PLANNING COMMISSION STAFF REPORT

APPLICATION: **TTM73257/CUP2015-03** **AGENDA ITEM:** **PH-2**

PREPARED BY: **Ili Lobaco**
Associate Planner

MEETING DATE: **May 13, 2015**

SUBJECT: Tentative Tract Map No. TTM73257/Conditional Use Permit CUP2015-03
725 East Lemon Avenue

REQUEST: Construct a 4-unit, two-story, detached Planned Unit Development in the RM3500 (Residential Medium Density) Zone.

APPLICANT: Lanno Lemon LLC
18472 Colima road, Suite 222
Rowland Heights, CA 91748

ENVIRONMENTAL DETERMINATION: Categorical Exemption (Class 3)

BACKGROUND: The applicant is requesting approval to construct a detached 4-unit, planned unit development (PUD). The subdivision of the property requires the approval of a tentative tract map and the construction of a planned unit development requires approval of a conditional use permit (CUP).

This item was originally advertised for the December 10, 2014, Planning Commission meeting but was continued to the January 2015 meeting as per the request of the applicant. Several persons spoke at both the December and January meetings. Due to neighborhood concerns, at the January 2015 meeting the applicant asked for a continuance to the March meeting to allow time to address these concerns. On March 3, 2015, the applicant submitted a letter indicating they were withdrawing the application to explore different options. Upon submittal of this new application, a neighborhood meeting was held on April 22, 2015 where neighbors reviewed the new plans and provided comments and concerns in an informal setting. The meeting resulted in a positive exchange of ideas that have been incorporated into the new plans for review at this meeting.

SUBJECT PROPERTY: The property is located on the north side of East Lemon Avenue between Shamrock and Mountain Avenues. The lot measures 100' wide and approximately 140' deep for a lot area of 14,000 square feet and is developed with a 1,297 square foot single-family residence. The zoning for the parcel is RM3500 (Residential Medium) Density as is the zoning to the east and the west. To the north the zoning is RL (Residential Low) and across the street the zoning is PQP (Public Quasi Public). Of the 22 parcels on the north side of Lemon Avenue between Shamrock and Mountain Avenues, more than half (13) are developed with two units. Recreation Park is located across the street to the south.

DISCUSSION/ANALYSIS:

Site Plan
The development of four (4), two-story, detached units is proposed. The lot will be subdivided into five parcels, one parcel for each unit, with the fifth parcel consisting of the common area that will be managed by the homeowner's association. The two street facing units are setback 30' feet from the property line at Lemon Avenue (29'7" is the average setback of the block). The other two units are to the rear and are accessed via a 12' paved driveway down the center of the property.

The units meet all zoning code requirements in relation to side yard setbacks, rear yard setbacks, separation requirements and recreation space. Side yard setbacks required for the units are a minimum 10% of the parcel width. This parcel is 100' wide so a minimum 10' side yard setback is required for the first and second stories. The proposed development meets or exceeds the minimum required separation between structures with at least 10' for the first floor and a minimum of 15' for the second floor. Some of the units exceed the 15' second story separation by providing from 18' to 34'10". The rear yard (north property line) setback requires a minimum 20' setback as is being proposed.

A decorative block wall or approved alternative is required as part of the conditions on Data Sheet 1 and shall be provided adjacent to the rear and side property lines but outside of the front setback area. There currently exists a combination of wall/fencing along all the property lines that include block, red brick and wood fencing. Planning Condition #4 requires the applicant to make a "good faith effort" to work with the adjacent property owners to prevent the installation of a double wall.

The site has several mature oak trees on the property. The proposed development will preserve the seven on-site oaks trees that vary from 6" to 24" diameter in size. The applicant provided a Protected Tree Survey Report addressing the protection of the trees. The site plan submitted shows the location and size of the oak trees.

Private Open Space
The RM Zone requires that a minimum of 40% of the unit's size be provided in private recreational space of which 50% of that can be provided in common area. This development will be able to provide all of the 40% required recreational space adjacent to each unit. For this development private recreational spaces are required to be between 503 to 631 square feet. This project provides between 506 square feet to 1,515 square feet of recreational space.

Building Elevations/Floor Plan
Four different floor plans are proposed that vary in size between 1,256 to 1,576 square feet. The maximum allowable living space allowed on the parcel is 40% of 14,000 square feet or 5,600 square feet. The project provides for 5,594 total square feet of living area. Two of the units will have three bedrooms and three bathrooms while the other two will have four bedrooms and three bathrooms. An attached two-car garage will be provided for each unit. Guest parking is not required for this project because there are only four units proposed. On-site guest parking is only required once six or more units are proposed. Due to neighborhood concern about parking congestion on Lemon Avenue, the applicant has incorporated two on-site guest parking spaces.

The applicant has provided new street building elevation options for this proposal. In previous discussions regarding the Spanish Colonial architecture, the neighbors indicated that they wanted to see a different style of home. The new street facing elevations now incorporate a full width porch across the front. The homes will have a stucco finish, wood

front door, arched and rectangular windows, concrete tile roofing, and shutters that will flank the second story windows. The applicant will also provide the option of the Spanish Colonial architecture by providing one of each style for the front facing units.

Conclusion

The development will result in the addition of four homes that will be an attractive addition to the neighborhood and community. The project meets all the development guidelines for this multi-family zoned property and will be improved with additional landscaping while preserving the seven oak trees located on the property.

RECOMMENDATION: Staff and the Development Review Committee recommend approval of the 4-unit Planned Unit Development. If the Planning Commission concurs with this recommendation then, following the public hearing, the adoption of the following resolution is appropriate:

The Planning Commission of the City of Monrovia hereby finds, determines and resolves as follows:

1. Pursuant to the California Environmental Quality Act ("CEQA") and the City's local CEQA Guidelines, the Planning Commission in the exercise of its independent judgment finds that TTM73257/CUP2015-03 is categorically exempt from CEQA under Class 3.

2. The Planning Commission finds that the custodian of records for all other materials that constitute the record of proceeding upon which this decision is based is the Planning Division Manager. Those documents are available for public review in the Planning Division located at 415 South Ivy Avenue, Monrovia, California, 91016.

3. The Planning Commission in the exercise of its independent judgment hereby makes the findings listed on attached Data Sheet No. 3 for TTM73257/CUP2015-03, which are incorporated herein by this reference.

4. The Planning Commission hereby recommends approval to the City Council of TTM73257/CUP2015-03, subject to the attached Planning Conditions on Data Sheet No. 1, Public Works Conditions on Data Sheet No. 2, and recommendations in the Staff Report, all of which are incorporated herein by this reference.

MOTION TO APPROVE:

Close the public hearing and adopt the Resolution recommending approval to the City Council of Tentative Tract Map No. 73257/Conditional Use Permit CUP2015-03 as presented in the Staff Report.

DATA SHEET 1 Planning Conditions

TTM73257/CUP2015-03 **725 East Lemon Avenue**

Development of the subject property and operations on the site must remain in substantial conformance at all times with the request and application forms and plans for TTM73257/CUP2015-03, a four-unit PUD submitted by the applicant, as approved by the Planning Commission and placed on file in the office of the Planning Division, except as modified by the conditions imposed by the Planning Commission and by subsequent modifications determined by the Planning Division Manager to be in substantial compliance with the conditions of approval. The term "Applicant" as used herein shall include the applicant, the property developer and all successors in interest to this conditional use permit and tract map.

DEVELOPMENT STANDARDS

1. A final materials board shall be submitted to the Planning Division Manager for review and approval prior to building permit issuance. The final materials board shall include a breakdown by unit of materials to be used and samples/examples of siding, stucco, stone veneers, windows, exterior doors, garage doors, roofing, color schemes and exterior light fixtures.

2. A decorative block wall or approved alternative shall be provided by the Applicant adjacent to the rear and side property lines but outside of the front setback area. The property line wall must be a minimum of five feet above the subject property's finished grade and a minimum of five feet and a maximum of six feet above the adjacent property's grade, measured in accordance with the Monrovia Municipal Code. The walls shall be installed before building construction begins.

3. All private recreation areas must be enclosed by 5' to 6' high wood fence or decorative block wall or approved alternative. All proposed fences shall be shown and indicated on the submitted site plan.

4. The Applicant shall make a good faith effort to work with adjacent property owners (that have existing walls/fences) to avoid a double wall condition, and provide a single wall along the project's perimeter. The applicant shall notify by mail all contiguous property owners at least 30 days prior to the removal of any existing walls/fences along the project's perimeter.

5. If a driveway gate is proposed at a later date the Development Review Committee shall consider the request after providing written notification to property owners within a 300' radius of the site. The cost of such notification shall be paid in advance by the Applicant.

6. An area for storage of individual trashcans shall be provided on a paved surface and screened and shall be shown and indicated on the submitted site plan.

7. A level concrete patio shall be provided for each unit in the private recreation area and shall be indicated on the grading plan and approved by the Development Review Committee prior to the start of grading.

8. Placement and design of mailboxes shall be reviewed and approved by both the U.S. Postal Service and the Planning Division prior to installation.

9. No roof mounted mechanical equipment shall be permitted.

10. Ground level mechanical equipment shall be placed a minimum of 5' from the interior property lines and shall be completely screened with landscaping. Ground level mechanical equipment shall not be located within the front setback.

11. Electrical power lines, telephone lines, and any other transmission lines (including, without limitation, cable television lines, data transmission lines, communication lines, other utility lines, etc.) to and from the development, and within the development, shall be placed underground and provided to each unit.

12. All utilities and structures such as gas meters, electrical meters, telephone pedestal-mounted terminal boxes, surface mounted electrical transformers, or other potential obstructions shall be noted on the plans with provisions for appropriate screening.

13. Plans showing all exterior lighting shall be submitted to the Planning Division for review prior to building permit issuance and no exterior lighting shall be installed without the approval of the Planning Division Manager. All exterior lighting shall be designed, arranged, and installed so as to confine direct rays onto the premises and to direct light away from adjacent structures.

LANDSCAPING

14. The Applicant shall submit plans which show all on-site trees to remain (the "Tree Retention Plan"). The Tree Retention Plan shall be submitted simultaneously with the grading plan, and be drawn to the same scale as the grading plan. The Tree Retention Plan shall be prepared or reviewed by a licensed Landscape Architect or certified Arborist and recommendations of the licensed Landscape Architect or certified Arborist shall be incorporated into the Tree Retention Plan prior to submittal to the City. The Tree Retention Plan shall be subject to the review and approval of the Planning Division Manager. After reviewing the Tree Retention Plan, the Planning Division Manager may require site design alterations to accommodate trees that will be preserved. Recommendations in the approved Tree Retention Plan shall be incorporated into the Landscape and Irrigation Plan.

15. The Tree Retention Plan shall include all trees that are to remain on-site (the "Retained Trees"). The Tree Retention Plan shall incorporate any necessary measures needed to protect the Retained Trees during construction or post-construction periods. The Tree Retention Plan shall include at minimum the following:
    a. Tree protection fencing requirements. Each Retained Tree shall have a protective fence installed, surrounding the base of the tree a distance determined by the Landscape Architect or certified Arborist, prior to the start of construction. Such fencing shall remain in place during construction. Grading operations within the drip line of the Retained Trees shall be minimized to prevent soil compaction around the trees and to protect them from damage.

b. Protection Measures. Any protection measures needed for the protection and preservation of the Retained Trees and all trees on adjacent properties on or near common property lines of the subject site, including any City parkway trees, shall be included in the Tree Retention Plan.

c. Recommendations on anticipated pruning of trees. Pruning shall be under the direction of a certified arborist if pruning occurs as part of the construction process.

16. A Landscape and Irrigation Plan prepared by a Landscape Architect shall be submitted to the Planning Division for plan check showing the size, type, and location of all planting areas and shall incorporate the Tree Retention Plan and the following conditions of approval:
    a. Landscaping shall be a combination of 24" and 36" box trees, shrubs, groundcover, and turf.
    b. All landscaping shall be maintained by a permanent automatic irrigation sprinkler system.
    c. Any unimproved City right-of-way contiguous with the property shall be landscaped by the Applicant and incorporated into the required landscape plan.
    d. Hardscape improvements shall be provided in common areas.

17. A landscape documentation package pursuant to the requirements of AB1881 and the Model Water Efficient Landscape Ordinance shall be submitted to the Planning Division for approval prior to landscape construction. A Landscape Certificate of Completion shall be submitted to the Planning Division at the completion of the installation, prior to request for a final inspection and Certificate of Occupancy.

PARKING

18. All paved parking and driveway areas shall be surfaced with Portland cement concrete (3-1/2" minimum thickness) or approved alternative.

19. All driveway surface areas shall incorporate accent treatment throughout the design. Accent treatment shall include stamped concrete or other approved treatment.

CONSTRUCTION SITE REQUIREMENTS

20. Provide temporary perimeter fencing with view obscuring material during construction. If graffiti is painted or marked in any way upon the premises or on an adjacent area under the control of the Applicant (including without limitation, any temporary perimeter construction fencing or the permanent wall), the graffiti shall be removed or painted over by Applicant within twenty-four hours, unless any law in effect imposes a shorter time period. Fencing may be removed prior to landscape installation with Planning Division approval.

21. One waterproof sign (36" x 48") in both English and Spanish noting construction hours and a phone number for contact shall be posted at the front of the site prior to grading or construction.

GENERAL REQUIREMENTS

22. A draft copy of the Conditions, Covenants, and Restrictions (CC&R's) shall be provided in electronic form to the Planning Division for review. The CC&R's, acceptable in form and substance to the City Attorney, must meet the approval of the Planning Division Manager and City Engineer, and shall be recorded against each unit with the Los Angeles County Recorder's Office. No Certificate of Occupancy will be issued by the City until the CC&R's are approved and recorded. The CC&R's shall include that a homeowner's fee be collected by the Board of Governors of the Homeowners Association (HOA) for maintenance of the front yard and common landscaping, walls/fences, the driveway, and all exterior finishes and roofing. Additionally, the CCR's shall incorporate all of the provisions listed in MMC §17.44.050(C)(4)(a) as well as provisions imposing and enforcing the following conditions of approval:
    a. The CC&R's shall not be modified or revoked without the prior written approval of the City of Monrovia.
    b. All trees indicated on the approved Landscape and Irrigation Plan and/or Tree Retention Plan shall be retained. Removal of any trees requires the approval of the Planning Division Manager.
    c. The pruning of the oak trees shall be under the direction of a Certified Arborist.
    d. Garages shall be used for the storage of vehicles only and shall not be converted for livable, recreational or storage usage in a way that would prohibit its primary use as a two-car garage.
    e. Maintenance of common landscaping and irrigation includes all areas not in enclosed private yard areas.
    f. Trash cans shall be stored in private yard areas.

23. In addition to Planning (Data Sheet No. 1) and Public Works (Data Sheet No. 2) conditions of approval the Applicant shall also comply with all requirements of the Monrovia Municipal Code, Building Division and Fire Department that are directly applicable to the project.

24. Any violation of these conditions of approval or the Monrovia Municipal Code may be subject to the Administrative Fine Ordinance, other available remedies and/or revocation or modification of this permit at the discretion of the City Attorney and City Prosecutor.

25. The Applicant shall, within 30 days after approval by the City Council, submit to the Community Development Department his/her written consent to all of the conditions of approval contained in Data Sheet Numbers 1 and 2. Conditional Use Permit CUP2015-03 and Tentative Map No. 73257 shall be void and of no force or effect unless such written consent is submitted to the City within the 30 day period.

26. The Final Map for the proposed subdivision shown on this Tentative Tract Map No. 73257 must satisfy the requirements of Section 16.16.010 et seq. of the Monrovia Municipal Code and be filed with and deemed a complete filing by the City Engineer, and the use or development to which the Conditional Use Permit applies must begin, within twenty-four months after the Tentative Map was conditionally approved, or TTM 73257 and CUP2015-03 will expire without further action by the City.

27. All of the above conditions shall be complied with prior to issuance of the Certificate of Occupancy, unless an earlier compliance period is specified as part of a condition.

28. Indemnification. As a condition of approval, Applicant agrees to defend, indemnify, protect and hold harmless City, its officers, officials, employees, agents and volunteers from and against any and all claims, actions, or proceeding against the City, its officers, officials, employees, agents and/or volunteers to attack, set aside, void or annul, an approval of the City, Planning Commission or City Council concerning these permits and the project. Such indemnification shall include damages, judgments, settlements, penalties, fines, defensive costs or expenses (including, but not limited to, interest, attorneys' fees and expert witness fees), or liability of any kind related to or arising from such claim, action, or proceeding. The City shall promptly notify the Applicant of any claim, action, or proceeding. Nothing contained herein shall prohibit City from participating in a defense of any claim, action or proceeding in accordance with the Subdivision Map Act.

DATA SHEET 2 Public Works Conditions

TTM 73257/CUP2015-03

725 E. Lemon Avenue

All conditions shall be met prior to the final approval of the project.

The Applicant shall submit a tentative tract map and final tract map as required by Monrovia Municipal Code (MMC) Chapter 16 – Subdivisions.

Development shall be subject to the conditions of approval listed below, and if so indicated, the condition(s) shall be satisfied before the Final Map is filed in the Department of Public Works for review and approval. The term "Applicant" shall include, without limitation, the applicant, the property developer, the property owner, and all subsequent owners of each parcel.

Engineering Conditions

1. Prior to any development, the Applicant shall provide the following:
    a. Soils and Geotechnical Report
    b. Hydrology Report
    c. SUSMP Plan
    d. Local SWPPP Plan
    e. Tract Map
    f. Site Plan
    g. Grading Plan
    h. Utility Plan

2. Submit existing site plan, topographic map of the project site, grading, drainage and utility plan to the Community Development Department for review and approval. The plans shall indicate existing and proposed structures, miscellaneous facilities if applicable and all utilities applicable within the project site. The plans shall be prepared on a maximum 24" x 36" sheets with City standard title block stamped and signed by a Registered Professional Civil Engineer in the State of California. The submittal of the plans shall include: a hydrology report, a geotechnical report, required design calculations, a cost estimate, a plan check fee, and an inspection fee. The final submittal for final approval shall include a Mylar of the approved grading, drainage and utility plans. The applicant shall use the assigned drawing number G-877 for this project. Partial or incomplete submittals will not be accepted.

3. All submitted plans by the Applicant such as but not limited to site plans, grading plans, drainage plans, utility plans and street improvement plans shall be coordinated for consistency and shall be approved by the City Engineer prior to the issuance of any construction permit. Applicant shall pay all fees for Engineering Divisions services such as plan check fee and construction inspection fee as applicable.

4. Prior to filing the Final Map with the Community Development Department, the Applicant shall provide a current title report for the project site. The title report and guarantee is required and such documents shall show all fee interest holders; all interest holders whose interest could ripen into a fee; all trust deeds, together with the name of the trustee; and all easement holders.

5. All easements and dedications must be shown on Final Map in accordance with Section 16.16.130 of the Monrovia Municipal Code prior to approval by the City Council. This includes the location, owner, purpose and recording reference for all existing easements.

6. A Final Map prepared by or under the direction of a Licensed Land Surveyor or Licensed Civil Engineer legally authorized to practice land surveying in the State of California must be filed in the Department of Public Works for review and approval and processed through the City Engineer prior to being filed with the Los Angeles County Recorder.

7. Prior to filing the Final Map (TM 73257) with the Community Development Department for review and approval, the Applicant's surveyor or engineer shall set durable monuments to the satisfaction of the City Engineer in conformance with Section 66495 of Subdivision Map Act.

8. Prior to filing the Final Map (TM 73257) with the Department of Public Works for review and approval, the Applicant shall provide street improvements adjacent to the proposed land division to the satisfaction of the City Engineer. Improvements shall include, but are not limited to, driveway modifications, new driveways, removal of abandoned driveways, sidewalk improvements, ADA improvements and compliance to latest requirements, replacement of damaged curb and gutter, and street resurfacing and/or slurry seal of street pavement within the boundary of the dedicated Right-of-Way property as directed by the City Engineer. If the improvement work has not been completed and/or survey requirements have not been met all as set forth in Chapter 16.28 and to the satisfaction of the City Engineer, then the Applicant shall file an agreement and bonds in accordance with Chapter 16.32 of the Monrovia Municipal Code (MMC). Improvement plans and necessary letters of credit, cash and/or bonds to secure the construction of all public improvements shall be submitted by Applicant and approved by the City Engineer prior to the issuance of any construction permit.

