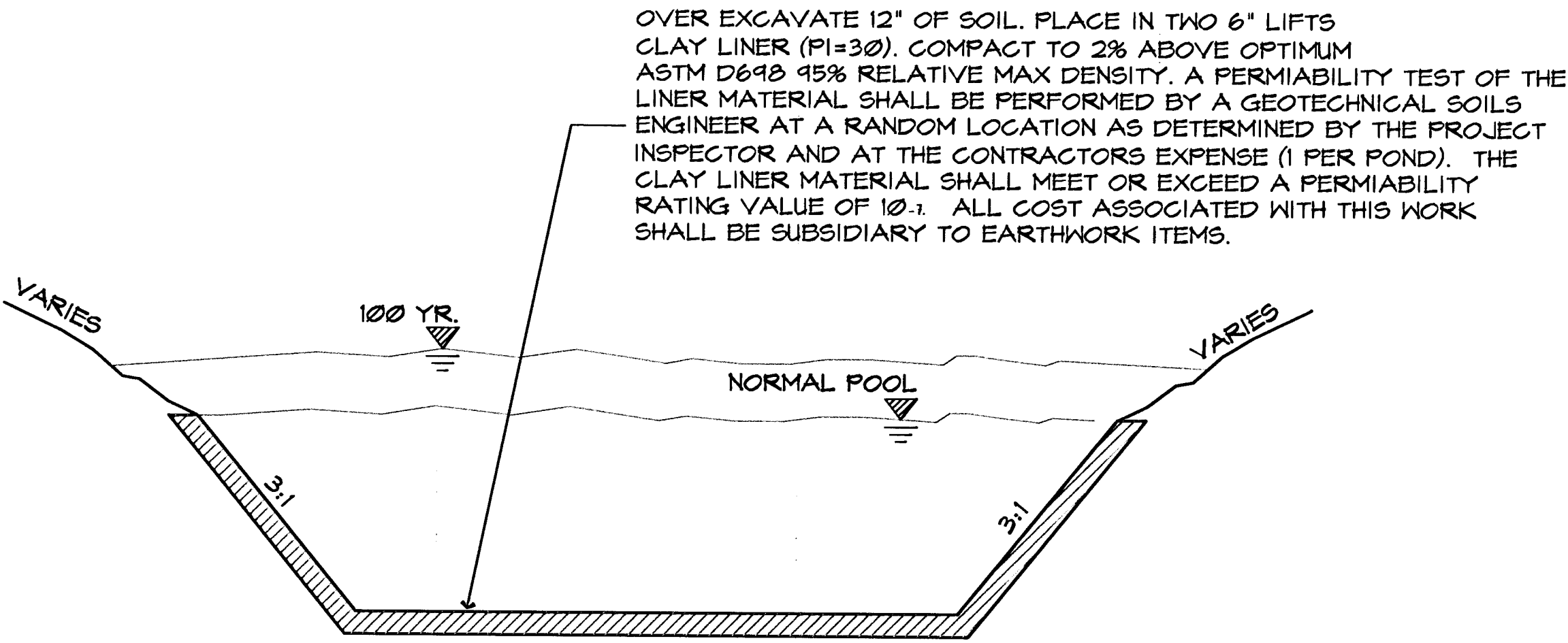


GENERAL GRADING NOTES:

- 1. THE SITE GRADING SHALL BE APPROVED BY MKEC'S LANDSCAPE ARCHITECT PRIOR TO THE ADDITION OF THE TOPSOIL LAYER.
- 2. MANY EXISTING NATURAL AREAS (TREES & PASTURE) ARE SHOWN TO BE PRESERVED & SHALL BE OFF LIMITS TO ANY TYPE OF CONSTRUCTION ACTIVITY. TEMPORARY CONSTRUCTION FENCE SHALL BE ERECTED AROUND THESE SITES PRIOR TO THE START OF ANY CONSTRUCTION AND SHALL BE MAINTAINED AND LEFT INTACT AT THE COMPLETION OF THE PROJECT.
- 3. A 6" LAYER OF TOPSOIL SHALL BE STRIPPED IN ALL AREAS OF CUT AND FILL AND REPLACED AT A 6" THICKNESS EXCEPT WITHIN THE 32' STREET R.O.W. NOTE: THE FINISHED GRADE INDICATES THE SURFACE ELEVATION AFTER THE LAYER OF TOPSOIL HAS BEEN PLACED. IN CASES WHERE GRADING IS DIRECTED UNDER TREE DRIP LINES NO TOPSOIL STRIPPING SHALL BE PERFORMED WITHIN THESE AREAS. (COST SUBSIDIARY TO EARTHWORK).
- 4. WHERE OFFSITE TOPSOIL IS NEEDED, IT SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, OBTAINED FROM WELL DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEIOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL pH RANGE SHALL BE 5.5 TO 7.0. TOPSOIL SHALL BE APPROVED BY MKEC'S LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
- 5. CONTRACTOR SHALL COORDINATE WITH MKEC ON ANY HAUL ROAD ROUTES. AS THE PROJECT NEARS COMPLETION, THE CONTRACTOR SHALL RIP (SCARIFY) ALL HAUL ROADS WITH AN AGRICULTURAL IMPLEMENT INTENDED FOR SUCH PURPOSES TO A DEPTH OF 18". MULTIPLE PASSES MAY BE NECESSARY TO THOROUGHLY ALEVIAE COMPACTION.
- 6. ANY EXCESS EXCAVATION SHALL BE STOCKPILED AT AN OWNER APPROVED LOCATION. COORDINATE WITH THE OWNER'S REPRESENTATIVE. EXCESS MATERIAL PLACEMENT SHALL BE SUBSIDIARY TO BID ITEM "EARTHWORK".
- 7. CLAY LINER SHALL BE SUBSIDIARY TO THE BID ITEM "EARTHWORK".

NOTE: CONTRACTOR SHALL MAKE EVERY EFFORT TO USE THE CHOICE MATERIAL FOR CLAY LINER. PI-30 IS A MIN.

