



CITY OF
**PALO
ALTO**

Architectural Review Board Staff Report

From: Planning and Development Services Director
Lead Department: Planning and Development Services

Meeting Date: April 4, 2024
Report #: 2403-2758

TITLE

2501 Embarcadero Way [22PLN-00367]: Recommendation to Council for Approval of a Site and Design Application and a Design Enhancement Exception to Allow the Construction of a Local Advanced Water Purification System at the Regional Water Quality Control Plant (RWQCP). A Design Enhancement Exception to Allow for a Taller Screening Wall is Also Requested. Environmental Assessment: Council Previously Adopted an Addendum to the 2015 Environmental Impact Report (EIR) for the City of Palo Alto Recycled Water Project Which Evaluated the Environmental Impacts of the Proposed Project. Zone District: PF (D) (Public Facility with Site and Design Combining District). For More Information Contact the Project Planner, Claire Raybould, at Claire.Raybould@Cityofpaloalto.org

RECOMMENDATION

Staff recommends the Architectural Review Board (ARB) take the following action(s):

1. Consider the previously adopted addendum to the City of Palo Alto Recycled Water Project EIR, provided in Attachment E.
2. Recommend that City Council approve the draft Record of Land Use Action (RLUA) approving the request for Site and Design Review as well as the requested Design Enhancement Exception based on findings and subject to conditions of approval.

EXECUTIVE SUMMARY

The application is a request for Site and Design Review for a proposed local advanced water purification system (AWPS). The purpose of the project is to improve recycled water quality by reducing its average concentration of total dissolved solids (TDS) through the blending of reverse osmosis permeate with tertiary-treated recycled water. The project also includes a request for a Design Enhancement Exception to allow for a solid wall to provide screening and to serve as a sound barrier.

The project responds to Council's expressed goal, as set forth in the Recycled Water Salinity Reduction Policy adopted in 2015, to reduce the TDS level of recycled water to 600 parts per million. It also responds to mitigation measure HYD-3d set forth in the corresponding adopted

Environmental Impact Report (EIR), which requires the City to consider treatment options, such as reverse osmosis, to reduce the salinity of its recycled water and thus make its recycled water useable for irrigation of salt-sensitive species. A location map for the proposed AWPS is included in Attachment A. A detailed project description is provided in Attachment G and the project Plans are provided in Attachment H. The subject project was previously reviewed by the ARB. An earlier staff report includes additional background information. This report restates the comments made by the Board in its previous review and details the applicant’s response to those comments. The analysis section below builds upon the information contained in the earlier report and is modified to reflect recent project changes.

BACKGROUND

Following adoption of the Recycled Water Salinity EIR, Council directed staff to coordinate with Valley Water and Mountain View to prepare a feasibility study and preliminary design report for a local advanced water purification system (AWPS), which was completed in 2017. The report was used as the basis for preparing preliminary plans for the proposed project. In 2019 the City Council approved an agreement with Valley Water to advance recycle water projects in the region, one of them is the Local AWPS. Staff proceeded with the design of the project. That design is reflected in the project plans.

On November 2, 2023 the ARB reviewed the project. A video recording of the Board’s meeting and meeting minutes are available online.¹ The Board’s comments and the applicant’s response to those comments are summarized in the following table:

ARB Comments/Direction	Applicant Response
Boardmembers requested more information about the noise levels of proposed equipment as well as ambient noise levels	The City hired a third party, Black and Veatch to prepare an assessment of ambient noise levels. The assessment looked at two locations along the plant property line. The lowest repeated sound level during monitoring ranged from 41-44 dBA. The maximum sound level of the equipment is 90 dBA. However, with the incorporation of barriers (e.g. sound wall) and distance from the property line, the noise level would be less than 49 dBA at the nearest property line, meeting the PAMC requirements.
Boardmembers had comments about the proposed lighting, including a request for better information on what the proposed	Sheet E-EC-101 in the project plans includes a photometric plan showing foot candle levels beyond the area of the

¹ A video and minutes of the November 2, 2023 ARB hearing are available online at: <https://www.cityofpaloalto.org/Departments/Planning-Development-Services/Architectural-Review-Board-ARB/Previous-ARB-Agendas-Minutes>

lighting levels are and how it can be further reduced and/or shielded downward to avoid light spillover beyond the canopy and especially at property lines. They noted that lighting should be mounted as low as possible and that lighting should be shut off when not in use.

