YMP/CM-0016

U.S. DEPARTMENT OF ENERGY

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OCRWM

YUCCA MOUNTAIN

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

PROJECT BASELINE DOCUMENT

EXPLORATORY STUDIES FACILITY TECHNICAL BASELINE

VOLUME 1

Rev. 1 (Part 2)

NOTE: This is Part two (2) of previously distributed Design Package 1A

CHANGES TO THIS DOCUMENT REQUIRE PREPARATION AND APPROVAL OF A CHANGE REQUEST IN ACCORDANCE WITH PROJECT AP-3.3Q

102.8

UNITED STATES DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE

9305250071 930519
PDR WASTE
WM-11 PDR

VOLUME 2
DESIGN DRAWINGS

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77.	YMP-025-1-7007-AR107	Rev. 0	Electrical Switchgear Building 7007 Schedules
78.	YMP-025-1-7007-EL101	Rev. 0	Electrical Switchgear Building 7007 Equipment Layout Plan
79.	YMP-025-1-7007-EL102	Rev. 0	Electrical Switchgear Building 7007 Exposed Conduit, Power Plan Sht 1
80.	YMP-025-1-7007-EL103	Rev. 0	Electrical Switchgear Building 7007 Exposed Conduit, Power Plan Sht 2
81.	YMP-025-1-7007-EL104	Rev. 0	Electrical Switchgear Building 7007 Grounding Plan
82.	YMP-025-1-7007-EL105	Rev. 1	Electrical Switchgear Building 7007 Lightning Protection Plan & Details
83.	YMP-025-1-7007-EL107	Rev. 0	Electrical Switchgear Building 7007 Lighting Plan Sht 1
84.	YMP-025-1-7007-EL108	Rev. 0	Electrical Switchgear Building 7007 Lighting Plan Sht 2
85.	YMP-025-1-7007-EL109	Rev. 0	Electrical Switchgear Building 7007 Embedded Conduit Plan
86.	YMP-025-1-7007-EL112	Rev. 0	Electrical Switchgear Building 7007 One Line Diagram

			YMP/CM-0016, Rev. 1
87.	YMP-025-1-7007-EL113	Rev. 0	Electrical Switchgear Building 7007 Schematic/Connection Diagrams Sht 1
88.	YMP-025-1-7007-EL114	Rev. 0	Electrical Switchgear Building 7007 Schematic/Connection Diagrams Sht 2
89.	YMP-025-1-7007-EL115	Rev. 0	Electrical Switchgear Building 7007 Schematic/Connection Diagrams Sht 3
90.	YMP-025-1-7007-EL120	Rev. 0	Electrical Switchgear Building 7007 Panel Schedules
91.	YMP-025-1-7007-EL124	Rev. 1	Electrical Switchgear Building 7007 Fire Alarm Plan/Details
92.	YMP-025-1-7007-EL125	Rev. 0	Electrical Switchgear Building 7007 Fire Alarm Diagrams/Details Sht 1
93.	YMP-025-1-7007-EL126	Rev. 0	Electrical Switchgear Building 7007 Fire Alarm Diagrams/Details Sht 2
94.	YMP-025-1-7007-HV101	Rev. 0	Electrical Switchgear Building 7007 Control Room HVAC Plan & Sections
95.	YMP-025-1-7007-HV102	Rev. 0	Electrical Switchgear Building 7007 Switchgear Room HVAC Plan & Sections
96.	YMP-025-1-7007-ST101	Rev. 1	Electrical Switchgear Building 7007 Foundation Plan & Sections
97.	YMP-025-1-7007-ST102	Rev. 0	Electrical Switchgear Building 7007 Slab Plan
98.	YMP-025-1-7007-ST103	Rev. 0	Electrical Switchgear Building 7007 Foundation Details
99.	YMP-025-1-7008-AR101	Rev. 0	Booster Pump Station Building 7008 Floor Plan

100.	YMP-025-1-7008-AR102	Rev. 0	Booster Pump Station Building 7008 Elevations & Section
101.	YMP-025-1-7008-EL101	Rev. 1	Booster Pump Station Building 7008 Power & Grounding Plan
102.	YMP-025-1-7008-EL102	Rev. 0	Booster Pump Station Building 7008 Lighting Plan
103.	YMP-025-1-7008-EL103	Rev. 1	Booster Pump Station Building 7008 Lightning Protection Plan & Elevation
104.	YMP-025-1-7008-EL104	Rev. 0	Booster Pump Station Building 7008 Panel Schedule and Relay Panel Connection Diagram
105.	YMP-025-1-7008-EL105	Rev. 0	Booster Pump Station Building 7008 Fire Alarm Plan/Diagrams
106.	YMP-025-1-7008-EL106	Rev. 0	Booster Pump Station Building 7008 One Line Diagram
107.	YMP-025-1-7008-EL107	Rev. 0	Booster Pump Station Building 7008 Schematic/Connection Diagram Sht 1
108.	YMP-025-1-7008-EL108	Rev. 0	Booster Pump Station Building 7008 Schematic/Connection Diagram Sht 2
109.	YMP-025-1-7008-HV101	Rev. 0	Booster Pump Station Building 7008 HVAC Plan & Sections
110.	YMP-025-1-7008-ST101	Rev. 0	Booster Pump Station Building 7008, Foundation Plan & Sections

Title II Specifications

1.	YMP-025-1-SP01	Rev. 2	North Portal Pad, Electrical Utilities & Access Roads
2.	YMP-025-1-SP02	Rev. 2	Electrical Switchgear Building
3.	YMP-025-1-SP03	Rev. 2	Booster Pump Station
4.	YMP-025-1-SP04	Rev. 1	Topsoil & Rock Storage Area

Rec'd unchecked 5/19/93

YMP/CM-0016
Rev. 1 (Part 2)

U.S. DEPARTMENT OF ENERGY

OCRWM

YUCCA MOUNTAIN

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

PROJECT CCB BASELINE DOCUMENT

NOTE: This is part two (2) of previously distributed Design Package 1A

EXPLORATORY STUDIES FACILITY TECHNICAL BASELINE

VOLUME 2

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UNITED STATES DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE

9305250071-01

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

EXPLORATORY STUDIES FACILITY

TECHNICAL BASELINE

VOLUME 2

SOUTH PORTAL

DESIGN DRAWINGS

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101 Convention Center Drive

Las Vegas, Nevada

102-8

9305250071 -02

MICROWAVE COMMUNICATION TOWER BLDG.

MICROWAVE COMMUNICATION TOWER

PORTAL CONTROL CENTER BLDG.

CHANGE HOUSE BLDG.

25'DIA. T.S.SOUTH RAMP

T.S.SOUTH PORTAL AIRLOCK BLDG.

ACCESS ROAD

EMPLOYEE PARKING AREA

ELECTRICAL SWITCHGEAR BLDG.

INCOMING POWER LINES

CONVEYOR STEEL TUBE GALLERY

VENTILATION FANS

GENERATORS

U/G FUEL STORAGE

VENTILATION FANS HYDRAULIC CONTROL BLDG.

TRANSFORMERS

CONVEYOR DRIVE & TRANSFER BLDG.

AIR COMPRESSOR PAD

SHOP/WAREHOUSE BLDG.

ELECTRICAL SUBSTATION CONTROL BLDG.

OPEN STORAGE AREA

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1028

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRF'Y	ENV	SAF	QA	TPO

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YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEM

PERSPECTIVE

DESIGN	PZ
DRAWN	PZ
CHECKED	
DEC	
DESIGN CHANGE	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91
PROJ. NO	126312
C-NO	

SUBMITTED BY: T.P. Tillet — DATE: 8-26-91 — DRAWING NO: YMP-025-2-ARCH-GA01

YMPO APPROVED — DATE — SHT — OF

11 10 9 8 7 6 5 4 3 2 1

9305250071-03

TS SOUTH PORTAL

GENERAL SUPPORT

TITLE SHEET	YMP-025-2-CIVL-GE01
DRAWING INDEX	YMP-025-2-CIVL-GE02
PERSPECTIVE	YMP-025-2-ARCH-GA01
MATERIAL FLOW DIAGRAM	YMP-025-1-ARCH-GA02

CIVIL

OVERALL SITE PLAN	YMP-025-1-CIVL-PL01
TS SOUTH PORTAL SURFACE SITE PLAN	YMP-025-2-CIVL-PL01
TS SOUTH PORTAL GRADING PLAN	YMP-025-2-CIVL-GP01
TS SOUTH PORTAL WASTE WATER FACILITIES GRADING PLAN	YMP-025-2-CIVL-PL03
TS SOUTH PORTAL UTILITIES PLAN	YMP-025-2-CIVL-PL04
TS SOUTH PORTAL WATER STORAGE TANK SITE & GRADING PLAN	YMP-025-2-CIVL-PL05
BATCH PLANT FACILITIES SITE & GRADING PLAN	YMP-025-2-CIVL-PL07
TS SOUTH PORTAL ACCESS ROAD PLAN & PROFILE (SHT 1)	YMP-025-2-CIVL-PR01
TS SOUTH PORTAL ACCESS ROAD PLAN & PROFILE (SHT 2)	YMP-025-2-CIVL-PR02
TS SOUTH PORTAL ACCESS ROAD PLAN & PROFILE (SHT 3)	YMP-025-2-CIVL-PR03
WATER STORAGE TANK ACCESS RD "A" PLAN & PROFILE (SHT 1)	YMP-025-2-CIVL-PR06
WATER STORAGE TANK ACCESS RD "B" PLAN & PROFILE (SHT 2)	YMP-025-2-CIVL-PR07
TS SOUTH PORTAL H-ROAD IMPROVEMENTS PLAN & PROFILE (SHT 3)	YMP-025-2-CIVL-PR09
TS SOUTH PORTAL H-ROAD IMPROVEMENTS PLAN & PROFILE (SHT 10)	YMP-025-2-CIVL-PR10
EXPLOSIVES STORAGE PAD ACCESS ROAD PLAN & PROFILE	YMP-025-2-CIVL-PR12

ARCHITECTURAL

TS SOUTH PORTAL SURFACE PLOT PLAN	YMP-025-2-ARCH-PL01
TS SOUTH PORTAL OVERALL PLOT PLAN	YMP-025-2-ARCH-PL02

STRUCTURAL

TS SOUTH PORTAL CONVEYOR PLAN & ELEVATION	YMP-025-2-STRU-SA01
TS SOUTH PORTAL CONSTRUCTION OPERATIONS PHASE PLAN & SECT	YMP-025-2-STRU-SA02
TS SOUTH PORTAL VENTILATION FANS PLAN & SECTION	YMP-025-2-STRU-SA03
TS SOUTH PORTAL SURFACE CONVEYORS PROFILE (SHT 1)	YMP-025-2-STRU-SA04
TS SOUTH PORTAL UNDERGROUND CONVEYORS PROFILE (SHT 2)	YMP-025-2-STRU-SA05
TS SOUTH PORTAL UNDERGROUND CONVEYORS PROFILE (SHT 3)	YMP-025-2-STRU-SA06
TS SOUTH PORTAL UNDERGROUND CONVEYORS PROFILE (SHT 4)	YMP-025-2-STRU-SA07

TS SOUTH PORTAL

MINING

SUBSURFACE ACCESS GENERAL ARRANGEMENT PLAN	YMP-025-1-MING-MI01
TS LEVEL EXPLORATORY DRIFTS PLAN	YMP-025-2-MING-MI01
TS MAIN DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI02
TS MAIN DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI03
TS EAST DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI04
TS WEST DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI05
TS FABRICATE DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI06
TS NORTH & TS SOUTH RAMPS PLAN	YMP-025-2-MING-MI07
TS NORTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI08
TS NORTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI09
TS SOUTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI10
TS SOUTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI11
CH LEVEL EXPLORATORY DRIFTS PLAN	YMP-025-2-MING-MI13
CH MAIN DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI14
CH MAIN DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI15
CH FABRICATE DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI17
CH WEST GHOST DANCE DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI18
CH EAST GHOST DANCE DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI19
CH LATAHO DRIFT PLAN & PROFILE SECTION	YMP-025-2-MING-MI20
CH NORTH & CH SOUTH RAMPS PLAN	YMP-025-2-MING-MI21
CH NORTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI22
CH SOUTH RAMP PLAN & PROFILE SECTION	YMP-025-2-MING-MI23
TS MAIN TEST AREA PLAN AND SECTION	YMP-025-2-MING-MI25
TS SOUTH RAMP PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI26
TS SOUTH RAMP PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI27
TS MAIN DRIFT PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI30
TS MAIN DRIFT PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI31
TS MAIN TEST AREA PRELIMINARY TEST LOCATIONS PLAN	YMP-025-2-MING-MI32
TS EAST & WEST DRIFTS PRELIM TEST LOCATIONS PLAN	YMP-025-2-MING-MI37
CH LEVEL DRIFTS PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI38
CH MAIN DRIFT PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI39
CH MAIN DRIFT PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI40
CH SOUTH RAMP PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI42
CH LEVEL DRIFTS PRELIM TEST LOCATIONS PLAN & PROFILE	YMP-025-2-MING-MI43
TS CH SOUTH RAMP INTERSECTION PLAN & SECTION	YMP-025-2-MING-MI45
TS/CH SOUTH RAMP INTERSECTION SECTIONS	YMP-025-2-MING-MI46
RAMP CONSTRUCTION SEQUENCE SECTIONS	YMP-025-2-MING-MI48
RAMP STATION CONSTRUCTION SEQUENCE PLANS & SECTIONS	YMP-025-2-MING-MI49
RAMP STATION CONSTRUCTION SEQUENCE PLANS & SECTIONS	YMP-025-2-MING-MI50
TS/CH PRELIM VENTILATION (OPERATION PHASE) PLAN	YMP-025-2-MING-MI51
TS MAIN TEST AREA VENTILATION PLAN	YMP-025-2-MING-MI52
DEVELOPMENT VENTILATION SEQUENCE PLAN	YMP-025-2-MING-MI53
FANS VENTILATION (CONSTRUCTION PHASE) SECTIONS	YMP-025-2-MING-MI54

ELECTRICAL

TS MAIN DRIFT/NORTH FEEDERS ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL10
TS MAIN DRIFT/NORTH FEEDERS ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL11
CH MAIN DRIFT/NORTH FEEDERS ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL16
CH MAIN DRIFT/NORTH FEEDERS ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL17
SOUTH PORTAL SURFACE SUBSTATION ONE LINE DIAGRAM	YMP-025-2-ELEC-EL20
SOUTH PORTAL SURFACE ELECTRICAL ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL21
SOUTH PORTAL SURFACE ELECTRICAL ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL22
TS SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL23
TS SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL24
TS SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 3)	YMP-025-2-ELEC-EL25
TS MAIN DRIFT/SOUTH FEEDERS ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL26
TS MAIN DRIFT/SOUTH FEEDERS ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL27
CH SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL29
CH SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL30
CH SOUTH RAMP ELECTRICAL ONE LINE DIAGRAM (SHT 3)	YMP-025-2-ELEC-EL31
CH MAIN DRIFT/SOUTH FEEDERS ONE LINE DIAGRAM (SHT 1)	YMP-025-2-ELEC-EL32
CH MAIN DRIFT/SOUTH FEEDERS ONE LINE DIAGRAM (SHT 2)	YMP-025-2-ELEC-EL33
TS/CH TYPICAL ARRANGEMENT ELECTRICAL POWER CENTER	YMP-025-2-ELEC-EL34

TS NORTH & TS SOUTH RAMP

MECHANICAL

UNDERGROUND WATER DISTRIBUTION SCHEMATIC FLOW DIAGRAM	YMP-025-2-MECH-PI01
UNDERGROUND WASTE WATER COLLECTION SYSTEM	YMP-025-2-MECH-PI03
COMPRESSED AIR DISTRIBUTION SYSTEM	YMP-025-2-MECH-PI05

SHOP / WAREHOUSE BLDG #7010

ARCHITECTURAL

SHOP / WAREHOUSE BUILDING FLOOR PLANS	YMP-025-2-7010-AR01
SHOP / WAREHOUSE BUILDING ELEVATIONS & SECTIONS	YMP-025-2-7010-AR02

MECHANICAL

SHOP / WAREHOUSE BUILDING HVAC PLAN	YMP-025-2-7010-HV01
SHOP / WAREHOUSE BUILDING PLUMBING PLAN	YMP-025-2-7010-PP01

CHANGE HOUSE BLDG #7011

ARCHITECTURAL

CHANGE HOUSE BUILDING FLOOR PLAN	YMP-025-2-7011-AR01
CHANGE HOUSE BUILDING ELEVATIONS & SECTION	YMP-025-2-7011-AR02

MECHANICAL

CHANGE HOUSE BUILDING HVAC PLAN	YMP-025-2-7011-HV01
CHANGE HOUSE BUILDING PLUMBING PLAN	YMP-025-2-7011-PP01

PORTAL CONTROL CENTER BLDG #7012

ARCHITECTURAL

PORTAL CONTROL CENTER BLDG PLAN SECTION & ELEV'S	YMP-025-2-7012-AR01

MECHANICAL

PORTAL CONTROL CENTER BLDG HVAC PLAN	YMP-025-2-7012-HV01
PORTAL CONTROL CENTER BLDG PLUMBING PLAN	YMP-025-2-7012-PP01

CONVEYOR DRIVE & TRANSFER BLDG #7013

ARCHITECTURAL

CONVEYOR DRIVE & TRANSFER BLDG PLANS & SECTIONS	YMP-025-2-7013-AR01

MECHANICAL

CONVEYOR DRIVE & TRANSFER BLDG HVAC PLAN	YMP-025-2-7013-HV01
CONVEYOR DRIVE & TRANSFER BLDG PLUMBING PLAN	YMP-025-2-7013-PP01

FAN HYDRAULIC CONTROL BLDG # 7014

ARCHITECTURAL

VENT FAN HYDRAULIC CONTROL BLDG PLAN & ELEV'S	YMP-025-2-7014-AR01

AIRLOCK BLDG # 7015

ARCHITECTURAL

AIRLOCK BLDG (OPER PHASE) PLAN & SECTIONS	YMP-025-2-7015-AR01

ELECT SUBSTATION CONTROL BLDG # 7016

ARCHITECTURAL

ELECT SUBSTATION CONTROL BLDG PLAN & ELEV'S	YMP-025-2-7016-AR01

ELECTRICAL SWITCHGEAR BUILDING # 7017

ARCHITECTURAL

ELECTRICAL SWITCHGEAR BUILDING PLAN & ELEV'S	YMP-025-2-7017-AR01

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YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	MJM
DRAWN	MJM
CHECKED	
DEC	
DESIGN MANAGER	B.CH
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

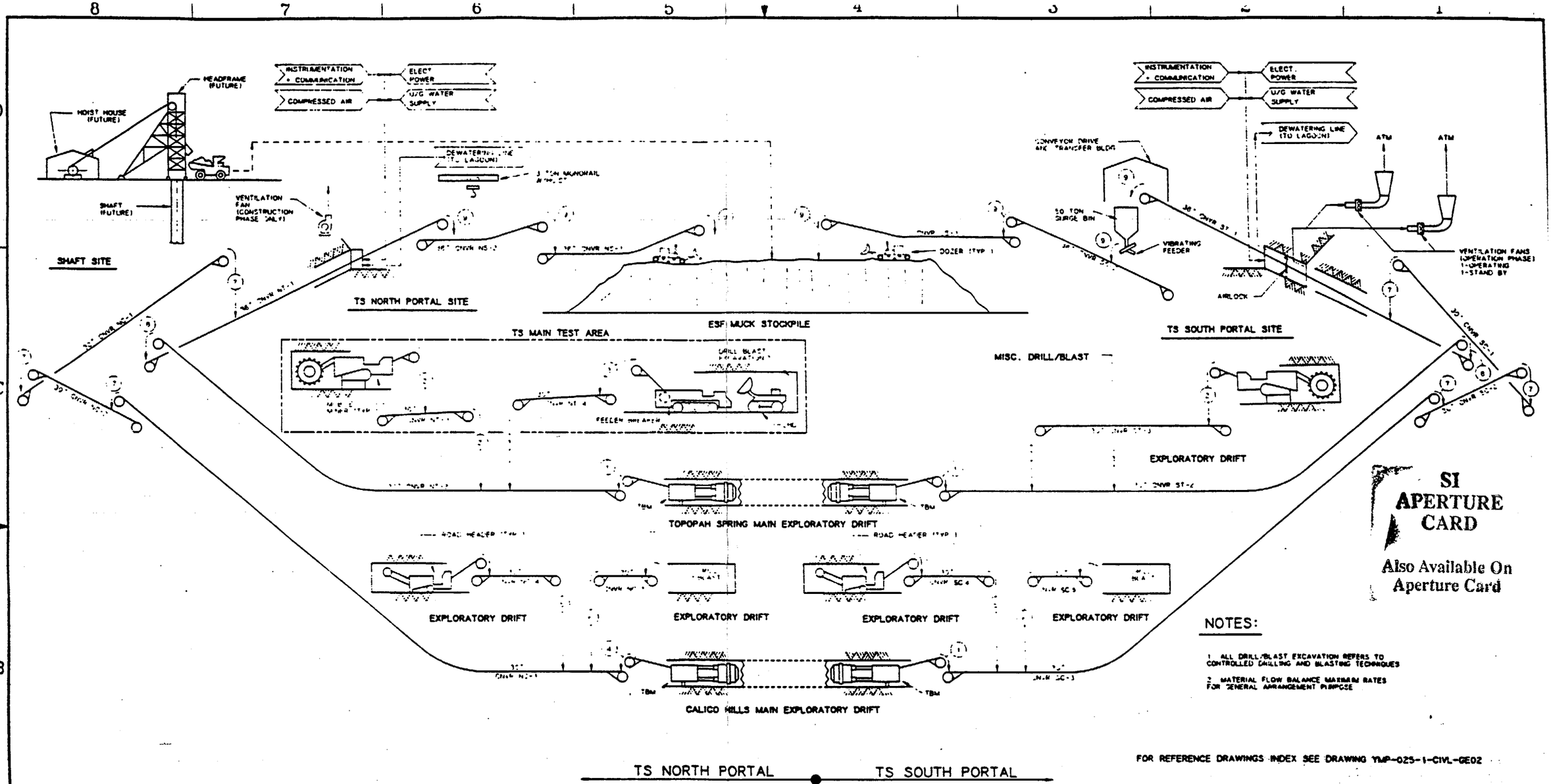
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEME

DRAWING INDEX

SUBMITTED BY | DATE | DRAWING NO YMP-025-2-CIVL-GE02

YMPO APPROVED | DATE | SHT | OF

9305250071-04



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NOTES:

1. ALL DRILL/BLAST EXCAVATION REFERS TO CONTROLLED DRILLING AND BLASTING TECHNIQUES
2. MATERIAL FLOW BALANCE MAXIMUM RATES FOR GENERAL ARRANGEMENT PURPOSE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-1-CIVL-GE02

MATERIAL FLOW BALANCE

	1	2	3	4	5	6	7	8	9
TON/HR. (NOMINAL)	302	75	94	169	71	60	300	471	771
TON/HR. (DESIGN)	332	83	103	186	78	66	330	518	848
MAX. LUMP SIZE (INCHES)	-6"	-6"	-6"	-6"	-6"	-6"	-6"	-6"	-6"
MATERIAL DENSITY (#/FT³) (BROKEN)	98	98	98	98	98	98	98	98	98
TEMPERATURE (°F)	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB

Plotted Thu Aug 22 07:37:13 1991, PL1 Plot name YMP-0143 DRW -

9305250071-05

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

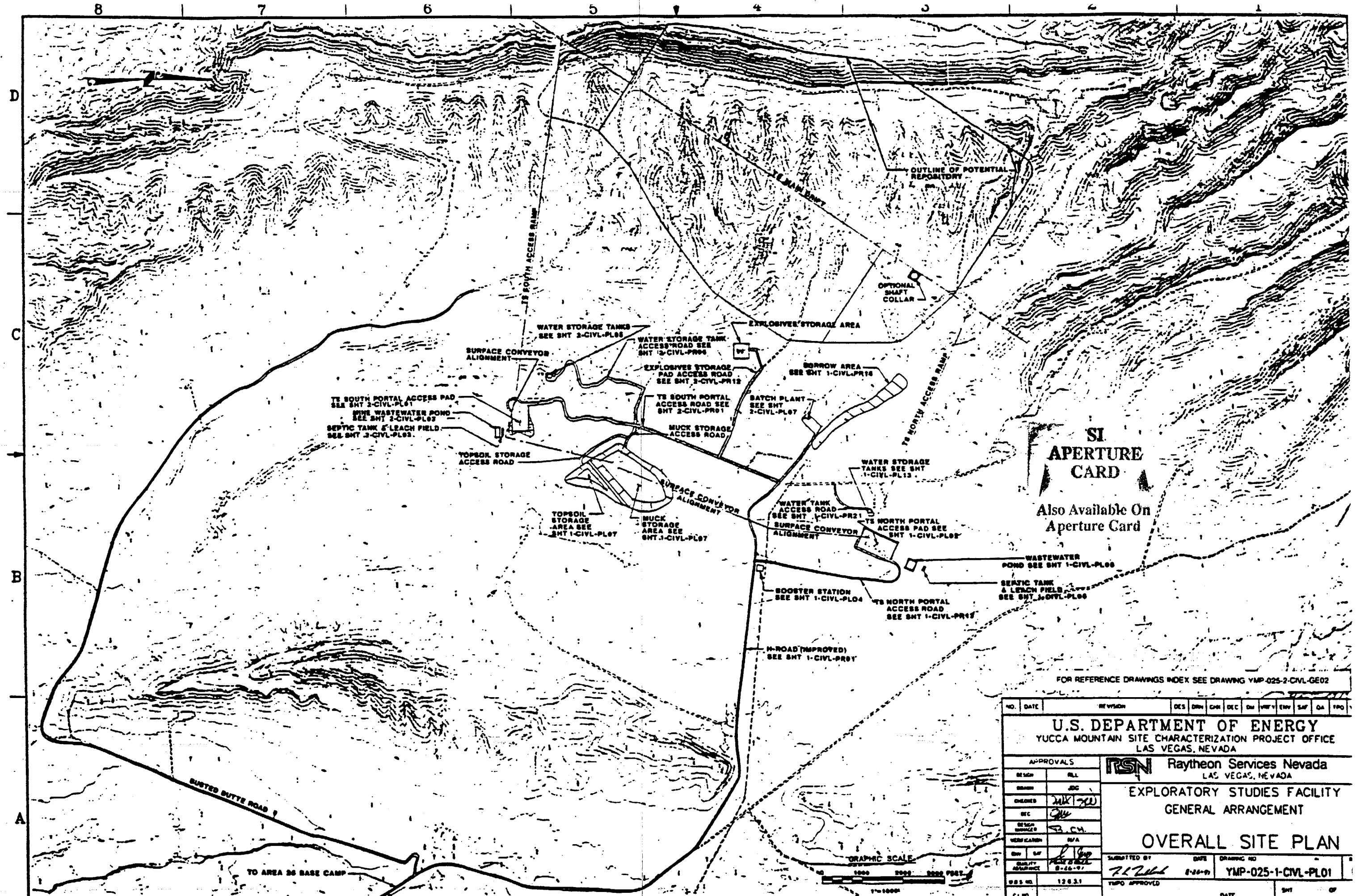
DESIGN	NBT
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	R.B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS NORTH & TS SOUTH PORTALS
MATERIAL FLOW DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-1-ARCH-GA02

YMPO APPROVED | DATE | SHT | OF



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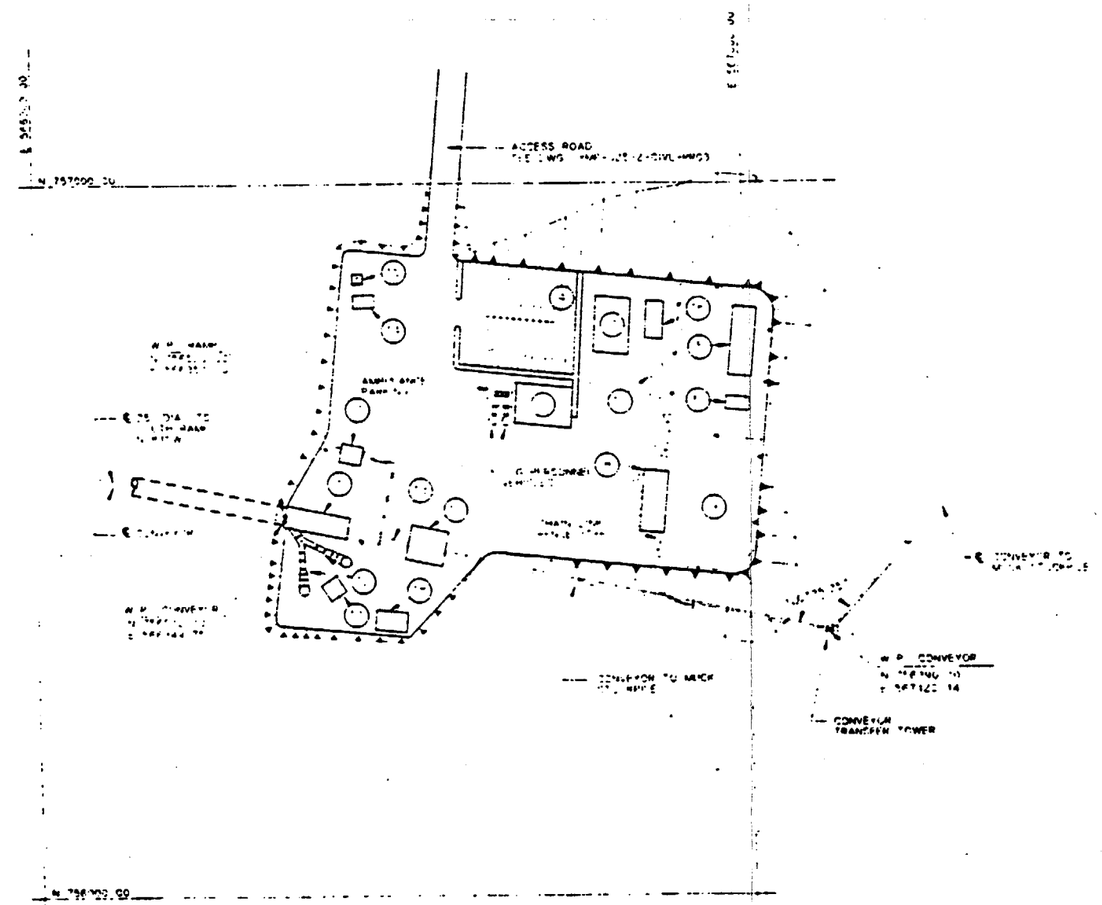

SITE PLAN

LEGEND

1. SOUTH PORTAL AIRLOCK BLDG
2. PORTAL CONTROL CENTER BLDG.
3. CHANGE HOUSE BLDG
4. EMPL. PARKING AREA (50 CARS)
5. TRANSFORMER PAD
6. ELECTRICAL SUBSTATION CONTROL BLDG
7. ELECTRICAL SWITCHGEAR BLDG
8. SHOP / WAREHOUSE BLDG
9. OPEN STORAGE AREA
10. CONVEYOR DRIVE AND TRANSFER BLDG
11. VENT FANS HYDRAULIC CONTROL BLDG.
12. VENTILATION FAN
13. BELT CONVEYOR STEEL TUBE GALLERY
14. MICROWAVE COMMUNICATION BLDG
15. MICROWAVE COMMUNICATION TOWER
16. GENERATOR PAD
17. UNDERGROUND FUEL STORAGE TANK
18. AIR COMPRESSOR PAD

SI APERTURE CARD

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FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVIL-GE02

GRAPHIC SCALE
0 100 200 300 FEET
1" = 100'

NO	DATE	REVISION	DESIGN	CHK	DEC	DM	VRF	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

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APPROVALS	
DESIGN	WTM
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMEN
SURFACE
SITE PLAN

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-CIVIL-PL01
YMPO APPROVED | DATE | SHT | OF

Plotted Wed Aug 21 08:49:48 1991, by: Part name YMP2188.dwg

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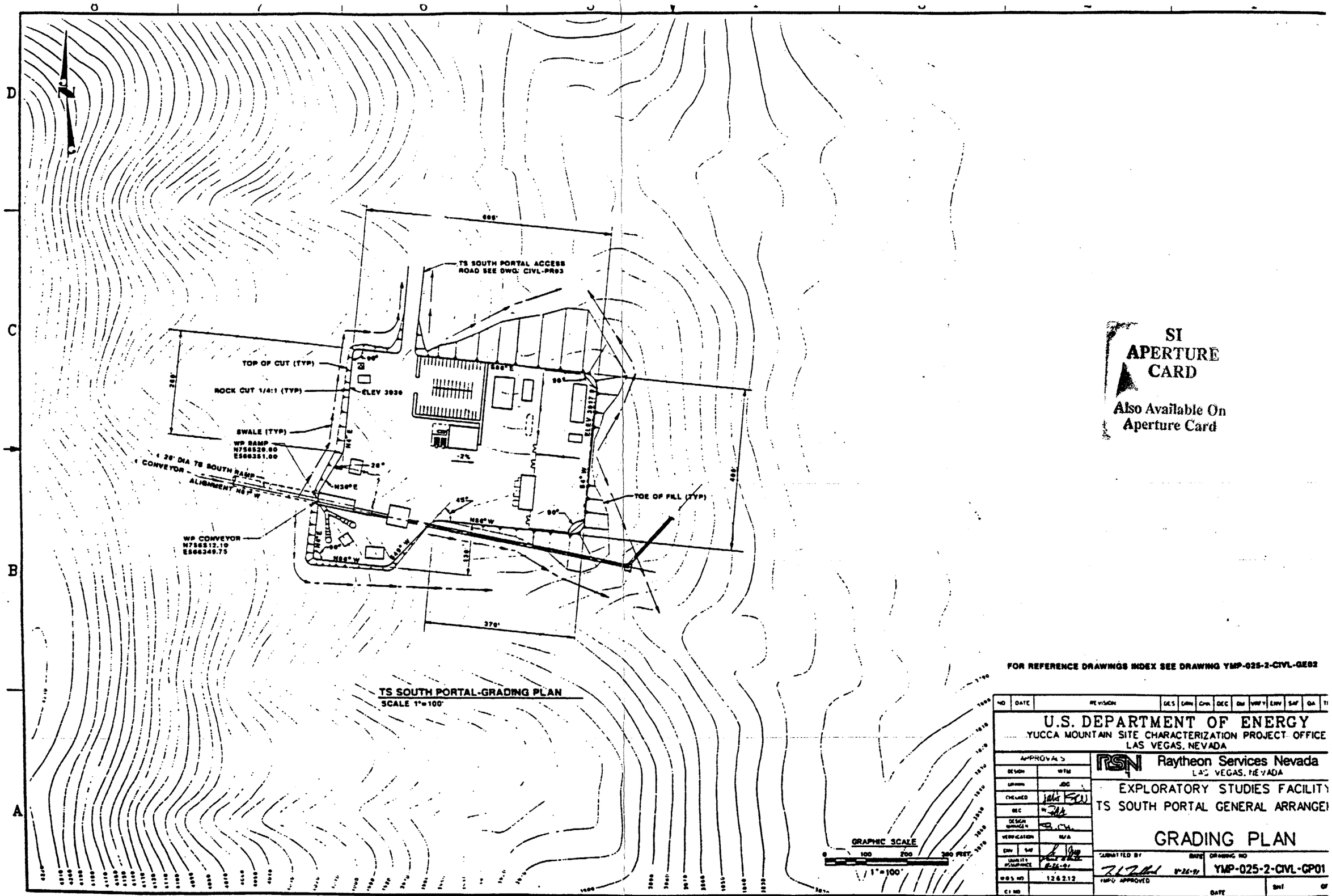

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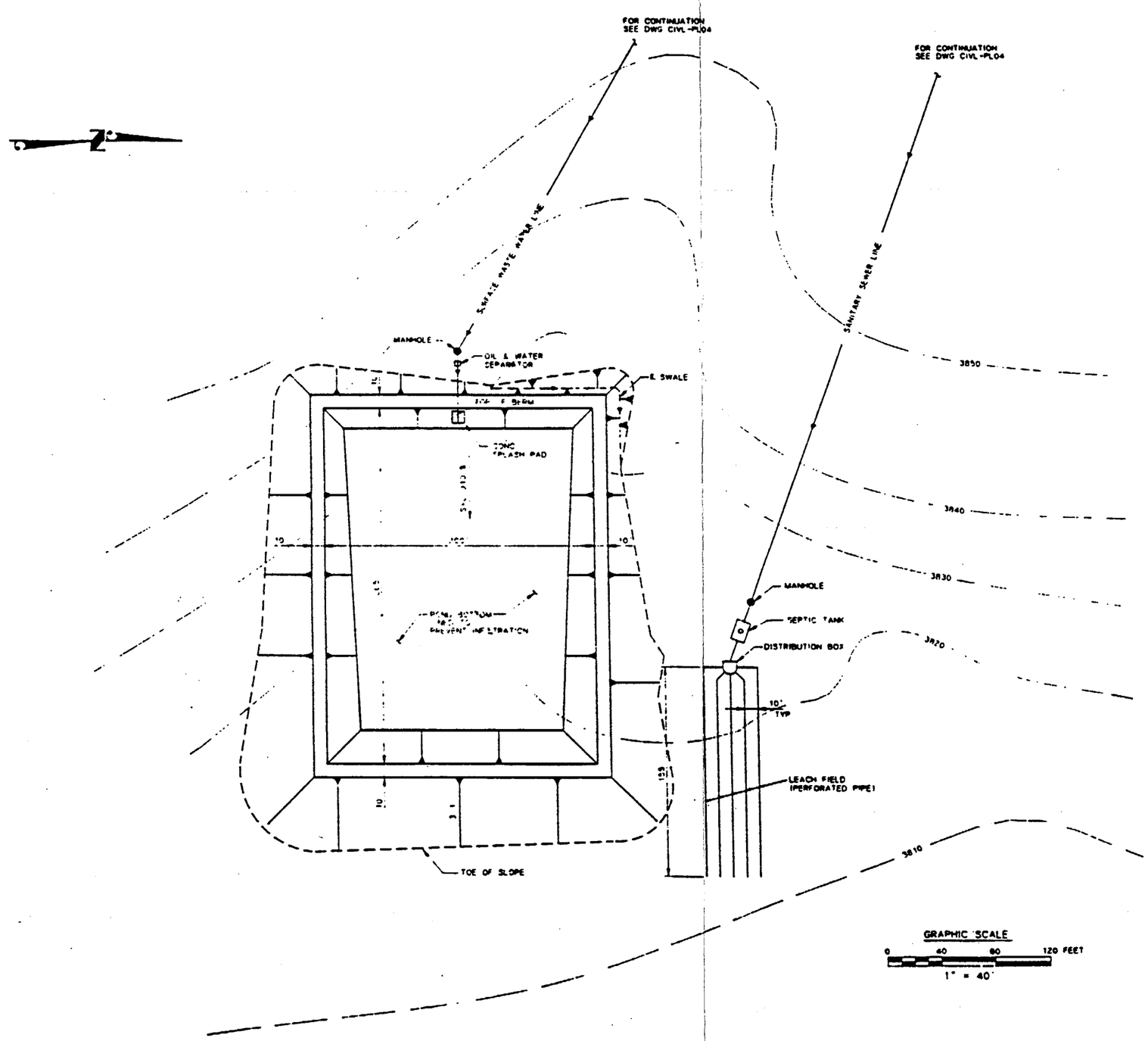


WASTE WATER FACILITIES SITE & GRADING PLAN

SCALE 1"=40'

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SI APERTURE CARD

Also Available On Aperture Card

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RDC
DRAWN	MJH
ENGINEER	
REC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

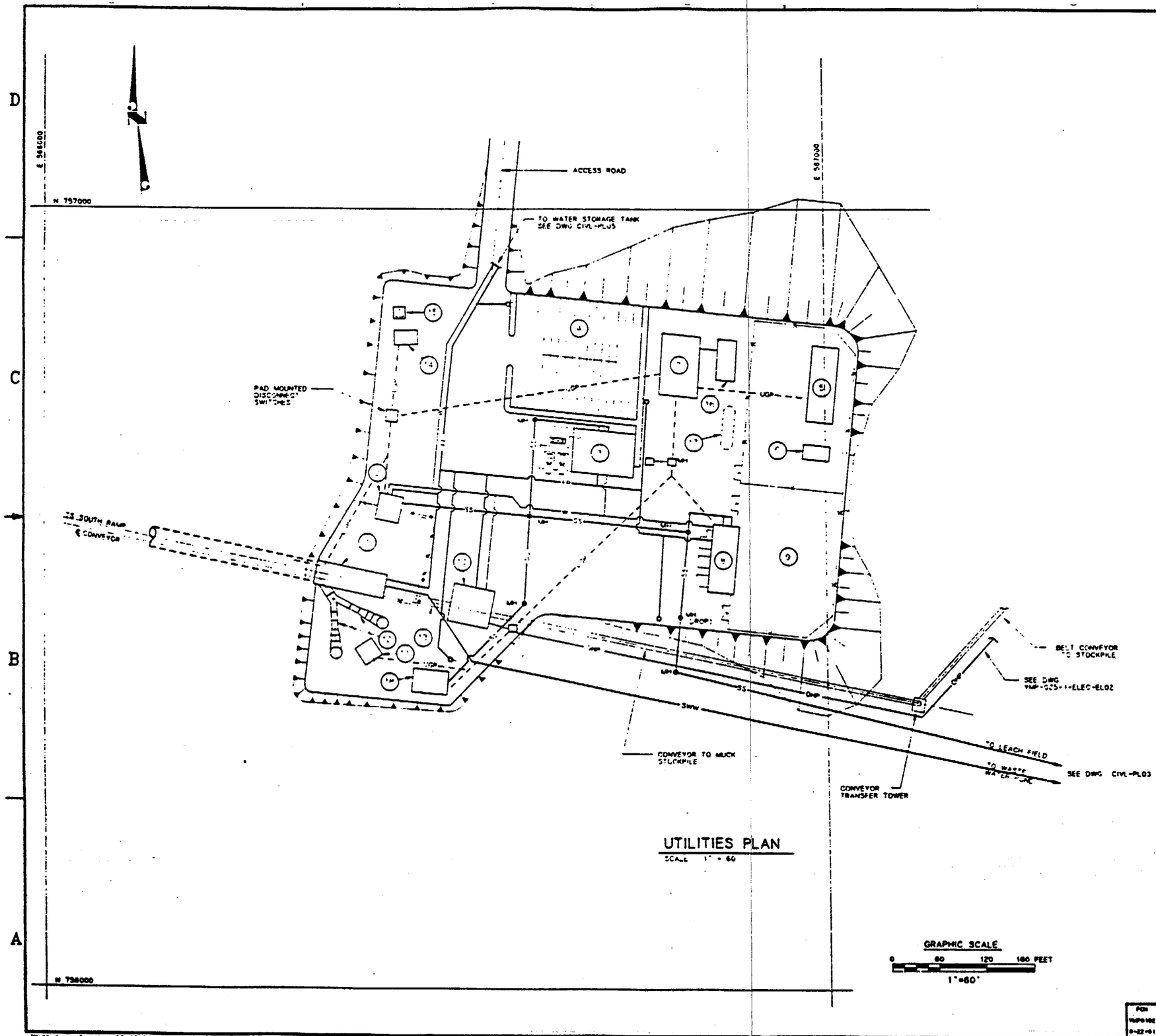
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
WASTE WATER FACILITIES
GRADING PLAN

SUBMITTED BY	DATE	DRAWING NO.	REV.
	8-16-97	YMP-025-2-CIVL-PL03	0

YMPO APPROVED DATE SHT OF

9305250071-09



UTILITIES PLAN

SCALE 1" = 60

LEGEND

1. SOUTH PORTAL AIRLOCK BLDG.
2. PORTAL CONTROL CENTER BLDG.
3. CHANGE HOUSE BLDG.
4. EMPL. PARKING AREA (50 CARS)
5. TRANSFORMER PAD
6. ELECTRICAL SUBSTATION CONTROL BLDG.
7. ELECTRICAL SWITCHGEAR BLDG.
8. SHOP / WAREHOUSE BLDG
9. OPEN STORAGE AREA
10. CONVEYOR DRIVE AND TRANSFER BLDG
11. VENT FANS HYDRAULIC CONTROL BLDG.
12. VENTILATION FANS
13. BELT CONVEYOR STEEL TUBE GALLERY
14. MICROWAVE COMMUNICATION BLDG.
15. MICROWAVE COMMUNICATION TOWER
16. GENERATOR PAD
17. UNDERGROUND FUEL STORAGE TANK
18. AIR COMPRESSOR PAD

- FP — FIRE PROTECTION WATER LINE
- SWW — SURFACE WASTEWATER LINE
- SS — SANITARY SEWER LINE
- W — POTABLE WATER LINE
- MH — SANITARY SEWER MANHOLE
- FIRE HYDRANT
- MH — ELECTRICAL MANHOLE
- PP — POWER POLE W/GUY ANCHORS
- OHP — OVERHEAD POWER LINE
- UGP — UNDERGROUND POWER LINE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RC
DRAWN	TAN
CHECKED	
REC	
DESIGN MANAGER	B. CVL
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SOUTH PORTAL
UTILITIES PLAN

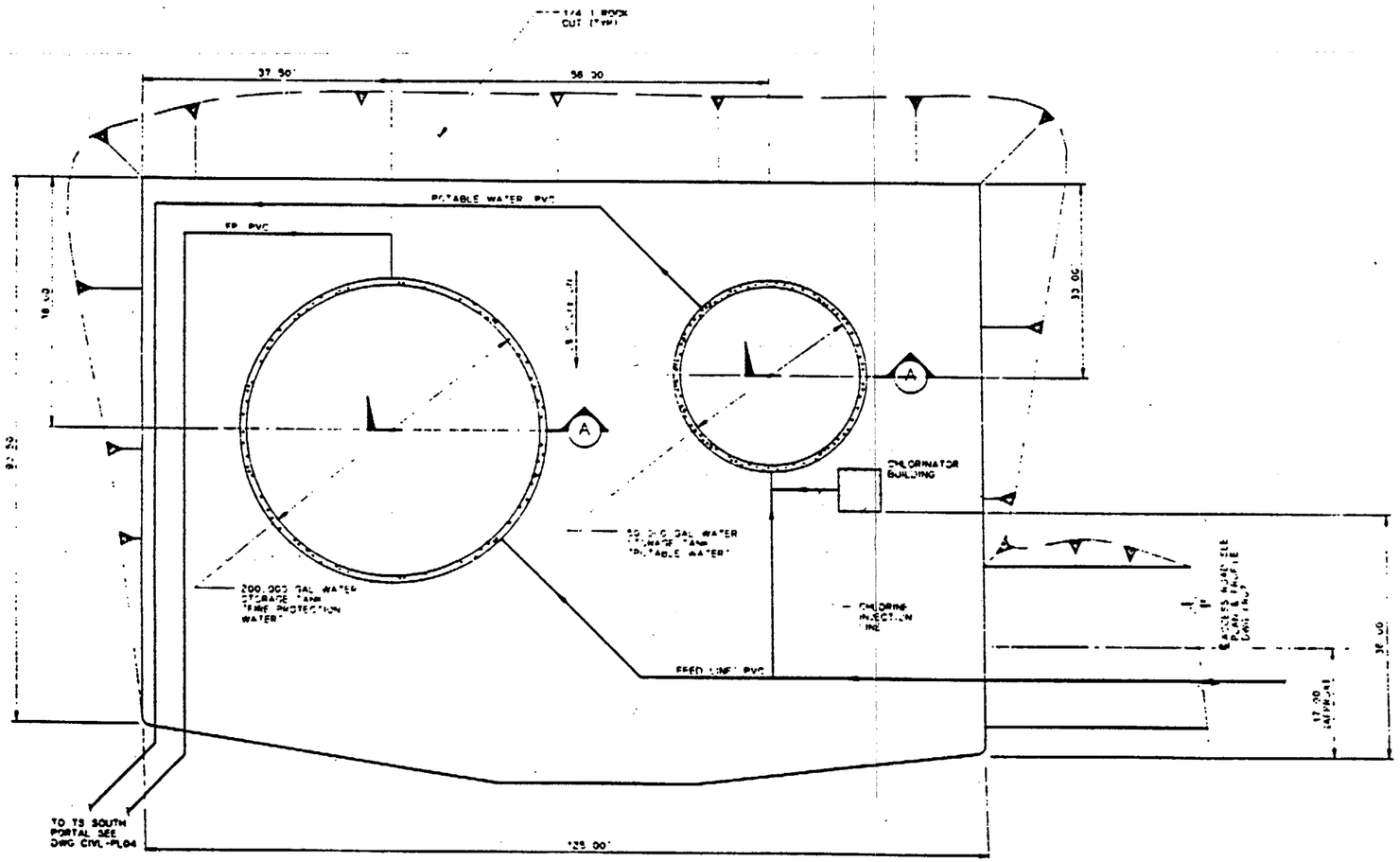
SUBMITTED BY: TRZ | DATE: 8-22-91 | DRAWING NO. YMP-025-2-CIVL-PL04 | REV. 0

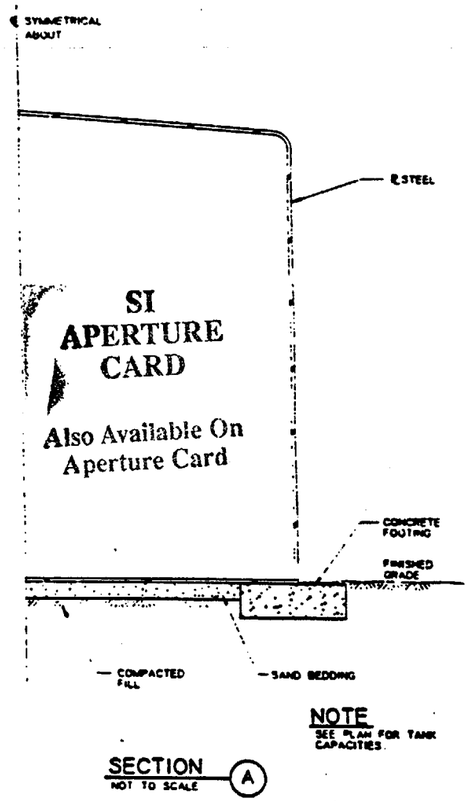
YMPO APPROVED | DATE | SHT | OF

PCN YMP0192 8-22-91 | V.D.S. NO. 1.2.8.2.2.2 | C.I. NO.

Plotted Thu Aug 22 10:54:42 1991, PDT Part name: ymP0192.DRW

9305250071-10





SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

WATER STORAGE TANK SITE & GRADING PLAN
SCALE 1" = 10

9305250071-11

GRAPHIC SCALE
0 10 20 30 FEET
1"=10'

NO	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLL
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

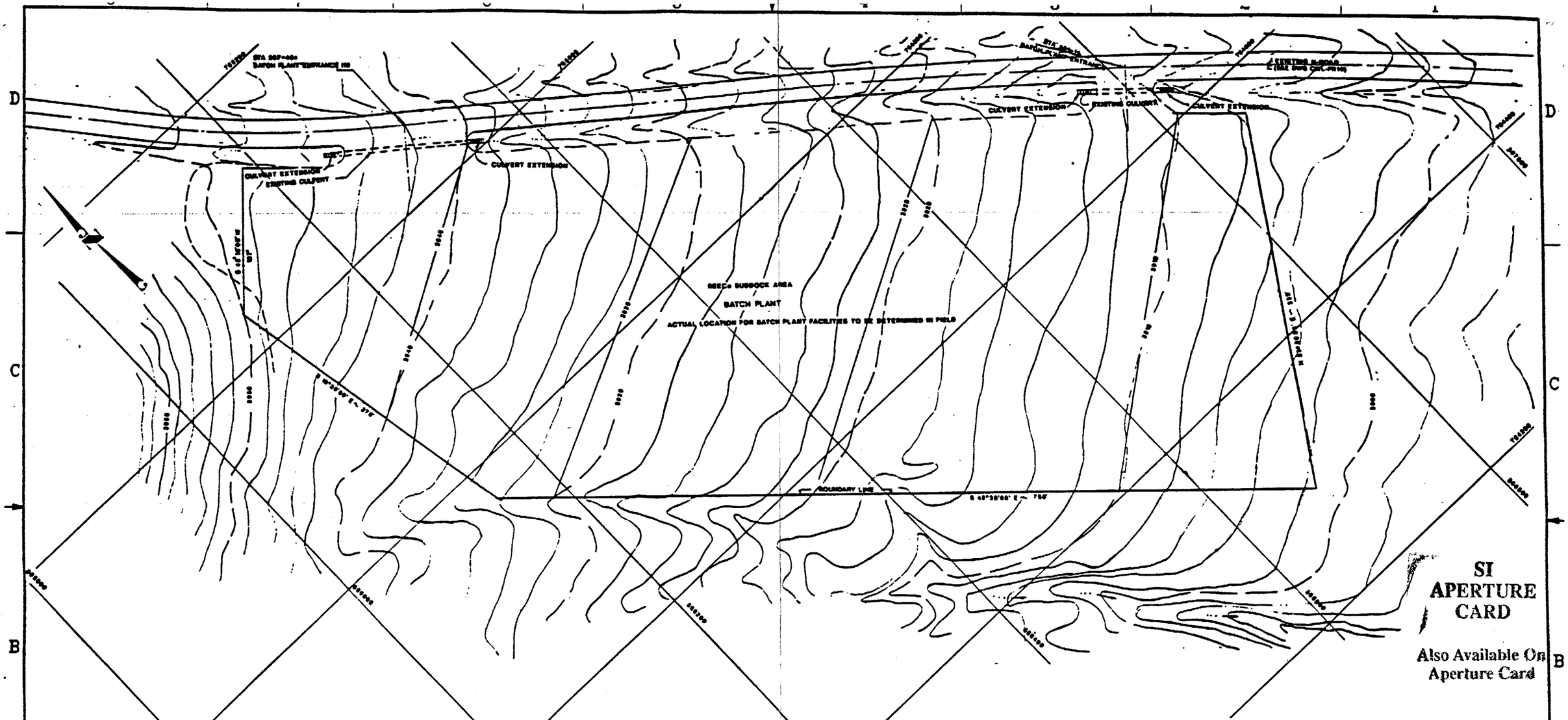
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
WATER STORAGE TANK
SITE & GRADING PLAN

SUBMITTED BY	DATE	DRAWING NO.	REV
	8-26-91	YMP-025-2-CIVL-PL05	0

YMPO APPROVED DATE SHT OF

Plotted: Thu Aug 22 12:46:58 1991, PDT Part name: YMP0210 (Info 0)



FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-12

SITE AND GRADING PLAN

SCALE: 1" = 40'

GRAPHIC SCALE

0 40 80 120 FEET

1" = 40'

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

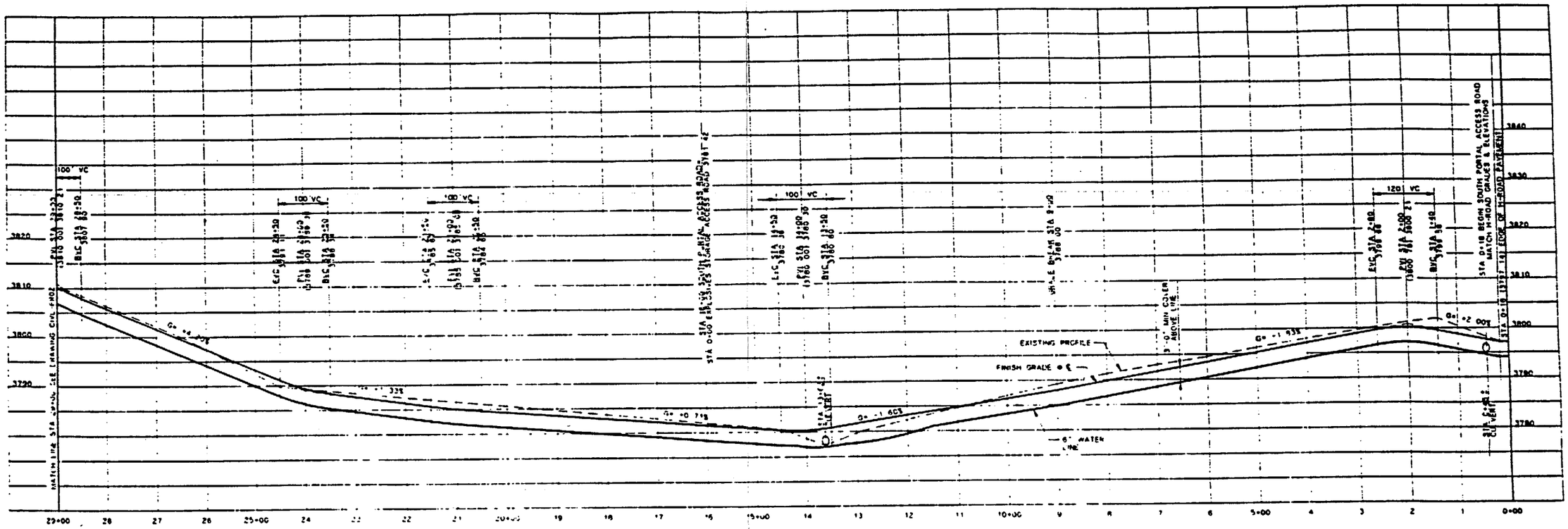
Raytheon Services Nevada
LAS VEGAS, NEVADA

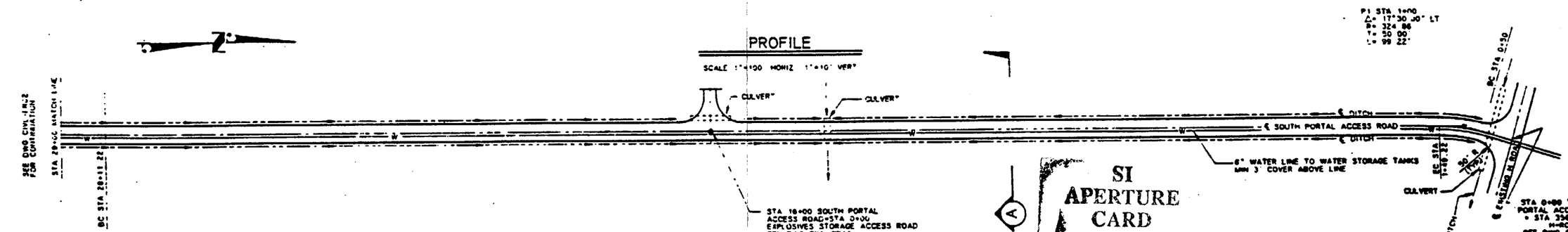
APPROVALS	
DESIGN	WTM
DRAWN	MMJ
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	
WBS NO	1.2.6.3.1.6
CI NO	

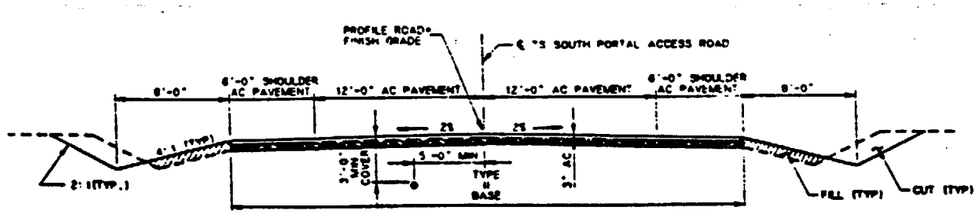
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
BATCH PLANT FACILITIES
SITE & GRADING PLAN

SUBMITTED BY	DATE	DRAWING NO	REV.
	8-26-97	YMP-025-2-CIVL-PL07	0

YMPO APPROVED DATE SHT OF







TYPICAL ROAD SECTION (A)

SCALE 1"=5'

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

GRAPHIC SCALE

0 100 200 300 FEET

1" = 100'

9305250071-13

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLL
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-30-91

Raytheon Services Nevada
LAS VEGAS, NEVADA

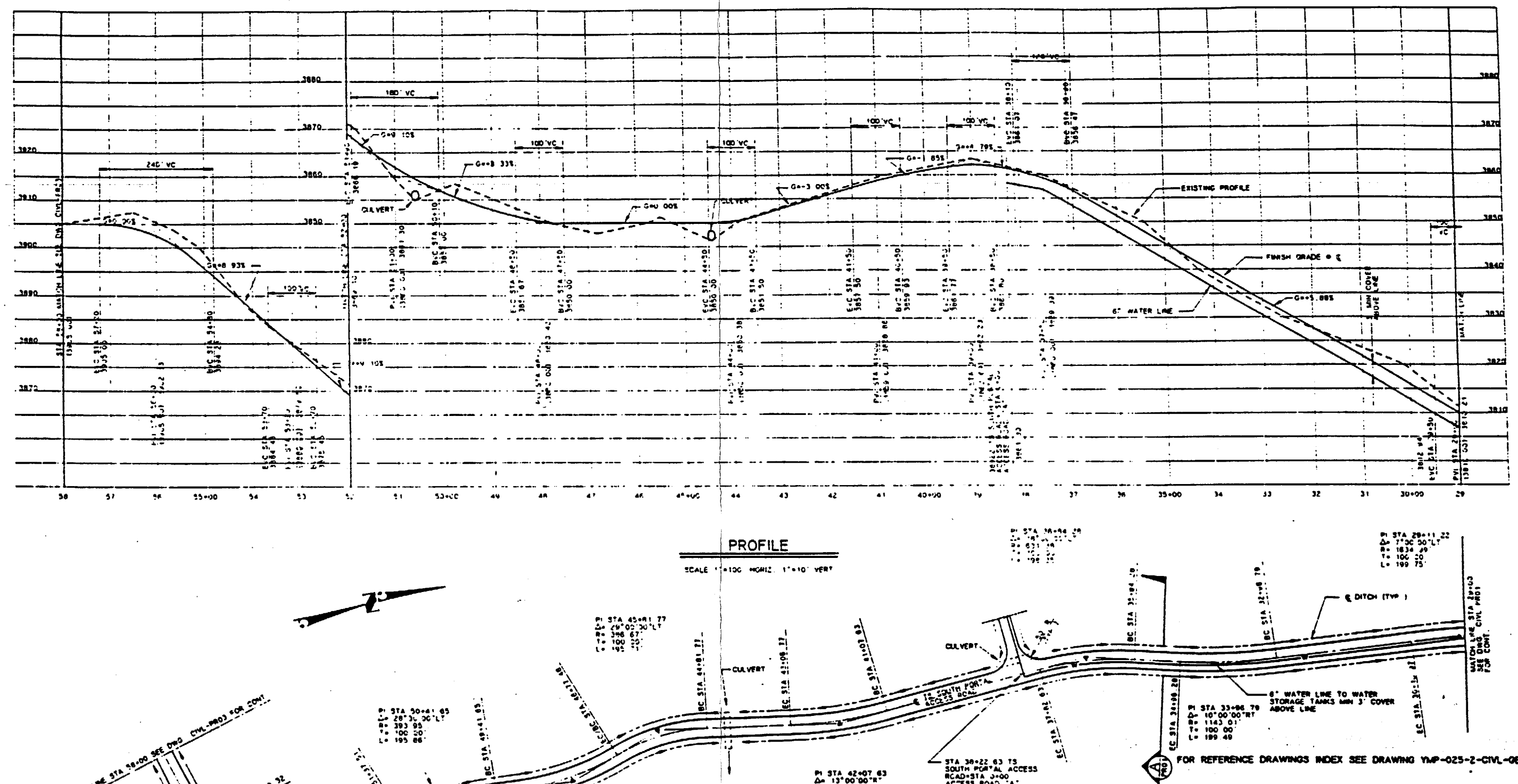
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL-GENERAL ARRANGEMENT
ACCESS ROAD
PLAN AND PROFILE

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-CIVL-PR01 | REV. 0

YMPO APPROVED | DATE | SHT | OF

FOR YMPO155 8-22-91

Plotted Thu Aug 22 06 33 13 1991, PDT Part name YMPC155.DWG *



SI
APERTURE
CARD

Also Available On
Aperture Card

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLL
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-24-01

Raytheon Services Nevada
LAS VEGAS, NEVADA

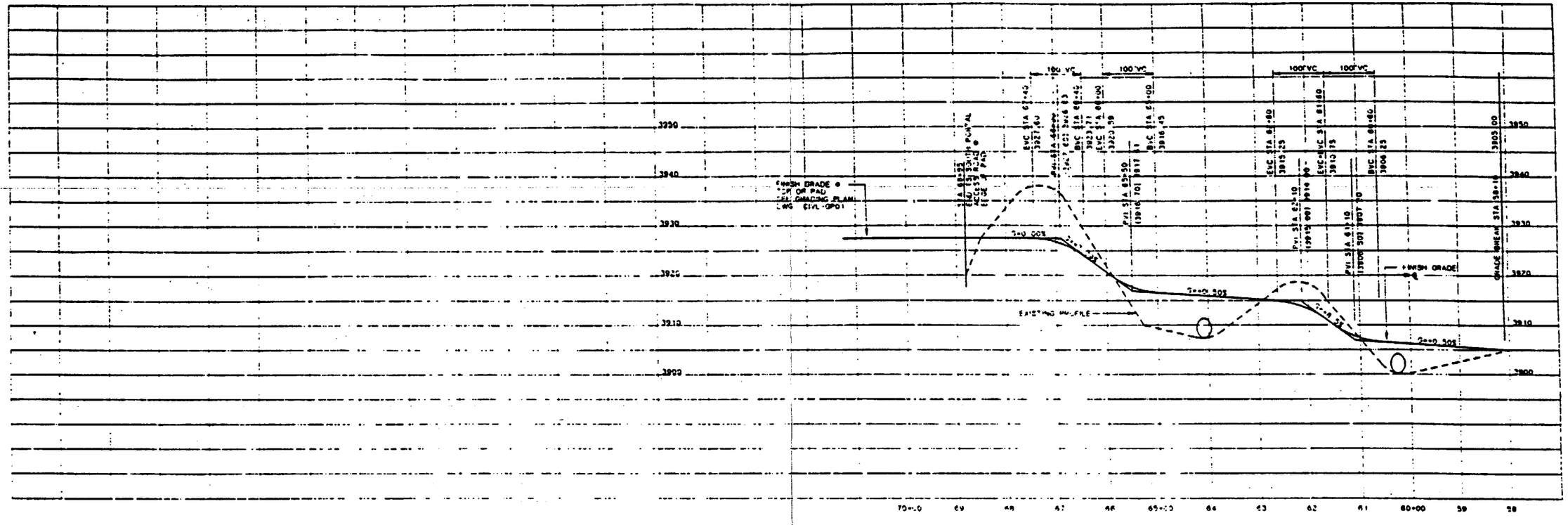
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL-GENERAL ARRANGEMENT
ACCESS ROAD
PLAN AND PROFILE

