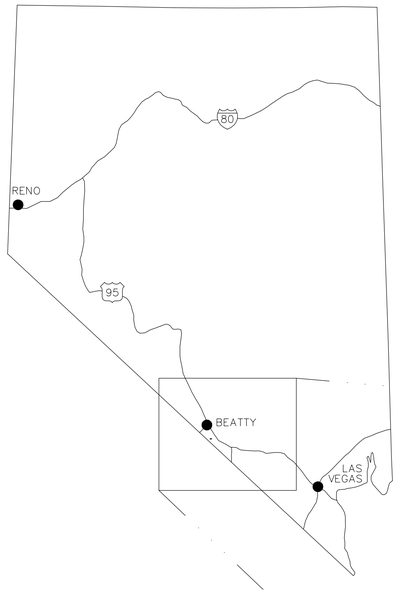
# LANDFILL TRENCH 13 DESIGN
# HAZARDOUS WASTE MANAGEMENT FACILITY
# BEATTY, NEVADA

## RCRA FACILITY ID NO. NVT330010000
## HAZARDOUS WASTE PERMIT NUMBER NV HW0025





PREPARED BY:

AquAeTer
optimizing resources | water, air, earth

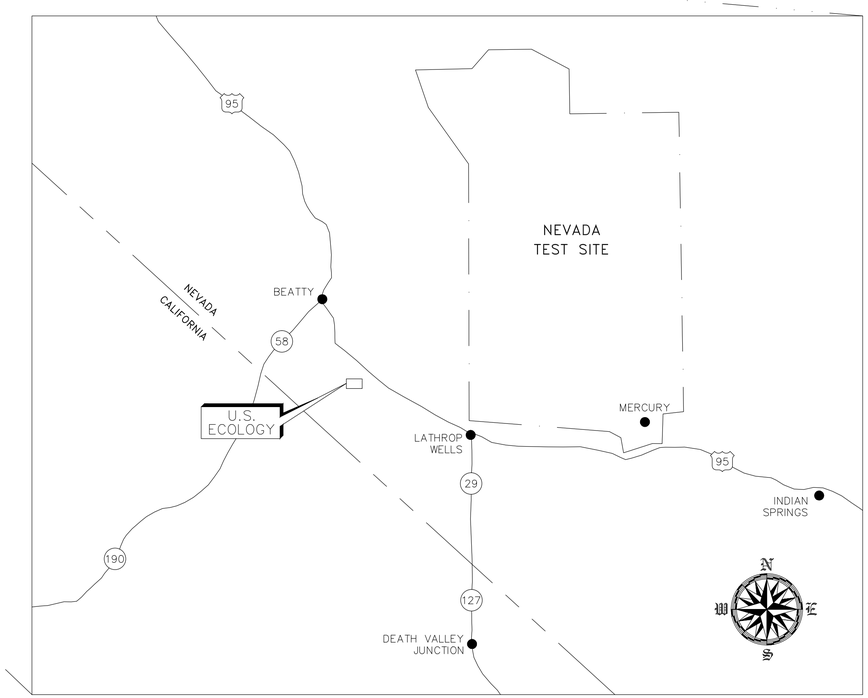
AQUAETER, INC.
7430 EAST CALEY AVE
CENTENNIAL, CO 80111
(303)-771-9150

PROFESSIONAL ENGINEER-STATE OF NEVADA
CHRISTOPHER A BOLIN
Exp. 12/31/16
ENVIRONMENTAL
No. 023644

SWIFT RIVER
ENVIRONMENTAL SERVICES, LLC

SWIFT RIVER ENVIRONMENTAL SERVICES, LLC
26 WEST DRY CREEK CIRCLE
LITTLETON, CO 80120
(303)-695-4660

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L WAMPLER
Exp. 6/30/16
CIVIL
No. 01364

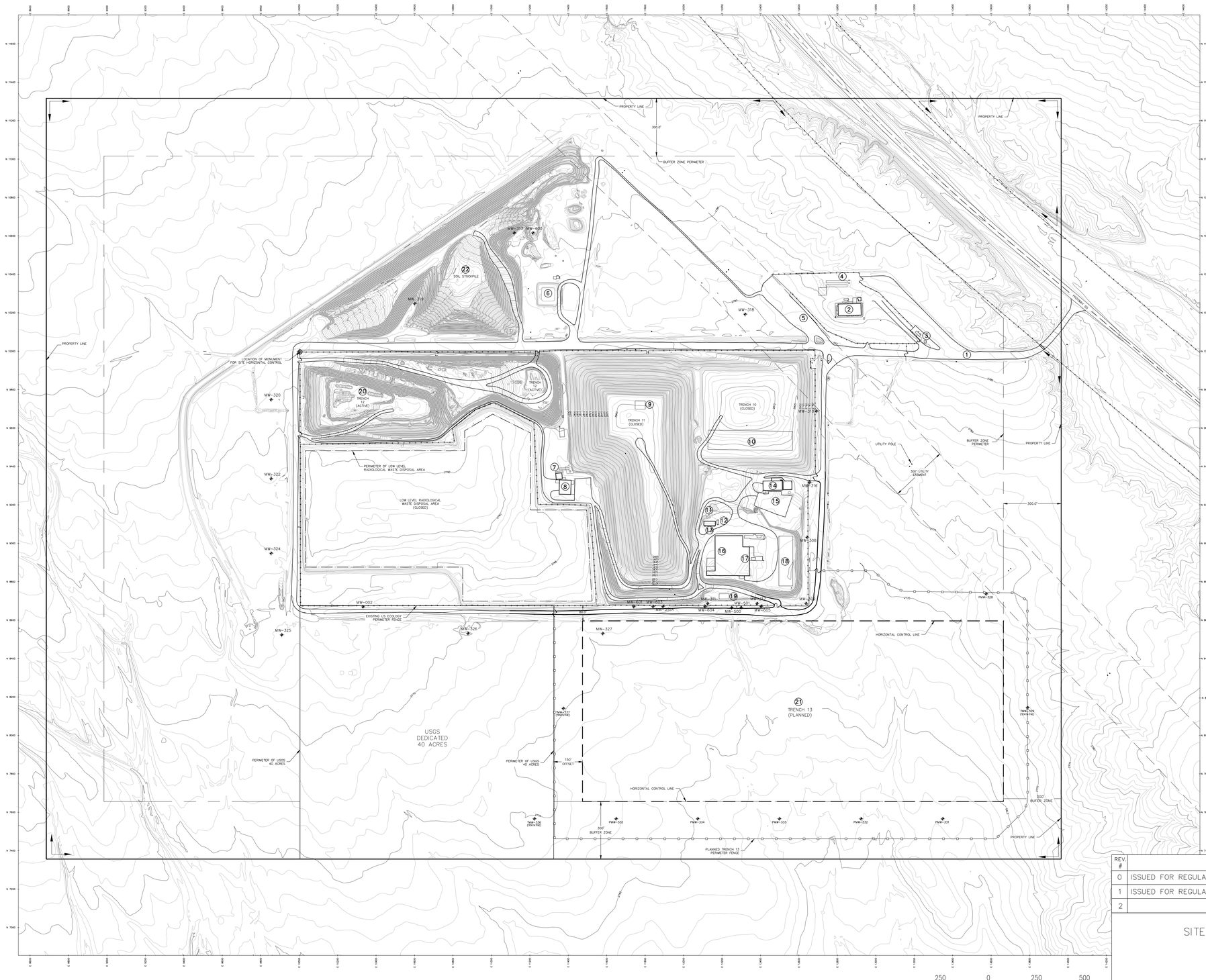




VICINITY MAP

20 10 0 20
SCALE MILES

INDEX OF DRAWINGS

| SHEET NUMBER | SHEET TITLE |
|---|---|
| NV13-15-001 | COVER SHEET |
| NV13-15-002 | SITE PLAN |
| NV13-15-003 | NORTHERN AND SOUTHERN HORIZONTAL CONTROL LINE |
| NV13-15-004 | WESTERN AND EASTERN HORIZONTAL CONTROL LINE |
| NV13-15-005 | SUBGRADE EXCAVATION 1 OF 2 |
| NV13-15-006 | SUBGRADE EXCAVATION 2 OF 2 |
| NV13-15-007 | SUBGRADE PROFILES |
| NV13-15-008 | LINER DETAILS |
| NV13-15-009 | LCRS AND LDS SUMP DETAILS 1 OF 2 |
| NV13-15-010 | LCRS AND LDS SUMP DETAILS 2 OF 2 |
| NV13-15-011 | FINAL WASTE GRADE PLAN VIEW |
| NV13-15-012 | FINAL COVER PLAN VIEW |
| NV13-15-013 | FINAL COVER PROFILES |
| NV13-15-014 | SURFACE WATER MANAGEMENT 1 OF 3 |
| NV13-15-015 | SURFACE WATER MANAGEMENT 2 OF 3 |
| NV13-15-016 | SURFACE WATER MANAGEMENT 3 OF 3 |
| NV13-15-017 | PHASE CONSTUCTION |
| NV13-15-018 | ABOVE-GRADE WASTE, PROTECTIVE BERM, AND FINAL COVER PLACEMENT |
| NV13-15-019 | FINAL COVER DETAILS |




1. MAIN SITE ENTRANCE
2. ADMINISTRATION OFFICE AND LABORATORY
3. SECURITY AND DRIVERS TRAILER
4. INBOUND AND OUTBOUND SCALES
5. PROFILING STATION
6. WATER STORAGE
7. FUEL STORAGE
8. MAINTENANCE SHOP
9. WEATHER STATION AND TRENCH 11 LYSIMETER
10. DRY HAZARDOUS WASTE STORAGE AREA 3
11. OUTDOOR TREATMENT PANS
12. REAGENT STORAGE SILOS
13. OPERATIONS OFFICE
14. PCB PROCESSING AREA AND STORAGE/PCB TANK FARM
15. REAGENT SOLIDS STORAGE
16. CONTAINER MANAGEMENT AND STORAGE BUILDING
17. INDOOR TREATMENT PANS
18. DRY HAZARDOUS WASTE STORAGE AREA 2
19. EVAPORATION TANK (TRUCK WASH PAD)
20. TRENCH 12 (ACTIVE)
21. TRENCH 13 (PLANNED)
22. SOIL STOCKPILE (SEE NOTE 6)

MW-316 EXISTING MONITORING WELL LOCATION

PMW-328 PLANNED MONITORING WELL LOCATION

TMW-328 TENTATIVELY PLANNED MONITORING WELL LOCATION

APPROXIMATE RADIOLOGICAL WASTE DISPOSAL PERIMETER

BUFFER ZONE PERIMETER

PROPERTY LINE

EXISTING FENCE

INTERNAL ROADWAYS

GATE

TRENCH 13 HORIZONTAL CONTROL LINE (LIMIT OF WASTE, SEE NOTE 5)

PLANNED TRENCH 13 PERIMETER FENCE

UTILITY POLE

TORTOISE FENCE FOLLOWS PROPERTY LINE OR US HIGHWAY 95 R.O.W. FENCE LINE BETWEEN DESIGNATED SYMBOLS

NOTES:

1. DATE OF AERIAL TOPOGRAPHY: 2014
2. HORIZONTAL CONTROL: SITE CORRDINATE SYSTEM
3. MONUMENT COORDINATES: 10,000 N – 10,000 E
4. ELEVATION: FEET (NORTH AMERICAN VERTICAL DATUM 1988)
5. THE HORIZONTAL CONTROL LINE IS THE FINAL HORIZONTAL LIMIT OF WASTE PLACEMENT FOR ALL PHASES OF TRENCH 13.
6. ADDITIONAL STOCKPILE LOCATIONS SHALL BE PROPOSED TO NDEP PRIOR TO EACH OF PHASE OF LANDFILL DEVELOPMENT

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SITE PLAN

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

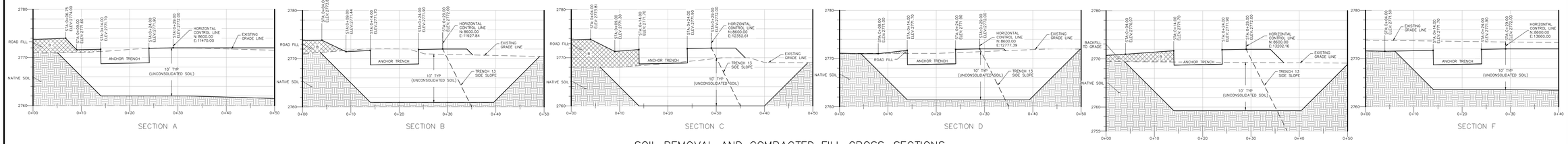
AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | |
|---|---|---|---|---|---|---|---|
| CWK | 1/27/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 250' | DRAWING NO: NV13-15-002 |

## NORTHERN HORIZONTAL CONTROL LINE PLAN VIEW

80 0 80 160

SCALE: 1"=80'




## SOIL REMOVAL AND COMPACTED FILL CROSS-SECTIONS NORTHERN HCL

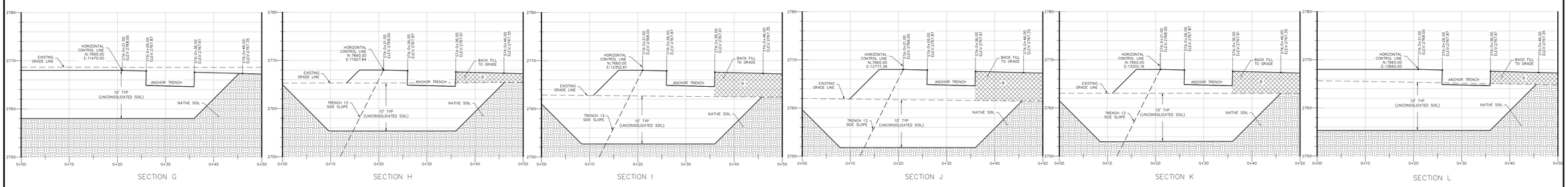
10 0 10 20

SCALE: 1"=10'

## SOUTHERN HORIZONTAL CONTROL LINE PLAN VIEW

80 0 80 160

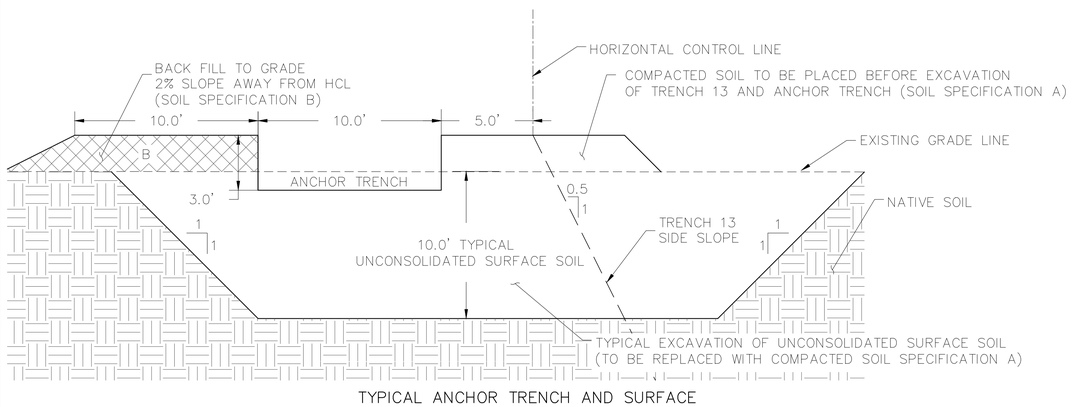
SCALE: 1"=80'




## SOIL REMOVAL AND COMPACTED FILL CROSS-SECTIONS SOUTHERN HCL

10 0 10 20

SCALE: 1"=10'




## TYPICAL ANCHOR TRENCH AND SURFACE SOIL REMOVAL/COMPACTED FILL DETAIL.

(N.T.S.)

