



**TOPSOIL PROTECTION PLAN**

**Oil and Gas Development Plan Ruby 7-J Pad, Docket #210700120**

**Ruby 7-J Pad: NESW Section 7, Township 7 North, Range 65 West**

**Form 2A Doc #402590095**

**Weld County, Colorado**

Per Rule, 1001.a, Bayswater will ensure the protection of segregated topsoil and will return the land surface as nearly as practical to its condition at the commencement of drilling operations. Within three months following subsequent drilling operations, the total footprint of the Ruby 7-J Pad disturbed area will be reduced from approximately 13.90 acres to 11.20 acres.

Per Rule, 1002.a, the drill site will be delineated by a perimeter stormwater ditch and berm BMP structure. The ditch and berm will be installed to specifications detailed in Bayswater's Stormwater Management Plan and in conjunction topsoil removal and segregation. The drill site is located in irrigated cropland and the surface owner has not requested that fencing or any other barrier, other than the ditch and berm BMP, be utilized to delineate the disturbed area. There is no livestock present in the immediate area and no reserve pits will be utilized during drilling or production operations.

Per Rule, 1002.b and 1002.c, soil horizons will be removed and stored separately for use during future interim and final reclamation. Soil horizons will be segregated based on physical characteristics observed during topsoil removal. All stockpiled soils shall be protected from degradation due to contamination, compaction and, to the extent practicable, from wind and water erosion during drilling and production operations. Topsoil stockpiles will be located along the north, west, and south sides of the proposed Oil and Gas Location as shown on the Facility Layout Drawings. The maximum height of topsoil stockpiles will be 10 feet.

Typical erosion control practices include, but are not limited to, revegetation of disturbed areas, mulching, berms, diversion dikes, surface roughening, slope drains, check dams, and other comparable measures.

Operator will stabilize the topsoil stockpiles utilizing vehicle tracking perpendicular to slope angle for short term stabilization and drill seed/crimped straw mulch application for longer term stabilization will be utilized to prevent erosion.

An integrated weed management plan which includes mowing, spraying, and routine inspections will be utilized to prevent weed establishment.

Establishment of diverse population of native plant species through seeding, as well as application of site-specific soil amendments (if necessary) will be utilized to maintain soil microbial activity.



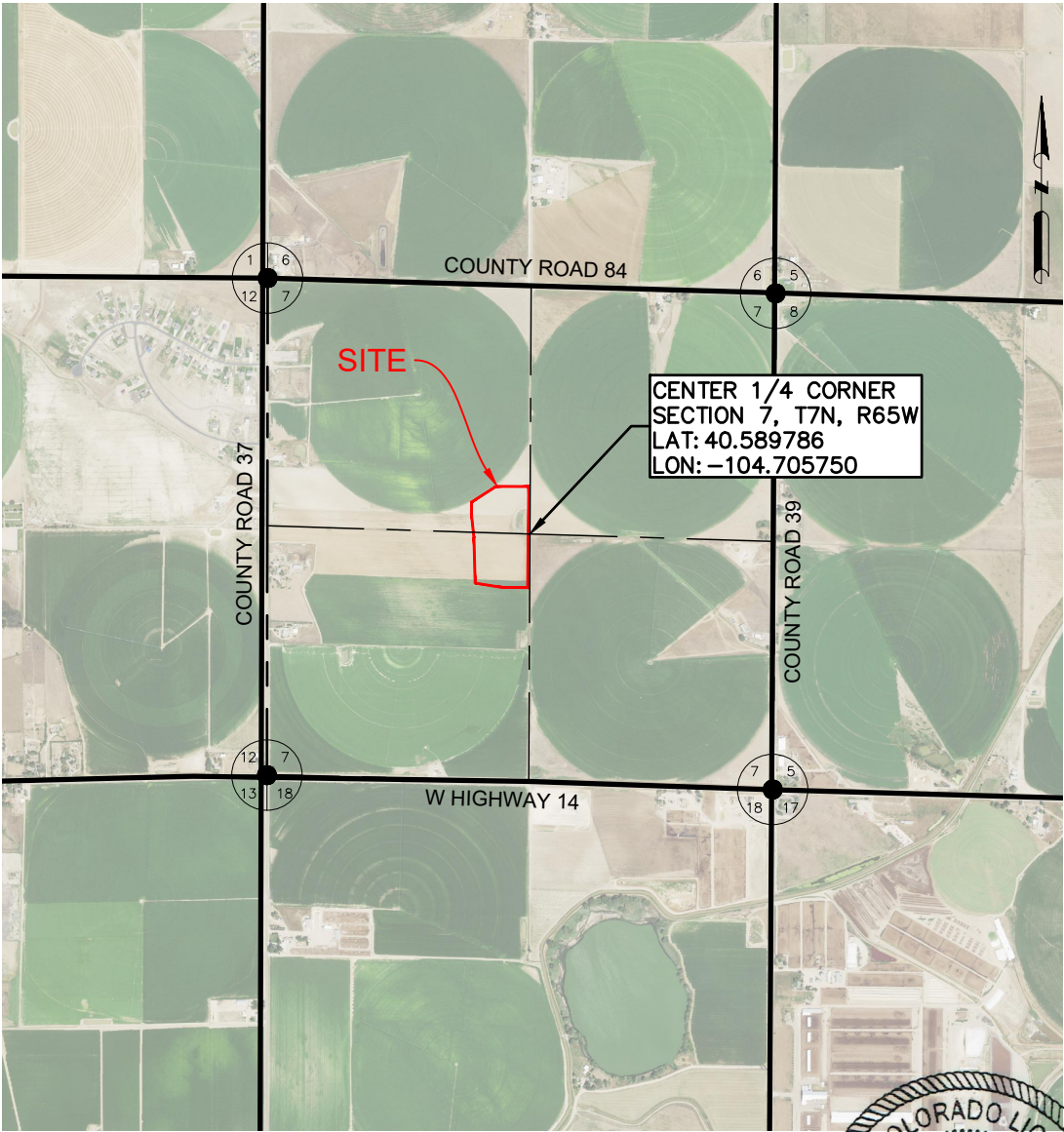
Topsoil depth inventories will be conducted in accordance with CDOT Topsoil Testing Procedures at areas determined by the person conducting the inventory. Inventories will be taken after issuance of the 2A and prior to construction and as part of the pad work. We will conduct a topsoil depth inventory at 2-3 locations within the Disturbed Area to confirm the depth of topsoil. Such depths will be determined on site via either a heavy equipment dozer or grader by via approximate 50' long slot cuts. If there is a variance in the depths exposed via the slot cuts additional slot cuts will be made to ensure that all topsoil is removed and stockpiled.

The Grading Plan prepared in conjunction with the Weld County 1041WOGA is attached to this plan and estimates six inches of topsoil in its calculations. If the slot cuts described above indicate greater depths of topsoil, then those additional cubic yards will be calculated and stockpiled in the areas shown on the attached Grading Plan.

The Grading Plan also shows a diagram of the topsoil stockpiles along with the maximum slopes and volumes of material moved.



REGIONAL MAP  
N.T.S.




VICINITY MAP  
N.T.S.

DATA SOURCE:  
AERIAL IMAGERY: NAIP 2019


PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.

DISCLAIMER:  
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

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ASCENT GEOMATICS SOLUTIONS  
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PREPARED FOR:  


BAYSWATER EXPLORATION & PRODUCTION, LLC  
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DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
**COVER SHEET**  
SURFACE LOCATION  
RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	REVISION DESCRIPTION	INT.
0	03/23/21	ISSUED FOR CONSTRUCTION	AMS
1	05/25/21	ISSUED FOR CONSTRUCTION	CSG
2	07/28/21	ISSUED FOR CONSTRUCTION	AMS
3	09/03/21	ISSUED FOR CONSTRUCTION	AMS
1			-

FIELD DATE:  
04-28-2020

DRAWING DATE:  
03-01-2021

DRAFTED BY:  
AMS

SHEET NO.  
01 OF 15

GENERAL NOTES

1. SHOULD ARTIFACTS OF POTENTIAL HISTORICAL SIGNIFICANCE BE ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CLIENT AND DISCONTINUE EXCAVATION IN THE AFFECTED AREA UNTIL OTHERWISE NOTIFIED BY THE CLIENT OR ENGINEER. ANY DAMAGE TO A DESIGNATED ARCHEOLOGICAL SITE AS A RESULT OF CONTRACTOR NEGLIGENCE SHALL BE THE SOLE RESPONSIBILITY OF CONTRACTOR.
2. DO NOT PERFORM ANY GRADING OR GRUBBING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR INTO NATURAL WATERCOURSES.
3. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
4. CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT DRAWINGS WITH ALL CHANGES IDENTIFIED. THE AS-BUILT FIELD DRAWINGS SHALL BE SUBMITTED TO CLIENT AT PROJECT COMPLETION.

SAFETY

5. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY OF HIS OWN PERSONNEL, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ALL APPLICABLE HEALTH AND SAFETY STANDARDS INCLUDING, BUT NOT LIMITED TO, OSHA 29 CFR PARTS 1910 AND 1926 FOR GENERAL CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF DUST CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING ALL PHASES OF SITE PREP, EARTHWORKS AND GRADING.
7. UNLESS A SAFE EXCAVATION/TRENCH DEPTH IS SPECIFICALLY IDENTIFIED DURING THE PRECONSTRUCTION SAFETY ASSESSMENT BY QUALIFIED PERSONNEL, WHERE PERSONNEL ENTER EXCAVATIONS 4 FEET OR MORE IN DEPTH, PROTECT THE EXCAVATION WITH A SUPPORT SYSTEM OF SLOPING, SHORING, BRACING OR BY USE OF A TRENCH BOX MEETING OSHA SAFETY STANDARD; INSPECT SHORING AND/OR BRACING SYSTEMS DAILY AND AFTER RAINSTORMS OR OTHER HAZARD-INCREASING OCCURRENCE. ALSO PROVIDE SUCH PROTECTION IN EXCAVATIONS LESS THAN 4 FEET DEEP WHERE HAZARDOUS EARTH MOVEMENT MAY BE EXPECTED.
8. ALL CONTRACTORS PERFORMING SUBSURFACE EARTHWORKS MUST CONTACT 811 AT LEAST 3 BUSINESS DAYS PRIOR TO EXCAVATION AND AS REQUIRED BY LAW.

TOPSOIL, CLEARING AND GRUBBING

9. CONTRACTOR SHALL CLEAR AND GRUB PROJECT AREA PRIOR TO PERFORMING ANY EARTHWORKS. HOLES RESULTING FROM REMOVAL OF VEGETATION SHALL BE BACKFILLED, COMPACTED AND GRADED IN ACCORDANCE WITH THIS DRAWING PACKAGE, GENERAL NOTES AND SPECIFICATIONS WHERE APPLICABLE.
10. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL INCLUDING, BUT NOT LIMITED TO VEGETATION, ROCK, DEBRIS, EXCESS SOILS, DEMOLITION MATERIALS, AND CONSTRUCTION MATERIALS. ACQUISITION OF OFF-SITE DISPOSAL AREA IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED BY CLIENT.
11. PERFORM ALL CLEARING, GRUBBING AND EARTHWORKS IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS, INCLUDING REQUIREMENTS FOR HANDLING, REMOVING AND DISPOSING OF CONTAMINATED SOIL, IF APPLICABLE.
12. NO VEGETATION OVERHANGING THE CONSTRUCTION AREA, BUT ROOTED OUTSIDE SAID AREA, SHALL BE REMOVED WITHOUT APPROVAL FROM THE CLIENT OR CONSTRUCTION MANAGER.
13. SHOULD THE CONTRACTOR DISCOVER THAT THE DEPTH OF TOPSOIL EXCEEDS THE DEPTH INDICATED ON THE PLANS, CONTRACTOR SHALL NOTIFY THE CLIENT AND ENGINEER IN WRITING TO DETERMINE IF ANY REVISIONS TO THE EARTHWORKS QUANTITIES AND DESIGN ARE REQUIRED. UNDER SUCH CIRCUMSTANCES THE CONTRACTOR SHALL NOT PROCEED WITH TOPSOIL REMOVAL UNTIL DIRECTED TO DO SO BY THE CLIENT OR CONSTRUCTION MANAGER.

GRADING AND COMPACTION

14. WHERE A GEOTECHNICAL REPORT EXISTS FOR THIS PROJECT, CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND ADHERING TO THE REQUIREMENTS OF THE REPORT. SHOULD A DISCREPANCY BETWEEN THE PROJECT SITE GEOTECHNICAL REPORT AND THESE PLANS EXIST, CONTRACTOR TO INFORM THE ENGINEER IN WRITING BEFORE PROCEEDING WITH EARTHWORKS ACTIVITIES. CONTRACTOR SHALL NOT PROCEED WITH EARTHWORKS ACTIVITIES UNTIL DIRECTED TO DO SO BY THE ENGINEER AND CLIENT.
15. CONTRACTOR SHALL PROPERLY DISPOSE OF EXCESS EXCAVATED MATERIAL OFF SITE UNLESS DIRECTED OTHERWISE BY THE CLIENT OR ENGINEER.
16. ONSITE EXCAVATED MATERIAL STORAGE SHALL BE IN THE LOCATION INDICATED BY THE CLIENT OR AS INDICATED ON THESE PLANS. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES FOR THE SOIL STOCKPILES AS APPROPRIATE.
17. ANY ROCK UNEARTHED DURING EXCAVATION WITH A LONG AXIS LENGTH THAT EXCEEDS 5 INCHES AND IS NOT REQUIRED FOR SITE DEVELOPMENT, SHALL BE DISPOSED OF BY THE CONTRACTOR UNLESS INDICATED OTHERWISE BY THE CLIENT OR ENGINEER.
18. CONTRACTOR TO PROVIDE AND VERIFY THAT ADEQUATE COMPACTION HAS BEEN ACHIEVED PRIOR TO INDEPENDENT CONFIRMATION OF COMPACTION BY A QUALIFIED INSPECTOR. OPTIMUM MOISTURE CONTENT AND MAXIMUM COMPACTED DENSITY TO BE INDICATED IN THESE DRAWINGS OR IN THE ASSOCIATED GEOTECHNICAL REPORT. ON SPEC MATERIAL TO BE PLACED AND COMPACTED IN 6-INCH HORIZONTAL LIFTS.
19. COMPACTION TO BE VERIFIED BY NUCLEAR METHOD PER ASTM D-6938 OR BY AN EQUIVALENT METHOD APPROVED BY THE ENGINEER.
20. COMPACTION TESTING FREQUENCY FOR ROADS AND PARKING AREAS SHALL BE 1 TEST (ASTM D-6938) PER 12 FT. OF WIDTH PER 500 FT. OF LENGTH, OR FRACTION THEREOF PER 6" LIFT UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
21. COMPACTION TEST FREQUENCY FOR AREAS UNDER STRUCTURAL FOUNDATIONS SHALL BE 1 TEST (ASTM D-6938) FOR EACH 1,000 FT<sup>2</sup> OR FRACTION THEREOF PER 6" LIFT, UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.

RUBY 7-J PAD  
GRADING PLAN

22. COMPACTION TEST FREQUENCY FOR DETENTION OR RETENTION POND FILL EMBANKMENTS OR ANY EMBANKMENT IMPOUNDING WATER SHALL BE A MINIMUM OF 1 TEST (ASTM D-6938) PER 2,500 FT<sup>2</sup> OR FRACTION THEREOF PER 6" LIFT UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
23. COMPACTION TEST FREQUENCY FOR REMAINING AREAS (NOT INCLUDING STRUCTURAL FOUNDATIONS, ROADS AND DETENTION POND EMBANKMENTS) IN NON-HEAVY LOADING AREAS SHALL BE 1 SPOT CHECKS PER 40,000 FT<sup>2</sup> PER 6" LIFT IN FILL AREAS UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
24. CONSTRUCTION MANAGER, INSPECTOR AND/OR ENGINEER MAY REQUIRE THAT MORE COMPACTION TESTS ARE NEEDED BASED ON FIELD OBSERVATIONS. THE RECOMMENDED NUMBER OF COMPACTION TESTS INDICATED IN THESE GENERAL NOTES CONSTITUTES THE MINIMUM NUMBER OF TESTS; MORE TESTS MAY BE WARRANTED BASED ON FINDINGS IN THE FIELD.
25. THE CONTRACTOR SHALL SCARIFY SUBGRADE 6" (MIN.) WITH A MOISTURE CONDITION AND COMPACT TO 95% MAXIMUM ACHIEVABLE DENSITY IN ACCORDANCE WITH ASTM D-698 UNLESS INDICATED OTHERWISE IN THESE PLANS.
26. HORIZONTAL LIFTS OF NON-GRAVEL MATERIAL TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698 UNLESS INDICATED OTHERWISE IN THESE PLANS. HORIZONTAL LIFTS OF GRAVEL MATERIAL TO BE COMPACTED IN 6" (MAX) LIFTS TO 90% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 UNLESS INDICATED OTHERWISE IN THESE PLANS. SHOULD A DISCREPANCY BETWEEN THE PROJECT SITE GEOTECHNICAL REPORT AND THESE PLANS EXIST, CONTRACTOR TO INFORM THE ENGINEER IN WRITING BEFORE PROCEEDING WITH SOIL LIFT PLACEMENT AND COMPACTION.
27. WHERE SUFFICIENT EXCAVATION MATERIAL IS NOT AVAILABLE FOR FILL AND "BORROW MATERIAL" IS REQUIRED; BORROW MATERIAL SHALL BE OBTAINED FROM SOURCES SHOWN IN THIS DRAWING PACKAGE OR OTHER SOURCES APPROVED BY THE ENGINEER. OVERBURDEN TO BE REMOVED FROM BORROW SITE PRIOR TO OBTAINING BORROW MATERIAL. ENGINEER APPROVED BMP AND EROSION CONTROL MEASURES TO BE PROVIDED BY CONTRACTOR FOR ANY BORROW LOCATIONS.
28. BLASTING IS NOT PERMITTED, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER AND CLIENT.
29. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATION PURPOSES ONLY. 6" OF TOPSOIL HAS BEEN REMOVED FROM THE EXISTING CAD SURFACE PRIOR TO PERFORMING EARTHWORKS CALCULATIONS UNLESS NOTED OTHERWISE IN THESE PLANS. CONTRACTOR AND SUBCONTRACTOR ARE RESPONSIBLE FOR DETERMINING ALL QUANTITIES.
30. THE CUT AND FILL VOLUMES PROVIDED IN THIS DRAWING PACKAGE ARE LISTED AS BANK (I.E. IN-SITU) VOLUMES UNLESS INDICATED OTHERWISE. UNLESS STATED ELSEWHERE IN THIS DRAWING PACKAGE OR IN THE APPLICABLE GEOTECHNICAL REPORT, CONTRACTOR TO ASSUME A 25% VOLUMETRIC CHANGE OF EXCAVATED SOILS (BULKING/SHRINKAGE FACTOR) FOR THE PURPOSES OF EARTHWORKS TRANSPORT, STORAGE AND STOCKPILING. SOIL MATERIAL PLACED AND COMPACTED PER THE REQUIREMENTS OF THESE PLANS IS ASSUMED TO BE HAVE A 1:1 RATIO FOR EXCAVATED (BANK) TO PLACED EARTHWORKS VOLUMES; ANY OBSERVED VOLUMETRIC CHANGE IN THE SOILS (EXPANSION AND/OR SHRINKAGE) OF THE PLACED AND COMPACTED MATERIALS THAT IS NOT AT A 1:1 RATIO SHALL BE REPORTED TO THE CLIENT AND ENGINEER BY THE CONTRACTOR.
31. ALL STOCKPILES SHOWN IN THESE PLANS ARE ASSUMED TO HAVE 2H:1V SIDE SLOPES. MAXIMUM STOCKPILE HEIGHT IS ASSUMED TO BE 10 FT. CONTRACTOR SHALL NOT CREATE STOCKPILES WITH SIDE SLOPES GREATER THAN 2:1 OR HEIGHTS GREATER THAN 10 FT. WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OR UNLESS INDICATED OTHERWISE IN THESE PLANS. THE STOCKPILE FOOTPRINTS SHOWN IN THESE PLANS ARE ASSUMED TO HAVE AN EXPANSION FACTOR OF 1.25.
32. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES IDENTIFIED SHALL BE BROUGHT TO THE INSPECTOR'S OR CONSTRUCTION MANAGER'S ATTENTION AND RECONCILED WITH THE ENGINEER PRIOR TO CONSTRUCTION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL EXISTING DISTURBED AREAS, FENCES, WALLS, SHEDS OR ANY OTHER STRUCTURES DAMAGED DURING CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER CONDITION. ANY DAMAGE TO ADJACENT PROPERTY OFF OF THE CLIENT'S PROPERTY SHALL BE REPORTED TO THE CLIENT'S REPRESENTATIVE FOR AUTHORIZATION PRIOR TO SAID REPAIRS.
34. ALL EARTHWORKS SHALL CONFORM TO ELEVATIONS AND GRADES DESIGNATED IN THIS DRAWING PACKAGE. ALLOWABLE TOLERANCES ARE ± 0.10 FEET OF FINISHED FINAL GRADE (FG) FOR ALL EARTHWORKS UNLESS INDICATED OTHERWISE IN THIS DRAWING PACKAGE OR BY THE ENGINEER.
35. CONTRACTOR TO PROVIDE BEST MANAGEMENT PRACTICES (BMP) FOR STORMWATER RUNOFF AND SEDIMENT CONTROL IN ACCORDANCE WITH STATE AND FEDERAL GOVERNMENT REQUIREMENTS. IN PARTICULAR, BMP SHALL CONFORM WITH THE FEDERAL CLEAN WATER ACT'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER REGULATIONS REQUIREMENTS. DO NOT PERFORM ANY GRADING OR GRUBBING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR INTO NATURAL WATERCOURSES.
36. ALL PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY OTHER EARTH DISTURBING ACTIVITY. ALL OTHER STRUCTURAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS SOON AS THE CONSTRUCTION ACTIVITIES, AROUND WHICH THEY ARE BASED, COMMENCE.

37. IMPORTED FILL TO MEET ASTM D-1241 SPECIFICATION FOR TYPE I, GRADE B MATERIAL AS FOLLOWS UNLESS INDICATED OTHERWISE IN THIS DRAWING PACKAGE:

- A. 100% SOIL MATERIAL FINER THAN 2-INCH SIEVE.  
B. 75% - 95% SOIL MATERIALS FINER THAN 1-INCH SIEVE.  
C. 40% - 75% SOIL MATERIALS FINER THAN NO. 3/8 SIEVE.  
D. 30% - 60% SOIL MATERIALS FINER THAN NO. 4 SIEVE.  
E. 20% - 45% SOIL MATERIALS FINER THAN NO. 10 SIEVE.  
F. 15% - 30% SOIL MATERIALS FINER THAN NO. 40 SIEVE.  
G. 5% - 15% SOIL MATERIALS FINER THAN NO. 200 SIEVE.  
H. MAXIMUM LIQUID LIMIT OF 25.  
I. PLASTICITY INDEX (PI) 6 (MAX).  
J. MAXIMUM EXPANSIVE POTENTIAL 0.5%.

38. THE SPOT CUT/FILL VALUES SHOWN ON THESE DRAWINGS (WHEN APPLICABLE) ARE FOR PROPOSED GROUND VS. SCRAPED (I.E. TOPSOIL REMOVED) GROUND (E.G. +0.7 MEANS THAT THE PROPOSED GROUND IS 0.7 FT ABOVE THE SCRAPED GROUND).
39. THE PREFERRED LOCATION(S) FOR PLACEMENT OF HEAVY LOADS ARE IN AREAS OF CUT. IF ANY HEAVY LOADS (E.G. MLVTS, MINION TANKS, ETC.) ARE INTENDED TO BE PLACED ON THE PAD IN FILL AREAS, THE LOAD(S) MUST BE PLACED A MINIMUM OF 30 LINEAR FEET FROM THE EDGE OF THE PAD. THIS REQUIREMENT IS TO PROVIDE ADEQUATE SPACING TO PROTECT AGAINST SLOPE STABILITY ISSUES AND TO PROVIDE SAFE WORKING CONDITIONS IN ACCORDANCE WITH ENGINEERING BEST PRACTICES. CONTRACTOR SHALL CONTACT ASCENT GEOMATICS SOLUTIONS ENGINEERING DEPARTMENT SHOULD A DISCREPANCY BETWEEN THIS REQUIREMENT AND THESE PLANS BE IDENTIFIED AND/OR IF THE CONTRACTOR SEEKS CLARIFICATION ON WHAT CONSTITUTES "HEAVY LOADS".
40. HORIZONTAL LIFTS OF FILL SOIL MATERIAL (NON-GRAVELS) DIRECTLY BENEATH AND WITHIN 5.0 FT OF THE WATER TANK TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF THREE (3) COMPACTION TESTS PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE FILL AREAS DIRECTLY BENEATH AND WITHIN 5.0 FT OF THE WATER TANK TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.

FINAL GRADE AND ACCEPTANCE

41. FINAL GRADE TO MAINTAIN POSITIVE (I.E. OFFSITE) DRAINAGE ACROSS THE ENTIRE PROJECT SITE UNLESS SPECIFICALLY INDICATED OTHERWISE IN THIS DRAWING PACKAGE.
42. SETTLEMENT OR WASHBOARDING THAT OCCURS IN GRADED OR BACKFILLED AREAS PRIOR TO ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL CHARGE TO CLIENT.
43. FINAL SUBGRADE (AS APPLICABLE) TO BE PROOF ROLLED BY A TRUCK WITH A REAR AXLE LOAD OF APPROXIMATE 16,000 LBS./AXLE AND ACCEPTED BY THE INSPECTOR OR CONSTRUCTION MANAGER PRIOR TO FINAL ACCEPTANCE OF SUBGRADE AND PLACEMENT OF GRAVEL TOP LAYER. REMOVE AND REPLACE ANY SOFT MATERIAL WHICH EXHIBITS PERMANENT SUBGRADE DEFORMATION EXCEEDING 0.5".
44. SITE COORDINATES AND DESIGN ARE GROUND VALUES BASED ON A LOW DISTORTION PROJECTION (LDP). THIS LDP IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 40.568059°N A CENTRAL MERIDIAN LONGITUDE OF 104.658844°W, A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000230 (EXACT), A FALSE NORTHING OF 100,000, AND A FALSE EASTING OF 300,000. THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
45. BEARINGS AND DISTANCES SHOWN ARE GROUND VALUES BASED ON THE LDP NOTED ABOVE.
46. CONTRACTOR TO FIELD VERIFY LOCAL BENCHMARKS /MONUMENTS BEFORE STARTING CONSTRUCTION. CONTRACTOR MAY BE REQUIRED TO RECTIFY TRUE COORDINATES TO MATCH THE NORTHINGS AND EASTINGS SHOWN IN THIS PLAN SET. ANY CONFLICTS WITH LOCAL COORDINATES SHALL BE DISCUSSED WITH FIELD ENGINEER.

GEOTECHNICAL REPORT

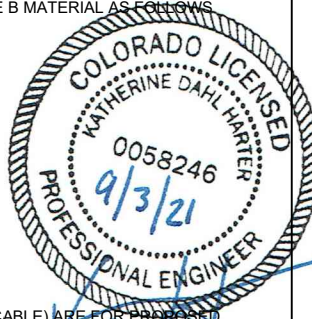
47. ASCENT GEOMATICS WAS NOT PROVIDED WITH A GEOTECHNICAL REPORT TO AID IN THE PREPARATION OF THIS GRADING PLAN.