9. Applicant shall remove and replace any curb, gutter, sidewalk, driveway approach or street pavement found by the City Engineer to be broken, uplifted or damaged. Applicant shall construct improvements as required to match existing improvements on adjacent properties. All ADA requirements shall be satisfied by the Applicant. These conditions apply on public right-of-way along property frontage. All work such as, but not limited to demolition, construction and improvements within the public right-of-way shall be subject to review and approval by the City Engineer, and will require construction and encroachment permit from the City's Public Works Department, prior to start of any construction. All work within the public right-of-way shall be in accordance with applicable standards of the City of Monrovia, Standard Specifications for Public Works Construction ("Green Book", latest edition) and the Manual on Uniform Traffic Control Devices (MUTCD, latest edition), and further that construction equipment ingress and egress be controlled by a plan approved by the City Engineer.

10. The City requires the restoration of the existing pavement after utility installation. Restoration is required from the outer limits of the area covering and encompassing all the utility cuts as shown on the plans, but actual limits shall be determined out in the field by City Engineer. Restoration of asphalt pavement may be up to 2-inch pavement grind and 2-inch asphalt overlay, removal and replacement of broken AC or PCC pavement, cape seal, slurry seal Type II, or combination of any of the method of pavement restoration as directed by the City Engineer. The scope of work shall be mutually agreed by the City Engineer and the Applicant prior to approval of any construction plans and/or issuance of any Public Works permits.

11. Prior to start of any construction activity, Applicant shall provide a Transportation Plan to the Public Works Department formalizing the approved truck route, staging areas, radio control points and manpower, street sweeping activities along with loading/unloading of supplies/materials and parking for contractors and employees in/on and around the site prior to issuance of any demolition, grading, construction or encroachment permits for the project. No construction activity will be allowed without first getting approval of all required submittals to the Public Works Department.

12. Applicant shall provide the Engineering Division with a soils and geotechnical report. The soils investigation shall evaluate the soils percolation characteristics for storm drainage considerations. Grading plan shall conform to MMC Chapter 15.28 and be prepared on a maximum 24" x 36" sheets with City title block. Required improvements may be shown on the grading plan along with site drainage.

13. All grading is to be done under the supervision of a licensed engineer qualified in soils field. Upon completion of the grading, the Soils Engineer shall file a certification with the Community Development Department that he/she supervised the grading and that the grading was done pursuant to the City of Monrovia Municipal Code, Chapter 15.28, and the grading plan approved by the City.

14. Applicant shall provide an analysis and construct required infiltration and/or treatment of storm water from impervious surfaces prior to reaching direct connections leading to the main storm drainage system.

15. All required mitigation measures identified in the soils engineer's and geologist's reports shall be incorporated into the grading/drainage plans and a made a part thereof. Drainage devices shall be designed to handle and prevent erosion from damaging the proposed structure and surrounding neighborhood.

16. The lot shall handle its own drainage and be handled on site. An alternative shall infiltrate or percolate drainage on site, thereby not impacting off site drainage structures. Site drainage discharge shall be subject to the requirements of the City of Monrovia Storm Water Management and Discharge Control Ordinance.

17. With the submittal of a grading plan for plan check, Applicant shall provide geotechnical report that addresses earthwork and foundation recommendations, including but not limited to, earthwork, retaining walls and foundation construction adjacent to the existing structures located on the property. The geotechnical report shall include data regarding the nature, distribution and strengths of existing soils, conclusions and recommendations for grading procedures, design criteria for and identified corrective measures, and opinions and recommendations regarding existing conditions and proposed grading. The report shall also include subsurface geology of the site, degree of seismic hazard, if any, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, opinions and recommended design criteria to mitigate any identified geologic hazards including locations of surface and subsurface fault lines in the area as applicable.

18. Applicant shall submit a utility plan showing all proposed utility cuts for services such as Water, Sewer, Fire Department Stand Pipe, Gas, Edison, Telephone, Cable TV, etc. The Utility plan shall be submitted and approved prior to issuance of grading permits. Private utility plans including sewer, water, gas, including all abandoned, or to be removed facilities, etc. for the proposed development shall be submitted for review and approval by the City Engineer.

19. This project shall obtain water service from the City of Monrovia. Apply to the City's Utilities Division for new water services and for removal of all unused meters by the City. Deposit fee will be required, construction costs will be based on actual time and material incurred by the City.

20. Applicant shall install sanitary sewers to connect to Monrovia's sewer system to serve the entire development in accordance with all applicable standard sewer drawings such as but not limited to new minimum 6 inch lateral(s) with clean-out(s) at property line per City standard drawing S-215 and S-225 requirements and to the specifications of the City Engineer. The Applicant shall connect all buildings to Monrovia's sewer system. Cap off all abandoned laterals at the connection point from the main line to the satisfaction of the City Engineer. Indicate on the Site/Grading/Utility plan the work to be done by the Applicant.

21. The Applicant shall comply with the requirements of MMC Section 13.12.015 Non-Storm Water Discharges, Section 13.12.02 Deposit or Discharge of Specified Substances Prohibited, Section 13.12.030 Grease Traps Required and Section 13.12.040 Maintenance of Sewer Laterals. All sewer laterals shall be maintained by the owner of the property served by such lateral in a safe and sanitary operating condition so that there is no seepage of waste at any point up to and including the junction of the sewer lateral and sewer main so that passage of waste through the lateral to the sewer main is free from stoppage and obstruction; all devices and safeguards required for the operation of sewer laterals shall be maintained in good working order. The Applicant shall provide the Department of Public Works a copy of a closed circuit television inspection video report of the condition of the existing sewer lateral and any newly installed sewer lateral. A City Public Works Inspector must be present on-site to witness all CCTV video inspections. Prior to CCTV inspection, the Applicant shall notify the Department of Public Works at least 24-hours in advance, requesting to have the Public Works Inspector on site to witness the CCTV inspection. Payment of applicable fee is required on all CCTV inspection request. Public Works will review the CCTV report, and if the sewer lateral needs repair, it shall be completed to the satisfaction of the City Engineer prior to commencement of the applicant's operation or prior to issuance of certificate of occupancy.

22. For projects one (1) acre or greater, project must be covered under the General Construction Activity Stormwater Permit (GCASP). Developer must submit a Notice of Intent and Waste Discharge's Identification (WDID) number as evidence of having applied for a GCASP before the City will issue a grading permit.

Environmental Conditions

Based upon the requirements of the City's Stormwater Management Ordinance, MMC 12.36 and the Los Angeles County Municipal Storm Water National Pollutant Discharge Elimination System (MS4 NPDES) Permit issued by California Regional Water Quality Control Board, Los Angeles Region, the following shall be incorporated into the project application:

The Applicant shall be responsible for the following:

- Minimize impacts from storm water runoff on the biological integrity of natural drainage systems and water bodies in accordance with requirements under the California Environmental Quality Act (California Public Resources Code Section 21100), Section 13369 of the California Water Code, Sections 319, 402(p), and 404 of the Clean Water Act, Section 6217(g) of the Coastal Zone Act Reauthorization Amendments, Section 7 of the Environmental Protection Act, and local governmental ordinances.

- Maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground.

- Minimize the amount of storm water directed to impermeable surfaces.

- Minimize pollution emanating from parking lots through the use of appropriate treatment control using best management and good housekeeping practices.

General Conditions/Packet Information
Based on the Development Planning Program and Storm Water Program Planning Priority Checklist (Form PC), this project is **NON-exempt**, and the Applicant **SHALL prepare a Standard Urban Stormwater Mitigation Plan (SUSMP)** and demonstrate mitigation of the following options:

- The project shall require that post-construction Treatment Control BMP's incorporate, a volumetric treatment control design standard, or both, to infiltrate, filter or treat storm water runoff from the project to capture the first ¾ inch of storm runoff.
- SUSMP must determine and provide pervious and impervious for pre-development and post development created by the project.
- Control of Impervious Runoff
- Roof down spouts must not be directed to trash enclosures or material storage areas. Down spouts should be discharged to gravel or heavily vegetated areas whenever possible.
- Trash containers shall be enclosed to prevent discharge of trash, and be equipped with lids, or screened, roofed or walled, and runoff should be diverted around trash areas to avoid flow through.
- Trash enclosure drainage should be directed to vegetative areas whenever feasible.
- Storm drains should be stenciled. All yard drains and catch basins to the street or storm drain system must be stenciled or labeled with the "No Dumping – Drains to Ocean" logo or equivalent.
- The project shall provide verification of maintenance provisions for structural and treatment control BMP's, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits.

The following forms have been provided to the applicant:

A. Brochure: City of Monrovia Planning Developer's Guidelines and Review (Applicant Retains)
B. Stormwater Best Management Practices (BMPs) – General Construction & Site Supervision
C. Development/Planning – Minimum Project Requirements (Applicant Retains)
D. Form PC – Storm Water Program Planning Checklist (Applicant Returns)
E. Form P1 – General Project Certification (Applicant Returns)
F. Form OC1 – Minimum BMPs for all Construction Sites
G. Form LS-1 – Local Storm Water Pollution Prevention Plan (Applicant Returns)
H. Form LS-2 – Local Storm Water Pollution Prevention Plan, BMP Table (Applicant Returns)
I. Form LS-F – Sample Project Site Diagram, Local Storm Water Pollution Prevention Plan (Applicant Retains)
J. Self Inspection Forms (Applicant Retains)
K. Form LS-3 – Wet Weather Erosion Control Plan (Applicant Returns, if applicable)

23. This project is subject to the MS4 NPDES' Standard Urban Stormwater Mitigation Plan (SUSMP) regulations. The Applicant must submit a site-specific drainage concept and

stormwater quality plan to mitigate post-development stormwater.

24. The Applicant shall integrate Best Management Practices to ensure compliance with NPDES guidelines and the City's Stormwater Management Ordinance, MMC 12.36 to the satisfaction of the City Engineer, prior to the issuance of the grading permit. The design, implementation, construction activities and maintenance of the management devices shall mitigate and reduce pollutants in storm water discharges to the maximum extent practicable and shall be identified on a "site specific mitigation plan". Site Specific Mitigation Plan must specifically address and provide best management practices (BMPs) either structural or non structural to mitigate pollutants.

25. The Applicant shall obtain the approval of a Drainage BMP plan (which can also be included as part of the grading and drainage plan). The BMP must address run-off and pollutants of concern including, but not limited to trash/litter, fossil fuels, metals, bacteria, toxics, nutrients, and sediment. The Drainage BMP plan shall be reviewed and approved to the satisfaction of the City Engineer prior to the issuance of grading permit. The plans shall be prepared on a maximum 24" x 36" sheets with City title block. The submittal of the plans shall include: a cost estimate for the installation of structural BMP's, a plan check fee, and an inspection fee. The final submittal shall include a Mylar of the approved Drainage BMP plan. Partial or incomplete submittals will not be accepted.

26. The Applicant shall comply with NPDES guidelines and the City's Stormwater Management Ordinance, MMC 12.36 to the satisfaction of the City Engineer, prior to commencement of the applicant's operation. The design, implementation, construction activities and maintenance of the management devices shall mitigate and reduce pollutants in storm water discharges to the maximum extent practicable and shall be identified on a "site specific mitigation plan". Site Specific Mitigation Plan must specifically address and provide best management practices (BMPs) to mitigate pollutants.

27. In compliance with AB 939, any waste and recyclables that are generated must be reported. The applicant must work with the hauler to fulfill this on-going condition. The report must provide the following information: the total tonnage collected, total tonnage diverted, total tonnage disposed, and disposal sites used and tonnages delivered to each.

28. Roof down spouts should be discharged to gravel or heavily vegetated areas whenever possible.

29. Storm drains must be stenciled. All yard drains and catch basins to the street or storm drain system must be stenciled or labeled with the "No Dumping – Drains to Ocean" logo or equivalent.

30. The Applicant shall maintain the drainage devices such as paved swales, inlets, catch basins, pipes, and water quality devices as applicable that have been constructed within said areas according to BMP plans permitted by the City of Monrovia, in a good and functional condition to safeguard all lots within the development and the adjoining properties from damage and pollution.

31. The Applicant shall conduct annual maintenance inspections by the manufacturer or by a City approved inspector of all structural and/or treatment control storm water devices by following best management practices which shall also verify the legibility of all required stencils and signs which shall be repainted and labeled as necessary. Proof of

such inspection shall be retained by the Applicant and a copy submitted to the City of Monrovia on a yearly basis.

32. The Applicant shall record a maintenance covenant with the L.A. County Registrar/Recorder and submitted to the City for the Standard Urban Stormwater Mitigations Plan and other Municipal NPDES Requirements to the satisfaction of the City Engineer prior to the issuance of Certificate of Occupancy.

33. For projects which disturb soil during wet season (October 1- April 15), Applicant must submit a signed certification statement declaring that contractor will comply with Minimum Best Management Practices (BMPs) required by the National Pollutant Discharge Elimination System (NPDES), and also submit a Local Storm Water Pollution Prevention Plan/Wet Weather Erosion Control Plan.

34. The project demolition activities shall comply with the City's Construction and Demolition Recycling Program (C&D Recycling Program) by filing an application and submitting a deposit to Public Works Environmental Services prior to issuance of permits. The C&D Recycling Program requirements are enclosed as an attachment and made part of the Conditions of Approval.

35. Building, demolition, and grading permits will not be issued until the applicant provides the City with the required forms and the waste management plan has been reviewed and approved by the Environmental Services. If the Applicant chooses not to participate in the C&D Recycling Program, then the hauler must be identified on the demolition, building and grading plans. The C&D Recycling Program requirements are enclosed as an attachment and made part of the conditions of approval.

DATA SHEET 3 Findings

TTM73257/CUP2015-03 **725 East Lemon Avenue**

TENTATIVE TRACT MAP

As required by Sections 66473.5 & 66474 of the California Government Code, the decision for approving Tentative Tract Map No. 73257 for a 4 unit PUD located at 725 East Lemon Avenue is based on the following findings:

A. That the tentative tract map subdividing the existing 14,000 square feet of land area for the development of four detached units, together with the provisions for the subdivision's design and improvement, are consistent with the General Plan and satisfies the requirements of the Map Act and of the Municipal Code. This project will be consistent with the General Plan in that it meets the requirements of the current General Plan land use designation for the property. The RM3500 zoning allows for the development of four-units and the applicant is proposing four units that meet all the Zoning Code development guidelines. The increase in the intensity of the land use from its current use will not be significant, thus it is compatible with the objective policies, general land uses and the programs specified in the General Plan.

B. That the site is physically suitable for this type of development, as the site is flat and can accommodate a 4-unit Planned Unit Development. This parcel is actually two parcels developed with one house. The parcel will allow for the development of four houses while still preserving the oak trees and requiring minimal grading. No variances are requested for the proposed improvements.

C. That the site is physically suitable for the proposed density of development, specifically the 14,000 square foot parcel is zoned RM3500 and is being developed at the permitted density and floor area ratio requirements of the Zoning Ordinance. The proposed development will meet all of the development standards of the Zoning Ordinance and no variances are requested for the proposed improvements.

D. That the design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat in that the site has previously already been developed, and is surrounded by developed lots.

E. The design of the subdivision and the type of improvements are not likely to cause serious public health problems, as it will comply with all City design and safety standards, including fire suppression requirements.

F. The design of the subdivision and the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision, as the public sidewalk incorporated into the design will continue to provide access to the public along that right-of-way, and the City is unaware of any other such easements that exist on the property.

G. The City has considered the effect of the subdivision on the housing needs of the region in which the City is situated, and balanced those needs against the public service needs of its residents and available fiscal and environmental resources. The proposed development will not significantly increase the demands on available fiscal and environmental resources. The housing needs will be improved in the region by the addition of the three more units.

H. The discharge of waste from the proposed subdivision into an existing community sewer system will not result in violation of existing requirements of the Regional Water Quality Control Board.

CONDITIONAL USE PERMIT

As required by Section 17.52.290 of the Monrovia Municipal Code, the decision for granting Conditional Use Permit No. CUP2015-03 for a 4-unit Planned Unit Development located at 725 East Lemon Avenue is based on the following findings:

A. The project site is adequate in size, shape and topography for the development of 4 units. The site has sufficient width, depth and lot area to accommodate this type of development.

B. The project site has sufficient access to streets and highways, adequate in width and pavement type to carry the quantity and quality of traffic generated by this 4-unit development with one ingress and egress access onto Lemon Avenue.

C. The four-unit PUD will be compatible with the General Plan and will not adversely impact the objectives of the General Plan specifically the RM3500 designation allows a density of 4 units on this 14,000 square foot site.

D. The 4-unit PUD will comply with the applicable provisions of the zoning ordinance. All development guidelines are being met.

E. The proposed location of the 4-unit PUD and the conditions under which it will be operated or maintained will not be detrimental to the public health, safety or welfare, nor will it be materially injurious to properties or improvements in the vicinity, as the site will be upgraded to include new landscaping, perimeter walls and architectural amenities. It is on a residential block developed with both single and multi-family residences.

F. The proposed project will not result in the demolition of a residential structure built prior to January 1, 1940, with architectural or know historic value. The existing structure that will be demolished was constructed in 1940, and is thus not covered by the moratorium (Ordinance No. 2014-13U) that prohibits demolition of any main building constructed in a residential zone prior to January 1, 1940.

PLANNED UNIT DEVELOPMENT

As required by Section 17.44.050 of the Monrovia Municipal Code, the approval of the 4-unit PUD located at 725 East Lemon Avenue is based upon the following findings:

A. The plan provides as well, or better, for light and air, for public safety and convenience, the protection of property values and the preservation of the general welfare of the community, than if developed in other permitted uses, because the design of the planned unit development has taken into consideration all of those concerns on a parcel that is regular in shape.

DATA SHEET 4 Surrounding Land Uses

TTM73257/CUP2015-03 **725 East Lemon Avenue**

Property Description:

Located on the north side of East Lemon Avenue between Shamrock and Mountain Avenues. The lot measures 100' wide and approximately 140' deep for a lot area of 14,000 square feet and developed with a 1,297 square foot single-story home.

Zoning

Subject site: RM3500 (Residential Medium 3500) Density

Surrounding pattern:

north: RL (Residential Low) Density

south: PQP (Public Quasi Public)

east: RM3500 (Residential Medium 3500) Density

west: RM3500 (Residential Medium 3500) Density

Land Use

Subject site: Single-family residence

Surrounding pattern:

north: Single-family residences

south: Recreation Park

east: Single-family residence

west: Single-family residence

Environmental Determination: Categorical Exemption Class 3

Applicable Ordinance Regulations: MMC 17.52.020 Planning Commission Authority for CUP

TENTATIVE TRACT MAP NUMBER 73257
LOCATED IN THE CITY OF MONROVIA
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA"

LOTS 18 AND 19 IN BLOCK "D" OF TRACT NO. 5315, IN THE CITY OF MONROVIA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORD IN BOOK 71 PAGE 3 OF MAPS, IN THE OFFICE OF COUNTY RECORDED OF SAID COUNTY

APN: 8517-018-006

FOR PUD PURPOSES

PREPARED BY:

JACK LEE
CAL LAND ENGINEERING, INC.
576 E LAMBERT RD
BREA, CA 92821
TEL: (714) 671-1050
FAX: (714) 671-1090

OWNER:

LANNO LEMON, LLC.
18472 COLIMA RD, SUITE #222
ROWLAND HEIGHTS, CA 91748
TEL: (626) 709-7337

BENCHMARK:

BM NUMBER G 4948
ELEV: 529.594'
DESCRIPTION: FD L&BR IN N CB 21.3FT W/O BCR@NW COR HUNTINGTON DR & SHAMROCK AVE.