NOTES:

1. LIMITS OF SURFACE SOIL REMOVAL AND REPLACEMENT ARE SHOWN AT A NOMINAL DEPTH OF 10 FEET BELOW EXISITNG GRADE. ACTUAL EXCAVATION DEPTH AND PLACEMENT OF COMPACTED FILL SHALL BE DETERMINED BY SITE-SPECIFIC CONDITIONS.
2. REMOVAL AND REPLACEMENT OF UNCONSOLIDATED SURFACE SOIL MUST INCLUDE SOIL BENEATH THE ANCHOR TRENCH EXTENDING THROUGH SOIL THAT WILL BECOME THE TRENCH 13 SIDEWALL.
3. HORIZONTAL CONTROL LINE (HCL) IS THE FINAL HORIZONTAL LIMIT OF WASTE PLACEMENT FOR ALL PHASES OF TRENCH 13
4. COMPACTED SOIL PLACED ABOVE "EXISTING GRADE LINE" IS A LEVELING BERM AT AN ELEVATION OF 2772 FEET ALONG THE NORTHERN HCL, AN ELEVATION OF 2768 ALONG THE SOUTHERN HCL, AND A CONNECTING SURFACE ALONG THE EASTERN AND WESTERN HCL.
5. ASSUME SOIL SPECIFICATION A FOR FOR COMPACTED SOIL PLACEMENT IF NOT LABELED OTHERWISE.
6. SOIL SPECIFICATION A: (SEE TRENCH 13 CQA PLAN)
7. SOIL SPECIFICATION B: (SEE TRENCH 13 CQA PLAN)

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

NORTHERN AND SOUTHERN HORIZONTAL CONTROL LINE

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013647

US ecology

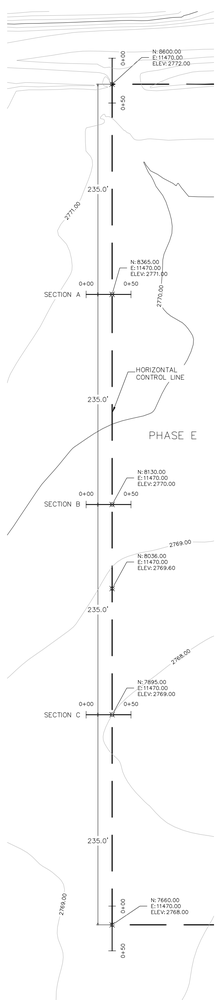
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRAWN BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 3/05/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES |

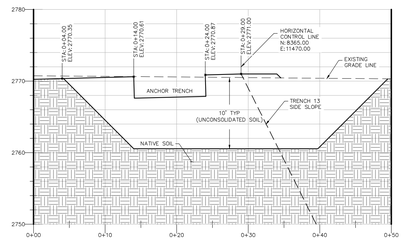
DRAWING NO: NV13-15-003



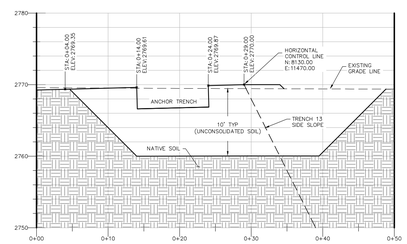

WESTERN HORIZONTAL CONTROL LINE PLAN VIEW

80 0 80 160

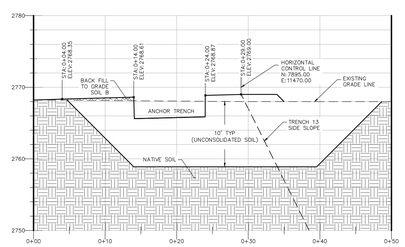
SCALE: 1"=80'




SECTION A




SECTION B

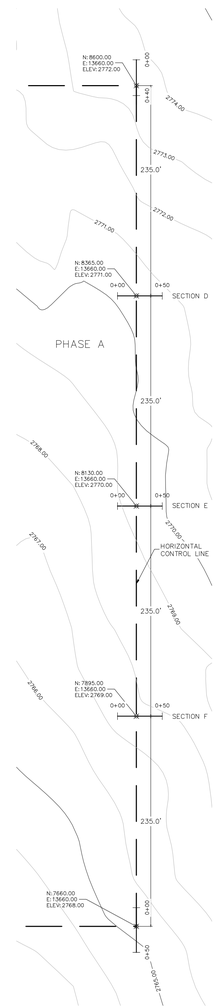



SECTION C

SOIL REMOVAL AND COMPACTED FILL CROSS-SECTIONS
WESTERN HCL

10 0 10 20

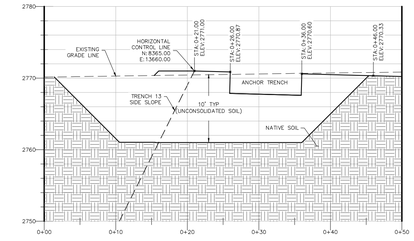
SCALE: 1"=10'



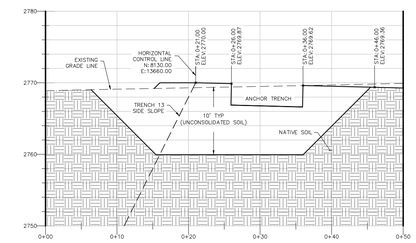

EASTERN HORIZONTAL CONTROL LINE PLAN VIEW

80 0 80 160

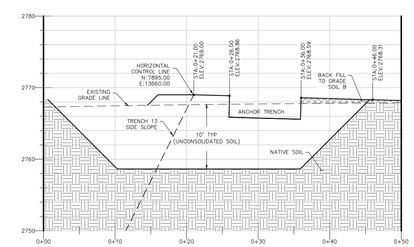
SCALE: 1"=80'




SECTION D




SECTION E




SECTION F

SOIL REMOVAL AND COMPACTED FILL CROSS-SECTIONS
EASTERN HCL

10 0 10 20

SCALE: 1"=10'

NOTES:

1. LIMITS OF SURFACE SOIL REMOVAL AND REPLACEMENT ARE SHOWN AT A NOMINAL DEPTH OF 10 FEET BELOW EXISITNG GRADE. ACTUAL EXCAVATION DEPTH AND PLACEMENT OF COMPACTED FILL SHALL BE DETERMINED BY SITE-SPECIFIC CONDITIONS.
2. REMOVAL AND REPLACEMENT OF UNCONSOLIDATED SURFACE SOIL MUST INCLUDE SOIL BENEATH THE ANCHOR TRENCH EXTENDING THROUGH SOIL THAT WILL BECOME THE TRENCH 13 SIDEWALL.
3. HORIZONTAL CONTROL LINE (HCL) IS THE FINAL HORIZONTAL LIMIT OF WASTE PLACEMENT FOR ALL PHASES OF TRENCH 13
4. COMPACTED SOIL PLACED ABOVE "EXISTING GRADE LINE" IS A LEVELING BERM AT AN ELEVATION OF 2772 FEET ALONG THE NORTHERN HCL, AN ELEVATION OF 2768 ALONG THE SOUTHERN HCL, AND A CONNECTING SURFACE ALONG THE EASTERN AND WESTERN HCL.
5. ASSUME SOIL SPECIFICATION A FOR FOR COMPACTED SOIL PLACEMENT IF NOT LABELED OTHERWISE.
6. SOIL SPECIFICATION A: (SEE TRENCH 13 CQA PLAN)
7. SOIL SPECIFICATION B: (SEE TRENCH 13 CQA PLAN)

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

WESTERN AND EASTERN HORIZONTAL CONTROL LINE

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

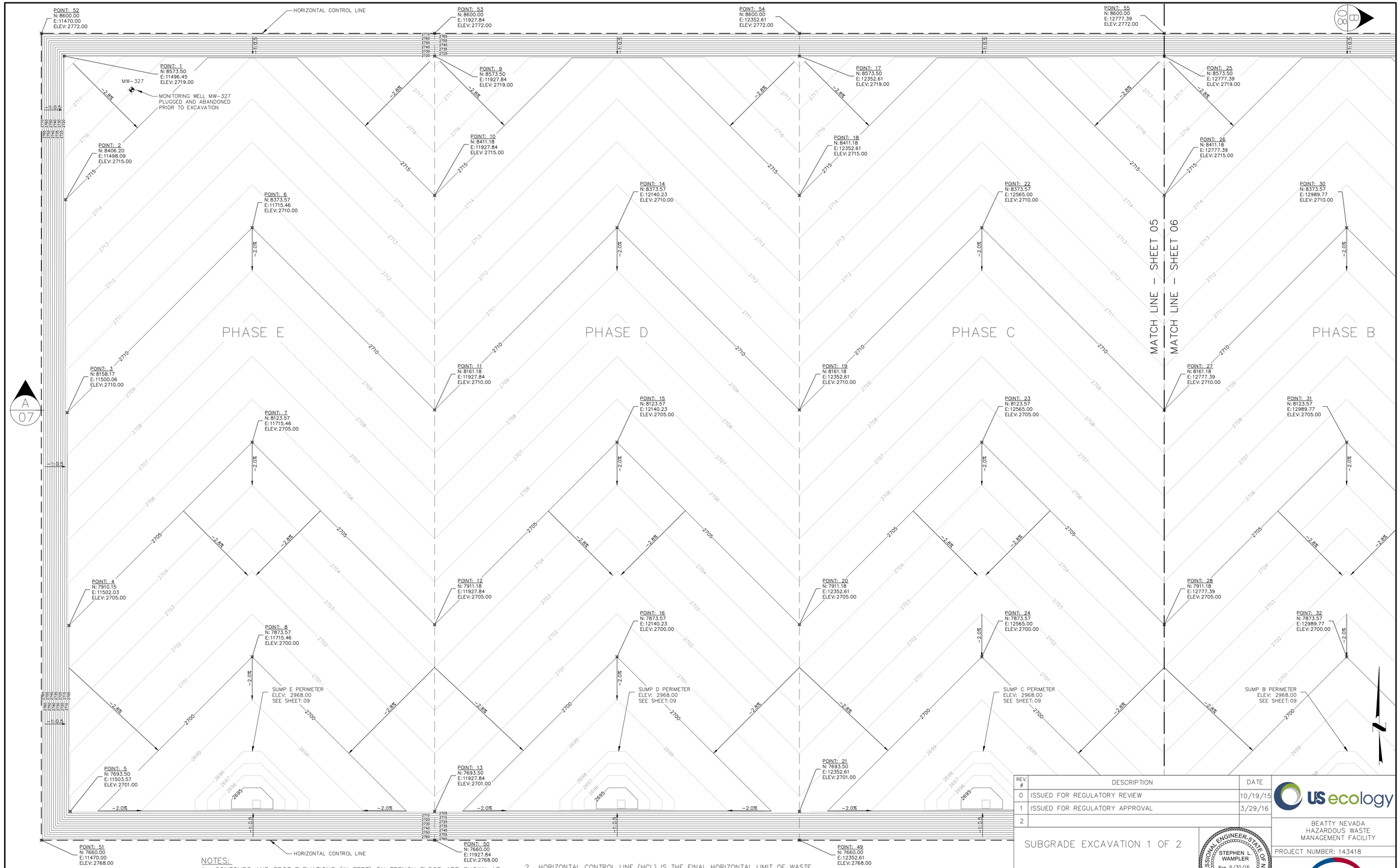
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRAWN BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 3/05/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES | NV13-15-004 |




PLUGGED AND ABANDONED MONITORING WELL

2719 MINOR CONTOUR

2720 MAJOR CONTOUR

*PLEASE REFERENCE SHEET 06 FOR SURVEY CONTROL POINT TABLE

NOTES:

1. CONTOURS AND SPOT ELEVATIONS (IN FEET) ON TRENCH FLOOR ARE SHOWN AT TOP OF PREPARED SUBGRADE, BEFORE THE PLACEMENT OF THE TRENCH 13 LINER SYSTEM AND AFTER THE PLACEMENT OF PREPARED SUBGRADE. AS SPECIFIED IN THE DESIGN REPORT FOR TRENCH 13, A MINIMUM OF 9 INCHES OF COMPACTED FINE-GRAINED MATERIAL IS PLACED OVER THE ENTIRE FLOOR OF TRENCH 13 TO COMPRISE THE PREPARED SUBGRADE. SEE SHEET 09 FOR SPECIFICATIONS FOR SUMP AREAS.
2. HORIZONTAL CONTROL LINE (HCL) IS THE FINAL HORIZONTAL LIMIT OF WASTE PLACEMENT FOR ALL PHASES OF TRENCH 13.
3. ALL SUBGRADE EXCAVATION SIDE-SLOPES ARE AT 1:0.5 (VERTICAL:HORIZONTAL).
4. THE MINIMUM BOTTOM SLOPE TO ALL SUMPS OF TRENCH 13 IS 2%.
5. RUN ON CONTROL FOR ALL PHASES OF CONSTRUCTION OF TRENCH 13 IS PROVIDED IN THE SURFACE WATER MANAGEMENT PLAN ON SHEETS 14 AND 15.
6. SEE DETAILS 12 AND 13 ON SHEET 10 FOR LCRS CENTERLINE AND LATERAL PIPES.

ELEVATIONS: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSYEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SUBGRADE EXCAVATION 1 OF 2

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

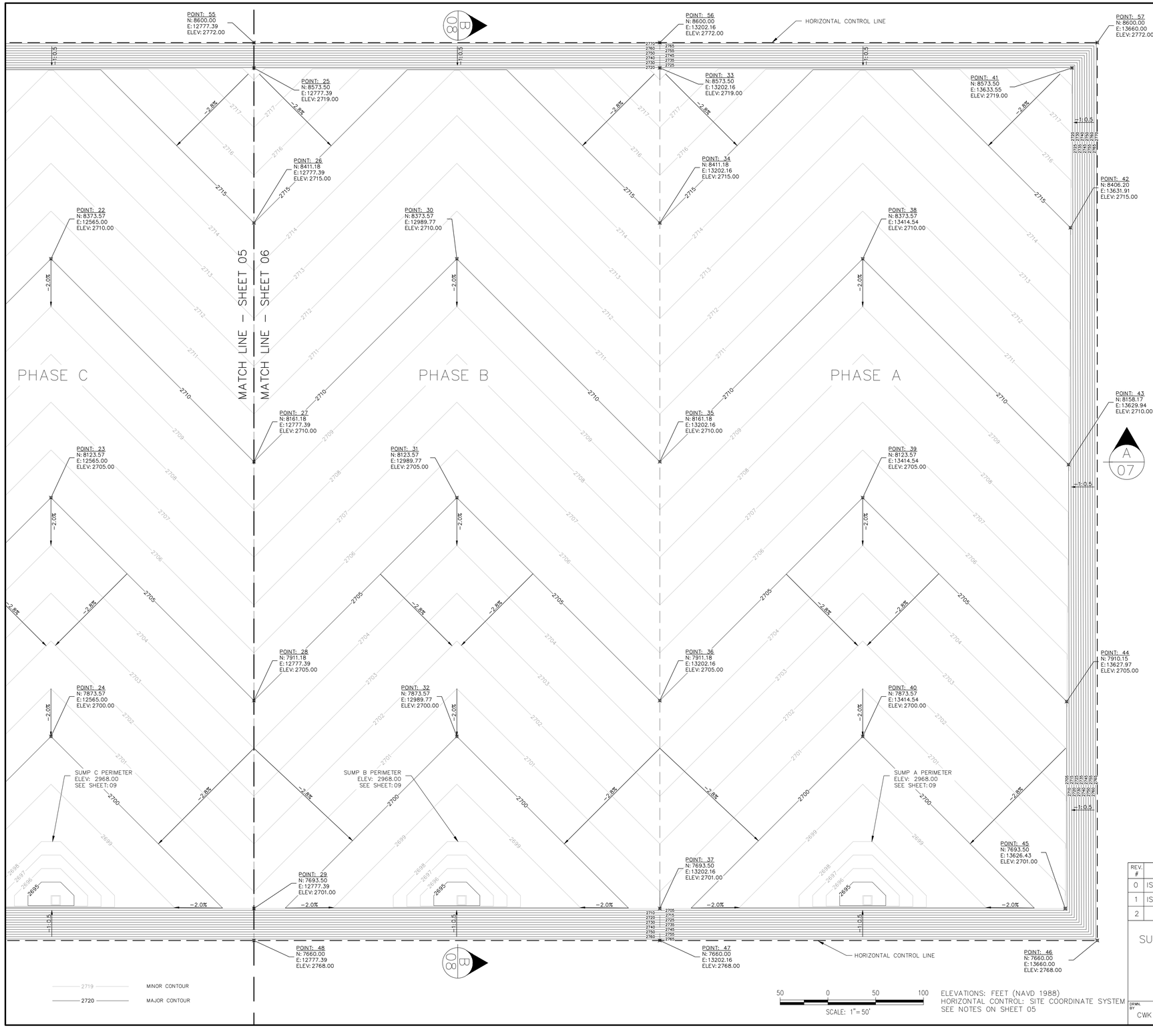
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquaeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/04/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 50' |

DRAWING NO: NV13-15-005




ELEVATIONS: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM
SEE NOTES ON SHEET 05