TITLE REPORT

48. ASCENT GEOMATICS SOLUTIONS WAS NOT PROVIDED A TITLE REPORT FOR THIS SITE. ALL RECORDED DOCUMENTS REFERENCED ON THESE PLANS WERE DOWNLOADED FROM RESEARCH VIA THE WELD COUNTY CLERK AND RECORDER. ASCENT GEOMATICS SOLUTIONS MAKES NO GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED, TO THE COMPLETENESS OF ENCUMBRANCES TO THE SUBJECT PROPERTY.

PROJECT SPECIFIC NOTES

49. PAD TO BE CAPPED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC) UNLESS INDICATED OTHERWISE IN THESE PLANS OR BY THE CLIENT. ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF ONE (1) COMPACTION TESTS PER 6,000 FT<sup>2</sup> PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE POND INFILL AREA TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
50. THE CONTRACTOR SHALL OVER-EXCAVATE TO A DEPTH OF 5 FT (MINIMUM) BELOW THE EXISTING POND. SHOULD THE CONTRACTOR DISCOVER THAT THE DEPTH OF INCOMPETENT SOILS EXCEEDS 5 FT, THE CONTRACTOR SHALL NOTIFY THE CLIENT AND ENGINEER IN WRITING TO DETERMINE IF ANY REVISIONS TO THE EARTHWORKS QUANTITIES AND DESIGN ARE REQUIRED.
51. EXISTING POND TO BE INFILLED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC). ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF ONE (1) COMPACTION TESTS PER 6,000 FT<sup>2</sup> PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE POND INFILL AREA TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.



ASCENT GEOMATICS SOLUTIONS  
8620 WOLFF COURT  
WESTMINSTER, CO 80031  
(303) 928-7128

PREPARED FOR:



BAYSWATER EXPLORATION &  
PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
GENERAL NOTES

SURFACE LOCATION

RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	DESCRIPTION	REVISION	INT.
0	03/23/21	ISSUED FOR CONSTRUCTION	AMS	
1	05/25/21	ISSUED FOR CONSTRUCTION	CSG	
			I	
			I	
			I	

FIELD DATE:

04-28-2020

DRAWING DATE:

03-01-2021

DRAFTED BY:

AMS

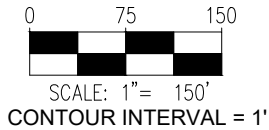
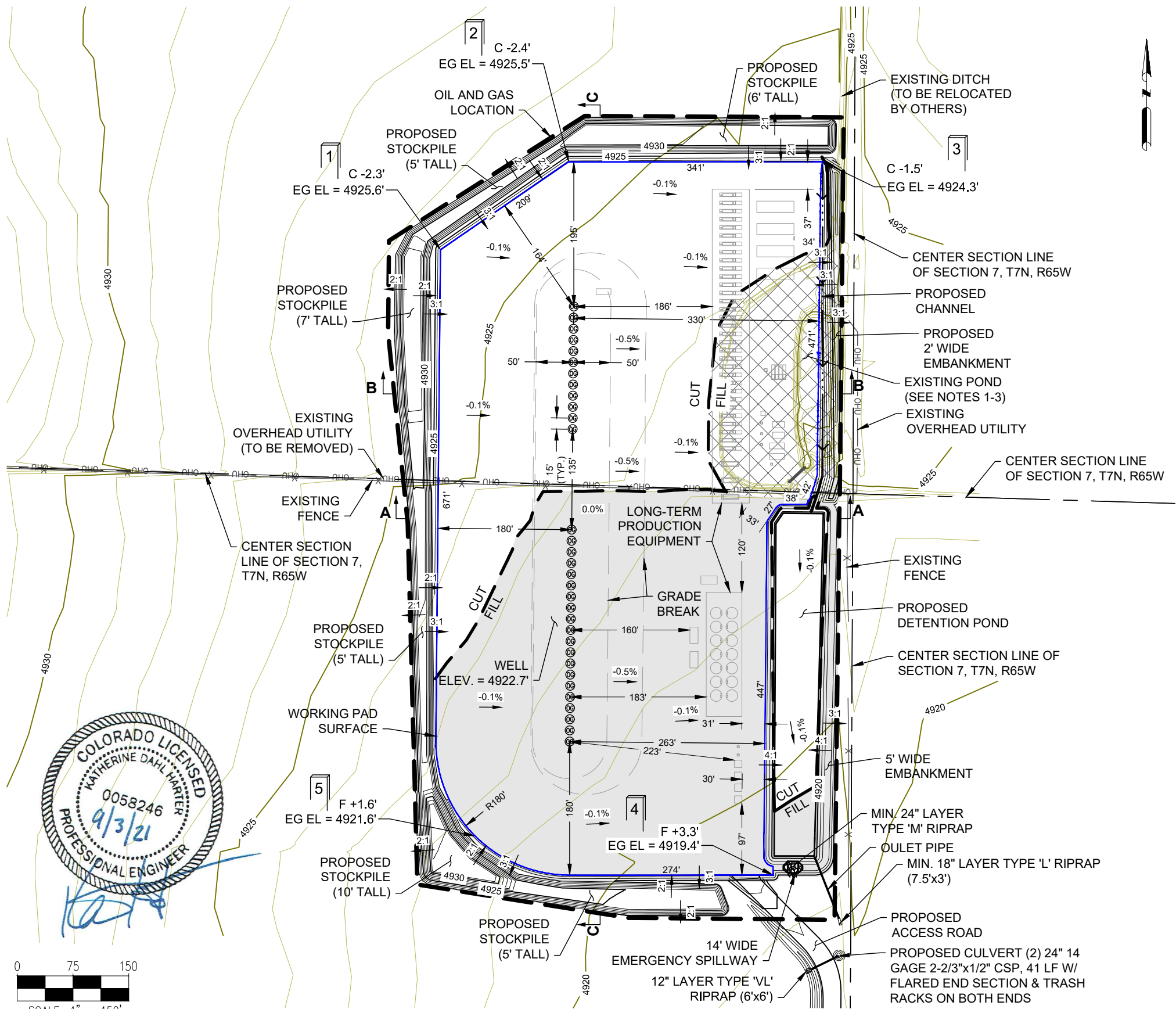
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OF

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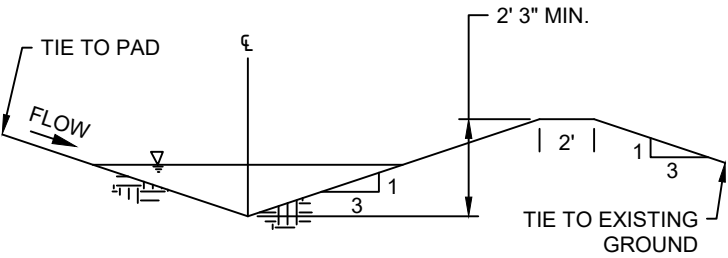
RUBY 7-J PAD  
GRADING PLAN



SITE QUANTITIES

FINISHED GRADE ELEVATION	4922.6' - 4923.4'
ROUGH GRADE ELEVATION	4922.1' - 4922.9'
OVER-EXCAVATION (BANK)	9,372 CY
IMPORT (CDOT CLASS 6) FOR POND INFILL	9,372 CY
TOTAL CUT FOR WELL PAD (BANK)	11,219 CY
FILL FOR WELL PAD	12,845 CY
IMPORT FOR WELL PAD	1,626 CY
TOPSOIL (BANK)	8,526 CY
OIL & GAS LOCATION AREA	13.9 ACRES
WORKING PAD SURFACE AREA	10.1 ACRES
ACCESS ROAD DISTURBANCE AREA	2.3 ACRES

- NOTES:
- IN THE ABSENCE OF A GEOTECHNICAL REPORT, ASCENT HAS ASSUMED AN OVER-EXCAVATION DEPTH OF 5 FT BELOW THE EXISTING POND.
  - EXISTING POND TO BE INFILLED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC). ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF ONE (1) COMPACTION TESTS PER 6,000 FT<sup>2</sup> PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE POND INFILL AREA TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF INCOMPETENT SOILS REMOVED DURING OVER-EXCAVATION OF THE EXISTING POND. THE INCOMPETENT SOILS SHALL NOT BE USED FOR CONSTRUCTION OF THE PAD.
  - ASCENT GEOMATICS SOLUTIONS WAS NOT PROVIDED A TITLE REPORT FOR THIS SITE. ALL RECORDED DOCUMENTS REFERENCED ON THESE PLANS WERE DOWNLOADED FROM RESEARCH VIA THE WELD COUNTY CLERK AND RECORDER. ASCENT GEOMATICS SOLUTIONS MAKES NO GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED, TO THE COMPLETENESS OF ENCUMBRANCES TO THE SUBJECT PROPERTY.



CHANNEL DETAIL  
N.T.S.

DISCLAIMER:  
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ASCENT  
GEOMATICS SOLUTIONS

ASCENT GEOMATICS SOLUTIONS  
8620 WOLFF COURT  
WESTMINSTER, CO 80031  
(303) 928-7128

PREPARED FOR:  
BAYSWATER  
EXPLORATION AND PRODUCTION, LLC

BAYSWATER EXPLORATION &  
PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
PAD LAYOUT  
SURFACE LOCATION  
RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	DESCRIPTION	INT.
0	03/23/21	ISSUED FOR CONSTRUCTION	AMS
1	05/25/21	ISSUED FOR CONSTRUCTION	CSG
2	07/28/21	ISSUED FOR CONSTRUCTION	AMS
3	09/03/21	ISSUED FOR CONSTRUCTION	AMS
1			

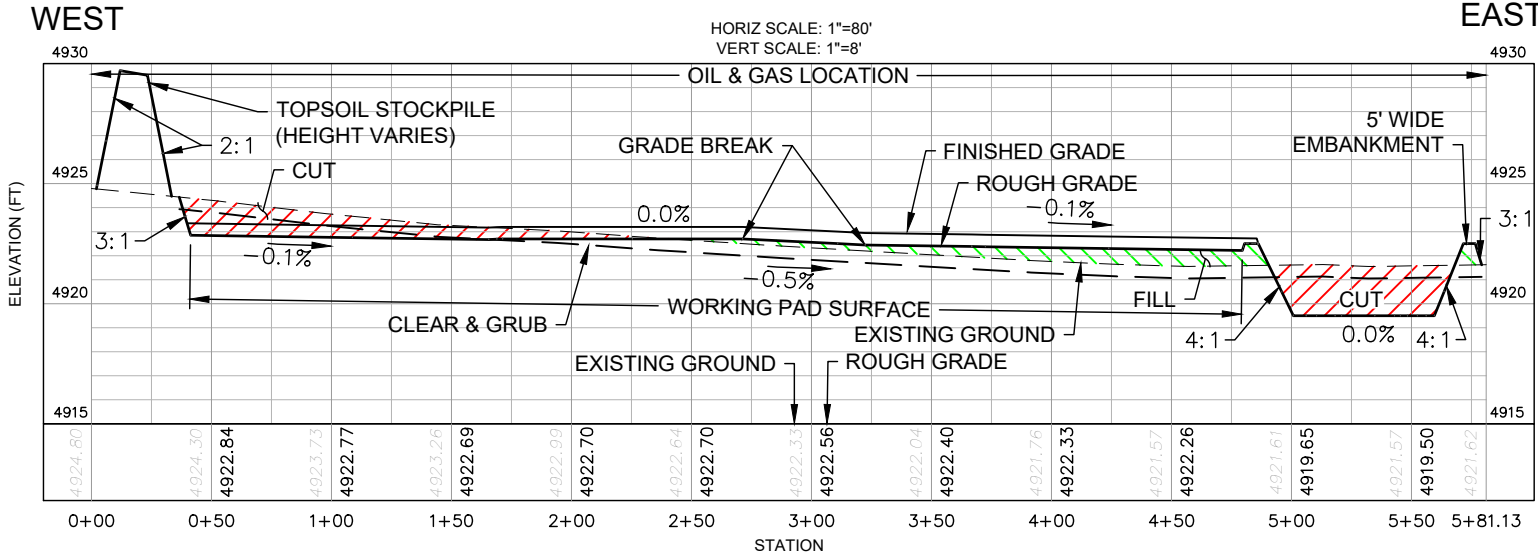
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04-28-2020

DRAWING DATE:  
03-01-2021

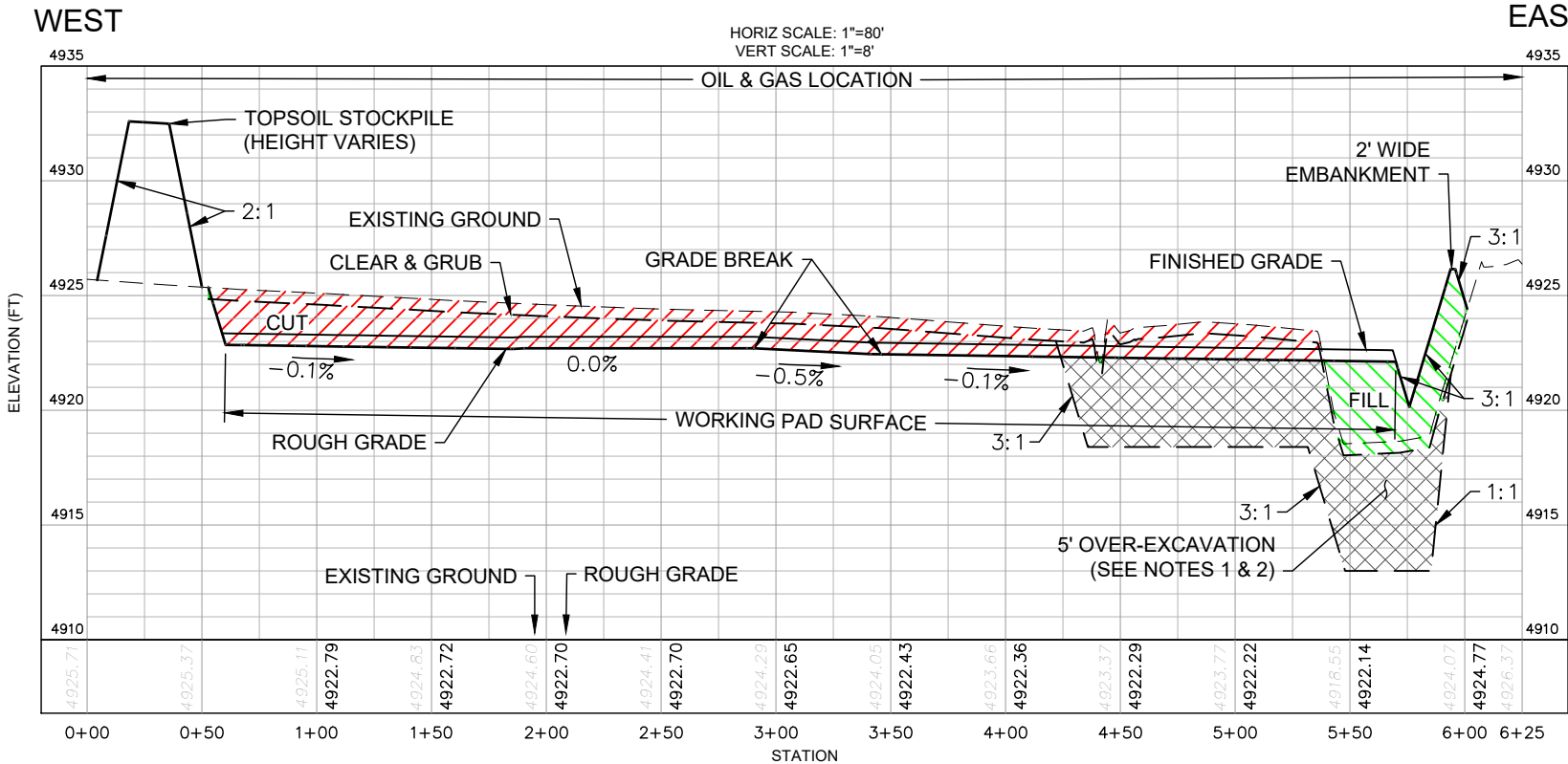
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AMS

SHEET NO.  
03 OF 15

# RUBY 7-J PAD GRADING PLAN



SECTION A - LOOKING NORTH



SECTION B - LOOKING NORTH

DISCLAIMER:  
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ASCENT GEOMATICS SOLUTIONS  
8620 WOLFF COURT  
WESTMINSTER, CO 80031  
(303) 928-7128

PREPARED FOR:



**PRODUCTION, LLC**  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

**SHEET NAME:**

**CROSS SECTIONS**

**SURFACE LOCATION**

**RUBY 7-J PAD**

**NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.**

**WELD COUNTY, COLORADO**

REV.	DATE	REVISION DESCRIPTION	IN T.
0	03/23/21	ISSUED FOR CONSTRUCTION	AMS
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FIELD DATE:  
04-28-2020

DRAWING DATE:  
03-01-2021

DRAFTED BY:  
AMS

SHEET NO.  
04 OF 15

# RUBY 7-J PAD GRADING PLAN



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WESTMINSTER, CO 80031  
(303) 928-7128

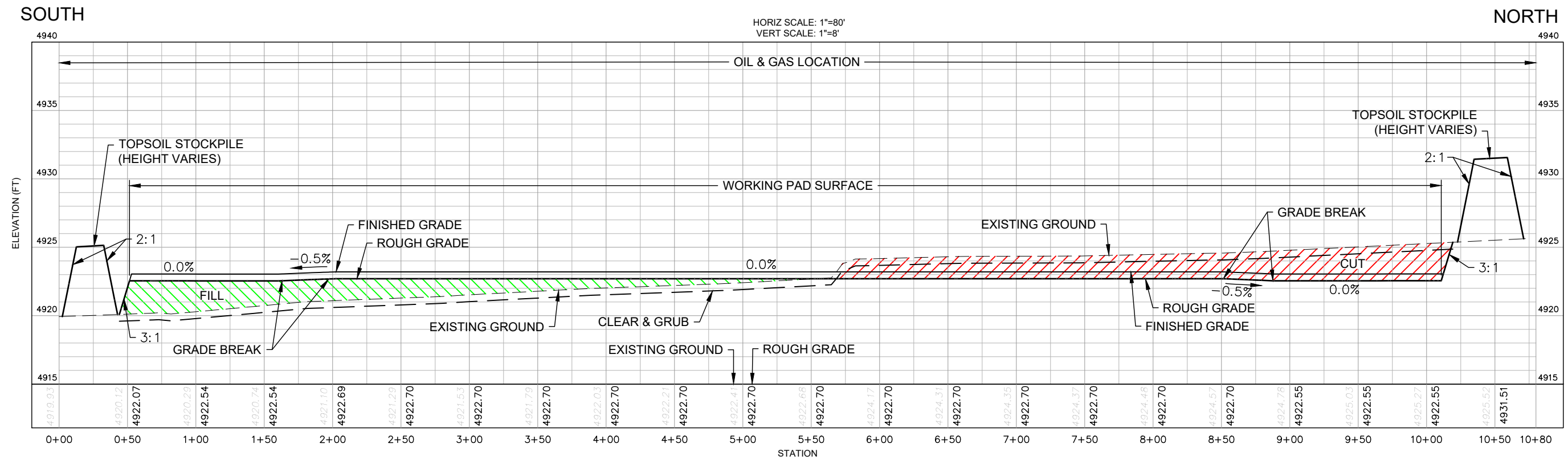
PREPARED FOR:



**PRODUCTION, LLC**  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME :  
CROSS SECTIONS

**SURFACE LOCATION**  
**RUBY 7-J PAD**  
**NE 1/4 SW 1/4 SECTION 7,**  
**T7N, R65W, 6TH P.M.**  
**WELD COUNTY, COLORADO**



### SECTION C - LOOKING WEST

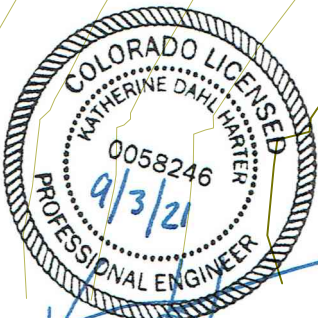


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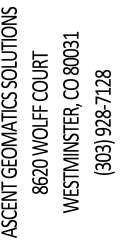
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SHEET NO.	05 OF 15

# GRADING PLAN



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**BAYSWATER**  
EXPLORATION AND PRODUCTION, LLC

**RIG LAYOUT**

---

**SURFACE LOCATION**

**RUBY 7-J PAD**

**NE 1/4 SW 1/4 SECTION 7,**

**T7N, R65W, 6TH P.M.**

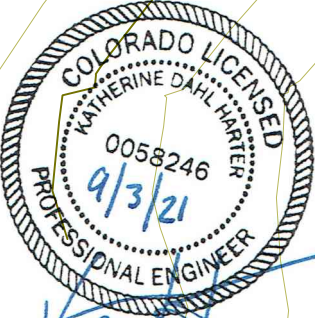
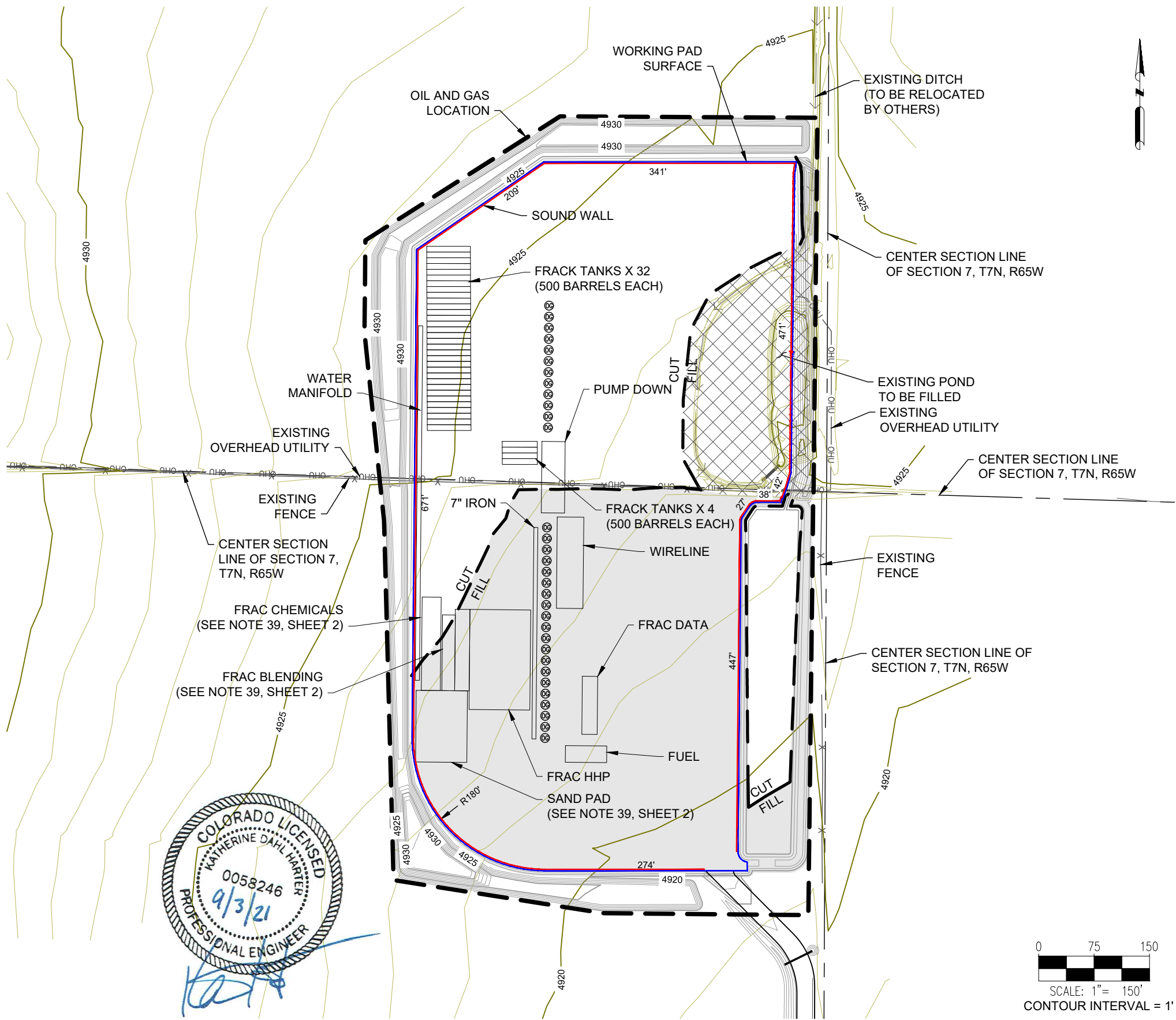
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**WELD COUNTY, COLORADO**

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SHEET NO. 06 OF 15

RUBY 7-J PAD  
GRADING PLAN



**NOTES:**

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ASCENT  
GEOMATICS SOLUTIONS

ASCENT GEOMATICS SOLUTIONS  
8620 WOLFF COURT  
WESTMINSTER, CO 80031  
(303) 928-7128

PREPARED FOR:

**BAYSWATER EXPLORATION & PRODUCTION, LLC**  
PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**COMPLETIONS & STIMULATION LAYOUT**

SURFACE LOCATION  
**RUBY 7-J PAD**  
**NE 1/4 SW 1/4 SECTION 7,**  
**T7N, R65W, 6TH P.M.**  
**WELD COUNTY, COLORADO**

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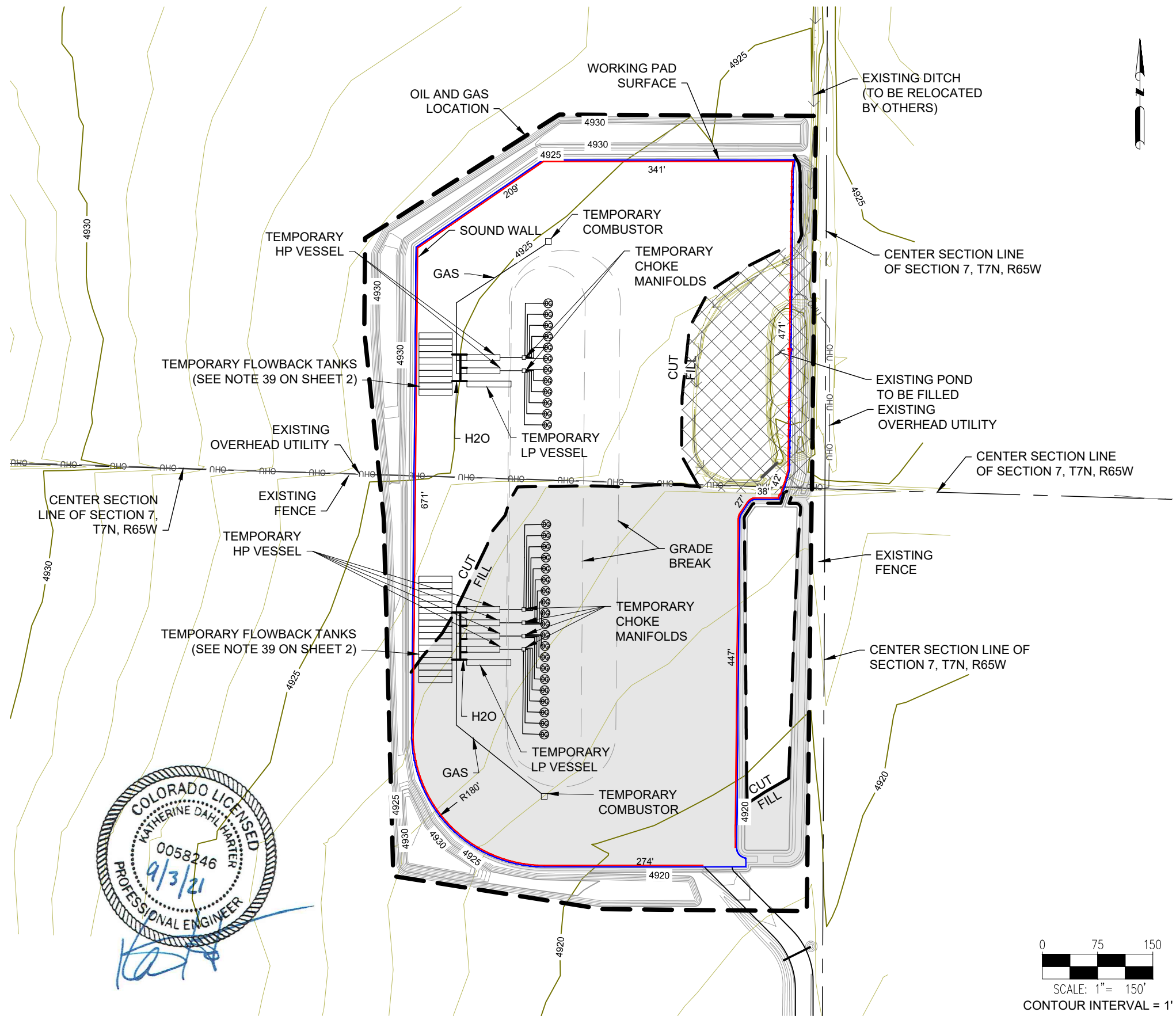
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**AMS**

