REGULAR MEETING OF THE
CITY OF CONCORD
DESIGN REVIEW BOARD

Thursday, April 14, 2016
5:30 p.m., Regular Meeting
PERMIT CENTER CONFERENCE ROOM
1950 Parkside Drive, Bldg. D

Design Review Board Members

Jack Moore, Chair
Kirk Shelby, Vice Chair
Peter Harmon
Ross Wells
Jason Laub – Planning Commission Liaison

AMENDED AGENDA

PUBLIC COMMENT PERIOD

ADDITIONS/CONTINUANCES/WITHDRAWALS

CONSENT CALENDAR

A. **3/24/16 Meeting Minutes**

STAFF REPORTS

1. **Model Water Efficient Landscape Ordinance Implementation** – Report on Model Water Efficient Landscape Ordinance (MWELO) adopted by City Council on February 23, 2016 **Project Planner: Andrew Mogensen @ (925) 671-3332**

2. **Renaissance** **–** Consideration of an architectural modification to the approved plans for Renaissance Phase 2 located at 1825 Galindo Street. **Project Planner: Frank Abejo @ (925) 671-3128**

3. **Buffalo Wild Wings** **–** Consideration of an architectural modification to the approved plans for the rear wall and trellis at the Buffalo Wild Wings site located at 2090 Diamond Blvd. **Project Planner: Joan Ryan @ (925) 671-3370**

HEARINGS

1. **Jo-Ann Fabrics & Burlington Coat Factory Façade Improvements** **(PL15369 – DR)** – Design Review for exterior modifications to Jo-Ann Fabrics and Burlington Coat Factory at Park N Shop at 1675 Willow Pass Road. The General Plan designation is Downtown Mixed Use; Zoning classification is DMX (Downtown Mixed Use); APN 126-281-009. **Project Planner: Afshan Hamid @ (925) 671-3281**

2. **Veranda Shopping Center (PL16092 – DR)** – Design Review to demolish an approximately 609,000 square foot office and construct an approximately 375,000 square foot shopping center on a 30-acre site located at 2001-2003 Diamond Boulevard. The General Plan designation is West Concord Mixed Use; Zoning classification is WMX (West Concord Mixed Use); APN 126-440-001. **Project Planner: Frank Abejo @ (925) 671-3128**

3. **El Primo Tires (PL16066 – DR) –** Design Review to modify an existing 1,639 square foot service building, construct a new 600 square foot service building, new landscaping and related improvements on a 0.4-acre site located at 2807 Port Chicago Highway . The General Plan designation is Neighborhood Commercial.; Zoning classificaiton is NC (Neighborhood Commercial); APN 110-071-002. **Project Planner: Frank Abejo @ (925) 671-3128**

BOARD CONSIDERATIONS/ANNOUNCEMENTS

STAFF ANNOUNCEMENTS

BROWN ACT BRIEFING - Briefing on Brown Act provisions pertaining to Design Review Board meetings. **Briefing by Susanne Brown, Senior Assistant City Attorney @ (925) 671-3160**

ADJOURNMENT

NOTICE TO PUBLIC

No item will be considered for hearing after 9 P.M. Items remaining on the agenda will be rescheduled.

At the beginning of the meeting any items to be held over will be announced. The staff may bring up following this, any items on the agenda that are of a routine and non-controversial nature, and the chairperson may call for action on these items without further discussion if there is no opposition present at the meeting. Normal hearings will then proceed for the remainder of the agenda.

Staff will not provide written summaries of the Board's discussions on preliminary review or continued agenda items. Applicants should be prepared to take all necessary notes regarding the Board's comments, suggestions, and directions on projects, or schedule an appointment to review tape recordings of the meetings. For items resulting in a final action by the Board, action letters will be prepared by staff and distributed to the applicant.

Correspondence and writings received that constitutes a public record under the Public Records Act concerning any matter on this agenda are available for inspection during normal business hours by contacting the Planning Division, located at 1950 Parkside Drive, Wing D, Concord, CA. For additional information contact (925) 671-3152.

In accordance with the Americans with Disabilities Act and California Law, it is the policy of the City of Concord to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including those with disabilities. If you are disabled and require a copy of a public hearing notice, or an agenda and/or agenda packet in an appropriate alternative format; or if you require other accommodation, please contact the ADA Coordinator at (925) 671-3021, at least five (5) days in advance of the hearing. Advance notification within this guideline will enable the City to make reasonable arrangements to ensure accessibility.

NEXT DESIGN REVIEW BOARD MEETINGS:

April 28, 2016
May 12, 2016

REGULAR MEETING OF THE CITY OF CONCORD DESIGN REVIEW BOARD

Thursday, March 24, 2016
5:30 p.m., Regular Meeting
PERMIT CENTER CONFERENCE ROOM
1950 Parkside Drive, Bldg. D

Board Members Present:	**J. Moore, K. Shelby, P. Harmon, J. Laub, R. Wells**
Staff Present:	**R. Lenhardt, A. Hamid**
Audience Attendance:	**17 people**

SUMMARY MINUTES/ANNOTATED AGENDA

PUBLIC COMMENT PERIOD – ***None.***

ADDITIONS/CONTINUANCES/WITHDRAWALS - ***Kamyshin Minor Hillside Development continued to a date uncertain (5-0, Shelby motioned, Wells seconded)***

CONSENT CALENDAR

A. 3/10/16 Meeting Minutes

ACTION: ***Approved, 4-0-1. (Shelby motioned, Wells seconded, Laub abstained)***

STAFF REPORTS

1. **Kamyshin Minor Hillside Development (PL15005 – DR)** – Design Review for a 2,750 square foot single-family residence on a 0.42-acre site located at 3687 Treat Boulevard. The General Plan designation is Rural Residential; Zoning classification is RS-15 (Single-Family Residential 15,000 square foot minimum lot size); APN 130-230-044. **Project Planner: Joan Ryan @ (925) 671-3370**

2. **2090 Diamond Boulevard Commercial Development (PL15042 - DR) –** Design Review for a modification to the rear screening wall along Galaxy Way and corner trellis feature for the Buffalo Wild Wings Restaurant and adjacent commercial building, currently under construction at 2090 Diamond Boulevard. The General Plan designation is West Concord Mixed Use; Zoning Classification is WMX (West Concord Mixed Use); APN 126-490-001. **Project Planner: Joan Ryan @ (925) 671-3370**

   ACTION: ***The Board approved the following changes, 1) eliminate the stone wainscot along the rear wall between the columns and replace the stone material with stucco to match the upper wall 2) simplify the wall cap per the plans, 3) change the flared column footing to a flat column footing, 4) upsize the metal trellises along the rear wall to match those attached***

to the building, 5) eliminate the trellis "connections" between each vertical trellis element at the corner of the site, 6) eliminate the three-foot trellis wall, and 7) incorporate a three-foot flared stone veneer footing at each trellis column. The following items shall return as a staff report item, 1) a section of the rear wall columns showing how the veneer will be applied to the wall (the column shall project 6" from the wall and the veneer shall return around the column to the wall and appear "substantial" so there is adequate relief and shadow), and 2) a detail of the three-foot flared stone veneer footing at each trellis column.

HEARINGS

1. **Conco Commercial Building (PL16010 – DR)** – Final Design Review for a 56,146 sq. ft. light industrial warehouse building at 5129 Commercial Circle. The General Plan designation is Business Park; Zoning classification is OBP (Office Business Park); APN 159-040-078. **Project Planner: G. Ryan Lenhardt @ (925) 671-3162**

   ACTION: ***Approved, 4-0-1. (Harmon motioned, Shelby seconded, Laub abstained)***

2. **Park & Shop Design Guidelines (PL16092 – DR)** – Preliminary Design Review for façade improvements and a master sign program for the Park & Shop retail center. The General Plan designation is Downtown Mixed Use; Zoning classification is DMX (Downtown Mixed Use); APN's 126-281-033,005, 007, 009, 010, 011, 012, 013, 035, 040, 041, 022 through 028; and 126-360-001 through 009. **Project Planner: Afshan Hamid @ (925) 671-3281**

   ACTION: ***The Board provided comments.***

BOARD CONSIDERATIONS/ANNOUNCEMENTS – ***Board member Wells thanked staff for hosting its annual tour of new projects in Concord. Board member Harmon expressed his concern about there being adequate and legible information when applicants present changes to projects. Chair Moore expressed a concern when applicants ask to "simplify" the design of approved projects. Board member Harmon suggested staff implement an "Orchids and Onions" program to spotlight good architectural design.***

STAFF ANNOUNCEMENTS – ***None.***

ADJOURNMENT – ***8:14 p.m. (5-0, Shelby motioned, Laub seconded)***

NEXT DESIGN REVIEW BOARD MEETINGS:

April 14, 2016
April 28, 2016

Concord **REPORT TO DESIGN REVIEW BOARD**

DATE: April 14, 2016

I. GENERAL INFORMATION

Project Name:	**Water Efficient Landscaping Ordinance Implementation**
Review Status:	**Adopted by City Council on February 23, 2016**
Location(s):	**City-Wide**
Code Section:	**Chapter §18.170**

II. PROJECT BACKGROUND

In order to address the drought emergency and rebuild depleted water reserves, Governor Brown issued Executive Order B-29-15 in April 2015, directing the California Department of Water Resources (DWR) to update the State's Model Water Efficient Landscape Ordinance (referred to as MWELO or "the Ordinance") with more efficient standards through an expedited process. The new MWELO was approved by the California Water Commission on July 15, 2015 and was published by the State Office of Administrative Law in early October (Exhibit A). Staff brought this update to the Design Review Board for recommendation on October 8, 2015 shortly thereafter. The State of California estimates that, under these updated regulations, a typical California landscape will use about 20 to 30 percent less water than previously allowed.

All local agencies were given until December 1, 2015 to either adopt the State's updated MWELO or adopt a local ordinance which is at least as effective in conserving water as the State's (Exhibit B). The State's MWELO requirements automatically went into effect by default on December 1, 2015. The City Council voted to adopt MWELO by reference in the Development Code on February 23, 2016 (Exhibit C).

III. DISCUSSION

The City Council followed the recommendation of the Design Review Board and Planning Commission last February by adopting the State's MWELO by reference within Concord Development Code Section 18.170, Water Efficient Landscaping, rather than directing staff to draft a custom ordinance. The primary benefit to this method is that it provides built-in familiarity and consistency. This more streamlined, business-friendly approach allows landscape architects and professionals to focus on the preparation of their plans rather than having to relearn a customized local ordinance.

The Model Water Efficient Landscape Ordinance reduces the total amount of water used to irrigate landscaping by reducing the overall water allotment and by requiring more efficient irrigation

methods for each landscaping project. Landscape Architects are required to calculate the total amount of water allocated for each project with the new formula through their landscaping plan submittal to the City and must certify that their design does not exceed the given allotment. Landscape architects must also use more efficient plant species, ground cover, and irrigation methods in the design of their projects. After construction, landscaping professionals must then certify that their installation complies with the approved landscaping plans and water allocation and provides a copy of that certification to the Planning division for its records upon completion.

The updated MWELO reduces the threshold of new landscaping projects subject to the Ordinance from 2,500 square feet to 500 square feet. This threshold applies to all new landscaping projects that require a permit, plan check or Design Review. The threshold for existing landscapes that are being rehabilitated and do not require a permit or plan check remains unchanged at 2,500 square feet. The updated Ordinance also limits the installation of turf unless it is used for a specific function such as sports fields or gathering areas, requires the installation of efficient sprinkler nozzles, bans turf in street medians and parkways with few exceptions, and requires the use of compost to improve the water-holding capacity of soil.

The most noticeable changes under the new MWELO will involve the quantity of turf installed in new projects irrigated from potable water sources (i.e. tap water). Turf irrigated by recycled water will continue to be exempt from these limitations. As turf is a high water use plant species, the reduced water allocation required under the Ordinance will effectively limit the amount of turf coverage in new and rehabilitated residential projects from 33% to 25% of the total landscaped area. The Ordinance prohibits the placement of high water use plant species within narrow landscape areas such as median strips less than ten feet in width. The Ordinance also prohibits the installation of overhead spray irrigation systems in small landscape areas less than 10 feet wide, which must now be irrigated with subsurface drip or other technology that produces no over spray or runoff. The water allowance for areas used for specific functions, such as recreational sports fields and edible gardens, remains unchanged.

Another requirement in the updated MWELO is a new annual reporting requirement. All local agencies will be required to submit an annual report to the State of California identifying permit statistics on the number and types of projects subject to the ordinance, the total area of landscaping (in square feet) subject to the ordinance, and the number of new housing starts, new commercial projects, and landscape retrofits. It is important for landscaping professionals to accurately identify these details on their plans and Certificate of Completion, so that staff can collect and relay the information to the State.

In response to these new regulations, staff is taking additional measures to inform the public of the new landscaping permit requirements, including providing updated information online and at the Permit Center. Staff has already begun posting information on the City website and at the Permit Center with new handouts and updated checklists to assist applicants. The Contra Costa Water District also has a number of programs in place to assist residential water customers and landscaping contractors, including a Landscape Design Assistance program to encourage and assist with the installation of more water efficient landscaping.

Staff has prepared the following questions and answers regarding the new MWELO update:

What is the Model Water Efficient Landscaping Ordinance and how does it affect the City?

MWELO functions as the "building code" for all landscaping projects. It specifically regulates the budgeting and allocation of water used for the irrigation of landscaping projects. It also regulates the design and construction method of landscaping irrigation systems. The application of MWELO to landscaping is comparable to a building code applied to architecture. Landscape architects are required to design their projects to comply with MWELO, just as architects are required to adhere to the California Building Code in the design of their projects.

The purpose of MWELO is to reduce California's overall water usage. According to the Department of Water Resources, about 53 percent of a typical California household's total average water use — about 190 gallons per household per day — is used for landscaping and other outdoor uses. In order to achieve a meaningful reduction in water usage during the drought emergency declared last year, all jurisdictions are required to adopt the updated MWELO standards. The requirements apply to all local agencies, as well as landscape architects and contractors. The new rules took effect on December 1, 2015, regardless of local agencies' adoption. The City is, by State law, already required to ensure that all landscaping plans that are reviewed are in compliance with MWELO.

Could the City of Concord adopt its own ordinance or a regional ordinance that overrides the requirements of the State's MWELO?

The City has the option of adopting its own custom local ordinance or a regional ordinance, but State law requires it to be at least as effective as the State's MWELO. The Contra Costa Water District is not preparing a regional or alternative ordinance.

How do the updated MWELO requirements affect landscaping design in Concord?

MWELO is applied to the budgeting and allocation of irrigation water for a given landscape project. It does not require or prohibit the use of any particular plant species or require landscaping projects to be smaller or use fewer plants. Because this MWELO update allocates about 20% less water from the prior version, landscape design will be affected in that new landscaping projects will need to incorporate an overall combination of plant species that require less water. High water use plant species, such as turf, will be used less often and in fewer locations.

Each plant species has a different water requirement, which can also vary depending on the climate. A standard manual published by the California Department of Water Resources (DWR) known as WUCOLS IV, or the "Water Use Classification of Landscape Species, 4th Edition" contains an extensive list of plant species and their irrigation requirements. Landscape architects use this manual in conjunction with MWELO to calculate the irrigation requirements for each plant species and ensure that their project does not exceed the overall water allocation in the landscaping plan submittal to the City. This manual provides landscape architects with an extensive palette of low water use plant species to choose from when designing their plans. They can continue to use high water use plant

species, but due to the reduced water allocations, they will need to balance them so that their ultimate design still complies with MWELO.

Future landscaping projects in Concord will be more in line with local climate conditions. The reduced water allocation will encourage a greater use of native plant species and trees, especially native California oaks, wildflowers, and grasses. The most notable change will be a reduction in the overall amount of turf used in most landscaping, due to its very high irrigation requirements.

Does this mean that all projects that comply with the updated MWELO requirements end up looking like a barren landscape?

Definitely not. A good landscape architect can creatively overcome the updated water reduction requirements with a landscape plan that is indistinguishable from the previous standards. A landscaping project that complies with MWELO does not need to appear barren or sparsely planted. While such a design may fully comply with MWELO's reduced water allocation, it must still receive a recommendation of support from staff or the Design Review Board. There are literally thousands of low and moderate water use plant species available to landscape architects that can result in an unlimited variety of lush and attractive landscaping designs. The City will continue to have the opportunity to evaluate proposed landscaping plans that meet the threshold size to ensure that they are lush and well designed in accord with MWELO.

How will the updated MWELO affect City parks and median landscaping?

Staff consulted with the Parks and Recreation Department, which is currently undertaking a study to evaluate the cost of landscaping maintenance in Concord. It should be noted that recreational turf in City parks and play fields are exempt from the provisions of MWELO. Additionally, the new ordinance does not affect the City's existing landscaping and street medians; however, when the City does rehabilitate these landscape areas, they will need to comply with the MWELO provisions. New or remodeled public landscaping projects will be designed to use less water and require less frequent maintenance.

The cost for compliance with MWELO is not expected to pose an additional financial burden on the City in that the new irrigation methods are not more complicated or expensive to install than existing irrigation systems. In fact, the overall maintenance cost for new landscaping is anticipated to be less.

Do the updated MWELO requirements affect Concord's status as a Tree City?

The new MWELO standards will have no effect on Concord's Tree City designation. Although MWELO reduces the overall amount of water available for landscaping, it should not greatly affect existing established trees or the number of trees planted in the future. Native tree species such as Valley Oaks, Sycamores, and Buckeyes are already low water use plants and will be completely unaffected. Concord's oldest and largest trees were planted long before anyone used automated irrigation systems.

When does a City permit or plan check trigger the MWELO requirements?

The updated MWELO thresholds apply to any new construction project with a landscape project area equal to or greater than 500 square feet and any rehabilitated landscape project with an area equal to or greater than 2,500 square feet. These requirements are triggered by a building permit, plan check or Design Review.

Concord's Development Code already requires any multifamily residential, industrial, or commercial landscaping project that involves the "substantial alteration of any landscaping or site topography" to apply for Design Review under Section 18.415.020. The Design Review Board will continue to evaluate development projects that meet this City standard using the new MWELO provisions. In addition, staff will also evaluate building permit applications that do not require Design Review for compliance with the new MWELO provisions.

Any type of development permit that includes a new landscaping project between 500 and 2,500 square feet will be able to use a self-certification checklist provided by the City as an option for compliance. This provision extends to all projects less than 2,500 square feet, including residential, allowing the applicant to avoid the cost of preparing a formal landscape plan submittal with their building permit or hiring a landscape architect to certify compliance with the MWELO provisions.

How would the City enforce the MWELO requirements if a residential homeowner has a landscaping rehabilitation project over 2,500 square feet but does not need to apply for a building or other City permit?

MWELO is only triggered by a building permit, plan check or design review. The City of Concord does not require a special landscaping permit outside of the normal building permit process, so a residential homeowner's landscaping rehabilitation project alone would not likely trigger a building permit. When crafting the updated law, the Department of Water Resources identified the average residential landscape size in California to be 2,500 square feet. They estimated that very few existing residential homeowners would have landscaping rehabilitation projects that exceed 2,500 square feet.

How will the City enforce compliance with the updated landscaping requirements?

The City of Concord enforces MWELO through the existing Design Review and building permit plan check process. All planning and building permit applications are reviewed for compliance with the measures. The process already in place will continue to function in the same manner it did before last year's MWELO update. Projects which are constructed without a building permit or differently than the approved plans are investigated by the Building Code Enforcement staff and red tagged for corrective compliance.

What information is required to be reported to the State of California?

Local agencies are now required to report on the MWELO implementation and enforcement measures to the Department of Water Resources on an annual basis. This information includes the number and types of properties subject to MWELO, the total area of square feet subject to MWELO, as well as the

number of new housing starts, new commercial projects, and landscaping retrofits conducted over the prior year. Staff has reprogrammed the City's permit tracking software to input and collect this information during the plan check process. The State of California does not require special enforcement outside of the existing plan check and building permit process.

How will MWELO affect the redevelopment of the Naval Weapons Station?

The updated MWELO provisions will apply to all future development in the Base Reuse Area. One benefit is that future development and associated landscaping within the Base Reuse Area will require less water and place less of a burden on existing water resources and utility services than older style development that used more water intensive landscaping.

IV. RECOMMENDED ACTION

Staff is bringing this item forward to the Design Review Board for their information. Although there is no recommendation requested from the Board at this time, their comments and suggestions regarding implementation of the new Ordinance are welcome.

Prepared by:

Andrew J. Mogensen, AICP
Principal Planner
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Exhibits:

A- New 2015 State Model Water Efficient Landscaping Ordinance
B- Informational Handout from the Department of Water Resources
C- Concord Development Code Section 18.170, as adopted on February 23, 2016

California Code of Regulations
Title 23. Waters
Division 2. Department of Water Resources
Chapter 2.7. Model Water Efficient Landscape Ordinance

§ 490. Purpose.

(a) The State Legislature has found:

(1) that the waters of the state are of limited supply and are subject to ever increasing demands;

(2) that the continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

(3) that it is the policy of the State to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;

(4) that landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; ~~and~~

(5) that landscape design, installation, maintenance and management can and should be water efficient; and

(6) that Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use.

(b) Consistent with the legislative findings, the purpose of this model ordinance is to:

(1) promote the values and benefits of landscaping practices that integrate and go beyond the conservation and efficient use of water;~~landscapes while recognizing the need to invest water and other resources as efficiently as possible;~~

(2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects by encouraging the use of a watershed approach that requires cross-sector collaboration of industry, government and property owners to achieve the many benefits possible;

(3) establish provisions for water management practices and water waste prevention for existing landscapes;

(4) use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount;

(5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;

(6) encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and

(7) encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.

(c) Landscapes that are planned, designed, installed, managed and maintained with the watershed based approach can improve California's environmental conditions and provide benefits and realize sustainability goals. Such landscapes will make the urban environment resilient in the face of climatic extremes. Consistent with the legislative findings and purpose of the Ordinance, conditions in the urban setting will be improved by:

(1) Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and esthetic benefits.

(2) Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.
(3) Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.
(4) Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.
(5) Protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants. Utilizing integrated pest management with least toxic methods as the first course of action.

Note: Authority cited: Section 65593, Government Code. Reference: Sections 65591, 65593 and 65596, Government Code.

§ 490.1. Applicability.

(a) After ~~January 1, 2010,~~ December 1, 2015, and consistent with Executive Order No. B-29-15, this ordinance shall apply to all of the following landscape projects:

(1) new construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review;
(2) rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;
~~(1) new construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check or design review;~~
~~(2) new construction and rehabilitated landscapes which are developer-installed in single-family and multi-family projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;~~
~~(3) new construction landscapes which are homeowner-provided and/or homeowner-hired in single-family and multi-family residential projects with a total project landscape area equal to or greater than 5,000 square feet requiring a building or landscape permit, plan check or design review;~~
(3) ~~(4)~~ existing landscapes limited to Sections 493, 493.1 and 493.2; and
(4) ~~(5)~~ cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 492.4, 492.11, and 492.12; and existing cemeteries are limited to Sections 493, 493.1, and 493.2.

(b) For local land use agencies working together to develop a regional water efficient landscape ordinance, the reporting requirements of this ordinance shall become effective December 1, 2015 and the remainder of this ordinance shall be effective no later than February 1, 2016.
(c) Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix D.
(d) For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D section (5).
(~~b~~e) This ordinance does not apply to:

(1) registered local, state or federal historical sites;
(2) ecological restoration projects that do not require a permanent irrigation system;
(3) mined-land reclamation projects that do not require a permanent irrigation system; or

(4) existing plant collections, as part of botanical gardens and arboretums open to the public.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 491. Definitions.

The terms used in this ordinance have the meaning set forth below:

(a) "applied water" means the portion of water supplied by the irrigation system to the landscape.

(b) "automatic irrigation controller" means ~~an automatic~~ timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

(c) "backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

(d) "Certificate of Completion" means the document required under Section 492.9.

(e) "certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

(f) "certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

(g) "check valve" or "anti-drain valve" means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

(h) "common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.

(i) "compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

(~~i~~j) "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year.

(k) "distribution uniformity" means the measure of the uniformity of irrigation water over a defined area.

(~~j~~l) "drip irrigation" means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

(~~k~~m) "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

(~~l~~n) "effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.

(~~m~~o) "emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.

(~~n~~p) "established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

(~~o~~q) "establishment period of the plants" means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth. Native habitat mitigation areas and trees may need three to five years for establishment.

(~~p~~r) "Estimated Total Water Use" (ETWU) means the total water used for the landscape as described in Section 492.4.

(~~q~~s) "ET adjustment factor" (ETAF) means a factor of ~~0.7~~0.55 for residential areas and 0.45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. ~~A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7)=(0.5/0.71).~~ The ETAF for ~~a~~ new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-rehabilitated landscapes is 0.8.

(~~r~~t) "evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

(su) "flow rate" means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

(v) "flow sensor" means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves. This combination flow sensor/controller may also function as a landscape water meter or submeter.

(w) "friable" means a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

(x) "Fuel Modification Plan Guideline" means guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone.

(y) "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers. Health and Safety Code Section 17922.12.

(~~t~~z) "hardscapes" means any durable material (pervious and non-pervious).

~~(u) "homeowner-provided landscaping" means any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.~~

(aa) ~~(v)~~ "hydrozone" means a portion of the landscaped area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.

(bb) ~~(w)~~ "infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

(cc) ~~(x)~~ "invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. ~~"Noxious weeds" means any weed as described in the Food and Agricultural Code, Section 5004.~~ Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

(dd) ~~(y)~~ "irrigation audit" means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency "Watersense" labeled auditing program.

(ee) ~~(z)~~ "irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The ~~minimum average~~ irrigation efficiency

for purposes of this ordinance are 0.75 for overhead spray devices and 0.81 for drip systems.~~is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems~~.
(ff) ~~(aa)~~ "irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.
(gg) ~~(bb)~~ "irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.
(hh) ~~(cc)~~ "landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.
(ii) ~~(dd)~~ "landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation).
(jj) ~~(ee)~~ "landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.
(kk) ~~(ff)~~ "Landscape Documentation Package" means the documents required under Section 492.3.
(ll) ~~(gg)~~ "landscape project" means total area of landscape in a project as defined in "landscape area" for the purposes of this ordinance, meeting requirements under Section 490.1.
(mm) "landscape water meter" means an inline device installed at the irrigation supply point that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.
(nn) ~~(hh)~~ "lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.
(oo) ~~(ii)~~ "local agency" means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.
(pp) ~~(jj)~~ "local water purveyor" means any entity, including a public agency, city, county, or private water company that provides retail water service.
(qq) ~~(kk)~~ "low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
(rr) ~~(ll)~~ "main line" means the pressurized pipeline that delivers water from the water source to the valve or outlet.
(ss) "master shut-off valve" is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.
(tt) ~~(mm)~~ "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 492.4. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0. MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
(uu) "median" is an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.
(vv)~~(nn)~~ "microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

(ww) ~~(oo)~~ "mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.
(xx) ~~(pp)~~ "mulch" means any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, ~~and~~or decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.
(yy) ~~(qq)~~ "new construction" means, for the purposes of this ordinance, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.
(zz) "non-residential landscape" means landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated recreational areas.
(aaa) ~~(rr)~~ "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
(bbb) ~~(ss)~~ "overhead sprinkler irrigation systems" or "overhead spray irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).
(ccc) ~~(tt)~~ "overspray" means the irrigation water which is delivered beyond the target area.
(ddd)"parkway" means the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.
(eee) ~~(uu)~~ "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.
(fff) ~~(vv)~~ "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.
(ggg) ~~(ww)~~ "plant factor" or "plant water use factor" is a factor, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for very low water use plants is 0 to 0.1, the plant factor range for low water use plants is ~~0~~0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the ~~Department of Water Resources 2000~~ publication "Water Use Classification of Landscape Species". Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).
~~(xx) "precipitation rate" means the rate of application of water measured in inches per hour.~~
(hhh) ~~(yy)~~ "project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 492.3, to request a permit, plan check, or design review from the local agency. A project applicant may be the property owner or his or her designee.
(iii) ~~(zz)~~ "rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.
(jjj) ~~(aaa)~~ "record drawing" or "as-builts" means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.
(kkk) ~~(bbb)~~ "recreational area" means areas, excluding private single family residential areas, ~~dedicated~~ designated ~~to~~for active play, recreation or public assembly ~~such as~~in parks, sports fields, picnic grounds, amphitheaters ~~and~~or golf course~~s where turf provides a playing surface.~~ tees, fairways, roughs, surrounds and greens.
(lll) ~~(ccc)~~ "recycled water," "reclaimed water," or "treated sewage effluent water" means treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation and water features. This water is not intended for human consumption.
(mmm) ~~(ddd)~~ "reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year as represented in Appendix A ~~Section 495.1~~, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as

the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated.
(nnn) "Regional Water Efficient Landscape Ordinance" means a local Ordinance adopted by two or more local agencies, water suppliers and other stakeholders for implementing a consistent set of landscape provisions throughout a geographical region. Regional ordinances are strongly encouraged to provide a consistent framework for the landscape industry and applicants to adhere to.
(ooo) ~~(eee)~~ "rehabilitated landscape" means any relandscaping project that requires a permit, plan check, or design review, meets the requirements of Section 490.1, and the modified landscape area is equal to or greater than 2,500 square feet~~, is 50% of the total landscape area, and the modifications are completed within one year~~.
(ppp) "residential landscape" means landscapes surrounding single or multifamily homes.
(qqq) ~~(fff)~~ "run off" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, run off may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.
(rrr) ~~(ggg)~~ "soil moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.
(sss) ~~(hhh)~~ "soil texture" means the classification of soil based on its percentage of sand, silt, and clay.
(ttt) ~~(iii)~~ "Special Landscape Area" (SLA) means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water~~ and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface~~.
(uuu) ~~(jjj)~~ "sprinkler head" or "spray head" means a device which delivers water through a nozzle.
(vvv) ~~(kkk)~~ "static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.
(www) ~~(lll)~~ "station" means an area served by one valve or by a set of valves that operate simultaneously.
(xxx) ~~(mmm)~~ "swing joint" means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.
(yyy) "submeter" means a metering device to measure water applied to the landscape that is installed after the primary utility water meter.
(zzz) ~~(nnn)~~ "turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.
(aaaa) ~~(ooo)~~ "valve" means a device used to control the flow of water in the irrigation system. ~~(ss) "water conservation concept statement" means a one page checklist and a narrative summary of the project as shown in Section 492(c)(1).~~
(bbbb) ~~(ppp)~~ "water conserving plant species" means a plant species identified as having a very low or low plant factor.
(cccc) ~~(qqq)~~ "water feature" means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.
(dddd) ~~(rrr)~~ "watering window" means the time of day irrigation is allowed.
(eeee) ~~(sss)~~ "WUCOLS" means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, and the Department of Water Resources ~~and the Bureau of Reclamation, 2000~~2014.

Note: Authority cited: Section 65595, Government Code. Reference: Sections 65592 and 65596, Government Code.

§ 492. Provisions for New Construction or Rehabilitated Landscapes.

(a) A local agency may designate by mutual agreement, another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.4. Water Efficient Landscape Worksheet.

(a) A project applicant shall complete the Water Efficient Landscape Worksheet in Appendix B which contains information on the plant factor, irrigation method, irrigation efficiency, and area associated with each hydrozone. Calculations are then made to show that the evapotranspiration adjustment factor (ETAF) for the landscape project does not exceed a factor of 0.55 for residential areas and 0.45 for non-residential areas, exclusive of Special Landscape Areas. The ETAF for a landscape project is based on the plant factors and irrigation methods selected. The Maximum Applied Water Allowance is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required. The Estimated Total Water Use (ETWU) is calculated based on the plants used and irrigation method selected for the landscape design. ETWU must be below the MAWA. ~~two sections (see sample worksheet in Appendix B):~~

~~(1) a hydrozone information table (see Appendix B, Section A) for the landscape project; and~~
~~(2) a water budget calculation (see Appendix B, Section B) for the landscape project. For the calculation of the~~

(1) In calculating the Maximum Applied Water Allowance and Estimated Total Water Use, a project applicant shall use the ETo values from the Reference Evapotranspiration Table in Appendix A. For geographic areas not covered in Appendix A, use data from other cities located nearby in the same reference evapotranspiration zone, as found in the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.

(b) Water budget calculations shall adhere to the following requirements:

(1) The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factor ranges from 0 to 0.1 for very low water using plants, 0.1 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.

(2) All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.

(3) All Special Landscape Areas shall be identified and their water use calculated as shown in Appendix B ~~described below~~.

(4) ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

~~(c) Maximum Applied Water Allowance~~

~~The Maximum Applied Water Allowance shall be calculated using the equation;~~

~~MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]~~

~~The example calculations below are hypothetical to demonstrate proper use of the equations and do not represent an existing and/or planned landscape project. The ETo values used in these calculations are from the Reference Evapotranspiration Table in Appendix A, for planning purposes only. For actual irrigation scheduling, automatic irrigation controllers are required and shall use current reference~~

evapotranspiration data, such as from the California Irrigation Management Information System (CIMIS), other equivalent data, or soil moisture sensor data.

(1) Example MAWA calculation: a hypothetical landscape project in Fresno, CA with an irrigated landscape area of 50,000 square feet without any Special Landscape Area (SLA= 0, no edible plants or recreational areas or use of recycled water). To calculate MAWA, the annual reference evapotranspiration value for Fresno is 51.1 inches as listed in the Reference Evapotranspiration Table in Appendix A.
MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]
MAWA = Maximum Applied Water Allowance (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
0.62 = Conversion Factor (to gallons)
0.7 = ET Adjustment Factor (ETAF)
LA = Landscape Area including SLA (square feet)
0.3 = Additional Water Allowance for SLA
SLA = Special Landscape Area (square feet)
MAWA = (51.1 inches) (0.62) [(0.7 x 50,000 square feet) + (0.3 x 0)]
= 1,108,870 gallons per year
To convert from gallons per year to hundred cubic feet per year:
= 1,108,870 /748 = 1,482 hundred cubic feet per year
(100 cubic feet = 748 gallons)

(2) In this next hypothetical example, the landscape project in Fresno, CA has the same ETo value of 51.1 inches and a total landscape area of 50,000 square feet. Within the 50,000 square foot project, there is now a 2,000 square foot area planted with edible plants. This 2,000 square foot area is considered to be a Special Landscape Area.
MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]
MAWA = (51.1 inches) (0.62) [(0.7 x 50,000 square feet) + (0.3 x 2,000 square feet)]
= 31.68 x [35,000 + 600] gallons per year
= 31.68 x 35,600 gallons per year
=1,127,808 gallons per year or 1,508 hundred cubic feet per year

(d) Estimated Total Water Use.
The Estimated Total Water Use shall be calculated using the equation below. The sum of the Estimated Total Water Use calculated for all hydrozones shall not exceed MAWA.

$$ETWU = (ETo)(0.62)\left(\frac{PF \times HA}{IE} + SLA\right)$$

Where:

ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches)
PF = Plant Factor from WUCOLS (see Section 491)
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor
IE = Irrigation Efficiency (minimum 0.71)

(1) Example ETWU calculation: landscape area is 50,000 square feet; plant water use type, plant factor, and hydrozone area are shown in the table below. The ETo value is 51.1 inches per year.

There are no Special Landscape Areas (recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water) in this example.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	10,000	7,000
3	Medium	0.5	16,000	8,000
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	24,700

*Plant Factor from WUCOLS

$$ETWU = (51.1)(0.62)\left(\frac{24.700}{0.71} + 0\right)$$

= 1,102,116 gallons per year

Compare ETWU with MAWA: For this example MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 0)] = 1,108,870 gallons per year. The ETWU (1,102,116 gallons per year) is less than MAWA (1,108,870 gallons per year). In this example, the water budget complies with the MAWA.

(2) Example ETWU calculation: total landscape area is 50,000 square feet, 2,000 square feet of which is planted with edible plants. The edible plant area is considered a Special Landscape Area (SLA). The reference evapotranspiration value is 51.1 inches per year. The plant type, plant factor, and hydrozone area are shown in the table below.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	9,000	6,300
3	Medium	0.5	15,000	7,500
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	23,500
6	SLA	1.0	2,000	2,000

*Plant Factor from WUCOLS

$$ETWU = (51.1)(0.62)\left(\frac{23,500}{0.71} + 2,000\right)$$

= (31.68) (33,099 + 2,000)

= 1,111,936 gallons per year

Compare ETWU with MAWA. For this example:

MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 2,000)]

= 31.68 x [35,000 + 600]

= 31.68 x 35,600

~~= 1,127,808 gallons per year~~

~~The ETWU (1,111,936 gallons per year) is less than MAWA (1,127,808 gallons per year). For this example, the water budget complies with the MAWA.~~

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.5. Soil Management Report.

(a) In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his/her designee, as follows:

(1) Submit soil samples to a laboratory for analysis and recommendations.

(A) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

(B) The soil analysis ~~may~~shall include:

1. soil texture;
2. infiltration rate determined by laboratory test or soil texture infiltration rate table;
3. pH;
4. total soluble salts;
5. sodium;
6. percent organic matter; and
7. recommendations.

(C) In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.

(2) The project applicant, or his/her designee, shall comply with one of the following:

(A) If significant mass grading is not planned, the soil analysis report shall be submitted to the local agency as part of the Landscape Documentation Package; or

(B) If significant mass grading is planned, the soil analysis report shall be submitted to the local agency as part of the Certificate of Completion.

(3) The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

(4) The project applicant, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the local agency with Certificate of Completion.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.6. Landscape Design Plan.

(a) For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

(1) Plant Material

(A) Any plant may be selected for the landscape, providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance. ~~To encourage the efficient use of water, the following is highly recommended~~ Methods to achieve water efficiency shall include one or more of the following:

1. protection and preservation of native species and natural vegetation;
2. selection of water-conserving plant, tree and turf species, especially local native plants;
3. selection of plants based on local climate suitability, disease and pest resistance;
4. selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area; and
5. selection of plants from local and regional landscape program plant lists.
6. selection of plants from local Fuel Modification Plan Guidelines.

(B) Each hydrozone shall have plant materials with similar water use, with the exception of hydrozones with plants of mixed water use, as specified in Section 492.7(a)(2)(D).

(C) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. ~~To encourage the efficient use of water, the following is highly recommended~~ Methods to achieve water efficiency shall include one or more of the following:

1. use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
2. recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; allow for adequate soil volume for healthy root growth; and
3. consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

(D) Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

(E) High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians.

(F) ~~(E)~~ A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches. Refer to the local Fuel Modification Plan guidelines.

(G) ~~(F)~~ The use of invasive ~~and/or noxious~~ plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.

(H) ~~(G)~~ The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

(2) Water Features

(A) Recirculating water systems shall be used for water features.

(B) Where available, recycled water shall be used as a source for decorative water features.

(C) Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.

(D) Pool and spa covers are highly recommended.

(3) Soil Preparation, Mulch and Amendments

(A) Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.

(B) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 492.5).

(C) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.

(D) ~~(A)~~ A minimum ~~two~~three inch (~~2~~3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to 5 % of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.

(E) ~~(B)~~ Stabilizing mulching products shall be used on slopes that meet current engineering standards.

(F) ~~(C)~~ The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.

(G) Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances.

~~(D) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 492.5).~~

(b) The landscape design plan, at a minimum, shall:

(1) delineate and label each hydrozone by number, letter, or other method;

(2) identify each hydrozone as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;

(3) identify recreational areas;

(4) identify areas permanently and solely dedicated to edible plants;

(5) identify areas irrigated with recycled water;

(6) identify type of mulch and application depth;

(7) identify soil amendments, type, and quantity;

(8) identify type and surface area of water features;

(9) identify hardscapes (pervious and non-pervious);

(10) identify location, ~~and~~ installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Project applicants shall refer to the local agency or regional Water Quality Control Board for information on any applicable stormwater technical requirements. Stormwater best management practices are encouraged in the landscape design plan and examples ~~include, but are not limited to:~~ are provided in Section 492.16.

~~(A) infiltration beds, swales, and basins that allow water to collect and soak into the ground;~~

~~(B) constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants; and~~

~~(C) pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.~~

(11) identify any applicable rain harvesting or catchment technologies ~~(e.g., rain gardens, cisterns, etc.)~~as discussed in Section 492.16 and their 24-hour retention or infiltration capacity;

(12) identify any applicable graywater discharge piping, system components and area(s) of distribution;

(13) ~~(12)~~ contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and
(14) ~~(13)~~ bear the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.)

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code; and Section 1351, Civil Code.

§ 492.7. Irrigation Design Plan.

(a) This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

(1) System

(A) ~~Dedicated l~~Landscape water meters, defined as either a dedicated water service meter or private submeter, ~~are highly recommended on landscape areas smaller than 5,000 square feet to facilitate water management.~~shall be installed for all non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq.ft. (the level at which *Water Code* 535 applies) and residential irrigated landscapes of 5,000 sq. ft. or greater. A landscape water meter may be either:

1. a customer service meter dedicated to landscape use provided by the local water purveyor; or
2. a privately owned meter or submeter.

(B) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.

(C) If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is required ~~The irrigation system shall be designed~~ to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

1. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
2. Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

(D) Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

(E) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.
(F) Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.
(G) ~~High~~ Fflow sensors that detect ~~and report~~ high flow conditions created by system damage or malfunction are ~~recommended~~required for all on non-residential landscapes and residential landscapes of 5000 sq. ft. or larger.
(H) Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.
(I) ~~(H)~~ The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.
(J) ~~(I)~~ Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.
(K) ~~(J)~~ The design of the irrigation system shall conform to the hydrozones of the landscape design plan.
(L) ~~(K)~~ The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 492.4 regarding the Maximum Applied Water Allowance.
(M) All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard, All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
(N) ~~(L)~~ It is highly recommended that the project applicant or local agency inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.
(O) ~~(M)~~ In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
(P) ~~(N)~~ Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
(Q) ~~(O)~~ Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
(R) ~~(P)~~ Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turfgrass.
(S) ~~(Q)~~ Check valves or anti-drain valves are required ~~for all irrigation systems~~on all sprinkler heads where low point drainage could occur.
(T) ~~(R) Narrow or irregularly shaped areas, including turf,~~ Areas less than ten~~eight~~ (~~8~~10) feet in width in any direction shall be irrigated with subsurface irrigation or ~~low volume irrigation system.~~ other means that produces no runoff or overspray.
(U) ~~(S)~~ Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:

1. the landscape area is adjacent to permeable surfacing and no runoff occurs; or
2. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
3. the irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in Section 492.7 (a)(1)(~~I~~H). Prevention of overspray and runoff must be confirmed during the irrigation audit.

(V) ~~(T)~~ Slopes greater than 25% shall not be irrigated with an irrigation system with a ~~precipitation~~application rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

(2) Hydrozone

(A) Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

(B) Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

(C) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.

(D) Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:

1. plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or
2. the plant factor of the higher water using plant is used for calculations.

(E) Individual hydrozones that mix high and low water use plants shall not be permitted.

(F) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table (see Appendix B Section A). This table can also assist with the irrigation audit and programming the controller.

(b) The irrigation design plan, at a minimum, shall contain:

(1) location and size of separate water meters for landscape;

(2) location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;

(3) static water pressure at the point of connection to the public water supply;

(4) flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

(5) recycled water irrigation systems as specified in Section 492.14;

(6) the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"; and

(7) the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.9. Certificate of Completion.

(a) The Certificate of Completion (see Appendix C for a sample certificate) shall include the following six (6) elements:

(1) project information sheet that contains:

(A) date;

(B) project name;

(C) project applicant name, telephone, and mailing address;

(D) project address and location; and

(E) property owner name, telephone, and mailing address;

(2) certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package;

(A) where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;

(B) A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

(3) irrigation scheduling parameters used to set the controller (see Section 492.10);

(4) landscape and irrigation maintenance schedule (see Section 492.11);

(5) irrigation audit report (see Section 492.12); and

(6) soil analysis report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Section 492.5).

(b) The project applicant shall:

(1) submit the signed Certificate of Completion to the local agency for review;

(2) ensure that copies of the approved Certificate of Completion are submitted to the local water purveyor and property owner or his or her designee.

(c) The local agency shall:

(1) receive the signed Certificate of Completion from the project applicant;

(2) approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the local agency shall provide information to the project applicant regarding reapplication, appeal, or other assistance.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.11. Landscape and Irrigation Maintenance Schedule.

(a) Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.

(b) A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing, adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; topdressing with compost, replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing ~~and~~ obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

(c) Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.

(d) A project applicant is encouraged to implement established landscape industry sustainable Best Practices ~~or environmentally friendly practices~~for ~~overall~~ all landscape maintenance activities.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.12. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

(a) All landscape irrigation audits shall be conducted by a local agency landscape irrigation auditor or a third party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who designed the landscape or installed the landscape.
(b) In large projects or projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or approximately 15% will satisfy this requirement.
~~(b)~~(c) For new construction and rehabilitated landscape projects installed after ~~January 1, 2010~~December 1, 2015, as described in Section 490.1:

(1) the project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming;

(2) the local agency shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.13. Irrigation Efficiency.
(a) For the purpose of determining ~~Maximum Applied Water Allowance~~Estimated Total Water Use, average irrigation efficiency is assumed to be 0.75~~0.71~~ for overhead spray devices and 0.81 for drip system devices. ~~Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.~~

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.14. Recycled Water.
(a) The installation of recycled water irrigation systems shall allow for the current and future use of recycled water~~, unless a written exemption has been granted as described in Section 492.14(b).~~
~~(b) Irrigation systems and decorative water features shall use recycled water unless a written exemption has been granted by the local water purveyor stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.~~
~~(c)~~ (b) All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.
~~(d)~~ (c) Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.15. Graywater Systems.
(a) Graywater systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All graywater systems shall conform to the California Plumbing Code (Title 24, Part 5, Chapter 16) and any applicable local ordinance standards. Refer to § 490.1 (d) for the applicability of this ordinance to landscape areas less than 2,500 square feet with the Estimated Total Water Use met entirely by graywater.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.16~~5~~. Stormwater Management and Rainwater Retention.

(a) Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration are encouraged.
(b) Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements~~ordinances and stormwater management plans~~.
(c) All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to § 492.6(a)(3).
(d) It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (i.e. roof and paved areas) from either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.
(e) It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:

- Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.
- Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.
- Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.
- Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.
- Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.
- Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.
- Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

~~(c) Rain gardens, cisterns, and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are recommended.~~

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.17~~6~~. Public Education.
(a) Publications. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is encouraged in the community.

(1) A local agency or water supplier/purveyor shall provide information to owners of permitted renovations and new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes based on a water budget.

(b) Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscapes described in this ordinance.

(1) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme. Signage shall include information about the site water use as designed per the local ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping such as using native plants, graywater systems, and rainwater catchment systems.

(2) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 492.18~~7~~. Environmental Review.
(a) The local agency must comply with the California Environmental Quality Act (CEQA), as appropriate.

Note: Authority cited: Section 21082, Public Resources Code. Reference: Sections 21080 and 21082, Public Resources Code.

§ 493. Provisions for Existing Landscapes.
(a) A local agency may by mutual agreement, designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this ordinance. Local agencies may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 493.1. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.
(a) This section, 493.1, shall apply to all existing landscapes that were installed before ~~January 1, 2010~~ December 1, 2015 and are over one acre in size.

(1) For all landscapes in 493.1(a) that have a water meter, the local agency shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the Maximum Applied Water Allowance for existing landscapes. The Maximum Applied Water Allowance for existing landscapes shall be calculated as: MAWA = (0.8) (ETo)(LA)(0.62).

(2) For all landscapes in 493.1(a), that do not have a meter, the local agency shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.

(b) All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 494. Effective Precipitation.
(a) A local agency may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate Maximum Applied Water Allowance:
MAWA= (ETo - Eppt) (0.62) [(~~0.7~~0.55 x LA) + (~~0.3~~0.45 x SLA)] for residential areas.
MAWA= (ETo-EPPT) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

§ 495. Reporting.
(a) Local agencies shall report on implementation and enforcement by December 31, 2015. Local agencies responsible for administering individual ordinances shall report on their updated ordinance, while those agencies developing a regional ordinance shall report on their existing ordinance. Those agencies crafting a regional ordinances shall also report on their new ordinance by March 1, 2016. Subsequently, reporting for all agencies will be due by January 31st of each year. Reports shall be submitted to the Department of Water Resources.
(b) Local agencies are to address the following:

(1) State whether you are adopting a single agency ordinance or a regional agency alliance ordinance, and the date of adoption or anticipated date of adoption.

(2) Define the reporting period. The reporting period shall commence on December 1, 2015 and the end on December 28, 2015. For local agencies crafting regional ordinances with other agencies, there shall be an additional reporting period commencing on February 1, 2016 and ending on February 28, 2016. In subsequent years, all local agency reporting will be for the calendar year.

(3) State if using a locally modified Water Efficient Landscape Ordinance (WELO) or the MWELO. If using a locally modified WELO, how is it different than MWELO, is it at least as efficient as MWELO, and are there any exemptions specified?

(4) State the entity responsible for implementing the ordinance.

(5) State number and types of projects subject to the ordinance during the specified reporting period.

(6) State the total area (in square feet or acres) subject to the ordinance over the reporting period, if available.

(7) Provide the number of new housing starts, new commercial projects, and landscape retrofits during the reporting period.

(8) Describe the procedure for review of projects subject to the ordinance.

(9) Describe actions taken to verify compliance. Is a plan check performed; if so, by what entity? Is a site inspection performed; if so, by what entity? Is a post-installation audit required; if so, by whom?

(10) Describe enforcement measures.

(11) Explain challenges to implementing and enforcing the ordinance.

(12) Describe educational and other needs to properly apply the ordinance.

Note: Authority cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

Appendix A. Reference Evapotranspiration (ETo) Table.

