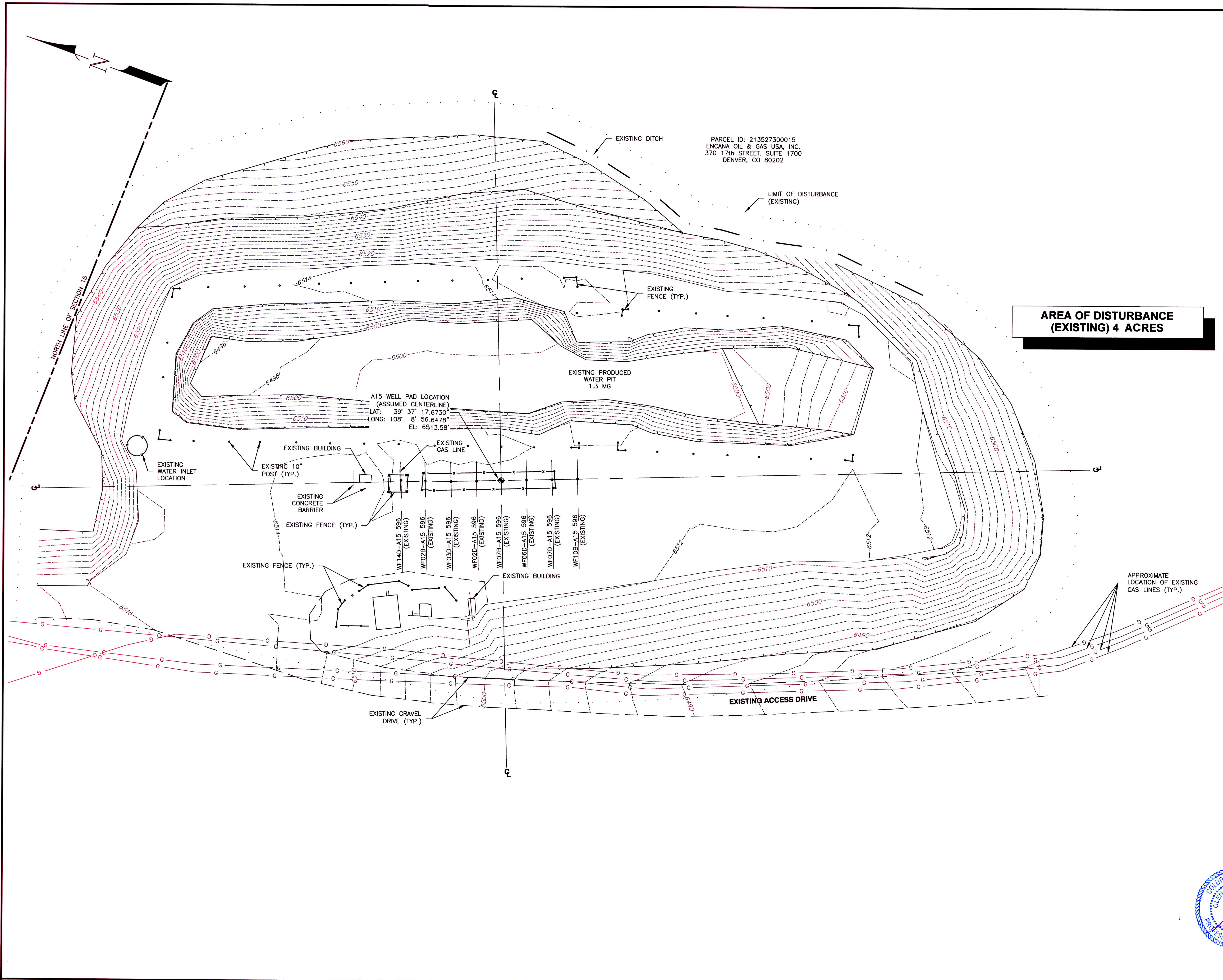


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 Plotted by: christopher lason on: Jan. 5, 12 - 2:48 PM



**LEGEND**

	EXISTING SECTION LINE
	EXISTING MUNICIPAL BOUNDARY
	EXISTING UNPAVED ROAD
	EXISTING INDEX CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	EXISTING TOP OF SLOPE
	EXISTING BOTTOM OF SLOPE
	EXISTING GAS PIPELINE
	EXISTING GAS WELL
	EXISTING PIPE BOLLARD
	EXISTING FENCE
	EXISTING BUILDING
	EXISTING CENTERLINE OF DITCH
	WELL PAD CENTERLINE LOCATION
	PROPOSED LIMIT OF DISTURBANCE

- NOTES:**
- SITE FEATURES AND TOPOGRAPHY WAS SURVEYED BY UNIVERSALPEGASUS INTERNATIONAL ON 7/21/11.
  - SURVEY BENCHMARK AND SURVEY CONTROL SHOULD BE ESTABLISHED BY THE CONTRACTOR FOR PIT LOCATION, DEPTH AND SLOPE LIMITS, PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
  - PRIOR TO ANY EXCAVATION WORK ON A PAD THAT HAS PIPELINES, THE PIPELINE SHALL BE PREPPED FOR CONSTRUCTION. PIPELINE SHALL BE LOCKED-OUT/TAGGED OUT, PURGED, WATER TESTED AND OPEN TO ATMOSPHERE.
  - ONE-CALL SHALL BE MADE IN ACCORDANCE WITH COLORADO STATE LAW. AFTER ALL PIPES HAVE BEEN HORIZONTAL LOCATED, DEPTH OF PIPES MUST BE DETERMINED WHEN PIPELINES ARE WITHIN TWO FEET OF EXCAVATION. THIS SHALL BE DONE BY DIGGING 6" DOWN ON EITHER SIDE OF THE PIPE AND SLOUGHING OFF THE MATERIAL BY HAND TO LOCATE THE PIPE. WHERE SPACE IS CONFINED, POT-HOLING SHALL BE USED TO LOCATE THE PIPE.
  - PIT VOLUME SHOWN ON PLANS IS MEASURED FROM WATER SURFACE ELEVATION TO BOTTOM OF PIT AND EXCLUDES THE 2' FREEBOARD VOLUME.
  - WELL PAD LOCATION WAS ASSUMED AND DOES NOT COINCIDE WITH EXISTING WELL HEAD LOCATIONS.
  - HORIZONTAL DATUM=NAD 83  
 HORIZONTAL PROJECTION=COLORADO CENTRAL ZONE  
 VERTICAL DATUM=NAVD88 (GEOID 03)  
 U.S. SURVEY FEET (GRID)  
 COMBINED SCALE FACTOR=0.99966821  
 PDOP=1.28.