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**07 OF 15**

RUBY 7-J PAD  
GRADING PLAN



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PREPARED FOR:

**BAYSWATER**  
EXPLORATION AND PRODUCTION, LLC

**BAYSWATER EXPLORATION & PRODUCTION, LLC**  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**FLOWBACK EQUIPMENT LAYOUT**

SURFACE LOCATION  
**RUBY 7-J PAD**  
**NE 1/4 SW 1/4 SECTION 7, T7N, R65W, 6TH P.M.**  
**WELD COUNTY, COLORADO**

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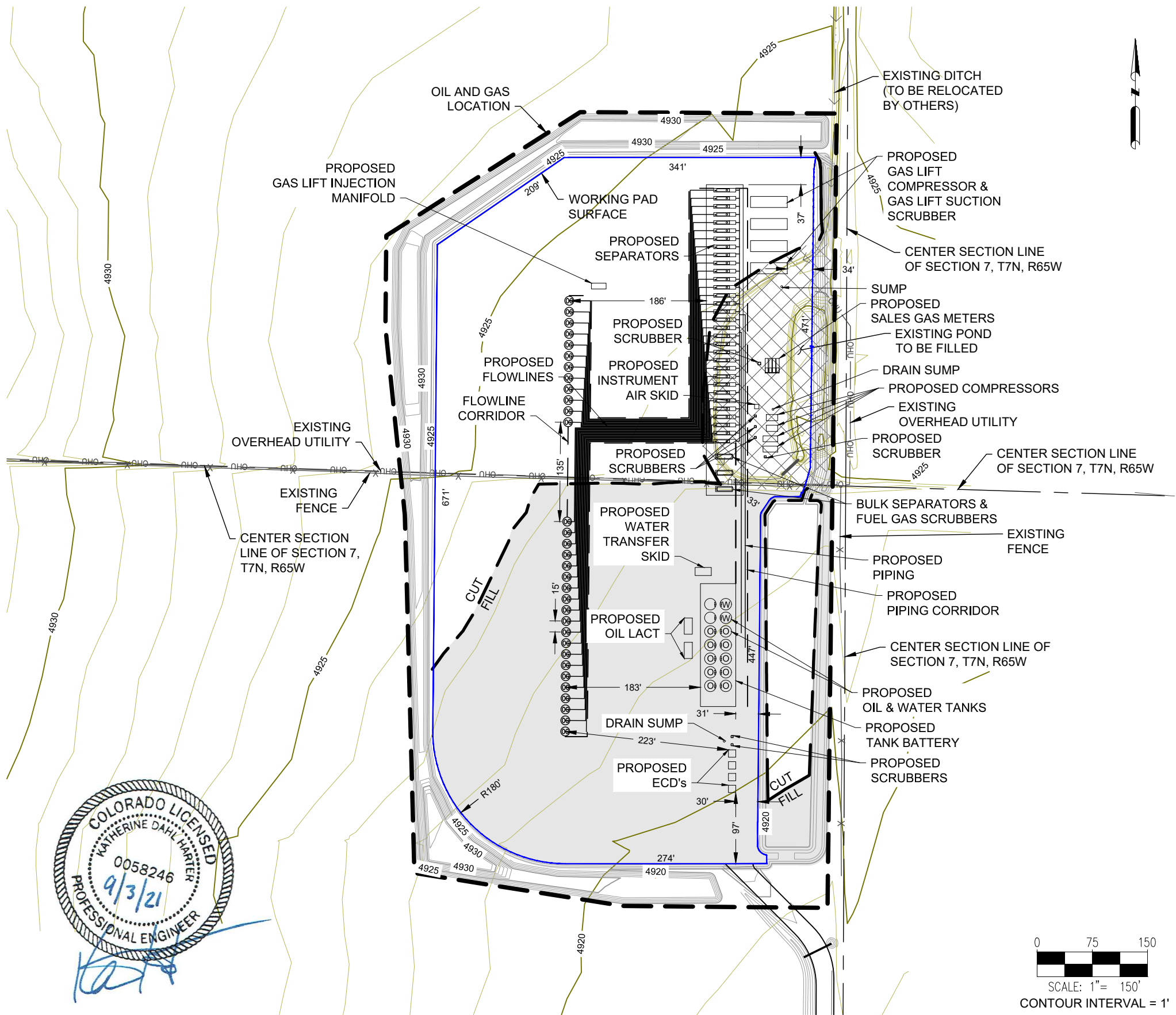
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**AMS**

SHEET NO.  
**08** OF **15**

RUBY 7-J PAD  
GRADING PLAN



0 75 150  
SCALE: 1"= 150'  
CONTOUR INTERVAL = 1'

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PREPARED FOR:

**BAYSWATER EXPLORATION & PRODUCTION, LLC**  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**PRODUCTION LAYOUT**

SURFACE LOCATION  
**RUBY 7-J PAD**  
**NE 1/4 SW 1/4 SECTION 7,**  
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**WELD COUNTY, COLORADO**

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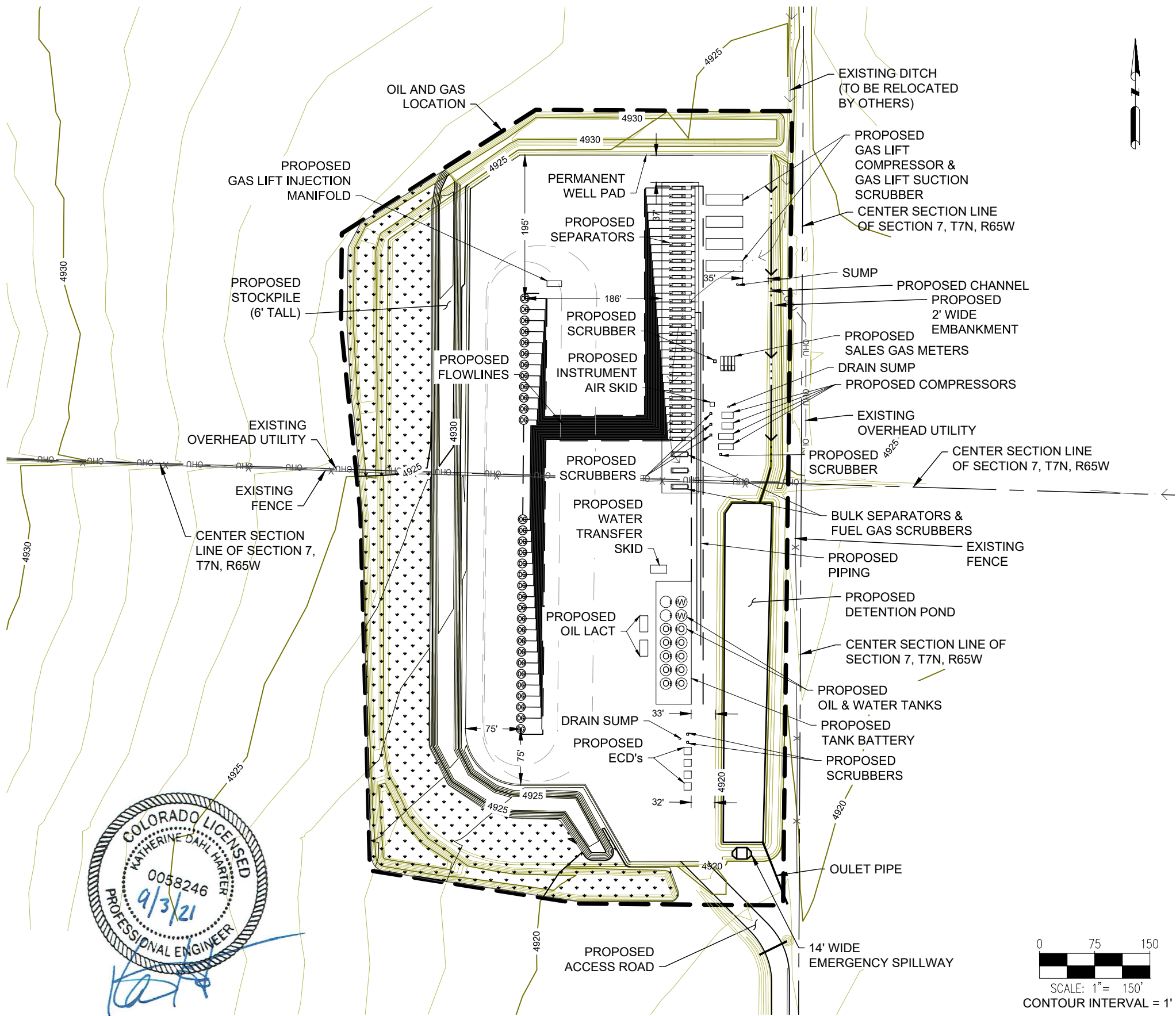
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**AMS**

SHEET NO.  
**09 OF 15**

RUBY 7-J PAD  
GRADING PLAN

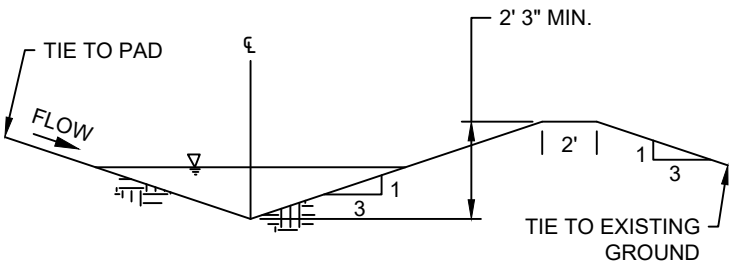


SITE QUANTITIES

TOTAL CUT FOR SITE (BANK)	2,909 CY
TOTAL FILL FOR SITE	2,715 CY
NET EXCESS MATERIAL (BANK)	194 CY
TOPSOIL TO BE REPLACED	2,065 CY
EXCESS TOPSOIL REMAINING	7,403 CY
RECLAIMED AREA	2.7 ACRES
PERMANENT DISTURBANCE AREA	11.2 ACRES
OIL & GAS LOCATION AREA	13.9 ACRES

NOTES:

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CHANNEL DETAIL  
N.T.S.

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PREPARED FOR:

BAYSWATER  
EXPLORATION AND PRODUCTION, LLC

BAYSWATER EXPLORATION &  
PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

RECLAMATION LAYOUT

SURFACE LOCATION

RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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FIELD DATE:

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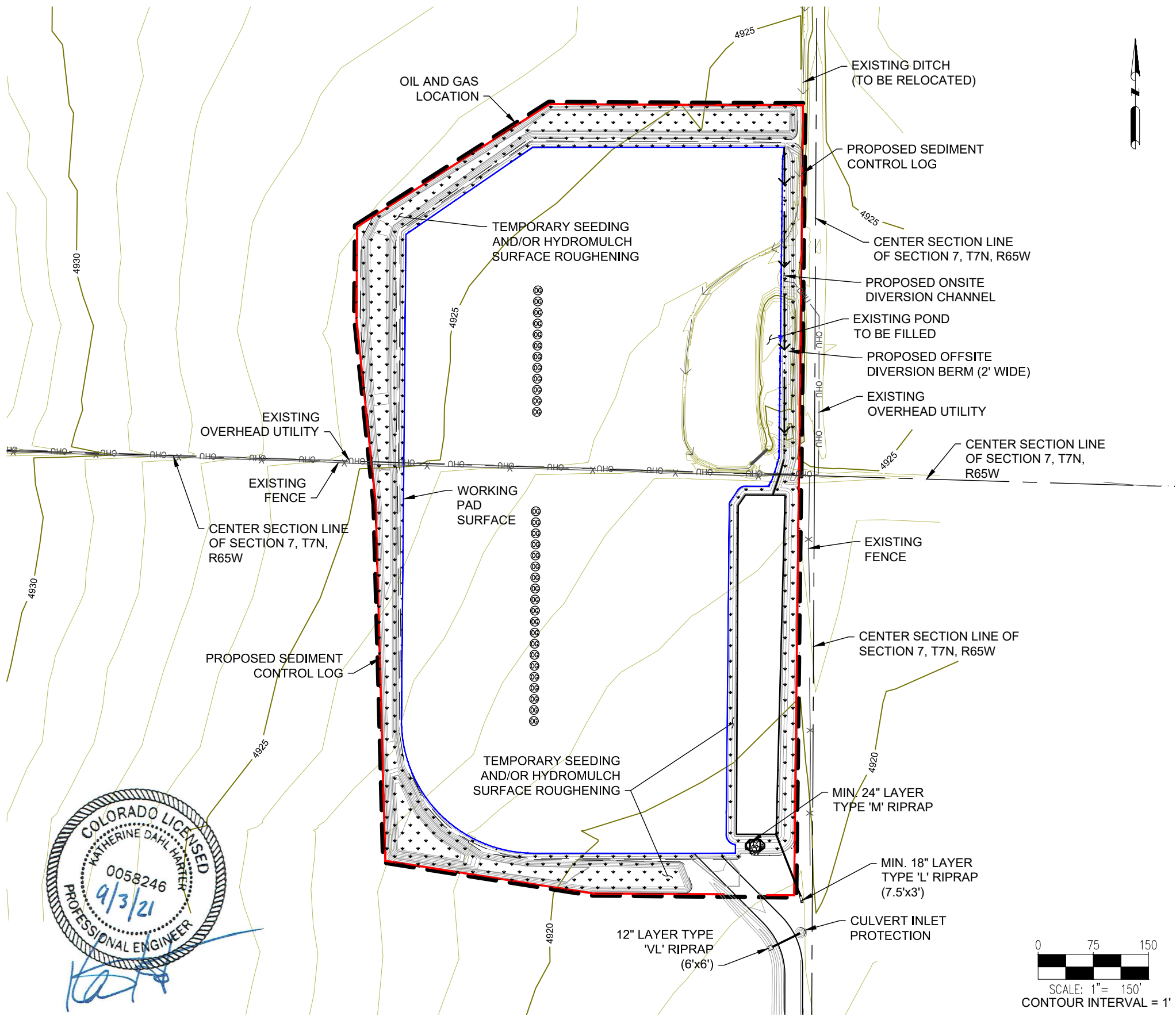
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SHEET NO.

10 OF 15

RUBY 7-J PAD  
GRADING PLAN



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730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**EROSION & SEDIMENT CONTROL PLAN**

SURFACE LOCATION  
**RUBY 7-J PAD**  
**NE 1/4 SW 1/4 SECTION 7,**  
**T7N, R65W, 6TH P.M.**  
**WELD COUNTY, COLORADO**

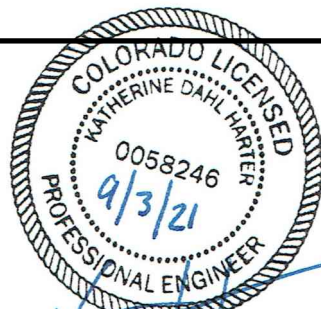
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4			-

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**04-28-2020**

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**03-01-2021**

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**AMS**

SHEET NO.  
**11 OF 15**



RUBY 7-J PAD  
GRADING PLAN

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- 2. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM WELD COUNTY PUBLIC WORKS.
- 3. CLEARING, GRUBBING, AND TOPSOIL STRIPPED SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THE E&S PLAN.
- 4. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- 5. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN.
- 6. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY WELD COUNTY PUBLIC WORKS.
- 7. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 8. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- 9. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- 10. ALL SEDIMENT REMOVED FROM BMPS SHALL BE PLACED WITHIN THE RIGHT-OF-WAY EXCEPT IN WETLAND AREAS OR AS OTHERWISE DESCRIBED IN THE PLAN DRAWINGS.

- 11. AREAS WHICH ARE TO BE TOP SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 12. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 13. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
- 14. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- 15. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- 16. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- 17. IF EARTH DISTURBANCE ACTIVITIES ARE TO CEASE FOR MORE THAN 4 DAYS, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS. ACCESS AREAS THAT CONTINUE TO BE DISTURBED WILL BE STABILIZED ONCE ACTIVITY IS COMPLETE.
- 18. AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION, AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.
- 19. MULCH WITH NETTING OR EROSION CONTROL MATS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER AND WITHIN 100' OF SPECIAL PROTECTION WATERS OR 50' OF SURFACE WATERS.
- 20. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.



ASCENT GEOMATICS SOLUTIONS  
8620 WOLFE COURT  
WESTMINSTER, CO 80031  
(303) 928-7128

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BAYSWATER  
EXPLORATION AND PRODUCTION, LLC

BAYSWATER EXPLORATION &  
PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
EROSION & SEDIMENT CONTROL NOTES  
SURFACE LOCATION  
RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.,  
WELD COUNTY, COLORADO

REV.	DATE	REVISION DESCRIPTION	INT.	AMS	CSG	I	I	I
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1	05/25/21	ISSUED FOR CONSTRUCTION	CSG					

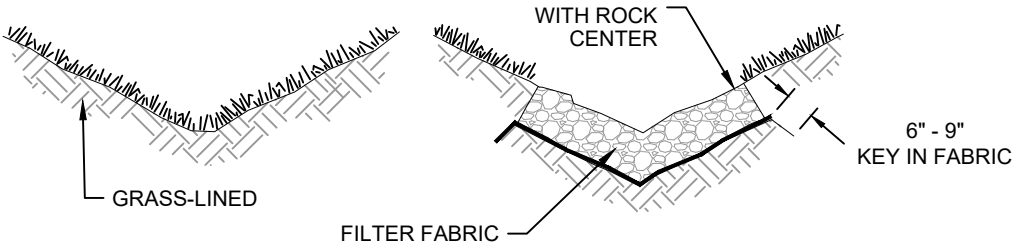
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04-28-2020

DRAWING DATE:  
03-01-2021

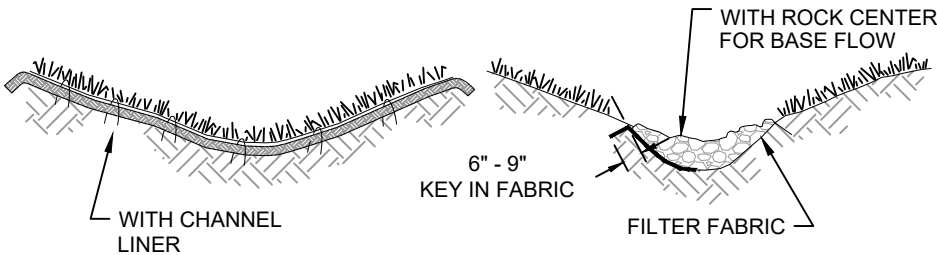
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AMS

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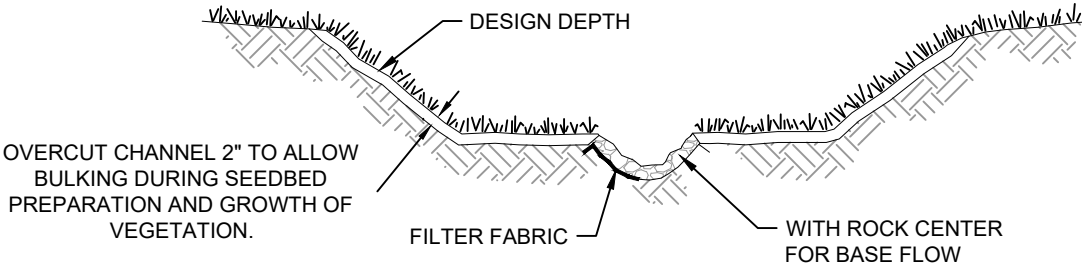
TYPICAL V-SHAPED CHANNEL CROSS-SECTION



TYPICAL PARABOLIC CHANNEL CROSS-SECTION



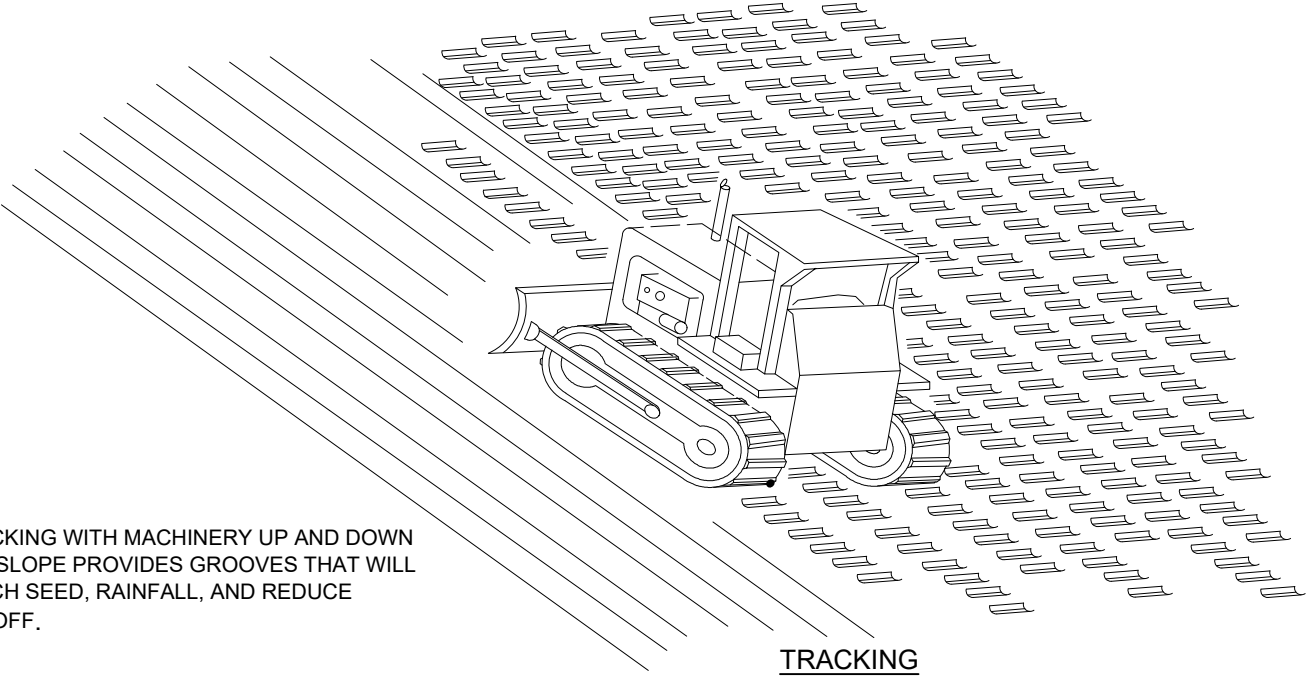
TYPICAL TRAPEZOIDAL CHANNEL CROSS-SECTION



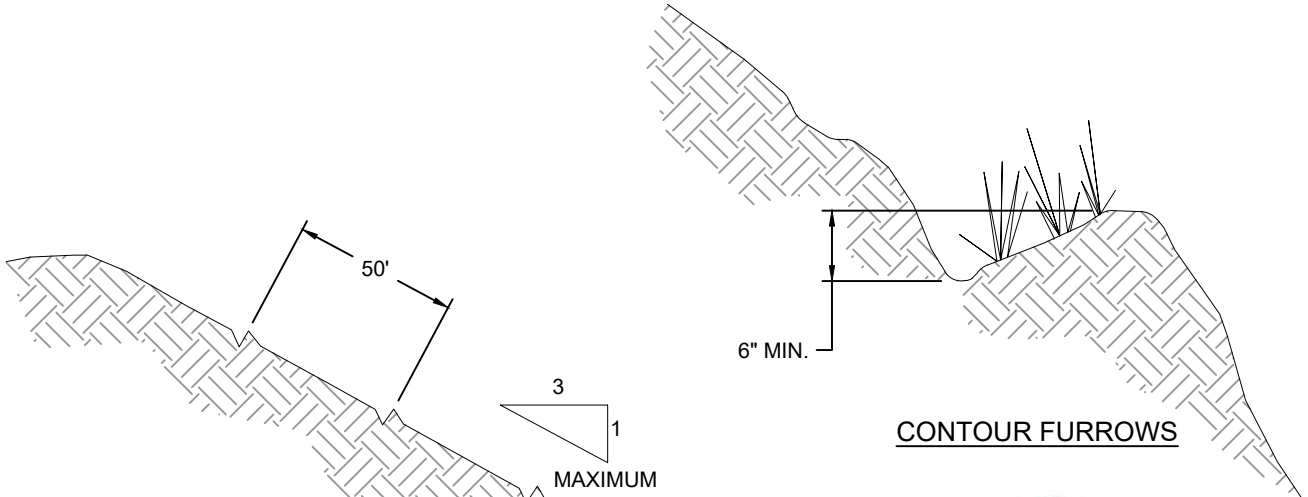
TYPICAL GRASS-LINED CHANNELS

SCALE: NOT TO SCALE

RUBY 7-J PAD  
GRADING PLAN



TRACKING WITH MACHINERY UP AND DOWN THE SLOPE PROVIDES GROOVES THAT WILL CATCH SEED, RAINFALL, AND REDUCE RUNOFF.

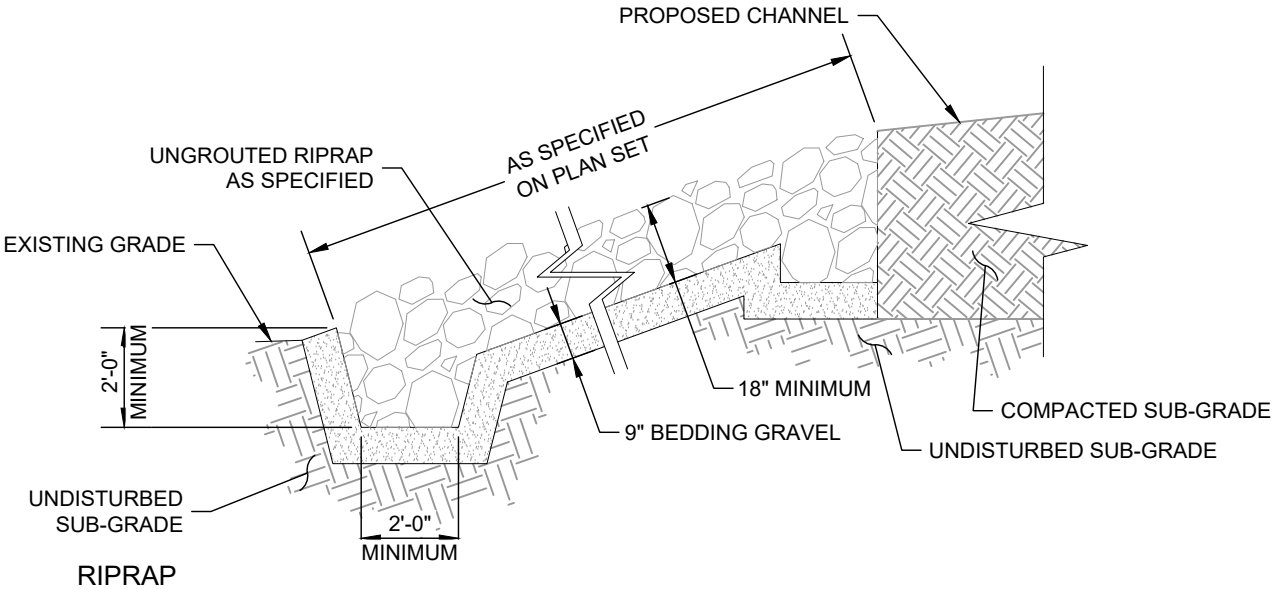


GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL, AND DECREASE RUNOFF.


