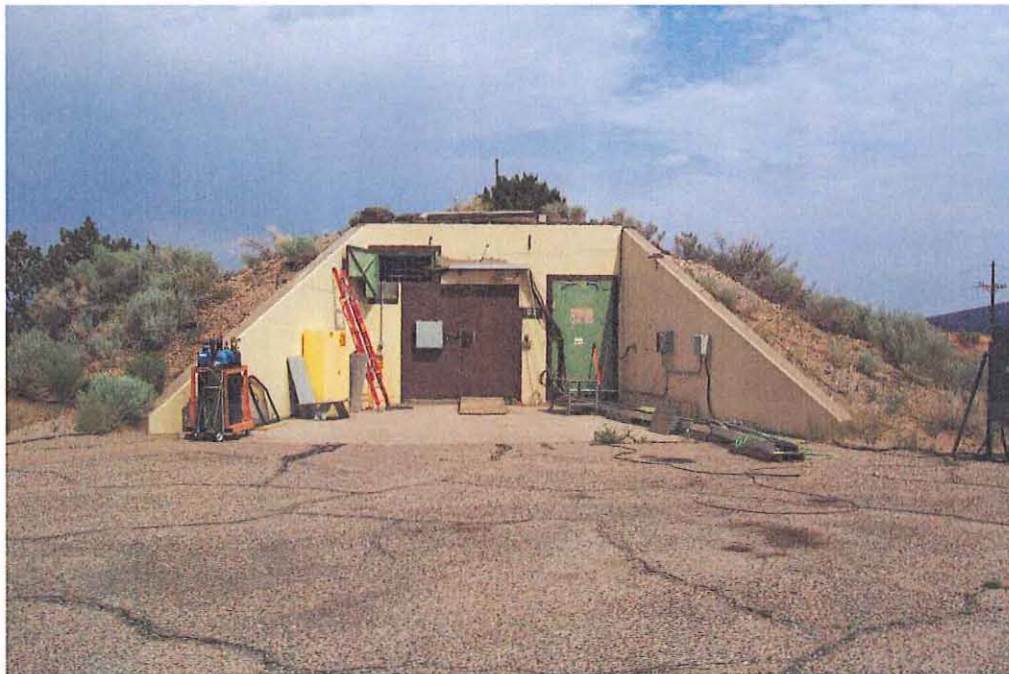


Fig. 9. TA-33-87

TA-33-87 (HP-87), Control Building

TA-33-87 is a one-story rectangular building measuring 92 ft 5 in by 21 ft. The building contains 1584 ft² of useable floor space and is approximately 15 ft in height. The interior of the building is divided into five rooms: one large main “control” room, and four small rooms including a bathroom, darkroom, and two utility rooms. The floors in the main room have built-in trenches for running electrical cables.

Building 87 is constructed with a reinforced concrete foundation and floor slab and has reinforced concrete walls and a flat roof. The west concrete headwall is constructed with angled wing walls that serve as a retaining system for the compacted earthen berm covering the remaining three sides and roof. This western elevation, the only exposed exterior wall, has a painted concrete finish. A pair of heavy-duty metal doors, a single heavy-duty metal door, and a grated ventilation duct are set within the headwall on this elevation, and provide the only access

into the building. The pair of doors seen today replaced a single reinforced metal strap hinged door sometime after 1984. A building identification sign and electrical conduit and control boxes are located on the exterior surface of the wing walls.

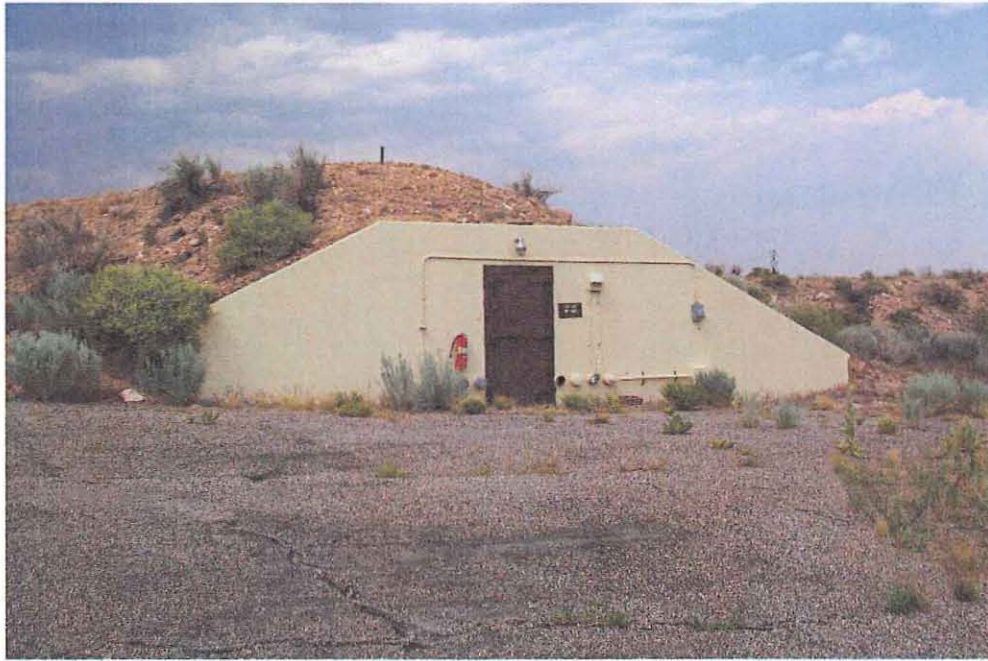


Fig. 10. TA-33-88

TA-33-88 (HP-88), Cable or Instrumentation Building

TA-33-88 is a one-story single room building measuring 17 ft 8 in by 14 ft with 192 ft² of useable floor space and an 8 ft interior ceiling height. The building is constructed with a reinforced concrete foundation and floor slab. It has reinforced concrete walls and a flat roof. The south exposed concrete headwall is constructed with wing walls that serve as a retaining system for the compacted earthen berm covering the remaining three sides and roof. This exposed wall has a painted concrete finish. A single reinforced metal door is set within the headwall, providing the only access into the building.

A fire extinguisher, security light, electrical conduit and control box, capped pipe sleeve openings, and building identification sign are located on the exterior face of the building.



Fig. 11. TA-33-89

TA-33-89 (HP-89), X-Unit Vault

TA-33-89 is a one-story single room building measuring 13 ft by 16 ft (excluding the protruding wing walls). The interior measures 70 ft² with an approximate 7 ft interior ceiling height. The structure is constructed with a reinforced concrete foundation and floor slab and has reinforced concrete walls and a flat roof. The east exposed concrete headwall is constructed with wing walls that are continuations of the sidewalls of the structure. These wing walls serve as a retaining system for the compacted earthen berm covering the remaining three sides and roof. This exposed portion of the building is unpainted concrete.

A single reinforced metal door with heavy-duty strap hinges and a steel lever door handle is set within the headwall and provides the only access into the building. There is a concrete ramp leading down from the surrounding ground surface to the building entry level. Additionally, there is a set of metal stairs and landing leading down from the surrounding ground surface to the building entry level along the north sidewall.

A fire extinguisher, security light, building identification sign, and metal safety-railing are located on the exterior face of the building and wing walls. A metal pipe sleeve with elbow and cap is also extruding from the roof of the building.

Integrity Issues

Integrity

The LANL Heritage Resources and Environmental Policy Compliance Team has developed four integrity codes to assess potentially eligible properties. The integrity requirements for properties eligible under Criterion A are less stringent than for those properties eligible under Criterion C.

A historically significant property with a level 3 integrity could still be eligible, especially if an element of historical uniqueness is involved. Properties eligible under Criterion C should have no lower than a level 2 integrity. Level 4 integrity properties are not eligible for the Register.

1. Excellent Integrity - the property is still closely associated with its primary context and retains integrity of location, design, setting, workmanship, materials, feeling, and association. Little or no remodeling has occurred to the property and all remodeling is in keeping with its associated historic context/significant use period.
2. Good Integrity - the property's interior and exterior retain historic feeling and character but some of the original significant equipment may be gone. The property may have had minor remodeling.
3. Fair Integrity - a property in this category should retain original location, setting, association, and exterior design. All associated interior machinery/equipment may be absent but the essential question is "Is this property still recognizable to a contemporary of the building's historic period?"
4. Poor Integrity - the property has no connection with the historically significant setting, feeling, and context. Major changes to the property have occurred. The property would be unrecognizable to a contemporary.

It appears that all of the original equipment has been removed from the three buildings discussed in this report. Other than this loss of interior integrity, the buildings have not been significantly modified since their period of significance. TA-33-87, TA-33-88, and TA-33-89 are all in good physical condition with some deterioration due to the passage of time and lack of upkeep. The buildings would be immediately recognizable to someone who worked at TA-33 between 1955 and 1972. For these reasons, the three buildings have level 3 integrity.

National Register Eligibility Recommendations

Based on the information gathered during this building survey, TA-33-87, TA-33-88, and TA-33-89 are eligible for nomination to the National Register of Historic Places under Criterion A. The activities conducted in these buildings directly contributed to Cold War weapons research and development at Los Alamos. Specifically, all three buildings supported the initiator testing program at TA-33. Although these three buildings do not possess a high level of interior integrity, they still maintain significant exterior integrity. TA-33-87, TA-33-88, and TA-33-89 retain the key elements of original location, setting, association, feeling, and design.

The SHPO is requested to concur with the eligibility determinations contained in this report and to concur that the proposed upgrades to TA-33-87, TA-33-88, and TA-33-89 will adversely affect this small complex of historic buildings. As a result of this historic building survey, this project complies with the National Historic Preservation Act of 1966 (as amended).

References Cited

Ahlquist, A. J.

- 1983 "Conversations with Harlow Russ Regarding TA-33, 10/27/83," LANL Memorandum HSE-8/83-733 to HSE-8 file from A. J. Ahlquist (HSE-8), Los Alamos, New Mexico.

Hoard, Dorothy

- 1991 "Conversations with Harlow Russ, December 14, 1990," LANL Memorandum CLS-1/91-304-DH to CLS-1 file from D. Hoard (CLS-1), Los Alamos, New Mexico.

Los Alamos National Laboratory

- 1992 *RFI Work Plan for Operable Unit 1122: Environmental Restoration Program*, LA-UR-92925, Los Alamos National Laboratory, Los Alamos, New Mexico.
- 1995 *Dateline: Los Alamos, Special Issue, LALP-95-2-6&7*. Los Alamos National Laboratory, Los Alamos, New Mexico.

Los Alamos National Laboratory Archives

Information acquired from the LANL Archives, TA-21-1001, Roger Meade, LANL Archivist. Files accessed include "Group M-3 and Group W-3 Monthly Progress Reports" and other general LANL organizational chart information on file at the archives.

U.S. Department of Energy

- 1986 *Phase 1: Installation Assessment, Los Alamos National Laboratory, Comprehensive Environmental Assessment and Response Program [CEARP] (Working Draft)*. Albuquerque Operations Office, Albuquerque, New Mexico. On file at RRES-ECO, Los Alamos National Laboratory, Los Alamos, New Mexico.

Appendix A
LANL Historic Building Survey Forms, Photographs, and Drawings

LANL TA- Building # 33-0087

Camera 984244

Frame #s DCP_1708, 1709, 1716,

Surveyor(s) K. Garcia, J. Ronquillo

Date 07/14/2003

Los Alamos National Laboratory CRMT Historic Building Survey Form

Building Name Control Building UTM's easting 388699 northing 3959221 zone 13

Legal Description: Map White Rock Quad 1984 tns range sec

Current Use/ Function Storage Original Use/ Function Control Building

Date (estimated) Date (actual) 1955 Property Type Laboratory/Processing

Type of Construction

Pre-Fabricated Metal Steel Frame Wood Frame CMU Reinforced Concrete

Other Type of Construction # of Stories 1

Foundation Reinforced Concrete

Exterior CMU-Exterior Reinforced Concrete-Exterior Steel (galvanized) Steel (corrugated) Wood Siding Asbestos Shingles-Exterior In-Fill Panels Other-Exterior Earthen Berm

Exterior Treatment (painted, stuccoed, etc) Painted concrete

Exterior Features (docks, speakers, lights, signs, etc) Wall mounted electrical conduit and control boxes.

Addition CMU-Addition Reinforced Concrete-Addition Steel (galvanized)- Addition Wood Steel (corrugated)-Addition Asbestos Shingles-Addition Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition

Roof Form Slanted/Shed Gable Other Roof Type Flat with earthen berm.

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal Rolled Asphalt Asbestos Shingles 4-Ply Built Up Other Roof Materials Reinforced concrete roof covered with an earthen berm.

