Addendum No. 1

Project:	**Vegetation Management Andrew Johnson Highway**
Control No:	**00956**
Issued:	**To all listed plan holders**
Date:	**August 31, 2017**

This addendum forms a part of the Agreement described above. The original Contract Documents and any prior addenda remain in full force and effect except as modified by the following, which shall take precedence over any contrary provisions in prior documents.

Specification Change

1. Section 16950 Vegetation Control Program, 9 pages

   DELETE Section 16950, Vegetation Control Program, and REPLACE with revised Section 16950, Vegetation Control Program, attached. In addition, Section 16950 that was provided with the bid documents is of an obsolete version and the correct revised version is supplied with this addendum.

   ** All side-pruning of trees shall be a minimum of twenty-five feet (25') from the energized conductor

END

Each Bidder/Proposer shall acknowledge receipt of this addendum by affixing his signature below, by noting this addendum on his Bid/Proposal Form, and by attaching this addendum to his Bid/Proposal. **Failure to acknowledge this addendum could be cause for bid/proposal rejection.**

ACKNOWLEDGMENT

The undersigned acknowledges receipt of this addendum and the Bid submitted is in accordance with information, instructions and stipulations set forth herein.

BIDDER / PROPOSER _____

AUTHORIZED SIGNATURE_____

DATE _____

SECTION 16950

VEGETATION CONTROL PROGRAM

PART 1. GENERAL

1.1 Purpose

The purpose of these specifications is to provide direction for properly pruning and/or removing trees, shrubs, vines, and other vegetation, which are in contact with, or have the potential (in the utility maintenance zone, easement, or as described herein) to come in contact with power lines. All pruning shall be in accordance with Tree Line USA requirements as described in "Pruning Trees Near Electric Utility Lines: A Field Guide for Qualified Line-Clearance Workers" by Dr. Alex L. Shigo, Best Management Practices – Utility Pruning of Trees, and ANSI A300 guidelines.

PART 2. MATERIALS

Not Used.

PART 3. EXECUTION

3.1 GENERAL GUIDELINES

A. All pruning and clearing shall comply with KUB Standards and Specifications Section 16945 and Section 16950. CONTRACTOR's work shall be guaranteed for one (1) full year. CONTRACTOR shall correct any deficiencies (rework) of a completed circuit within fifteen (15) calendar days upon notification from OWNER or OWNER's Resident Project Representative. If after fifteen calendar days or upon notification from CONTRACTOR that rework is complete, OWNER or OWNER's Resident Project Representative (RPR) determines that areas have still not been completed satisfactorily, the actual cost of labor, transportation, and overhead for future inspections shall be deducted from CONTRACTOR's payment. OWNER may elect to use other resources to correct deficiencies and deduct cost from CONTRACTOR's payment. OWNER may use past CONTRACTOR performance in evaluating future CONTRACTOR bids. Circuit maps issued by KUB may not accurately depict the circuit in its entirety (e.g., street light wires, secondaries, and lines temporarily out of service may not be on the map), however CONTRACTOR is required to complete work along all lines unless it is determined line section was newly constructed after the bid process.

3.2 TRANSMISSION LINES, DISTRIBUTION LINES, SECONDARIES, STREET LIGHTS, AND SERVICE DROPS

A. All pruning within the transmission line utility maintenance zone will require close coordination between CONTRACTOR and OWNER's RPR. Pruning of trees near the transmission conductors may require the line to be de-energized. This will be coordinated by CONTRACTOR's supervisor through OWNER's RPR. Clearance of transmission lines is both weather and load dependent, and may not be available upon request. Clearances should be requested a minimum of 48 hours in advance of work.

