

DISTRIBUTION AND TRANSMISSION LINE CLEARING AND ENVIRONMENTAL QUALITY PROTECTION

NEW CONSTRUCTION CLEARING PROGRAM

TREES AND VEGETATION WILL BE CLEARED TO REQUIRED CLEARANCES FOR NEW CONSTRUCTION OF FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEARING OF THE RIGHT-OF-WAY. IT IS VERY IMPORTANT THAT THE CLEARING BE DONE APPROPRIATELY. APPROPRIATE EQUIPMENT MAY NOT BE AS READILY ACCESSIBLE/AVAILABLE TO THESE AREAS IN THE FUTURE. ALL TREES SHOULD BE TRIMMED, REMOVED, OR CHEMICALLY TREATED PER SPECIFICATIONS AND AS THEY ARE LISTED IN THIS DOCUMENT.

IDENTIFICATION

- PRIOR TO PERFORMING ANY WORK A VIDEO SHOWING EXISTING TREES AND VEGETATION FOR ENTIRE LENGTH AND WIDTH OF THE RIGHT-OF-WAY SHALL BE TAKEN AND 2 COPIES MADE AND STORED UNTIL THE FINAL PAYMENT IS MADE.
- THE CONTRACTOR'S ARBORIST SHALL IDENTIFY ALL TREES BY HEIGHT, DIAMETER SPECIES, LOCATION AND GENERAL HEALTH. THE ARBORIST TO IDENTIFY ANY TREE THAT IS ENDANGERED BY FEDERAL STATE OR COUNTY LAW. IDENTIFY ALL TREES FOR REMOVAL, TRIMMING, ROOT AND PRUNING ETC PRIOR TO PERFORMING WORK. PROVIDE THE CITY WITH SECTION OF ALL TREES AND PLANT GROWTH SHOWN.

GENERAL TREE TRIMMING GUIDELINES

LOW GROWING SHRUBS -- SHRUBS WHICH WILL NOT INTERFERE WITH ACCESS, OPERATION OR MAINTENANCE OF THE LINE, SHALL BE LEFT UNDISTURBED.

SLASH -- SLASH MAY BE CHIPPED AND BLOWN ON THE RIGHT-OF-WAY IF SO SPECIFIED. IF CHIPPING IS NOT POSSIBLE DUE TO TERRAIN OR OTHER CIRCUMSTANCES, THE SLASH WILL BE LOADED AND SCATTERED ON OUTER LIMITS OF RIGHT-OF-WAY SO THAT ACCESS FOR CREWS WILL NOT BE INHIBITED OR HALLED AWAY TO A LICENSED DUMP. STANDARD FIRE HAZARD REDUCTION PRACTICES WILL BE EMPLOYED, SUCH AS REMOVING LADDER FUELS.

CUTTING TREES OUTSIDE THE RIGHT-OF-WAY -- DEAD TREES BEYOND THE RIGHT-OF-WAY WHICH WOULD STRIKE THE LINE IN FALLING SHALL BE REMOVED. LEANING TREES BEYOND THE RIGHT-OF-WAY WHICH WOULD STRIKE THE LINE IN FALLING AND WHICH WOULD REQUIRE TOPPING IF NOT REMOVED, SHALL EITHER BE REMOVED OR TOPPED. THE LANDOWNERS PERMISSION SHALL BE RECEIVED PRIOR TO CUTTING TREES OUTSIDE OF THE RIGHT-OF-WAY.

MOVING -- MECHANICAL OPERATIONS SUCH AS MOWERS OR BRUSHHOGS, WILL BE UTILIZED WHERE TERRAIN PERMITS, TO MOST EFFICIENTLY USE OUR EQUIPMENT, AND REDUCE HUMAN EXPOSURE TO HAZARDOUS CONDITIONS. THE MACHINES WILL BE REQUIRED TO PRODUCE A CLEAN, NEAT LOOKING JOB.

PRUNING STANDARDS AND PRACTICES -- ALL PRUNING PRACTICES WILL FOLLOW MODERN GUIDELINES AS PUBLISHED BY THE INTERNATIONAL ASSOCIATION OF ARBORICULTURE (ISA) STANDARDS UNLESS A LANDOWNER MAKES A WRITTEN REQUEST OTHERWISE. REFER TO ANSI A300 (1995), INTERNATIONAL SOCIETY OF ARBORICULTURE TREE PRUNING STANDARDS (1995), AND PRUNING TREES NEAR ELECTRICAL UTILITY LINES (SHOO-1990). CORRECT TREE TRIMMING SHOULD PROMOTE TREE GROWTH AWAY FROM ELECTRICAL CONDUCTORS, PROVIDE LONGER PERIODS OF CLEARANCE, AND REDUCE FUTURE WORK.