SUBMITTED BY	DATE	DRAWING NO	REV.
TRZ	8-24-01	YMP-025-2-CIVL-PR02	0

YMPO APPROVED DATE SHT OF

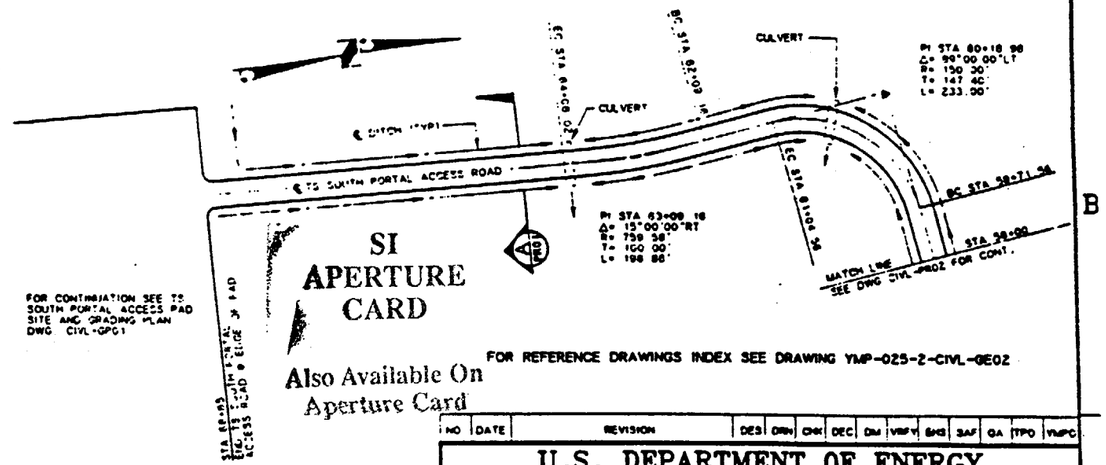
Plotted Thu Aug 22 08 54 36 1991, PC Part name YMP0156 DWG

9305250071-14



PROFILE

SCALE 1"=100' HORIZ 1"=10' VERT



PLAN

SCALE 1" = 100'

GRAPHIC SCALE

0 100 200 300 FEET

1" = 100'

9305250071 - 15

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SHG	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLL
DRAWN	TAH
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
DRN / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

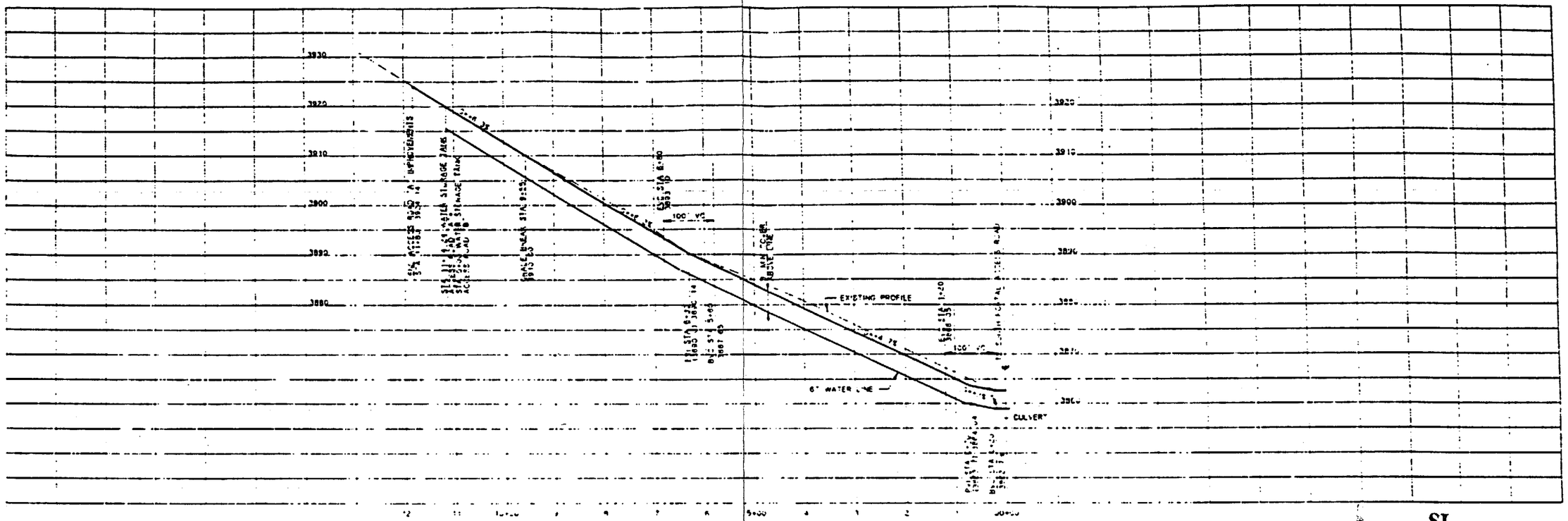
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
ACCESS ROAD
PLAN AND PROFILE

SUBMITTED BY	DATE	DRAWING NO	REV.
	8-21-91	YMP-025-2-CIVL-PR03	0

YMPO APPROVED DATE SHT OF

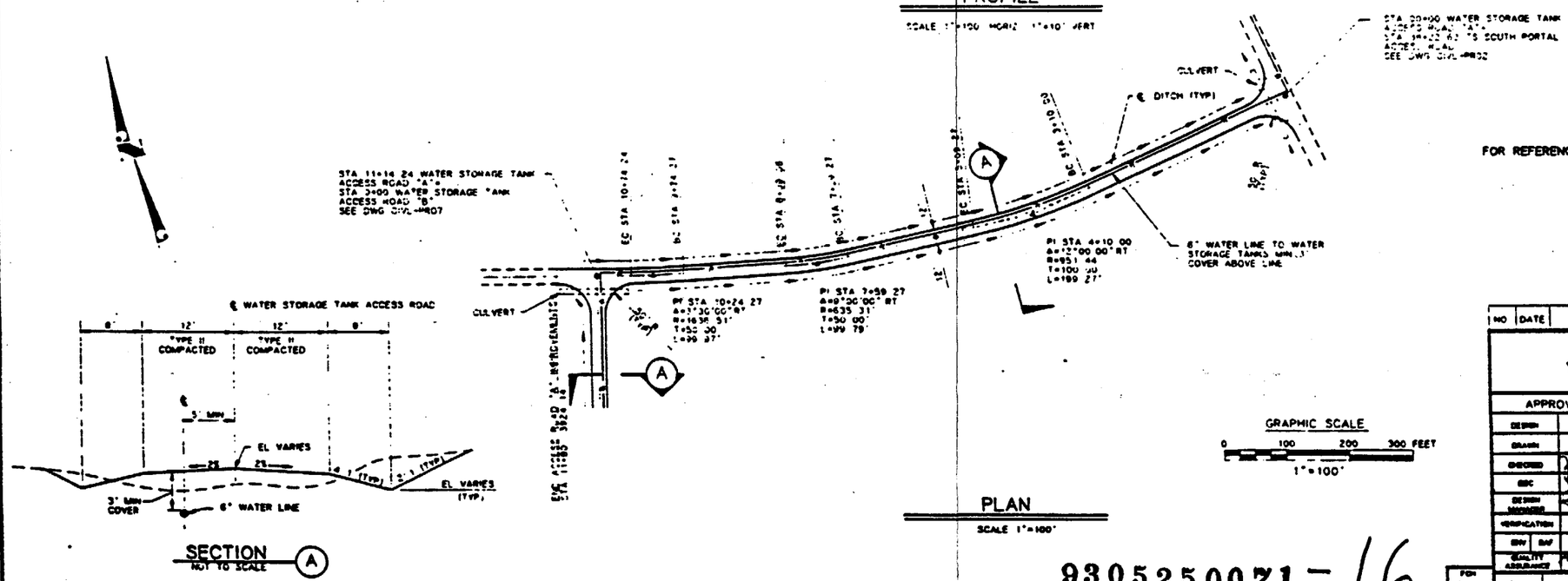
FCN YMPR015 8-21-91 WBS NO 1.2.6.2.1.4 C.I. NO

Plotted: Wed Aug 21 16:55:09 1991, PDT Part name: ymP0215.DRW



PROFILE

SCALE 1"=100' HORIZ 1"=10' VERT



PLAN

SCALE 1"=100'

SECTION (A)
NOT TO SCALE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	IDR	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLL
DRAWN	MJH
CHECKED	
IDC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV SAF	
QUALITY ASSURANCE	

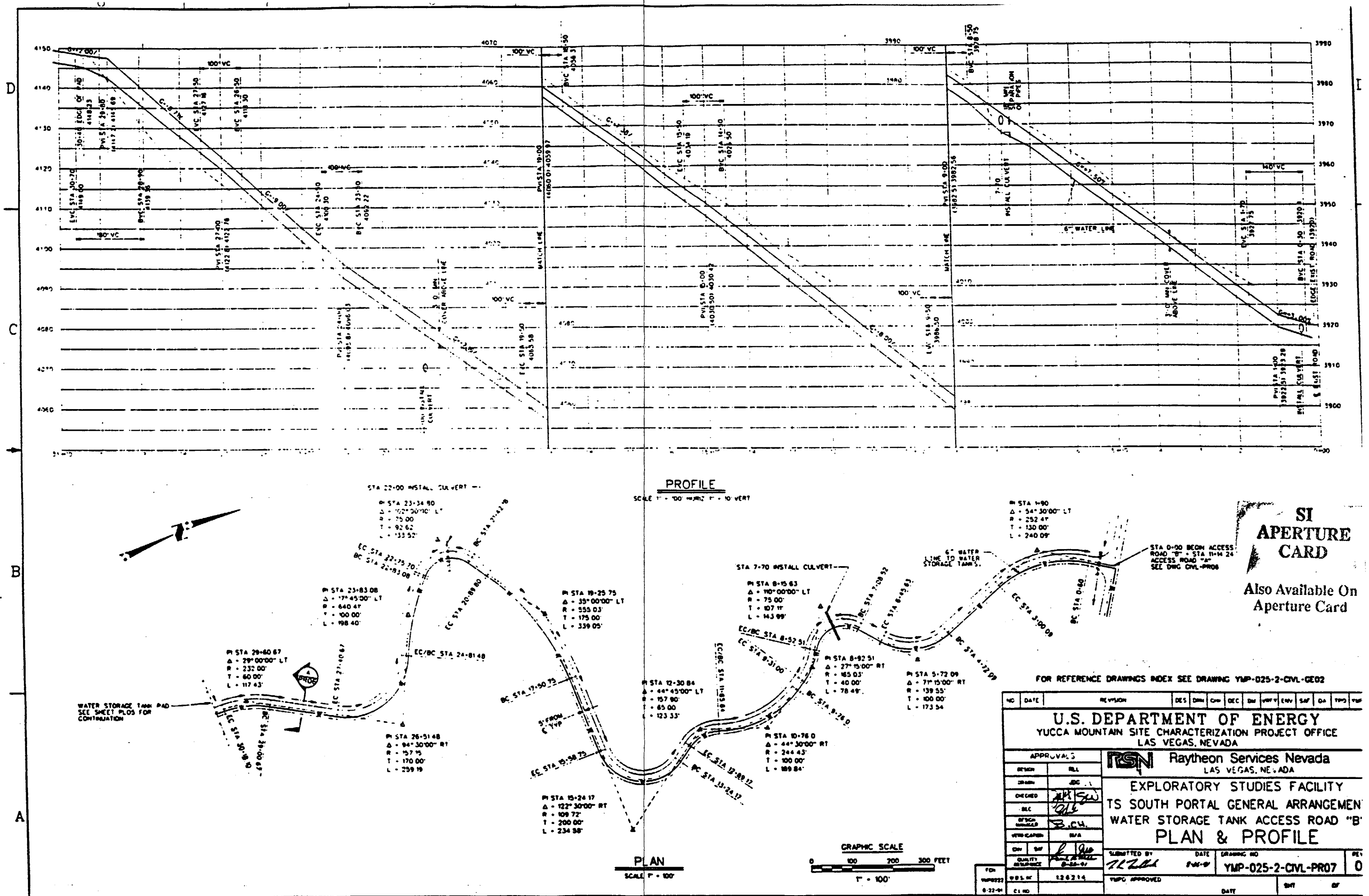
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
WATER STORAGE TANK ACCESS ROAD "A"
PLAN & PROFILE

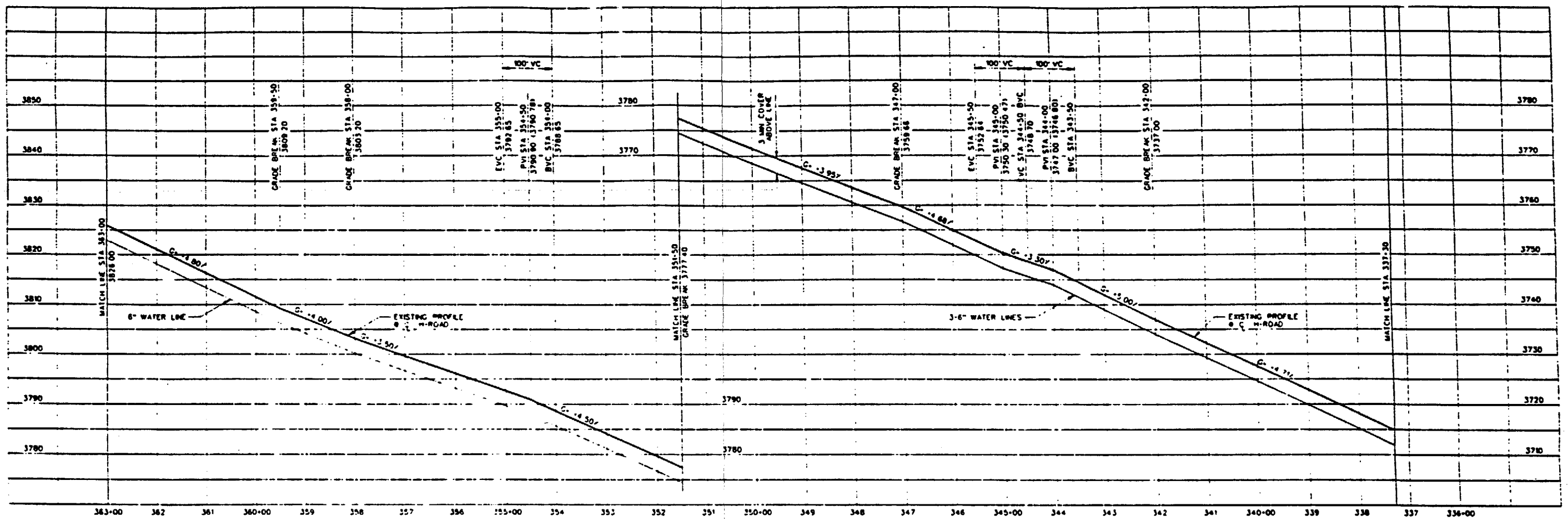
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-CIVL-PR06 | REV. 0

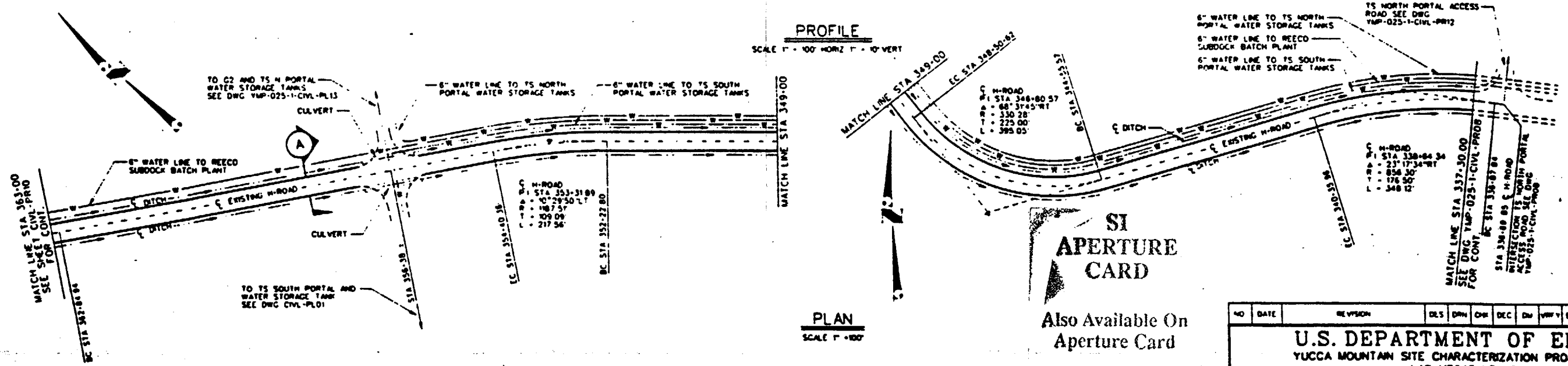
YMPO APPROVED | DATE | SHT | OF

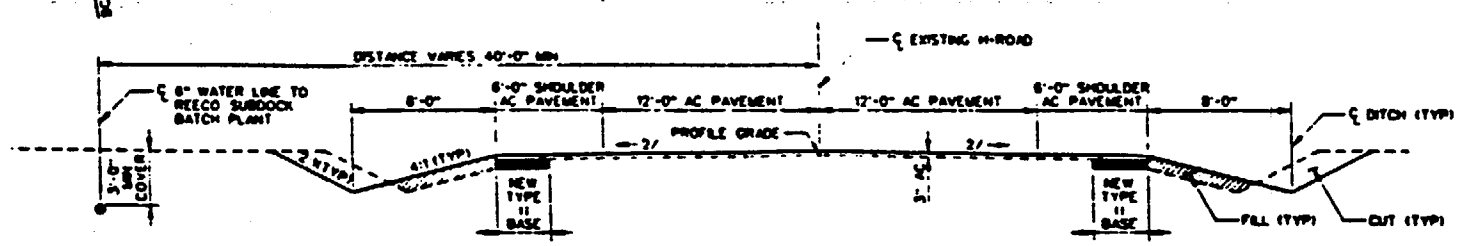
9305250071 - 16



9305250071 - 17







TYPICAL ROAD SECTION (A)
SCALE 1" = 5'

9305250071-18

FOR REFERENCE DRAWING INDEX SEE YMP-025-2-CIVL-GE02

GRAPHIC SCALE
0 100 200 300 FEET
1" = 100'

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	EMS	QA	TPO

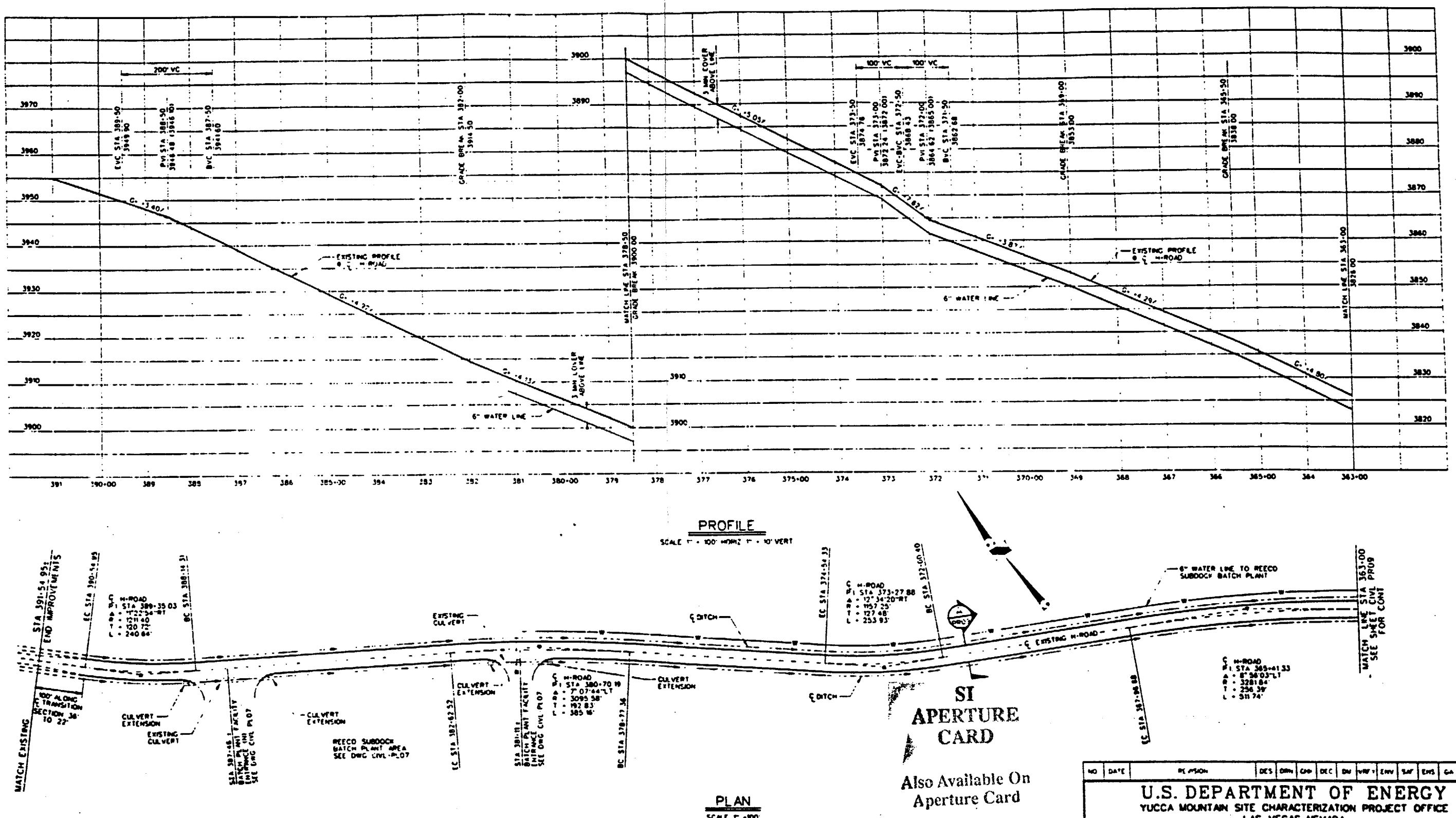
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WTM
DRAWN	FE
CHECKED	
DEC	
DESIGN MANAGER	B.CH
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	
WBS NO	1.2.8.2.1.4
C.I. NO	

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL-GENERAL ARRANGEMEN
H-ROAD IMPROVEMENTS
PLAN AND PROFILE

SUBMITTED BY | DATE | DRAWING NO: YMP-025-2-CIVL-PR09 | REV: C
YMPO APPROVED | DATE | SHT | OF



SI APERTURE CARD

Also Available On Aperture Card

9305250071 -19

FOR REFERENCE DRAWING INDEX SEE YMP-025-2-CIVL-GE02

GRAPHIC SCALE

0 100 200 300 FEET

1" = 100'

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRF'T	ENV	SAF	ENS	GA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WTM
DRAWN	FE
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

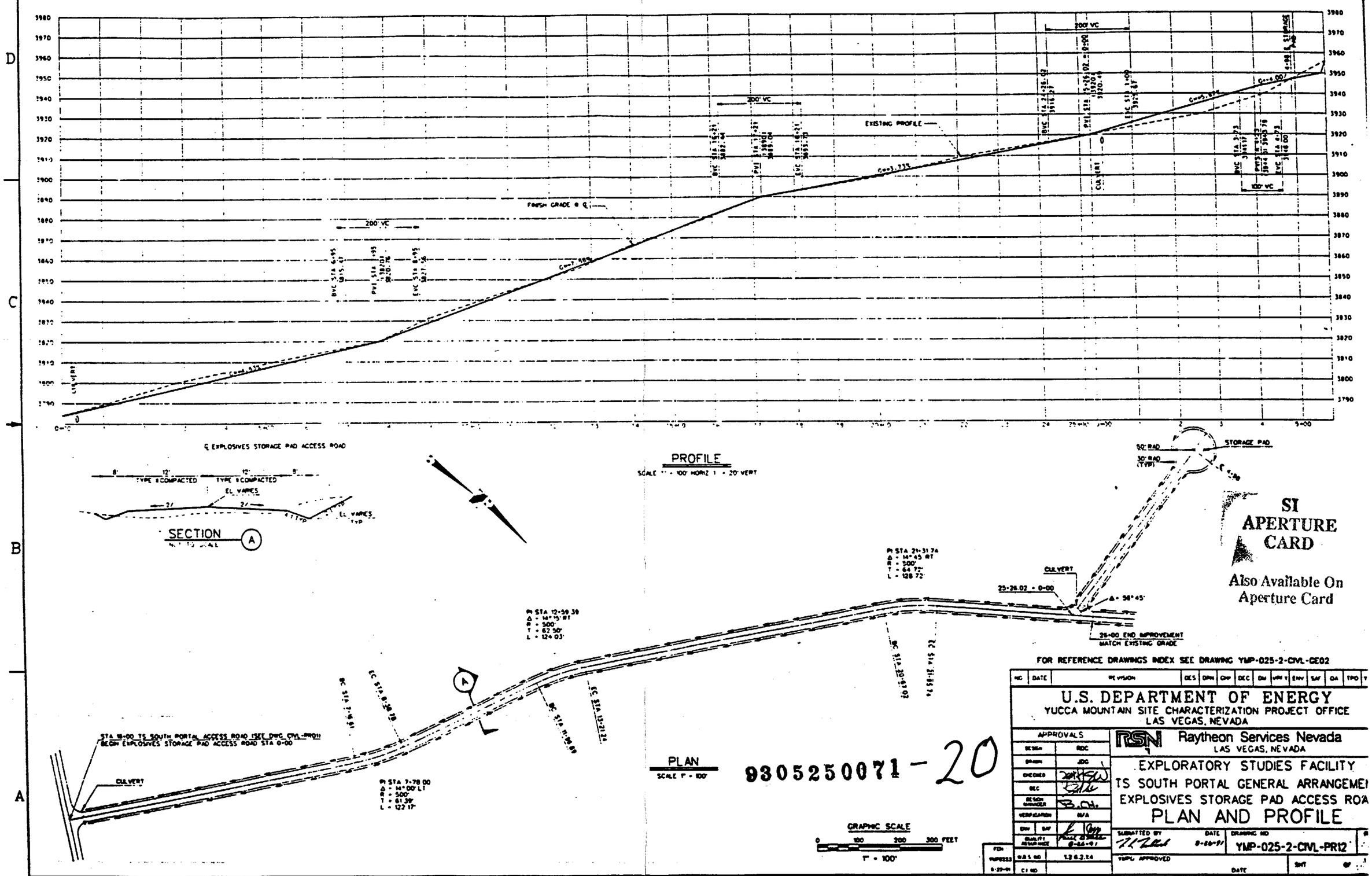
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL-GENERAL ARRANGEMEN
H-ROAD IMPROVEMENTS
PLAN AND PROFILE

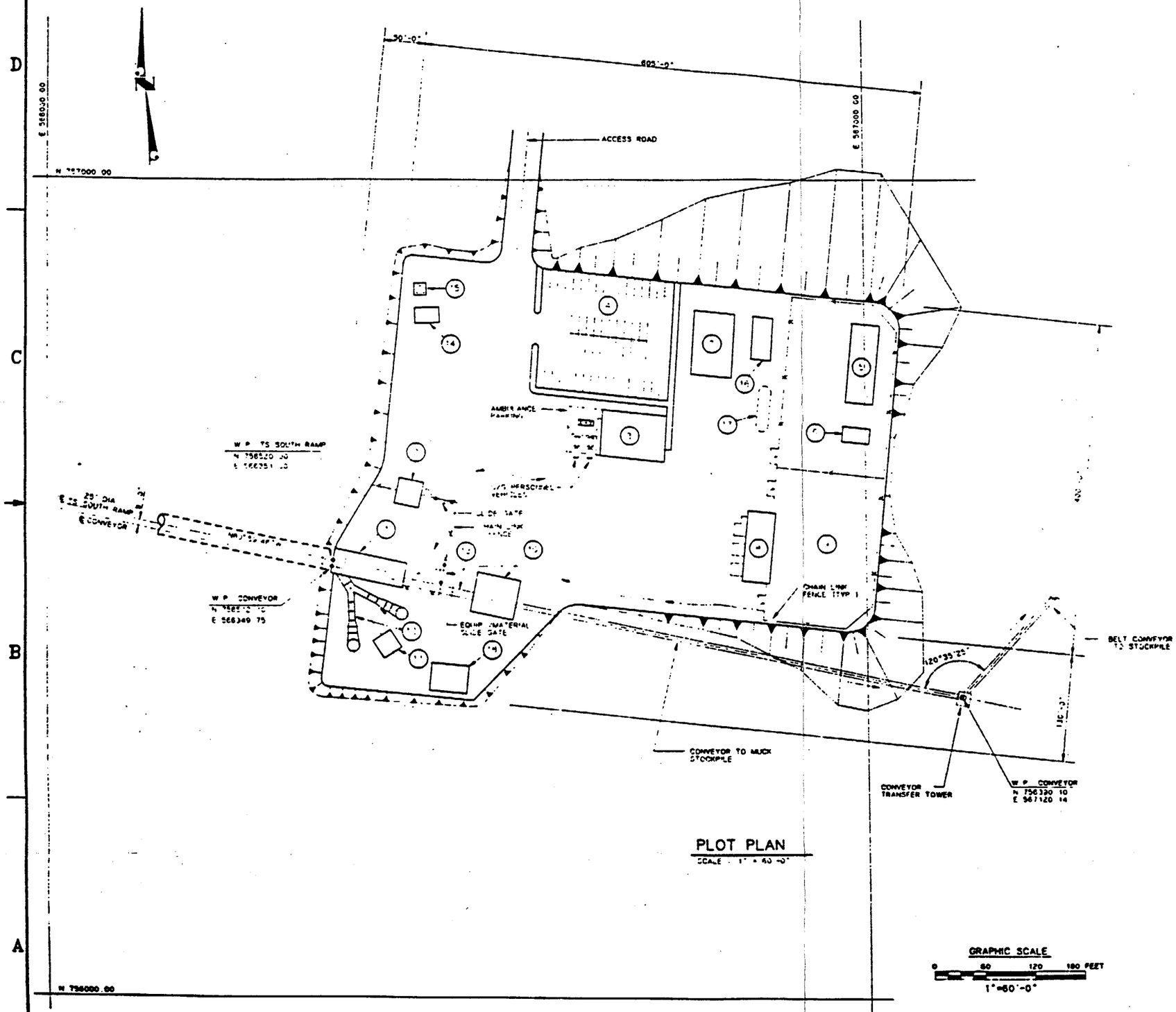
SUBMITTED BY | DATE | DRAWING NO: YMP-025-2-CIVL-PR10

YMPO APPROVED | DATE | SHT | OF

WBS NO 1.2.6.2.L4

C-1 NO


PROFILE
SCALE 1" = 100' HORIZ 1" = 20' VERT
EXISTING PROFILE
FINISH GRADE @ ℄
200' VC
100' VC
℄ EXPLOSIVES STORAGE PAD ACCESS ROAD
SECTION A
TYPE II COMPACTED
EL. VARIES
PLAN
SCALE 1" = 100'
STA 10+00 TS SOUTH PORTAL ACCESS ROAD (SEE DWG CIVL-PR01)
BEGIN EXPLOSIVES STORAGE PAD ACCESS ROAD STA 0+00
CULVERT
PI STA 7+78.00
Δ = 14°00' LT
R = 500'
T = 61.39'
L = 122.17'
PI STA 12+59.39
Δ = 14°15' RT
R = 500'
T = 62.50'
L = 124.03'
PI STA 21+31.74
Δ = 14°45' RT
R = 500'
T = 64.72'
L = 128.72'
25+26.02 = 0+00
Δ = 56°45'
25+00 END IMPROVEMENT
MATCH EXISTING GRADE
STORAGE PAD
50' RAD
30' RAD (TYP)
GRAPHIC SCALE
0 100 200 300 FEET
1" = 100'
SI APERTURE CARD
Also Available On Aperture Card
FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA
APPROVALS
Raytheon Services Nevada
LAS VEGAS, NEVADA
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMEI
EXPLOSIVES STORAGE PAD ACCESS ROA
PLAN AND PROFILE
YMP-025-2-CIVL-PR12
9305250071-20



PLOT PLAN

SCALE : 1" = 60'-0"

GRAPHIC SCALE

0 60 120 180 FEET

1"=60'-0"

LEGEND

1. SOUTH PORTAL AIRLOCK BLDG.
2. PORTAL CONTROL CENTER BLDG.
3. CHANGE HOUSE BLDG
4. EMPL PARKING AREA (50 CARS)
5. TRANSFORMER PAD
6. ELECTRICAL SUBSTATION CONTROL BLDG.
7. ELECTRICAL SWITCHGEAR BLDG.
8. SHOP / WAREHOUSE BLDG.
9. OPEN STORAGE AREA
10. CONVEYOR DRIVE AND TRANSFER BLDG
11. VENT FANS HYDRAULIC CONTROL BLDG.
12. VENTILATION FANS
13. BELT CONVEYOR STEEL TUBE GALLERY
14. MICROWAVE COMMUNICATION BLDG.
15. MICROWAVE COMMUNICATION TOWER
16. GENERATOR PAD
17. UNDERGROUND FUEL STORAGE TANK
18. AIR COMPRESSOR PAD

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

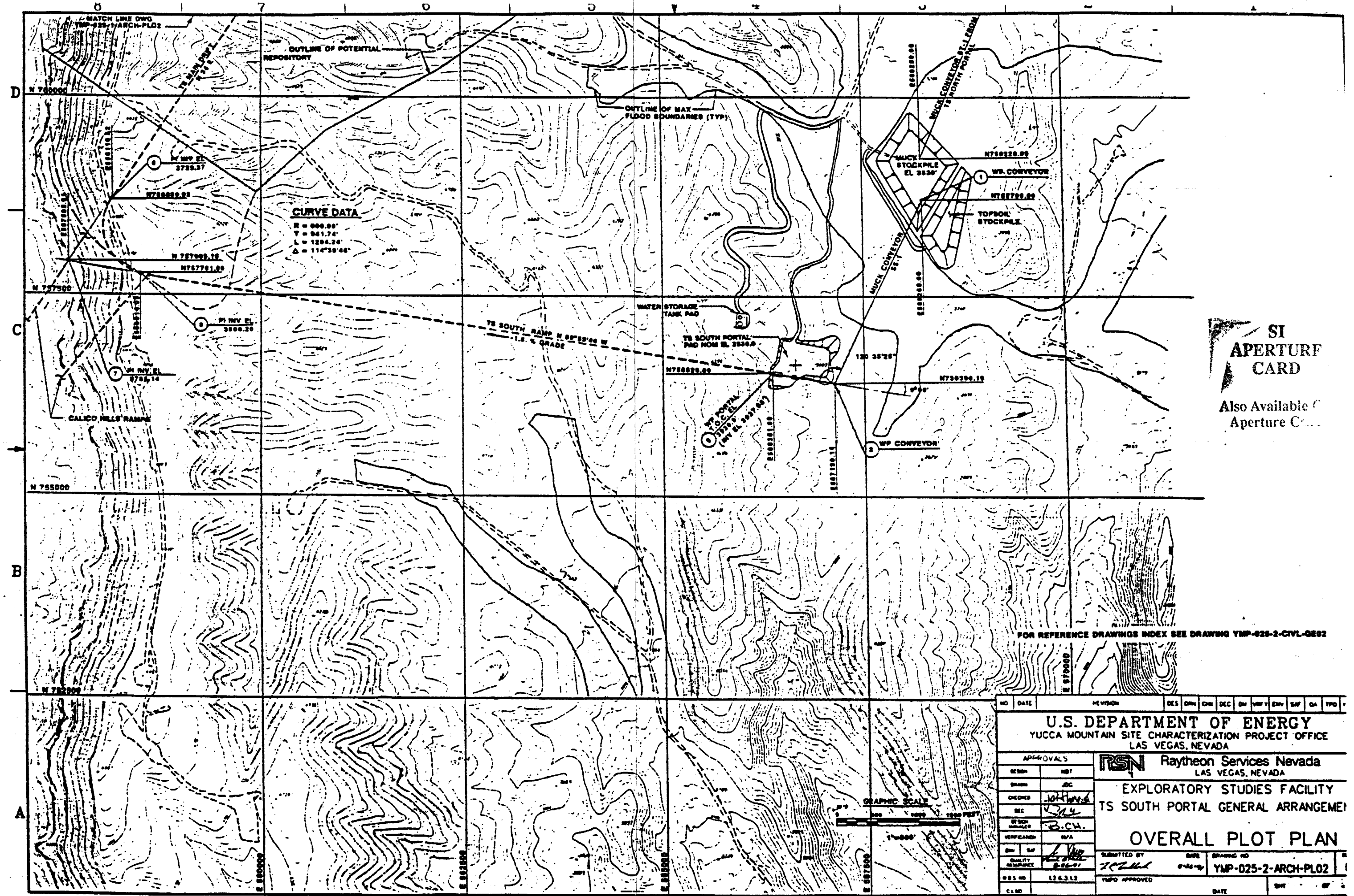
APPROVALS	
DESIGN	PZ
DRAWN	TAN / RFC
CHECKED	
DEC	
DESIGN MANAGER	B.CH
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-22-01

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SURFACE
PLOT PLAN

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ARCH-PL01 | REV. 0

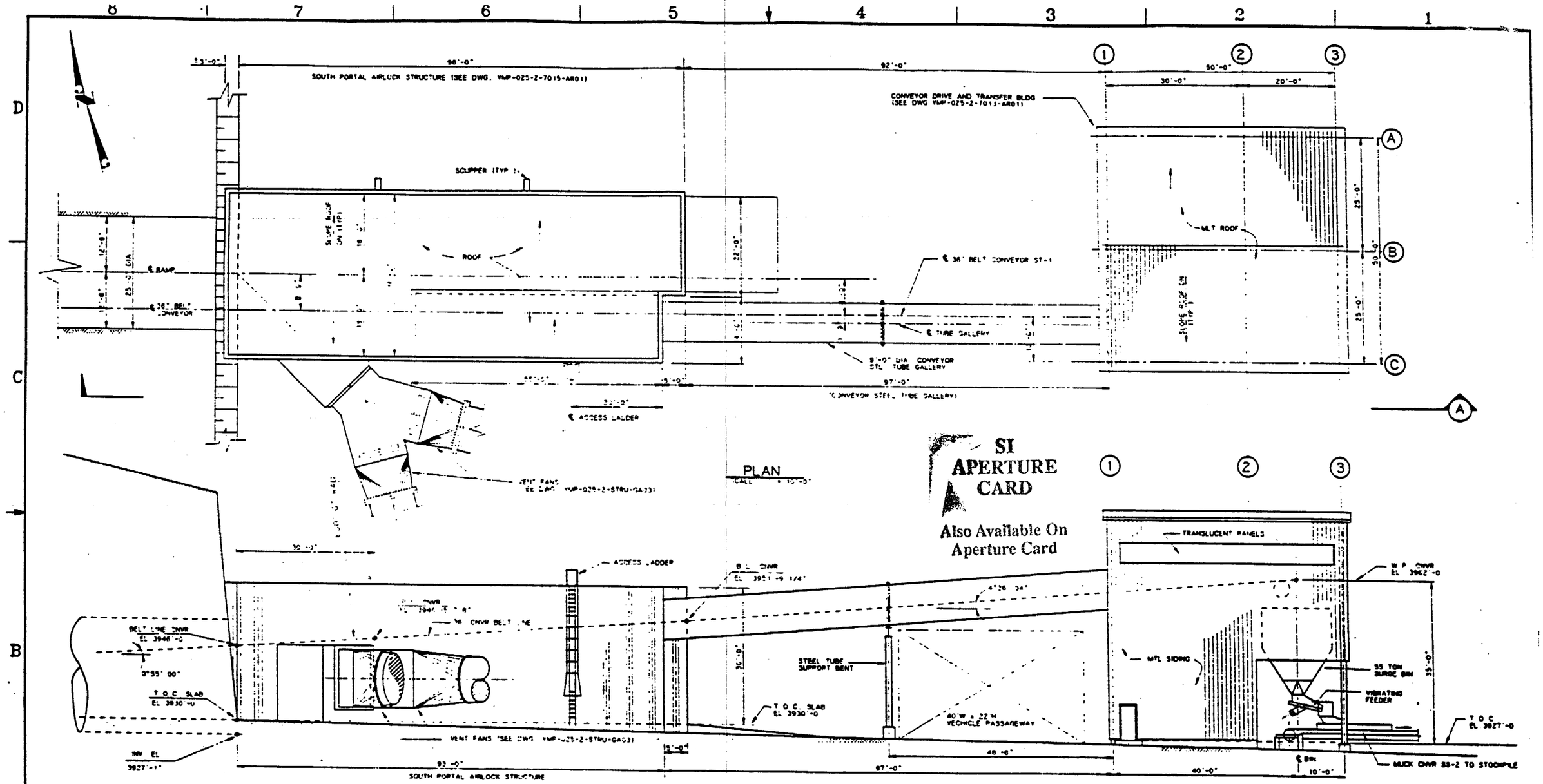
YMPO APPROVED | DATE | SHT | OF

9305250071-21



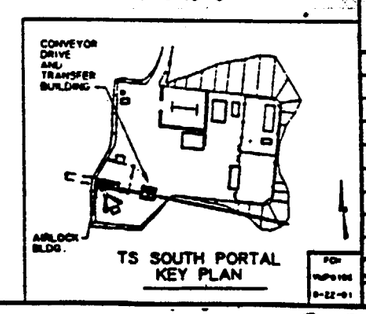
SI APERTURE CARD
Also Available On Aperture Card

9305250071-22



SI APERTURE CARD
Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02



TS SOUTH PORTAL KEY PLAN

NO	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	NBT
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-97

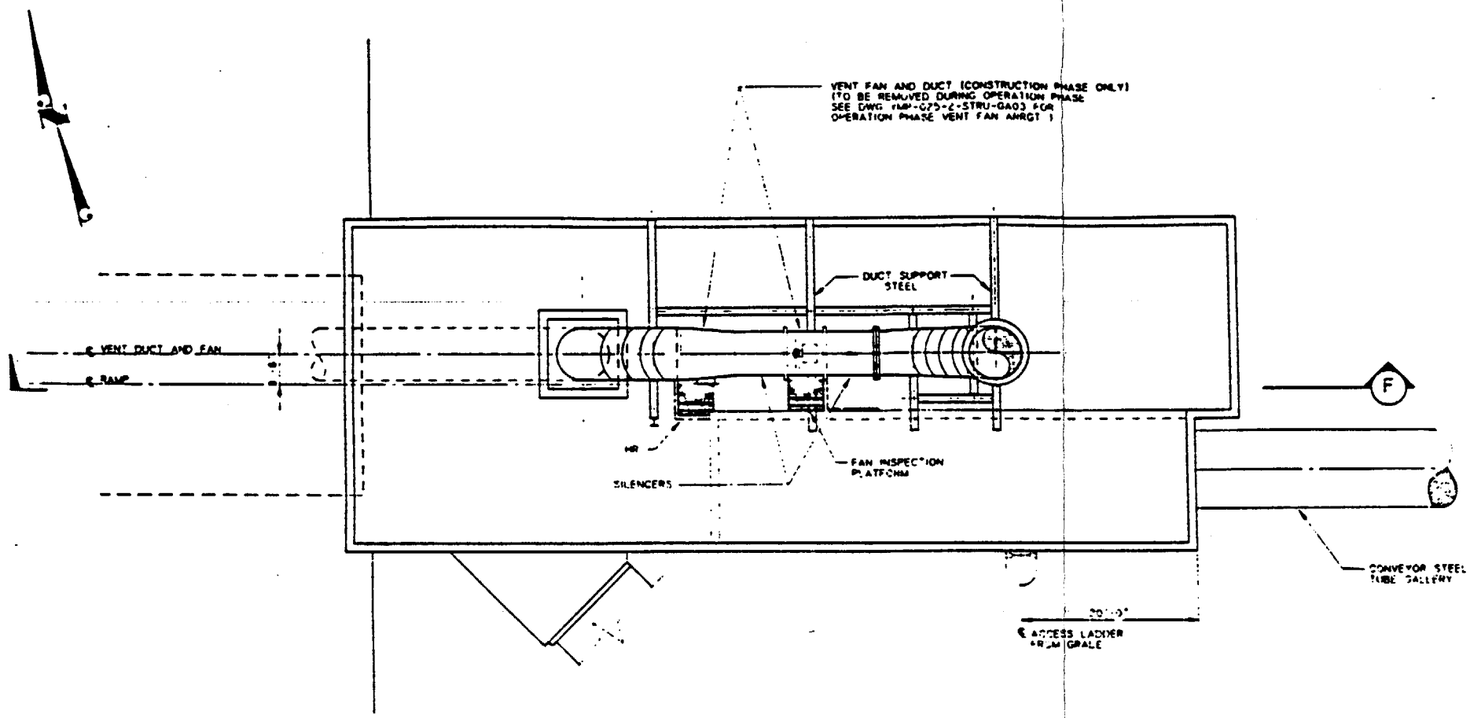
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
PORTAL-CONVEYOR
PLAN AND ELEVATION

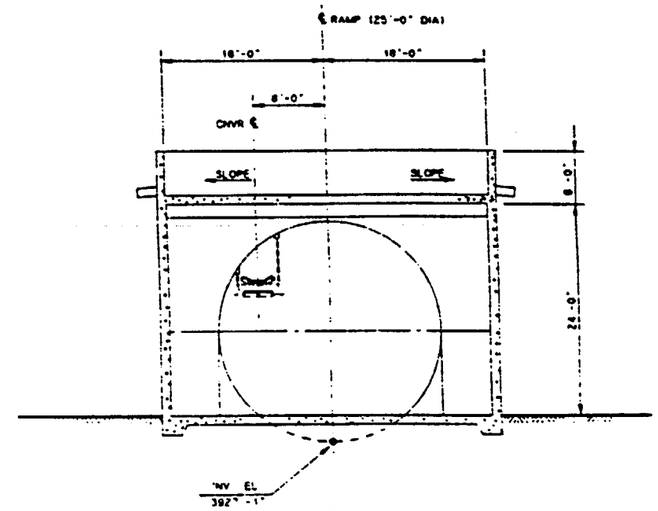
SUBMITTED BY	DATE	DRAWING NO.	REV
	8-26-97	YMP-025-2-STRU-GA01	0

YMPO APPROVED DATE SHT OF

9305250071-23

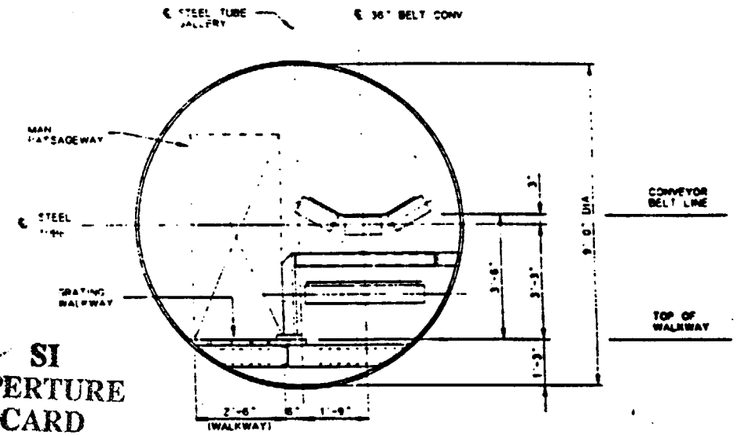


ROOF PLAN



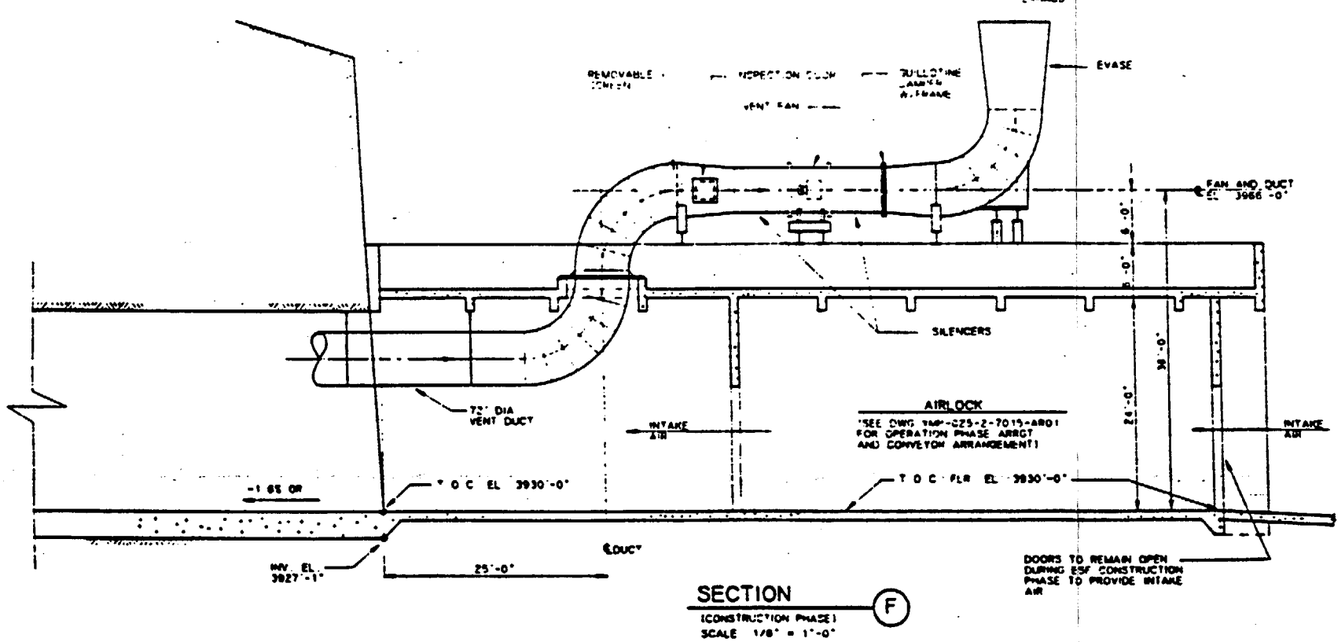
SECTION D

SCALE 1/8" = 1'-0" 7015 ARG1



SECTION F

SCALE 1/2" = 1'-0" 7015 ARG1



SECTION F

(CONSTRUCTION PHASE)

SCALE 1/8" = 1'-0"

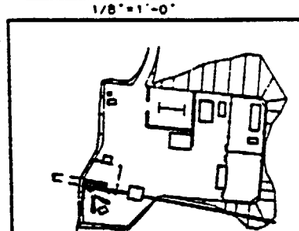
SI APERTURE CARD

Also Available On Aperture Card

GRAPHIC SCALE

0 4 8 16 24 FEET

1/8" = 1'-0"



AIRLOCK BLDG CONSTR/OPER PHASE

TS SOUTH PORTAL KEY PLAN

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE

LAS VEGAS, NEVADA

Raytheon Services Nevada

LAS VEGAS, NEVADA

APPROVALS	
DESIGN	NBT
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY

TS SOUTH PORTAL GENERAL ARRANGEMENT

PORTAL CONSTR/OPER. PHASE

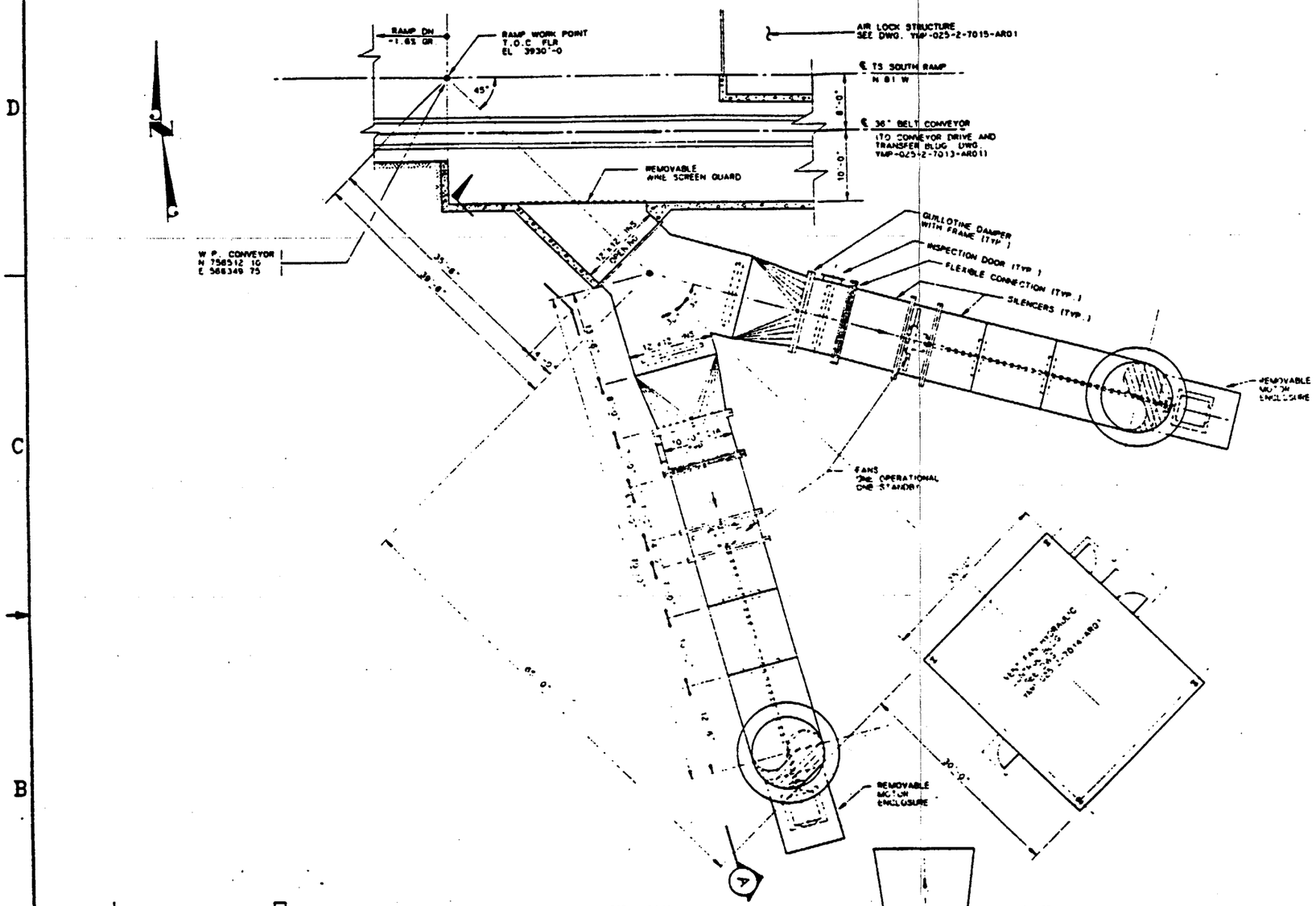
PLAN AND SECTIONS

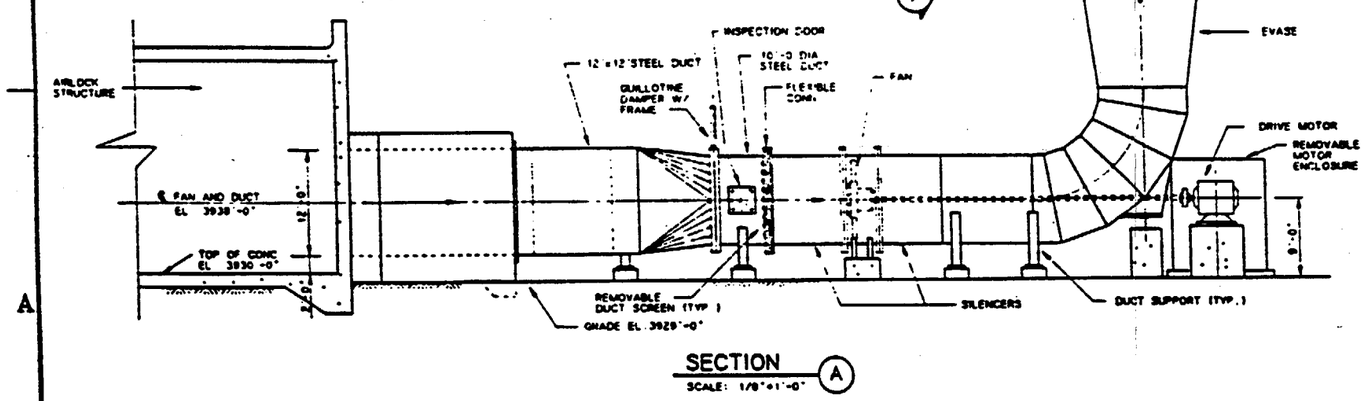
SUBMITTED BY	DATE	DRAWING NO.	REV
	9-26-91	YMP-025-2-STRU-GA02	0

YMPO APPROVED DATE SHT OF

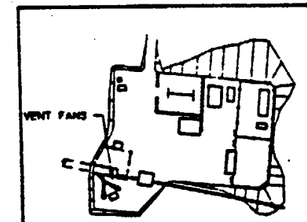
9305250071-24

Plotted: Thu Aug 22 03:19:33 1991, PDT Part name: YMP-3195 Dwg:





SECTION (A)
SCALE: 1/8"=1'-0"



TS SOUTH PORTAL
KEY PLAN

SI
APERTURE
CARD

Also Available On
Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

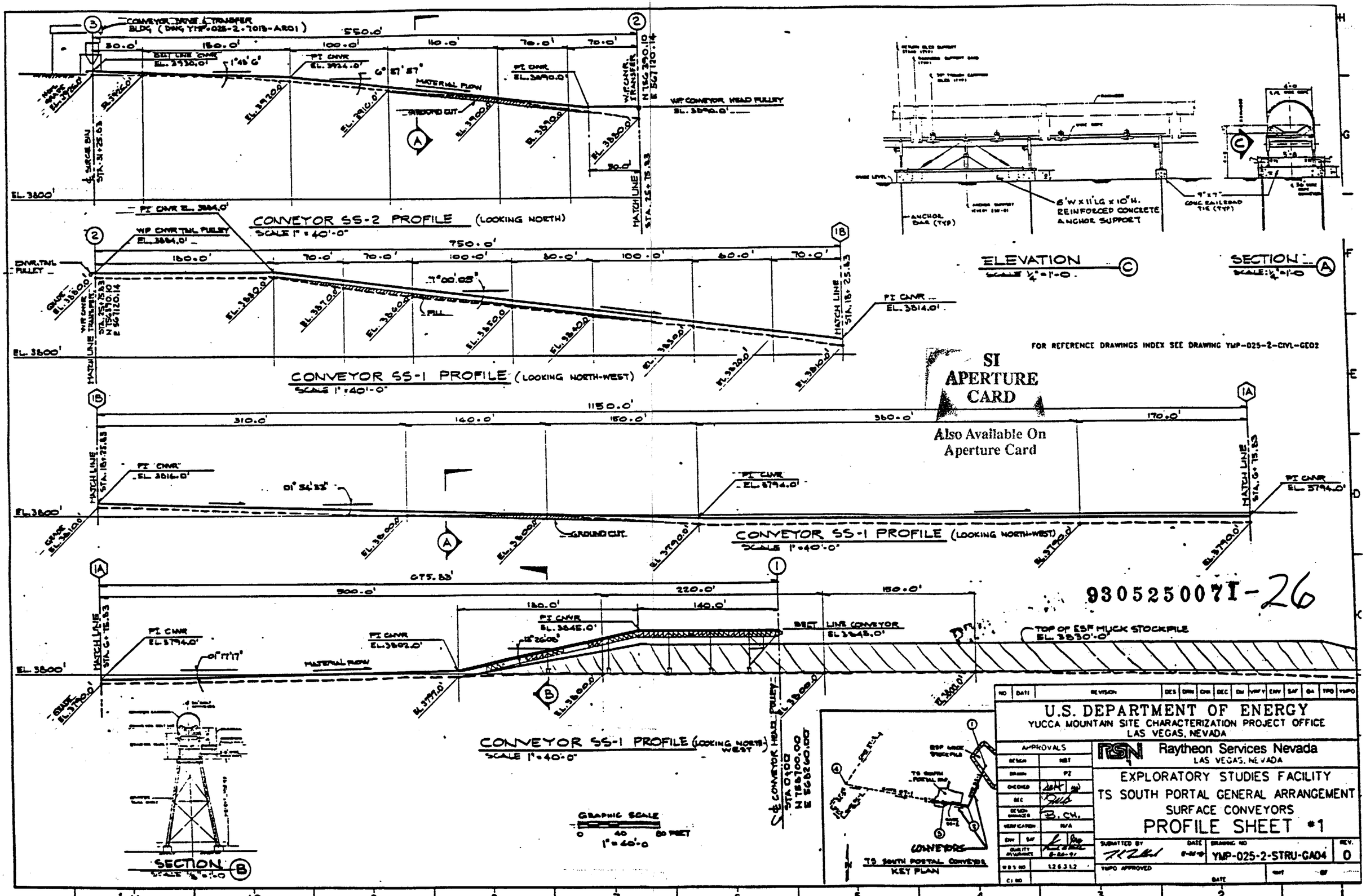
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	NBT
DRAWN	TAN
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
VENTILATION FANS
PLAN AND SECTION

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-STRU-GA03 | REV. 0
YMPO APPROVED | DATE | SHT | OF

9305250071-25


CONVEYOR DRIVE & TRANSFER BLDG (DWG YMP-025-2-7018-AR01)
CONVEYOR SS-2 PROFILE (LOOKING NORTH)
SCALE 1" = 40'-0"
CONVEYOR SS-1 PROFILE (LOOKING NORTH-WEST)
SCALE 1" = 40'-0"
CONVEYOR SS-1 PROFILE (LOOKING NORTH-WEST)
SCALE 1" = 40'-0"
CONVEYOR SS-1 PROFILE (LOOKING NORTH-WEST)
SCALE 1" = 40'-0"
MATERIAL FLOW
GROUND CUT
FILL
TOP OF ESF MUCK STOCKPILE EL. 3830'-0"
WP CONVEYOR HEAD PULLEY
HATCH LINE
GRAPHIC SCALE
1" = 40'-0"
ELEVATION
SCALE 1/4" = 1'-0"
SECTION
SCALE: 1/4" = 1'-0"
ANCHOR BAR (TYP)
6'W x 11'LG x 10"H. REINFORCED CONCRETE ANCHOR SUPPORT
CONC. RAILROAD TIE (TYP)
SECTION
SCALE 1/8" = 1'-0"
TS SOUTH PORTAL CONVEYOR
KEY PLAN
FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02
SI APERTURE CARD
Also Available On Aperture Card
9305250071
I-26
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA
Raytheon Services Nevada
LAS VEGAS, NEVADA
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SURFACE CONVEYORS
PROFILE SHEET #1
YMP-025-2-STRU-GA04
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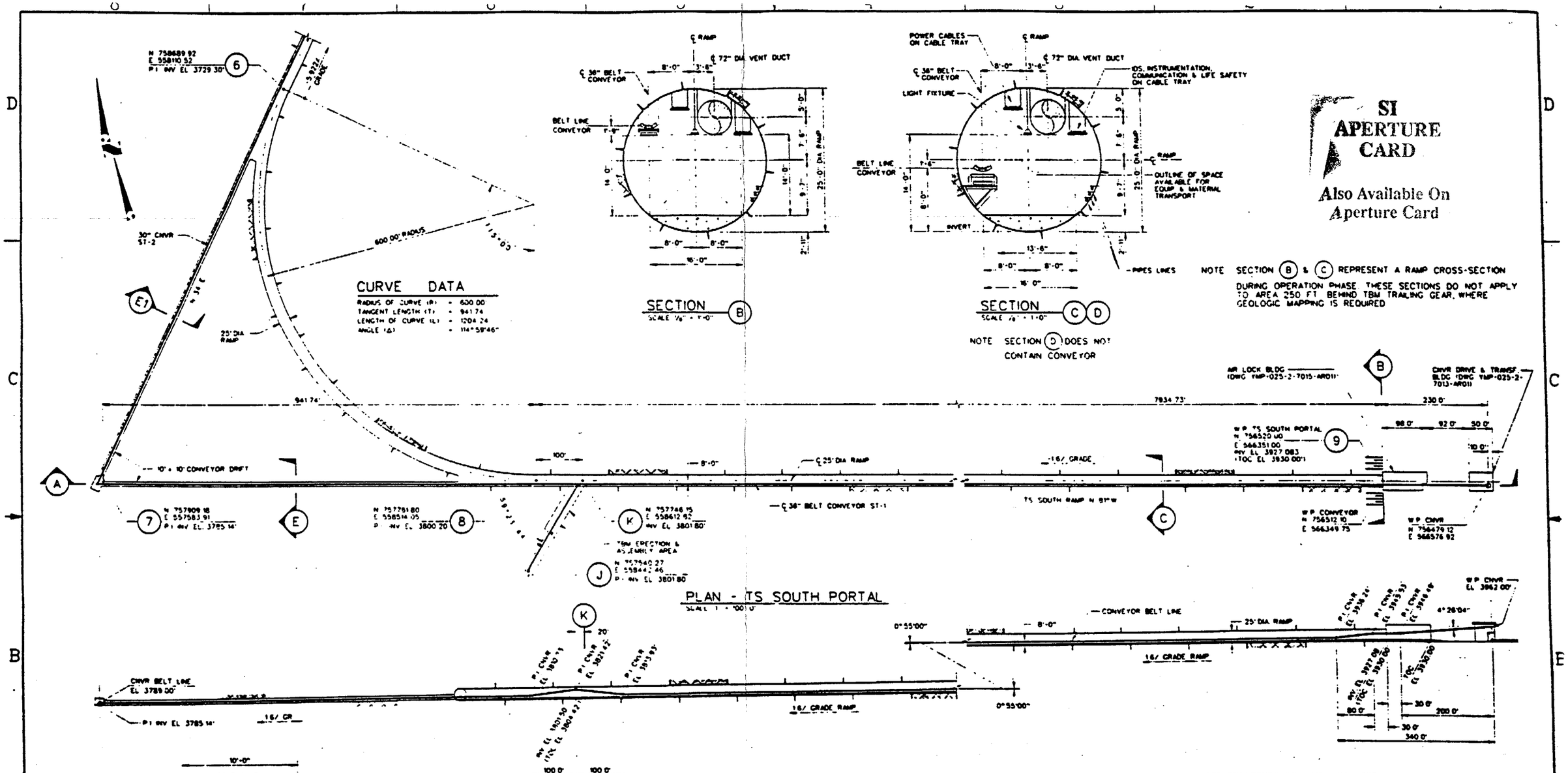


