

**DESERT RESEARCH INSTITUTE  
CULTURAL RESOURCES REPORT LR040120-1  
PROJECT NO. 201323**

**Finding of Adverse Effect and Mitigation Documentation for the Stormwater Drainage and  
Street Systems, Substation Foundations, and the Bus Parking Lot in Mercury,  
Area 23, Nevada National Security Site, Nye County, Nevada**

**Prepared by**

**Cheryl Collins  
Division of Earth and Ecosystem Sciences  
Desert Research Institute, Las Vegas, Nevada**

**Prepared for**

**U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Field Office, Las Vegas, Nevada**

**Submitted by**

**Maureen King, Project Director  
Division of Earth and Ecosystem Sciences  
Desert Research Institute, Las Vegas, Nevada**

**May 2020**

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## **INTRODUCTION**

The U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (NNSA/NFO) proposes to grade the block on the southeast corner of Mercury Highway and Ranger Avenue and demolish an adjacent street segment in the town of Mercury at the Nevada National Security Site (NNSS) in Nye County, Nevada.

The purpose of this letter report is to submit documentation related to the finding of effect for the undertaking and mitigation of four resources on and adjacent to the block that will be affected by planned activities to modernize parking and infrastructure in central Mercury. Two of these resources are portions of the street system and the stormwater drainage system, which are elements of the town's infrastructure. The foundations of an old electrical substation and the bus parking lot will also be replaced by new parking or landscaping. This submission is intended to comply with the stipulations in the *Programmatic Agreement between the National Nuclear Security Administration Nevada Field Office and the Nevada State Historic Preservation Officer Regarding Modernization and Operational Maintenance of the Nevada National Security Site, at Mercury in Nye County, Nevada*, hereafter referred to as the Mercury PA.

The town of Mercury and the immediate surrounding area have been designated the Mercury Historic District (SHPO Resource #D230), which is a property eligible to the National Register of Historic Places under Criteria A and C for its importance in supporting nuclear testing and scientific research from 1951 through 1992. During the initial architectural survey (Reno et al. 2018), all four resources were identified as contributing to the eligibility of the district.

## **PROJECT DESCRIPTION**

As part of the modernization activities addressed in the Mercury PA, there will be substantial changes to one large block and a street segment immediately to its south. The area of potential effect (APE) is defined as the 5.6-acre block between Mercury Highway to the west, Ranger Avenue to the north, and Teapot Street to the east. Hardtack Avenue, located on the south side of the block, is included in the APE. A map of the APE is on the final page of this letter report.

The two resources located entirely within the APE will be demolished. The first resource is the remains of a 1960s electrical substation. The foundations of this substation, which held the structural components, will be removed and the lot will be graded. The second resource is a bus parking lot, which does not have any foundations or other structural components. The old pavement covering the bus parking lot will be removed and a new parking lot will be constructed along the south end of the block.

This report also addresses modifications to small portions of two of the linear infrastructure resources in Mercury. The drainage constructed to control the flow of stormwater around the electrical substation will be filled and graded, and Hardtack Avenue between Mercury Highway and Teapot Street will be demolished to construct part of a large walkway that will connect several current and future buildings on the upgraded campus.

## FINDING OF EFFECT

After informal consultation with the DRI subject matter expert and applying the criteria of adverse effect, the NNSA/NFO Cultural Resource Manager (NFO/CRM) has determined the planned activities will alter the characteristics that qualify the Mercury Historic District for inclusion in the National Register. Therefore, the proposed demolitions and grading will have an **Adverse Effect** to a historic property. Table 1 lists the individual properties affected by this activity.

Table 1. Properties mitigated due to planned undertaking.

Description	SHPO Resource No.	Type
Bus Parking	C301	Lot
Mercury Street System	S1762	Linear
Mercury Stormwater Drainage System	S1765	Linear
Electrical (Tap and Meter) Substation Foundations	S1794	Lot

The four resources are contributing elements to the Mercury Historic District, but they are not individually significant under any of the Secretary of the Interior's Significance Criteria. Streets, parking lots, drainage systems, etc., in Mercury were utilitarian in design and workmanship and were intended to only meet the functional needs of the Mercury townsite. At the electrical substation, equipment has been removed, leaving only foundations, which are a poor representative of a substation element in Mercury. The existing switching station near the main gate south of Mercury was constructed in 1967, only three years after the substation. That station also has engineering drawings available from 1966, which would provide a much better example of electrical infrastructure in Mercury during the 1960s. No engineering drawings were found of the substation being demolished for this project.

## ELEMENT CATEGORY IDENTIFICATION

In consultation with the State Historic Preservation Office (SHPO), all four elements were identified as Category III resources for their potential National Register eligibility based on the Secretary of the Interior's Significance Criteria (Table C-1 of the Mercury PA). Per Stipulation IV.B.3, Category III properties may include elements for which there are several representatives within the district, and the elements have characteristics that are not unique to the Mercury Historic District.

## MITIGATION FOR CATEGORY III ELEMENTS

Pursuant to Stipulation VIII.C of the Mercury PA, the following steps were taken to mitigate each resource:

- Updated Architectural Resource Assessment (ARA) forms (VIII.C.1.a) were completed.
- Additional high-quality digital images were attached that are consistent with the plan for photography found in Appendix D of the Mercury PA (VIII.C.1.b).

Because limited historical information was found during research efforts related to the electrical substation and the bus parking lot, historical photographs were the primary sources used to update information in the ARA forms for these two properties. Some of the available archival maps and engineering drawings were added to the ARA updates for the two linear resources, as well as a list of selected engineering drawings that may be acquired for each from the Nuclear Testing Archive in Las Vegas. If available, historical photos and maps were added to the updates to represent change over time.

## **APPENDED DOCUMENTATION**

The following documentation is included in Appendix A for SHPO review and comment to comply with standard mitigation requirements (VIII.C).

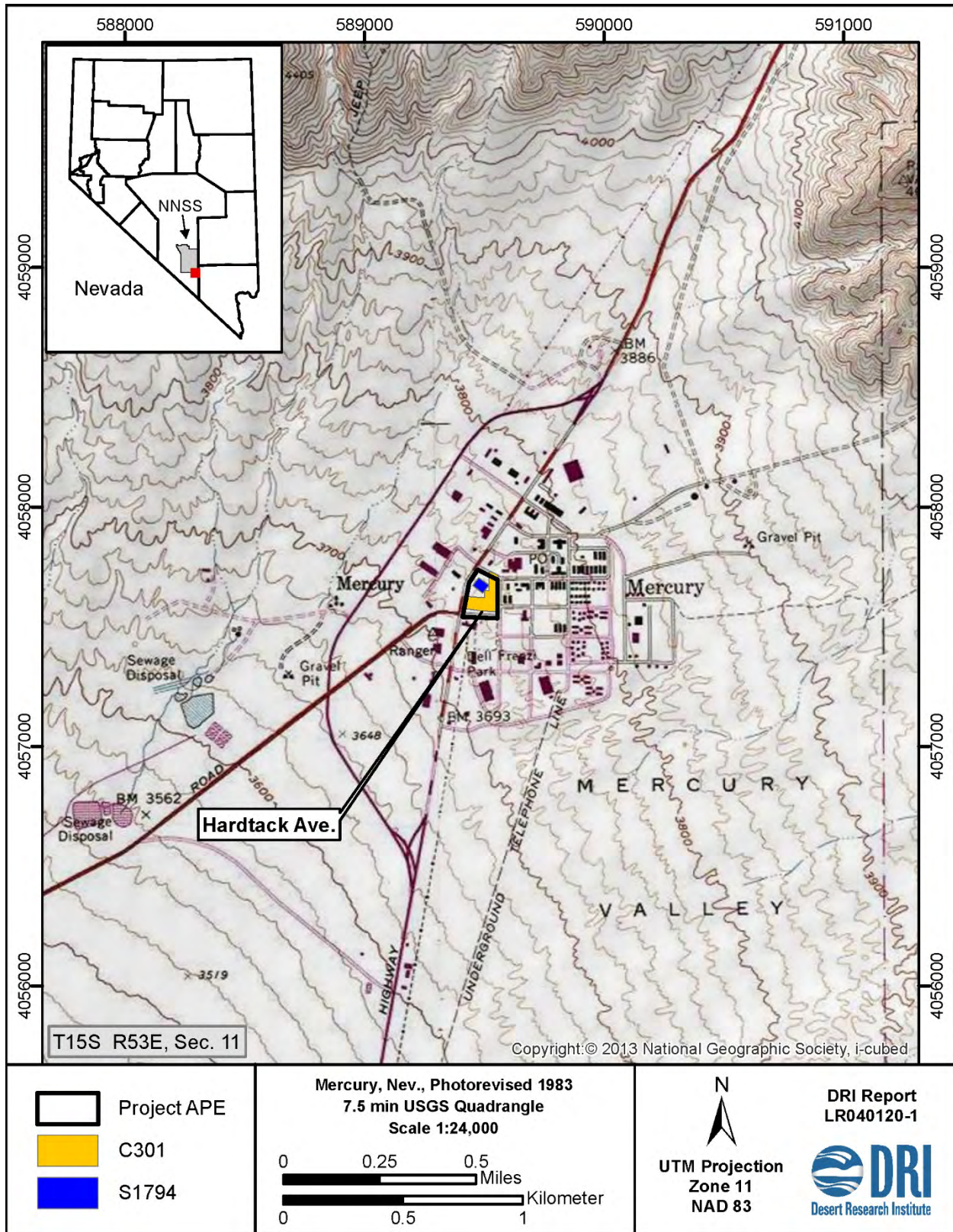
- Updated ARA forms for:
  - Bus Parking
  - Mercury Street System
  - Mercury Stormwater Drainage System
  - Electrical (referred to as “Tap and Meter” on the ARA form) Substation Foundations

## **ADEQUACY OF STANDARD MITIGATION FOR CATEGORY III ELEMENTS**

Only small portions of the two linear resources, the stormwater drainage system and the street system, are within the APE. The NNSA/NFO is submitting its determination that the appended final mitigation documents are adequate for the mitigation of the full extent of these resources within the Mercury Historic District and no other documentation will be required for future adverse effects to these two elements.

Reno, Ron, Cheryl M. Collins, and Maureen King

2018. *The Architecture of Mercury – Nevada’s Atomic Boom Town, An Architectural Survey of Mercury, Area 23, Nevada National Security Site, Nye County, Nevada*. DOE/NV/0003 590-09, Desert Research Institute Cultural Resources Report TR115 Rev 1. Desert Research Institute, Las Vegas.



Map of the APE showing the locations of three of the affected resources. C301 is the bus parking lot S1794 is the electrical substation, and the location of Hardtack Ave. is noted by the label. The stormwater drainage (not shown) guides water from the north side of S1794 along the northwest edge of the substation and into the drainage along Mercury Highway to the southwest.

**APPENDIX A**  
**Cultural Resource Forms**

**Architectural Resource Assessment Forms**

SHPO Resource # S1762, Mercury Street System

SHPO Resource # S1765, Mercury Stormwater Drainage System

SHPO Resource # C301, Bus Parking & Evacuation Assembly Area

SHPO Resource #S1794, Tap and Meter Substation Foundations

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## Architectural Resource Assessment (ARA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:			
Survey Date	May 2020	Recorded By	Collins, Lancaster	Agency Report #	LR040120-1

The purpose of this update is to record additional information about the Mercury street system affected by the ongoing modifications occurring because of the Mercury Modernization Project. The street system (SHPO Resource No. S1762) contributes to the significance of the Mercury Historic District (MHD; SHPO Resource No. D230). Some roads will be affected by changes to the overall town layout and landscaping plan in the center of Mercury. The Mercury Modernization Project will be implemented in accordance with the terms of the *Programmatic Agreement between the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) and the Nevada State Historic Preservation Officer (SHPO) Regarding Modernization and Operational Maintenance of the Nevada National Security Site, at Mercury in Nye County, Nevada (PA)*. Per the PA, the NNSA/NFO, in consultation with the SHPO, determined that demolition and grading within the district may result in visual or other indirect effects to the overall historic character of the MHD (Stipulation II.D). The Mercury street system is defined in Table C-1 of the PA as a Category III resource, and this form is being updated according to the stipulations in the PA for a Category III property.

### 6. Narrative Eligibility Justification

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

The Mercury street system is in a very similar condition to that reported in 2017. Recent modifications have involved excavating and repaving segments of the streets to upgrade underground utilities, which are regarded in the PA as exempt activities (Appendix B, Stipulations O and R). S1762 continues to be a contributing resource to the district. No information was discovered during the research conducted to evaluate this resource that would suggest the street system would be individually eligible to the NRHP. Streets in Mercury were utilitarian in design and workmanship and were intended to only meet the functional needs of the nuclear testing activities on the NNSS.

### 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

From their construction in 1951, paved roads were critical to the activities occurring in Mercury (see upper photo on page 8). Most of the roads in Mercury already needed resurfacing by 1952 (see page 13 in the original ARA form). The camp expanded more rapidly than roads could be constructed, resulting in a mix of paved and dirt roads for many years (see lower photo on page 8 and upper photo on page 9).

Although roads were added and repaved in Mercury as needed, there were some widespread changes made during various building phases. As part of the Master Plan for Mercury (Arthur Benedict Associates 1962), numerous roads were paved, repaved, or actually moved, as in the case of Trinity Ave. (see lower photo on page 9). Lists of engineering drawings from 1963 and 1965 show that Teapot Street, Buster Street, Tumbler Street, and Sandstone Avenue were all upgraded or extended, drainage channels under roads were added, and numerous driveways were installed. These drawings specifically mention modifications to road grades and slopes; the construction of gutters, ditches, and culverts; and sign installations. One pavement legend indicates the use of a 9 in compacted subgrade, a 4 in aggregate base course, a prime coat (details unreadable), and a 2 in bituminous surface course (Koebig and Koebig 1965).

An engineering drawing, drawn in 1971 and updated to As-Built in 1972 and 1979, shows the plan for grading and paving Knothole Street between Warehouse Avenue and Greenhouse Avenue. A detail of the paving specifications for this project is on page 10, and the full drawing is on page 13.

Another extensive round of road and parking improvements occurred in 1976 and 1977. During this construction phase, Trinity Avenue was also extended across Mercury Highway to Jackass Flats Highway (Holmes and Narver 1977) and South Road was completed between Buster Street and Mercury Highway.

## 8. References

### Text References

Arthur Benedict Associates

1962 *Master Plan Mercury, Nevada*. Prepared for the U.S. Atomic Energy Commission by Arthur Benedict Associates of Los Angeles.

Holmes and Narver, Inc.

1977 Nevada Test Site Area 23 Trinity Avenue Extension & Parking Lot, BLDG. 703, Mercury Plan and Detail, As-Built. Engineering Drawing No. JS-023-094-C5, Sheet 1 of 2. U.S. Energy Research and Development Administration Nevada Operations Office, Las Vegas.

Koebig and Koebig, Inc.

1965 Mercury, Nevada Utilities Typical Road Sections & Details, As-Built. Engineering Drawing No. NV-11-04-01, Sheet 42 of 162. U.S. Atomic Energy Commission Nevada Operations Office, Las Vegas.

### Map and Photo References (on following pages)

*All photographs below attributed to REECo are associated with the REECo 1982 reference.*

AEC, See U.S. Atomic Energy Commission

Fehner, Terrence R., and F. G. Gosling

2006 *Battlefield of the Cold War: Nevada Test Site. Volume 1, Atmospheric Nuclear Weapons Testing 1951-1963*. Report DOE/MA--0003. U.S. Department of Energy, Management and Administration, Washington, DC.

Holmes and Narver, Inc.

1965 Mercury, Nevada Utilities Grading and Paving Details, As-Built copy of version originally drafted by Koebig and Koebig, Inc., 1963. Engineering Drawing No. NV-11-04-01.1, Sheet 40 of 162. U.S. Atomic Energy Commission Nevada Operations Office, Las Vegas.

1977 Nevada Test Site Area 23 Trinity Avenue Extension & Parking Lot, BLDG. 703, Mercury Plan and Detail, As-Built. Engineering Drawing No. JS-023-094-C5, Sheet 1 of 2. U.S. Energy Research and Development Administration Nevada Operations Office, Las Vegas.

Koebig and Koebig, Inc.

1965 Mercury, Nevada Utilities Vicinity Map and Site Plans, As-Built. Engineering Drawing No. NV-11-04-01.1, Sheet 2 of 162. U.S. Atomic Energy Commission Nevada Operations Office, Las Vegas.

Olsen, K.

2017 FRM-0901a Cultural Resource Compliance Worksheet for Project Grading Parking Area, December 19, 2017. On file at Desert Research Institute, Las Vegas.

Reynolds Electrical and Engineering Co (REECo)

1963 Plot Plan Mercury Nevada. Engineering drawing STD SK 58. U.S. Atomic Energy Commission, Las Vegas.

1979 Knothole St. Upgrading Plan and Profile, As-Built. Engineering Drawing 23-C21. U.S. Atomic Energy Commission Nevada Operations Office, Las Vegas.

1982 Photograph Album Index (1958-1976). On file, Desert Research Institute, Las Vegas.

U.S. Atomic Energy Commission (AEC), Division of Construction

1956 LVB-ALO – New Upshot Avenue, North of Dormitories 513-515, Looking West (photograph). Electronic document, <https://www.osti.gov/opennet/servlets/purl/1517953.pdf>, accessed May 22, 2020.

### 11. Photographs



The intersection of Knothole St. and Upshot Ave.

Direction facing: West

Photographer: DRI

Date: 2020



A similar view of Upshot Ave. just after its original construction, taken on September 25, 1956. (AEC 1956)

LWP-ALO - New Upshot Avenue, North of  
Dormitories 513-515, Looking West  
REMBKE, CLAUGH & KING  
Contract No. AT(25-2)-437  
September 25, 1956 - 97%



The intersection in the background is the location at which Tumbler Ave. on the left becomes Nougat Street on the right. Upshot Ave. is in the left foreground.

Direction facing: North

Photographer: DRI

Date: 2020



Trinity Ave., approaching Buster St. The former chapel is in the background.

Direction facing: East-northeast

Photographer: DRI

Date: 2020



Sandstone Ave. between Jangle St. and Knothole St. The lot on the left previously contained Quonset huts.  
Direction facing: Northeast      Photographer: DRI      Date: 2019



The intersection of Jangle St. (left to right) and Greenhouse Ave.  
Direction facing: Northeast      Photographer: DRI      Date: 2019



Intersection of Jangle St. and Sandstone Ave.  
Direction facing: North

Photographer: DRI

Date: 2017



Intersection of Teapot St. and Sandstone Ave.  
Direction facing: North

Photographer: DRI

Date: 2017



Ranger Ave. in front of Dorms B, C, and D between Snapper St. (in foreground) and Jangle St.  
Direction facing: East-southeast      Photographer: DRI      Date: 2015



Roads that would become Warehouse Ave. and Tumbler Ave. during the early days of construction at Camp Mercury.  
Direction facing: Northeast      Source: Fehner and Gosling 2006      Date: 1951



View of the street system in mid-1959. Avenues generally run east-west and streets run north-south.  
Direction facing: North      Source: REECo 1982, Photo 682-5      Date: 7/27/1959  
Road name source: REECo 1963



View of the street system in 1961. The street segments noted by the arrows and labels no longer exist.  
Direction facing: North      Source: REEC0 1982, Photo 1165-10      Date: 12/7/1961  
Road name sources: Koebig and Koebig 1965, REEC0 1963



Trinity Ave. being reconstructed approximately 130 ft (40 m) to the south of its original location during a 1963 construction boom.

Direction facing: West

Source: REEC0 1982, Photo 1746-3

Date: 11/05/1963



Before Knothole St. was extended south of Ranger Ave., the road east of the men's trailer park was named Redwing St. The segment of the old Trinity Ave. between Knothole St. and Jangle St. was renamed Divider Ave. Direction facing: South-southwest. Source: <https://www.flickr.com/photos/diffenderfer/15000826196/>, accessed 11/07/2019. Date: c. 1981. Road name sources: Koebig and Koebig 1965, Olsen 2017, REECo 1963.

