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COMMERCIAL FOREST ACT [sic] FOREST MANAGEMENT PLANT 2016-2036
MFA RANCH ROAD PARCEL
T43N, R35W, SECTION 23, SW1/4 SE1/4 FOR A TOTAL OF 40 ACRES

The above mentioned 40 acre parcel located in T42N-R35W, Section 23, SW1/4 SE1/4 is located in Stambaugh Township, Iron County. The parcel is located about 3 miles south of Caspian, MI. To get to the parcel travel south on M189 to the Ranch Road and turn west. Travel ¼ mile and this would be the location of the southeast corner of the property (GPS-46-00-53.8/88 38 32.2). This road is a county maintained road, gravel surface and is normally plowed during winter as it is access to year round residences. There is an adequate interior road systems of woods roads that have been used in the past for harvest and access. The main entrance is a short distance past the southeast corner heading into an old abandoned field. This road system would have to be used only during dry periods of the summer or winter use unless significant improvements were made to the road.

The CFA Plan is prepared to guide the land owner's management of all the Forest Resources on the ownership for the future. The CFA provides for a tax incentive to the landowner who requires owner to pay a minimal annual fee rather than the taxable rate. Owner must follow the plans requirements and notify MDNR of planned activities. Significant penalties are applied if non conformance is determined and or if parcel is removed from the Act.

The 40 acres parcel is not too different from the rest of the parcels in the adjacent area which is generally under active forest management by the Forest Service, State and private landowners. The major forest type is your normal northern hardwood forest. 93% of area would be considered commercial forest land while the remainder is an old abandoned field of grass and weeds that is gradually regenerating to aspen and ash. The 40 acre parcel has 4 basic forest stands:

The largest stand (stand# 2-22 acres) is a typical northern hardwood saw timber stand. This represents 55% of the area. Stand averages a basal area of 75 and average diameter is 14 inches. Stand consists mostly of Sugar Maple with smaller amounts of red maple, basswood and yellow birch. Stand was harvest a few years ago. Adequate sugar maple regeneration is present in understory.

Stand 1 is the next largest area (which is really an inclusion in stand 2) but because of its uniqueness, I made it a separate stand. In addition, it is actually 2 stands, one of a black ash pole stand averaging 70 basal area and about 10 inches in diameter and an aspen stand of about same basal area and size.

The last area is Stand 3 which appears to be an old abandoned farm field. It most certainly would support a forest and is in the process of regenerating to a mix of aspen and ash. If one want it to remain a field some maintenance (mowing or removing aspen and ash) would have to be done on field in next several years.

As mentioned above the parcel has good all weather access from M 189 and the gravel county Ranch road. Any harvests would have to occur during the dry summer period or during winter to

prevent rutting and other resource problems. The majority of the parcel is a Wabeno Association of soils that are mostly Stambaugh silt loams, relatively flat to rolling. This parcel actually has a fairly steep but short slope in south east part of parcel and along north central area of parcel. Neither would cause any access problems for harvesting. There are rocks in sub surface. Soils would only allow harvest activities during dry periods in the summer and during winter freeze up periods without causing significant resource damage. There are not significant erosion problems now nor are any anticipated during harvest activities. 99% of area is considered commercial forest land capable of producing over 20 board feet per acre per year.

Owner is not planning any other major activities on parcel in near future nor is he planning any minor activities that might affect the condition of the parcel. Owner intends to keep property for recreation uses and timber management as prescribed in this plan. Land has been owned by an individual that owned a significant amount of acreage in Michigan for many years. Once that person passed away the land was given to the Michigan Forest Association. MFA plans to continue to manage the land for long term benefits of sound forest management based on Forest Science and perhaps use area as an educational tool for the residence of Iron County.

Within this planned period the 3 forest stands will need to be harvested (2031). Stands 1 and 2 would be a conventional selection harvest and stand 4 would be a thinning of the ash and designated harvest of the aspen. This harvest would produce about 300 cords of pulpwood and 11MBF of saw timber.

SPECIFIC FOREST RESOURCE SUMMARY

TOPOGRAPHY: The majority of the area is relatively flat to rolling. However, there are a couple of steep but short duration slopes (40 feet changes in elevation). The majority of the area drains to the south into the Mud Lake area and then into the Brule River that eventually drains into Lake Michigan via the Menominee River system. Topographic changes would not affect ability of area to be harvested.

HISTORIC: The area is mostly forested. There is the one small field on parcel that was either a small pasture or a location of a barn or house. Most of surrounding area has been and is now owned by the State, Forest Service and large to small private landowners. Most of this area has been routinely managed following current acceptable logging practices. Adjacent to area are several large farm field that are not being managed at a low intensity for mostly hay production. Being close to Caspian and Iron River there are several year round homes nearby. There are not a lot of camps that typical to areas farther from town. The land was owned by a private landowner (Prince) who owned many parcels of forest land in Michigan. He was active in the Michigan Forest Association and when he died this property and others were deeded to the MFA. MFA plans to continue to manage these lands according to long established Forest Science. There is a hope that the land can also be used in some way as an educational tool for the residents of Iron County.

WATER: There is year long standing water or flowing water on the parcel. The ash area holds shallow surface water for a period in snow free season and there are a couple smaller areas that are similar but smaller. None of wet areas would significantly affect logging. Of course, as mentioned the area does drain mostly to the south into the Brule, Menominee Rivers and then into Lake Michigan.

AESTHETICS: The area is not very visible from any highly traveled roads. The Southern edge of area can be seen off the Ranch Road but view distance is short because of topography. Perhaps the best viewing site is from the small field. Parcel does not provide a lot of diversity in vegetation as most of it is northern hardwoods. In addition, there is not much traffic on the Ranch road (10 vehicles per day). Most of traffic is local traffic coming and going to a few residences in the area.

RECREATION: The area has been used in the past mostly for forest management, hunting (especially deer hunting) and general forest viewing for wildlife. The future holds a very similar use by the owners.

ROADS: The area has good external access via M 189, a paved state highway. Parcel is close to Caspian and Iron River and god markets for all wood products are within acceptable driving distance from parcel. Ranch Road is a flat good graveled road with direct access to parcel. There is an internal road system that is adequate for conventional commonly used logging equipment. Road could not be used for all season log traffic without significant improvements. Internal roads should not be used during wet periods with normal trucks but no evidence of resource impacts is evident. Most likely, entire parcel would be forwarded to old field and hauled directly on to Ranch Road and the to M 189.

PROPERTY LINES: I did not see any painted boundaries or monumented corners in my field visit. However, most of boundary had old fence or fields as boundaries or ample evidence to fairly easily establish boundaries. There are also old established cutting lines from previous harvests.

FISH: There are no fish on the parcel. Water quality running off parcel could affect off site water sources to the south.