EARTHWORK QUANTITIES

CUT: 100 CY
FILL: 0 CY
EXPORT: 100 CY

BASIS OF BEARINGS:

CENTER LINE OF E. LEMON AVE
BEARING AT N89°43'30"E

NOTES:

PRESENT ZONE: RM 3500
PROPOSED ZONE: R-3/U
NO OF EXISTING LOTS: 1
NO OF PROPOSED LOTS: 4
NO. OF STORIES: 2
NO. OF PARKINGS: 8 (RESIDENT)
SEWERAGE DISPOSAL: BY GRAVITY SEWER PIPES TO STREET MAIN
LAND SIZE = 14,000.00 SF = 0.321 AC
APN: 8517-018-006

LOT COVERAGE:

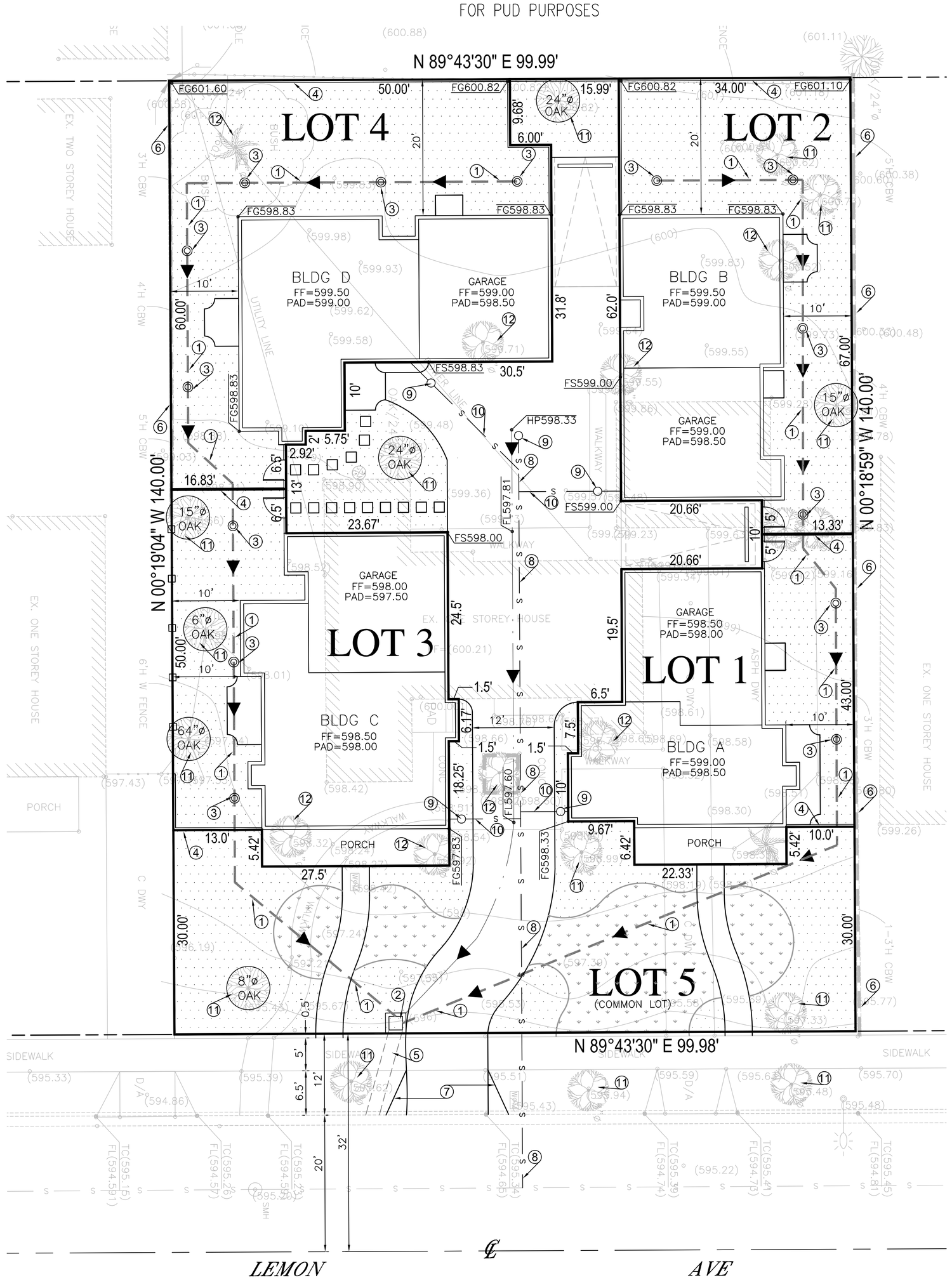
LOT 1: 1,606.72 SF
LOT 2: 2,174.29 SF
LOT 3: 2,029.37 SF
LOT 4: 2,669.24 SF
LOT 5: 5,520.38 SF

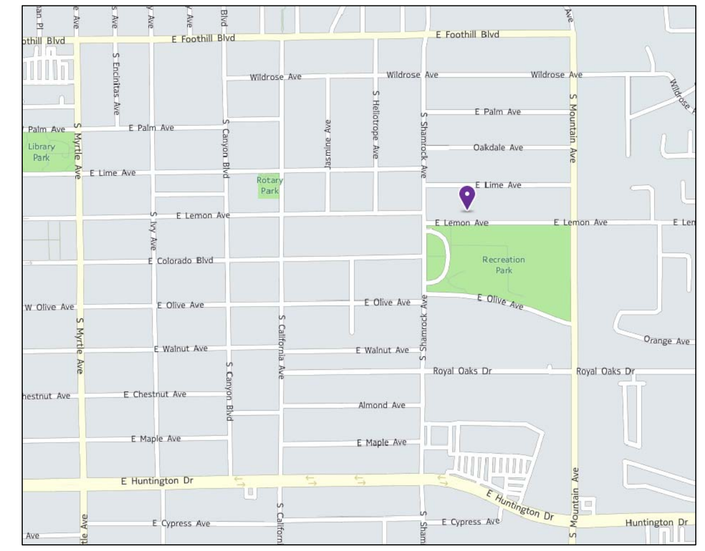
ADDRESS	BUILDING (TYPE)	1ST FLR. (SQ.FT.)	2ND FLR. (SQ.FT.)	LIVING (SQ.FT.)	PORCH (SQ.FT.)	GARAGE (SQ.FT.)
LOT 1	A	505	751	1,256	121	465
LOT 2	B	517	761	1,278	12	440
LOT 3	C	734	842	1,576	149	460
LOT 4	D	699	785	1,484	–	430
TOTAL:				5,600	282	1,795

DENSITY: 14,000/3,500 = 4.0 UNIT
PARKING: 2-CAR GARAGE/UNIT
DWELLING UNIT F.A.R. (MAX. 40%): 5,594/14,000 = 39.96%
ACCESSORY BLDG. F.A.R. (MAX. 20%): 1,795/14,000 = 12.82%

OPEN SPACE REQUIREMENT (40% MIN. OF LIVING AREA):

ADDRESS	REQUIRED	PROVIDED
LOT 1	1,256 X 40% = 503 SQ. FT.	506 SQ. FT.
LOT 2	1,278 X 40% = 511 SQ. FT.	1,150 SQ. FT.
LOT 3	1,576 X 40% = 631 SQ. FT.	665 SQ. FT.
LOT 4	1,484 X 40% = 594 SQ. FT.	1,515 SQ. FT.





VICINITY MAP
T.G. 567 H4

LEGEND:

(98.23).....EXISTING ELEVATION
99.00.....PROPOSED ELEVATION
--(100)-- EXISTING CONTOUR
.....DRAINAGE PATTERN
.....EXISTING STRUCTURE
.....PROPOSED STRUCTURE
.....PROPOSED SEWER
.....EXISTING R/W LINE
...FIRE HYDRANT
...CATCH BASIN
RL .....RIDGE LINE
P .....PLANTER
B/W.....BACK OF SIDEWALK
EC .....END OF CONCRETE
EP .....END OF PAVEMENT
EX .....EXISTING
TG .....TOP GRATE
INV.....INVERT ELEVATION
FS .....FINISH SURFACE
BP.....BOTTOM OF SUMP PIT
T.C.....TOP OF CURB
F.L.....FLOW LINE
F.G.....FINISH GRADE
F.S.....FINISH SURFACE
F.F.....FINISH FLOOR
TC.....TOP OF CURB
--D--D--....DAYLIGHT LINE
H.P.....HIGH POINT

TREE NOTE:

REMOVE ALL EXISTING TREES UNLESS OTHERWISE SHOWN IN THIS PLAN

NOTES:

1. PROPOSED DRAIN PIPE
2. PROPOSED CATCH BASIN
3. PROPOSED AREA DRAIN
4. PROPOSED BLOCK WALL
5. PROPOSED PARKWAY DRAIN
6. PROTECT-IN-PLACE EXISTING WALL
7. PROPOSED DRIVEWAY APRON
8. PROPOSED SEWER LATERAL
9. PROPOSED SEWER CLEANOUT
10. PROPOSED SEWER HOUSE CONNECTION
11. PROTECT-IN-PLACE EXISTING TREE
12. REMOVE EXISTING TREE

HURON

0 10 20
(IN FEET)
1 inch = 10 ft.

REGISTERED PROFESSIONAL ENGINEER
JACK C. S. LEE
40870
Exp. 3-31-17
CIVIL
STATE OF CALIFORNIA

CAL LAND ENGINEERING, INC.
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA. 92821
TEL: (714) 671-1050 • FAX: (714) 671-1090

RELEASED

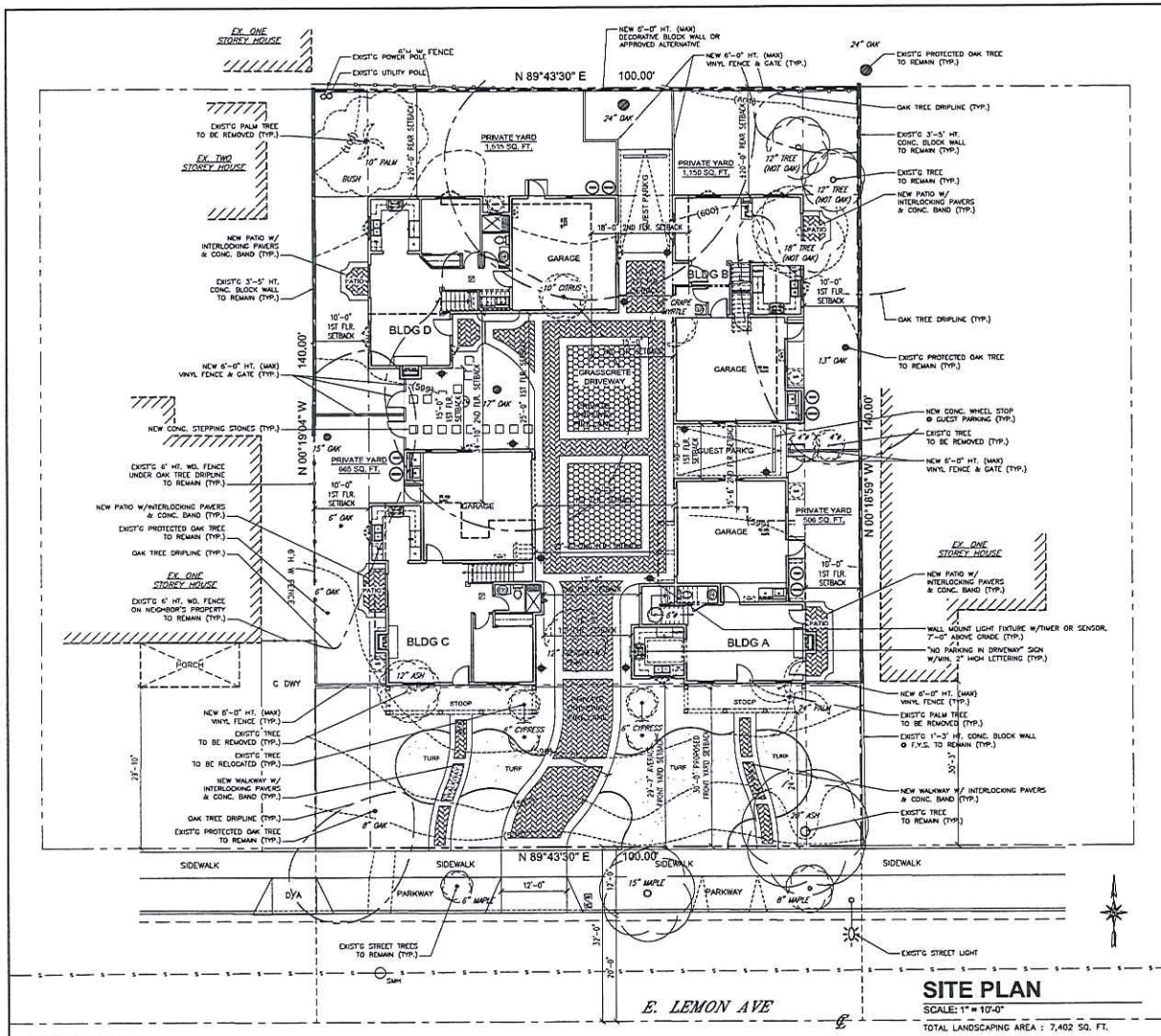
REVISIONS

PREPARED FOR:
4-UNIT PUD
725 E. LEMON AVENUE,
MONROVIA, CA 91016

DRAWN: RR
CHECKED:
DATE: 3-26-2015
JOB NO.: 14-180-028a
SCALE: 1"=10'
FILE NAME:

C-1

SHEET 1 OF 1 SHT.



SITE PLAN

SCALE: 1" = 10'-0"

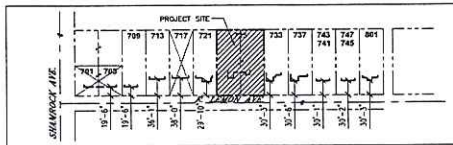
TOTAL LANDSCAPING AREA : 7,402 SQ. FT.

OAK TREE PROTECTION NOTES:

THE CONTRACTOR SHALL ENSURE THAT ALL NECESSARY MEASURES ARE IN PLACE TO PREVENT ANY OAK TREES FROM BEING DAMAGED, PER THE PROTECTED TREE (ARBORIST) REPORT. PROTECTIVE FENCING AT THE TREE PROTECTIVE ZONE (TPZ), MINIMUM 15' FROM THE OUTSIDE EDGE OF TREE TRUNK, MUST BE IN PLACE AT ALL TIMES. FENCING MAY BE MOVED TEMPORARILY TO ALLOW FOR NECESSARY CONSTRUCTION WORK, BUT SHALL BE PUT BACK AS QUICKLY AS POSSIBLE. NO HARDSCAPE CONSTRUCTION, GRADING, COMPACTION OR TRENCHING, NO STORAGE OF MATERIALS, VEHICLES, OR DEBRIS, AND NO WASHING OF CHEMICALS OR EQUIPMENT ARE ALLOWED WITHIN THE TPZ, EXCEPT AS ALLOWED PER A PROJECT ENCROACHMENT PERMIT. ALL DEMOLITION AND GRADING WITHIN TPZ TO BE DONE WITH HAND TOOLS UNDER ARBORIST'S SUPERVISION. ALL NECESSARY TRENCHING SHOULD BE DONE BY HAND WITH PNUCMATIC OR HYDRAULIC SOIL EXCAVATION TOOLS, AND ROOTS LARGER THAN 1-1/2" SHOULD NOT BE CUT. THESE MEASURES MUST BE CONTINUOUSLY MAINTAINED THROUGHOUT CONSTRUCTION.

PLANT LEGEND

- EXISTING TREES TO BE REMOVED
- EXISTING PALM TREE TO BE REMOVED
- EXISTING TREES TO REMAIN
- PROTECTED OAK TREE



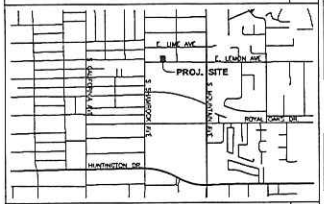
AVE. FRONT SETBACK 29'-7" N.T.S. 8

DEFERRED SUBMITTALS:

(FIRE SPRINKLER, ROOF TRUSS, HEATING AND AIR-CONDITIONING SYSTEM DESIGN, ETC.)

A. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE TO REVIEW AND NOTIFY THAT THE DOCUMENTS ARE FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.
B. THE DEFERRED ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY BUILDING DEPARTMENT.
C. CONTRACTOR'S SHALL BE RESPONSIBILITY ALL DEFERRED SUBMITTAL PER CBC 1706. (CBC APPENDIX 108.3.4.2).

DEFERRED SUBMITTALS 4



VICINITY MAP N.T.S. 5

GENERAL NOTES:

1. AN APPROVED BACKWATER VALVE IS REQUIRED FOR DRAINAGE PIPING SERVING FIXTURES LOCATED BELOW THE ELEVATION OF THE NEXT UPSTREAM MANHOLE COVER (522.67'). FIXTURES ABOVE SUCH ELEVATION SHALL NOT DISCHARGE THROUGH THE BACKWATER VALVE. CLEAN OUTS FOR DRAINS THAT PASS THROUGH A BACK WATER VALVE SHALL BE CLEARLY IDENTIFIED WITH A PERMANENT LABEL STATING BACKWATER VALVE DOWNSTREAM. [CPC 710.1]
2. SEPARATE PERMIT ARE REQUIRED FOR ALL FENCE WALLS, AND RETAINING WALLS (TYP.)
3. NEW TOWNHOUSES, ONE- AND TWO-FAMILY DWELLINGS SHALL HAVE AN AUTOMATIC FIRE SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH CRC SECTION R313.3 OR NFPA 13D. [CRC R313]
4. BUILDING ADDRESS SHALL BE PROVIDED ON THE FRONTING BUILDING ELEVATION IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET. ADDRESS NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND, 4" HIGH MINIMUM AND WITH A MINIMUM STROKE WIDTH OF .5". [CRC R319.1]
5. INTERNALLY ILLUMINATED ADDRESS SIGN SHALL NOT CONTAIN A SCREW-BASE SOCKET AND CONSUME NO MORE THAN 5 WATTS OF POWER AS DETERMINED ACCORDING TO SECTION 130(d) PER SECTION 150(K) 14.
6. OUTDOOR LIGHTING ATTACHED TO THE BUILDING SHALL BE HIGH EFFICACY OR MUST BE CONTROLLED BY A MOTION SENSOR WITH INTEGRAL PHOTO CONTROL.
7. LOCATION AND DESIGN OF MAIL BOX TO BE APPROVED BY PLANNING DEPARTMENT PRIOR TO INSTALLATION.
8. CONTRACTOR SHALL POST THE INSTALLATION CERTIFICATE (CF-6R) FROM AND INSULATION CERTIFICATE (IC-1) FORM IN A CONSPICUOUS LOCATION OR KEPT WITH PLANS AND MADE AVAILABLE TO THE INSPECTOR.
9. CONTRACTOR SHALL PROVIDE COPIES OF THE CALIFORNIA HOME ENERGY GUIDE, CF-1R, MF-1R, CF-6R AND IC-1 FORMS TO THE BUILDING OWNER.
10. PEDESTRIANS SHALL BE PROTECTED DURING CONSTRUCTION, REMODELING AND DEMOLITION ACTIVITIES. SIGN SHALL BE PROVIDED TO DIRECT PEDESTRIAN TRAFFIC. BARRIERS SHALL BE CONSTRUCTED PER CBC 3306.8. COVERED WALKWAYS SHALL BE COMPLY WITH CBC 3306.7. [CBC 3306.1 & TABLE 3306.1]
11. IRRIGATION CONTROLLERS TO BE INSTALLED PRIOR TO FINAL INSPECTION.
12. FOR LANDSCAPE DETAIL SEE L1 – LANDSCAPING PLAN.
13. ALL UTILITIES SHALL BE UNDERGROUND.
14. DUE CARE SHALL BE TAKEN TO PROTECT EXISTING TREES TO REMAIN DURING CONSTRUCTION. TEMPORARY PROTECTIVE FENCING SHOULD BE INSTALLED IF NECESSARY AND CARE TAKEN TO AVOID DAMAGE TO CANOPIES AND ROOT SYSTEMS DURING CONSTRUCTION, GRADING, AND TRENCHING. DO NOT DISTURB OR CHANGE THE EXISTING GRADE WITHIN THE TREE DRIPLINE. USE HAND TOOLS WHEN WORKING AROUND ROOTS. DO NOT CUT ROOTS OVER 1-1/2" DIAMETER, AND TUNNEL PIPE UNDER ROOTS WHEN PIPING CANNOT BE RELOCATED. DO NOT STOCKPILE SOIL OR OTHER MATERIALS WITHIN THE DRIPLINE AREA, AND DO NOT WASH CHEMICALS OR EQUIPMENT UNDER TREE CANOPIES. PROVIDE OCCASIONAL DEEP TREES AT LEAST 1-2 TIMES PER MONTH, WATERING AS NECESSARY TO KEEP TREES HEALTHY UNTIL NEW IRRIGATION SYSTEM IS INSTALLED.