HERBICIDE SPECIFICATION

- GENERAL -- THE USE OF HERBICIDES IS AN INTEGRAL PART OF A VEGETATION MANAGEMENT PROGRAM. HERBICIDE APPLICATIONS WILL BE PERFORMED ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS. HERBICIDE PRODUCTS WILL BE USED CONSISTENT WITH THEIR LABELING. THE LABEL IS THE LAW. HERBICIDE APPLICATIONS WILL BE PURSUED AS A VEGETATION MANAGEMENT TOOL WHERE POSSIBLE. ALL HERBICIDE PRODUCTS, MIXES AND APPLICATIONS MUST BE APPROVED. ALL HERBICIDE APPLICATIONS REQUIRE WRITTEN PERMISSION FROM THE PROPERTY OWNER. EXERCISE EXTREME CAUTION WHEN APPLYING HERBICIDES NEAR WATER. ADJACENT PROPERTIES WITH CROPS THAT MIGHT BE DAMAGED, OR TREES THAT MIGHT BE ROOT GRAFTED TO A NEARBY STUMP, AGAIN, THE LABEL WILL SPELL OUT THESE CONCERNS AND THE APPLICATION/CONTRACTOR IS RESPONSIBLE FOR THEM.
- HERBICIDE APPLICATIONS -- THE COMPANY MAKING THE APPLICATION IS RESPONSIBLE FOR THE PURCHASE, STORAGE, RECORD KEEPING AND DISPOSAL OF HERBICIDES. HERBICIDES WILL ONLY BE APPLIED BY QUALIFIED APPLICATORS. HERBICIDE CREWS, TREE CREWS, AND MOWING CREWS ARE REQUIRED TO HAVE AT LEAST ONE INDIVIDUAL ON THE CREW AT ALL TIMES, WHO IS QUALIFIED TO APPLY HERBICIDES. A QUALIFIED APPLICATOR IS AN INDIVIDUAL WHO HAS BEEN TRAINED REGARDING THE PRODUCT AND APPLICATION METHOD, AND MEETS ANY FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. THIS INDIVIDUAL MAY BE REQUIRED TO HOLD A CERTIFIED APPLICATORS LICENSE, OR BE UNDER THE DIRECT SUPERVISION OF A CERTIFIED APPLICATOR. THIS WILL DEPEND UPON STATE LAWS AND REGULATIONS WHERE THE APPLICATION IS MADE. SUPERVISOR OF QUALIFIED APPLICATORS ARE REQUIRED TO HOLD A CERTIFIED APPLICATORS LICENSE IN THE STATE OR STATES IN WHICH THEY SUPERVISE CREWS.

HERBICIDE REPORTS -- ALL HERBICIDE APPLICATION OF CONTRACTORS WILL BE REPORTED TO THE CITY USING THE CONTRACTOR'S HERBICIDE REPORT. REPORTS WILL BE SUBMITTED TO CITY ON A WEEKLY BASIS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REPORTS FOR REVIEW BY THE STATE DEPARTMENT OF AGRICULTURE.

TREE REMOVAL -- TREE REMOVAL ELIMINATES HAZARDOUS CONDITIONS, IMPROVES ACCESS TO FACILITIES AND REDUCES FUTURE WORK. TREE REMOVALS WILL BE PURSUED WHEREVER FEASIBLE.

- TREE REMOVAL CANDIDATES
 - TREES THAT ARE LOCATED AT HOMES, SCHOOLS, PARKS, AND BUSINESSES OR OTHER AREAS, WHICH CHIMNEY MAY COME EASILY AND CONTACT PRIMARY CONDUCTORS.
 - CLIMBABLE TREES OR TREES WITH TREE HOUSES THAT ARE CLOSE TO PRIMARY CONDUCTORS.
 - FAST GROWING TREES THAT MAY INTERFERE WITH PRIMARY CONDUCTORS BEFORE THE NEXT MAINTENANCE TRIMMING.
 - VOLUNTARY TREES WHICH WILL ESSENTIALLY INTERFERE WITH PRIMARY CONDUCTORS.
 - IMMATURE TREES THAT ARE NOT PRESENTLY INTERFERING WITH PRIMARY CONDUCTORS, BUT COULD AT THEIR MATURE HEIGHT.
 - DEAD, DYING, DISEASED, DEFORMED AND UNSTABLE TREES WHICH HAVE A HIGH PROBABILITY OF FALLING AND CONTACTING PRIMARY OR SECONDARY CONDUCTORS.
 - TREES THAT REQUIRE EXTENSIVE DROP CROUCH TRIMMING.
- TREE REMOVAL CONDITIONS
 - TREE REMOVALS SHOULD BE LIMITED TO TEN FEET EITHER SIDE OF DISTRIBUTION CONDUCTORS AND WITHIN TRANSMISSION RIGHTS OF WAY, EXCLUDING DANGER TREES. SEE 55281-147 PRESERVATION OF TREES, SHRUBS AND EVERGREENS.
 - DANGER TREES (OUTSIDE OF THE RIGHT-OF-WAY) SHOULD ONLY BE REMOVED IF THERE IS A THREAT OF THE TREE OR LIMBS FALLING AND CONTACTING THE PRIMARY CONDUCTOR AND/OR LANDOWNER PERMISSION.
 - LOW GROWING COMPATIBLE SHRUBS OR TREES WHOSE MATURE HEIGHT IS LESS THAN 25 FEET SHOULD NOT BE REMOVED. THERE WILL BE SITUATIONS WHERE THIS TYPE OF VEGETATION SHOULD BE REMOVED FOR ACCESS TO FACILITIES OR POLE CLEARING REQUIREMENTS.
 - STUMPS SHALL BE CUT AS CLOSE TO THE GROUND AS PRACTICAL OR REMOVED.
 - ALL DECIDUOUS TREES, BUSHES AND VINES THAT ARE REMOVED MAY REQUIRE STUMP TREATMENT WITH AN APPROVED HERBICIDE MIX. HERBICIDE APPLICATIONS REQUIRE WRITTEN PERMISSION FROM THE PROPERTY OWNER OR COUNTY.
 - TREE REMOVAL REQUIRES PERMISSION FROM THE PROPERTY OWNER, ON TRANSMISSION LINES ONLY. CERTAIN "LANDSCAPE" TREES MAY BE LEFT AT OWNER'S REQUEST, PROVIDED RW ACCESS IS NOT IMPAIRED.
 - ALL TREES REMOVED SHALL BE REPLACED PER THE CITY'S PLANTING SPECIFICATION, QUANTITY BY QUANTITY AND OF SLOW GROWING VARIETY AND FINAL HEIGHT LESS THAN 25' WHEN FULLY GROWN (SEE PAGE 4).