NOTE:  
1. DETAIL SHOWS VERTICAL TRACKING. ACTUAL TRACKING MAY BE HORIZONTAL.

SURFACE ROUGHENING BY TRACKING AND CONTOUR FURROWS

SCALE: NOT TO SCALE




SCALE: NOT TO SCALE



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DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**BMP TYPICAL DETAILS**

SURFACE LOCATION

RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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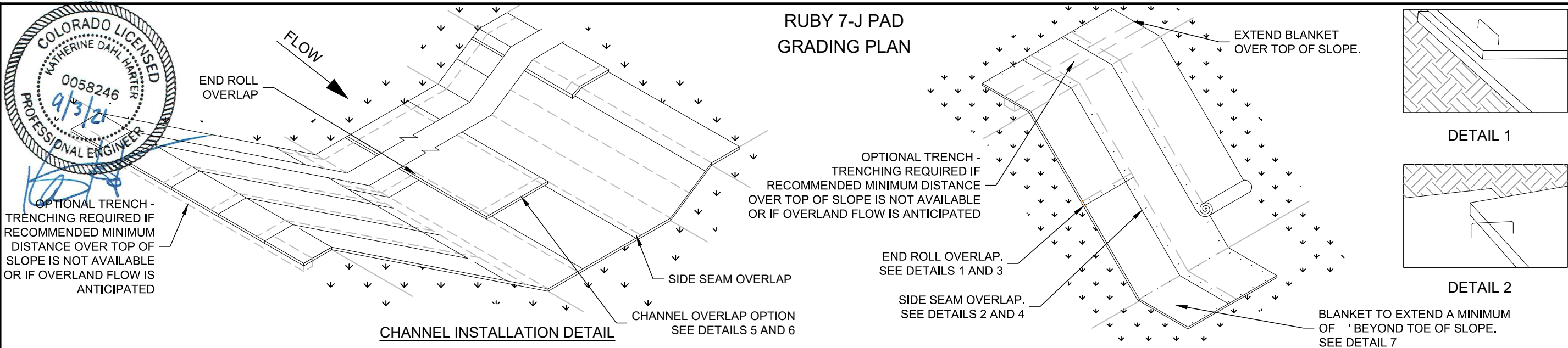
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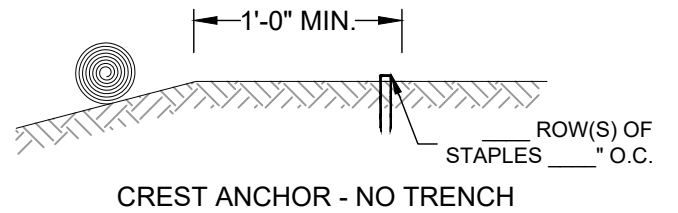




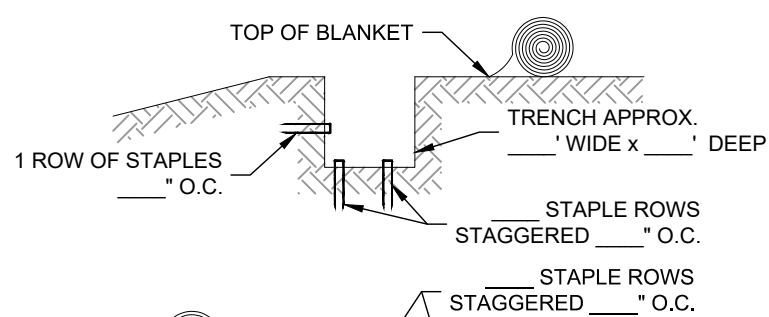
RUBY 7-J PAD  
GRADING PLAN



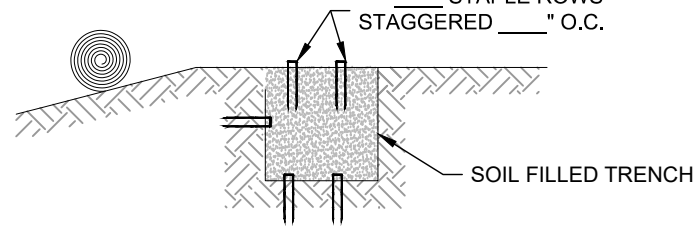
TRENCH ANCHOR  
OPTION 1



STEP 1

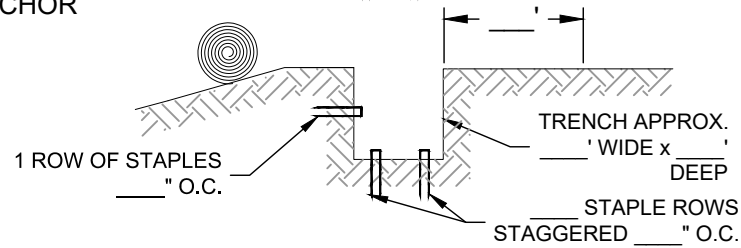


STEP 2

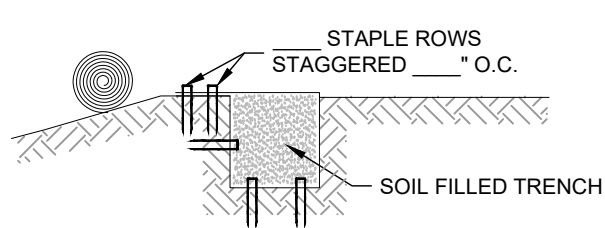


TRENCH ANCHOR  
OPTION 2

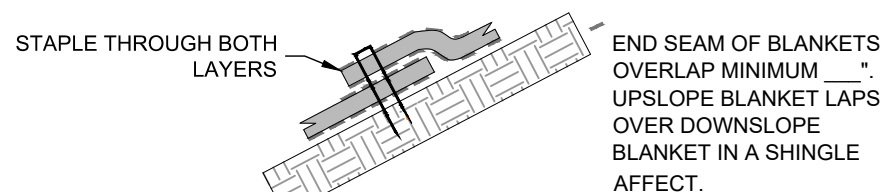
STEP 1



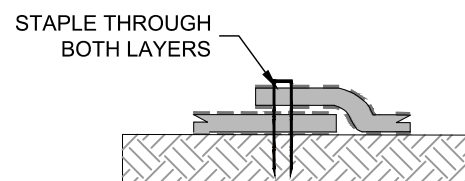
STEP 2



EROSION CONTROL MAT INSTALLATION

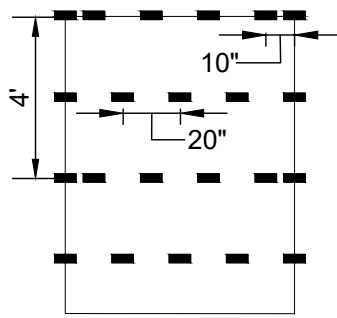
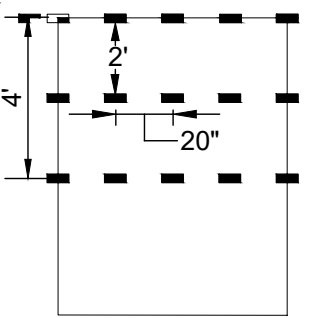
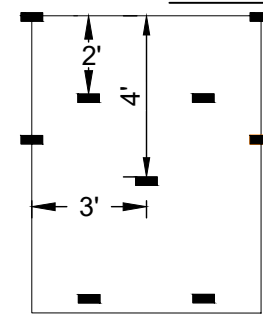
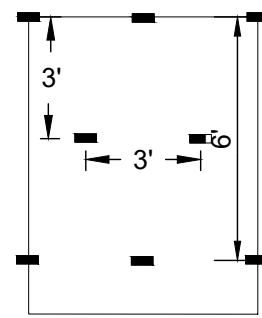
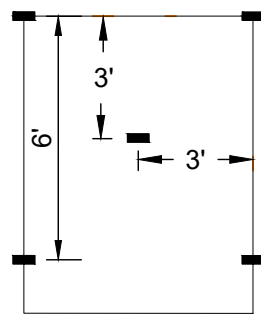


DETAIL 3  
END ROLL OVERLAP



DETAIL 4  
SIDE SEAM OVERLAP

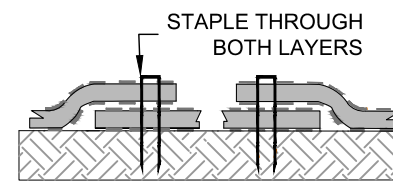
STAPLE  
PATTERNS



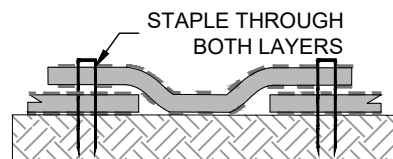
EROSION CONTROL MAT INSTALLATION NOTES:

1. STAPLE PATTERNS ARE DEPENDENT UPON SLOPE CONDITIONS AND MANUFACTURER'S RECOMMENDATIONS.
2. STAPLES OF 11 GAUGE OR HEAVIER SHALL BE USED TO HOLD MATS AND NETS IN PLACE.
3. STAPLES SHALL BE U-SHAPED WITH A 1-INCH CROWN.
4. STAPLE LENGTHS ARE DETERMINED BASED ON SOIL CONDITION. SEE WI STANDARD 484-MULCHING FOR STAPLE LENGTH REQUIREMENTS.
5. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR BOTH END AND EDGE OVERLAP LENGTH.
6. CONSIDER THE USE OF BIODEGRADABLE STAPLES IN LOCATIONS WHERE WIRE STAPLES ARE DETERMINED TO BE A RISK.

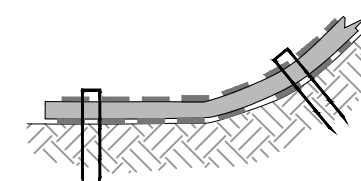
SLOPE INSTALLATION DETAIL



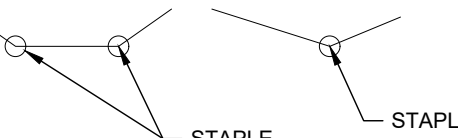
DETAIL 5  
CHANNEL INSTALLATION  
OPTION 1



DETAIL 6  
CHANNEL INSTALLATION  
OPTION 2



DETAIL 7  
TOE OF SLOPE INSTALLATION



CRITICAL STAPLE LOCATIONS IN  
CHANNELS



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BAYSWATER EXPLORATION &  
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DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
BMP TYPICAL DETAILS  
SURFACE LOCATION  
RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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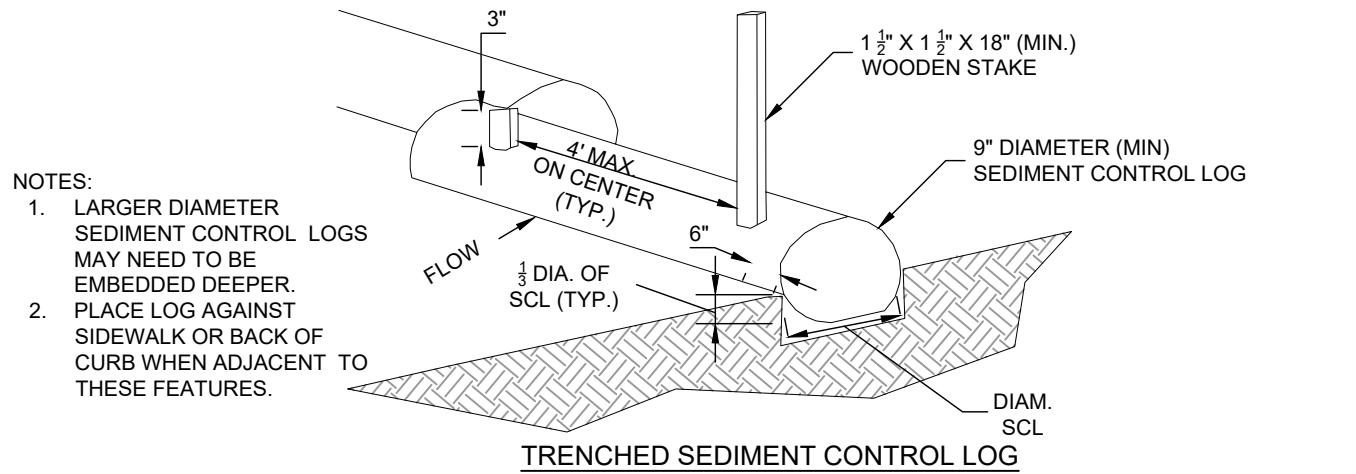
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03-01-2021

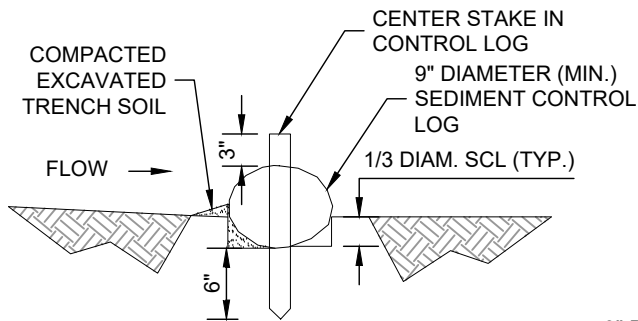
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AMS

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SCALE: NOT TO SCALE

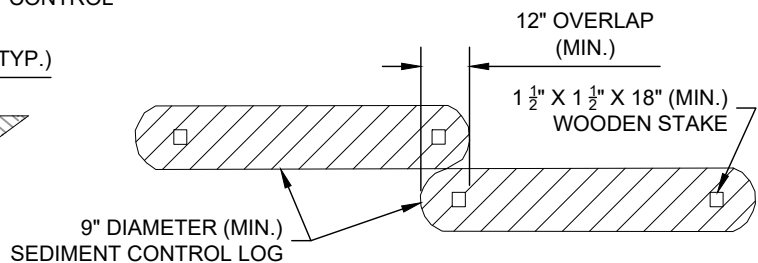


TRENCHED SEDIMENT CONTROL LOG



SECTION A  
TRENCHED SEDIMENT CONTROL LOG

TRENCHED SEDIMENT CONTROL LOG

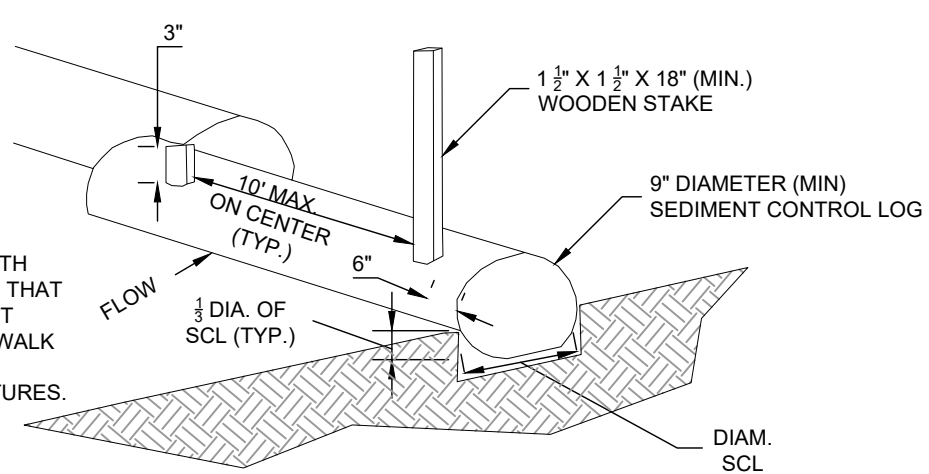


LOG JOINTS

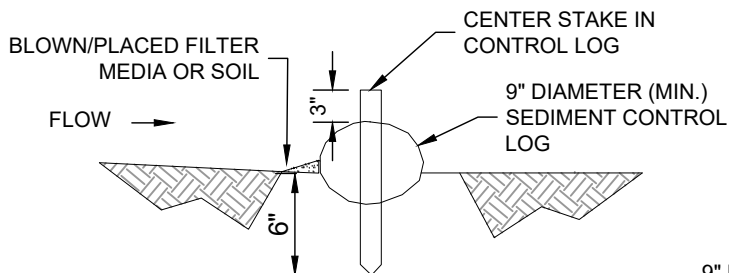
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## RUBY 7-J PAD GRADING PLAN

- NOTES:
3. THIS DETAIL IS FOR USE WITH SEDIMENT CONTROL LOGS THAT AREA A MINIMUM OF 8 LB/FT
  4. PLACE LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.

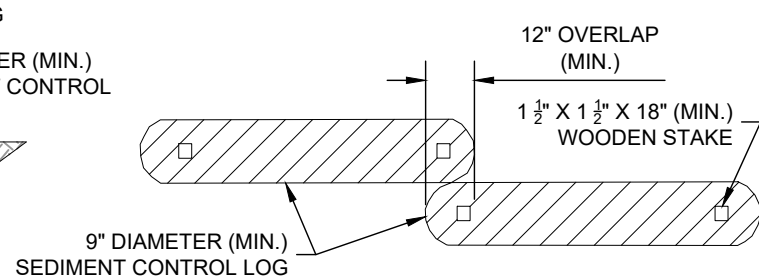


COMPOST SEDIMENT CONTROL LOG  
(WEIGHTED)



SECTION A  
COMPOST SEDIMENT CONTROL LOG

COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



LOG JOINTS

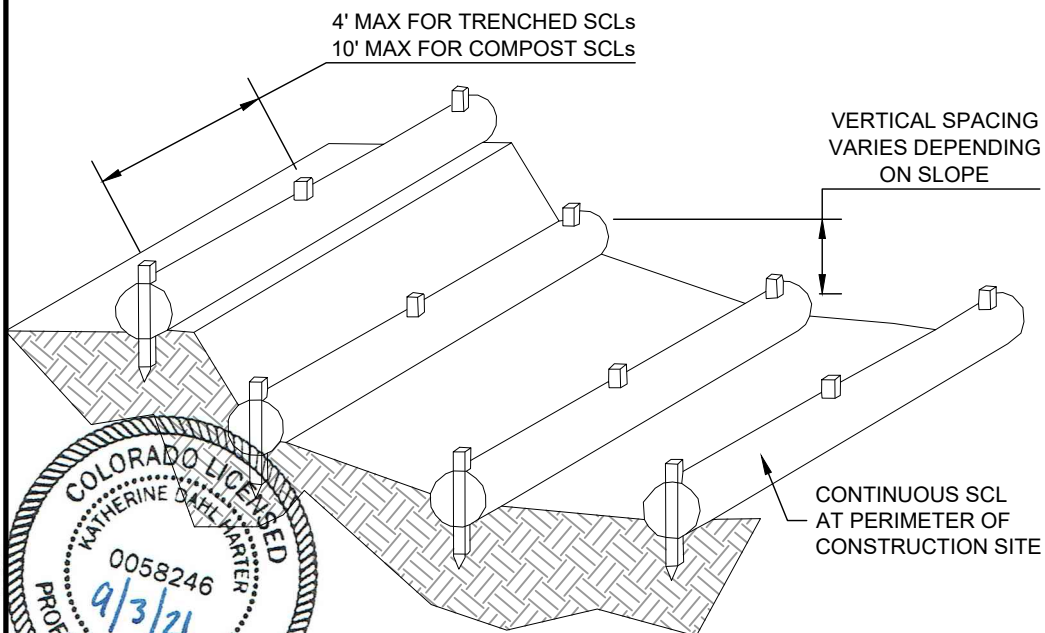
SCALE: NOT TO SCALE

### SEDIMENT CONTROL LOG INSTALLATION NOTES:

5. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
6. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
7. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES, AND OBVIOUS WEAR.
8. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
9. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
10. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
11. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

### SEDIMENT CONTROL LOG MAINTENANCE NOTES:

12. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
13. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
14. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
15. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACES AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.



SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SCALE: NOT TO SCALE



ASCENT GEOMATICS SOLUTIONS  
8620 WOLFF COURT  
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PREPARED FOR:



BAYSWATER EXPLORATION & PRODUCTION, LLC  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:  
BMP TYPICAL DETAILS

SURFACE LOCATION  
RUBY 7-J PAD  
NE 1/4 SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.,  
WELD COUNTY, COLORADO

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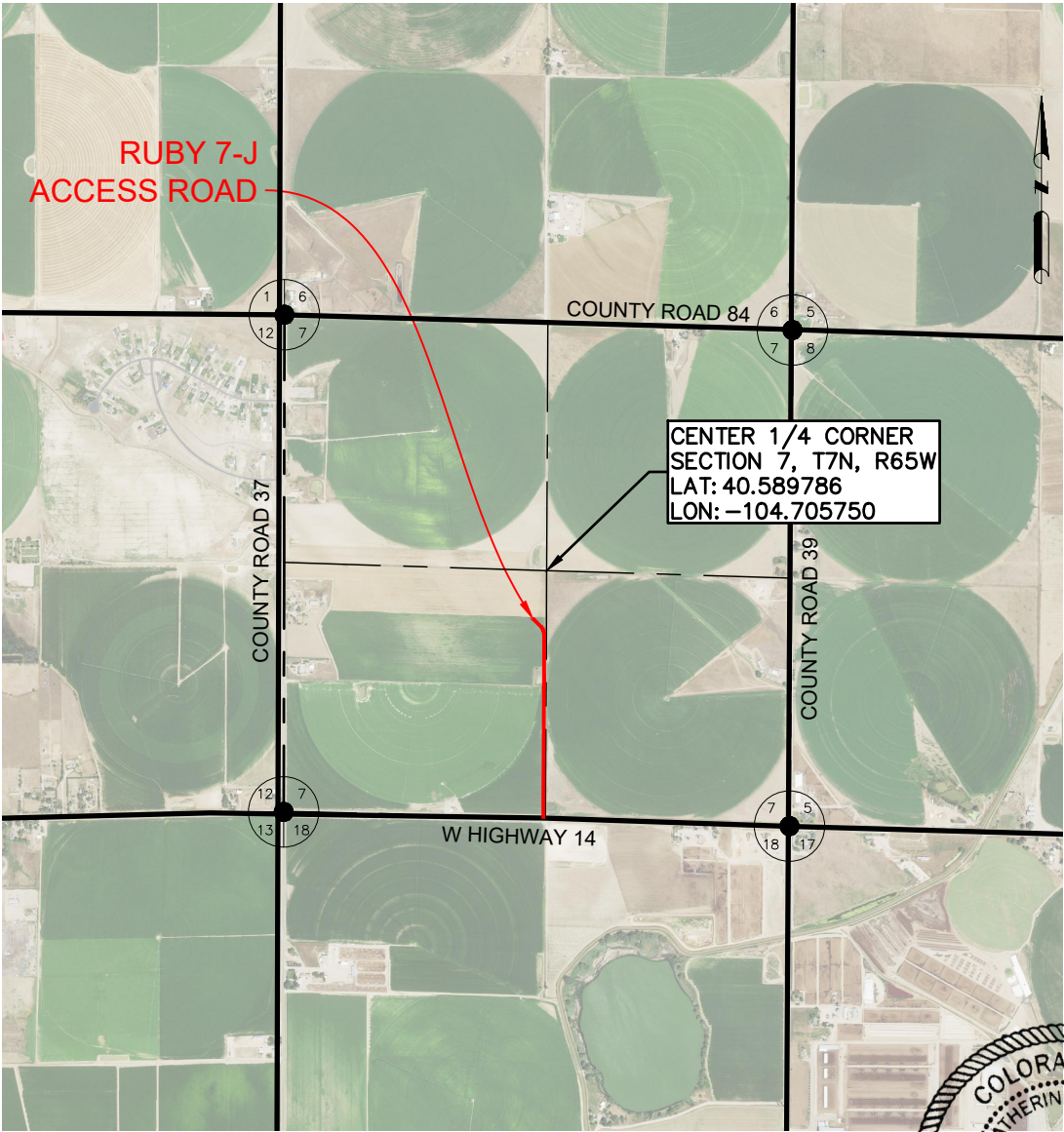
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15 OF 15



REGIONAL MAP  
N.T.S.



VICINITY MAP  
N.T.S.

DATA SOURCE:  
AERIAL IMAGERY: NAIP 2019

PUBLICLY AVAILABLE DATA SOURCES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY ASCENT.

DISCLAIMER:  
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINES, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.



DRAWING INDEX		
SHEET NO.	TITLE	REV.
1	COVER SHEET	0
2	GENERAL NOTES	0
3	QUANTITIES & LEGEND	0
4	PLAN & PROFILE	0
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6	PLAN & PROFILE	0
7	CULVERT PLAN & PROFILE	0
8	CULVERT PLAN & PROFILE	0
9	ACCESS ROAD STANDARD DETAILS	0
10	ACCESS ROAD STANDARD DETAILS	0
11	BMP TYPICAL DETAILS	0
12	BMP TYPICAL DETAILS	0
13	BMP TYPICAL DETAILS	0

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DENVER, CO 80202  
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SHEET NAME:

COVER SHEET

SURFACE LOCATION

RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	REVISION DESCRIPTION	INT.
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03-17-2021

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SHEET NO.

01 OF 13

RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS

GENERAL NOTES

1. SHOULD ARTIFACTS OF POTENTIAL HISTORICAL SIGNIFICANCE BE ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CLIENT AND DISCONTINUE EXCAVATION IN THE AFFECTED AREA UNTIL OTHERWISE NOTIFIED BY THE CLIENT OR ENGINEER. ANY DAMAGE TO A DESIGNATED ARCHEOLOGICAL SITE AS A RESULT OF CONTRACTOR NEGLIGENCE SHALL BE THE SOLE RESPONSIBILITY OF CONTRACTOR.
2. DO NOT PERFORM ANY GRADING OR GRUBBING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR INTO NATURAL WATERCOURSES.
3. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
4. CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT DRAWINGS WITH ALL CHANGES IDENTIFIED. THE AS-BUILT FIELD DRAWINGS SHALL BE SUBMITTED TO CLIENT AT PROJECT COMPLETION.

SAFETY

5. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY OF HIS OWN PERSONNEL, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ALL APPLICABLE HEALTH AND SAFETY STANDARDS INCLUDING, BUT NOT LIMITED TO, OSHA 29 CFR PARTS 1910 AND 1926 FOR GENERAL CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF DUST CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING ALL PHASES OF SITE PREP, EARTHWORKS AND GRADING.
7. UNLESS A SAFE EXCAVATION/TRENCH DEPTH IS SPECIFICALLY IDENTIFIED DURING THE PRECONSTRUCTION SAFETY ASSESSMENT BY QUALIFIED PERSONNEL, WHERE PERSONNEL ENTER EXCAVATIONS 4 FEET OR MORE IN DEPTH, PROTECT THE EXCAVATION WITH A SUPPORT SYSTEM OF SLOPING, SHORING, BRACING OR BY USE OF A TRENCH BOX MEETING OSHA SAFETY STANDARD; INSPECT SHORING AND/OR BRACING SYSTEMS DAILY AND AFTER RAINSTORMS OR OTHER HAZARD-INCREASING OCCURRENCE. ALSO PROVIDE SUCH PROTECTION IN EXCAVATIONS LESS THAN 4 FEET DEEP WHERE HAZARDOUS EARTH MOVEMENT MAY BE EXPECTED.
8. ALL CONTRACTORS PERFORMING SUBSURFACE EARTHWORKS MUST CONTACT 811 AT LEAST 3 BUSINESS DAYS PRIOR TO EXCAVATION AND AS REQUIRED BY LAW.