GENERAL NOTES 6

2013 CALGREEN RESIDENTIAL MANDATORY REQUIREMENTS CHECKLIST
NEWLY-CONSTRUCTED RESIDENTIAL BUILDINGS OF THREE STORIES OR LESS

Item #	Code Section	Requirement	Reference Sheet (sheet # or N/A)	Comments (e.g. note # or detail #)
		PLANNING AND DESIGN		
1	4.106.2	Storm water drainage and retention during construction		
2	4.106.3	Surface drainage		
		ENERGY EFFICIENCY		
3	4.211.1	Comply with CA. Energy Code		
		WATER EFFICIENCY & CONSERVATION		
4	4.303.1	Water conserving plumbing fixtures and fittings		WATER EFFICIENCY & CONSERVATION CHART
5	4.303.2	Standards for plumbing fixtures and fittings		
6	4.304.1	Irrigation controllers		GENERAL NOTE #7
		MATERIAL CONSERVATION & RESOURCE EFFICIENCY		
7	4.406.1	Rodent Proofing		GENERAL NOTE #28
8	4.408.1	Construction waste reduction of at least 50%		PER CITY ORD.
9	4.410.1	Operation and maintenance manual		DEFERRED SUBMITTAL
		ENVIRONMENTAL QUALITY		
10	4.503.1	Gas Fireplaces and woodstoves		DIRECT-VENT SEALED-COMBUSTION TYPE
11	4.504.1	Covering of duct openings and protection of mechanical equipment during construction		GENERAL NOTE #27
12	4.504.2	Finish material pollutant control		
13	4.504.2.1	Adhesives, sealants, caulks		
14	4.504.2.2	Paints and coatings		
15	4.504.2.3	Aerosol Paints and Coatings		
16	4.504.2.4	Verification		
17	4.504.3	Carpet systems		
18	4.504.3.1	Carpet cushion		
19	4.504.4	Resilient flooring systems		
20	4.504.5	Composite wood products		
21	4.505.2.1	Capillary break		DETAIL #7
22	4.505.3	Moisture content of building materials		
23	4.506.1	Bathroom exhaust fans		ELECTRICAL LEGEND
24	4.507.2	Heating and air-conditioning system design		DEFERRED SUBMITTAL

2013 CALGREEN MANDATORY MEASURES 7

DEVELOPER: LANNO LEMON, LLC.
18472 COLIMA RD, SUITE #222
ROWLAND HEIGHTS, CA 91748
(626) 709-7337

PROJECT: 4-UNIT P.U.D.
LOT SIZE: 14,000 SQ. FT.
APN: 8517-018-006
ZONING: RM 3500

A. PROPOSED USE:

OCCUPANCY GROUP: R-3/U
BUILDING STORY: 2-STORY
TYPE OF CONSTRUCTION: V/D W/AUTOMATIC SPRINKLER SYSTEM THROUGHOUT

B. FLOOR AREA SUMMARY

ADDRESS	BUILDING (TYP.)	1ST FLR. (SQ.FT.)	2ND FLR. (SQ.FT.)	LIVING (SQ.FT.)	PORCH (SQ.FT.)	GARAGE (SQ.FT.)
–	A	505	751	1,256	121	465
–	B	517	761	1,278	12	440
–	C	734	842	1,576	149	460
–	D	699	785	1,484	–	430
TOTAL:				5,800	282	1,795

DENSITY: 14,000/3,500 = 4.0 UNIT
PARKING: 2-CAR GARAGE/UNIT
DWELLING UNIT F.A.R. (MAX. 40%): 5,584/14,000 = 39.86%
ACCESSORY BLDG. F.A.R. (MAX. 20%): 1,795/14,000 = 12.82%

OPEN SPACE REQUIREMENT (40% MIN. OF LIVING AREA):

ADDRESS	REQUIRED	PROVIDED
–	1,256 X 40% = 503 SQ. FT.	506 SQ. FT.
–	1,278 X 40% = 511 SQ. FT.	1,150 SQ. FT.
–	1,576 X 40% = 631 SQ. FT.	865 SQ. FT.
–	1,484 X 40% = 594 SQ. FT.	1,515 SQ. FT.

C. REQUIRED FIRE RESISTIVE CONSTRUCTION:

1. 1-HR FIRE RESISTIVE CONSTRUCTION BETWEEN R-3 AND U OCCUPANCY
2. 1-HR FIRE RESISTIVE CONSTRUCTION BETWEEN UNITS

CODE:

THE GOVERNING CODES FOR THIS PROJECT ARE:
2013 CALIFORNIA BUILDING CODE (CBC),
2013 CALIFORNIA GREEN BUILDING STANDARD CODE,
2013 CALIFORNIA RESIDENTIAL CODE (CRC),
2013 CALIFORNIA ELECTRICAL CODE (CEC),
2013 ENERGY, TITLE 24 (ENS),
2013 CALIFORNIA MECHANICAL CODE (CMC),
2013 CALIFORNIA PLUMBING CODE (CPC),
WITH LOCAL AMENDMENTS.

PROJECT SUMMARY 1

SHEET INDEX 2

CONSULTING ENGINEERING 3

REVISIONS

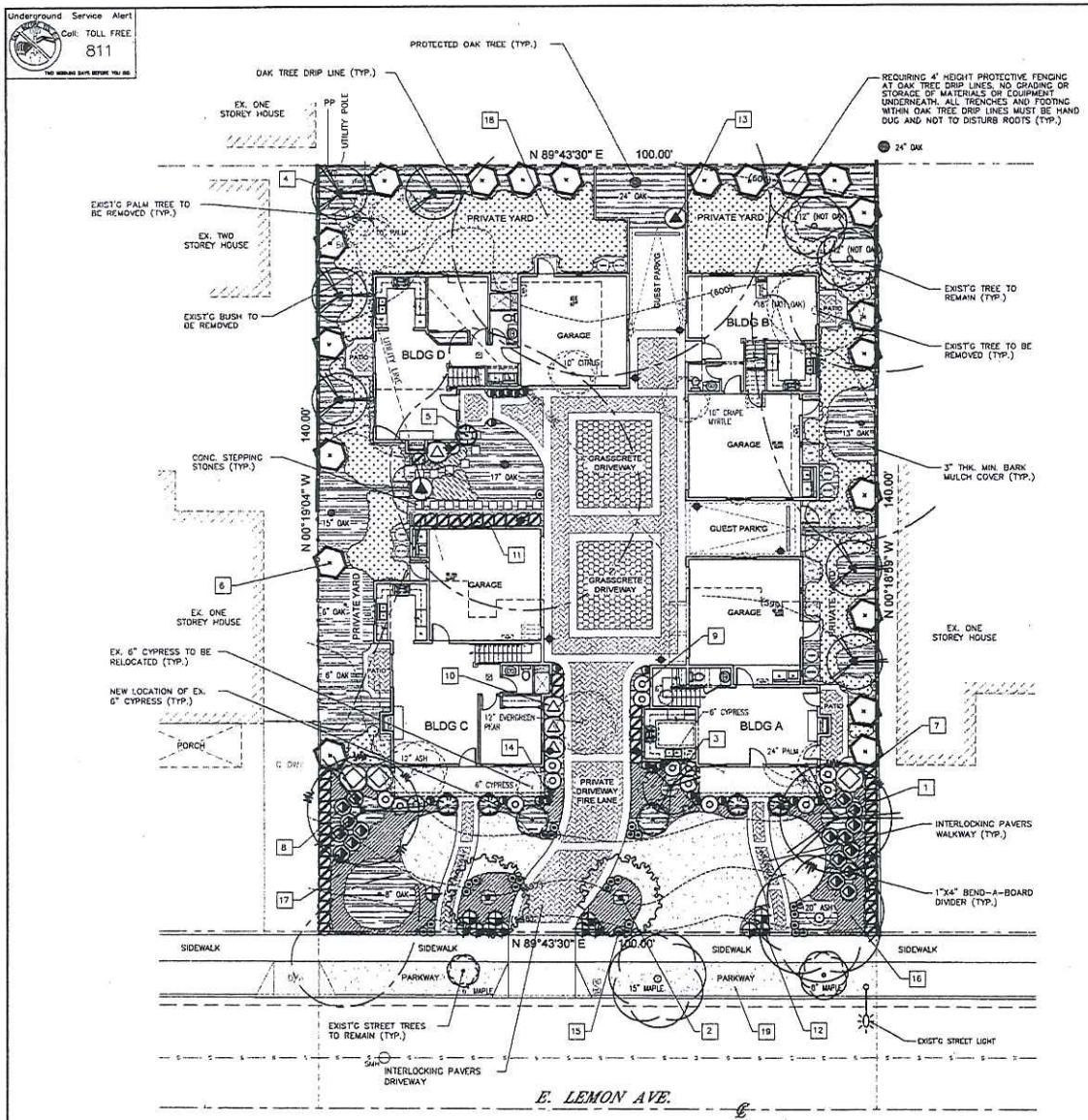
DATE	NO

Stamp

SANYAO INTERNATIONAL INC.
• Residential Planning •
255 E. Santa Clara St., #200, Arcadia, CA 91006, U.S.A.
Tel (626) 446-8048 • Fax (626) 446-7099

4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date 10/29/2014
Scale SEE PLAN
Drawn H.A.
Job 2014-53
Sheet T-1



CONCEPTUAL LANDSCAPE PLAN

SCALE : 1" = 10'-0"

PLANT LEGEND

SYMBOL	ITEM NO.	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	TYPE	WATER USE
	1	OLEA EUROPAEA 'MONHER'	MAJESTIC BEAUTY FRUITLESS OLIVE	36" BOX	2	TREE	L
	2	LAGERSTROEMIA INDICA 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	36" BOX	2	TREE	L
	3	MAGNOLIA GRANDIFLORA 'SOUTHERN CHARM'	TEDDY BEAR SOUTHERN MAGNOLIA	24" BOX	1	TREE	L
	4	LAURUS NOBILIS	SWEET BAY	24" BOX	6	TREE	L
	5	JUNIPERUS CHINENSIS 'HETZII COLUMNARIS'	GREEN COLUMNAR JUNIPER	15 GAL.	5	SHRUB (SPIRAL FORM)	M
	6	PRUNUS CAROLINIANA 'MONUS'	BRIGHT 'N TIGHT CAROLINA LAUREL	15 GAL.	20	SHRUB	L
	7	CISTUS X PULVERULENTUS 'SUNSET'	MAGENTA ROCK ROSE	15 GAL.	3	SHRUB	L
	8	LAVANCULA DENTATA	FRENCH LAVENDER	5 GAL.	17	SHRUB	L
	9	RHAPHIOLEPIS INDICA 'BALLERINA'	BALLERINA INDIAN HAWTHORN	5 GAL.	15	SHRUB	M
	10	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL.	4	SHRUB	L
	11	BUXUS MICROPHYLLA JAPONICA 'GREEN BEAUTY'	GREEN BEAUTY BOXWOOD	5 GAL.	48	SHRUB	M
	12	ROSA HYBRID 'MEIDILAND'	MEIDILAND ROSE	5 GAL.	12	SHRUB	M
	13	CEANOTHUS G. HORIZONTALIS 'DIAMOND HEIGHTS'	VARIEGATED CARMEL CREEPER	5 GAL.	2	SHRUB	L
	14	AGAPANTHUS AFRICANUS 'BLUE'	BLUE LILY OF THE NILE	5 GAL.	20	SHRUB	L
	15	HEMEROCALLIS HYBRID 'STELLA DE ORO'	STELLA DE ORO DWARF DAYLILY	5 GAL.	28	SHRUB	M
	16	PELARGONIUM PELTATUM	IVY GERANIUM	FLATS	12"O.C.	GROUND COVER	M
	17	ARCTOSTAPHYLOS UVA-URSI 'MASSACHUSETTS'	MASSACHUSETTS KINNIKINNICK	FLATS	12"O.C.	GROUND COVER	L
	18	DUCHESNEA INDICA	INDIAN MOCK STRAWBERRY	FLATS	12"O.C.	GROUND COVER	L
	19	ZOYSIA JAPONICA STEUD	ZENITH ZOYSIA	SOD	SOD	LAWN	WST

EXISTING TREE LEGEND

- EXISTING TREE TO REMAIN (NOT OAK)
- EXISTING TREE TO BE REMOVED (NOT OAK)
- EXISTING PALM TREE TO BE REMOVED
- EXISTING OAK TREE TO REMAIN

NOTES:

1. LANDSCAPE AREA: 7,402 S.F.
2. EXISTING TREES INDICATE TO REMAIN SHALL BE PRESERVED & PROTECTED DURING THE COURSE OF CONSTRUCTION.
3. PROVIDE ROOT BARRIERS ON ALL TREES WITHIN 5 FEET OF ALL PAVED AREAS AND FOUNDATIONS.
4. CONTRACTOR/ DEVELOPER TO MAINTAIN ALL PRIVATE YARDS WITHOUT ANY WEEDS OR DEBRIS BEFORE THE UNIT SOLD.
5. CITY TO APPROVE PLANTING MATERIALS PRIOR TO INSTALLATION.
6. CONTRACTOR TO VERIFY WITH CITY PLANNING DIVISION AND PARK DIVISION MANGERS FOR STREET TREES PLANTING REQUIREMENT.
7. EIGHT EXISTING OAK TREES ON SITE & OFF SITE TO REMAIN.
8. ROOT BARRIERS SHALL BE PROVIDED ON ALL TREES WITHIN 5 FEET OF ALL PAVED AREAS AND FOUNDATIONS.
9. ALL PAVING AREAS SHALL BE KEPT CLEAN AND FREE OF DUST, MUD, OR TRASH.
10. ALL LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND HEALTHY CONDITION.
11. SHREDDED WOOD CHIPS 1"–3" LENGTH, 3/8"–5/8" DIAMETER– 3 INCHES THICK MIN., DISPENSER EVENLY THROUGHOUT ALL PLANTING AREAS EXCEPT TURF AREA.

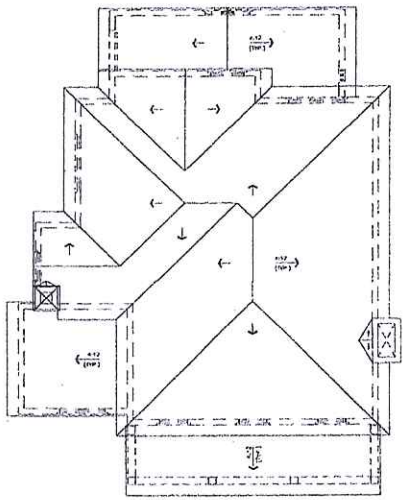
REVISIONS	
DATE	NO

CONSULTANT LANDSCAPE ARCHITECT, LIC # 2309
BEN LUNDGREN & ASSOCIATES
2605 FAIRFIELD PL.
SAN MARINO, CA 91108
TEL: 626-535-9544 FAX: 626-535-9534

Prepared by
TERRY LEE DESIGN GROUP
210 W. LESLIE DR.
SAN GABRIEL, CA 91775
TEL: 626-285-6522 FAX: 626-285-6479

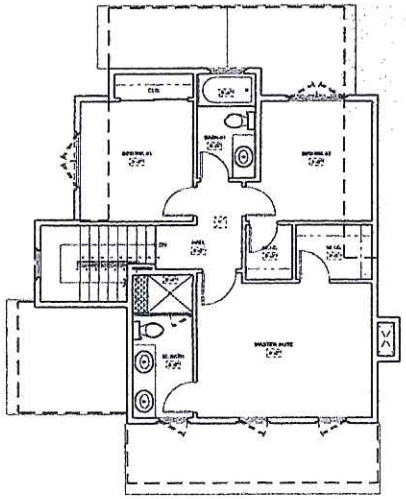
Project
4-UNIT P.U.D.
725 E. LEMON AVE.
MONROVIA, CA 91016
Assessor's I.D No. 8517-018-006

Sheet Title	CONCEPTUAL PLANTING PLAN
Date	10-02-14
Scale	1"=10'-0"
Drawn	T.L.
Job	100114
Sheet	L-1



ROOF PLAN BLDG A

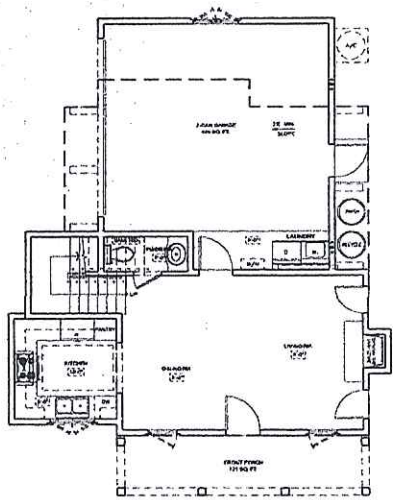
SCALE: 3/16" = 1'-0"



SECOND FLOOR PLAN BLDG A

SCALE: 3/16" = 1'-0" 751 SQ. FT.

(XX) INDICATE CEILING HT.



FIRST FLOOR PLAN BLDG A

SCALE: 3/16" = 1'-0" 505 SQ. FT.

(XX) INDICATE CEILING HT.

REVISIONS

DATE	NO
	1
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SANYAO INTERNATIONAL INC.

• Residential Planning •

255 E. Santa Clara St., #200, Arcadia, CA 91006, U.S.A.

Tel (626) 446-8048 • Fax (626) 446-7030

4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date 5/30/2015

Scale SEE PLAN

Drawn H.A.

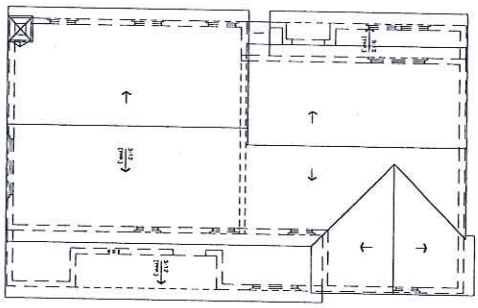
Job 2014-53

Sheet

A-1

ROOF PLAN — BLDG B

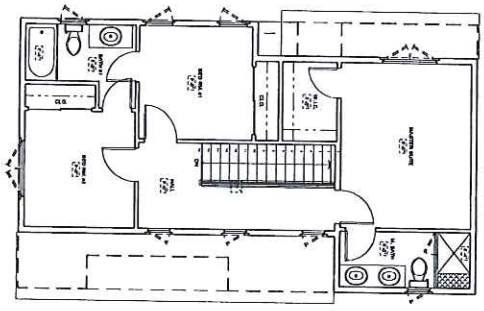
SCALE: 3/16" = 1'-0"



SECOND FLOOR PLAN — BLDG B

SCALE: 3/16" = 1'-0"

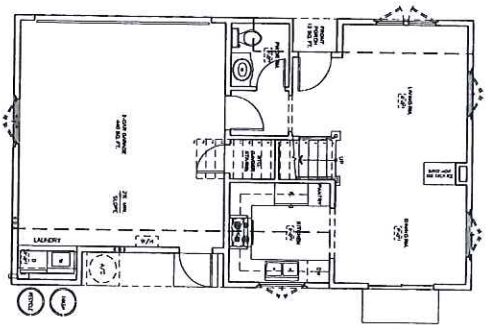
761 SQ. FT.



FIRST FLOOR PLAN — BLDG B

SCALE: 3/16" = 1'-0"

517 SQ. FT.



4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date	5/06/2015
Scale	SEE PLAN
Drawn	H.A.
Job	2014-53
Sheet	A-2

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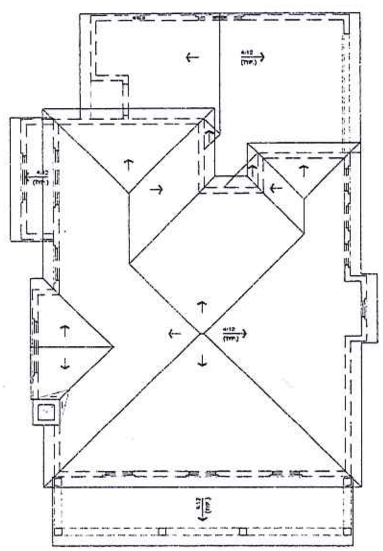
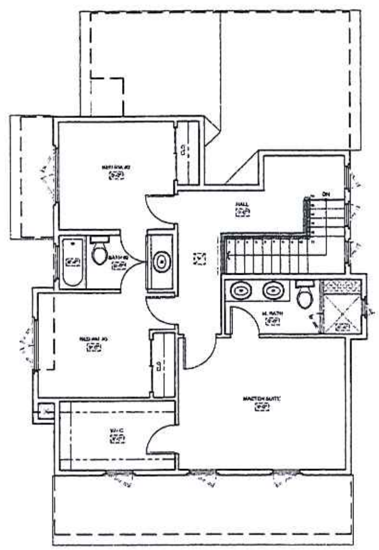
Stamp

REVISIONS	DATE	NO



ROOF PLAN BLDG C

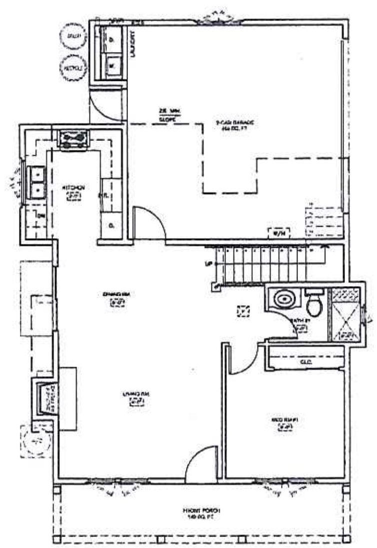
SCALE: 3/16" = 1'-0"



SECOND FLOOR PLAN BLDG C

SCALE: 3/16" = 1'-0" 842 SQ. FT.

