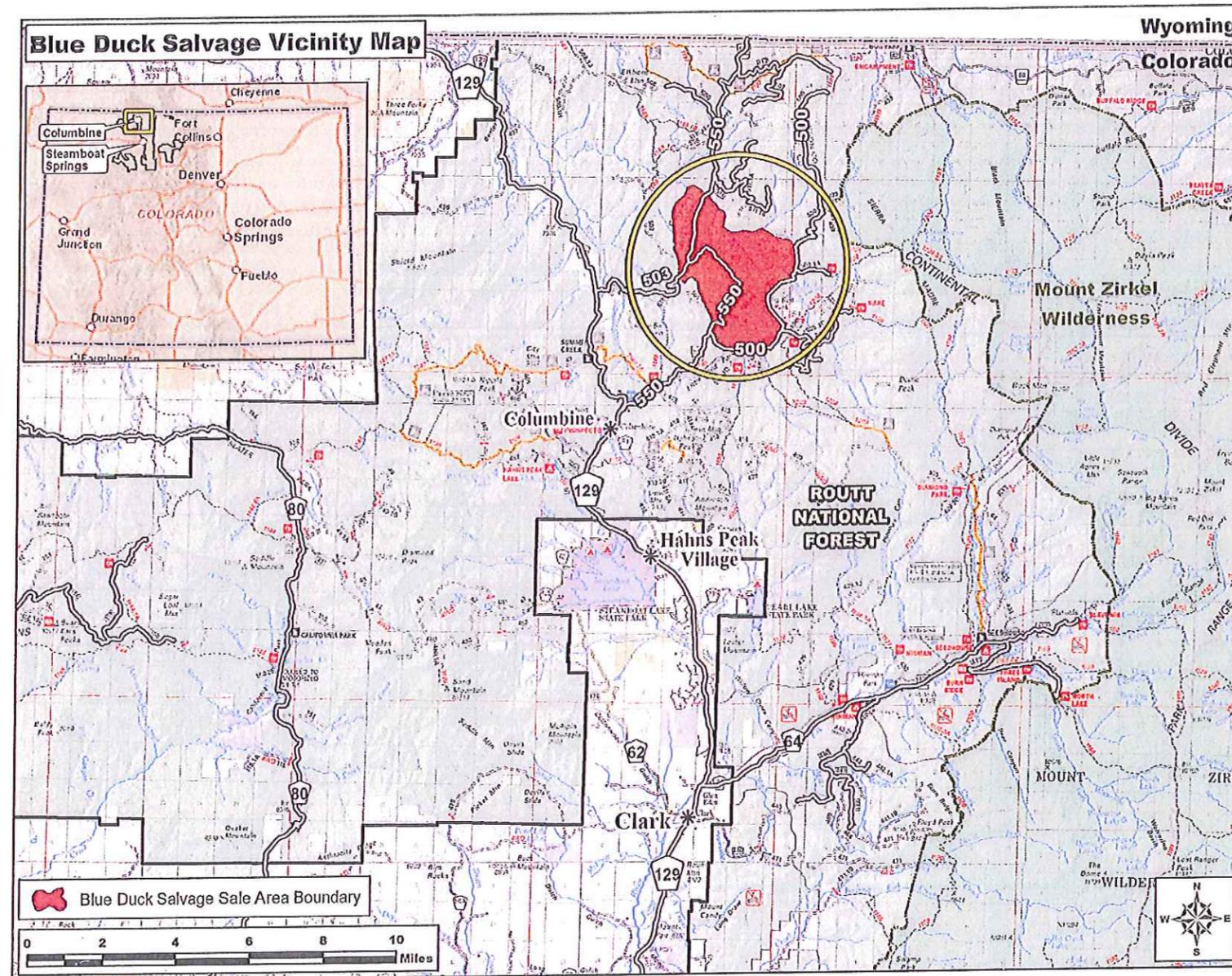


A7 DRAWINGS FOR SPECIFIED ROAD
 RECONSTRUCTION FOR
**BLUE DUCK SALVAGE
 TIMBER SALE**

HAHNS PEAK/BEARS EARS RANGER DISTRICT

INDEX TO SHEETS

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- 17 CLEARING DETAIL & INTERSECTION TYPICALS
- 18 TYPICAL ROAD SECTIONS
- 19 TYPICAL ROLLING DIP
- 20 GRADE DIP TYPICAL
- 21 CULVERT INSTALLATION TYPICALS
- 22 GATE DETAIL & BRACE TYPICAL



PREPARED BY:

Timothy Maxwell 9/10/2015
 Timothy Maxwell, Design Engineer Date

REVIEWED BY:

Brandon Taglioli 9/10/15
 Brandon Taglioli, South Zone Engineer Date

I CERTIFY THE TECHNICAL ADEQUACY OF THESE DRAWINGS:

Dana R Bardsley 9/16/2015
 Dana Bardsley, Forest Engineer Date

I CERTIFY THESE DRAWINGS COMPLY WITH LAND AND
 RESOURCE MANAGEMENT PLANS:

Chad Stewart 9/14/15
 Chad Stewart, HPBE District Ranger Date

APPROVED:

Dennis Jaeger 9/16/15
 Dennis Jaeger, Forest Supervisor Date

Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland

PROJECT NAME:

Blue Duck Salvage Timber Sale

SHEET TITLE:

Title Sheet & Transportation Vicinity Map

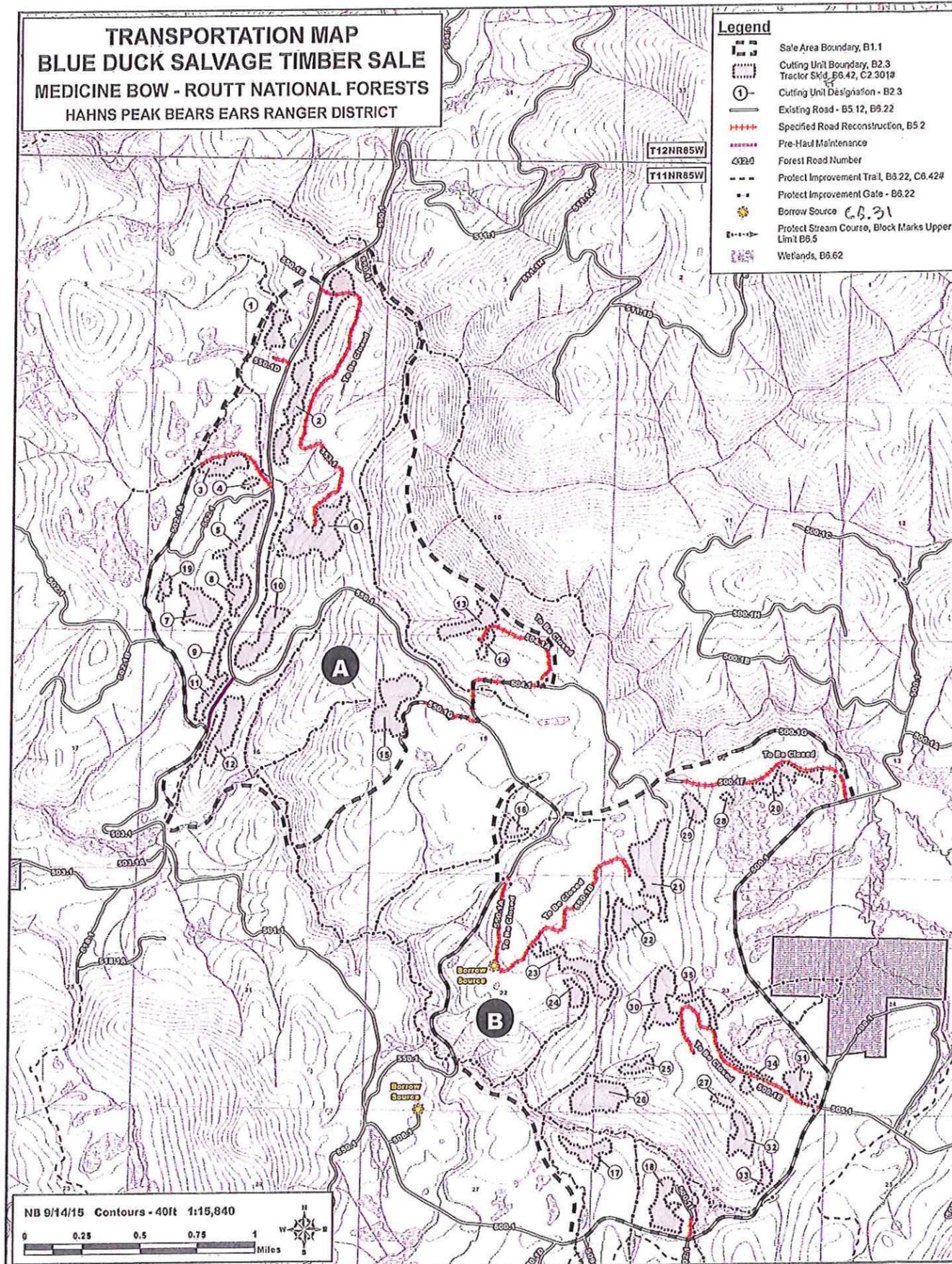
SCALE:

None

SHEET:

1 Of 22

**TRANSPORTATION MAP
BLUE DUCK SALVAGE TIMBER SALE
MEDICINE BOW - ROUTT NATIONAL FORESTS
HAHNS PEAK BEARS EARS RANGER DISTRICT**



SPECIFIED ROADS LISTING

Road No.	Road Name	Design Class	Reconstruction (Miles)
500.1E	Redridge	SingleLane/10mph	1.01
500.1F	Redside	SingleLane/10mph	0.84
500.1I	King Solomon Disp CG A	SingleLane/10mph	0.05
502.1A	Driveway Loop	SingleLane/5mph	0.40
504.1	Duncan	SingleLane/15mph	0.41
504.1A	Old Sawmill	SingleLane/10mph	0.46
550.1A	Whiskey Park Spur	SingleLane/5mph	0.42
550.1B	Post and Pole	SingleLane/10mph	0.88
550.1D	Crane Park Disp CG B	SingleLane/10mph	0.08
550.1G	Pol	SingleLane/10mph	0.21
553.1	Beam	SingleLane/5mph	1.50

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-2
ROCKY MOUNTAIN REGION

Medicine Bow — Routt National Forests
And
Thunder Basin National Grassland

PROJECT NAME:

Blue Duck Salvage Timber Sale

SHEET TITLE:
Transportation Map & Specified Roads Listing

SCALE:
None

SHEET:
2 Of 22

GENERAL NOTES:

1. Work shall conform to 'Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects'(FP-03), <http://flh.fhwa.dot.gov/resources/pse/specs/fp-03usc.pdf>, and associated supplemental specifications.
2. All road work herein described in this contract is paid for directly and indirectly under the pay item numbers listed in the Summary of Quantities.
3. **Section 156 — Public Traffic**
Traffic Control shall conform to Timber Sale provision B6.33.
Public Travel includes non-motorized use, thus gated forest road shall also conform to Timber Sale provision B6.33.
4. **Item No. 203(01) — Removal of Structures or Obstructions**
Dispose by removing from FS Property. Disposal is incidental to pay item.
5. **Item No. 204(04) — Unclassified Borrow, Compaction Method C, Finishing Method A**
Cost to haul and place from Government borrow source. Acceptance of material will be by visual inspection by CO. No gradation testing required. Measurement will be in place. Commercial pit-run (4" maximum) may be used in lieu of Government borrow source, at no additional expense to the Government.
6. **Item No. 204(20) — Drainage Excavation, Rolling Dip (R/D)**
Water not required for dust abatement or compaction.
9. **Item No. 212(01) — Linear Grading**
Travelway clearing & grubbing, surface blading, and ditch maintenance are incidental to pay item 212(01). Unless noted otherwise, maintenance of rolling dips, grade dips, drainage dips, and lead-out ditches is incidental to pay item.
10. **Item No. 230(50) — Roadside Brushing**
Slash and stump disposal is incidental to pay item.
11. **Item No. 303(26) — Road Reconditioning**
Travelway surface blading, and ditch maintenance are incidental to pay item 303(26). Unless noted otherwise, maintenance of rolling dips, grade dips, drainage dips, and lead-out ditches is incidental to pay item.
12. **Item No. 322(11) — Aggregate Surface Course**
Cost to haul and place from Government borrow source. Use either Grading U or CDOT Class 6. Compact per 324.05 — Method A. Acceptance of material will be by visual inspection by CO. No gradation testing required. Measurement will be in place. Commercial aggregate may be used in lieu of Government borrow source, at no additional expense to the Government. Acceptance will be by certified test results provided by commercial supplier. No new gradation testing required.

13. **Item No. 324(18) — Screened Aggregate**
Cost to haul and place from commercial borrow source. Use Grading Q. Compact per 324.05 — Method A. Acceptance of material will be by certified test results provided by commercial supplier. No new gradation testing required. Measurement will be in place. CO shall receive copies of all weight tickets of hauled material showing the aggregate type and placement location.
14. **Item No. 602(11) — 18" CMP**
Cost to furnish and place. Catch basin and ditch block construction are incidental to pay item. On site material is suitable culvert bedding material and is incidental to pay item. Acceptance of bedding material will be visual acceptance by the CO.
15. **Item No. 607(08) — Cleaning Culverts in Place**
Catch basin and ditch block maintenance are incidental to pay item. Ditch to drain when necessary.
15. **Section 703 — Aggregate**

CLASSIFICATION FOR AGGREGATE BASE COURSE

Sieve Size	Mass Percent Passing Square Mesh Sieves						
	L.L. not greater than 35			L.L. not greater than 30			
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
150mm (6")			100				
100mm (4")		100					
75mm (3")		95-100					
60mm (2 1/2")	100						
50mm (2")	95-100			100			
37.5mm (2")				90-100	100		
25mm (1")					95-100		100
19mm (3/4")				50-90		100	
4.75mm (#4)	30-65			30-50	30-70	30-65	
2.36mm (#8)						25-55	20-85
75 µm (#200)	3-15	3-15	20 max	3-12	3-15	3-12	5-15

NOTE: Class 3 material shall consist of bank or pit run material.

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ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
And
Thunder Basin National Grassland**

PROJECT NAME:
Blue Duck Salvage Timber Sale

SHEET TITLE:
General Notes

SCALE: None | SHEET: 3 Of 22

SUMMARY OF QUANTITIES

					ROAD NUMBER RECONSTRUCTION LENGTH (MILES)											
					500.1E	500.1F	500.1I	502.1A	504.1	504.1A	550.1A	550.1B	550.1D	550.1G	553.1	
					1.01	0.84	0.05	0.40	0.41	0.46	0.42	0.88	0.08	0.21	1.50	
ITEM NO.	DESCRIPTION	METHOD OF MEASURE	UNIT	REVISION DATE	QUANTITIES											
151(01)	Mobilization	CQ	LS	2005		0.50										0.50
204(04)	Unclassified Borrow, Compaction Method C, Finishing Method A	CQ	CY	2005			180		20							
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	2005	1	9			2			2	1	1		5
212(01)	Linear Grading	CQ	Mile	2004				0.40	0.41	0.46		0.88	0.08	0.21		1.50
230(50)	Roadside Brushing	CQ	Mile	2005	1.01	0.84					0.42					
303(26)	Road Reconditioning	CQ	Mile	2005	1.01	0.84					0.42					
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	2005		10	30	20					80			20
324(18)	Screened Aggregate, Grading Q, Compaction Method A	CQ	CY	2005									10			
602(11)	18" Corrugated Metal Pipe, 0.064" Thickness	CQ	LF	2009			40	50			40				30	
607(08)	Cleaning Culverts In Place	CQ	Each	2005					1							

U.S. DEPARTMENT OF AGRICULTURE
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ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
And
Thunder Basin National Grassland**

PROJECT NAME:

Blue Duck Salvage Timber Sale

SHEET TITLE:
Summary of Quantities

SCALE:
None

SHEET:
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SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 500.1E
 Road Name Redridge Reconstruction Length (Miles) 1.01

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	1	\$ 135.00	\$ 135.00
230(50)	Roadside Brushing	CQ	Mile	1.01	\$ 445.00	\$ 449.45
303(26)	Road Reconditioning	CQ	Mile	1.01	\$ 1,450.00	\$ 1,464.50
SUB-TOTAL:						\$ 2,048.95
TOTAL ALL ROADS:						\$34,556.30

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 500.1F
 Road Name Redside Reconstruction Length (Miles) 0.84

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
151(01)	Mobilization	CQ	LS	0.05	\$ 1,580.00	\$ 79.00
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	9	\$ 135.00	\$ 1,215.00
230(50)	Roadside Brushing	CQ	Mile	0.84	\$ 445.00	\$ 373.80
303(26)	Road Reconditioning	CQ	Mile	0.84	\$ 1,450.00	\$ 1,218.00
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	10	\$ 9.50	\$ 95.00
SUB-TOTAL:						\$ 2,980.80
TOTAL ALL ROADS:						\$34,556.30

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items
 SCALE: None SHEET: 5 Of 22

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 500.11
 Road Name King Solomon Disp CG A Reconstruction Length (Miles) 0.05

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(04)	Unclassified Borrow, Compaction Method C, Finishing Method A	CQ	CY	180	\$ 17.25	\$ 3,105.00
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	30	\$ 9.50	\$ 285.00
602(11)	18" Corrugated Metal Pipe, 0.064" Thickness	CQ	LF	40	\$ 41.50	\$ 1,660.00

SUB-TOTAL: \$ 5,050.00
 TOTAL ALL ROADS: \$34,556.30

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 502.1A
 Road Name Driveway Loop Reconstruction Length (Miles) 0.4

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
212(01)	Linear Grading	CQ	Mile	0.4	\$ 3,855.00	\$ 1,542.00
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	20	\$ 9.50	\$ 190.00
602(11)	18" Corrugated Metal Pipe, 0.064" Thickness	CQ	LF	50	\$ 41.50	\$ 2,075.00

SUB-TOTAL: \$ 3,807.00
 TOTAL ALL ROADS: \$34,556.30

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items
 SCALE: None SHEET: 6 Of 22

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 504.1
 Road Name Duncan Reconstruction Length (Miles) 0.41

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(04)	Unclassified Borrow, Compaction Method C, Finishing Method A	CQ	CY	20	\$ 17.25	\$ 345.00
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	2	\$ 135.00	\$ 270.00
212(01)	Linear Grading	CQ	Mile	0.41	\$ 3,855.00	\$ 1,580.55
607(08)	Cleaning Culverts In Place	CQ	Each	1	\$ 110.00	\$ 110.00
					SUB-TOTAL:	\$ 2,305.55
					TOTAL ALL ROADS:	\$34,556.30

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 504.1A
 Road Name Old Saw mill Reconstruction Length (Miles) 0.46

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
212(01)	Linear Grading	CQ	Mile	0.46	\$ 3,080.00	\$ 1,416.80
					SUB-TOTAL:	\$ 1,416.80
					TOTAL ALL ROADS:	\$34,556.30

U.S. DEPARTMENT OF AGRICULTURE
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items
 SCALE: None SHEET: 7 Of 22

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale
 Road Name Whiskey Park Spur

Road No. 550.1A
 Reconstruction Length (Miles) 0.42

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
230(50)	Roadside Brushing	CQ	Mile	0.42	\$ 445.00	\$ 186.90
303(26)	Road Reconditioning	CQ	Mile	0.42	\$ 1,450.00	\$ 609.00
602(11)	18" Corrugated Metal Pipe, 0.064" Thickness	CQ	LF	40	\$ 41.50	\$ 1,660.00

SUB-TOTAL: \$ 2,455.90
TOTAL ALL ROADS: \$34,556.30

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SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale
 Road Name Post and Pole

Road No. 550.1B
 Reconstruction Length (Miles) 0.88

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	2	\$ 135.00	\$ 270.00
212(01)	Linear Grading	CQ	Mile	0.88	\$ 3,855.00	\$ 3,392.40

SUB-TOTAL: \$ 3,662.40
TOTAL ALL ROADS: \$34,556.30

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items
 SCALE: None
 SHEET: 8 Of 22

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 550.1D
 Road Name Crane Park Disp CG B Reconstruction Length (Miles) 0.08

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	1	\$ 135.00	\$ 135.00
212(01)	Linear Grading	CQ	Mile	0.08	\$ 3,080.00	\$ 246.40
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	80	\$ 9.50	\$ 760.00
324(18)	Screened Aggregate, Grading Q, Compaction Method A	CQ	CY	10	\$ 35.82	\$ 358.20
SUB-TOTAL:						\$ 1,499.60
TOTAL ALL ROADS:						\$34,556.30

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale Road No. 550.1G
 Road Name POL Reconstruction Length (Miles) 0.21

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	1	\$ 135.00	\$ 135.00
212(01)	Linear Grading	CQ	Mile	0.21	\$ 3,080.00	\$ 646.80
602(11)	18" Corrugated Metal Pipe, 0.064" Thickness	CQ	LF	30	\$ 41.50	\$ 1,245.00
SUB-TOTAL:						\$ 2,026.80
TOTAL ALL ROADS:						\$34,556.30

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items
 SCALE: None SHEET: 9 Of 22

SCHEDULE OF ITEMS

Timber Sale Blue Duck Salvage Timber Sale
 Road Name Beam

Road No. 553.1
 Reconstruction Length (Miles) 1.5

Item Number	Description	Method of Meas.	Unit	Quantity	Unit Price	Total
151(01)	Mobilization	CQ	LS	0.5	\$ 1,580.00	\$ 790.00
204(20)	Drainage Excavation, Type - Rolling Dip	CQ	Each	4	\$ 135.00	\$ 540.00
212(01)	Linear Grading	CQ	Mile	1.5	\$ 3,855.00	\$ 5,782.50
322(11)	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A	CQ	CY	20	\$ 9.50	\$ 190.00
SUB-TOTAL:						\$ 7,302.50
TOTAL ALL ROADS:						\$34,556.30

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
R-2
 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**

PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Schedule of Items

SCALE: None SHEET: 10 Of 22

DESCRIPTION OF WORK -- NFSR 500.1E						
	Drainage Excavation, Type - Rolling Dip	Roadside Brushing	Road Reconditioning			Remarks:
Item Number	204(20)	230(50)	303(26)			
Unit of Measure	Each	Mile	Mile			
Station	Description of Work					
0+00						B.O.P. Intersection with NFSR 500.1. Begin Roadside Brushing & Road Reconditioning, Typical Section D14
2+85						Existing USFS Type II Gate
4+70						Grade Dip, Maintain
12+15						Drainage Dip, Maintain
16+15						Grade Dip, Maintain
17+80						Grade Dip, Maintain
22+15						Grade Dip, Maintain
25+75						Rolling Dip, Maintain
29+90						Rolling Dip, Maintain
33+25						Existing Turn-Out
34+95						Rolling Dip, Maintain
37+40						Rolling Dip, Maintain
39+85						Rolling Dip, Maintain
43+50						Rolling Dip, Maintain
46+75						Continue Roadside Brushing & Road Reconditioning, Typical Section C14
50+30	1					Reconstruct Rolling Dip
53+20		1.01	1.01			E.O.P. End of Road. End Roadside Brushing & Road Reconditioning.
TOTAL	1	1.01	1.01			