TOPSOIL, CLEARING AND GRUBBING

9. CONTRACTOR SHALL CLEAR AND GRUB PROJECT AREA PRIOR TO PERFORMING ANY EARTHWORKS. HOLES RESULTING FROM REMOVAL OF VEGETATION SHALL BE BACKFILLED, COMPACTED AND GRADED IN ACCORDANCE WITH THIS DRAWING PACKAGE, GENERAL NOTES AND SPECIFICATIONS WHERE APPLICABLE.
10. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL INCLUDING, BUT NOT LIMITED TO VEGETATION, ROCK, DEBRIS, EXCESS SOILS, DEMOLITION MATERIALS, AND CONSTRUCTION MATERIALS. ACQUISITION OF OFF-SITE DISPOSAL AREA IS THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED BY CLIENT.
11. PERFORM ALL CLEARING, GRUBBING AND EARTHWORKS IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS, INCLUDING REQUIREMENTS FOR HANDLING, REMOVING AND DISPOSING OF CONTAMINATED SOIL, IF APPLICABLE.
12. NO VEGETATION OVERHANGING THE CONSTRUCTION AREA, BUT ROOTED OUTSIDE SAID AREA, SHALL BE REMOVED WITHOUT APPROVAL FROM THE CLIENT OR CONSTRUCTION MANAGER.
13. SHOULD THE CONTRACTOR DISCOVER THAT THE DEPTH OF TOPSOIL EXCEEDS THE DEPTH INDICATED ON THE PLANS, CONTRACTOR SHALL NOTIFY THE CLIENT AND ENGINEER IN WRITING TO DETERMINE IF ANY REVISIONS TO THE EARTHWORKS QUANTITIES AND DESIGN ARE REQUIRED. UNDER SUCH CIRCUMSTANCES THE CONTRACTOR SHALL NOT PROCEED WITH TOPSOIL REMOVAL UNTIL DIRECTED TO DO SO BY THE CLIENT OR CONSTRUCTION MANAGER.

GRADING AND COMPACTION

14. WHERE A GEOTECHNICAL REPORT EXISTS FOR THIS PROJECT, CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND ADHERING TO THE REQUIREMENTS OF THE REPORT. SHOULD A DISCREPANCY BETWEEN THE PROJECT SITE GEOTECHNICAL REPORT AND THESE PLANS EXIST, CONTRACTOR TO INFORM THE ENGINEER IN WRITING BEFORE PROCEEDING WITH EARTHWORKS ACTIVITIES. CONTRACTOR SHALL NOT PROCEED WITH EARTHWORKS ACTIVITIES UNTIL DIRECTED TO DO SO BY THE ENGINEER AND CLIENT.
15. CONTRACTOR SHALL PROPERLY DISPOSE OF EXCESS EXCAVATED MATERIAL OFF SITE UNLESS DIRECTED OTHERWISE BY THE CLIENT OR ENGINEER.
16. ONSITE EXCAVATED MATERIAL STORAGE SHALL BE IN THE LOCATION INDICATED BY THE CLIENT OR AS INDICATED ON THESE PLANS. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES FOR THE SOIL STOCKPILES AS APPROPRIATE.
17. ANY ROCK UNEARTHED DURING EXCAVATION WITH A LONG AXIS LENGTH THAT EXCEEDS 5 INCHES AND IS NOT REQUIRED FOR SITE DEVELOPMENT, SHALL BE DISPOSED OF BY THE CONTRACTOR UNLESS INDICATED OTHERWISE BY THE CLIENT OR ENGINEER.
18. CONTRACTOR TO PROVIDE AND VERIFY THAT ADEQUATE COMPACTION HAS BEEN ACHIEVED PRIOR TO INDEPENDENT CONFIRMATION OF COMPACTION BY A QUALIFIED INSPECTOR. OPTIMUM MOISTURE CONTENT AND MAXIMUM COMPACTED DENSITY TO BE INDICATED IN THESE DRAWINGS OR IN THE ASSOCIATED GEOTECHNICAL REPORT. ON SPEC MATERIAL TO BE PLACED AND COMPACTED IN 6-INCH HORIZONTAL LIFTS.
19. COMPACTION TO BE VERIFIED BY NUCLEAR METHOD PER ASTM D-6938 OR BY AN EQUIVALENT METHOD APPROVED BY THE ENGINEER.
20. COMPACTION TESTING FREQUENCY FOR ROADS AND PARKING AREAS SHALL BE 1 TEST (ASTM D-6938) PER 12 FT. OF WIDTH PER 500 FT. OF LENGTH, OR FRACTION THEREOF PER 6" LIFT UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.

21. COMPACTION TEST FREQUENCY FOR AREAS UNDER STRUCTURAL FOUNDATIONS SHALL BE 1 TEST (ASTM D-6938) FOR EACH 1,000 FT<sup>2</sup> OR FRACTION THEREOF PER 6" LIFT, UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
22. COMPACTION TEST FREQUENCY FOR DETENTION OR RETENTION POND FILL EMBANKMENTS OR ANY EMBANKMENT IMPOUNDING WATER SHALL BE A MINIMUM OF 1 TEST (ASTM D-6938) PER 2,500 FT<sup>2</sup> OR FRACTION THEREOF PER 6" LIFT UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
23. COMPACTION TEST FREQUENCY FOR REMAINING AREAS (NOT INCLUDING STRUCTURAL FOUNDATIONS, ROADS AND DETENTION POND EMBANKMENTS) IN NON-HEAVY LOADING AREAS SHALL BE 1 SPOT CHECKS PER 40,000 FT<sup>2</sup> PER 6" LIFT IN FILL AREAS UNLESS INDICATED OTHERWISE IN THESE PLANS OR IN THE ASSOCIATED GEOTECHNICAL REPORT.
24. CONSTRUCTION MANAGER, INSPECTOR AND/OR ENGINEER MAY REQUIRE THAT MORE COMPACTION TESTS ARE NEEDED BASED ON FIELD OBSERVATIONS. THE RECOMMENDED NUMBER OF COMPACTION TESTS INDICATED IN THESE GENERAL NOTES CONSTITUTES THE MINIMUM NUMBER OF TESTS; MORE TESTS MAY BE WARRANTED BASED ON FINDINGS IN THE FIELD.
25. THE CONTRACTOR SHALL SCARIFY SUBGRADE 6" (MIN.) WITH A MOISTURE CONDITION AND COMPACT TO 95% MAXIMUM ACHIEVABLE DENSITY IN ACCORDANCE WITH ASTM D-698 UNLESS INDICATED OTHERWISE IN THESE PLANS.
26. HORIZONTAL LIFTS OF NON-GRAVEL MATERIAL TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698 UNLESS INDICATED OTHERWISE IN THESE PLANS. HORIZONTAL LIFTS OF GRAVEL MATERIAL TO BE COMPACTED IN 6" (MAX) LIFTS TO 90% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 UNLESS INDICATED OTHERWISE IN THESE PLANS. SHOULD A DISCREPANCY BETWEEN THE PROJECT SITE GEOTECHNICAL REPORT AND THESE PLANS EXIST, CONTRACTOR TO INFORM THE ENGINEER IN WRITING BEFORE PROCEEDING WITH SOIL LIFT PLACEMENT AND COMPACTION.
27. WHERE SUFFICIENT EXCAVATION MATERIAL IS NOT AVAILABLE FOR FILL AND "BORROW MATERIAL" IS REQUIRED; BORROW MATERIAL SHALL BE OBTAINED FROM SOURCES SHOWN IN THIS DRAWING PACKAGE OR OTHER SOURCES APPROVED BY THE ENGINEER. OVERBURDEN TO BE REMOVED FROM BORROW SITE PRIOR TO OBTAINING BORROW MATERIAL. ENGINEER APPROVED BMP AND EROSION CONTROL MEASURES TO BE PROVIDED BY CONTRACTOR FOR ANY BORROW LOCATIONS.
28. BLASTING IS NOT PERMITTED, UNLESS AUTHORIZED IN WRITING BY THE ENGINEER AND CLIENT.
29. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATION PURPOSES ONLY. 6" OF TOPSOIL HAS BEEN REMOVED FROM THE EXISTING CAD SURFACE PRIOR TO PERFORMING EARTHWORKS CALCULATIONS UNLESS NOTED OTHERWISE IN THESE PLANS. CONTRACTOR AND SUBCONTRACTOR ARE RESPONSIBLE FOR DETERMINING ALL QUANTITIES.
30. THE CUT AND FILL VOLUMES PROVIDED IN THIS DRAWING PACKAGE ARE LISTED AS BANK (I.E. IN-SITU) VOLUMES UNLESS INDICATED OTHERWISE. UNLESS STATED ELSEWHERE IN THIS DRAWING PACKAGE OR IN THE APPLICABLE GEOTECHNICAL REPORT, CONTRACTOR TO ASSUME A 25% VOLUMETRIC CHANGE OF EXCAVATED SOILS (BULKING/SHRINKAGE FACTOR) FOR THE PURPOSES OF EARTHWORKS TRANSPORT, STORAGE AND STOCKPILING. SOIL MATERIAL PLACED AND COMPACTED PER THE REQUIREMENTS OF THESE PLANS IS ASSUMED TO BE HAVE A 1:1 RATIO FOR EXCAVATED (BANK) TO PLACED EARTHWORKS VOLUMES; ANY OBSERVED VOLUMETRIC CHANGE IN THE SOILS (EXPANSION AND/OR SHRINKAGE) OF THE PLACED AND COMPACTED MATERIALS THAT IS NOT AT A 1:1 RATIO SHALL BE REPORTED TO THE CLIENT AND ENGINEER BY THE CONTRACTOR.
31. ALL STOCKPILES SHOWN IN THESE PLANS ARE ASSUMED TO HAVE 2H:1V SIDE SLOPES. MAXIMUM STOCKPILE HEIGHT IS ASSUMED TO BE 10 FT. CONTRACTOR SHALL NOT CREATE STOCKPILES WITH SIDE SLOPES GREATER THAN 2:1 OR HEIGHTS GREATER THAN 10 FT. WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OR UNLESS INDICATED OTHERWISE IN THESE PLANS. THE STOCKPILE FOOTPRINTS SHOWN IN THESE PLANS ARE ASSUMED TO HAVE AN EXPANSION FACTOR OF 1.25.
32. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES IDENTIFIED SHALL BE BROUGHT TO THE INSPECTOR'S OR CONSTRUCTION MANAGER'S ATTENTION AND RECONCILED WITH THE ENGINEER PRIOR TO CONSTRUCTION.
33. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL EXISTING DISTURBED AREAS, FENCES, WALLS, SHEDS OR ANY OTHER STRUCTURES DAMAGED DURING CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER CONDITION. ANY DAMAGE TO ADJACENT PROPERTY OFF OF THE CLIENT'S PROPERTY SHALL BE REPORTED TO THE CLIENT'S REPRESENTATIVE FOR AUTHORIZATION PRIOR TO SAID REPAIRS.
34. ALL EARTHWORKS SHALL CONFORM TO ELEVATIONS AND GRADES DESIGNATED IN THIS DRAWING PACKAGE. ALLOWABLE TOLERANCES ARE ± 0.10 FEET OF FINISHED FINAL GRADE (FG) FOR ALL EARTHWORKS UNLESS INDICATED OTHERWISE IN THIS DRAWING PACKAGE OR BY THE ENGINEER.
35. CONTRACTOR TO PROVIDE BEST MANAGEMENT PRACTICES (BMP) FOR STORMWATER RUNOFF AND SEDIMENT CONTROL IN ACCORDANCE WITH STATE AND FEDERAL GOVERNMENT REQUIREMENTS. IN PARTICULAR, BMP SHALL CONFORM WITH THE FEDERAL CLEAN WATER ACT'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER REGULATIONS REQUIREMENTS. DO NOT PERFORM ANY GRADING OR GRUBBING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR INTO NATURAL WATERCOURSES.
36. ALL PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY OTHER EARTH DISTURBING ACTIVITY. ALL OTHER STRUCTURAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS SOON AS THE CONSTRUCTION ACTIVITIES, AROUND WHICH THEY ARE BASED, COMMENCE.

37. IMPORTED FILL TO MEET ASTM D-1241 SPECIFICATION FOR TYPE I, GRADE B MATERIAL AND UNLESS INDICATED OTHERWISE IN THIS DRAWING PACKAGE:
- A. 100% SOIL MATERIAL FINER THAN 2-INCH SIEVE.  
B. 75% - 95% SOIL MATERIALS FINER THAN 1-INCH SIEVE.  
C. 40% - 75% SOIL MATERIALS FINER THAN NO. 3/8 SIEVE.  
D. 30% - 60% SOIL MATERIALS FINER THAN NO. 4 SIEVE.  
E. 20% - 45% SOIL MATERIALS FINER THAN NO. 10 SIEVE.  
F. 15% - 30% SOIL MATERIALS FINER THAN NO. 40 SIEVE.  
G. 5% - 15% SOIL MATERIALS FINER THAN NO. 200 SIEVE.  
H. MAXIMUM LIQUID LIMIT OF 25.  
I. PLASTICITY INDEX (PI) 6 (MAX).  
J. MAXIMUM EXPANSIVE POTENTIAL 0.5%.
38. THE SPOT CUT/FILL VALUES SHOWN ON THESE DRAWINGS (WHEN APPLICABLE) ARE FOR PROPOSED GROUND VS. SCRAPED (I.E. TOPSOIL REMOVED) GROUND (E.G. +0.7 MEANS THAT THE PROPOSED GROUND IS 0.7 FT ABOVE THE SCRAPED GROUND).
39. THE PREFERRED LOCATION(S) FOR PLACEMENT OF HEAVY LOADS ARE IN AREAS OF CUT. IF ANY HEAVY LOADS (E.G. MLVTS, MINION TANKS, ETC.) ARE INTENDED TO BE PLACED ON THE PAD IN FILL AREAS, THE LOAD(S) MUST BE PLACED A MINIMUM OF 30 LINEAR FEET FROM THE EDGE OF THE PAD. THIS REQUIREMENT IS TO PROVIDE ADEQUATE SPACING TO PROTECT AGAINST SLOPE STABILITY ISSUES AND TO PROVIDE SAFE WORKING CONDITIONS IN ACCORDANCE WITH ENGINEERING BEST PRACTICES. CONTRACTOR SHALL CONTACT ASCENT GEOMATICS SOLUTIONS ENGINEERING DEPARTMENT SHOULD A DISCREPANCY BETWEEN THIS REQUIREMENT AND THESE PLANS BE IDENTIFIED AND/OR IF THE CONTRACTOR SEEKS CLARIFICATION ON WHAT CONSTITUTES "HEAVY LOADS".
40. HORIZONTAL LIFTS OF FILL SOIL MATERIAL (NON-GRAVELS) DIRECTLY BENEATH AND WITHIN 5.0 FT OF THE WATER TANK TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF THREE (3) COMPACTION TESTS PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE FILL AREAS DIRECTLY BENEATH AND WITHIN 5.0 FT OF THE WATER TANK TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.

FINAL GRADE AND ACCEPTANCE

41. FINAL GRADE TO MAINTAIN POSITIVE (I.E. OFFSITE) DRAINAGE ACROSS THE ENTIRE PROJECT SITE UNLESS SPECIFICALLY INDICATED OTHERWISE IN THIS DRAWING PACKAGE.
42. SETTLEMENT OR WASHBOARDING THAT OCCURS IN GRADED OR BACKFILLED AREAS PRIOR TO ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL CHARGE TO CLIENT.
43. FINAL SUBGRADE (AS APPLICABLE) TO BE PROOF ROLLED BY A TRUCK WITH A REAR AXLE LOAD OF APPROXIMATE 16,000 LBS./AXLE AND ACCEPTED BY THE INSPECTOR OR CONSTRUCTION MANAGER PRIOR TO FINAL ACCEPTANCE OF SUBGRADE AND PLACEMENT OF GRAVEL TOP LAYER. REMOVE AND REPLACE ANY SOFT MATERIAL WHICH EXHIBITS PERMANENT SUBGRADE DEFORMATION EXCEEDING 0.5".

SITE COORDINATES NOTES

44. SITE COORDINATES AND DESIGN ARE GROUND VALUES BASED ON A LOW DISTORTION PROJECTION (LDP). THIS LDP IS BASED ON THE NORTH AMERICAN DATUM OF 1983, U.S. SURVEY FOOT WITH A LATITUDE ORIGIN OF 40.568059°N A CENTRAL MERIDIAN LONGITUDE OF 104.658844°W. A SCALE FACTOR ON THE CENTRAL MERIDIAN OF 1.000230 (EXACT), A FALSE NORTHING OF 100,000, AND A FALSE EASTING OF 300,000. THE LDP BASIS OF BEARINGS IS GEODETIC NORTH.
45. BEARINGS AND DISTANCES SHOWN ARE GROUND VALUES BASED ON THE LDP NOTED ABOVE.
46. CONTRACTOR TO FIELD VERIFY LOCAL BENCHMARKS /MONUMENTS BEFORE STARTING CONSTRUCTION. CONTRACTOR MAY BE REQUIRED TO RECTIFY TRUE COORDINATES TO MATCH THE NORTHINGS AND EASTINGS SHOWN IN THIS PLAN SET. ANY CONFLICTS WITH LOCAL COORDINATES SHALL BE DISCUSSED WITH FIELD ENGINEER.

GEOTECHNICAL REPORT

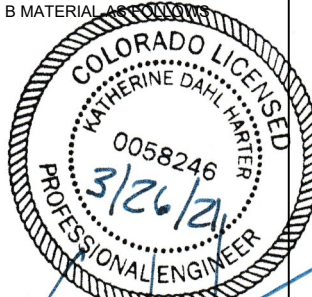
47. ASCENT GEOMATICS WAS NOT PROVIDED WITH A GEOTECHNICAL REPORT TO AID IN THE PREPARATION OF THIS GRADING PLAN.

TITLE REPORT

48. ASCENT GEOMATICS SOLUTIONS WAS NOT PROVIDED A TITLE REPORT FOR THIS SITE. ALL RECORDED DOCUMENTS REFERENCED ON THESE PLANS WERE DOWNLOADED FROM RESEARCH VIA THE WELD COUNTY CLERK AND RECORDER. ASCENT GEOMATICS SOLUTIONS MAKES NO GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED, TO THE COMPLETENESS OF ENCUMBRANCES TO THE SUBJECT PROPERTY.

PROJECT SPECIFIC NOTES

49. PAD TO BE CAPPED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC) UNLESS INDICATED OTHERWISE IN THESE PLANS OR BY THE CLIENT. ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698 UNLESS INDICATED OTHERWISE IN THESE PLANS.
50. THE CONTRACTOR SHALL OVER-EXCAVATE TO A DEPTH OF 5 FT (MINIMUM) BELOW THE EXISTING POND. SHOULD THE CONTRACTOR DISCOVER THAT THE DEPTH OF INCOMPETENT SOILS EXCEEDS 5 FT, THE CONTRACTOR SHALL NOTIFY THE CLIENT AND ENGINEER IN WRITING TO DETERMINE IF ANY REVISIONS TO THE EARTHWORKS QUANTITIES AND DESIGN ARE REQUIRED.
51. EXISTING POND TO BE INFILLED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC). ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF ONE (1) COMPACTION TESTS PER 6,000 FT<sup>2</sup> PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE POND INFILL AREA TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.



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PREPARED FOR:

BAYSWATER  
EXPLORATION AND PRODUCTION, LLC

**BAYSWATER EXPLORATION & PRODUCTION, LLC**  
730 17TH ST, SUITE 500  
DENVER, CO 80202  
(303) 893-2503

SHEET NAME:

**GENERAL NOTES**

SURFACE LOCATION

RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	DESCRIPTION	ISSUED FOR CONSTRUCTION	INT.	AMS
0	03/26/21				

FIELD DATE:

04-28-2020

DRAWING DATE:

03-17-2021

DRAFTED BY:

AMS

SHEET NO.

02 OF 13

RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS

LEGEND:

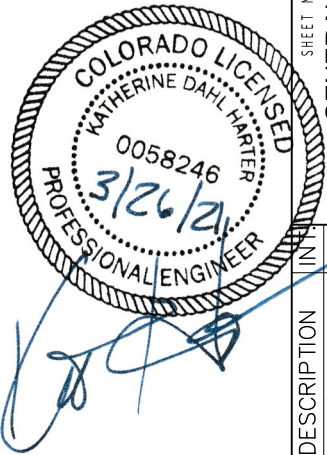
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	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	SECTION LINE
	CENTER-SECTION LINE
	QUARTER-SECTION LINE
	EXISTING FENCE
	EXISTING DIRT DITCH
	EXISTING CULVERT
	PROPOSED CULVERT
	EXISTING UNDERGROUND GAS LINE
	EXISTING UNDERGROUND OIL LINE
	EXISTING OVERHEAD UTILITY LINE
	ROADWAY ALIGNMENT STATIONING
	EXISTING PAVED ROAD
	EXISTING GRAVEL ROAD
	EXISTING DIRT ROAD
	RIP RAP OR SLOPE PROTECTION
	EXISTING OIL & GAS WELL
	PROPOSED OIL & GAS WELL
	EXISTING WATER WELL
	EXISTING POWER POLE

QUANTITIES:

OVER-EXCAVATION (BANK)	1,338	CY
IMPORT (CDOT CLASS 6) FOR POND INFILL	1,338	CY
TOTAL CUT FOR ACCESS ROAD	1,786	CY
TOTAL FILL FOR ACCESS ROAD	1,739	CY
NET EXPORT MATERIAL	47	CY
1-1/2" AGGREGATE BASE COURSE (6" DEPTH)	1,009	CY
DISTURBANCE AREA	2.27	AC

NOTES:

- IN THE ABSENCE OF A GEOTECHNICAL REPORT, ASCENT HAS ASSUMED AN OVER-EXCAVATION DEPTH OF 5 FT BELOW THE EXISTING POND.
- EXISTING POND TO BE INFILLED WITH CDOT CLASS 6 AGGREGATE BASE COURSE (ABC). ABC TO BE COMPACTED IN 6" (MAX) LIFTS TO 95% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557; A MINIMUM OF ONE (1) COMPACTION TESTS PER 6,000 FT<sup>2</sup> PER 6" LIFT (COMPACTED THICKNESS) SHALL BE PERFORMED FOR THE POND INFILL AREA TO CONFIRM THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF INCOMPETENT SOILS REMOVED DURING OVER-EXCAVATION OF THE EXISTING POND. THE INCOMPETENT SOILS SHALL NOT BE USED FOR CONSTRUCTION OF THE ROAD.
- ASCENT GEOMATICS SOLUTIONS WAS NOT PROVIDED A TITLE REPORT FOR THIS SITE. ALL RECORDED DOCUMENTS REFERENCED ON THESE PLANS WERE DOWNLOADED FROM RESEARCH VIA THE WELD COUNTY CLERK AND RECORDER. ASCENT GEOMATICS SOLUTIONS MAKES NO GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED, TO THE COMPLETENESS OF ENCUMBRANCES TO THE SUBJECT PROPERTY.