SCALE IN FEET  
 0 30 60

**ISSUED FOR CONSTRUCTION**  
 01/05/12

REF. DWG. NO.	REFERENCE TITLE	NO	REVISION	DATE	DRAWN	CHKD	NO

<b>DRAWN</b> SWH	<b>DATE</b> 09/01/11
<b>CHECKED</b> GDB	<b>DATE</b> 11/15/11
<b>APPROVED</b> GDB	<b>DATE</b> 11/18/11
<b>SCALE</b> 1"=30'-0"	<b>SHEET</b> 1 OF 1
<b>JOB NO.</b> 18675	
<b>CLIENT</b> ENCANA NATURAL GAS	
<b>CLIENT JOB NO.</b> -	

CIVIL/STRUCTURAL  
**WEST FORK PARACHUTE CREEK - A15 WELL PAD  
 PRODUCED WATER PIT  
 TOPOGRAPHIC PROPERTY PLAN**

TSS R96W  
 GARFIELD COUNTY, COLORADO

**encana**  
 natural gas

**DRAWING NO.** 18675-520-SIT-32201  
**REV.** 0

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PARCEL ID: 213527300015  
 ENCANNA OIL & GAS USA, INC.  
 370 17th STREET, SUITE 1700  
 DENVER, CO 80202

### LOCATION SCHEDULE

FACILITIES	DESCRIPTION	DISTANCE	DIRECTION
BUILDING	EXXONMOBIL BUILDING	15,586FT	NE 45.9'
BUILDING	ENCANA OIL & GAS BUILDING	19,849FT	SE 142.1'
PUBLIC ROAD	UNIMPROVED ROAD	121FT	W
PUBLIC ROAD	UNIMPROVED ROAD (402)	3,235FT	NE 62.5'
MAJOR UTILITY/POWER LINE	ABOVE GROUND POWER LINE	66,327FT	NE 68.4'
RAILROAD	DENVER/RIO GRANDE WESTERN	55,751FT	SE 165.2'
PROPERTY LINE	US BLM	960FT	S
PROPERTY LINE	EXXONMOBIL	488FT	E

NOTE: ALL DISTANCES ARE MEASURED FROM CENTERLINE OF WELL NUMBER WF-07B-A15-596

### LEGEND

- EXISTING SECTION LINE
- EXISTING MUNICIPAL BOUNDARY
- EXISTING UNPAVED ROAD
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING TOP OF SLOPE
- EXISTING BOTTOM OF SLOPE
- EXISTING GAS PIPELINE
- EXISTING GAS WELL
- EXISTING PIPE BOLLARD
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING CENTERLINE OF DITCH
- WELL PAD CENTERLINE LOCATION
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED PIPE BOLLARD LINE
- PROPOSED TOP OF SLOPE
- PROPOSED BOTTOM OF SLOPE
- PROPOSED WATER SURFACE
- PROPOSED CENTERLINE OF DITCH
- PROPOSED RIP-RAP

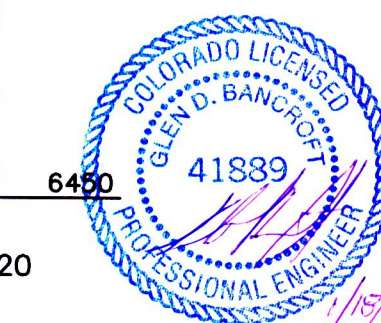
**AREA OF DISTURBANCE (PROPOSED) 4 ACRES**

### NOTES:

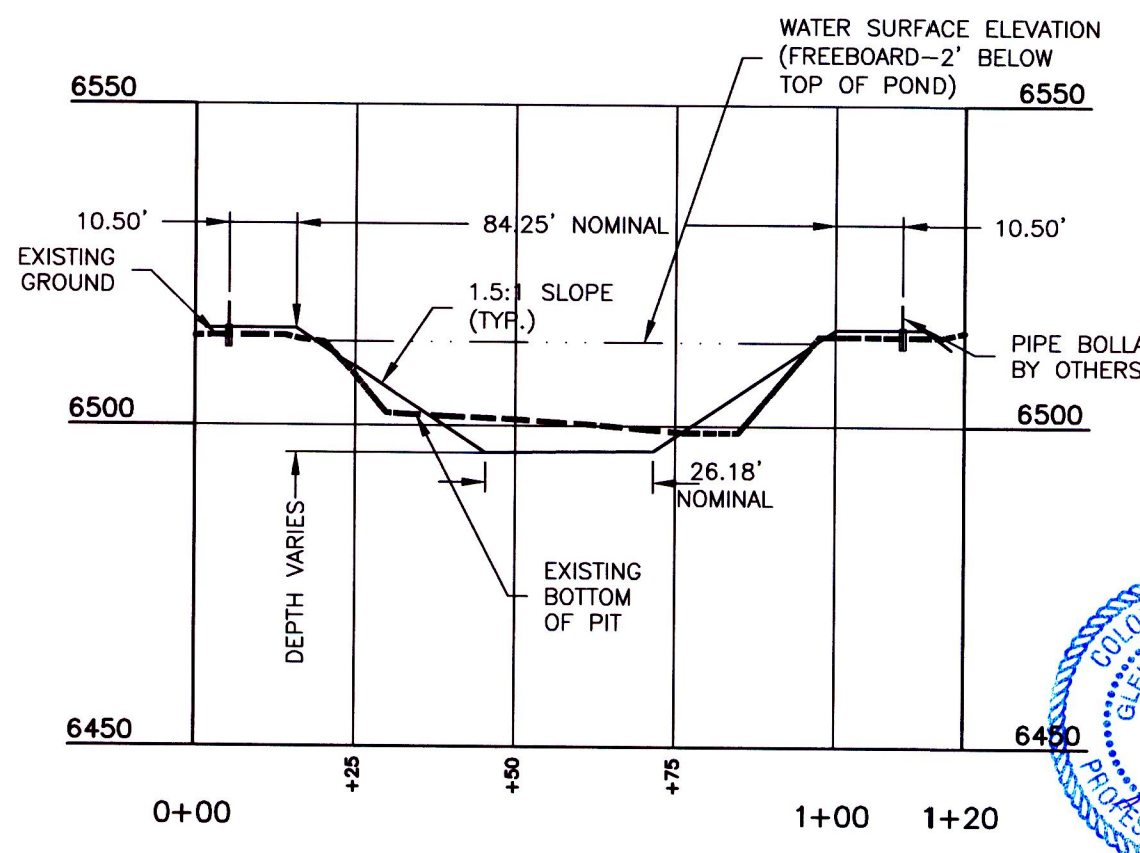
- SITE FEATURES AND TOPOGRAPHY WERE SURVEYED BY UNIVERSALPEGASUS INTERNATIONAL ON 7/21/11.
- SURVEY BENCHMARK AND SURVEY CONTROL SHOULD BE ESTABLISHED BY THE CONTRACTOR FOR PIT LOCATION, DEPTH AND SLOPE LIMITS, PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
- WHERE WATERLINE RISER INTERFERES WITH PROPOSED PRODUCED WATER PIT, RISER SHALL BE RELOCATED BY OTHERS, PRIOR TO COMMENCING EXCAVATION ACTIVITIES.