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
ALAMEDA													
Fremont	1.5	1.9	3.4	4.7	5.4	6.3	6.7	6.0	4.5	3.4	1.8	1.5	47.0
Livermore	1.2	1.5	2.9	4.4	5.9	6.6	7.4	6.4	5.3	3.2	1.5	0.9	47.2
Oakland	1.5	1.5	2.8	3.9	5.1	5.3	6.0	5.5	4.8	3.1	1.4	0.9	41.8
Oakland Foothills	1.1	1.4	2.7	3.7	5.1	6.4	5.8	4.9	3.6	2.6	1.4	1.0	39.6
Pleasanton	0.8	1.5	2.9	4.4	5.6	6.7	7.4	6.4	4.7	3.3	1.6	1.0	46.2
Union City	1.4	1.8	3.1	4.2	5.4	5.9	6.4	5.7	4.4	3.1	1.5	1.2	44.2
ALPINE													
Markleeville	0.7	0.9	2.0	3.5	5.0	6.1	7.3	6.4	4.4	2.6	1.2	0.5	40.6
AMADOR													
Jackson	1.2	1.5	2.8	4.4	6.0	7.2	7.9	7.2	5.3	3.2	1.4	0.9	48.9
Shanandoah Valley	1.0	1.7	2.9	4.4	5.6	6.8	7.9	7.1	5.2	3.6	1.7	1.0	48.8
BUTTE													
Chico	1.2	1.8	2.9	4.7	6.1	7.4	8.5	7.3	5.4	3.7	1.7	1.0	51.7
Durham	1.1	1.8	3.2	5.0	6.5	7.4	7.8	6.9	5.3	3.6	1.7	1.0	51.1
Gridley	1.2	1.8	3.0	4.7	6.1	7.7	8.5	7.1	5.4	3.7	1.7	1.0	51.9
Oroville	1.2	1.8	2.8	4.7	6.1	7.6	8.5	7.3	5.3	3.7	1.7	1.0	51.5
CALAVERAS													
San Andreas	1.2	1.5	2.8	4.4	6.0	7.3	7.9	7.0	5.3	3.2	1.4	0.7	48.8
COLUSA													
Colusa	1.0	1.7	3.4	5.0	6.4	7.5	8.3	7.2	5.4	3.8	1.8	1.1	52.8
Williams	1.2	1.7	2.9	4.5	6.1	7.2	8.5	7.3	5.3	3.4	1.6	1.0	50.8
CONTRA COSTA													
Benicia	1.3	1.4	2.7	3.8	4.9	5.0	6.4	5.5	4.4	2.9	1.2	0.7	40.3
Brentwood	1.0	1.5	2.9	4.5	6.1	7.1	7.9	6.7	5.2	3.2	1.4	0.7	48.3
Concord	1.1	1.4	2.4	4.0	5.5	5.9	7.0	6.0	4.8	3.2	1.3	0.7	43.4
Courtland	0.9	1.5	2.9	4.4	6.1	6.9	7.9	6.7	5.3	3.2	1.4	0.7	48.0
Martinez	1.2	1.4	2.4	3.9	5.3	5.6	6.7	5.6	4.7	3.1	1.2	0.7	41.8
Moraga	1.2	1.5	3.4	4.2	5.5	6.5	6.7	5.9	4.6	3.2	1.6	1.0	44.9
Pittsburg	1.0	1.5	2.8	4.1	5.6	6.4	7.4	6.4	5.0	3.2	1.3	0.7	45.4
Walnut Creek	0.8	1.5	2.9	4.4	5.6	6.7	7.4	6.4	4.7	3.3	1.5	1.0	46.2
DEL NORTE													
Crescent City	0.5	0.9	2.0	3.0	3.7	3.5	4.3	3.7	3.0	2.0	0.9	0.5	27.7
EL DORADO													
Camino	0.9	1.7	2.5	3.9	5.9	7.2	7.8	6.8	5.1	3.1	1.5	0.9	47.3
FRESNO													
Clovis	1.0	1.5	3.2	4.8	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.4
Coalinga	1.2	1.7	3.1	4.6	6.2	7.2	8.5	7.3	5.3	3.4	1.6	0.7	50.9
Firebaugh	1.0	1.8	3.7	5.7	7.3	8.1	8.2	7.2	5.5	3.9	2.0	1.1	55.4
FivePoints	1.3	2.0	4.0	6.1	7.7	8.5	8.7	8.0	6.2	4.5	2.4	1.2	60.4
FRESNO													
Fresno	0.9	1.7	3.3	4.8	6.7	7.8	8.4	7.1	5.2	3.2	1.4	0.6	51.1
Fresno State	0.9	1.6	3.2	5.2	7.0	8.0	8.7	7.6	5.4	3.6	1.7	0.9	53.7
Friant	1.2	1.5	3.1	4.7	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.3
Kerman	0.9	1.5	3.2	4.8	6.6	7.7	8.4	7.2	5.3	3.4	1.4	0.7	51.2
Kingsburg	1.0	1.5	3.4	4.8	6.6	7.7	8.4	7.2	5.3	3.4	1.4	0.7	51.6
Mendota	1.5	2.5	4.6	6.2	7.9	8.6	8.8	7.5	5.9	4.5	2.4	1.5	61.7
Orange Cove	1.2	1.9	3.5	4.7	7.4	8.5	8.9	7.9	5.9	3.7	1.8	1.2	56.7
Panoche	1.1	2.0	4.0	5.6	7.8	8.5	8.3	7.3	5.6	3.9	1.8	1.2	57.2
Parlier	1.0	1.9	3.6	5.2	6.8	7.6	8.1	7.0	5.1	3.4	1.7	0.9	53.0
Reedley	1.1	1.5	3.2	4.7	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.3
Westlands	0.9	1.7	3.8	6.3	8.0	8.6	8.6	7.8	5.9	4.3	2.1	1.1	58.8

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
GLENN													
Orland	1.1	1.8	3.4	5.0	6.4	7.5	7.9	6.7	5.3	3.9	1.8	1.4	52.1
Willows	1.2	1.7	2.9	4.7	6.1	7.2	8.5	7.3	5.3	3.6	1.7	1.3	51.3
HUMBOLDT													
Eureka	0.5	1.1	2.0	3.0	3.7	3.7	3.7	3.7	3.0	2.0	0.9	0.5	27.5
Ferndale	0.5	1.1	2.0	3.0	3.7	3.7	3.7	3.7	3.0	2.0	0.9	0.5	27.5
Garberville	0.6	1.2	2.2	3.1	4.5	5.0	5.5	4.9	3.8	2.4	1.0	0.7	34.9
Hoopa	0.5	1.1	2.1	3.0	4.4	5.4	6.1	5.1	3.8	2.4	0.9	0.7	35.6
IMPERIAL													
Brawley	2.8	3.8	5.9	8.0	10.4	11.5	11.7	10.0	8.4	6.2	3.5	2.1	84.2
Calipatria/Mulberry	2.4	3.2	5.1	6.8	8.6	9.2	9.2	8.6	7.0	5.2	3.1	2.3	70.7
El Centro	2.7	3.5	5.6	7.9	10.1	11.1	11.6	9.5	8.1	6.1	3.3	2.0	81.7
Holtville	2.8	3.8	5.9	7.9	10.4	11.6	12.0	10.0	8.6	6.2	3.5	2.1	84.7
Meloland	2.3	3.2	5.5	7.5	8.9	9.2	9.0	8.5	6.8	5.3	3.1	2.2	71.6
Palo Verde II	2.5	3.3	5.7	6.9	8.5	8.9	8.6	7.9	6.2	4.5	2.9	2.3	68.2
Seeley	2.7	3.5	5.9	7.7	9.7	10.1	9.3	9.3	6.9	5.5	3.4	2.2	75.4
Westmoreland	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.4
Yuma	2.5	3.4	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.6
INYO													
Bishop	1.7	2.7	4.3	6.7	8.2	10.9	7.4	9.6	7.4	4.8	2.5	1.6	68.3
Death Valley Jct	2.2	3.3	5.4	7.7	9.8	11.1	11.4	10.1	8.3	5.4	2.9	1.7	79.1
Independence	1.7	2.7	3.4	5.6	8.5	9.5	9.8	8.5	7.1	3.9	2.0	1.5	65.2
Lower Haiwee Res.	1.8	2.7	4.4	7.3	8.5	9.5	9.8	8.5	7.1	4.2	2.6	1.5	67.6
Oasis	2.7	2.8	5.9	8.0	10.4	11.7	11.6	10.0	8.4	6.2	3.4	2.1	83.1
KERN													
Arvin	1.2	1.8	3.5	4.7	6.6	7.4	8.1	7.3	5.3	3.4	1.7	1.0	51.9
Bakersfield	1.0	1.8	3.5	4.7	6.6	7.7	8.5	7.3	5.3	3.5	1.6	0.9	52.4
Bakersfield/Bonanza	1.2	2.2	3.7	5.7	7.4	8.2	8.7	7.8	5.7	4.0	2.1	1.2	57.9
Bakersfield/Greenlee	1.2	2.2	3.7	5.7	7.4	8.2	8.7	7.8	5.7	4.0	2.1	1.2	57.9
KERN													
Belridge	1.4	2.2	4.1	5.5	7.7	8.5	8.6	7.8	6.0	3.8	2.0	1.5	59.2
Blackwells Corner	1.4	2.1	3.8	5.4	7.0	7.8	8.3	7.7	5.8	3.9	1.9	1.2	56.6
Buttonwillow	1.0	1.8	3.2	4.7	6.6	7.7	8.5	7.3	5.4	3.4	1.5	0.9	52.0
China Lake	2.1	3.2	5.3	7.7	9.2	10.0	11.0	9.8	7.3	4.9	2.7	1.7	74.8
Delano	0.9	1.8	3.4	4.7	6.6	7.7	8.5	7.3	5.4	3.4	1.4	0.7	52.0
Famoso	1.3	1.9	3.5	4.8	6.7	7.6	8.0	7.3	5.5	3.5	1.7	1.3	53.1
Grapevine	1.3	1.8	3.1	4.4	5.6	6.8	7.6	6.8	4.9	3.4	1.9	1.0	49.5
Inyokern	2.0	3.1	4.9	7.3	8.5	9.7	11.0	9.4	7.1	5.1	2.6	1.7	72.4
Isabella Dam	1.2	1.4	2.8	4.4	5.8	7.3	7.9	7.0	5.0	3.2	1.7	0.9	48.4
Lamont	1.3	2.4	4.4	4.6	6.5	7.0	8.8	7.6	5.7	3.7	1.6	0.8	54.4
Lost Hills	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.1	2.1	1.6	57.1
McFarland/Kern	1.2	2.1	3.7	5.6	7.3	8.0	8.3	7.4	5.6	4.1	2.0	1.2	56.5
Shafter	1.0	1.7	3.4	5.0	6.6	7.7	8.3	7.3	5.4	3.4	1.5	0.9	52.1
Taft	1.3	1.8	3.1	4.3	6.2	7.3	8.5	7.3	5.4	3.4	1.7	1.0	51.2
Tehachapi	1.4	1.8	3.2	5.0	6.1	7.7	7.9	7.3	5.9	3.4	2.1	1.2	52.9
KINGS													
Caruthers	1.6	2.5	4.0	5.7	7.8	8.7	9.3	8.4	6.3	4.4	2.4	1.6	62.7
Corcoran	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Hanford	0.9	1.5	3.4	5.0	6.6	7.7	8.3	7.2	5.4	3.4	1.4	0.7	51.5
Kettleman	1.1	2.0	4.0	6.0	7.5	8.5	9.1	8.2	6.1	4.5	2.2	1.1	60.2
Lemoore	0.9	1.5	3.4	5.0	6.6	7.7	8.3	7.3	5.4	3.4	1.4	0.7	51.7
Stratford	0.9	1.9	3.9	6.1	7.8	8.6	8.8	7.7	5.9	4.1	2.1	1.0	58.7

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
LAKE													
Lakeport	1.1	1.3	2.6	3.5	5.1	6.0	7.3	6.1	4.7	2.9	1.2	0.9	42.8
Lower Lake	1.2	1.4	2.7	4.5	5.3	6.3	7.4	6.4	5.0	3.1	1.3	0.9	45.4
LASSEN													
Buntingville	1.0	1.7	3.5	4.9	6.2	7.3	8.4	7.5	5.4	3.4	1.5	0.9	51.8
Ravendale	0.6	1.1	2.3	4.1	5.6	6.7	7.9	7.3	4.7	2.8	1.2	0.5	44.9
Susanville	0.7	1.0	2.2	4.1	5.6	6.5	7.8	7.0	4.6	2.8	1.2	0.5	44.0
LOS ANGELES													
Burbank	2.1	2.8	3.7	4.7	5.1	6.0	6.6	6.7	5.4	4.0	2.6	2.0	51.7
Claremont	2.0	2.3	3.4	4.6	5.0	6.0	7.0	7.0	5.3	4.0	2.7	2.1	51.3
El Dorado	1.7	2.2	3.6	4.8	5.1	5.7	5.9	5.9	4.4	3.2	2.2	1.7	46.3
Glendale	2.0	2.2	3.3	3.8	4.7	4.8	5.7	5.6	4.3	3.3	2.2	1.8	43.7
Glendora	2.0	2.5	3.6	4.9	5.4	6.1	7.3	6.8	5.7	4.2	2.6	2.0	53.1
Gorman	1.6	2.2	3.4	4.6	5.5	7.4	7.7	7.1	5.9	3.6	2.4	1.1	52.4
Hollywood Hills	2.1	2.2	3.8	5.4	6.0	6.5	6.7	6.4	5.2	3.7	2.8	2.1	52.8
Lancaster	2.1	3.0	4.6	5.9	8.5	9.7	11.0	9.8	7.3	4.6	2.8	1.7	71.1
Long Beach	1.8	2.1	3.3	3.9	4.5	4.3	5.3	4.7	3.7	2.8	1.8	1.5	39.7
Los Angeles	2.2	2.7	3.7	4.7	5.5	5.8	6.2	5.9	5.0	3.9	2.6	1.9	50.1
LOS ANGELES													
Monrovia	2.2	2.3	3.8	4.3	5.5	5.9	6.9	6.4	5.1	3.2	2.5	2.0	50.2
Palmdale	2.0	2.6	4.6	6.2	7.3	8.9	9.8	9.0	6.5	4.7	2.7	2.1	66.2
Pasadena	2.1	2.7	3.7	4.7	5.1	6.0	7.1	6.7	5.6	4.2	2.6	2.0	52.3
Pearblossom	1.7	2.4	3.7	4.7	7.3	7.7	9.9	7.9	6.4	4.0	2.6	1.6	59.9
Pomona	1.7	2.0	3.4	4.5	5.0	5.8	6.5	6.4	4.7	3.5	2.3	1.7	47.5
Redondo Beach	2.2	2.4	3.3	3.8	4.3	4.7	5.4	4.8	4.4	2.8	2.4	2.0	42.6
San Fernando	2.0	2.7	3.5	4.6	5.5	5.9	7.3	6.7	5.3	3.9	2.6	2.0	52.0
Santa Clarita	2.8	2.8	4.1	5.6	6.0	6.8	7.6	7.8	5.8	5.2	3.7	3.2	61.5
Santa Monica	1.8	2.1	3.3	4.5	4.7	5.1	5.4	5.4	3.9	3.4	2.4	2.2	44.2
MADERA													
Chowchilla	1.0	1.4	3.2	4.7	6.6	7.8	8.5	7.3	5.3	3.4	1.4	0.7	51.4
Madera	0.9	1.4	3.2	4.8	6.6	7.8	8.5	7.3	5.3	3.4	1.4	0.7	51.5
Raymond	1.2	1.5	3.0	4.6	6.1	7.6	8.4	7.3	5.2	3.4	1.4	0.7	50.5
MARIN													
Black Point	1.1	1.7	3.0	4.2	5.2	6.2	6.6	5.8	4.3	2.8	1.3	0.9	43.0
Novato	1.3	1.5	2.4	3.5	4.4	6.0	5.9	5.4	4.4	2.8	1.4	0.7	39.8
Point San Pedro	1.1	1.7	3.0	4.2	5.2	6.2	6.6	5.8	4.3	2.8	1.3	0.9	43.0
San Rafael	1.2	1.3	2.4	3.3	4.0	4.8	4.8	4.9	4.3	2.7	1.3	0.7	35.8
MARIPOSA													
Coulterville	1.1	1.5	2.8	4.4	5.9	7.3	8.1	7.0	5.3	3.4	1.4	0.7	48.8
Mariposa	1.1	1.5	2.8	4.4	5.9	7.4	8.2	7.1	5.0	3.4	1.4	0.7	49.0
Yosemite Village	0.7	1.0	2.3	3.7	5.1	6.5	7.1	6.1	4.4	2.9	1.1	0.6	41.4
MENDOCINO													
Fort Bragg	0.9	1.3	2.2	3.0	3.7	3.5	3.7	3.7	3.0	2.3	1.2	0.7	29.0
Hopland	1.1	1.3	2.6	3.4	5.0	5.9	6.5	5.7	4.5	2.8	1.3	0.7	40.9
Point Arena	1.0	1.3	2.3	3.0	3.7	3.9	3.7	3.7	3.0	2.3	1.2	0.7	29.6
Sanel Valley	1.0	1.6	3.0	4.6	6.0	7.0	8.0	7.0	5.2	3.4	1.4	0.9	49.1
Ukiah	1.0	1.3	2.6	3.3	5.0	5.8	6.7	5.9	4.5	2.8	1.3	0.7	40.9
MERCED													
Kesterson	0.9	1.7	3.4	5.5	7.3	8.2	8.6	7.4	5.5	3.8	1.8	0.9	55.1
Los Banos	1.0	1.5	3.2	4.7	6.1	7.4	8.2	7.0	5.3	3.4	1.4	0.7	50.0
Merced	1.0	1.5	3.2	4.7	6.6	7.9	8.5	7.2	5.3	3.4	1.4	0.7	51.5

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
MODOC													
Modoc/Alturas	0.9	1.4	2.8	3.7	5.1	6.2	7.5	6.6	4.6	2.8	1.2	0.7	43.2
MONO													
Bridgeport	0.7	0.9	2.2	3.8	5.5	6.6	7.4	6.7	4.7	2.7	1.2	0.5	43.0
MONTEREY													
Arroyo Seco	1.5	2.0	3.7	5.4	6.3	7.3	7.2	6.7	5.0	3.9	2.0	1.6	52.6
Castroville	1.4	1.7	3.0	4.2	4.6	4.8	4.0	3.8	3.0	2.6	1.6	1.4	36.2
Gonzales	1.3	1.7	3.4	4.7	5.4	6.3	6.3	5.9	4.4	3.4	1.9	1.3	45.7
MONTEREY													
Greenfield	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
King City	1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	5.5	5.2	2.2	1.3	49.6
King City-Oasis Rd.	1.4	1.9	3.6	5.3	6.5	7.3	7.4	6.8	5.1	4.0	2.0	1.5	52.7
Long Valley	1.3	1.9	3.2	4.1	5.8	6.5	7.3	6.5	5.3	3.6	2.0	1.2	49.1
Monterey	1.7	1.8	2.7	3.5	4.0	4.1	4.3	4.2	3.5	2.8	1.9	1.5	36.0
Pajaro	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.1
Salinas	1.6	1.9	2.7	3.8	4.8	4.7	5.0	4.5	4.0	2.9	1.9	1.3	39.1
Salinas North	1.2	1.5	2.9	4.1	4.6	5.2	5.5	4.3	3.2	2.8	1.5	1.2	36.9
San Ardo	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	5.1	3.1	1.5	1.0	49.0
San Juan	1.8	2.1	3.4	4.6	5.3	5.7	5.5	4.9	3.8	3.2	2.2	1.9	44.2
Soledad	1.7	2.0	3.4	4.4	5.5	6.4	6.5	6.2	5.2	3.7	2.2	1.5	47.7
NAPA													
Angwin	1.8	1.9	3.2	4.7	5.8	7.3	8.1	7.1	5.5	4.5	2.9	2.1	54.9
Carneros	0.8	1.5	3.1	4.6	5.5	6.6	6.9	6.2	4.7	3.5	1.4	1.0	45.8
Oakville	1.0	1.5	2.9	4.7	5.8	6.9	7.2	6.4	4.9	3.5	1.6	1.2	47.7
St Helena	1.2	1.5	2.8	3.9	5.1	6.1	7.0	6.2	4.8	3.1	1.4	0.9	44.1
Yountville	1.3	1.7	2.8	3.9	5.1	6.0	7.1	6.1	4.8	3.1	1.5	0.9	44.3
NEVADA													
Grass Valley	1.1	1.5	2.6	4.0	5.7	7.1	7.9	7.1	5.3	3.2	1.5	0.9	48.0
Nevada City	1.1	1.5	2.6	3.9	5.8	6.9	7.9	7.0	5.3	3.2	1.4	0.9	47.4
ORANGE													
Irvine	2.2	2.5	3.7	4.7	5.2	5.9	6.3	6.2	4.6	3.7	2.6	2.3	49.6
Laguna Beach	2.2	2.7	3.4	3.8	4.6	4.6	4.9	4.9	4.4	3.4	2.4	2.0	43.2
Santa Ana	2.3	2.7	3.7	4.5	4.6	5.4	6.2	6.1	4.7	3.7	2.5	2.0	48.2
PLACER													
Auburn	1.2	1.7	2.8	4.4	6.1	7.4	8.3	7.3	5.4	3.4	1.6	1.0	50.6
Blue Canyon	0.7	1.1	2.1	3.4	4.8	6.0	7.2	6.1	4.6	2.9	0.9	0.6	40.5
Colfax	1.1	1.5	2.6	4.0	5.8	7.1	7.9	7.0	5.3	3.2	1.4	0.9	47.9
Roseville	1.1	1.7	3.1	4.7	6.2	7.7	8.5	7.3	5.6	3.7	1.7	1.0	52.2
Soda Springs	0.7	0.7	1.8	3.0	4.3	5.3	6.2	5.5	4.1	2.5	0.7	0.7	35.4
Tahoe City	0.7	0.7	1.7	3.0	4.3	5.4	6.1	5.6	4.1	2.4	0.8	0.6	35.5
Truckee	0.7	0.7	1.7	3.2	4.4	5.4	6.4	5.7	4.1	2.4	0.8	0.6	36.2
PLUMAS													
Portola	0.7	0.9	1.9	3.5	4.9	5.9	7.3	5.9	4.3	2.7	0.9	0.5	39.4
Quincy	0.7	0.9	2.2	3.5	4.9	5.9	7.3	5.9	4.4	2.8	1.2	0.7	40.2
RIVERSIDE													
Beaumont	2.0	2.3	3.4	4.4	6.1	7.1	7.6	7.9	6.0	3.9	2.6	1.7	55.0
Blythe	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.4
Cathedral City	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Coachella	2.9	4.4	6.2	8.4	10.5	11.9	12.3	10.1	8.9	6.2	3.8	2.4	88.1

Appendix A - Reference Evapotranspiration (ETo) Table*

County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
RIVERSIDE													
Desert Center	2.9	4.1	6.4	8.5	11.0	12.1	12.2	11.1	9.0	6.4	3.9	2.[illegible]	90.0
Elsinore	2.1	2.8	3.9	4.4	5.9	7.1	7.6	7.0	5.8	3.9	2.6	[illegible].9	55.0
Indio	3.1	3.6	6.5	8.3	10.5	11.0	10.8	9.7	8.3	5.9	3.7	2.7	83.9
La Quinta	2.4	2.8	5.2	6.5	8.3	8.7	8.5	7.9	6.5	4.5	2.[illegible]	2.2	66.2
Mecca	2.6	3.3	5.7	7.2	8.6	9.0	8.8	8.2	6.8	5.0	[illegible].2	2.4	70.8
Oasis	2.9	3.3	5.3	6.1	8.5	8.9	8.7	7.9	6.9	4.8	2.9	2.3	68.4
Palm Deser	2.5	3.4	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.[illegible]	3.0	2.2	71.6
Palm Springs	2.0	2.9	4.9	7.2	8.3	8.5	11.6	8.3	7.2	[illegible].9	2.7	1.7	71.1
Rancho California	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
Rancho Mirage	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.[illegible]	5.0	3.0	2.2	71.4
Ripley	[illegible].7	3.3	5.6	7.2	8.7	8.7	8.4	7.6	[illegible].2	4.6	2.8	2.2	67.8
Salton Sea North	2.[illegible]	3.3	5.5	7.2	8.8	9.3	9.2	8.5	6.8	5.2	3.1	2.3	71.7
Temecula East II	2.3	2.4	4.1	4.9	6.4	7.0	7.8	7.[illegible]	5.7	4.1	2.6	2.2	56.7
Thermal	2.4	[illegible].3	5.5	7.6	9.1	9.6	9.3	[illegible].6	7.1	5.2	3.1	2.1	72.8
Riverside UC	2.5	2.[illegible]	4.2	5.3	5.9	6.6	7.2	6.9	5.4	4.1	2.9	2.6	56.4
Winchester	2.3	2.4	4.1	4.9	6.4	6.9	7.[illegible]	7.5	6.0	3.9	2.6	2.1	56.8
SACRAMENTO													
Fair Oaks	1.0	1.6	3.[illegible]	4.1	6.5	7.5	8.1	7.1	5.2	3.4	1.5	1.0	50.5
Sacramento	1.0	1.8	3.2	4.7	6.4	7.[illegible]	8.4	7.2	5.4	3.7	1.7	0.9	51.9
Twitchell Island	1.2	1.8	3.9	[illegible].3	7.4	[illegible].8	9.1	7.8	5.9	3.8	1.7	1.2	57.9
SAN BENITO													
Hollister	1.5	1.8	3.1	4.3	5.[illegible]	5.7	6.4	5.9	5.0	3.5	1.7	1.1	45.1
San Benito	1.2	1.6	3.1	4.6	[illegible].6	6.4	6.9	6.5	4.8	3.7	1.7	1.2	47.2
San Juan Valley	1.4	1.8	3.4	4.5	6.[illegible]	6.7	7.1	6.4	5.0	3.5	1.8	1.4	49.1
SAN BERNARDINO													
Baker	2.7	3.9	6.1	[illegible].3	10.4	[illegible].8	12.2	11.0	8.9	6.1	3.3	2.1	86.6
Barstow NE	2.2	2.9	5.3	6.9	9.0	10.[illegible]	9.9	8.9	6.8	4.8	2.7	2.1	71.7
Big Bear Lake	1.8	2.6	4.[illegible]	6.0	7.0	7.6	8.1	7.4	5.4	4.1	2.4	1.8	58.6
Chino	2.1	2.9	[illegible].9	4.5	5.7	6.5	[illegible].3	7.1	5.9	4.2	2.6	2.0	54.6
Crestline	1.5	1.9	3.3	4.4	5.5	6.6	7.[illegible]	7.1	5.4	3.5	2.2	1.6	50.8
Lake Arrowhead	1.8	2.[illegible]	4.6	6.0	7.0	7.6	8.1	7.4	5.4	4.1	2.4	1.8	58.6
Lucerne Valley	2.2	[illegible].9	5.1	6.5	9.1	11.0	11.4	[illegible].9	7.4	5.0	3.0	1.8	75.3
Needles	3.2	4.2	6.6	8.9	11.0	12.4	12.8	11.[illegible]	8.9	6.6	4.0	2.7	92.1
Newberry Springs	2.[illegible]	2.9	5.3	8.4	9.8	10.9	11.1	9.9	7.6	5.2	3.1	2.0	78.2
San Bernardino	[illegible].0	2.7	3.8	4.6	5.7	6.9	7.9	7.4	[illegible].9	4.2	2.6	2.0	55.6
Twentynine Palms	2.6	3.6	5.9	7.9	10.1	11.2	11.2	10.3	8.[illegible]	5.9	3.4	2.2	82.9
Victorville	2.0	2.6	4.6	6.2	7.3	8.9	9.8	9.0	6.5	4.7	2.7	2.1	66.2
SAN DIEGO													
Chula Vista	2.2	2.7	3.4	3.8	4.9	4.7	5.5	4.9	4.5	3.[illegible]	2.4	2.0	44.2
Escondido SPV	2.4	2.6	3.9	4.7	5.9	6.5	7.1	6.7	5.3	3.9	2.8	2.3	54.2
SAN DIEGO													
Miramar	2.3	2.5	3.7	4.1	5.1	5.4	6.1	5.8	4.5	3.3	2.[illegible]	2.1	47.1
Oceanside	2.2	2.7	3.4	3.7	4.9	4.6	4.6	5.1	4.1	3.3	2.4	[illegible].0	42.9
Otay Lake	2.3	2.7	3.9	4.6	5.6	5.9	6.2	6.1	4.8	3.7	2.6	[illegible].2	50.4
Pine Valle[illegible]	1.5	2.4	3.8	5.1	6.0	7.0	7.8	7.3	6.0	4.0	2.2	1.[illegible]	54.8
Ramona	2.1	2.1	3.4	4.6	5.2	6.3	6.7	6.8	5.3	4.1	2.8	2.1	51.6
San D[illegible]ego	2.1	2.4	3.4	4.6	5.1	5.3	5.7	5.6	4.3	3.6	2.4	2.0	[illegible].5
San[illegible]ee	2.1	2.7	3.7	4.5	5.5	6.1	6.6	6.2	5.4	3.8	2.6	2.0	51.[illegible]
T[illegible]rrey Pines	2.2	2.3	3.4	3.9	4.0	4.1	4.6	4.7	3.8	2.8	2.0	2.0	39.8
Warner Springs	1.6	2.7	3.7	4.7	5.7	7.6	8.3	7.7	6.3	4.0	2.5	1.3	56.0

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
SAN FRANCISCO													
San Francisco	1.5	1.3	2.4	3.0	3.7	4.6	4.9	4.8	4.1	2.8	1.3	0.7	35.1
SAN JOAQUIN													
Farmington	1.5	1.5	2.9	4.7	6.2	7.6	8.1	6.8	5.3	3.3	1.4	0.7	50.0
Lodi West	1.0	1.6	3.3	4.3	6.3	6.9	7.3	6.4	4.5	3.0	1.4	0.8	46.7
Manteca	0.9	1.7	3.4	5.0	6.5	7.5	8.0	7.1	5.2	3.3	1.6	0.9	51.2
Stockton	0.8	1.5	2.9	4.7	6.2	7.4	8.1	6.8	5.3	3.2	1.4	0.6	49.1
Tracy	1.0	1.5	2.9	4.5	6.1	7.3	7.9	6.7	5.3	3.2	1.3	0.7	48.5
SAN LUIS OBISPO													
Arroyo Grande	2.0	2.2	3.2	3.8	4.3	4.7	4.3	4.6	3.8	3.2	2.4	1.7	40.0
Atascadero	1.2	1.5	2.8	3.9	4.5	6.0	6.7	6.2	5.[illegible]	3.2	1.7	1.0	43.7
Morro Bay	2.0	2.2	3.1	3.5	4.3	4.5	4.6	4.6	[illegible].8	3.5	2.1	1.7	39.9
Nipomo	2.2	2.5	3.8	5.1	5.7	6.2	6.4	6.1	4.9	4.1	2.9	2.3	52.1
Paso Robles	1.6	[illegible].0	3.2	4.3	5.5	6.3	7.3	6.[illegible]	5.1	3.7	2.1	1.4	49.0
San Luis Obispo	2.0	[illegible]	3.2	4.1	4.9	5.3	4.6	[illegible].5	4.4	3.5	2.4	1.7	43.8
San Miguel	1.6	2.0	3.2	4.3	5.0	6.4	7.4	6.8	5.1	3.7	2.1	1.4	49.0
San Simeon	2.0	2.0	[illegible].9	3.5	4.2	4.4	[illegible]	4.3	3.5	3.1	2.0	1.7	38.1
SAN MATEO													
Hal Moon Bay	1.5	1.7	2.4	3.0	3.9	4.3	4.3	4.2	3.5	2.8	1.3	1.0	33.7
Redwood City	1.5	1.8	2.9	[illegible].8	5.2	[illegible].3	6.2	5.6	4.8	3.1	1.7	1.0	42.8
Woodside	1.8	2.2	3.4	4.[illegible]	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
SANTA BARBARA													
Betteravia	2.1	2.6	4.0	5.2	[illegible].0	5.9	5.8	5.4	4.1	3.3	2.7	2.1	49.1
Carpenteria	2.0	2.4	3.2	3.9	4.[illegible]	5.2	5.5	5.7	4.5	3.4	2.4	2.0	44.9
Cuyama	2.1	2.4	3.8	5.[illegible]	6.9	7.9	8.5	7.7	5.9	4.5	2.6	2.0	59.7
Goleta	2.1	2.5	3.9	[illegible].1	5.7	[illegible].7	5.4	5.4	4.2	3.2	2.8	2.2	48.1
Goleta Foothills	2.3	2.6	3.7	5.4	5.3	5.6	5.5	5.7	4.5	3.9	2.8	2.3	49.6
Guadalupe	2.0	2.2	[illegible].2	3.7	4.9	4.6	[illegible].5	4.6	4.1	3.3	2.4	1.7	41.1
Lompoc	2.0	2.2	3.2	3.7	4.8	4.6	[illegible].9	4.8	3.9	3.2	2.4	1.7	41.1
Los Alamos	1.8	2.0	3.2	4.1	4.9	5.3	5.7	5.5	4.4	3.7	2.4	1.6	44.6
Santa Barbara	2.0	[illegible].5	3.2	3.8	4.6	5.1	5.5	[illegible].5	3.4	2.4	1.8	1.8	40.6
SANTA BARBARA													
Santa Maria	1.[illegible]	2.3	3.7	5.1	5.7	5.8	5.6	5.3	4.2	3.5	2.4	1.9	47.4
Santa Ynez	[illegible].7	2.2	3.5	5.0	5.8	6.2	6.4	6.0	[illegible].5	3.6	2.2	1.7	48.7
Sisquoc	2.1	2.5	3.8	4.1	6.1	6.3	6.4	5.8	4.[illegible]	3.4	2.3	1.8	49.2
Solvang	2.0	2.0	3.3	4.3	5.0	5.6	6.1	5.6	4.4	3.7	2.2	1.6	45.6
SANTA CLARA													
Gilroy	1.3	1.8	3.1	4.1	5.3	5.6	6.1	5.5	4.7	3.[illegible]	1.7	1.1	43.6
Los Gatos	1.5	1.8	2.8	3.9	5.0	5.6	6.2	5.5	4.7	3.2	[illegible].7	1.1	42.9
Morgan Hill	1.5	1.8	3.4	4.2	6.3	7.0	7.1	6.0	5.1	3.7	[illegible].9	1.4	49.5
Palo Alto	1.5	1.8	2.8	3.8	5.2	5.3	6.2	5.6	5.0	3.2	1.[illegible]	1.0	43.0
San Jose	1.5	1.8	3.1	4.1	5.5	5.8	6.5	5.9	5.2	3.3	1.8	[illegible].0	45.3
SANTA CRUZ													
De Laveaga	1.4	1.9	3.3	4.7	4.9	5.3	5.0	4.8	3.6	3.0	1.6	1.3	40.8
Green Valley Rd	1.2	1.8	3.2	4.5	4.6	5.4	5.2	5.0	3.7	3.1	1.6	1.3	[illegible].6
Santa Cruz	1.5	1.8	2.6	3.5	4.3	4.4	4.8	4.4	3.8	2.8	1.7	1.2	[illegible].6
Watsonville	1.5	1.8	2.7	3.7	4.6	4.5	4.9	4.2	4.0	2.9	1.8	1.2	37.[illegible]
Webb	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.2

Appendix A - Reference Evapotranspiration (ETo) Table*

County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
SHASTA													
Burney	0.7	1.0	2.1	3.5	4.9	5.9	7.4	6.4	4.4	2.9	0.9	0.6	40.9
Fall River Mills	0.6	1.0	2.1	3.7	5.0	6.1	7.8	6.7	4.6	2.8	0.9	0.5	41.8
Glenburn	0.6	1.0	2.1	3.7	5.0	6.3	7.8	6.7	4.7	2.8	0.9	0.6	42.1
McArthur	0.7	1.4	2.9	4.2	5.6	6.9	8.2	7.2	5.0	3.0	1.[illegible]	0.6	46.8
Redding	1.2	1.4	2.6	4.1	5.6	7.1	8.5	7.3	5.3	3.2	[illegible].4	0.9	48.8
SIERRA													
Downieville	0.7	1.0	2.3	3.5	5.0	6.0	7.4	6.2	4.7	2.[illegible]	0.9	0.6	41.3
Sierraville	0.7	1.1	2.2	3.2	4.5	5.9	7.3	6.4	4.3	[illegible].6	0.9	0.5	39.6
SISKIYOU													
Happy Camp	0.5	0.9	2.0	3.0	4.3	5.2	6.1	5.3	4.[illegible]	2.4	0.9	0.5	35.1
MacDoel	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	[illegible].1	3.1	1.5	1.0	49.0
Mt Shasta	0.5	0.9	2.0	3.0	4.5	5.3	6.7	5.7	4.0	2.2	0.7	0.5	36.0
Tule lake FS	0.7	1.3	2.7	4.0	5.4	6.3	7.1	6.[illegible]	4.7	2.8	1.0	0.6	42.9
Weed	0.5	0.9	2.0	2.5	4.5	5.3	6.7	[illegible].5	3.7	2.0	0.9	0.5	34.9
Yreka	0.6	0.9	2.1	3.0	4.9	5.8	7.3	6.5	4.3	2.5	0.9	0.5	39.2
SOLANO													
Dixon	0.7	1.4	[illegible].2	5.2	6.3	7.6	[illegible].2	7.2	5.5	4.3	1.6	1.1	52.1
Fairfield	1.1	1.7	2.[illegible]	4.0	5.5	6.1	7.8	6.0	4.8	3.1	1.4	0.9	45.2
Hastings Tract	1.6	2.2	3.[illegible]	5.1	6.8	7.[illegible]	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Putah Creek	1.0	1.6	3.2	[illegible].9	6.1	[illegible].3	7.9	7.0	5.3	3.8	1.8	1.2	51.0
Rio Vista	0.9	1.7	2.8	[illegible].4	5.9	6.7	7.9	6.5	5.1	3.2	1.3	0.7	47.0
Sulsun Valley	0.6	1.3	3.0	4.7	[illegible].5	7.0	7.7	6.8	5.3	3.8	1.4	0.9	48.3
Winters	0.9	1.7	3.3	5.0	[illegible].4	7.5	7.9	7.0	5.2	3.5	1.6	1.0	51.0
SONOMA													
Bennett Valley	1.1	1.7	3.2	[illegible].1	5.5	6.5	6.6	5.7	4.5	3.1	1.5	0.9	44.4
Cloverdale	1.1	1.4	2.6	[illegible].4	5.0	[illegible].9	6.2	5.6	4.5	2.8	1.4	0.7	40.7
Fort Ross	1.2	1.4	2.2	3.0	3.7	[illegible].5	4.2	4.3	3.4	2.4	1.2	0.5	31.9
Healdsburg	1.2	1.5	[illegible].1	3.5	5.0	5.9	6.1	5.6	4.5	2.8	1.4	0.7	40.8
Lincoln	1.2	1.7	[illegible].8	4.7	6.1	7.4	[illegible].4	7.3	5.4	3.7	1.9	1.2	51.9
Petaluma	1.2	1.5	2.8	3.7	4.6	5.6	4.[illegible]	5.7	4.5	2.9	1.4	0.9	39.6
Santa Rosa	1.2	1.[illegible]	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7	42.0
Valley of the Moon	1.0	1.6	3.0	4.5	5.6	6.6	7.1	[illegible].3	4.7	3.3	1.5	1.0	46.1
Windsor	0.9	1.6	3.0	4.5	5.5	6.5	6.5	5.[illegible]	4.4	3.2	1.4	1.0	44.2
Denair	1.[illegible]	1.9	3.6	4.7	7.0	7.9	8.0	6.1	5.3	3.4	1.5	1.0	51.4
La Grange	1.2	1.5	3.1	4.7	6.2	7.7	8.5	7.3	[illegible].3	3.4	1.4	0.7	51.2
Modesto	0.9	1.4	3.2	4.7	6.4	7.7	8.1	6.8	5.[illegible]	3.4	1.4	0.7	49.7
Newman	1.0	1.5	3.2	4.6	6.2	7.4	8.1	6.7	5.0	3.4	1.4	0.7	49.3
STANISLAUS													
Oakdale	1.2	1.5	3.2	4.7	6.2	7.7	8.1	7.1	5.1	3.[illegible]	1.4	0.7	50.3
Patterson	1.3	2.1	4.2	5.4	7.9	8.6	8.2	6.6	5.8	4.0	1.9	1.3	57.3
Turlock	0.9	1.5	3.2	4.7	6.5	7.7	8.2	7.0	5.1	3.4	[illegible].4	0.7	50.2
SUTTER													
Nicolaus	0.9	1.6	3.2	4.9	6.3	7.5	8.0	6.9	5.2	3.4	1.5	0.9	50.2
Yuba City	1.3	2.1	2.8	4.4	5.7	7.2	7.1	6.1	4.7	3.2	1.2	0.9	46.7
TEHAMA													
Corning	1.2	1.8	2.9	4.5	6.1	7.3	8.1	7.2	5.3	3.7	1.7	1.1	50.7
Gerber	1.0	1.8	3.5	5.0	6.6	7.9	8.7	7.4	5.8	4.1	1.8	1.1	5[illegible].7
Gerber Dryland	0.9	1.6	3.2	4.7	6.7	8.4	9.0	7.9	6.0	4.2	2.0	1.0	55.[illegible]
Red Bluff	1.2	1.8	2.9	4.4	5.9	7.4	8.5	7.3	5.4	3.5	1.7	1.0	51.1

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
TRINITY													
Hay Fork	0.5	1.1	2.3	3.5	4.9	5.9	7.0	6.0	4.5	2.8	0.9	0.4	40.1
Weaverville	0.6	1.1	2.2	3.3	4.9	5.9	7.3	6.0	4.4	2.7	0.9	0.7	40.0
TULARE													
Alpaugh	0.9	1.7	3.4	4.8	6.6	7.7	8.2	7.3	5.4	3.4	1.4	0.7	51.6
Badger	1.0	1.3	2.7	4.1	6.0	7.3	7.7	7.0	4.8	3.3	1.4	0.7	47.3
Delano	1.1	1.9	4.0	4.9	7.2	7.9	8.1	7.3	5.4	3.2	1.5	1.2	53.6
Dinuba	1.1	1.5	3.2	4.7	6.2	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.2
Lindcove	0.9	1.6	3.0	4.8	6.5	7.6	8.1	7.2	5.2	3.4	1.6	0.9	50.6
Porterville	1.1	1.8	3.4	4.7	6.6	7.7	8.5	7.3	5.3	3.4	1.4	0.7	52.1
Visalia	0.9	1.7	3.3	5.1	6.8	7.7	7.9	6.8	4.9	3.2	1.5	0.8	50.7
TUOLUMNE													
Groveland	1.1	1.5	2.8	4.1	5.7	7.2	7.9	6.6	5.1	3.3	1.4	0.7	47.5
Sonora	1.1	1.5	2.8	4.1	5.8	7.2	7.9	6.7	5.1	3.2	1.4	0.7	47.6
VENTURA													
Camarillo	2.2	2.5	3.7	4.3	5.0	5.2	5.9	5.4	4.2	3.0	2.5	2.1	46.1
Oxnard	2.2	2.5	3.2	3.8	4.4	4.6	5.4	4.8	4.0	3.3	2.4	2.0	42.3
Piru	2.8	2.8	4.1	5.6	6.9	6.8	7.6	7.8	5.8	5.2	3.7	3.2	61.5
Port Hueneme	2.0	2.3	3.3	4.6	4.9	4.9	4.9	5.0	3.7	3.2	2.5	2.2	43.5
Thousand Oaks	2.2	2.6	3.4	4.5	5.4	5.9	6.7	6.4	5.4	3.9	2.6	2.0	51.0
Ventura	2.2	2.6	3.2	3.8	4.6	4.7	5.5	4.9	4.1	3.4	2.5	2.0	43.5
YOLO													
Bryte	0.9	1.7	3.3	5.0	6.4	7.5	7.9	7.0	5.2	3.5	1.6	1.0	51.0
Davis	1.0	1.9	3.3	5.0	6.4	7.6	8.2	7.1	5.4	4.0	1.8	1.0	52.5
Esparto	1.0	1.7	3.4	5.5	6.9	8.1	8.5	7.5	5.8	4.2	2.0	1.2	55.8
Winters	1.7	1.7	2.9	4.4	5.8	7.1	7.9	6.7	5.3	3.3	1.6	1.0	49.4
Woodland	1.1	1.8	3.2	4.7	6.1	7.7	8.2	7.2	5.4	3.7	1.7	1.0	51.6
Zamora	1.1	1.9	3.5	5.2	6.4	7.4	7.8	7.0	5.5	4.0	1.9	1.2	52.8
YUBA													
Browns Valley	1.0	1.7	3.1	4.7	6.1	7.5	8.5	7.6	5.7	4.1	2.0	1.1	52.9
Brownsville	1.1	1.4	2.6	4.0	5.7	6.8	7.9	6.8	5.3	3.8	1.5	0.9	47.4

* The values in this table were derived from:
1) California Irrigation Management Information System (CIMIS);
2) Reference EvapoTranspiration Zones Map, UC Dept. of Land, Air & Water Resources and California Dept of Water Resources 1999; and
3) Reference Evapotranspiration for California, University of California, Department of Agriculture and Natural Resources (1987) Bulletin 1922 4) Determining Daily Reference Evapotranspiration, Cooperative Extension UC Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
ALAMEDA													
Fremont	1.5	1.9	3.4	4.7	5.4	6.3	6.7	6.0	4.5	3.4	1.8	1.5	47.0
Livermore	1.2	1.5	2.9	4.4	5.9	6.6	7.4	6.4	5.3	3.2	1.5	0.9	47.2
Oakland	1.5	1.5	2.8	3.9	5.1	5.3	6.0	5.5	4.8	3.1	1.4	0.9	41.8
Oakland Foothills	1.1	1.4	2.7	3.7	5.1	6.4	5.8	4.9	3.6	2.6	1.4	1.0	39.6
Pleasanton	0.8	1.5	2.9	4.4	5.6	6.7	7.4	6.4	4.7	3.3	1.5	1.0	46.2
Union City	1.4	1.8	3.1	4.2	5.4	5.9	6.4	5.7	4.4	3.1	1.5	1.2	44.2
ALPINE													
Markleeville	0.7	0.9	2.0	3.5	5.0	6.1	7.3	6.4	4.4	2.6	1.2	0.5	40.6
AMADOR													
Jackson	1.2	1.5	2.8	4.4	6.0	7.2	7.9	7.2	5.3	3.2	1.4	0.9	48.9
Shanandoah Valley	1.0	1.7	2.9	4.4	5.6	6.8	7.9	7.1	5.2	3.6	1.7	1.0	48.8
BUTTE													
Chico	1.2	1.8	2.9	4.7	6.1	7.4	8.5	7.3	5.4	3.7	1.7	1.0	51.7
Durham	1.1	1.8	3.2	5.0	6.5	7.4	7.8	6.9	5.3	3.6	1.7	1.0	51.1
Gridley	1.2	1.8	3.0	4.7	6.1	7.7	8.5	7.1	5.4	3.7	1.7	1.0	51.9
Oroville	1.2	1.7	2.8	4.7	6.1	7.6	8.5	7.3	5.3	3.7	1.7	1.0	51.5
CALAVERAS													
San Andreas	1.2	1.5	2.8	4.4	6.0	7.3	7.9	7.0	5.3	3.2	1.4	0.7	48.8
COLUSA													
Colusa	1.0	1.7	3.4	5.0	6.4	7.6	8.3	7.2	5.4	3.8	1.8	1.1	52.8
Williams	1.2	1.7	2.9	4.5	6.1	7.2	8.5	7.3	5.3	3.4	1.6	1.0	50.8
CONTRA COSTA													
Brentwood	1.0	1.5	2.9	4.5	6.1	7.1	7.9	6.7	5.2	3.2	1.4	0.7	48.3
Concord	1.1	1.4	2.4	4.0	5.5	5.9	7.0	6.0	4.8	3.2	1.3	0.7	43.4
Courtland	0.9	1.5	2.9	4.4	6.1	6.9	7.9	6.7	5.3	3.2	1.4	0.7	48.0
Martinez	1.2	1.4	2.4	3.9	5.3	5.6	6.7	5.6	4.7	3.1	1.2	0.7	41.8
Moraga	1.2	1.5	3.4	4.2	5.5	6.1	6.7	5.9	4.6	3.2	1.6	1.0	44.9
Pittsburg	1.0	1.5	2.8	4.1	5.6	6.4	7.4	6.4	5.0	3.2	1.3	0.7	45.4
Walnut Creek	0.8	1.5	2.9	4.4	5.6	6.7	7.4	6.4	4.7	3.3	1.5	1.0	46.2
DEL NORTE													
Crescent City	0.5	0.9	2.0	3.0	3.7	3.5	4.3	3.7	3.0	2.0	0.9	0.5	27.7
EL DORADO													
Camino	0.9	1.7	2.5	3.9	5.9	7.2	7.8	6.8	5.1	3.1	1.5	0.9	47.3
FRESNO													
Clovis	1.0	1.5	3.2	4.8	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.4
Coalinga	1.2	1.7	3.1	4.6	6.2	7.2	8.5	7.3	5.3	3.4	1.6	0.7	50.9
Firebaugh	1.0	1.8	3.7	5.7	7.3	8.1	8.2	7.2	5.5	3.9	2.0	1.1	55.4
FivePoints	1.3	2.0	4.0	6.1	7.7	8.5	8.7	8.0	6.2	4.5	2.4	1.2	60.4
Fresno	0.9	1.7	3.3	4.8	6.7	7.8	8.4	7.1	5.2	3.2	1.4	0.6	51.1
Fresno State	0.9	1.6	3.2	5.2	7.0	8.0	8.7	7.6	5.4	3.6	1.7	0.9	53.7
Friant	1.2	1.5	3.1	4.7	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.3
Kerman	0.9	1.5	3.2	4.8	6.6	7.7	8.4	7.2	5.3	3.4	1.4	0.7	51.2
Kingsburg	1.0	1.5	3.4	4.8	6.6	7.7	8.4	7.2	5.3	3.4	1.4	0.7	51.6
Mendota	1.5	2.5	4.6	6.2	7.9	8.6	8.8	7.5	5.9	4.5	2.4	1.5	61.7
Orange Cove	1.2	1.9	3.5	4.7	7.4	8.5	8.9	7.9	5.9	3.7	1.8	1.2	56.7
Panoche	1.1	2.0	4.0	5.6	7.8	8.5	8.3	7.3	5.6	3.9	1.8	1.2	57.2
Parlier	1.0	1.9	3.6	5.2	6.8	7.6	8.1	7.0	5.1	3.4	1.7	0.9	52.0