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WELD COUNTY, COLORADO

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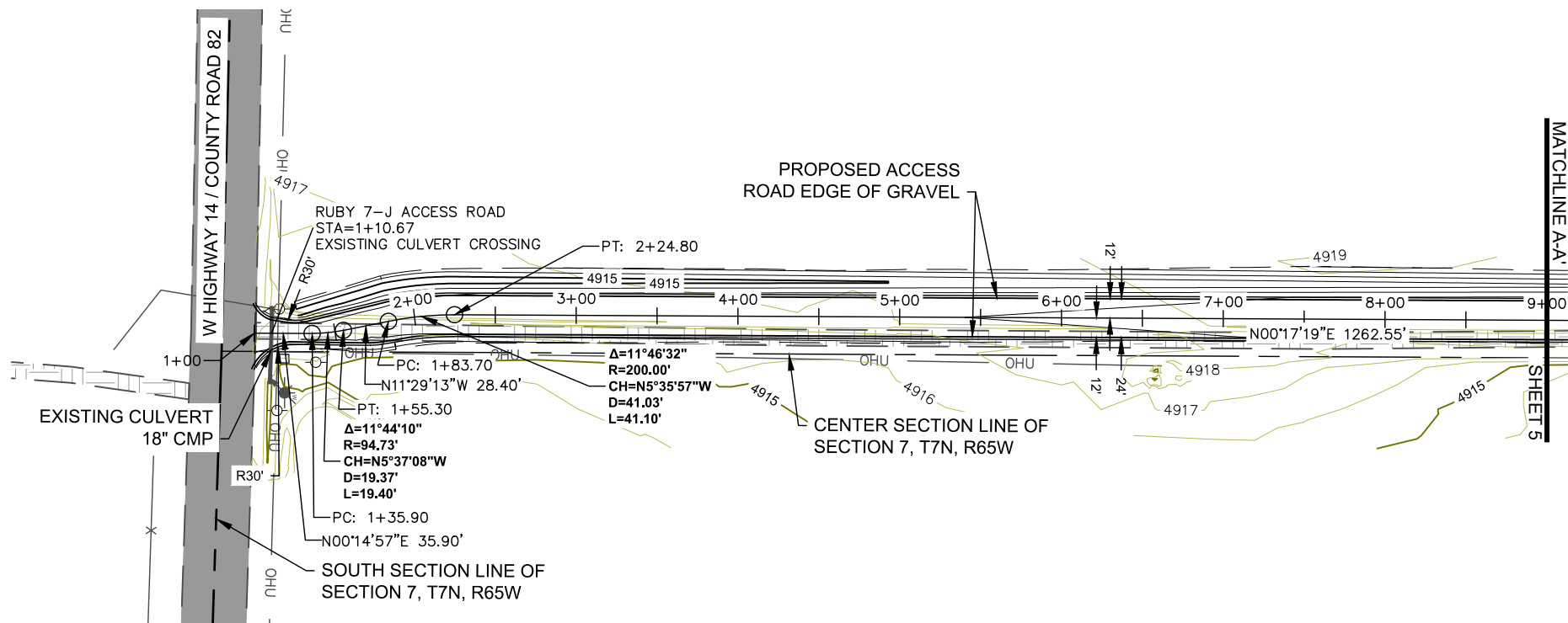
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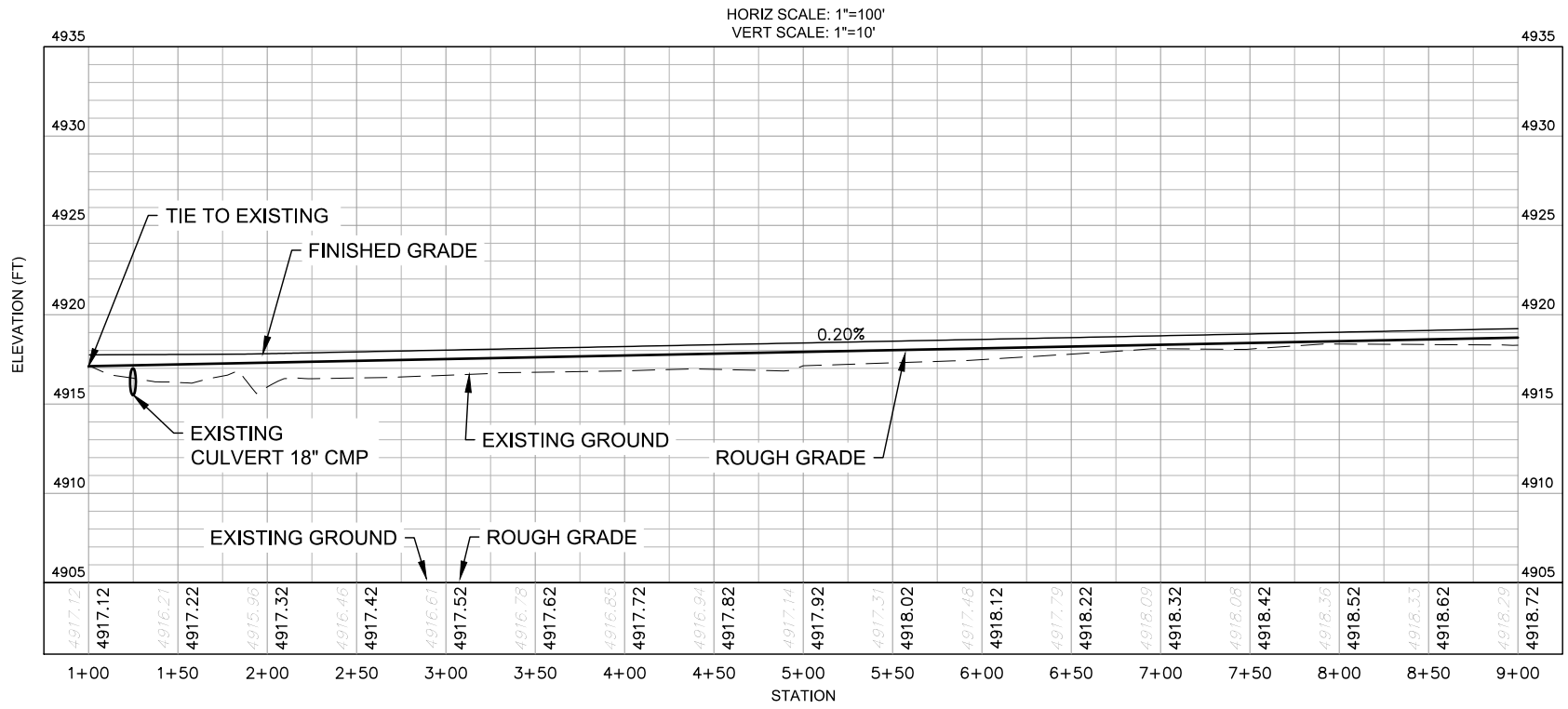
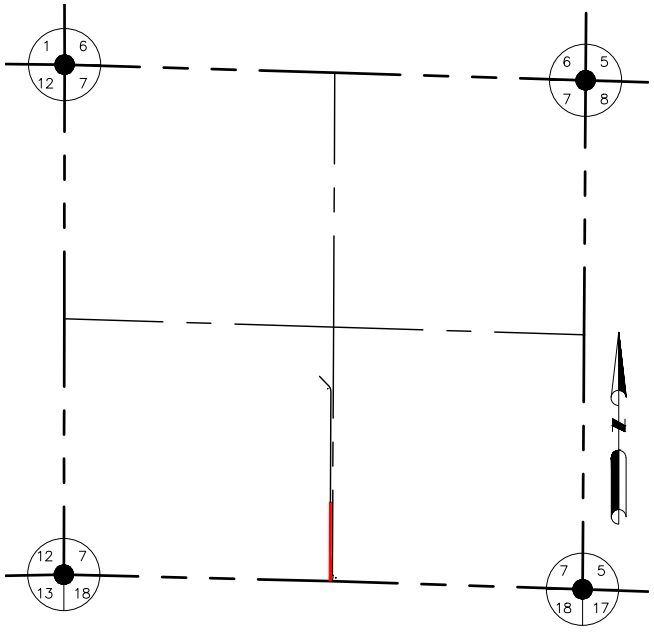
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03 OF 13

RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS



SCALE: 1" = 100'



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PLAN & PROFILE

SURFACE LOCATION

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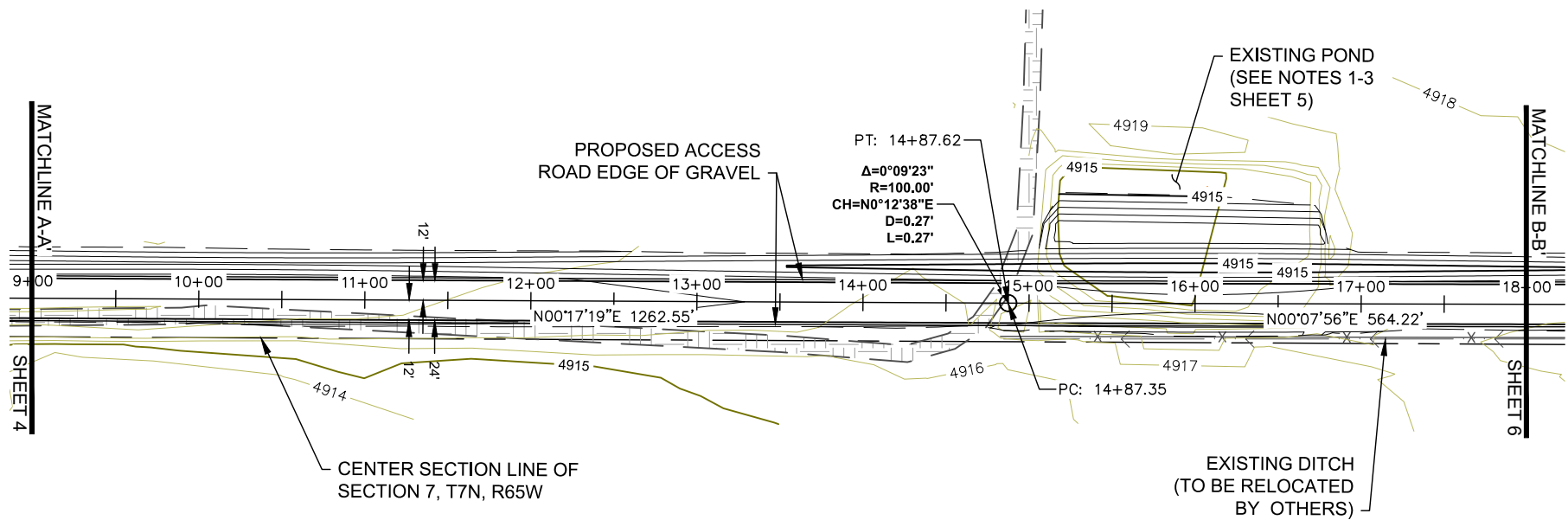
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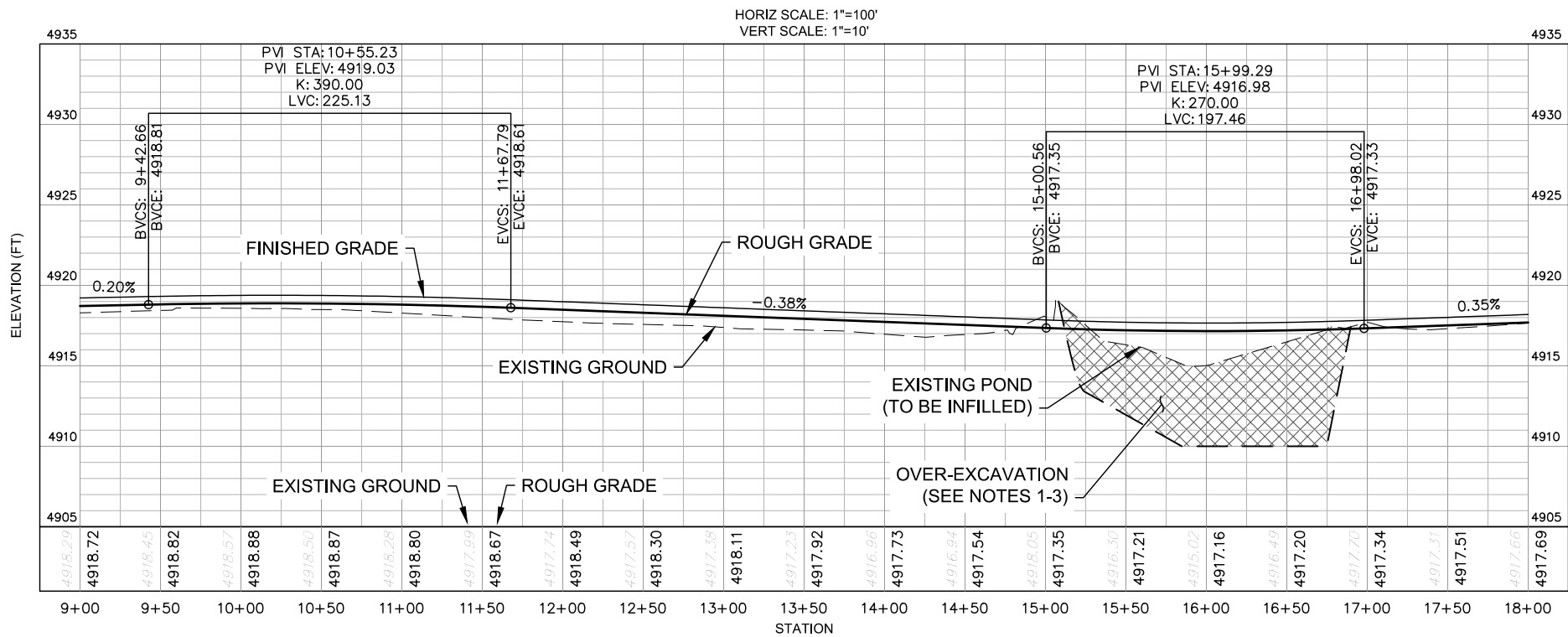
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RUBY 7-J ACCESS ROAD  
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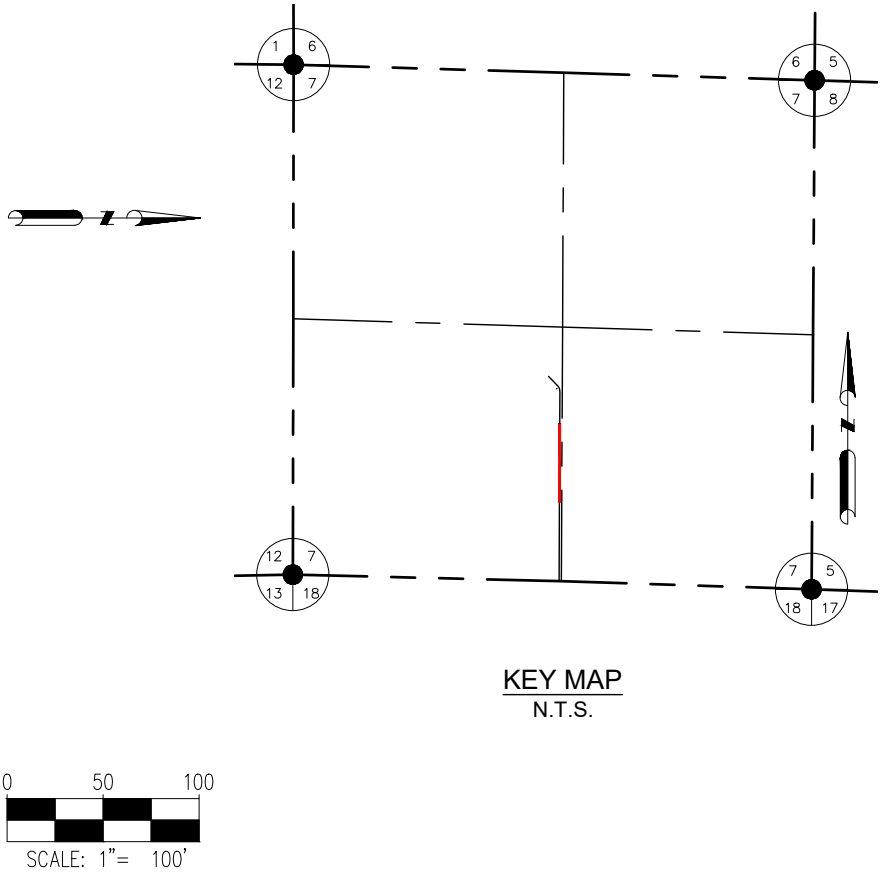


PLAN VIEW OF RUBY 7-J ACCESS ROAD

SCALE: 1" = 100'



PROFILE VIEW OF RUBY 7-J ACCESS ROAD



KEY MAP  
N.T.S.

NOTES:

- IN THE ABSENCE OF A GEOTECHNICAL REPORT, ASCENT HAS ASSUMED AN OVER-EXCAVATION DEPTH OF 5 FT BELOW THE EXISTING POND.
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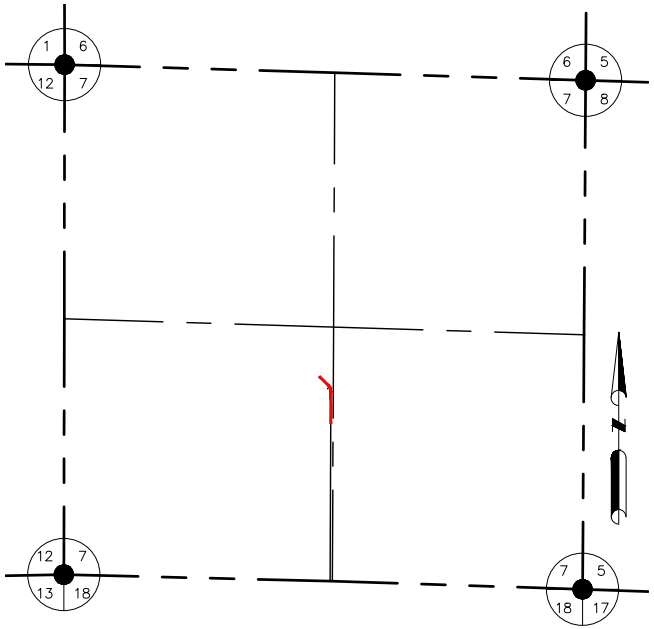
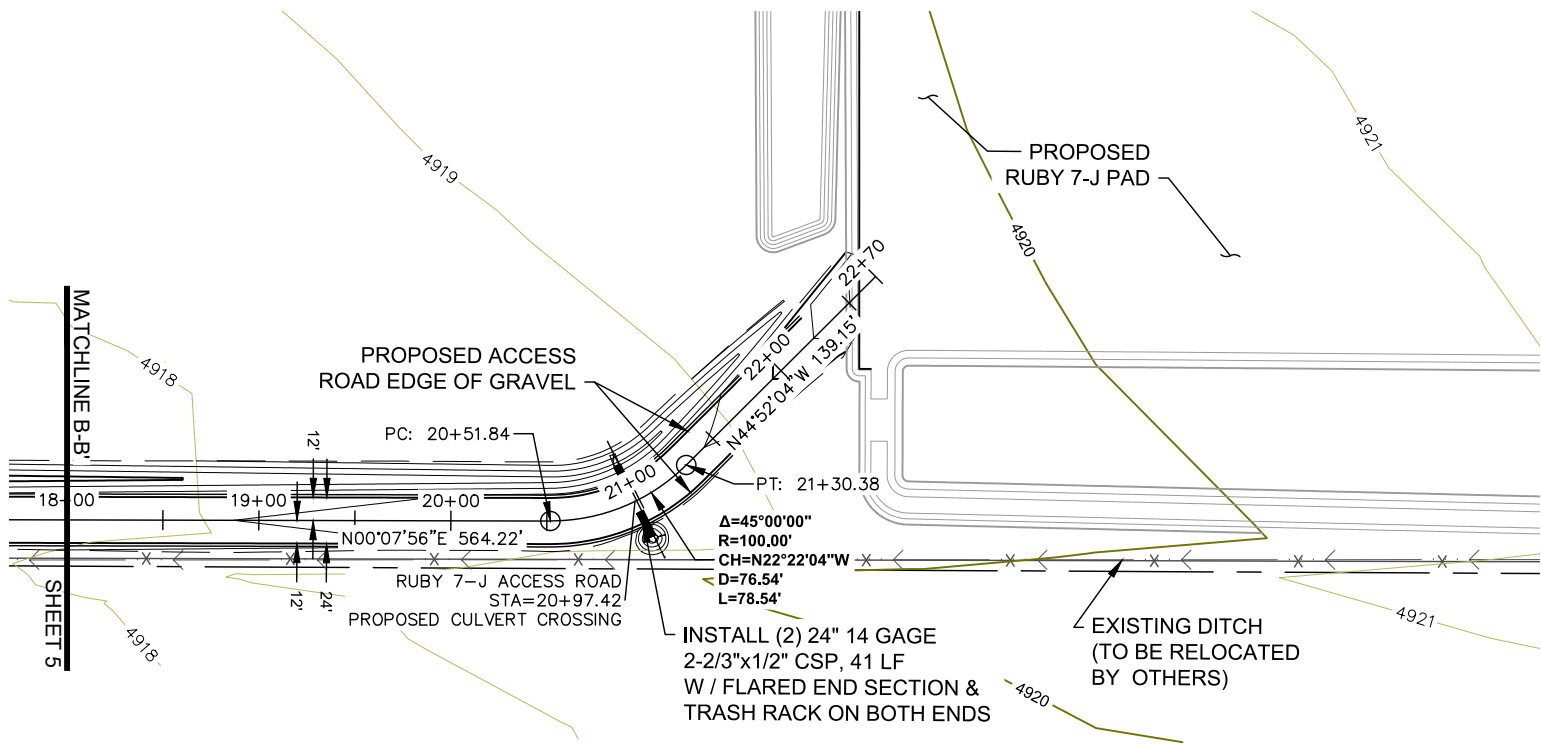
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RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS



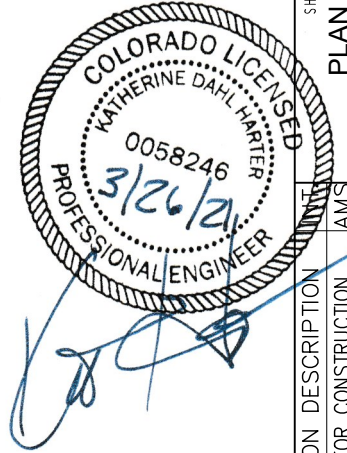
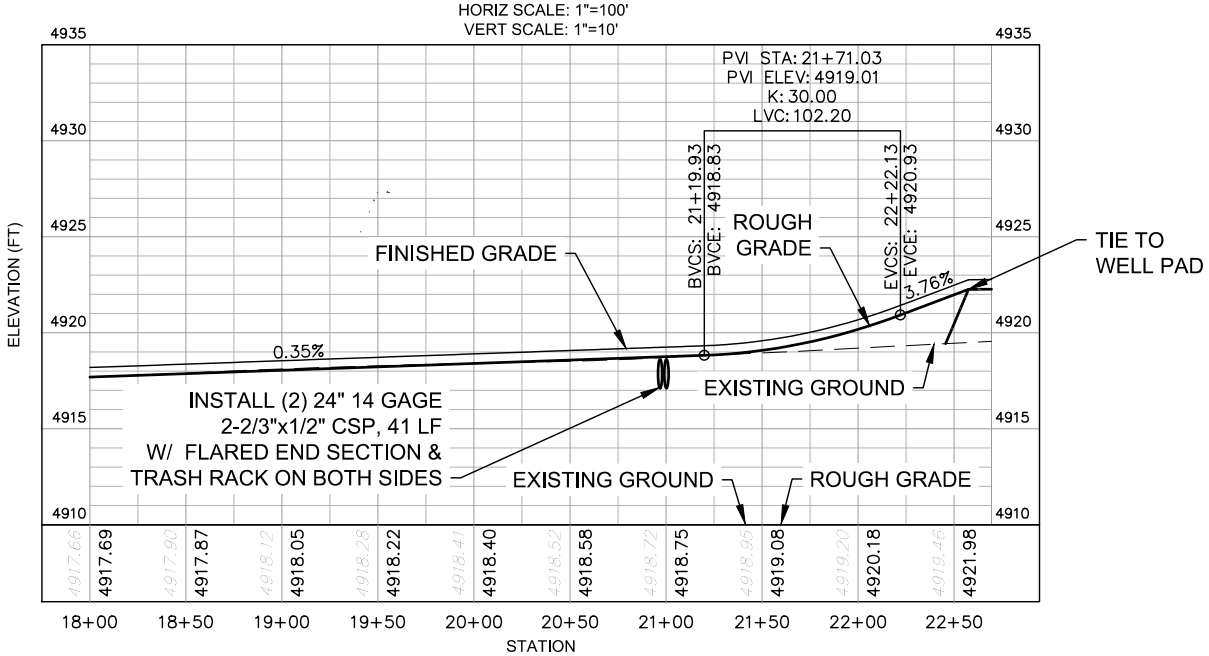
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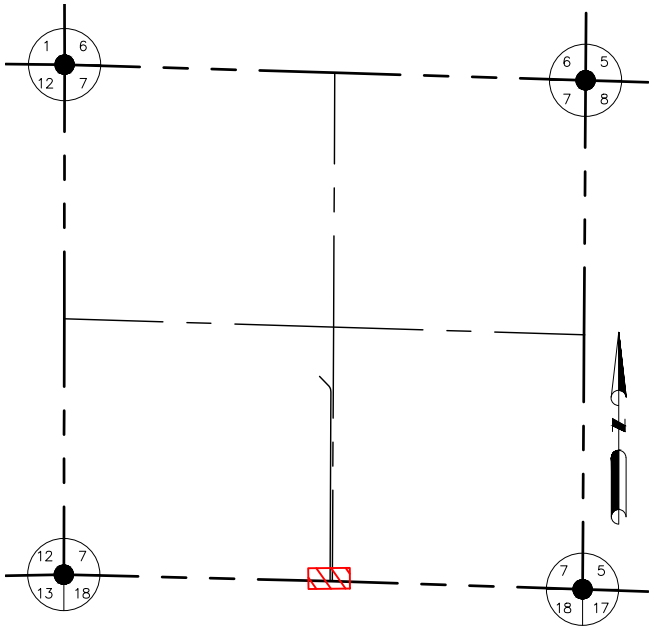
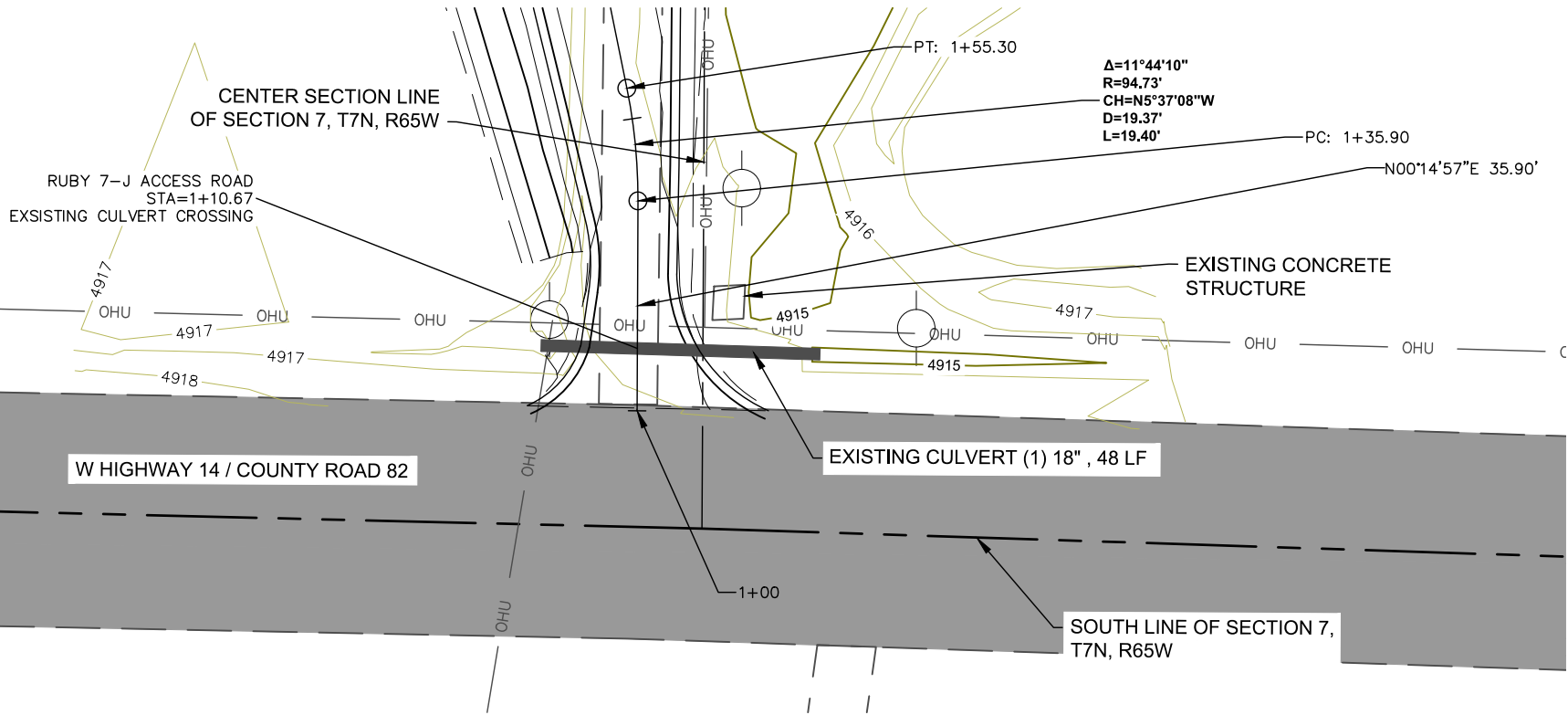
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PLAN & PROFILE		SURFACE LOCATION	
RUBY 7-J ACCESS ROAD		SW 1/4 SECTION 7, T7N, R65W, 6TH P.M., WELD COUNTY, COLORADO	
REV.	DATE	REVISION DESCRIPTION	ISSUED FOR CONSTRUCTION
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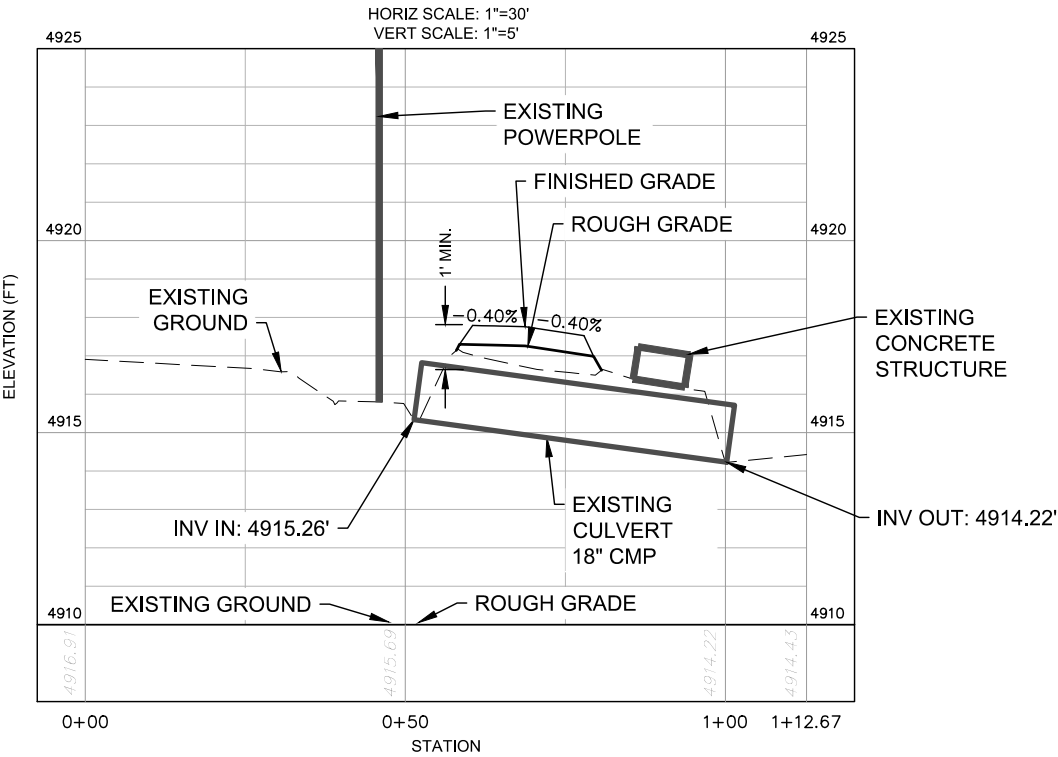
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CONSTRUCTION DRAWINGS



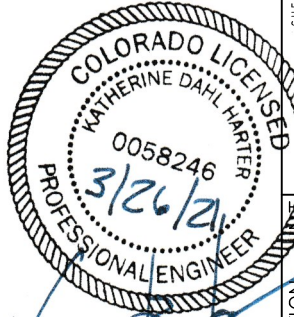
KEY MAP  
N.T.S.