- PRIOR TO ANY EXCAVATION WORK ON A PAD THAT HAS PIPELINES, THE PIPELINE SHALL BE PREPARED FOR CONSTRUCTION. PIPELINE SHALL BE LOCKED-OUT/TAGGED OUT, PURGED, WATER TESTED AND OPEN TO ATMOSPHERE.
- ONE-CALL SHALL BE MADE IN ACCORDANCE WITH COLORADO STATE LAW. AFTER ALL PIPES HAVE BEEN HORIZONTAL LOCATED, DEPTH OF PIPES MUST BE DETERMINED WHEN PIPELINES ARE WITHIN TWO FEET OF EXCAVATION. THIS SHALL BE DONE BY DIGGING 6" DOWN ON EITHER SIDE OF THE PIPE AND SLOUGHING OFF THE MATERIAL BY HAND TO LOCATE THE PIPE. WHERE SPACE IS CONFINED, POT-HOLES SHALL BE USED TO LOCATE THE PIPE.
- PIPE BOLLARD, FENCING, SWING GATE, EMERGENCY EGRESS PERSONNEL GATES AND BIRD NETTING TO BE DESIGNED AND LOCATED BY OTHERS. PIPE BOLLARDS SHOWN ON PLAN ARE FOR INFORMATION ONLY. ALL PIPE BOLLARD PLACEMENT SHOULD AVOID EXISTING GAS AND WATER LINE INTERFERENCE.
- HORIZONTAL DATUM=HAD 83  
HORIZONTAL PROJECTION=COLORADO CENTRAL ZONE  
VERTICAL DATUM=NAVD83 (GEOID 03)  
U.S. SURVEY FEET (GRID)  
COMBINED SCALE FACTOR=0.99966821  
PDOP=1.28
- WARNING SIGNS & ENTRY REGULATORY SIGNAGE TO BE PROVIDED & INSTALLED BY OWNER.
- PIT VOLUME SHOWN ON PLANS IS MEASURED FROM WATER SURFACE ELEVATION TO BOTTOM OF BIT AND EXCLUDES THE 2' FREEBOARD VOLUME.
- REMOVE EXISTING LINERS AND FILL IN EXISTING PIT WITH SPOILS FROM NEW PIT EXCAVATION. SPOILS SHOULD BE PLACED AND COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- EXISTING STEEL PIPE BOLLARDS IN CONSTRUCTION AREA SHALL BE REMOVED AND SET ASIDE FOR RE-USE. HOLES SHALL BE FILLED WITH ONSITE FILL MATERIAL AND THOROUGHLY COMPACTED.
- PRODUCED WATER PIT LINER SYSTEM SHALL CONSIST OF A PRIMARY AND SECONDARY LINER, A GEOTEXTILE CUSHION (GCL) LAYER, AND INTERSTITIAL DRAINAGE LAYER WITH LEAK DETECTION WELL. FOR LINER SYSTEM DETAILS SEE DWG. 520-DT1-32401
- THE FOLLOWING PROJECT SPECIFICATIONS SHALL BE INCORPORATED BY REFERENCE:  
-18675-520-SPC-001 EARTHWORK AND PIT CONSTRUCTION  
-18675-520-SPC-002 GEOSYNTHETIC CLAY LINER  
-18675-520-SPC-003 GEOSYNTHETIC DRAINAGE LAYER  
-18675-520-SPC-004 GEOMEMBRANE LINER
- CONTRACTOR TO INSTALL RIP-RAP (2" MATERIAL) AT DITCH OUTFALL SHOWN.
- EXISTING DITCHES SHALL BE RETURNED TO FUNCTIONAL CONDITION ONCE WORK IS COMPLETE.
- THE HILLSIDE NORTH AND EAST OF PIT SHALL BE STABILIZED AND SEEDED IMMEDIATELY AFTER COMPLETION OF FINISHED GRADING. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL MEASURES AS REQUIRED.