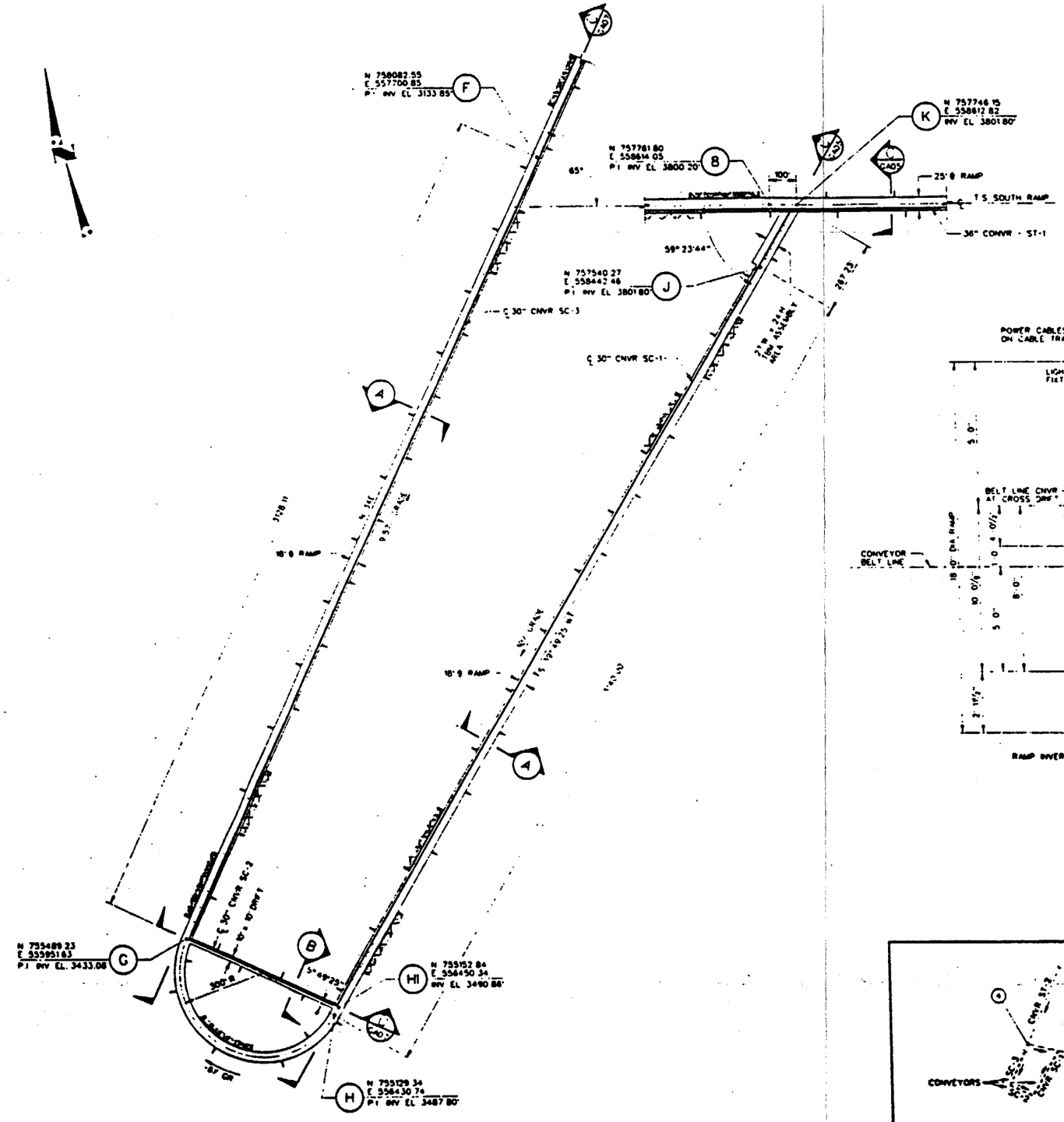
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
UNDERGROUND CONVEYORS
PROFILE SHEET # 2

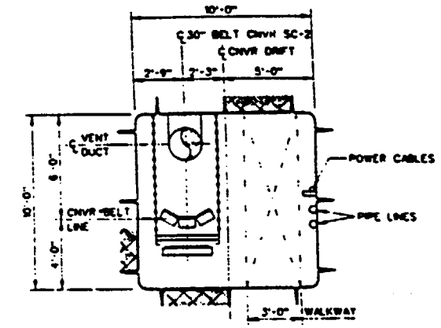
SUBMITTED BY	DATE	DRAWING NO	REV
		YMP-025-2-STRU-GA05	0

9305250071-27

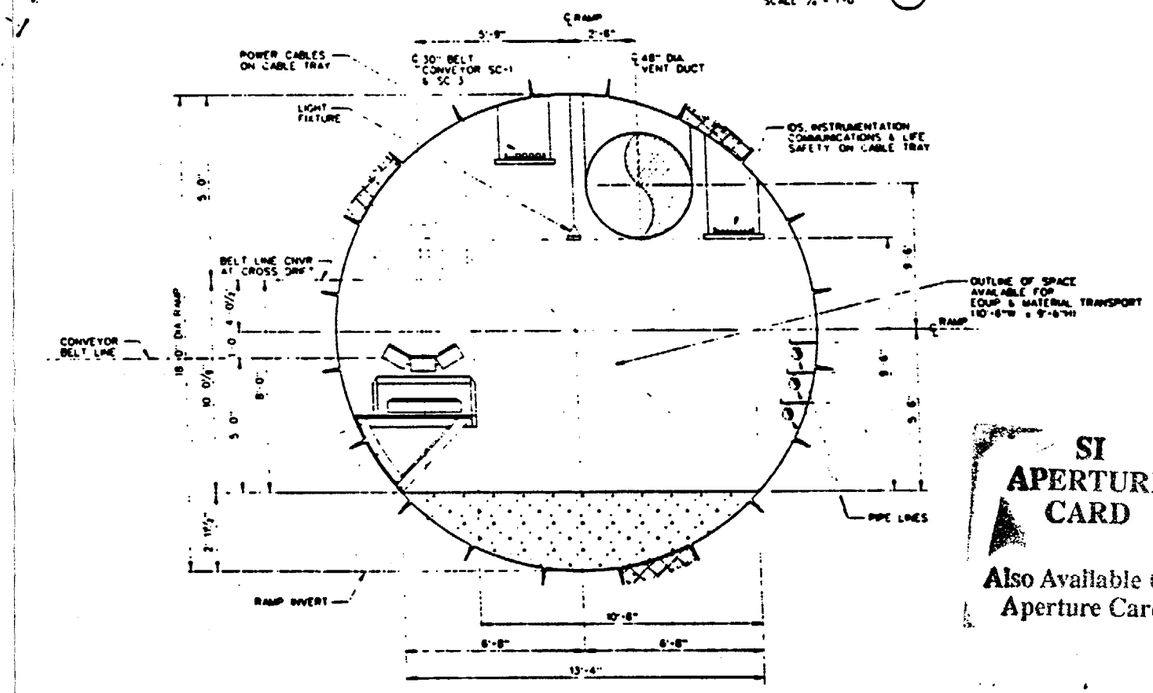


PLAN - CALICO HILLS - SOUTH RAMP
SCALE 1" = 200'

GRAPHIC SCALE
0 200 400 600 FEET
1" = 200'



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

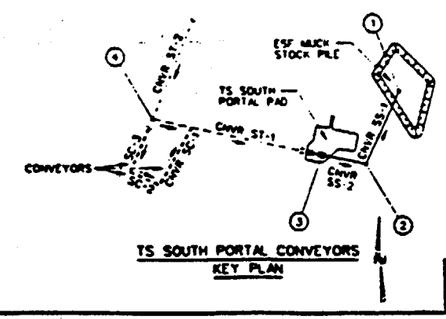


TYPICAL 18'-0" DIA. RAMP CROSS-SECTION A
SCALE 1/4" = 1'-0"

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWING INDEX SEE YMP-025-2-CIVL-GE02



TS SOUTH PORTAL CONVEYORS
KEY PLAN

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRF'D	ENV	SAF	EMS	QA	YPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	NBT
DRAWN	PE
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

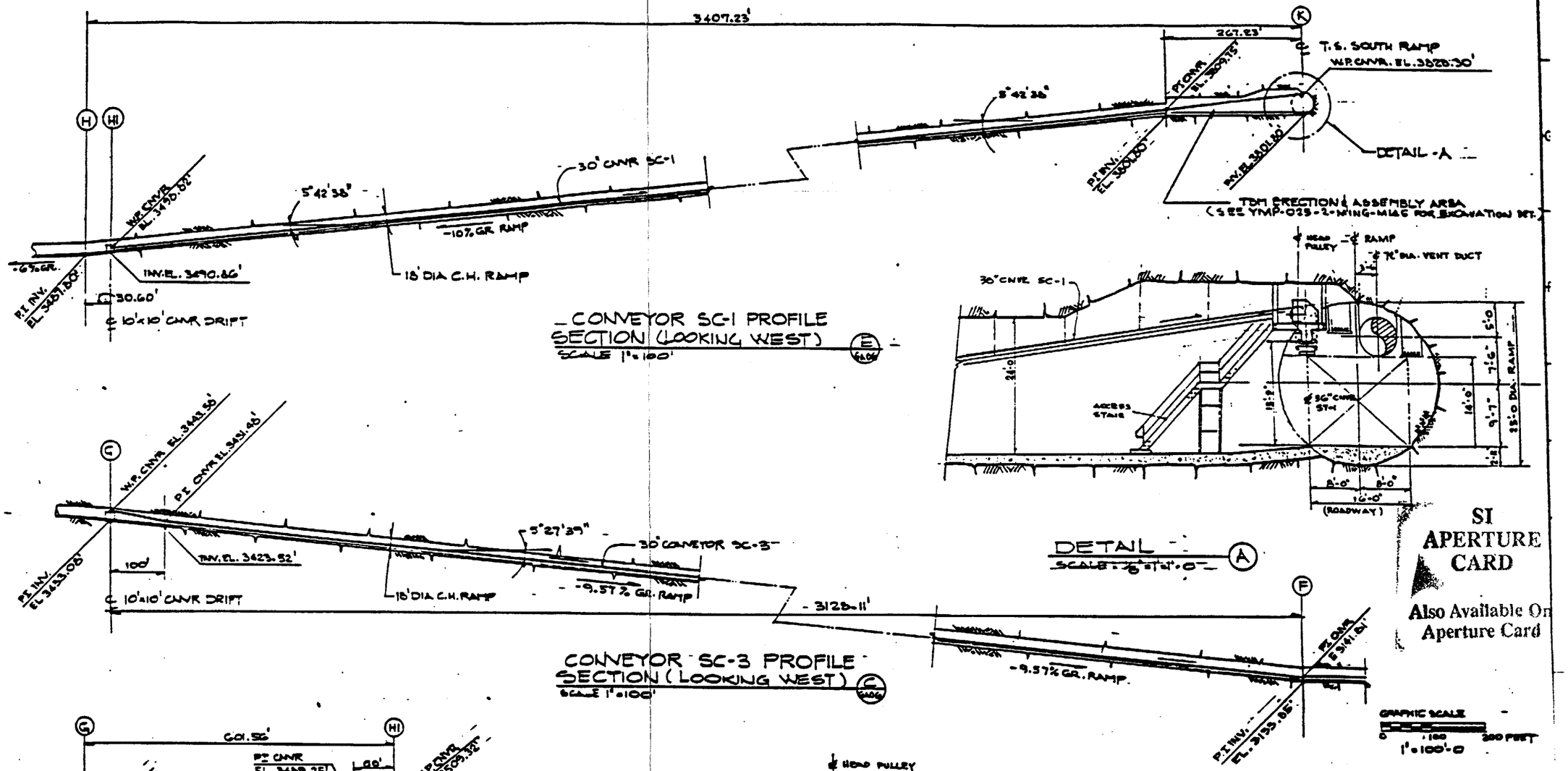
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
UNDERGROUND CONVEYORS
PROFILE SHEET # 3

SUBMITTED BY	DATE	DRAWING NO	REV
		YMP-025-2-STRU-GA06	0

YMPO APPROVED DATE SHT OF

FCN YMP0027 08 27 91
WBS NO 1.2.8.3.1.2
CI NO

9305250071-28



SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-1-CIVL-GE02

9305250071-29

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	S&F	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION-PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	NBT
DRAWN	PZ
CHECKED	
REC	
DESIGN ENGINEER	B.CH.
VERIFICATION	N/A
ENV / S&F	
QUALITY ASSURANCE	8-26-9
WBS NO	1.2.6.3.1.2
CI NO	

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
UNDERGROUND CONVEYORS
PROFILE SHEET #4

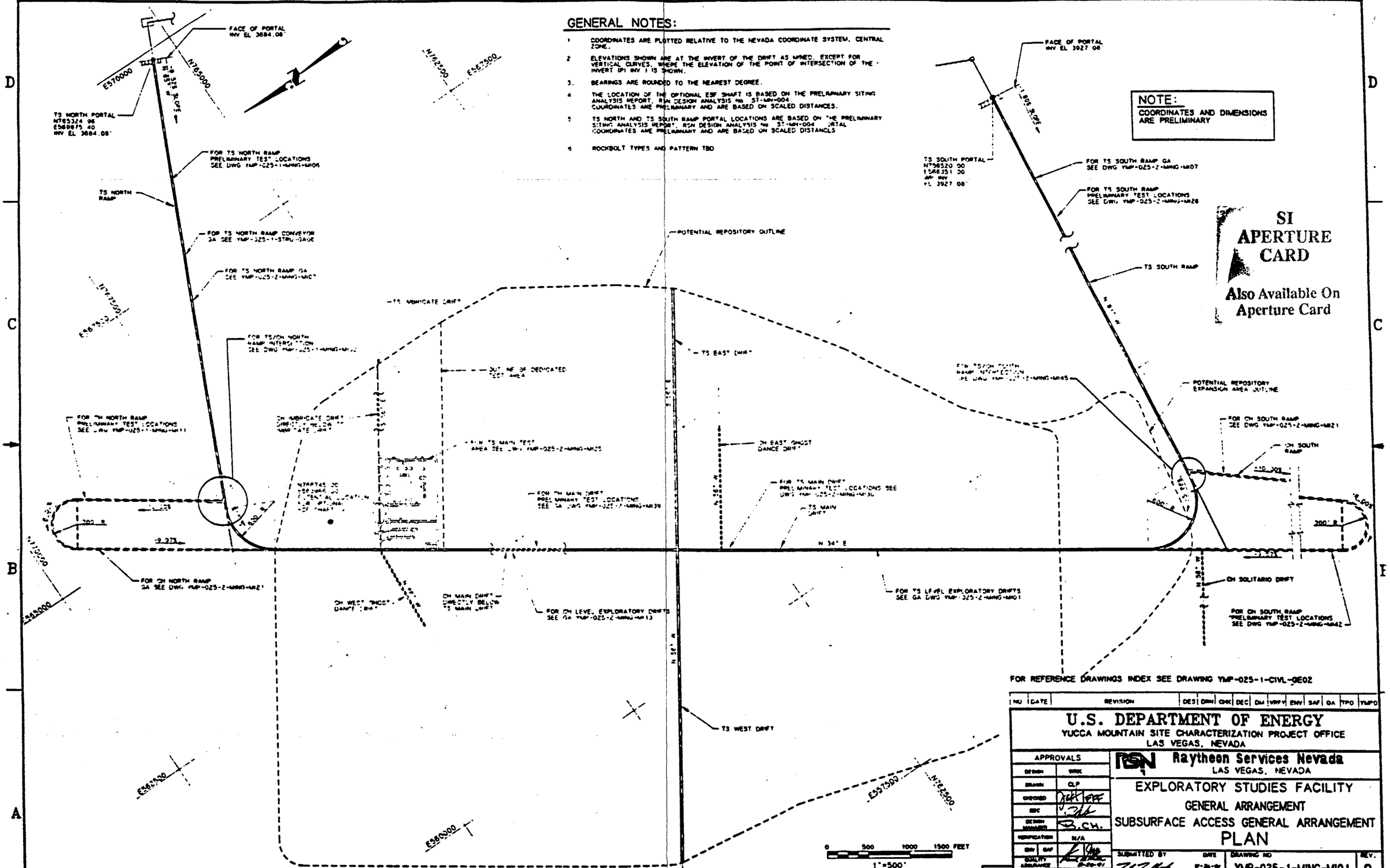
SUBMITTED BY	DATE	DRAWING NO	REV.
	8-26-9	YMP-025-2-STRU-GA07	0

YMPO APPROVED DATE SHT OF

GENERAL NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI) INV 1 IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. THE LOCATION OF THE OPTIONAL ESF SHAFT IS BASED ON THE PRELIMINARY SITING ANALYSIS REPORT, RSN DESIGN ANALYSIS No. ST-MN-004. COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES.
5. TS NORTH AND TS SOUTH RAMP PORTAL LOCATIONS ARE BASED ON THE PRELIMINARY SITING ANALYSIS REPORT, RSN DESIGN ANALYSIS No. ST-MN-004. PORTAL COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES.
6. ROCKBOLT TYPES AND PATTERN TBD

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



SUBSURFACE ACCESS GENERAL ARRANGEMENT PLAN
SCALE 1"=500'

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-1-CIVL-GE02

NO	DATE	REVISION	DES	DRW	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-20-01

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
SUBSURFACE ACCESS GENERAL ARRANGEMENT
PLAN

SUBMITTED BY	DATE	DRAWING NO	REV.
	8-24-01	YMP-025-1-MING-MI01	0

YMPO APPROVED DATE SHT OF

PCN YMP0012 8-20-01

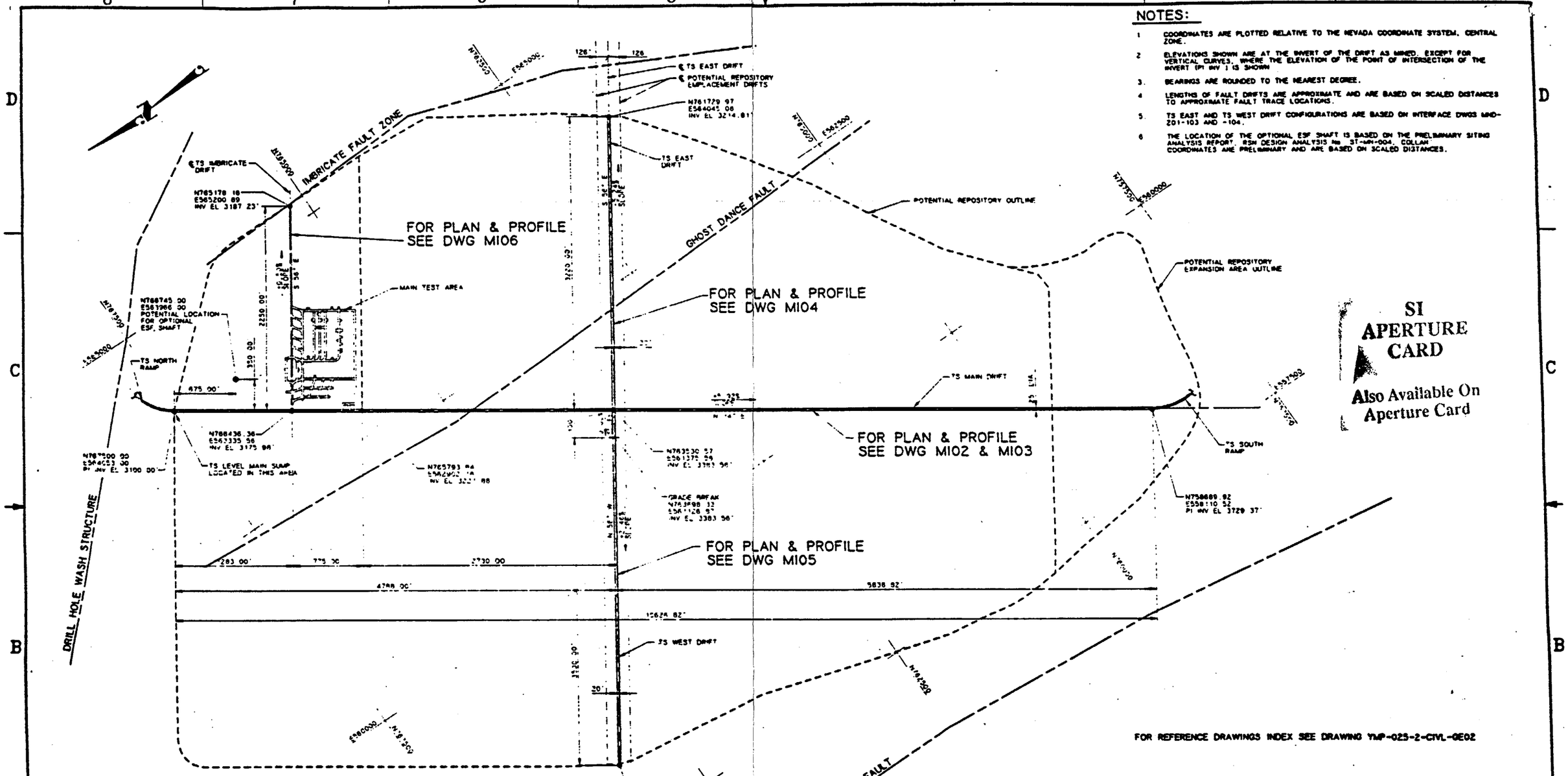
Plotted: Tue Aug 28 14:37:12 1991, PDT Part name YMP-0012.DWG

9305250071-30

SI APERTURE CARD
Also Available On Aperture Card

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS.
5. TS EAST AND TS WEST DRIFT CONFIGURATIONS ARE BASED ON INTERFACE DWGS MND-201-103 AND -104.
6. THE LOCATION OF THE OPTIONAL ESF SHAFT IS BASED ON THE PRELIMINARY SITING ANALYSIS REPORT, RSN DESIGN ANALYSIS No. ST-MN-004. COLLAR COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES.


IMBRICATE FAULT ZONE
GHOST DANCE FAULT
DRILL HOLE WASH STRUCTURE
SOLITARIO CANYON FAULT
TS IMBRICATE DRIFT
N765178.18
E565200.89
INV EL 3187.23'
FOR PLAN & PROFILE SEE DWG MI06
MAIN TEST AREA
N766745.00
E561966.00
POTENTIAL LOCATION FOR OPTIONAL ESF SHAFT
TS NORTH RAMP
TS LEVEL MAIN SUMP LOCATED IN THIS AREA
N766436.36
E563335.56
INV EL 3175.98'
N767500.00
E564053.00
PI INV EL 3100.00'
N765793.84
E562902.14
INV EL 3227.88
TS EAST DRIFT
POTENTIAL REPOSITORY EMPLACEMENT DRIFTS
N761729.97
E564045.08
INV EL 3214.81'
FOR PLAN & PROFILE SEE DWG MI04
POTENTIAL REPOSITORY OUTLINE
POTENTIAL REPOSITORY EXPANSION AREA OUTLINE
TS MAIN DRIFT
FOR PLAN & PROFILE SEE DWG MI02 & MI03
TS SOUTH RAMP
N758689.92
E558110.52
PI INV EL 3729.37'
N763530.57
E561375.59
INV EL 3383.56'
GRADE BREAK
N763988.33
E561126.57
INV EL 3383.56'
FOR PLAN & PROFILE SEE DWG MI05
TS WEST DRIFT
N765855.50
E558225.24
INV EL 3489.72'
475.00'
2250.00'
350.00'
283.00'
775.00'
2730.00'
4788.00'
5838.92'
15628.82'
1320.00'
20'
126'
126'
N765500
E564000
N766000
E564500
N767500
E565000
N768500
E565500
N769500
E566000
N770500
E566500
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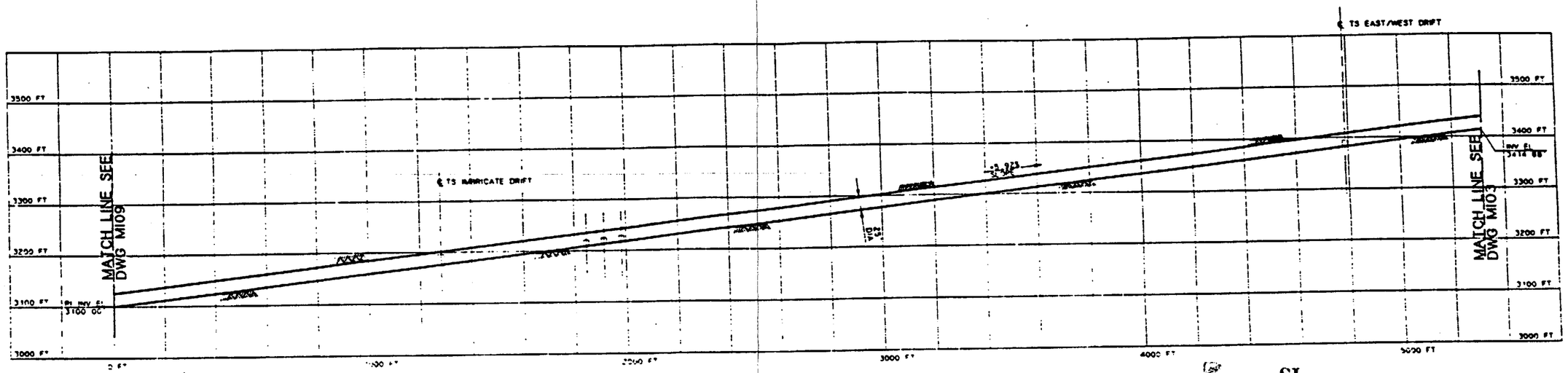
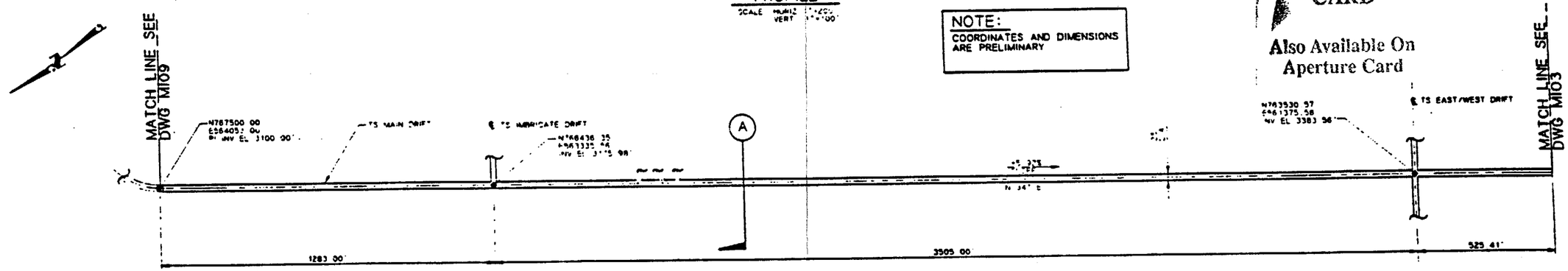


PROFILE
SCALE HORIZ 1"=200' VERT 1"=100'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

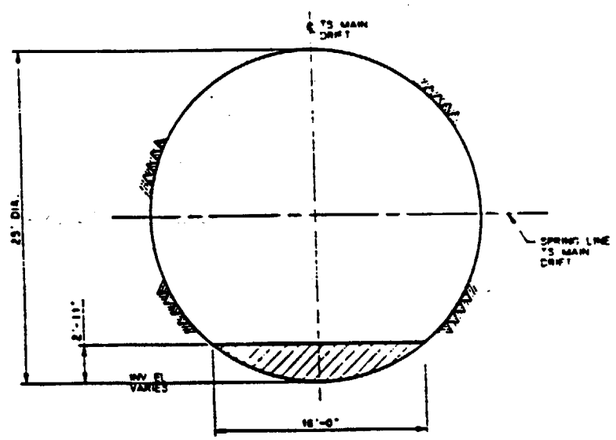
Also Available On Aperture Card



PLAN
SCALE 1"=200'

9305250071-32

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02



SECTION A
SCALE 3/16"=1'-0"

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT PI INV 1 IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

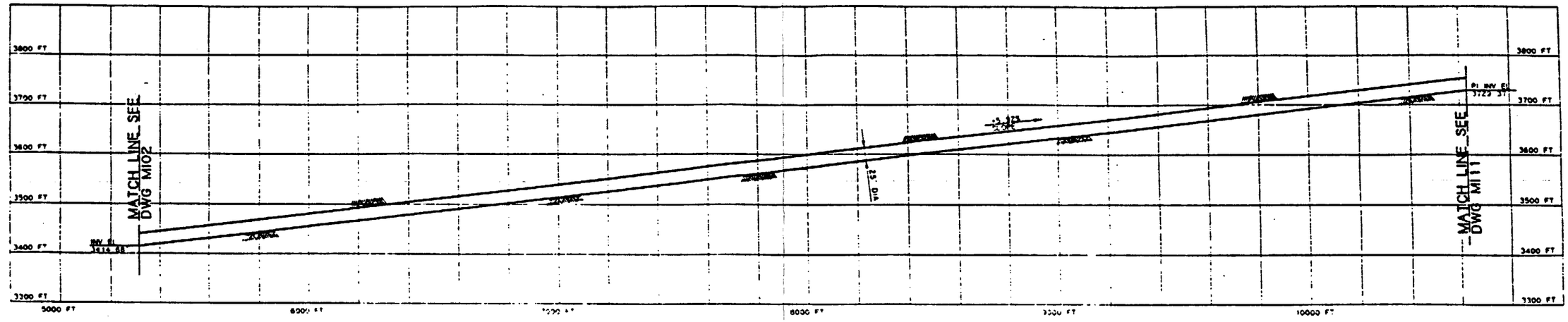
APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN DRIFT
PLAN & PROFILE, SECTION

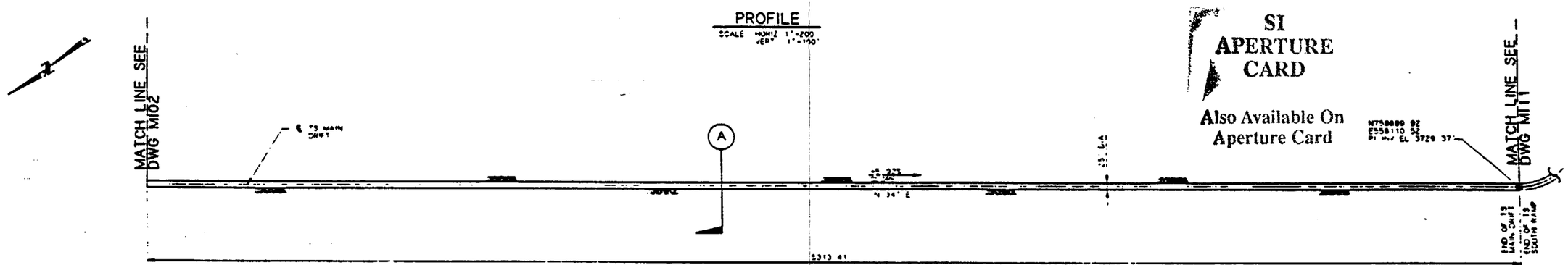
SUBMITTED BY	DATE	DRAWING NO.	REV.
		YMP-025-2-MING-M102	0

YMPO APPROVED DATE SHT OF

Plotted: Fri Aug 23 08 17 43 1991, PDT Part name YMP0128.DWG



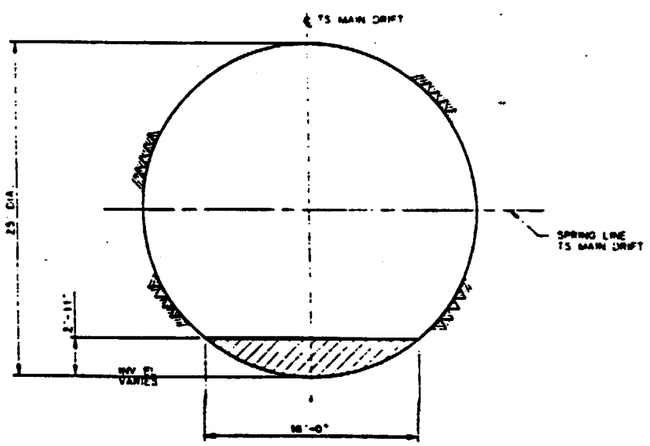
PROFILE
SCALE HORIZ 1"=200' VERT 1"=100'



PLAN
SCALE 1"=200'

SI APERTURE CARD

Also Available On Aperture Card



SECTION A
SCALE: 3/16"=1'-0"

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-33

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

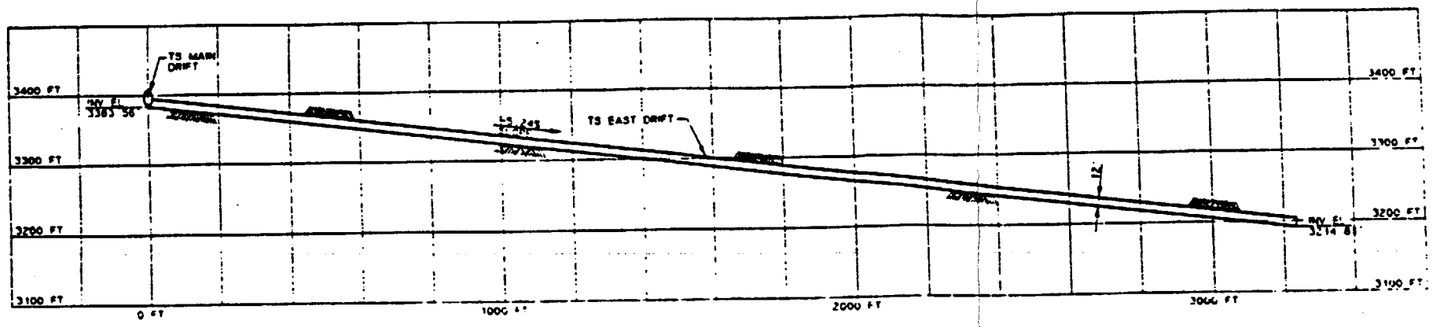
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY	DATE	DRAWING NO.	REV.
		YMP-025-2-MING-MI03	0

YMPO ACCEPTED DATE SHT OF

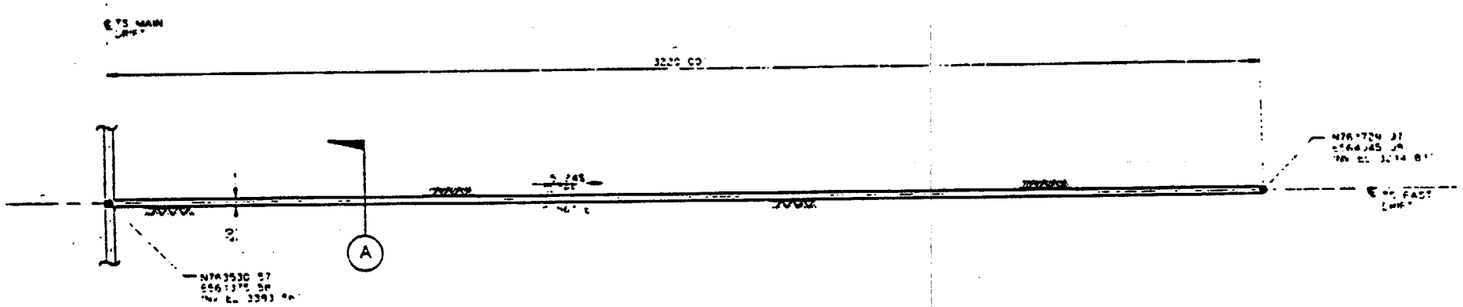
PGN YMP0135 9-20-01 | 1.2.8.5

Plotted Fri Aug 23 08:51:21 1991, PDT Part name @ \vms5\ymp0135.dwg

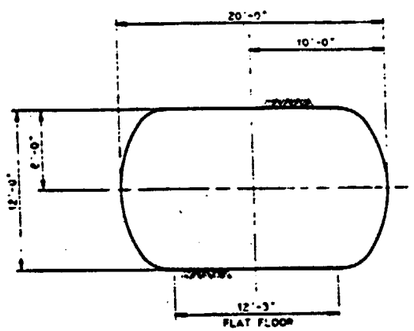


PROFILE

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



PLAN



SECTION A

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV.) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS.
5. TS EAST AND TS WEST DRIFT CONFIGURATIONS ARE BASED ON INTERFACE DWGS MND-201-103 AND -104

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071 -34

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	BNV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	WBK
DRAWN	CLP
CHECKED	
REC	
DRAWING REVIEWER	B.C.H.
VERIFICATION	N/A
BNV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS EAST DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MNG-M104 | REV. 0

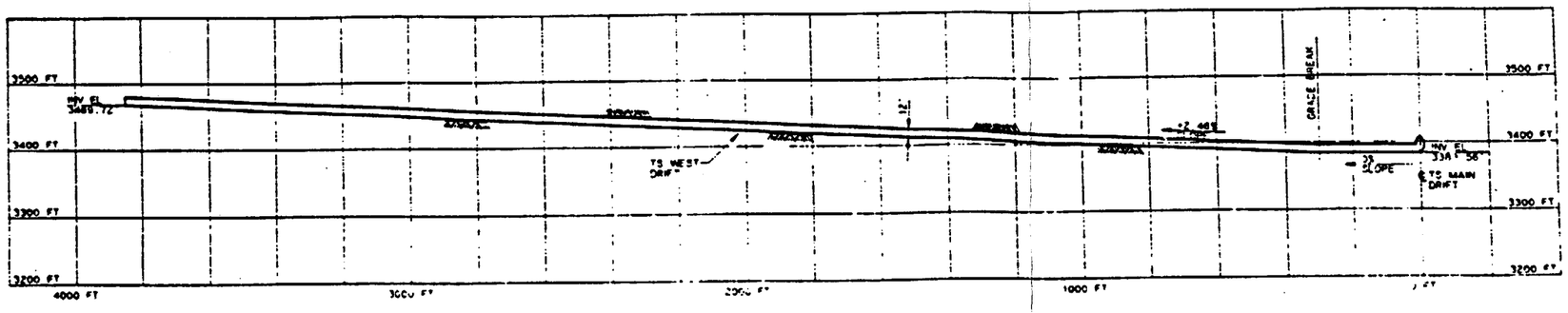
YMPO APPROVED | DATE | SHT. OF.

PCN YMP0107 8-20-91

Plotted Tue Aug 20 16 08 32 1991, PDT Part name YMP0107.DRW

NOTES:

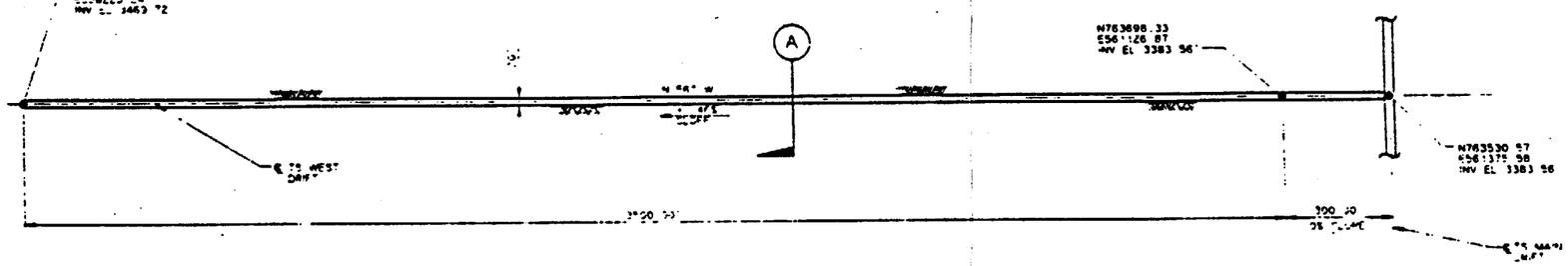
1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI) INV 1 IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS
5. TS EAST AND TS WEST DRIFT CONFIGURATIONS ARE BASED ON INTERFACE DWGS MND-Z01-103 AND -104



PROFILE

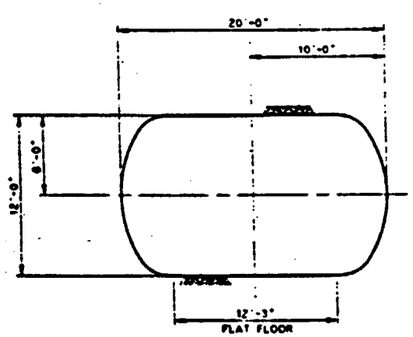
SCALE HOR. 1"=200' VERT. 1"=100'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



PLAN

SCALE 1"=200'



SECTION (A)

SCALE 3/16"=1'-0"

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-QE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-20-91

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS WEST DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY: 8-26-91 | DRAWING NO. YMP-025-2-MING-M105 | REV. 0

YMPO APPROVED | DATE | SHT OF

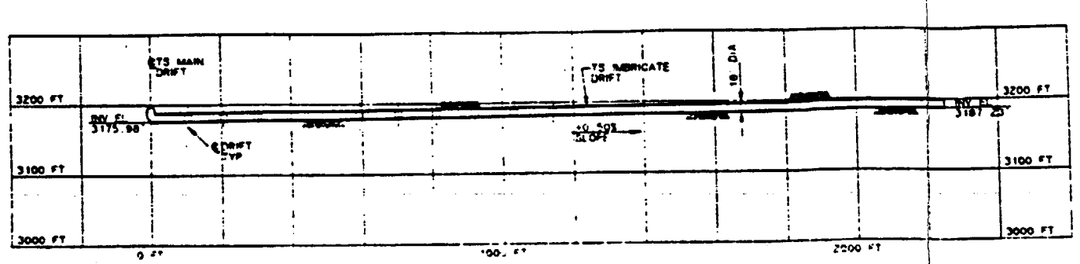
FOR 1 2 3 4 5
YMPO 100 8-20-91
C.I. NO

Plotted: Tue Aug 20 16:14:30 1991, PDT Part name YMP-U165.DWG

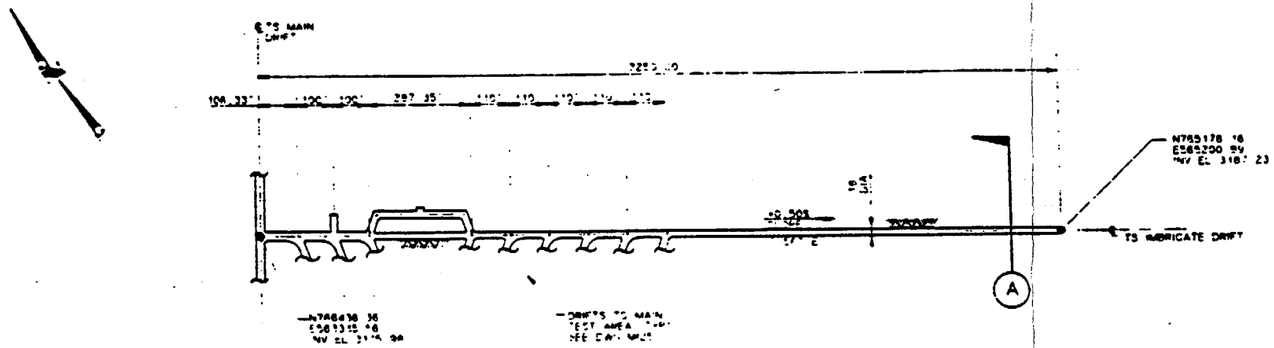
9305250071-35

NOTES:

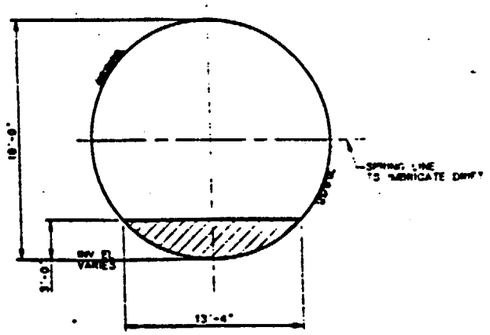
1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI) INV I IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS.



PROFILE

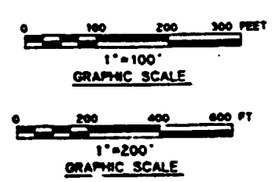


PLAN



SECTION A
SCALE: 3/16" = 1'-0"

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	YMPO	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS IMBRICATE DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY: 8-26-91 | DATE | DRAWING NO. YMP-025-2-MING-M106 | REV. 0

YMPO APPROVED | DATE | SHT

SI APERTURE CARD

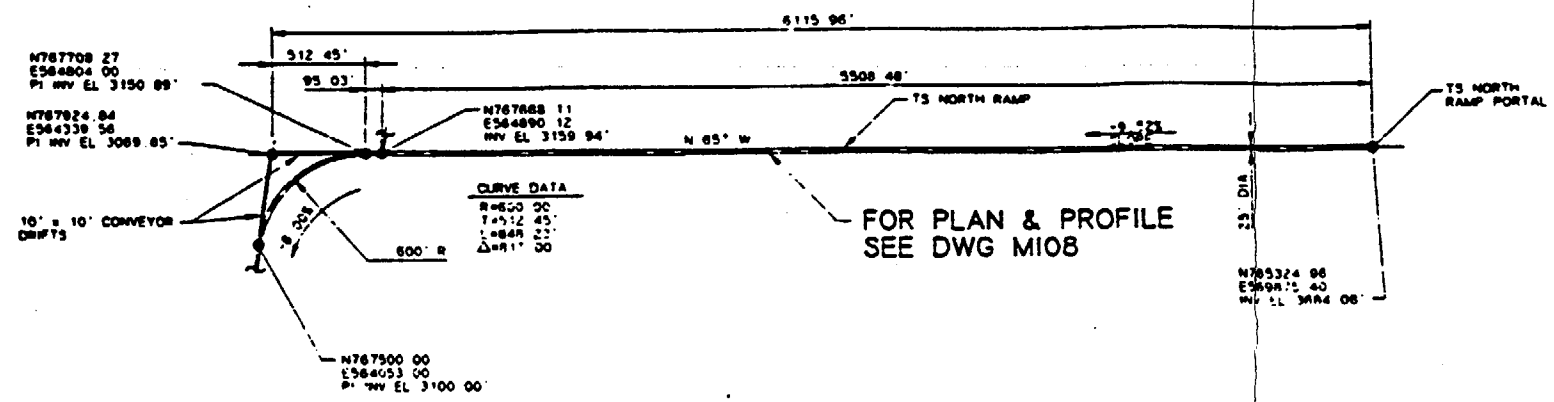
Also Available On Aperture Card

Plotted: Tue Aug 20 10:22:10 1991, PDT Part name

9305250071-36

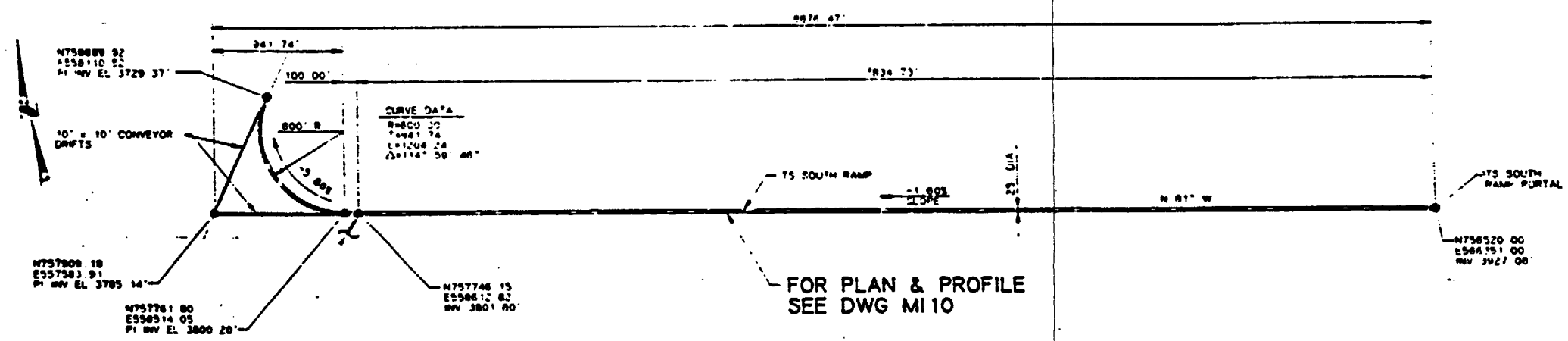
NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. TS NORTH AND TS SOUTH RAMP PORTAL LOCATIONS ARE BASED ON THE PRELIMINARY SITING ANALYSIS REPORT, RSN DESIGN ANALYSIS No. ST-MN-U04. PORTAL COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES.



TS NORTH RAMP PLAN

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



TS SOUTH RAMP PLAN

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SI APERTURE CARD

Also Available On Aperture Card

9305250071-37

0 500 1000 1500 FEET
1"=500'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

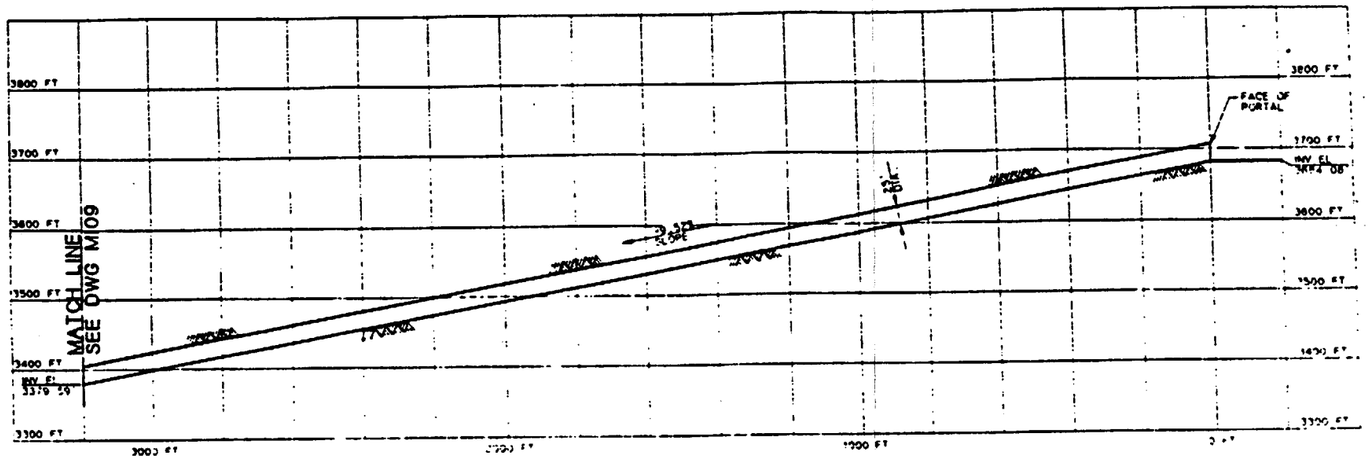
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS NORTH & TS SOUTH RAMPS
PLAN

SUBMITTED BY	DATE	DRAWING NO.	REV.
	8-26-91	YMP-025-2-MING-M107	0

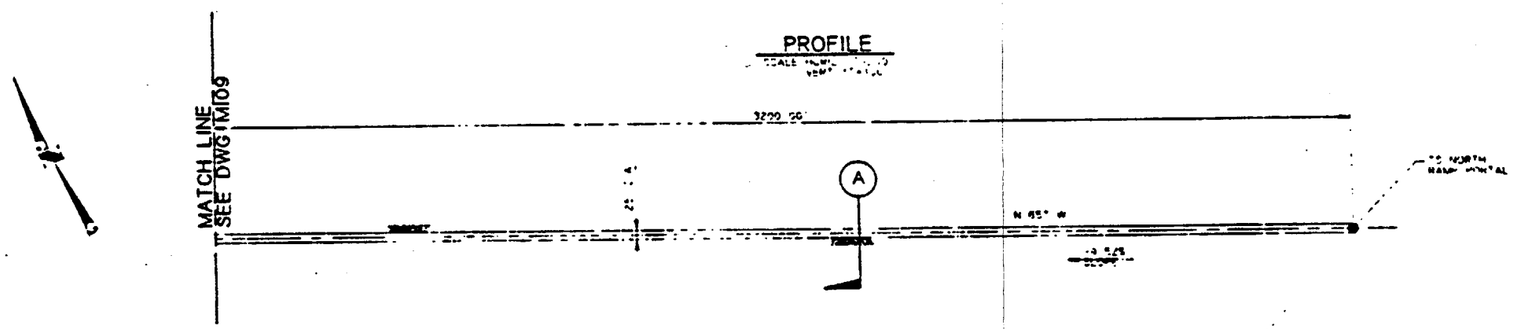
YMPO APPROVED DATE SHT OF

Plotted: Tue Aug 20 16:40:26 1991, PDT Part name YMP0126.LAW



NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. TS NORTH AND TS SOUTH RAMP PORTAL LOCATIONS ARE BASED ON THE PRELIMINARY SITING ANALYSIS REPORT RSN DESIGN ANALYSIS No ST-MN-1304. PORTAL COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES
5. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS



PLAN

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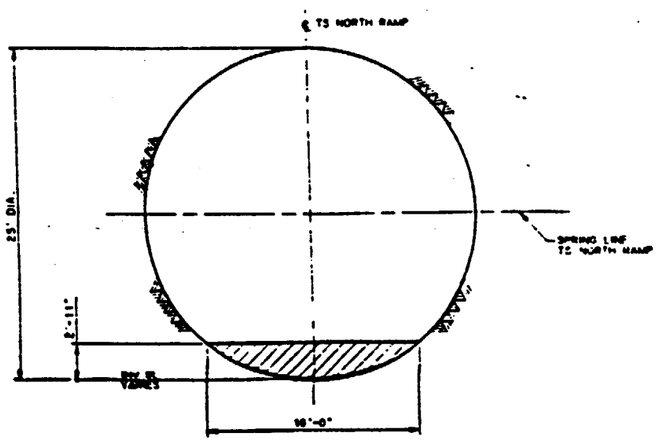
E546875.40
INV EL 3684.08



SECTION (A)
SCALE: 3/16"=1'-0"

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-38

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS NORTH RAMP
PLAN & PROFILE, SECTION

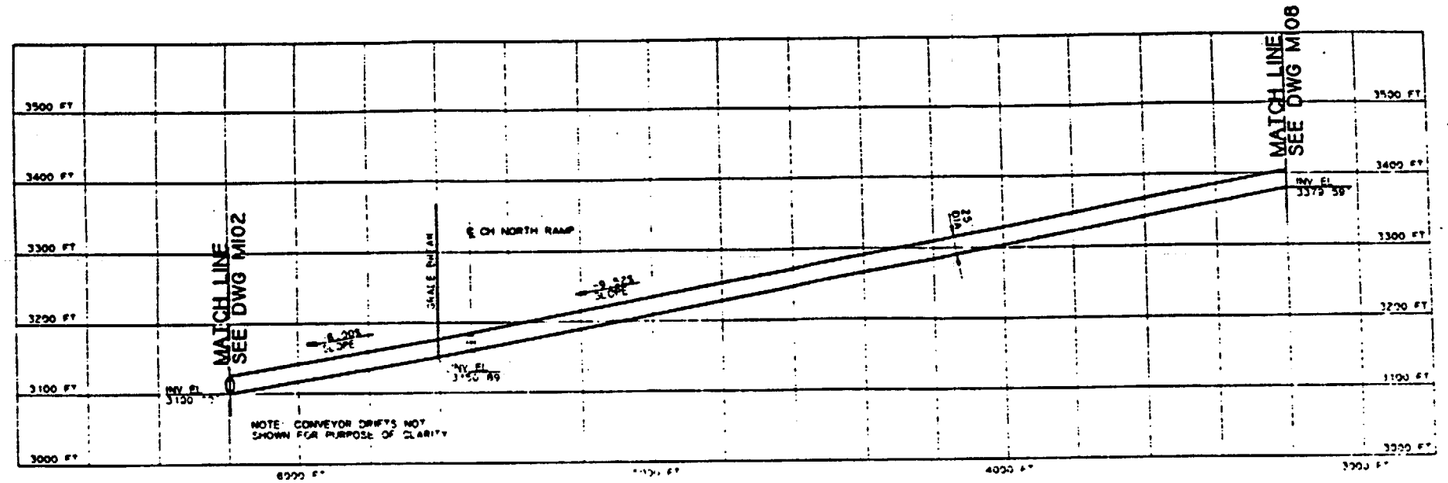
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-M108

YMPO APPROVED | DATE | SHT | OF

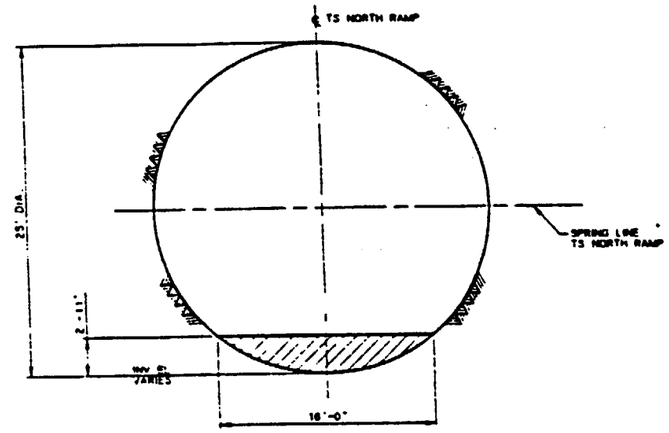
SI APERTURE CARD

Also Available On Aperture Card

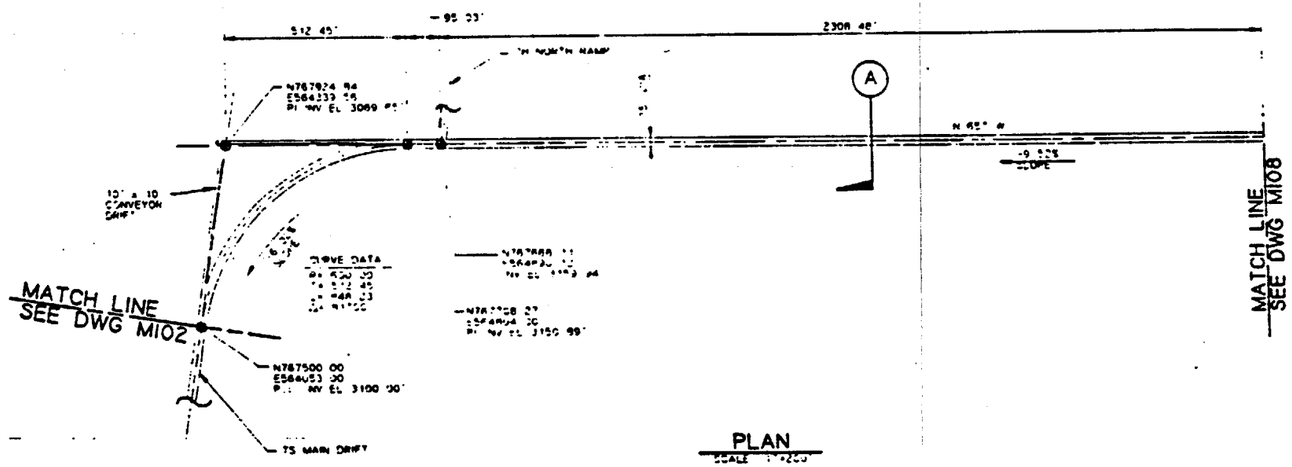
Plotted: Tue Aug 20 16:51:40 1991, PL1 Part name: YMP3141.DWG



PROFILE
SCALE 1"=100' HORZ 1"=20' VERT



SECTION (A)
SCALE 3/16"=1'-0"



PLAN
SCALE 1"=200'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-39

100 200 300 FEET
1"=100'
GRAPHIC SCALE

200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS

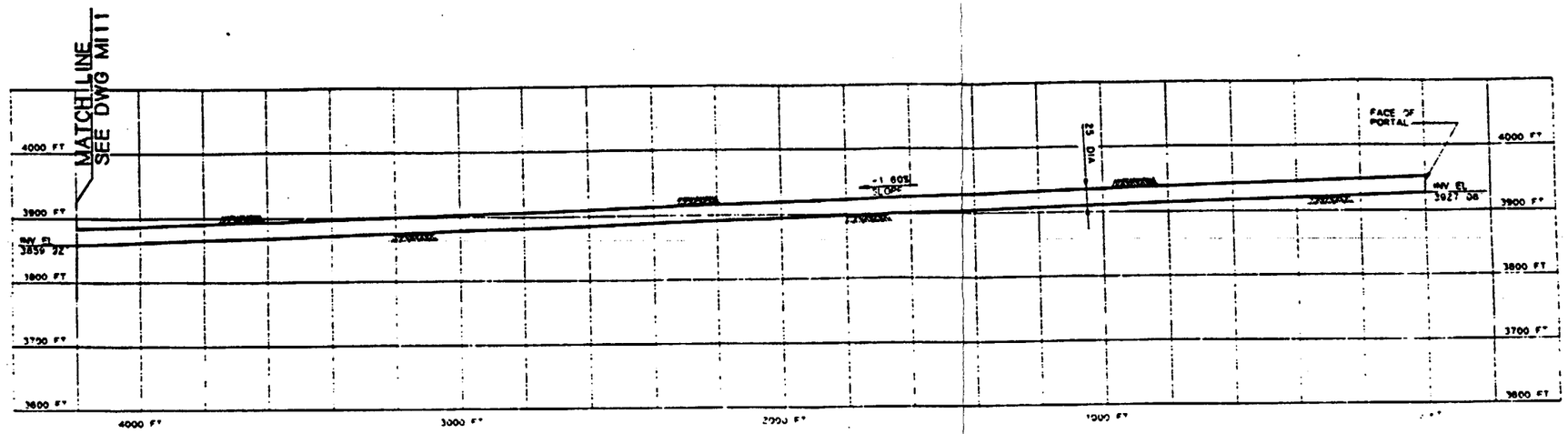
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS NORTH RAMP
PLAN & PROFILE, SECTION

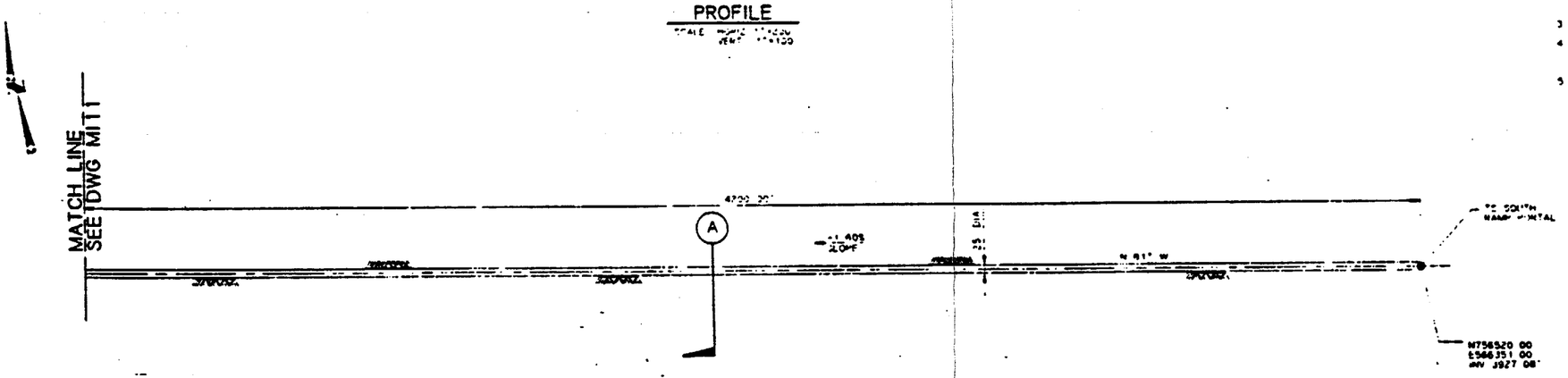
SUBMITTED BY: 8-26-91 DATE
DRAWING NO. YMP-025-2-MING-M109
YMPO APPROVED DATE
SHT SF

RSN YMP0147 8-29-91
W.B.S. NO. 1.2.6.5
C.I. NO.