WILDLIFE: The area has moderate habitat for deer, bear, grouse and other wildlife populations that like managed forest land. Lack of vegetation diversity and similar age classes are the limiting factors. I did notice several very distinct deer run ways. There were ample deer tracks on parcel when I inventoried the parcel. The area is a transient use area by wolves as I have seen wolves close to the parcel. There were several coyote tracks on parcel when I did the inventory. Owner does not plan to do any major wildlife improvement projects on this parcel. I am sure Bald Eagle patrol the river for fish.

SOILS: The majority of the soils on the area are considered to be part of the Wabeno association which is a moderately drained silt loam. The majority of the soils are further broken down to the Stambaugh silt loam soils which are mostly a silt loam which are generally the better drained soils of this association. There are some rocks on surface and in sub surface of soils. The soils would dictate that logging activity should take place during winter freeze up periods and dry periods during the summer. Avoid the wet periods in spring and fall and during any heavy rain event in summer. There does not seem to be any significant soil erosion problems on the parcel nor do I expect any to occur from timber management activities.

TIMBER: 93% of this parcel would be considered commercially productive forest land. All of these lands would be capable of producing at least 20 cubic feet of timber per year. There were no insect or disease issues identified during this inventory.

Stand 1 (13 acres) is your traditional northern hardwood pole size stand (M6). This stand represents 33% of the parcel. Stand averages 73 basal area and an average diameter of about 7 inches (lost of 6 inch and 8 inch trees). Stand is mostly sugar maple with smaller amounts of red maple, basswood and yellow birch. Stand was harvested a few years ago. There is adequate regeneration in the understory of seedlings and saplings. Most of regeneration is ash but there is also adequate sugar maple. Density of stand is a little lower than one would want a few years after a harvest but it did appear that the lower quality trees were removed and spacing is pretty good. Stand will be ready to have a selection harvest in 2031. Inventory should be implemented a couple years before that time.

Stand 2 is the largest stand of the parcel. Stand is your traditional northern hardwoods saw timber size stand (M9). Stand is 22 acres (55% of parcel). Stand averages 75 basal area and an average diameter of 14 inches. Stand is mostly sugar maple with smaller amounts of red maple basswood and yellow birch. Stand was harvested a few years ago. There is adequate regeneration in the understory of seedlings and saplings of sugar maple. Density of stand is little less than what you would want it to be a few years after a harvest. However, it did appear the correct trees were removed which would be the poorer quality trees and a fairly good distribution was established. Stand will be ready to have a selection harvest 2013. Inventory should be implemented a couple years before that time.

Stand 3 is an old abandoned field that is now a grass and weed combination (3 acres-7%). However, considerable amounts of aspen and ash are encroaching on the edges of stand. If some sort of control is not established on the aspen and ash the stand will eventually become forested.

Stand 4 is a black ash stand which is really just an inclusion in stand 2 (5%-2 acres). I identified it out as a separate stand since it is about all the diversity the parcel has at present. Actually this stand is about ½ ash and ½ aspen. Ash and aspen are about 70 basal area and average diameter of about 10 inches. The ash area is wet but more of a highland ash than lowland. Both parts of stand should be harvested along with the harvest scheduled for 2031 in stands 1 & 2. Thin the ash and clear-cut the aspen. There should be no challenge in getting the aspen to regenerate and encourage more ash regeneration.

CONCLUSIONS: there will need to be a harvest in the 3 forest stands within this planned period. Most likely in about 15 years (2031). Schedule an inventory in about 2029 to see if basal area and regeneration is where it should be for a harvest. Stands 1 and 2 would be your conventional selection harvest and stand 4 would be a thinning in ash and clear-cut in the aspen area.

All stands will continue to develop regeneration over time. Deer browsing is an issue but most of area has regeneration that appears is over browsing height or will be. Regeneration will continue to occur over time to a similar type forest stand by natural regeneration. The aspen in stand 4 will regenerate nicely naturally. There is very little hemlock, pine, cedar or other conifers. No hemlock, cedar or pine should be removed be removed. Any balsam or spruce should be retained as long as feasible.

No endangered or threatened vegetation species are in existence in these stands.

EXHIBITS: See Exhibits A-I for additional information and locations.

