



PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT

STAFF REPORT

DATE: January 6, 2021

TO: Hearing Officer

SUBJECT: Conditional Use Permit #6850

LOCATION: 650 S. Wilson Avenue

APPLICANT: California Institute of Technology (Caltech)

ZONING DESIGNATION: PS (Public/Semi-Public)

GENERAL PLAN DESIGNATION: Institutional

CASE PLANNER: Natsue Sheppard

STAFF RECOMMENDATION: Adopt the Environmental Determination and the Specific Findings in Attachment A to **approve** the application with the conditions in Attachment B.

PROJECT PROPOSAL: Conditional Use Permit: To allow the demolition of existing cooling towers and enclosure and reconstruction of new cooling towers and enclosure for the existing Central Plant at the same location on the Caltech campus. A Conditional Use Permit is required for minor changes that are inconsistent with an approved Master Plan.

ENVIRONMENTAL DETERMINATION: This project has been determined to be exempt from environmental review pursuant to the guidelines of the California Environmental Quality Act (Public Resources Code §21080(b)(9); Administrative Code, Title 14, Chapter 3, §15301, Class 1, Existing Facilities and §15302, Class 2, Replacement and Reconstruction. There are no features that distinguish this project from others in the exempt classes; therefore, there are no unusual circumstances. Section 15301 exempts projects from environmental review, where restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety, unless it is determined that the damage was substantial and resulted from an environmental hazard such

as earthquake, landslide, or flood. Section 15302 exempts projects such as replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The project consists of demolition of an existing utility facility (cooling towers) and construction of new cooling towers for the existing Central Plant at the same location on the campus.

BACKGROUND:

Site Characteristics: The subject site is bounded by California Boulevard to the north, Wilson Avenue to the west, and Arden Road to the east. The site is developed as part of the Caltech campus consisting of academic buildings, laboratory buildings, athletic fields, swimming pools, and utility facilities.

Adjacent Uses: North – College, Traditional Campus Setting (Caltech Main Campus)
South – Single-Family Residential
East – Single-Family Residential
West – School, Private (Polytechnic School)

Adjacent Zoning: North – PS (Public/Semi-Public)
South – RS-4 (Single-Family Residential, 0-4 units per acre)
East – RS-2 (Single-Family Residential, 0-2 units per acre) and RS-4 (Single-Family Residential, 0-4 units per acre)
West – PS (Public/Semi-Public)

Previous Cases: A Master Plan, phased over 30 years, was adopted for Caltech in 1989, and since then a number of amendments and entitlements have been approved for the campus, with the latest amendment in 2006.

PROJECT DESCRIPTION:

The applicant, California Institute of Technology (Caltech), proposes the demolition of existing cooling towers and enclosure and reconstruction of new cooling towers and enclosure at the same location on the campus. The cooling towers are part of the Central Plant Facility located along Wilson Avenue south of California Boulevard and west of the athletic playing field. The existing cooling towers were built in 1973 and are deteriorating. The new cooling tower enclosure would have slightly larger footprint with a 25'-6 1/2" street setback where 27 feet is required, and have a height of 36 feet to the top of the enclosure. The Master Plan identified the existing Central Plant as a facility to remain on the campus as is and did not intend it to be removed or rehabilitated. A Conditional Use Permit is required for minor changes that are inconsistent with an approved Master Plan.

ANALYSIS:

Caltech Master Plan (Amendment #3) of 2006

California Institute of Technology (Caltech), founded in 1891, is a private university that specializes in science and technology. The first Master Plan for the institution was approved in 1989, in order to minimize uncertainty about Caltech's future development and at the same time to streamline development procedures. The first and second amendments to the Master Plan were approved in 1995 and 1999, respectively. The current Master Plan is the third amendment

and approved by City Council in December 2006. The Master Plan was approved without a specific term or sunset date, and is in force indefinitely.

In the 2006 Master Plan, the Central Plant and the subject cooling towers were identified as facilities to remain on the campus as is and not to be removed or rehabilitated. Furthermore, because the Central Plant was to remain, no specific development standards, such as maximum height or floor area, were established for the cooling towers or the enclosure. The Master Plan requires the building setbacks along Wilson Avenue to be measured from the curb lines (rather than the property lines), and to match the existing setback of Morrisroe Astroscience Lab (formerly I.P.A.C. Building) that is located south of the cooling towers and immediately west of the athletic field.