All overhanging limbs are to be removed. All brush and trees less than six inches in diameter, with the exception of landscape-quality and ornamental trees in maintained homeowner's yards, are to be removed from the utility maintenance zone and all brush is to be chipped. All trees larger than six inches in diameter located in the utility maintenance zone shall only be removed at the direction of OWNER or OWNER's RPR. All side-pruning of trees shall be a minimum of twenty-five feet (25') from the energized conductor. Except in residential areas, the transmission utility maintenance zone is to be mechanically cleared (i.e., mowed or bush-hogged) to a minimum or twenty-five feet (25') from the centerline of the line or a total width of fifty feet (50') unless otherwise noted on the map or drawing. Mechanical equipment is not permitted in residential areas. No mechanical brush removal shall be performed within a five foot (5') radius of poles, guys, or structures; hand-cutting is required in these areas. CONTRACTOR shall not use mechanical equipment directly adjacent to streams, creeks, or rivers or in wetlands and shall not remove low growing varieties of brush that are growing directly adjacent to streams, creeks and rivers or in wetlands. CONTRACTOR must notify OWNER or OWNER's RPR to determine an appropriate buffer zone in which to leave low growing vegetation. All brush or bushes left in these areas must be varieties that would not reasonably be expected to grow to a height that would endanger the reliability of the transmission line. Tall-growing vegetation directly adjacent to streams, creeks, or rivers must be removed by hand-cutting.

B. Distribution lines must be pruned for a minimum of ten feet (10') from any primary conductor (i.e., above, below, and to the sides of the primary conductors), with the exception of reduced clearances for the following slow-growing species: cedar, dogwood, fir, hemlock, magnolia, and spruce shall be pruned for a minimum of five to six feet (5 to 6') of clearance. Small diameter limbs currently overhanging or encroaching over 2 and 3-phase lines shall be removed.

Clearance will be determined by a combination of the minimum requirement and lateral pruning.

A minimum of ten feet (10') of clearance is required for the neutral conductor in unmaintained areas. A minimum of five feet (5') of clearance is required for the neutral conductor in maintained, residential areas. Clearance will be determined by a combination of the minimum requirement and lateral pruning.

All diseased, weak (i.e., limbs with cracks, weak branch unions and/or decay/rot), and dead limbs above ALL conductors must be removed. Overhanging limbs of the following species must be closely examined for defects, and if defects are present, the overhanging limbs must be removed: box elder, silver maple, red maple, tulip poplar, hackberry, willow (all varieties), and elm (all varieties). Small diameter limbs overhanging or encroaching over 2 and 3-phase lines shall be removed. Large, established overhang is not to be removed. Overhang is considered established if overhanging limbs are over six inches (6") in diameter at the point the limbs cross the conductor. OWNER will make final determination in cases where overhang is near six inches (6") and overhang removal is in question. Tall-growing trees six inches (6") or less in diameter and tall-growing brush species (i.e., plants that are capable of growing at height to reach maintenance zone for electric conductors or equipment, for example, Japanese privet) that will require pruning in future years shall be selectively removed from the utility maintenance zone. Low-growing trees and brush (for example, dogwoods, redbuds, or ornamental trees) and landscape quality trees six inches (6") or less in diameter shall only be removed at the direction of OWNER or OWNER's RPR. In some cases, the OWNER may have a customer agreement to leave tall-growing trees six inches (6") or less in diameter and/or brush in the utility maintenance zone. In these cases, all vegetation will be pruned for a minimum of ten foot (10') clearance. All trees larger than 6 inches (6") in diameter located in the utility maintenance zone shall only be removed at the direction of OWNER or OWNER's RPR.

Secondary Conductors shall be pruned a minimum of ten feet (10') from bare conductors and five feet (5') from conductors with weather-proof coating. The definition of a "Secondary Conductor" for tree pruning is as follows: Open three-wire or triplex conductors that carry current from the secondary side of a distribution transformer to a lift pole or poles serving more than one customer. Secondary Conductors serving more than one customer shall be pruned from the connection at the transformer to the last lift pole.

Overhead guys shall be pruned for a minimum of five feet (5') of clearance.

Triplex and/or coated street lighting conductors shall only be pruned to remove vegetation in contact and abrading or putting pressure on the conductor and/or to remove vegetation threatening to damage the conductor. Bare street lighting conductors shall be pruned for a minimum of ten feet (10') of clearance.