Signed
TERRY L. READ, ACF, CF
Registered Forester #633
1/23/16

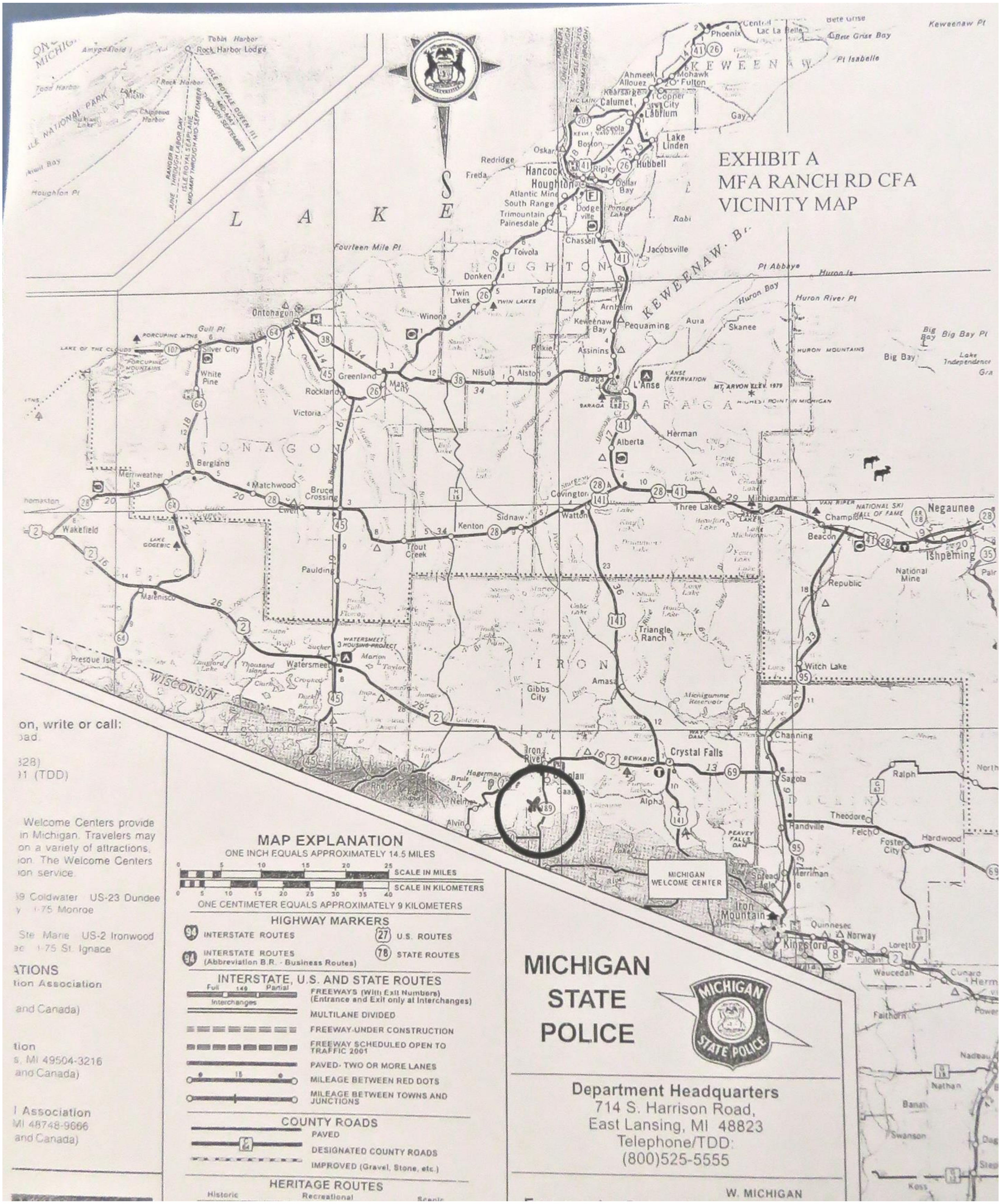
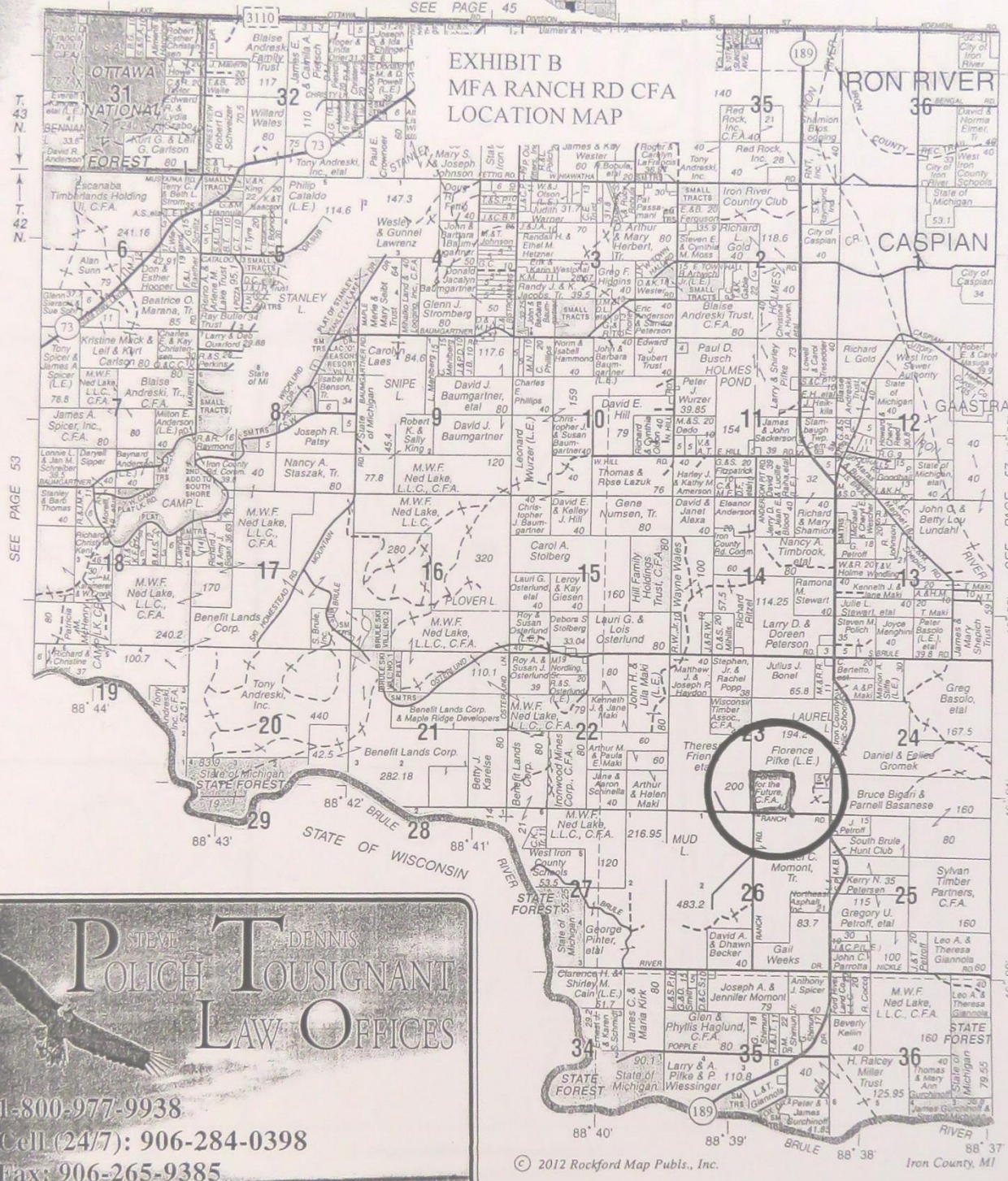


EXHIBIT A
MFA RANCH RD CFA
VICINITY MAP
LAKE SUPERIOR
KEWEENAW
HOUGHTON
BARAGA
ONTONAGON
IRON
WISCONSIN
Hancock
Houghton
Calumet
Ontonagon
Iron River
Crystal Falls
Iron Mountain
Kingsford
Ishpeming
Negaunee
Watersmeet
Wakefield
MICHIGAN WELCOME CENTER
MAP EXPLANATION
ONE INCH EQUALS APPROXIMATELY 14.5 MILES
SCALE IN MILES
SCALE IN KILOMETERS
ONE CENTIMETER EQUALS APPROXIMATELY 9 KILOMETERS
HIGHWAY MARKERS
INTERSTATE ROUTES
U.S. ROUTES
INTERSTATE ROUTES (Abbreviation B.R. - Business Routes)
STATE ROUTES
INTERSTATE, U.S. AND STATE ROUTES
FREEWAYS (With Exit Numbers) (Entrance and Exit only at Interchanges)
MULTILANE DIVIDED
FREEWAY-UNDER CONSTRUCTION
FREEWAY SCHEDULED OPEN TO TRAFFIC 2001
PAVED- TWO OR MORE LANES
MILEAGE BETWEEN RED DOTS
MILEAGE BETWEEN TOWNS AND JUNCTIONS
COUNTY ROADS
PAVED
DESIGNATED COUNTY ROADS
IMPROVED (Gravel, Stone, etc.)
HERITAGE ROUTES
MICHIGAN STATE POLICE
Department Headquarters
714 S. Harrison Road,
East Lansing, MI 48823
Telephone/TDD:
(800)525-5555
W. MICHIGAN

STAMBAUGH NO. 3 T.42-43N.-R.35W.