Conditional Use Permit – To allow minor changes inconsistent with an existing Master Plan

The purpose of a Master Plan is to reduce processing time and uncertainty for some types of public or semi-public and open space uses by consolidating multiple entitlements, typically several Conditional Use Permits over an extended period, into one process. After a Master Plan is approved, projects that are consistent with the plan do not require an additional entitlement as long as they comply with the Master Plan and other applicable requirements of the Zoning Code. The Master Plan needs to be amended if a project that is inconsistent with the approved Master Plan is proposed. However, for inconsistencies that are determined to be minor, the Director may allow an applicant to apply for a Conditional Use Permit as an alternative to an amendment to the Master Plan.

The proposal involves the demolition of the existing cooling towers and enclosure located at the western portion of the campus along Wilson Avenue, and construction of new cooling towers and enclosure at the same location as the replacement. According to the applicant, the existing cooling towers were built in 1973 and are deteriorating. They are past the useful life and are not constructed to any seismic rating. The Central Plant serves most of the Caltech facilities on its campus, as such upgrading the cooling towers is critical in order to provide sufficient energy to support Caltech's academic and research programs and to improve sustainability.

There is another utility plant located in the northeastern portion of the campus, referred to by Caltech as the "Satellite Utility Plant," constructed in 1993. The Satellite Utility Plant is connected to the same chilled water system of the Central Plant. The applicant stated, however, that the proposed replacement of the cooling towers at the Central Plant would not compromise, aggravate, impact, or alter the functioning of the Satellite Utility Plant.

The existing cooling tower enclosure is 34'-4 ½" in height, 5,780 square feet in footprint, and has a setback of 31 feet from Wilson Avenue. The proposed cooling tower enclosure would be 36'-0" in height to the top of the enclosure, 6,475 square feet in building footprint, and would have a setback of 25'-6 ½". The replacement cooling towers and enclosure would be built at the same location of the existing cooling towers and would utilize the existing 4,993 square-foot subterranean structural elements.

As mentioned earlier, the Master Plan does not specify the development standards for the Central Plant Facility since it was anticipated that the existing structures would remain. Therefore, the development standards for a new cooling tower and enclosure are the same as the existing cooling towers', except for the street side setback. Per the Master Plan, the required setback for the structures along Wilson Avenue is the existing setback for Morrisroe Astroscience Lab (27 feet). The proposed replacement of the cooling towers and enclosure is

larger and taller than the existing; therefore, the project is considered to be inconsistent with the approved Master Plan.

The Master Plan identifies “envelopes,” or approximate locations, for development of new facilities on the campus. These envelopes do not define specific buildings, but areas within which new buildings may be constructed. Because the Master Plan was intended to accommodate Caltech’s future programs rather than approving the specific design of each building, the Master Plan allows a measure of flexibility of a five-percent tolerance for development standards such as building height, setback and site coverage. This tolerance does not apply to the FAR, total building area, or number of dwelling units.

Height:

The proposed project with a 36-foot tall enclosure would increase the height of the cooling plant enclosure by 1’-7 ½”, or 4.7 percent of the existing height of 34’-4 ½”. The top of the new enclosure would be at least three feet taller than the top of the cooling towers in order to alleviate potential noises emitted from the cooling towers. The proposed height of the new enclosure would be within the five-percent measure of flexibility allowed for the height requirement, and therefore, the project is consistent with the height standard of the Master Plan.

Setback:

As previously noted, the building setbacks for structures along Wilson Avenue are 27 feet, as measured from the curb lines. The proposed setback for the project is 25’-6 ½”, which would be 1’-5 ½” less than the required 27 feet (5.4 percent difference). While the proposed project exceeds the allowable five-percent flexibility by 1.1 inches, the proposed change in setback is considered to be minor.

FAR:

The Zoning Code defines “gross floor area” of a non-residential building as the total enclosed and covered area of all floors of a building measured to the inside face of the exterior walls including halls, stairways, elevator shafts at each floor level, service and mechanical equipment rooms and basement or attic areas having a height of more than seven feet. The existing cooling tower structure has a subterranean mechanical room directly below the platform of the cooling towers. The 4,993 square feet of the existing subterranean floor area would be maintained for the new cooling tower structure. No expansion of the floor area is proposed with the project.

Noise Study:

In reviewing whether the proposed replacement cooling towers would cause noise-related concerns for the residents and occupants of the adjoining properties, a noise study was conducted for the project. The study was conducted by Veneklasen Associates (VA), an acoustic consultant, and was based on measured sound levels for the existing cooling towers and sound levels data of the proposed replacement options and architectural drawings provided by the project engineering firm (Affiliated Engineers, Inc., AEI). A total of 11 test locations were selected, including seven locations at property lines of properties adjoining to Caltech campus and four locations within the single-family residential area west of Catalina Avenue. A version of the model was generated to assess noise exposure from the existing cooling towers in order to validate the model using the sound measurements performed on October 4 and October 11,

2019. For the existing conditions as well as for the future proposed options, the model was based on the worst-case scenario, with all of the cooling towers running simultaneously at maximum capacity.

