

REGULAR MEETING AGENDA

Date:12/3/2018Time:7:00 p.m.City Council Chambers701 Laurel St., Menlo Park, CA 94025

- A. Call To Order
- B. Roll Call

C. Reports and Announcements

Under "Reports and Announcements," staff and Commission members may communicate general information of interest regarding matters within the jurisdiction of the Commission. No Commission discussion or action can occur on any of the presented items.

D. Public Comment

Under "Public Comment," the public may address the Commission on any subject not listed on the agenda, and items listed under Consent Calendar. Each speaker may address the Commission once under Public Comment for a limit of three minutes. Please clearly state your name and address or political jurisdiction in which you live. The Commission cannot act on items not listed on the agenda and, therefore, the Commission cannot respond to non-agenda issues brought up under Public Comment other than to provide general information.

E. Consent Calendar

E1. Approval of minutes from the November 5, 2018, Planning Commission meeting. (Attachment)

F. Public Hearing

- F1. Architectural Control/Barulch Bennaim/154 Buckthorn Way: Request for architectural control to modify the exterior of an existing townhouse in the R-3 (Apartment) zoning district. The request includes modifications to second and third story windows, and modifications to the balcony, and front/garage doors. The proposal also includes repainting the exterior of the residence white. (Staff Report #18-096-PC)
- F2. Architectural Control and Use Permit/G + S Architecture/409 Glenwood Avenue, 417 Glenwood Avenue, and 1357 Laurel Street: Request for architectural control to demolish one, two-story residence and one, one-story residence addressed 409 Glenwood and 1357 Laurel Street, relocate an existing two-story residence addressed 417 Glenwood on site, and construct two new two-story multifamily buildings with an underground parking garage. One building would include three dwelling units and one would include four dwelling units. The project site currently contains three dwelling units, and the

project would result in an increase of five units, for a total of eight units at the project site. As part of the project, a use permit would be requested for excavation within the required front setback for egress stairs. One heritage tree is proposed for removal as part of the project. The project site is located within the R-3 (Residential Apartment) zoning district. The proposed project includes consideration of a Mitigated Negative Declaration regarding potential environmental impacts. (Staff Report #18-097-PC)

F3 Use Permit & Architectural Control/NMSBPCSLDHB/40 Middlefield Road:

Request for a use permit and architectural control to construct a new single-story office building, 3,681 square feet in size, on a vacant lot in the C-4 (general commercial) zoning district. In addition, the applicant is requesting a parking reduction to provide 16 spaces where 22 spaces are required. The project was previously continued following a Planning Commission public hearing on May 14, 2018. Since then, the applicant has revised the project to increase parking on the site from 12 spaces to 16 spaces by locating a parking puzzler at the rear of the proposed building with access from the adjacent service road. The gross floor area of the proposed building has also increased by 97 square feet to better integrate the parking puzzler into the building. In addition, a parking landscape island at the rear of the site has been reduced in size to accommodate deliveries to the adjacent market. The project includes a dedication of approximately 1,700 square feet of right-of-way along Middlefield Road associated with a plan line. (Staff Report #18-098-PC)

G. Informational Items

- G1. Future Planning Commission Meeting Schedule The upcoming Planning Commission meetings are listed here, for reference. No action will be taken on the meeting schedule, although individual Commissioners may notify staff of planned absences.
 - Regular Meeting: December 10, 2018
 - Regular Meeting: January 14, 2019

H. Adjournment

Agendas are posted in accordance with Government Code Section 54954.2(a) or Section 54956. Members of the public can view electronic agendas and staff reports by accessing the City website at www.menlopark.org and can receive e-mail notification of agenda and staff report postings by subscribing to the "Notify Me" service at menlopark.org/notifyme. Agendas and staff reports may also be obtained by contacting the Planning Division at 650-330-6702. (Posted: 11/28/2018)

At every Regular Meeting of the Commission, in addition to the Public Comment period where the public shall have the right to address the Commission on any matters of public interest not listed on the agenda, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during the Commission's consideration of the item.

At every Special Meeting of the Commission, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during consideration of the item.

Any writing that is distributed to a majority of the Commission by any person in connection with an agenda item is a public record (subject to any exemption under the Public Records Act) and is available for inspection at the City Clerk's Office, 701 Laurel St., Menlo Park, CA 94025 during regular business hours.

Persons with disabilities, who require auxiliary aids or services in attending or participating in Commission meetings, may call the City Clerk's Office at 650-330-6620.

Planning Commission



REGULAR MEETING MINUTES - DRAFT

Date: 11/5/2018 Time: 7:00 p.m. City Council Chambers 701 Laurel St., Menlo Park, CA 94025

A. Call To Order

Chair Susan Goodhue called the meeting to order at 7:01 p.m.

B. Roll Call

Present: Andrew Barnes (Vice Chair), Drew Combs (arrived at 7:08 p.m.), Susan Goodhue (Chair), John Onken, Henry Riggs, Katherine Strehl, and Camille Kennedy

Staff: Kaitie Meador, Associate Planner; Ori Paz, Assistant Planner; Kyle Perata, Acting Principal Planner; Corinna Sandmeier, Senior Planner

C. Reports and Announcements

Acting Principal Planner Kyle Perata said the City Council at its October 23, 2018 meeting approved the second reading of the EV Charger ordinance. He said it also reviewed the 840 Menlo Avenue appeal, denied it, approved the project, and approved the relocation of the loading zone for Draeger's Market onto Evelyn Street. He said the Council at its November 13, 2018 meeting would hear the Conditional Development Permit and the Use Permit and Architectural Control applications for the 180-200 and the 220 Jefferson Drive projects that the Planning Commission had reviewed and recommended for approval at its October 22, 2018 meeting.

Commissioner Katherine Strehl asked when the continued 555 Willow Road project would return to the Commission for review. Acting Principal Planner Perata said in 2019 but the date was not set at this time.

Replying to Commissioner Andrew Barnes, Acting Principal Planner Perata said his understanding was the decision on the relocation of the Draeger's loading zone onto Evelyn Street was final.

Chair Goodhue noted for the public's benefit that item G1 on the agenda, which was a study session on 555 Willow Road, was continued and would be noticed and heard in 2019. She said that members of the public who had wanted to comment on that agenda item might still do so under D. Public Comment for items not on the agenda.

D. Public Comment

Peter Carpenter, Menlo Park, said regarding the proposed Hampton Inn project at 1704 El Camino Real that the Park Forest neighbors had worked hard for many years to find a compromise with the property owner and had agreed to support the proposed project with underground parking. He said

the property owner significantly changed the proposed project that was presented at the October study session to a much larger development with ground level parking only. He questioned the Commission comment for neighbors to work on a compromise with the property owner as that had occurred previously and was then disregarded by the property owner. He said neighbors were opposed to the October project proposal regardless of any cosmetic changes that might be made. He questioned how removing the underground garage and reducing development costs was a public benefit. He said the Park Forest community would support the project previously proposed with underground parking.

Chair Goodhue noted that Commissioner Drew Combs had arrived at 7:08 p.m.

E. Consent Calendar

E1. Approval of minutes from the October 22, 2018, Planning Commission meeting. (Attachment)

Commissioner John Onken made suggestions to edit the minutes.

- Page 5, 2nd paragraph, modify as follows "Commissioner Onken said he appreciated the work that they had done and the money they would invest were about to spend."
- Page 5, 2nd paragraph, modify as follows "He said the Commission's remiss remit was to consider architectural control..."

Commissioner Henry Riggs made suggestions to edit the minutes. He said he also wanted to have Item E2 pulled off the consent calendar.

- Page 5, 3rd paragraph, 3rd line, modify as follows "He said as an example inside outside the house they were proposing marble tile for the entry paving."
- Page 7, Item 4.c, project-specific conditions, modify "Simultaneously with the submittal of a complete building permit application, the applicant shall submit an alternate window sample for casement, *single hung* or double hung."

ACTION: Motion and second (Strehl/Riggs) to approve the October 22, 2018 minutes with the following modifications; passes 7-0.

- Page 5, 2nd paragraph, modify as follows "Commissioner Onken said he appreciated the work that they had done and the money they would invest-were about to spend."
- Page 5, 2nd paragraph, modify as follows "He said the Commission's remiss remit was to consider architectural control..."
- Page 5, 3rd paragraph, 3rd line, modify as follows "He said as an example inside outside the house they were proposing marble tile for the entry paving."
- Page 7, Item 4.c, project-specific conditions, modify "Simultaneously with the submittal of a complete building permit application, the applicant shall submit an alternate window sample for casement, *single hung* or double hung."
- E2. Architectural Control/Chris Kummerer/1326 Hoover Street: Request for revisions to an architectural control permit that was approved in April 2018 for modifications to the exterior materials and balcony railings on an existing 10-unit multi-family building located on a standard lot in the R-3 (Apartment) zoning district. (Staff Report #18-091-PC)

Commissioner Riggs said he had no issues with the proposed architectural control. He questioned the use of deodar cedar as the replacement trees for the two pines being removed. He said that species was very undesirable in the region. Assistant Planner Ori Paz said the applicant had reviewed the City's list of acceptable heritage tree replacement species. He said the pine trees removal was part of the original architectural control approval, and this revision did not include any additional heritage tree removals.

Chris Kummerer, CKA Architects, Menlo Park, project architect, said the two pines approved for removal were to be replaced with two incense cedars. He said if the staff report indicated deodar cedar there was a mix up. He said he had wanted another species than incense cedar, but the City Arborist sought something that was more conifer as there were pines in the area. He said they had compromised on incense cedar.

Commissioner Riggs said that incense cedar was probably less objectionable than deodar cedar. He said the most important factor was species and soil compatibility. Replying to Commissioner Riggs, Mr. Kummerer said they would prefer more choice in selecting replacement trees, if his client wanted to select a different conifer.

Commissioner Riggs asked if commissioners wanted to give the applicant some flexibility around the tree species choice. Chair Goodhue said she could support. Commissioner Riggs moved to encourage staff to reconsider the applicant's preference and allow some flexibility in the replacement tree selection.

Chair Goodhue opened the public comment period and closed it as there were no speakers.

ACTION: Motion and second (Riggs/Combs) to approve the project with the following modification; passes 7-0.

- 1. Make a finding that the project is categorically exempt under Class 1 (Section 15301, "Existing Facilities") of the current California Environmental Quality Act (CEQA) Guidelines.
- 2. Adopt the following findings, as per Section 16.68.020 of the Zoning Ordinance, pertaining to architectural control approval:
 - a. The general appearance of the structure is in keeping with the character of the neighborhood.
 - b. The development will not be detrimental to the harmonious and orderly growth of the city.
 - c. The development will not impair the desirability of investment or occupation in the neighborhood.
 - d. The development provides adequate parking as required in all applicable city ordinances and has made adequate provisions for access to such parking.
 - e. The property is not within any Specific Plan area, and as such no finding regarding consistency is required to be made.
- 3. Approve the architectural control subject to the following *standard* conditions:

- a. Development of the project shall be substantially in conformance with the plans provided by CKA Architects, consisting of ten plan sheets, dated received October 19, 2018, and approved by the Planning Commission on November 5, 2018 except as modified by the conditions contained herein, subject to review and approval of the Planning Division.
- b. Prior to building permit issuance, the applicant shall comply with all Sanitary District, Menlo Park Fire Protection District, Recology, and utility companies' regulations that are directly applicable to the project.
- c. Prior to building permit issuance, the applicant shall comply with all requirements of the Building Division, Engineering Division, and Transportation Division that are directly applicable to the project.
- d. Prior to building permit issuance, the applicant shall submit a plan for any new utility installations or upgrades for review and approval by the Planning, Engineering and Building Divisions. All utility equipment that is installed outside of a building and that cannot be placed underground shall be properly screened by landscaping. The plan shall show exact locations of all meters, back flow prevention devices, transformers, junction boxes, relay boxes, and other equipment boxes.
- e. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating that the applicant shall remove and replace any damaged and significantly worn sections of frontage improvements. The plans shall be submitted for review and approval of the Engineering Division.
- f. Heritage trees in the vicinity of the construction project shall be protected pursuant to the Heritage Tree Ordinance and the arborist report prepared by Advanced Tree Care, on February 24, 2018.
- 4. Approve the architectural control, subject to the following project-specific condition:

a. Simultaneous with the submittal of a complete building permit application, the applicant shall have the flexibility to propose alternative heritage tree replacements subject to the review and approval of the City Arborist.

F. Public Hearing

F1. Use Permit/Jake and Katya Mizrahi/1834 Doris Drive:

Request for a use permit revision to make changes to the approved roofing material, add a first floor window and a second floor skylight, and change the eave structure on the southwest side elevation for a new two-story residence on a substandard lot with regard to lot width in the R-1-S (Single Family Suburban Residential) zoning district. In addition, a heritage size street tree is proposed for removal. The original use permit was approved in May 2017. (Staff Report #18-092-PC)

Staff Comment: Senior Planner Corinna Sandmeier said she had no additions to the written report.

Applicant Presentation: Steve Simpson, project architect, said they were requesting several things that were mostly related to try to get more light into the house including adding a window and a skylight. He said the eave structure referenced in the staff report was an overhang projecting five feet off the side of the house that was pulled back to four feet to allow more light into the dining room and the light well. He said the house was originally approved with a standing seam metal roof. He said their intent had been for a more classic look rather than a contemporary, look, so they wanted to use a composite shingle roof instead. He said they spent time to get a high-quality roof and a color palette very similar to the previously approved roof color. He said the property owners had wanted to keep the magnolia tree in the front but thought now there might be a better solution for the site. He said much of that related to the driveway and how it would need to go into the house. He said magnolia's have a very shallow root system and were hard to pave around. He said paving over the roots would cause a berm in the front of the property. He said driving over that would probably cause harm to the tree in the long run. He said recently PG&E came to the site and said they had a new policy of not doing work under a tree canopy. He said where the gas line was proposed there was no way to run the line, so it was not under the canopy of the tree. He said the house was plumbed to that side so a solution to move the line to the other side of the property was not reasonable. He said they had a landscape architect review and currently were proposing to replace the magnolia tree with a field dug olive tree 14 to 15 feet tall. He said they were open to different species noting a tree with deep roots was desirable. He said three or four feet of the street was located on the subject property.

Commissioner Onken confirmed that the house was basically the same volume and design. Mr. Simpson said there was one more window added on the front first floor.

Commissioner Barnes said the staff report on page 3 called out that the City Arborist was not supportive of removing the tree unless additional information was provided by the applicant. He asked staff to provide more context. Senior Planner Sandmeier said the City Arborist indicated that the tree was a street tree, so its removal needed his approval. She said the Arborist had asked the applicant to provide more information. She said the Commission was asked to provide feedback on the expanded driveway proposed should the tree be removed or to keep the driveway as originally approved to remain regardless of the tree.

Mr. Simpson asked whether the City Arborist knew the tree was not in the City's right of way but was located on the subject property and was a privately-owned tree. Chair Goodhue asked staff to address. Senior Planner Sandmeier said the City Arborist had a citywide plan of street trees and that was the information he had given staff. She said their understanding was the project could move forward without the removal of the tree. She said should the City Arborist receive additional information on why the tree's removal was necessary that could move forward separately. She said the use permit revision request was for the changes to the house and driveway design.

Commissioner Barnes asked about the driveway. Senior Planner Sandmeier said the driveway was 10 feet wide at the curb cut under the original use permit approval. She said that could remain or if the City Arborist approved removal of the tree the driveway could be expanded to a 24-foot wide curb cut or a reduced curb cut. Commissioner Barnes said the Commission was asked to decide before the City Arborist finally decided about the magnolia tree. Acting Principal Planner Perata said essentially the overall approval of the project included the retention of the magnolia tree. He said however if the City Arborist allowed for the removal of the magnolia tree would the Planning Commission support a driveway expansion up to a 24-foot wide curb cut, which was the maximum permitted.

Replying to Commissioner Strehl, Mr. Simpson said the driveway was narrow with the original design as the tree was in front of the garage. He said apparently PG&E had a new policy about working around trees both above and below ground. He said they were trying to schedule PG&E to run the gas line to the house and were told they could not run it because of the tree being there.

Commissioner Combs said the applicant had made a point about the tree being on the subject property and confirmed with staff that regardless of where it was located the City Arborist was the decision maker regarding its removal because it was a heritage tree.

Commissioner Onken clarified with staff that a replacement tree would be planted in a different location than the existing magnolia tree.

Commissioner Riggs said he understood a street tree was any tree located within five feet of the street noting that he had two trees on his property that he had to maintain as street trees. He confirmed with staff that the magnolia tree was the only tree on the front of the property.

Replying to Chair Goodhue, Senior Planner Sandmeier said part of the use permit revision request was to expand the curb cut and the driveway. Mr. Simpson said if the tree were removed, they could do a more conventional driveway but with the tree there the driveway had to go around it. He said a 24-foot wide or 20-foot wide curb cut would be fine with them.

Commissioner Camille Kennedy confirmed that if the tree remained the driveway would remain as approved and the house would need to be replumbed for the gas line to come into the other side away from the tree. She said if the tree was removed the house could have a gas line run as currently plumbed and the driveway could be designed to a more conventional width.

Chair Goodhue opened the public hearing and closed it as there were no speakers.

Commission Comment: Commissioner Barnes said he supported the request for the design changes. He said if the City Arborist approved the heritage tree removal, he would support a 20-foot driveway curb cut.

Replying to Commissioner Strehl, Acting Principal Planner Perata said the City Arborist was reviewing the applicant's request to remove the magnolia tree. He noted that the Planning Commission was not able to direct the City Arborist to approve the tree removal request. He said they thought it would be beneficial for the applicant and the project to bring the use permit revision requests to the Commission sooner than later with the possibility of a driveway change if the tree removal was approved.

Commissioner Onken said if the Commission approved a driveway that would run over the space where a tree currently was that they were deeming the tree would be removed with the approval of the use permit revisions. Senior Planner Sandmeier said it could be part of a motion that if the tree was not approved for removal that the project's original driveway design would be in effect.

Commissioner Onken moved to approve the use permit revisions as recommended in the staff report and the expanded driveway contingent upon City Arborist approval of the removal of the magnolia tree.

Commissioner Riggs said he could not support the logic that the tree would need to be removed to save the applicant money from running the gas line further. He said typically one-third of a tree's roots might be removed during a given season without harming it, noting he had to do this twice. He said regarding paving over roots and creating a high point causing water runoff toward the house that similarly he had had to put a drain in front of a garage door to solve that. He said the Doris Drive street frontage had few street trees and he could not support losing one or replacing it with an inferior species in terms of canopy and height. He said he did not find the argument against having to back out from the garage a distance substantial enough to require loss of the tree. He said the other changes such as the roof, eave adjustments and addition of a window were attractive and easy to support. He said he could not second the motion.

Commissioner Barnes said he would second the motion. He asked if Commissioner Onken favored a 24-foot or 20-foot driveway. Commissioner Onken said as proposed at 24-feet. Commissioner Barnes said he would prefer a 20-foot driveway. Commissioner Onken revised his motion to approve a 20-foot driveway. Commissioner Barnes seconded the amended motion.

ACTION: Motion and second (Onken/Barnes) to approve the project with the following modification; passes 6-1 with Commissioner Riggs opposed.

- 1. Make a finding that the project is categorically exempt under Class 1 (Section 15301, "Existing Facilities") of the current California Environmental Quality Act (CEQA) Guidelines.
- 2. Make findings, as per Section 16.82.030 of the Zoning Ordinance pertaining to the granting of use permits, that the proposed use will not be detrimental to the health, safety, morals, comfort and general welfare of the persons residing or working in the neighborhood of such proposed use, and will not be detrimental to property and improvements in the neighborhood or the general welfare of the City.
- 3. Approve the use permit subject to the following *standard* conditions:
 - a. Development of the project shall be substantially in conformance with the plans prepared by SDG Architecture, consisting of 22 plan sheets, stamped received on October 25, 2018, and approved by the Planning Commission on November 5, 2018, except as modified by the conditions contained herein, subject to review and approval by the Planning Division.
 - b. Prior to building permit issuance, the applicants shall comply with all Sanitary District, Menlo Park Fire Protection District, and utility companies' regulations that are directly applicable to the project.
 - c. Prior to building permit issuance, the applicants shall comply with all requirements of the Building Division, Engineering Division, and Transportation Division that are directly applicable to the project.
 - d. Prior to building permit issuance, the applicant shall submit a plan for any new utility installations or upgrades for review and approval by the Planning, Engineering and Building Divisions. All utility equipment that is installed outside of a building and that cannot be placed underground shall be properly screened by landscaping. The plan shall show exact locations of all meters, back flow prevention devices, transformers, junction boxes, relay boxes, and other equipment boxes.

- e. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating that the applicant shall remove and replace any damaged and significantly worn sections of frontage improvements. The plans shall be submitted for review and approval of the Engineering Division.
- f. Simultaneous with the submittal of a complete building permit application, the applicant shall submit a Grading and Drainage Plan for review and approval of the Engineering Division. The Grading and Drainage Plan shall be approved prior to the issuance of grading, demolition or building permits.
- g. Heritage trees in the vicinity of the construction project shall be protected pursuant to the Heritage Tree Ordinance
- 4. Approve the use permit, subject to the following project-specific condition:
 - a. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans showing a 10.5-foot wide curb cut as approved by the Planning Commission on May 22, 2018 as part of the original use permit, or if the City Arborist approves removal of the heritage size Magnolia tree, an up to 20-foot wide curb cut may be incorporated into the building permit plan set, subject to review and approval by the Planning and Engineering Divisions.
- F2. Use Permit/Chris Dolan/119 Baywood Avenue:

Request for a use permit to demolish an existing single-family residence and detached garage and construct a new two-story single-family residence with an attached one-car garage on a substandard lot with respect to lot area and width in the R-1-U (Single Family Urban Residential) zoning district. (Staff Report #18-093-PC)

Staff Comment: Assistant Planner Paz said staff had no additions to the written report.

Applicant Presentation: Chris Dolan, project sponsor, said the existing home had been abandoned for over 25 years and was in extremely poor condition. He said they had met with adjacent neighbors and those across the street, who welcomed the replacement of the existing structures. He noted a street study they did along Baywood Avenue using photos. He said the subject lot had a cant in terms of the shape, so they pulled the garage to the left side to maximize the front and back yards. He said they were choosing an alternate means and method for construction. He said they would do a factory-built home that would reduce construction impact to the neighborhood. He said it also created a 70% reduction in waste.

Commissioner Onken asked how much the pre-built structure dictated the height. Mr. Dolan said each module was approximately eight to nine feet tall. He said in stacking those they sat on a stem wall foundation to get the height off the finished grade. He said the modules were eight feet in diameter. He said they had to make sure they stayed within the setbacks. He said they added a porch and awnings to break up the façade and the garage would be constructed onsite.

Commissioner Barnes referred to Attachment E, the paragraph under the heading *Neighboring Properties* that indicated they had contact with neighbors at 106 and 111 Baywood Avenue. He asked if that was the extent of neighbor outreach. Mr. Dolan said they met with the neighbor to the

rear after rats were seen when they cleared the subject property backyard of overgrowth. He said they worked with the neighbor to the left on cleaning and debris removal. Commissioner Barnes asked if they had shown the plans to neighbors. Mr. Dolan said when they purchased the property and began debris removal neighbors came over to see what was happening. He said they introduced themselves to the left adjacent neighbor, the neighbor facing the property, and another neighbor across the street and told them of their plans to demolish the existing structures and install a modular designed home. He said at that time they had not completed any of the renderings. He said through the City's neighbor notification process they received a neighbor comment that they did not like the modern style home proposed as it related to the neighborhood.

Commissioner Riggs confirmed with the applicant that they would do extermination prior to demolition.

Chair Goodhue opened the public hearing.

Public Comment:

 Joel Zott, 111 Baywood Avenue, said he was the adjacent neighbor. He said he supported the project. He said he thought they all were looking forward to a new neighbor and a great property in Menlo Park.

Chair Goodhue closed the public hearing.

Commission Comment: Commissioner Riggs referred to a rendering of the driveway and asked its width as it seemed to dominate the façade. Mr. Dolan said that it was 24-feet wide. Commissioner Riggs said he was not quite comfortable with a dominance of paving in small lots. He questioned the selection of a pistache tree for the front yard as in 20 years it would only have a five-inch diameter trunk. Mr. Dolan said it was used to break of the massing of the façade and garage. He said two street trees were also proposed to be planted. He said all were at the recommendation of the City Arborist. He said they were using two different materials to breakup the massing of the driveway. He said they needed the width to meet the guidelines for the turn radius into the driveway from the street, keep the house in close proximity to the front and have the uncovered parking space adjacent to the garage.

Commissioner Riggs said he recently had been researching factory-built housing. He said his concern was this was a relatively simple and traditional neighborhood and this proposed box structure was not as harmonious as what he would like to see.

Commissioner Onken said the roof plan showed the 1.5 by 12 for the main building and the garage like a flat roof at half-inch. He said he did not see what would happen with rainwater on the garage. Mr. Dolan said it would slope to the downslope side to a scupper and downspout. Commissioner Onken said it was sloping in each direction and asked where it would scupper out. Mr. Dolan said they would do the most appropriate configuration. Commissioner Onken referred to the main rendering. He said the scale of it seemed to show the new residence smaller and further back than the reality as compared to the site plan. Mr. Dolan said the site plan D04 showed the actual massing of the house was set back three-quarters away from the neighbor's adjacent garage. He said what was seen was the massing of the front porch, which was about halfway next to the garage. Commissioner Onken said the neighbor's garage was a mass very similar to the project

garage. He said yet the project garage was closer to the front and appeared to only be large enough to accommodate a mini vehicle whereas the neighbor's garage was a two-car garage.

Commissioner Onken said he supported using modular housing, but he thought the proposal had issues with its fit on the site and within the neighborhood. He suggested they might extend the front porch height past where the first floor and second floor split as that might increase the dominance of the ground floor and reduce the top heaviness of the second floor. He said he thought the garage would need to have some kind of parapet or something when the roofs were resolved. He said as proposed the garage was more massive and dominant than was expected. Mr. Dolan said the neighbor's garage was on a corner lot and its house was extremely long, that it was much more massive in appearance than what their house would be.

Commissioner Barnes said the applicant referred to the vernacular of the garage. He said such a prominent freestanding garage was not represented in the neighborhood. He said he was concerned with the proposed garage's prominence, location and incorporation into the site. He said he also had a concern with the neighbor outreach. Mr. Dolan said the plans were provided through notice of the City and their neighbor at 111 Doris Avenue shared them on NextDoor. Commissioner Barnes said he would have liked to have seen a more robust outreach with all neighbors with adjoining property lines.

Referring to the garage comments, Mr. Dolan said the front setback line ran at an angle. He said for the garage and the parking to work with that cant they put the garage on the left side to pull it as close to the street as possible. He said the garage engaged with the residence for egress, use and practicality of exiting the garage onto the front porch. He said they looked at bringing the house forward more and reducing the width of the front porch but pulling the façade too close to the front street would have been too much massing. He said they felt that engaging the garage with the front porch and stepping the front façade back further reduced the vertical massing from the street.

Commissioner Riggs asked staff whether a garage had to be attached to be in the front of a lot as this proposed garaged seemed to only be tangentially connected. Assistant Planner Paz said the definition of "structurally attached" was "sharing common loadbearing members." He said early on they took this question to the City's Building Official Ron LaFrance, who confirmed that the proposed construction would be considered structurally attached. He said that the garage would be integrated into the factory-built porch unit informed the Building Official's finding that the garage was structurally attached.

Commissioner Combs said he was concerned with the proposed contemporary design as it was not present in the surrounding area. He said he also had a concern about neighborhood outreach. He said though that the neighbors in this area turn out when they have an issue with a project. He said he had to assume that there was neighbor support noting the one public commenter tonight or there was indifference to it and an unwillingness to come out on it.

Commissioner Strehl said the neighborhood was a very active one noting Commissioner Combs' observation about the neighbor turnout in opposition of 50 Middlefield Road. She said in this instance that there was no objection seemed to indicate that their silence was acquiescence or approval. She said she would have a hard time voting against the project.

Commissioner Onken said he thought the project just needed a bit more attention to address the boxiness of it.

Commissioner Barnes said the staff report on page 2 under Design and Materials said the Commission might wish to discuss whether a direct pedestrian connection should be provided between the main entry and the public right of way. He asked what staff's viewpoint was. Assistant Planner Paz said providing a direct pedestrian access would connect the project to the street. He said it was not required as there was nothing in the zoning ordinance requiring it. He said it was the fit and integration within the neighborhood that they were asking the Commission to weigh in on. He said it was the pattern in the neighborhood and it would soften the façade of the garage.

Commissioner Barnes said he would support continuing the project and would ask the applicant to visit with the neighbors and show the plans and provide a record of that.

Commissioner Strehl said her home was accessed up the driveway to the front door and did not have a direct path to the front door from the street. She said there were a number of homes like that in the area.

Commissioner Riggs said staff had also prompted that the Commission might want to discuss if the 24-foot curb cut was an appropriate width. He said in effect the 24-foot width was two driveway spaces and a walkway. He said he did not want to say how the home should be entered but with this width driveway it was encouraging three cars parked and a rec room in the garage. He said regarding the architecture as contemporary and its dissimilarity in the area that he could not support it. He said if they continued the project, they had to be forthright about what should be changed to be supported. He referred to D0.2, the streetscape. He said that gave a sense of how the proposed home dominated the street, not because of overall square footage, but because of its façade. He said stacking modules of nine-feet would create sidewalls that were more imposing than a house with a roof peak six-feet taller. He said Commissioner Onken's description of the homes in the area as cute and small was very apt particularly in this end of the Willows.

Commissioner Combs asked if there was a motion on the table. Chair Goodhue said Commissioner Onken was going to make a motion, but it had not been made. Commissioner Onken moved to continue the project.

Chair Goodhue said she agreed with some of the comments. She said she preferred a direct pedestrian access from the street. She said regarding the neighborhood character that she thought the Willows was a neighborhood in great transition. She said she lived in the Willows and the homes going up across the street from her were neither cute or small. She noted the streetscape provided by the applicant that showed the neighboring homes. She said she thought 121 Baywood Avenue when it was built some years ago was out of scale to the street. She heard the boxy arguments, but she thought the boxy modular was something that was happening in the neighborhood. She said she loved the proposed garage. She said the neighboring house was oriented to Woodland Avenue and the other was fronting on Clover Avenue. She said she would prefer a smaller width curb cut if it worked. She said the architecture could be finessed more but she was concerned that the City has no design guidelines. She said she did not support a continuance.

Commissioner Combs asked what direction would be given to the applicant.

Commissioner Onken said that discussion on architectural style was a red herring. He said the scale of a project was something the Commission was mindful of. He said the applicant's photo

page demonstrated that there was any variety of architectural styles in the area. He said the other homes though tended to a smaller scale. He said he would like the architect to play with the scale of the main mass of the building moving the modules back in front, raising the porch height, and perhaps the porch didn't have to go the full width of the façade. He said he would like the project to address the slightly smaller scale of the neighborhood. He said he favored walking up the driveway as more planting was preferable in the front yard.

Commissioner Riggs said he would second the motion to continue. He said at least two or three of the Commissioners believed modern architecture had to be done sensitively. He said a product described as having limitations in shape indicated potential failure in the use of forms. He said the Commission had seen and been impressed with modern architectural projects.

Commissioner Combs suggested that they should provide general direction to the applicant.

Commissioner Strehl called for the vote and if it passed to then provide direction.

Chair Goodhue asked the applicant if he wanted more direction for a continuance. Mr. Dolan said that if the direction was to add certain elements to the front façade to break up the elevation that was one thing. He said if the direction was to step back the upper modules that was not doable. He said he would prefer they go to the vote.

ACTION: Motion and second (Onken/Riggs) to continue the project with the following general guidance; passes 4-3 with Commissioners Barnes, Combs, Onken and Riggs in favor and Commissioners Goodhue, Kennedy and Strehl in opposition.

- 1. General guidance and comments for applicant consideration:
 - a. Explore options for reducing the perceived massing of the building by:
 - i. Increasing the perceived "weight" of the lower floor by moving up the height of the porch
 - ii. Add awnings/different material elements to soften the front façade
 - iii. Consider reducing the extent of the porch
 - b. Conduct additional outreach:
 - i. Contact the nearby neighbors and get sign off from them that they have seen the plans
 - c. Revise the garage:
 - i. Correct the roof pitch for proper drainage
 - ii. Prominence is problematic from a design perspective
 - d. Reduce curb cut width:
 - i. Consider reducing the width from 24 feet to 20 feet

G. Study Session

G1. Use Permit and Architectural Control/David Claydon/555 Willow Road:

Study Session on a request for use permit and architectural control review to demolish an existing nonconforming office building (currently vacant) and construct a 16-bedroom, three-story boardinghouse. The project site is located in the R-3 (Residential Apartment) zoning district, and boardinghouses are conditional uses in the R-3 zoning district. As part of the project, the existing restaurant building, which is a nonconforming use, would remain. The proposed project would include eight parking spaces devoted to the boardinghouse and five parking spaces for the restaurant, for a total of 14 on-site where 16 spaces are required. *Continued to a future meeting.*

H. Regular Business

H1. Architectural Control/Tom Barnds/2180 Sand Hill Road:

Request for an Architectural Control revision to allow exterior building modifications to an existing four-story office building including, new exterior building materials, the creation of a new outdoor patio, modifications to landscaping, and reconfiguration of the parking lot. The subject property is in the C-1-X (Administrative and Professional District, Restrictive - Conditional Development) zoning district. The proposal includes a request to locate 33 parking spaces in landscape reserve. (Staff Report #18-094-PC)

Staff Comment: Associate Planner Kaitie Meador said a materials board was provided for the Commission's review.

Application Presentation: Dawn Jedkins, DES Architects and Engineers, Redwood City, said they were the project architects. She said the building at 2180 Sand Hill Road was recently purchased by their clients, who wanted to do architectural and site improvements. She said their work included façade renovation to implement some higher quality materials and to create a more traditional look as well as to create more open space. She said the latter would eliminate a row of parking. She said they retained the required number of parking spaces by restriping the spaces to the current standards of the uni-stall size as opposed to the larger existing nine-foot stalls. She said they have maintained the existing emergency access. She described the proposed changes with a visual presentation.

Commissioner Onken asked if they had considered extending the screening material for the antennas around the entire building top. Ms. Jedkins said they had looked at that and found it seemed too heavy, so they put them where they were necessary. She said they broke the window pattern from one large window into three windows with a larger mullion that then projected up and connected to the cornice element where the antenna screening feature did not occur.

Commissioner Combs asked if the building was occupied by different tenants. She said the clients would occupy the offices on the top floor noting the current tenants' leases would soon expire. She said two tenants would remain during construction on the ground floor. Commissioner Combs asked why the patio space was desired. Ms. Jedkins said the desire was for a space to go outside, eat lunch, or have a small meeting. She said it was not intended for large events noting the space was broken up creating more intimate spaces.

Chair Goodhue opened up the public comment period and closed it as there were no speakers.

Commission Comment: Commissioner Barnes moved to approve, and Commissioner Kennedy seconded the motion. Commissioner Onken said the site needed signage attention as the site was easy to drive by without being able to access it easily after having done so. Ms. Jedkins said that they were doing a master signage plan separately.

ACTION: Motion and second (Barnes/Kennedy) to approve the item as recommended in the staff report; passes 7-0.

- 1. Make a finding that the project is categorically exempt under Class 1 (Section 15301, "Existing Facilities") of the current California Environmental Quality Act (CEQA) Guidelines.
- 2. Adopt the following findings, as per Section 16.68.020 of the Zoning Ordinance, pertaining to architectural control approval:
 - a. The general appearance of the structure is in keeping with the character of the neighborhood.
 - b. The development will not be detrimental to the harmonious and orderly growth of the city.
 - c. The development will not impair the desirability of investment or occupation in the neighborhood.
 - d. The development provides adequate parking as required in all applicable city ordinances and has made adequate provisions for access to such parking.
 - e. The property is not within any Specific Plan area, and as such no finding regarding consistency is required to be made.
- 3. Approve the architectural control subject to the following *standard* conditions:
 - a. Development of the project shall be substantially in conformance with the plans prepared by DES Architects + Engineers, consisting of 44 plan sheets, dated received October 29, 2018, and approved by the Planning Commission on November 5, 2018, except as modified by the conditions contained herein, subject to review and approval by the Planning Division.
 - b. Prior to building permit issuance, the applicants shall comply with all Sanitary District, Menlo Park Fire Protection District, and utility companies' regulations that are directly applicable to the project.
 - c. Prior to building permit issuance, the applicants shall comply with all requirements of the Building Division, Engineering Division, and Transportation Division that are directly applicable to the project.

- d. Prior to building permit issuance, the applicant shall submit a plan for any new utility installations or upgrades for review and approval by the Planning, Engineering and Building Divisions. All utility equipment that is installed outside of a building and that cannot be placed underground shall be properly screened by landscaping. The plan shall show exact locations of all meters, back flow prevention devices, transformers, junction boxes, relay boxes, and other equipment boxes.
- e. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating that the applicant shall remove and replace any damaged and significantly worn sections of frontage improvements. The plans shall be submitted for review and approval of the Engineering Division.
- f. Simultaneous with the submittal of a complete building permit application, the applicant shall submit a Grading and Drainage Plan for review and approval of the Engineering Division. The Grading and Drainage Plan shall be approved prior to the issuance of grading, demolition or building permits.
- g. Heritage trees in the vicinity of the construction project shall be protected pursuant to the Heritage Tree Ordinance and the arborist report prepared by David L. Babby and dated April 26, 2018.
- 4. Approve the architectural control subject to the following *project-specific* condition:
 - a. The applicant shall maintain a minimum of 219 off-street parking spaces, of which 33 parking spaces are in landscape reserve. Should landscape reserve parking stalls be needed in the future, either the applicant or the City may make a request, subject to review and approval of the Planning Division and Transportation Division.
- H2. Review of Draft 2019 Planning Commission Meeting Dates. (Staff Report #18-095-PC)

Staff Comment: Acting Principal Planner Kyle Perata said staff prepared the draft 2019 meeting schedule for the Planning Commission. He asked if the Commissioners might review and see if staff had dates that potentially conflicted with school holidays or other holidays.

There was no discussion.

I. Informational Items

I1. Future Planning Commission Meeting Schedule

Acting Principal Planner Perata said there were two meetings in December and not a second meeting in November. He said the December agendas were tentative at this time. He said expected projects for December agendas included a couple of multi-family development projects and EIR scoping session for a new research development building in the Bayfront area at 1350 Adams Court that the Commission had seen earlier in a study session.

Chair Goodhue confirmed with staff that Commissioner Combs and she would need to recuse themselves from the Adams Court item.

Commissioner Strehl asked when the 40 Middlefield Road project would be heard. Acting Principal Planner Perata said it likely would be on one of the two December meeting agendas.

Commissioner Onken asked when the Hampton Inn project would be seen by the Planning Commission again. Acting Principal Planner Perata said that was not tentatively agendized for either December meeting.

- Regular Meeting: December 3, 2018
- Regular Meeting: December 10, 2018

J. Adjournment

Chair Goodhue adjourned the meeting at 9:38 p.m.

Staff Liaison: Kyle Perata, Acting Principal Planner

Recording Secretary: Brenda Bennett

Community Development



STAFF REPORT

Planning Commission Meeting Date: Staff Report Number:

12/3/2018 18-096-PC

Consent Calendar:

Architectural Control/ Marie and Bryson Young/ 154 Buckthorn Way

Recommendation

Staff recommends that the Planning Commission approve an architectural control request to modify the exterior of an existing townhouse in the R-3 (Apartment) zoning district. The request includes modifications to second and third story windows, modifications to the balcony, and new front and garage doors. The proposal also includes repainting the exterior of the residence white. The recommended actions are contained within Attachment A.

Policy Issues

Each architectural control request is considered individually. The Planning Commission should consider whether the required architectural control findings can be made for the proposal.

Background

Site location

The subject property is located at 154 Buckthorn Way, mid-block between El Camino Real and Stone Pine Lane, in the Park Forest neighborhood near the City's northern border. Some of the adjacent parcels along Buckthorn Way are also located within the R-3 (Apartment) zoning district, and contain townhouses and associated common space; and some are in the R-1U (Single family residential) zoning district and are occupied by single family residences. The parcel and the townhouses surrounding the parcel were originally developed under the jurisdiction of San Mateo County as a Planned Unit Development and are known collectively as the Park Forest development. The area represents a variety of architectural styles, with most townhouses at a three-story scale. Many residents have modified their units since being annexed into the City of Menlo Park. Closer to El Camino Real, parcels are located within the SP-ECR/D (El Camino Real/Downtown Specific Plan) zoning district, including a property at 1704 El Camino Real that is proposed for redevelopment with a three-story hotel. A location map is included as Attachment B.

Analysis

Project description

The existing single-family townhouse contains approximately 2,437 square feet of gross floor area. The existing townhouse also includes a two-car garage, which is not included in the calculation of gross floor area. The townhouse consists of three levels with three bedrooms and two and half bathrooms. The applicant is proposing exterior modifications, which are described in detail in the following section of this

Staff Report #: 18-096-PC Page 2

staff report. The proposed project would not increase the gross floor area of the existing residence. The project plans are included as Attachment C, and the project description letter is included as Attachment D.

Design and Materials

The front and rear elevations of the townhouse are proposed to be modified, with the majority of the materials, colors, and window modifications to the front elevation. On the front elevation, the applicant proposes to remove the stucco balcony and replace with horizontal cedar siding. On the rear elevation, the proposed changes would be limited to repainting the stucco balcony railing from light blue to white. The applicant proposes to remove and replace all the front elevation windows with tempered glass and aluminum bronze anodized trim. The sizes of all but the third floor master bathroom window openings would be altered. The second floor windows would have a height of five feet, six inches instead of seven feet,-four inches. On the third floor, the expansive 14 foot, 10 inch window would have multiple two feet, eight inch windows, but the sill height and overall width would remain the same.

The applicant also proposes replacing the existing entry door with a new single solid door with glass sidelight. As shown on the color board, the front door and garage door are proposed to be wood panels to match the proposed balcony material, which would provide an accent feature. Other exterior changes to the front and rear elevations include changing of the exterior color from blue to white. The proposed front elevation, showing some of the colors and materials, can be seen on Plan Sheet A-04 (included in Attachment C). A color and materials board has also been included in the submittal, and will be available for Planning Commission review prior to considering the consent calendar at the December 3rd meeting.

Staff believes the project would be consistent with the existing contemporary architectural style of the individual unit. The project would also be compatible with the existing architectural styles of the overall Park Forest development, which features a number of townhouses with a variety of materials and architectural styles. In addition, the project should have a relatively small impact to the neighbors given the limited scope of work.

Correspondence

A letter from the Park Forest II Homeowners Association Architectural Committee relaying approval of the project is included as Attachment E.

Conclusion

Staff believes the project would result in a consistent architectural style for the individual unit. Additionally, the project would be compatible with the existing architectural styles found within the overall development, which features a number of townhouses with a variety of materials and architectural styles. The proposal has been approved by the applicable homeowners association. Staff recommends that the Planning Commission approve the proposed project.

Impact on City Resources

The project sponsor is required to pay Planning, Building and Public Works permit fees, based on the City's Master Fee Schedule, to fully cover the cost of staff time spent on the review of the project.

Environmental Review

The project is categorically exempt under Class 1 (Section 15301, "Existing Facilities") of the current California Environmental Quality Act (CEQA) Guidelines.

Public Notice

Public Notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Public notification also consisted of publishing a notice in the local newspaper and notification by mail of owners and occupants within a 300-foot radius of the subject property.

Appeal Period

The Planning Commission action will be effective after 15 days unless the action is appealed to the City Council, in which case the outcome of the application shall be determined by the City Council.

Attachments

- A. Recommended Actions
- B. Location Map
- C. Project Plans
- D. Project Description Letter
- E. Home Owner Association Letter

Disclaimer

Attached are reduced versions of maps and diagrams submitted by the applicants. The accuracy of the information in these drawings is the responsibility of the applicants, and verification of the accuracy by City Staff is not always possible. The original full-scale maps, drawings and exhibits are available for public viewing at the Community Development Department.

Exhibits to Be Provided at Meeting

Color and Materials Board

Report prepared by: Fahteen Khan, Contract Assistant Planner

Report reviewed by: Kyle Perata, Acting Principal Planner THIS PAGE INTENTIONALLY LEFT BLANK

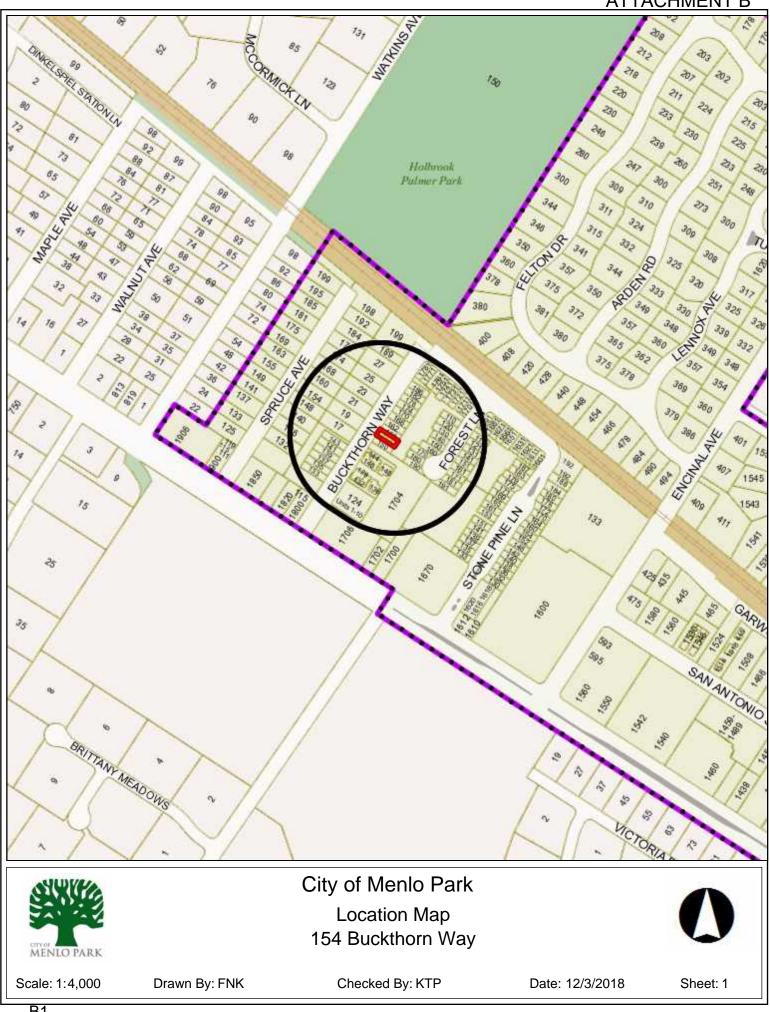
ATTACHMENT A

154 Buckthorn Way – Attachment A: Recommended Actions

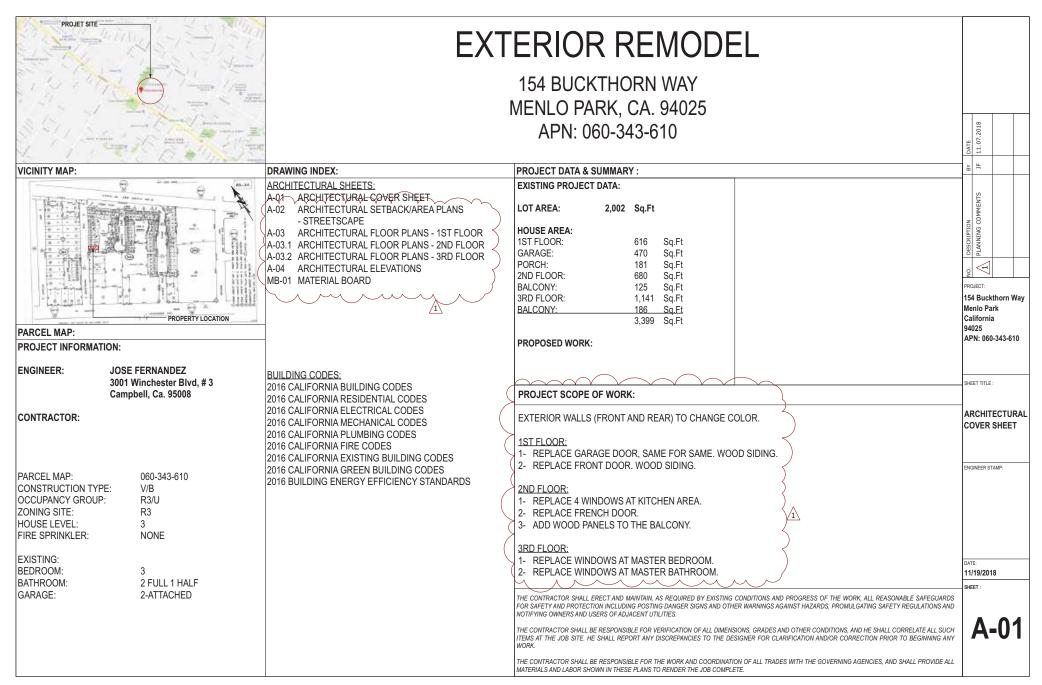
			ECT NUMBER: 018-00115			OWNERS: Marie and Bryson Young			
(Ap mo	partment) :	zoning district. The rest to the balcony, and	equest includes mo	difications to secon	d and th	ng townhouse in the R-3 hird story windows, and s repainting the exterior of the			
DECISION ENTITY: Planning Commission			DATE: December 3, 2018 AC		ACTION	CTION: TBD			
VC	TE: TBD	(Barnes, Combs, Go	odhue, Kennedy, C	Onken, Riggs, Strehl)				
AC	TION:								
1.		inding that the projec rrent California Envir				on 15301, "Existing Facilities")			
2.	Adopt the following findings, as per Section 16.68.020 of the Zoning Ordinance, pertaining to architectural control approval:								
	a. 1	The general appeara	nce of the structure	e is in keeping with t	he chara	acter of the neighborhood.			
	b. 1	The development will	not be detrimental	I to the harmonious	and orde	erly growth of the city.			
	c. 1	The development will	not impair the des	irability of investmer	nt or occ	cupation in the neighborhood.			
		The development pro nade adequate provi			all appli	cable city ordinances and has			
		The property is not w equired to be made.	ithin any Specific F	Plan area, and as su	ch no fir	nding regarding consistency is			
3.	Approve the architectural control subject to the following standard conditions:								
	C t	a. Development of the project shall be substantially in conformance with the plans provided by JF Consulting, consisting of seven plan sheets, dated received November 20, 2018, and approved b the Planning Commission on December 3, 2018 except as modified by the conditions contained herein, subject to review and approval of the Planning Division.							
	F					Sanitary District, Menlo Park that are directly applicable to			
	[requirements of the Building directly applicable to the			
	L E F	upgrades for review a equipment that is inst properly screened by	and approval by the alled outside of a b landscaping. The	Planning, Engineer building and that car plan shall show exa	ring and inot be p ct location	or any new utility installations of Building Divisions. All utility placed underground shall be ons of all meters, back flow other equipment boxes.			
	s	e. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating that the applicant shall remove and replace any damaged and significan worn sections of frontage improvements. The plans shall be submitted for review and approval of the Engineering Division.							

LOCATION: 154 Buckthorn Way	PROJECT NUMBER: PLN2018-00115		APPLICANT: Mike Atias		OWNERS: Marie and Bryson Young						
PROPOSAL: Request for architectural control to modify the exterior of an existing townhouse in the R-3 (Apartment) zoning district. The request includes modifications to second and third story windows, and modifications to the balcony, and front/garage doors. The proposal also includes repainting the exterior of the residence white.											
DECISION ENTITY: Plana Commission	ning	DATE: December 3, 2018		ACTION: TBD							
VOTE: TBD (Barnes, Combs, Goodhue, Kennedy, Onken, Riggs, Strehl)											
ACTION:											
f. Heritage trees in the vicinity of the construction project shall be protected pursuant to the Heritage tree Ordinance.											

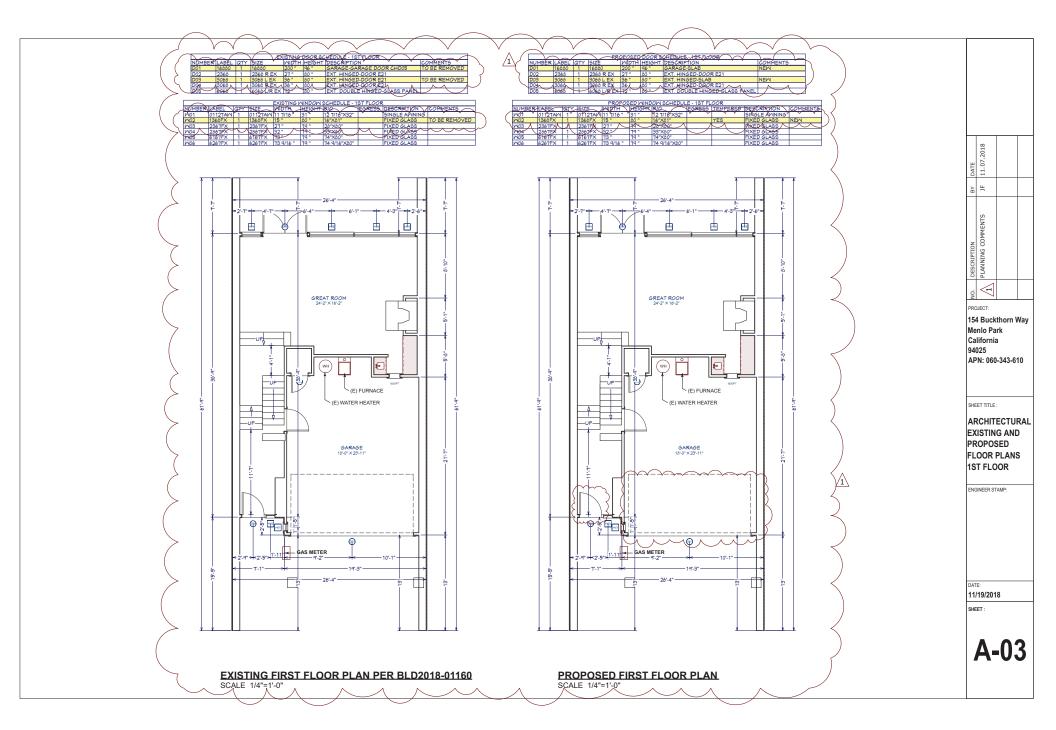
ATTACHMENT B

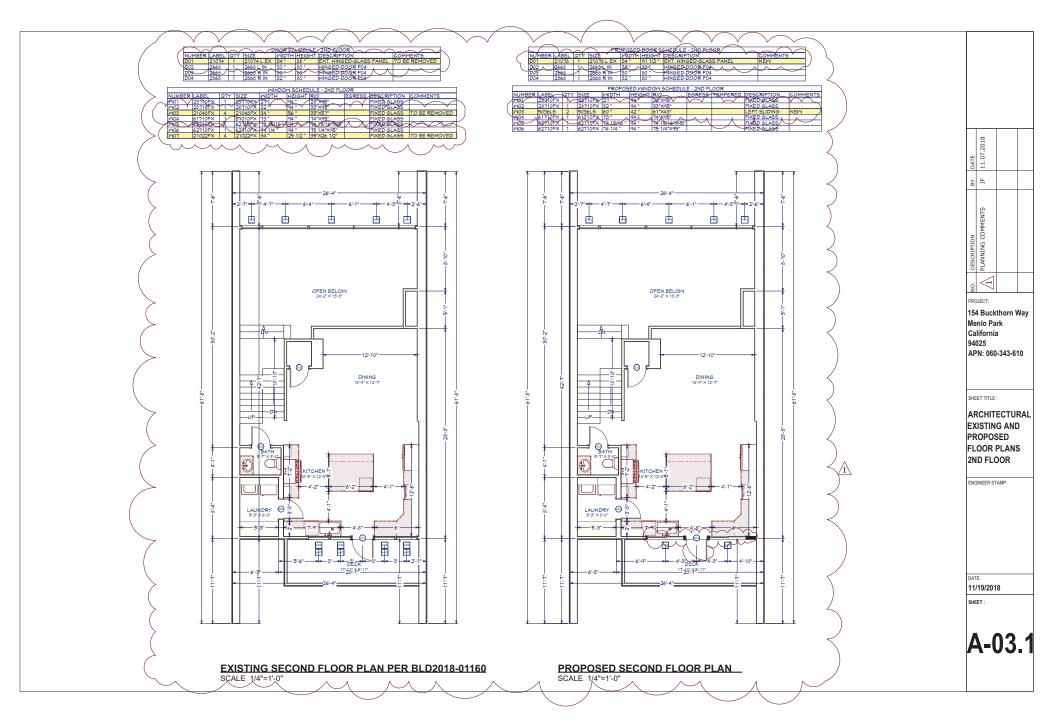


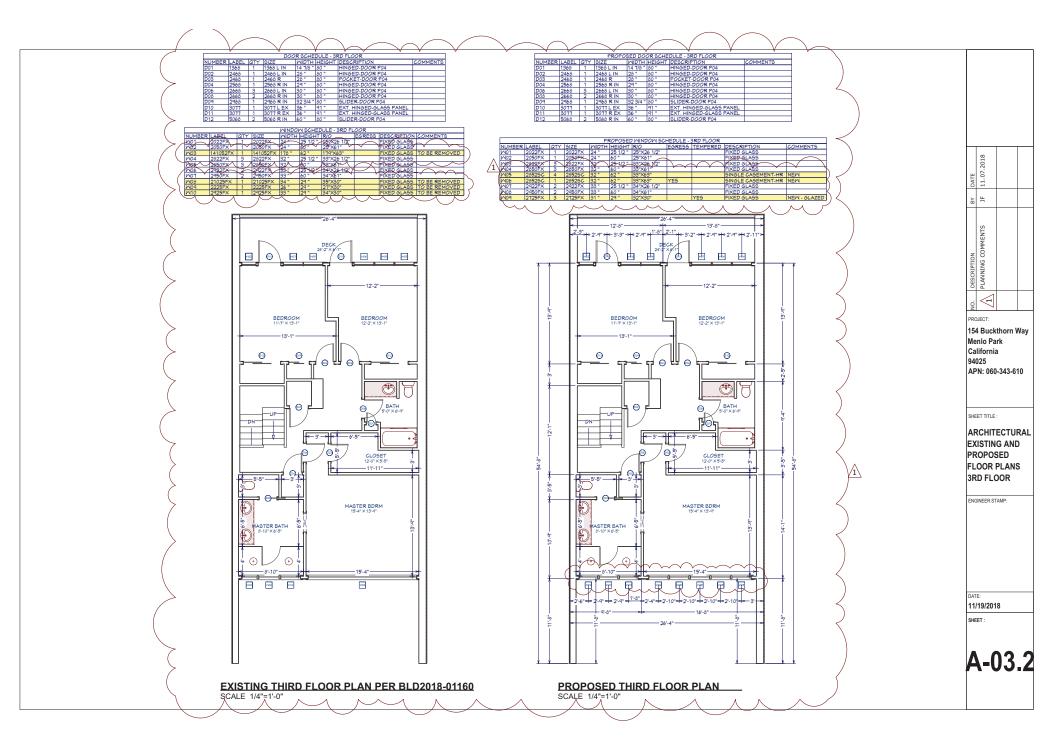
ATTACHMENT C



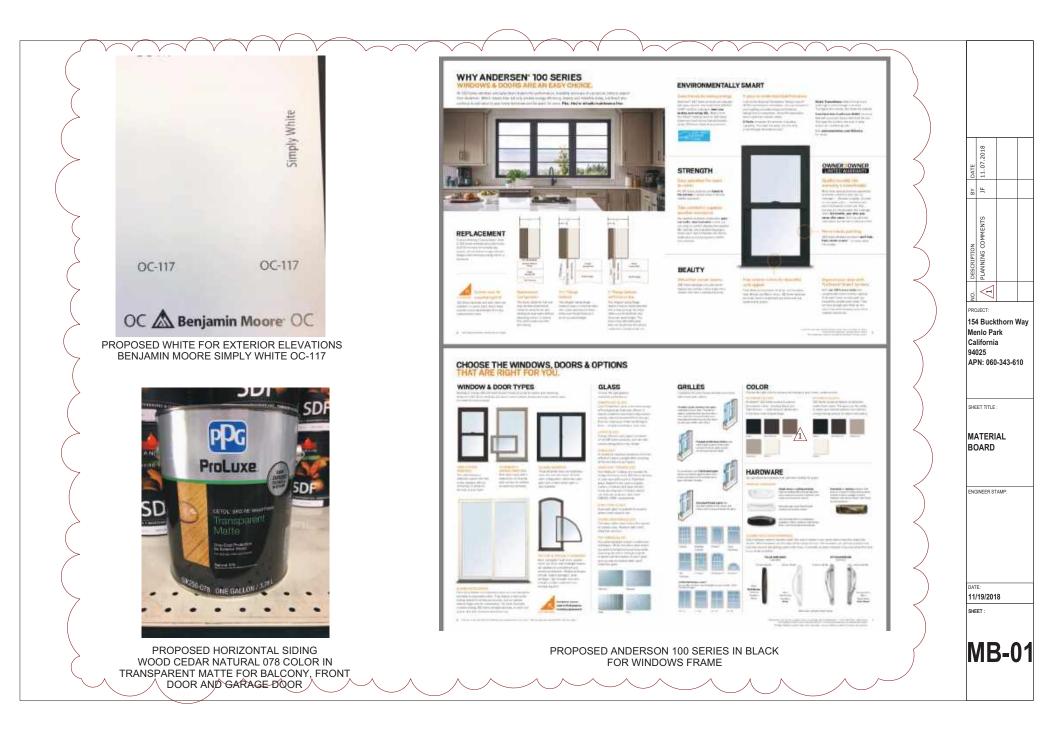












ATTACHMENT D

November 9, 2018

To Whom It May Concern:

My husband, Bryson, and I purchased the home at 154 Buckthorn Way with a vision for what it could become. Though the style of the home was not to our taste when we bought it, from the moment we walked in we were drawn to the grand window lines and the potential for a beautiful, open, and modern space in which we could raise our family (which, incidentally, grew by one member on November 5, 2018!).

