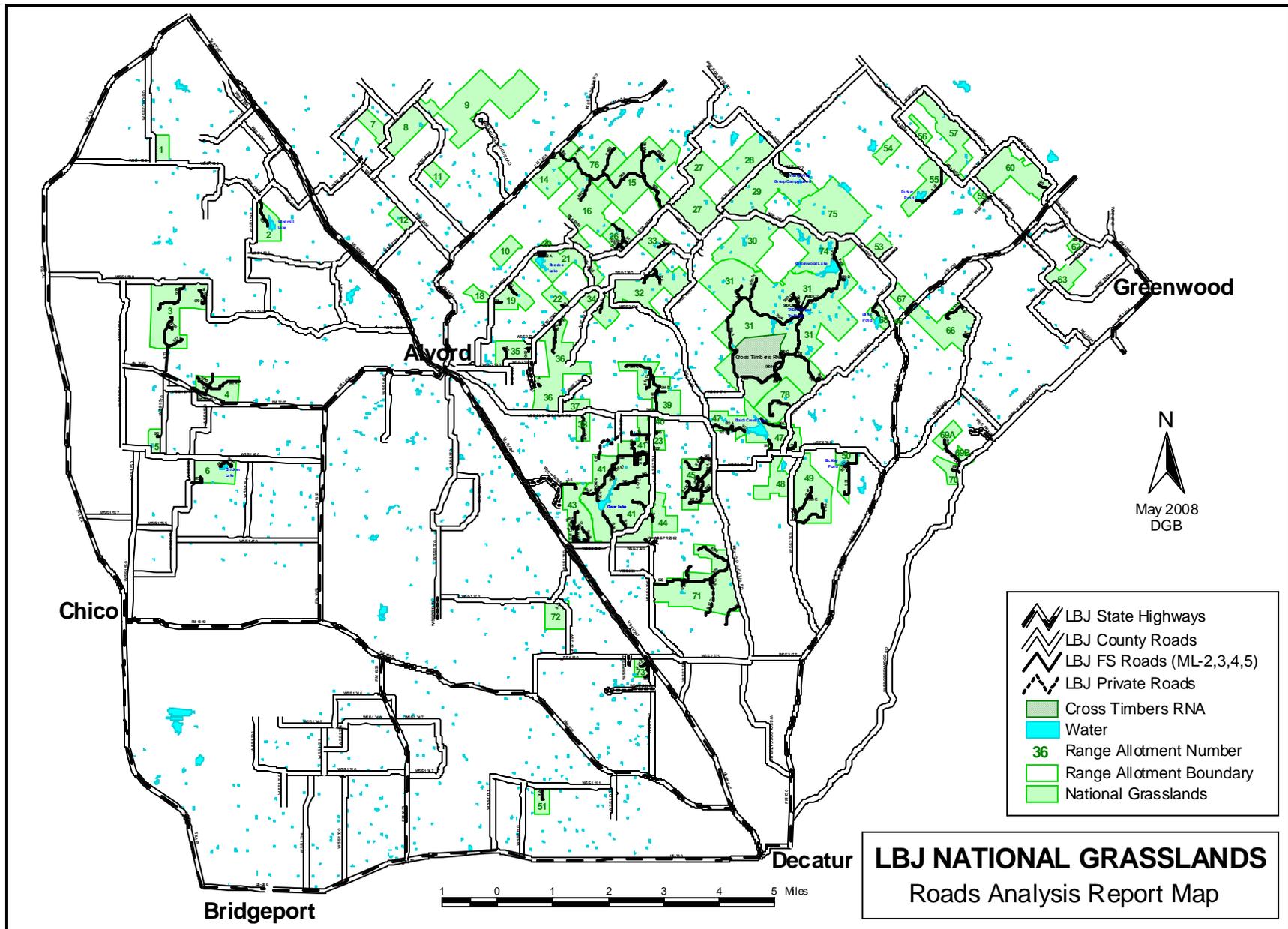


Appendices

A. Maps of Caddo-LBJ NG Roads (State, County, and ML-2, 3, 4, and 5 FS Roads)	
LBJ National Grasslands Map	43
Caddo National Grasslands Maps	
Lake Fannin and Bois d'Arc Units	44
Bois d'Arc Unit	45
Lake Fannin Unit	46
Ladonia Unit	47
B. State Highways	48
C. Forest Highways	49
D. County Road Cooperative Agreements	50
E. Forest Service ML-3, 4, and 5 Roads	51
F. Forest Service ML-2 Roads Open to Public Use	52
G. Forest Service ML-2 Oil & Gas Roads	54
H. Decommissioned Forest Service Oil & Gas Roads	57
I. All Forest Service ML-2 Roads	58
J. Road Maintenance Levels	62
K. Traffic Service Levels	63
L. Road Management Objectives	64
M. Summary of Current <i>Plan</i> Direction	74
N. Assessment of Issues (Step 4)	79
O. Assessment of Road Stream Crossings	111
P. Public Involvement	113
1. Letter Soliciting Comments	
2. Mailing List	
3. Public Comments	
Q. Glossary	129

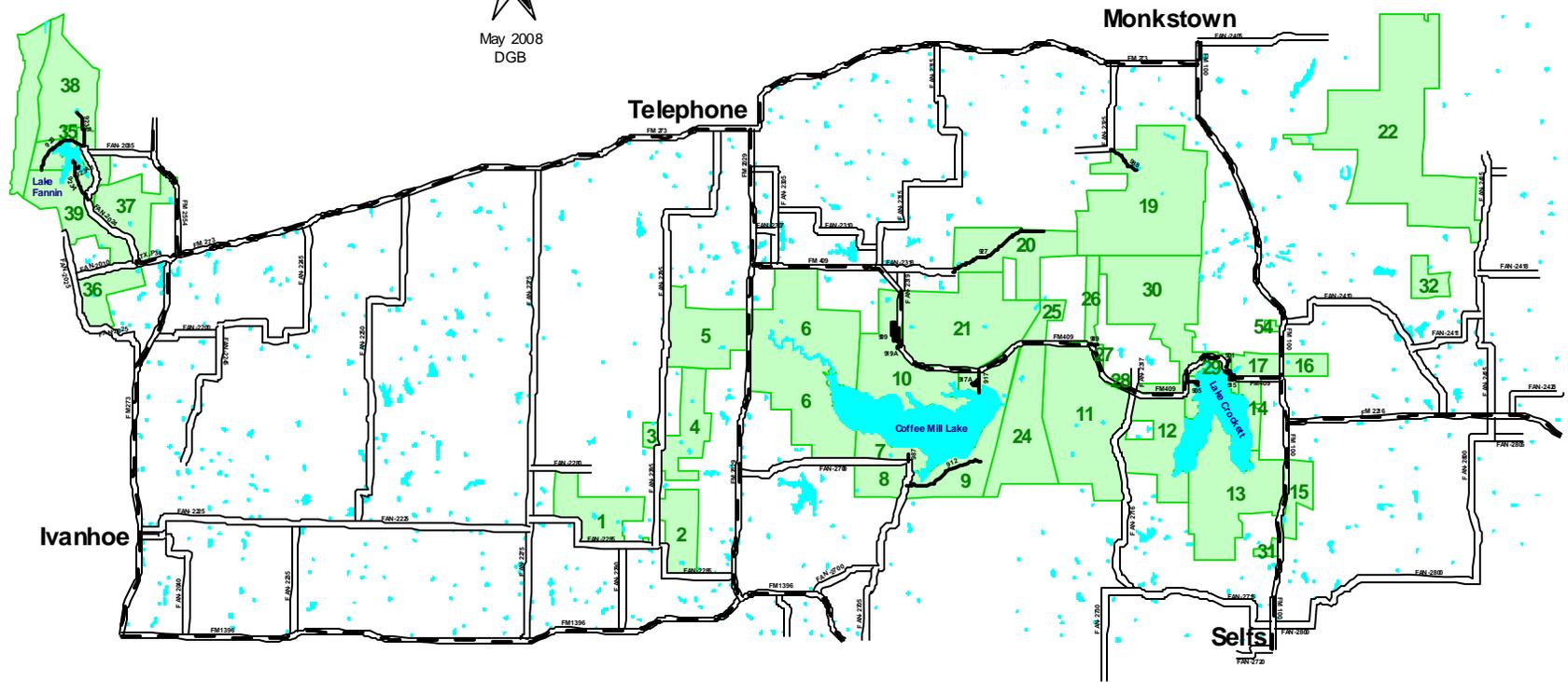


-  Caddo State Highways
-  Caddo County Roads
-  Caddo FS Roads (ML-2,3,4,5)
-  Water
- 19** Range Allotment Number
-  Range Allotment Boundary
-  National Grasslands