In the study, the noise data was reviewed against the standards specified under Section 9.36.090 of the PMC (Machinery, equipment, fans and air conditioning), which states that “(e)xcept for emergency work as defined in this chapter, it is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five decibels.” The study concluded that the project as proposed (“Option 1” in the study) would comply with the City’s Noise regulations, as the predicted noise level would be identical to ambient noise measured at the 11 selected noise receptor locations. Further, the proposed project would create less noise than the existing cooling towers because the new cooling towers would be equipped with ultra-quiet fans and the enclosures would have additional height. The study concluded that the predicted sound levels of the proposed project would comply with the Noise Ordinance of the Municipal Code.

Landscaping and Trees:

The Zoning Code requires all required setback and open space areas to be landscaped, except where a required setback is occupied by a sidewalk or driveway, or where a required setback is screened from public view. According to the submitted plans, there is currently no landscaping within the required setback area between the curb line of Wilson Avenue and the cooling tower enclosure.

The City’s Tree Protection Ordinance (Chapter 8.52 of PMC) provides protection requirements for native and specimen trees that are on the City’s Protected Tree List, mature trees that are defined as an otherwise non-protected tree with a diameter at breast height (DBH) of 19 inches or larger, and all public trees. There are eight trees located in the required setback adjacent to the project area; two of the eight trees are located on the Caltech property, both of which do not qualify for protection under the City’s Tree Protection Ordinance; and six trees are located within the public-right-of way. No existing tree is proposed to be removed as part of this project.

The proposed landscape plan indicates that the required setback area would be fully landscaped with shrubs and trees. New trees would be planted within the public-right-of-way. Protection of public trees and planting of trees within the public right-of-way are under the jurisdiction of the Department of Public Works. The applicant must follow its requirements as stated in Conditions #23 through #33 in Attachment B of this report. Landscaping in the private property portion of the setback will be reviewed by the Planning Department during the building permit plan check process.

GENERAL PLAN CONSISTENCY:

The land use classification for the project site is Institutional. This classification is for uses and facilities owned and operated by the City or by other public and/or private institutions such as schools, libraries, and hospitals. General Plan Policy 2.9 (Institutional Uses) calls for accommodation of the development of educational, religious, cultural, and similar facilities that enrich the lives of Pasadena’s residents. Caltech has operated a private university at its existing location for more than 100 years and has grown in a gradual manner. Additionally, the General Plan reaffirms the City’s commitment to provide a diverse educational system responsive to the

needs of the community, including Goal 17 (Educational System), which promotes a strong and diverse educational system that is responsive to the life-long needs of the community and related to maintaining a high quality of life and a strong economy. The proposed replacement cooling towers would be constructed to meet the current seismic standards and energy code and would support the world-class innovation and research conducted within the Caltech campus. As conditioned, the project will support a long standing educational institution, thus is in conformance with the goals, policies and objectives of the General Plan.

ENVIRONMENTAL REVIEW:

This project has been determined to be exempt from environmental review pursuant to the guidelines of the California Environmental Quality Act (Public Resources Code §21080(b)(9); Administrative Code, Title 14, Chapter 3, §15301, Class 1, Existing Facilities and §15302, Class 2, Replacement and Reconstruction. There are no features that distinguish this project from others in the exempt classes; therefore, there are no unusual circumstances. Section 15301 exempts projects from environmental review, where restoration or rehabilitation of deteriorated or damaged structures, facilities, or mechanical equipment to meet current standards of public health and safety, unless it is determined that the damage was substantial and resulted from an environmental hazard such as earthquake, landslide, or flood. Section 15302 exempts projects such as replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity. The project consists of demolition of an existing utility facility (cooling towers) and construction of new cooling towers for the existing Central Plant at the same location on the campus.

REVIEW BY OTHER CITY DEPARTMENTS:

The proposal was reviewed by the Department of Public Works, Department of Transportation, Fire Department, Building and Safety Division, and Design and Historic Preservation Section. The Design and Historic Preservation Section determined that the new cooling tower structure consists of enclosure walls and is not considered a building. As a result, the proposed project noted above is exempt from Design Review. The Department of Public Works provided recommended Conditions of Approval as specified in Attachment B. The remaining departments would review the plans through the building permit plan check process.

CONCLUSION:

It is staff's assessment that the findings to approve the Conditional Use Permit can be made. The conditions of approval from the approved Master Plan amendment of 2006 would remain in effect, except as superseded by this entitlement. The proposed project would result in a nominal increase in the footprint and the height of the cooling towers and enclosure. The site would remain as a private educational institution with traditional campus setting, and the development of the site would be required to adhere to the approved Master Plan. Further, additional conditions of approval are recommended to address issues associated with the construction and maintenance of the cooling towers. Therefore, staff recommends that the Hearing Officer approve the application with the findings in Attachment A and the conditions of approval in Attachment B.