C. Service Drops are not pruned. The definition of a "Service Drop" is as follows: Secondary Conductors, which carry current from the secondary side of a distribution transformer to a single customer connection or from the last lift pole serving one customer. Service drops are not pruned by CONTRACTOR.

3.3 TREE PRUNING

The following KUB Vegetation Control Practices are in accordance with ANSI A300 and Arbor Day Foundation Tree Line USA guidelines as described in "Best management practices – Utility pruning of trees" or "Pruning Trees Near Electric Utility Lines: A Field Guide for Qualified Line-Clearance Workers" by Dr.Alex L. Shigo. Documentation of training in proper pruning techniques according to ANSI A300 and "BEST MANAGEMENT PRACTICES – UTILITY PRUNING OF TREES; SPECIAL COMPANION PUBLICATION TO THE ANSI A300 PART 1: TREE, SHRUB, AND OTHER WOODY PLANT MAINTENANCE – STANDARD PRACTICES, PRUNING" or "PRUNING TREES NEAR ELECTRIC UTILITY LINES" by Dr. Alex Shigo shall be furnished to OWNER upon OWNER's request and at least annually for all crew members and prior to beginning work on OWNER'S system. CONTRACTOR shall be able to provide OWNER, upon OWNER's request, documentation that all appropriate employees and/or subcontractors of CONTRACTOR have completed the above training. CONTRACTOR shall provide one of the field guides listed above (or other similar material approved by OWNER) to each crew who performs line clearance pruning, and the field guide must be carried on the truck at all times for reference. OWNER will also provide a copy of KUB's contract tree crew guidelines for each crew. These guides shall be available at each work site as a quick reference. Specifically, the following practices shall be followed:

A. Techniques consistent with the practices of lateral pruning shall be utilized. All limbs shall be pruned back to a lateral of appropriate size. The lateral point shall be at or beyond the minimum clearance distances specified in Section 3.2.

B. Cuts are to be made back to the main stem or to a lateral branch, which is at least one-third the diameter of the portion being removed. Cuts made back to "water sprouts" are not acceptable. "Water sprouts" reaching within the minimum clearance zone shall be removed at their origin. Tree limbs shall not be stubbed off at the edge of the clearing limits, unless directed in writing by OWNER. Wherever possible, all pruning cuts shall be made to direct future growth and sprouting away from the power lines.

C. Conifers should be pruned in a natural manner that allows them to retain as much of their natural shape as possible.

D. A minimum of cuts should be utilized to achieve required clearances.

E. Where practical, cuts should be primarily restricted to lateral branches made well within the crown. Shaping through the use of many cuts of small diameter branches in the outer crown must be avoided.

F. Remove living branches by making cuts as close as possible to the branch collar. Remove dead branches by making cuts as close as possible to the living tissues that surround the dead branch at the base.

G. Precautions shall be taken to avoid stripping or tearing of bark when cutting large-diameter limbs.

H. Climbing irons or "hooks" shall not be used except in cases involving tree removal work or in other rare instances where the work cannot be performed safely otherwise.

I. Previously topped trees, for which lateral pruning is no longer an option, shall have re-growth removed at the points of the previous topping, as long as this achieves the required minimum clearance.

J. Circuit pruning work shall begin at the substation and proceed in a logical, orderly manner unless another starting point is identified by OWNER or CONTRACTOR requests permission to begin at another location. CONTRACTOR shall not skip around on the Circuit Area.

K. Mechanical pruning (e.g., Jarraff) shall be permitted for use only in areas specified in the circuit descriptions on the Bid Form and in other areas approved in writing by OWNER.

Mechanical tree pruning must be acceptable for Arbor Day Foundation Tree Line USA standards. Although it is generally not practical for the equipment operator to make pruning cuts just outside the branch collar or bark ridge, stubs are to be kept to a minimum and generally not longer than one to two feet. If stubs are left larger than this, rework shall be required to make corrections.