INDICATE CEILING HT.



FIRST FLOOR PLAN BLDG C

SCALE: 3/16" = 1'-0" 734 SQ. FT.

INDICATE CEILING HT.

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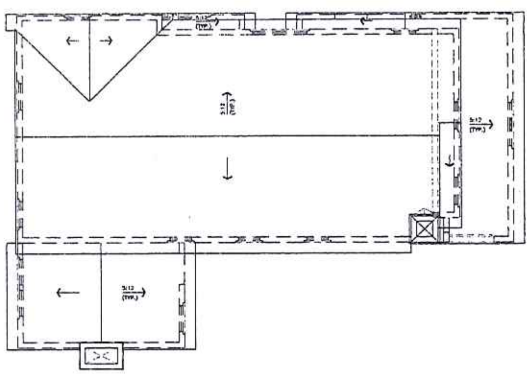
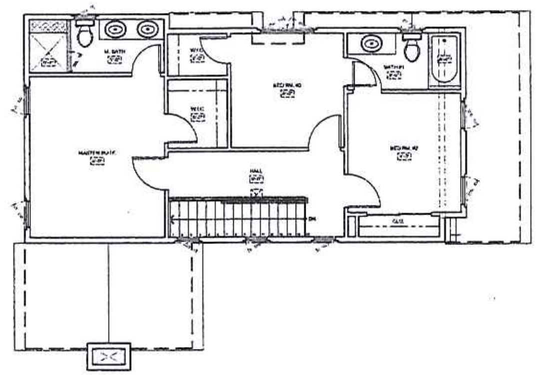
4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date	2/17/2015
Scale	SEE PLAN
Drawn	H.A.
Job	2014-53
Sheet	A-3



ROOF PLAN **BLDG D**

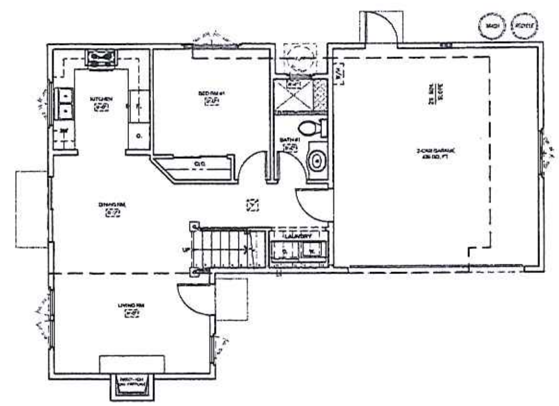
SCALE: 3/16" = 1'-0"



SECOND FLOOR PLAN **BLDG D**

SCALE: 3/16" = 1'-0" 785 SQ. FT.

INDICATE CEILING HT.



FIRST FLOOR PLAN **BLDG D**

SCALE: 3/16" = 1'-0" 699 SQ. FT.

INDICATE CEILING HT.

REVISIONS	
DATE	NO
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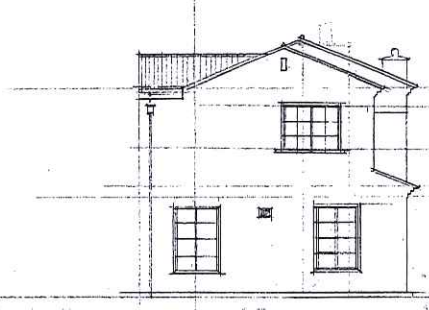
4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date	2/17/2015
Scale	SEE PLAN
Drawn	H.A.
Job	2014-53
Sheet	**A-4**

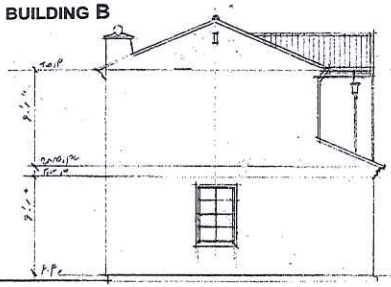


SIDE ELEVATION 3/16"=1'-0"

BUILDING B

3/16"=1'-0" FRONT ELEVATION

BUILDING B



SIDE ELEVATION 3/16"=1'-0"

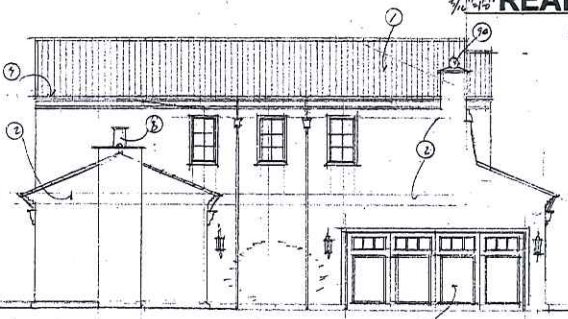
BUILDING B

3/16"=1'-0" REAR ELEVATION

BUILDING B

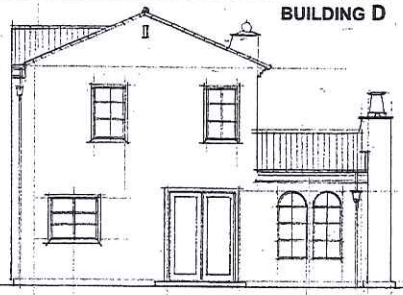
FRONT ELEVATION 3/16"=1'-0"

BUILDING D



SIDE ELEVATION 3/16"=1'-0"

BUILDING D



BUILDING D REAR ELEVATION 3/16"=1'-0"

BUILDING D SIDE ELEVATION 3/16"=1'-0"

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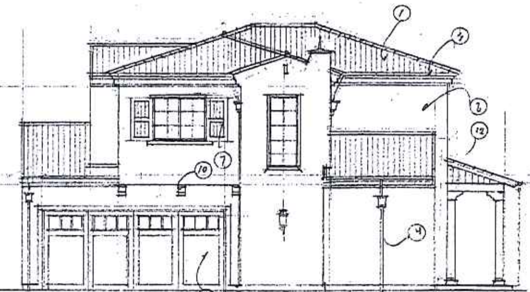
BUILDING B
BUILDING D

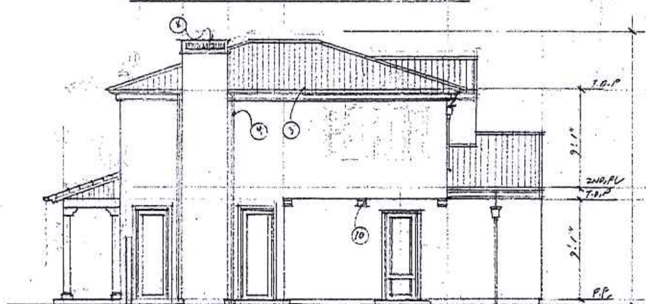
4-UNIT P.U.D.
725 E. LEMON AVE.
MONROVIA, CA

Date	
Scale	
Drawn	
Job	
Sheet	
Of	Sheets

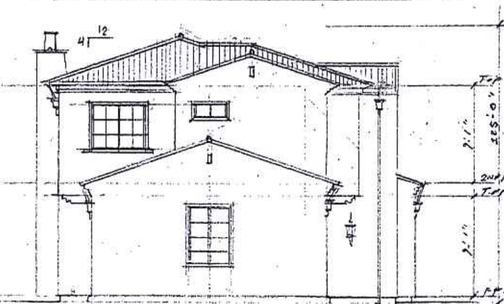


BUILDING A **SIDE ELEVATION** 3/16"=1'-0"

BUILDING A **FRONT ELEVATION** 3/16"=1'-0"



BUILDING A **SIDE ELEVATION** 3/16"=1'-0"



BUILDING A **REAR ELEVATION** 3/16"=1'-0"

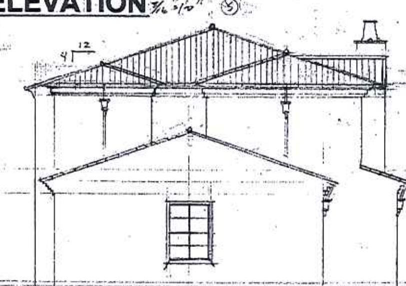
○ ELEVATION KEY NOTE.

1. [illegible] CONC (S) ROOF TILE W/ICC-ESR [illegible] PRODUCT NO: 3581 CANYON BROWN
2. STUCCO SAND FIN. (20/30) P-535
3. 6" HALF ROUND RAIN GUTTER } (BROWN)
4. 5" φ DOWN SPOUT
5. WOOD STAIN ENTRY FRONT DOOR
6. METAL GARAGE DOOR COLOR: [illegible]
7. WOOD SHUTTER COLOR: BLACK
8. METAL CHIMNEY CAP (BROWN)
9. [illegible] REINFORCED PRE-CAST CONC. PRODUCT W/ICC-ES [illegible] LISTING a) CORNER COLUMN W/CAPITAL b) FRONT DOOR SURROUNDING c) 6" MOLDING d) DECORATIVE CAP e) FINIAL f) 7.5" HALF COLUMN
10. STYRO FOAM [illegible] SMOOTH FIN. COLOR TO MATCH PRE-CAST.
11. W.I. W/ AWNING (BLACK)
12. W.I. RAILING (BLACK)
13. 8X8 SMOOTH SPRUCE WOOD POST
14. 8X8 SMOOTH SPRUCE WOOD BEAM
15. 8X8 SMOOTH SPRUCE WOOD CORBEL
16. 4X6 SMOOTH SPRUCE WOOD RAFTER TAIL

SIDE ELEVATION 3/16"=1'-0"
BUILDING C

FRONT ELEVATION 3/16"=1'-0"
BUILDING C

BUILDING C **SIDE ELEVATION** 3/16"=1'-0"



BUILDING C 3/16"=1'-0" **REAR ELEVATION**

REVISIONS	BY

Stamp

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255 E. Santa Clara St., #200, Arcadia, CA 91006, U.S.A.
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BUILDING A
BUILDING C

4-UNIT P.U.D.
725 E. LEMON AVE.
MONROVIA, CA

Date
Scale
Drawn
Job
Sheet
Of Sheets

TENTATIVE TRACT MAP NUMBER 73257
LOCATED IN THE CITY OF MONROVIA
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA"

LOTS 18 AND 19 IN BLOCK "D" OF TRACT NO. 5315, IN THE CITY OF MONROVIA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORD IN BOOK 71 PAGE 3 OF MAPS, IN THE OFFICE OF COUNTY RECORDED OF SAID COUNTY

APN: 8517-018-006

FOR PUD PURPOSES

PREPARED BY:

JACK LEE
CAL LAND ENGINEERING, INC.
576 E LAMBERT RD
BREA, CA 92821
TEL: (714) 671-1050
FAX: (714) 671-1090

OWNER:

LANNO LEMON, LLC.
18472 COLIMA RD. SUITE #222
ROWLAND HEIGHTS, CA 91748
TEL: (626) 709-7337

BENCHMARK:

BM NUMBER G 4948
ELEV: 529.594'
DESCRIPTION: FD L&BR IN N CB 21.3FT W/O BCR@NW COR HUNTINGTON DR & SHAMROCK AVE.

EARTHWORK QUANTITIES

CUT: 100 CY
FILL: 0 CY
EXPORT: 100 CY

BASIS OF BEARINGS:

CENTER LINE OF E. LEMON AVE
BEARING AT N89°43'30"E

NOTES:

PRESENT ZONE: RM 3500
PROPOSED ZONE: R-3/U
NO. OF EXISTING LOTS: 1
NO. OF PROPOSED LOTS: 4
NO. OF STORIES: 2
NO. OF PARKINGS: B (RESIDENT)
SEWERAGE DISPOSAL: BY GRAVITY SEWER PIPES TO STREET MAIN
LAND SIZE = 14,000.00 SF = 0.321 AC
APN: 8517-018-006

LOT COVERAGE:

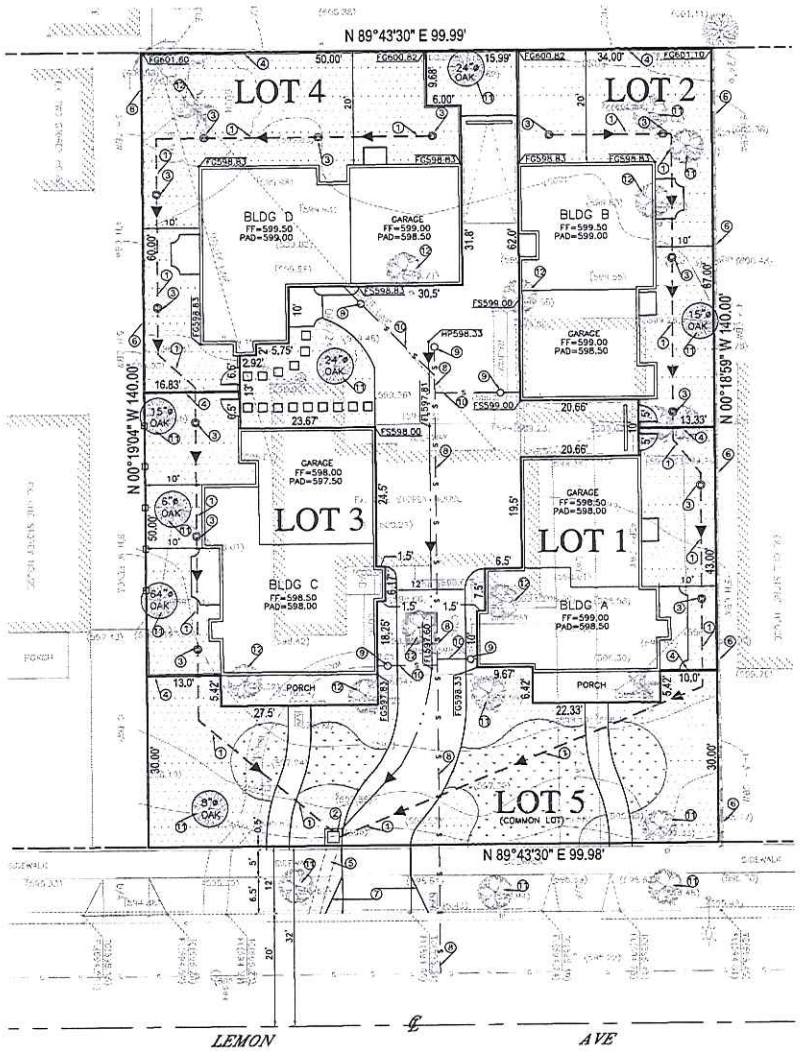
LOT 1: 1,606.72 SF
LOT 2: 2,174.29 SF
LOT 3: 2,029.37 SF
LOT 4: 2,669.24 SF
LOT 5: 5,520.38 SF

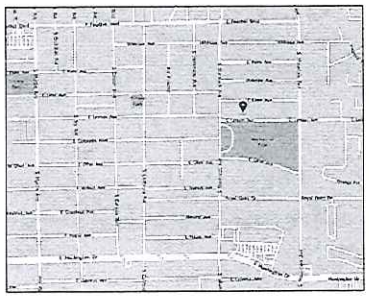
ADDRESS	BUILDING (TYPE)	1ST FLR. (SQ.FT.)	2ND FLR. (SQ.FT.)	LIVING (SQ.FT.)	PORCH (SQ.FT.)	GARAGE (SQ.FT.)
LOT 1	A	505	751	1,256	121	465
LOT 2	B	517	761	1,278	12	440
LOT 3	C	734	842	1,576	149	460
LOT 4	D	699	785	1,484	-	430
TOTAL:				5,600	282	1,795

DENSITY: 14,000/3,500 = 4.0 UNIT
PARKING: 2-CAR GARAGE/UNIT
DWELLING UNIT F.A.R. (MAX. 40%): 5,594/14,000 = 39.96%
ACCESSORY BLDG. F.A.R. (MAX. 20%): 1,795/14,000 = 12.82%

OPEN SPACE REQUIREMENT (40% MIN. OF LIVING AREA):

ADDRESS	REQUIRED	PROVIDED
LOT 1	1,256 X 40% = 503 SQ. FT.	506 SQ. FT.
LOT 2	1,278 X 40% = 511 SQ. FT.	1,150 SQ. FT.
LOT 3	1,576 X 40% = 631 SQ. FT.	665 SQ. FT.
LOT 4	1,484 X 40% = 594 SQ. FT.	1,515 SQ. FT.





VICINITY MAP
T.G. 567 H4

LEGEND:

(98.23)....EXISTING ELEVATION	EC ....END OF CONCRETE
99.00....PROPOSED ELEVATION	EP ....END OF PAVEMENT
--(100)-- EXISTING CONTOUR	EX ....EXISTING
....DRAINAGE PATTERN	TG ....TOP GRATE
....EXISTING STRUCTURE	INV....INVERT ELEVATION
....PROPOSED STRUCTURE	FS ....FINISH SURFACE
....PROPOSED SEWER	BP....BOTTOM OF SUMP PIT
....EXISTING R/W LINE	T.C....TOP OF CURB
....FIRE HYDRANT	FL....FLOW LINE
....CATCH BASIN	F.G....FINISH GRADE
RL ....RIDGE LINE	F.S....FINISH SURFACE
P ....PLANTER	F.F....FINISH FLOOR
B/W....BACK OF SIDEWALK	TC....TOP OF CURB
	--D--D--....DAYLIGHT LINE
	HP....HIGH POINT

TREE NOTE:

REMOVE ALL EXISTING TREES UNLESS OTHERWISE SHOWN IN THIS PLAN

NOTES:

1. PROPOSED DRAIN PIPE
2. PROPOSED CATCH BASIN
3. PROPOSED AREA DRAIN
4. PROPOSED BLOCK WALL
5. PROPOSED PARKWAY DRAIN
6. PROTECT-IN-PLACE EXISTING WALL
7. PROPOSED DRIVEWAY APRON
8. PROPOSED SEWER LATERAL
9. PROPOSED SEWER CLEANOUT
10. PROPOSED SEWER HOUSE CONNECTION
11. PROTECT-IN-PLACE EXISTING TREE
12. REMOVE EXISTING TREE

NORTH

0 10 20
(IN FEET)
1 inch = 10 ft.

CAL LAND ENGINEERING, INC.
dba QUARTECH CONSULTANTS
576 E. LAMBERT ROAD, BREA, CA 92821
TEL: (714) 671-1050 • FAX: (714) 671-1090

RELEASED

REVISIONS

PREPARED FOR:
4-UNIT PUD
725 E. LEMON AVENUE,
MONROVIA, CA 91016

DRAWN: RDL
CHECKED:
DATE: 3-20-2015
JOB NO.: 14-110-0274
SCALE: 1"=10'
FILE NAME:

C-1

SHEET 1 OF 1 SHT.

ROYAL OAKS GARDEN

4-UNIT P.U.D.

