Summit Midstream 19 Loop 12"Pipeline

RECEIVED
APR 12 2013
GARFIELD COUNTY
COMMUNITY DEVELOPMENT

GARFIELD COUNTY GRADING PERMIT APPLICATION

108 8th Street, Suite 401, Glenwood Springs, Co 81601
Phone: 970-945-8212 / Fax: 970-384-3470 / Inspection Line: 888-868-5306
www.garfield-county.com

1	Parcel No: (this information is available at the assessors office 970-945-9134) 2401-311-00-192 & 2401-291-00-191			
2	Job Address: (if an address has not been assigned, please provide Cr, Hwy or Street Name & City) or and legal description Section 19 & 30, Township 7 South, Range 92 West, 6th, P.M.			
3	Lot No:	Block No:	Subd./ Exemption:	
4	Owner: (property owner) Shideler Land & Cattle Shidelerosa	Mailing Address 4128 CO RD 315 Silt CO 81652 1411 CO RD 316 Silt CO 81652	Ph: (970) 876-0480 (970) 876-2276	Alt Ph;
5	Contractor: Grand River Gathering, LLC	Mailing Address 2128 Railroad Ave. Ste 106/ Rifle CO 81650	Ph: Permitting (970)440-1006	Alt Ph: Tracey Jensen (970) 987-4538
6	Architect / Engineer: N/A	Mailing Address	Ph:	Alt Ph:
7	Sq. Ft. of Grading: 253,770		Cu. Yd. of Grading:	
8	Describe Work: Grading of ROW for installation & burial of 12" natural gas pipeline. Proposed pipeline across fee is approx. 4614' in length and 55' in width; permanent easement will be 30', temp easement 25', which will be reclaimed to as near as pre-construction contours as possible.			
9	***ALL UTILITIES MUST BE LOCATED PRIOR TO ANY GRADING***			

NOTICE

Authority. This application for a Grading Permit must be signed by the Owner of the property, described above, or an authorized agent. If the signature below is not that of the Owner, a separate letter of authority, signed by the Owner, must be provided with this Application.

Legal Access. A Grading Permit cannot be issued without proof of legal and adequate access to the property for purposes of inspections by the Building Department.

Other Permits. Multiple separate permits may be required: (1) State Electrical Permit, (2) County ISDS Permit, (3) another permit required for use on the property identified above, e.g. State or County Highway/ Road Access or a State Wastewater Discharge Permit.

Void Permit. A Permit becomes null and void if the work authorized is not commenced within 180 days of the date of issuance and if work is suspended or abandoned for a period of 180 days after commencement.

CERTIFICATION

I hereby certify that I have read this Application and that the information contained above is true and correct. I understand that the Building Department accepts the Application, along with the plans and specifications and other data submitted by me or on my behalf (submittals), based upon my certification as to accuracy.

Assuming completeness of the submittals and approval of this Application, a Permit will be issued granting permission to me, as Owner, to construct the structure(s) and facilities detailed on the submittals reviewed by the Building Department.

In consideration of the issuance of the g Permit, I agree that I and my agents will comply with provisions of any federal, state or local law regulating the work and the Garfield County Building Code, ISDS regulations and applicable land use regulations (County Regulation(s)). I acknowledge that the Permit may be suspended or revoked, upon notice from the County, if the location, construction or use of the structure(s) and facility(ies), described above, are not in compliance with County Regulation(s) or any other applicable law.

I hereby grant permission to the Building Department to enter the property, described above, to inspect the work. I further acknowledge that the issuance of the Permit does not prevent the Building Official from: (1) requiring the correction of errors in the submittals, if any, discovered after issuance; or (2) stopping construction or use of the structure(s) or facility(ies) if such is in violation of County Regulation(s) or any other applicable law.

Review of this Application, including submittals, and inspections of the work by the Building Department do not constitute an acceptance of responsibility or liability by the County of errors, omissions or discrepancies. As the Owner, I acknowledge that responsibility for compliance with federal, state and local laws and County Regulations rest with me and my authorized agents, including without limitation my architect designer, engineer and/ or builder.

I HEREBY ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THE **NOTICE & CERTIFICATION** ABOVE:

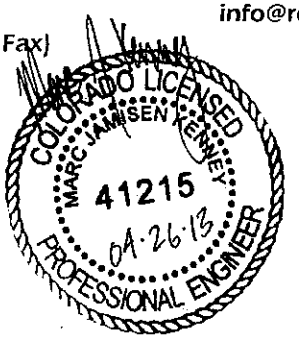
OWNERS SIGNATURE — DATE 03/27/13

STAFF USE ONLY

Special Conditions:		
Fees Paid & Date: CK 751 4000.- 4.12.13	**Permit Fee:** 400.-	**Balance Due:** —
Grading Permit: Grad-4-13-2797	**Issue Date:** May 7, 2013	
Building & Planning Dept: APPROVAL	DATE 5/6/13	

RIVERCITY
CONSULTANTS

744 HORIZON COURT SUITE 110 (970) 241-4722 info@rccwest.com
GRAND JUNCTION, CO 81506 (970) 241-8841 (Fax)



To: Andy Schwaller, Garfield County
From: Marc Kenney, P.E.
Date: April 26, 2013

RE: Design Review

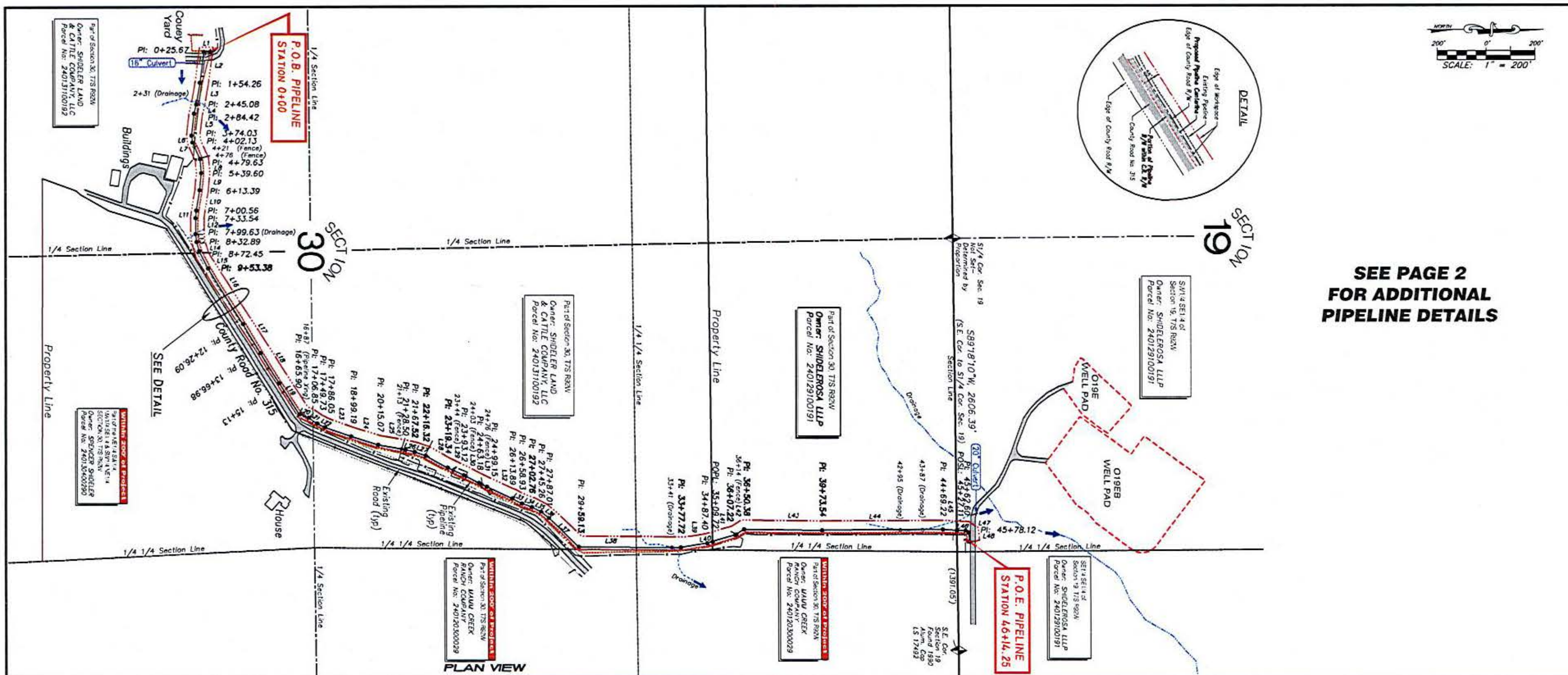
The purpose of this letter is to document River City Consultant's design review of the 19 Loop Pipeline. Summit Midstream Partners provided available design information for the 19 Loop Pipeline. River City Consultants reviewed the provided design information and referenced standards and specifications. Based on our review, the design and layout of this pipeline appears to meet current design standards and standard engineering practice.

A good quality assurance and quality control (QA/QC) program with associated testing and documentation is recommend during construction to ensure the final as-built product meets design expectations/needs. This program should include compaction testing of backfill in critical areas (e.g. open cut road crossings and drainage crossings). The pipeline testing requirements provided by Summit Midstream may be modified during/after construction depending on the pipeline classification desired for the finished product. All of the QA/QC testing should be clearly documented in writing so the classification of the final product is obvious and known to future users of the line.

Attached to this letter is the following backup information that was provided by others:

- 19 Loop Plan & Profile Sheets dated 03/20/13 by Wasatch Surveying;
- 19 Loop Valve Yard Sheets dated 03/27/13 by BIS TEPSCO;
- Couey Valve Yard Sheets dated 03/14/13 by BIS TEPSCO;
- MAOP (maximum allowable operating pressure) Determination Worksheet dated 04/01/13 by Summit Midstream Partners (formerly Energy Transfer); and
- Pipeline Wall Thickness and Pressure Testing Spreadsheet by Summit Midstream Partners (formerly part of Encana Oil & Gas (USA) Inc.;

Attachments
mjk/


SEE PAGE 2
FOR ADDITIONAL
PIPELINE DETAILS
SCALE: 1" = 200'
DETAIL
Edge of Workspace
Existing Pipeline
Proposed Pipeline Centerline
Edge of County Road R/W
County Road No. 315
Edge of County Road R/W
SECTION 19
SECTION 30
Couey Yard
P.O.B. PIPELINE
STATION 0+00
P.O.E. PIPELINE
STATION 46+14.25
PI: 0+25.67
18" Culvert
2+31 (Drainage)
PI: 1+54.26
PI: 2+45.08
PI: 2+84.42
PI: 3+74.03
PI: 4+02.13
PI: 4+79.63
PI: 5+39.60
PI: 6+13.39
PI: 7+00.56
PI: 7+33.54
PI: 7+99.63 (Drainage)
PI: 8+32.89
PI: 8+72.45
PI: 9+53.38
PI: 12+26.09
PI: 13+66.98
PI: 15+13
16+87 (Pipeline Xing)
PI: 16+65.90
PI: 17+06.85
PI: 17+49.73
PI: 17+86.05
PI: 18+99.19
PI: 20+15.07
PI: 21+28.50
PI: 21+67.52
PI: 22+16.32
PI: 23+19.34
PI: 23+93.12
PI: 24+63.18
PI: 24+99.15
PI: 26+13.89
PI: 26+58.93
PI: 27+02.76
PI: 27+45.26
PI: 27+87.01
PI: 29+59.13
PI: 33+77.72
33+41 (Drainage)
PI: 34+87.40
POPL: 35+09.72
PI: 36+07.22
36+14 (Fence)
PI: 36+50.38
PI: 39+73.54
42+95 (Drainage)
43+87 (Drainage)
PI: 44+69.22
POSL: 45+27.11
PI: 45+62.60
PI: 45+78.12
20" Culvert
S89°18'10"W, 2606.39'
(S.E. Cor. to S1/4 Cor. Sec. 19)
Section Line
S1/4 Cor. Sec. 19
Not Set-
Determined by
Proportion
S.E. Cor.
Section 19
Found 1990
Alum. Cap
LS 17492
(1391.05')
1/4 Section Line
1/4 1/4 Section Line
Property Line
Drainage
County Road No. 315
SEE DETAIL
Buildings
House
Existing Pipeline (typ)
Existing Road (typ)
O19E
WELL PAD
O19EB
WELL PAD
SW1/4 SE1/4 of
Section 19, T7S R92W
Owner: SHIDELEROSA LLLP
Parcel No: 240129100191
SE1/4 SE1/4 of
Section 19 T7S R92W
Owner: SHIDELEROSA LLLP
Parcel No: 240129100191
Part of Section 30, T7S R92W
Owner: SHIDELEROSA LLLP
Parcel No: 240129100191
Part of Section 30, T7S R92W
Owner: SHIDELER LAND
& CATTLE COMPANY, LLC
Parcel No: 240131100192
Within 200' of Project
Part of Section 30, T7S R92W
Owner: MAMM CREEK
RANCH COMPANY
Parcel No: 240120300029
Within 200' of Project
Owner: SPENCER SHIDELER
Parcel No: 240130400290
PLAN VIEW
PROFILE VIEW
Sta. 2+31 - Drainage
Sta. 8+00 - Drainage
Sta. 16+87 - Pipeline Crossing
EXISTING GROUND
Sta. 33+41 - Drainage
Sta. 42+95 - Drainage
Sta. 43+87 - Drainage
DATUM ELEV
6475.00
6642.6
6625.7
6605.1
6614.2
6634.0
6632.6
6632.0
6632.7
6624.7
6628.8
6631.0
6629.3
6627.2
6624.5
6624.9
6622.4
6621.4
6619.2
6614.9
6609.0
6605.6
6601.1
6595.9
6593.7
6590.9
6589.0
6586.8
6580.7
6575.5
6570.5
6569.5
6539.2
6517.8
6496.4
6504.2
6502.2
6544.1
6549.3
6545.4
6541.3
6538.2
6535.6
6532.4
6525.1
6518.2
6512.4
6508.6
0+00
2+00
4+00
6+00
8+00
10+00
12+00
14+00
16+00
18+00
20+00
22+00
24+00
26+00
28+00
30+00
32+00
34+00
36+00
38+00
40+00
42+00
44+00
46+00
HORIZ. SCALE: 1"= 200'
VERT. SCALE: 1"= 100'

NOTE:
Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

811 Know what's below. Call before you dig.

CERTIFICATE OF SURVEYOR
I, TED TAGGART OF FRUITA, COLORADO HEREBY CERTIFY THAT THIS MAP WAS MADE FROM NOTES TAKEN DURING AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECTION FOR GRAND RIVER GATHERING, LLC AND THAT THE RESULTS OF WHICH ARE CORRECTLY SHOWN HEREON.

LEGEND
SECTION OR PROPERTY CORNER LOCATED
P.I. POINT OF INTERSECTION
P.O.B. POINT OF BEGINNING
P.O.E. POINT OF ENDING
P.O.S.L. POINT ON SECTION LINE
P.O.P.L. POINT ON PROPERTY LINE

REVISIONS			
0	First Issue	SST	3/20/13
		BY	DATE

PREPARED BY: WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO: 13-12-04

PROJECT: -PIPELINE PLAN & PROFILE-
Couey Yard to O19EB Pipeline
Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

PREPARED FOR: SUMMIT MIDSTREAM

SHEET: **1** of 2

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	SECTION	FEET	TOTAL
Shideler Land & Cattle Co. LLC	Sec. 30, T7S R92W	3509.72	3509.72
Shidelerosa LLC	Secs. 19 & 30, T7S R92W	1104.53	1104.53
		Total	4614.25

RIGHT-OF-WAY LIMITS BOX						
		Reference Points				
FROM	TO	Temporary Work Space Left	Permanent Right-of-Way Left	Permanent Right-of-Way Right	Temporary Work Space Right	Total
P.O.B.	STA: 8+72	20'	15'	15'	5'	55'
STA: 8+72	STA: 16+66	VARIES	15'	15'	VARIES	55'
STA: 16+66	STA: 29+59	25'	15'	15'	0'	55'
STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PIPE BEND TABLE

ANGLE POINT	STATION	PIPE BEND
BEGIN PIPE	00+00	
P.I.	00+26	82.2° LT
P.I.	01+54	2.2° RT
P.I.	02+45	3.7° RT
P.I.	02+84	6.7° LT
P.I.	03+74	15.5° LT
P.I.	04+02	15° LT
P.I.	04+80	19.6° RT
P.I.	05+40	9.4° RT
P.I.	06+13	3.8° RT
P.I.	07+01	2.2° LT
P.I.	07+34	6.2° LT
P.I.	08+00	9° LT
P.I.	08+33	7° LT
P.I.	08+72	10.9° LT
P.I.	09+53	5.2° LT
P.I.	12+26	1.4° RT
P.I.	13+67	1.5° LT
P.I.	15+13	0.9° LT
P.I.	16+66	37° LT
P.I.	17+07	14.1° RT
P.I.	17+50	7° LT
P.I.	17+86	7.4° LT
P.I.	18+99	2.6° LT
P.I.	20+15	7.4° LT
P.I.	21+28	2.8° RT
P.I.	21+68	6.3° RT
P.I.	22+16	9.7° RT
P.I.	23+19	2.9° LT
P.I.	23+93	2.1° RT
P.I.	24+63	1.2° LT
P.I.	24+99	1.7° LT
P.I.	26+14	2.4° RT
P.I.	26+59	7.5° LT
P.I.	27+02	7.9° RT
P.I.	27+45	12.4° RT
P.I.	27+87	4.1° RT
P.I.	29+59	44.2° LT
P.I.	33+78	9.5° LT
P.I.	34+87	7.1° LT
P.I.	36+07	17.3° LT
P.I.	36+50	34.3° RT
P.I.	39+74	1.1° LT
P.I.	44+69	3° RT
P.I.	45+63	31.5° RT
P.I.	45+78	49.5° RT
P.O.E.	46+14	

LINE TABLE

LINE	DIRECTION	LENGTH
L1	S00°19'57"E	25.67
L2	S82°31'57"E	128.59
L3	S80°19'14"E	90.82
L4	S76°38'17"E	39.34
L5	S83°23'08"E	89.61
L6	N81°09'12"E	28.10
L7	N66°07'07"E	77.50
L8	N85°43'48"E	59.98
L9	S84°52'24"E	73.79
L10	S81°04'22"E	87.16
L11	S83°17'38"E	32.99
L12	S89°30'56"E	66.09
L13	N81°28'15"E	33.26
L14	N74°26'14"E	39.56
L15	N63°30'44"E	80.93
L16	N58°18'50"E	272.71
L17	N59°41'00"E	140.89
L18	N58°10'58"E	146.03
L19	N57°17'43"E	152.90
L20	N20°17'31"E	40.95
L21	N34°20'35"E	42.88
L22	N27°22'29"E	36.32
L23	N19°57'10"E	113.14
L24	N17°23'58"E	115.88
L25	N10°02'03"E	113.43
L26	N12°51'44"E	39.02
L27	N19°10'38"E	48.81
L28	N28°54'53"E	103.02
L29	N26°01'12"E	73.78
L30	N28°04'53"E	70.05
L31	N26°54'07"E	35.98
L32	N25°11'30"E	114.73
L33	N27°37'54"E	45.05
L34	N20°10'23"E	42.79
L35	N28°01'56"E	43.53
L36	N40°24'03"E	41.76
L37	N44°32'40"E	172.11
L38	N00°17'55"E	418.60
L39	N09°12'56"W	109.68
L40	N16°16'14"W	22.32
L41	N16°16'14"W	97.50
L42	N33°35'37"W	43.15
L43	N00°41'59"E	323.16
L44	N00°23'54"W	495.68
L45	N02°34'07"E	57.89
L46	N02°34'07"E	35.50
L47	N34°02'42"E	15.52
L48	N83°31'03"E	36.13

NOTE:
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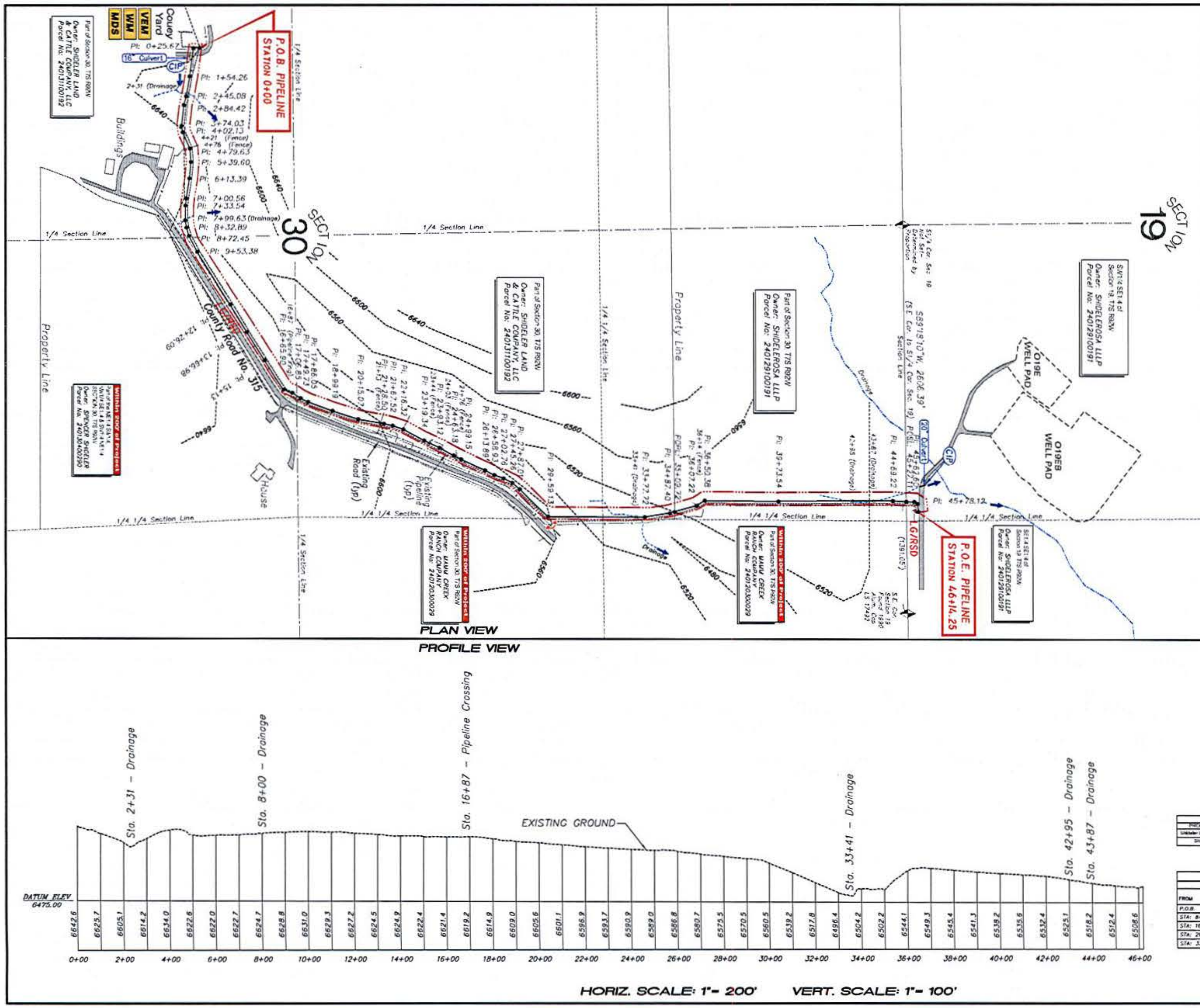
PROJECT: -PIPELINE PLAN & PROFILE-
Couey Yard to O19EB Pipeline
Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

PREPARED FOR: SUMMIT MIDSTREAM

SHEET 2 of 2


P.O.B. PIPELINE
STATION 0+00
P.O.E. PIPELINE
STATION 46+14.25
Couey Yard
VEM
WM
MDS
SECTION 19
SECTION 30
O19E WELL PAD
O19EB WELL PAD
20" Culvert
16" Culvert
CIP
LG/RSD
County Road No. 315
Existing Pipeline (typ)
Existing Road (typ)
Buildings
House
Property Line
1/4 Section Line
1/4 1/4 Section Line
S89°18'10"W, 2606.39'
(S.E. Cor. to S1/4 Cor. Sec. 19)
Section Line
SW1/4 SE1/4 of Section 19, T7S R92W Owner: SHIDELEROSA LLLP Parcel No: 240129100191
SE1/4 SE1/4 of Section 19 T7S R92W Owner: SHIDELEROSA LLLP Parcel No: 240129100191
Part of Section 30, T7S R92W Owner: SHIDELEROSA LLLP Parcel No: 240129100191
Part of Section 30, T7S R92W Owner: SHIDELER LAND & CATTLE COMPANY, LLC Parcel No: 240131100192
Within 200' of Project Part of Section 30, T7S R92W Owner: MAMM CREEK RANCH COMPANY Parcel No: 240120300029
Within 200' of Project Owner: SPENCER SHIDELER Parcel No: 240130400290
PLAN VIEW
PROFILE VIEW
EXISTING GROUND
Sta. 2+31 - Drainage
Sta. 8+00 - Drainage
Sta. 16+87 - Pipeline Crossing
Sta. 33+41 - Drainage
Sta. 42+95 - Drainage
Sta. 43+87 - Drainage
DATUM ELEV 6475.00
HORIZ. SCALE: 1"= 200'
VERT. SCALE: 1"= 100'

LEGEND/BMP'S

- VEM - VEHICLE EQUIPMENT MAINTENANCE AREA
- MDS - MATERIAL DELIVERY & STORAGE
- WM - WASTE MANAGEMENT
- LG - LAND GRADING
- RSL - ROADSIDE DITCHES & TURNOUTS
- CIP - CULVERT INLET PROTECTION
- COP - CULVERT OUTLET PROTECTION
- C - CULVERT
- WATTLE
- DIRECTION OF FLOW

SCALE: 1" = 200'

NOTE:
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		Total	4614.25

RIGHT-OF-WAY LIMITS BOX						
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STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
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PREPARED BY: WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO.: 13-12-04

REV	DESCRIPTION	BY	DATE
0	First Issue	SCT	3/20/13

REVISIONS

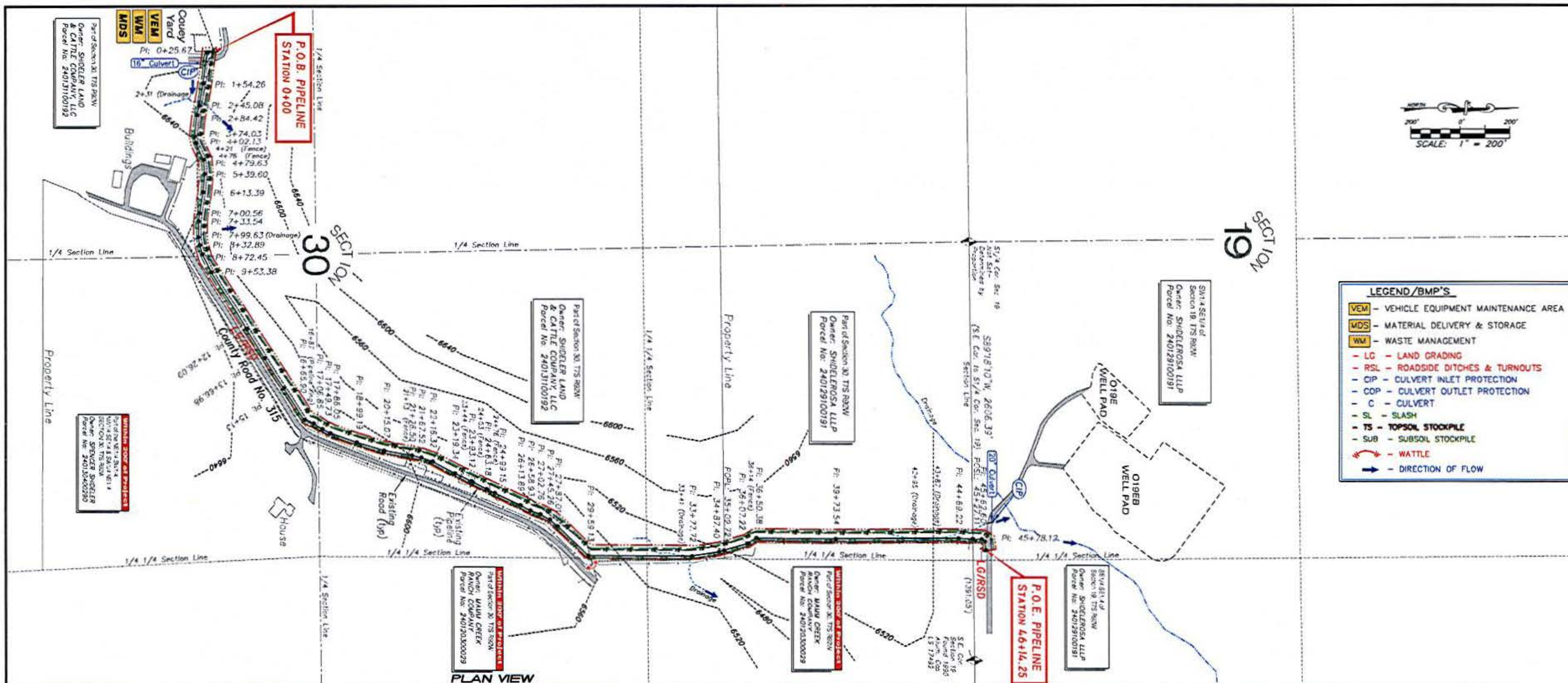
CENTERLINE LENGTH = 4,614.25'
TYPICAL R.O.W. WIDTH = 55'
TOTAL ACREAGE = 5.83 ACRES
CONSTRUCTION SITE BOUNDARY IS DEFINED BY THE R.O.W. LENGTH AND WIDTH AND IS EQUAL TO THE TOTAL AREA OF DISTURBANCE OF: 5.83 ACRES.
EDGE WORKSPACE