CADDO NATIONAL GRASSLANDS
 Lake Fannin and Bois d'Arc Units
 Roads Analysis Report Map

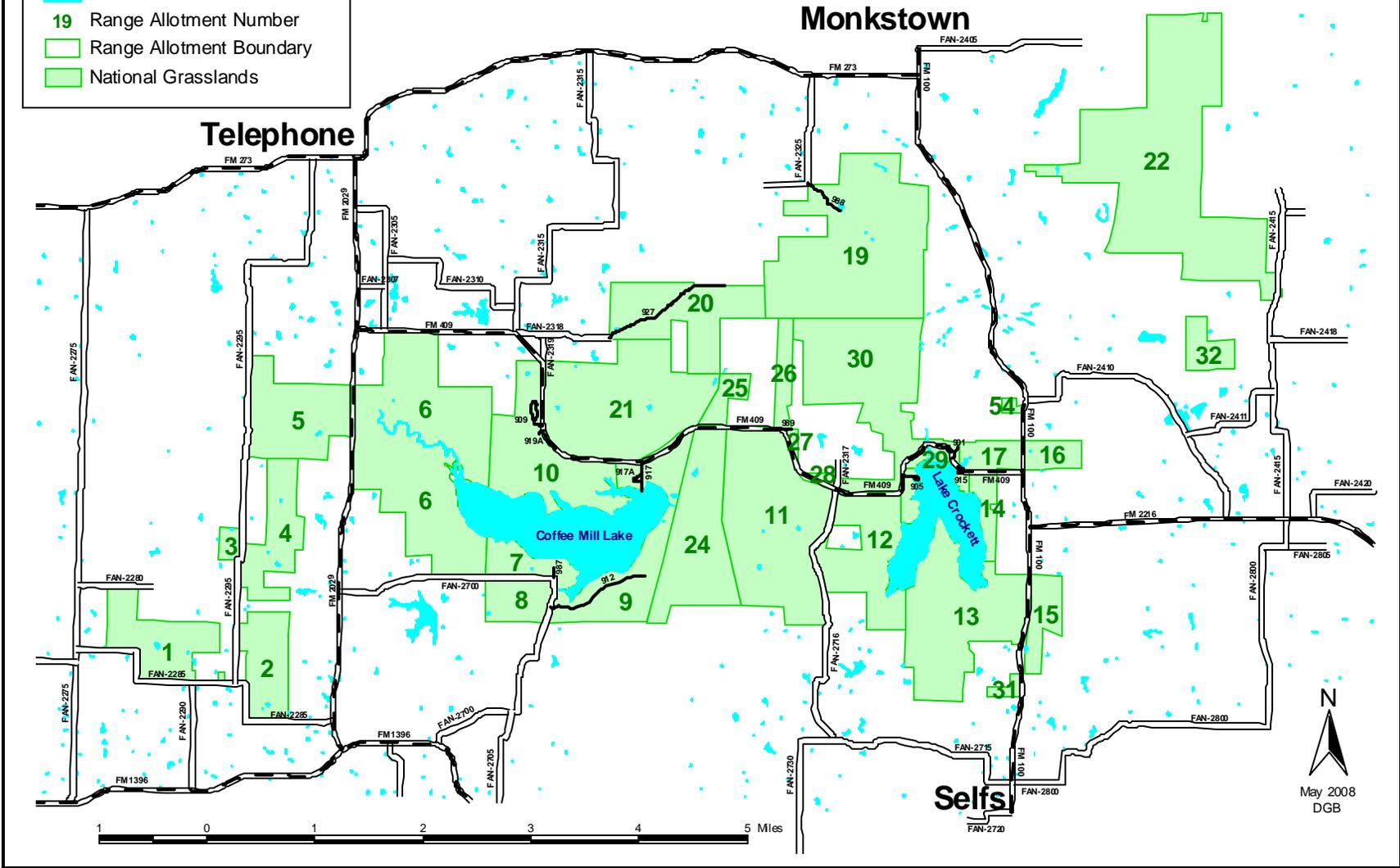
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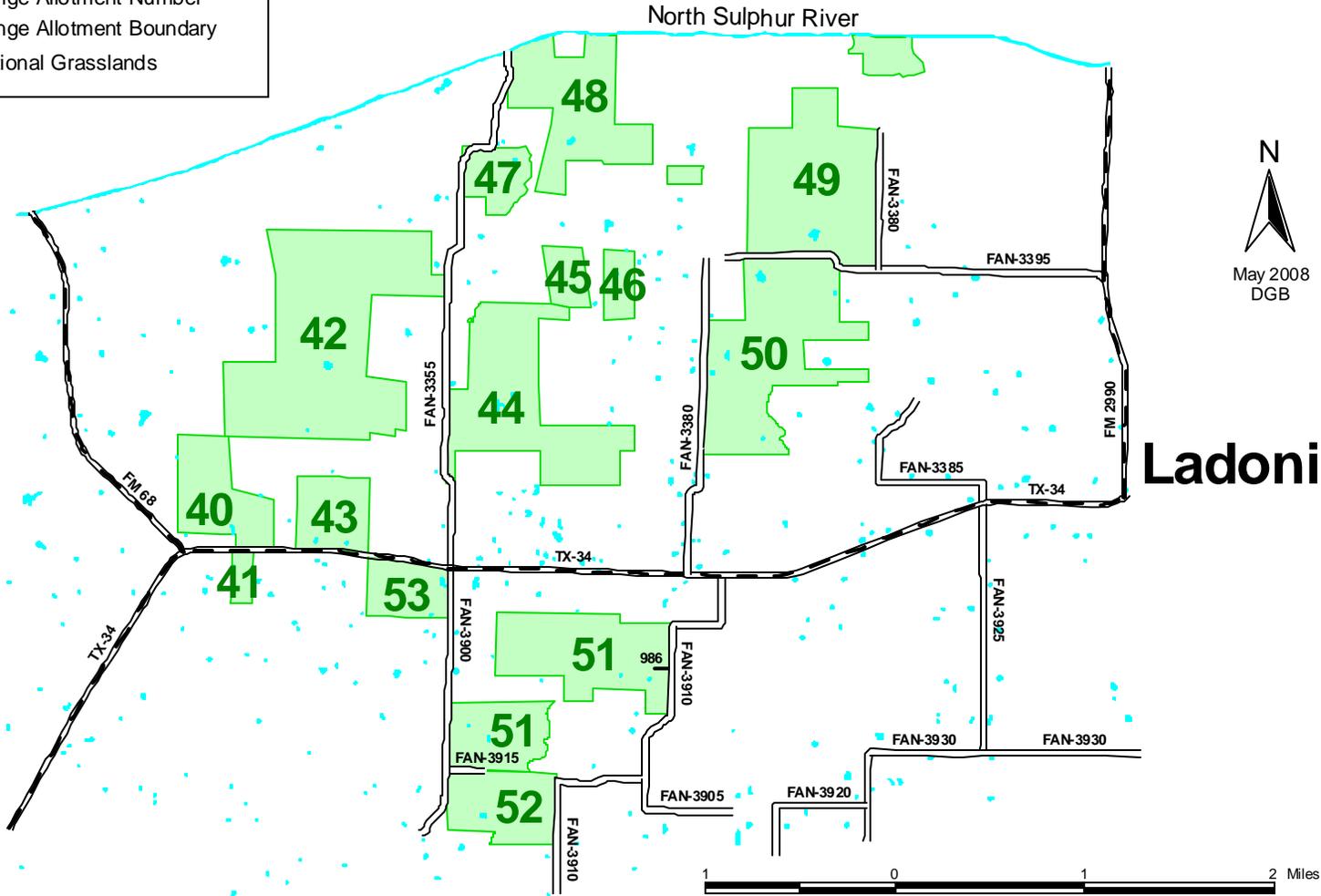
-  Caddo State Highways
-  Caddo County Roads
-  Caddo FS Roads (ML-2,3,4,5)
-  Water
-  19 Range Allotment Number
-  Range Allotment Boundary
-  National Grasslands