Attachments:

Attachment A: Recommended Specific Findings

Attachment B: Recommended Conditions of Approval

ATTACHMENT A
SPECIFIC FINDINGS FOR CONDITIONAL USE PERMIT #6850

Conditional Use Permit – To allow minor changes inconsistent with an existing Master Plan:

1. *The proposed use is allowed with a Conditional Use Permit within the applicable zoning district and complies with all applicable provisions of this Zoning Code.* The proposed project differs from the Caltech Master Plan, as approved by the City Council on December 11, 2006. Per Section 17.61.050.I (Conditional Use Permits and Master Plans) of the Zoning Code, projects that are inconsistent with an approved Master Plan may be processed through a Conditional Use Permit. The proposed changes are determined to be minor; thus, in lieu of a Master Plan Amendment, the proposed changes to the approved 2006 Caltech Master Plan is allowed with a Conditional Use Permit.
2. *The location of the proposed use complies with the special purposes of this Zoning Code and the purposes of the applicable zoning district.* The subject site is located in the PS (Public and Semi-Public) Zoning District, the purpose of which is to provide a specific base zoning district for large public or semi-public land uses that may not be appropriate in other base zoning districts. While the project is inconsistent with the approved Master Plan, the proposed changes are considered minor. In addition to specific conditions of approval for the project, all conditions of approval for the Master Plan will remain in effect. As conditioned, the proposed changes to the Master Plan will be in conformance with the intent of the Master Plan; thus consistent with the special purposes of the Zoning Code.
3. *The proposed use is in conformance with the goals, policies, and objectives of the General Plan and the purpose and intent of any applicable specific plan.* The land use classification for the project site is Institutional. This classification is for uses and facilities owned and operated by the City or by other public and/or private institutions such as schools, libraries, and hospitals. General Plan Policy 2.9 (Institutional Uses) calls for accommodation of the development of educational, religious, cultural, and similar facilities that enrich the lives of Pasadena's residents. Caltech has operated a private university at its existing location for more than 100 years and has grown in a gradual manner. Additionally, the General Plan reaffirms the City's commitment to provide a diverse educational system responsive to the needs of the community, including Goal 17 (Educational System), which promotes a strong and diverse educational system that is responsive to the life-long needs of the community and related to maintaining a high quality of life and a strong economy. The proposed replacement cooling towers would be constructed to meet the current seismic and energy code and would support the world-class innovation and research conducted within the Caltech campus. As conditioned, the project will support a long standing educational institution, thus is in conformance with the goals, policies and objectives of the General Plan.
4. *The establishment, maintenance, or operation of the use would not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the neighborhood of the proposed use.* The existing cooling towers are past their useful life and are not constructed to any seismic rating. Upgrading the cooling towers is critical in order to provide sufficient energy to support Caltech's academic and research programs and to improve sustainability. The new cooling towers and enclosure will be designed to meet all the requirements of the current building and energy code. In addition, the sophisticated acoustical engineering will reduce the predicted noise level from the existing noise level. Conditions of approval will ensure that the

continued operation of the campus will not be detrimental to the health, safety, or general welfare of the inhabitants in the surrounding area.

5. *The use, as described and conditionally approved, would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City.* The proposed changes to the approve Master Plan are considered minor. Since founded in 1891, Caltech has expanded and coexisted with surrounding residential uses. The project must adhere to the City's and State's law that ensure the continuity of the compatible coexistence of this use with surrounding use.

6. *The design, location, operating characteristics, and size of the proposed use would be compatible with the existing and future land uses in the vicinity, in terms of aesthetic values, character, scale, and view protection.* The proposed project is to replace the outdated facility with new cooling towers and enclosure that will meet the current seismic standards of the building code. The physical changes proposed for the new facility will slightly increase the height and footprint; however, the changes are considered minor. While the project will not require a Design Review, several conditions of approval to address aesthetic concerns are included.