PLAN VIEW OF CULVERT A  
SEE SHEET 4

SCALE: 1" = 30'



PROFILE VIEW OF CULVERT A



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SHEET NAME:

CULVERT PLAN & PROFILE

SURFACE LOCATION

RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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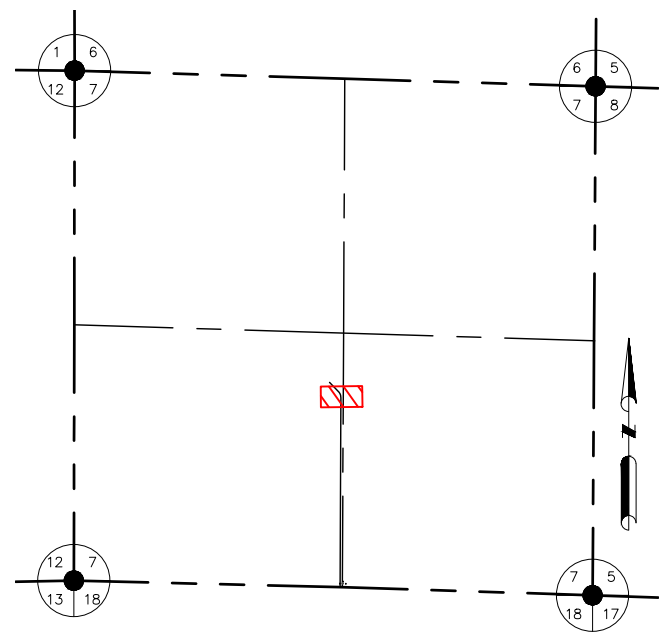
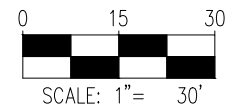
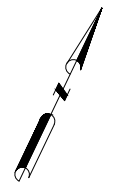
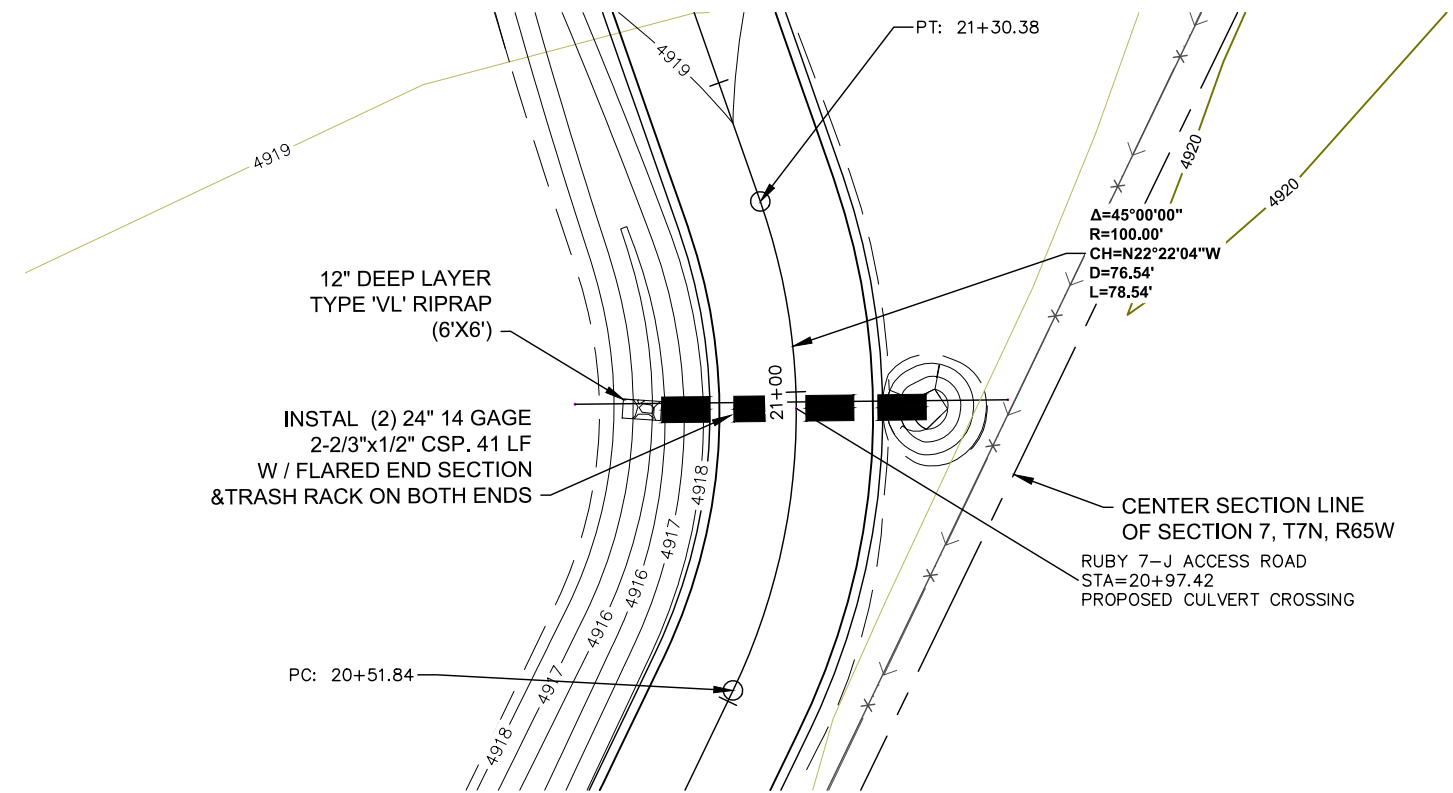
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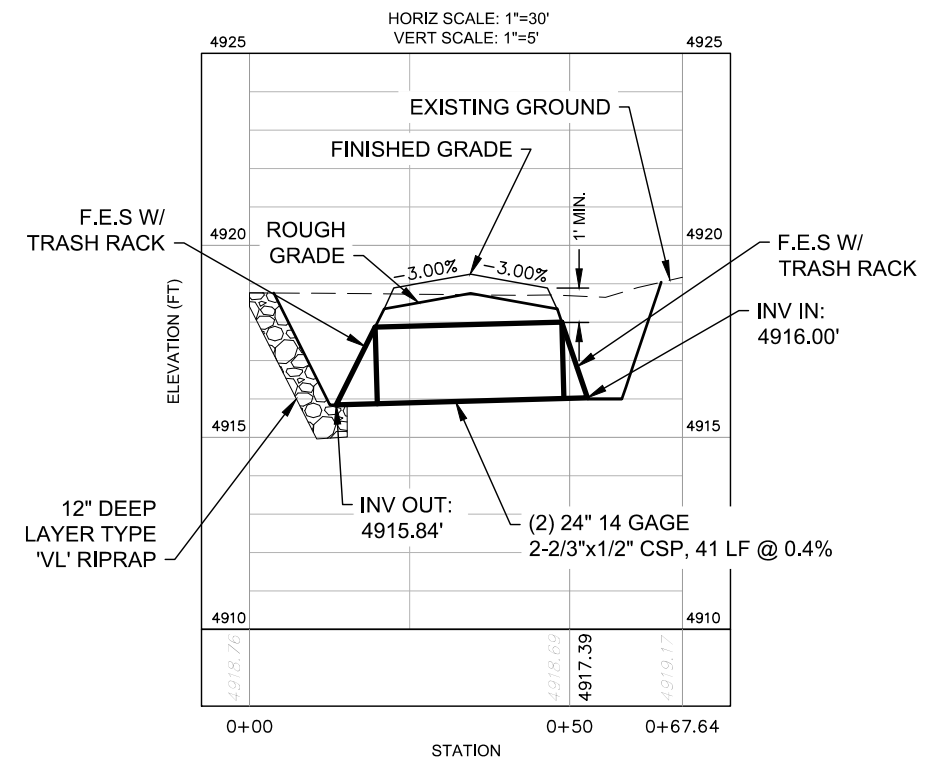
07 OF 13

RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS



PLAN VIEW OF CULVERT A  
SEE SHEET 4

SCALE: 1" = 30'



PROFILE VIEW OF CULVERT A



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SHEET NAME:  
CULVERT PLAN & PROFILE

SURFACE LOCATION  
RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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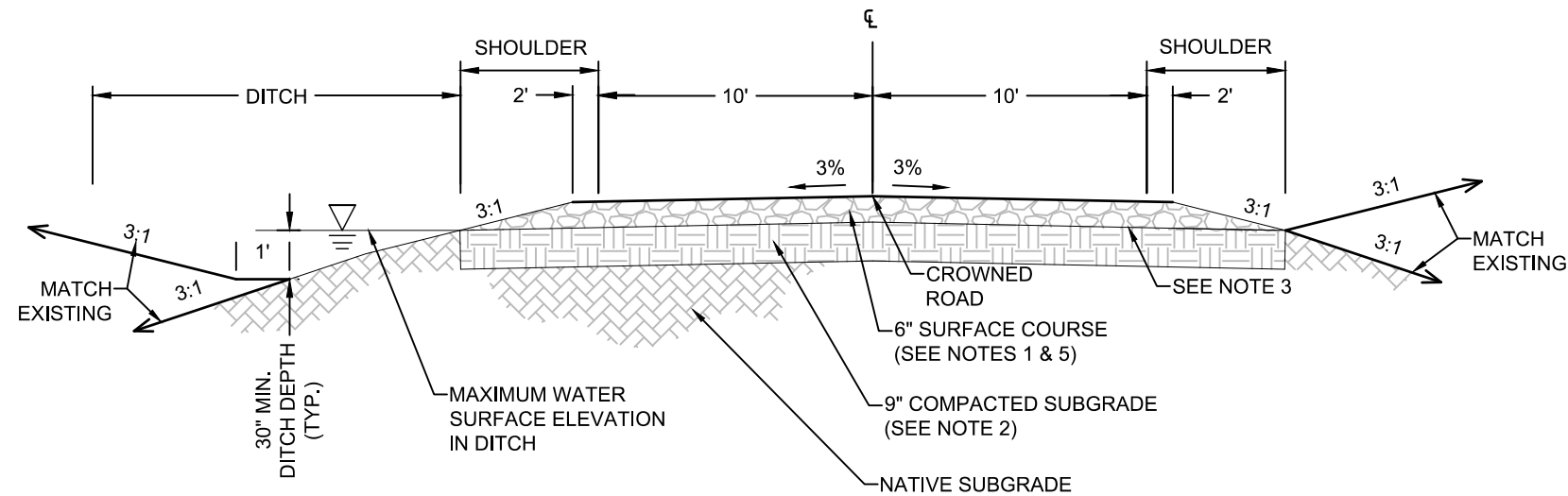
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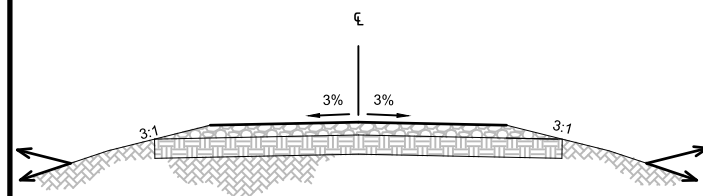
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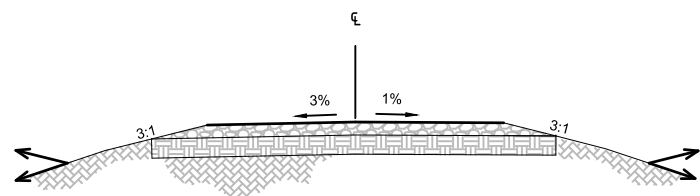
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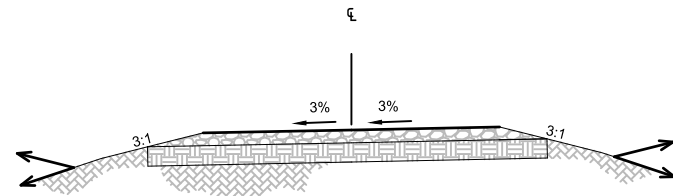
TYPICAL GRAVEL ACCESS ROAD CROSS-SECTION  
N.T.S



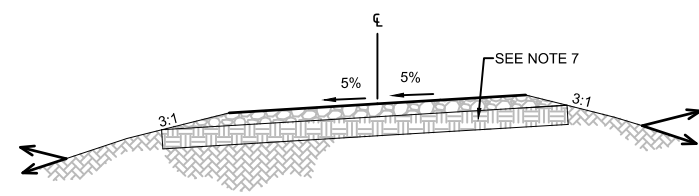
DETAIL A - TYPICAL CROWNED ROAD  
N.T.S



DETAIL B - BEGIN TRANSITION  
N.T.S



DETAIL C - CONTINUED TRANSITION  
N.T.S



DETAIL D - SUPERELEVATION (I.E. BANKED TURN)  
N.T.S

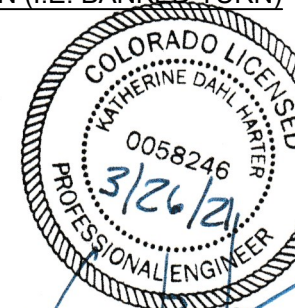
TRANSITION TO SUPERELEVATION

GENERAL NOTES

- THIS ROAD STANDARD HAS BEEN CREATED AS A GENERAL STANDARD FOR GRAVEL ROADS CONSTRUCTION IN WELD COUNTY, COLORADO AND APPLIES FOR RURAL, LOCAL UNPAVED PRIVATE ROADS.
- SEE WELD COUNTY ENGINEERING AND CONSTRUCTION GUIDELINES (LATEST EDITION) FOR ADDITIONAL INFORMATION ON RECOMMENDED DESIGN AND CONSTRUCTION FOR ROADS.

DESIGN NOTES:

- IMPORTED FILL TO MEET THE FOLLOWING SPECIFICATION:
  - 100% SOIL MATERIAL FINER THAN 1.5 INCH SIEVE.
  - 100% - 95% SOIL MATERIALS FINER THAN 1 INCH SIEVE.
  - 30% - 70% SOIL MATERIALS FINER THAN NO. 4 SIEVE.
  - 3% - 15% SOIL MATERIALS FINER THAN NO. 200 SIEVE.
  - MAXIMUM LIQUID LIMIT OF 30.
- THE CONTRACTOR SHALL SCARIFY THE SUBGRADE 9" (MIN.), MOISTURE CONDITION, THEN COMPACT TO 95% MAXIMUM ACHIEVABLE DENSITY IN ACCORDANCE WITH ASTM D-698.
- FINAL SUBGRADE TO BE PROOF ROLLED BY A RUBBER-TIRE TRUCK WITH A REAR AXLE LOAD OF APPROXIMATE 18,000 LBS./AXLE AND ACCEPTED BY THE INSPECTOR OR CONSTRUCTION MANAGER PRIOR TO ACCEPTANCE OF THE SUBGRADE AND PLACEMENT OF ROAD BASE. REMOVE AND REPLACE ANY SOFT MATERIAL WHICH EXHIBITS PERMANENT SUBGRADE DEFORMATION EXCEEDING 0.5".
- HORIZONTAL LIFTS OF ROAD BASE MATERIAL TO BE COMPACTED BY LARGE COMPACTING EQUIPMENT IN MAXIMUM 8" LIFTS (LOOSE DEPTH) TO 95% MAXIMUM DENSITY (AT A MINIMUM) AT OPTIMUM MOISTURE CONTENT (-2% TO +2%) TO ACHIEVE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557.
- COMPACTION TO BE VERIFIED BY NUCLEAR METHOD PER ASTM D-6938 OR BY AN EQUIVALENT METHOD APPROVED BY THE ENGINEER.
- COMPACTION TESTING FREQUENCY FOR ROADS SHALL BE 1 TEST (ASTM D-6938) PER 15 FT. OF WIDTH PER 500 FT. OF LENGTH, OR FRACTION THEREOF PER 6" LIFT (COMPATED DEPTH).
- SUPERELEVATION DESIGN BASED ON GRAVEL ROAD WITH A DESIGN SPEED LIMIT OF 25 MPH AND CURVATURE LENGTH OF 200 FEET (BEGINNING OF CURVE TO END OF CURVE).



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ACCESS ROAD STANDARDS  
RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

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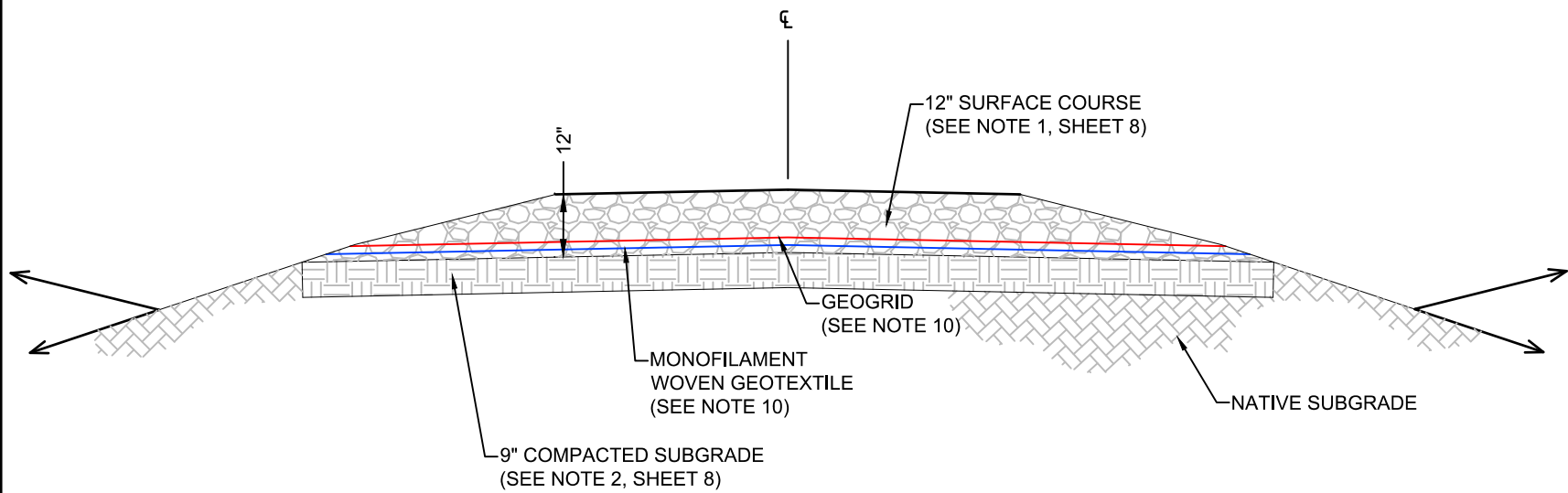
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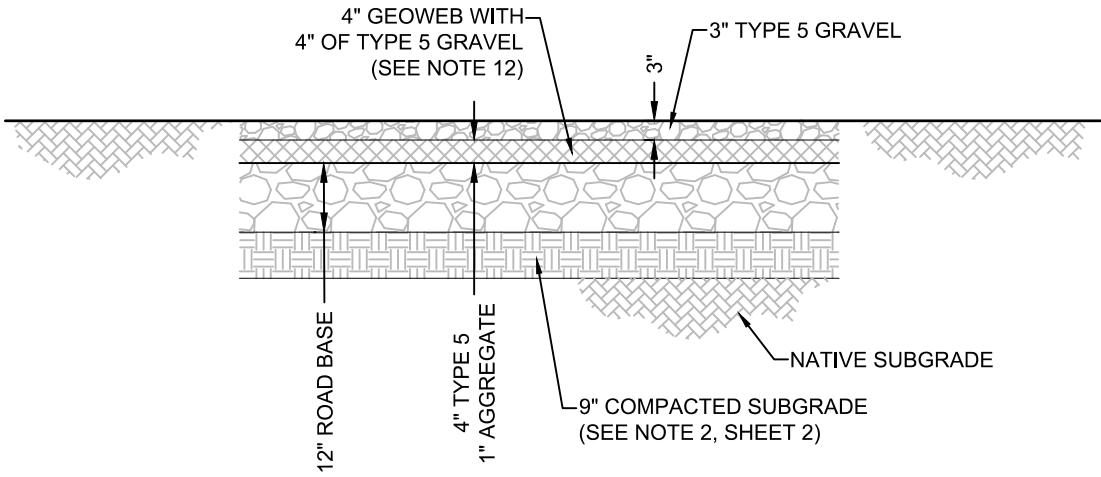
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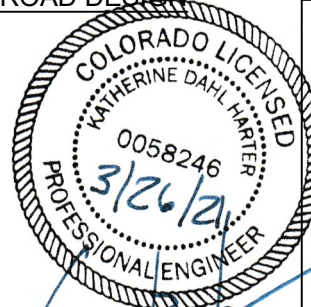
RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS



DETAIL E - SOFT SOIL ROAD DESIGN (SEE NOTE 13)  
N.T.S



DETAIL F - DRAINAGEWAY CROSSING ROAD DESIGN  
N.T.S



- NOTES:
- 8. #5 GRADE CRUSHED STONE WITH STONE SIZE RANGING FROM 1.5" - 3/8" WITH THE MAJORITY OF THE STONE BEING OF 1-INCH SIZE.
  - 9. HORIZONTAL LIFTS OF GRAVEL MATERIAL TO BE COMPACTED BY LARGE COMPACTING EQUIPMENT IN MAXIMUM OF 6" (LOOSE DEPTH) LIFTS TO 90% MAXIMUM DENSITY (MINIMUM) AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE MAXIMUM DENSITY.
  - 10. GEOSYNTHETIC REINFORCEMENT OF THE SUBGRADE TO BE ACHIEVED BY PROVIDING A WOVEN MONOFILAMENT GEOTEXTILE WITH A W200 GRAB TENSILE STRENGTH (I.E. BREAK STRENGTH) RATING AS THE BOTTOM LAYER. WOVEN MONOFILAMENT GEOTEXTILE TO BE OVERLAID WITH A GEOGRID GEOTEXTILE REINFORCEMENT WITH A 1-INCH APERTURE SIZE AND AN ULTIMATE TENSILE STRENGTH OF NOT LESS THAN 1,200 POUNDS PER FOOT. BOTH GEOSYNTHETICS TO BE 100% RESISTANT TO UV DEGRADATION.
  - 11. GEOSYNTHETIC REINFORCEMENT TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
  - 12. SMALL CELL POLYETHYLENE GEOWEB (APPROXIMATE 45 IN<sup>2</sup>/CELL), 4-INCH DEPTH WITH A MINIMUM 300 POUND CELL SEAM STRENGTH.
  - 13. SOFT SOIL TO BE DEFINED AS ANY SOILS WHICH EXHIBITS PERMANENT DEFORMATION EXCEEDING 3/4" WHEN PROOF ROLLED (SEE NOTE 3, SHEET 1) OR AS REQUIRED BY THE CONSTRUCTION MANAGER.

