



NORTHEAST CHURCH ROCK PROJECT

30% Design Submittal - July 2016

Volume 2 - Design Drawings

Prepared For

UNITED NUCLEAR CORPORATION AND GENERAL ELECTRIC COMPANY



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REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

DESIGNED J. COLEMAN
 CHECKED J. CUMBERS
 APPROVED C. STRACHAN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 COVER SHEET

SHEET
 1-01
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NORTHEAST CHURCH ROCK PROJECT 30% DESIGN SUBMITTAL		
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DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
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NORTHEAST CHURCH ROCK PROJECT 30% DESIGN

NOT FOR CONSTRUCTION

This document is an interim document and not suitable for construction. As an interim document, it may contain data that is potentially inaccurate or incomplete and is not to be relied upon without the express written consent of the preparer.



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO

NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 SHEET INDEX

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GENERAL NOTES - CIVIL:

GENERAL:

1. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE FROM DAMAGE. ALL IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
2. ALL BUILDING COORDINATES ARE TO OUTSIDE CORNER OF COLUMN OR BUILDING.
3. CONTRACTOR SHALL RESTORE ALL SURVEY MONUMENTS THAT ARE DAMAGED OR DESTROYED DURING CONSTRUCTION.

UTILITIES:

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN AND AROUND THE AREAS OF NEW CONSTRUCTION.
2. THE CONTRACTOR SHALL PROTECT ALL REMAINING EXISTING UTILITIES.
3. LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND ELEVATIONS AND SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT UTILITY LINES WHETHER SHOWN OR NOT SHOWN.
4. PRIOR TO ANY CONNECTION TO AN EXISTING UTILITY, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER.
5. PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY EXISTING UNDERGROUND FACILITIES, INCLUDING ALL WATER, SEWER, STORM DRAIN, GAS, PETROLEUM PRODUCTS, OR OTHER PIPELINES; ALL BURIED ELECTRIC POWER, COMMUNICATIONS, OR TELEVISION CABLES; ALL TRAFFIC SIGNAL AND STREET LIGHTING FACILITIES; AND ALL ROADWAY, STATE HIGHWAY, AND RAILROAD RIGHTS-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE RESPECTIVE AUTHORITIES REPRESENTING THE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITIES NOT LESS THAN 3 DAYS NOR MORE THAN 7 DAYS PRIOR TO EXCAVATION SO THAT A REPRESENTATIVE OF SAID OWNERS OR AGENCIES CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE. IN THE CASE OF THE UNDERGROUND UTILITY SERVICE ALERT CENTER, THIS NOTICE WILL GIVE THEM TIME TO MARK THE LOCATION OF THE UTILITIES. THE CONTRACTOR SHALL ALSO NOTIFY THE REGIONAL OR LOCAL UNDERGROUND SERVICE ALERT COMPANY AT LEAST 3 DAYS, BUT NO MORE THAN 7 DAYS, PRIOR TO SUCH EXCAVATION.

EROSION CONTROL:

1. THE CONTRACTOR SHALL SUBMIT A SWPPP FOR WORK PRIOR TO THE START OF CONSTRUCTION.

LEGEND:

	EXISTING GROUND SURFACE CONTOURS & ELEVATION, FEET
	PROPOSED SURFACE CONTOURS & ELEVATION, FEET
	NECR MINE PERMIT BOUNDARY
	UNC PROPERTY BOUNDARY
	MINE FACILITY OR AREA BOUNDARY
	APPROXIMATE NAVAJO NATION BOUNDARY
	ROADS
	NATURAL DRAINAGE
	EXISTING FENCE
	RAL SURFACE SOIL BOUNDARY
	RAL SUBSURFACE SOIL BOUNDARY
	SECTION LINE
	POWER LINES
	PIPELINE
	STRUCTURE
	MATCHLINE
	CULVERT
	GATE

SYMBOL:

36	SECTION NUMBER
	SURVEY CONTROL POINTS
	MONITORING WELL
	BOREHOLE
	TEST PIT
	STORMWATER POND
	PROFILE OR CROSS SECTION IDENTIFICATION
	DRAWING NO. WHERE PROFILE/SECTION IS SHOWN
	DETAIL IDENTIFICATION
	DETAIL DESCRIPTION
	DRAWING NO. WHERE DETAIL IS SHOWN
	FILL SLOPE, H:V (HORIZONTAL TO VERTICAL)
	CUT SLOPE, H:V (HORIZONTAL TO VERTICAL)
	SLOPE RATIO

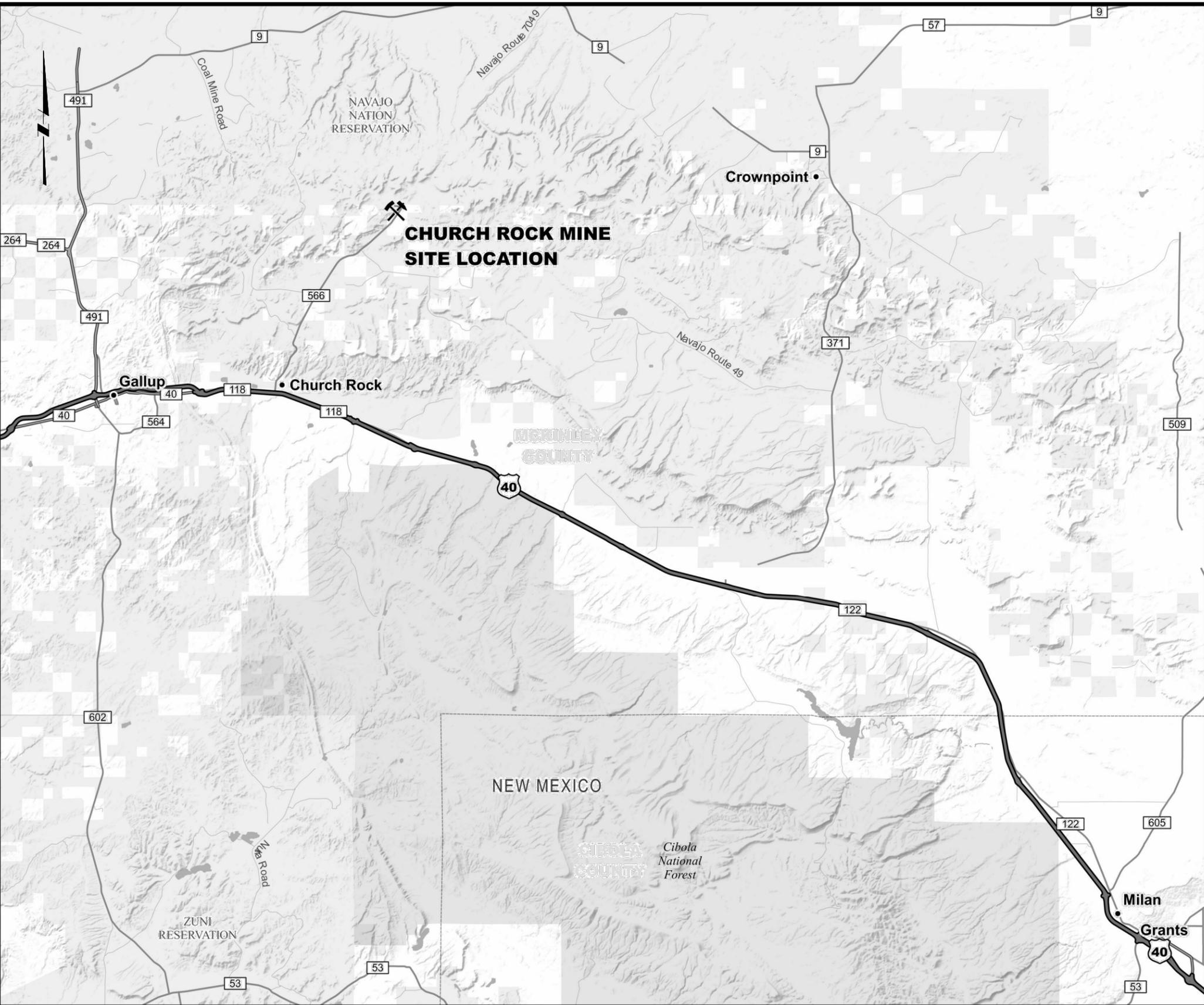
ACRONYMS:

B	BORING
BMP	BEST MANAGEMENT PRACTICE
CF	CUBIC FEET
CSF	CONSTRUCTION SUPPORT FACILITIES
CTR	CONTROL
CY	CUBIC YARDS
D ₉₀	MEDIAN DIAMETER
EB	EAST BORROW
EL	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FT OR '	FEET
GE	GENERAL ELECTRIC COMPANY
GW	GROUNDWATER
HWY	HIGHWAY
MIN	MINIMUM
NB	NORTH BORROW
NECR	NORTHEAST CHURCH ROCK
NM	NEW MEXICO
NN	NAVAJO NATION
NOM.	NOMINAL
PTW	PRINCIPAL THREAT WASTE
PW	POWER
R	RANGE
RAL	REMOVAL ACTION LIMITS
S	STORMWATER
SB	SOUTH BORROW
SQFT	SQUARE FEET
STA	STATION
STP , NTP	TEST PIT
T	TOWN
TBD	TO BE DETERMINED
TDA	TAILINGS DISPOSAL AREA
TPH	TOTAL PETROLEUM HYDROCARBONS
TYP	TYPICAL
UNC	UNITED NUCLEAR CORPORATION
WB	WEST BORROW

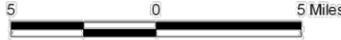
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CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
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		UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE MCKINLEY COUNTY, NEW MEXICO NORTHEAST CHURCH ROCK PROJECT 30% DESIGN GENERAL NOTES AND ACRONYMS	SHEET 1-03 10508639
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SITE VICINITY MAP



SITE LOCATION MAP



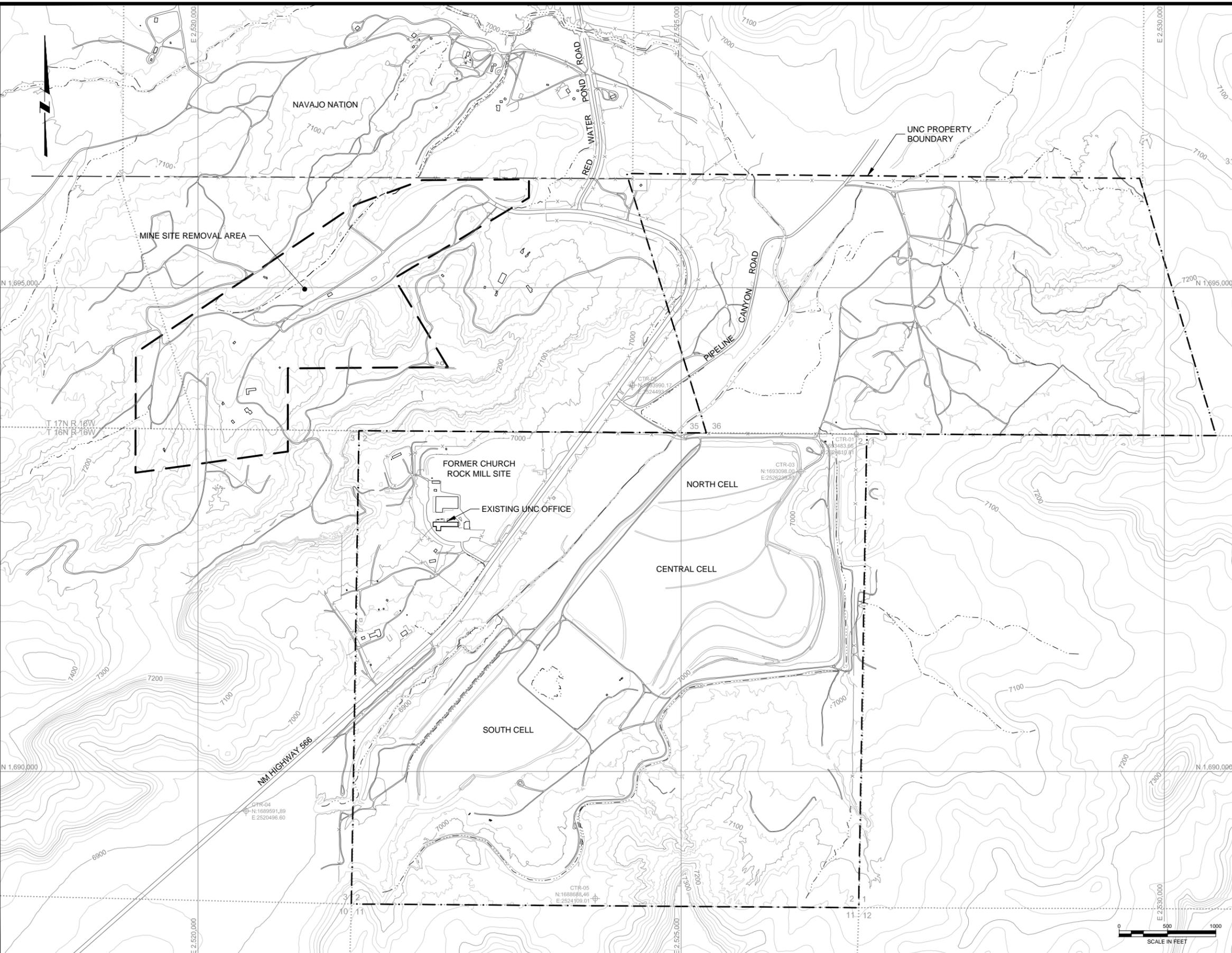
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UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 SITE LOCATION MAP

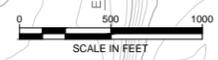
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LEGEND:

	EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
	NECR MINE PERMIT BOUNDARY
	UNC PROPERTY BOUNDARY
	APPROXIMATE NAVAJO NATION BOUNDARY
	ROADS
	NATURAL DRAINAGE
	EXISTING FENCE
	SECTION LINE
36	SECTION NUMBER
	SURVEY CONTROL POINTS



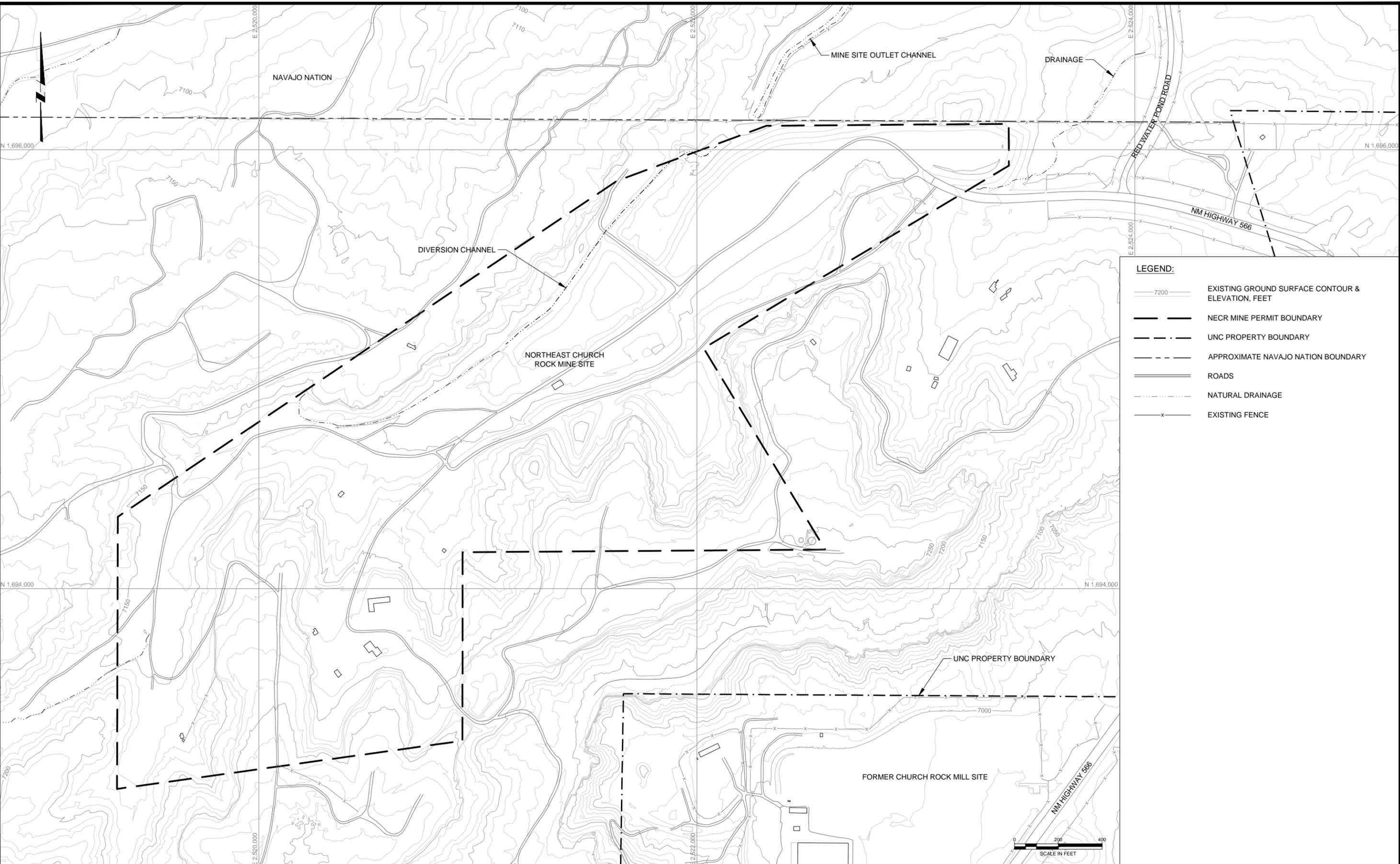
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UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 PRINCIPAL EXISTING CONDITION, SITE FEATURES, AND SURVEY CONTROL

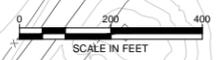
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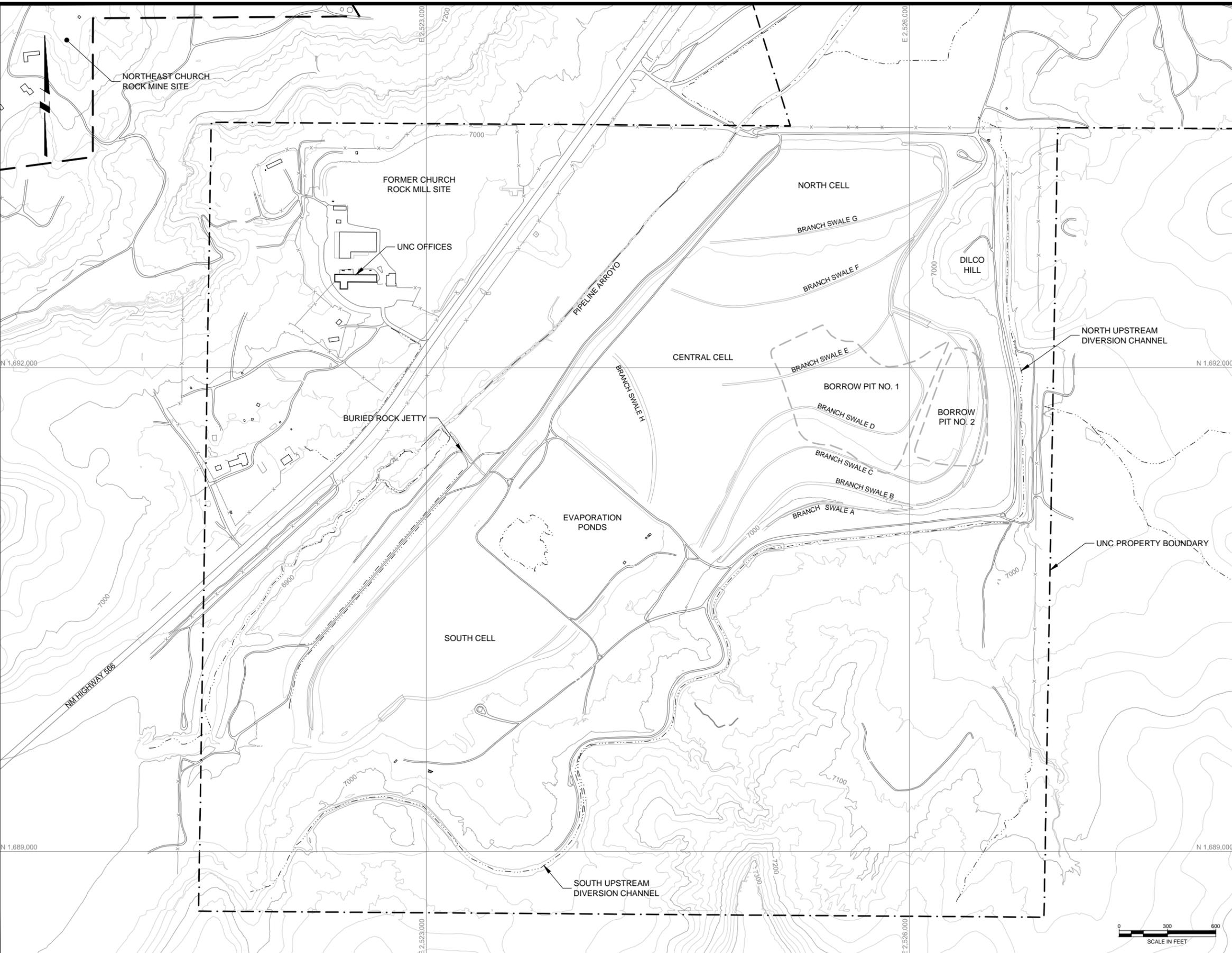
LEGEND:

	EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
	NECR MINE PERMIT BOUNDARY
	UNC PROPERTY BOUNDARY
	APPROXIMATE NAVAJO NATION BOUNDARY
	ROADS
	NATURAL DRAINAGE
	EXISTING FENCE



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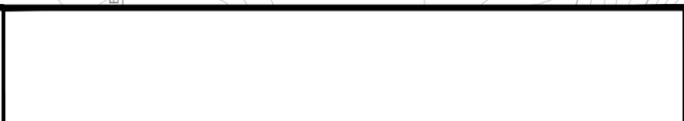


- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - NECR MINE PERMIT BOUNDARY
 - UNC PROPERTY BOUNDARY
 - APPROXIMATE NAVAJO NATION BOUNDARY
 - ROADS
 - NATURAL DRAINAGE
 - EXISTING FENCE
 - FORMER BORROW PIT BOUNDARY



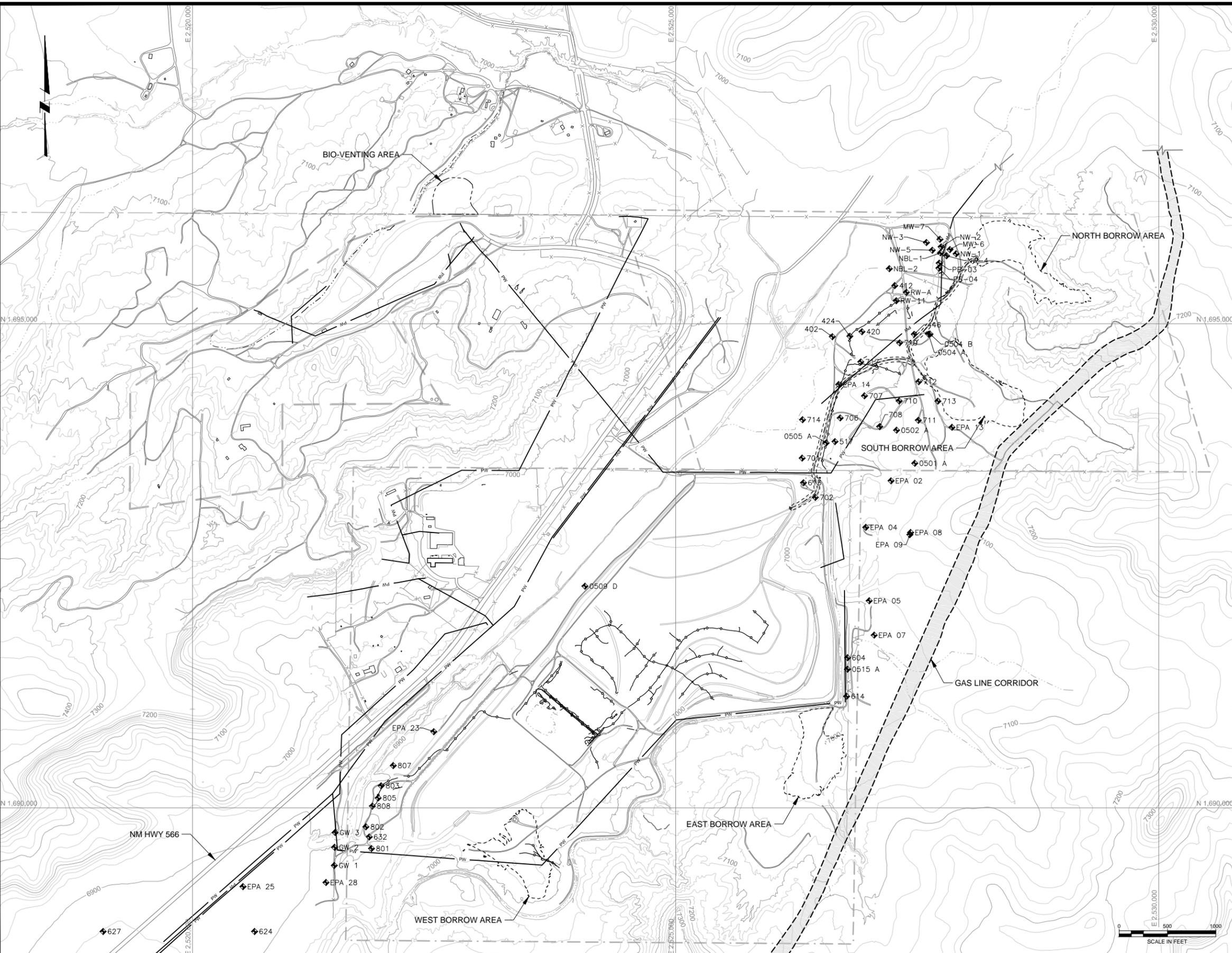
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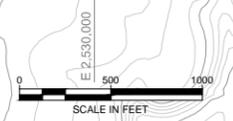


UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 EXISTING CONDITION UNC SITE

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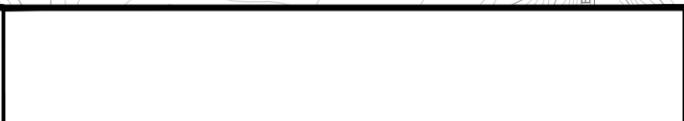


- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - NECR MINE PERMIT BOUNDARY
 - UNC PROPERTY BOUNDARY
 - APPROXIMATE NAVAJO NATION BOUNDARY
 - ROADS
 - NATURAL DRAINAGE
 - EXISTING FENCE
 - GAS LINE CORRIDOR
 - POWER LINES
 - PIPELINE
 - MONITORING WELL



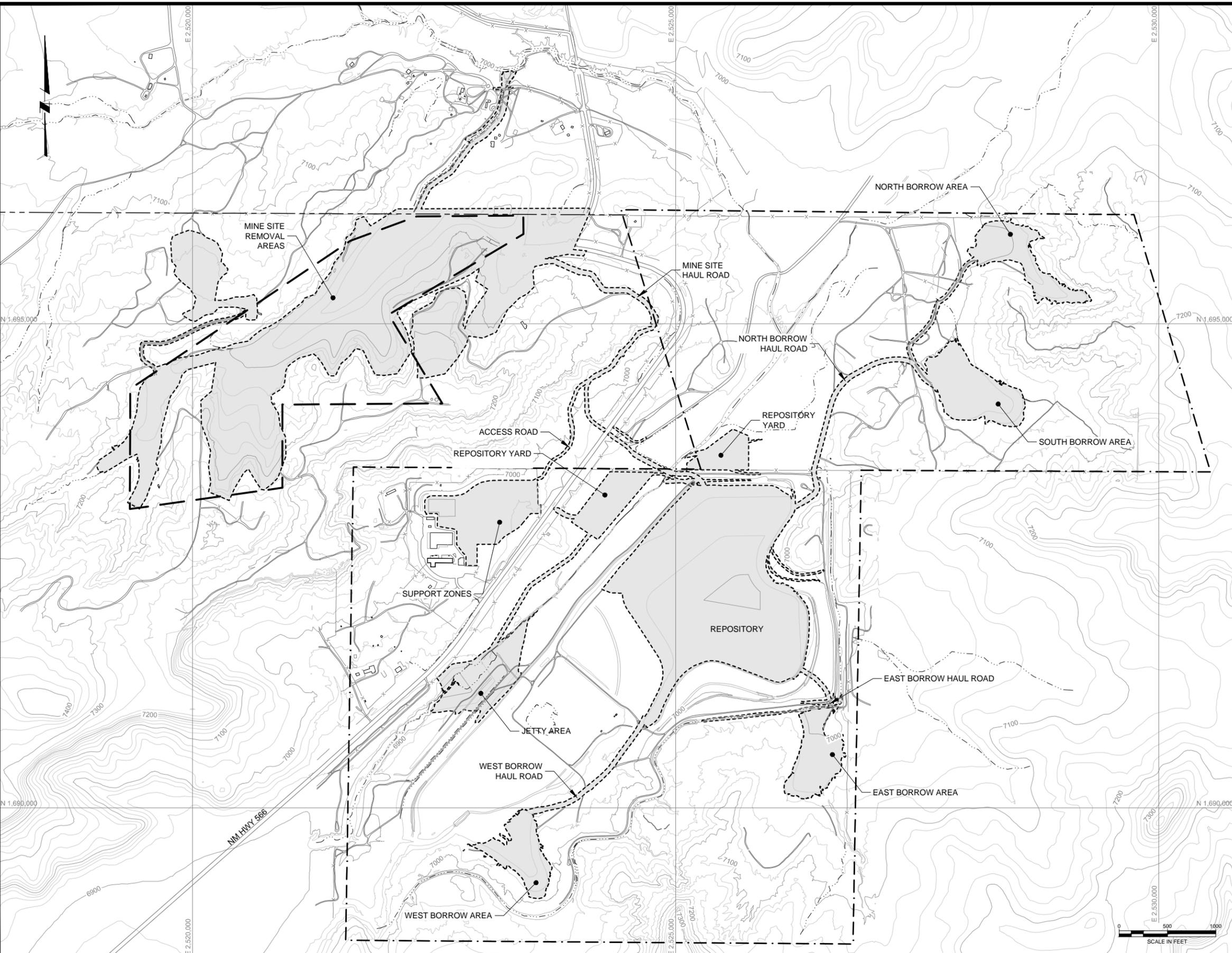
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 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 SITE UTILITIES

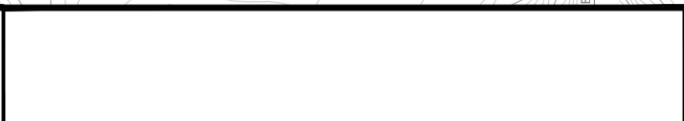
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 - ROADS
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 - EXISTING FENCE
 - MINE SITE REMOVAL AREAS
 - PRINCIPAL COMPONENTS

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NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 PRINCIPAL COMPONENTS AND LIMITS OF DISTURBANCE

SHEET
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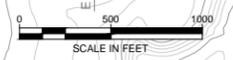
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- LEGEND:**
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 - 7200 PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - NECR MINE PERMIT BOUNDARY
 - UNC PROPERTY BOUNDARY
 - APPROXIMATE NAVAJO NATION BOUNDARY
 - ROADS
 - NATURAL DRAINAGE
 - EXISTING FENCE

NOTE(S):

1. HAUL ROADS TO BE RECLAIMED FOLLOWING CONSTRUCTION.



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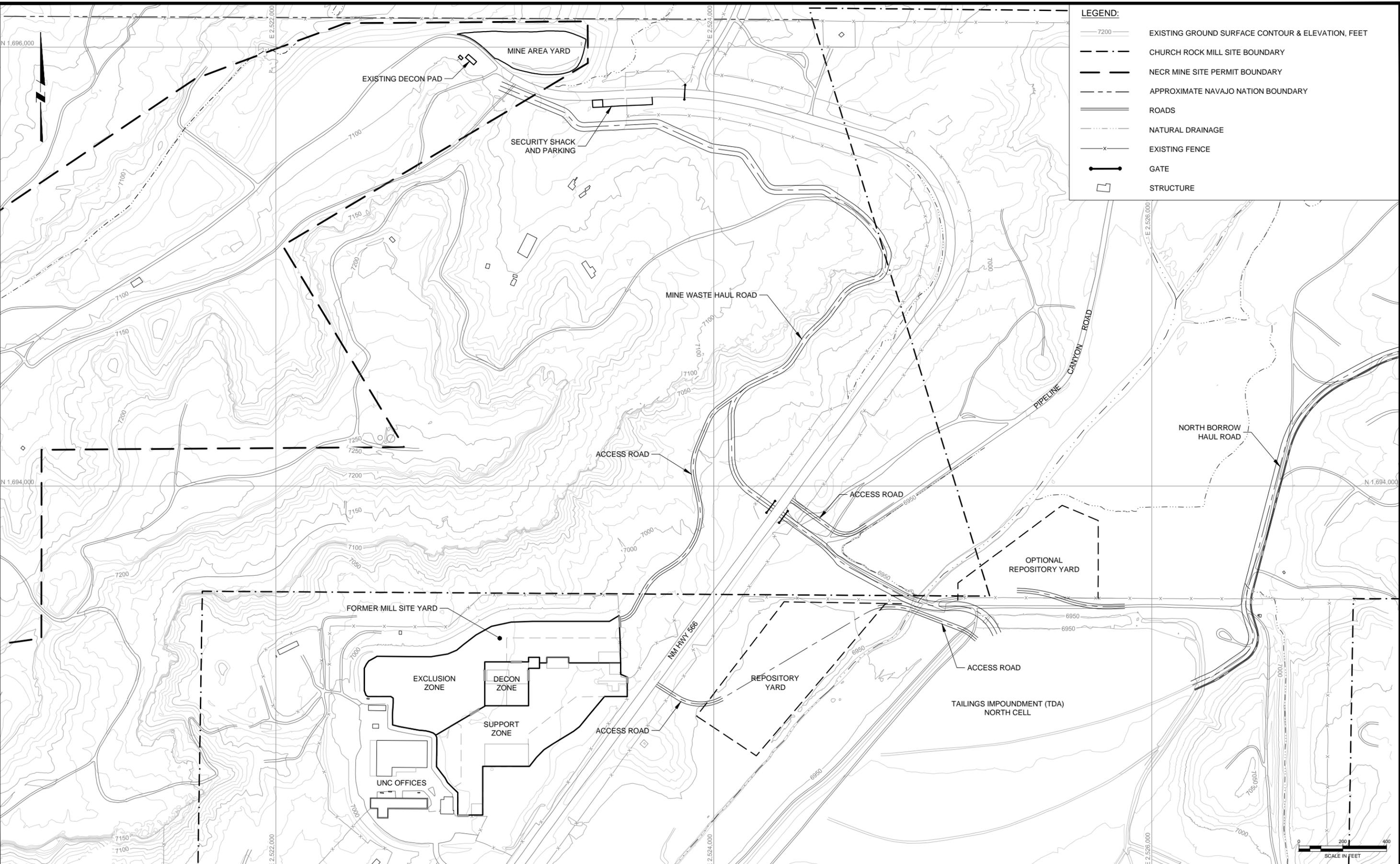
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 BY: FOWLERPH



LEGEND:	
	EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
	CHURCH ROCK MILL SITE BOUNDARY
	NECR MINE SITE PERMIT BOUNDARY
	APPROXIMATE NAVAJO NATION BOUNDARY
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	EXISTING FENCE
	GATE
	STRUCTURE

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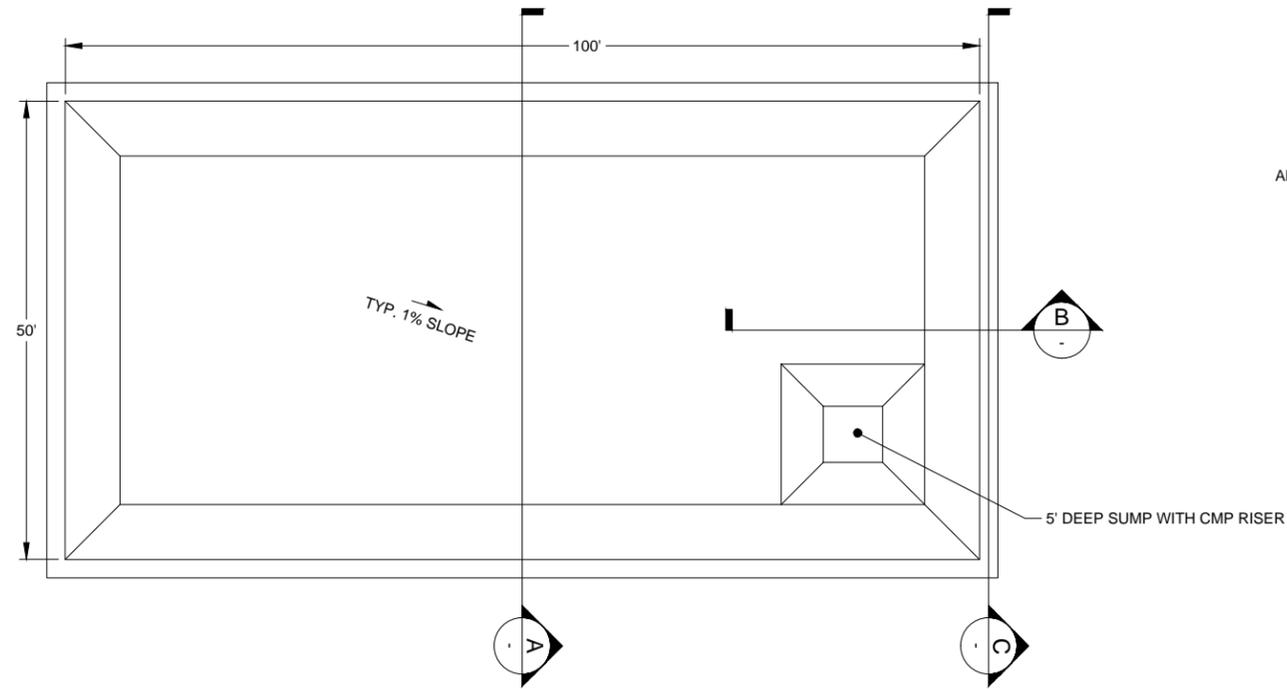
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CHECKED	J. CUMBERS
APPROVED	C. STRACHAN



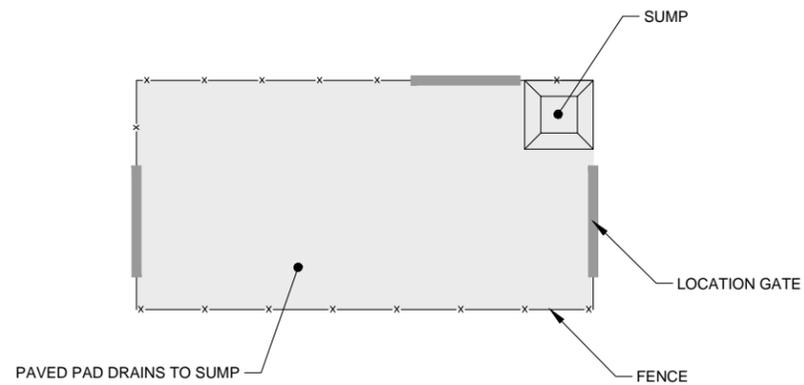
UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 EARLY WORKS AND CONSTRUCTION SUPPORT FACILITIES

SHEET	2-01
10508639	

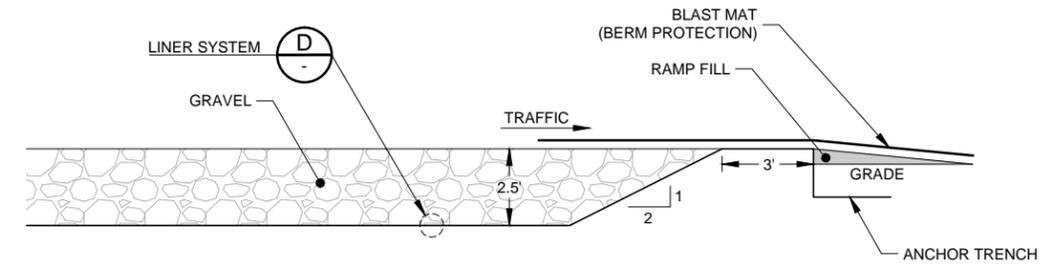
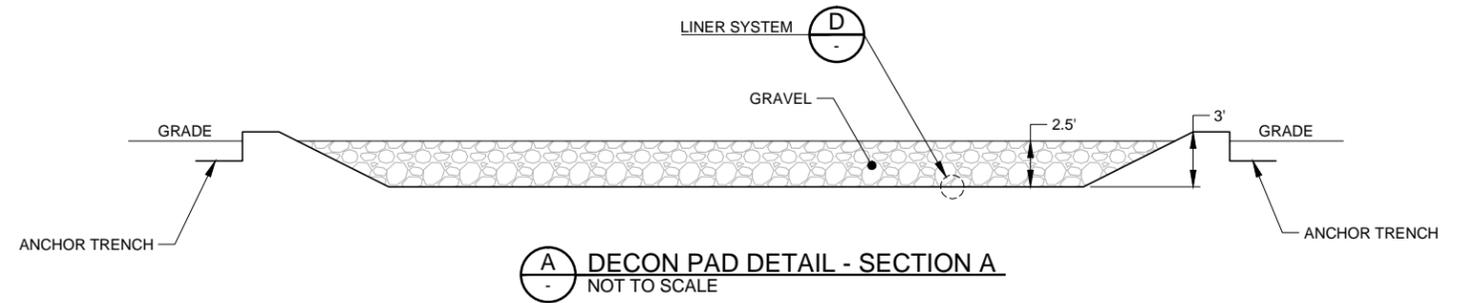
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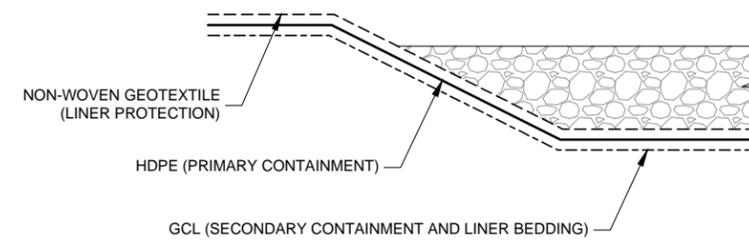
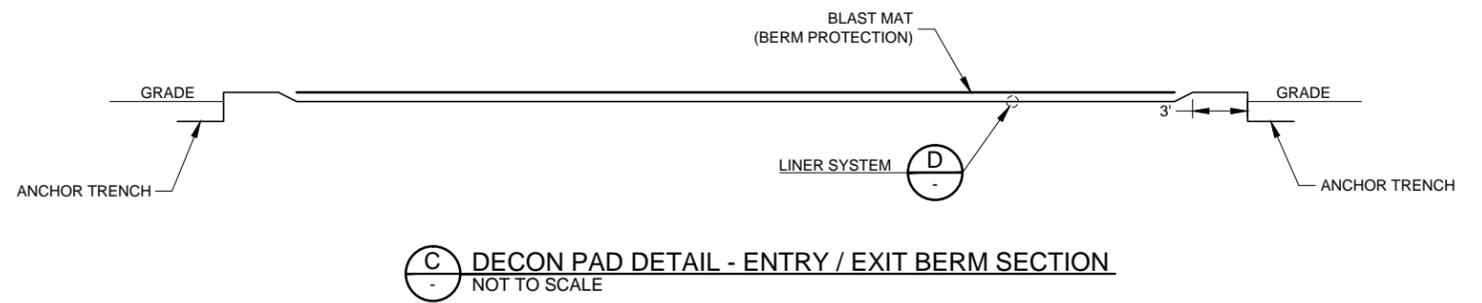
1 DECON PAD DETAIL - PLAN VIEW
2-05 NOT TO SCALE