ATTACHMENT B
CONDITIONS OF APPROVAL FOR CONDITIONAL USE PERMIT #6850

The applicant or successor in interest shall meet the following conditions:

General

1. The site/floor plans submitted for building permits and/or future development shall substantially conform to the site/floor plans site plan submitted with this application and dated, "Approved at Hearing, January 6, 2021," except as modified herein.
2. The approval of this application authorizes the demolition of existing cooling towers and enclosure and reconstruction of new cooling towers and enclosure for the existing Central Plant along Wilson Avenue on the southwest portion of the Caltech campus, as shown on the approved plans.
3. The Caltech Master Plan and all Conditions of Approval of the Caltech Master Plan Amendment approved on December 11, 2006 (Resolution 8691) shall remain in full effect, with the exception of modifications made by Conditions of Approval related to this approval.
4. In accordance with Section 17.64.040 of the Pasadena Municipal Code, the exercise of the right granted under this application must be commenced within three years of the effective date of the approval. This approval is eligible for two one-year extensions. Each one-year extension is required to be reviewed and approved by the Hearing Officer at a noticed public hearing. In order for a project to be eligible for a time extension, the applicant is required to submit the required fee and time extension application to the Permit Center prior to the expiration date of the land use entitlement. The right granted by this approval may be revoked if the entitlement is exercised contrary to the conditions of approval or if it is exercised in violation of the Zoning Code.
5. Any change to these Conditions of Approval or expansion of the use shall require the modification of this Conditional Use Permit, a new Conditional Use Permit, or amendment to the Master Plan.
6. The Zoning Administrator, at any time, can call for a review of the approved conditions at a duly noticed public hearing. At his/her discretion, the conditions herein may be modified or new conditions applied to reduce any unforeseen impacts during construction or operation of the use.
7. The applicant or successor in interest shall meet the applicable code requirements of all other City Departments.
8. The final decision letter and Conditions of Approval shall be incorporated in the building plans as part of the building plan check process.
9. The proposed project, Activity Number **ZENT2020-10044**, is subject to a Final Zoning Inspection. A Final Zoning Inspection is required for the project prior to the issuance of a Certificate of Occupancy. Contact the Planning Case Manager, Natsue Sheppard at (626) 744-7527 to schedule an inspection appointment time.

Planning Division

10. The new cooling towers and enclosure for the Central Plant shall be located where the existing cooling towers and enclosure are located, along Wilson Avenue on the southwest portion of the Caltech campus.
11. The new cooling tower enclosure shall have a minimum of 25'-6 1/2" setback measured from the curb line along Wilson Avenue.
12. The height of the cooling tower enclosure shall not exceed 36 feet, measured from the natural or finished grade to the topmost of the enclosure.
13. The cooling tower enclosure shall not have mirror or highly reflective glass covering more than 20 percent of a structure's surface visible from a street. In addition, the cooling tower enclosure shall not have a metallic finish or reflective surface, (e.g., exposed metal cladding) unless the approval of a Minor Conditional Use Permit is first obtained. Prior to the issuance of the building permit for the cooling tower enclosure, the applicant shall submit the plans and/or sample materials to the satisfaction of the Zoning Administrator.
14. The cooling towers shall be fully enclosed and sound attenuated to comply with the noise standards in Chapter 9.36 of PMC.
15. Prior to the final inspection of the building permit for the project, the applicant shall conduct a comprehensive post-construction noise study to verify compliance with Chapter 9.36 of the PMC and submit to the satisfaction of the Zoning Administrator.
16. The Zoning Administrator, at any time, may request to implement new or additional noise reduction measures to reduce any unforeseen impacts with the operation of the cooling towers.
17. Landscaping shall be provided and maintained at the campus and athletic field in compliance with the provisions of Chapter 17.44 (Landscaping).
18. A final tree inventory prepared by a certified arborist shall be submitted with a building permit application for any construction that requires removal of trees. If additional protected private trees are proposed to be removed, pursuant to Pasadena Municipal Code Chapter 8.52, the applicant shall submit an application for Private Tree Removal Permit indicating which of the Tree Protection Ordinance findings apply to the removal(s), including the possibility of requiring a new or revised conceptual landscaping plan indicating the location of required replacement trees.
19. Prior to removal of any protected private trees, the applicant or successor in interest shall submit final landscape plans, demonstrating adherence to the replacement matrix adopted by resolution the City Council and included in the associated administrative guidelines and/or alternative requirements, to the Zoning Administrator for review and approval. Compliance with the Tree Protection Ordinance will be monitored through the approved landscape plan depicting replacement trees during the building plan check phase of the project.
20. Prior to the issuance of a building permit, the applicant shall submit a Tree Protection Plan with a final landscape plan to the Zoning Administrator for review and approval. The Tree

Protection Plan shall be prepared by a licensed landscape architect and/or certified arborist in compliance with the City's Tree Protection Guidelines.