3.4 TREE, BRUSH, AND VINE REMOVAL

A. Trees six inches (6”) or less in diameter and tall-growing brush species ((i.e., plants that are capable of growing at height to reach maintenance zone for electric conductors or equipment, for example, Japanese privet) that will require pruning in future years shall be removed from the utility maintenance zone, with the exception of low-growing trees (for example, dogwoods, redbuds, or ornamental trees) and landscape quality trees six inches (6”) or less in diameter, which shall only be removed at the direction of OWNER or OWNER’s RPR. In some cases, the OWNER may have a customer agreement to leave tall-growing trees six inches (6”) or less in diameter and/or brush in the utility maintenance zone. In these cases, all vegetation will be pruned for a minimum of ten foot (10’) clearance. <u>All</u> stumps of deciduous woody vegetation must be treated with a suitable chemical herbicide to prevent sprouting and new growth.

B. All trees larger than six inches (6") in diameter located in the utility maintenance zone shall only be removed at the direction of OWNER or OWNER's RPR.

C. If CONTRACTOR is instructed by the homeowner that he wishes to have any trees larger than six inches (6") in diameter removed, CONTRACTOR shall inform OWNER or OWNER's RPR of the request immediately. CONTRACTOR shall not remove trees larger than six inches (6") in diameter until approval is received from OWNER or OWNER's RPR.

D. Unless otherwise specified by OWNER or OWNER'S RPR, all cutting for existing utility maintenance zone clearing shall be as close to the ground as the topography and type of soil will allow, with a maximum remaining height of four inches (4") for brush stubs and six inches (6") for tree stumps.

E. All tall dead or dying trees located outside the pruning zone shall be removed if, in the sole opinion of OWNER or OWNER'S RPR, they present a hazard to the power line. In such case and if directed by OWNER or OWNER's RPR, CONTRACTOR shall remove such tree(s) for the unit cost for removal so noted in the Contract Documents. It is the intent of OWNER that if CONTRACTOR is awarded pruning and unit removal on a circuit, both will be done as CONTRACTOR proceeds in working along the circuit in a logical, orderly manner. CONTRACTOR shall not skip around on the Circuit Area. Crews should be multi-functional with the ability to perform both pruning and removal together. OWNER wants to lessen the impact on its customers and wishes not to have a two-part operation of pruning, then removals.

F. All vines are to be removed from all poles, guys, power lines, and structures and cleared within a ten-foot (10') radius. Vines shall be cut off at ground level and chemically treated with suitable herbicide to prevent re-growth. All precautions shall be taken to prevent drift or run off of herbicide to adjacent property.

G. CONTRACTOR shall clear trees and brush in a ten-foot (10') radius from all poles in non-residential portions of the utility maintenance zone. Clearance of woody vegetation around poles in maintained areas of homeowners' yards shall only be performed at the direction of OWNER or OWNER's RPR. CONTRACTOR shall clear or prune woody vegetation around down guys only when the vegetation is in contact and putting pressure and/or abrading down guy and/or when vegetation is threatening to damage down guy.

H. Mechanical clearing (i.e., mowing or bush-hogging) of the distribution utility maintenance zone is permitted only with permission from OWNER or OWNER'S RPR and/or written permission of the property owner. Mechanical clearing is required in non-residential portions of the transmission utility maintenance zone, and all trees six inches (6") or less in diameter are to be removed, with the exception of landscape-quality and ornamental trees in maintained homeowner's yards. For 69kV sections