Achieving this vision did not require any major changes as the bones of the house are excellent. Rather, there were a handful of relatively minor updates that we felt would make a great impact on what we wanted this house to be. Among these were the replacement of the windows along the front of the house, namely in the kitchen (windows and glass door) and in the master bedroom and bathroom.

We are excited that the update of the spectacularly sized windows to black frames in combination with painting the exterior of the house white and incorporating cedar siding on the balcony as well as the front door and garage doors will make for a modern and striking silhouette that will complement the inherently modern style of the home perfectly.

Inside the house, we have similarly made a number of updates, all intended to create a modern and open space, maximizing the size of each room and its access to natural light, from the kitchen to the dining room to the master bathroom.

We are excited to move forward with this project and anxiously await the city's approval.

Best regards, Marie & Bryson Young

ATTACHMENT E

Park Forest II HOA Association Menlo Park

September 7th, 2018

Menlo Park Permitting Department 701 Laurel Drive Menlo Park, CA 94025

To whom this may concern;

This letter will confirm that under the By-Laws of the Park Forest II homeowners Association , approval from the Architectural Committee of the HOA is only required for the changes made to the exterior of the home, including any changes to the landscaping in the front of the home and any changes made to the Common Area. Interior changes to the home made by the owner of the home do not require approval of the HOA Architectural committee.

Sincerely,

Carol Boyden

Park Forest II Chairperson

Park Forest II HOA Association Menlo Park

September 8, 2018

Menlo Park Permit Department 701 Laurel Street Menlo Park, Ca 94025

RE-154 Buckthorn Menlo Park exterior window replacement

To Whom It May Concern:

This letter will confirm the Park Forest II Architectural Committees approval of the window placement on the exterior of the home at 154 Buckthorn Menlo Park.

Sincerely,

part

Carol Boyden Park Forest II Architectural Committee Chairperson

Community Development



STAFF REPORT

Planning Commission Meeting Date: Staff Report Number:

12/3/2018 18-097-PC

Public Hearing:

Architectural Control, Use Permit, Below Market Rate Housing Agreement, and Mitigated Negative Declaration/Mark Sutherland/409 & 417 Glenwood Avenue and 1357 Laurel Street

Recommendation

Staff recommends that the Planning Commission approve a request for architectural control to demolish one, two-story residence and one, single-story residence addressed 409 Glenwood and 1357 Laurel Street, relocate an existing two-story residence addressed 417 Glenwood on-site, and construct two new two-story multi-family buildings with a below grade parking garage. One building would include three dwelling units and one would include four dwelling units. The project site currently contains three dwelling units, and the project would result in an increase of five units, for a total of eight units at the project site. As part of the project, the applicant is requesting a use permit for excavation within the required front setback for egress stairs. One heritage size tree is proposed for removal as part of the project. The proposal also includes a Below Market Rate (BMR) housing agreement for compliance with the City's BMR program and consideration of a Mitigated Negative Declaration regarding potential environmental impacts. The project site is located within the R-3 (Residential Apartment) zoning district. The recommended actions are contained within Attachment A.

Policy Issues

Each architectural control, use permit, BMR housing agreement, and Mitigated Negative Declaration is considered individually. The project site is zoned R-3 and is greater than 10,000 square feet in lot area and located around the El Camino Real/Downtown Specific Plan area. Therefore it is subject to specific requirements (such as a minimum density) for lots of its size and location within the R-3 district, which were modified as part of the City's 2007-2014 Housing Element Update, adopted in May 2013, to encourage more dense infill development around the El Camino Real/Downtown Specific Plan area. The Planning Commission should consider whether the required use permit, architectural control, BMR housing agreement, and Mitigated Negative Declaration findings can be made for the proposed project.

Background

Site location

The subject site is a 15,668 square foot lot and is located at 409 and 417 Glenwood Avenue and 1357 Laurel Street. The site is currently developed with three residential units in three detached buildings, one of which is a historic structure. Parking for the residential buildings is provided by a driveway on Glenwood Avenue. A location map is included as Attachment B.

The subject site is a corner lot with frontages on Glenwood Avenue and Laurel Street, where Glenwood Avenue serves as the front and Laurel Street serves as the side, per the requirements of the Zoning Ordinance for corner lots. Using Glenwood Avenue in a north-south orientation, the parcels to the south and east of the project site are also located in the R-3 zoning district and occupied by residential buildings. The parcels to the north and across Laurel Street are single family homes located in the Town of Atherton. The parcels to the west and across Glenwood Avenue are single family homes located in the single family suburban residential (R-1-S) and single family urban residential (R-1-U) zoning districts.

2007-2014 Housing Element Update

As stated in the Policy Issues section of the report, the subject parcel is zoned R-3 (Apartment) and is required to comply with the "Lot Area of 10,000 sq. ft. or More for Property Around the El Camino Real/Downtown Specific Plan Area" requirements. The City updated its 2007-2014 Housing Element in 2013, which contained a comprehensive set of policies and implementing programs intended to address effective implementation of the Housing Element, protection and enhancement of existing housing and neighborhoods, strategies to address special housing needs in the community, and ways to provide an adequate supply of new housing. A key component of the Housing Element was the subsequent adoption of Modifications to the R-3 (Apartment) Zoning District. The City Council amended the Zoning Ordinance to create opportunities for higher density housing in infill locations around the El Camino Real/Downtown Specific Plan area in proximity to where services and transit are available. Some of the key changes to the R-3 zoning district for lots greater than 10,000 square feet were as follows:

- Increase in building coverage maximum from 35 percent to 40 percent;
- Minimum density requirement of 13.1 dwelling units per acre up to a maximum of 30 dwelling units per acre;
- Relaxation of the parking requirements for one-bedroom and studio units to one-and-a-half spaces instead of two spaces; and
- Removal of the required separation between buildings on the subject site, as well as between buildings on adjacent lots.

The project's compliance with the R-3 zoning district and more specifically the requirements for properties that meet the "Lot Area of 10,000 sq. ft. or More for Property Around the El Camino Real/Downtown Specific Plan Area" criteria is discussed throughout this staff report.

Analysis

Project description

The applicant is requesting architectural control approval to demolish one, two-story residence and one, single-story residence, and relocate an existing two-story residence on-site, and construct two new two-story multi-family buildings with a below grade parking garage. The project also includes a use permit for excavation to construct the necessary egress stairs that would extend four feet into the required front yard setback. A data table summarizing parcel and project attributes is included as Attachment C. The project plans and the applicant's project description letter are included as Attachments D and E respectively.

The project site currently contains three dwelling units, and the project would result in an increase of five units, for a total of eight units at the project site. The buildings would be located in relatively the same location as the existing buildings and would feature three separate residential buildings. The building currently located at 417 Glenwood Avenue is considered a historic resource and is proposed to be retained and relocated on-site to the northwest corner of the property currently occupied by the building addressed 409 Glenwood Avenue, which would be demolished. The relocated structure is anticipated to be addressed 409 Glenwood Avenue. Two new multi-family residential buildings would be constructed along the east and south property lines at 417 Glenwood Avenue and 1357 Laurel Street. The final addressing would be subject to review and approval of the Building Official. The proposed buildings would meet the required setbacks. A use permit would be required for the excavation within the required front setback for the egress stairs to the below grade parking; however, the below grade stairs do not have a required minimum setback. The historic building would also feature larger setbacks than required to minimize potential impacts to the existing heritage trees on-site.

The historic building would be retained as one residential unit with four-bedrooms and two bathrooms. The multi-family residential buildings would feature townhouse style units that would each be two stories tall and have separate entrances oriented towards the center of the property. The multi-family building along the south property line at 417 Glenwood Avenue would contain four, two-bedroom and two-and-a-half bathroom residential units. The multi-family building along the east property line at 1357 Laurel Street would contain three residential units including two, one-bedroom and one-and-a-half bathrooms units and one, two-bedroom and two-and-a-half bathroom unit. One of the one-bedroom units would also be a below market rate (BMR) unit as discussed in a following section. Parking for the residential units would be located in the below grade parking garage.

For lots of this size and location, the R-3 district identifies a sliding scale for the maximum floor area ratio (FAR) based on the proposed density and specifies minimum and maximum FARs based on the proposed density. The minimum allowed FAR is 35 percent for 13.1 dwelling units per acre, increasing to a maximum of 75 percent for 30 dwelling units per acre. In this case, the applicant is proposing eight units, which is a density of 22.24 dwelling units per acre. The corresponding FAR from the sliding scale is 56.6 percent or 8,873.8 square feet of gross floor area. The proposed project falls within these limits, with a total of 8,871.6 square feet of gross floor area. The FAR has been calculated per the definition of Gross Floor Area (GFA), which includes all levels of a structure, with exemptions for covered parking and certain non-usable/non-occupiable areas.

While FAR would be developed to the maximum permitted, the site would be designed with 5,203 square feet (33.2 percent) of building coverage and 1,873.1 square feet (3 percent) of open parking and driveway areas, which are both below the maximum allowed thresholds of 40 percent building coverage and 35 percent open parking and driveway areas. Additionally, the site would be developed with approximately 7,286 square feet (46.5 percent) landscaping where 3,917 square feet (25 percent) is the minimum required. The maximum height of historic building would be 31.8 feet and the multi-family residential buildings would be 24.8 and 23.5 feet in height where a total height of 40 feet is allowed.

Design and materials

The historic residence is designed in a Stick architectural style and would not be significantly altered as

part of the proposed project. The Stick architectural style is characterized by Victorian-era elements such as a raised compact massing with hipped roofs and accent gables. Additional architectural features include enclosed eaves, vertical double hung windows, horizontal wood siding, and extensive wood trim. Minor changes would occur to demolish the non-historic rear addition. A window on the south elevation would be replaced with a patio door and a landing would be constructed to provide access to the new door. The patio door would replace an existing window, and the fenestration pattern on that side of the building would be unchanged. The right side of the building is also a secondary façade, not readily visible from the street. The primary facade facing the sidewalk contains the property's historic materials and features that characterize the property. The style, materials, and finishes of the new elements would be consistent with the existing building and would not affect the historic eligibility of the structure. The applicant submitted a Historic Resource Evaluation (HRE) included as Attachment F that evaluates the historic structure with regards to its historic eligibility and provides guidance on the proposed modifications and relocation of the structure.

The proposed multi-family residential buildings are designed in a contemporary craftsman style, which would complement the style and materials of the historic building without mimicking its architecture. The buildings would feature horizontal painted wood siding along the ground floor and stucco on the upper floors. The upper floors would also feature horizontal painted board and batten siding under the gable roof eaves. Additional architectural interest would be added on the building facades by the painted wood lattice on the second floor windows, first floor bay windows, and covered entry porches. The proposed windows would be metal clad wood windows and the entry doors would be painted wood.

The variety of the materials, along with the variation in building forms, would provide visual interest and help limit the perceived mass of the structures. The sill heights of the windows on the second floor would be designed with sill heights of 3.5 feet and higher to minimize privacy impacts. The buildings would contain sloped roofs, typical of the contemporary style in a composition shingle material.

The stair and elevator building would feature concrete walls and painted wood slats and a flat roof. The Planning Commission could consider if adjustments to stair and elevator building should be made to make the structure more consistent with the residential buildings such as application of similar colors and materials and/or landscaping to soften the building elevations. The stairs along the front elevation would be uncovered and would have a painted metal railing. Landscaping would also be located in front of the metal railing to minimize the visual impact of the stairs located in the front setback.

Overall, the proposed exterior changes would result in a consistent architectural design throughout the site. Staff believes that the proposed design, materials, and colors are compatible with those of the surrounding neighborhood.

Parking and circulation

Vehicular access for the site would be relocated from a driveway on Glenwood Avenue to a garage entrance on the rear half of the property on Laurel Street. A total of 16 parking spaces would be provided in the below-grade garage level which is consistent with the zoning requirement of 15 parking spaces inclusive of an accessible parking space, as required by the California Building Code. Prior to building permit issuance the parking would be required to comply with the new electric vehicle (EV) charging requirements, as indicated in condition 6b. The parking requirement for units of up to one bedroom in size within the R-3 zoning district is one-and-a-half spaces (one of which must be covered). For dwelling units with two or more bedrooms, the parking requirement is two spaces (one of which must be covered). The proposal would also include bicycle parking in the parking garage.

A covered staircase and elevator along Laurel Street would provide direct access from the garage to the ground level residential units. An additional uncovered staircase would be located at the southwest corner of the site, four feet into the required front yard setback, which can be allowed with a use permit. The historic residence would have a direct pedestrian access path from Glenwood Avenue. Additional pedestrian access paths would be provided from Glenwood Avenue and Laurel Street for the multi-family residential buildings where each unit would have direct ground floor access. During the staff review process, the garage plans, parking requirements, and Traffic Impact Analysis (TIA) were reviewed by Transportation Division staff to confirm the accuracy of the conclusions of the plans/report.

Based on the total number of proposed residential units, a Traffic Impact Analysis (TIA) was prepared for the project by an independent traffic consultant and is included as Attachment G. The report concluded that the proposed project would add 36 daily trips, 2 trips of which would occur in the AM peak hour and 2 trips in the PM peak hour. The report also analyzed two study intersections: Laurel Street/Glenwood Avenue and EI Camino Real/Glenwood Avenue, based on the City's criteria for determining significant traffic impacts, the proposed project is not expected to result in a significant impact at any of the study intersections. The applicant will be required to pay the applicable Transportation Impact Fee (TIF) for the net increase of five multi-family dwelling units, as set forth in condition 6ei, which would fund transportation infrastructure improvements within the City and further mitigate any potential impacts from the proposed project.

Trees and landscaping

The applicant has submitted an arborist report (Attachment H) detailing the species, size, and conditions of the heritage and non-heritage trees on site. The report discusses the impacts of the proposed improvements, including temporary construction impacts, and provides recommendations for tree maintenance and the protection of the trees.

At present, there are 43 trees on or in close proximity to the subject site. The arborist reports identified one heritage tree and 27 non-heritage trees proposed for removal. The heritage tree is a Ponderosa pine (Trees #17) that is 31.3 inches in diameter. This tree is located in the center of the site and is required to be removed due to conflicts with the proposed construction, specifically the underground parking garage. During the project review process, the arborist report was reviewed by the City Arborist. All recommendations identified in the arborist report shall be implemented and ensured as part of condition 50.

As part of the project, the site landscaping would be comprehensively updated and approximately 28 new trees would be planted throughout the site, including one, 36 inch box gingko biloba replacement tree for the heritage tree removal. The project would exceed the minimum landscape requirements of 3,917 square feet (25 percent) for the R-3 zoning district with 7,286 square feet (46.5 percent) of proposed landscapes area. Prior to building permit issuance the proposed landscaping would be required to meet

the Water Efficient Landscape Ordinance (WELO) requirements per condition 5e.

Below Market Rate Housing Agreement

The applicant is required to comply with Chapter 16.96 of City's Municipal Code ("BMR Ordinance"), and with the BMR Housing Program Guidelines adopted by the City Council to implement the BMR Ordinance ("BMR Guidelines") since the project includes more than five residential units. Previously rental projects were not subject to the City's BMR requirements; however, new state laws require rental housing projects to comply with the same BMR requirements as for-sale projects. In accordance with the City's BMR guidelines, for residential developments of five to nine units it is preferred that the developer provide one unit at below market rates to very low- or low-income households on-site. The applicant is proposing to satisfy the project's BMR obligation through the provision of one, one-bedroom low-income level BMR rental unit on-site.

The BMR proposal was reviewed by the Housing Commission at their meeting on April 11, 2018. The Housing Commission voted 5-0-2 to recommend approval of the BMR proposal. The Housing Commission's meeting staff report and minutes are included as hyperlinks in Attachments I and J, respectively. The BMR Agreement Term Sheet is included as Attachments K. The BMR Agreement Term Sheet outlines the requirements for the on-site BMR unit consistent with the BMR Ordinance for projects of this size scale and scope and informs the BMR Agreement. Prior to issuance of the building permit, the BMR Agreement shall be prepared, finalized, and recorded on the property per conditions 6c and 6d. The BMR Agreement shall be subject the City Attorney's review and approval.

Correspondence

Staff has received two emails expressing concerns about the proposed construction. During the project review process, the property owner sent out letters to the neighboring properties in addition to the City's standard noticing these letters and the letters that staff received are included as Attachment L. The comments from the letters are summarized below.

- Excavation of the below grade parking garage
- Impact of construction activities
- Traffic impacts of the proposed development
- Site drainage and water runoff
- Proposed residential density

The Building Division has policies and requirements for construction activities to minimize construction impacts to the surrounding properties. Some of these requirements include limits to construction work hours, dust control measures, erosion control measures, and tree and site fencing. While not required, the applicant has also made provisions for construction parking on-site to minimize construction parking impacts in the public right-of-way. During the building permit review process, the project would be required to provide additional plans and reports indicating compliance with the site grading, drainage, and stormwater treatment requirements which would be reviewed by the Engineering Division. Conditions of approval are included in the recommended actions related to the construction activities and site drainage that ensure compliance with the relevant requirements.

The proposed project would be within the allowed minimum density (13.1 dwelling units per acre) and maximum density (30 dwelling units per acre) with a proposed density of 22.24 dwelling units per acre. The proposed density is also consistent with the Housing Element policy to create higher density infill housing around the El Camino Real/Downtown Specific Plan area and in proximity to where services and transit are located.

Conclusion

Staff recommends that the Planning Commission approve the proposed project. Staff believes the scale, materials, and style of the proposed residences are compatible with the neighborhood, and that the varying projections and articulations on the elevations of the proposed residences would reduce the perception of mass. The historic residence on the property would be retained and relocated on the site and the two proposed residential buildings would be in relatively the same location as the existing structures. New trees would be planted to mitigate the tree removals and tree protection measures would minimize construction impacts to the remaining heritage and non-heritage trees. New landscaping would be planted throughout the site and would exceed the minimum standards. Staff recommends that the Planning Commission approve the proposed project.

Impact on City Resources

The project sponsor is required to pay Planning, Building and Public Works permit fees, based on the City's Master Fee Schedule, to fully cover the cost of staff time spent on the review of the project. In addition, the proposed development would be subject to payment of a Transportation Impact Fee (TIF). These required fees were established to account for projects' proportionate obligations.

Environmental Review

The proposed project is not categorically exempt from the California Environmental Quality Act (CEQA). An Initial Study and Mitigated Negative Declaration, collectively referred to as the MND, have been prepared and circulated for public review in compliance with CEQA. The Mitigated Negative Declaration portion of the MND has been included in this staff report as Attachment M and the initial study portion is available at the City offices or at the hyperlink included in Attachment N.

The complete MND is available for review at the Planning Division office during business hours. The public review period began on November 13, 2018 and ends on December 3, 2018 at 5:30 p.m. As of the printing of this staff report, staff has not received any comments on the MND.

The MND analyzes the potential environmental impacts of the project across a wide range of impact areas. The MND determined that the project would have less-than-significant impact without the need for mitigation measures on the following areas: aesthetics, air quality, biological resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, and utilities and service systems. The MND identifies no effects in the following categories: agricultural resources and mineral resources. The MND identifies potentially significant unless mitigation is incorporated effects in the following category: cultural resources.

As indicated previously, the existing residence located at 417 Glenwood Avenue is considered to be a historic resource under CEQA, based on the association of the property with significant historic personalities, in this case the Gale family, and because of its distinctive architectural characteristics of the Stick style. A Historic Resource Evaluation (HRE) was prepared for the project and is included as Attachment F. The HRE evaluated the proposed project for compatibility with the Secretary of the Interior's Standards for Rehabilitation on the historic resource.

The project proposes to remove a non-historic rear addition and move the historic structure on-site toward the northwest corner of the property. Additional minor exterior window and door modifications are proposed to the structure. The relatively minor alterations would not impair the form and the integrity of the house, and the project would not result in impacts to the historic building, and the resource would still be eligible for listing on the California Register. Thus, the project would not have a substantial adverse change under CEQA. However, moving the historic structure could have construction related effects. There are no suggested improvement measures to the project, but two mitigation measures included in the Mitigation Monitoring and Reporting Program (MMRP) (Attachment O) and as conditions 6ai and 6aii are required while moving the historic house to mitigate potential impacts to the historical integrity of the residence during the relocation.

Public Notice

Public Notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Public notification also consisted of publishing a notice in the local newspaper and notification by mail of owners and occupants within a 300-foot radius of the subject property. Notice of the MND availability was also published in the local paper and notice of availability was provided to agencies and jurisdictions of interest.

Appeal Period

The Planning Commission action will be effective after 15 days unless the action is appealed to the City Council, in which case the outcome of the application shall be determined by the City Council.

Attachments

- A. Recommended Actions
- B. Location Map
- C. Data Table
- D. Project Plans
- E. Project Description Letter
- F. Historic Evaluation
- G. Traffic Impact Analysis (TIA)
- H. Arborist Report
- I. Housing Commission Staff Report Hyperlink: https://www.menlopark.org/DocumentCenter/View/17124/Staff-Report-18-006-HC-409-Glenwood-Ave?bidId

- J. Housing Commission Minutes Hyperlink: https://www.menlopark.org/AgendaCenter/ViewFile/Minutes/_04112018-3073
- K. Below Market Rate (BMR) Agreement Term Sheet
- L. Correspondence
- M. Mitigated Negative Declaration
- N. Initial Study Hyperlink: https://www.menlopark.org/ArchiveCenter/ViewFile/Item/8690
- O. Mitigation Monitoring and Reporting Program (MMRP)

Disclaimer

Attached are reduced versions of maps and diagrams submitted by the applicants. The accuracy of the information in these drawings is the responsibility of the applicants, and verification of the accuracy by City Staff is not always possible. The original full-scale maps, drawings and exhibits are available for public viewing at the Community Development Department.

Exhibits to Be Provided at Meeting

Color and Materials Board

Report prepared by: Kaitie Meador, Senior Planner

Report reviewed by: Kyle Perata, Acting Principal Planner THIS PAGE INTENTIONALLY LEFT BLANK

409 Glenwood Avenue – Attachment A: Recommended Actions

LOCATION: 409 Glenwood Avenue		JECT NUMBER:APPLICANT: Mark0013-00067Sutherland		OWNER: Michal Smulski				
PROPOSAL: Request for architectural control to demolish one, two-story residence and one, single-story residence addressed 409 Glenwood and 1357 Laurel Street, relocate an existing two-story residence addressed 417 Glenwood on-site, and construct two new two-story multi-family buildings with an below grade parking garage. One building would include three dwelling units and one would include four dwelling units. The project site currently contains three dwelling units, and the project would result in an increase of five units, for a total of eight units at the project site. As part of the project, a use permit would be requested for excavation within the required front setback for egress stairs. One heritage tree is proposed for removal as part of the project. The proposal also includes a Below Market Rate (BMR) housing agreement for compliance with the City's BMR program and consideration of a Mitigated Negative Declaration regarding potential environmental impacts.								
DECISION ENTITY: Plann Commission	ing	DATE: Decembe	r 3, 2018	ACTION	I: TBD			

VOTE: TBD (Barnes, Combs, Goodhue, Kennedy, Onken, Riggs, Strehl)

ACTION:

- 1. Make the following findings relative to the environmental review of the proposal and adopt the Mitigated Negative Declaration:
 - a. A Mitigated Negative Declaration has been prepared and circulated for public review in accordance with current State California Environmental Quality Act Guidelines; and
 - b. The Planning Commission has considered the Mitigated Negative Declaration prepared for the proposal and any comments received during the public review period; and
 - c. Relevant mitigation measures have been incorporated into the project through the Mitigation Monitoring and Reporting Program (Attachment O), which is approved as part of this finding; and
 - d. Based on the Initial Study prepared for the Mitigated Negative Declaration, relevant mitigation measures, and any comments received on the document, there is no substantial evidence that the proposed project will have a significant effect on the environment.
- 2. Make findings, as per Section 16.82.030 of the Zoning Ordinance pertaining to the granting of use permits, that the proposed excavation into the required yard will not be detrimental to the health, safety, morals, comfort and general welfare of the persons residing or working in the neighborhood of such proposed use, and will not be detrimental to property and improvements in the neighborhood or the general welfare of the City.
- 3. Adopt the following findings, as per Section 16.68.020 of the Zoning Ordinance, pertaining to architectural control approval:
 - a. The general appearance of the structure is in keeping with the character of the neighborhood.
 - b. The development will not be detrimental to the harmonious and orderly growth of the City.
 - c. The development will not impair the desirability of investment or occupation in the neighborhood.
 - d. The development provides adequate parking as required in all applicable City Ordinances and has made adequate provisions for access to such parking.

LOCATIO Glenwood		PROJEC PLN2013	CT NUMBER: 3-00067	APPLICANT: Ma Sutherland	rk	OWNER: Michal Smulsk	
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	ve the architectu t to the following			R Term Sheet, and	l Mitigate	d Negative Declaration	
a.	+ S Architectu approved by the	re consist he Plannir	ting of 38 plan she ng Commission or	eets, dated receive December 3, 201	d Novem 8, excep	t as modified by the	
b.	 conditions contained herein, subject to review and approval of the Planning Division. b. Concurrent with the submittal of a complete building permit application, the applicant shall submit a Hydrology Report in conjunction with the grading and drainage plan substantiating that on-site flows will not exceed existing conditions as a result of the proposed improvements. Additionally, the grading and drainage design shall demonstrate that on-site runoff will be contained within the property up to the 10-year storm with the use of retention structures as applicable. Otherwise, the applicant hereby agrees that under no circumstances shall runoff directly flow across a neighboring property line. The Hydrology Report shall be subject to review and approval of the Engineering Division. 						
c. Concurrent with the submittal of a complete building permit application, the applicant shall submit a C.3/C.6 checklist demonstrating conformance with the County's mandate for stormwater treatment. A stormwater control plan and report, pursuant to the latest iteration of the San Mateo County C.3 Technical Guidance Manual, shall be furnished should the project exceed 10,000 square feet of replaced or created impervious area. The stormwater report must designate all existing and proposed project conditions, applicable source controls, and sizing of stormwater treatment devices (i.e. bioretention areas, flow through planters, etc.) to the satisfaction of the City's Engineering Division.							
d.	Treatment Me Agreement sh	asures Op all outline	perations and Mai all O&M procedu	ntenance (O&M) A res for on-site stor	greemen mwater tr	ubmit a Stormwater at with the City. This reatment facilities and is ounty of San Mateo. All	

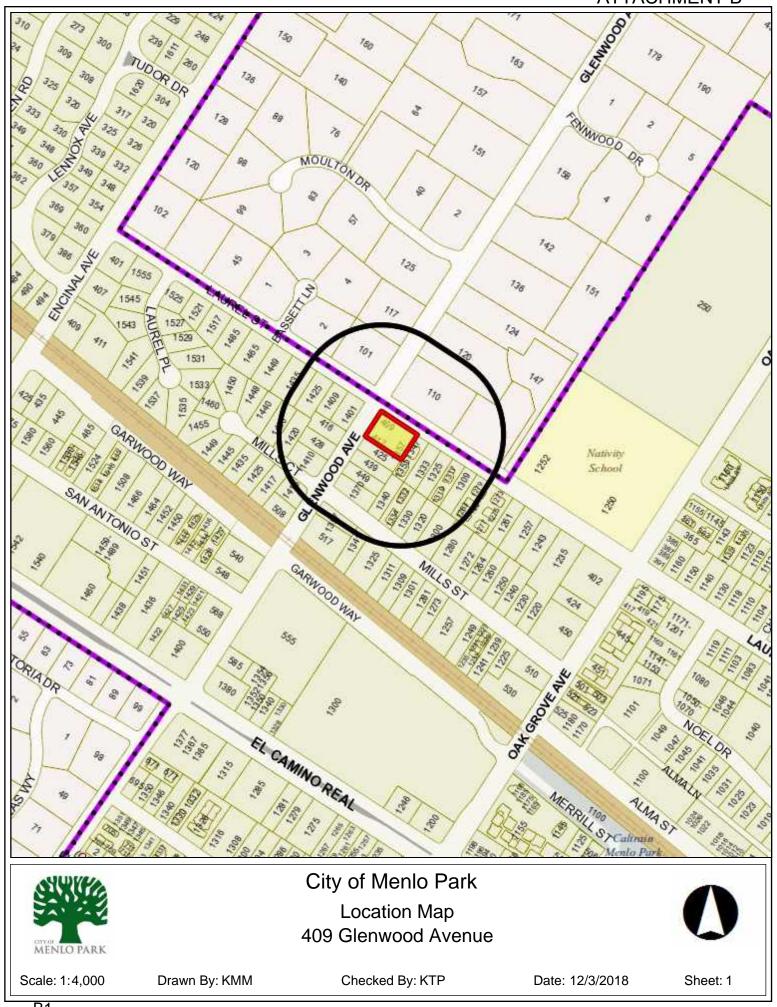
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	Agreements s County Recore		n perpetuity and shall b	e recorded with the San Mateo			
e.	Concurrent with the submittal of a complete building permit application, the applicant shall furnish landscaping and irrigation plans in additional to any supplemental Water Efficient Landscape Ordinance (WELO) documentation as detailed on the City webpage (http://menlopark.org/361/Water-efficient-landscaping-ordinance), subject to review and approval of the Engineering Division.						
f.	Prior to final occupancy, the applicant shall submit a landscape audit report to the Public Works Department for review and approval demonstrating conformance with the City's WELO mandate.						
g.	The applicant shall obtain an encroachment permit from the appropriate reviewing jurisdiction prior to commencing any work within the right of way or public easement (including the proposed curb cut). An additional curb ramp connecting the crosswalk across Glenwood Avenue for ADA access must also be included in the design.						
h.	Prior to final sign off of the building permits, all public right of way improvements, including frontage improvements and the dedication of public access or utility easements (if applicable), shall be completed to the satisfaction of the Engineering Division and recorded with the County of San Mateo.						
i.	Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating that the applicant shall remove and replace any damaged and significantly worn sections of frontage improvements. Any existing frontage that is damaged in its existing condition, or as a result of construction, must be replaced in kind per the latest City standard details. The plans shall be submitted for review and approval of the Engineering Division.						
j.	submit all app		ans for review and appro	application, the Applicant shall oval by the Engineering Division.			
		ng Topography (NAVD lition Plan lan	9 88')				

LOCATION Glenwood /		PROJEC PLN201	CT NUMBER: 3-00067	APPLICANT: Ma Sutherland	rk	OWNER: Michal Smulski	
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 m. Concurrent with the submittal of a complete building permit application, the applicant shall submit a plan for any new utility installations or upgrades for review and approval of the Planning, Engineering, and Building Divisions. All utility equipment that is installed outside of a building and, which cannot be placed underground, shall be property screened by landscaping The plan shall show exact locations of all meters, back flow prevention devices, transformers, junction boxes, relay boxes, and other equipment boxes. 							
n. Prior to building permit issuance, during the design phase of the construction drawings, all potential utility conflicts shall be potholed with actual depths and recorded on the improvement plans, submitted for Engineering Division review and approval.							
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LOCATION Glenwood		PROJECT I PLN2013-00	-	APPLICANT: Ma Sutherland	rk	OWNER: Michal Smulsk	
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p.	"record" drawi	ngs of public	improvements	all retain a civil eng s, and the drawings ering Division.		prepare "as-built" or submitted in both	
q.	Prior to building permit issuance, the Applicant shall submit plans for construction parking management, construction staging, material storage, and Traffic Control Plans to be reviewed and approved by the City.						
r.	r. If construction is not complete by the start of the wet season (October 1st through April 30th), the Applicant shall implement a winterization program to minimize the potential for erosion and sedimentation. As appropriate to the site and status of construction, winterization requirements shall include inspecting/maintaining/cleaning all soil erosion and sedimentation controls prior to, during, and immediately after each storm event; stabilizing disturbed soils through temporary or permanent seeding, mulching, matting, tarping or other physical means; rocking unpaved vehicle access to limit dispersion of mulch onto public right of way; and covering/tarping stored construction materials; fuels; and other chemicals. Plans to include proposed measures to prevent erosion and polluted runoff from all site conditions shall be submitted for review and approval of the Engineering Division prior to beginning of construction.						
6. Approv	e the architectu	ural control su	ibject to the fo	llowing project-sp	ecific cor	nditions:	
a. The applicant shall address all Mitigation Monitoring and Reporting Program (MMRP) requirements as specified in the MMRP (Attachment O). Failure to meet these requirements may result in delays to the building permit issuance, stop work orders during construction, and/or fines.							
	docur all ext archit const	nentation to t erior façades ectural details	he Planning D , interior room s. In the event ving, the archi	ivision for its record s, and close-ups of the historic structu	ds. Photo f any unu re is dam	rposes and submit the graphs should be taken o sual or significant aged during project cumentation to be used to	
	const	ruction, buildi	ng reassembly	/, and restoration w	ork wher	the siting, foundation the move has taken mittal of a complete	

LOCATION Glenwood		PROJECT NUMBER: PLN2013-00067	APPLICANT: Ma Sutherland	rk OWNER: Michal Smulsk				
Glenwood AvenuePLN2013-00067SutherlandPROPOSAL:Request for architectural control to demolish one, two-story residence and one, single-story residence addressed 409 Glenwood and 1357 Laurel Street, relocate an existing two-story residence addressed 417 Glenwood on-site, and construct two new two-story multi-family buildings with an below grade parking garage. One building would include three dwelling units and one would include four dwelling units. The project site currently contains three dwelling units, and the project would result in an increase of five units, for a total of eight units at the project site. As part of the project, a use permit would be requested for excavation within the required front setback for egress stairs. One heritage tree is proposed for removal as part of the project. The proposal also includes a Below Market Rate (BMR) housing agreement for compliance with the City's BMR program and consideration of a Mitigated Negative Declaration regarding potential environmental impacts.								
DECISION Commissio	ENTITY: Plann	ning DATE: Decem	per 3, 2018	ACTION: TBD				
VOTE: TBI	D (Barnes, Com	bs, Goodhue, Kennedy, (Onken, Riggs, Strehl)				
ACTION:								
b.	 building permit application that demonstrates that all construction forepersons and field supervisors have received proper training on procedures on moving an historic home. Additionally, the building permit plans shall itemize the ways that the project incorporates the relevant requirements. b. Simultaneous with the submittal of a complete building permit application, the applicant shall submit plans indicating compliance with the electric vehicle (EV) charging spaces for new construction per section Chapter 12.24 to the Municipal Code. The plans shall be submitted for review and approval of the Building and Planning Divisions. 							
C.	c. Simultaneous with the submittal of a complete building permit application, the BMR agreement shall be prepared in accordance with the approved BMR Term Sheet and the City's Blow Market Rate Housing Program, subject to final review and approval by the City Attorney. The BMR agreement shall include one one-bedroom, low-income level BMR rental unit on-site.							
d.	 Prior to building permit issuance, the applicant shall record the approved BMR agreement with the San Mateo County Recorder's Office. 							
e.	e. Prior to issuance of building permit, the applicant shall pay all relevant transportation impact fees (TIF), subject to review and approval of the Transportation Division. Such fees include:							
	/unit x fee is	7 multi-family units and §	3,301.30/unit x 1 sir 1st based on the Er	calculated as follows: (\$2,026.34 ngle-family unit). Please note this ngineering News Record Bay Area Iding permit is issued.				

ATTACHMENT B



ATTACHMENT C

409 Glenwood Avenue - Attachment C: Data Table

	PROPOSED PROJECT	EXISTING PROJECT	ZONING ORDINANCE						
Lot area	15,668 sf	15,668 sf	10,000 sf min.						
Lot width	103.9 ft.	103.9 ft.	80 ft. min.						
Lot depth	150 ft.	150 ft.	100 ft. min.						
Setbacks									
Front	20 ft.	16.3 ft.	20 ft. min.						
Rear	15 ft.	1.8 ft.	15 ft. min.						
Side (interior)	10 ft.	11.7 ft.	10 ft. min.						
Side (corner)	21.4 ft.	12.2 ft.	15 ft. min.						
Building coverage	5,203 sf	4,388 sf	6,267.2 sf max.						
	33.2 %	28 %	40 % max.						
FAR (Floor Area Ratio)*	8,871.6 sf	6,029 sf	8,873.8 sf max.						
	56.6 %	38.5 %	56.6 % max.						
Landscaping	7,286 sf	8,121 sf	3,917 sf min.						
-	46.5 %	51.8 %	25 % max.						
Driveways and Open	465 sf	2,594 sf	5,483 sf max.						
Parking Areas	3 %	16.6 %	35 % max.						
Density (du/acre)	22.24 du/acre	8.3 du/acre	13.1 du/acre min 30 du/acre max						
Square footage by floor**	2,030.43 sf/building 1 4,146.19 sf/building 2 2,697.29 sf/building 3 8,514.38 sf/garage 139 sf/stair and elevator 252 sf/covered	2,216 sf/building 1 2,370 sf/building 2 1,042 sf/building 3 760 sf/garage 179 sf/covered porches							
Square footage of	porches 17,779.29 sf	6,567 sf							
buildings									
Building height	31.8 ft.	31.8 ft.	40 ft. max.***						
Parking	16 covered	3 covered, 5 uncovered	2 spaces for 2 or more						
			bedrooms 1.5 spaces for up to 1 bedroom 1 space for each unit must be covered (15 spaces for proposed project)						
	Note: Areas shown highlighte	d indicate a nonconforming or subst	Note: Areas shown highlighted indicate a nonconforming or substandard situation.						

Trees

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Heritage trees	7	Non-Heritage trees	36***	New Trees	28
. ieniage a coo		i ten i tenage acce	*		_0
Heritage trees proposed	1	Non-Heritage trees	27	Total Number of	43***
		0		Traca	*
for removal		proposed for removal		Trees	

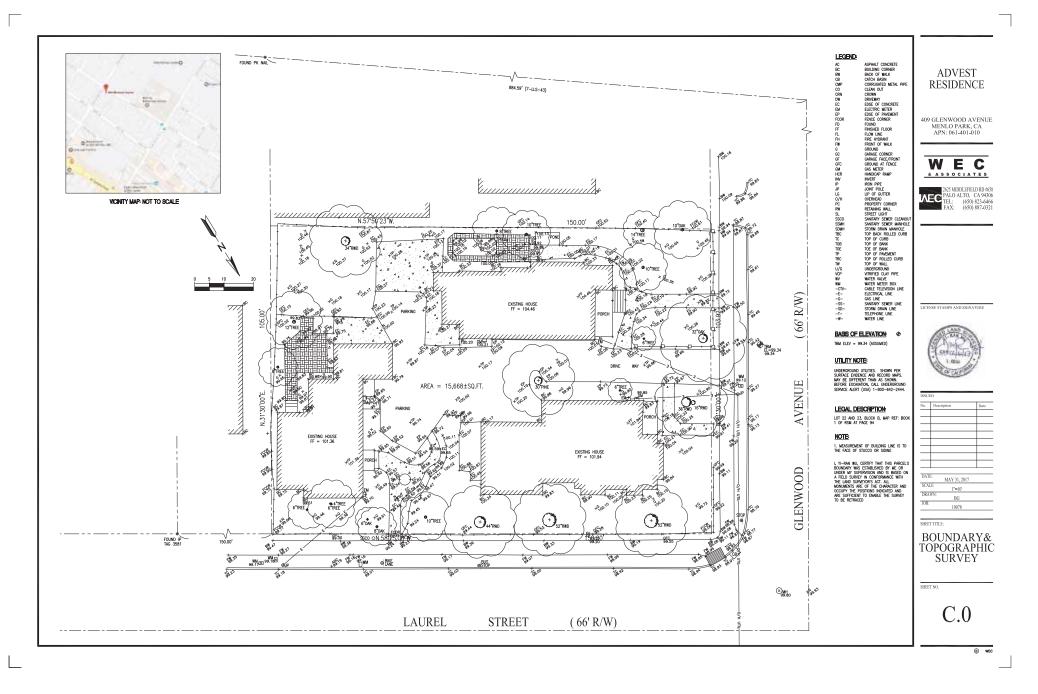
*In the R-3 (Apartment) district where the lot greater than 10,000 square feet and adjacent to the Downtown Specific Plan, FAR is calculated on a sliding scale based on the density.

**Square footages do not include the areas exempt as non-usable space.

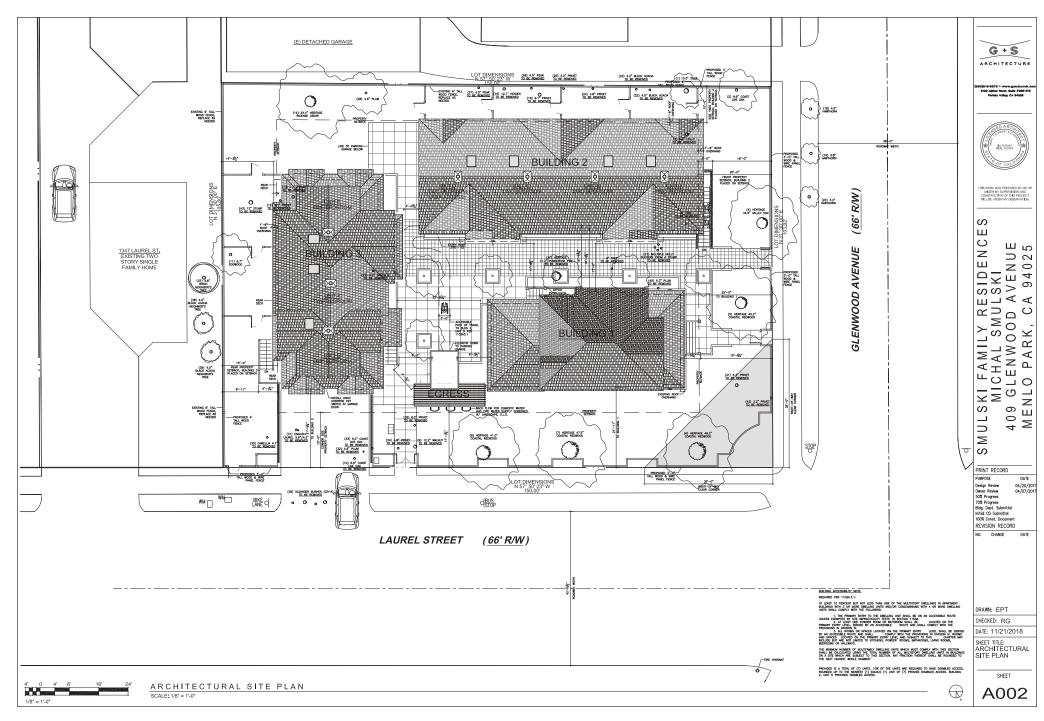
For projects that provide a density of 20 du/acre or greater the maximum height is increased to 40 feet. *Includes trees on neighboring properties and street trees.

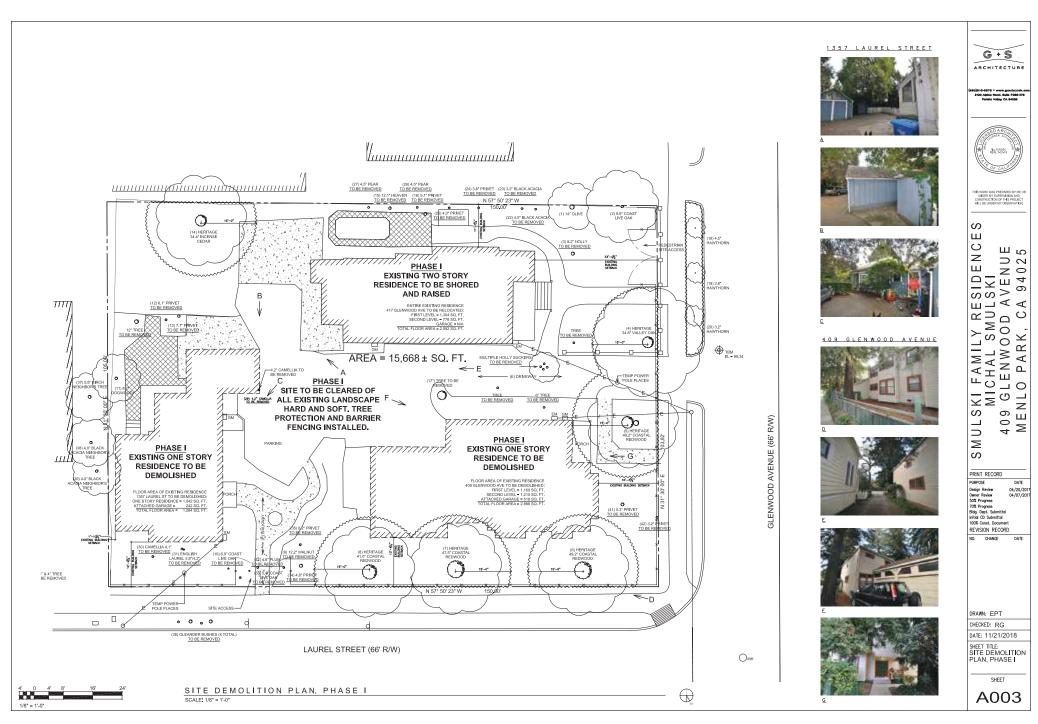
ATTACHMENT D

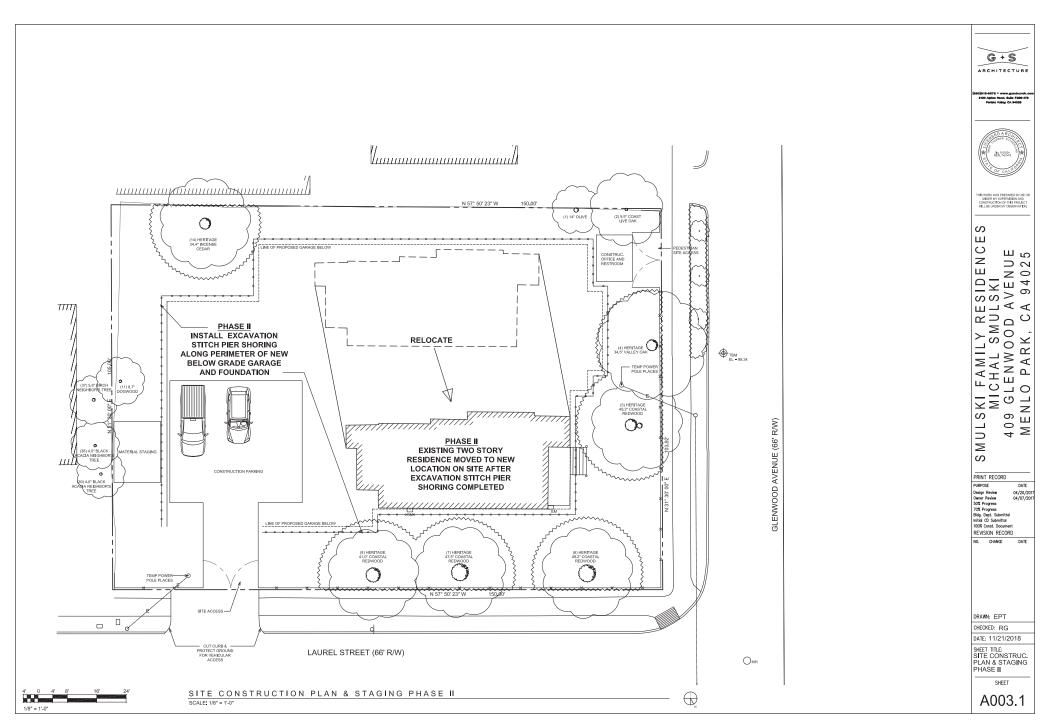
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					A TO THE REAL				409 GLENWOOD AVENUE	-
	-		ا با ر		and the first			DEMOLISH SINGLE FAMILY HOME AT 409 G	LENWOOD AVE. AND 1357 LAUREL STREET, RELOCATE	
	N		ا است ار	UNDER CABINET FLUORESCENT	ele Part 1		A SAN AND AND AND AND AND AND AND AND AND A	(WHICH IS NOT PART OF THE ORIGINAL HI	STORIC HOUSE) REPLACE EXISTING WINDOWS ON SOUTH	ARCHITECTURE
		SECTION NUMBER/ SHEET	\$	SINGLE SWITCH				PROPOSED 2 MULTI FAMILY RESIDENCES A UNDERGROUND PARKING FOR THE THREE I	T 417 GLENWOOD AVE. AND 1357 LAUREL STREET WITH PROPOSED BUILDINGS.	(880)818-8675 - www.gandecreh.eem 2120 Alpine Rand, Sulla F288-475 Partici Villes CA 94039
	6	ELEVATION REFERENCE	\$	DOUBLE SWITCH		Strop C. 1	a faith and the second	APPLICABLE CODE:		
	\otimes	DOOR NUMBER	\$3	3-WAY SWITCH	ALL SUG			APN:	R-3	SEDARCH
	\otimes	WINDOW TYPE	ф	DIMMER		to a start where	ALL AND	OCCUPANCY GROUP: TYPE OF CONSTRUCTION:	TYPE V-B	ALCONTRACT STATE
	102	ROOM NUMBER	φ	RECEPTACLE OUTLET			NO. DANCE STREET	STORIES: FIRE SPRINKLER:	2 STORY BUILDINGS TO BE FULLY SPRINKLERED	PER ASI-19
	<u> </u>	DIMENSION	$\Phi_{\rm gfi}$	GFI RECEPTACLE OUTLET			The second second	LOT AREA =		
	t t	ALIGN	wp¶gfi	GFI RECEPTACLE OUTLET W/ WEATHER PROOF COVER		VICINIT	Y MAP	RAMP & PARKING = BICYCLE PARKING =	7,466.46 SF 739.89 SF (EXEMPT)	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
	ē	CENTER LINE	ę	SWITCH OPERATED RECEPTACLE OUTLET	A CARLE	And the second		TOTAL =	8,514.38 SF	
		NEW WALL	P	CABLE	1 Crayles	MESCAL.	A BAR AND A COMPANY	1ST FLOOR = 2ND FLOOR =	1,261.33 SF 769.10 SF	
		EXISTING WALL	ഒ	HARD-WIRED SMOKE DETECTOR W/ BATTERY BACK-UP	The second second	Charles 5 5 1 1				L
		WALL TO BE DEMOLISHED		(E) SMOKE DETECTOR (BATTERY OPERATED)				1ST FLOOR =	2.026.45 SF	
	•	PENDANT LIGHT FIXUTRE	(e)	HOSE BIBB				BUILDING 3 - 1357 LAUREL ST (3 NE)	W UNITS)	[므포핀 중]
	Ť	WALL MOUNTED FIXTURE	-^~	DRYER EXHAUST VENT		WALVALE P	CHERRAL I TO SIL	2ND FLOOR = TOTAL =	1,176.88 SF 2,694.93 SF	0,0,0
				EXHAUST FAN			at the cater of		8,871.55 SF 8,873.80 SF MAX.	
			3	REVISION TO DRAWINGS -	There are	C LC Alt	and the second se	BELOW GRADE GARAGE, UNDER STAIR =	266.22 SF MAX 118.65 SF	
			À	CHANGE	12 Linking			BUILDING 1 FLUE CHASE, BOTH FLOORS =	13.51 SF	$\exists \neg \geq \overset{R}{\vdash}$
						AREA	MAP	BUILDING COVERAGE SUMMARY: LOT AREA =	15,668 SF	
									1,166 SF	
Image: Section constrained and constrai					OWNER: MICHAL SMULSKI 4249 SUZANNE DRIVE	MARK SUTHERLAND, AIA			1,266 SF	×≥ z
Notes 100-70 N					PALO ALTO, CA 94306 msmulski@advestnv.com	PORTOLA VALLEY ČA. 94028 mark@aandsarch.com		1ST FLOOR =	2,026 SF 113 SF	니 이쁜
ATWEED THE CARE THE START BRANCE ACCOUNT OF THE CARE ACCOUNT OF TH					ARBORIST:		A002 ARCHITECTURAL SITE PLAN A003 SITE DEMOLITION PLAN PHASE I	BUILDING 3 - 1357 LAUREL ST (3 NE)	W UNITS) 1,518 SF	
See California Score A 2452 See California S					ADVANCED TREE CARE ROBERT WEATHERILL 965 E. SAN CARLOS AVE.	RICHARD BRANDI HISTORIC PRESERVATION 125 DORCHESTER WAY.	A003.3 SITE CONSTRUCTION PLAN & STAGING PHASES V		<u>139</u> SF 1,659 SF	S
Image: Displace in the control of					650.839.9539	SAN FRANCISCO, CA 94127 415.753.5130	A005 SITE PLAN COVERAGE CALCULATIONS A006 PARKING GARAGE COVERAGE CALCULATIONS A007 BUILDING 1 & EGRESS COVERAGE CALCULATIONS	COVERED STAIR		
HATWARD, CA 94-54 30 WIND, CA 94-55 100% Bedrares.com Writeboltwei@punt Writeboltwei					LEA & BRAZE ENGINEERING, INC	LANDSCAPE ARCHITECT:	A008 BUILDING 2 COVERAGE CALCULATIONS A009 BUILDING 3 COVERAGE CALCULATIONS A010 STREET COMBINED BUILDING ELEVATIONS	TOTAL LOT COVERAGE = TOTAL ALLOWABLE COVERAGE =	5,203 SF 6,267 SF MAX.	Design Review 04/20/2017 Owner Review 04/07/2017
Image: Construction of the second process of the second proces of the second process of the second proces of the second pro					HAYWARD, CA 94545 JIM TOBY	MENLO PARK, CALIFORNIA 94025 650.823.0291		LANDSCAPE AREA LOT AREA =	15,668 SF	70% Progress Bida, Dept, Submittal
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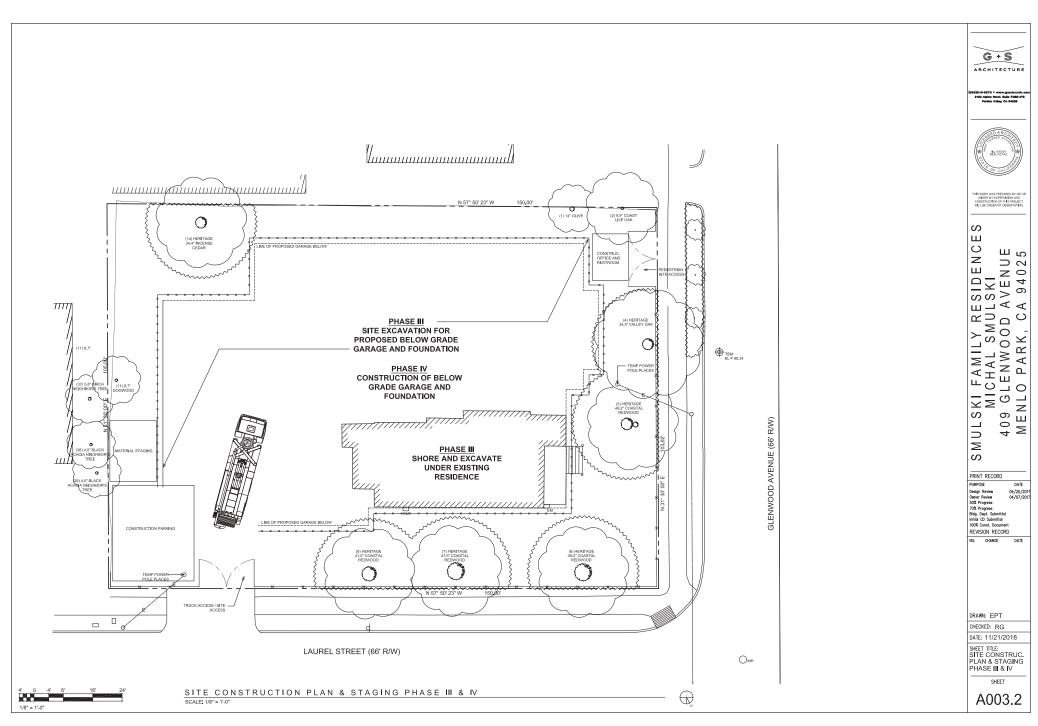


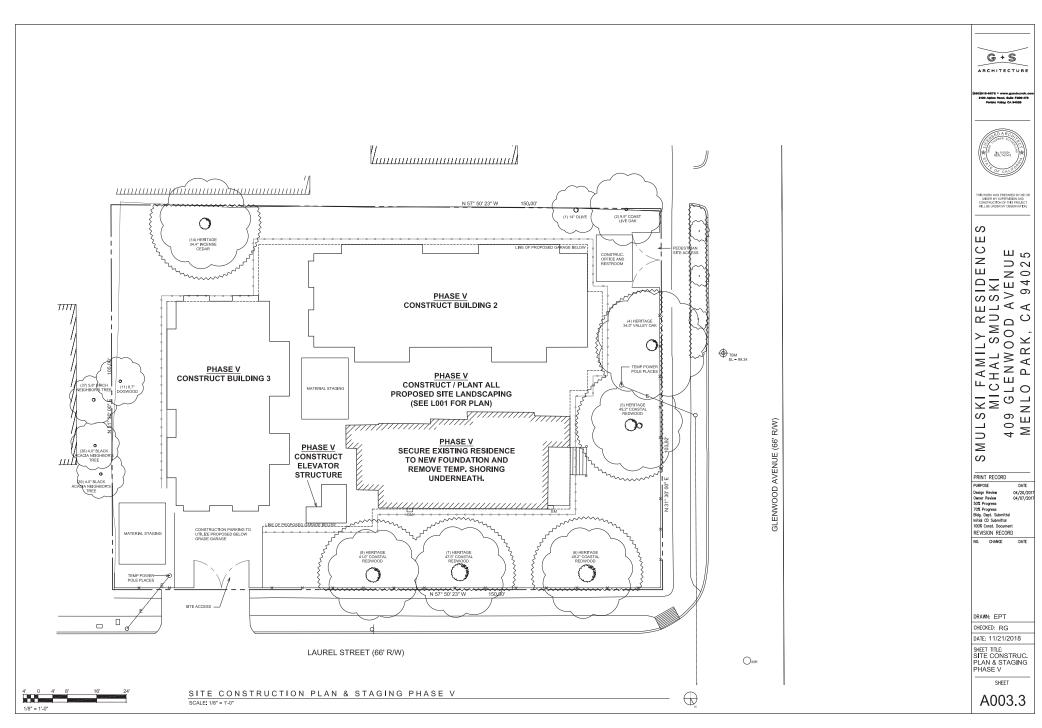
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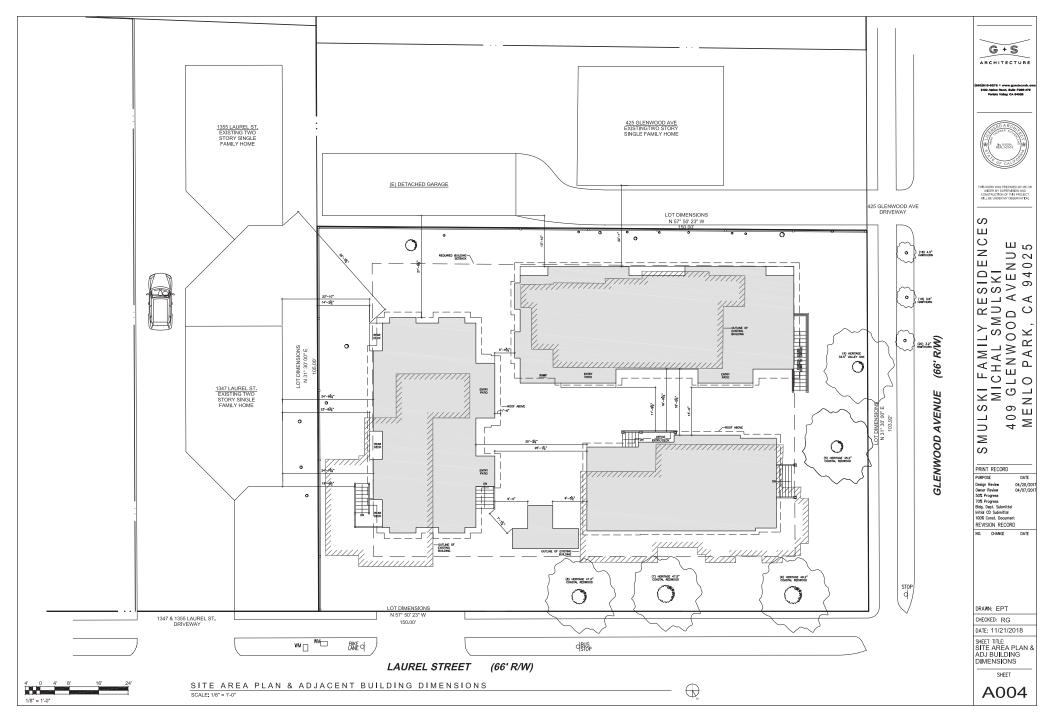


