



MICHIGAN DEPARTMENT OF NATURAL RESOURCES
FOREST, MINERAL AND FIRE MANAGEMENT

TIMBER SALE PRESCRIPTION

GENERAL					
Date 10/23/08	Forest Management Unit Atlanta Unit				
Timber Sale Number (if applicable)	Sale Name (or prescription name) Compartment 020 Marking				
LOCAL CONTACT					
Telephone Number (989) 785-4251 x 5243	FAX Number (989) 785-3513				
Name Richard Barber	Email Address barberr@michigan.gov				
<input checked="" type="checkbox"/> Map of Project Area Attached					
LEGAL DESCRIPTION					
T30N R01E Section2: SESW, S2SE; Section 3: S2NW					
Year of Entry: 2009 Compartment(s): 20 Stand Number(s): 9 & 24					
THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE					
Estimated Acres:63 Source: <input checked="" type="checkbox"/> OI <input type="checkbox"/> GPS <input type="checkbox"/> Other _____					
Actual Acres: Source: <input type="checkbox"/> OI <input type="checkbox"/> GPS <input type="checkbox"/> Other _____					
Total Acres: 63					
Payment will be made on the basis of these estimated acres.					
TREATMENT & OBJECTIVE					
STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
9	N. Hdwd	8	106 (hits 130)	Single Tree Cut	Northern Hardwoods
24	N. Hdwd	55	102 (hits 160)	Single Tree Cut	Northern Hardwoods
PRESCRIPTION					
<p>1. Stand 09: put in boundary and Unit Lines, determine area by GPS, mark to 80 BA, tally logs and cruise pulp. Paint and GPS 1 ch buffer around hemlock, and use painted, GPS'd boundaries to create 1 chain buffer on cedar stand to the south.</p> <p>2. Stand 24: Put in boundary and unit lines, determine area by GPS, mark to 80 BA, tally logs and cruise pulp. Paint and GPS around steep slopes and 1 ch buffer around hemlock. Use painted, GPS'd boundaries to exclude steep slopes from sale.</p> <p>Access: By Secrist Road (via Manier Road) and Camp 8 Road.</p>					
DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK					ESTIMATED DATE
All work in the Compartment will be done by Contractor.					
<p>CONTRACT WORK CAN BEGIN:</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Immediately <input type="checkbox"/> Date: _____</p> <p>CONTRACT WORK MUST BE COMPLETED BY: Date 09/01/2009</p>					

PAINT LINE WORK

This is included in the bid This is not included in the bid

Paint line work to be performed: (See attached map for locations)

TYPE OF LINE	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR	
Internal Buffer, Slope, or Reserve	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Blue	<input checked="" type="checkbox"/> Other: Green
Sale boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Red	<input checked="" type="checkbox"/> Other: Blue (Pvt.)
Sale cutting unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:
Stand type line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:

Exclusions to mark and why:

Contractor will put in all sale and unit boundary lines. Refer to the contract and attached appendix for detailed instructions.

Standards for marking lines against private land:

See Contract Specifications I-B,7.a.

AREA CALCULATION

This is included in the bid This is not included in the bid

UNIT	METHOD	STANDARD
Sale	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Payment Unit	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Stand	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

Special Instructions:

All stands and payment units will need the area calculated using a GPS unit as described in the contract. These files must be submitted as ".cor" files on media immediately accessible to the Local Contact's equipment. The corrected map at a scale of 1:15840 will be used to indicate the plot locations as the cruise map.

TIMBER CRUISING SPECIFICATIONS

This is included in the bid This is not included in the bid

Required Basal Area Factor: 10 20 Other:

Cruise Line Directions: North-South

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stand 9	Approx. 0.83	3 X 4
Stand 24	Approx. 0.83	3 X 4
TOTAL NUMBER OF CRUISE POINTS	TBD by LCA, but approx. 51	

Cruise Special Instructions:

Refer to the contract and attached appendix for detailed instructions.

Unless otherwise specified, the tally sheets used must be those supplied by the Forest, Mineral and Fire Management Unit.

TIMBER MARKING SPECIFICATIONS

This is included in the bid This is not included in the bid

Precise specifications to be delineated at pre-work meeting with DNR staff

Total Residual BA (Basal Area): 80 (Minimum 70 to Maximum 90) Stands: 9, 24

Total Residual BA (Basal Area):

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre in Stands: 24		One hole per 3-5 acres	1 to 1.5 times tree ht.
Girdled Trees Per Acre		NA	NA
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	X and dot per 8ft log	10 inches	8 inches
Sawbolts	NA	NA	NA
Pulpwood	slash	4.6 inches	4 inches
TYPE OF WORK	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR
Trees marked to leave	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Green <input type="checkbox"/> Other
Trees marked to cut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Orange <input type="checkbox"/> Other

TALLY INTENSITIES

SPECIES / PRODUCT	RATIO
Sawlogs	1 : 1
Pulpwood: see cruising section	

SPECIES TO FAVOR:
Contact LCA for stand specific information.

SPECIES TO FAVOR:
Contact LCA

SPECIAL MARKING INSTRUCTIONS:
See attached Appendix and contact LCA.

Unless otherwise specified, the tally sheets used must be those provided by the Forest, Mineral and Fire Management Unit.

- RESTRICTIONS:**
1. Forest, Mineral and Fire Division must be able to identify who did what on the timber sale.
 2. The contractor may not have more than two markers in one payment unit without prior approval.
 3. Each marker should have an assigned area to mark (not strips).