**NOTES:**

EV

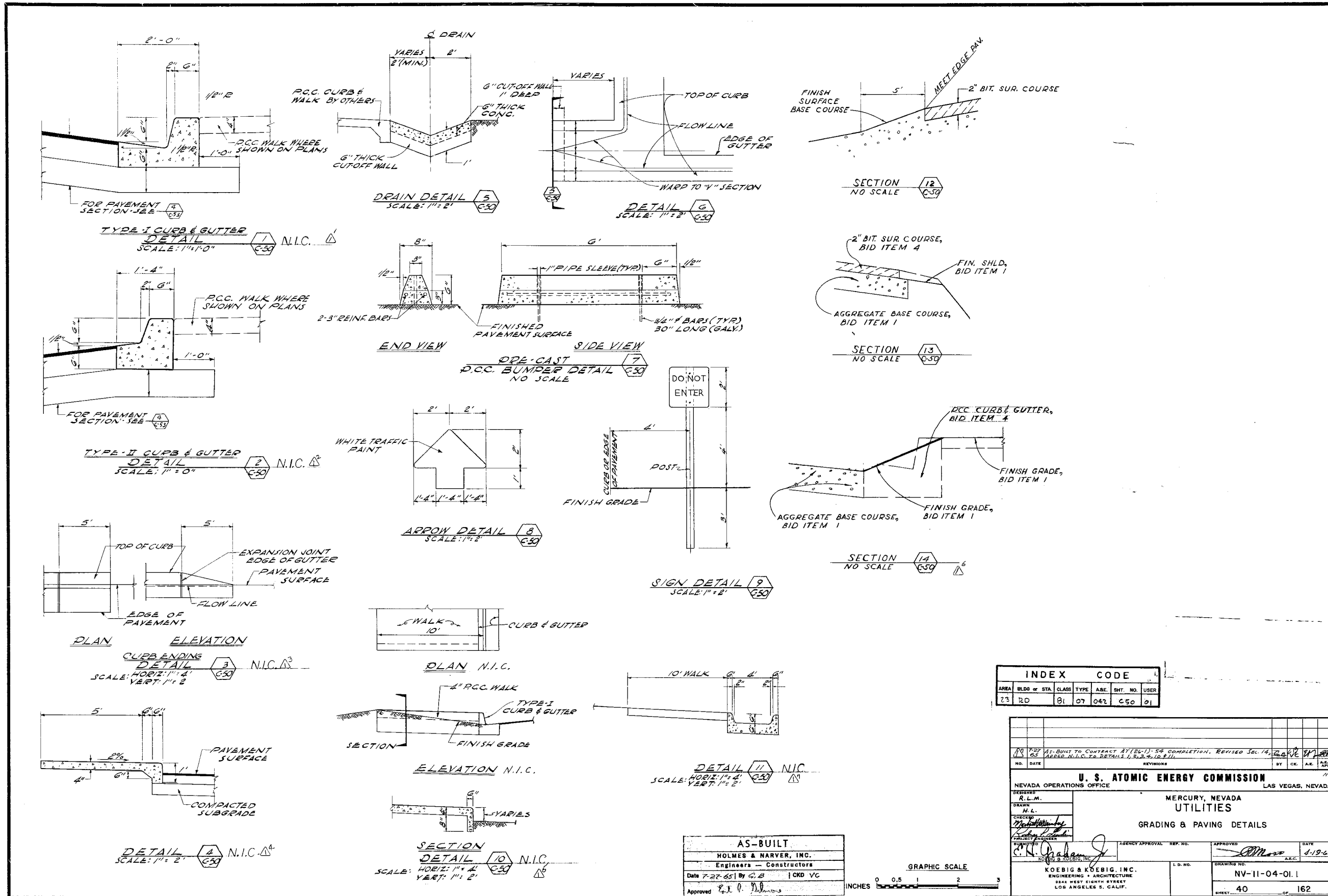
- ① ALL UTILITY LINES WITHIN CONSTRUCTION AREA TO BE "GOLDAKED," & STAKED BY REECO SURVEY BEFORE CONSTRUCTION BEGINS.
- ② COMPACT FILL IN 6 INCH LIFTS TO 95% MAX. DENSITY AT OPTIMUM MOISTURE CONTENT. SCARIFY EXISTING GROUND 6" MAX. BEFORE PLACING NEW FILL. (ASTM D-1557) METHOD "D".
- ③ NO GRADING NECESSARY IN THIS AREA.
- ④ THIS AREA 6490 FT.<sup>2</sup>
- ⑤ " 19,291 FT.<sup>2</sup>
- ⑥ DOUBLE APPLICATION OIL & CHIPS.  
 PRIME WITH MC-70 @ 0.30 GAL/59. YD., CURE AS PER ASPHALT INSTITUTE RECOMMENDATIONS  
 1ST COAT OIL RC-800 @ 0.30 GAL/59. YD.  
 1ST COAT CHIPS 3/4" MINUS 20%-30%/59. YD.  
 2ND COAT OIL RC-800 @ 0.35 GAL/59. YD.  
 2ND COAT CHIPS 1/2" MINUS @ 25%-30%/59. YD.  
 COMPACT W/RUBBER TIRE ROLLER 45 PSI MIN. CONTACT PRESSURE.  
  
 BROOM OFF CHIPS BETWEEN 1ST & 2ND COAT OF OIL.  
 ROAD BED TEMP. MUST BE 40°F & RISING BEFORE ANY OIL CAN BE APPLIED.  
 MOISTURE CONTENT OF ROAD BED CANNOT EXCEED 7% AT TIME OF OIL APPLICATION.

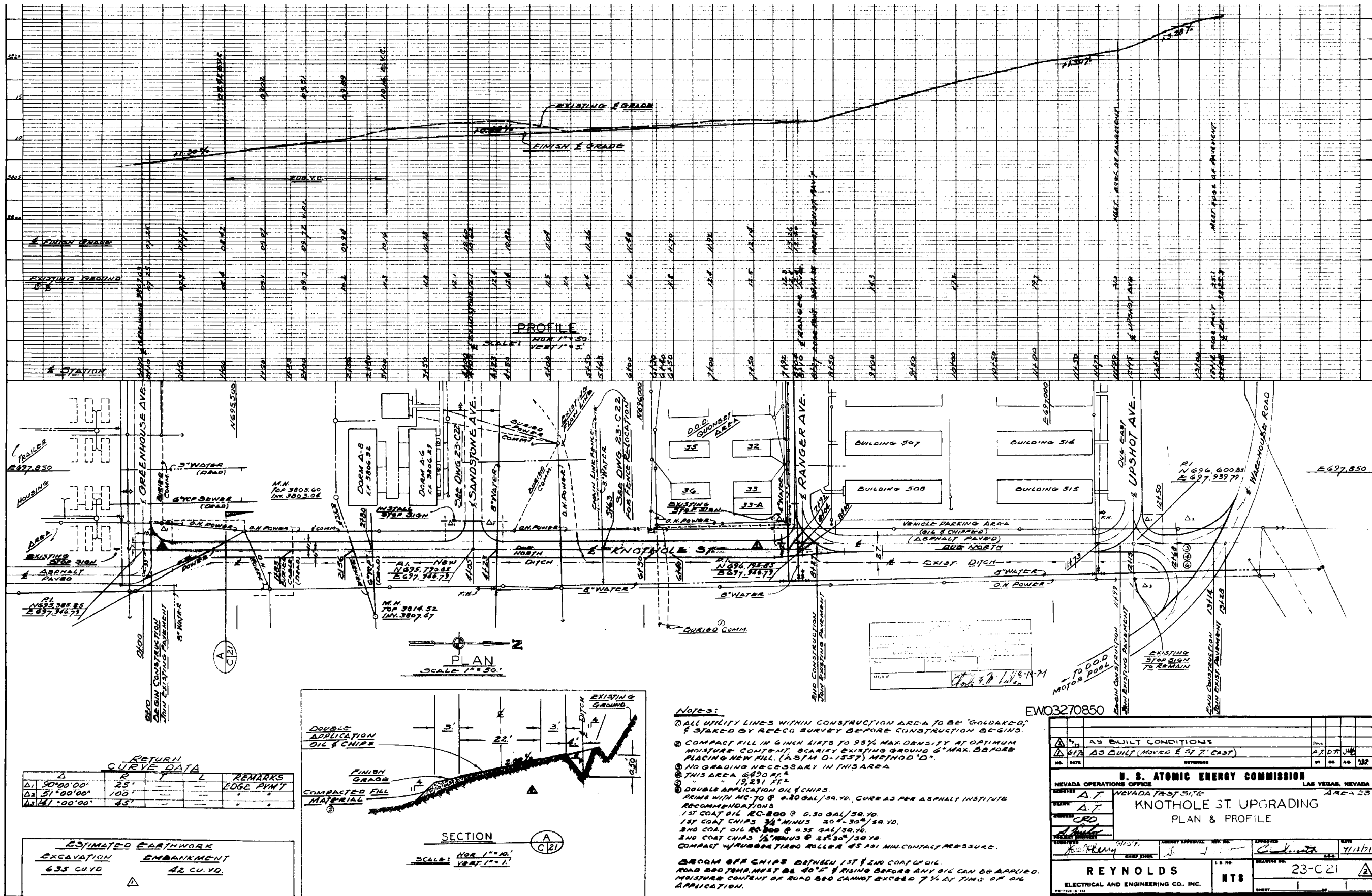
Example of specifications for grading and paving a street in Mercury in 1971 (REECo 1979). See complete drawing on page 13.

Selection of drawings related to the Mercury Street System available from the Nuclear Testing Archive, Las Vegas.

Name	Description/Title	Issue Date
NV 11 04 01 C019.1_R_69155	BUSTER STREET PLAN & PROFILE 105+00 TO 114+30	11/26/1976
NV 11 04 01 C021_R_63780	CAFETERIA-TUMBLER AVE PLANS & PROFILE	07/22/1965
M U39_R_33042	DORMITORIES ROAD PLAN	01/16/1976
NTS M C122_R_224368	DRAINAGE DITCH JANGLE STREET	01/22/1957
NV 11 04 01 C020_R_69003	JANGLE ST 115+19.88 124+70 PLAN	11/26/1976
NV 11 04 01 C054_R_151233	MERC UTIL ROAD CROSS SECTIONS 0+71.79 TO 11+50	04/19/1963
RE 926_R_76947	PRTL RE PVG SANDSTONE & TEAPOT	11/17/1977
23 C26_R_32652	REHABILITATE OLD JACKASS FLATS ROAD-SECTIONS	01/16/1976
23 C26_R_69147	REHABILITATE OLD JACKASS FLATS ROAD-SECTIONS	11/26/1976
NV 11 04 01 C053.1_R_69173	ROAD CROSS SECTIONS & DETAILS	11/26/1976
NV 11 04 01 C054_R_69030	ROAD CROSS SECTIONS 0+71.79 TO 11+50	11/26/1976
NV 11 04 01 C024_R_69006	SANDSTONE AVE 180+00 TO 185+50 PLAN & PROFILE	07/22/1965
23 C22_R_68983	SANDSTONE AVENUE UPGRADING PLAN & PROFILE	11/26/1976
23 C22.2_R_82768	SANDSTONE AVENUE UPGRADING PLAN & PROFILE	10/19/1979
NV 11 04 01 C010_R_68993	SOUTH ROAD 0+59.79 13+50 PLAN	11/26/1976
NV 11 04 01 C018_R_69001	TEAPOT ST 95+00 104+50 PLAN	11/26/1976
NV 11 04 01 C057.1_R_69174	TRINITY AVE CROSS SECTIONS	11/26/1976
NV 11 04 01 C016_R_68998	TRINITY ST 60+00 68+53.94 PLAN	11/26/1976
NV 11 04 01 C053_R_69029	TYPICAL ROAD SECTIONS & DETAILS	11/26/1976

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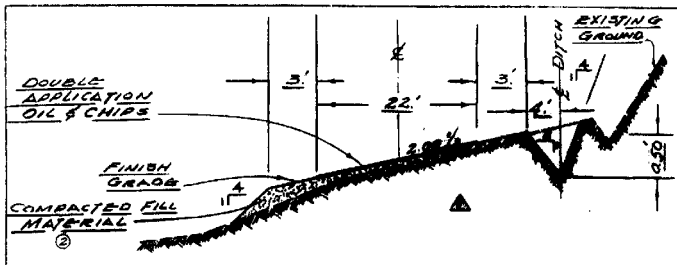


RETURN CURVE DATA

Δ	R	L	REMARKS
Δ1 50°00'00"	25'		EDGE PNT
Δ2 51°00'00"	100'		
Δ3 47°00'00"	43'		

ESTIMATED EARTHWORK

EXCAVATION	EMBANKMENT
635 CU.YD	42 CU.YD.



**NOTES:**

- ALL UTILITY LINES WITHIN CONSTRUCTION AREA TO BE "GOLDKED" & STAKED BY RECO SURVEY BEFORE CONSTRUCTION BEGINS.
- COMPACT FILL IN 6 INCH LIFTS TO 95% MAX. DENSITY AT OPTIMUM MOISTURE CONTENT, SCARIFY EXISTING GROUND 6" MAX. BEFORE PLACING NEW FILL. (ASTM D-1557) METHOD "D".
- NO GRADING NECESSARY IN THIS AREA.
- THIS AREA 6450 FT<sup>2</sup>.
- 19,231 FT<sup>2</sup>.
- DOUBLE APPLICATION OIL & CHIPS. PRIMA WITH MC-70 @ 0.30 GAL/50 YD. CURB AS PER ASPHALT INSTITUTE RECOMMENDATIONS. 1ST COAT OIL RC-800 @ 0.30 GAL/50 YD. 1ST COAT CHIPS 3/4" MINUS 20"-30" / 50 YD. 2ND COAT OIL RC-800 @ 0.35 GAL/50 YD. 2ND COAT CHIPS 1/2" MINUS @ 25"30" / 50 YD. COMPACT W/ RUBBER TIRE ROLLER 45 PSI MIN. CONTACT PRESSURE.
- CRUM OF CHIPS BETWEEN 1ST & 2ND COAT OF OIL. ROAD BED TEMP. MUST BE 40°F & RISING BEFORE ANY OIL CAN BE APPLIED. MOISTURE CONTENT OF ROAD BED CANNOT EXCEED 7% AT TIME OF OIL APPLICATION.

EW03270850

NO.	DATE	REVISION
AS BUILT CONDITIONS		
AS BUILT (MOVED E OF 7' EAST)		

**U. S. ATOMIC ENERGY COMMISSION**  
 NEVADA OPERATIONS OFFICE  
 LAS VEGAS, NEVADA

VEVADA TEST SITE  
 AREA 23

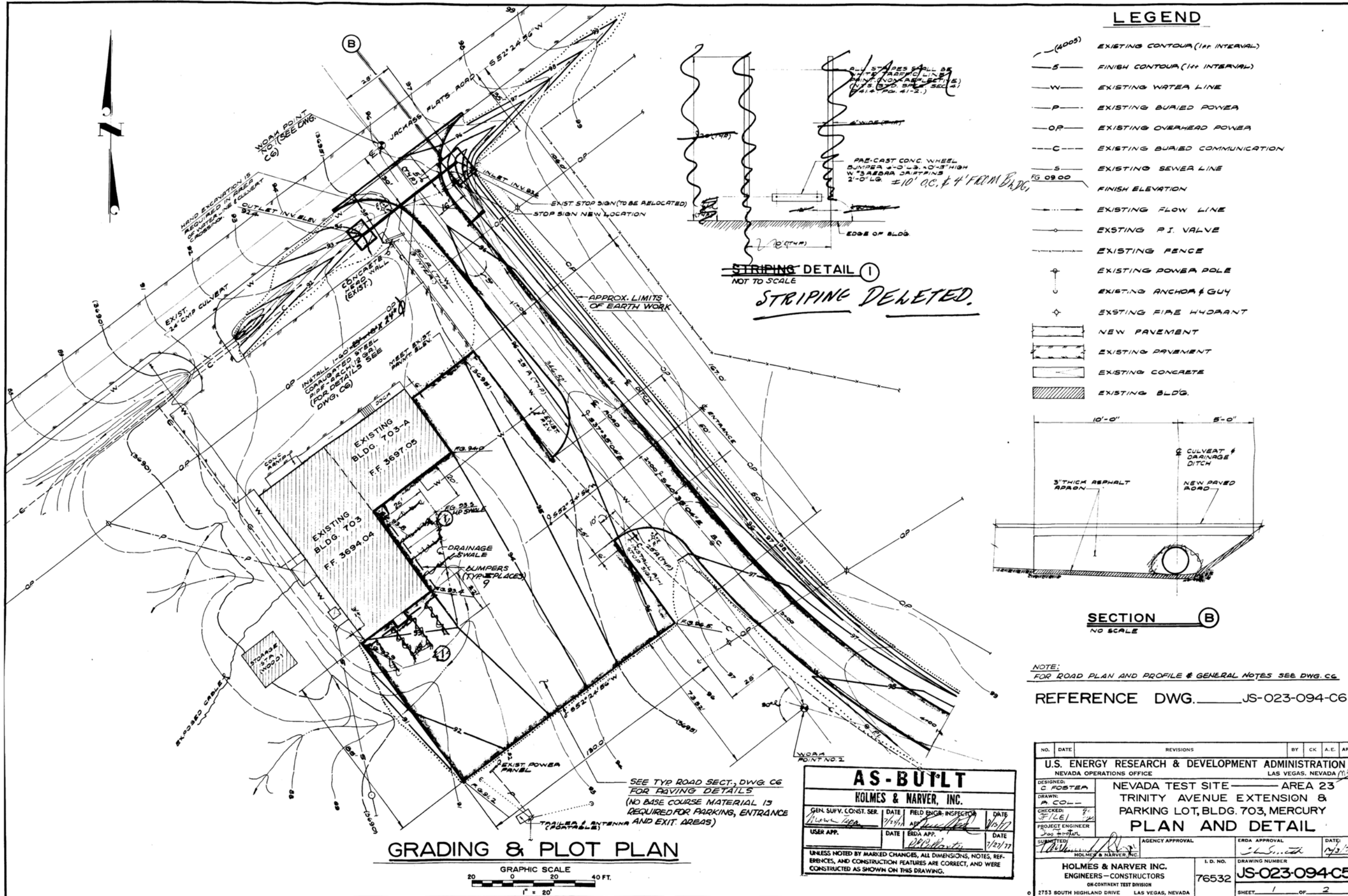
**KNOTHOLE ST. UPGRADING**  
 PLAN & PROFILE

DESIGNED BY: *AT*  
 CHECKED BY: *CRD*  
 DRAWN BY: *AT*

APPROVED BY: *Reynolds* DATE: 7/11/21  
 APPROVED BY: *Chick* DATE: 7/11/21

**REYNOLDS**  
 ELECTRICAL AND ENGINEERING CO., INC.

NTS  
 SHEET NO. 23-C21



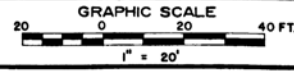
**LEGEND**

- (4005) EXISTING CONTOUR (1 FT. INTERVAL)
- 5 FINISH CONTOUR (1 FT. INTERVAL)
- W EXISTING WATER LINE
- P EXISTING BURIED POWER
- OP EXISTING OVERHEAD POWER
- C EXISTING BURIED COMMUNICATION
- S EXISTING SEWER LINE
- FINISH ELEVATION
- EXISTING FLOW LINE
- EXISTING P.I. VALVE
- EXISTING FENCE
- ⊕ EXISTING POWER POLE
- ⊕ EXISTING ANCHOR & GUY
- ⊕ EXISTING FIRE HYDRANT
- ▭ NEW PAVEMENT
- ▭ EXISTING PAVEMENT
- ▭ EXISTING CONCRETE
- ▭ EXISTING BLDG.

**SECTION B**  
NO SCALE

NOTE:  
 FOR ROAD PLAN AND PROFILE & GENERAL NOTES SEE DWG. C6  
 REFERENCE DWG. JS-023-094-C6

**GRADING & PLOT PLAN**



**AS-BUILT**  
 HOLMES & NARVER, INC.

GENL. SUPT. CONST. SER.	DATE	FIELD ENGR. INSPECTOR	DATE
USER APP.	DATE	ERDA APP.	DATE

UNLESS NOTED BY MARKED CHANGES, ALL DIMENSIONS, NOTES, REFERENCES, AND CONSTRUCTION FEATURES ARE CORRECT, AND WERE CONSTRUCTED AS SHOWN ON THIS DRAWING.

NO.	DATE	REVISIONS	BY	CK	A.E.	APP.
U.S. ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION NEVADA OPERATIONS OFFICE LAS VEGAS, NEVADA						
DESIGNED: C FOSTER DRAWN: A COLLE CHECKED: J FILE PROJECT ENGINEER: J... SUBMITTED: ... AGENCY APPROVAL: ... ERDA APPROVAL: ...						
NEVADA TEST SITE - AREA 23 TRINITY AVENUE EXTENSION & PARKING LOT, BLDG. 703, MERCURY <b>PLAN AND DETAIL</b>						
HOLMES & NARVER INC. ENGINEERS-CONSTRUCTORS OR-CONTINENT TEST DIVISION 2753 SOUTH HIGHLAND DRIVE LAS VEGAS, NEVADA			I.D. NO. 76532 DRAWING NUMBER <b>JS-023-094-C5</b> SHEET 1 OF 2			

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NEVADA  
**STATE HISTORIC  
 PRESERVATION OFFICE**

### Architectural Resource Assessment (ARA) Form

For SHPO Use Only		SHPO Concurrence?: Y / N		Date:	
Survey Date	June 2017	Recorded By	Collins, Menocal, Shimer	Agency Report #	TR 115

#### 1. Property Type

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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#### 2. Property Overview and Location

Street Address	NNSS Area 23 (multiple blocks)				
City, Zip	Mercury, 89023				
County	Nye				
Assessor's Parcel #	N/A	Subdivision Name	N/A		
UTM Location (NAD 83, UTM Zone 11 North)	Easting: 589700		Northing: 4057593		
USGS Info	Township: 15S	Range: 53E	Section: 11,14	USGS 7.5' Quad & Date: Mercury, Nev. 1983	
Ownership	Private <input type="checkbox"/>	Public-Local <input type="checkbox"/>	Public-State <input type="checkbox"/>	Public-Federal <input checked="" type="checkbox"/>	Multiple <input type="checkbox"/>
Should the property's location be kept confidential?	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>		

#### 3. Architectural Information

*(Insert primary photograph below.)*

Construction Date	1951 - 1964	
Architectural Style	N/A	
Architectural Type	N/A	
Roof Form	N/A	
Roof Materials	N/A	
Exterior Wall Materials	N/A	
Foundation Materials	N/A	
Window Materials	N/A	
Window Type	N/A	
Accessory Resources?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Number?:	



Intersection of Jangle St. and Trinity Ave., facing north (2017)

Condition of Resource(s)?		
Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/>	Poor <input type="checkbox"/>
Explanation: Maintained, in use.		

#### 4. Existing Listing & Potential District

Is the property listed in the National Register?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	Date Listed:	
				NRIS #:	
Contributing to a listed historic district?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	NRIS #:	
			Name:		
			Date listed:		
If no, is there a potential district?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	If so, is this resource contributing?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
District Name: Mercury Historic District			SHPO #: D230		

**5. NRHP Evaluation**

*If not already listed, complete the information below:*

Eligible Under:	Criterion A <input type="checkbox"/>	Criterion B <input type="checkbox"/>	Criterion C <input type="checkbox"/>	Criterion D <input type="checkbox"/>
	Not Eligible <input type="checkbox"/>	Unevaluated <input type="checkbox"/>		
Area(s) of Significance	Nuclear Testing, Townsite Development			
Period(s) of Significance	1951-1992			
Integrity – Does the resource possess integrity in all or some of the 7 aspects?				
Location <input checked="" type="checkbox"/>	Design <input checked="" type="checkbox"/>	Materials <input type="checkbox"/>	Workmanship <input type="checkbox"/>	Setting <input checked="" type="checkbox"/> Feeling <input checked="" type="checkbox"/> Association <input checked="" type="checkbox"/>
General Integrity:	Intact <input type="checkbox"/>	Altered <input checked="" type="checkbox"/>	Moved <input type="checkbox"/>	Date(s): Numerous
Threats to Resource:	Development, Underground Utility Maintenance			
Historic Name	None overall; many individual street names			
Current/Common Name	None overall; many individual street names			
Historic/Original Owner	U.S. Atomic Energy Commission			
Current Owner	U.S. Department of Energy			
Current Owner Address	Nevada National Security Site			
Historic Building Use	Road system			
Current Building Use	Road system			
Architect/Engineer/Designer	Unknown			
Builder/Contractor	Unknown			

**6. Narrative Eligibility Justification**

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

For purposes of the present survey, the resources in Mercury were evaluated only as they relate to the Historic District as a contributing versus non-contributing element. It is the nature of most of the individual elements of the district that they would not be individually eligible, but rather that, in the aggregate, they combine to create the unique significance of the district as a whole, which is presently recommended eligible to the National Register under Criteria A and C and unevaluated under Criteria B and D as detailed in the District form.