SURVEYOR:

PROJECT:
-PRE-CONSTRUCTION- STORMWATER SITE PLAN
Couey Yard to O19EB Pipeline
Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

PREPARED FOR: SUMMIT MIDSTREAM

SHEET: 1 of 1



PLAN VIEW
P.O.B. PIPELINE STATION 0+00
P.O.E. PIPELINE STATION 46+14.25
SECTION 19
SECTION 30
Couey Yard
VEM
WM
MDS
County Road No. 315
O19E WELL PAD
O19EB WELL PAD
Buildings
House
Property Line
1/4 Section Line
1/4 1/4 Section Line
S89°18'10"W, 2606.39' (S.E. Cor. to S1/4 Cor. Sec. 19)
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Existing Road (typ)
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MDS - MATERIAL DELIVERY & STORAGE
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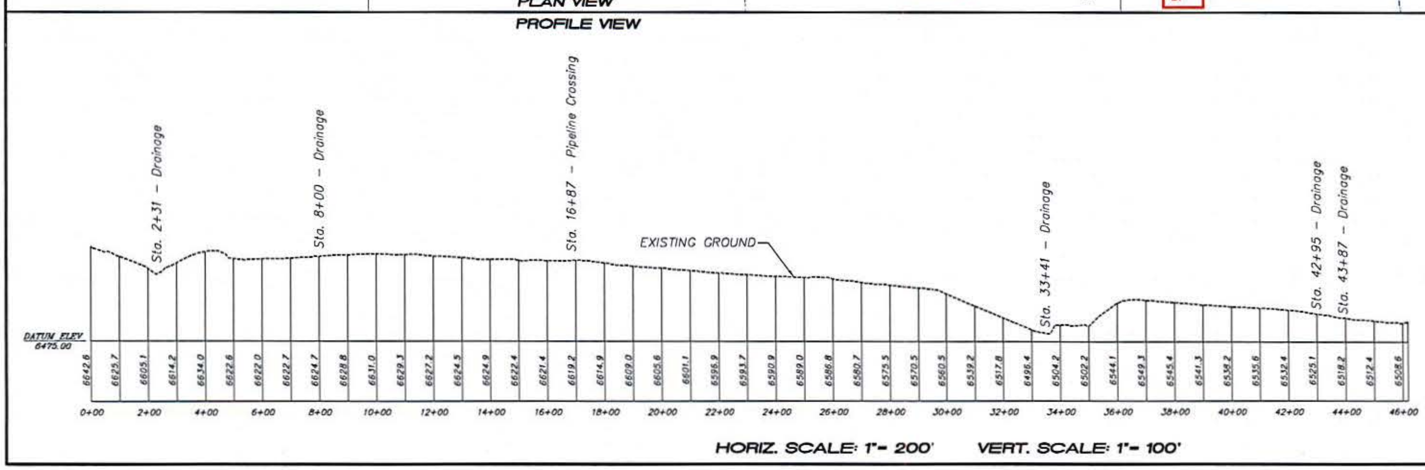
LC - LAND GRADING
RSL - ROADSIDE DITCHES & TURNOUTS
CIP - CULVERT INLET PROTECTION
COP - CULVERT OUTLET PROTECTION
C - CULVERT
SL - SLASH
TS - TOPSOIL STOCKPILE
SUB - SUBSOIL STOCKPILE
- WATTLE
- DIRECTION OF FLOW
SCALE: 1" = 200'



NOTE:
Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

811 Know what's below. Call before you dig.

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	SECTION	FEET	TOTAL
Shideler Land & Cattle Co. LLC	Sec. 30, T7S R92W	3509.72	3509.72
Shidelerosa LLC	Secs. 19 & 30, T7S R92W	1104.53	1104.53
		Total	4614.25

RIGHT-OF-WAY LIMITS BOX

FROM	TO	Temporary Work Space Left	Permanent Right-of-Way Left	Permanent Right-of-Way Right	Temporary Work Space Right	Total
P.O.B.	STA: 8+72	20'	15'	15'	5'	55'
STA: 8+72	STA: 16+66	VARIES	15'	15'	VARIES	55'
STA: 16+66	STA: 29+59	25'	15'	15'	0'	55'
STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PREPARED FOR: SUMMIT MIDSTREAM

PROJECT: -CONSTRUCTION- STORMWATER SITE PLAN
Couey Yard to O19EB Pipeline
Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

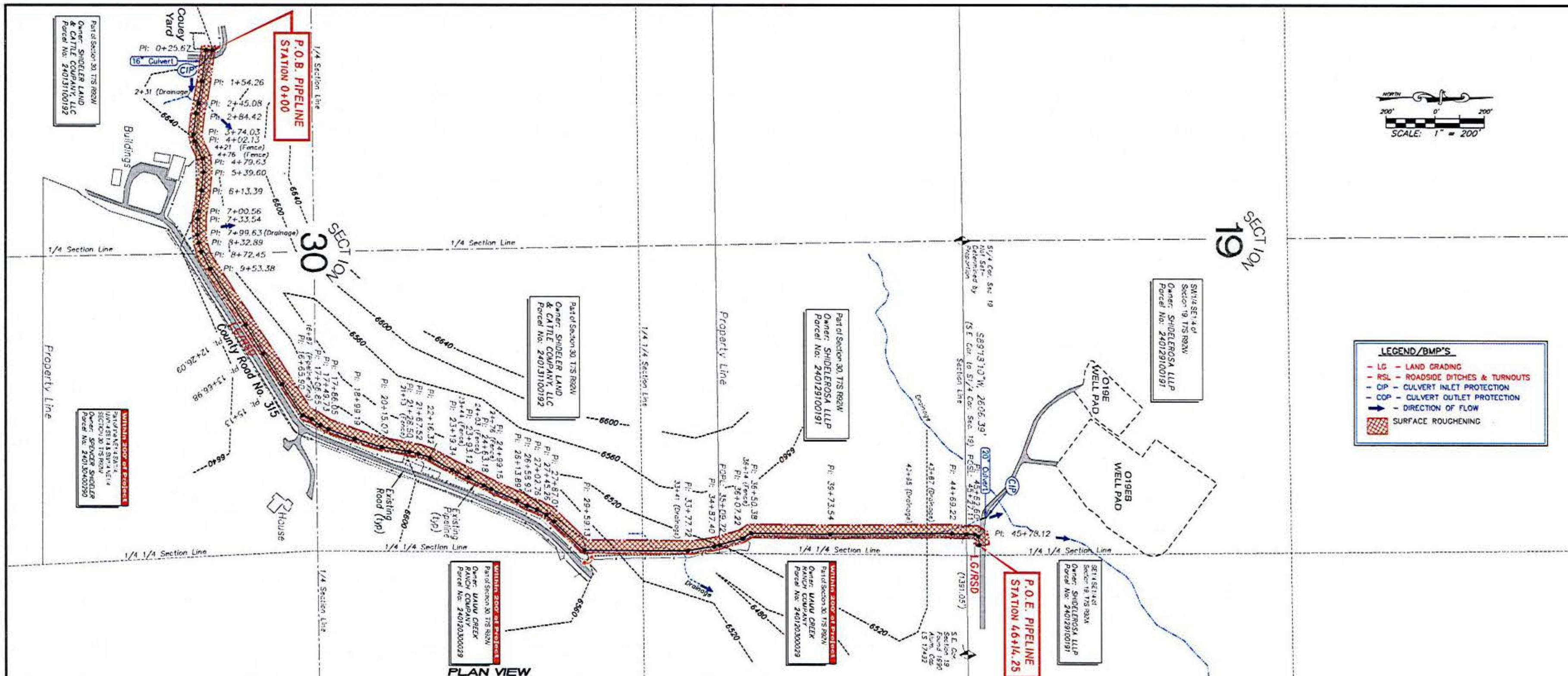
SURVEYOR:
CENTERLINE LENGTH = 4,614.25'
TYPICAL R.O.W. WIDTH = 55'
TOTAL ACREAGE = 5.83 ACRES
CONSTRUCTION SITE BOUNDARY IS DEFINED BY THE R.O.W. LENGTH AND WIDTH AND IS EQUAL TO THE TOTAL AREA OF DISTURBANCE OF: 5.83 ACRES. TOTAL WORKSPACE

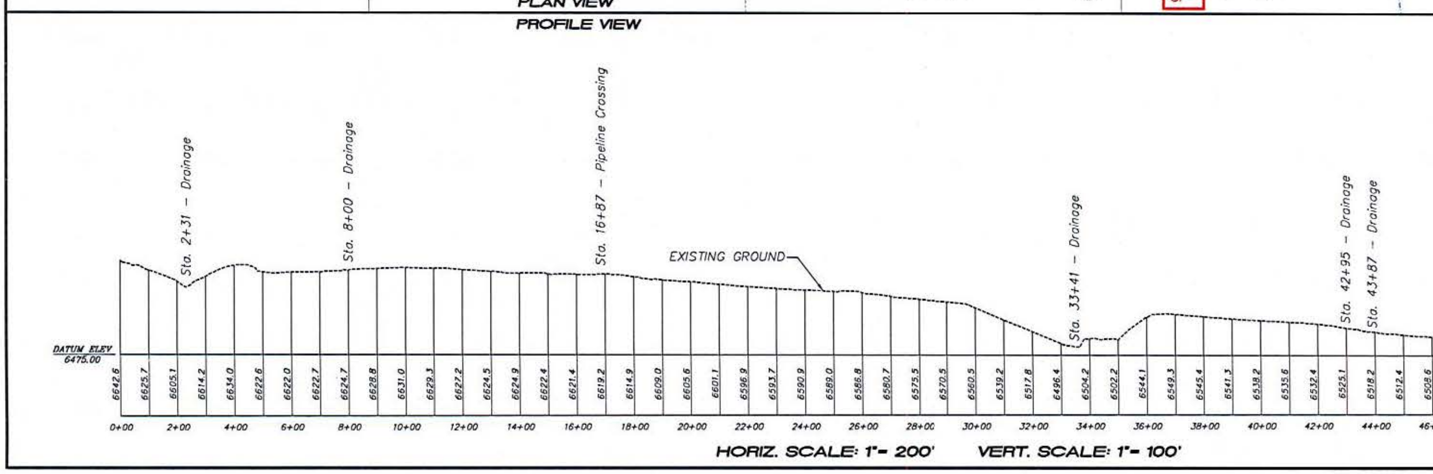
REVISIONS			
0	First Issue	SGT	3/20/13
		BY	DATE

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO.: 13-12-04

PREPARED BY: WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

SHEET: 1 of 1





NOTE:

Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

Know what's below. Call before you dig. 811

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	SECTION	FEET	TOTAL
Shideler Land & Cattle Co. LLC	Sec. 30, T7S R92W	3509.72	3509.72
Shidelerosa LLC	Secs. 19 & 30, T7S R92W	1104.53	1104.53
		Total	4614.25

RIGHT-OF-WAY LIMITS BOX						
		Reference Points				
FROM	TO	Temporary Work Space Left	Permanent Right-of-Way Left	Permanent Right-of-Way Right	Temporary Work Space Right	Total
P.O.B.	STA: 8+72	20'	15'	15'	5'	55'
STA: 8+72	STA: 16+66	VARIES	15'	15'	VARIES	55'
STA: 16+66	STA: 29+59	25'	15'	15'	0'	55'
STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PREPARED FOR: SUMMIT MIDSTREAM

PROJECT: ·FINAL RECLAMATION· STORMWATER SITE PLAN

Couey Yard to O19EB Pipeline

Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

SURVEYOR

CENTERLINE LENGTH = 4,614.26'
TYPICAL R.O.W. WIDTH = 55'
TOTAL ACREAGE = 5.83 ACRES

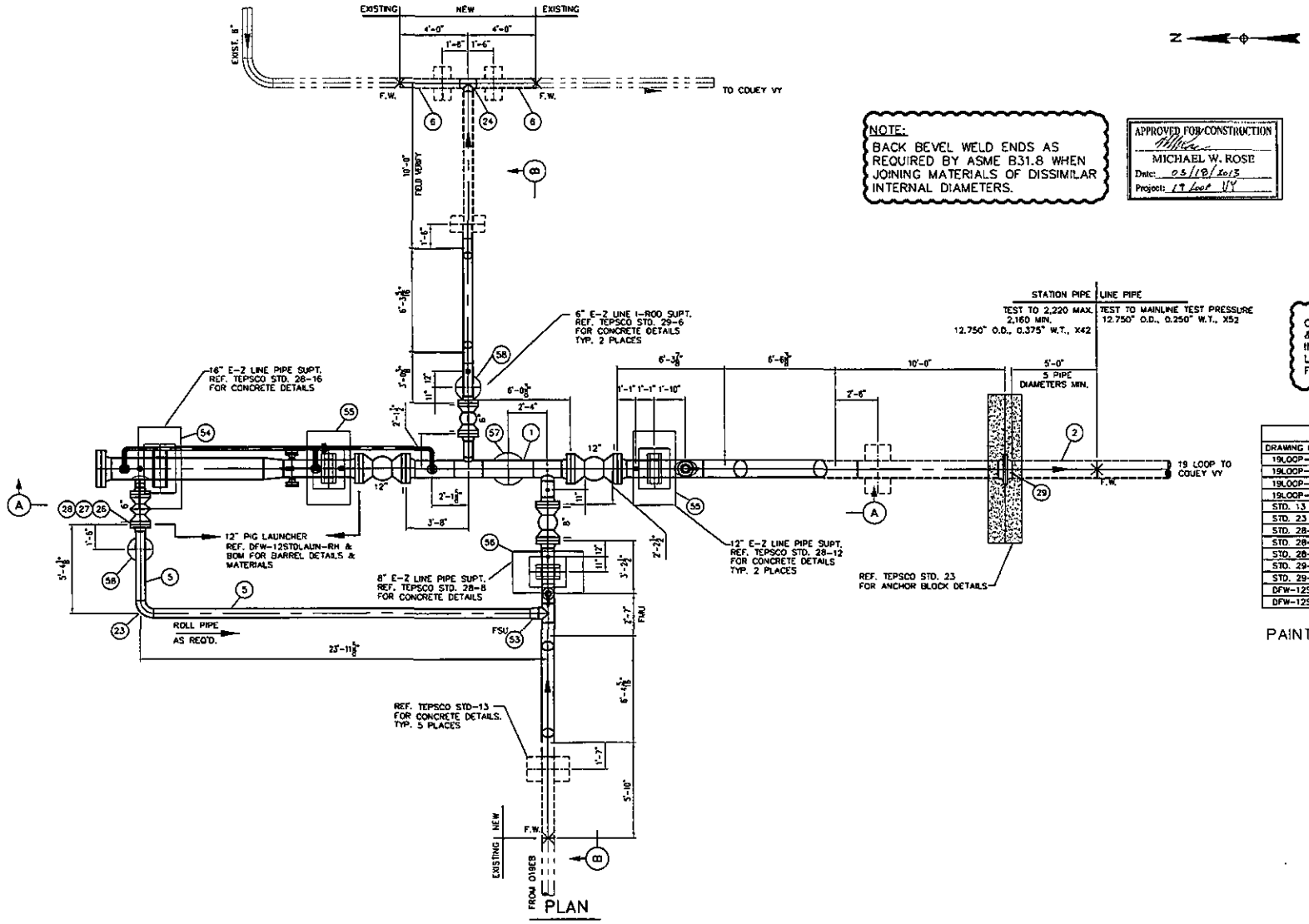
CONSTRUCTION SITE BOUNDARY IS DEFINED BY THE R.O.W. LENGTH AND WIDTH AND IS EQUAL TO THE TOTAL AREA OF DISTURBANCE OF: 5.83 ACRES. EDGE WORKSPACE

REVISIONS			
0	First Issue	SGT	3/20/13
		BY	DATE

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO: 13-12-04

PREPARED BY: WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

SHEET 1 of 1



NOTE:
BACK BEVEL WELD ENDS AS REQUIRED BY ASME B31.8 WHEN JOINING MATERIALS OF DISSIMILAR INTERNAL DIAMETERS.

APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 05/19/2013
Project: 19 Loop VV

SUMMIT MIDSTREAM 19 LOOP VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	2
Design Factor	0.6
Design Pressure, psig	1462
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2,220
Minimum, psig	2,160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.

REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TYPE
19LOOP-301	PIPING PLAN
19LOOP-302	SECTIONS
19LOOP-303	MATERIALS
19LOOP-304	MATERIALS
STD. 13	CONCRETE DETAIL
STD. 23	ANCHOR BLOCK DETAIL
STD. 28-8	CONCRETE DETAIL
STD. 28-12	CONCRETE DETAIL
STD. 28-16	CONCRETE DETAIL
STD. 29-6	CONCRETE DETAIL
STD. 29-8	CONCRETE DETAIL
DFW-12STDLAUN-RH	PIG TRAP
DFW-12STDLAUN-BOM	PIG TRAP BOM

PAINT: BLM SHADOW GRAY

COLORADO REGISTERED PROFESSIONAL ENGINEER
N. SHERRILL
NUMBER 35536
03-27-13

REV.	DATE	BY	DESCRIPTION	APPD.

PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
FIRM REGISTRATION NUMBER 4848

PROJECT: SUMMIT MIDSTREAM

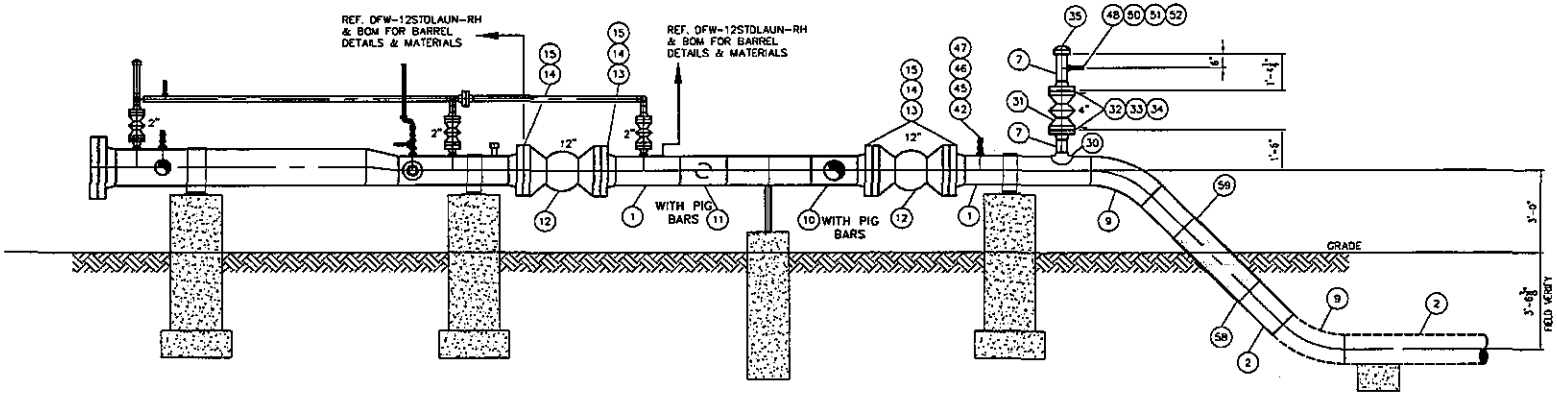
DRAWING TITLE: PIPING PLAN
19 LOOP VALVE YARD
AFE 02012-MAMM-MSV-SWAM

DRAWN	JT
DWG. DATE	03/12/13
SCALE	NONE
DRAWING NO.	19LOOP-301
JOB NO	720072
CHECKED	PNS
CK. DATE	3/27/13
	ISSUED FOR REVIEW
DATE	3/27/13
REVI.	0

SUMMIT MIDSTREAM 19 LOOP VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	2
Design Factor	0.6
Design Pressure, psig	1462
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2,220
Minimum, psig	2,160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

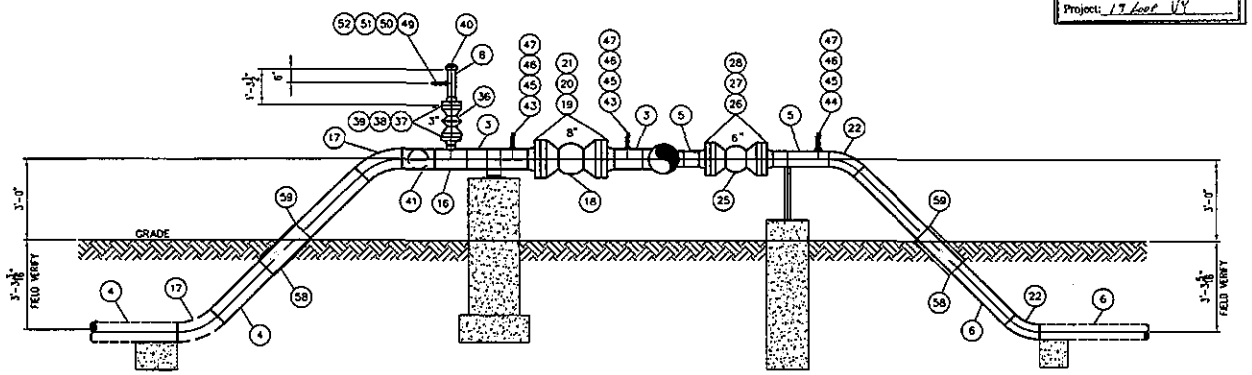
CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.



SECTION A
SCALE NONE

NOTE:
ITEM NUMBER 58 TO BE INSTALLED 12" ABOVE AND 18" BELOW GRADE. ITEM 59 TO BE INSTALLED ON TOP OF RD6 12" ABOVE AND 2" BELOW GRADE.

APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 03/18/2013
Project: 19 Loop VY



SECTION B
SCALE NONE

NOTE:
VENT HOLES IN SADDLES (ITEM # 30) MUST BE SEALED AS PER ASME B31.8

COLORADO REGISTERED PROFESSIONAL ENGINEER
PAUL N. SHERRILL
NUMBER 35536

03-27-13

REV.	DATE	BY	DESCRIPTION	APPD.

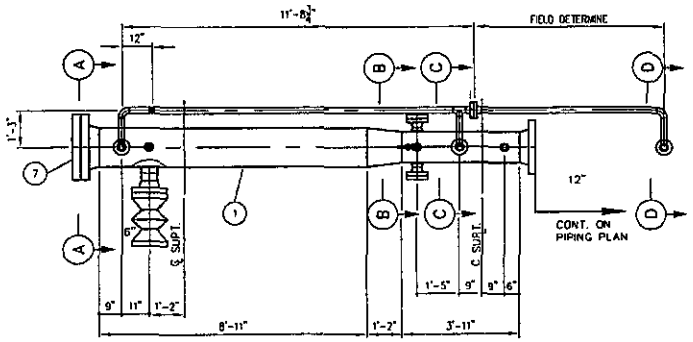
PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
FIRM REGISTRATION NUMBER 4089

PROJECT: SUMMIT MIDSTREAM

DRAWING TITLE: SECTIONS
19 LOOP VALVE YARD
AFE 02012-MAMM-MSV-SWAM

DRAWN	JT	JOB NO	720072
DWG. DATE	03/12/13	CHECKED	PHS
SCALE	NONE	CK. DATE	3/27/13
DRAWING NO.	19LOOP-302	ISSUED FOR REVIEW	
		DATE	3/27/13 REV. 0



PLAN

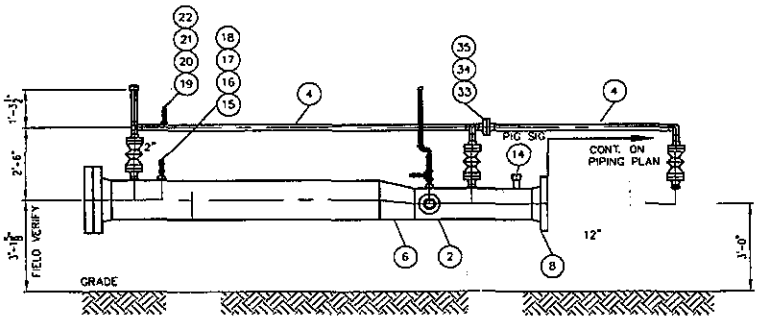
SUMMIT MIDSTREAM 12" PIG LAUNCHER	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1,218
MAOP, psig	1,218
HYDROSTATIC PRESSURE	
Maximum, psig	2,220
Minimum, psig	2,160
Test Duration, hours	8
X-Ray, %	100

NOTE:
VENT HOLES IN SADDLES (ITEM # 13) MUST BE SEALED AS PER ASME B31.8

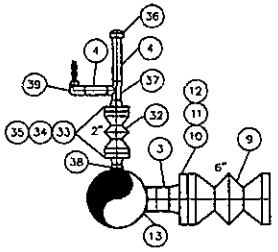
GENERAL NOTES:

1. WELDING PROCEDURES & WELDERS SHALL BE QUALIFIED I.A.W. API 1104, ASME B31.8, AND DFW MIDSTREAM SERVICES WELDING STANDARDS.
2. PIPE WELDING SHALL BE I.A.W. CFR 49 PART 192, API 1104, ASME B31.8, AND DFW MIDSTREAM SERVICES WELDING STANDARDS.
3. 100% OF ALL PIPING BUTT WELDS SHALL BE INSPECTED BY RADIOGRAPHIC INSPECTION PER 49 CFR 192 AND API 1104.
4. 100% OF FILLET WELDS SHALL BE EXAMINED BY ANY METHOD FOUND ACCEPTABLE PER ASME B31.8.
5. FABRICATION TO BE I.A.W. CFR 49 PART 192, ASME B31.8, AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS.
6. ALL PRESSURE PIPING SHALL BE HYDROSTATICALLY TESTED PER 49 CFR PART 192 AND ASME B31.8 FOR EIGHT (8) HOURS:
   a) THE PRESSURE AND TEMPERATURE RECORDERS SHALL HAVE BEEN CALIBRATED WITHIN SIX (6) MONTHS PRIOR TO THE HYDROTEST.
   b) DEAD WEIGHTS ARE TO BE USED WITH PRESSURE & TEMPERATURE RECORDED EVERY 1/4 HOUR.
   c) TEST TO MAXIMUM AND MINIMUM PRESSURES PER DRAWING INSTRUCTIONS.
   d) ANY VALVE INCLUDED IN THE HYDROTEST SHOULD BE 1/4 OPEN DURING HYDROTESTING.
   e) DO NOT INCLUDE RELIEF VALVES IN THE HYDROTEST
7. COATING INSTRUCTIONS
   a) SURFACE PREPARATION: COMMERCIAL METAL BLAST PER STEEL STRUCTURES PAINTING COUNCIL, SSPS SP-6 SURFACE PROFILE 2.0 TO 3.0 MILS.
   b) FIRST COAT: SHERWIN WILLIAMS ZINC CLAD II ETHYL SILICATE, INORGANIC ZINC RICH COATING (B69V3/B69D11) OR EQUIVALENT. APPLY AT A RATE OF 2.5 TO 3.5 MILS DRY FILM THICKNESS.
   c) INTERMEDIATE COAT: SHERWIN WILLIAMS RECOATABLE EPOXY PRIMER B67 SERIES / B67V5 OR EQUIVALENT. APPLY AT A RATE OF 4.0 TO 6.0 MILS DRY FILM THICKNESS.
   d) TOP COAT: COAST INDUSTRIAL COATINGS INC. NEW IDEA GREEN (#380) OR EQUIVALENT. APPLY AT A RATE OF 2.0 TO 3.0 MILS DRY FILM THICKNESS.
8. REQUIRED RECORDS
   a) AS-BUILT DRAWINGS, INCLUDING CALIBRATION RECORDS, RADIOGRAPH AND OTHER NDE RECORDS, MATERIAL TEST RECORDS, HYDRO TEST CHART, AND WELDER QUALIFICATION RECORDS.
9. PREPARATION FOR SHIPMENT SHALL BE AS FOLLOWS:
   a) ALL EXPOSED FLANGE FACES SHALL BE PROTECTED AGAINST CORROSION BY COATING WITH A HEAVY COAT OF RUST PREVENTATIVE GREASE OR OTHER APPROVED CORROSION PREVENTATIVE.
   b) AFTER APPLICATION OF A CORROSION PREVENTATIVE ON ALL EXPOSED FLANGE FACES THE FLANGE FACES SHALL BE COVERED WITH 1/2" THICK PLYWOOD OR 1/8" THICK STEEL PLATE WITH A 1/8" THICK RUBBER OR GARLOCK TYPE GASKET. COVERS SHALL BE SECURED TO THE FLANGES WITH A MINIMUM OF FOUR (4) EQUALLY SPACED BOLTS.
   c) THREADOLETS SHALL BE PLUGGED WITH HEX HEAD SOLID STEEL PIPE PLUGS PER MATERIAL LIST.

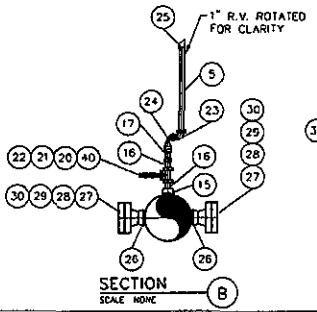
USE LATEST EDITION FOR CFR 49 PART 192, API 1104 AND ASME B31.8 REFERENCES.



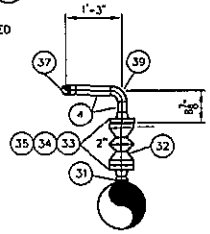
ELEVATION



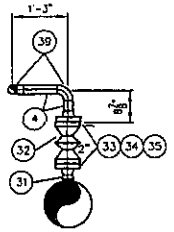
SECTION A
SCALE NONE



SECTION B
SCALE NONE



SECTION C
SCALE NONE



SECTION D
SCALE NONE

11-30-2012

REV	DATE	BY	DESCRIPTION	APPD.

PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

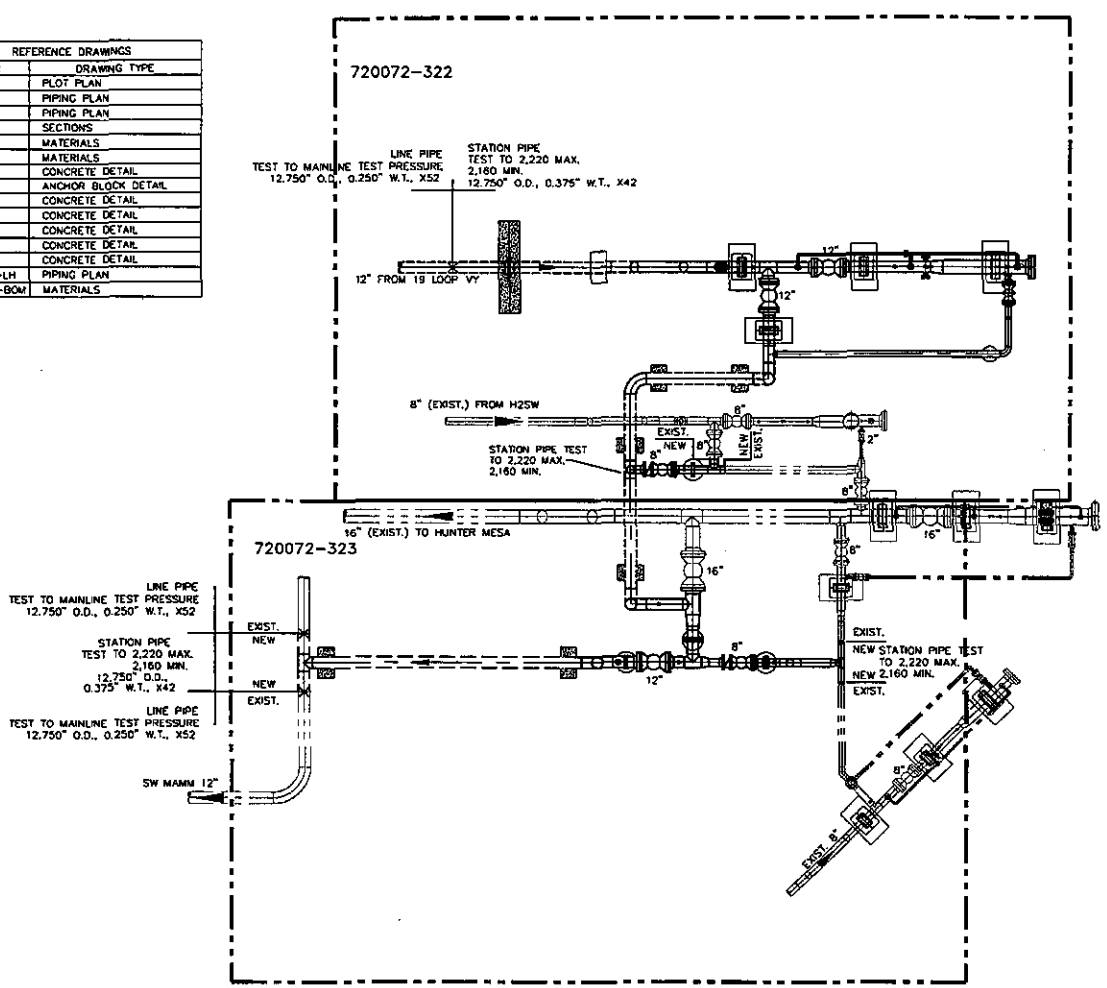
TEPSCO
BIS
FIRM REGISTRATION NUMBER 4669

PROJECT: DFW MSS

DRAWING TITLE: PLAN & SECTIONS 12" PIG LAUNCHER RIGHT HAND

DRAWN	JT	JOB NO	720072
DWG. DATE	8/10/12	CHECKED	PNS
SCALE	NONE	CK. DATE	11/30/12
DRAWING NO.	SM-12STDLAUN-RH	ISSUED FOR CONSTRUCTION	
		DATE	11/30/12
		REV	0

REFERENCE DRAWINGS	
DRAWING NUMBER	DRAWING TYPE
720072-321	PLOT PLAN
720072-322	PIPING PLAN
720072-323	PIPING PLAN
720072-324	SECTIONS
720072-325	MATERIALS
720072-326	MATERIALS
STD. 13	CONCRETE DETAIL
STD. 23	ANCHOR BLOCK DETAIL
STD. 28-12	CONCRETE DETAIL
STD. 28-16	CONCRETE DETAIL
STD. 29-12	CONCRETE DETAIL
STD. 29-8	CONCRETE DETAIL
STD. 29-6	CONCRETE DETAIL
DFW-12STOREC-LH	PIPING PLAN
DFW-12STOREC-BOM	MATERIALS



N

SUMMIT MIDSTREAM COUEY VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1235
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2220
Minimum, psig	2160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

NOTE:
BACK BEVEL WELD ENDS AS REQUIRED BY ASME B31.8 WHEN JOINING MATERIALS OF DISSIMILAR INTERNAL DIAMETERS.

CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.

PAINT: BLM SHALE GREEN

APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 03/08/2013
Project: Couey VY Rev1

COLORADO REGISTERED
PAUL N. SHERWOOD
NUMBER
35536
PROFESSIONAL ENGINEER
03-14-2013

REV.	DATE	BY	DESCRIPTION	APPD.

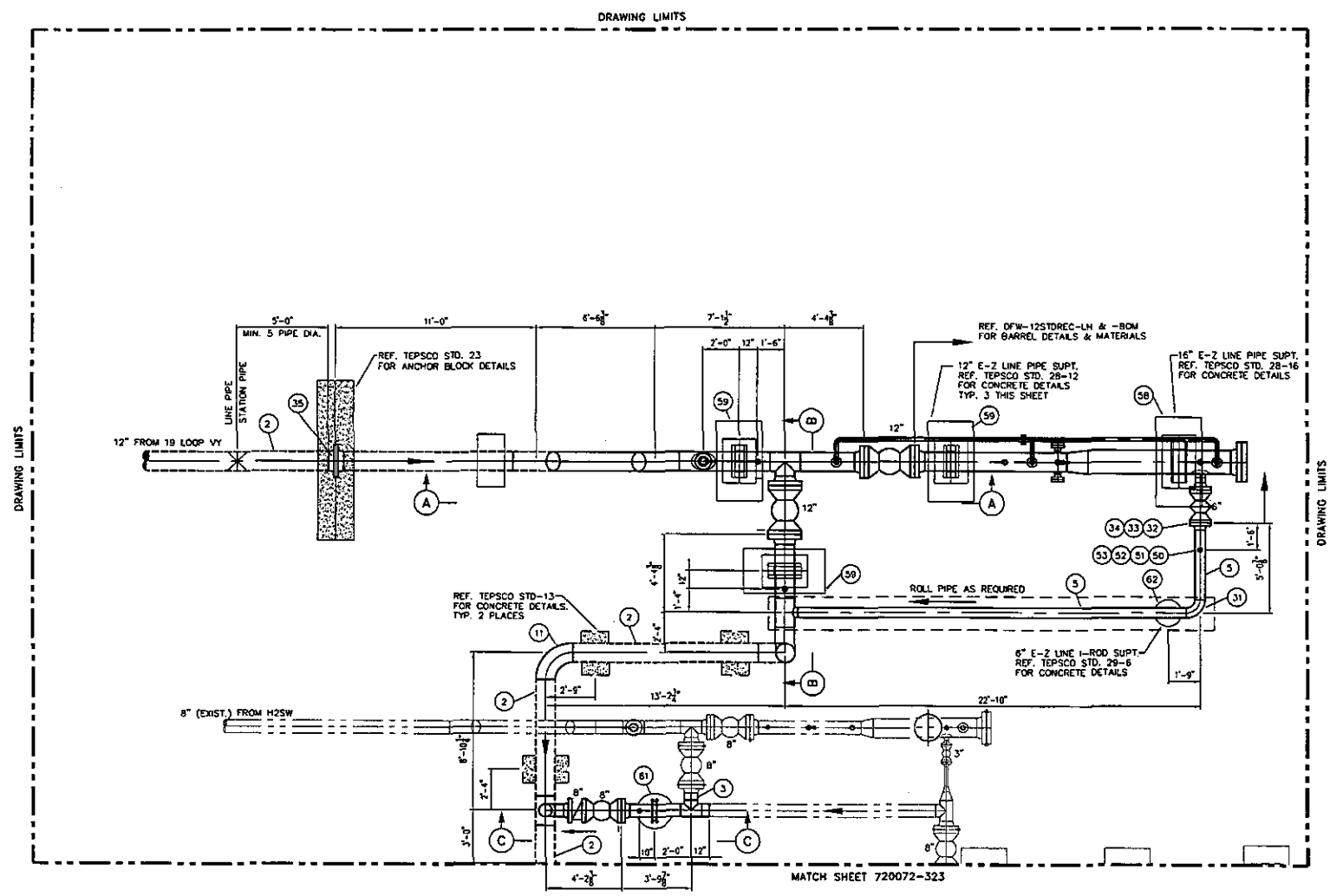
PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
FIRM REGISTRATION NUMBER 4866

PROJECT: SUMMIT MIDSTREAM

DRAWING TITLE: PLOT PLAN & SHEET INDEX
COUEY VALVE YARD
AFE 2012-MAMM-MSV-SWAM

DRAWN	PAM
DWG. DATE	2/24/2013
SCALE	NONE
DRAWING NO.	720072-321
JOB NO	720072
CHECKED	PNS
CK. DATE	3/14/13
	ISSUED FOR CONSTRUCTION
DATE	3/14/13
REV	0



SUMMIT MIDSTREAM COUEY VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1235
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2220
Minimum, psig	2160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.

PAINT: BLM SHALE GREEN

APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 04/08/2013
Project: Couey VY Rev 1

COLORADO REGISTERED
PAUL N. SHERRILL
NUMBER
35536
PROFESSIONAL ENGINEER
03-14-2013

REV.	DATE	BY	DESCRIPTION	APPD.

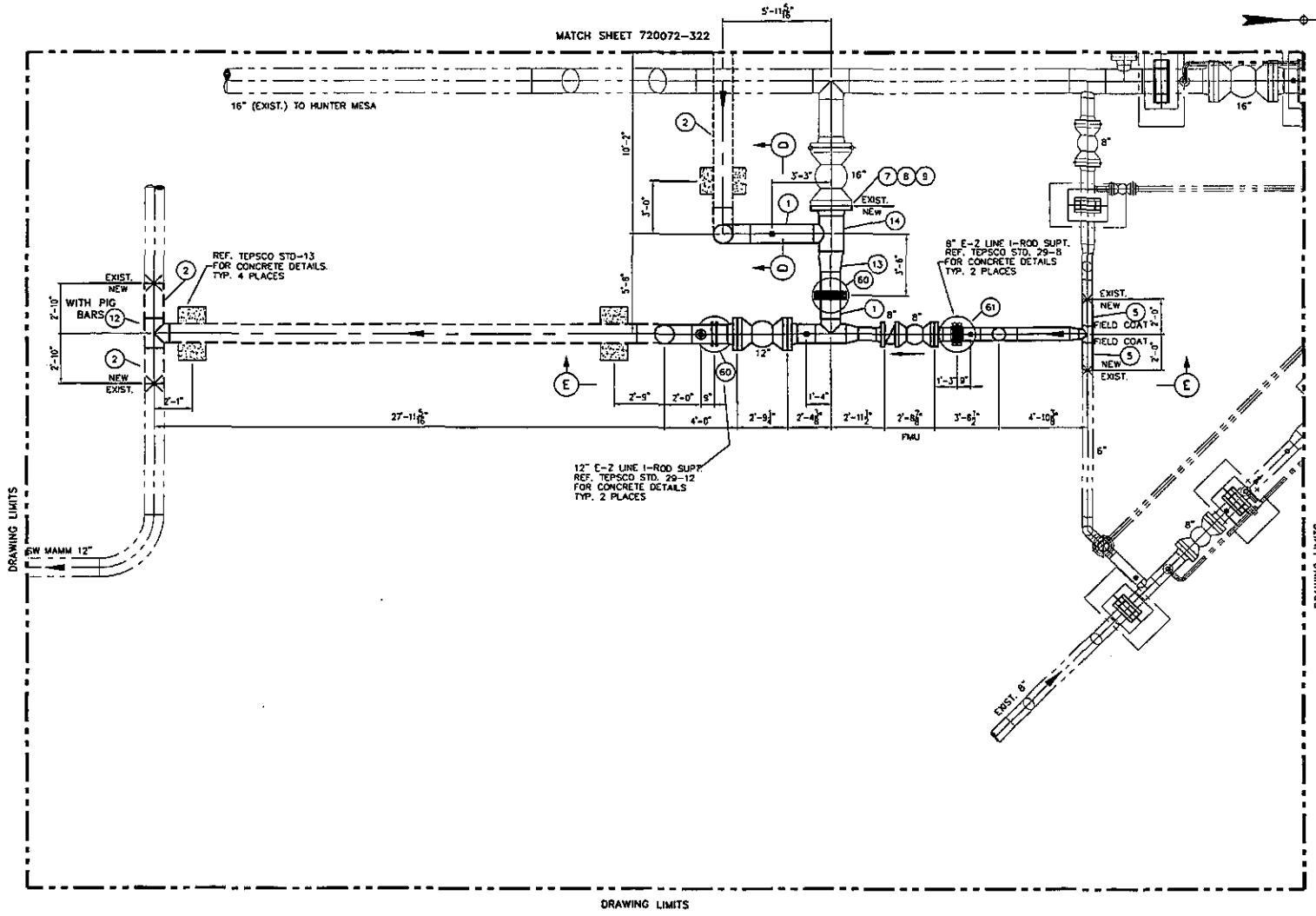
PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

BIS TEPSCO
FIRM REGISTRATION NUMBER 4569

PROJECT: SUMMIT MIDSTREAM

DRAWING TITLE: PIPING PLAN
COUEY VALVE YARD
AFE 2012-MAMM-MSV-SWAM

DRAWN	PAM
DWG. DATE	11/10/12
SCALE	NONE
DRAWING NO.	720072-322
JOB NO	720072
CHECKED	PNS
OIL DATE	3/14/13
	ISSUED FOR CONSTRUCTION
DATE	3/14/13 (REV. 1)



SUMMIT MIDSTREAM COUEY VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1235
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2220
Minimum, psig	2160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.

PAINT: BLM SHALE GREEN

APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 05/08/2013
Project: Couey VY Part I

COLORADO REGISTERED PAUL N. SHERK NUMBER 35536 PROFESSIONAL ENGINEER
03-14-2013

REV.	DATE	BY	DESCRIPTION	APPD.

PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
FIRM REGISTRATION NUMBER 4808

PROJECT: SUMMIT MIDSTREAM

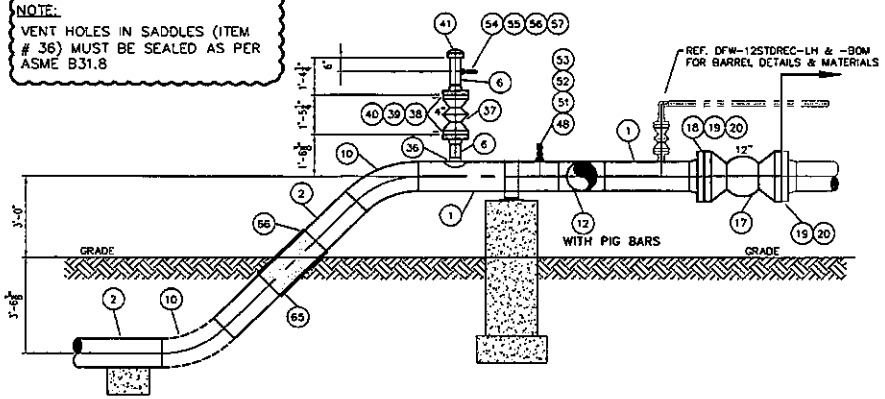
DRAWING TITLE: PIPING PLAN COUEY VALVE YARD AFE 2012-MAMM-MSV-SWAM

DRAWN PAM | DWG. DATE 11/10/12 | SCALE NONE | DRAWING NO. 720072-323

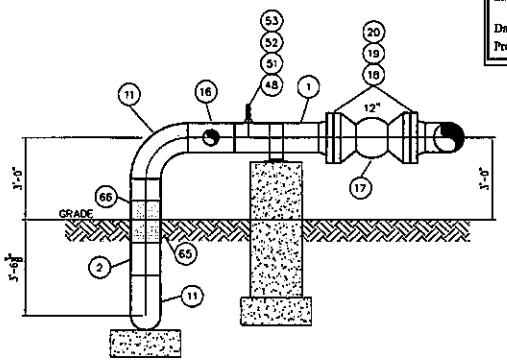
JOB NO 720072 | CHECKED PNS | CH. DATE 3/14/13

ISSUED FOR CONSTRUCTION
DATE 3/14/13 REV 0

NOTE:
VENT HOLES IN SADDLES (ITEM # 36) MUST BE SEALED AS PER ASME B31.8



SECTION A
SCALE NONE



SECTION B
SCALE NONE

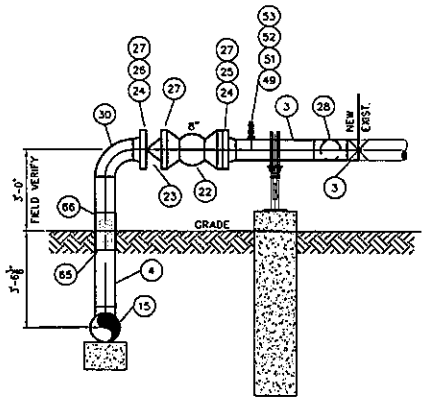
APPROVED FOR CONSTRUCTION
MICHAEL W. ROSE
Date: 03/08/2013
Project: Couey VY Rev 1

SUMMIT MIDSTREAM COUEY VALVE YARD STATION PIPING	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1235
MAOP, psig	1223
HYDROSTATIC PRESSURE	
Maximum, psig	2220
Minimum, psig	2160
Test Duration, hours	8
X-Ray, %	100

FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION!!

CONTRACTOR TO LAY 6" TO 8" CRUSHED & WASHED LIMESTONE, 3/4" TO 1 1/2" IN DIAMETER. PERIMETER OF CRUSHED LIMESTONE TO BE A MINIMUM OF 6'-0" FROM ALL ABOVE GROUND PIPING.

NOTE
ITEM NUMBER 65 TO BE INSTALLED 12" ABOVE AND 18" BELOW GRADE. ITEM 66 TO BE INSTALLED ON TOP OF RD6 12" ABOVE AND 2" BELOW GRADE.



SECTION C
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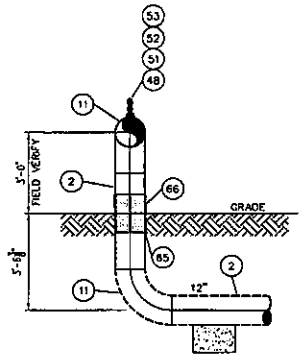

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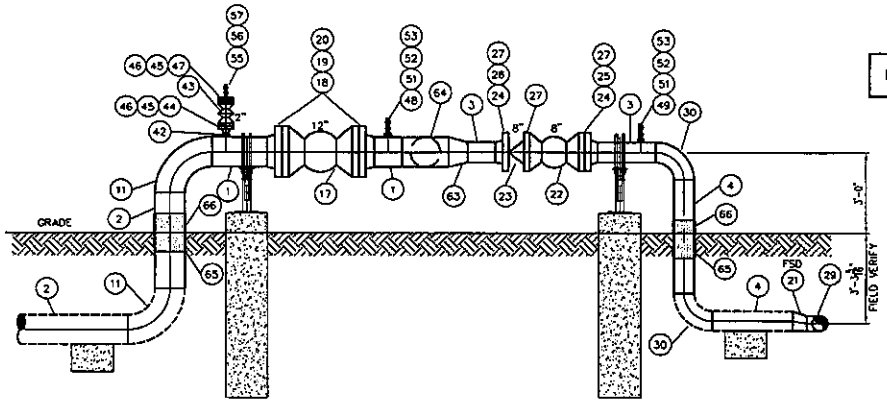


SECTION E
SCALE NONE

PAINT: BLM SHALE GREEN

COLORADO REGISTERED PAUL N. SHERRILL NUMBER 35536 PROFESSIONAL ENGINEER
03-14-2013

REV.	DATE	BY	DESCRIPTION	APPD.

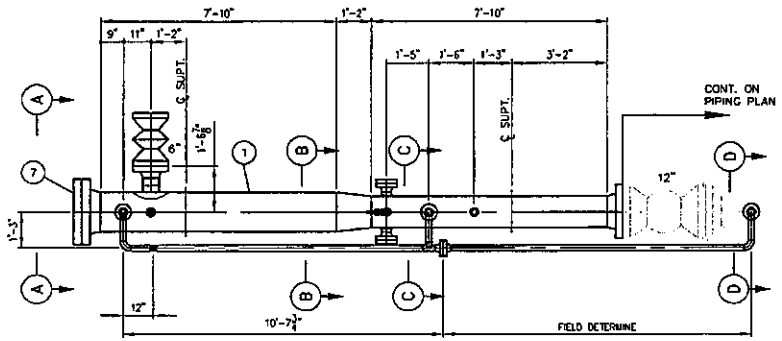
PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
FIRM REGISTRATION NUMBER 4669

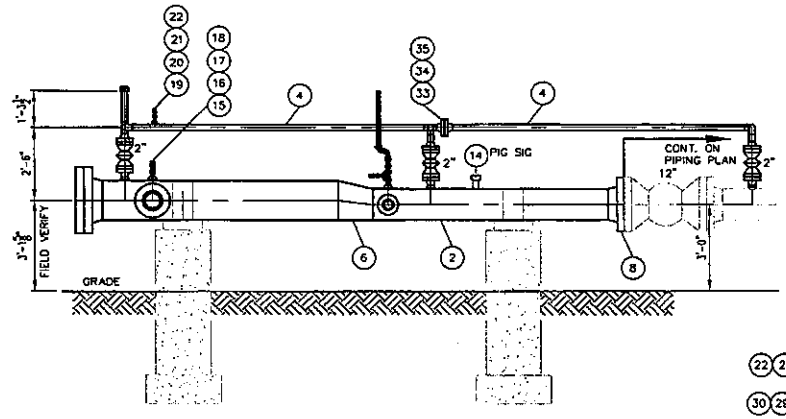
PROJECT: SUMMIT MIDSTREAM

DRAWING TITLE: SECTIONS
COUEY VALVE YARD
AFE 2012-MAMM-MSV-SWAM

DRAWN PAM | JOB NO 720072
DWG. DATE 11/10/12 | CHECKED PNS
SCALE NONE | CH. DATE 3/14/13
DRAWING NO. 720072-324
ISSUED FOR CONSTRUCTION
DATE 3/14/13 | REV. 0



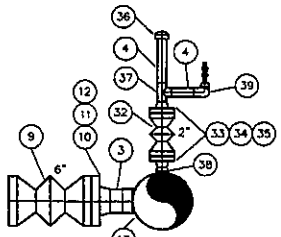
PLAN



ELEVATION

SUMMIT MIDSTREAM 12" RECEIVER BARREL	
PRESSURE DATA	
Class	3
Design Factor	0.5
Design Pressure, psig	1,218
MAOP, psig	1,218
HYDROSTATIC PRESSURE	
Maximum, psig	2,220
Minimum, psig	2,160
Test Duration, hours	8
X-Ray, %	100

NOTE:
VENT HOLES IN SADDLES (ITEM # 13) MUST BE SEALED AS PER ASME B31.8



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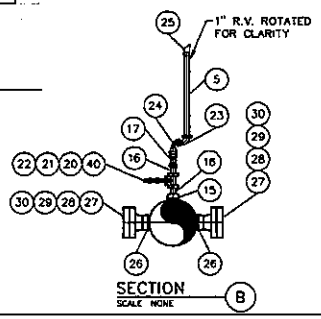

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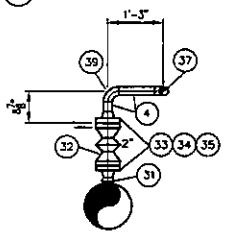

SECTION C
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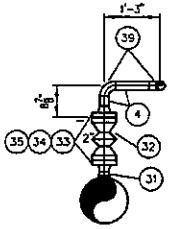


SECTION D
SCALE NONE

GENERAL NOTES:

1. WELDING PROCEDURES & WELDERS SHALL BE QUALIFIED I.A.W. API 1104, ASME B31.8, AND DFW MIDSTREAM SERVICES WELDING STANDARDS.
2. PIPE WELDING SHALL BE I.A.W. CFR 49 PART 192, API 1104, ASME B31.8, AND DFW MIDSTREAM SERVICES WELDING STANDARDS.
3. 100% OF ALL PIPING BUTT WELDS SHALL BE INSPECTED BY RADIOGRAPHIC INSPECTION PER 49 CFR 192.AND API 1104.
4. 100% OF FILLET WELDS SHALL BE EXAMINED BY ANY METHOD FOUND ACCEPTABLE PER ASME B31.8.
5. FABRICATION TO BE I.A.W. CFR 49 PART 192, ASME B31.8, AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS.
6. ALL PRESSURE PIPING SHALL BE HYDROSTATICALLY TESTED PER 49 CFR PART 192 AND ASME B31.8 FOR EIGHT (8) HOURS:
   a) THE PRESSURE AND TEMPERATURE RECORDERS SHALL HAVE BEEN CALIBRATED WITHIN SIX (6) MONTHS PRIOR TO THE HYDROTEST.
   b) DEAD WEIGHTS ARE TO BE USED WITH PRESSURE & TEMPERATURE RECORDED EVERY 1/4 HOUR.
   c) TEST TO MAXIMUM AND MINIMUM PRESSURES PER DRAWING INSTRUCTIONS.
   d) ANY VALVE INCLUDED IN THE HYDROTEST SHOULD BE 1/4 OPEN DURING HYDROTESTING.
   e) DO NOT INCLUDE RELIEF VALVES IN THE HYDROTEST.
7. COATING INSTRUCTIONS
   a) SURFACE PREPARATION: COMMERCIAL METAL BLAST PER STEEL STRUCTURES PAINTING COUNCIL, SSPS SP-6 SURFACE PROFILE 2.0 TO 3.0 MILS.
   b) FIRST COAT: SHERWIN WILLIAMS ZINC CLAD II ETHYL SILICATE, INORGANIC ZINC RICH COATING (B69V3/B69D11) OR EQUIVALENT. APPLY AT A RATE OF 2.5 TO 3.5 MILS DRY FILM THICKNESS.
   c) INTERMEDIATE COAT: SHERWIN WILLIAMS RECOATABLE EPOXY PRIMER B67 SERIES / B67V5 OR EQUIVALENT. APPLY AT A RATE OF 4.0 TO 6.0 MILS DRY FILM THICKNESS.
   d) TOP COAT: COAST INDUSTRIAL COATINGS INC. NEW IDEA GREEN (#380) OR EQUIVALENT. APPLY AT A RATE OF 2.0 TO 3.0 MILS DRY FILM THICKNESS.
8. REQUIRED RECORDS
   a) AS-BUILT DRAWINGS, INCLUDING CALIBRATION RECORDS, RADIOGRAPH AND OTHER NDE RECORDS, MATERIAL TEST RECORDS, HYDRO TEST CHART, AND WELDER QUALIFICATION RECORDS.
9. PREPARATION FOR SHIPMENT SHALL BE AS FOLLOWS:
   a) ALL EXPOSED FLANGE FACES SHALL BE PROTECTED AGAINST CORROSION BY COATING WITH A HEAVY COAT OF RUST PREVENTATIVE GREASE OR OTHER APPROVED CORROSION PREVENTATIVE.
   b) AFTER APPLICATION OF A CORROSION PREVENTATIVE ON ALL EXPOSED FLANGE FACES THE FLANGE FACES SHALL BE COVERED WITH 1/2" THICK PLYWOOD OR 1/8" THICK STEEL PLATE WITH A 1/8" THICK RUBBER OR GARLOCK TYPE GASKET. COVERS SHALL BE SECURED TO THE FLANGES WITH A MINIMUM OF FOUR (4) EQUALLY SPACED BOLTS.
   c) THREADOLETS SHALL BE PLUGGED WITH HEX HEAD SOLID STEEL PIPE PLUGS PER MATERIAL LIST.

USE LATEST EDITION FOR CFR 49 PART 192, API 1104 AND ASME B31.8 REFERENCES.

COLORADO REGISTERED PAUL N. SHERRELL NUMBER 35536 PROFESSIONAL ENGINEER

12-11-2012

REV.	DATE	BY	DESCRIPTION	APPD.

PREPARED FOR: SUMMIT MIDSTREAM
CLIENT APPROVAL: DATE:

TEPSCO
BIS
FIRM REGISTRATION NUMBER 4689

PROJECT: SUMMIT MIDSTREAM

DRAWING TITLE: PLAN & SECTIONS 12" PIG RECEIVER LEFT HAND

DRAWN	PAM	JOB NO	720072
CHK. DATE	12/10/12	CHECKED	PNS
SCALE	NONE	CK. DATE	12/10/12
DRAWING NO.	DFW-12STDREC-LH	ISSUED FOR CONSTRUCTION	
		DATE	12/10/12 REV. 0

ENERGY TRANSFER

PIPELINE MAOP DETERMINATION SHEET

Project Name: SW Mamm 12"
Pipeline Name: SW Mamm 12"
Pipeline Segment: I27W to Parker VY
Owning Company:
MAOP Basis: New Construction (619a)

AFE No.: 2012-MAMM-MSV-SWAM
Pipeline Line #
Pipeline System #
Operating Company:
Pipeline Install Date: April 1, 2013

Pipe Data

From	To	Length (ft)	Class Location	O.D. (in)	W.T. (in)	Grade	Design Temp.	Joint Efficiency	90% SMYS	100% SMYS	Design Pressure	Test Pressure	Test Duration (Hour)	MAOP (calculated)
0+00		0	1	12.75	0.25	52000	100	ERW	1,835	2,039	1,468	1739	8	1468

Component Data

Component Type	Location	ANSI Rating	Material Spec	Design Temp.	Design Pressure	MAWP	Test Pressure	Test Duration	Test Date	Test Location
Valves										
Flanges	All	600 lb.		100	1480					
Flanges	All	600 lb.		100	1480					
Pressure vessel										
Fittings										
Other										

Remarks:

(192.619a) The maximum allowable operating pressure of the segment shall be the lesser of: The design pressure of the weakest element in the segment or the piping test pressure divided by the appropriate factor below.