DESCRIPTION OF WORK -- NFSR 500.1F						
	Drainage Excavation, Type - Rolling Dip	Roadside Brushing	Road Reconditioning	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A		Remarks:
Item Number	204(20)	230(50)	303(26)	322(11)		
Unit of Measure	Each	Mile	Mile	CY		
Station	Description of Work					
0+00						B.O.P. Intersection with NFSR 500.1. Begin Road Reconditioning & Roadside Brushing, Typical Section DD14
3+85	1					Reconstruct Rolling Dip
5+80						Continue Road Reconditioning & Roadside Brushing, Typical Section D14
8+60						Existing USFS Type II Gate
10+85	1					Construct Rolling Dip
15+60	1					Reconstruct Rolling Dip
19+00	1					Reconstruct Rolling Dip
19+65	1					Reconstruct Rolling Dip
24+15				10		Drainage Crossing: Import aggregate for surface repair and hardening.
26+95						Grade Dip, Maintain
29+75						Rolling Dip, Maintain
32+75	1					Reconstruct Rolling Dip
34+30						Existing Turn-Out
36+05	1					Reconstruct Rolling Dip
38+00	1					Reconstruct Rolling Dip. Continue Road Reconditioning & Roadside Brushing, Typical Section C14
40+65	1					Reconstruct Rolling Dip
44+10		0.84	0.84			E.O.P. End Road Reconditioning & Roadside Brushing
TOTAL	9	0.84	0.84	10		

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**Medicine Bow — Routt National Forests
And
Thunder Basin National Grassland**
PROJECT NAME:
Blue Duck Salvage Timber Sale

SHEET TITLE:
Description of Work
SCALE: None SHEET: 11 Of 22

DESCRIPTION OF WORK -- NFSR 500.1I						
Item Number	204(04)				322(11)	602(11)
Unit of Measure	CY				CY	LF
Station	Description of Work					
0+00						
0+20					40	
0+40						
0+85						
1+70						
2+60	180				30	
TOTAL	180				30	40

DESCRIPTION OF WORK -- NFSR 502.1A							
Item Number					212(01)	322(11)	602(11)
Unit of Measure					Mile	CY	LF
Station	Description of Work						
0+00							
0+10						50	
0+50						20	
2+00							
4+00							
7+25							
21+00					0.4		
TOTAL					0.4	20	50

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
R-2
 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**
 PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Description of Work
 SCALE: None SHEET: 12 Of 22

DESCRIPTION OF WORK -- NFSR 504.1						
	Unclassified Borrow, Compaction Method C, Finishing Method A	Drainage Excavation, Type - Rolling Dip		Linear Grading		Cleaning Culverts in Place
Item Number	204(04)	204(20)		212(01)		607(08)
Unit of Measure	CY	Each		Mile		Each
Station	Description of Work					
0+00						B.O.P. Intersection with NFSR 550.1. Realign intersection to accommodate RH turn. Begin Linear Grading, Typical Section DD14.
4+00	20				1	Existing 18" CMP. Clean inlet & outlet. Import Unclassified Borrow for fill and surface repair over CMP.
17+25		1				Construct Rolling Dip
19+50		1				Construct Rolling Dip
21+75				0.41		E.O.P. Intersection with NFSR 504.1A. End Linear Grading.
TOTAL	20	2		0.41	1	

DESCRIPTION OF WORK -- NFSR 504.1A						
				Linear Grading		
Item Number				212(01)		
Unit of Measure				Mile		
Station	Description of Work					
0+00						B.O.P. Intersection with NFSR 504.1. Begin Linear Grading, Typical Section C14
0+95						Existing USFS Type II Gate
24+50				0.46		E.O.P. End Linear Grading.
TOTAL				0.46		

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**

PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Description of Work

SCALE: None SHEET: 13 Of 22

DESCRIPTION OF WORK -- NFSR 550.1A						
Item Number		Roadside Brushing	Road Reconditioning	18" Corrugated Metal Pipe, 0.064" Thickness		Remarks:
		230(50)	303(26)	602(11)		
Unit of Measure		Mile	Mile	LF		
Station						Description of Work
0+00						B.O.P. Intersection with NFSR 550.1 Begin Road Reconditioning & Roadside Brushing, Typical Section C14.
0+05				40		Existing 18" x 18' CMP. Remove and replace with 18" x 40' CMP. Dispose of existing CMP by removing from FS Property.
0+50						Begin widening road 5 ft left for 100 LF, or until sufficient fill is acquired for minimum coverage over CMP and to develop intersection.
1+10						Rolling Dip, Maintain
1+50						End widening road 5 ft left.
2+15						Existing 16' USFS Metal Gate
2+50						Rolling Dip, Maintain
5+80						Rolling Dip, Maintain
7+85						Rolling Dip, Maintain
12+30						Borrow Source
9+35						Rolling Dip, Maintain
13+00						Reconstruct Grade Dip
15+45						Rolling Dip, Maintain
17+10						Rolling Dip, Maintain
18+50						Rolling Dip, Maintain
22+00		0.42	0.42			E.O.P. Intersection with NFSR 550.1B End Road Reconditioning & Roadside Brushing
TOTAL		0.42	0.42	40		

DESCRIPTION OF WORK -- NFSR 550.1B						
Item Number		Drainage Excavation, Type - Rolling Dip		Linear Grading		Remarks:
		204(20)		212(01)		
Unit of Measure		Each		Mile		
Station						Description of Work
0+00						B.O.P. Intersection with NFSR 550.1A. Begin Linear Grading, Typical Section DD14.
0+55						Grade Dip, Maintain
8+10						Grade Dip, Maintain
12+00		1				Reconstruct Rolling Dip. Reduce berm.
14+75		1				Reconstruct Rolling Dip. Reduce berm.
21+90						Rolling Dip, Maintain
42+35						Rolling Dip, Maintain
46+60				0.88		E.O.P. End of road. End Linear Grading
TOTAL		2		0.88		

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ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
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Blue Duck Salvage Timber Sale

SHEET TITLE:
Description of Work
SCALE: None SHEET: 14 Of 22

DESCRIPTION OF WORK -- NFSR 550.1D						
Item Number	204(20)	212(01)	322(11)	324(18)	Remarks:	
Unit of Measure	Each	Mile	CY	CY		
Station	Description of Work					
0+00					10	B.O.P. Intersection with NFSR 550.1 Construct Type I Intersection. Begin Linear Grading, Typical Section C14. Fill ditch parallel to NFSR 550.1 with screened aggregate. Begin hardening intersection with aggregate surface course, 4" min. depth.
0+20						Begin constructing ditch right, Typical Section D14. Use material as fill on roadbed. Continue hardening with aggregate surface course, 4" min. depth.
1+15	1					Construct Rolling Dip. Begin constructing ditch left & right, Typical Section DD14. Use material as fill on roadbed. Continue hardening with aggregate surface course, 4" min. depth.
3+00						End constructin ditch right & left, Typical Section C14. Continue hardening with aggregate surface course, 4" min. depth.
4+00			0.08	80		E.O.P. End Linear Grading. End hardening with aggregate surface course.
TOTAL	1		0.08	80	10	

DESCRIPTION OF WORK -- NFSR 550.1G						
Item Number	204(20)	212(01)	602(11)	Remarks:		
Unit of Measure	Each	Mile	LF	1) Road scheduled for decommissioning (C5.41#)		
Station	Description of Work					
0+00						B.O.P. Intersection with NFSR 550.1 Begin road realignment as staked. Construct Type II Intersection. Begin Linear Grading, Typical Section C14.
0+05					30	Furnish & install 18" x 30' CMP
2+00						End road realignment. Continue Linear Grading.
8+10	1					Reconstruct Rolling Dip
11+00			0.21			E.O.P. End Linear Grading.
TOTAL	1		0.21		30	

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Medicine Bow — Routt National Forests
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PROJECT NAME:

Blue Duck Salvage Timber Sale

SHEET TITLE:

Description of Work

SCALE:

None

SHEET:

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DESCRIPTION OF WORK -- NFSR 553.1						
Item Number	Drainage Excavation, Type - Rolling Dip		Linear Grading	Aggregate Surface Course, Grading U or CDOT Class 6, Compaction Method A		Remarks:
Unit of Measure	Each		Mile	CY		
Station						Description of Work
0+00						B.O.P. Intersection with NFSR 550.1 Construct Type I Intersection. Begin Linear Grading, Typical Section DD14. Begin cleaning ditch right. Begin constructing ditch left. Pull material onto road. Harden intersection with aggregate surface course, 4" min. depth.
0+50				20		End hardening intersection with aggregate surface course.
3+70						End cleaning ditch right. End constructing ditch left. Continue Linear Grading, Typical Section C14.
4+10						Very large earthen berm. Grade smooth for haul.
4+50						Very large earthen berm. Grade smooth for haul.
9+30	1					Reconstruct Rolling Dip.
11+40	1					Reconstruct Rolling Dip.
12+75	1					Reconstruct Rolling Dip.
16+35	1					Reconstruct Rolling Dip.
20+45	1					Reconstruct Rolling Dip.
22+70						Grade Dip. Maintain.
78+70			1.5			E.O.P. End of road. End Linear Grading.
TOTAL	5		1.5	20		

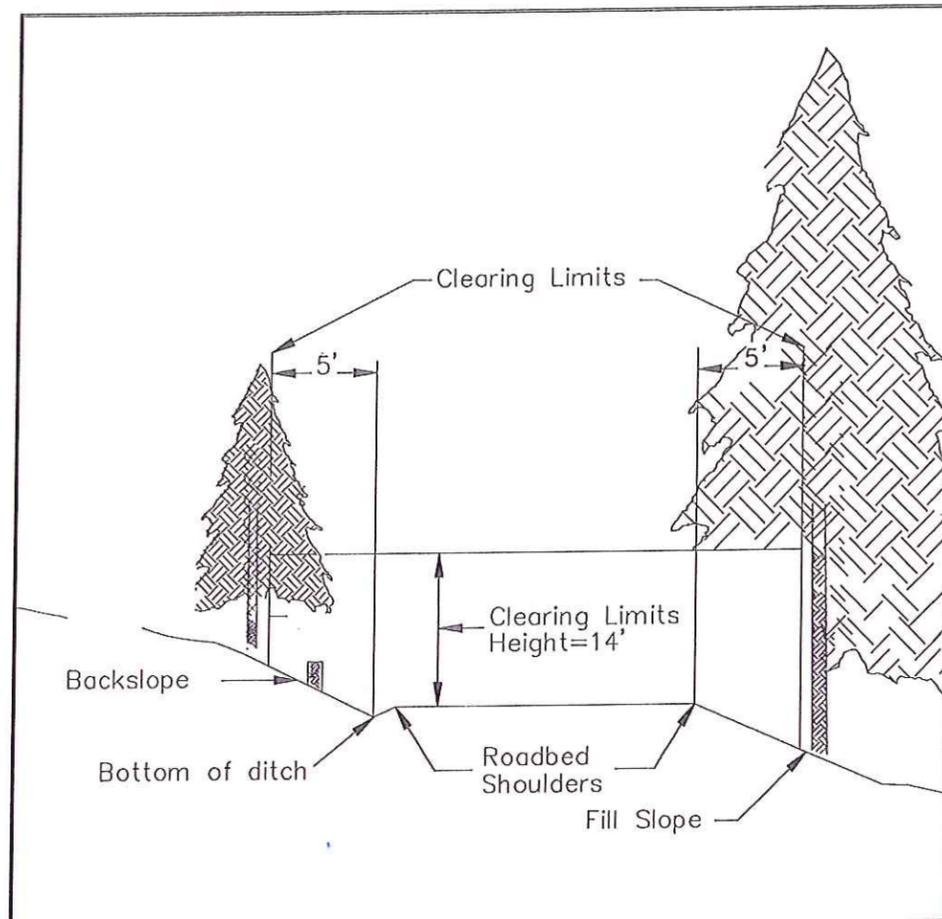
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 ROCKY MOUNTAIN REGION

**Medicine Bow — Routt National Forests
 And
 Thunder Basin National Grassland**

PROJECT NAME:
 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Description of Work

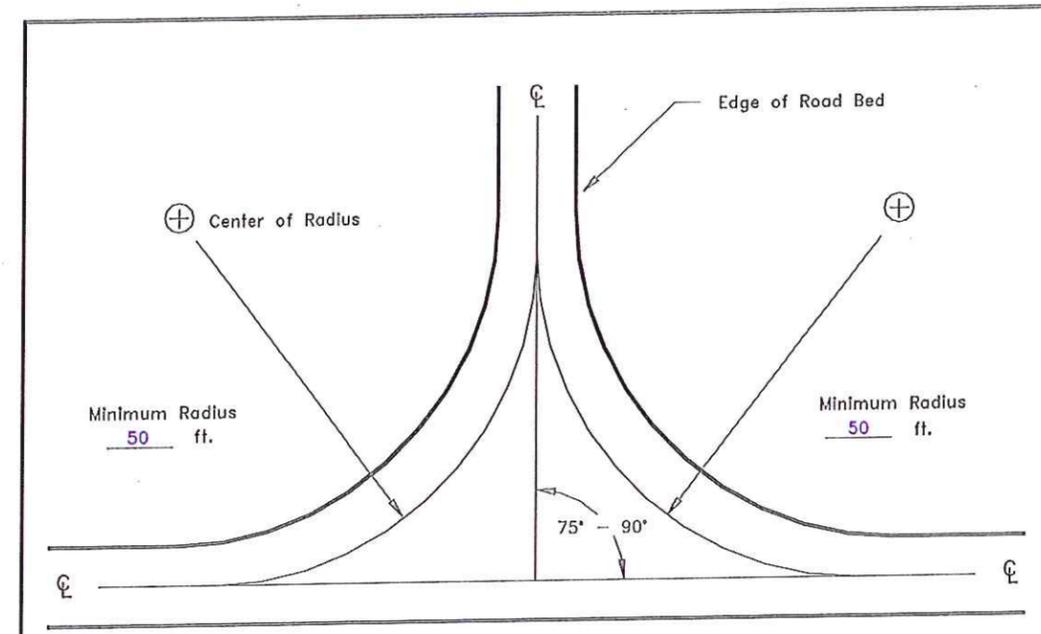
SCALE: None SHEET: 16 Of 22



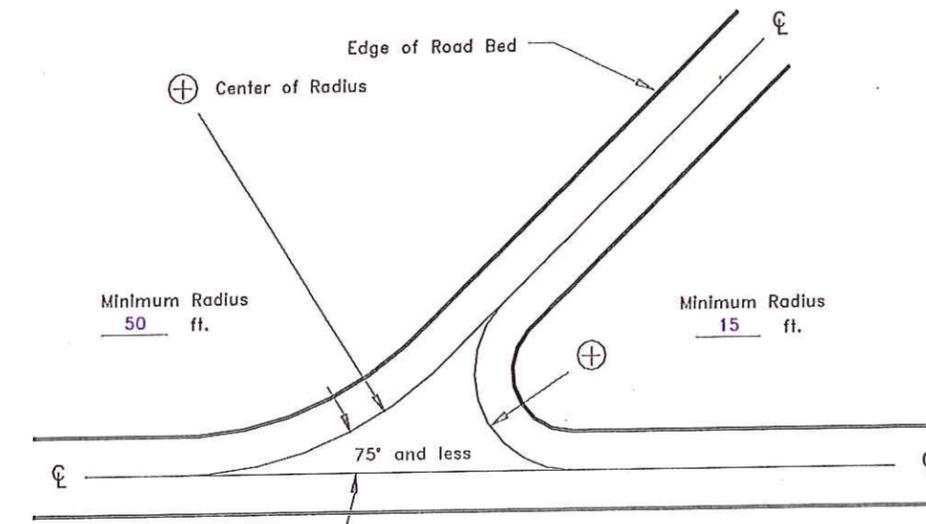
1. Use in conjunction with Pay Item 212(01) Linear Grading.
2. All conifers, hardwoods, and brush within 5 ft. of the traveled way shall be removed.
3. Branches on remaining conifers shall be trimmed from ground level to a clearing height limit of 14 ft above the roadbed, or, to a limit of 60% of the tree's height, whichever is less, Limbs of vegetation shall be cut so as to not protrude within the clearing limits.