Due to the extensive resource-level of research beyond the capabilities of the present survey required to make justifiable recommendations regarding eligibility, this resource remains unevaluated under the criteria at this time. It is anticipated that such enhanced recording and evaluation will occur in the future as redevelopment plans mature.

The Mercury street system (S1762) contributes to the overall significance of the Mercury Historic District and retains most aspects of integrity. The road system is not individually eligible, but rather is a contributing element to the district principally in relation to its necessity for townsite development under Criterion C but also to some extent in regard to its overall historic significance under Criterion A. Taken out of the context of Mercury, it is not exemplary.

The roads in Mercury were necessary to support nuclear testing. During the testing period of 1951 to 1992, and continuing into the present, maintaining the roads has been a regular consideration to sustain mission activities at the NNSS.

The system retains integrity of location and setting when it is considered within the context of the district. Mercury could not have functioned without infrastructure; thus, the location and setting of the roads were vital to the nuclear testing program. The location of Mercury was selected due to its spatial relationship to Las Vegas and the testing areas, and the remote desert setting of the entire project was considered important in order to protect the public from fallout as much as possible and make it easier to provide a high level of perimeter security.

The road system also retains integrity of design, but lacks integrity related to materials and workmanship. The roads, with few exceptions, are in the same locations as they were when first constructed. They have, however, been repaved numerous times, and portions of the roads have been dug up to install or access underground utilities.

The aspects of feeling and association are present for the structure. There has been little effort to maintain the roads

beyond the very basic needs of NNSS operations. They lack medians, landscaping or other efforts to improve their aesthetic quality, and in most areas are not even bounded by cement curbs. Their simplicity and plainness retain the feeling of infrastructure designed only to meet the needs of the testing program. Because of the importance of infrastructure in maintaining the nuclear program, S1762 contributes to the sense that Mercury was part of the critical nuclear testing effort during the Cold War.

## 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

In December 1950, the U.S. Air Force approved a plan to allow the Atomic Energy Commission (AEC), now the U.S. Department of Energy, to use the Las Vegas Bombing and Gunnery Range, a federal facility established in 1940 by President Roosevelt, for a proposed series of continental tests named Operation Ranger (NNSA/NFO 2013). On December 18, 1950, President Truman approved the choice, and construction for the first tests began the following month.

After the Ranger tests were successfully completed in early February 1951, it was clear that additional facilities would be needed to continue testing. The AEC proposed building facilities to support the "Mercury project area," including a camp to provide housing and dining facilities, a transportation center, a center of operations for structure and facility maintenance, a vehicle service station, a repair shop, warehouses, and other structures needed for maintenance and operations. Initial plans also included the construction of supporting infrastructure (AEC 1951).

The only information available for the road system within Mercury comes from engineering drawings, maps, and photographs. The map on page 6 shows when roads first appeared in a completed state in a referenced document. In most cases this means that the road appears to have been paved by the date on the document; however, according to photographs, the old Trinity Ave. between Jangle St. and Mercury Hwy. seems to have been maintained as a built-up gravel road until it went into disuse when the new Trinity Ave. was built in about 1963.

An early map (Silas Mason Co. 1952) indicated that a proposed project to resurface some of the streets in Mercury at that time would use "double surface treatment." This method involves two separate applications of asphalt surfacing materials, one after the other, over an existing weathered pavement. It extends the life of the surface and reduces maintenance costs (Burke 1994).

In almost all cases the roads are two-lane asphalt with abundant turnouts for bus stops or parking. There are no stop lights but there is a limited amount of area lighting from utility poles generally mounting cobra fixtures. Most streets are named after nuclear tests. In some areas of Mercury surface drainage is allowed to flow right over the roads. In areas of higher stormwater volume, there are ditches, some of which are improved with riprap. In most places culverts pass under the roads for stormwater. This related stormwater drainage system was recorded separately. Some areas have concrete sidewalks but they are lacking along most of the roads in Mercury.

There are no Accessory Resources.

## 8. References

*List references used to research and evaluate the individual property.*

AEC, See U.S. Atomic Energy Commission

Burke, Jr., William E.

1994 *User's Guide: Double Bituminous Surface Treatment*. Miscellaneous Paper GL-94-29. U.S. Army Center for Public Works, Alexandria.

NNSA/NFO, see U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office

Silas Mason Co.

1952 Roads – Camp Site Streets – Nevada Proving Grounds. Drawing No. N.T.S. 125-C, Sheet 2 of 5. U.S. Atomic Energy Commission, Santa Fe Operations Office, Los Alamos, New Mexico.

U.S. Atomic Energy Commission

1951 *Background Data on Nevada Test Site Construction*. Retrieved from NNSA/NSO Nuclear Testing Archive, Las Vegas, Accession No. NV0322845.

U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (NNSA/NFO)

2013 *Nevada National Security Site History, Project Nutmeg*. DOE/NV--767. U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office, Las Vegas, Nevada.

### **Map and Photo References**

Arthur Benedict Associates

1962 *Master Plan Mercury, Nevada*. Prepared for the U.S. Atomic Energy Commission. Arthur Benedict Associates, Los Angeles.

Holmes & Narver, Inc.

1979 Area 23 Mercury Utilities Water. Page 8W.

Reynolds Electrical and Engineering Co. Inc.

1951 Mercury Campsite Layout. Drawing No. N.T.S.-187-C. U.S. Atomic Energy Commission, Los Alamos.

1955 *Report on Existing Facilities at the Nevada Test Site*. Prepared for the U.S. Atomic Energy Commission.

1956 Dormitories Structures 501 Thru 508, 513, 514, 515 Water Distribution Layout. Engineering Drawing No. M-746. U.S. Atomic Energy Commission, Las Vegas Branch Office, Las Vegas, Nevada.

1982 Photograph Album Index (1958-1976). Photos 682-5 (1959), 939-12, 940-2 & 940-4 (1961), 1860-8 (1964).

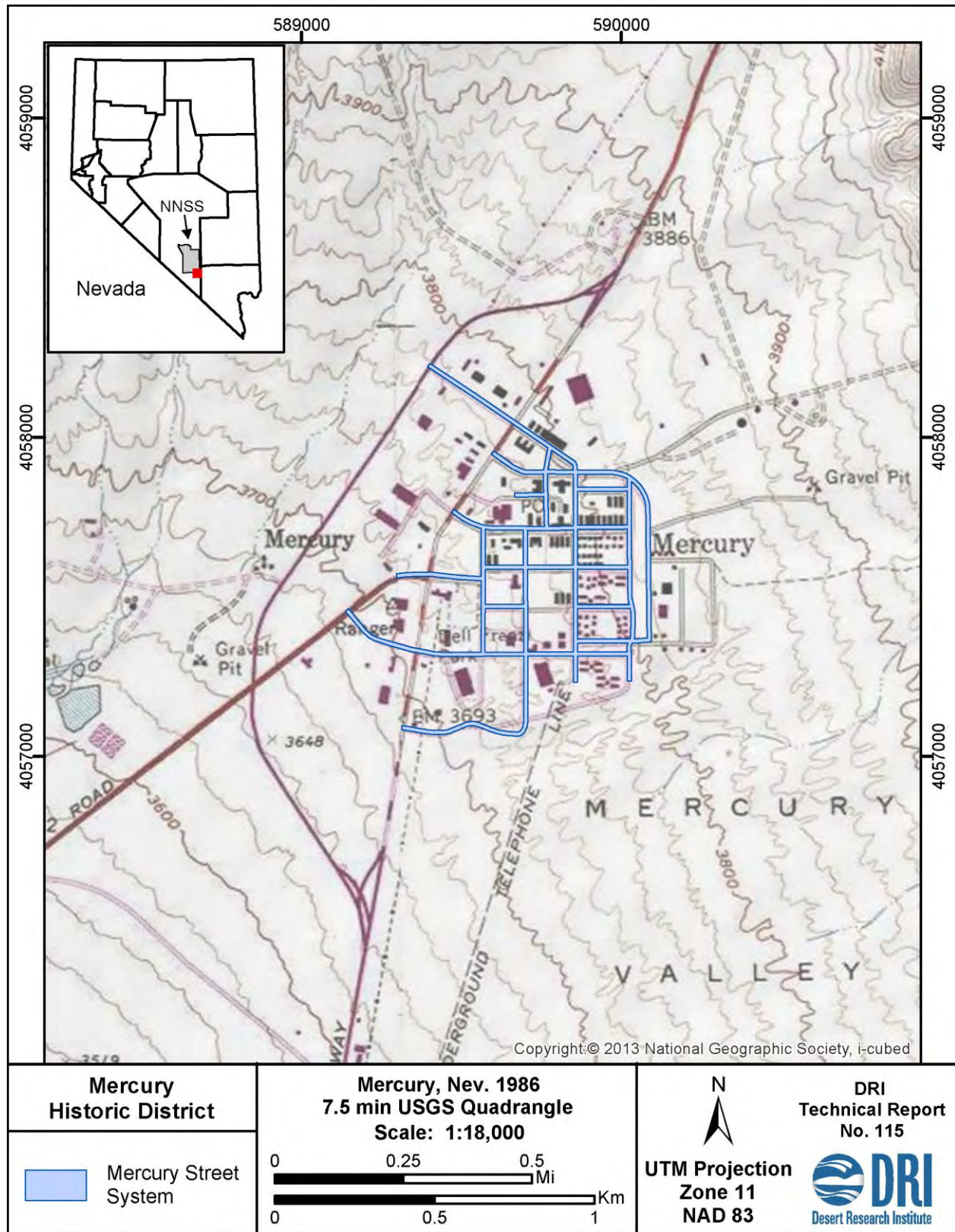
1993 Utilities Power Distribution Mercury, Area 23 Site Plan Area C-3. Drawing No. 23\_PS-556-E15, Sheet 11 of 15. U.S. Department of Energy Nevada Field Office, Las Vegas, Nevada.

U.S. Atomic Energy Commission

1968 Mercury Nevada (map). U.S. Atomic Energy Commission.

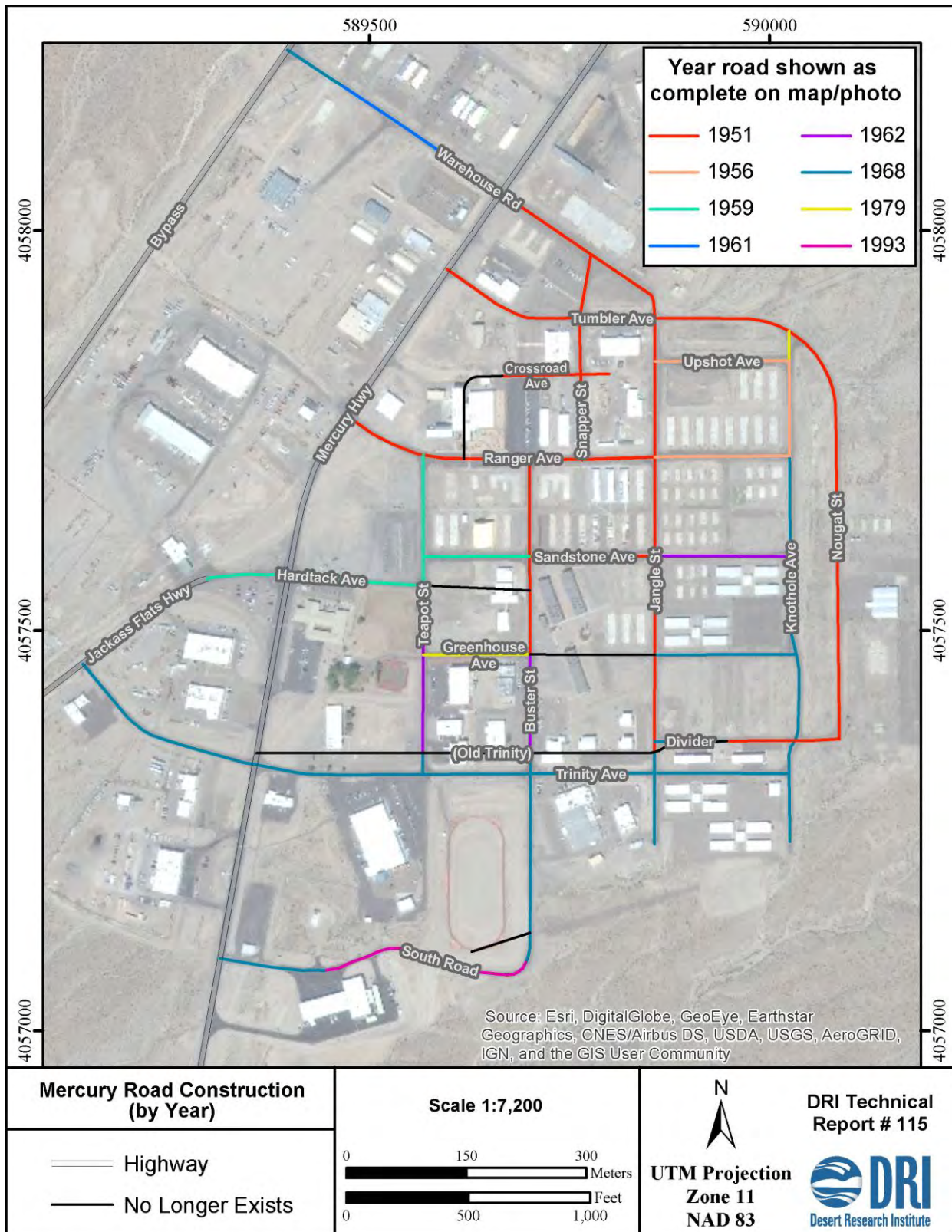
### 8. Area Location Map

Use a USGS quadrangle map at large extent to show general area of resource.



**9. Site Plan Map**

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



Historical representation of road construction according to drawings, maps, and photographs. See p. 4 for references.

**10. Photographs**

*Include as many photographs as needed to accurately depict the resource.*



Knothole Ave. from Greenhouse Ave. Direction facing: North Photographer: Menocal Date: 6/19/2017



Greenhouse Ave. from Knothole Ave. Direction facing: West Photographer: Menocal Date: 6/19/2017



Example of street signs and markings at Tumbler Ave. and Snapper St.  
Direction facing: Northwest      Photographer: Menocal      Date: 6/19/2017



Ranger Ave. from Jangle St.      Direction facing: West-northwest      Photographer: Menocal      Date: 6/19/2017



One of the few curbs found in Mercury, located on the north side of Ranger Ave. in front of the cafeteria.  
Direction facing: East      Photographer: Menocal      Date: 5/24/2017



A second location where a curb can be found, on Sandstone Ave. west of Buster St.  
Direction facing: Southeast      Photographer: Menocal      Date: 6/19/2017



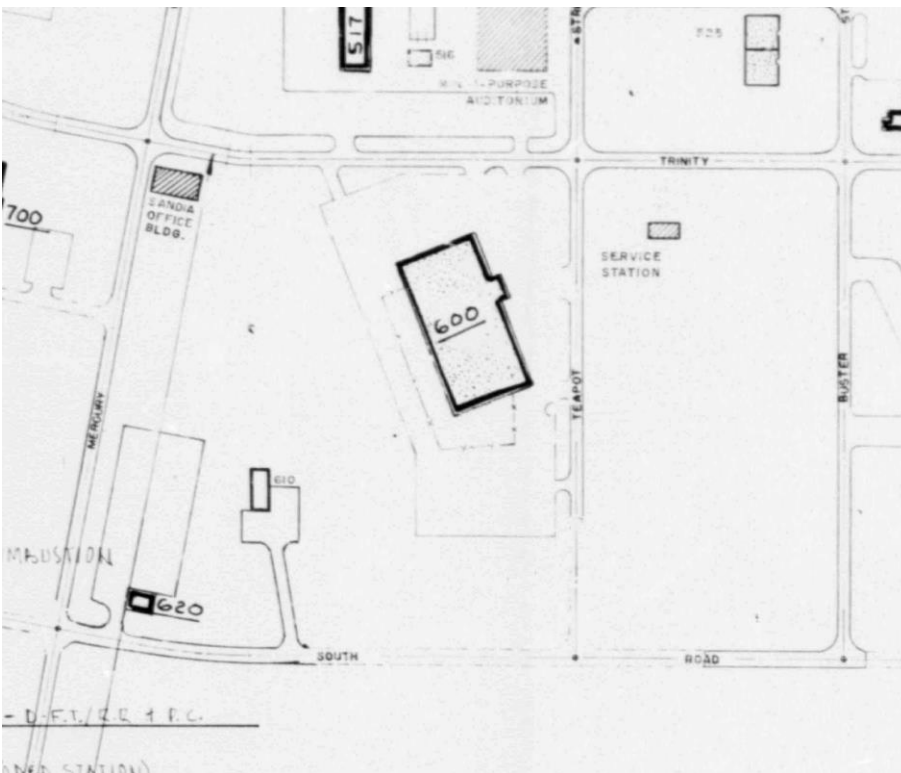
Typical street corner in Mercury in the mid-1950s. This is at the corner of Ranger Ave. and Buster St.  
Direction facing: Southeast      Source: REECo (1955)



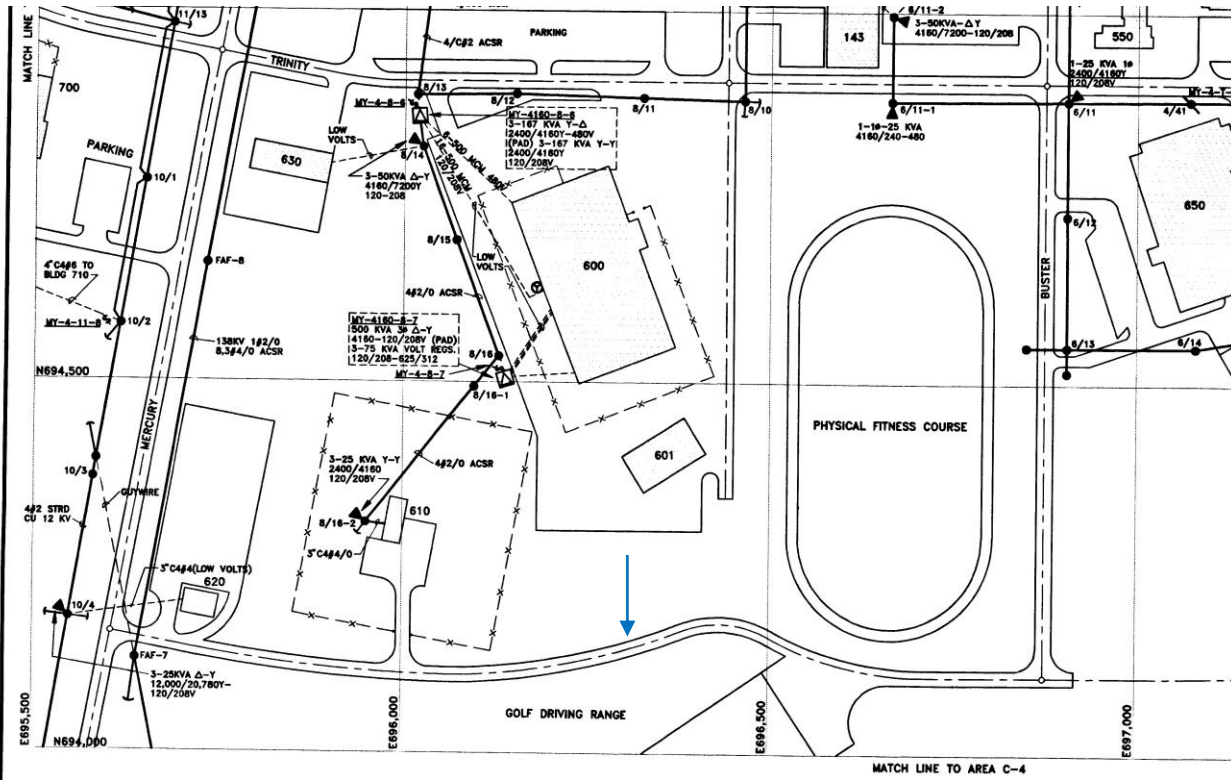
Mercury road system in the early 1960s.  
Direction facing: Northwest      Source: REECo (1982)      Date: 1961



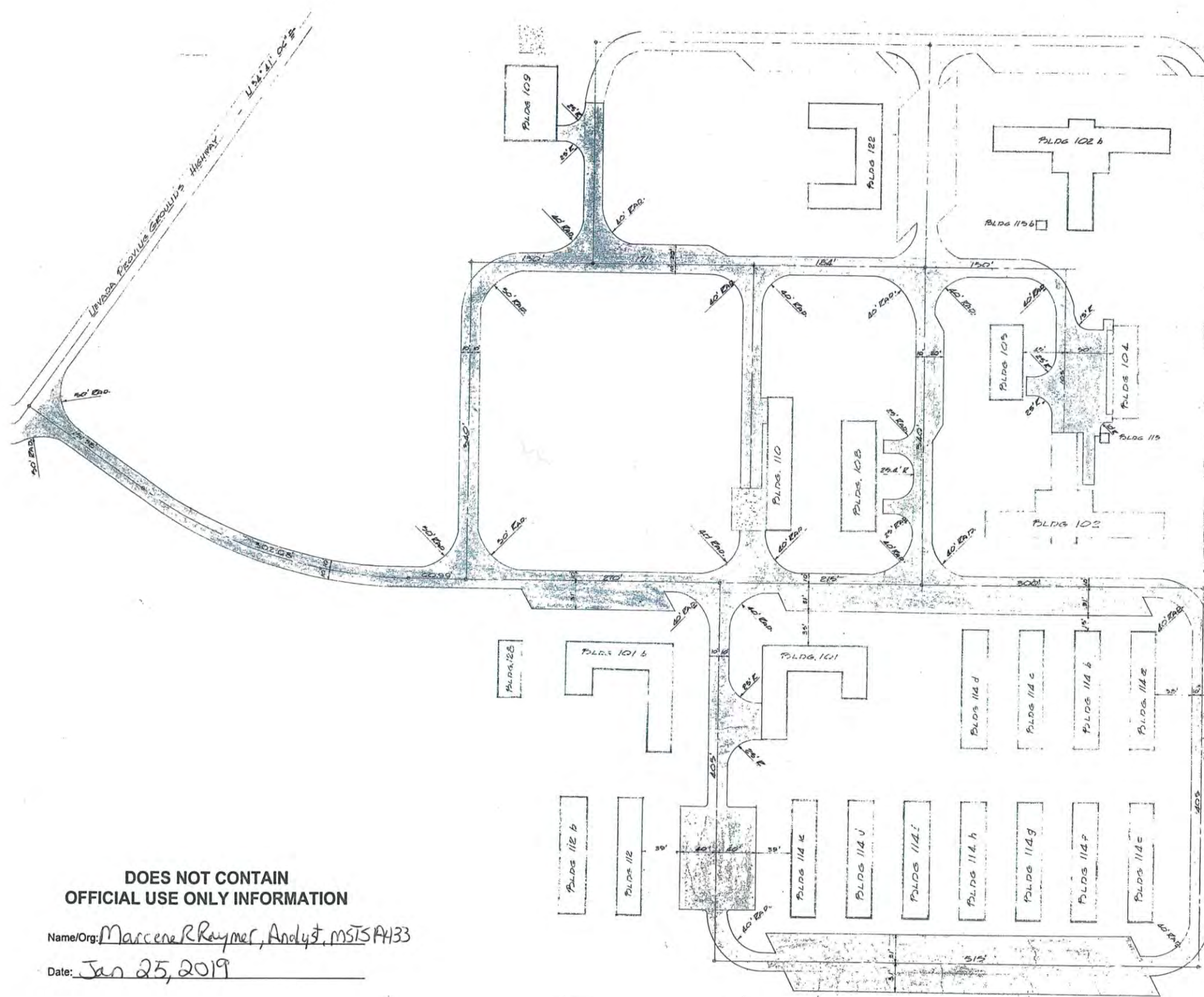
Mercury road system after the 1963-64 construction boom. The blue arrow points to the old Trinity Ave. The red arrow is at the new Trinity Ave.  
Direction facing: West-northwest      Source: REECo (1982)      Date: 1964



Close-up view from a Mercury map of partially-built South Rd. in 1968.  
Direction facing: North at top.      Source: U.S. Atomic Energy Commission 1968.