## Point Table

| Point # | Northing | Easting | Elevation |
|---|---|---|---|
| 1 | 8573.50 | 11496.45 | 2719.00 |
| 2 | 8406.20 | 11498.09 | 2715.00 |
| 3 | 8158.17 | 11500.06 | 2710.00 |
| 4 | 7910.15 | 11502.03 | 2705.00 |
| 5 | 7693.50 | 11503.57 | 2701.00 |
| 6 | 8373.57 | 11715.46 | 2710.00 |
| 7 | 8123.57 | 11715.46 | 2705.00 |
| 8 | 7873.57 | 11715.46 | 2700.00 |
| 9 | 8573.50 | 11927.84 | 2719.00 |
| 10 | 8411.18 | 11927.84 | 2715.00 |
| 11 | 8161.18 | 11927.84 | 2710.00 |
| 12 | 7911.18 | 11927.84 | 2705.00 |
| 13 | 7693.50 | 11927.84 | 2701.00 |
| 14 | 8373.57 | 12140.23 | 2710.00 |
| 15 | 8123.57 | 12140.23 | 2705.00 |
| 16 | 7873.57 | 12140.23 | 2700.00 |
| 17 | 8573.50 | 12352.61 | 2719.00 |
| 18 | 8411.18 | 12352.61 | 2715.00 |
| 19 | 8161.18 | 12352.61 | 2710.00 |
| 20 | 7911.18 | 12352.61 | 2705.00 |
| 21 | 7693.50 | 12352.61 | 2701.00 |
| 22 | 8373.57 | 12565.00 | 2710.00 |
| 23 | 8123.57 | 12565.00 | 2705.00 |
| 24 | 7873.57 | 12565.00 | 2700.00 |
| 25 | 8573.50 | 12777.39 | 2719.00 |
| 26 | 8411.18 | 12777.39 | 2715.00 |
| 27 | 8161.18 | 12777.39 | 2710.00 |
| 28 | 7911.18 | 12777.39 | 2705.00 |
| 29 | 7693.50 | 12777.39 | 2701.00 |
| 30 | 8373.57 | 12989.77 | 2710.00 |
| 31 | 8123.57 | 12989.77 | 2705.00 |
| 32 | 7873.57 | 12989.77 | 2700.00 |
| 33 | 8573.50 | 13202.16 | 2719.00 |
| 34 | 8411.18 | 13202.16 | 2715.00 |
| 35 | 8161.18 | 13202.16 | 2710.00 |
| 36 | 7911.18 | 13202.16 | 2705.00 |
| 37 | 7693.50 | 13202.16 | 2701.00 |
| 38 | 8373.57 | 13414.54 | 2710.00 |
| 39 | 8123.57 | 13414.54 | 2705.00 |
| 40 | 7873.57 | 13414.54 | 2700.00 |
| 41 | 8573.50 | 13633.55 | 2719.00 |
| 42 | 8406.20 | 13631.91 | 2715.00 |
| 43 | 8158.17 | 13629.94 | 2710.00 |
| 44 | 7910.15 | 13627.97 | 2705.00 |
| 45 | 7693.50 | 13626.43 | 2701.00 |
| 46 | 7660.00 | 13660.00 | 2768.00 |
| 47 | 7660.00 | 13202.16 | 2768.00 |
| 48 | 7660.00 | 12777.39 | 2768.00 |
| 49 | 7660.00 | 12352.61 | 2768.00 |
| 50 | 7660.00 | 11927.84 | 2768.00 |
| 51 | 7660.00 | 11470.00 | 2768.00 |
| 52 | 8600.00 | 11470.00 | 2772.00 |
| 53 | 8600.00 | 11927.84 | 2772.00 |
| 54 | 8600.00 | 12352.61 | 2772.00 |
| 55 | 8600.00 | 12777.39 | 2772.00 |
| 56 | 8600.00 | 13202.16 | 2772.00 |
| 57 | 8600.00 | 13660.00 | 2772.00 |

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SUBGRADE EXCAVATION 2 OF 2

PROFESSIONAL ENGINEER - STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

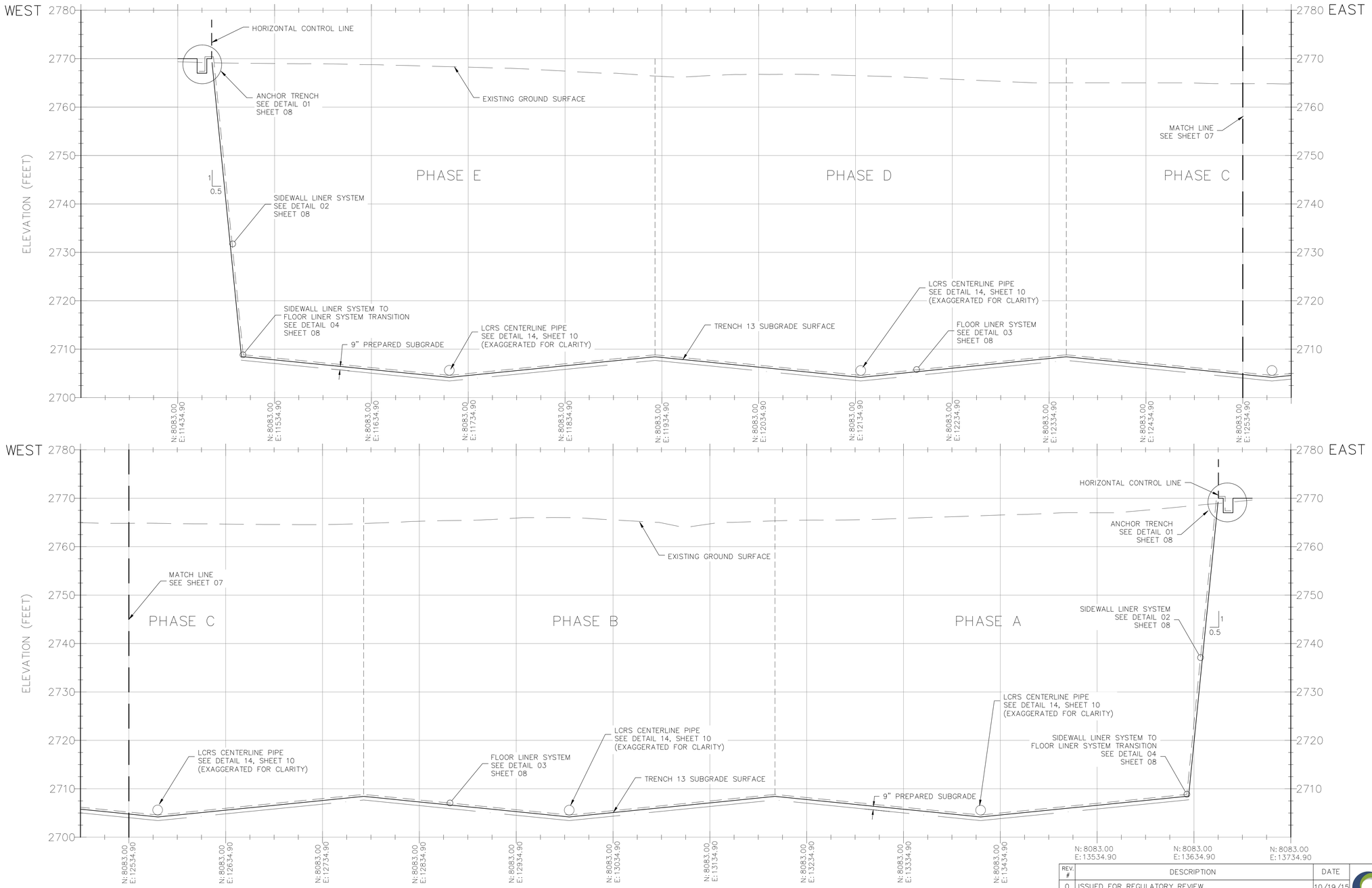
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/04/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 50' |

DRAWING NO: NV13-15-006




(A) WEST TO EAST PROFILE VIEW OF TRENCH 13 SUBGRADE

(VERTICAL EXAGGERATION OF 5X FOR CLARITY)

50 0 50 100

SCALE: 1"=50'

ELEVATIONS: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SUBGRADE PROFILES

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/25/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 50' |

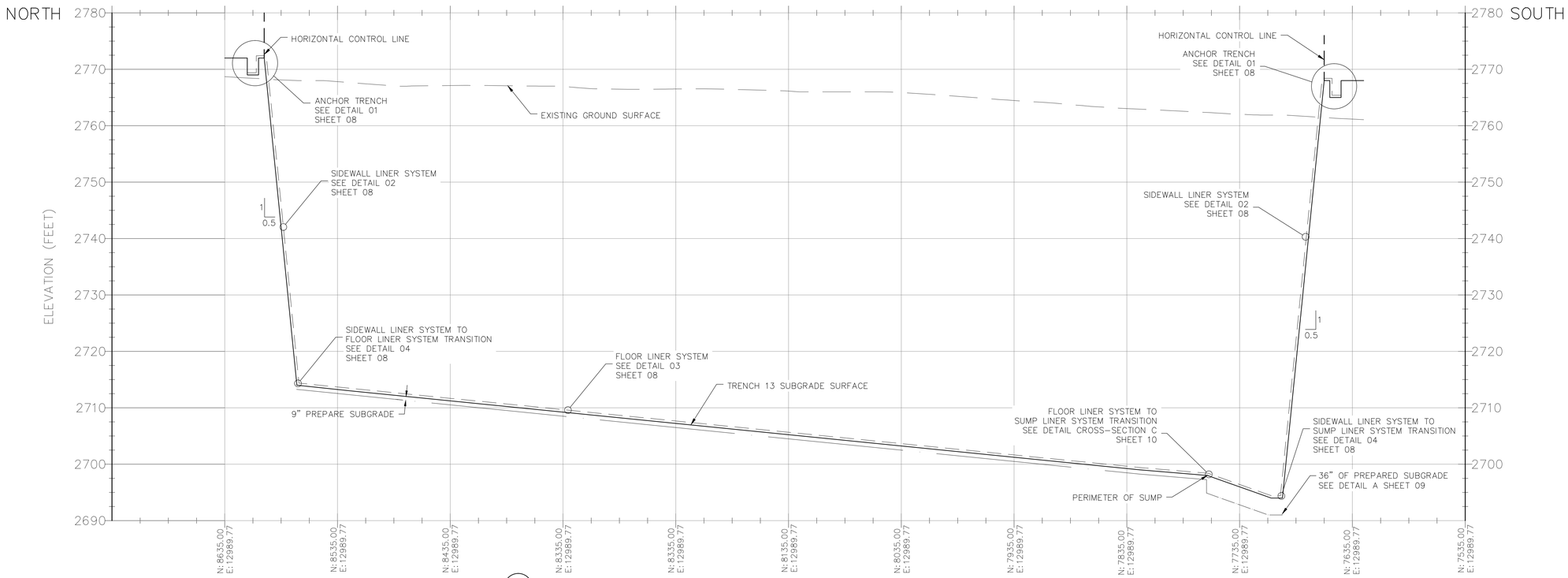
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquaTer
optimizing resources | water, air, earth

DRAWING NO: NV13-15-007

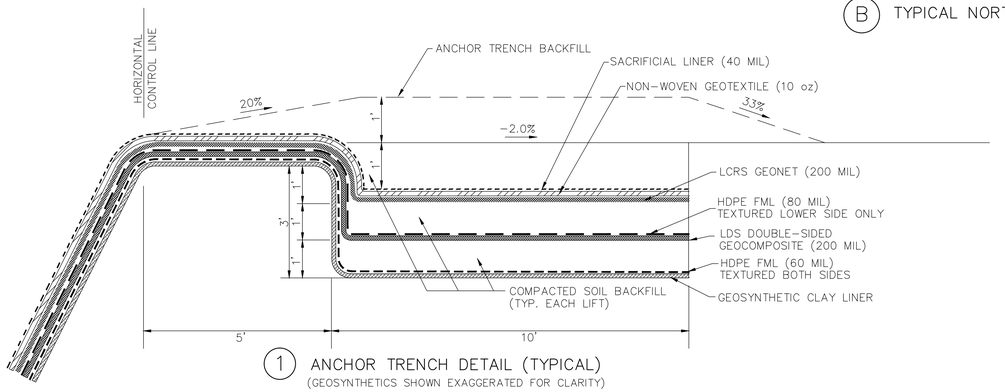



B TYPICAL NORTH TO SOUTH PROFILE VIEW OF TRENCH 13 SUBGRADE AT PHASE CENTERLINE

(VERTICAL EXAGGERATION OF 5X FOR CLARITY)

50 0 50 100

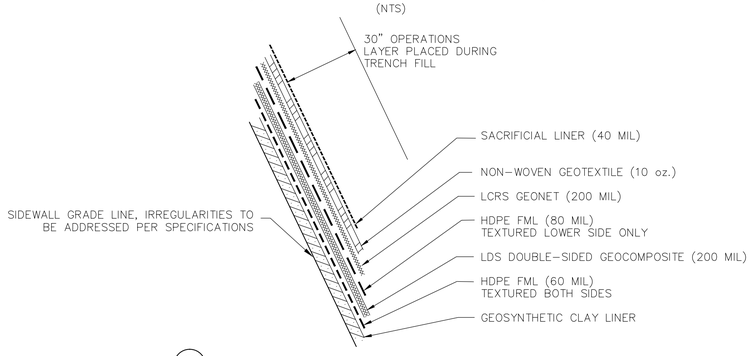
SCALE: 1"=50'




1 ANCHOR TRENCH DETAIL (TYPICAL)

(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)

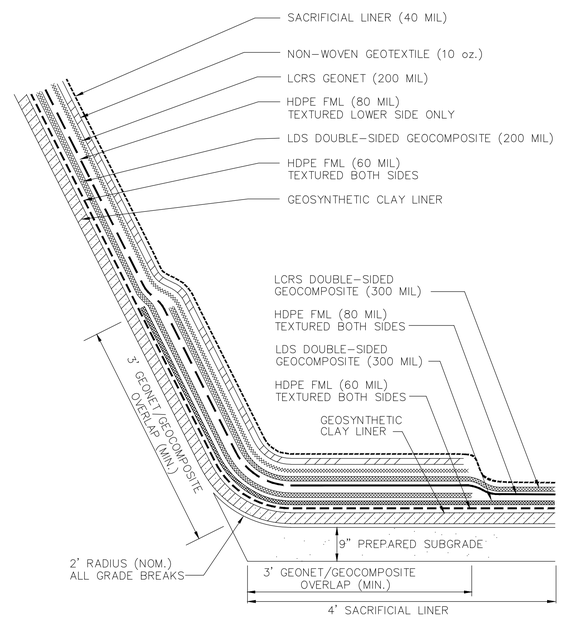
(NTS)




2 SIDEWALL LINER SYSTEM (TYPICAL)

(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)

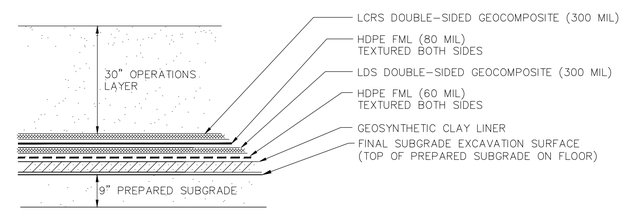
(NTS)




4 SIDEWALL LINER SYSTEM TO FLOOR LINER SYSTEM TRANSITION (TYPICAL)

(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)

(NTS)




3 FLOOR LINER SYSTEM (TYPICAL)

(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)

(NTS)

ELEVATIONS: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

LINER DETAILS

PROFESSIONAL ENGINEER - STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

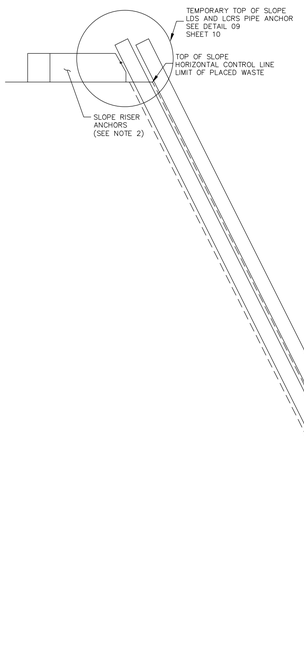
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

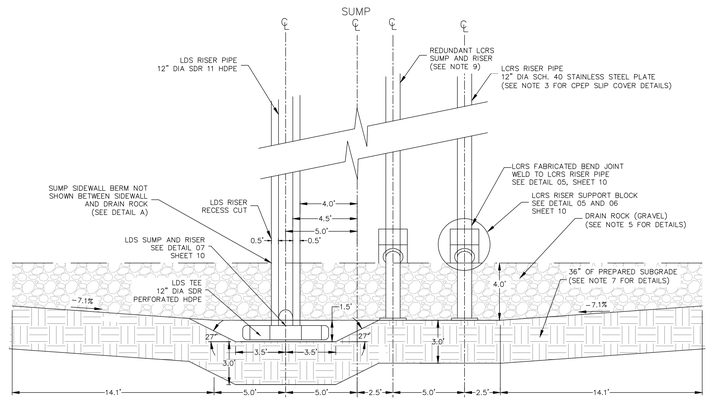
PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/25/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES |

DRAWING NO: NV13-15-008



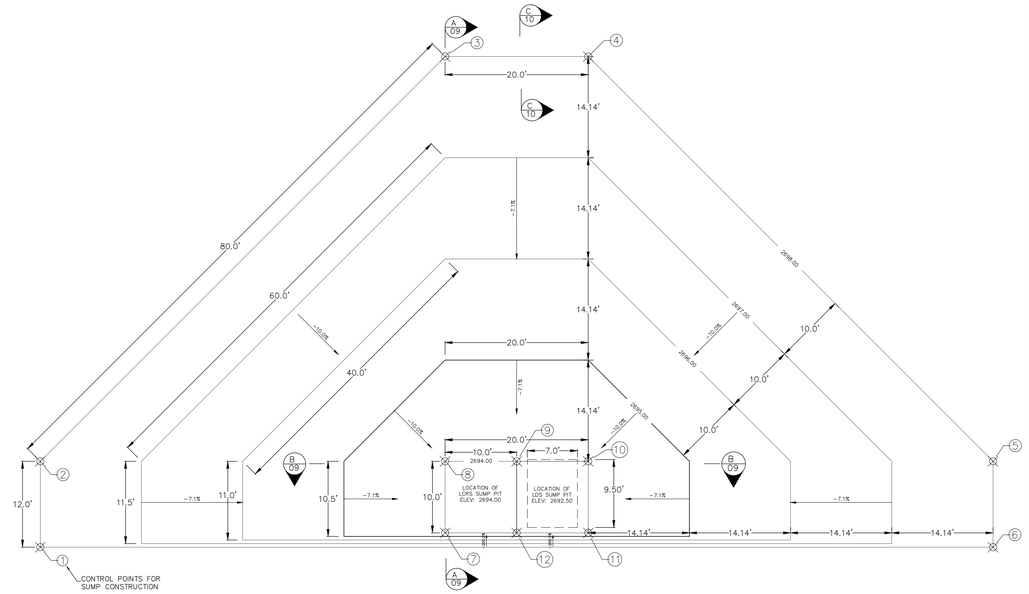




B TYPICAL TRANSVERSE SECTION OF SUMPS AND RISERS

(GEOSYNTHETICS NOT SHOWN FOR CLARITY)

5 0 5 10

SCALE: 1"=5'




TYPICAL SUMP PLAN VIEW

(SEE CROSS-SECTIONS AND DETAILS FOR LCRS AND LDS RISER SPECIFICATIONS)

10 0 10 20

SCALE: 1"=10'

SUMP CONTROL POINTS – PHASE E

| Point Number | Elevation | Northing | Easting |
|---|---|---|---|
| POINT 1 | 2698.00 | 7695.00 | 11648.89 |
| POINT 2 | 2698.00 | 7707.00 | 11648.89 |
| POINT 3 | 2698.00 | 7763.57 | 11705.46 |
| POINT 4 | 2698.00 | 7763.57 | 11725.46 |
| POINT 5 | 2698.00 | 7707.00 | 11782.03 |
| POINT 6 | 2698.00 | 7695.00 | 11782.03 |
| POINT 7 | 2694.00 | 7697.00 | 11705.46 |
| POINT 8 | 2694.00 | 7707.00 | 11705.46 |
| POINT 9 | 2694.00 | 7707.00 | 11715.46 |
| POINT 10 | 2694.00 | 7707.00 | 11725.46 |
| POINT 11 | 2694.00 | 7697.00 | 11725.46 |
| POINT 12 | 2694.00 | 7697.00 | 11715.46 |

SUMP CONTROL POINTS – PHASE D

| Point Number | Elevation | Northing | Easting |
|---|---|---|---|
| POINT 1 | 2698.00 | 7695.00 | 12073.66 |
| POINT 2 | 2698.00 | 7707.00 | 12073.66 |
| POINT 3 | 2698.00 | 7763.57 | 12130.23 |
| POINT 4 | 2698.00 | 7763.57 | 12150.23 |
| POINT 5 | 2698.00 | 7707.00 | 12206.80 |
| POINT 6 | 2698.00 | 7695.00 | 12206.80 |
| POINT 7 | 2694.00 | 7697.00 | 12130.23 |
| POINT 8 | 2694.00 | 7707.00 | 12130.23 |
| POINT 9 | 2694.00 | 7707.00 | 12140.23 |
| POINT 10 | 2694.00 | 7707.00 | 12150.23 |
| POINT 11 | 2694.00 | 7697.00 | 12150.23 |
| POINT 12 | 2694.00 | 7697.00 | 12140.23 |

SUMP CONTROL POINTS – PHASE C

| Point Number | Elevation | Northing | Easting |
|---|---|---|---|
| POINT 1 | 2698.00 | 7695.00 | 12498.43 |
| POINT 2 | 2698.00 | 7707.00 | 12498.43 |
| POINT 3 | 2698.00 | 7763.57 | 12555.00 |
| POINT 4 | 2698.00 | 7763.57 | 12575.00 |
| POINT 5 | 2698.00 | 7707.00 | 12631.57 |
| POINT 6 | 2698.00 | 7695.00 | 12631.57 |
| POINT 7 | 2694.00 | 7697.00 | 12555.00 |
| POINT 8 | 2694.00 | 7707.00 | 12555.00 |
| POINT 9 | 2694.00 | 7707.00 | 12565.00 |
| POINT 10 | 2694.00 | 7707.00 | 12575.00 |
| POINT 11 | 2694.00 | 7697.00 | 12575.00 |
| POINT 12 | 2694.00 | 7697.00 | 12565.00 |

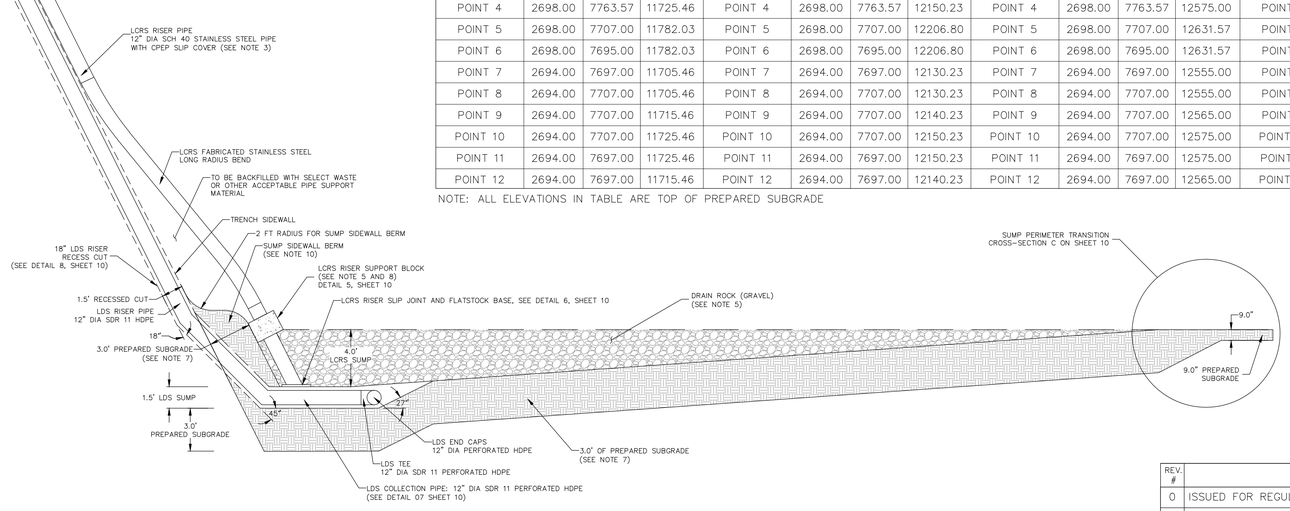
SUMP CONTROL POINTS – PHASE B

| Point Number | Elevation | Northing | Easting |
|---|---|---|---|
| POINT 1 | 2698.00 | 7695.00 | 12923.20 |
| POINT 2 | 2698.00 | 7707.00 | 12923.20 |
| POINT 3 | 2698.00 | 7763.57 | 12979.77 |
| POINT 4 | 2698.00 | 7763.57 | 12999.77 |
| POINT 5 | 2698.00 | 7707.00 | 13056.34 |
| POINT 6 | 2698.00 | 7695.00 | 13056.34 |
| POINT 7 | 2694.00 | 7697.00 | 12979.77 |
| POINT 8 | 2694.00 | 7707.00 | 12979.77 |
| POINT 9 | 2694.00 | 7707.00 | 12989.77 |
| POINT 10 | 2694.00 | 7707.00 | 12999.77 |
| POINT 11 | 2694.00 | 7697.00 | 12999.77 |
| POINT 12 | 2694.00 | 7697.00 | 12989.77 |

SUMP CONTROL POINTS – PHASE A

| Point Number | Elevation | Northing | Easting |
|---|---|---|---|
| POINT 1 | 2698.00 | 7695.00 | 13347.98 |
| POINT 2 | 2698.00 | 7707.00 | 13347.98 |
| POINT 3 | 2698.00 | 7763.57 | 13404.54 |
| POINT 4 | 2698.00 | 7763.57 | 13424.54 |
| POINT 5 | 2698.00 | 7707.00 | 13481.11 |
| POINT 6 | 2698.00 | 7695.00 | 13481.11 |
| POINT 7 | 2694.00 | 7697.00 | 13404.54 |
| POINT 8 | 2694.00 | 7707.00 | 13404.54 |
| POINT 9 | 2694.00 | 7707.00 | 13414.54 |
| POINT 10 | 2694.00 | 7707.00 | 13424.54 |
| POINT 11 | 2694.00 | 7697.00 | 13424.54 |
| POINT 12 | 2694.00 | 7697.00 | 13414.54 |

NOTE: ALL ELEVATIONS IN TABLE ARE TOP OF PREPARED SUBGRADE




A TYPICAL LONGITUDINAL SECTION OF SUMPS AND RISERS

(GEOSYNTHETICS NOT SHOWN FOR CLARITY)

5 0 5 10

SCALE: 1"=5'

NOTES

1. CONTROL POINT LOCATIONS ARE DISPLAYED IN THE TYPICAL SUMP LAYOUT. PHASE-SPECIFIC NORTHINGS AND EASTINGS ARE PROVIDED IN THE TABLES ABOVE.
2. EXTEND 3 RISERS AND RELOCATE 3 SLOPE RISER ANCHORS TO ACCOMMODATE ABOVE-GRADE WASTE DISPOSAL
3. THE SLIP COVER IS SPLIT LONGITUDINALLY AND PLACED ON THE LCRS RISER TO PREVENT WASTE SETTLEMENT FROM TRANSFERRING LOADS TO THE LCRS RISER OR LINER SYSTEM. USE 10' SECTIONS OF CORRUGATED POLYETHYLENE (CPEP) PIPE (OR ACCEPTABLE ALTERNATIVE), CUT TO FIT AS NECESSARY, DO NOT JOIN ADJACENT SECTIONS.
4. IN THE LDS SUMP AREA ADD 3%-5% PORTLAND CEMENT (OR OTHER ACCEPTABLE MATERIAL) TO PREPARED SUBGRADE TO PROVIDE SUFFICIENT COHESION TO ALLOW SUMP CUT.
5. THE SUMP SHALL BE BACKFILLED WITH WELL-GRADED DRAIN ROCK, EXTENDED TO THE EXTERIOR PERIMETER OF THE SUMP. THIS GRAVEL SHALL ACT AS SUPPORT FOR THE LCRS RISER SYSTEM.
6. THE LCRS RISER SUPPORT BLOCK SHOULD BE CAST-IN-PLACE (SEE DETAIL 05, SHEET 10). THE RISER SUPPORT BLOCK SHALL BE PLACED 6 INCHES AWAY FROM THE SUMP SIDEWALL BERM OF TRENCH 13. THE LONG RADIUS ELBOW SHALL ACCOUNT FOR THE OFFSET SO THE UPPER PORTION OF THE LCRS RISER PIPE WILL SIT FLUSH AGAINST THE SIDEWALL. THE TOP AND BOTTOM OF THE RISER SUPPORT BLOCK SHALL BE CAST SO AS TO BE SQUARE WITH THE LCRS LONG RADIUS ELBOW.
7. THE ENTIRE SUMP AREA SHALL BE EXCAVATED 3.0 FEET BELOW THE SPECIFIED GRADE AND BACK FILLED WITH 3.0 FEET OF PREPARED SUBGRADE, DETAILED IN THE TRENCH 13 DESIGN REPORT, UNTIL SPECIFIED GRADE IS MET. PREPARED SUBGRADE WILL BE SOIL CEMENT IN CENTRAL SUMP AREA WHERE NEEDED, TO FACILITATE STEEP ANGLE OR VERTICAL CUTS IN THE PREPARED SUBGRADE.
8. LONG RADIUS ELBOW TO OFFSET RISER SUPPORT BLOCK 6 INCHES FROM SUMP SIDEWALL BERM AND LINER COMPONENTS. OFF-SET SPACE TO BE FILLED WITH DRAIN ROCK (GRAVEL) TO TOP OF RISER SUPPORT BLOCK.
9. THE SUMP WILL CONTAIN TWO LEACHATE COLLECTION AND REMOVAL SYSTEMS (LCRS), BOTH SYSTEMS WILL BE IDENTICAL IN DESIGN AND FABRICATION, AND WILL HAVE A 5.0 FOOT SEPARATION BETWEEN THE CENTERLINES OF BOTH RISER PIPES.
10. SUMP SIDEWALL BERM IS 3 FEET THICK (HORIZONTAL DIMENSION) AND EXTENDS ACROSS FULL WIDTH OF SUMP AT FOOT OF SIDEWALL. TOP ELEVATION OF BERM IS A CONSTANT 2698.00 (FT NAVD). VERTICAL THICKNESS REDUCES AS SUMP SHALLOWS LATERALLY. BERM IS SAME MATERIAL AS PREPARED SUBGRADE.

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

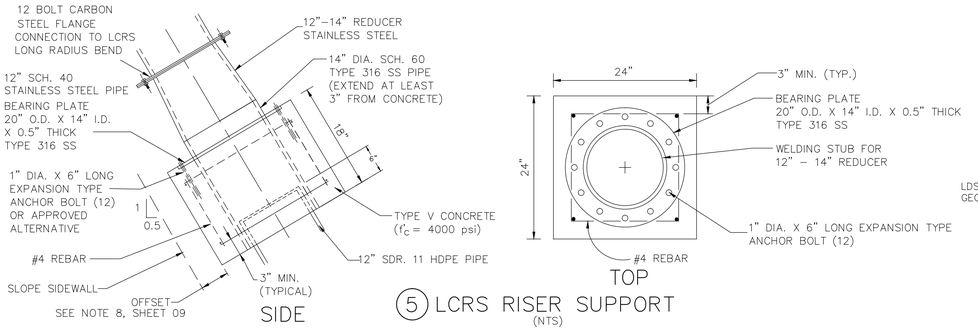
LCRS AND LDS SUMP DETAILS
1 OF 2

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

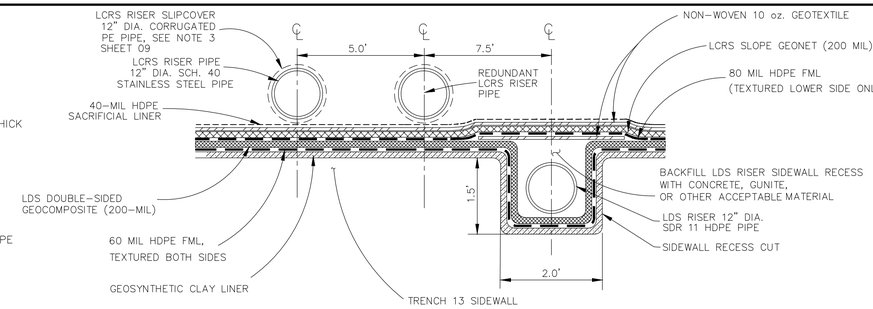
PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

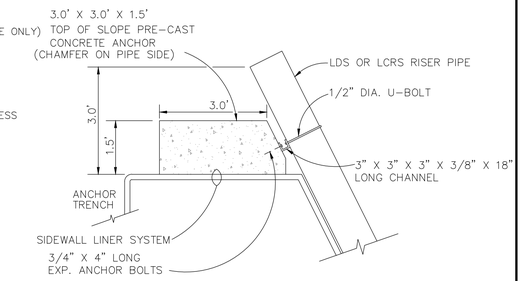
| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 2/13/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES | NV13-15-009 |