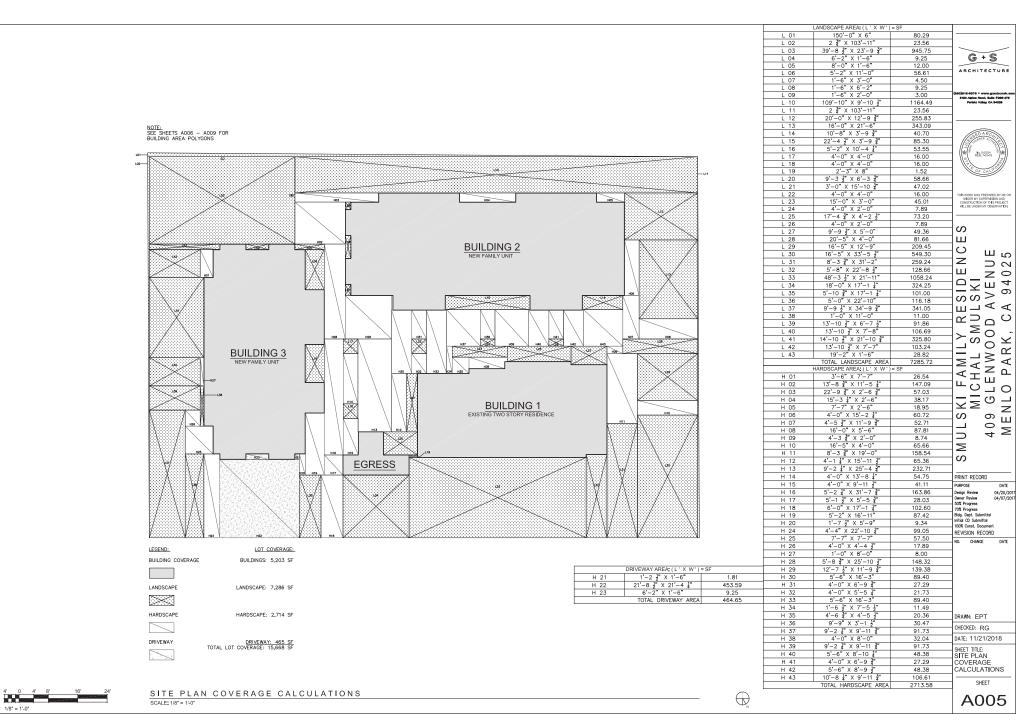


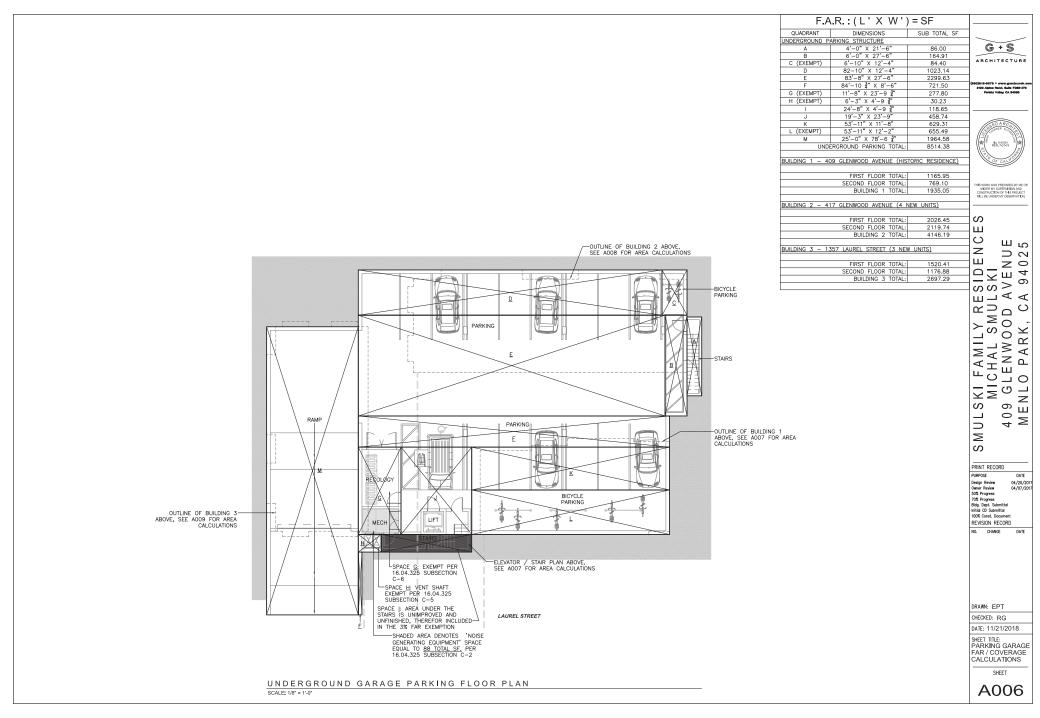


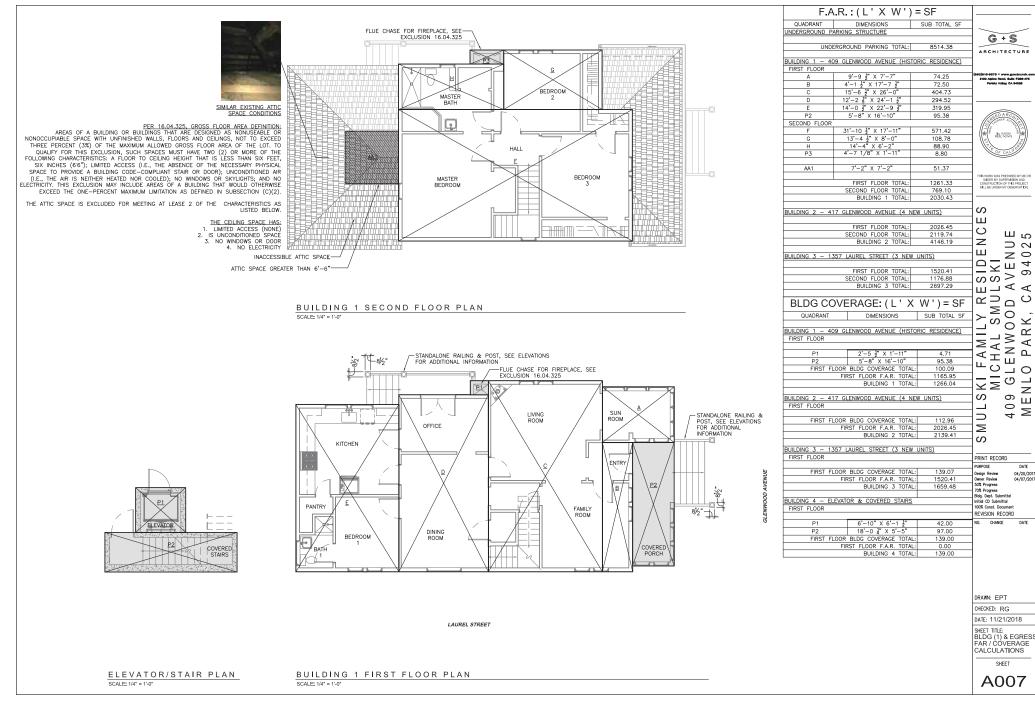


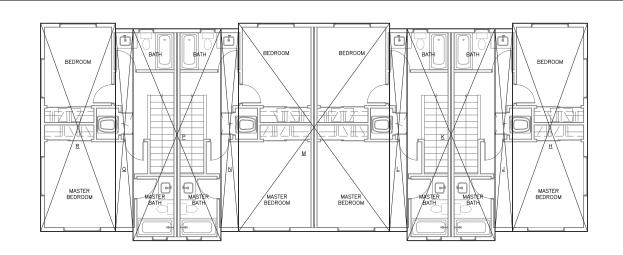






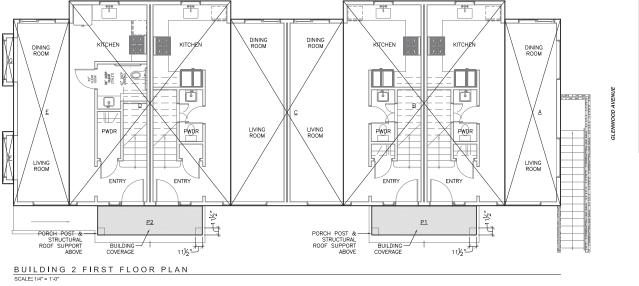




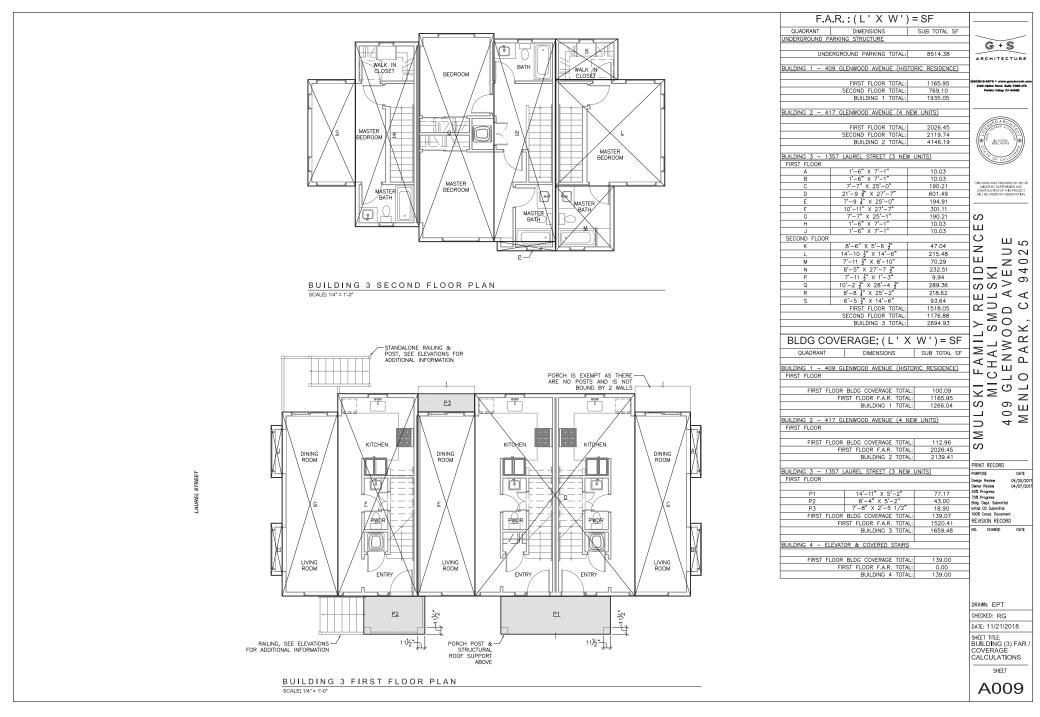


BUILDING 2 SECOND FLOOR PLAN





F	A.R.:(L'XW')	= SF	
QUADRANT	DIMENSIONS	SUB TOTAL SF	-
UNDERGROUND	PARKING STRUCTURE		G+S
UNI	DERGROUND PARKING TOTAL:	8514.38	ARCHITECTURE
BUILDING 1 - 4	109 GLENWOOD AVENUE (HIST	ORIC RESIDENCE)	
	FIRST FLOOR TOTAL:	1165.95	(850)615-9575 • www.gondsoroh.ee 3130 Alpine Read, Suite 4266-475 Buttela Water CA 54028
	FIRST FLOOR TOTAL: SECOND FLOOR TOTAL: BUILDING 1 TOTAL:	769.10 1935.05	Periola Valley: CA 84038
BUILDING 2 - 4	17 GLENWOOD AVENUE (4 N	W UNITS)]
FIRST FLOOR			SED ARCHIN
A B	22' 0 1" V 27' 11"	192.74 614.74	
C		390.25	
E	22'-0 ‡" X 27'-11" 7'-7" X 25'-5" 1'-6" X 7'-0"	614.74 192.74	- CALLER -
F	1' 6" V 7' 0"	10.62	
G SECOND FLOOP	1 -6 X / -0	10.62	
н	10'-2 1" X 28'-4 1"	289.66	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION
J	2'-4 ³ / ₄ " × 27'-7 ¹ / ₂ " 11'-11 ³ / ₄ " × 28'-10 ¹ / ₂ "	66.16 345.89	WILL BE UNDER MY OBSERVATION.
L		66.18	1
М	20'-7 1" X 28'-4 1"	584.44	S
N P	2'-4 ³ / ₄ " X 27'-7 ¹ / ₂ " 11'-11 ² / ₄ " X 28'-10 ¹ / ₂ "	66.18 345.39	
Q	2'_4 3" × 27'_7 1"	66.18	<u>о</u> ш <u>о</u>
R	10'-2 1" X 28'-4 1"	289.66	Z D R
	FIRST FLOOR TOTAL: SECOND FLOOR TOTAL:	2026.45 2119.74	빛_ z
	BUILDING 2 TOTAL:	4146.19	[므즈 띠 꽃
BUILDING 3 - 1	1357 LAUREL STREET (3 NEW	UNITS)	- S S S S S S S S S S S S S S S S S S S
			≥ > ∟ш
	FIRST FLOOR TOTAL: SECOND FLOOR TOTAL:	1520.41 1176.88	<u>κ</u> ⊃∩ Ω
	BUILDING 3 TOTAL:	2697.29]、≥⊼ .
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QUADRANT	DIMENSIONS	SUB TOTAL SF	-≥_≥ <
BUILDING 1 - 4	109 GLENWOOD AVENUE (HIST	ORIC RESIDENCE)	Ч Н Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц Ц
FIRST FLOOR			ᆘᅳᆜᆼ
FIRST	FLOOR BLDG COVERAGE TOTAL		ത
	FIRST FLOOR F.A.R. TOTAL BUILDING 1 TOTAL		1¥2 ~ z
			1ഗ പെ
BUILDING 2 - 4 FIRST FLOOR	17 GLENWOOD AVENUE (4 N	EW UNITS)	
		•	
P1 P2	14'-3" X 4'-0" 14'-3" X 4'-0"	56.48 56.48	Σ
FIRST I	FLOOR BLDG COVERAGE TOTAL	: 112.96	ပ
	FIRST FLOOR F.A.R. TOTAL BUILDING 2 TOTAL	: 2026.45	PRINT RECORD
		•	PURPOSE DATE
	357 LAUREL STREET (3 NEW	UNITS)	Design Review 04/20/20 Owner Review 04/07/20
FIRST FLOOR			- 50% Progress 70% Progress
FIRST	FLOOR BLDG COVERAGE TOTAL FIRST FLOOR F.A.R. TOTAL	: 139.07	Bldg, Dept. Submittal Initial CD Submittal 100% Const. Document
	BUILDING 3 TOTAL	: 1520.41 : 1659.48	100% Const. Document REVISION RECORD
	LEVATOR & COVERED STAIRS		NO. CHANGE DATE
			-
FIRST	FLOOR BLDG COVERAGE TOTAL FIRST FLOOR F.A.R. TOTAL		
	FIRST FLOOR F.A.R. TOTAL BUILDING 4 TOTAL		-
			1
			DRAWN: EPT
			CHECKED: RG
			DATE: 11/21/2018
			SHEET TITLE:
			BUILDING (2) FAR COVERAGE
			CALCULATIONS
			SHEET
			10000
			A008





BUILDING 1 EXISTING HISTORICAL STRUCTURE, TO BE RELOCATED ON SITE



EXISTING GLENWOOD AVENUE ELEVATION

NOTE: -ALL EXISTING BUILDING MATERIALS TO REMAIN OR IF NEEDED DUE TO CONDITIONS, REPLACE IN KIND

-NO NEW WINDOWS ARE PROPOSED

-NEW FRENCH DOORS TO OFFICE A108 WILL MATCH IN STYLE (RAIL, STILE & SPACER BARS) TO EXISTING FRENCH DOOR. SEE BELOW FOR EXISTING FRENCH DOOR



BUILDINGS 2 & 3 NEW MULTI FAMILY RESIDENCES

ROOFING:



COMPOSITION SHINGLE ROOF





FINISH COLOR TONE SAMPLE PAINTED PANTONE WHITE 000 C



ENTRY DOORS TO BE PAINTED PANTONE GRAY 422 C

FINISH COLOR TONE SAMPLE PANTONE GRAY 422 C

- PAINTED ENTRY

DOOR



G+S ARCHITECTURE

3120 Alpine Read, Sulle #268-47 Portola Valley, CA 94028

UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

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HARDIEPLANK® LAP SIDING, SELECT CEDARMILL PAINTED PANTONE GRAY 422 C

TRIM, COLUMNS, BEAMS, EAVES & FASCIA:



PAINTED 1X & 2X WOOD SELECT CEDARMILL PAINTED PANTONE WHITE 000 C

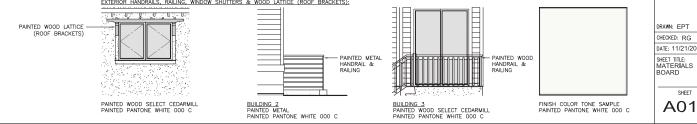
EXTERIOR DOORS & WINDOWS:



(WHITE) METAL CLAD WOOD WINDOW W/ CLEAR INSULATED GLASS AND SIMULATED DIVIDED LIGHTS. WINDOWS ARE CASEMENT & FIXED

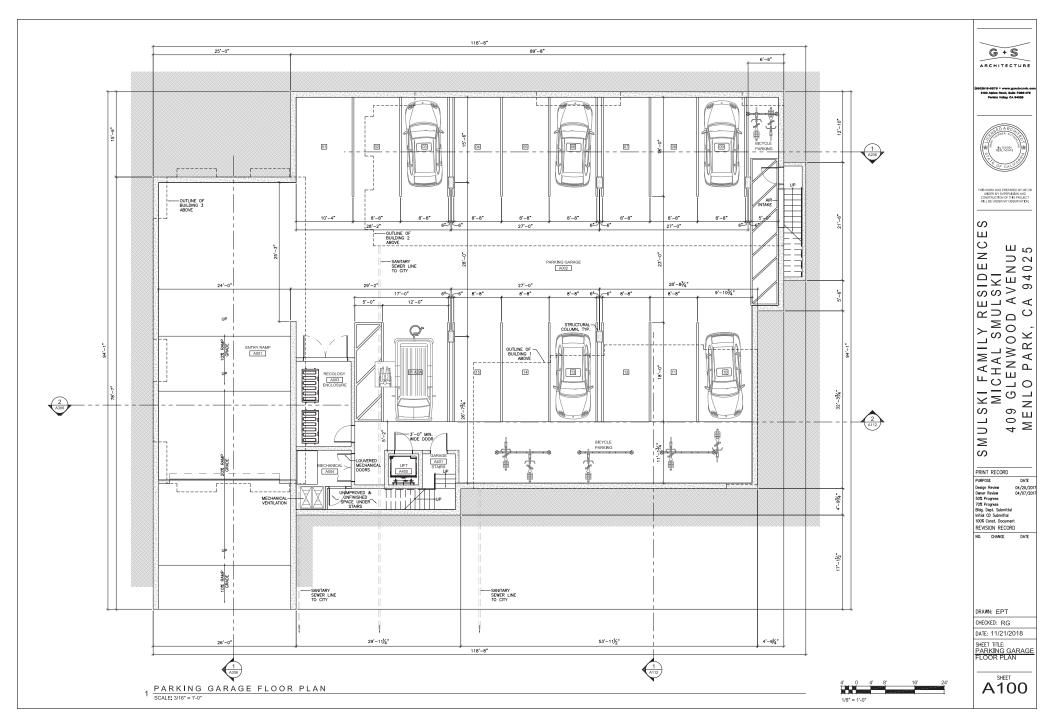
(WHITE) METAL CLAD WOOD DOOR W/ CLEAR INSULATED GLASS AND SIMULATED DIVIDED LIGHTS.

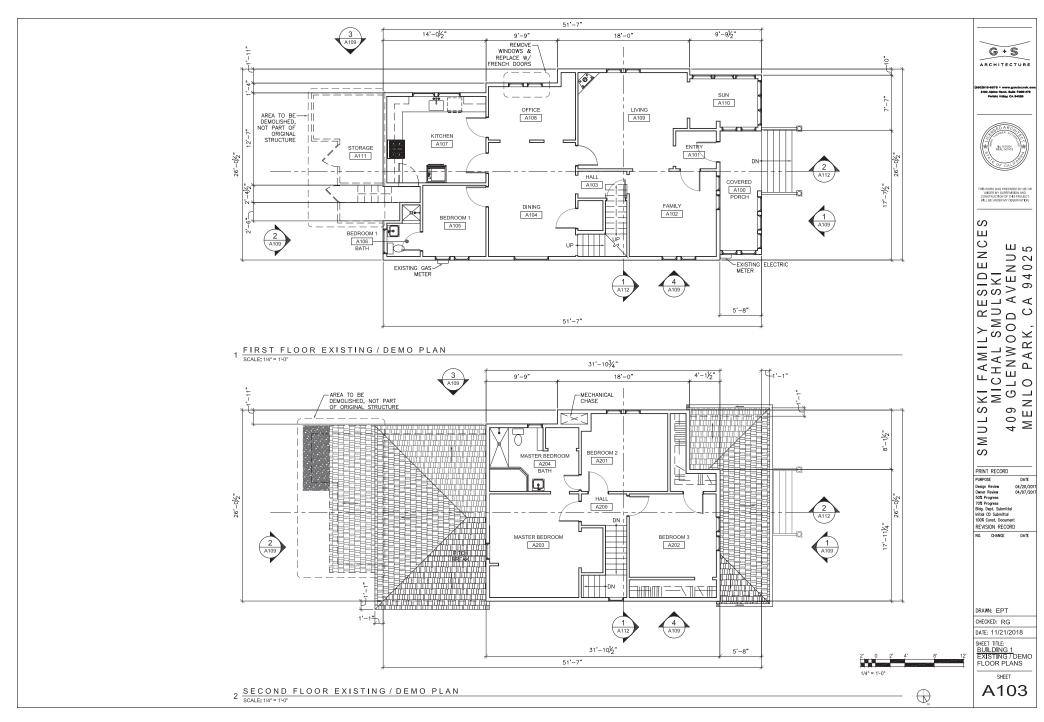
EXTERIOR HANDRAILS, RAILING, WINDOW SHUTTERS & WOOD LATTICE (ROOF BRACKETS):

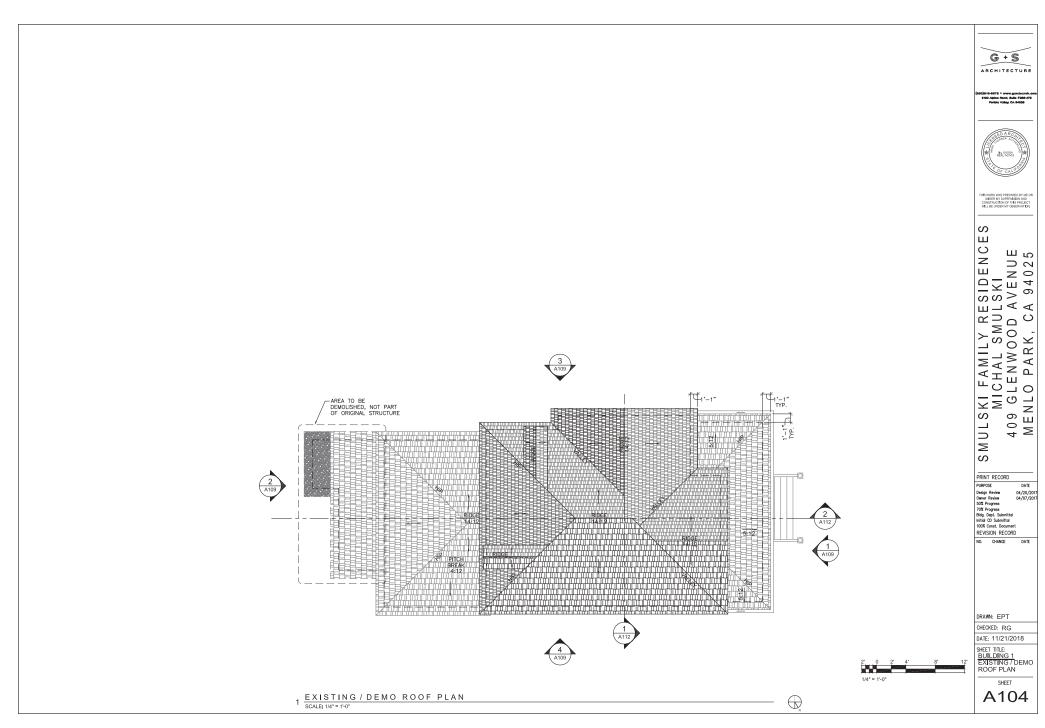


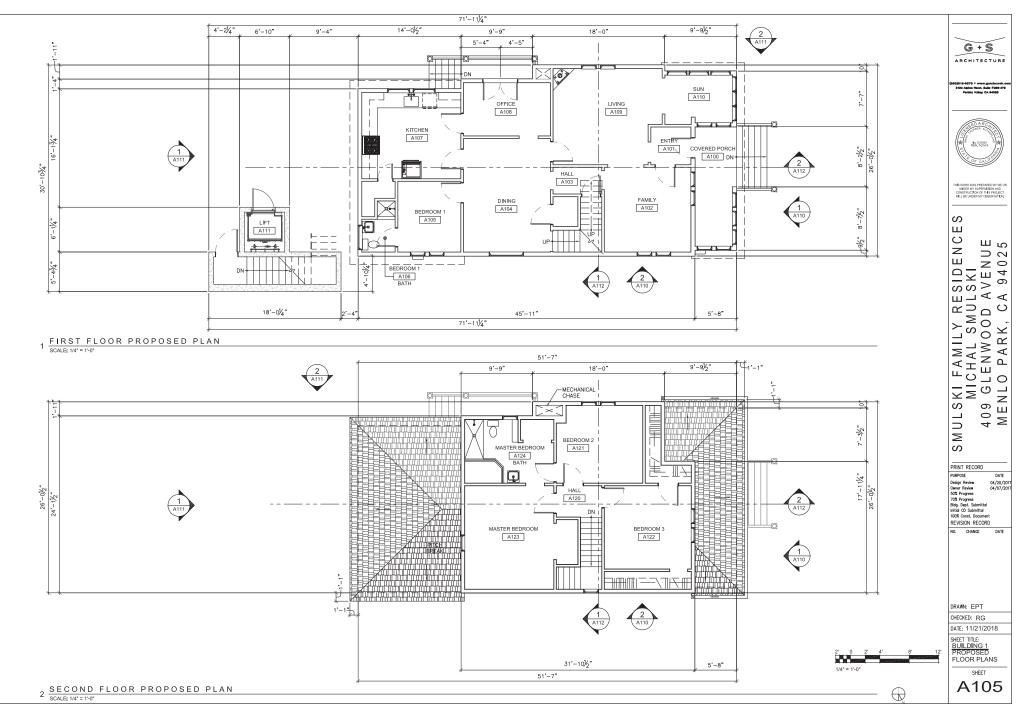


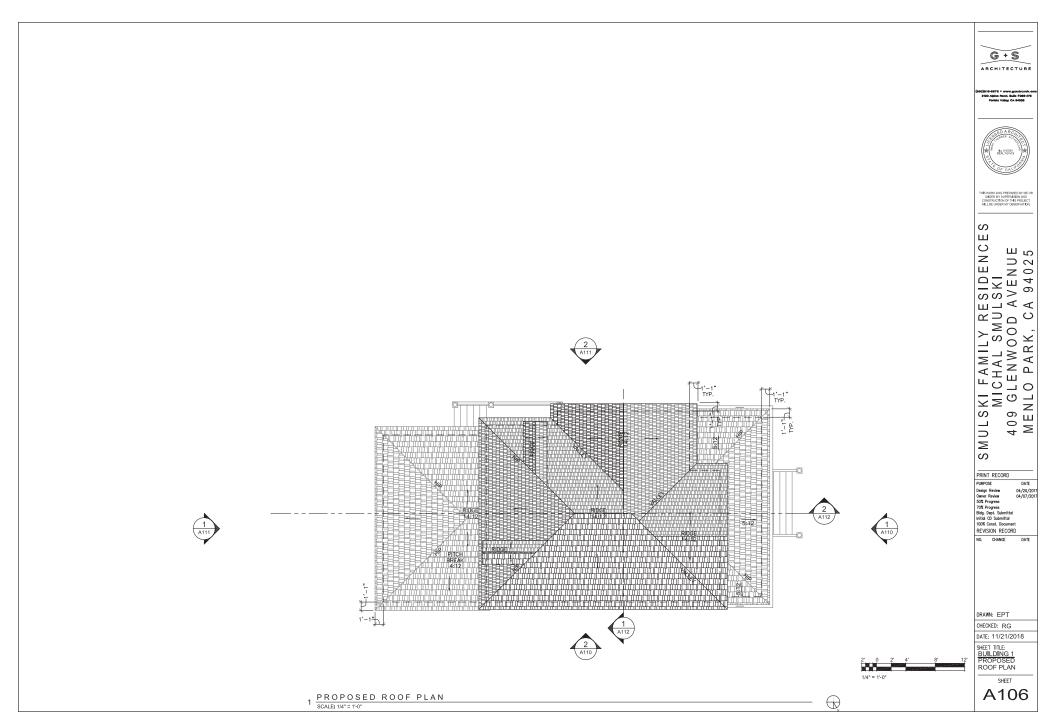
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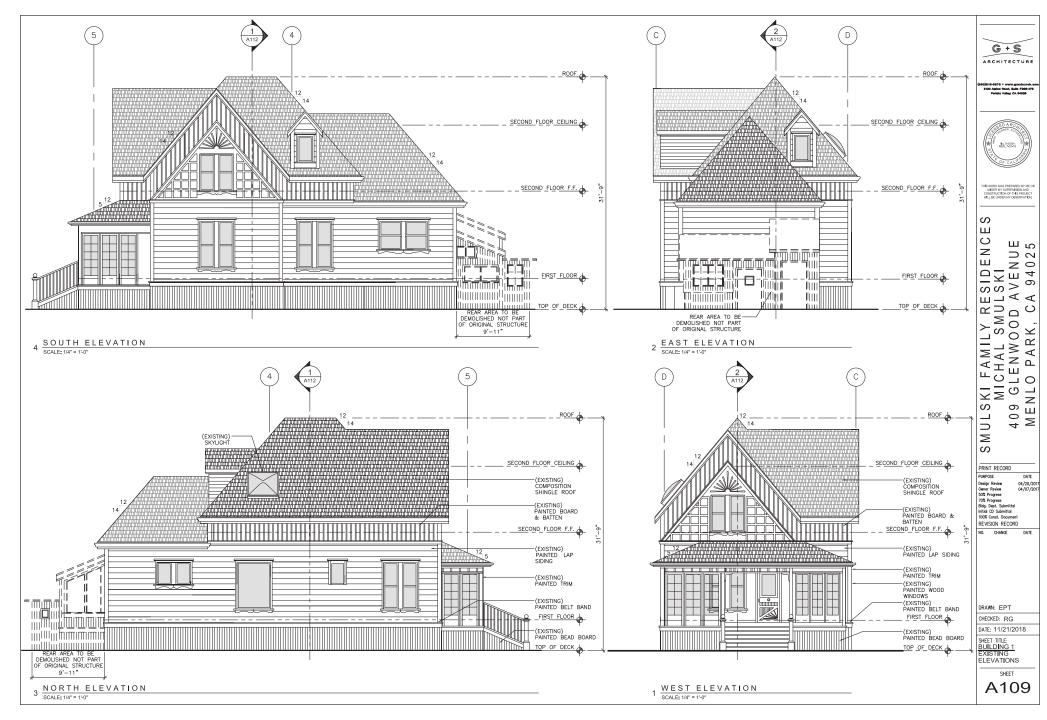


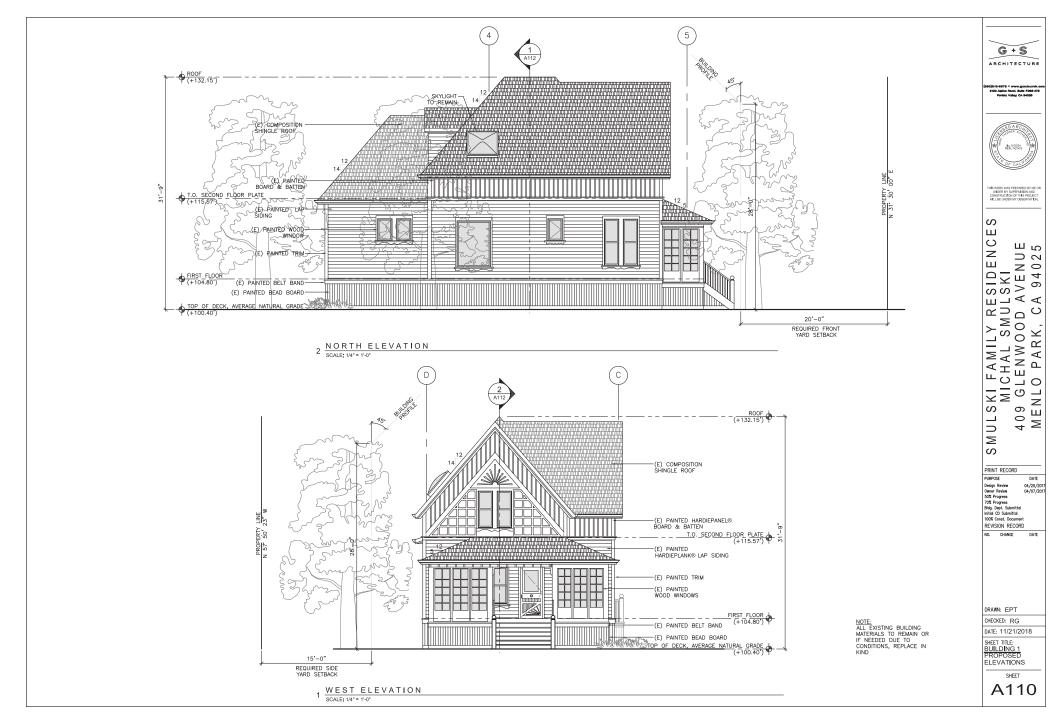


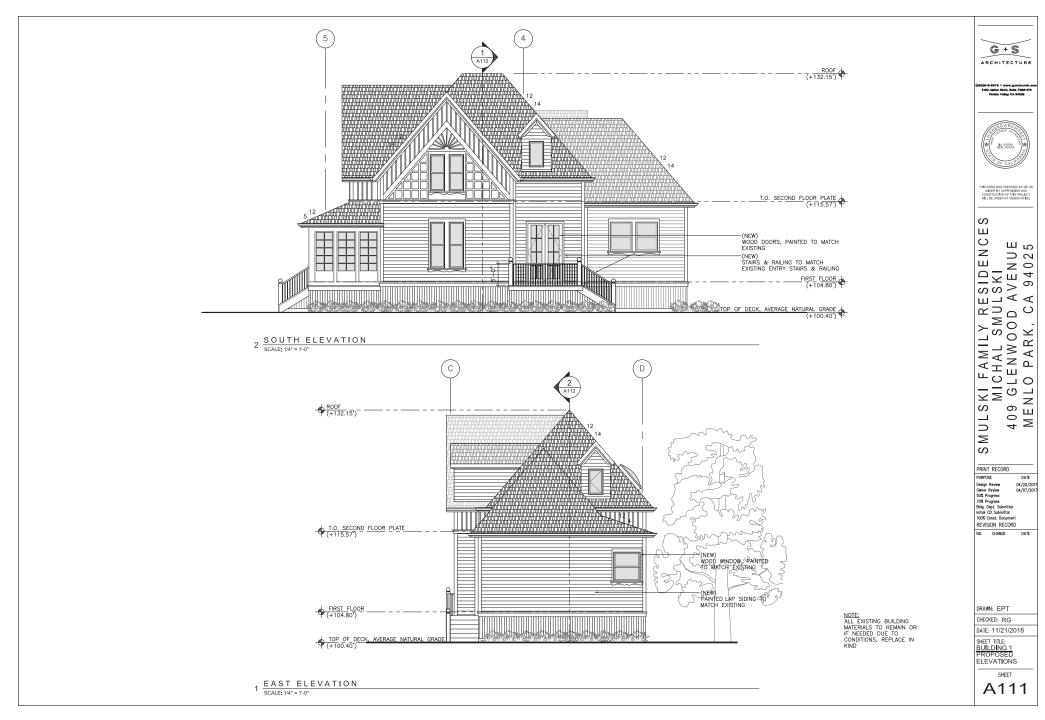


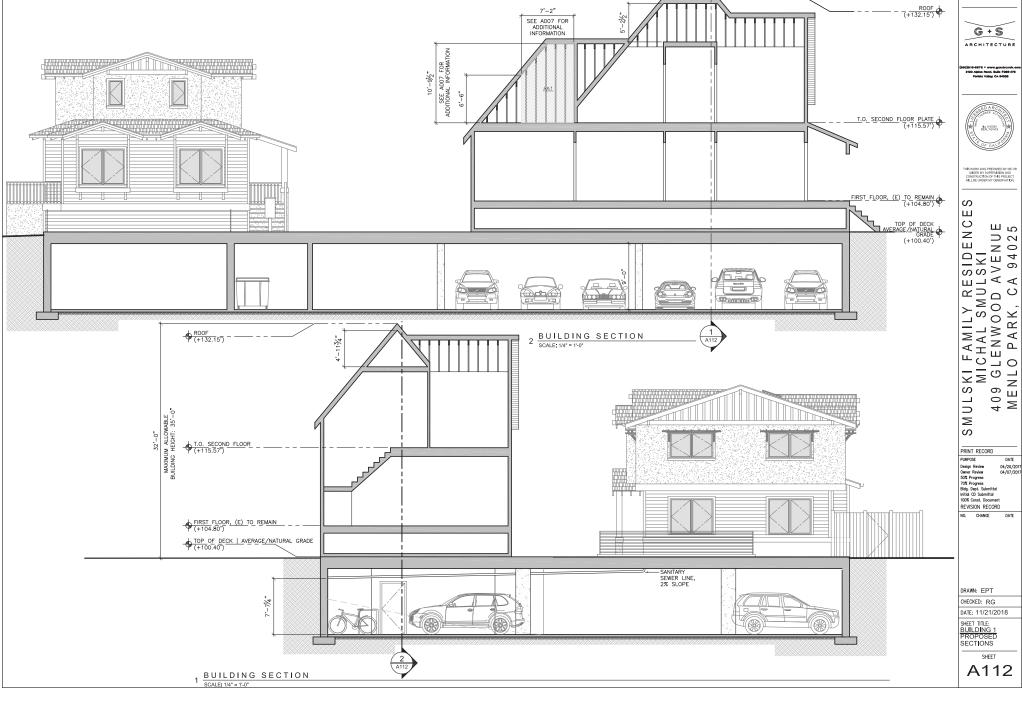


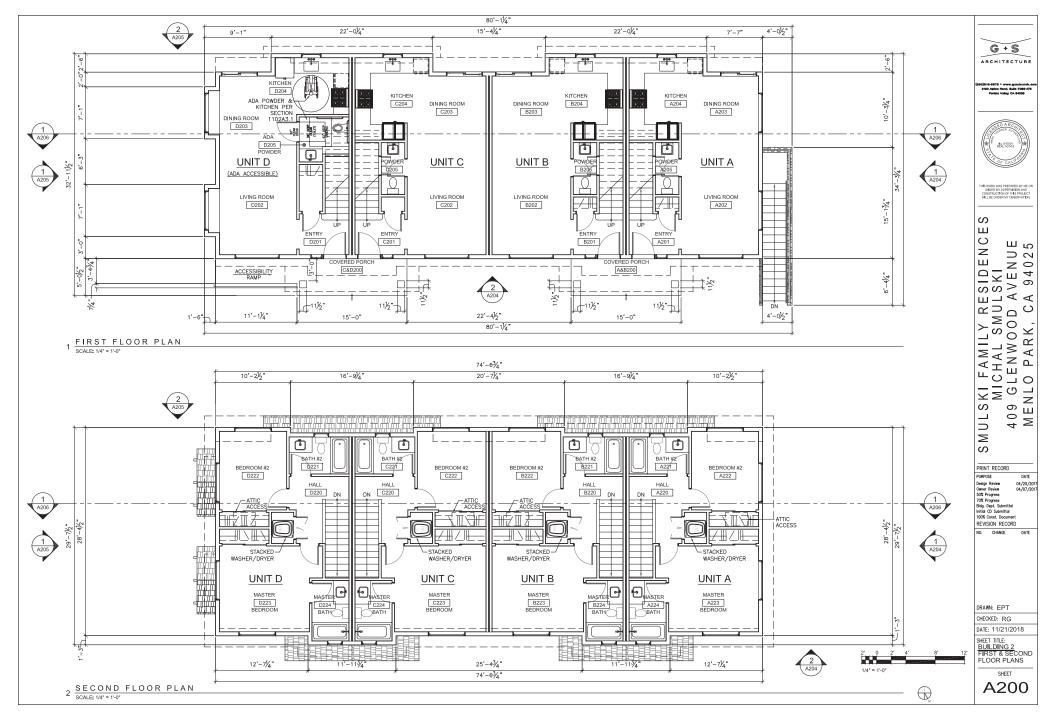


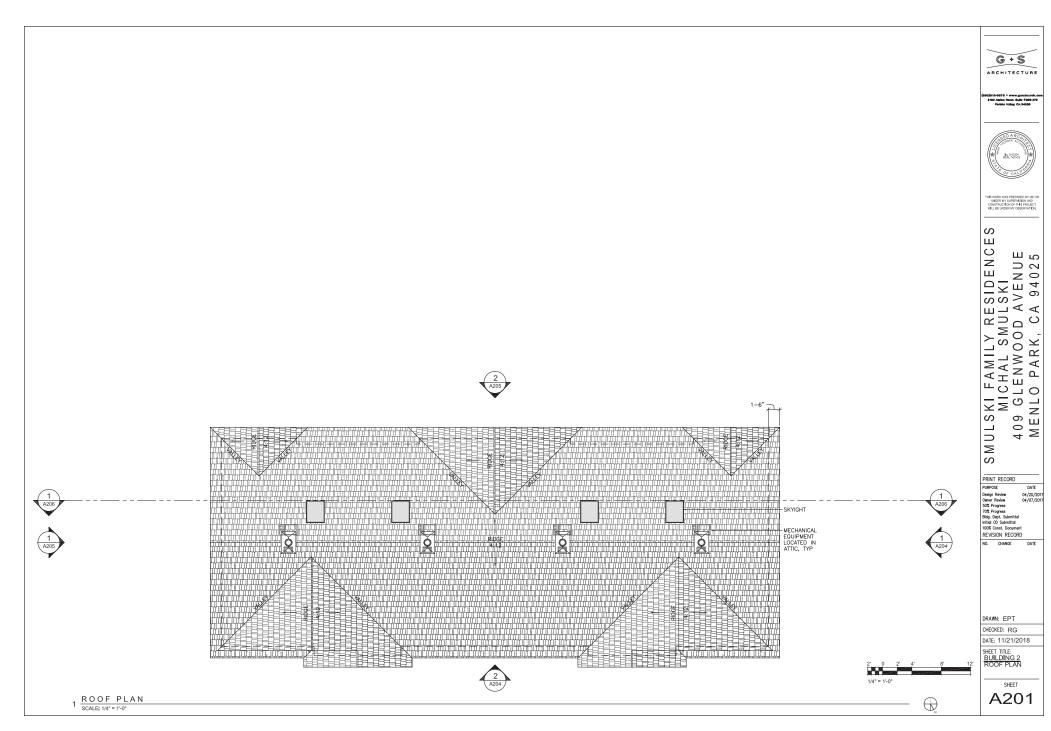






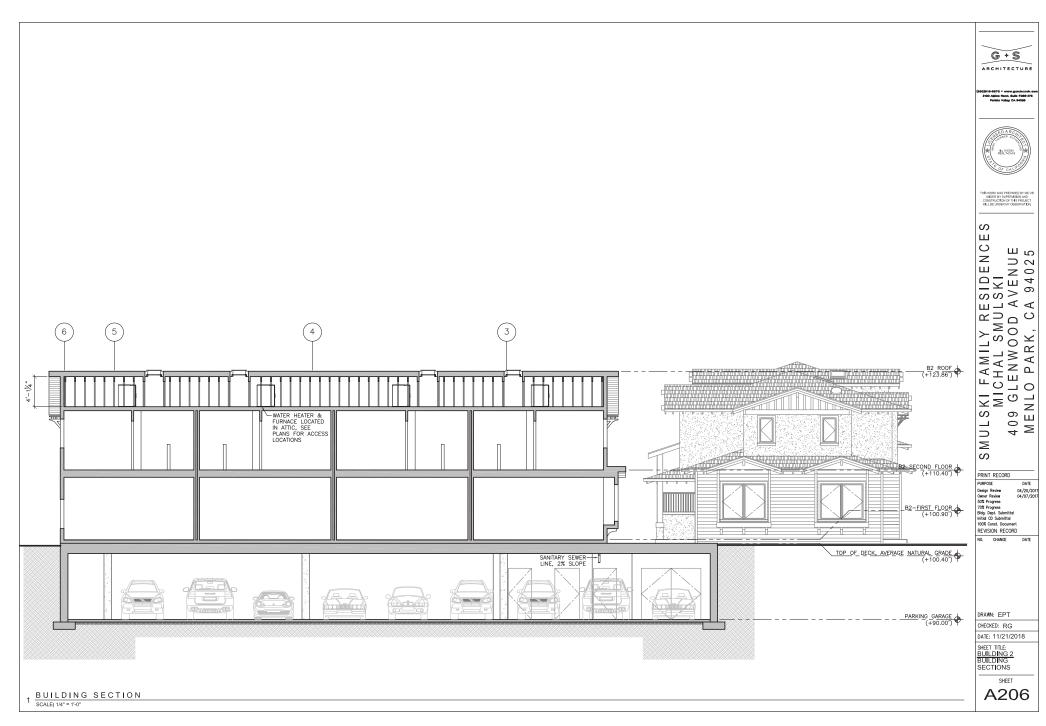


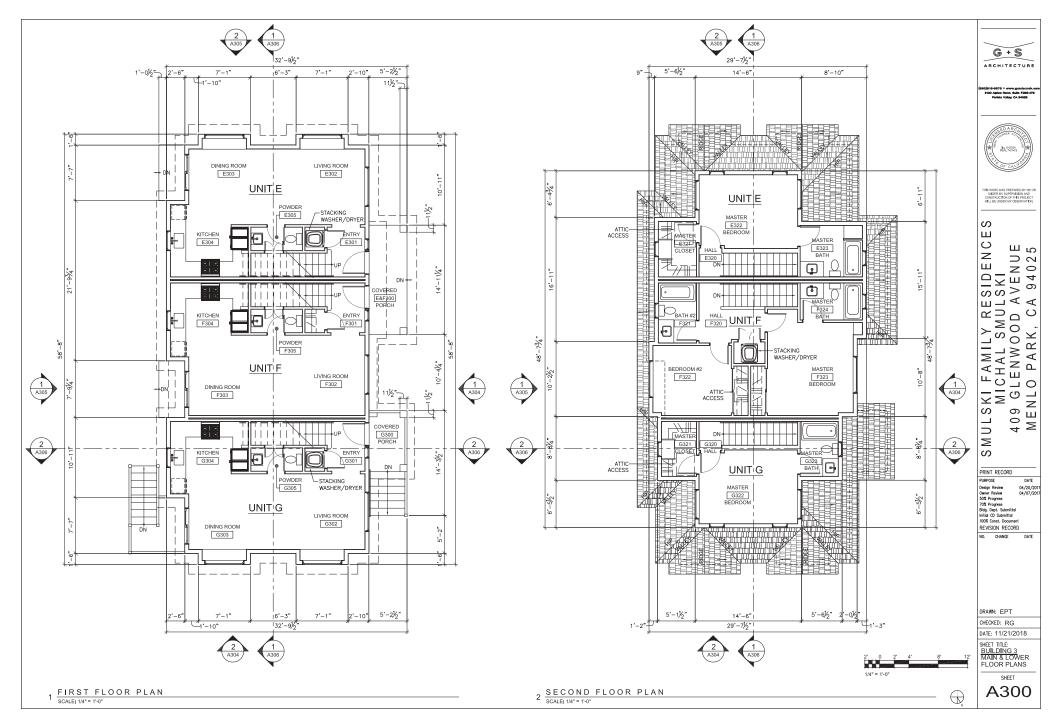


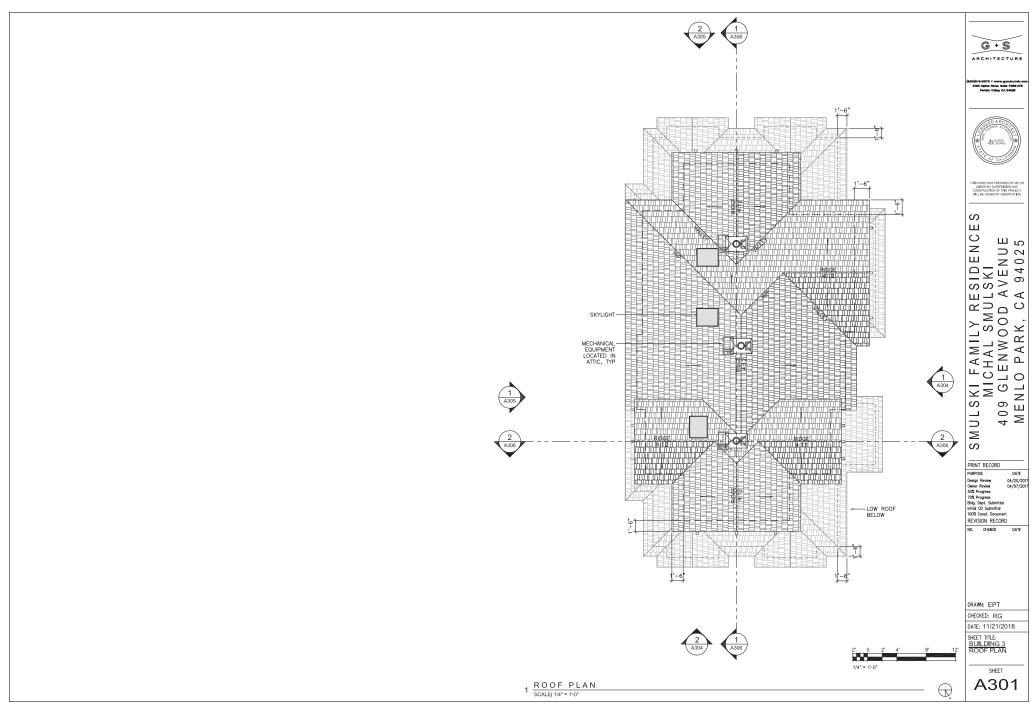


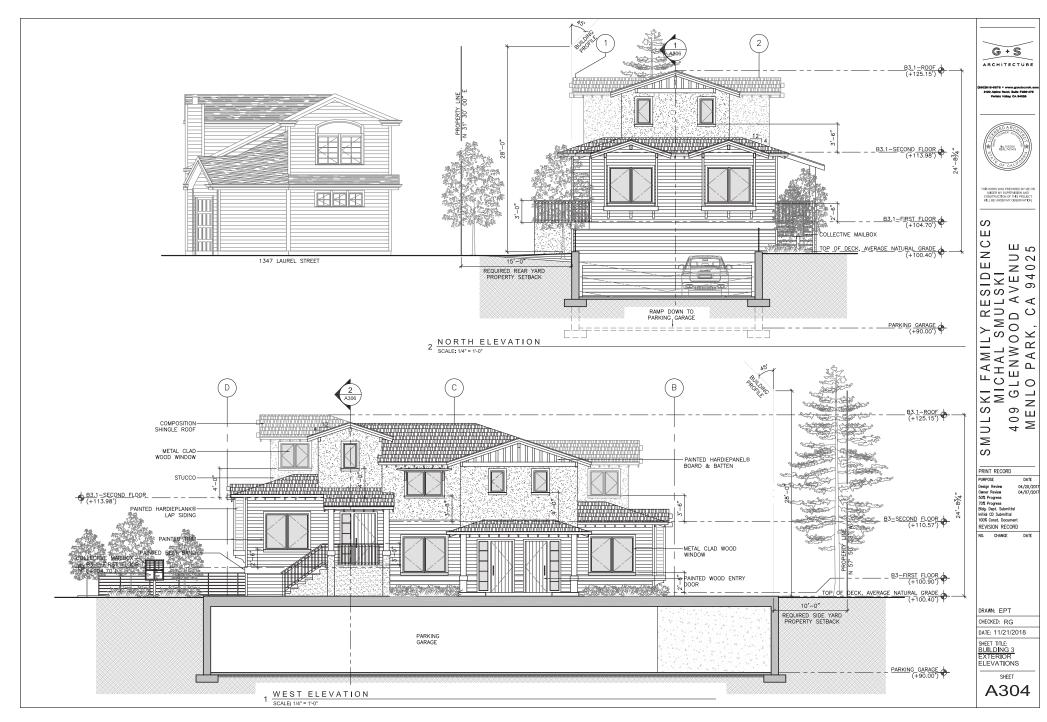


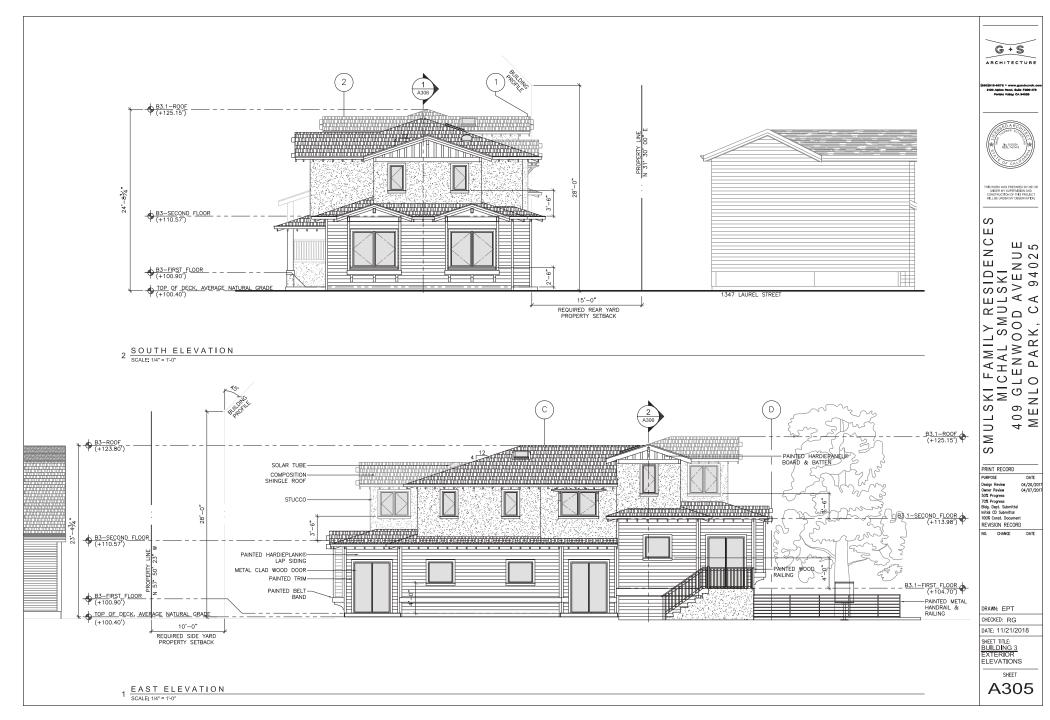


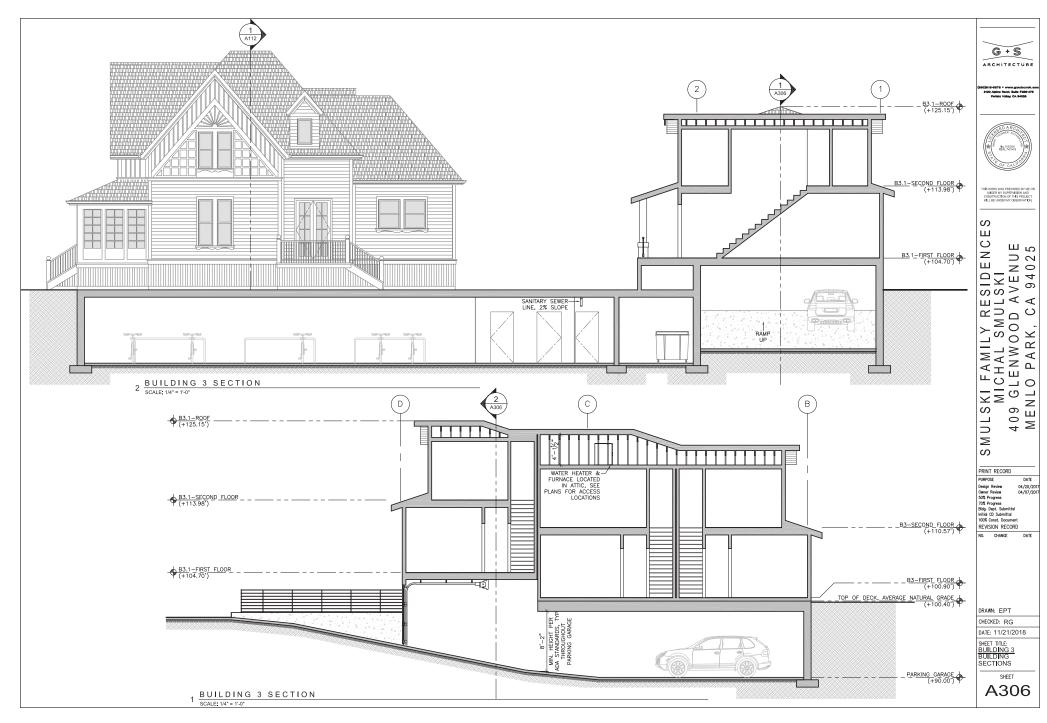


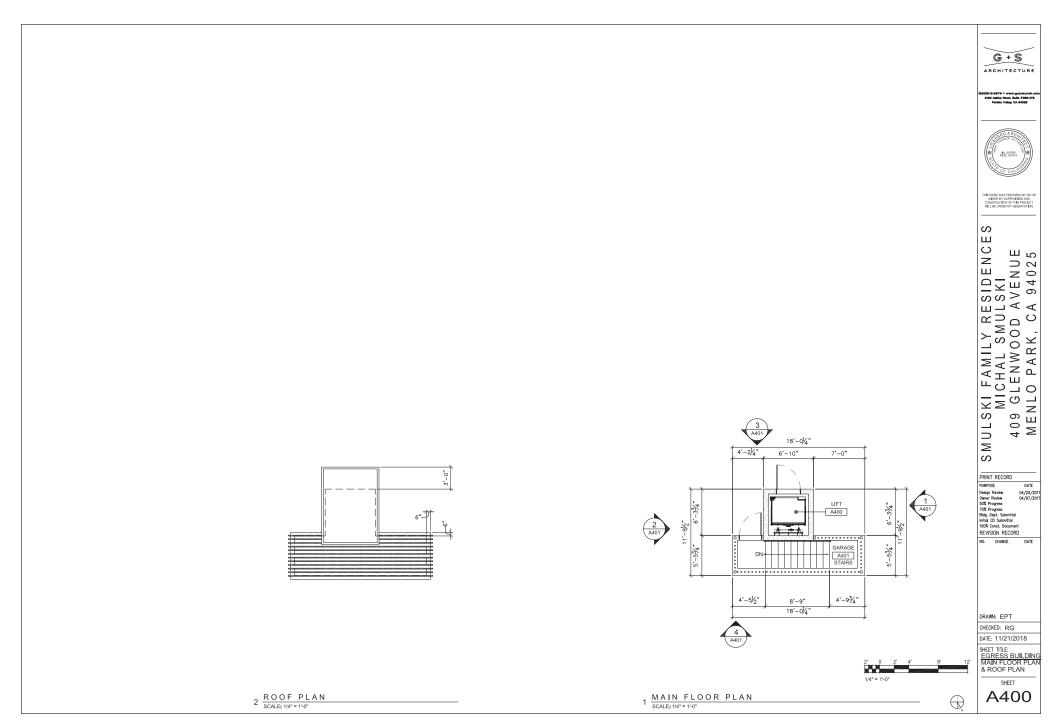


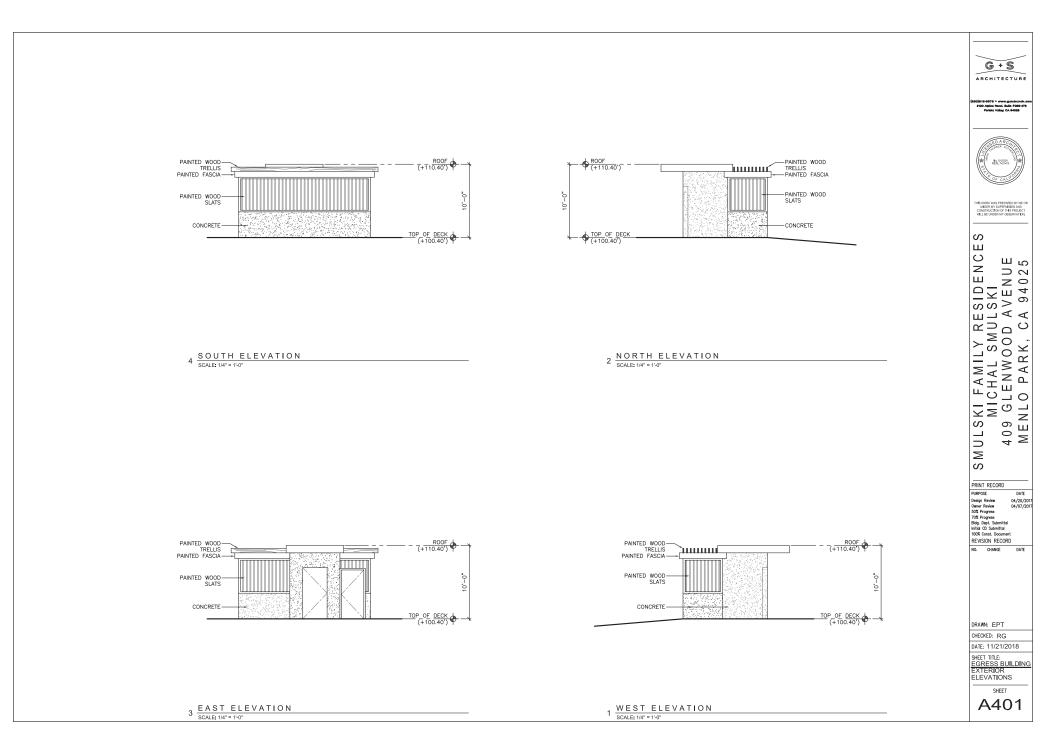


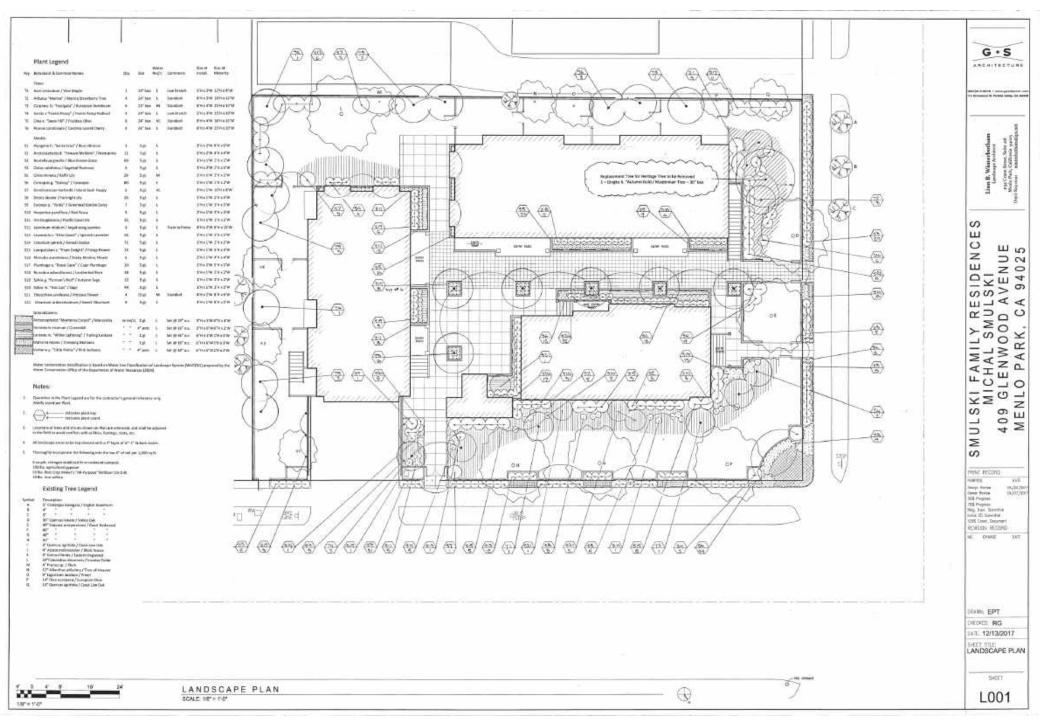












D37



Project Description Letter

409 Glenwood Ave. Menlo Park, CA

Project Purpose:

The purpose of this project is to create new, modern and functional housing for multiple families on the site, while also preserving a historic home and many heritage trees currently on site.