A close-up view from a 1993 map showing the last road constructed during the Mercury Historic District's period of significance: South Rd., at the blue-green arrow, between the entrance to Building 23-610 and Buster St. Direction facing: North at top. Source: REECo 1993.



- Notes:
1. SHADED AREAS DELINEATE STREETS & PARKING AREAS THAT ARE TO BE RESURFACED.
  2. PAVEMENT TO BE DOUBLE SURFACE TREATMENT (SEE SPEC'S)

~~FOR OFFICIAL USE ONLY~~

INVITATION No. 292-55-2

**DOES NOT CONTAIN  
 OFFICIAL USE ONLY INFORMATION**

Name/Org: Marcene R Reymier, Analyst, MST5 PAH33

Date: Jan 25, 2019

NO.	DATE	REVISIONS	BY	CHK.	PROJ. A. E. C. ENGR. APP.
<b>U. S. ATOMIC ENERGY COMMISSION</b> SANTA FE OPERATIONS OFFICE LOS ALAMOS, NEW MEXICO					
ROAD GAMMERS STREET LIVADA PROXIMA GREGG'S HIGHWAY					
SUBMITTED <i>[Signature]</i>			RECOMMENDED <i>[Signature]</i>		APPROVED <i>[Signature]</i>
Sitas Mason Company ENGINEERS LAS VEGAS, NEVADA			CONTRACTORS N. T. S. 125-C		SHEET 2 OF 5

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NEVADA  
**STATE HISTORIC  
 PRESERVATION OFFICE**

## Architectural Resource Assessment (ARA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:			
Survey Date	August 2019	Recorded By	C. Collins	Agency Report #	LR040120-1

The purpose of this update is to record additional information about the Mercury stormwater drainage system affected by the ongoing modifications occurring because of the Mercury Modernization Project. Some drainages will be affected by changes to the overall town layout and landscaping in the center of Mercury. The drainage system (SHPO Resource No. S1765) contributes to the significance of the Mercury Historic District (MHD; SHPO Resource No. D230). The Mercury Modernization Project will be implemented in accordance with the terms of the 2018 *Programmatic Agreement between the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) and the Nevada State Historic Preservation Officer (SHPO) Regarding Modernization and Operational Maintenance of the Nevada National Security Site, at Mercury in Nye County, Nevada (PA)*. Per the PA, the NNSA/NFO, in consultation with the SHPO, determined that demolition and grading within the district may result in visual or other indirect effects to the overall historic character of the MHD (Stipulation II.D). The Mercury stormwater drainage system is defined in Table C-1 of the PA as a Category III resource, and this form is being updated according to the stipulations in the PA for a Category III property.

### 6. Narrative Eligibility Justification

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

The Mercury stormwater drainage system is in a very similar condition to that reported in 2017. S1765 continues to be a contributing resource to the district. No information was discovered during the research conducted to evaluate this resource that suggests the drainage system would be individually eligible to the National Register. Infrastructure elements, such as the drainage system in Mercury, were utilitarian in design and workmanship and were intended to only meet the functional needs of the nuclear testing activities on the NNSS.

### 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

During the study conducted in preparation for expanding Mercury in the early 1960s, Koebig and Koebig (1963) stated that the drainage system on the east side of the Mercury Highway was inadequate for the calculated amount of stormwater that could accumulate on that side of the road during a peak runoff event. In addition to recommending a second culvert to safely convey this runoff under the highway, the engineers also suggested enlarging some existing culverts, diverting some drainages to avoid new construction, and constructing new culverts and ditches in several areas. New culverts were to be made of bituminous-coated corrugated metal pipe or pipe arch, and have flared metal end sections on both the upstream and downstream ends in most cases. The new culverts would be at least 15 in pipe or 18 x 11 in pipe arch.

See the original ARA form for the description of the existing system.

## 8. References

*List references used to research and evaluate the individual property.*

Koebig & Koebig, Inc.  
1963 *Report on Utilities for Mercury, Nevada*. Atomic Energy Commission, Nevada Operations Office.

### **References for maps/drawings below:**

*All photographs below attributed to REECo are associated with the REECo 1982 reference.*

Arthur Benedict Associates (ABA)  
1962 *Master Plan Mercury, Nevada*. Prepared for the U.S. Atomic Energy Commission. Arthur Benedict Associates, Los Angeles.

Reynolds Electrical and Engineering Co., Inc. (REECo)  
1957 Drainage Ditch Jangle Street - Mercury. Engineering Drawing No. NTS M-C122. U.S. Atomic Energy Commission, Santa Fe Operations Office, Los Alamos.

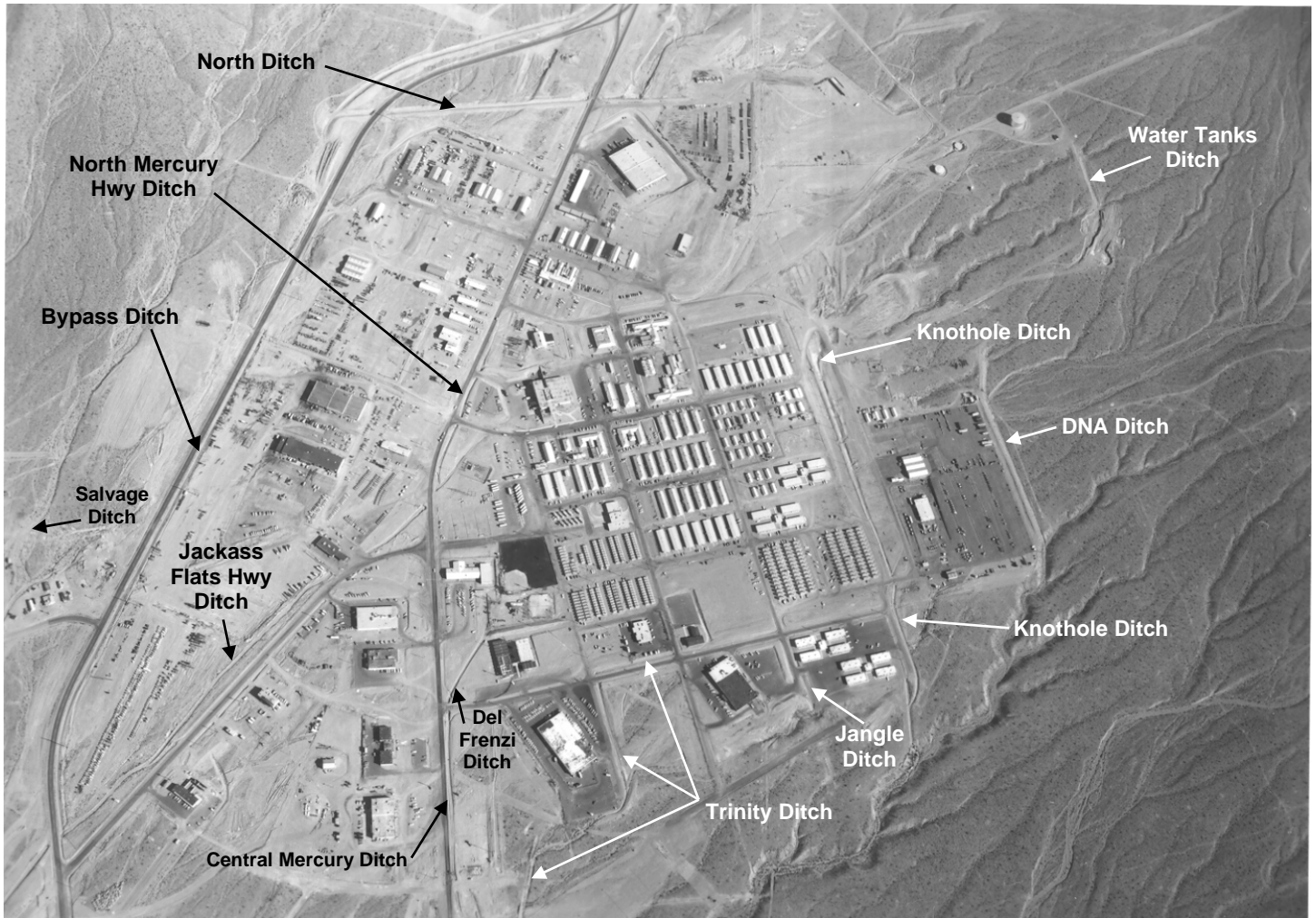
1982 Photograph Album Index (1958-1976). On file at the Desert Research Institute, Las Vegas.

### 9. Photographs

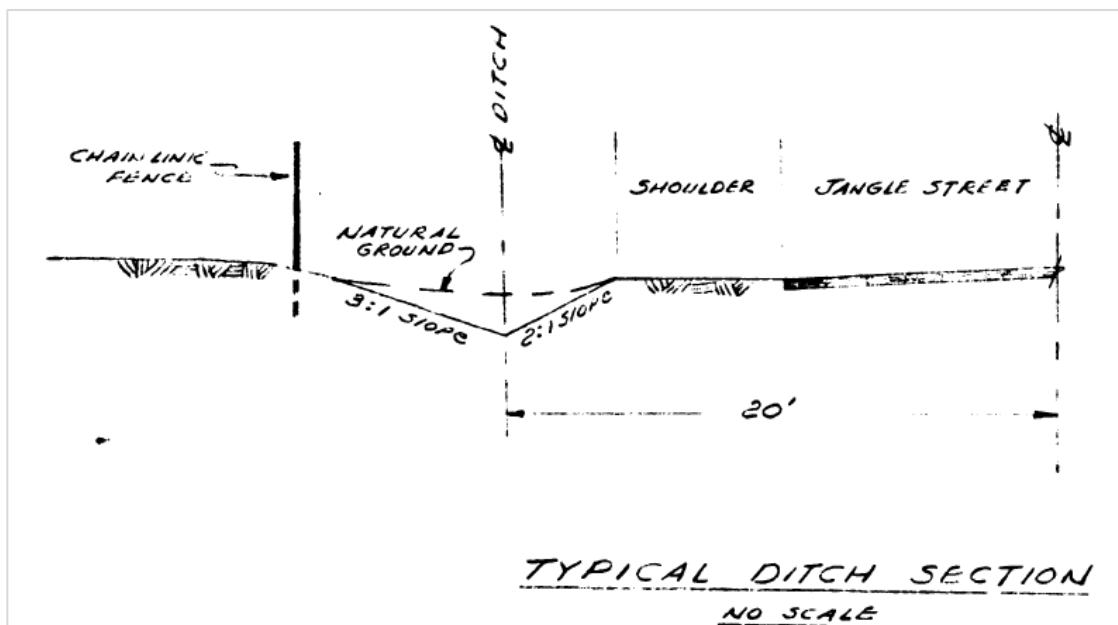
Include as many photographs as needed to accurately depict the resource.



An aerial view of Mercury before the implementation of the master plan (ABA 1962) showing some of the more prominent natural and constructed drainages, facing east (REECO, January 1961).



An aerial view of Mercury after the construction boom, facing north-northeast, showing some of the more prominent constructed ditches (REECo, Photo 2574-4, 10/11/1967).



Section of the planned drainage along Jangle Street (REECo 1957).



View of a drainage trench that has widened over time along a curve near the sewage lagoons and Jackass Flats Highway.

Elevation: N/A

Direction facing: South

Photographer: DRI

Date: 2018



One of the natural drainages near the water tanks that feeds into the north end of the drainage along Knothole Street.

Elevation: N/A

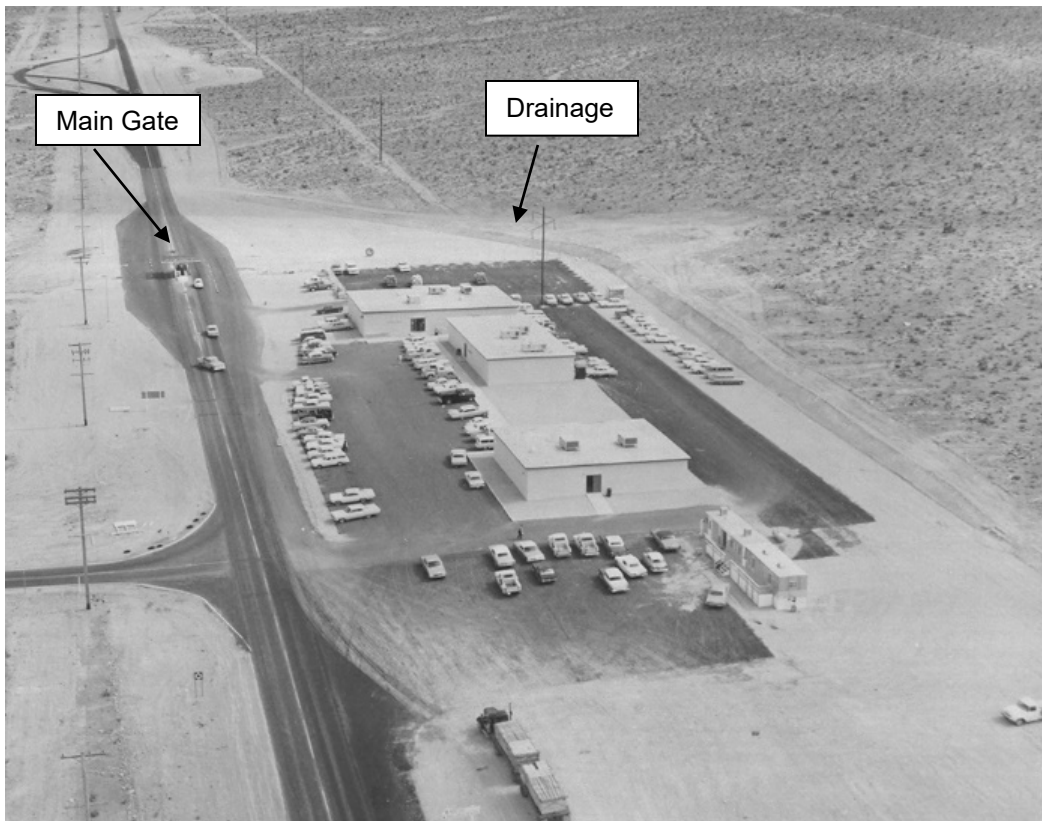
Direction facing: West-southwest

Photographer: DRI

Date: 2018



This ditch on the north side of Building 23-160 directs water around the building. The curve in the foreground feeds stormwater into the drainage along the east side of Mercury Highway.  
Elevation: N/A      Direction facing: Southeast      Photographer: DRI      Date: 2018



This photo, facing north-northeast, shows the drainage running along the right (east) side of Mercury Highway in the background. Upon reaching the newly constructed buildings near the main gate, a trench (at black arrow) directs stormwater east of the buildings (REECO, Photo 3028-3, 1965).

Selection of drawings related to the Mercury stormwater drainage system available from the Nuclear Testing Archive, Las Vegas.

<b>Name</b>	<b>Description/Title</b>	<b>Issue Date</b>
NTS M C122_R_224368	DRAINAGE DITCH JANGLE STREET	01/22/1957
NV 11 04 01 C034_R_151218	MERC UTIL BY-PASS DRAINAGE CHANNEL PLAN & PROFILE	04/19/1963
NV 11 04 01 C035_R_151219	MERC UTIL DRAINAGE CHANNEL A PLAN & PROFILE	04/19/1963
NV 11 04 01 C071_R_151250	MERC UTIL BY-PASS DRAINAGE CHANNEL CROSS SECTIONS	04/19/1963
NV 11 04 01 C072_R_151251	MERC UTILITIES DRAINAGE CHANNEL A CROSS SECTIONS	04/19/1963
NV 11 04 01 C034_R_69015	BY-PASS DRAINAGE CHANNEL PLAN & PROFILE	07/22/1965
NV 11 04 01 C035_R_69016	DRAINAGE CHANNEL A PLAN & PROFILE	07/22/1965
NV 11 04 01 C061_R_69048	DRAINAGE CHANNEL A CROSS SECTIONS	07/22/1965
NV 11 04 01 C071_R_69047	BY-PASS DRAINAGE CHANNEL CROSS SECTIONS	07/22/1965
090 075 C19.2_R_69159	BY PASS DRAINAGE CHANNEL	11/26/1976
090 075 C20.2_R_69160	BY PASS DRAINAGE CHANNEL	11/26/1976
23 C2_R_69148	MERCURY DRAINAGE MODS PLAN PROF	11/26/1976
23 C3_R_69149	MERCURY DRAINAGE MODS PLAN PROF	11/26/1976
SK 4586 C1_R_69181	DRAINAGE MERCURY HWY MODS	11/26/1976
23 C2.2_R_76954 thru 958	MERC DRAINAGE MODS PL & PROFILE	11/17/1977
23 TC C1 E5_R1_167375	FENCING & DRAINAGE CONTROL - MERCURY TENNIS COURTS - PLAN	06/11/1986
23 TC C2.1_R_167374	FENCING & DRAINAGE CONTROL DETAIL & SECTIONS	06/11/1986

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### Architectural Resource Assessment (ARA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:
Survey Date	June 2017	Recorded By
	Reno, Menocal, Shimer	Agency Report #
		TR 115

#### 1. Property Type

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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#### 2. Property Overview and Location

Street Address	NNSS Area 23 (multiple blocks)		
City, Zip	Mercury, 89023		
County	Nye		
Assessor's Parcel #	N/A	Subdivision Name	N/A
UTM Location (NAD 83, UTM Zone 11 North)	Easting: 589368		Northing: 4057329
USGS Info	Township: 15S	Range: 53E	Section: 10-12,14,15
USGS 7.5' Quad & Date: Mercury, Nev. 1983			
Ownership	Private <input type="checkbox"/>	Public-Local <input type="checkbox"/>	Public-State <input type="checkbox"/>
			Public-Federal <input checked="" type="checkbox"/>
			Multiple <input type="checkbox"/>
Should the property's location be kept confidential?	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>

#### 3. Architectural Information

(Insert primary photograph below.)

Construction Date	1951
Architectural Style	N/A
Architectural Type	N/A
Roof Form	N/A
Roof Materials	N/A
Exterior Wall Materials	N/A
Foundation Materials	N/A
Window Materials	N/A
Window Type	N/A
Accessory Resources?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	Number?: 21



Condition of Resource(s)?	
Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/> Poor <input type="checkbox"/>
Explanation: Maintained, in use.	

#### 4. Existing Listing & Potential District

Is the property listed in the National Register?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	Date Listed:
				NRIS #:
Contributing to a listed historic district?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	NRIS #:
			Name:	
			Date listed:	
If no, is there a potential district?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	If so, is this resource contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
District Name: Mercury Historic District			SHPO #: D230	

**5. NRHP Evaluation**

*If not already listed, complete the information below:*

Eligible Under:	Criterion A <input type="checkbox"/>	Criterion B <input type="checkbox"/>	Criterion C <input type="checkbox"/>	Criterion D <input type="checkbox"/>
	Not Eligible <input type="checkbox"/>	Unevaluated <input type="checkbox"/>		
Area(s) of Significance	Nuclear Testing; Community Development			
Period(s) of Significance	1951-1992			
Integrity – Does the resource possess integrity in all or some of the 7 aspects?				
Location <input checked="" type="checkbox"/>	Design <input checked="" type="checkbox"/>	Materials <input checked="" type="checkbox"/>	Workmanship <input checked="" type="checkbox"/>	Setting <input checked="" type="checkbox"/>
				Feeling <input checked="" type="checkbox"/>
				Association <input checked="" type="checkbox"/>
General Integrity:	Intact <input checked="" type="checkbox"/>	Altered <input type="checkbox"/>	Moved <input type="checkbox"/>	Date(s):
Threats to Resource:	Demolition, Construction			
Historic Name	None			
Current/Common Name	None			
Historic/Original Owner	AEC			
Current Owner	DOE			
Current Owner Address	Nevada National Security Site			
Historic Building Use	Stormwater Drainage			
Current Building Use	Same			
Architect/Engineer/Designer	Unknown			
Builder/Contractor	Multiple			

**6. Narrative Eligibility Justification**

*Provide a detailed explanation of the resource’s eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

For purposes of the present survey, the resources in Mercury were evaluated only as they relate to the Historic District as a contributing versus non-contributing element. It is the nature of most of the individual elements of the district that they would not be individually eligible, but rather that, in the aggregate, they combine to create the unique significance of the district as a whole, which is presently recommended eligible to the National Register under Criteria A and C and unevaluated under Criteria B and D as detailed in the District form.

Due to the extensive resource-level of research beyond the capabilities of the present survey required to make justifiable recommendations regarding eligibility, this resource remains unevaluated under the criteria at this time. It is anticipated that such enhanced recording and evaluation will occur in the future as redevelopment plans mature.