PRELIMINARY EARTHWORK CALCULATIONS:  
 2944 CYDS CUT  
 869 CYDS FILL  
 2075 CYDS NET CUT

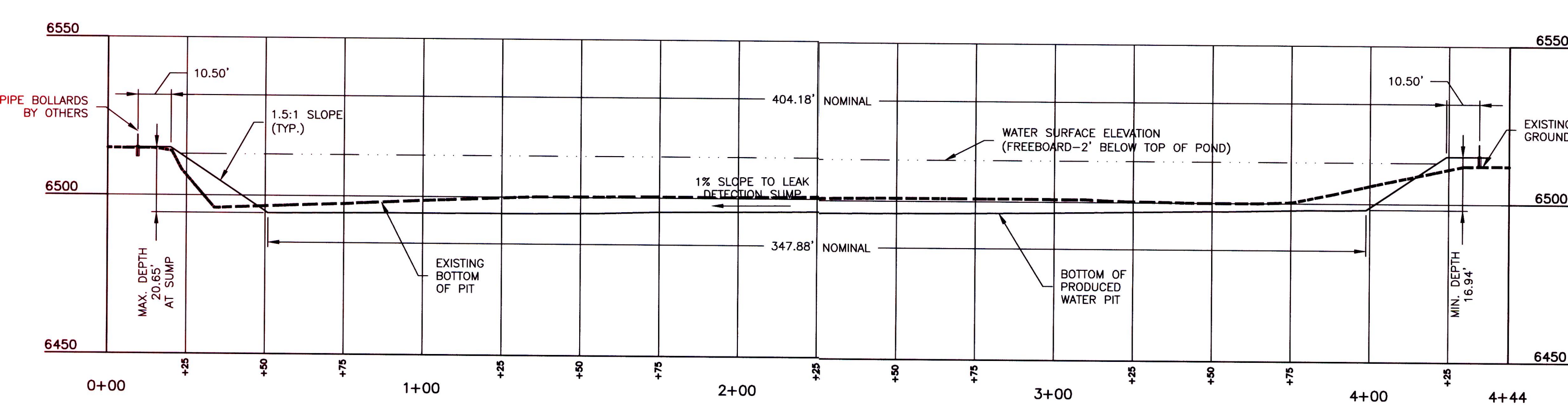
**ISSUED FOR CONSTRUCTION**  
 01/05/12



SCALE IN FEET  
0 30 60



**DETAIL B-B**  
SCALE: H:1"=30'; V:1"=30'



**DETAIL A-A**  
SCALE: H:1"=30'; V:1"=30'

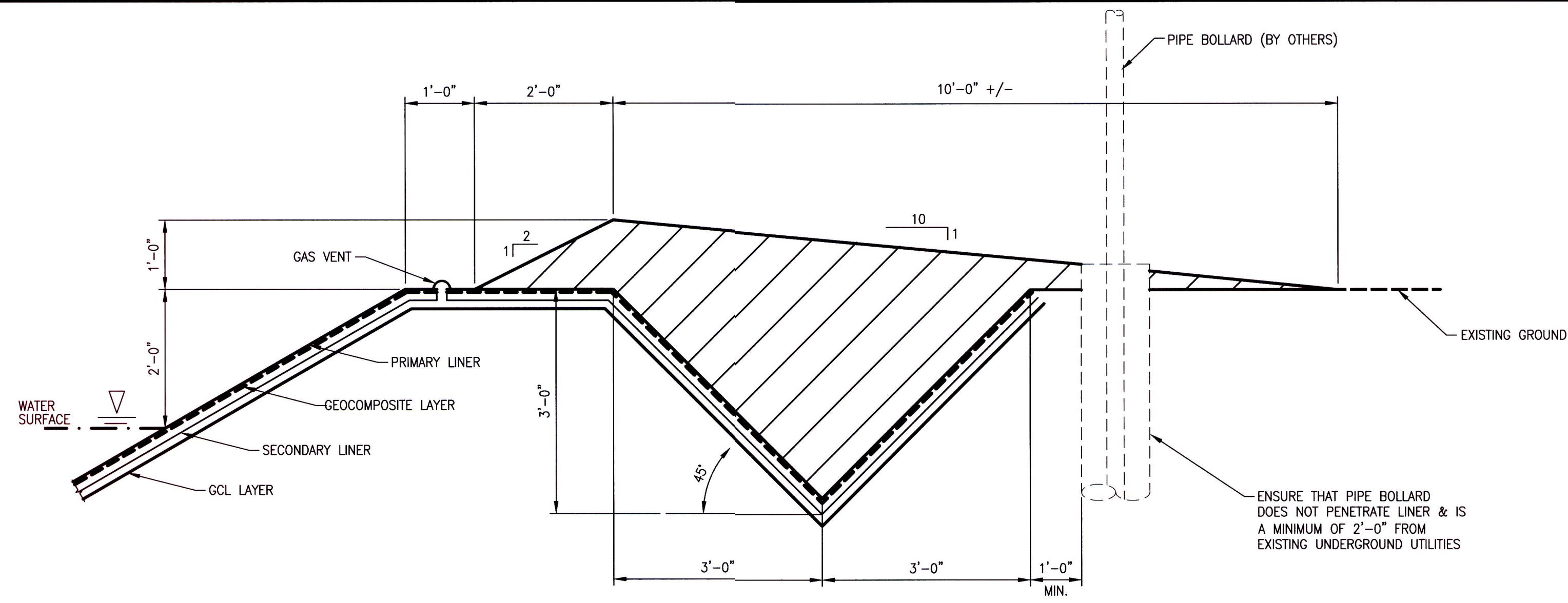
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DRAWN	SWH	DATE	08/05/11
CHECKED	GDB	DATE	11/15/11
APPROVED	GDB	DATE	11/18/11
SCALE	1"=30'-0"	SHEET	2 OF 2
JOB NO.	18675		
CLIENT	ENCANA NATURAL GAS		
CLIENT JOB NO.			

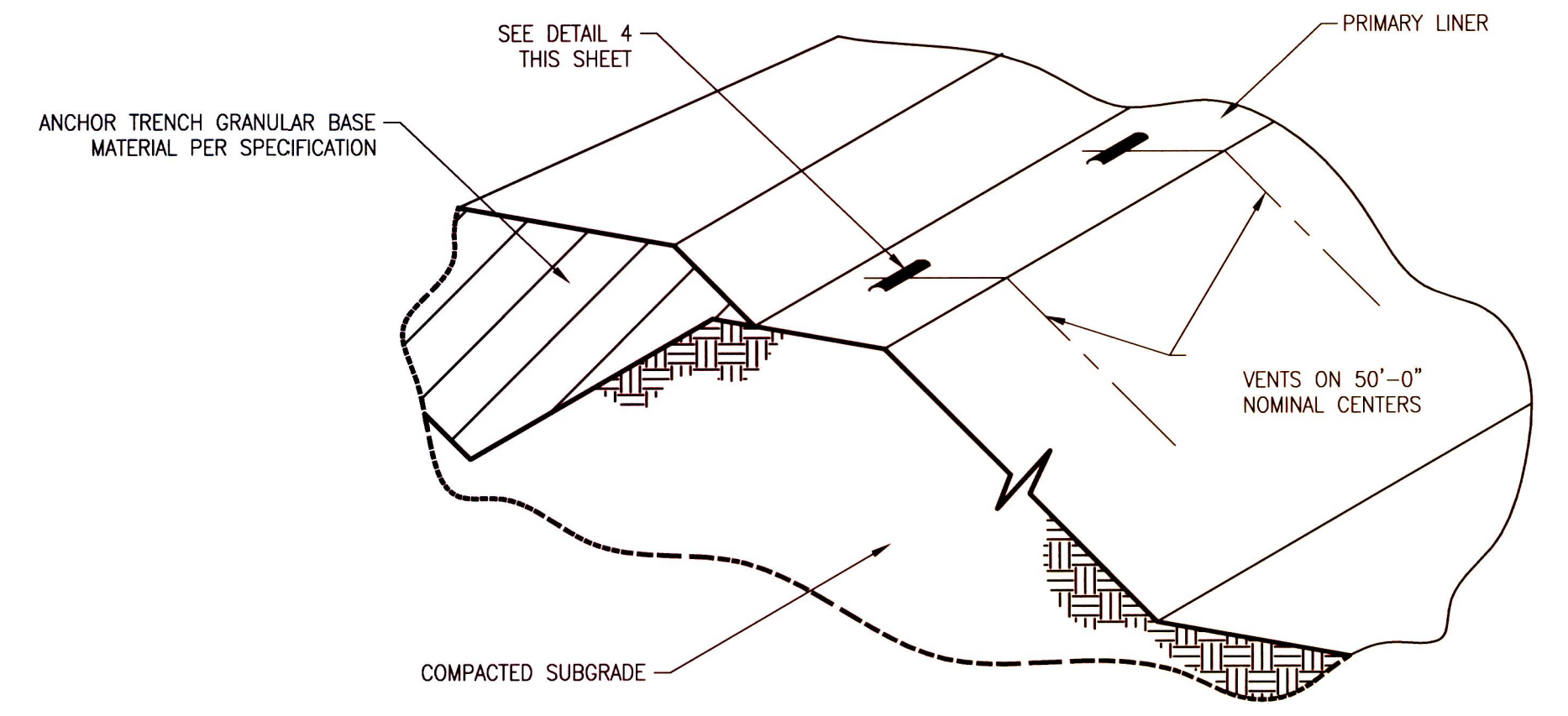
CIVIL/STRUCTURAL  
**WEST FORK PARACHUTE CREEK - A15 WELL PAD  
 PRODUCED WATER PIT  
 LOCATION & GRADING PLAN**  
 TSS R96W  
 GARFIELD COUNTY, COLORADO