21. The applicant or successor in interest shall submit landscape and irrigation plans as part of any building, grading or zoning permits. Where proposing more than 2,500 square feet of new landscaping, the project shall meet the threshold for state-mandated water-efficient landscaping. Accordingly, the final landscape plans (inclusive of planting and hardscape plans, the planting pallet, drainage plan, and irrigation system plan(s) and specifications), shall be reviewed by Planning and Community Development Department staff for conformance with the standards and requirements specified within the 2015 California Model Water Efficient Landscape Ordinance (MWELo) prior to the issuance of a building permit. No certificate of occupancy shall be issued until such plans have been deemed compliant with the MWELo and the landscaping has been installed per such approved MWELo-compliant plans to the satisfaction of the Director of Planning and Community Development or his/her designee.

Department of Public Works

22. No private improvements may be placed within the public right-of-way, including, but not limited to, soldier beams, tie-backs, utility conduits, backflow preventers, transformers, fire sprinkler valve, decorative sidewalk and applicable parade post holes on Colorado Boulevard per Standard Drawing S-419. Private improvements may only be placed in the public right-of-way by submitting a license agreement, which must be approved by the City. The license agreement application for any private improvement within the public right-of-way shall be submitted to the Department of Public Works for review and shall be approved by the City before any permits are granted.

The applicant shall submit the application, plan and processing fee, associated with processing the license agreement, at least three to four (3-4) months prior to the issuance of any permits. An approved license agreement will allow the applicant to install and maintain the private improvements within the public right-of-way with conditions.

A license agreement for shoring requires an indemnity bond in order to guarantee that shoring and tie-backs are free from defect due to faulty material, workmanship and failure. Upon review of the license agreement exhibits, an indemnity bond estimate will be prepared and forwarded to the applicant. The estimated amount is equivalent to the cost of reconstructing the public right of way, including all affected utilities, public facilities, and infrastructures, based on the plane of failure at a 45-degree angle from the lowest point of excavation. The indemnity bond shall be submitted to the City prior to the execution of the agreement and the issuance of any building or demolition permits.

All steel rods in every tie-back unit shall be relieved of all tension and stresses, and any portion of soldier beams and any portion of the tie-backs located be removed entirely from the public right-of-way. A monthly monitoring report stamped and certified by a licensed surveyor shall be submitted to indicate that the deflection from any piles or soldier beams does not exceed one inch. Upon completion of construction, the developer or his contractor shall remove all tie-back rods within the public right-of-way. The removal shall be documented by a report certified by a licensed deputy inspector. The report shall be submitted to the City for review and approval. The applicant will be charged a penalty of \$7,000 for each tie-back rod not removed from the public right-of-way. For temporary tie-

backs or shoring, the maximum width of the license area fronting the development frontage(s) shall only extend to the centerline of the public right-of-way.

23. To protect existing City trees during construction, the applicant shall fully conformed to the Tree Protection Guidelines signed by the City Manager. The full guidelines is available at the following link: <https://www.cityofpasadena.net/public-works/engineering-and-construction/engineering/>
24. A Tree Protection Zone (TPZ) shall be established for all existing City trees within the scope of a construction project. The TPZ extends from the base of the tree to four (4) radial feet beyond the dripline of a tree and applies to the entirety of the tree – from the roots to the canopy of the tree.

The applicant is prohibited from the following within a designated TPZ: construction vehicle access, construction vehicle operation, staging of materials, and trenching without the consent of the Department of Public Works.

The applicant shall at minimum provide the following within a designated TPZ: mulching, irrigation, and protective fencing.

25. Prior to the issuance of any permit, the applicant shall submit a Preliminary Tree Protection Plan (PMC Ch. 8.52 – City Trees and Tree Protection Ordinance), prepared by a Landscape Architect or certified Arborist, showing the TPZ and all structures, footings, and grading that may impact City trees shall be submitted to the Department of Public Works, for review and approval. Given that each construction project poses unique conditions, it is the responsibility of the applicant to develop a Tree Protection Plan based off the TPZ standards to the extent feasible. The Plan shall conform to the Tree Protection Standards which specifically require showing the locations of all existing trees, their diameters, canopies, whether the tree is a public tree or private tree, as well as any trees to be planted with their canopy at mature size. The final conditions of the Tree Protection Plan shall be approved by the Forestry Superintendent. A non-refundable flat fee, per the current General Fee Schedule, will be required for staff time to review the Tree Protection Ordinance compliance.
26. Prior to any construction, tree protections including the installation of fencing to protect public trees must be in place. The fencing material shall be chain-link attached to posts inserted into the ground at the edge of the dripline and shall be a minimum of 6' in height. See Standard Plan S-642 – Tree Protection Chain Link Fencing. Fencing shall maintain visual lines of sight in order to avoid vehicle and pedestrian hazards. Fencing shall include a minimum 8.5" x 11" warning sign with the following information: 'Tree Protection Zone'; name and contact information of project owner or authorized representative; 'Please contact the City of Pasadena Citizen Service Center to report any concerns (626) 744-7311. All protective fencing must be permitted, inspected and approved by Public Works prior to the commencement of any construction.
27. Prior to issuance of any permit, the applicant shall submit a valuation assessment report of the existing public tree(s) along the boundary of their project. The report shall be prepared by a registered Arborist and submitted to PNR for review and approval. If it is determined that the applicant has failed to care for any City tree within their Tree Protection Plan, and the health of the tree(s) was critically compromised requiring its removal, the applicant shall be liable for the following costs: assessed value of tree determined by a PNR Arborist using

a current ISA assessment methodology; the removal cost determined by PNR; and any applicable infraction or administrative fines determined by Code Compliance.