Window Type Casement Single Hung Sash Double Hung Sash Fixed Window Other Window Type

of Each Window Type/ Comments N/A

Glass Type Clear Wire Glass Opaque Painted Glass Glass Block

Light Pattern

Door Type Personnel Door Types Exterior Fire Door Single Double Roll-up Sliding

		Hollow Metal <input checked="" type="checkbox"/>	Solid Wood <input type="checkbox"/>	1/2 Glazed <input type="checkbox"/>	Paneled <input type="checkbox"/>	
		Louvered <input type="checkbox"/>	Painted <input checked="" type="checkbox"/>			
	Interior	Fire Door <input type="checkbox"/>	Single <input checked="" type="checkbox"/>	Double <input type="checkbox"/>	Roll-up <input type="checkbox"/>	Sliding <input type="checkbox"/>
		Hollow Metal <input checked="" type="checkbox"/>	Solid Wood <input type="checkbox"/>	1/2 Glazed <input type="checkbox"/>	Paneled <input type="checkbox"/>	
		Louvered <input type="checkbox"/>	Painted <input type="checkbox"/>			
Equipment Door Types	Exterior	Fire Door <input type="checkbox"/>	Single <input type="checkbox"/>	Double <input type="checkbox"/>	Roll-up <input type="checkbox"/>	Sliding <input type="checkbox"/>
		Hollow Metal <input type="checkbox"/>	Solid Wood <input type="checkbox"/>	1/2 Glazed <input type="checkbox"/>	Paneled <input type="checkbox"/>	
		Louvered <input type="checkbox"/>	Painted <input type="checkbox"/>			
	Interior	Fire Door <input type="checkbox"/>	Single <input type="checkbox"/>	Double <input type="checkbox"/>	Roll-up <input type="checkbox"/>	Sliding <input type="checkbox"/>
		Hollow Metal <input type="checkbox"/>	Solid Metal <input type="checkbox"/>	1/2 Glazed <input type="checkbox"/>	Paneled <input type="checkbox"/>	
		Louvered <input type="checkbox"/>	Painted <input type="checkbox"/>			

of Each Door Type/Comments:

Interior Wall Gypsum Board Reinforced Concrete- Interior

CMU- Interior Plywood Other- Interior

In-Wall Electrical Wiring On-Wall Electrical Wiring

Ceiling Drop Ceiling

Interior Comments (Equipment, etc)

Degree of Remodeling

Condition Excellent Good Fair Deteriorating Contaminated Burned

Associated Building

If yes, list building names and #s:

Integrity

Significance

Eligible Under Criterion A B C D Not Eligible

DOE Themes

Nuclear Weapon Components and Assembly Nuclear Weapon Design and Testing Nuclear Propulsion

Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science Energy and Environment: Research Design Projects

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support Super Computing

Reactor Technology Biomedical/Health Physics Strategic and Supporting Research

Environment/Waste Management Administration and Social History Architectural History

Recommendations/ Additional Comments

Architectural Features (elevations)

West Elevation: Entrance into Control Building. Sometime after 1984 the front entrance was modified. The original single personnel door (a reinforced metal door with heavy duty strap hinges) located in the center of the west elevation, was replaced with a pair of heavy-duty metal doors. When these doors were installed the ventilation duct opening and covering were also modified. North, east, and south elevations are covered by a surrounding earthen berm as is the roof of the building.

A utility tunnel connects buildings TA-33-87, -88, & -89. This 5' X 6'10" tunnel holds a 36" conduit that carries the cables connecting electronic experimental equipment in each of the buildings.

Total sq ft

1584

Architect/ Builder

A/E is Max Flatow - Jason Moore, Builder R.E. McKee

Alterations

List of Drawings (Ctrl + Enter for para break)

ENG-C 10509
TA-33, Bldg 87 (HP-87)
Recovery Box Installation
Civil - Plot Plan
November 9, 1956
Revised to as built status June 25, 1957

ENG-SK 2306
Sheet 9 of 18
TA-33
Extension of TA-33 Facilities
Plot Plan - Area B
March 4, 1953

ENG-C 3305
Sheet 4 of 66
TA-33
Additional Facilities, TA-33
Profile & Details 36" Conduit
April 19, 1954

ENG-SK 2307
Sheet 10 of 18
TA-33
Extension of TA-33 Facilities
Plan & Sections
Building HP-87
March 4, 1953

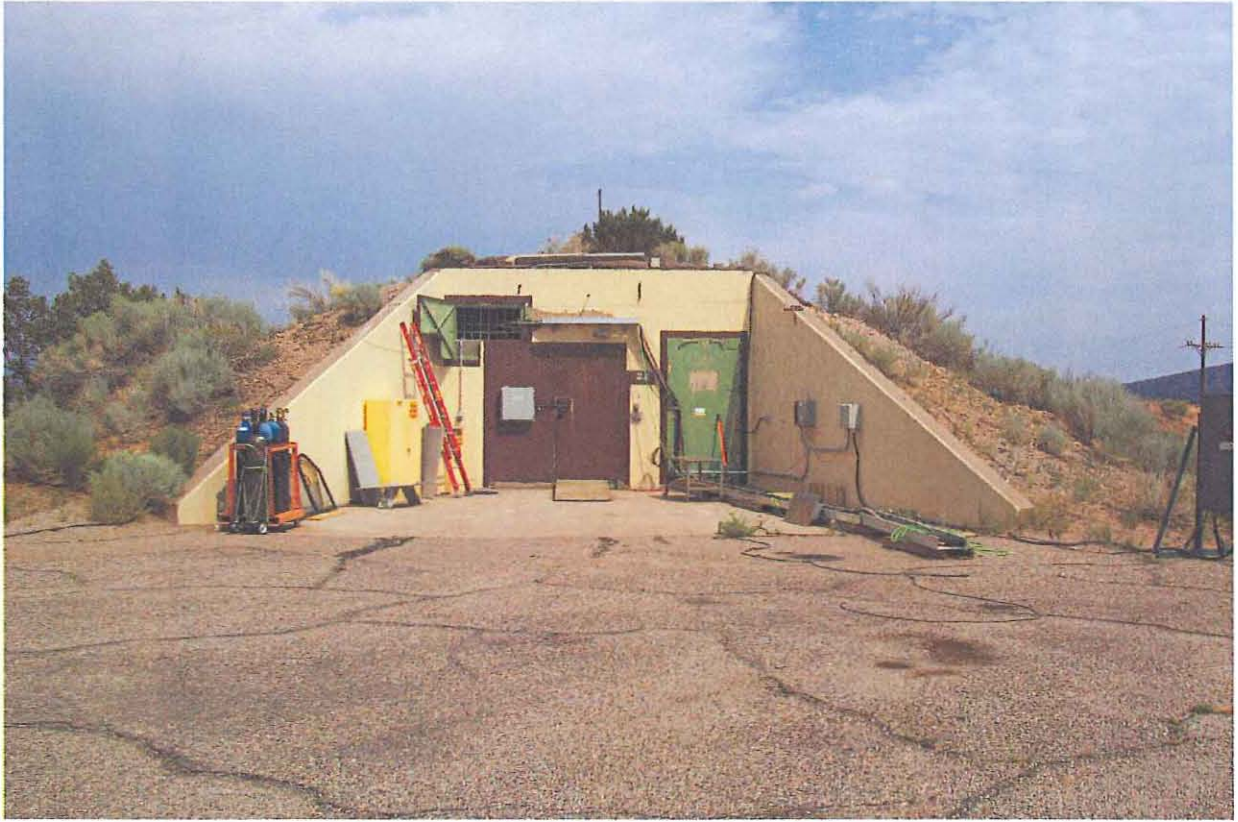
ENG-C 3321
Sheet 20 of 66
TA-33, Bldg 87 (Bldg HP-87)
Additional Facilities
Structural Plan and Details
April 19, 1954

ENG-C 3322
Sheet 21 of 66
TA-33, Bldg 87 (Bldg HP-87)
Additional Facilities
Structural Details
April 19, 1954

ENG-C 3324
Sheet 23 of 66
TA-33, Bldg 87 (Bldg HP-87)
Additional Facilities
Floor Plan and Elevation
April 19, 1954

Continued from previous page

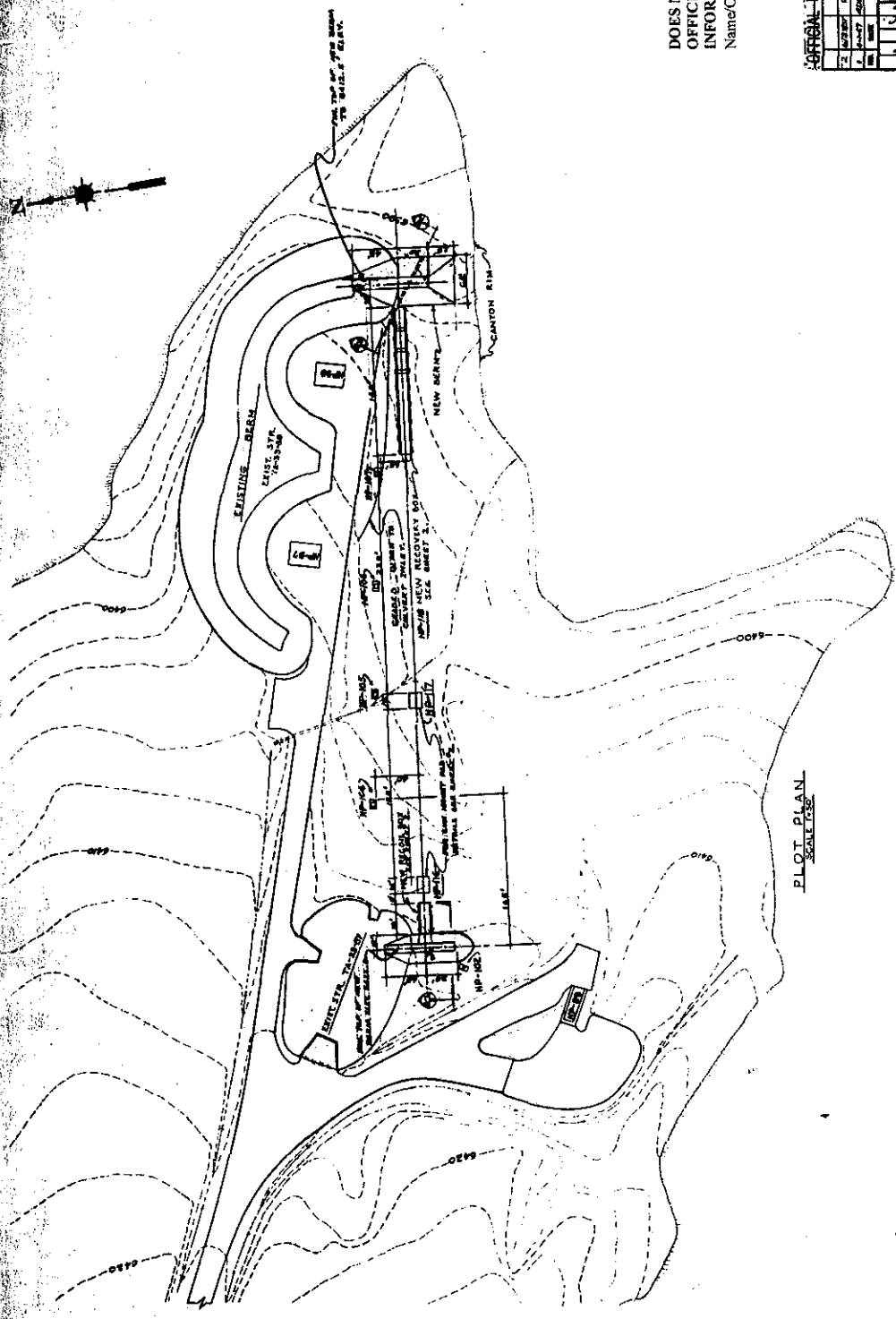
ENG-R 3036
TA-33, Bldg 87 (Bldg HP-87)
Control Building
Floor Plan
March 21, 1963
Revised to status of June 8, 1984



TA-33-87, West side, facing east



TA-33-87, South side, facing northwest



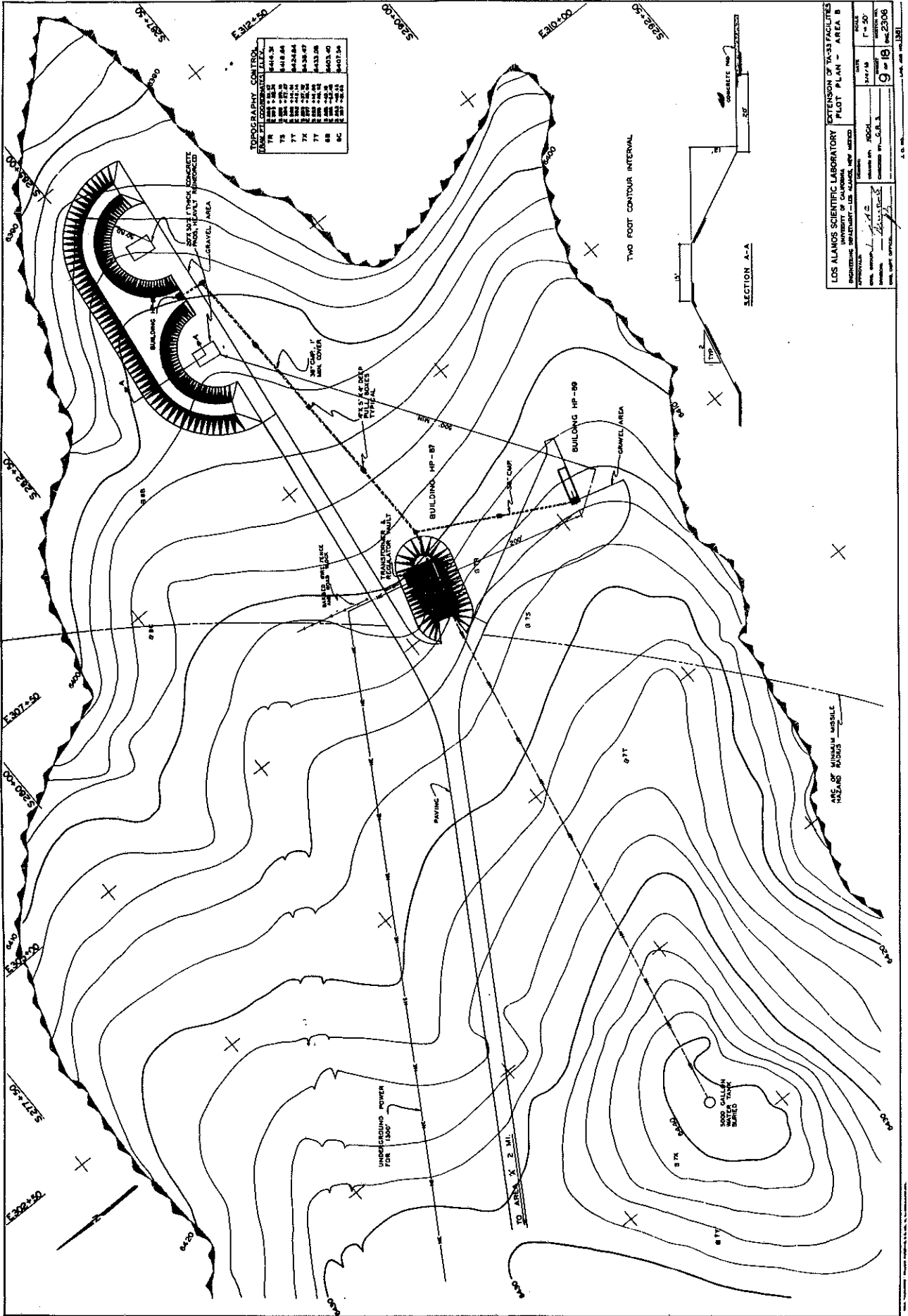
PLOT PLAN
SCALE 1/2" = 1'-0"

