

GENERAL GRADING NOTES:

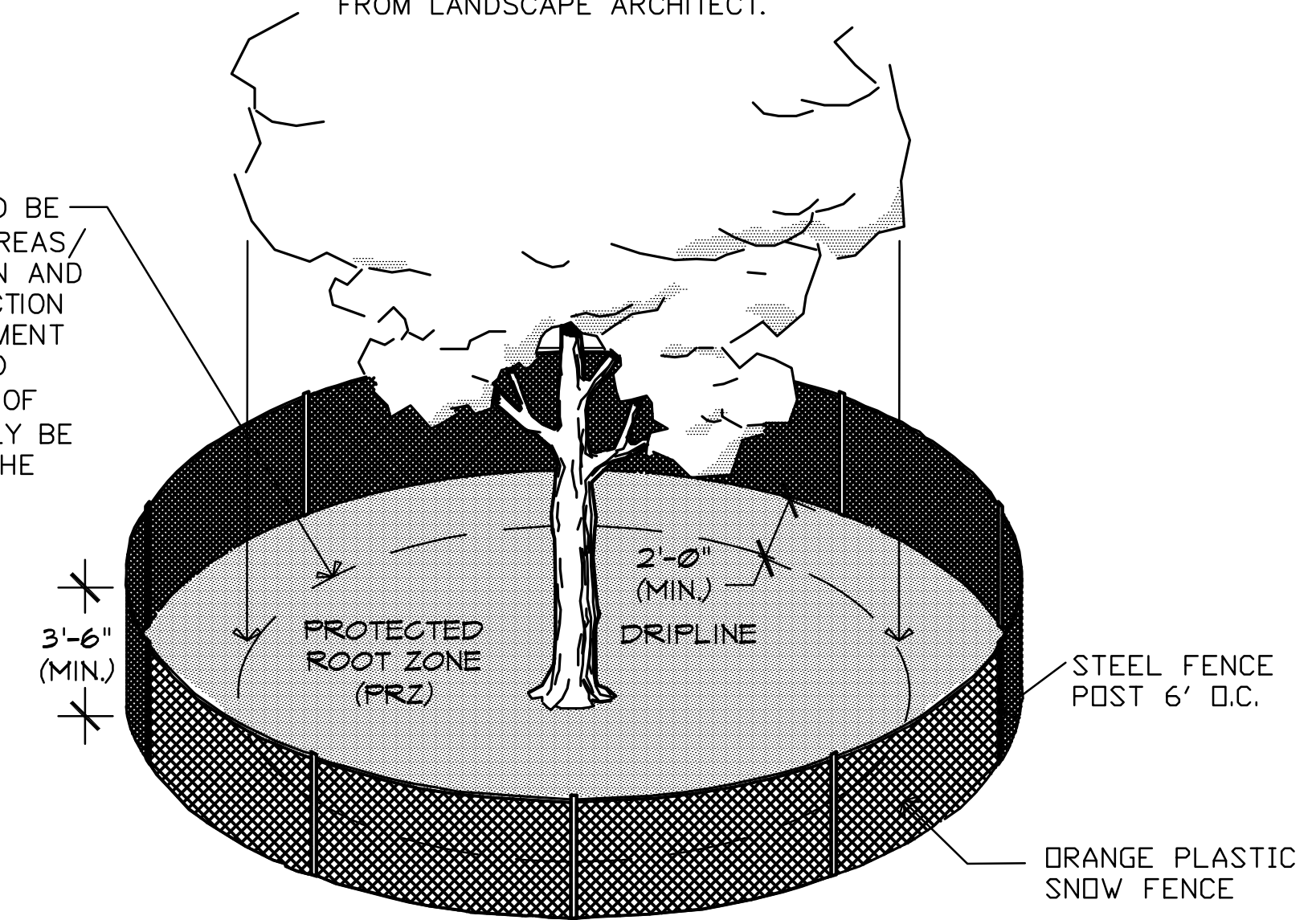
- UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WICHITA, KANSAS, STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- A 6" (MAX. DEPTH) LAYER OF TOPSOIL SHALL BE STRIPPED IN ALL AREAS TO RECEIVE FILL AND SAVED BACK FOR REPLACEMENT IN NON-BUILDING AND NON-PAVED AREAS. ANY EXCESS TOPSOIL SHALL BE SEPARATELY STOCKPILED ON-SITE AT AN OWNER APPROVED LOCATION. EXCESS MATERIAL PLACEMENT SHALL BE SUBSIDIARY TO BID ITEM "EARTHWORK".
- ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. MAXIMUM LIFT THICKNESS SHALL BE 8". CONTRACTOR TO PROVIDE ADEQUATE COMPACTION TESTING TO CONFIRM COMPACTION.
- ALL AREAS DISTURBED WITH THE EXCEPTION OF PROPOSED BERMS AND STREETS SHALL BE SEEDED (COST SUBSIDIARY TO "EARTHWORK") AND FERTILIZED AS FOLLOWS:
K31 FESCUE @ 200 LBS/ACRE
10-20-10 @ 350 LBS/ACRE
- ALL SEEDED AREAS SHALL BE IMMEDIATELY MULCHED W/ PRAIRIE HAY AT 2 TONS/ACRE. ANCHOR MULCH BY CRIMPING INTO TOPSOIL WITH SUITABLE MECHANICAL EQUIPMENT.
- SEEDING AREAS SHALL BE PREPARED FOR PLANTING WITH COMMON AGRICULTURAL TECHNIQUES. ALL RESERVE AREAS SHALL BE FINE GRADED USING SMALL EQUIPMENT. REMOVE EXISTING GRASS, VEGETATION AND TURF. DO NOT MIX INTO SURFACE SOIL. LOOSEN SOIL TO A DEPTH OF AT LEAST 6 INCHES. GRADE AREAS TO A SMOOTH UNIFORM SURFACE PLANE. ROLL, RAKE, AND REMOVE RIDGES AND FILL DEPRESSIONS. THE SURFACE SHALL BE FREE FROM STICKS, SMALL STONES, AND OTHER EXTRANEIOUS MATERIALS. APPROVE WITH OWNER'S REPRESENTATIVE BEFORE PLANTING.
- ALL SEED SHALL BE DISTRIBUTED WITH AN ACCEPTABLE DRILL INTENDED FOR SUCH OPERATIONS, OR OTHER EQUIPMENT APPROVED BY THE OWNER'S REPRESENTATIVE. SEEDING DEPTH SHALL BE 1/4".
- CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF CONSTRUCTION SCHEDULING.
- EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING VEGETATION WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT PERFORM ANY GRADING OPERATIONS WITHIN THE DRIPLINE OF ANY EXISTING TREES. COORDINATE GRADING WITH MKEC LANDSCAPE ARCHITECT.
- THIS IS DESIGN GRADING. ALL GRADES SHALL BE CONTOURED SMOOTHLY WITH GENTLE ROUNDING/SHAPING OF ALL AFFECTED LAND SURFACES. ABRUPT TRANSITIONS AT THE TOP OF SLOPES WHERE PROPOSED GRADES MEET EXISTING ARE NOT ACCEPTABLE. SURVEY STAKES FOR POND GRADING ARE FOR GENERAL GRADING PURPOSES ONLY. NOT ALL SLOPES ARE CONSTANT AND THEREFORE THE GRADING PLANS SHALL BE REFERRED TO FOR FINAL GRADE SHAPING. ALL BERMS & POND EDGES SHALL BE FINAL GRADED/SHAPED WITH A TRACK DOZER, NOT A BLADE. THE GRADING SHALL BE APPROVED BY MKEC'S LANDSCAPE ARCHITECT PRIOR TO THE ADDITION OF THE TOPSOIL LAYER.
- TOPSOIL SHALL BE REPLACED AT A DEPTH OF 6" IN ALL RESERVE AREAS (EXCEPT GRADES BELOW THE PROPOSED NORMAL POOL ELEVATION WITHIN PONDS). THE TOPSOIL REPLACEMENT THICKNESS SHALL BE A MINIMUM OF 12" ON BERMS. NOTE: THE FINISHED GRADE INDICATES THE SURFACE ELEVATION AFTER THE TOPSOIL LAYER HAS BEEN PLACED. THE TOP 12" OF TOPSOIL SHALL NOT BE PLACED ON BERMS WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT. IF THE TOP 12" OF TOPSOIL IS PLACED PRIOR TO APPROVAL AND THERE IS A PROBLEM, THE CONTRACTOR MAY NEED TO REWORK THE BERM IN ORDER TO CONSTRUCT PER THE INTENT OF THE PLAN.
- 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 ALEVIATE COMPACTION.
- IN THE EVENT THAT 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.