The Mercury Stormwater Drainage System contributes to the overall significance of the Mercury Historic District. It retains all aspects of integrity. The ditch system makes use of common design elements such as earthen ditches and dams and typical culvert structures. It contributes principally in relation to its necessity for community development under Criterion C.

Most of the system has been in place since the inception of Mercury and nearly all major additions and modifications were well within the period of significance for the district. All Accessory Resources contribute. As shown on the resource map, the only non-contributing portions of the system are two segments of Lagoon Ditch (AR11), a short segment of Track Ditch (AR17) and three culverts (CM4, SM3, TR5) on the Fire Station access road. All of these recent additions or alterations date to 2010 or later.

## 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

With its location on a bajada, Mercury is subject to major episodes of flash flooding, though average rainfall is low. A complex system of earthen ditches has been constructed to protect Mercury and its associated facilities from storm water damage. Most of the ditches were constructed in 1951. Dates of later ditches are given in specific descriptions of the individual ditches making up the system listed below.

To the best of our knowledge, no ditches have historic names, so for convenience in the description, the ditches were assigned names after the nearest named road or other feature. In all 20 ditches were assigned names, and each was also assigned an Associated Resource number. *Primary* ditches provide protection from runoff reaching developed areas from watersheds outside Mercury. *Interior* ditches channel runoff that accumulated within the borders of the primary perimeter system. These terms are added after the AR name below when applicable. Most surface drainage within the primary ditch perimeter is handled by simply allowing the water to flow over the paved and gravel surfaces to eventually be gathered by one of the ditches for removal. Minimal grading and shallow local ditches serve to protect individual facilities.

The primary protective ditches on the north and east sides of Mercury were excavated concurrent with initial camp development in 1951 and were fully operational at least by 1952 as shown on air photos. This first generation of ditches includes the North Ditch, Water Tanks Ditch, DNA Ditch, Knothole Ditch, and ditching along the Mercury Highway.

Most culverts are corrugated galvanized steel with a protective tar coating. Some culverts are concrete. In some cases the ends of the culverts are equipped with retaining walls, wing walls, aprons, flared metal end sections, or riprap. A few ditch segments are also protected with stone or recycled concrete riprap. In the descriptions, the culverts are steel unless noted otherwise. A sample of culverts was measured and assigned numbers separately for each ditch to document the amount of flow various portions of the system were designed to handle.

The ditch system was expanded in 1965 to accommodate growth of the community and construction of the Mercury Bypass and Gate 100 complex. Additional changes were made in 1973 with ditching to protect the facilities built in the northwest portion of the District and the Landfill area. Aside from these changes, the ditch system has continually been maintained and upgraded to gradually handle stormwater events which routinely overwhelmed the capacity of the system at least into the mid-1960s (Arthur Benedict Associates 1962:40).

Maps showing locations mentioned in the descriptions below are on pages 8 through 10.

### **AR1: Airport Ditch (AP, Interior)**

The Airport Ditch originates in Block 20. After protecting Building 23-701 (B15277) it proceeds southwest, following the east side of the runway for the Mercury Airport. It passes under the Mercury Bypass via culvert AP1 (2 ½ ft. diameter).

### **AR2: Bypass Ditch (BP, Primary to 1965, Interior after 1965)**

The earliest portion of this ditch captures a natural drainage and diverts water around the north sides of the warehouses and CETO (Bldg 23-790, C312) complex in Block 1. Small culverts are in ditch crossings just north of the Terrace in Block 1 (C292), at the northern extent of the district. In the 1950s this short ditch terminated in the major watercourse northwest of CETO which carried all of the water diverted by the North Ditch. The ditch was given its present configuration with construction of the Mercury Bypass in 1965. It passes under Warehouse Road in 2 ½ ft. culvert BP1 and continues in part within the natural watercourse mentioned above until reaching the bypass, which it protects by following its east shoulder. This portion of the ditch is typically about 3 ft. deep and 5 ft. wide with spoils on both sides. The ditch terminates by emptying into the Jackass Flats Hwy. Ditch.

### **AR3: Central Mercury Highway Ditch (CM, Primary and Interior to 1965, Interior after 1965)**

This ditch collects local surface runoff and channels it along the east side of the Mercury Highway starting at Building 23-111 (B15255). Culvert CM1 under Trinity Ave. is 2 ft. 10 in. by 2 ft., and Culvert CM2 under South Road is 3 ft. 6 in. by 2 ft. The road has been refurbished for access to the new Fire Station (23-640), but this old culvert (and SM2) have been preserved.

The ditch formerly emptied into a natural watercourse via Culvert CM3 under the Mercury Highway. The 2 ft. 6 in. west portal is still visible, but the east portal is buried. The ditch continues under the new south entrance to 23-640 (Culvert CM4 4 ft. by 1 ½ ft. concrete, non-contributing) before terminating at Culvert CM5 (2 ½ ft.), which passes under the Mercury Highway and continues as a natural watercourse. Prior to construction of the Gate 100 complex in 1965 this ditch continued southward as the principal Mercury Highway Ditch, but at that time the segment from here south to the new gate was abandoned and filled in to be replaced by an extension of the South Mercury Highway Ditch farther to the east.

**AR4: Del Frenzi Ditch (DF, Interior)**

Prior to 1983 this ditch extended into Block 16. The west end of smooth galvanized Culvert DF1 (1 ½ ft.) is still visible near the Basketball Court in Block 15 at what is now the beginning of the ditch. After traversing Block 15 the ditch flows into the Central Mercury Ditch at Trinity Ave.

**AR5: DNA Ditch (Primary)**

The north end of this ditch begins at a diversion dam which captures both natural runoff and waters diverted into it upstream by the Water Tanks Ditch. The ditch runs south along the edge of the DNA compound to flow into a major watercourse ultimately intercepted by the South Mercury Highway Ditch. There are no culverts along this ditch.

**AR6: Northwest Ditch (Primary)**

Built in 1973 to protect the new facilities built north of the Landfill, the eastern part of the ditch flows indirectly into the Lagoon Ditch. The western end is extended well beyond the facilities in the northwest area to protect the Landfill (23-800, C327) prior to merging with a natural watercourse.

**AR7: Gas Ditch (Interior)**

This minor ditch diverts local runoff around a large storage yard, which includes a gas canister storage structure (23-134, S1750), and into a natural watercourse. This watercourse has been interrupted by street development so the water is then allowed to find its way down paved streets and across lots to ultimately be collected in the Jackass Flats Hwy. Ditch.

**AR8: Jackass Flats Hwy. Ditch (JF, Primary and Interior)**

The ditch begins in the center of Mercury in the vicinity of Building 23-116 (B15230), running along the east side of the Mercury Hwy. Culverts JF1 and JF2 are both 3 ft 3 in by 2 ft 4 in at the rear entrance to the Cafeteria (23-300, B15232) and at Ranger Ave. It passes under the Mercury Hwy via JF3, which is concrete and 6 ft. by 2 ft. It then passes under the Jackass Flats Hwy via a long culvert in front of Building 23-752 (B15274). Upon emerging, it follows the northwest side of the Jackass Flats Hwy. out of the Mercury Historic District. At the entrance to 23-756 (S1746), JF4 is two 30 by 32 in. culverts. JF5, which passes under the Mercury Bypass, is 6 by 3 ½ ft. The interior drainage portion of the ditch ends where the Salvage Ditch enters it, bearing storm water from the North Ditch as well.

**AR9: Jangle Ditch (JA, Interior)**

This small ditch runs along the east side of Jangle St. south of Trinity Ave. JA1 is a pair of 2 ft. culverts which have nearly been buried by sediment. At the south edge of town the formal ditch enters a natural watercourse which runs along the south edge of Block 23. Storm water passes over the pavement of Buster St. to enter the Track Ditch.

**AR10: Knothole Ditch (KH, Primary and Interior)**

This ditch has its origins in the vicinity of the Water Tanks where it utilizes two improved ditch segments to channel water southward away from the northern part of town. The natural channel runs under Nougat St. via a 2 ft. culvert (KH1). Runoff is then captured in a ditch running along the east side of Knothole St. This is one of the more imposing parts of the system with a dike running up to 8 ft. tall, 10 ft. across its flat top, and with a channel about 30 ft. wide. This ditch is so large that it accounts for all of the space between Nougat and Knothole. It passes under the DNA south entry street at KH1, which is 40 by 26 in., before working its way to join the same natural drainage utilized by the DNA Ditch.

**AR11: Lagoon Ditch (Interior)**

The three branches of the Lagoon Ditch serve to protect the old Sewer Plant and all of the sewage lagoons. Portions of the ditch within the recently-disturbed Landfill area follow alignments established at least as early as 1976, but have been recently re-graded. Due to the extent of this grading, these portions of the ditch, which are obvious on recent air photos, are non-contributing.

**AR12: North Ditch (NO, Primary)**

This ditch protects the entire north side of Mercury. It originates near the Water Tanks and passes around the storage yards of 23-134 (S1750) with a combination of natural drainages and small ditches. The earthwork becomes progressively larger as the ditch turns to the west, again partly utilizing a natural drainage. Originally it crossed the Mercury Hwy. at NO1 via two 3 by 4 ft. culverts. An additional matching culvert was added here following the 1962 and 1963 drainage assessments. With this modification the ditch could handle a flow of 370 cubic feet per second (cfs). The ditch ended in a natural drainage west of the Mercury Hwy. which took the waters to the Bypass Ditch as noted above.

With construction of the Mercury Bypass in 1965 the North Ditch was extended westward on the same alignment to pass under the bypass and into another natural drainage which conveys water to the Salvage Ditch and ultimately to the Jackass Flats Hwy. Ditch. In this area the ditch can handle 668 cfs (Koebig & Koebig 1963:49). Just west of the Mercury Hwy., the North Ditch is about 10 ft. across. Its downhill (south) berm is about 20 ft. wide at the base and has a flat top about 10 ft. wide.

**AR13: North Mercury Highway Ditch (NM, Interior)**

This extremely short ditch serves to protect Warehouse 23-160 (B15219) and its grounds. Culvert NM1 (1 ft. 8 in.) passes under the driveway into the warehouse area.

**AR14: Salvage Ditch (SA, Primary)**

The Salvage Ditch was constructed in 1965 to protect the Salvage Yard (C311) and to handle storm water diverted into this area by the North Ditch. Culvert SA1 (2 ft.) carries the ditch under a road crossing between two sections of the Salvage Yard. Water is allowed to pass directly over the pavement of the unnamed road to the West Facilities rather than constructing a culvert large enough to accommodate occasional very high flows in this area. The ditch terminates in the Jackass Flats Hwy. Ditch.

**AR15: South Jackass Flats Rd. Ditch (SJ, Interior)**

This small ditch handles storm water accumulations within the triangle formed by the Mercury Hwy. and Jackass Flats Hwy. At its origin it curves around the north side of Building 23-726 (B15254) and follows the southeast side of the Jackass Flats Hwy. Two ft. Culvert SJ1 is located at Trinity Ave. The ditch passes under the Jackass Flats Hwy. opposite 23-701 (B15277) via SJ2 (pair of 2 ft. culverts) to empty into the Jackass Flats Hwy. Ditch.

**AR16: South Mercury Highway Ditch (SM, Primary, Interior)**

The longest and largest of the Mercury ditches has its origin as a tiny interior ditch in Block 21. Its first culvert, SM1, has a mere 9 in. diameter where it passes under a pedestrian footpath. SM2 under South Road is 1 ½ ft. Concrete Culvert SM3 under the new south entrance to the Fire Station is much larger than needed for flow at 4 ft. by 1 ½ ft. This culvert is recent (non-contributing). From this point onward there are no culverts in the Mercury area since the ditch stays on the east side of the Mercury Highway.

South of the Fire Station, flow in the ditch is increased by the confluence of the Trinity Ditch and the natural watercourse with water from the Jangle and Track ditches, all of which are still interior drainage systems.

Flow is greatly increased near the Mercury Bypass intersection where the natural drainage with water from the Water Tanks, DNA, and Knothole ditches enters the South Mercury Hwy. Ditch. From this point onward it is a primary ditch. It swerves eastward to pass around the Gate 100 compound, and after that point, runs parallel to the Mercury Highway out of the Mercury Historic District. It finally passes under the Mercury Highway in the valley bottom near the NNSS boundary via SM4 which is a major concrete structure with two 12 ft. by 5 ft. rectangular concrete culverts. The drainage channel just upstream of this culvert is about 22 ft. wide by 3 ft. deep. It has an 11 ft. wide berm that stands 1 ½ ft. above grade in this area.

**AR17: Substation Ditch (Interior)**

This ditch protects 23-1010 (B15305) with a combination ditch and berm.

**AR18: Track Ditch (Interior)**

This small ditch circles the north, east, and south sides of the Fitness Track in deeply-entrenched embankments before crossing over the pavement of the South Road. At this point it is diverted by a recent extension required by the new Fire Station into a natural watercourse to the south.

**AR19: Trinity Ditch (TR, Interior)**

The Trinity Ditch wanders southward through Block 17 until it reaches the north shoulder of Trinity Ave., which it then follows to the west. Culvert TR1 at Buster Street is 2 ½ by 1 ft. 10 in. TR2, where the ditch passes under Trinity at Teapot St., is slightly smaller at 2 ½ by 1 ½ ft.

The ditch then follows the east side of Trinity St. southward. TR3 under a sidewalk leading to the Track is 2 ft. TR4 at South Rd. is the same diameter. The final culvert, TR5, is 4 ft. by 1 ½ ft. concrete, matching CM4 and SM3. Like these others, TR5 is recent and non-contributing. The ditch terminates at its junction with the South Mercury Hwy. Ditch.

**AR20: Warehouse Ditch (WH, Interior)**

This small ditch runs along the north shoulder of Warehouse Rd. west of the Mercury Hwy. It has several culverts which are largely buried in sediment since this ditch has not been maintained for some time. The best culvert exposure at WH1 indicates a diameter of about 2 ft. This ditch flowed into the Bypass Ditch.

**AR21: Water Tanks Ditch (Primary)**

Though quite short, this ditch diverts water from two major drainages away from the central part of Mercury. The dam across the northerly of these drainages is about 40 ft. wide at base, 10 ft. tall on its downstream face, and 10 ft. wide across its flat top. The ditch is typically about 6 ft. deep and about 10 ft. across at the bottom and 55 ft. across at the level of the surrounding ground surface. There are no culverts in this ditch.

**8. References**

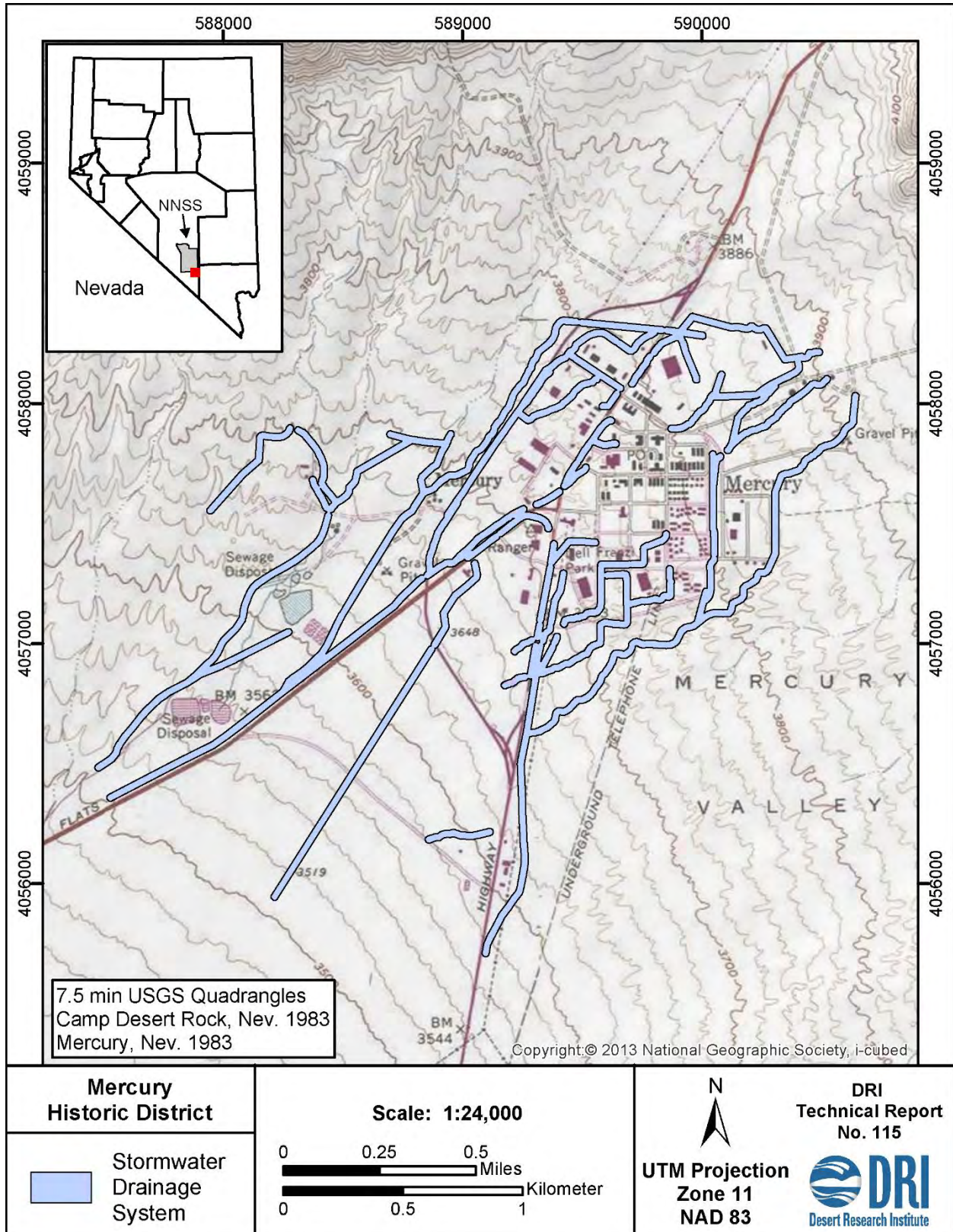
*List references used to research and evaluate the individual property.*

Arthur Benedict Associates  
1962 *Master Plan Mercury, Nevada*. Prepared for the U.S. Atomic Energy Commission. Arthur Benedict Associates, Los Angeles.

Koebig & Koebig, Inc.  
1963 *Report on Utilities for Mercury, Nevada*. Atomic Energy Commission, Nevada Operations Office.