2 DECON PAD DETAIL - PLAN VIEW
(ASPHALT OPTION) NOT TO SCALE



B DECON PAD DETAIL - ENTRY / EXIT PROFILE
NOT TO SCALE



D LINER SYSTEM DETAIL
NOT TO SCALE

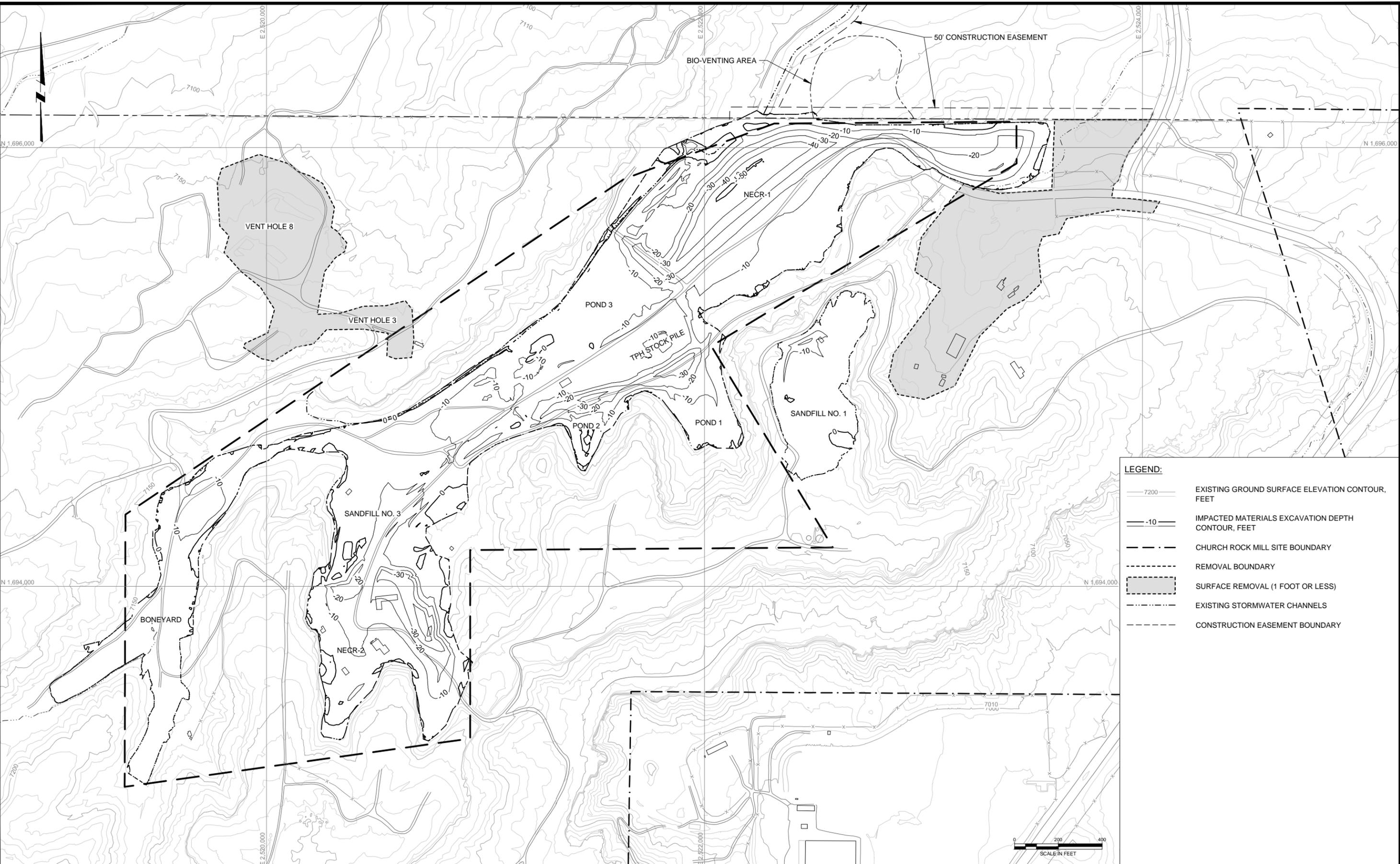
DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 DETAILS

SHEET
 2-05
 10508639

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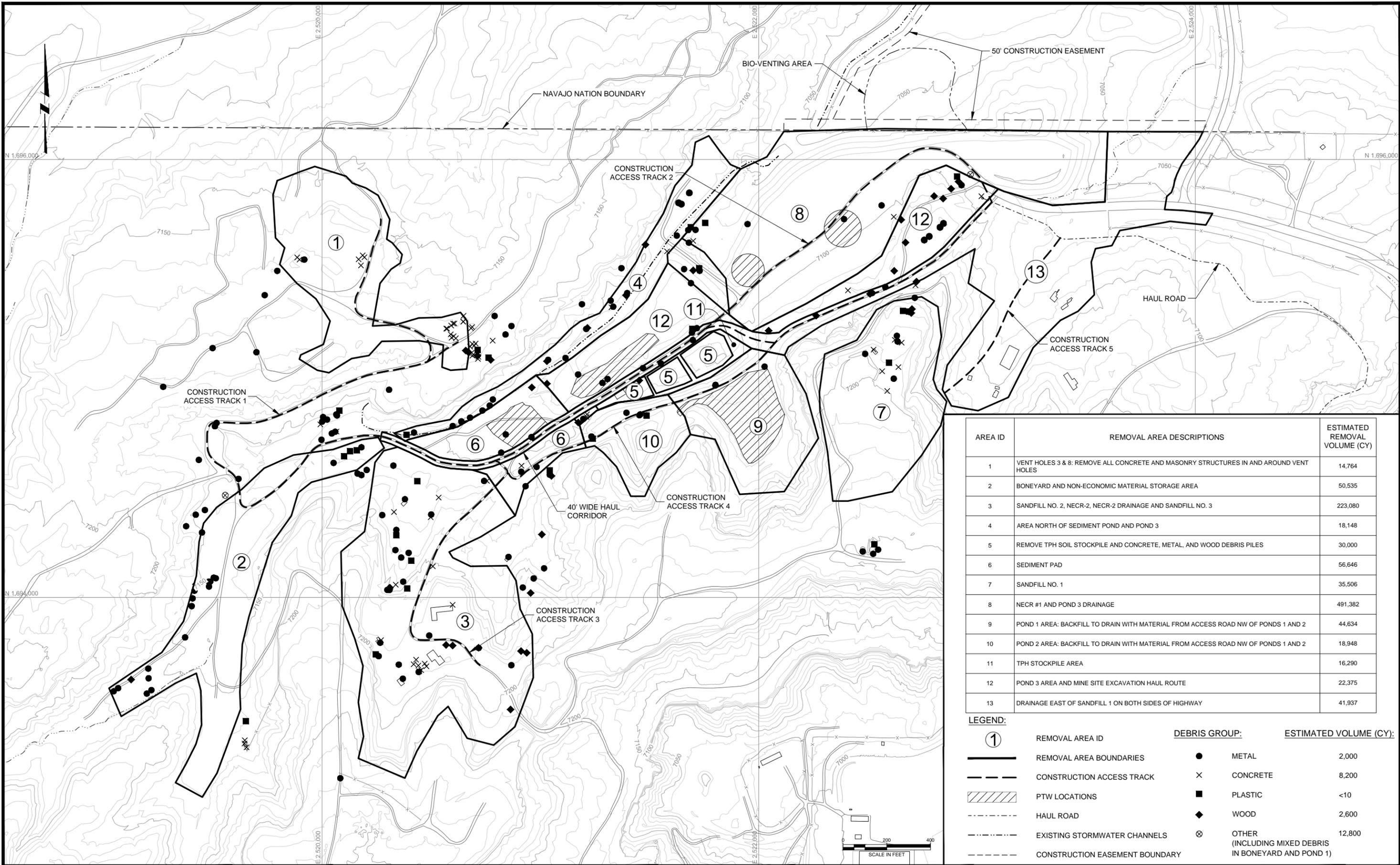
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	IMPACTED MATERIALS EXCAVATION DEPTH CONTOUR, FEET
	CHURCH ROCK MILL SITE BOUNDARY
	REMOVAL BOUNDARY
	SURFACE REMOVAL (1 FOOT OR LESS)
	EXISTING STORMWATER CHANNELS
	CONSTRUCTION EASEMENT BOUNDARY

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



P:\AMER\PROJECTS\2016-2017\30% DESIGN REPORT\NECR_3-03 PHASE RMOA AREAS.dwg
 BY: CAMILLE FOWLER
 PLOT DATE: 7/9/2016 2:41 PM



AREA ID	REMOVAL AREA DESCRIPTIONS	ESTIMATED REMOVAL VOLUME (CY)
1	VENT HOLES 3 & 8: REMOVE ALL CONCRETE AND MASONRY STRUCTURES IN AND AROUND VENT HOLES	14,764
2	BONEYARD AND NON-ECONOMIC MATERIAL STORAGE AREA	50,535
3	SANDFILL NO. 2, NECR-2, NECR-2 DRAINAGE AND SANDFILL NO. 3	223,080
4	AREA NORTH OF SEDIMENT POND AND POND 3	18,148
5	REMOVE TPH SOIL STOCKPILE AND CONCRETE, METAL, AND WOOD DEBRIS PILES	30,000
6	SEDIMENT PAD	56,646
7	SANDFILL NO. 1	35,506
8	NECR #1 AND POND 3 DRAINAGE	491,382
9	POND 1 AREA: BACKFILL TO DRAIN WITH MATERIAL FROM ACCESS ROAD NW OF PONDS 1 AND 2	44,634
10	POND 2 AREA: BACKFILL TO DRAIN WITH MATERIAL FROM ACCESS ROAD NW OF PONDS 1 AND 2	18,948
11	TPH STOCKPILE AREA	16,290
12	POND 3 AREA AND MINE SITE EXCAVATION HAUL ROUTE	22,375
13	DRAINAGE EAST OF SANDFILL 1 ON BOTH SIDES OF HIGHWAY	41,937

LEGEND:

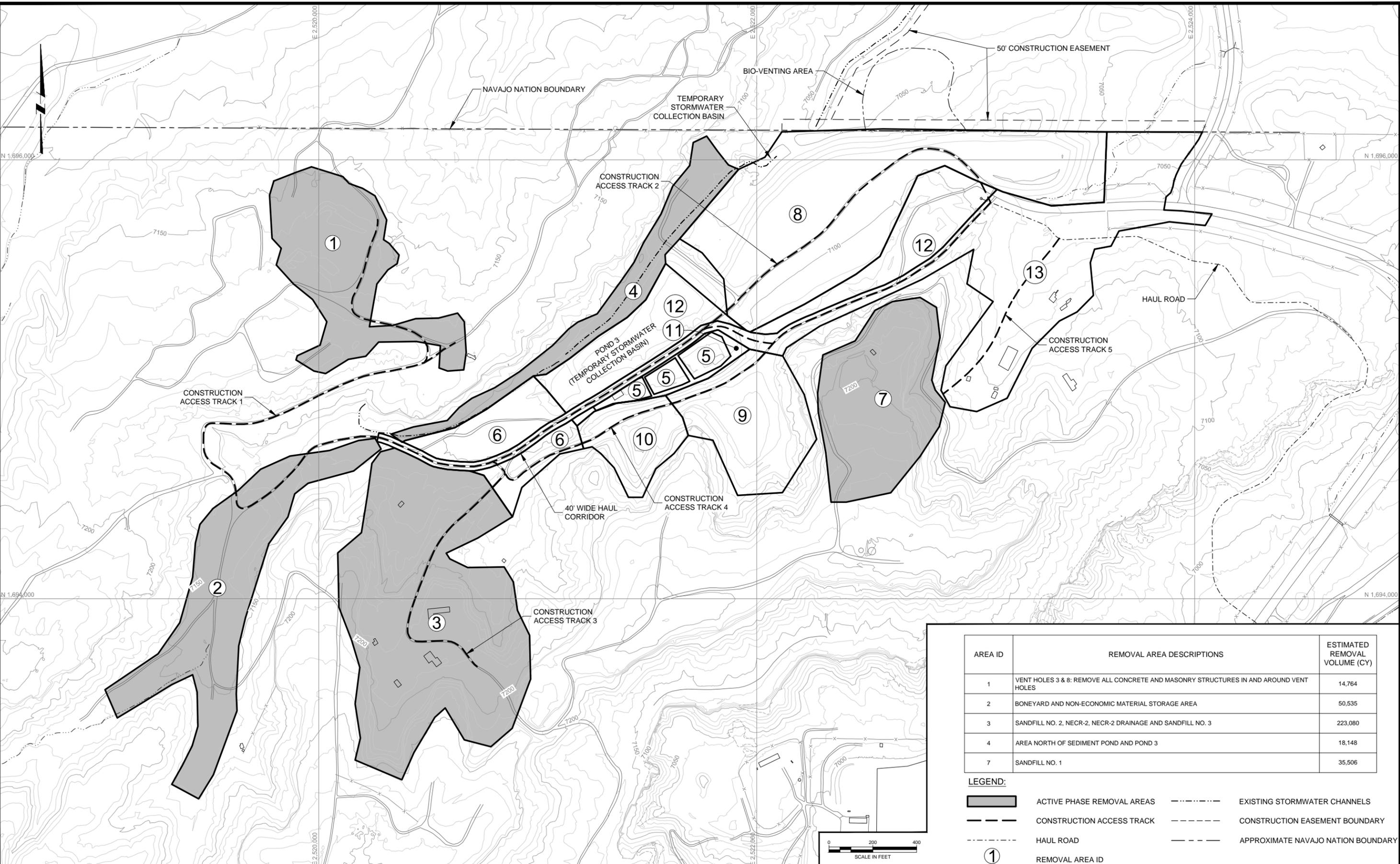
①	REMOVAL AREA ID	DEBRIS GROUP:	ESTIMATED VOLUME (CY):
—	REMOVAL AREA BOUNDARIES	●	METAL 2,000
- - -	CONSTRUCTION ACCESS TRACK	×	CONCRETE 8,200
▨	PTW LOCATIONS	■	PLASTIC <10
- - - -	HAUL ROAD	◆	WOOD 2,600
- · - · -	EXISTING STORMWATER CHANNELS	⊗	OTHER (INCLUDING MIXED DEBRIS IN BONEYARD AND POND 1) 12,800
- - - - -	CONSTRUCTION EASEMENT BOUNDARY		

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE SITE REMOVAL EXCAVATIONS AND DEMOLITION
 REMOVAL AREAS AND DEBRIS MAP

SHEET
3-03
 10508639

P:\AMER\PROJECTS\2016-2017\30% DESIGN\REPORTS\3-04 PH1 RMOA AREAS.dwg
 PLOT DATE: 7/12/2016 1:16 PM
 BY: KEVIN REED II



AREA ID	REMOVAL AREA DESCRIPTIONS	ESTIMATED REMOVAL VOLUME (CY)
1	VENT HOLES 3 & 8: REMOVE ALL CONCRETE AND MASONRY STRUCTURES IN AND AROUND VENT HOLES	14,764
2	BONEYARD AND NON-ECONOMIC MATERIAL STORAGE AREA	50,535
3	SANDFILL NO. 2, NECR-2, NECR-2 DRAINAGE AND SANDFILL NO. 3	223,080
4	AREA NORTH OF SEDIMENT POND AND POND 3	18,148
7	SANDFILL NO. 1	35,506

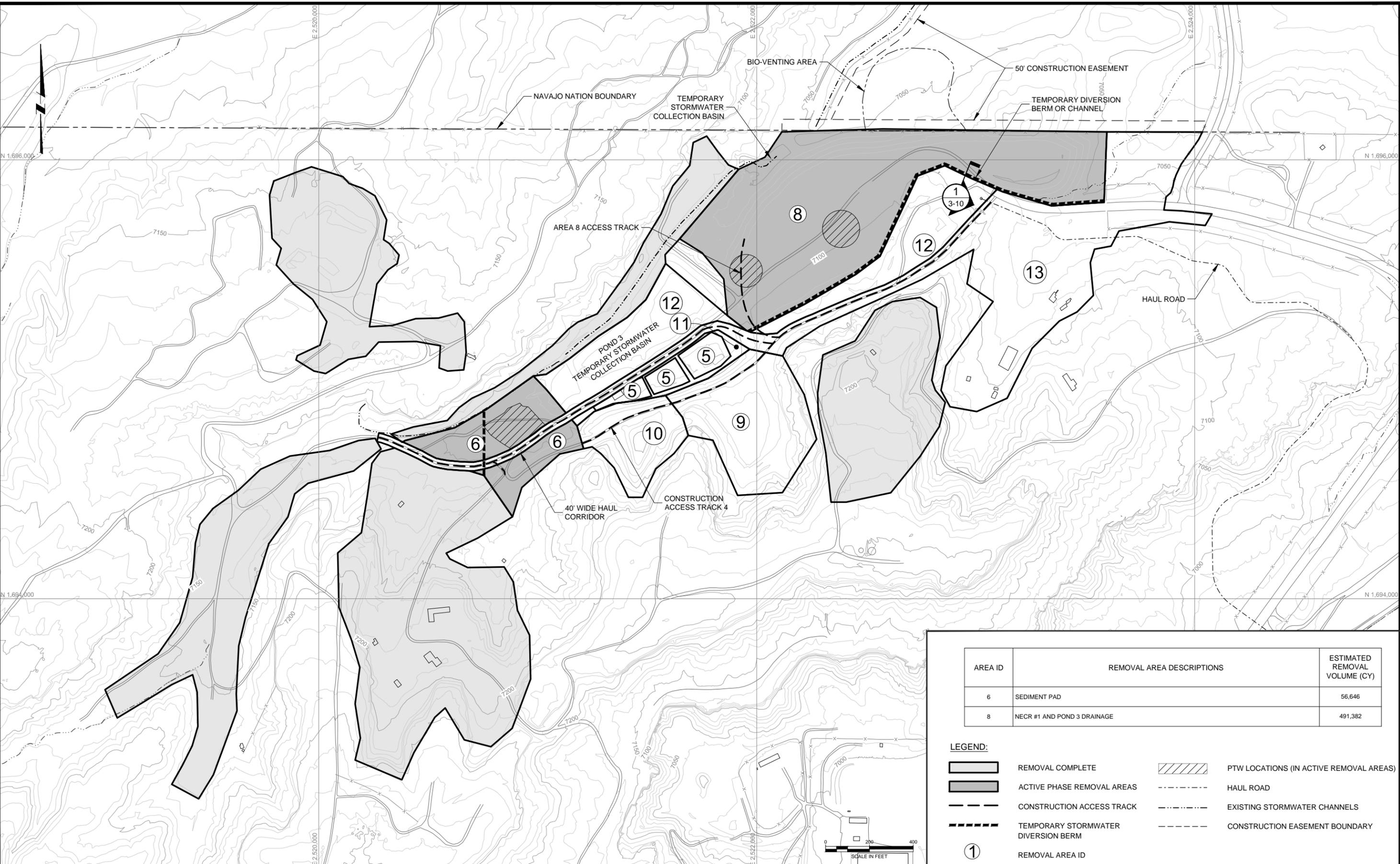
LEGEND:

- ACTIVE PHASE REMOVAL AREAS
- CONSTRUCTION ACCESS TRACK
- HAUL ROAD
- EXISTING STORMWATER CHANNELS
- CONSTRUCTION EASEMENT BOUNDARY
- APPROXIMATE NAVAJO NATION BOUNDARY
- 1 REMOVAL AREA ID

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



P:\AMER\PROJECTS\2016\30% DESIGN\REPORT\NECR_3-05_PH2_REMOVEAS.dwg BY: CAMILLE FOWLER PLOT DATE: 7/9/2016 2:53 PM
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AREA ID	REMOVAL AREA DESCRIPTIONS	ESTIMATED REMOVAL VOLUME (CY)
6	SEDIMENT PAD	56,646
8	NECR #1 AND POND 3 DRAINAGE	491,382

LEGEND:

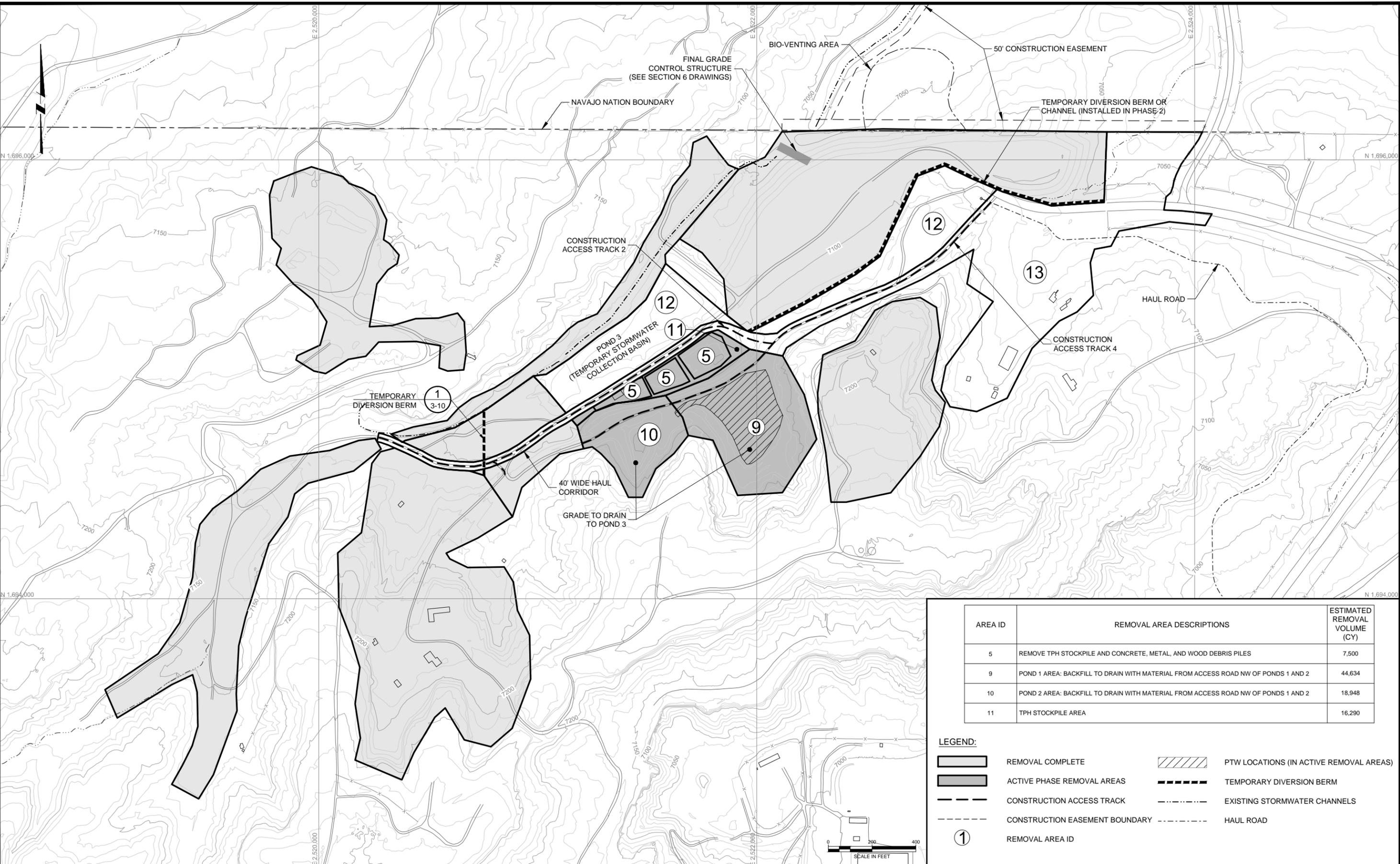
	REMOVAL COMPLETE		PTW LOCATIONS (IN ACTIVE REMOVAL AREAS)
	ACTIVE PHASE REMOVAL AREAS		HAUL ROAD
	CONSTRUCTION ACCESS TRACK		EXISTING STORMWATER CHANNELS
	TEMPORARY STORMWATER DIVERSION BERM		CONSTRUCTION EASEMENT BOUNDARY
	REMOVAL AREA ID		

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE SITE REMOVAL EXCAVATIONS AND DEMOLITION
 PHASE 2 REMOVAL AREAS

SHEET
3-05
 10508639

P:\AMER\PROJECTS\2016\30% DESIGN\REPORT\NECR_3-06 PH3 RMDA AREAS.dwg
 BY: CAMILLE FOWLER
 PLOT DATE: 7/9/2016 3:01 PM
 P:\AMER\PROJECTS\2016\30% DESIGN\REPORT\NECR_3-06 PH3 RMDA AREAS.dwg
 DESIGN: CAMILLE FOWLER
 CHECKED: J. CUMBERS
 APPROVED: C. STRACHAN



AREA ID	REMOVAL AREA DESCRIPTIONS	ESTIMATED REMOVAL VOLUME (CY)
5	REMOVE TPH STOCKPILE AND CONCRETE, METAL, AND WOOD DEBRIS PILES	7,500
9	POND 1 AREA: BACKFILL TO DRAIN WITH MATERIAL FROM ACCESS ROAD NW OF PONDS 1 AND 2	44,634
10	POND 2 AREA: BACKFILL TO DRAIN WITH MATERIAL FROM ACCESS ROAD NW OF PONDS 1 AND 2	18,948
11	TPH STOCKPILE AREA	16,290

LEGEND:

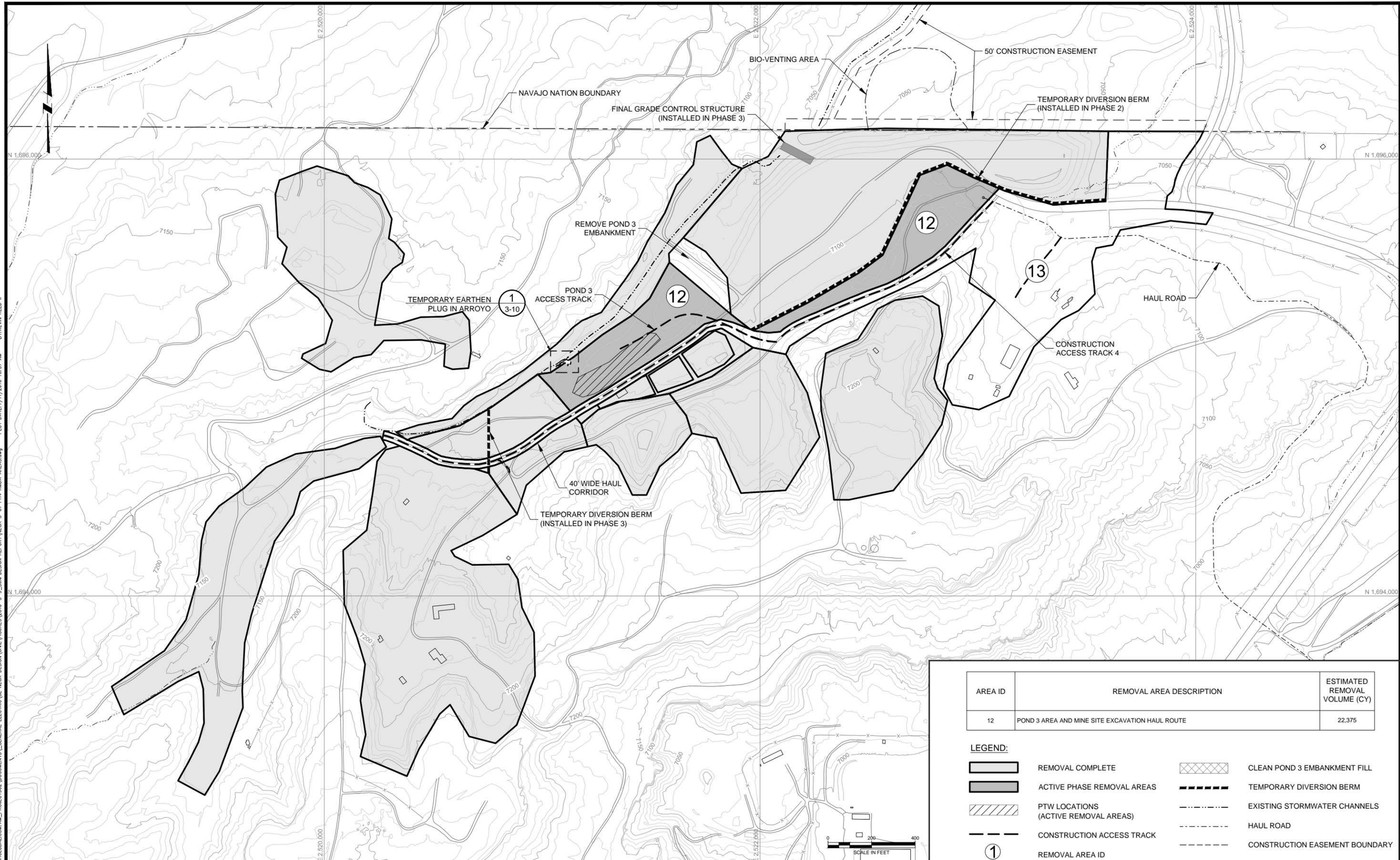
	REMOVAL COMPLETE		PTW LOCATIONS (IN ACTIVE REMOVAL AREAS)
	ACTIVE PHASE REMOVAL AREAS		TEMPORARY DIVERSION BERM
	CONSTRUCTION ACCESS TRACK		EXISTING STORMWATER CHANNELS
	CONSTRUCTION EASEMENT BOUNDARY		HAUL ROAD
	REMOVAL AREA ID		

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE SITE REMOVAL EXCAVATIONS AND DEMOLITION
 PHASE 3 REMOVAL AREAS



P:\AMER\PROJECTS\2016\30% DESIGN\REPORT\NECR_3-07 PH4 REMOVAL AREAS.dwg
 PLOT DATE: 7/11/2016 10:57 AM
 BY: KEVIN REED II



AREA ID	REMOVAL AREA DESCRIPTION	ESTIMATED REMOVAL VOLUME (CY)
12	POND 3 AREA AND MINE SITE EXCAVATION HAUL ROUTE	22,375

LEGEND:

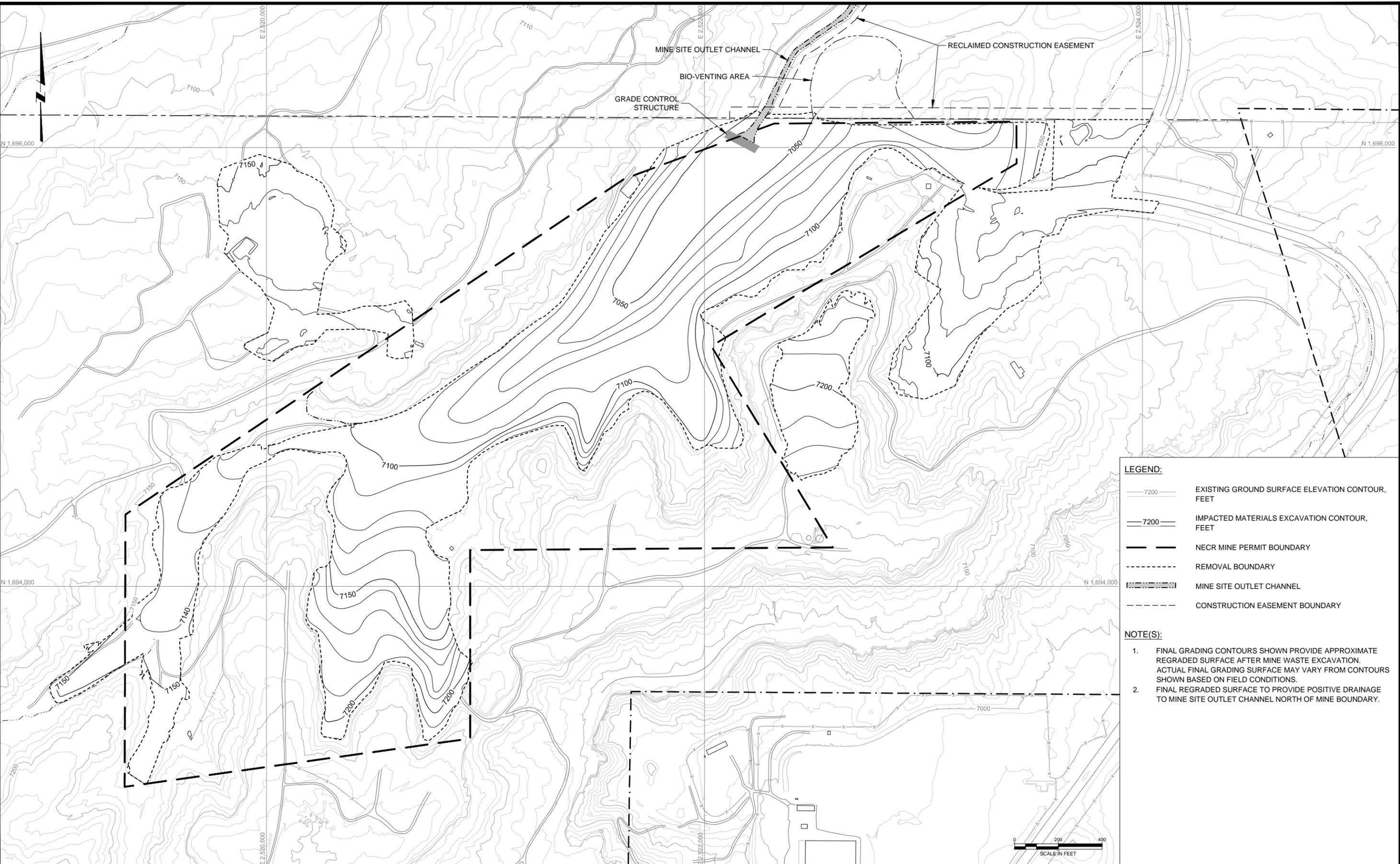
	REMOVAL COMPLETE		CLEAN POND 3 EMBANKMENT FILL
	ACTIVE PHASE REMOVAL AREAS		TEMPORARY DIVERSION BERM
	PTW LOCATIONS (ACTIVE REMOVAL AREAS)		EXISTING STORMWATER CHANNELS
	CONSTRUCTION ACCESS TRACK		HAUL ROAD
	REMOVAL AREA ID		CONSTRUCTION EASEMENT BOUNDARY

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE SITE REMOVAL EXCAVATIONS AND DEMOLITION
 PHASE 4 REMOVAL AREAS



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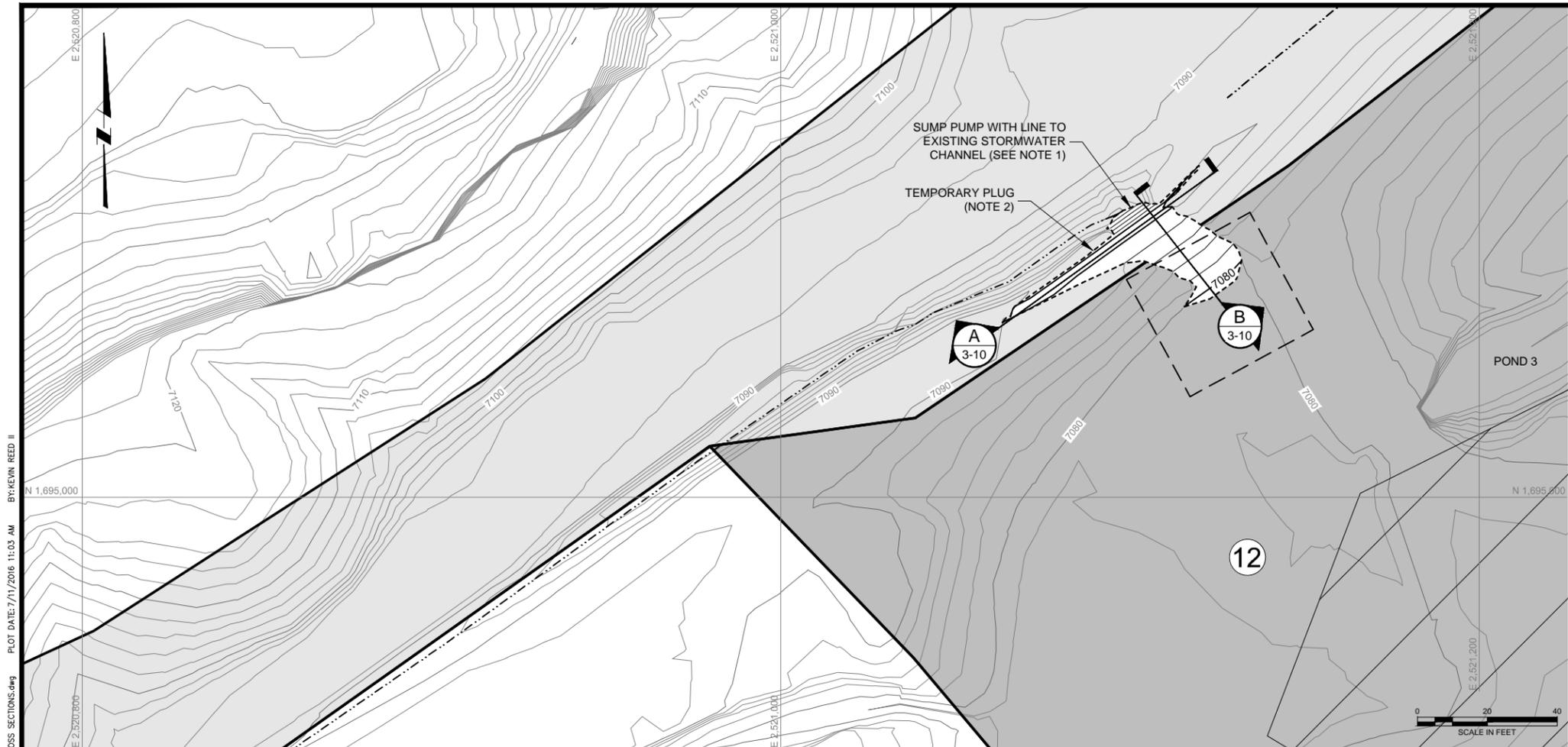
LEGEND:

	EXISTING GROUND SURFACE ELEVATION CONTOUR, FEET
	IMPACTED MATERIALS EXCAVATION CONTOUR, FEET
	NECR MINE PERMIT BOUNDARY
	REMOVAL BOUNDARY
	MINE SITE OUTLET CHANNEL
	CONSTRUCTION EASEMENT BOUNDARY

- NOTE(S):**
- FINAL GRADING CONTOURS SHOWN PROVIDE APPROXIMATE REGRADED SURFACE AFTER MINE WASTE EXCAVATION. ACTUAL FINAL GRADING SURFACE MAY VARY FROM CONTOURS SHOWN BASED ON FIELD CONDITIONS.
 - FINAL REGRADED SURFACE TO PROVIDE POSITIVE DRAINAGE TO MINE SITE OUTLET CHANNEL NORTH OF MINE BOUNDARY.

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

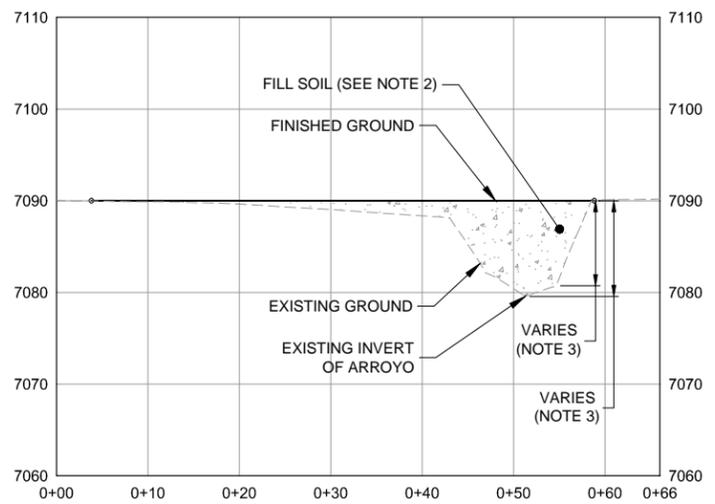




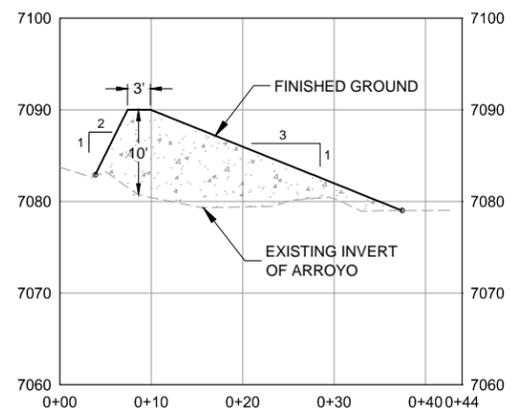
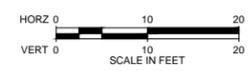
- LEGEND:**
- 7200 EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - 7200 PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - IMPACTED AREAS
 - REMOVAL COMPLETE
 - EXISTING STORMWATER CHANNEL
 - PONDING EXTENT BOUNDARY

- NOTE(S):**
1. 50 GALLON PER MINUTE SUMP PUMP IS REQUIRED TO REMOVE STORMWATER THAT COLLECTS IN EXISTING ARROYO BEHIND EARTHEN PLUG. TO BE PROVIDED BY CONTRACTOR. REMOVED STORMWATER CAN BE RELEASED TO THE EXISTING STORMWATER CHANNEL THAT BYPASSES POND 3 TO THE NORTHEAST.
 2. PLUG AND TYPICAL BERM CONSTRUCTED WITH AVAILABLE ONSITE, CLEAN SOIL COMPACTED IN 2-FT LIFTS TO 95% OF STANDARD PROCTOR DENSITY.
 3. CONSTRUCT PLUG HEIGHT TO BE LEVEL WITH GROUND SURFACE.