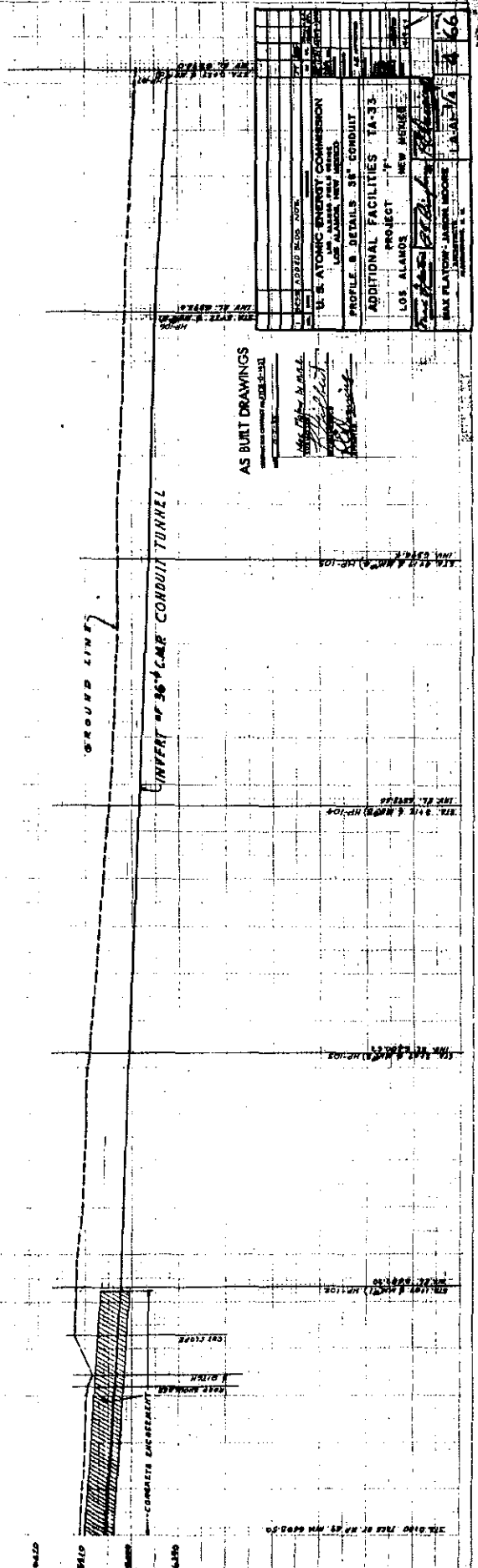
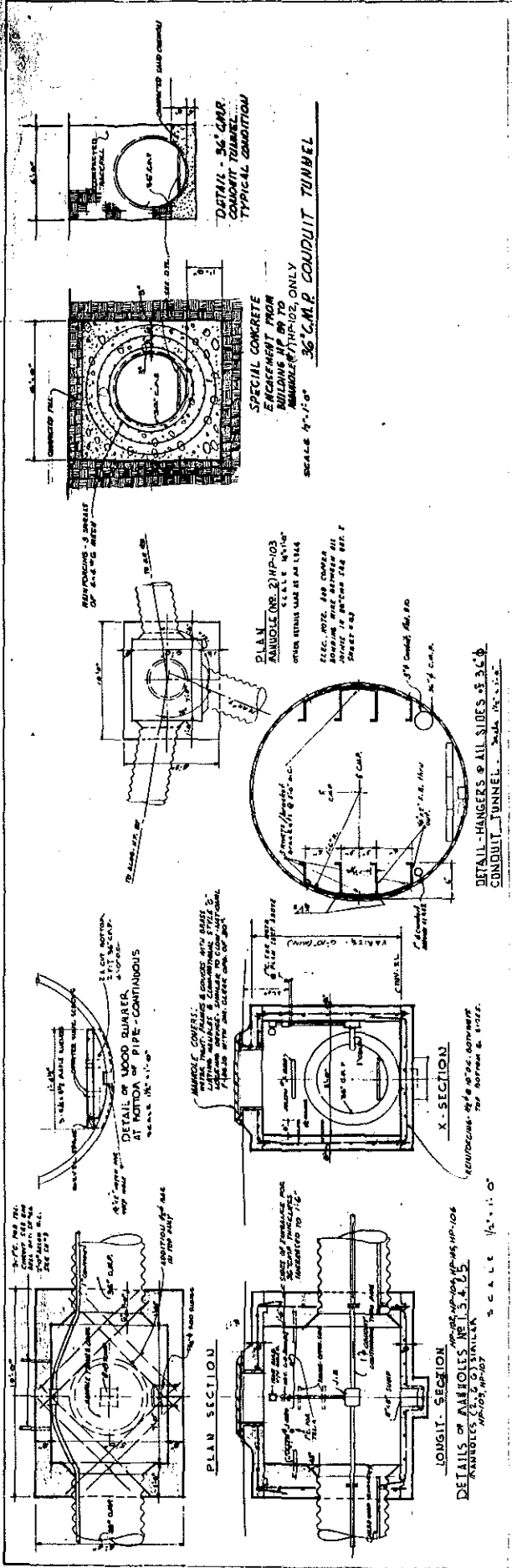
DOES NOT CONTAIN
OFFICIAL USE ONLY
INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 6/21/67

THIS PLAN SHEET IS UNCLASSIFIED
DATE 11/19/98 BY SP-6/SSS/STW/STW

OFFICIAL USE ONLY

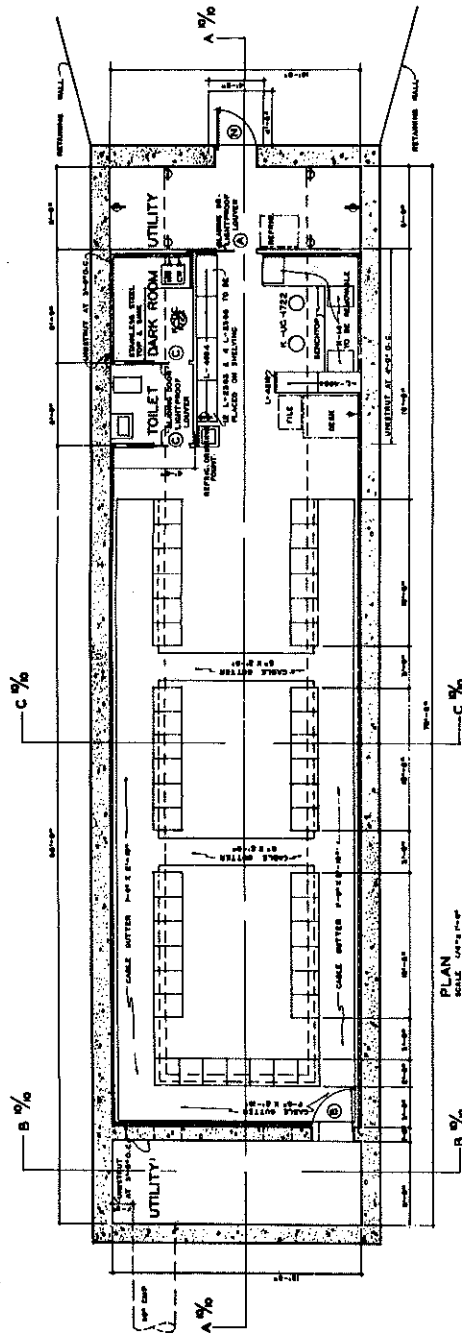
1	DATE	REVISION	BY	REASON
1	6/21/67	REVISED TO A.S. BUILT STATUS	JLH	
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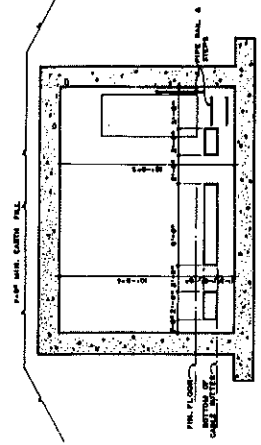


DATE	BY	CHECKED	APPROVED
11/15/66	J. L. W. W.	J. L. W. W.	J. L. W. W.
U. S. ATOMIC ENERGY COMMISSION LOS ALAMOS, NEW MEXICO			
PROJECT: NEW MEXICO			
ADDITIONAL FACILITIES: TA-33			
SCALE: 1/4\"/>			

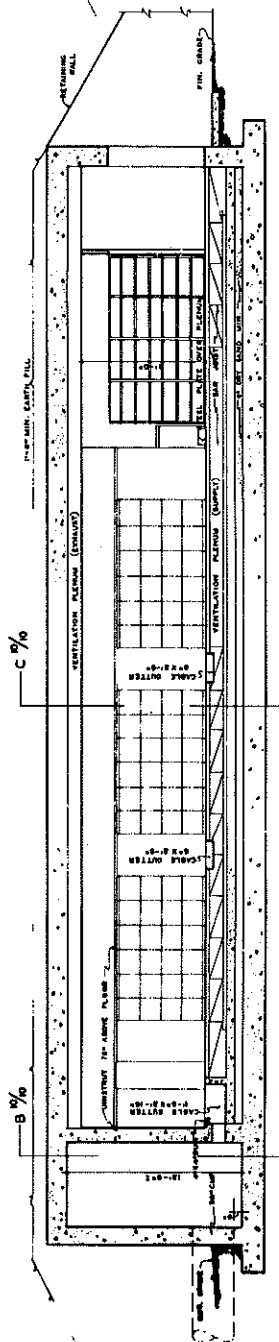
L.A.S.L. INC. ENGINEERING 3305
LOS ALAMOS, N.M.



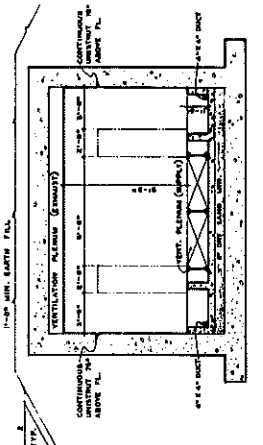
PLAN
SCALE 1/4" = 1'-0"



SECTION B-B
SCALE 1/4" = 1'-0"



SECTION A-A
SCALE 1/4" = 1'-0"



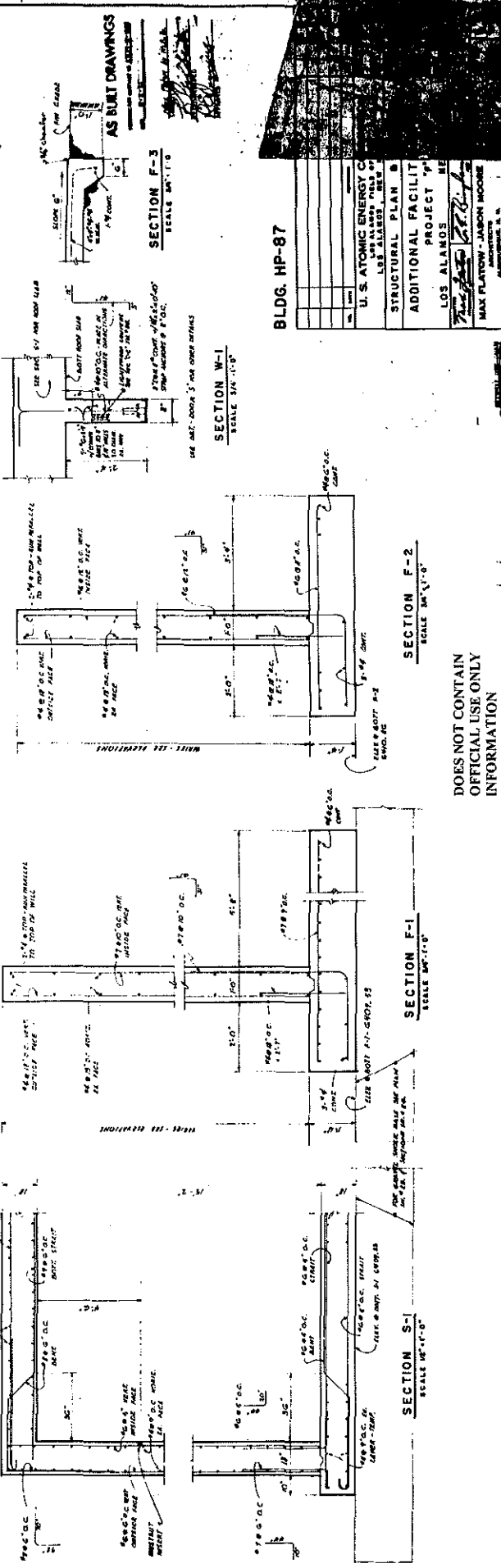
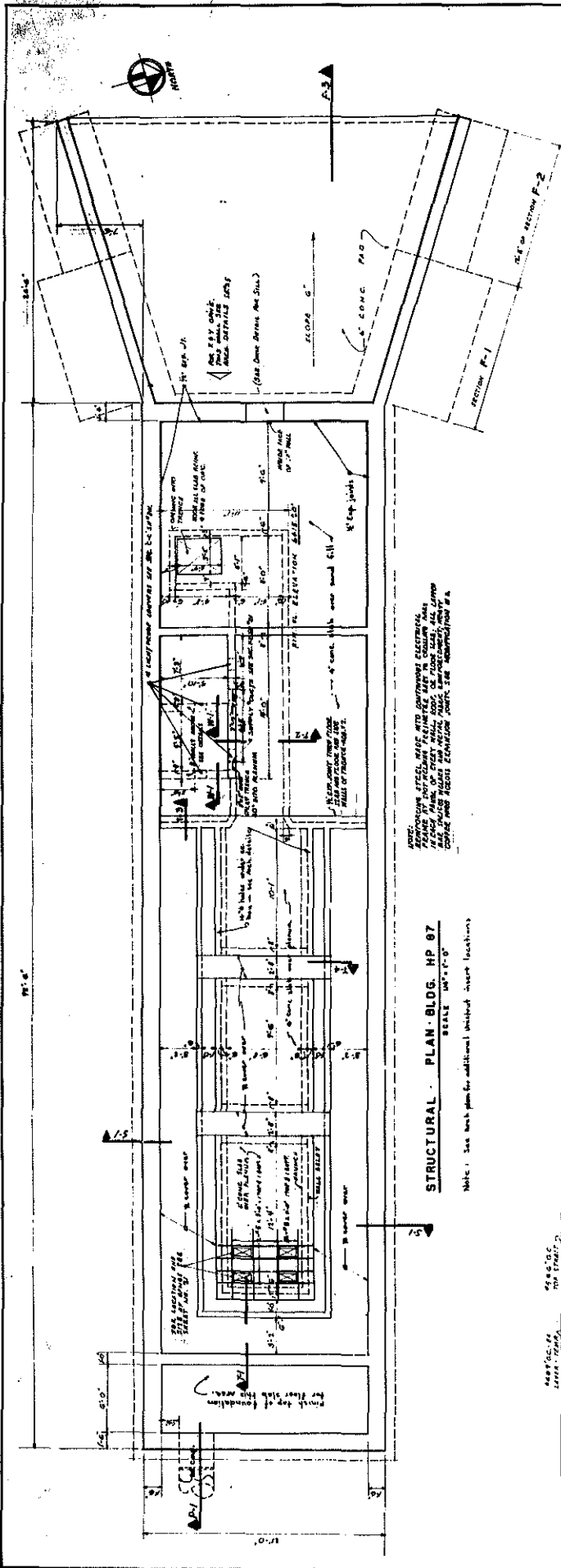
SECTION C-C
SCALE 1/4" = 1'-0"