Scope of Project:

The proposed project consists of creating eight residential units within three buildings on a corner property in Menlo Park where currently there are three single family structures. The addresses of the existing residences are a two-story residence addressed 417 Glenwood Avenue, a two-story residence addressed 409 Glenwood Avenue, and a one-story residence addressed 1357 Laurel Street.

The designated, historic home at 417 Glenwood would be relocated to a more prominent location at the corner of the overall site and preserved in its current state with little alteration.

The other two residences are to be removed and demolished and two, new, two-story buildings are to be built on the property as shown, creating seven new residential units. The required on-site parking for these residences, will consist of an underground level parking garage, upon which the residences will sit.

Styles and Colors:

The two new residential buildings are proposed to be built with a contemporary craftsman style, which is complementary to the historic home's style and coloring. The new buildings will be clad in lap siding and board & batten siding, mimicking the siding on the historic house. There are stucco surfaces as well on the new buildings. The color palate of the new buildings are shades of gray with white trim. The historic home will maintain its current palette of pastel yellow siding and white trim. Roofs on the new structures will have composition shingles in a dark grey palette. Again, this is complementary to the existing shingle roofing on the historic home.

Siting and Construction methods:

To allow for the necessary on-site parking for the residential complex, while maintaining the historic home, the overall design incorporates a subterranean parking level (parking garage). This precipitates the need for a concrete pad above this level at grade, on which the three buildings and their immediate landscaping will be supported. The creation of the underground parking level and main level pad requires the use of stitch piers around the garage perimeter to allow for minimal impact to the existing heritage redwood and other trees on the site.

The siting of the buildings and position of the entry to the parking level are the result of fitting the historic home and the two additional residential buildings on the site, within the confines of the existing setbacks and the site's heritage trees. While other layouts were considered, the proposed layout is the final solution which both allows for the required parking, residential density, and appropriate spacing and private spaces for the residential units. The historic home has been shifted towards Laurel Street to allow for the layout of the two new residential buildings. The general orientation on-site of the historic home is maintained and is more similar to its historic, open-site relationship to the street corner, prior to the construction of the existing building at 409 Glenwood Avenue.

Neighborhood Outreach:

The owner mailed an outreach letter, along with a link to the submitted plans to all neighbors within a 300' radius of the project address. Concerns included the siting of the driveway on Laurel Street, however this driveway configuration is common among mid-density housing projects along Laurel Street currently. We will update our Project Description letter as more comments or concerns are received.

Historic Resource Evaluation

409 Glenwood Ave. Menlo Park, CA



Prepared for:

Mark T. Sutherland, AIA G and S Architecture

Prepared by:

Richard Brandi Architectural Historian 125 Dorchester Way San Francisco, CA 94127 August 14, 2017

HISTORIC RESOURCE EVALUATION REPORT

1. Introduction

This HRE evaluates the 409 Glenwood Avenue Project for compatibility with the Secretary of the Interior's Standards for Rehabilitation on the historic resource at 417 Glenwood Avenue. The project will affect three buildings, 409 and 417 Glenwood Ave., and 1357 Laurel St. in Menlo Park. 417 Glenwood is considered to be a historic resource under the California Environmental Quality Act (CEQA), and this evaluation of project plans was conducted for its compatible with the Secretary of the Interior's Standards for Rehabilitation.

Based on archival research, a site visit, review of the project plans dated April 7, 2017, and analysis, the 409 Glenwood Project is compatible with the Secretary of the Interior's Standards for Rehabilitation regarding 417 Glenwood Avenue.

Qualifications

This review was conducted by Richard Brandi who holds an M.A. in Historic Preservation from Goucher College, Maryland and a B.A. from U.C. Berkeley. He is listed as a qualified historian by the San Francisco Planning Department and the California Historical Resources Information System. In addition to researching and writing historic context statements, Mr. Brandi conducts historic resource evaluations; architectural surveys; CEQA, NEPA and Section 106 reviews; HABS/HAER documentation; National Register nominations; and project reviews using the Secretary of the Interior's Standards for the Treatment of Historic Properties. Richard has completed two nominations to the National Register of Historic Places, two HABS/HAER documentations, and dozens of HREs. He has also evaluated hundreds of buildings and surveyed thousands of buildings and structures. He has conducted design reviews using the Secretary of the Interior's Standards for the Treatment of Historic Properties Standards for the Treatment of Historic Properties using the Secretary of the Interior's October (Conducted Conducted Conduc

Current Historic Status

According to a recent historic resource evaluation of 409 Glenwood, 417 Glenwood Ave., and 1357 Laurel St., only 417 Glenwood Ave is eligible for the National and California registers. The report concludes¹:

Criterion B of the National Register and Criterion (2) of the California Register addresses the association of the property with significant historic personalities. The Gale family was directly tied to this property for almost 80 years. Susan Gale has been officially recognized by the City of Menlo Park for her local contributions as city historian, and she has been memoralized for her contributions. The residence at 417 Glenwood Ave. has a direct and primary association with Susan Gale, and because of this appears eligible as a local resource for the National and California Registers under Criterion B and (2).

The house at 417 Glenwood Ave. is a distinctive architectural specimen, and as such it appears to qualify for the California Register under Criterion (3), and for the National Register under Criterion C. It was owner-designed and built by Aaron Gale, who worked as a master carpenter/builder in the Menlo Park area. It derives its quality from its distinction as an important architectural work in the Stick style. The property retains its early twentieth century residential scale and feeling and continues, through its distinctive form and detailing, to illustrate a distinguished carpenter-built Stick style house of the period.

As far as its character-defining features:

This unique two-story house is a Victorian-era example of Stick residential architecture. A balloon-frame structure, it features Victorian-era character-defining elements such as a raised compact mass with hipped main roof and accent gables at the front and side, enclosed eaves, vertical double-hung windows, horizontal siding, as well as extensive wood trim. The house retains most, but not all of its, historical integrity over time as per the National Register's seven aspects of integrity; particularly, the setting has changed with the inclusion of the house at 409 Glenwood Ave., and the rear of the house has been modified and expanded. The house however maintains its original location near the intersection of Glenwood Avenue and Laurel Street, and is located on the same property as when constructed during the nineteenth century within a residential subdivision that today

contains a mix of older and more recent homes. The house retains its 1890s residential scale and feeling and continues to illustrate its associations with Stick style design of the Victorian era. Later additions to the rear are generally not compatible, but do not impact the overall integrity of the building as they are generally out of view – these changes appear reversible. The historic design features include the raised balloon frame form, hipped and gabled roof, wrap around and partially enclosed porch, enclosed eaves and wood gutters, board and batten frieze and stick surface panels, channel rustic siding with watertable, wood windows, and original Queen Anne front door. The majority of the original character-defining materials and the workmanship of this house have been preserved.

To recap, the character-defining features of the building are as follows:

- Raised balloon frame form,
- Hipped and gabled roof,
- Wrap around and partially enclosed porch,
- Enclosed eaves and wood gutters,
- Board and batten frieze and stick surface panels,
- Channel rustic siding with watertable,
- Vertical double hung wood windows, and
- Original Queen Anne front door.

The rear shed roof addition is not a character-defining feature.



The rear addition (i.e., from the red lines rearward) is not a characterdefining feature.

SECRETARY OF THE INTERIOR'S STANDARDS ANALYSIS

Project Description

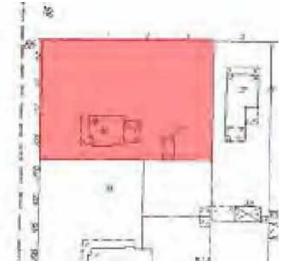
The proposed project would demolish 409 Glenwood and 1357 Laurel Street and move 417 Glenwood 44' 3" toward Laurel Avenue and 14' 6" toward Glenwood Avenue to the corner of the lot at Glenwood Avenue and Laurel Street. 417 Glenwood is currently set back 33' 6" from the property line on Glenwood and would sit 25 feet from the property line when moved. According to the project architect, the historic house will be moved to the corner for a programmatic reason, in order to allow for the construction of an underground garage on the site, and to further public policy by accommodating existing mature trees.

409 Glenwood presently sits on the corner, and 417 Glenwood is adjacent. An underground parking garage will be constructed underneath the house. The house may be raised up to 12 inches above the existing grade, depending on future structural engineering for the foundations and parking garage decking. If a raided deck is required, the house itself will still have the same steps up from the decking and the same visual appearance as sitting on grade, according to the project architect. The rear of 417 Glenwood, which is a later addition, would be removed. Also, the existing windows on the right would be replaced with patio doors and a landing of painted wood, in-kind replacement. No other changes will be made to the house. It has not been determined yet, but any replacement windows would be in-kind replacement in material, finish, and color.

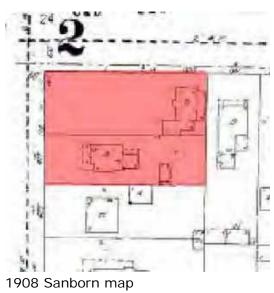


Existing site.

The property contains three buildings on the site, 417 Glenwood built 1892, 1357 Laurel built 1906, and 409 Glenwood built 1980. The property originally had one house, 417 Glenwood, on the lot.

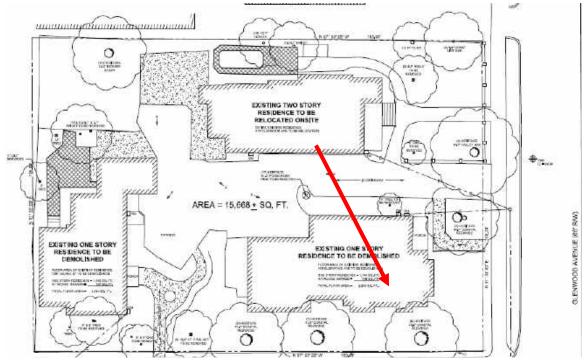


1904 Sanborn map.

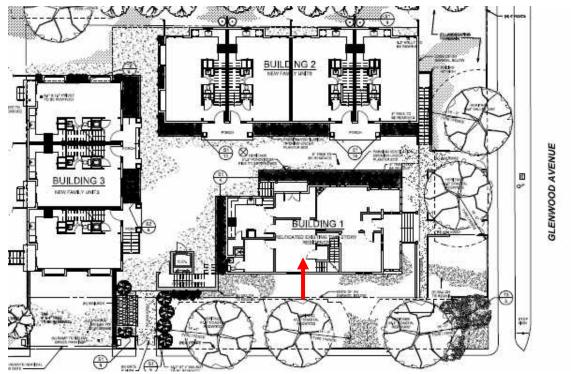




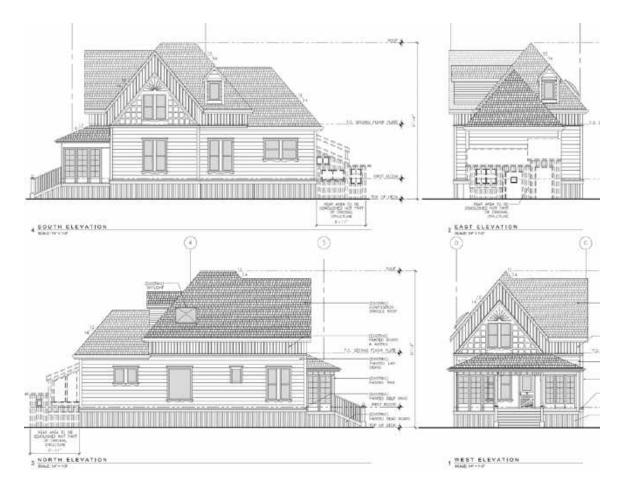
The existing building on the corner would be demolished and 417 Glenwood (on the right) would be moved to the (left) to sit on the corner.



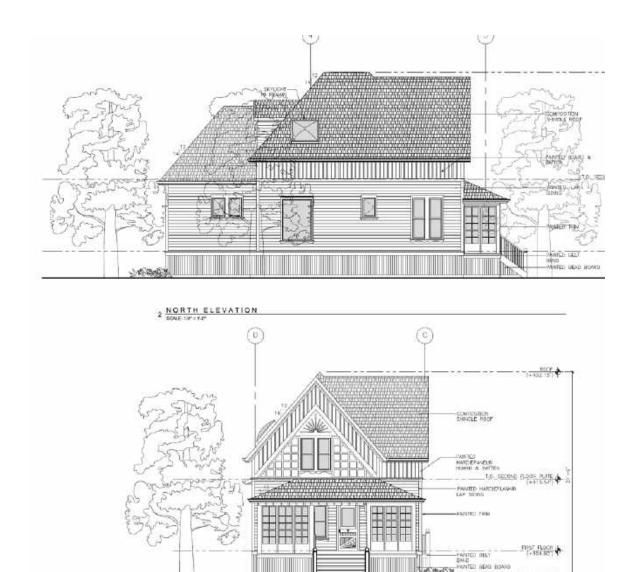
Current site configuration. Arrow indicates direction of house move (not to scale).



Proposed site. Building 1 is 417 Glenwood.



Existing elevations.



1 WEST ELEVATION

Proposed Elevations

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1 EAST ELEVATION

Proposed Elevations.

EVALUATION FOR CONSISTENCY WITH SECRETARY OF INTERIOR'S STANDARDS

When a proposed project has the potential to affect a historic resource, *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings* (hereinafter "Standards") are used to provide guidance to review the potential impacts to the historic structure. There are four Standards for the treatment of historic properties: Preserving, Rehabilitation, Restoring, and Reconstructing. The current project is not attempting to preserve or restore the building, but to reorganize and reprogram the interior spaces while preserving the exterior of the building. Therefore, the Rehabilitation Standard is appropriate for this project. The proposed project was evaluated in this report through the application of the Rehabilitation standard from the Standards.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural or architectural heritage. —Secretary of the Interior's Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

The project proposes to use the building for residential use, which is its historic and present use. Therefore, the project is consistent with Standard #1.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

The historic character of the property will be retained and preserved. The non-historic and non characterdefining rear addition will be removed. The distinctive materials and features are unchanged. The house will be moved 44' 3" toward Laurel Ave. and 14' 6" toward Glenwood. According to the project architect, the historic house will be moved to the corner in order to allow for the construction of an underground garage on the site and to accommodate existing mature trees. The spatial relationships among the existing three buildings are not historic and do not characterize the property. Although the house will be moved, its historic integrity of location is maintained. (See discussion below.) Therefore, the project is consistent with Standard #2.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

The proposed project does not propose to add conjectural features and is therefore consistent with Standard #3.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

No documented changes to the property have achieved historic significance; therefore, the proposed project is consistent with Standard #4.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

The proposed project does not propose to remove distinctive materials, features, finishes, and construction techniques or examples of craftsmanship. The rear addition is not original. The project therefore is consistent with Standard #5.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

The project will make any modifications to the existing structure with in-kind replacements, including material, look, finish, and color. Therefore, the project is consistent with Standard #6.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

The proposed project should follow guidelines for the cleaning of the exterior of the building and use the gentlest means possible in order to be consistent with Standard #7.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

This report does not evaluate potential archeological resources.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

The proposed project proposes to demolish the non-historic rear addition. A side window and the right side will be replaced with a patio door. A landing will also be constructed on the right side as a means of access for the patio door. The patio door replaces an existing widow, and the fenestration pattern on that side of the building is unchanged. The right side of the building is a secondary façade, not readily visible from the street. The primary facade facing the sidewalk contains the property's historic materials and features that characterize the property. Therefore, the project is consistent with Standard #9.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The relatively minor new construction of a patio door and landing could be removed and would not impair the form and integrity of the house, and therefore the project is consistent with Standard #10.

Impacts Analysis

The project would not result in impacts to the historic building. Nor does it appear that the project would result in any cumulative impacts.

EVALUATION OF ADVERSE IMPACTS UNDER CEQA

An additional analysis was made of the project to assess whether the moving of the historic house constitutes "a substantial adverse change in the significance of a historical resource" under the California Environmental Quality Act.

Moving the House

The project proposes to move the historic house 44' 3" toward Laurel Ave. and 14' 6" toward Glenwood. The question is whether this move constitutes "a substantial adverse change in the significance of a historical resource" under the California Environmental Quality Act (CEQA). Under CEQA, a substantial adverse change in the significance of a historical resource means physical demolition, destruction, *relocation*, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired.² (Emphasis added.)

However, relocations can be acceptable under CEQA:

Relocation of an historical resource may constitute an adverse impact to the resource. However, in situations where relocation is the only feasible alternative to demolition, relocation may mitigate below a level of significance *provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register* (14 CCR Section 4852(d)(1)). ³ (Emphasis added.)

The significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources.⁴ Eligibility for listing on the California Register of Historical Resources has a three-part test: a resource must meet one of four criteria for historic significance, must generally be more than 50 years old, and must retain its historic integrity.

The California Register of Historical Resources (CRHR) evaluates a resource's historic significance based on the following four criteria:

Criterion 1 (Event): Resources associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2 (Person): Resources associated with the lives of persons important to local, California, or national history.

Criterion 3 (Design/Construction): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master or possess high artistic values.

Criterion 4 (Information Potential): Resources that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

If the property appears to possess historic significance, then a determination is made of its physical integrity: that is, its authenticity as evidenced by the survival of characteristics that existed during the resource's period of significance.

There are seven aspects of integrity:

- Location
- Design
- Setting
- Materials
- Workmanship
- Feeling
- Association

The previous historic resource evaluation found that 419 Glenwood Avenue is significant under Criteria 2) Person, and 3) Architecture, and *that it retains its historic integrity except for setting.* The historic setting has changed twice, first when the house at 1357 Laurel was built in 1906 and again in 1980 when the house at 409 Glenwood was built. Nonetheless, the previous evaluation found that the house at 419 Glenwood retains its historic integrity in spite of changes in historic setting.

Project Impacts and Historic Integrity

Not all properties must have all seven aspects to be considered historic. It depends on the resource and what makes it historic.

All properties change over time. It is not necessary for a property to retain all its historic physical features or characteristics. The property must retain, however, the essential physical features that enable it to convey its historic identity. The essential physical features are those features that define both *why* a property is significant (Applicable Criteria and Areas of Significance) and *when* it was significant (Periods of Significance). They are the features without which a property can no longer be identified as, for instance, a late 19th century dairy barn or an early 20th century commercial district.

A property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique. A property that has lost some historic materials or details can be eligible *if* it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style.⁵

Location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved.

Design is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original

conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies, as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place. A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved. The property must also be an actual historic resource, not a recreation; a recent structure fabricated to look historic is not eligible. Likewise, a property whose historic features and materials have been lost and then reconstructed is usually not eligible.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques. Workmanship is important because it can furnish evidence of the technology of a craft; illustrate the aesthetic principles of a historic or prehistoric period; and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery.

Setting is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historical role. It involves *how*, not just where, the property is situated and its relationship to surrounding features and open space. Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve. In addition, the way in which a property is positioned in its environment can reflect the designer's concept of nature and aesthetic preferences. The physical features that constitute the setting of a historic property can be either natural or manmade and include such elements as the topographic features (a gorge or the crest of a hill); vegetation; simple manmade features (paths or fences); and relationships between buildings and other features or open space. These features and their relationships should be examined not only within the exact boundaries of the property, but also between the property and its *surroundings*. This is particularly important for districts.

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the

property's historic character. For example, a rural historic district retaining original design, materials, workmanship, and setting will relate the feeling of agricultural life in the 19th century. A grouping of prehistoric petroglyphs, unmarred by graffiti and intrusions and located on its original isolated bluff, can evoke a sense of tribal spiritual life.

Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. For example, a Revolutionary War battlefield whose natural and manmade elements have remained intact since the 18th century will retain its quality of association with the battle. Because feeling and association depend on individual perceptions, their retention *alone* is never sufficient to support eligibility of a property for the National Register.

The project may affect the current Setting, *but the current setting is not historic as explained above.* The project does not materially affect Feeling because, although the building will be moved to the corner and the left side of the house will have greater visibility than it does currently, this does not materially affect the "property's expression of the aesthetic or historic sense of a particular period of time." The "aesthetic or historic sense of a particular period of time." The "aesthetic or historic sense of a particular period of time" refers to the building character-defining features. In any case, the building is currently detached so that the left side of the house is somewhat visible. And as a matter of historical note, the house's left side was completely visible before a building was built on the corner, according to the 1904 and 1908 Sanborn maps. Therefore, the move of the house does not change six of the historic integrity aspects of Design, Materials, Workmanship, Setting, Feeling, and Association.

Regarding the historic aspect of Location, the question is whether moving it such a short distance degrades the historic integrity aspect of Location to such an extent that it no longer conveys its historic significance. Moving historic buildings is not recommended as explained by Technical Preservation Services Division⁶:

Moving a historic building is sometimes the only way to save it from demolition, but such an action should be undertaken only as a last resort when all other preservation options have been exhausted. When a historic building has been moved, it loses its integrity of setting and its "sense of place and time" — important aspects of the historic character of a building and its environment

Often the original site and its relationship to the historic structure is [*sic*] as important as the building itself. A relocated building, even if placed on a terrain similar to where it stood previously, will seldom have the same aesthetic relationship to its new site. Thus the selection of a new site, appropriate for the building, plays an important role in the success of the relocation project.

The admonition against moving historic buildings stems from a desire to avoid relocations across towns to different neighborhoods. In this case, the historic building is being moved a few feet for programmatic reasons and for other public policy reasons (to allow for the construction of an underground garage on the site and to accommodate the existing mature trees.)

As explained earlier, the "integrity of setting" and its "sense of place and time" have been changed over the years and are not those of the historic period. The "site" is the same, it is being moved a few feet on the lot. The new location will be similar to the current "aesthetic relationship" as the current location. A change in the aesthetic relationship does not constitute an adverse impact unless the resource would no longer convey its historic significance. Although the house is being moved 44 feet, the location of the house is virtually the same. It will be in the same compass direction as the present orientation to Glenwood Avenue. The house will be closer to the sidewalk than it is presently, but it will still retain a front yard. With the house located on the corner, the east facing side of the house will be visible as is was when the house was originally constructed. Therefore, the historic aspect of Location is not materially affected by the project.

The moving of the house does not change the historic integrity aspects of Location, Design, Materials, Workmanship, Setting, Feeling, and Association. The project may affect the current Setting, *but the current setting is not historic as explained above.* The location is virtually the same, being moved slightly on the lot. Therefore, the project will retain all aspects of historic integrity, has no impact on the significance of the historic resources, and the resource will still be eligible for listing on the California Register. Thus, the project will not have a substantial adverse change under CEQA.

However, Technical Preservation Services Division cautions that moving a historic building carry risks:

Moving a historic building ... is a procedure which requires considerable skill and experience. ... Moving a historic structure, whether intact or in a totally or partially dismantled state, unavoidably destroys some of the historic fabric and lessens the historic integrity of the building. Some building types lend themselves to moving better than others. A small frame structure, which can be moved intact, is unquestionably easier to relocate, with less disturbance to its integrity, than a large multi-storied, masonry building.

The relocation of a building as a single and intact unit is generally the most desirable method. Not only are the labor costs of dismantling and reassembling avoided, but, more importantly, the original fabric is preserved. No matter how skilled the artisans who disassemble the building, the loss factor increases with the scope of the dismantling process.

Recommendations for reducing the risk of damage to the historic house are contained below.

Recommendations

There are no suggested improvement measures to the project, but the following are recommended while moving the historic house:

1. Although the project does not pose a substantial or adverse change to the historic house, the house is being moved slightly. Therefore, it is recommended as a mitigation measure that the house be documented by a qualified professional historian for archival purposes prior to its relocation. Photographs should be taken of all exterior façades, interior rooms, and close-ups of any unusual or significant architectural details. Any vegetation that obscures the exterior façades should be removed prior to the taking of photos. A historical narrative of the resources should be compiled. The photographs and narrative should be compiled in a report and sent to the Menlo Park Historical Society and the Menlo Park Public Library.

2. The project sponsors should consult *Moving Historic Buildings* by John Obed Curtis as a guide to moving the house. This pamphlet addresses the siting, foundation construction, building reassembly, and restoration work after a successful move has taken place. Available from the International Association of Structural Movers (www.iasm.org/wp-content/uploads/2013/12/moving-historic-buildings.pdf).

Conclusion

The project is compatible with the Secretary of the Interior's Standards for Rehabilitation. The project has no impact on the significance of the historical resources and will not have a substantial adverse change under CEQA.

¹ HISTORIC RESOURCE EVALUATION, 409 and 417 Glenwood Ave., and 1357 Laurel St., Menlo Park, ARCHIVES & ARCHITECTURE, LLC, September, 2013

² California Office of Historic Preservation website: ohp.parks.ca.gov/?page_id=21726.

³ California Office of Historic Preservation website http://ohp.parks.ca.gov/?page_id=21727

⁴ California Code of Regulations, Title 14, Chapter 3, 15064–5.

⁵ How to Apply the National Register Criteria for Evaluation, Website, National Register Bulletin: www.nps.gov/nr/publications/bulletins/nrb15/nrb15_9.htm.

⁶ John Obed Curtis, Moving Historic Buildings, G.S. Department of the Interior, Heritage Conservation and Recreation Service, Technical Preservation Services Division, Washington, D.C. 1979, https://archive.org/stream/movinghistoricbu00curt/movinghistoricbu00curt_djvu.

ATTACHMENT G

TRAFFIC IMPACT ANALYSIS

409 GLENWOOD AVENUE MENLO PARK, CA



October 2018

TRAFFIC IMPACT ANALYSIS

409 GLENWOOD AVENUE

MENLO PARK, CA

Submitted to:

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Project No. CMK1801



October 2018

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APPENDICES

- A: Traffic Volume Data
- B: Intersection Level of Service Worksheets

LIST OF ABBREVIATIONS AND ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Menlo Park
СМР	Congestion Management Program
DU	dwelling unit
EIR	Environmental Impact Report
ft	foot/feet
HCM	Highway Capacity Manual
ICU	intersection capacity utilization
ITE	Institute of Transportation Engineers
LOS	level of service
mph	miles per hour
SamTrans	San Mateo County Transit District
sf	square foot/feet
SR-82	State Route 82
TSF	thousand square feet
v/c	volume-to-capacity [ratio]

INTRODUCTION

The project site is a single 15,668-square-foot (sf) parcel in Menlo Park, California, that currently consists of three single-family dwelling units (DUs): a two-story residence at 417 Glenwood Avenue, a two-story residence at 409 Glenwood Avenue, and a one-story residence at 1357 Laurel Street.

LSA has prepared the following analysis to identify the potential traffic impacts resulting from the demolition of two single-family residential DUs, the relocation of the third residential DU, and the development of seven multifamily residential DUs. The project is located in an R3 zone and is designated Residential Medium Density in the General Plan. LSA has prepared this analysis consistent with the requirements of the City of Menlo Park (City) *Transportation Impact Analysis Guidelines* and applicable provisions of the California Environmental Quality Act (CEQA).

The traffic analysis for the proposed project examines four scenarios:

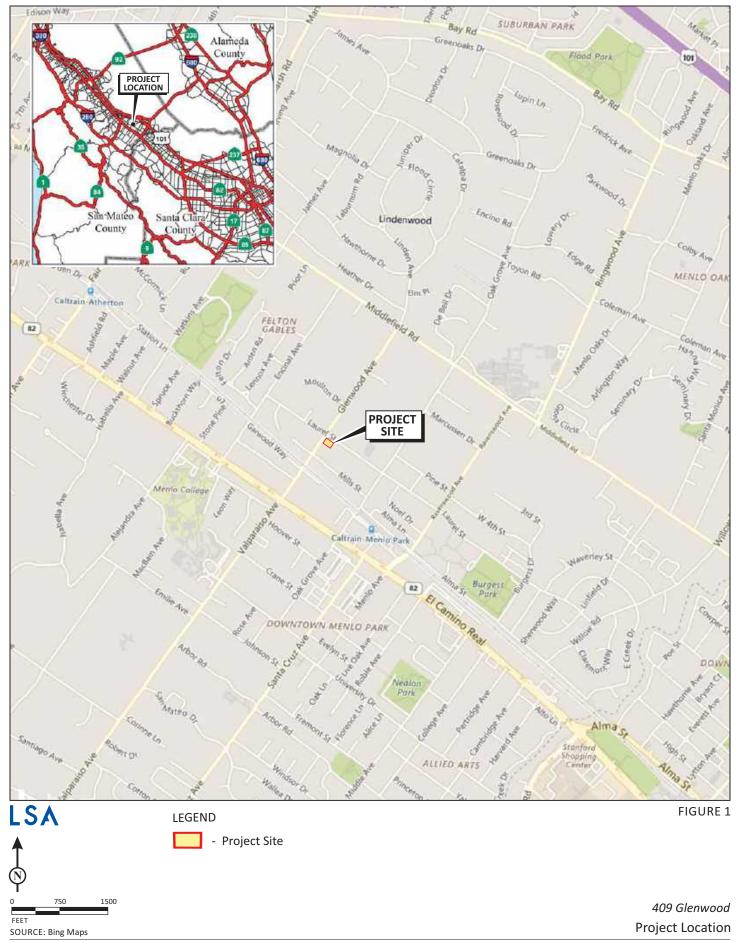
- 1. Existing Conditions
- 2. Existing Plus Project Conditions
- 3. Near Term (2021) Conditions
- 4. Near Term (2021) Plus Project Conditions

Project Description

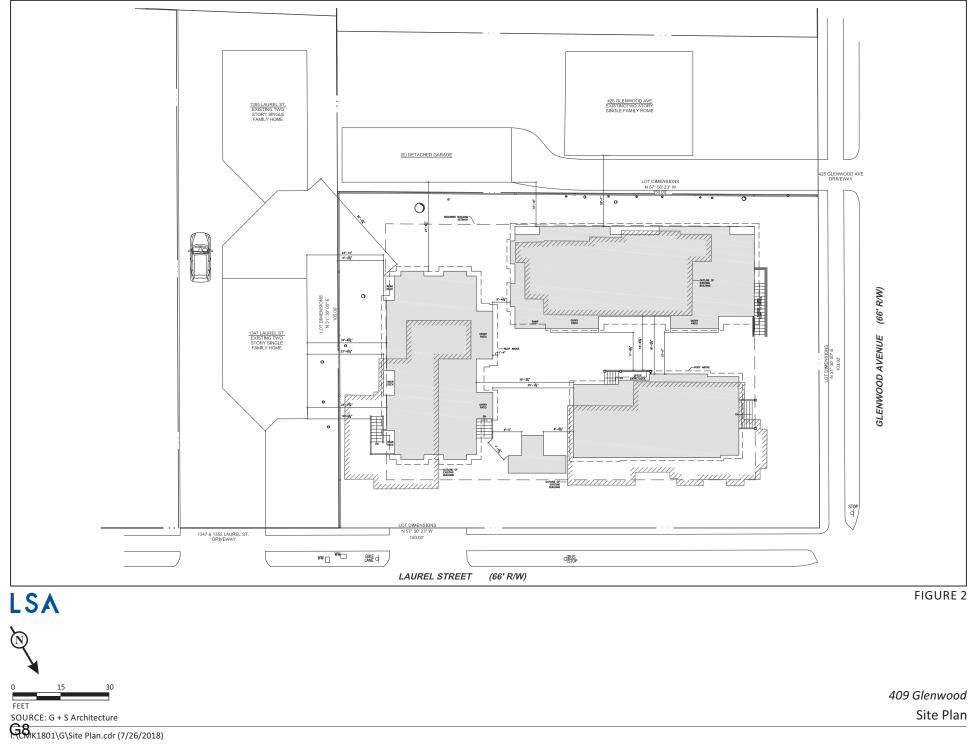
Figure 1 shows the location of the project site. As shown on Figure 1, the street grid in the vicinity of the project site is oriented approximately 45 degrees to cardinal directions. Throughout this report, "north" refers to the northwest, which is the direction leading toward the north end of the peninsula. The existing site is bordered by Glenwood Avenue to the north and Laurel Street to the east. Residential land uses surround the project site. The project site is currently accessed by an existing driveway located on Glenwood Avenue. The proposed project will relocate the existing driveway to provide access from Laurel Street.

The proposed project will demolish the existing single-family DUs at 409 Glenwood Avenue and 1357 Laurel Street. The existing residence at 417 Glenwood Avenue has been designated a historic home and will be relocated to a more prominent location within the project site and preserved in its current state with little alteration. Seven new multifamily DUs will be constructed, resulting in a total of eight DUs upon project completion (an addition of five residential DUs). A site plan of the proposed project is illustrated on Figure 2.

The required on-site parking for these residences will consist of an underground parking garage upon which the residences will sit.



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METHODOLOGY

The City's *Transportation Impact Analysis Guidelines* exempt residential projects under five units from the requirements of the guidelines. Because the proposed project creates five additional residential units, it is not exempt from the requirements. LSA created a scope of work for this analysis based on review of the City's *Transportation Impact Analysis Guidelines*, which was approved by the City prior to beginning the analysis. Through the scoping process, the study area illustrated on Figure 3 was established.

Study Intersections:

- 1. Laurel Street/Glenwood Avenue
- 2. El Camino Real/Glenwood Avenue

Figure 3 provides the existing geometrics and traffic control devices at each study intersection.

Intersection Level of Service Methodology

In accordance with the City's *Transportation Impact Analysis Guidelines*, the study area intersections were analyzed using the latest version of the *Highway Capacity Manual* (HCM) methodology and the City's Citywide Transportation Model. The Citywide Transportation Model uses PTV Vistro (Version 6.0) software to calculate the levels of service (LOS) for signalized and unsignalized intersections. This program applies HCM methodology to calculate LOS based on traffic volume and intersection geometry inputs.

The HCM methodology calculates the delay experienced by all movements through an intersection. At signalized intersections and all-way, stop-controlled intersections, delay is reported as the average for all vehicles traversing the intersection. At a two-way, stop-controlled intersection (i.e., unsignalized intersections where the main street is uncontrolled and the minor street has to stop before finding a gap to enter the main street), delay is reported for the most delayed approach. LOS criteria for intersections are presented as follows.

LOS Descriptions

LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations. LOS is assigned along the following letter gradient where LOS A represents free-flow activity, and LOS F represents overcapacity operation:

- LOS A: No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.
- LOS B: This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.



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- LOS C: This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
- LOS D: This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
- LOS E: Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.
- LOS F: This level describes forced-flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In an extreme case, speeds can drop to zero.

The relationship between LOS and the delay (in seconds) at signalized and unsignalized intersections is as follows:

Level of Service	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
А	≤10.0	≤10.0
В	>10.0 and ≤20.0	>10.0 and ≤15.0
С	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: Highway Capacity Manual 6th Edition (Transportation Research Board 2016).

The City has established LOS C as the minimum acceptable LOS for intersections on collector roadways and LOS D as the minimum acceptable LOS for intersections on arterial roadways or local street approaches to State facilities.

Significance Criteria

The City's *Transportation Impact Analysis Guidelines* establish significance criteria to determine whether trips added to the circulation system by a project will require mitigation. A project has a potentially significant impact if one of these conditions applies:

- An intersection operating at an acceptable LOS is caused to operate at an unacceptable LOS;
- Delay is increased by 23 seconds or greater at an intersection operating at an acceptable LOS in existing conditions; or

• Average delay at all critical movements is increased by more than 0.8 second at an intersection operating at an unacceptable LOS in near term conditions.

EXISTING CONDITIONS

Existing Circulation System

Key roadways in the vicinity of the proposed project are as follows:

- **Glenwood Avenue:** Glenwood Avenue is an east-west roadway located adjacent to and north of the project and currently provides access to the project site at an unsignalized driveway. The route is designated as a Neighborhood Collector by the City's General Plan Circulation Element. The posted speed limit on Laurel Street is 25 miles per hour (mph). Sidewalks and bike lanes are provided on both sides of the street. On-street parking is permitted on the south side of the street with no time restrictions. On the north side of the street, on-street parking is prohibited between 7:00 a.m. and 6:00 p.m.
- Laurel Street: Laurel Street is a north-south roadway located adjacent to and east of the project. During construction and at completion of the project, Laurel Street will provide access to the project site at an unsignalized driveway. The route is designated as a Neighborhood Collector by the City's General Plan Circulation Element. Bike lanes are provided on both sides of the street. A sidewalk is provided on the west side of the street. On-street parking is permitted on the west side of the street.
- State Route 82 (SR-82) El Camino Real: El Camino Real is a north-south roadway located west of the project. The route is designated as a Boulevard by the City's General Plan Circulation Element and provides regional access. There are sidewalks provided on both sides of the street, and on-street parking is allowed.

Existing Transit Service

Caltrain provides commuter rail service along the San Francisco peninsula and through the Santa Clara Valley. The Menlo Park Caltrain station is located approximately one-third mile from the project site.

The San Mateo County Transit District (SamTrans) provides fixed-route bus service in the vicinity of the project. A bus stop for Routes 82, 83, 84, and 88 is located adjacent to the project site on Laurel Street. SamTrans operates Route ECR along El Camino Real.

Existing Intersection Level of Service Analysis

At the time of initiation of this traffic analysis, public and private schools near the project site were closed and traffic volumes may not have reflected typical conditions. To address this omission, vehicle turning volumes were provided by the City for the study intersections during the peak morning (7:00 a.m.–9:00 a.m.) and evening (4:00 p.m.–6:00 p.m.) commute periods at a time when schools were in session (Wednesday, March 8, 2017). Figure 4 presents the existing a.m. and p.m. peak-hour turn movement volumes for the study intersections. The traffic volume data sheets are provided in Appendix A.



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Table A summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis. All analysis worksheets are provided in Appendix B. As Table A indicates, both study area intersections operate at an acceptable LOS in the a.m. and p.m. peak hours.

Study	Intersections	AM Peak F	lour	PM Peak Hour		
Area No.	intersections	Delay (sec)	LOS	Delay (sec)	LOS	
1	Laurel Street/Glenwood Avenue	12.2	В	10.8	В	
2	El Camino Real/Glenwood Avenue	28.2	С	30.0	C	
LOS = level of	of service					

Table A: Existing Intersection LOS Summary

sec = seconds

NEAR TERM (2021) CONDITIONS

The proposed project is anticipated to be completed by 2021. The City provided LSA with a list of nearby approved projects that could be completed and thereby contribute traffic to the study area by 2021. Figure 5 shows the locations of these approved projects. Table B calculates the trip generation potential for each approved project. Several of the approved projects prepared traffic analyses disclosing their trip generation. For projects without traffic analyses, LSA applied trip rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, Tenth Edition (2017) to calculate the trip generation potential.

Traffic analyses were queried to determine whether the project's study intersections were included in the approved project analyses. Where an approved project analyzed study intersections or intersections adjacent to study intersections, LSA identified the approved project's traffic contribution. For other approved projects located near El Camino Real, LSA applied residential, employment, and commercial distribution patterns identified in the *Circulation System Assessment* (City of Menlo Park 2004) for each project. In order to capture the potential for ambient traffic growth, LSA applied a growth rate of 1 percent per year (4 percent total from 2017 to 2021) to existing traffic volumes. The resulting Near Term (2021) baseline traffic volume is illustrated on Figure 6.

Near Term (2021) Intersection Level of Service Analysis

The City reports (Capital Improvement Program 2015-2020, page 179) that a roadway improvement project at the intersection of El Camino Real/Glenwood Avenue will convert the westbound shared through-right lane into a through lane and a dedicated right-turn lane. Because this project is anticipated to be completed by 2021, it is accounted for in the Near Term (2021) analysis.

Table C summarizes the results of the near term a.m. and p.m. peak-hour LOS analysis for the study area intersections. As indicated in Table C, all study area intersections operate at an acceptable LOS in the a.m. and p.m. peak hours in the Near Term (2021) condition.



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		Ci=-	Size Unit	ADT	A	VI Peak H	our	PM Peak Hour		
	Land Use	Size		ADT	In	Out	Total	In	Out	Total
Trip	Rates (land use code)									
	Manufacturing (140) ¹		TSF	3.93	0.48	0.14	0.62	0.21	0.46	0.67
	Warehousing (150) ¹		TSF	1.74	0.13	0.04	0.17	0.05	0.14	0.19
	Multifamily Housing (220) ¹		DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56
	Hotel (310) ¹		room	8.36	0.28	0.19	0.47	0.31	0.29	0.60
	Arena (460) ²		TSF	4.70	0.00	0.00	0.00	0.17	0.30	0.47
	Office (710) ¹		TSF	9.74	1.00	0.16	1.16	0.18	0.97	1.15
	Research and Development Center (760)		TSF	11.26	0.32	0.10	0.42	0.07	0.42	0.49
	Shopping Center (820) ¹		TSF	37.75	0.58	0.36	0.94	1.83	1.98	3.81
	Gas Station (944) ¹		TSF	1,202.83	42.28	42.27	84.55	54.64	54.63	109.2
Cur	nulative Projects									
1.	Commonwealth Corporate Center ³	259.920	TSF	3,713	531	67	598	89	447	536
2.	3639 Haven Avenue									
	Multifamily Housing	394	DU	2,884	43	138	181	138	83	221
	Manufacturing	(36.471)	TSF	(143)	(18)	(5)	(23)	(8)	(17)	(25)
	Warehouse	(40.837)	TSF	(71)	(5)	(2)	(7)	(2)	(6)	(8)
	Net Trip Generation	/	-	2,670	20	131	151	128	60	188
3.	3645 Haven Avenue			,						
	Multifamily Housing	146	DU	1,069	16	51	67	51	31	82
	Warehouse	(15.000)	TSF	(26)	(2)	(1)	(3)	(1)	(2)	(3)
	Net Trip Generation	(13.000)	131	1,043	14	50	64	50	29	79
4.	Menlo Gateway	438.000	TSF	6,657	426	139	566	276	381	657
ч.	100-190 Independence Drive ⁴	430.000	131	0,037	420	155	500	270	501	057
5.	Menlo Gateway	494.664	TSF	4,455	511	70	581	104	475	578
5.	100-155 Constitution Drive ⁴	15 1.00 1	131	1,135	511	70	501	101		570
6.	1283-1295 El Camino Real									
0.	Multifamily Housing	15	DU	110	2	5	7	5	3	8
	Office/Retail/Service	1.997	TSF	110	2	0	2	0	2	2
	Office/Retail/Service	(6.471)	TSF	(63)	(6)	(1)	(8)	(1)	(6)	(7)
	Net Trip Generation	(0.471)	151	66	(4)	4	(8) 1	4	(1)	3
7.	133 Encinal Ave			00	(-)	-	-	-	(1)	3
7.		24	DU	176	3	8	11	8	5	13
	Multifamily Housing					(2)		o (11)	(12)	(23)
	Retail	(6.166)	TSF	(233)	(4)	. ,	(6)	· · /		. ,
0	Net Trip Generation 1010-1026 Alma Street			(57)	(1)	6	5	(3)	(7)	(10)
8.		25.450	тог	245	25	4	29	5	24	29
	Office	25.156	TSF	245	25	-		-		
	Retail	0.324	TSF	12	0	0	0	1	1 (20)	(20)
	Retail	(10.272)	TSF	(388)	(6)	(4)	(10)	(19)	(20)	(39)
	Net Trip Generation			(131)	19	0	19	(13)	5	(9)
9.	1400 El Camino Real		-							
	Hotel	61	Room	510	17	12	29	19	18	37
	Gas Station	(1,932)	TSF	(2,324)	(82)	(82)	(163)	(106)	(106)	(211)
	Net Trip Generation			(1,814)	(65)	(70)	(134)	(87)	(88)	(174)
10.	650-660 Live Oak Avenue									
	Office	16.854	TSF	164	17	3	20	3	16	19
	Residential	17	DU	125	2	6	8	6	4	10
	Residential ⁵	(2)	DU	0	0	0	0	0	0	0
	Office ⁵	(5.996)	TSF	0	0	0	0	0	0	0
	Net Trip Generation			289	19	9	27	9	20	29
11.	1275 El Camino Real									
	Residential	3	DU	22	0	1	1	1	1	2
	Office	9.334	TSF	91	9	2	11	2	9	11
	Retail	0.589	TSF	22	0	0	1	1	1	2
	Net Trip Generation			135	9	3	13	4	11	15

Table B: Approved Project Trip Generation

Table B: Approved Project Trip Generation

Land Use	Size Unit		ADT	A	И Peak H	lour	Р	M Peak H	lour
Land Use	5120	Unit	ADT	In	Out	Total	In	Out	Total
 Facebook Expansion Project 301-309 Constitution Drive⁶ 	1,137.200	TSF	14,902	1,678	268	1,946	396	1,737	2,113
13. Middle Plaza 500 El Camino Real ⁷	Mixed Use		2,658	231	105	336	120	206	326
 Menlo Park Small High School 150 Jefferson Drive⁸ 	40.000	TSF	1,740 ²	177	145	322	79	95	174
15. 1300 El Camino Real Greenheart ⁹	Mixed	Use	3,740	283	101	384	126	275	401
16. Guild Theatre 949 El Camino Real									
Arena - Live Entertainment Venue	10.854	TSF	51 ²	0	0	0	2	3	5
Movie Theater ⁵	(4.172)	TSF	0	0	0	0	0	0	0
Net Trip Generation			0	0	0	0	2	3	5
17. 1540 El Camino Real ¹⁰	Mixed	Use	(398)	44	11	55	(20)	13	(7)
18. 506-556 Santa Cruz Avenue ¹¹	Mixed	Use	824	51	29	81	30	36	65
19. 1125 Merrill Street ¹¹	Mixed		60	6	2	8	2	6	8

¹ Trip rates referenced from the ITE *Trip Generation Manual*, 10th Edition (2017).

² Daily traffic estimated at 10 times PM peak-hour traffic.

³ Commonwealth Corporate Center Project Draft EIR (DKS Associates 2013).

⁴ Menlo Gateway Project - Traffic and Circulation (DKS Associates 2009).

⁵ Change in land use accounted for at time existing traffic data collected.

⁶ Facebook Campus Expansion Project Draft EIR (TJKM 2016). Inbound and outbound traffic rates for General Office were applied to previously analyzed peak hour volume.

⁷ Middle Plaza at 500 El Camino Real Project Draft Infill EIR (W-Trans 2016).

Sequoia Union High School District Menlo Park Small High School Project Draft EIR - Vol. 2 (Hexagon Transportation Consultants, Inc., June 28, 2016).

⁹ 1300 El Camino Real Greenheart Project Draft Infill EIR (W-Trans 2015).

¹⁰ City of Menlo Park.

¹¹ Transportation Demand Management Summary 506-556 Santa Cruz Avenue and 1525 Merrill Avenue, Menlo Park, CA (TDM Specialists, Inc. 2018).

ADT = average daily trips

DU = dwelling unit

ITE = Institute of Transportation Engineers

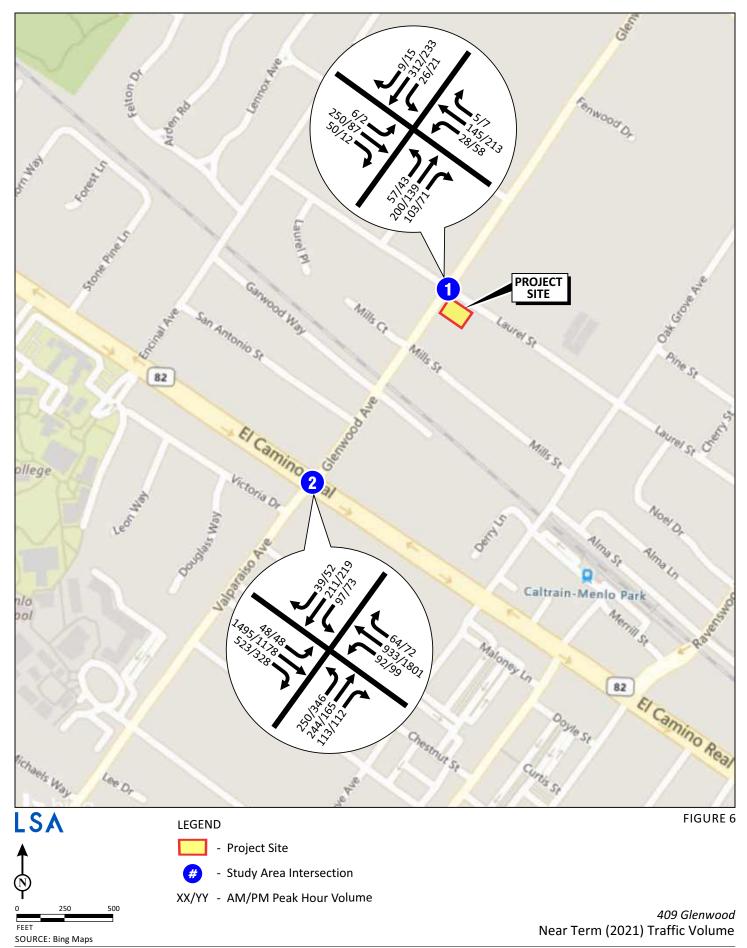
TSF = thousand square feet

Table C: Near Term (2021) Intersection LOS Summary

Study	Intersections	PM Peak Hour			
Area No.	Intersections	Delay (sec)	LOS	Delay (sec)	LOS
1	Laurel Street/Glenwood Avenue	15.6	С	11.5	В
2	El Camino Real/Glenwood Avenue	35.6	D	52.1	D

LOS = level of service

sec = seconds



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PROJECT IMPACTS

Trip Generation

The proposed project considers the replacement of two existing residential DUs with seven residential DUs on the approximately 15,668 sf site. One existing DU would remain on site. The daily and peak-hour trips for the two replaced DUs and the project's seven new DUs were generated using trip rates contained in the ITE *Trip Generation Manual*, Tenth Edition (2017). The existing condition has multiple residential DUs on the same parcel, so the multifamily housing trip rates were applied. The resulting trip generation is presented in Table D.

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
Land Ose	3120	Unit	ADT	In	Out	Total	In	Out	Total
Trip Rates (Land Use Code)									
Multifamily Housing (220) ¹		DU	7.32	0.11	0.35	0.46	0.35	0.21	0.56
Existing Trip Generation									
Existing Houses	2	DU	15	0	1	1	1	0	1
Proposed Project Trip Generation									
Proposed Multifamily Housing	7	DU	51	1	2	3	2	1	3
Net New Trip Generation			36	1	1	2	1	1	2

Table D: Existing Trips and Trip Generation

¹ Trip rates referenced from the ITE *Trip Generation Manual*, 10th Edition (2017).

ADT = average daily trips

DU = dwelling unit

ITE = Institute of Transportation Engineers

409 Glenwood Avenue currently has three single-family residential DUs, two of which will be demolished as part of the project. These two units are estimated to generate 15 trips per day, 1 trip of which would occur in the a.m. peak hour and 1 trip in the p.m. peak hour. The project would construct seven new multifamily residential DUs, resulting in the addition of five residential DUs. As Table D shows, the proposed project trip generation would result in the generation of 36 additional trips per day, 2 trips of which would occur in the a.m. peak hour and 2 trips in the p.m. peak hour.

Daily Traffic Variation

LSA examined existing traffic volumes on Laurel Street over three consecutive weekdays (Tuesday, Wednesday, and Thursday). Table E summarizes the traffic volume on Laurel Street during the a.m. and p.m. peak hours on each of those days, and shows that traffic volumes near the project site vary on a daily basis. In fact, traffic volumes can change by more than 10 percent from one day to the next. The new trips generated by the project would add 1 percent or less to the traffic volume on Laurel Street. Because the contribution of project traffic is less than the daily variation in traffic volume, the new project trips may not be noticeable.

	AN	/I Peak Hour		PN	/I Peak Hour	
	Northbound	Southbound	Total	Northbound	Southbound	Total
Tuesday	94	175	269	268	109	377
Wednesday	87	194	281	265	129	394
Thursday	100	169	269	232	100	332
Variation	13	25	12	36	29	62

Table E: Laurel Street Peak-Hour Traffic Volumes

Trip Distribution and Assignment

Trip distribution defines the regional percentage origins/destinations for a project. LSA reviewed the residential distribution pattern identified in the *Circulation System Assessment* (City of Menlo Park 2004) and assigned traffic volumes for the two residential units being demolished that access the project site from Glenwood Avenue and the seven residential units being constructed that will access the project site from Laurel Street. Figure 7 shows that the change in access locations results in more vehicle trips at the intersection of Laurel Street/Glenwood Avenue. However, only one additional trip in the a.m. peak hour and one additional trip in the p.m. peak hour are anticipated to occur at the intersection of El Camino Real/Glenwood Avenue. It should be noted that if trips from the project site travel southbound on Laurel Street, then the addition of traffic to El Camino Real/Glenwood Avenue would be zero.

EXISTING PLUS PROJECT CONDITION

The project trips were added to the existing traffic volumes at the study intersections. Figure 8 shows the resulting Existing Plus Project a.m. and p.m. peak-hour traffic volumes.

Existing Plus Project Intersection Level of Service Analysis

Table F summarizes the results of the Existing Plus Project a.m. and p.m. peak-hour LOS analysis for all study intersections. As Table F indicates, all study intersections are anticipated to operate at an acceptable LOS in the a.m. and p.m. peak hours.

Church			eline	Plus Project					
Study Area No.	Intersections	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Area No.		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1	Laurel Street/Glenwood Avenue	12.2	В	10.8	В	12.2	В	10.8	В
2	El Camino Real/Glenwood Avenue	28.2	С	30.0	С	29.8	С	33.7	С

Table F: Existing Plus Project Intersection LOS Summary

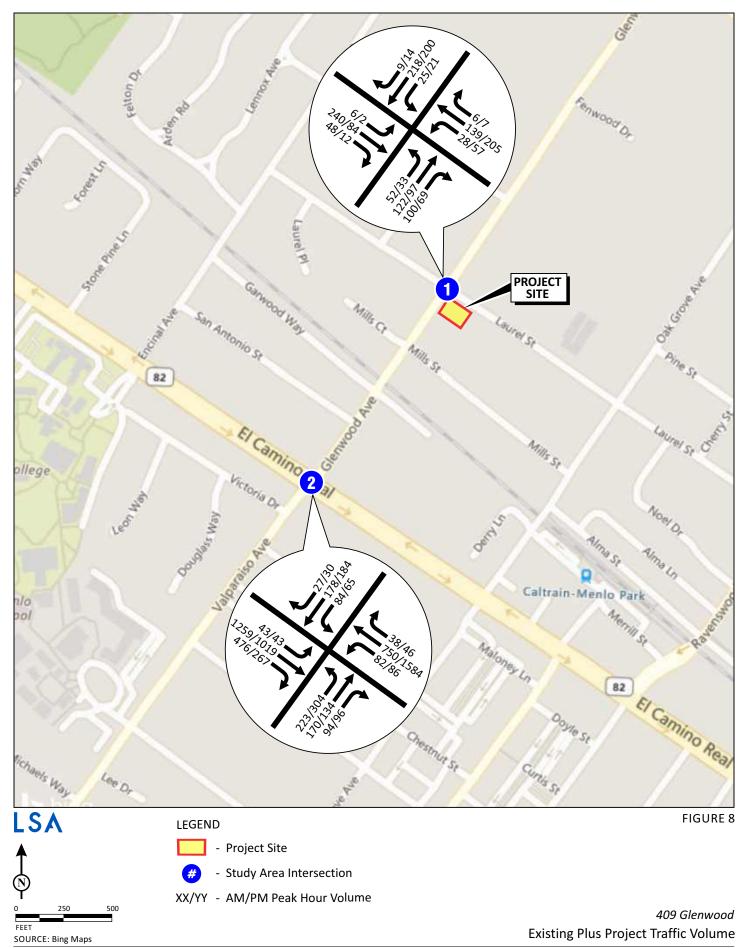
LOS = level of service

sec = seconds

Based on the City's criteria for determining significant traffic impacts (as described in the Methodology section of this report), the proposed project is not expected to result in a significant impact at any of the study intersections.



I:\CMK1801\G\Proj_Trip_Assignment.cdr (8/10/2018)



I:\CMK1801\G\Volume_Exist_Plus_Proj.cdr (10/12/2018)

NEAR TERM (2021) PLUS PROJECT CONDITION

Traffic generated by the project was added to the Near Term (2021) traffic volumes at each study intersection and roadway segment. Figure 9 illustrates the resulting Near Term (2021) plus project a.m. and p.m. peak-hour traffic volumes.

Near Term (2021) Plus Project Intersection Level of Service Summary Analysis

15.6

35.6

Table G summarizes the results of the Near Term (2021) plus project a.m. and p.m. peak-hour LOS analysis for all study intersections. As Table E indicates, all study intersections are anticipated to operate at an acceptable LOS in the a.m. and p.m. peak hours.

Study			Base	eline			Plus P	roject	
Area	Intersections	AM Peak H	lour	PM Peak H	lour	AM Peak H	lour	PM Peak F	lour
No.		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS

С

D

11.5

52.1

В

D

15.6

37.7

С

D

11.5

52.1

В

D

Table G: Near Term (2021) Plus Project Intersection LOS Summary

El Camino Real/Glenwood Avenue LOS = level of service

Laurel Street/Glenwood Avenue

sec = seconds

1

2

Based on the City's criteria for determining significant traffic impacts, the proposed project is not expected to result in a significant impact at any of the study intersections.

ROADWAY ANALYSIS

According to the City's Transportation Impact Analysis Guidelines, both intersections and roadway segments would require analysis. Both Laurel Street and Glenwood Avenue are classified as Neighborhood Collectors in the City of Menlo Park General Plan Circulation Element, for which the established thresholds are: (1) a net increase of 50 daily trips or more on a roadway with greater than 9,000 daily trips; (2) a net increase of 50 percent of daily traffic on a roadway with between 5,000 and 9,000 daily trips (or a net increase of 12.5 percent of daily traffic if the increase in traffic would result in more than 9,000 daily trips); or (3) a net increase of 25 percent of daily traffic on a roadway with less than 5,000 daily trips.

The project is anticipated to generate 36 new daily trips. In order for the project to cause a significant impact to these roadways, the existing traffic volume would have to be lower than 144 daily trips. LSA examined daily roadway traffic volumes disclosed in the traffic analyses for the cumulative projects and the daily roadway traffic volumes collected on Laurel Street during Summer 2018, and concludes the traffic volume on Laurel Street and Glenwood Avenue is between 3,200 and 6,000 daily trips. Therefore, the project would not result in a significant traffic impact to roadways.



SOURCE: Bing Maps

I:\CMK1801\G\Volume_Cumul_2021_Plus_Proj.cdr (10/12/2018)

LONG-TERM TRAFFIC IMPACTS

According to the City's *Transportation Impact Analysis Guidelines*, projects of regional magnitude (defined as projects generating 100 or more trips during peak hours) must analyze impacts for a span of 10 years from the existing conditions. The proposed project generates fewer than 100 peakhour trips and is not required to perform this analysis.

CONGESTION MANAGEMENT PROGRAM

The San Mateo County Congestion Management Program (CMP) (City/County Association of Governments of San Mateo County 2017) establishes a 100 peak-hour trip threshold for requiring analysis of potential traffic impacts to CMP-monitored facilities. The proposed project generates fewer than 100 peak-hour trips, which is below the threshold for potential impacts to CMP-monitored facilities.

ACCESS ANALYSIS

Internal Circulation and Parking

Menlo Park Municipal Code Section 16.72.020 requires two off-street parking spaces per residential DU. At completion of the proposed project, a total of eight DUs will be located on the project site, requiring a total of 16 parking spaces. The City of Menlo Park *Handicap Parking Design Guidelines* require one handicap parking space in a parking lot or garage with between 1 and 25 parking spaces. Therefore, one handicap parking space would be required. The City's *Parking Area Design Guidelines* use a one-size-fits-all parking stall width of 8.5 feet (ft). For parking areas with perpendicular parking, the minimum aisle width is 23 ft.

LSA examined the project plans related to the subterranean parking garage. The garage provides 16 parking spaces, one of which is sized for a handicap van accessible space. Parking stalls are 8.5 ft wide and 18 ft in length. The aisle between perpendicular parking stalls is 23 ft. Therefore, the parking area appears to conform to the City's guidelines.

The subterranean parking garage allows for on-site turn-around of vehicles. Vehicles would enter the subterranean parking garage front-in from Laurel Street and exit the garage front-out onto Laurel Street. This is generally a safer movement than vehicles backing into the public right-of-way.

Driveway Performance

In the existing condition, the driveway on Glenwood Avenue is located approximately 65 ft west of the intersection of Laurel Street/Glenwood Avenue. No turn movements are restricted into or out of the driveway.

With the proposed project, the driveway would be relocated to access Laurel Street and is located approximately 120 ft east of the intersection of Glenwood Avenue/Laurel Street. No turn movements would be restricted into or out of the driveway. LSA examined the performance of the driveway's intersection with Laurel Street under Near Term conditions. Table H summarizes the driveway performance. As Table H shows, the driveway is anticipated to function at a satisfactory LOS during both a.m. and p.m. peak hours.