725 E. LEMON AVE.

MONROVIA, CA

721 E LEMON AVE

725 E LEMON AVE

733 E LEMON AVE

STREETSCAPE

NOT TO SCALE

REVISIONS	
DATE	NO
	1
	2
	3
	4
	5
	6

Stamp

SANYAO INTERNATIONAL INC.
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255 E. Santa Clara St., #200, Arcadia, CA 91006, U.S.A.
Tel (626) 440-9048 • Fax (626) 440-7090

4-UNIT P.U.D.
725 E. LEMON AVE
MONROVIA, CA

Date	3/27/2015
Scale	SEE PLAN
Drawn	H.A.
Job	2014-53
Sheet	T-0

Protected Tree Report:
Tree Survey, Encroachment, Protection and Mitigation

725 E. Lemon Avenue
Monrovia, CA 91016

Prepared For:

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October 2014

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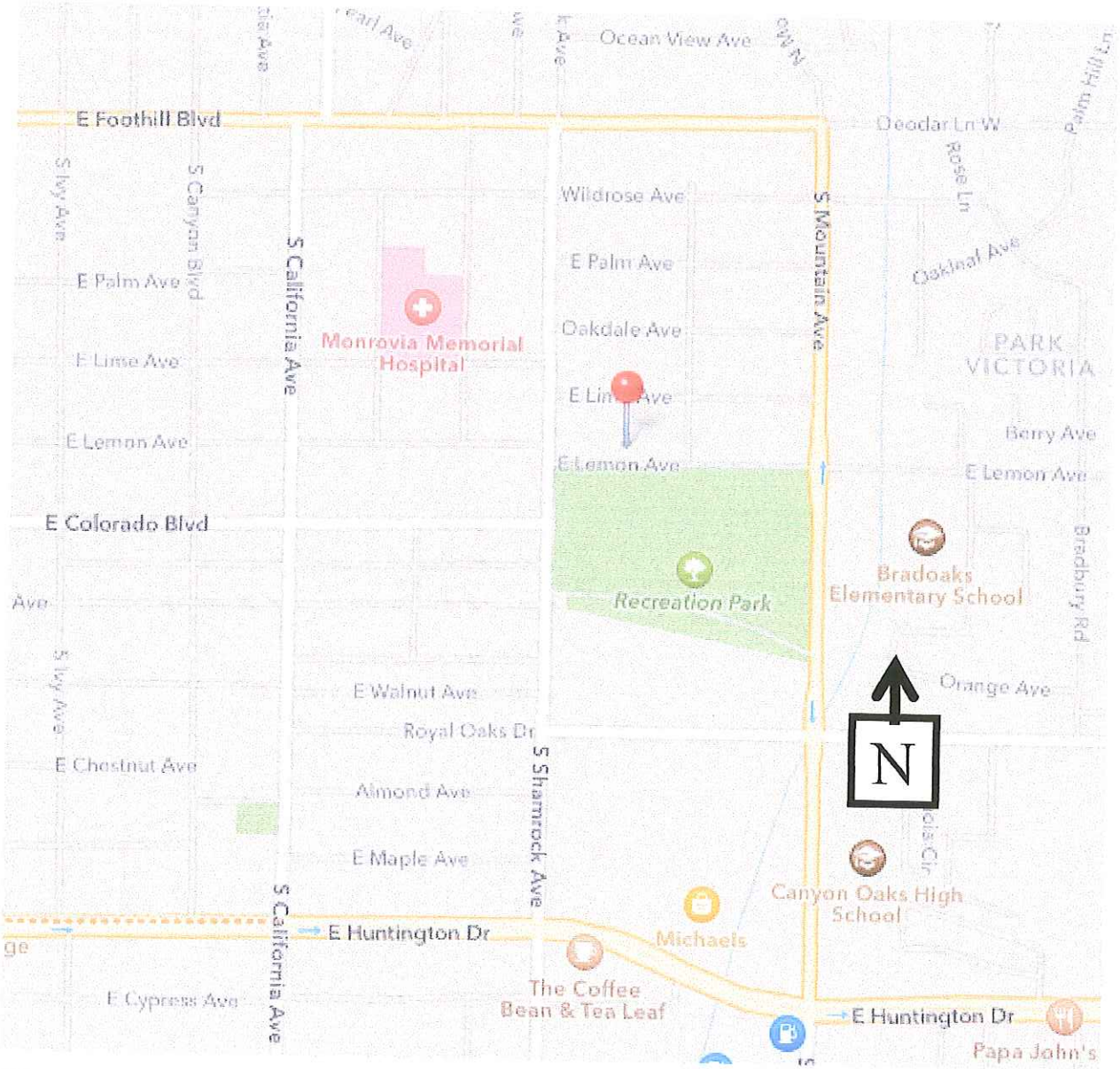
SUMMARY OF DATA

Total number of healthy Protected Trees on property including street trees located in the adjacent public right-of-way area	10
Total number of off-site Protected Trees with canopies (driplines) encroaching onto the property	0
Total number of diseased/hazardous Protected Trees on site proposed for removal	0
Total number of healthy Protected Trees to be preserved	10
Total number of healthy Protected Trees to be removed	0
Total number of Protected Trees that will be preserved, which will be impacted by construction within dripline (encroached)	10
Total number of Protected Trees with no dripline encroachments	0
Total number of proposed mitigation trees to be planted on site	0

BACKGROUND & PURPOSE

I was retained by the Project Manager, Mr. Robert Tong of Sanyao International, Inc. to be the consulting arborist for the planned redevelopment of the property located at 725 E. Lemon Ave., Monrovia. There are Protected Trees located on the property and in the public right-of-way adjacent to the property. The proposed construction may impact these trees and this report will serve to both notify the City of Monrovia Planning Division of the extent of the potential impacts as well as to inform the builder of the proper protection measures which must be taken in order to preserve the trees. As part of my preparation for this report I made a site visit to the property on October 22, 2014. I met with Mr. Tong at that time to view and discuss the proposed construction plans as they relate to the preservation of the Protected Trees.

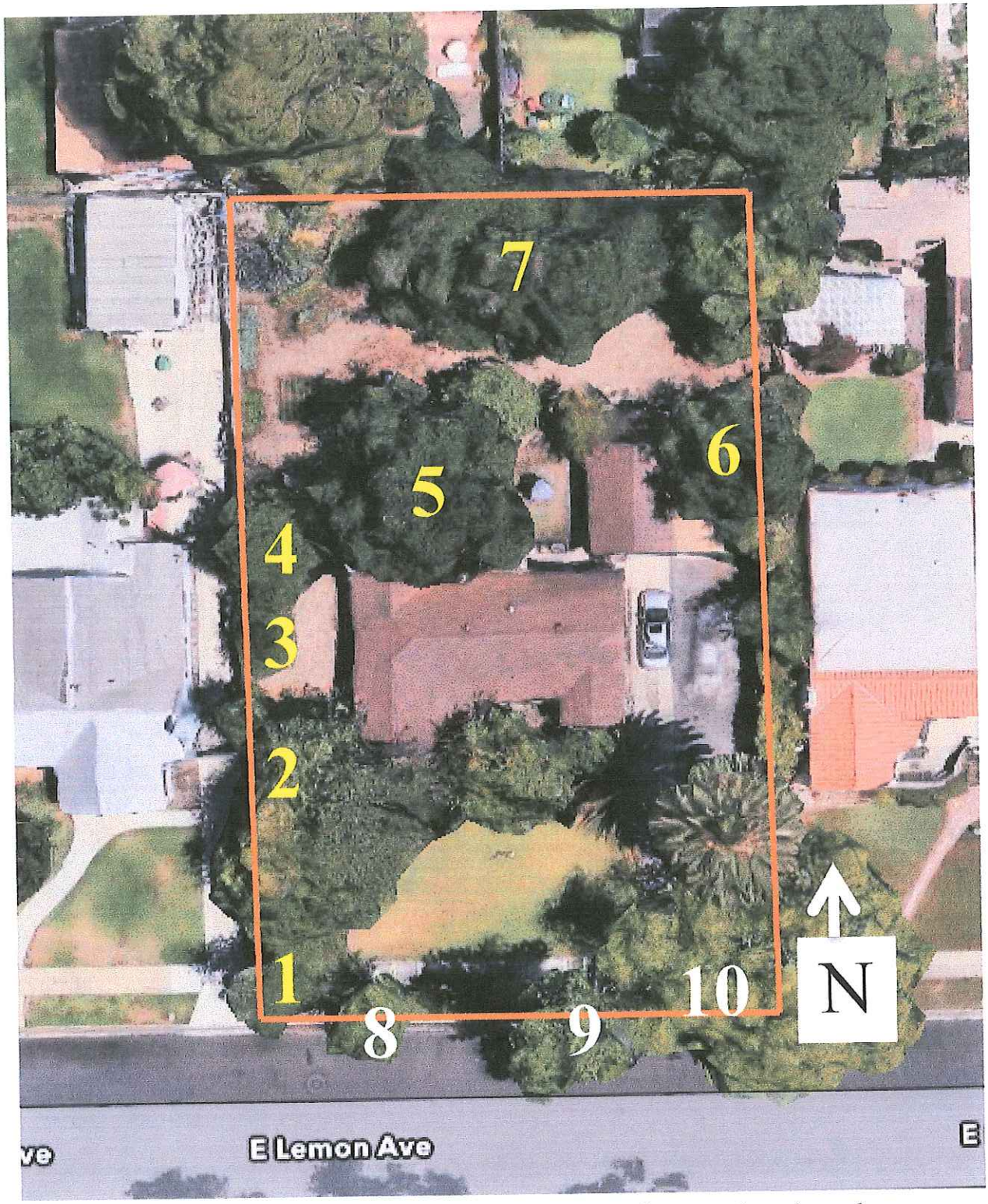
PROJECT LOCATION, DESCRIPTION & TREE ORDINANCE



The property is approximately five blocks south of E. Foothill Blvd., one block west of S. Mountain Ave. Above map courtesy of Apple Maps.

The property consists of a one story single-family residence that appears to be in poor condition. The home will be demolished and the property redeveloped into a four-unit townhome complex.

The landscape is unmaintained and in poor condition; however, the Protected Trees on the property appear to be in good health and structural conditions. The landscape will be renovated and the Protected Trees will be incorporated into the new design.



This aerial view (courtesy of Apple Maps) has been illustrated to show the approximate boundary lines (orange). The locations of the Protected Oak Trees are numbered in yellow, and street trees are numbered in white.

City of Monrovia Oak Tree Ordinance

Preserving Our Oaks
In an effort to save our oak trees for future generations, the City of Monrovia has adopted an oak tree preservation plan, found in Section 17.20.040 of the Monrovia Municipal Code. This code identifies which trees are subject to the ordinance and when a permit for removal or trimming is required.

Which Trees Does the Ordinance Cover?
The City of Monrovia's oak tree preservation ordinance was enacted to establish regulations for the protection of oak trees within the city. Oak trees that are subject to the ordinance are the following:

- Any trees in the oak family that measure ten inches in diameter or more at two feet above the level ground
- Oak trees located in the front yard or street facing side yard of single-family properties
- All oak trees located in the multiple-family, commercial or industrial zones (exception are single-family developed properties where no additional development is proposed are subject to same conditions as single-family zoned properties)
- All oak trees on vacant lots
- All oak trees indicated on an oak tree preservation plan

When Do I Need A Permit?
An oak tree preservation permit is needed when any of the oak trees that meet the above conditions are:

- To be cut to the ground, completely extracted or killed or removed by any means
- Removal of live tissue for the purpose of altering the appearance of an oak tree shall not be allowed. Therefore, ornamental pruning, thinning out, heading up, or any other similar pruning which involves the removal of live tissue is not permitted. However, deadwooding an oak tree is allowed and self-explanatory in that no live tissue is allowed to be removed
- If irrigation is to be installed or grading (cutting or filling) is to take place within the drip line of the tree

FIELD OBSERVATIONS & DESIGN ANALYSIS

Refer to Site Plan located in pocket at back of this report, Tree Characteristics and Health Matrix on page 5, Construction Impacts Matrix on page 6 and Photos in Appendix A, page 8.

Analysis regarding rootzone impacts are based on the type of impact, e.g, soil compaction, grading, and excavation; as well as the distance from the trunk that the impacts will occur. It is commonly accepted among professional arborists that a distance equal to three times a trunks diameter contains the structural roots responsible for keeping the tree upright. This critical rootzone area is defined as the root plate. Beyond the root plate the roots typically taper off into smaller, less significant sizes. These smaller roots are usually two inches in diameter or smaller and make up the rootmass responsible for water and nutrient uptake. Although roots of these sizes can be cut without significantly impacting health and stability it is advised that no more than 30 percent of the rootmass within the dripline is severed. The bulk of the rootmass is located within the top three feet of soil and root growth slows or halts when soil bulk density exceeds 1.60 g/cm^3 for most soils. More information regarding rootzone impacts is provided in the Excavation and Root Pruning section of the Construction Impact Guidelines, Appendix B.

Tree #1 – 8" coast live oak: Located in the front yard area, near the west property line. The tree is surrounded with dense vegetation that has somewhat suppressed its growth. The vegetation will be removed and the tree will be exposed, which will allow it to assume a spreading form. No pruning of the live crown is required to complete the project, but some structural pruning would most likely benefit the tree.

Tree #2 – 6" coast live oak: Located near the west property line. Similar to Tree #1 it is surrounded by dense vegetation, which will be removed to the benefit of the tree. The foundation of a home will be built ten feet from the trunk and the assumed overexcavation and compaction for the building pad may come as close as five feet from the trunk on its east side. The existing wood fence on the west property line will remain. No pruning of the live crown is required to complete the project but some structural pruning would benefit the tree.

Tree #3 – 6" coast live oak: Located near the west property line. The foundation of a home will be built seven feet from the trunk and the assumed overexcavation and compaction for the building pad may come as close as three feet from the trunk on its east side. The existing wood fence on the west property line will remain. No pruning of the live crown is required to complete the project but some structural pruning would benefit the tree. No pruning of the live crown is required to complete the project.

Tree #4 – 15" coast live oak: Located near the west property line. Similar to Tree #1 it is surrounded by dense vegetation, which will be removed to the benefit of the tree. The foundation of a home will be built 15 feet from the trunk and the assumed overexcavation and compaction for the building pad may come as close as ten feet from the trunk on its east side.

The existing wood fence on the west property line will remain. No pruning of the live crown is required to complete the project but some structural pruning would benefit the tree

Tree #5 – 17" coast live oak: This is the only Protected Tree that is not located near a boundary line. This tree will be encroached on the north and south by the foundations of homes and on the east by a new driveway. The encroachment on the south side of the trunk is buffered by the existing home's foundation that is two feet from the trunk. The driveway will be contoured at least six feet from the trunk on the east side. The driveway will be paved with semi-pervious interlocking pavers set on hand-compacted sand. Excavation for the driveway and base material will likely be 10 inches. The foundation for the new home on the north side of the trunk will be built as close as 13 feet away and the anticipated overexcavation and compaction will occur as close as 8 feet. Some crown raising and reduction type pruning will likely be required to accommodate the new roofline.

Tree #6 – 13" coast live oak: Located near the east property line. The existing block wall on the boundary line will remain. An existing garage and permanent storage shed will be removed and the foundation for a new home will be built within the same footprint. Overexcavation and compaction could come as close as five feet from the trunk on the west side. Some crown raising and reduction type pruning will likely be required to accommodate the new roofline.

Tree #7 – 24" coast live oak: This is the largest specimen tree on the property and it is located near the north property line. The existing wood fence on the boundary line will be replaced with a similarly designed and built vinyl fence. The foundation for the new home on the south side of the trunk will be built as close as 17 feet away and the anticipated overexcavation and compaction will occur as close as 12 feet. Some crown raising and reduction type pruning will likely be required to accommodate the new roofline.

Tree #8 – 18" sweetgum: Trees #8 #9 and #10 are all Protected Street Trees located in the parkway strip between the street and the sidewalk. A new driveway entry will be cut ten feet from the trunk on its east side.

Tree #9 – 15" sweetgum: A new driveway entry will be cut ten feet from the trunk on its west side. The existing driveway entry located ten feet from the trunk on its east side will be abandoned.

Tree #10 – 8" sweetgum: The existing driveway entry located ten feet from the trunk on its west side will be abandoned.

This chart includes all Protected Trees that are either located or encroaching on the property. It provides physical data collected from field observations. The trees have been surveyed and numbers correspond to the Site Plan included in this report. Tree numbers with an "os" indicate that the specimen is located off-site and a portion of the canopy extends over the subject property.

TREE CHARACTERISTICS & HEALTH MATRIX

CHARACTERISTICS												HEALTH											
		SIZE			FORM		CROWN CLASS			AGE CLASS			FOLIAGE DENSITY			SHOOT GROWTH			WOUND DEFENSE			VIGOR CLASS		
TREE NUMBER	SPECIES	TRUNK DIAMETER (INCHES)	APPROXIMATE HEIGHT (FEET)	AVERAGE SPREAD (FEET)	SYMMETRIC	ASYMMETRIC	DOMINANT	CO-DOMINANT	SUPPRESED	YOUNG	MATURE	OVERMATURE	NORMAL	SPARSE	DISEASE / INSECT	AVERAGE	POOR	TWIG DIEBACK	NORMAL	POOR	WOOD DECAY	GOOD	POOR	DISEASED/HAZARDOUS
1	Quercus agrifolia	8	20	20		X		X		X			X			X			X			X		
2	Quercus agrifolia	6	15	15	X			X		X			X			X			X			X		
3	Quercus agrifolia	6	15	15	X			X		X			X			X			X			X		
4	Quercus agrifolia	15	20	30	X			X		X			X			X			X			X		
5	Quercus agrifolia	17	30	40	X		X				X		X			X			X			X		
6	Quercus agrifolia	13	30	30		X	X				X		X			X			X			X		
7	Quercus agrifolia	24	40	60	X		X				X		X			X			X			X		
8	Liquidambar styraciflua	15	30	20	X		X			X			X			X			X			X		
9	Liquidambar styraciflua	15	40	25	X		X				X		X			X				X		X		
10	Liquidambar styraciflua	8	25	20	X		X			X			X			X			X			X		

This section includes all Protected Trees that are either located or encroaching on the property. It provides data collected from the analysis of construction plans. The tree has been surveyed and numbers correspond to the Site Plan included in this report. Tree numbers with an "os" indicate that the specimen is located off-site and a portion of the canopy extends over the subject property.

CONSTRUCTION IMPACTS MATRIX

	TREE SPECIES	SIZE & CONDITION		ROOTZONE IMPACTS								REQUIRED PRUNING OF LIVE CROWN				
TREE NUMBER		TRUNK DIAMETER (DBH)	CONDITION	Sides of tree where excavation (six inches or deeper) will occur	Sides where excavation impacts are buffered by existing infrastructure	**Excavation will remain a distance of at least 10 X DBH from trunk**	**Excavation will remain a distance of at least 5 X DBH from trunk**	**Excavation will remain a distance of at least 3 X DBH from the trunk**	**Removal or Relocation**	Additional light grading less than 6" deep to occur within dripline	Estimated % of total root mass to be removed or severed	**No Pruning Required**	**Pruning not to exceed 10%**	**Pruning not to exceed 30%**	Number of cuts larger than 3" in diameter required	Diameter of cuts for branch removals
1	Quercus agrifolia	8	Good	-	-					Yes	<20				0	N/A
2	Quercus agrifolia	6	Good	W	-					Yes	<20				0	N/A
3	Quercus agrifolia	6	Good	W	-					Yes	<30				0	N/A
4	Quercus agrifolia	15	Good	W	-					Yes	<20				0	N/A
5	Quercus agrifolia	17	Good	N,S,E	S					Yes	<20				0	N/A

CONSTRUCTION IMPACTS MATRIX (continued)

	TREE SPECIES	SIZE & CONDITION		ROOTZONE IMPACTS								REQUIRED PRUNING OF LIVE CROWN				
TREE NUMBER		TRUNK DIAMETER (DBH)	CONDITION	Sides of tree where excavation (six inches or deeper) will occur	Sides where excavation impacts are buffered by existing infrastructure	**Excavation will remain a distance of at least 10 X DBH from trunk**	**Excavation will remain a distance of at least 5 X DBH from trunk**	**Excavation will remain a distance of at least 3 X DBH from the trunk**	**Removal or Relocation**	Additional light grading less than 6" deep to occur within dripline	Estimated % of total root mass to be removed or severed	**No Pruning Required**	**Pruning not to exceed 10%**	**Pruning not to exceed 30%**	Number of cuts larger than 3" in diameter required	Diameter of cuts for branch removals
6	Quercus agrifolia	13	Good	W	W					Yes	<20				0	N/A
7	Quercus agrifolia	24	Good	S	-					Yes	<20				0	N/A
8	Liquidambar styraciflua	15	Good	E	-					Yes	<10				0	N/A
9	Liquidambar styraciflua	15	Good	W	-					Yes	<20				0	N/A
10	Liquidambar styraciflua	8	Good	E, N	N					Yes	<20				0	N/A

FINDINGS

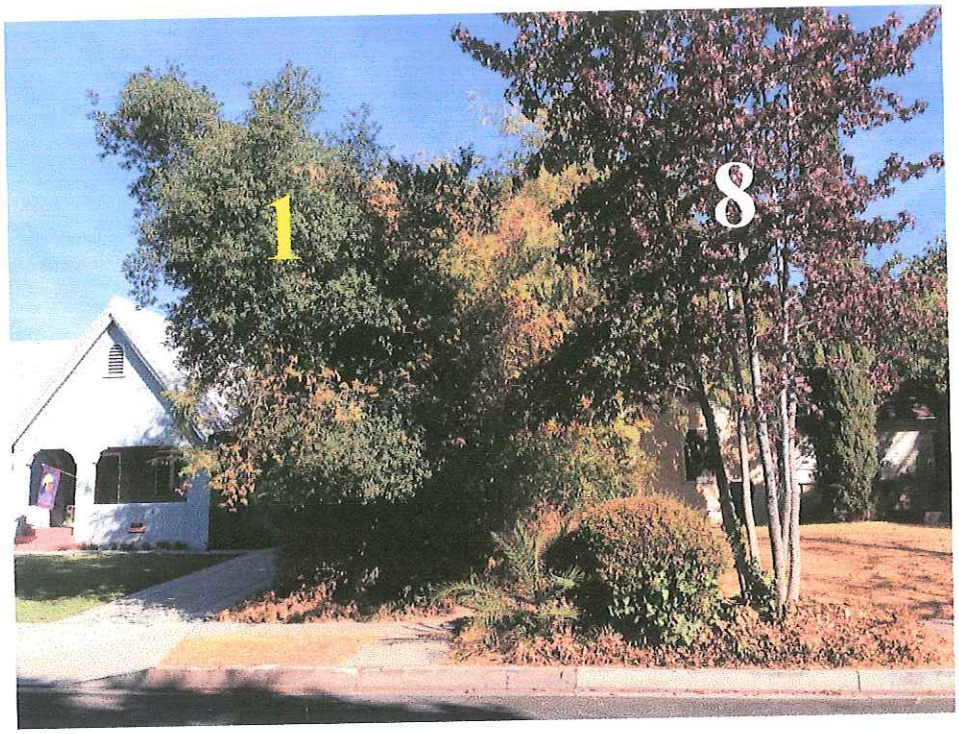
- The excavation that will occur on three sides of Tree #5 is tolerable because the impacts will be buffered on the south side by the existing foundation and excavation will remain outside of the root plate area on all other sides.
- Excavation will occur on one side of all other trees besides Tree #5 and it is at tolerable distances from the trunks; at least a distance equal to five times the trunk diameters.
- Existing vegetation and irrigation will be removed from within 15 feet of each tree. These areas should be mulched and left non-irrigated.