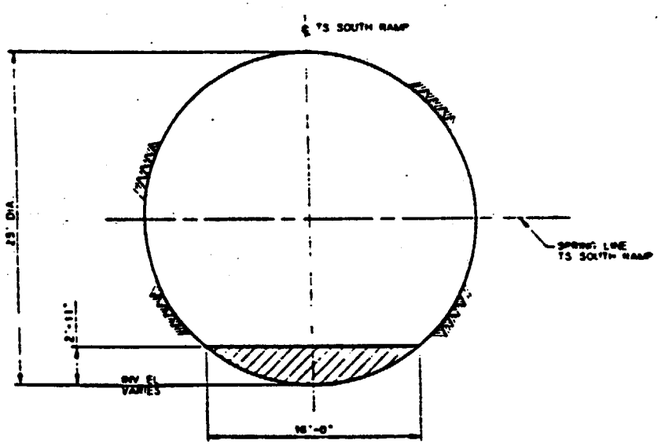
Plotted: Tue Aug 20 17:02:21 1991, PDT Part name YMP-314.* (MB)



PROFILE



PLAN



SECTION (A)
SCALE: 3/16"=1'-0"

NOTE:

COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. TS NORTH AND TS SOUTH RAMP PORTAL LOCATIONS ARE BASED ON THE PRELIMINARY SITING ANALYSIS REPORT, NSN DESIGN ANALYSIS No. ST-NN-004. PORTAL COORDINATES ARE PRELIMINARY AND ARE BASED ON SCALED DISTANCES.
5. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

SI
APERTURE
CARD

Also Available On
Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-40

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

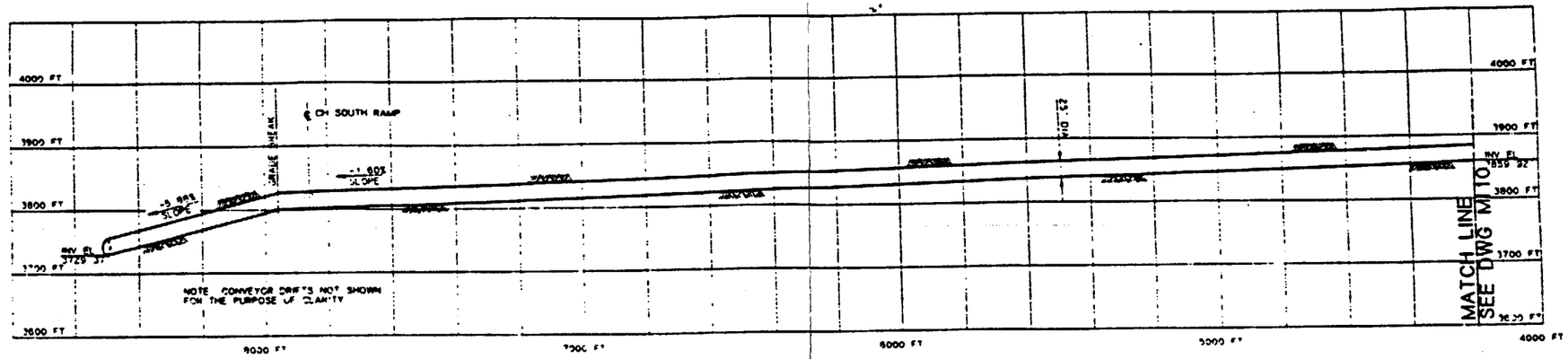
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ARRANGER	

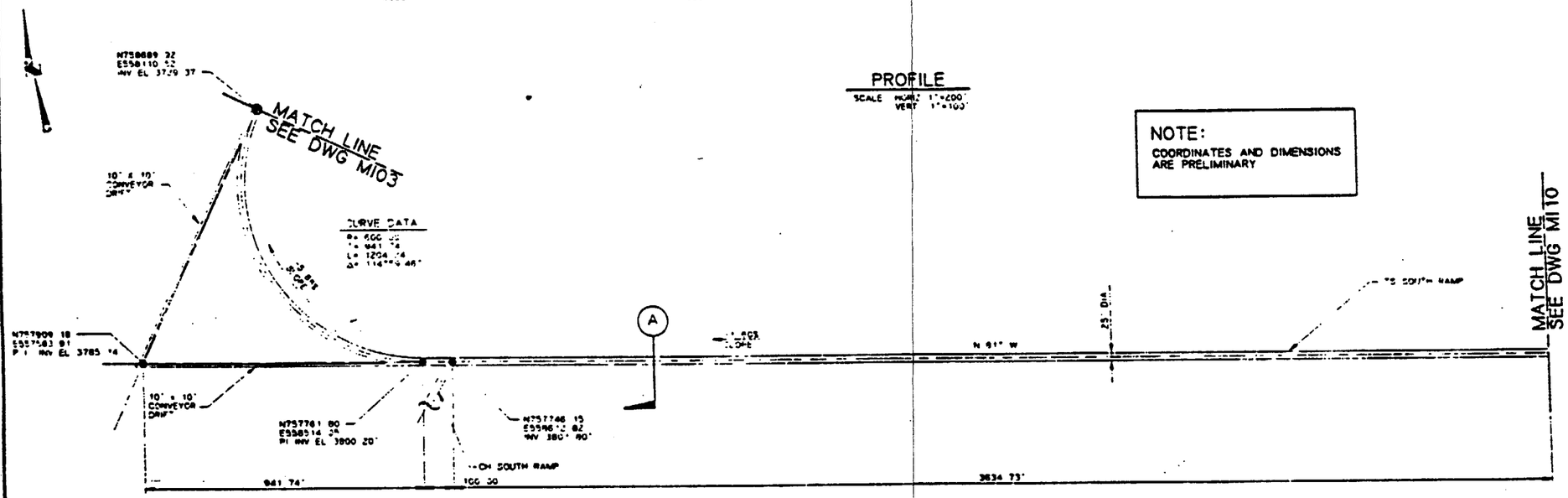
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS SOUTH RAMP
PLAN & PROFILE, SECTION

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-M110
YMPO APPROVED | DATE | SHT | OF



PROFILE

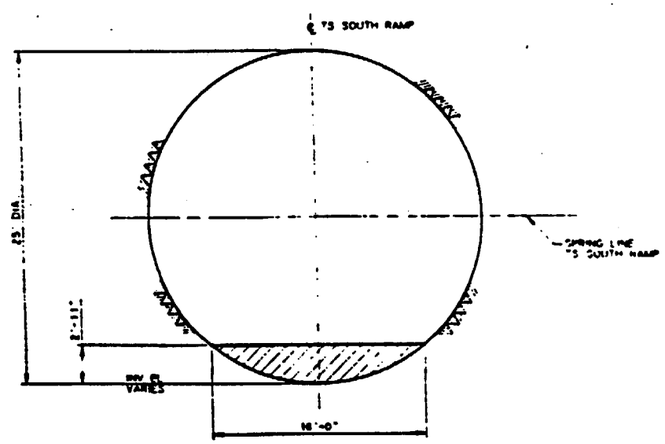
SCALE HORIZ 1"=200' VERT 1"=100'



NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

PLAN

SCALE 1"=200'



SECTION A

SCALE 3/16"=1'-0"

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-QE02

9305250071-41

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	BMV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
BMV / SAF	
QUALITY ASSURANCE	8-20-91

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS SOUTH RAMP
PLAN & PROFILE, SECTION

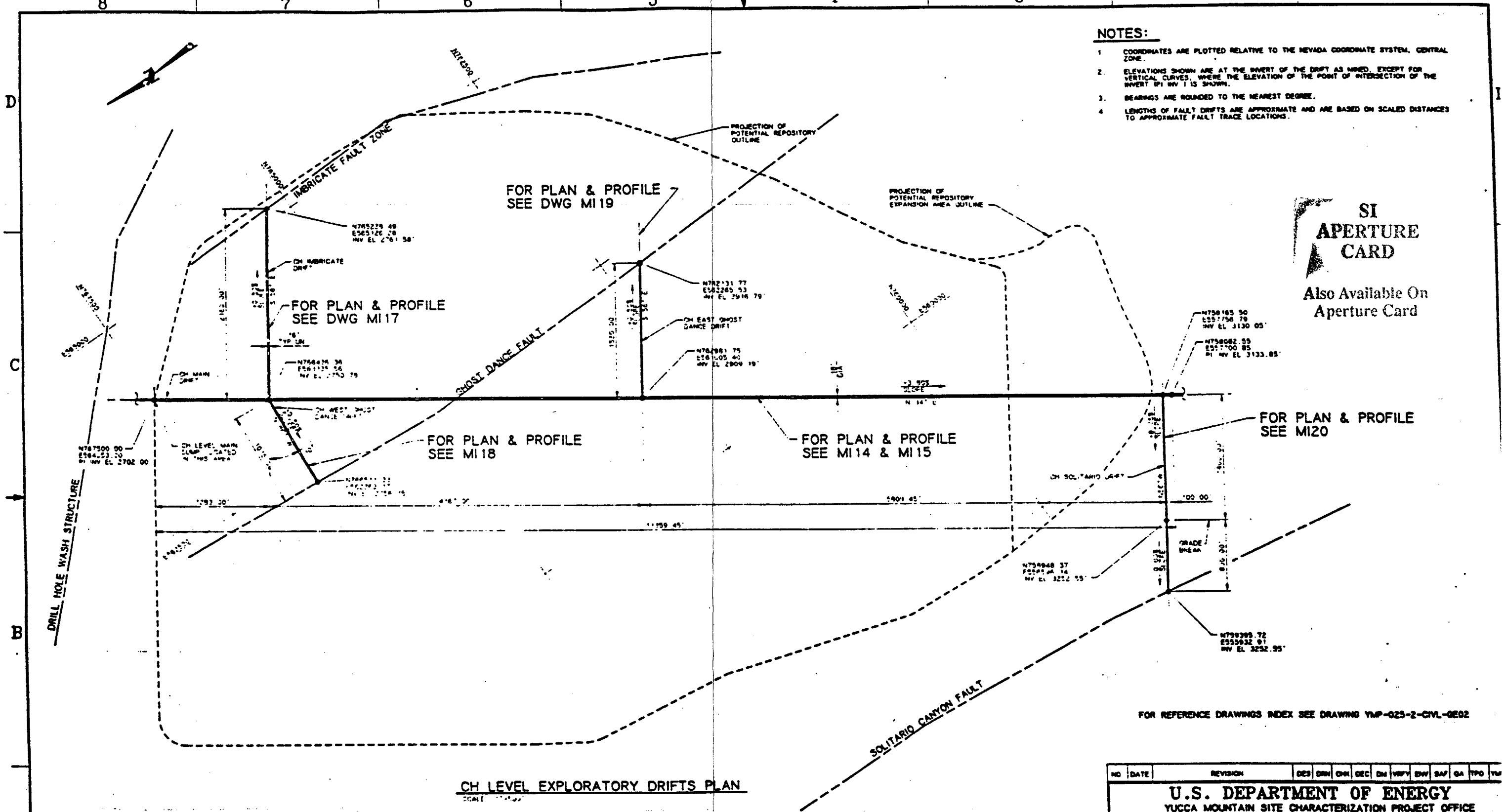
SUBMITTED BY: T.L. Ellis DATE: 8-20-91
DRAWING NO. YMP-025-2-MING-M111
YMPO APPROVED DATE
SHT OF

SI APERTURE CARD
Also Available On Aperture Card

Plotted Tue Aug 20 17:15:24 1991, PDT Part name YMP014V.DWG

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS.



SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

CH LEVEL EXPLORATORY DRIFTS PLAN

SCALE

NOTES:

FAULT TRACE LOCATIONS SHOWN ARE APPROXIMATIONS BASED ON AT-DEPTH PROJECTIONS OF INFORMATION FROM SCOTT AND BONK PRELIMINARY GEOLOGIC MAP AND SECTIONS

NOTE:

COORDINATES AND DIMENSIONS ARE PRELIMINARY

9305250071-42

0 500 1000 1500 FEET

1"=500'

GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH LEVEL EXPLORATORY DRIFTS
PLAN

SUBMITTED BY	DATE	DRAWING NO.	REV
	8-26-91	YMP-025-2-MING-MI13	0

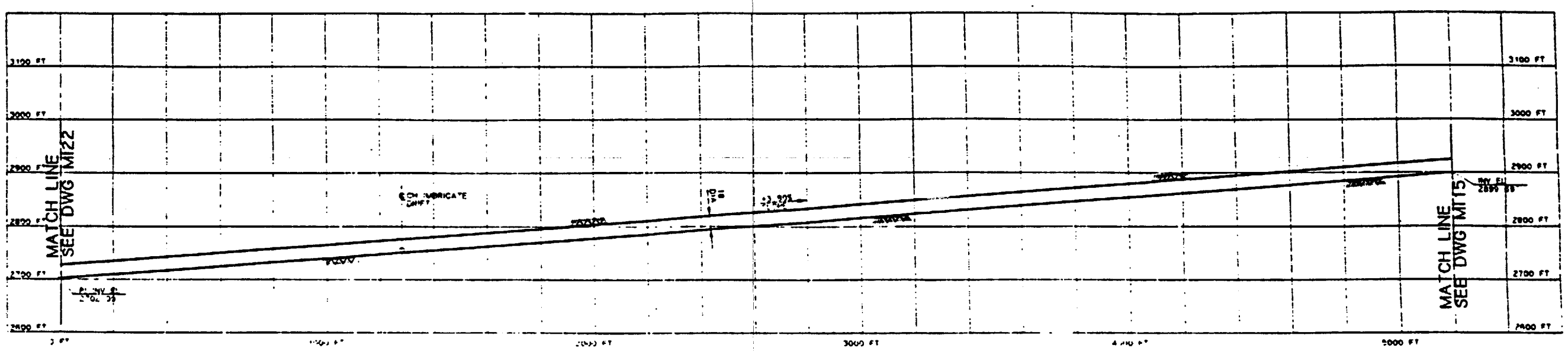
YMPO APPROVED DATE SHT OF

YMP0153 9-20-91

S.O.S. NO. 1,2,6,5

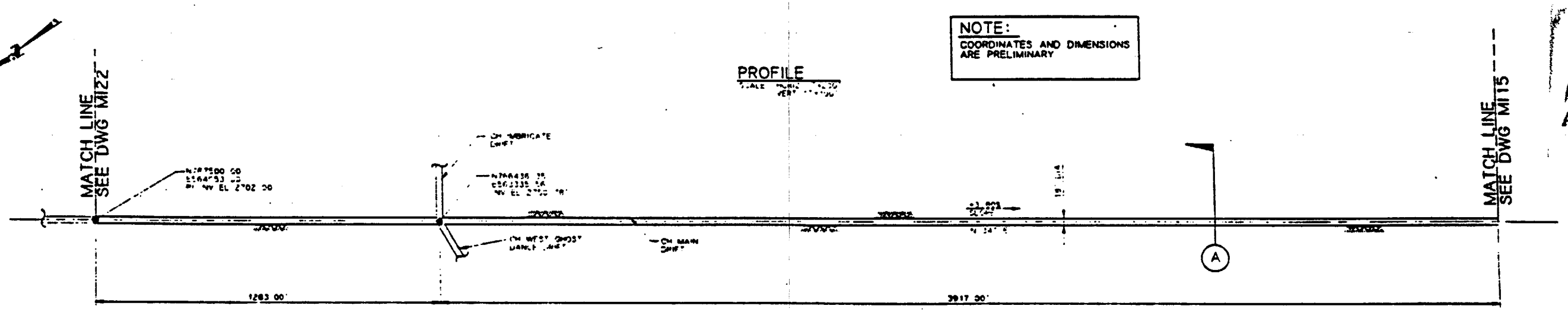
C.I. NO.

Plotted: Tue Aug 20 17:31:53 1991, PC Par name YMP0153.DRW



PROFILE

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

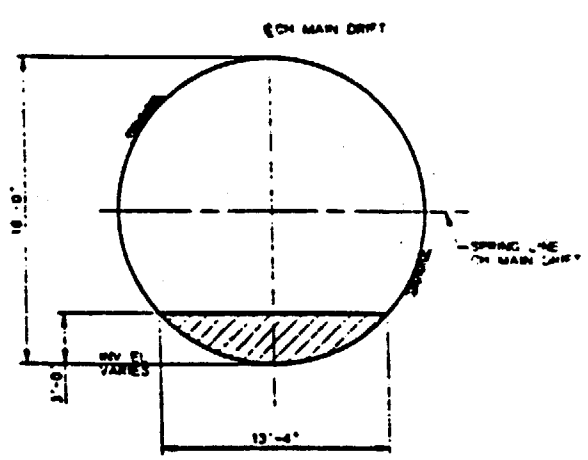


PLAN

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02



SECTION A

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

9305250071-43

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	GA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

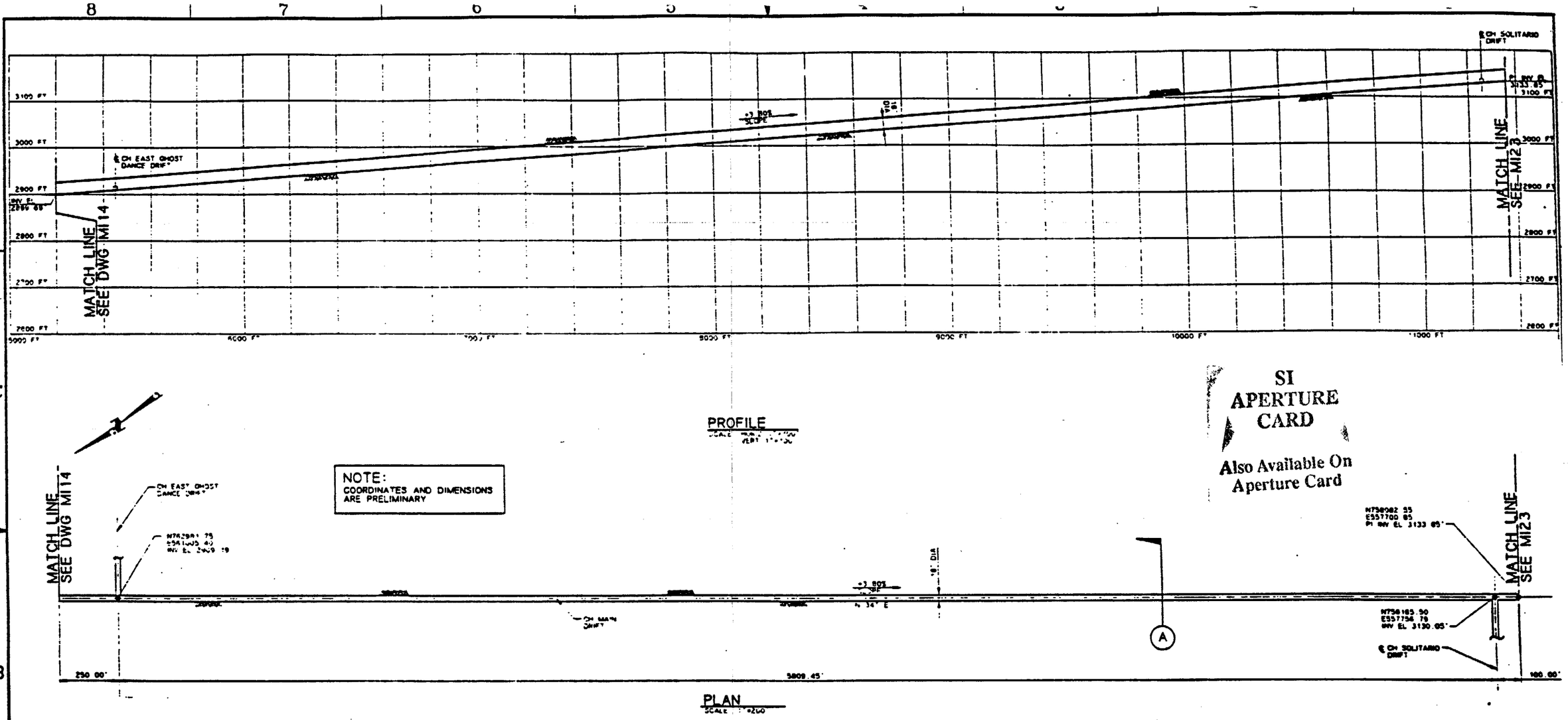
APPROVALS

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH MAIN DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY — DATE — DRAWING NO. YMP-025-2-MNG-MI14

YMPO APPROVED — DATE — SHT — OF

Plotted: Wed Aug 21 15:35:39 1991, PLT Part name: ymPC154.URW

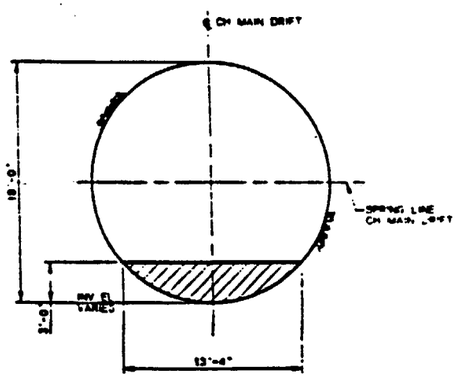


NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02



NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

9305250071-44

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

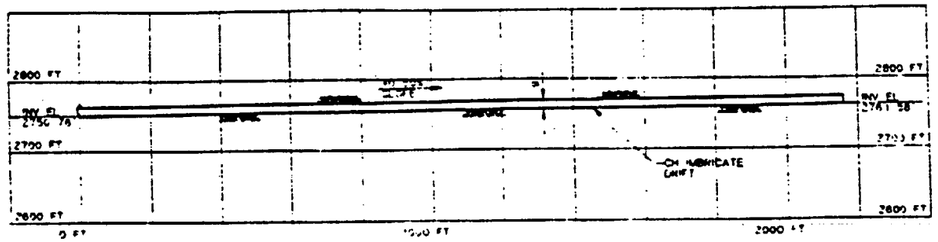
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS
DESIGN WRK
DRAWN CLP
CHECKED
DEC
DESIGN MANAGER B.C.H.
VERIFICATION N/A
ENV SAF
QUALITY ASSURANCE

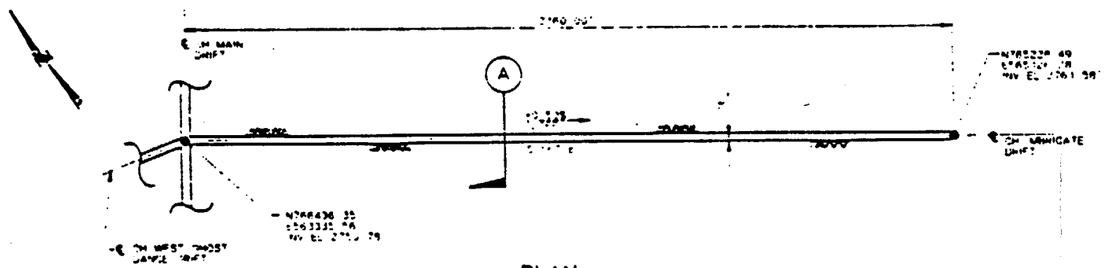
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH MAIN DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY
DATE 9-16-91
DRAWING NO. YMP-025-2-MING-MI15
YMPO APPROVED
DATE
SHT OF

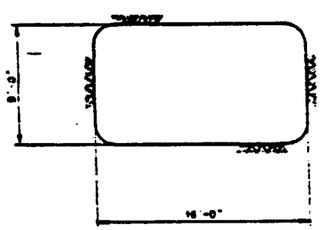
Plotted Wed Aug 21 08:03:34 1991, PDT



PROFILE



PLAN



SECTION A

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV.) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-45

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

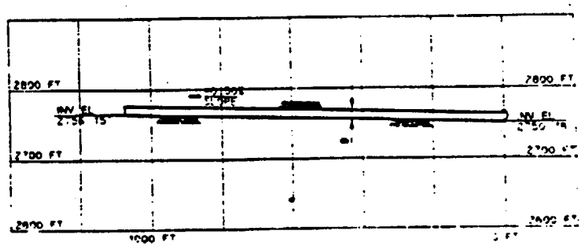
APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
INTERDISCIPLINARY REVIEW	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH IMBRICATE DRIFT
PLAN & PROFILE, SECTION

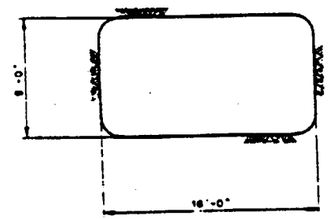
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-M117 | REV 0

YMPO APPROVED | DATE | SMT | SF

RSN YMPO170 9-21-01 | 2 0 3 0 0 | 1 2 6 5 | C 1 10

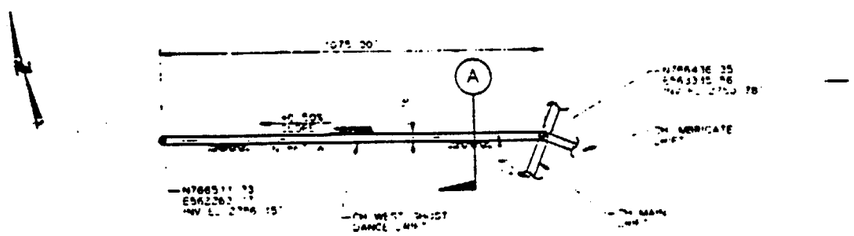


PROFILE



SECTION (A)

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



PLAN

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
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SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-46

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	PCS, CHL
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

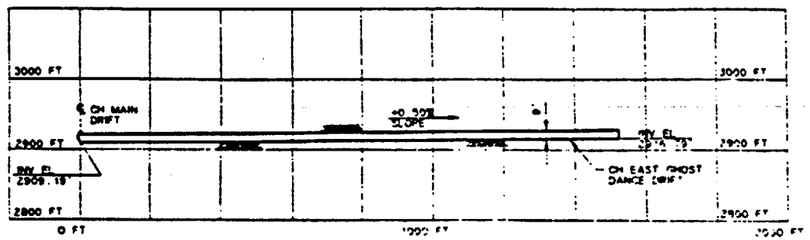
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH WEST GHOST DANCE DRIFT
PLAN & PROFILE, SECTION

SUBMITTED BY	DATE	DRAWING NO.	REV
	8-26-91	YMP-025-2-MINC-M118	C

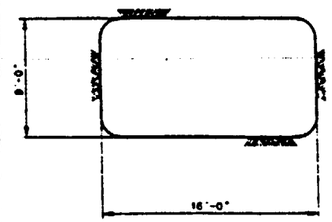
YMPO APPROVED DATE SHT OF

PCN YMP0171 8-21-91 | 1.2.6.5

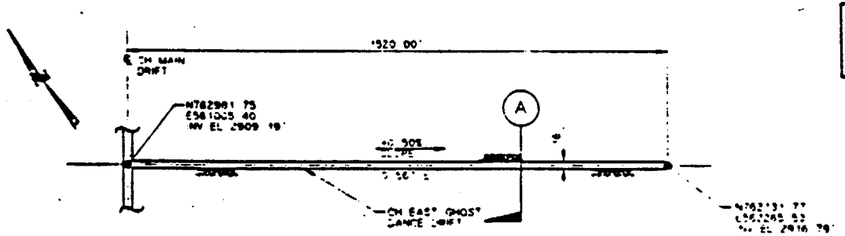
Plotted Wed Aug 21 08:28:34 1991, PDT Part name ymr0171.DRW



PROFILE



SECTION (A)



PLAN
SCALE 1"=200'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
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3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS

SI APERTURE CARD
Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-47

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

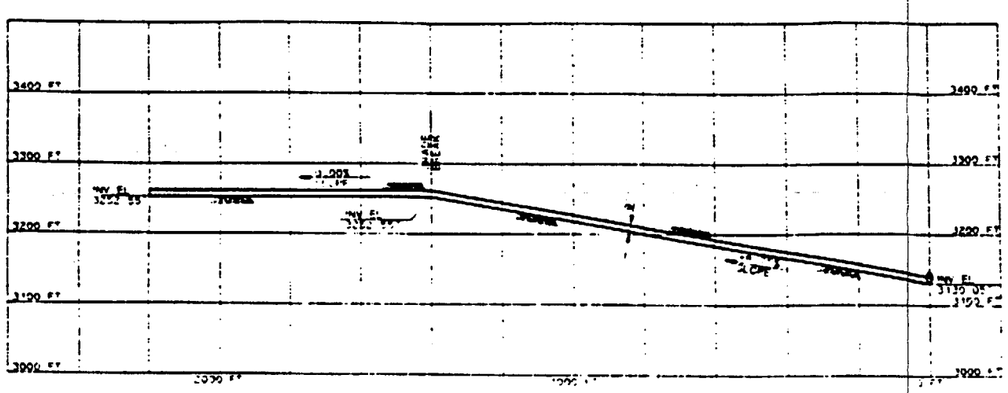
APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	6-24-91

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH EAST GHOST DANCE DRIFT
PLAN & PROFILE, SECTION

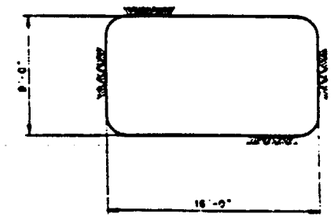
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MNG-M119 | REV 0

YMPO APPROVED | DATE | SHT | OF

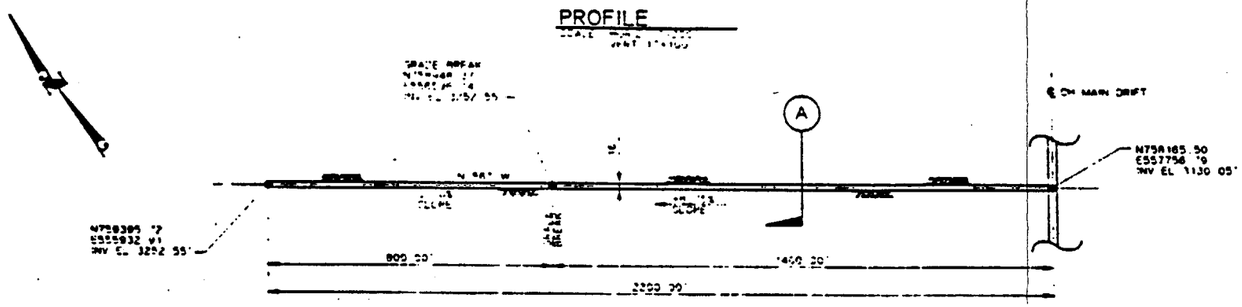
Plotted Wed Aug 21 08:36:34 1991, PDT Part name ymp0172.dwg



PROFILE



SECTION A



PLAN

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. LENGTHS OF FAULT DRIFTS ARE APPROXIMATE AND ARE BASED ON SCALED DISTANCES TO APPROXIMATE FAULT TRACE LOCATIONS

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-48

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	SM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

Raytheon Services Nevada
LAS VEGAS, NEVADA

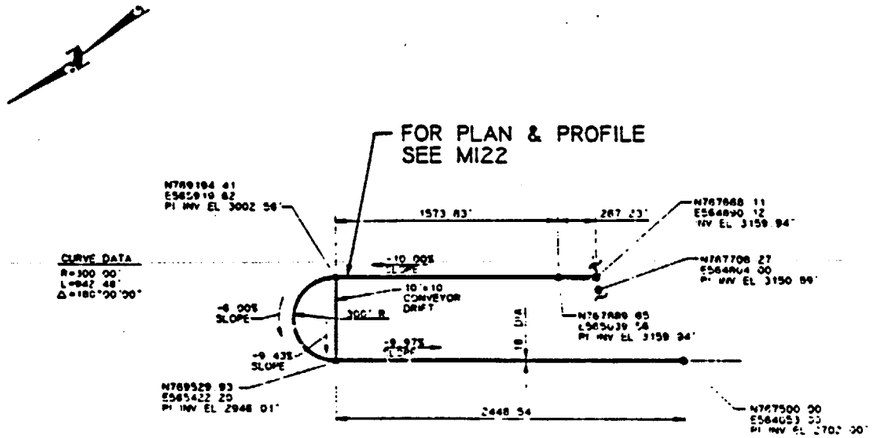
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH SOLITARIO DRIFT
PLAN & PROFILE, SECTIO

SUBMITTED BY — DATE 8-26-91 — DRAWING NO. YMP-025-2-MING-MI20

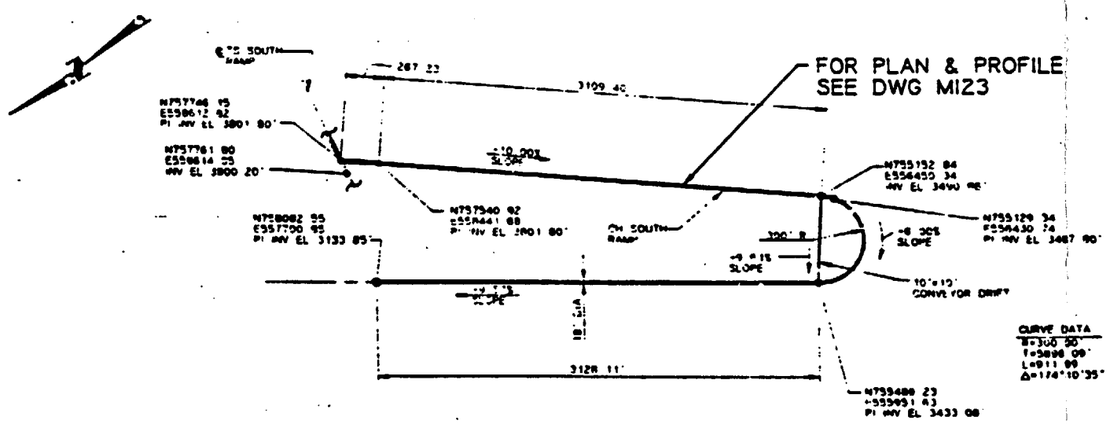
YMPO APPROVED — DATE — SHT — OF

PGN YMP0173 8-21-91

Plotted: Wed Aug 21 09:47:44 1991, HP Part name ymp2173.DWG



CH NORTH RAMP PLAN



CH SOUTH RAMP PLAN

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-49

0 500 1000 1500 FT
1"=500'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPG

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

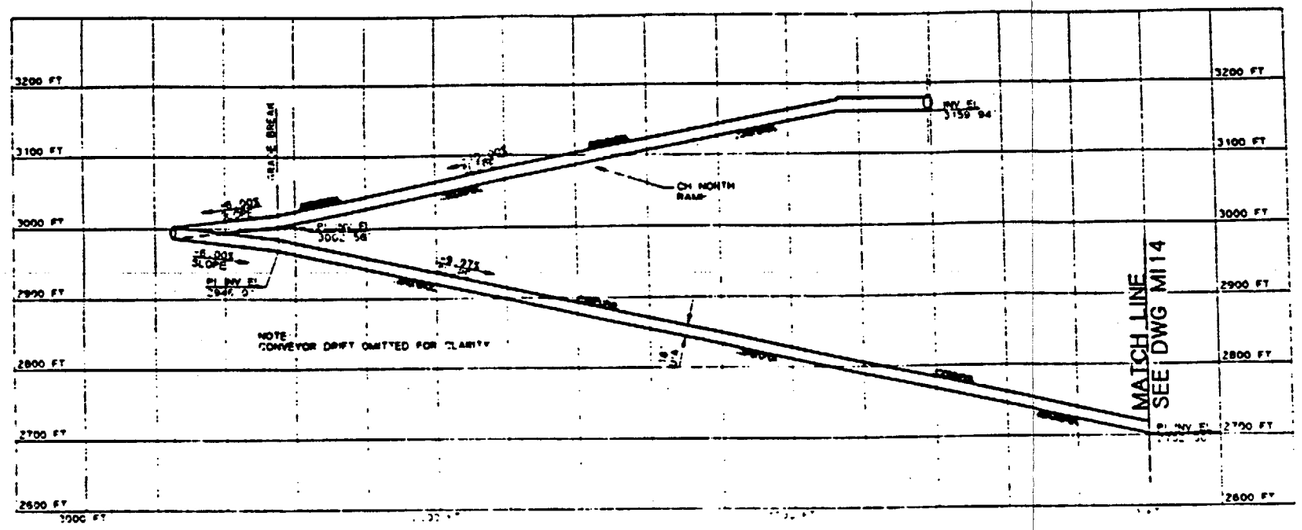
APPROVALS

DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

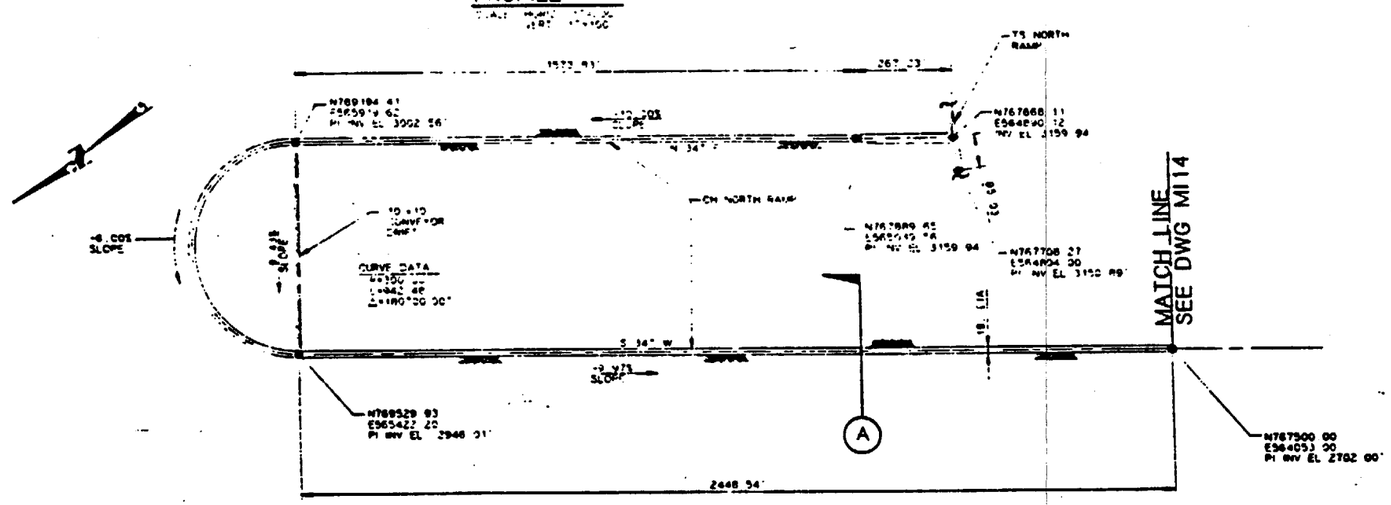
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH NORTH & CH SOUTH RAMPS
PLAN

SUBMITTED BY — DATE — DRAWING NO. YMP-025-2-MING-MI21
YMPO APPROVED — DATE — SHT — OF

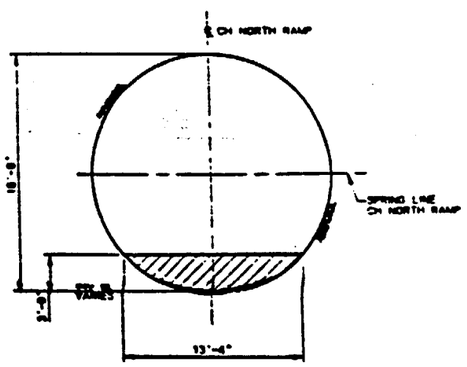
Plotted Wed Aug 21 07:00:04 1991, MST Part name pm40157.DRW



PROFILE



PLAN
SCALE 1"=200'



SECTION (A)
SCALE 3/16"=1'-0"

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
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3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX, SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-50

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SNV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	R.CH.
VERIFICATION	N/A
SNV / SAF	
QUALITY ASSURANCE	8-26-91

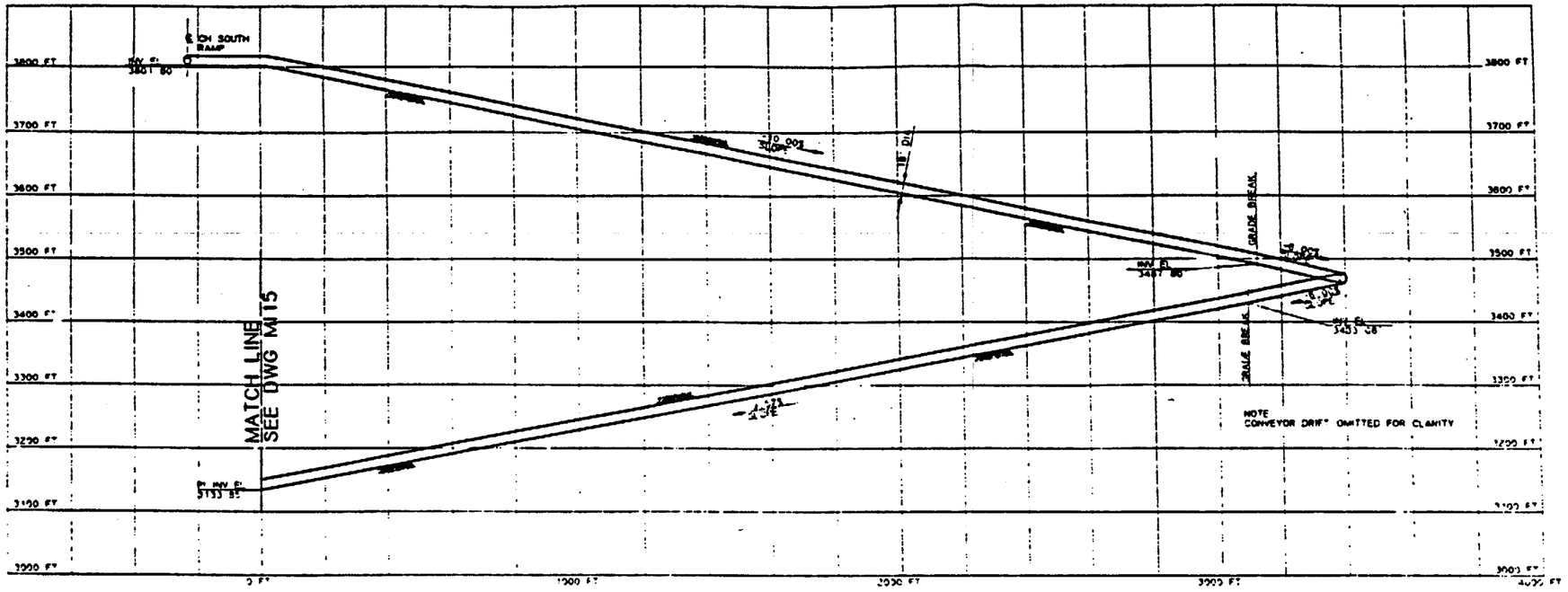
Raytheon Services Nevada
LAS VEGAS, NEVADA

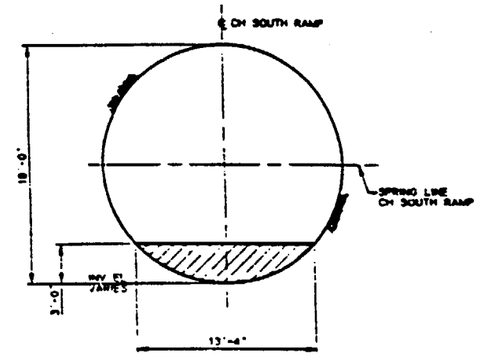
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH NORTH RAMP
PLAN & PROFILE, SECTIO

SUBMITTED BY | DATE 8-26-91 | DRAWING NO. YMP-025-2-MING-MI22

YMPO APPROVED | DATE | SHT

Plotted: Wed Aug 21 07:08:24 1991, PDT Part name: ymp-u158.DWG

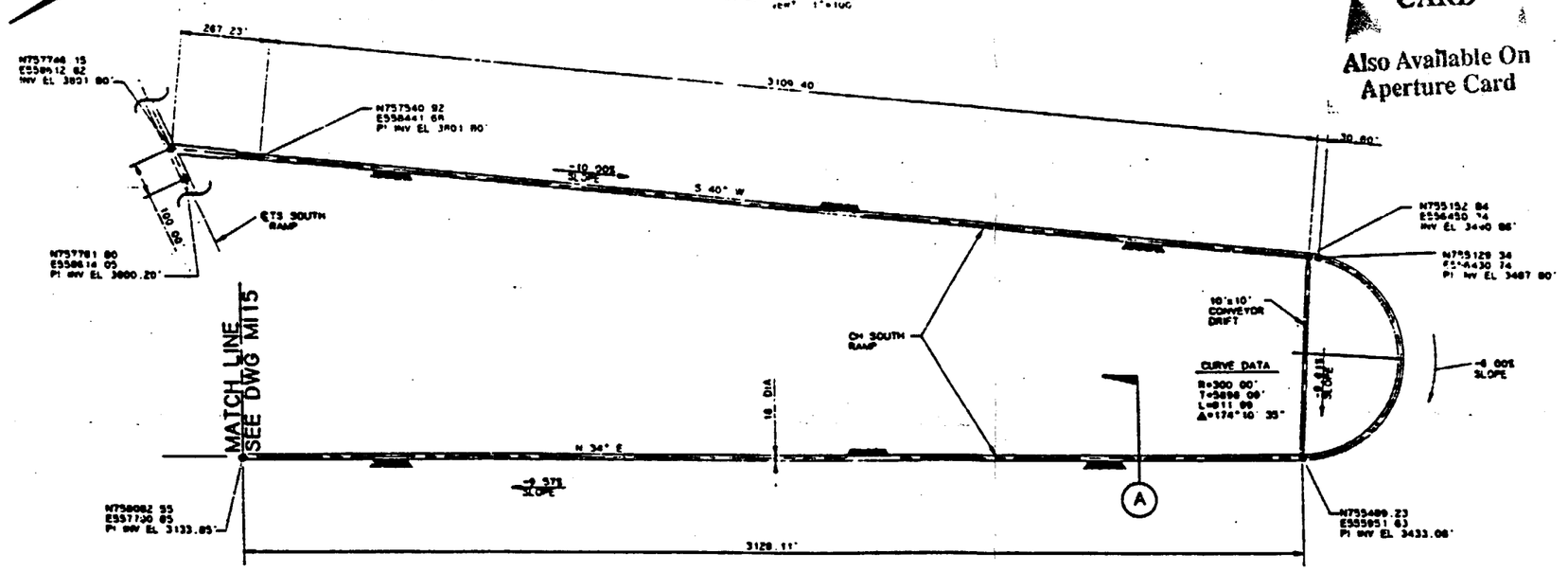




SECTION (A)
SCALE 3/16" = 1'-0"

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

PROFILE
SCALE HORIZ 1"=100' VERT 1"=100'



PLAN
SCALE 1"=200'

1"=100' GRAPHIC SCALE

1"=200' GRAPHIC SCALE

SI APERTURE CARD

Also Available On Aperture Card

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT (PI INV) IS SHOWN
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. BY-PASSES AND TURN-AROUNDS WILL BE PROVIDED AT REGULAR INTERVALS.

9305250071-51

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

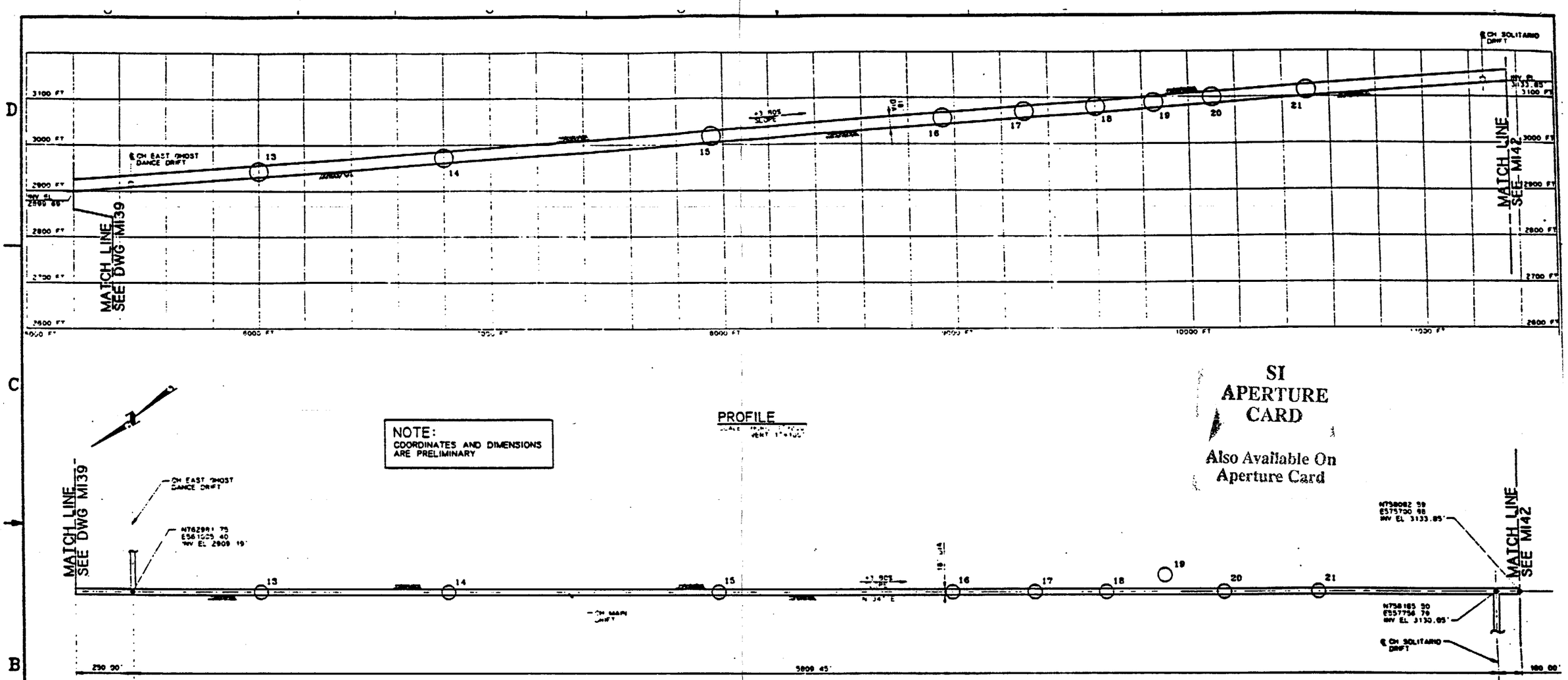
APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH SOUTH RAMP
PLAN & PROFILE, SECTION

SUBMITTED BY — DATE 9-20-91
DRAWING NO. YMP-025-2-MING-MI23 — REV C
YMPO APPROVED — DATE — ENV — SF

PCN YMPO 9-21-91 — 0 1 2 3 4 5 — C 1 40

Plotted: Wed Aug 21 07:26:00 1991, PDT Part name: ymp0159.idw



SI APERTURE CARD

Also Available On Aperture Card

9305250071-52

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

CALICO HILLS MAIN DRIFT

TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
13	OVERCORE STRESS	15' W x 30' L x 12' H
14	DIFFUSION (VITRIC)	20' W x 20' L x 12' H
15	RADIAL BORE HOLE (ANISOTROPY CH#2) HYDROCHEMISTRY	24' W x 20' L x 22' H SAME ALCOVE AS RADIAL BORE HOLE TEST
16	RADIAL BORE HOLE (V/Z CONTACT) HYDROCHEMISTRY	24' W x 20' L x TBD' H SAME ALCOVE AS RADIAL BORE HOLE
17	DIFFUSION (ZEOLITIC)	20' W x 20' L x 12' H
18	OVERCORE STRESS	15' W x 30' L x 12' H
19	RADIONUCLIDE MIGRATION (ZEOLITIC/WELDED PROW PASS)	2 ROOMS 33' W x 33' L x 9' H
20	PERCOLATION (ZEOLITIC)	2 DRIFTS 12' W x 23' L x 14' H
21	RADIAL BORE HOLE (ANISOTROPY CH#3) HYDROCHEMISTRY	24' W x 20' L x 22' H SAME ALCOVE AS RADIAL BORE HOLE TEST

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND TEST ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED.
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MING-M148, M150 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN MAINS.
4. THREE ADDITIONAL TESTS WHICH MAY REQUIRE ALCOVES CANNOT PRESENTLY BE LOCATED DUE TO CURRENT STATUS OF TEST PLANNING OR DEPENDENCE ON SITE-SPECIFIC GEOLOGY. THESE TESTS ARE: 1) BULK PERMEABILITY, 2) ROCK-MASS STRENGTH, AND 3) IN SITU TESTING OF SEAL COMPONENTS. ALCOVE LOCATIONS FOR THESE TESTS WILL BE DETERMINED AS PLANNING IS COMPLETED OR UPON EXAMINATION OF GEOLOGIC FEATURES FOLLOWING EXCAVATION.

LEGEND ○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRW	CHK	DEC	DM	VRFY	BNW	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS
DESIGN: RLC
DRAWN: CLP
CHECKED
DEC
DESIGN MANAGER: B.CH.
VERIFICATION: N/A
BNW / SAF
QUALITY ASSURANCE: 8-26-91

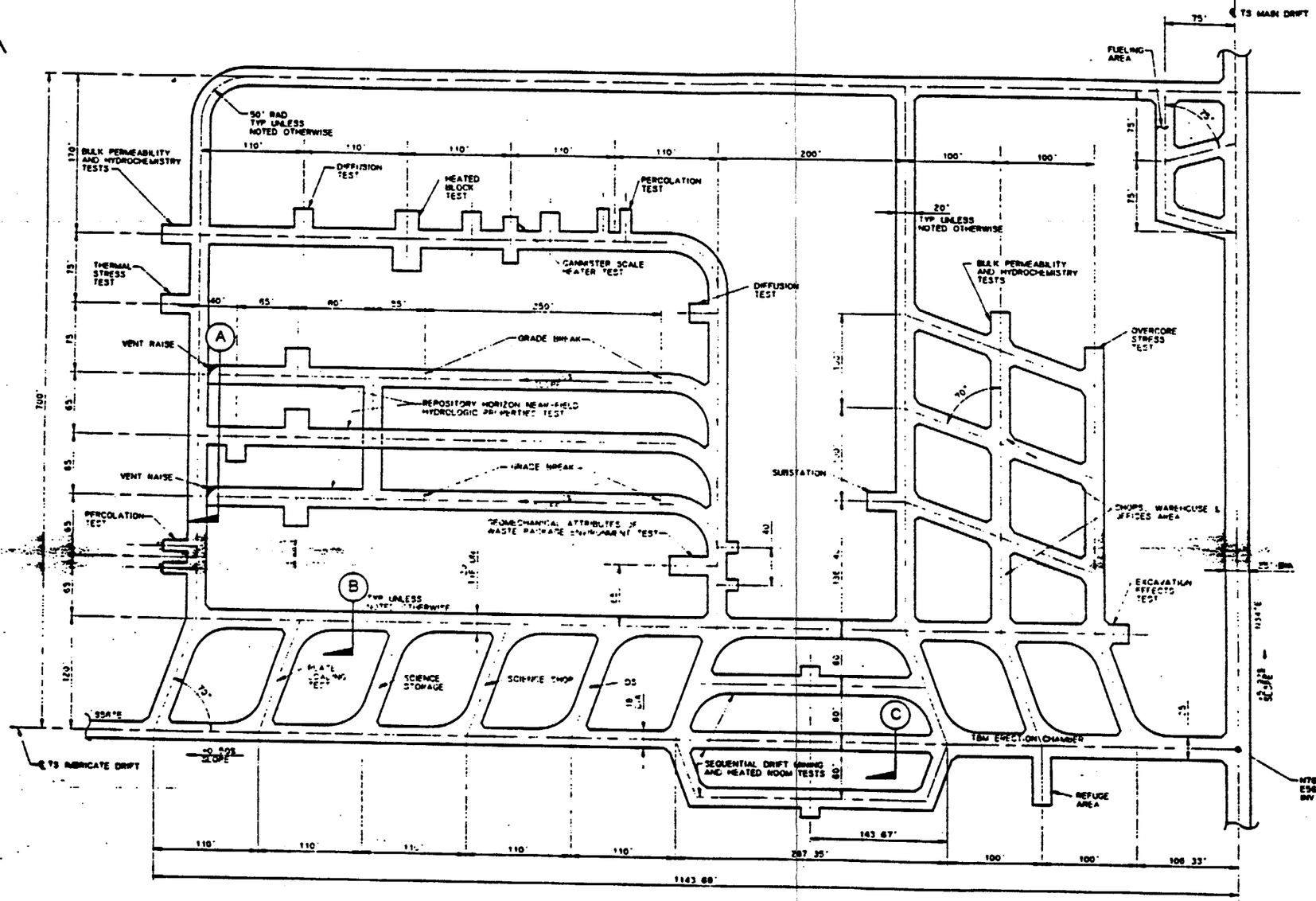
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH MAIN DRIFT PRELIMINARY TEST LOCATION
PLAN AND PROFILE

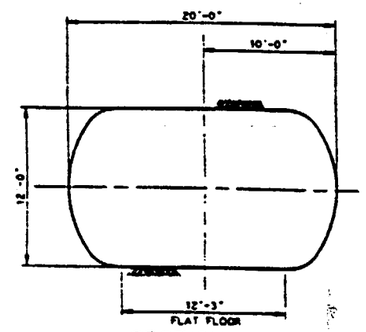
SUBMITTED BY: 8-26-91 | DATE | DRAWING NO. YMP-025-2-MING-M140
YMPO APPROVED | DATE | SHT

Plotted Wed Aug 21 10:28:08 1991, PCT Part name YMP0170.DRW

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



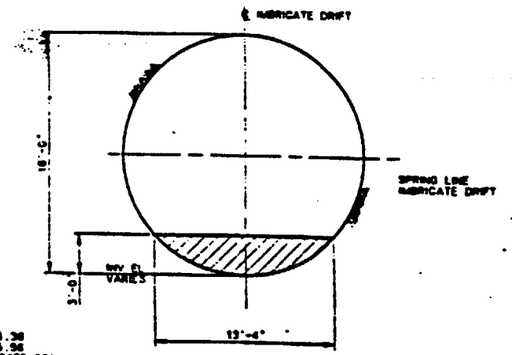
TS MAIN TEST AREA PLAN
SCALE 1"=60'



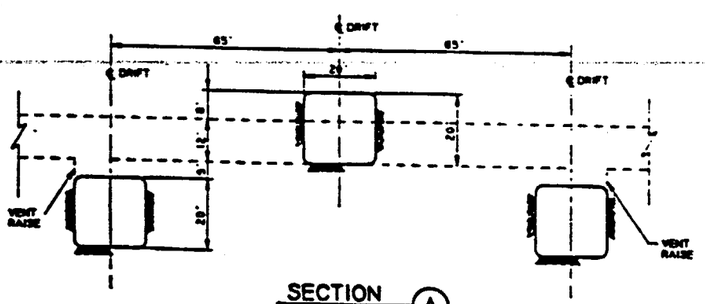
SECTION (B)
SCALE 3/16"=1'-0"

SI APERTURE CARD

Also Available On Aperture Card



SECTION (C)
SCALE 3/16"=1'-0"



SECTION (A)
SCALE 1"=20'

9305250071-53

NOTES:

1. COORDINATES ARE PLOTTED RELATIVE TO THE NEVADA COORDINATE SYSTEM, CENTRAL ZONE.
2. ELEVATIONS SHOWN ARE AT THE INVERT OF THE DRIFT AS MINED, EXCEPT FOR VERTICAL CURVES, WHERE THE ELEVATION OF THE POINT OF INTERSECTION OF THE INVERT EPI INV 1 IS SHOWN.
3. BEARINGS ARE ROUNDED TO THE NEAREST DEGREE.
4. THE MAIN TEST AREA LAYOUT IS BASED ON EXCAVATION BY MOBILE MINER. ACTUAL EXCAVATION METHODS/SEQUENCE TO BE EMPLOYED IN THIS AREA TBD. THE TS MAINGATE DRIFT IS TO BE EXCAVATED BY TBM.
5. TEST AREA LAYOUT GEOMETRY IS BASED ON PRELIMINARY TESTING REQUIREMENTS DESCRIBED IN YMP/CC-0013, REV 7/29/91 VOL. 2 ESFDR.
6. TEST LOCATIONS AND ORIENTATIONS AS SHOWN ARE PRELIMINARY AND CANNOT BE FINALLY DETERMINED UNTIL INITIAL DRIFTING AND GEOLOGICAL MAPPING ARE COMPLETED.

0 60 120 180 FT
1"=60'
GRAPHIC SCALE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	SMV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

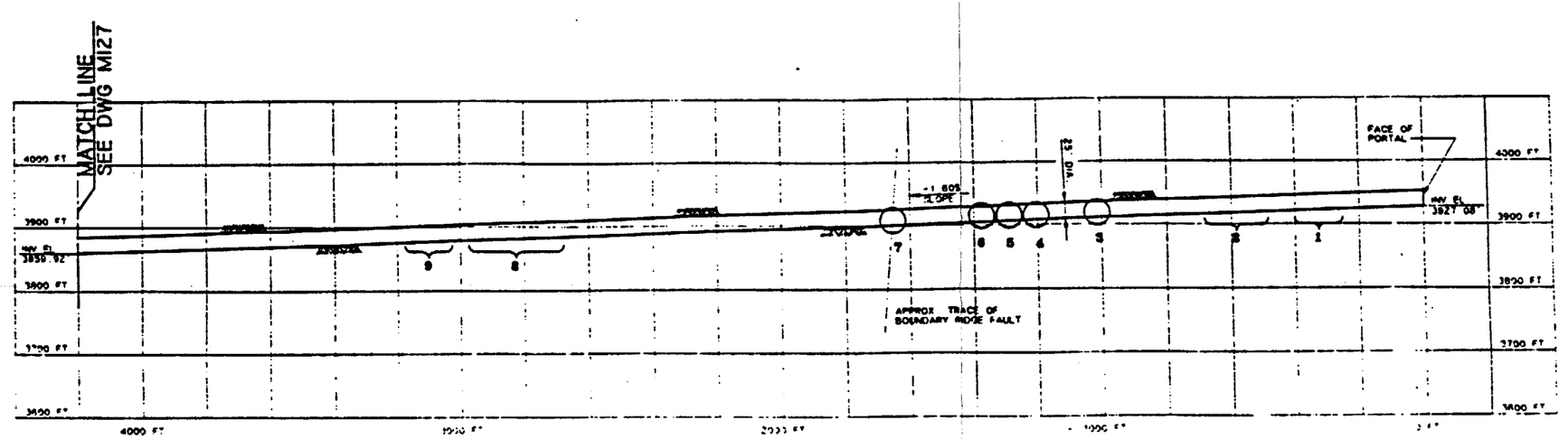
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	WRK
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
SMV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN TEST AREA
PLAN AND SECTIONS

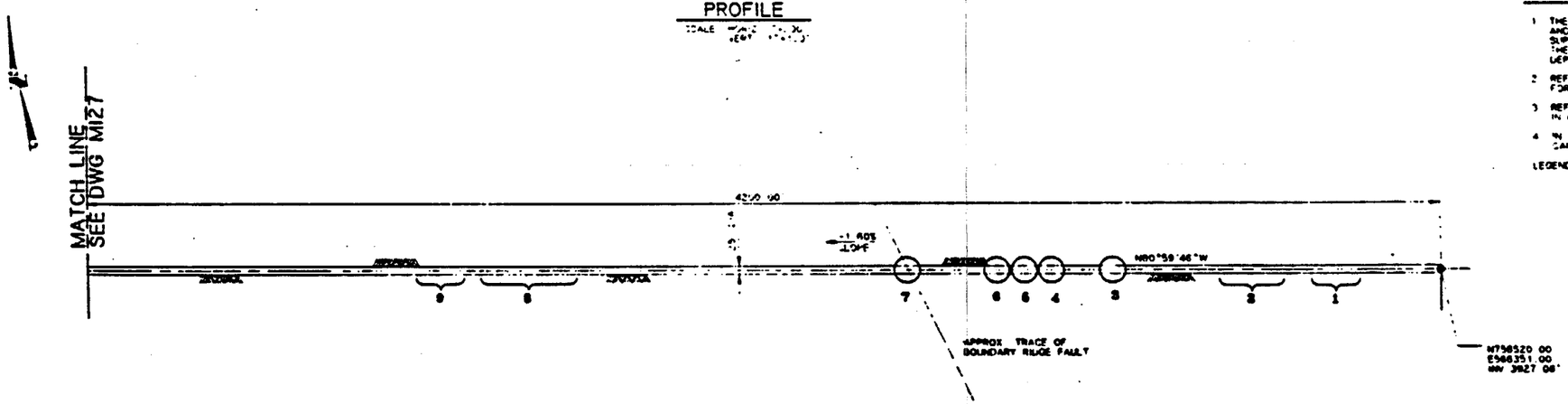
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MNG-M125 | REV. D
YMPO APPROVED | DATE | SHT OF

Plotted: Wed Aug 21 07:36:57 1991, PDT Part name: ymP5174.DWG



PROFILE

SCALE 1"=200' (VERT 1"=40')



PLAN

SCALE 1"=200'

SI APERTURE CARD

Also Available On Aperture Card

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL-MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, [illegible], AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL 2 ESFDR FOR TEST DESCRIPTIONS
3. REFER TO YMP-025-2-MING-M49, M50 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN RAMP
4. IN SITU SEALS TESTING WILL REQUIRE ALCOVES. THESE ALCOVES AND THEIR LOCATIONS CANNOT BE IDENTIFIED AT THIS TIME

LEGEND:

INDICATES UNCERTAINTY OF TEST ALCOVE LOCATION

INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGICAL INFORMATION

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-54

TS SOUTH RAMP

TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
1	RADIAL BORE HOLE (ANISOTROPY) HYDROCHEMISTRY	24' W x 20' L x 22' H SAME AS ANISOTROPY TEST
2	PLATE LOADING	15' W x 60 L x TBD H
3	RADIAL BORE HOLE (ANISOTROPY) HYDROCHEMISTRY	24' W x 20' L x 22' H USE SAME ALCOVE
4	RADIAL BORE HOLE (CONTACT) HYDROCHEMISTRY PERCOLATION	24' W x 20' L x TBD' H SAME ALCOVE AS RADIAL BORE HOLE (CONTACT) 2 DRIFTS 12' W x 23' L x 14' H
5	RADIAL BORE HOLE (ANISOTROPY) HYDROCHEMISTRY	24' W x 20' L x 22' H USE SAME ALCOVE
6	RADIAL BORE HOLE (CONTACT) HYDROCHEMISTRY PERCOLATION	24' W x 20' L x TBD' H SAME ALCOVE AS RADIAL BORE HOLE (CONTACT) 2 DRIFTS 12' W x 23' L x 14' H
7	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (NEAR BOUNDARY RIDGE)	TBD
8	RADIAL BORE HOLE (ANISOTROPY) HYDROCHEMISTRY PLATE LOADING	24' W x 20' L x 22' H USE SAME ALCOVE 15' W x 60' L x 12' H
9	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (BETWEEN GHOST DANCE AND BOUNDARY RIDGE FAULTS)	TBD

NOTE:

COORDINATES AND DIMENSIONS ARE PRELIMINARY

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO.	DATE	REVISION	DES	DR	[illegible]

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

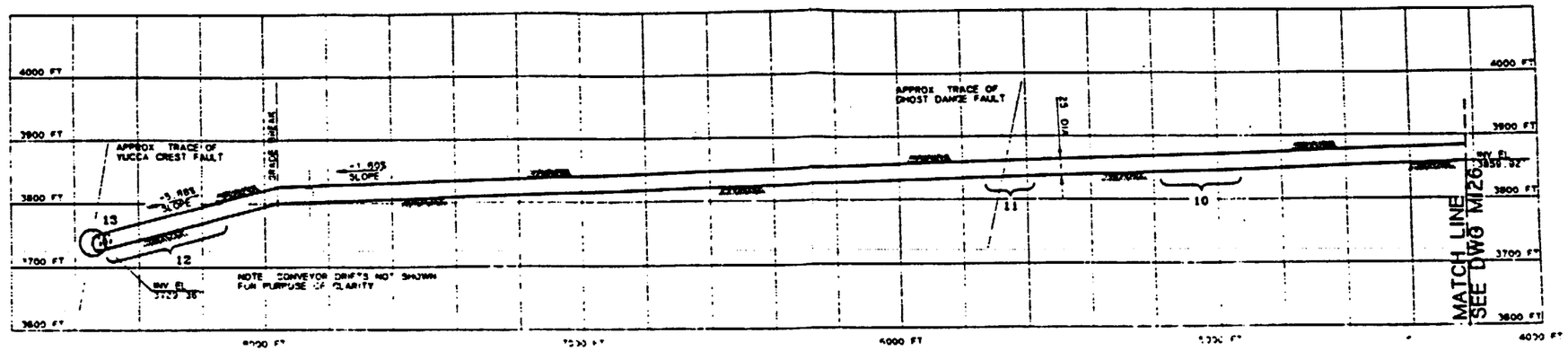
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	[illegible]
SDC	[illegible]
DESIGN ENGINEER	S.C.H.
VERIFICATION	N/A
CDV	DAT
QUALITY ASSURANCE	[illegible]

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS SOUTH RAMP PRELIMINARY TEST LOCATION
PLAN AND PROFILE

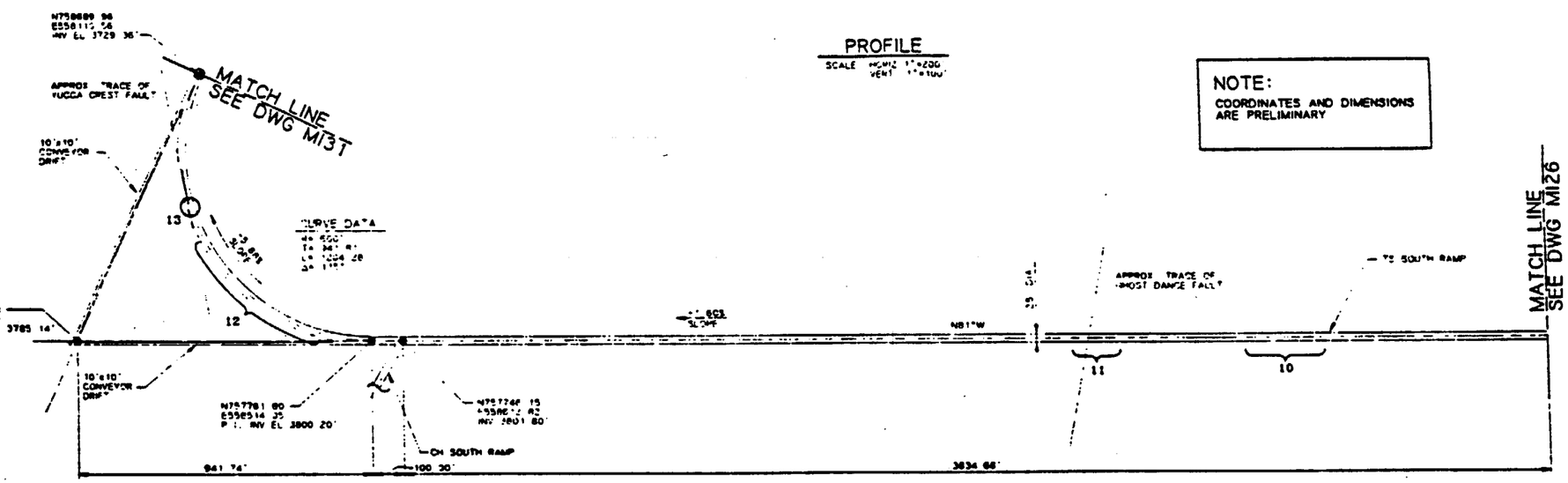
SUBMITTED BY: [illegible] DATE: [illegible]
DRAWING NO. YMP-025-2-MING-MI26
YMPO APPROVED
DATE
SHT [illegible]

Plotted : Wed Aug 21 08:18:33 1991, PDT Part name: ymp0181.DRW



PROFILE

SCALE HORIZ 1"=200' VERT 1"=100'



PLAN

SCALE 1"=200'

NOTE:

COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card

TS SOUTH RAMP		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
10	OVERCORE STRESS TEST	15' W x 30' L x 12' H
11	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (GHOST DANCE) HYDROCHEMISTRY	50' W x 80' L x 26' H USE SAME ALCOVE
12	RADIAL BOREHOLE (ANISOTROPY) HYDROCHEMISTRY PLATE LOADING	24' W x 20' L x 22' H SAME ALCOVE AS ANISOTROPY 15' W x 60' L x TBD H
13	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (NEAR YUCCA CREST)	TBD

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MINO-MI48,MI50 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN RAMP.
4. IN SITU SEALS TESTING WILL REQUIRE ALCOVES. THESE ALCOVES AND THEIR LOCATIONS CANNOT BE IDENTIFIED AT THIS TIME.