CLEARING LIMITS DETAIL

212-01



Type I



Type II

TYPICAL INTERSECTION TYPE I AND II

212-01

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ROCKY MOUNTAIN REGION

Medicine Bow — Routt National Forests
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PROJECT NAME:

Blue Duck Salvage Timber Sale

SHEET TITLE:

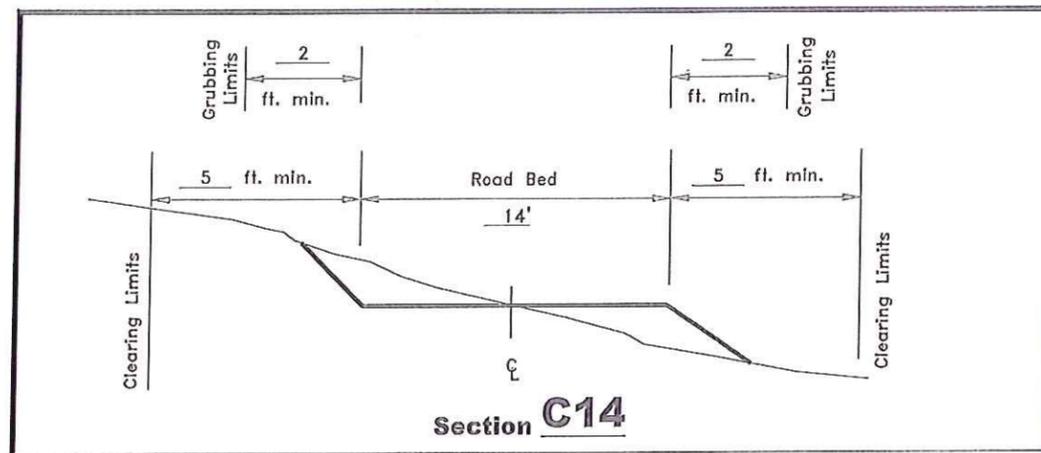
Clearing Detail & Intersection Typicals

SCALE:

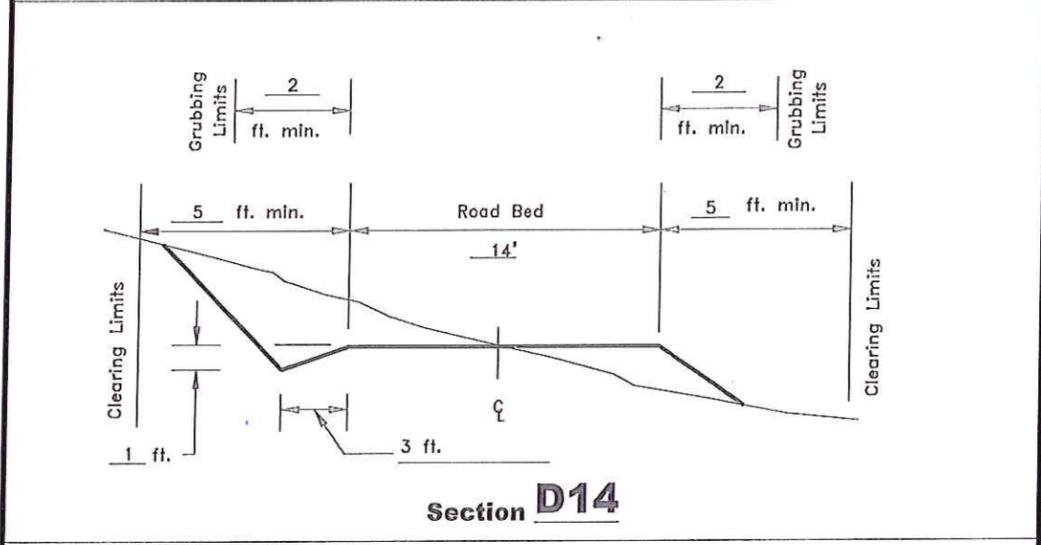
None

SHEET:

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Section **C14**

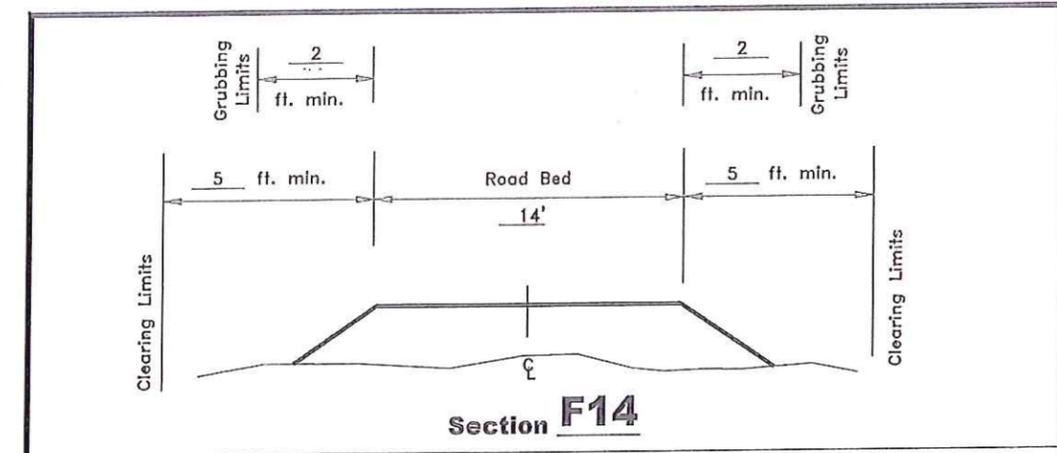


Section **D14**

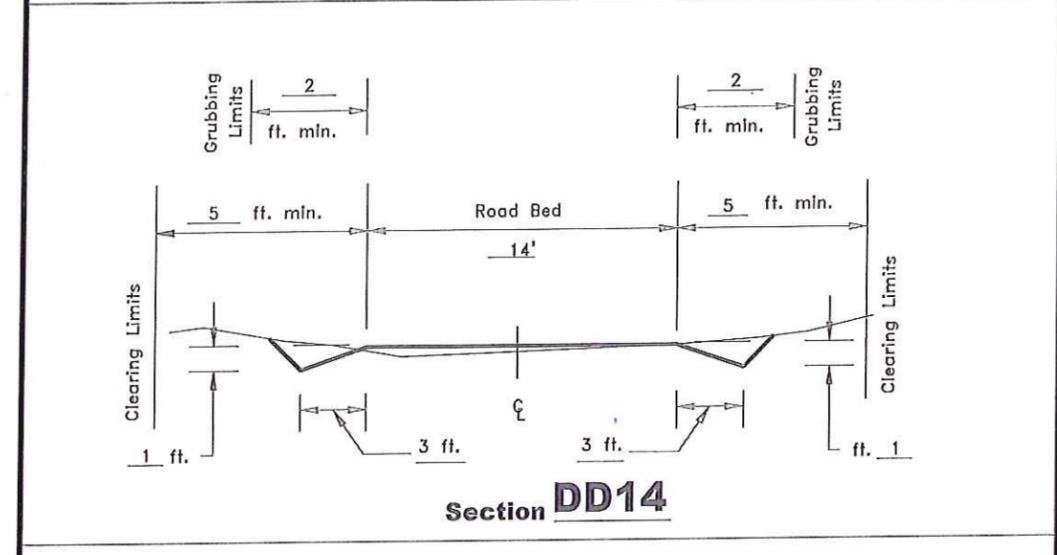
1. Cut slopes : 1.5:1
Fill slopes : 2:1
2. Road Bed width shown is without necessary widening for fill, sluff, curves, and turnouts. Required widening is included in the design and quantity calculations and is shown on the descriptions of work.
3. Construction Slash Treatment (203.05): Slash: Method F
Stumps: Method F
4. Oversize rock and unsuitable material shall be disposed of as approved by the CO.
5. Decking Areas shall be approved by the CO.
6. Road shall have a cross slope of 2% - 4%.