THESE REQUIREMENTS MEET OR EXCEED SUGGESTED STATE AND FEDERAL GUIDELINES FOR FIRE HAZARD CONTROL AND WILL PROVIDE OUR LINE CREWS WITH THE BEST POSSIBLE ACCESS AND SAFE, CLEAR WORKING CONDITIONS, AND MINIMIZE TREE RELATED SERVICE INTERRUPTIONS.

- TREE TRIMMING SPECIFICATIONS/CLEARANCES

THE BASIC REQUIREMENTS FOR CLEARANCES AROUND TRANSMISSION LINES CONDUCTORS ARE SET FORTH IN TABLE 1. BELOW FIGURE 1 ON THE FOLLOWING PAGES SHOW A SUMMARY OF THESE CLEARANCES. THESE ARE MINIMUM REQUIREMENTS AT WHICH TIME TRIMMING WILL BE NECESSARY TO ALLOW FOR GROWTH DURING THE NEXT CYCLE. THE ACTUAL TRIMMED CLEARANCE SHOULD BE AT LEAST FIVE FEET MORE THAN THE MINIMUM, TO ALLOW FOR GROWTH.

TABLE 1

TRANSMISSION LINE CLEARANCES	
GROUND CLEARANCE: 15' MIN. HORIZONTALLY FROM CENTER OF RIGHT-OF-WAY, BOTH SIDES, OR TO ORIGINAL (POLE) TO RIGHT-OF-WAY WIDTH -- 10' AROUND AND STRUCTURE (POLE OR TOWER).	
SIDE CLEARANCE: 138KV LINE--20 FT. FROM CONDUCTOR IN STATIC POSITION 34.5KV LINE--10 FT. FROM CONDUCTOR	

NO OVERHANG WILL BE ALLOWED ON TRANSMISSION LINES SEE FIGURE 1 FOR UNDERGROWTH RESTRICTIONS.

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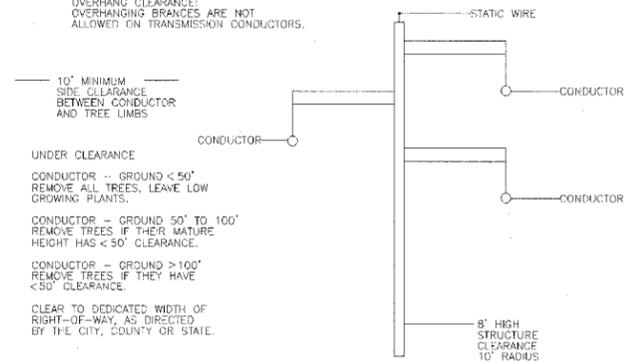
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138KV TRANSMISSION LINE CLEARANCE				
FIGURE-1				
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	87
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83961	

OVERHANG CLEARANCE

A TEN FOOT OVERHANG WILL ONLY BE AN OPTION IN SPECIAL SITUATIONS AT THE PROPERTY OWNER'S REQUEST, AND WILL NONE BE CONSIDERED ON LARGE DIAMETER TREES (TREE LARGER THAN 20 FEET DIAMETER BREST HEIGHT) THAT ARE SOUND AND THE PROPERTY OWNER DOESN'T WANT THE TREE CUT.



INSTALLATION OF LANDSCAPING CAN BE ACCEPTABLE IN ELECTRIC TRANSMISSION RIGHTS-OF-WAY. HOWEVER, LANDSCAPING MUST NOT BE ALLOWED TO COMPROMISE SAFE CLEARANCE BETWEEN PLANTS AND CONDUCTORS OR BETWEEN PLANTS AND STRUCTURES (TOWERS OR POLES). NOR SHALL LANDSCAPING IMPED ACCESS OR PREVENT EASY INSPECTION OF FACILITIES. CITY WILL NOT CONSENT TO LANDSCAPING DESIGNS THAT INCREASE ITS MAINTENANCE COSTS OR HAVE THE POTENTIAL OF CREATING FUTURE SERVICE RELIABILITY OR PUBLIC SAFETY ISSUES. THE CONTRACTOR SHOULD ALWAYS CONSULT WITH THE LOCAL CITY TRANSMISSION LINE SUPERVISOR BEFORE FINALIZING LANDSCAPE PLANS IN THE VICINITY OF ELECTRIC TRANSMISSION FACILITIES.