- LEGEND**
- C- INDICATES REMOVABLE LABORATORY FURNITURE.
 - L- INDICATES LEAD-CLAD METAL PRODUCTS.
 - DOTTED LINES- INDICATES CONDUIT NOT FINISHED.
 - O- INDICATES OPEN TYPE (SEE SH. NO. 10)
 - CROSS HATCHING- MASONRY
 - DOTTED MASONRY- FOR SERVICE DUCT WITH INSULATION.
 - S- 2" DIA. PART. MASONRY NOT LACK REINFT. WITH 1/4" BARS AT 12" O.C.
 - CW- COLD WATER
 - HW- HOT WATER
 - T- TELEPHONE



LOS ALAMOS SCIENTIFIC LABORATORY EXTENSION OF T-333 FACILITIES
UNIVERSITY OF CALIFORNIA
MATERIALS DIVISION

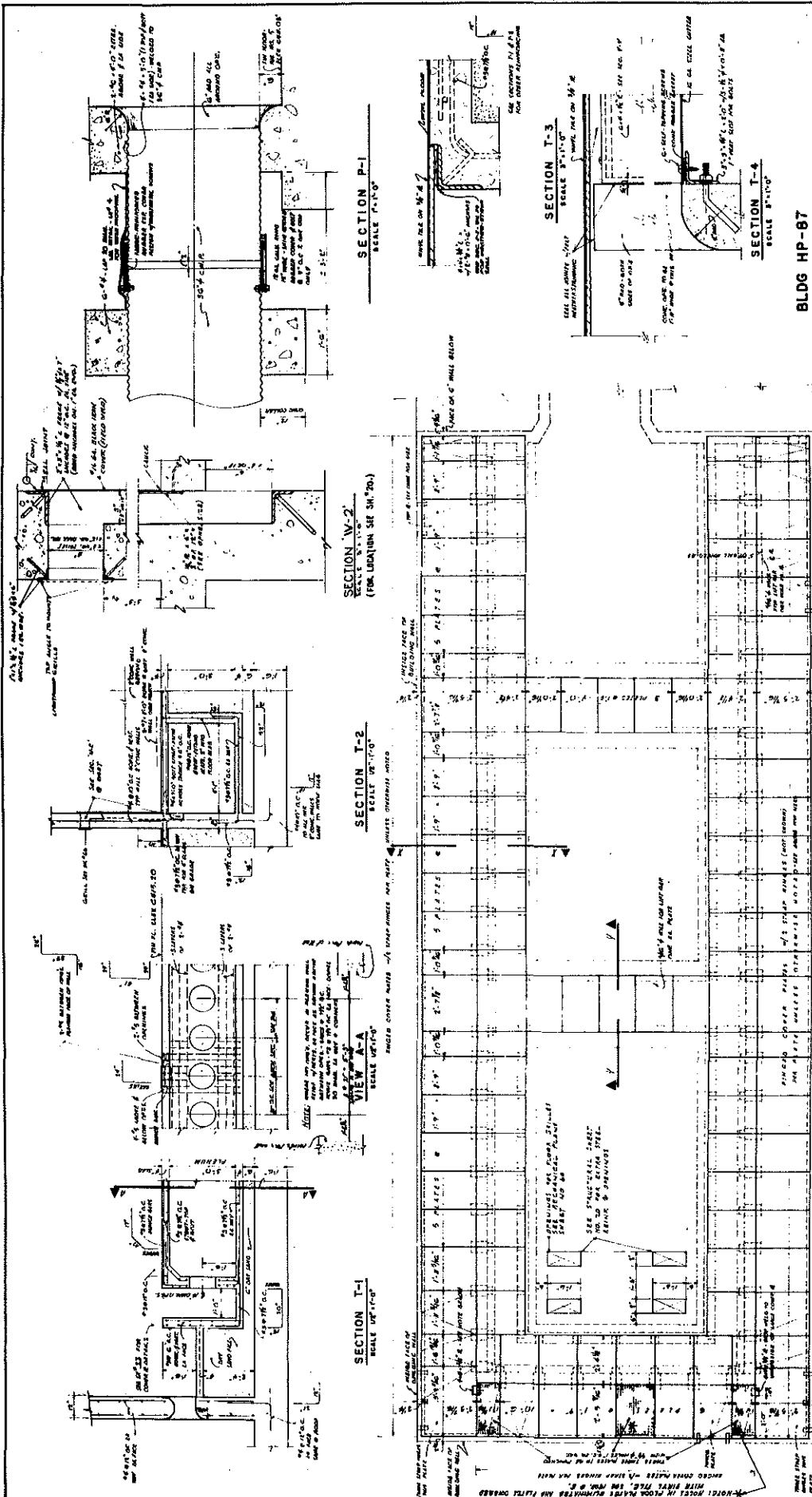
PROJECT NO. 10-118
DATE 3-4-53
DRAWN BY J.S.S.
CHECKED BY J.S.S.
DESIGNED BY J.S.S.
SCALE 1/4" = 1'-0"
SECTION NO. 10 of 18
JOB NO. 2307



BLDG. HP-87

U.S. ATOMIC ENERGY COMMISSION
LOS ALAMOS, N.M.
ADDITIONAL FACILITY PROJECT
LOS ALAMOS
MAX FLATOW - JARON MOORE
DATE: 6/23/64
PROJECT NO. 3321

DOES NOT CONTAIN OFFICIAL USE ONLY INFORMATION

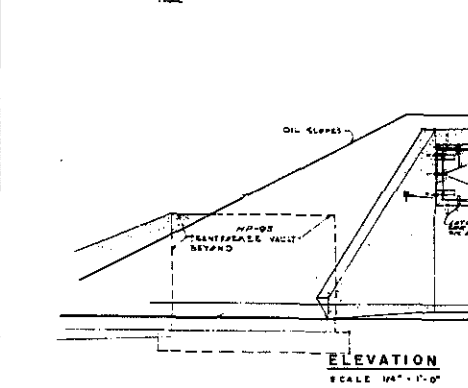
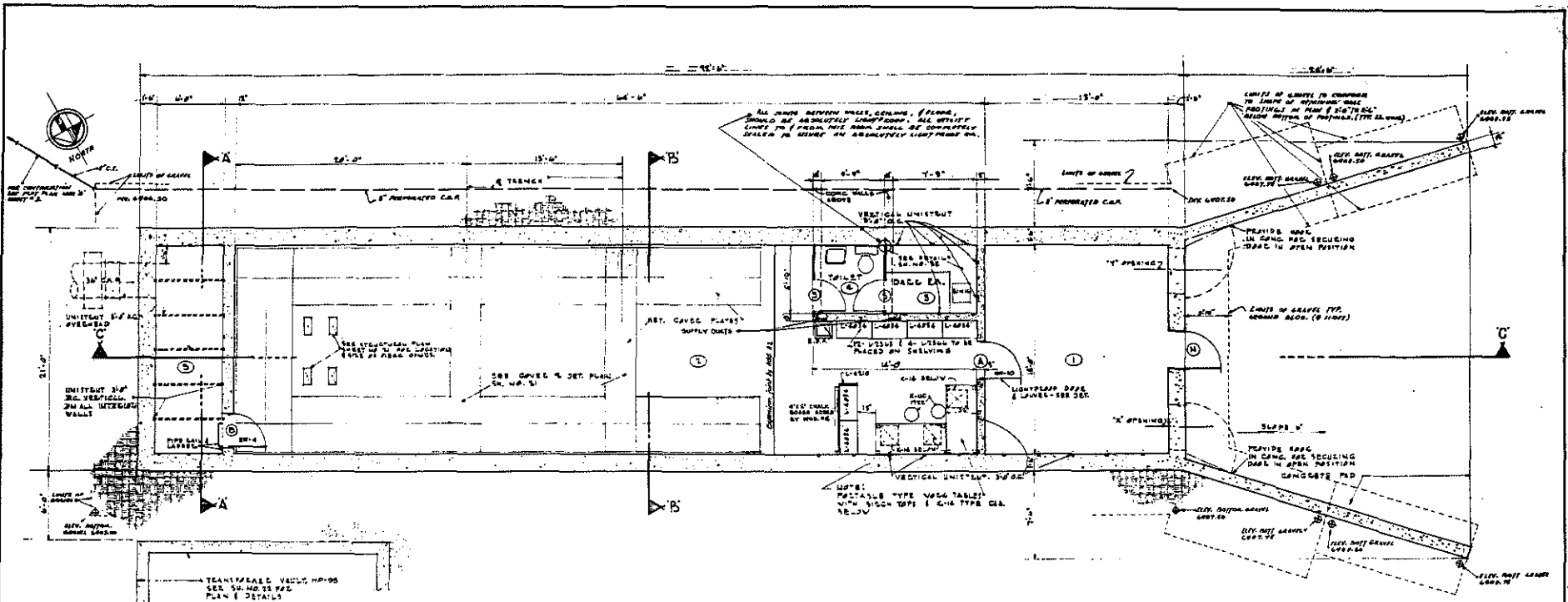


BLDG HP-87 U. S. ATOMIC ENERGY COMMISSION LOS ALAMOS, NEW MEXICO STRUCTURAL DETAILS ADDITIONAL FACILITIES TA-33 PROJECT NEW MEXICO LOS ALAMOS MAX PLATTOW - JASON MOORE ARCHITECTS, P.C. LOS ALAMOS, N.M.		SHEET NO. 1 OF 1	DATE 11/11/66	E1 66
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NOTES: DIMENSIONS ARE IN 6" OR 8" DIMS UNLESS NOTED OTHERWISE

AS BUILT DRAWINGS
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 11/11/66

LIST: BAR DETAIL - BOURSE, 2006



LEGEND

CONCRETE

MOLLOW ARE. PACT. BY 5/8\"/>

NOTES:
 1. SEE SH. NO. 87 DOOR SCHEDULE & SH. 32 THRU 33 FOR DOOR DETAILS.