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
FRESNO													
Reedley	1.1	1.5	3.2	4.7	6.4	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.3
Westlands	0.9	1.7	3.8	6.3	8.0	8.6	8.6	7.8	5.9	4.3	2.1	1.1	58.8
GLENN													
Orland	1.1	1.8	3.4	5.0	6.4	7.5	7.9	6.7	5.3	3.9	1.8	1.4	52.1
Willows	1.2	1.7	2.9	4.7	6.1	7.2	8.5	7.3	5.3	3.6	1.7	1.0	51.3
HUMBOLDT													
Eureka	0.5	1.1	2.0	3.0	3.7	3.7	3.7	3.7	3.0	2.0	0.9	0.5	27.5
Ferndale	0.5	1.1	2.0	3.0	3.7	3.7	3.7	3.7	3.0	2.0	0.9	0.5	27.5
Garberville	0.6	1.2	2.2	3.1	4.5	5.0	5.5	4.9	3.8	2.4	1.0	0.7	34.9
Hoopa	0.5	1.1	2.1	3.0	4.4	5.4	6.1	5.1	3.8	2.4	0.9	0.7	35.6
IMPERIAL													
Brawley	2.8	3.8	5.9	8.0	10.4	11.5	11.7	10.0	8.4	6.2	3.5	2.1	84.2
Calipatria/Mulberry	2.4	3.2	5.1	6.8	8.6	9.2	9.2	8.6	7.0	5.2	3.1	2.3	70.7
El Centro	2.7	3.5	5.6	7.9	10.1	11.1	11.6	9.5	8.3	6.1	3.3	2.0	81.7
Holtville	2.8	3.8	5.9	7.9	10.4	11.6	12.0	10.0	8.6	6.2	3.5	2.1	84.7
Meloland	2.5	3.2	5.5	7.5	8.9	9.2	9.0	8.5	6.8	5.3	3.1	2.2	71.6
Palo Verde II	2.5	3.3	5.7	6.9	8.5	8.9	8.6	7.9	6.2	4.5	2.9	2.3	68.2
Seeley	2.7	3.5	5.9	7.7	9.7	10.1	9.3	8.3	6.9	5.5	3.4	2.2	75.4
Westmoreland	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.4
Yuma	2.5	3.4	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.6
INYO													
Bishop	1.7	2.7	4.8	6.7	8.2	10.9	7.4	9.6	7.4	4.8	2.5	1.6	68.3
Death Valley Jct	2.2	3.3	5.4	7.7	9.8	11.1	11.4	10.1	8.3	5.4	2.9	1.7	79.1
Independence	1.7	2.7	3.4	6.6	8.5	9.5	9.8	8.5	7.1	3.9	2.0	1.5	65.2
Lower Haiwee Res.	1.8	2.7	4.4	7.1	8.5	9.5	9.8	8.5	7.1	4.2	2.6	1.5	67.6
Oasis	2.7	2.8	5.9	8.0	10.4	11.7	11.6	10.0	8.4	6.2	3.4	2.1	83.1
KERN													
Arvin	1.2	1.8	3.5	4.7	6.6	7.4	8.1	7.3	5.3	3.4	1.7	1.0	51.9
Bakersfield	1.0	1.8	3.5	4.7	6.6	7.7	8.5	7.3	5.3	3.5	1.6	0.9	52.4
Bakersfield/Bonanza	1.2	2.2	3.7	5.7	7.4	8.2	8.7	7.8	5.7	4.0	2.1	1.2	57.9
Bakersfield/Greenlee	1.2	2.2	3.7	5.7	7.4	8.2	8.7	7.8	5.7	4.0	2.1	1.2	57.9
Belridge	1.4	2.2	4.1	5.5	7.7	8.5	8.6	7.8	6.0	3.8	2.0	1.5	59.2
Blackwells Corner	1.4	2.1	3.8	5.4	7.0	7.8	8.5	7.7	5.8	3.9	1.9	1.2	56.6
Buttonwillow	1.0	1.8	3.2	4.7	6.6	7.7	8.5	7.3	5.4	3.4	1.5	0.9	52.0
China Lake	2.1	3.2	5.3	7.7	9.2	10.0	11.0	9.8	7.3	4.9	2.7	1.7	74.8
Delano	0.9	1.8	3.4	4.7	6.6	7.7	8.5	7.3	5.4	3.4	1.4	0.7	52.0
Famoso	1.3	1.9	3.5	4.8	6.7	7.6	8.0	7.3	5.5	3.5	1.7	1.3	53.1
Grapevine	1.3	1.8	3.1	4.4	5.6	6.8	7.6	6.8	5.9	3.4	1.9	1.0	49.5
Inyokern	2.0	3.1	4.9	7.3	8.5	9.7	11.0	9.4	7.1	5.1	2.6	1.7	72.4
Isabella Dam	1.2	1.4	2.8	4.4	5.8	7.3	7.9	7.0	5.0	3.2	1.7	0.9	48.4
Lamont	1.3	2.4	4.4	4.6	6.5	7.0	8.8	7.6	5.7	3.7	1.6	0.8	54.4
Lost Hills	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
McFarland/Kern	1.2	2.1	3.7	5.6	7.3	8.0	8.3	7.4	5.6	4.1	2.0	1.2	56.5
Shafter	1.0	1.7	3.4	5.0	6.6	7.7	8.3	7.3	5.4	3.4	1.5	0.9	52.1
Taft	1.3	1.8	3.1	4.3	6.2	7.3	8.5	7.3	5.4	3.4	1.7	1.0	51.2
Tehachapi	1.4	1.8	3.2	5.0	6.1	7.7	7.9	7.3	5.9	3.4	2.1	1.2	52.9
KINGS													
Caruthers	1.6	2.5	4.0	5.7	7.8	8.7	9.3	8.4	6.3	4.4	2.4	1.6	62.7

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
KINGS													
Corcoran	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Hanford	0.9	1.5	3.4	5.0	6.6	7.7	8.3	7.2	5.4	3.4	1.4	0.7	51.5
Kettleman	1.1	2.0	4.0	6.0	7.5	8.5	9.1	8.2	6.1	4.5	2.2	1.1	60.2
Lemoore	0.9	1.5	3.4	5.0	6.6	7.7	8.3	7.3	5.4	3.4	1.4	0.7	51.7
Stratford	0.9	1.9	3.9	6.1	7.8	8.6	8.8	7.7	5.9	4.1	2.1	1.0	58.7
LAKE													
Lakeport	1.1	1.3	2.6	3.5	5.1	6.0	7.3	6.1	4.7	2.9	1.2	0.9	42.8
Lower Lake	1.2	1.4	2.7	4.5	5.3	6.3	7.4	6.4	5.0	3.1	1.3	0.9	45.4
LASSEN													
Buntingville	1.0	1.7	3.5	4.9	6.2	7.3	8.4	7.5	5.4	3.4	1.5	0.9	51.8
Ravendale	0.6	1.1	2.3	4.1	5.6	6.7	7.9	7.3	4.7	2.8	1.2	0.5	44.9
Susanville	0.7	1.0	2.2	4.1	5.6	6.5	7.8	7.0	4.6	2.8	1.2	0.5	44.0
LOS ANGELES													
Burbank	2.1	2.8	3.7	4.7	5.1	6.0	6.6	6.7	5.4	4.0	2.6	2.0	51.7
Claremont	2.0	2.3	3.4	4.6	5.0	6.0	7.0	7.0	5.3	4.0	2.7	2.1	51.3
El Dorado	1.7	2.2	3.6	4.8	5.1	5.7	5.9	5.9	4.4	3.2	2.2	1.7	46.3
Glendale	2.0	2.2	3.3	3.8	4.7	4.8	5.7	5.6	4.3	3.3	2.2	1.8	43.7
Glendora	2.0	2.5	3.6	4.9	5.4	6.1	7.3	6.8	5.7	4.2	2.6	2.0	53.1
Gorman	1.6	2.2	3.4	4.6	5.5	7.4	7.7	7.1	5.9	3.6	2.4	1.1	52.4
Hollywood Hills	2.1	2.2	3.8	5.4	6.0	6.5	6.7	6.4	5.2	3.7	2.8	2.1	52.8
Lancaster	2.1	3.0	4.6	5.9	8.5	9.7	11.0	9.8	7.3	4.6	2.8	1.7	71.1
Long Beach	1.8	2.1	3.3	3.9	4.5	4.3	5.3	4.7	3.7	2.8	1.8	1.5	39.7
Los Angeles	2.2	2.7	3.7	4.7	5.5	5.8	6.2	5.9	5.0	3.9	2.6	1.9	50.1
Monrovia	2.2	2.3	3.8	4.3	5.5	5.9	6.9	6.4	5.1	3.2	2.5	2.0	50.2
Palmdale	2.0	2.6	4.6	6.2	7.3	8.9	9.8	9.0	6.5	4.7	2.7	2.1	66.2
Pasadena	2.1	2.7	3.7	4.7	5.1	6.0	7.1	6.7	5.6	4.2	2.6	2.0	52.3
Pearblossom	1.7	2.4	3.7	4.7	7.3	7.7	9.9	7.9	6.4	4.0	2.6	1.6	59.9
Pomona	1.7	2.0	3.4	4.5	5.0	5.8	6.5	6.4	4.7	3.5	2.3	1.7	47.5
Redondo Beach	2.2	2.4	3.3	3.8	4.5	4.7	5.4	4.8	4.4	2.8	2.4	2.0	42.6
San Fernando	2.0	2.7	3.5	4.6	5.5	5.9	7.3	6.7	5.3	3.9	2.6	2.0	52.0
Santa Clarita	2.8	2.8	4.1	5.6	6.0	6.8	7.6	7.8	5.8	5.2	3.7	3.2	61.5
Santa Monica	1.8	2.1	3.3	4.5	4.7	5.0	5.4	5.4	3.9	3.4	2.4	2.2	44.2
MADERA													
Chowchilla	1.0	1.4	3.2	4.7	6.6	7.8	8.5	7.3	5.3	3.4	1.4	0.7	51.4
Madera	0.9	1.4	3.2	4.8	6.6	7.8	8.5	7.3	5.3	3.4	1.4	0.7	51.5
Raymond	1.2	1.5	3.0	4.6	6.1	7.6	8.4	7.3	5.2	3.4	1.4	0.7	50.5
MARIN													
Black Point	1.1	1.7	3.0	4.2	5.2	6.2	6.6	5.8	4.3	2.8	1.3	0.9	43.0
Novato	1.3	1.5	2.4	3.5	4.4	6.0	5.9	5.4	4.4	2.8	1.4	0.7	39.8
Point San Pedro	1.1	1.7	3.0	4.2	5.2	6.2	6.6	5.8	4.3	2.8	1.3	0.9	43.0
San Rafael	1.2	1.3	2.4	3.3	4.0	4.8	4.8	4.9	4.3	2.7	1.3	0.7	35.8
MARIPOSA													
Coulterville	1.1	1.5	2.8	4.4	5.9	7.3	8.1	7.0	5.3	3.4	1.4	0.7	48.8
Mariposa	1.1	1.5	2.8	4.4	5.9	7.4	8.2	7.1	5.0	3.4	1.4	0.7	49.0
Yosemite Village	0.7	1.0	2.3	3.7	5.1	6.5	7.1	6.1	4.4	2.9	1.1	0.6	41.4
MENDOCINO													
Fort Bragg	0.9	1.3	2.2	3.0	3.7	3.5	3.7	3.7	3.0	2.3	1.2	0.7	29.0
Hopland	1.1	1.3	2.6	3.4	5.0	5.9	6.5	5.7	4.5	2.8	1.3	0.7	40.9

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
MENDOCINO													
Point Arena	1.0	1.3	2.3	3.0	3.7	3.9	3.7	3.7	3.0	2.3	1.2	0.7	29.6
Sanel Valley	1.0	1.6	3.0	4.6	6.0	7.0	8.0	7.0	5.2	3.4	1.4	0.9	49.1
Ukiah	1.0	1.3	2.6	3.3	5.0	5.8	6.7	5.9	4.5	2.8	1.3	0.7	40.9
MERCED													
Kesterson	0.9	1.7	3.4	5.5	7.3	8.2	8.6	7.4	5.5	3.8	1.8	0.9	55.1
Los Banos	1.0	1.5	3.2	4.7	6.1	7.4	8.2	7.0	5.3	3.4	1.4	0.7	50.0
Merced	1.0	1.5	3.2	4.7	6.6	7.9	8.5	7.2	5.3	3.4	1.4	0.7	51.5
MODOC													
Modoc/Alturas	0.9	1.4	2.8	3.7	5.1	6.2	7.5	6.6	4.6	2.8	1.2	0.7	43.2
MONO													
Bridgeport	0.7	0.9	2.2	3.8	5.5	6.6	7.4	6.7	4.7	2.7	1.2	0.5	43.0
MONTEREY													
Arroyo Seco	1.5	2.0	3.7	5.4	6.3	7.3	7.2	6.7	5.0	3.9	2.0	1.6	52.6
Castroville	1.4	1.7	3.0	4.2	4.6	4.8	4.0	3.8	3.0	2.6	1.6	1.4	36.2
Gonzales	1.3	1.7	3.4	4.7	5.4	6.3	6.3	5.9	4.4	3.4	1.9	1.3	45.7
Greenfield	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
King City	1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	6.5	5.2	2.2	1.3	49.6
King City-Oasis Rd.	1.4	1.9	3.6	5.3	6.5	7.3	7.4	6.8	5.1	4.0	2.0	1.5	52.7
Long Valley	1.5	1.9	3.2	4.1	5.8	6.5	7.3	6.7	5.3	3.6	2.0	1.2	49.1
Monterey	1.7	1.8	2.7	3.5	4.0	4.1	4.3	4.2	3.5	2.8	1.9	1.5	36.0
Pajaro	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.1
Salinas	1.6	1.9	2.7	3.8	4.8	4.7	5.0	4.5	4.0	2.9	1.9	1.3	39.1
Salinas North	1.2	1.5	2.9	4.1	4.6	5.2	4.5	4.3	3.2	2.8	1.5	1.2	36.9
San Ardo	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	5.1	3.1	1.5	1.0	49.0
San Juan	1.8	2.1	3.4	4.6	5.3	5.7	5.5	4.9	3.8	3.2	2.2	1.9	44.2
Soledad	1.7	2.0	3.4	4.4	5.5	5.4	6.5	6.2	5.2	3.7	2.2	1.5	47.7
NAPA													
Angwin	1.8	1.9	3.2	4.7	5.8	7.3	8.1	7.1	5.5	4.5	2.9	2.1	54.9
Carneros	0.8	1.5	3.1	4.6	5.5	6.6	6.9	6.2	4.7	3.5	1.4	1.0	45.8
Oakville	1.0	1.5	2.9	4.7	5.8	6.9	7.2	6.4	4.9	3.5	1.6	1.2	47.7
St Helena	1.2	1.5	2.8	3.9	5.1	6.1	7.0	6.2	4.8	3.1	1.4	0.9	44.1
Yountville	1.3	1.7	2.8	3.9	5.1	6.0	7.1	6.1	4.8	3.1	1.5	0.9	44.3
NEVADA													
Grass Valley	1.1	1.5	2.6	4.0	5.7	7.1	7.9	7.1	5.3	3.2	1.5	0.9	48.0
Nevada City	1.1	1.5	2.6	3.9	5.8	6.9	7.9	7.0	5.3	3.2	1.4	0.9	47.4
ORANGE													
Irvine	2.2	2.5	3.7	4.7	5.2	5.9	6.3	6.2	4.6	3.7	2.6	2.3	49.6
Laguna Beach	2.2	2.7	3.4	3.8	4.6	4.6	4.9	4.9	4.4	3.4	2.4	2.0	43.2
Santa Ana	2.2	2.7	3.7	4.5	4.6	5.4	6.2	6.1	4.7	3.7	2.5	2.0	48.2
PLACER													
Auburn	1.2	1.7	2.8	4.4	6.1	7.4	8.3	7.3	5.4	3.4	1.6	1.0	50.6
Blue Canyon	0.7	1.1	2.1	3.4	4.8	6.0	7.2	6.1	4.6	2.9	0.9	0.6	40.5
Colfax	1.1	1.5	2.6	4.0	5.8	7.1	7.9	7.0	5.3	3.2	1.4	0.9	47.9
Roseville	1.1	1.7	3.1	4.7	6.2	7.7	8.5	7.3	5.6	3.7	1.7	1.0	52.2
Soda Springs	0.7	0.7	1.8	3.0	4.3	5.3	6.2	5.5	4.1	2.5	0.7	0.7	35.4
Tahoe City	0.7	0.7	1.7	3.0	4.3	5.4	6.1	5.6	4.1	2.4	0.8	0.6	35.5
Truckee	0.7	0.7	1.7	3.2	4.4	5.4	6.4	5.7	4.1	2.4	0.8	0.6	36.2

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
PLUMAS													
Portola	0.7	0.9	1.9	3.5	4.9	5.9	7.3	5.9	4.3	2.7	0.9	0.5	39.4
Quincy	0.7	0.9	2.2	3.5	4.9	5.9	7.3	5.9	4.4	2.8	1.2	0.5	40.2
RIVERSIDE													
Beaumont	2.0	2.3	3.4	4.4	6.1	7.1	7.6	7.9	6.0	3.9	2.6	1.7	55.0
Blythe	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.4
Cathedral City	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Coachella	2.9	4.4	6.2	8.4	10.5	11.9	12.3	10.1	8.9	6.2	3.8	2.4	88.1
Desert Center	2.9	4.1	6.4	8.5	11.0	12.1	12.2	11.1	9.0	6.4	3.9	2.6	90.0
Elsinore	2.1	2.8	3.9	4.4	5.9	7.1	7.6	7.0	5.8	3.9	2.6	1.9	55.0
Indio	3.1	3.6	6.5	8.3	10.5	11.0	10.8	9.7	8.3	5.9	3.7	2.7	83.9
La Quinta	2.4	2.8	5.2	6.5	8.3	8.7	8.5	7.9	6.5	4.5	2.7	2.2	66.2
Mecca	2.6	3.3	5.7	7.2	8.6	9.0	8.8	8.2	6.8	5.0	3.2	2.4	70.8
Oasis	2.9	3.3	5.3	6.1	8.5	8.9	8.7	7.9	6.9	4.8	2.9	2.3	68.4
Palm Desert	2.5	3.4	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.6
Palm Springs	2.0	2.9	4.9	7.2	8.3	8.5	11.6	8.3	7.2	5.9	2.7	1.7	71.1
Rancho California	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
Rancho Mirage	2.4	3.3	5.3	6.9	8.7	9.6	9.6	8.7	6.9	5.0	3.0	2.2	71.4
Ripley	2.7	3.3	5.6	7.2	8.7	8.7	8.4	7.6	6.2	4.6	2.8	2.2	67.8
Salton Sea North	2.5	3.3	5.5	7.2	8.8	9.3	9.2	8.5	6.8	5.2	3.1	2.3	71.7
Temecula East II	2.3	2.4	4.1	4.9	6.4	7.0	7.8	7.4	5.7	4.1	2.6	2.2	56.7
Thermal	2.4	3.3	5.5	7.6	9.1	9.6	9.3	8.6	7.1	5.2	3.1	2.1	72.8
Riverside UC	2.5	2.9	4.2	5.3	5.9	6.6	7.2	6.9	5.4	4.1	2.9	2.6	56.4
Winchester	2.3	2.4	4.1	4.9	6.4	6.9	7.7	7.5	6.0	3.9	2.6	2.1	56.8
SACRAMENTO													
Fair Oaks	1.0	1.6	3.4	4.1	6.5	7.5	8.1	7.1	5.2	3.4	1.5	1.0	50.5
Sacramento	1.0	1.8	3.2	4.7	6.4	7.7	8.4	7.2	5.4	3.7	1.7	0.9	51.9
Twitchell Island	1.2	1.8	3.9	5.3	7.4	8.8	9.1	7.8	5.9	3.8	1.7	1.2	57.9
SAN BENITO													
Hollister	1.5	1.8	3.1	4.3	5.5	5.7	6.4	5.9	5.0	3.5	1.7	1.1	45.1
San Benito	1.2	1.6	3.1	4.6	5.6	6.4	6.9	6.5	4.8	3.7	1.7	1.2	47.2
San Juan Valley	1.4	1.8	3.4	4.5	6.0	6.7	7.1	6.4	5.0	3.5	1.8	1.4	49.1
SAN BERNARDINO													
Baker	2.7	3.9	6.1	8.3	10.4	11.8	12.2	11.0	8.9	6.1	3.3	2.1	86.6
Barstow NE	2.2	2.9	5.3	6.9	9.0	10.1	9.9	8.9	6.8	4.8	2.7	2.1	71.7
Big Bear Lake	1.8	2.6	4.6	6.0	7.0	7.6	8.1	7.4	5.4	4.1	2.4	1.8	58.6
Chino	2.1	2.9	3.9	4.5	5.7	6.5	7.3	7.1	5.9	4.2	2.6	2.0	54.6
Crestline	1.5	1.9	3.3	4.4	5.5	6.6	7.8	7.1	5.4	3.5	2.2	1.6	50.8
Lake Arrowhead	1.8	2.6	4.6	6.0	7.0	7.6	8.1	7.4	5.4	4.1	2.4	1.8	58.6
Lucerne Valley	2.2	2.9	5.1	6.5	9.1	11.0	11.4	9.9	7.4	5.0	3.0	1.8	75.3
Needles	3.2	4.2	6.6	8.9	11.0	12.4	12.8	11.0	8.9	6.6	4.0	2.7	92.1
Newberry Springs	2.1	2.9	5.3	8.4	9.8	10.9	11.1	9.9	7.6	5.2	3.1	2.0	78.2
San Bernardino	2.0	2.7	3.8	4.6	5.7	6.9	7.9	7.4	5.9	4.2	2.6	2.0	55.6
Twentynine Palms	2.6	3.6	5.9	7.9	10.1	11.2	11.2	10.3	8.6	5.9	3.4	2.2	82.9
Victorville	2.0	2.6	4.6	6.2	7.3	8.9	9.8	9.0	6.5	4.7	2.7	2.1	66.2
SAN DIEGO													
Chula Vista	2.2	2.7	3.4	3.8	4.9	4.7	5.5	4.9	4.5	3.4	2.4	2.0	44.2
Escondido SPV	2.4	2.6	3.9	4.7	5.9	6.5	7.1	6.7	5.3	3.9	2.8	2.3	54.2
Miramar	2.3	2.5	3.7	4.1	5.1	5.4	6.1	5.8	4.5	3.3	2.4	2.1	47.1

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
SAN DIEGO													
Oceanside	2.2	2.7	3.4	3.7	4.9	4.6	4.6	5.1	4.1	3.3	2.4	2.0	42.9
Otay Lake	2.3	2.7	3.9	4.6	5.6	5.9	6.2	6.1	4.8	3.7	2.6	2.2	50.4
Pine Valley	1.5	2.4	3.8	5.1	6.0	7.0	7.8	7.3	6.0	4.0	2.2	1.7	54.8
Ramona	2.1	2.1	3.4	4.6	5.2	6.3	6.7	6.8	5.3	4.1	2.8	2.1	51.6
San Diego	2.1	2.4	3.4	4.6	5.1	5.3	5.7	5.6	4.3	3.6	2.4	2.0	46.5
Santee	2.1	2.7	3.7	4.5	5.5	6.1	6.6	6.2	5.4	3.8	2.6	2.0	51.1
Torrey Pines	2.2	2.3	3.4	3.9	4.0	4.1	4.6	4.7	3.8	2.8	2.0	2.0	39.8
Warner Springs	1.6	2.7	3.7	4.7	5.7	7.6	8.3	7.7	6.3	4.0	2.5	1.3	56.0
SAN FRANCISCO													
San Francisco	1.5	1.3	2.4	3.0	3.7	4.6	4.9	4.8	4.1	2.8	1.3	0.7	35.1
SAN JOAQUIN													
Farmington	1.5	1.5	2.9	4.7	6.2	7.6	8.1	6.8	5.3	3.3	1.4	0.7	50.0
Lodi West	1.0	1.6	3.3	4.3	6.3	6.9	7.3	6.4	4.5	3.0	1.4	0.8	46.7
Manteca	0.9	1.7	3.4	5.0	6.5	7.5	8.0	7.1	5.2	3.3	1.6	0.9	51.2
Stockton	0.8	1.5	2.9	4.7	6.2	7.4	8.1	6.8	5.3	3.2	1.4	0.6	49.1
Tracy	1.0	1.5	2.9	4.5	6.1	7.3	7.9	6.7	5.3	3.2	1.3	0.7	48.5
SAN LUIS OBISPO													
Arroyo Grande	2.0	2.2	3.2	3.8	4.3	4.7	4.3	4.6	3.8	3.2	2.4	1.7	40.0
Atascadero	1.2	1.5	2.8	3.9	4.5	6.0	6.7	6.2	5.0	3.2	1.7	1.0	43.7
Morro Bay	2.0	2.2	3.1	3.5	4.3	4.5	4.6	4.6	3.8	3.5	2.1	1.7	39.9
Nipomo	2.2	2.5	3.8	5.1	5.7	6.2	6.4	6.1	4.9	4.1	2.9	2.3	52.1
Paso Robles	1.6	2.0	3.2	4.3	5.5	6.3	7.3	6.7	5.1	3.7	2.1	1.4	49.0
San Luis Obispo	2.0	2.2	3.2	4.1	4.9	5.3	4.6	5.5	4.4	3.5	2.4	1.7	43.8
San Miguel	1.6	2.0	3.2	4.3	5.0	6.4	7.4	6.8	5.1	3.7	2.1	1.4	49.0
San Simeon	2.0	2.0	2.9	3.5	4.2	4.4	4.6	4.3	3.5	3.1	2.0	1.7	38.1
SAN MATEO													
Hal Moon Bay	1.5	1.7	2.4	3.0	3.9	4.3	4.3	4.2	3.5	2.8	1.3	1.0	33.7
Redwood City	1.5	1.8	2.9	3.8	5.2	5.3	6.2	5.6	4.8	3.1	1.7	1.0	42.8
Woodside	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
SANTA BARBARA													
Betteravia	2.1	2.6	4.0	5.2	6.0	5.9	5.8	5.4	4.1	3.3	2.7	2.1	49.1
Carpenteria	2.0	2.4	3.2	3.9	4.8	5.2	5.5	5.7	4.5	3.4	2.4	2.0	44.9
Cuyama	2.1	2.4	3.8	5.4	6.9	7.9	8.5	7.7	5.9	4.5	2.6	2.0	59.7
Goleta	2.1	2.5	3.9	5.1	5.7	5.7	5.4	5.4	4.2	3.2	2.8	2.2	48.1
Goleta Foothills	2.3	2.6	3.7	5.4	5.3	5.6	5.5	5.7	4.5	3.9	2.8	2.3	49.6
Guadalupe	2.0	2.2	3.2	3.7	4.9	4.6	4.5	4.6	4.1	3.3	2.4	1.7	41.1
Lompoc	2.0	2.2	3.2	3.7	4.8	4.6	4.9	4.8	3.9	3.2	2.4	1.7	41.1
Los Alamos	1.8	2.0	3.2	4.1	4.9	5.3	5.7	5.5	4.4	3.7	2.4	1.6	44.6
Santa Barbara	2.0	2.5	3.2	3.8	4.6	5.1	5.5	4.5	3.4	2.4	1.8	1.8	40.6
Santa Maria	1.8	2.3	3.7	5.1	5.7	5.8	5.6	5.3	4.2	3.5	2.4	1.9	47.4
Santa Ynez	1.7	2.2	3.5	5.0	5.8	6.2	6.4	6.0	4.5	3.6	2.2	1.7	48.7
Sisquoc	2.1	2.5	3.8	4.1	6.1	6.3	6.4	5.8	4.7	3.4	2.3	1.8	49.2
Solvang	2.0	2.0	3.3	4.3	5.0	5.6	6.1	5.6	4.4	3.7	2.2	1.6	45.6
SANTA CLARA													
Gilroy	1.3	1.8	3.1	4.1	5.3	5.6	6.1	5.5	4.7	3.4	1.7	1.1	43.6
Los Gatos	1.5	1.8	2.8	3.9	5.0	5.6	6.2	5.5	4.7	3.2	1.7	1.1	42.9
Morgan Hill	1.5	1.8	3.4	4.2	6.3	7.0	7.1	6.0	5.1	3.7	1.9	1.4	49.5
Palo Alto	1.5	1.8	2.8	3.8	5.2	5.3	6.2	5.6	5.0	3.2	1.7	1.0	43.0

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual ETo**
SANTA CLARA													
San Jose	1.5	1.8	3.1	4.1	5.5	5.8	6.5	5.9	5.2	3.3	1.8	1.0	45.3
SANTA CRUZ													
De Laveaga	1.4	1.9	3.3	4.7	4.9	5.3	5.0	4.8	3.6	3.0	1.6	1.3	40.8
Green Valley Rd	1.2	1.8	3.2	4.5	4.6	5.4	5.2	5.0	3.7	3.1	1.6	1.3	40.6
Santa Cruz	1.5	1.8	2.6	3.5	4.3	4.4	4.8	4.4	3.8	2.8	1.7	1.2	36.6
Watsonville	1.5	1.8	2.7	3.7	4.6	4.5	4.9	4.2	4.0	2.9	1.8	1.2	37.7
Webb	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.2
SHASTA													
Burney	0.7	1.0	2.1	3.5	4.9	5.9	7.4	6.4	4.4	2.9	0.9	0.6	40.9
Fall River Mills	0.6	1.0	2.1	3.7	5.0	6.1	7.8	6.7	4.6	2.8	0.9	0.5	41.8
Glenburn	0.6	1.0	2.1	3.7	5.0	6.3	7.8	6.7	4.7	2.8	0.9	0.6	42.1
McArthur	0.7	1.4	2.9	4.2	5.6	6.9	8.2	7.2	5.0	3.0	1.1	0.6	46.8
Redding	1.2	1.4	2.6	4.1	5.6	7.1	8.5	7.3	5.3	3.2	1.4	0.9	48.8
SIERRA													
Downieville	0.7	1.0	2.3	3.5	5.0	6.0	7.4	6.2	4.7	2.8	0.9	0.6	41.3
Sierraville	0.7	1.1	2.2	3.2	4.5	5.9	7.3	6.4	4.3	2.6	0.9	0.5	39.6
SISKIYOU													
Happy Camp	0.5	0.9	2.0	3.0	4.3	5.2	6.1	5.3	4.1	2.4	0.9	0.5	35.1
MacDoel	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	5.1	3.1	1.5	1.0	49.0
Mt Shasta	0.5	0.9	2.0	3.0	4.5	5.3	6.7	5.7	4.0	2.2	0.7	0.5	36.0
Tule lake FS	0.7	1.3	2.7	4.0	5.4	6.3	7.1	6.4	4.7	2.8	1.0	0.6	42.9
Weed	0.5	0.9	2.0	2.5	4.5	5.3	6.7	5.5	3.7	2.0	0.9	0.5	34.9
Yreka	0.6	0.9	2.1	3.0	4.9	5.8	7.3	6.5	4.3	2.5	0.9	0.5	39.2
SOLANO													
Benicia	1.3	1.4	2.7	3.8	4.9	5.0	6.4	5.5	4.4	2.9	1.2	0.7	40.3
Dixon	0.7	1.4	3.2	5.2	6.3	7.6	8.2	7.2	5.5	4.3	1.6	1.1	52.1
Fairfield	1.1	1.7	2.8	4.0	5.5	6.1	7.8	6.0	4.8	3.1	1.4	0.9	45.2
Hastings Tract	1.6	2.2	3.7	5.1	6.8	7.8	8.7	7.8	5.7	4.0	2.1	1.6	57.1
Putah Creek	1.0	1.6	3.2	4.9	6.1	7.3	7.9	7.0	5.3	3.8	1.8	1.2	51.0
Rio Vista	0.9	1.7	2.8	4.4	5.9	6.7	7.9	6.5	5.1	3.2	1.3	0.7	47.0
Suisun Valley	0.6	1.3	3.0	4.7	5.8	7.0	7.7	6.8	5.3	3.8	1.4	0.9	48.3
Winters	0.9	1.7	3.3	5.0	6.4	7.5	7.9	7.0	5.2	3.5	1.6	1.0	51.0
SONOMA													
Bennett Valley	1.1	1.7	3.2	4.1	5.5	6.5	6.6	5.7	4.5	3.1	1.5	0.9	44.4
Cloverdale	1.1	1.4	2.6	3.4	5.0	5.9	6.2	5.6	4.5	2.8	1.4	0.7	40.7
Fort Ross	1.2	1.4	2.2	3.0	3.7	4.5	4.2	4.3	3.4	2.4	1.2	0.5	31.9
Healdsburg	1.2	1.5	2.4	3.5	5.0	5.9	6.1	5.6	4.5	2.8	1.4	0.7	40.8
Lincoln	1.2	1.7	2.8	4.7	6.1	7.4	8.4	7.3	5.4	3.7	1.9	1.2	51.9
Petaluma	1.2	1.5	2.8	3.7	4.6	5.6	4.6	5.7	4.5	2.9	1.4	0.9	39.6
Santa Rosa	1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7	42.0
Valley of the Moon	1.0	1.6	3.0	4.5	5.6	6.6	7.1	6.3	4.7	3.3	1.5	1.0	46.1
Windsor	0.9	1.6	3.0	4.5	5.5	6.5	6.5	5.9	4.4	3.2	1.4	1.0	44.2
STANISLAUS													
Denair	1.0	1.9	3.6	4.7	7.0	7.9	8.0	6.1	5.3	3.4	1.5	1.0	51.4
La Grange	1.2	1.5	3.1	4.7	6.2	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.2
Modesto	0.9	1.4	3.2	4.7	6.4	7.7	8.1	6.8	5.0	3.4	1.4	0.7	49.7
Newman	1.0	1.5	3.2	4.6	6.2	7.4	8.1	6.7	5.0	3.4	1.4	0.7	49.3
Oakdale	1.2	1.5	3.2	4.7	6.2	7.7	8.1	7.1	5.1	3.4	1.4	0.7	50.3

Appendix A - Reference Evapotranspiration (ETo) Table*													
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
STANISLAUS													
Patterson	1.3	2.1	4.2	5.4	7.9	8.6	8.2	6.6	5.8	4.0	1.9	1.3	57.3
Turlock	0.9	1.5	3.2	4.7	6.5	7.7	8.2	7.0	5.1	3.4	1.4	0.7	50.2
SUTTER													
Nicolaus	0.9	1.6	3.2	4.9	6.3	7.5	8.0	6.9	5.2	3.4	1.5	0.9	50.2
Yuba City	1.3	2.1	2.8	4.4	5.7	7.2	7.1	6.1	4.7	3.2	1.2	0.9	46.7
TEHAMA													
Corning	1.2	1.8	2.9	4.5	6.1	7.3	8.1	7.2	5.3	3.7	1.7	1.1	50.7
Gerber	1.0	1.8	3.5	5.0	6.6	7.9	8.7	7.4	5.8	4.1	1.8	1.1	54.7
Gerber Dryland	0.9	1.6	3.2	4.7	6.7	8.4	9.0	7.9	6.0	4.2	2.0	1.0	55.5
Red Bluff	1.2	1.8	2.9	4.4	5.9	7.4	8.5	7.3	5.4	3.5	1.7	1.0	51.1
TRINITY													
Hay Fork	0.5	1.1	2.3	3.5	4.9	5.9	7.0	6.0	4.5	2.8	0.9	0.7	40.1
Weaverville	0.6	1.1	2.2	3.3	4.9	5.9	7.3	6.0	4.4	2.7	0.9	0.7	40.0
TULARE													
Alpaugh	0.9	1.7	3.4	4.8	6.6	7.7	8.2	7.3	5.4	3.4	1.4	0.7	51.6
Badger	1.0	1.3	2.7	4.1	6.0	7.3	7.7	7.0	4.8	3.3	1.4	0.7	47.3
Delano	1.1	1.9	4.0	4.9	7.2	7.9	8.1	7.3	5.4	3.2	1.5	1.2	53.6
Dinuba	1.1	1.5	3.2	4.7	6.2	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.2
Lindcove	0.9	1.6	3.0	4.8	6.5	7.6	8.1	7.2	5.2	3.4	1.6	0.9	50.6
Porterville	1.2	1.8	3.4	4.7	6.6	7.7	8.5	7.3	5.3	3.4	1.4	0.7	52.1
Visalia	0.9	1.7	3.3	5.1	6.8	7.7	7.9	6.9	4.9	3.2	1.5	0.8	50.7
TUOLUMNE													
Groveland	1.1	1.5	2.8	4.1	5.7	7.2	7.9	6.6	5.1	3.3	1.4	0.7	47.5
Sonora	1.1	1.5	2.8	4.1	5.8	7.2	7.9	6.7	5.1	3.2	1.4	0.7	47.6
VENTURA													
Camarillo	2.2	2.5	3.7	4.3	5.0	5.2	5.9	5.4	4.2	3.0	2.5	2.1	46.1
Oxnard	2.2	2.5	3.2	3.7	4.4	4.6	5.4	4.8	4.0	3.3	2.4	2.0	42.3
Piru	2.8	2.8	4.1	5.6	6.0	6.8	7.6	7.8	5.8	5.2	3.7	3.2	61.5
Port Hueneme	2.0	2.3	3.3	4.6	4.9	4.9	4.9	5.0	3.7	3.2	2.5	2.2	43.5
Thousand Oaks	2.2	2.6	3.4	4.5	5.4	5.9	6.7	6.4	5.4	3.9	2.6	2.0	51.0
Ventura	2.2	2.6	3.2	3.8	4.6	4.7	5.5	4.9	4.1	3.4	2.5	2.0	43.5
YOLO													
Bryte	0.9	1.7	3.3	5.0	6.4	7.5	7.9	7.0	5.2	3.5	1.6	1.0	51.0
Davis	1.0	1.9	3.3	5.0	6.4	7.6	8.2	7.1	5.4	4.0	1.8	1.0	52.5
Esparto	1.0	1.7	3.4	5.5	6.9	8.1	8.5	7.5	5.8	4.2	2.0	1.2	55.8
Winters	1.7	1.7	2.9	4.4	5.8	7.1	7.9	6.7	5.3	3.3	1.6	1.0	49.4
Woodland	1.0	1.8	3.2	4.7	6.1	7.7	8.2	7.2	5.4	3.7	1.7	1.0	51.6
Zamora	1.1	1.9	3.5	5.2	6.4	7.4	7.8	7.0	5.5	4.0	1.9	1.2	52.8
YUBA													
Browns Valley	1.0	1.7	3.1	4.7	6.1	7.5	8.5	7.6	5.7	4.1	2.0	1.1	52.9
Brownsville	1.1	1.4	2.6	4.0	5.7	6.8	7.9	6.8	5.3	3.4	1.5	0.9	47.4

* The values in this table were derived from:

1) California Irrigation Management Information System (CIMIS);
2) Reference EvapoTranspiration Zones Map, UC Dept. of Land, Air & Water Resources and California Dept of Water Resources 1999; and
3) Reference Evapotranspiration for California, University of California, Department of Agriculture and Natural Resources (1987) Bulletin 1922;
4) Determining Daily Reference Evapotranspiration, Cooperative Extension UC Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426

Appendix B — Sample Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package. Please complete all sections (A and B) of the worksheet.

SECTION A. HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the square footage of landscape area per hydrozone.

*Hydrozone**	*Zone or Valve*	*Irrigation Method***	*Area (Sq. Ft.)*	*% of Landscape Area*
	Total			*100%*

** Hydrozone*
HW = High Water Use Plants
MW = Moderate Water Use Plants
LW = Low Water Use Plants

***Irrigation Method*
MS = Micro-spray
S = Spray
R = Rotor
B= Bubbler
D= Drip
O = Other

SECTION B. WATER BUDGET CALCULATIONS

Section B1. Maximum Applied Water Allowance (MAWA)

The project's Maximum Applied Water Allowance shall be calculated using this equation:

MAWA = (ETo) (0.62) [(0.7 x LA) + (0.3 x SLA)]

where:

MAWA = Maximum Applied Water Allowance (gallons per year)
ETo = Reference Evapotranspiration from Appendix A (inches per year)
0.7 = ET Adjustment Factor (ETAF)
LA = Landscaped Area Includes Special Landscape Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
SLA = Portion of the landscape area identified as Special Landscape Area (square feet)
0.3 = the additional ET Adjustment Factor for Special Landscape Area (1.0 - 0.7 = 0.3)

Maximum Applied Water Allowance = _____gallons per year

Show calculations.

Effective Precipitation (Eppt)

If considering Effective Precipitation, use 25% of annual precipitation. Use the following equation to calculate Maximum Applied Water Allowance:

MAWA= (ETo – Eppt) (0.62) [(0.7 x LA) +(0.3 x SLA)]

Maximum Applied Water Allowance = _____gallons per year

Show calculations.

Section B2. Estimated Total Water Use (ETWU)

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (ETo)(0.62)\left(\frac{PF \times HA}{IE} + SLA\right)$$

where:

ETWU = Estimated total water use per year (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
PF = Plant Factor from WUCOLS (see Definitions)
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor (to gallons per square foot)
IE = Irrigation Efficiency (minimum 0.71)

Hydrozone Table for Calculating ETWU

Please complete the hydrozone table(s). Use as many tables as necessary.

Hydrozone	*Plant Water Use Type(s)*	*Plant Factor (PF)*	*Area (HA) (square feet)*	*PF x HA (square feet)*
			Sum	
	SLA			

Estimated Total Water Use = _____ ***gallons***

Show calculations.

Appendix B – Sample Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) _____

Hydrozone # /Planting Description[a]	Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq, ft,)	ETAF x Area	Estimated Total Water Use (ETWU)[e]
Regular Landscape Areas							
				Totals	(A)	(B)	
Special Landscape Areas							
				1			
				1			
				1			
				Totals	(C)	(D)	
						ETWU Total	
						Maximum Allowed Water Allowance (MAWA)[e]	

[a] ***Hydrozone #/Planting Description*** *E.g*
1.) front lawn
2.) low water use plantings
3.) medium water use planting

[b] ***Irrigation Method*** *overhead spray or drip*

[c] ***Irrigation Efficiency*** *0.75 for spray head 0.81 for drip*

[d] ***ETWU*** **(Annual Gallons Required) =** *Eto x 0.62 x ETAF x Area*
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

[e] ***MAWA (Annual Gallons Allowed)*** *= (Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]*
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
Average ETAF	**B ÷ A**

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
Sitewide ETAF	**(B+D) ÷ (A+C)**

Appendix C — Sample Certificate of Completion.

CERTIFICATE OF COMPLETION

This certificate is filled out by the project applicant upon completion of the landscape project.

PART 1. PROJECT INFORMATION SHEET

Date		
Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Project Address and Location:

Street Address		Parcel, tract or lot number, if available.
City		Latitude/Longitude (optional)
State	Zip Code	

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

_____

Property Owner Signature *Date*

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency_____
2. Date the Landscape Documentation Package was approved by the local agency_____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor_____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

"I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

*Signature**	*Date*	
Name (print)	*Telephone No.*	
	Fax No.	
Title	*Email Address*	
License No. or Certification No.		
Company	*Street Address*	
City	*State*	*Zip Code*

**Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.*

PART 3. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per ordinance Section 492.10.

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attach schedule of Landscape and Irrigation Maintenance per ordinance Section 492.11.

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT

Attach Landscape Irrigation Audit Report per ordinance Section 492.12.

PART 6. SOIL MANAGEMENT REPORT

Attach soil analysis report, if not previously submitted with the Landscape Documentation Package per ordinance Section 492.5.

Attach documentation verifying implementation of recommendations from soil analysis report per ordinance Section 492.5.

Appendix C – Sample Certificate of Completion.

CERTIFICATE OF COMPLETION

This certificate is filled out by the project applicant upon completion of the landscape project.

PART 1. PROJECT INFORMATION SHEET

Date		
Project Name		
Name of Project Applicant	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Project Address and Location:

Street Address		Parcel, tract or lot number, if available.
City		Latitude/Longitude (optional)
State	Zip Code	

Property Owner or his/her designee:

Name	Telephone No.	
	Fax No.	
Title	Email Address	
Company	Street Address	
City	State	Zip Code

Property Owner

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

_____

Property Owner Signature Date

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency_____
2. Date the Landscape Documentation Package was approved by the local agency_____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor_____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

"I/we certify that based upon periodic site observations, the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

PART 3. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per ordinance Section 492.10.

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attach schedule of Landscape and Irrigation Maintenance per ordinance Section 492.11.

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT

Attach Landscape Irrigation Audit Report per ordinance Section 492.12.

PART 6. SOIL MANAGEMENT REPORT

Attach soil analysis report, if not previously submitted with the Landscape Documentation Package per ordinance Section 492.6.

Attach documentation verifying implementation of recommendations from soil analysis report per ordinance Section 492.6.

Appendix D – Prescriptive Compliance Option

(a) This appendix contains prescriptive requirements which may be used as a compliance option to the Model Water Efficient Landscape Ordinance.

(b)Compliance with the following items is mandatory and must be documented on a landscape plan in order to use the prescriptive compliance option:

(1) Submit a Landscape Documentation Package which includes the following elements:

(A) date

(B) project applicant

(C) project address (if available, parcel and/or lot number(s))

(D) total landscape area (square feet), including a breakdown of turf and plant material

(E) project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed)

(F) water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well

(G) contact information for the project applicant and property owner

(H) applicant signature and date with statement, "I agree to comply with the requirements of the prescriptive compliance option to the MWELO".

(2) Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into landscape area (unless contra-indicated by a soil test);

(3) Plant material shall comply with all of the following:

(A) For residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water; For non-residential areas, install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 100% of the plant area excluding edibles and areas using recycled water;

(B) A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.

(4) Turf shall comply with all of the following:

(A) Turf shall not exceed 25% of the landscape area in residential areas, and there shall be no turf in non-residential areas;

(B) Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every 4 feet of horizontal length;

(C) Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.

(5) Irrigation systems shall comply with the following:

(A) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor.

(B) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.

(C) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.

(D) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be installed as close as possible to the point of connection of the water supply.

(E) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014. "Landscape Irrigation Sprinkler and Emitter Standard," All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

(F) Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.

(6) For non-residential projects with landscape areas of 1,000 sq. ft. or more, a private submeter(s) to measure landscape water use shall be installed.

(c) At the time of final inspection, the permit applicant must provide the owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

EXHIBIT B

The 2015 Updated Model Water Efficient Landscape Ordinance

Guidance for California Local Agencies

INTRODUCTION

Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the State's Model Water Efficient Landscape Ordinance (MWELO) through expedited regulation. The California Water Commission approved the revised MWELO Ordinance on July 15, 2015. This fact sheet provides guidance to cities and counties (local agencies) in California, who are responsible for adopting and reporting on a water efficient landscape ordinance. The focus is on major changes in the MWELO which must be addressed when local agencies are revising their own local or regional ordinances.

DEADLINES AND OPTIONS FOR LOCAL AGENCY ACTIONS (Section 490.1)

Local agencies have until ***December 1, 2015*** to adopt the MWELO or to adopt a Local Ordinance which must be at least as effective in conserving water as MWELO. Local agencies working together to develop a Regional Ordinance have until ***February 1, 2016*** to adopt, but they are still subject to the December 2015 reporting requirements (see Reporting Requirements). A local agency will either integrate MWELO into an existing ordinance or establish a new, separate program. To comply, a local agency must perform one of the following actions:

- Adopt *by reference* Sections 490-495, Chapter 2.7, Division 2, Title 23 in the California Code of Regulations
- Adopt the MWELO *in detail* - Sections 490-495, Chapter 2.7, Division 2, Title 23 in the California Code of Regulations
- Amend an existing or adopt a new Local Ordinance or Regional Ordinance to meet the requirements contained in the regulations
- Take no action and allow the MWELO to go into effect by default

A local agency may choose to allow MWELO to become effective by default and then adopt a Local or Regional Ordinance at a later time. Subsequent reporting must include the details of Local or Regional Ordinances.

Local agencies are not limited to require only the levels of water conservation stipulated by MWELO. The Local or Regional Ordinance can require higher levels of water conservation, as determined appropriate by the local agency to address one of these local conditions:

- climate
- geology
- topography
- environmental conditions.

However, in such situations where a more restrictive requirement is incorporated, the local agency must make express findings that the requirement is reasonably necessary for one or more of the above conditions. Like all ordinance adoption processes, the adoption must follow the applicable rules for a public process including a public comment period and formal public proceeding during adoption.

SIGNIFICANT REVISIONS TO MWELO

Projects Subject to the Ordinance (Section 490.1)

The size of landscapes subject to the ordinance has been lowered from 2500 sq. ft. to 500 sq. ft. The size threshold applies to residential, commercial, industrial and institutional projects that require a permit, plan check or design review.

To reduce the complexity and costs for the smaller landscapes now subject to ordinance, the revised MWELO has a prescriptive compliance approach (Appendix D) for landscapes between 500 and 2500 sq. ft. Landscapes within this size range can comply either through meeting the traditional MWELO approach or through the prescriptive approach in Appendix D. The size threshold for existing landscapes that are being rehabilitated has not changed, remaining at ***2500 square feet.*** Only rehabilitated landscapes that are associated with a building or landscape permit, plan check, or design review are subject to the Ordinance.

Definitions (Section 491)

The definitions section of MWELO has been expanded to include new terms and concepts. Please see the strike-out version of MWELO at http://www.water.ca.gov/wateruseefficiency/landscapeordinance/ to review definition changes.

Water Efficient Worksheet and Water Budget (Section 492.4)

The maximum applied water allowance (MAWA) has been lowered from 70% of the reference evapotranspiration (ETo) to 55% for residential landscape projects, and to 45% of ETo for non-residential projects. This water allowance reduces the landscape area that can be planted with high water use plants such as cool season turf. For typical residential projects, the reduction in the MAWA reduces the percentage of landscape area that can be planted to high water use plants from 33% to 25%. In typical non-residential landscapes, the reduction in MAWA limits the planting of high water use plants to special landscape areas. The revised MWELO still uses a water budget approach and larger areas of high water use plants can be installed if the water use is reduced in the other areas provided the overall landscape stays within the budget. The use of special landscape areas (SLA) was not changed in the revised MWELO. The SLA provides for an extra water allowance in non-residential areas for specific functional landscapes, such as recreation, areas for public assembly, and edible gardens or for areas irrigated with recycled water.

The revised MWELO allows the irrigation efficiency to be entered for each area of the landscape. The site-wide irrigation efficiency of the previous ordinance (2010) was 0.71; for the purposes of estimating total water use, the revised MWELO defines the irrigation efficiency (IE) of drip irrigation as 0.81 and overhead irrigation and other technologies must meet a minimum IE of 0.75.

The worksheets for Maximum Applied Water Allowance (MAWA) and the Estimated Total Water Use (ETWU) have been combined into one table. (See Appendix B, Water Efficient Landscape Worksheet). As explained above, rather than using a site-wide default IE, irrigation efficiency is calculated for each hydrozone.

The revised ordinance also precludes the use of high water use plants in street median strips.

Also because of the requirement to irrigate areas less than ten feet wide with subsurface irrigation or other means that produces no runoff or overspray, the use of cool season turf in parkways is limited.

Soil Management Report (Section 492.5)

For multi-lot projects, the revised MWELO added clarification that soil testing should be completed using a soil sampling rate of approximately 1 in 7 lots or 15 percent.