MapCard - Print your custom map

EXHIBIT C
MFA RANCH RD CFA
TOPOGRAPHIC MAP

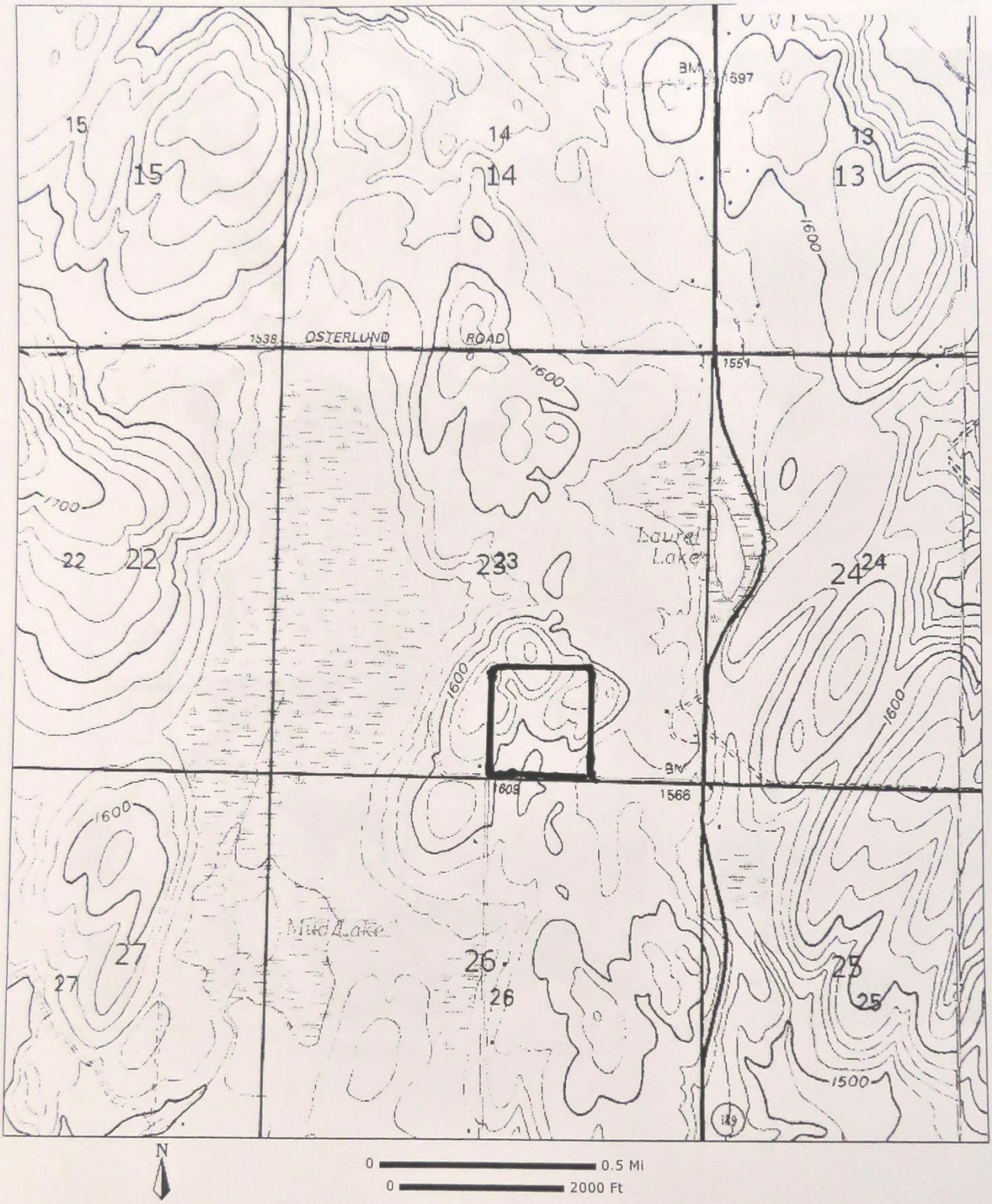
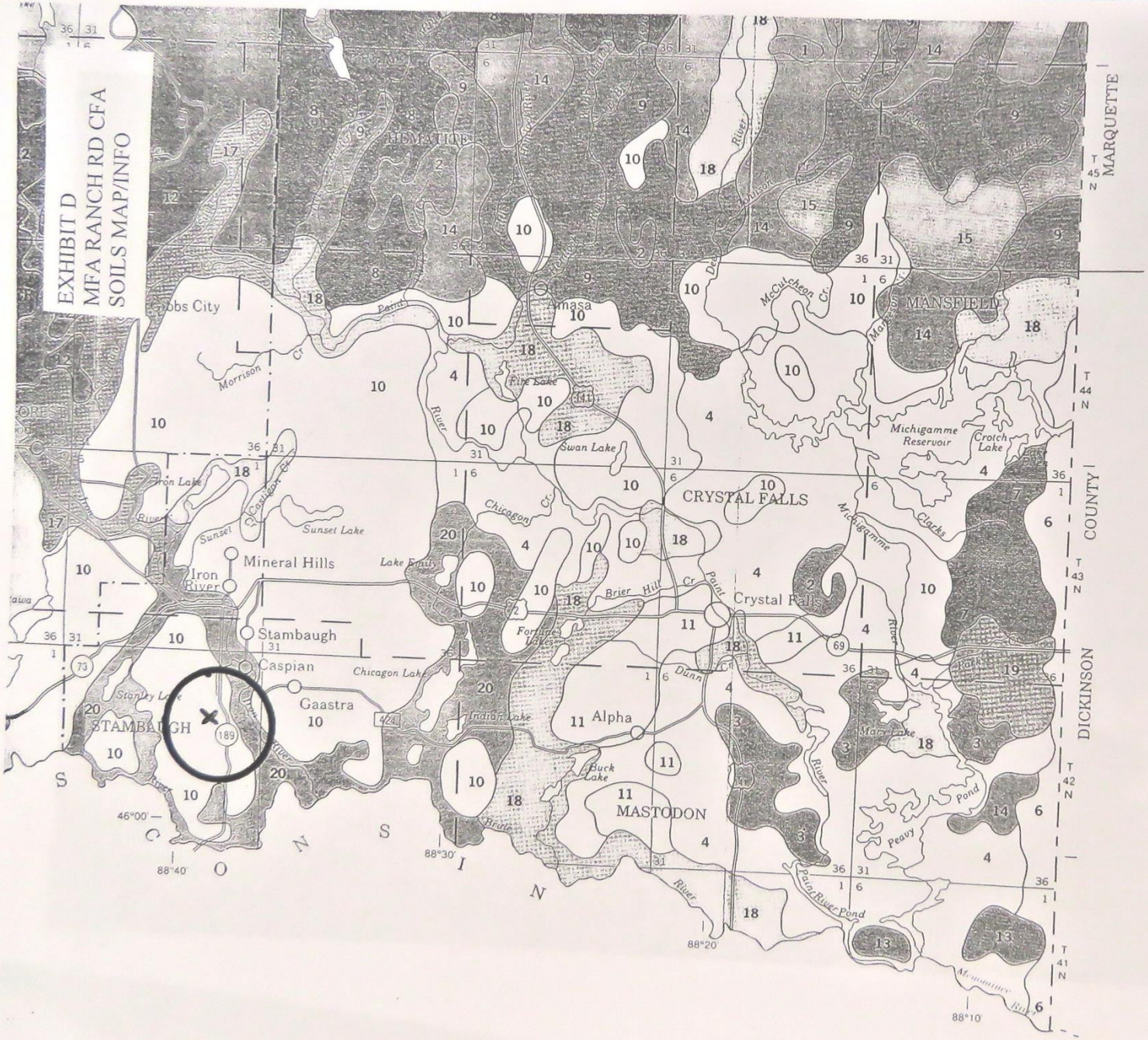