Table H: Near Term (2021) Plus Project Driveway LOS Summary

Study	Intersections	AM Peak H	our	PM Peak H	our
Area No.	Intersections	Delay (sec)	LOS	Delay (sec)	LOS
1	Laurel Street/Project Driveway	16.1	С	14.8	В

LOS = level of service sec = seconds

Sight Distance

Laurel Street has a posted speed limit of 25 mph. Extrapolating the American Association of State Highway and Transportation Officials (AASHTO) *Geometric Design of Highways and Streets* (2004) yields a stopping sight distance of 150 ft for a roadway with a design speed of 25 mph. The California Department of Transportation (Caltrans) *Highway Design Manual, Fifth Edition* (2001) recommends a stopping sight distance on a 40 kilometer-per-hour road (approximately 25 mph) of 50 meters, which is approximately 164 ft.

The proposed driveway would be located less than 164 ft from the intersection of Laurel Street/ Glenwood Avenue. However, vehicles traveling southbound on Laurel Street would have come to a stop at the all-way stop-controlled intersection of Laurel Street/Glenwood Avenue, would be traveling slower than 25 mph, and would have a shorter stopping sight distance due to their lower speed. It should be noted that the proposed driveway will be located farther from the intersection than the existing driveway.

Laurel Street appears to provide at least 164 ft of sight distance from the proposed driveway to the south. However, LSA recommends regular landscape maintenance of the trees located in the parkway (near the existing bike lane sign) to ensure they do not become overgrown and interfere with sight distance. If sight distance becomes restricted by this landscaping, drivers exiting the proposed driveway may creep into the on-street parking lane when waiting for an appropriate gap in traffic.

Public Transit, Bicycle, and Pedestrian Facilities

The project has access to the SamTrans bus service with a bus stop immediately adjacent to the project site. Due to the low estimated trip generation, the project is not anticipated to generate more transit trips than could be accommodated by existing transit resources.

Bicycle lanes are provided on both Glenwood Avenue and Laurel Street. The project will provide bicycle parking spaces for residents in the subterranean garage. Sidewalks are provided on the south side of Glenwood Avenue and the west side of Laurel Street adjacent to the project site. Project traffic will cross these facilities when forward facing, rather than backing out of a driveway. Vehicles traveling forward generally have a better range of vision and are more likely to see bicycles and pedestrians than vehicles traveling in reverse.

CONCLUSION

This traffic analysis considered the effects of demolishing two single-family residential DUs on the project site, relocating one single-family residential DU within the project site, and constructing seven new multifamily residential DUs on the project site. The project will result in five additional DUs that are estimated to result in 36 additional daily trips, 2 of which would occur in the a.m. peak hour and 2 in the p.m. peak hour.

As a part of the impact analysis, two intersections were examined at Laurel Street/Glenwood Avenue and El Camino Real/Glenwood Avenue. Four scenarios: Existing, Existing Plus Project, Near Term (2021), and Near Term (2021) Plus Project were analyzed. Based on results of this traffic analysis, the project would not result in a significant traffic impact at any of the study intersections.

The site plan was reviewed and found to conform to City guidelines for on-site traffic circulation and parking.

Project access was analyzed and the proposed driveway location is anticipated to function at a satisfactory LOS and have equivalent or better sight distance than the existing driveway, which is located closer to the intersection of Laurel Street/Glenwood Avenue than the proposed driveway.

The project is not anticipated to decrease the performance or safety of transit, bicycle, or pedestrian facilities.

REFERENCES

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Geometric Design of Highways and Streets.
- California Department of Transportation (Caltrans). 2001. *Highway Design Manual,* Fifth Edition.
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APPENDIX A

TRAFFIC VOLUME DATA

#074 Laurel St & Glenwood Ave - AM PEAK

LOCATION#:	074	QTD PROJ#:	2017101
NORTH / SOUTH:	Laurel St	DATE:	Wednesday, March 08, 2017
EAST / WEST:	Glenwood Ave	VICINITY:	MP

DIRECTION:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	TOTALS
LANES:	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1011120
7:00 AM	3	8	1	0	1	8	2	0	1	13	8	0	2	32	1	0	80
7:15 AM	2	6	0	0	0	11	0	0	3	23	12	0	7	47	3	0	114
7:30 AM	7	26	0	0	2	36	3	0	8	23	17	0	7	63	3	0	195
7:45 AM	7	56	2	0	1	64	17	0	24	28	26	0	7	67	4	0	303
8:00 AM	5	44	3	0	2	71	18	0	12	27	28	0	5	52	1	0	268
8:15 AM	7	20	0	0	2	52	5	0	8	35	18	0	12	60	2	0	221
8:30 AM	8	19	0	0	1	53	8	0	8	32	27	0	1	39	2	0	198
8:45 AM	6	13	1	0	2	50	7	0	5	29	23	0	4	54	6	0	200
VOLUME STATS:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	
TOTAL:	45	192	7	0	11	345	60	0	69	210	159	0	45	414	22	0	1579
P.H.V: 1	27	139	5	0	6	240	48	0	52	122	99	0	25	218	9	0	990
P.H.F: 2		0.6	558			0.8	808			0.8	375			0.8	808		0.817

Peak Hour Volume (Peak Hour - 745 AM - 845 AM)
 Peak Hour Factor (directional aggregate)
 Peak 15m: 745 AM - 800 AM



QUALITY TRAFFIC DATA, LLC

#074 Laurel St & Glenwood Ave - PM PEAK

LOCATION#:	074	QTD PROJ#:	2017101
NORTH / SOUTH:	Laurel St	DATE:	Wednesday, March 08, 2017
EAST / WEST:	Glenwood Ave	VICINITY:	MP

DIRECTION:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	TOTALS
LANES:	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTALS
4:00 PM	14	36	0	0	2	19	4	0	6	31	17	0	4	31	1	0	165
4:15 PM	10	40	0	0	0	24	2	0	5	24	17	0	3	34	2	0	161
4:30 PM	15	44	1	0	2	20	4	0	6	26	22	0	6	46	4	0	196
4:45 PM	16	58	0	0	1	15	4	0	7	19	13	0	6	39	4	0	182
5:00 PM	10	52	3	0	2	25	3	0	4	19	13	0	6	50	1	0	188
5:15 PM	11	68	3	0	0	16	3	0	7	19	19	0	3	50	2	0	201
5:30 PM	19	47	0	0	0	20	1	0	9	37	18	0	5	59	6	0	221
5:45 PM	16	38	1	0	0	23	5	0	13	22	18	0	6	41	5	0	188
VOLUME STATS:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	
TOTAL:	111	383	8	0	7	162	26	0	57	197	137	0	39	350	25	0	1502
P.H.V: 1	56	205	7	0	2	84	12	0	33	97	68	0	20	200	14	0	798
P.H.F: 2		0.8	317			0.8	317			0.7	73			0.8	336		0.903

Peak Hour Volume (Peak Hour - 500 PM - 600 PM)
 Peak Hour Factor (directional aggregate)
 Peak 15m: 530 PM - 545 PM



QUALITY TRAFFIC DATA, LLC

#025 El Camino Real & Glenwood Ave - AM PEAK

LOCATION#:	025	QTD PROJ#:	2017101
NORTH / SOUTH:	El Camino Real	DATE:	Wednesday, March 08, 2017
EAST / WEST:	Glenwood Ave	VICINITY:	Menio Park

DIRECTION:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	TOTALS
LANES:	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	1	0	0	101/120
7:00 AM	4	102	7	1	7	206	52	0	18	12	10	0	13	18	2	0	452
7:15 AM	13	113	6	2	2	280	43	1	34	25	21	0	18	29	4	0	591
7:30 AM	25	149	11	1	3	356	71	1	51	30	19	0	31	47	5	0	800
7:45 AM	12	196	10	2	8	344	115	3	46	35	26	0	22	46	3	0	868
8:00 AM	23	186	7	8	5	313	114	1	64	44	17	0	26	54	11	0	873
8:15 AM	15	197	6	4	8	280	137	1	55	47	27	0	21	49	5	0	852
8:30 AM	16	171	15	2	12	322	110	5	58	43	24	0	15	29	8	0	830
8:45 AM	7	184	6	3	5	292	134	2	39	42	11	0	16	42	10	0	793
VOLUME STATS:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	
TOTAL:	115	1298	68	23	50	2393	776	14	365	278	155	0	162	314	48	0	6059
P.H.V: 1	66	750	38	16	33	1259	476	10	223	169	94	0	84	178	27	0	3423
P.H.F: 2		0.9	971			0.9	946			0.9	942			0.7	794		0.980

(1) Peak Hour Volume (Peak Hour - 745 AM - 845 AM)
(2) Peak Hour Factor (directional aggregate)
(3) Peak 15m: 800 AM - 815 AM



QUALITY TRAFFIC DATA, LLC

#025 El Camino Real & Glenwood Ave - PM PEAK

LOCATION#:	025	QTD PROJ#:	2017101
NORTH / SOUTH:	El Camino Real	DATE:	Wednesday, March 08, 2017
EAST / WEST:	Glenwood Ave	VICINITY:	Menio Park

DIRECTION:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	TOTALS
LANES:	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	1	0	0	TOTALS
4:00 PM	23	343	18	0	7	226	68	0	65	28	17	0	11	33	6	0	845
4:15 PM	16	409	15	4	7	224	61	2	77	26	27	0	14	32	6	0	920
4:30 PM	21	371	12	4	7	264	71	1	52	30	17	0	15	42	8	0	915
4:45 PM	18	368	14	3	5	230	80	1	75	23	13	0	12	31	9	0	882
5:00 PM	16	405	10	6	8	238	67	6	83	25	37	0	17	45	5	0	968
5:15 PM	19	370	9	2	9	275	54	2	80	39	17	0	22	37	13	0	948
5:30 PM	13	423	13	8	9	250	69	1	69	32	17	0	13	54	10	0	981
5:45 PM	18	386	14	4	6	256	77	2	72	38	25	0	13	47	2	0	960
VOLUME STATS:	NL	NT	NR	U	SL	ST	SR	U	EL	ET	ER	U	WL	WT	WR	U	
TOTAL:	144	3075	105	31	58	1963	547	15	573	241	170	0	117	321	59	0	7419
P.H.V: 1	66	1584	46	20	32	1019	267	11	304	134	96	0	65	183	30	0	3857
P.H.F: 2		0.9	939			0.9	74			0.9	921			0.9	903		0.983

Peak Hour Volume (Peak Hour - 500 PM - 600 PM)
 Peak Hour Factor (directional aggregate)
 Peak 15m: 530 PM - 545 PM



QUALITY TRAFFIC DATA, LLC

Prepared by NDS/ATD VOLUME Laurel St S/O Glenwood Ave

Day: Tuesday Date: 6/19/2018

City: Menlo Park Project #: CA18_8336_001

	D	AILY 1	ΓΟΤΑ	ALS		NB	SB		EB		WB							otal
						1,726	1,491		0		0						3,4	217
AM Period	NB		SB		EB	WB		DTAL	PM Period	NB		SB		EB	W	В		TAL
00:00 00:15	2 1		1 1				3 2		12:00 12:15	35 21		31 28					66 49	
00:30	2		0				2		12:30	24		29					53	
00:45	0	5	1	3			1	8	12:45	37	117	22	110				59	227
01:00 01:15	0 3		0 0				0 3		13:00 13:15	19 30		30 24					49 54	
01:30	1		0				1		13:30	18		22					40	
01:45	0	4	0				0	4	13:45	25	92	23	99				48	191
02:00 02:15	1 0		2 0				3 0		14:00 14:15	24 25		18 24					42 49	
02:30	1		1				2		14:30	21		25					46	
02:45	0	2	0	3			0	5	14:45	30	100	22	89				52	189
03:00 03:15	0 0		0 0				0 0		15:00 15:15	35 30		25 29					60 59	
03:30	0		0				0		15:30	35		24					59	
03:45	0		0				0		15:45	32	132	37	115				69	247
04:00 04:15	0 0		0 0				0 0		16:00 16:15	41 43		22 27					63 70	
04:13	1		1				2		16:30	43 98		29					127	
04:45	1	2	1	2			2	4	16:45	43	225	31	109				74	334
05:00 05:15	1 0		1 1				2 1		17:00 17:15	65 62		19 30					84 92	
05:30	1		3				4		17:30	54		28					82	
05:45	3	5	1	6			4	11	17:45	59	240	19	96				78	336
06:00	3		4 5				7		18:00 18:15	52		18					70	
06:15 06:30	3 8		5 7				8 15		18:30	51 47		21 22					72 69	
06:45	9	23	17	33			26	56	18:45	30	180	14	75				44	255
07:00	12		12				24		19:00	26		22					48	
07:15 07:30	12 7		28 34				40 41		19:15 19:30	13 24		15 21					28 45	
07:45	18	49	28	102			46	151	19:45	18	81	7	65				25	146
08:00	23		32				55		20:00	23		14					37	
08:15 08:30	22 27		39 53				61 80		20:15 20:30	13 11		12 3					25 14	
08:45	22	94	51	175			73	269	20:45	9	56	6	35				15	91
09:00	29		43				72		21:00	10		9					19	
09:15 09:30	22 21		32 26				54 47		21:15 21:30	4 4		4 5					8 9	
09:45	17	89	43	144			60	233	21:45	9	27	2	20				11	47
10:00	16		20				36		22:00	6		4					10	
10:15 10:30	20 23		19 32				39 55		22:15 22:30	6 3		4 2					10 5	
10:45	19	78	28	99			47	177	22:45	6	21	3	13				9	34
11:00	16		16				32		23:00	2		1					3	
11:15 11:30	25 20		27 18				52 38		23:15 23:30	3 5		1 1					4 6	
11:45	32	93	32	93			64	186	23:45	1	11	2	5				3	16
TOTALS		444		660				1104	TOTALS		1282		831					2113
SPLIT %		40.2%		59.8%				34.3%	SPLIT %		60.7%		39.3%					65.7%
	л	AILY 1	ΓΟΤΑ	<u> </u>		NB	SB		EB		WB						Тс	otal
						1,726	1,491	L	0		0						3,2	217
AM Peak Hour		11:15		08:15				08:15	PM Peak Hour		16:30		15:00					16:30
AM Pk Volume		112		186				286	PM Pk Volume		268		115					377
Pk Hr Factor 7 - 9 Volume		0.800		0.877 277	0	0		0.894 420	Pk Hr Factor 4 - 6 Volume		0.684 465		0.777 205		0	0		0.742 670
7 - 9 Volume 7 - 9 Peak Hour		08:00		08:00				420 08:00	4 - 6 Peak Hour		465 16:30		205 16:00					16:30
7 - 9 Pk Volume		94		175				269	4 - 6 Pk Volume		268		109					377
Pk Hr Factor		0.870		0.825	0.000	0.000)	0.841	Pk Hr Factor		0.684		0.879	0.	000	0.000		0.742

Prepared by NDS/ATD VOLUME Laurel St S/O Glenwood Ave

Day: Wednesday Date: 6/20/2018 City: Menlo Park Project #: CA18_8336_001

	ם	AILY 1	ΓΟΤΑ	us.		NB	SB		EB		WB						Тс	otal
				123		1,641	1,529)	0		0						3,:	170
AM Period	NB		SB		EB	WB	тс	TAL	PM Period	NB		SB		EB	W	В	то	TAL
00:00	1		0				1		12:00	37		25					62	
00:15 00:30	2 2		0 3				2 5		12:15 12:30	21 14		27 23					48 37	
00:45	0	5	0	3			0	8	12:45	19	91	23	98				42	189
01:00	0		0				0		13:00	32		23					55	
01:15	1		0				1		13:15	24		27					51	
01:30 01:45	0 1	2	0 1	1			0 2	3	13:30 13:45	24 26	106	23 27	100				47 53	206
02:00	1	2	1	1			2		14:00	20	100	20	100				40	200
02:15	0		0				0		14:15	31		13					44	
02:30	0		0	2			0	2	14:30	16	07	21					37	474
02:45 03:00	0	1	1 1	2			1	3	14:45 15:00	<u>30</u> 22	97	23 32	77				53 54	174
03:15	1		0				1		15:15	40		31					71	
03:30	0		0				0		15:30	23		36					59	
03:45	0	1	0	1			0	2	15:45	32	117	25	124				57	241
04:00 04:15	0 0		0 0				0 0		16:00 16:15	35 43		24 31					59 74	
04:13	0		0				0		16:30	45 58		20					74 78	
04:45	0		0				0		16:45	57	193	17	92				74	285
05:00	1		2				3		17:00	86		33					119	
05:15 05:30	0 4		3 5				3 9		17:15 17:30	66 59		41 25					107 84	
05:45	2	7	4	14			6	21	17:45	59 54	265	25 30	129				84 84	394
06:00	4		6				10		18:00	37		23					60	
06:15	1		5				6		18:15	33		18					51	
06:30	8 7	20	8	22			16	52	18:30 18:45	21	170	25	96				46	214
06:45 07:00	9	20	14 17	33			21 26	53	19:00	37 28	128	20 14	86				57 42	214
07:15	11		26				37		19:15	25		18					43	
07:30	15		38				53		19:30	13		8					21	
07:45	14 22	49	37 39	118			51 61	167	19:45 20:00	15 20	81	5 10	45				20 30	126
08:00 08:15	22		39 49				75		20:00	20 14		10					30 24	
08:30	14		41				55		20:30	21		5					26	
08:45	25	87	65	194			90	281	20:45	21	76	5	30				26	106
09:00	27		44 25				71		21:00	9		4					13	
09:15 09:30	27 19		35 28				62 47		21:15 21:30	10 8		9 3					19 11	
09:45	24	97	35	142			59	239	21:45	3	30	5	21				8	51
10:00	20		28				48		22:00	5		5					10	
10:15	24		27				51		22:15	2		3					5	
10:30 10:45	13 19	76	30 20	105			43 39	181	22:30 22:45	3 6	16	1 4	13				4 10	29
11:00	11		20	100			31	101	23:00	2	-0	1					3	
11:15	24		17				41		23:15	1		0					1	
11:30	25	00	31	06			56	105	23:30 22:45	3	7	3	-				6	12
11:45	29	89	28	96			57	185	23:45	1	7	1	5				2	12
TOTALS		434		709				1143	TOTALS		1207		820				-	2027
SPLIT %		38.0%		62.0%				36.1%	SPLIT %		59.5%		40.5%					63.9%
	D	AILY 1	ΓΟΤΑ			NB	SB		EB		WB						Тс	otal
						1,641	1,529		0		0						3,:	170
AM Peak Hour		11:15		08:15				08:15	PM Peak Hour		16:45		17:00					17:00
AM Pk Volume		115		199				291	PM Pk Volume		268		129					394
Pk Hr Factor	_	0.777		0.765	0	0		0.808	Pk Hr Factor		0.779		0.787	_	0	0		0.828
7 - 9 Volume 7 - 9 Peak Hour		136 08:00		312 08:00				448 08:00	4 - 6 Volume 4 - 6 Peak Hour		458 16:45		221 17:00					679 17:00
7 - 9 Peak Hour		87		194				281	4 - 6 Pk Volume		268		17.00					394
Pk Hr Factor		0.837		0.746	0.000	0.000		0.781	Pk Hr Factor		0.779		0.787	0	0.000	0.000		0.828

Prepared by NDS/ATD VOLUME Laurel St S/O Glenwood Ave

Day: Thursday Date: 6/21/2018

City: Menlo Park Project #: CA18_8336_001

	П	AILY 1	ΓΟΤΛ			NB		SB		EB		WB						То	otal
	U			AL3		1,632	2	1,555		0		0						3,1	187
AM Period	NB		SB		EB	WB		то	TAL	PM Period	NB		SB		EB		WB	то	TAL
00:00 00:15	4 1		3					7		12:00 12:15	26 16		26 31					52 47	
00:15	0		1 1					2 1		12:15	33		31					47 64	
00:45	0	5	1	6				1	11	12:45	17	92	29	117				46	209
01:00	1		0					1		13:00	27		18					45	
01:15	1		0					1		13:15	23		19					42	
01:30 01:45	0 0	2	1 0	1				1 0	3	13:30 13:45	26 26	102	28 32	97				54 58	199
02:00	1	2	0					1		14:00	28	102	26	51				54	155
02:15	2		0					2		14:15	25		19					44	
02:30	0		0					0		14:30	39		32					71	
02:45 03:00	0	3	0					0	3	14:45 15:00	14 33	106	25 32	102				39 65	208
03:15	0		1					1		15:15	25		26					51	
03:30	1		0					1		15:30	30		22					52	
03:45	0	1	0	1				0	2	15:45	35	123	29	109				64	232
04:00 04:15	0 0		0 1					0 1		16:00 16:15	53 37		27					80 60	
04:13	0		0					0		16:30	57		23 24					82	
04:45	0		0	1				0	1	16:45	46	194	20	94				66	288
05:00	0		1					1		17:00	66		25					91	
05:15	0		1					1		17:15	62		31					93	
05:30 05:45	1 0	1	5 1	8				6 1	9	17:30 17:45	48 42	218	27 26	109				75 68	327
06:00	4	1	2	0				6		18:00	44	210	23	105				67	527
06:15	2		9					11		18:15	30		22					52	
06:30	8		11					19		18:30	31		14					45	
06:45 07:00	6 13	20	12 21	34				18 34	54	18:45 19:00	25 37	130	<u>18</u> 9	77				43 46	207
07:15	15		32					43		19:15	32		9 16					40	
07:30	10		30					40		19:30	14		16					30	
07:45	16	50	49	132				65	182	19:45	16	99	19	60				35	159
08:00	15		24					39		20:00	11		11					22	
08:15 08:30	22 27		49 37					71 64		20:15 20:30	21 11		6 3					27 14	
08:45	36	100	59	169				95	269	20:45	11	54	6	26				17	80
09:00	34		68					102		21:00	10		12					22	
09:15	21		27					48		21:15	5		12					17	
09:30 09:45	24 23	102	26 32	153				50 55	255	21:30 21:45	9 13	37	4 7	35				13 20	72
10:00	19	102	28	133				47	255	22:00	5	37	4	33				9	12
10:15	16		22					38		22:15	4		5					9	
10:30	19		22					41		22:30	5		3					8	
10:45	22 32	76	27 30	99				49 62	175	22:45 23:00	2	16	5	17				7	33
11:00 11:15	32 20		30 14					62 34		23:00	4 0		1 1					5	
11:30	24		27					51		23:30	0		2					2	
11:45	19	95	32	103				51	198	23:45	2	6	1	5				3	11
TOTALS		455		707					1162	TOTALS		1177		848					2025
SPLIT %		39.2%		60.8%					36.5%	SPLIT %		58.1%		41.9%					63.5%
	Р	בעווא	ΓΟΤΑ			NB		SB		EB		WB						То	otal
	U	AILY 1				1,632	2	1,555		0		0						3,1	187
AM Peak Hour		08:15		08:15					08:15	PM Peak Hour		16:30		12:00					16:30
AM Pk Volume		119		213					332	PM Pk Volume		232		117					332
Pk Hr Factor		0.826		0.783			0		0.814	Pk Hr Factor		0.879		0.944	_	0			0.892
7 - 9 Volume		150 08:00		301 08:00					451 08:00	4 - 6 Volume 4 - 6 Peak Hour		412 16:30		203 17:00					615 16:30
7 - 9 Peak Hour				00.00															10:30
7 - 9 Pk Volume		100		169					269	4 - 6 Pk Volume		232		109					332



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING

Vistro File: P:\...\1. Existing Conditions_AM.vistro Report File: P:\...\1. Existing - AM.pdf Scenario 1 Existing PM 8/8/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.661	28.2	С
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SEB Thru	0.435	12.2	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level Of Service Report									
Intersection 30: El Camino Real (SR 82)/Glenwood Ave-Valparaiso Ave									
Signalized	Delay (sec / veh):	28.2							
HCM 6th Edition	Level Of Service:	С							
15 minutes	Volume to Capacity (v/c):	0.661							

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real ((SR 82)	El Camino Real (SR 82)			
Approach	No	rtheastbou	und	Sou	Ithwestbo	und	Nor	thwestbo	und	Southeastbound			
Lane Configuration	•	htr			٦ ►		•	חוור		лIIг			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0	
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00	
Speed [mph]		30.00			25.00		35.00			30.00			
Grade [%]		0.00			0.00			0.00			0.00		
Curb Present		No			No			No			No		
Crosswalk		Yes			Yes			Yes			Yes		

Name	Valp	araiso Av	enue	Gler	nwood Ave	enue	El Cam	ino Real (SR 82)	El Camino Real (SR 82)			
Base Volume Input [veh/h]	223	169	94	84	178	27	82	750	38	43	1259	476	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]	0.00	5.60	0.00	0.00	0.60	0.00	1.00	0.50	0.00	1.80	1.70	0.00	
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	0	0	0	45	0	0	274	
Total Hourly Volume [veh/h]	223	169	35	84	178	27	82	750	0	43	1259	202	
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume [veh/h]	58	44	9	22	46	7	21	195	0	11	328	53	
Total Analysis Volume [veh/h]	232	176	36	88	185	28	85	781	0	45	1311	210	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume crossing	9	8			1			9			2		
v_di, Inbound Pedestrian Volume crossing r	n	ı 9			2			8			1		
v_co, Outbound Pedestrian Volume crossing	2	1			5			4			1		
v_ci, Inbound Pedestrian Volume crossing n	ni 1				4		5			1			
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0			
Bicycle Volume [bicycles/h]		6			5			4			9		

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Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	26.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	50.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group Calculations											
Lane Group	L	С	R	L	С	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	20	20	20	19	19	9	88	88	7	86	86
g / C, Green / Cycle	0.13	0.13	0.13	0.13	0.13	0.06	0.59	0.59	0.05	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.11	0.11	0.02	0.05	0.12	0.05	0.22	0.00	0.03	0.37	0.13
s, saturation flow rate [veh/h]	1810	1804	1544	1768	1842	1795	3603	1615	1784	3569	1571
c, Capacity [veh/h]	244	243	208	227	237	106	2127	953	80	2058	906
d1, Uniform Delay [s]	63.29	63.29	57.42	59.92	64.38	68.23	7.57	0.00	69.01	10.22	7.97
k, delay calibration	0.11	0.11	0.11	0.11	0.31	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.53	7.54	0.39	1.08	26.37	13.16	0.49	0.00	5.97	1.52	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results											-
X, volume / capacity	0.84	0.84	0.17	0.39	0.90	0.80	0.37	0.00	0.56	0.64	0.23
d, Delay for Lane Group [s/veh]	70.82	70.83	57.81	60.99	90.74	81.39	8.06	0.00	74.98	11.75	8.57
Lane Group LOS	E	E	E	E	F	F	A	А	E	В	А
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	8.15	8.12	1.24	3.18	9.83	3.54	3.35	0.00	1.81	7.91	1.98
50th-Percentile Queue Length [ft/In]	203.72	203.02	31.09	79.57	245.86	88.40	83.65	0.00	45.22	197.63	49.45
95th-Percentile Queue Length [veh/In]	12.83	12.79	2.24	5.73	14.98	6.36	6.02	0.00	3.26	12.52	3.56
95th-Percentile Queue Length [ft/In]	320.76	319.85	55.96	143.22	374.44	159.12	150.57	0.00	81.40	312.91	89.01

Version 6.00-01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.82	70.83	57.81	60.99	90.74	90.74	81.39	8.06	0.00	74.98	11.75	8.57
Movement LOS	Е	E	E	E	F	F	F	А	A	E	В	А
d_A, Approach Delay [s/veh]		69.77			82.05			15.26		13.14		
Approach LOS		E			F			В			В	
d_I, Intersection Delay [s/veh]				•		28	.16			•		
Intersection LOS						(С					
Intersection V/C						0.6	661					
Other Modes												
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5		21.5		
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00		0.00		
M_CW, Crosswalk Circulation Area [ft²/ped		0.00		0.00			0.00				0.00	
d_p, Pedestrian Delay [s]		27.72		27.72			42.94					
I_p,int, Pedestrian LOS Score for Intersectio	n	2.512			2.084			2.981			3.329	
Crosswalk LOS		В			В			С			С	
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000	
c_b, Capacity of the bicycle lane [bicycles/h]	487			287			784			784	
d_b, Bicycle Delay [s]	43.07				55.18		27.78			27.85		
I_b,int, Bicycle LOS Score for Intersection	n 2.390			2.056			2.311			3.078		
Bicycle LOS		В			В			В			С	

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 1 22a	SG: 2 - 636	SG: 4 25a	SG: 3 40s
SG 5 22s	SG: 5 63s		

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

All-way stop

HCM 6th Edition

15 minutes

Control Type: Analysis Method: Analysis Period:

Delay (sec / veh): 12.2 Level Of Service: B Volume to Capacity (v/c): 0.435

Intersection Setup

Name				Gler	wood Ave	enue	L	aurel Stre	et				
Approach	No	rtheastbo	und	Sou	uthwestbo	und	No	rthwestbo	und	Southeastbound			
Lane Configuration		ηÌг			<u>nir</u>			ліг		ліг			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	2.00 12.00 12.00 [•]			12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Speed [mph]		30.00			30.00			30.00		30.00			
Grade [%]		0.00			0.00			0.00		0.00			
Crosswalk		Yes		Yes				Yes		Yes			

Name				Gler	wood Ave	enue	L	aurel Stre	et			
Base Volume Input [veh/h]	52	122	99	25	218	9	27	139	5	6	240	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	122	99	25	218	9	27	139	5	6	240	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	31	25	6	55	2	7	35	1	2	60	12
Total Analysis Volume [veh/h]	52	122	99	25	218	9	27	139	5	6	240	48
Pedestrian Volume [ped/h]		0			0			0			0	

Version 6.00-01

Intersection Settings

Lanes												
Capacity per Entry Lane [veh/h]	500	537	600	508	546	609	495	530	590	513	551	617
Degree of Utilization, x	0.10	0.23	0.17	0.05	0.40	0.01	0.05	0.26	0.01	0.01	0.44	0.08
Movement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.35	0.87	0.59	0.15	1.91	0.04	0.17	1.04	0.03	0.04	2.19	0.25
95th-Percentile Queue Length [ft]	8.66	21.70	14.70	3.87	47.67	1.12	4.32	26.08	0.64	0.89	54.75	6.31
Approach Delay [s/veh]		10.71			13.10			11.56			13.24	
Approach LOS		В			В			В			В	
Intersection Delay [s/veh]						12	.22					
Intersection LOS						E	3					

Vistro File: P:\...\2. Existing Conditions_PM.vistro Report File: P:\...\2. Existing - PM.pdf Scenario 1 Existing PM 8/8/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.751	30.0	С
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.344	10.8	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level C	of Service Report	
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	30.0
HCM 6th Edition	Level Of Service:	С
15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Camino Real (SR 82)			
Approach	Noi	rtheastbou	und	Sou	uthwestbo	und	Nor	thwestbou	und	Southeastbound			
Lane Configuration	•	11			٦F		•	ΊĬг		лIIг			
Turning Movement	Left	eft Thru Right			Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0	
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00	
Speed [mph]		30.00			25.00			35.00		30.00			
Grade [%]		0.00			0.00			0.00		0.00			
Curb Present		No			No			No			No		
Crosswalk		Yes			Yes			Yes			Yes		

Name	Valp	araiso Av	enue	Gler	nwood Ave	enue	El Cam	ino Real (SR 82)	El Cam	ino Real (SR 82)
Base Volume Input [veh/h]	304	134	96	65	183	30	86	1584	46	43	1019	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	5.60	0.00	0.00	0.60	0.00	1.00	0.50	0.00	1.80	1.70	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	59	0	0	0	0	0	45	0	0	274
Total Hourly Volume [veh/h]	304	134	37	65	183	30	86	1584	1	43	1019	0
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	35	10	17	48	8	22	413	0	11	265	0
Total Analysis Volume [veh/h]	317	140	39	68	191	31	90	1650	1	45	1061	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	9	8			1			9			2	
v_di, Inbound Pedestrian Volume crossing r	n	9			2			8			1	
v_co, Outbound Pedestrian Volume crossing	2	1			5			4			1	
v_ci, Inbound Pedestrian Volume crossing n	ni	1			4			5			1	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		6			5			4			9	

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	26.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	50.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group Galculations											
Lane Group	L	С	R	L	С	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	22	22	22	20	20	9	86	86	7	83	83
g / C, Green / Cycle	0.15	0.15	0.15	0.13	0.13	0.06	0.57	0.57	0.05	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.03	0.04	0.12	0.05	0.46	0.00	0.03	0.30	0.00
s, saturation flow rate [veh/h]	1810	1782	1545	1768	1837	1795	3603	1566	1784	3569	1615
c, Capacity [veh/h]	271	267	231	235	244	111	2058	894	80	1978	895
d1, Uniform Delay [s]	62.12	62.12	55.56	58.62	64.11	67.91	12.69	7.68	69.01	11.24	0.00
k, delay calibration	0.11	0.11	0.11	0.11	0.33	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.38	7.48	0.34	0.67	28.83	12.96	3.41	0.00	5.97	1.05	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results					•						
X, volume / capacity	0.85	0.85	0.17	0.29	0.91	0.81	0.80	0.00	0.56	0.54	0.00
d, Delay for Lane Group [s/veh]	69.50	69.60	55.90	59.29	92.94	80.87	16.10	7.68	74.98	12.29	0.00
Lane Group LOS	E	E	E	E	F	F	В	А	E	В	А
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	9.14	9.01	1.32	2.41	10.40	3.73	13.31	0.01	1.81	6.49	0.00
50th-Percentile Queue Length [ft/In]	228.48	225.17	33.06	60.23	260.02	93.22	332.76	0.22	45.22	162.35	0.00
95th-Percentile Queue Length [veh/In]	14.10	13.93	2.38	4.34	15.69	6.71	19.29	0.02	3.26	10.67	0.00
95th-Percentile Queue Length [ft/In]	352.42	348.22	59.50	108.41	392.25	167.79	482.34	0.40	81.40	266.83	0.00

Version 6.00-01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.53	69.60	55.90	59.29	92.94	92.94	80.87	16.10	7.68	74.98	12.29	0.00				
Movement LOS	Е	E	E	E	F	F	F	В	А	E	В	А				
d_A, Approach Delay [s/veh]		68.48			85.05		19.44 14.84			14.84			14.84			
Approach LOS		Е			F			В			В					
d_l, Intersection Delay [s/veh]						29	.97			•						
Intersection LOS						(С									
Intersection V/C						0.7	751									
Other Modes																
g_Walk,mi, Effective Walk Time [s]	58.8				58.8			36.5			21.5					
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00			0.00					
M_CW, Crosswalk Circulation Area [ft²/ped		0.00			0.00			0.00			0.00					
d_p, Pedestrian Delay [s]		27.72			27.72	27.72					55.04					
I_p,int, Pedestrian LOS Score for Intersectio	n	2.476			2.072		3.096			3.4						
Crosswalk LOS		В		В		В		С				С				
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000					
c_b, Capacity of the bicycle lane [bicycles/h	487		487		487		487		487 287 784		287				784	
d_b, Bicycle Delay [s]	43.07		43.07		43.07		43.07		55.18			27.78		27.85		
I_b,int, Bicycle LOS Score for Intersection		2.475			2.038			3.033			2.698					
Bicycle LOS		В			В			С			В					

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:1 22s	SG: 2 - 636	SG 4 25s	SG:3 40a	
SG:5 22s	SG:6:63s			

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

All-way stop

HCM 6th Edition

15 minutes

Control Type: Analysis Method: Analysis Period:

Delay (sec / veh): 10.8 Level Of Service: B Volume to Capacity (v/c): 0.344

Intersection Setup

Name					wood Ave	enue	La	aurel Stre	et			
Approach	No	Northeastbound		Sou	Southwestbound			thwestbo	und	Southeastbound		
Lane Configuration		ηÌг			ліг			ηÌг		ліг		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00		30.00			30.00			
Grade [%]	0.00			0.00		0.00			0.00			
Crosswalk	Yes		Yes			Yes			Yes			

Name				Gler	wood Ave	enue	L	Laurel Street				
Base Volume Input [veh/h]	33	97	68	20	200	14	56	205	7	2	84	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	97	68	20	200	14	56	205	7	2	84	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	24	17	5	50	4	14	51	2	1	21	3
Total Analysis Volume [veh/h]	33	97	68	20	200	14	56	205	7	2	84	12
Pedestrian Volume [ped/h]		0			0			0		0		

Version 6.00-01

Intersection Settings

anes												
Capacity per Entry Lane [veh/h]	534	577	649	545	590	666	550	595	673	524	565	633
Degree of Utilization, x	0.06	0.17	0.10	0.04	0.34	0.02	0.10	0.34	0.01	0.00	0.15	0.0
ovement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.20	0.60	0.35	0.11	1.49	0.06	0.34	1.53	0.03	0.01	0.52	0.0
95th-Percentile Queue Length [ft]	4.92	15.01	8.73	2.85	37.33	1.61	8.45	38.20	0.79	0.29	12.99	1.4
Approach Delay [s/veh]		9.70			11.48			11.39				
Approach LOS		А			В			В			А	
Intersection Delay [s/veh]	10.82											
Intersection LOS	В											



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

NEAR TERM

Vistro File: P:\...\3. Near Term (2021) - AM.vistro Report File: P:\...\3. Near Term (2021) - AM.pdf Scenario 1 Existing AM 8/10/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.821	35.6	D
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.610	15.6	С

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

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Intersection Level C	Intersection Level Of Service Report							
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave							
Signalized	Delay (sec / veh):	35.6						
HCM 6th Edition	Level Of Service:	D						
15 minutes	Volume to Capacity (v/c):	0.821						

Intersection Setup

Name	Valp	Valparaiso Avenue			wood Ave	enue	El Cam	ino Real ((SR 82)	El Camino Real (SR 82)		
Approach	No	Northeastbound			Southwestbound			thwestbo	und	Southeastbound		
Lane Configuration		чļь			٦İг		•	חוור		•	חוור	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00
Speed [mph]		30.00		25.00				35.00		30.00		
Grade [%]	0.00			0.00		0.00						
Curb Present	No		No		No			No				
Crosswalk	Yes		Yes		Yes			Yes				

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Carr	ino Real ((SR 82)	El Camino Real (SR 82)
Base Volume Input [veh/h]	250	244	113	97	211	39	92	933	64	48	1495	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285
Total Hourly Volume [veh/h]	250	244	39	97	211	39	92	933	35	48	1495	238
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	67	11	27	58	11	25	256	10	13	411	65
Total Analysis Volume [veh/h]	275	268	43	107	232	43	101	1025	38	53	1643	262
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	9	5			2			5			3	
v_di, Inbound Pedestrian Volume crossing r	n 5				3			5			2	
v_co, Outbound Pedestrian Volume crossing	2				6			6		2		
v_ci, Inbound Pedestrian Volume crossing n	ni 2				6		6			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]		18			15			4		9		

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

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Lane Group Calculations

					0							
Lane Group	L	С	R	L	С	R	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
<pre>I1_p, Permitted Start-Up Lost Time [s]</pre>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	26	26	26	21	21	21	10	81	81	7	78	78
g / C, Green / Cycle	0.17	0.17	0.17	0.14	0.14	0.14	0.07	0.54	0.54	0.05	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.03	0.06	0.12	0.03	0.06	0.29	0.02	0.03	0.47	0.17
s, saturation flow rate [veh/h]	1775	1861	1518	1785	1858	1539	1810	3506	1561	1782	3506	1526
c, Capacity [veh/h]	306	321	262	243	253	210	123	1902	847	84	1830	796
d1, Uniform Delay [s]	60.36	60.34	52.76	59.51	63.92	57.47	67.28	12.23	9.62	68.94	19.55	12.38
k, delay calibration	0.16	0.16	0.11	0.11	0.35	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.61	10.03	0.29	1.25	30.59	0.48	12.56	1.10	0.10	7.42	7.43	1.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results												
X, volume / capacity	0.87	0.87	0.16	0.44	0.92	0.21	0.82	0.54	0.04	0.63	0.90	0.33
d, Delay for Lane Group [s/veh]	70.97	70.36	53.05	60.76	94.51	57.95	79.83	13.33	9.72	76.35	26.98	13.48
Lane Group LOS	E	E	D	E	F	E	E	В	А	E	С	В
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	10.76	11.20	1.42	3.88	10.98	1.50	4.15	6.52	0.40	2.15	21.29	3.43
50th-Percentile Queue Length [ft/In]	268.93	280.00	35.42	96.88	274.47	37.48	103.77	162.90	9.91	53.74	532.24	85.75
95th-Percentile Queue Length [veh/In]	16.14	16.69	2.55	6.98	16.41	2.70	7.47	10.70	0.71	3.87	28.86	6.17
95th-Percentile Queue Length [ft/In]	403.40	417.22	63.76	174.38	410.32	67.46	186.78	267.56	17.84	96.74	721.41	154.34

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.96	70.36	53.05	60.76	94.51	57.95	79.83	13.33	9.72	76.35	26.98	13.48
Movement LOS	Е	E	D	E	F	E	E	В	A	E	С	В
d_A, Approach Delay [s/veh]		69.37			80.94	•		18.99			26.51	
Approach LOS		E			F			В			С	
d_I, Intersection Delay [s/veh]				•		35	.59			•		
Intersection LOS						[C					
Intersection V/C						3.0	321					
Other Modes												
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5			21.5	
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00			0.00	
M_CW, Crosswalk Circulation Area [ft²/ped		0.00			0.00			0.00			0.00	
d_p, Pedestrian Delay [s]		27.72			27.72			42.94			55.04	
I_p,int, Pedestrian LOS Score for Intersection	n	2.602			2.278			3.082			3.459	
Crosswalk LOS		В			В			С			С	
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000	
c_b, Capacity of the bicycle lane [bicycles/h]	487			287			784			784	
d_b, Bicycle Delay [s]		43.33			55.46			27.78			27.85	
I_b,int, Bicycle LOS Score for Intersection		2.649			2.190			2.544			3.410	
Bicycle LOS		В			В			В			С	

Sequence

-			h					-			-					
Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:1 22s	SG: 2 - 636	SG: 4 25s	SG: 3 40s
SG 5 22s	SG 6 63s		

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Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

Control Type: Analysis Method: Analysis Period: All-way stop

HCM 6th Edition

15 minutes

Delay (sec / veh): 15.6 Level Of Service: C Volume to Capacity (v/c): 0.610

Intersection Setup

Name				Gler	wood Ave	enue	L	aurel Stre	et			
Approach	No	rtheastbo	und	Sou	uthwestbo	und	No	thwestbo	und	Sou	utheastbo	und
Lane Configuration		ηÌг			ліг			ηÌг		חור		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes		Yes			Yes		

Name				Gler	wood Ave	enue	Li	aurel Stre	et			
Base Volume Input [veh/h]	57	200	103	26	312	9	28	145	5	6	250	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	200	103	26	312	9	28	145	5	6	250	50
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	50	26	7	78	2	7	36	1	2	63	13
Total Analysis Volume [veh/h]	57	200	103	26	312	9	28	145	5	6	250	50
Pedestrian Volume [ped/h]		0			0			0			0	

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Intersection Settings

anes												
Capacity per Entry Lane [veh/h]	462	495	548	478	512	567	446	475	523	464	496	548
Degree of Utilization, x	0.12	0.40	0.19	0.05	0.61	0.02	0.06	0.30	0.01	0.01	0.50	0.0
lovement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.42	1.94	0.69	0.17	4.04	0.05	0.20	1.28	0.03	0.04	2.80	0.3
95th-Percentile Queue Length [ft]	10.46	48.41	17.17	4.30	101.01	1.21	5.00	31.92	0.72	0.98	69.91	7.4
Approach Delay [s/veh]		13.17			19.15			13.10			15.81	
Approach LOS		В			С			В			С	
Intersection Delay [s/veh]						15	.58			•		
Intersection LOS						(2					

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.904	52.1	D
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.391	11.5	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level Of	f Service Report	
Intersection 30: El Camino Real (SR 8	2)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	52.1
HCM 6th Edition	Level Of Service:	D
15 minutes	Volume to Capacity (v/c):	0.904

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Cam	iino Real (SR 82)
Approach	No	rtheastbou	und	Sou	uthwestbo	und	Nor	thwestbo	und	Sou	utheastbou	und
Lane Configuration	•	חלר			ηÌг		•	חוור		hiir		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00
Speed [mph]		30.00			25.00			35.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Carr	ino Real (SR 82)	El Carr	ino Real (SR 82)
Base Volume Input [veh/h]	346	165	112	73	219	52	99	1801	72	48	1178	328
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285
Total Hourly Volume [veh/h]	346	165	38	73	219	52	99	1801	43	48	1178	43
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	95	45	10	20	60	14	27	495	12	13	324	12
Total Analysis Volume [veh/h]	380	181	42	80	241	57	109	1979	47	53	1295	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	9	5			2			5			3	
v_di, Inbound Pedestrian Volume crossing r	n	5			3			5			2	
v_co, Outbound Pedestrian Volume crossing	2	2			6			6			2	
v_ci, Inbound Pedestrian Volume crossing n	ni	2			6			6			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		18			15			4			9	

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group	L	с	R	L	с	R	L	с	R	L	с	R
•		-			-			-		_	-	
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	27	27	27	21	21	21	11	80	80	7	76	76
g / C, Green / Cycle	0.18	0.18	0.18	0.14	0.14	0.14	0.07	0.53	0.53	0.05	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.03	0.04	0.13	0.04	0.06	0.56	0.03	0.03	0.37	0.03
s, saturation flow rate [veh/h]	1775	1831	1519	1785	1858	1541	1810	3506	1560	1782	3506	1525
c, Capacity [veh/h]	317	327	271	251	262	217	131	1864	830	85	1776	772
d1, Uniform Delay [s]	59.92	59.90	51.96	57.94	63.59	57.37	66.80	21.82	10.41	68.95	17.77	12.26
k, delay calibration	0.19	0.19	0.11	0.11	0.38	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.22	11.75	0.26	0.72	31.94	0.64	12.35	39.39	0.13	7.40	2.67	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results		•		•	•						•	
X, volume / capacity	0.87	0.87	0.15	0.32	0.92	0.26	0.83	1.06	0.06	0.63	0.73	0.06
d, Delay for Lane Group [s/veh]	72.14	71.65	52.22	58.66	95.53	58.00	79.15	61.21	10.54	76.35	20.44	12.41
Lane Group LOS	E	E	D	E	F	E	E	F	В	E	С	В
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	11.34	11.63	1.37	2.82	11.49	2.00	4.46	35.81	0.52	2.15	13.04	0.59
50th-Percentile Queue Length [ft/In]	283.41	290.65	34.29	70.60	287.34	49.88	111.42	895.35	12.97	53.74	325.94	14.77
95th-Percentile Queue Length [veh/In]	16.86	17.22	2.47	5.08	17.05	3.59	7.92	47.90	0.93	3.87	18.96	1.06
95th-Percentile Queue Length [ft/In]	421.45	430.45	61.72	127.09	426.34	89.79	197.97	1197.54	23.34	96.73	473.98	26.59

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	72.01	71.65	52.22	58.66	95.53	58.00	79.15	61.21	10.54	76.35	20.44	12.41
Movement LOS	Е	E	D	E	F	E	E	F	В	E	С	В
d_A, Approach Delay [s/veh]		70.52			82.07		61.01				22.29	
Approach LOS		E			F			E			С	
d_I, Intersection Delay [s/veh]						52	.07					
Intersection LOS						[C					
Intersection V/C						9.0	904					
Other Modes												
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5			21.5	
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00			0.00	
M_CW, Crosswalk Circulation Area [ft²/ped		0.00			0.00			0.00			0.00	
d_p, Pedestrian Delay [s]		27.72			27.72			42.94			55.04	
I_p,int, Pedestrian LOS Score for Intersectio	n	2.558			2.261			3.195			3.542	
Crosswalk LOS		В			В			С			D	
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000	
c_b, Capacity of the bicycle lane [bicycles/h]	487		487 287		784			784			
d_b, Bicycle Delay [s]	43.33			55.46	5.46 27.78			27.85				
I_b,int, Bicycle LOS Score for Intersection	2.677				2.183		3.345			2.946		
Bicycle LOS		В			В			С			С	

Sequence

-			h					-			-					
Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:1 22s	SG: 2 - 636	SG: 4 25s	SG: 3 40s
SG 5 22s	SG 6 63s		

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

Control Type: Analysis Method: Analysis Period: All-way stop

HCM 6th Edition

15 minutes

4: Glenwood Avenue/ Laurel Street Delay (sec / veh): 11.5 Level Of Service: B Volume to Capacity (v/c): 0.391

Intersection Setup

Name				Gler	nwood Ave	enue	L	aurel Stre	et				
Approach	Northeastbound			Sou	Southwestbound			thwestbo	und	Southeastbound			
Lane Configuration		ηÌг			ліг			ηÌг					
Turning Movement	Left	Left Thru Right			Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00 100.00 100.00		100.00 100.00 100.00			100.00	100.00	100.00	
Speed [mph]		30.00			30.00		30.00			30.00			
Grade [%]	0.00				0.00			0.00		0.00			
Crosswalk	Yes			Yes			Yes			Yes			

Name				Gler	wood Ave	enue	Li	aurel Stree	et			
Base Volume Input [veh/h]	43	139	71	21	223	15	58	213	7	2	87	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	139	71	21	223	15	58	213	7	2	87	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	35	18	5	56	4	15	53	2	1	22	3
Total Analysis Volume [veh/h]	43	139	71	21	223	15	58	213	7	2	87	12
Pedestrian Volume [ped/h]		0			0			0			0	

Version 6.00-01

Intersection Settings

anes															
Capacity per Entry Lane [veh/h]	522	562	631	529	571	641	529	571	641	505	542	605			
Degree of Utilization, x	0.08	0.25	0.11	0.04	0.39	0.02	0.11	0.37	0.01	0.00	0.16	0.0			
Novement, Approach, & Intersection Re	sults														
95th-Percentile Queue Length [veh]	0.27	0.97	0.38	0.12	1.84	0.07	0.37	1.72	0.03	0.01	0.57	0.0			
95th-Percentile Queue Length [ft]	6.71	24.18	9.45	3.09	46.12	1.79	9.17	42.98	0.83	0.30	14.20	1.5			
Approach Delay [s/veh]		10.44			12.47	-		12.11	•		10.38				
Approach LOS		В			В			В			В				
Intersection Delay [s/veh]				•		11	.54			•					
Intersection LOS						l	3								



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING PLUS PROJECT

Vistro File: P:\...\5. Existing + Project_AM.vistro Report File: P:\...\5. Existing + Project Report (AM).pdf

Scenario 1 Existing AM 8/8/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.708	29.8	С
254	Glenwood Avenue/Laurel Street	All-way stop	HCM 6th Edition	SEB Thru	0.435	12.2	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level	Of Service Report	
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	29.8
HCM 6th Edition	Level Of Service:	С
15 minutes	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real ((SR 82)	El Camino Real (SR 82)		
Approach	No	rtheastbou	und	Sou	Ithwestbo	und	Nor	thwestbo	und	Sou	utheastbou	und
Lane Configuration	•	чļь			٦ ►		•	חוור		•	חוור	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00
Speed [mph]		30.00			25.00			35.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No		No		
Crosswalk		Yes			Yes			Yes		1 0 180.00 100.00 1 30.00 0.00		

Name	Valparaiso Avenue			Glenwood Avenue			El Camino Real (SR 82)			El Camino Real (SR 82)		
Base Volume Input [veh/h]	223	170	94	84	178	27	82	750	38	43	1259	476
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285
Total Hourly Volume [veh/h]	223	170	20	84	178	27	82	750	9	43	1259	191
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	47	5	23	49	7	23	206	2	12	346	52
Total Analysis Volume [veh/h]	245	187	22	92	196	30	90	824	10	47	1384	210
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	g 5			2			5			3		
v_di, Inbound Pedestrian Volume crossing r	n 5			3		5			2			
v_co, Outbound Pedestrian Volume crossing	g 2			6			6			2		
v_ci, Inbound Pedestrian Volume crossing n	ni 2			6			6			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	18			15		4			9			

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	50.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group	L	С	R	L	С	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	21	21	21	21	21	9	86	86	7	84	84
g / C, Green / Cycle	0.14	0.14	0.14	0.14	0.14	0.06	0.57	0.57	0.05	0.56	0.56
(v / s)_i Volume / Saturation Flow Rate	0.12	0.12	0.01	0.05	0.13	0.05	0.24	0.01	0.03	0.39	0.14
s, saturation flow rate [veh/h]	1775	1850	1510	1785	1802	1810	3506	1562	1782	3506	1527
c, Capacity [veh/h]	250	260	212	245	247	111	2017	899	82	1962	854
d1, Uniform Delay [s]	62.85	62.85	56.13	58.87	63.84	67.95	8.81	7.45	68.98	12.42	9.18
k, delay calibration	0.11	0.11	0.11	0.11	0.36	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.76	7.47	0.21	0.96	31.05	12.84	0.62	0.02	6.29	2.16	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results	•	•		•		•				•	
X, volume / capacity	0.85	0.85	0.10	0.38	0.92	0.81	0.41	0.01	0.58	0.71	0.25
d, Delay for Lane Group [s/veh]	70.61	70.32	56.35	59.83	94.90	80.79	9.43	7.47	75.27	14.59	9.86
Lane Group LOS	E	E	E	E	F	F	A	A	E	В	А
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	8.44	8.78	0.75	3.29	10.73	3.73	3.97	0.09	1.89	10.49	2.20
50th-Percentile Queue Length [ft/In]	211.07	219.38	18.66	82.31	268.19	93.16	99.30	2.16	47.32	262.16	55.00
95th-Percentile Queue Length [veh/In]	13.21	13.63	1.34	5.93	16.10	6.71	7.15	0.16	3.41	15.80	3.96
95th-Percentile Queue Length [ft/In]	330.20	340.84	33.60	148.16	402.47	167.69	178.74	3.88	85.18	394.92	99.01

Version 6.00-01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.58	70.32	56.35	59.83	94.90	94.90	80.79	9.43	7.47	75.27	14.59	9.86
Movement LOS	Е	E	E	E	F	F	F	A	A	E	В	А
d_A, Approach Delay [s/veh]		69.78			84.75			16.36			15.72	
Approach LOS		E			F			В			В	
d_I, Intersection Delay [s/veh]						29	.83					
Intersection LOS						(С					
Intersection V/C						0.7	708					
Other Modes												
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5			21.5	
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00			0.00	
M_CW, Crosswalk Circulation Area [ft²/ped		0.00			0.00			0.00			0.00	
d_p, Pedestrian Delay [s]		27.72			27.72			42.94			55.04	
I_p,int, Pedestrian LOS Score for Intersectio	n	2.546			2.091			2.981			3.368	
Crosswalk LOS		В			В			С			С	
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000	
c_b, Capacity of the bicycle lane [bicycles/h]	487			287			784			784	
d_b, Bicycle Delay [s]		43.33			55.46			27.78			27.85	
I_b,int, Bicycle LOS Score for Intersection		2.431			2.084			2.346			3.149	
Bicycle LOS		В			В			В			С	

Sequence

-			h					-			-					
Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:1 22s	SG: 2 636	SG: 4 255	SG: 3 40s	
SG:5 22s	SG: 6 63s			

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/Laurel Street

All-way stop

HCM 6th Edition

15 minutes

Control Type: Analysis Method: Analysis Period:

Delay (sec / veh): Level Of Service:

Volume to Capacity (v/c):

0.435

12.2

В

Intersection Setup

Name				Gler	wood Ave	enue	L	aurel Stre	et			
Approach	No	rtheastbo	und	Sou	uthwestbo	und	No	thwestbo	und	Sou	utheastbou	und
Lane Configuration		ηÌг			ηÌг			ηÌг			ліг	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes		Yes		Yes			Yes			

Name				Gler	wood Ave	enue	Li	aurel Stree	et			
Base Volume Input [veh/h]	52	122	100	25	218	9	28	139	6	6	240	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	122	100	25	218	9	28	139	6	6	240	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	31	25	6	55	2	7	35	2	2	60	12
Total Analysis Volume [veh/h]	52	122	100	25	218	9	28	139	6	6	240	48
Pedestrian Volume [ped/h]		0			0			0			0	

Version 6.00-01

Intersection Settings

Lanes												
Capacity per Entry Lane [veh/h]	500	537	600	508	546	610	495	530	591	513	551	617
Degree of Utilization, x	0.10	0.23	0.17	0.05	0.40	0.01	0.06	0.26	0.01	0.01	0.44	0.08
Movement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.35	0.87	0.60	0.15	1.91	0.04	0.18	1.04	0.03	0.04	2.19	0.25
95th-Percentile Queue Length [ft]	8.66	21.70	14.88	3.87	47.64	1.12	4.49	26.09	0.77	0.89	54.74	6.31
Approach Delay [s/veh]		10.72			13.09			11.54			13.24	
Approach LOS		В			В			В			В	
Intersection Delay [s/veh]						12	.21					
Intersection LOS						E	3					

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Scenario 1 Existing AM 8/10/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.809	33.7	С
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.345	10.8	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Control Type:

Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level (Of Service Report	
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	33.7
HCM 6th Edition	Level Of Service:	С
15 minutes	Volume to Capacity (v/c):	0.809

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Cam	iino Real (SR 82)
Approach	No	rtheastbou	und	Sou	uthwestbo	und	Nor	thwestbou	und	Sou	utheastbou	und
Lane Configuration	•	חלר			٦F		•	ΊĬг		•	ηЩг	
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00
Speed [mph]		30.00			25.00			35.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No			No	
Crosswalk		Yes			Yes			Yes			Yes	

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Carr	ino Real ((SR 82)	El Cam	ino Real ((SR 82)
Base Volume Input [veh/h]	304	134	96	65	184	30	86	1584	46	43	1019	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285
Total Hourly Volume [veh/h]	304	134	22	65	184	30	86	1584	17	43	1019	0
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	37	6	18	51	8	24	435	5	12	280	0
Total Analysis Volume [veh/h]	334	147	24	71	202	33	95	1741	19	47	1120	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing		5	-		2	-		5	-		3	
v_di, Inbound Pedestrian Volume crossing r	n	5			3			5			2	
v_co, Outbound Pedestrian Volume crossing		2			6			6			2	
v_ci, Inbound Pedestrian Volume crossing n	ni	2			6			6			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		18			15			4			9	

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group	L	С	R	L	С	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	23	23	23	21	21	10	83	83	7	80	80
g / C, Green / Cycle	0.16	0.16	0.16	0.14	0.14	0.06	0.56	0.56	0.05	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.13	0.13	0.02	0.04	0.13	0.05	0.50	0.01	0.03	0.32	0.00
s, saturation flow rate [veh/h]	1775	1828	1514	1785	1799	1810	3506	1561	1782	3506	1573
c, Capacity [veh/h]	276	284	236	252	254	117	1949	868	82	1883	845
d1, Uniform Delay [s]	61.70	61.70	54.28	57.56	63.57	67.64	16.01	8.68	68.99	13.22	0.00
k, delay calibration	0.12	0.12	0.11	0.11	0.38	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.61	8.39	0.19	0.60	33.28	12.60	6.78	0.05	6.27	1.39	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results			-		•						
X, volume / capacity	0.86	0.86	0.10	0.28	0.92	0.81	0.89	0.02	0.58	0.59	0.00
d, Delay for Lane Group [s/veh]	70.31	70.09	54.46	58.16	96.86	80.24	22.80	8.73	75.27	14.62	0.00
Lane Group LOS	E	E	D	E	F	F	С	А	E	В	Α
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	9.49	9.76	0.80	2.49	11.30	3.92	19.01	0.18	1.89	8.18	0.00
50th-Percentile Queue Length [ft/In]	237.35	243.90	19.98	62.23	282.44	97.93	475.32	4.58	47.32	204.57	0.00
95th-Percentile Queue Length [veh/In]	14.55	14.88	1.44	4.48	16.81	7.05	26.16	0.33	3.41	12.87	0.00
95th-Percentile Queue Length [ft/In]	363.68	371.97	35.96	112.01	420.25	176.27	654.09	8.25	85.18	321.86	0.00

Version 6.00-01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	70.25	70.09	54.46	58.16	96.86	96.86	80.24	22.80	8.73	75.27	14.62	0.00		
Movement LOS	Е	E	D	E	F	F	F	С	A	E	В	Α		
d_A, Approach Delay [s/veh]		69.45			87.88	•		25.59	•		17.06			
Approach LOS		Е			F			С			В			
d_I, Intersection Delay [s/veh]						33	.75							
Intersection LOS						(C							
Intersection V/C						0.8	309							
Other Modes														
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5			21.5			
M_corner, Corner Circulation Area [ft²/ped]		0.00			0.00			0.00			0.00			
M_CW, Crosswalk Circulation Area [ft²/ped		0.00			0.00			0.00			0.00			
d_p, Pedestrian Delay [s]		27.72			27.72			42.94			55.04			
I_p,int, Pedestrian LOS Score for Intersectio	n	2.510			2.079			3.104			3.455			
Crosswalk LOS		В			В			С			С			
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000			
c_b, Capacity of the bicycle lane [bicycles/h]	487			287			784			784			
d_b, Bicycle Delay [s]		43.33			55.46			27.78		27.85				
I_b,int, Bicycle LOS Score for Intersection		2.515			2.065			3.114		2.758				
Bicycle LOS		В			В			С			С			

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG:1 22s	SG: 2 - 636	SG 4 25s	SG:3 40a	
SG:5 22s	SG:6:63s			

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

All-way stop

HCM 6th Edition

15 minutes

Control Type: Analysis Method: Analysis Period:

Delay (sec / veh): 10.8 Level Of Service: B Volume to Capacity (v/c): 0.345

Intersection Setup

Name				Gler	nwood Ave	enue	La	Laurel Street				
Approach	No	Northeastbound			Southwestbound			thwestbo	und	Southeastbound		
Lane Configuration	ліг			ліг				ηÌг		ліг		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00 100.00 100.00		100.00 100.00 10		100.00	00 100.00 100.00 10		100.00
Speed [mph]		30.00			30.00			30.00		30.00		
Grade [%]	0.00				0.00		0.00			0.00		
Crosswalk	Yes				Yes			Yes		Yes		