Landscape Design Plan (Section 492.6)

The following changes were made to Landscape Design Plan section:

Prior to planting, 4 yards of compost must be incorporated per 1000 sq. ft. of permeable area. Compacted soils must be transformed to a friable condition. The depth of mulch required was increased from 2 to 3 inches. Graywater and storm retention components must be indicated on the landscape plan.

Irrigation Design Plan (Section 492.7)

The following changes were made to the Irrigation Design section:

Dedicated landscape water meters or submeters are required for residential landscapes over 5,000 square feet and non-residential landscapes over 1000 square feet. Dedicated meters or submeters may be either a meter supplied by the local water supplier or a privately owned submeter.

Irrigation systems are required to have ***pressure regulation*** to ensure correct and efficient operation.

All irrigation emission devices must meet the American National Standards Institute standard, American Society of Agricultural and Biological Engineers'/International Code Council's 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard". ***Flow sensors*** that detect and report high flow conditions due to broken pipes and/or popped sprinkler heads are required for landscape areas greater than 5,000 square feet. Master shut-off valves that prevent water waste in case of large failures of irrigation systems due to breakage or vandalism are required on all landscapes except where sprinklers can be individually controlled.

The ***minimum width of areas that can be overhead irrigated was increased from 8 feet to 10 feet***; areas less than 10 feet wide must be irrigated with subsurface drip or other technology that produces no over spray or runoff.

The revised update requires ***the irrigation auditor to be a local agency auditor or third party auditor*** to reduce conflicts of interest. All landscape irrigation auditors must be certified by one of the U.S. EPA WaterSense labeled auditing programs. EPA WaterSense: http://www.epa.gov/watersense/outdoor/cert_programs.html

Graywater Systems (Section 492.15)

The revised MWELO added a graywater section that specifies that landscapes less than 2,500 square feet that are irrigated entirely with graywater or captured rainwater are subject only to the irrigation system requirements of Appendix D, Prescriptive Compliance Option. Graywater is allowed throughout the state under the California Plumbing Code, Ch. 16. Applicants should consult with the local building authority regarding graywater systems.

Stormwater and Rainwater Retention (Section 492.16)

A requirement was added that landscape area should have friable soil to maximize stormwater infiltration. Additional stormwater measures were recommended, but not required.

Reporting (Section 495)

Executive Order B-29-15 and the revised ordinance require that local agencies report on the implementation and enforcement of their single agency Local Ordinances to DWR by December 31, 2015. Local agencies developing a Regional Ordinance must report on adoption by March 1, 2016. Reporting for all agencies is due by January 31st of each year thereafter. The reporting requirement is a new addition to the MWELO.

In the initial reporting, a local agency states whether they are adopting a single agency ordinance or a regional agency ordinance, and specifies the date of adoption or anticipated date of adoption.

The following information is to be included in the first report by the local agency. Once stated, the information does not have to be repeated in subsequent reports unless the information changes.

- State if using a locally modified Water Efficient Landscape Ordinance (Local or Regional Ordinance) or the MWELO. If using a Local or Regional Ordinance, how is it different than MWELO; is it at least as efficient as MWELO; and are there any exemptions specified?
- State the entity responsible for implementing the ordinance.

In subsequent years, all local agency reporting will be for the calendar year. For the initial reporting period after new ordinance adoption and each year thereafter, include the following information during each reporting period:

- Number and types of projects subject to the ordinance
- Total area (in square feet or acres) subject to the ordinance
- Number of new housing starts, new commercial projects, and landscape retrofits

For the initial reporting period after new ordinance adoption and each year thereafter, describe the following:

- The procedure for review of projects subject to the ordinance
- The actions taken to verify compliance- Is a plan check performed; if so, by what entity? Is a site inspection performed; if so, by what entity? Is a post-installation audit required; if so, by whom?
- Enforcement measures
- The challenges to implementing and enforcing the ordinance
- The educational, training, and other needs to properly apply the ordinance

Contact Information:

Julie Saare-Edmonds, DWR Senior Environmental Scientist at Julie.Saare-Edmonds@water.ca.gov or (916) 651-9676

EXHIBIT C

Chapter 18.170

WATER EFFICIENT LANDSCAPING

Sections:

18.170.010 Purpose.

The purpose of this chapter is to meet the requirements of Title 23, Division 2, Chapter 2.7 of the California Code of Regulations and Section 65595 of the California Government Code, in accord with Governor's Executive Order Number B-29-15 adopted on April 1, 2015. This chapter encourages water conservation through the use of water efficient landscaping design and irrigation practices consistent with the requirements of the State of California.

18.170.020 State Model Water Efficient Landscaping Ordinance adopted by reference.

The Model Water Efficient Landscape Ordinance of the State of California, as contained in the California Code of Regulations Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance, and as amended from time to time by the State of California, is hereby adopted by reference as the water efficient landscaping ordinance of the City of Concord. A copy of the California State Model Water Efficient Landscaping Ordinance has been filed with the City Clerk and the ordinance is adopted by reference as if incorporated and set out in full in this chapter.

18.170.030 Stormwater management.

Proposed landscape and irrigation plans shall comply with all requirements of the stormwater control plan (C.3) and the National Pollutant Discharge Elimination System (NPDES) intended to implement stormwater best management practices into the planting, irrigation, and grading plans to minimize runoff and to increase on-site retention and infiltration.

MEMORANDUM

April 14, 2016

TO: Design Review Board

FROM: Frank Abejo, Senior Planner

SUBJECT: Staff Report Item No. 2 – Renaissance Phase II design modification

Monogram Residential proposes eliminating chimneys in the approved design for the Renaissance Phase 2 building. Proposed elevations omitting the chimneys are provided as Exhibit A. Approved elevations with the chimneys included are provided as Exhibit B for comparison purposes. Chimneys were constructed as part of the Phase 1 building as shown in Exhibit C. Monogram requests omitting the chimneys from the Phase 2 building design for the following reasons:

1) ***Phase 2 architecture does not have the same form as Phase 1 that allows for chimneys;***
2) ***Adding chimneys will not make sense architecturally; and***
3) ***Added chimney forms create flashing challenges that could lead to leaking.***

Renaissance's Design Review approval includes the following condition related to plan revisions:

> ***Minor modifications that are found to be in substantial conformance with the approved plans such as colors, plant materials, or minor lot line adjustments, may be approved administratively. Major modifications shall be approved by the applicable decision making body.***

Staff requests the Board consider the proposed change and provide one of the following recommendations to staff:

1) The Board supports omitting the chimneys and considers this change a minor modification in substantial conformance with the approved design subject to administrative approval; or

2) The Board considers omitting the chimneys a major change to the approved design and recommends against their removal.

Under Recommendation #2, Monogram would have the option of applying for a Design Review Amendment for a major modification to the approved design subject to review and approval by the Planning Commission. The Board's recommendation to keep the chimneys would be forwarded to the Planning Commission as part of their consideration of the Design Review Amendment request.

Exhibits

A – Proposed elevation modifications
B – Approved elevations
C – Phase 1 building elevations

MEMORANDUM

April 14, 2016

TO: Design Review Board members

FROM: Joan Ryan, Senior Planner

SUBJECT: **2090 Diamond Blvd. Commercial Development (PL1500042 - DR) -** Buffalo Wild Wings – Staff Report item for Modification Request of Rear Wall and Trellis

---

On March 21, 2016, the applicant contacted staff requesting a modification to two areas of the project design: 1) the rear screening wall and 2) the corner trellis feature at the project site. The Board reviewed the request at their March 24, 2016 meeting. The Board approved the requests at that time, as noted on the March 24 annotated agenda, but requested two items return to the Board as a staff report item.

These requests included the applicant providing two details including: 1) A section of the rear wall columns showing how the veneer will be applied to the wall (the column shall project 6" from the wall and the veneer shall return around the column to the wall and appear substantial so there is adequate relief and shadow); and 2) A detail of the three-foot flared stone veneer footing at each trellis column. The applicant has submitted four details, as attached.

Rear Wall

1. Wall Section – The attached wall section shows the stone veneer wrapping the column which is projecting 6 inches in front of the wall face. Stone veneer for the columns is also wrapping over the CMU wall. The wall includes a cement rounded cap, with a stucco finish, as shown in Exhibit A.

- *Staff is satisfied with the detail provided.*

Trellis

2. Trellis Column – The attached detail shows the side elevation of the tapered stone column, 3-feet in height, at the base of each stone column to support the trellis, with stone veneer covering each side of the base, as shown in Exhibit B.

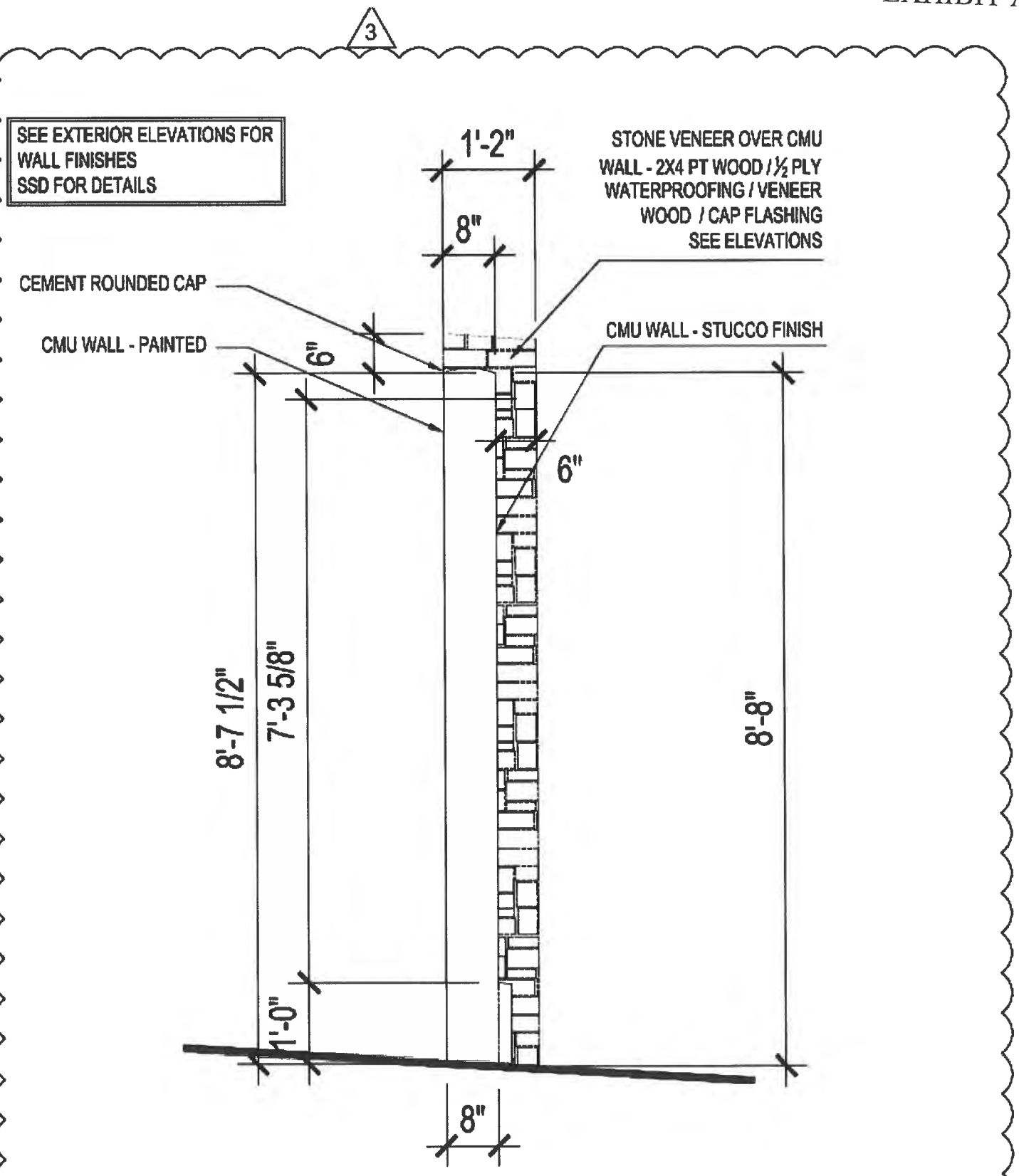
3. Trellis Colum – The attached detail shows the front elevation of the tapered stone column with the stone wrapping each and columns 4-foot on center, as shown in Exhibit C.

- *Staff is satisfied with the details provided.*

Exhibits:

A-Wall Section
B-Trellis (Side Elevation)
C-Trellis (Front Elevation)

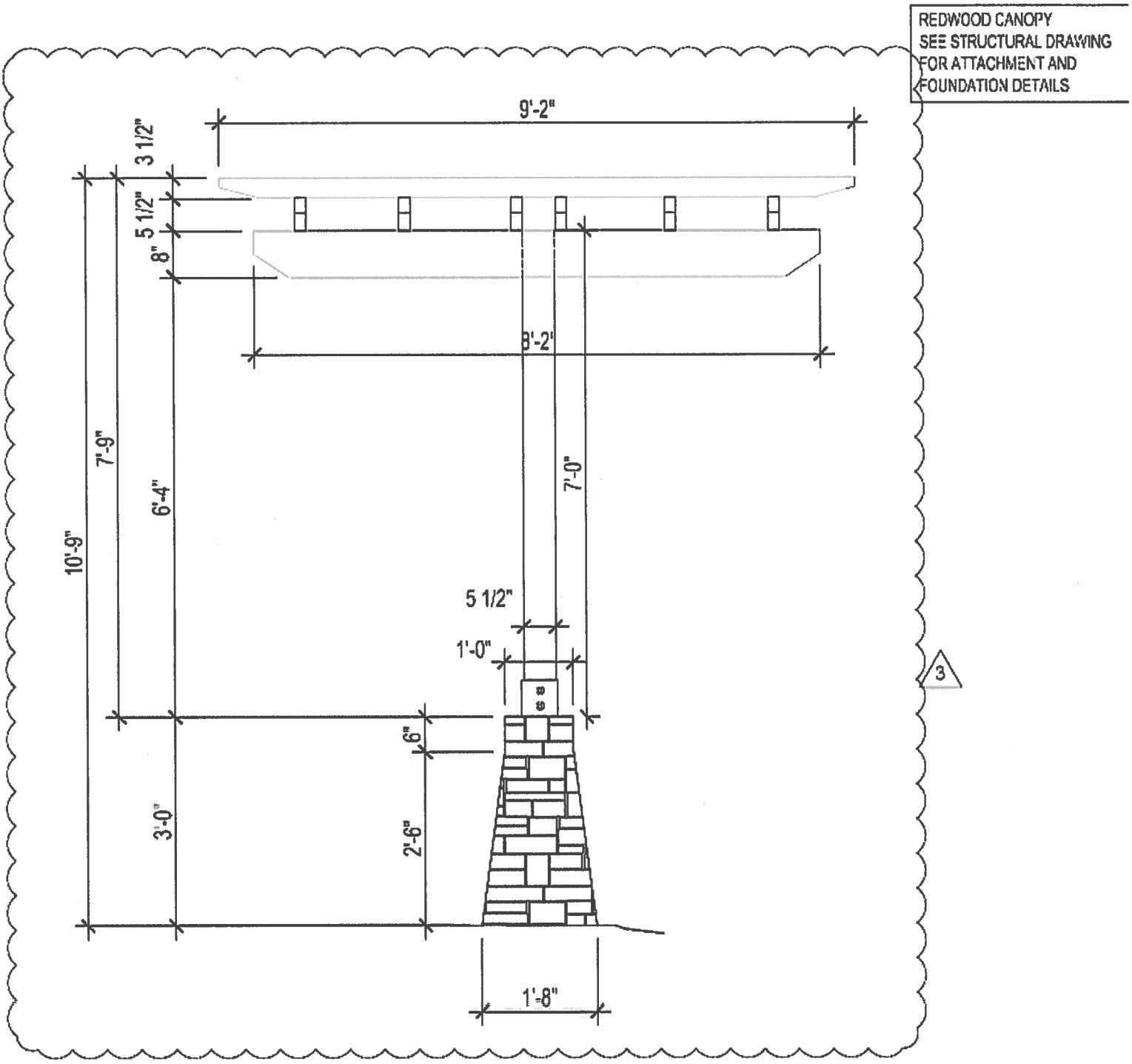
16memo.037 DRB



8 WALL SECTION

SCALE: 1/2" = 1'-0"

EXHIBIT B



6 CANOPY A SECTION

SCALE: 1/2" = 1'-0"

REDWOOD CANOPY
SEE STRUCTURAL DRAWING
FOR ATTACHMENT AND
FOUNDATION DETAILS

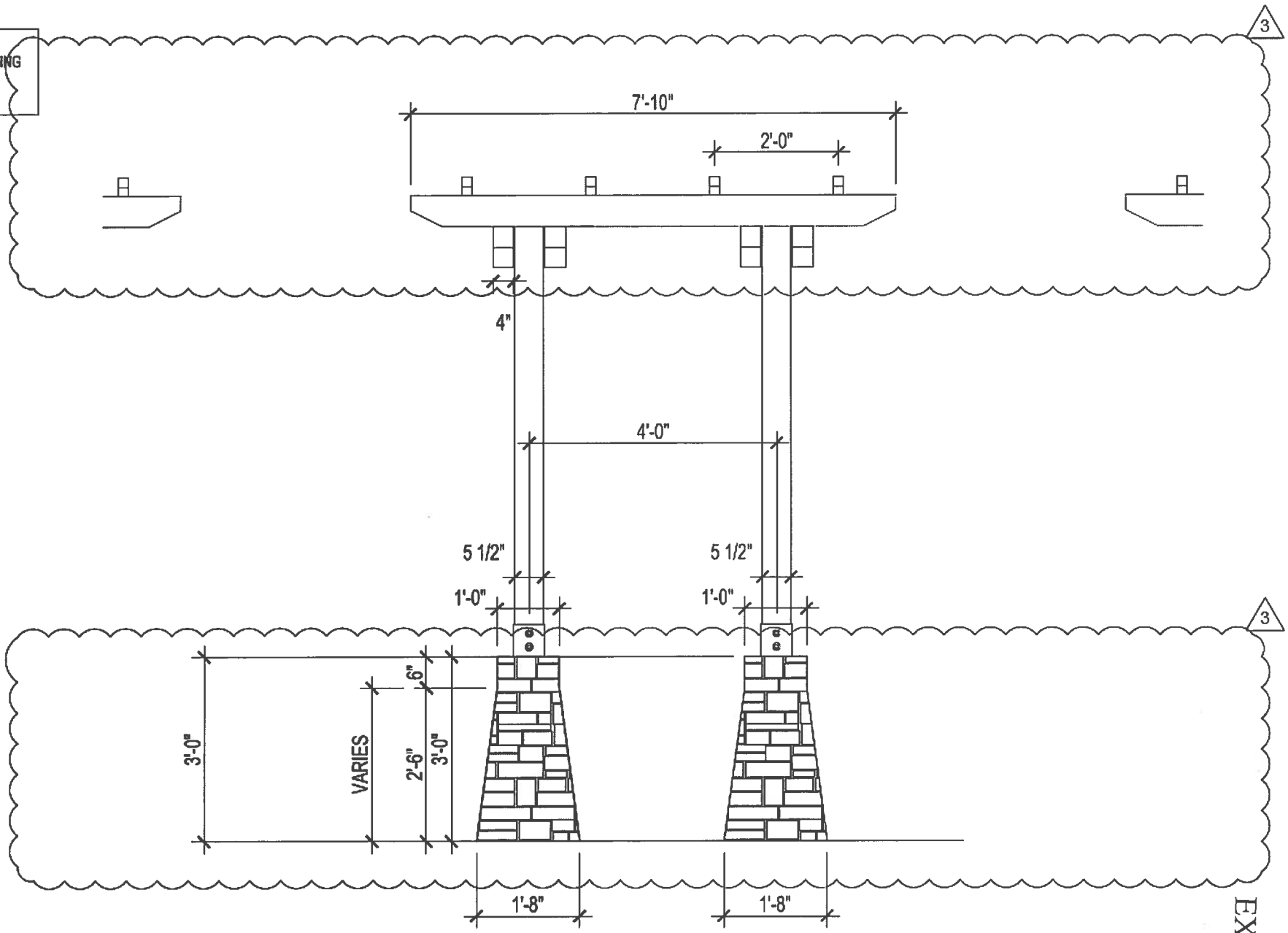


EXHIBIT C

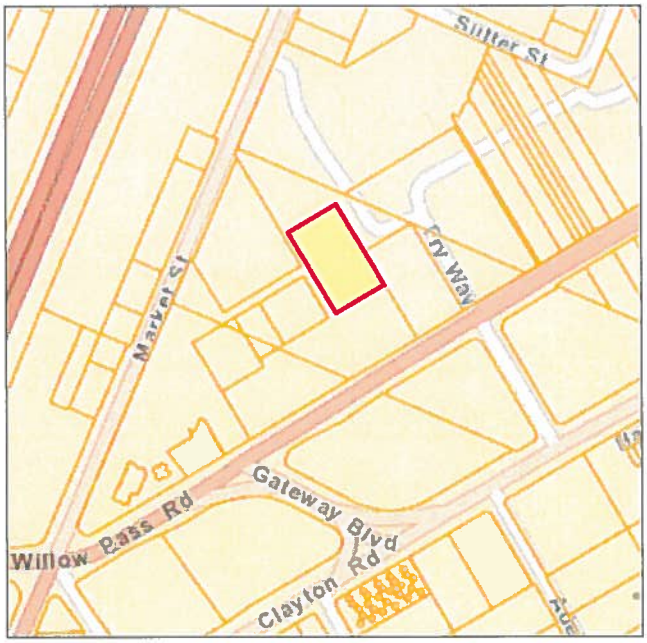
Concord **REPORT TO DESIGN REVIEW BOARD**

DATE: April 14, 2016

I. GENERAL INFORMATION

Project Name:	**JoAnn Fabrics and Burlington Coat Factory Façade Improvements (PL15369 - DR)**
Review Status:	**Final Design Review**
Location:	**1675 Willow Pass Road**
Parcel Number:	**APN 126-281-009**
General Plan:	**Downtown Mixed Use**
Zoning:	**DMX (Downtown Mixed Use)**
Applicant:	**Rob Canepa** **Montgomery Realty Group, Inc.** **447 Battery Street, Suite 230** **San Francisco, CA 94111** **(415) 291-7657**

Vicinity Map:



II. PROJECT BACKGROUND

The Design Review Board recommended denial of the project on February 25, 2016 after appearing before the Design Review Board on September 10, October 26 (working session), and November 19, 2015. The applicant has a new architectural team, Johnson Lyman Architects, LLC, that has a portfolio of commercial retail projects. The applicant is now submitting a new façade improvement and elevation for the Jo-Ann Fabric and Burlington Coat Factory.

III. DISCUSSION

The applicant requests the Design Review Board recommend final design review of the following project design.

Site Plan/Circulation/Parking:

1. The parking, access and circulation will remain as is.

Architecture:

1. New bumped out entry towers with roof and decorative niches.
2. New enlarged storefront entrance.
3. New steel canopy above the entrance.
4. New painted pilasters, and
5. New textured concrete paving at entrances

IV. STAFF COMMENTS

At the February 25th DRB meeting with the prior design, staff provided comments for the renovation with the summary as follows:

Architecture:

1. Evaluate a retail concept that is current and creates a lifestyle concept.
2. Evaluate a retail concept that blends in with the recent improvements to the west such as Korean B-B-Q, Bonjour Bakery, Goodwill and Quickly.
3. Staff has previously shared draft versions of the Park and Shop Design Guidelines with the applicant. Although the Park and Shop Design Guidelines are under review, it is recommended that the applicant apply design and architectural principles of mass, form, varying heights, materials, and signage to the proposed concept.

4. The proposed long continuous horizontal beam is similar to the existing glulam beam and in effect does not solve the concerns about connectivity to adjacent retail, increased pedestrian activity or visibility. It is recommended that human scale elements be introduced at the pedestrian level, such as individual canopies or awnings, along with breaking up the base with durable materials and vitrine windows.

5. Consider more pedestrian oriented design that encourages retail activity at the ground level. Evaluate continuity between recent improvements on the west with proposed improvements so that they align.

6. Propose signage concepts that are more in keeping with the signage introduced in the Master Sign Program of the draft Park & Shop Design Guidelines.

7. Address the comments from the DRB November 19, 2015 Study Session.

Landscaping:

1. Evaluate opportunity areas for landscaping, such as the end of the parking rows, or columns that could incorporate landscaping, similar to China Wall, Quickly and Bonjour Bakery on the west.

The February 25th project was recommended for denial by the Design Review Board. On March 1, staff issued an administrative denial of the project consistent with this recommendation. The owner, Montgomery Realty Group, LLC and the firm of Reuben, Junius & Rose have filed an appeal to the Planning Commission. In an effort to address the DRB concerns, a new commercial retail concept is now being proposed by Johnson Lyman Architects. The February 25th appeal project as well as the Design Review Board recommendation on the new April 14th project will be presented to the Planning Commission on April 20th.

In terms of the new April 14th design, the project is taking an overall positive direction and is a very exciting retail renovation. The project addresses staff's previous design concerns. The project indicates a current retail design that is in keeping with improvements at the center and renovated retail centers throughout the East Bay area. The project articulates the mass, creates interest at the street level, and creates an inviting facade. The project improvements will help the continued revitalization efforts of the Park & Shop retail center. Staff is offering the following comments for the proposed improvements:

1. Specify new landscaping in the landscape islands with species and sizes.

Staff is cognizant of the applicant's budget and would like to ensure that the project will be carried out in a complete manner by Johnson Lyman Architects. However, staff would like to offer additional recommendations that may be phased at a later time or considered as part of the current scope of work, budget permitting:

2. Widen the sidewalk and align the drive with the project to the west.

3. Add a durable material at the base of the building.
4. Add a stone or similar material at the entry columns.
5. Add recessed lighting beneath the lower and higher entrance canopies.
6. Add banners perpendicular to the façade as well as blade signs.
7. Add landscaping along the façade, such as a green screen.
8. Incorporate site furnishings such as benches, bike racks and large planters.

V. RECOMMENDATION

It is recommended that the Design Review Board approve the application for Jo-Ann Fabrics and Burlington Coat Factory Façade Improvements.

VI. MOTION

I (Board Member _____) hereby move that the Design Review Board recommend approval of the JoAnn Fabrics and Burlington Coat Factory Façade Improvements (PL15369 - DR), subject to all applicable provisions of the Development Code or as amended by the Design Review Board.

Prepared by: _____

Afshan Hamid, AICP
Associate Planner
(925) 671-3281
Afshan.hamid@cityofconcord.org

Exhibits:

A - Façade Improvement Package date stamp received 3/30/2016

16srdrb.035

DUNN EDWARDS DESERT GRAY DEC760

BENJAMIN MOORE AUTUMN BRONZE 2161-10

DUNN EDWARDS OATMEAL COOKIE DEC763

BENJAMIN MOORE GARGOYLE 1546

DUNN EDWARDS ROCKY RIDGE DE6145

DUNN EDWARDS ANCIENT EARTH DE6217

VISA LIGHTING OW1334

JOHNSON LYMAN ARCHITECTS
1370 LOCUST ST #101 WALNUT CREEK, CA 94596

THE MONTGOMERY REALTY GROUP

Blumfarm Asset Management Corp.
Montgomery Realty Group, Inc.
447 Battery Street Suite 230
San Francisco, CA 94111
P (415)291-3300 F(415)291-3327

FACADE IMPROVEMENTS

Burlington/Jo-Ann Store

1675 Willow Pass Road, Concord, CA 94520

PAGE #: A100

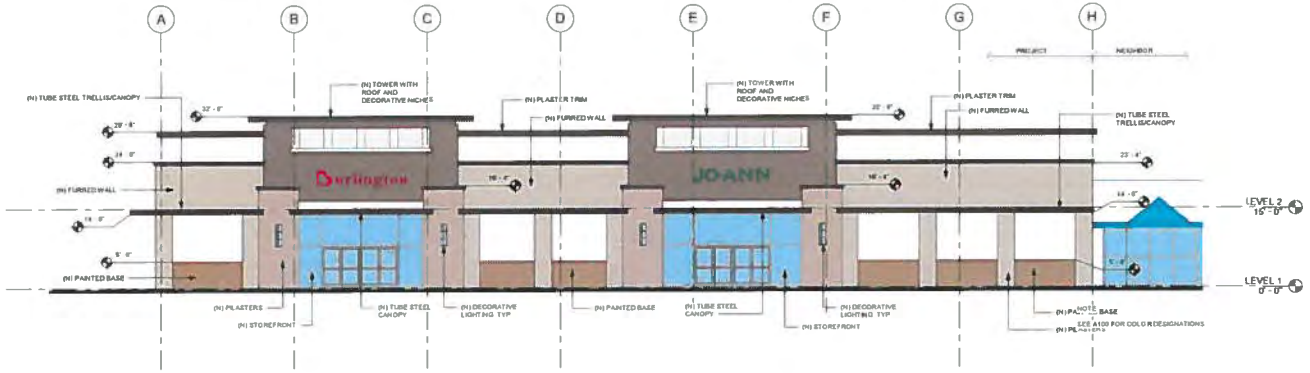
PAGE: TITLE SHEET

DATE: 03/30/2016

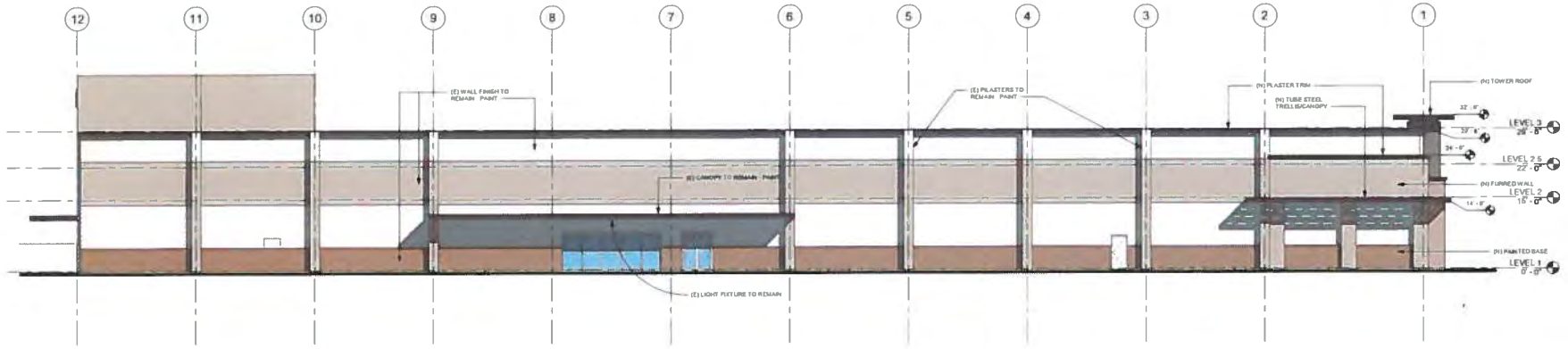
REVISIONS: 05/09/2016 appvd

NOT FOR CONSTRUCTION

EXHIBIT A



1 ELEVATION SOUTH PROPOSED
1" = 10'-0"



2 ELEVATION WEST PROPOSED
1" = 10'-0"

JOHNSON LYMAN ARCHITECTS
1111 LINCOLN ST #500, ALAMEDA, CA 94501

THE MONTGOMERY REALTY GROUP

Bluestone Asset Management Corp.
Montgomery Realty Group, Inc.
447 Battery Street Suite 230
San Francisco, CA 94111
P (415)291-3300 F(415)291-3327

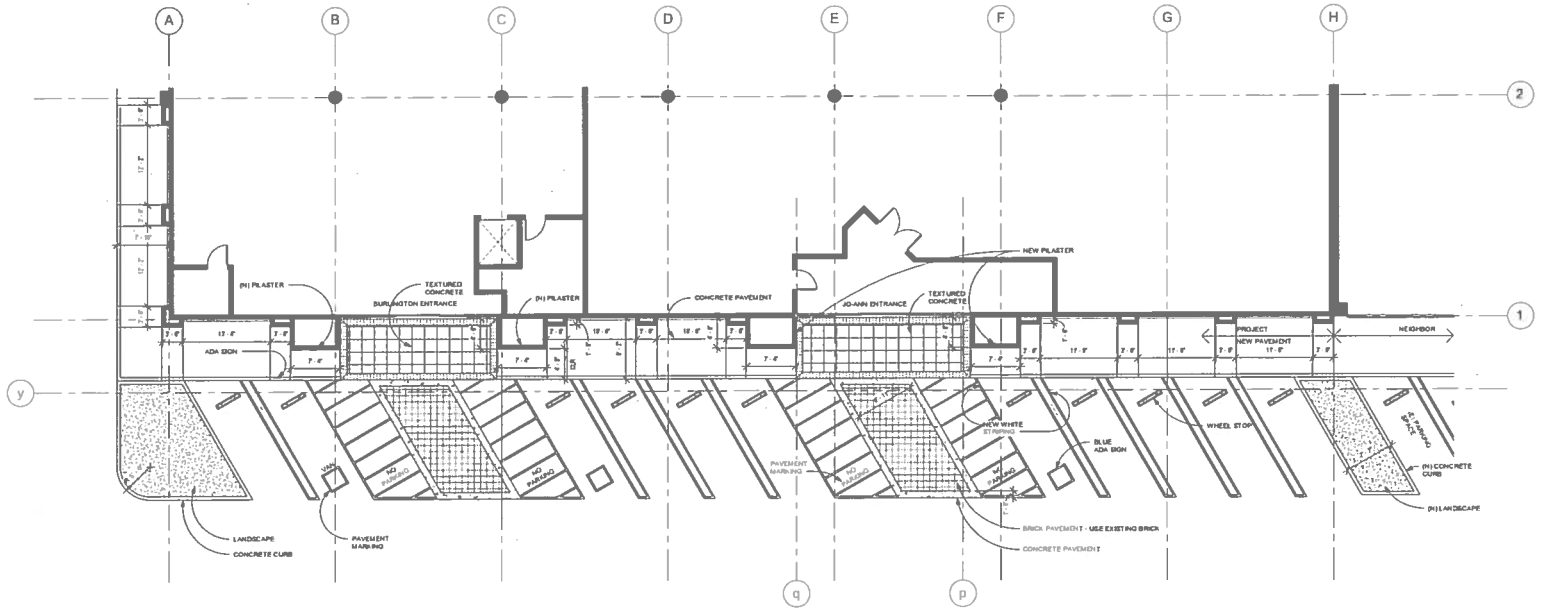
FACADE IMPROVEMENTS

Burlington/Jo-Ann Store

1675 Willow Pass Road, Concord, CA 94520

PAGE #: A101
PAGE: PROPOSED ELEVATIONS
DATE
REVISIONS:

NOT FOR CONSTRUCTION



3 LEVEL 1 NEW ENLARGED
1/8" = 1'-0"

GRAPHIC SCALE

JOHNSON LYMAN ARCHITECTS
1211 LINCOLN ST #208 WALNUT CREEK, CA 94596

THE MONTGOMERY REALTY GROUP

Bluestone Asset Management Corp.
Montgomery Realty Group, Inc.
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FACADE IMPROVEMENTS

Burlington/Jo-Ann Store

1575 Willow Pass Road, Concord, CA 94520

PAGE #: A102
DATE: 03/30/2018
REVISIONS: 03/08/2019 appeal
PAGE: PROPOSED ENLARGED PLAN

NOT FOR CONSTRUCTION

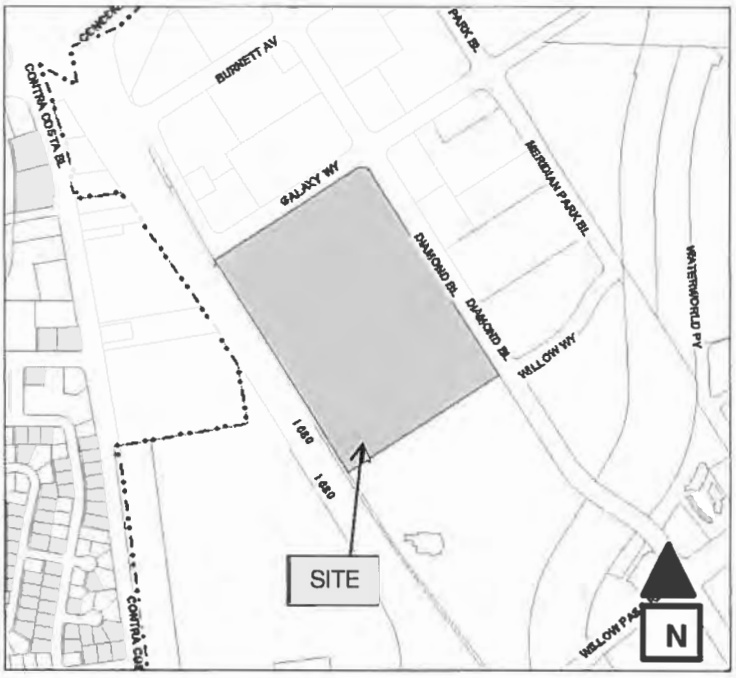
Concord **REPORT TO DESIGN REVIEW BOARD**

DATE: April 14, 2016

I. GENERAL INFORMATION

Project Name:	**Veranda Shopping Center (PL15466-DR)**
Review Status:	**Final Review**
Location(s):	**2001-2003 Diamond Boulevard**
Parcel Number(s):	**126-440-001**
General Plan:	**West Concord Mixed Use**
Zoning:	**WMX (West Concord Mixed Use)**
Applicant:	**CenterCal Properties, LLC** **160 East Franklin Avenue** **El Segundo, CA 90245**

Vicinity Map:



II. PROJECT BACKGROUND

The Design Review Board conducted a conceptual review for the Veranda Shopping Center on January 13, 2016. The Board's conceptual review recommendations included the importance of providing four-sided design for all buildings. The Board reviewed revised plans on March 10, 2016, that included architectural changes in response to the Board's recommendation on four-sided design. The Board noted examples where revised elevations were successful and where elevations had been simplified and needed enhancing. The Board recommended the applicant return with revised elevations that achieved four-sided design.

III. DISCUSSION

Building elevations with the most recent changes are provided as Exhibit A. The previous elevations are provided as Exhibit B for comparison purposes. Changes proposed by the current plan are summarized below in bold followed by staff's recommendations on the proposed changes.

BUILDING A. South Elevation: trellis and hearth elements at the front of the building have been replaced with pop-outs.

BUILDING B. East Elevation: details and accents added and different forms introduced to pop-out openings; South Elevation: building element featuring tile roof extended and detailed with awnings, decorative lighting and metal grille; tower element relocated to southeast corner of building; window and awning added to southeast corner. West Elevation: design and massing of elevation has been changed to be more consistent with the overall architecture. North Elevation: massing and design of the corner tower elements have been changed.

BUILDING C. East Elevation: lower roof line added to break up massing; North Elevation: middle portion of building extended out and articulated with tile roof.

BUILDG D. North and South Elevations: building lengths extended and elevations completely redesigned; North and South Elevations: detailing added and articulation of building elements enhanced.

BUILDING E. All elevations have been revised to include more detailing and new elements (e.g., building pop-outs, roof line variations) introduced to enhance massing and articulation.

BUILDING F. North Elevation: Articulation and detailing of façade for "F-160" tenant has been enhanced consistent with the overall architecture; trellis elements at alley portal replaced with decorative metal arch; East Elevation: revised to include more detailing and articulation consistent with the overall architecture.

BUILDING H. East Elevation: second story added to H-120 space.

PD-A1. All elevations revised to include more details and elements to enhance massing and articulation.

Overall staff finds the revised plans provide four-sided design as recommended by the Board. Staff has the following comments and recommendations for the Board's consideration:

- Staff previously commented on the importance of the elevations facing the street corner. Staff recommends keeping the original design for the outdoor seating area (Building B, southeast corner) because it has a more interesting and open design that results in a stronger enhancement of the streetscape.

- Staff will require a peer review of the landscaping and architectural construction documents to ensure consistency with approved plans. Staff requests the Board's recommendations on key design elements or issues to consider during the plan check process.

IV. RECOMMENDATION

Staff has prepared the following motion for the Board's consideration for the project.

I (Board Member _____) hereby move that the Design Review Board recommend approval of the Veranda Shopping Center (PL15466 – DR), subject to the Development Code provisions applicable to the project, all applicable conditions of approval, and the following conditions recommended by the Board.

Staff Recommendations

- Keep the original design for the outdoor seating area (Building B, southeast corner).

- A peer review of the landscaping and architectural construction documents shall be required to ensure consistency with approved plans.

Prepared by: Frank Abejo

Frank Abejo
Senior Planner
(925) 671-3128
frank.abejo@cityofconcord.org

Exhibits:

A - Revised Building Elevations
B - Previous Building Elevations

CCP CONCORD

2001 & 2003 Diamond Blvd., Concord, CA 94520

SHEET INDEX - ARCHITECTURAL

SHEET INDEX - ARCHITECTURAL (CONT)

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SHEET INDEX - LANDSCAPE

SHEET INDEX - LANDSCAPE

SHEET INDEX - LIGHTING

PROJECT INFORMATION

APN: 126-440-0031
PRIOR DEVELOPMENT APPROVAL:
CO - COMMERCIAL OFFICE
PROJECT DESCRIPTION: NEW 354,000 SF SHOPPING CENTER

RECEIVED
MAR 25 2016
PLANNING

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

EXHIBIT A

PROJECT SUMMARY:	
SITE GROSS AREA:	30 AC
BUILDING AREA:	
BUILDING A:	34,280 SF
BUILDING B:	15,861 SF
BUILDING C:	8,475 SF
BUILDING D:	10,100 SF
BUILDING E:	11,854 SF
BUILDING F:	36,903 SF
BUILDING G:	46,739 SF
BUILDING H:	172,787 SF
BUILDING H - LEVEL 2:	9,809 SF
BUILDING PD-A1:	4,134 SF
BUILDING PV-10:	1,500 SF
BUILDING PV-20:	650 SF
BUILDING PV-30:	650 SF
BUILDING PV-40:	650 SF
BUILDING PV-50:	650 SF
TOTAL:	353,062 SF
TOTAL PROVIDED STALLS:	1,429
PROJECT PARKING RATIO:	4.09/1000

BUILDING H - LEVEL 2

SCALE: 1" = 60'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

ILLUSTRATIVE SITE PLAN

DATE

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	Permit
	Project Number
	Drawing Name
12/09/2015	Plot Date
02/11/2016	1 Final DRB Submittal
03/07/2016	2 Final DRB Submittal

SHEET

1

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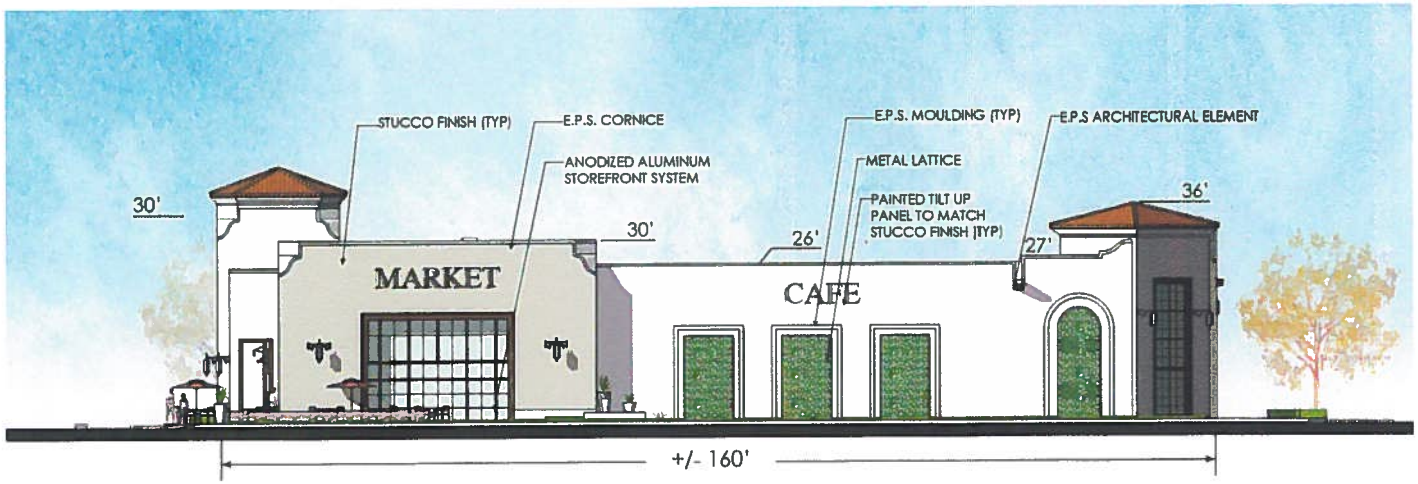

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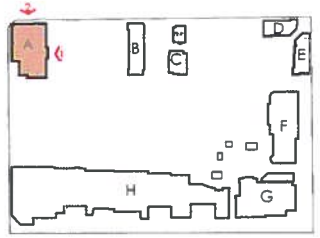

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ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG A ELEVATIONS

DATE

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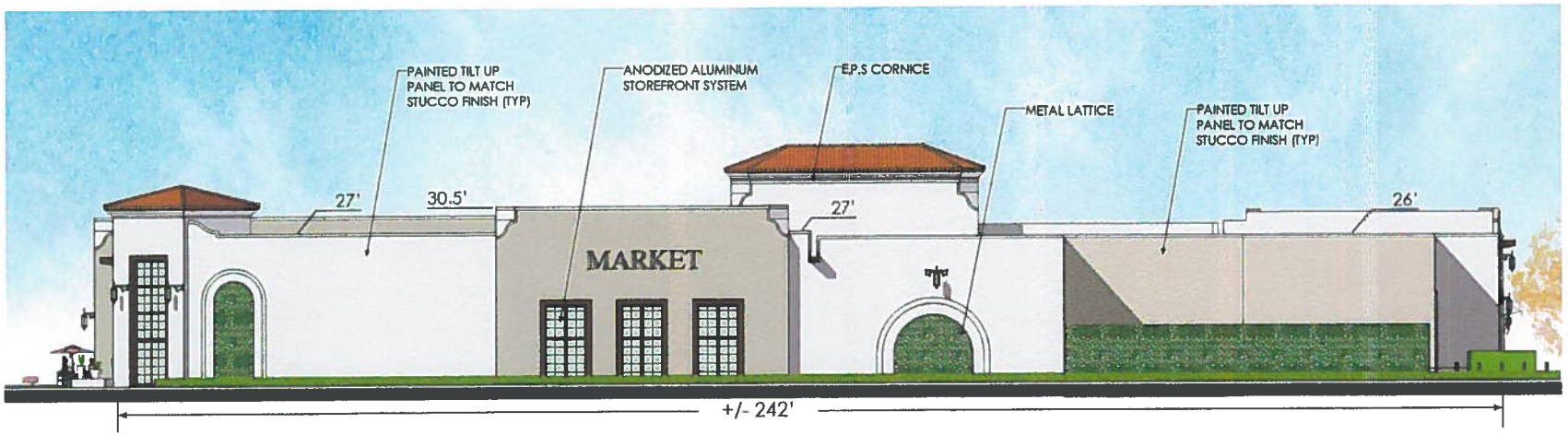
SHEET
3



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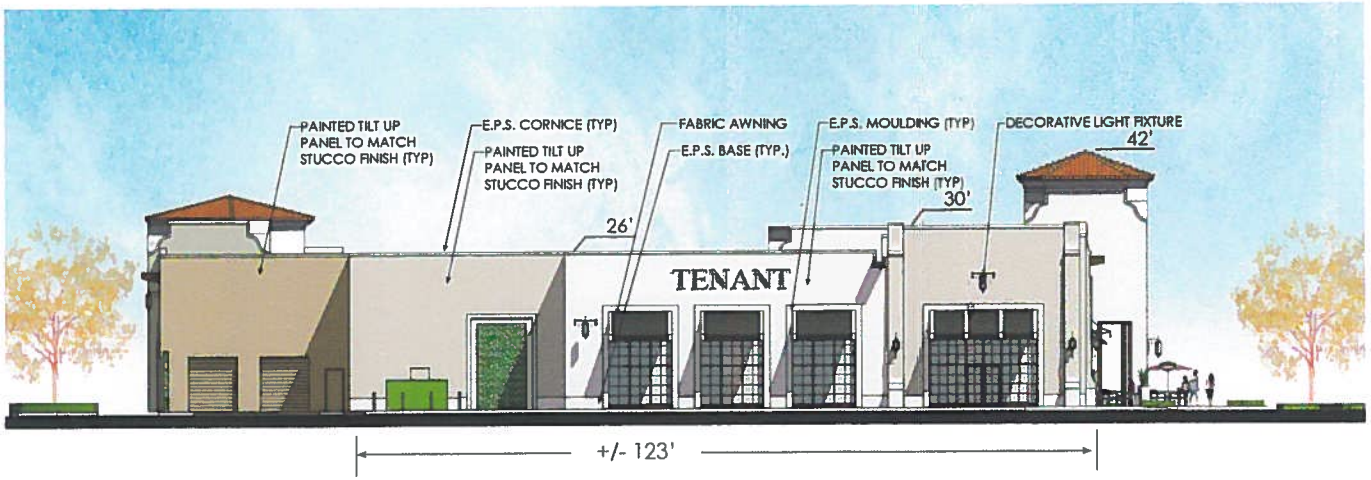

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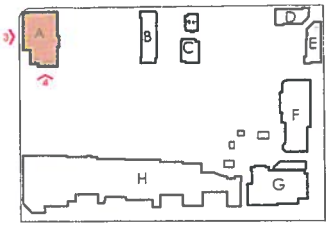

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY

CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG A ELEVATIONS

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03/23/2016 Final DRB Submittal

SHEET

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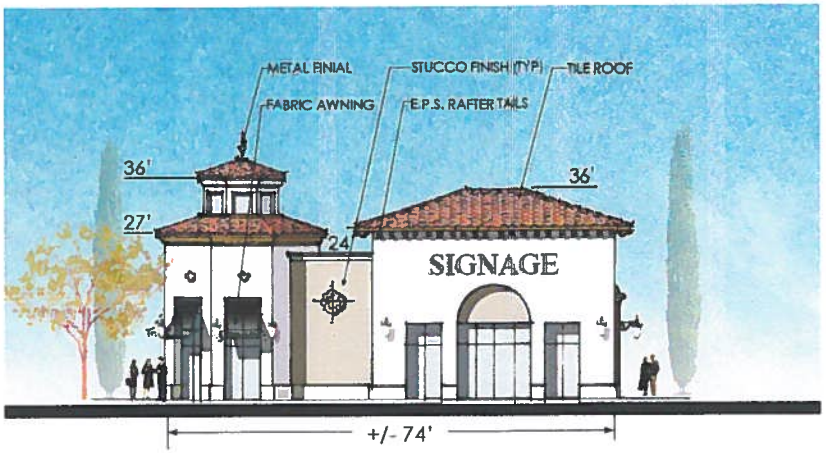