28. Prior to issuance of any permit, a deposit in the amount of the applicant's total liabilities based on the aforementioned approved tree assessment report shall be submitted to the City. The deposit is fully refundable, less administrative fees, upon the satisfaction of Public Works prior to the issuance of a Certificate of Occupancy.
29. The applicant shall submit off-site improvement plans for the proposed off-site improvements/landscape along Wilson Avenue frontage. The landscape plans shall be reviewed and approved by the Urban Forestry Division of the Department of Public Works. A non-refundable flat fee, per the current General Fee Schedule, will be required for staff time to review the proposed off-site improvements/landscape plans.
30. The applicant shall plant the officially designated street tree per the City's approved Master Street Tree Plan along the boundary of the subject property. The Department of Public Works will confirm eligible planting sites, and will provide the applicant the location, quantity and tree species to be planted as a result of the applicant's project.
31. Trees planted by the applicant must meet the City's tree stock standards, be inspected by the City, and be planted according to the details provided by the Parks and Natural Resources (PNR) Division. Planting shall include the installation of the following per tree: no less than two tree stakes; one arbor guard; and the use of slow-release fertilizer tablets. The applicant shall contact PNR (626-744-3880) for tree planting approval, a minimum of two (2) months, prior to the issuance of a Certificate of Occupancy.
32. Trees planted by the applicant must be irrigated by either an existing or a new irrigation system constructed by the applicant. Plans for the irrigation system shall be prepared by a landscape architect registered in the State of California and submitted to PNR for review and approval. Irrigation facilities (main line, valve, pull box, timer, etc.) must be constructed within private property with the exception of the laterals and bubblers. The lateral shall be a minimum of 18" deep, and no above-ground structures are allowed.
33. Prior to issuance of the Certificate of Occupancy, the applicant shall submit a Tree Guarantee Deposit equal to the cost of all new trees planted to guarantee that newly planted trees are maintained by the applicant for a minimum of three calendar years. Tree maintenance during this period shall include the following: watering no less than once a week; weed removal; reconstruction of tree wells as needed; re-staking as needed; adjustment to grade of any trees that settle; and any other operations needed to assure normal tree growth. The applicant shall replace any newly planted trees which, for any reason, die or whose health is compromised, within the applicant's three-year establishment period. The three-year tree establishment period shall commence on the day that the Certificate of Occupancy is issued. PNR shall inspect all trees planted by the applicant at the end of the three-year establishment period, and if the trees are found to be in good health, the applicant's deposit will be released. If the trees are found to be in poor health, the establishment period may be extended by PNR and the applicant's deposit shall be held accordingly. Said deposit may be included as part of the construction guarantee if applicable, and is subject to partial refund or additional billing.
34. The applicant shall protect all existing public facilities and maintain the right of way in good clean condition during the construction. If any damage is proven to be caused by the subject

development, the applicant is responsible for replacing and/or repairing the facilities to the satisfaction of the City, prior to the issuance of Certificate of Occupancy.

35. Past experience has indicated that projects such as this tend to damage the abutting street improvements with the heavy equipment and truck traffic that is necessary during construction. Additionally, the City has had difficulty in requiring developers to maintain a clean and safe site during the construction phase of development. Accordingly, the applicant shall place a \$20,000 deposit with the Department of Public Works prior to the issuance of a building or grading permit. This deposit is subject to refund or additional billing, and is a guarantee that the applicant will keep the site clean and safe, and will make permanent repairs to the abutting street improvements that are damaged, including striping, slurry seal/resurfacing, curb, gutter, and sidewalk, either directly or indirectly, by the construction on this site. The deposit may be used for any charges resulting from damage to street trees. A processing fee will be charged against the deposit.
36. Prior to the start of construction or the issuance of any permits, the applicant shall submit a Construction Staging and Traffic Management Plan to the Department of Public Works for review and approval. The template for the Construction Staging and Traffic Management Plan can be obtained from the Department of Public Works webpage at: <https://ww5.cityofpasadena.net/public-works/engineering-and-construction/engineering/forms-and-applications/> A non-refundable flat fee, based on the current General Fee Schedule, is required for plan review and on-going monitoring during construction. This plan shall show the impact of the various construction stages on the public right-of-way (and the private street) including all street occupations, lane closures, detours, staging areas, and routes of construction vehicles entering and exiting the construction site. An occupancy permit shall be obtained from the department for the occupation of any traffic lane, parking lane, parkway, or any other public right-of-way. All lane closures shall be done in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and California Supplement. If the public right-of-way occupation requires a diagram that is not a part of the MUTCD or California Supplement, a separate traffic control plan must be submitted as part of the Construction Staging and Traffic Management Plan to the department for review and approval. No construction truck idling or staging, material storage, or construction trailer are allowed in the public right-of-way.