Boardmembers requested additional details relating to the design/materials of the perimeter wall

Boardmembers asked for a more complete picture of the RWQCP to provide better context regarding space constraints. Some boardmembers asked for more information to show why the facility can't be moved about 10 feet to the southeast to provide a greater setback from Embarcadero Road.

Interest in further information about the trees and reducing the number of trees that need to be removed.

Board members asked PW to reconsider the red color of the roof in accordance with the baylands design Guidelines. Recommended consideration of a blue sky or light-blue gray color.

canopy, out to the property lines. Attachment E provides a summary of how DarkSky International key principals have been incorporated into the design to minimize light spillover.

A rendering further detailing the sound wall has been included as the last sheet in the project plans. The applicant was not able to obtain a sample of the sound wall material.

Attachment D provides an aerial view of the plant and a summary of constraints on the site given existing facilities and future needs of the plant.

This request to reduce the number of trees to be removed ties into whether the AWPS could be moved further south to preserve more trees along the frontage. Due to site constraints shown in Attachment D this is not feasible. However, in previous iterations of the design efforts were made to reduce the number of trees removed based on feedback from the Parks and Recreation Commission. This is discussed further in the analysis below. The tree inventory has also been updated recently to reflect trees that have fallen in the past year in storm events. Since these trees are no longer existing, the total count of trees to be removed has been reduced.

The color of the roof has been revised to sandy hook grey, consistent with the recommendations of the Baylands Design Guidelines. However, two alternative colors have been provided for the ARB's

	consideration that have blue hues if the board would prefer a different color.
Boardmembers asked for less visually aggressive chain link.	Consistent with ARB and staff comments, the chain link has been revised to be black vinyl coated, consistent with the Baylands Design Guidelines.
Board members want covers around the building or at least on the side that is visible from Embarcadero Road.	The project design has been revised to include additional screening of the equipment on the north side (facing Embarcadero Road). Sheets L-00-003 and L-00-005 detail the proposed perforated aluminum decorative screening proposed. The memorandum in Attachment E provides some additional details.

Planning and Transportation Commission Actions

In accordance with the Site and Design Review process, this project was previously reviewed by the PTC. On February 28, 2024 PTC recommended approval of the proposed project to Council (6-0; Templeton recused), making the following motion:

Recommend approval of the project, including the variance, to City Council based on the findings and subject to conditions and asking staff to:

- Investigate utilizing 2,700 kelvin lighting versus the 4,000 kelvin lighting currently proposed
- Consider 100% native planting

Public Works Water Quality consulted experts to determine whether the design could be revised to reflect these recommendations. The landscaping plan has been refined to reflect all native plantings with the exception of the climbing vines for the wall, for which a native alternative was not available. Ultimately, the recommendations to reduce the temperature of the proposed safety lighting was not incorporated, as detailed further in the analysis.

Following the PTC’s recommendation, staff determined that a Design Enhancement Exception would be more appropriate to document the increased height of the proposed wall than a variance since the purpose of the wall is primarily to screen the equipment and to reduce noise levels at the property line. Therefore, the proposal now includes a request for a DEE in-lieu of a variance.

Previous Council Actions

In September 2015 the City of Palo Alto City Council certified an Environmental Impact Report (EIR) for the Palo Alto Recycled Water Project (SCH #2011062037). The EIR included Mitigation Measure HYD-3d, which requires the City to consider treatment options, such as reverse osmosis, to reduce the salinity of its recycled water and thus make its recycled water useable for irrigation of salt-sensitive species. Since that time, staff has presented updates and components of this project to Council as follows:

- April 4, 2016, staff provided Council with an update on the recycled water EIR and collaboration work with Valley Water and Mountain View to expand the program and reduce TDS (CMR #6691).
- November 18, 2019 City Council approved Valley Water Agreement to move forward with the design of the Local AWPS. The EIR Addendum for the proposed AWPS was also adopted at this hearing (CMR #10627).
- March 8, 2021, Council approved design contract for the Local AWPS (CMR #11782)
- September 12, 2022 City Council held a study session to hear an update on, and discuss, the proposed project (CMR # 14650)
- October 16, 2023, Council approved Staff to move forward with loan agreement and directed Staff to secure financing and solicit bids for a construction contract (CMR #2308-1863).