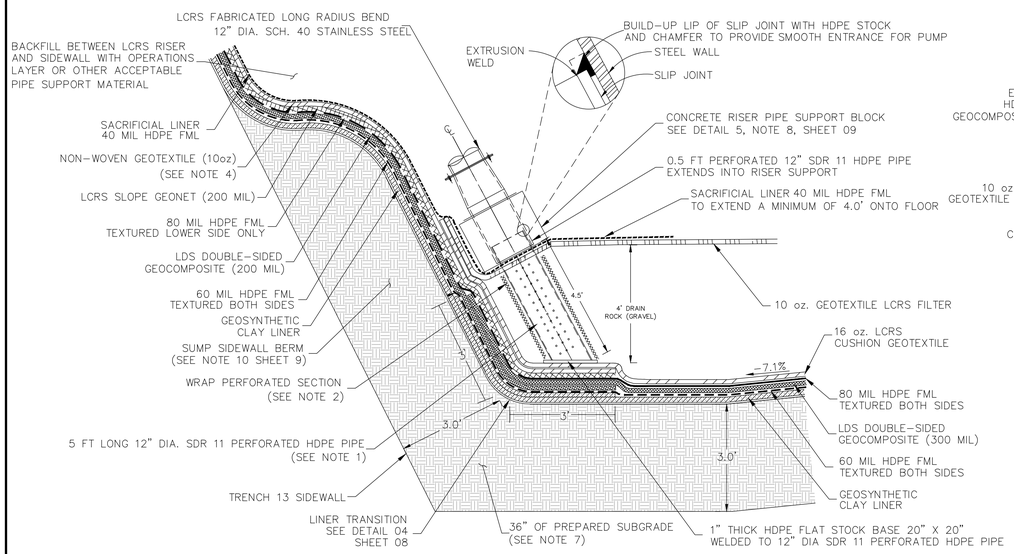

5 LCRS RISER SUPPORT
(NTS)



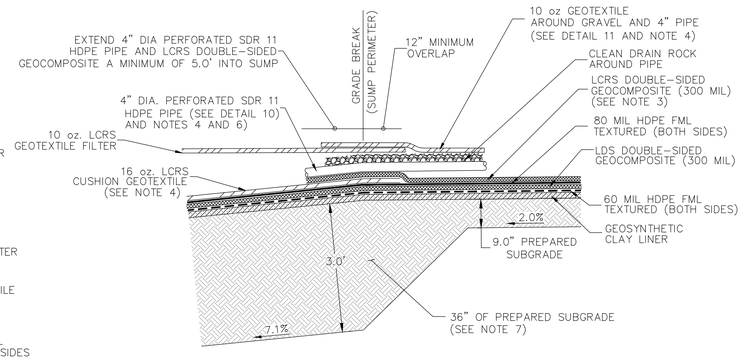

8 TYPICAL SIDEWALL CROSS-SECTION SHOWING RISERS AND RECESS
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY SEE SHEET 08 FOR DETAILED LEGEND)
(NTS)



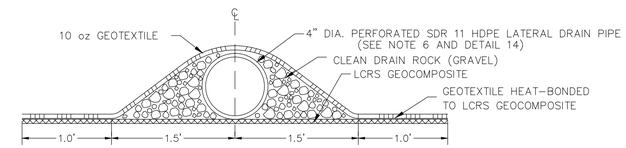

9 TYPICAL TOP OF SLOPE RISER ANCHOR
(GEOSYNTHETICS NOT SHOWN FOR CLARITY)
(NTS)



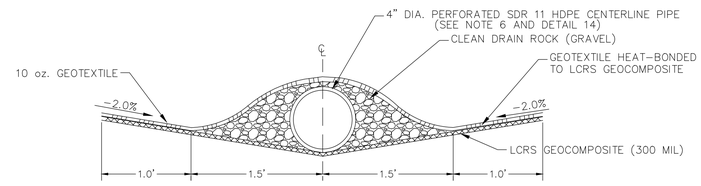

6 DETAIL OF LCRS SUMP PIT AND RISER
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)
(NTS)



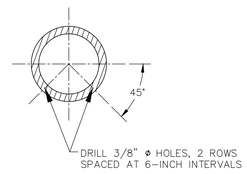

C DETAIL CROSS-SECTION AT SUMP PERIMETER
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)
(NTS)



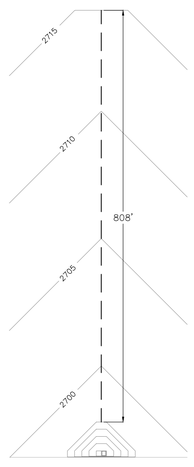

10 LATERAL PIPE CROSS-SECTION (TYP)
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)
(BASE LINER COMPONENTS NOT SHOWN, SEE DETAIL 3, SHEET 08)
(NTS)



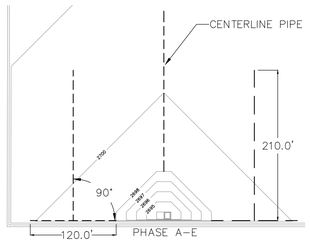

11 CENTERLINE PIPE CROSS-SECTION
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)
(BASE LINER COMPONENTS NOT SHOWN, SEE DETAIL 3, SHEET 08)
(NTS)



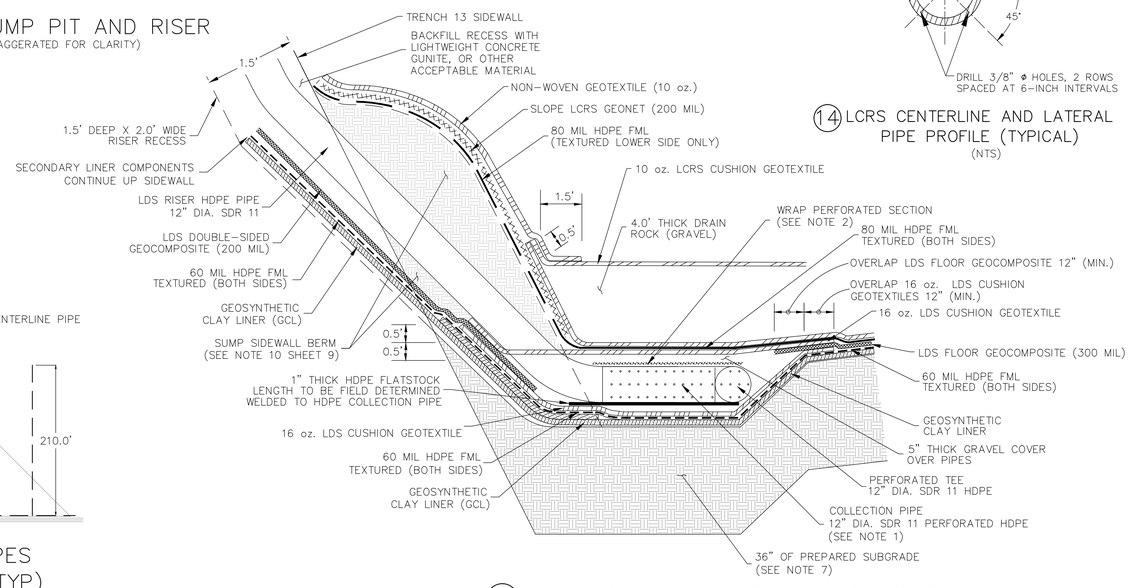

14 LCRS CENTERLINE AND LATERAL PIPE PROFILE (TYPICAL)
(NTS)




13 CENTERLINE PIPE PLAN VIEW (TYP)
(NTS)




12 LATERAL PIPES PLAN VIEW (TYP)
(NTS)




7 DETAIL OF LDS SUMP PIT AND RISER
(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)
(NTS)

NOTES:

1. PERFORATIONS ARE 6– 1/2" DIA. HOLES SPACED AT 60 DEGREES ; 24 HOLES PER FOOT. PIPE LENGTHS SHALL BE FIELD DETERMINED
2. DOUBLE LAYER OF GEONET AND SECURE WITH STAINLESS STEEL CLAMPS.
3. EXTEND LCRS GEOCOMPOSITE 12" (MIN.) INTO SUMP.
4. EXTEND 10 oz FILTER AND 16 oz. LCRS CUSHION GEOTEXTILES 12" (MIN.) PAST GRADE BREAK. HEAT BONDED 10oz FILTER AND 16oz LCRS GEOTEXTILE AT WALL AND SUMP EDGE
5. LCRS GEOCOMPOSITE ON TRENCH FLOOR = 300 MIL GEONET AND 8 oz. GEOTEXTILES
   LCRS GEOCOMPOSITE ON SIDEWALL = 200 MIL GEONET AND 8 oz. GEOTEXTILE
   LDS GEOCOMPOSITE ON TRENCH FLOOR = 300 MIL GEONET AND 8 oz. GEOTEXTILES
   LDS GEOCOMPOSITE ON SIDEWALL = 200 MIL GEONET and 6 oz. GEOTEXTILES
6. CENTERLINE PIPE AND LATERAL PIPES ARE 4" DIA PERFORATED SDR 11 HDPE WITH 2 – 3/8" HOLES SPACE AT 45 DEGREES DOWN FROM HORIZONTAL EVERY LINEAL FOOT. THE PIPES WILL BE COVERED WITH DRAIN ROCK (GRAVEL) 3 FEET IN WIDTH.
7. THE ENTIRE SUMP AREA SHALL BE EXCAVATED 3.0 FEET BELOW THE SPECIFIED GRADE AND BACK FILLED WITH 3.0 FEET OF PREPARED SUBGRADE, DETAILED IN THE TRENCH 13 DESIGN REPORT, UNTIL SPECIFIED GRADE IS MET. PREPARED SUBGRADE WILL BE SOIL CEMENT IN CENTRAL SUMP AREA WHERE NEEDED, TO FACILITATE STEEP ANGLE OR VERTICAL CUTS IN THE PREPARED SUBGRADE.

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

LCRS AND LDS SUMP DETAILS
2 OF 2

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

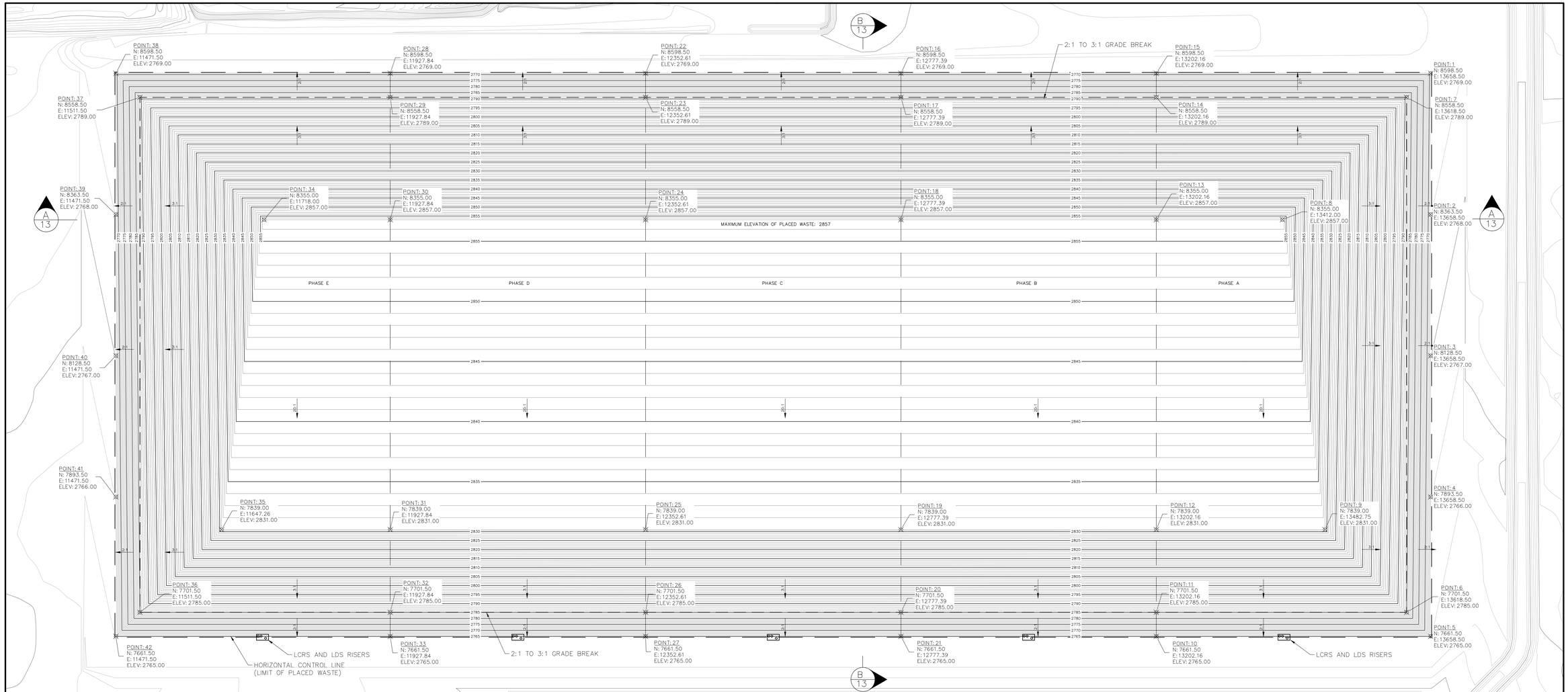
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRAWN BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 2/15/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES | NV13–15–010 |




| Point Table | | | |
|---|---|---|---|
| Point # | Northing | Easting | Elevation |
| 1 | 8598.50 | 13658.50 | 2769.00 |
| 2 | 8363.50 | 13658.50 | 2768.00 |
| 3 | 8128.50 | 13658.50 | 2767.00 |
| 4 | 7893.50 | 13658.50 | 2766.00 |
| 5 | 7661.50 | 13658.50 | 2765.00 |
| 6 | 7701.50 | 13618.50 | 2785.00 |
| 7 | 8558.50 | 13618.50 | 2789.00 |
| 8 | 8355.00 | 13412.00 | 2857.00 |
| 9 | 7839.00 | 13482.75 | 2831.00 |
| 10 | 7661.50 | 13202.16 | 2765.00 |
| 11 | 7701.50 | 13202.16 | 2785.00 |
| 12 | 7839.00 | 13202.16 | 2831.00 |
| 13 | 8355.00 | 13202.16 | 2857.00 |
| 14 | 8558.50 | 13202.16 | 2789.00 |
| 15 | 8598.50 | 13202.16 | 2769.00 |
| 16 | 8598.50 | 12777.39 | 2769.00 |
| 17 | 8558.50 | 12777.39 | 2789.00 |
| 18 | 8355.00 | 12777.39 | 2857.00 |
| 19 | 7839.00 | 12777.39 | 2831.00 |

| Point Table | | | |
|---|---|---|---|
| Point # | Northing | Easting | Elevation |
| 20 | 7701.50 | 12777.39 | 2785.00 |
| 21 | 7661.50 | 12777.39 | 2765.00 |
| 22 | 8598.50 | 12352.61 | 2769.00 |
| 23 | 8558.50 | 12352.61 | 2789.00 |
| 24 | 8355.00 | 12352.61 | 2857.00 |
| 25 | 7839.00 | 12352.61 | 2831.00 |
| 26 | 7701.50 | 12352.61 | 2785.00 |
| 27 | 7661.50 | 12352.61 | 2765.00 |
| 28 | 8598.50 | 11927.84 | 2769.00 |
| 29 | 8558.50 | 11927.84 | 2789.00 |
| 30 | 8355.00 | 11927.84 | 2857.00 |
| 31 | 7839.00 | 11927.84 | 2831.00 |
| 32 | 7701.50 | 11927.84 | 2785.00 |
| 33 | 7661.50 | 11927.84 | 2765.00 |
| 34 | 8355.00 | 11718.00 | 2857.00 |
| 35 | 7839.00 | 11647.26 | 2831.00 |
| 36 | 7701.50 | 11511.50 | 2785.00 |
| 37 | 8558.50 | 11511.50 | 2789.00 |
| 38 | 8598.50 | 11471.50 | 2769.00 |

| Point Table | | | |
|---|---|---|---|
| Point # | Northing | Easting | Elevation |
| 39 | 8363.50 | 11471.50 | 2768.00 |
| 40 | 8128.50 | 11471.50 | 2767.00 |
| 41 | 7893.50 | 11471.50 | 2766.00 |
| 42 | 7661.50 | 11471.50 | 2765.00 |

NOTES:

1. SEE SHEET 17 AND 18 FOR WASTE PLACEMENT FINAL COVER SEQUENCING
2. SITE FEATURES SUCH AS PROPERTY BOUNDARIES, ROADS, FENCES, AND MONITORING WELLS SHOWN ON SHEET 12

80 0 80 160

SCALE: 1"= 80'