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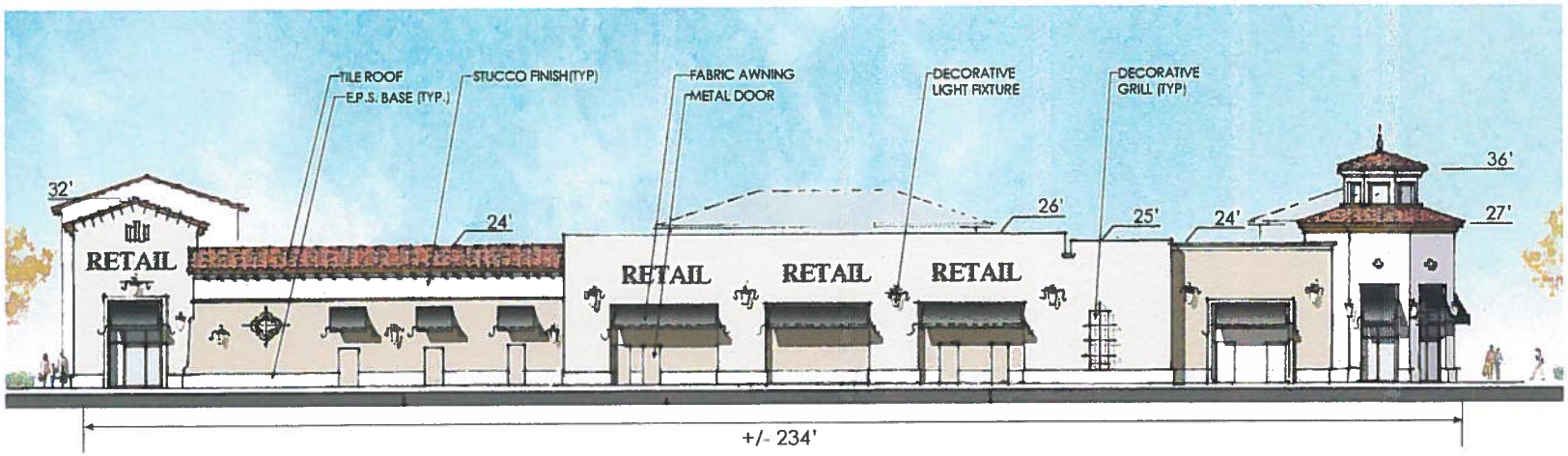

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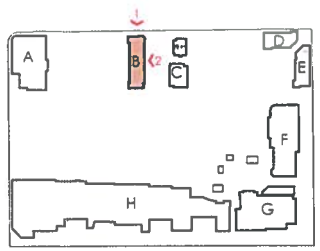

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG B ELEVATIONS

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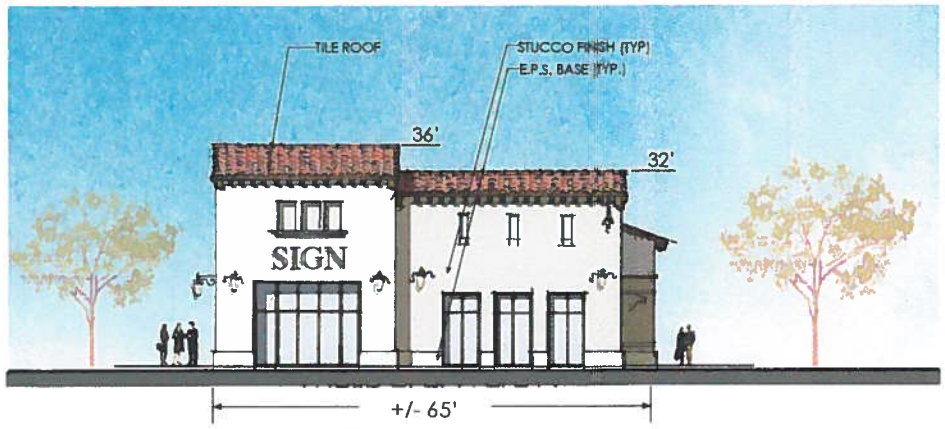
03/22/2016	Revised DRB Submittal

SHEET

7



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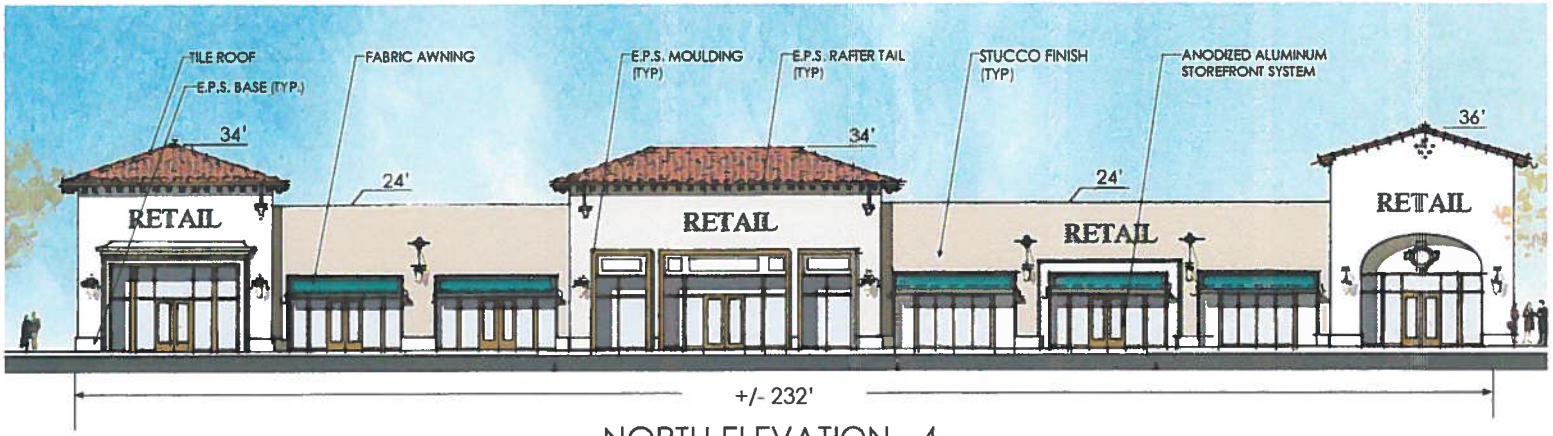

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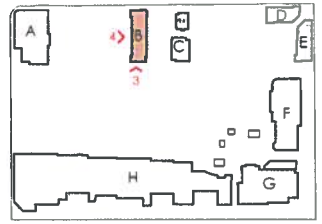

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG B
ELEVATIONS

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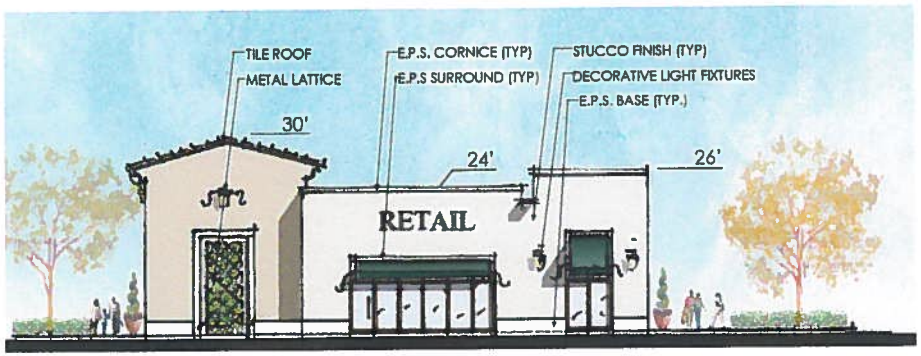
SHEET

8



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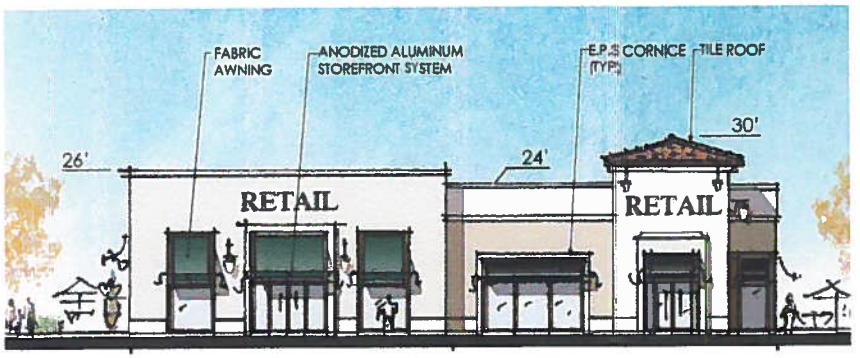

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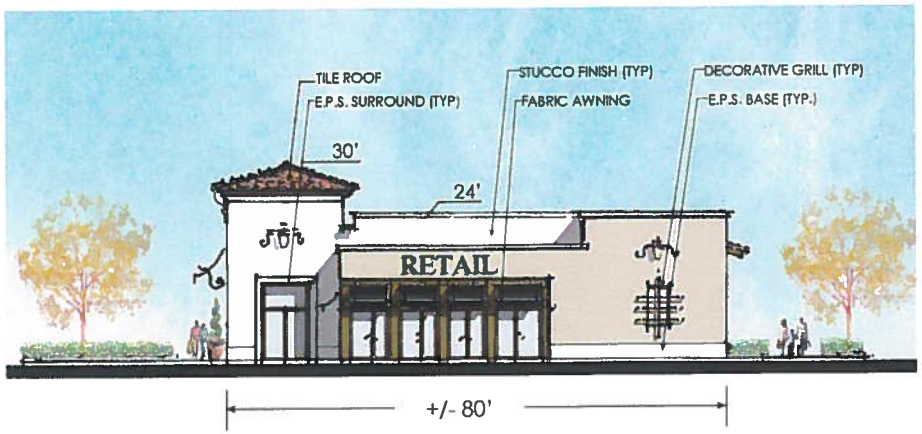

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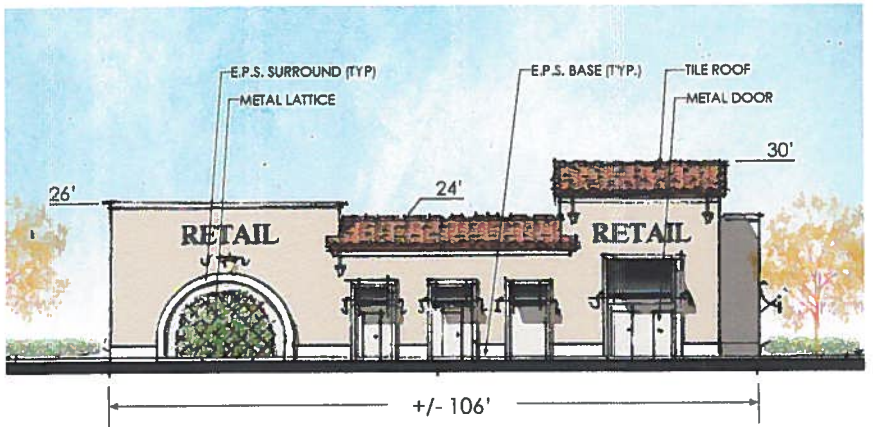

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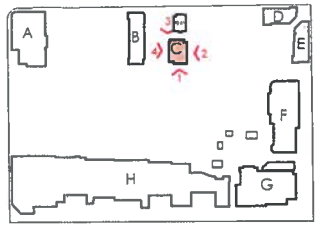

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG C
ELEVATIONS

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03/02/2016	Fence DRB Submittal

SHEET

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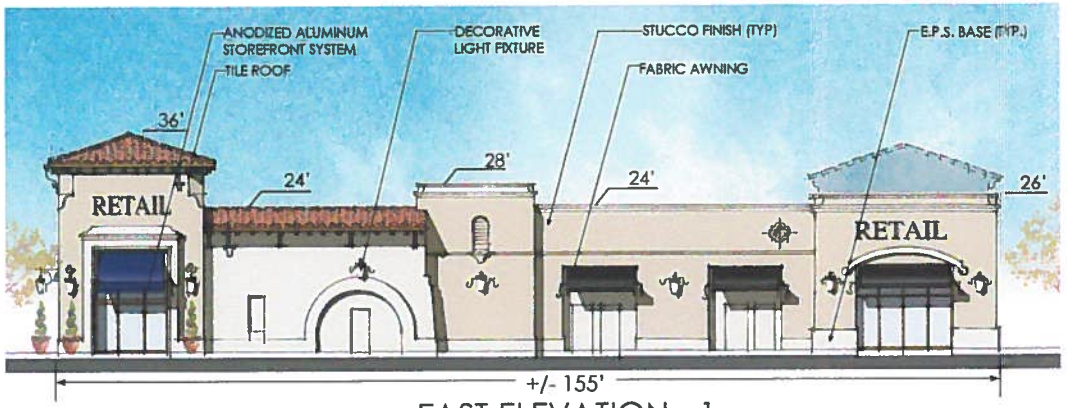

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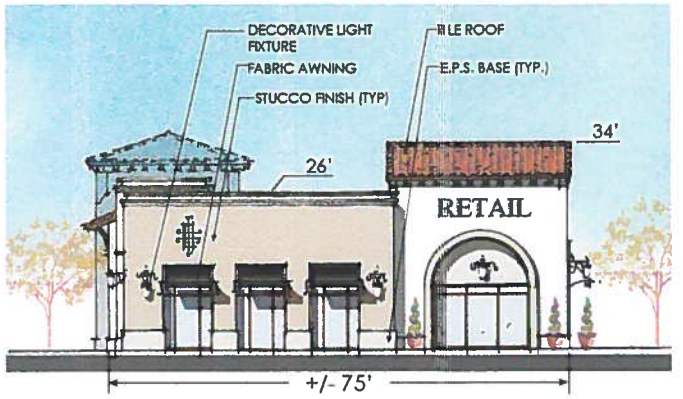

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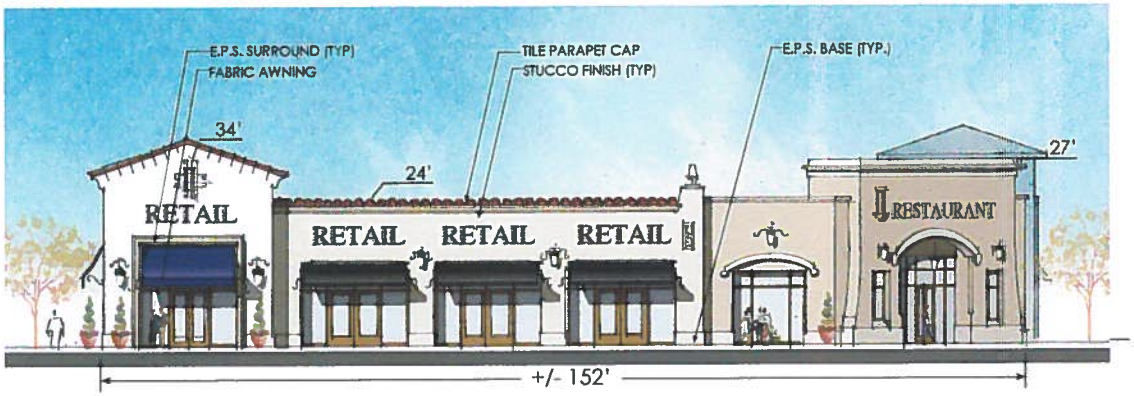
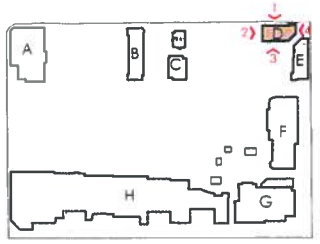


WEST ELEVATION - 3

SOUTH ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG D ELEVATIONS

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03/22/2016	2 Third DRB Submittal

SHEET

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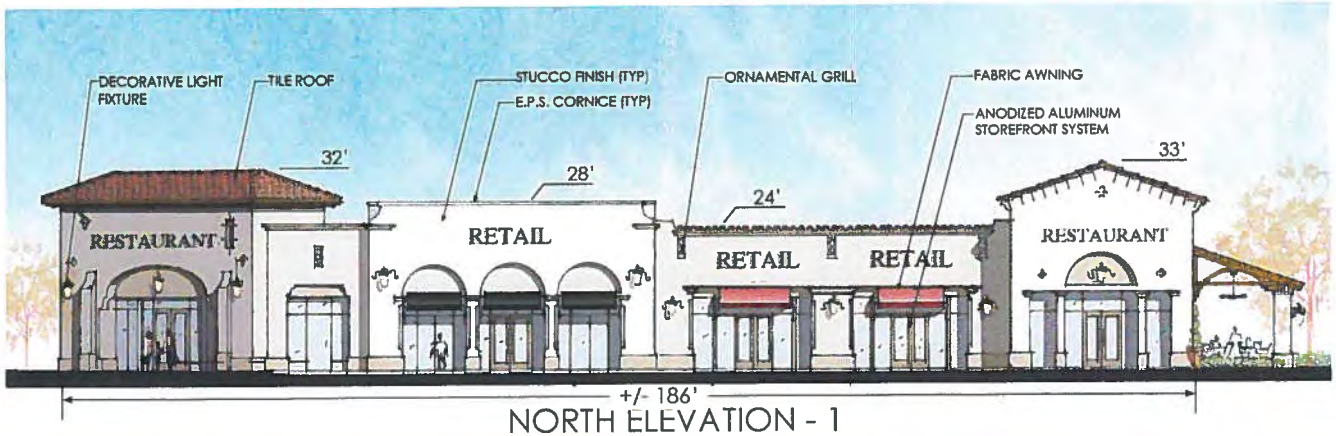

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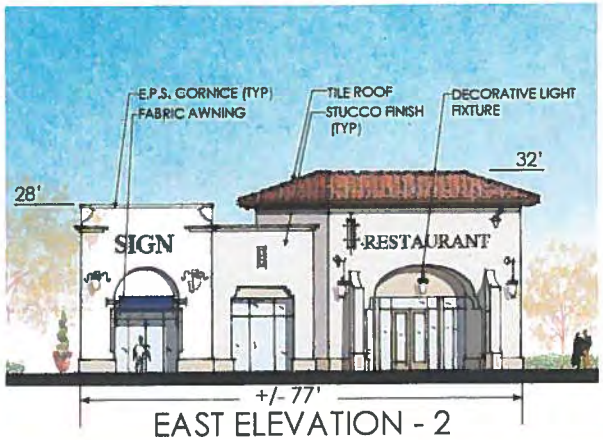

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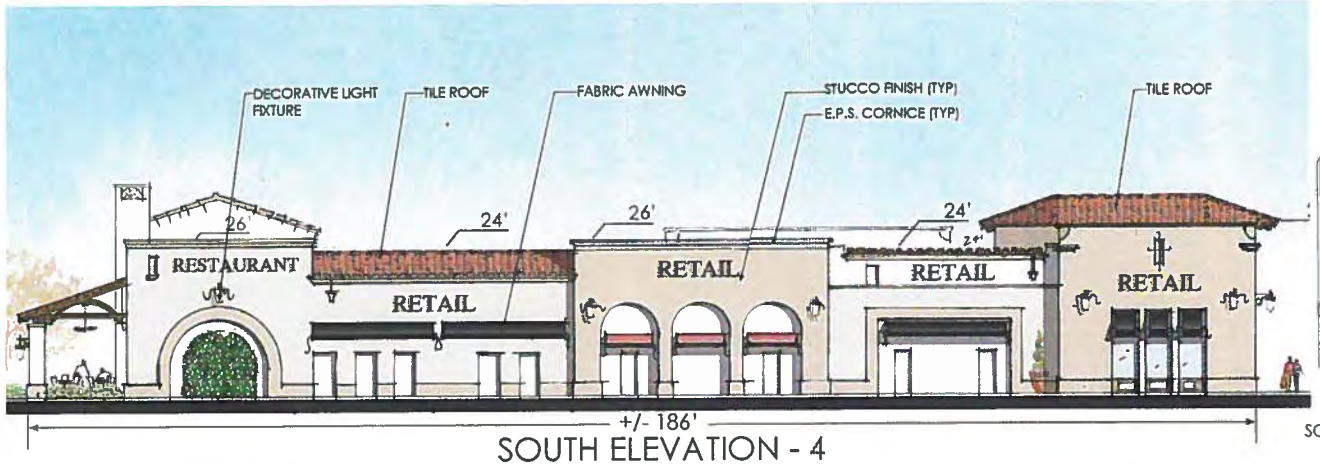
WEST ELEVATION - 3



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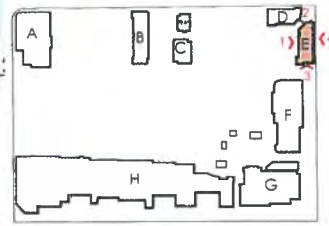

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG E ELEVATIONS

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03/02/2016	Third DRB Submittal

SHEET

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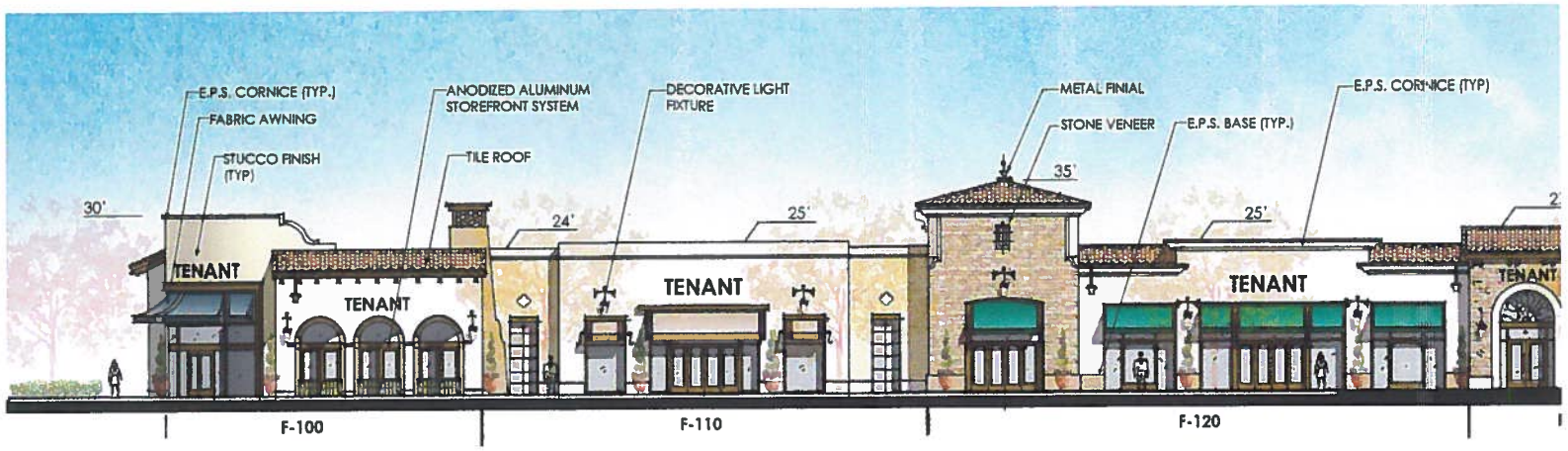

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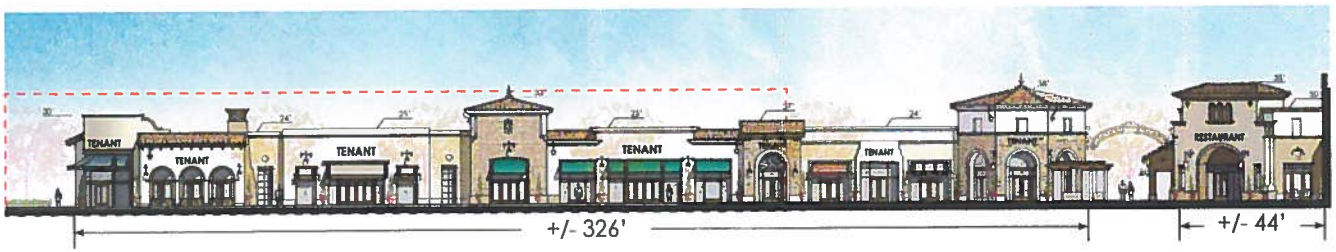

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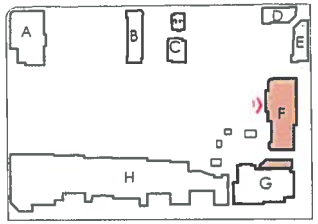

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG F
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03/07/2016	Final DRB Submittal

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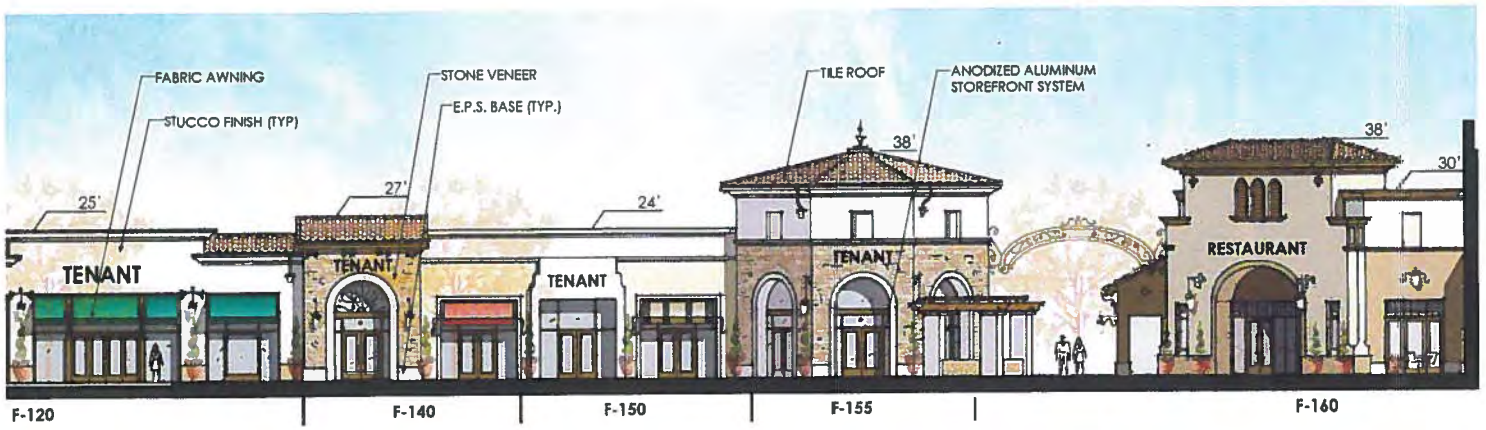

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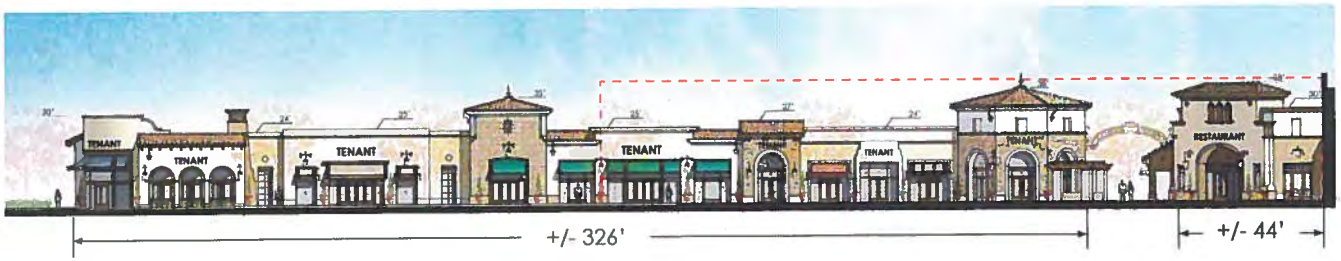

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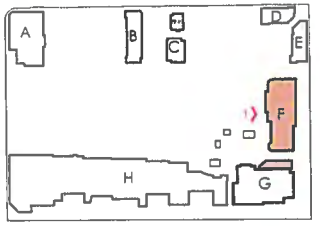

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAVOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG F
ELEVATIONS

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03/07/2016	Revised DRB Submittal

SHEET

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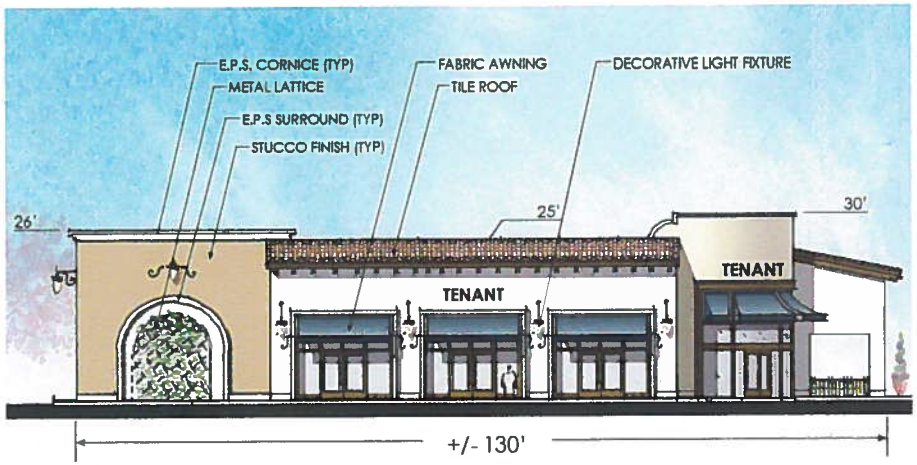

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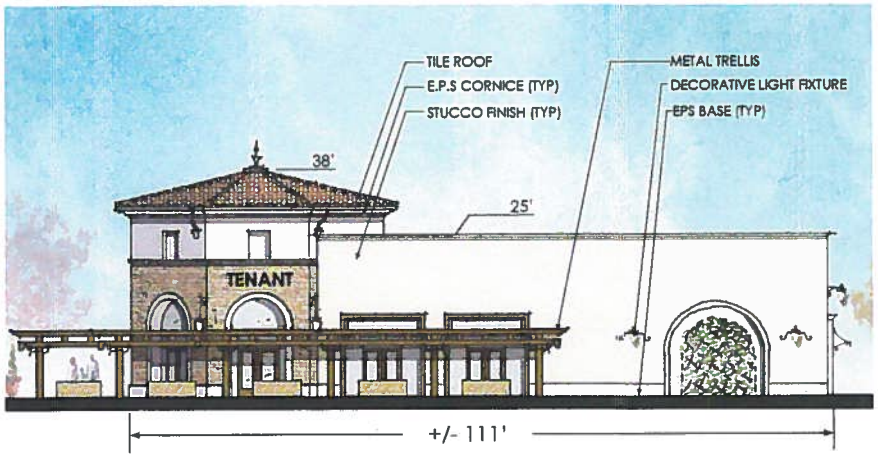

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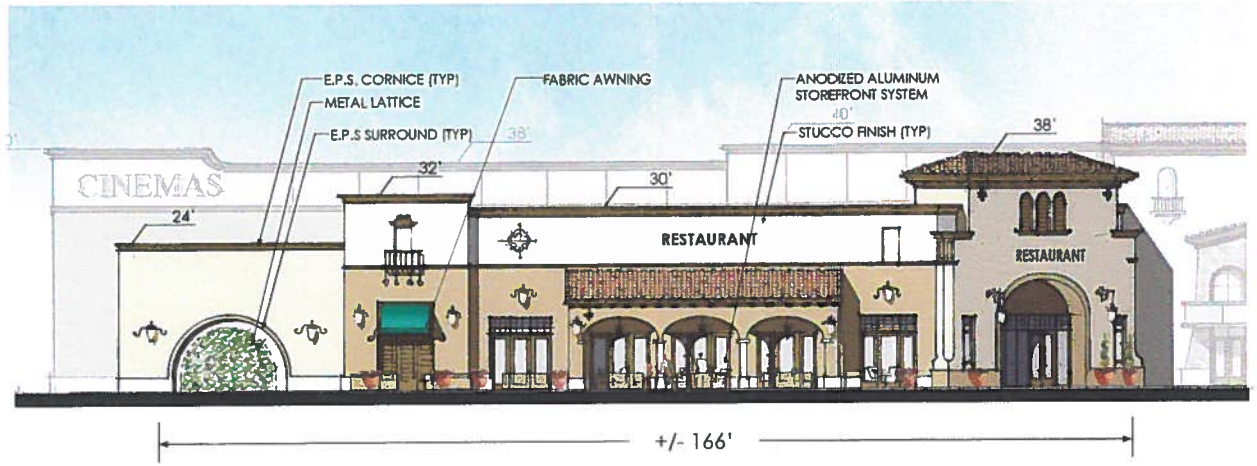

EAST ELEVATION - 2.1

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY

CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG F ELEVATIONS

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12/09/2015	Plot Date
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03/22/2016	2nd CC DRB Submittal

SHEET

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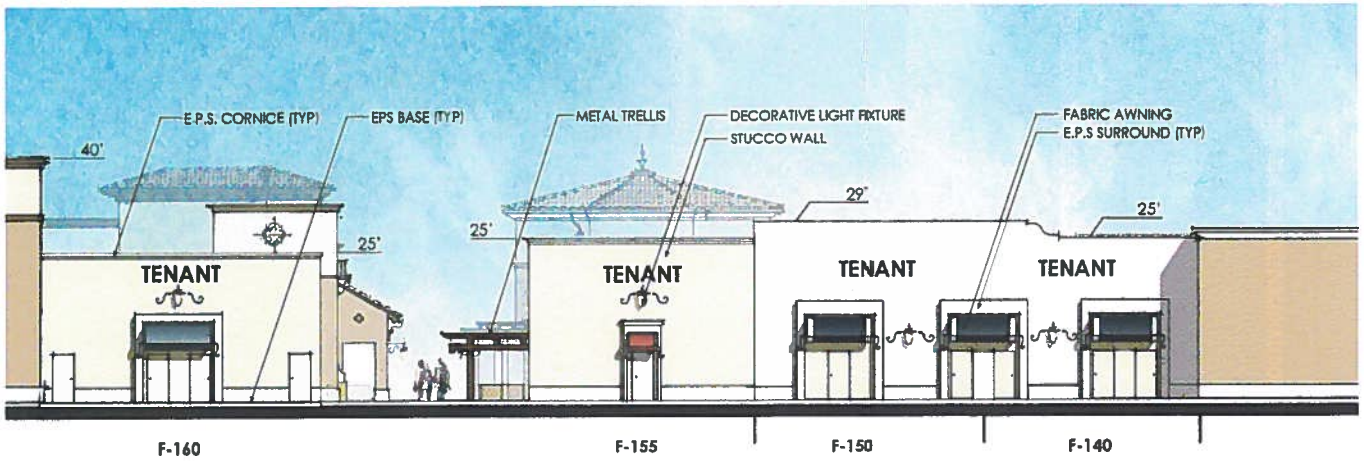

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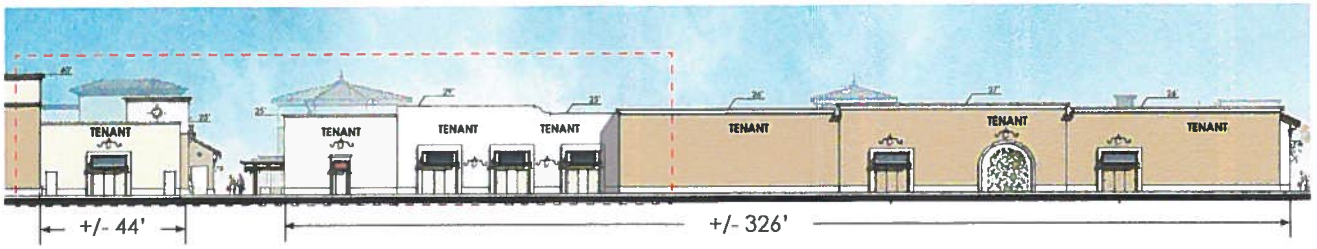
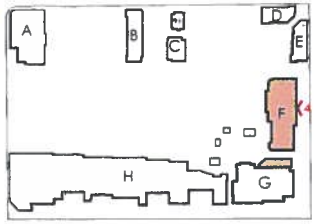


OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG F
ELEVATIONS

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03/22/2016	Revised DRB Submittal

SHEET

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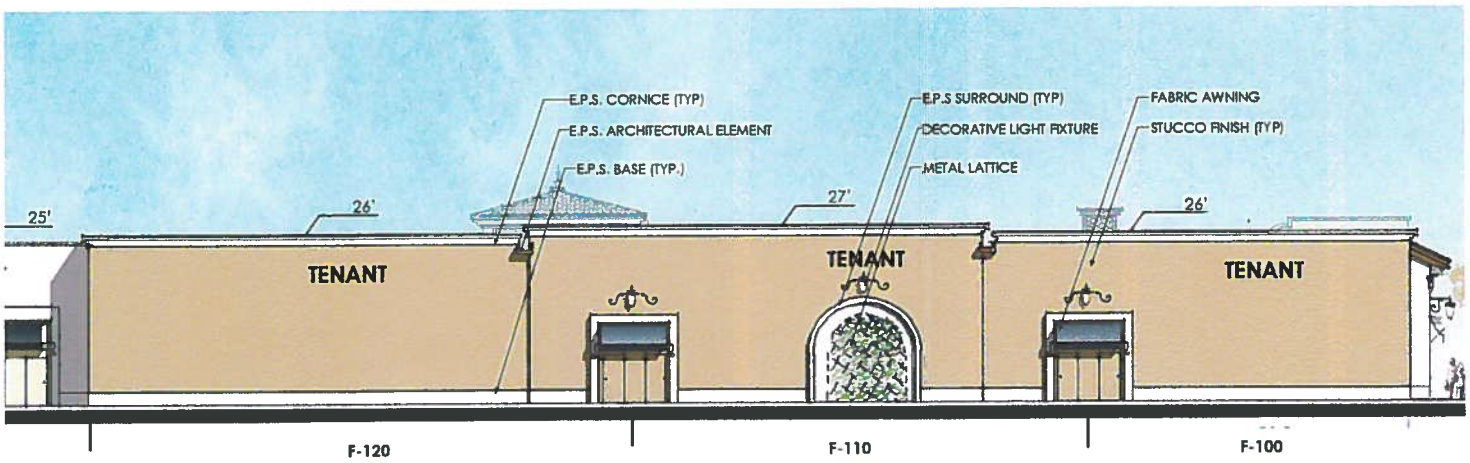

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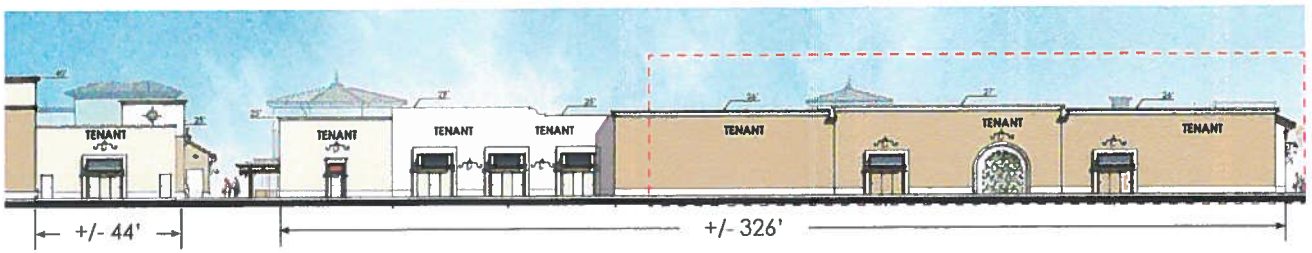

OVERALL ELEVATION
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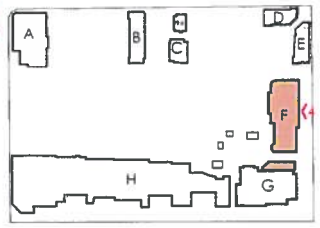

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG F
ELEVATIONS

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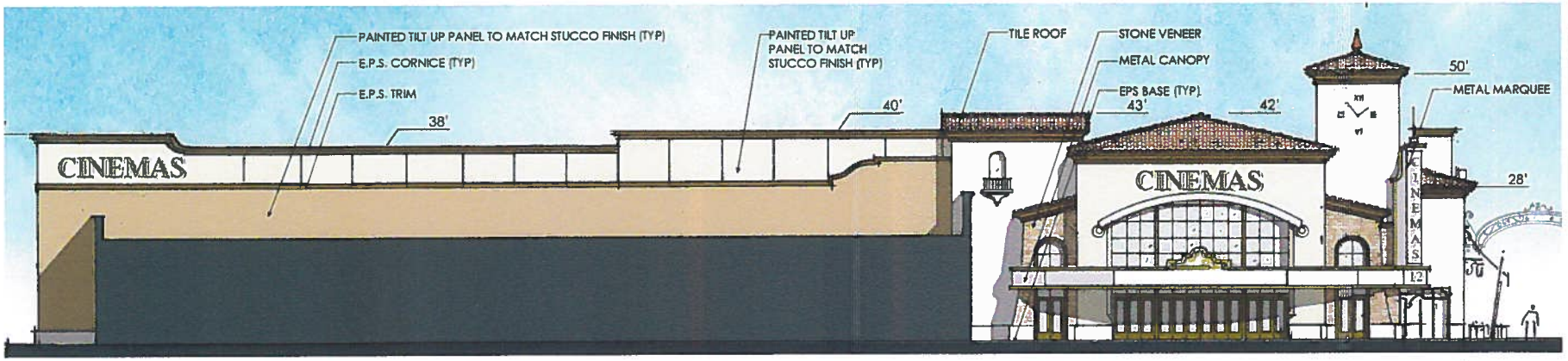
02/11/2016	Issue DRB Submittal
03/07/2016	Issue DRB Submittal

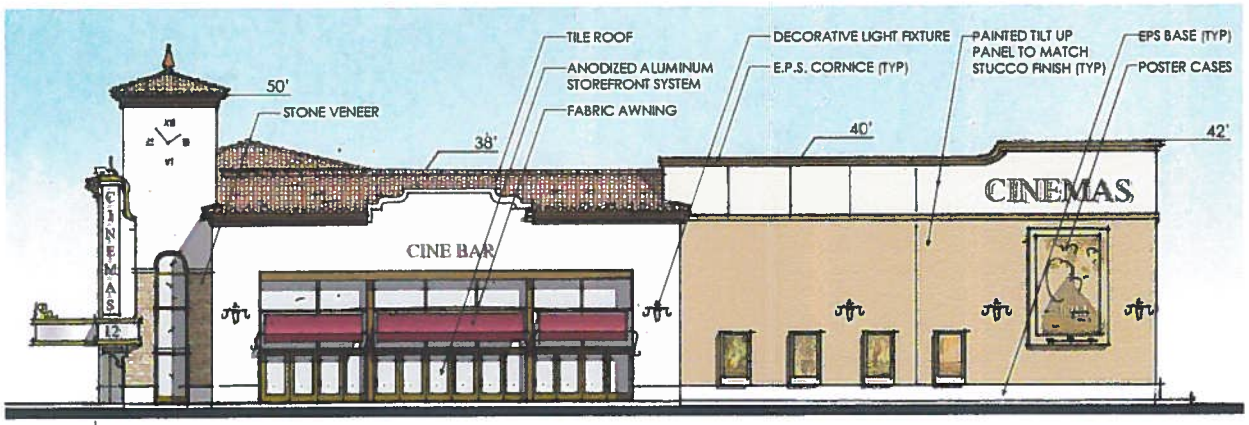
SHEET

22



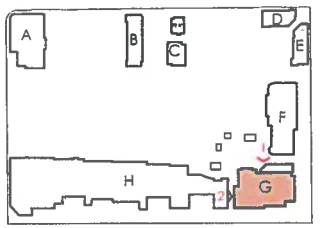
+/- 257'

EAST ELEVATION-1



+/- 186'

NORTH ELEVATION - 2



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY

CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG G ELEVATIONS

DATE

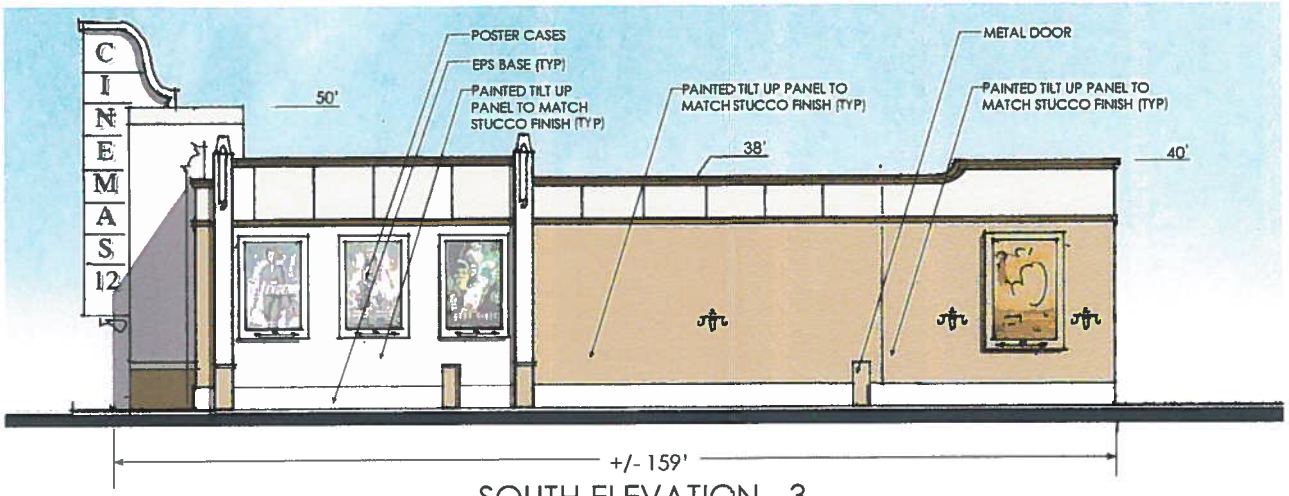
12/09/2015 Plot Date

02/11/2016 Email DRB Submittal

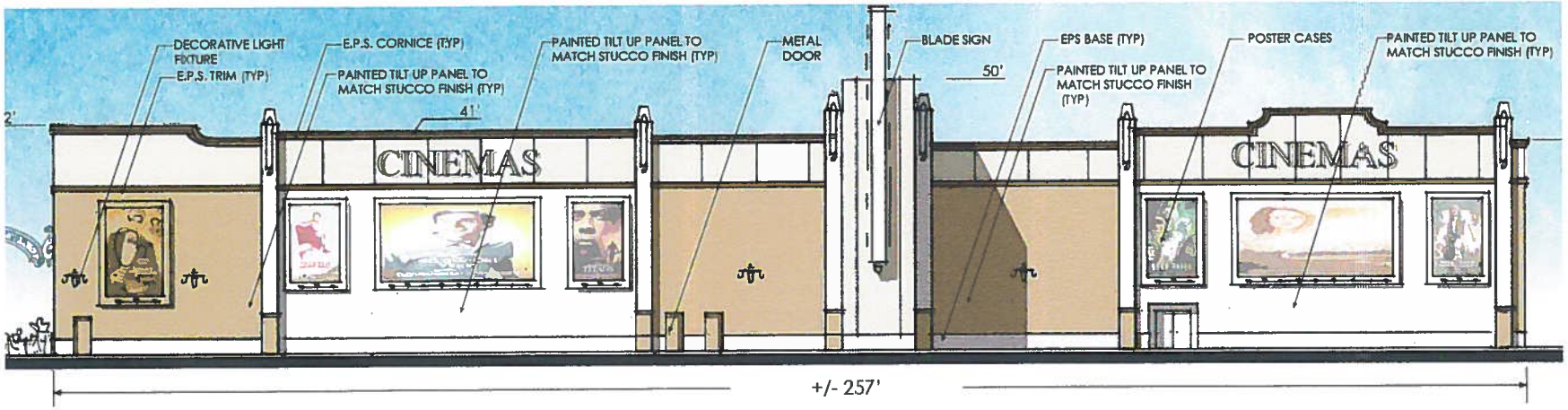
03/22/2016 Email DRB Submittal

SHEET

25



SOUTH ELEVATION - 3



WEST ELEVATION - 4

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG G ELEVATIONS

DATE

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12/09/2015	Print Date
02/11/2016	Tenant DRB Submittal
03/22/2016	Tenant DRB Submittal

SHEET

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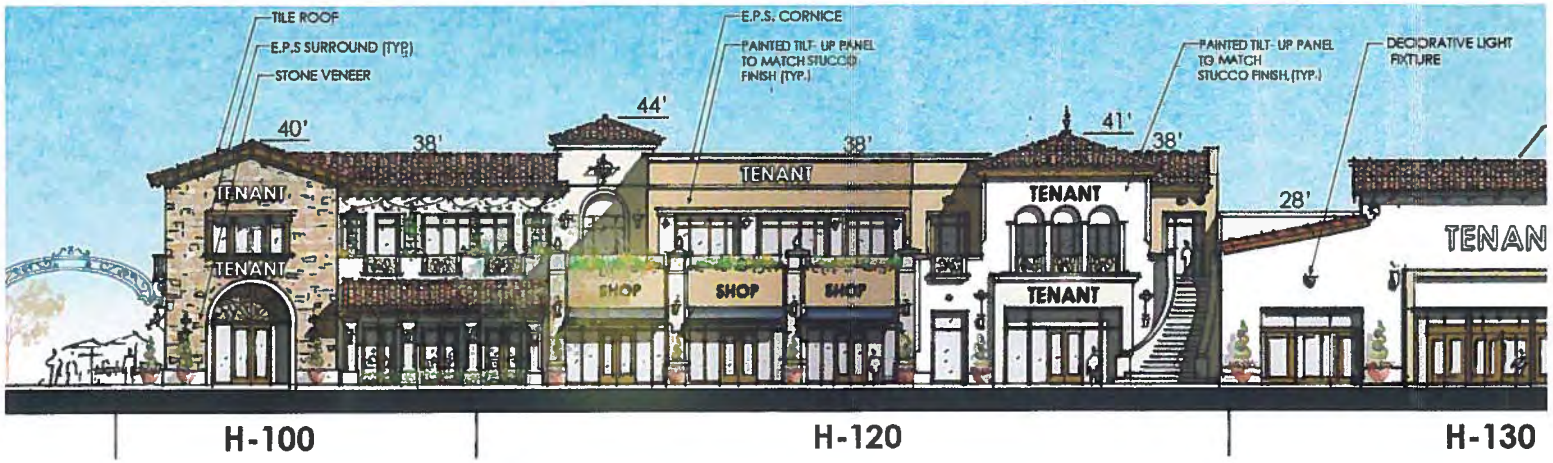
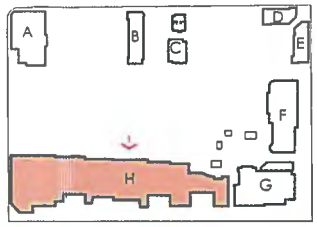


PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

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12/09/2015	Plot Date
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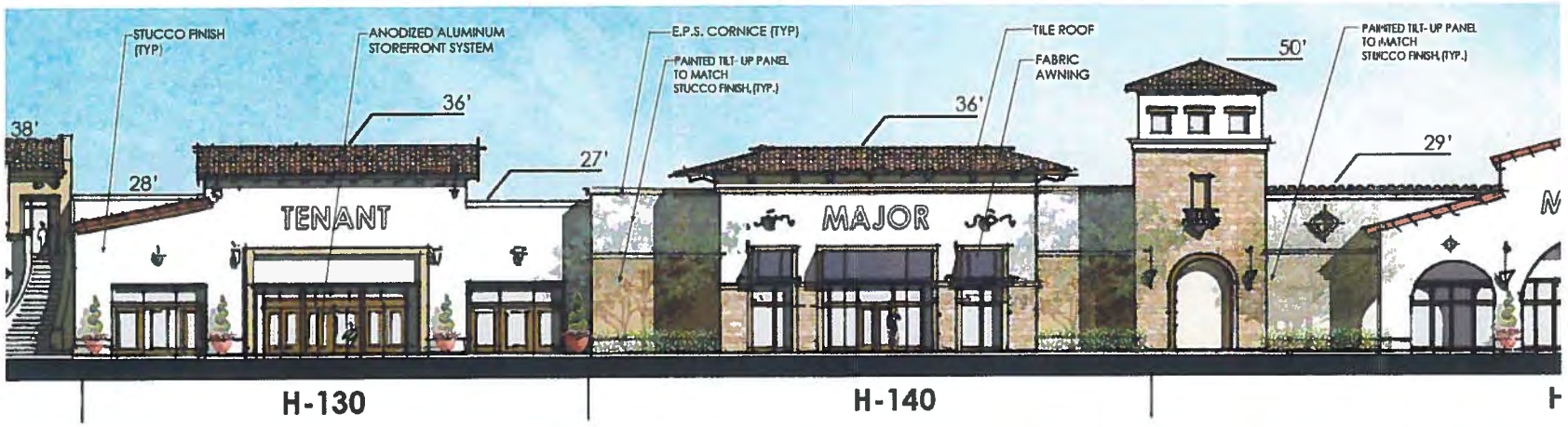
03/02/2016	Issue 2 DRB Submittal

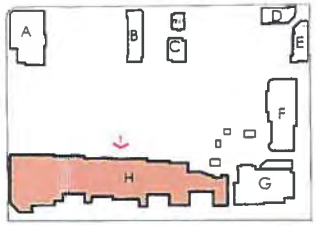
SHEET

29



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H ELEVATIONS

DATE

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	Project Number
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12/09/2015	Plot Date
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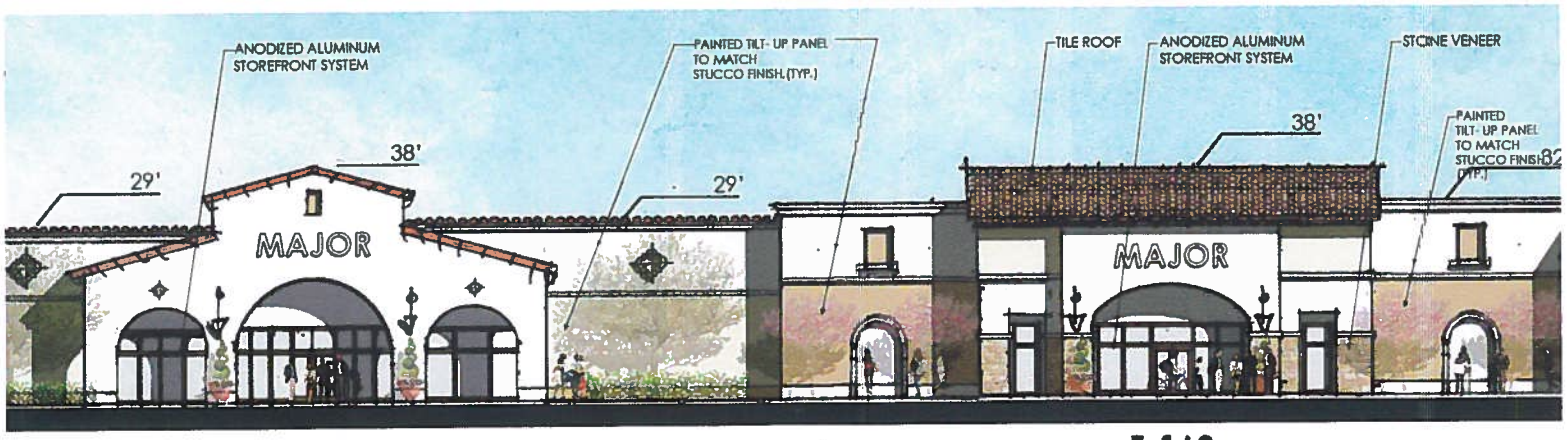
03/22/2016	2 Final DRB Submittal

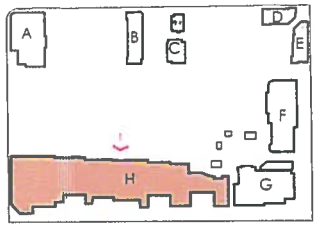
SHEET

30



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H ELEVATIONS

DATE

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	Project Number
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12/09/2015	Plot Date
02/11/2016	1 Initial DRB Submittal
03/02/2016	2 Initial DRB Submittal

SHEET

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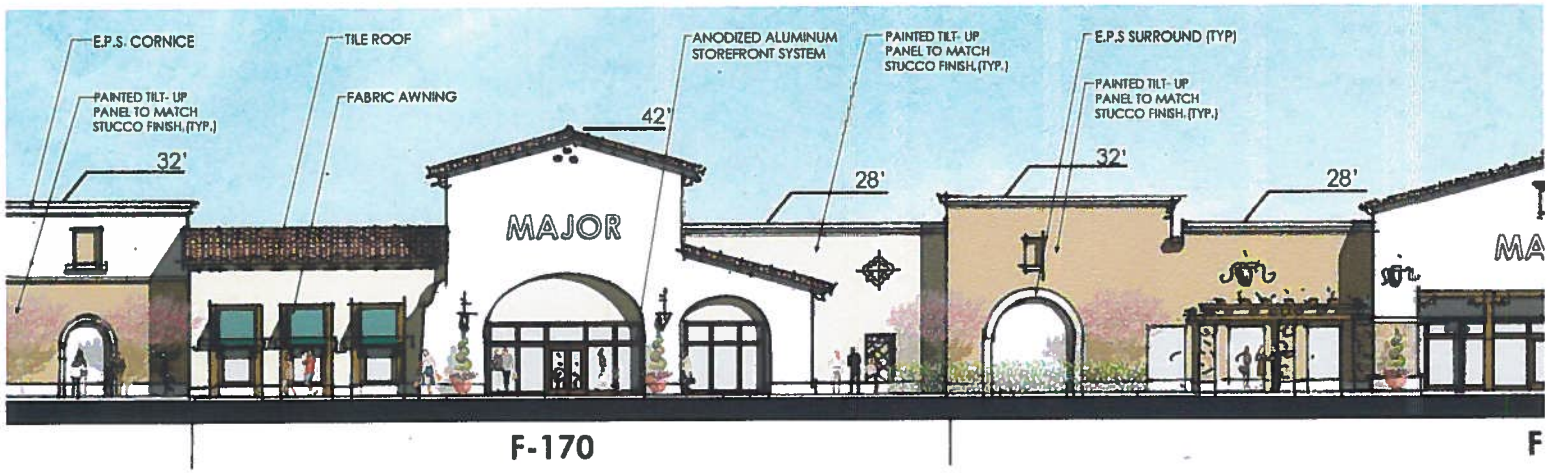
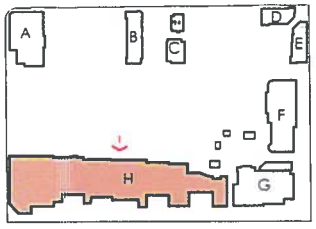


PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

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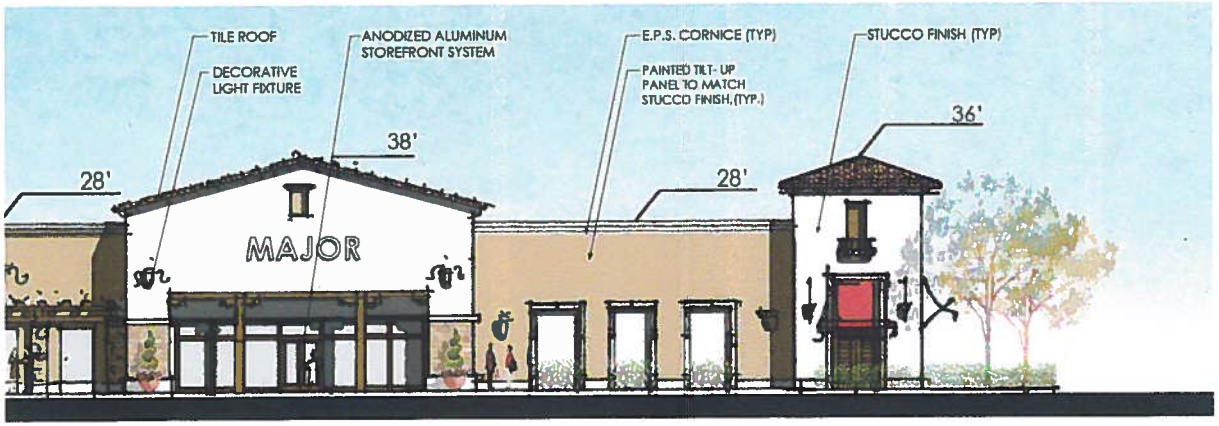
03/07/2016	Final DRB Submittal

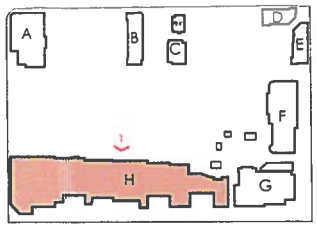
SHEET
32



F-180

PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

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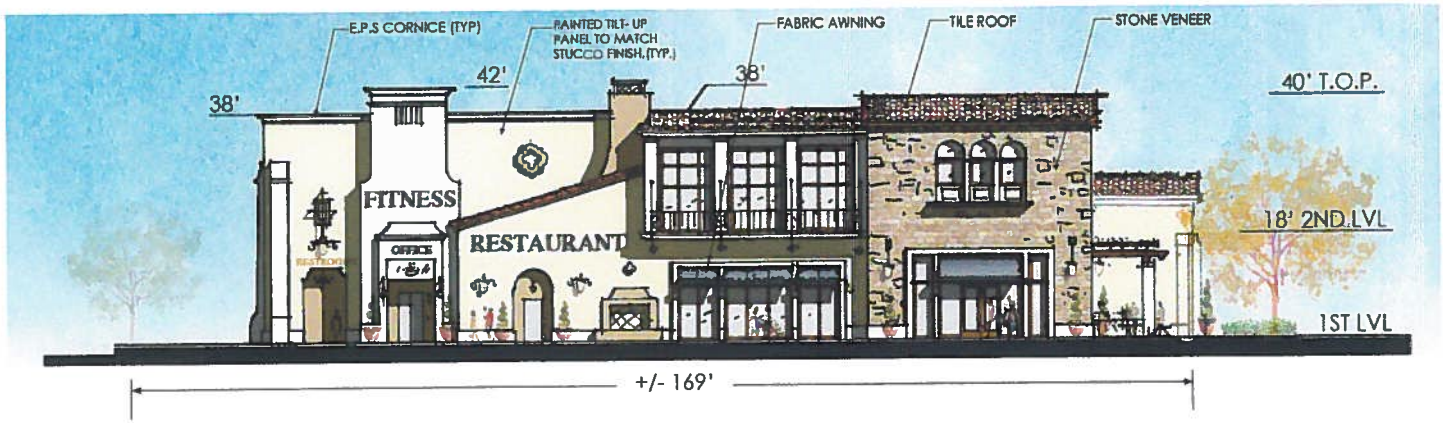
03/22/2016 Issue DRB Submittal

SHEET
33

NORTH ELEVATION - 2



SOUTH ELEVATION - 3

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE

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03/22/2016	Revised DRB Submittal

SHEET

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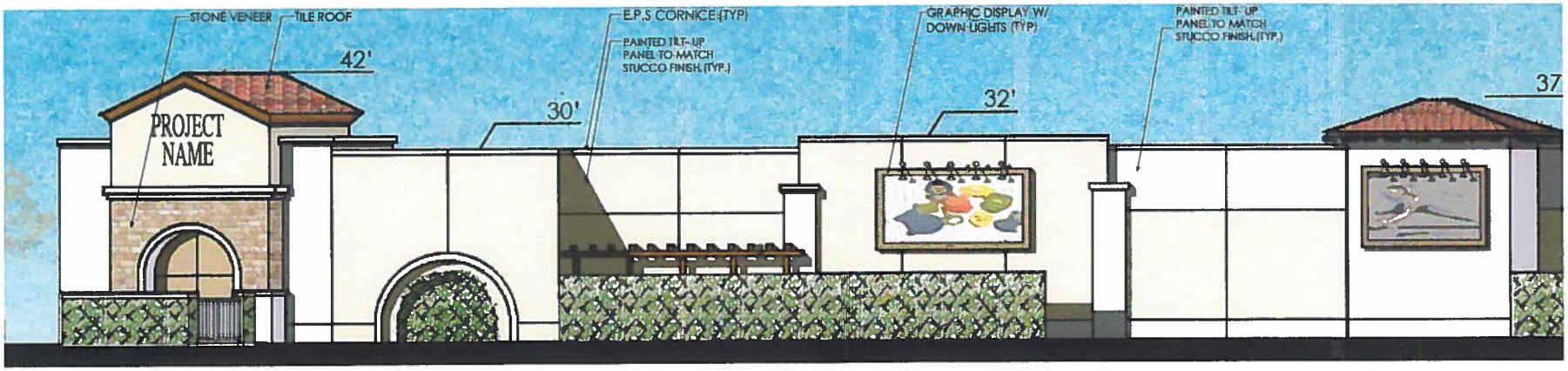
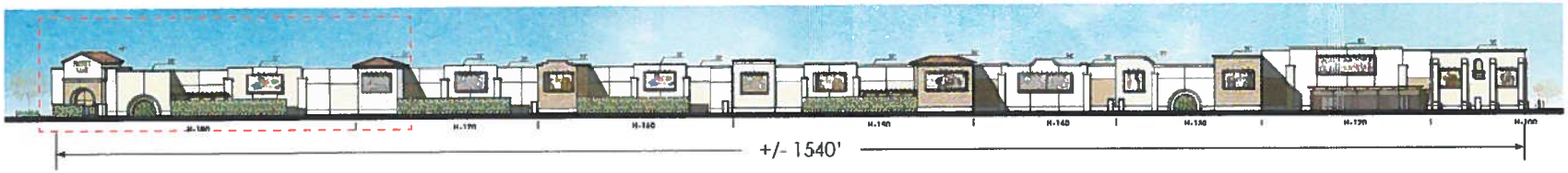


H-180

PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE

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12/09/2015	Plot Date
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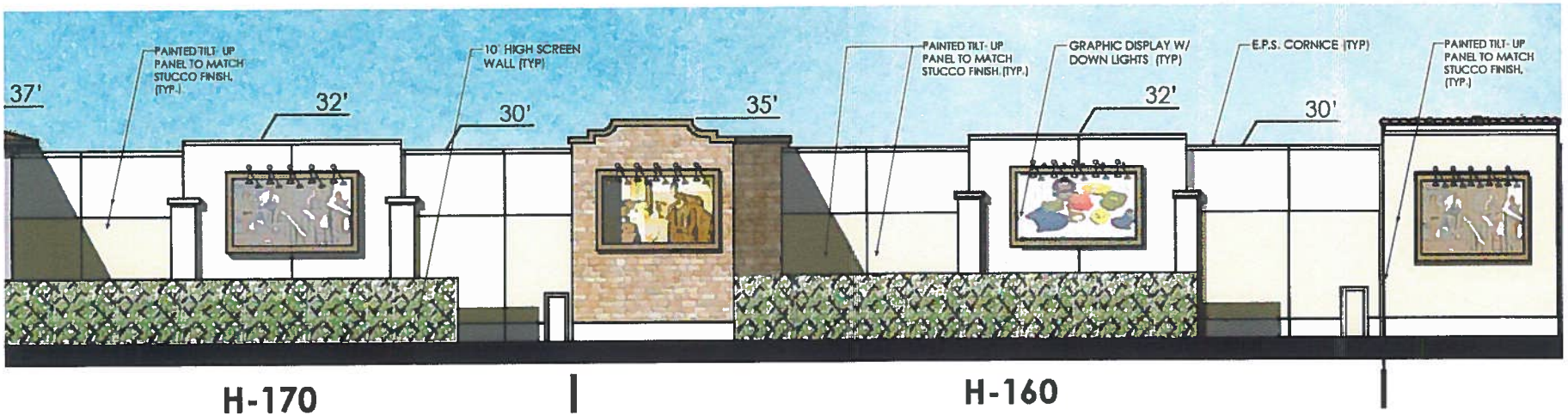
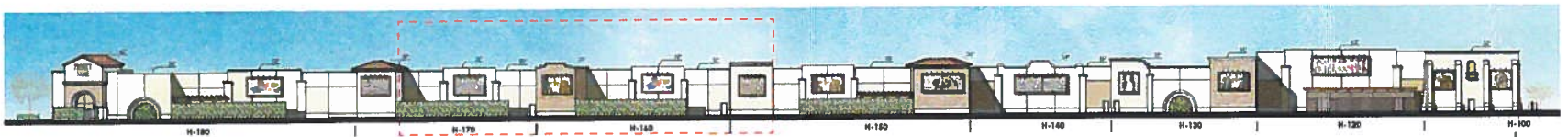
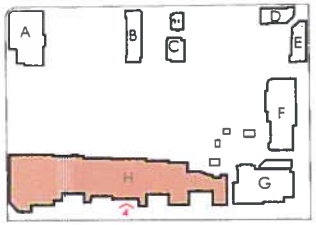
SHEET
35



PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE

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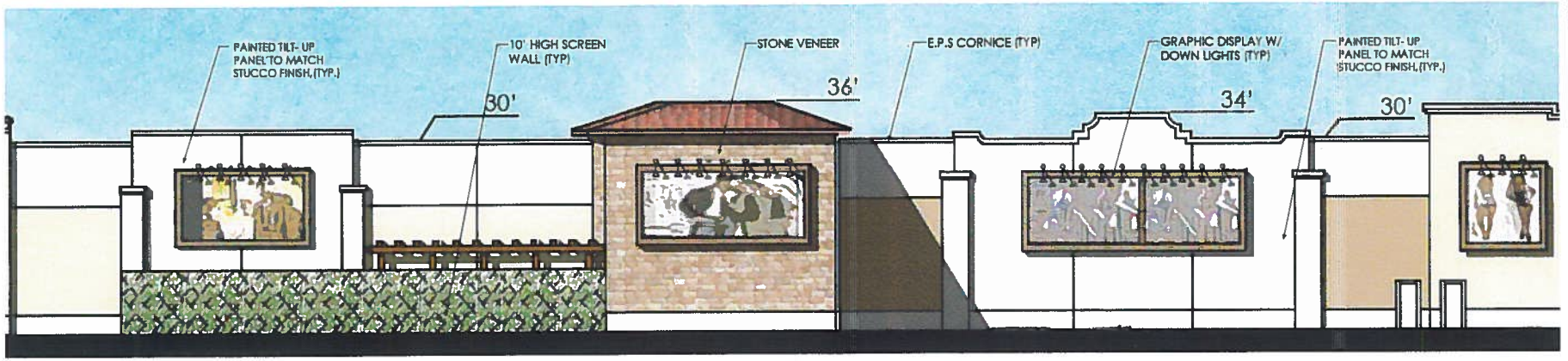
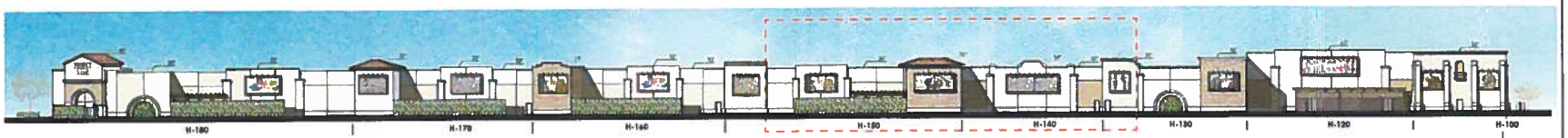
	Project Number
	Drawing Name
12/09/2015	Plot Date
02/11/2016	1 Final DRB Submittal
03/29/2016	2 Final DRB Submittal

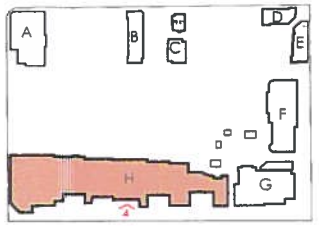
SHEET
36



PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE

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12/09/2015	Plot Date
02/11/2016	Final DRB Submittal
08/09/2016	Final DRB Submittal

SHEET

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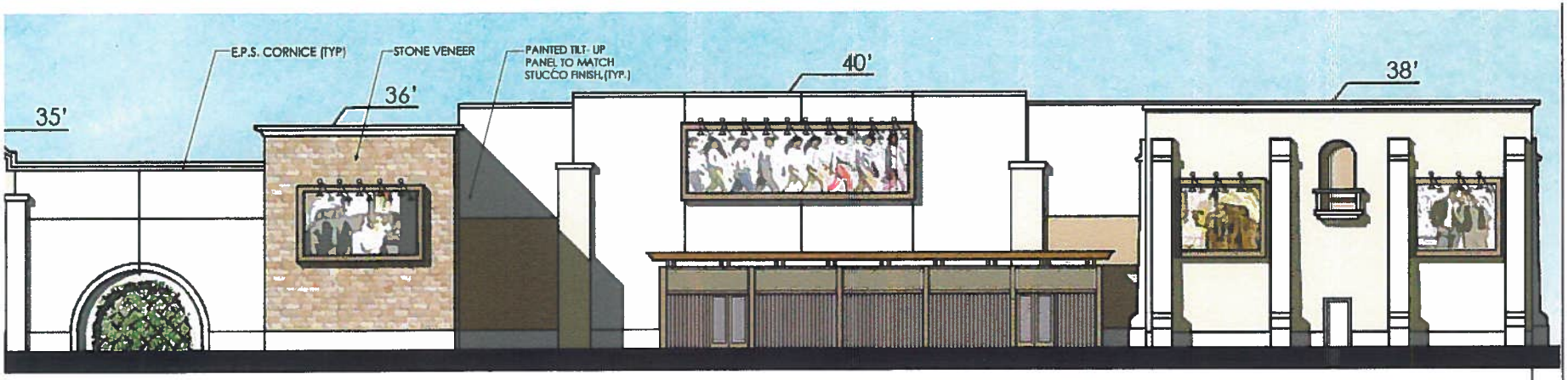
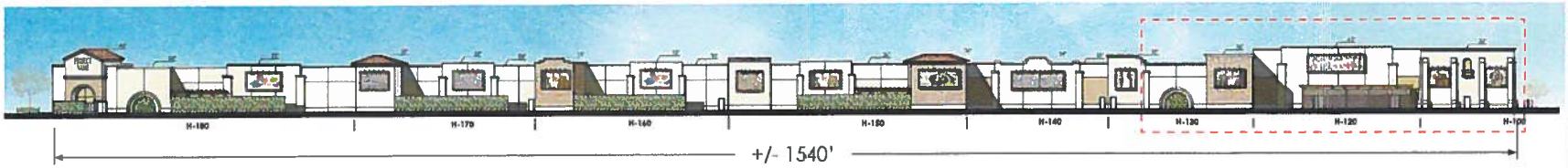
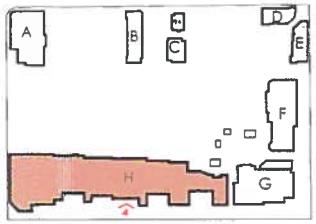


PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE

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	Project Number
	Drawing Name
12/09/2015	Plot Date
02/19/2016	1st DRB Submittal
03/07/2016	2nd DRB Submittal

SHEET
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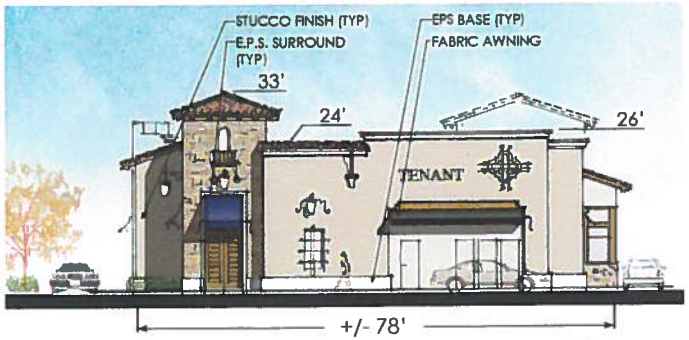
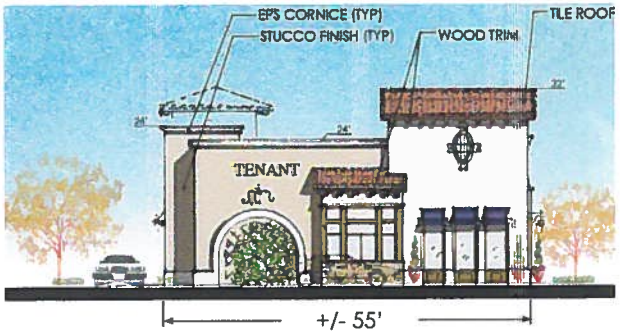


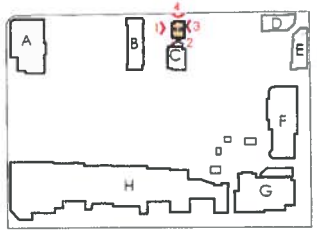
NORTH ELEVATION - 1



WEST ELEVATION - 2

SOUTH ELEVATION - 3

EAST ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

PD-A1
ELEVATIONS

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03/22/2016	Revised DRB Submittal

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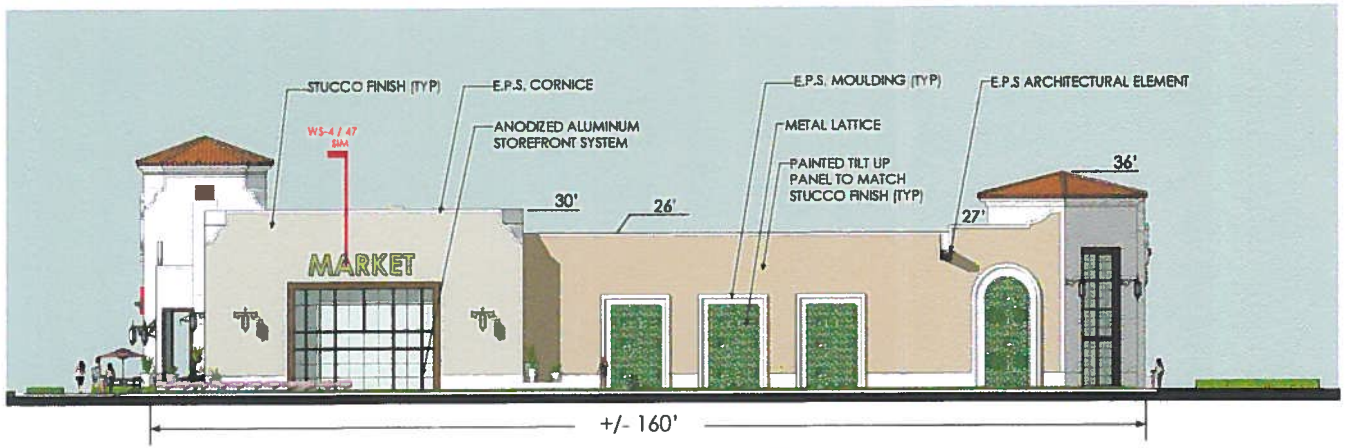
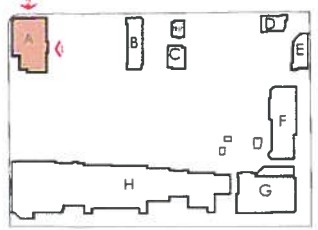
SOUTH ELEVATION - 1



EAST ELEVATION - 2



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

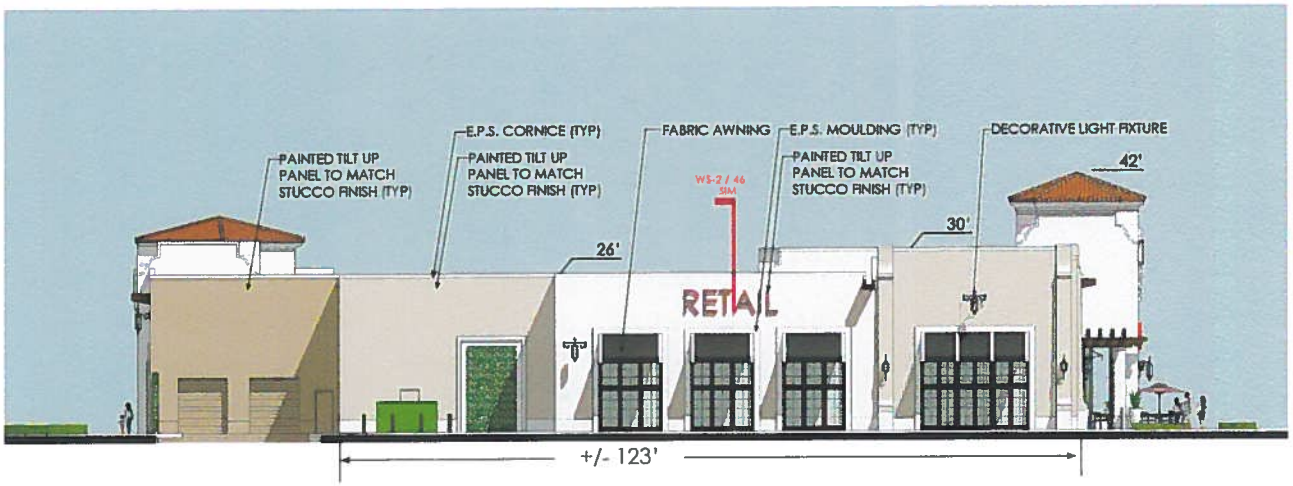
CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

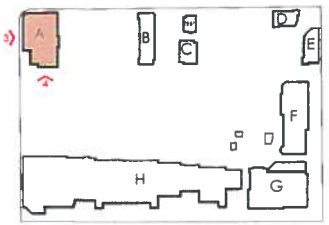
BLDG A ELEVATIONS

EXHIBIT B

NORTH ELEVATION - 3



WEST ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG A ELEVATIONS

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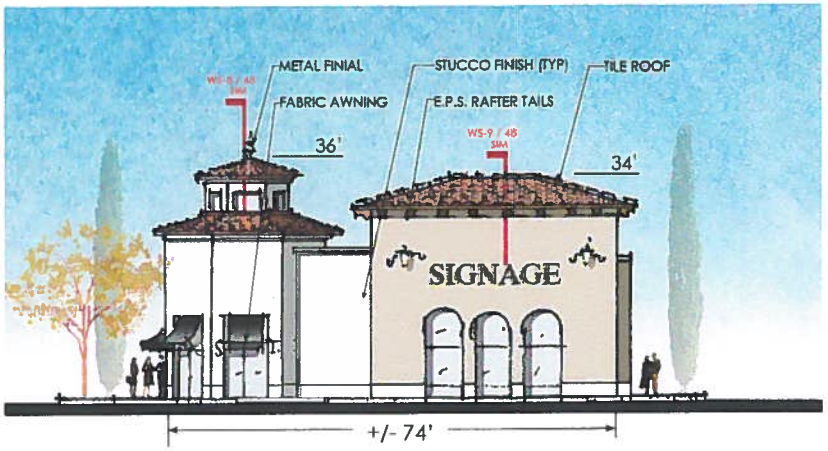
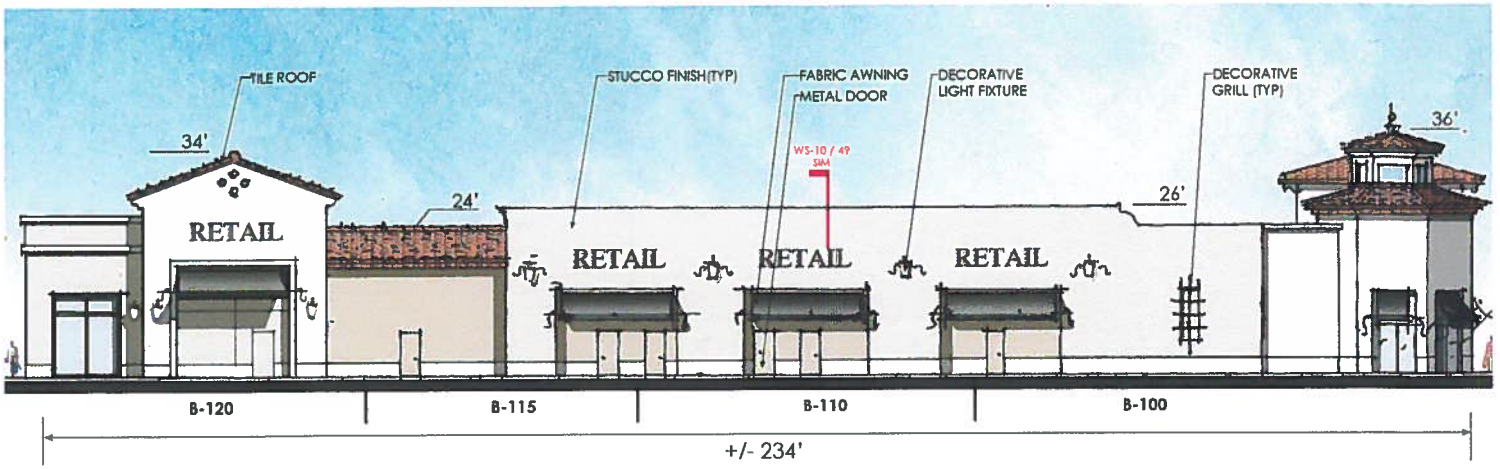
SHEET

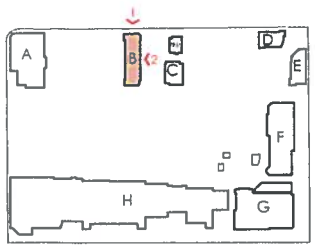
4



EAST ELEVATION - 1



SOUTH ELEVATION -2



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG B ELEVATIONS

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SHEET

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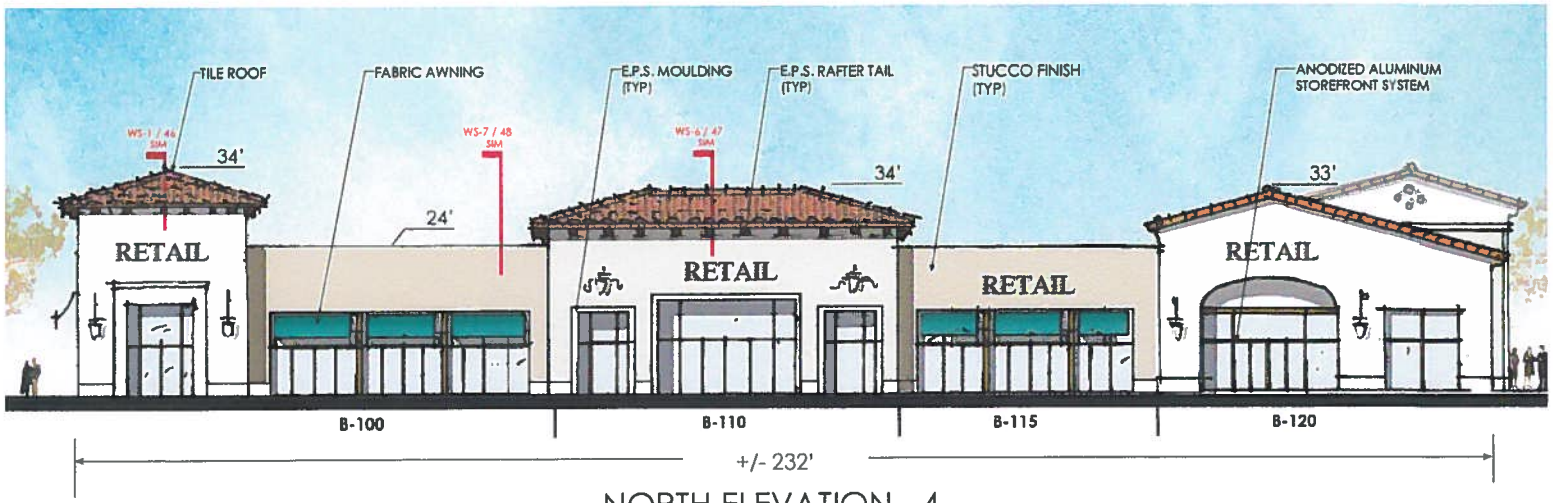
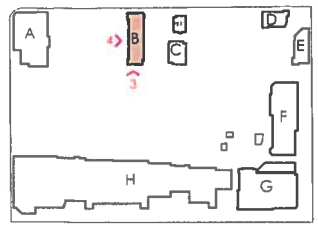
WEST ELEVATION - 3



NORTH ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG B
ELEVATIONS

DATE

Plan Check
Bid Set
Permit
Project Number
Drawing Name
10/09/2015 Plot Date
02/11/2016 Final DRB Submittal

SHEET
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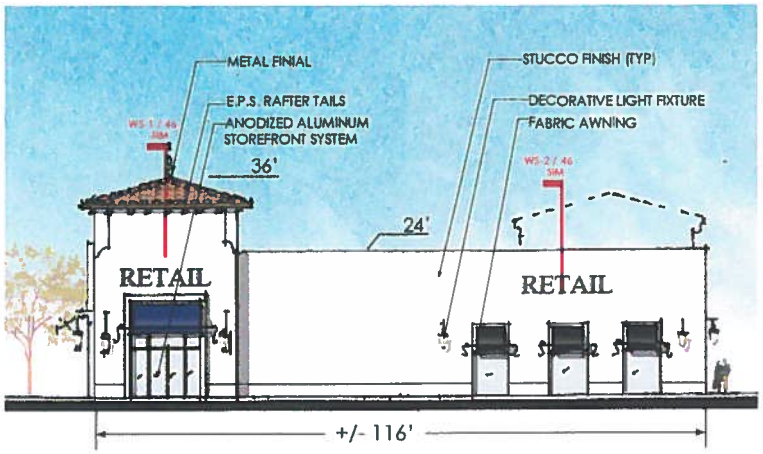
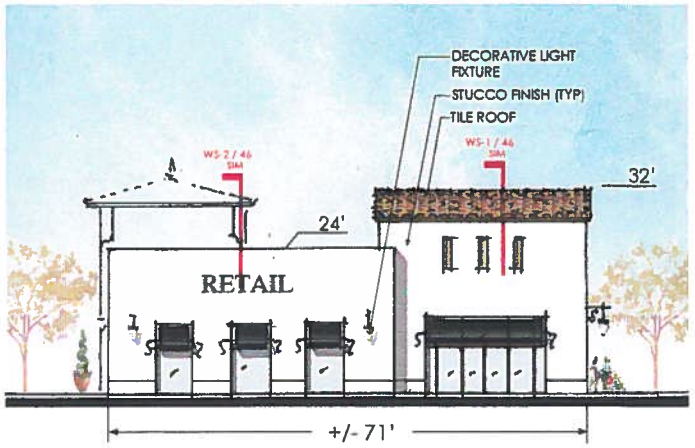
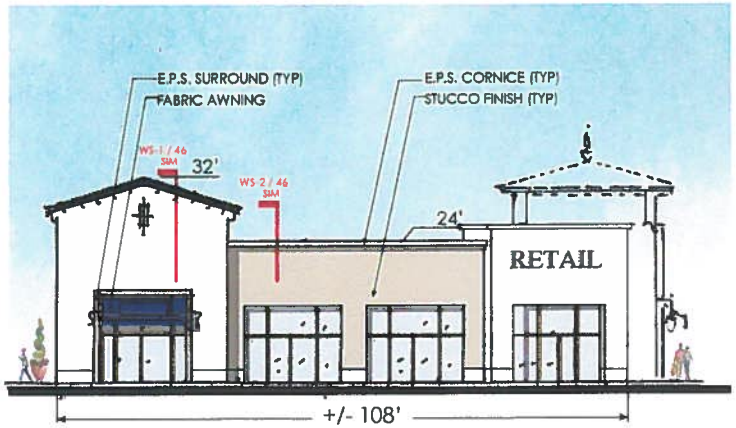


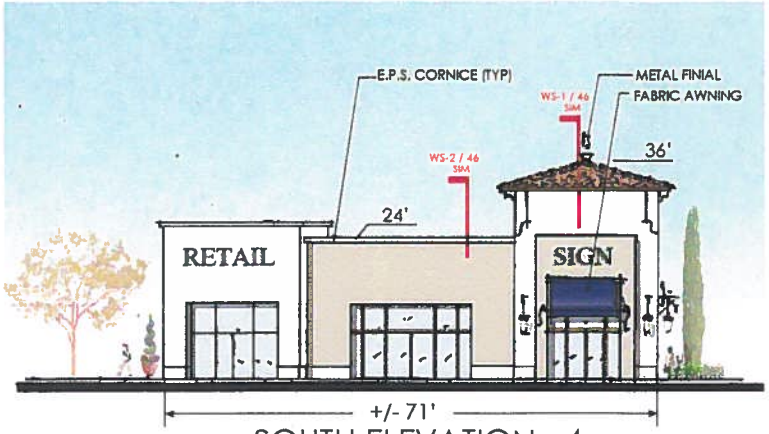
EAST ELEVATION - 1



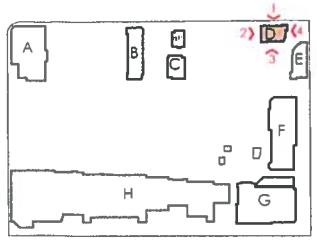
NORTH ELEVATION - 2



WEST ELEVATION - 3



SOUTH ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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BLDG D ELEVATIONS

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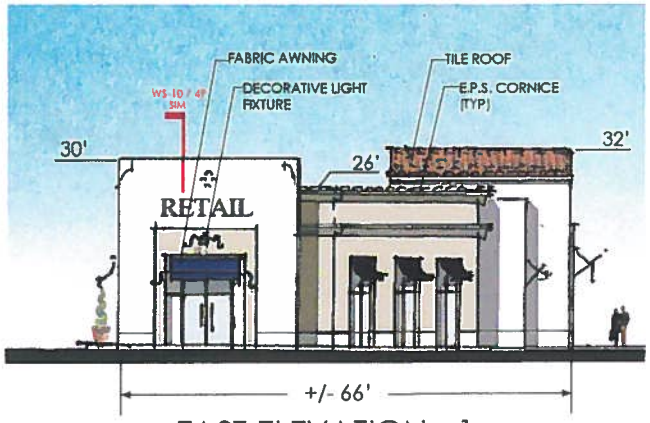
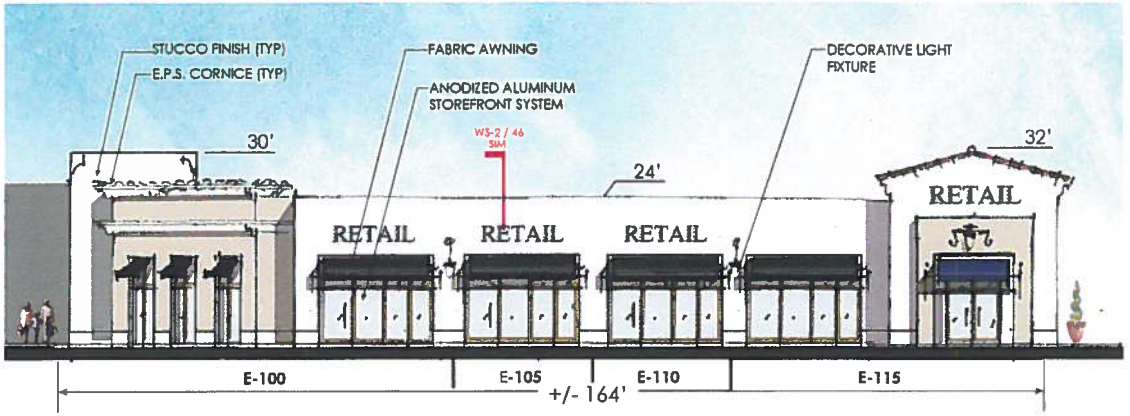
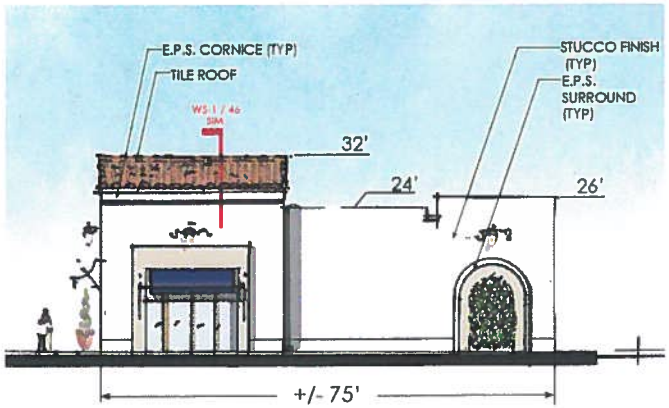


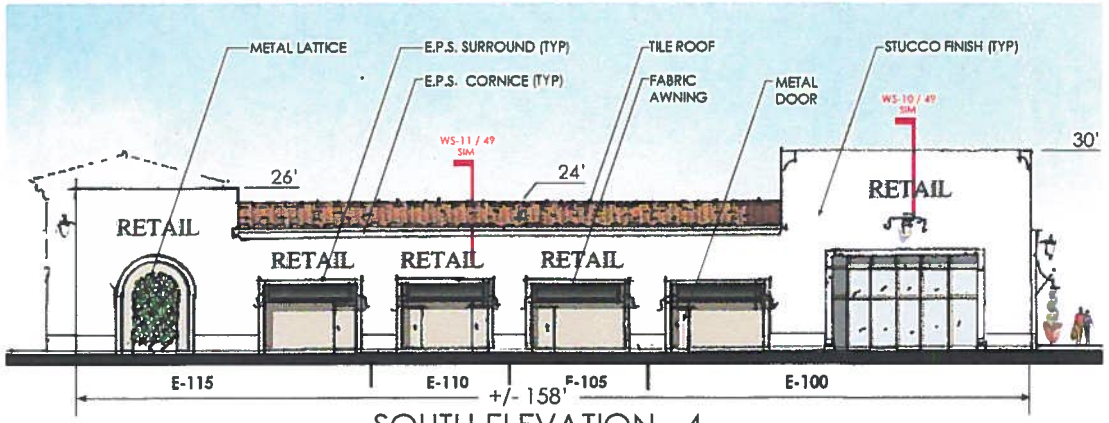
EAST ELEVATION - 1



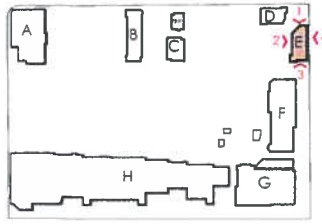
NORTH ELEVATION - 2



WEST ELEVATION - 3



SOUTH ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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CONCORD, CA

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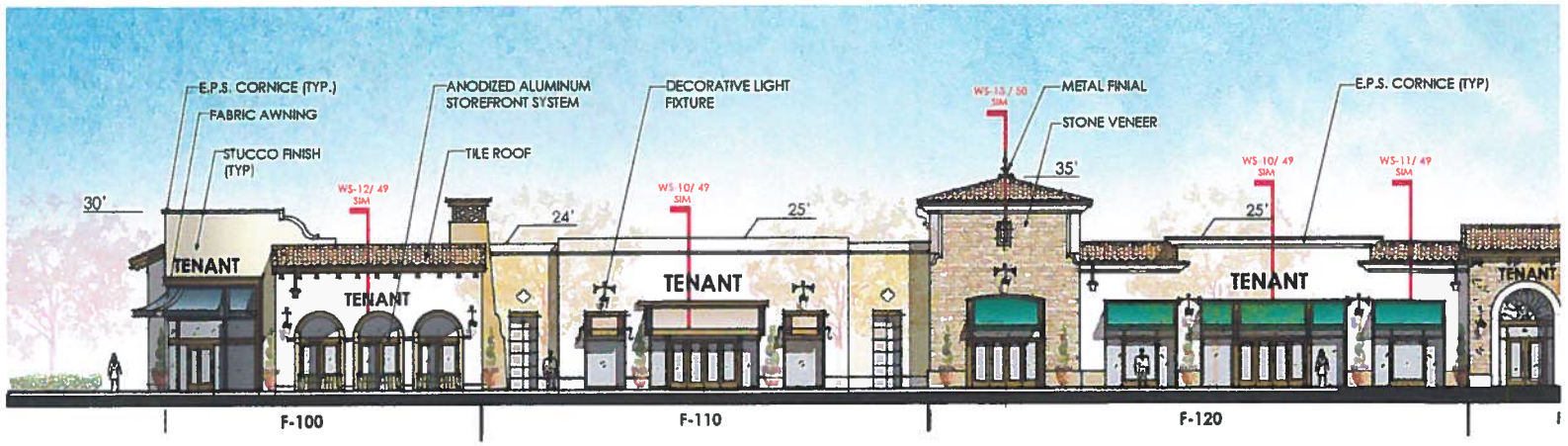
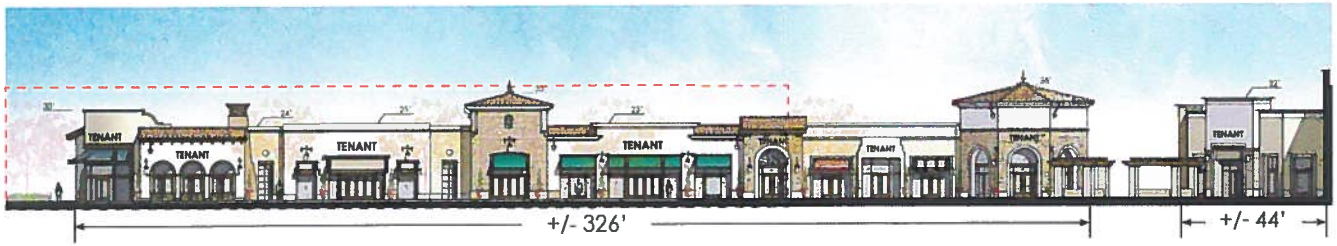
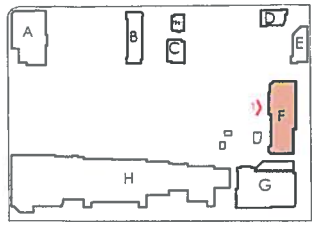