LINE CLEARANCE

PLANTS SHOULD NOT BE INSTALLED THAT COULD ULTIMATELY GROW WITHIN THE MINIMUM ACCEPTABLE CLEARANCE DISTANCE OF PLANTS FROM CONDUCTORS STATED IN TABLE BELOW. IN GENERAL, THE ACCEPTABLE MATURE HEIGHT OF PLANTS FOR A GIVEN SITUATION WILL BE DETERMINED BY THE HEIGHT OF THE CONDUCTOR ABOVE THE GROUND AND THE VOLTAGE OF THE LINE. USING A CONDUCTOR HEIGHT OF 40' (ABOVE GROUND AT 235°F @ 750' SPAN) RESULT IN MAXIMUM PLANT HEIGHT AS FOLLOWS:

VOLTAGE	MINIMUM CLEARANCE OF PLANTS FROM CONDUCTOR	MAXIMUM PLANT HEIGHT	MAX. SAG @ 235°F @ 750' SPAN
12,000 VOLTS TO 138,000 VOLTS	15'	25'	24'

- GENERAL

THE ASSIGNED CONTRACTOR SHALL PLAN, COORDINATE, AND CONDUCT HIS OPERATIONS IN A MANNER WHICH PROTECTS THE QUALITY OF THE ENVIRONMENT AND COMPLIES WITH ENVIRONMENTAL EXPECTATIONS. THIS SPECIFICATION CONTAINS PROVISIONS WHICH SHALL BE CONTRACT CONSTRUCTION OPERATIONS. IF THE CONTRACTOR FAILS TO OPERATE WITHIN THE INTENT OF THESE REQUIREMENTS, WILL DIRECT CHANGES TO OPERATING PROCEDURES. CONTINUED VIOLATION WILL RESULT IN A WORK SUSPENSION UNTIL CORRECTION OR REMEDIAL ACTION TAKEN BY THE CONTRACTOR. PENALTIES AND CONTRACT TERMINATION WILL BE USED AS APPROPRIATE. THE COSTS OF COMPLYING WITH THESE SPECIFICATIONS ARE INCIDENTAL TO THE CONTRACTOR WORK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. AT ALL STRUCTURE AND CONDUCTOR PULLING SITES, PROTECTIVE MEASURES TO PREVENT EROSION WILL BE TAKEN IMMEDIATELY UPON THE END OF EACH STEP IN A CONSTRUCTION SEQUENCE, AND THOSE PROTECTIVE MEASURES SHALL BE INSPECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION AND RIGHT-OF-WAY REHABILITATION PERIOD.
- REGULATIONS

THE ASSIGNED CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL AND ANTI POLLUTION LAWS, REGULATIONS, AND ORDINANCES RELATED TO ENVIRONMENT PROTECTION AND PREVENTION, CONTROL, AND ABATEMENT OF ALL FORMS OF POLLUTION.
- USE AREAS

THE ASSIGNED CONTRACTOR'S USE AREAS INCLUDE BUT ARE NOT LIMITED TO SITE OFFICE, SHOP, MAINTENANCE, PARKING, STORAGE, STAGING, ASSEMBLY AREAS, UTILITY SERVICES, AND ACCESS ROADS TO THE USE AREAS. THE CONSTRUCTION CONTRACTOR SHALL SUBMIT PLANS AND DRAWINGS FOR THEIR LOCATION AND DEVELOPMENT TO THE ENGINEER AND PROJECT MANAGER FOR APPROVAL. SECONDARY CONTAINMENT WILL BE PROVIDED FOR FUEL AND PETROLEUM PRODUCT STORAGE PURSUANT TO 28CFR1910.106(d)(6)(i)(ii)(OSHA).
- EQUIPMENT

ALL MAJOR EQUIPMENT AND PROPOSED METHODS OF OPERATION SHALL BE SUBJECT TO THE APPROVAL OF CITY. THE USE OR OPERATION OF HEAVY EQUIPMENT IN AREAS OUTSIDE THE RIGHT-OF-WAY, ACCESS ROADS, OR STRUCTURE, POLE, OR TOWER SITES WILL NOT BE PERMITTED WITHOUT PERMISSION OF THE CITY INSPECTOR OR FIELD ENGINEER. HEAVY EQUIPMENT USE ON STEEP SLOPES (GREATER THAN 20 PERCENT) AND IN WEI AREAS WILL BE HELD TO THE MINIMUM NECESSARY TO CONSTRUCT THE TRANSMISSION LINE. STEPS WILL BE TAKEN TO LIMIT GROUND DISTURBANCE CAUSED BY HEAVY EQUIPMENT USAGE, AND EROSION AND SEDIMENT CONTROL WILL BE INSTITUTED ON DISTURBED AREAS IN ACCORDANCE WITH STATE REQUIREMENTS.