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**ACCESS ROAD STANDARDS**

SHEET NO. 10 OF 13

SURFACE LOCATION  
RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

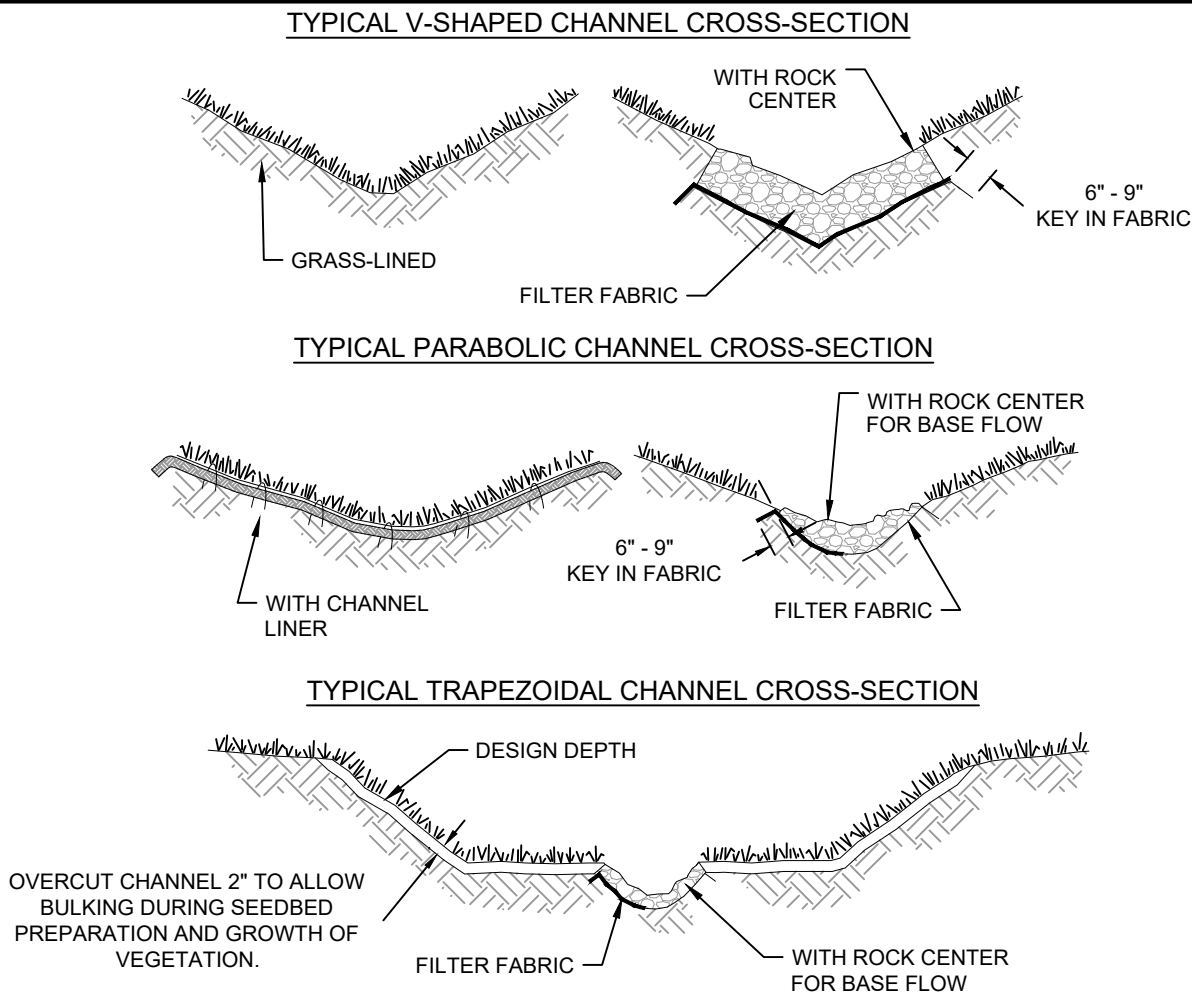
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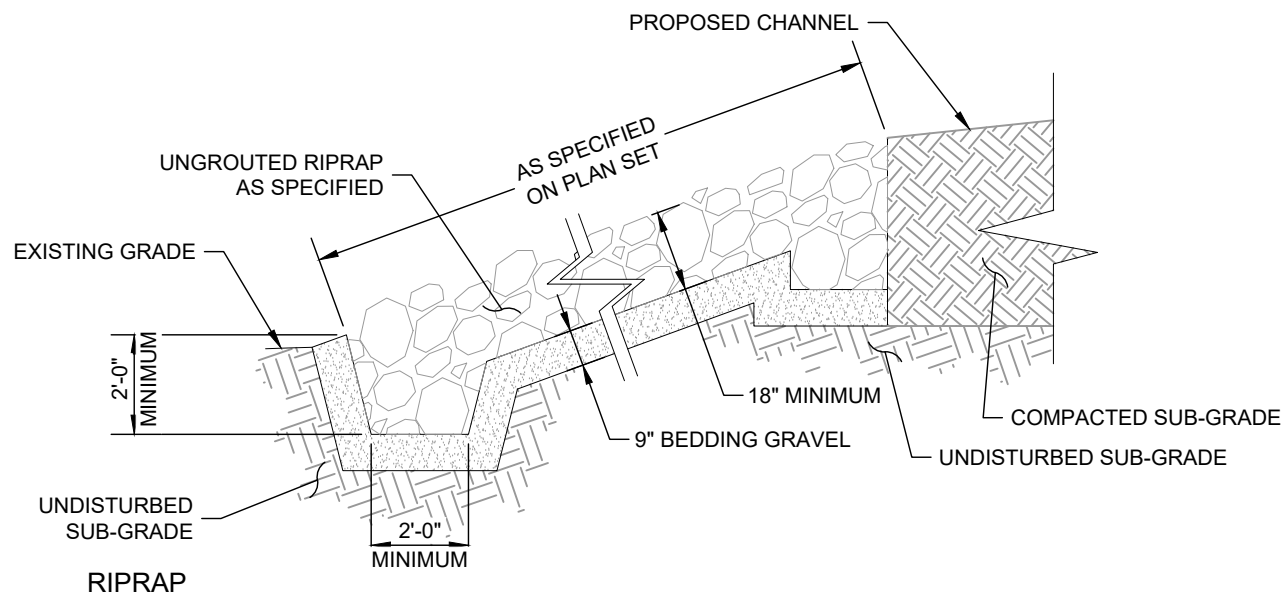
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# RUBY 7-J ACCESS ROAD CONSTRUCTION DRAWINGS

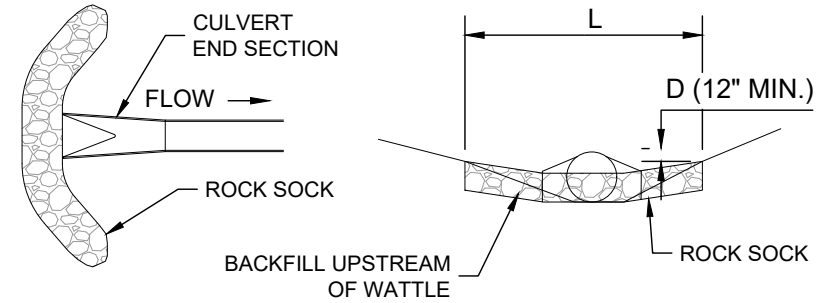


## TYPICAL GRASS-LINED CHANNELS

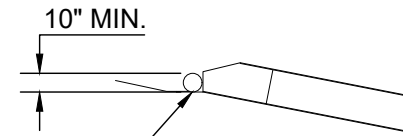
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SCALE: NOT TO SCALE



## CULVERT INLET PROTECTION PLAN



## SECTION B

KEY IN ROCK SOCK 0" ON BEDROCK,  
PAVEMENT OR RIPRAP KEY IN ROCK SOCK  
2" ON EARTH

## CULVERT INLET PROTECTION

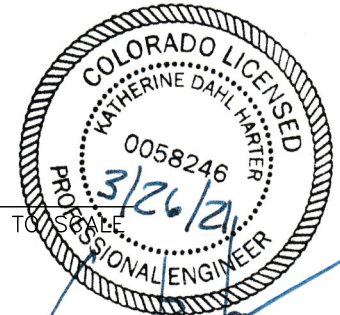
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GENERAL INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
  - LOCATION OF INLET PROTECTION.
  - TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6).
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLET IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.



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SHEET NAME: **BMP TYPICAL DETAILS**

RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
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WELD COUNTY, COLORADO

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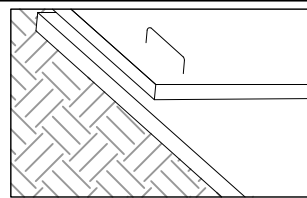
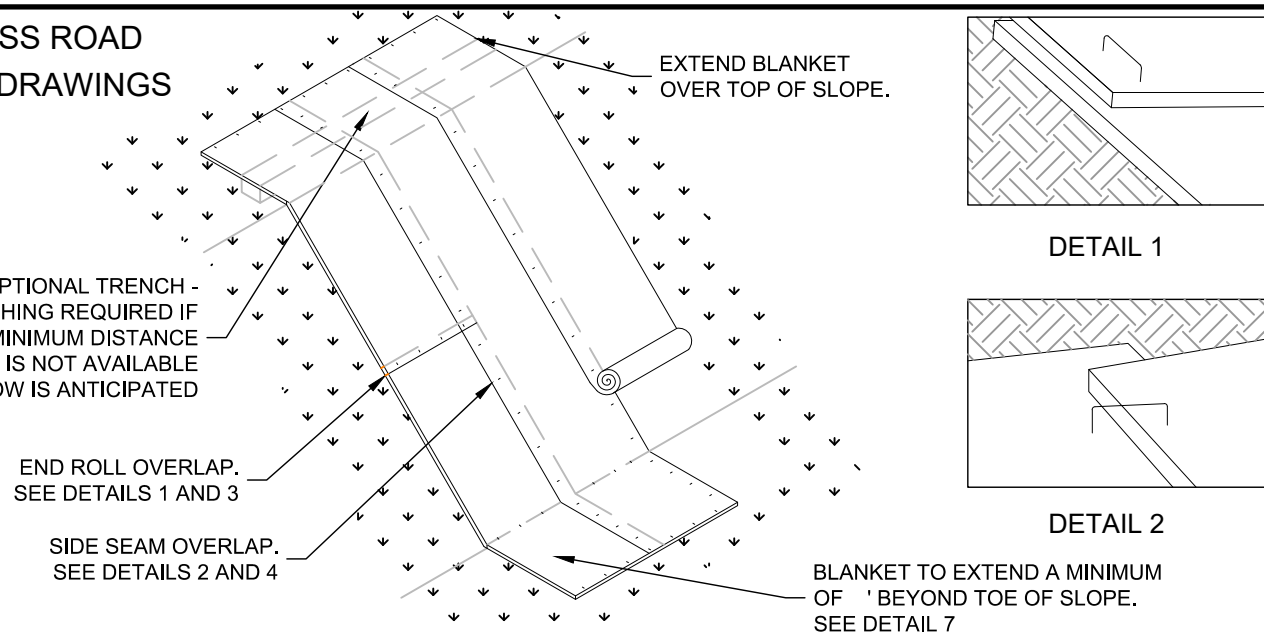
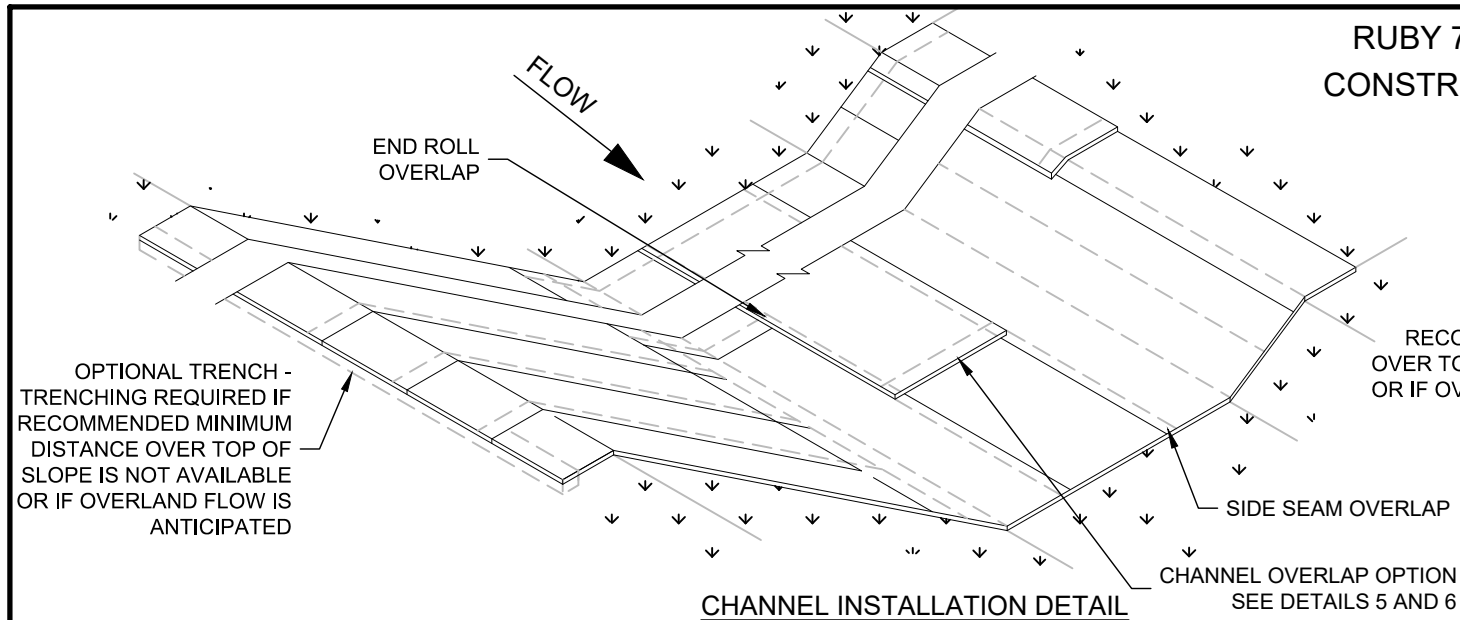
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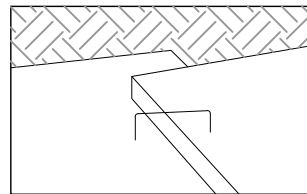
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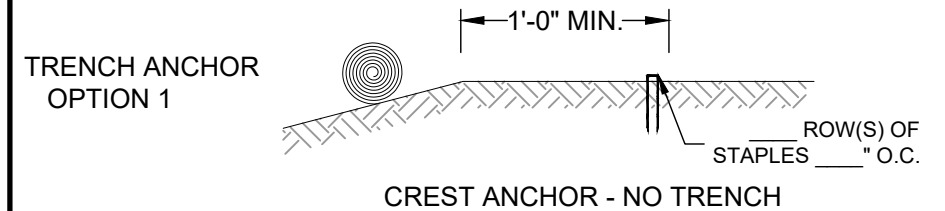
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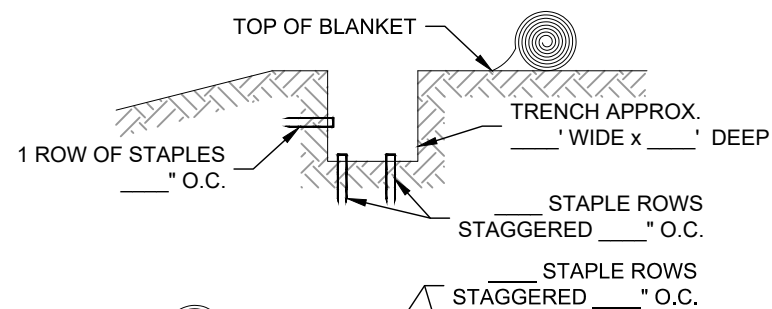
DETAIL 1



DETAIL 2



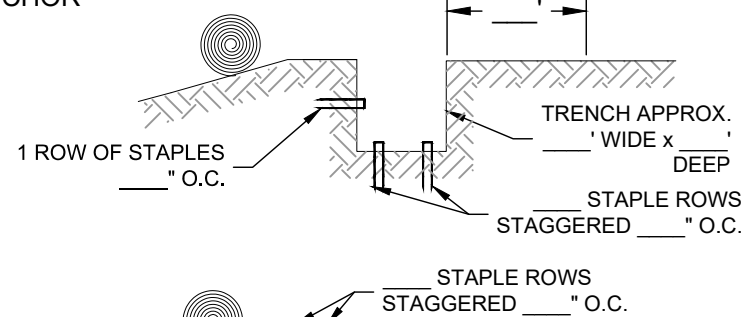
STEP 1



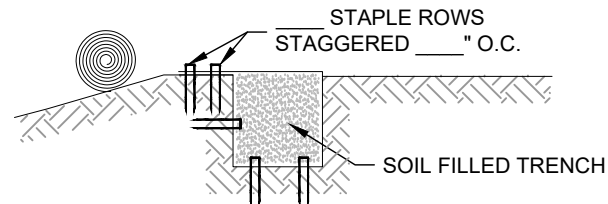
STEP 2

**TRENCH ANCHOR OPTION 2**

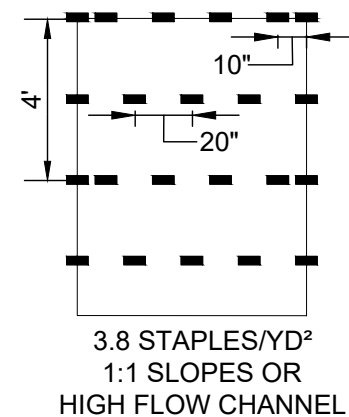
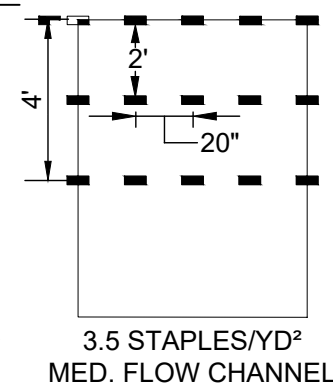
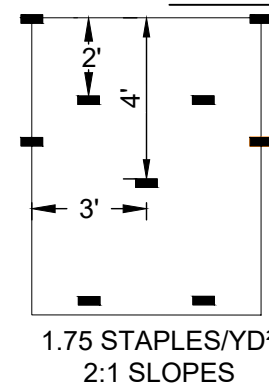
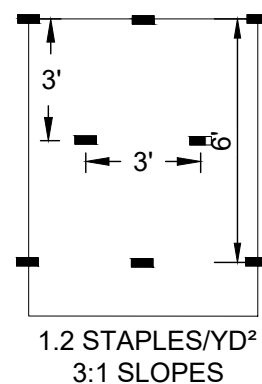
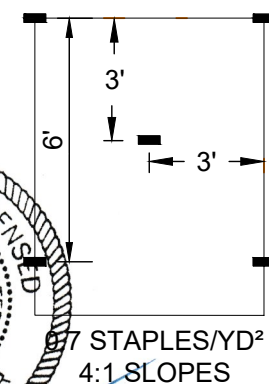
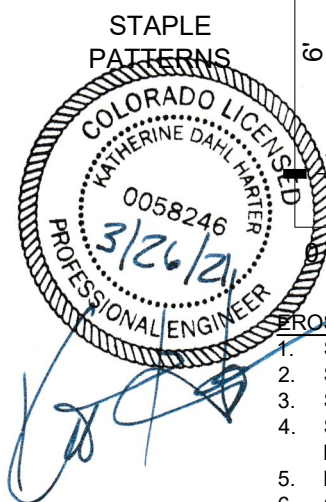
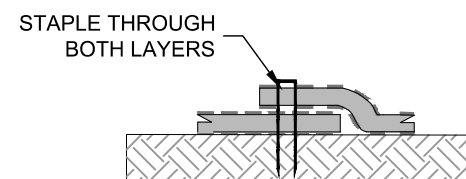
STEP 1



STEP 2



**EROSION CONTROL MAT INSTALLATION**



**EROSION CONTROL MAT INSTALLATION NOTES:**

1. STAPLE PATTERNS ARE DEPENDENT UPON SLOPE CONDITIONS AND MANUFACTURER'S RECOMMENDATIONS.
2. STAPLES OF 11 GAUGE OR HEAVIER SHALL BE USED TO HOLD MATS AND NETS IN PLACE.
3. STAPLES SHALL BE U-SHAPED WITH A 1-INCH CROWN.
4. STAPLE LENGTHS ARE DETERMINED BASED ON SOIL CONDITION. SEE WI STANDARD 484-MULCHING FOR STAPLE LENGTH REQUIREMENTS.
5. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR BOTH END AND EDGE OVERLAP LENGTH.
6. CONSIDER THE USE OF BIODEGRADABLE STAPLES IN LOCATIONS WHERE WIRE STAPLES ARE DETERMINED TO BE A RISK.

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SHEET NAME:  
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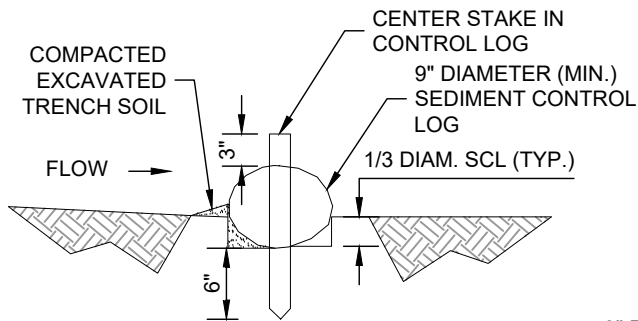
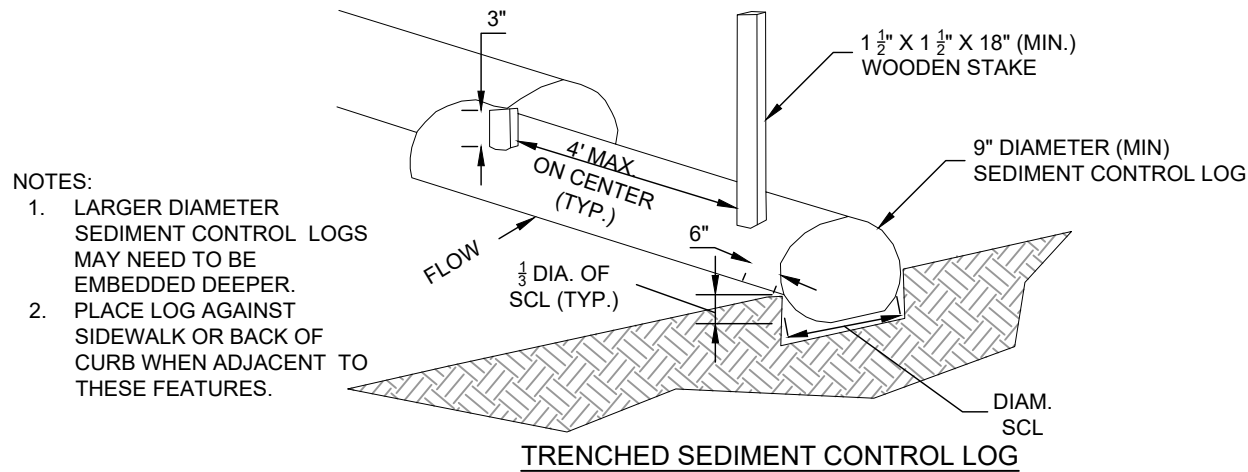
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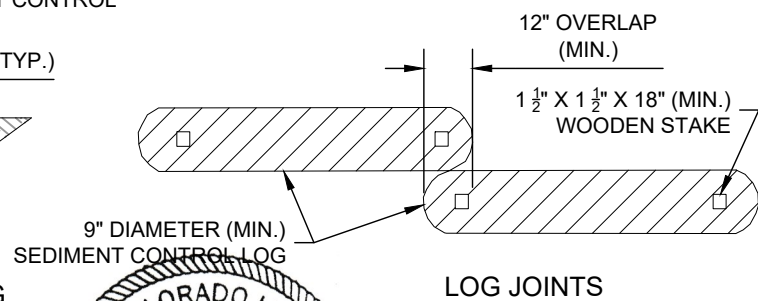
DRAWING DATE:  
03-17-2021

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AMS

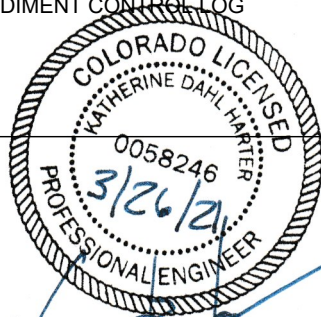
SHEET NO.  
12 OF 13



**TRENCHED SEDIMENT CONTROL LOG**



**LOG JOINTS**



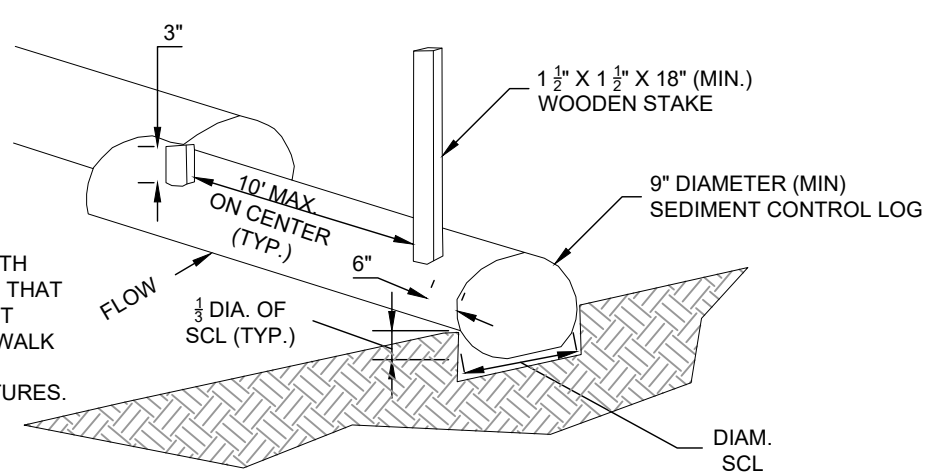
SCALE: NOT TO SCALE

**SEDIMENT CONTROL LOG INSTALLATION NOTES:**

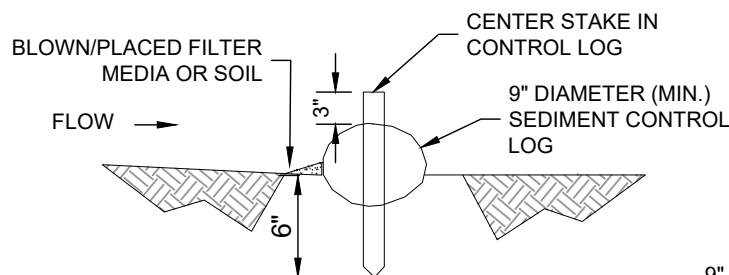
5. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
6. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
7. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES, AND OBVIOUS WEAR.
8. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
9. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
10. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
11. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

**RUBY 7-J ACCESS ROAD  
CONSTRUCTION DRAWINGS**

- NOTES:
3. THIS DETAIL IS FOR USE WITH SEDIMENT CONTROL LOGS THAT AREA A MINIMUM OF 8 LB/FT
  4. PLACE LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.

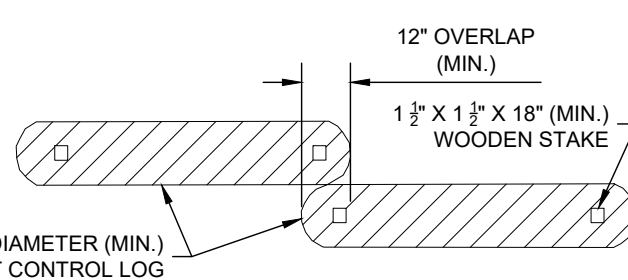


**COMPOST SEDIMENT CONTROL LOG  
(WEIGHTED)**



**COMPOST SEDIMENT CONTROL LOG**

**COMPOST SEDIMENT CONTROL LOG (WEIGHTED)**

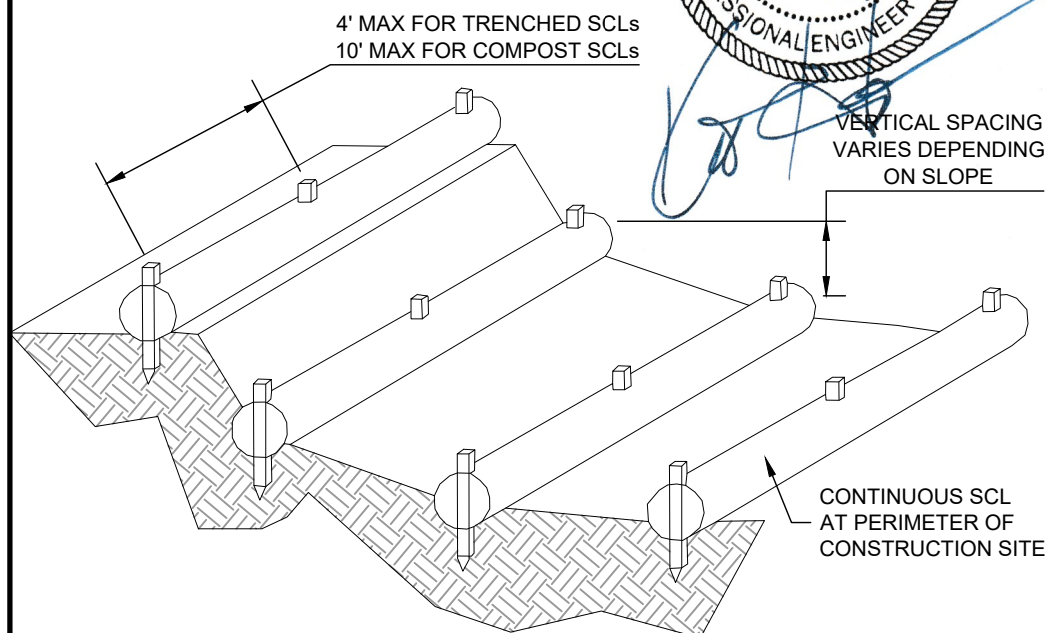


**LOG JOINTS**

SCALE: NOT TO SCALE

**SEDIMENT CONTROL LOG MAINTENANCE NOTES:**

12. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
13. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
15. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
16. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACES AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.



SCALE: NOT TO SCALE



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(303) 893-2503

SHEET NAME:  
**BMP TYPICAL DETAILS**

SURFACE LOCATION

RUBY 7-J ACCESS ROAD  
SW 1/4 SECTION 7,  
T7N, R65W, 6TH P.M.  
WELD COUNTY, COLORADO

REV.	DATE	DESCRIPTION	INT.
0	03/26/21	ISSUED FOR CONSTRUCTION	AMS

FIELD DATE:  
04-28-2020

DRAWING DATE:  
03-17-2021

DRAFTED BY:  
AMS

SHEET NO.  
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