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

FINAL WASTE GRADE PLAN VIEW

PROFESSIONAL ENGINEER - STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

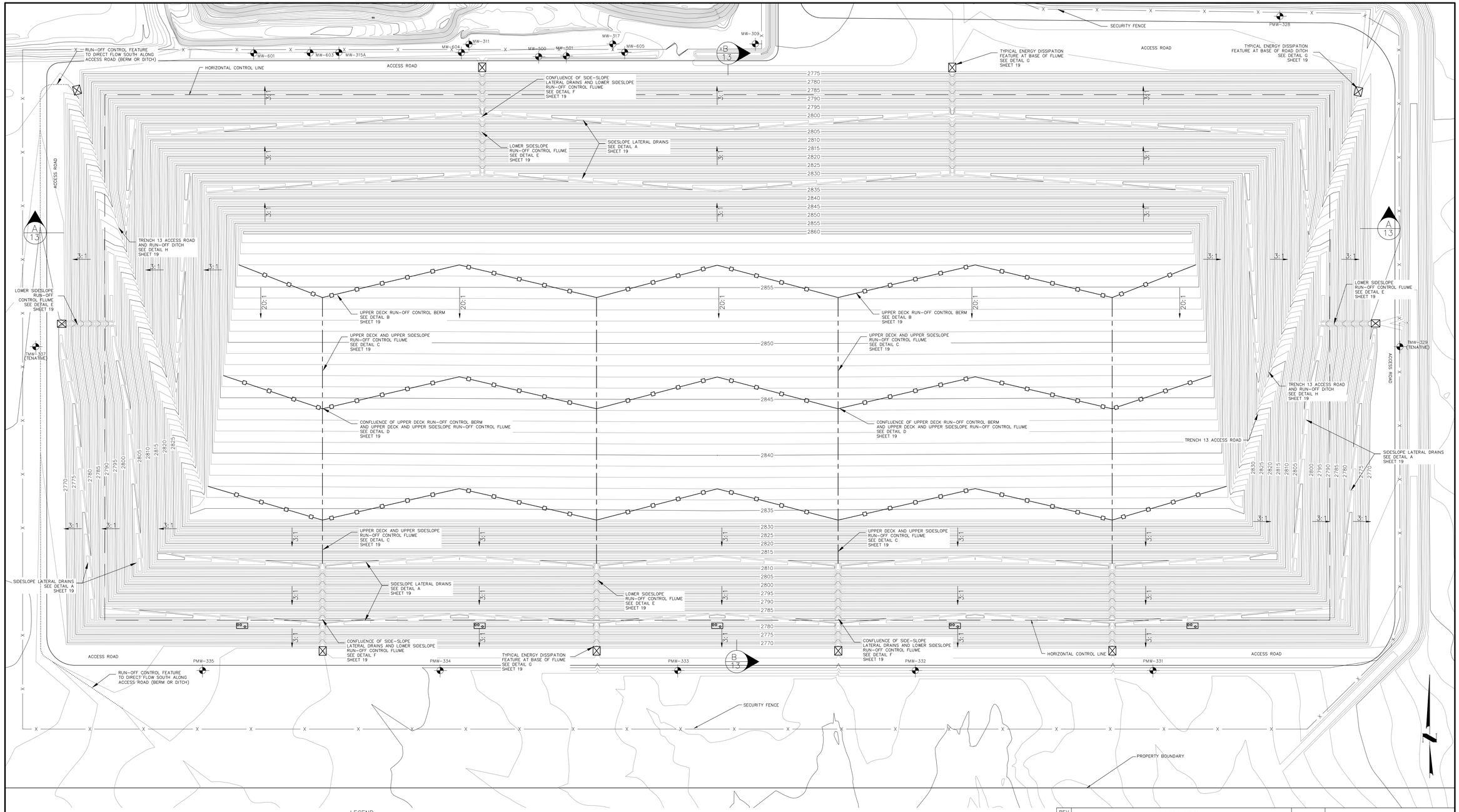
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

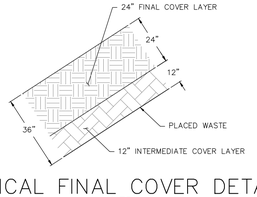
PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/08/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 80' |

DRAWING NO: NV13-15-011




## 15 TYPICAL FINAL COVER DETAIL
(NTS)

LEGEND

- LCRS AND LDS SUMP RISERS AND LEACHATE STORAGE
- PMW-335 — PLANNED MONITORING WELL
- MW-601 — EXISTING MONITORING WELL
- TMW-329 — TENTATIVELY PLANNED MONITORING WELL
- SECURITY FENCE
- UPPER DECK RUN-OFF CONTROL BERMS
- UPPER DECK AND LOWER SIDESLOPE RUN-OFF CONTROL FLUMES
- TYPICAL ENERGY DISSIPATION FEATURE
- RUN-OFF CONTROL FEATURE (DITCH OR BERM)

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

80 0 80 160
SCALE: 1"= 80'

NOTES:

1. FINAL COVER IS 3.0 FEET MINIMUM THICKNESS OVER PLACED WASTE (SEE SHEET 11 AND 13)
2. CONTROL POINTS NOT PROVIDED, VERIFICATION OF PLACED FINAL COVER THICKNESS WILL BE BY COMPARISON OF 50'X50' GRID SURVEY ON TOP OF PLACED WASTE AND TOP OF FINAL COVER
3. SEE SHEET 14, 15, AND 16 FOR STORMWATER MANAGEMENT FEATURES OUTSIDE THE LIMIT OF WASTE DISPOSAL.
4. SEE SHEET 18 FOR FINAL COVER PLACEMENT SEQUENCING

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

FINAL COVER PLAN VIEW

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

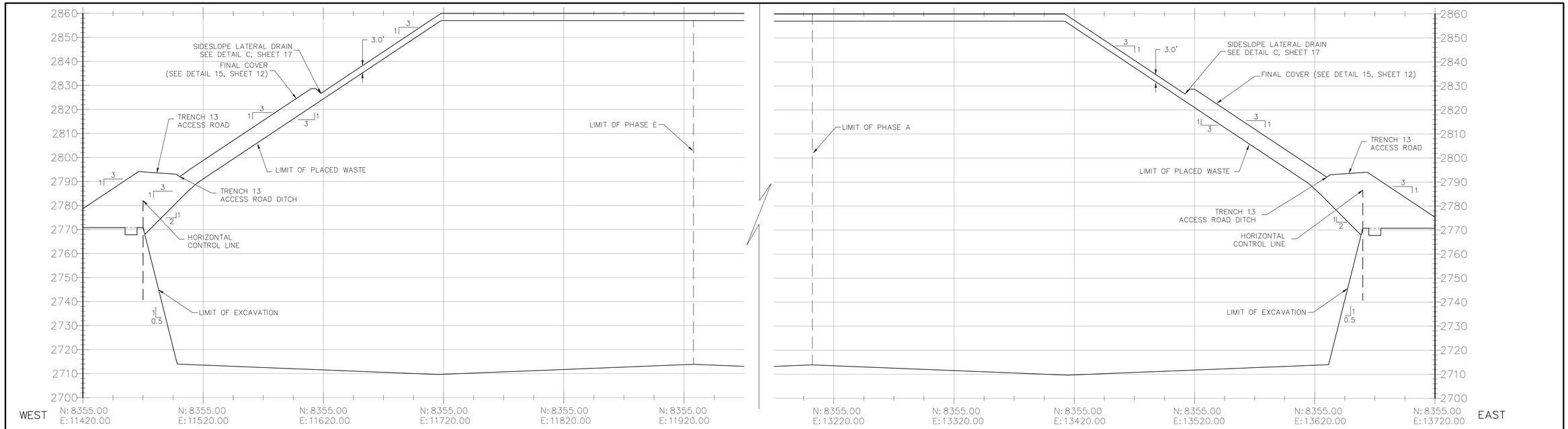
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

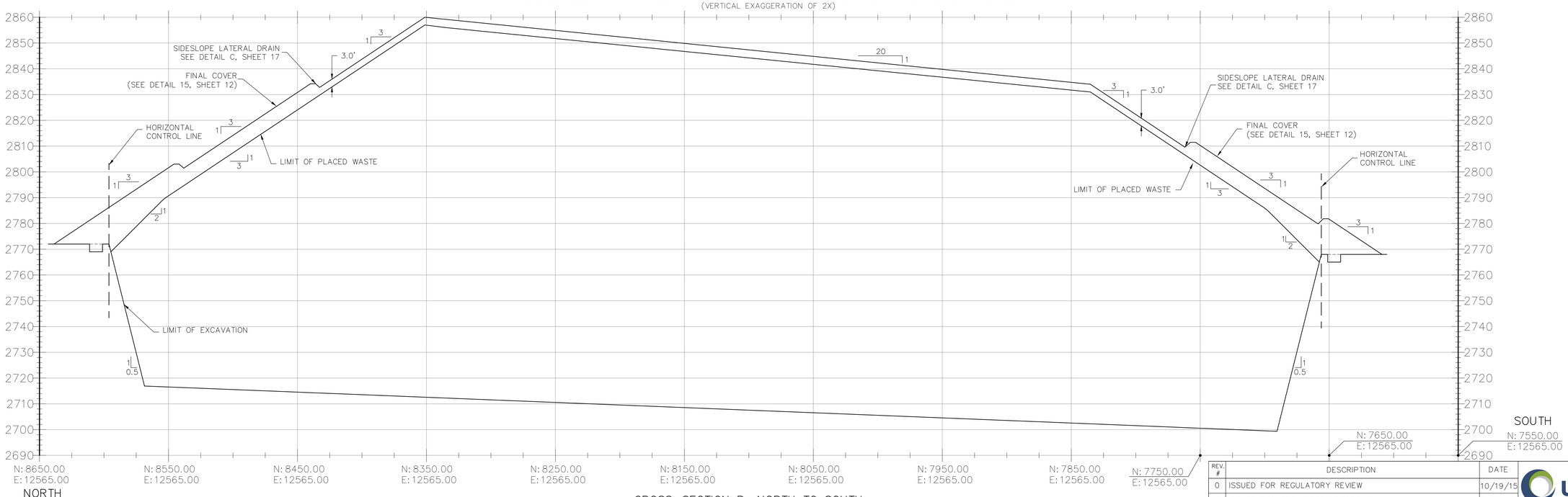
| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/20/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 80' |

DRAWING NO: NV13-15-012




CROSS-SECTION A: WEST TO EAST – TYPICAL WASTE AND FINAL COVER PROFILE

(VERTICAL EXAGGERATION OF 2X)




CROSS-SECTION B: NORTH TO SOUTH
TYPICAL WASTE AND FINAL COVER PROFILE AT PHASE CENTERLINE

(VERTICAL EXAGGERATION OF 2X)

40 0 40 80

SCALE: 1"= 40'

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

FINAL COVER PROFILES

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L WAMPLER
Exp. 6/30/16
CIVIL
No. 01364

US ecology

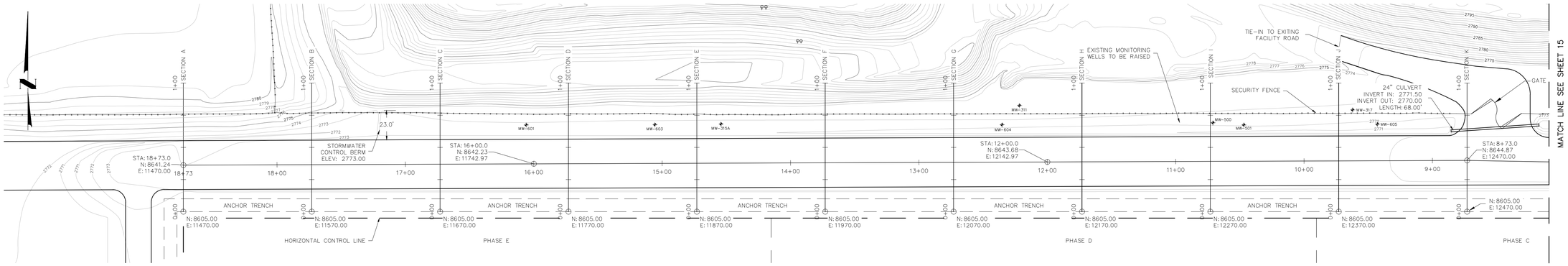
BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquaTer
optimizing resources | water, air, earth

| DRAWN BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 2/25/15 | CAB | 3/25/15 | SLW | 10/12/15 | 1" = 40' |

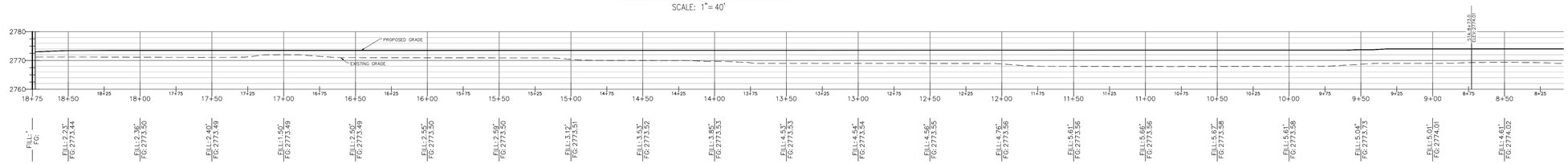
DRAWING NO: NV13-15-013




## NORTHERN HAUL ROAD AND DRAINAGE DITCH PLAN

40 0 40 80

SCALE: 1"= 40'

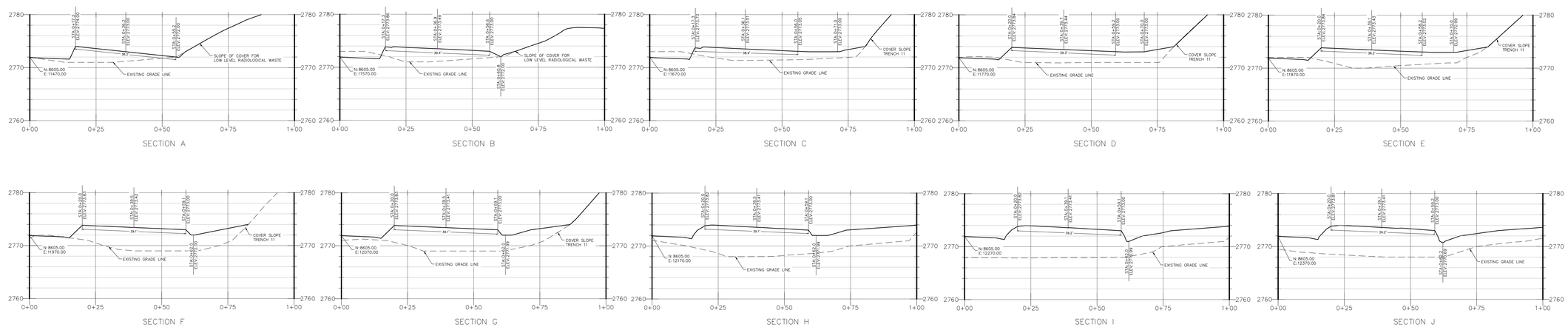



## NORTHERN HAUL ROAD CENTERLINE PROFILE

40 0 40 80

SCALE: 1"= 40'

(VERTICAL EXAGGERATION OF 2x)

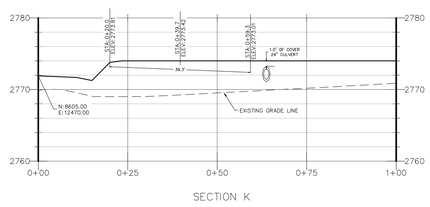



## NORTHERN HAUL ROAD AND DRAINAGE DITCH CROSS-SECTIONS

20 0 20 40

SCALE: 1"= 20'

(VERTICAL EXAGGERATION OF 2x)




NOTES:

1. SURFACE PREPARATION FOR ROAD FILL WILL REQUIRE REMOVAL OF VEGETATION AND 0.5 FT OF SCARIFICATION
2. ROAD FILL TO BE COMPACTION SPECIFICATION B BACKFILL
3. ANCHOR TRENCH AND SOIL SPECIFICATION A BACKFILL NOT SHOWN, REFER TO SHEETS 03 AND 04

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SURFACE WATER MANAGEMENT
1 OF 3

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 01364

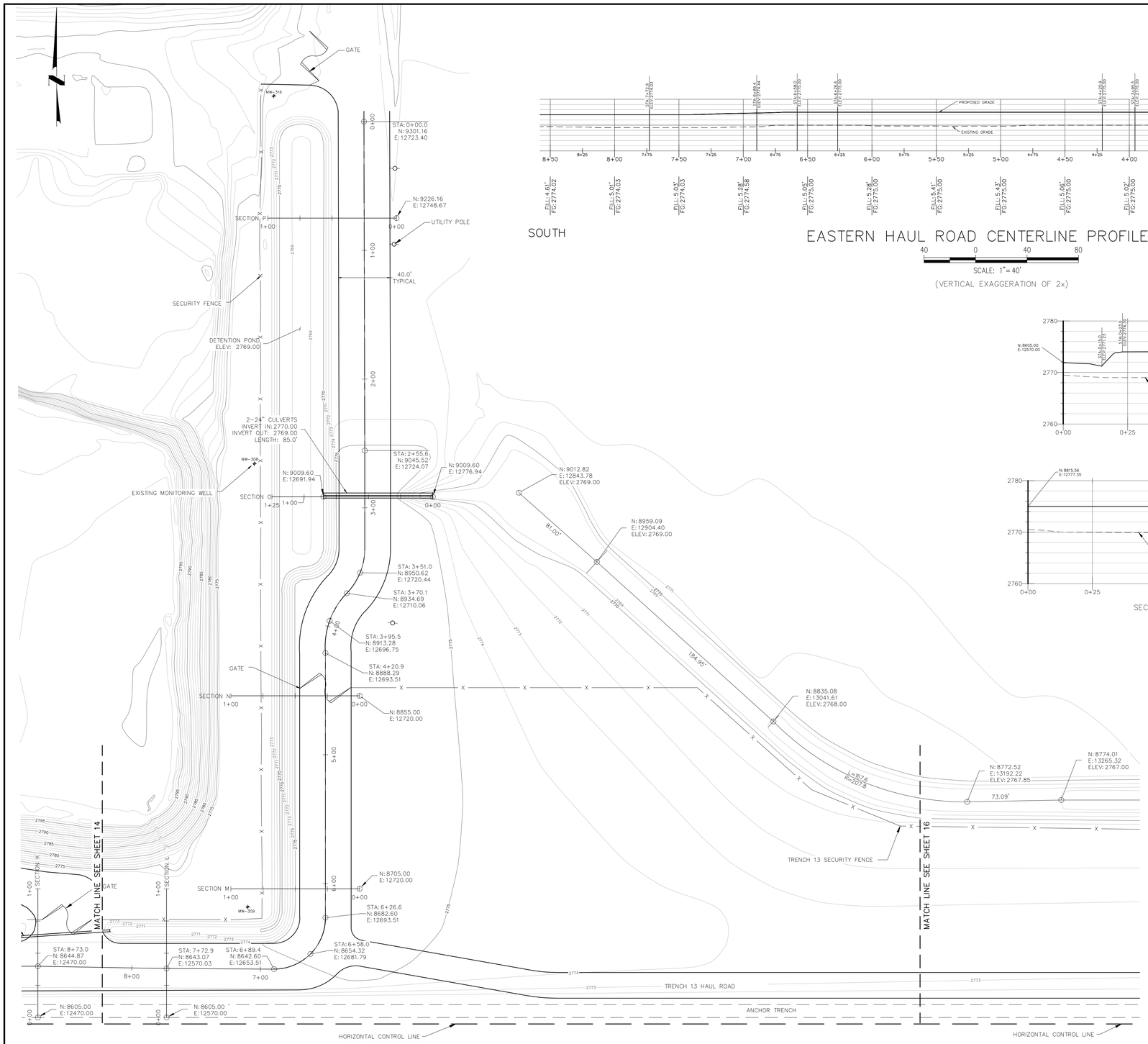
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquaTer
optimizing resources | water, air, earth