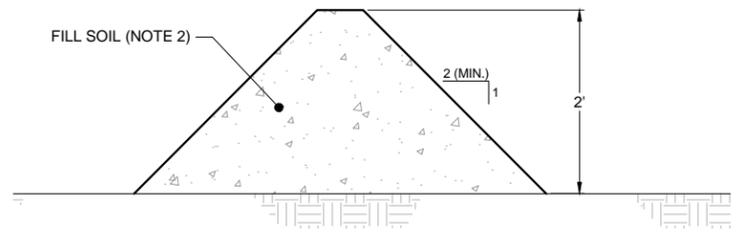
TEMPORARY PLUG
(SEE SHEET 3-07 FOR LOCATION)



A
3-10 **TEMPORARY PLUG SECTION A**



B
3-10 **TEMPORARY PLUG SECTION B**



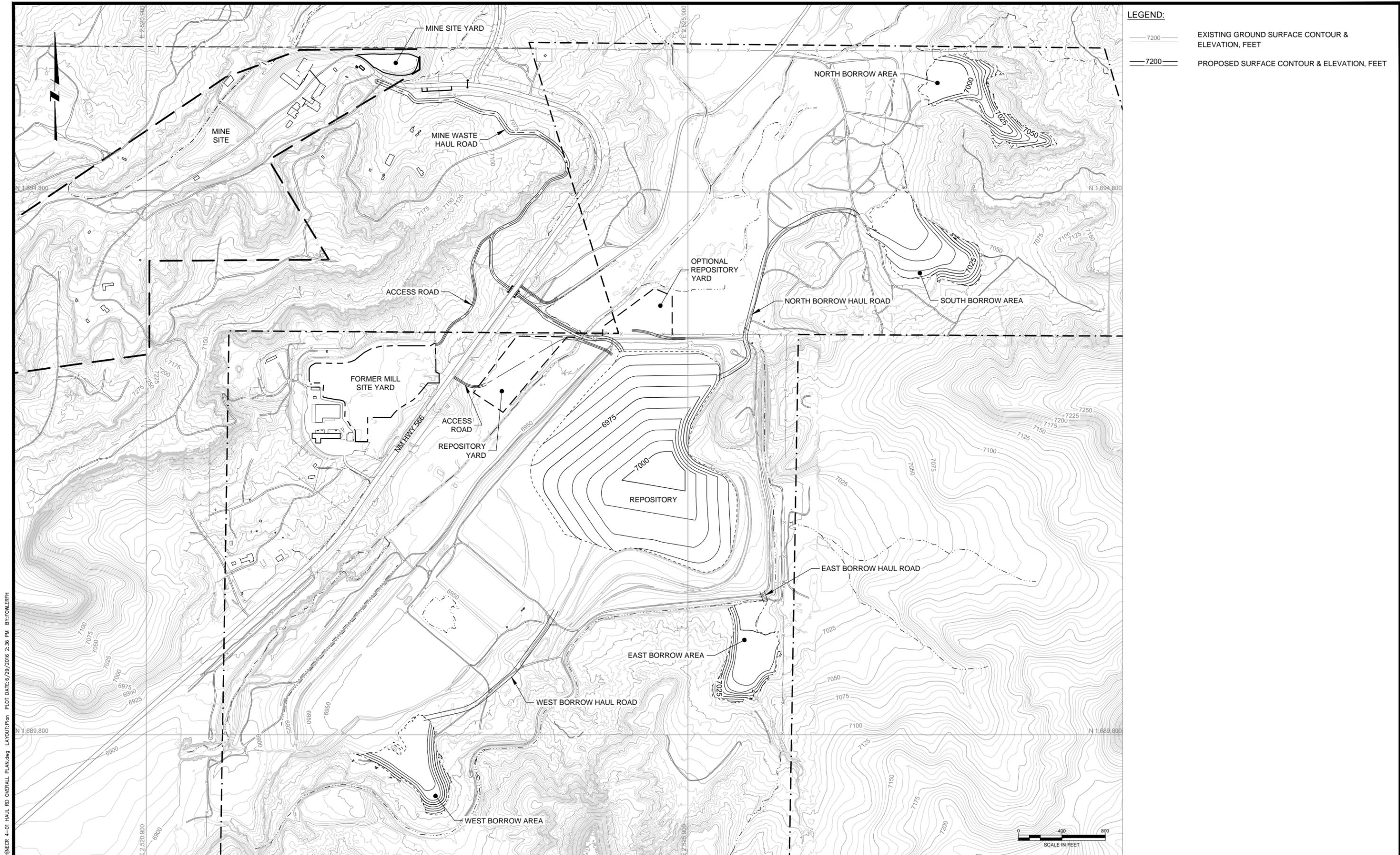
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3-10 **TEMPORARY DIVERSION BERM DETAIL**
(NOT TO SCALE)

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 BY: KEVIN REED II
 PLOT DATE: 7/11/2016 11:03 AM
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 GENERAL ELECTRIC (SEE NECR DESIGN DWG FIGURES) 2016-3-9_30% DESIGN REPORT\NECR_3-10 TEMP PLUG CROSS SECTIONS.dwg

DESIGNED	M. WITLER		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE SITE REMOVAL EXCAVATIONS AND DEMOLITION
 TEMPORARY PLUG CROSS SECTIONS AND TYPICAL BERM DETAIL



LEGEND:

--- 7200 --- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET

— 7200 — PROPOSED SURFACE CONTOUR & ELEVATION, FEET

REPLACE WITH PW PATHNER 4-01 HAUL RD OVERALL PLAN.dwg LAYOUT:Plan PLOT DATE:6/29/2016 2:36 PM BY:FOWLERH

REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

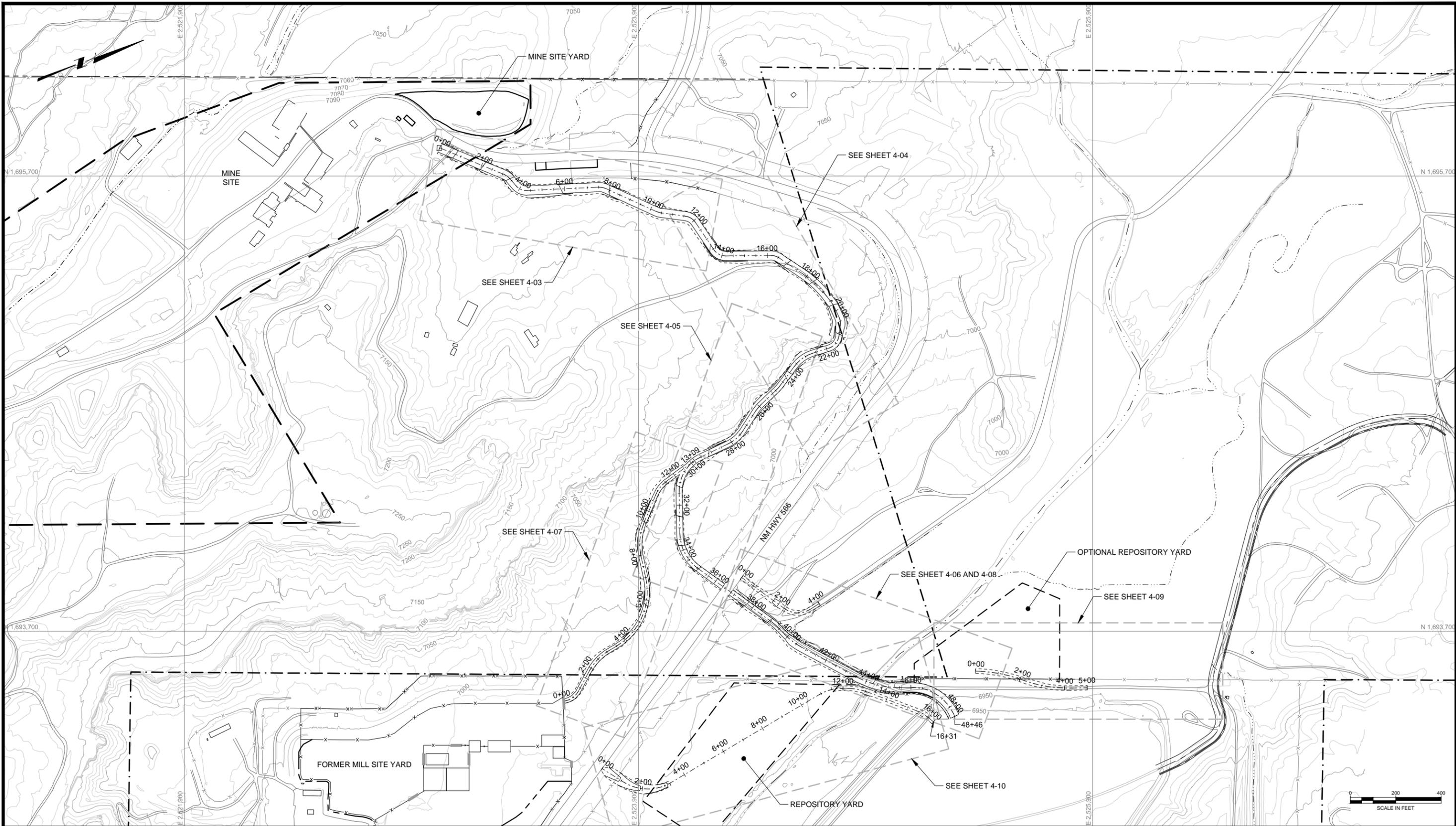
DESIGNED J. COLEMAN
 CHECKED J. CUMBERS
 APPROVED C. STRACHAN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 HAUL ROAD OVERALL PLAN

SHEET
 4-01
 10508639

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HAUL ROAD PLAN VIEW INDEX

REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

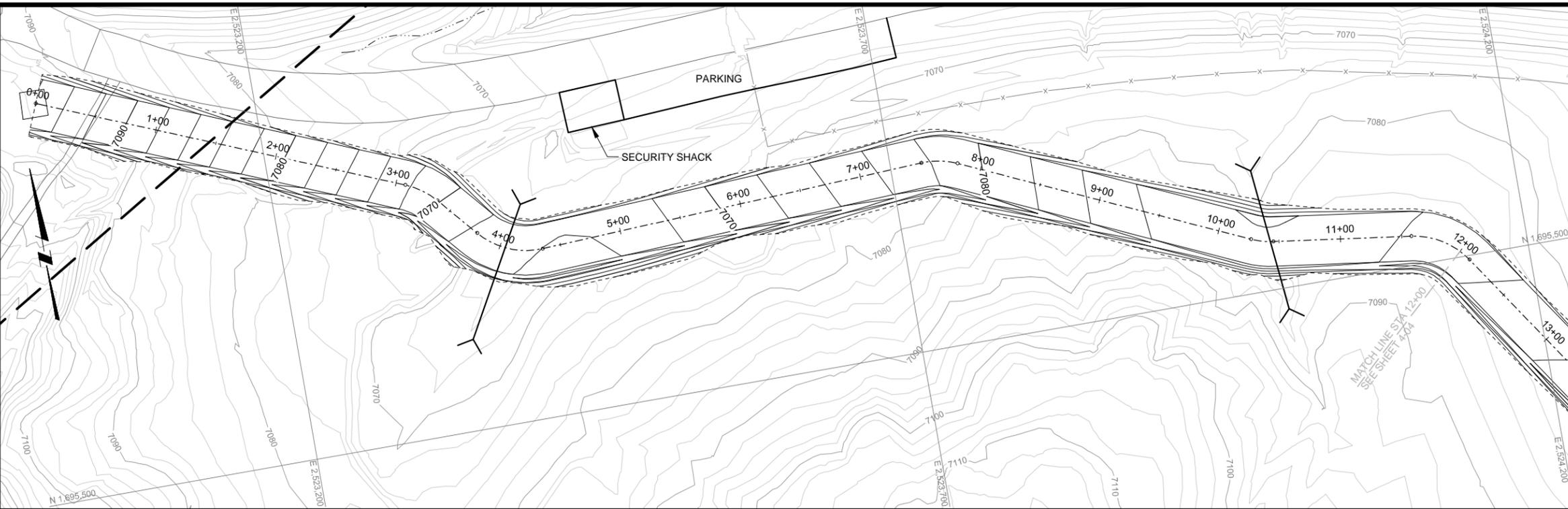
DESIGNED	J. COLEMAN
CHECKED	J. CUMBERS
APPROVED	C. STRACHAN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 HAUL ROAD PLAN INDEX

SHEET
4-02
 10508639

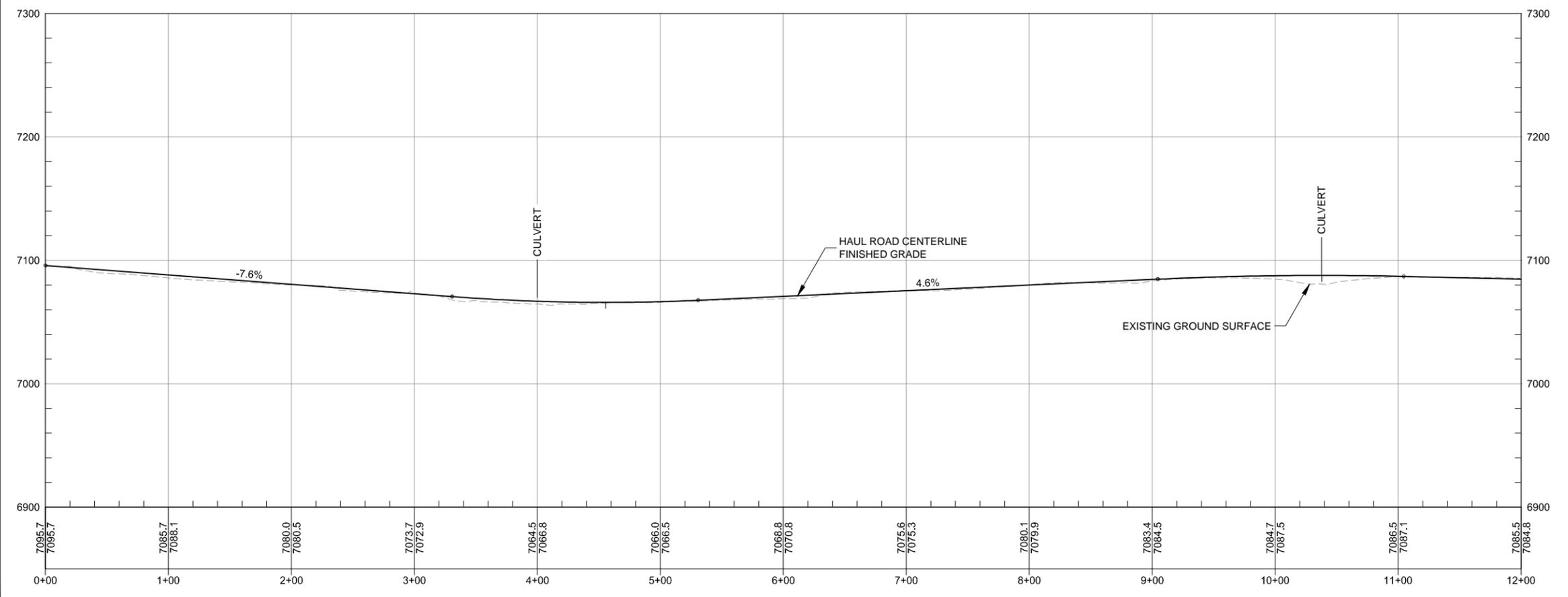
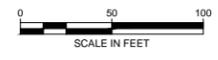
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- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - CULVERT
 - GATE

- NOTE(S):**
1. CULVERT SIZING TO BE CONDUCTED AT NEXT DESIGN PHASE.
 2. CULVERT INLET AND OUTLET DETAILS TO BE DEVELOPED AT NEXT DESIGN PHASE.
 3. TYPICAL ROAD SECTIONS ARE SHOWN ON DETAILS 1 AND 2 ON SHEET 4-17.
 - A. 2-LANE SECTION: STA 0+00 TO 21+25
 - B. 1-LANE SECTION: STA 21+25 TO 40+00
 - C. 2-LANE SECTION: STA 40+00 TO 48+46

HAUL ROAD PLAN VIEW
STATION 0+00 TO 12+00



HAUL ROAD PROFILE
STATION 0+00 TO 12+00

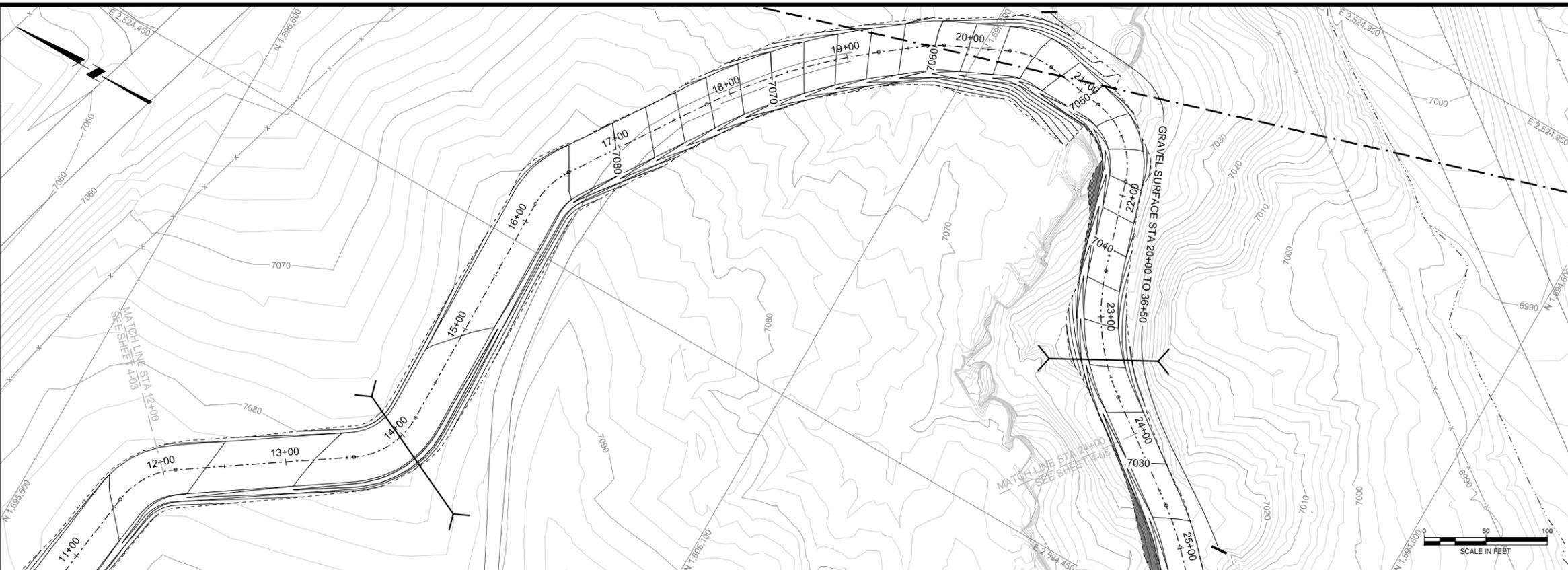


DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

MWH now part of Stantec
UNC
GE

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD PLAN AND PROFILE (1 OF 4)

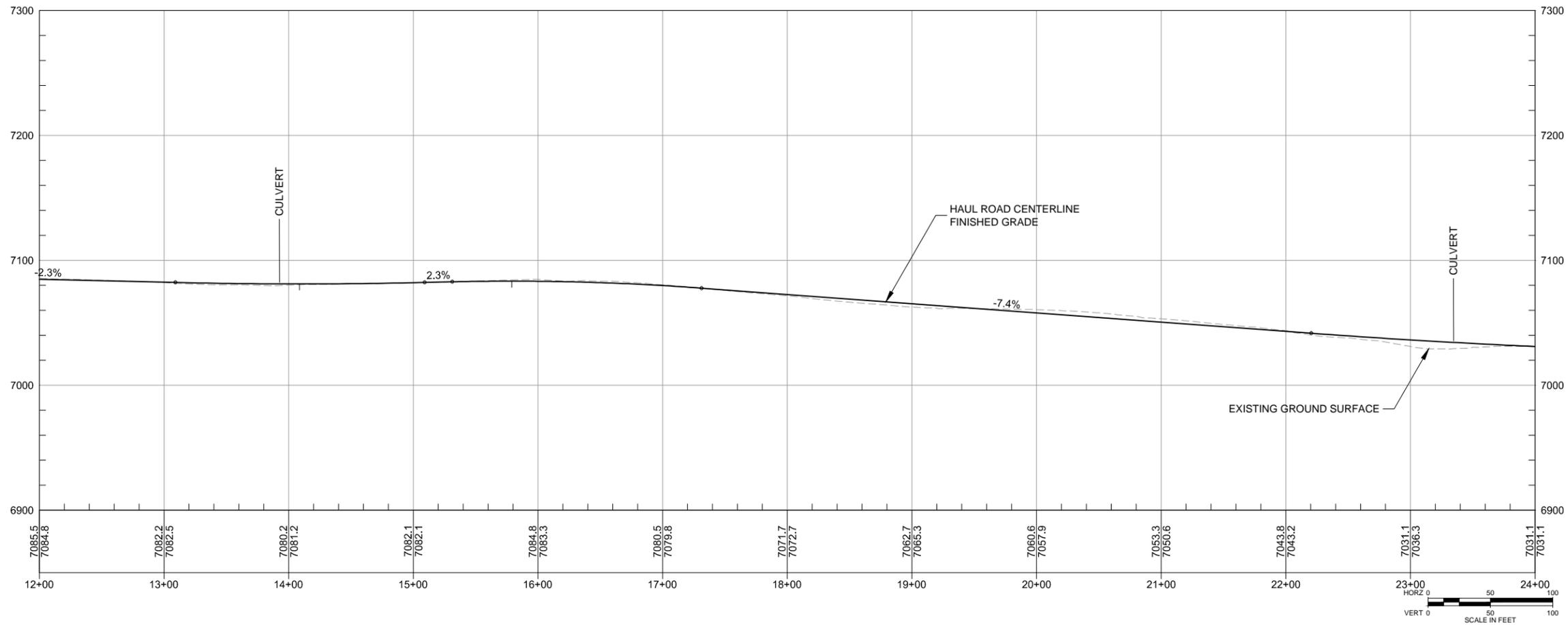
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- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - CULVERT
 - GATE