TYPICAL LINEAR GRADING SECTIONS

212-01



Section **F14**



Section **DD14**

1. Cut slopes : 1.5:1
Fill slopes : 2:1
2. Road Bed width shown is without necessary widening for fill, sluff, curves, and turnouts. Required widening is included in the design and quantity calculations and is shown on the descriptions of work.
3. Construction Slash Treatment (203.05): Slash: Method F
Stumps: Method F
4. Oversize rock and unsuitable material shall be disposed of as approved by the CO.
5. Decking Areas shall be approved by the CO.
6. Road shall have a cross slope of 2% - 4%.

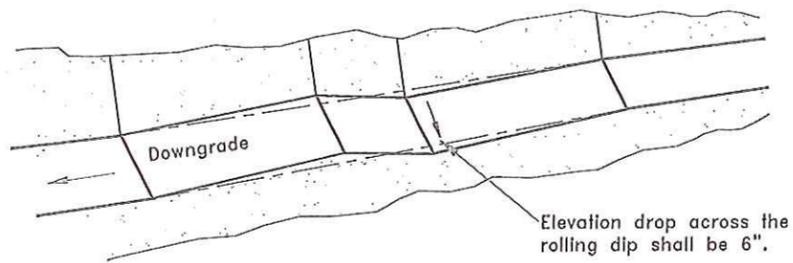
TYPICAL LINEAR GRADING SECTIONS

212-01

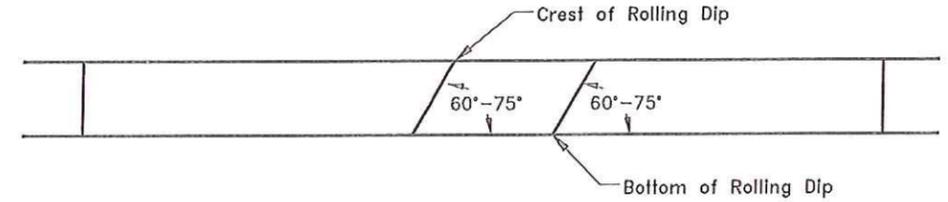
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ROCKY MOUNTAIN REGION

Medicine Bow — Routt National Forests
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PROJECT NAME:
Blue Duck Salvage Timber Sale

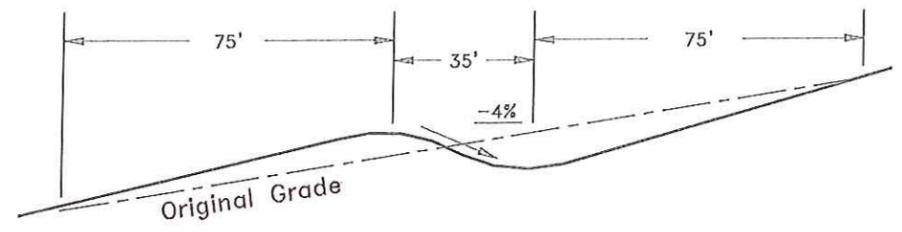
SHEET TITLE:
Typical Road Sections
SCALE: None SHEET: 18 Of 22



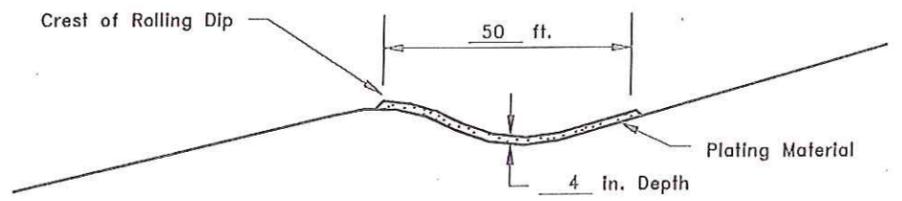
PERSPECTIVE VIEW



PLAN VIEW



PROFILE ROLLING DIP



PROFILE ROLLING DIP WITH PLATING

1. When rolling dips are constructed in ditch sections the ditch shall drain across the rolling dip. Resume ditch construction 25' downgrade from the crest of the rolling dip.
2. Outlet drain ditches shall have cut slopes equal to or flatter than H1.5:V1. Excavation from outlet ditching shall be wasted along the sides of the ditch. All necessary clearing will be treated in with applicable specifications.
3. Tolerance class through the rolling dip shall be Class E (FSSS Table 204-2).

TYPICAL ROLLING DIP (R/D)

204-20, 212-01

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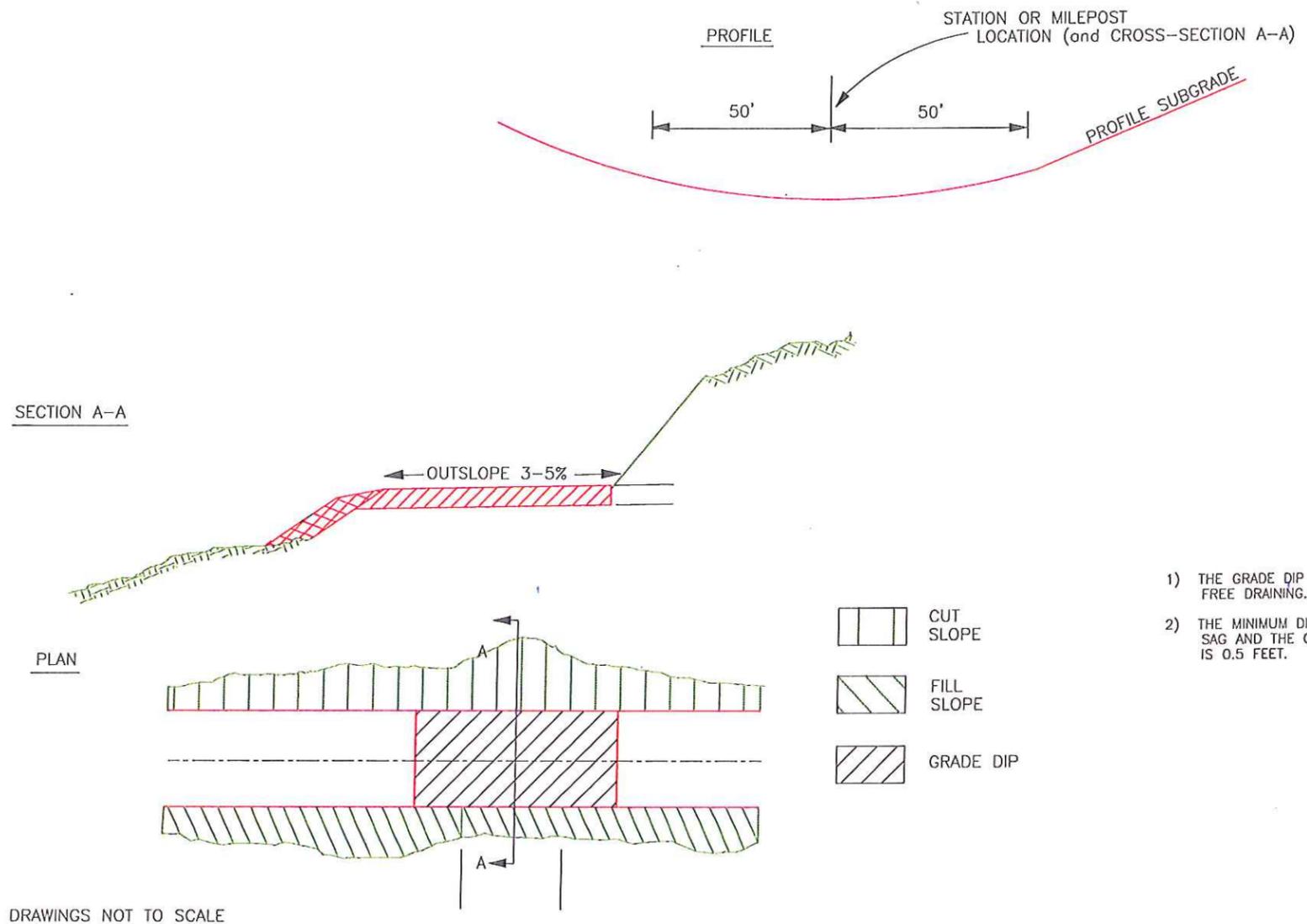
**Medicine Bow — Routt National Forests
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 Blue Duck Salvage Timber Sale