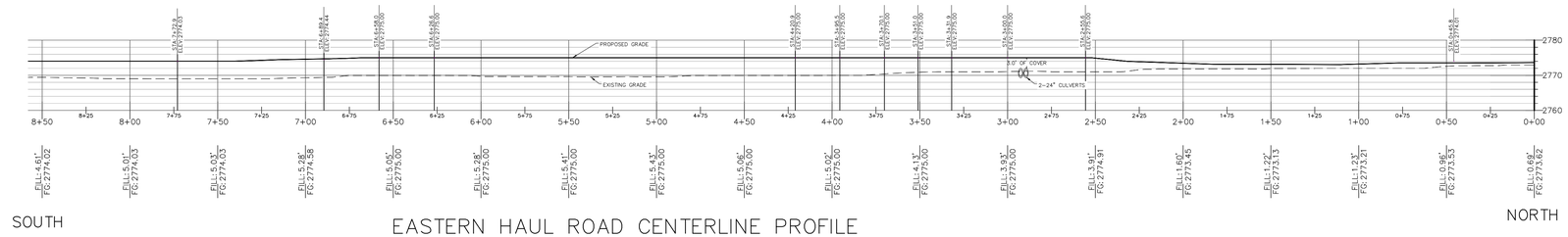
| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 2/25/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES | NV13-15-014 |




EASTERN HAUL ROAD, DETENTION POND, AND DIVERSION CHANNEL

40 0 40 80

SCALE: 1"= 40'

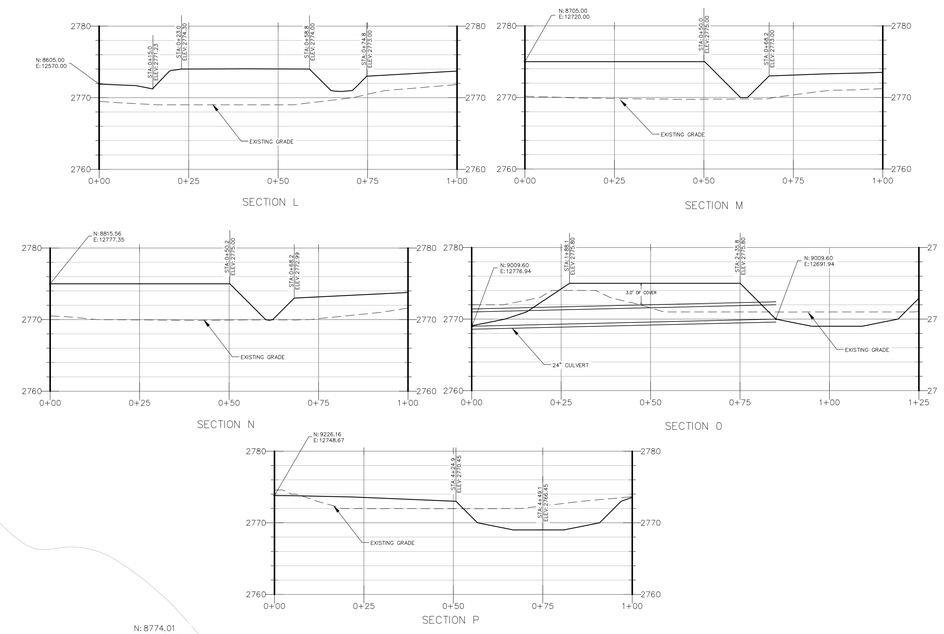



EASTERN HAUL ROAD CENTERLINE PROFILE

40 0 40 80

SCALE: 1"= 40'

(VERTICAL EXAGGERATION OF 2x)




EASTERN HAUL ROAD AND DETENTION POND CROSS-SECTIONS

20 0 20 40

SCALE: 1"= 20'

(VERTICAL EXAGGERATION OF 2x)

NOTES:

1. SURFACE PREPARATION FOR ROAD FILL WILL REQUIRE REMOVAL OF VEGETATION AND 0.5 FT OF SCARIFICATION
2. ROAD FILL TO BE COMPACTION SPECIFICATION B BACKFILL
3. ANCHOR TRENCH AND SOIL SPECIFICATION A BACKFILL NOT SHOWN, REFER TO SHEETS 03 AND 04

ELEVATION: FEET (NAVD 1988)
HORIZONTAL CONTROL: SITE COORDINATE SYSTEM

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

SURFACE WATER MANAGEMENT
2 OF 3

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 01364

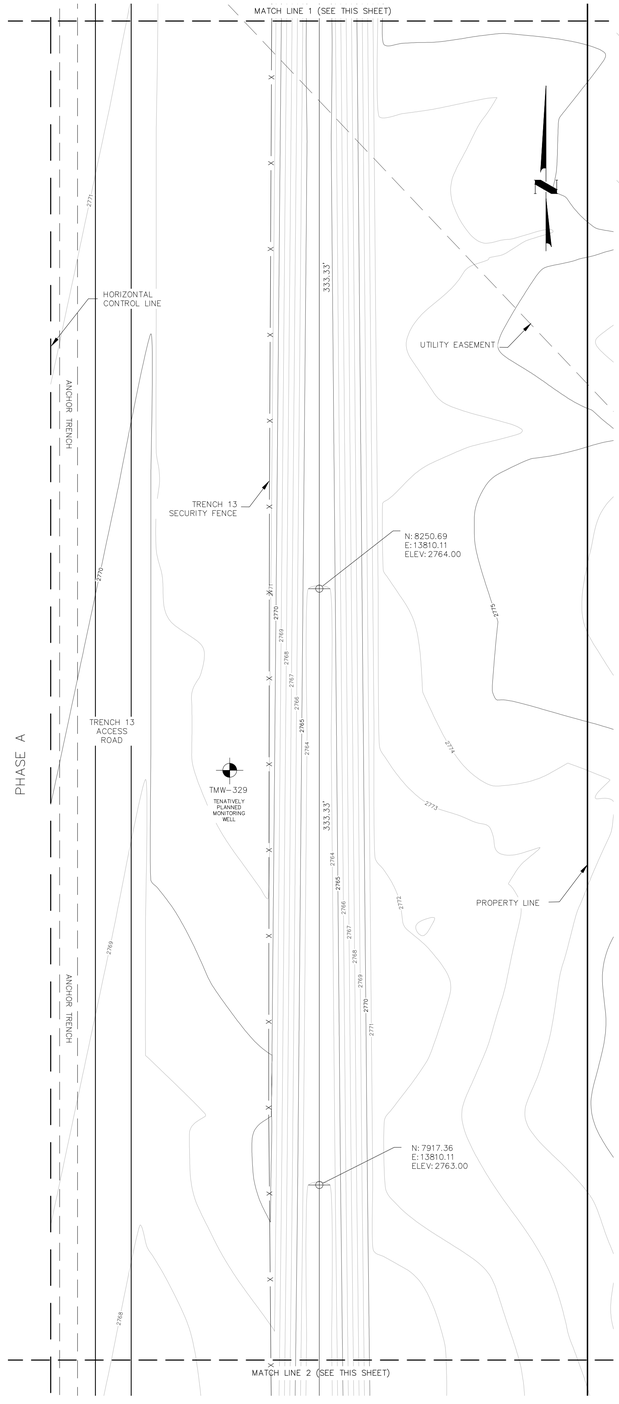
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

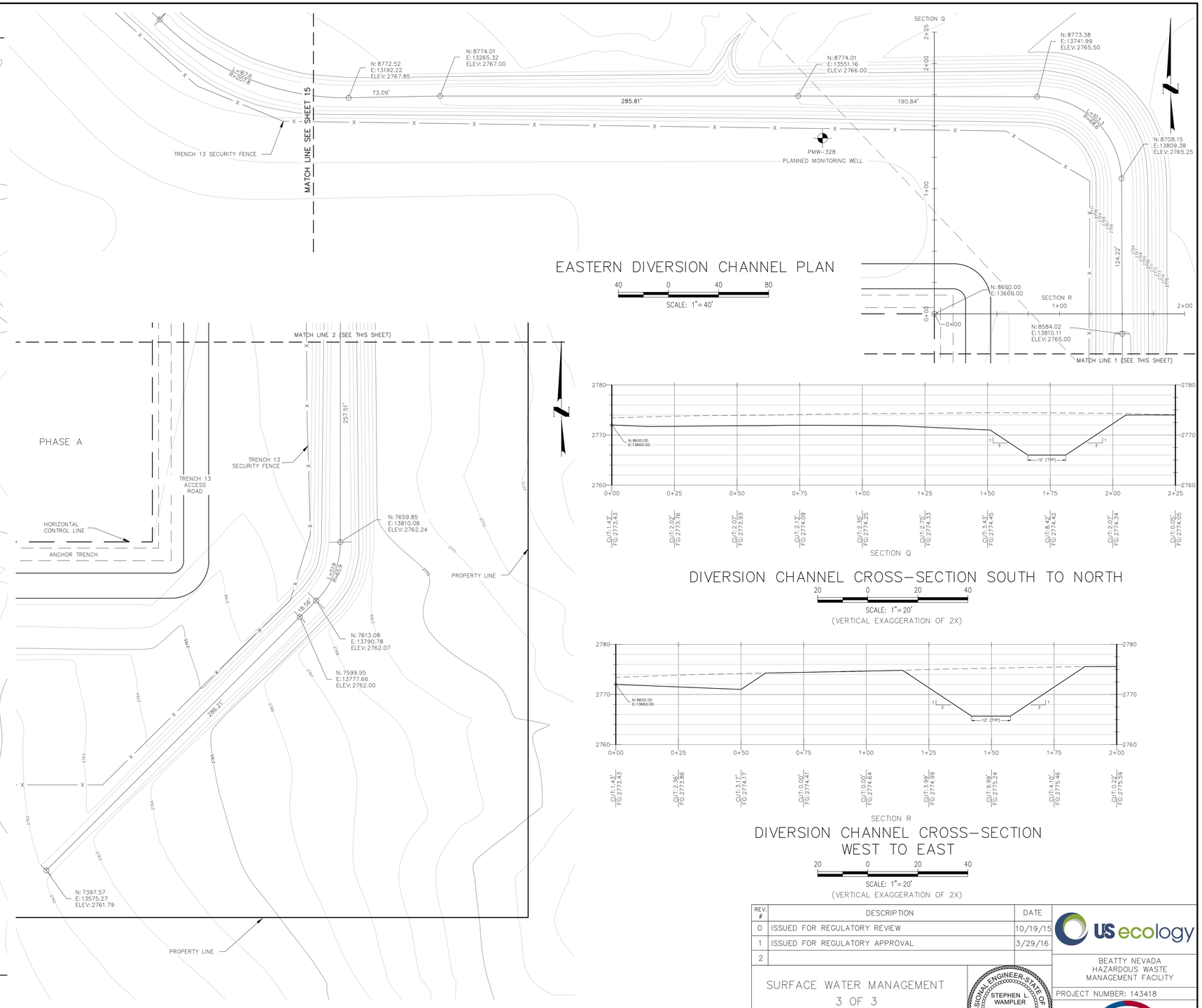
| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 3/23/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES | NV13-15-015 |




EASTERN DIVERSION CHANNEL PLAN

40 0 40 80

SCALE: 1"= 40'




EASTERN DIVERSION CHANNEL PLAN

40 0 40 80

SCALE: 1"= 40'




DIVERSION CHANNEL CROSS-SECTION SOUTH TO NORTH

20 0 20 40

SCALE: 1"= 20'

(VERTICAL EXAGGERATION OF 2X)




DIVERSION CHANNEL CROSS-SECTION WEST TO EAST

20 0 20 40

SCALE: 1"= 20'

(VERTICAL EXAGGERATION OF 2X)

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

SURFACE WATER MANAGEMENT
3 OF 3

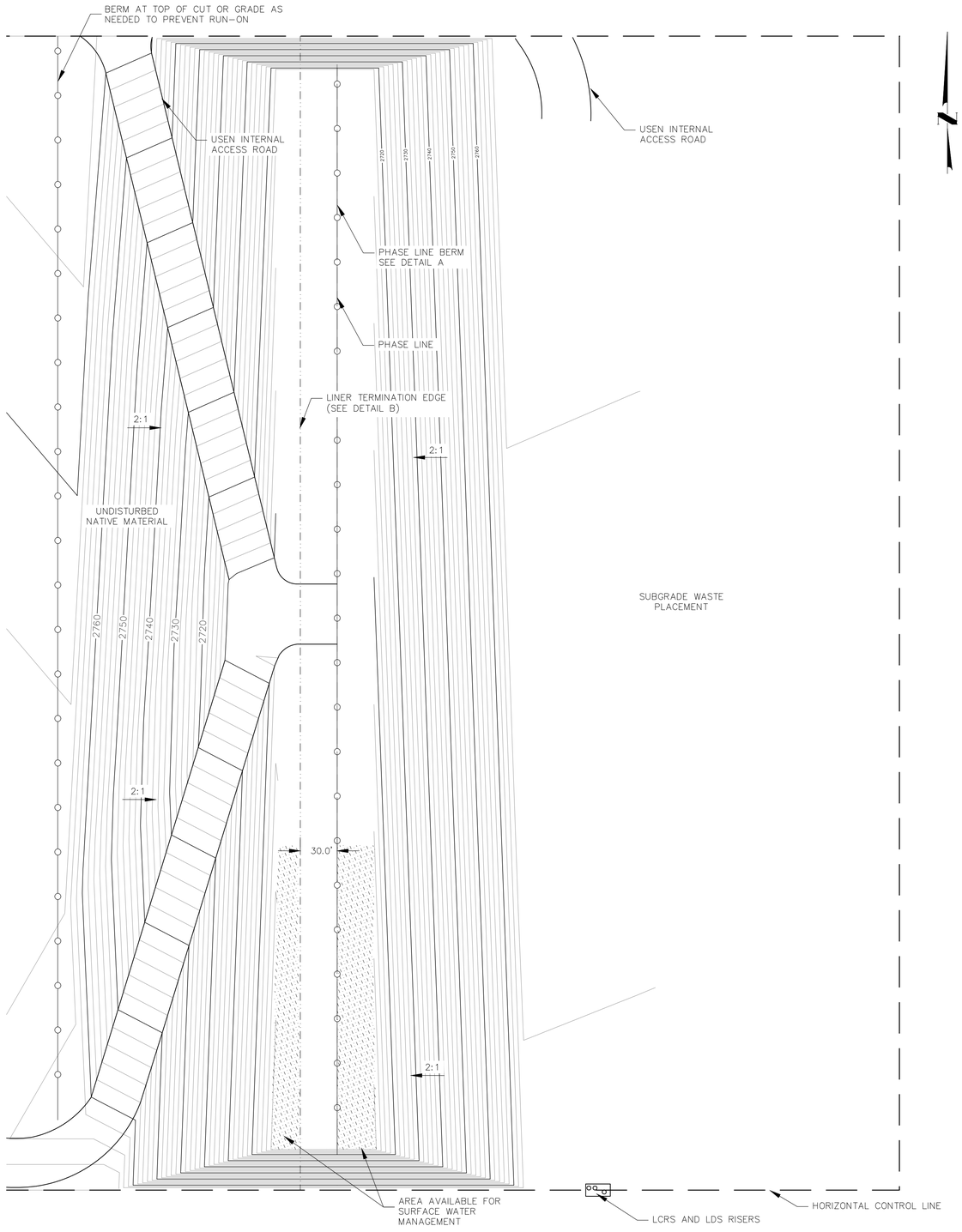
PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 01364

PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 3/23/15 | CAB | 3/25/15 | SLW | 10/12/15 | VARIES |

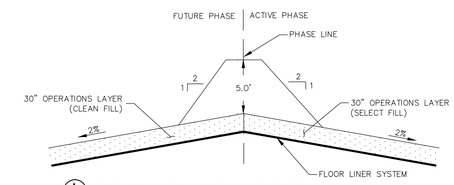
DRAWING NO: NV13-15-016




TYPICAL FULL PHASE DEVELOPMENT PLAN

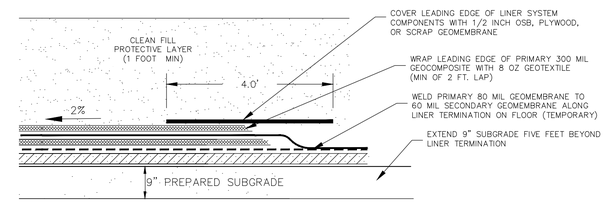
50 0 50 100

SCALE: 1"=50'




Ⓐ TYPICAL PHASE LINE BERM DETAIL

(N.T.S.)