LEGEND:

INDICATES UNCERTAINTY OF TEST ALCOVE LOCATION

INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-55

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SNV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

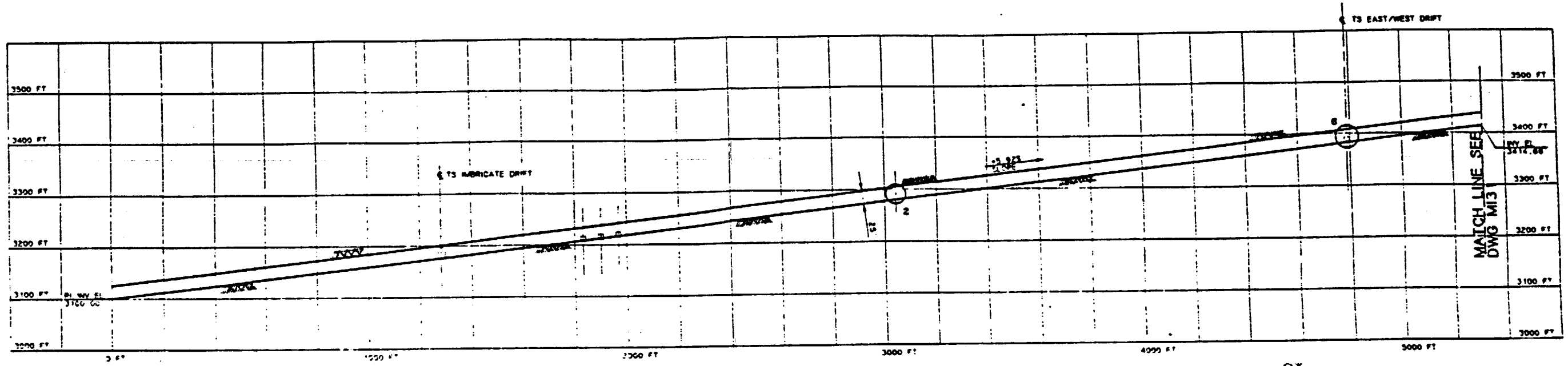
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS SOUTH RAMP PRELIMINARY TEST LOCATIONS
PLAN AND PROFILE

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
SNV SAF	
QUALITY ASSURANCE	

SUBMITTED BY DATE
YMPO APPROVED DATE

DRAWING NO. YMP-025-2-MINO-MI27

Plotted : Wed Aug 21 08:37:23 1991, PDT Part name: ymP0182.DRW

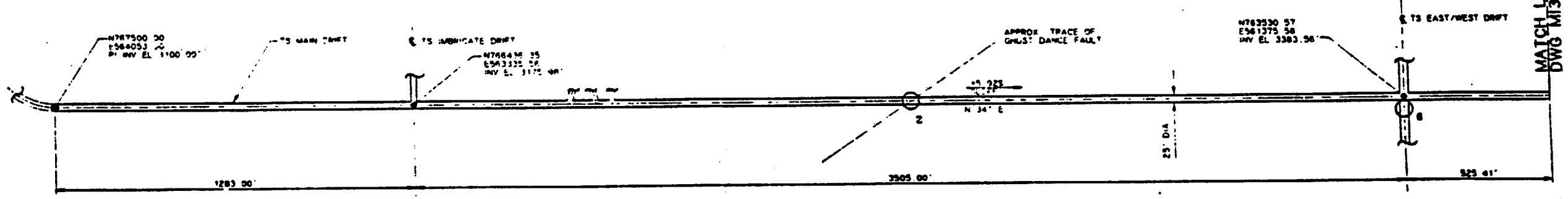


PROFILE
SCALE HORIZ 1"=200' VERT 1"=150'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card



PLAN
SCALE 1"=200'

9305250071-56

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

TS MAIN DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
2	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (GHOST DANCE FAULT) HYDROCHEMISTRY	TBD USE SAME ALCOVE
6	EXCAVATION EFFECTS TEST	22' W x 20' L x 12' H (MIN)

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED.
2. REFER TO YMP/CC 0013 REV 7/20/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS
3. REFER TO YMP-025-2-MING-M149,M150 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN DRIFT
4. IN SITU SEALS TESTING AND ROCK MASS STRENGTH WILL REQUIRE ALCOVES. THESE ALCOVES AND THEIR LOCATIONS CANNOT BE IDENTIFIED AT THIS TIME.

LEGEND:

○ . INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGICAL INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	MGPV	BW	SAF	SA	TPO	YMP

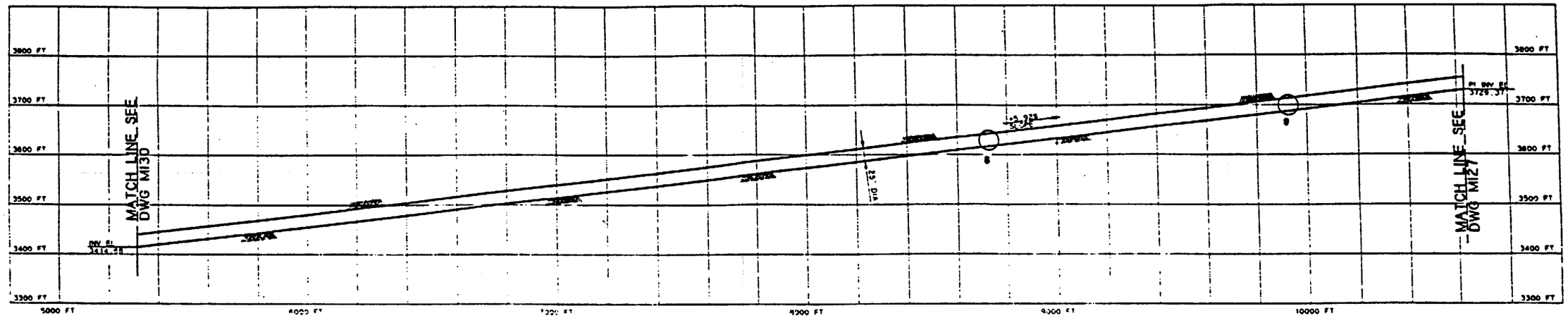
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
SAF	
SURVEY ARRANGEMENT	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN DRIFT PRELIMINARY TEST LOCATION
PLAN AND PROFILE

SUBMITTED BY: 7CZRS DATE: 8-24-94
DRAWING NO.: YMP-025-2-MING-M130
YMPO APPROVED DATE



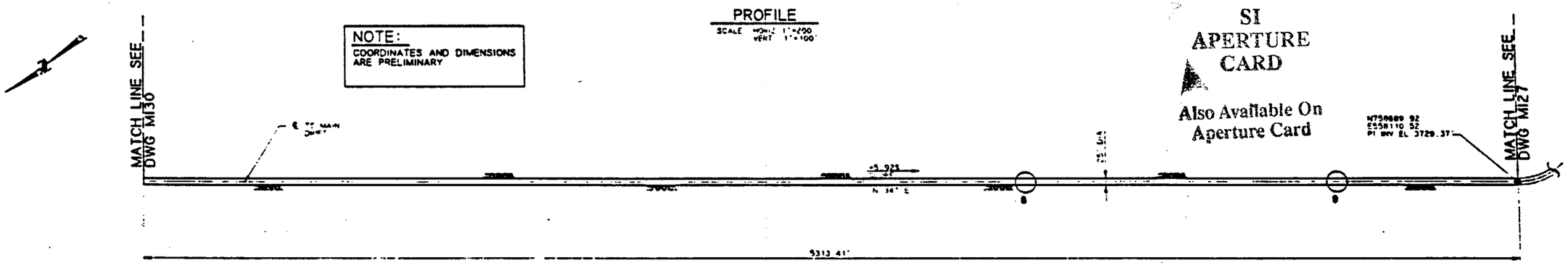
PROFILE

SCALE HORIZ 1"=200' VERT 1"=100'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card



PLAN

SCALE 1"=200'

TS MAIN DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
8	OVERCORE STRESS TEST	15' W x 30' L x 12' H (ALLOWS FOR ANY ORIENTATION)
9	BULK PERMEABILITY HYDROCHEMISTRY	12' W x 15' L x TBD H USE SAME ALCOVE

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MING-M149.MP50 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN DRIFT.
4. IN SITU SEALS TESTING MAY REQUIRE ALCOVES. THESE ALCOVES AND THEIR LOCATIONS CANNOT BE IDENTIFIED AT THIS TIME.
5. ROCK MASS STRENGTH TESTS MAY REQUIRE ALCOVES. THESE ALCOVES LOCATIONS CAN NOT BE IDENTIFIED AT THIS TIME.

LEGEND: ○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-57

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-22-91

Raytheon Services Nevada
LAS VEGAS, NEVADA

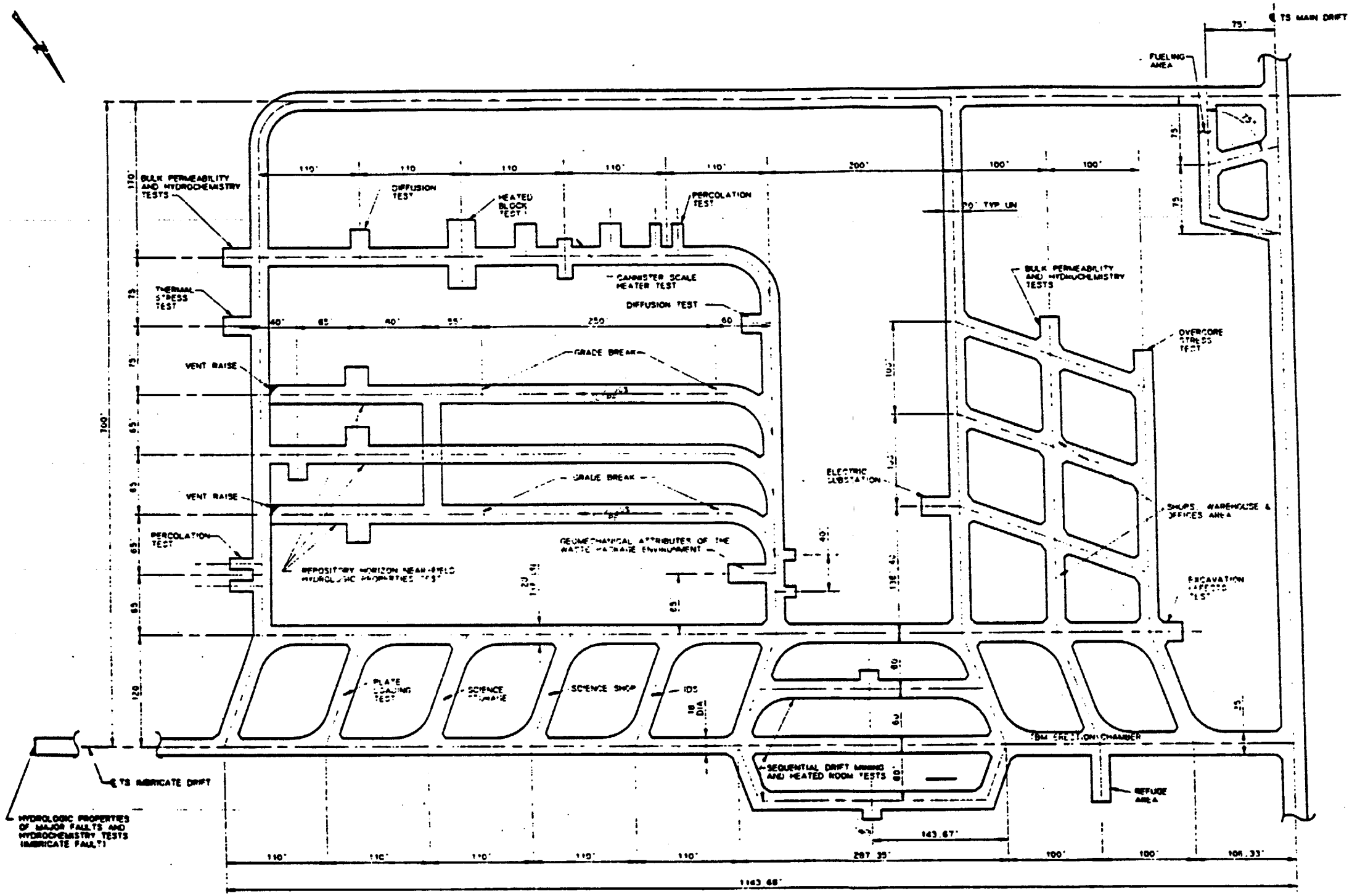
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN DRIFT PRELIMINARY TEST LOCATIO
PLAN AND PROFILE

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-M131

YMPO APPROVED | DATE | SHT OF

YMP0177 8-21-91 | P.S.S. NO. 1,2,8,9 | C.I. NO.

Plotted Wed Aug 21 08:59:41 1991, PDT Part name ymP0177.DWG



NOTES:

1. THIS DRAWING AS SHOWN WAS DEVELOPED USING TITLE I AND ESF ALTERNATIVES STUDY INPUTS FOR THE PURPOSE OF ESTABLISHING AN INITIAL TEST PROGRAM BASIS.

   THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED

2. MANY INTERFERENCE STANDOFF ZONES MAY INCREASE AS A RESULT OF ONGOING PERFORMANCE EVALUATIONS, ESPECIALLY FOR HEATER TESTS. ALL CURRENTLY DEFINED (TITLE I) STANDOFF ZONES ARE APPLIED. FLEXIBILITY TO ALLOW STANDOFF EXPANSIONS HAS BEEN CONSIDERED

3. ROCK MASS STRENGTH AND IN SITU SEALS TESTS MAY REQUIRE ALCOVES, BUT CANNOT BE PRESENTLY LOCATED

4. REFER TO YMP/CC 0013 REV 7/29/91 VOL.2 ESFDR FOR TEST DESCRIPTIONS.

5. TEST LOCATIONS AND ORIENTATIONS ARE PRELIMINARY AND CANNOT BE FINALLY DETERMINED UNTILL INITIAL DRIFTING AND GEOLOGICAL MAPPING ARE COMPLETED

LEGEND:

TBM: TUNNEL BORING MACHINE

IDS: INTEGRATED DATA SYSTEM

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NOTE :
COORDINATES AND DIMENSIONS ARE PRELIMINARY

TS MAIN TEST AREA PRELIMINARY TEST LOCATIONS PLAN

SCALE 1"=60'

9305250071-58

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VERF	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

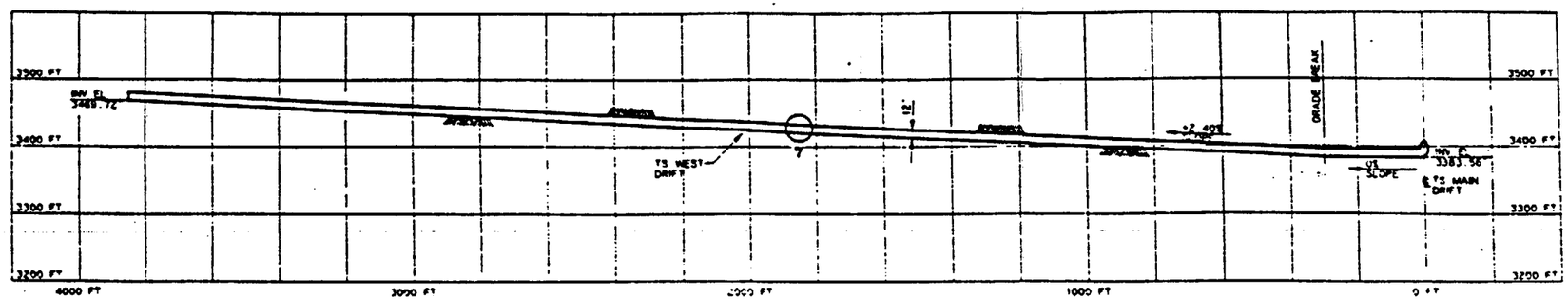
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS MAIN TEST AREA PRELIMINARY TEST LOCATION PLAN

SUBMITTED BY: DATE: 9-20-91
DRAWING NO. YMP-025-2-MNG-M133 REV 0
YMPO APPROVED DATE SHT OF

PCN YMP-0002 9-21-91 | S.D.S. NO. 1.2.6.5 | C.I. NO.

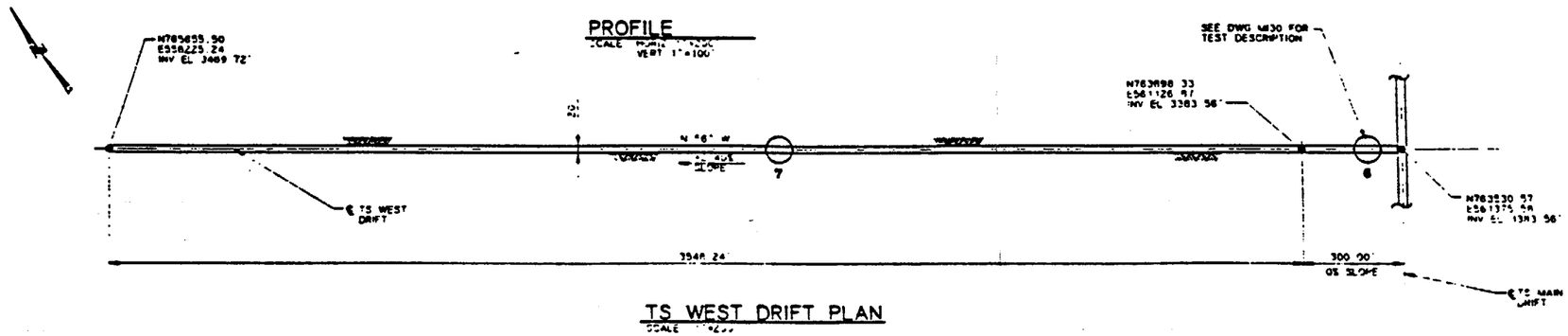
Plotted : Wed Aug 21 09:32 02 1991, PDT Part name ymP0162.DRW



NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL.2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MINO-M149, M150 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN DRIFTS.
4. IN SITU SEALS TESTING AND ROCK MASS STRENGTH TESTS MAY REQUIRE ALCOVES. THESE ALCOVES AND THEIR LOCATIONS CANNOT BE IDENTIFIED AT THIS TIME.

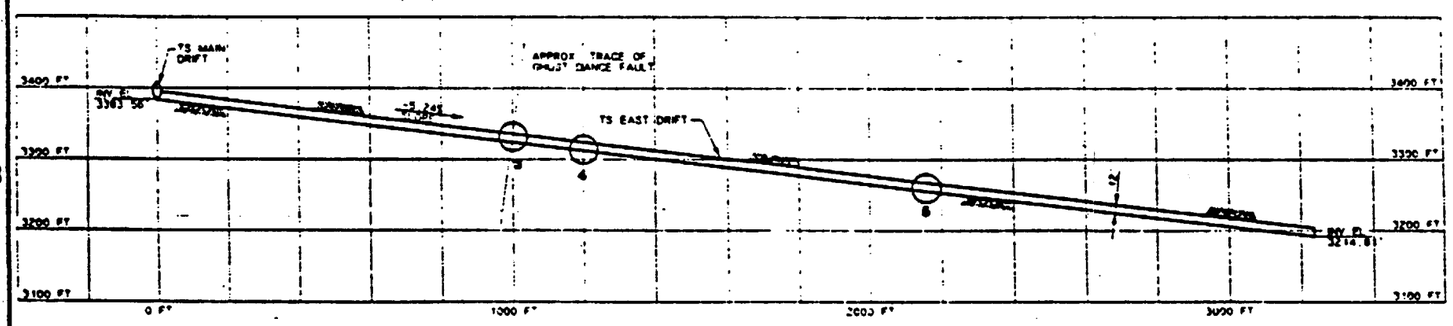
LEGEND: ○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGICAL INFORMATION



SI APERTURE CARD

Also Available On Aperture Card

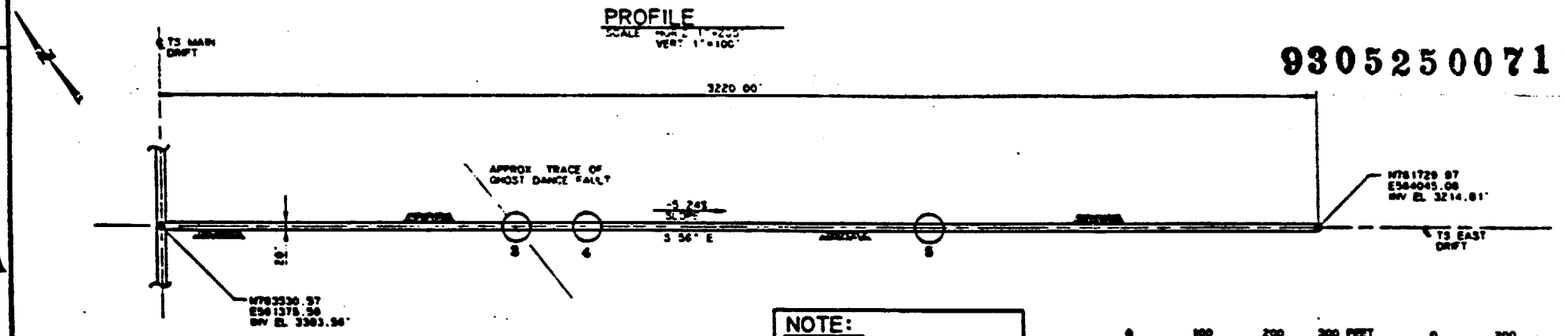
TS WEST DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
7	BULK PERMEABILITY HYDROCHEMISTRY	12' W x 15' L x TBD H USE SAME ALCOVE



TS EAST DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
3	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (NEAR GHOST DANCE FAULT) HYDROCHEMISTRY	TBD USE SAME ALCOVE
4	PLATE LOADING	15' W x 60' L x TBD H
5	BULK PERMEABILITY HYDROCHEMISTRY	12' W x 15' L x TBD H USE SAME ALCOVE

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

PROFILE
VERT 1"=100'



TS EAST DRIFT PLAN
SCALE: 1"=200'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

9305250071-59

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

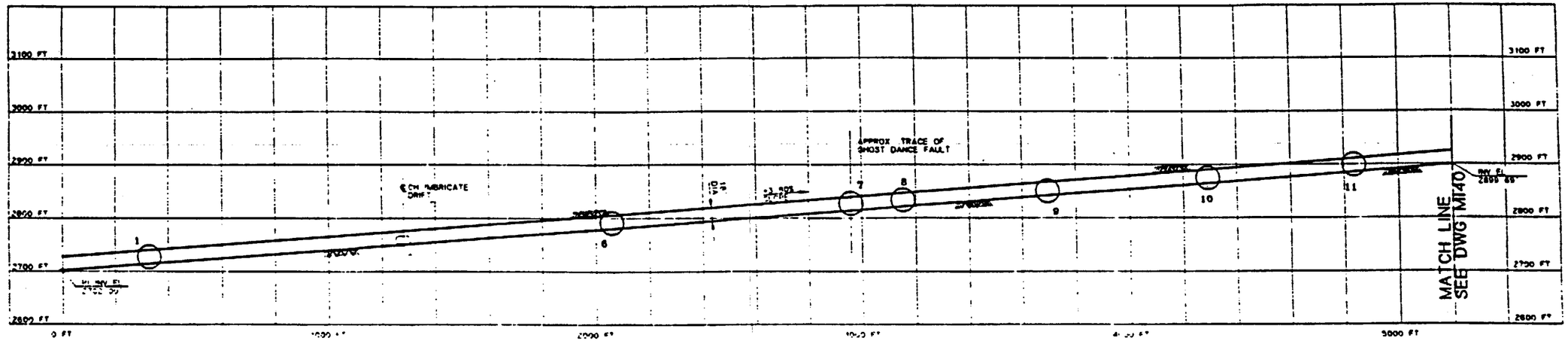
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

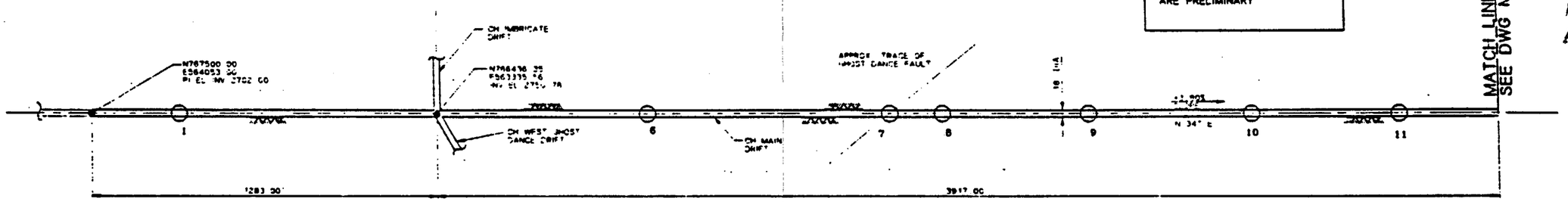
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS EAST & WEST DRIFTS PRELIMINARY TEST LOCATIO
PLAN AND PROFILE

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MINO-M137
YMPO APPROVED | DATE | SHT



PROFILE



PLAN
SCALE 1"=200'

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY

SI APERTURE CARD

Also Available On Aperture Card

9305250071 -60

FOR REFERENCE DRAWINGS INDEX, SEE DRAWING YMP-025-2-CIVL-GE02

CALICO HILLS MAIN DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
1	RADIAL BORE HOLE (V/Z CONTACT) HYDROCHEMISTRY	24' W x 20' L x TBD' H SAME ALCOVE AS RADIAL BORE HOLE TEST
6	PLATE LOADING (VITRIC)	15' W x 60' L x TBD' H
7	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (GHOST DANCE MIDDLE) HYDROCHEMISTRY	TBD SAME ALCOVE AS HYDROLOGIC PROPERTIES
8	PLATE LOADING (FAULT CONTACT)	15' W x 60' L x TBD' H
9	DIFFUSION (VITRIC)	20' W x 20' L x 12' H
10	PERCOLATION (VITRIC)	2 DRIFTS 12' W x 23' L x 14' H
11	RADIAL BORE HOLE (ANISOTROPY CHN1) HYDROCHEMISTRY	24' W x 20' L x 22' H SAME ALCOVE AS RADIAL BORE HOLE

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE, THE FINAL LOCATIONS OF TESTS AND TEST ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED.
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MING-MI149, MI50 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN MAINS.
4. THREE ADDITIONAL TESTS WHICH MAY REQUIRE ALCOVES CANNOT PRESENTLY BE LOCATED DUE TO CURRENT STATUS OF TEST PLANNING OR DEPENDENCE ON SITE-SPECIFIC GEOLOGY. THESE TESTS ARE: 1) BULK PERMEABILITY, 2) ROCK MASS STRENGTH, AND 3) IN SITU TESTING OF SEAL COMPONENTS. ALCOVE LOCATIONS FOR THESE TESTS WILL BE DETERMINED AS PLANNING IS COMPLETED OR UPON EXAMINATION OF GEOLOGIC FEATURES FOLLOWING EXCAVATION.

LEGEND:

○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FEET
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

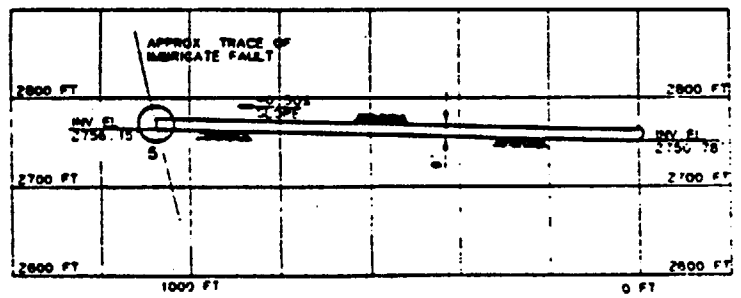
APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH MAIN DRIFT PRELIMINARY TEST LOCATION
PLAN AND PROFILE

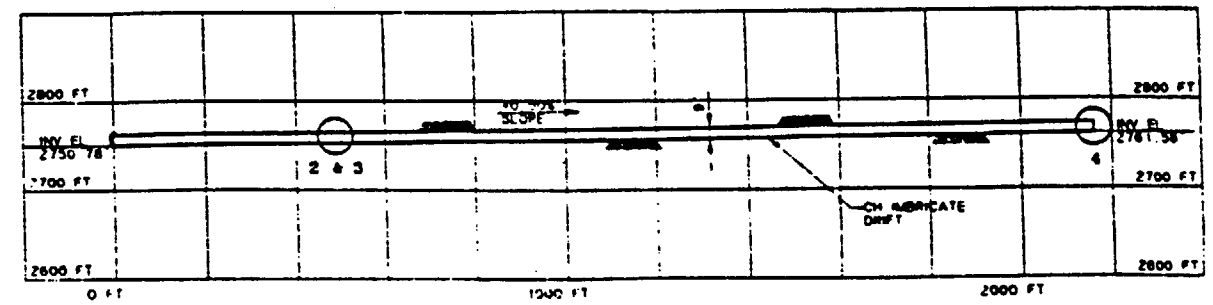
SUBMITTED BY: 7-11-91 | DATE | DRAWING NO. YMP-025-2-MING-MI39
YMPO APPROVED | DATE | SHT | OF

Plotted: Wed Aug 21 10:08:05 1991, PDT Part name: YMPU178.DRW

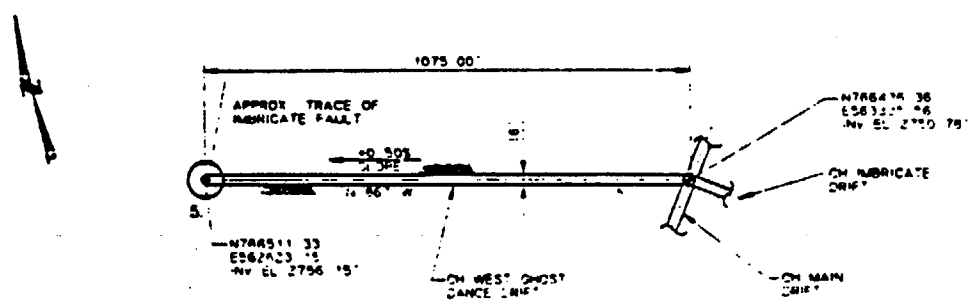


PROFILE

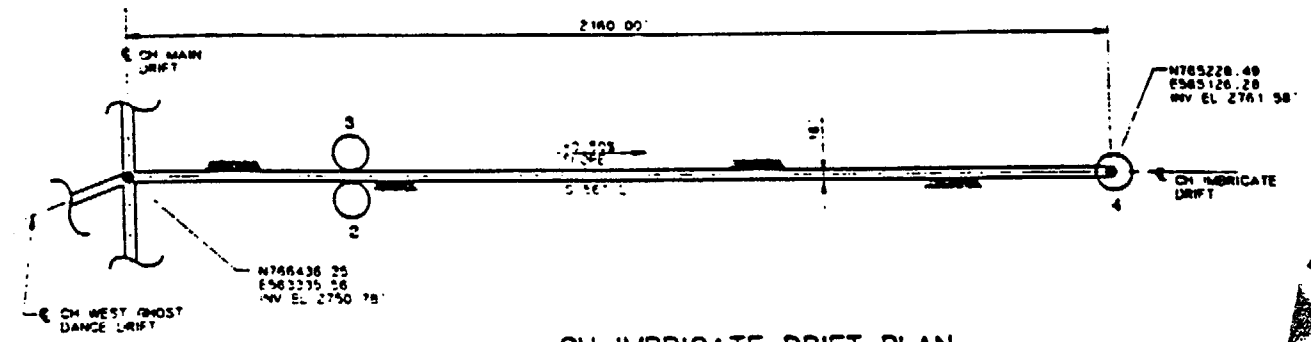
NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



PROFILE



CH WEST GHOST DANCE DRIFT PLAN



CH IMBRICATE DRIFT PLAN

SI APERTURE CARD

Also Available On Aperture Card

CH WEST GHOST DANCE DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
5	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (GHOST DANCE) HYDROCHEMISTRY	TBD USE SAME ALCOVE

CH IMBRICATE DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
2	RADIAL BOREHOLE (TS/CH CONTACT) HYDROCHEMISTRY	24' W x 20' L x TBD' H SAME DRIFT AS #3' (CONTACT)
3	RADIONUCLIDE MIGRATION (TS/CH)	2 ROOMS 33'W x 33'L x 9'H
4	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (IMBRICATE) HYDROCHEMISTRY	TBD SAME ALCOVE AS HYDROLOGIC PROPERTIES

9305250071 -61

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS
3. REFER TO YMP-025-2-MINO-M849, M150 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN DRIFT
4. THREE ADDITIONAL TESTS WHICH MAY REQUIRE ALCOVES CANNOT PRESENTLY BE LOCATED DUE TO CURRENT STATUS OF TEST PLANNING OR DEPENDENCE ON SITE-SPECIFIC GEOLOGY. THESE TESTS ARE: 1) BULK PERMEABILITY, 2) ROCK-MASS STRENGTH, AND 3) IN SITU TESTING OF SEAL COMPONENTS. ALCOVE LOCATIONS FOR THESE TESTS WILL BE DETERMINED AS PLANNING IS COMPLETED OR UPON EXAMINATION OF GEOLOGIC FEATURES FOLLOWING EXCAVATION

LEGEND: ○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

NO	DATE	REVISION	DES	DRN	CHK	ENG	DM	YMPO	ENV	SAP	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

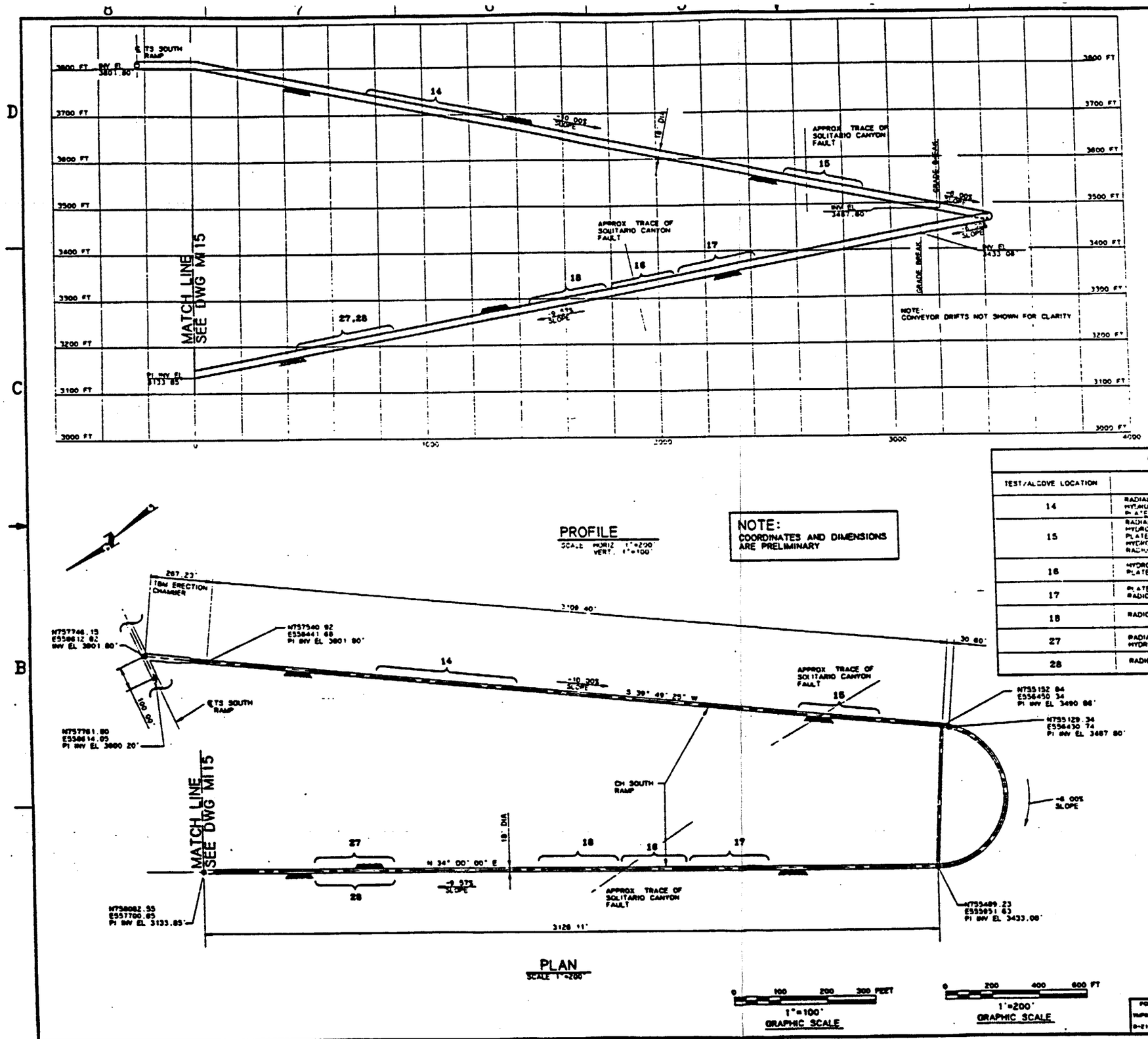
APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DOC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAP	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH LEVEL DRIFTS PRELIMINARY TEST LOCATIONS
PLAN AND PROFILE

SUBMITTED BY: R.L. Zelle — DATE: 8-26-91
DRAWING NO.: YMP-025-2-MINO-M138
YMPO APPROVED — DATE
SHT ___ OF ___

PCN YMP0207 8-21-91
V.O.S. 1,2 & 5
C.I.

Plotted: Wed Aug 21 09:54:44 1991, PDT Part name: YMP0207.DRW



NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-025-2-MINO-M149, M150 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN RAMP.
4. IN SITU SEALS TEST WHICH MAY REQUIRE ALCOVES CANNOT PRESENTLY BE LOCATED DUE TO CURRENT STATUS OF TEST PLANNING OR DEPENDENCE ON SITE-SPECIFIC GEOLOGY AND FACILITY DESIGN. ALCOVE LOCATIONS FOR THESE TESTS WILL BE DETERMINED AS PLANNING IS COMPLETED OR UPON EXAMINATION OF GEOLOGIC FEATURES FOLLOWING EXCAVATION

LEGEND:
○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGICAL INFORMATION
⌣ INDICATES UNCERTAINTY OF TEST ALCOVE LOCATION

SI APERTURE CARD

Also Available On Aperture Card

CALICO HILLS SOUTH RAMP

TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED ON ALCOVE	EXCAVATION SIZE REQUIRED
14	RADIAL BORE HOLE (AMS) HYDROCHEMISTRY PLATE LOADING (TSm3)	24' W x 20' L x 22' H SAME ALCOVE AS RADIAL BORE HOLE 15' W x 60' L x TBD H
15	RADIAL BORE HOLE (CONTACT) HYDROCHEMISTRY PLATE LOADING (CHn1) HYDROLOGIC PROPERTIES OF MAJOR FAULTS (SOLITARIO CANYON) RADIONUCLIDE MIGRATION (TS/CH)	24' W x 20' L x TBD H USE SAME ALCOVE AS RADIAL BORE HOLE 15' W x 60' L x TBD H TBD W x TBD W x TBD H 33' W x 33' L x 9' H 2 RMS REQ'D
16	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (SOLITARIO CANYON) PLATE LOADING (CHn2)	TBD W x TBD L x TBD H 15' W x 60' L x TBD H
17	PLATE LOADING (CHn3) RADIONUCLIDE MIGRATION (VITRIC)	15' W x 60' L x TBD H 33' W x 33' L x 9' H
18	RADIONUCLIDE MIGRATION (VITRIC)	33' W x 33' L x 9' H 2 ROOMS REQUIRED
27	RADIAL BORE HOLE (V/Z CONTACT) HYDROCHEMISTRY	24' W x 20' L x TBD H USE SAME ALCOVE AS RADIAL BOREHOLE
28	RADIONUCLIDE MIGRATION (VITRIC / ZEOLITIC)	33' W x 33' L x 9' H 2 ROOMS REQUIRED

9305250071 -62

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

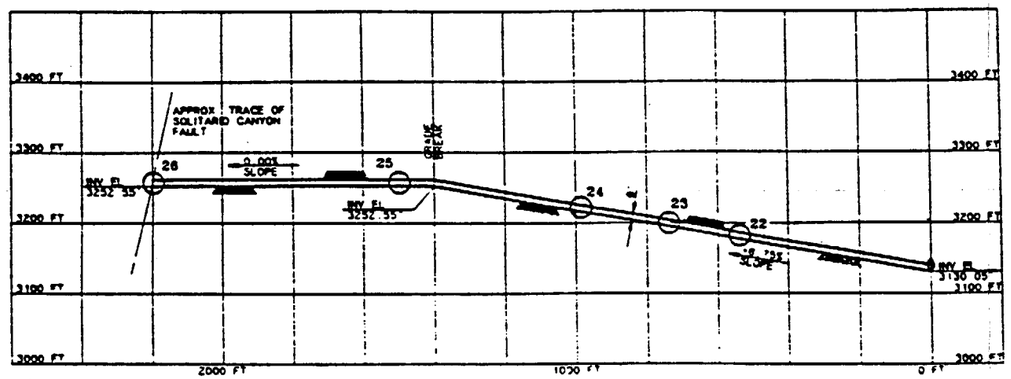
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

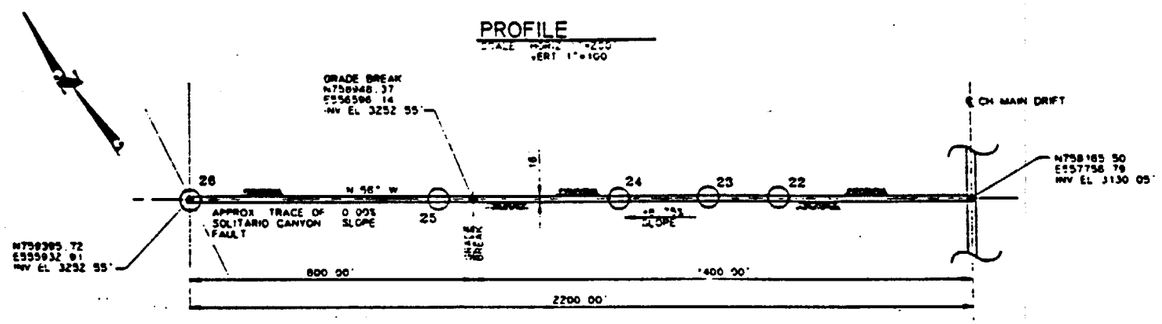
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH SOUTH RAMP PRELIMINARY TEST LOCATIO
PLAN & PROFILE

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MINO-MI42
YMPO APPROVED | DATE | SHT | OF



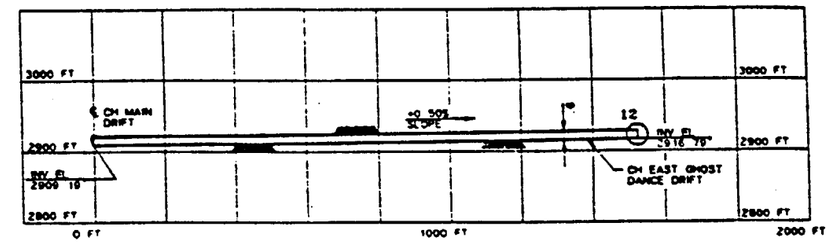
PROFILE
SCALE HORIZ 1"=200
VERT 1"=100



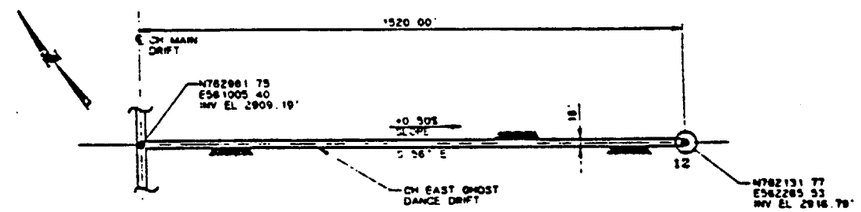
CH SOLITARIO DRIFT PLAN
SCALE 1"=200

CALICO HILLS SOLITARIO DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED IN ALCOVE	EXCAVATION SIZE REQUIRED
22	RADIONUCLIDE MIGRATION (ZEOLITIC/VITRIC)	33' W x 33' L x 9' H 2 RMS REQUIRED
23	PLATE LOADING (ZEOLITIC) HYDROCHEMISTRY	15' W x 60' L x TBD H USE SAME ALCOVE
24	RADIONUCLIDE MIGRATION (ZEOLITIC)	33' W x 33' L x 9' H 2 RMS REQUIRED
25	DIFFUSION TEST (ZEOLITIC)	20' W x 20' L x 9' H
26	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (SOLITARIO CANYON) HYDROCHEMISTRY	TBD USE SAME ALCOVE

NOTE:
COORDINATES AND DIMENSIONS ARE PRELIMINARY



PROFILE
SCALE HORIZ 1"=200
VERT 1"=100



CH EAST GHOST DANCE DRIFT PLAN
SCALE 1"=200

CALICO HILLS EAST GHOST DANCE DRIFT		
TEST/ALCOVE LOCATION	TEST(S) TO BE LOCATED ON ALCOVE	EXCAVATION SIZE REQUIRED
12	HYDROLOGIC PROPERTIES OF MAJOR FAULTS (GHOST DANCE) HYDROCHEMISTRY	TBD USE SAME ALCOVE

SI APERTURE CARD

Also Available On Aperture Card

NOTES:

1. THE TEST LOCATIONS ARE CLOSELY DEPENDENT UPON THE HYDROLITHOLOGIC AND THE THERMAL/MECHANICAL CONTACTS. THE CURRENT GEOLOGIC INFORMATION SUPPLIED BY SNL, SAIC, AND RSN IS PRELIMINARY AND UNCERTAIN. THEREFORE THE FINAL LOCATIONS OF TESTS AND TEST ACCESS DRIFTS AND THEIR ORIENTATIONS WILL BE DEPENDENT UPON OBSERVED GEOLOGY AS EXCAVATION AND TESTING PROCEED
2. REFER TO YMP/CC 0013 REV 7/29/91 VOL. 2 ESFDR FOR TEST DESCRIPTIONS.
3. REFER TO YMP-000-2-MINO-M149.M50 FOR TYPICAL ALCOVE EXCAVATION SEQUENCE IN MAINS.
4. THREE ADDITIONAL TESTS WHICH MAY REQUIRE ALCOVES CANNOT PRESENTLY BE LOCATED DUE TO CURRENT STATUS OF TEST PLANNING OR DEPENDENCE ON SITE-SPECIFIC GEOLOGY. THESE TESTS ARE: 1) BULK PERMEABILITY, 2) ROCK-MASS STRENGTH, AND 3) IN SITU TESTING OF SEAL COMPONENTS. ALCOVE LOCATIONS FOR THESE TESTS WILL BE DETERMINED AS PLANNING IS COMPLETED OR UPON EXAMINATION OF GEOLOGIC FEATURES FOLLOWING EXCAVATION.

LEGEND: ○ INDICATES PRELIMINARY TEST ALCOVE LOCATION BASED UPON AVAILABLE GEOLOGIC INFORMATION

0 100 200 300 FEET
1"=100'
GRAPHIC SCALE

0 200 400 600 FT
1"=200'
GRAPHIC SCALE

9305250071-63

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	EM	VRFY	ENV	BAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

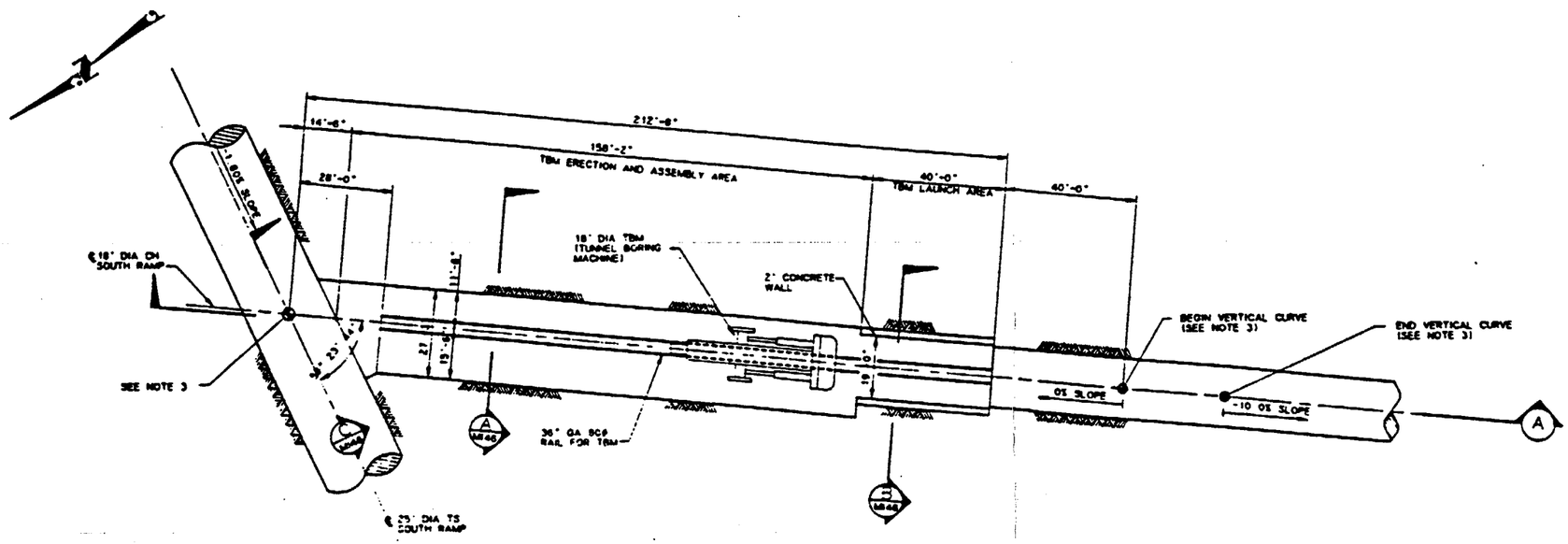
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	RLC
DRAWN	CLP
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / BAF	
QUALITY ASSURANCE	

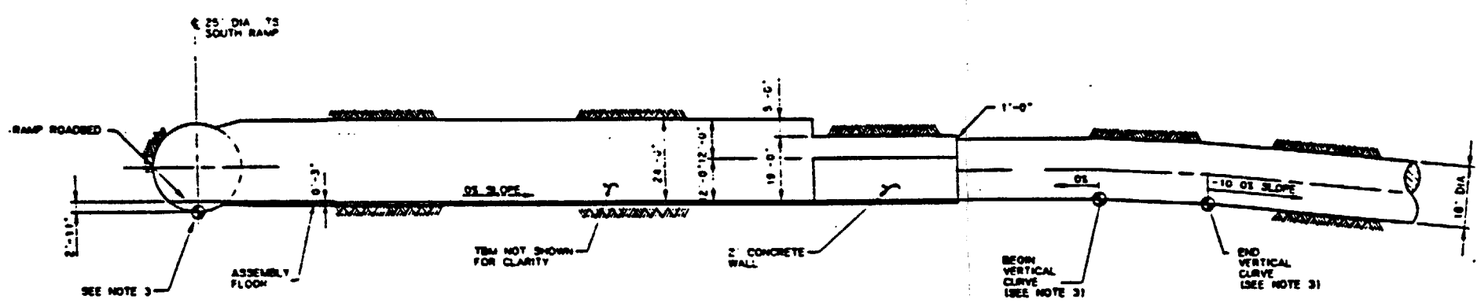
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
CH LEVEL DRIFTS PRELIMINARY TEST LOCATIONS
PLAN AND PROFILE

SUBMITTED BY: T.K. Zellis DATE: 8-26-91
DRAWING NO. YMP-025-2-MING-M143 REV 0
YMPO APPROVED DATE
SHT OF

Plotted: Wed Aug 21 10:57:25 1991 PDT Part name YMP0708.DRW



PLAN
SCALE 1"=20'



SECTION (A)
SCALE 1"=20'

0 20 40 60 FEET
1"=20'
GRAPHIC SCALE

SI APERTURE CARD

Also Available On Aperture Card

NOTES:

1. DIMENSIONS SHOWN ARE APPROXIMATE ACTUAL DIMENSIONS DEPEND ON TBM SELECTED
2. ⊕ SYMBOL IS FOR REFERENCE ONLY AND DOES NOT INDICATE SURVEY STATION LOCATIONS.
3. SEE CALCULATION ST-SA-001 FOR MAJOR COORDINATES AND VERTICAL CURVE DATA.

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-64

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

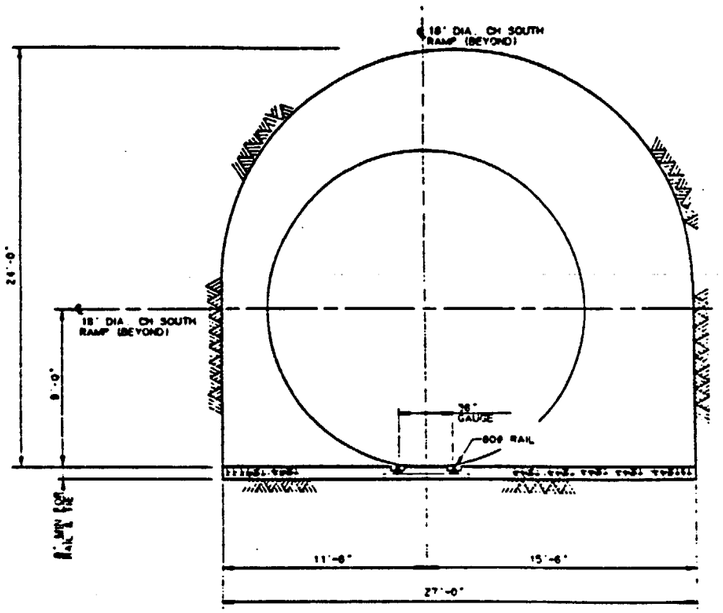
APPROVALS	
DESIGN	MJE
DRAWN	CLP / RFC
ENGINEER	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-22-01

Raytheon Services Nevada
LAS VEGAS, NEVADA

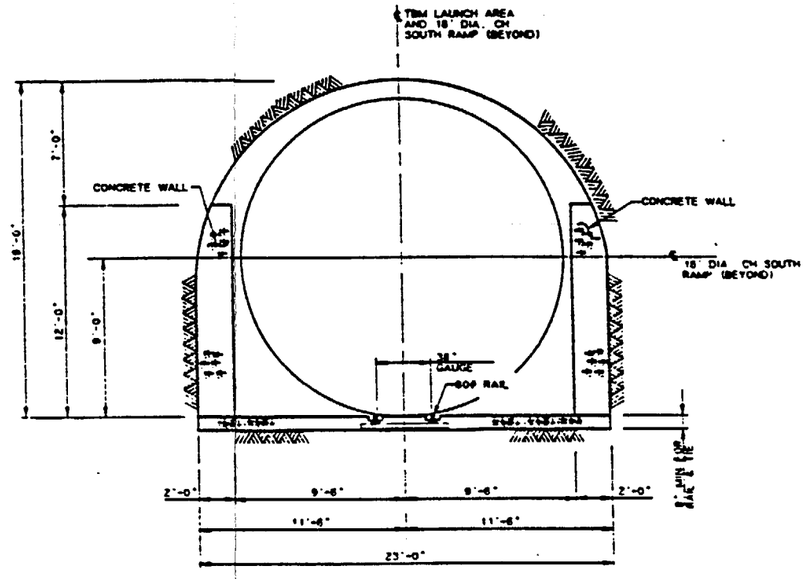
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS/CH SOUTH RAMP INTERSECTION
PLAN & SECTION

SUBMITTED BY: 8-22-01 DATE
DRAWING NO. YMP-025-2-MING-M145
YMPO APPROVED DATE
SHT OF

Plotted : Wed Aug 21 11:10:12 1991, PDT Part name YMPG116.DRW

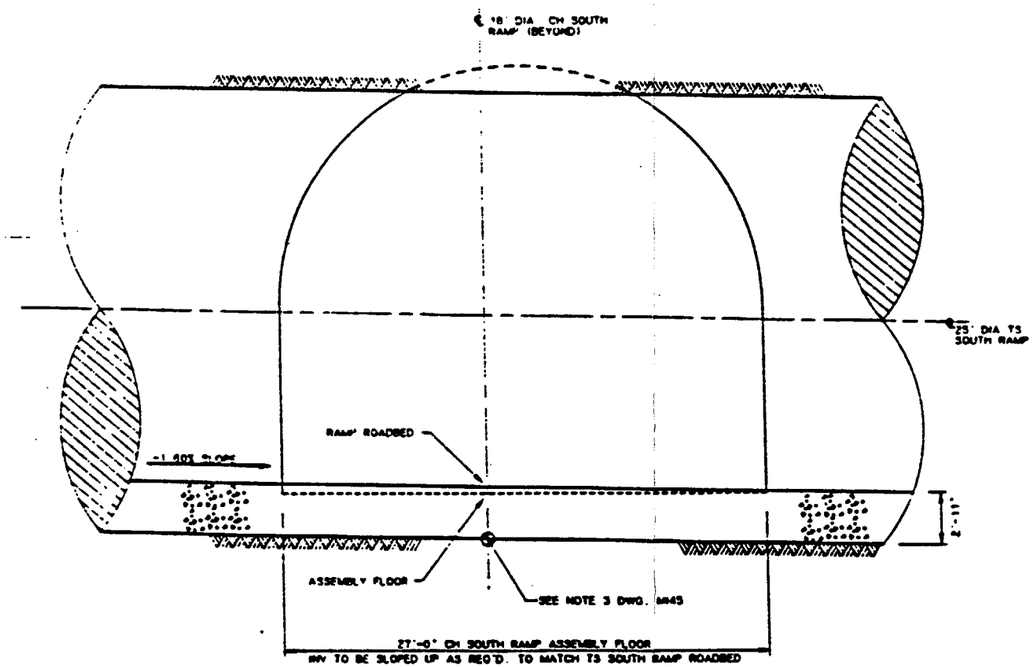


SECTION A (M45)
SCALE 1/4"=1'-0"



SECTION B (M45)
SCALE 1/4"=1'-0"

NOTE:
DIMENSIONS SHOWN ARE APPROXIMATE
ACTUAL DIMENSIONS DEPEND ON TBM SELECTED



SECTION C (M45)
SCALE 1/4"=1'-0"

0 4 8 12 FEET
1/4"=1'-0"
GRAPHIC SCALE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02
FOR NOTES SEE DRAWING YMP-025-2-MING-M845

9305250071-65

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VERF	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	MJE
DRAWN	CLP / RFC
CHECKED	
DEC	
DESIGN MANAGER	T.B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-26-91

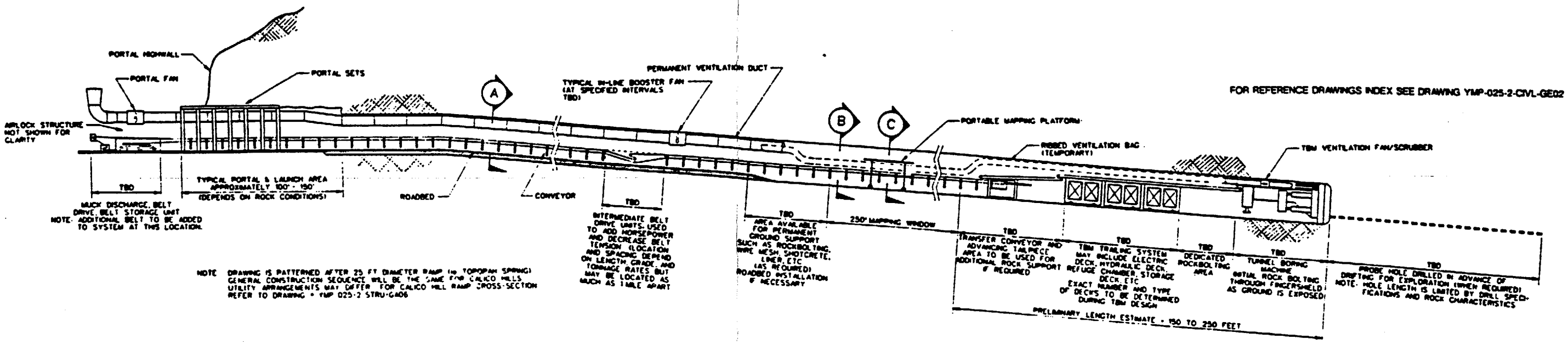
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS/CH SOUTH RAMP INTERSECTION
SECTIONS

SUBMITTED BY: 8-26-91
DATE
DRAWING NO. YMP-025-2-MING-M146
YMPO APPROVED
DATE
SHT OF

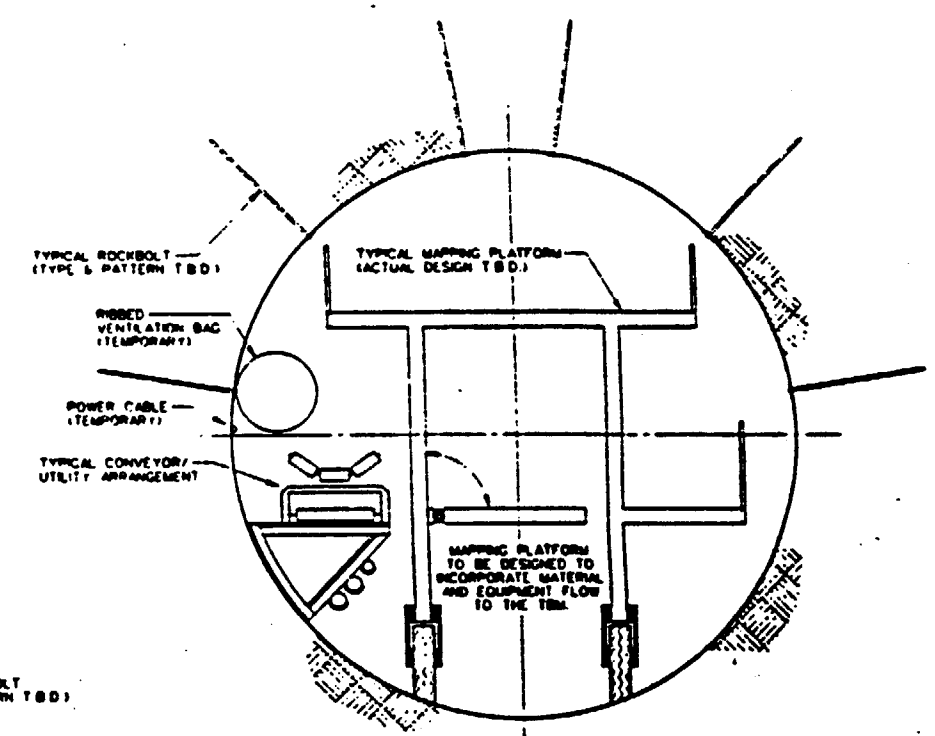
Plotted: Wed Aug 21 11:17:10 1991, PDT Part name: YMP0117.DRW

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02



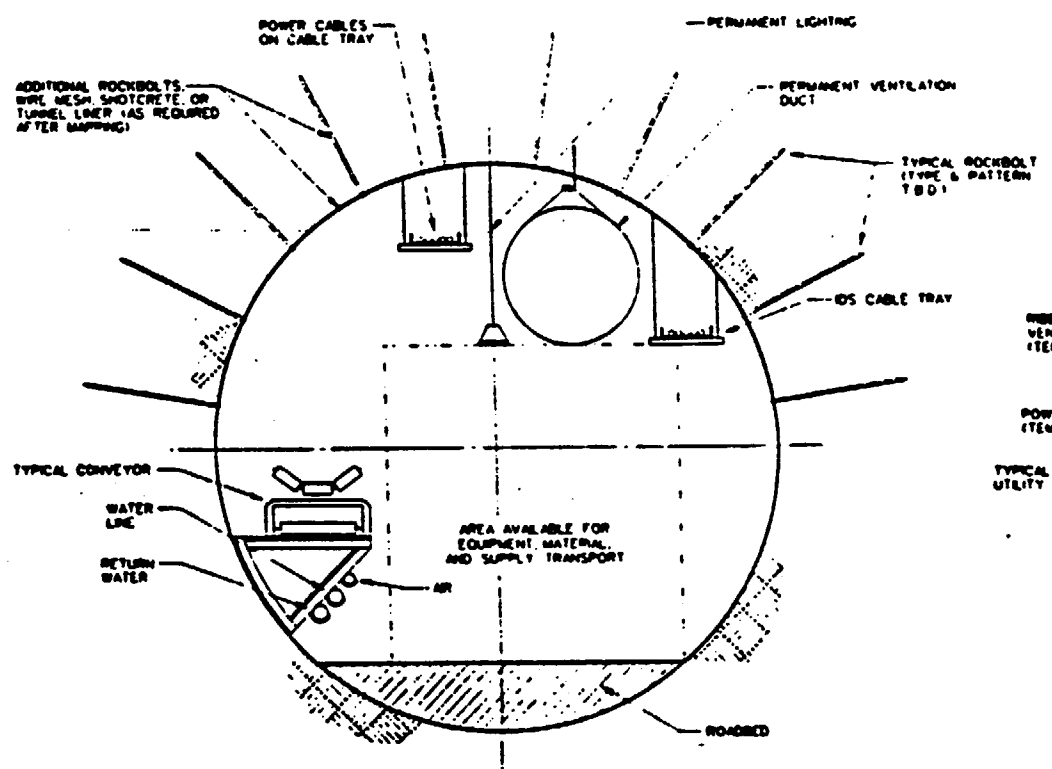
TYPICAL CROSS-SECTION OF RAMP CONSTRUCTION SEQUENCE

SCALE NONE



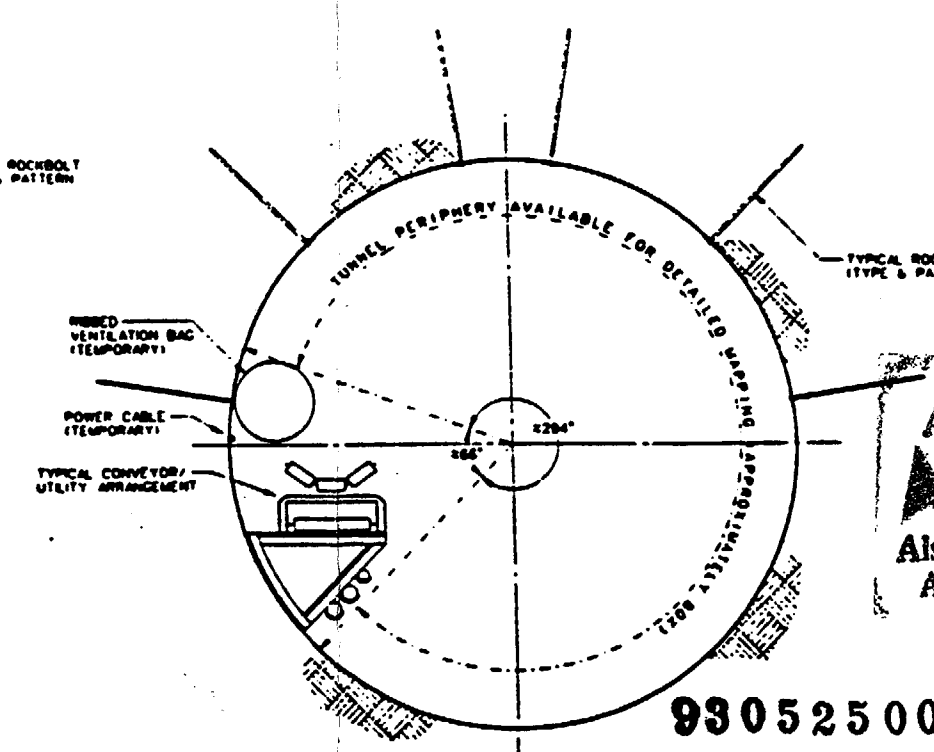
SECTION C — TYPICAL RAMP SECTION IN MAPPING ARRANGEMENT SHOWING PORTABLE MAPPING PLATFORM

SCALE NONE



SECTION A — TYPICAL RAMP SECTION IN PERMANENT ARRANGEMENT (NOTE IDS CABLES, COMMUNICATION LINES, ETC TO BE INSTALLED AS-REQUIRED, AFTER MAPPING.)