In addition, prior to the start of construction or issuance of any permits, the applicant shall conduct a field meeting with an inspector from the Department of Public Works for review and approval of construction staging, parking, delivery and storage of materials, final sign-off procedure, and any of the specifics that will affect the public right-of-way. An appointment can be arranged by calling 626-744-4195.

37. In preparation for the New Year Rose Parade and Rose Bowl Game, the Department of Public Works will suspend all works within the public right-of-way during the holiday season in accordance to PMC 12.24.100 and City Policy.

In general, all public streets, sidewalks and parkways shall be free and clear of excavations and other construction related activities during the period of November through January of the following year. Specific dates will vary on an annual basis. Accordingly, contractors will be required to shut down construction operations which would impede traffic and pedestrian movements during these periods unless otherwise authorized by the City Engineer. Any existing excavations shall be backfilled, compacted and temporarily repaved before the beginning of the moratorium period.

The Holiday Moratorium Map, showing the appropriate shutdown period, and corresponding areas in the City, is available at the Department of Public Works Permit Counter (window #6), 175 N. Garfield Avenue, Pasadena, CA 91109, or at the following link:
<https://www.cityofpasadena.net/public-works/engineering-and-construction/engineering/>

38. All costs associated with these conditions shall be the applicant's responsibility. Unless otherwise noted in this memo, all costs are based on the General Fee Schedule that is in effect at the time these conditions are met. A processing fee will be charged against all deposits. A Public Works permit is required for all construction and occupancies in the public right-of-way. If construction vehicles and equipment are parked off-site in the public right of way, the permit fee for street and sidewalk occupancy will be based on the area and duration corresponding to the current City's General Fee Schedule. For more information, please contact Yannie Wu-Bowman at 626-744-3762.

39. In addition to the above conditions, the requirements of the following ordinances may apply to the proposed project:

- Sidewalk Ordinance - Chapter 12.04 of the Pasadena Municipal Code (PMC)
In accordance with Section 12.04.035, entitled "Abandoned Driveways" of the PMC, the applicant shall close any unused drive approach with standard concrete curb, gutter and sidewalk. In addition, the applicant shall repair any existing or newly damaged curb, gutter and sidewalk along the subject frontage prior to the issuance of a Certificate of Occupancy in accordance with Section 12.04.031, entitled "Inspection required for Permit Clearance" of the PMC.
- City Trees and Tree Protection Ordinance - Chapter 8.52 of the PMC
The ordinance provides for the protection of specific types of trees on private property as well as all trees on public property. No street trees in the public right-of-way shall be removed without the support of the Urban Forestry Advisory Committee. No trees shall be damaged by the proposed construction, if a City tree is damaged, the applicant may be liable for the assessed value of the tree. Refer to <https://ww5.cityofpasadena.net/public-works/parks-and-natural-resources/urban-forestry/> for guidelines and requirements for tree protection.
- Construction and Demolition Waste Ordinance, Chapter 8.62 of the PMC
The applicant shall submit the following plan and form which can be obtained from the Permit Center's webpage at: <https://ww5.cityofpasadena.net/public-works/street-maintenance-waste-management/recycling-resources/construction-and-demolition-debris-recyclers/> and the Recycling Coordinator, (626) 744-7175, for approval prior to the request for a permit:
 - a. C & D Recycling & Waste Assessment Plan – Submit plan prior to issuance of the permit. A list of Construction and Demolition Recyclers is included on the waste management application plan form and it can also be obtained from the Recycling Coordinator.
 - b. Summary Report with documentation must be submitted prior to final inspection.

A security performance deposit of three percent of the total valuation of the project or \$30,000, whichever is less, is due prior to permit issuance. For Demolition Only projects,

the security deposit is \$1 per square foot or \$30,000, whichever is less. This deposit is fully refundable upon compliance with Chapter 8.62 of the PMC. A non-refundable Administrative Review fee is also due prior to permit issuance and the amount is based upon the type of project.