CADDO NATIONAL GRASSLANDS
Bois d'Arc Unit
Roads Analysis Report Map



-  Caddo State Highways
-  Caddo County Roads
-  Caddo FS Roads (ML-2,3,4,5)
-  Water
-  49 Range Allotment Number
-  Range Allotment Boundary
-  National Grasslands

CADDO NATIONAL GRASSLANDS
Ladonia Unit
Roads Analysis Report Map



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Ladonia

Appendix B. State Highways

Caddo-LBJ National Grasslands State Highways

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>Remarks</u>
FM 100		7.5	Forest Highway
FM 1204		2.6	
FM 1396		8.9	
FM 1655		17.6	
FM 1810		12.0	
FM 2029		5.6	Forest Highway
FM 2216		3.2	
FM 2265		3.8	
FM 2554		1.7	
FM 273		17.3	
FM 2990		2.3	
FM 409		8.0	Forest Highway
FM 68		2.1	
FM 730		17.5	Forest Highway
TX-101		17.5	
TX-34		7.5	
TX-50		2.0	
TX-P34	Park Road 34	0.4	
US-287		29.5	
US-380		10.0	
		177.0	Total

Appendix C. Forest Highways

Caddo-LBJ National Grasslands Forest Highways

<u>Forest Highway No.</u>	<u>Road ID</u>	<u>Road Name</u>	<u>Begins</u>	<u>Ends</u>	<u>Length (miles)</u>	<u>Jurisdiction</u>
9	FM 100		FAN-2405	FAN-2730	7.5	State
15	FM 409		FM 2029	FM 100	8.0	State
19	FM 2029		FM 273	FM 1396	5.6	State
66	FM 730		US 380	FM 455	17.5	State
67	WSE-2675		WSE-2677	WSE-2585	0.4	Wise Co.
	WSE-2585		WSE-2675	WSE-2475	1.9	Wise Co.
	WSE-2475		WSE-2585	WSE-Old Decatur Rd	3.4	Wise Co.
	WSE-Old Decatur Rd	Old Decatur Rd	WSE-2475	WSE-2175	4.4	Wise Co.
	WSE-2175		WSE-Old Decatur Rd	FM 730	0.9	Wise Co.
671	WSE-2690	New Harp Rd	WSE-2677	WSE-Roberts Rd	2.2	Wise Co.
	WSE-Roberts Rd	Roberts Rd	WSE-2690	FM 1655	1.7	Wise Co.
68	WSE-Old Decatur Rd	Meridian Rd	FM 1655	WSE-2475	5.1	Wise Co.
69	WSE-2690		WSE-2590	WSE-2677	5.6	Wise Co.
	WSE-2677		WSE-2690	WSE-2675	0.8	Wise Co.
	WSE-2675		WSE-2677	WSE-2560	0.6	Wise Co.
	WSE-2560		WSE-2675	WSE-2461	4.7	Wise Co.
	WSE-2461		WSE-2560	FM 730	0.1	Wise Co.
903	FAN-2700	Spoonamore Rd	FM 2029	FM 1396	4.4	Fannin Co.
					74.8	Total

Appendix D. County Road Cooperative Agreements

Caddo-LBJ National Grasslands Coop Road Agreements

<u>Road ID</u>	<u>Road Name</u>	<u>Length (Miles)</u>	<u>County</u>	<u>Jurisdiction</u>	<u>Primary Maintainer</u>	<u>Remarks</u>
Fannin County						
	CR 2030					(Shown as CR 2025 on Fannin Co. road map)
FAN-2025	CR 2025	2.3	Fannin	County	County	(4.1 miles from FM 273 to FS 923 on Fannin Co. road map)
FAN-2035	CR 2035	0.6	Fannin	County	County	(0.8 miles from FM 2554 to CR 2025 on Fannin Co. road map)
FAN-2285	CR 2285	1.7	Fannin	County	County	(1.7 miles from CR 2275 to CR 2295 on Fannin Co. road map)
FAN-2295	CR 2295	5.3	Fannin	County	County	(6.7 miles from FM 273 to FM 2029 on Fannin Co. road map)
FAN-2297	CR 2297	1.3	Fannin	County	County	(0.5 miles from CR 2290 to CR 2295 on Fannin Co. road map)
	CR 2343					(Signed as CR 2318)
FAN-2318	CR 2318	0.7	Fannin	County	County	(0.7 miles east from FM 409 to National Grasslands)
FAN-2325	CR 2325	0.7	Fannin	County	County	(1.0 miles from FM 273 to FS 988)
FAN-2415	CR 2415	2.3	Fannin	County	County	(2.3 miles north from FM 2216 to end of National Grasslands)
FAN-2700	CR 2700	2.5	Fannin	County	County	(4.3 miles from FM 2029 to FM 1396 on Fannin Co. road map)
	CR 2710					(Shown as CR 2716 on Fannin Co. road map)
FAN-2716	CR 2716	1.3	Fannin	County	County	(1.3 miles south from FM 409 to end of National Grasslands)
	CR 3345					(Shown as CR 3355 on Fannin Co. road map)
FAN-3355	CR 3355	2.9	Fannin	County	County	(2.9 miles north from TX-34 to end of National Grasslands)
FAN-3380	CR 3380	1.3	Fannin	County	County	(1.7 miles north from TX-34 to FAN-3395)
FAN-3395	CR 3395	3.5	Fannin	County	County	(2.2 miles west from FM 2990 to FAN-3380)
FAN-3900	CR 3900	1.0	Fannin	County	County	(1.0 mile from TX-34 to FAN-3915 on Fannin Co. road map)
FAN-3910	CR 3910	1.9	Fannin	County	County	(2.2 miles south from TX-34 to end of National Grasslands)
FAN-3915	CR 3915	0.2	Fannin	County	County	(0.2 miles from FAN-3900 to end of road. Old CR 3910.)
	CR 3920	0.8	Fannin	County	County	(Shown on Fannin Co. road map from CR 3930 to county line)
		30.3	Total			

Appendix E. Forest Service ML-3, 4, and 5 Roads

Caddo-LBJ National Grasslands
Forest Service ML-3, 4, and 5 Roads
(Roads suitable for low clearance passenger cars)

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Function Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>	<u>Remarks</u>
900	Mesa	4.0	Wise	Collector	4	4	Aggregate	B	Potential PFSR
900A	Cottonwood	3.2	Wise	Local	3	3	Aggregate	C	
901	Caddo Workcenter	0.1	Fannin	Local	5	5	Bituminous	B	
902	Black Creek Rec Area	0.6	Wise	Local	4	4	Aggregate	C	Potential PFSR
904	Gravel Pit	0.8	Wise	Local	4	4	Improved Native Material	B	Potential PFSR
905	West Lake Crockett	0.2	Fannin	Local	5	4	Aggregate	B	Potential PFSR
908	Miller	2.9	Wise	Collector	4	3	Aggregate	C	Potential PFSR
909	Bois D'Arc Horse Camp	0.5	Fannin	Local	3	3	Aggregate	C	
911	LBJ Workcenter	0.1	Wise	Local	5	5	Bituminous	B	
914	Old LBJ Workcenter	0.2	Wise	Local	3	3	Aggregate	C	
915	East Lake Crockett	0.1	Fannin	Local	5	5	Bituminous	B	Potential PFSR
917	Coffee Mill Lake	0.3	Fannin	Local	5	5	Bituminous	B	Potential PFSR
917A	Coffee Mill Lake Loop	0.175	Fannin	Local	3	3	Aggregate	C	
919A	Bois D'Arc Horse Trailhead	0.05	Fannin	Local	3	3	Improved Native Material	C	
920	Overlook Bluff	1.7	Wise	Collector	3	3	Aggregate	C	Potential PFSR
923	Lake Fannin	0.7	Fannin	Local	3	3	Improved Native Material	C	Potential PFSR
923A	Lake Fannin Boat Ramp	0.4	Fannin	Local	3	3	Aggregate	C	Potential PFSR
923A	Lake Fannin Boat Ramp	0.1	Fannin	Local	3	3	Native Material	C	Potential PFSR
932	Rhodes Lake	0.3	Wise	Local	3	3	Aggregate	C	
981	Valley View Group Camp	0.3	Wise	Local	3	3	Aggregate	C	
		16.7	Total						