SCALE NONE



SECTION B — TYPICAL RAMP SECTION IN MAPPING ARRANGEMENT SHOWING TUNNEL PERIPHERY AVAILABLE FOR MAPPING.

SCALE NONE

SI APERTURE CARD

Also Available On Aperture Card

9305250071-66

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	YMP Y	ENV	SAF	ENG	QA	TP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

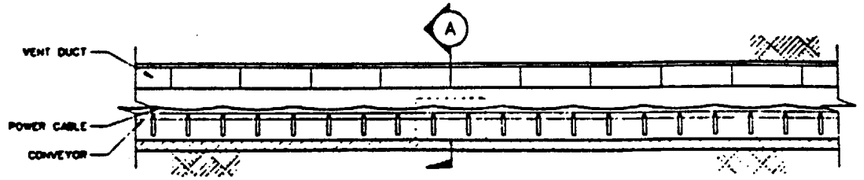
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	MJE
DRAWN	PE
CHECKED	
REC	
DESIGN ENGINEER	B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	8-16-91

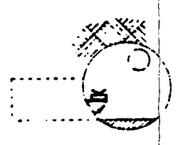
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
RAMP CONSTRUCTION SEQUENCE
SECTIONS

SUBMITTED BY: T. J. Killeen — DATE: 8-16-91
DRAWING NO: YMP-025-2-MNC-M48
YMPO APPROVED — DATE
SHT ___ OF ___

FOR TRACKING: OBS NO 1265.5; CI NO; 88 22-01

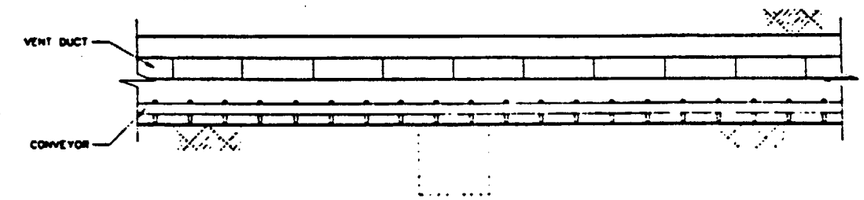


SIDE VIEW OF TYPICAL RAMP SHOWING STATION LOCATION
(UTILITY PIPES, COMMUNICATION LINES, ETC. NOT SHOWN FOR CLARITY)
SCALE NONE

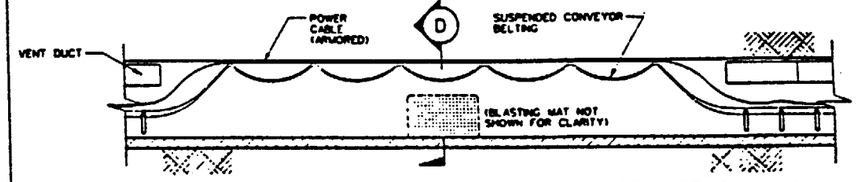


SECTION A
SCALE NONE

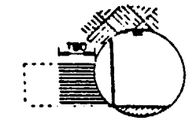
1 TYPICAL STATION IS LOCATED IN THE RAMP



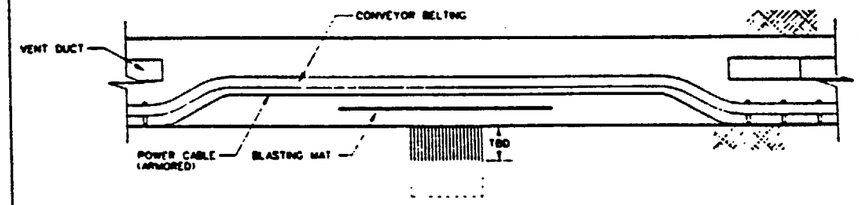
PLAN VIEW OF TYPICAL RAMP SHOWING STATION LOCATION
SCALE NONE



SIDE VIEW OF RAMP SHOWING DRILLING OF INTERSECTION
SCALE NONE



SECTION D
SCALE NONE



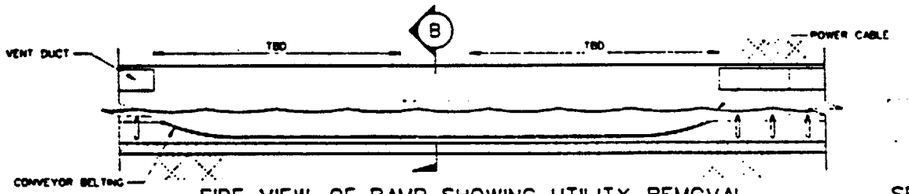
PLAN VIEW OF RAMP SHOWING DRILLING OF INTERSECTION
SCALE NONE

CONTROLLED DRILL AND BLAST

4. TRANSPORT DRILL JUMBO TO INTERSECTION AND DRILL OUT FIRST ROUND (DRILL PATTERN TBD) HANG BLASTING MAT TO PROTECT CONVEYOR BELTING AND POWER/COMMUNICATIONS LINES. LOAD DRILLHOLES WITH EXPLOSIVES AND DETONATE.

ALTERNATE CASE (NOT SHOWN)
MECHANICAL

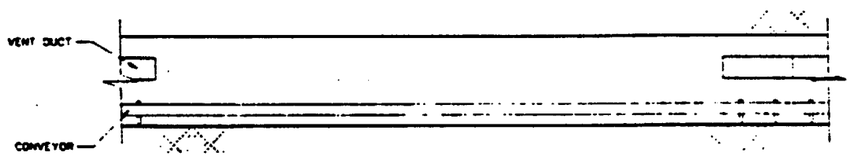
4A. TRANSPORT MECHANICAL MINER TO INTERSECTION AND CONNECT ALL ELECTRIC/UTILITIES BEGIN EXCAVATING INTERSECTION MECHANICALLY WITH MUCK LOADING INTO A TRUCK OR LHD (NO BLASTING MAT NECESSARY)



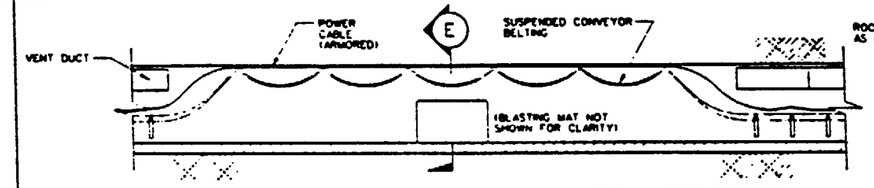
SIDE VIEW OF RAMP SHOWING UTILITY REMOVAL
SCALE NONE

SECTION B
SCALE NONE

2 UTILITIES SUCH AS VENT DUCT, AIRLINE, WATERLINES, ETC ARE REMOVED FROM RAMP FOR A SPECIFIED (TBD) DISTANCE FROM PLANNED INTERSECTION CONVEYOR HARDWARE SUCH AS IDLERS, FRAME, AND SUPPORTS ARE REMOVED FOR SAME DISTANCE. CONVEYOR BELTING IS LEFT SUSPENDED THROUGH PLANNED INTERSECTION



PLAN VIEW OF RAMP SHOWING UTILITY REMOVAL
SCALE NONE



SIDE VIEW OF RAMP SHOWING BLASTED INTERSECTION
SCALE NONE

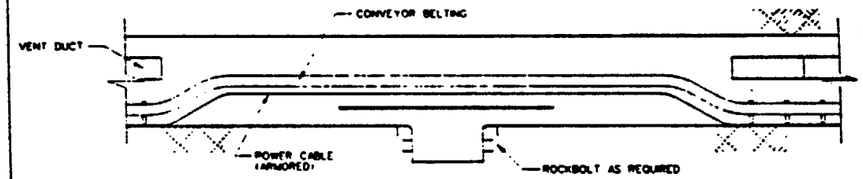
SECTION E
SCALE NONE

CONTROLLED DRILL AND BLAST

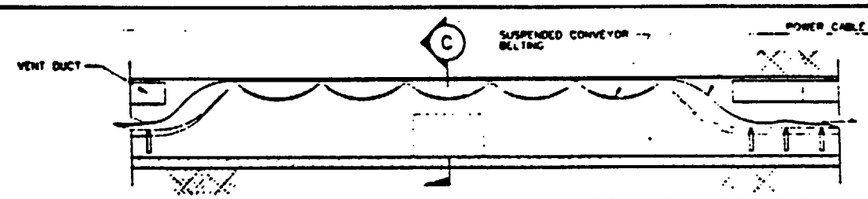
5. AFTER SMOKE & DUST CLEAR, BARDOWN AND ROCKBOLT AS REQUIRED TIE BLASTING MAT BACK TO ALLOW LHD ACCESS TO INTERSECTION MUCK INTERSECTION WITH LHD OR LHD TRUCK COMBINATION.

ALTERNATE CASE (NOT SHOWN)
MECHANICAL

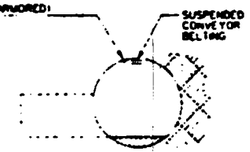
5A. CONTINUE EXCAVATING MECHANICALLY WITH MUCK LOADING INTO A TRUCK OR LHD ROCKBOLT AS REQUIRED



PLAN VIEW OF RAMP SHOWING BLASTED INTERSECTION
SCALE NONE

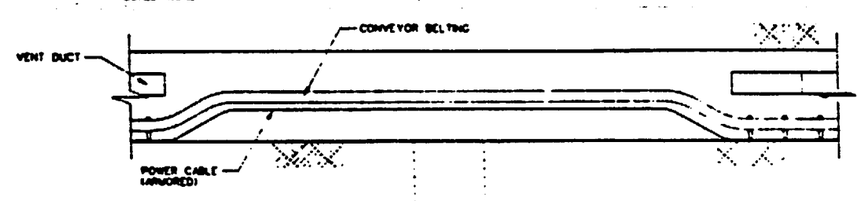


SIDE VIEW OF RAMP SHOWING BELT/POWER CABLE RELOCATION
SCALE NONE



SECTION C
SCALE NONE

3. EXCESS BELT IS FED OUT OF BELT STORAGE UNIT TO ALLOW ENOUGH SLACK TO HANG BELT OUT OF THE WAY THROUGH INTERSECTION POWER CABLE, COMMUNICATION LINES, ETC ARE HUNG OUT OF THE WAY AND PROTECTED BY ARMOR CASINGS BOLTED TO THE BACK OR OPPOSITE RIB



PLAN VIEW OF RAMP SHOWING CONVEYOR/BELT POWER CABLE RELOCATION
SCALE NONE

SI
APERTURE
CARD

Also Available On
Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

GENERAL NOTES

1. RAMP STATION CONSTRUCTION SEQUENCE CONTINUED ON YMP-025-2-MNG-M50
2. MECHANICAL EXCAVATION METHODS WILL BE USED WHEN FEASIBLE AND PRACTICAL CONTROLLED DRILL AND BLAST SCENARIO IS SHOWN TO ILLUSTRATE THE CYCLIC NATURE OF THE SYSTEM UTILITY RE-ARRANGEMENTS WILL BE SIMILAR FOR A MECHANICAL MINER
3. RAMP STATION CONSTRUCTION SEQUENCE APPLIES TO ALL RAMP SIZES UNDER CONSIDERATION
4. ROCKBOLT TYPES & PATTERN TBD

9305250071-67

NO	DATE	REVISION	DES	DRN	CHK	DEC	JW	VRF'Y	ENV	SAF	EMS	QA	TPI

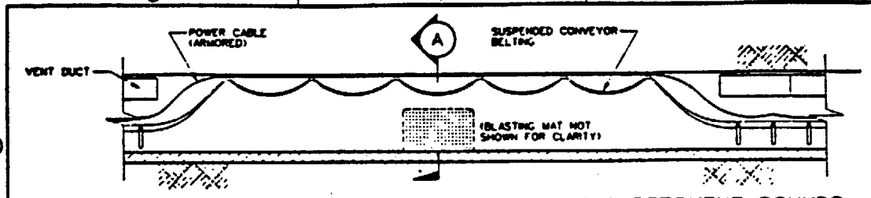
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

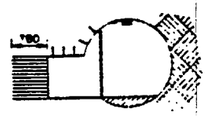
APPROVALS	
DESIGN	MJE
DRAWN	PE
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	6-26-91
FOR YMPO/DOE	08-22-91
0 DES NO	1285
C1 NO	

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
RAMP STATION CONSTRUCTION SEQUE
PLANS AND SECTIONS

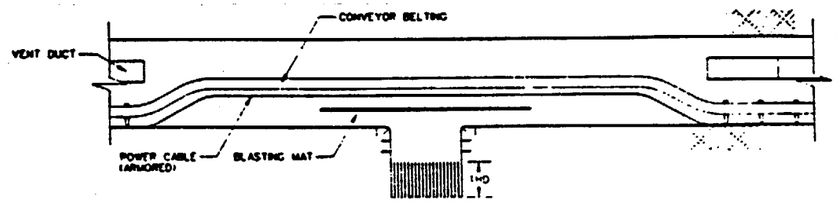
SUBMITTED BY: 7-26-91 DATE
DRAWING NO: YMP-025-2-MNG-M49
YMPO APPROVED DATE
SHT OF



SIDE VIEW OF RAMP SHOWING DRILLING OF SUBSEQUENT ROUNDS
SCALE NONE



SECTION A
SCALE NONE



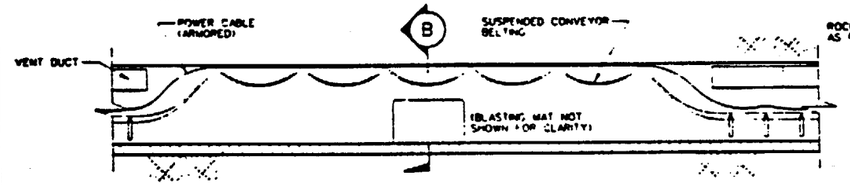
PLAN VIEW OF RAMP SHOWING DRILLING OF SUBSEQUENT ROUNDS
SCALE NONE

CONTROLLED DRILL AND BLAST

6 TRANSPORT DRILL JUMBO TO FACE AND DRILL OUT NEXT ROUND (DRILL PATTERN TBD) LOAD DRILLHOLES WITH EXPLOSIVES AND LOWER BLASTING MAT DETONATE WHEN READY

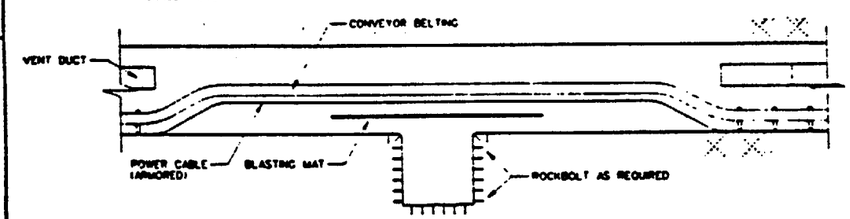
ALTERNATE CASE (NOT SHOWN)
MECHANICAL

6A. CONTINUE EXCAVATING MECHANICALLY WITH MUCK LOADING INTO A TRUCK OR LHD ROCKBOLT AS REQUIRED



SIDE VIEW OF RAMP SHOWING TYPICAL BLASTED STATION
SCALE NONE

SECTION B
SCALE NONE



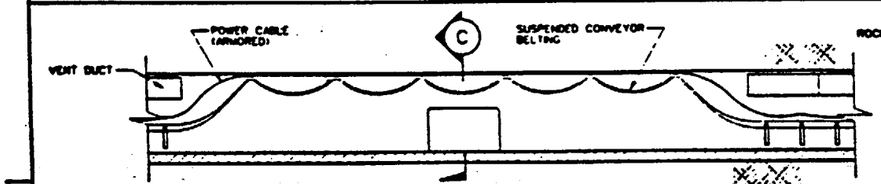
PLAN VIEW OF RAMP SHOWING TYPICAL BLASTED STATION
SCALE NONE

CONTROLLED DRILL AND BLAST

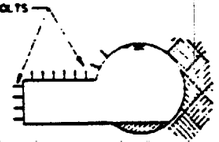
7 AFTER SMOKE AND DUST CLEAR BAR DOWN AND ROCKBOLT AS REQUIRED REMOVE BLASTING MAT TO ALLOW LHD ACCESS TO INTERSECTION MUCK INTERSECTION WITH LHD OR LHD/TRUCK COMBINATION

ALTERNATE CASE (NOT SHOWN)
MECHANICAL

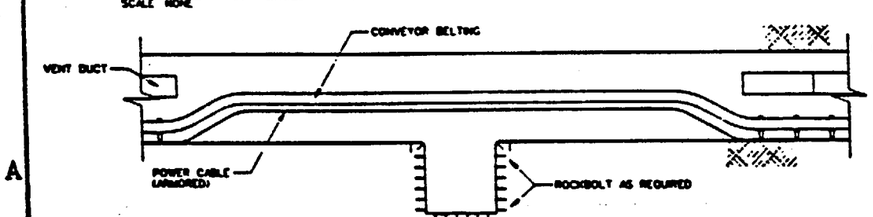
7A. CONTINUE EXCAVATING MECHANICALLY WITH MUCK LOADING INTO TRUCK OR LHD ROCKBOLT AS REQUIRED



SIDE VIEW OF RAMP/STATION PRIOR TO UTILITY RE-INSTALLATION
SCALE NONE



SECTION C
SCALE NONE



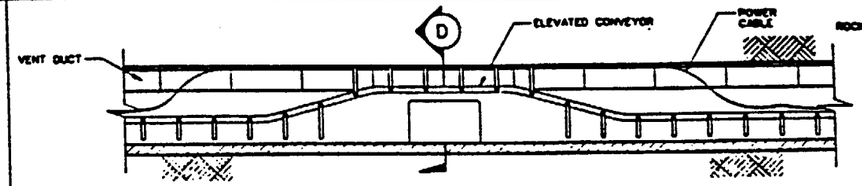
PLAN VIEW OF RAMP PRIOR TO UTILITY RE-INSTALLATION
SCALE NONE

CONTROLLED DRILL AND BLAST

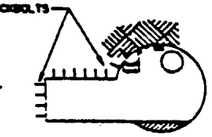
8. AFTER ROCKBOLTING AND MUCKING OPERATIONS ARE FINISHED, PREPARE TO RE-INSTALL UTILITIES.

ALTERNATE CASE (NOT SHOWN)
MECHANICAL

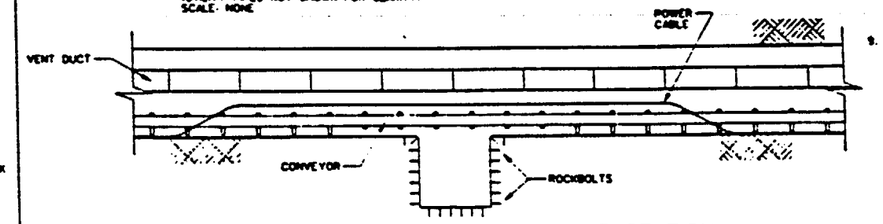
8A. AFTER EXCAVATION IS FINISHED, DEMOBILIZE AND REMOVE MECHANICAL MINER ROCKBOLT AS REQUIRED. PREPARE TO RE-INSTALL UTILITIES.



SIDE VIEW OF RAMP SHOWING BLASTED INTERSECTION
(UTILITY PIPES NOT SHOWN FOR CLARITY)
SCALE NONE



SECTION D
SCALE NONE



PLAN VIEW OF FINISHED RAMP/STATION
SCALE NONE

9. RE-INSTALL VENT DUCT, UTILITY PIPES, ETC. SUSPEND CONVEYOR NEAR BACK THROUGH INTERSECTION CONVEYOR CLEARANCE FOR 25' DIAMETER TUNNEL = 14' CONVEYOR CLEARANCE FOR 18' DIAMETER TUNNEL = 8'

NOTE: FOR STATIONS LEAVING RAMP ON OPPOSITE SIDE, CONSTRUCTION SEQUENCE IS THE SAME EXCEPT FINAL CONVEYOR ARRANGEMENT DOES NOT NEED TO BE SUSPENDED AFTER STATION IS FINISHED.

SI
APERTURE
CARD

Also Available On
Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

GENERAL NOTES

1. RAMP STATION CONSTRUCTION SEQUENCE CONTINUED FROM YMP-025-2-MINC-M49.
2. MECHANICAL EXCAVATION METHODS WILL BE USED WHEN FEASIBLE AND PRACTICAL. CONTROLLED DRILL AND BLAST SCENARIO IS SHOWN TO ILLUSTRATE THE CYCLIC NATURE OF THE SYSTEM UTILITY RE-ARRANGEMENTS WILL BE SIMILAR FOR A MECHANICAL MINER.
3. RAMP STATION CONSTRUCTION SEQUENCE APPLIES TO ALL RAMP SIZES UNDER CONSIDERATION
4. ROCKBOLT TYPES & PATTERN TBD

9305250071-68

NO.	DATE	REVISION	DES	DRN	CHK	SEC	CH	VRFY	ENV	SAF	EHS	QA	TPO

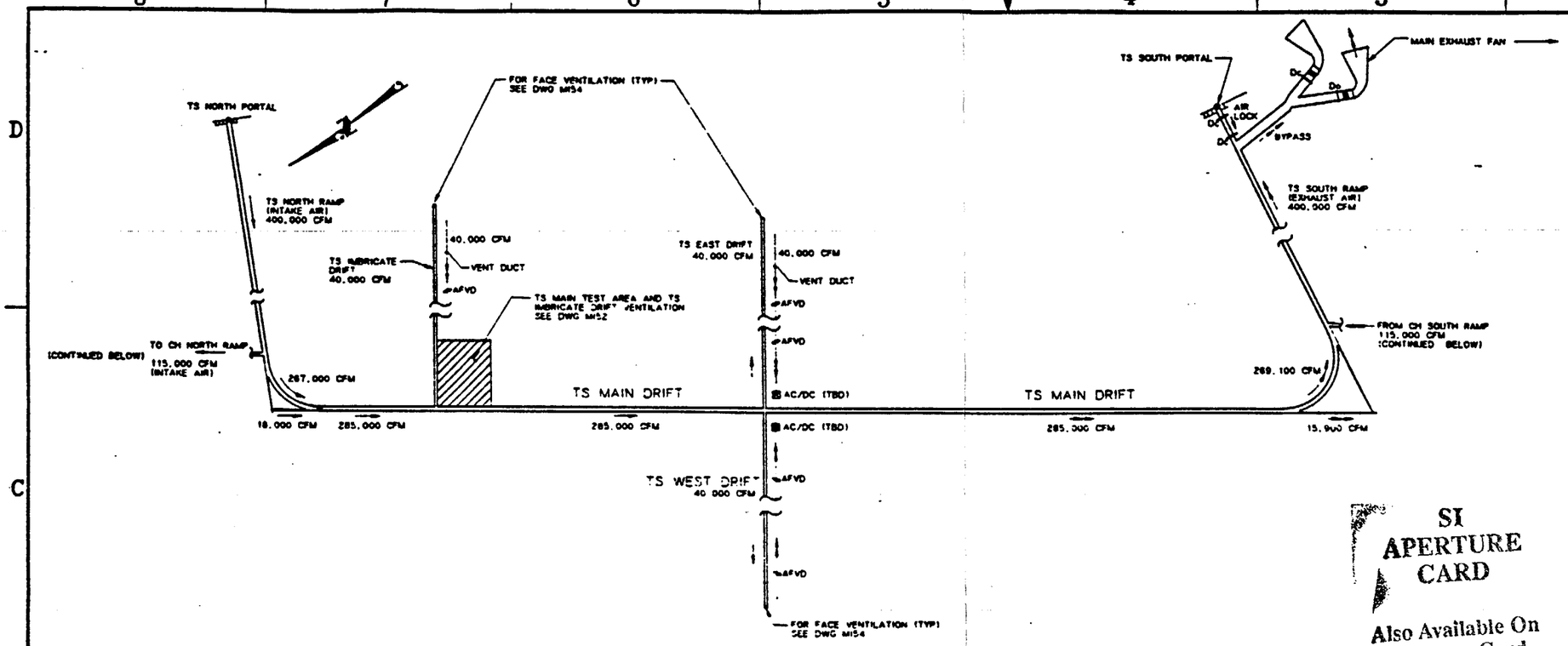
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

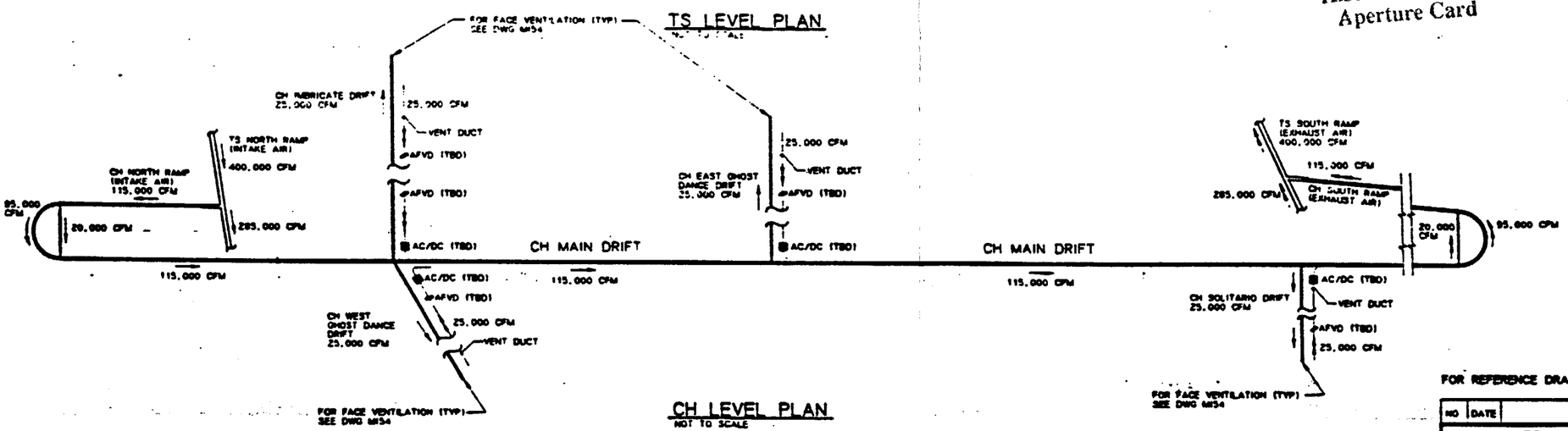
APPROVALS	
DESIGN	MJE
DRAWN	FE
CHECKED	
SEC	
DESIGN ENGINEER	B.CH.
VERIFICATION	N/A
ENV	
SAF	
QUALITY ASSURANCE	8-26-91

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
RAMP STATION CONSTRUCTION SEQUE
PLANS AND SECTIONS

SUBMITTED BY: TLZ
DATE: 8-26
DRAWING NO: YMP-025-2-MINC-M50



TS LEVEL PLAN



CH LEVEL PLAN
NOT TO SCALE

MAIN EXHAUST FAN FEATURE:

- AIR QUANTITY - 420,000 CFM (INCLUDES 20,000 CFM LEAKAGE)
- STATIC PRESSURE - 7.0 " WATER GAGE
- MOTOR - 700 BHP
- PROVIDED W/ SILENCERS, INTAKE SCREEN, AND ACCESS DOOR
- ONE IDENTICAL FAN INSTALLED AS BACK-UP

AIRFLOW ALLOCATION

TOPOPAH SPRING LEVEL	VOLUME IN CFM
TS IMBRICATE DRIFT	40,000
TS WEST DRIFT	40,000
TS EAST DRIFT	40,000
TS MAIN TEST AREA (MTA)	130,000
TS MECHANICS SHOP	35,000
TS TOTAL =	285,000 CFM

CALICO HILLS LEVEL	VOLUME IN CFM
CH IMBRICATE DRIFT	25,000
CH WEST GHOST DANCE	25,000
CH EAST GHOST DANCE	25,000
CH SOLITARIO DRIFT	25,000
CH MECHANICS SHOP	15,000
CH TOTAL =	115,000 CFM
ESF TOTAL =	400,000 CFM

NOTE:

LEAKAGES ALONG DOORS AND VENT DUCTS WILL BE ANALYZED SEPARATELY.

LEGEND

AC/DC	AIR CLEANER/DUST COLLECTOR (TBD)
AFVD	AUXILIARY FAN IN VENT DUCT (TBD)
CFM	CUBIC FEET PER MINUTE
Dc	DOOR (CLOSED POSITION)
Do	DOOR (OPEN POSITION)
———	FRESH AIRFLOW DIRECTION
- - -	RETURN AIRFLOW DIRECTION

SI APERTURE CARD
Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	YMPV	SMV	SAF	SA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

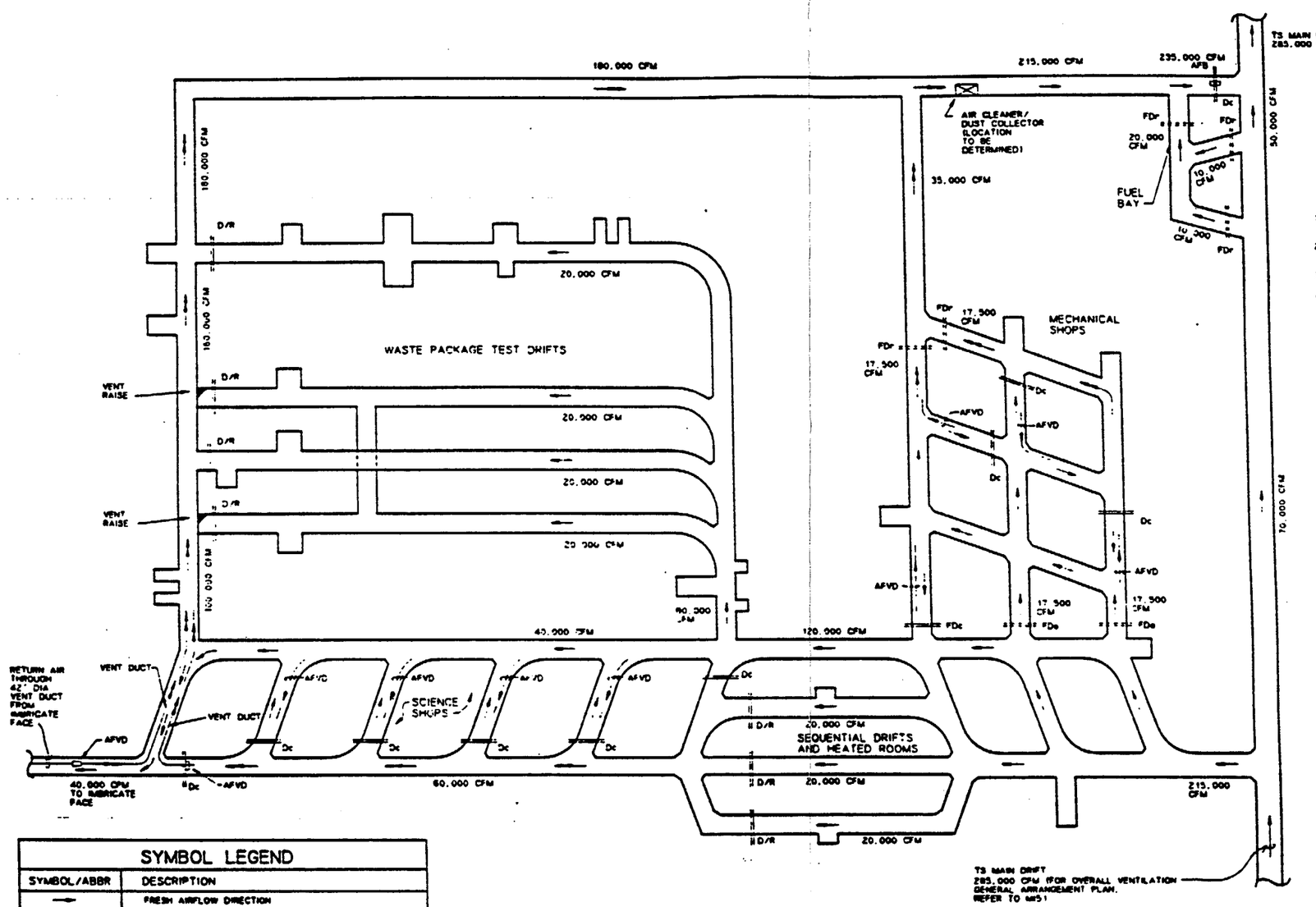
DESIGN	RSJ
DRAWN	CLP/CLG
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
SMV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
TS/CH PRELIMINARY VENTILATION (OPERATION PHASE
PLAN

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-MI51 | REV. 0
YMPO APPROVED

9305250071-69



GENERAL NOTES:

1. SYSTEM WILL ACCOMMODATE FLEXIBLE AIRFLOW DISTRIBUTION TO THE DIFFERENT ROOMS OR HEADINGS AS NEEDED DURING SITE CHARACTERIZATION PHASE BY WAY OF REGULATORS.
2. MECHANICAL SHOP AND FUEL BAY ARE PROVIDED WITH ISOLATION FIRE DOORS AND AUTOMATIC FIRE SUPPRESSION TO SATISFY 30 CFR 57 4761
3. LEAKAGE ALONG DOORS AND VENT DUCTS WILL BE ANALYZED SEPARATELY.
4. SEE DRAWING YMP-025-2-MING-M825 FOR INDIVIDUAL TEST LOCATIONS AND DRIFT NAMES.

AIR DISTRIBUTION (FRESH AIR ALLOCATION)

WASTE PACKAGE TEST DRIFTS	80,000 CFM
SEQUENTIAL DRIFTS & HEATED ROOMS	60,000 CFM
MECHANICAL SHOP	35,000 CFM
IMBRICATE DRIFT	40,000 CFM
TOTAL	215,000 CFM

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SYMBOL LEGEND

SYMBOL/ABBR	DESCRIPTION
——	FRESH AIRFLOW DIRECTION
—→	RETURN AIRFLOW DIRECTION
AFB	AUXILIARY FAN IN BULKHEAD WITH ACCESS DOOR IN CLOSED POSITION
AFVD	AUXILIARY FAN IN VENT DUCT
CFM	CUBIC FEET PER MINUTE
Dc	DOOR (CLOSED POSITION)
D/R	DOOR AND REGULATOR (LOCATION TO BE DETERMINED)
FDc	FIRE DOOR (CLOSED POSITION)
FDo	FIRE DOOR (OPEN POSITION)
FDr	FIRE DOOR (REGULATOR)
R	REGULATOR WITH ACCESS DOOR IN CLOSED POSITION

VENTILATION PLAN
TS MAIN TEST AREA
(OPERATION PHASE)

NOT TO SCALE

9305250071-70

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	BIN	SAF	BA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

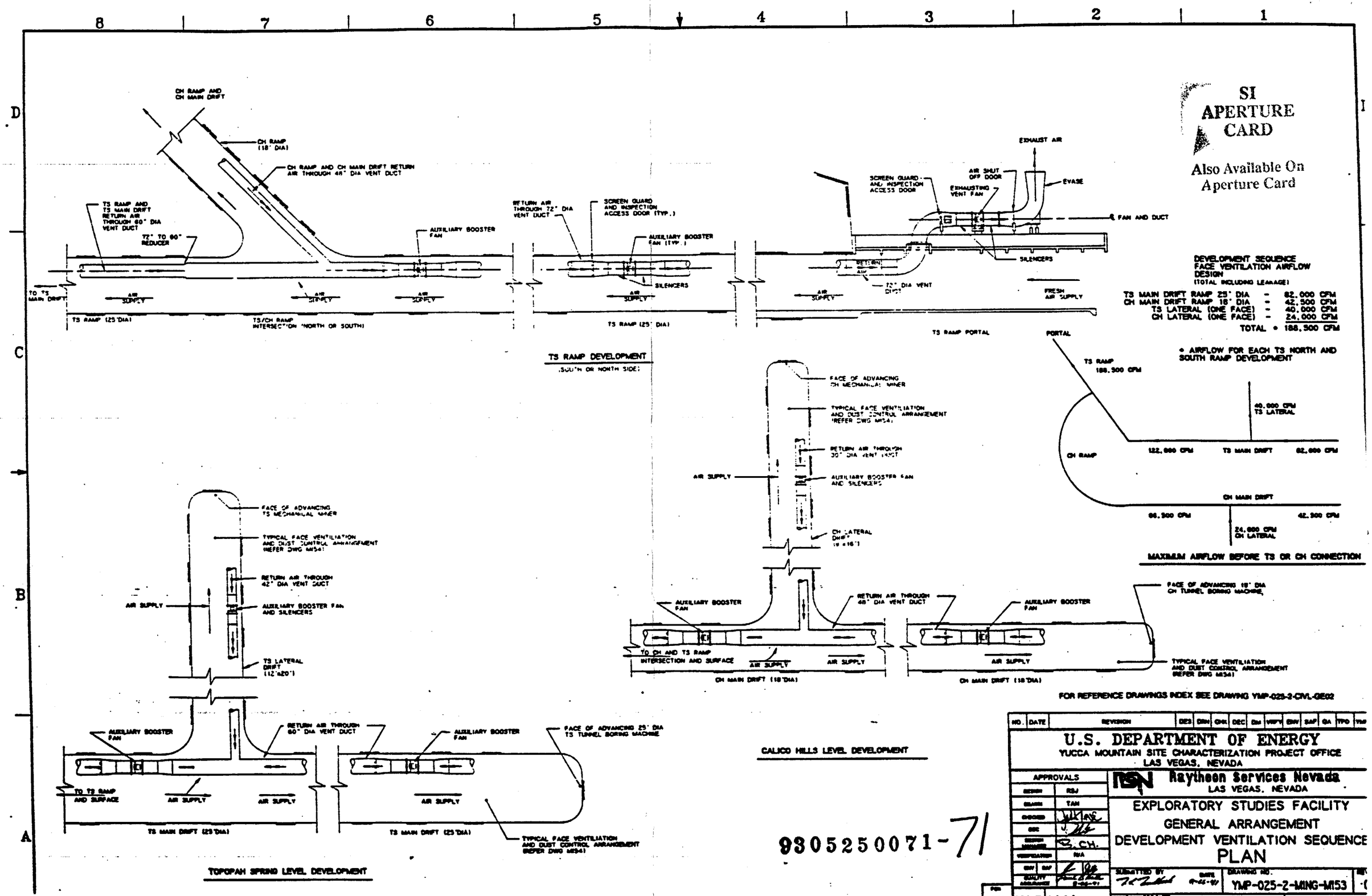
DESIGN	RSJ
DRAWN	CLP / RFC
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
BIN / SAF	
QUALITY ASSURANCE	

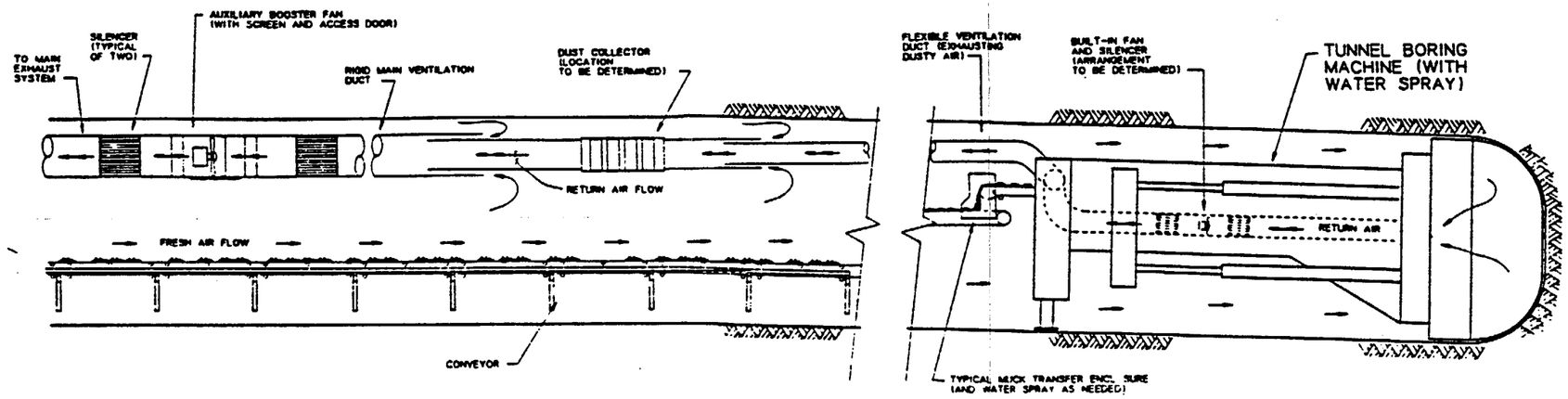
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
AIRFLOW GENERAL ARRANGEMENT
TS MAIN TEST AREA VENTILATION PLAN

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MING-M152 | REV. 0

YMPO APPROVED | DATE | SHT


CH RAMP AND CH MAIN DRIFT
CH RAMP (18' DIA)
CH RAMP AND CH MAIN DRIFT RETURN AIR THROUGH 48" DIA VENT DUCT
TS RAMP AND TS MAIN DRIFT RETURN AIR THROUGH 60" DIA VENT DUCT
72" TO 60" REDUCER
AUXILIARY BOOSTER FAN
TO TS MAIN DRIFT
AIR SUPPLY
TS RAMP (25' DIA)
TS/CH RAMP INTERSECTION (NORTH OR SOUTH)
RETURN AIR THROUGH 72" DIA VENT DUCT
SCREEN GUARD AND INSPECTION ACCESS DOOR (TYP.)
AUXILIARY BOOSTER FAN (TYP.)
SILENCERS
TS RAMP (25' DIA)
TS RAMP DEVELOPMENT
(SOUTH OR NORTH SIDE)
EXHAUST AIR
AIR SHUT OFF DOOR
SCREEN GUARD AND INSPECTION ACCESS DOOR
EXHAUSTING VENT FAN
EVASE
FAN AND DUCT
SILENCERS
RETURN AIR
72" DIA VENT DUCT
FRESH AIR SUPPLY
TS RAMP PORTAL
SI APERTURE CARD
Also Available On Aperture Card
DEVELOPMENT SEQUENCE
FACE VENTILATION AIRFLOW DESIGN
(TOTAL INCLUDING LEAKAGE)
TS MAIN DRIFT RAMP 25' DIA - 82,000 CFM
CH MAIN DRIFT RAMP 18' DIA - 42,500 CFM
TS LATERAL (ONE FACE) - 40,000 CFM
CH LATERAL (ONE FACE) - 24,000 CFM
TOTAL * 188,500 CFM
* AIRFLOW FOR EACH TS NORTH AND SOUTH RAMP DEVELOPMENT
PORTAL
TS RAMP 188,500 CFM
40,000 CFM TS LATERAL
CH RAMP
122,000 CFM
TS MAIN DRIFT
82,000 CFM
CH MAIN DRIFT
66,500 CFM
42,500 CFM
24,000 CFM CH LATERAL
MAXIMUM AIRFLOW BEFORE TS OR CH CONNECTION
FACE OF ADVANCING TS MECHANICAL MINER
TYPICAL FACE VENTILATION AND DUST CONTROL ARRANGEMENT (REFER DWG M541)
RETURN AIR THROUGH 42" DIA VENT DUCT
AIR SUPPLY
AUXILIARY BOOSTER FAN AND SILENCERS
TS LATERAL DRIFT (12'x20')
AUXILIARY BOOSTER FAN
RETURN AIR THROUGH 60" DIA VENT DUCT
AUXILIARY BOOSTER FAN
FACE OF ADVANCING 25' DIA TS TUNNEL BORING MACHINE
TO TS RAMP AND SURFACE
AIR SUPPLY
TS MAIN DRIFT (25' DIA)
TYPICAL FACE VENTILATION AND DUST CONTROL ARRANGEMENT (REFER DWG M541)
TOPOPAH SPRING LEVEL DEVELOPMENT
FACE OF ADVANCING CH MECHANICAL MINER
TYPICAL FACE VENTILATION AND DUST CONTROL ARRANGEMENT (REFER DWG M541)
RETURN AIR THROUGH 30" DIA VENT DUCT
AIR SUPPLY
AUXILIARY BOOSTER FAN AND SILENCERS
CH LATERAL DRIFT (8'x16')
AUXILIARY BOOSTER FAN
RETURN AIR THROUGH 48" DIA VENT DUCT
TO CH AND TS RAMP INTERSECTION AND SURFACE
AIR SUPPLY
CH MAIN DRIFT (18' DIA)
AUXILIARY BOOSTER FAN
FACE OF ADVANCING 18' DIA CH TUNNEL BORING MACHINE
TYPICAL FACE VENTILATION AND DUST CONTROL ARRANGEMENT (REFER DWG M541)
CALICO HILLS LEVEL DEVELOPMENT
FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02
NO. DATE REVISION DES DRN CHK DEC DM VRFY ENV SAF QA TPO YMP
U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA
APPROVALS
DESIGN RSJ
DRAWN TAN
CHECKED
QEC
DESIGN MANAGER
VERIFICATION N/A
ENV SAF
QUALITY ASSURANCE
Raytheon Services Nevada
LAS VEGAS, NEVADA
EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
DEVELOPMENT VENTILATION SEQUENCE
PLAN
SUBMITTED BY
DATE
DRAWING NO.
YMP-025-2-MING-M153
9305250071-71



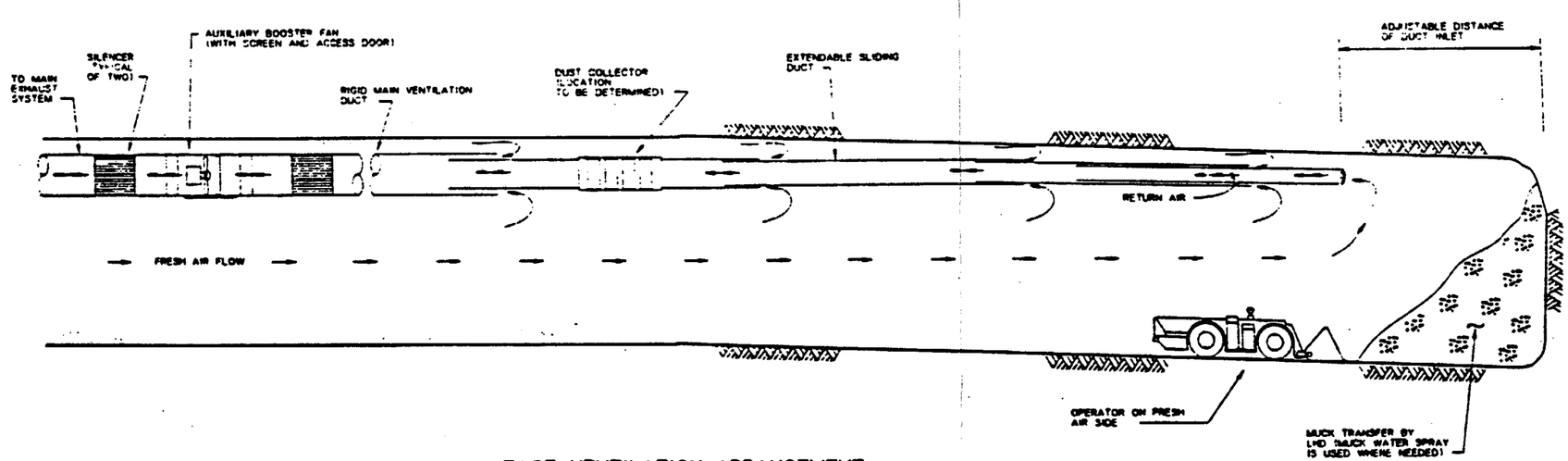
FACE VENTILATION ARRANGEMENT
TYPICAL AIR FLOW DIRECTION AND
DUST CONTROL CONCEPT
FOR MECHANICAL MINERS

NOT TO SCALE

DEVELOPMENT FACE VENTILATION AIRFLOW DESIGN (TOTAL INCLUDING LEAKAGES)

TS RAMP OR DRIFT 25' DIA. ----	82,000 CFM
CH RAMP OR DRIFT 18' DIA. ----	42,500 CFM
TS LATERAL (ONE FACE) --------	40,000 CFM
CH LATERAL (ONE FACE) --------	24,000 CFM
TOTAL	188,500 * CFM

* AIRFLOW FOR EACH TS NORTH AND SOUTH RAMP DEVELOPMENT



FACE VENTILATION ARRANGEMENT
TYPICAL AIR FLOW DIRECTION AND
DUST CONTROL CONCEPT
FOR LOADING MUCK BY LHD

NOT TO SCALE

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-72

NO.	DATE	REVISION	DES	DRN	CHK	REC	DM	VRFY	SAV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

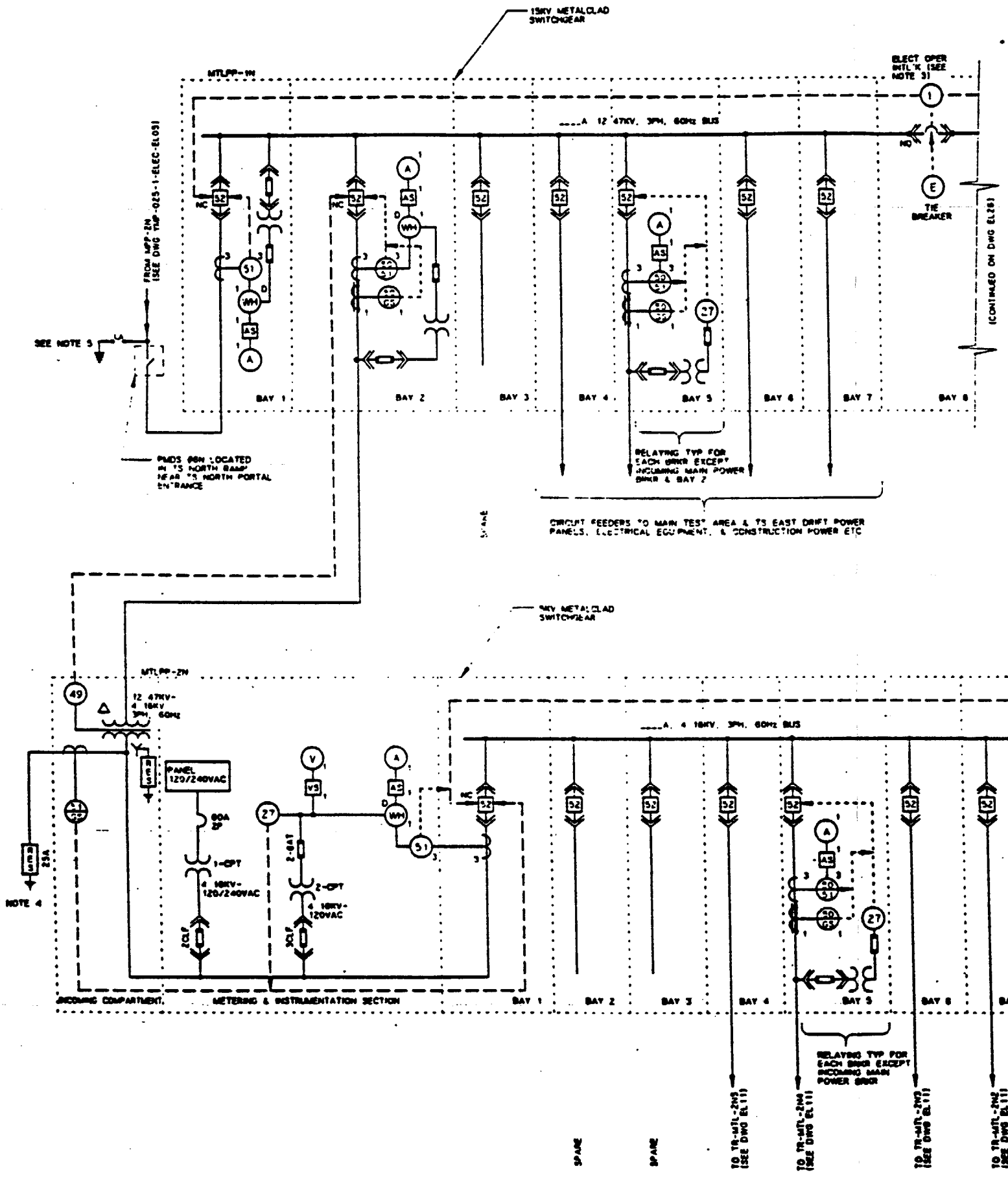
DESIGN	RSJ
DRAWN	RFC
CHECKED	
REC	
PROJECT MANAGER	B.CH.
VERIFICATION	N/A
SAV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
GENERAL ARRANGEMENT
FACE VENTILATION (CONSTRUCTION PHASE
SECTIONS

SUBMITTED BY: 8-21-91
DRAWING NO.: YMP-025-2-MING-M154
YMPO APPROVED
DATE
SHT

W.S.J. NO. 1.2.8.5



NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS AND FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. SPARE 4.16KV CIRCUITS MAY BE UTILIZED FOR LONG EXPLORATORY DRIFT MINING.
3. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.
4. THE RESISTOR GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY.
5. THE GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SRV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MRF
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
SRV / SAF	
QUALITY ASSURANCE	6-29-91

Raytheon Services Nevada
LAS VEGAS, NEVADA

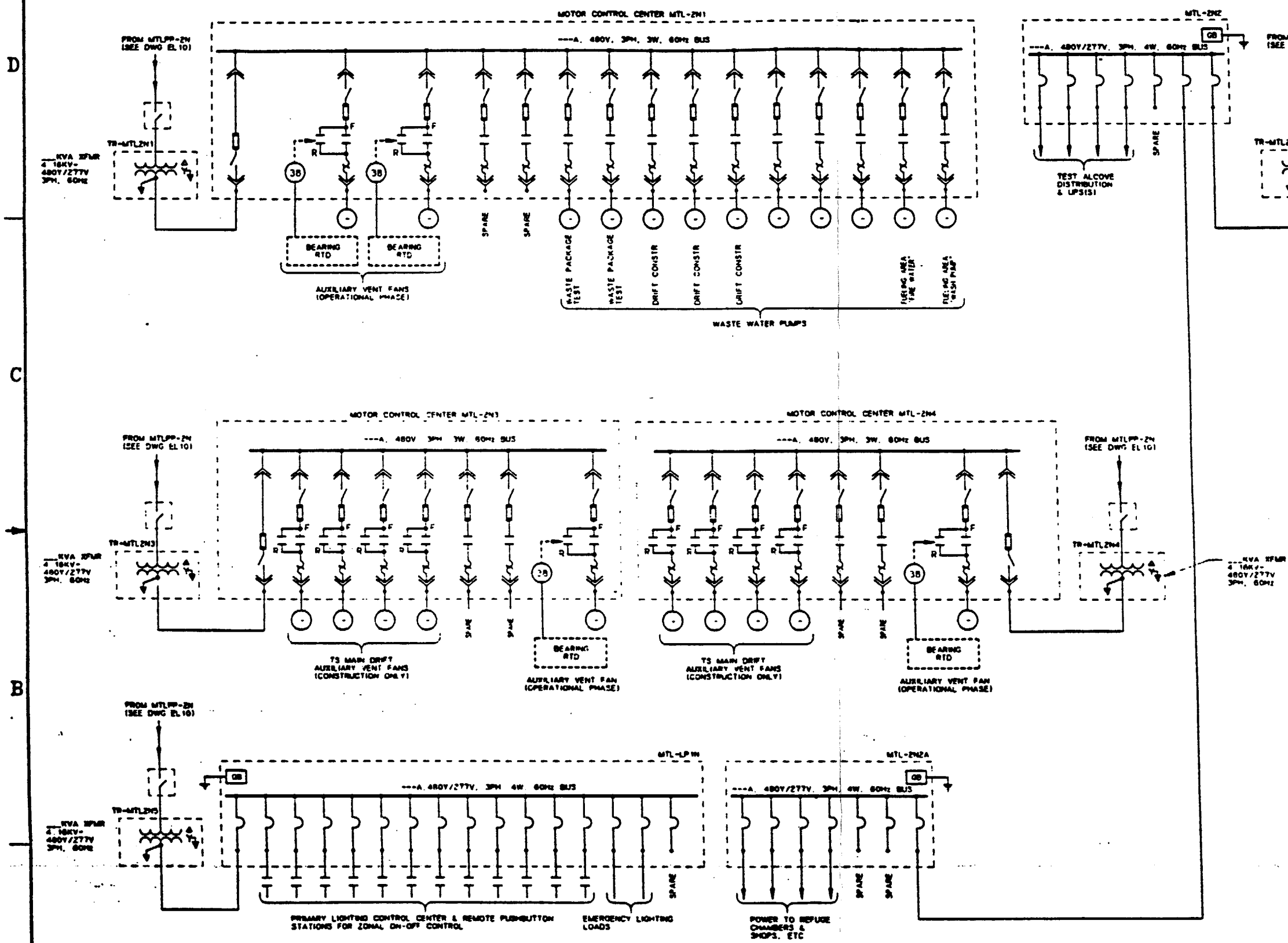
EXPLORATORY STUDIES FACILITY
TS MAIN DRIFT/NORTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY: 7/24/91 — DATE: 8-20-91 — DRAWING NO. YMP-025-2-ELEC-EL10 — REV 0

YMPO APPROVED — DATE

TS MAIN DRIFT/NORTH FEEDERS-ONE LINE DIAGRAM

9305250071-73



NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL10
2. DURING CONSTRUCTION, THE AUXILIARY VENT FANS WILL BE INTERLOCKED & CAN BE MANUALLY REVERSED AS NEEDED
3. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
4. ALL MAIN 480V CIRCUITS SHALL HAVE GROUND-FAULT & UNDERVOLTAGE PROTECTION
5. QUANTITIES FOR FANS & PUMPS, ETC WILL BE DETERMINED DURING THE TITLE II EFFORT

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

TS MAIN DRIFT/NORTH FEEDERS-ONE LINE DIAGRAM

9305250071-74

NO.	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	SRV	SAP	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

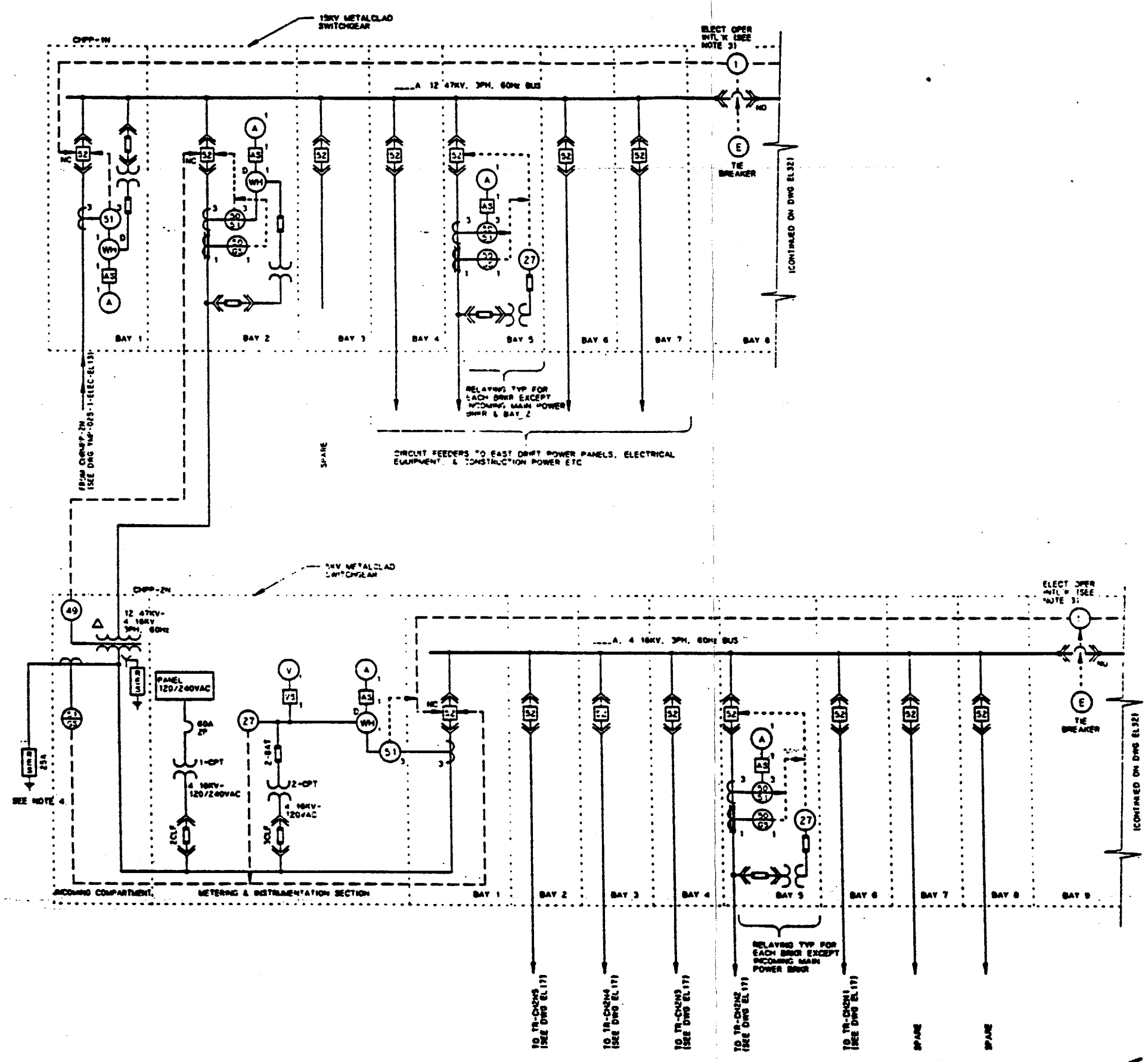
APPROVALS

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS MAIN DRIFT/NORTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL11 | REV 0

YMPO APPROVED | DATE



NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. SPARE 4.16KV CIRCUITS MAY BE UTILIZED FOR LONG EXPLORATORY DRIFT MINING.
3. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.
4. THE RESISTOR GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

OR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	WRY	BW	SAF	GA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	JD
DRAWN	CLD
CHECKED	
DEC	
DESIGN MANAGER	B. CH.
VERIFICATION	N/A
BW	
SAF	
QUALITY ASSURANCE	