NO SUBSURFACE CROWN-DISTURBING EQUIPMENT OR STUMP-REMOVAL EQUIPMENT WILL BE USED BY CONSTRUCTION FORCES EXCEPT ON ACCESS ROADS OR AT THE ACTUAL STRUCTURE, POLE, OR TOWER SITES, WHERE ONLY FOOTING LOCATIONS AND CONTROLLED RAINOFF DIVERSIONS SHALL BE CREATED THAT DISTURB THE SOIL. ALL OTHER AREAS OF GROUND COVER OR IN PLACE STUMPS AND ROOTS SHALL REMAIN IN PLACE. (NOTE: TRACKED VEHICLES DISTURB SURFACE LAYER OF THE GROUND DUE TO SIZE AND FUNCTION). SOME DISKING OF THE RIGHT-OF-WAY MAY OCCUR FOR PROPER SEEDING PREPARATION.

UNLESS PONDING PREVIOUSLY OCCURRED (E.G., EXISTING LOW-LYING AREAS), WATER SHOULD NOT BE ALLOWED TO FLOOD ON THE STRUCTURE SITES EXCEPT AROUND FOUNDATION AREAS. THE WATER MUST BE DIRECTED AWAY FROM THE SITE IN A DISPERSED MANNER AS POSSIBLE. AT POLE OR STRUCTURE SITES SOME MEANS OF UPSIDE INTERRUPTION OF POTENTIAL OVERLAND FLOW AND DIVERSION AROUND THE FOOTINGS SHOULD BE PROVIDED AS THE FIRST STEP IN CONSTRUCTION-SITE PREPARATION. IF LEVELING IS NECESSARY, IT MUST BE IMPLEMENTED BY MEANS THAT PROVIDE FOR CONTINUOUS GENTLE, CONTROLLED, OVERLAND FLOW MUST BE MAINTAINED. A GOOD GRASS COVER, STRAW, GRAVEL, OR OTHER PROTECTION OF THE SURFACE MUST BE MAINTAINED. STEPS SHALL BE TAKEN TO PREVENT EROSION IN THE WASHING CHANNEL OF THE IN-SITU SOILS WILL BE BENEFICIAL BOTH DURING CONSTRUCTION AND OVER THE SERVICE LIFE OF ANY STRUCTURE.
- REFUSE DISPOSAL

THE CONTRACTOR PERSONNEL SHALL BE RESPONSIBLE FOR EARLY INSPECTION, CLEANUP, AND PROPER LABELING, STORAGE, AND DISPOSAL OF ALL REFUSE AND DEBRIS PRODUCED BY HIS OPERATIONS AND BY HIS EMPLOYEES. SUITABLE REFUSE COLLECTION FACILITIES WILL BE REQUIRED. ONLY STATE-APPROVED DISPOSAL AREAS SHALL BE USED. DISPOSAL CONTAINERS SUCH AS DUMPSTERS OR POLY-ETHYLENE CONTAINERS SHALL BE OBTAINED FROM A PROPER WASTE DISPOSAL CONTRACTOR. SOLID, SPECIAL, CONSTRUCTION/DEMOLITION, AND HAZARDOUS WASTES AS WELL AS SCRAP ARE PART OF THE POTENTIAL REFUSE GENERATED AND MUST BE PROPERLY MANAGED WITH EMPHASIS ON REUSE, RECYCLE, OR POSSIBLE GIVE AWAY, AS APPROPRIATE, BEFORE THEY ARE HANDLED AS WASTE.

- LANDSCAPE PRESERVATION

THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE IN THE ENTIRE CONSTRUCTION AREA AS WELL AS USE AREAS, IN OR OUTSIDE THE RIGHT-OF-WAY, AND ON OR ADJACENT TO ACCESS ROADS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PREVENT ANY UNNECESSARY DESTRUCTION, SCARRING, OR DEFACING OF THE NATURAL VEGETATION AND SURROUNDINGS IN THE VICINITY OF THE WORK.

CERTAIN AREAS ON SITE AND ALONG THE RIGHT-OF-WAY MAY BE DESIGNATED BY THE SPECIFICATIONS OR THE CITY ENGINEER AS ENVIRONMENTALLY SENSITIVE. THESE AREAS INCLUDE BUT ARE NOT LIMITED TO AREAS CLASSIFIED AS FRODIBLE, GEOLOGICALLY SENSITIVE, SCENIC, HISTORICAL AND ARCHAEOLOGICAL, FISH AND WILDLIFE REFUGES, WATER QUALITY PROTECTION, AND PUBLIC RECREATION AREAS SUCH AS PARKS AND MONUMENTS. CONTRACTOR'S CONSTRUCTION CREWS SHALL TAKE ALL NECESSARY ACTIONS TO AVOID ADVERSE IMPACTS TO THESE SENSITIVE AREAS AND THEIR ADJACENT BUFFER ZONES. THESE ACTIONS MAY INCLUDE SUSPENSION OF WORK OR CHANGING OPERATIONS DURING PERIODS OF RAIN OR HEAVY PUBLIC USE. HOURS MAY BE RESTRICTED OR CONCENTRATIONS OF NOISY EQUIPMENT MAY HAVE TO BE DISPERSED, IF PRE-HISTORIC OR HISTORIC ARTIFACTS OR FEATURES ARE ENCOUNTERED DURING CLEANING OR CONSTRUCTION OPERATIONS, THE OPERATIONS SHALL IMMEDIATELY CEASE FOR AT LEAST 100 FEET IN EACH DIRECTION, AND THE CITY'S RIGHT-OF-WAY INSPECTOR OR CONSTRUCTION SUPERINTENDENT AND CULTURAL RESOURCES PROGRAM SHALL BE NOTIFIED. THE SITE SHALL BE LEFT AS FOUND UNTIL A SIGNIFICANCE DETERMINATION IS MADE. WORK MAY CONTINUE ELSEWHERE, BEYOND THE 100 FOOT PERIMETER.
- WATER QUALITY CONTROL