ROOF FINISH SCHEDULE						
DOOR NO.	FLOOR	WALLS	CEILING	BASE	EASINGS	
		FIN. GRG.	FIN. GRG.	FIN. GRG.	NON E.	VINYL
		VINYL	CONC. TILE	CONC. TILE	NON E.	VINYL
1						
2						SEE SH. 34-36 FOR CHG.
3						
4						
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AS BUILT DRAWINGS

APPROVED BY ARCHITECT

DATE: 6-2-57

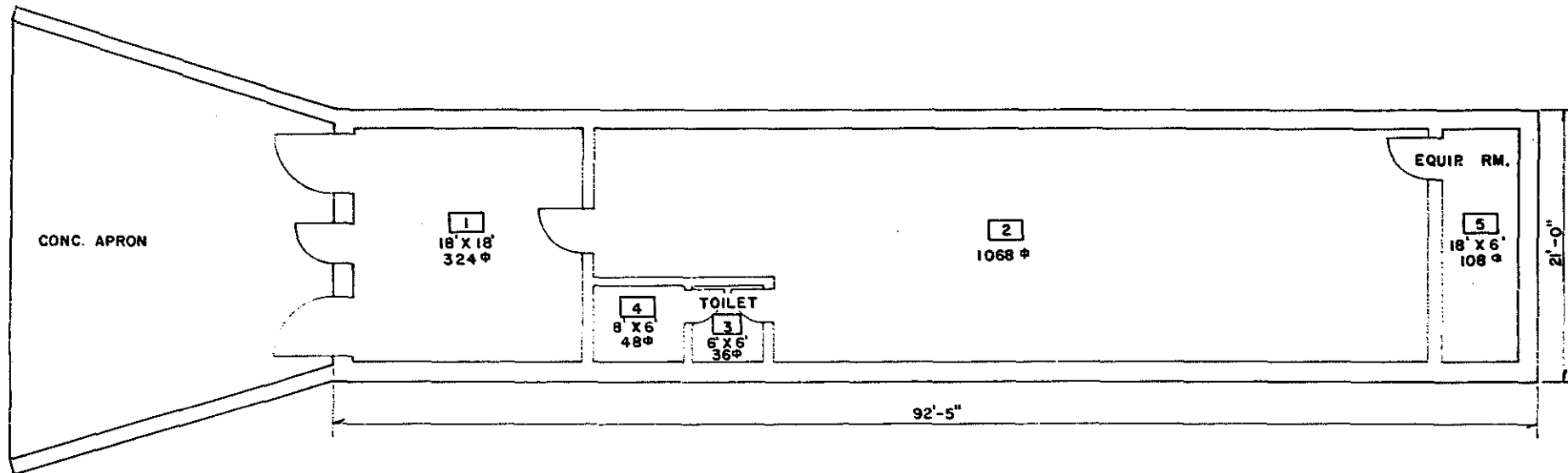
Max Platow
Jason Moore

BLDG. HP-87

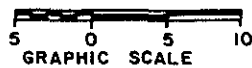
NO.	DATE	BY	CHKD.	APP'D.
U. S. ATOMIC ENERGY COMMISSION LOS ALAMOS FIELD OFFICE LOS ALAMOS, NEW MEXICO				
FLOOR PLAN B ELEVATION				
ADDITIONAL FACILITIES TA-33 PROJECT "F"				
LOS ALAMOS NEW MEXICO				
MAX PLATOW - JASON MOORE ARCHITECTS ALBUQUERQUE, N. M.			LA-AI-34	2566

DOES NOT CONTAIN
 OFFICIAL USE ONLY
 INFORMATION
 Name/Org.: Jiff Hefele/S-7 Date: 6/23/04

NO.	DATE	REVISION	BY	CHKD.	APP'D.
1	8-19-66	REVISED TO STATUS OF 8-15-66	MM	Y	W.T.H.



(1/8" = 1'-0")



TOTAL SQ. FT. 1584

REV.	DATE	REVISION	BY	CHKD.	APP'D.
2	6-8-84	REVISED TO STATUS OF 6-8-84	MM	Y	W.T.H.

UNIVERSITY OF CALIFORNIA
Los Alamos Los Alamos National Laboratory
 Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

CONTROL BUILDING
FLOOR PLAN

BLDG. HP-87 TA-33

SUBMITTED: *E. Trusillo* RECOMMENDED: *Dominic F...* APPROVED: *W.T.H.*

CLASS.	U
REVIEWER	<i>Trusillo</i>
DATE	6-11-84

DRAWN	LEMON	DATE	3-21-63	SHEET NO.	1 OF 1	DRAWING NO.	ENG-R3036
CHECKED	<i>Trusillo</i> H-N						

R. C. T. 100. U. C. 100. U. C. TO VAULTS

LANL TA- Building # 33-0088

Camera 984244

Frame #s DCP_1713

Surveyor(s) K. Garcia, J. Ronquillo

Date 07/14/2003

Los Alamos National Laboratory CRMT Historic Building Survey Form

Building Name Cable Building/Instrumentation Building UTMs easting 388851 northing 3959218 zone 13

Legal Description: Map White Rock Quad 1984 tnsp range sec

Current Use/ Function Storage Original Use/ Function Cable Building

Date (estimated) Date (actual) 1955 Property Type Laboratory/Processing

Type of Construction

Pre-Fabricated Metal Steel Frame Wood Frame CMU Reinforced Concrete

Other Type of Construction # of Stories 1

Foundation Reinforced Concrete

Exterior CMU-Exterior Reinforced Concrete-Exterior Steel (galvanized) Steel (corrugated) Wood Siding Asbestos Shingles-Exterior In-Fill Panels Other-Exterior Earthen berm

Exterior Treatment (painted, stuccoed, etc) Painted concrete

Exterior Features (docks, speakers, lights, signs, etc) Wall mounted fire extinguisher, electrical conduit and control box, pipe sleeve openings and caps, and security light.

Addition CMU-Addition Reinforced Concrete-Addition Steel (galvanized)- Addition Wood Steel (corrugated)-Addition Asbestos Shingles-Addition Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition

Roof Form Slanted/Shed Gable Other Roof Type Flat with earthen berm.

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal Rolled Asphalt Asbestos Shingles 4-Ply Built Up Other Roof Materials Reinforced concrete roof covered with an earthen berm.

Window Type Casement Single Hung Sash Double Hung Sash Fixed Window Other Window Type

of Each Window Type/ Comments N/A

Glass Type Clear Wire Glass Opaque Painted Glass Glass Block

Light Pattern

Door Type

Personnel Door Types	Exterior	Fire Door	<input type="checkbox"/>	Single	<input checked="" type="checkbox"/>	Double	<input type="checkbox"/>	Roll-up	<input type="checkbox"/>	Sliding	<input type="checkbox"/>
		Hollow Metal	<input checked="" type="checkbox"/>	Solid Wood	<input type="checkbox"/>	1/2 Glazed	<input type="checkbox"/>	Paneled	<input type="checkbox"/>	Louvered	<input type="checkbox"/>
	Interior	Fire Door	<input type="checkbox"/>	Single	<input type="checkbox"/>	Double	<input type="checkbox"/>	Roll-up	<input type="checkbox"/>	Sliding	<input type="checkbox"/>
		Hollow Metal	<input type="checkbox"/>	Solid Wood	<input type="checkbox"/>	1/2 Glazed	<input type="checkbox"/>	Paneled	<input type="checkbox"/>	Louvered	<input type="checkbox"/>
Equipment Door Types	Exterior	Fire Door	<input type="checkbox"/>	Single	<input type="checkbox"/>	Double	<input type="checkbox"/>	Roll-up	<input type="checkbox"/>	Sliding	<input type="checkbox"/>
		Hollow Metal	<input type="checkbox"/>	Solid Wood	<input type="checkbox"/>	1/2 Glazed	<input type="checkbox"/>	Paneled	<input type="checkbox"/>	Louvered	<input type="checkbox"/>
	Interior	Fire Door	<input type="checkbox"/>	Single	<input type="checkbox"/>	Double	<input type="checkbox"/>	Roll-up	<input type="checkbox"/>	Sliding	<input type="checkbox"/>
		Hollow Metal	<input type="checkbox"/>	Solid Metal	<input type="checkbox"/>	1/2 Glazed	<input type="checkbox"/>	Paneled	<input type="checkbox"/>	Louvered	<input type="checkbox"/>

of Each Door Type/Comments:

Interior Wall

Gypsum Board Reinforced Concrete- Interior

CMU- Interior Plywood Other- Interior

In-Wall Electrical Wiring On-Wall Electrical Wiring

Ceiling Drop Ceiling

Interior Comments (Equipment, etc)

Degree of Remodeling

Condition Excellent Good Fair Deteriorating Contaminated Burned

Associated Building

If yes, list building names and #s:

Integrity

Significance

Eligible Under Criterion A B C D Not Eligible

DOE Themes

Nuclear Weapon Components and Assembly Nuclear Weapon Design and Testing Nuclear Propulsion

Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science Energy and Environment: Research Design Projects

LANL Themes

Weapons Research and Design, Testing, and Stockpile Support Super Computing

Reactor Technology Biomedical/Health Physics Strategic and Supporting Research

Environment/Waste Management Administration and Social History Architectural History

Recommendations/ Additional Comments

Architectural Features (elevations)

South Elevation: Entrance into Cable Building. North, east, and west elevations are covered by a surrounding earthen berm as is the roof of the building.

A utility tunnel connects buildings TA-33-87, -88, & -89. This 5' X 6'10" tunnel holds a 36" conduit that carries the cables connecting electronic experimental equipment in each of the buildings.

Total sq ft

192

Architect/ Builder

A/E is Max Flatow - Jason Moore, Builder R. E. McKee

Alterations

List of Drawings (Cntrl + Enter for para break)

ENG-C 10509
TA-33
Recovery Box Installation
Civil - Plot Plan
November 9, 1956
Revised to as built status June 25, 1957

ENG-SK 2306
TA-33
Sheet 9 of 18
Extension of TA-33 Facilities
Plot Plan - Area B
March 4, 1953

ENG-C 3305
Sheet 4 of 66
TA-33
Additional Facilities, TA-33
Profile & Details 36" Conduit
April 19, 1954

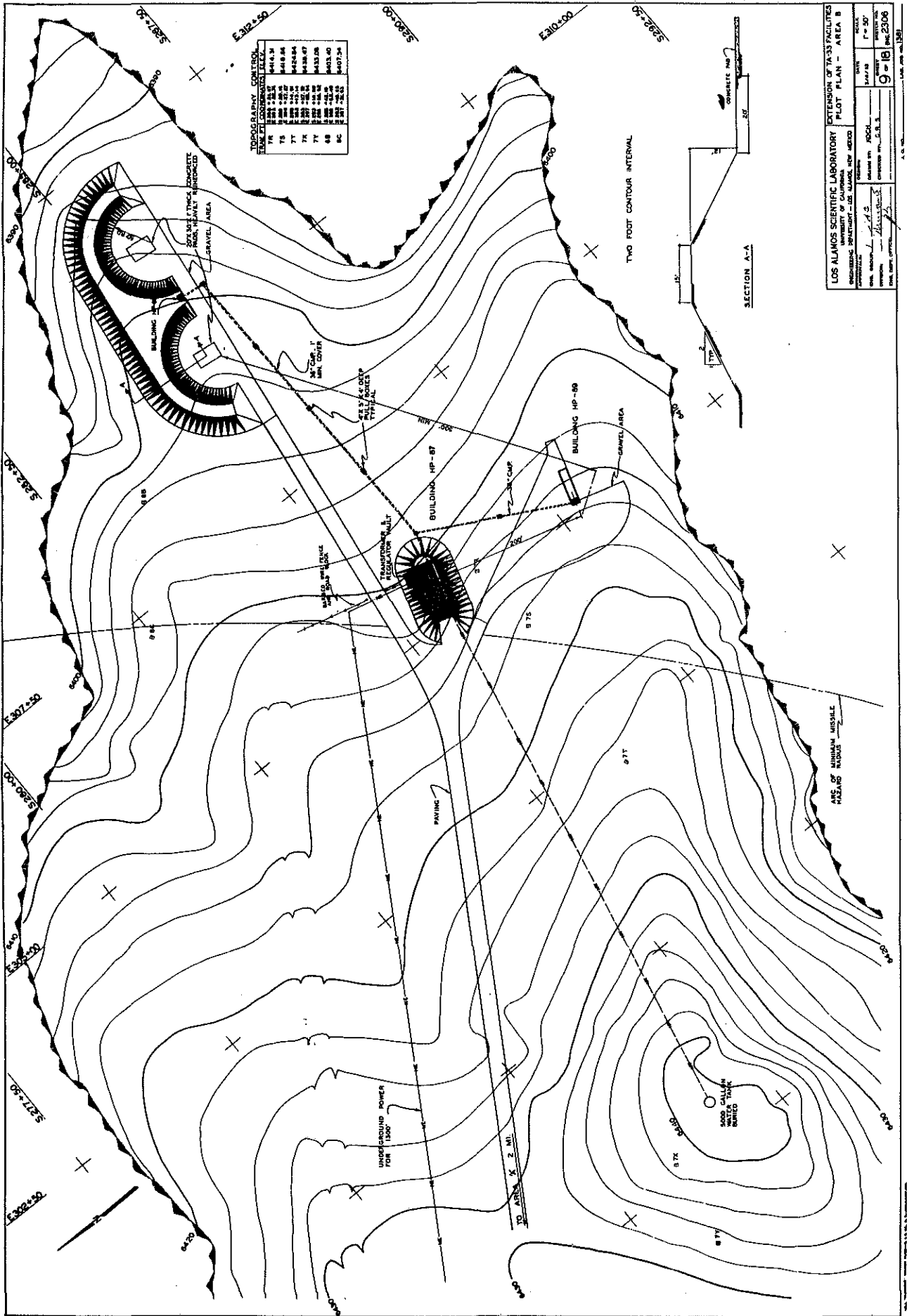
ENG-SK 2308
Sheet 11 of 18
TA-33, Buildings 88 & 89 (Buildings HP-88 & HP-89)
Extension of TA-33 Facilities
Plan, Elevation, & Section
March 4, 1953

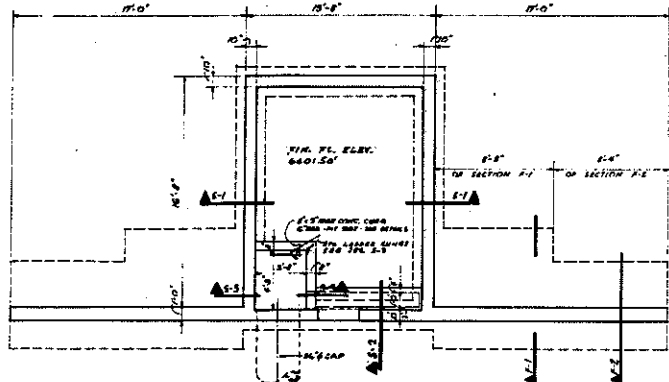
ENG-C 3327
Sheet 26 of 66
TA-33, Building 88 (Building HP-88)
Additional Facilities TA-33
Structural Plan & Details
April 19, 1954