**encana.**  
 natural gas  
 DRAWING NO. 18675-520-SIT-32202  
 REV. 0

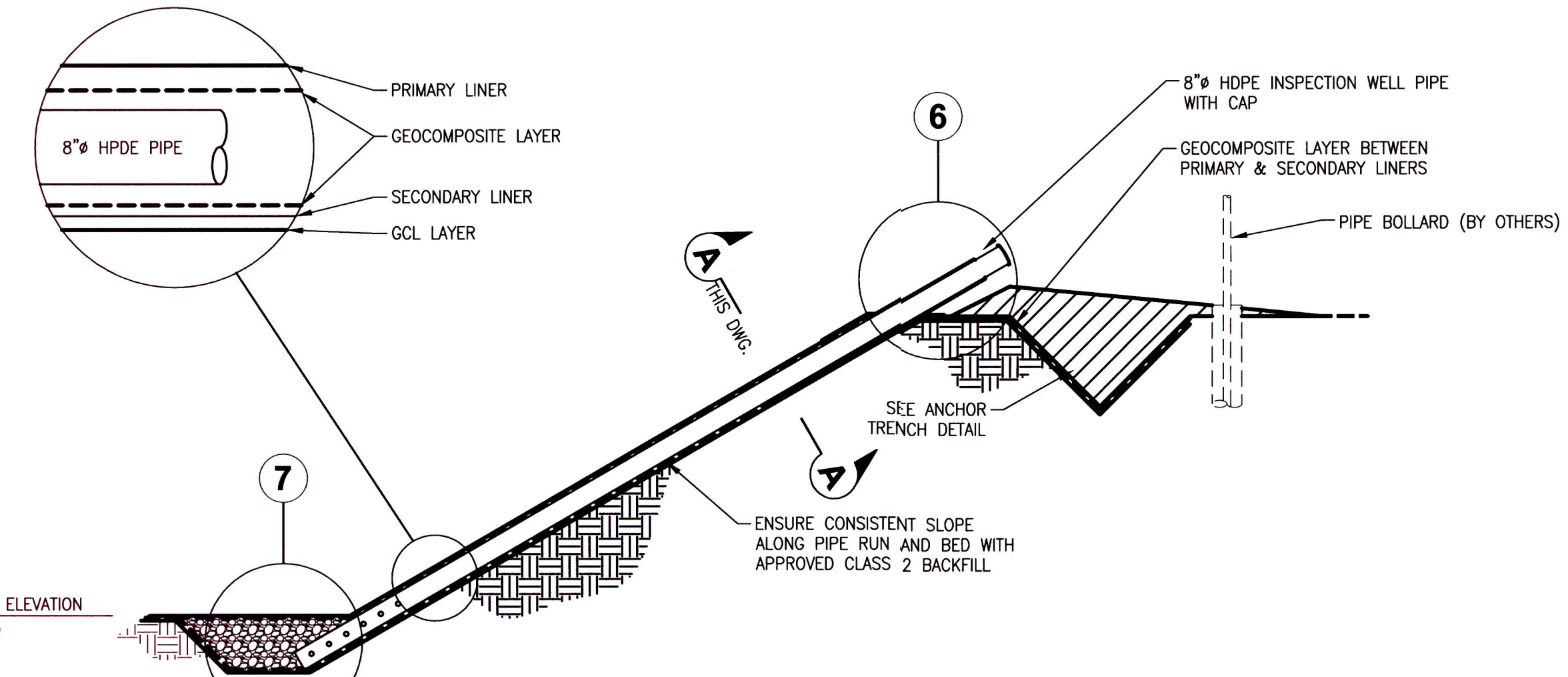
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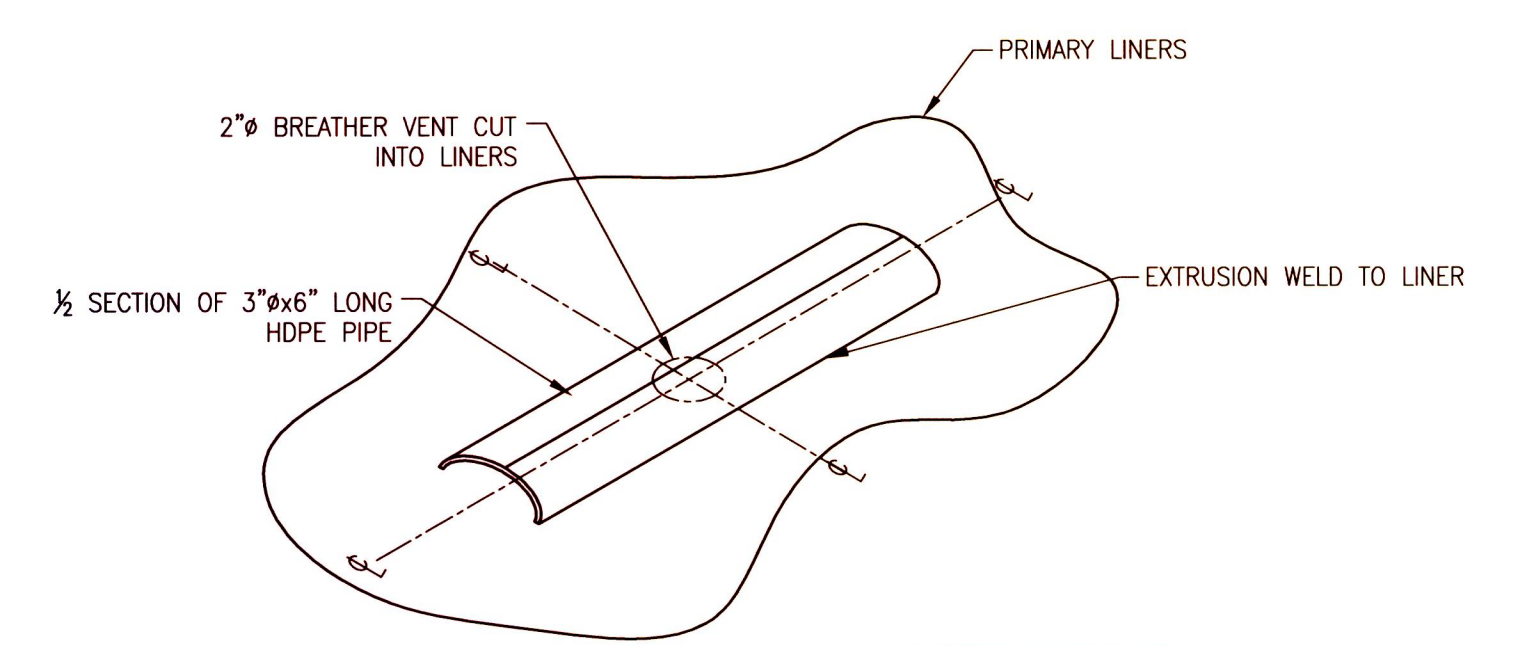
**ANCHOR TRENCH DETAIL 1**  
SCALE : N.T.S. 520-SIT-32202