PROJECT DESCRIPTION

A complete project description is included in Attachment G and the project plans are included in Attachment H. In summary, the project consists of several structures and components, including:

- A reverse osmosis permeate storage tank.
- a small prefabricated electric building; and
- a pre-engineered open-air building.

The circular tank would be 50 ft in diameter with a sidewall height of 30 feet and a capacity of 350,000 gallons. It would be erected on a reinforced concrete mat type foundation supported by deep pile foundation. The open-air building covers a membrane filtration system, chemical storage/feed system components, and other ancillary components essential to the purification system. The facility would have a building footprint of approximately 15,544 sf. The open-air building will be constructed over a concrete deck in order to raise the equipment up out of the flood zone per FEMA requirements. The project will also include a blending station located in the basement of the RWQCP administration building and installation of yard piping inside the RWQCP. The project will be located on the northwest side of the RWQCP, abutting Embarcadero Road, partially outside the existing fence line but within the defined boundaries of the plant. The project also includes new landscaping, a new concrete screening wall, and revisions to the chain link fence surrounding the RWQCP to incorporate the area of the new AWPS (which would be inside the screening wall).

Requested Entitlements, Findings and Purview:

The applicant requests the following discretionary application:

- **Site and Design Review:** The process for evaluating this type of application is set forth in PAMC 18.30(G). Site and Design applications are reviewed by the PTC and ARB, and recommendations are forward to the City Council for final action. Site and Design projects are evaluated against specific findings that include both the ARB findings (ARB purview) and Site and design findings (PTC purview). All findings must be made in the affirmative to approve the project. Failure to make any one of the findings requires project redesign or denial. Draft findings for PTC to approve a site and design application are provided in Attachment B.
- **Design Enhance Exception (DEE):** The process for evaluating this type of application is set forth in PAMC 18.76.050. DEE applications are reviewed by staff and/or the Architectural Review Board in accordance with 18.77.070 and recommendations are forwarded to the Director of Planning and Development Services for final action. DEE projects are evaluated against specific findings. All findings must be made in the affirmative to approve the project. Failure to make any one of the findings requires project redesign or denial. Draft findings for approval of the proposed variance are provided in Attachment B.

ANALYSIS²

Following is a summary of staff's analysis on how the project has been refined in accordance with board member's previous recommendations and the project's consistency with relevant plans and ordinances. Overall, the project is consistent with the Comprehensive Plan, Zoning Ordinance, and other applicable goals and policies of the City and, with modifications to the plans and submittal of other relevant information, the applicant has been responsive to board member's comments.

Response to Previous Board member Comments

As discussed above, several requested modifications were made to provide clarity in the plan set such as providing black vinyl chain link fencing consistent with the baylands design guidelines and adding the requested details regarding the perimeter wall.

Noise

Black & Veatch conducted a sound level assessment to identify the local ambient sound levels and to determine the property boundary sound level for the project based on the maximum noise level of the proposed equipment. Two locations immediately outside the plant boundary were monitored for ambient noise levels; one location at the southwest boundary of the site near the parking lot of 1900 Embarcadero Way and a second location north of the plant near the walking trail along Embarcadero Road. The lowest repeated sound level during the

² The information provided in this section is based on analysis prepared by the report author prior to the public hearing. Planning and Transportation Commission in its review of the administrative record and based on public testimony may reach a different conclusion from that presented in this report and may choose to take an alternative action from the recommended action.

monitoring was 41 dBA at location 1 and 44 dBA at location 2. Since PAMC allows commercial and industrial properties to permit a sound level equal to the local ambient plus 8 dBA at the property line, the proposed project was designed to ensure that the sound level at the property line did not exceed 49 dBA. The loudest proposed equipment (the proposed reverse osmosis pumps and the membrane filtration pumps) have a maximum noise level of 90 dBA at three feet. However, with the incorporation of the sound wall and attenuation of the noise level over distance (minimum setback of 106 feet for the reverse osmosis pumps and minimum setback of 45 feet from the membrane filtration pumps and the nearest property lines) the project would have a noise level of 49 dBA or less at the closest property line.