that are non-residential and not accessible for mechanical brush clearing, crews must remove vines, brush, and trees six inches (6") or less in diameter. Mechanical equipment is not permitted in residential areas. No mechanical brush removal shall be performed within a five foot (5') radius of poles, guys, or structures; hand-cutting is required in these areas. CONTRACTOR shall not use mechanical equipment directly adjacent to streams, creeks, or rivers or in wetlands and shall not remove low growing varieties of brush that are growing directly adjacent to streams, creeks and rivers or in wetlands. CONTRACTOR must notify OWNER or OWNER's RPR to determine an appropriate buffer zone in which to leave low growing vegetation. All brush or bushes left in these areas must be varieties that would not reasonably be expected to grow to a height that would endanger the reliability of the transmission line. Tall-growing vegetation directly adjacent to streams, creeks, or rivers must be removed by hand-cutting. CONTRACTOR shall ensure that all brush ridden down by mechanical equipment has been cut. All stumps must be treated with appropriate herbicide to prevent regrowth (e.g., cut-stubble treatment). When mechanical means (bush-hog) are utilized, required follow-up by CONTRACTOR with chain saws and /or chemicals will be at the discretion of OWNER or OWNER'S RPR. Mechanical means (bush-hog) are not to be used for side-cutting of vegetation in the utility maintenance zone.

3.5 USE OF HERBICIDES

A. CONTRACTOR shall handle, store, apply, and dispose of herbicide chemicals in a prudent and safe manner in accordance with all local, state, and federal laws governing the use, disposal, and application of herbicide chemicals. CONTRACTOR shall exercise prudent work practices to ensure that the general environment is not harmed as a result of the method, location, or timing of chemical applications.

B. CONTRACTOR employees performing herbicide application shall be licensed as required by local, state, and federal laws. Prior to beginning circuit work, CONTRACTOR shall provide OWNER documentation of certifications and/or licenses for all employees who will be applying herbicide.

C. No stump spraying or other application can be done where damages to crops, orchards, or ornamental plants may result from chemical drift. Brush application should be used in these areas.

D. No spraying shall be done within thirty minutes after any fog, dew, or rain heavy enough to cause run-off. No spraying shall be done with impending rain that might cause run-off. Particular attention should be paid to drainage areas and water sources to prevent contamination of streams and waterways. Herbicide applications shall not be made along streams, creeks, rivers, in wetlands, or in drainage ditches / areas that intermittently hold surface water.

E. All chemical stump treatment must contain a locator dye in order for inspectors to locate treated stumps. The locator dye must have a longevity of at least three (3) weeks. It is highly recommended that CONTRACTOR test spray to ensure locator dyes are present in chemical products. CONTRACTOR must re-spray all stumps at CONTRACTOR's expense where locator dye is not visible.

F. CONTRACTOR shall mix and apply chemicals in accordance with recommendations of the manufacturer and in accordance with all federal, state, and local laws, rules, and regulations.