**GAS VENT LOCATION DETAIL 3**  
SCALE : N.T.S. 520-SIT-32202



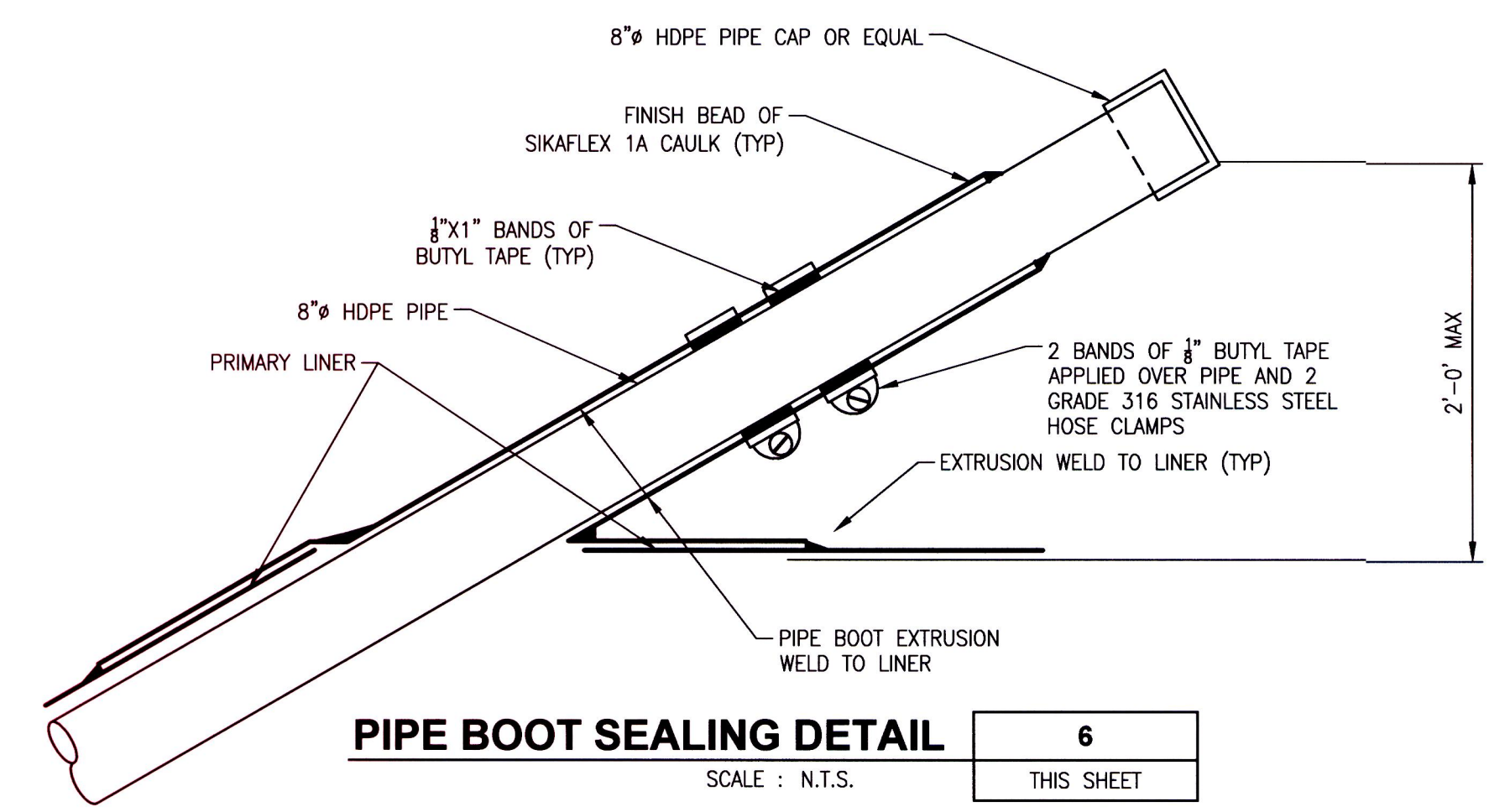
**TYPICAL POND LINING SYSTEM DETAIL 2**  
SCALE : N.T.S. 520-SIT-32202



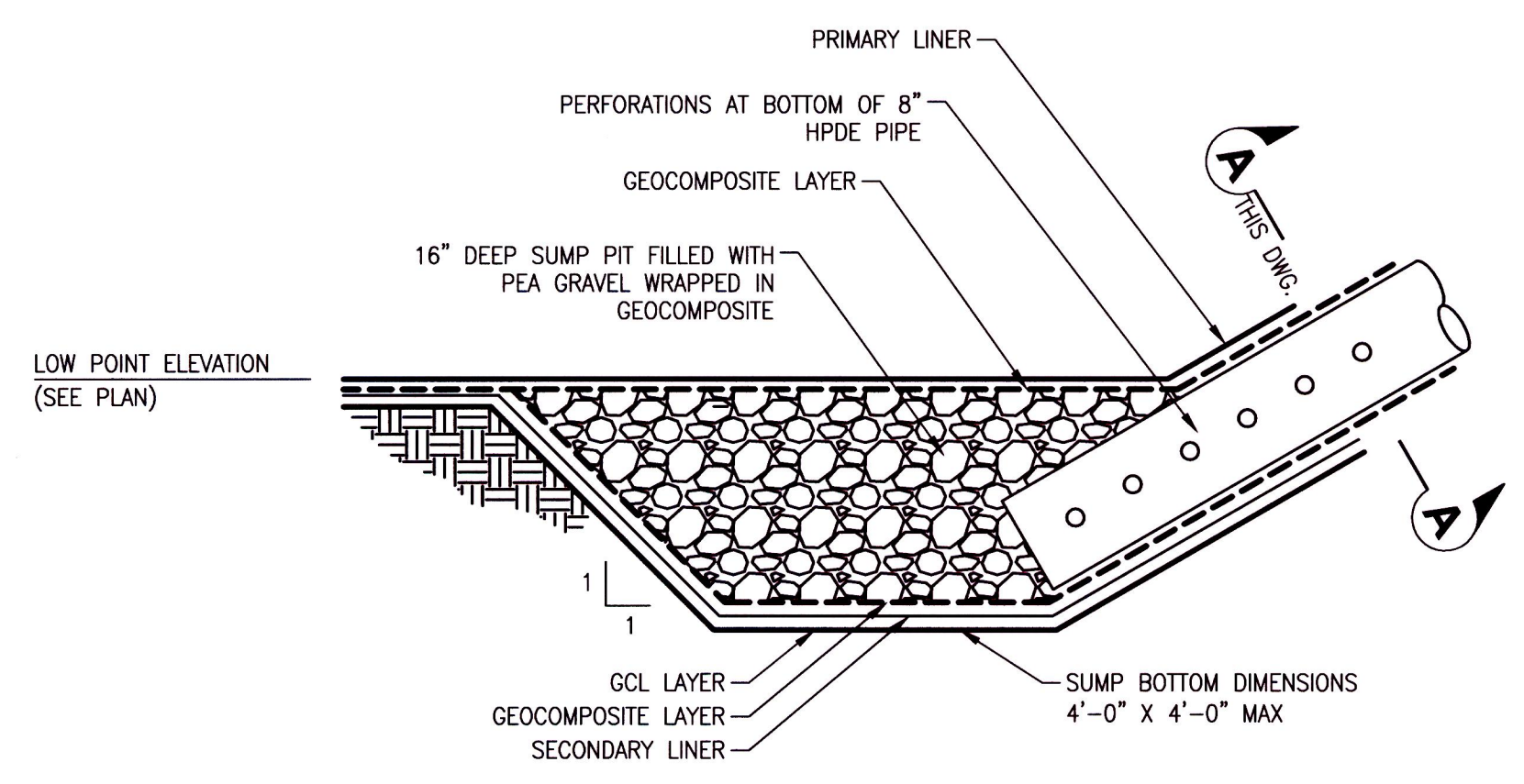
**AIR/GAS VENT DETAIL 4**  
SCALE : N.T.S. THIS SHEET