EXHIBIT D
MFA RANCH RD CFA
SOILS MAP/INFO



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LOAMY AND MUCKY S

6 Sagola-Trenary-Cathro

NEARLY LEVEL TO VE
POORLY DRAINED, LC

Trenary-Solona-Karlin a

Champion-Net associati

Sundog-Minocqua-Char

NEARLY LEVEL TO VE
DRAINED, LOAMY SOI
DRUMLINS

10 Wabeno association

11 Peavy association

12 Champion association

13 Sarona-Wabeno associ

14 Petticoat-Wabeno assoc

15 Goodman-Wabeno-Sun

NEARLY LEVEL TO HI
MODERATELY WELL D
STREAM TERRACES,

16 Entic Haplorthods, sand

17 Pence-Lode association

18 Padus-Pence associati

19 Oconto association

20 Stambaugh-Padus asso

* The units on this legen
"General Soil Map Uni

UNITED STATES
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MICHIGAN AGRIC
COOPERA
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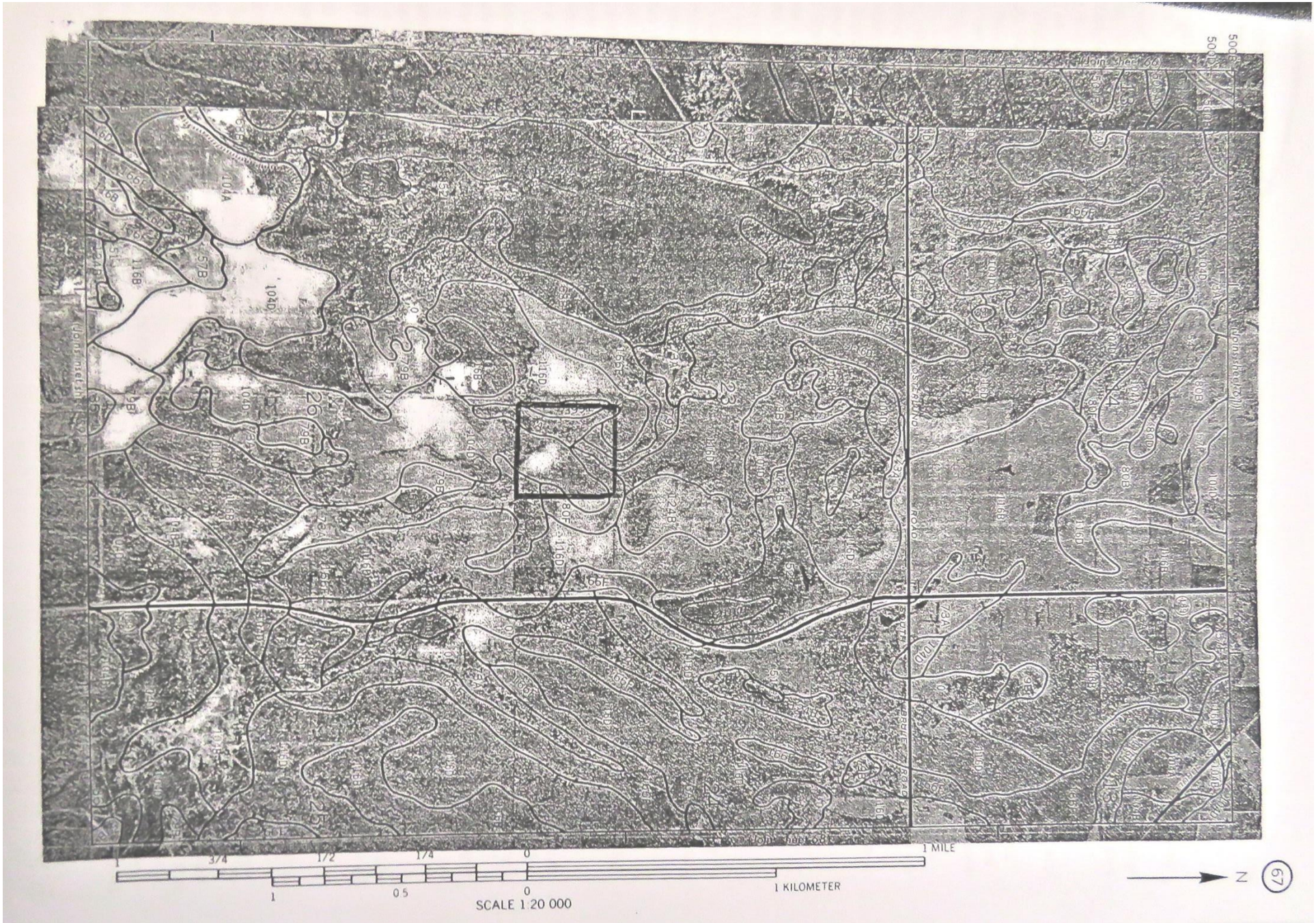
GENER

IRON CO


1 MILE
1 KILOMETER
SCALE 1:20 000
N

10. Wabeno Association

Nearly level to rolling, moderately well drained, loamy soils on ground moraines, end moraines, and drumlins

Areas of these soils are on ground moraines and drumlins. Slopes range from 1 to 18 percent.

This association makes up about 23.5 percent of the county. It is about 65 percent Wabeno and similar soils and 35 percent soils of minor extent (fig. 4).

The Wabeno soils are moderately well drained. Typically, the surface layer is black silt loam about 2 inches thick. The subsurface layer is brown silt loam about 2 inches thick. The subsoil is about 46 inches thick. The upper part is dark brown and brown, friable silt loam. The next part is dark brown and brown, mottled, friable and very firm silt loam and very fine sandy loam. The lower part is reddish brown, very firm sandy loam. The substratum to a depth of about 60 inches is brown sandy loam.