Class Location	New Construction	Conversion of service	For Unknow Design
1	1.1	1.25	80% of Yeild Pressure divided by the approperate factor
2	1.25	1.25	
3	1.4	1.5	
4 *	1.5	1.5	

192.619c highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970 (max pressure 72% of design)

Uprating 192.555 Before increasing the operating pressure above the previously established maximum allowable operating pressure the requirements of CFR 49 Part 192 Subpart K shall be met.

192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure. (.8 cl2, .667 cl3, and .555 cl4)

Maximum Allowable Operating Pressure **1468**
(MAOP is set based on weakest link of the pipeline)

Limiting Factor: Pipe | Calculated MAOP: 1468

Pressure relief may not exceed 110% of MAOP or 75% of SMYS **1529**

* If installed before November 11, 1970, use 1.4 for New Construction in class 4 location

Completed by: Cameron Bingham Date: April 1, 2013

Version 02.24.2009

Instructions of Use and Maintenance of Pipeline Wall Thickness and Pressure Testing Spreadsheet

1) Below is the following Key to what paramaters are inputs:

Combo Box		is	INPUT
Green Cell		is	SELECT INPUT
Check Box		is	INPUT

All other cells are NOT input!!! Do not change these cells or the integrity in which the workbook runs as its calculations will be compromised.

2) Please send all your suggestions (to Shane.Myers@encana.com) on the user interface of this workbook. To achieve something that is thorough and easy to use is tough, feedback is a necessity.

3) The blue cells are INPUT if it is needed

is MANUAL INPUT

4) The purpose of this spreadsheet is to calculate the Maximum Allowable Operating Pressure (M.A.O.P) for a given type of pipe and to determine which pressure testing method is allowable and under what conditions it should be run.

Area:	
Field:	
Pipeline Name/Number:	

	Input Type:
	Drop Down
	Manual
	Solution (don't change)

STEEL CALCULATIONS

Location Descriptions

Crossing Descriptions

API Wall Thicknesses

Pressure Test Table

Pressure Test Descriptions

Type of Pipe	Steel
O.D. of Pipe	12.750"
Design Factor, F	Location Class 1, Division 2
Crossings	Pipelines, mains, and service lines
Desired Wall Thickness (in)	0.25
Pipe Grade	X52
Joint Factor	API 5L: Electric Resistance Welded
Temperature (°F)	250 or less
Minimum Yield Stress (psi)	52000
Burst Pressure (psig)	2039
Maximum Allowable Operating Pressure (psig)	1468
Desired Maximum Operating Pressure (psig)	1468
Hoop Stress (psi)	37434
% SMYS	71.99
Test Required	Pressure Test
Maximum Pipeline Elevation (ft)	7360
Minimum Pipeline Elevation (ft)	6800
Gauge/Fill Point Elevation (ft)	7000
High to Low Height Change (ft)	560
High to Gauge Height Change (ft)	360

HYDRO PRESSURE TEST	
P gauge	1771
P high	1615
P low	1857

Design Factor:	Location Class 1, Division 2
Available Test Type:	Pressure Test

NOTE: If Safety reads, 'NOT SAFE' the Maximum exceeds SMYS!

Hydro Pressure Test		
Pressure Factor	1.10	
Test Pressure at Gauge/Fill Point	1771	psig
Test Pressure at Highest Point	1615	psig
Test Pressure at Lowest Point	1857	psig
SMYS	2039	psig
Safety	SAFE	-

Nitrogen Pressure Test		
Pressure Factor	1.10	
Desired Test Pressure	1615	psig
Maximum Test Pressure	1615	psig
SMYS	2039	psig
Safety	SAFE	-

Pipeline Grading Permit Checklist

Project name/operater: Shidler Cattle Castle Summit. 19Cap 12" Steel

Project general location: Shidelgraben Mamm Creek

Project acreage: 5.83

Project length and pipe size: 12" x 4614

Bond Amount (must equal acreage x $2500): 5.83+2500 = $14,575

Weed management plan approved by Veg. Management: Sent 4-16

Property owners including federal lands with easements: Yes

Shidler Cattle Castle

Shidelbrook LLP

Engineered sealed plans:

Plan set to county engineer consultant for review: No

State storm water permit: Yes

Any county road cut permits needed: No

Any land use permits needed based on size or flood plain: No

Any Corp of Eng. wetland issues: No

Original Bond and map to Treasurer's office: Yes

Copy of bond in file: Yes

Map to GIS:

Other: See Rural City 4-26-2013 Land

Pending items/date: Flag Sent on Pipeline Install 4-15-2013

~~Revised From S. Anthony 4-16~~ Rec 4-25

David Bartholomew

From: Andy Schwaller
Sent: Thursday, April 25, 2013 3:11 PM
To: David Bartholomew
Cc: Fred Jarman
Subject: FW: Sealed Plans-Pipeline Construction-Grading Permits

David,

I sent this to Tracey with Summit on Tuesday. We are requiring them to have engineered seals on both the erosion control plan and the design and burial of the pipeline. They are using an in-house engineer to design the pipeline install. Unfortunately, he does not have Colorado P.E. license. Hopefully the e-mail will explain what we need and what they need to do. I have been working with them on this for several weeks. I have not heard back and hopefully it will just get done correctly while I am gone.

Andy

From: Andy Schwaller
Sent: Tuesday, April 23, 2013 4:42 PM
To: 'Tracey Jensen'
Cc: 'Marc Kenney'
Subject: Sealed Plans-Pipeline Construction

Tracey,

I discussed the above with Marc Kenney and I believe we may have a short term solution. Ultimately, the goal of the county and also the State Board of Licensure for Architects, Professional Engineers and Professional Surveyors is for Summit to contract out the engineering or do their own engineering in house with a Colorado licensed engineer. Professionals licensed in other states must obtain registration in Colorado in order to practice here. I believe Jake is in that process. As per state law, I am required to verify all engineering plans, unless specially exempt, are sealed. I also have an obligation to report anyone practicing engineering without the proper license.

Overstamping is not an appropriate way to deal with plans designed by a non Colorado engineer. By sealing the plans, the engineer is taking responsible charge for them and in affect stating that the documents were prepared by him or her responsible control. Marc and I discussed a memo just to verify the design appears to meet the industry standards and general engineering practices. This does not cure the problem completely but gives the county some assurance the basic design is correct. It also buys some time for Summit to determine its in-house or contracting needs.

Please refer to the state website www.dora.state.co.us/Statute-PE.pdf. Also Colorado Revised Statue 12-25-117 for more information. Call with any questions.

Thanks,

Andy Schwaller
Building Official
Garfield County

Andy Schwaller

From: Andy Schwaller
Sent: Tuesday, April 23, 2013 11:12 AM
To: 'Marc Kenney'
Subject: RE: Erosion Control Plan Notes

Looks like good engineering to me. The code listed would be a minimum. We have seen other pipeline companies have more stringent requirements such as 48 in. of cover. Maybe their experience is to ask for 48 inches and they end up with 36 inches in the thin areas. Minimum code or better works for us.

Soils compaction is hard to qualify. Compaction directly around the pipe bedding and shading should be very tight. Depending on the surface load, farm field or paved road, the top 2 or 3 feet could vary widely.

A single pipeline corridor could cover a wild range of geotechnical, end use, wetlands, river crossing and more. Specific engineering review of job specific requirements would need to be noted. The county could always ask for more detail but evidence (sealed) this was reviewed and designed by an engineer would be good.

Just my own observation; but, I think the spider web of a variety of pipelines installed over many years will cause more environmental problems than anything else in the oil and gas field arena. It sure is a lot of surface area.

Thanks for your help,

Andy

From: Marc Kenney [mailto:mkenney@rccwest.com]
Sent: Tuesday, April 23, 2013 9:17 AM
To: Andy Schwaller
Subject: RE: Erosion Control Plan Notes

Andy,

Summit has request we review the design of the pipeline, with the intent of meeting the County's requirements for an engineered design. Would the attached pipeline design sheet meet the County's design requirements if stamped by a Colorado PE? If not please let me know specifically what the County is requiring. Thank you very much for your help.

Marc

From: Andy Schwaller [mailto:aschwaller@garfield-county.com]
Sent: Monday, April 08, 2013 2:16 PM
To: Marc Kenney; 'Jake Latham'; 'Cameron Bingham'
Subject: RE: Erosion Control Plan Notes

That about sums up the County's position.

Andy

From: Marc Kenney [mailto:mkenney@rccwest.com]
Sent: Monday, April 08, 2013 1:58 PM
To: 'Jake Latham'; 'Cameron Bingham'
Cc: Andy Schwaller
Subject: Erosion Control Plan Notes

Garfield County

Vegetation Management

April 25, 2013

Andy Schwaller
Garfield County Community Development Department

RE: Grading Permit GRAD-2797

Dear Andy,

The Integrated Vegetation and Noxious Weed Management Plan for this project is acceptable. The surface area to be reseeded has been quantified as 253,770 square feet or 5.82 acres. Community Development has requested a revegetation security of $14,550.

The security shall be held by Garfield County until vegetation has been successfully reestablished according to the Reclamation Standards section in the Garfield County Weed Management Plan. The Reclamation Standards at the date of permit issuance are cited in Sections 4.06, 4.07 and 4.08 of the Garfield County Weed Management Plan (Resolution #2002-94).

Please let me know if you have any questions.

Sincerely,

Steve Anthony
Garfield County Vegetation Manager

0375 County Road 352, Bldg 2060
Rifle, CO 81650 Phone: 970-945-1377 x 4305 Fax: 970-625-5939

Jake,

I talked with Any Schwaller at Garfield County. We discussed the construction notes you and I discussed this morning and their applicability to the Erosion Control Plans. Andy and I agreed that those notes are not applicable to the Erosion Control Portion of the project and did not need to be on the stamped ECPs. So we are proceeding without said notes.

This is not so say that Garfield County is not looking for an engineered and PE stamped design. They are looking for an engineered design and are under the assumption that said design would include notes such as the ones they suggested. Not necessarily an exact copy of the notes, as they would need to be adjusted to project conditions and the contractors means and methods. We can assist with engineered plans if you need assistance with those to complete your submittal package.

Thanks, and please let me know if you have any questions, comments, or concerns.

Marc

Marc J. Kenney, PE
CPSWQ & CPESC
RIVERCITY
CONSULTANTS
744 Horizon Court Suite 110
Grand Junction, CO 81506
Phone: (970) 241-4722
Fax: (970) 241-8841

Andy Schwaller

From: Andy Schwaller
Sent: Tuesday, April 23, 2013 4:42 PM
To: 'Tracey Jensen'
Cc: 'Marc Kenney'
Subject: Sealed Plans-Pipeline Construction

Tracey,

I discussed the above with Marc Kenney and I believe we may have a short term solution. Ultimately, the goal of the county and also the State Board of Licensure for Architects, Professional Engineers and Professional Surveyors is for Summit to contract out the engineering or do their own engineering in house with a Colorado licensed engineer. Professionals licensed in other states must obtain registration in Colorado in order to practice here. I believe Jake is in that process. As per state law, I am required to verify all engineering plans, unless specially exempt, are sealed. I also have an obligation to report anyone practicing engineering without the proper license.

Overstamping is not an appropriate way to deal with plans designed by a non Colorado engineer. By sealing the plans, the engineer is taking responsible charge for them and in affect stating that the documents were prepared by him or her responsible control. Marc and I discussed a memo just to verify the design appears to meet the industry standards and general engineering practices. This does not cure the problem completely but gives the county some assurance the basic design is correct. It also buys some time for Summit to determine its in-house or contracting needs.

Please refer to the state website www.dora.state.co.us/Statute-PE.pdf. Also Colorado Revised Statue 12-25-117 for more information. Call with any questions.

Thanks,

Andy Schwaller
Building Official
Garfield County

Garfield County

STATEMENT OF AUTHORITY

Pursuant to C.R.S. §38-30-172, the undersigned executes this Statement of Authority on behalf of Grand River Gathering, LLC, a Limited Liability Company (corporation, limited liability company, general partnership, registered limited liability partnership, registered limited liability limited partnership, limited partnership association, government agency, trust or other), an entity other than an individual, capable of holding title to real property (the "Entity"), and states as follows:

The name of the Entity is Grand River Gathering,LLC.
and is formed under the laws of the State of Delaware.
The mailing address for the Entity is 2128 Railroad Ave, Suite 106
Rifle CO 81650.

The name and/or position of the person authorized to execute instruments conveying, encumbering, or otherwise affecting title to real property on behalf of the Entity is Tracey Jensen.

The limitations upon the authority of the person named above or holding the position described above to bind the Entity are as follows (if no limitations, insert "None"): Sign permit applications and permits issued by Garfield County.

Other matters concerning the manner in which the Entity deals with any interest in real property are (if no other matter, leave this section blank):

EXECUTED this 5th day of October, 2012.

Signature: Block M Dexter
Name (printed): BLOCK M. DEXTER
Title (if any): SVP & GENERAL COUNSEL

STATE OF TEXAS)
)ss.
COUNTY OF DALLAS)

The foregoing instrument was acknowledged before me this 5th day of October, 2012 by BLOCK M. DEXTER, on behalf of GRAND RIVER GATHERING, LLC, a LIMITED LIABILITY COMPANY.

Witness my hand and official seal.
My commission expires: 5/1/2014 (Date)
(Notary Public)

[SEAL]

JESSICA LYNN ERWIN
Notary Public, State of Texas
My Commission Expires
May 01, 2014

Grand River Gathering, LLC
2128 Railroad Avenue, Suite 106
Rifle, CO 81650

Phone: 970.440.1000
Fax: 970.440.1019
www.summitmidstream.com

March 27, 2013

Attention: Andy Schwaller
Garfield County Building & Planning Department
108 Eighth Street, Suite 401
Glenwood Springs, CO 81601

Re: Grading Permit
19 Loop 12"

Dear Mr. Schwaller:

In association with Grand River Gathering's Grading Permit Application Submission, this letter shall serve as notice that Grand River Gathering will comply with all of the terms and conditions associated with rights to lay one or more pipelines as set forth in the below listed documents.

Document Type	**Date**	**Grantor**	**Recording Data**
Right-of-Way Easement	03/21/2013	Shideler Land & Cattle CO	832957
Right-of-Way Easement	03/21/2013	Shidelerosa, LLLP	832959

Copies of the foregoing documents have been provided to Garfield County with the submittal of the Grading Permit Application.

Sincerely,

Grand River Gathering, LLC

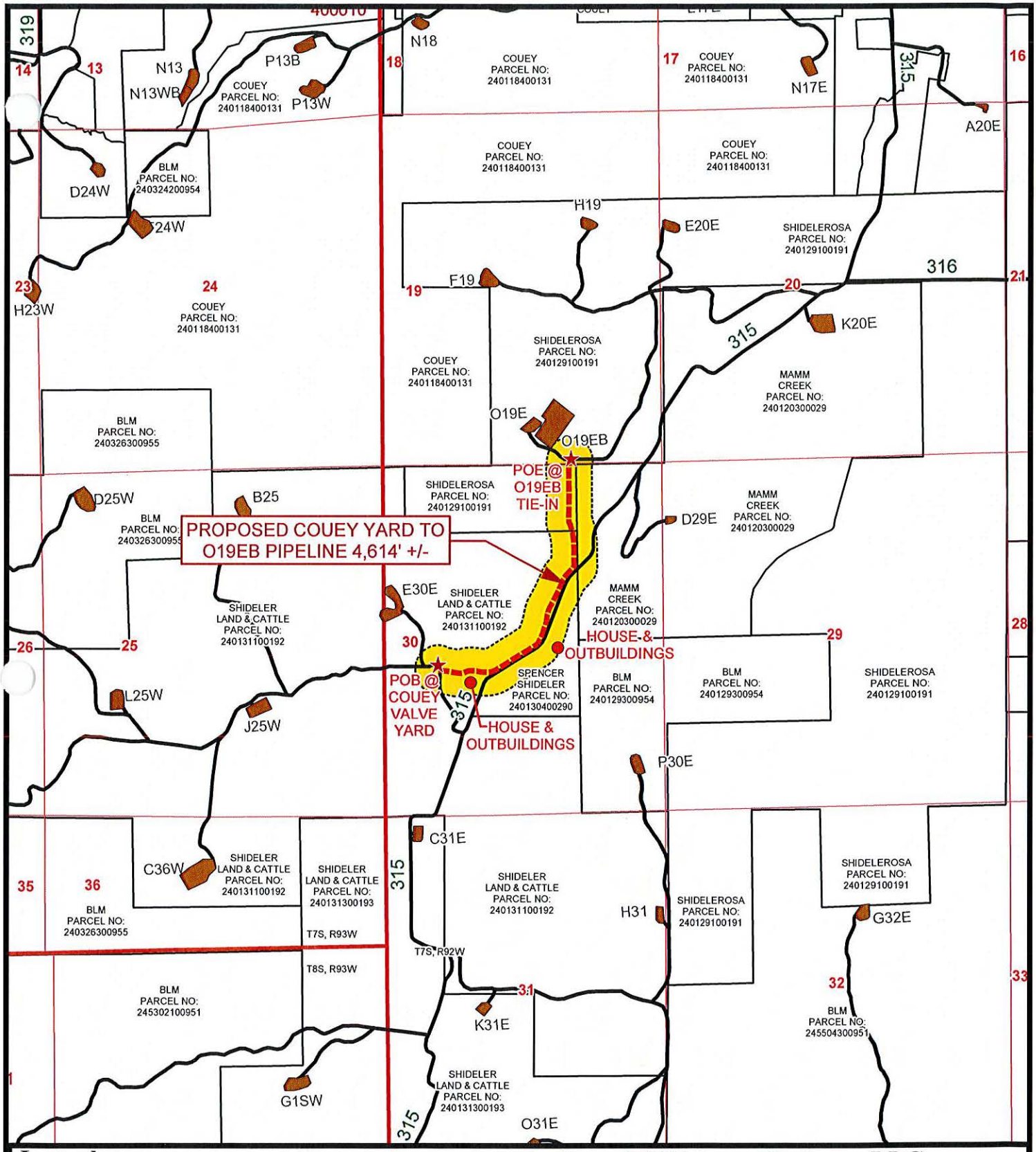
By: _____
Tracey Jensen
Permit Manager

MAPS

- Vicinity Map
- Garfield County Assessor's Map
- Plan and Profile

EROSION CONTROL PLANS

- Pre-Construction Stormwater Site Plan
- Construction Stormwater Site Plan
- Final Reclamation Stormwater Site PLan



Legend

- PROPOSED COUEY YARD TO O19EB PIPELINE (4,614' +/-)
- 350' BUFFER

Summit Midstream Partners, LLC

PROPOSED COUEY YARD TO O19EB PIPELINE
Sections 19 & 30, T7S, R92W, 6th P.M.
GARFIELD COUNTY, COLORADO

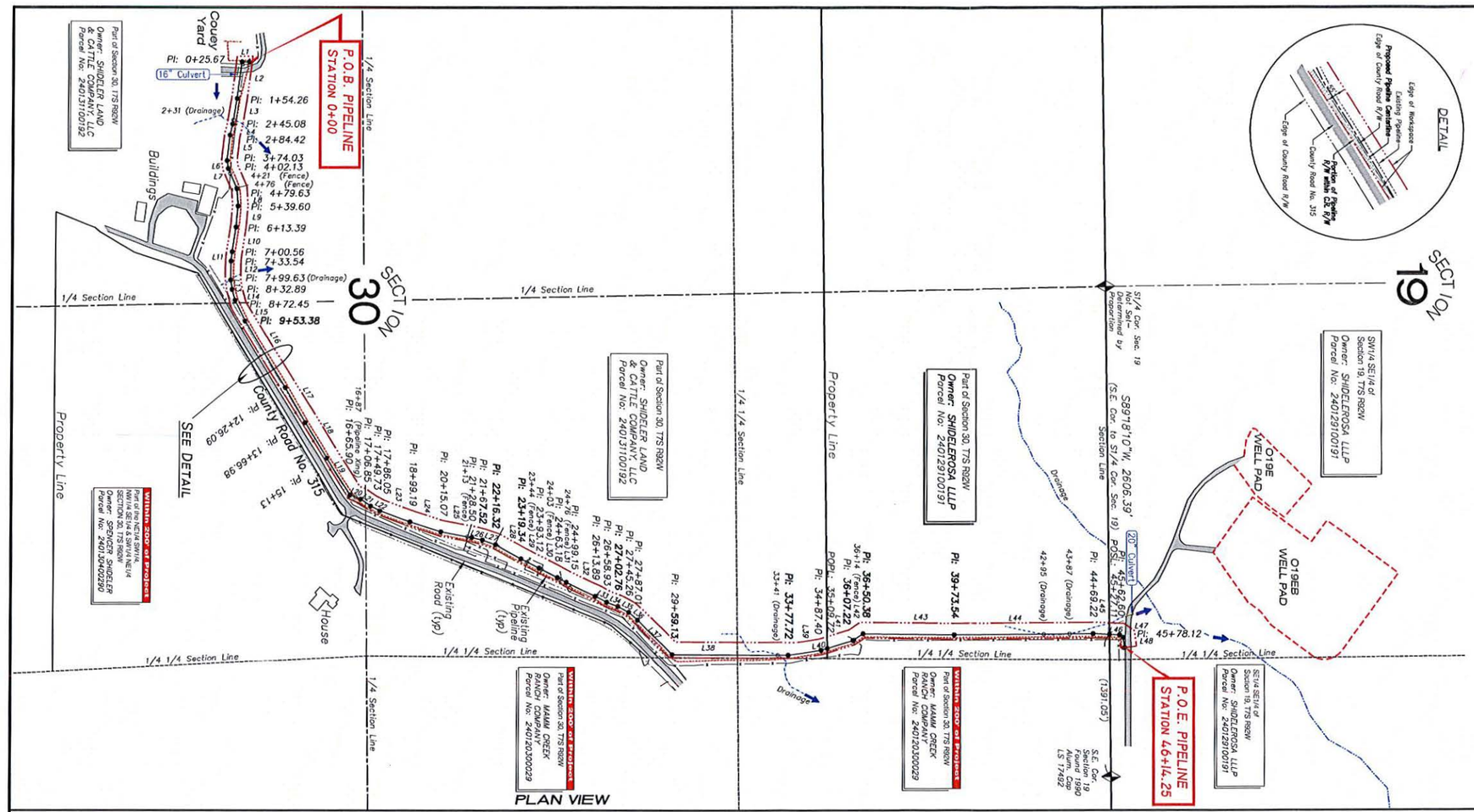
Scale in Feet: 0 — 1,000 — 2,000

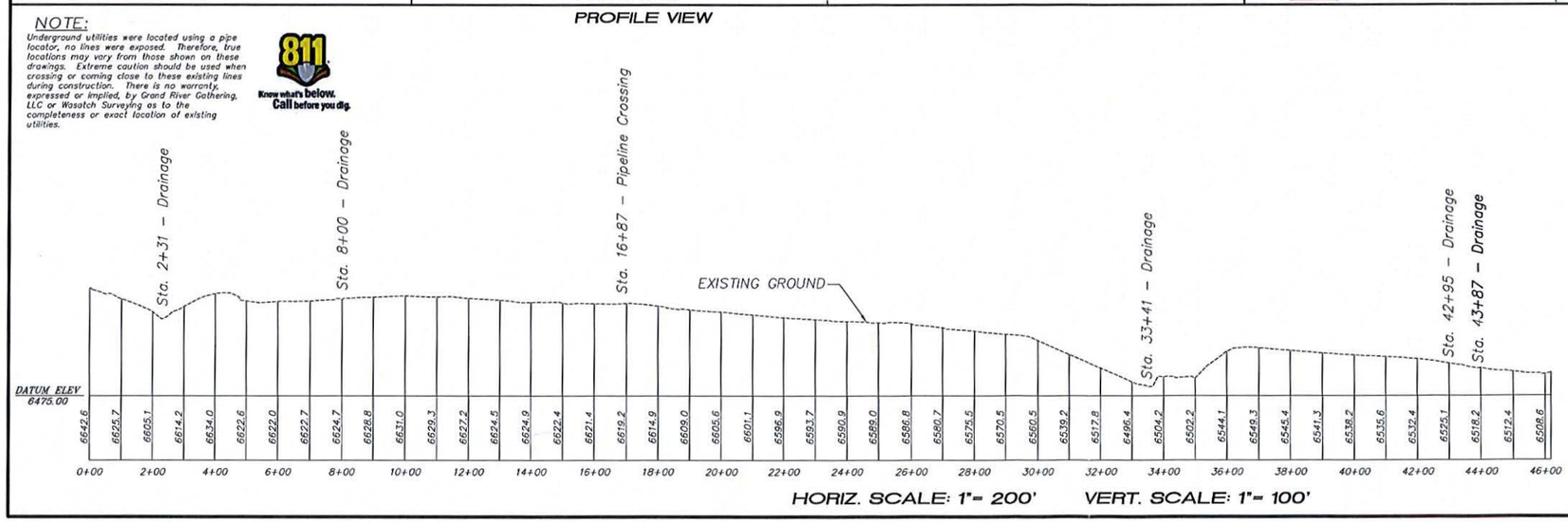
Wasatch Surveying Associates
906 Main Street Evanston, Wyoming 82930
Phone No. (307) 789-4545 Fax (307) 789-5722

ASSESSORS MAP

PROJECT No. 13-12-04
DATE: 3/20/2013
SCALE: 1 inch = 2,000 feet

1 of 1





NOTE:

Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

811 Know what's below. Call before you dig.

CERTIFICATE OF SURVEYOR

I, TED TAGGART OF FRUITA, COLORADO HEREBY CERTIFY THAT THIS MAP WAS MADE FROM NOTES TAKEN DURING AN ACTUAL SURVEY MADE BY ME OR UNDER MY DIRECTION FOR GRAND RIVER GATHERING, LLC AND THAT THE RESULTS OF WHICH ARE CORRECTLY SHOWN HEREON.