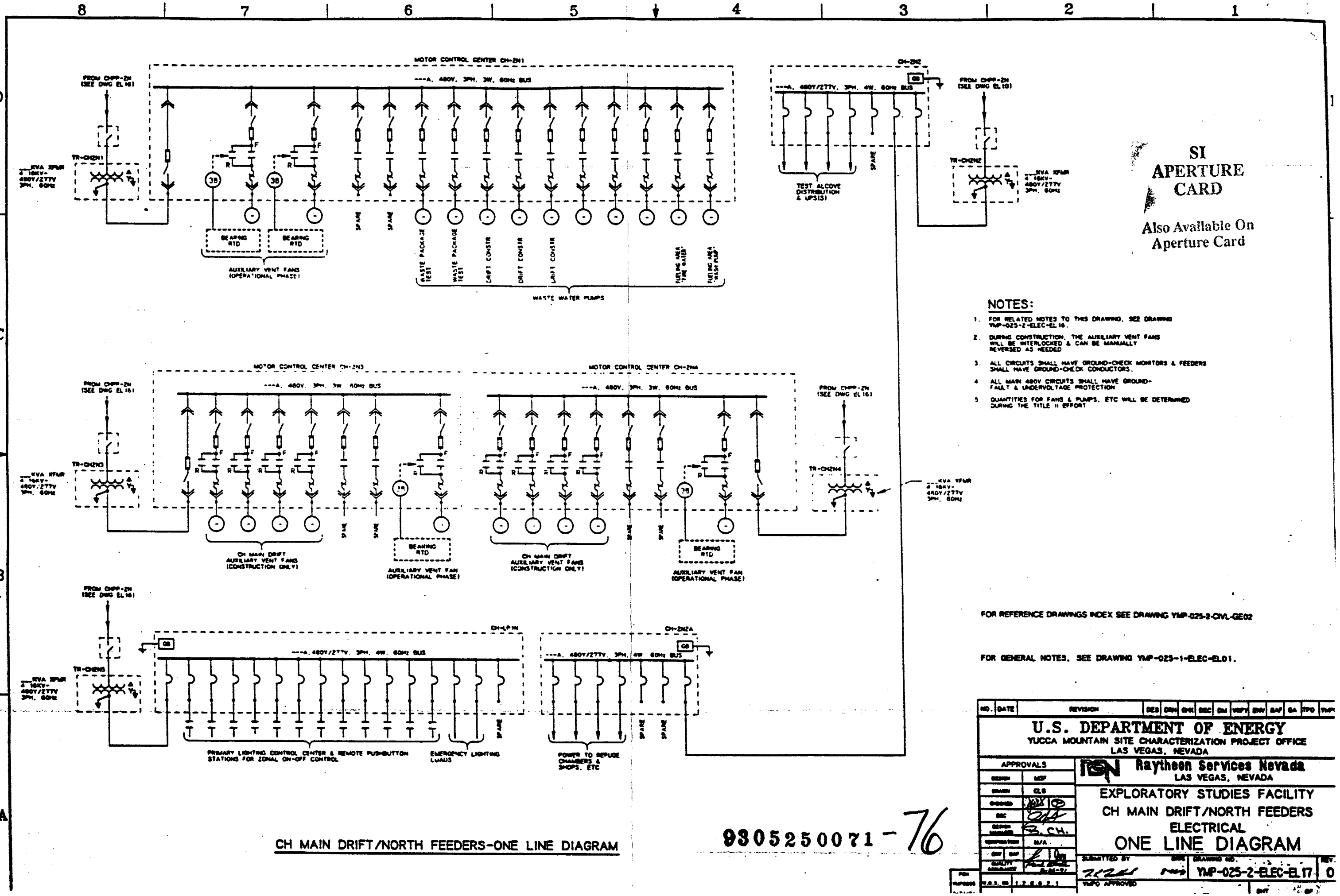
EXPLORATORY STUDIES FACILITY
CH MAIN DRIFT/NORTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL16 | REV. 0

YMPO APPROVED | DATE

CH MAIN DRIFT/NORTH FEEDERS-ONE LINE DIAGRAM

9305250071-75



NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL16.
2. DURING CONSTRUCTION, THE AUXILIARY VENT FANS WILL BE INTERLOCKED & CAN BE MANUALLY REVERSED AS NEEDED
3. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
4. ALL MAIN 480V CIRCUITS SHALL HAVE GROUND-FAULT & UNDERVOLTAGE PROTECTION.
5. QUANTITIES FOR FANS & PUMPS, ETC WILL BE DETERMINED DURING THE TITLE II EFFORT

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

SI APERTURE CARD

Also Available On Aperture Card

CH MAIN DRIFT/NORTH FEEDERS-ONE LINE DIAGRAM

9305250071 - 76

NO.	DATE	REVISION	DES	DRN	CHK	SEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

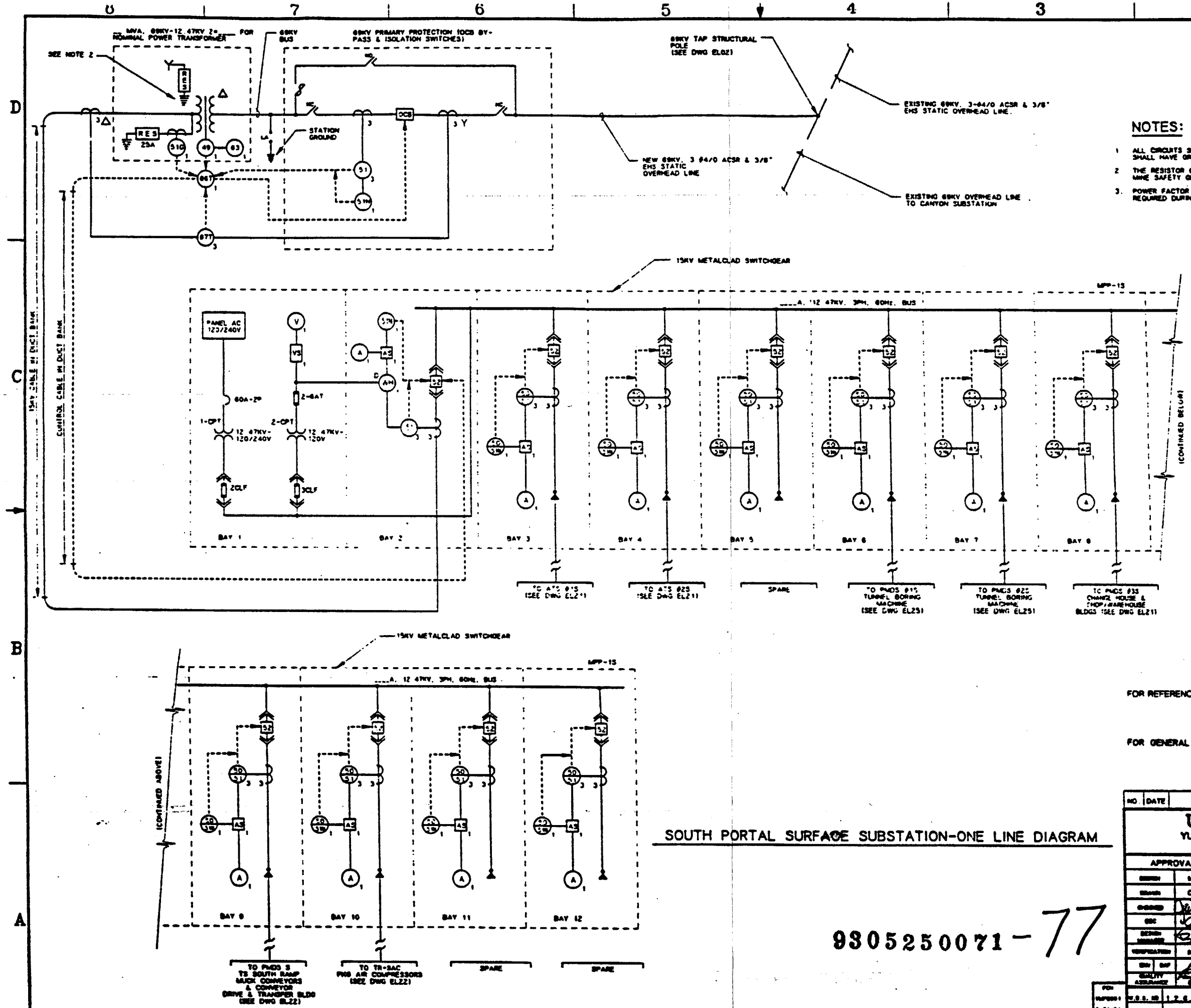
DESIGN	MSF
DRAWN	CLG
CHECKED	
SEC	
DESIGN MANAGER	B. CH.
CONSTRUCTION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
CH MAIN DRIFT/NORTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DRAWING NO. YMP-025-2-ELEC-EL17 | REV. 0

YMPO APPROVED



NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. THE RESISTOR GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY.
3. POWER FACTOR CAPACITORS WILL BE INCLUDED AS REQUIRED DURING THE TITLE II EFFORT.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

SOUTH PORTAL SURFACE SUBSTATION-ONE LINE DIAGRAM

9305250071 - 77

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

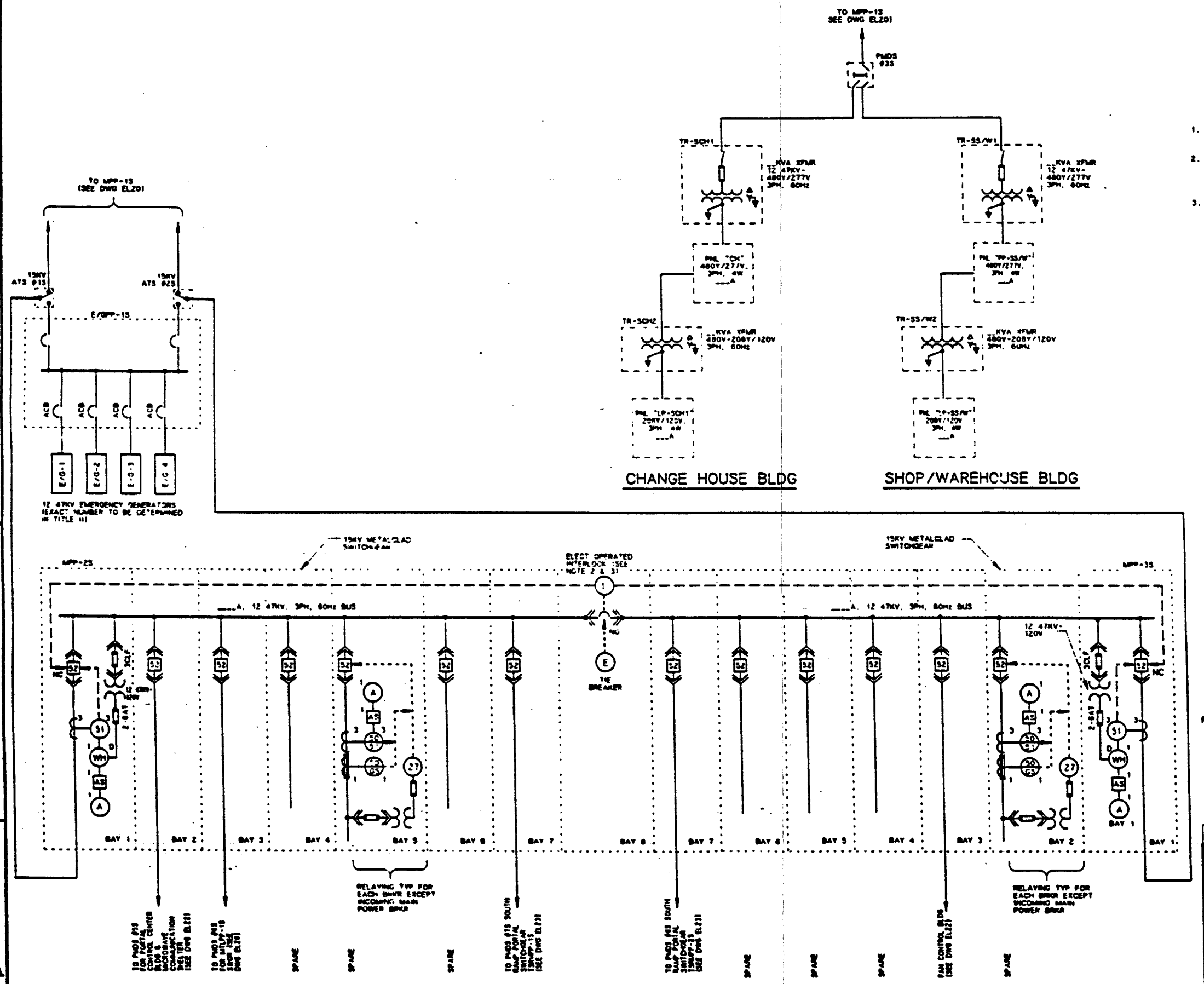
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS

EXPLORATORY STUDIES FACILITY
SOUTH PORTAL
SURFACE SUBSTATION
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL20 | REV. 0

YMPO APPROVED | DATE | SHT | OF



SOUTH PORTAL SURFACE ELECTRICAL - ONE LINE DIAGRAM

NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS AND FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. THE ELECTRICALLY OPERATED INTERLOCK IS INTERLOCKED WITH THE AUTOMATIC TRANSFER SWITCH AND IS TO INITIATE EMERGENCY GENERATORS TO ENERGIZE SWITCHGEAR BUS DURING A POWER FAILURE.
3. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	BA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	JD
CHARGE	CLB
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
SAF / SAP	
QUALITY ASSURANCE	

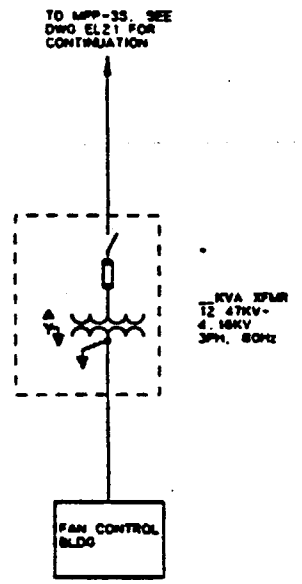
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
SOUTH PORTAL
SURFACE ELECTRICAL
ONE LINE DIAGRAM

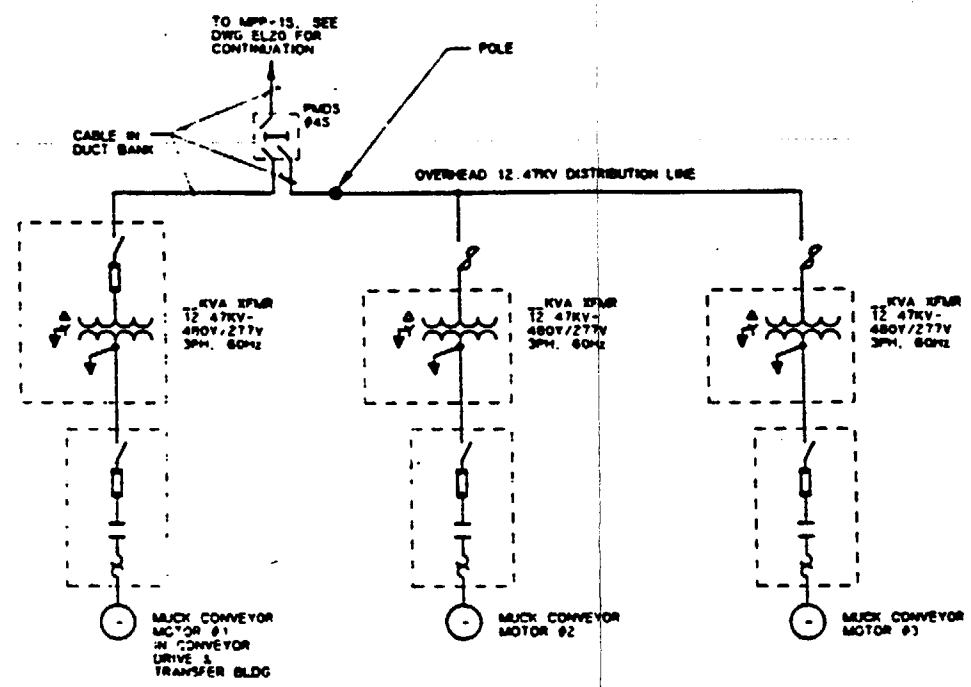
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL21 | REV. 0

YMPO APPROVED | DATE | SHT 47 OF 47

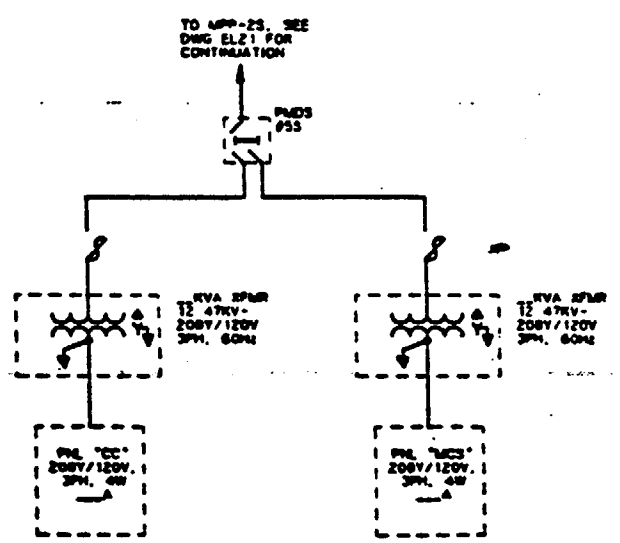
9305250071-78



FAN CONTROL BLDG

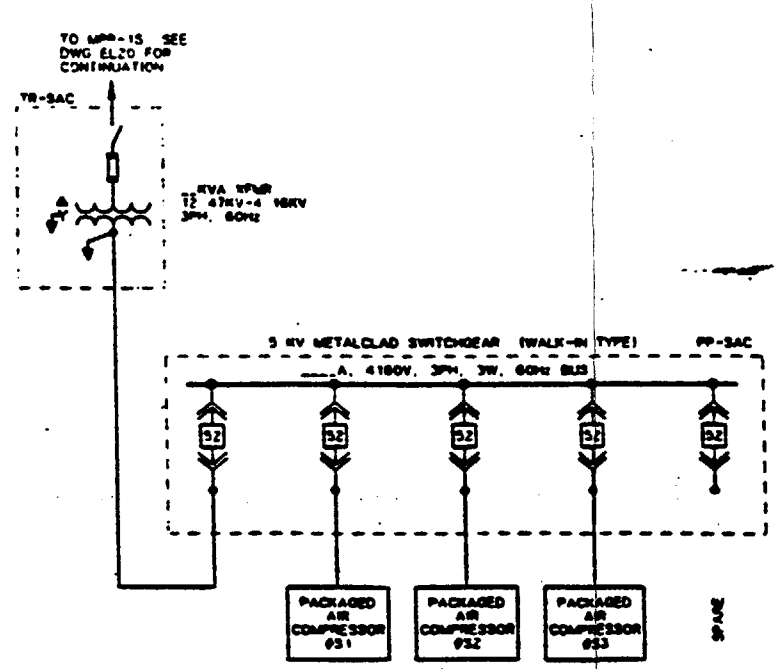


SOUTH RAMP MUCK CONVEYORS



PORTAL CONTROL CENTER BLDG

MICROWAVE COMMUNICATION SHELTER



PACKAGED AIR COMPRESSORS

NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL21.
2. CONTROL & INTERLOCK DETAILS FOR THE VENT FANS, CONVEYORS, & PACKAGED AIR COMPRESSOR SYSTEMS WILL BE DEPICTED DURING THE TITLE II EFFORT.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SRV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

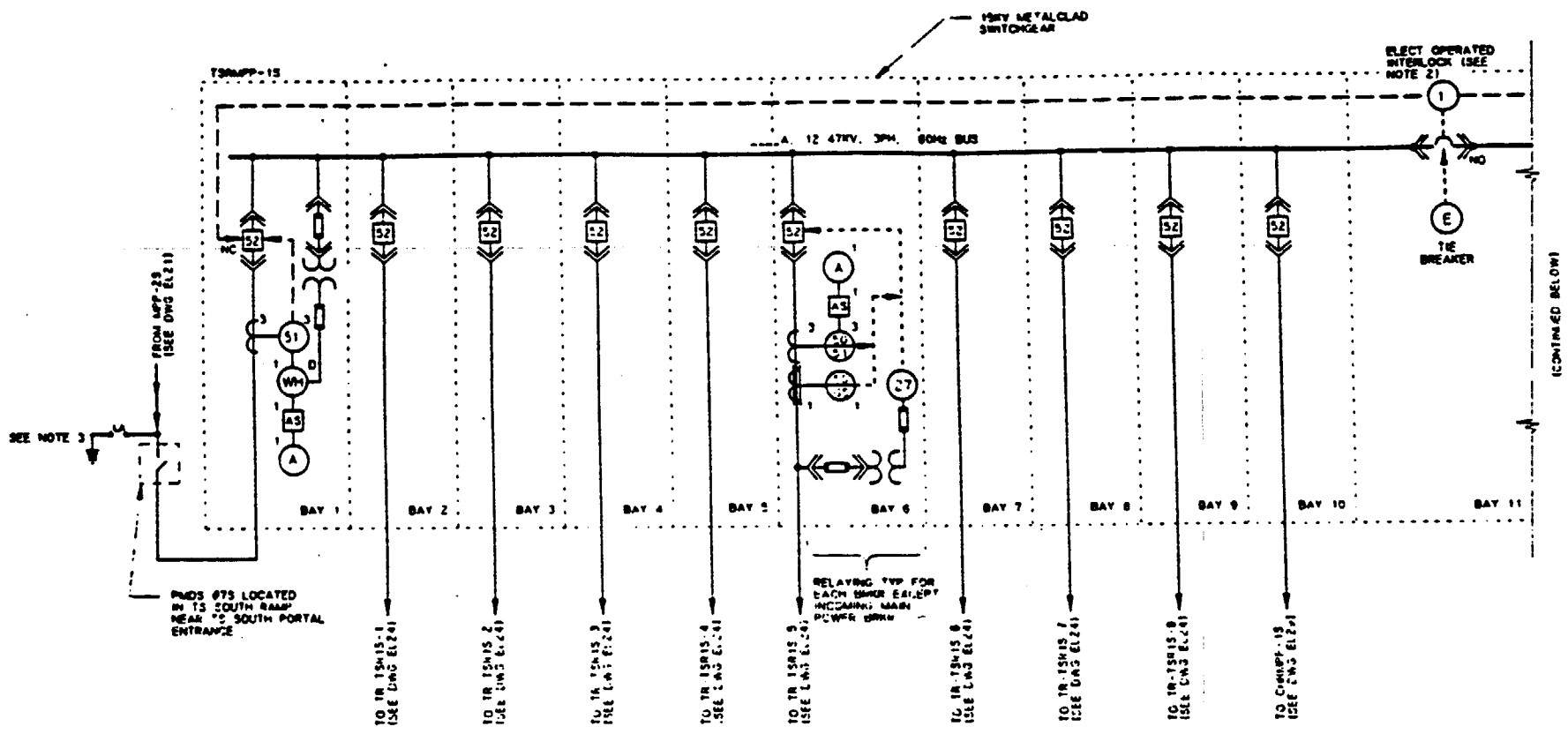
APPROVALS	
DESIGN	JD
DRAWN	CLB
CHECKED	
DEC	
DESIGN ASSURANCE	B. CH.
VERIFICATION	N/A
QSR / SAF	
DESIGN ASSURANCE	

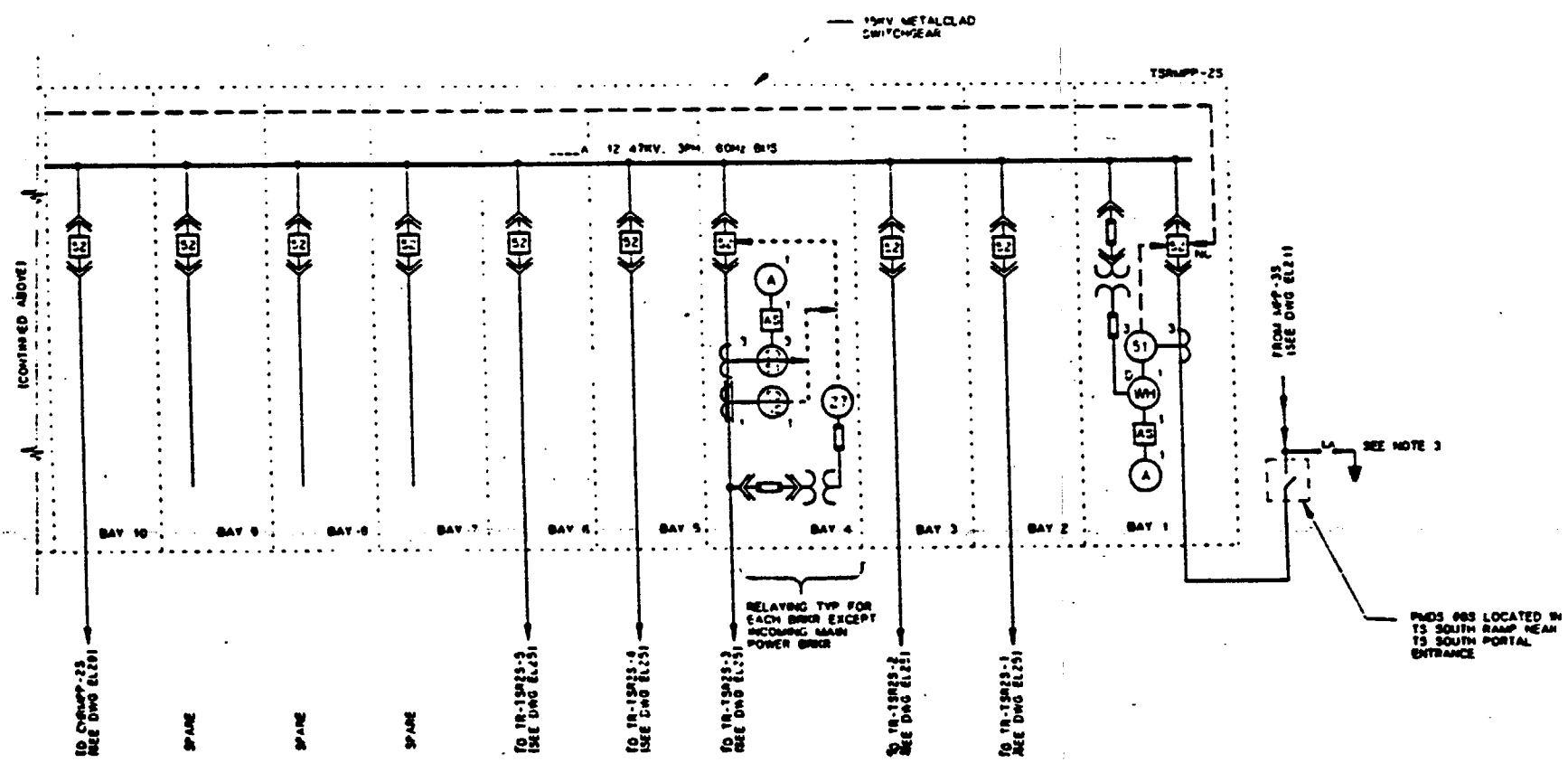
EXPLORATORY STUDIES FACILITY
SOUTH PORTAL
SURFACE ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY: SIGN: DRAWING NO.: YMP-025-2-ELEC-EL22 REV. 0

YMPO APPROVED

9305250071-79





TS SOUTH RAMP - ONE LINE DIAGRAM

NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS AND FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS
2. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.
3. THE GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	SA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MEF
DRAWN	CLG
CHECKED	
DES	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
ENV / SAF	
DRAWING MANAGER	

Raytheon Services Nevada
LAS VEGAS, NEVADA

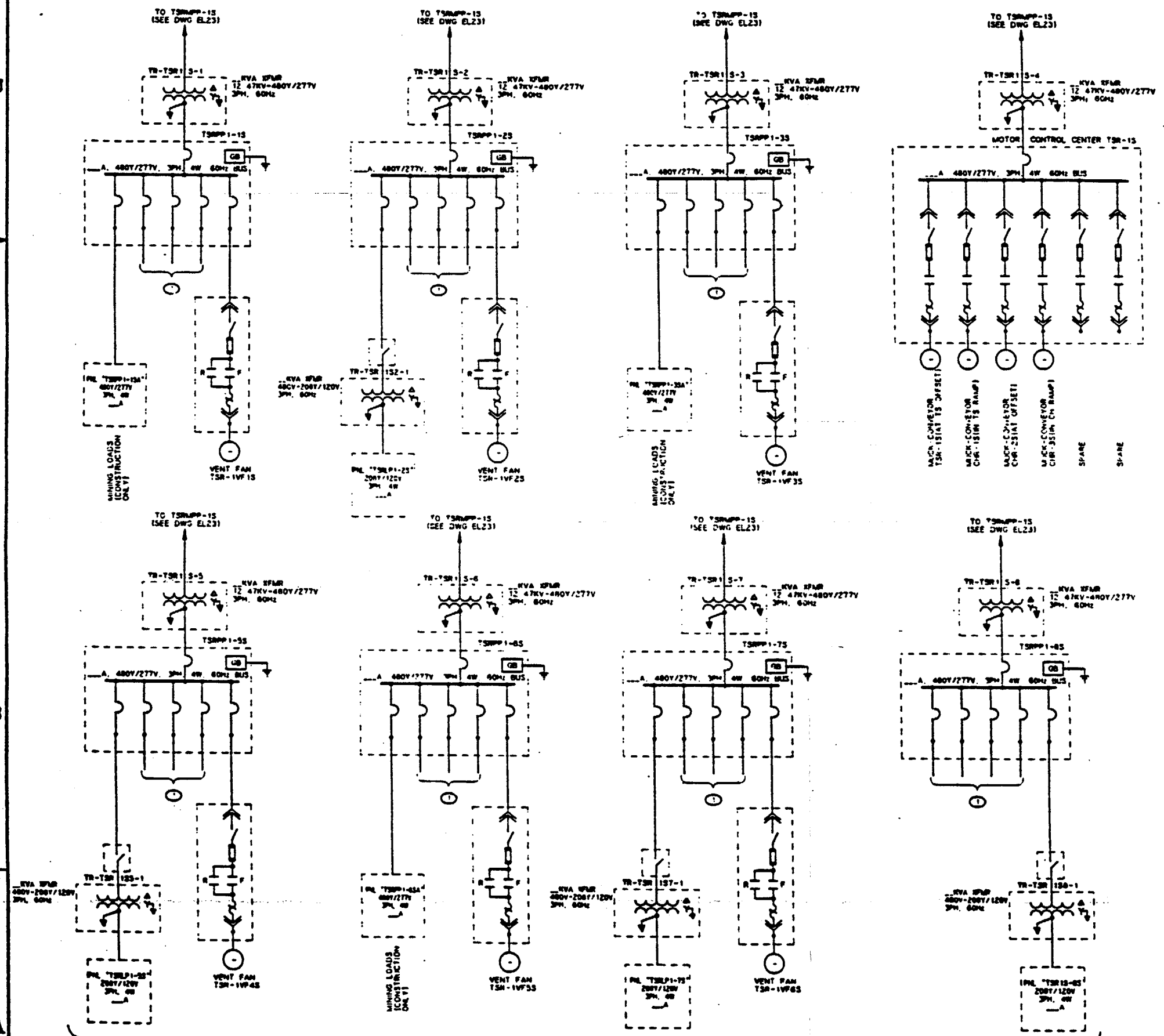
EXPLORATORY STUDIES FACILITY
TS SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL23 | REV. 0

YMPO APPROVED | DATE | SHT. OF

W.B.S. NO. 1.2.6.3.2

9305250071 -80



TS SOUTH RAMP - ONE LINE DIAGRAM

9305250071-81

NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL23.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

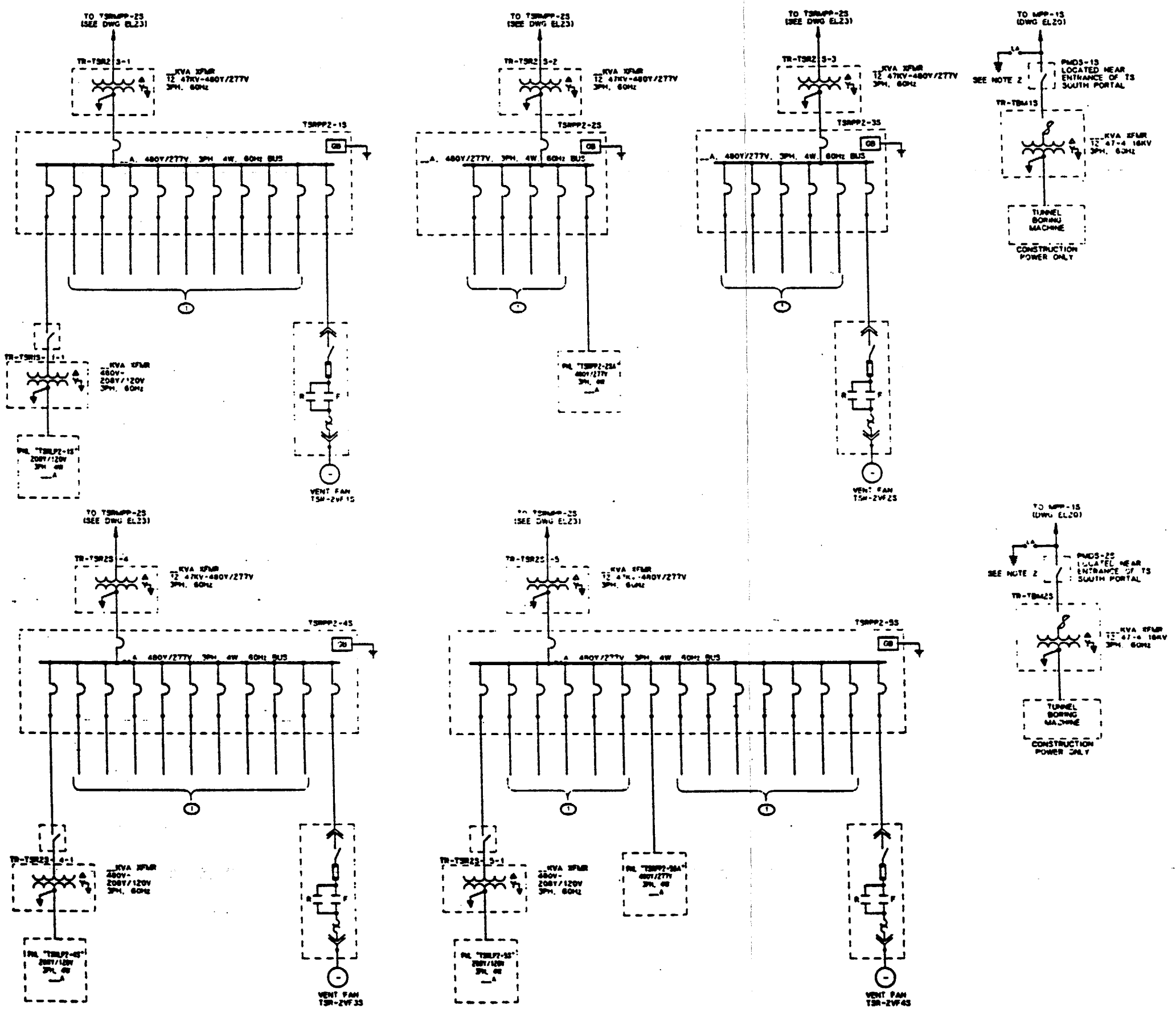
DESIGN	MSF
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY: 7/12/91
DATE: 8-22-91
DRAWING NO. YMP-025-2-ELEC-EL24

YMPO APPROVED
DATE
SHT OF



① POWER PANELS LOCATED IN TS SOUTH RAMP AT VARIOUS FACILITIES REQUIRING POWER FOR INSTRUMENTATION TESTING, LIGHTING, UPS(S), ETC.

TS SOUTH RAMP - ONE LINE DIAGRAM

NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL23.
2. THE GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SIM	SAF	SA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MSF
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
REPRESENTATIVE	N/A
SIM / SAF	
QUALITY ASSURANCE	

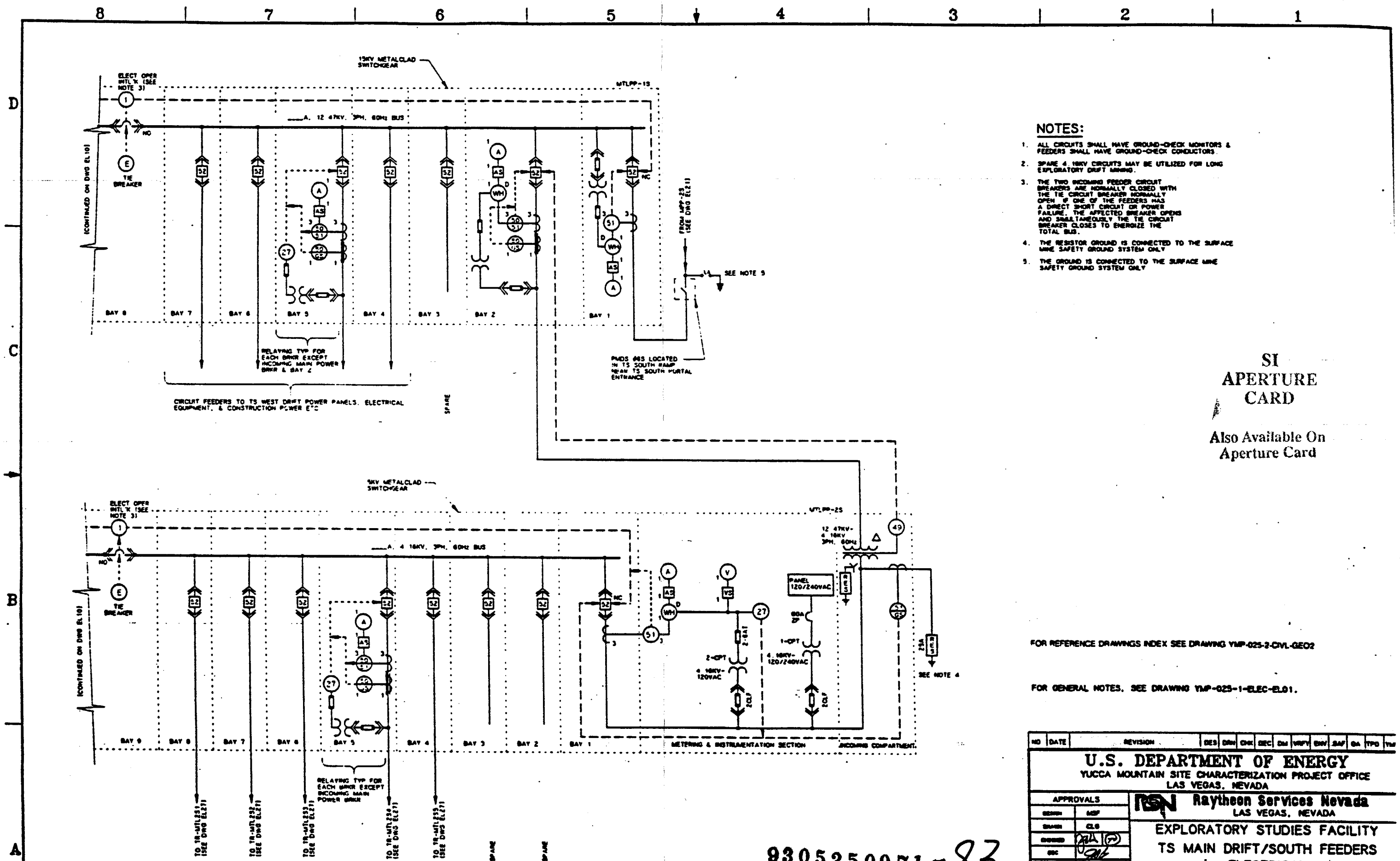
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DRN | DRAWING NO. YMP-025-2-ELEC-EL25 | REV 0

YMPO APPROVED | DATE | SHT | OF

9305250071-82



NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. SPARE 4.16KV CIRCUITS MAY BE UTILIZED FOR LONG EXPLORATORY DRIFT MINING.
3. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.
4. THE RESISTOR GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY.
5. THE GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	GEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MSF
DRAWN	CLG
CHECKED	
GEC	
DESIGN MANAGER	S.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

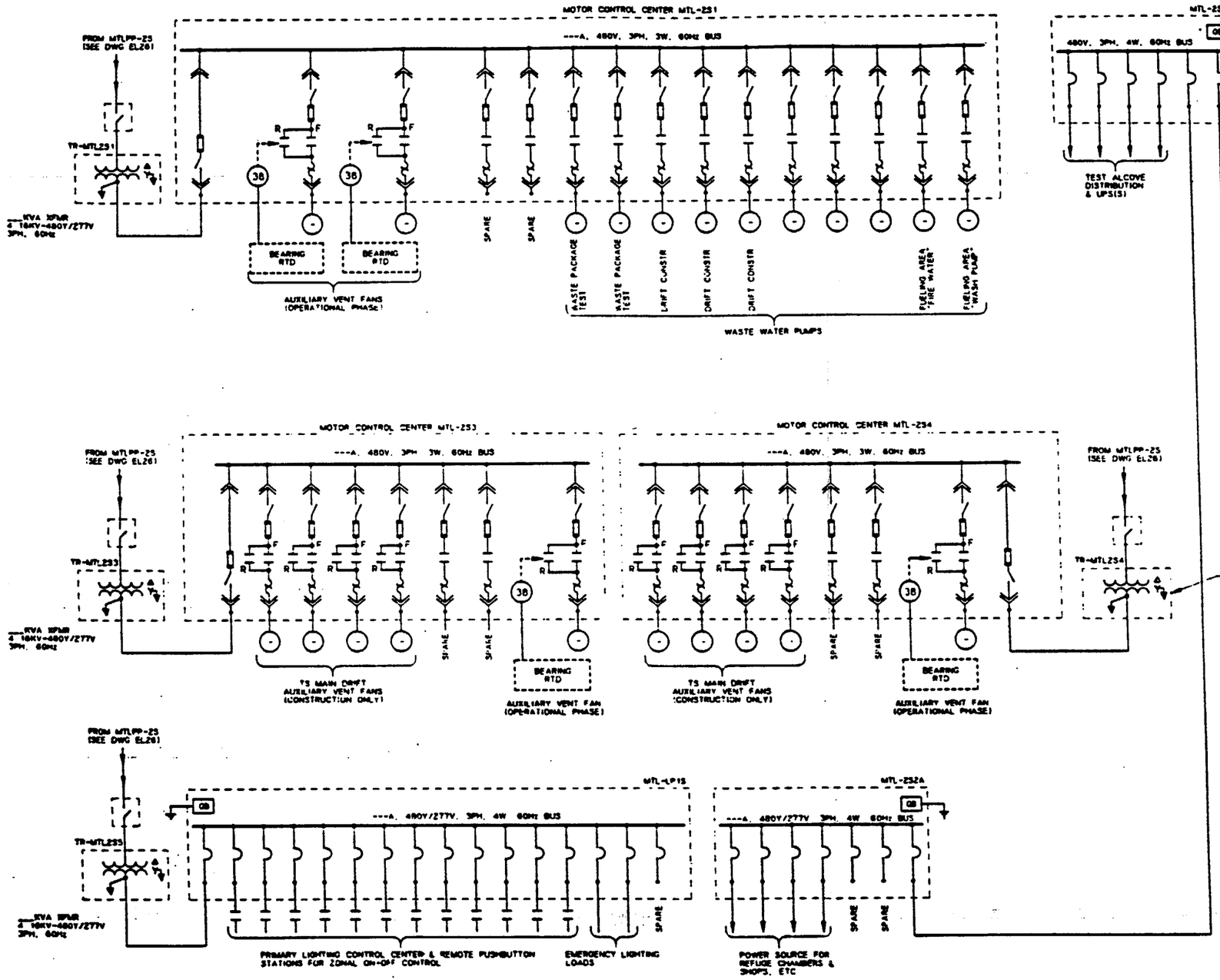
EXPLORATORY STUDIES FACILITY
TS MAIN DRIFT/SOUTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL26 | REV 0

YMPO APPROVED | SHT | OF

9305250071-83

TS MAIN DRIFT/SOUTH FEEDERS - ONE LINE DIAGRAM



NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL28
2. DURING CONSTRUCTION, THE AUXILIARY VENT FANS WILL BE INTERLOCKED & CAN BE MANUALLY REVERSED AS NEEDED
3. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
4. ALL MAIN 480V CIRCUITS SHALL HAVE GROUND-FAULT & UNDERVOLTAGE PROTECTION
5. QUANTITIES FOR FANS & PUMPS, ETC WILL BE DETERMINED DURING THE TITLE II EFFORT

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

9305250071 -84

TS MAIN DRIFT/SOUTH FEEDERS - ONE LINE DIAGRAM

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

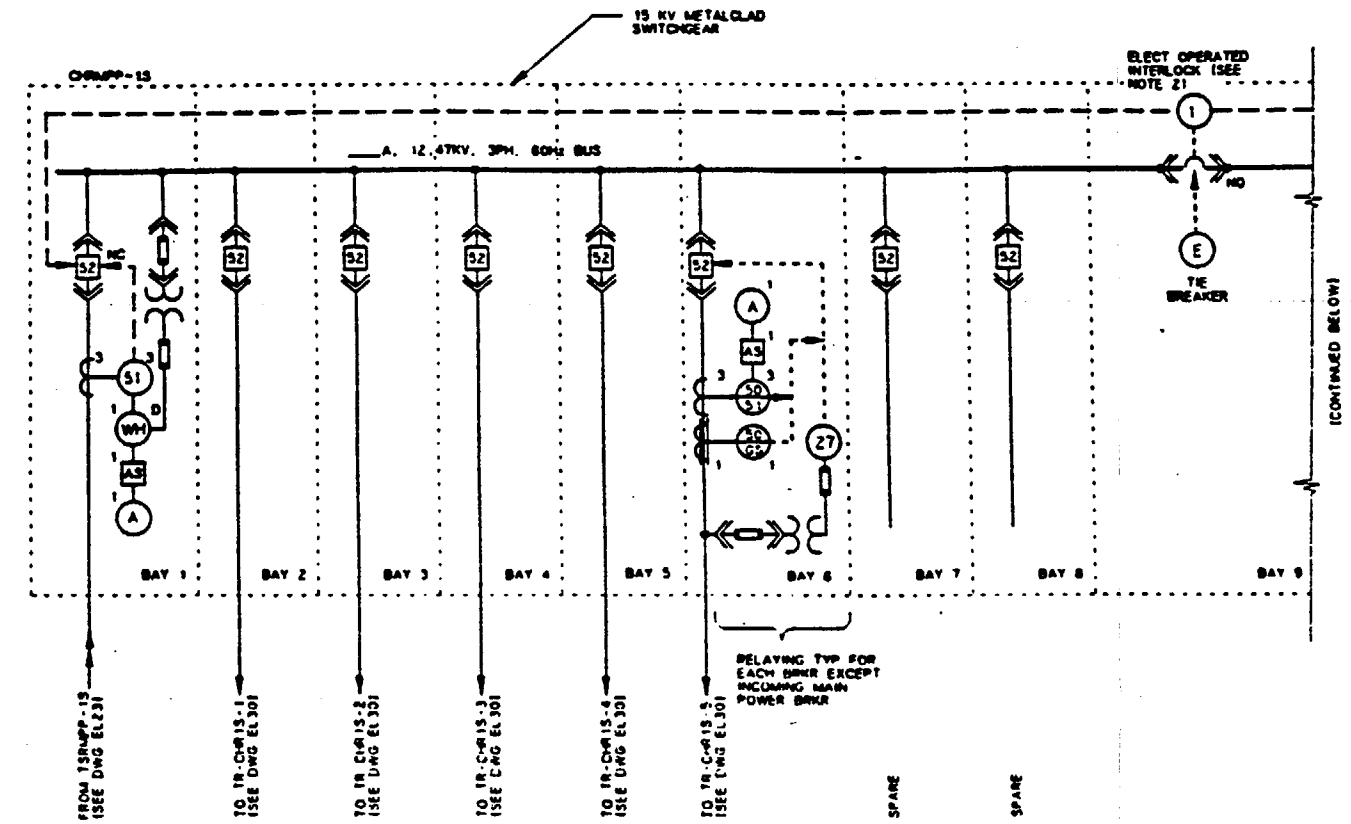
DESIGN	MSF
DRAWN	CLD
CHECKED	
DEC	
DESIGN MANAGER	B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

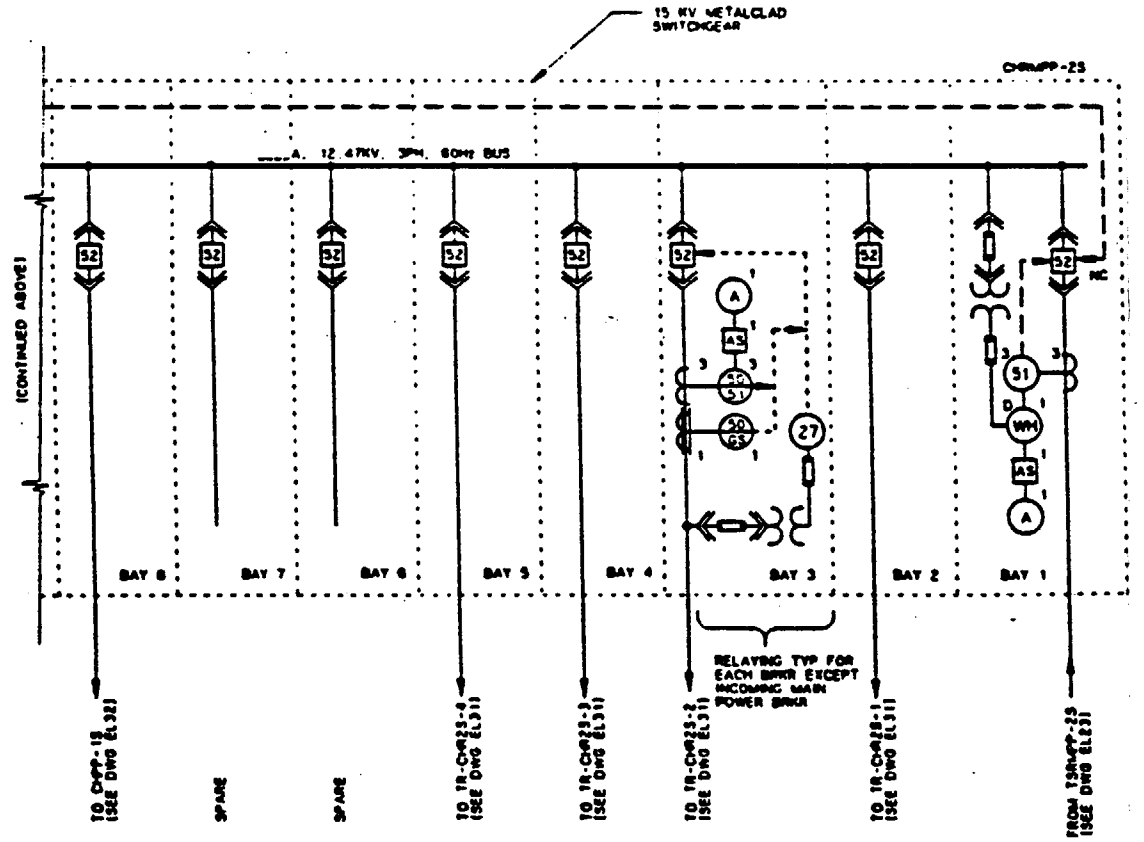
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS MAIN DRIFT/SOUTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL27
YMPO APPROVED | DATE | SHT

Plotted : Wed Aug 21 15:29:10 1991, PDT Part name YMPO196.DWG





CH SOUTH RAMP - ONE LINE DIAGRAM

NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS AND FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GED2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

9305250071-85

NO.	DATE	REVISION	DES	DRW	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MSF
DRAWN	CLG
CHECKED	
DEC	J. Clark
DESIGN MANAGER	S.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

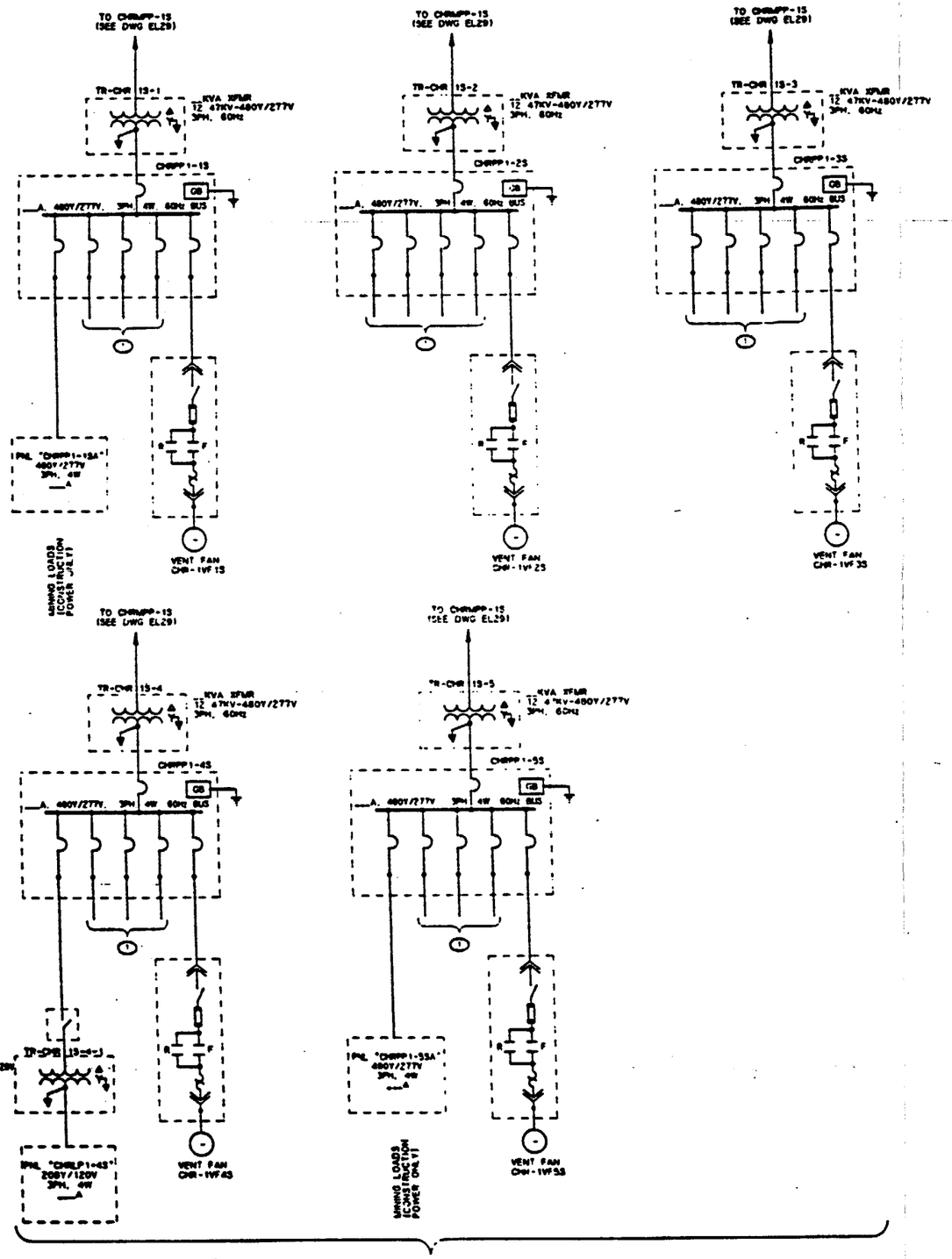
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
CH SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY: TH Tullid — DATE: 8-14-9 — DRAWING NO. YMP-025-2-ELEC-EL29 — REV 0

YMPO APPROVED — DATE — SHT — OF

FOR YMP-100 0-21-01 — F.S.S. NO. 1,2,6,5,3 — C.I. NO.



CH SOUTH RAMP - ONE LINE DIAGRAM

NOTE:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL29.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

9305250071 -86

NO	DATE	REVISION	DES	DRN	CHK	DEC	SM	VRFY	ERV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

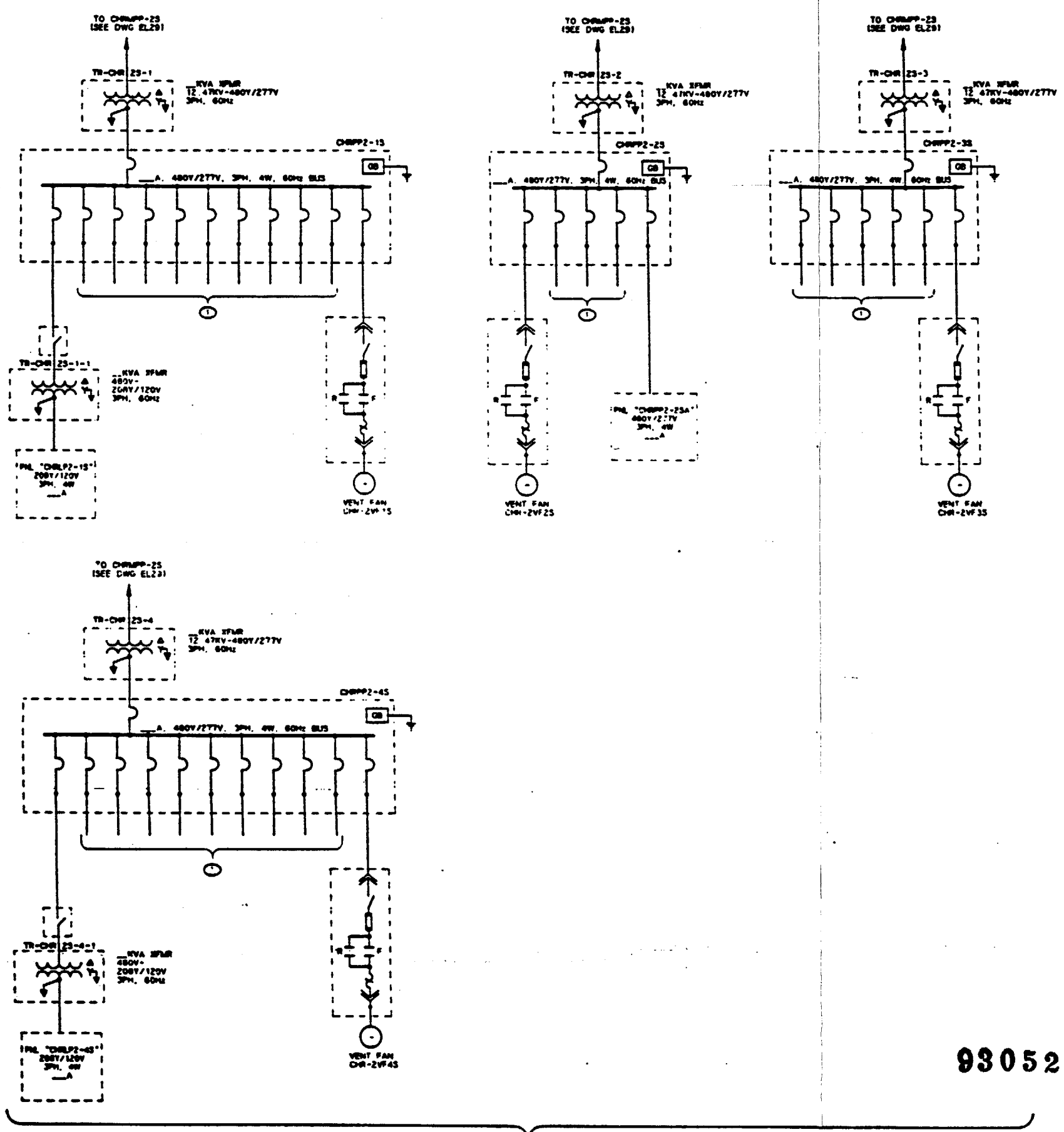
Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	MEF
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
CH SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL30 | REV 0

YMPO APPROVED | DATE | SHT ... OF



① POWER PANELS LOCATED IN CH SOUTH RAMP AT VARIOUS FACILITIES REQUIRING POWER FOR INSTRUMENTATION, TESTING, LIGHTING, UPS(S), ETC

CH SOUTH RAMP - ONE LINE DIAGRAM

NOTE:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL29.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

9305250071-87

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SNV	SAF	SA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS

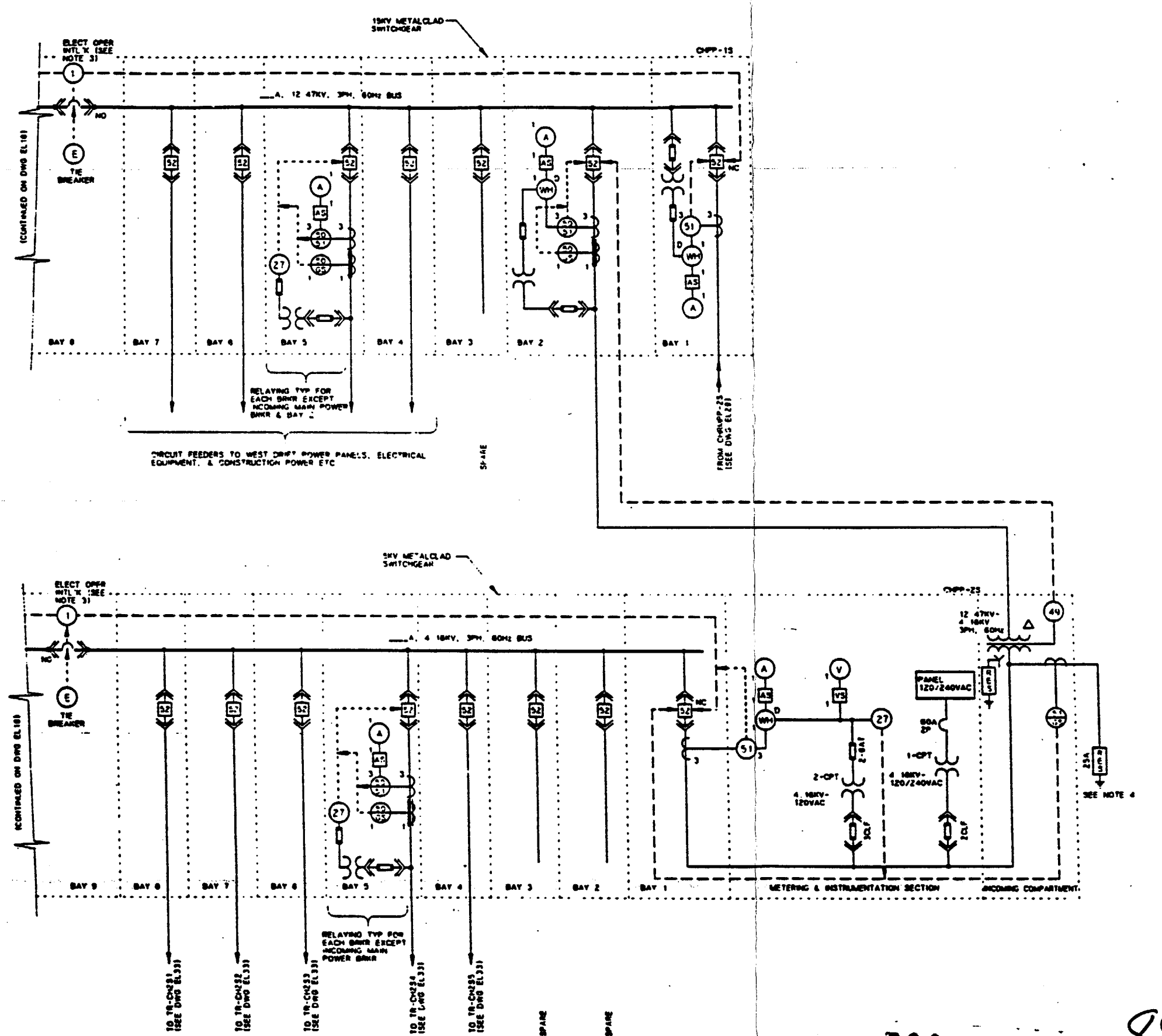
DESIGN	MSP
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	C.H.
VERIFICATION	N/A
SNV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
CH SOUTH RAMP
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL31 | REV. 0

YMPO APPROVED

PCN YMPO FILE | D.S.S. NO. 1 2 6 5 3



NOTES:

1. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
2. SPARE 4.16KV CIRCUITS MAY BE UTILIZED FOR LONG EXPLORATORY DRIFT MINING.
3. THE TWO INCOMING FEEDER CIRCUIT BREAKERS ARE NORMALLY CLOSED WITH THE TIE CIRCUIT BREAKER NORMALLY OPEN. IF ONE OF THE FEEDERS HAS A DIRECT SHORT CIRCUIT OR POWER FAILURE, THE AFFECTED BREAKER OPENS AND SIMULTANEOUSLY THE TIE CIRCUIT BREAKER CLOSES TO ENERGIZE THE TOTAL BUS.
4. THE RESISTOR GROUND IS CONNECTED TO THE SURFACE MINE SAFETY GROUND SYSTEM ONLY

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	WRPY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	MBF
DRAWN	CLB
CHECKED	
DEC	
DESIGN MANAGER	B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

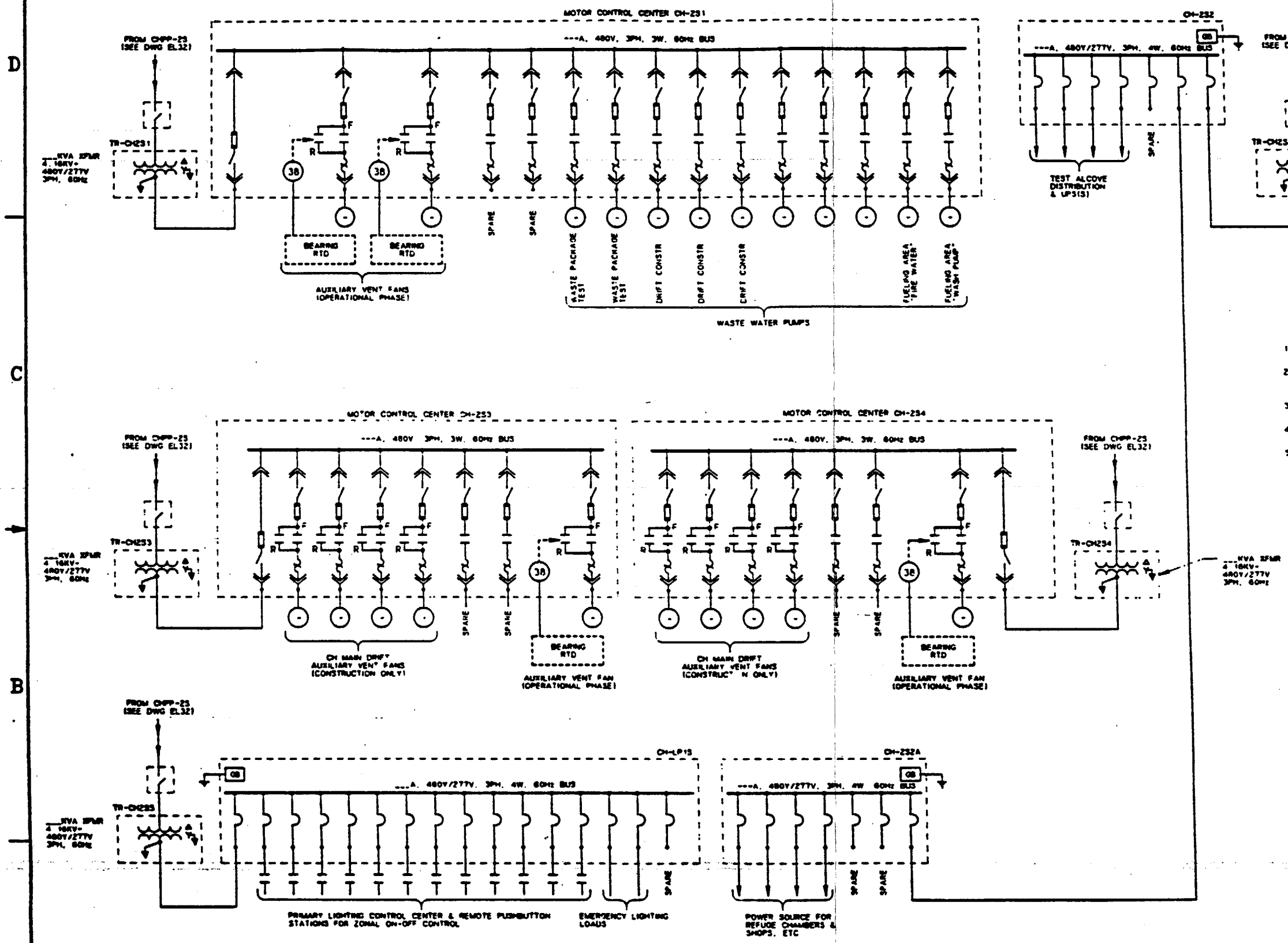
EXPLORATORY STUDIES FACILITY
CH MAIN DRIFT/SOUTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-ELEC-EL32

YMPO APPROVED

9305250071-88

CH MAIN DRIFT/SOUTH FEEDERS - ONE LINE DIAGRAM



NOTES:

1. FOR RELATED NOTES TO THIS DRAWING, SEE DRAWING YMP-025-2-ELEC-EL32
2. DURING CONSTRUCTION, THE AUXILIARY VENT FANS WILL BE INTERLOCKED & CAN BE MANUALLY REVERSED AS NEEDED
3. ALL CIRCUITS SHALL HAVE GROUND-CHECK MONITORS & FEEDERS SHALL HAVE GROUND-CHECK CONDUCTORS.
4. ALL MAIN 480V CIRCUITS SHALL HAVE GROUND-FAULT & UNDERVOLTAGE PROTECTION.
5. QUANTITIES FOR FANS & PUMPS, ETC WILL BE DETERMINED DURING THE TITLE II EFFORT.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GEO2

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01.