Trees and Landscaping

Following boardmember comments at the study session and in response to review comments from staff, an updated arborist report was prepared. The updated arborist report revised the total number of existing trees (several trees had fallen in storms over the past couple of years), clarified the species of several trees that were previously unspecified, and reflected an updated proposal for removal to show retention of some trees based on refinements to the design following early feedback from the Parks and Recreation Commission. The proposed project includes the removal of 35 trees, 12 of which are protected due to their size. These trees are varying species of Eucalyptus, Myoporum laetum, and Casuarina glauca trees which are primarily non-native, invasive species. All of these are within the proposed project footprint. At the Parks and Recreation Commission's request, the project was refined in its early design phases to prioritize retention of some of the larger trees along the Embarcadero frontage. The project refinements retained eleven additional trees. However, five of those trees have since died/fallen in storms. Therefore, the project includes retention of six larger trees that were identified for desired preservation by PRC.

The project includes planting 36 trees along the project frontage along with other large and smaller shrubs to provide an attractive landscape buffer between the pedestrian pathway and the RWQCP as well as between the pedestrian path and Embarcadero Road.

Native Vegetation

The plant species in the proposed landscaping plan is primarily native and was designed with a previously approved (and implemented) planting plan for the Regional Water Quality in mind as well as Mountain View's North Bayshore Precise Plan, which the PRC recommended reviewing as an example of a successful landscaping plan with a less formal, more naturalized look to the design. At the PTC's recommendation, the landscaping has been further refined to be all native with the exception of the climbing vines for the wall, for which a native alternative was not possible. It should also be noted that this area is irrigated with recycled water that has a higher salinity content than potable water. Therefore, the plant palette was also selected with this in mind as well.

Canopy Colors, Material, and Design

The proposed canopy color has been revised in response to ARB feedback on the red color and now includes the standard sandy grey color recommended in the Baylands Design Guidelines.

Public Works Water Quality has also presented two alternative colors for the ARB's consideration that provide more of a blue hue based on the feedback that a bluer hue may be preferred. Staff recommends the standard recommendations consistent with the Baylands Design Guidelines. However, if desired, the ARB could recommend a different color.

As discussed above and detailed further in the plans and Attachment F, the project has been refined to include a perforated aluminum metal screening canopy between the top of the engineering building and the canopy cover to further screen the equipment from view. Due to maintenance constraints and to maintain necessary access to the process equipment, this could not be provided around the entire canopy. The project proposes a weathered green powdercoated color for the screening and a leaf design for the perforation which will blend well with the landscaping along the frontage. However, the memorandum also shows some other perforated designs that could be selected if the ARB has a different recommendation.

The applicant could not provide a physical sample of the sound wall material; however, a rendering showing further detail on how the wall would be viewed from the pedestrian perspective has been provided and Public Works Staff will have pictures available in their presentation to show similar applications of this material.

Consistency with the Comprehensive Plan, Area Plans and Guidelines³

The Comprehensive Plan includes Goals, Policies, and Programs that guide the physical form of the City. The Comprehensive Plan provides the basis for the City's development regulations and is used by City staff to regulate building and development and make recommendations on projects. Further, ARB Finding #1 requires that the design be consistent and compatible with applicable elements of the Palo Alto Comprehensive Plan. The Comprehensive Plan land use designation for the project site is major Institution/Special Facility which includes governmental and community service uses and lands that are publicly owned such as the subject property. The proposed AWPS within the area of the RWQCP boundaries is consistent with the Comprehensive Plan Land Use. Staff is still completing a thorough analysis of the project's consistency with the Comprehensive Plan. Generally, the project is consistent with several goals of the Comprehensive Plan, including Policy N-4.17 of the Natural Element, which states "Improve source control, treatment, and distribution of recycled water, including reducing the salinity of recycled water, to maximize its use."

Baylands Design Guidelines

The project is located within the Boundaries of the Baylands Nature Preserve. However, because it's within the RWQCP boundaries, it is not located on land that is dedicated as parkland. Nevertheless, the project is subject to the Baylands Design Guidelines. Generally, the project appears consistent with the guidelines to the extent that they are applicable. Based on feedback from the Architectural Review Board at its study session in November 2023, the project has been revised to improve consistency with the guidelines. Specifically, red roofs have been revised to match the standard Sandy Grey color that is recommended in the design guidelines, to comply with the "muted, natural colors" requirement set forth in the guidelines.