Appendix F. Forest Service ML-2 Roads Open to Public Use

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Function Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>
900C	TADRA Point Trailhead	0.37	Wise	Local	3	2	Aggregate	D
900C1	TADRA Point Trailhead Loop	0.1	Wise	Local	2	2	Aggregate	D
900C2	TADRA Point Trailhead Loop	0.13	Wise	Local	3	2	Aggregate	D
900C3	TADRA Point Trailhead Loop	0.17	Wise	Local	3	2	Aggregate	D
900D	Little Cottonwood Lake	0.1	Wise	Local	2	2	Aggregate	D
900E	Cottonwood Lake Boat Ramp	0.1	Wise	Local	3	2	Aggregate	D
900G	(Unit 31 Horse Camp)	0.1	Wise	Local	2	2	Native Material	D
900H	(Unit 31 Horse Camp)	0.3	Wise	Local	2	2	Native Material	D
900I	(Unit 31 Horse Camp)	0.18	Wise	Local	2	2	Native Material	D
908A		0.88	Wise	Local	2	2	Aggregate	D
908A1		0.27	Wise	Local	2	2	Improved Native Material	D
916	Rucker Pond	1.0	Wise	Local	3	2	Improved Native Material	D
920A	Alvord	0.6	Wise	Local	2	2	Aggregate	D
920B		0.1	Wise	Local	2	2	Aggregate	D
920C	Bryson	0.2	Wise	Local	2	2	Improved Native Material	D
920D		0.14	Wise	Local	2	2	Aggregate	D
922	West Black Creek Lake	0.7	Wise	Local	3	2	Improved Native Material	D
923A1	Lake Fannin Boat Ramp Spur	0.1	Fannin	Local	2	2	Improved Native Material	D
928	Clear Lake	0.56	Wise	Local	3	2	Improved Native Material	D
931	Black Creek Branch	0.48	Wise	Local	1	2	Native Material	D
931A	Bickley Pond	0.05	Wise	Local	2	2	Improved Native Material	D
936	Hopewell	1.64	Wise	Local	2	2	Aggregate	D
936A		0.17	Wise	Local	2	2	Aggregate	D
936B		0.25	Wise	Local	2	2	Aggregate	D
936E		0.15	Wise	Local	2	2	Aggregate	D
936E1		0.07	Wise	Local	2	2	Aggregate	D
936F		0.25	Wise	Local	2	2	Aggregate	D
940	Opal Robinson 3	0.8	Wise	Local	2	2	Aggregate	D
948		0.4	Wise	Local	2	2	Aggregate	D
964		0.2	Wise	Local	2	2	Aggregate	D
969	Windmill Lake	0.6	Wise	Local	3	2	Aggregate	D
970	Daisy Taylor A4	0.2	Wise	Local	3	2	Aggregate	D
970A		0.35	Wise	Local	2	2	Aggregate	D

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Function Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>
970B		0.1	Wise	Local	2	2	Aggregate	D
986	Caddo Unit 51 Hunter Camp	0.05	Fannin	Local	2	2	Improved Native Material	D
987	Caddo Unit 7 Hunter Camp	0.2	Fannin	Local	3	2	Improved Native Material	D
988	Caddo Unit 19 Hunter Camp	0.45	Fannin	Local	2	2	Native Material	D
989	Caddo Unit 26 Hunter Camp	0.1	Fannin	Local	2	2	Native Material	D
999	Dan's Pond	0.35	Wise	Local	3	2	Improved Native Material	D
		13.0	Total					

Appendix G. Forest Service ML-2 Oil & Gas Roads

Caddo-LBJ National Grasslands
Oil & Gas Special Use Roads

<u>Road ID</u>	<u>Road Name</u>	<u>Length</u>	<u>Access Rights</u>	<u>County</u>	<u>Other System</u>	<u>Primary Maintainer</u>	<u>Surface Type</u>
900C1		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
904A		0.12	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
910	Gas Well Road	0.7	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
910A		0.85	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
910B		0.06	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
910C		0.08	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
920C		0.61	Permit	Wise	OGM - Oil Gas Minerals	Forest Service	Improved Material
920E		0.16	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
921		0.18	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
921A		0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
922A		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
922B		0.02	Permit	Wise	OGM - Oil Gas Minerals	Private	Aggregate
924		0.04	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
925		0.25	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
930		0.75	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
931B		0.08	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
933		0.25	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
933A		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
934		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
935		0.35	Lease	Wise	OGM - Oil Gas Minerals	Forest Service	Aggregate
936	Hopewell	1.64	Lease	Wise	OGM - Oil Gas Minerals	Forest Service	Aggregate
936A		0.17	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936B		0.25	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936E		0.15	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936E1		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936F		0.25	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936G		0.05	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936H		0.13	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936H1		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936I		0.08	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936I1		0.05	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
936I2		0.04	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate

<u>Road ID</u>	<u>Road Name</u>	<u>Length</u>	<u>Access Rights</u>	<u>County</u>	<u>Other System</u>	<u>Primary Maintainer</u>	<u>Surface Type</u>
936K		0.32	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
937		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
938		0.5	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
939	Bertha Collins 2	0.4	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
940	Opal Robinson 3	0.8	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
940C		0.05	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941	Lucy Rogers 5	0.7	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941A		0.03	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941B		0.37	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941B1		0.04	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941C		0.13	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941C1		0.03	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941D		0.09	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941E		0.06	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
941F		0.03	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
942	Flat Rock Cemetery	0.6	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
942A	ATAPCO 19-5	0.4	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
942B	ATAPCO 19-6	0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
942C		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
942D		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
943	ATAPCO George 1	0.25	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
943A		0.5	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
943B		0.2	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
945		0.6	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
946		0.11	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
947		0.8	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
948		0.4	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
949	Collins A-1	0.2	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
953		0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
955		0.13	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
956		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
957		0.33	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
959	WSE-PR2433	0.63	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
960		0.16	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
961		0.13	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
963		0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
964		0.2	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
965		0.2	Lease	Wise	OGM - Oil Gas Minerals	Private	Improved Dirt

<u>Road ID</u>	<u>Road Name</u>	<u>Length</u>	<u>Access Rights</u>	<u>County</u>	<u>Other System</u>	<u>Primary Maintainer</u>	<u>Surface Type</u>
966		0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
968		0.12	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
968A		0.09	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
972		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
973		1.16	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
973A		0.3	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
973B		0.1	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
974		0.07	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
975		0.29	Lease	Wise	OGM - Oil Gas Minerals	Private	Aggregate
977		0.11	Lease	Wise	OGM - Oil Gas Minerals	Private	Improved Dirt
979		0.16	Lease	Wise	OGM - Oil Gas Minerals	Private	Improved Dirt
		21.55	Total				

Appendix H. Decommissioned Forest Service Oil & Gas Roads

Caddo-LBJ National Grasslands
Decommissioned Oil & Gas Special Use Roads

<u>Road ID</u>	<u>Road Name</u>	<u>Length</u>	<u>Access Rights</u>	<u>County</u>	<u>Other System</u>	<u>Primary Maintainer</u>	<u>Surface Type</u>
933B		0.2	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
936C		0.05	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
936D		0.18	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
938A		0.2	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
940A		0.09	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
940B		0.15	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
940B1		0.24	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
940D		0.12	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
958		0.15	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
962		0.09	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Aggregate
977A		0.67	Lease	Wise	OGM - Oil Gas Minerals	Decommissioned	Improved Dirt
		2.14	Total				

Appendix I. All Forest Service ML-2 Roads

Caddo-LBJ National Grasslands
Forest Service ML-2 Roads
(Roads Suitable for High Clearance Vehicles)

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Functional Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>	<u>Remarks</u>
900A1		0.3	Wise	Local	2	2	Improved Native Material	D	
900A2		0.4	Wise	Local	2	2	Improved Native Material	D	
900C	TADRA Point Trailhead	0.37	Wise	Local	3	2	Aggregate	D	
900C1	TADRA Point Loop	0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
900C2	TADRA Point Loop	0.13	Wise	Local	3	2	Aggregate	D	
900C3	TADRA Point Loop	0.17	Wise	Local	3	2	Aggregate	D	
900D	Little Cottonwood Lake	0.1	Wise	Local	2	2	Aggregate	D	
900E	Cottonwood Lake	0.1	Wise	Local	3	2	Aggregate	C	
900G		0.2	Wise	Local	2	2	Native Material	D	
900H		0.3	Wise	Local	2	2	Native Material	D	
900I		0.3	Wise	Local	2	2	Native Material	D	
900I1	900I Short Cut	0.05	Wise	Local	2	2	Native Material	D	
904A		0.12	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
908A		0.88	Wise	Local	2	2	Aggregate	D	
908A1		0.27	Wise	Local	2	2	Improved Native Material	D	
908C		0.46	Wise	Local	2	2	Improved Native Material	D	
908D		0.53	Wise	Local	2	2	Improved Native Material	D	
910	Gas Well Road	0.7	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
910A		0.85	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
910B		0.06	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
910C		0.08	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
912	South Coffee Mill Lake	1.0	Fannin	Local	3	2	Improved Native Material	D	
913		0.56	Wise	Local	2	2	Native Material	D	
914A		0.09	Wise	Local	2	2	Native Material	D	
914B		0.14	Wise	Local	2	2	Native Material	D	
916	Rucker Pond	1.0	Wise	Local	3	2	Improved Native Material	D	
918	East Black Creek Lake	0.3	Wise	Local	2	2	Improved Native Material	D	
920A	Alvord	0.6	Wise	Local	2	2	Aggregate	D	
920B		0.1	Wise	Local	2	2	Aggregate	D	