ENG-R 3037
TA-33, Bldg HP-88
Cable Building
Floor Plan
June 16, 1964
Revised to status of June 8, 1984

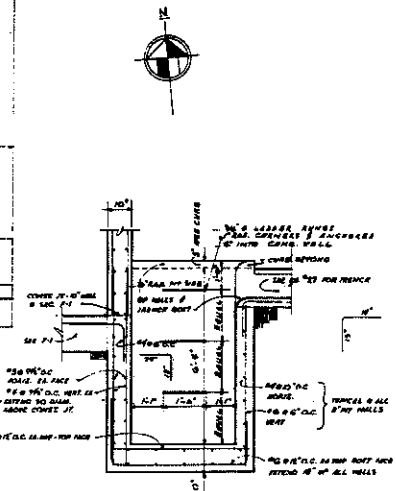


TA-33-88, South side, facing north

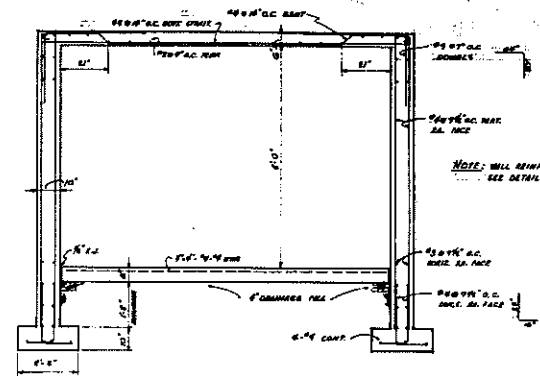




PLAN - BLDG. HP-88
SCALE 1/4" = 1'-0"

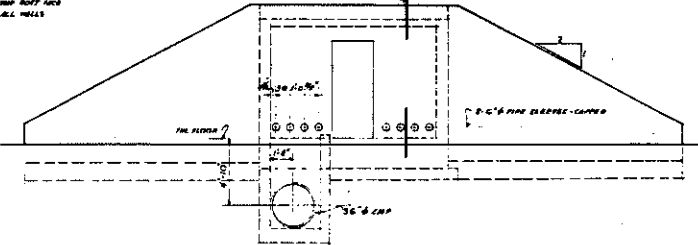


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SCALE 1/2" = 1'-0"



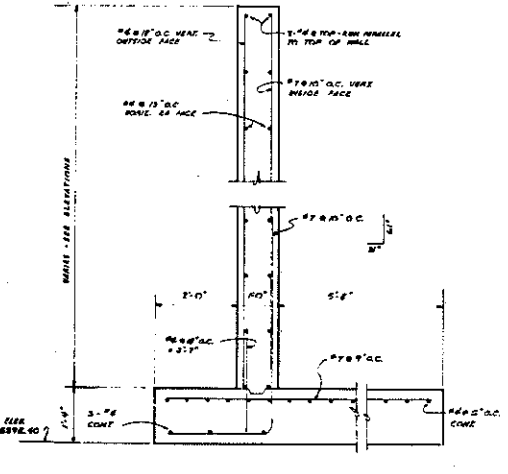
SECTION S-1
SCALE 1/2" = 1'-0"

NOTE: WALL BEING TYPICAL ALL WALLS
SEE DETAILS FOR SPECIAL CONDITIONS

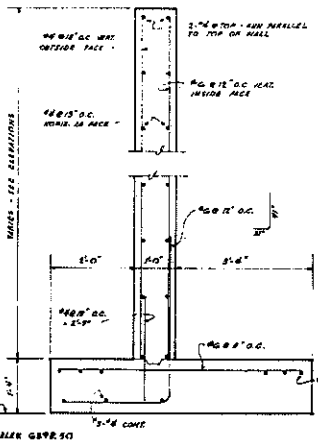


FRONT ELEVATION
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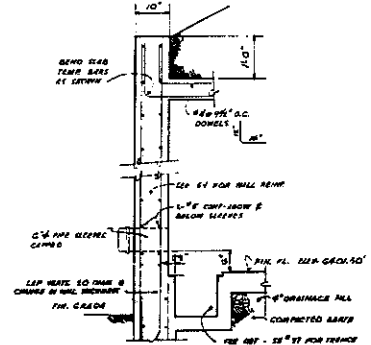
AS BUILT DRAWINGS
DATE: 8-2-55
[Signatures]
APPROVED



SECTION F-1
SCALE 1/4" = 1'-0"



SECTION F-2
SCALE 1/4" = 1'-0"

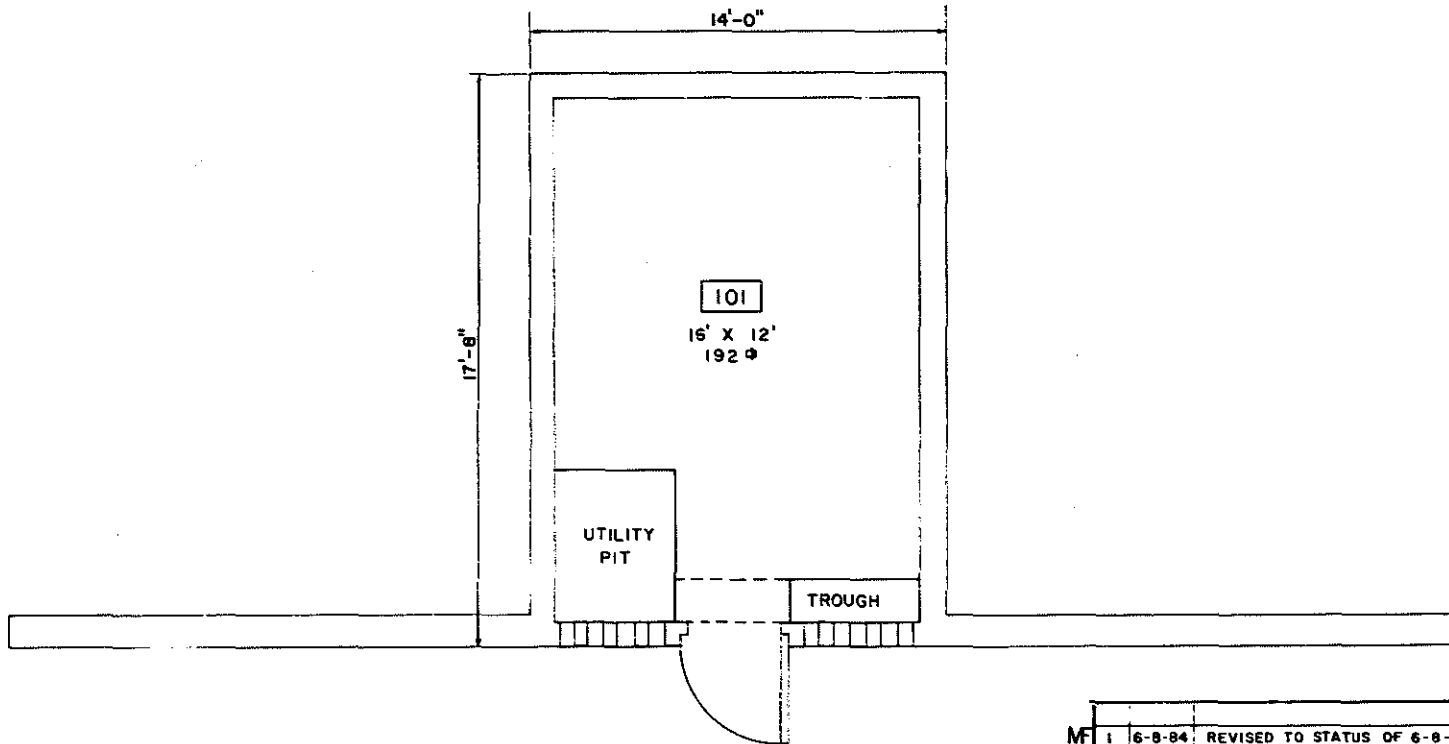


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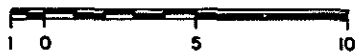
DOES NOT CONTAIN
OFFICIAL USE ONLY
INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 6/23/04

BLDG. HP-88

U. S. ATOMIC ENERGY COMMISSION LOS ALAMOS FIELD OFFICE LOS ALAMOS, NEW MEXICO	
STRUCTURAL PLAN & DETAILS	
ADDITIONAL FACILITIES TA-33 PROJECT "P"	
LOS ALAMOS NEW MEXICO	
<i>[Signatures]</i>	
MAX FLATOW - JADON MOORE ARCHITECTS ALBUQUERQUE, N. M.	LA-AI-274 20 66



(1/4" = 1'-0")



GRAPHIC SCALE

TOTAL SQ. FT. 192

M 1		6-8-84		REVISED TO STATUS OF 6-8-84		HGN	SA	CD
REV.	DATE	REVISION	BY	CHK.	APP.			
UNIVERSITY OF CALIFORNIA						Los Alamos National Laboratory Los Alamos, New Mexico 87545		
Los Alamos								
FACILITIES ENGINEERING DIVISION						SEC. CLASSIFICATION		
CABLE BUILDING						CLASS. <i>U</i>		
FLOOR PLAN						REVIEWER <i>W. T. ...</i>		
BLDG. HP-88				TA-33		DATE <i>6/1/84</i>		
SUBMITTED		RECOMMENDED		APPROVED				
<i>E. ...</i>		<i>Daniel ...</i>		<i>W. T. ...</i>				
DRAWN	BREMER	DATE	6-16-84	SHEET NO.	1 OF 1	DRAWING NO.		
CHECKED	<i>Frank ...</i>					ENG-R3037		

LANL TA- Building # 33-0089

Camera 984244

Frame #s DCP_1714, 1715

Surveyor(s) K. Garcia, J. Ronquillo

Date 07/14/2003

Los Alamos National Laboratory CRMT
Historic Building Survey Form

Building Name X-Unit Vault UTMs easting 388687 northing 3959157 zone 13

Legal Description: Map White Rock Quad 1984 tns range sec

Current Use/ Function Storage Original Use/ Function X-Unit Vault

Date (estimated) Date (actual) 1955 Property Type Laboratory/Processing

Type of Construction

Pre-Fabricated Metal Steel Frame Wood Frame CMU Reinforced Concrete

Other Type of Construction # of Stories 1

Foundation Reinforced Concrete

Exterior CMU-Exterior Reinforced Concrete-Exterior Steel (galvanized) Steel (corrugated)
Wood Siding Asbestos Shingles-Exterior In-Fill Panels Other-Exterior Earthen berm

Exterior Treatment (painted, stuccoed, etc) Exposed unpainted concrete.

Exterior Features (docks, speakers, lights, signs, etc) There is a wall mounted security light and fire extinguisher attached to the head wall and a metal set of stairs attached to the side wing wall. In addition a safety-railing is attached to the exterior perimeter wall.

Addition CMU-Addition Reinforced Concrete-Addition Steel (galvanized)- Addition Wood
Steel (corrugated)-Addition Asbestos Shingles-Addition Other- Addition

Exterior Treatment-Addition

Exterior Features-Addition

Roof Form Slanted/Shed Gable Other Roof Type Flat with earthen berm.

Degree of Pitch/ Slope Slight

Roof Materials Corrugated Metal Rolled Asphalt Asbestos Shingles 4-Ply Built Up
Other Roof Materials Reinforced concrete roof covered with an earthen berm.

Window Type Casement Single Hung Sash Double Hung Sash Fixed Window
Other Window Type

of Each Window Type/ Comments N/A

Glass Type Clear Wire Glass Opaque Painted Glass Glass Block

Light Pattern

- Door Type**
- | | | | | | | |
|----------------------|----------|--|---|-------------------------------------|----------------------------------|----------------------------------|
| Personnel Door Types | Exterior | Fire Door <input type="checkbox"/> | Single <input checked="" type="checkbox"/> | Double <input type="checkbox"/> | Roll-up <input type="checkbox"/> | Sliding <input type="checkbox"/> |
| | | Hollow Metal <input checked="" type="checkbox"/> | Solid Wood <input type="checkbox"/> | 1/2 Glazed <input type="checkbox"/> | Paneled <input type="checkbox"/> | |
| | | Louvered <input type="checkbox"/> | Painted <input checked="" type="checkbox"/> | | | |
| | Interior | Fire Door <input type="checkbox"/> | Single <input type="checkbox"/> | Double <input type="checkbox"/> | Roll-up <input type="checkbox"/> | Sliding <input type="checkbox"/> |
| | | Hollow Metal <input type="checkbox"/> | Solid Wood <input type="checkbox"/> | 1/2 Glazed <input type="checkbox"/> | Paneled <input type="checkbox"/> | |
| | | Louvered <input type="checkbox"/> | Painted <input type="checkbox"/> | | | |
| Equipment Door Types | Exterior | Fire Door <input type="checkbox"/> | Single <input type="checkbox"/> | Double <input type="checkbox"/> | Roll-up <input type="checkbox"/> | Sliding <input type="checkbox"/> |
| | | Hollow Metal <input type="checkbox"/> | Solid Wood <input type="checkbox"/> | 1/2 Glazed <input type="checkbox"/> | Paneled <input type="checkbox"/> | |
| | | Louvered <input type="checkbox"/> | Painted <input type="checkbox"/> | | | |
| | Interior | Fire Door <input type="checkbox"/> | Single <input type="checkbox"/> | Double <input type="checkbox"/> | Roll-up <input type="checkbox"/> | Sliding <input type="checkbox"/> |
| | | Hollow Metal <input type="checkbox"/> | Solid Metal <input type="checkbox"/> | 1/2 Glazed <input type="checkbox"/> | Paneled <input type="checkbox"/> | |
| | | Louvered <input type="checkbox"/> | Painted <input type="checkbox"/> | | | |

of Each Door Type/Comments:

- Interior Wall**
- Gypsum Board Reinforced Concrete- Interior
- CMU- Interior Plywood Other- Interior
- In-Wall Electrical Wiring On-Wall Electrical Wiring

Ceiling Drop Ceiling

Interior Comments (Equipment, etc)

Degree of Remodeling

Condition Excellent Good Fair Deteriorating Contaminated Burned

Associated Building

If yes, list building names and #s:

Integrity

Significance

Eligible Under Criterion A B C D Not Eligible

DOE Themes

- Nuclear Weapon Components and Assembly Nuclear Weapon Design and Testing Nuclear Propulsion
- Peaceful Uses: Plowshare, Nuclear Medicine, Nuclear Energy, Nuclear Science Energy and Environment: Research Design Projects

LANL Themes

- Weapons Research and Design, Testing, and Stockpile Support Super Computing
- Reactor Technology Biomedical/Health Physics Strategic and Supporting Research
- Environment/Waste Management Administration and Social History Architectural History

Recommendations/ Additional Comments

[Redacted]

Architectural Features (elevations)

East Elevation: Entrance into X-unit Vault. North, west, and south elevations are covered by a surrounding earthen berm as is the roof of the building.