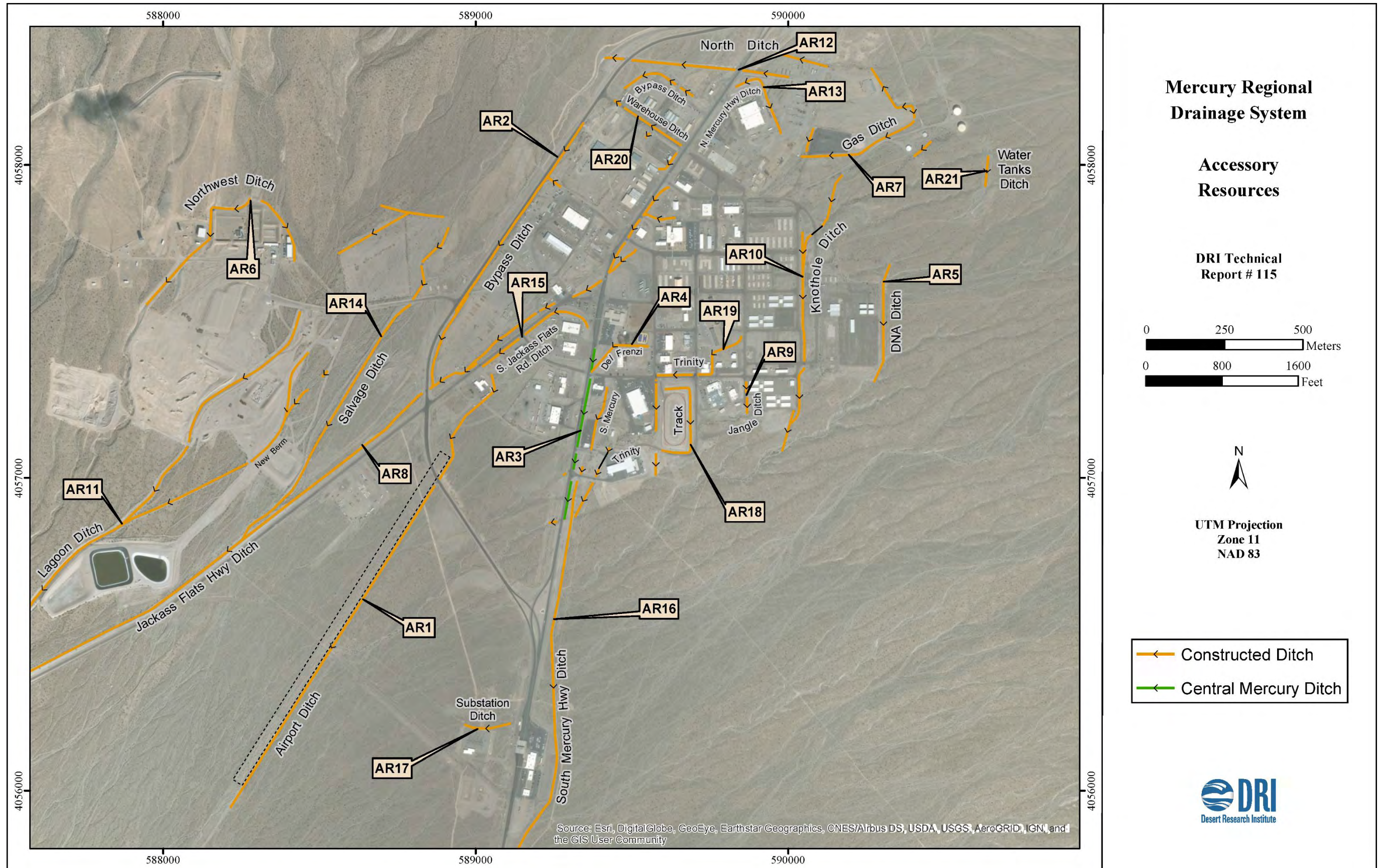
**9. Area Location Map**

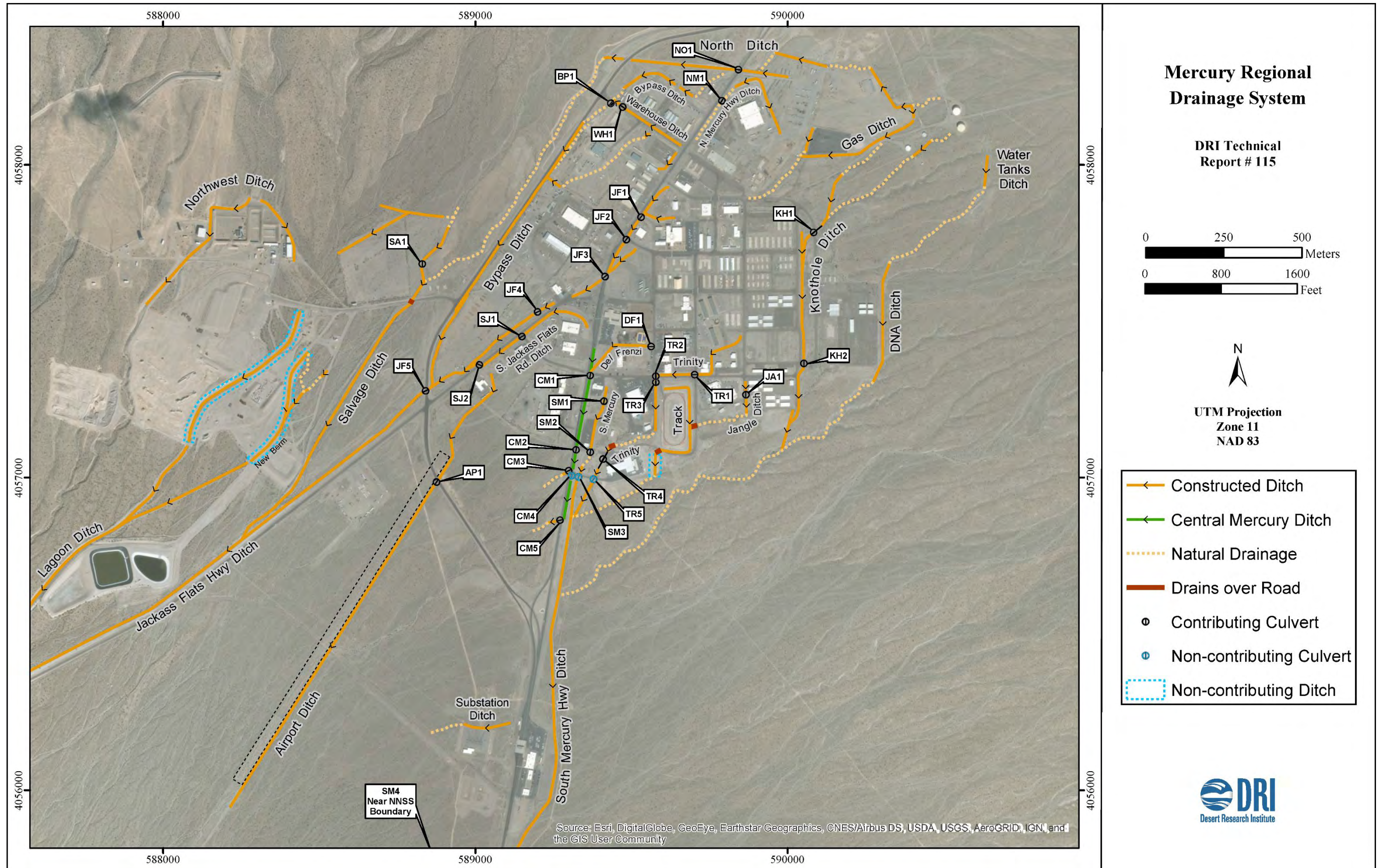
Use a USGS quadrangle map at large extent to show general area of resource.



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10. Site Plan Map





### Mercury Regional Drainage System

DRI Technical Report # 115

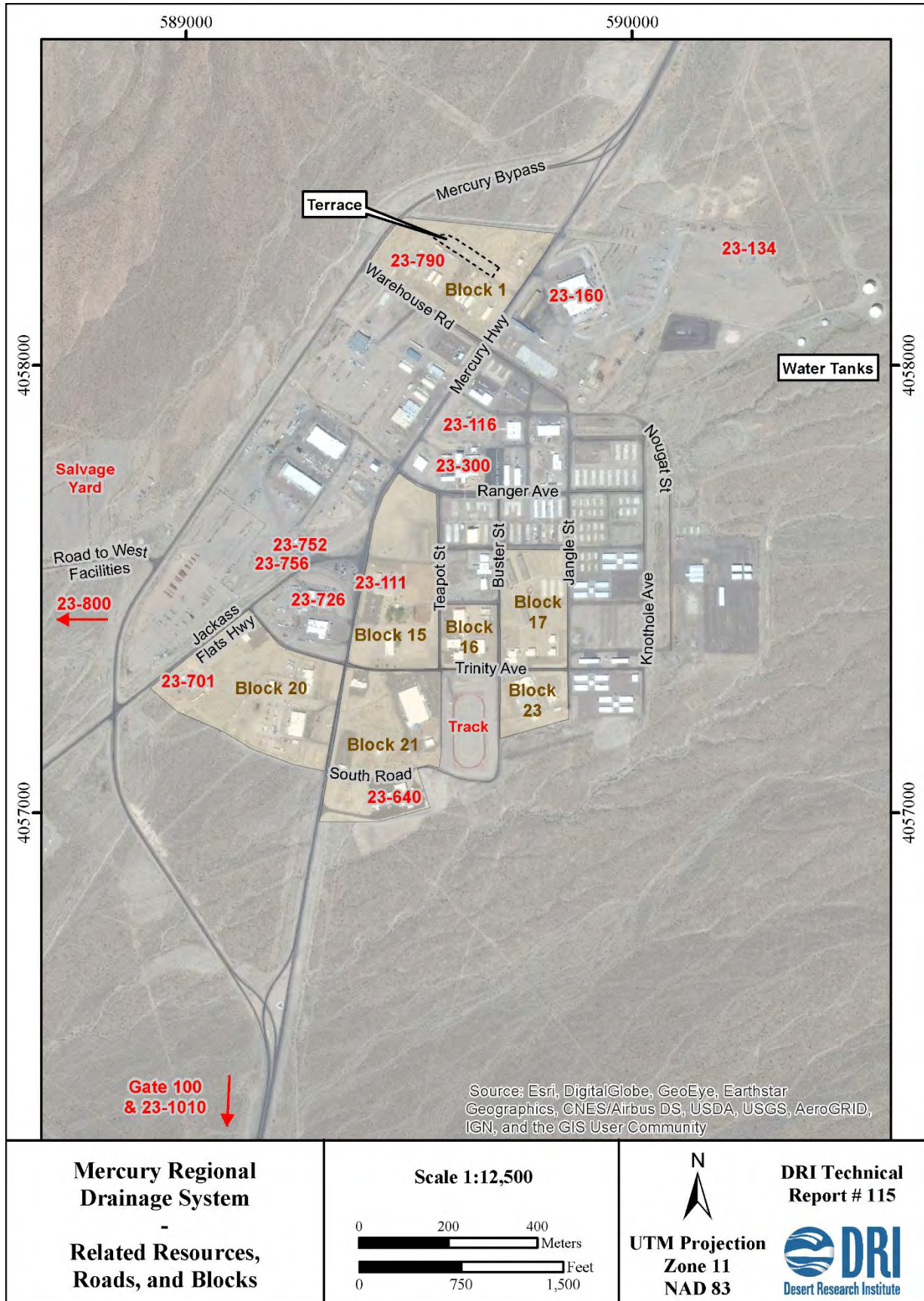


UTM Projection  
 Zone 11  
 NAD 83

- ← Constructed Ditch
- ← Central Mercury Ditch
- ⋯ Natural Drainage
- Drains over Road
- ⊙ Contributing Culvert
- ⊕ Non-contributing Culvert
- Non-contributing Ditch



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Locations mentioned in resource descriptions.

**11. Photographs**

*Include as many photographs as needed to accurately depict the resource.*



Drainage along the east side of Knothole Ave. Direction facing: South Photographer: Menocal

Date: 2017



Drainage with riprap on east side Mercury Hwy. Direction facing: North Photographer: Menocal

Date: 2017

**12. Accessory Resources**

Complete only if Accessory Resources are present. Include as many extra entries as necessary.

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR1: Airport Ditch		
Construction Date	Mid-late 1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 588875		Northing: 4056985 (Culvert AP1)



Ditch along east side of demolished runway. Direction facing: Southwest Photographer: Menocal Date: 2016

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR2: Bypass Ditch		
Construction Date	1950s, modified 1965	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589432		Northing: 4058197 (Culvert BP1)



Left: Ditch north of Bldg 23-128 (B15215). Direction facing: Southeast Photographer: Menocal Date: 2017  
 Right: North of Jackass Flats Hwy. Intersection. Direction facing: North-northeast Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR3: Central Mercury Highway Ditch		
Construction Date	1950s, modified 1965	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589321	Northing: 4057088 (Culvert CM2)	



Culvert CM2. Direction facing: North Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR4: Del Frenzi Ditch		
Construction Date	Ca. 1955-1959	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589562	Northing: 4057420 (Culvert DF1)	



South end of park. Direction facing: Northeast Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR5: DNA Ditch		
Construction Date	Early 1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 590300	Northing: 4057487 (Approx. Center)	



East of Bldg 23-211 (B15297). Direction facing: North-northeast

Photographer: Menocal

Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR6: Northwest Ditch		
Construction Date	1973-1987	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 588397	Northing: 4057795 (Photo Location)	



Riprap along NE edge. Direction facing: West-northwest

Photographer: Menocal

Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR7: Gas Ditch		
Construction Date	Late 1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 590270	Northing: 4058068 (Approx. Center)	



Gas Ditch. Direction facing: Southwest Photographer: Menocal Date: 2018

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR8: Jackass Flats Hwy. Ditch		
Construction Date	Mid-1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 588840	Northing: 4057277 (Culvert JF5)	



Culvert JF5. Direction facing: Northeast Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR9: Jangle Ditch		
Construction Date	1963	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589865	Northing: 4057265 (Culvert JA1)	



Culvert JA1 is under driveway visible above trash container.  
 Direction facing: Northeast      Photographer: Menocal      Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR10: Knothole Ditch		
Construction Date	Early 1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 590083	Northing: 4057784 (Culvert KH1)	



Point along ditch near Ranger Ave.      Direction facing: South      Photographer: Menocal      Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR11: Lagoon Ditch		
Construction Date	Mid-1970s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 587758	Northing: 4056788 (Pt near lower lagoon)	



Accessible portion of Lagoon Ditch near Jackass Flats Hwy. Direction facing: East-northeast  
 Photographer: Menocal Date: 2018

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR12: North Ditch		
Construction Date	1950s, modified 1965	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589842	Northing: 4058305 (Culvert NO1)	



Outflow of Culvert NO1 with masonry retaining wall. Direction facing: East-southeast Photographer: King Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR13: North Mercury Highway Ditch		
Construction Date	1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589789	Northing: 4058205 (Culvert NM1)	



West end of ditch leading to Mercury Hwy. Direction facing: West-southwest Photographer: Menocal Date: 2018

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR14: Salvage Ditch		
Construction Date	1965	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 588830	Northing: 4057684 (Culvert SA1)	



Inflow side of Culvert SA1. Direction facing: South Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR15: South Jackass Flats Rd. Ditch		
Construction Date	Mid-1960s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589148	Northing: 4057451 (Culvert SJ1)	



View from Culvert SJ2 toward SJ1. Direction facing: Northeast Photographer: Menocal Date: 2018

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR16: South Mercury Hwy. Ditch		
Construction Date	1950s, modified mid 1960s & 2010	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589412	Northing: 4057245 (Culvert SM1)	



Ditch south of Main Gate. Direction facing: South Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR17: Substation Ditch		
Construction Date	1967	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 588995	Northing: 4056200 (Approx. Center)	



Portion of ditch north of the electrical substation complex containing Bldg 23-1010 (B15305), which is near the Main Gate. Direction facing: West Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR18: Track Ditch		
Construction Date	1968-1979	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589686	Northing: 4057190 (Approx. Center)	



Ditch along east side of track. Direction facing: North Photographer: Menocal Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR19: Trinity Ditch		
Construction Date	Early 1960s, modified thru 2010	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589701	Northing: 4057329 (Culvert TR1)	



Left: Ditch approaching Culvert TR2 at bottom left.

Direction facing: Northeast

Photographer: Menocal

Date: 2017

Left: Inflow side of Culvert TR3 west of Track.

Direction facing: South

Photographer: Menocal

Date: 2017

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR20: Warehouse Ditch		
Construction Date	1957	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589471	Northing: 4058187 (Culvert WH1)	



Ditch on the north side of Warehouse Road facing Mercury Hwy.

Direction facing: Southeast

Photographer: Menocal Date: 2018

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR21: Water Tanks Ditch		
Construction Date	1950s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 590634	Northing: 4057983 (Approx. Center)	



From north end of ditch, dam at center, ditch at left, blocked natural drainage at right.  
 Direction facing: South      Photographer: Menocal      Date: 2017

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## Architectural Resource Assessment (ARA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:			
Survey Date	August 20, 2019	Recorded By	Collins, Menocal	Agency Report #	LR040120-1

The purpose of this update is to record additional information about the bus parking lot on the northwest corner of Teapot Street and Hardtack Avenue that will be impacted by the ongoing modifications occurring as a result of the Mercury Modernization Project. The bus lot (SHPO Resource No. C301) contributes to the significance of the Mercury Historic District (MHD; SHPO Resource No. D230). The Mercury Modernization Project will be implemented according to the terms of the 2018 *Programmatic Agreement Between the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) and the Nevada State Historic Preservation Officer (SHPO) Regarding Modernization and Operational Maintenance of the Nevada National Security Site, at Mercury in Nye County, Nevada (PA)*. Per the PA, the NNSA/NFO, in consultation with the SHPO, determined that the removal of a contributing resource will result in visual or other effects to the overall historic character of the MHD (Stipulation II.A-B). The bus parking area is defined in Table C-1 of the PA as a Category III resource, and this form is being updated according to the stipulations in the PA for a Category III property.

### 1. Architectural Information

Construction Date	ca. 1963
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### 6. Narrative Eligibility Justification

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

The bus parking lot is in a very similar condition to that reported in 2017. No modifications were made to the area between 2017 and the present. No information was discovered during the research conducted to evaluate this resource that would suggest the parking lot would be individually eligible to the National Register; however, it continues to be a contributing resource to the MHD. Parking lots in Mercury were utilitarian in design and workmanship and were intended to only meet the functional needs of the nuclear testing activities on the NNSS.

### 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

Very little additional information has been found about this resource during research efforts carried out since 2017. A review of engineering drawing titles in an extensive database of Nevada National Security Site (NNSS) records failed to identify any documentation related to the planning or construction of the lot or the evacuation area (Accessory Resource 1). Available documents written for the planning phase of the large construction upgrade to Mercury in 1963-64 do not mention a specific parking area for buses.

Lacking any other data regarding this resource, historic photos and maps have been added to this form to show changes in the use and appearance of the bus parking and evacuation assembly area over time. One update to the previous description is now possible after viewing more aerial photography – the lot had been reconfigured for bus parking by 1963. Photographs showing the lot in 1964, 2013, and 2017 are in the original ARA form.

## 8. References

*List references used to research and evaluate the individual property.*

*All photographs below attributed to REECo are associated with the REECo 1982 reference.*

AEC, See U.S. Atomic Energy Commission

Holmes & Narver, Inc.

1959 Plot Plan Mercury Nevada. Engineering drawing BD-M-P-1. U.S. Atomic Energy Commission, Las Vegas Branch Office.

Reynolds Electrical and Engineering, Co., Inc. (REECo)

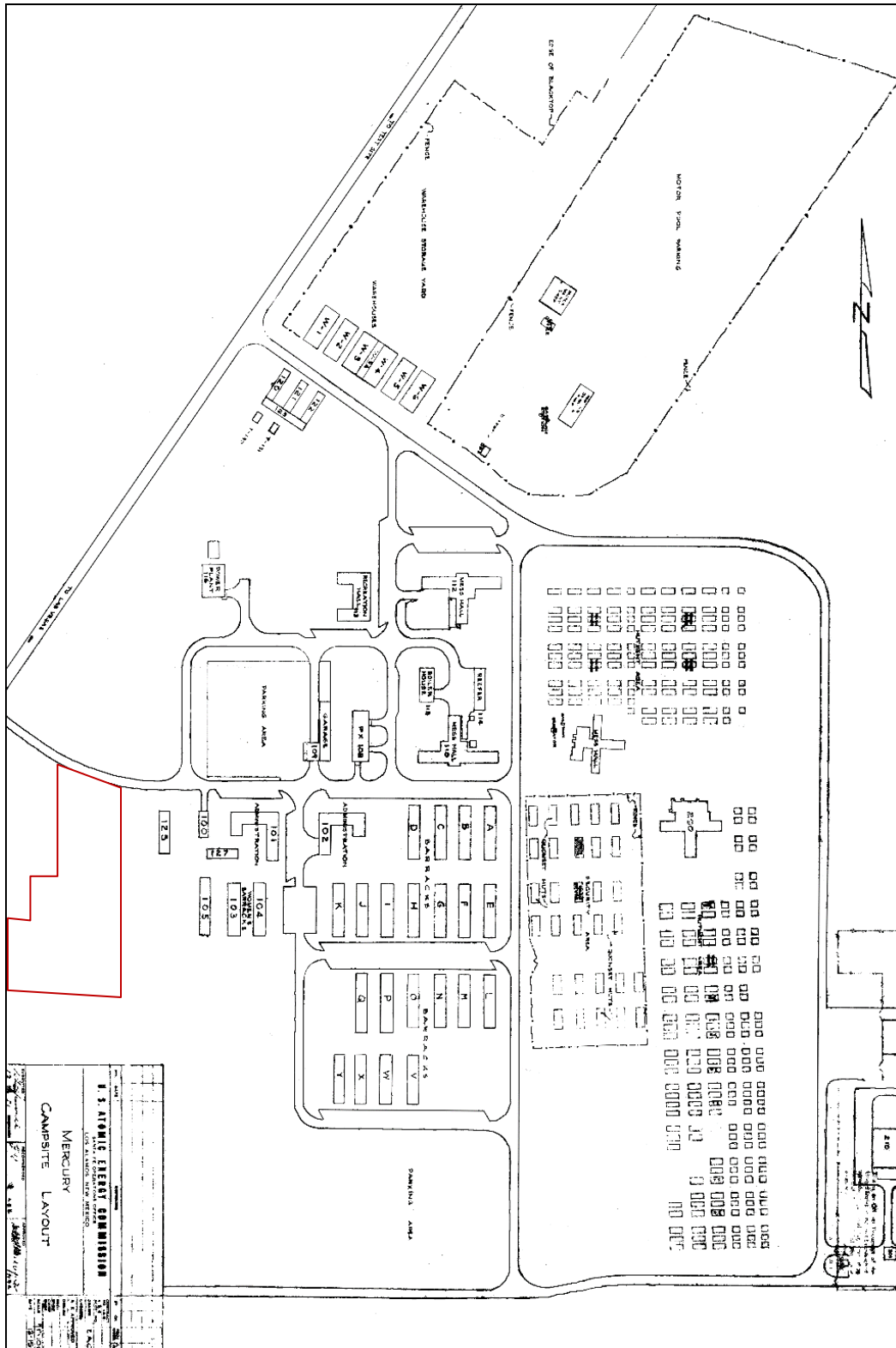
1982 Photograph Album Index (1958-1976). On file at the Desert Research Institute, Las Vegas.

U.S. Atomic Energy Commission

1951 Mercury Campsite Layout. Drawing No. N.T.S.-187-C. U.S. Atomic Energy Commission, Los Alamos.

### 11. Photographs

Include as many photographs as needed to accurately depict the resource.



Map of Mercury in December 1951 (AEC 1951 - best available copy). The area that later became the bus parking lot is shown in red.





The general location of the future bus parking area (in red) in 1961 (REECO Photo 940-5, 1/24/1961, facing southeast).



A closer view of the lot later in 1961 (REECO Photo 1074-8, 9/1/1961, facing south-southwest).



By late 1961, most of the area had been graded and partially paved (REECO Photo 1165-8, 12/7/1961, facing east).



The lot had been reconfigured for bus parking by late 1963 (REECO Photo 1730-8, 10/23/1963, facing north-northeast). It has essentially been maintained with the same layout since that time (see the lower photo on page 8 of the original ARA form for an aerial view of the lot in 2013).



### Architectural Resource Assessment (ARA) Form

For SHPO Use Only		SHPO Concurrence?: Y / N		Date:	
Survey Date	June 20, 2017	Recorded By	Reno, Menocal, Shimer	Agency Report #	TR 115

**1. Property Type**

Building <input type="checkbox"/>	Structure <input type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input checked="" type="checkbox"/>
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**2. Property Overview and Location**

Street Address	NNSS Area 23, Block 15, Trinity – Mercury Hwy.				
City, Zip	Mercury, 89023				
County	Nye				
Assessor's Parcel #	N/A	Subdivision Name	N/A		
UTM Location (NAD 83, UTM Zone 11 North)	Easting: 589534		Northing: 4057605		
USGS Info	Township: 15S	Range: 53E	Section: 11	USGS 7.5' Quad & Date: Mercury, Nev. 1983	
Ownership	Private <input type="checkbox"/>	Public-Local <input type="checkbox"/>	Public-State <input type="checkbox"/>	Public-Federal <input checked="" type="checkbox"/>	Multiple <input type="checkbox"/>
Should the property's location be kept confidential?	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>		

**3. Architectural Information**

*(Insert primary photograph below.)*

Construction Date	ca. 1968	
Architectural Style	N/A	
Architectural Type	N/A	
Roof Form	N/A	
Roof Materials	N/A	
Exterior Wall Materials	N/A	
Foundation Materials	N/A	
Window Materials	N/A	
Window Type	N/A	
Accessory Resources?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	Number?: 1	



Bus Parking Area, view south, Evacuation Assembly Area in foreground (2017).

Condition of Resource(s)?		
Good <input checked="" type="checkbox"/>	Fair <input type="checkbox"/>	Poor <input type="checkbox"/>
Explanation: Area is maintained and in use.		