CH MAIN DRIFT/SOUTH FEEDERS - ONE LINE DIAGRAM

9305250071-89

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	WRPV	SMV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

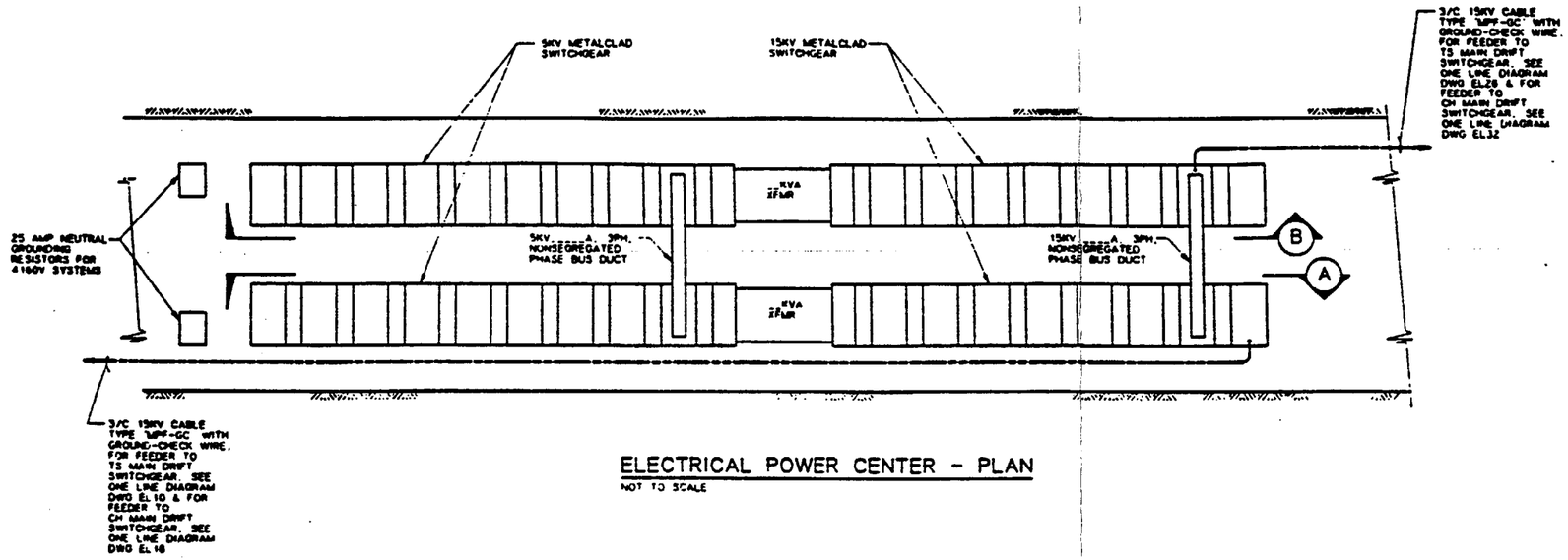
APPROVALS

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
CH MAIN DRIFT/SOUTH FEEDERS
ELECTRICAL
ONE LINE DIAGRAM

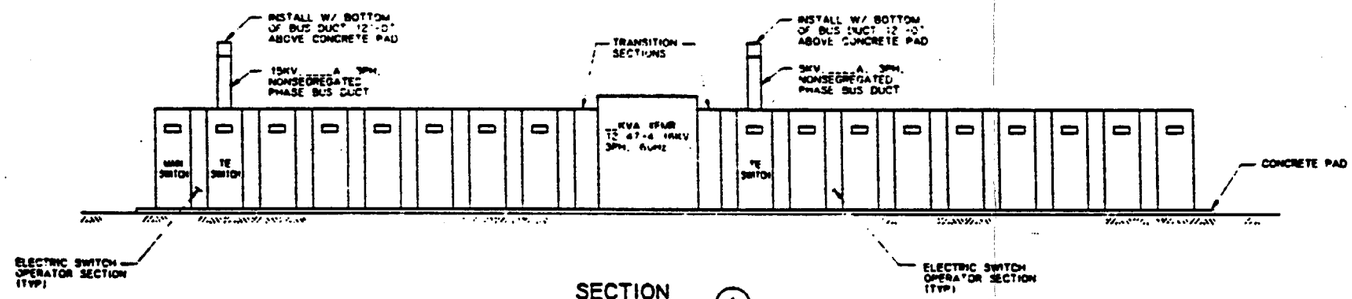
SUBMITTED BY — DATE — DRAWING NO. YMP-025-2-ELEC-EL33 — REV 0

YMPO APPROVED — DATE — SHT — OF



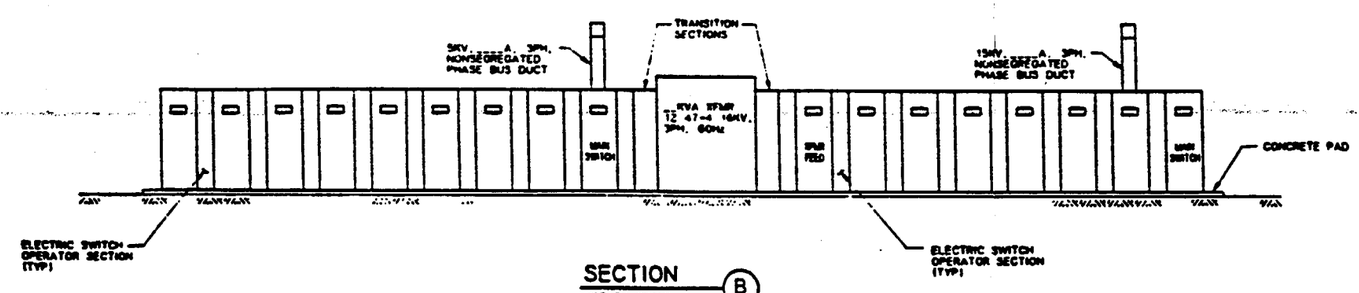
ELECTRICAL POWER CENTER - PLAN

NOT TO SCALE



SECTION (A)

NOT TO SCALE



SECTION (B)

NOT TO SCALE

9305250071-90

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

FOR GENERAL NOTES, SEE DRAWING YMP-025-1-ELEC-EL01

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	MSF
DRAWN	CLG
CHECKED	
DEC	
DESIGN MANAGER	S.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
TS MAIN DRIFT/CH MAIN DRIFT
TYPICAL ARRANGEMENT
ELECTRICAL POWER CENTER

SUBMITTED BY	DRAWING NO.	REV.
	YMP-025-2-ELEC-EL34	0

YMPO APPROVED ____ DATE ____ SHT ____ OF ____

GENERAL NOTES :

1. SYSTEM SHOWN SCHEMATICALLY, NOT TO SCALE. MAJOR PIPING RUNS CURVED TO SHOW RELATIVE ELEVATIONS BETWEEN SALIENT POINTS.
2. DASHED BOXES IN DRIFT PIPING DEPICT THE GENERIC WATER FACILITY TYPICAL FOR A SPECIFIC APPLICATION (e.g. WATER TAP AT DRIFT INTERSECTION EXCAVATION EQUIPMENT SITE). SPECIFIC LOCATIONS FOR EACH APPLICATION ARE NOT IMPLIED.
3. METERING AND REMOTE MONITORING AND CONTROL SYSTEMS WILL BE DEVELOPED IN THE TITLE II DESIGN TO REGULATE WATER LOSS BY LEAK RATES BELOW LINE BREAK VALVE SETPOINTS.
4. MAIN DISTRIBUTION PIPING SHALL BE SCHEDULE 40 WITH GROOVED COUPLINGS AND FITTINGS. PIPING SIZES SHALL BE 8" FOR TS RAMPS AND TS MAIN DRIFT, 6" FOR CH RAMPS AND CH MAIN DRIFT.

KEYED NOTES :

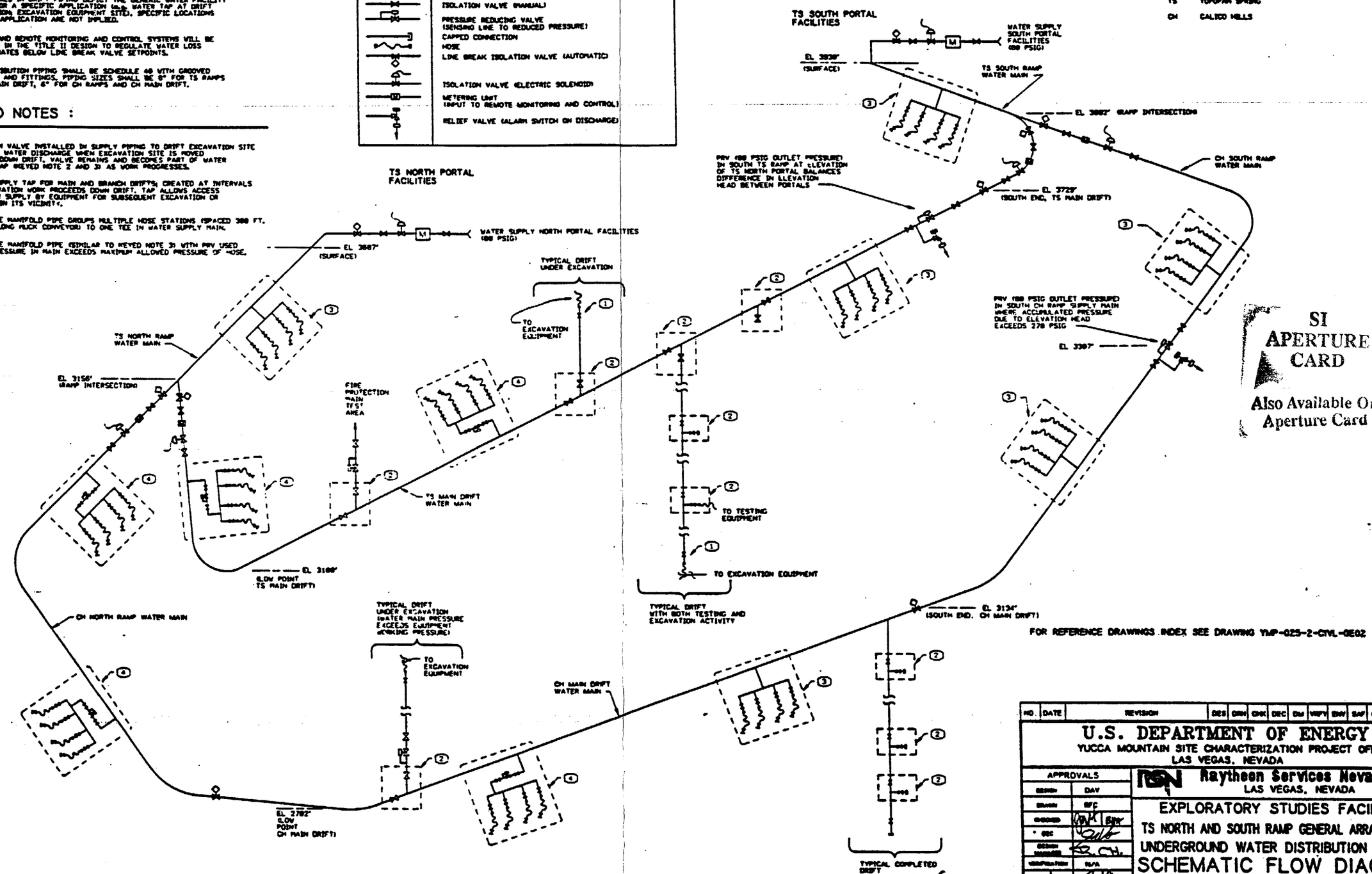
1. ISOLATION VALVE INSTALLED IN SUPPLY PIPING TO DRIFT EXCAVATION SITE PREVENTS WATER DISCHARGE WHEN EXCAVATION SITE IS MOVED FURTHER DOWN DRIFT. VALVE REMAINS AND BECOMES PART OF WATER SUPPLY TAP (KEYED NOTE 2 AND 3) AS WORK PROGRESSES.
2. WATER SUPPLY TAP FOR MAIN AND BRANCH DRIFTS, CREATED AT INTERVALS AS EXCAVATION WORK PROCEEDS DOWN DRIFT. TAP ALLOWS ACCESS TO WATER SUPPLY BY EQUIPMENT FOR SUBSEQUENT EXCAVATION OR TESTING IN ITS VICINITY.
3. FIRE HOSE MANIFOLD PIPE GROUPS MULTIPLE HOSE STATIONS (SPACED 300 FT. APART ALONG MUCK CONVEYOR) TO ONE TEE IN WATER SUPPLY MAIN.
4. FIRE HOSE MANIFOLD PIPE (SIMILAR TO KEYED NOTE 3) WITH PRV USED WHERE PRESSURE IN MAIN EXCEEDS MAXIMUM ALLOWED PRESSURE OF HOSE.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	ISOLATION VALVE (MANUAL)
	PRESSURE REDUCING VALVE (SENSING LINE TO REDUCED PRESSURE)
	CAPPED CONNECTION
	HOSE
	LINE BREAK ISOLATION VALVE (AUTOMATIC)
	ISOLATION VALVE (ELECTRIC SOLENOID)
	METERING UNIT (INPUT TO REMOTE MONITORING AND CONTROL)
	RELIEF VALVE (ALARM SWITCH ON DISCHARGE)

ABBREVIATIONS

PRV	PRESSURE REDUCING VALVE
TS	TOPOPAH SPRING
CH	CALICO HILLS



FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SI APERTURE CARD
Also Available On Aperture Card

NO.	DATE	REVISION	DES	DRN	CHK	DEC	CM	VRFY	ENV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	DAV
DRAWN	BFC
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS NORTH AND SOUTH RAMP GENERAL ARRANGEMENT
UNDERGROUND WATER DISTRIBUTION SYSTEM
SCHEMATIC FLOW DIAGRAM

SUBMITTED BY — DATE 5-10-91 — DRAWING NO. YMP-025-2-MECH-P101 — REV 0
YMPO APPROVED — DATE — SHT — OF

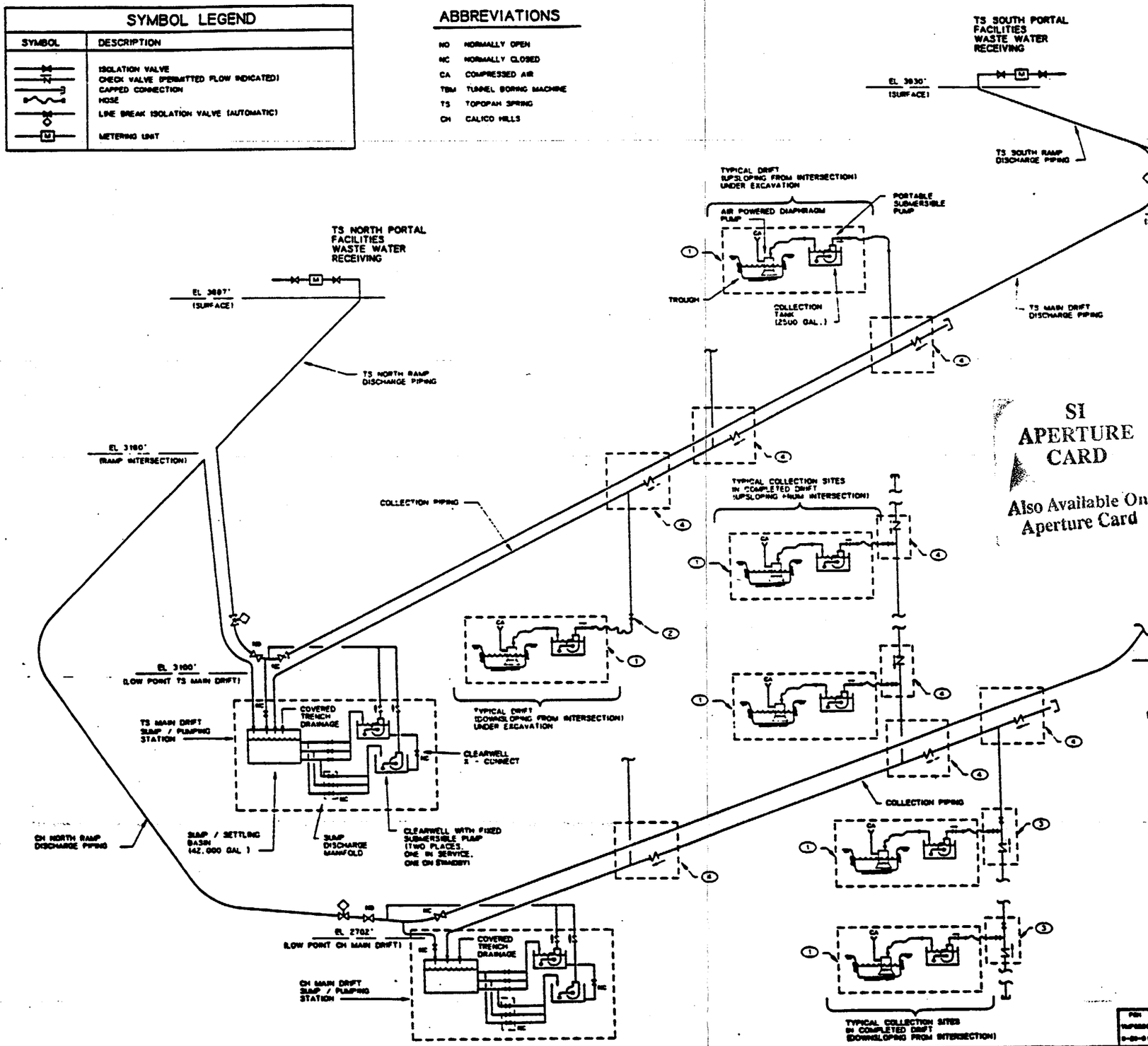
9305250071 - 91

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	ISOLATION VALVE
	CHECK VALVE (PERMITTED FLOW INDICATED)
	CAPPED CONNECTION
	HOSE
	LINE BREAK ISOLATION VALVE (AUTOMATIC)
M	METERING UNIT

ABBREVIATIONS

NO	NORMALLY OPEN
NC	NORMALLY CLOSED
CA	COMPRESSED AIR
TBM	TUNNEL BORING MACHINE
TS	TOPOPAH SPRING
CH	CALICO HILLS



GENERAL NOTES :

1. SYSTEM SHOWN SCHEMATICALLY, NOT TO SCALE. MAJOR PIPING RUNS CURVED TO SHOW RELATIVE ELEVATIONS BETWEEN SALIENT POINTS.
2. DASHED BOXES IN DRIFT PIPING DEPICT THE GENERIC WASTE WATER FACILITY TYPICAL FOR A SPECIFIC APPLICATION (e.g. DRAIN TAP FOR UPSLOPING DRIFT; COLLECTION SITE IN DRIFT EXCAVATION). SPECIFIC LOCATIONS FOR EACH APPLICATION ARE NOT IMPLIED.
3. DISCHARGE PIPING 6" SCHEDULE 40 WITH GROOVED FITTINGS.
4. COLLECTION PIPING 3" SCHEDULE 40 WITH GROOVED FITTINGS.

KEYED NOTES :

1. WASTE WATER COLLECTION SITE. APPLICABLE FOR EXCAVATION, TESTING AND GROUND WATER INFLOW. WATER WILL BE CHANNELED AND PICKED UP AS SOON AS FEASIBLE BY THE WASTE WATER COLLECTION SYSTEM.
2. ISOLATION VALVE INSTALLED IN COLLECTION PIPING OF DRIFT SLOPING DOWN FROM DRIFT INTERSECTION PREVENTS WATER DRAINAGE WHEN EXCAVATION SITE IS MOVED FURTHER DOWN DRIFT. VALVE REMAINS AND BECOMES PART OF DRAINAGE TAP (KEYED NOTE 3) AS WORK PROGRESSES.
3. DRAIN TAP FOR DOWNWARD SLOPING DRIFT; CREATED AT INTERVAL AS WORK PROCEEDS DOWN DRIFT. TAP ALLOWS ACCESS TO DRAIN BY COLLECTION SITE (KEYED NOTE 1) FOR TESTING OR GROUND WATER IN ITS VICINITY.
4. DRAIN TAP FOR UPWARD SLOPING DRIFT; (SIMILAR TO KEYED NOTE 3) REQUIRING ONLY CHECK VALVE.

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SI APERTURE CARD

Also Available On Aperture Card

9305250071 - 92

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	SMV	SAF	QA	TPO	YMP

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

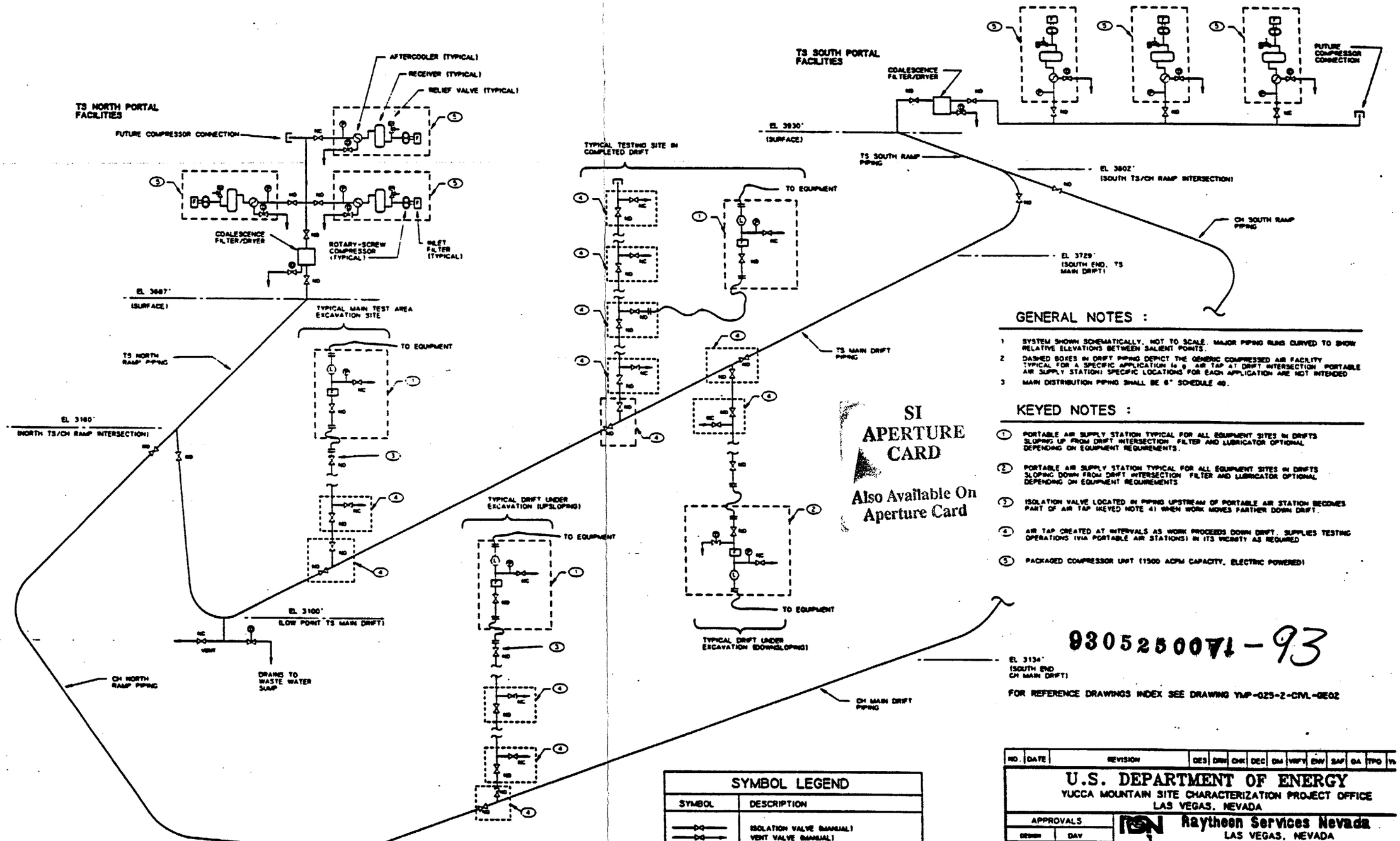
APPROVALS	
DESIGN	DAV
DRAWN	GFC
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
SMV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS NORTH AND SOUTH RAMP GENERAL ARRANGEMENT
UNDERGROUND WASTE WATER COLLECTION SYSTEM
SCHEMATIC FLOW DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MECH-P103

YMPO APPROVED | DATE | SHT | OF



GENERAL NOTES :

1. SYSTEM SHOWN SCHEMATICALLY, NOT TO SCALE. MAJOR PIPING RUNS CURVED TO SHOW RELATIVE ELEVATIONS BETWEEN SALIENT POINTS.
2. DASHED BOXES IN DRIFT PIPING DEPICT THE GENERIC COMPRESSED AIR FACILITY TYPICAL FOR A SPECIFIC APPLICATION (e.g. AIR TAP AT DRIFT INTERSECTION, PORTABLE AIR SUPPLY STATION). SPECIFIC LOCATIONS FOR EACH APPLICATION ARE NOT INTENDED.
3. MAIN DISTRIBUTION PIPING SHALL BE 6" SCHEDULE 40.

KEYED NOTES :

1. PORTABLE AIR SUPPLY STATION TYPICAL FOR ALL EQUIPMENT SITES IN DRIFTS SLOPING UP FROM DRIFT INTERSECTION. FILTER AND LUBRICATOR OPTIONAL DEPENDING ON EQUIPMENT REQUIREMENTS.
2. PORTABLE AIR SUPPLY STATION TYPICAL FOR ALL EQUIPMENT SITES IN DRIFTS SLOPING DOWN FROM DRIFT INTERSECTION. FILTER AND LUBRICATOR OPTIONAL DEPENDING ON EQUIPMENT REQUIREMENTS.
3. ISOLATION VALVE LOCATED IN PIPING UPSTREAM OF PORTABLE AIR STATION BECOMES PART OF AIR TAP (KEYED NOTE 4) WHEN WORK MOVES FARTHER DOWN DRIFT.
4. AIR TAP CREATED AT INTERVALS AS WORK PROCEEDS DOWN DRIFT. SUPPLIES TESTING OPERATIONS (VIA PORTABLE AIR STATIONS) IN ITS VICINITY AS REQUIRED.
5. PACKAGED COMPRESSOR UNIT (1500 ACFM CAPACITY, ELECTRIC POWERED).

SI APERTURE CARD
Also Available On Aperture Card

93052500TI-93

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SYMBOL LEGEND

SYMBOL	DESCRIPTION
	ISOLATION VALVE (MANUAL)
	VENT VALVE (MANUAL)
	FILTER
	CAPPED CONNECTION
	HOSE
	LUBRICATOR
	DRAIN VALVE (AUTOMATIC)
	PRESSURE GAUGE

ABBREVIATIONS

NO	NORMALLY OPEN
NC	NORMALLY CLOSED
CH	CALICO HILLS
TS	TOPOPAH SPRING

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	DAV
DRAWN	RFC
CHECKED	
SDC	
DESIGN MANAGER	B. CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

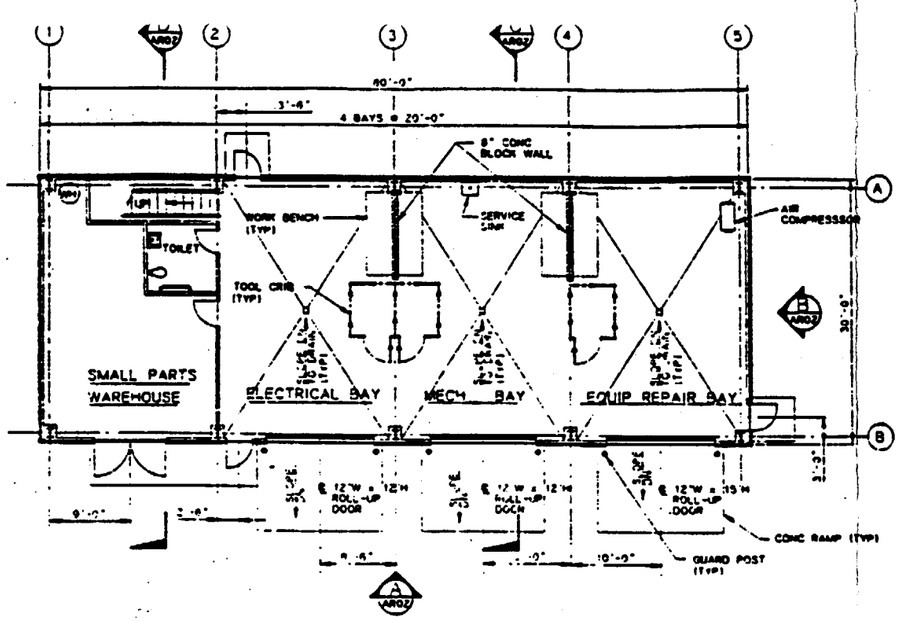
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS NORTH AND SOUTH RAMP GENERAL ARRANGEMENT
COMPRESSED AIR DISTRIBUTION SYSTEM
SCHEMATIC FLOW DIAGRAM

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-MECH-P105

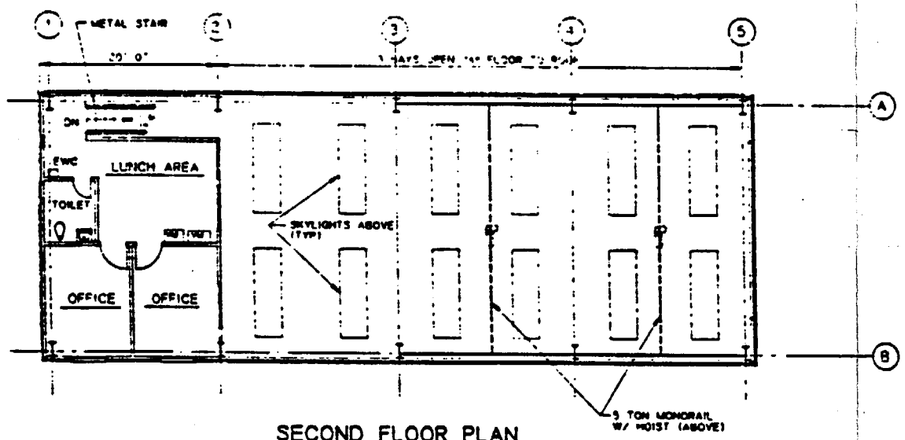
YMPO APPROVED | DATE | SHT

Plotted: Tue Aug 20 15:11:19 1991 PDT



FIRST FLOOR PLAN

SCALE 1/8"=1'-0"



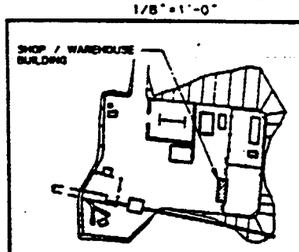
SECOND FLOOR PLAN

SCALE 1/8"=1'-0"

GRAPHIC SCALE

0 4 8 16 24 FEET

1/8"=1'-0"



TS SOUTH PORTAL KEY PLAN

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-Z-CIVL-GE02

9305250071 - 94

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPC

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	PZ
DRAWN	MJH
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

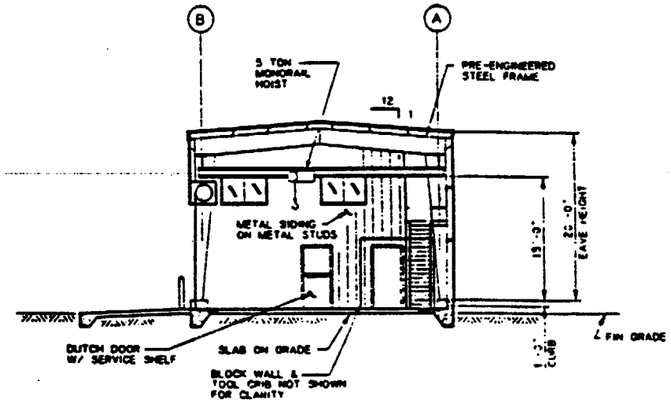
Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SHOP / WAREHOUSE BUILDING
FLOOR PLANS

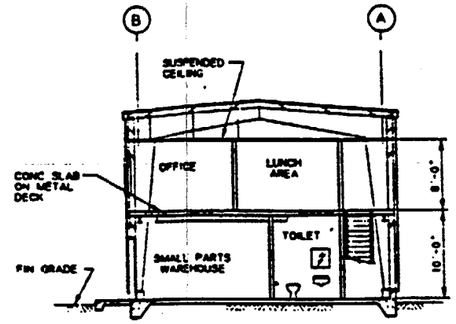
SUBMITTED BY | DATE | DRAWING NO. YMP-025-Z-7010-AR01 | REV. 0

YMPO APPROVED | DATE | SHT | OF

Plotted Wed Aug 21 17:39:22 1991, PDT Part name J:\WBCZ\YMP0033.DWG -UW



SECTION C
SCALE 1/8" = 1'-0"
ARO1



SECTION D
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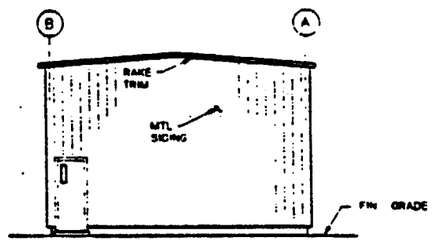
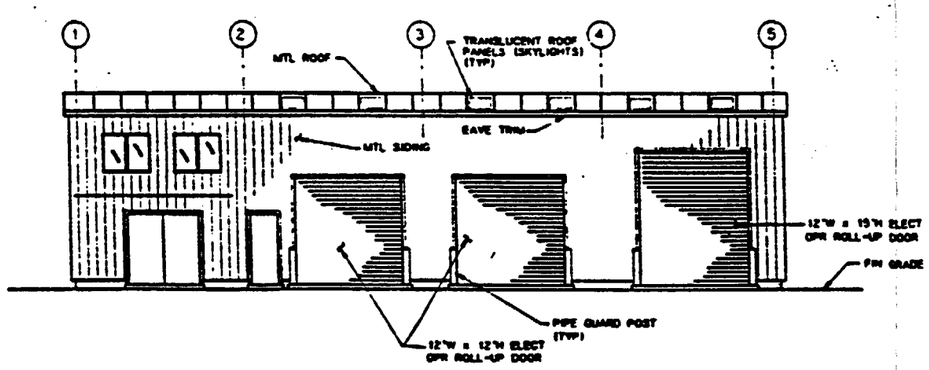
ARO1



ELEVATION B
SCALE 1/8" = 1'-0"
ARO1



ELEVATION A
SCALE: 1/8" = 1'-0"
ARO1

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071 - 95

NO.	DATE	REVISION	DES	DRN	CHK	SEC	SM	VRFY	SRV	SAF	SA	TPO	YM

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

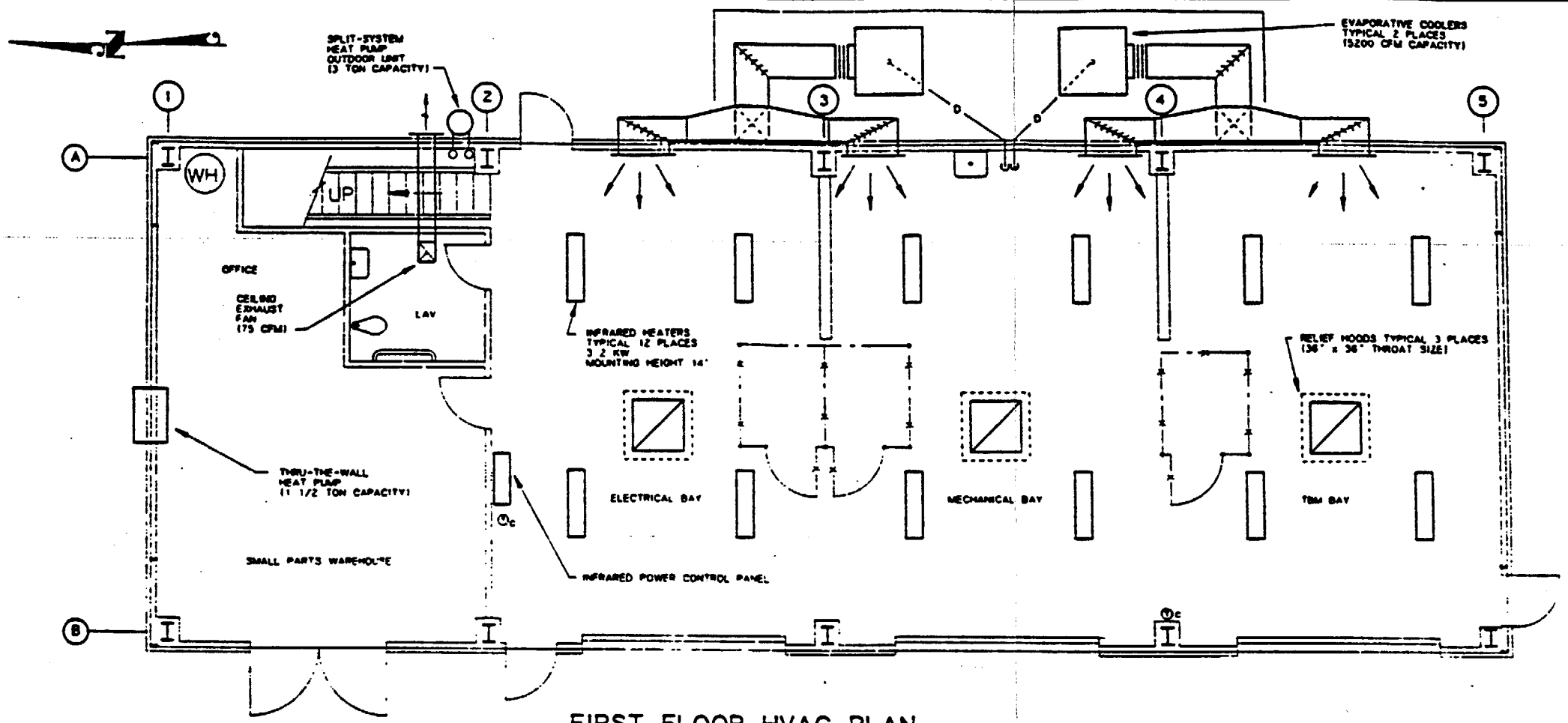
DESIGN	PZ
DRAWN	MJH
CHECKED	
SEC	
DESIGN MANAGER	B.C.H.
VERIFICATION	N/A
SRV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMEN
SHOP / WAREHOUSE BUILDING
ELEVATIONS & SECTIONS

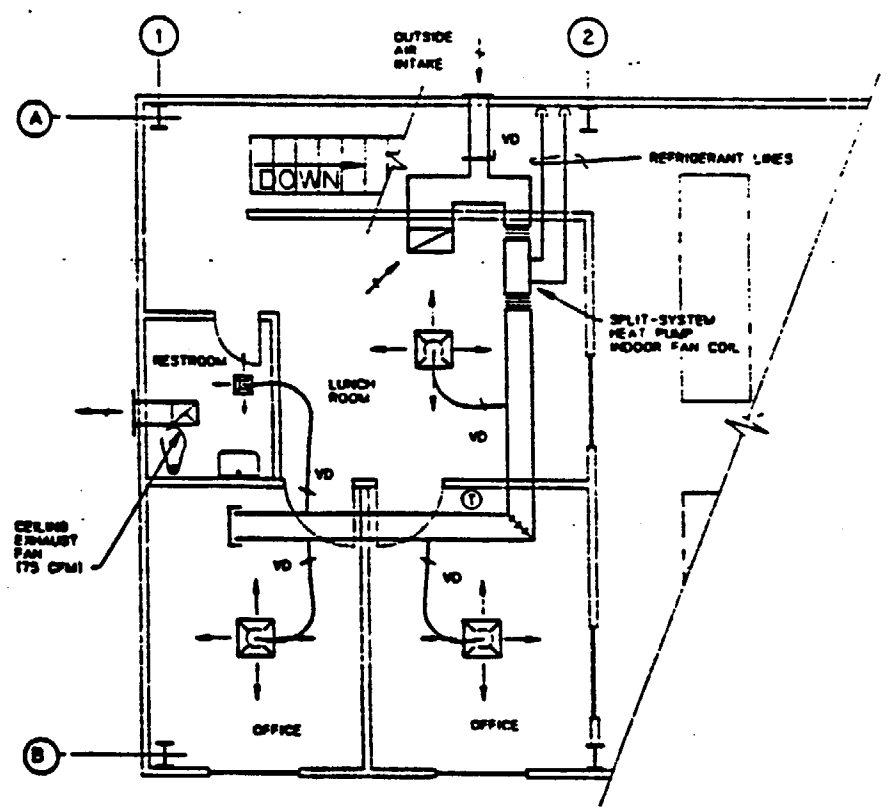
SUBMITTED BY: T.R. Zulloch — DATE: 9-28-91
DRAWING NO.: YMP-025-2-7010-AR02
YMPO APPROVED — DATE

FCN YMPO134 0-25-01
U.S.D. NO. 1.2.6.3.1.2
C.I. NO.



FIRST FLOOR HVAC PLAN

SCALE 1/4" = 1'-0"



SECOND FLOOR HVAC PLAN

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

HVAC LEGEND

SYMBOL	DESCRIPTION
RL	REFRIGERANT LIQUID LINE
HG	REFRIGERANT HOT GAS LINE
RS	REFRIGERANT SUCTION LINE
D	DRAIN LINE
	FLEXIBLE CONNECTION TO EQUIPMENT
	DUCT TRANSITION
	ELBOW WITH TURNING VANES
	RECTANGULAR "T" WITH TURNING VANES
VD	VOLUME DAMPER IN RIGID DUCT TAKEOFF
VD	VOLUME DAMPER IN FLEXIBLE DUCT TAKEOFF
	DUCT SECTION (SUPPLY)
	DUCT SECTION (RETURN)
	CEILING DIFFUSER (SUPPLY)
	SIDEWALL REGISTER/LOUVER
	SIDEWALL SUPPLY REGISTER
	CEILING GRILLE (RETURN)
	CEILING GRILLE (EXHAUST)
T	THERMOSTAT (COOLING AND HEATING)
Tc	THERMOSTAT (COOLING ONLY)
	DIRECTION OF AIR FLOW

GENERAL NOTES:

1. THIS DRAWING DEPICTS ONLY THE MAJOR DESIGN FEATURES OF THIS PROJECT. ALL DETAILS, EQUIPMENT DESCRIPTIONS AND SPECIAL INSTRUCTIONS SHALL BE DEVELOPED DURING THE TITLE II EFFORT.

SI APERTURE CARD

Also Available On Aperture Card

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071 — 96

GRAPHIC SCALE

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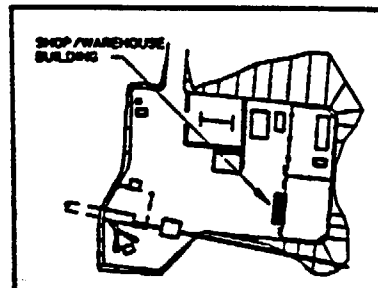
1/4"=1'-0"



TS SOUTH PORTAL KEY PLAN

NO.	DATE	REVISION	DES	DRN	CHK	DSC	SM	VRFY	SNV	SAF	SA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

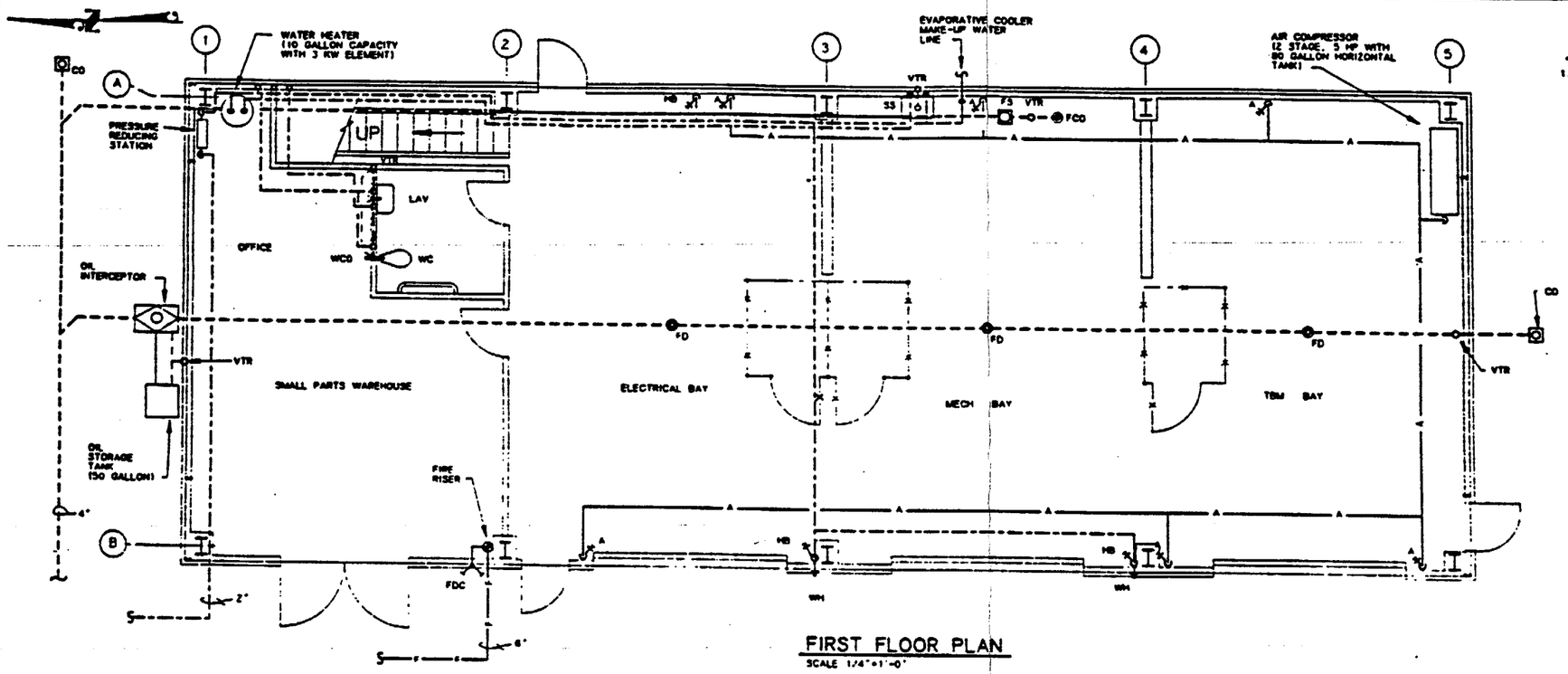
DESIGN	SMA
DRAWN	SFC
CHECKED	
DSC	
DESIGN ENGINEER	B.CH.
VERIFICATION	N/A
SNV / SAF	
QUALITY ASSURANCE	8-26-97

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SHOP / WAREHOUSE BUILDING
HVAC PLAN

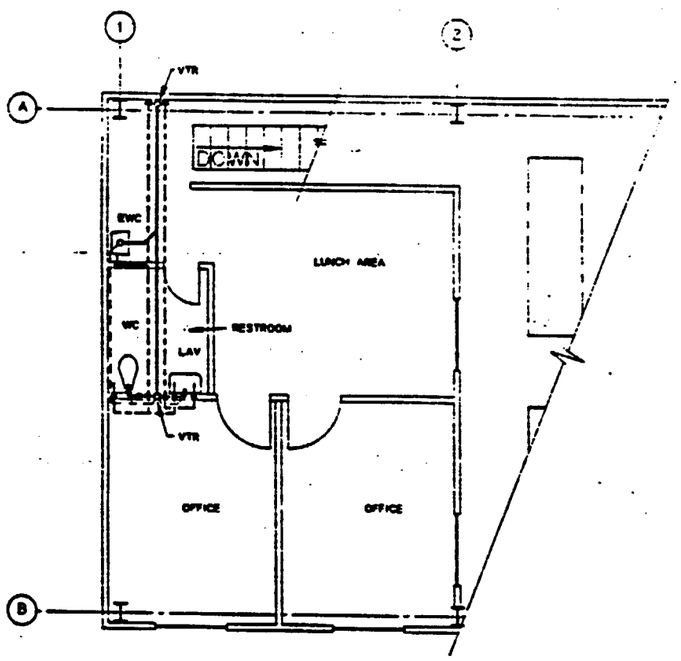
SUBMITTED BY: 8-26-97 — YMPO APPROVED

DRAWING NO. YMP-025-2-7010-HV01 — REV. 0



FIRST FLOOR PLAN

SCALE 1/4"=1'-0"



2ND FLOOR PLUMBING PLAN

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

PLUMBING LEGEND

SYMBOL/ABBREVIATION	DESCRIPTION
	SOIL/WASTE (ABOVE GRADE)
	SOIL/WASTE (BELOW GRADE)
	VENT PIPING
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
F F	FIRE LINE
A A	COMPRESSED AIR
	FIRE RISER
FDC	FIRE DEPARTMENT CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FS	FLOOR SINK
WCO	WALL CLEAN OUT
CO	CLEAN OUT AT FINISH GRADE
VTR	VENT THRU ROOF
HB	HOSE BIBB
WH	WALL HYDRANT
SH	SHOWER
WC	WATER CLOSET
UR	URINAL
SS	SERVICE SINK
LAV	COUNTER TOP LAVATORY
LAV	WALL MOUNTED LAVATORY
SK	COUNTER TOP SINK
WF	WASH FOUNTAIN
EW/SH	EYE WASH/SHOWER
BW	BOOT WASH
EWC	ELECTRIC WATER COOLER
A	COMPRESSED AIR STATION

GENERAL NOTES:

1. THIS DRAWING DEPICTS ONLY THE MAJOR DESIGN FEATURES OF THIS PROJECT. ALL DETAILS, EQUIPMENT DESCRIPTIONS AND SPECIAL INSTRUCTIONS SHALL BE DEVELOPED DURING THE TITLE II EFFORT.

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071-97

GRAPHIC SCALE

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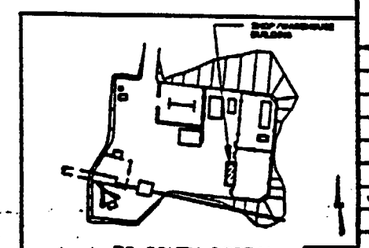
1/4"=1'-0"



TS SOUTH PORTAL KEY PLAN

NO.	DATE	REVISION	DES	DRN	CHK	GEC	DM	VRFY	SNV	SAF	SA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

Raytheon Services Nevada
LAS VEGAS, NEVADA

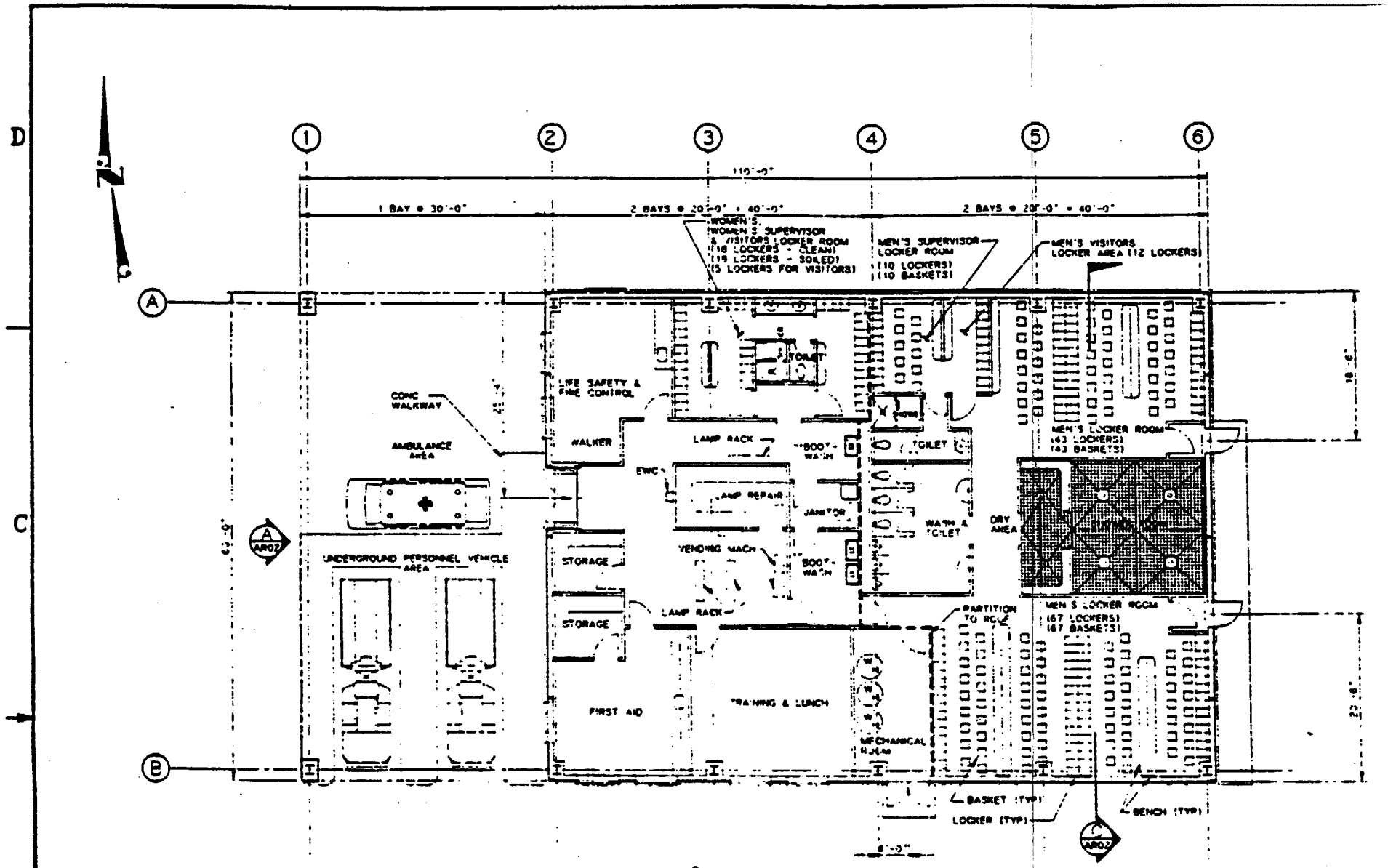
APPROVALS

DESIGN	TAN
DRAWN	RFC
CHECKED	
GEC	
DESIGN MANAGER	S. CH.
VERIFICATION	N/A
SNV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
SHOP / WAREHOUSE BUILDING
PLUMBING PLAN

SUBMITTED BY: TAN
DATE: 6-20-91
DRAWING NO.: YMP-025-2-7010-PP01
REV.: 0
YMPO APPROVED
DATE
SHT

Plotted : Wed Aug 21 10:31:47 1991, PDT Part name: YMP0008.DWG



FLOOR PLAN

SCALE 1/8" = 1'-0"

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

SI APERTURE CARD

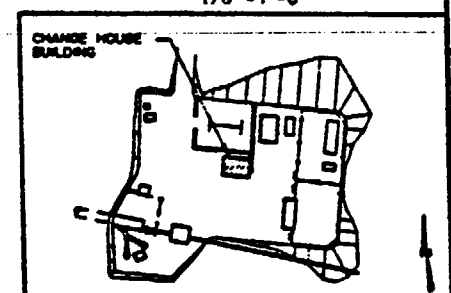
Also Available On Aperture Card

9305250071 - 98

GRAPHIC SCALE

0 4 8 16 24 FEET

1/8"=1'-0"



TS SOUTH PORTAL KEY PLAN

NO	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE

LAS VEGAS, NEVADA

Raytheon Services Nevada

LAS VEGAS, NEVADA

APPROVALS	
DESIGN	PZ
DRAWN	NM
CHECKED	
DEC	
DESIGN MANAGER	
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

EXPLORATORY STUDIES FACILITY

TS SOUTH PORTAL GENERAL ARRANGEMEN

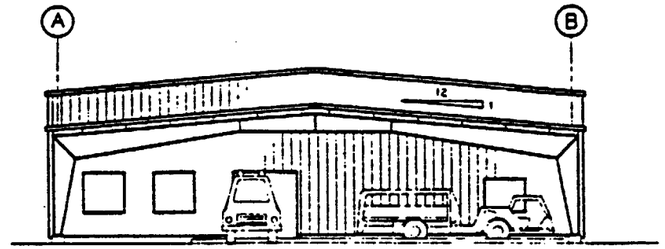
CHANGE HOUSE BUILDING

FLOOR PLAN

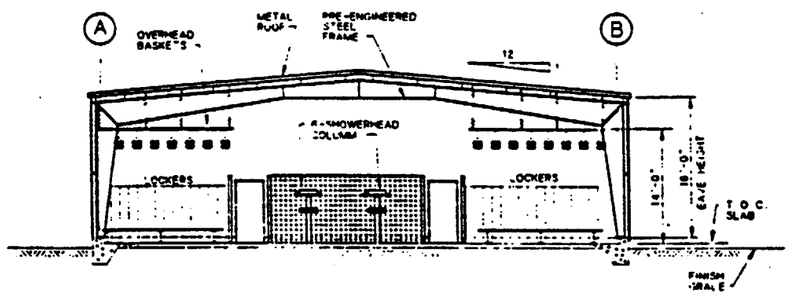
SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-7011-AR01

YMPO APPROVED | DATE | SHT | OF

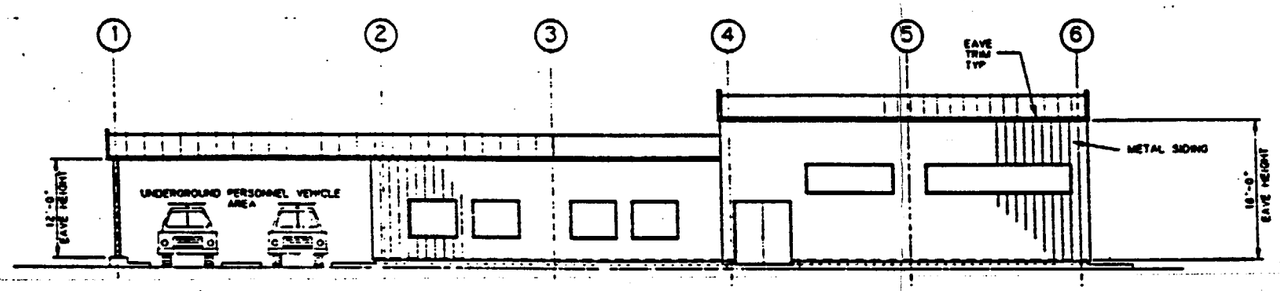
Plotted: Wed Aug 21 10:32:JC 1991, PLT Part name D:\WBC2\YMP012e.DRW -JW



ELEVATION (A / ARO1)
SCALE 1/8" = 1' - 0"



SECTION (C / ARO1)
SCALE 1/8" = 1' - 0"



ELEVATION (B / ARO1)
SCALE 1/8" = 1' - 0"

FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071 - 99

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS

DESIGN	PZ
DRAWN	MJM
CHECKED	
DEC	
DESIGN ENGINEER	S.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

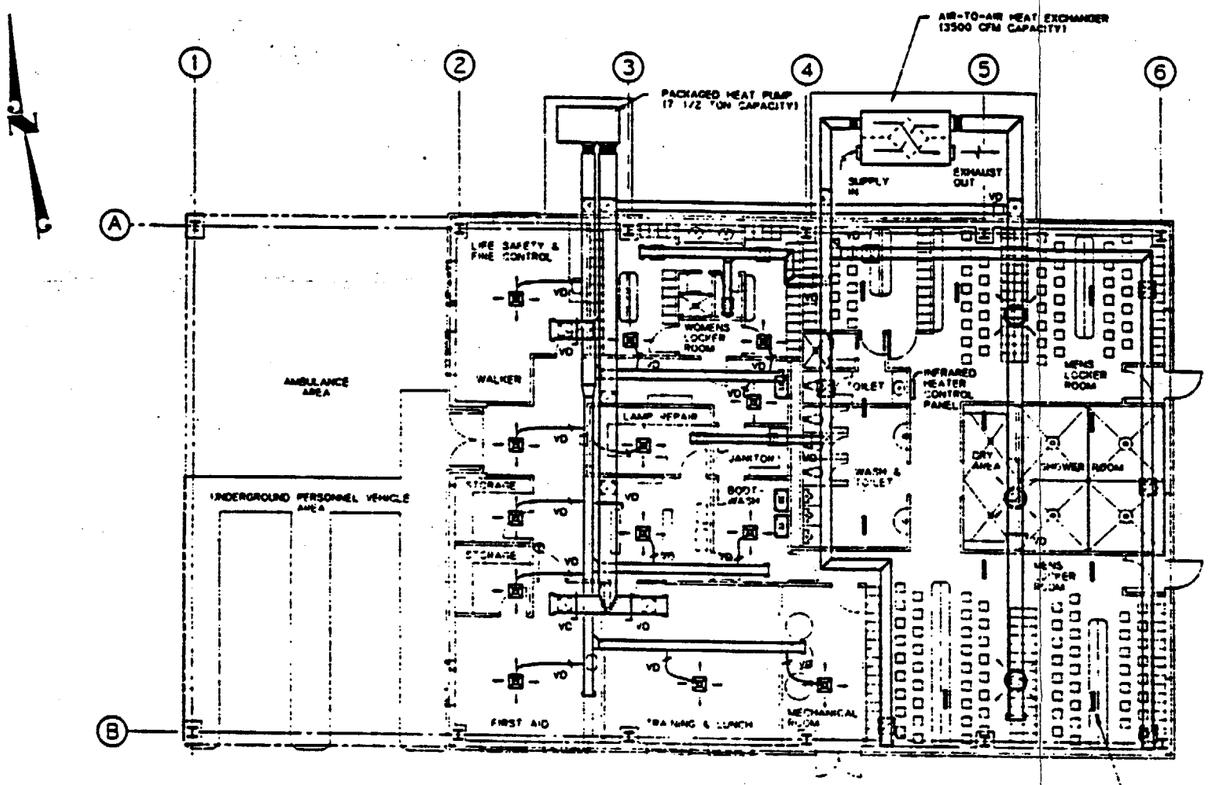
EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMEN
CHANGE HOUSE BUILDING
ELEVATIONS & SECTION

SUBMITTED BY | DATE | DRAWING NO. YMP-025-2-7011-AR02

YMPO APPROVED | DATE

SI APERTURE CARD
Also Available On Aperture Card

Plotted: Wed Aug 21 19:57:34 1991, PDT Part name: D:\VBC2\YMP013J.DWG



HVAC PLAN

SCALE 1/8" = 1'-0"

GENERAL NOTES:

1. THIS DRAWING DEPICTS ONLY THE MAJOR DESIGN FEATURES OF THIS PROJECT. ALL DETAILS, EQUIPMENT DESCRIPTIONS AND SPECIAL INSTRUCTIONS SHALL BE DEVELOPED DURING THE TITLE II EFFORT.

SI APERTURE CARD

Also Available On Aperture Card

HVAC LEGEND

SYMBOL	DESCRIPTION
RL	REFRIGERANT LIQUID LINE
HG	REFRIGERANT HOT GAS LINE
RS	REFRIGERANT SUCTION LINE
D	DRAIN LINE
	FLEXIBLE CONNECTION TO EQUIPMENT
	DUCT TRANSITION
	ELBOW WITH TURNING VANES
	RECTANGULAR "T" WITH TURNING VANES
	BRANCH DUCT WITH TURNING VANES
SD	VOLUME DAMPER IN RIGID DUCT TAKEOFF
FD	FIRE DAMPER IN WALL PENETRATION
SD	VOLUME DAMPER IN FLEXIBLE DUCT TAKEOFF
	DUCT SECTION (SUPPLY)
	DUCT SECTION (RETURN)
	CEILING DIFFUSER (SUPPLY)

HVAC LEGEND CONTINUATION

SYMBOL	DESCRIPTION
	SIDEWALL REGISTER/LOUVER
	SIDEWALL SUPPLY REGISTER
	CEILING GRILLE (RETURN)
	CEILING GRILLE (EXHAUST)
	WALL / DOOR LOUVER
T	THERMOSTAT (COOLING AND HEATING)
T_C	THERMOSTAT (COOLING ONLY)
T_H	THERMOSTAT (HEATING ONLY)
	DIRECTION OF AIR FLOW

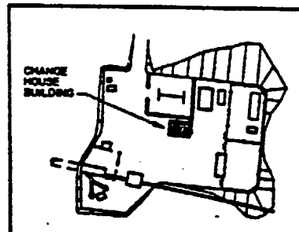
FOR REFERENCE DRAWINGS INDEX SEE DRAWING YMP-025-2-CIVL-GE02

9305250071 -100

GRAPHIC SCALE

0 4 8 16 24 FEET

1/8" = 1'-0"



TS SOUTH PORTAL KEY PLAN

NO.	DATE	REVISION	DES	DRN	CHK	DEC	DM	VRFY	ENV	SAF	QA	TPO	YMPO

U.S. DEPARTMENT OF ENERGY
YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT OFFICE
LAS VEGAS, NEVADA

APPROVALS	
DESIGN	SHA
DRAWN	RFC
CHECKED	
DEC	
DESIGN MANAGER	B.CH.
VERIFICATION	N/A
ENV / SAF	
QUALITY ASSURANCE	

Raytheon Services Nevada
LAS VEGAS, NEVADA

EXPLORATORY STUDIES FACILITY
TS SOUTH PORTAL GENERAL ARRANGEMENT
CHANGE HOUSE BUILDING
HVAC PLAN

SUBMITTED BY — DATE — DRAWING NO. YMP-025-2-7011-HV01 — REV. 0

YMPO APPROVED — DATE — SHT — OF

Plotted: Wed Aug 21 10:55:08 1991, PDT Part name: YMP012B.DWG