Name				Gler	wood Ave	enue	L	aurel Stre	et			
Base Volume Input [veh/h]	33	97	69	21	200	14	57	205	7	2	84	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	97	69	21	200	14	57	205	7	2	84	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	24	17	5	50	4	14	51	2	1	21	3
Total Analysis Volume [veh/h]	33	97	69	21	200	14	57	205	7	2	84	12
Pedestrian Volume [ped/h]		0			0			0			0	

Version 6.00-01

Intersection Settings

anes												
Capacity per Entry Lane [veh/h]	534	576	649	545	590	665	550	595	672	523	565	633
Degree of Utilization, x	0.06	0.17	0.11	0.04	0.34	0.02	0.10	0.34	0.01	0.00	0.15	0.02
Movement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.20	0.60	0.36	0.12	1.50	0.06	0.35	1.53	0.03	0.01	0.52	0.0
95th-Percentile Queue Length [ft]	4.93	15.03	8.88	3.00	37.38	1.61	8.63	38.24	0.79	0.29	13.00	1.4
Approach Delay [s/veh]		9.70			11.48			11.40			9.97	
Approach LOS		А			В			В			А	
Intersection Delay [s/veh]						10	.83					
Intersection LOS						E	3					



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

NEAR TERM PLUS PROJECT

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.827	36.7	D
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.610	15.6	С

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Scenario 1 Existing AM

8/10/2018

Control Type: Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level 0	Of Service Report	
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	36.7
HCM 6th Edition	Level Of Service:	D
15 minutes	Volume to Capacity (v/c):	0.827

Intersection Setup

Name	Valp	araiso Av	enue	Gler	nwood Ave	enue	El Cam	ino Real ((SR 82)	El Camino Real (SR 82)		
Approach	No	rtheastbo	und	Sou	uthwestbo	und	Nor	thwestbo	und	Sou	utheastbou	und
Lane Configuration	•	чļч			٦Ìг		•	חוור		12.00 12.00 1 0		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00
Speed [mph]		30.00			25.00			35.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Curb Present		No			No			No		No		
Crosswalk		Yes			Yes			Yes		1 0 180.00 100.00 30.00 0.00		

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Cam	ino Real (SR 82)
Base Volume Input [veh/h]	250	245	113	97	221	39	92	933	64	48	1495	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285
Total Hourly Volume [veh/h]	250	245	39	97	221	39	92	933	35	48	1495	238
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	69	67	11	27	61	11	25	256	10	13	411	65
Total Analysis Volume [veh/h]	275	269	43	107	243	43	101	1025	38	53	1643	262
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	9	5			2			5			3	
v_di, Inbound Pedestrian Volume crossing r	n	5			3			5			2	
v_co, Outbound Pedestrian Volume crossing	9	2			6			6		2		
v_ci, Inbound Pedestrian Volume crossing n	ni	2			6			6			2	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		18			15			4			9	

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

	L	с	R	L	с	R	L	с	R	L	с	R
Lane Group		-			-			-			-	
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
<pre>I1_p, Permitted Start-Up Lost Time [s]</pre>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	26	26	26	21	21	21	10	80	80	7	77	77
g / C, Green / Cycle	0.17	0.17	0.17	0.14	0.14	0.14	0.07	0.54	0.54	0.05	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.15	0.15	0.03	0.06	0.13	0.03	0.06	0.29	0.02	0.03	0.47	0.17
s, saturation flow rate [veh/h]	1775	1861	1518	1785	1858	1542	1810	3506	1561	1782	3506	1525
c, Capacity [veh/h]	306	321	262	253	264	219	123	1882	838	85	1810	787
d1, Uniform Delay [s]	60.37	60.35	52.75	58.74	63.53	56.73	67.28	12.78	10.02	68.95	20.42	12.88
k, delay calibration	0.18	0.17	0.11	0.11	0.38	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.32	10.70	0.29	1.12	32.36	0.43	12.47	1.14	0.10	7.40	8.19	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results				•								
X, volume / capacity	0.87	0.87	0.16	0.42	0.92	0.20	0.82	0.54	0.05	0.63	0.91	0.33
d, Delay for Lane Group [s/veh]	71.69	71.05	53.04	59.86	95.90	57.17	79.74	13.92	10.13	76.35	28.61	14.01
Lane Group LOS	E	E	D	E	F	E	E	В	В	E	С	В
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/In]	10.84	11.28	1.42	3.84	11.62	1.49	4.15	6.78	0.41	2.15	22.13	3.52
50th-Percentile Queue Length [ft/In]	270.99	282.10	35.43	96.10	290.42	37.19	103.71	169.51	10.19	53.74	553.34	88.06
95th-Percentile Queue Length [veh/In]	16.24	16.79	2.55	6.92	17.21	2.68	7.47	11.05	0.73	3.87	29.85	6.34
95th-Percentile Queue Length [ft/In]	405.98	419.82	63.77	172.98	430.16	66.95	186.68	276.27	18.34	96.73	746.23	158.52

Version 6.00-01

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.68	71.05	53.04	59.86	95.90	57.17	79.74	13.92	10.13	76.35	28.61	14.01	
Movement LOS	Е	E	D	E	F	E	E	В	В	E	С	В	
d_A, Approach Delay [s/veh]		70.02			81.85			19.51			27.95		
Approach LOS		E			F			В					
d_I, Intersection Delay [s/veh]		36.74						•					
Intersection LOS		D											
Intersection V/C						3.0	327						
Other Modes													
g_Walk,mi, Effective Walk Time [s]		58.8			58.8			36.5					
M_corner, Corner Circulation Area [ft²/ped]		0.00		0.00				0.00					
M_CW, Crosswalk Circulation Area [ft²/ped		0.00		0.00			0.00				0.00		
d_p, Pedestrian Delay [s]		27.72			27.72			42.94					
I_p,int, Pedestrian LOS Score for Intersectio	n	2.605			2.280			3.082			3.459		
Crosswalk LOS		В			В			С			С		
s_b, Saturation Flow Rate of the bicycle lane	;	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h	487				287			784			784		
d_b, Bicycle Delay [s]	43.33				55.46 27.78				27.85				
I_b,int, Bicycle LOS Score for Intersection		2.650			2.208			2.544	.544				
Bicycle LOS		В			В			В		С			

Sequence

Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 1 22a	SG: 2 - 636	SG: 4 25a	SG: 3 40s
SG 5 22s	SG: 5 63s		

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

Control Type: Analysis Method: Analysis Period: All-way stop

HCM 6th Edition

15 minutes

Delay (sec / veh): 15.6 Level Of Service: C Volume to Capacity (v/c): 0.610

Intersection Setup

Name				Gler	wood Ave	enue	L	aurel Stre	et			
Approach	No	rtheastbo	und	Sou	Southwestbound			thwestbo	und	Southeastbound		
Lane Configuration		eff Thru Pight			ліг			ηÌг		nir 🗌		
Turning Movement	Left	eft Thru Right L			Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00 12.00 12.00 12		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00 100.00 100.00		100.00 100.00 100.0		100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			Yes			Yes	

Name				Gler	Glenwood Avenue			Laurel Street					
Base Volume Input [veh/h]	57	200	104	26	312	9	29	145	6	6	250	50	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	57	200	104	26	312	9	29	145	6	6	250	50	
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume [veh/h]	14	50	26	7	78	2	7	36	2	2	63	13	
Total Analysis Volume [veh/h]	57	200	104	26	312	9	29	145	6	6	250	50	
Pedestrian Volume [ped/h]		0		0				0			0		

Version 6.00-01

Intersection Settings

anes												
Capacity per Entry Lane [veh/h]	462	495	547	478	512	567	447	475	524	465	497	549
Degree of Utilization, x	0.12	0.40	0.19	0.05	0.61	0.02	0.06	0.30	0.01	0.01	0.50	0.0
ovement, Approach, & Intersection Re	sults											
95th-Percentile Queue Length [veh]	0.42	1.94	0.69	0.17	4.03	0.05	0.21	1.28	0.03	0.04	2.79	0.3
95th-Percentile Queue Length [ft]	10.45	48.39	17.37	4.30	100.87	1.21	5.19	31.93	0.87	0.98	69.81	7.4
Approach Delay [s/veh]		13.16			19.12			13.07			15.79	
Approach LOS		В			С			В			С	
Intersection Delay [s/veh]						15	.55					
Intersection LOS		С										

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
30	El Camino Real (SR 82) /Glenwood Ave-Valparaiso Ave	Signalized	HCM 6th Edition	SWB Thru	0.903	52.1	D
254	Glenwood Avenue/ Laurel Street	All-way stop	HCM 6th Edition	SWB Thru	0.391	11.5	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Scenario 1 Existing AM

8/10/2018

Control Type: Analysis Method:

Analysis Period:

Version 6.00-01

Intersection Level (Of Service Report	
Intersection 30: El Camino Real (SR	82)/Glenwood Ave-Valparaiso Ave	
Signalized	Delay (sec / veh):	52.1
HCM 6th Edition	Level Of Service:	D
15 minutes	Volume to Capacity (v/c):	0.903

Intersection Setup

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Camino Real (SR 82)			
Approach	No	rtheastbo	und	Sou	uthwestbo	und	Nor	thwestbo	und	Sou	Southeastbound		
Lane Configuration		left Thru Right			٦Гг		•	חוור		hiir			
Turning Movement	Left Thru Right			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00 12.00 12.00			12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	1	0	1	1	1 0		1	0	1	1	0	0	
Pocket Length [ft]	205.00	100.00	130.00	120.00	100.00	100.00	190.00	100.00	105.00	180.00	100.00	100.00	
Speed [mph]		30.00			25.00			35.00		30.00			
Grade [%]	0.00				0.00			0.00			0.00		
Curb Present	No			No			No			No			
Crosswalk		Yes			Yes			Yes		Yes			

Name	Valp	araiso Av	enue	Gler	wood Ave	enue	El Cam	ino Real (SR 82)	El Camino Real (SR 82)			
Base Volume Input [veh/h]	346	165	112	73	220	52	99	1801	72	46	1178	328	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]	2.40	2.40	1.60	0.00	2.80	0.00	0.00	3.90	0.00	1.90	3.90	3.30	
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Right-Turn on Red Volume [veh/h]	0	0	74	0	0	0	0	0	29	0	0	285	
Total Hourly Volume [veh/h]	346	165	38	73	220	52	99	1801	43	46	1178	43	
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume [veh/h]	95	45	10	20	60	14	27	495	12	13	324	12	
Total Analysis Volume [veh/h]	380	181	42	80	242	57	109	1979	47	51	1295	47	
Presence of On-Street Parking	No		No	No		No	No		No	No		No	
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	
v_do, Outbound Pedestrian Volume crossing	9	5			2			5			3		
v_di, Inbound Pedestrian Volume crossing r	n	-			3			5			2		
v_co, Outbound Pedestrian Volume crossing	g 2				6			6			2		
v_ci, Inbound Pedestrian Volume crossing n	ni 2			6			6			2			
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0			
Bicycle Volume [bicycles/h]	18		15			4			9				

Version 6.00-01

Intersection Settings

Located in CBD	No	
Signal Coordination Group	1 - ECR	
Cycle Length [s]	150	
Coordination Type	Time of Day Pattern Coordinated	
Actuation Type	Fully actuated	
Offset [s]	106.0	
Offset Reference	LeadGreen	
Permissive Mode	SingleBand	
Lost time [s]	4.00	

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	3	0	0	4	0	1	6	0	5	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	6	0	0	6	0	8	10	0	8	10	0
Maximum Green [s]	0	0	0	0	0	0	0	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.5	3.7	0.0	3.5	3.7	0.0
All red [s]	0.0	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	0	40	0	0	25	0	22	63	0	22	63	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	1.5	0.0	0.0	1.5	0.0	2.0	2.2	0.0	2.0	2.2	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	50.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	50.0	50.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Version 6.00-01

Lane Group Calculations

Lane Group	L	С	R	L	С	R	L	С	R	L	С	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.20	4.20	4.00	4.20	4.20
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	1.50	1.50	1.50	1.50	1.50	1.50	2.00	2.20	2.20	2.00	2.20	2.20
g_i, Effective Green Time [s]	27	27	27	21	21	21	11	80	80	7	76	76
g / C, Green / Cycle	0.18	0.18	0.18	0.14	0.14	0.14	0.07	0.53	0.53	0.05	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.03	0.04	0.13	0.04	0.06	0.56	0.03	0.03	0.37	0.03
s, saturation flow rate [veh/h]	1775	1831	1519	1785	1858	1541	1810	3506	1560	1782	3506	1525
c, Capacity [veh/h]	317	327	271	252	263	218	131	1865	830	84	1774	772
d1, Uniform Delay [s]	59.93	59.91	51.96	57.88	63.56	57.31	66.80	21.81	10.41	68.95	17.82	12.29
k, delay calibration	0.19	0.19	0.11	0.11	0.38	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.27	11.80	0.26	0.71	32.17	0.63	12.35	39.33	0.13	6.99	2.68	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Group Results												
X, volume / capacity	0.87	0.87	0.15	0.32	0.92	0.26	0.83	1.06	0.06	0.61	0.73	0.06
d, Delay for Lane Group [s/veh]	72.20	71.71	52.23	58.59	95.73	57.94	79.15	61.14	10.54	75.94	20.50	12.44
Lane Group LOS	E	E	D	E	F	E	E	F	В	E	С	В
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/In]	11.34	11.63	1.37	2.82	11.56	1.99	4.46	35.80	0.52	2.06	13.07	0.59
50th-Percentile Queue Length [ft/In]	283.53	290.77	34.29	70.56	288.91	49.85	111.42	895.03	12.96	51.57	326.77	14.80
95th-Percentile Queue Length [veh/In]	16.86	17.22	2.47	5.08	17.13	3.59	7.92	47.88	0.93	3.71	19.00	1.07
95th-Percentile Queue Length [ft/In]	421.61	430.60	61.72	127.00	428.29	89.73	197.97	1197.03	23.33	92.83	474.99	26.64

Version 6.00-01

Movement, Approach, & Intersection Results

72.07	71.71	52.23	58.59	95.73	57.94	79.15	61.14	10.54	75.94	20.50	12.44	
Е	E	D	E	F	E	E	F	В	E	С	В	
	70.58			82.21			60.95			22.26		
	Е			F			E		С			
					52	.07						
					[C						
					9.0	903						
	58.8			58.8			36.5		21.5			
	0.00		0.00				0.00		0.00			
	0.00			0.00			0.00			0.00		
	27.72			27.72			42.94					
n	2.558			2.261			3.195			3.542		
	В			В			С			D		
9	2000			2000			2000			2000		
]	487			287			784			784		
43.33			55.46				27.78		27.85			
n 2.677			2.185				3.345		2.944			
В			В				С		С			
	E	E E 70.58 E 58.8 0.00 0.00 27.72 n 2.558 B 2000 487 43.33 2.677	E E D 70.58 E 58.8 0.00 0.00 27.72 n 2.558 B 2000 487 43.33 2.677	E E D E 70.58 E 70.58 E 58.8 0.00 0.00 27.72 n 2.558 B 2000 1 487 43.33 2.677 I	E E D E F 70.58 82.21 F E F F 58.8 58.8 58.8 0.00 0.00 0.00 0.00 0.00 0.00 27.72 27.72 27.72 n 2.558 2.261 B B B 2000 2000 1 487 287 43.33 55.46 2.677 2.185	E E D E F E 70.58 82.21 F 52 E F 52 58.8 58.8 0.0 0.00 0.00 0.00 0.00 0.00 0.00 27.72 27.72 n 2.558 2.261 B B 2000 2000 43.33 55.46 2.677 2.185	E E D E F E E 70.58 82.21 F 52.07 E F D 0.903 58.8 58.8 0.903 0.00 0.00 0.903 27.72 27.72 27.72 B B B 2000 2000 2000 43.33 55.46 43.33 2.677 2.185 43.33	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	E E D E F E E F B 70.58 82.21 60.95 60.95 60.95 60.95 60.95 E F E E <t< td=""><td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td><td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td></t<>	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	

Sequence

•																
Ring 1	1	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SG: 1 22a	SG: 2 63a	SG:4 2	is i	SG: 3 40a	
SG 5 22s	SG: 5: 63s				

Version 6.00-01

Intersection Level Of Service Report Intersection 254: Glenwood Avenue/ Laurel Street

Control Type: Analysis Method: Analysis Period: All-way stop

HCM 6th Edition

15 minutes

4: Glenwood Avenue/ Laurel Street Delay (sec / veh): 11.5 Level Of Service: B Volume to Capacity (v/c): 0.391

Intersection Setup

Name				Gler	nwood Ave	enue	L	aurel Stre	et				
Approach	No	rtheastbo	und	Sou	uthwestbo	und	No	thwestbo	und	Sou	Southeastbound		
Lane Configuration					ліг			ηÌг		hir			
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Lane Width [ft]	12.00 12.00 12.00			12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00 100.00 100.00			100.00 100.00 100.00			100.00	100.00	
Speed [mph]		30.00			30.00			30.00			30.00		
Grade [%]	0.00				0.00			0.00		0.00			
Crosswalk	Yes			Yes				Yes		Yes			

Name				Gler	wood Ave	enue	Li	aurel Stre	et			
Base Volume Input [veh/h]	43	139	72	22	223	15	59	213	7	2	87	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	139	72	22	223	15	59	213	7	2	87	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	35	18	6	56	4	15	53	2	1	22	3
Total Analysis Volume [veh/h]	43 139 72		72	22 223 15		59 213 7			2	87	12	
Pedestrian Volume [ped/h]	0		0				0		0			

Version 6.00-01

Intersection Settings

anes												
Capacity per Entry Lane [veh/h]	522	562	630	529	570	641	529	570	641	505	542	604
Degree of Utilization, x	0.08	0.25	0.11	0.04	0.39	0.02	0.11	0.37	0.01	0.00	0.16	0.0
Movement, Approach, & Intersection Results												
95th-Percentile Queue Length [veh]	0.27	0.97	0.38	0.13	1.85	0.07	0.37	1.72	0.03	0.01	0.57	0.0
95th-Percentile Queue Length [ft]	6.71	24.20	9.61	3.25	46.18	1.80	9.36	43.03	0.83	0.30	14.21	1.5
Approach Delay [s/veh]		10.45			12.47			12.11			10.38	
Approach LOS		В			В			В			В	
Intersection Delay [s/veh]				•		11	.55			•		
Intersection LOS	В											



APPENDIX B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

DRIVEWAY

 Vistro File: P:\...\Laurel Avenue + Driveway Access (AM)
 Scenario: Base Scenario

 .vistro
 Report File: P:\...\Laurel Avenue + Driveway Access (AM)

 .pdf
 8/10/2018

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Laurel Avenue/ Driveway Access	Two-way stop	HCM 6th Edition	NEB Left	0.006	16.1	С

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Version 6.00-01

Intersection Level Of Service Report Intersection 5: Laurel Avenue/ Driveway Access

		······································	
Control Type:	Two-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 6th Edition	Level Of Service:	С
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Drivewa	y Access	Laurel	Laurel Avenue		Avenue	
Approach	Northeastbound		Northwe	Northwestbound		astbound	
Lane Configuration	T		•	4		F	
Turning Movement	Left	Right	Left	Thru	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	0	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	
Speed [mph]	30	0.00	30	30.00		30.00	
Grade [%]	0	0.00		0.00		.00	
Crosswalk	Y	′es	Y	es	Yes		

Name	Drivewa	y Access	Laurel	Avenue	Laurel	Avenue	
Base Volume Input [veh/h]	2	0	180	0	380	1	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	
In-Process Volume [veh/h]	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	2	0	180	0	380	1	
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume [veh/h]	1	0	45	0	95	0	
Total Analysis Volume [veh/h]	2	0	180	0	380	1	
Pedestrian Volume [ped/h]	(0		0	0		

Version 6.00-01

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.15	0.00	0.00	0.00	
d_M, Delay for Movement [s/veh]	16.14	10.47	8.61	0.00	0.00	0.00	
Movement LOS	С	В	А	A	A	A	
95th-Percentile Queue Length [veh/In]	0.02	0.02	0.54	0.54	0.00	0.00	
95th-Percentile Queue Length [ft/In]	0.46	0.46	13.48	13.48	0.00	0.00	
d_A, Approach Delay [s/veh]	16	.14	8.	8.61		0.00	
Approach LOS	C A A				A		
d_l, Intersection Delay [s/veh]	2.81						
Intersection LOS	С						

 Vistro File: P:\...\Laurel Avenue + Driveway Access (PM)
 Scenario: Base Scenario

 .vistro
 .vistro

 Report File: P:\...\Laurel Avenue + Driveway Access (PM)
 8/10/2018

 .pdf
 .pdf

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Laurel Avenue/ Driveway Access	Two-way stop	HCM 6th Edition	NEB Left	0.003	14.8	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Version 6.00-01

Intersection Level Of Service Report Intersection 5: Laurel Avenue/ Driveway Access

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	В
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Drivewa	y Access	Laurel	Laurel Avenue		Avenue	
Approach	Northea	Northeastbound		Northwestbound		astbound	
Lane Configuration	T		•	4		F	
Turning Movement	Left	Right	Left	Thru	Thru	Right	
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	
No. of Lanes in Pocket	0	0	0	0	0	0	
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	
Speed [mph]	30	0.00	30	30.00		30.00	
Grade [%]	0.00		0.	0.00		.00	
Crosswalk	Y	'es	Y	Yes		Yes	

Name	Drivewa	y Access	Laurel	Avenue	Laurel	Avenue
Base Volume Input [veh/h]	1	0	229	0	181	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	229	0	181	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	57	0	45	1
Total Analysis Volume [veh/h]	1	0	229	0	181	2
Pedestrian Volume [ped/h]		0	(0	0	

Version 6.00-01

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.16	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	14.83	9.21	8.09	0.00	0.00	0.00
Movement LOS	В	А	А	А	А	A
95th-Percentile Queue Length [veh/In]	0.01	0.01	0.59	0.59	0.00	0.00
95th-Percentile Queue Length [ft/In]	0.20	0.20	14.71	14.71	0.00	0.00
d_A, Approach Delay [s/veh]	14	.83	8.09		0.00	
Approach LOS		B		4	A	
d_I, Intersection Delay [s/veh]	4.52					
Intersection LOS	В					

Advanced Tree Care P. O. Box 5326 Redwood City, CA 94063

409 Glenwood Ave, Menlo Park April 20, 2018

G and S Architecture Richard Gillern 112 Groveland St Portola Valley, CA 94028

April 20, 2018

Site: 409 Glenwood Ave, Menlo Park

Dear Richard

At your request I visited the above site for the purpose of inspecting and commenting on the heritage trees around the property. A new multi unit home is planned for this property, prompting the need for this tree protection report.

Method:

The location of the heritage trees on this site can be found on the plan provided by you. The trees are measured at 54 inches above ground level (DBH or Diameter at Breast Height). A condition rating of 1 to 100 is assigned to each tree representing form and vitality on the following scale:

1 to	29	Very Poor
30 to	49	Poor
50 to	69	Fair
70 to	89	Good
90 to	100	Excellent

The height and spread of each tree is estimated. A Comments section is provided for any significant observations affecting the condition rating of the tree.

A Summary and Tree Protection Plan are at the end of the end of the survey providing recommendations for maintaining the health and condition of the trees during and after construction.

If you have any questions, please don't hesitate to call.

Sincerely

Robert Weatherill Certified Arborist WE 1936A



Advanced Tree Care

P. O. Box 5326 Redwood City, CA 94063

Tree Survey

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
1	Olive Olea europea	13.3"	28/8	65	Poor structure, healthy Not protected
2	Coast live oak Quercus agrifolia	9.9"	25/6	65	Poor structure, healthy Not protected
3	Holly Ilex aquifolium	8.2"	18/6	65	Fair health and condition Not protected
4	Valley oak Quercus lobata	34.5"	40/25	65	Cavities at 8' and 10', good health Heavily pruned for PG and E
5	Coastal redwood Sequoia sempervirens	45.2"	70/25	60	Co-dominant at 6' fair health
6	Coastal redwood Sequoia sempervirens	49.2"	70/25	65	Good form, thinning canopy
7	Coastal redwood Sequoia sempervirens	47.5"	70/25	55	Good form, thinning canopy
8	Coastal redwood Sequoia sempervirens	41.0"	85/25	80	Good health and condition
9	Walnut 12.2 Juglans hindsii	2" at 1'	18/6	40	Poor health and condition Not protected
10	Coast live oak Quercus agrifolia	6.9"	18/5	70	Healthy young tree Not protected
11	Dogwood Cornus capitata	8.7"	20/6	60	Fair health and condition Not protected
12	Privet Ligustrum lucidum	6.1"	20/6	40	Poor health and condition Not protected
13	Privet Ligustrum lucidum	7.7"	20/6	40	Poor health and condition Not protected
14	Incense cedar Calocedrus decurrens	34.4" 7	0/20	65	Fair health and condition
15	Tree of heaven Ailanthus altissima	12.1"	40/20	65	Poor species, invasive. Remove Not protected

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Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
16	Privet Ligustrum lucidum	9.1"	20/15	40	Poor health and condition Not protected
17	Ponderosa pine Pinus ponderosa	31.3"	60/25	65	Fair health and condition

Summary:

The trees on this site are a mixture of natives and non-natives of which 7 are Heritage Trees with trunk diameter of 15 inches or greater at 54 inches above grade. Most of the non-protected trees are in poor health and condition and probably should be removed, however some provide good screening which may be useful during construction. Tree #s 3, 9, 10, 12, 13 and 17 will be removed of which only 17 is a Heritage Tree.

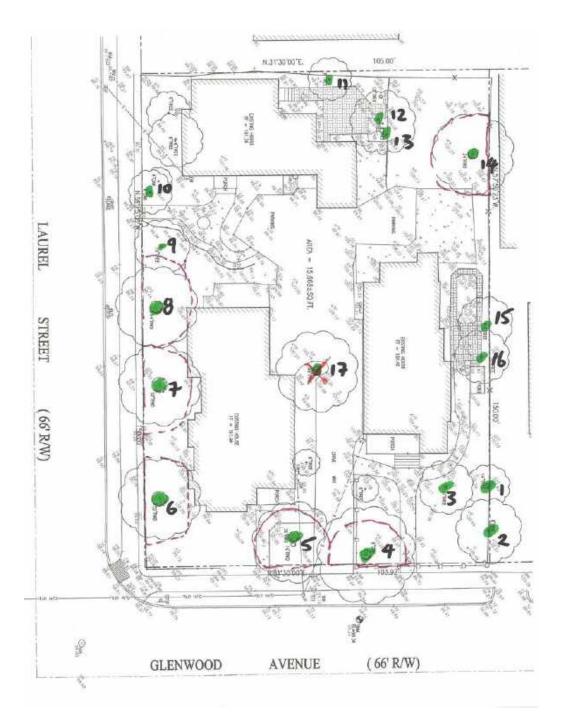
Tree # 4 is a valley oak at the front of the property. It has cavities at 8 and 10 feet above grade and has been heavily pruned by PG and E. The tree is quite healthy and adds to the look of the property. This tree should be protected during construction.

Tree #s 5, 6, 7 and 8 are all redwoods in varying health and condition. All 4 trees are struggling with drought stress causing some dieback and thinning canopies. These trees would benefit from supplemental irrigation during construction and should be protected during construction.

Tree # 14 is an incense cedar in fair health and condition. This tree is also struggling from drought stress and would benefit from supplemental irrigation during construction and should be protected during construction.

Tree # 17 is a Ponderosa pine in fair health and condition. It is standing right in the middle of the proposed construction despite efforts to redesign and preserve the tree there are no other alternatives but to remove the tree.

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Location of existing buildings, trees and their Tree Protection Zones

Additional trees on site

The City has requested that all trees on the site and adjacent properties be included regardless of size, species or status.

A continuation of the existing survey is below including all trees on site and adjacent properties.

Tree Survey

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
18	Hawthorn Cratageus laevigata	8.6" at grade	15/4	50	Fair health, poor structure, Street Tree Protected
19	Hawthorn Cratageus laevigata	3.8"	12/3	50	Fair health, poor structure, Street Tree Protected
20	Hawthorn Cratageus laevigata	8.9" at grade	12/3	40	Fair health, poor structure, Street Tree Protected
21	Holly 2.3"/2.2"/3.3" Ilex aquifolium	"/3.8" at grade	12/6	40	Suckers from a stump. 4 Separate trunks Not protected
22	Black acacia Acacia melonoxylon	4.5"	20/4	0	Invasive weed. Not protected
23	Black acacia Acacia melonoxylon	3.2"	20/3	0	Invasive weed. Not protected
24	Privet 3.8". <i>Ligustrum ovalifoliu</i>	/2.6" at grade	20/5	0 Inva	asive weed. 2 Separate trunks Not protected
25	Privet 9.7" at 6 <i>Ligustrum ovalifoliu</i>	" above grade	20/5	0	Invasive weed. Not protected
26	Pear Pyrus calleryana	4.5"	20/4	10	Poor health and condition Not protected
27	Pear Pyrus calleryana	3.2"	20/2	10	Poor health and condition Not protected
28	Plum Prunus spp	4.6"	20/10	5	Fair health and condition Not protected

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Tree Survey

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
29	Camellia Camellia spp	4.2"	10/5	50	Fair health and condition Not protected
30	Camellia Camellia spp	4.1"	15/5	50	Fair health and condition Not protected
31	English laurel 9.8"at 6 Prunus spp	" above grad	le 15/10	50	Fair health and condition Not Protected
32	Plum Prunus spp	4.6"	20/10	5	Fair health and condition Not protected
33	Coast live oak <i>Quercus agrifolia</i>	5.4"	20/4	50	Fair health and condition. Not protected
34	Privet Ligustrum ovalifolium	4.8"	20/5	0	Invasive weed. Not protected
35	Privet Ligustrum ovalifolium	6.2"	20/6	0	Invasive weed. Not protected
36	Oleander 4 x b Nerium spp	oushes	10/4	50	Fair health and condition Street tree, Not Protected
37	Birch Betula pendula	5.8"	20/6	10	Fair health and condition Neighbor's tree. Not protected
38	Black acacia Acacia melonoxylon	4.0" est	20/3	0	Invasive weed. Not protected
39	Black acacia Acacia melonoxylon	4.0" est	20/3	0	Invasive weed. Not protected
40	Plum Prunus spp	5.3"	12/6	60	Fair health and condition Not protected
41	Privet Ligustrum lucidum	3.2"	15/6	0	Invasive weed Not protected
42	Privet Ligustrum lucidum	Bushes	10/3	0	Invasive weed Not protected
43	Dead stump	12" est	4'	0	Dead tree stump holding up fence

Summary

The trees in this second inventory are mostly invasive volunteers of no value whatsoever.

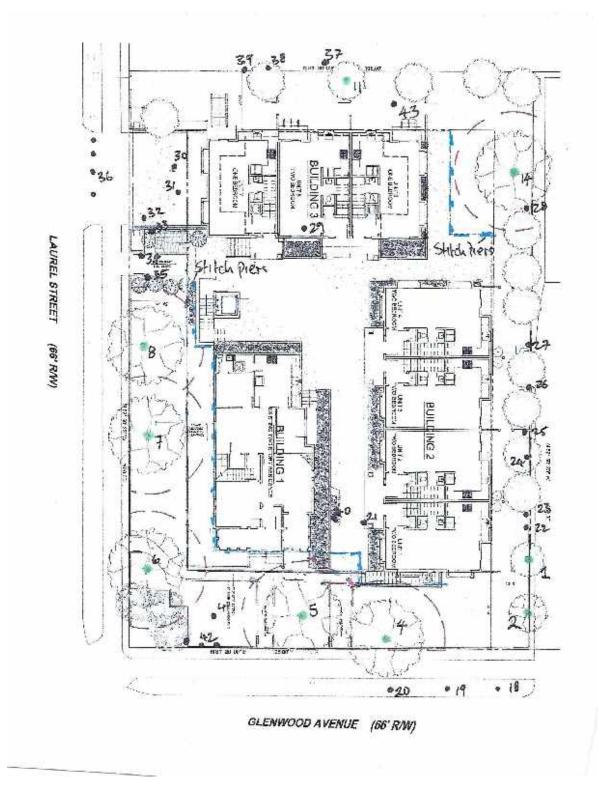
There are 3 street trees, #s 18, 19 and 20 in fair health and poor condition protected during construction.

There are 4 street bushes, #36 in fair health and condition that will be removed.

There is one tree on the neighbor's property, # 37, that will not be impacted by the construction whatsoever.

All other trees should be removed.

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Location of additional trees around property, #s 18 to 43

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Tree Protection Plan

1. The Tree Protection Zone (TPZ) should be defined with protective fencing. This should be cyclone or chain link fencing on 1¹/₂" or 2" posts driven at least 2 feet in to the ground standing at least 6 feet tall. The TPZ should be defined by the **dripline** of the tree, this may not be practical in some cases and so the TPZ's are as follows:

Tree Nos 4, 5, 6, 7, 8 and 14. TPZ should be at a radius of 15 feet from the trunk in accordance with Type I Tree Protection as outlined below and illustrated in image 2.15-1 and $2^{(6)}$



IMAGE 2.15-1 Tree Protection Fence at the Dripline



Tree Protection Fence at the Dripline

• Type I Tree Protection The fences shall enclose the entire area under the canopy dripline or TPZ of the tree(s) to be saved throughout the life of the project, or until final improvement work within the area is required, typically near the end of the project (see *Images* 2.15-1 and 2.15-2). Parking Areas: If the fencing must be located on paving or sidewalk that will not be demolished, the posts may be supported by an appropriate grade level concrete base.

Tree Nos 18, 19 and 20. TPZ should be at a radius of 4 feet from the trunk in accordance with Type II Tree Protection as outlined below and illustrated in image 2.15-3 ⁽⁶⁾



IMAGE 2.15-3 Tree Protection within a Planter Strip

• Type II Tree Protection For trees situated within a narrow planting strip, only the planting strip shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.(see Image 2.15-3) 2. In locations where the submerged parking is to be excavated close to the trees, engineering such as stitch piers should be utilized to prevent any over dig into the TPZ. These areas are marked in blue on the drawings.

Excavation of the first 3 feet of the underground parking close to any protected trees should be done under arborist supervision to prevent root damage.

Tree #s 4 and 5 are a good distance from the excavation and will not be impacted

Tree #s 6 and 7 are also a good distance from the excavation and will not be impacted

Tree # 8 has some excavation within the TPZ. This area should be hand dug or carefully dug with machine when working in the critical root zone under arborist supervision. I do not think there will be any large roots. If large roots are encountered they will have to be worked around.

Tree #14 is a good distance from the excavation and will not be impacted

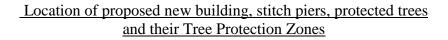
- 3. Prior to excavation, all trees that remain should be deep root fertilized and mulched with a 4 inch layer of mulch to prevent damage to the root systems and to retain moisture in the soils of the TPZs.
- 4. Normal irrigation should be maintained at all times. Supplemental irrigation or deep watering may be necessary if root zones are impacted.
- 5. Any pruning and maintenance of the tree shall be carried out before construction begins. This should allow for any clearance requirements for both the new structure and any construction machinery. This will eliminate the possibility of damage during construction. The pruning should be carried out by an arborist, not by construction personnel. No limbs greater than 4" in diameter shall be removed.
- 6. Any excavation in ground where there is a potential to damage roots of 1" or more in diameter should be carefully hand dug. Where possible, roots should be dug around rather than cut.⁽²⁾
- 7. If roots are broken, every effort should be made to remove the damaged area and cut it back to its closest lateral root. A clean cut should be made with a saw or pruners. This will prevent any infection from damaged roots spreading throughout the root system and into the tree.⁽²⁾

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- P. O. Box 5326 Redwood City, CA 94063
- 8. **Do Not**: .⁽⁴⁾
- a. Allow run off or spillage of damaging materials into the area below any tree canopy.
- b. Store materials, stockpile soil, park or drive vehicles within the TPZ of the tree.
- c. Cut, break, skin or bruise roots, branches or trunk without first obtaining permission from the city arborist.
- d. Allow fires under any adjacent trees.
- e. Discharge exhaust into foliage.
- f. Secure cable, chain or rope to trees or shrubs.
- g. Apply soil sterilants under pavement near existing trees.
- 9. Where roots are exposed, they should be kept covered with the native soil or four layers of wetted, untreated burlap. Roots will dry out and die if left exposed to the air for too long.⁽⁴⁾
- 10. Route pipes into alternate locations to avoid conflict with roots.⁽⁴⁾
- 11. Where it is not possible to reroute pipes or trenches, the contractor is to bore beneath the dripline of the tree. The boring shall take place no less than 3 feet below the surface of the soil in order to avoid encountering "feeder" roots.⁽⁴⁾
- 12. Compaction of the soil within the dripline shall be kept to a minimum.⁽²⁾
- 13. Any damage due to construction activities shall be reported to the project arborist or city arborist within 6 hours so that remedial action can be taken. .⁽⁴⁾
- 14. Ensure upon completion of the project that the original ground level is restored.

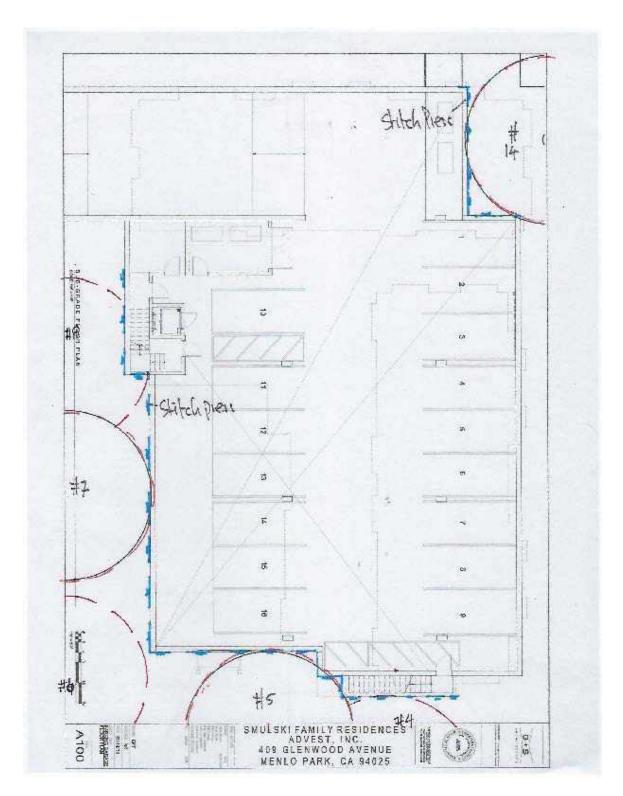
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3 1 × 36 •2 LAUREL STREET Stilduliers titch piers (65' R/W) NO 18 19 20 GLENWOOD AVENUE (66' R/W)



Advanced Tree Care P. O. Box 5326 Redwood City, CA 94063

409 Glenwood Ave, Menlo Park April 20, 2018



Location of proposed new underground parking, stitch piers, protected trees and their Tree Protection Zones

P. O. Box 5326 Redwood City, CA 94063

Glossary

Canopy	The part of the crown composed of leaves and small twigs. ⁽²⁾
Cavities	An open wound, characterized by the presence of extensive decay and resulting in a hollow. ⁽¹⁾
Decay	Process of degradation of woody tissues by fungi and bacteria through the decomposition of cellulose and $lignin^{(1)}$
Dripline	The width of the crown as measured by the lateral extent of the foliage. ⁽¹⁾
Root crown	The point at which the trunk flares out at the base of the tree to become the root system.
Species	A Classification that identifies a particular plant.

References

(1) Matheny, N.P., and Clark, J.P. <u>Evaluation of Hazard Trees in Urban</u> <u>Areas.</u> International Society of Arboriculture,1994.

(2) Harris, R.W., Matheny, N.P. and Clark, J.R.. <u>Arboriculture: Integrated</u> <u>Management of Landscape Trees, Shrubs and Vines.</u> Prentice Hall, 1999.

(3) Carlson, Russell E. <u>Paulownia on The Green: An Assessment of Tree</u> <u>Health and Structural Condition.</u> Tree Tech Consulting, 1998.

(4) Extracted from a copy of Tree Protection guidelines. Anon

(5) T. D. Sydnor, Arboricultural Glossary. School of Natural Resources, 2000

(6) D Dockter, Tree Technical Manual. City of Palo Alto, June, 2001

Advanced Tree Care

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Certification of Performance⁽³⁾

I, Robert Weatherill certify:

* That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms and Conditions;

* That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

* That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;

* That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;

* That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

* That no one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a member of the International Society of Arboriculture and a Certified Arborist. I have been involved in the practice of arboriculture and the care and study of trees for over 15 years.

Signed



Robert Weatherill Certified Arborist WE 1936A

Terms and Conditions(3)

The following terms and conditions apply to all oral and written reports and correspondence pertaining to consultations, inspections and activities of Advanced Tree Care :

1. All property lines and ownership of property, trees, and landscape plants and fixtures are assumed to be accurate and reliable as presented and described to the consultant, either verbally or in writing. The consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.

2. It is assumed that any property referred to in any report or in conjunction with any services performed by Advanced Tree Care, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.

3. All reports and other correspondence are confidential, and are the property of Advanced Tree Care and it's named clients and their assignces or agents. Possession of this report or a copy thereof does not imply

any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.

4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. Advanced Tree Care and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.

5. All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring or other invasive procedures, unless otherwise noted in the report. No warrantee or guarantee is made, expressed or implied, that problems or deficiencies of the plants or the property will not occur in the future, from any cause. The consultant shall not be responsible for damages caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.

6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payment of additional fees for such services as described by the consultant or in the fee schedules or contract.

7. Advanced Tree Care has no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his/her particular case.

8. Any report and the values, observations, and recommendations expressed therein represent the professional opinion of the consultants, and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.

9. Any photographs, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphs material or the work product of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by Advanced Tree Care or the consultant as to the sufficiency or accuracy of that information.

409 Glenwood Avenue

Draft Below Market Rate (BMR) Housing Proposal

- Applicant owns property known as Assessor's Parcel Number: 061-401-010 ("Property"), more commonly known as 409 Glenwood Avenue, 417 Glenwood Avenue, and 1357 Laurel Avenue, Menlo Park;
- 2. Applicant is requesting architectural control approval for the demolition of one, two-story residence and one, one-story residence addressed 409 Glenwood and 1357 Laurel Street, relocation of an existing two-story residence addressed 417 Glenwood on-site, and construction of two new two-story multifamily buildings with an underground parking garage in the R-3 (Apartment District) zoning district. As part of the project, a use permit would be requested for excavation within the required front setback for egress stairs. One heritage tree is proposed for removal as part of the project;
- 3. The residential units consist of more than five units therefore, Applicant is required to comply with Chapter 16.96 of City's Municipal Code ("BMR Ordinance") and with the Below Market Rate Housing Program Guidelines ("Guidelines") adopted by the City Council to implement the BMR Ordinance;
- 4. The project would include eight residential rental units which would result in a requirement of one BMR housing unit or in-lieu fee payment;
- 5. Applicant has elected to satisfy the BMR requirement for the proposed project by providing one on-site BMR unit;
- The characteristics of the BMR units shall be in conformance with Section 5 of the BMR Guidelines;
- The eligibility requirements for the BMR units shall be established as set forth in Section 6 of the BMR Guidelines;
- 8. The BMR waiting list for rental units shall be established as set forth in Section 7 of the BMR Guidelines; and
- 9. The residential component of the proposal is rental, and as such the BMR units shall meet the rental requirements set forth in Section 11 of the BMR Guidelines.

Kaitie,

These are my concerns about the project. I think the Planning Commission should weigh the public's interest over the developer's.

1. Drainage and water runoff is an issue. The corner of Glenwood and Laurel already has flooding problems because the surrounding areas drain into a drain at the corner and often gets overwhelmed. The new plan calls for additional hardscape above and beyond what is present today as well as an underground garage which will put additional stress on the situation. What is the drainage plan? The developer should be required to keep all his water on his property. Can the existing situation be improved with the new development? The plans provided on this development show no filtration-retention devices. One should be provided which is large enough to retain the runoff as required by City and County regulations. No exemptions should be allowed.

2. Digging an underground garage will require a lot of heavy equipment and generate a lot of dust. The bike lane and sidewalks on Laurel and Glenwood are used by many parents and children going to and from Encinal Elementary, Nativity School, Hillview Middle and MA High. 1347 Laurel has a SamTrans bus stop in front of it for Hillview students. Even during construction, the developer should not be given permission to encroach into the sidewalks and bike lanes as it will force our children into the street to compete for space with the traffic. The children should not be put at risk. The developer should be given a window outside of heavy traffic and outside of school transit times to move his dirt or just eliminate the underground parking garage.

3. Changing the density of the site from three homes to eight seems high. Fewer homes would give some relief to the construction issues.

4. The expansion of homes and subsequent owners or renters will add to a burgeoning traffic problem already in existence on Glenwood and Laurel, especially with the two hotels and the Greenhart projects which have already been approved.

Finally this project will further change the character of the neighborhood which is single family homes. While it is recognized that some apartments exist down near Oak Grove and also near the train tracks, this development turns all of Menlo Park's Glenwood (South side) residents into apartments.

Mary Widmer

Dear Mr. Chun,

I am writing to you in response to your letter to the City of Menlo Park regarding the construction project at 409 Glenwood Ave., which was forwarded to me by the planning department.

I am the owner of the property and for a number of years I have been working with my architect to navigate the very challenging permitting process to construct seven rental apartments there. The current proposed design is a compromise that meets all the city requirements. We are not proposing any commercial development, but are conforming to the current zoning of all the lots on the west side of Laurel Street in the two blocks south of Glenwood Ave. The entrance of the proposed project's underground parking lot cannot easily be relocated to Glenwood and still allow for the necessary parking spaces as required by the city, due to the narrower width of the Glenwood side of the lot. The garage entrance on Glenwood would negatively affect the historical house at 417 Glenwood, and maintaining that is also part of the requirement from the planning department.

My architect has done a great deal of research regarding the neighborhood to make sure our project blends well with other properties along both Glenwood and Laurel. We know that Laurel Street is residential in nature, but it does consist of many medium to high density multi-family residential complexes along its length. The multiple line bus service and street light at Ravenswood establish Laurel Street as a major city connector street. There is a similar bus stop and high-density housing with a subterranean entrance at the south end of the block on Laurel Street at Oak Grove. There are currently over ten similar density multi-family complexes along the two block section of Laurel Street between Glenwood and Ravenswood.

I would be happy to meet with you to review the above items in person. Please give me a call or email to schedule a meeting.

Regards,

Michal Smulski 650-776-4952 mwsmulski@gmail.com

CC: Kaitie Meador, Associate Planner, Menlo Park Planning Department

Ms. Kaitie Meador Associate Planner City of Menlo Park Planning Division

Dear Ms. Meador,

We are owners and residents of 110 Glenwood Avenue in Atherton, which is located directly across Laurel Street from the proposed project described above. In response to the Notice of Application Submittal for this project from the City of Menlo Park Planning Division, we respectfully submit the comments below.

We have reviewed the proposed project at

https://www.menlopark.org/ArchiveCenter/ViewFile/Item/5188. Based on this review, we urge the Planning Commission to preserve the residential nature of Laurel Street by *relocating the entrance to the proposed project's underground parking lot from Laurel Street to Glenwood Avenue*, for the reasons stated below:

1. Since 1982, when we bought our home, Glenwood Avenue has transitioned from a quiet neighborhood street to a major thoroughfare for traffic from Highway 101 or Middlefield Road traveling to El Camino Real or Alameda de las Pulgas, and vice versa. Because there are few pedestrians, this higher level of traffic does not seem to pose significant safety issues. By contrast, Laurel Street has retained much more of its residential nature since 1982. Because of both Nativity Catholic School and Church of the Nativity on the other side of Laurel Street from the proposed project, pedestrian traffic is higher on Laurel Street than on Glenwood Avenue. Moreover, on Laurel Street directly in front of the proposed project, pedestrians wait or disembark at a samTrans stop for 5 different bus routes, as well at another samTrans stop on the other side of Laurel Street. Because of the proposed project's increased housing density, there will likely be significantly more traffic from the subject properties, and a higher risk of accidental injury to pedestrians, if the entrance to the proposed project's underground parking garage is on Laurel Street rather than on Glenwood Avenue. Moreover, the increased levels of sound (from cars entering and exiting the underground garage) and nighttime light (from car headlights entering and exiting the parking garage) will further depreciate the residential nature of Laurel Street.

2. In contrast to Laurel Street's current residential nature with its homes, school and church, Glenwood Avenue near the proposed project already has significant commercial development. One block south, beginning at Garwood Way, there are a Marriott Residence Inn, a Peninsula Pet Hospital, a Language Pacifica building, an Agape Foundation building, a 76 service station, and a boutique hotel under construction. If the entrance to the proposed project's underground parking lot were relocated to Glenwood Avenue, just a block from this commercial development, the negative impact of the proposed project's increased traffic on Glenwood Avenue's commercial district abutting El Camino Real would be much less than on Laurel Street's residential nature.

For this reason, we respectfully urge the Menlo Park Planning Commission to preserve the

residential nature of Laurel Street by *relocating the entrance to the proposed project's underground parking lot from Laurel Street to Glenwood Avenue*.

Sincerely,

Thomas Chun Judith Chun 110 Glenwood Avenue Atherton, California

P.O. Box 1117 (650) 325-4810 - home Menlo Park, California 94026 (650) 867-1865 - cell

June 10, 2017

Dear Neighbor,

As a homeowner and resident of our neighborhood, I wanted to reach out to you with my plans for improvements to the properties at 409 Glenwood Ave., 417 Glenwood Ave. and 1357 Laurel St. My architect and I have been working in concert with the City Planning Department to offer multi-family housing at these sites while also maintaining an existing historic home.

RECEIVE

CITY OF MENLO MARK

BUILDING

The proposed project will offer seven rental apartments within two new two-story buildings. The historic home will be maintained as a single unit, for a total of eight living units on the site. The historic home will be relocated to the corner of Laurel and Glenwood to add further context and scale to the site, while allowing the proposed buildings to be located so as to minimize the impact to the streetscape. There are currently three living units on the combined site.

The architect's plans for this project are available online at the city's website: <u>www.menlopark.org/publicnotices</u> (409 Glenwood Ave). We welcome you to review the plans and let us know if you have any questions.

The architect can be reached at: Mark Sutherland - G and S Architecture 650-815-9575 mark@gandsarch.com

We have worked extensively with the City to conform within their planning guidelines to keep the proposed buildings to a human scale and modest height, and have retained an arborist to assure that the existing trees on the site are maintained in good health. Our plans also include underground parking for the tenants so that neighborhood street parking will be minimally impacted by this project.

Thank you for your consideration of our plans to improve housing opportunities near our city center while respecting the scale and density of our existing neighborhood.

Warm regards,

Michen Simler

Michal Smulski

ATTACHMENT M



COMMUNITY DEVELOPMENT PLANNING DIVISION

PUBLIC NOTICE OF AVAILABILITY MITIGATED NEGATIVE DECLARATION

Document Type: Mitigated Negative Declaration	Iment Type: Mitigated Negative Declaration				
Project Title: 409 Glenwood Avenue Use Permit and Architectural Control					
Project Location (Specific): 409 Glenwood Avenue	9				
Project Location (City): Menlo Park	Project Location (C	county): San Mateo			
Request for architectural control to demolish one, two-story residence and one, one-story residence addressed 409 Glenwood Avenue and 1357 Laurel Street, relocate an existing two-story residence addressed 417 Glenwood Avenue on site, and construct two new two-story multifamily buildings with an underground parking garage. One building would include three dwelling units and one would include four dwelling units. The project site currently contains three dwelling units, and the project would result in an increase of five units, for a total of eight units at the project site. As part of the project, a use permit is requested for excavation within the required front setback for egress stairs. One heritage tree is proposed for removal as part of the project. The project site is located within the R-3 (Apartment) zoning district.					
The Mitigated Negative Declaration (MND) prepared for the project identifies less than significant environmental effects in the following categories: Aesthetics, Air Quality, Biological Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation, and Utilities and Service Systems. The MND identifies no effects in the following categories: Agricultural Resources, and Mineral Resources. The MND identifies potentially significant unless mitigation is incorporated effects in the following category: Cultural Resources.					
The California Environmental Quality Act (CEQA) requires this notice to disclose whether any listed hazardous waste sites are present at the location. The project location does not contain a hazardous waste site included in a list prepared under Section 65962.5 of the Government Code. The Hazards and Hazardous Materials section of the MND discusses this topic in more detail.					
Lead Agency: City of Menlo Park		act Person: Kaitie Meador			
	Telephone No.: (65				
	Email: KMMeador				
ADDRESSES WHERE DOCUMENT MAY BE OBTAINED & REVIEWED					
Obtained and Reviewed: City of Menlo Park	<i>Reviewed</i> : City of Menlo Pa	ark			
Planning Division					
701 Laurel Street					
Menlo Park, California	lifornia				
Public Review Period: Begins: Tuesday, November 13, 2018					

Public Review Period:	v Period: Begins: Tuesday, November 13, 2018			
	Ends: Monday, D	ecember 3, 2018 at 5:30 p.m.		
Public Hearing (Planning	g Commission)			
Date & Time: Monday, December 3, 2018 at				
7:00 p.m.				

Location:	Menlo Park Council Chambers					
	701 Laurel Street, Menlo Park					
		mment on the document by written response or by				
		rmation regarding availability of the document and the				
public hea	public hearing(s) may be obtained from the Planning Division at (650) 330-6702.					
Kai	Kaitin Malen					
Kaitie Mead	dor, Associate Planner					



COMMUNITY DEVELOPMENT PLANNING DIVISION

MITIGATED NEGATIVE DECLARATION

INTRODUCTION

This Mitigated Negative Declaration has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 and its applicable Guidelines, as amended. It is an informational document prepared to inform the decision-makers and the general public of the potential environmental effects associated with the proposed project at 409 Glenwood Avenue.

The City of Menlo Park will use this Mitigated Negative Declaration in its decision making process on the proposed project.

The conclusion of this Mitigated Negative Declaration is that the proposed project would not generate any significant direct or primary physical impacts on the environment.

PROJECT DESCRIPTION AND LOCATION

409 Glenwood Avenue is a 15,668 square foot (0.36 acres) parcel located in the R-3 zoning district on the southwest corner of Glenwood Avenue and Laurel Street. The project site currently consists of an existing two-story residence at 417 Glenwood Avenue, a two-story residence at 409 Glenwood Avenue, and a one-story residence at 1357 Laurel Street. The historic home at 417 Glenwood would be relocated to a more prominent location at the corner of the overall site and preserved in its current state with little alteration. The other two residences are to be removed and demolished and two, new two-story buildings are to be built on the property, creating seven new residential units. The required on-site parking for these residences would consist of 16 parking spaces in an underground level parking garage. Access to the underground parking is from Laurel Street. The applicant would provide one on-site Below Market Rate (BMR) housing unit.

Styles and Colors: The two new multi-family buildings are proposed to be built with a contemporary craftsman style, which would be complementary to the historic home's style and coloring. The new buildings would be clad in lap siding and board & batten siding, mimicking the siding on the historic house and stucco surfaces on the new buildings. The color palate of the new buildings would be shades of gray with white trim. The historic home would maintain its current palette of pastel yellow siding and white trim. Roofs on the new structures would have composition shingles in a dark grey palette.

Siting and Construction methods: To allow for the necessary on-site parking for the residential complex, while maintaining the historic home, the overall design incorporates a subterranean parking level (parking garage). This results in the need for a concrete pad above this level at grade, on which the three buildings and their immediate landscaping would be supported. The creation of the underground parking level and main level pad requires the use of stitch piers around the garage perimeter to allow for minimal impact to the existing heritage redwood trees and other trees on the site. The siting of the buildings and position of the entry to the parking level are the result of fitting the historic home and the two additional multi-family buildings on the site, within the confines of the existing setbacks and the site's heritage trees. The historic home would be shifted towards Laurel Street to allow for the layout of the two new multi-family buildings. The general orientation on-site of the historic home would be maintained and would be more similar to its historic, open-site

relationship to the street corner, prior to the construction of the existing building at 409 Glenwood Avenue.

Project construction would be done in phases:

Phase 1-Project site to be cleared of all existing landscape and hardscape (with the exception of trees designated for retention), tree protection and barrier fencing installed. The two residential homes would be demolished and the historic home would be shored and raised.

Phase 2- Install excavation stitch pier shoring along perimeter of new below grade garage and foundation. Relocate historic home to new location.

Phase 3- Site excavation for proposed below grade garage and foundation. Shore and excavate under historic home.

Phase 4-Construction of below grade garage.

Phase 5-Construction of the new buildings, secure historic residence to new foundation and remove temporary shoring underneath. Plant all proposed site landscaping.

FINDINGS AND BASIS FOR A MITIGATED NEGATIVE DECLARATION

The Planning Division has reviewed the Initial Study for the project and finds the following:

- 1. The project will not generate significant adverse effects on the water or air quality, greenhouse gases, or increase noise levels substantially.
- 2. The project will not have any significant adverse impacts on the flora or fauna of the area.
- 3. The project will not significantly degrade the aesthetic quality of the area.
- 4. The project will not have any significant adverse impacts on traffic, land use, population and housing, public services, and infrastructure.
- 5. In addition, the project will not:
 - a. Create impacts that have the potential to significantly degrade the quality of the environment.
 - b. Create significant impacts that achieve short-term, to the disadvantage of long-term, environmental goals.
 - c. Create impacts that are individually limited, but cumulatively considerable to a significant degree.
 - d. Create environmental effects that will cause significant adverse effects on human beings, either directly or indirectly.

It may, therefore, be determined that the potential environmental impact of the project will be less than significant.

INITIAL STUDY

A copy of the Initial Study on which the findings for a Mitigated Negative Declaration has been based is available on the project page (<u>http://www.menlopark.org/specificplan</u>).

REVIEW PERIOD:

The review period is from November 13, 2018 through December 3, 2018. All written comments regarding this Mitigated Negative Declaration must be received by the City of Menlo Park Planning Division, 701 Laurel Street, Menlo Park, California 94025, no later than 5:30 P.M., December 3, 2018.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

This Mitigated Negative Declaration has been prepared in accordance with the California Environmental Quality Act of 1970 and its applicable guidelines, as amended.

CONTACT PERSON: KAITIE MEADOR - (650) 330-6731

Mah ait

Kaitie Meador, Associate Planner



Mitigation Monitoring and Reporting Program

409 Glenwood Avenue

Impact	Mitigation Measure	Monitoring/	Timing	Implementing	Monitoring	
-		Reporting Action	0	Party	Agency	
	CUI	LTURAL				
Impact CUL-1: The project could impact an historical resource as defined in CEQA Section 15064.5 (Potentially Significant)	Mitigation Measure: Although the project does not pose a substantial or adverse change to the historic house, the house is being moved slightly. Therefore, it is recommended as a mitigation measure that the house be documented by a qualified professional historian for archival purposes prior to its relocation. Photographs should be taken of all exterior façades, interior rooms, and close-ups of any unusual or significant architectural details. Any vegetation that obscures the exterior façades should be removed prior to the taking of photos. A historical narrative of the resources should be compiled. The photographs and narrative should be compiled in a report and sent to the Menlo Park Historical Society and the Menlo Park Public Library.	A qualified historian shall document the house for archival purposes. Photographs should be taken of all exterior façades, interior rooms, and close-ups of any unusual or significant architectural details. In the event the historic structure is damaged during project construction or moving, the archival report would provide documentation to be used to correct any damage.	Prior to issuance of building permits or significant site work.	Qualified historian retained by the project sponsor(s).	CDD	
Impact CUL-2: The project could impact an historical resource as defined in CEQA Section 15064.5 (Potentially Significant)	The project sponsors should consult Moving Historic Buildings by John Obed Curtis as a guide to moving the house. This pamphlet addresses the siting, foundation construction, building reassembly, and restoration work after a successful move has taken place. Available from the International Association of Structural Movers (www.iasm.org/wp- content/uploads/2013/12/moving-historic- buildings.pdf).	Consult "Moving Historic Building" by John Obed. Addresses the siting, foundation construction, building reassembly, and restoration work when the move has taken place. The applicant shall submit documentation	During relocation of the historic home.	Project Sponsor(s) and contractor(s)	CDD	

Impact	Mitigation Measure	Monitoring/	Timing	Implementing	Monitoring
		Reporting Action		Party	Agency
		with the building permit			
		that demonstrates that all			
		construction forepersons			
		and field supervisors			
		have received proper			
		training on procedures			
		on moving an historic			
		home. Additionally, the			
		building permit plans			
		shall itemize the ways			
		that the project			
		incorporates the relevant			
		requirements.			

Community Development



STAFF REPORT

Planning Commission Meeting Date: Staff Report Number:

12/3/2018 18-098-PC

Public Hearing:

Use Permit and Architectural Control/NMSBPCSLDHB/40 Middlefield Road

Recommendation

Staff recommends that the Planning Commission approve a request for a use permit and architectural control to construct a new single-story, 3,681 square-foot non-medical office building on a vacant parcel located at 40 Middlefield Road in the C-4 (General Commercial) zoning district. In addition, the applicant is requesting a parking reduction to provide 16 spaces, for a parking ratio of one space per 230 square feet of gross floor area (GFA). The project includes the dedication of 1,667 square feet of right-of-way along Middlefield Road associated with a plan line. The recommended actions are included as Attachment A.

Policy Issues

Each use permit and architectural control request is considered individually. The Planning Commission should consider whether the required use permit and architectural control findings can be made for the proposal.

Background

Site location

The subject parcel is located at 40 Middlefield Road in the C-4 (General Commercial) zoning district. For the purposes of this staff report, Middlefield Road is considered to have an east-west orientation, and all compass directions referenced will use this orientation. The parcel is located at the northwest corner of the intersection of Woodland Avenue and Middlefield Road. A Union 76 gas station operated on the project site between 1967 and 1997. In 1997, the gas station was demolished and three underground tanks were removed; the property has since been vacant. The site is currently an undeveloped gravel lot surrounded by chain link fence panels. A plan line setting the boundaries of the future public right-of-way along Middlefield Road exists at the back of the existing sidewalk along the Middlefield Road frontage of the parcel. Portions of the existing street, curb and gutter, and sidewalk are located within the plan line, but are currently part of the project parcel.