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Functional Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>	<u>Remarks</u>
920C	Bryson	0.61	Wise	Local	2	2	Improved Native Material	D	
920D		0.14	Wise	Local	2	2	Aggregate	D	
920E		0.16	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
921		0.18	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
921A		0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
922	West Black Creek Lake	0.7	Wise	Local	3	2	Improved Native Material	D	
922A		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
922B		0.02	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
923A1		0.1	Fannin	Local	2	2	Native Material	D	
923B	Red River	0.6	Fannin	Local	2	2	Native Material	D	
924		0.04	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
925		0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
927		1.2	Fannin	Local	2	2	Improved Native Material	D	Private Road
928	Clear Lake	0.56	Wise	Local	3	2	Improved Native Material	D	
929		0.5	Wise	Local	2	2	Improved Native Material	D	
929A		0.24	Wise	Local	2	2	Improved Native Material	D	
930		0.75	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
931	Black Creek Branch	0.48	Wise	Local	1	2	Native Material	D	
931A	Bickley Pond	0.05	Wise	Local	2	2	Improved Native Material	D	
931B		0.08	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
932A	Rhodes Lake Spur	0.08	Wise	Local	2	2	Native Material	D	
933		0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
933A		0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
934		0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
935		0.35	Wise	Local	2	2	Improved Native Material	D	Oil Gas Minerals
936	Hopewell	1.64	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936A		0.17	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936B		0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936E		0.15	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936E1		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936F		0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936G		0.05	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936H		0.13	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936H1		0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936I		0.08	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936I1		0.05	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
936I2		0.04	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Functional Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>	<u>Remarks</u>
936K		0.32	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
937		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
938		0.5	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
939		0.4	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
940		0.8	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
940C		0.05	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941	Luck Rogers 5	0.7	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941A		0.03	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941B		0.37	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941B1		0.04	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941C		0.13	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941C1		0.03	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941D		0.09	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941E		0.06	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
941F		0.03	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
942	Flat Rock Cemetery	0.6	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
942A	ATAPCO 19-5	0.4	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
942B	ATAPCO 19-6	0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
942C		0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
942D		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
943	ATAPCO George 1	0.25	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
943A		0.5	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
943B		0.2	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
944	Briar Branch	0.74	Wise	Local	2	2	Improved Native Material	D	
944A		0.1	Wise	Local	2	2	Aggregate	D	
944B		0.16	Wise	Local	2	2	Improved Native Material	D	
944C		0.9	Wise	Local	2	2	Improved Native Material	D	
944C1		0.03	Wise	Local	2	2	Improved Native Material	D	
945		0.6	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
946		0.11	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
947		0.15	Fannin	Local	2	2	Aggregate	D	Oil Gas Minerals
948		0.4	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
949		0.2	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
952		0.25	Wise	Local	2	2	Improved Native Material	D	
953		0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
955		0.13	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
956		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals

<u>Road ID</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>County</u>	<u>Functional Class</u>	<u>Objective Mntc Level</u>	<u>Op Mntc Level</u>	<u>Surface Type</u>	<u>Traffic Service Level</u>	<u>Remarks</u>
957		0.33	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
959		0.15	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
960		0.16	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
961		0.13	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
961A		0.44	Wise	Local	2	2	Improved Native Material	D	
963		0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
964		0.2	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
965		0.2	Wise	Local	2	2	Improved Native Material	D	Oil Gas Minerals
966		0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
967	Chicken Lake	0.2	Wise	Local	2	2	Aggregate	D	
967A		0.25	Wise	Local	2	2	Improved Native Material	D	
968		0.12	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
968A		0.09	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
969	Windmill Lake	0.6	Wise	Local	3	2	Aggregate	D	
970	Daisy Taylor A4	0.9	Wise	Local	2	2	Aggregate	D	
970A		0.35	Wise	Local	2	2	Aggregate	D	
970B		0.1	Wise	Local	2	2	Aggregate	D	
972		0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
973		1.16	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
973A		0.3	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
973B		0.1	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
974		0.07	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
975		0.29	Wise	Local	2	2	Aggregate	D	Oil Gas Minerals
976		0.37	Wise	Local	2	2	Improved Native Material	D	
976A		0.6	Wise	Local	2	2	Improved Native Material	D	
976B		0.24	Wise	Local	2	2	Improved Native Material	D	
977		0.11	Wise	Local	2	2	Improved Native Material	D	Oil Gas Minerals
978		0.57	Wise	Local	2	2	Improved Native Material	D	
979		0.16	Wise	Local	2	2	Improved Native Material	D	Oil Gas Minerals
985		1.2	Fannin	Local	2	2	Native Material	D	
986	Hunter Camp	0.01	Fannin	Local	2	2	Native Material	D	
987	Hunter Camp	0.17	Fannin	Local	3	2	Native Material	D	
988	Hunter Camp	0.45	Fannin	Local	2	2	Native Material	D	
989	Hunter Camp	0.1	Fannin	Local	2	2	Native Material	D	
999	Dan's Pond	0.35	Wise	Local	3	2	Improved Native Material	D	
		42.65	Total						

Appendix J. Road Maintenance Levels

Parameters	1	2	3	4	5
Service Life	Intermittent Service-Closed Status	Constant Service or Intermittent Service - Open Status (Some uses may be restricted under 36 CFR 261.50)			
Traffic Type	Open for non-motorized uses. Closed to motorized traffic traffic.	Administrative, Permittees, Leases, disperse recreation, specialized, commercial haul.	All National Forest Traffic - General Use and Commercial		
Vehicle Type	Closed-N/A	High clearance, pick-up, 4x4, log trucks, etc.	All types - passenger cars to large commercial vehicles		
Traffic Volume	Closed-N/A	Traffic volume increases with Maintenance Level			
Typical Surface	All types	None, Native, or Aggregate (may be dust abated)	Aggregate (usually dust abated) or Paved		
Travel Speed	Closed-N/A	Travel speed increases with Maintenance Level			
User Comfort and Convenience	Closed-N/A	Not a consideration	Low Priority	Moderate Priority	High Priority
Functional Classification	All Types	Local Collector	Local Collector Arterial	Local Collector Arterial	Local Collector Arterial
Traffic Service Level	Closed-N/A	D	A, B, C Traffic Service Level increases with Maintenance Level		
Traffic Management Strategy	Prohibit or Eliminate	Discourage or Prohibit cars. Accept or Discourage high clearance vehicles.	Encourage, Accept	Encourage	Encourage