COLORADO REGISTERED T. L. TAGGART 3/20/13 37075 PROFESSIONAL LAND SURVEYOR

LEGEND

SECTION OR PROPERTY CORNER LOCATED
Pl. POINT OF INTERSECTION
P.O.B. POINT OF BEGINNING
P.O.E. POINT OF ENDING
P.O.S.L. POINT ON SECTION LINE
P.O.P.L. POINT ON PROPERTY LINE

REVISIONS			
0	First Issue	SG1	3/20/13
		BY:	DATE:

PREPARED BY:
WASATCH SURVEYING
966 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545
SCALE: As Shown
DATE: March 26, 2013
PROJECT NO.: 13-1404

PROJECT:
-PIPELINE PLAN & PROFILE-
Couey Yard to O19EB Pipeline
Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

PREPARED FOR:
SUMMIT MIDSTREAM

SHEET:
1
of 2

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	SECTION	FEET	TOTAL
Shideler Land & Cattle Co. LLC	Sec. 30, T7S R92W	3509.72	3509.72
Shidelerosa LLC	Secs. 19 & 30, T7S R92W	1104.53	1104.53
		Total	4614.25

RIGHT-OF-WAY LIMITS BOX						
		Reference Points				
FROM	TO	Temporary Work Space Left	Permanent Right-of-Way Left	Permanent Right-of-Way Right	Temporary Work Space Right	*Total*
P.O.B.	*STA: 8+72*	*20'*	*15'*	*15'*	*5'*	*55'*
STA: 8+72	*STA: 16+66*	*VARIES*	*15'*	*15'*	*VARIES*	*55'*
STA: 16+66	*STA: 29+59*	*25'*	*15'*	*15'*	*0'*	*55'*
STA: 29+59	*STA: 33+78*	*25'*	*20'*	*10'*	*0'*	*55'*
STA: 33+78	*P.O.E.*	*25'*	*15'*	*15'*	*0'*	*55'*

PIPE BEND TABLE

ANGLE POINT	STATION	PIPE BEND
BEGIN PIPE	00+00	
P.I.	00+26	82.2° LT
P.I.	01+54	2.2° RT
P.I.	02+45	3.7° RT
P.I.	02+84	6.7° LT
P.I.	03+74	15.5° LT
P.I.	04+02	15° LT
P.I.	04+80	19.6° RT
P.I.	05+40	9.4° RT
P.I.	06+13	3.8° RT
P.I.	07+01	2.2° LT
P.I.	07+34	6.2° LT
P.I.	08+00	9° LT
P.I.	08+33	7° LT
P.I.	08+72	10.9° LT
P.I.	09+53	5.2° LT
P.I.	12+26	1.4° RT
P.I.	13+67	1.5° LT
P.I.	15+13	0.9° LT
P.I.	16+66	37° LT
P.I.	17+07	14.1° RT
P.I.	17+50	7° LT
P.I.	17+86	7.4° LT
P.I.	18+99	2.6° LT
P.I.	20+15	7.4° LT
P.I.	21+28	2.8° RT
P.I.	21+68	6.3° RT
P.I.	22+16	9.7° RT
P.I.	23+19	2.9° LT
P.I.	23+93	2.1° RT
P.I.	24+63	1.2° LT
P.I.	24+99	1.7° LT
P.I.	26+14	2.4° RT
P.I.	26+59	7.5° LT
P.I.	27+02	7.9° RT
P.I.	27+45	12.4° RT
P.I.	27+87	4.1° RT
P.I.	29+59	44.2° LT
P.I.	33+78	9.5° LT
P.I.	34+87	7.1° LT
P.I.	36+07	17.3° LT
P.I.	36+50	34.3° RT
P.I.	39+74	1.1° LT
P.I.	44+69	3° RT
P.I.	45+63	31.5° RT
P.I.	45+78	49.5° RT
P.O.E.	46+14	

LINE TABLE

LINE	DIRECTION	LENGTH
L1	S00°19'57"E	25.67
L2	S82°31'57"E	128.59
L3	S80°19'14"E	90.82
L4	S76°38'17"E	39.34
L5	S83°23'08"E	89.61
L6	N81°09'12"E	28.10
L7	N66°07'07"E	77.50
L8	N85°43'48"E	59.98
L9	S84°52'24"E	73.79
L10	S81°04'22"E	87.16
L11	S83°17'38"E	32.99
L12	S89°30'56"E	66.09
L13	N81°28'15"E	33.26
L14	N74°26'14"E	39.56
L15	N63°30'44"E	80.93
L16	N58°18'50"E	272.71
L17	N59°41'00"E	140.89
L18	N58°10'58"E	146.03
L19	N57°17'43"E	152.90
L20	N20°17'31"E	40.95
L21	N34°20'35"E	42.88
L22	N27°22'29"E	36.32
L23	N19°57'10"E	113.14
L24	N17°23'58"E	115.88
L25	N10°02'03"E	113.43
L26	N12°51'44"E	39.02
L27	N19°10'38"E	48.81
L28	N28°54'53"E	103.02
L29	N26°01'12"E	73.78
L30	N28°04'53"E	70.05
L31	N26°54'07"E	35.98
L32	N25°11'30"E	114.73
L33	N27°37'54"E	45.05
L34	N20°10'23"E	42.79
L35	N28°01'56"E	43.53
L36	N40°24'03"E	41.76
L37	N44°32'40"E	172.11
L38	N00°17'55"E	418.60
L39	N09°12'56"W	109.68
L40	N16°16'14"W	22.32
L41	N16°16'14"W	97.50
L42	N33°35'37"W	43.15
L43	N00°41'59"E	323.16
L44	N00°23'54"W	495.68
L45	N02°34'07"E	57.89
L46	N02°34'07"E	35.50
L47	N34°02'42"E	15.52
L48	N83°31'03"E	36.13

NOTE:

Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

811 Know what's below. Call before you dig.

PREPARED BY: Wasatch Surveying, 908 Main Street, Evanston, Wyoming 82930, Phone No: (307) 789-4545

SCALE: As Shown | DATE: March 20, 2013 | PROJECT NO.: 13-12-04

REVISIONS

NO.	DATE	BY
0	First Issue	SGT 3/20/13

LEGEND

- SECTION OR PROPERTY CORNER LOCATED
- P.I. POINT OF INTERSECTION
- P.O.B. POINT OF BEGINNING
- P.O.E. POINT OF ENDING
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PROJECT: **-PIPELINE PLAN & PROFILE-**

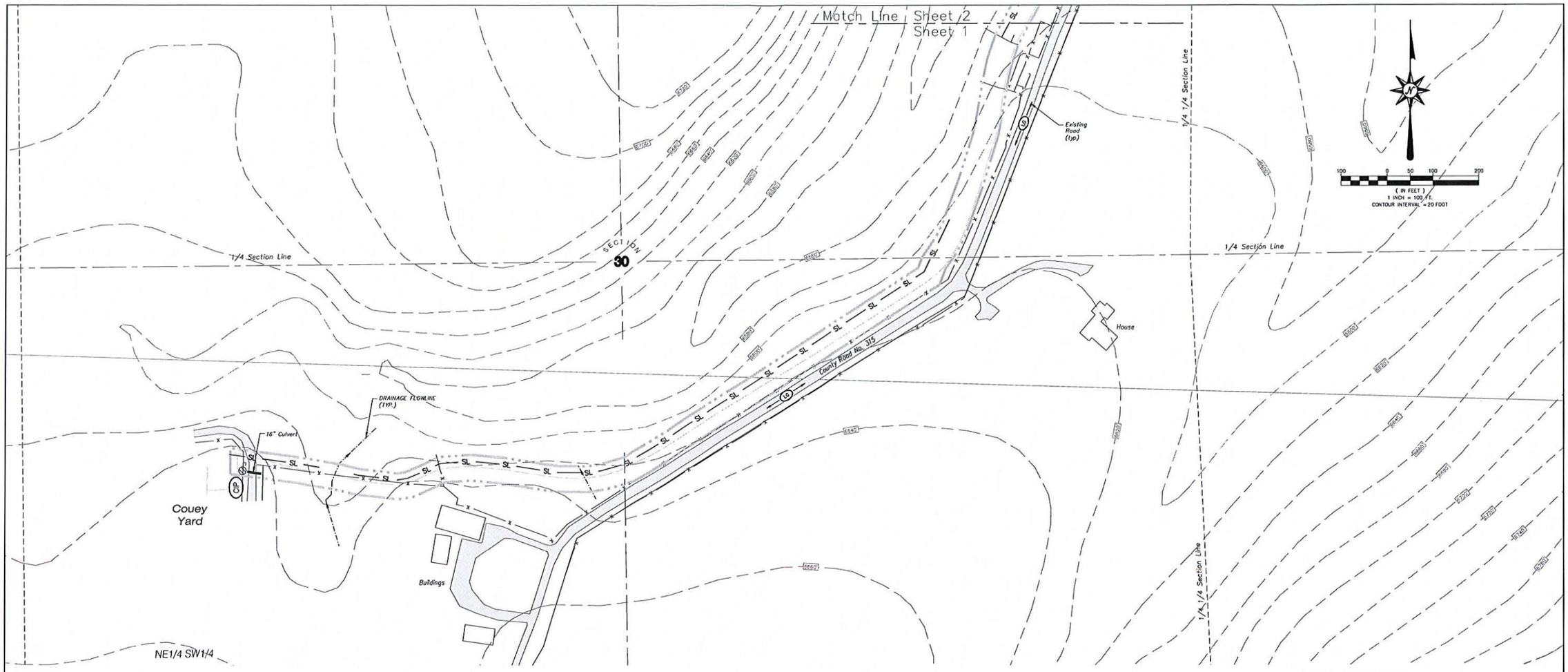
Couey Yard to O19EB Pipeline

Sections 19 & 30, T7S, R92W, 6th P.M.

Garfield County, Colorado

PREPARED FOR: SUMMIT MIDSTREAM

SHEET: **2** *of 2*



SITE DESCRIPTION

1. THE PROJECT IS LOCATED IN SECTION 19 & 30, TOWNSHIP 7 SOUTH, RANGE 92 WEST, OF THE 6TH PRINCIPAL MERIDIAN, GARFIELD COUNTY, COLORADO. THE PROJECT AREA IS EQUAL TO THE ESTIMATED TOTAL AREA OF DISTURBANCE WHICH IS 5.8 ACRES. THE TOTAL AREA TO BE RE-VEGETATED IS APPROXIMATELY 5.8 ACRES.
2. ACCORDING TO THE NRCS WEB SITE, THE UPPER LAYER OF SOIL PRESENT AT THE PROJECT SITE CONSISTS OF VARIOUS SOILS THAT HAVE A HYDROLOGIC SOIL CLASSIFICATION OF B (LOW TO MODERATE RUNOFF POTENTIAL) & D (HIGH RUNOFF POTENTIAL). THE WHOLE SOIL EROSION K FACTOR FOR THESE SOILS IS .24, .32 & .37 MEANING THESE SOILS ARE MODERATELY ERODIVE.
3. STORMWATER FROM THIS SITE FOLLOW EXISTING DRAINAGE PATTERNS AS GRADES WILL BE RETURNED TO PRE-CONSTRUCTION ELEVATIONS/CONDITIONS. DRAINAGE FOR THIS AREA IS GENERALLY TO THE EAST TOWARDS MIDDLE MAMM CREEK, WHICH ULTIMATELY DRAINS INTO THE COLORADO RIVER.
4. THE RECEIVING BODY OF WATER IS THE COLORADO RIVER, APPROXIMATELY 10 MILES DOWNSTREAM OF THE SITE.
5. CONSTRUCTION ACTIVITY WILL CONSIST OF, IN THE FOLLOWING ORDER: ESTABLISHMENT OF PERIMETER STORMWATER BMPS, SITE CLEARING, TOPSOIL REMOVAL AND STOCKPILING, TRENCHING, PIPELINE INSTALLATION, BACKFILL, TOPSOIL SPREADING AND FINAL SEEDING. INTERMEDIATE STORMWATER BMPS WILL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONTRACTOR'S MEANS AND METHODS.
6. THE PRIMARY CONTAMINANT OF CONCERN FOR THIS SITE IS SEDIMENT. THE PROPOSED EROSION CONTROLS HAVE BEEN SELECTED AND PLACED TO MITIGATE THE POTENTIAL FOR SEDIMENT TRANSPORT FROM THE SITE.
7. EXISTING VEGETATION ON THE SITE CONSISTS PRIMARILY OF HIGH DESERT VEGETATION (SAGE, RABBIT BRUSH, JUNIPER, PINION PINE, OAK BRUSH, ETC.). VEGETATION WOULD BE CLASSIFIED IN GOOD AND FAIR CONDITION.
8. THE 100 YEAR RUNOFF SCS CURVE NUMBERS FOR THIS SITE ARE 41 FOR UNDEVELOPED UNDISTURBED AREAS AND 91 FOR NEWLY GRADED AREAS.

EROSION CONTROL MEASURES (PERFORMANCE STANDARDS)

INSTALLATION DETAILS AND MAINTENANCE GUIDELINES FOR THE ABOVE EROSION CONTROL MEASURES CAN BE FOUND IN CDOT STANDARDS, ON DENVER'S URBAN DRAINAGE AND FLOOD CONTROL DISTRICT WEBSITE, AND VARIOUS MANUFACTURE'S WEBSITES. VARIATIONS FROM THESE STANDARDS SHALL BE APPROVED BY THE CSMWP ADMINISTRATOR PRIOR TO INSTALLATION. THIS LIST IS NOT CONSIDERED COMPLETE OR ABSOLUTE. ADDITIONAL METHODS CAN AND SHOULD BE ADDED TO THIS PLAN IF REQUIRED. THIS CSMWP SHOULD BE KEPT CURRENT AND MODIFIED APPROPRIATELY BY THE CSMWP ADMINISTRATOR BASED ON ACTUAL FIELD CONDITIONS AND THE CONTRACTOR'S MEANS AND METHODS.

THE GENERAL REQUIREMENTS FOR EROSION CONTROL WORK SHALL BE AS FOLLOWS:

1. ANY GRADING SHALL BE CONDUCTED IN SUCH A MANNER TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
2. ALL GRADING SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED TO MINIMIZE THE SIZE AND DURATION OF EXPOSED (UNVEGETATED) AREA.
3. SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE CAPTURED AND REMOVED FROM RUNOFF WATER PRIOR TO LEAVING THE SITE.
4. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE GRADED AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.
5. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.
6. ALL BMPs WILL BE IN PLACE PRIOR TO ANY MAJOR EARTHWORK.

DURING CONSTRUCTION (TEMPORARY MEASURES)

1. MATERIAL STOCKPILES SHALL BE BERMED AROUND THEIR PERIMETER TO PREVENT RUNOFF POLLUTION.
2. PLACE WATTLES, AND/OR BERM DOWNGRADIENT OF DISTURBED AREAS AND STOCKPILES.
3. COMPACT SOIL AND TOPSOIL TO THE REQUIREMENTS AS STATED IN THE GEOTECHNICAL RECOMMENDATIONS AND FINISH GRADE TO ELEVATIONS SHOWN ON THE SITE PLAN. ELIMINATE ANY LOW SPOTS PRIOR TO FINAL STABILIZATION.
4. CONTRACTOR SHALL HAVE A WATER TRUCK MADE AVAILABLE TO ASSIST IN CONTROLLING MOISTURE CONTENT AND DUST AND WIND EROSION.
5. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE CSMWP ADMINISTRATOR.
6. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.

AFTER CONSTRUCTION (PERMANENT MEASURES)

1. TOPSOIL WINDROWS SHALL BE SPREAD ON NEWLY CONSTRUCTED SLOPES PRIOR TO REVEGETATION.
2. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED WITH A CERTIFIED WEED-FREE NATIVE SEED MIX APPROPRIATE FOR SITE SOILS AND CONDITIONS. THESE AREAS SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER OF AT LEAST 70% OF PRE-CONSTRUCTION CONDITIONS EXISTS. IF NECESSARY, ADDITIONAL SEED, MULCH, AND/OR FERTILIZER SHOULD BE APPLIED TO ESTABLISH SAID VEGETATIVE COVER.

MAINTENANCE

1. ALL EROSION CONTROL MEASURES SHOULD BE INSPECTED TO DETERMINE IF REPAIRS OR SEDIMENT REMOVAL IS NECESSARY. THE MAXIMUM TIME BETWEEN INSPECTIONS SHALL BE 14 DAYS.
2. EROSION CONTROL MEASURES ARE ALSO TO BE INSPECTED WITHIN 48 HOURS OF A STORM THAT PRODUCES RUNOFF, OR MODERATE SNOW MELT.
3. REPAIRS OR MODIFICATIONS TO THE EROSION CONTROL MEASURES SHALL BE COMPLETED IMMEDIATELY. REPAIRS AND MODIFICATIONS SHALL BE DOCUMENTED (WHAT, WHY, & WHEN).
4. SILT AND SEDIMENT SHALL BE REMOVED IF THERE IS A RISK OF SEDIMENT BYPASSING THE EROSION CONTROL FEATURE. SPECIFICALLY, SEDIMENT BUILDUP SHALL NOT EXCEED 1/3 THE HEIGHT OF ANY CHECK DAM OR BERM (INCLUDING INLET PROTECTION), OR WHEN SEDIMENT WITHIN A SEDIMENT BASIN GETS WITHIN 6 INCHES OF THE OUTLET INVERT.
5. WHEN THE TEMPORARY MEASURES ARE TO BE REMOVED, ANY SILT AND SEDIMENT DEPOSITS SHALL BE REMOVED AND SPREAD EVENLY IN OPEN AREAS AND SEEDED AS NECESSARY.

GENERAL NOTES

1. SWMP ADMINISTRATOR (LOCAL CONTACT): MIKE ROSE (970) 440-1000.
2. THE CONSTRUCTION SITE BOUNDARY IS EQUAL TO THE TOTAL AREA OF DISTURBANCE.
3. THE ESTIMATED TOTAL AREA OF DISTURBANCE IS 5.8 ACRES.
4. AT ALL TIMES DURING CONSTRUCTION, EROSION AND SEDIMENT CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR.
5. EROSION CONTROL MEASURES SHALL BE INSTALLED AS THE WORK (GRADING) PROGRESSES.
6. DETAILS SHOWN ARE SCHEMATIC ONLY. ADJUSTMENTS MAY BE NECESSARY TO FIT ACTUAL FIELD CONDITIONS.
7. NEGATIVE IMPACTS TO DOWNSTREAM AREAS (OR RECEIVING WATERS) CAUSED BY THE OVERLOT GRADING AND/OR CONSTRUCTION TO BE MONITORED AND CORRECTED BY THE CONTRACTOR.
8. THE FIRST BMP TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION.
9. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE SWMP-APPROVED ACCESS POINTS.
11. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON VISIBLE EVIDENCE FROM ABOVE GROUND STRUCTURES, MARKINGS BY THE RESPECTIVE UTILITY COMPANIES AND/OR THEIR LOCATOR SERVICES, AND DRAWINGS PROVIDED BY THE UTILITY COMPANIES. NO EXCAVATIONS WERE MADE DURING THIS SURVEY TO DETERMINE EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES AND STRUCTURES. ACTUAL LOCATIONS MAY VARY FROM THOSE AS SHOWN HEREON AND ADDITIONAL UNDERGROUND UTILITIES MAY EXIST. EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION ON THIS PROPERTY. EXTREME CAUTION SHOULD BE USED WHEN CROSSING OR COMING CLOSE TO THESE EXISTING LINES DURING CONSTRUCTION. THERE IS NO WARRANTY, EXPRESSED OR IMPLIED, BY ENCANA OIL & GAS (USA) INC. OR WASATCH SURVEYING AS TO THE COMPLETENESS OR EXACT LOCATION OF EXISTING UTILITIES.
12. EXISTING SURVEY INFORMATION (INCLUDING EXISTING UTILITIES) PROVIDED BY WASATCH SURVEYING, INC..
13. ORIGINAL DRAWING SIZE IS 24"x36".

BMP LEGEND

Installation details and maintenance guidelines for the above erosion control measures can be found in CDOT standards, on Denver's Urban Drainage and Flood Control District website, and various manufacture's websites. Variations from these standards shall be approved by the CSMWP Administrator prior to installation. This list is not considered complete or absolute, additional methods can and should be added to this plan if required. This CSMWP should be kept current and modified appropriately by the CSMWP Administrator based on actual field conditions and the Contractor's means and methods.

1		CD	CHECK DAM	13	TS	TS	TOPSOIL BERM
2		CIP	CULVER INLET PROTECTION	14	SL	SL	SLASH
3		COP	CULVERT OUTLET PROTECTION	15	SUB	SUB	SUBSOIL STOCKPILE
4			DIRECTION OF FLOW	16			EDGE OF WORKSPACE
5	LG	LG	LAND GRADING	17	B		BERM
6		MSA	MATERIALS STORAGE AREA	18		ECB	EROSION CONTROL BLANKET
7	WB	WB	WATER BAR	19		SD	SEDIMENT BASIN
8			DRAINAGE FLOW LINE	20		FB	ROCK FILTER BERM
9		TP	TOILETS	21			EXISTING CONTOUR (MAJOR)
10		VEM	VEHICLE EQUIPMENT & MAINTENANCE	22			EXISTING CONTOUR (MINOR)
11		WM	WASTE MANAGEMENT	23	X		EXISTING FENCE
12	W	WTL	STRAW WATTLE	24			SECTION LINE

** SLOPES 3:1 OR GREATER: SURFACE ROUGHENING, TOPSOIL SPREADING, BROADCAST SEEDING AMENDMENTS, AND HYDRAULIC EROSION CONTROL MULCH

SLOPES LESS THAN 3:1: SURFACE ROUGHENING, TOPSOIL SPREADING, DRILL SEEDING, AND CRIMPED STRAW MULCH

UNCC Utility Notification Center of Colorado 800.922.1987 www.uncc.org — 811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	DATE	REVISIONS DESCRIPTION	BY

COLORADO LICENSED 41215 PROFESSIONAL ENGINEER 04-11-13

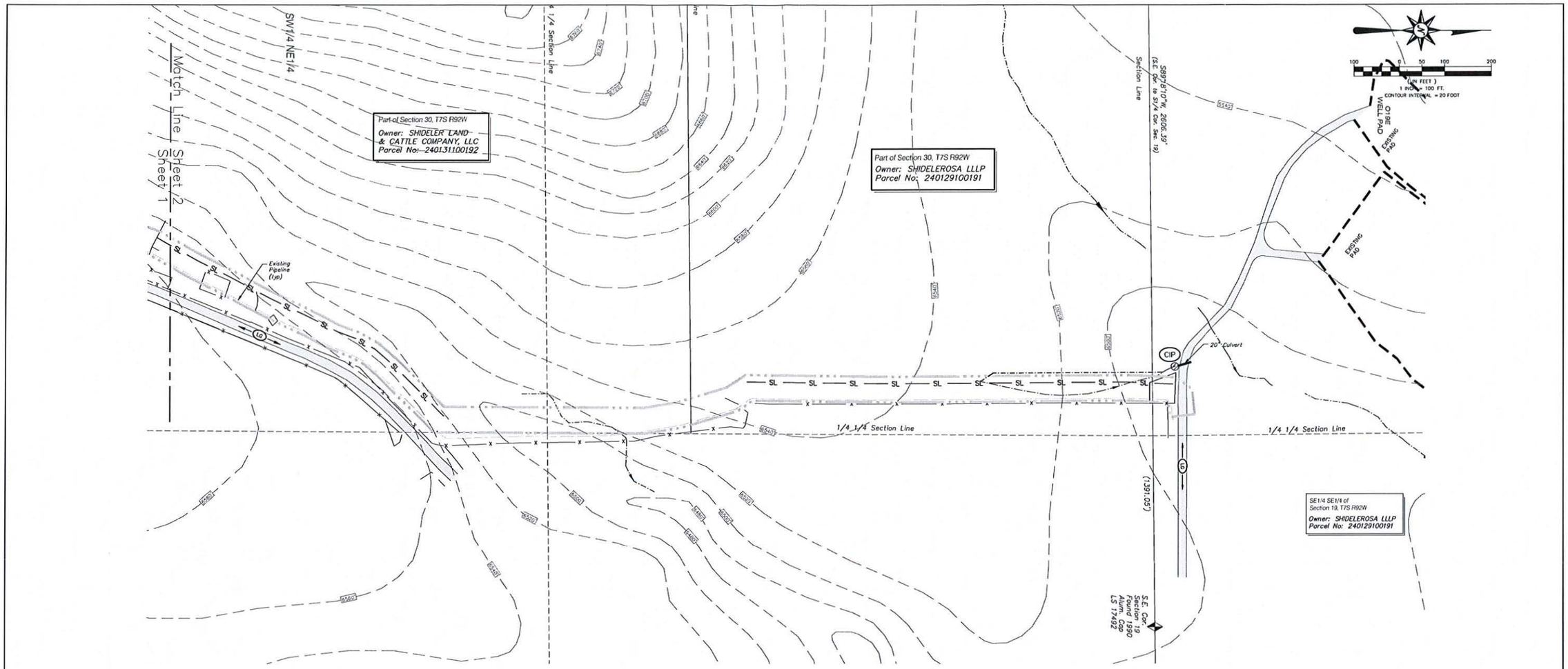
SUMMIT MIDSTREAM
RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110
Grand Junction, Co. 81506
Phone: 970.241.4722
Fax: 970.241.8841

Summit Midstream

Couey Yard to 019EB Pipeline
Pre-Construction Erosion Control Plan
Sheet 1 of 2

PROJECT #1215-008	SCALE	DATE ISSUED: 04-11-2013	C1
DRAWN BY: hmc	HORIZ: AS NOTED		
CHECKED BY: mjk	VERT: N/A	SHEET NO. 1 OF 6 SHEETS	

S:\PROJECTS\1215 Summit Midstream Partners\008.19 Loop Pipeline\design\1215-008 ECP.dwg, 4/11/2013 1:06:28 PM



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6. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.

AFTER CONSTRUCTION (PERMANENT MEASURES)

1. TOPSOIL WINDROWS SHALL BE SPREAD ON NEWLY CONSTRUCTED SLOPES PRIOR TO REVEGETATION.
2. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED WITH A CERTIFIED WEED-FREE NATIVE SEED MIX APPROPRIATE FOR SITE SOILS AND CONDITIONS. THESE AREAS SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER OR AT LEAST 70% OF PRE-CONSTRUCTION CONDITIONS EXISTS. IF NECESSARY, ADDITIONAL SEED, MULCH, AND/OR FERTILIZER SHOULD BE APPLIED TO ESTABLISH SAID VEGETATIVE COVER.

MAINTENANCE

1. ALL EROSION CONTROL MEASURES SHOULD BE INSPECTED TO DETERMINE IF REPAIRS OR SEDIMENT REMOVAL IS NECESSARY. THE MAXIMUM TIME BETWEEN INSPECTIONS SHALL BE 14 DAYS.
2. EROSION CONTROL MEASURES ARE ALSO TO BE INSPECTED WITHIN 48 HOURS OF A STORM THAT PRODUCES RUNOFF, OR MODERATE SNOW MELT.
3. REPAIRS OR MODIFICATIONS TO THE EROSION CONTROL MEASURES SHALL BE COMPLETED IMMEDIATELY. REPAIRS AND MODIFICATIONS SHALL BE DOCUMENTED (WHAT, WHY, & WHEN).
4. SILT AND SEDIMENT SHALL BE REMOVED IF THERE IS A RISK OF SEDIMENT BYPASSING THE EROSION CONTROL FEATURE. SPECIFICALLY, SEDIMENT BUILDUP SHALL NOT EXCEED 1/3 THE HEIGHT OF ANY CHECK DAM OR BERM (INCLUDING INLET PROTECTION), OR WHEN SEDIMENT WITHIN A SEDIMENT BASIN GETS WITHIN 6 INCHES OF THE OUTLET INVERT.
5. WHEN THE TEMPORARY MEASURES ARE TO BE REMOVED, ANY SILT AND SEDIMENT DEPOSITS SHALL BE REMOVED AND SPREAD EVENLY IN OPEN AREAS AND SEEDED AS NECESSARY.

GENERAL NOTES

1. SWMP ADMINISTRATOR (LOCAL CONTACT): MIKE ROSE (970) 440-1000.
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9		TP	TOILETS	21			EXISTING CONTOUR (MAJOR)
10		VEM	VEHICLE EQUIPMENT & MAINTENANCE	22			EXISTING CONTOUR (MINOR)
11		WM	WASTE MANAGEMENT	23	X		EXISTING FENCE
12	W	WTL	STRAW WATTLE	24			SECTION LINE

** SLOPES 3:1 OR GREATER: SURFACE ROUGHENING, TOPSOIL SPREADING, BROADCAST SEEDING AMENDMENTS, AND HYDRAULIC EROSION CONTROL MULCH

SLOPES LESS THAN 3:1: SURFACE ROUGHENING, TOPSOIL SPREADING, DRILL SEEDING, AND CRIMPED STRAW MULCH

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CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	DATE	REVISIONS DESCRIPTION	BY

COLORADO LICENSED 41215 04-11-13 PROFESSIONAL ENGINEER

SUMMIT MIDSTREAM
RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110
Grand Junction, Co. 81506
Phone: 970.241.4722
Fax: 970.241.8841

Summit Midstream

Couey Yard to 019EB Pipeline
Pre-Construction Erosion Control Plan
Sheet 2 of 2

PROJECT #: 1215-008	SCALE	DATE ISSUED: 04-11-2013	
DRAWN BY: hmc	HORIZ: AS NOTED		C2
CHECKED BY: mjk	VERT: N/A	SHEET NO. 2 OF 6 SHEETS	

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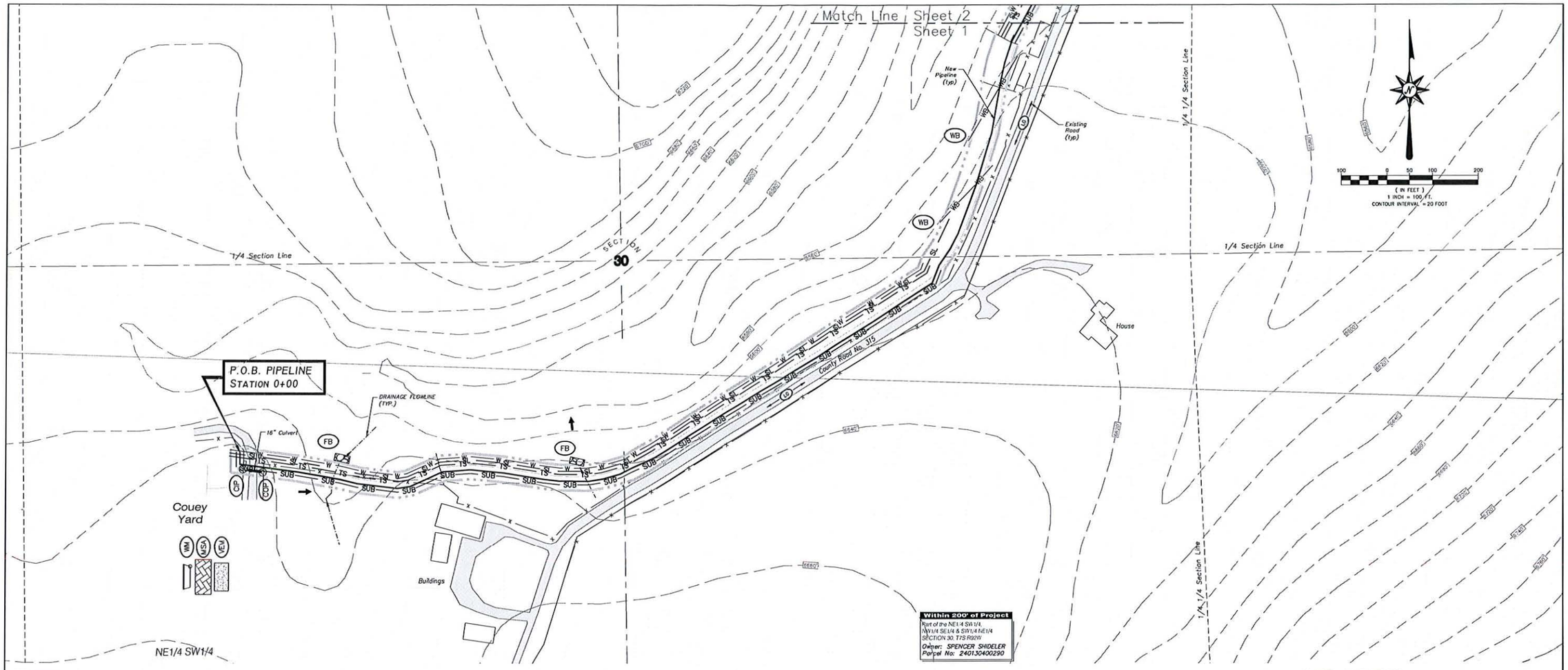

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2. ACCORDING TO THE NRCS WEB SITE, THE UPPER LAYER OF SOIL PRESENT AT THE PROJECT SITE CONSISTS OF VARIOUS SOILS THAT HAVE A HYDROLOGIC SOIL CLASSIFICATION OF B (LOW TO MODERATE RUNOFF POTENTIAL) & D (HIGH RUNOFF POTENTIAL). THE WHOLE SOIL EROSION K FACTOR FOR THESE SOILS IS .24, .32 & .37 MEANING THESE SOILS ARE MODERATELY ERODIVE.
3. STORMWATER FROM THIS SITE FOLLOW EXISTING DRAINAGE PATTERNS AS GRADES WILL BE RETURNED TO PRE-CONSTRUCTION ELEVATIONS/CONDITIONS. DRAINAGE FOR THIS AREA IS GENERALLY TO THE EAST TOWARDS MIDDLE MAMM CREEK, WHICH ULTIMATELY DRAINS INTO THE COLORADO RIVER.
4. THE RECEIVING BODY OF WATER IS THE COLORADO RIVER, APPROXIMATELY 10 MILES DOWNSTREAM OF THE SITE.
5. CONSTRUCTION ACTIVITY WILL CONSIST OF, IN THE FOLLOWING ORDER: ESTABLISHMENT OF PERIMETER STORMWATER BMPS, SITE CLEARING, TOPSOIL REMOVAL AND STOCKPILING, TRENCHING, PIPELINE INSTALLATION, BACKFILL, TOPSOIL SPREADING AND FINAL SEEDING. INTERMEDIATE STORMWATER BMPS WILL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONTRACTOR'S MEANS AND METHODS.
6. THE PRIMARY CONTAMINANT OF CONCERN FOR THIS SITE IS SEDIMENT. THE PROPOSED EROSION CONTROLS HAVE BEEN SELECTED AND PLACED TO MITIGATE THE POTENTIAL FOR SEDIMENT TRANSPORT FROM THE SITE.
7. EXISTING VEGETATION ON THE SITE CONSISTS PRIMARILY OF HIGH DESERT VEGETATION (SAGE, RABBIT BRUSH, JUNIPER, PINION PINE, OAK BRUSH, ETC.). VEGETATION WOULD BE CLASSIFIED IN GOOD AND FAIR CONDITION.
8. THE 100 YEAR RUNOFF SCS CURVE NUMBERS FOR THIS SITE ARE 41 FOR UNDEVELOPED UNDISTURBED AREAS AND 91 FOR NEWLY GRADED AREAS.