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Alternatives options are also provided as options to the ARB. The plans show the general location of interactive signage, but the details of the signage will be reviewed separately from the current application. Any future signage will be required to comply with the Baylands Design Guidelines.

Airport Influence Area

The project is located within the Airport Influence Area. Specifically, the Comprehensive Land Use Plan for the Palo Alto Airport shows that the project area, and all of the RWQCP, is within the Turning Safety Zone. In the Turning Safety Zone, typically lower density uses are encouraged. Hazardous materials uses such as gas stations are discouraged. The project includes some hazardous materials in relatively small quantities for the treatment of water, similar to the existing RWQCP. These materials are not combustible and do not pose a concern within the Turning Safety Zone. The project does not conflict with any height restrictions in the plan. Further, as detailed in the EIR addendum in Attachment H, the RWQCP is considered an existing facility.

Zoning Code Compliance

The project is located within the Public Facilities (PF) Zone District as well as the Site and Design (D) Review combining district. The proposed facilities for the treatment of recycled water is considered a public facility and is an appropriate use within the PF zone district and especially within the boundaries of the existing Regional Water Quality Control Plant.

Because the project includes a new building within the Site and Design Review Combining District, Site and Design review is required. A detailed review of the proposed project's consistency with applicable zoning standards is provided in Attachment C. The project is consistent with the PF Zone District and D Combining District requirements or is otherwise requesting to deviate from the code in a manner that is consistent with the zoning ordinance. More specifically, a Design Enhancement Exception is requested to allow for an approximately 10-foot-tall wall where an 8-foot-tall wall is allowed in accordance with Chapter 16.24 of the code. Draft findings for the approval of a DEE are included in the Draft RLUA in Attachment B.

Title 21 Subdivision Map Compliance

The existing property lines for the site do not follow the existing boundaries of the RWQCP. Therefore, under existing conditions the new facility would be constructed over an existing property line. A certificate of compliance is required to revise the boundary between the two City parcels (APN 008-05-005; and APN 008-06-001). The new proposed boundary is shown in the project plans. Recordation of the certificate of compliance is required as a condition of approval prior to building permit issuance.

FISCAL/RESOURCE IMPACT

Funding for the Local Salt Removal Facility is projected to come from several sources. Prior to allocation of the \$56 million total project cost for the Preliminary Finance Plan, external funding sources were subtracted from the total to reduce the overall cost to each agency. External funding sources include the \$16 million from the 2019 Agreement with Valley Water and a \$12,867,875 US Bureau of Reclamation grant, leaving a remaining funding requirement of

\$27,434,792 which will be covered by Mountain View. Palo Alto currently has no plans to expand its existing recycled water system and current customers are mainly municipal users, therefore Palo Alto does not have a customer base requesting this higher quality water. Palo Alto and Mountain View staff agreed that Mountain View would pay the remainder of the capital costs associated with this project. Mountain View staff recommended this project and Mountain View's City Council approved it on June 27, 2023.

On September 19, 2023 the finance committee recommended that Council approve the Financing Plan for the project and authorize staff to amend the Recycled Water Agreement with the City of Mountain View. Council approved the financing plan on October 16, 2023.

STAKEHOLDER ENGAGEMENT

The Palo Alto Municipal Code requires notice of this public hearing be published in a local paper and mailed to owners and occupants of property within 600 feet of the subject property at least ten days in advance. Notice of a public hearing for this project was published in the Daily Post on March 22, 2024, which is 12 days in advance of the meeting. Postcard mailing occurred on March 20, 2024, which is 14 days in advance of the meeting.

City Outreach and Coordination

The City's Public Works, Environmental Services Division has worked diligently on this project since Council's adoption of the EIR for the Recycled Water Program. In addition to the study sessions with Council and the PRC, as noted above, they held the following meetings to obtain stakeholder feedback throughout the process.