Appendix K. Traffic Service Levels

Parameters	A	B	C	D
Flow	Free flowing with adequate parking facilities.	Congested during heavy traffic such as during peak logging or recreation activities.	Interrupted by limited passing facilities, or slowed by the road condition.	Flow is slow or may be blocked by an activity. Two-way traffic is difficult and may require backing to pass.
Volumes	Uncontrolled; will accommodate the expected traffic volumes.	Occasionally controlled during heavy use periods.	Erratic; frequently controlled as the capacity is reached.	Intermittent and usually controlled. Volume is limited to that associated with the single purpose.
Vehicle Types	Mixed; includes the critical vehicle and all vehicles normally found on public roads.	Mixed; includes the critical vehicle and all vehicles normally found on public roads.	Controlled mix; accommodates all vehicle types including the critical vehicle. Some use may be controlled to vehicle types.	Single use; not designed for mixed traffic. Some vehicles may not be able to negotiate. Concurrent use traffic is restricted.
Critical Vehicle	Clearances are adequate to allow free travel. Overload permits are required.	Traffic controls needed where clearances are marginal. Overload permits are required	Special provisions may be needed. Some vehicles will have difficulty negotiating some segments.	Some vehicles may not be able to negotiate. Loads may have to be off-loaded and walked in.
Safety	Safety features are a part of the design.	High priority in design. Some protection is accomplished by traffic management.	Most protection is provided by management.	The need for protection is minimized by low speeds and strict traffic controls.
Traffic Management	Normally limited to regulatory, warning, and guide signs and permits	Employed to reduce traffic volume and conflicts.	Traffic controls are frequently needed during periods of high use by the dominant resource activity.	Used to discourage or prohibit traffic other than that associated with the single purpose.
User Costs	Minimize; transportation efficiency is important.	Generally higher than "A" because of slower speeds and increased delays.	Not important; efficiency of travel may be traded for lower construction costs.	Not considered.
Alignment	Design speeds is the predominant factor within feasible topographic limitations.	Influenced more strongly by topography than by speed and efficiency.	Generally dictated by topographic features and environmental factors. Design speeds are generally low.	Dictated by topography, environmental factors, and the design and critical vehicle limitations. Speed is not important.
Road Surface	Stable and smooth with little or no dust, considering the normal season of use.	Stable for the predominant traffic for the normal use season. Periodic dust control for heavy use or environmental reasons. Smoothness is commensurate with the design speed.	May not be stable under all traffic or weather conditions during the normal use season. Surface rutting, roughness, and dust may be present, but controlled for environmental or investment protection.	Rough and irregular. Travel with low clearance vehicles is difficult. Stable during dry conditions. Rutting and dusting controlled only for soil and water protection.

Appendix L. Road Management Objectives



United States Department of Agriculture	Forest Service	National Forests and Grasslands in Texas SO	701 N. First Street Lufkin, TX 75901 Phone 936-639-8501 TDD# 936-639-8560
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File Code: 7730

Date: July 7, 1999

Route To:

Subject: Road Maintenance Objectives (RMO)

To: District Rangers

Enclosed are the RMOs for the Forest. They have been approved for use Forestwide. If you have a project that requires an exception to these generic RMOs, then you can develop and approve a new RMO that meets the specific project requirements. Specific project RMOs can be approved by the District Ranger.

s/ Glenn P. Donnahoe

GLENN DONNAHOE
Acting Team Leader
Heritage, Recreation, Lands,
Engineering and Information Systems

cc: R. Graves
S. Lewis
J. White
N. Snoberger
L. Felts
B. Rasbeary
B. Breland
G. Bible
D. Benner
D. Phillips
G. Weick
L. Bonner
D. Peterson
G. Ippolito

NATIONAL FORESTS & GRASSLANDS IN TEXAS
ROAD MANAGEMENT OBJECTIVES (RMO)
Maintenance Level 4 and 5 Roads

I. DESIGN, OPERATION AND MAINTENANCE CRITERIA

MAINTENANCE LEVEL: ML 4: Moderate degree of user comfort

ML 5: High degree of user comfort

Recreation roads are subject to seasonal closure

TRAFFIC SERVICE LEVEL: ML 4: TSL C & B

ML 5: TSL B & A

FUNCTIONAL CLASS:	ML 4: Local – 57.1 miles	ML 5: Local – 38.6 miles
	Collector – 25.7 miles	Collector – 0 miles
	Arterial – 0 miles	Arterial – 0 miles

A. Design Criteria

Primary Road Users:

Mixed traffic including public, recreational, commercial, suburban, mail, medical and law enforcement travel needs.

B. Traffic Requirements – Traffic consists of cars, pickups, school buses, mail carriers, local law enforcement and rescue squad emergency vehicles and touring buses. Some tractor trailer, commercial and industrial carriers.

1. Design Vehicle – Cars and tractor-trailers operating at the maximum legal weight of 85,000 pounds.
2. Design Speed – Speed limits should be determined based upon road alignment and geometry and meeting state requirements.
3. Safety – Provide for surfacing material to support design vehicles within the approved design speed limit for each road. Provide for minimum 8 foot safety zones on each side of the road. Signing shall conform to the latest edition of the TX MUTCD.
4. Environmental – Design criteria and standards are consistent with the Standards and Guidelines contained in the Revised Forest Land and Resource Management Plan, 1996. A project Environmental Analysis and Decision Memo shall be consistent with the Forest Land Management Plan and the RMO.
5. Economics – The cost of the proposed road project should be evaluated with environmental requirements and its value to the overall transportation system. Service life for crushed aggregate surfacing should be a minimum of 10 years. Culverts should provide a service life of 20 years.

II. DESIGN STANDARDS

- A. Design Class – Double lane, including minimum 8-foot safety zones.
- B. Right-of-way – 50 feet
- C. Design width – 26 feet includes 22 foot riding surface with 2 foot shoulders.
- D. Design Profile & Grade – Road cross section includes cut and fill sections with ditches and drainage structures. Maximum centerline grade of 4% with short road sections of up to 8% for distance of 500 feet or less.
- E. Slopes – Front slopes 4:1, Back slopes 3:1
- F. Surfacing – ML 4: Minimum of 6 inches of crushed aggregate. ML 5: Minimum of 3 inches of hot mix asphalt or two coats of bituminous chip seal.
- G. Sub-grade – Improve structural strength with lime or cement treated sub-grade. Minimum depth to be determined by engineering design.
- H. Drainage Structures – Designed to meet 50 year flood events, structural and environmental needs.
- I. Sign – Provide regulatory, informational, directional, and warning signs according to the TX MUTCD.
- J. Erosion Control – Provide temporary and permanent erosion control to minimize the loss and damage of roadway and areas.

III. OPERATION AND MAINTENANCE STANDARDS

- A. Operation – Maintenance Level 4 and 5 roads will remain open and are subject to the Highway Safety Act. Emergency repairs of damaged roads and signs must be completed in a timely manner to respond to public traffic needs.
- B. Maintenance – Current and Preventative – Provide routine maintenance activities necessary to prevent damage to the roadway and surroundings. Frequent monitoring and maintenance repairs are needed to ensure the safety of the traveling public and Forest Service employees. Monitor frequently and provide as a minimum road maintenance inspection on roads that have a high ADT and accident history. Take corrective action on any critical safety need.

C. The Maintenance Level 4 and 5 roads listed in the NFGT Infra Transportation System are subject to the design criteria, standards and operation and maintenance requirements of this "RMO – Maintenance Level 4 & 5".

PREPARED BY:	<u>s/ <i>Richard Graves</i></u>	<u>6/29/99</u>
	Richard Graves	Date
REVIEWED BY:	<u>s/ <i>Glenn P. Donnahoe</i></u>	<u>7-6-99</u>
	Glenn Donnahoe	Date
APPROVED BY:	<u>s/ <i>Ronnie Raum</i></u>	<u>7/7/99</u>
	Ronnie Raum Forest Supervisor	Date

NATIONAL FORESTS & GRASSLANDS IN TEXAS
ROAD MANAGEMENT OBJECTIVES (RMO)
Maintenance Level 3 Roads

I. DESIGN, OPERATION AND MAINTENANCE CRITERIA

MAINTENANCE LEVEL 3: Suitable for passenger cars

TRAFFIC SERVICE LEVEL: TSL C

FUNCTIONAL CLASS: Local – 231 miles

Collector – 201 miles

Arterial – 37 miles

A. Design Criteria

Primary Road Users:

Mixed traffic including public, recreational, commercial and other National Forest resources, suburban, mail routes, medical and law enforcement travel needs.

B. Traffic Requirements – Traffic consists of cars, pickups, log trucks, oil and gas heavy duty trucks, school buses, mail carriers, local law enforcement and rescue squad vehicles and local farming equipment and trucks.

1. Design Vehicle – Cars and tractor-trailers operating at the maximum legal weight of 85,000 pounds.
2. Design Speed – Speed limits should be determined based upon road alignment and geometry and meeting state requirements.
3. Safety – Provide for surfacing material to support design vehicles within the approved design speed limit for each road. Signing shall conform to the latest edition of the TX MUTCD.
4. Environmental – Design criteria and standards are consistent with the Standards and Guidelines contained in the Revised Forest Land and Resource Management Plan, 1996. A project Environmental Analysis and Decision Memo shall be consistent with the Forest Land Management Plan and the RMO.
5. Economics – The cost of the proposed road project should be evaluated with environmental requirements and its value to the overall transportation system. Service life for crushed aggregate surfacing should be a minimum of 10 years. Culverts should provide a service life of 20 years.