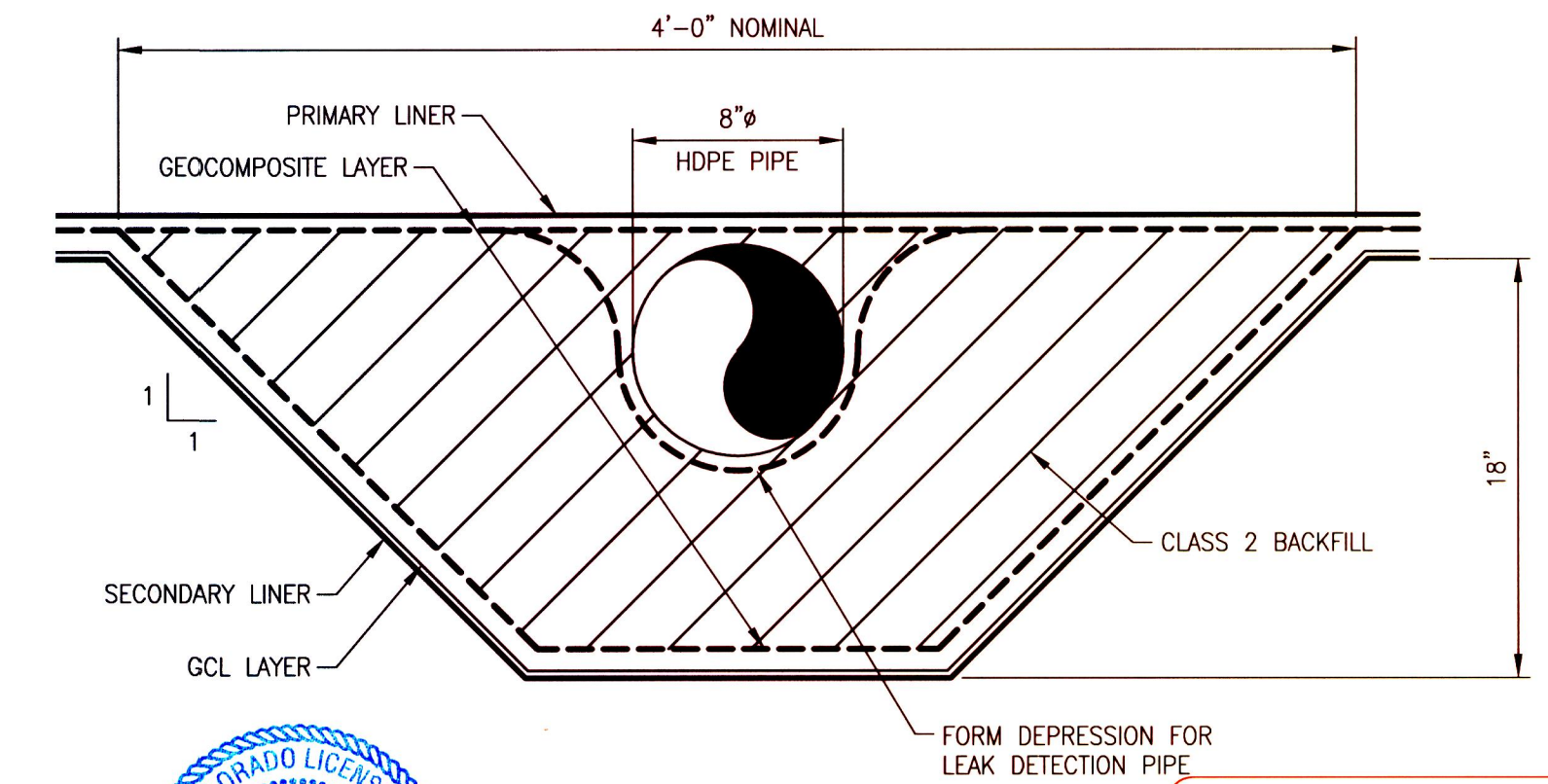
**LEAK DETECTION WELL DETAIL W/ PIPE RESTING ON SLOPE GRADE 5**  
SCALE : N.T.S. 520-SIT-32202



**PIPE BOOT SEALING DETAIL 6**  
SCALE : N.T.S. THIS SHEET



**SUMP PIT FILLED WITH GRAVEL 7**  
SCALE : N.T.S. THIS SHEET



**SECTION A-A**  
SCALE : N.T.S. THIS SHEET



**ISSUED FOR CONSTRUCTION**  
 01/05/12

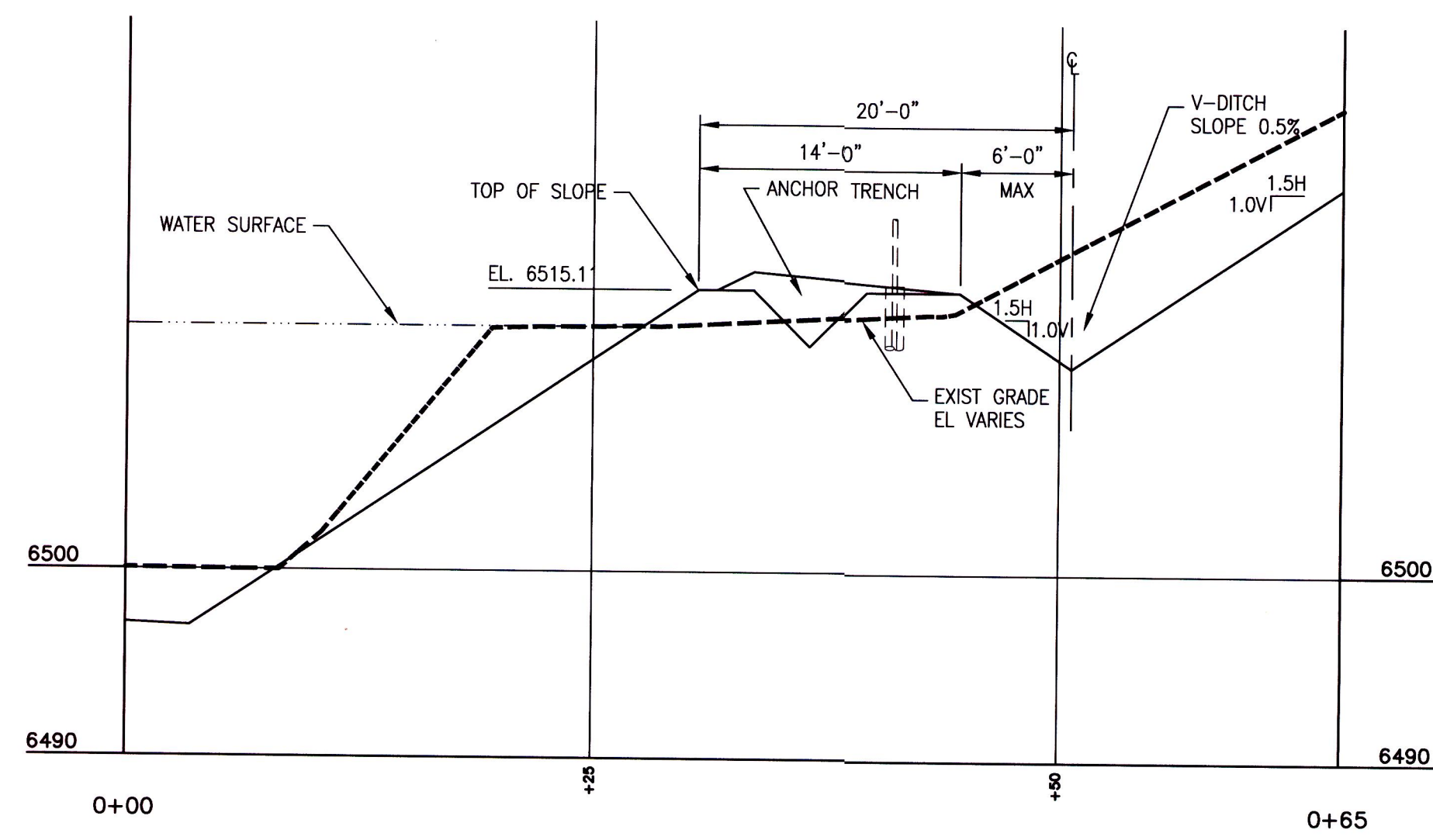
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<b>UniversalPegasus INTERNATIONAL</b>	<b>DRAWN</b> CLL	<b>DATE</b> 11/10/11
	<b>CHECKED</b> GDB	<b>DATE</b> 11/15/11
	<b>APPROVED</b> GDB	<b>DATE</b> 11/18/11
	<b>SCALE</b> N.T.S.	<b>SHEET</b> 1
	<b>JOB NO.</b> 18675	
	<b>CLIENT</b> ENCANA NATURAL GAS	
	<b>CLIENT JOB NO.</b> -	