- PAINT:**
1. Call Richard Barber at (989) 785-4251 ext 5243, to make arrangements for paint.
 2. Paint will be supplied from (location).
 3. Contractor's work schedule must coincide with the DNR work schedule for paint supply.
 4. The DNR will not be available on weekends or evenings.

- DELIVERABLES:**
1. A list of names that marked or cruised each payment unit.
 2. A summary of paint used in quarts.
 3. Tally summaries for each payment unit (one summary regardless of the number of markers) and all of the original tally sheets.
 4. GPS files for any GPS work, including all red, green or yellow painted lines.

Compartment 20 Hardwood Contract TIMBER SALE PRESCRIPTION APPENDIX

When establishing paint lines:

- The attached type map delineates the contract marking area.
- Avoid using dead or badly damaged trees - boundary trees must last for the duration of the timber sale (up to 3-4 years).
- Favor the use of reserved species such as cedar.
- Avoid using small (fast-growing) stems and those exposed to direct sunlight.
- Marking must be done in dry weather and when tree surfaces are not wet.
- Paint the boundary line in such a way that it can be seen both from the inside of the sale area and when walking along the line from either direction (two sides). Each boundary line tree must be stump-marked, at the base of the stump (one side) between the roots extending all the way to the ground.
- Place marks approximately six feet above the base of the tree.
- The contractor will keep track of total quarts of paint used per-sale by color.
- The contractor will use a GPS unit to determine enclosed acreage to the nearest one-tenth acre, unless an alternative method is approved prior by Unit Management.
- GPS units used must be compatible with Pathfinder Office (2.01 or later) and capable of producing a Trimble .COR file format. Supply a copy of the traverse file along with a hard copy of the corrected traverse file.
- Position Mode must be set so that GPS receiver collects data from a minimum of four satellites. This must be recorded in the position properties window after downloading.
- Positions deliver ODS (over determine system) data. 2D position will not be acceptable.
- The GPS receiver must log PDOP. This log must be recorded in the position properties window after downloading.
- PDOP mask must be less than or equal to 8.
- SNR setting must be less than or equal to 4.
- Sale boundaries are to be recorded as an area feature, not a line.
- Payment Unit lines may be recorded as a line feature bisecting the sale.
- In stand 9, paint (green) a 1 chain buffer around hemlock, and leave a 1 chain buffer (red) between the sale and the cedar stand to the south.
- In stand 24, paint (green) a 1 chain buffer around hemlock.
- Excessively steep slopes internal to the sale will be marked with green paint.

When Registered Corners or Witness Trees are discovered:

- Any wooden posts encountered at corners must also be painted/protected.
- Bearing and/or witness trees discovered during the course of sale preparation must be protected. This can be accomplished by painting a ring completely around the tree at 4-6 feet above ground level with either red paint (corner surrounded by state lands) or blue paint (corner on private property boundary line). In addition, tying ribbon on these trees helps alert loggers to their presence. Do not mark any trees for harvest if cutting them is likely to result in damage to corner monuments and/or bearing trees.
- Please report the condition of all corners, posts and bearing trees to the LCA.

When Cruising:

- Data must be recorded so volume can be determined by stand. If a stand is split into 2 or more payment units, each unit must be recorded separately. In addition, all data must be summarized by species or species grouping by payment unit.
- All saw logs must be 100% tallied by species and diameter.
- Within all marked stands, cruise all marked pulpwood tree species that will yield one or more 100" pulpwood sticks with a minimum top diameter of four (4) inches DIB. Contact LCA to see what grouping of pulpwood is acceptable.
- Within all marked stands, residual basal area (merchantable sized trees by species) at each plot must also be recorded on the cruise sheets. Borderline residual trees do not have to be measured, but every other borderline tree should be counted.
- Plot centers must be marked according to contract specifications and correspond to a legible 1:15840 scale cruise map. Cruise specifications may be altered as necessary by the LCA.

When marking, prioritize selection of trees to be cut in the following order:

1. Release suitable crop trees. (Refer to The Complete Marker for crop tree specifications.)
2. When appropriate, try to increase the number of lesser occurring species such as beech in areas of high bear use. LCA can provide an explanation of this priority.
3. Remove high-risk, poor quality and trees with poor crowns.
4. Maintain target basal area.
5. Maintain all species diversity.
6. Stand 9: With sawlog BA just under 40, and total BA of 106, reduce total BA to 70-90. Conduct crop tree release, favoring removal of about half the 6 inch class in both sugar maple and basswood, and some 8 inch sugar maple. When a pole tree is not available for

releasing a crop tree, try to select a cut tree from 10 and 14 inch basswood. Other than must cut trees and the basswood already mentioned, harvest is to be drawn from pole classes. Protect large, sprawling oak. The east-most part of stand may be too small to thin.

7. Stand 24: Sawlog BA is 45, and total BA is 102, Reduce total BA to 70-90. Conduct crop tree release, favoring removal of about 40% the 6 and 8 inch sugar maple, beech and basswood plus "must cut" trees. To the greatest extent possible, harvest is to be drawn from pole classes. If a pole tree is not available for releasing a crop tree, try to select a cut tree from either sugar maple or basswood in the 10 and 12 inch classes. Protect large, sprawling oak from felling damage.

Reserved Species:

- Do not mark within 100' of any raptor nest trees. Report these to the LCA as soon as possible and directions will be given at that time.
- Marking of infrequently occurring species should be avoided. Consult the LCA for clarification.