THE CONTRACTOR CONSTRUCTION ACTIVITIES SHALL BE PERFORMED BY METHODS THAT WILL PREVENT ENTRANCE OR ACCIDENTAL SPILLS OF SOLID MATTER, CONTAMINANTS, DEBRIS, AND OTHER OBJECTIONABLE POLLUTANTS AND WASTES INTO FLOWING CANALS, SINKHOLES, STREAMS, DRY WATERCOURSES, LAKES, PONDS, AND UNDERGROUND WATER SOURCES.

THE CLEANING CONTRACTOR WILL ERECT AND MAINTAIN SILT FENCES ON STEEP SLOPES AND ADJACENT TO ANY STREAM, WETLAND, OR OTHER WATER BODY. ADDITIONAL PROTECTION MAY BE REQUIRED FOR AREAS OF DISTURBANCE CREATED BY CONSTRUCTION ACTIVITIES. THE PROTECTION DEVICES WILL BE INSPECTED BY THE FIELD ENGINEER OR OTHER DESIGNATED CITY OR CONTRACTOR PERSONNEL ROUTINELY AND DURING PERIODS OF HIGH RUNOFF, AND ANY NECESSARY REPAIRS WILL BE MADE AS SOON AS PRACTICABLE. CONTROL SURFACE INSPECTIONS WILL BE CONDUCTED IN ACCORDANCE WITH PERMIT REQUIREMENTS. RECORDS OF ALL INSPECTIONS WILL BE MAINTAINED ON SITE, AND COPIES OF INSPECTION FORMS WILL BE FORWARDED TO THE CITY'S CONSTRUCTION ENVIRONMENT ENGINEER.

ACCEPTABLE MEASURES FOR DISPOSAL OF WASTE OIL FROM VEHICLES AND EQUIPMENT SHALL BE FOLLOWED. NO WASTE OIL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, ON A CONSTRUCTION SITE, OR ON ACCESS ROADS.
- TURBIDITY AND BLOCKING OF STREAMS

CONSTRUCTION ACTIVITIES IN OR NEAR BODIES OF WATER SHALL BE CONTROLLED TO PREVENT THE WATER TURBIDITY FROM EXCEEDING STATE OR LOCAL WATER QUALITY STANDARDS FOR THAT STREAM. ALL CONDITIONS OF A GENERAL STREAM WATER PERMIT, ADIUTIC REGULATE ALTERNATE PERMIT, OR A SITE-SPECIFIC PERMIT SHALL BE MET INCLUDING MONITORING OF TURBIDITY IN RECEIVING STREAMS AND/OR STORM WATER DISCHARGES AND IMPLEMENTATION OF APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES.

APPROPRIATE DRAINAGE FACILITIES FOR TEMPORARY CONSTRUCTION ACTIVITIES INTERRUPTING NATURAL SITE DRAINAGE SHALL BE PROVIDED TO AVOID EROSION. WATERCOURSES SHALL NOT BE BLOCKED OR DIVERTED UNLESS REQUIRED BY THE SPECIFICATIONS OR THE CITY ENGINEER. DIVERSIONS SHALL BE MADE IN ACCORDANCE WITH STATE COUNTY OR CITY.

MECHANIZED EQUIPMENT SHALL NOT BE OPERATED IN FLOWING WATER EXCEPT WHEN APPROVED AND, THEN ONLY TO CONSTRUCT CROSSINGS OR TO PERFORM REQUIRED CONSTRUCTION UNDER DIRECT GUIDANCE OF CITY. CONSTRUCTION OF STREAM FORD OR OTHER CROSSINGS WILL ONLY BE PERMITTED AT APPROVED LOCATION AND TO CURRENT CITY CONSTRUCTION ACCESS ROAD STANDARDS. MATERIAL SHALL NOT BE DISPOSED IN WATERCOURSES OR WITHIN STREAM BANK AREAS WHERE IT COULD BE WASHED AWAY BY HIGH STREAM FLOWS. APPROPRIATE CORPS OF ENGINEERS AND STATE PERMITS SHALL BE OBTAINED.

WASTEWATER FROM CONSTRUCTION OR DEWATERING OPERATIONS SHALL BE CONTROLLED TO PREVENT EXCESSIVE EROSION OR TURBIDITY IN A STREAM, WETLAND, LAKE, OR POND. ANY WORK OR PLACING OF EQUIPMENT WITHIN A FLOWING OR DRY WATERCOURSE REQUIRES THE PRIOR APPROVAL OF CITY.