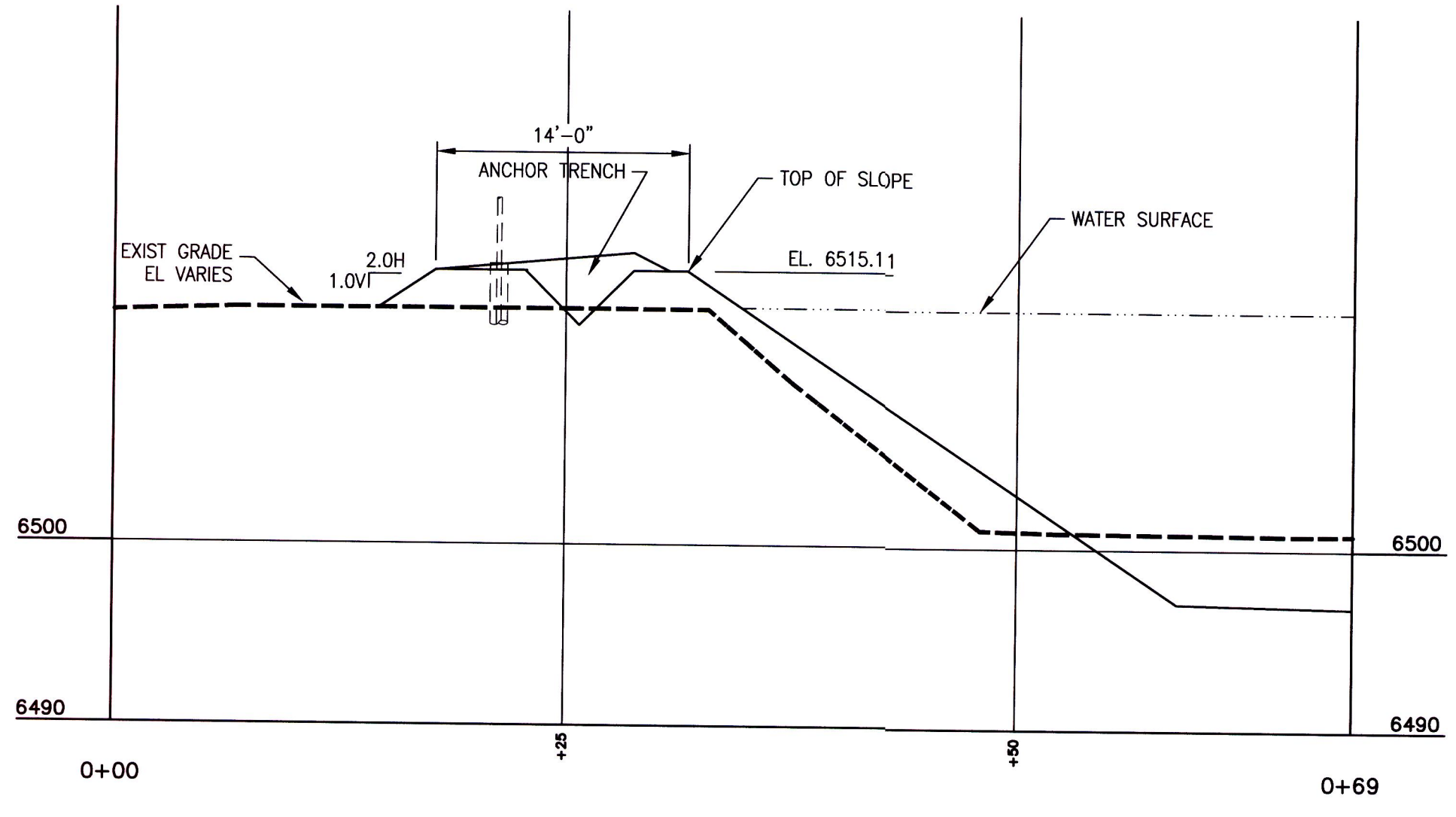
CIVIL/STRUCTURAL  
**WEST FORK PARACHUTE CREEK - A15 WELL PAD**  
**PRODUCED WATER PIT**  
**CIVIL DETAILS**  
 15S R96W GARFIELD COUNTY, COLORADO

**encana**  
 natural gas  
 DRAWING NO. 18675-520-DTL-32401  
 REV. 0

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 Plotted by: christopher larson on: Jan. 5, 12 - 2:45 PM



**DETAIL C-C**  
SCALE : 1/8"=1'-0"



**DETAIL D-D**  
SCALE : 1/8"=1'-0"



**ISSUED FOR CONSTRUCTION**  
 01/05/12

REF. DWG. NO.	REFERENCE TITLE	NO	REVISION	DATE	DRAWN	CHKD	NO
			ISSUED FOR CONSTRUCTION	01/05/12	CLL	CDB	0



DRAWN	CLL	DATE	11/10/11
CHECKED	GDB	DATE	11/15/11
APPROVED	GDB	DATE	11/18/11
SCALE	N.T.S.   SHEET 1		
JOB NO.	18675		
CLIENT	ENCANA NATURAL GAS		
CLIENT JOB NO.	-		

CIVIL/STRUCTURAL  
**WEST FORK PARACHUTE CREEK - A15 WELL PAD  
 PRODUCED WATER PIT  
 CIVIL DETAILS**

TSS R96W GARFIELD COUNTY, COLORADO

**encana**  
*natural gas*

DRAWING NO. 18675-520-DTL-32402  
 REV. 0