II. DESIGN STANDARDS

- A. Design Class – Single lane, with turnouts, includes some double lane roads.
- B. Right-of-way – 40 feet
- C. Design width – 14 foot riding surface with 1 foot shoulders

- D. Design Profile & Grade – Road cross section includes cut and fill sections with ditches and drainage structures. Maximum centerline grade of 6% with short road sections of up to 10% for distance of 500 feet or less.
- E. Slopes – 3:1
- F. Surfacing – Roads shall maintain a minimum of 4 inch depth of crushed aggregate surfacing with improved sub-grade.
- G. Drainage Structures – Designed to meet minimum 25 year flood events, structural and environmental needs. Provide for protection of culvert and bridge inlets and outlets, including rip rap or reinforced concrete protection.
- H. Sign – Provide warning, directional and regulatory signs complying with the TX MUTCD.
- I. Erosion Control – Provide temporary and permanent erosion control to minimize loss and damage of roadway and areas.

III. OPERATION AND MAINTENANCE STANDARDS

- A. Operation – Maintenance Level 3 roads can be closed. They are subject to the Highway Safety Act. Emergency repairs of damaged roads and signs must be completed in a timely manner to respond to public traffic needs. Use proper closure devices and signing, meeting Texas MUTCD and Forest Service requirements.
- B. Maintenance – Current and Preventative. Provide routine maintenance activities necessary to prevent damage to the roadway and surrounding s. Frequent maintenance repairs are needed to ensure the safety of the traveling public and Forest Service employees. Monitor frequently and provide as a minimum road maintenance inspection on roads that have a high ADT and accident history. Take corrective action on any critical safety need.
- C. The Maintenance Level 3 roads listed in the NFGT Infra Transportation System are subject to the design criteria, standards and operation and maintenance requirements of this “RMO – Maintenance Level 3”.

PREPARED BY:	<u>s/ <i>Richard Graves</i></u>	<u>6/29/99</u>
	Richard Graves	Date
REVIEWED BY:	<u>s/ <i>Glenn P. Donnahoe</i></u>	<u>7-6-99</u>
	Glenn Donnahoe	Date
APPROVED BY:	<u>s/ <i>Ronnie Raum</i></u>	<u>7/7/99</u>
	Ronnie Raum, Forest Supervisor	Date

NATIONAL FORESTS & GRASSLANDS IN TEXAS
ROAD MANAGEMENT OBJECTIVES (RMO)
Maintenance Level 2 Roads

I. DESIGN, OPERATION AND MAINTENANCE CRITERIA

MAINTENANCE LEVEL 2: High Clearance Vehicles

TRAFFIC SERVICE LEVEL: TSL C and TSL D

FUNCTIONAL CLASS: Local - 1483 miles

A. Design Criteria

Primary Road Users:

- Commercial Timber Haul
- Dispersed Recreation
- Hunting and Trails
- Forest Service Administration
- Contact Administration
- Environmental Monitoring
- Resource Protection

B. Traffic Requirements

Traffic primarily consists of commercial haul vehicles with related high clearance service and administrative type vehicles.

1. Design Vehicle – Tractor trailers operating at the maximum legal weight of 85,000 pounds.
2. Safety – Provide for structural materials (riprap, geotech fabric) to reinforce poor subgrades, minimize rutting and to increase traction on grades greater than 6%. Provide for proper signing.
3. Environmental – Design criteria and standards are consistent with the Standards and Guidelines contained in the Revised Forest Land and Resource Management Plan, 1996. A project Environmental Analysis and Decision Memo shall be consistent with the Forest Land Management Plan and the RMO.
4. Economics – The cost of the proposed road project should be evaluated with environmental requirements and its value to the overall transportation system. Service life for crushed aggregate surfacing should be a minimum of 10 years. Culverts should provide a service life of 20 years.

II. DESIGN STANDARDS

- A. Design Class – Single lane with turnouts and curve widening as needed for safety.
- B. Right-of-way (ROW) – 20 to 28 feet
- C. Design width – 12 foot riding surface with 1 foot shoulders.

- D. Design Profile & Grade – Road cross section includes cut and fill sections with ditches and drainage structures. Maximum centerline grade of 8% with short road sections of up to 14% for distances to 500 feet or less.
- E. Slopes – 3:1
- F. Surfacing – Spot surfacing and surfacing of sections of roads or entire lengths of roads depending upon volume and type of traffic, soil type and strength and erosion control requirements. Some roads with existing native surfacing that prevents rutting do not need crushed aggregate.
- G. Drainage Structures – Design to meet minimum 10 year flood events, structural and environmental needs.
- H. Erosion Control – Provide temporary and permanent erosion control to minimize loss of surfacing, roadbed, and roadway components.

III. OPERATION AND MAINTENANCE STANDARDS

- A. Operation – Maintenance Level 2 roads can be closed. Use proper closure devices and signing meeting Texas MUTCD and Forest Service requirements.

Maintenance Level 2 roads are not subject to the Highway Safety Act.
- B. Maintenance – Provide maintenance activities necessary to protect the environment and resources that the transportation facility serves. Provide for spot surfacing and erosion control repair or replacement as needed. Utilize a road maintenance condition survey to identify maintenance needs.
- C. The Maintenance Level 2 roads listed in the NFGT Infra Transportation System are subject to the design criteria, standards and operation and maintenance requirements of this “RMO – Maintenance Level 2”.

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NATIONAL FORESTS & GRASSLANDS IN TEXAS
ROAD MANAGEMENT OBJECTIVES (RMO)
Maintenance Level 1 Roads

I. DESIGN, OPERATION AND MAINTENANCE CRITERIA

MAINTENANCE LEVEL 1: Basic Custodial Care
Road Closed

TRAFFIC SERVICE LEVEL: TSL D

FUNCTIONAL CLASS: Local – 444 miles

A. Design Criteria

Primary Road Users:

Commercial Haul
Dispersed Recreation
Hunting and Trails
Forest Service Administration
Contact Administration
Environmental Monitoring
Resource Protection

B. Traffic Requirements – Traffic primarily consists of commercial haul vehicles with related high clearance service and administrative type vehicles.

1. Design Vehicle – Tractor-trailers operating at the maximum legal weight 85,000 pounds.
2. Safety – Provide for structural materials (riprap, geotech fabric) to reinforce poor subgrades, minimize rutting and to increase traction on grades greater than 8%. Provide for proper signing.
3. Environmental – Design criteria and standards are consistent with the Standards and Guidelines contained in the Revised Forest Land and Resource Management Plan, 1996. A project Environmental Analysis and Decision Memo shall be consistent with the Forest Land Management Plan and the RMO.
4. Economics – The cost of the proposed road project should be evaluated with environmental requirements and its value to the overall transportation system. Service life for crushed aggregate surfacing should be a minimum of 10 years. Culverts should provide a service life of 20 years.

II. DESIGN STANDARDS

A. Design Class – Single lane, only add turnouts where needed for safety.

B. Right-of-way – 20 feet.

C. Design width – 12-foot travelway.

- D. Design Profile & Grade – Usually flat grades with dips and ditches as needed to reduce sediment runoff. Pitch grades can be between 8% and 15% for distances of 500 feet or less. Use culverts in perennial streams and intermittent streams.
- E. Slopes – 3:1
- F. Surfacing – Provide surfacing to protect resources including stream approaches, dips and other drainage structures.
- G. Drainage Structures – Design to meet structural and environmental needs. Provide for a minimum hydraulic design for a 10-year flood event.
- H. Erosion Control – Provide temporary and permanent erosion control to minimize loss of soil.

III. OPERATION AND MAINTENANCE STANDARDS

- A. Operation – Maintenance Level 1 roads will be closed permanently or seasonally. Use proper closure devices and signing meeting Texas MUTCD and Forest Service manual requirements.

Maintenance Level 1 roads are not subject to the Highway Safety Act.

- B. Maintenance – Provide maintenance activities necessary to protect the environment and resources that the transportation facility serves. Annual and routine maintenance is not required. Repair washed out road sections to prevent further loss of roadway and drainage structures. Road condition surveys should be performed to identify maintenance needs.
- C. The Maintenance Level 1 roads listed in the NFGT Infra Transportation System are subject to the design criteria, standards and operation and maintenance requirements of this “RMO – Maintenance Level 1”.