RECOMMENDATIONS

As with many construction projects, soil compaction is the most preventable impact that will need to be monitored in order to provide reliable protection and long-term preservation of the trees. To prevent unnecessary soil compaction a protective fence must be installed around the Protected Trees before any demolition occurs. The goal is to enclose the largest possible amount of space underneath the tree so that the heavy equipment required for demolition and construction can be routed away from root zones. The recommended fence placements are drawn in dashed lines on the Site Plan of this report. The main haul route for the demolition phase and into most of the construction phase shall be the existing driveway and the front yard area outside of the dripline of Tree #1

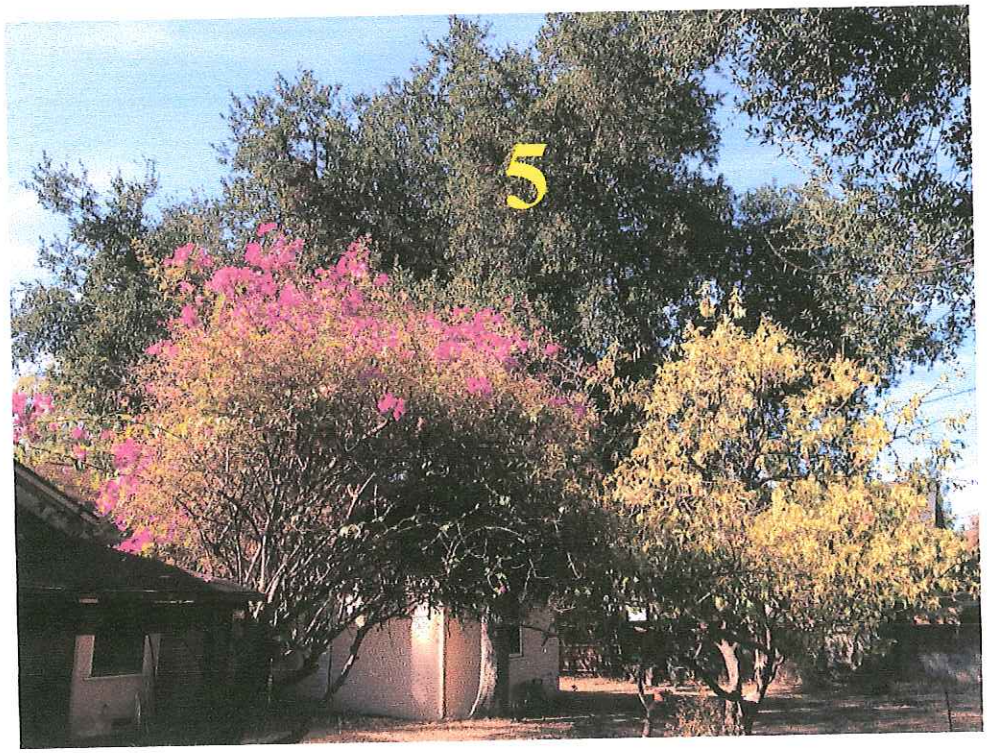
- Prior to demolition the contractor and consulting arborist shall meet on site to make sure fences are properly placed and installed and to review the goals for the tree protection plan. **The location of the protective fences are drawn with a dashed line on the Site Plan included in this report.**
- Tree Protection Zone fences shall be at least four feet tall and constructed of chain link fencing secured on metal posts.
- The fenced protection zones may be altered during construction; however, any alterations of the fenced protection zones must be approved by the arborist of record.
- Maintain the fences throughout the completion of the project. No staging of materials or equipment or washing-out is to occur within the fenced protected zones.
- The removal of existing vegetation near the Protected Trees shall be done by hand. No rototilling or other deep cultivation or grading shall occur within the driplines.
- Refer to the Construction Impact Guidelines in Appendix B for important general preservation measures concerning the different elements of this project.

APPENDIX A – Photos

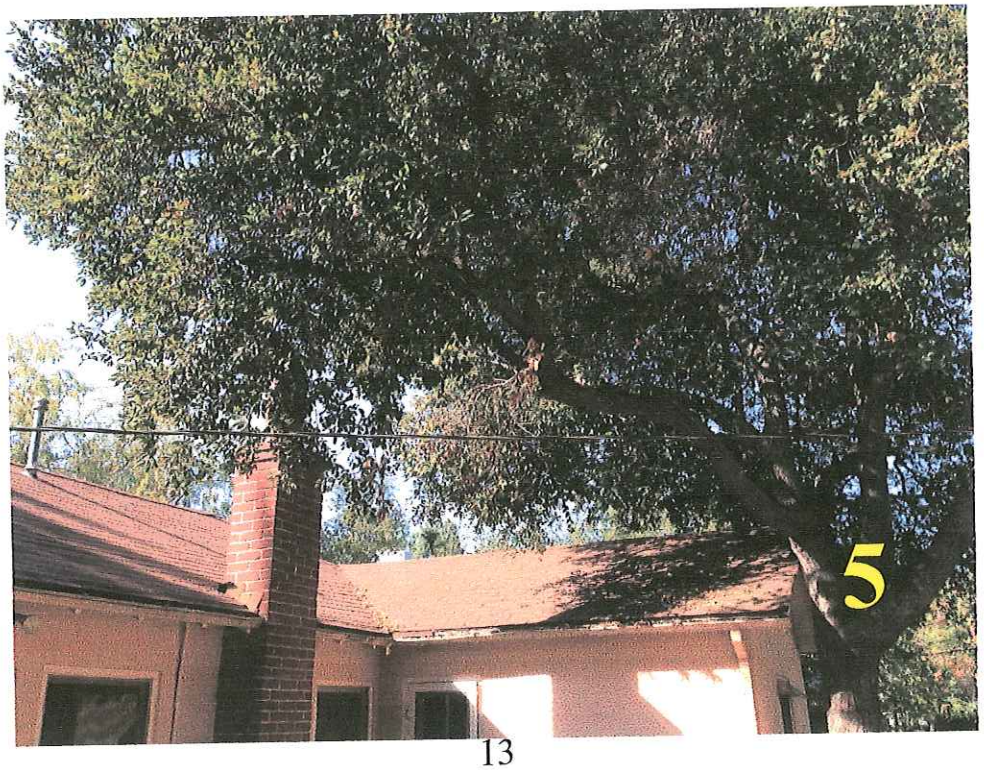


ABOVE: Tree #1 is surrounded by dense vegetation, which will be removed to allow the crown to develop a more symmetrical form. BELOW: Trees #2, #3 and #4 are small oaks located near the west property line. The new foundation will encroach closer to them than the existing home.

ABOVE: Tree #5 will be encroached by new foundations on two sides, one which is within the footprint of the existing house. BELOW: A residence and garage will be built 13 feet from the trunk in the open space on the right side.



ABOVE: The new foundation that will be built to the left (south) of Tree #5 will be set further back from the trunk. BELOW: The second story roofline will require a small amount of crown raising and reduction type pruning.



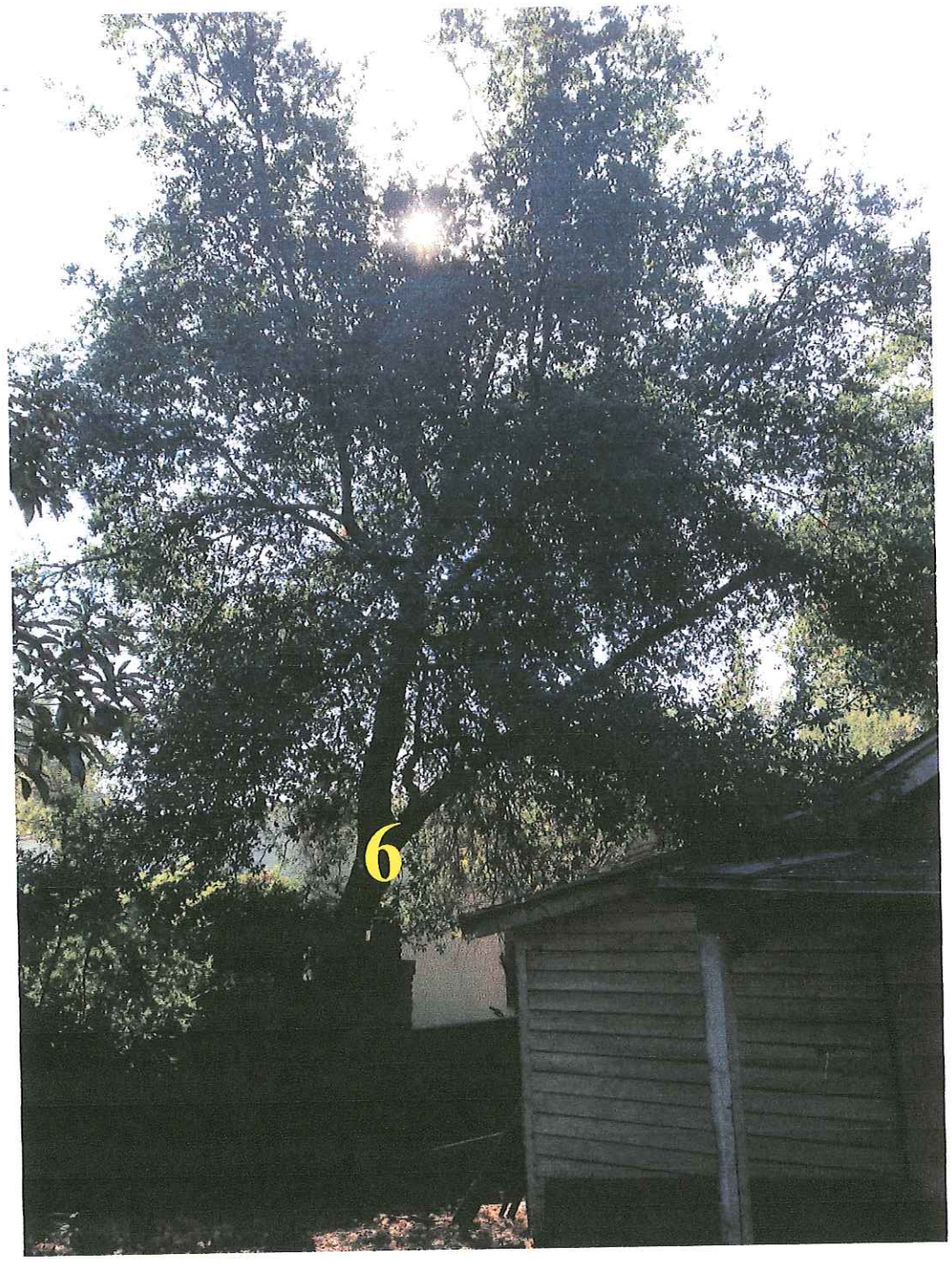
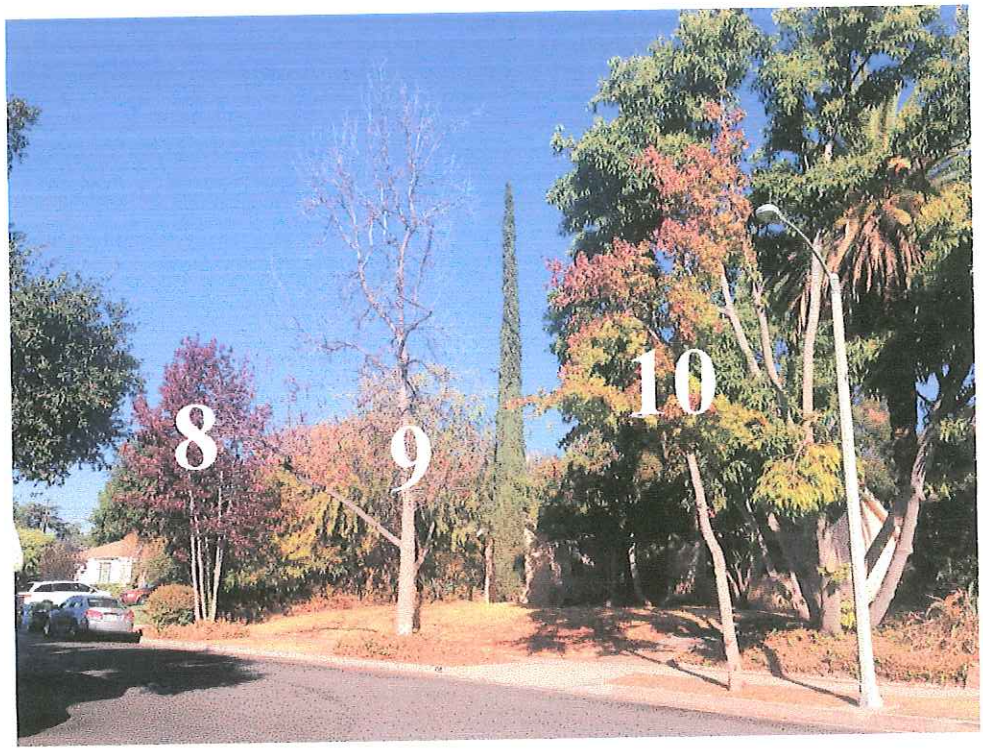


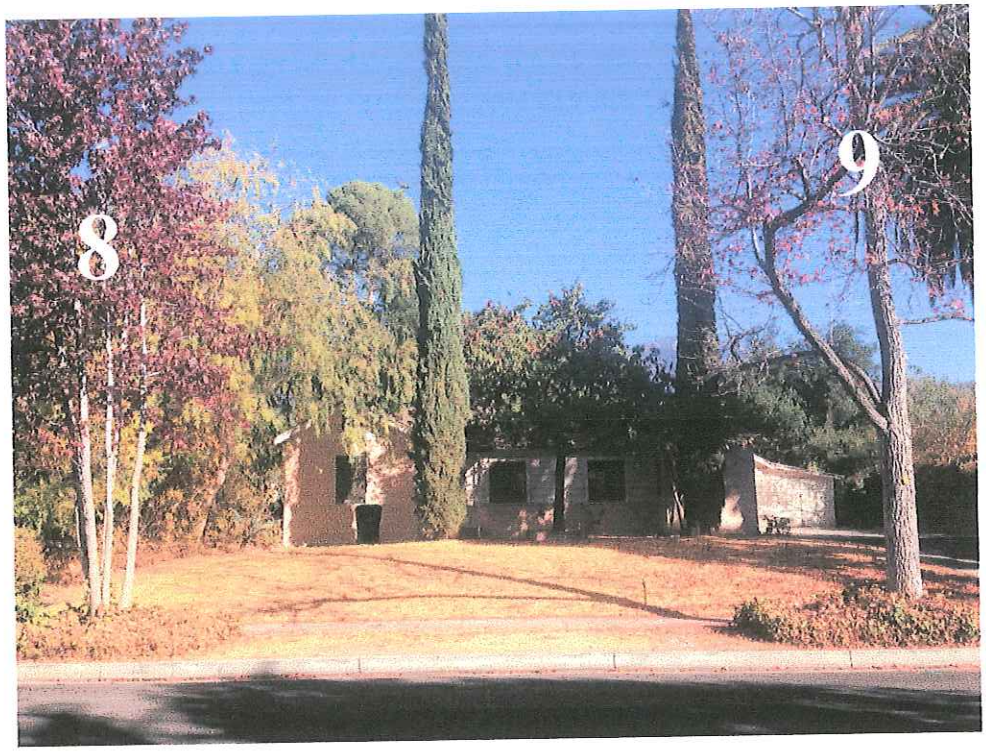
PHOTO: Tree #6 is located near the east property line. The existing block wall on the property line will remain.

ABOVE and BELOW: The existing structure under Tree #6 will be removed and a new garage and residence will be built within the same footprint.

ABOVE: Tree #7 is located near the back (north) property line. It has a very low canopy, which will need crown raising and reduction type pruning to accommodate a second story roofline 15 feet away from the trunk. BELOW: The wood fence will be removed and a similarly designed vinyl fence will be built.



ABOVE: Three street trees are located in the parkway strip in front of the property. All three are sweetgums, *Liquidambar styraciflua*. BELOW: The sidewalk will remain or be replaced in the same footprint.



ABOVE: A new driveway entry will be cut equidistantly between Trees #8 and #9. BELOW: The existing driveway entry near Trees #9 and #10 will be abandoned.

APPENDIX B - Protected Tree Construction Impact Guidelines

Size and Distribution of Tree Roots – Taken from Arboriculture, Integrated Management of Landscape Trees Shrubs and Vines. Harris, R.W., Clark, J.W., Matheny N.P. Prentice Hall 2004.

Roots of most plants, including large trees, grow primarily in the top meter (3 ft) of soil (see figure below). Most plants concentrate the majority of their small absorbing roots in the upper 150 mm (6 in.) of soil if the surface is protected by a mulch or forest litter. In the absence of a protective mulch, exposed bare soil can become so hot near the surface that roots do not grow in the upper 200 to 250 mm (8 to 10 in.). Under forest and many landscape situations, however, soil near the surface is most favorable for root growth. In addition, roots tend to grow at about the same soil depth regardless of the slope of the soil surface.

Although root growth is greatly influenced by soil conditions, individual roots seem to have an inherent guidance mechanism. Large roots with vigorous tips usually grow horizontally. Similar roots lateral to the large roots grow at many angles to the vertical, and some grow up into the surface soil. However, few roots in a root system actually grow down.

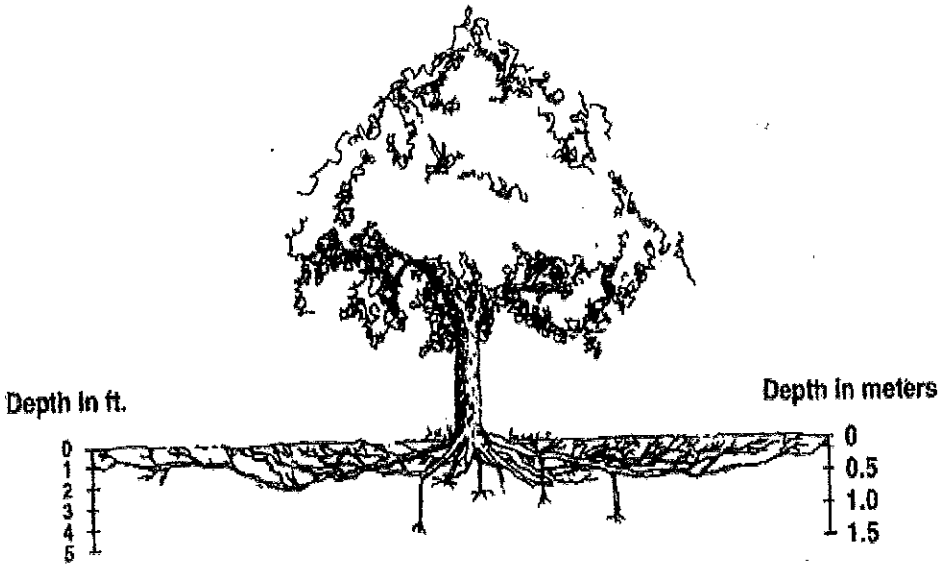


FIGURE In mature trees, the taproot is either lost or reduced in size. The vast majority of the root system is composed of horizontally oriented lateral roots.