- Kickoff meeting for the feasibility study was held June 2016 with Mountain View and Valley Water. The City, in coordination with Valley Water and Mountain View, held workshops at 50% completion (September 2016), 80% completion (December 2016), and 95% completion (January 2017).
- Preliminary Design workshop with Mountain View and Valley Water (October 2017)
- Quarterly Joint Recycled Water Meetings with Palo Alto Council Members, Mountain View Council Members and Valley Water Board Members
- Palo Alto hosted a community meeting on October 23, 2019 to inform the community and answer questions about the components of the funding Agreement between Palo Alto, Valley Water, and Mountain View, including partial funding for the AWPS/Local Plant. Members of the public approached staff during break-out sessions to get direct answers to questions. Most comments were focused on the Agreement terms and were overall supportive of the AWPS facility. With respect to Palo Alto itself, the open meetings on the budget process serve as the main vehicle for engaging the community on both new projects such as this and associated rate impacts. EIR Addendum was covered in this session.
- 30% Design workshop December 2021, 60% Design workshop January 2022 and 90% design workshop November 2022. Valley Water and Mountain View staff attended these workshops

- The Parks and Recreation Commission (PRC) held two study sessions on May 24, 2022 and December 13, 2022 to provide feedback on the project. Their feedback focused on the landscaping component, path alignment and external screening. Commissioners were generally supportive of the proposed design at the study session in December.
- September 19, 2023 – Finance Committee Meeting to discuss Local AWPS project. Committee approved and recommended moving forward. Public Comments As of the writing of this report, no project-related public comments were received.

Public Comments

There were no public comments at the ARB hearing on the proposed project. At the PTC hearing on February 28, 2024, there was a comment from one member of the public who expressed concerns regarding lighting and its impacts on avian species as well as the color of the trees. The commenter requested that the color temperature of the lighting be reduced to align more with the recommended color temperature recommended by Dark Sky International.

Additionally, staff met with Midpeninsula Open Space to discuss the project on November 20, 2023. Midpeninsula Open Space provided the following key comments on the project:

- Consider egrets and herons in your planning. These nesting birds tend to return to the same nests year after year so the loss of trees with these nests can be impactful beyond the direct impact during nesting season if their nests are present in the trees planned for removal.
- Consider the trees being selected and whether any trees would serve as perching areas for raptors that may impact adjacent wetland areas.
- Consider additional measures to better protect from spread of invasive species, especially species such as eucalyptus, when removing. Protect from plant pathogens (e.g. those that cause sudden oak tree death).
- Make sure that the plant species being planted in the landscaping are appropriate for the environment in the Baylands

The trees proposed for removal do not have any egret or heron nests that these species may return to. In clarifying the location of the proposed tree plantings, staff and Midpeninsula open space agreed that trees in this location would not pose a concern for raptor predation. Midpen has agreed to send a list of standard best management practices to protect from the spread of invasive species that the city can review and incorporate as applicable. The planting plan was designed to include native, low water use species appropriate for planting in the Baylands. The planting plan is shown on sheet L-00-200 and L-00-201 of the plans.

Staff also reached out to County Airports on January 5, 2024 to confirm whether a hearing before the County Airport Land Use Commission was required for the proposed project. County staff responded on January 8, 2024 confirming that a hearing before the ALUC was not required for the proposed project, stating that only amendments to the General Plan, a Specific Plan or

zoning or building regulations need to be referred to the ALUC, not individual development projects.

ENVIRONMENTAL REVIEW

The subject project has been assessed in accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the environmental regulations of the City. In 2015 Council adopted an EIR for the City of Palo Alto Recycled Water Project. The EIR included mitigation Measure MM HYD-3d, which required the City to consider treatment options, such as reverse osmosis, to reduce the salinity of its recycled water and thus make its recycled water useable for irrigation of salt-sensitive species. On November 18, 2019, in taking discretionary actions to further pursue this project, council adopted an EIR addendum that included more site-specific details associated with the proposed development. The adopted CEQA addendum is included in Attachment E.

ALTERNATIVE ACTIONS

In addition to the recommended action, the ARB may:

1. Approve the project with modified findings or conditions; or
2. Continue the project to a date (un)certain

ATTACHMENTS

Attachment A: Location Map

Attachment B: Draft Record of Land Use Action

Attachment C: Zoning Consistency Analysis

Attachment D: Aerial View and Summary of RWQCP Constraints

Attachment E: Lighting Memorandum

Attachment F: Canopy Memorandum

Attachment G: Project Description

Attachment H: Project Plans and CEQA Addendum

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