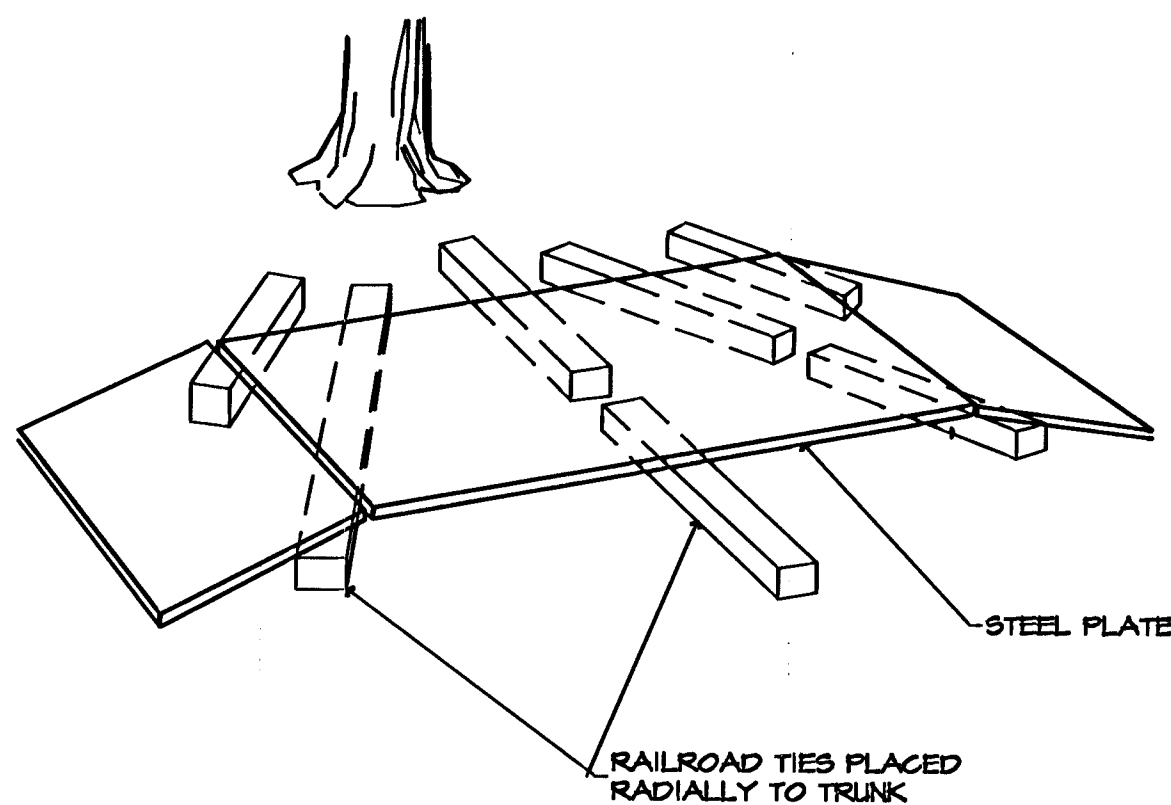


TYPICAL LAKE DETAIL

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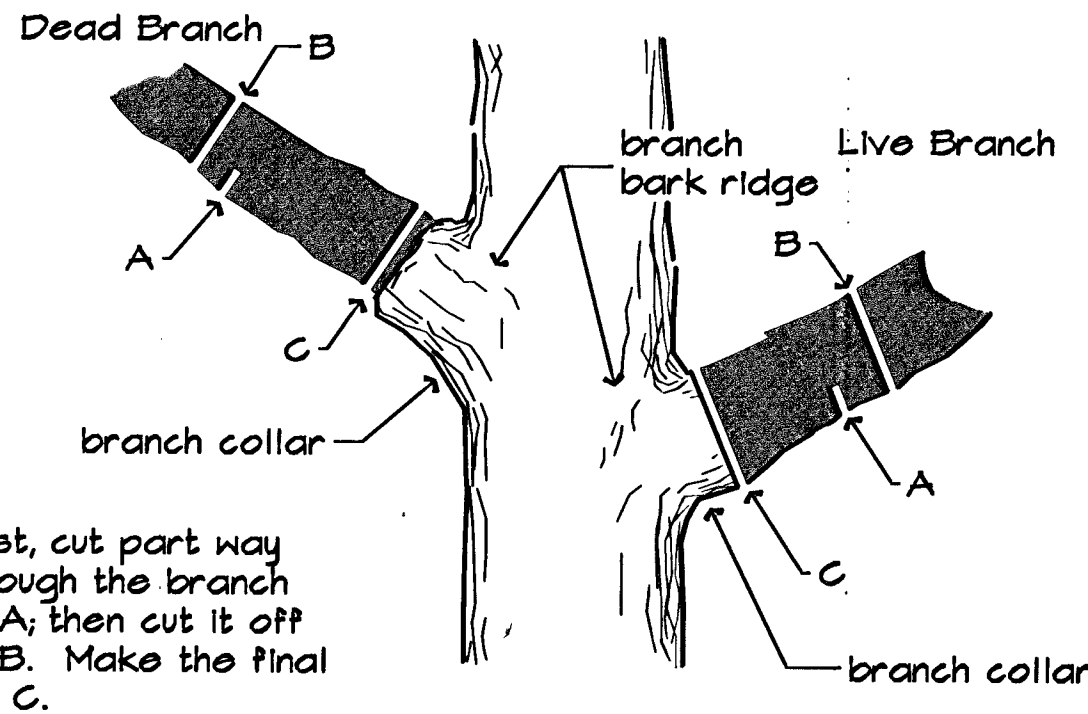
GENERAL TREE & NATURAL AREA PROTECTION NOTES:

- 1. TREES AND NATIVE PRAIRIE PASTURE ARE AN IMPORTANT ASSET TO THE DEVELOPER. EVERY EFFORT SHOULD BE MADE TO PRESERVE EACH AND EVERY TREE AND PASTURE SPACE (UNLESS NOTED FOR REMOVAL) AS DIRECTED IN THESE PLANS & NOTES.
- 2. BEFORE ANY TYPE OF CONSTRUCTION BEGINS WITHIN THE PROJECT IMPROVEMENT AREA THE CONTRACTOR SHALL INSTALL PROTECTION FENCE AROUND ALL TREE MASSES, INDIVIDUAL TREES, AND NATIVE PRAIRIE AREAS THAT ARE NOT NOTED FOR REMOVAL/ OR DISTURBANCE.
- 3. THE NATIVE PRAIRIE PASTURE SHALL BE IMPACTED AS LITTLE AS POSSIBLE. CONSTRUCTION EQUIPMENT & STORED MATERIALS SHALL REMAIN OUT OF AREAS NOTED TO BE PRESERVED. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO A CONFINED SPACE WITHIN THE STREET R.O.W. OR IMMEDIATE CONSTRUCTION AREA. VEHICLES SHALL NOT RANDOMLY CROSS PASTURE SPACES BUT RATHER STAY ON PREDEFINED ROUTES/HAUL ROADS THAT THE OWNERS REPRESENTATIVE AGREES TO. IT IS NOT THE INTENTION OF THESE REQUIREMENTS TO MAKE THE PROJECT MORE DIFFICULT BUT RATHER TO THOUGHTFULLY PLAN HOW TO GET THE PROJECT BUILT WITHOUT DESTROYING THE AESTHETIC QUALITIES OF THE PROPERTY.
- 4. EQUIPMENT AND CONSTRUCTION MATERIALS SHALL REMAIN OUT OF AND AWAY FROM TREE DRIPLINES SO AS TO NOT COMPACT THE ROOT ZONE OR DAMAGE THE TREE. CHEMICAL SPILL DAMAGE SHALL BE PREVENTED BY FILLING GAS TANKS, CLEANING TOOLS & REPAIRING EQUIPMENT WELL OUTSIDE TREE PROTECTED ROOT ZONES. MIXING TRUCKS SHALL BE RINSED OUT OFF SITE. WHERE IT OCCURS THAT A CONSTRUCTION ROUTE OR A PROPOSED IMPROVEMENT OCCURS WITHIN A TREE'S PROTECTED ROOT ZONE, IT MAY BE NECESSARY, DEPENDENT UPON THE TYPE OF CONSTRUCTION AND EQUIPMENT USED, TO INSTALL A ROOT PROTECTION BRIDGE OR APPROVED EQUIVALENT. THIS MAY BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE LANDSCAPE ARCHITECT (REFER TO DETAIL THIS SHEET).
- 5. ANY TREE THAT MUST HAVE BRANCHES REMOVED SHALL BE TRIMMED WITH SHARP INSTRUMENT/TOOL THAT IS INTENDED FOR SUCH OPERATIONS. CONSULT LANDSCAPE ARCHITECT PRIOR TO TRIMMING. KNOCKING BRANCHES OFF WITH A BACKHOE OR OTHER SIMILAR MACHINE IS NOT ACCEPTABLE! REFER TO TREE TRIMMING DETAIL ON THIS SHEET FOR TRIMMING PROCEDURE.
- 6. FAILURE TO MAINTAIN ERECTED TREE PROTECTION FENCE AROUND DESIGNATED AREAS WITHOUT PRIOR REMOVAL CONSENT FROM THE OWNER IS STRICTLY PROHIBITED. ALL EQUIPMENT WORK SHALL HAULT UNTIL REMIDIED SHOULD ANY PROTECTION FENCE BE REMOVED OR MOVED.