GENERAL TREE AND NATURAL AREA PROTECTION NOTES:

- TREES ARE AN IMPORTANT ASSET TO THE DEVELOPER. EVERY EFFORT SHALL BE MADE TO PRESERVE EACH AND EVERY TREE (UNLESS NOTED FOR REMOVAL) AS DIRECTED IN THESE PLANS & NOTES.
- BEFORE ANY TYPE OF CONSTRUCTION BEGINS WITHIN THE PROJECT IMPROVEMENT AREA THE CONTRACTOR SHALL INSTALL PROTECTION FENCE AROUND ALL TREE MASSES AND INDIVIDUAL TREES AS NOTED IN PLANS. ALL TREE REMOVAL SHALL BE DISCUSSED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
- 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 (REFER TO THIS SHEET FOR DETAIL). 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 OWNER'S REPRESENTATIVE.
- 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 SHEET X FOR TRIMMING PROCEDURE.
- MAINTAIN FAILURE TO ERECTED TREE PROTECTION FENCE AROUND DESIGNATED AREAS WITHOUT PRIOR REMOVAL CONSENT FROM THE OWNER'S REPRESENTATIVE IS STRICTLY PROHIBITED. ALL WORK SHALL HALT UNTIL REMEDIED, SHOULD ANY PROTECTION FENCE BE REMOVED, MOVED, OR DEVIATIONS FROM THESE NOTES ARE OBSERVED BY THE OWNER'S REPRESENTATIVE (THIS INCLUDES TREES WHERE NO FENCE IS REQUIRED).

NOTE: WHERE INDICATED, TREES SHALL BE PROTECTED AS SHOWN PRIOR TO ANY CONSTRUCTION AND THROUGHOUT CONSTRUCTION. PROTECTION FENCING MAY BE ADJUSTED UPON AGREEMENT FROM LANDSCAPE ARCHITECT.

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 PLACEMENT OF FENCE AROUND THE (PRZ) MAY ONLY BE ADJUSTED WITH PERMISSION FROM THE LANDSCAPE ARCHITECT.

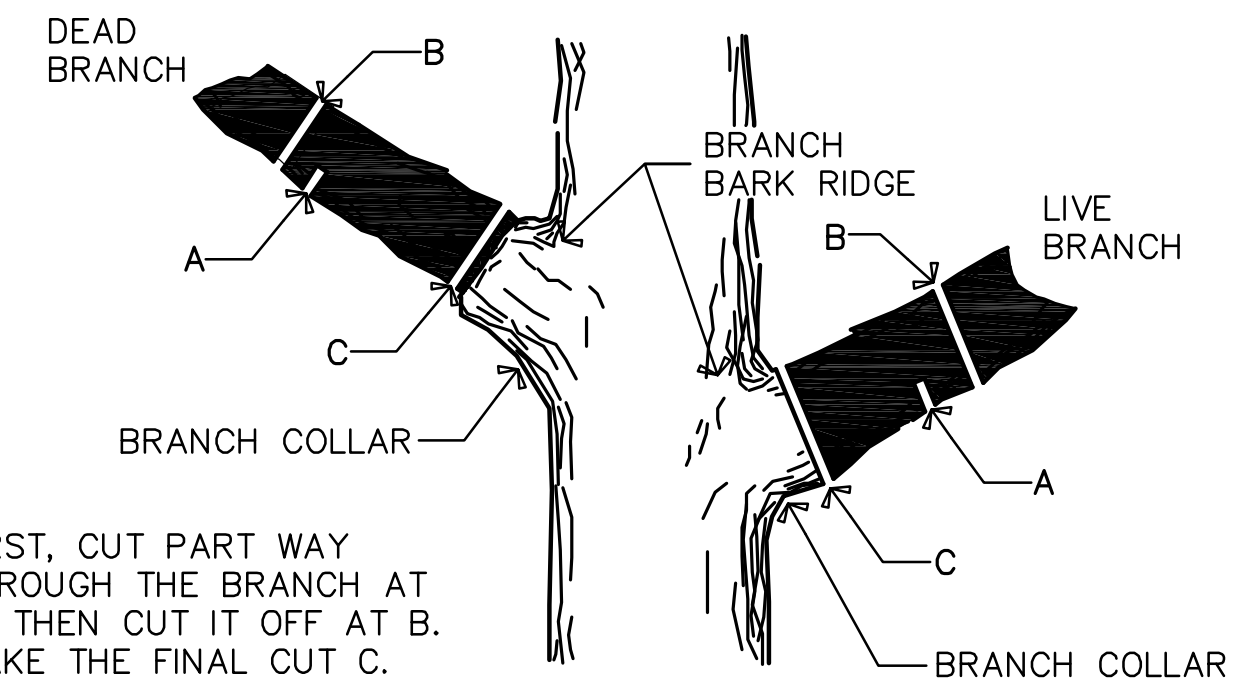


TEMPORARY TREE PROTECTION
NOT TO SCALE

NOTE: EVERY EFFORT SHALL BE MADE TO AVOID TREE DAMAGE. STORM SEWER ALIGNMENT MAY BE ADJUSTED IN FIELD TO AVOID TREES. CONTRACTOR SHALL COORDINATE ANY CHANGES IN ALIGNMENT WITH OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL USE SMALL MACHINERY IN THE BRANCH REMOVAL ZONE DUE TO LIMITED WORK SPACE.