- NOTE(S):**
1. CULVERT SIZING TO BE CONDUCTED AT NEXT DESIGN PHASE.
 2. CULVERT INLET AND OUTLET DETAILS TO BE DEVELOPED AT NEXT DESIGN PHASE.
 3. TYPICAL ROAD SECTIONS ARE SHOWN ON DETAILS 1 AND 2 ON SHEET 4-17.
 - A. 2-LANE SECTION: STA 0+00 TO 21+25
 - B. 1-LANE SECTION: STA 21+25 TO 40+00
 - C. 2-LANE SECTION: STA 40+00 TO 48+46

HAUL ROAD PLAN VIEW
STATION 12+00 TO 24+00



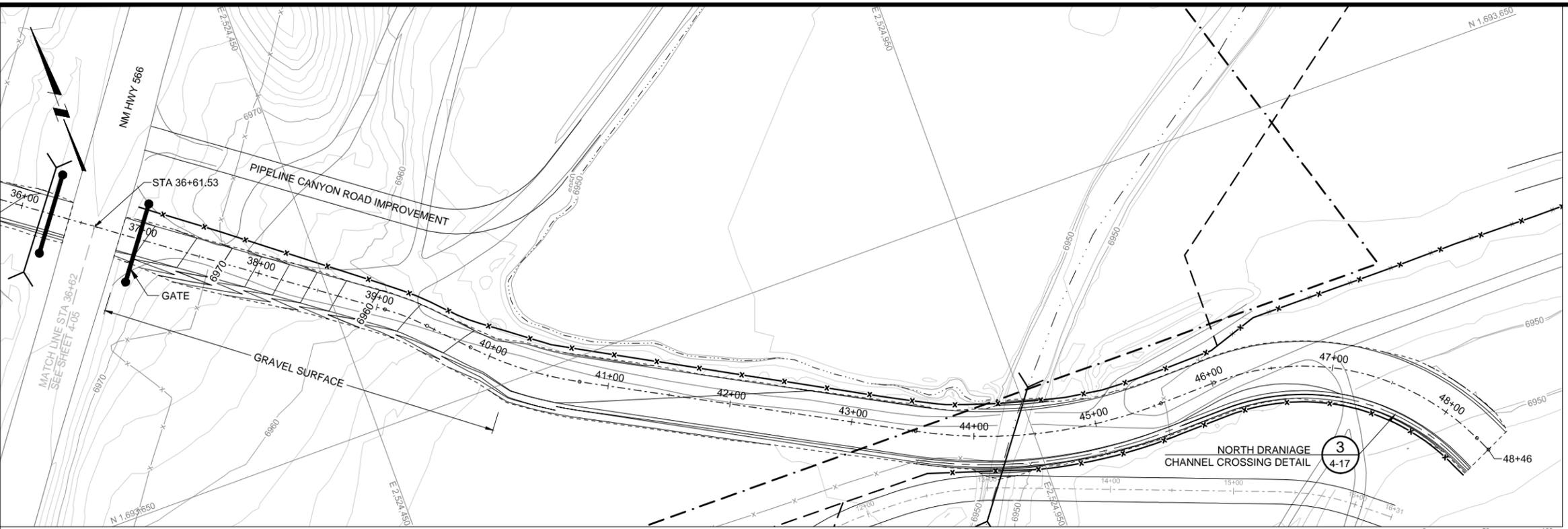
HAUL ROAD PROFILE
STATION 12+00 TO 24+00

DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

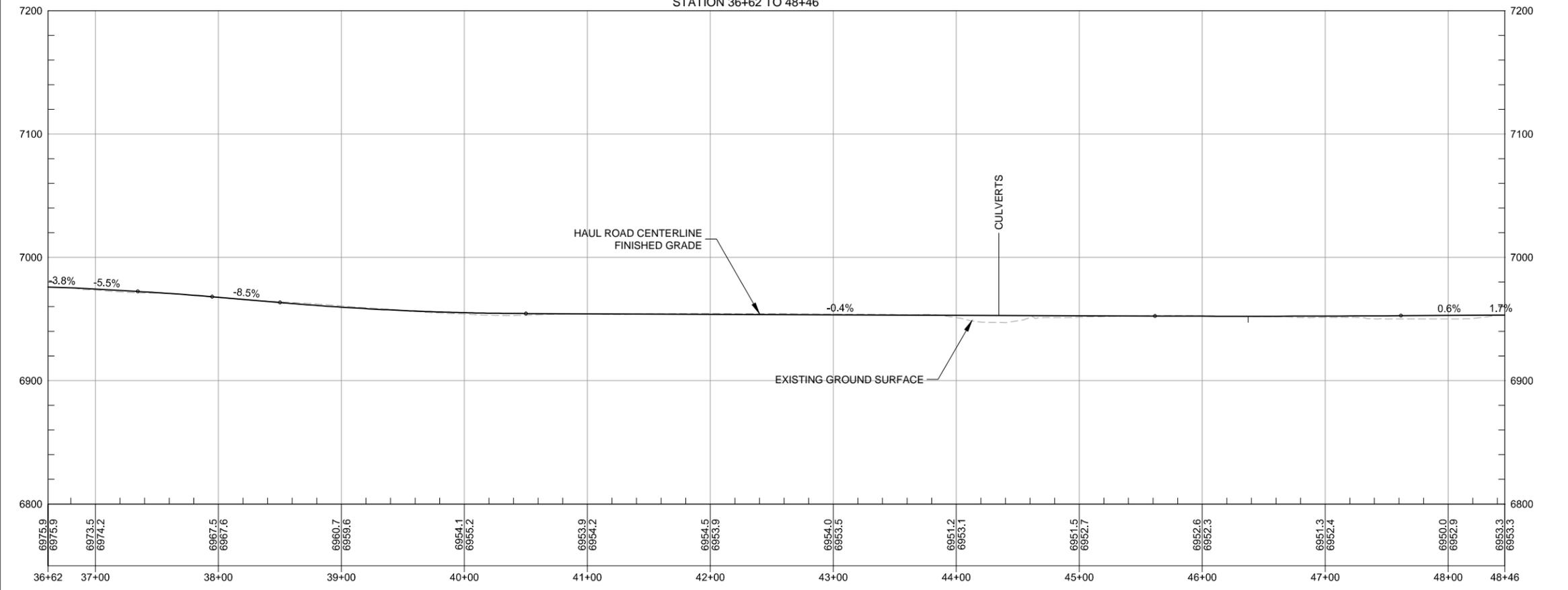
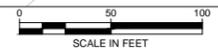


UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD PLAN AND PROFILE (2 OF 4)

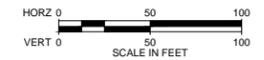
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HAUL ROAD PLAN VIEW
STATION 36+62 TO 48+46



HAUL ROAD PROFILE
STATION 36+62 TO 48+46



- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - CULVERT
 - GATE
 - SEPARATION FENCE
 - UNC PROPERTY BOUNDARY

- NOTE(S):**
1. CULVERT SIZING TO BE CONDUCTED AT NEXT DESIGN PHASE.
 2. CULVERT INLET AND OUTLET DETAILS TO BE DEVELOPED AT NEXT DESIGN PHASE.
 3. TYPICAL ROAD SECTIONS ARE SHOWN ON DETAILS 1 AND 2 ON SHEET 4-17.
 - A. 2-LANE SECTION: STA 0+00 TO 21+25
 - B. 1-LANE SECTION: STA 21+25 TO 40+00
 - C. 2-LANE SECTION: STA 40+00 TO 48+46

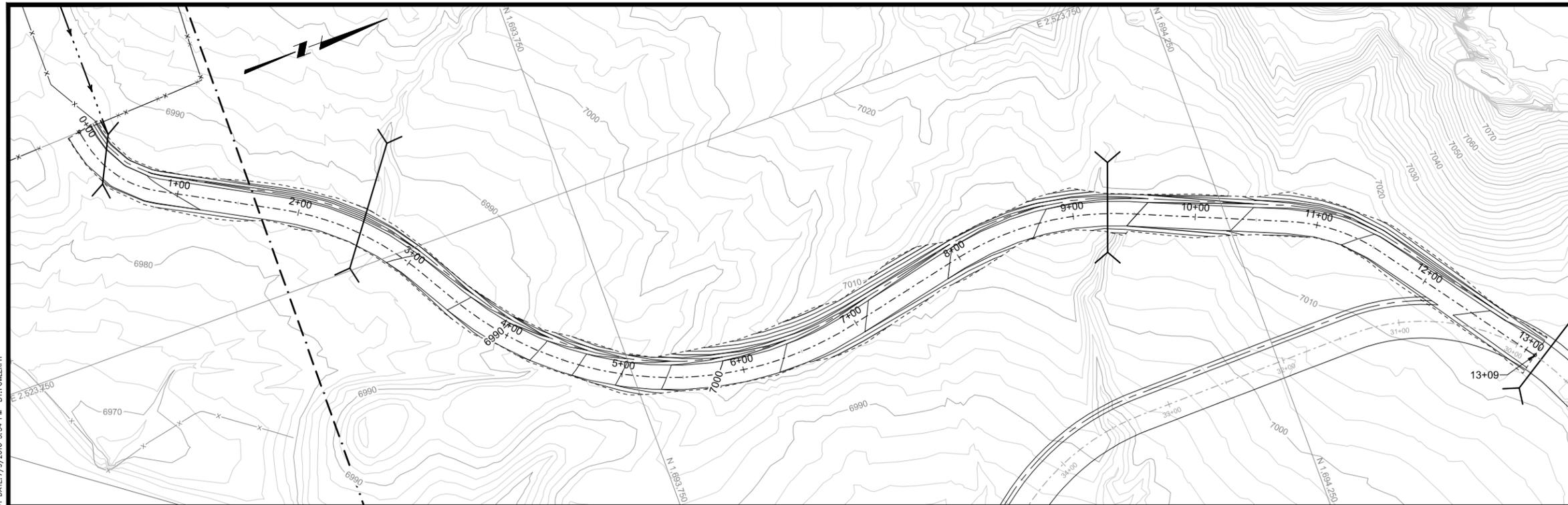
DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

MWH now part of Stantec

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD PLAN AND PROFILE (4 OF 4)

SHEET
4-06
 10508639

P:\mineview\103\mwhglobal.com\AM_PROJECTS\202\Documents\General Electric\GE_NECR_Design\Civil\Sheet Sets\NECR-30%_DESIGN_DRAWINGS\01-GENERAL\NECR 4-07 HAUL RD SPUR PLAN PROF.dwg LAYOUT:Plan PLOT DATE:7/9/2016 3:54 PM BY:FOMLERFH

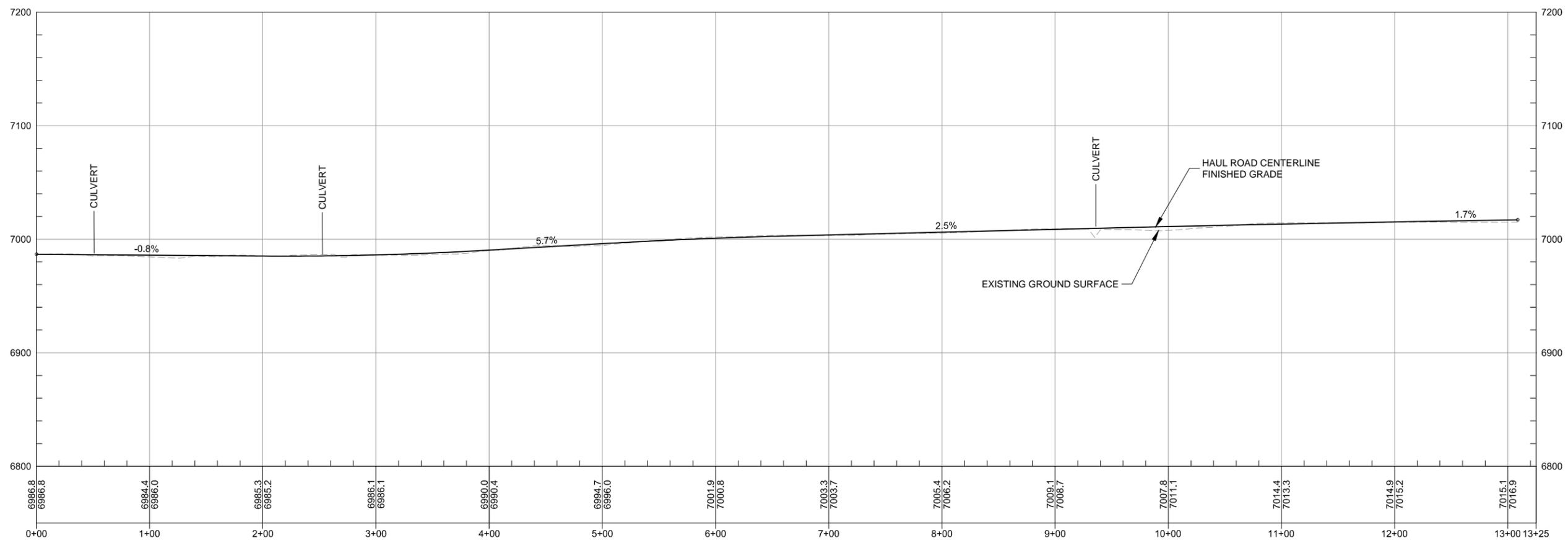
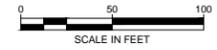


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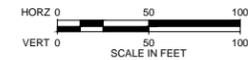
- 7200 EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
- 7200 PROPOSED SURFACE CONTOUR & ELEVATION, FEET
- CLEAN STORMWATER DIVERSION DITCH
- CULVERT
- GATE

- NOTE(S):**
1. CULVERT SIZING TO BE CONDUCTED AT NEXT DESIGN PHASE.
 2. CULVERT INLET AND OUTLET DETAILS TO BE DEVELOPED AT NEXT DESIGN PHASE.
 3. TYPICAL ROAD SECTIONS ARE SHOWN ON DETAILS 1 AND 2 ON SHEET 4-17.
 - A. 1-LANE SECTION: STA 0+00 TO 13+00

HAUL ROAD SPUR PLAN VIEW
STATION 0+00 TO 13+09



HAUL ROAD SPUR PROFILE
STATION 0+00 TO 13+09

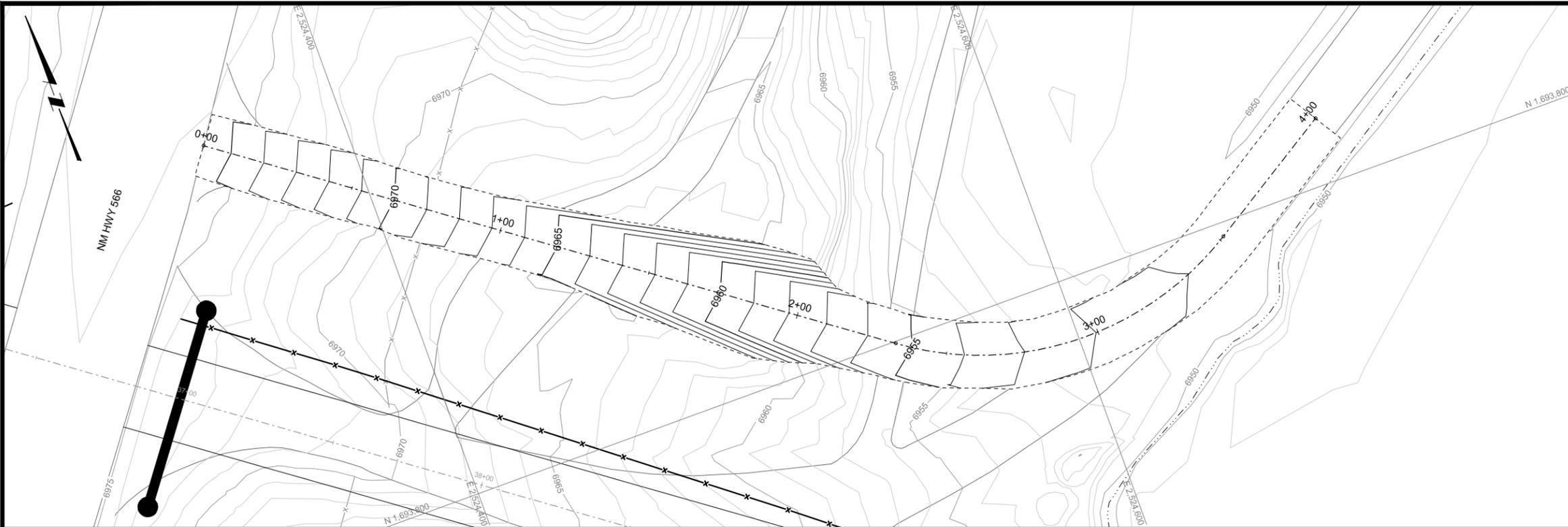


DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



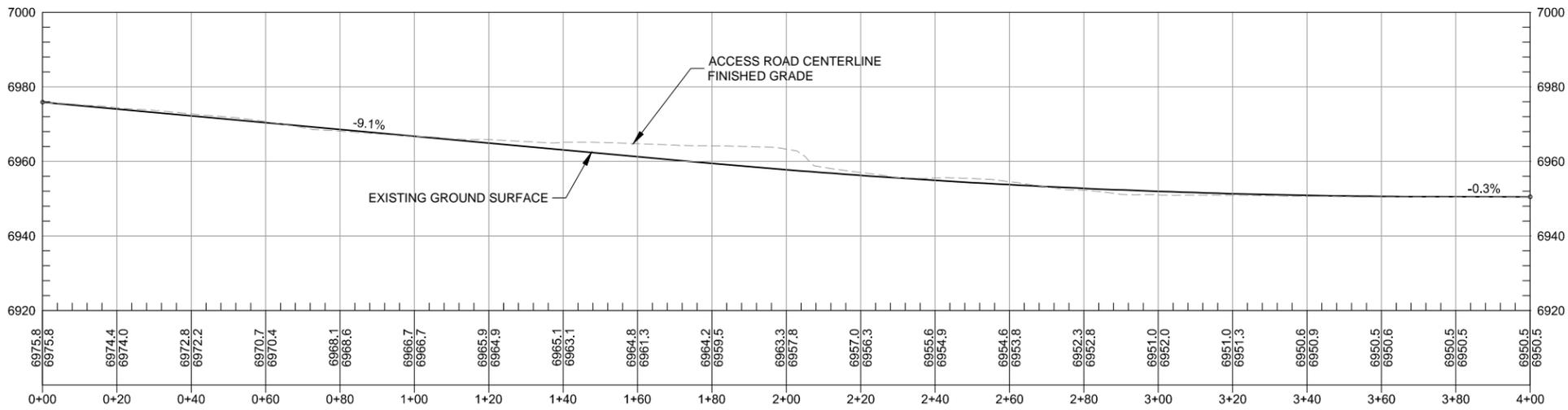
UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD SPUR PLAN AND PROFILE

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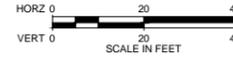


- LEGEND:**
- 7200 EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - 7200 PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - GATE
 - SEPARATION FENCE

CLEAN ACCESS ROAD PLAN VIEW
STATION 0+00 TO 4+00



CLEAN ACCESS ROAD PROFILE
STATION 0+00 TO 4+00

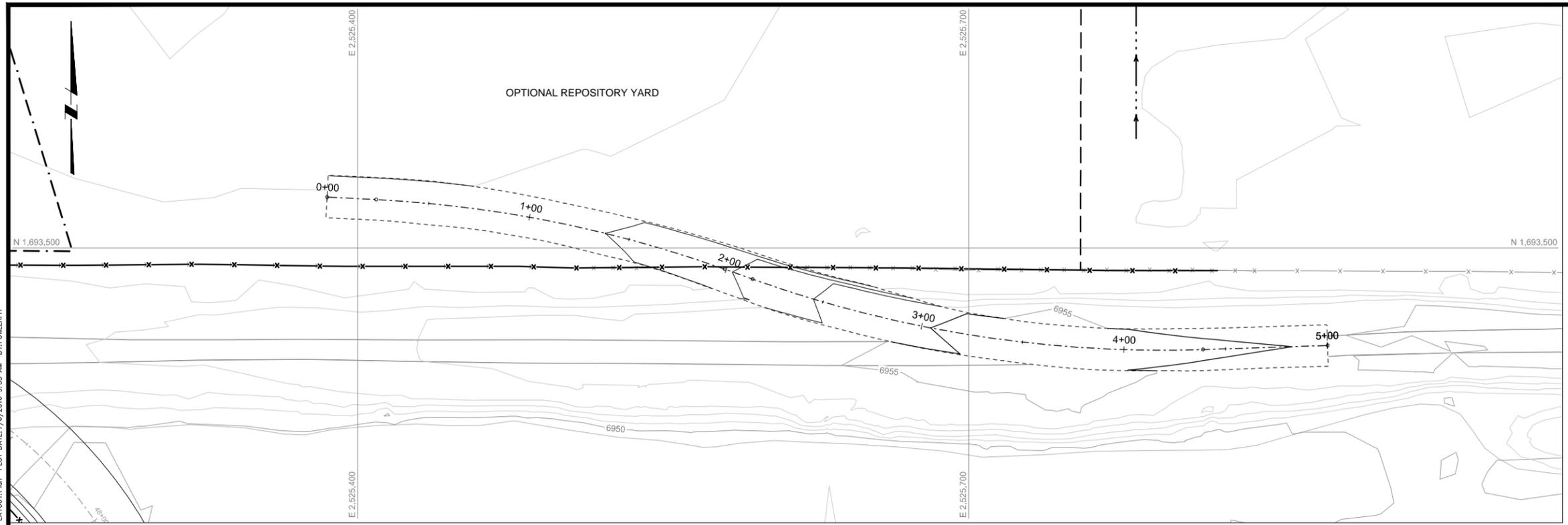


DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
MCKINLEY COUNTY, NEW MEXICO
NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
CLEAN ACCESS ROAD PLAN AND PROFILE