- CLEARING

NO CONSTRUCTION ACTIVITIES MAY CLEAR ADDITIONAL, SITE OR RIGHT-OF-WAY VEGETATION OR DISTURB REMAINING REMAINED VEGETATION, STUMPS, OR BIRCHGROWTH AT LOCATIONS OTHER THAN THE STRUCTURE SITES AND CONDUCTOR SLEEP AREAS. THE CONSTRUCTION CONTRACTOR MUST PROVIDE APPROPRIATE EROSION OR SEDIMENT CONTROL MEASURES FOR AREAS THAT HAVE DISTURBED THAT HAVE PREVIOUSLY BEEN RESTORED AFTER CLEARING OPERATIONS. CONTROL MEASURES SHALL BE IMPLEMENTED AS SOON AS PRACTICABLE AFTER DISTURBANCE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND/OR LOCAL STORM WATER REGULATIONS.
- RESTORATION OF SITE

ALL CONSTRUCTION DISTURBED AREAS, WITH THE EXCEPTION OF FARMLAND UNDER CULTIVATION AND ANY OTHER AREAS AS MAY BE DESIGNATED BY CITY'S SPECIFICATIONS, SHALL BE STABILIZED IN THE FOLLOWING MANNER UNLESS THE PROPERTY OWNER AND CITY'S ENGINEER SPECIFY A DIFFERENT METHOD.

 - THE SUBSOIL SHALL BE LOOSENEED TO A MINIMUM DEPTH OF 6 INCHES IF POSSIBLE AND WORKED TO REMOVE UNNATURAL RIDGES AND DEPRESSIONS.
 - IF NEEDED, APPROPRIATE SOIL AMENDMENTS WILL BE ADDED.
 - ALL DISTURBED AREAS WILL INITIALLY BE SEEDDED WITH A TEMPORARY GROUND COVER SUCH AS WINTER WHEAT, RYE, OR MILLET, DEPENDING ON THE SEASON. PERENNIALS MAY ALSO BE PLANTED DURING INITIAL SEEDING. IF PROPER GROWING CONDITIONS EXIST, FINAL RESTORATION AND FINAL SEEDING WILL BE PERFORMED AS LINE CONSTRUCTION IS COMPLETED. FINAL SEEDING WILL CONSIST OF PERMANENT PERENNIAL GRASSES SUCH AS THOSE OUTLINED IN SPECIFICATION. EXCEPTIENS WOULD INCLUDE THOSE AREAS DESIGNATED AS NATIVE GRASS PLANTING AREAS, INITIAL AND FINAL RESTORATION WILL BE PERFORMED BY THE CONTRACTOR.
 - CITY HOLDS THE OPTION, DEPENDING UPON THE TIME OF YEAR AND WEATHER CONDITION, TO DELAY OR WITHDRAW THE REQUIREMENT OF SEEDING UNTIL MORE FAVORABLE PLANTING CONDITIONS ARE CERTAIN. IN THE MEANTIME, OTHER STABILIZATION TECHNIQUES MUST BE APPLIED.
- AIR QUALITY CONTROL

CONSTRUCTION CREWS SHALL TAKE APPROPRIATE ACTIONS TO MINIMIZE THE AMOUNT OF AIR POLLUTION CREATED BY THEIR CONSTRUCTION OPERATIONS. ALL OPERATIONS MUST BE CONDUCTED IN A MANNER WHICH AVOIDS CREATING A NUISANCE AND PREVENTS DAMAGE TO LANDS, CROPS, DWELLINGS, OR PERSONS.
- DUST AND MUD CONTROL

CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED TO MINIMIZE THE CREATION OF DUST. THIS MAY REQUIRE LIMITATIONS AS TO TYPES OF EQUIPMENT, ALLOWABLE SPEEDS, AND ROUTES. UTILIZING WATER, STRAW, WOOD CHIPS, DIRT PALLIATIVES, GRAVEL, COMBINATIONS OF THESE, OR SIMILAR CONTROL MEASURES MAY BE USED SUBJECT TO CITY'S APPROVAL. ON NEW CONSTRUCTION SITES AND EASEMENTS, THE LAST 100 FEET BEFORE AN ACCESS ROAD APPROACH TO A COUNTY ROAD OR HIGHWAY SHALL BE GRAVELED TO PREVENT TRANSFER OF MUD INTO THE PUBLIC ROAD.
- VEHICLE EXHAUST EMISSIONS

THE CONTRACTOR SHALL MAINTAIN AND OPERATE EQUIPMENT TO LIMIT VEHICLE EXHAUST EMISSIONS, EQUIPMENT AND VEHICLES THAT SHOW EXCESSIVE EMISSIONS OF EXHAUST GASES AND PARTICULATE DUE TO POOR ENGINE ADJUSTMENTS OR OTHER INEFFICIENT OPERATING CONDITIONS SHALL NOT BE OPERATED UNTIL CORRECTIVE REPAIRS OR ADJUSTMENTS ARE MADE.