A utility tunnel connects buildings TA-33-87, -88, & -89. This 5' X 6'10" tunnel holds a 36" conduit that carries the cables connecting electronic experimental equipment in each of the buildings.

Total sq ft

70

Architect/ Builder

A/E is Max Flatow - Jason Moore, Builder R. E. McKee

Alterations

[Redacted]

List of Drawings (Cntrl + Enter for para break)

ENG-C 10509
TA-33
Recovery Box Installation
Civil - Plot Plan
November 9, 1956
Revised to as built status June 25, 1957

ENG-SK 2306
Sheet 9 of 18
TA-33
Extension of TA-33 Facilities
Plot Plan - Area B
March 4, 1953

ENG-C 3305
Sheet 4 of 66
TA-33
Additional Facilities, TA-33
Profile & Details 36" Conduit
April 19, 1954

ENG-SK 2308
Sheet 11 of 18
TA-33, Buildings 88 & 89 (Buildings HP-88 & HP-89)
Extension of TA-33 Facilities
Plan, Elevation, & Section
March 4, 1953

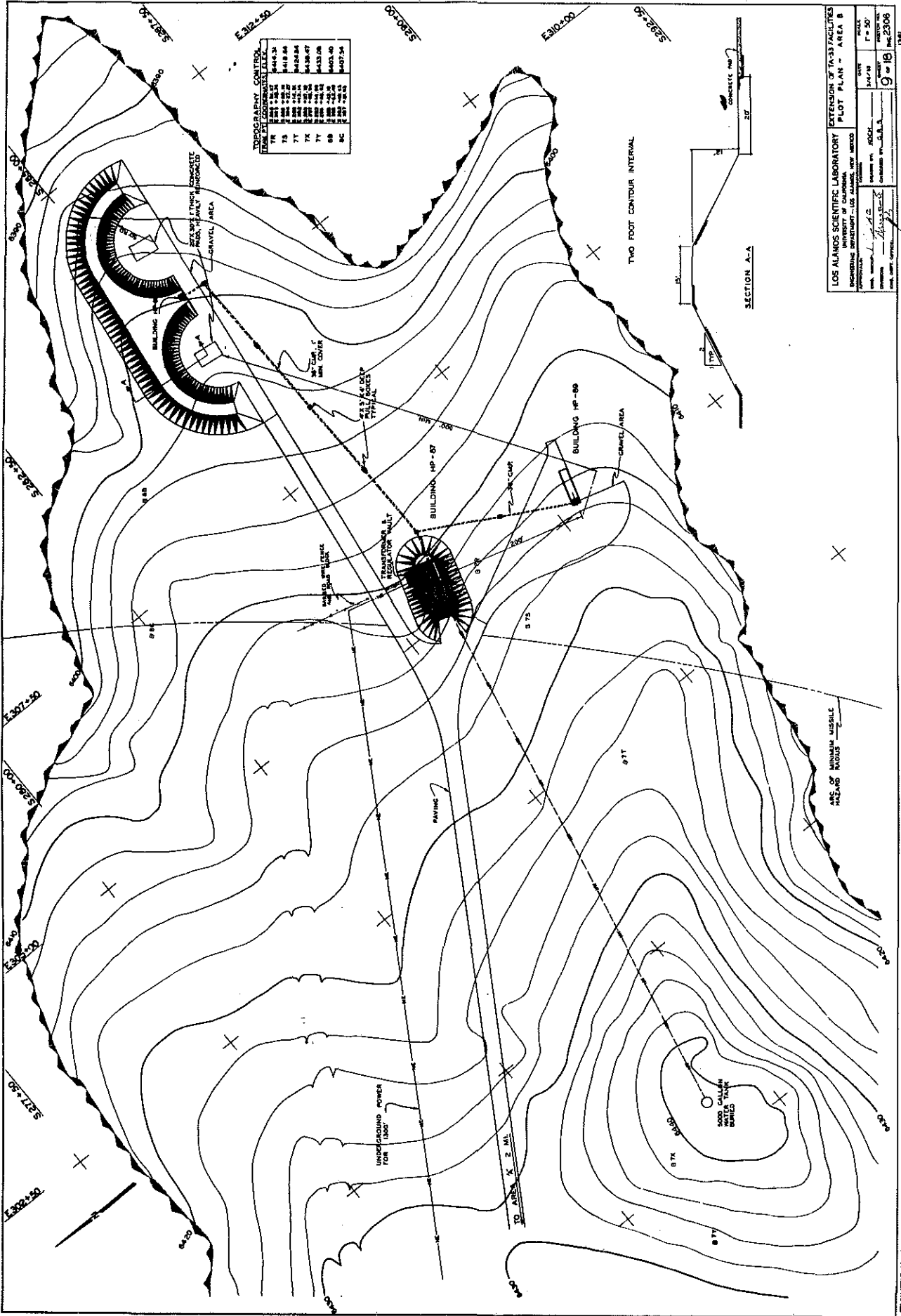
ENG-C 3329
Sheet 28 of 66
TA-33, Building 89 (Building HP-89)
Additional Facilities TA-33
Structural Plan & Details
April 19, 1954

ENG-c 3330
Sheet 29 of 66
TA-33, Building 89 (Building HP-89)
Additional Facilities TA-33
Architectural Plan & Details
April 19, 1954

ENG-R 3038
TA-33, Bldg 89 (Bldg HP-89)
X-Unit Vault
Floor Plan
June 29, 1964
Revised as to status of June 8, 1984



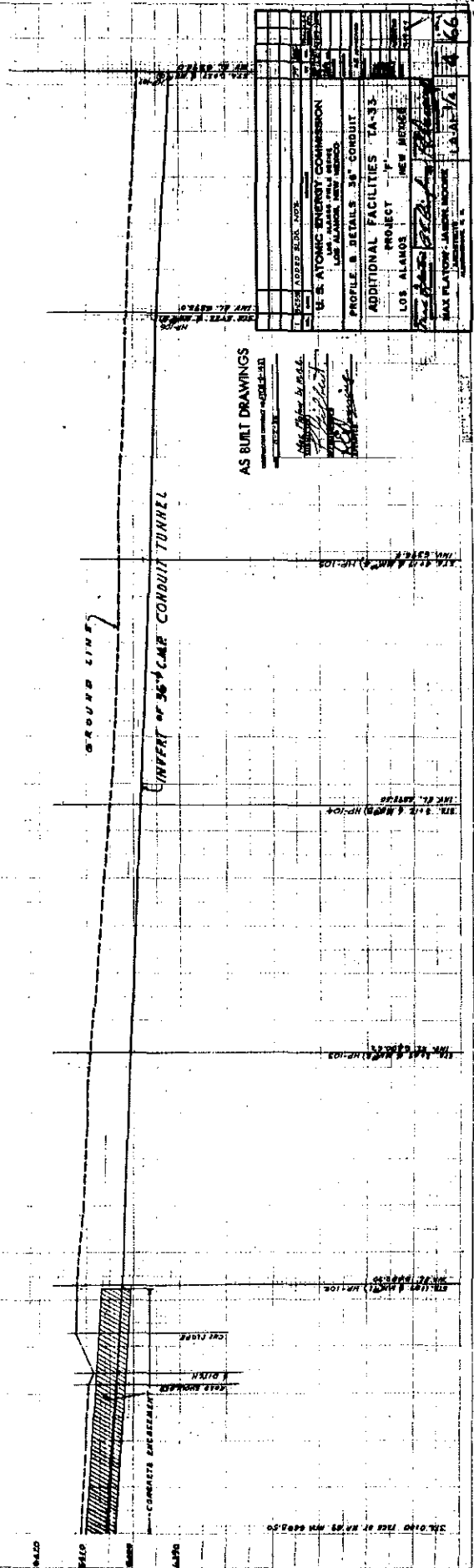
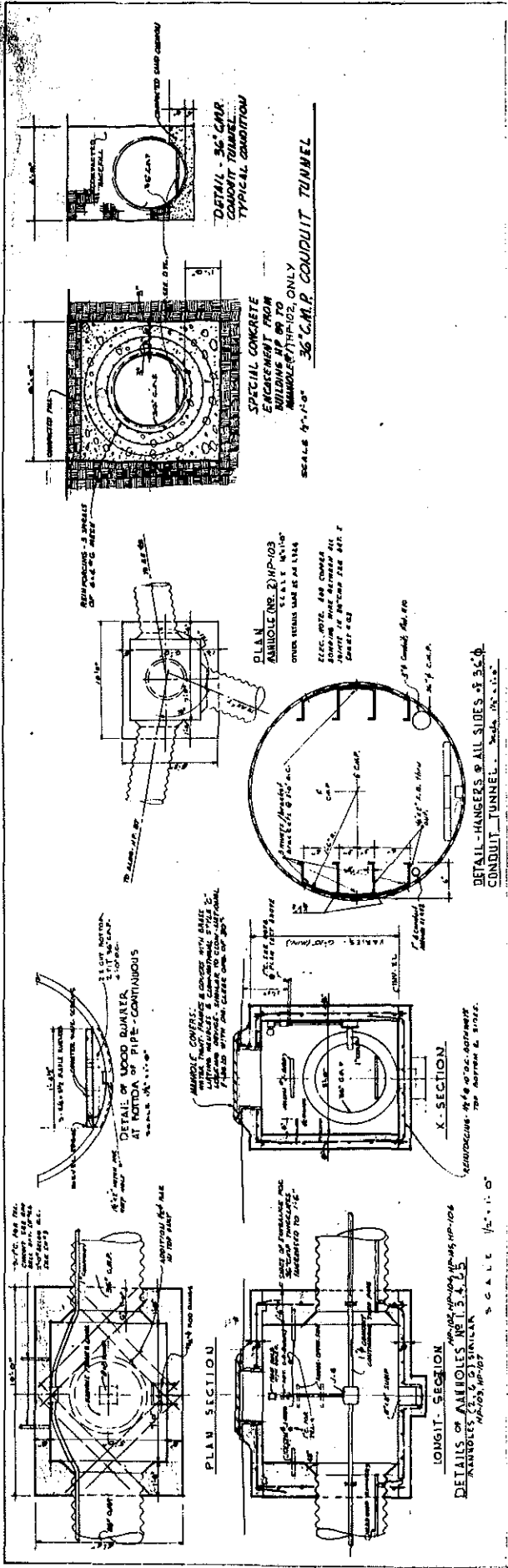
TA-33-89, East side, facing west



LOS ALAMOS SCIENTIFIC LABORATORY EXTENSION OF TA-33 FACILITIES PLOT PLAN - AREA B

ENGINEERING DEPARTMENT - LOS ALAMOS, NEW MEXICO

DATE: 1-1-60
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 SCALE: AS SHOWN
 SHEET NO. 9 OF 16
 JOB NO. 2306



NO.	DATE	DESCRIPTION
1	1954	AS BUILT DRAWINGS
2	1954	ADD BLDG. NO. 33
3	1954	ADD BLDG. NO. 33
4	1954	ADD BLDG. NO. 33
5	1954	ADD BLDG. NO. 33
6	1954	ADD BLDG. NO. 33
7	1954	ADD BLDG. NO. 33
8	1954	ADD BLDG. NO. 33
9	1954	ADD BLDG. NO. 33
10	1954	ADD BLDG. NO. 33
11	1954	ADD BLDG. NO. 33
12	1954	ADD BLDG. NO. 33
13	1954	ADD BLDG. NO. 33
14	1954	ADD BLDG. NO. 33
15	1954	ADD BLDG. NO. 33
16	1954	ADD BLDG. NO. 33
17	1954	ADD BLDG. NO. 33
18	1954	ADD BLDG. NO. 33
19	1954	ADD BLDG. NO. 33
20	1954	ADD BLDG. NO. 33