Of minor extent in this association are the well drained Stambaugh and Padus soils; the well drained or moderately well drained Champion and Fence soils; the somewhat poorly drained Gaastra, Monico, and Net soils; the poorly drained Witbeck soils; the very poorly drained, nonacid Borosaprists; and the very poorly drained Lupton soils. Stambaugh and Padus soils have a substratum of gravelly sand. Champion soils are coarser textured than the Wabeno soils and are less productive. Fence soils do not have very firm layers in the subsoil and thus have a greater rooting depth than the Wabeno soils. Stambaugh, Padus, Champion, and Fence soils are in landscape positions similar to those of the Wabeno soils. Gaastra, Monico, Net, and Witbeck soils are in drainageways and on low flats in the uplands. Lupton soils and the nonacid Borosaprists are in depressions on uplands and on lowlands.

This association is used mainly as woodland. The major management concerns are an equipment limitation and windthrow.

Some areas are used as cropland. The major management concerns are stoniness and water erosion.

11. Peavy Association

Nearly level to rolling, well drained and moderately well drained, loamy soils on ground moraines and end moraines

Areas of these soils are on ground moraines and end moraines. Slopes range from 1 to 18 percent.

This association makes up about 1.7 percent of the county. It is about 65 percent Peavy and similar soils and 35 percent soils of minor extent (fig. 5).

Typically, the surface layer of the Peavy soils is dark reddish brown silt loam about 6 inches thick. The subsoil is dark reddish brown, very firm channery loam about 35 inches thick. The substratum to a depth of about 60 inches is dark reddish brown channery sandy loam.

Of minor extent in this association are the somewhat excessively drained Karlin soils, the well drained Padus and Sarona soils, the somewhat poorly drained Net soils, the poorly drained Witbeck soils, and the very poorly drained Lupton and Cathro soils. Karlin soils are coarser textured and more droughty than the major soils. Padus soils have a substratum of gravelly sand. Sarona soils have a friable subsoil. Karlin, Padus, and Sarona soils are in landscape positions similar to those of the Peavy soils. Net and Witbeck soils are in drainageways and on low flats in the uplands. Lupton and Cathro soils are in depressions on uplands and on lowlands.

This association is used mainly as woodland. The major management concerns are an equipment limitation and windthrow.

Some areas are used as cropland. The major management concern is water erosion.

12. Champion Association

Nearly level to hilly, well drained and moderately well drained, loamy soils on ground moraines and drumlins

Areas of these soils are on ground moraines and drumlins. Slopes range from 1 to 35 percent.

This association makes up about 8.4 percent of the county. It is about 65 percent Champion and similar soils and 35 percent soils of minor extent.

Typically, the surface layer of the Champion soils is black, partially decomposed organic material about 1 inch thick. The subsurface layer is gray very fine sandy loam about 3 inches thick. The subsoil is about 45 inches thick. The upper part is dark reddish brown and dark brown, very friable and friable very fine sandy loam. The next part is dark brown and brown, friable very fine sandy loam. The lower part is dark grayish brown and dark brown, mottled, extremely firm gravelly fine sandy loam. The substratum to a depth of about 60 inches is grayish brown gravelly fine sandy loam.

Of minor extent in this association are the well drained, coarse-loamy Typic Dystrochrepts that have a sandy substratum; the somewhat poorly drained, coarse-loamy Typic Fragiaquods; and the very poorly drained, nonacid and acid Borosaprists. Typic Dystrochrepts have a coarser textured substratum than the Champion soils and are less productive. They are in landscape positions similar to those of the Champion soils. Typic Fragiaquods are in drainageways and on low flats in the uplands. Borosaprists are in depressions on uplands and on lowlands.

Figure 7.—A mature stand of sugar maple in an area of Stambaugh silt loam, 2 to 6 percent slopes, stony.

Woodland

Major management concerns: Equipment limitation

Management measures:

• The use of equipment is briefly restricted in spring and during other excessively wet periods. Access is easiest during periods in winter when access roads are frozen.

Cropland

Major management concerns: Soil blowing, water erosion, low organic matter content, tilth

Management measures:

• Conservation tillage, crop residue management, stripcropping, vegetative barriers, cover crops, and crop rotations that include small grain and hay help to control soil blowing.

• Conservation tillage, grassed waterways, cover crops, and crop rotations that include grasses or legumes help to control water erosion.

• Contour farming and contour stripcropping reduce the runoff rate and the hazard of water erosion.

• No-till farming, crop residue management, and a cropping sequence that includes green manure crops increase the organic matter content.

• Minimizing tillage and tilling at the proper soil moisture content help to maintain good tilth and prevent crusting.

• Returning crop residue to the soil, adding other organic material, and including grasses and legumes in the cropping sequence improve soil structure, permeability, and the rate of water infiltration.

• Stones on the surface may interfere with the use of tillage and planting equipment and some harvesting equipment. Removing the stones minimizes wear on equipment.

Interpretive Groups

Land capability classification: IIIs
Woodland ordination symbol: 3L
Michigan soil management group: 3/5a-a
Primary habitat type: AVO
Secondary habitat type: None assigned

104D—Stambaugh silt loam, 6 to 18 percent slopes, stony

Setting

Landform and position on the landform: Rolling areas on outwash plains and stream terraces
Shape of areas: Irregular
Size of areas: 5 to 300 acres

Typical Profile

Surface layer:
0 to 4 inches—very dark gray silt loam

Subsoil:
4 to 22 inches—dark brown, brown, and yellowish brown, friable silt loam and very fine sandy loam
22 to 39 inches—reddish brown and brown, firm silt loam

Substratum:
39 to 60 inches—dark brown very gravelly sand and reddish brown gravelly sand

Soil Properties and Qualities

Depth class: Very deep
Rock fragments on the surface: Kind—stones and cobbles; percent of surface covered—0.01 to 0.1
Permeability: Moderately slow in the upper part and rapid in the lower part
Available water capacity: High
Drainage class: Well drained
Seasonal high water table: At a depth of more than 6 feet
Surface runoff: Medium
Flooding: None

Composition

Stambaugh soil and similar soils: 85 to 90 percent
Contrasting inclusions: 10 to 15 percent

Inclusions

Contrasting inclusions:
• The moderately well drained Wabeno soils, which have a shallower rooting depth than the Stambaugh soil; in landscape positions similar to those of the Stambaugh soil
• The moderately well drained Fence soils that have a substratum of very fine sandy loam; in landscape positions similar to those of the Stambaugh soil
• Padus soils, which are more droughty than the Stambaugh soil; in landscape positions similar to those of the Stambaugh soil
• The somewhat poorly drained Gaastra soils on foot slopes and in drainageways
• Areas that have slopes of 18 to 30 percent

Use and Management

Land use: Dominant uses—woodland, cropland

Woodland

Major management concerns: Equipment limitation

Management measures:
• The use of equipment is briefly restricted in spring and during other excessively wet periods. Access is easiest during periods in winter when access roads are frozen.
• Small areas of nearly level included soils, if any are available, and suitable nearly level adjacent areas should be selected as sites for landings.