ROOT BRIDGING DETAIL

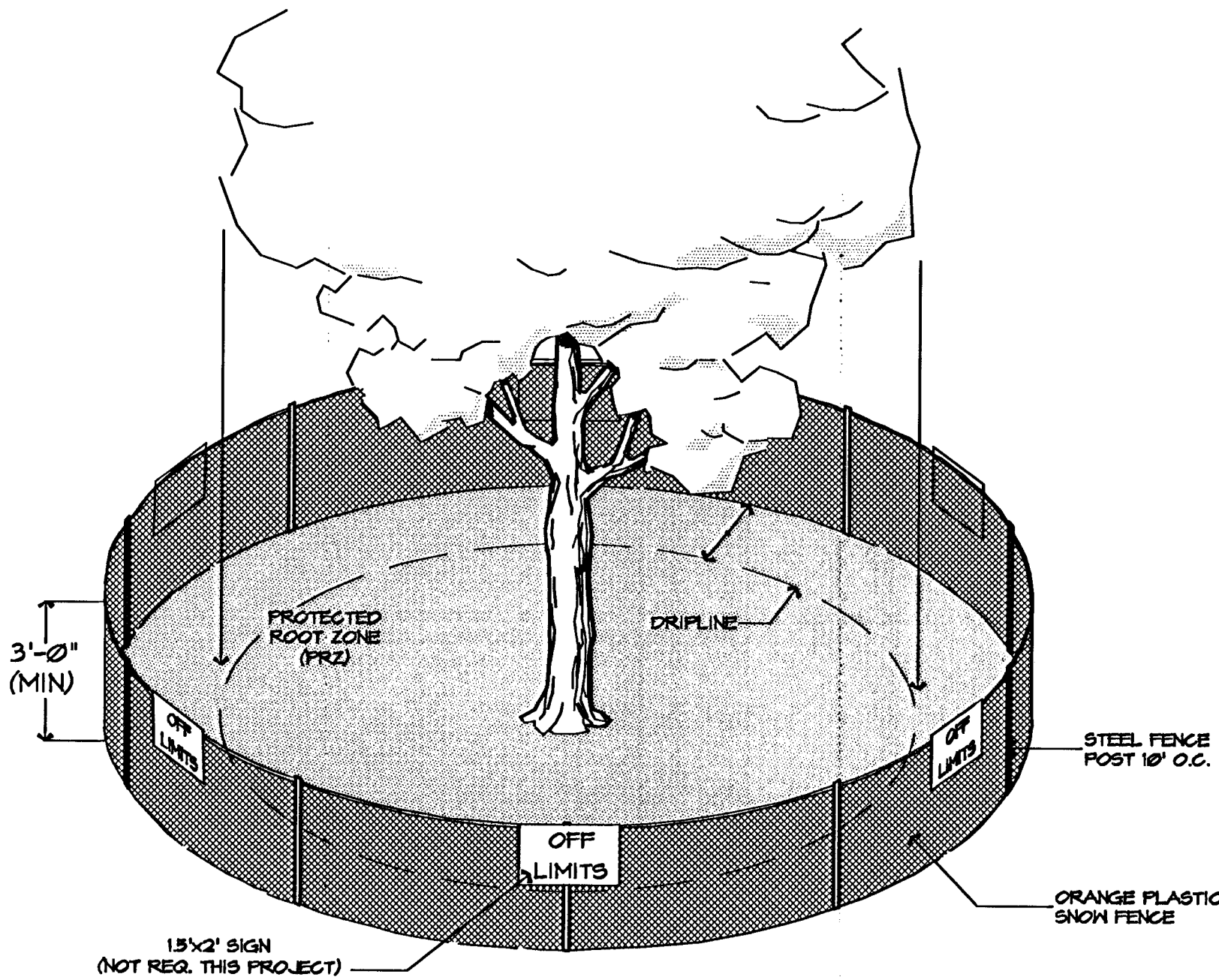
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First, cut part way through the branch at A; then cut it off at B. Make the final cut C.

TREE TRIMMING DETAIL

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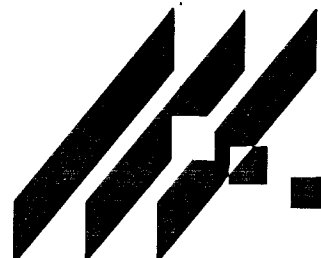


NOTE: THE TEMPORARY FENCE IS TO BE CONSTRUCTED AROUND SPECIFIED AREAS/TREES PRIOR TO ANY CONSTRUCTION AND SHALL REMAIN UNTIL ALL CONSTRUCTION IS COMPLETE. CONSTRUCTION EQUIPMENT AND MATERIALS ARE NOT PERMITTED WITHIN THE (PRZ). THE FENCE PLACEMENT AROUND THE (PRZ) MAY ONLY BE ADJUSTED WITH PERMISSION FROM THE OWNER'S REPRESENTATIVE.

TEMPORARY TREE PROTECTION DETAIL

NOT TO SCALE

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MKEC
ENGINEERING
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411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

HAWTHORNE THIRD ADDITION - PHASE 3
PROJECT NAME

NOTES & DETAILS
SHEET TITLE

MKEC DESIGN BY. MKEC DRAWN BY. JAG CHECKED BY.

AUGUST 2005 DATE 02167 JOB NO. 16 / 36 SHEET/OF