EROSION CONTROL MEASURES (PERFORMANCE STANDARDS)

INSTALLATION DETAILS AND MAINTENANCE GUIDELINES FOR THE ABOVE EROSION CONTROL MEASURES CAN BE FOUND IN CDOT STANDARDS, ON DENVER'S URBAN DRAINAGE AND FLOOD CONTROL DISTRICT WEBSITE, AND VARIOUS MANUFACTURE'S WEBSITES. VARIATIONS FROM THESE STANDARDS SHALL BE APPROVED BY THE CSMP ADMINISTRATOR PRIOR TO INSTALLATION. THIS LIST IS NOT CONSIDERED COMPLETE OR ABSOLUTE, ADDITIONAL METHODS CAN AND SHOULD BE ADDED TO THIS PLAN IF REQUIRED. THIS CSMP SHOULD BE KEPT CURRENT AND MODIFIED APPROPRIATELY BY THE CSMP ADMINISTRATOR BASED ON ACTUAL FIELD CONDITIONS AND THE CONTRACTOR'S MEANS AND METHODS.

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2. ALL GRADING SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED TO MINIMIZE THE SIZE AND DURATION OF EXPOSED (UNVEGETATED) AREA.
3. SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE CAPTURED AND REMOVED FROM RUNOFF WATER PRIOR TO LEAVING THE SITE.
4. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE GRADED AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.
5. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.
6. ALL BMPs WILL BE IN PLACE PRIOR TO ANY MAJOR EARTHWORK.

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1. MATERIAL STOCKPILES SHALL BE BERMED AROUND THEIR PERIMETER TO PREVENT RUNOFF POLLUTION.
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COLORADO LICENSED 41215 04-11-13 PROFESSIONAL ENGINEER

SUMMIT MIDSTREAM

RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110, Grand Junction, Co. 81506
Phone: 970.241.4722 Fax: 970.241.8841

Summit Midstream

Couey Yard to 019EB Pipeline
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Sheet 1 of 2

PROJECT #: 1215-008	SCALE	DATE ISSUED: 04-11-2013	C3
DRAWN BY: hmc	HORIZ: AS NOTED		
CHECKED BY: mjk	VERT: N/A	SHEET NO. 3 OF 6 SHEETS	

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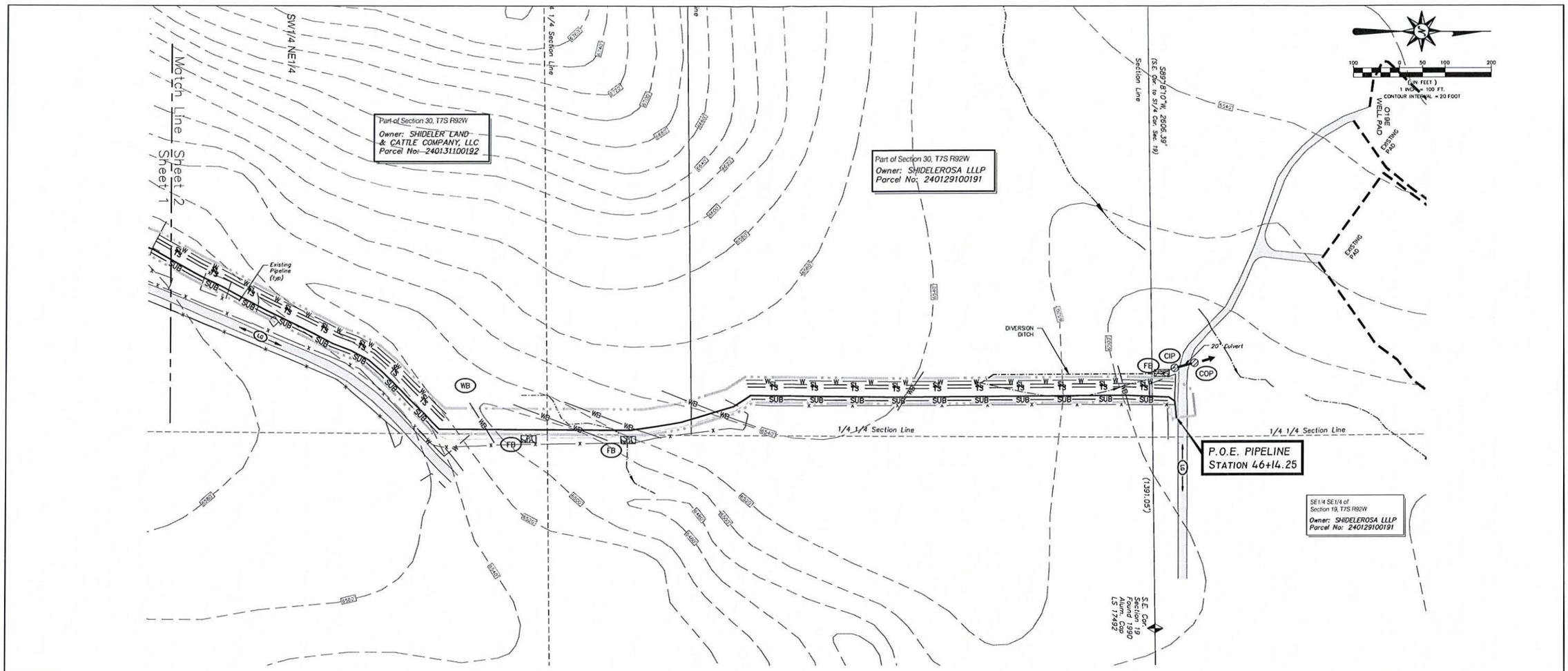

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4. SILT AND SEDIMENT SHALL BE REMOVED IF THERE IS A RISK OF SEDIMENT BYPASSING THE EROSION CONTROL FEATURE. SPECIFICALLY, SEDIMENT BUILDUP SHALL NOT EXCEED 1/3 THE HEIGHT OF ANY CHECK DAM OR BERM (INCLUDING INLET PROTECTION), OR WHEN SEDIMENT WITHIN A SEDIMENT BASIN GETS WITHIN 6 INCHES OF THE OUTLET INVERT.
5. WHEN THE TEMPORARY MEASURES ARE TO BE REMOVED, ANY SILT AND SEDIMENT DEPOSITS SHALL BE REMOVED AND SPREAD EVENLY IN OPEN AREAS AND SEEDED AS NECESSARY.

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UNCC Know what's below. Call before you dig. 811
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NO.	DATE	REVISIONS DESCRIPTION	BY

COLORADO LICENSED 41215 04-11-13 PROFESSIONAL ENGINEER

SUMMIT MIDSTREAM
RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110, Grand Junction, Co. 81506
Phone: 970.241.4722 Fax: 970.241.8841

Summit Midstream

Couey Yard to 019EB Pipeline
Construction Erosion Control Plan
Sheet 2 of 2

PROJECT #1215-008		SCALE	
DRAWN BY: hmc	HORIZ: AS NOTED	DATE ISSUED: 04-11-2013	C4
CHECKED BY: mjk	VERT: N/A	SHEET NO. 4 OF 6 SHEETS	

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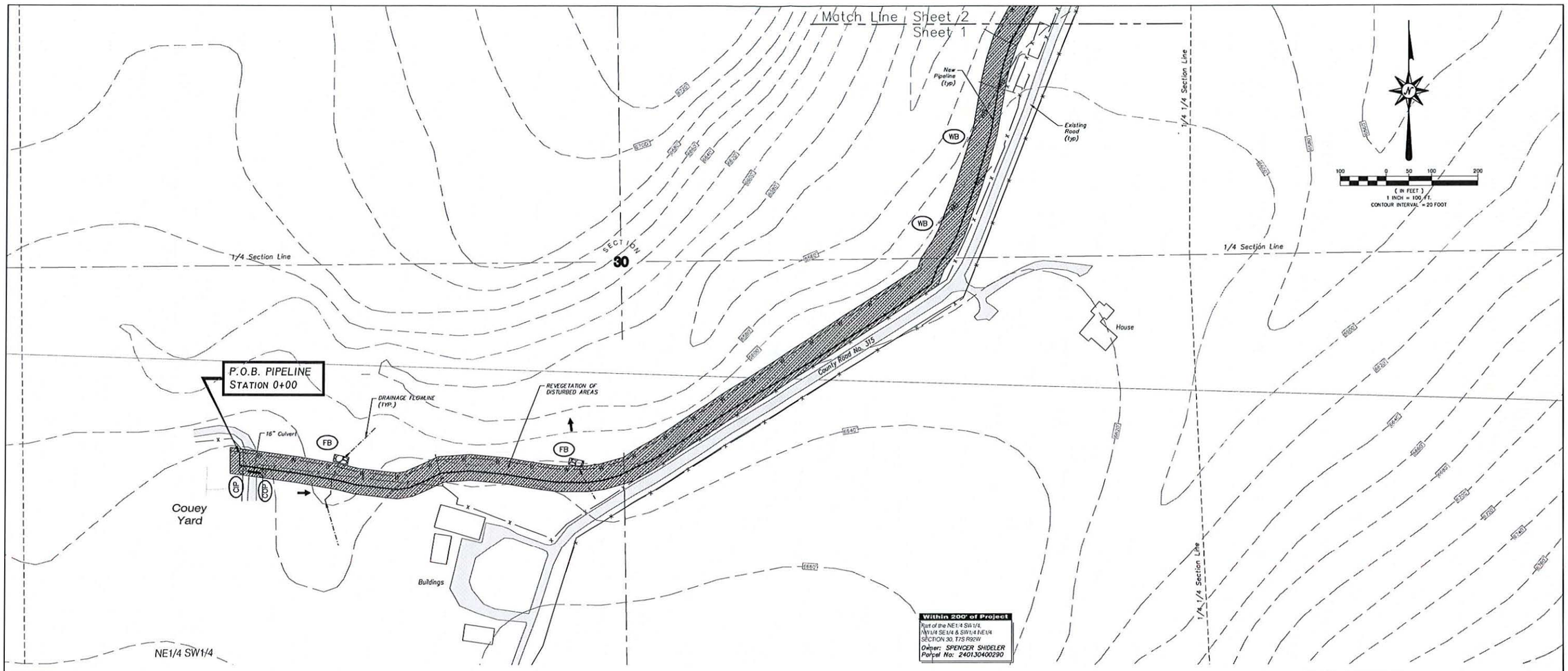

SITE DESCRIPTION

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2. ACCORDING TO THE NRCS WEB SITE, THE UPPER LAYER OF SOIL PRESENT AT THE PROJECT SITE CONSISTS OF VARIOUS SOILS THAT HAVE A HYDROLOGIC SOIL CLASSIFICATION OF B (LOW TO MODERATE RUNOFF POTENTIAL) & D (HIGH RUNOFF POTENTIAL). THE WHOLE SOIL EROSION K FACTOR FOR THESE SOILS IS .24, .32 & .37 MEANING THESE SOILS ARE MODERATELY ERODIVE.
3. STORMWATER FROM THIS SITE FOLLOW EXISTING DRAINAGE PATTERNS AS GRADES WILL BE RETURNED TO PRE-CONSTRUCTION ELEVATIONS/CONDITIONS. DRAINAGE FOR THIS AREA IS GENERALLY TO THE EAST TOWARDS MIDDLE MAMM CREEK, WHICH ULTIMATELY DRAINS INTO THE COLORADO RIVER.
4. THE RECEIVING BODY OF WATER IS THE COLORADO RIVER, APPROXIMATELY 10 MILES DOWNSTREAM OF THE SITE.
5. CONSTRUCTION ACTIVITY WILL CONSIST OF, IN THE FOLLOWING ORDER: ESTABLISHMENT OF PERIMETER STORMWATER BMPS, SITE CLEARING, TOPSOIL REMOVAL AND STOCKPILING, TRENCHING, PIPELINE INSTALLATION, BACKFILL, TOPSOIL SPREADING AND FINAL SEEDING. INTERMEDIATE STORMWATER BMPS WILL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED BY THE CONTRACTOR'S MEANS AND METHODS.
6. THE PRIMARY CONTAMINANT OF CONCERN FOR THIS SITE IS SEDIMENT. THE PROPOSED EROSION CONTROLS HAVE BEEN SELECTED AND PLACED TO MITIGATE THE POTENTIAL FOR SEDIMENT TRANSPORT FROM THE SITE.
7. EXISTING VEGETATION ON THE SITE CONSISTS PRIMARILY OF HIGH DESERT VEGETATION (SAGE, RABBIT BRUSH, JUNIPER, PINION PINE, OAK BRUSH, ETC.). VEGETATION WOULD BE CLASSIFIED IN GOOD AND FAIR CONDITION.
8. THE 100 YEAR RUNOFF SCS CURVE NUMBERS FOR THIS SITE ARE 41 FOR UNDEVELOPED UNDISTURBED AREAS AND 91 FOR NEWLY GRADED AREAS.

EROSION CONTROL MEASURES (PERFORMANCE STANDARDS)

INSTALLATION DETAILS AND MAINTENANCE GUIDELINES FOR THE ABOVE EROSION CONTROL MEASURES CAN BE FOUND IN CDOT STANDARDS, ON DENVER'S URBAN DRAINAGE AND FLOOD CONTROL DISTRICT WEBSITE, AND VARIOUS MANUFACTURE'S WEBSITES. VARIATIONS FROM THESE STANDARDS SHALL BE APPROVED BY THE CSWMP ADMINISTRATOR PRIOR TO INSTALLATION. THIS LIST IS NOT CONSIDERED COMPLETE OR ABSOLUTE, ADDITIONAL METHODS CAN AND SHOULD BE ADDED TO THIS PLAN IF REQUIRED. THIS CSWMP SHOULD BE KEPT CURRENT AND MODIFIED APPROPRIATELY BY THE CSWMP ADMINISTRATOR BASED ON ACTUAL FIELD CONDITIONS AND THE CONTRACTOR'S MEANS AND METHODS.

THE GENERAL REQUIREMENTS FOR EROSION CONTROL WORK SHALL BE AS FOLLOWS:

1. ANY GRADING SHALL BE CONDUCTED IN SUCH A MANNER TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
2. ALL GRADING SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED TO MINIMIZE THE SIZE AND DURATION OF EXPOSED (UNVEGETATED) AREA.
3. SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE CAPTURED AND REMOVED FROM RUNOFF WATER PRIOR TO LEAVING THE SITE.
4. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM THE GRADED AREA SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.
5. TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES.
6. ALL BMPs WILL BE IN PLACE PRIOR TO ANY MAJOR EARTHWORK.

DURING CONSTRUCTION (TEMPORARY MEASURES)

1. MATERIAL STOCKPILES SHALL BE BERMED AROUND THEIR PERIMETER TO PREVENT RUNOFF POLLUTION.
2. PLACE WATTLES, AND/OR BERM DOWNGRADIENT OF DISTURBED AREAS AND STOCKPILES.
3. COMPACT SOIL AND TOPSOIL TO THE REQUIREMENTS AS STATED IN THE GEOTECHNICAL RECOMMENDATIONS AND FINISH GRADE TO ELEVATIONS SHOWN ON THE SITE PLAN. ELIMINATE ANY LOW SPOTS PRIOR TO FINAL STABILIZATION.
4. CONTRACTOR SHALL HAVE A WATER TRUCK MADE AVAILABLE TO ASSIST IN CONTROLLING MOISTURE CONTENT AND DUST AND WIND EROSION.
5. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE CSWMP ADMINISTRATOR.
6. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.

AFTER CONSTRUCTION (PERMANENT MEASURES)

1. TOPSOIL WINDROWS SHALL BE SPREAD ON NEWLY CONSTRUCTED SLOPES PRIOR TO REVEGETATION.
2. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED WITH A CERTIFIED WEED-FREE NATIVE SEED MIX APPROPRIATE FOR SITE SOILS AND CONDITIONS. THESE AREAS SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER OR AT LEAST 70% OF PRE-CONSTRUCTION CONDITIONS EXISTS. IF NECESSARY, ADDITIONAL SEED, MULCH, AND/OR FERTILIZER SHOULD BE APPLIED TO ESTABLISH SAID VEGETATIVE COVER.

MAINTENANCE

1. ALL EROSION CONTROL MEASURES SHOULD BE INSPECTED TO DETERMINE IF REPAIRS OR SEDIMENT REMOVAL IS NECESSARY. THE MAXIMUM TIME BETWEEN INSPECTIONS SHALL BE 14 DAYS.
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COLORADO LICENSED 41215 04-11-13 PROFESSIONAL ENGINEER

SUMMIT MIDSTREAM

RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110
Grand Junction, Co. 81506
Phone: 970.241.4722
Fax: 970.241.8841

Summit Midstream

Couey Yard to 019EB Pipeline
Post-Construction Erosion Control Plan
Sheet 1 of 2

PROJECT #1215-008	SCALE	DATE ISSUED: 04-11-2013	C5
DRAWN BY: hmc	HORIZ: AS NOTED	SHEET NO. 5 OF 6 SHEETS	
CHECKED BY: mjk	VERT: N/A		

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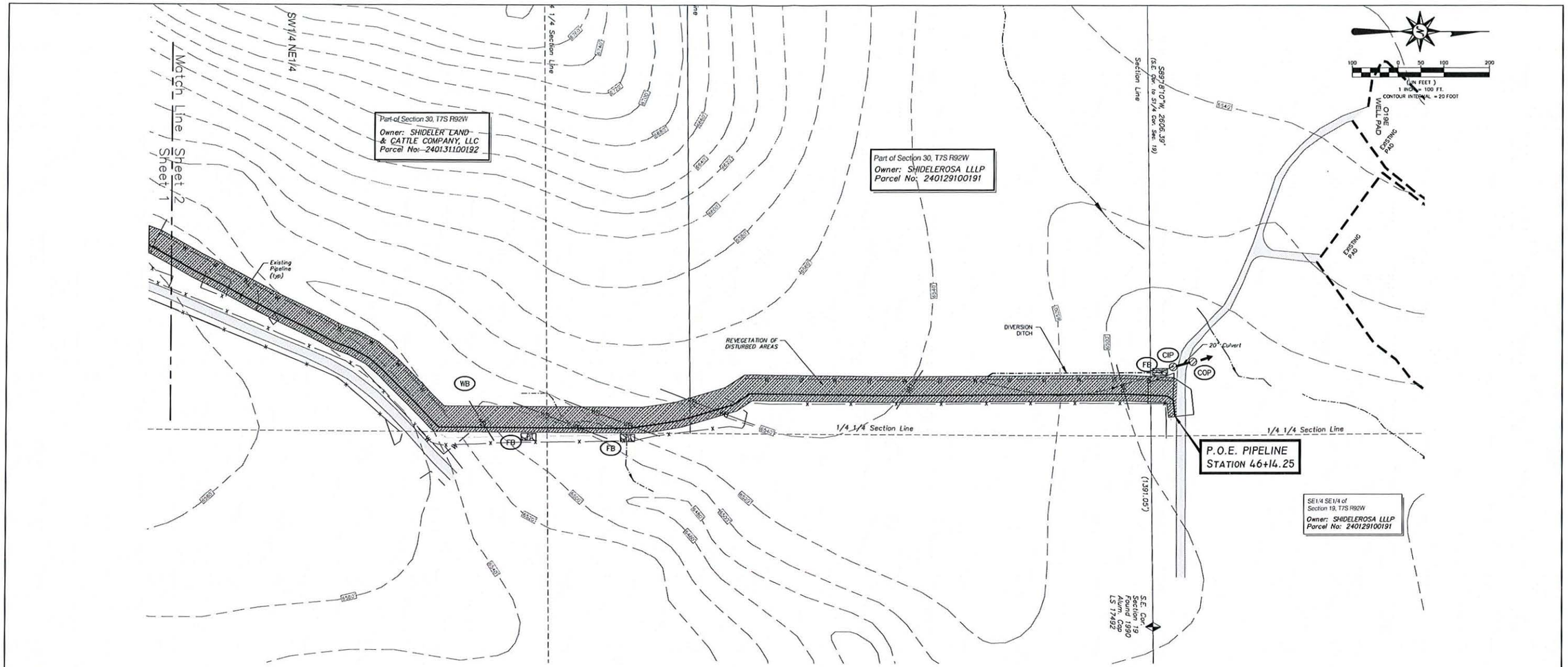

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9. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE SWMP-APPROVED ACCESS POINTS.
11. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON VISIBLE EVIDENCE FROM ABOVE GROUND STRUCTURES, MARKINGS BY THE RESPECTIVE UTILITY COMPANIES AND/OR THEIR LOCATOR SERVICES, AND DRAWINGS PROVIDED BY THE UTILITY COMPANIES. NO EXCAVATIONS WERE MADE DURING THIS SURVEY TO DETERMINE EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITIES AND STRUCTURES. ACTUAL LOCATIONS MAY VARY FROM THOSE AS SHOWN HEREON AND ADDITIONAL UNDERGROUND UTILITIES MAY EXIST. EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION ON THIS PROPERTY. EXTREME CAUTION SHOULD BE USED WHEN CROSSING OR COMING CLOSE TO THESE EXISTING LINES DURING CONSTRUCTION. THERE IS NO WARRANTY, EXPRESSED OR IMPLIED, BY ENCANA OIL & GAS (USA) INC. OR WASATCH SURVEYING AS TO THE COMPLETENESS OR EXACT LOCATION OF EXISTING UTILITIES.
12. EXISTING SURVEY INFORMATION (INCLUDING EXISTING UTILITIES) PROVIDED BY WASATCH SURVEYING, INC..
13. ORIGINAL DRAWING SIZE IS 24"x36".

BMP LEGEND

Installation details and maintenance guidelines for the above erosion control measures can be found in CDOT standards, on Denver's Urban Drainage and Flood Control District website, and various manufacture's websites. Variations from these standards shall be approved by the CSWMP Administrator prior to installation. This list is not considered complete or absolute, additional methods can and should be added to this plan if required. This CSWMP should be kept current and modified appropriately by the CSWMP Administrator based on actual field conditions and the Contractor's means and methods.

1		CD	CHECK DAM	13	TS	TS	TOPSOIL BERM
2		CIP	CULVER INLET PROTECTION	14	SL	SL	SLASH
3		COP	CULVERT OUTLET PROTECTION	15	SUB	SUB	SUBSOIL STOCKPILE
4			DIRECTION OF FLOW	16			EDGE OF WORKSPACE
5	LG	LG	LAND GRADING	17	B		BERM
6		MSA	MATERIALS STORAGE AREA	18		ECB	EROSION CONTROL BLANKET
7	WB	WB	WATER BAR	19		SD	SEDIMENT BASIN
8			DRAINAGE FLOW LINE	20		FB	ROCK FILTER BERM
9		TP	TOILETS	21			EXISTING CONTOUR (MAJOR)
10		VEM	VEHICLE EQUIPMENT & MAINTENANCE	22			EXISTING CONTOUR (MINOR)
11		WM	WASTE MANAGEMENT	23	x		EXISTING FENCE
12	W	WTL	STRAW WATTLE	24			SECTION LINE

** SLOPES 3:1 OR GREATER: SURFACE ROUGHENING, TOPSOIL SPREADING, BROADCAST SEEDING AMENDMENTS, AND HYDRAULIC EROSION CONTROL MULCH

SLOPES LESS THAN 3:1: SURFACE ROUGHENING, TOPSOIL SPREADING, DRILL SEEDING, AND CRIMPED STRAW MULCH

UNCC 811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	DATE	REVISIONS DESCRIPTION	BY

COLORADO LICENSED 41215 04-11-13 PROFESSIONAL ENGINEER

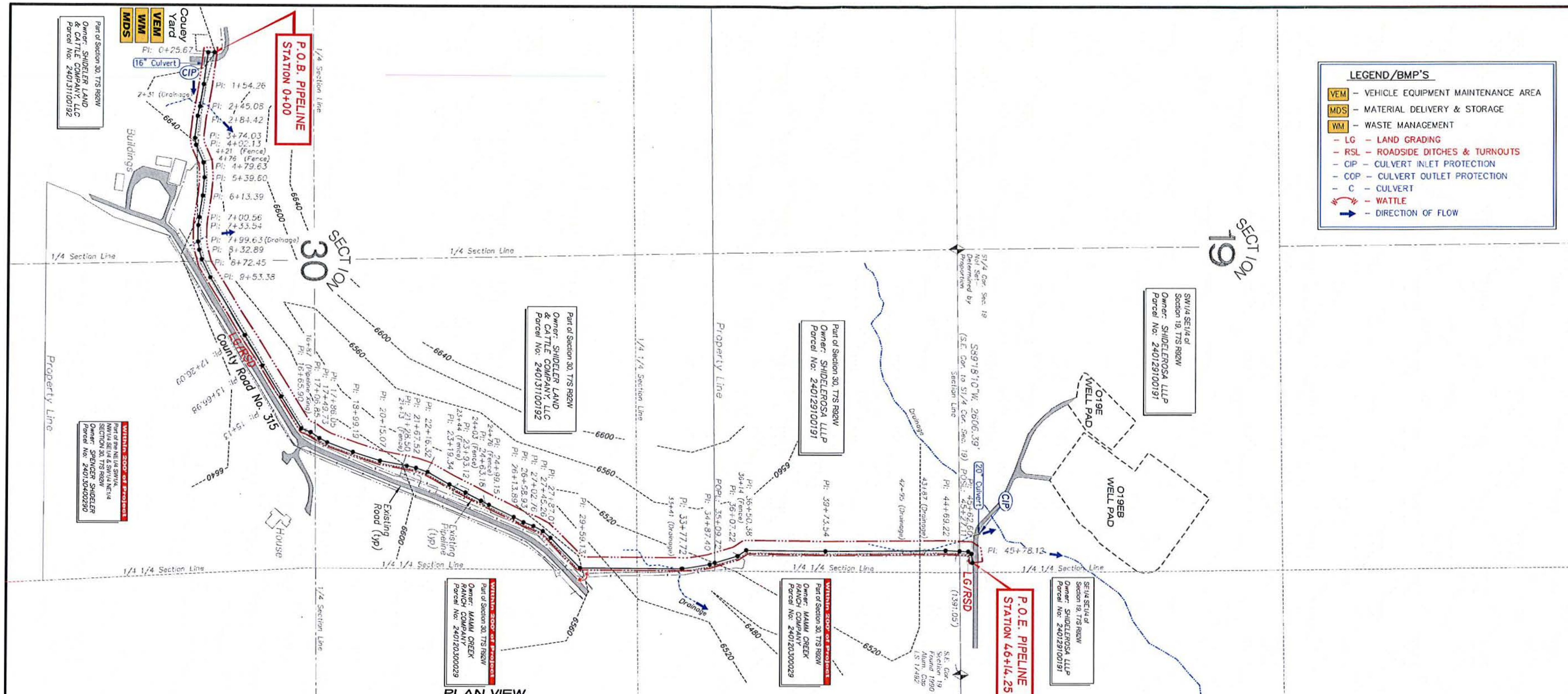
SUMMIT MIDSTREAM
RIVER CITY CONSULTANTS
744 Horizon Court, Suite 110, Grand Junction, Co. 81506
Phone: 970.241.4722 Fax: 970.241.8841

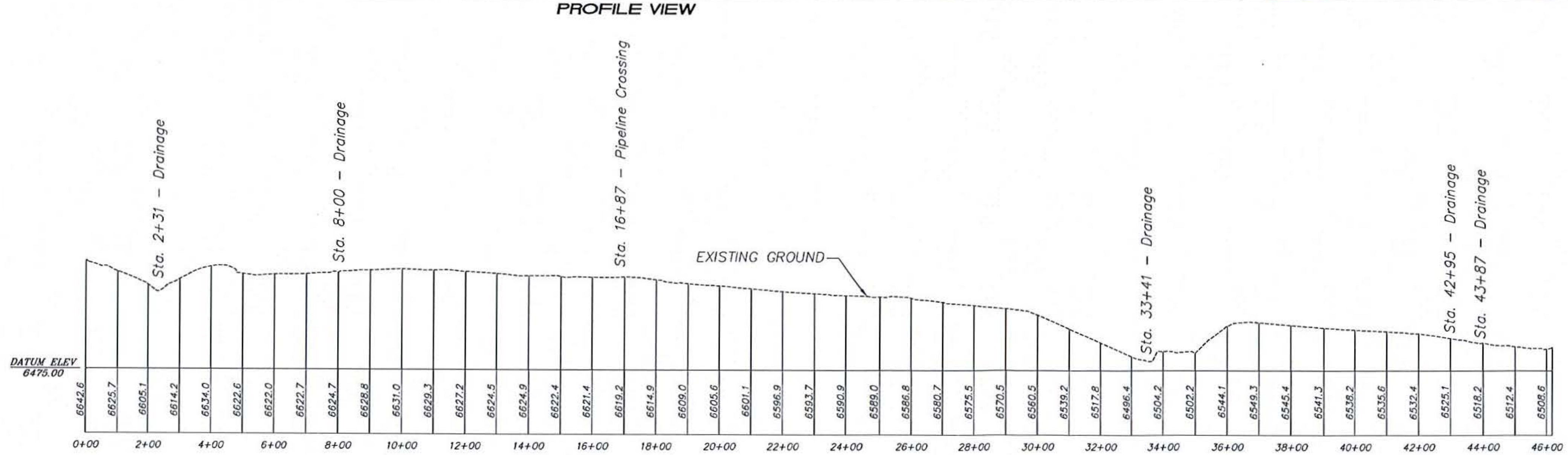
Summit Midstream

Couey Yard to 019EB Pipeline
Post-Construction Erosion Control Plan
Sheet 2 of 2

PROJECT #1215-008	SCALE	DATE ISSUED: 04-11-2013	C6
DRAWN BY: hmc	HORIZ: AS NOTED	SHEET NO. 6 OF 6 SHEETS	
CHECKED BY: mjk	VERT: N/A		

S:\PROJECTS\1215 Summit Midstream Partners\008 19 Loop Pipeline\design\1215-008 ECP.dwg 4/11/2013 1:07:16 PM





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

NOTE:

Underground utilities were located using a pipe locator, no lines were exposed. Therefore, true locations may vary from those shown on these drawings. Extreme caution should be used when crossing or coming close to these existing lines during construction. There is no warranty, expressed or implied, by Grand River Gathering, LLC or Wasatch Surveying as to the completeness or exact location of existing utilities.