The property to the east across Woodland Avenue is a landscape strip adjacent to the San Francisquito Creek, and is located along the municipal boundary with the City of Palo Alto. The property to the south across Middlefield Road is zoned C-1 (Administrative and Professional District, Restrictive), and was formerly the headquarters of Sunset Magazine. Sunset vacated the property in 2015 and the existing office building and grounds are currently unoccupied. Parcels to the west of the subject site are zoned C-4 and are the site of The Willows Market grocery store and a 16-space parking lot associated with the market. The parcels to the north (across a one-way service road) contain single-family residences fronting onto Clover Lane or Baywood Avenue in the R-1-U (Single Family Urban Residential) zoning district. The Applebee Preschool is also located on Clover Lane in the R-1-U zoning district, approximately 115 feet northwest of

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the project site. The preschool received a use permit in 1987 to allow operations on the site with up to 24 children between the hours of 7:00 a.m. and 6:00 p.m. The use permit did not include any specific conditions related to drop-off/pick-up activities at the preschool, although the minutes for that Planning Commission meeting included a reference to an existing verbal agreement allowing use of the market parking lot for access. The service road is public right-of-way that is approximately 18 feet wide, with no parking permitted on either side. A location map is included as Attachment B.

Previous Planning Commission review

On May 14, 2018, the Planning Commission reviewed an initial version of the proposal for the subject property. Twelve members of the public spoke at the meeting, all in opposition to the proposal. The Commission continued the use permit and architectural control application (on a 6-0-1 vote) with direction to explore changes to the amount of parking on the site and modify the plans. For reference, the Planning Commission's May 14 minutes are available as Attachment H, and a selection of the earlier project plans is included as Attachment I. The Commission's direction included the following points:

- Increase the amount of proposed parking on the site to a ratio greater than 3.33 spaces per 1,000 square feet of GFA but less than 6 spaces per 1,000 square feet of GFA, and
- Address potential barriers at the northwest corner of the site that may impede deliveries to the Willows Market loading dock, including the location of the proposed site wall, landscaping, curbs, and other potential impediments to truck deliveries.

The applicant has resubmitted a proposal that would increase proposed parking on the site to a ratio of 4.36 spaces per 1,000 square feet of GFA. In addition, the applicant has reduced the length of a proposed site wall adjacent to the Willows Market parking lot, and reduced the size of a landscaped parking island in consultation with the Willows Market owner. More details about the proposed changes to the proposed project are provided in the sections below.

Analysis

Project description

Following the May 2018 Planning Commission meeting, the applicant explored options to add additional parking to the site beyond the 12 spaces originally proposed. Under the revised proposal, five surface parking spaces would be located along the west side of the building in a recessed area that would help screen the parking area from view along Middlefield Road, consistent with the original proposal. Under the previous proposal, seven surface parking spaces were proposed to be located at the rear of the building off of the service road. With the revised proposal, the rear parking area would include a mix of surface parking (two spaces) and an enclosed parking puzzler with nine parking slots, which would be incorporated into the back of the building. A portion of the rear wall of the office building and the rear wall of the parking puzzler. This modification would increase the proposal floor area ratio (FAR) from 36 percent under the original proposal to 37 percent under the revised proposal. In addition, since the May 2018 Planning Commission meeting, the applicant worked with the owner of the Willows Market to redesign a landscaped parking island at the rear of the property and reduce the length of the proposed western site wall to accommodate truck deliveries to the market from the service road.

Aside from these modifications, the revised proposal maintains many aspects of the original proposal. The applicants are proposing to construct a new one-story, 3,681-square-foot non-medical office building on the existing vacant lot. The current parcel area of 11,590 square feet would be reduced to 9,923 square feet

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with the dedication of 1,667 square feet to the public right-of-way where portions of Middlefield Road and a sidewalk already exist. The new front property line would be located just behind the back of the existing sidewalk.

All new construction of permitted uses within the C-4 zoning district requires a use permit and architectural control approval from the Planning Commission. In the C-4 district, there are no requirements for minimum lot area, minimum lot dimensions, minimum required yards, or maximum building coverage. The proposed building would be sited at the proposed front lot line (post dedication of the ROW), but the location of the front wall would be nearly parallel with the front wall of The Willows Market and would respect the context of other commercial and office buildings on Middlefield Road. The project would provide 12 percent of the site area as landscaping where the zoning district requires a minimum of five percent, the maximum height of the building would be 37 percent where a 40 percent maximum is allowed. The project plans and the applicant's project description letter are included as Attachments C and D, respectively.

Design and materials

The building has been designed in a modern architectural style with a flat roof, large bands of windows on the east and west elevations, and a central glass clerestory with a flat roof and large wooden eaves. The primary building materials would be textured limestone veneer; clear glass; stained western red cedar wood; and dark bronze mullions, handrails, and frames. A color and materials board will be available for the Planning Commission's review at the meeting.

The front wall of the building would be located along the new front property line, and a small recessed front entrance would be located near the center of the front façade. At the corner of Middlefield Road and Woodland Avenue, the east side of the building would have three modulations projecting at right angles from south to north along the east property line and creating triangular recesses for raised landscape planters adjacent to the sidewalk bordering the site. The east-facing walls of the modulated recesses would primarily be large bands of windows, and the south facing walls would be limestone. Portions of the west side of the building would feature climbing fig vines to help soften limestone veneer walls not articulated by window and door openings.

Under the revised proposal, a parking puzzler would be integrated into the rear of the building. The side walls of the puzzler would be wrapped with limestone, and the remainder of the puzzler entrance, facing the service road, would have a gate with a woven metal grid in a dark bronze finish to match the gate of the trash enclosure and the finish of the window frames and other metalwork around the building. A stained western red cedar band would cap the upper portion of the puzzler entrance. Staff believes that the proposed design of the building would be compatible with the mix of commercial and office building styles in the vicinity, including ranch, modern, and contemporary designs.

Parking and circulation

The C-4 zoning district allows permitted, administrative, and conditional uses with a range of potential traffic volumes, including retail stores, financial establishments, professional and administrative offices, restaurants, service stations, and motels. Section 16.72.010 of the Zoning Ordinance allows for a request to reduce the amount of required parking for a particular use through an administrative permit or as part of a discretionary permit application. The City's Policy for Administrative Review of Parking Reduction Requests ("Parking Reduction Request Policy"), approved by the City Council in 2005, sets a guideline of one space per 300 square feet of gross floor area for general office uses. The Parking Reduction Request Policy also advises that a number of factors should be considered in approving a request to provide less parking than required by the zoning district, including the primary use of the building, employee and customer estimates,

transportation demand management (TDM) measures, hours of operation, surrounding land uses, and proximity to residential neighborhoods. In the previous proposal, the applicant requested a parking reduction ratio of one space per 300 square feet of GFA, consistent with the City's policy. Under the revised proposal, the applicant increased parking on the site to a ratio of one space per 230 square feet of GFA, which is above the recommendation in the City's parking reduction request policy. Table 1, below, shows the general parking requirements for the C-4 zoning district in comparison with the applicants' revised parking reduction request.

	Table 1: Parking				
	C-4 Zoning District	Original Parking Reduction Request	Revised Parking Reduction Request		
Parking Ratio	6 spaces per 1,000 s.f. GFA (1 space per 166.67 s.f. GFA)	1 space per 300 s.f. GFA	1 space per 230 s.f. GFA		
Total Parking Spaces	22 spaces	12 spaces	16 spaces		

The requested parking reduction is consistent with the Parking Reduction Request Policy guidelines and staff believes the increase addresses the Planning Commission's guidance on the site parking at the May 2018 meeting. To justify the request, the applicants have provided a parking reduction request letter and a TDM plan, which are included as Attachments E and F, respectively. The request letter indicates that the proposed building is intended to be a professional office use with a lower volume of clients and customers than other potential uses in the zoning district. The business hours are anticipated to be between 8:00 a.m. and 6:00 p.m., Monday through Friday, which is a narrower range of time than some retail stores, service stations, restaurants, and other potential uses on the site would operate. In addition, the applicants state that the actual area for office uses within the building would be approximately 2,500 square feet, after accounting for amenities and ancillary spaces within the building. Adjacent land uses include other office buildings, a grocery store, and a residential neighborhood, which is separated from the proposed building by a service road.

Based on the Institute of Transportation Engineers (ITE) trip generation rate estimates, the development is projected to generate six peak AM hour trips and five peak PM hour trips, as identified in Table 2 below. The TDM plan was developed using the City/County Association of Governments (C/CAG) peak-hour trip credit accounting criteria, and is anticipated to reduce AM and PM peak-hour vehicle trips associated with the project and mitigate potential impacts. Proposed TDM measures include long- and short-term bicycle parking, on-site showers and changing rooms, a guaranteed ride home program, participation in Commute.org programs, and an on-site commuter information kiosk.

Table 2: Peak Hour Trip Generation Estimates					
Peak AM Hour Peak PM Hour					
Estimated Peak Hour Trips	5 in, 1 out	1 in, 4 out			
Total Trips	6 trips	5 trips			

With regard to vehicular circulation on the site, automobiles would enter the property via a one-way driveway off of Middlefield Road and exit from a one-way service road behind the proposed building onto Woodland Avenue. As noted earlier, parking on this service road is not permitted. Five parking spaces

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would be provided off of the driveway from Middlefield Road, and seven spaces would be provided off of the service road. Both rows of parking would have a backup distance of 23 feet or more, which is consistent with the City's Parking Stalls and Driveway Design Guidelines and adequate for vehicular navigation and safety. Prominent "Do Not Enter" signs are posted at the service road exit onto Woodland Avenue, which would ensure that drivers are aware of the one-way vehicular flow and that turns onto the service road from Woodland Avenue are illegal. Given the small number of vehicles estimated to enter the site during the peak AM and PM hours, conflicts between left-turn traffic onto the property and traffic approaching the Middlefield Road and Willow Road intersection are anticipated to be minimal.

The proposed parking puzzler system would allow users to call their assigned parking stall from within their vehicles within a radius of approximately 100 feet of the puzzler entrance. The puzzler gate would open and close automatically, sliding sideways to create a full-height opening for a vehicle to enter. According to the applicants, stalls would be assigned to employees only, and every user would be trained how to use the system. Because each user would have a uniquely programmed remote, the user would not need to remember their assigned stall number and would only have access to their own stall, which the puzzler system would deliver to the entrance on demand. Per the applicant, it would take an average of approximately 30 seconds to call a stall, with a maximum 60 second delay depending on the position of the stalls within the puzzler when called. With the location of the puzzler entrance off the service road, any stacking of vehicles that could potentially occur while users wait to enter the puzzler would occur in the entrance driveway on the site, reducing the likelihood of cars backing up onto Middlefield Road or adjacent properties in order to use the puzzler.

For pedestrians, a new five-foot sidewalk would be installed along the project frontages on Middlefield Road and Woodland Avenue, and would continue as a four-foot path around the side of the building to the parking areas and service road. At the rear of the site, decorative pavers would be installed in the space between the service road and the back of the parking stalls to indicate a pedestrian path outside of the roadway. For cyclists, a bicycle rack would be placed near the front entrance off of Middlefield Road, a bike locker would be located behind the building, and wall-mounted bike racks would be provided within the building.

Trees and landscaping

The project site is presently undeveloped and contains no trees or landscaping. As part of the proposed project, 12 percent of the lot would be landscaped with a mix of shrubs and groundcover, predominantly around the edges of the building, adjacent to the parking areas, and within the triangular building recesses bordering Woodland Avenue. The plantings would mainly consist of Phormium evergreen species and succulents, with various other low water plants to provide accents around the site. On the west wall of the building, climbing fig plants would be planted to soften the appearance of the exterior walls where no windows or other architectural details are provided. One 24-inch box lavender crape myrtle would be planted near the northeast corner of the property.

A two-foot tall site wall and six-foot tall site wall would be installed along the east and west property lines, respectively. The east site wall would be two feet tall and made of stone to match the stone walls of the proposed building, and it would create raised triangular planting areas within the recesses of the building. The west site wall would be made of stucco with a plaster finish and would separate the parking area for the office building from the parking area of the market next door. The west site wall would be a maximum of six feet in height and step down to three feet in height beginning 35 feet from the back edge of the wall to provide adequate site distance onto the service road. Under the revised proposal, the length of the west site wall would be reduced so that it would be located over 12 feet from the rear property line along the service road. In addition, a parking strip planter was reduced in size and pulled away from the rear property line under the revised proposal. These modifications would allow delivery trucks easier navigation when making

deliveries to the Willows Market.

Correspondence

As of the writing of this report, staff received one item of correspondence regarding the revised proposal with concerns about the location of the parking strip planter at the rear edge of the subject property and fire access to the property from the service road (Attachment G). The Menlo Park Fire Protection District reviewed the proposal and approved the project without indicating concerns regarding the location of the planter or any other project components proposed near the rear property line adjacent to the service road. The Fire District indicated that fire apparatus access and aerial ladder access to the site would be provided from Woodland Avenue and Middlefield Road in the event of a fire at the proposed building.

The applicants' project description letter (Attachment D) indicates that they performed outreach to area residents following the submittal of the revised project. Between September and October 2018, the applicants met with representatives of the Willows Market, sent out an email to neighborhood residents who had previously corresponded regarding the project, and held four neighborhood meetings at a nearby space at 68 Willow Road to talk in depth about the proposal and answer questions.

Recommended conditions

Based on the volume of correspondence indicating concerns about traffic in the area and parking on site with the original proposal, staff is continuing to recommend conditions of approval 5.a.i through 5.a.v to require parking for all employees and visitors to be managed with the 16 parking spaces provided and no parking on adjacent parcels or in residential neighborhoods. The recommended conditions would further restrict the types of office uses on the site to exclude all medical, dental, and healthcare-related offices from occupancy, as well as all computer or mobile device software and/or hardware development. These types of uses tend to have high patient volumes and turnover and a greater density of employees, respectively. The recommended conditions would additionally limit the types of permitted office uses on the site to professional offices with low customer/client volumes. The applicant would be required to record a deed restriction memorializing the conditions of approval to ensure that future owners and lessees are aware of the restrictions related to uses and parking on the site. In addition, staff has included Building-related condition 5.b.i to provide a case closure letter or Phase I Environmental Site Assessment (ESA) in order to document that there are no potential issues relating to the previous underground storage tanks at this site.

Conclusion

The proposed project would replace a vacant gravel lot surrounded by chain link fencing with a small office building below the maximum FAR and height permitted, and with greater landscape area than required by the C-4 zoning district. The applicant's parking reduction request is more conservative than the guideline of one space per 300 square feet of GFA for general office uses, as set by a 2005 City Council policy. To support the parking reduction request, the applicant has developed a TDM plan to reduce peak hour trips to the site. Relative to other uses permitted in the C-4 district (such as retail stores, personal services, and cafes and restaurants), professional and administrative offices would typically create less traffic and parking demand, and the intended hours of operation from 8:00 a.m. to 6:00 p.m. Monday through Friday are a narrower range than other potential uses on the site could operate. Neighborhood opposition to the original project was significant, but the applicants have made modifications to the plans at the adjacent property owners' request, and provided additional parking on the site within the parking range requested by the Planning Commission at the May 14, 2018 meeting where the project was continued. Furthermore, staff has recommended conditions that would limit the types of professional office uses permitted on the site and require a deed restriction on the property to ensure future tenants and owners are aware of the conditions placed on the property. Staff recommends that the Planning Commission approve the proposed use permit and architectural control application.

Impact on City Resources

The project sponsor is required to pay Planning, Building and Public Works permit fees, based on the City's Master Fee Schedule, to fully cover the cost of staff time spent on the review of the project. In addition, the proposed development would be subject to payment of a Transportation Impact Fee (TIF). These required fees were established to account for projects' proportionate obligations.

Environmental Review

The project is categorically exempt under Class 3 (Section 15303, "New Construction or Conversion of Small Structures") of the current California Environmental Quality Act (CEQA) Guidelines.

Public Notice

Public Notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Public notification also consisted of publishing a notice in the local newspaper and notification by mail of owners and occupants within a 300-foot radius of the subject property.

Appeal Period

The Planning Commission action on the use permit and architectural control will be effective after 15 days unless the action is appealed to the City Council, in which case the outcome of the application shall be determined by the City Council.

Attachments

- A. Recommended Actions
- B. Location Map
- C. Project Plans
- D. Project Description Letter
- E. Parking Reduction Request Letter
- F. TDM Plan
- G. Correspondence
- H. Planning Commission Minutes from May 14, 2018 available at https://www.menlopark.org/AgendaCenter/ViewFile/Minutes/_05142018-3096
- I. Original Project Plans (Selection)

Disclaimer

Attached are reduced versions of maps and diagrams submitted by the applicants. The accuracy of the information in these drawings is the responsibility of the applicants, and verification of the accuracy by City Staff is not always possible. The original full-scale maps, drawings and exhibits are available for public viewing at the Community Development Department.

Exhibits to Be Provided at Meeting

Color and materials board

Report prepared by: Tom Smith, Senior Planner

Report reviewed by: Kyle Perata, Acting Principal Planner

ATTACHMENT A

40 Middlefield Road – Attachment A: Recommended Actions

	LOCATION: 40 PROJEC Middlefield Road PLN2017		CT NUMBER:APPLICANT:7-00106NMSBPCSLDHB			OWNER: Pajis Station, LLC c/o Win Properties, Inc.					
bui dis pro	PROPOSAL: Request for a use permit and architectural control to construct a new single-story office building, approximately 3,600 square feet in size, on a vacant lot in the C-4 (general commercial) zoning district. In addition, a parking reduction request to provide 16 spaces where 22 spaces are required. The project includes a dedication of approximately 1,700 square feet of right-of-way along Middlefield Road associated with a plan line.										
	DECISION ENTITY: Planning CommissionDATE: December 3, 2018ACTION: TBD										
VC	TE: TB	D (Barnes, Com	ıbs, Good	lhue, Kennedy, Or	nken, Riggs, Strehl)					
AC	TION:										
1.	Constru				empt under Class 3 of the current Calif		n 15303, "New vironmental Quality Act				
2.	permits welfare detrime reques minimu City Co plan to deman limit the office u	s, that the propo- e of the persons ental to property ted parking ratio puncil in 2005, a reduce trips to d than other us e types of office uses.	sed use residing and imp o of 1 spa set by th and the ap the site. es allowe	will not be detrime or working in the r rovements in the r ace per 230 square ne City's parking re oplicant has prepa The proposed offic d within the C-4 zo rmitted on the site	ntal to the health, so neighborhood of su neighborhood or the effect of gross floor eduction request per red a transportation are use should gene poning district. Projet to lower density ar	safety, m ich propo e genera r area exc olicy for g n deman erate less ect-specif nd lower o	to the granting of use orals, comfort and general used use, and will not be I welfare of the City. The ceeds the recommended general office, approved by d management (TDM) traffic and parking ic conditions would further client/customer volume				
3.		the following fin ctural control a		per Section 16.68	.020 of the Zoning	Ordinan	ce, pertaining to				
	a.	The building d along Middlefi	esign wo eld Road he front d	uld fit with the mix and Willow Road. of the lot, is respec	of office and comr The size and heig	nercial bu ht of the	cter of the neighborhood. uilding styles in the vicinity building, as well as its residential development				
	b. The development will not be detrimental to the harmonious and orderly growth of the City. The applicant has prepared a TDM plan to reduce trips to the site, and the 3,584-square foot size of the building is small enough that parking and trips to the site should be less than other potential uses in the C-4 zoning district, such as service stations and retail stores.										
	c. The development will not impair the desirability of investment or occupation in the neighborhood. The project would replace a vacant gravel parcel surrounded by chain link fencing with a new office building, site improvements, and landscaping.										
	d. The development provides adequate parking as required in all applicable City Ordinances and has made adequate provisions for access to such parking. The requested parking ratio of 1 space per 230 square feet of gross floor area, for a total of 16 parking spaces, is consistent with the City's parking reduction request policy for general office, approved by City Council in 2005.										
	e.	The property i is required to			an area, and as su	ch no find	ding regarding consistency				
4.	Approv	e the architectu	iral contro	ol and use permit s	subject to the follow	ving stan	idard conditions:				
	а.						n the plans prepared by n Dorn Abed Landscape				

LOCATION: 40 PROJEC Middlefield Road PLN2017		CT NUMBER: 7-00106	APPLICANT: NMSBPCSLDHB		OWNER: Pajis Station, LLC c/o Win Properties, Inc.			
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	Description Le November 26, 2018, and app the conditions	etter, date , 2018; ar proved by containe	ed November 26, 2 nd the transportation the Planning Com d herein, subject to	2018; the Parking F on demand manag nmission on Decen o review and appro	Reduction ement (T nber 3, 20 oval of the	018, as well as the Project Request Letter, dated DM) plan, dated April 30, 018, except as modified by e Planning Division.		
b.	Simultaneous with the submittal of a complete building permit application, the applicant shall submit a draft "Stormwater Treatment Measures Operations and Maintenance (O&M) Agreement" with the City subject to review and approval by the Engineering Division. With the executed agreement, the property owner is responsible for the operation and maintenance of stormwater treatment measures for the project. The agreement shall run with the land and the agreement shall be recorded with the San Mateo County Recorder's Office prior to building permit final inspection.							
C.	submit a Grad	ling and D	Drainage Plan for r		al of the E	ation, the applicant shall Engineering Division. The building permit.		
d.	comply with a	ll requirer	ments of the Buildi		eering Div	ation, the Applicant shall vision, Transportation ct.		
e.	coordinate wit service lateral water main an	h Menlo F s meet th d service ject, be re	Park Municipal Wa e domestic and fir laterals are not su equired to construc	ater (MPMW) to con e flow requirement ufficient as determi	nfirm the is of the p ned by M	ation, applicant shall existing water mains and project. If the existing IPMW, applicant may, as ins and service laterals		
f.	coordinate wit service lateral service lateral as part of the	h West B s have su s are not project, b	ay Sanitary Distric ifficient capacity for sufficient as deter	t to confirm the ex or the project. If the mined by West Ba truct and install ne	isting sar existing y Sanitar	ation, applicant shall hitary sewer mains and sanitary sewer mains and y District, applicant may, y sewer mains and		
g.	comply with a	ll Sanitary		ark Fire Protection		ation, the Applicant shall and utility companies'		
h.	submit plans f dust control, 3 vehicle parkin Engineering, a	or: 1) cor) air pollu g. The pla and Planr	nstruction safety fe Ition control, 4) erc ans shall be subject ing Divisions. The	nces around the p osion and sedimen ct to review and ap fences and erosic	eriphery o tation cor proval by on and se	ation, the Applicant shall of the construction area, 2 ntrol, and 5) construction / the Building, dimentation control ommencing construction.		

LOCATION: 40 PROJEC Middlefield Road PLN2017		CT NUMBER: 7-00106	APPLICANT: NMSBPCSLDHB		OWNER: Pajis Station, LLC c/o Win Properties, Inc.		
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j.	submit a pla Planning, E building and The plan sh	n for any na ngineering a I that canno all show ex	ew utility installation and Building Division t be placed under	ons or upgrades fo ions. All utility equi ground shall be pro meters, back flow	r review a pment that operly scr	ition, the Applicant shall nd approval of the at is installed outside of a eened by landscaping. in devices, transformers,	
k.	Prior to build Menlo Park			licant shall pay all	Public Wo	orks fees. Refer to City of	
I.	Stormwater shall be imp	Pollution P lemented to	revention Program	ality, in accordance	e with the	es (BMPs) for constructior approved Stormwater electronically for inserting	
m.	Prior to com	Imencing ar		right-of-way or put appropriate review		nents, the Applicant shall ction.	
5. Approv			=			ect-specific conditions:	
a.	Planning-sp	ecific condi	tions:				
	mar peri	naged on-si mitted on ac	te with the 16 park djacent parcels or	king spaces provide within residential n	ed. No off eighborhd	rs to the building must be -site parking shall be bods at any time. Parking uilding employees only.	
			ental, physical therapy, psychiatry, psychology, counseling, or other ated office uses shall be permitted occupancy within the building.				
			r mobile device so pancy within the b		ware dev	elopment uses shall be	
customer/clien (including priva			es on this site shall be limited to professional office uses with low nt volumes, such as accounting, architecture, engineering, investment /ate equity, venture capital, and family asset management, but excludin vings and loan associations), and legal offices.				
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LOCATION: 40 PROJEC Middlefield Road PLN2017			CT NUMBER: 7-00106	APPLICANT: NMSBPCSLDHB		OWNER: Pajis Station, LLC c/o Win Properties, Inc.
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			be subject to revi ty Attorney.	ew and approval b	y the Cor	mmunity Development
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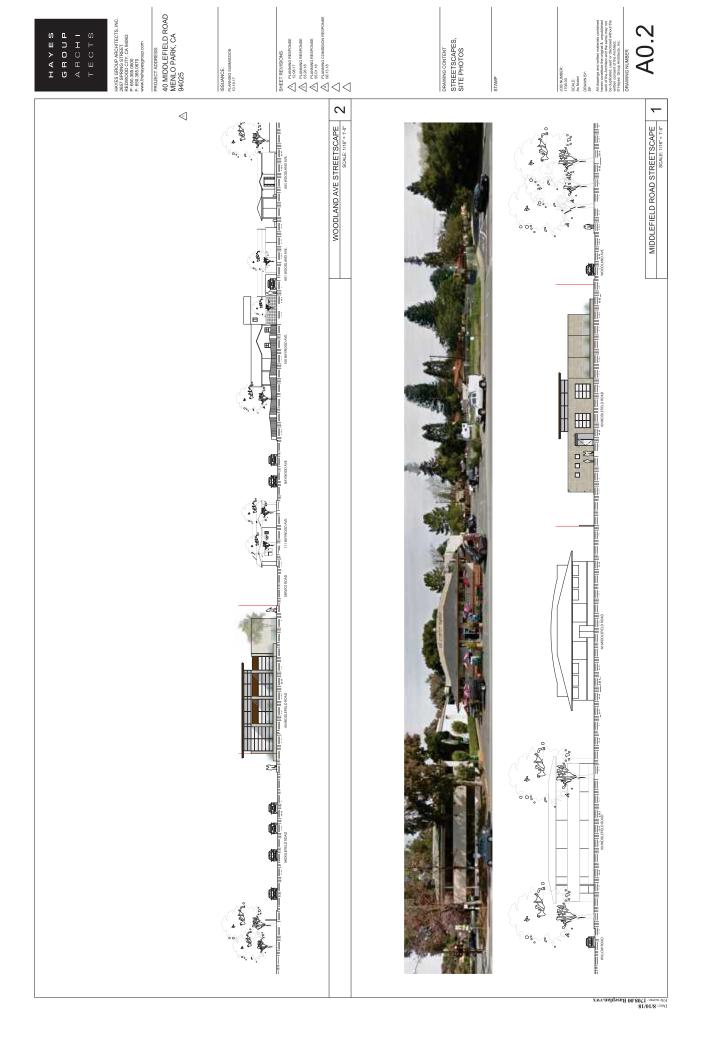
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	Prior to building permit issuance, the proposed right-of-way dedication shall be accepted by the City Council or designee. The right-of-way dedication shall match the future plan line, and shall encompass all proposed frontage improvements.						
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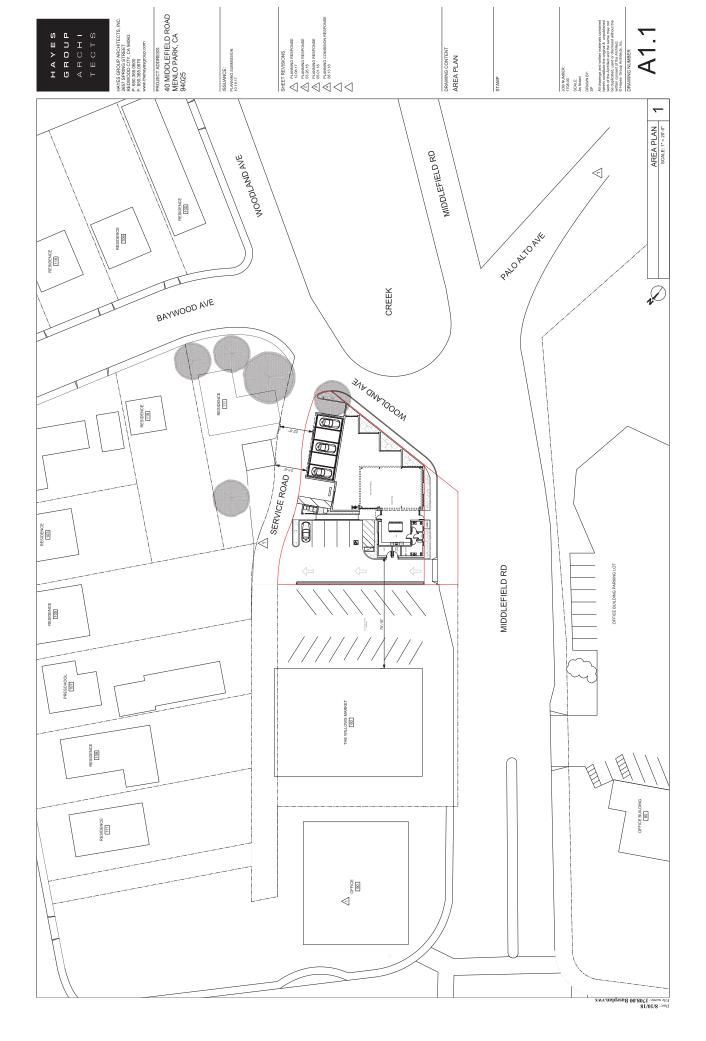
LOCATION: 40 PROJEC Middlefield Road PLN201		7-00106 APPLICANT: NMSBPCSLDHB		OWNER: Pajis Station LLC c/o Win Properties Inc.
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ATTACHMENT B



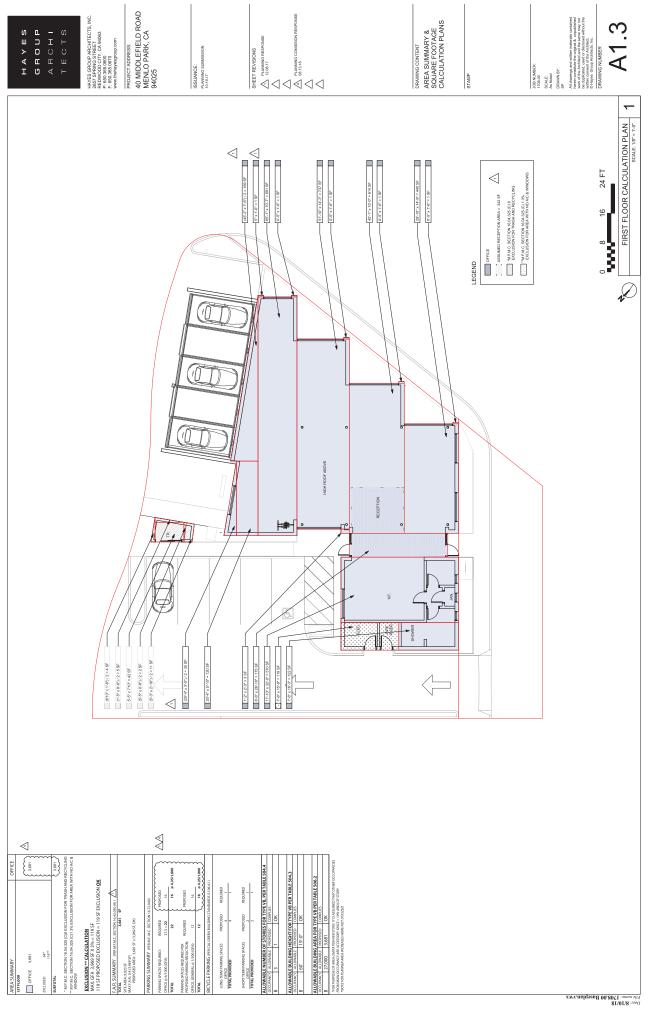
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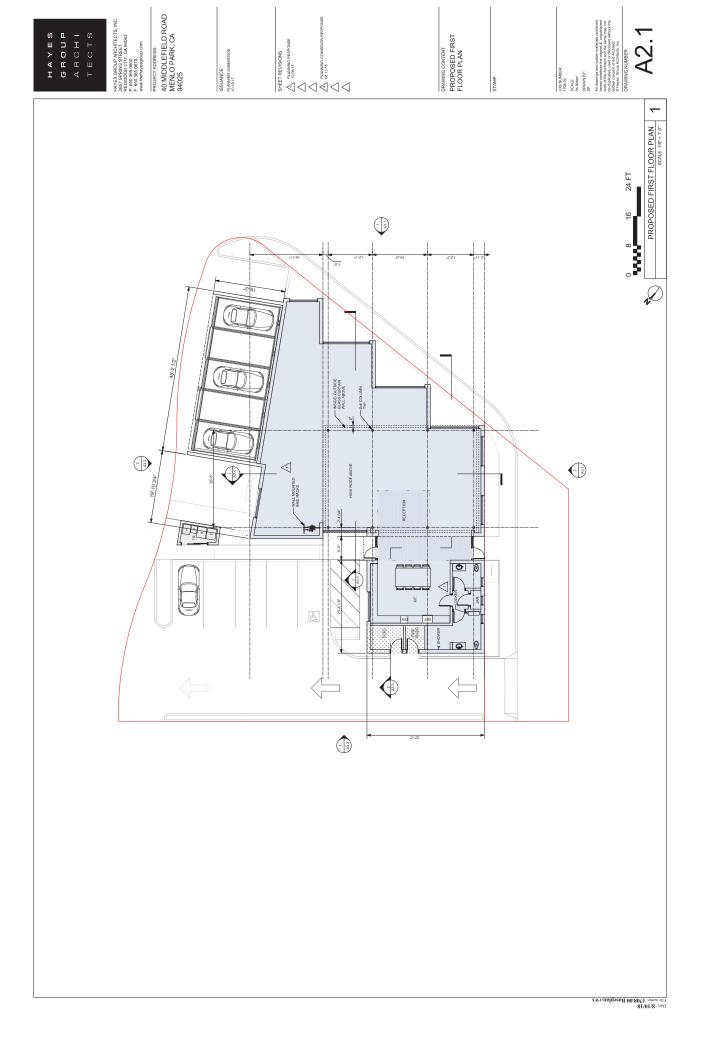


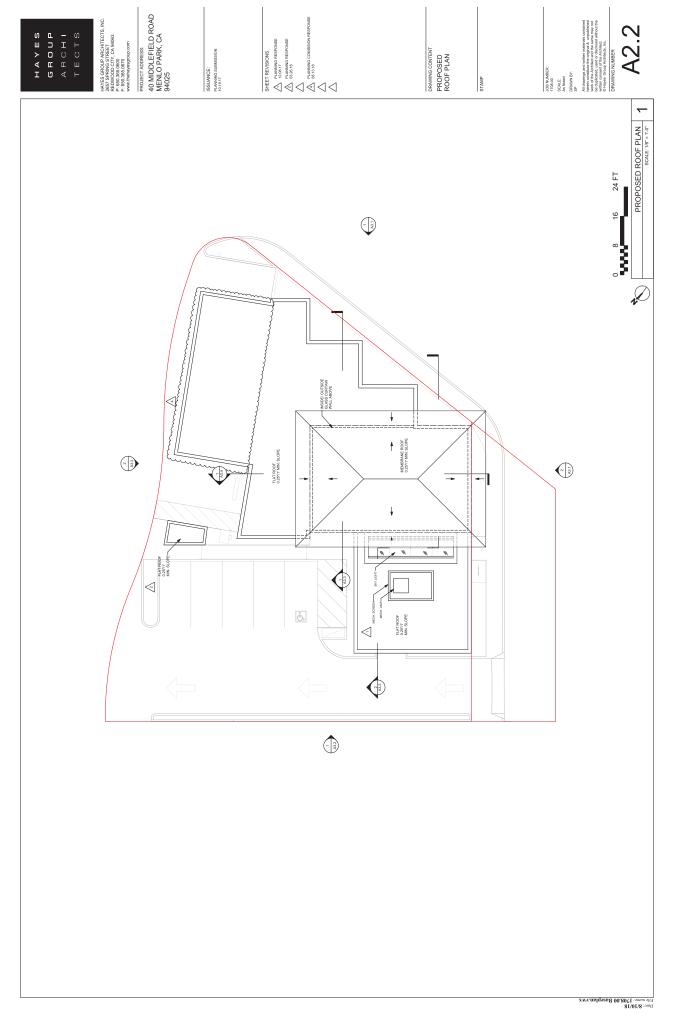


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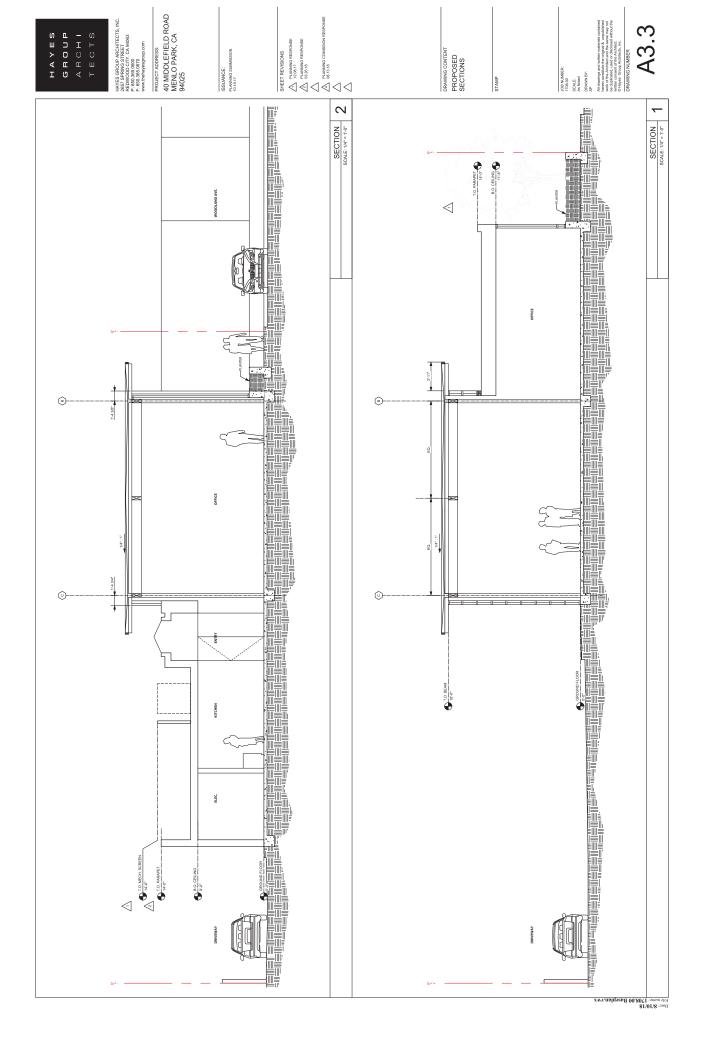