Cropland

Major management concerns: Soil blowing, water erosion, low organic matter content, tilth

Management measures:
• Conservation tillage, crop residue management, stripcropping, vegetative barriers, cover crops, and crop rotations that include small grain and hay help to control soil blowing.
• Water erosion can be controlled by diversions, crop rotations, grade-stabilization structures, or a combination of these practices.
• No-till farming, crop residue management, and cropping sequence that includes green manure increase the organic matter content.
• Minimizing tillage and tilling at the proper soil content help to maintain good tilth and prevent
• Returning crop residue to the soil, adding othe organic material, and including grasses and leg the cropping sequence improve soil structure, permeability, and the rate of water infiltration.
• Stones on the surface may interfere with the u tillage and planting equipment and some harves equipment. Removing the stones minimizes wea equipment.

Interpretive Groups

Land capability classification: VIe
Woodland ordination symbol: 3L
Michigan soil management group: 3/5a-a
Primary habitat type: AVO
Secondary habitat type: None assigned

105D—Wabeno-Rock outcrop complex, 18 percent slopes, very stony

Setting

Landform and position on the landform: Nearly le rolling areas on ground moraines and end m
Shape of areas: Irregular
Size of areas: 5 to 400 acres

Typical Profile

Wabeno

Surface layer:
0 to 2 inches—black silt loam
Subsurface layer:
2 to 4 inches—brown silt loam
Subsoil:
4 to 23 inches—dark brown and brown, friable s
23 to 32 inches—dark brown and brown, mottle silt loam
32 to 42 inches—a fragipan of dark brown and b mottled, very firm very fine sandy loam
42 to 50 inches—a fragipan of reddish brown, v sandy loam
Substratum:
50 to 60 inches—brown sandy loam

Soil Properties and Qualities

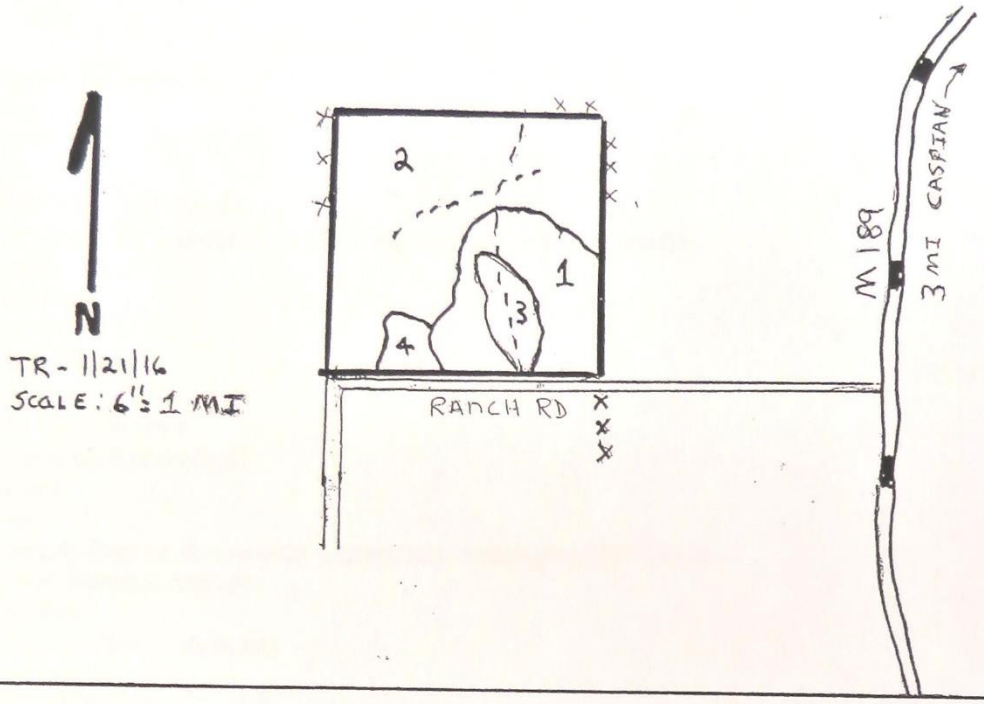
Wabeno

Depth class: Very deep
Rock fragments on the surface: Kind—stones an

EXHIBIT E
MFA RANCH RD CFA
AERIAL PHOTO

FOREST STAND DATA SHEET						MFA Ranch Road CFA Plan Exhibit F						
STD #	ACR.	CURR. TYPE	FUTUR TYPE	AGE	YR ORG	AVG. DIA	BASAL AREA	AVG. HT.	COMMENTS	HARVEST	CORDS	TIME FRAME
1	13	M6	M9	65	1941	7	73	65	SI 55. Stand is a slope on east, flat on north and west. Stand was harvested a few years ago and will not need another harvest until the end of this planning period. Basal area is about where it should be right after a harvest. Much ash regeneration. This is your basic pole stand of predominantly sugar maple with a mix of red maple basswood, ash and yellow birch. Stand is 53BA poles and 15BA sawtimber. Less than an acre of aspen saw/grass/weed in SE corner.	Selection	100	2031
2	22	M9	M9	100	1916	14	75	80	SI 60. Stand is mostly flat to rolling. Stand was harvested a few years ago. Another harvest will not be needed untl the end of this planning period. Basal area is about where it should be right after a harvest. This is your basic pole stand of predominantly sugar maple with a mix of red maple basswood, and ash. There are abundant sugar maple seedlings and saplings in most areas. Stand is 50BA sawtimber and 25 BA poles	Selection	180 Cord and 11MBF	2031
3	3	U	U	NA	NA	NA	NA	NA	Stand appears to be an old field. Field is being encroached by aspen and ash along edges.	NA	NA	NA
4	2	E6	E9	65	1941	10	70	65	West part of stand is a black ash larger pole stand and east part of stand is a larger pole size aspen stand. Manage the two together and remove aspen when thin ash is 2031.	Thin	30	2031