**4. Existing Listing & Potential District**

Is the property listed in the National Register?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	Date Listed:	
				NRIS #:	
Contributing to a listed historic district?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, provide:	NRIS #:	
			Name:		
			Date listed:		
If no, is there a potential district?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	If so, is this resource contributing?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
District Name: Mercury Historic District				SHPO #: D230	

**5. NRHP Evaluation**

*If not already listed, complete the information below:*

Eligible Under:	Criterion A <input type="checkbox"/>	Criterion B <input type="checkbox"/>	Criterion C <input type="checkbox"/>	Criterion D <input type="checkbox"/>
	Not Eligible <input type="checkbox"/>	Unevaluated <input type="checkbox"/>		
Area(s) of Significance	Nuclear Testing, Townsite Development			
Period(s) of Significance	1951-1992			
Integrity – Does the resource possess integrity in all or some of the 7 aspects?				
Location <input checked="" type="checkbox"/>	Design <input checked="" type="checkbox"/>	Materials <input checked="" type="checkbox"/>	Workmanship <input checked="" type="checkbox"/>	Setting <input checked="" type="checkbox"/> Feeling <input checked="" type="checkbox"/> Association <input checked="" type="checkbox"/>
General Integrity:	Intact <input checked="" type="checkbox"/>	Altered <input type="checkbox"/>	Moved <input type="checkbox"/>	Date(s):
Threats to Resource:	Redevelopment			
Historic Name	Bus Parking			
Current/Common Name	Bus Parking & Evacuation Assembly Area			
Historic/Original Owner	U.S. Atomic Energy Commission			
Current Owner	U.S. Department of Energy National Nuclear Security Administration Nevada Field Office			
Current Owner Address	Nevada National Security Site			
Historic Building Use	Parking			
Current Building Use	Parking			
Architect/Engineer/Designer	Unknown			
Builder/Contractor	Unknown			

**6. Narrative Eligibility Justification**

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

For purposes of the present survey, the resources in Mercury were evaluated only as they relate to the Historic District as a contributing versus non-contributing element. It is the nature of most of the individual elements of the district that they would not be individually eligible, but rather that, in the aggregate, they combine to create the unique significance of the district as a whole, which is presently recommended eligible to the National Register under Criteria A and C and unevaluated under Criteria B and D as detailed in the District form.

Due to the extensive resource-level of research beyond the capabilities of the present survey required to make justifiable recommendations regarding eligibility, this resource remains individually unevaluated under the criteria at this time. It is anticipated that such enhanced recording and evaluation will occur in the future as redevelopment plans mature.

The bus parking area served as a support facility in Mercury for nuclear testing at the Nevada Test Site throughout much of the Cold War. For the most part individual parking areas throughout Mercury were not separately recorded during this survey since they are ubiquitous. An exception was made in this case since Mercury was and continues to be so much a commuter community, heavily dependent on the daily bus connections to Las Vegas and to forward areas. This is one of the key character-defining elements of Mercury. This lot is remarkable for the longevity of its service as a combination bus parking lot, assembly area for commuters, parking area for personal vehicles, and evacuation area. As such it contributes to the significance of the Mercury Historic District.

## 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

The earliest formal bus parking area in Mercury was one block farther to the north than the present lot. The block bounded by the Mercury Highway, Ranger Avenue, Hardtack Avenue, and Teapot Street was set aside as a Women's Recreational Area on the 1959 Mercury map (Holmes & Narver). Although the lot north of Ranger continued to be used for bus parking, a 1961 REECo photo (REECo 1982, Photo 1165-12) shows that by that year the women have been dispossessed of the block, the east and southern portions of which have been bladed for vehicle parking. The bladed areas correspond fairly closely to the parking areas which still exist. The 1968 Mercury map (AEC) is the first one located which designates this lot as bus parking. That is also the year that a building (23-310) was constructed on the location of the earlier bus parking lot. Thus, 1968 appears to be the year the lot was restructured specifically for commuter bus parking.

Physically, the lot is very simple. Commuter bus parking occupies the southeast corner of the block at the intersection of Hardtack and Teapot. It is paved with asphalt and has stops for two rows of diagonally-parked buses.

Parking for personal vehicles is on a similar-sized paved lot at the corner of Hardtack and the Mercury Highway. Historically this area was largely used by individuals using personal vehicles to get to Mercury before transferring to buses to the forward areas. It is adjacent to the west end of the bus parking lot. It has signs noting the waiting areas for various routes.

An unpaved lot, formerly used for vehicle parking, is adjacent to the north end of the bus lot and continues northward to Ranger. It is reserved as an evacuation assembly area and is equipped with evacuation signage along with the flag signal at the waiting area noted below. The date this change in configuration was made is unknown.

There is one Accessory Resource.

### **AR1: Commuter Waiting Area**

AR1 is a flagpole and two sets of fiberglass benches with sunshades which serve both as the normal commuter waiting area and as part of the emergency evacuation assembly area.

## 8. References

*List references used to research and evaluate the individual property.*

AEC, See U.S. Atomic Energy Commission

Holmes & Narver, Inc.

1959 Plot Plan Mercury Nevada. Engineering drawing BD-M-P-1. U.S. Atomic Energy Commission, Las Vegas Branch Office.

Reynolds Electrical and Engineering, Co., Inc. (REECo)

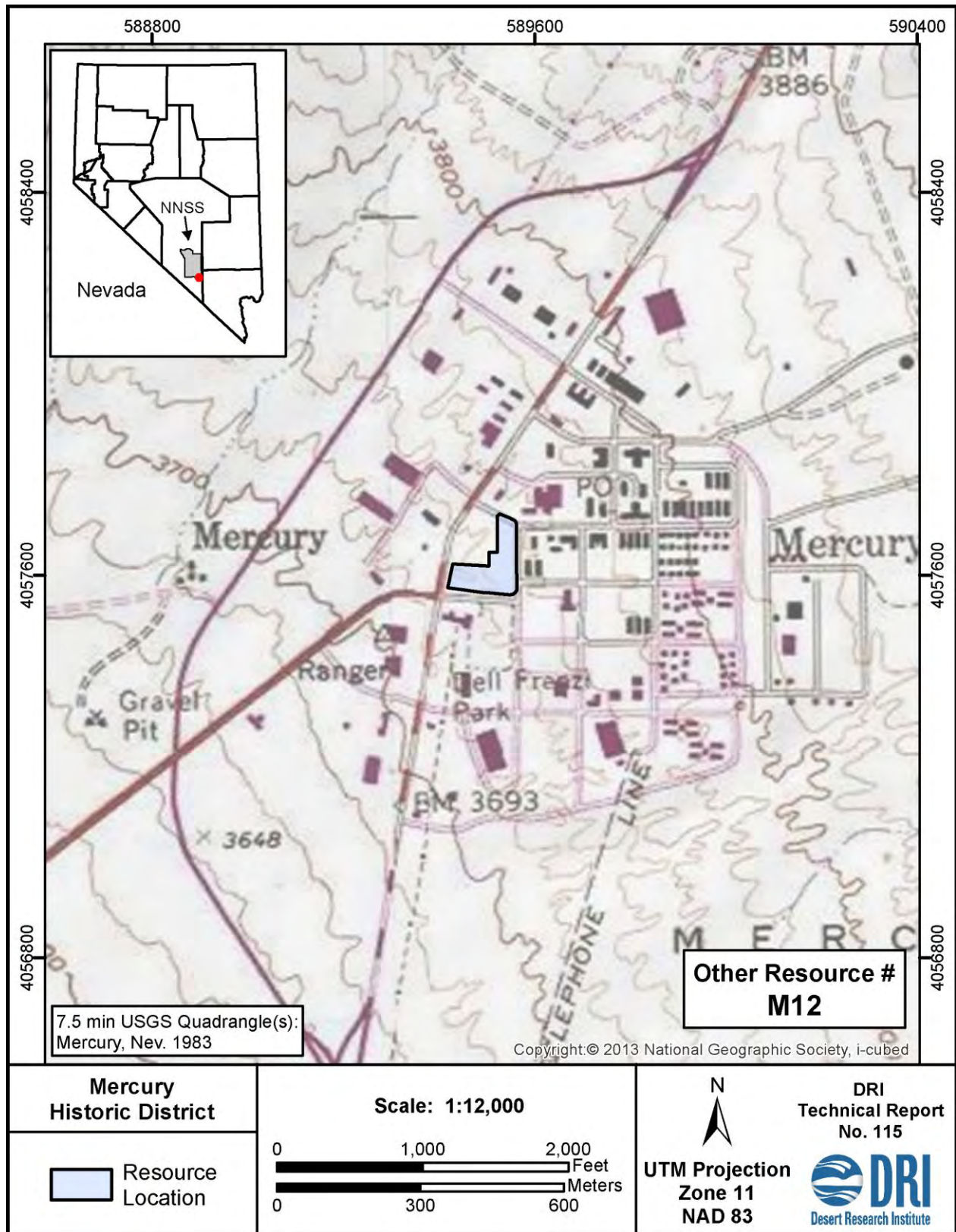
1982 Photograph Album Index (1958-1976)

U.S. Atomic Energy Commission

1968 Mercury Nevada (map). U.S. Atomic Energy Commission.

### 9. Area Location Map





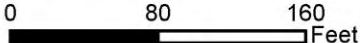
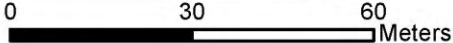
Use a USGS quadrangle map at large extent to show general area of resource.



**10. Site Plan Map**

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



 Accessory Resource  Resource Boundary	<b>Other Resource # M12</b>	<b>DRI Technical Report                  TR 115</b>   
	Scale 1:1250      NAD 83 UTM Z11  Feet  Meters	

**11. Photographs**

*Include as many photographs as needed to accurately depict the resource.*



Overview of bus parking area.

Elevation: N/A

Direction facing: North

Photographer: Menocal

Date: 06/20/2017



Route signs in the commuter parking lot.

Elevation: N/A

Direction facing: Northwest

Photographer: Menocal

Date: 06/20/2017



Overview of evacuation assembly area.

Elevation: N/A

Direction facing: North

Photographer: Menocal

Date: 06/20/2017



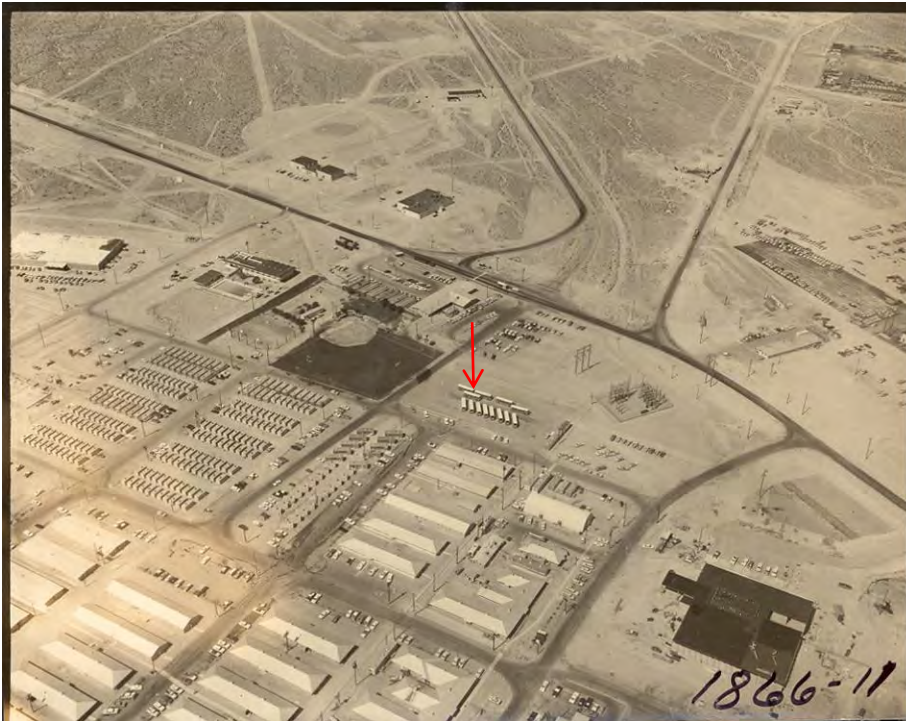
Evacuation assembly area sign.

Elevation: N/A

Direction facing: West

Photographer: Menocal

Date: 06/20/2017



Bus parking (shown at arrow).

Elevation: N/A

Direction facing: Southwest

Photographer: REECo (1982)

Date: 1964



Bus parking (center) and evacuation assembly area at right with red car at north end. Modified from photograph D13\_08031 on file at the Remote Sensing Laboratory (RSL), Nellis Air Force Base, Las Vegas.

Elevation: N/A

Direction facing: Northwest

Photographer: RSL

Date: 2013

**12. Accessory Resources**

*Complete only if Accessory Resources are present. Include as many extra entries as necessary.*

**Accessory Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**Accessory Resource Overview**

Accessory Resource Name	AR1 Commuter Waiting Area		
Construction Date	ca. 1970s	Contributing?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
UTM (NAD 83, UTM Zone 11 North)	Easting: 589559	Northing: 4057641	



Elevation: N/A      Direction facing: Northeast      Photographer: Menocal      Date: 06/20/2017

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NEVADA  
**STATE HISTORIC  
 PRESERVATION OFFICE**

## Architectural Resource Assessment (ARA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:			
Survey Date	April 2020	Recorded By	C. Collins	Agency Report #	LR040120-1

The purpose of this update is to record additional information about the electrical substation foundations on the southeast corner of Ranger Avenue and Mercury Highway affected by the ongoing modifications occurring as a result of the Mercury Modernization Project. The substation foundations (SHPO Resource No. S1794) contribute to the significance of the Mercury Historic District (MHD; SHPO Resource No. D230). The Mercury Modernization Project will be implemented in accordance with the terms of the 2018 *Programmatic Agreement between the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) and the Nevada State Historic Preservation Officer (SHPO) Regarding Modernization and Operational Maintenance of the Nevada National Security Site, at Mercury in Nye County, Nevada (PA)*. Per the PA, the NNSA/NFO, in consultation with the SHPO, determined that the removal of a contributing resource will result in visual or other effects to the overall historic character of the MHD (Stipulation II.A-B). The substation is defined in Table C-1 of the PA as a Category III resource, and this form is being updated according to the stipulations in the PA for a Category III property.

### 6. Narrative Eligibility Justification

The substation foundations are in a very similar condition to that reported in 2017. No modifications were made to the structure between 2017 and the present. Because of its lack of integrity (i.e., all of the electrical equipment has been removed), the substation is not individually eligible to the National Register. S1794 continues to be a contributing resource to the district.

### 7. Narrative Architectural Description

Very little additional information has been found about this resource during research efforts carried out since 2017. A review of engineering drawing titles in an extensive Nevada National Security Site (NNS) database of records failed to identify a match for the structure. It has been identified on a 1965 map of Mercury (see page 5), in which it was labeled as an "OCB Installation." In the electrical industry, this term refers to an oil circuit breaker system. Oil circuit breakers (OCBs) "are used to switch circuits and equipment in and out of a system in a substation. They are oil filled to provide cooling and to prevent arcing when the switch is activated" (OSHA 2020). They were first used in the late 1800s (Yeckley and Perulfi 2018).

Photographers from Reynolds Electrical and Engineering Co. (REECO) took a number of pictures during the construction of the substation, which serve as the primary historic source of information on the resource. Some of these pictures were included in the original ARA form, and additional photos are added below for this update. The term "tap and meter substation" used during the original recording of the resource came from the photo logs associated with these pictures.

### 8. References

- Holmes and Narver, Inc.  
 1959 Plot Plan Mercury Nevada. Drawing No. BD-M-P-1. U.S. Atomic Energy Commission, Las Vegas Branch Office, Las Vegas.
- Koebig and Koebig, Inc.  
 1963 Mercury, Nevada Utilities Vicinity Map and Site Plans. Drawing No. NV-11-04-01.1. U.S. Atomic Energy Commission, Nevada Operations Office, Las Vegas.

Occupational Safety and Health Administration (OSHA)

2020 Electric Power eTool: Glossary of Terms. Electronic document,  
[https://www.osha.gov/SLTC/etools/electric\\_power/glossary.html#Oil](https://www.osha.gov/SLTC/etools/electric_power/glossary.html#Oil), accessed April 3, 2020.

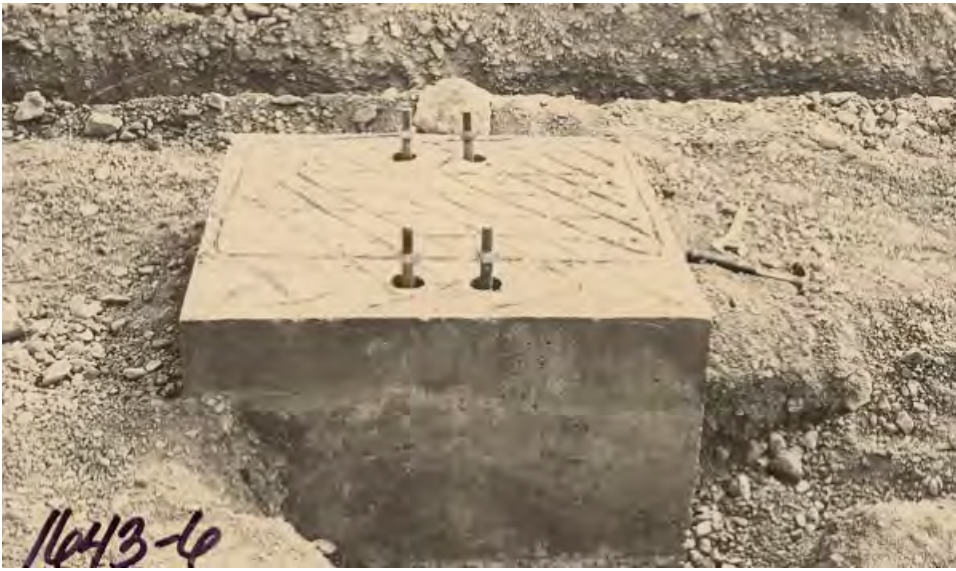
Reynolds Electrical and Engineering Co. Inc. (REECo)

1982 Photograph Album Index (1958-1976). On file at the Desert Research Institute, Las Vegas.

Yeckley, Russ, and John Perulfi

2018 Oil Circuit Breakers: A Look at the Earlier Generation [History]. *IEEE Power and Energy Magazine* 16(3):86-97. DOI:10.1109/MPE.2018.2801959, accessed April 14, 2020.

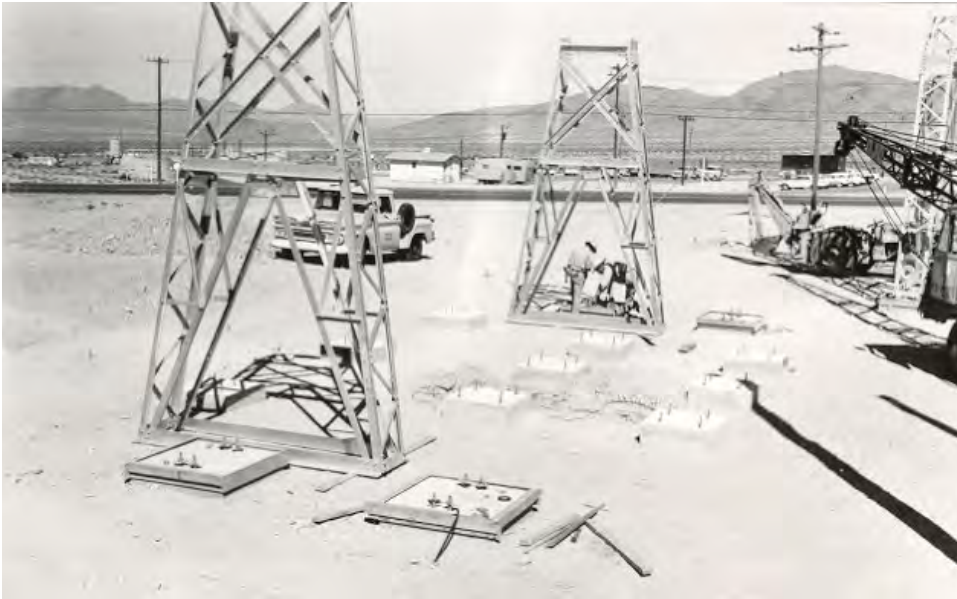
**11. Photographs**



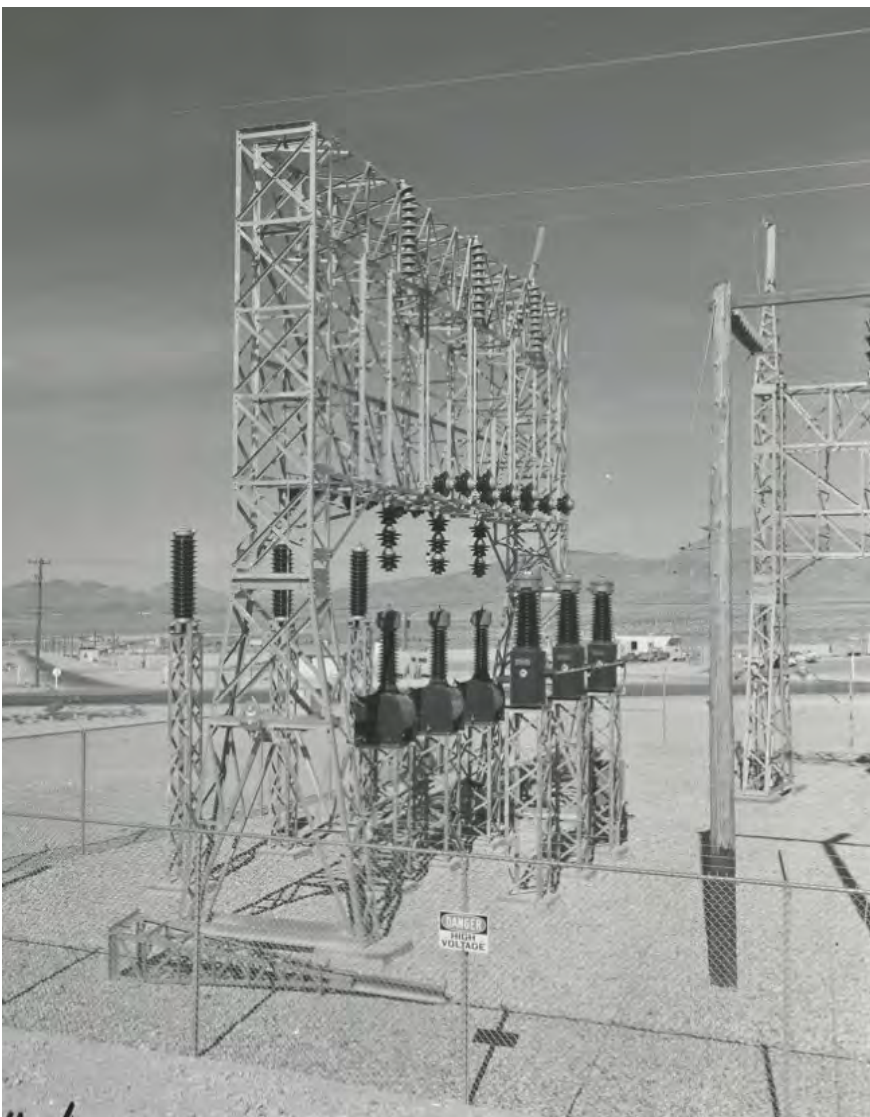
Elevation: N/A    Direction facing: Detail view    Photographer: REECo 1982, Photo # 1643-6    Date: 6/14/1963