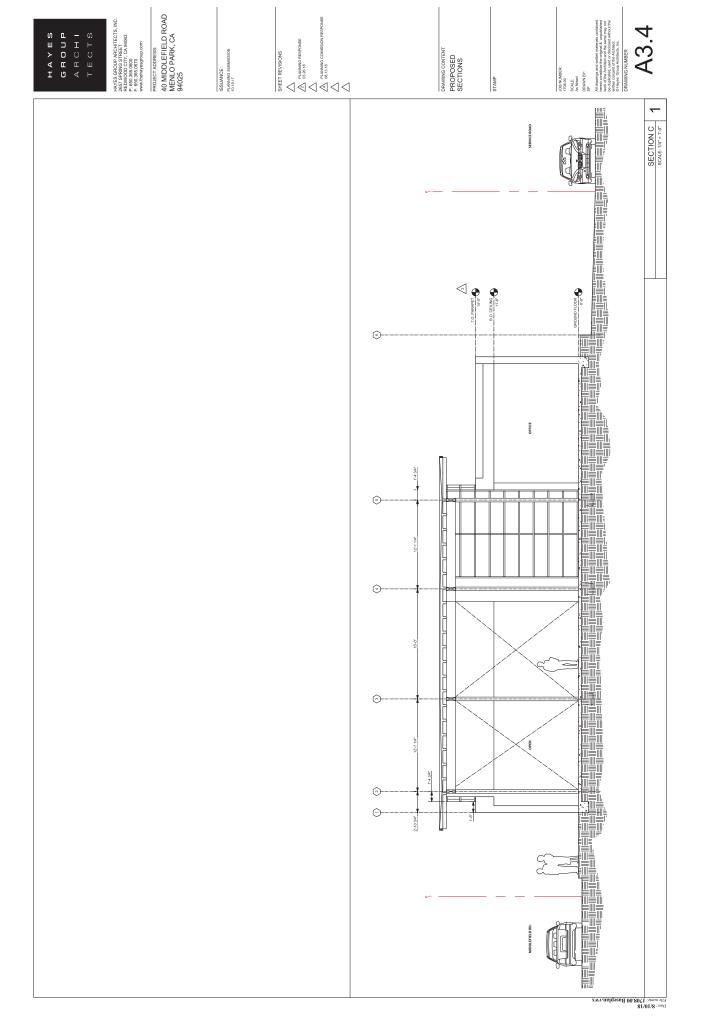




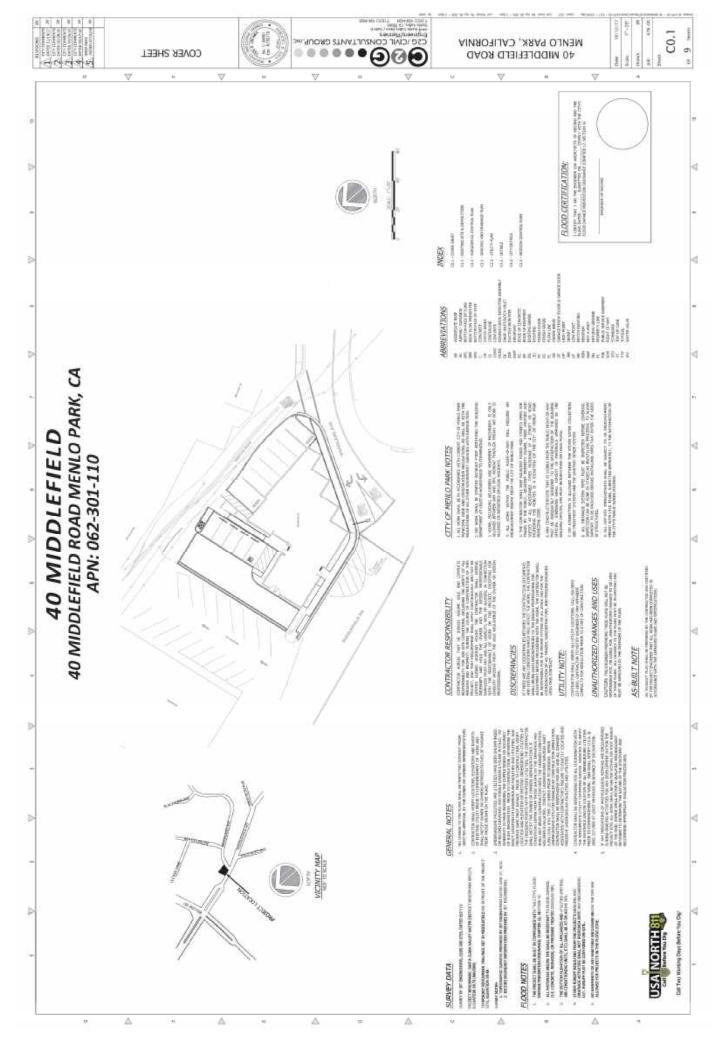


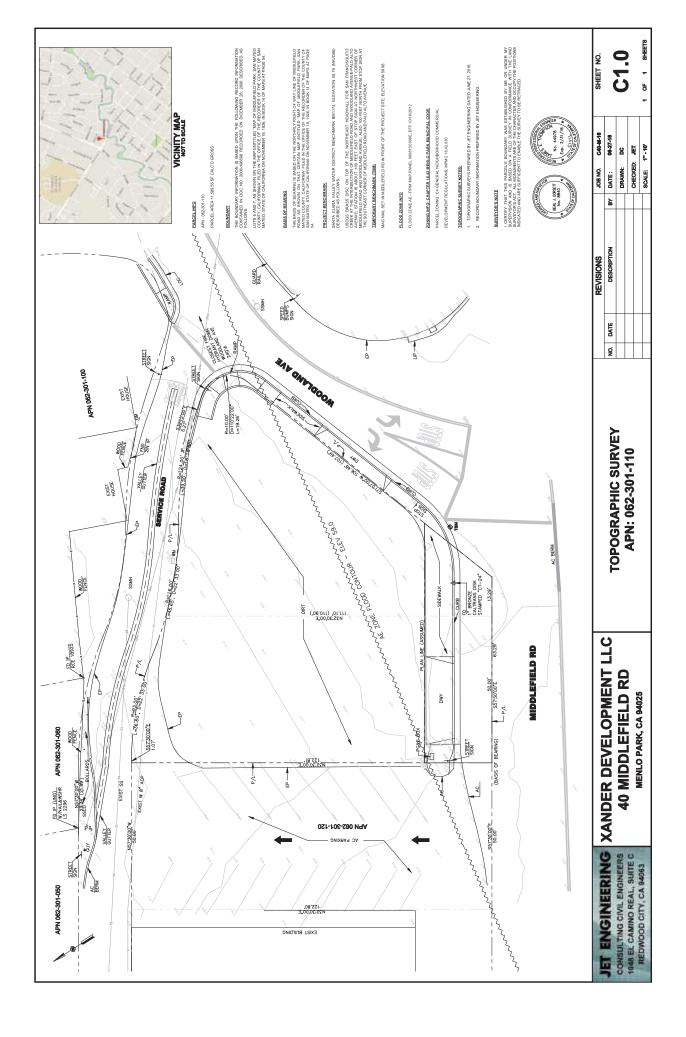


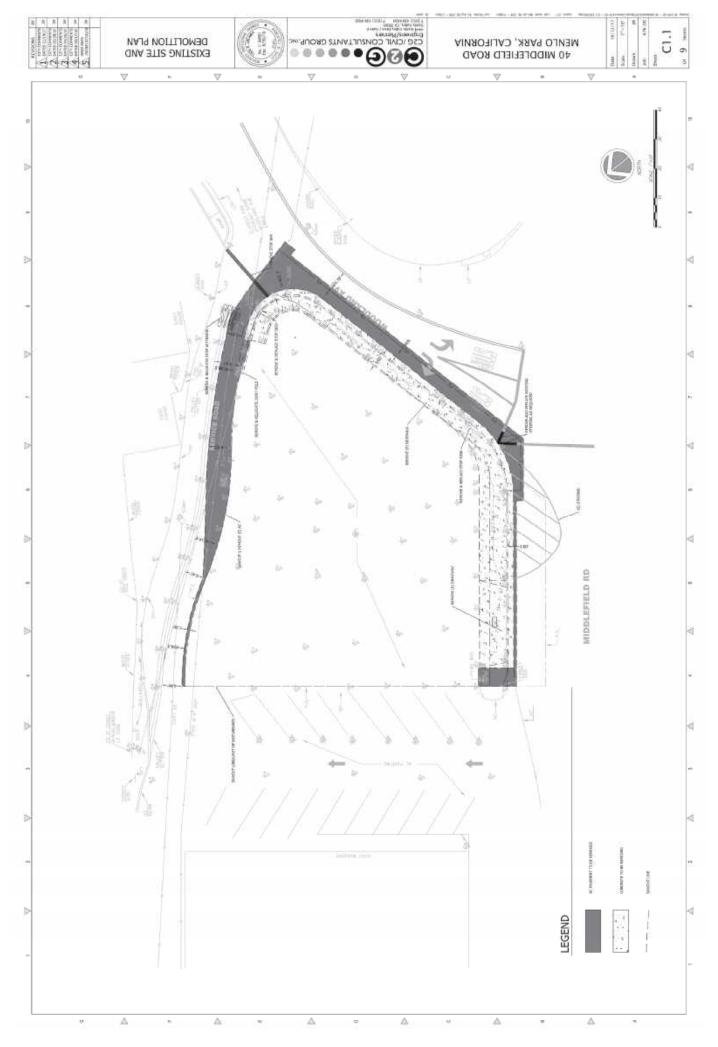


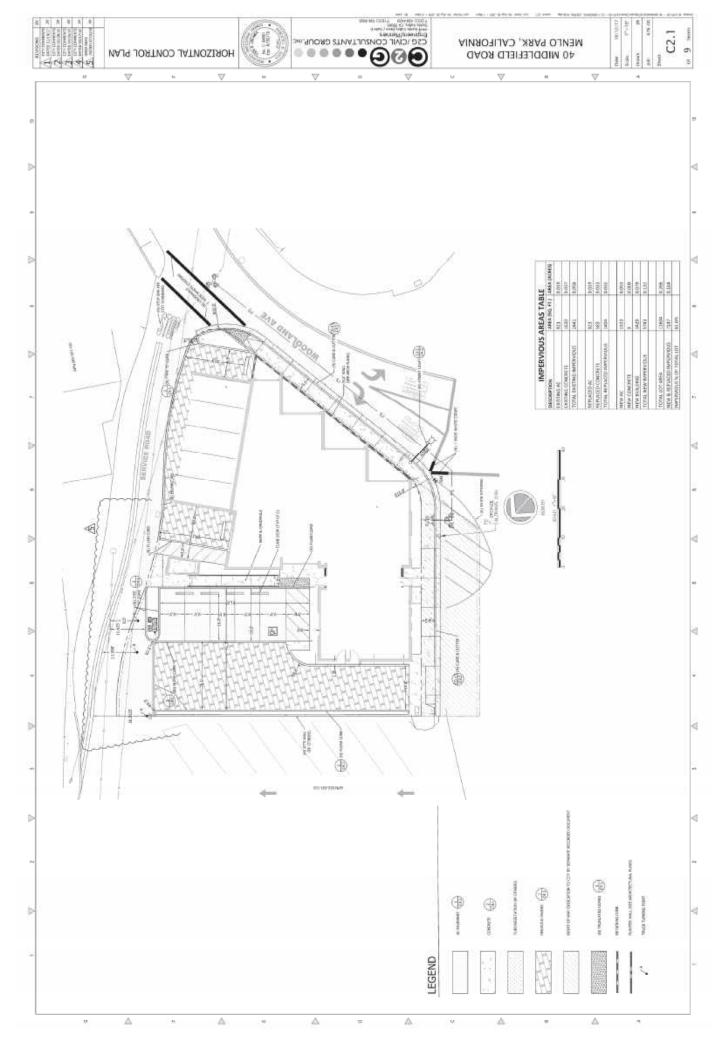


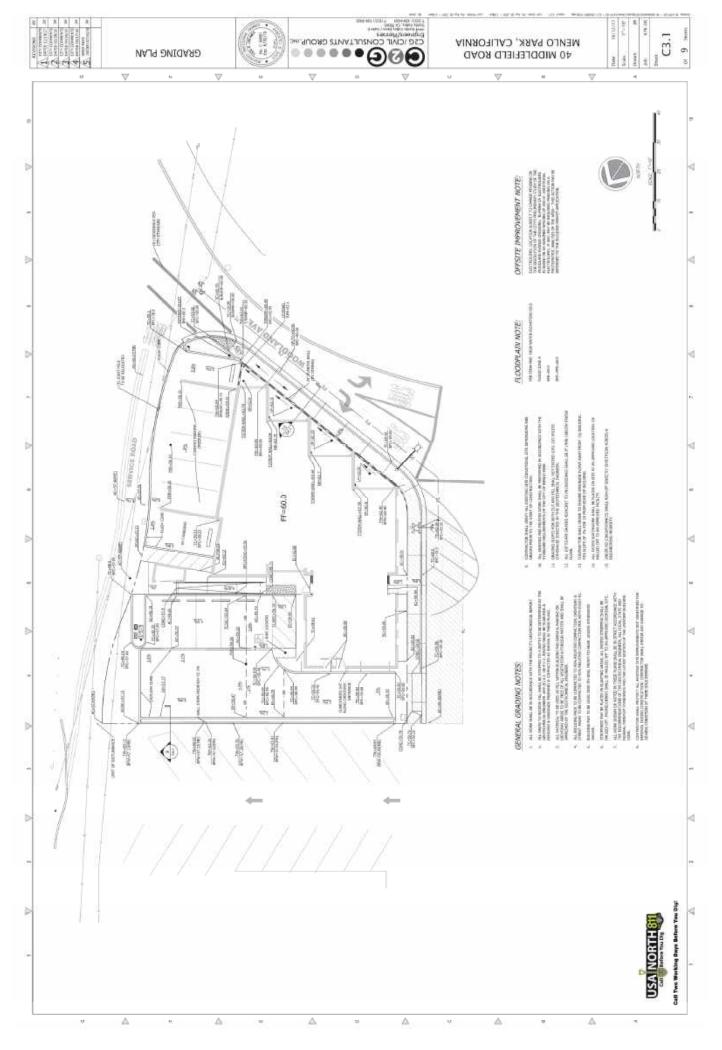


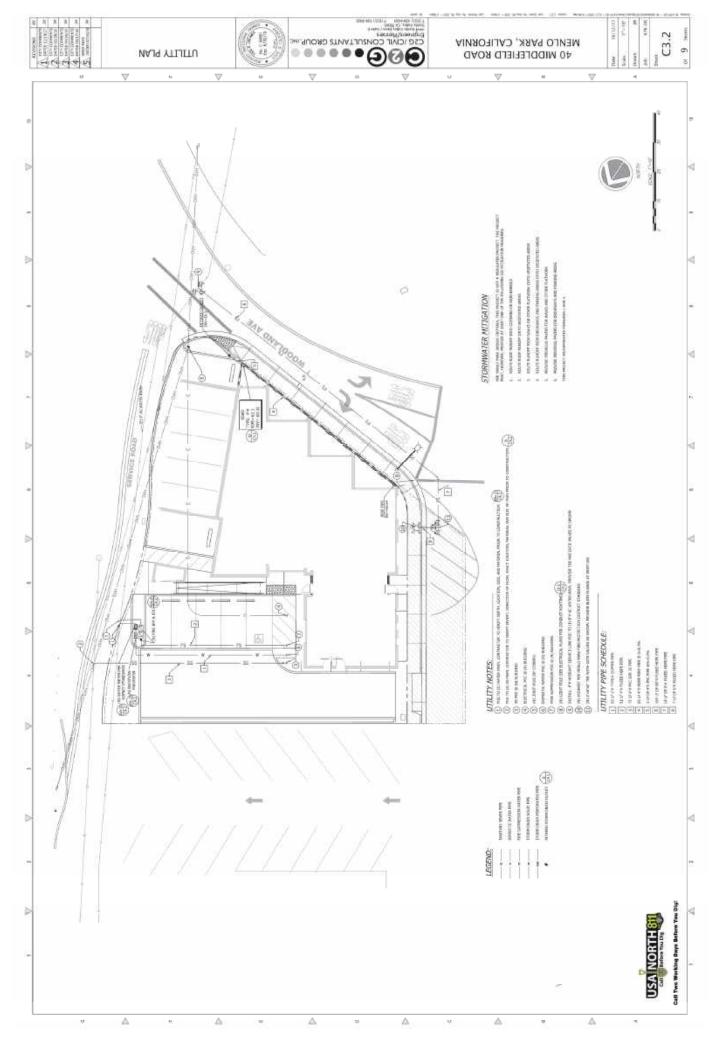


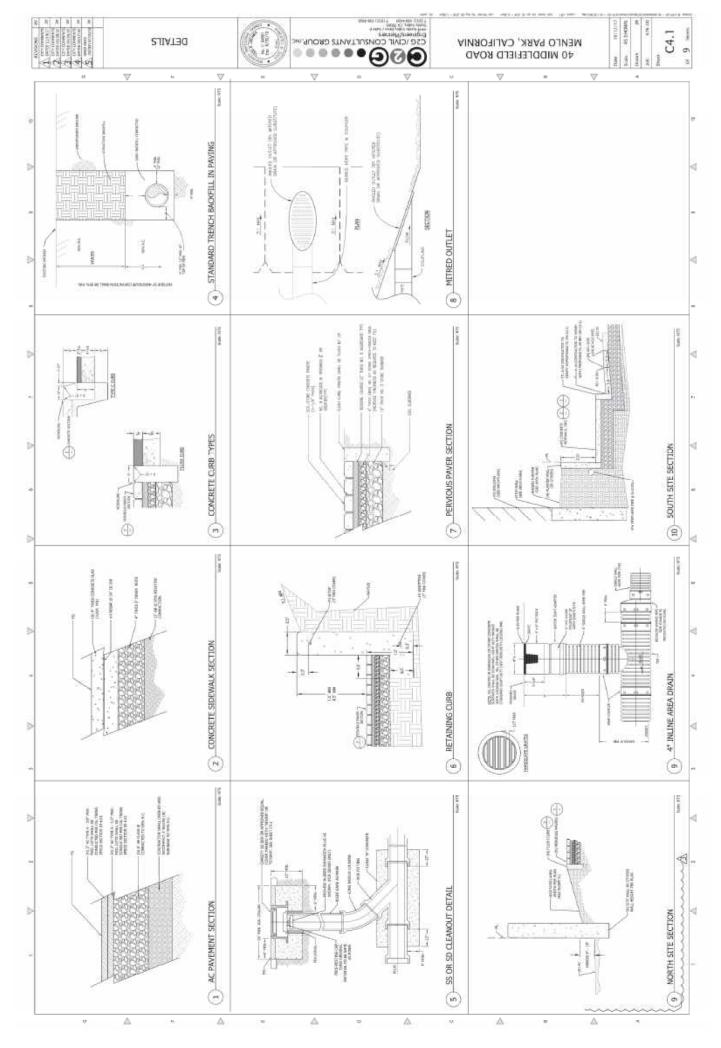


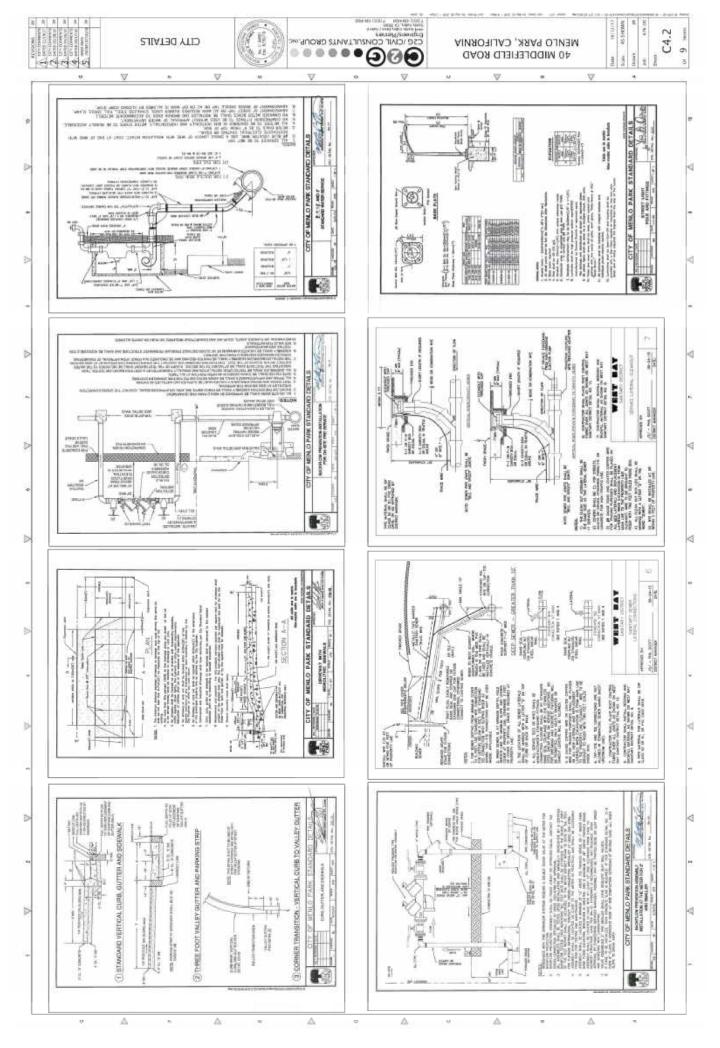


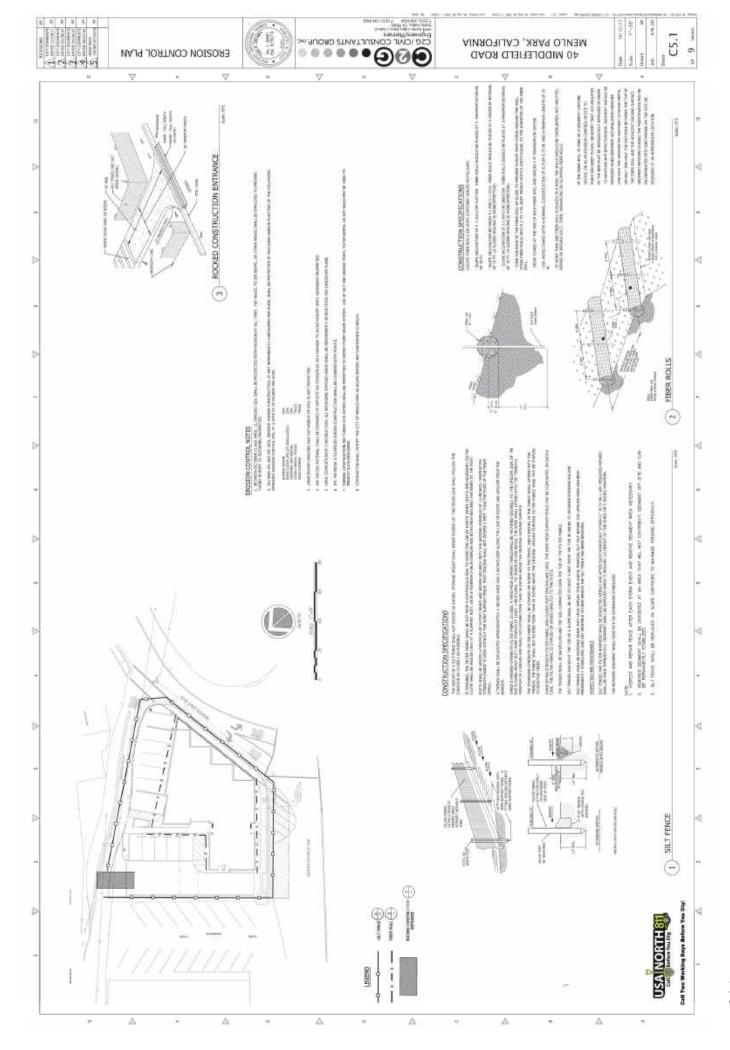


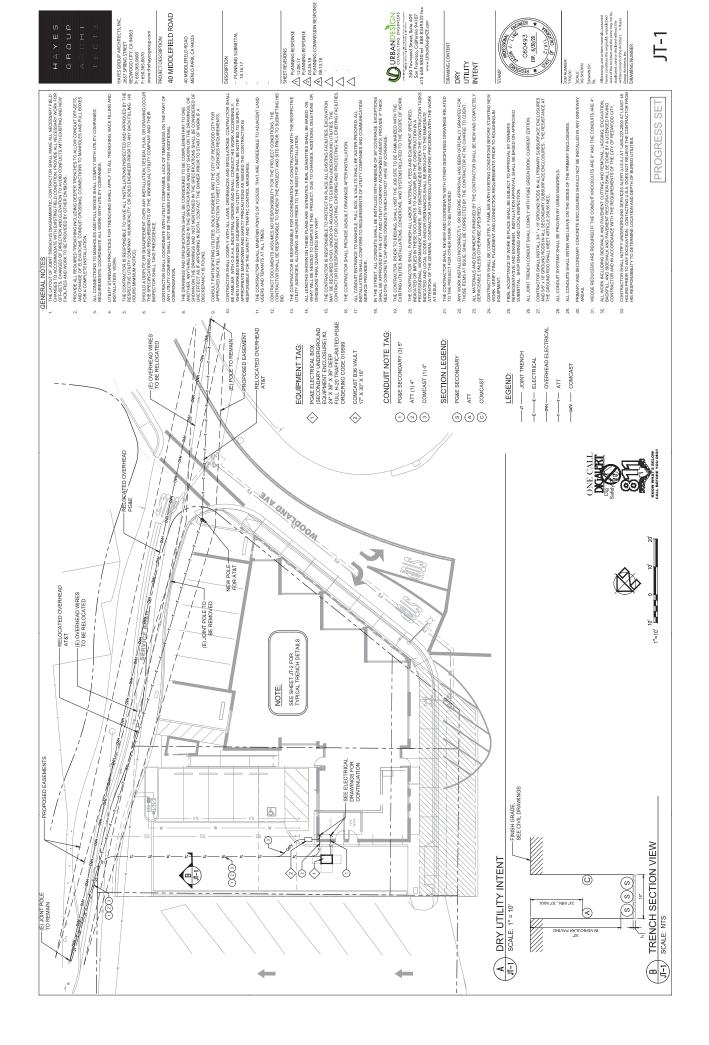


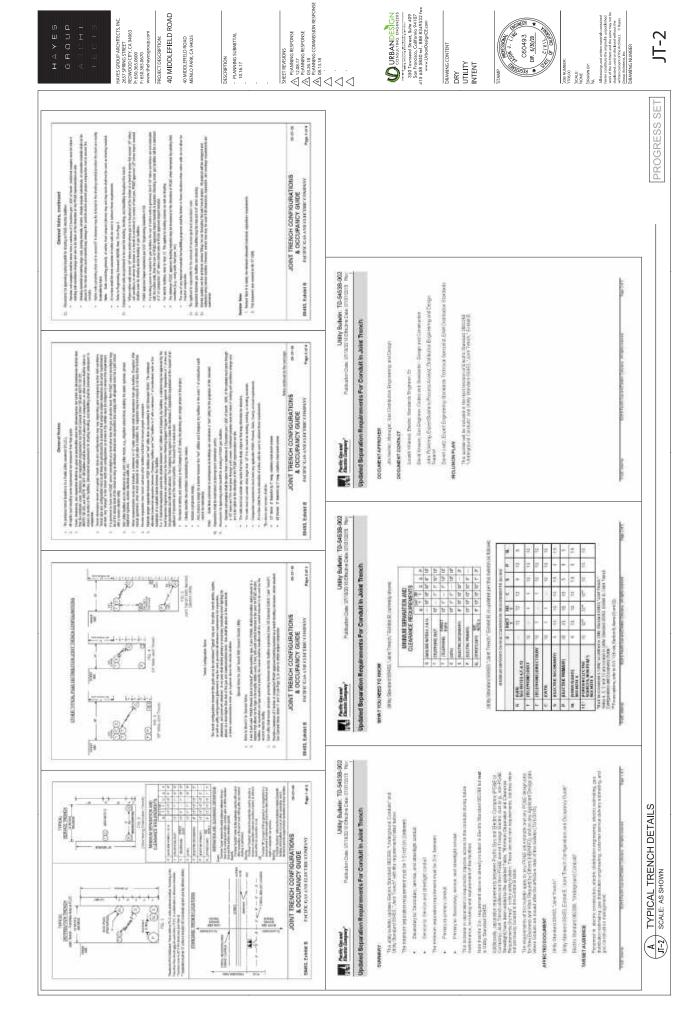


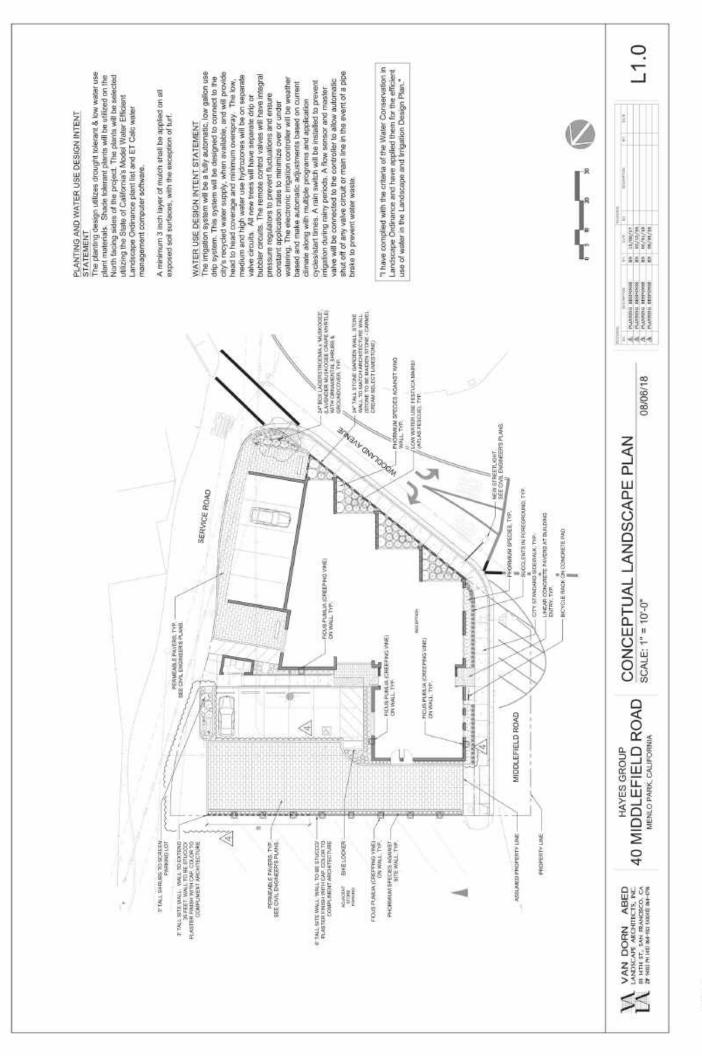


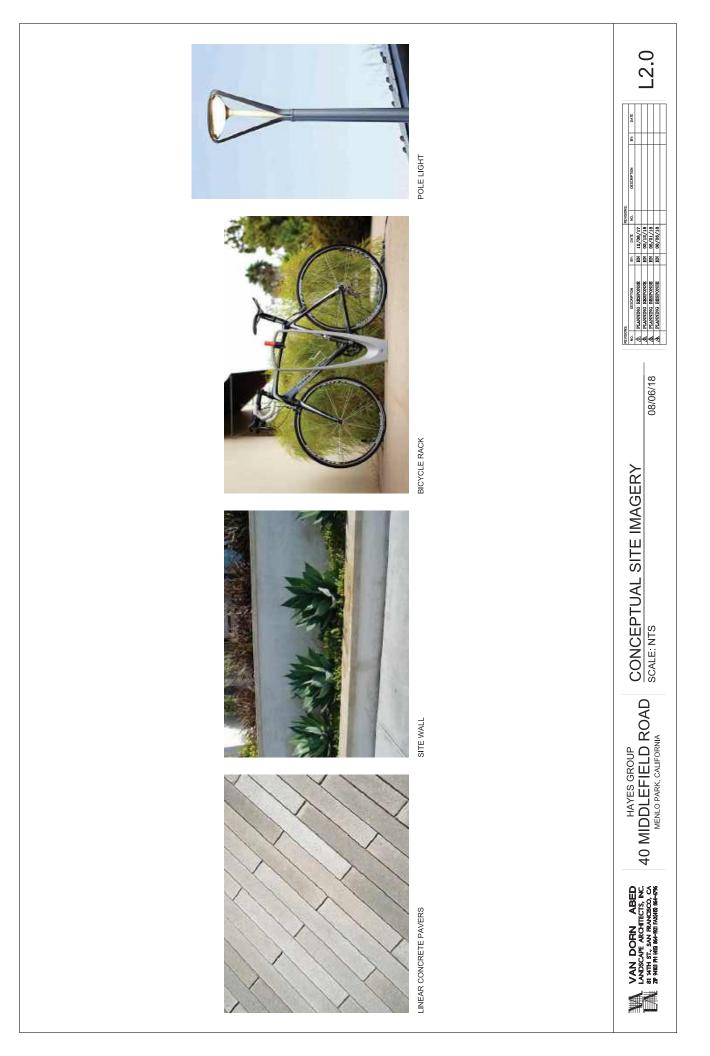












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ATTACHMENT D



November 26, 2018

Tom Smith City of Menlo Park Planning Division 701 Laurel Street Menlo Park, CA 94025

RE: <u>40 Middlefield Rd. – Project Description</u>

To Planning and DRT Staff:

Attached is Hayes Group Architect's revised submission of 40 Middlefield Rd for planning review. The project applicant is Hayes Group Architects on behalf of Granum Partners. This package includes proposed site plan, floor plans, elevations, and perspectives.

1. EXISTING CONDITIONS

The site is located on the north corner of Middlefield Rd. and Woodland Ave. The Willows Market neighbors the property to the west, with the San Francisquito Creek to the east, and residential properties to the north. There are commercial spaces and gardens to the south.

The property is currently vacant.

2. PROPOSED PROJECT

We are proposing the construction of a one-story office building. The stone and wood structure celebrates a modern rustic aesthetic that complements the heavily wooded area. Parking has been revised since the first PTC hearing. The revised design includes 33% more parking for the project. The project provides 16 parking stalls for 3,681 SF of office area for a parking ratio of 4.35 per 1,000 SF. Of the gross building area, 1,162 SF is amenity space consisting of shower, toilet rooms, kitchen, lobby and reception area. There will be on-grade parking, accessible from Middlefield Rd as well as the service road, north of the site. A new garage is proposed with an automated parking system, called a puzzler, accessed from the service road. The garage housing the puzzler system is intended to have the same level of finish materials as the building.



The reception area is accessed from the parking lot to the rear of the site and from Middlefield Rd for pedestrians. Once inside, users are greeted by a double height space, wrapped by large clerestory windows, and flooded with natural light. The office area features three full height windows, which frame unobstructed views to the San Francisquito Creek and tree canopy.

3. PUBLIC OUTREACH

Prior to the first PTC hearing, in March of this year, we reached out to the community by way of an evening meeting to introduce them to the project. A few residents attended this meeting, including the neighbors across the service road. Since the PTC meeting, we have reached out to the market and resolved the truck delivery concerns expressed at the first PTC hearing. Additionally, we have held four more community outreach meetings, on different days and times, to try to accommodate a variety of resident's schedules. Twelve residents attended these meetings. Residents were invited via email and letters sent to their addresses.

We look forward to the PTC meeting so that we can proceed with the development of this project.

Please call me at (650) 365-0699 x15 if you have any questions.

Sincerely,

Cebares

Ken Hayes, AIA Principal

CC: Granum Partners

ATTACHMENT E

HAYES GROUP ARCHI TECTS

November 26, 2018

Tom Smith Associate Planner City of Menlo Park Community Development Department, Planning Division 701 Laurel Street Menlo Park, CA 94025

SUBJECT: DEVELOPMENT REVIEW PERMIT APPLICATION # PLN2017-00106 PARKING REDUCTION REQUEST

Dear Mr. Smith,

Pursuant to your request in your letter of November 14, 2017, Item #14, this letter shall serve as our request for a parking reduction in accordance with the provisions of Menlo Park's Zoning Ordinance Section 16.72.010, which allows for requests to reduce the amount of required parking for a particular use through an administrative permit. In considering such requests, the guidelines contained in this policy should be used.

In accordance with the ordinance, the following factors should be considered in approving a request to provide less parking than required by the zoning district:

- Primary use of the building;
- Unique physical features of the building;
- Estimates of number of employees and customers;
- Transportation demand management measures;
- Hours of operation;
- Shared parking arrangements;
- Availability of on-street parking;
- Surrounding land uses; and
- Proximity to residential neighborhoods.

The primary use of the proposed building is professional office. The building is small at 3,681 SF when compared to other office buildings in the neighborhood and the site has an odd geometry driving down the parking efficiency.

It is difficult to estimate the number of employees; however, based on the owner's letter, included with this response, and the intent to lease the building to a private equity, investment banking, or private family office, the demand on parking will not be high. By observation, many of the office buildings along Middlefield Road to the north and Willow Road to the west are leased to similar companies and the parking facilities are underutilized at a ratio of 1 space per 300 SF of building area. Office hours of operation are expected to be normal business hours of 8 – 5 or 6 PM Monday through Friday. This



building also has an unusually high ratio of amenity space to useable space resulting in actual office area of roughly 2,500 SF, thereby reducing the number of automobile trips.

Selected TDM project measures were assessed using the City/County Association of Governments (C/CAG) peak-hour trip credit accounting criteria. TDM measures included long and short-term bicycle parking facilities, on-site showers, guaranteed ride home program, a commuter kiosk and participation with Commute.org's TMA-like programs. The C/CAG peak-hour trip credit accounting determined that project TDM measures will meet the mitigation requirements for all 12 peak-hour trips. This is a fairly robust TDM plan.

As stated above, the neighborhood consists of other office buildings but in addition there is a small grocery store next door as well as a single family residential neighborhood to the east. An alley separates the property from the residential neighborhood. No street parking is permitted in the alley or on Middlefield Road immediately in front of the building.

Based on the above analysis, we seek a reduction in the required parking from 6/1,000 SF or 22 spaces to 16 spaces or 4.35/1,000 SF which results in a ratio within your guidelines of 1 space/300 SF.

Please review the attached application and let me know if you need additional information of have any questions.

Sincerely,

Celapo

Ken Hayes, AIA President



ATTACHMENT F



40 MIDDLEFIELD LLC 40 MIDDLEFIELD ROAD, MENLO PARK

Transportation Demand Management Summary

January 2, 2018

Updated: April 30, 2018







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ATTACHMENTS

Dumbarton Express (AC Transit) SamTrans Route 82 SamTrans Route 83 SamTrans Route 84 SamTrans Route 88 SamTrans Route 296 SamTrans Route 397 Willow Road Shuttle M2-Belle Haven Midday Shuttle

TDM SPECIALISTS QUALIFICATIONS



EXECUTIVE SUMMARY

The proposed project known as 40 Middlefield LLC has prepared a Transportation Demand Management (TDM) for its proposed Menlo Park office development at 40 Middlefield Road. The design of the project meets commute-sustainable standards and justifies a parking reduction by incorporating select TDM elements. Project parking demand is anticipated to be reduced by 20 percent. Outcomes from these TDM actions and activities will eliminate potential spill over parking in the neighborhood.

This green development approach reduces parking demand, vehicle trips, air pollution and traffic congestion and contributes to successful carbon footprint and greenhouse gas reductions for long-term operations.

This TDM Plan addresses alternatives to on-site parking needs as well as employee commuter activities that reduce non-drive-alone transportation. This document provides supporting justification for the reduced parking proposed for 40 Middlefield Road. In addition, this plan supports the alternative transportation mode-use goals that address both traffic and air quality concerns in the City of Menlo Park.

The measures and elements contained in this plan are consistent with other well-performing employee TDM plans and commute programs in Menlo Park.

Locational advantages make the 40 Middlefield Road project very well suited for office use. It has access to transit, bicycle, and pedestrian facilities.

1.0 INTRODUCTION AND PURPOSE

The comprehensive plan of commute options and on-site measures (identified in this report) are essential to realizing the trip reduction benefits of the project as required by potential Conditions of Approval for the Use Permit. These factors will provide the momentum to achieve desired trip reduction needs for this project.

The 40 Middlefield Road TDM Plan incorporates trip reduction strategies to meet the City's trip reduction goals and to reduce traffic impacts in the neighborhood and maximize mobility options for employees. The applicant has included transit, bicycle, pedestrian, and rideshare incentives to promote alternative transportation modes for project tenants.





2.0 TRANSPORTATION MANAGEMENT PLANNING DEFINITION

TDM is a combination of services, incentives, facilities, and actions that reduce single occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand and air pollution problems. The following are basic goals that can be achieved through effective utilization of a trip reduction program with the use of TDM measures:

- Reduce parking demand by converting SOV trips to an alternate mode of transportation (e.g., transit, carpool or vanpool, bicycling or walking).
- Shift travel to less congested facilities by providing traveler information systems that warn motorists about delays or alternative routes.
- Support other technological solutions (e.g., compressed natural gas, electric/hybrid vehicles or other zero emission vehicles).
- Eliminate or shift trips from peak periods (e.g., flexible schedules, compressed work weeks or telecommuting).

Current economics and limited resources affect the ability to build and maintain more roads or parking structures. This reality necessitates better utilization of the existing transportation infrastructure (like adding a second shift at an existing manufacturing plant). To that end, TDM measures support the transition to a greater use of existing alternative transportation options.

Rideshare and TDM Program Benefits

Commuters can experience stress and frustration long before their workday officially begins. The transportation choices afforded by the project will improve the commuter experience, and local communities and business environments by decreasing both traffic congestion and greenhouse gas emissions.

3.0 PROJECT DESCRIPTION

The project at 40 Middlefield Road in Menlo Park is a small, infill office project. This single-story building is proposed to have 3,584 square feet. It is designed to reduce the need for parking by implementation of a robust transportation demand management (TDM) Plan. The following TDM Plan addresses alternatives to on-site parking needs and employee commuter activities intended to reduce the number of vehicle trips. TDM measures include infrastructure and incentive-based measures, which encourage all forms of alternative transportation mode-use, such as carpooling, mass transit, bicycling, walking, and telecommuting.

The measures and elements contained in this plan are consistent with other well-performing employee TDM plans and commute programs in the Greater San Francisco Bay Area and are estimated to reduce peak-hour vehicle trips by 20 percent.





SECTION I – EXISTING CONDITIONS

4.0 COMMUNITY CONNECTIVITY

The project will be a pedestrian and bicycle-friendly site that embraces Menlo Park's transportation goals and policies. Some of the pedestrian and transit-oriented design features



Somewhat Walkable

Some errands can be accomplished on foot.

include orienting the building toward transit stops and tying into adjacent bicycle and pedestrian circulation facilities. According to WalkScore.com, this project location scores a 63 out of 100 for walkability. This type of connectivity also for "some errands to be accomplished on foot."

5.0 TRANSIT PROXIMITY

The 40 Middlefield Road project will be located within walking distance (measured from the main building entrance) of ten transit routes. Service routes include an East Bay AC Transit Dumbarton Express bus, seven SamTrans buses, and two local city shuttles. The Dumbarton Express bus offers connectivity from the Union City BARt Station. The SamTrans buses offer connectivity from Caltrain stations in Redwood City, Palo Alto, Millbrae and Menlo Park.

A map showing the walking routes to various transit resources is provided on page 4. Access to and from transit and the project site is estimated at one to four minutes walking travel time. The bicycle route map from the Palo Alto Transit Center is also shown on page 4 and identifies the distance to be one mile with a bicycle travel time of seven minutes. Transit travel is approximately 12 minutes.

An advantage of this project is it's very proximity at the Palo Alto and Menlo Park Caltrain Stations and local SamTrans bus transit services. Also, the two free local shuttles located within an easy walking distance from the site include the Willow Road Shuttle and M2 Belle Haven mid-day Shuttle. Maps of these transit resources are provided as an attachment.

Transit services total more than 192 trips per day, providing good transit connectivity for future employees at the site. A transit access table, shown on page 5, identifies the number of transit trips provided near the project. A surrounding area transit map is shown on page 6.



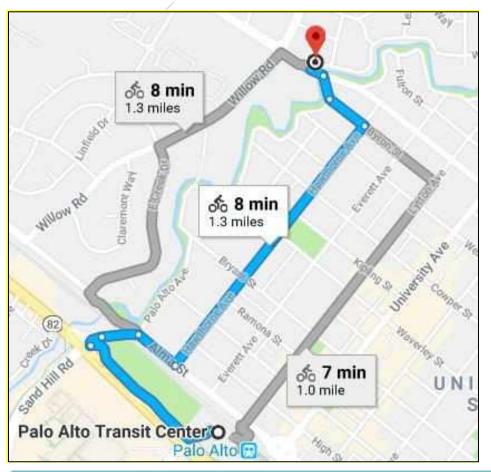
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Walking Route Map to Transit



Bicycle Route Map to Transit







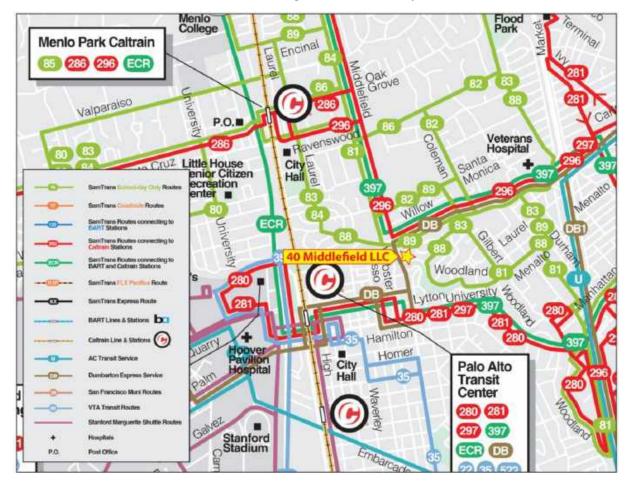
Route #	Span of Service	Trips per Weekday	Communities Served			
DB	5 Days/Week	23	Stanford Oval, Palo Alto Caltrain, Willow Rd. & Middlefield Rd.,			
AC Transit	6:33 am - 8:19 pm	25	Ardenwood Park & Ride, and Union City BART			
82	5 Days/Week		Bay/Harmon, Coleman/Menlo Oaks, Santa Monica/San Andreas,			
Samtrans	2:56 pm & 3:28 pm	3	Middlefield/Santa Margarita, Merrill/Santa Cruz,			
Samuans	School-day Only		Laurel/Glenwood, and Hillview School			
83	5 Days/Week		Bay/Ringwood, Durham/Laurel, Marmona/Robin,			
Samtrans	7:48 am - 3:44 pm	6	Willow/Blackburn, Merrill/Santa Cruz, Laurel/Glenwood, and			
Samuans	School-day Only		Hillview School			
84	5 Days/Week		Encinal/Middlefield, Middlefield/Lane, Middlefield/Santa			
Samtrans	2:57 pm & 3:41 pm	3	Margarita, Merrill/Santa Cruz, Laurel/Glenwood, and Hillview			
Samuans	School-day Only		School			
88	5 Days/Week		Bay/Harmon, Durham/Laurel, Marmona/Robin,			
Samtrans	7:45 am - 3:25 pm	3				
Samuans	School-day Only	//	Willow/Blackburn, Laurel/Sherwood, and Encinal School			
			Bayshore/Donohoe, Bay/University, Newbridge/Saratoga,			
296	7 Days/Week 5:28 am - 10:35 pm	120	Middlefield/Santa Margarita, Middlefield/Ringwood,			
Samtrans		120	Merrill/Santa Cruz, Middlefield/5th, and Redwood City Transit			
			Center			
297	7 Days/Week	8	Palo Alto Transit Center, Bay/University, Middlefield/Santa			
Samtrans	3:58 am - 11:52 pm	0	Margarita, Middlefield/5th, and Redwood City Transit Center			
			Palo Alto Transit Center, Bay/University, Middlefield/Santa			
397	7 Days/Week 6:23 am - 6:06 pm		Margarita, Middlefield/5th, Redwood City Transit Center, El			
Samtrans		7	Camino/Hillsdale, El Camino/Burlingame, Millbrae Transit			
Samuans			Center, SF Airport Courtyard A, Airport/Baden, Bayshore/Old			
			County, 11th/Market, Mission/1st, and Folsom/Beale			
			Menlo Park Caltrain, Linfield/Waverley, Linfield/Middlefield,			
Willow Road	5 Days/Week	7	Blackburn Ave, Chester St (VA Medical Center), O'Brien/Willow,			
Shuttle	7:05 am - 6:05 pm	/	1200 O'Brien (JobTrain), 1505 O'Brien, Adams Court, Hamilton			
			Court, and 1340 Willow Rd			
			Menlo Park Senior Center, Belle Haven Library, Willow &			
M2-Belle Haven	5 Days/Maak		Coleman, Blackburn Ave, Middlefield & Ringwood, Menlo Park			
Midday Shuttle	5 Days/Week	12	Library, Crane Place, Menlo Park Caltrain, Safeway, Little House,			
	6:51 am - 3:59 pm		Partridge/Kennedy, Middlefield & Ravenswood, and Willow &			
			Chester			
Total Tran	nsit Trips/Weekday	192				

All buses and trains are lift equipped for handicapped, elderly, or those in need.





Surrounding Area Transit Map



Commute Details to Downtown Menlo Park 3 68 5 minutes (1.49 ml) 11 minutes during rush hour olom St. Patrick's Seminary 8 Menio Atherton O High School O 12 minutes (1.58 mi) University 0 🕺 25 minutes (1.33 mi) 👪 8 minutes (1.52 mi) El Cami **Public Transit Options** 📱 12 minutes - 296-155 296-155 Bus 0 College 📱 12 minutes - 296-155 12 minutes - 296-155 School O Menlo Park 🚆 26 minutes -Elurgess Park DOWNTOWN 87 Canil MENLO PARK ñ



DOWNTOWN

1. 8.



6.0 TRANSIT TRIP PLANNING RESOURCES

Online transit trip planning services are a useful tool for planning public transit trips. Regionally, 511.org services the greater San Francisco Bay Area. 511.org is a useful tool for planning public transit trips. It can build an itinerary that suits the need of the transit user.

The itinerary identifies the fastest commute with the least amount of transfers or the cheapest fares. The 511 trip planner, by default, will generate the fastest itinerary between the origin and destination. This free service can be found online at http://511.org/.

Other Transit Resources include online applications and mobile device applications.



enables commuters to plan transit trips in the Bay Area using text messaging from a mobile phone by converting information from the 511 transit Trip planner to a text message. By sending a text

511) SF Bay	Wherever you're going, start here	
Home	Trip Planner Tran	sit Departures
511 Phone	😝 😭 🔆 💰	Φ
Fransit	To: Enter destination	DC
Garpool & Vanpool	More Route Options	Plan Trip
Carl Driving	~	
<mark>්රී</mark> Biking		

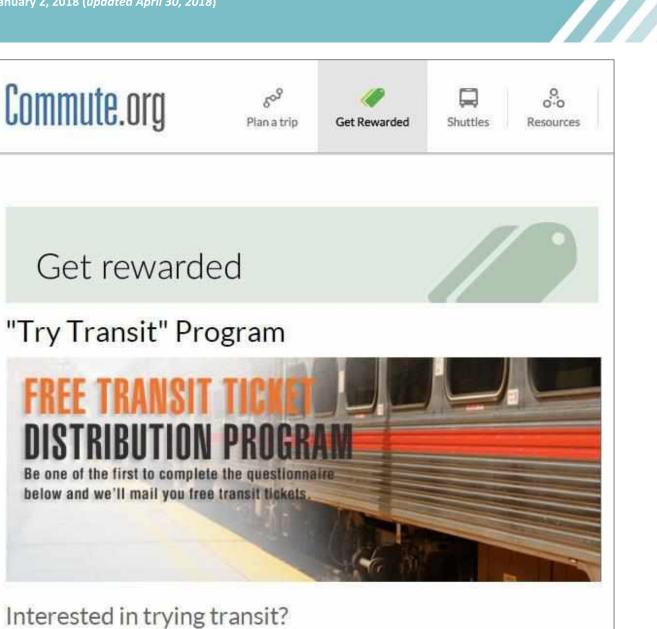
message with origin, destination and optional arrival or departure time, Dadnab's reply will tell commuters what buses or trains to take at which locations and times.

Google has also collaborated with select regional transit agencies to provide a public transit planner for riders of VTA, SamTrans, AC Transit and BART. This free service can be found online at www.google.com/transit.

Commute.org also offers a "Try Transit" incentive program.¹ All employees who live or work in San Mateo County, or commute through San Mateo County, are could be eligible for free tickets to try BART, SamTrans, or Caltrain. This try transit offer is a per person, one-time only incentive. An image of the try transit incentive application is shown on page 8.



¹ http://www.commute.org/get-rewarded/free-transit-tickets



If you live or work in San Mateo County, or if your commute takes you through San Mateo County, you could be eligible for free tickets to try BART, SamTrans, Caltrain, or San Francisco Bay Ferry. To qualify, you must be over 18 years old and cannot have participated in the Try Transit program in the past.

Simply complete the order form below and we'll send you free tickets from the transit agency of your choice (subject to availability and qualification):

Free Transit Tickets Order Form



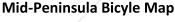


7.0 BICYCLE RESOURCES

Bicycle commuters looking to commute by bike can view free resources available at http://511.org/biking/commute/work. The 511 system provides significant resources for bicycle commuters including:

- Free Bike Buddy matching
- Bicycle maps and trip planners
- Safe bicycle route mapping
- Location of lockers
- How to take your bike on public transit
- How to take your bike across Bay Area toll bridges
- How to ride safely in traffic
- Tips on commuting
- Tips for bike selection
- Links to bicycle organizations
- Bike to Work Day







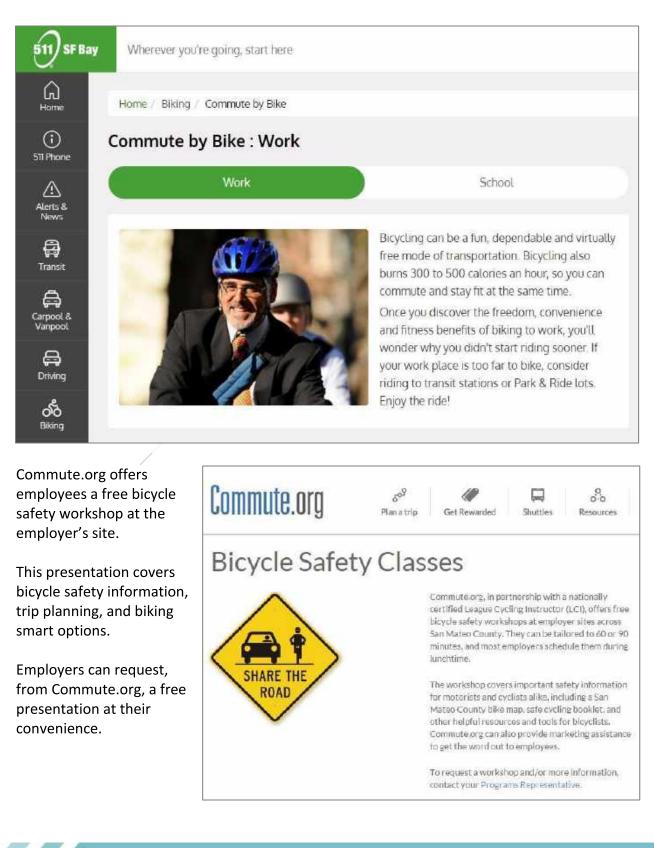


San Mateo County Bike Map













8.0 CARPOOL AND VANPOOL RESOURCES

Carpooling will be strongly encouraged at the project. The regional and local rideshare program provide individuals with a computerized list of other commuters near their employment and residential ZIP code, along with the closest cross street, phone number and hours commuters are available to commute to and from work.

The prospective carpooler will also be given a list of existing carpools and vanpools from their residential area that they may be able to join should vacancies exist. To the right is a sample screen shot of this online ride-matching resource.

Commute.org also offers a carpool incentive program.² Employees who form a new carpool with two or more people or add a new member to an existing carpool can each receive a \$50 carpool incentive.



An image of the carpool incentive application is shown on page 13.

Carpool Advantages for Employers

- No cost program for employers
- Reduce traffic congestion
- Alleviate employee stress and expense
- Improve employee morale
- Use as a recruitment and retention tool

Carpool Advantages for Employees

- When at least two people carpool, they can each earn a \$50 gift card for two months of carpooling
- Enjoy a travel companion to and from work
- Share commute costs with other passengers
- Utilize most HOV lanes with 2 or 3 passengers
- Take advantage of preferential parking at many employer sites
- Reduce commute time and stress



² <u>http://www.commute.org/get-rewarded/apply-for-carpool-incentives</u>



Commute.org	
Welcome to the Commute.org Carpool incentive Program Application (Powered by VistaShare). Please the form by answering each question appropriately. When you are done, click the Submit button to submit your answers.	
In order to be eligible for this program, you must meet the following criteria:	
1.Have never received the Carpool Incentive before.	
2. Be at least 18 years old; live or work in San Mateo County - or - have a commute that goes through the Mateo County.	ıgh San
3. Form a NEW carpool (less than one year old with two or more people over the age of 18), or	
4. Join an existing carpool as a NEW member	
Do not complete the application if you do not meet the eligibility require	ements.
Please note that the maximum Carpool Incentive that can be awarded is \$50 effective 7/1/20	16.
First Name	
LastName	
Email Address	

Carpool Incentives

Launched in August 2017, the San Mateo County Carpool program provides a promotional incentive for carpool riders and drivers when they match using the Scoop or Waze app. Commuters will be matched near their employment and residential ZIP code, along with the closest cross street, phone number and hours commuters are available to commute to and from work. Individuals are then able to select and contact others with whom they wish to commute. Matched carpoolers receive a \$2 per trip incentive for both the driver and passenger. A flier of this new ridematching resource is provided below.





NEW CARPOOL DISCOUNT PROGRAM AVAILABLE FOR SAN MATEO COUNTY COMMUTERS



Receive \$4 Incentive per Day By Carpooling!

Drivers and riders that use the incentive can get up to \$4 per day. This includes a \$2 incentive per person for each commute trip to and from the cities of San Mateo County. The discount will be applied to your account.



Carpool In San Mateo County! is available to residents or commuters who work in San Mateo County.

An Innovative C/CAG Pilot Program Carpool In San Mateo Countyl utilizes mobile carpooling apps to increase local carpool ridership during peak travel periods, therefore reducing single occupancy vehicles, traffic congestion, and greenhouse gas (GHG) emissions.

Benefits to Commuters It's fun and convenient. You can save time, save money, reduce stress, and meet new friends. It is also good for the environment.

Carpool With Your Co-Workers and Neighbors! The app automatically links drivers and riders to other users as close as possible to their origins and destinations. This includes door-to-door pickups and drop-offs.

How Does Carpool In San Mateo County! Work? Drivers and riders using Scoop will automatically receive the \$2 incentive per person during commute periods (5:30 a.m. - 10:00 a.m. and 3:30 p.m. - 8:00 p.m.), with a maximum incentive of \$4 per day.

How Do I Sign Up? The program is available now on the Scoop app downloadable from iTunes and Google Play.

Safe and Flexible. Drivers using the Scoop app already have their motor vehicle histories checked. Use it once a week or every day at the times that works for you.

Need More Info? Please visit www.commute.org

August 2017_1

Program funded by C/CAG local Congestion Relief Program Fund and BAAQMD San Mateo County Program Manager Fund.





Other Ridematching Resources

511 is working with private ride-matching companies to provide commuters with alternative ridematching resources. A sample of ridematching apps include the following:

	Scoop — takescoop.com
ငင္တာ	 Provides guaranteed ride home. Best for work trips during regular commute hours - Scoop currently matches carpoolers who work in various locations from home locations throughout the Bay Area. See "More" below.
App Store	 Enter your trip information by 9 p.m. the night before your morning commute, and 3:30 p.m. for your afternoon commute. Scoop automatically provides you with your match and trip itinerary. Register with Promo Code SCOOPMEDS for \$5 in free trips.
Google Play	Find out how to get guaranteed parking at Dublin/Pleasanton Station by carpooling with Scoop. Find out more information here!
	Carzac — carzac.com
	Available for trips throughout the Bay Area
carzac	 Pick locations to meet for pick up and drop off
nareyouxceanauru	Other riders can then join a trip with available seats.
	Recommended for the Casual Carpool return commute. Register with Promo Code StICARZAC for \$5 in free trips.
Duet	Duet — www.duetinc.com • See the profiles of those you can match with before you confirm a carpool. • Schedule carpools up to 2 hours before your trip; works best for commutes. • Full support including guaranteed return trips along the Hwy 101 corridor between San Francisco and San Jose. • Register with Promo Code DUETSTI for \$\$ in free trips
App Store Google Ray	511 RideMatch Service
	An interactive system that beins you find caroools, vanoools or bicycle partners.
	 An interactive system that helps you find carpools, vanpools or bicycle partners. Over 60,000 Bay Area commuters available for matching.
	Over 60,000 Bay Area commuters available for matching. Track your trips in the 511 Trip Diary and be eligible to win prizes. Watch this video
	 Over 60,000 Bay Area commuters available for matching. Track your trips in the 511 Trip Diary and be eligible to win prizes. Watch this video explanation of how the Trip Diary works.
	Over 60,000 Bay Area commuters available for matching. Track your trips in the 511 Trip Diary and be eligible to win prizes. Watch this video
Register	 Over 60,000 Bay Area commuters available for matching. Track your trips in the 511 Trip Diary and be eligible to win prizes. Watch this video explanation of how the Trip Diary works. Discounts on tolls and nifty rewards from 511 and local county agencies all just for
Register	 Over 60,000 Bay Area commuters available for matching. Track your trips in the 511 Trip Diary and be eligible to win prizes. Watch this video explanation of how the Trip Diary works. Discounts on tolls and nifty rewards from 511 and local county agencies all just for doing what you already do!





9.0 GUARANTEED EMERGENCY RIDE HOME PROGRAM

The new My.Commute.org STAR program offers the guaranteed ride home (GRH) program to all commuters who enroll in the program. The GRH program will provide commuters (who do not drive alone to work) with a reimbursement for an GRH trip up to \$60 per ride (for a maximum of four rides per eligible commuter, per year). The GRH program is incorporated in the STAR Platform and requires users to be registered in advance to participate in the program. The new program was launched October 1, 2017.





More details regarding the GRH program are provided as an attachment. These include GRH frequently asked questions, final program rules, and steps to be reimbursed.

WHO IS ELIGIBLE FOR A GRH REIMBURSEMENT?

- · Must be 18 years or older
- · Must work or go to a participating college in San Mateo County
- Used an alternative to driving alone to get to work or college on day GRH is needed
- Must have a STAR account and log trip to work or college on my.commute.org

WHAT TYPES OF EMERGENCIES ARE ELIGIBLE FOR A QUALIFIED GRH TRIP?

- · Personal or family illness or emergency
- · Home emergency
- · Eldercare or daycare emergency
- Bicycle theft or breakdown
- Unforeseen change of work schedule
- Inclement weather (for walkers/bicyclists)
- · Carpool partner emergency resulted in loss of ride home

WHAT TYPES OF TRIPS OR REASONS ARE NOT COVERED?

- · Transit delays
- Natural disasters
- · Personal errands or appointments
- Ride to work
- Using a ride-hailing app (e.g. Uber or Lyft) to work or college is not a qualifying alternative commute mode
- Carpool app provider cannot find a match to get the commuter home
- · Non-emergency side trips
- · Business related travel
- Transportation to a doctor or hospital resulting from an on-thejob injury (GRH cannot be used to replace an employer's legal responsibility under workers' compensation regulations.)

HOW WILL I GET HOME?

GRH program participants decide how to get home (e.g. taxi, ride-hailing app, transit, or combination).

STAR users can redeem a GRH reimbursement request via the incentives area in their STAR account. Participants must complete questionnaire provided in reimbursement request and provide GRH trip receipt(s) to receive reimbursement.

HOW DO I REQUEST A REIMBURSEMENT?

Reimbursement requests must be submitted within 30 days of GRH trip.

Visit Commute.org and click on the Guaranteed Ride Home button for program rules and limitations.





10.0 TRANSPORTATION MANAGEMENT ASSOCIATION

Transportation Management Associations (TMAs) are typically private; nonprofit organizations run by a voluntary Board of Directors and a small staff. They help businesses, developers, building owners, local government representatives, and others work together to collectively establish policies, programs, and services to address local transportation problems. The key to a successful TMA lies in the synergism of multiple groups banding together to address and accomplish more than any single employer, building operator, developer, or resident could do alone.

In the City Menlo Park, Commute.org (formerly the Peninsula Traffic Congestion Relief Alliance) operates as a TMA organization. Commute.org provides:

- Shuttle programs
- Carpool and vanpool matching
- Parking management programs
- Trial transit passes
- Emergency ride home programs
- Enhanced bicycle facilities
- Car and vanpool incentives

- Transit advocacy
- Information on local issues
- Teleworking
- Training
- Marketing programs
- Promotional assistance
- Newsletter

Participating in Commute.org is an asset for project employees. The neighboring residents may also participate in Commute.org programs and resources. Commute.org is a clearinghouse for information about alternative commute programs, incentives, and transportation projects affecting San Mateo County businesses.

Commute programs and benefits should be presented to the employees in a comprehensive and proactive manner along with other employee programs. Examples include employee orientation forums, lunch and learn presentations, employee newsletters, management bulletins, e-mails, and related activities.

In the event the City of Menlo Park establishes a TMA that specifically addresses commuter and transportation in the area, the project will become a member of the City's TMA.

Commute.org Employer Resources

Commute.org is available to help employers and property managers develop or enhance their commuter programs. The goal is to encourage employees and tenants to make smart transportation choices. Programs Representatives are available - at no cost - to aid employers with all Commute.org (and 511.org) programs. Below is a list of comprehensive program services and resources available from Commute.org for employers at 40 Middlefield Road site.

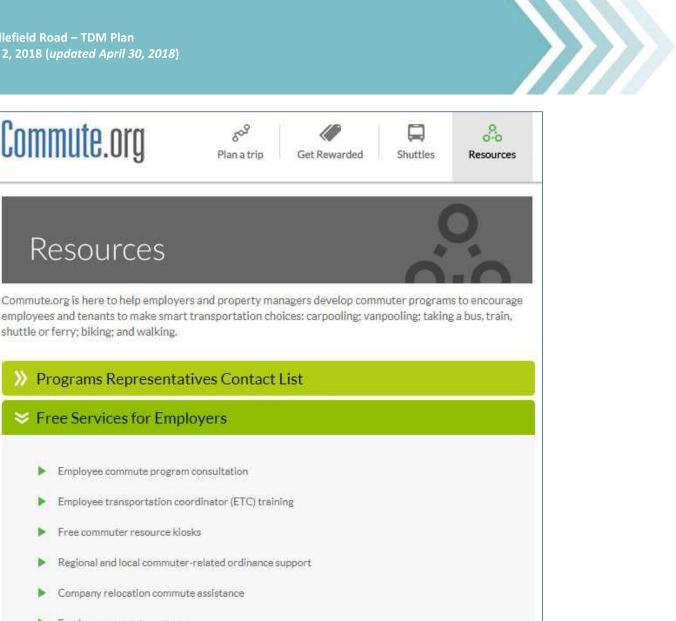
The future tenant(s) will be encouraged to engage with Commute.org on behalf of their employees.



Commute.org

Resources

shuttle or ferry; biking; and walking.



- Employee commute surveys
- On-site bicycle safety education
- Bicycle parking rebate program
- Telework program-building
- Customized marketing materials

>>> Vanpool Programs

- Carpool Advantages for Employers
- Carpool Advantages for Employees
- Bicycle Parking Reimbursement Program





SECTION II – TDM INFRASTRUCTURE & PHYSICAL MEASURES

The following physical infrastructure measures are designed to support alternative transportation commuters. These measures are TDM components that will be added and installed during the construction of the project.

11.0 INFILL DEVELOPMENT

The proposed project would develop an under-used parcel within the existing urban area. The area surrounding these projects is largely developed. Under these conditions, the project would be considered infill development which contributes to trip reduction outcomes. Two percent of all peak-hour vehicle trips will be credited for this infill projects as referenced in the City/County Association of Governments (CCAG) of San Mateo County's Congestion Management Program.

Encourage infill development.	Two percent of all peak hour trips will be credited for each infill development.	Generally acceptable TDM practices (based on research of TDM practices around the nation and reported on the Internet).
----------------------------------	--	---

12.0 PEDESTRIAN AMENITIES

Safe, convenient and well-lit pedestrian paths surround the project and will provide the most direct route to the nearest shuttle or transit connection from the project.

Lighting, landscaping, and building orientation will be designed to enhance pedestrian safety. The creation of a pedestrian-oriented environment ensures access between public areas and private development while strengthening pedestrian and bicycle connections. Pedestrian continuity will also be enhanced by:



- Recessing door and window features of the building to further the walkable area of the sidewalks.
- Incorporating landscaped areas to serve visitors and passersby at the entry to the building.
- Installing planters on the property adjacent to the public right-of-way.





13.0 BICYCLE AMENITIES

The project will have bicycle connections to local facilities and provide Class I and Class II bicycle facilities. The project intends to double the number of bike parking facilities beyond code requirements.

Bicycle Connections

The San Mateo Bicycle map is shown on page 10 shows various bicycle facilities for Menlo Park commuters. Class II bike lanes are identified on Willow Road and portions of Middlefield Road.

The San Mid-Peninsula Bicycle Map, shown on page 9, provide another view of bicycle facilities.

Bicycle Parking – Long-Term (Class I)

Class I (long-term) bicycle parking facilities will be provided on-site for bicycle commuters. One enclosed, secure bike locker and two indoor racks will offer four bike commuters with secure on-site, all-day bike parking. This is a 100 percent increase in Class I bike parking.

Bicycle Parking – Short-Term (Class II)

Class II (short-term) secure bicycle parking facilities will be provided on-site for bicycle commuters and visitors. Class II bicycle parking will be located within 50 feet of a main entrance of a building.

Class II (short-term) secure bicycle rack examples are shown below. One Class II secure bicycle rack will be placed in front of the building providing capacity for two bicycles.

Showers and Clothes Lockers

Showers and clothes lockers will be installed for use by employees who walk or bicycle to work or for those who wish to change clothes after commuting via an alternative mode of transportation.

Shower and changing facilities shall be in the building, within 200 yards of a building entrance. Shower and changing facilities will be provided free of charge for all employees.











14.0 PARKING MANAGEMENT

The willingness to participate in employee ridesharing and the measurable level of actual participation is directly linked to parking convenience and availability.

Parking Reduction

The project applicants propose to reduce the supply of parking by providing one space per 300 square feet of gross floor area, a reduction of 10 parking spaces. Reduced or constrained parking supports trip reduction and TDM efforts and discourages single-occupant vehicle (SOV) commuting by limiting an abundance of easy and convenient parking options. Reduced parking availability significantly enhances the use of alternative transportation mode options. Below is an excerpt from the Zoning Code regarding parking reduction guidelines.

Chapter 16.72 of the Zoning Ordinance establishes parking requirements for commercial and industrial uses based on zoning districts. Section 16.72.010 allows for requests to reduce the amount of required parking for a particular use through an administrative permit. In considering such requests, the guidelines contained in this policy should be used.

The following factors should be considered in approving a request to provide less parking than required by the zoning district:

- Primary use of the building;
- Unique physical features of the building:
- · Estimates of number of employees and customers;
- Transportation demand management measures;
- Hours of operation;
- Shared parking arrangements;
- Availability of on-street parking;
- · Surrounding land uses; and
- Proximity to residential neighborhoods.

Clean-fuel/EV/Carpool Parking Designation

Preferential parking spaces are an excellent incentive that sends a clear message to employees that alternative transportation is not only important but also provides benefits to those who use it.

There will be one designated clean-fuel/electric, carpool or vanpool vehicle parking spaces. Striping on the parking pavement may read "CLEAN AIR VEHICLE/CARPOOL PARKING" or another similar language.



Preferential Parking Space Placement

One effective means of encouraging employees to carpool, vanpool and use a clean-fuel vehicle is to place the one space, referenced above, in preferred parking spaces (premium, convenient locations close to buildings in the shade or within 100 feet of building entrances) for the exclusive use of carpool, vanpool, and clean-fuel vehicles.





15.0 EMPLOYEE TRANSPORTATION FLIER

At the time of leased occupancy, the tenant will be provided with a reproducible and electronic Employee Transportation flier regarding vehicle trip reduction requirements. This flier will include information about shuttle and transit opportunities, commuter resources, bicycle routes, and the regional promotions. The flier will promote transit and shuttle services, carpool ride-matching, transit trip planning, and bicycle route mapping. A sample employee flier is shown below.







16.0 TRANSPORTATION KIOSK

A transportation information board or kiosk will be in a common gathering area (e.g., lobby, employee entrance, break, or lunch room). The kiosk will contain transportation information for commuter programs including the GRH benefit, SamTrans and Caltrain transit schedules, and 511 and Scoop ride-matching. The kiosk may be free standing, wall-mounted, or placed on a counter top.

17.0 PROJECT AMENITIES

Nearby amenities provide employees with a full-service work environment. Eliminating or reducing the need for an automobile to make midday trips increases non-drive-alone rates. Many times, employees perceive their dependence upon the drive-alone mode because of errands and activities

they must carry out in different locations. By reducing this dependence through the provision of services and facilities at the work site, an increase in alternative mode usage for commutebased trips should be realized. A short list of nearby amenities, within walking distance of the projects, include:

Retail	Phone #	Distance Away
 The Willows Market 60 Middlefield Road, Menlo Park, CA 	650-322-0743	157 ft.
 Juses 130 Cowper Street, Palo Alto, CA 	650-207-2556	0.30
Daycare	Phone #	Distance Away
 Imagina Daycare 726 Everett Avenue, Palo Alto, CA 	650-739-5962	0.30





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SECTION III – PEAK-HOUR TRIP REDUCTION ACCOUNTING

No formal traffic assessment was prepared for these projects. However, using Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition resources, the project estimated the site to generate a total of five in and one out during the AM peak hour, and one in and four out during the PM peak hour.

Combined, the AM and PM peak hour trips total 11 peak-hour vehicle trips. Below is the trip generation table which shows the project's estimated total peak-hour trips for the AM and PM periods.

						A	M Pe	ak Hou	r		PM Pea	ak Hou	r
				Daily	Daily	Pk-Hr		Trips		Pk-Hr		Trips	
	ITE			Trip									
Land Use	Code	Size	Unit	Rates	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Land Use													
General Office Building	710	3.6	ksf	11.03	40	1.56	5	1	6	1.49	1	4	5
Estimated Total Project Trips					40		5	1	6		1	4	5

All rates are from: Institute of Transportation Engineers, Trip Generation, 9th Edition

1. Land Use Code 710: General Office Building (average rates, expressed in trips per 1,000 s.f.)

Selected TDM project measures were assessed using the C/CAG trip credit accounting criteria. The C/CAG trip credit accounting determined that project TDM measures will meet the mitigation requirements for all 11 peak-hour trips.

The C/CAG peak-hour accounting summary confirms the project is anticipated to generate nonsignificant levels of trips on the City's circulation network. The applied TDM components planned for the 40 Middlefield Road project fully mitigates peak-hour vehicle trips as shown in the C/CAG accounting summary below.

City/County Association of Governments of San Mateo County (C/CAG) Guidelines

C/CAG requires the applicant to implement TDM programs that have the capacity to reduce the demand for new, highest peak-hour trips. The estimated C/CAG trip credit accounting for the proposed project exceeds the peak-hour trip reduction. The C/CAG accounting shown below indicates that 51 peak-hour trips will be mitigated. The C/CAG trip credit accounting also meets the City of Menlo Park's intent to provide a completed checklist of trip reduction measures.



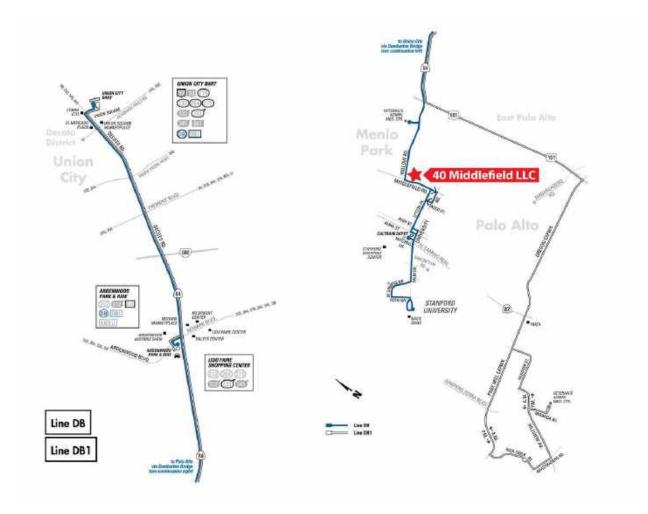
TDM Measures	Quantity	Credit Ratio	Trip Credit
Infill Development (2% of all peak-hour trips)	0.22	1	0.22
Bicycle Parking - long-Term (Class I) (4)			
Bicycle Parking - Short-Term (Class II) (4)			
Total Bicycle Storage	8	0.33	3
Showers/Clothes Lockers	1	10	10
Preferential Clean Fuel/Carpool Parking Space	1	2	2
Parking Reduction	10	1	10
TMA Participation (Commute.org)	1	5	5
Guaranteed Emergency Ride Home program	3	2	6
Transportation Board/Kiosk(s)	1	5	5
List of TDM Measures/Transportation Action Plan	1	10	10
Total C/CAG Trip Credits			51

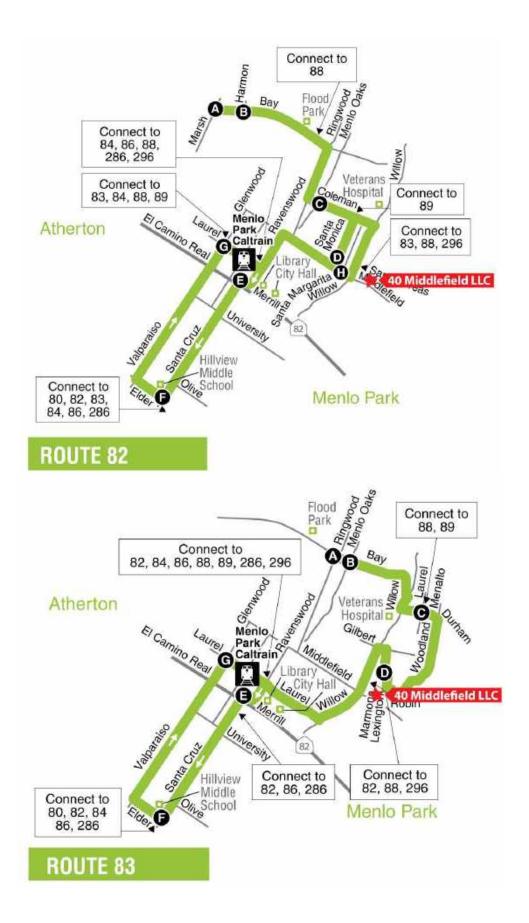


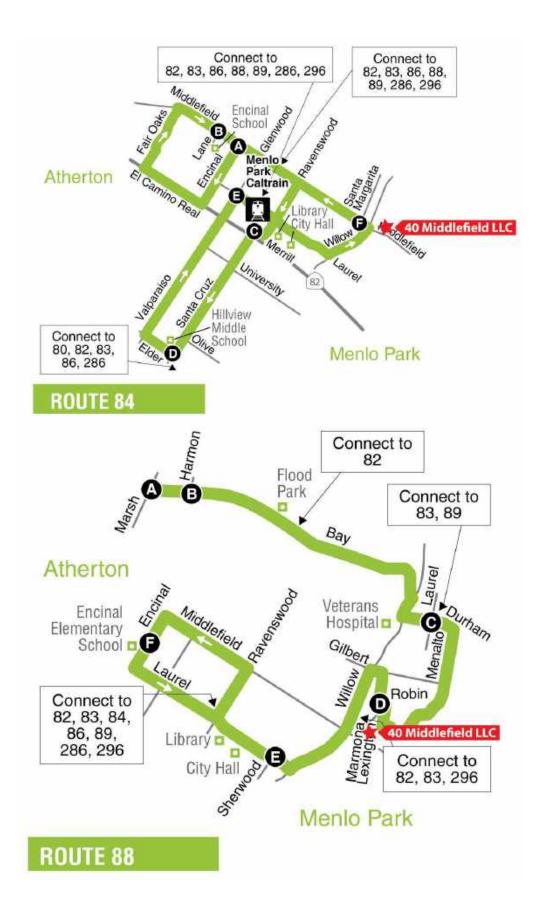
ATTACHMENTS

Dumbarton Express (AC Transit) SamTrans Route 82 SamTrans Route 83 SamTrans Route 84 SamTrans Route 88 SamTrans Route 296 SamTrans Route 397 Willow Road Shuttle M2-Belle Haven Midday Shuttle List of Nearby Amenities

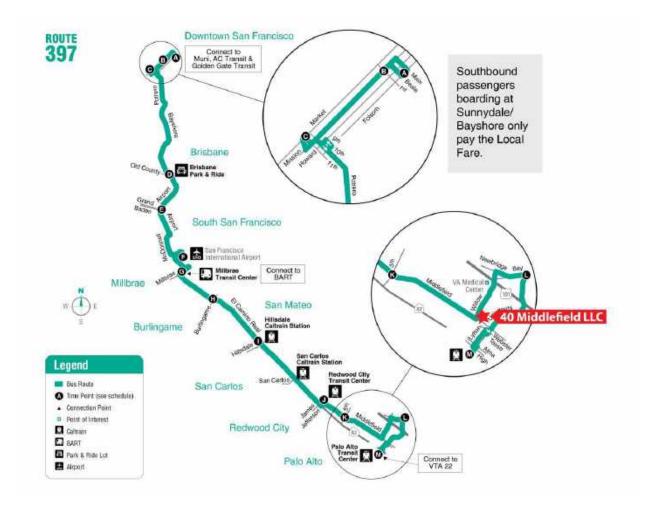
TDM SPECIALISTS QUALIFICATIONS

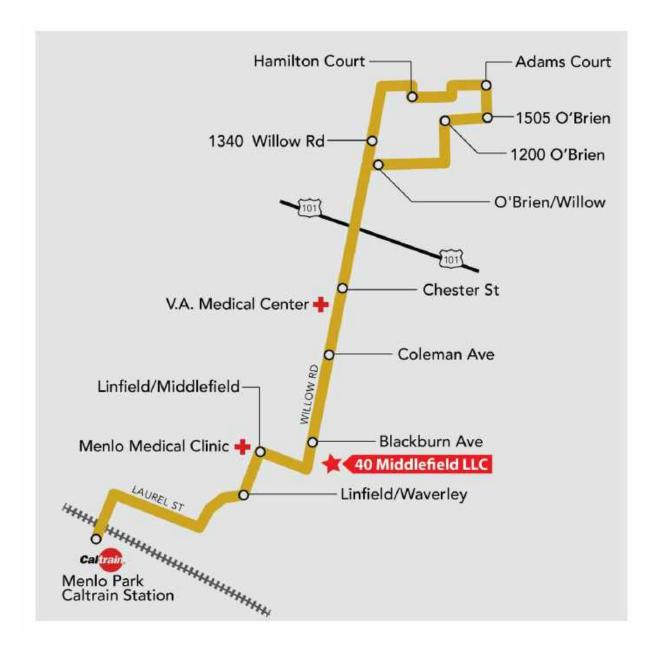














List of Nearby/Offsite Amenities 40 Middlefield Road, Menlo Park, CA

Retail		Phone #	Distance Away
4 The Willows 60 Middlefie	s Market eld Road, Menlo Park, CA	650-322-0743	157 ft.
4 Juses 130 Cowper	Street, Palo Alto, CA	650-207-2556	0.30
Daycare		Phone #	Distance Away
Imagina Day 726 Everett	ycare Avenue, Palo Alto, CA	650-739-5962	0.30

ATTACHMENT G

From: Lauri Hart [mailto:lauriahart@gmail.com]
Sent: Wednesday, November 7, 2018 4:57 PM
To: Smith, Tom A <tasmith@menlopark.org>
Cc: Joseph A Zott <jaz@zott.com>
Subject: RE: 40 Middlefield Updated plan submission

Yes, I'm able to access the revised plans.

After a quick review, my concern remains the width of the service road. Particularly, there is a curb at the back edge of the driveway which parallel to the market parking lot. The planter/curb protecting the parking space closest to the service road is the focus of my concern. It isn't apparent what the distance from the planter/curb is from the far edge of the service road,

If I remember correctly, the fire regulations require the width to be 20' in the service road for access. It isn't clear from any of these drawings what the width is at that point. I would like the developer and planning to verify that there is the required 20' width is correct at the planter curb and at the two points of our house and garage that are closest to the service road on our side. These three areas are the ones that are most critical in assuring safety of emergency vehicles requiring access to either the residences or market.

I'd like to emphasize the 20' measurement needs to be made based on the location of our existing residence and garage, rather than the plat map service road boundaries, as our buildings clearly have a constructive easement having been in their current location since 1925 according to city and county records.

I'll continue to review the plans, but this was popped out at me initially.

Thanks,

Lauri Hart

ATTACHMENT I