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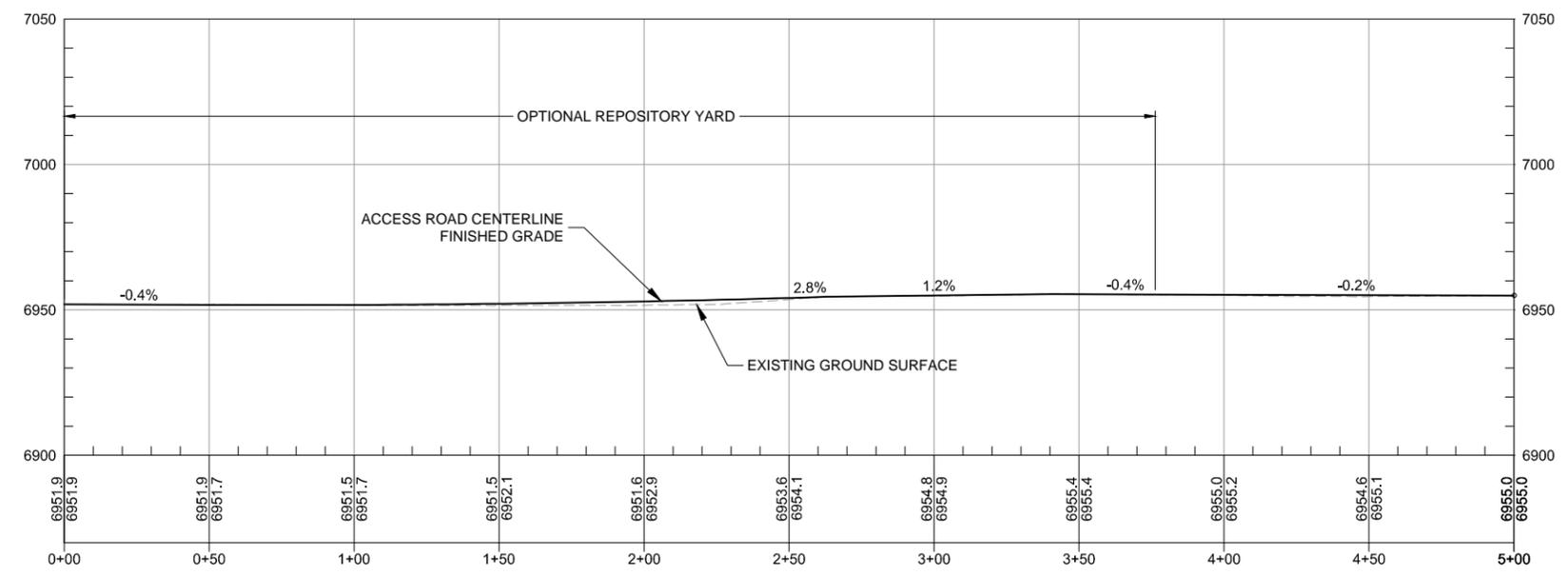


ACCESS RAMP PLAN VIEW
STATION 0+00 TO 5+00

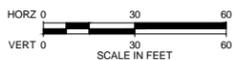


LEGEND:

	EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
	PROPOSED SURFACE CONTOUR & ELEVATION, FEET
	SEPARATION FENCE
	DITCH



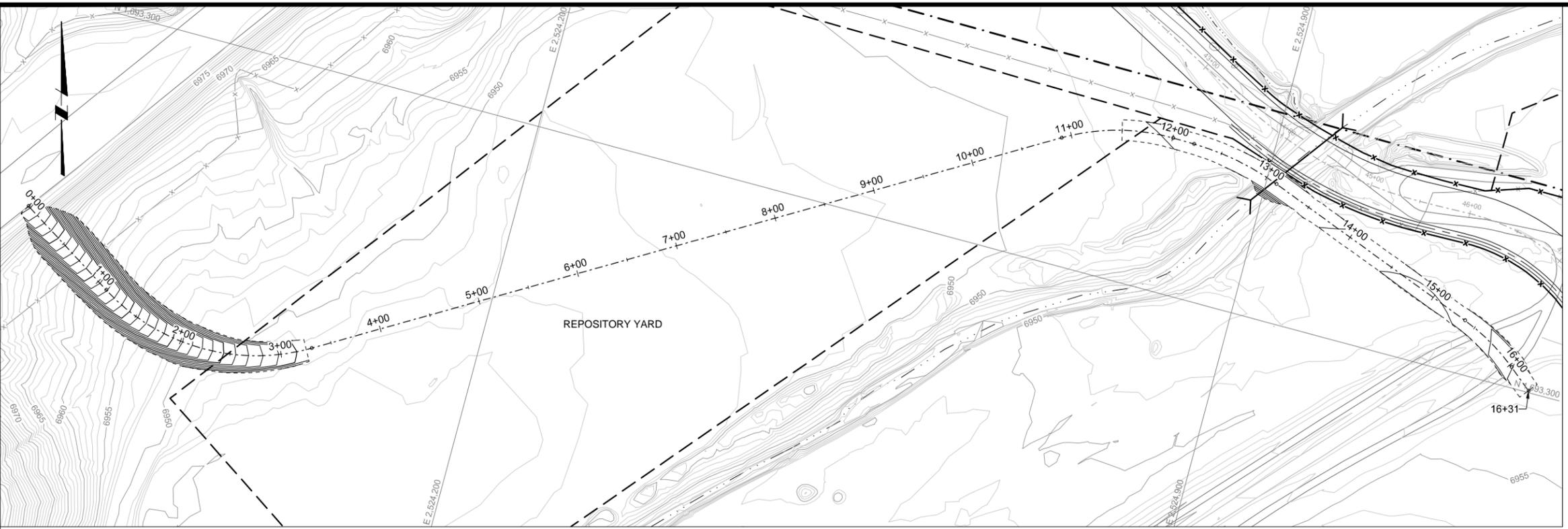
ACCESS RAMP PROFILE
STATION 0+00 TO 5+00



DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

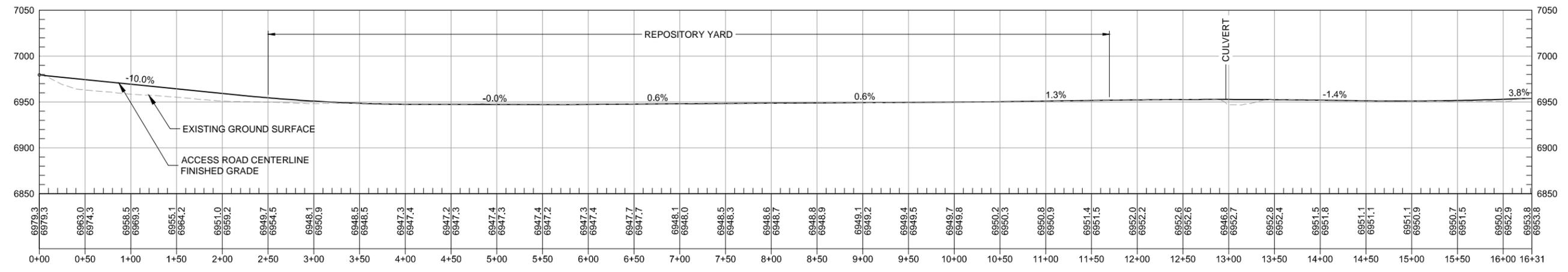
UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 CLEAN ACCESS RAMP PLAN AND PROFILE

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- LEGEND:**
- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
 - PROPOSED SURFACE CONTOUR & ELEVATION, FEET
 - SEPARATION FENCE
 - CULVERT

CLEAN ACCESS ROAD PLAN VIEW
STATION 0+00 TO 16+31



CLEAN ACCESS ROAD PROFILE
STATION 0+00 TO 16+31

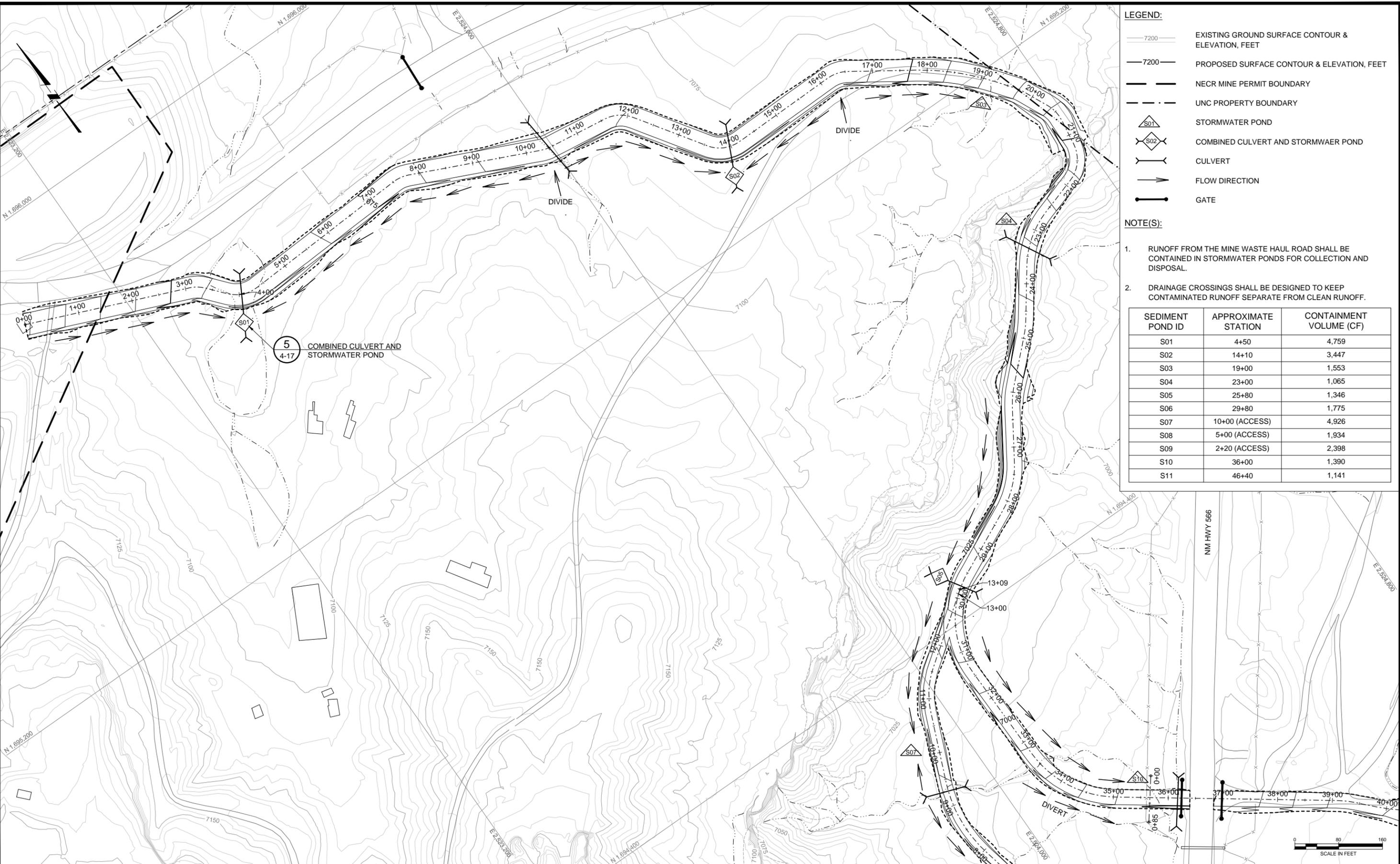


DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 REPOSITORY YARD CLEAN ACCESS ROAD PLAN AND PROFILE

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LEGEND:

- EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET
- PROPOSED SURFACE CONTOUR & ELEVATION, FEET
- NECR MINE PERMIT BOUNDARY
- UNC PROPERTY BOUNDARY
- STORMWATER POND
- COMBINED CULVERT AND STORMWAER POND
- CULVERT
- FLOW DIRECTION
- GATE

- NOTE(S):**
1. RUNOFF FROM THE MINE WASTE HAUL ROAD SHALL BE CONTAINED IN STORMWATER PONDS FOR COLLECTION AND DISPOSAL.
 2. DRAINAGE CROSSINGS SHALL BE DESIGNED TO KEEP CONTAMINATED RUNOFF SEPARATE FROM CLEAN RUNOFF.

SEDIMENT POND ID	APPROXIMATE STATION	CONTAINMENT VOLUME (CF)
S01	4+50	4,759
S02	14+10	3,447
S03	19+00	1,553
S04	23+00	1,065
S05	25+80	1,346
S06	29+80	1,775
S07	10+00 (ACCESS)	4,926
S08	5+00 (ACCESS)	1,934
S09	2+20 (ACCESS)	2,398
S10	36+00	1,390
S11	46+40	1,141

5
4-17
COMBINED CULVERT AND STORMWATER POND

0 80 160
SCALE IN FEET

DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN



UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD DRAINAGE CONTROL PLAN (1 OF 2)

SHEET
4-11
10508639

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DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

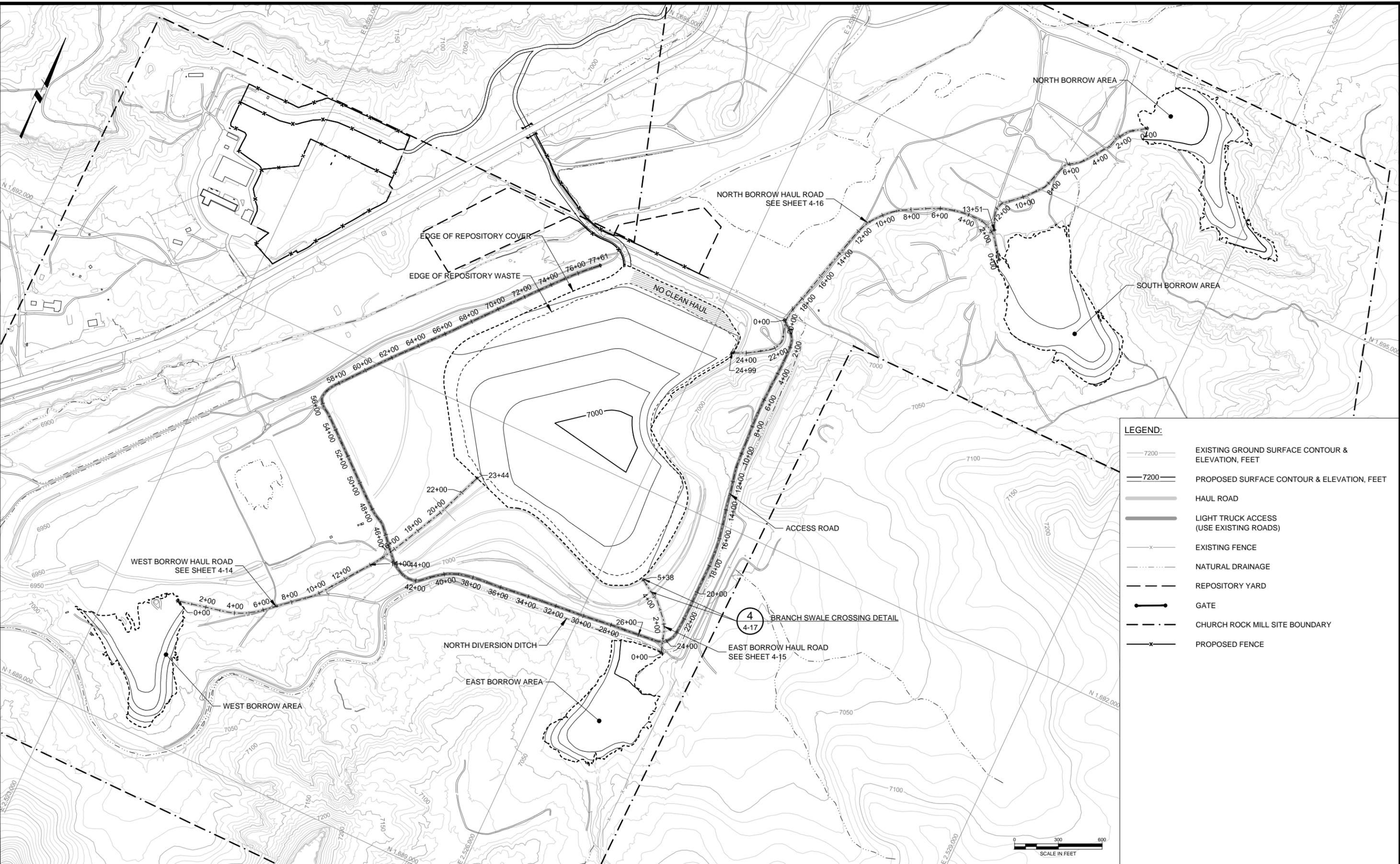
MWH now part of Stantec

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO

NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 MINE WASTE HAUL ROAD DRAINAGE CONTROL PLAN (2 OF 2)

SHEET
 4-12
 10508639

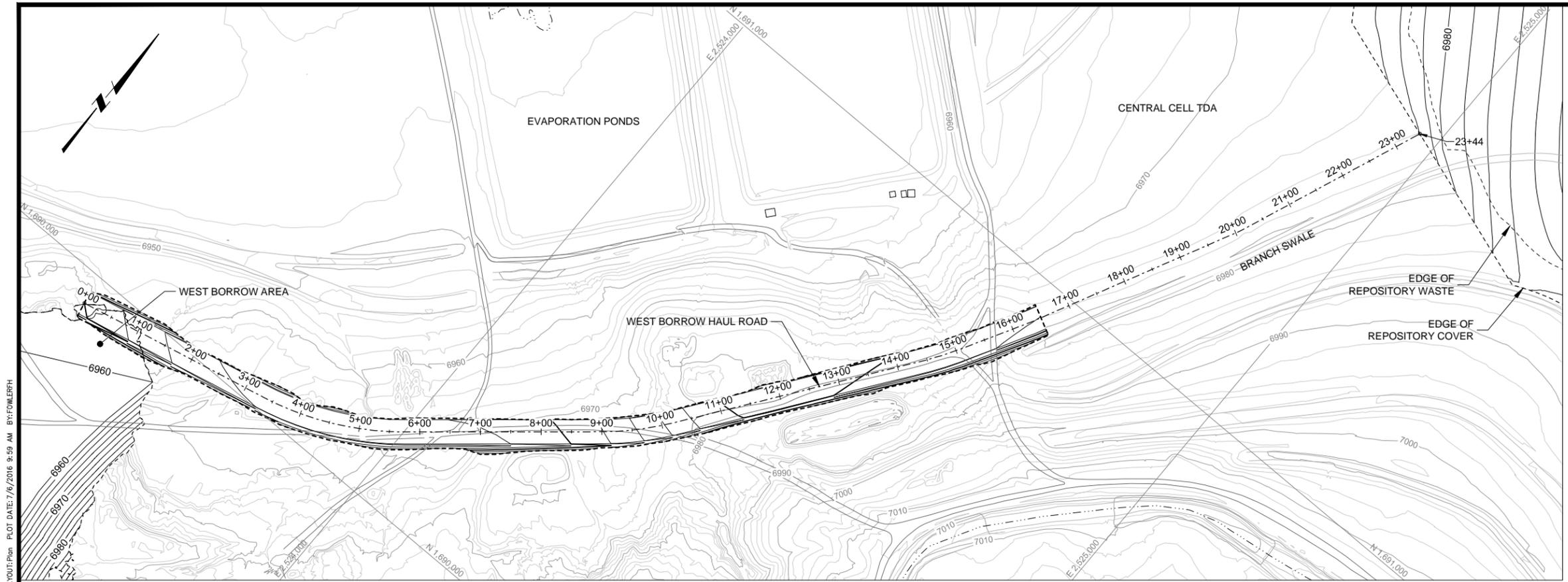
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REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

DESIGNED	J. COLEMAN
CHECKED	J. CUMBERS
APPROVED	C. STRACHAN





LEGEND:

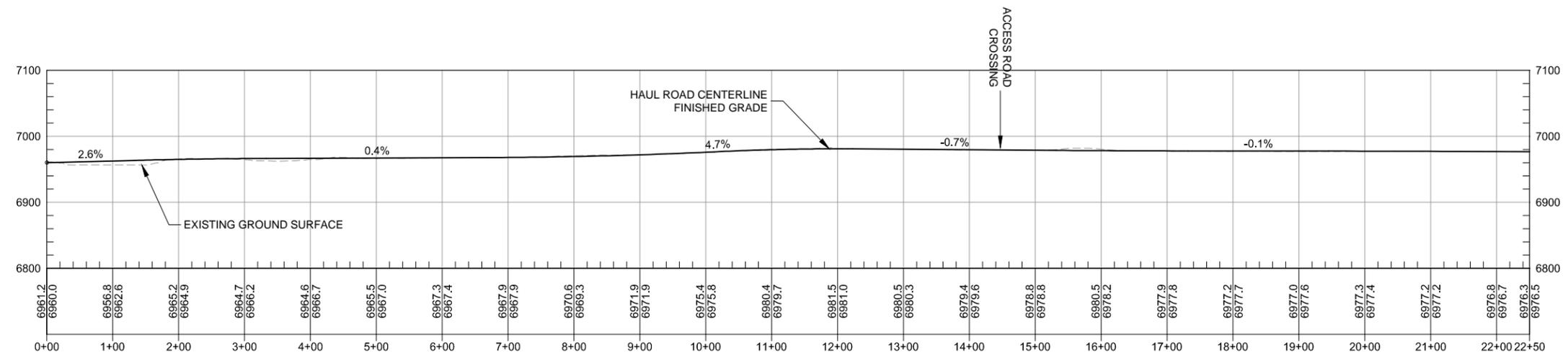
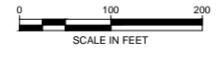
— 7200 — EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET

— 7200 — PROPOSED SURFACE CONTOUR & ELEVATION, FEET

NOTE(S):

- BORROW HAUL ROUTES ON THE EXISTING TDA COVER SHALL BE DESIGNATED BY CONTRACTOR.
- TDA COVER BENEATH DESIGNATED HAUL ROUTES SHALL BE RECONSTRUCTED UPON COMPLETION OF CONSTRUCTION TO MITIGATE DAMAGE FROM HAUL TRAFFIC.