Know what's below. Call before you dig.

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	SECTION	FEET	TOTAL
Shideler Land & Cattle Co. LLC	Sec. 30, T7S R92W	3509.72	3509.72
Shidelerosa LLC	Secs. 19 & 30, T7S R92W	1104.53	1104.53
		Total	4614.25

RIGHT-OF-WAY LIMITS BOX						
		Reference Points				
FROM	TO	Temporary Work Space Left	Permanent Right-of-Way Left	Permanent Right-of-Way Right	Temporary Work Space Right	Total
P.O.B.	STA: 8+72	20'	15'	15'	5'	55'
STA: 8+72	STA: 16+66	VARIES	15'	15'	VARIES	55'
STA: 16+66	STA: 29+59	25'	15'	15'	0'	55'
STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PREPARED BY: WASATCH SURVEYING 906 Main Street Evanston, Wyoming 82930 Phone No. (307) 789-4545

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO.: 13-12-04

REVISIONS			
0	First Issue	SGT	3/20/13
		BY	DATE

CENTERLINE LENGTH = 4,614.26'
TYPICAL R.O.W. WIDTH = 55'
TOTAL ACREAGE = 5.83 ACRES
CONSTRUCTION SITE BOUNDARY IS DEFINED BY THE R.O.W. LENGTH AND WIDTH AND IS EQUAL TO THE TOTAL AREA OF DISTURBANCE OF: 5.83 ACRES.
EDGE WORKSPACE

SURVEYOR:

PROJECT:

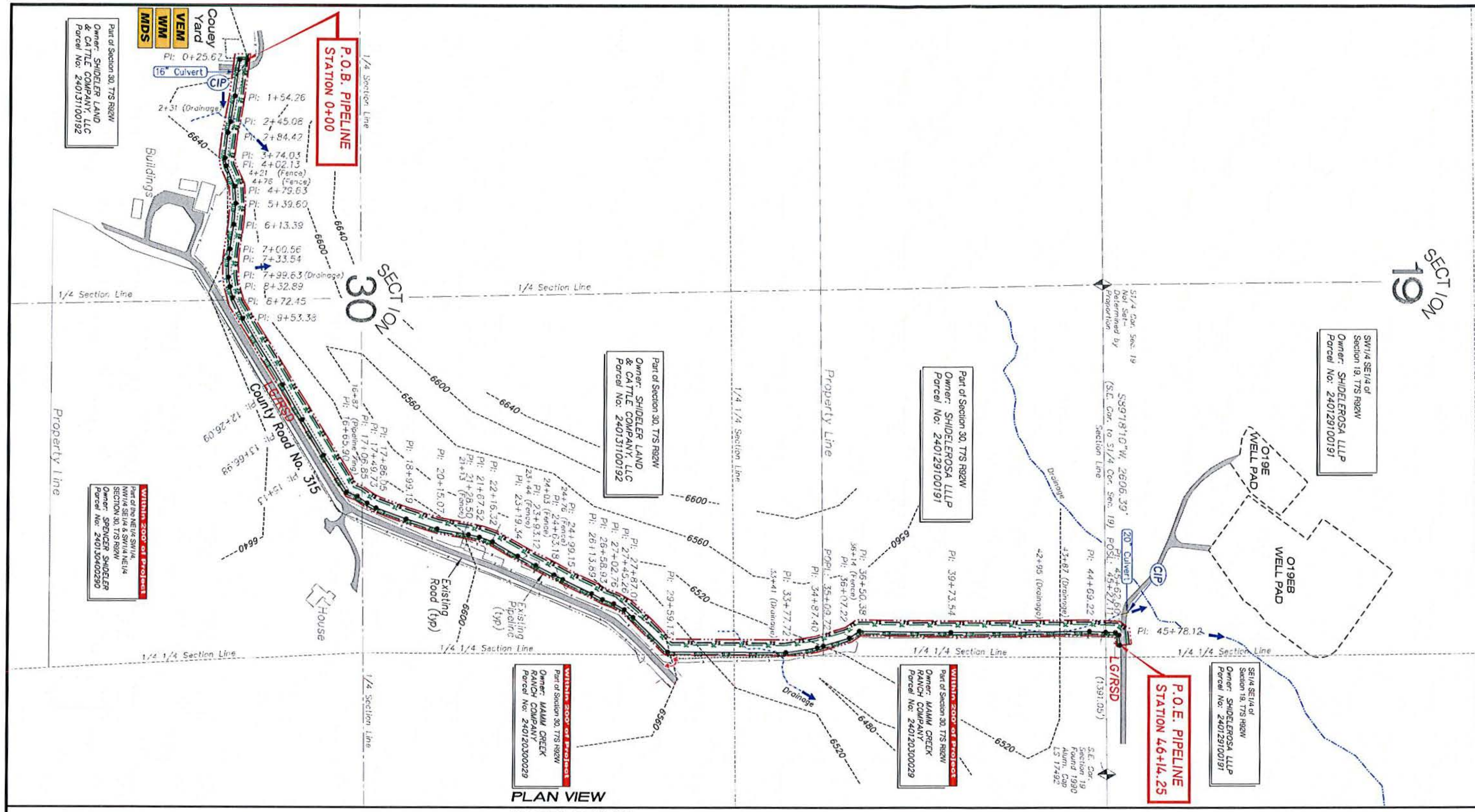
-PRE-CONSTRUCTION- STORMWATER SITE PLAN

Couey Yard to O19EB Pipeline

Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

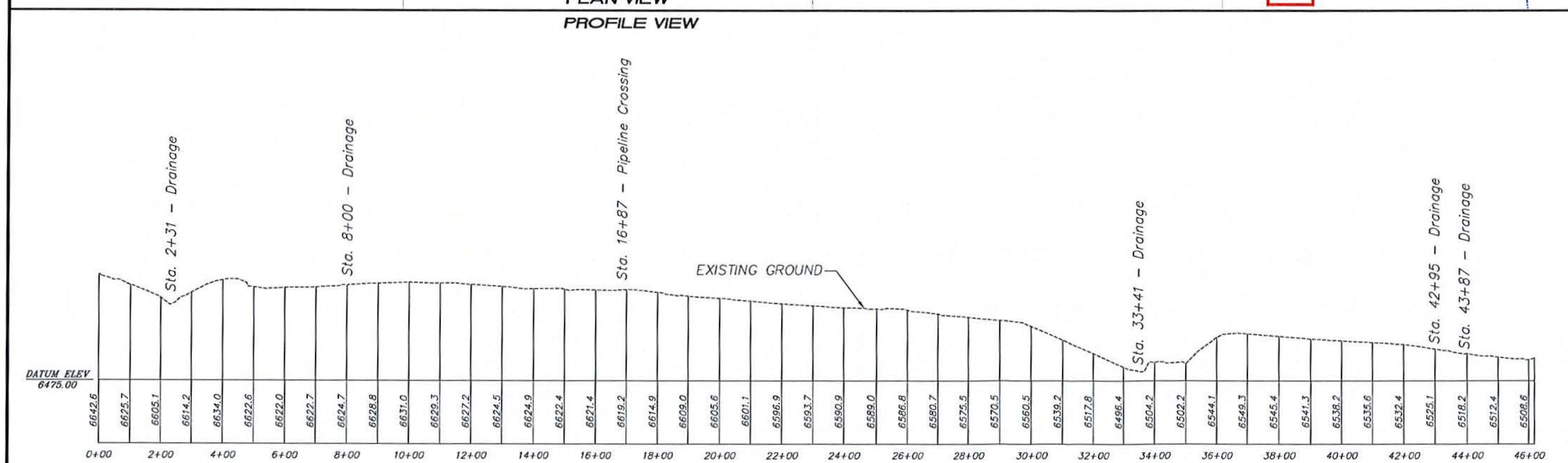
PREPARED FOR: SUMMIT MIDSTREAM

SHEET: 1 of 1



LEGEND/BMP'S

- VEM – VEHICLE EQUIPMENT MAINTENANCE AREA
- MDS – MATERIAL DELIVERY & STORAGE
- WM – WASTE MANAGEMENT
- LG – LAND GRADING
- RSL – ROADSIDE DITCHES & TURNOUTS
- CIP – CULVERT INLET PROTECTION
- COP – CULVERT OUTLET PROTECTION
- C – CULVERT
- SL – SLASH
- TS – TOPSOIL STOCKPILE
- SUB – SUBSOIL STOCKPILE
- – WATTLE
- – DIRECTION OF FLOW



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

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811 Know what's below. Call before you dig.

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STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PREPARED BY: WASATCH SURVEYING, 906 Main Street, Evanston, Wyoming 82930

SCALE: As Shown
DATE: March 20, 2013
PROJECT NO.: 13-12-04

REVISIONS: 0 – First Issue – SGT 3/20/13

CENTERLINE LENGTH = 4,614.26'
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TOTAL ACREAGE = 5.83 ACRES

SURVEYOR:

PROJECT:

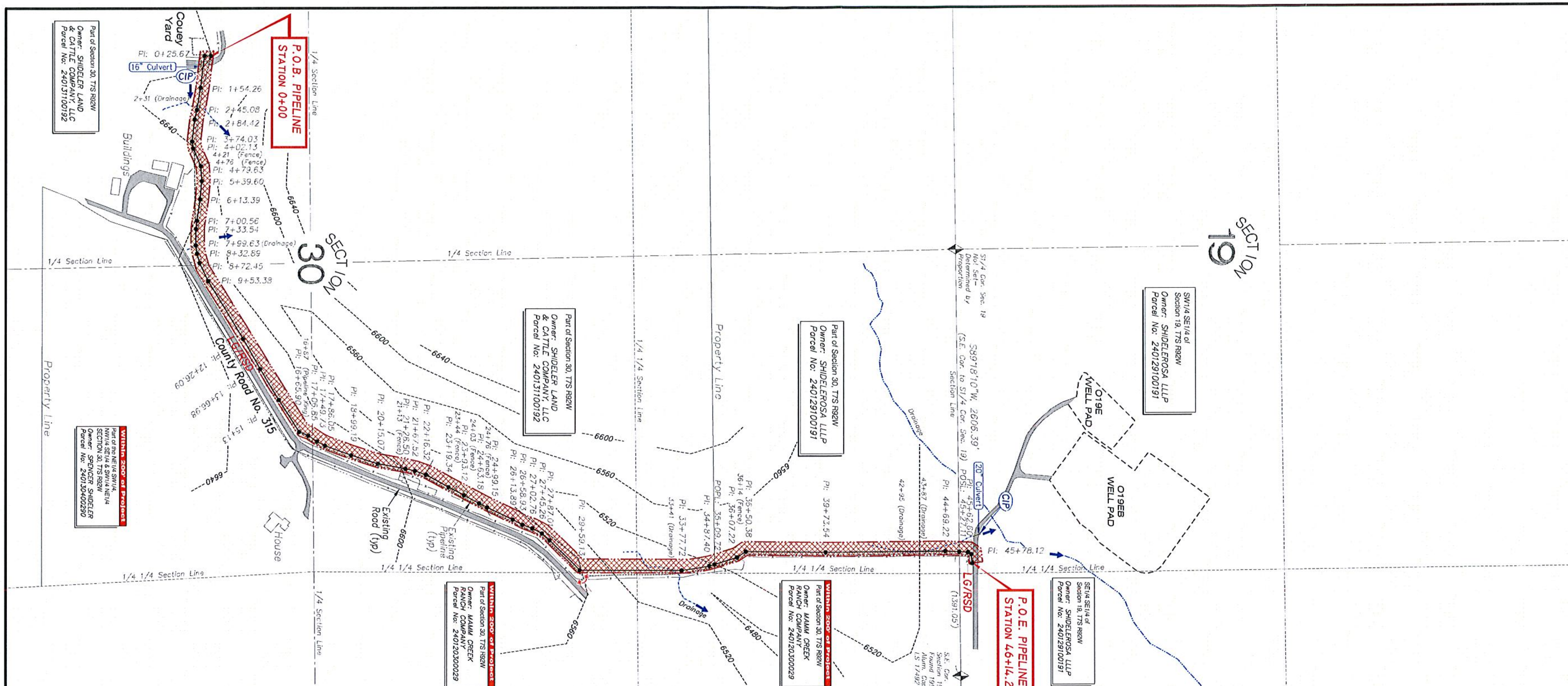
-CONSTRUCTION- STORMWATER SITE PLAN

Couey Yard to O19EB Pipeline

Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

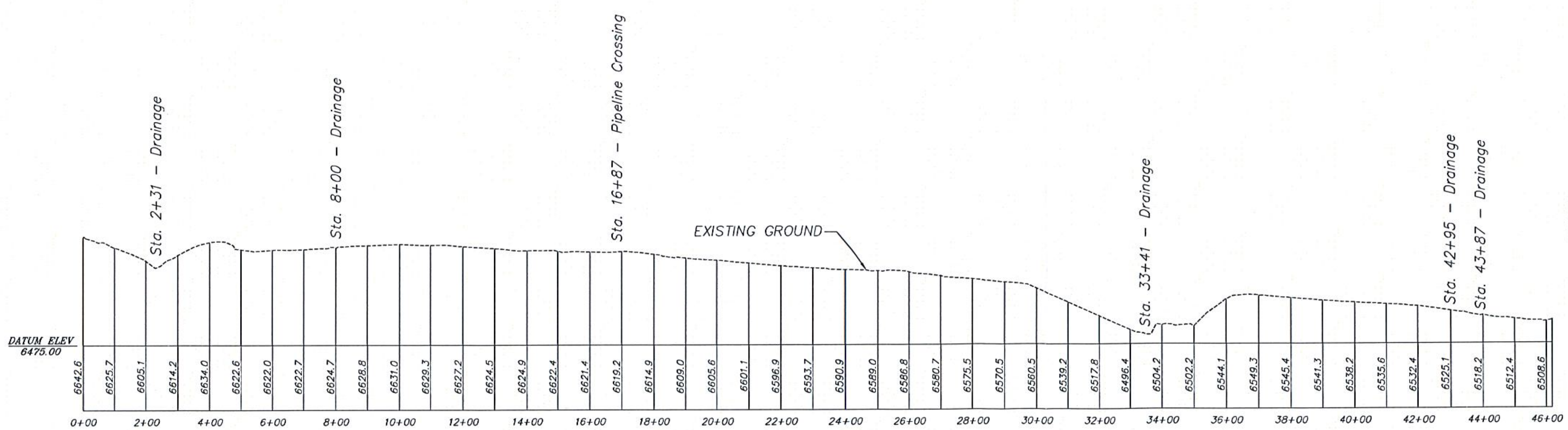
PREPARED FOR: SUMMIT MIDSTREAM

SHEET: 1 of 1



PLAN VIEW

PROFILE VIEW



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STA: 29+59	STA: 33+78	25'	20'	10'	0'	55'
STA: 33+78	P.O.E.	25'	15'	15'	0'	55'

PROJECT:

-FINAL RECLAMATION-
STORMWATER SITE PLAN

Couey Yard to O19EB Pipeline

Sections 19 & 30, T7S, R92W, 6th P.M.
Garfield County, Colorado

PREPARED FOR: SUMMIT MIDSTREAM

SHEET: 1 of 1

LANDOWNER INFORMATION

- Shideler Land & Cattle Company, LLC
- Shidelerosa, LLLP

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03/21/2013 01:55:39 PM Jean Alberico
1 of 9 Rec Fee:$51.00 Doc Fee:0.00 GARFIELD COUNTY CO

PIPELINE EASEMENT AGREEMENT

THIS PIPELINE EASEMENT AGREEMENT ("**Agreement**") is effective the 21 day of March, 2013, between **SHIDELER LAND AND CATTLE COMPANY, LLC**, a Colorado limited liability company ("**Grantor**"), whose address is 9667 County Road 315, Silt, Colorado 81652, and **GRAND RIVER GATHERING, LLC**, a Delaware limited liability company, ("**Grantee**"), whose mailing address is 2128 Railroad Avenue, Rifle, Colorado 81650.

RECITALS

A. Grantor owns the surface of the real property in Garfield County, Colorado (the "Property"), located in:

Township 7 South, Range 92 West, 6th PM
Section 30: W/2NE/4, N/2SW/4, NW/4SE/4

B. Grantee is in the business of transporting natural gas through pipelines in the vicinity of the Property.

C. Grantee wishes to install a single pipeline beneath the surface of the Property in accordance with the terms of this Agreement.

TERMS

THEREFORE, in consideration of the mutual covenants in this Agreement, and Grantee's agreement to pay the damages described in this Agreement, the parties agree as follows:

1. Grant. Grantor grants to Grantee a perpetual, non-exclusive pipeline easement thirty (30) feet in width ("Easement") across the Property as depicted on Exhibit A, to clear and excavate along a route, and to lay, construct, operate, maintain, inspect, test, repair, protect, remove and/or abandon one underground pipeline, pipeline markers, cathodic protection facilities, valves, test stations, risers, launcher and corrosion coupons necessary for the transportation of natural gas and its byproducts, including but not limited to water, condensate, crude oil, petroleum, petroleum products and derivatives thereof through pipelines. Grantor also grants to Grantee a license for the use of twenty-five (25) feet parallel to and adjoining the Easement, as generally depicted on Exhibit A, for temporary use during the initial installation of the pipeline.

2. Consideration. As consideration for the grant of the Easement, Grantee shall pay Grantor a one-time payment of 100.00 dollars and other valuable consideration upon execution of this Agreement. Except as otherwise provided in this Agreement, such payment shall

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03/21/2013 01:55:39 PM Jean Alberico
2 of 9 Rec Fee:$51.00 Doc Fee 0.00 GARFIELD COUNTY CO

constitute payment in full by Grantee for all damage to the Property associated with the construction, operation and maintenance of the pipeline within the Easement.

3. Construction.

3.1. Grantee shall complete installation of the pipeline and re-grading of the Property (exclusive of Grantee's reclamation obligations under Section 5) within three (3) months after the commencement of operations with heavy equipment ("Completion Date"). Grantee's failure to complete installation by the Completion Date shall result in a late fee of $1,000.00 per day being assessed against Grantee for each day it fails to complete installation beyond the Completion Date, provided that no late fee shall be assessed if failure to complete installation is caused by inclement weather or force beyond control of Grantee. Any late fee shall be due and payable to Grantor within thirty (30) days from the day it is assessed. Grantor's rights and remedies under this subsection 3.1 are not exclusive and are cumulative with any other rights and remedies Grantor may have under this Agreement or applicable law.

3.2. During initial construction and installation, and at all times thereafter, the pipeline shall be accessed only via the Easement and the road adjacent to the Easement, unless alternate access is explicitly permitted by Grantor in writing.

3.3. Grantee shall bury the pipeline within the Easement at a depth not fewer than forty-eight (48) inches, measured from the top of the pipeline, and shall install the pipeline so that they can be detected using a commonly available metal detector, except in those areas where plastic pipe is required due to the contours of the land.

3.4. As part of the initial installation of the pipeline, Grantee may remove as much fence located in the Easement as is reasonably necessary for the installation of the pipeline. Grantee shall be responsible for the reconstruction of any and all fence removed, including but not limited to materials and labor. Reconstructed fences shall be installed to Grantor's specifications.

3.5. Grantee shall haul off of the Property all trash.

3.6. Grantee shall immediately restore or repair any stream, ditch or water pipeline that is damaged during any construction on or use of the Easement so that the flow and/or delivery of water on the Property is not disrupted.

4. Grantor's Operations. During installation of the pipeline, and at all times thereafter, Grantee shall minimize disruption of, and interference with, any ranching, agriculture or other operations conducted on the Property now or in the future. Any gate used for accessing the Easement shall be closed. If Grantee fails to close any gate, Grantee is subject to $1,000

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penalty. Grantee will incur no penalty if gate is already open when accessing the Easement. No camping, hunting, recreational, or other non-pipeline related activities are allowed at any time on the Easement or the Property. Grantee will install temporary fencing and/ or livestock crossings where needed to control the movement of livestock. Grantee will abide by all posted speed limit signs, and will operate vehicles in a safe and responsible manner at all times.

5. Reclamation. Within a reasonable amount of time during the next growing season after installation of the pipeline, or any maintenance or repair of a pipeline that disturbs the surface of the Property, Grantee shall restore any affected area to its original pre-disturbance condition or better, and re-seed all such areas with appropriate grazing grasses or native vegetation (in Grantor's sole and absolute discretion) for ground cover and erosion control. Water bars shall be installed on any steep grades where necessary to prevent erosion of soil, as determined by Grantor in Grantor's sole and absolute discretion. All trenches, cuts and holes shall be re-filled only with original topsoil. Grantee shall immediately correct any trench settling that occurs during the term of the Easement. Grantee shall also be responsible for controlling all noxious weeds on any reclaimed area. Upon termination of the Easement in accordance with Section 8, Grantee shall drain the pipeline and cap them where they enter and exit the Property.

6. Future Construction. After initial installation of the pipeline, any future operations during which Grantee disturbs the land shall require Grantee to notify Grantor prior to commencement of operations. Grantee shall compensate Grantor for surface damages in an amount agreeable to both parties.

7. Compliance with Law. To the extent consistent with this Agreement, Grantee, its agents, designees, assignees and successors-in-interest shall, in connection with the use of the Easement, comply with all applicable federal, state and local laws, rules and regulations applicable to Grantee's use of the Easement, including, by way of example and not limitation, the common law and all other laws designed to protect the environment and public health or welfare.

8. No Other Facilities. Nothing in this Agreement shall be construed as granting Grantee the right to place any compressors, pipelines, valves, equipment, facilities or other improvements of any nature not listed in this agreement on the surface of the Property.

9. Term of Grant. The Easement shall continue until: (i) the parties' mutual, written agreement to terminate this Agreement, (ii) Grantee's written surrender of the Easement, or (iii) Grantee's non-use of the pipeline or Easement for three (3) consecutive years. Upon termination or surrender of the rights granted under this Agreement, Grantee shall execute and deliver to Grantor, within thirty (30) days after written demand therefor, an acknowledgment that this Agreement has been terminated.

10. Liability of Grantee. Grantee shall be liable for any injury to persons, property or livestock caused by or incident to the operations of Grantee, its agents, employees, contractors or

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subcontractors on the Property, or any extraordinary damages due to spills of materials, explosions or any other harmful activity of Grantee. Grantee shall indemnify and hold harmless Grantor from and against any and all liability, damages, costs, expenses, fines, penalties and fees (including without limitation attorney and consultant fees) incurred by or asserted against Grantor arising from or regarding or relating to (i) the operations of Grantee, its agents, employees, contractors or subcontractors on the Property or (ii) any other rights granted by this Agreement. Such indemnification shall extend to and encompass, but shall not be limited to, all claims, demands, actions or other matters that arise under the common law or other laws designed to protect the environment and public health or welfare. Grantee shall defend Grantor or reimburse Grantor as expenses are incurred for Grantor's defense against any claims, demands, actions or other matters, whether brought or asserted by federal, state or local governmental bodies or officials, or by private persons, which are asserted pursuant to or brought under any such laws. All of Grantee's obligations stated in this Section 9 shall survive termination of this Agreement.

11. Insurance. Grantee shall keep its operations insured, or comply with applicable self-insurance laws and regulations, for automobile, liability and workmen's compensation insurance, and for any damages incurred on the Property.

12. Grantee Liens. Grantee shall, at its sole expense, keep the Property free and clear of all liens and encumbrances resulting from Grantee's and its agents' activities on the Property, and shall indemnify and hold harmless Grantor from and against any and all liens, claims, demands, costs and expenses, including, without limitation, attorney fees and court costs, in connection with or arising out of any work done, labor performed, or materials furnished. Notwithstanding anything in this Agreement to the contrary, Grantee shall have the right and power to hypothecate, mortgage, pledge or encumber its interest in this Agreement.

13. No Warranty of Title. This Agreement is made subject to any and all existing easements, rights-of-way, liens, agreements, burdens, encumbrances, restrictions and defects in title affecting the Property. Grantor does not in any way warrant or guarantee title to the Property.

14. Non-Exclusive Use and Reservations. All rights granted in this Agreement are limited to the specific grants described in this Agreement. Grantor reserves to itself and its successors and assigns all rights not specifically granted to Grantee in this Agreement, including the right to the use and enjoyment of the surface of the Easement, so long as such use does not unreasonably hinder, conflict with, or interfere with Grantee's rights under this Agreement. . Grantor agrees not to substantially change the grade over the Easement, and shall not build, create, construct, or permit to be built, created, or constructed, any permanent building or lake over the Easement.

15. Waiver. The failure of either party to enforce any of its rights under this Agreement upon any occasion shall not be deemed a waiver of such rights on any subsequent

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occasion(s). The waiver, either express or implied, by any party of any of the rights, terms or conditions in this Agreement shall not be deemed as or constitute a waiver of any other rights, terms or conditions in this Agreement. Any waiver, in order to be valid and effective, must be in writing.

16. Survival of Obligations. All obligations, indemnifications, duties and liabilities undertaken by Grantee under this Agreement shall survive the termination of this Agreement.

17. Merger of Prior Agreements. This Agreement is the definitive understanding among the parties and supersedes and replaces all prior discussions, negotiations, commitments, and understandings relating to the subject of this agreement.

18. Amendments. This Agreement may only be amended by the written agreement of both parties. This Agreement cannot be amended or terminated orally.

19. Headings. Section headings or captions contained in this Agreement are inserted only as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of this Agreement or the intent of any provision.

20. Construction. Whenever required by the context of this Agreement, the singular shall include the plural, and vice versa; and the masculine gender shall include the feminine and neuter genders, and vice versa. The provisions of this Agreement have been independently, separately and freely negotiated by the parties as if drafted by both of them. The parties waive any statutory or common law presumption that would serve to have this Agreement construed in favor of or against either party.

21. Applicable Law and Attorney Fees. This Agreement and the rights of the parties under it shall be governed by and interpreted in accordance with the laws of the State of Colorado, by the District Court of Garfield County, Colorado. In the event of a dispute involving or related to any term or condition of this Agreement, the non-breaching party shall be entitled to recover its reasonable costs and attorney fees, including post-judgment collection costs, in addition to actual damages.

22. Heirs, Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, successors and assigns. The Easement granted in this Agreement shall run with the land and is not a personal covenant; provided, however, that assignment by Grantee of some or all of its rights hereunder shall not release Grantee from liability under this Agreement, unless specifically released by Grantor in writing.

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GRANTOR:

SHIDELER LAND AND CATTLE, LLC

John Shideler
Manager

STATE OF Colorado)
) ss.
COUNTY OF Garfield)

The foregoing instrument was acknowledged before me this 20 day of March, 2013, by John Shideler as Manager of Shideler Land and Cattle Company, LLC, Grantor.

Witness my hand and official seal.
My Commission Expires: 4/1/2016

(Seal)

JARROD BARNARD
Notary Public
State of Colorado

Notary Public

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03/21/2013 01:55:39 PM Jean Alberico
1 of 7 Rec Fee:$41.00 Doc Fee 0.00 GARFIELD COUNTY CO

PROJECT: O19EB 12" Extension from the Couey VY

TRACT NUMBER: 2

COUNTY: Garfield

PIPELINE RIGHT-OF-WAY GRANT

FOR AND IN CONSIDERATION of the sum of Ten Dollars ($10.00) and other valuable consideration, the receipt of which is hereby acknowledged, **SHIDELEROSA LLLP**, 1411 CR 316 Silt, CO 81652 **"GRANTOR"**, hereby grants unto **GRAND RIVER GATHERING**, L.L.C 2128 Railroad Avenue, Ste. #106, Rifle, CO 81650 **"GRANTEE"** its successors and assigns, a non- exclusive easement, right-of-way and the right to lay, maintain, inspect, repair, replace, erect, operate, and remove one pipeline and such drips, valves, fittings, meters, and other equipment appurtenances as may be necessary for the operation, over, through, upon, under and across the following described lands located in Garfield County, Colorado, to- wit:

Township 7 South, Range 92 West, 6th P.M.