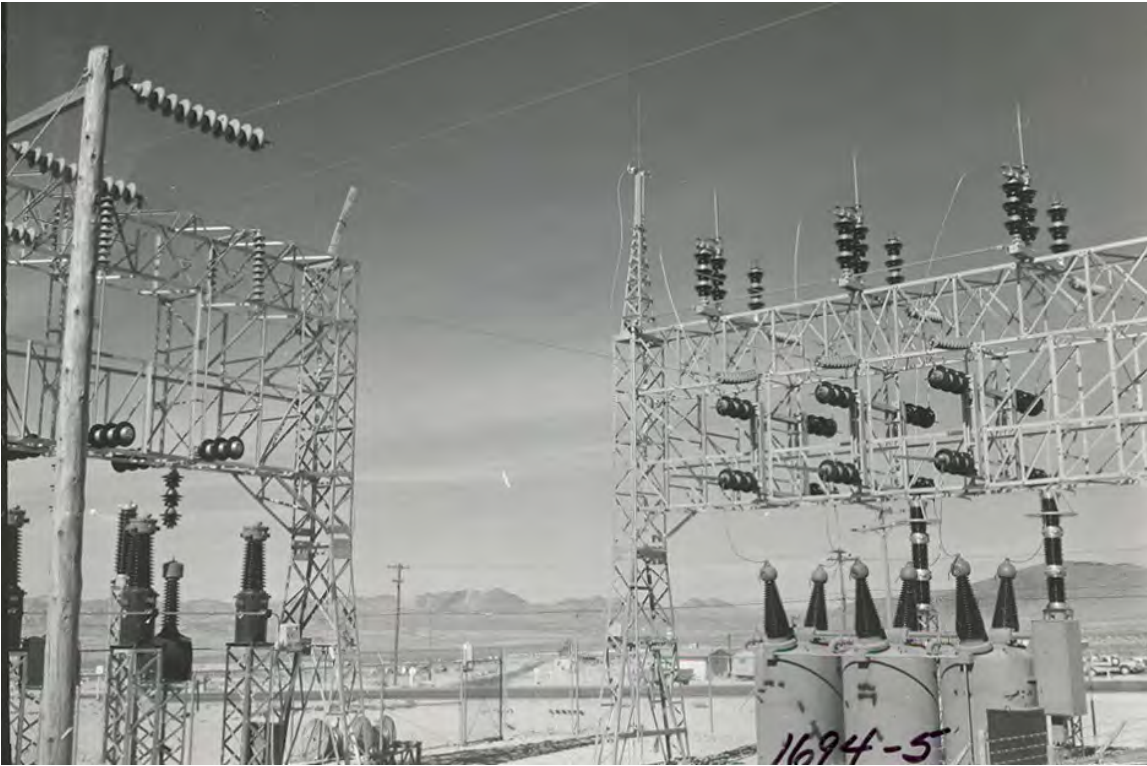
Elevation: N/A  
Direction facing: Detail view  
Photographer: REECo 1982, Photo # 1643-7  
Date: 6/14/1963



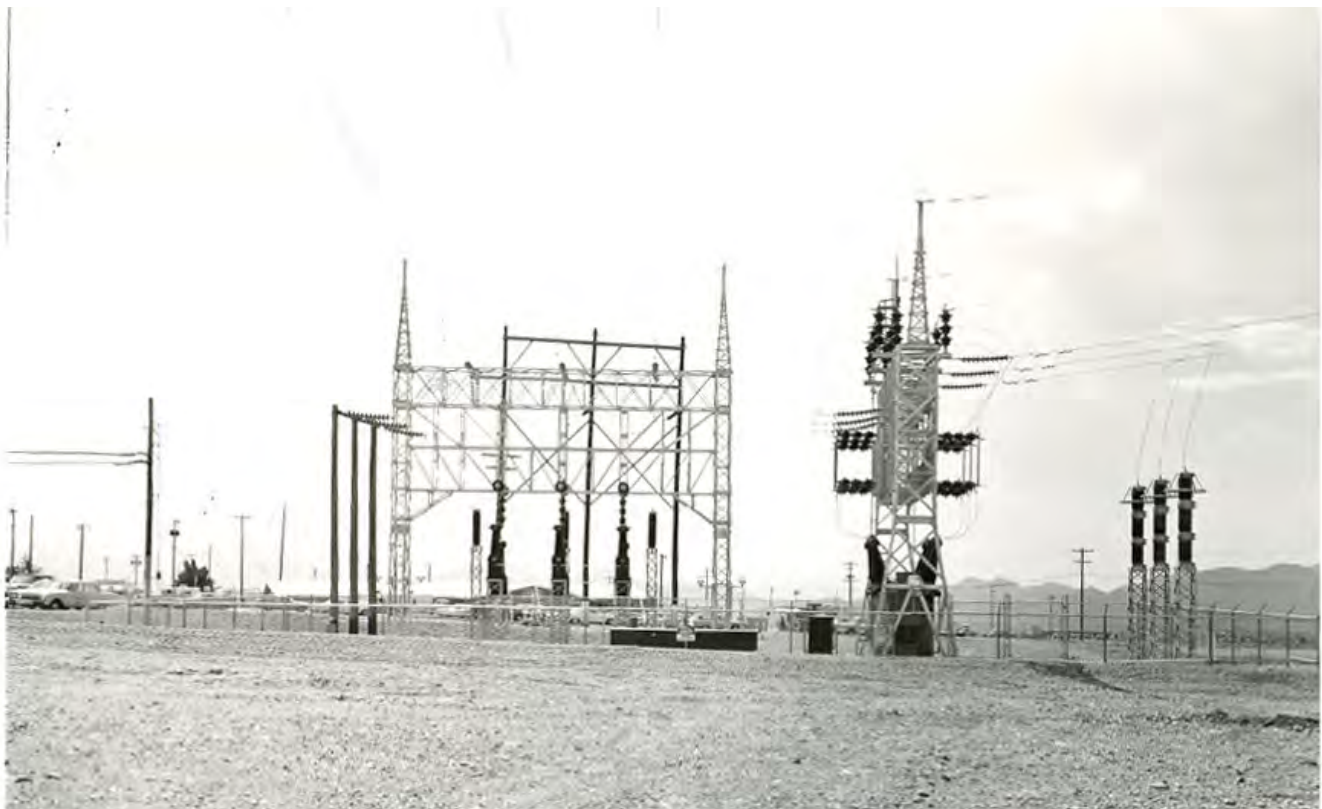
Elevation: N/A    Direction facing: West    Photographer: REECo 1982, Photo # 1653-10    Date: 6/27/1963



Elevation: N/A  
Direction facing: West  
Photographer: REECo 1982, Photo # 1694-4  
Date: 8/26/1963



The oil circuit breakers are the equipment in the lower right side of the photo.  
Elevation: N/A    Direction facing: West    Photographer: REECO 1982, Photo # 1694-5    Date: 8/26/1963



Elevation: N/A    Direction facing: Southwest    Photographer: REECO 1982, Photo # 1715-6    Date: 10/4/1963



Location (red box) of the oil circuit breaker (OCB) installation (Koebig and Koebig 1963). On a 1959 map (Holmes and Narver), this block was labeled as a women's recreation area. Since the 1960s, it has primarily been used for parking.



This photo, facing southeast, shows the remnants of the berm in the foreground that was built to guide stormwater around the substation (DRI 2017).

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### Architectural Resource Assessment (ARA) Form

For SHPO Use Only		SHPO Concurrence?: Y / N		Date:	
Survey Date	October 17, 2017	Recorded By	Menocal	Agency Report #	TR 115

**1. Property Type**

Building <input type="checkbox"/>	Structure <input checked="" type="checkbox"/>	Object <input type="checkbox"/>	Landscape (non-archaeological site) <input type="checkbox"/>
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**2. Property Overview and Location**

Street Address		NNSS Area 23, Block 15, Trinity – Mercury Hwy.			
City, Zip		Mercury, 89023			
County		Nye			
Assessor's Parcel #		N/A		Subdivision Name	
				N/A	
UTM Location (NAD 83, UTM Zone 11 North)		Easting: 589490		Northing: 4057672	
USGS Info	Township: 15S	Range: 53E	Section: 11	USGS 7.5' Quad & Date: Mercury, Nev. 1983	
Ownership	Private <input type="checkbox"/>	Public-Local <input type="checkbox"/>	Public-State <input type="checkbox"/>	Restricted-Federal <input checked="" type="checkbox"/>	Multiple <input type="checkbox"/>
Should the property's location be kept confidential?			Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>

**3. Architectural Information**

*(Insert primary photograph below.)*

Construction Date	1963	
Architectural Style	N/A	
Architectural Type	N/A	
Roof Form	N/A	
Roof Materials	N/A	
Exterior Wall Materials	N/A	
Foundation Materials	Concrete	
Window Materials	N/A	
Window Type	N/A	
Accessory Resources?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Number?:	



Overview, facing south. Menocal, 2017.

Condition of Resource(s)?		
Good <input type="checkbox"/>	Fair <input type="checkbox"/>	Poor <input checked="" type="checkbox"/>
Explanation: Demolished. Foundations remain.		

**4. Existing Listing & Potential District**

Is the property listed in the National Register?	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>		If yes, provide:	Date Listed:
						NRIS #:
Contributing to a listed historic district?	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>		If yes, provide:	NRIS #:
					Date listed:	
If no, is there a potential district?	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>		If so, is this resource contributing?	Yes <input checked="" type="checkbox"/>
						No <input type="checkbox"/>
District Name: Mercury Historic District					SHPO #: D230	

**5. NRHP Evaluation**

*If not already listed, complete the information below:*

Eligible Under:	Criterion A <input type="checkbox"/>	Criterion B <input type="checkbox"/>	Criterion C <input type="checkbox"/>	Criterion D <input type="checkbox"/>
	Not Eligible <input type="checkbox"/>	Unevaluated <input type="checkbox"/>		
Area(s) of Significance	Nuclear Testing, Townsite Development			
Period(s) of Significance	1963-1992			
Integrity – Does the resource possess integrity in all or some of the 7 aspects?				
Location <input checked="" type="checkbox"/>	Design <input type="checkbox"/>	Materials <input type="checkbox"/>	Workmanship <input type="checkbox"/>	Setting <input checked="" type="checkbox"/> Feeling <input checked="" type="checkbox"/> Association <input checked="" type="checkbox"/>
General Integrity:	Intact <input type="checkbox"/>	Altered <input checked="" type="checkbox"/>	Moved <input type="checkbox"/>	Date(s): ca. 1970s
Threats to Resource:	Redevelopment			
Historic Name	Tap and Meter Substation			
Current/Common Name	N/A			
Historic/Original Owner	U.S. Atomic Energy Commission			
Current Owner	U.S. Department of Energy Nevada National Security Administration Nevada Field Office			
Current Owner Address	Nevada National Security Site			
Historic Building Use	N/A			
Current Building Use	N/A			
Architect/Engineer/Designer	Unknown			
Builder/Contractor	Unknown			

**6. Narrative Eligibility Justification**

*Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.*

For purposes of the present survey, the resources in Mercury were evaluated only as they relate to the Historic District as a contributing versus non-contributing element. It is the nature of most of the individual elements of the district that they would not be individually eligible, but rather that, in the aggregate, they combine to create the unique significance of the district as a whole, which is presently recommended eligible to the National Register under Criteria A and C and unevaluated under Criteria B and D as detailed in the District form.

Since so many elements of the district have already been lost, those remaining elements from the period of significance have more comparative importance than they would have had otherwise. With this in mind, the requirements for being considered contributing elements to the district are fairly low. If a resource still retains visible elements which date to the period of significance, it is considered contributing to the significance of the district both for its historic importance in relation to nuclear testing under Criterion A and as a part of the distinctive design and construction of the district under Criterion C. The companion question asked was if that resource was to be removed would the district lose some of its overall significance. In nearly all cases there is sufficient integrity to answer this question in the affirmative.

Due to the extensive resource-level of research beyond the capabilities of the present survey required to make justifiable recommendations regarding individual eligibility, this resource remains unevaluated under the criteria at this time. It is anticipated that such enhanced recording and evaluation will occur in the future as redevelopment plans mature.

This structure served as an electrical support facility in Mercury for nuclear testing in the 1960s. Although only foundations remain, it contributes to the overall integrity of location, setting, feeling, and association for Mercury Historic District as a whole.

## 7. Narrative Architectural Description

*Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.*

Constructed in June of 1963, a photographic catalog refers to S1794 as a tap and meter structure for the 138 kV system (REECO 1982). The substation covered an area approximately 170 ft. northwest to southeast by 140 ft. northeast to southwest, including the protective berm. The berm directed stormwater around the structure on three sides, remaining open on the southwest perimeter to allow drainage of water off the pad. Having "tap" in the name of the facility suggests it was used to regulate voltage (Hydroelectric 2005) from the 138 kV line for use in the Mercury area. Based on photographs (pages 7 and 8), the substation appears to have included three oil circuit breakers and two steel superstructures, among other smaller components.

The structure was likely removed sometime during the late 1960s or early 1970s. Reliable aerial imagery from 1966 to the early 1980s is not available. No other documentation from the 1970s is currently available to narrow down the date of removal.

Note: The 1982 REECO catalog also refers to S1794 as a "top" and meter structure, although the meaning of this term in the electrical industry is unclear. "Tap," however, is a commonly used term, and it is assumed that "top" is a misspelling.

There are no Accessory Resources.

## 8. References

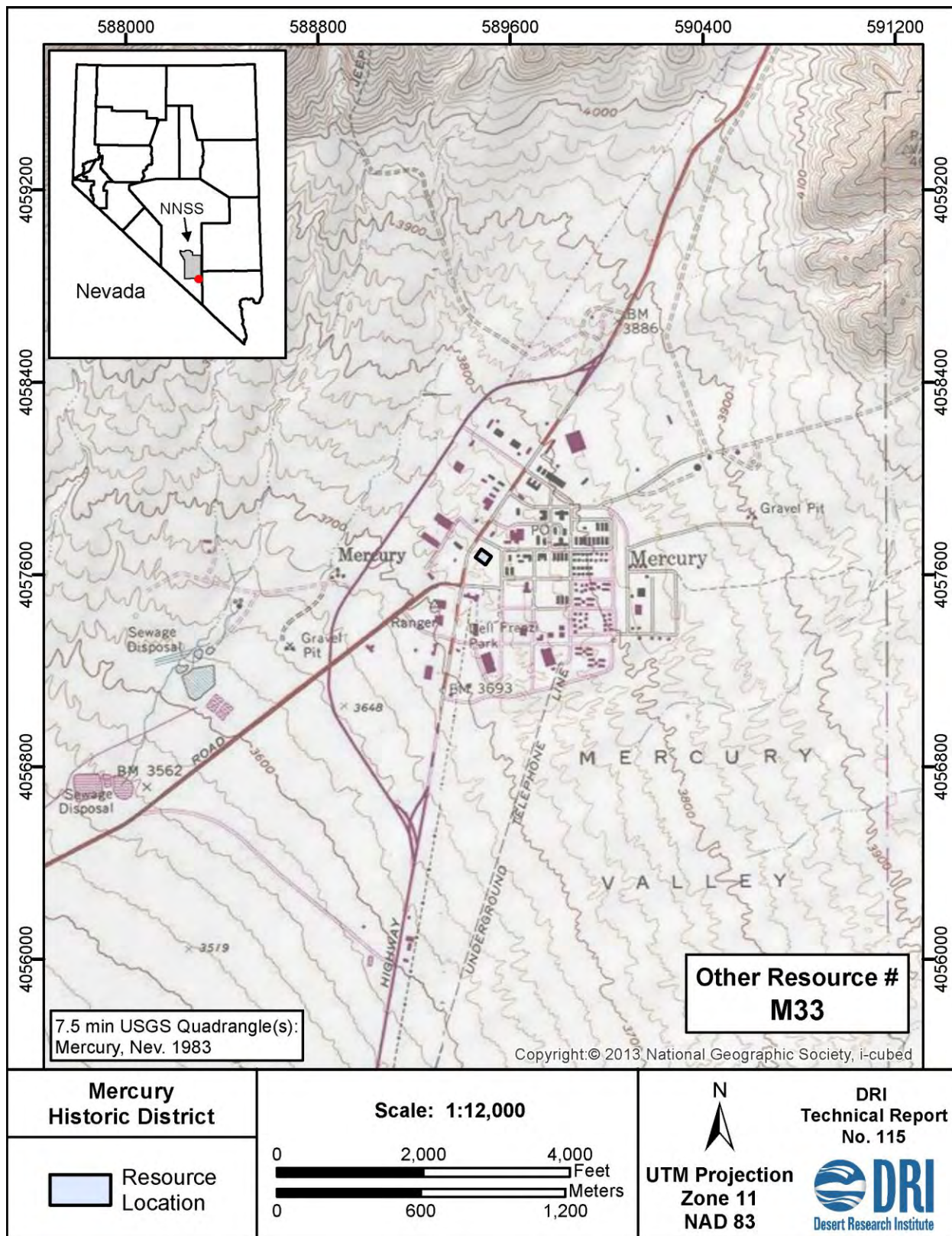
*List references used to research and evaluate the individual property.*

Hydroelectric Research and Technical Services Group  
2005 *Transformers: Basics, Maintenance, and Diagnostics*. U.S. Department of the Interior, Bureau of Reclamation, Technical Services Center, Denver.

Reynolds Electrical and Engineering Co. Inc. (REECO)  
1982 Photograph Album Index (1958-1976).

**9. Area Location Map**


Use a USGS quadrangle map at large extent to show general area of resource.





**10. Site Plan Map**

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



 Resource Boundary	<b>Other Resource # M33</b>	<b>DRI Technical Report TR 115</b>
	Scale 1:800      NAD 83 UTM Z11 0      50      100 Feet 0      20      40 Meters	





**11. Photographs**

*Include as many photographs as needed to accurately depict the resource.*



The foundations seen in this photo are still present as of 2017. (See current photo below, taken from a similar angle.)  
Elevation: N/A      Direction facing: North-northwest      Photographer: REECO 1982 (Photo # 1643-4)      Date: 1963



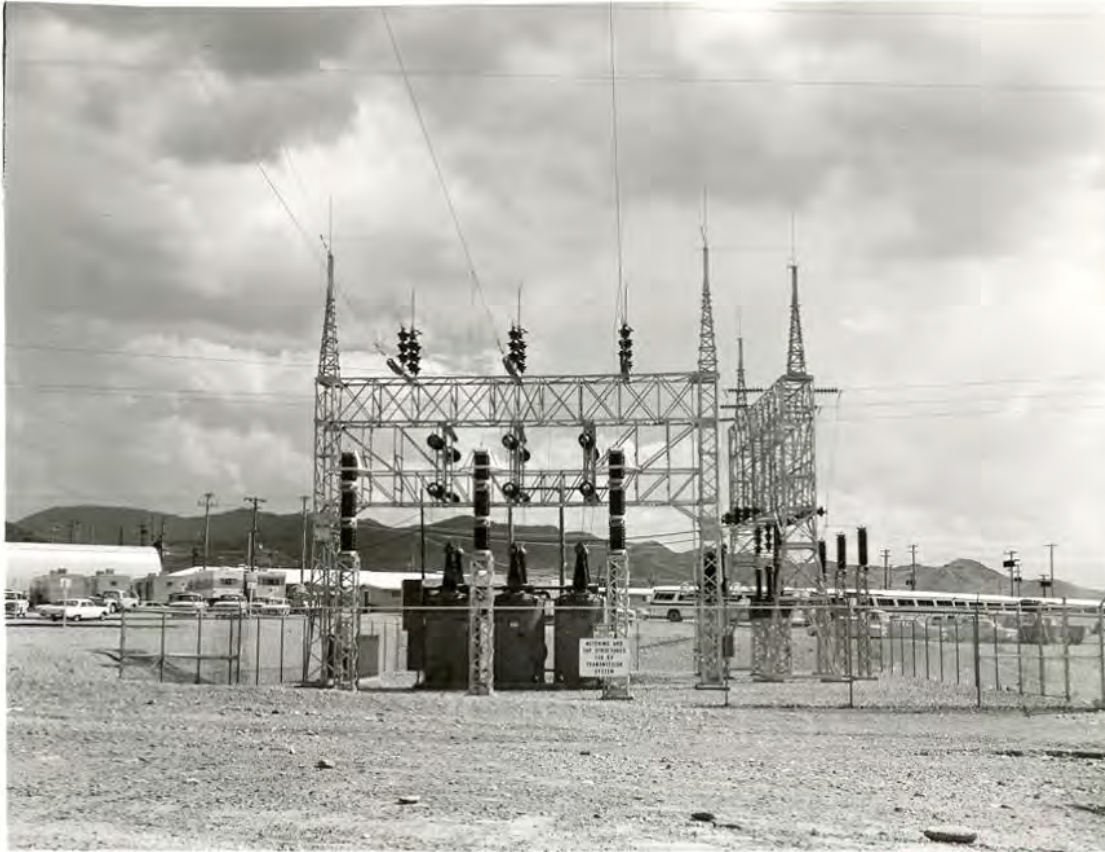
Elevation: N/A      Direction facing: Northwest      Photographer: Menocal      Date: 10/17/2017



Elevation: N/A      Direction facing: Southwest      Photographer: Menocal      Date: 10/17/2017



Elevation: N/A      Direction facing: West-southwest      Photographer: REECo 1982 (Photo # 1653-5)      Date: 1963



1715-5

Elevation: N/A

Direction facing: Southeast

Photographer: REECo 1982 (Photo # 1715-5)

Date: 1963