WEST BORROW HAUL ROAD PLAN VIEW
STATION 0+00 TO 22+18



WEST BORROW HAUL ROAD PROFILE
STATION 0+00 TO 22+18

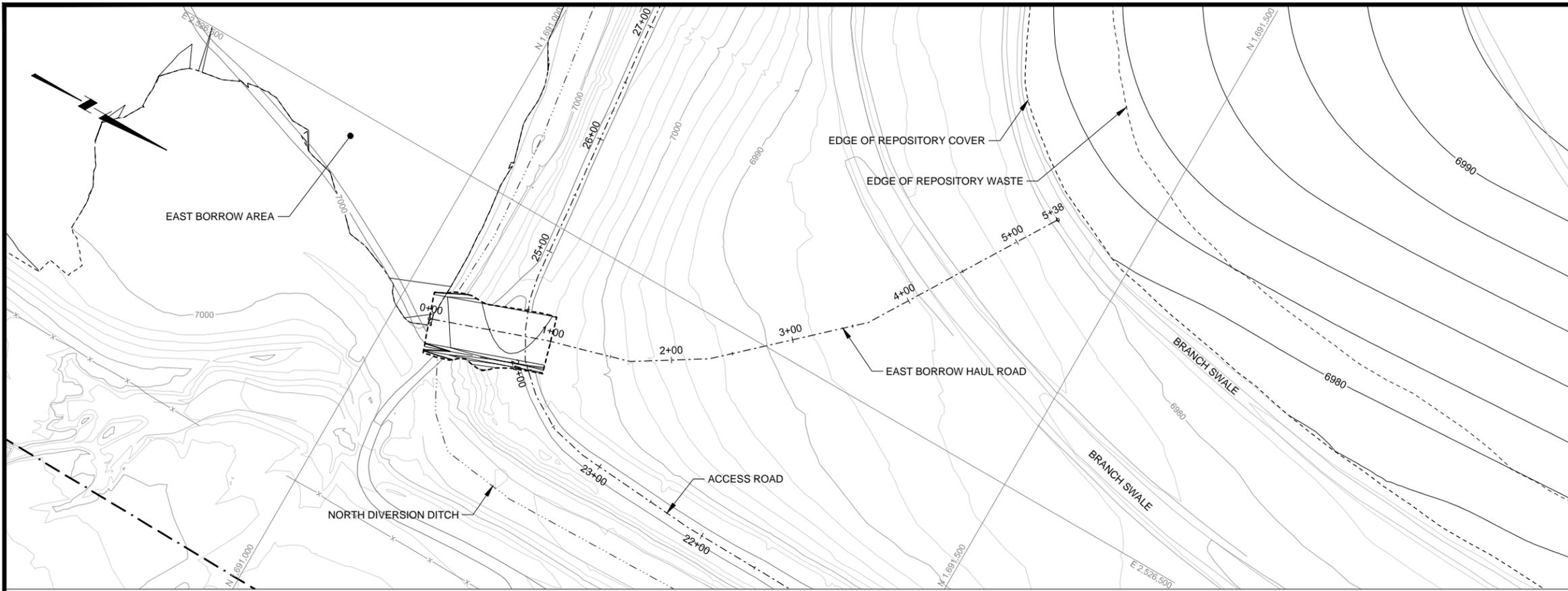


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 LAYOUT: Plan PLOT DATE: 7/6/2016 9:59 AM BY: FOWLERPH

DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
 MCKINLEY COUNTY, NEW MEXICO
 NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
 WEST BORROW HAUL ROAD PLAN AND PROFILE

P:\omervev\103.mhnglobal.com\AM_PROJECTS\202\Documents\General Electric\GE_NECR_Design\Civil\Sheet Sets\NECR-30%_DESIGN_DRAWINGS\01-GENERAL\NECR_4-15 BORROW HAUL RD 2.dwg LAYOUT:Plan PLOT DATE:7/6/2016 10:03 AM BY:FOMERRH



LEGEND:

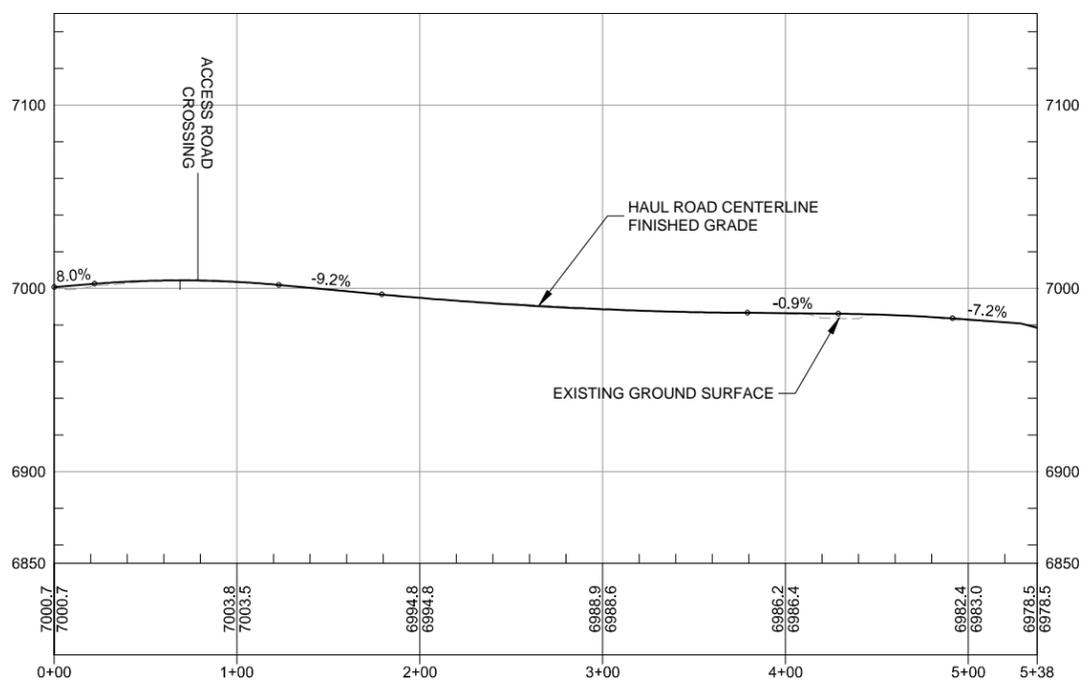
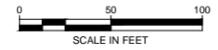
— 7200 — EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET

— 7200 — PROPOSED SURFACE CONTOUR & ELEVATION, FEET

NOTE(S):

- BORROW HAUL ROUTES ON THE EXISTING TDA COVER SHALL BE DESIGNATED BY CONTRACTOR.
- TDA COVER BENEATH DESIGNATED HAUL ROUTES SHALL BE RECONSTRUCTED UPON COMPLETION OF CONSTRUCTION TO MITIGATE DAMAGE FROM HAUL TRAFFIC.

EAST BORROW HAUL ROAD PLAN VIEW
STATION 0+00 TO 5+38



EAST BORROW HAUL ROAD PROFILE
STATION 0+00 TO 5+38



DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

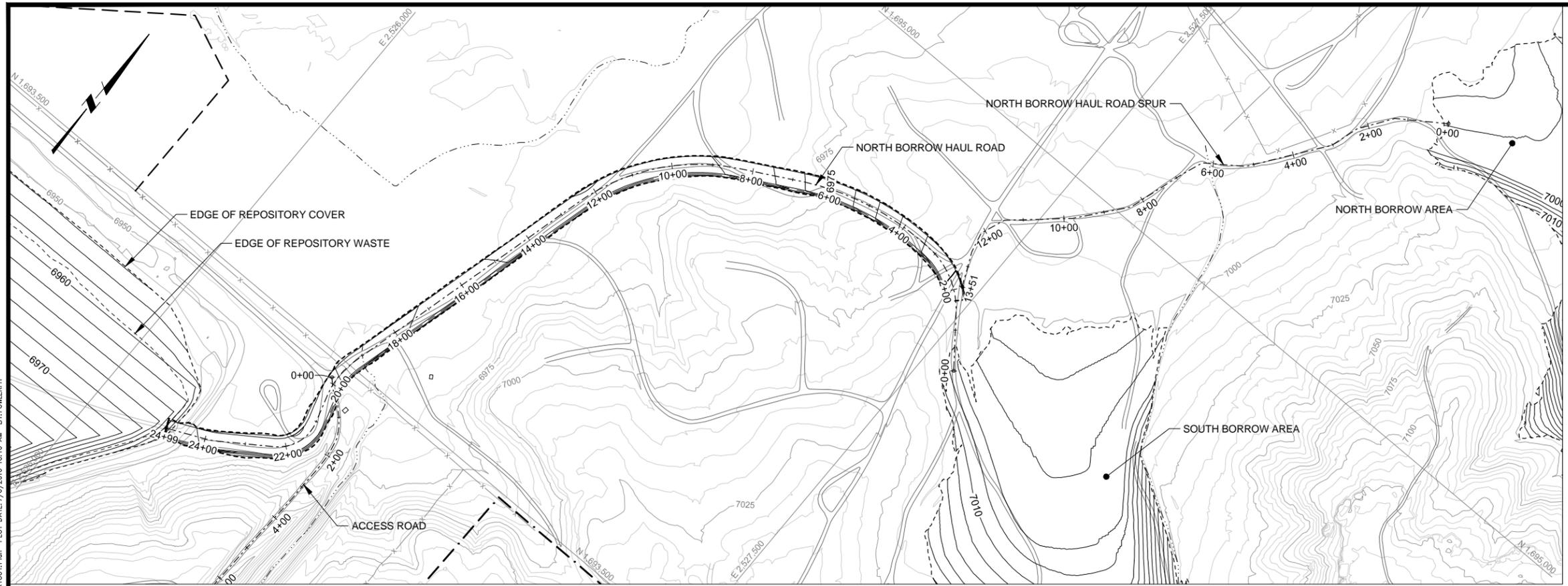
UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
MCKINLEY COUNTY, NEW MEXICO

MWH now part of Stantec

UNC GE

NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
EAST BORROW HAUL ROAD PLAN AND PROFILE

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LEGEND:

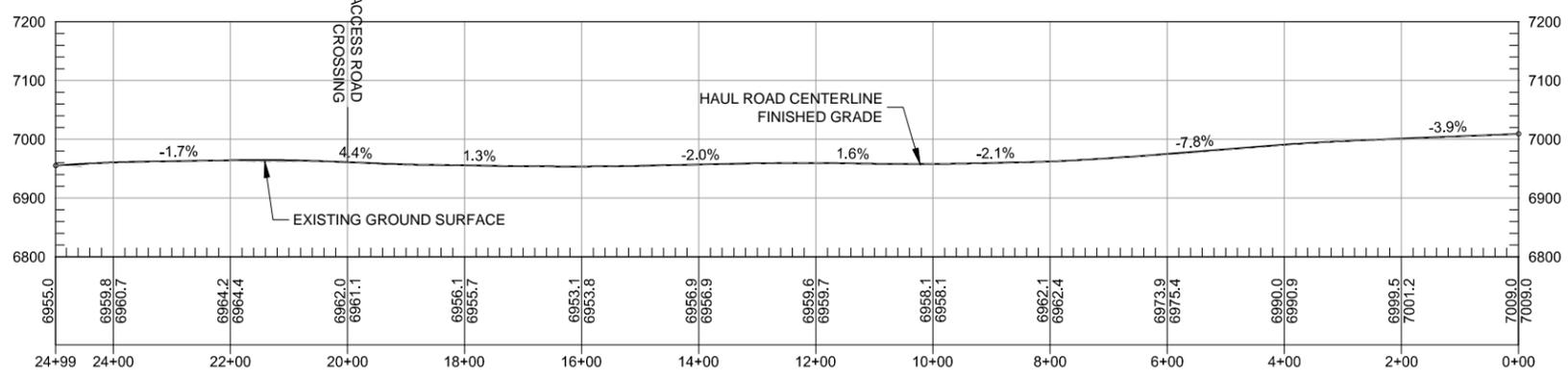
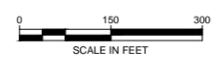
— 7200 — EXISTING GROUND SURFACE CONTOUR & ELEVATION, FEET

— 7200 — PROPOSED SURFACE CONTOUR & ELEVATION, FEET

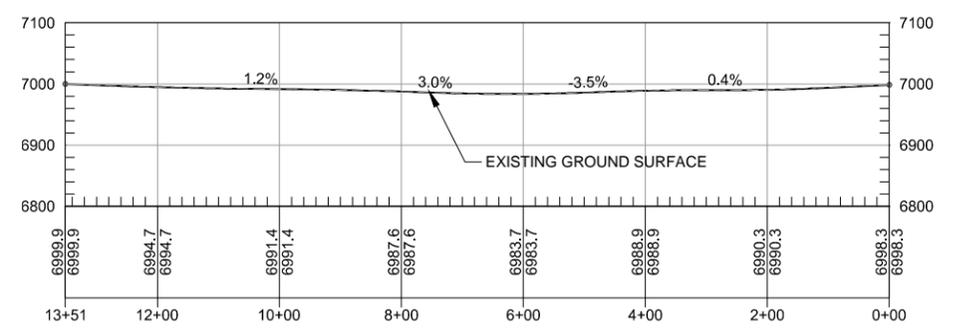
NOTE(S):

- BORROW HAUL ROUTES ON THE EXISTING TDA COVER SHALL BE DESIGNATED BY CONTRACTOR.
- TDA COVER BENEATH DESIGNATED HAUL ROUTES SHALL BE RECONSTRUCTED UPON COMPLETION OF CONSTRUCTION TO MITIGATE DAMAGE FROM HAUL TRAFFIC.

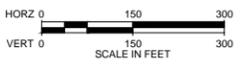
NORTH BORROW HAUL ROAD AND SPUR PLAN VIEW
STATION 0+00 TO 24+99



NORTH BORROW HAUL ROAD PROFILE
STATION 0+00 TO 24+99



NORTH BORROW HAUL ROAD SPUR PROFILE
STATION 0+00 TO 12+69



DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

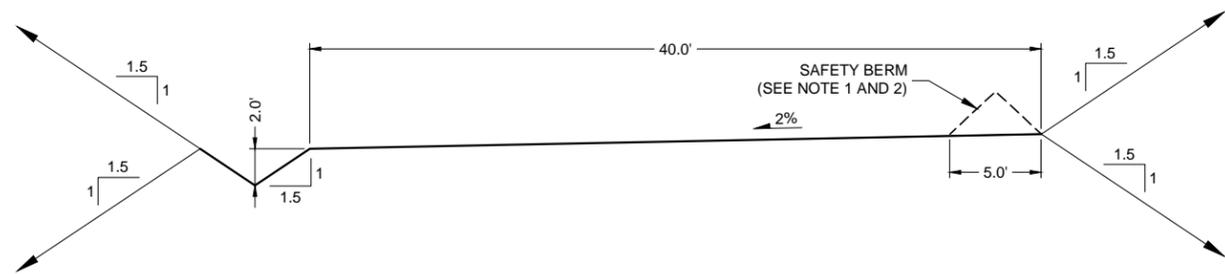


UNITED NUCLEAR CORPORATION AND NORTHEAST CHURCH ROCK MINE
MCKINLEY COUNTY, NEW MEXICO

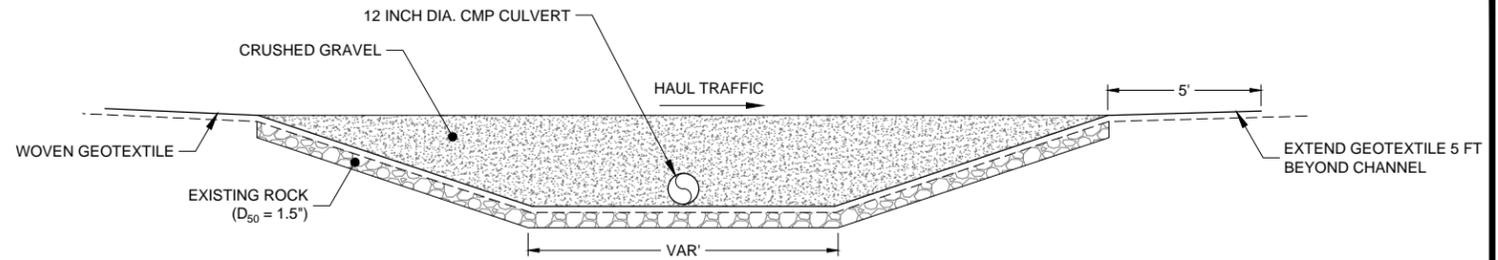
NORTHEAST CHURCH ROCK PROJECT 30% DESIGN
NORTH BORROW HAUL ROAD PLAN AND PROFILE

SHEET
4-16
10508639

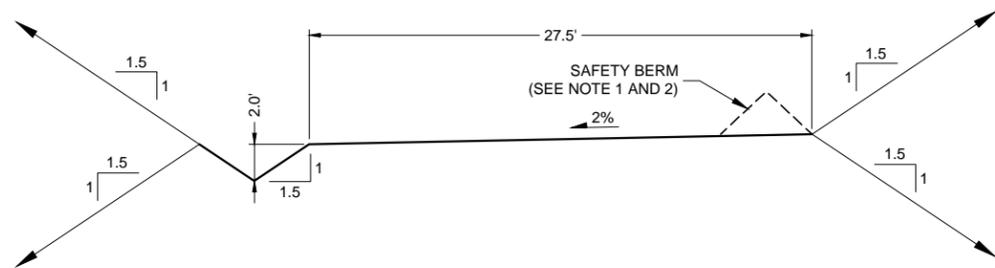
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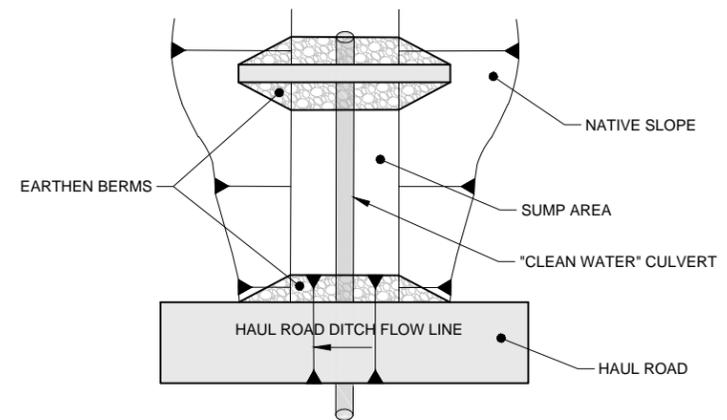
1 TWO-LANE ROAD TYPICAL CROSS SECTION
4-17



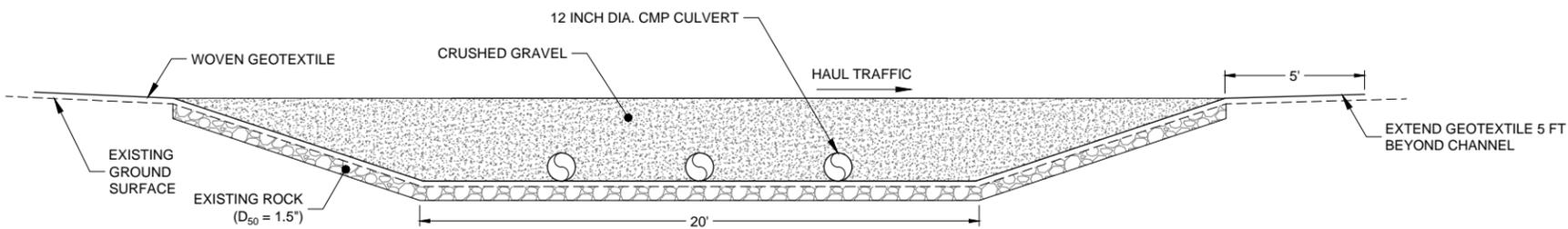
4 BRANCH SWALE CROSSING DETAIL
4-17



2 ONE-LANE ROAD TYPICAL CROSS SECTION
4-17



5 COMBINED STORMWATER POND AND CULVERT
4-17



3 NORTH DRAINAGE CHANNEL CROSSING DETAIL
4-17

NOTE(S):

1. SAFETY BERM SHALL BE PROVIDED WHERE A DROP-OFF EXISTS OF SUFFICIENT GRADE OR DEPTH TO CAUSE A VEHICLE TO OVERTURN OR ENDANGER THE OPERATOR.
2. SAFETY BERM SHALL BE MID-AXLE HEIGHT OF LARGEST EQUIPMENT THAT TRAVELS THE ROAD.
3. 4-INCH THICK LAYER OF GRAVEL SURFACING SHALL BE ADDED WHERE NOTED ON PLANS.

DESIGNED	J. COLEMAN		
CHECKED	J. CUMBERS		
APPROVED	C. STRACHAN		
REV	DATE	BY	DESCRIPTION
A	07/15/16	KR	ISSUED FOR 30% DESIGN