EXHIBIT G
MFA RANCH RD CFA
STAND BOUNDARY MAP



LEGEND

Paved State Road

Forest Stand Boundary

Parcel Boundary

Forest Stand # 1

Woods Road

Gravel County Road

Old Fence

THIS MAP IS NOT A SURVEY OF THE ACTUAL BOUNDARY OF ANY PROPERTY THIS MAP DEPICTS

Stand #	Acres	Forest Stand Type
1	13	M6
2	22	M9
3	3	U
4	2	E6

Cover Type, Size and Density Symbols

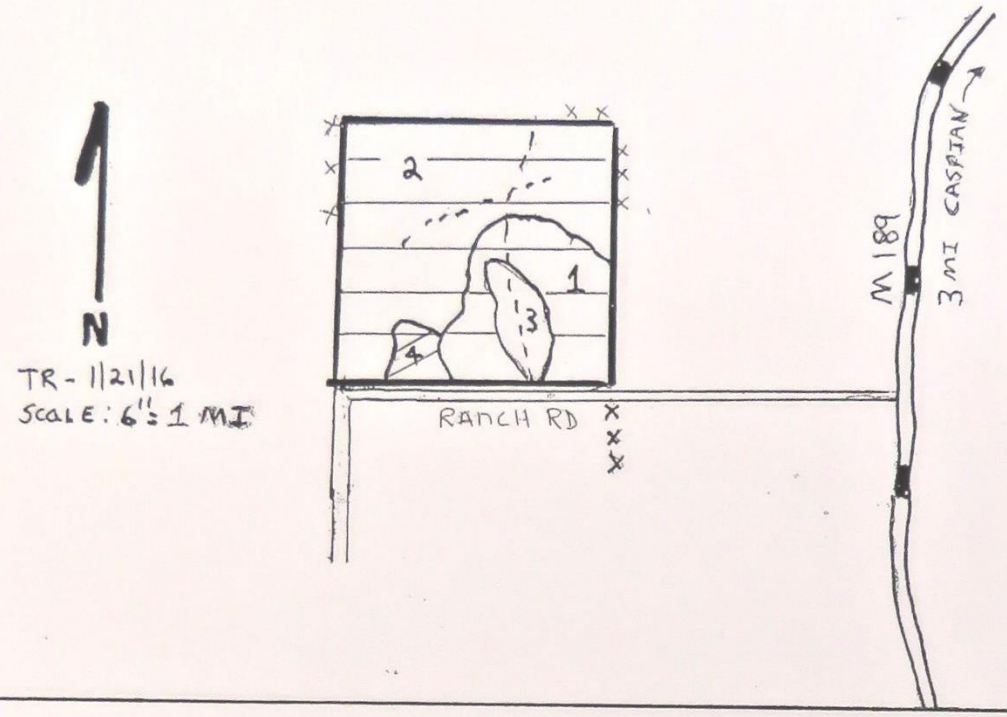
Cover Type

A	-	Aspen (Upland)
B	-	Paper Birch
C	-	Cedar
D	-	Treed bog
E	-	Swamp Hardwoods
F	-	Spruce - Fir (upland, including upland black spruce)
G	-	Grass
H	-	Hemlock
I	-	Local Use
J	-	Jack Pine
K	-	Rock
L	-	Lowland Brush
M	-	Northern Hardwood
N	-	March
O	-	Oak
P	-	Balsam Poplar & swamp aspen and swamp white birch
Q	-	Mixed swamp conifer
R	-	Red Pine
S	-	Black spruce - swamp
T	-	Tamarack
U	-	Upland Brush
V	-	Bog or muskeg
W	-	White pine
X	-	Other non-stocked or non-forest or non-productive
Y	-	Sand Dunes
Z	-	Water

Size Density (Stocking)

0	-	Non-stocked (less than 17% stocked)
1	-	Seedling-Sapling, poor stocking (17% - 39%)
2	-	Seedling-Sapling, medium stocking (40% - 69%)
3	-	Seedling-Sapling, well stocked (70%+)
4	-	Pole-timber, poor stocking (10-39 sq ft basal area)
5	-	Pole-timber, medium stocking (40-69 sq ft basal area)
6	-	Pole-timber, well stocked (70+ sq ft basal area)
7	-	Saw-timber, poor stocking (10-39 sq ft basal area)
8	-	Saw-timber, medium stocking (40-69 sq ft basal area)
9	-	Saw-timber, well stocked (70+ sq ft basal area)

EXHIBIT H
MFA RANCH RD CFA
HARVEST MAP



LEGEND

THIN/CLEARCUT

SELECTION HARVEST 2031

Paved State Road

Forest Stand Boundary

Parcel Boundary

Forest Stand # 1

Woods Road

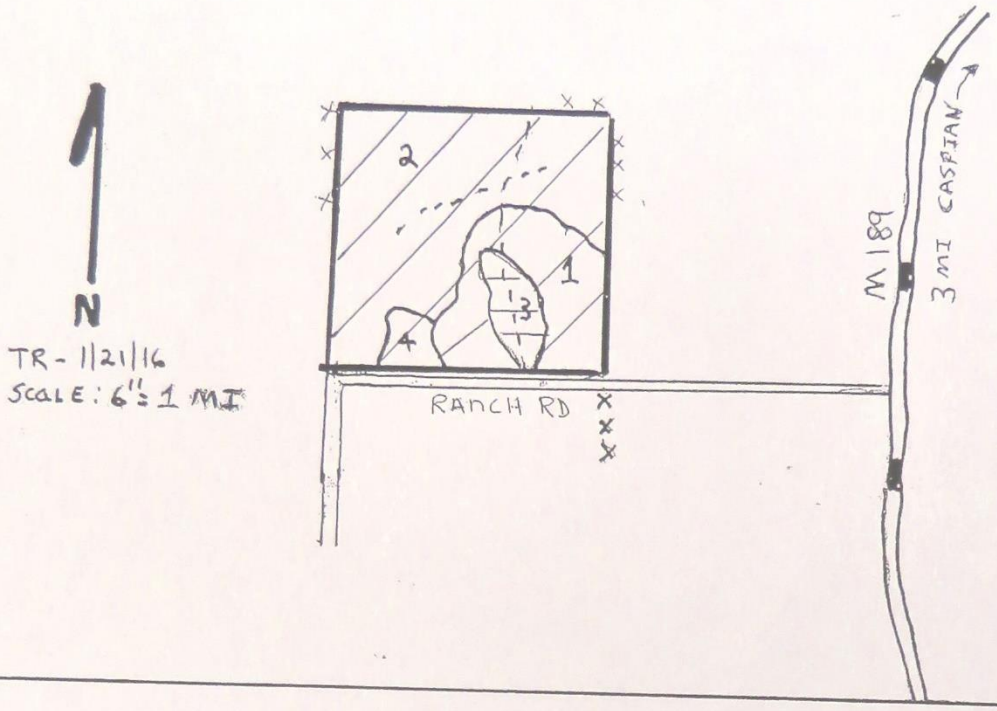
Gravel County Road

Old Fence

THIS MAP IS NOT A SURVEY OF THE ACTUAL BOUNDARY OF ANY PROPERTY THIS MAP DEPICTS

Stand #	Acres	Forest Stand Type
1	13	M6
2	22	M9
3	3	U
4	2	E6

EXHIBIT I
MFA RANCH RD CFA
DESIRED FUTURE CONDITION MAP



NORTHERN HARDWOODS

UPLAND OPEN

LEGEND

Paved State Road

Forest Stand Boundary

Parcel Boundary

Forest Stand # 1

Woods Road

Gravel County Road

Old Fence

THIS MAP IS NOT A SURVEY OF THE ACTUAL BOUNDARY OF ANY PROPERTY THIS MAP DEPICTS

Stand #	Acres	Forest Stand Type
1	13	M6
2	22	M9
3	3	U
4	2	E6