Section 19: SW4SE4

Section 30: NW4NE4

IT IS MUTUALLY UNDERSTOOD AND AGREED BETWEEN THE PARTIES AS FOLLOWS:

1. In addition to the consideration hereinabove stated, Grantee agrees to pay Grantor Ten Dollars and other good and valuable consideration as damages to the growing foliage for the initial installation of said pipeline. Damages caused by future excavations or operations shall be settled by mutual consent.

2. Immediately after installation of the pipeline. Grantee agrees to restore the ground by adequately tamping and packing to a condition as nearly as possible, as it existed prior to the installation of the pipeline. Grantee will maintain the easement so as to minimize any erosion problems that arise due to construction of the pipeline.

3. Grantee agrees that any pipeline installed shall be at a minimum depth of 48 inches below the surface of the ground. The right-of-way granted shall be fifteen (15.00) feet of either side of the centerline hereof, except that during the initial installation of the pipeline, Grantor, for the consideration stated above, hereby grants unto the Grantee the right to access the right-of-way twenty-five (25) feet, for an additional temporary work space, on either side of the centerline described in Exhibit "A" hereof as it runs through the above referenced lands. The Additional right-of-way and right of access shall in no case endure for a period in excess of one hundred eighty days from the date hereof or the completion of initial installation, whichever period is shorter.

4. All equipment or appurtenances to the pipeline, which shall be on or above the surface of the ground, as shown on the attached Exhibit "B" shall be installed in a manner to protect the Grantor's livestock when necessary. Any above ground installations will be made with the written consent of Grantor. No compressors shall be installed above described property without written consent of the Grantor.

5. Grantee agrees that during construction of said pipeline, livestock crossing will be provided where necessary. Further, all fences that must be severed or removed for installation and maintenance will be reinforced prior to severing adjacent to where the cut is made to prevent damage to the fence line. Temporary gates to preclude the escape of Grantor's livestock shall be installed where necessary. All fences that are cut or removed shall be restored in as good a condition as existed prior to installation of the pipeline.

6. The right-of-way easement herein granted shall terminate and all rights there under shall revert to Grantor when the pipeline located therein has not been used by Grantee for a period of one (1) year, except when non-use is caused by acts or circumstances beyond the control of Grantee.

7. Grantee shall pay the costs of recording and surveying said easement.

8. Grantor will not hold Grantee liable for damages incurred by Grantor as a result of Grantor's activities on the easement not compatible with the purposes contemplated herein.

9. Grantee will indemnify and hold harmless Grantor for any legal actions as a consequence of Grantee's

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activities.

10. The rights granted herein may be assigned in whole or in part.

11. This Agreement shall be binding upon heirs, successors, and assigns of Grantee and Grantor and shall be a covenant running with this land.

12 Grantee agrees to re-seed this easement after construction is completed until a cover crop is started to prevent erosion.

13. Gates shall be kept closed at all times and no cattle guards shall be installed on the property unless written consent is granted by the Grantor.

14 Grantee agrees to keep the pipeline right-of-way site clean and kept as natural as possible to the satisfaction of the owners. No junk, trash, debris or waste products shall be left on the surface or buried on the property.

15. Any pipeline constructed shall be buried four (4) feet underground. Any pipeline that becomes exposed shall be repaired immediately.

16. No firearms or dogs shall be permitted on the property.

17. Grantee shall be responsible for damages not mentioned in this agreement which are the result of Grantee's operations.

18. No person or vehicle shall ever leave the road right-of-way.

19. When constructing the pipeline on the above described property, any topsoils shall be segregated and replaced. At the discretion of the Grantor, any rocks shall be buried or put into drainage areas designated by Grantor.

20. Final reclamation shall be conducted pursuant to the then existing Colorado Oil and Gas Conservation Commission rules and regulations. Upon termination or abandonment of this pipeline, Grantor agrees to disconnect all pipelines from any producing source, blow out the line and fill the line with water.

21. Grantee agrees to maintain minimal noise levels during the construction and operation of this pipeline.

GRANTOR:

SHIDELEROSA LLLP

By: Barry C. Shidler
Name: Barry C. Shidler
Title: General Partner

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Notary Page to Pipeline Right-of-Way Grant dated the 21 of March, 2013, by and between SHIDELEROSA LLLP and Grand River Gathering, LLC.

IN WITNESS WHEREOF: Grantor has executed this agreement this 21 day of March, 2013.

==========

ACKNOWLEDGMENT

STATE OF COLORADO)
) ss.
COUNTY OF GARFIELD)

The foregoing instrument was acknowledged before me this 21 day of March, 2013, by Barry C. Shideler as General Partner of SHIDELEROSA LLLP known to me to be the person described in and who executed the foregoing instrument, and who acknowledged to me that he executed the same.

Witness my hand and official seal.

Joe Haney
NOTARY PUBLIC

JOE HANEY NOTARY PUBLIC STATE OF COLORADO

My Commission expires: 9-30-13

My address is: Glenwood Springs, Co

COUEY YARD TO O19EB PIPELINE

INTEGRATED VEGETATION AND NOXIOUS WEED MANAGEMENT PLAN

GARFIELD COUNTY, COLORADO

Cover Photo: Looking north toward O19EB along proposed pipeline alignment.

Prepared for:
Summit Midstream Partners
Rifle, CO

Prepared by:
WestWater Engineering
2516 Foresight Circle #1
Grand Junction, CO 81505
(970)241-7076

March 2013

1.0 INTRODUCTION

1.1 Project Description

At the request of Summit Midstream Partners, LLC. (Summit), WestWater Engineering (WWE) has prepared an Integrated Vegetation and Noxious Weed Management Plan for the proposed Couey Yard to O19EB gas pipeline project. The project would be located entirely on privately owned lands within Garfield County, Colorado southeast of Rifle.

The legal location of the pipeline is as follows (Figure1):

Sixth Principal Meridian

Sections 19 and 30, Township 7 South, Range 92 West

The project area can be accessed via Garfield County Road 315. The current primary uses of the land are natural gas development, agriculture, rangeland, and wildlife habitat.

1.2 General Survey Information

Noxious weed surveys were conducted along the proposed pipeline on March 18, 2013. Surveys were conducted prior to the typical growing and flowering season for most noxious weeds; however the previous year's stalks could be identified at the time of surveys. Portions of the pipeline alignment were still snow covered at the time of surveys which made identification of rosettes impossible. Survey findings and locations of noxious weeds are provided in this report (Appendix A). Additionally, this report provides recommendations for the management of noxious weeds found along the pipeline alignment. Noxious weeds were recorded using handheld GPS units in datum: NAD83, Zone 13.

2.0 LANDSCAPE SETTING

2.1 Terrain

The project would be located along the mesas and benches above Mamm Creek (Figure 1). Elevation in the project area is approximately 6,600 feet.

2.2 Vegetation

The majority of the pipeline alignment would parallel revegetated pipeline corridors along Garfield County Road 315, consisting of sagebrush shrublands, scattered pinyon/juniper trees, and mixed mountain shrublands. Common plants observed in the project area are described in Table 1.

Table 1. Common Plants Observed within Project Area.

Scientific name	Common Name	Abundance*
Agropyron cristatum	Crested wheatgrass	xx
Artemesia tridentata wyomngensis	Basin big sagebrush	xxx
Bassia prostrata	Kochia	xx
Bromus tectorum	Cheatgrass	xx
Cercocarpus montanus	Mountain mahogany	xx

Scientific name	Common Name	Abundance*
Ericameria nauseosa	Rubber rabbitbrush	xx
Grindelia spp.	Gumweed	xx
Melilotus officinalis	Yellow sweetclover	xx
Pascopyrum smithii	Western wheatgrass	xx
Quercus gambelii	Gambel oak	xx
Salsola spp.	Russian thistle	xx
Symphoricarpos oreophilus	Mountain snowberry	x

*x=least abundant, xx=moderately abundant, xxx=most abundant

3.0 NOXIOUS WEEDS

3.1 Introduction to Noxious Weeds

Noxious weeds are plants that are not native to an area. Most noxious weed species were introduced from Europe or Asia, either accidentally or as ornamentals that have escaped. Once these non-natives are established in a new environment they tend to spread quickly because the insects, diseases, and animals that normally control them are absent. Noxious weeds are spread by man, animals, water, and wind. Prime locations for the establishment of noxious weeds include: roadsides, sites cleared for construction, areas that are overused by animals or humans, wetlands, and riparian corridors. Subsequent to soil disturbances, vegetation communities can be susceptible to infestations of invasive or exotic weed species. Vegetation removal and soil disturbance during construction can create optimal conditions for the establishment of invasive non-native species. Construction equipment traveling from weed infested areas into weed free areas could disperse noxious or invasive weed seeds and propagates, resulting in the establishment of these weeds in previously weed free areas.

The Colorado Noxious Weed Act (State of Colorado 2005) requires local governing bodies to develop noxious weed management plans. The State of Colorado and Garfield County maintain a list of plants that are considered to be noxious weeds. The State of Colorado noxious weed list includes three categories: List A, List B, and List C. List A species must be eradicated whenever detected. List B species include weeds whose spread should be halted. List C species are widespread, but the State will assist local jurisdictions which choose to manage those weeds. Garfield County has developed a weed management program and has compiled a list of noxious weeds in their county (Garfield County 2002).

3.2 Observations

Noxious weeds observed along the pipeline alignment include cheatgrass, houndstongue, bull thistle, and musk thistle. Noxious weeds recorded during surveys are shown on Figure 1 and described in Appendix A. Due to the scattered abundance of cheatgrass this species was not recorded with GPS units.

Houndstongue was observed scattered along the southern portion of the pipeline, while bull thistle and musk thistle were observed in low densities near the crossing of a tributary to Middle Mamm Creek (Figure 1). Cheatgrass was observed throughout the survey area in moderate densities.

3.3 Integrated Weed Management

Control of invasive species is a difficult task and requires intensive ongoing control measures. Care must be taken to prevent damage to desirable plant species during treatments to avoid further infestations by other pioneer invaders. Weed management is best achieved through a variety of methods over a long period of time including: inventory (surveys), direct treatments, prevention through best management practices, monitoring of treatment efficacy, and subsequent detection efforts. Weed management is often done primarily to control existing species and to prevent further infestations (existing and new species) rather than eradication. After successful and effective management, decreases in infestation size and density can be expected, and after several years of successful management practices eradication is sometimes possible.

3.4 Prevention and Assessment of Noxious Weed Infestations

Weed management is costly and heavy infestations may exceed the economic threshold for practical treatment. Prevention is especially valuable in the case of noxious weed management. Several simple practices should be employed to prevent most weed infestations. The following practices should be adopted for any activity to reduce the costs of noxious weed control through prevention:

- Prior to delivery to the site, equipment should be thoroughly cleaned of soils remaining from previous construction sites which may be contaminated with noxious weeds.
- If working in sites with weed seed contaminated soil, equipment should be cleaned of potentially seed bearing soils and vegetative debris at the infested area prior to moving to uncontaminated terrain.
- All maintenance vehicles should be regularly cleaned of soil.
- Avoid driving vehicles through areas where weed infestations exist.

Assessment of the existence and extent of noxious weeds for an area is essential for the development of an integrated weed management plan. This report provides an initial assessment of the occurrence of noxious weeds for the project area. In order to continue effective management of noxious weeds, further inventory and analysis is necessary to 1) determine the effectiveness of the past treatment strategies; 2) modify the treatment plan if necessary; and 3) detect new infestations early, resulting in more economical treatments.

3.5 Treatment and Control of Noxious Weed Infestations

Control methods for the listed noxious weed species found in the project area are described in Table 2.

Table 2. Weed Control Methods

Common Name Scientific Name USDA Symbol	Type*	Control Methods
Cheatgrass *Bromus tectorum* BRTE	A	Eliminate seed source. Re-vegetate with native grasses. Herbicide treatment in early spring and fall. Avoid overgrazing.
Houndstongue ***Cynoglossum officinale*** **CYOF**	**B**	**Reseed disturbed sites with fast growing grasses, physical removal of plants at flowering or early seed formation, herbicides at pre-bud or rosette stage.**
Musk thistle ***Carduus nutans*** **CANU4**	**B**	**Prevent seed production by applying herbicides during the spring or fall to rosettes up to the early flower growth stage.**
Bull Thistle *Cirsium vulgare* CIVU	B	Mow or hand cutting at bolting or early flowering; Cut and bag mature seed heads. Herbicides in rosette stage; tilling in the rosette stage.

* Type: A = annual; B = biennial; P = perennial; **Bold** = Garfield County List

3.6 Recommended Treatment Strategies

It is important to know whether the target is an annual, biennial, or perennial to select strategies for effective control and eradication. Treatment strategies are different depending on plant type, and are summarized in Tables 3 and 4. Herbicides should not always be the first treatment of choice when other methods can be effectively employed.

Table 3. Treatment Strategies for Annual and Biennial Noxious Weeds
Target: Prevent Seed Production

1. Hand grub (pull), hoe, till, cultivate in rosette stage and before flowering or seed maturity. If seeds develop, cut and bag seed heads.
2. Cut roots with a spade just below soil level.
3. Treat with herbicide in rosette or bolting stage, before flowering.
4. Mow biennials after bolting stage but before seed set. Mowing annuals will not prevent flowering but can reduce total seed production.

(Sirota 2004)

Table 4. Treatment Strategies for Perennials

Target: Deplete nutrient reserves in root system, prevent seed production

1. Allow plants to expend as much energy from root system as possible. Do not treat when first emerging in spring but allow growth to bud/bloom stage. If seeds develop cut and bag if possible.
2. Herbicide treatment at bud to bloom stage or in the fall (recommended after August 15 when natural precipitation is present). In the fall plants draw nutrients into the roots for winter storage. Herbicides will be drawn down to the roots more efficiently at this time due to translocation of nutrients to roots rather than leaves. If the weed patch has been present for a long period of time another season of seed production is not as important as getting the herbicide into the root system. Spraying in fall (after middle August) will kill the following year's shoots, which are being formed on the roots at this time.
3. Mowing usually is not recommended because the plants will flower anyway, rather, seed production should be reduced. Many studies have shown that mowing perennials and spraying the regrowth is not as effective as spraying without mowing. Effect of mowing is species dependent therefore it is imperative to know the species and its basic biology. Timing of application must be done when biologically appropriate, which is not necessarily convenient.
4. Tillage may or may not be effective. Most perennial roots can sprout from pieces only 0.5 inch – 1.0 inch long. Clean machinery thoroughly before leaving the weed patch.
5. Hand pulling is generally not recommended for perennial species unless you know the plants are seedlings and not established plants. Hand pulling can be effective on small patches but is very labor intensive because it must be done repeatedly.

(Sirota 2004)

Some weeds, particularly annuals and biennials, can develop resistance to herbicides. The ability to quickly develop immunity to herbicides, especially when they are used incorrectly, makes it imperative to use the proper chemicals at the correct time in the specified concentration. Most misuse is centered on excessive application either in concentration or frequency. This results in mostly top kill and an immune phenotype.

Construction: The following best management practices will be adopted for any construction project to reduce the cost of noxious weed control and aid in prevention efforts:

- Top soil, where present, will be segregated from deeper soils and replaced as top soil on the final grade, a process known as live topsoil handling;
- Wetland vegetation will be live handled like sod, temporarily watered if necessary, and placed over excavated sub-soil relative to the position from which the wetland sod was removed;
- Cut-off collars will be placed on all wetland and stream crossings to prevent back washing or draining of important aquatic resources;
- In all cases temporary disturbance will be kept to an absolute minimum;

- Equipment and materials handling will be done on established sites to reduce area and extent of soil compaction;
- Disturbances will be reseeded at the appropriate time and with the recommended mix as outlined in the revegetation and reclamation section of this document;
- Topsoil stockpiles will be seeded with non-invasive sterile hybrid grasses if stored longer than one growing season;
- Prior to delivery to the site, equipment will be cleaned of soils remaining from previous construction sites which may be contaminated with noxious weeds;
- If working in sites with weed-seed contaminated soil equipment will be cleaned of potentially seed-bearing soils and vegetative debris prior to moving to uncontaminated terrain.

Herbicides: Annual and biennial weeds are best controlled at the pre-bud stage after germination or in the spring of the second year. Several of the species identified in the survey are susceptible to commercially available herbicides. Selective herbicides are recommended to minimize damage to desirable grass species.

Professionals or landowners using herbicides must use the concentration specified on the label of the container in hand. Herbicides generally do not work better at higher concentrations. Most herbicide failures observed by WWE are related to incomplete control caused by high concentrations killing top growth before the active ingredient can be transported to the roots through the nutrient translocation process. Most herbicide applications should use a surfactant, if directed on the herbicide label, or other adjuvant as called for on the herbicide label.
A certified commercial applicator is a good choice for herbicide control efforts. Restricted herbicides require a state licensed applicator. An applicator has the full range of knowledge, skills, equipment, and experience desired when dealing with tough noxious weeds.

Mechanical: Small isolated infestations of weed species can often be controlled with cutting and digging by hand. For dense or more extensive infestations, mechanical treatments can be useful in combination with chemical control. Effectiveness of mechanical control can often be increased by severing the root just below the crown of noxious weeds. Weeds that easily re-sprout from rootstocks, such as Canada thistle and Russian knapweed, may increase rather than decrease if mechanical control is the only method used.

Grazing: In the event grazing is allowed in the project area it should be deferred in reclaimed areas until the desired plant species that have been seeded are established.

Alternative Methods: Biological control of noxious weeds may be feasible for some weed species found along the proposed pipeline alignment.

An alternative method to assist revegetation, particularly where there is poor or destroyed topsoil, is the application of vesicular-arbuscular mycorrhizal fungi, typically referred to as AMF. These fungi, mostly of the genus *Glomus*, are symbiotic with about 80 percent of all vegetation. Endo-mycorrhizal fungi are associated mostly with grasses and forbs and could be helpful when reclaiming this project. In symbiosis, the fungi increase water and nutrient transfer

capacity of the host root system by as much as several orders of magnitude (Barrow and McCaslin 1995).

Over-the-counter commercial AMF products, which are better adapted to coating seeds when reseeding and treating roots of live seedling trees and shrubs at time of planting, come in powder -form and are available from many different sources. Some also come in granular form to be spread with seed from a broadcast spreader. The best AMF products should contain more than one species.

All Colorado State Forest Salida District tree and shrub plantings include the application of AMF (Tischler 2006). Most, if not all, Colorado Department of Transportation revegetation/reseeding projects now require use of AMF and BioSol, a certified by-product of the penicillin manufacturing process composed primarily of mycelium.

Compacted soils respond well to fossilized humic substances and by-products called humates. These humates, including humic and fulvic acids and humin were formed from pre-historic plant and animal deposits and work especially well on compacted soils when applied as directed.

Monitoring: Areas where noxious weed infestations are identified and treated will be inspected over time to ensure that control methods are working to reduce and suppress the identified infestation. The sites will be monitored until the infestations are eliminated or reduced to acceptable levels. These inspections can then be used to prioritize future weed control efforts.

4.0 REVEGETATION – RECLAMATION

WWE recommends using the seed mix attached in Appendix B (BLM 2007). Seeding rates should be doubled for broadcast application. The preferred seeding method using a multiple seed bin rangeland drill. In areas with slope greater than 3%, imprinting of the seed bed is recommended. Imprinting can be done in the form of dozer tracks or furrows perpendicular to the direction of slope. When hydro-seeding or mulching, imprinting should be done prior to seeding unless the mulch is to be crimped into the soil surface. If broadcast seeding and harrowing, imprinting should be done as part of the harrowing. Furrowing can be done by several methods, the most simple of which is to drill seed perpendicular to the direction of slope in a prepared bed. Other simple imprinting methods include deep hand raking and harrowing, always perpendicular to the direction of slope.

Alternative seeding methods include, but are not limited to:

- Harrow with just enough soil moisture to create a rough surface, broadcast seed and re-harrow, preferably at a 90 degree angle to the first harrow,
- Hydro-seeding (most economical in terms of seed cost), and
- Hand raking and broadcast followed by re-raking at a 90 degree angle to the first raking.

These are not the only means of replanting the site. However, these methods have been observed to be effective in similar landscapes.

5.0 REFERENCES

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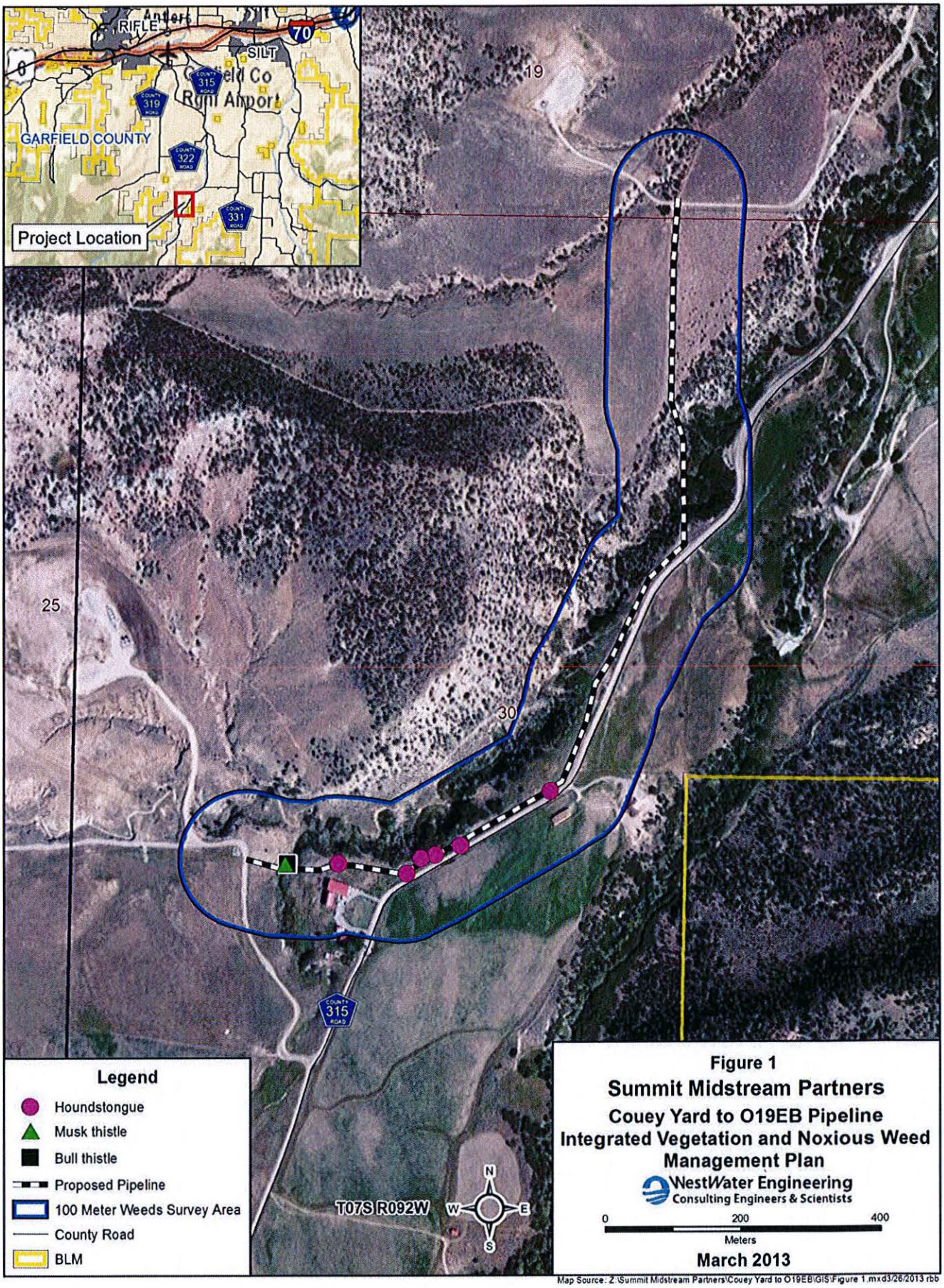
Garfield County. 2002. Garfield County Vegetation Management and Garfield County Weed Advisory Board. Garfield County Noxious Weed Management Plan, Resolution #2002-94, October 21.

Sirota, J. 2004. Best management practices for noxious weeds of Mesa County. Colorado State University, Cooperative Extension Tri River Area, Grand Junction, Colorado. URL: http://www.coopext.colostate.edu/TRA/Weeds/weedmgmt.html

State of Colorado. 2005. Rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act, 35-5-1-119, C.R.S. 2003. Department of Agriculture, Plant Industry Division, Denver, 78 pp.

Tischler, Crystal. 2006. District Forester, Colorado State Forest Service, Salida, Colorado. Personal communication with Bill Clark, WestWater Engineering, Grand Junction, Colorado.


RIFLE
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GARFIELD COUNTY
Project Location
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E
S
Legend
Houndstongue
Musk thistle
Bull thistle
Proposed Pipeline
100 Meter Weeds Survey Area
County Road
BLM
Figure 1
Summit Midstream Partners
Couey Yard to O19EB Pipeline
Integrated Vegetation and Noxious Weed Management Plan
WestWater Engineering
Consulting Engineers & Scientists
0
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400
Meters
March 2013
Map Source: Z:\Summit Midstream Partners\Couey Yard to O19EB\GIS\Figure 1.mxd3/26/2013 rbb

APPENDIX A

UTM LOCATIONS OF NOXIOUS WEEDS OBSERVED IN PROJECT AREA

Date	Northing	Easting	Quantity	Species Common Name
3/18/13	4366453	266651	10-20	Musk Thistle
3/18/13	4366454	266654	10-100	Bull Thistle
3/18/13	4366454	266730	1-10	Houndstongue
3/18/13	4366440	266831	10-100	Houndstongue
3/18/13	4366461	266851	10-100	Houndstongue
3/18/13	4366466	266873	10-100	Houndstongue
3/18/13	4366480	266909	10-100	Houndstongue
3/18/13	4366558	267040	10-100	Houndstongue

APPENDIX B

Recommended Seed Mix

Pinyon-Juniper Woodland and/or Mountain/Wyoming Big Sagebrush Shrubland

Common Name	Scientific Names	Variety	Season	Form	PLS lbs/acre*
Plant the Following (10% Total)					
Indian Ricegrass	*Achnatherum [Oryzopsis] hymenoides*	Nezpar, Paloma, Rimrock	Cool	Bunch	1.9
and Both of the Following (15% Each, 30% Total)					
Galleta	*Pleuraphis [Hilaria] jamesii*	Viva florets	Warm	Bunch	2.5
Bluebunch Wheatgrass	*Pseudoroegneria spicata, Agropyron spicatum*	Secar, P-7, Anatone	Cool	Bunch	2.8
and One of the Following (20% Total)					
Thickspike Wheatgrass	*Elymus lanceolatus ssp. lanceolatus, Agropyron dasystachyum*	Critana, Schwendimar	Cool	Sod-forming	3.4
Slender Wheatgrass	*Elymus trachycaulus, Agropyron trachycaulum*	San Luis	Cool	Bunch	3.3
and Two of the Following (40% Total)					
Muttongrass	*Poa fendleriana*		Cool	Bunch	0.6
Sandberg Bluegrass	*Poa sandbergii, Poa secunda*		Cool	Bunch	0.6
Bottlebrush Squirreltail	*Elymus elymoides, Sitanion hystrix*		Cool	Bunch	2.7

Based on 60 pure live seeds (PLS) per square foot, drill-seeded. Double this rate (120 PLS per square foot) if broadcast or hydroseeded.

- IVNWMP (Integrated Vegetation and Noxious Weed Management Plan)
- Permit Bond (Revegetation Security)

STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
TELEPHONE: (303) 692-3500

CERTIFICATION TO DISCHARGE
UNDER
CDPS GENERAL PERMIT COR-0300000
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Certification Number: **COR03I403**

This Certification to Discharge specifically authorizes:

Grand River Gathering LLC

to discharge stormwater from the facility identified as

Mamm Creek

to:

see application - Colorado River

Construction Activities :	Oil and Gas Production and/or Exploration,
Facility Located at:	s of I-70, e of Beaver Creek Rd, w of CR 342, n of Mesa County line, Rifle, Garfield County, CO 81650 Latitude: 39.454, Longitude: -107.719

Certification is effective: 11/15/2011 **Certification Expires:** 6/30/2012

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

Signed,

Nathan Moore
Construction/MS4/Pretreatment Unit Manager
Water Quality Control Division

STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
Located in Glendale, Colorado

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department
of Public Health
and Environment

June 21, 2012

Brock Degeyter, Sr VP
Grand River Gathering LLC
2100 McKinney Ave Ste 1250
Dallas, TX 75201

RE: Renewal of Permit/Certification
Administrative Continuation
For: Mamm Creek
Located at: I-70 & Beaver Creek Rd, Rifle, Garfield County
Permit No.: COR03I403

Dear Mr. Degeyter;

The Division has received an application to renew the above permit/certification. It has been determined that there is sufficient information to make this permit/certification eligible for renewal. More information may be requested by the Division as progress is made in developing a new permit/certification for the above listed facility. This information must be made available to the Division when requested to complete the permit process.

The Division is currently in the process of developing a new permit or master general permit and associated certification for the above permitted facility. The development and review procedures required by law have not yet been completed. When the discharge permit issued to you for your facility expired on **June 30, 2012** your permit is administratively continued and remains in effect under Section 104(7) of the Administrative Procedures Act, C.R.S. 1973, 24-4-101, et seq (1982 repl. vol. 10) until the new permit/certification is issued and effective.

All effluent permit terms and conditions in your current permit will remain in effect until your new permit/certification is issued and effective.

PLEASE KEEP THIS LETTER WITH YOUR PERMIT AND SWMP TO SHOW CONTINUATION OF PERMIT COVERAGE.

Sincerely,

Debbie Jessop

Debbie Jessop
Permits Section
WATER QUALITY CONTROL DIVISION

xc: Permit File