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	Ronnie Raum	Date
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Appendix M. Summary of Current *Plan* Direction

The Revised Land and Resource Management Plan for the National Forests and Grasslands in Texas (the *Plan*) was approved in March 1996. This appendix summarizes the desired future conditions in the *Plan* related to roads and the *Plan's* standards and guidelines that apply to road management.

1.1 The Plan's Desired Future Condition for Roads

The discussion of the desired future conditions and management objectives in Chapter 4 of the *Plan* provide the general direction to consider in the management of roads and access to the forest. The goals, desired future conditions, and objectives relative to roads were developed to respond to the Roads and Trails issue that arose during the public involvement process during preparation of the *Plan*.

The *Plan* contains the following direction specific to roads:

Roads will exist to provide access to the NFGT, however, some of these roads will be for administration and management only, with limited vehicular use by the public (the *Plan*, p. 44).

Forest-wide objectives relative to roads include the following (the *Plan*, p. 47):

Acquire rights-of-way that facilitate efficient management.
Manage the transportation system for increased cost-effectiveness and efficiency.

1.2 Plan Standards and Guidelines Applicable to Roads

1.2.1 Forest-wide Standards and Guidelines

FW-051

Develop the Forest Road System, as needed, to respond to resource and travel management objectives while providing for the appropriate movement of people and products to and through National Forest System lands.

Road and trail construction, reconstruction, and maintenance related activities will occur to support timber management, minerals exploration and development, recreation access, special uses, Forest administration and other management activities.

FW-052

Establish and maintain vegetative cover on slopes and areas outside the driving surface or trail head that were disturbed during road and trail construction and reconstruction activities.

FW-053

Design and construct roads and trails to minimize siltation and maintain to provide surface drainage away from streams and into vegetated buffer strips or other filtering system.

FW-054

Follow Scenic Resource Standards according to FSH and FSM guidelines for road location planning.

FW-055

Provide road and trail design and construction that allows unrestricted fish passage.

FW-056

Provide appropriate maintenance, operational management and reconstruction of existing ...roads and trails.

The use of EPA approved herbicides following appropriate site-specific environmental analysis is permitted.

FW-057

Maintain Forest Development Roads to appropriate maintenance level standards for the planned use and traffic.

The appropriate maintenance levels for roads are:

Arterial Roads - Level 4 or 5

Collector Roads - Level 3, 4, or 5

Local Roads - Level 1, 2, 3, 4, or 5

Level 1 - Custodial care with road use restrictions.

Level 2 - Limited traffic with brush control for high clearance vehicle.

Level 3 - Limited traffic with rough surface, passenger vehicle use possible with user comfort and convenience a low priority.

Level 4 - Moderate traffic with surface maintenance, passenger vehicle use provided with a moderate degree of user comfort and convenience

Level 5 - High traffic possible with surface maintenance, passenger vehicle use provided with a high degree of user comfort and convenience.

FW-058

Obliterate existing roads not needed for current or future use and have vegetative cover reestablished on all disturbed areas.

FW-059

Apply road use restrictions to protect other resource values.

a. Transportation routes inventoried in the Forest Transportation Information System (Infrastructure) should remain open for public travel unless restrictions are implemented in response to resources or program including but not limited to wildlife, recreation, minerals, fire, soil and water, and road maintenance reduction

b. A site specific analysis will be prepared for each proposed travelway closure or restriction. This analysis shall consider the effects on developed and dispersed recreation including the needs of people with disabilities

c. Restrictions shall conform to the requirements of 36 CFR 261

FW-214

Design roads according to Best Management Practices (BMP's). Implementation of construction and maintenance conforms to BMP's to meet State Water Quality Standards.

1.2.2 Management Area 3 – Grassland Ecosystems Standards and Guidelines

MA-3-21

Develop ...roads as necessary to provide access for recreation and other compatible multiple uses.

New trails, trailheads, or parking facilities may be built where needed to improve recreation opportunities (See Plan Appendix E). Provide facilities and access to key attractions such as recreational fisheries.

MA-3-23

Acquire public access to all isolated tracts unless resource considerations determine that access would be detrimental.

MA-3-71

The Recreation Opportunity Spectrum (ROS) for this management area shall be roaded-natural or semi-primitive motorized.

These designations should refer to established ROS maps.

MA-3-72

Retain existing semi-primitive recreation opportunities.

a. Short-term changes in recreation opportunity may occur where necessary to accommodate oil and gas operations.

b. Long-term changes in recreation opportunity may occur where access is provided to a previously isolated and inaccessible tract.

MA-3-73

Prohibit ORVs.

Restrict use to street legal vehicles with licensed operator on designated Forest System Roads.

MA-3-82

Emphasize natural appearing landscapes in facilities planning and by designing vegetation treatments to replicate the characteristic landscape and following natural vegetational changes and landscape features.

Well site locations, well site access roads, and pipelines proposed within the foreground of highways or paved State and County roads may require special mitigation as identified through site-specific environmental analysis.

MA-3-101

Prohibit soil disturbing mechanical activities within streamside zones (See MA-4 for specific guidelines).

The following types of projects may be allowed within streamside management zones if a site-specific environmental analysis determines they are acceptable: ... (f) road or trail construction, reconstruction, or maintenance.

1.2.3 Management Area 4 – Streamside Management Zones Standards and Guidelines

MA-4-22

Limit new road construction only to stream crossings or recreation facilities except where valid existing rights would allow.

Stream crossings should be constructed at right angles to the stream or riparian areas.

MA-4-23

Bridges are constructed so as to not constrict clearly defined stream channels.

- a. Design permanent bridges for 100-year flood levels to extent practicable
- b. Bridge approaches should be constructed to prevent erosion, use of culverts or box culverts that adversely restrict flow and native fisheries should be avoided.
- c. Limit the use of construction equipment in streams to the amount of time absolutely essential for completion of the project

MA-4-24

Require appropriate structures at all designated trails and permanent or temporary road system stream crossings.

- a. Design these structures to permit fish passage.
- b. Consider bridges on all perennial streams.
- c. Use culverts, anchored corduroy, bridges, gravel and/or concrete fords at intermittent and certain ephemeral streams that are determined during site specific analysis to require protective measures.
- d. Conforms with mandatory BMP for Section 404 for roads constructed for silvicultural purposes and Section 404 nationwide, general and individual permits for facility construction and maintenance when facilities are not for silvicultural purposes.
- e. Minimize or avoid crossings for roads and trails with deeply-incised stream banks.

MA-4-25

Protect road and trail approaches to and from perennial streams with anchored corduroy, gravel, or concrete for a minimum distance of 20 feet from the edge of stream channel.

Re-enforced approaches to bridges may be necessary and the need for these will be determined on a case-by-case basis Extend the protection to the gradient break to include nearby transitions between the stream floodplain and other landforms.

MA-4-26

Construction of physical structures within stream channels will be designed and engineered.

Construction will consider physical stream systems, including fishery habitat improvement structures, through coordination with other resource specialists.

MA-4-27

Roads and trails will be constructed and maintained as per section 404 of the Clean Water Act.

MA-4-121

Subject to valid existing rights, no soil disturbing activities within this management area will be permitted except for the following types of projects when approved through site-specific environmental analysis: ...(e) road or trail construction, reconstruction, or maintenance.

1.2.4 Management Area 8a – Research Natural Areas (Cross Timbers RNA) Standards and Guidelines

MA-8a-11

Subject to valid existing rights, prohibit new roads... unless they contribute to the objective or protection of the RNA.

1.2.5 Management Area 8f – Cultural Heritage Areas (Lake Fannin Camp) Standards and Guidelines

MA-8f-21

Construct new roads or trails only when they are necessary for interpretative or educational purposes or will correct resource damage occurring from existing roads or trails.

Existing roads within these special areas will be closed to public use if an evaluation determines resource integrity would be lost if roads remain open.

1.2.6 Management Area 10b – Special Use Permit Sites Standards and Guidelines

MA-10b-31

Issue of new special use permits or reissue of existing special use permits will be consistent with management direction in the Revised Plan.

MA-10b-32

Upon application for new special use permits, conduct appropriate site specific analysis of the effects of the use before issuing permit.

MA-10b-33

Consolidate linear rights-of-way into a single corridor where physically and legally feasible.

MA-10b-35

Deny an application for a permanent use where a reasonable alternative exists using other than National Forest lands.

MA-10b-38

Authorize only one private access road per private tract, regardless of multiple ownership. Avoid committing National Forest land as substitute for lack of internal access due to poor sub-division planning or uncooperative neighbors in the same private tract.