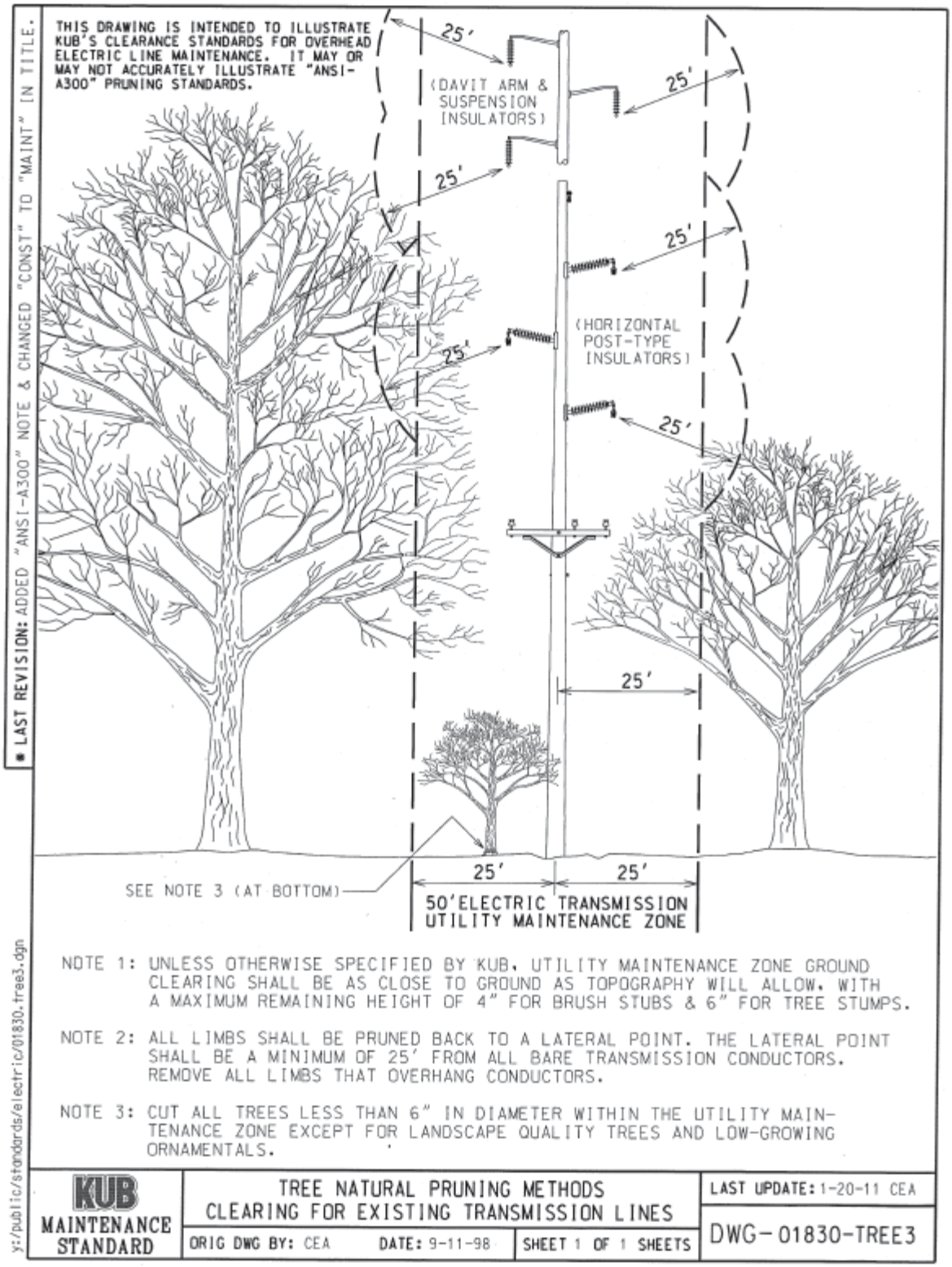
G. Stump application shall be used on all new stumps and cut vines at any season of the year. Stumps shall be sprayed as soon as practical. Chemical mixture shall be applied in sufficient volume to completely wet the sapwood, bark area, root crown, and any exposed roots. It is the intent of the OWNER that herbicide be applied as pruning and removal are performed on the Circuit Area in a logical, orderly manner to lessen impact of the operation on customers and to ensure stumps will not be missed.

H. Chemicals approved for use by OWNER shall be brand name. Chemicals suitable for cut stump treatment are Stalker (3%)/ Garlon 4 Ultra (20%) in basal oil. Approval must be obtained from OWNER for the use of chemicals not listed. OWNER or OWNER's RPR shall have the right to specify what kind, when, and where chemical application and/or spraying will be used.

I. The cost of stump treatment shall be included in the lump sum pruning cost and/or unit brush unit price for trees six inches (6") in diameter and less and in the price for unit tree removal.

J. CONTRACTOR must apply cut-stump and/or cut-stubble treatment on circuit work within two weeks of tree and/or brush removal work in the area. If cut-stump and/or cut-stubble treatment is not applied immediately after cutting, the application method must be such that the chemical may serve as a basal stem and cut-stump treatment. CONTRACTOR must confirm with OWNER the schedule for applying cut-stump and/or cut-stubble treatments on circuit work, so OWNER may schedule a timely inspection.

K. Specimen labels for chemicals used on OWNER's system must be furnished prior to the start of any spraying operation.



END OF SECTION

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