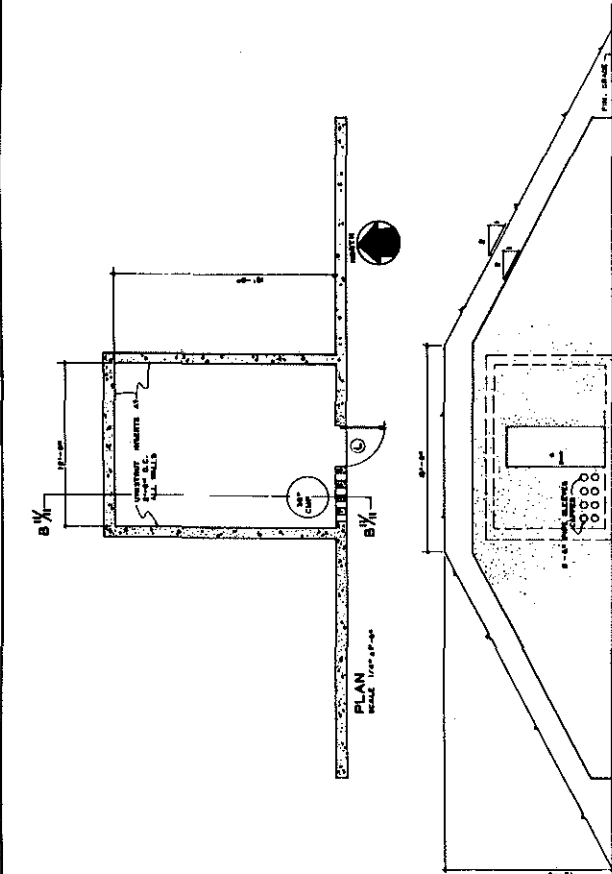
AS BUILT DRAWINGS

U.S. ATOMIC ENERGY COMMISSION
 LOS ALAMOS SCIENTIFIC LABORATORY
 PROJECT
 LOS ALAMOS NEW MEXICO

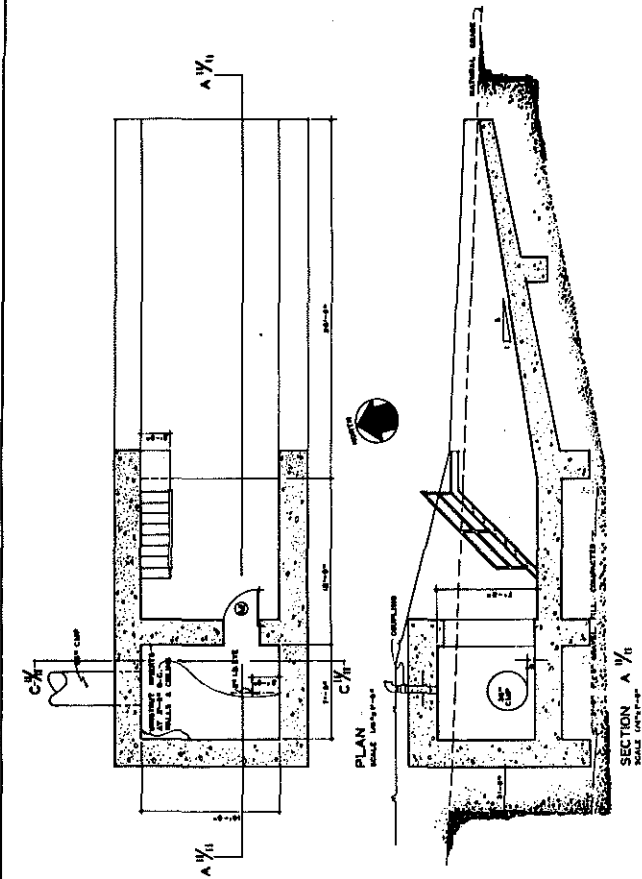
PROFILE B. DETAILS - 36 CONDUIT.
 ADDITIONAL FACILITIES TA-33

LAB JOB 1311

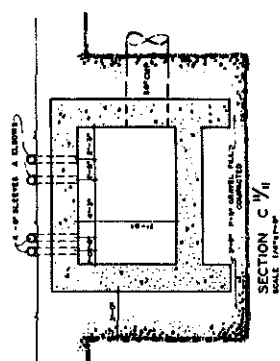
L.A.S.L. DWG. NO. EW-3395



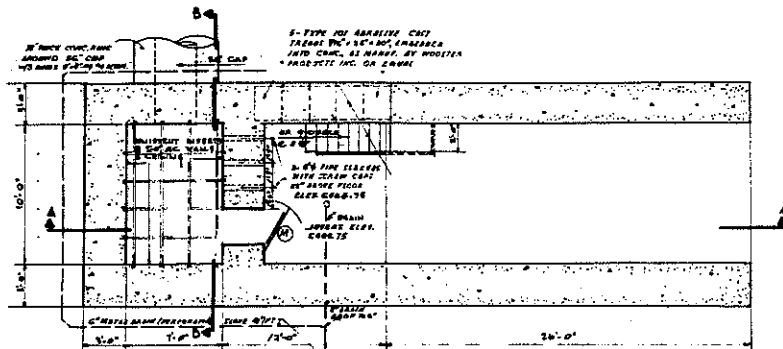
BUILDING HP - 88



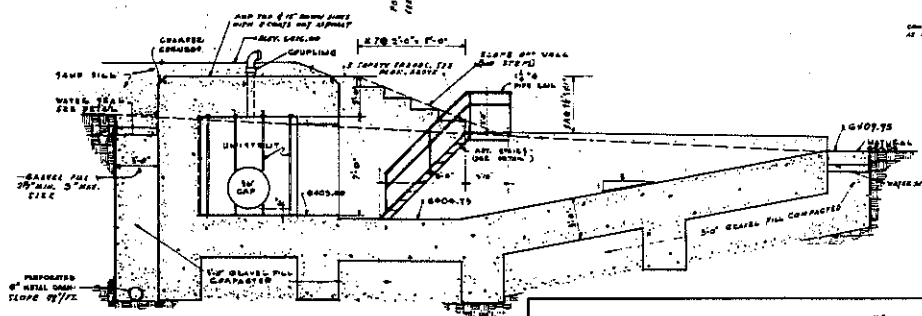
BUILDING HP - 89



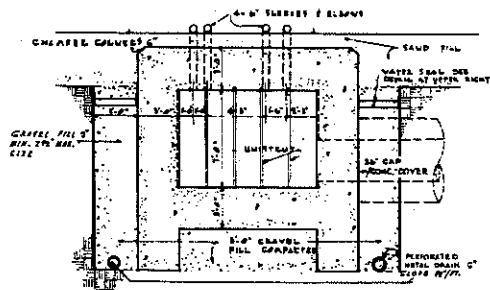
LOS ALAMOS SCIENTIFIC LABORATORY		EXTENSION OF T-333 FACILITIES	
UNIVERSITY OF CALIFORNIA		PLAN, ELEVATION & SECTION	
RESIDENTIAL BUILDING - LOS ALAMOS, NEW MEXICO		BUILDINGS 100-88 & 100-89	
PROJECT NO.	100-88	DATE	1/15/53
DESIGNED BY	E.S.A.	SCALE	AS SHOWN
CHECKED BY	[Signature]	SECTION NO.	10
DATE	1/15/53	PROJECT NO.	100-88
DRAWN BY		SCALE	
[Signature]		AS SHOWN	
DATE		PROJECT NO.	
1/15/53		100-88	
PROJECT NO.		SCALE	
100-88		AS SHOWN	



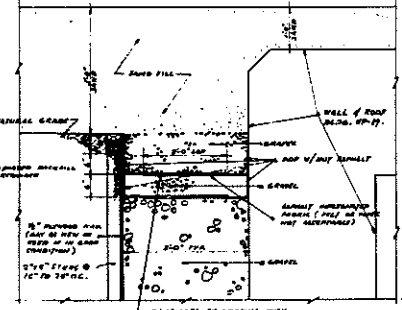
PLAN
SCALE 1/4" = 1'-0"



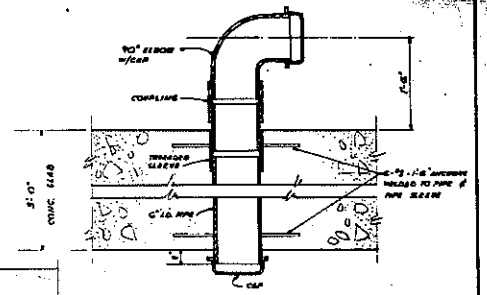
SECTION A-A
SCALE 1/4" = 1'-0"



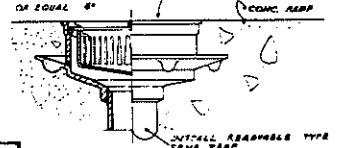
SECTION B-B
SCALE 1/4" = 1'-0"



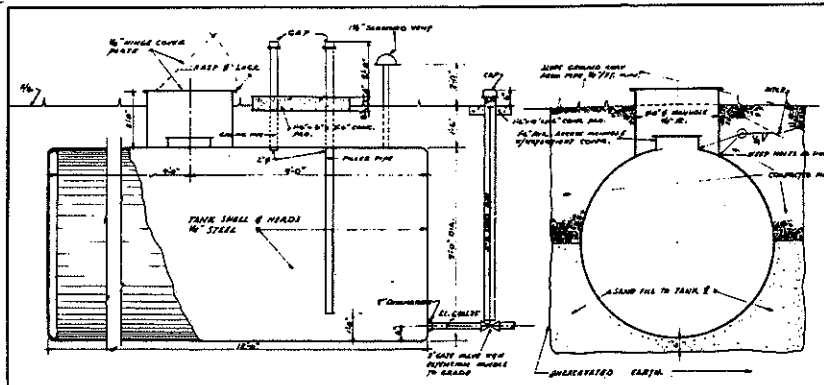
TYPICAL SECTION THRU SHOCK TRENCH
SCALE 1/2" = 1'-0"



PIPE SLEEVE DETAIL
SCALE 1/8" = 1'-0"



AREA DRAIN DETAIL
NO SCALE



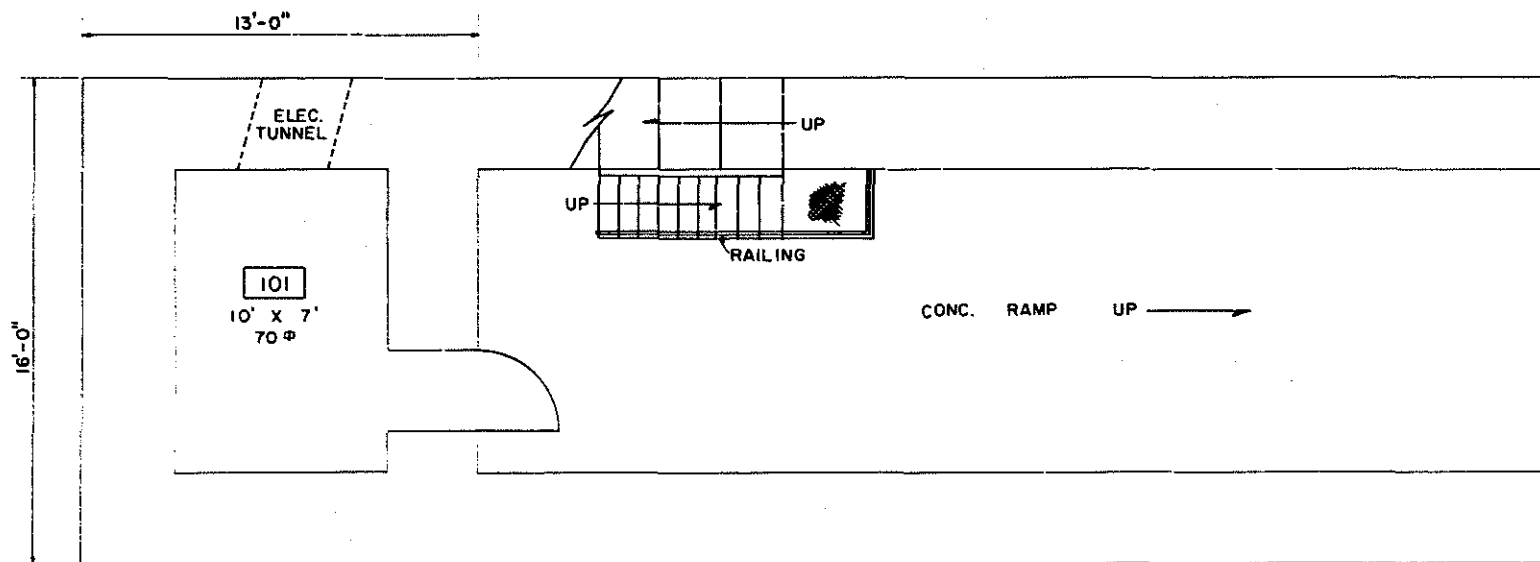
HP-94
WATER STORAGE TANK (for BLDG. HP-87)
SCALE 1/2" = 1'-0"

AS BUILT DRAWINGS
NO SCALE
REVISIONS
BY: [Signature]
DATE: [Signature]

BLDG. HP-89.

DATE	BY	CHKD	APP'D
U. S. ATOMIC ENERGY COMMISSION			
LOS ALAMOS FIELD OFFICE			
LOS ALAMOS, NEW MEXICO			
ARCHITECTURAL PLAN & DETAILS			
ADDITIONAL FACILITIES TA-33			
PROJECT "F"			
LOS ALAMOS, NEW MEXICO			
MAX FLATOW - JARON MOORE			
ARCHITECTS			
LA-AI-1/11			
29 66			

DOES NOT CONTAIN
OFFICIAL USE ONLY
INFORMATION
Name/Org.: Jill Hefele/S-7 Date: 6/23/04



(1/4" = 1'-0")



TOTAL SQ. FT. 70

REV.	DATE	REVISION	BY	CHKD.	APP.
MF	6-8-64	REVISED TO STATUS OF 6-8-64			
UNIVERSITY OF CALIFORNIA					
Los Alamos			Los Alamos National Laboratory Los Alamos, New Mexico 87545		
FACILITIES ENGINEERING DIVISION					
X-UNIT VAULT FLOOR PLAN					SEC. CLASSIFICATION
BLDG. HP-89					CLASS. <i>U</i>
TA-33					REVIEWER <i>Frederic</i>
					DATE <i>6-11-64</i>
SUBMITTED <i>W. Trujillo</i>		RECOMMENDED <i>Daniel King</i>		APPROVED <i>W. T. Elmer</i>	
DRAWN	BREMER	DATE	6-29-64	SHEET NO.	1 OF 1
CHECKED	<i>Frederic</i>	DATE		DRAWING NO.	ENG-R 3038

7/1/64