Ⓑ TYPICAL FLOOR LINER TERMINATION DETAIL

(GEOSYNTHETICS SHOWN EXAGGERATED FOR CLARITY)

(N.T.S.)

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

PHASE CONSTUCTION

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

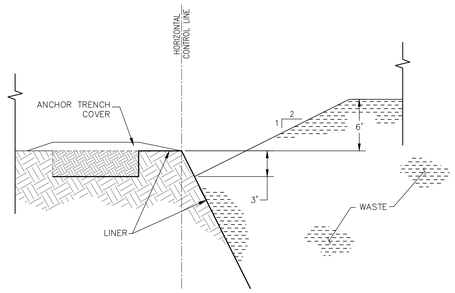
BEATTY NEVADA HAZARDOUS WASTE MANAGEMENT FACILITY

PROJECT NUMBER: 143418

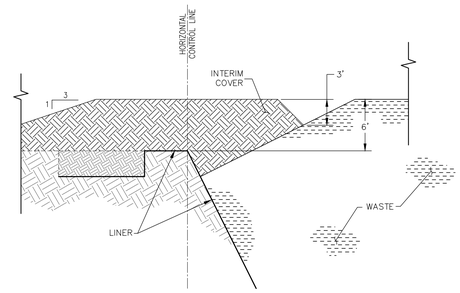
AquAeTer
optimizing resources | water, air, earth

| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: |
|---|---|---|---|---|---|---|
| CWK | 9/23/15 | CAB | 9/23/15 | SLW | 10/16/15 | VARIES |

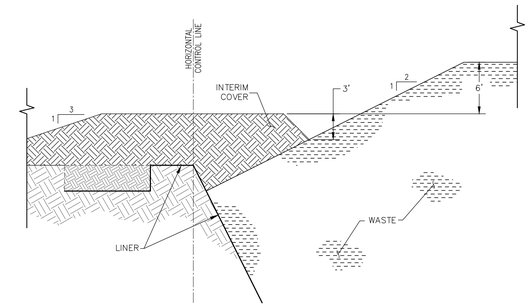
DRAWING NO: NV13-15-017



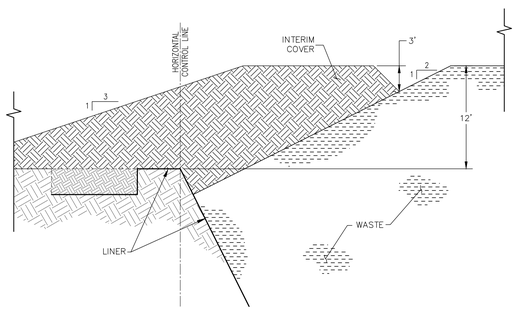

SEQUENCE #1a - INITIAL ABOVE-GRADE WASTE PLACEMENT
N.T.S.



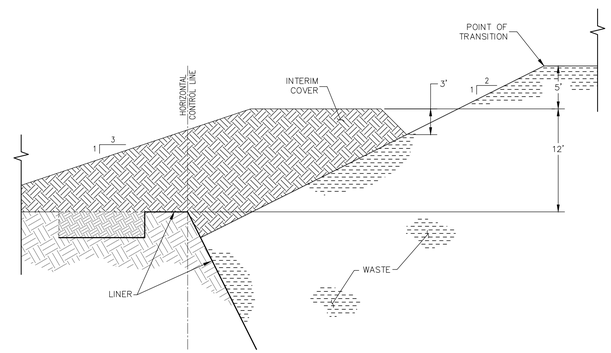

SEQUENCE #1b - INTERIM COVER PLACEMENT
N.T.S.



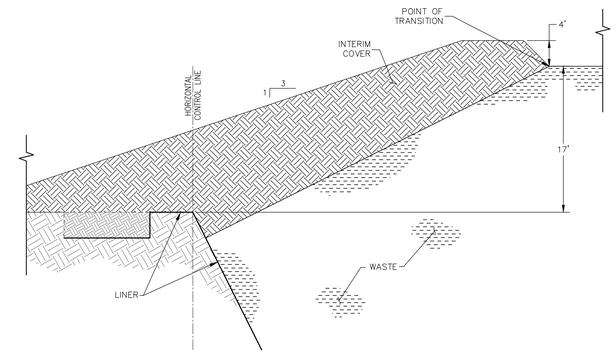

SEQUENCE #1c - ADDITIONAL WASTE PLACEMENT
N.T.S.



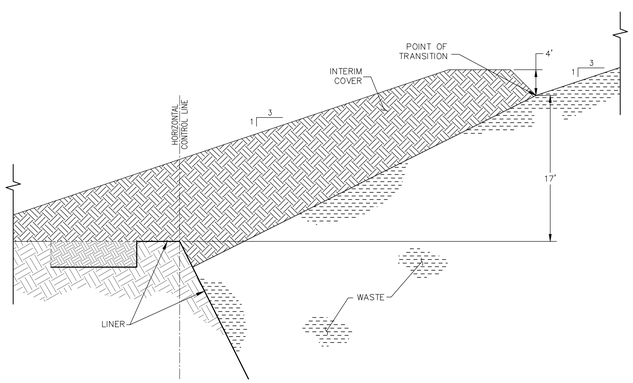

SEQUENCE #1d - INTERIM COVER PLACEMENT
N.T.S.



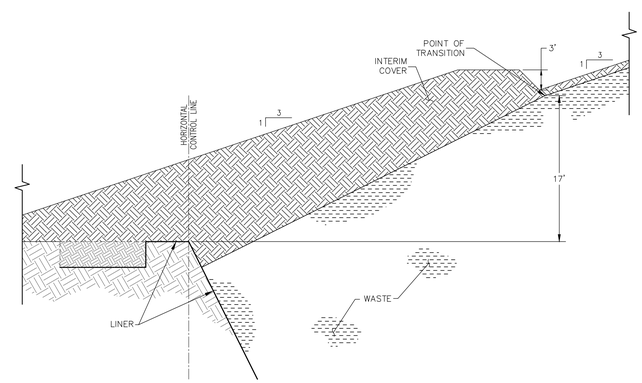

SEQUENCE #1e - ADDITIONAL WASTE PLACEMENT
N.T.S.



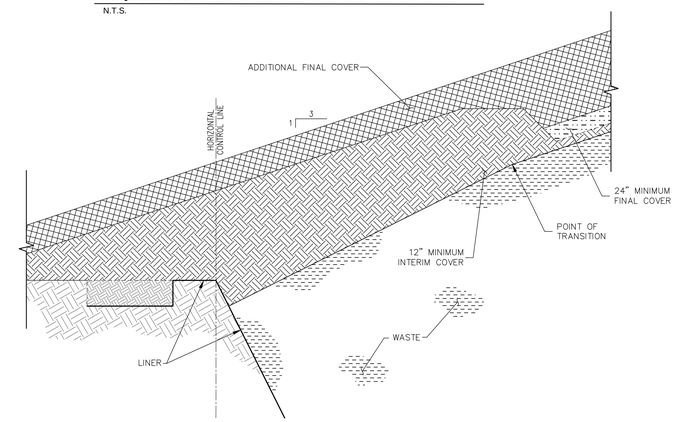

SEQUENCE #2 - INTERIM COVER TO HINGE
N.T.S.




SEQUENCE #3 - CONTINUED WASTE PLACEMENT
N.T.S.




SEQUENCE #4 - INTERMEDIATE COVER GRADING
N.T.S.




SEQUENCE #5 – FINAL COVER PLACEMENT
N.T.S.

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

ABOVE–GRADE WASTE, INTERIM PROTECTIVE BERM, AND COVER PLACEMENT

PROFESSIONAL ENGINEER - STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

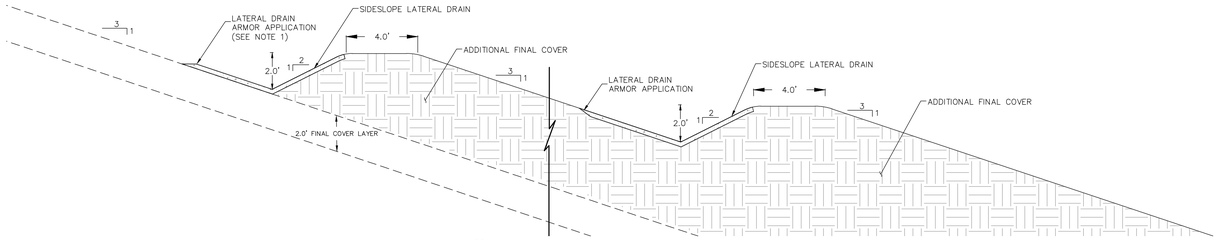
US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

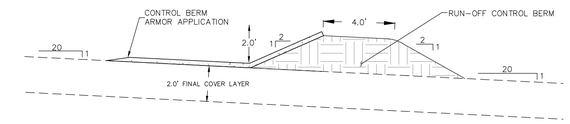
PROJECT NUMBER: 143418

AquAeTer
optimizing resources | water, air, earth

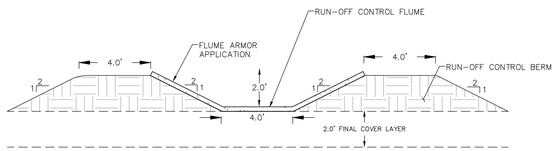
| DRWN. BY | DATE | CHKD. BY | DATE | APRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| VT | 9/15/15 | CAB | 9/23/15 | SLW | 10/16/15 | N.T.S. | NV13–15–018 |



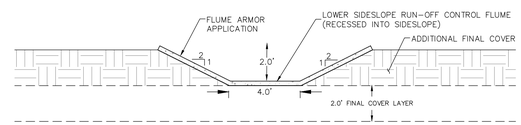

Ⓐ SIDE SLOPE LATERAL DRAIN PROFILE
(N.T.S.)



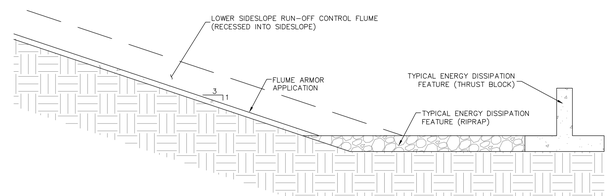

Ⓑ UPPER DECK RUN-OFF CONTROL BERM PROFILE
(N.T.S.)



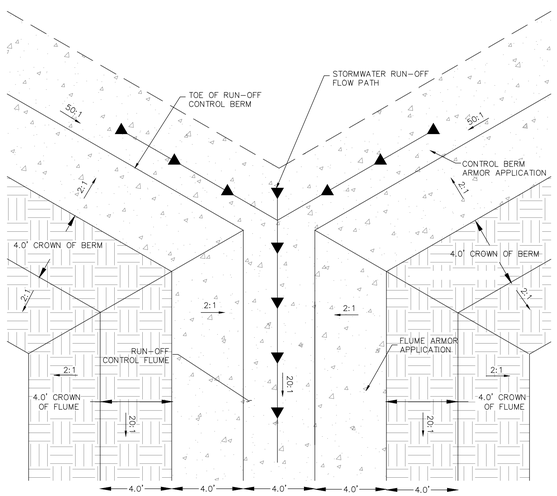

Ⓒ UPPER DECK AND UPPER SIDESLOPE RUN-OFF CONTROL FLUME PROFILE
(N.T.S.)



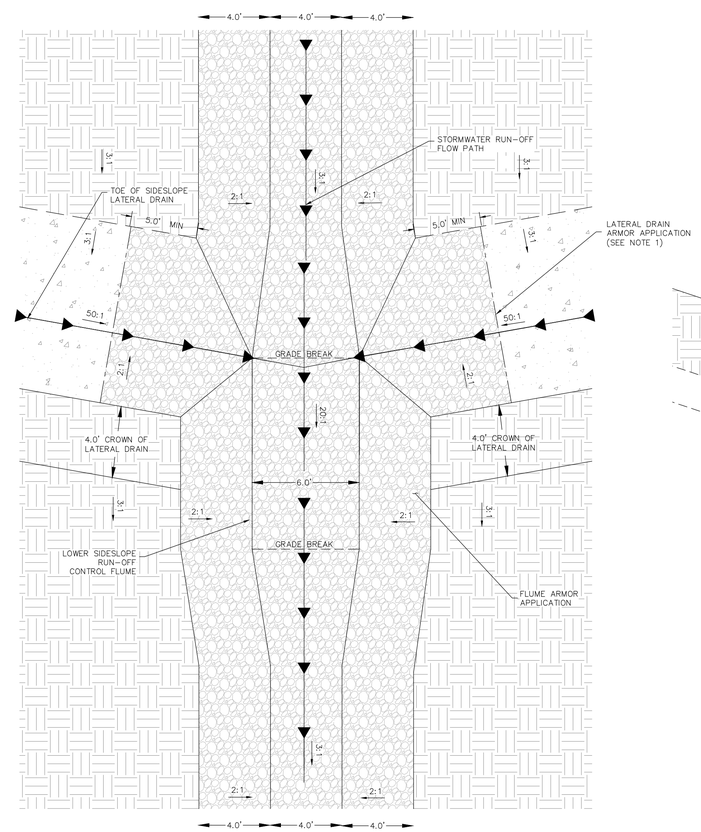

Ⓔ LOWER SIDESLOPE RUN-OFF CONTROL FLUME PROFILE
(N.T.S.)



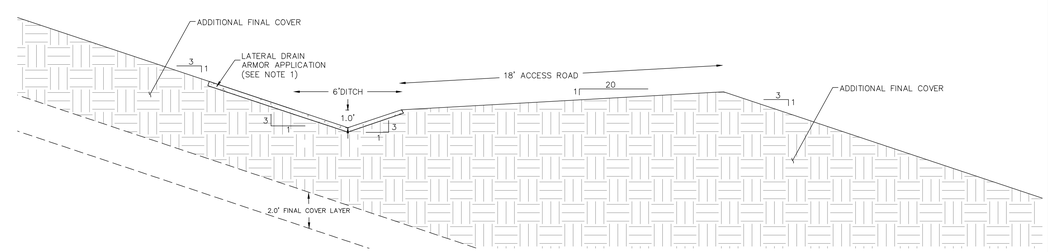

Ⓖ TYPICAL ENERGY DISSIPATION FEATURE
(N.T.S.)




Ⓓ CONFLUENCE OF RUN-OFF CONTROL BERM AND UPPER DECK AND UPPER SIDESLOPE RUN-OFF CONTROL FLUME
(N.T.S.)




Ⓕ CONFLUENCE OF SIDESLOPE LATERAL DRAINS AND LOWER SIDESLOPE RUN-OFF CONTROL FLUME
(N.T.S.)




Ⓗ TRENCH 13 ACCESS ROAD AND DRAINAGE DITCH PROFILE
(N.T.S.)

NOTE

1. AT INTERSECTION OF LATERAL DRAINS AND ACCESS ROAD DITCHES OR SIDESLOPE RUN-OFF CONTROL FLUMES, ADDITIONAL ARMORING WILL BE NECESSARY TO RESIST EROSION.

| REV. # | DESCRIPTION | DATE |
|---|---|---|
| 0 | ISSUED FOR REGULATORY REVIEW | 10/19/15 |
| 1 | ISSUED FOR REGULATORY APPROVAL | 3/29/16 |
| 2 | | |

FINAL COVER DETAILS

PROFESSIONAL ENGINEER-STATE OF NEVADA
STEPHEN L. WAMPLER
Exp. 6/30/16
CIVIL
No. 013641

US ecology

BEATTY NEVADA
HAZARDOUS WASTE
MANAGEMENT FACILITY

PROJECT NUMBER: 143418

AquaeTer
optimizing resources | water, air, earth

| DRAWN BY | DATE | CHKD. BY | DATE | APPRVD. BY | DATE | SCALE: | DRAWING NO: |
|---|---|---|---|---|---|---|---|
| CWK | 9/23/15 | CAB | 9/23/15 | SLW | 10/16/15 | VARIES | NV13-15-019 |