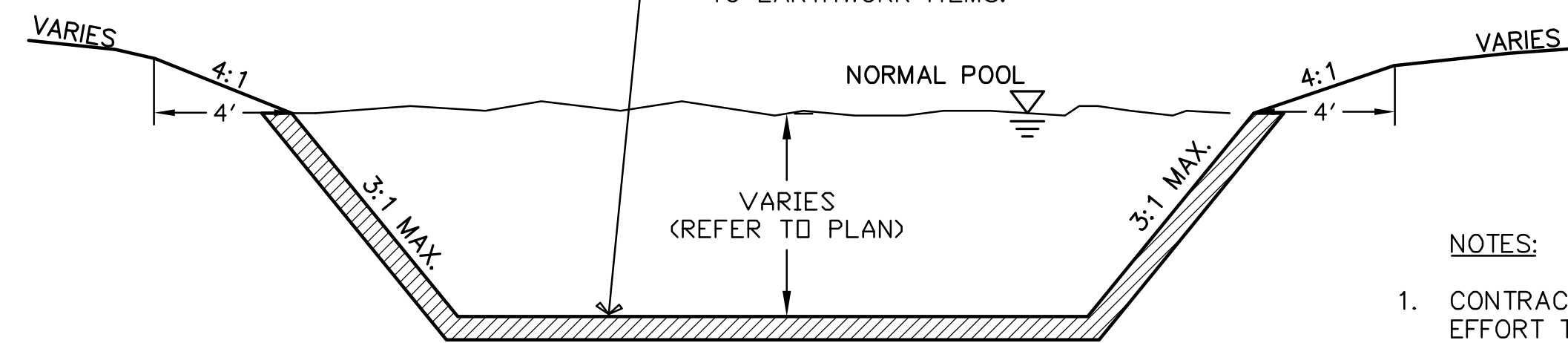
ALL BRANCHES TO BE REMOVED SHALL BE REMOVED ONLY WHEN A REPRESENTATIVE FROM MKEC IS PRESENT. PROVIDE MKEC 24-HOUR NOTICE.



FIRST, CUT PART WAY THROUGH THE BRANCH AT A; THEN CUT IT OFF AT B. MAKE THE FINAL CUT C.

TREE TRIMMING DETAIL
NOT TO SCALE

OVER EXCAVATE 12" OF SOIL. PLACE IN TWO 6" LIFTS CLAY LINER (PI=30). COMPACT TO 2% ABOVE OPTIMUM ASTM D698 95% RELATIVE MAX DENSITY. A PERMIABILITY TEST OF THE LINER MATERIAL SHALL BE PERFORMED BY A GEOTECHNICAL SOILS ENGINEER AT A RANDOM LOCATION AS DETERMINED BY THE PROJECT INSPECTOR AND AT THE CONTRACTORS EXPENSE (1 PER POND). THE CLAY LINER MATERIAL SHALL MEET OR EXCEED A PERMIABILITY RATING VALUE OF 1.7 X 10⁻³ CM/SEC. ALL COST ASSOCIATED WITH THIS WORK SHALL BE SUBSIDIARY TO EARTHWORK ITEMS. THE TOP 6" CLAY LIFT TO BE BLENDED WITH BENTONITE. BENTONITE TO BE PLACED @ A RATE OF 20LB/SY. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE SUBSIDIARY TO EARTHWORK ITEMS.



TYPICAL LAKE DETAIL
NOT TO SCALE

NOTES:

- CONTRACTOR SHALL MAKE EVERY EFFORT TO USE THE CHOICE MATERIAL FOR CLAY LINER. PI-31 IS A MIN.
- TOP 6" CLAY LIFT TO BE BLENDED WITH BENTONITE. BENTONITE TO BE PLACED AT A RATE OF 20 LB/SY.

GRADING NOTES AND DETAILS

SHEET TITLE
468-84409
PROJECT NUMBER

MKEC
DESIGN BY
MKEC
DRAWN BY
MKEC
CHECKED BY

ISSUED
January 2008
REVISED

SHEET NO.
11 of 21