The importance of soil

Soil supports and anchors tree roots and provides water, minerals and oxygen. Furthermore, soil is a habitat for soil microorganisms that enhance root function. A soil's ability to sustain tree growth is largely determined by its texture, structure (bulk density), organic matter, water and mineral content, salinity, aeration, and soil-microbe abundance and diversity.

Soil physical properties

Soil texture – the relative proportion of sand, silt and clay, is important because it affects water – and nutrient-holding capacity, drainage and aeration (gaseous diffusion). Soil structure is the arrangement of individual soil particles into clumps (aggregates). The net result is the formulation of larger voids between the aggregates which serve as channels for gaseous diffusion, movement of water and root penetration. Unfortunately, soil aggregates are readily destroyed by activities that compact the soil (increase bulk density). When this occurs, gaseous exchange, permeability, drainage and root growth are restricted.

The influence of the organic matter content of soil properties is quiet significant. Its decomposition by soil organisms releases substances that bind soil particles into larger granules, which improves both soil aeration, and drainage. In essence, the breakdown of organic matter improves water – and nutrient-holding capacity and reduces bulk density. Furthermore, it is the primary source of nitrogen and a major source of nitrogen and a major source of phosphorus and sulfur. Without organic matter soil organisms could not survive and most biochemical processes in the soil would cease.

Soil aeration, the movement and the availability of oxygen, is determined by both soil texture and structure. In general, compacted and finer soils, due to a higher proportion of small pore spaces (micropores), tend to drain slowly and hold less air than coarser, sandy, or well-structured find soils. Water retained in the small pores displaces oxygen and inhibits gaseous diffusion.

The availability of soil water is largely determined by the size of the pore spaces between the soil particles and the larger aggregates in which water is held. Most of the water in the larger pore spaces drains readily due to gravitational forces. A relatively thin film of water, which is readily available to plant roots, remains following drainage. Much of water held within the smaller pore spaces resists uptake by plant roots because it is held tightly on the soil surfaces.

Plant roots require an adequate supply of oxygen for development. Injury or dysfunction results when oxygen availability drops below a critical level. Root respiration is the first process to be restricted, followed by disruptions in growth, metabolism, nutrient and water uptake, and photosynthesis. Furthermore, the accumulation of high levels of carbon dioxide, produced by the roots during respiration can also impair root function. Reduced soil aeration resulting from soil compaction, flooding, excess irrigation, or

impervious pavement favors the development of crown rot (Phytophthora root disease). It also inhibits mycorrhizal fungi that enhance water and nutrient uptake and resist root pathogens.

The forest floor under a canopy in most undeveloped forests and woodland settings is typically covered by a layer of fallen leaves and other woody debris. It is usually cool, shady, well-aerated, and relatively moist – conditions that favor normal root growth. When the natural leaf litter is removed and when a tree's lower canopy is pruned up to provide clearance, the absorbing roots in the upper few inches of the soil experience higher soil temperatures and increased desiccation due to direct exposure to sunlight.

Minimizing the Effects of Construction and Development on Tree Root Systems

Activities that injure roots or adversely affect the root zone should be avoided or kept as far from the trunk as possible. Design changes or alternative building practices that avoid or minimize construction-related impacts should be considered and proposed when applicable.

Soil Compaction

Soils are intentionally compacted under structures, sidewalks, reads, parking areas, and load-bearing fill to prevent subsidence, and to prevent soil movement on slopes. Although unintentional, soil within the root zone of trees is often compacted by unrestricted foot traffic, parking of vehicles, operation of heavy equipment, and during installation of fill. Compaction destroys the soil's natural porosity by eliminating much of the air space contained within it. It leaves the soil hardm impenetrable and largely unfavorable for root growth. The soil's natural porosity, which allows for water movement and storage, gaseous exchange, and root penetration, is greatly reduced. Consequently, root growth and tree health suffer. Soil compaction is best managed by preventing it.

Bulk density is used to describe a soil's porosity, or the amount of space between soil particles and aggregates. High bulk densities indicate a low percentage of total pore space.

Pavement

Paving over the root systems of trees is another serious problem because it reduces the gaseous diffusion and soil moisture. Most paving materials are relatively impervious to water penetration and typically divert water away from a tree's root zone. Cracks and expansion joints do, though, allow for some water infiltration into the soil below. Of greater concern, is the loss of roots from excavation to achieve the required grade, and the necessary compaction to prevent subsidence. Once the soil surface is compacted, a base material is then added and compacted as well. With that done, the surface can then be paved. Thus, pavement within the root zones of trees can damage roots and create

unfavorable soil conditions. One alternative to minimize pavement impacts is to consider placing the pavement on the natural grade over a layer of minimally compacted base material. To reduce sub-grade compaction, consider using reinforced concrete or asphalt over a goetextile blanket to help stabilize the soil. On-grade patios or paving that covers more than one-third of the tree protection zone (TPZ) should be constructed using permeable materials that allow aeration and water penetration. Soil under permeable surfaces should not be compacted to more than 80 percent.

Excavation and root pruning

Excavation within the root zones of trees should be avoided as much as possible. The extent of root pruning (selective) or cutting (non-selective) should be based on the species growth characteristics and adaptive traits, environmental conditions, age, health, crown size, density, live crown ration and structural condition of the tree. The timing of the root pruning or cutting is another important consideration. Moderate to severe root loss during droughts or particularly hot periods can cause serious water-deficit injury or death.

When root pruning/ cutting is unavoidable, roots should be pruned or cut as far from the trunk as possible. Cutting roots on more than one side of a tree should also be avoided. Root cutting extending more than half-way around a tree should generally be no closer than about 10 times the trunk diameter. Recommended distances range from as little as 6 times trunk diameter (DBH) for young trees to 12 times trunk diameter for mature trees. The size of the TPZ should, however, be increased for over mature and declining trees and species that are sensitive to root loss.

The minimum distance from the trunk that roots can be cut on one side of the tree without destabilizing it, is a distance equal to about three times the diameter (DBH) of the trunk. Roots severed within that distance provide little or no structural support. Root pruning or cutting distances from the trunk should be greater for trees that lean and/ or those growing on shallow or wet soil.

In cases where the proposed grading will adversely affect trees designated for retention, special attention should be given to proper root pruning and post-construction care for injured trees. Where structural footings are required for foundations, retaining walls, etc., and roots larger than 2 inches in diameter will be impacted, consider design changes or alternative building methods.

When excavation within 5 times trunk diameter is unavoidable, roots greater than 1 ½ inches in diameter should be located prior to excavation and then pruned to avoid unnecessary damage. Hand-digging or use of a hydraulic or pneumatic soil excavation tool is the least disruptive way to locate roots for pruning. Although mechanical root pruners make clean cuts, they are non-selective. A backhoe bucket, dozer blade or trencher will typically pull, rip or shatter the larger root, causing additional damage toward the tree. Once the roots that interfere with the structure being built, e.g.,

foundations, footings, retaining wall, curbs, etc., are exposed, they should then be cut perpendicular to their long axis using a hand-saw, 'carbide-tipped chainsaw' or sharp ax, depending on size. Roots that are pruned in this manner typically regenerate new roots from near the cut. Roots exposed by excavation should be protected from exposure to sun and desiccation. Exposed roots that can not be covered with soil by the end of the day should be covered with moistened burlap or similar material.

Roots can generally be cut in a non-selective manner when excavating near of beyond the dripline. Ripped, splintered or fractured portions of roots however, should be re-cut. The damaged portion should be removed using sharp tools. The cut should be flat across the root with the adjacent bark intact. Wound dressings should not be applied to pruned or damaged roots except when recommended for disease, insect or sprout control.

The best approach to avoid water-deficit injury following root loss during the growing season is to provide ample irrigation. Irrigation should be considered prior to, during, and after root pruning. Watering schedules should also consider local soil conditions, climate, topography, time of year, species adaptability, extent of root pruning and tree health. If possible, irrigate the tree 7 to 10 days prior to excavation so that there is an adequate reservoir of soil water. Water can be delivered to large construction sites via water-tank trucks and applied directly to affected trees or stored nearby in plastic tanks. On relatively flat terrain, a 6 to 8 inch soil berm at the tree's dripline should be constructed to act as a watering basin. On steep terrain, soaker hoses should be used. They can be placed across the slope or spirally around the trunk, from about six feet away to the dripline. In addition, a two to four inch layer of wood chip mulch should be applied to as much of the root zone as possible to retard soil water loss.

Pruning foliage to compensate for root loss is not supported by scientific research and likely to result in slower recovery. Fertilization to stimulate root growth is generally unwarranted and may be counterproductive.

Trenching within the Tree Protection Zone

Trenching for underground utilities should be routed around the TPZ. When this is unavoidable, trenching within the TPZ should be done by 'hand' or using a pneumatic or hydraulic soil excavation tool, carefully working around larger roots. Roots larger than 1 ½ inches in diameter should not be cut. Dig below these roots to route utilities or install drains. A combination of tools can also produce satisfactory results, for example, a skillful backhoe operator under the arborist's supervision can dig down several inches at a time and detect larger roots by 'feel' (resistance). At that point, as assistant can expose the root and dig around it. In this manner, the backhoe can then continue extending the trench though the TPZ. Tunneling (boring) through the TPZ is the preferable alternative. For most large trees, tunneling depth should be at least 36 inches. Tunneling should begin at the edge of the TPZ, but no closer than a distance equal to one foot of clearance for each inch of tree DBH. Tunnels should also be offset to either side of the trunk. For trenching that extends only part way into TPZ, consider trenching radially to the tree trunk, as this is less harmful than tangential trenching. All trenches

made within the TPZ should be backfilled as quickly as possible to prevent root and soil desiccation.

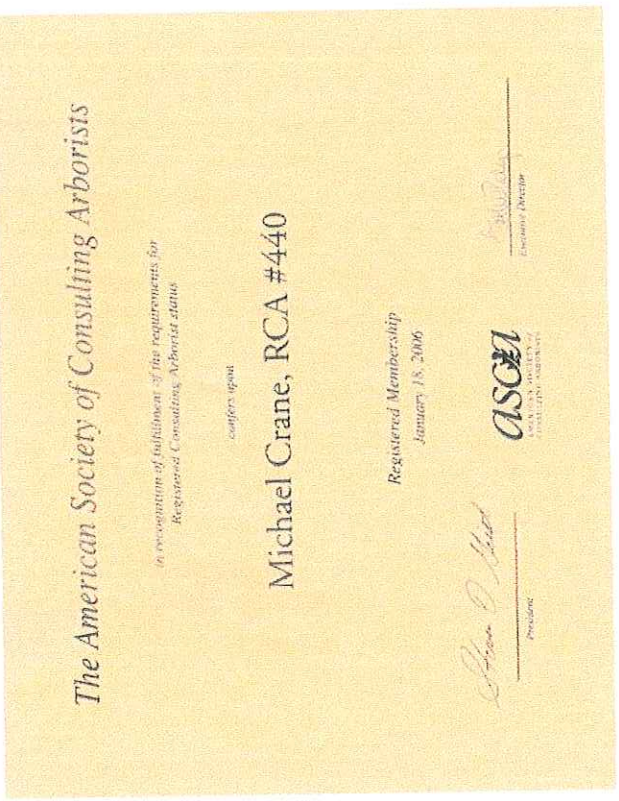
Managing Root Injured Trees

Root-pruned trees should be monitored for symptoms of water-deficit injury for a specified period following root pruning. Irrigation should be considered prior to, during, and after root pruning. Irrigation schedules should consider local soil conditions, climate, topography, time of year, species tolerance, extent of root pruning and tree health.

Grade Change: Fill Soil

Fill soil placed within the root zones of trees can have an adverse effect, particularly if the soil is compacted to support a structure or pavement. Soil compaction reduces aeration and water infiltration. Fill soil, die to textural changes, can also prevent water from penetrating the original soil layer below where the roots are. Furthermore, soil placed against the root crown and lower trunk can lead to root disease problems, especially if the soil near the trunk remains moist during the summer from irrigation. Alternatives to placing fills over roots zones shall be considered and proposed as appropriate.

AUTHOR'S CURRENT CREDENTIALS



The American Society of Consulting Arborists

In recognition of fulfillment of the requirements for Registered Consulting Arborist status

confers upon

Michael Crane, RCA #440

Registered Membership
January 18, 2006

President

Executive Director

ASCA

International Society of Arboriculture
Board-Certified Master Arborist

Michael J. Crane

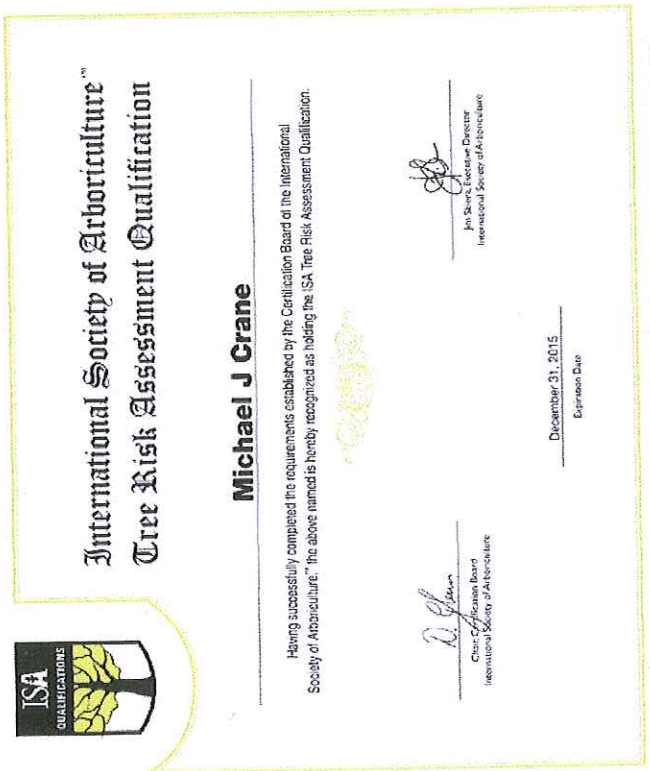
Having successfully completed the requirements set by the Arborist Certification Board of the International Society of Arboriculture, the above named is hereby recognized as an ISA Board-Certified Master Arborist

WE-6843B Nov 9, 2006 Dec 31, 2012

Certificate Number Certified Since Expiration Date

Jim Skiera, Executive Director
International Society of Arboriculture

ISA



ISA QUALIFICATIONS

International Society of Arboriculture™
Tree Risk Assessment Qualification

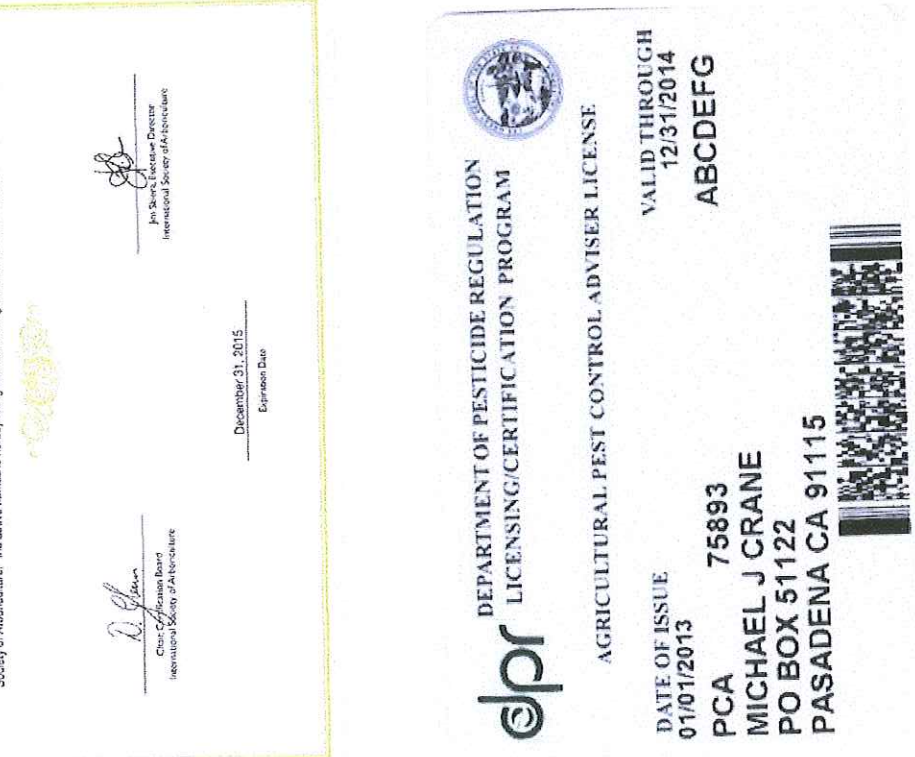
Michael J Crane

Having successfully completed the requirements established by the Certification Board of the International Society of Arboriculture,™ the above named is hereby recognized as holding the ISA Tree Risk Assessment Qualification.

Chair, Certification Board
International Society of Arboriculture

Jon Slack, Executive Director
International Society of Arboriculture

December 31, 2015
Expiration Date



DEPARTMENT OF PESTICIDE REGULATION
LICENSING/CERTIFICATION PROGRAM

AGRICULTURAL PEST CONTROL ADVISER LICENSE

VALID THROUGH
12/31/2014

ABCDEFG

DATE OF ISSUE
01/01/2013

PCA 75893
MICHAEL J CRANE
PO BOX 51122
PASADENA CA 91115

CERTIFICATION OF PERFORMANCE

I, Michael Crane, certify that:

- I have personally inspected the tree(s) and the property referred to in this report and have stated my findings accurately.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions, and conclusions stated herein are my own and are based on current scientific procedures and facts.
- My analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated within the report.
- My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party not upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Horticulture in a full-time capacity for a period of more than 15 years.

Signed: _____

Registered Consulting Arborist #440; American Society of Consulting Arborist
Board Certified Master Arborist #WE 6643B; International Society of Arboriculture
Licensed California Agricultural Pest Control Adviser #AA08269

Date: October 28, 2014

Arbor Care Inc.

Arboricultural Consulting & Plant Health Care
info@ArborCareInc.net 626-737-4007

March 30, 2015

TO: City of Monrovia Planning Division
415 S. Ivy Avenue
Monrovia, CA 91016

FROM: Michael Crane
Arbor Care, Inc.
Project's Arborist of Record: 725 E. Lemon Ave.

SUBJECT: **Analysis and recommendations for property line fence design modification 725 E. Lemon Ave.**
(Refer to Original Protected Tree Report, Dated October, 2014)

I met on site today with the project manager, Mr. Richard Tipping, to discuss in detail the design and construction of the north property line fence. The design has been changed from a vinyl fence set on posts similar to the existing wood fence to a typical concrete block wall with a continuous footing. The wall will encroach within a few feet of Tree #7, a 24" Protected Oak Tree. To prevent critical structural roots from being cut a design modification, (see attached suspended wall section detail) and special care in digging the trench for the footing will be required, which are:

- Hand dig the trench preserving all encountered roots that are two inches in diameter and larger. **I shall be on site to monitor the excavation within 20 feet of Tree #7**
- The distance from the tree that the continuous footing can extend will be determined by the size and number of roots encountered in the trench.
- The section of block wall set on a grade beam shall be used to span the root zone area where significant roots are located.

I will write a follow-up report for my monitoring of the trenching work. Please call of email me with any questions or concerns.

Respectfully,

Michael Crane
Project's arborist of record.

MICHAEL CRANE
ASCA
AMERICAN SOCIETY OF CONSULTING ARBORISTS
Registered Consulting Arborist #440

Suspended Wall Section

The custom footing made by securing a metal grade set on grade between two piers allows the wall to be built while bridging over the critical root zone of the tree. Note that this specification is for detail only. The footing spacing and dimensions related to structural integrity of the wall are not addressed in this detail.

Specific details for the grade beams that are planned for this project are:

- The grade beam will be constructed with extra reinforced poured concrete set on grade.
- Slight grading will occur to establish a level surface to form the grade beams, but no roots larger than one inch in diameter shall be cut to establish the grade.