- VEHICLE SERVICE

ROUTINE MAINTENANCE OF PERSONNEL VEHICLES WILL NOT BE PERFORMED ON THE RIGHT-OF-WAY. HOWEVER, IF EMERGENCY OR "HAVE TO" SITUATIONS ARISE, MINIMAL/TEMPORARY MAINTENANCE TO PERSONNEL VEHICLES WILL OCCUR IN ORDER TO MOBILIZE THE VEHICLE TO AN OFF-SITE MAINTENANCE SHOP. HEAVY EQUIPMENT WILL BE SERVICED ON THE RIGHT-OF-WAY, EXCEPT IN DESIGNATED AREAS. THE CONTRACTOR SHALL MAINTAIN THESE VEHICLES WITH APPROVED SPILL PROTECTION CONTROLS AND COUNTERMEASURES. IF EMERGENCY MAINTENANCE IN A SENSITIVE OR QUESTIONABLE AREA ARISES, THE AREA ENVIRONMENTAL COORDINATOR OR CONSTRUCTION ENVIRONMENTAL ENGINEER WILL BE CONSULTED. ALL WASTES AND USED OILS WILL BE PROPERLY RECOVERED, HANDLED, AND DISPOSED/RECYCLED. EQUIPMENT SHALL NOT BE TEMPORARILY STORED IN STREAM FLOOD PLAINS OR RIGHT-OF-WAY, WHETHER OVERNIGHT OR ON WEEKENDS OR HOLIDAYS.
- SMOKE AND ODORS

THE CONTRACTOR SHALL PROPERLY STORE AND HANDLE COMBUSTIBLE MATERIAL WHICH COULD CREATE OBJECTIONABLE SMOKE, ODORS, OR FUMES. THE CONTRACTOR SHALL NOT BURN REFUSE SUCH AS TRASH, RAGS, TIRES, PLASTICS, OR OTHER DEBRIS.
- NOISE CONTROL

THE CONTRACTOR SHALL TAKE MEASURES TO AVOID THE CREATION OF NOISE LEVELS THAT ARE CONSIDERED NUISANCES, SAFETY, OR HEALTH HAZARDS. CRITICAL AREAS INCLUDING BUT NOT LIMITED TO RESIDENTIAL AREAS, PARKS, PUBLIC USE AREAS, AND SOME HANDICAPPED OPERATIONS, WILL REQUIRE SPECIAL CONSIDERATIONS. THE CITY'S CRITERIA FOR DETERMINING CORRECTIVE MEASURES SHALL BE DETERMINED BY COMPARING THE NOISE LEVEL OF THE CONSTRUCTION OPERATION TO THE BACKGROUND NOISE LEVELS. ALSO, ESPECIALLY NOISY EQUIPMENT SUCH AS HELICOPTERS, PILE DRIVERS, AIR HAMMERS, CHIPPERS, CHAIN SAWS, OR AREAS FOR MACHINE SHOPS, STAGING, ASSEMBLY, OR BLASTING MAY REQUIRE CORRECTIVE ACTIONS WHEN REQUIRED BY THE CITY.

ALL INTERNAL COMBUSTION ENGINES SHALL BE PROPERLY EQUIPPED WITH MUFFLERS AS REQUIRED BY THE DEPARTMENT OF LABOR'S SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION. THE CITY MAY REQUIRE SPARK ARRESTERS IN ADDITION TO MUFFLERS ON SOME ENGINES. AIR COMPRESSORS AND OTHER NOISY EQUIPMENT MAY REQUIRE SOUND REDUCING ENCLOSURES IN SOME CIRCUMSTANCES.
- DAMAGES

THE MOVEMENT OF CONSTRUCTION CREWS AND EQUIPMENT SHALL BE CONDUCTED IN A MANNER WHICH CAUSES AS LITTLE INTRUSION AND DAMAGE AS POSSIBLE TO CORPES, ORCHARDS, WOODS, WETLANDS, AND OTHER PROPERTY FEATURES AND VEGETATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR EROSION DAMAGE CAUSED BY HIS ACTIONS AND ESPECIALLY FOR CREATING CONDITIONS THAT WOULD THREATEN THE STABILITY OF THE RIGHT-OF-WAY OR SITE SOIL, THE STRUCTURES, OR ACCESS TO EITHER, WHEN PROPERTY OWNERS PREFER THE CORRECTION OF GROUND COVER CONDITION OF SOIL AND SUBSOIL PROBLEMS THEMSELVES.

THE CONTRACTOR SHALL PAY THE PROPERTY OWNER FOR ALL WORK RELATIVE TO THE DAMAGED DONE.
- TREES, SHURBS AND EVERGREENS PRESERVATION

CONTRACTOR SHALL FOLLOW IDOT SPECIFICATION AND CITY SPECIFICATION WHEN PRESERVING TREES, SHRUBS AND EVERGREENS.

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CITY OF NAPEVILLE/DEPARTMENT OF PUBLIC UTILITIES -- ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	IMP NO. -	CAD FILE NO. 05819800/C21.DWG
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EUT2-06-04
DATE 06-19-07	WORK REQUEST NO. 58199	SEC. APPA
DESIGNED RFB	CHECKED NTS	DATE 06-19-07
ENGINEER RFB	APPROVED NTS	SHEET 21 OF 23