SHEET TITLE:
 Rolling Dip Typical

SCALE: None	SHEET: 19 Of 22
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STANDARD DETAIL FOR GRADE DIP



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ROCKY MOUNTAIN REGION

Medicine Bow — Routt National Forests
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Blue Duck Salvage Timber Sale

SHEET TITLE:

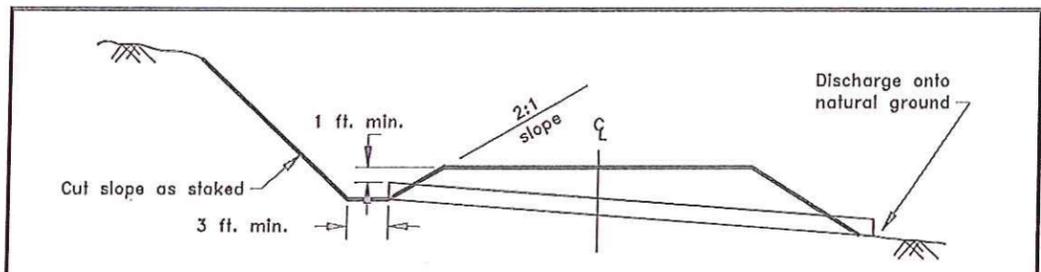
Grade Dip Typical

SCALE:

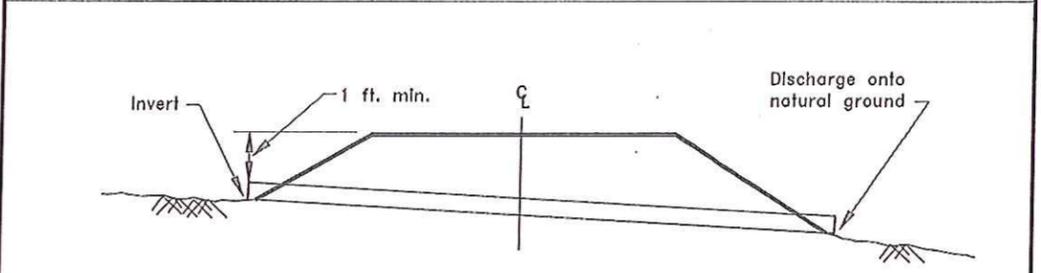
None

SHEET:

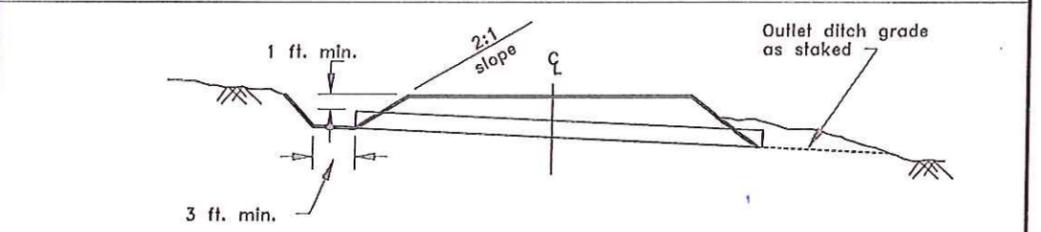
20 Of 22



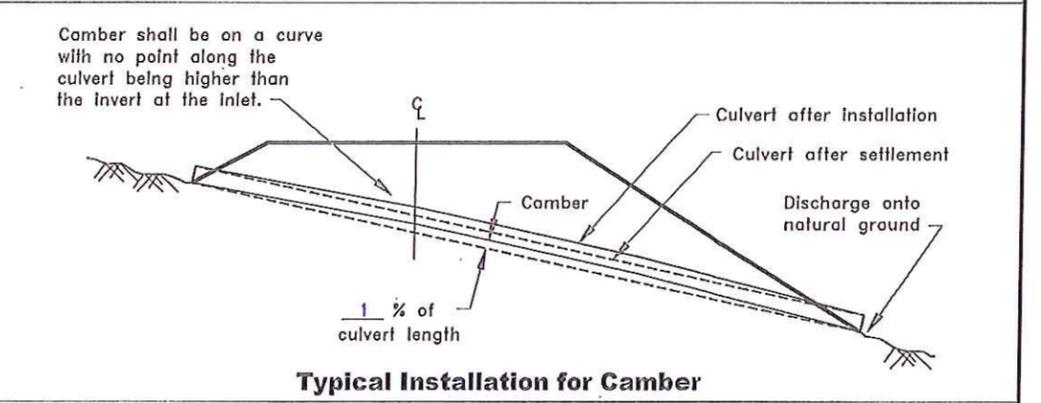
Typical Installation in Sidehill Section



Typical Installation in Fill Section



Typical Installation with Outlet Ditch

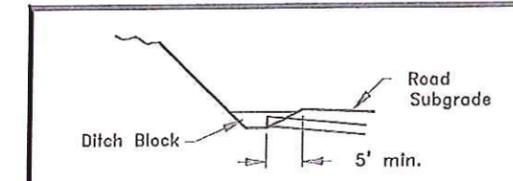


Typical Installation for Camber

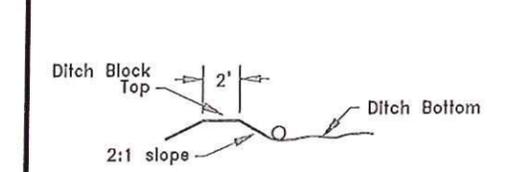
Install culverts on 2% minimum grade.

TYPICAL CULVERT INSTALLATION

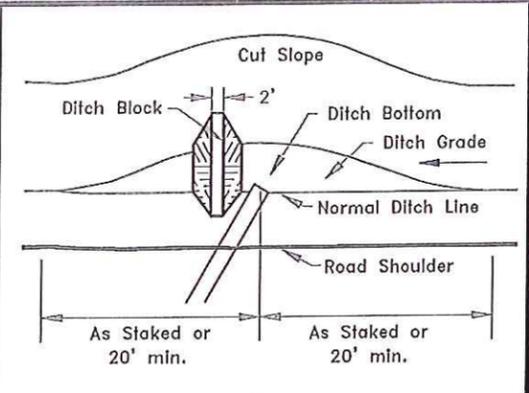
602-11, 607-08



Cross Section



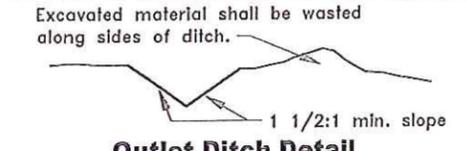
Profile along Ditch



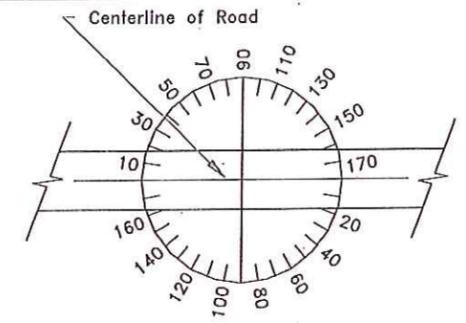
Plan

Ditch blocks shall be constructed to divert flow from ditch lines into culverts.

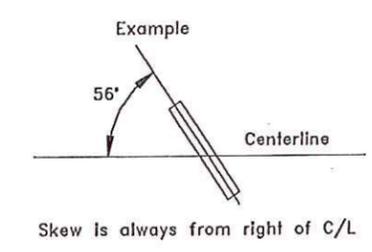
Typical Ditch Block Details



Outlet Ditch Detail



Skew Number



Pipe Skew Diagram

TYPICAL CULVERT INSTALLATION

602-11, 607-08

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Medicine Bow — Routt National Forests
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SHEET TITLE:
Culvert Installation Typicals
SCALE: None | SHEET: 21 Of 22