PARTIAL NORTH ELEVATION - 1



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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CONCORD, CA

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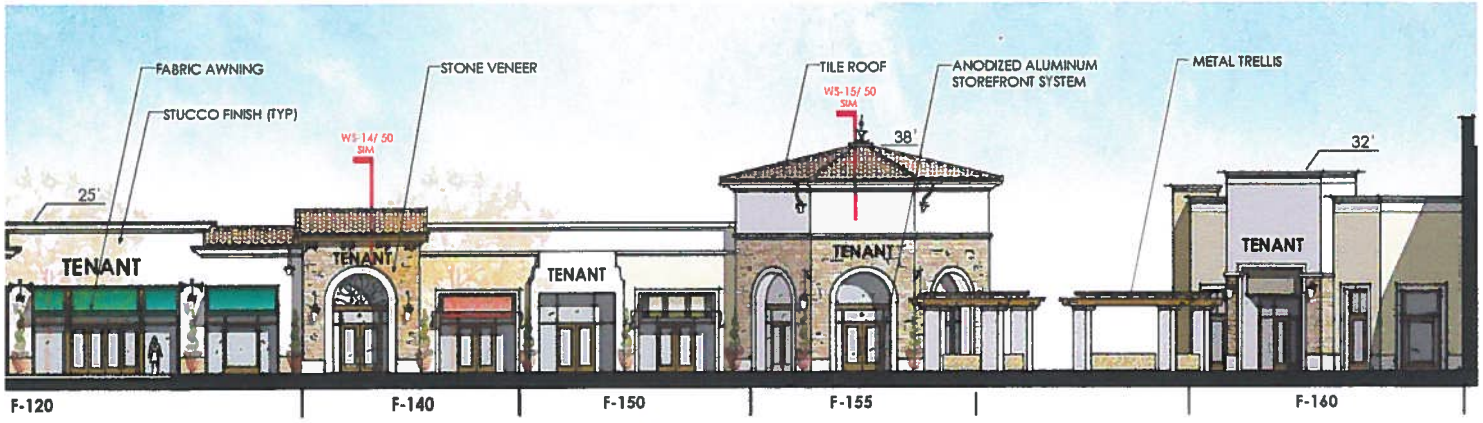
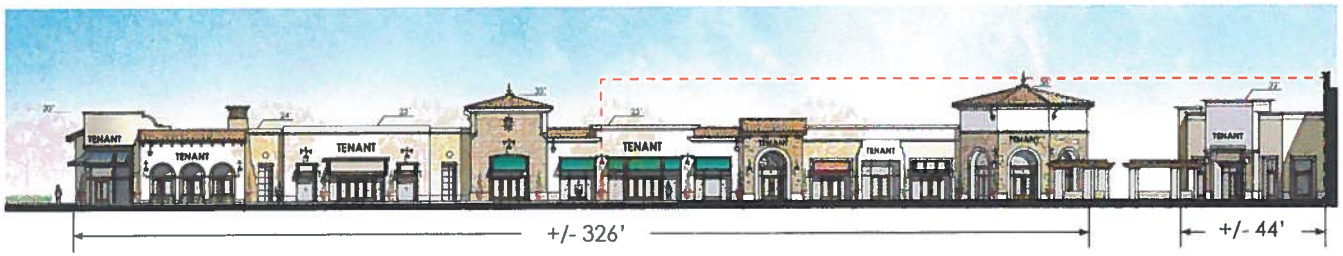
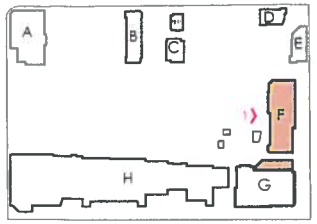
18



PARTIAL NORTH ELEVATION - 1



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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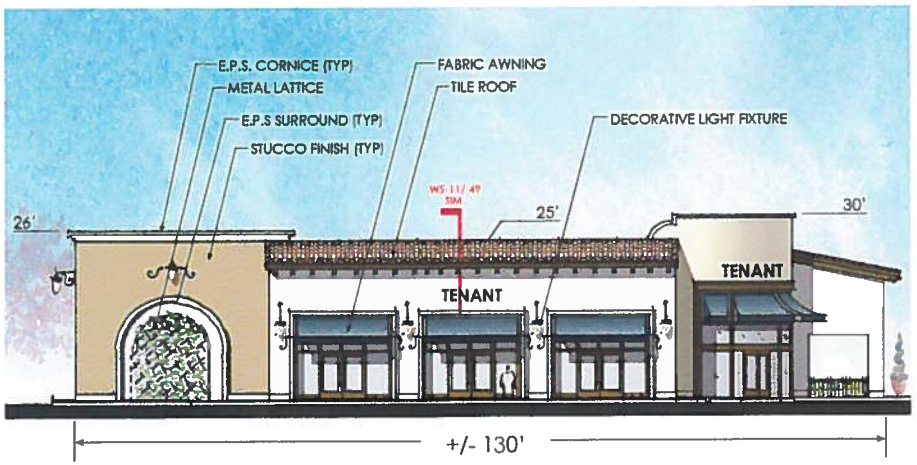
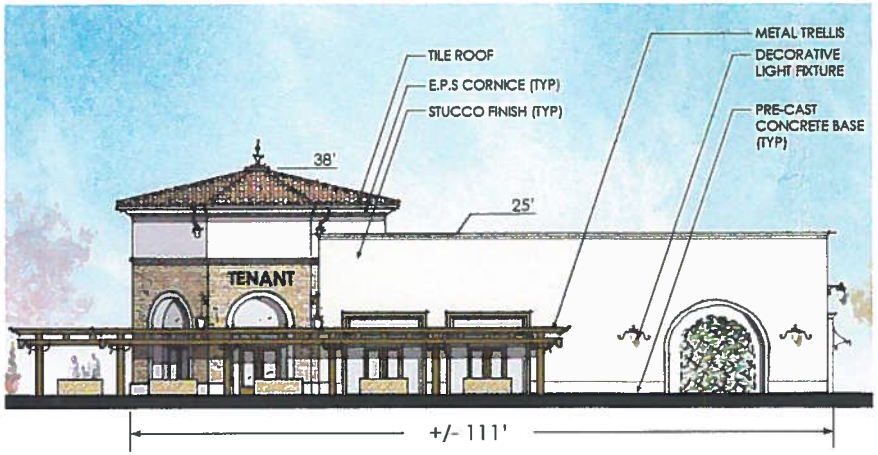
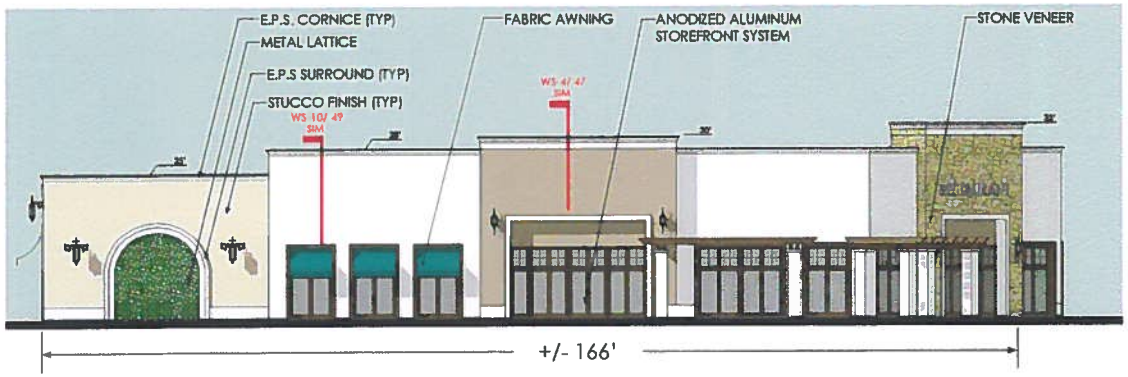


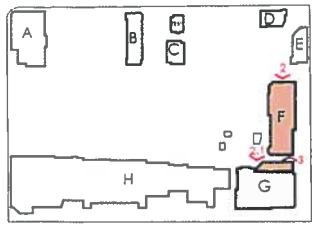
EAST ELEVATION - 2



WEST ELEVATION - 3



EAST ELEVATION - 2.1



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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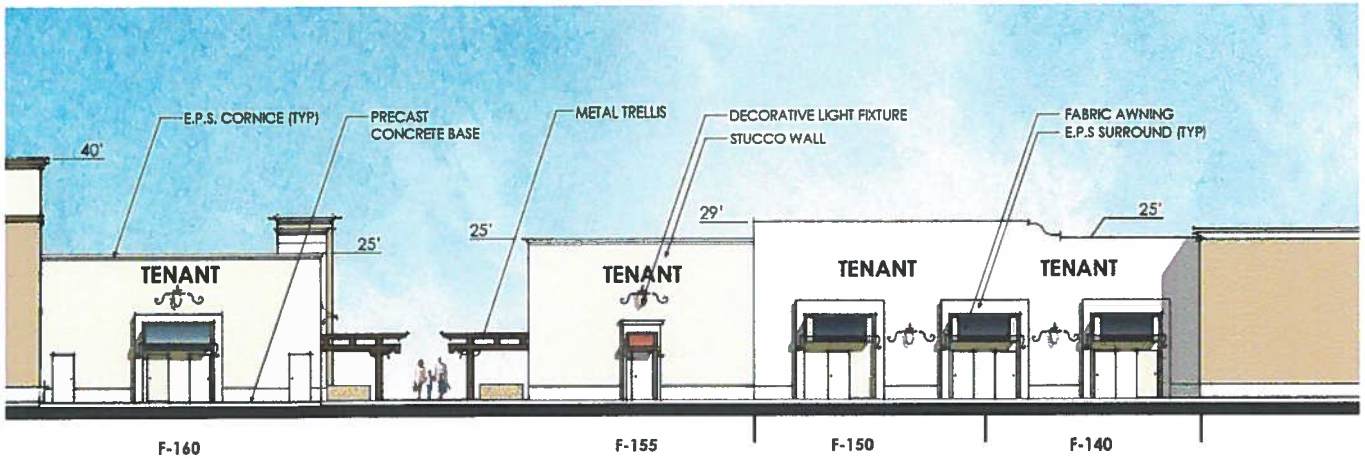
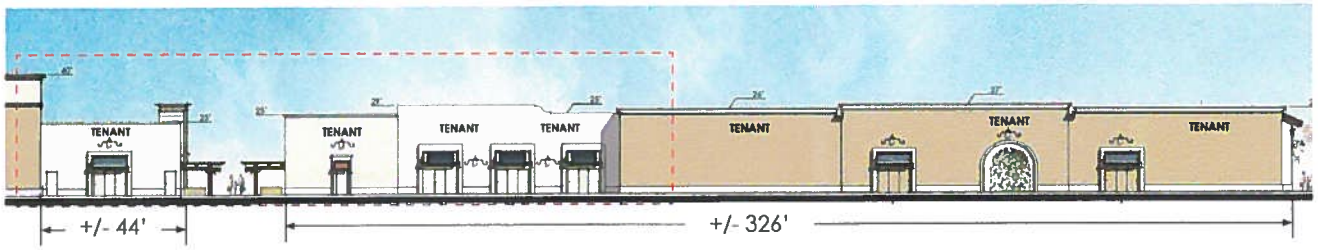


PARTIAL SOUTH ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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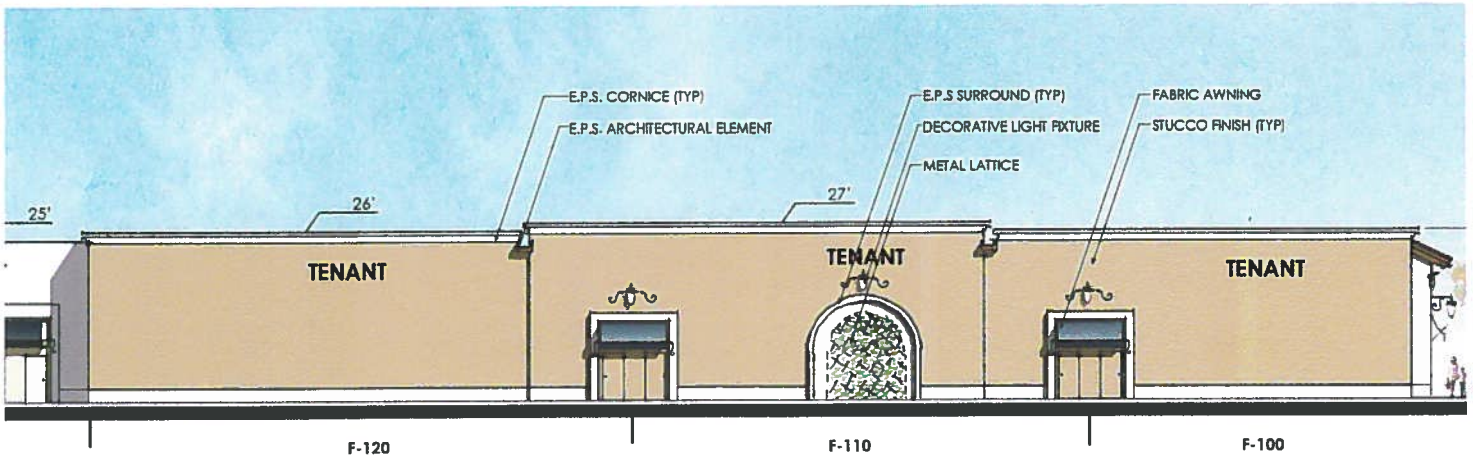
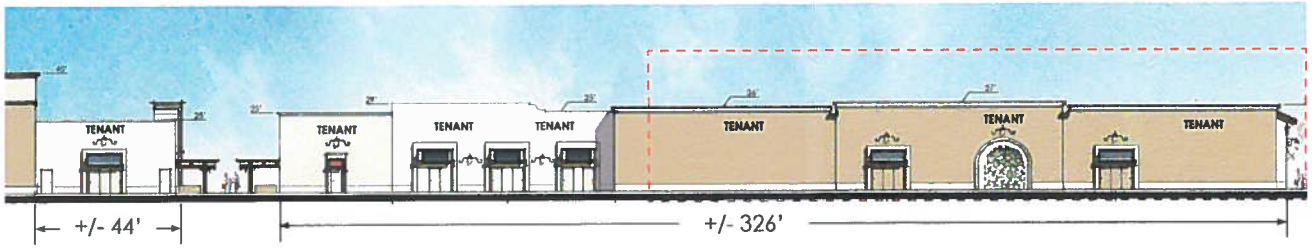
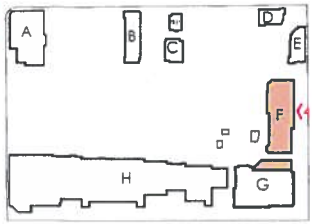


PARTIAL SOUTH ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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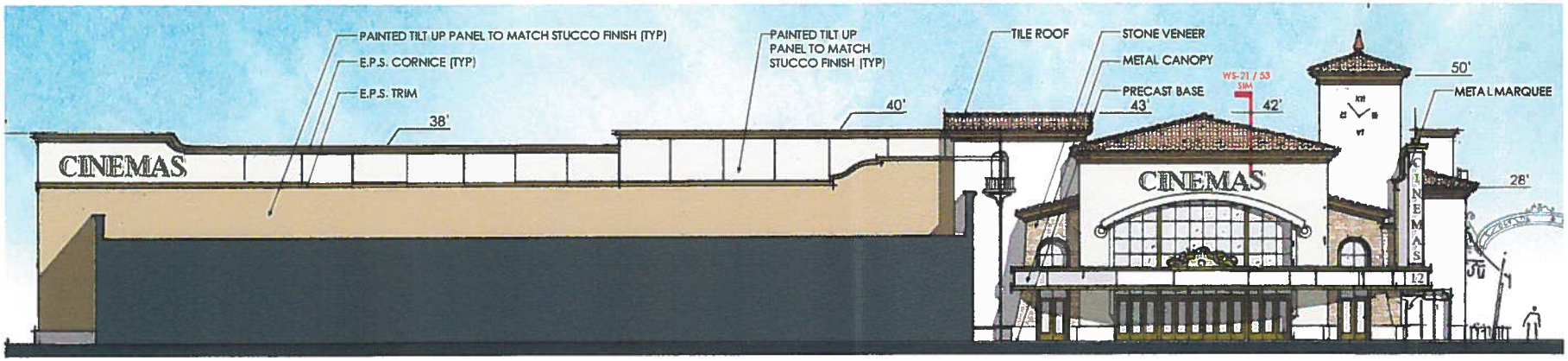
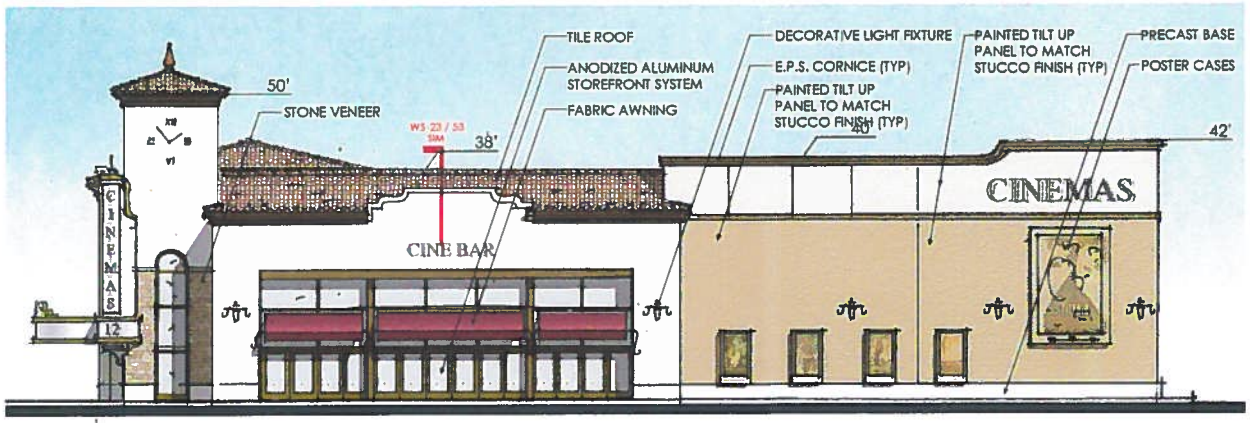
22



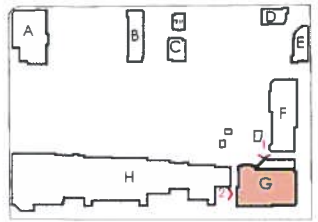
+/- 257'

EAST ELEVATION-1



+/- 186'

NORTH ELEVATION - 2



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD

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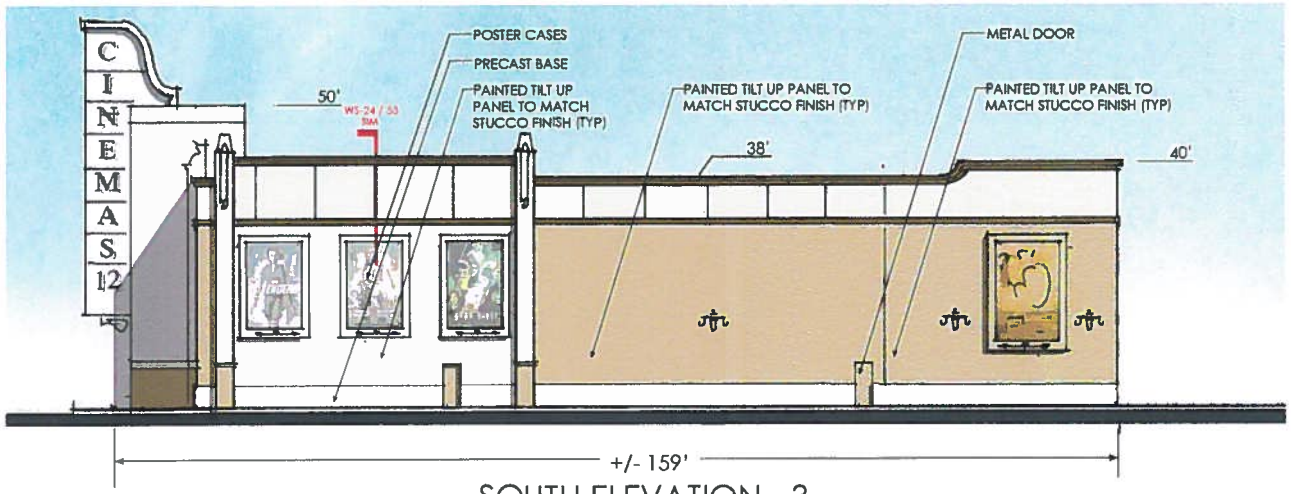
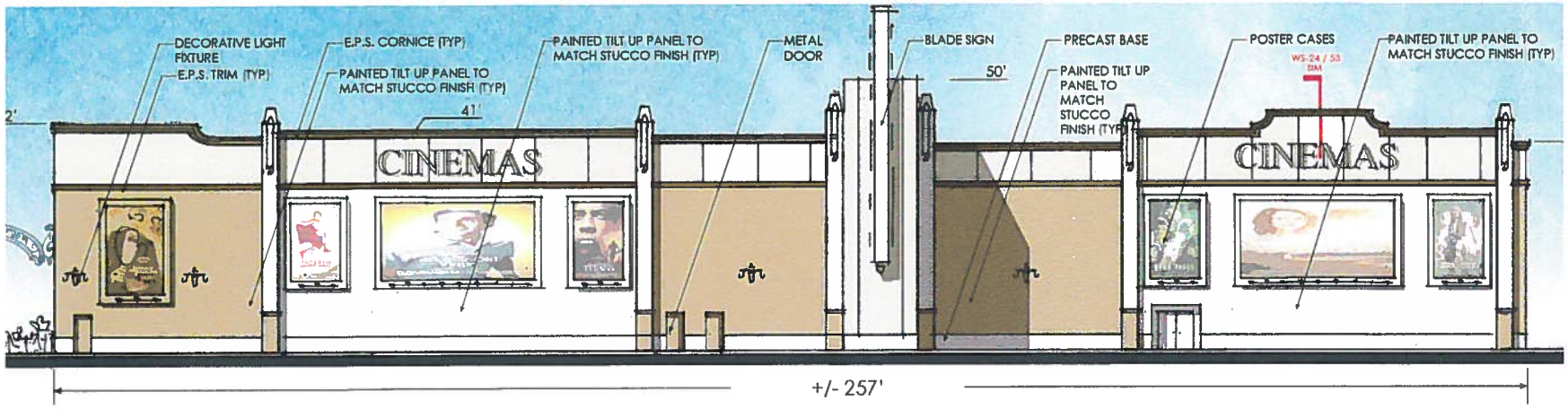
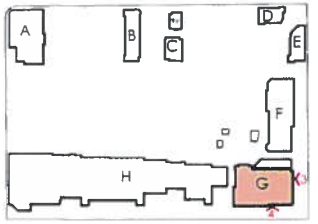
25



SOUTH ELEVATION - 3



WEST ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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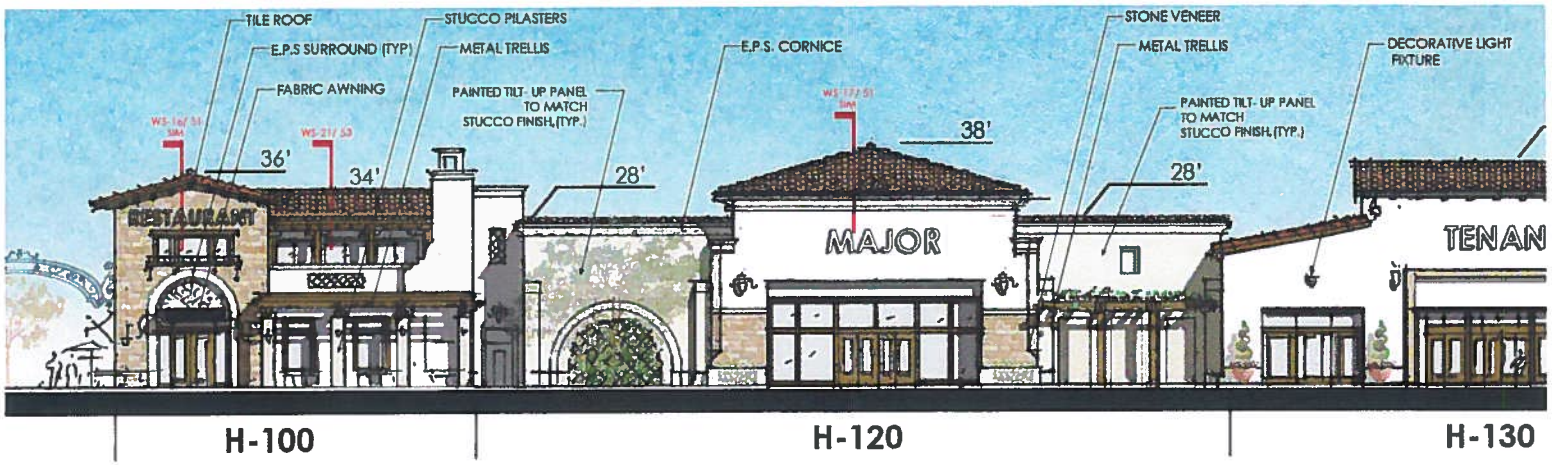
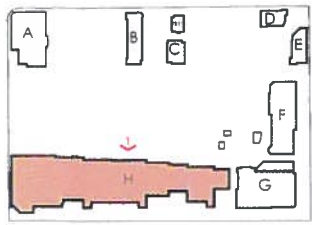
26



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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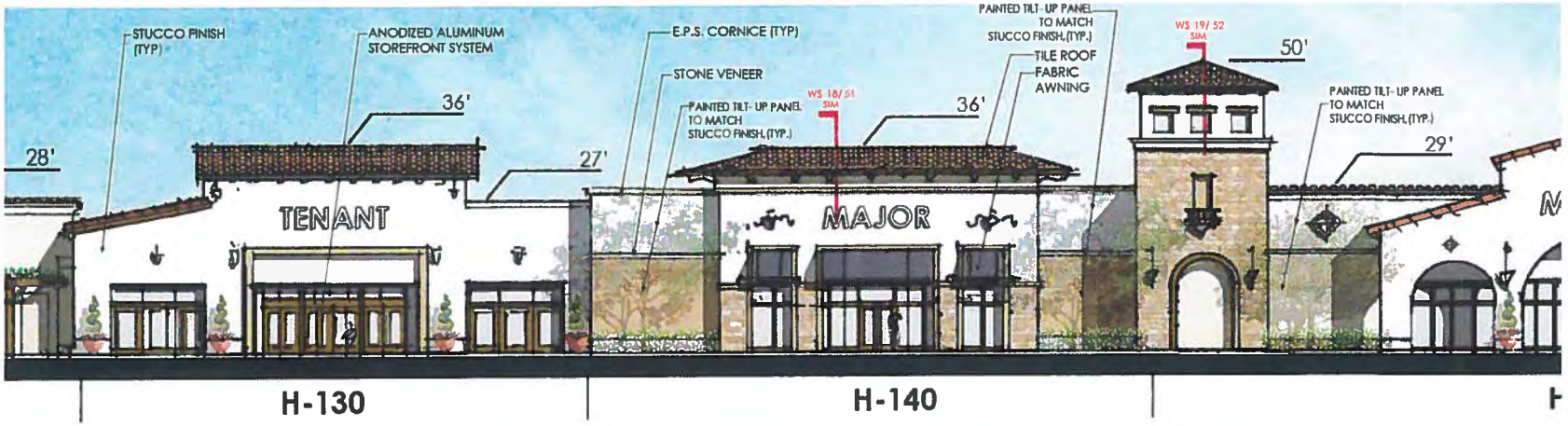
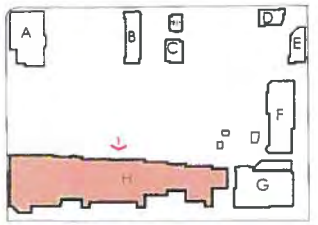
29



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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CONCORD, CA

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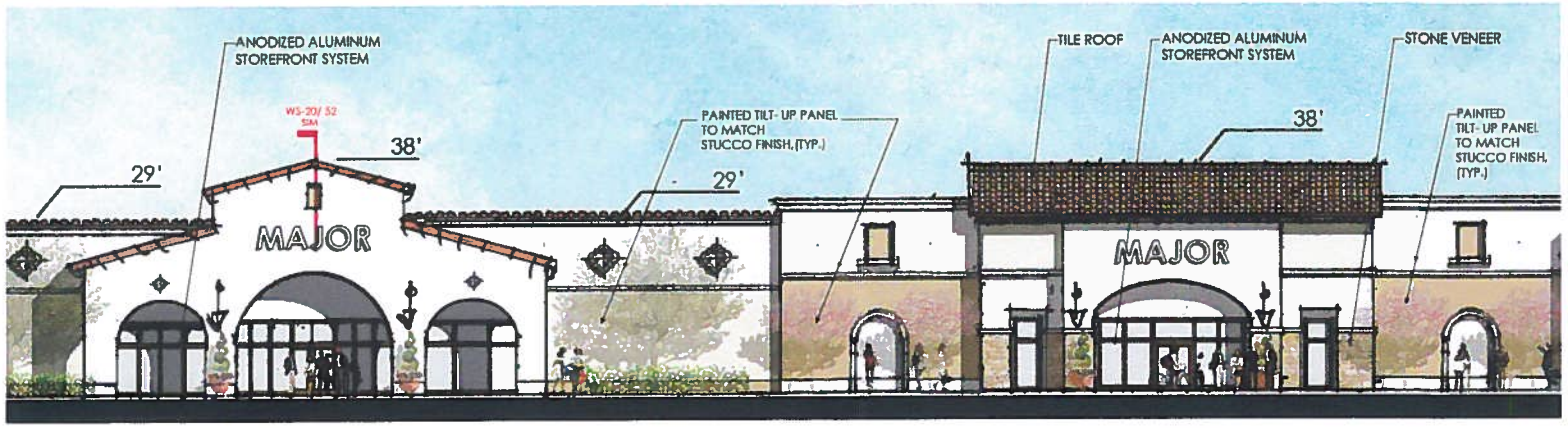
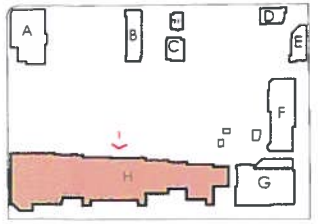
30



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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DIAMOND BLVD & GALAXY WAY
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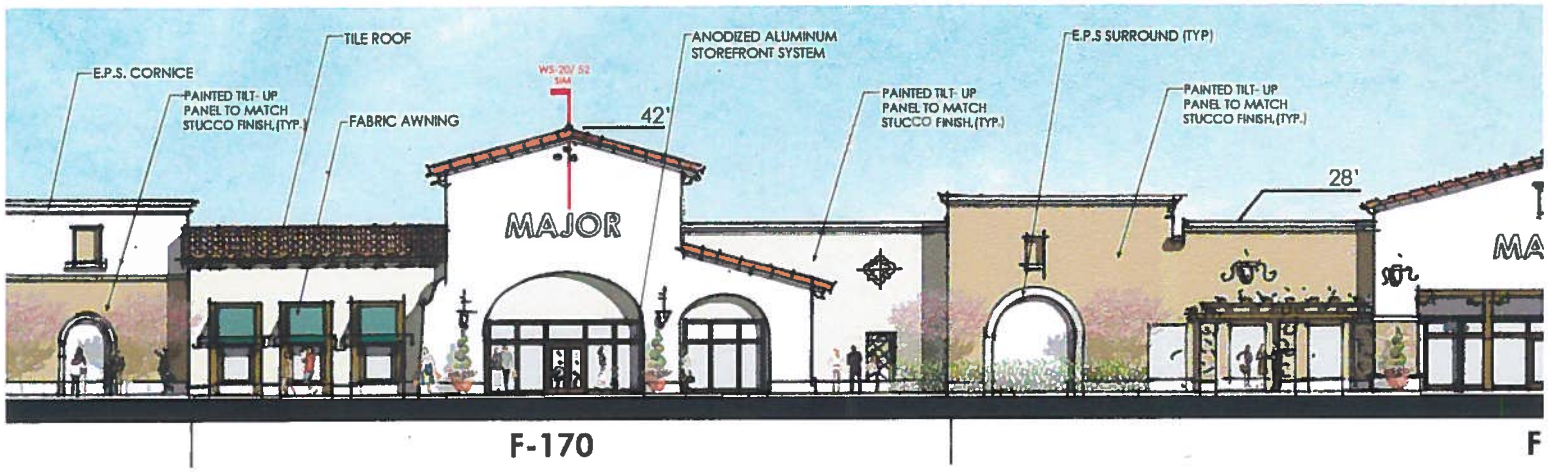
31



PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE

SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
DIAMOND BLVD & GALAXY WAY
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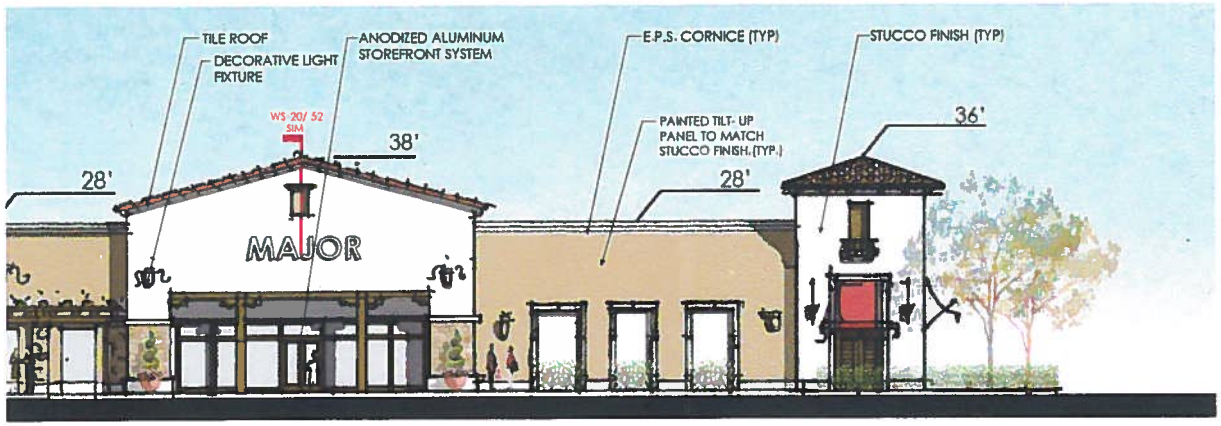
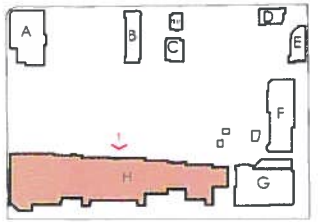


F-180

PARTIAL EAST ELEVATION - 1

OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

CONCORD
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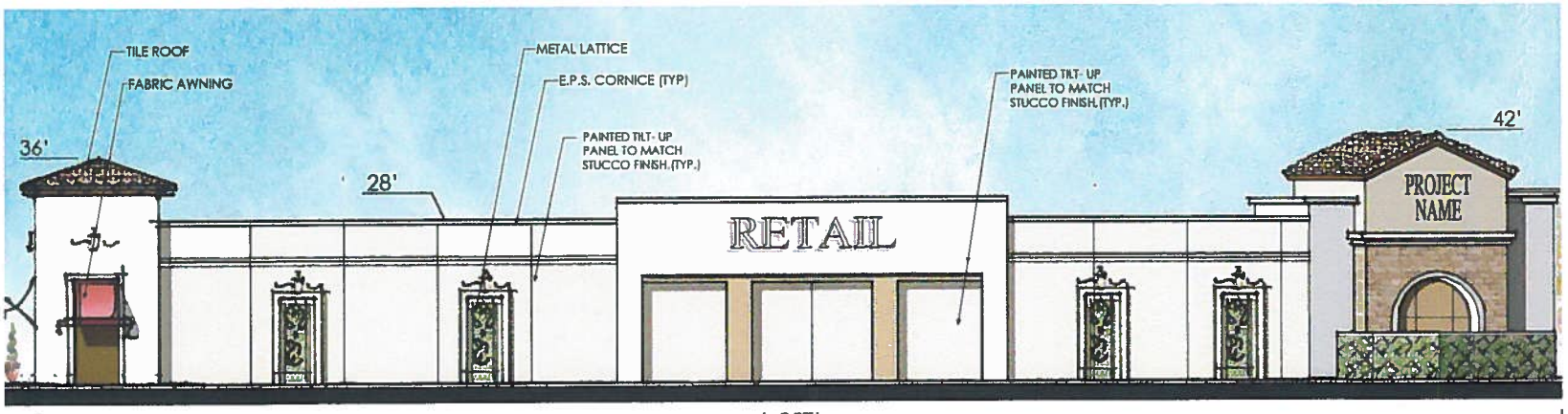
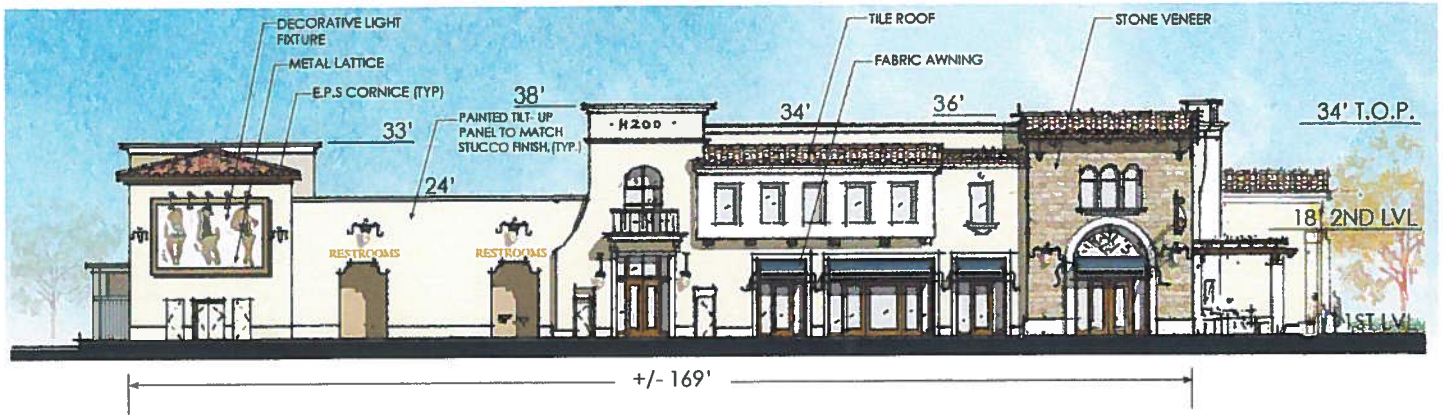
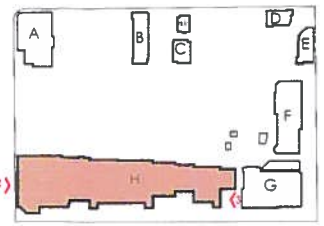


NORTH ELEVATION - 2



SOUTH ELEVATION - 3



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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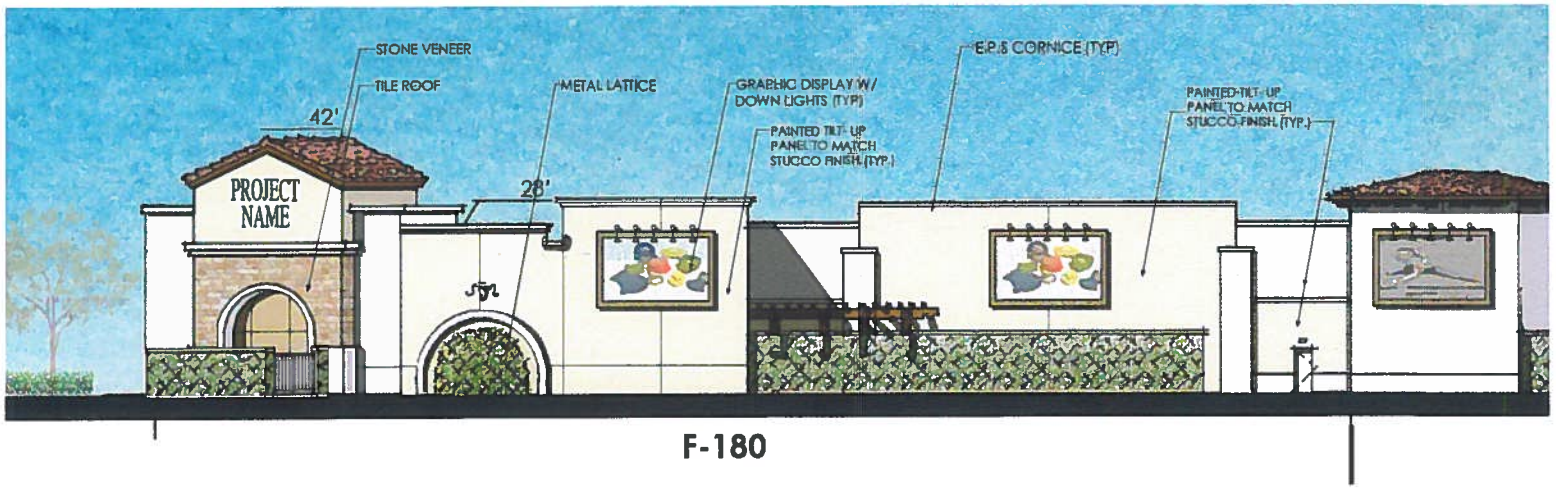
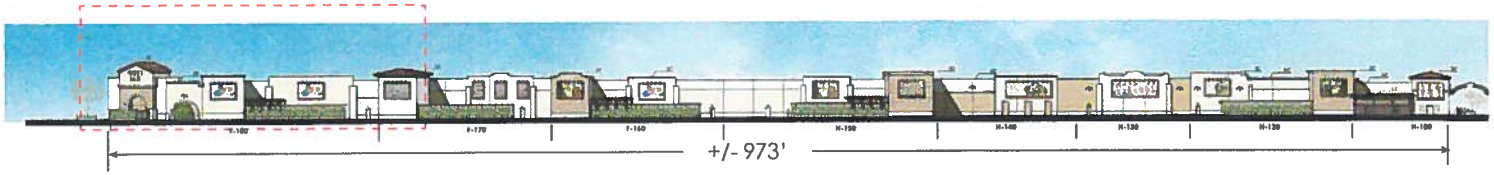
34

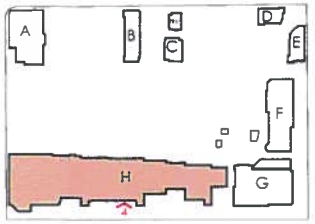


F-180

PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

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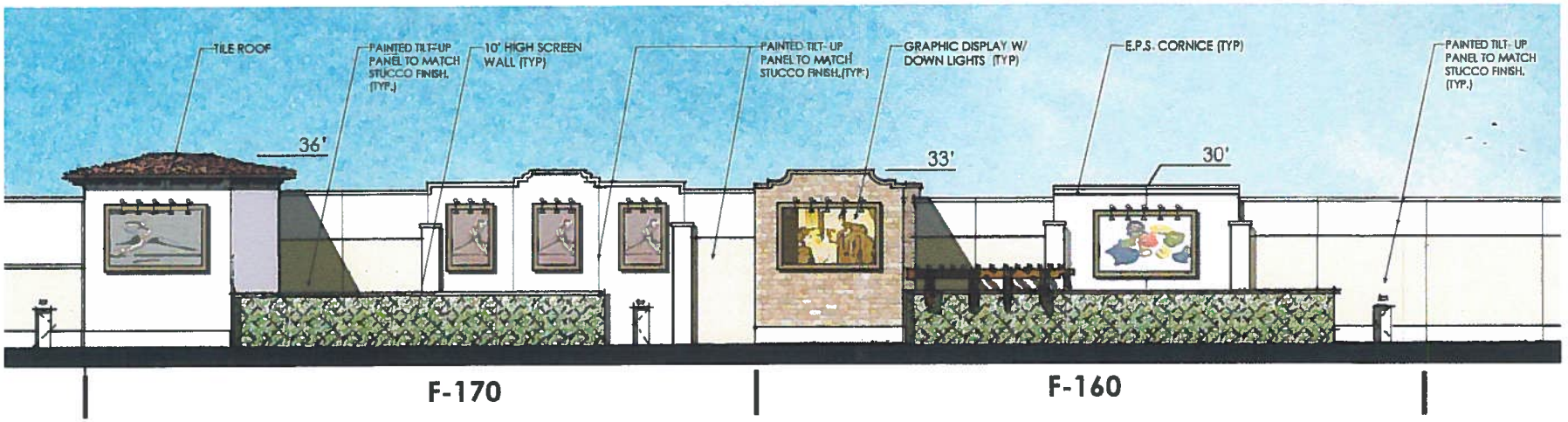
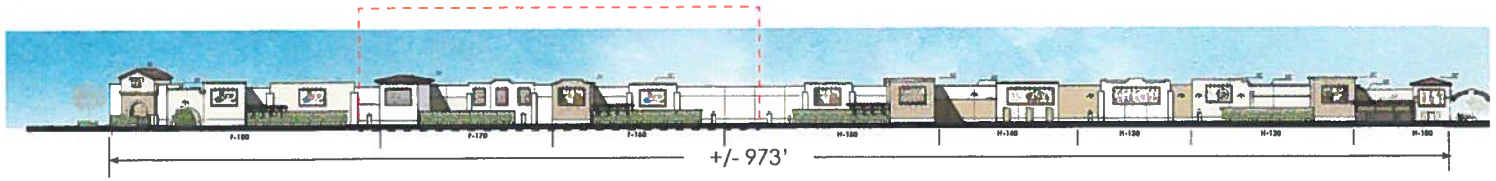
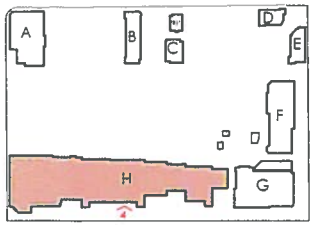


PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

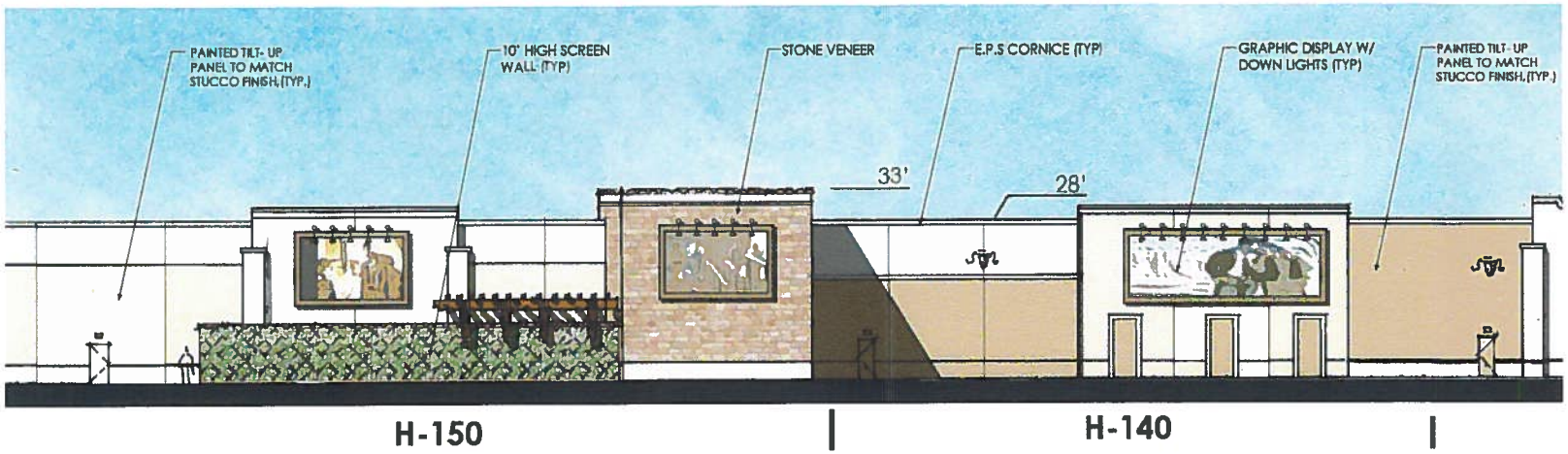
CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

BLDG H
ELEVATIONS

DATE
Plan Check
Bid Set
Permit
Project Monitor
Drawing Name
Plot Date
12/09/2016
05/11/2016 Final DRB Submittal

SHEET
36



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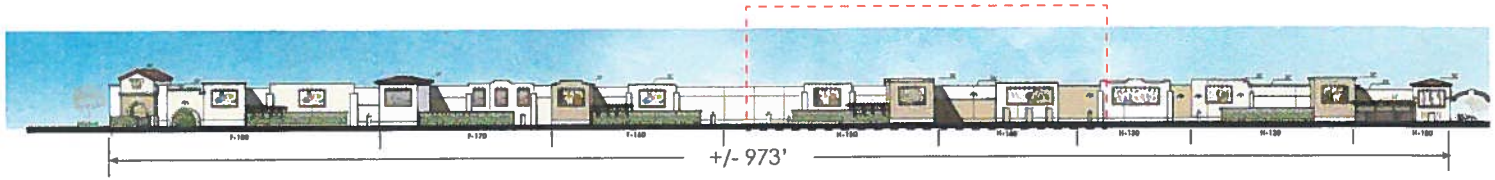
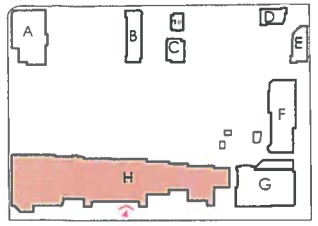


OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

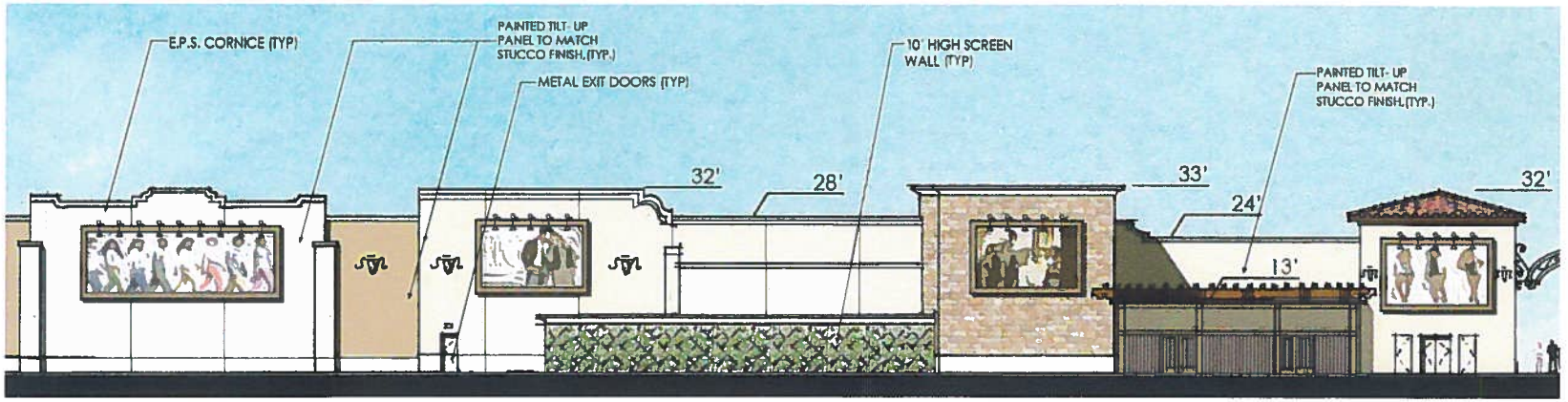
CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL

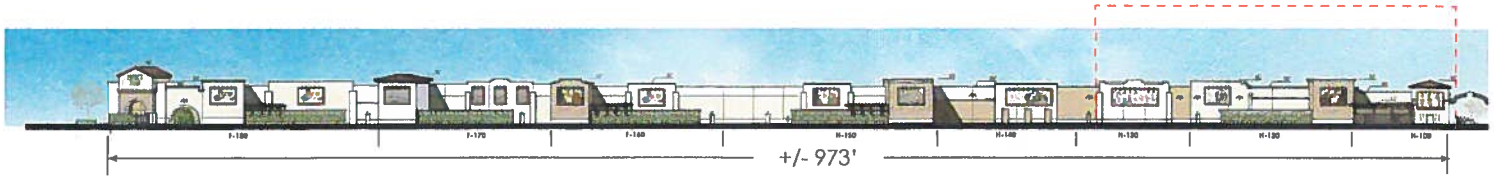
BLDG H ELEVATIONS

DATE
Plan Check
Bid Set
Permit
Project Number
Drawing Name
12/09/2015 Plot Date
02/11/2016 1 Final DRB Submittal

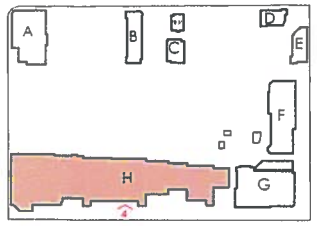
SHEET
37



PARTIAL WEST ELEVATION - 4



OVERALL ELEVATION
NOT TO SCALE



SCALE: 1/8" = 1'

ARCHITECTS ORANGE

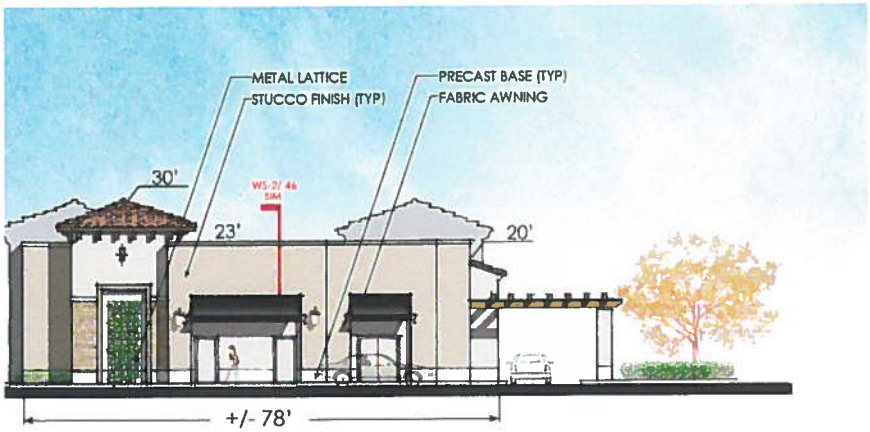
CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

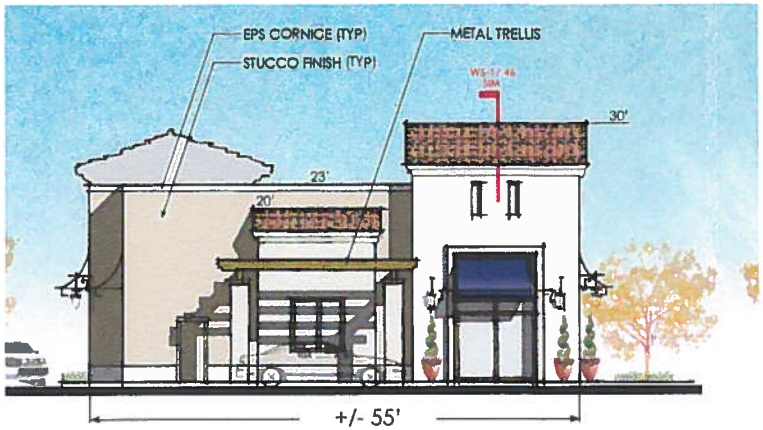
BLDG H
ELEVATIONS

DATE
Plan Check
Bid Set
Permit
Project Number
Drawing Name
10/09/2015 Plot Date
02/11/2016 Final DRB Submittal

SHEET
38

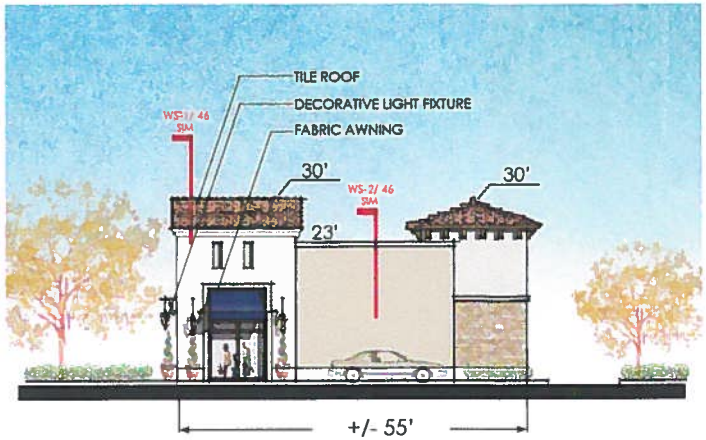


NORTH ELEVATION - 1

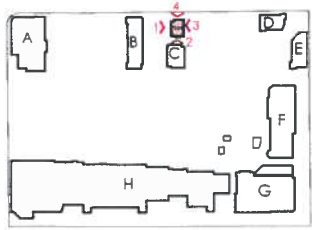


WEST ELEVATION - 2

SOUTH ELEVATION - 3



EAST ELEVATION - 4



SCALE: 1/8" = 1'

ARCHITECTS ORANCE

CONCORD
DIAMOND BLVD & GALAXY WAY
CONCORD, CA

CENTERCAL PROPERTIES, LLC

PD-A1
ELEVATIONS

DATE

	Plan Check
	Bid Set
	Permit
	Project Number
	Drawing Name
12/09/2016	Plot Date
02/11/2016	1 Final DRB Submittal

SHEET

43

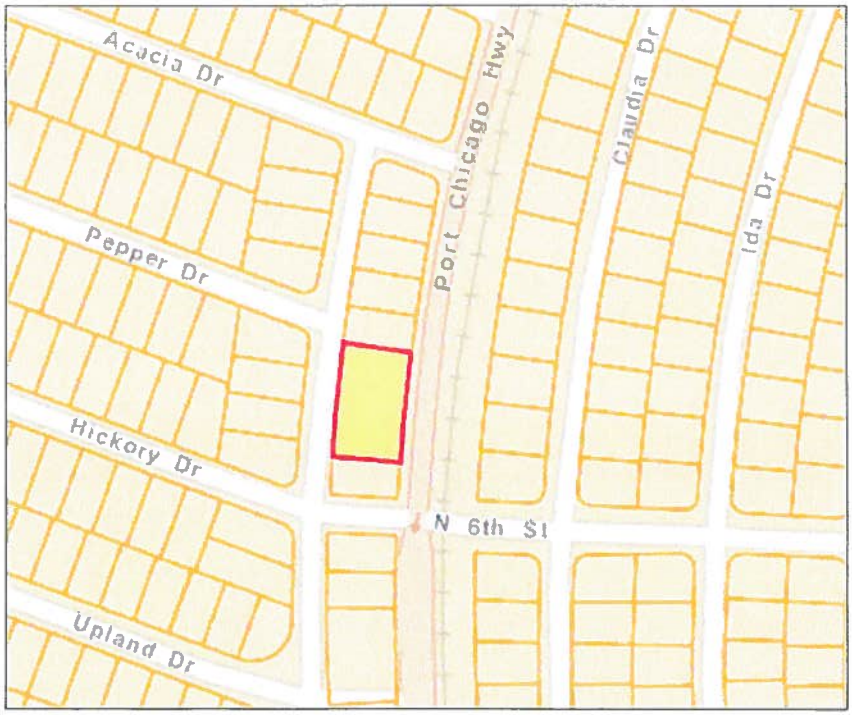
Concord **REPORT TO DESIGN REVIEW BOARD**

DATE: April 14, 2016

I. GENERAL INFORMATION

Project Name:	**El Primo Tire (PL16066 – DR)**
Review Status:	**Preliminary Review**
Location(s):	**2807 Port Chicago Highway**
Parcel Number(s):	**110-071-002**
General Plan:	**Neighborhood Commercial**
Zoning:	**NC (Neighborhood Commercial)**
Applicant:	**Raj Singh** **2807 Port Chicago Highway** **Concord, CA 94520**

Vicinity Map:



II. PROJECT BACKGROUND

On February 22, 2016, Raj Singh filed a Use Permit and Design Review application to establish an automotive service specializing in tire service and repair, and to construct related site improvements on a 0.4-acre site located at 2807 Port Chicago Highway.

The project has been reviewed by the Development Advisory Committee (DAC) who commented on concerns related to site circulation that is discussed in this report. A neighborhood meeting was held for the project on April 7, 2016. Neighbors who attended the meeting or sent comments did not raise any concerns related to the project's design.

III. PROJECT DESCRIPTION AND DISCUSSION

The 0.4-acre site fronts Port Chicago to the east and a residential street, Garden Avenue, to the west. Abutting uses consist of single family residential to the north and a convenience store to the south. The site is currently developed with a 945 square foot service building located along the southern portion of the site, gas station with four fueling dispensers and canopy at the middle of the site, and a non-operating car wash at the north end of the site. Three existing driveways – two on Port Chicago and one on Garden Avenue – provide vehicle access to the site.

The project proposes the following:

- Replace existing service building's storefront windows with garage doors to add two service bays;
- Add 694 square feet to the existing service building by enclosing an outdoor storage area located behind the building;
- Redesign the existing service building with stucco and metal siding façade enhancements;
- Add a new 600 square foot service building constructed of stucco; and
- Construct new landscaping.

Additional project information is provided in the applicant's Project Description and Design Statement, included as Exhibit A.

Staff supports the project and the applicant's willingness to improve the site and does not have any comments regarding the proposed architecture and landscaping. However, staff has the following comments and recommendations (by way of the Development Advisory Committee) regarding site circulation:

- The project may introduce conflicting vehicle movements at the northerly driveway off Port Chicago Highway. The location and orientation of the new service building requires cars to enter and back out of the garage from the same driveway that is used to access the gas station. Staff recommends the following alternatives to avoid this potential conflict:

  1) Shift westerly, or otherwise relocate, the proposed building;
  2) Rotate building to re-orient the service bay away from the driveway; or
  3) Shift the existing driveway southerly, separately, or together with alternatives #1 and #2.

IV. RECOMMENDED ACTION

Staff recommends the Board review the plans, consider the recommendations discussed in this report, identify any additional issues, and provide the applicant with comments for incorporation into plans for Final Design Review.

Staff Recommendations

- The project may introduce conflicting vehicle movements at the northerly driveway off Port Chicago Highway. The location and orientation of the new service building requires cars to enter and back out of the garage from the same driveway that is used to access the gas station. Staff recommends the following alternatives to avoid this potential conflict:

  1) Shift westerly, or otherwise relocate, the proposed building;
  2) Rotate building to re-orient the service bay away from the driveway; or
  3) Shift the existing driveway southerly, separately, or together with alternatives #1 and #2.

Prepared by: Frank Abejo

Frank Abejo
Senior Planner
(925) 671-3128
frank.abejo@cityofconcord.org

Exhibits:

A - Applicant's Project Description and Design Statement
B - Project plans received February 22, 2016

EXHIBIT A

2807 Port Chicago Highway
Project Description and Design Statement

Built originally in 1952 as a service station. The existing building built at that time was a modular/prefabricated proprietary system using formed metal panels, metal columns and metal roof trusses as the components of the building. Subsequently, a car wash car port type structure was added to the property. Still later the existing service station was clad in T-111 plywood and wood trim attached to the existing structure with 2x wood furring strips. No construction documents are available for the existing structure or the subsequent T-111 exterior material change.

Initially the owner desired to cover the existing plywood exterior of the service station with stucco to upgrade the buildings appearance, to construct a minor addition to provide additional storage for inventory and to make other minor adjustments to the facade to better facilitate the tire and wheel business currently located in the service station building. In addition it was desired to remove the car wash structure and replace it with an additional separate service bay in the same location.

A structural engineer was retained to provide a initial structural analysis of the existing service station. The findings were that the existing structure was not adequate to support the existing furring and plywood sheathing and wood not support the additional load that would be imposed by adding the stucco exterior finish. His recommendation was to remove the plywood and furring and apply a light weight finish to the existing structure. Accordingly, it proposed to use a metal siding on large sections of the existing building. To provide more relief, a self supporting stucco build out is proposed at the existing service bays, the addition to the building will be constructed with conventional framing and finished in stucco.

The new service bay will also be conventionally framed and finished with stucco in a design that is intended to be complementary to the renovated existing service station building.

Site development is minimal with no changes to the existing site circulation. Additional landscape areas have been added on the west side of the lot to provide a buffer for the proposed new parking to the street and diminish some of the paving area. Two small landscaping areas have also been added along Port Chicago Highway for the same purpose.

2807 Port Chicago Highway
Concord, California

BUILDING ADDITION & FACADE IMPROVEMENT

ABBREVIATIONS

AB	ANCHOR BOLT
AC	ASPHALT CONCRETE
A/C	AIR CONDITIONING
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL TILE
ADJ	ADJUSTABLE/ADJACENT
AFF	ABOVE FINISH FLOOR
AL	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
BA	BATH
BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BR	BEDROOM
CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT
CER	CERAMIC
CI	CAST IRON
CJ	CONSTRUCTION JOINT
CL	CENTERLINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
COL	COLUMN
COMP	COMPOSITION
CONC	CONNECTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSUNK
CT	CERAMIC TILE
D	DEPTH
DET	DETAIL
DF	DOUGLAS FIR/ DRINKING FOUNTAIN
DIAM	DIAMETER
DIM	DIMENSION
DR	DOOR
DS	DS
DWG	DWG
(E)	EXISTING
EA	EACH
ECP	EXTERIOR CEMENT PLASTER
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EQ	EQUAL
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
FAU	FORCED AIR UNIT
FD	FLOOR DRAIN
F EXT	FIRE EXTINGUISHER
FIN	FINISH
FLR	FLOOR
FLUOR.	FLUORESCENT
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZE (D)
GAR	GARAGE
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GFRC	GLASS FIBER REINFORCED CONCRETE
GI	GALVANIZED IRON
GTV	GATE VALVE
GYP	GYPSUM
HB	HOSE BIB
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HR	HOUR
HT	HEIGHT
HW	HOT WATER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
INSUL	INSULATION
INT	INTERIOR
ID	INSIDE DIAMETER
JAN	JANITOR
JB	JUNCTION BOX
JT	JOINT
KIT	KITCHEN
LAV	LAVATORY
LOC	LOCATION
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MASTER BEDROOM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MSTR	MASTER
MTL	METAL
MULL	MULLION
(N)	NEW
NA	NOT APPLICABLE OR NOT AVAILABLE
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NTS	NOT TO SCALE
o/	OVER
OC	ON CENTER
OD	OUTSIDE DIAMETER
ORD	OVERFLOW ROOF DRAIN
OFF	OFFICE
OPNG	OPENING
OPP	OPPOSITE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
R	RISER
(R)	RELOCATE(D)
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RDWD	REDWOOD
REC	RECESSED
REQ	REQUIRED
REINF	REINFORCED
RHMS	ROUND HEAD MACHINE SCREW
RM	ROOM
RO	ROUGH OPENING
RWL	RAINWATER LEADER
SBO	SUPPLIED BY OWNER
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SD	STORM DRAIN
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
T	TREAD
TC	TOP OF CURB/CONCRETE
TEL	TELEPHONE
T&G	TONGUE AND GROOVE
THK	THICKNESS
TO	TOP OF
TOS	TOP OF SLAB
TYP	TYPICAL
T 24	TITLE 24
UON	UNLESS OTHERWISE NOTED
UR	URINAL
VCP	VITREOUS CLAY PIPE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDTH
W/	WITH
WC	WATER CLOSET
WD	WOOD
WG	WIRE GLASS
WH	WATER HEATER
WS	WEATHERSTRIPPING
WWF	WELDED WIRE FABRIC

SYMBOLS

EXTERIOR ELEVATION
EXTERIOR ELEVATION NUMBER
SHEET WHERE ELEVATION OCCURS

INTERIOR ELEVATION
WALL DESIGNATION NUMBER
INTERIOR ELEVATION NUMBER
SHEET WHERE INTERIOR ELEVATION OCCURS

BUILDING SECTION CUT
SECTION NUMBER
SHEET WHERE SECTION OCCURS

WALL SECTION
WALL SECTION NUMBER
SHEET WHERE WALL SECTION OCCURS

DETAIL BUBBLE
DETAIL NUMBER
SHEET WHERE DETAIL OCCURS

DETAIL SECTION
DETAIL NUMBER
SHEET WHERE DETAIL OCCURS

DOOR TAGS
ROOM NUMBER & DOOR LETTER
HARDWARE GROUP (NUMBER)
OR
DOOR NUMBER

WINDOW TAG
WINDOW NUMBER

FINISH TAG
FINISH
COLOR

ROOM TAG
ROOM NAME
ROOM NUMBER

KEYNOTE
KEYNOTE NUMBER-NUMBER CORRESPONDS TO NUMBER IN KEYNOTE LEGEND

ELEVATION TARGET OR WORKING POINT

MATCH LINE
SHEET WHERE MATCH PLAN OCCURS

EXISTING SPOT ELEVATION

NEW SPOT ELEVATION

REVISION DIAMOND
A=ADDENDUM
C=CHANGE ORDER
ADDENDUM OR CHANGE ORDER NUMBER
ITEM NUMBER

PROJECT DATA:

BUILDING SUMMARY:

A.P.N.	112-053-001
BUILDING OCCUPANCY GROUPS.	B, M
BUILDING CONSTRUCTION TYPE.	V-II/NON-SPRINKLED
STORIES:	1 MULTI-TENANT
SUITE A	
FLOOR AREA:	1431 SF
OCCUPANCY LOAD	19
EXITS REQUIRED	1 EXIT REQUIRED, 2 EXITS PROVIDED
SUITE B:	
FLOOR AREA.	894 S.F
OCCUPANCY LOAD	9
EXITS REQUIRED:	1 EXIT REQUIRED, 1 EXIT PROVIDED
BATHROOMS	29 52 SF
TOTAL FLOOR AREA	2325 SF
PARKING REQUIRED:	NO CHANGE IN BUILDING GROSS FLOOR AREA NO CHANGE IN PARKING REQUIREMENTS

ALL WORK PERFORMED SHALL COMPLY IN ALL ASPECTS WITH BUT NOT NECESSARYILY LIMITED TO ALL APPLICABLE LOCAL AND STATE ORDINANCES, CODES, AND REGULATIONS AND WITH THE FOLLOWING CODE EDITION

CALIFORNIA BUILDING CODE 2013
CALIFORNIA PLUMBING CODE 2013
CALIFORNIA MECHANICAL CODE 2013
CALIFORNIA FIRE CODE 2013
CALIFORNIA ELECTRICAL CODE 2013
CALIFORNIA BUILDING CODE STANDARDS 2013
CALIFORNIA STATE TITLE 24 2013
CITY OF CONCORD MUNICIPAL CODE

TYP. COVER SHEET NOTES:

1. CONTRACTOR & SUBCONTRACTORS ARE TO REFER TO ALL SHEETS (DRAWINGS) PRIOR TO COMMENCEMENTS OF WORK TO ELIMINATE POSSIBLE FUTURE ERRORS AND OMMISSIONS. IF, IN THE OPINION OF THE CONTRACTOR OR ANY SUBCONTRACTOR, INSTRUCTIONS, DETAILS OR INFORMATION CONTIANED IN THESE DRAWINGS OR SPECIFICATIONS IS AT VARIANCE WITH OR DOES NOT COMPLY WITH ANY OF THE REQUIREMENTS ABOVE, HE SHALL REPORT THE SAME TO THE ARCHITECT BEFORE PRO- CEEDING WITH THAT PHASE OF THE WORK
2. ON-SITE FIELD VERIFICATION OF ALL EXISTING DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION
3. OMISSIONS: IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN ON THE DRAWINGS
4. UNDER NO CIRCUMSTANCES SHALL ANY SHEETS (DRAWINGS, PRINTS, PLANS, ETC.) MARKED "BID DOCUMENTS" BE USED FOR ACTUAL CON- STRUCTION

SCOPE OF WORK

THIS PROJECT CONSISTS OF DEMOLITION OF EXISTING CAR WASH FACILITY, ADDITION AND FACADE IMPROVEMENT AN EXISTING BUILDING AND A NEW BUILDING IN THE FORMER LOCATION OF THE CAR WASH

SCOPE OF WORK INCLUDES
- DEMOLITION OF EXISTING CAR WASH
- NEW SERVICE BAY BUILDING IN LOCATION OF CAR WASH
- ADDITION TO EXISTING BUILDING
- ADD NEW ACCESSIBLE BATH AS PART OF ADDITION
- COMPLETE FACADE IMPROVEMENT TO EXISTING BUILDING

RECEIVED
FEB 28 2016
PLANNING

SHEET INDEX

C	COVER SHEET
A1	SITE PLAN
A2	FLOOR PLANS / DEMOLITION PLANS
A3	RENOVATED EXISTING BUILDING ELEVATIONS
A4	NEW BUILDING ELEVATIONS
C1	CIVIL ENGINEER COVER SHEET
C2	PRELIMINARY GRADING AND DRAINAGE PLAN
L1	PRELIMINARY LANDSCAPE PLAN

PROJECT DIRECTORY:

BUILDING OWNER
RAJ SINGH
2807 PORT CHICAGO HIGHWAY
CONCORD, CA 94520
925 360 5670

ARCHITECT
ARETE, INC.
2280 BONIFACIO STREET
CONCORD CA 94520
925 691 5886
CONTACT KIRK SHELBY

CIVIL ENGINEER
APEX CIVIL ENGINEERING & LAND SURVEYING
817 ARNOLD DRIVE, STE 50
MARTINEZ, CA 94553
925 476 8409
CONTACT ROBERT LEZCANO, PLS
RLEZCANO@APEXCE.NET

LANDSCAPE ARCHITECT
CAMP AND CAMP ASSOCIATES
LANDSCAPE ARCHITECTURE-URBAN DESIGN-PLANNING
2520 CAMINO DIABLO
WALNUT CREEK CA 94597
925 941 6480
CONTACT TERRENCE CAMP PLA, ASLA

STRUCTURAL ENGINEER
TO BE DETERMINED

GENERAL CONTRACTOR
TO BE DETERMINED

LOCATION MAP

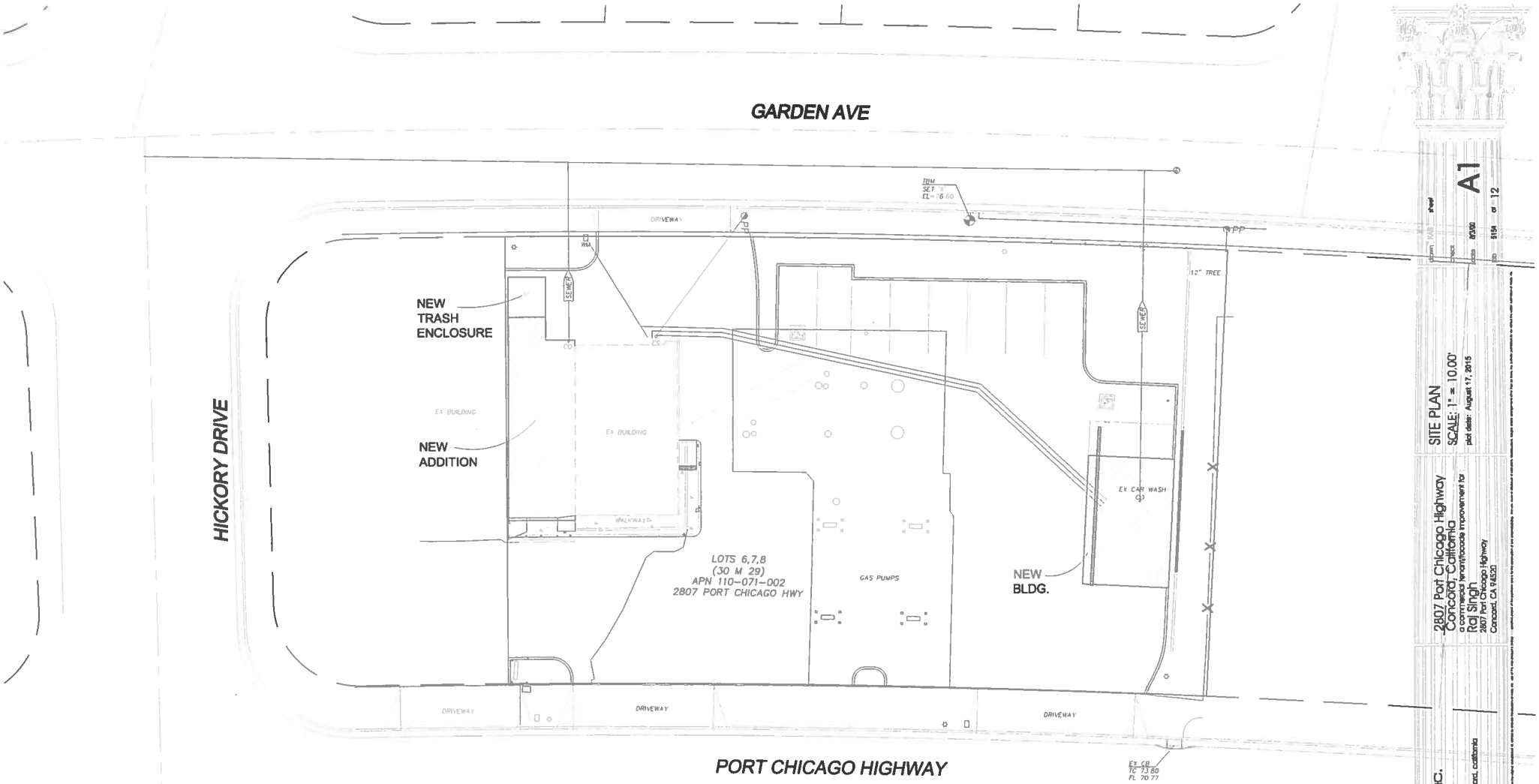
NO SCALE

2807 Port Chicago Highway
Concord, California
a commercial building addition/ facade improvement for:
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

COVER SHEET
NO SCALE

drawn KS
check KS
job 5026 of C
sheet C

EXHIBIT B

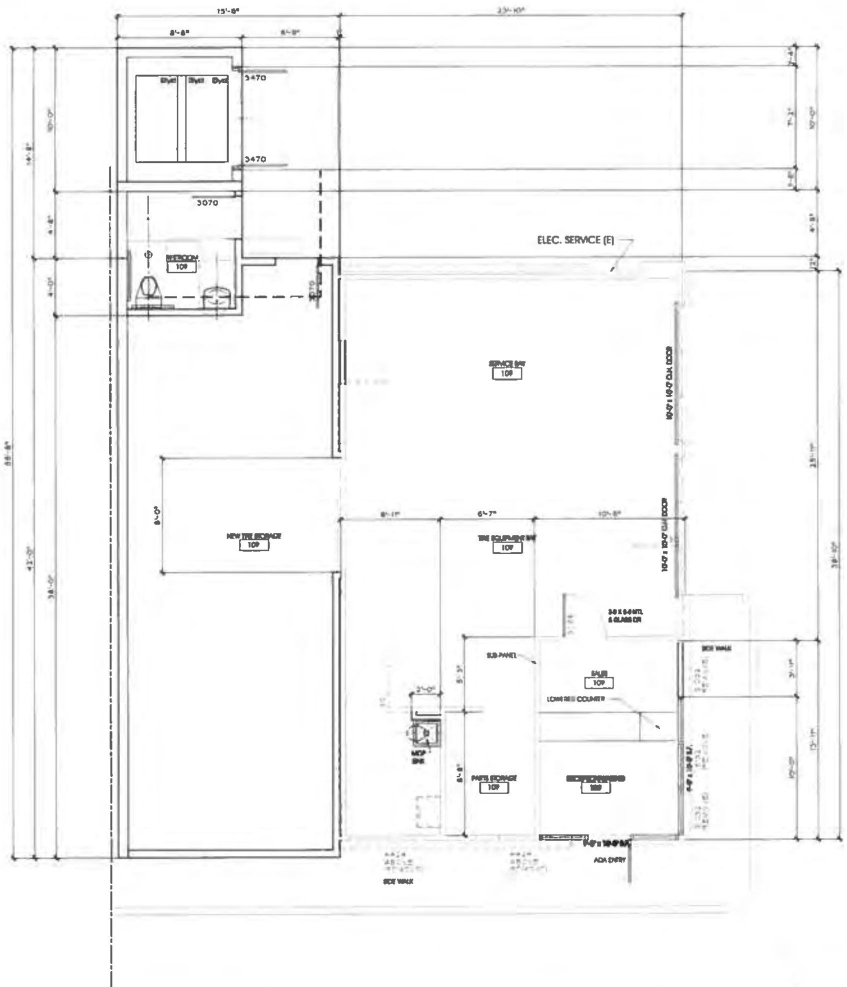


SITE PLAN
SCALE: 1" = 10.00'
plot date: August 17, 2015

2807 Port Chicago Highway
Concord, California
commercial tenant/facade improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

A1

arete, inc.
architecture
1820 gallaudet street, suite b concord, california
94520 925 672 3886



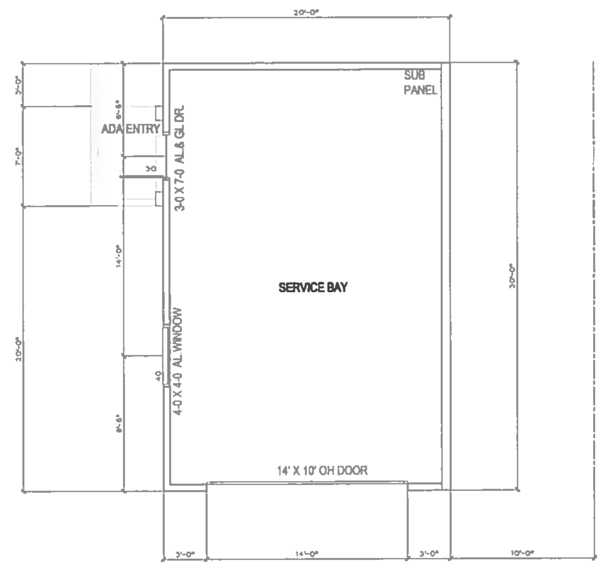
REMODELED TIRE SHOP PLAN

945 SF REMOD. + 694 SF NEW = 1,639 SF

SCALE: 1/4" = 1'-0"

BUILDING REMODEL NOTES

- SEE EXISTING PLAN FOR RELOCATION OF INTERIOR WALLS AND FIXTURES.
- STORE FRONT WINDOWS TO BE RELOCATED TO NEW OFFICE WINDOWS.
- 2- NEW 10'x10' ROLL & TO REPLACE EXISTING STORE FRONT WINDOWS.
- 1- NEW 6'x8' UP DOOR



NEW SERVICE BUILDING PLAN

600 SF NEW

SCALE: 1/4" = 1'-0"

NEW BUILDING NOTES

- WALLS TO BE CMU (R. SIDE) AND 2x6 DF # 2 STUDS w/ CEMENT STUCCO FINISH.
- NEW DOORS AND WINDOWS
- 1- NEW 14'x10' ROLL UP DOOR & 1- NEW 3'-0"x7'-0" ALUM. MAN DOOR
- ROOF TO BE SINGLE PLY SELF SEALING PUC VINYL

arete, inc.
architecture
820 galindo street, suite b concord, california 94520 925 692-5888

2807 Port Chicago Highway
Concord, California
a commercial building addition
facade improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

FLOOR / DEMOLITION PLANS

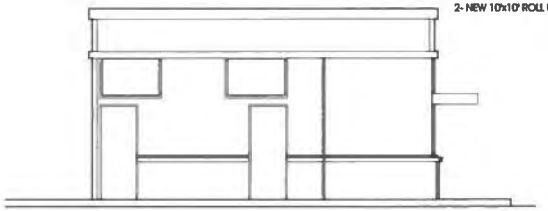
SCALE 1/4" = 1'-0"

drawn KAS
check
date 8/3/00
job 5154

sheet A2 of A4

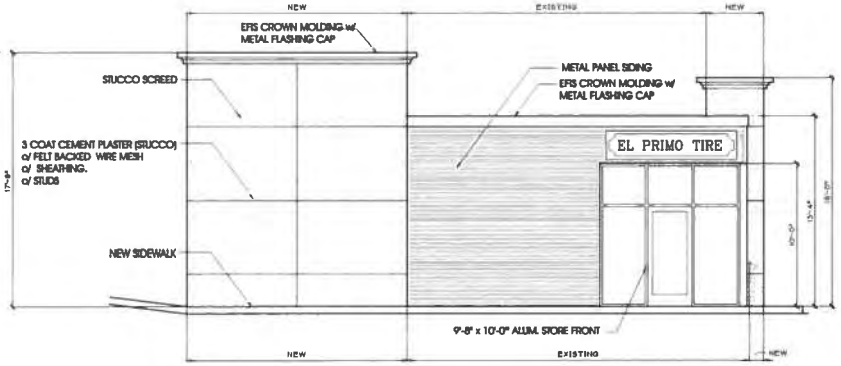
ELEVATION NOTES

SEE SECTIONS & DETAILS FOR ATTACHMENTS & FINISHES.
EXISTING BUILDING WALLS TO REMAIN & BE CLAD IN METAL SIDING & STUCCO.
NEW ADDITION SHALL HAVE A STUCCO EXTERIOR
STORE FRONT WINDOWS TO BE RELOCATED TO EXISTING OFFICE.
2- NEW 10'x10' ROLL UP DOOR TO REPLACE EXISTING STORE FRONT WINDOWS.



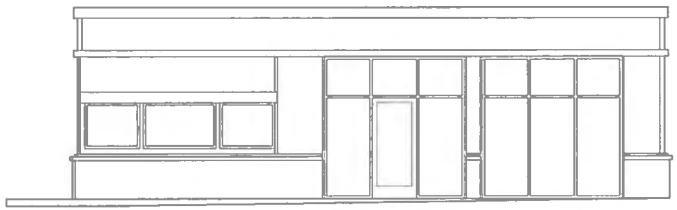
EXISTING: FRONT ELEVATION

SCALE: 1/4"= 1'-0"



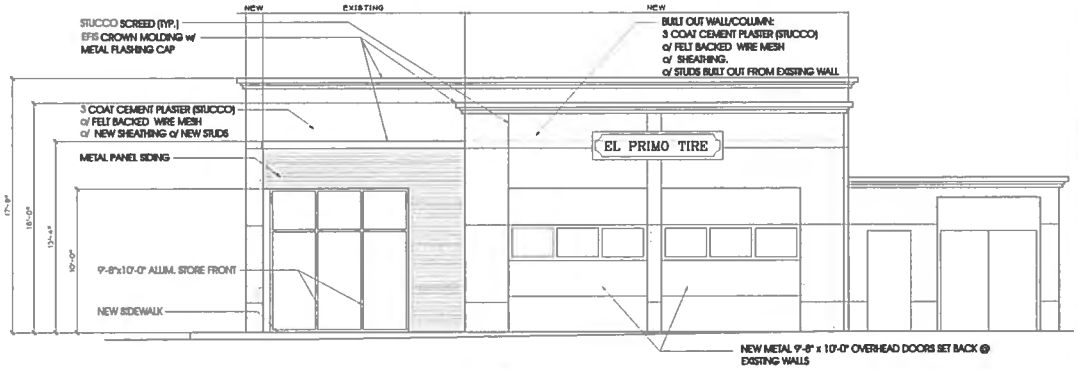
RENOVATION: FRONT (EAST) ELEVATION

SCALE: 1/4"= 1'-0"



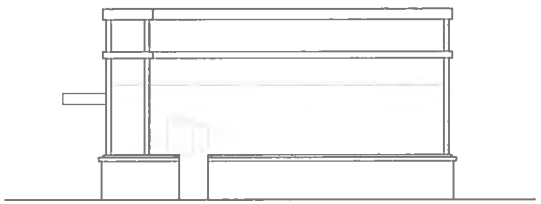
EXISTING: RIGHT SIDE ELEVATION

SCALE: 1/4"= 1'-0"



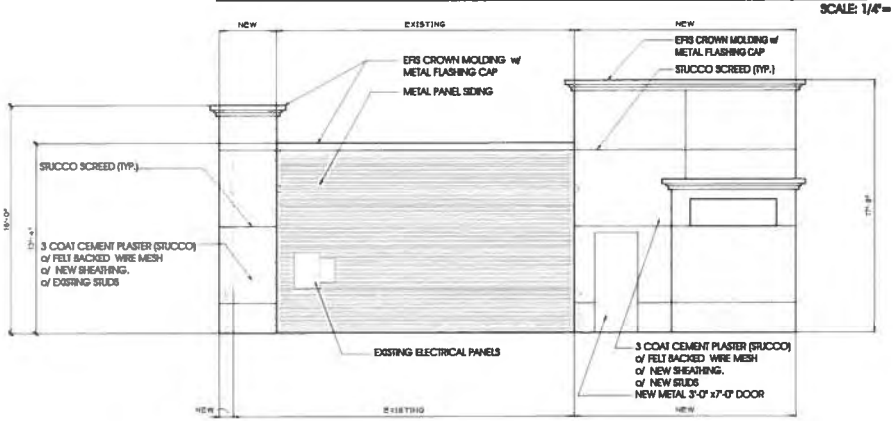
RENOVATION: RIGHT SIDE (NORTH) ELEVATION

SCALE: 1/4"= 1'-0"



EXISTING: NEW BACK ELEVATION

SCALE: 1/4"= 1'-0"



RENOVATION: BACK (WEST) ELEVATION

SCALE: 1/4"= 1'-0"

arete, inc.
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1620 gafinzo street, suite b concord, california
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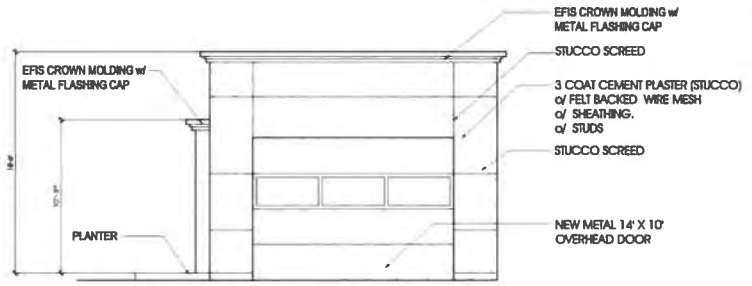
RENOVATION: NEW & EXISTING BUILDING EXTERIOR ELEVATIONS

SCALE: 1/4"=1'-0"

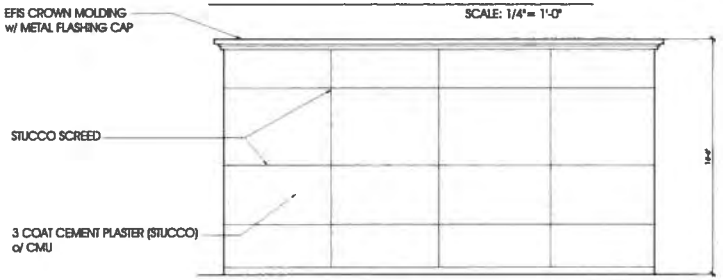
2807 Port Chicago Highway
Concord, California
a commercial building addition
& site improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

drawn FAS sheet A3
check
date 8/3/06
job 5154 of A4



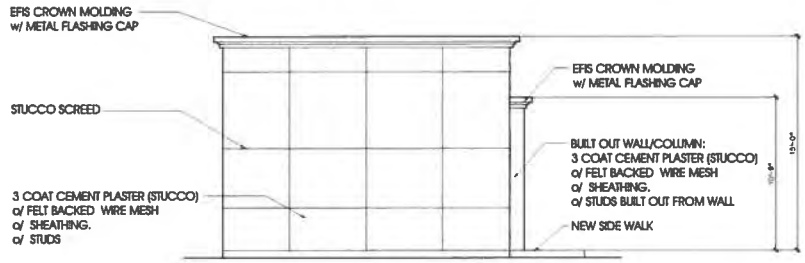
FRONT (EAST) ELEVATION

SCALE: 1/4"= 1'-0"



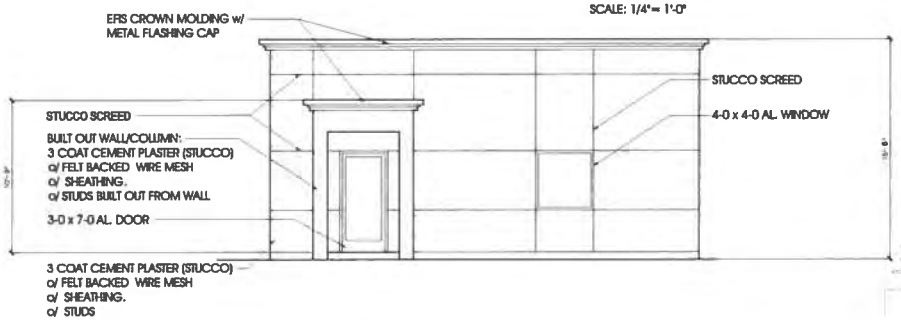
RIGHT SIDE (NORTH) ELEVATION

SCALE: 1/4"= 1'-0"



NEW BACK (WEST) ELEVATION

SCALE: 1/4"= 1'-0"



NEW BUILDING
EXTERIOR ELEVATIONS

2807 Port Chicago Highway
Concord, California
a commercial building addition/
facade improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

SCALE: 1/4"=1'-0"

drawn KAS sheet
check
date 8/31/00 A4
job 5154 of A4

arete, inc.
architecture
1820 gateway blvd, suite b concord, california
94520 925 692-5888

DIAL TOLL FREE
1 800 227 2600
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

PRELIMINARY GRADING & DRAINAGE PLAN

2807 PORT CHICAGO HIGHWAY

CITY OF CONCORD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA

NOTE:
THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES DURING CONSTRUCTION.

BENCHMARK

TBM–SET X IN SIDEWALK ALONG GARDEN AVE
ELEVATION=76 60 (NAVD 88)

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE MAP OF CONCORD VISTA (30 M 29). RECORD BOUNDARY IS PLACED BY BEST FITTING CURB LINES ALONG ACACIA, PEPPER, HICKORY DRIVE AND GARDEN AVE

GENERAL NOTES

1 ALL GRADING, SITE PREPARATION, PLACING AND COMPACTION OF FILL TO BE DONE IN ACCORDANCE WITH THE CITY OF CONCORD GRADING ORDINANCE

2 CONTRACTOR TO NOTIFY CITY OF CONCORD 48–HOURS PRIOR TO START OF WORK TO SCHEDULE A PRE–CONSTRUCTION MEETING

3 ALL CUT SLOPES SHALL BE ROUNDED TO MEET EXISTING GRADES AND BLEND WITH SURROUNDING TOPOGRAPHY. ALL GRADED SLOPES SHALL BE PLANTED WITH SUITABLE GROUND COVER

4 ANY DEVIATION FROM APPROVED PLAN REQUIRES APPROVAL OF THE CITY ENGINEER PRIOR TO ANY CHANGES OCCURRING AT THE PERMITTED SITE

5 DURING GRADING OPERATIONS, CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES ON SITE AND HAUL ROUTES, AND ALL OTHER STORM WATER POLLUTION PREVENTION REGULATIONS DURING DRY SEASONS

6 EROSION AND SEDIMENT CONTROL PLANS ARE REQUIRED DURING ALL SEASONS. COMPLIANCE TO STATE, COUNTY, AND LOCAL GOVERNMENT STORM WATER POLLUTION PREVENTION REGULATIONS IS AT ALL TIME (YEAR ROUND). PROTECTION OF ALL BARE SOILS IS REQUIRED OCTOBER 1ST THROUGH MAY 1ST, AND IN THE EVENT OF AN EXTENDED RAINY SEASON

7 GRADING WORK HOURS ARE 7 30 AM TO 5.30 PM, MONDAY THRU FRIDAY, EXCEPT AS OTHERWISE PROVIDED BY CONDITIONS OF APPROVAL FOR THE PROJECT. NO GRADING WORK WILL BE PERFORMED ON OBSERVED NATIONAL HOLIDAYS

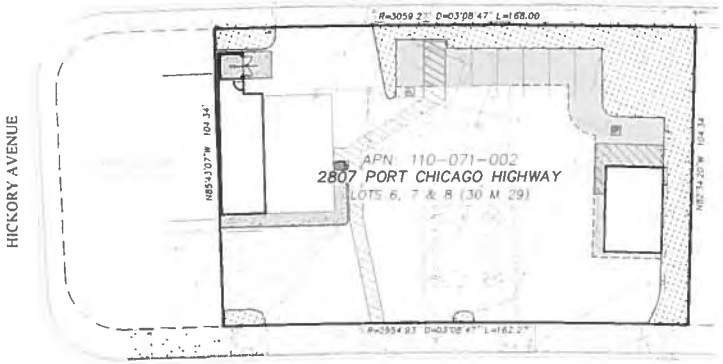
8 PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS (2% MIN).

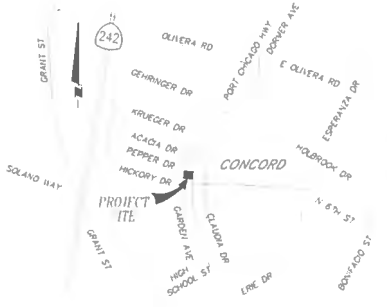
9 SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAIL AND INFORMATION ON PROPOSED BUILDINGS

10 SEE LANDSCAPE PLANS FOR ADDITIONAL DETAIL AND INFORMATION ON LANDSCAPING.

SHEET INDEX

GRAPHIC SCALE
(IN FEET)
1 inch = 20 feet





VICINITY MAP
NOT TO SCALE

LEGEND

- LOT BOUNDARY
- RIGHT–OF–WAY
- ADJACENT PROPERTY LINE
- EXISTING BUILDING
- NEW BUILDING
- EXISTING ASPHALT
- EXISTING CONCRETE
- NEW ASPHALT
- NEW CONCRETE
- 5% FINISHED GRADE SLOPE
- EX. TREE

OWNER

EL PRIMO TIRE - RAJ SIDHU
2807 PORT CHICAGO HIGHWAY
CONCORD, CA 94520
(925) 360-5870

ARCHITECT

ERROL ESBIT ARCHITECT (EEA)
P.O. BOX 1704
JACKSON, CA 95642
(209) 223-5181

CIVIL ENGINEER

APEX CIVIL ENGINEERING & LAND SURVEYING
817 ARNOLD DRIVE, SUITE 50
MARTINEZ, CA 94553
(925) 476-8499

LANDSCAPE ARCHITECT

CAMP & CAMP ASSOCIATES
2520 CAMINO DIABLO
WALNUT CREEK, CA 94597
(925) 941-6488

GRADING QUANTITIES

CUT	68 CU. YDS.
FILL	5 CU. YDS.

EXPORT 63 CU. YDS.

PROJECT SITE	17,231 SF
EXISTING IMPERVIOUS AREA.	15,408 SF
EXISTING LANDSCAPE AREA.	1,823 SF
TOTAL DISTURBED AREA.	6,266 SF
NEW IMPERVIOUS AREA.	488 SF
REPLACED IMPERVIOUS AREA.	3,091 SF
NEW LANDSCAPE AREA	1,352 SF
FINAL IMPERVIOUS AREA	14,544 SF
FINAL LANDSCAPE AREA.	2,687 SF

ABBREVIATIONS

AB – AGGREGATE BASE
AC – ASPHALT CONCRETE
CO – CLEANOUT
CONC – CONCRETE
ES – ELECTRIC PANEL
EX – EXISTING
FF – FINISH FLOOR ELEVATION
FG – FINISH GRADE ELEVATION
JT – JOINT TRENCH
MAX – MAXIMUM
MIN – MINIMUM
OH – OVERHEAD LINES
P – PAD ELEVATION
PP – POWER POLE
PVC – POLYVINYL CHLORIDE
SF – SQUARE FEET
TBM – TEMPORARY BENCHMARK
TC – TOP OF CURB ELEVATION
TYP – TYPICAL
WM – WATER METER

APEX CIVIL ENGINEERING & LAND SURVEYING
817 Arnold Drive, Ste 50
Martinez, CA 94553
Ph. (925) 476-8499
www.apexce.net

NO.	REVISIONS	BY	APP.	DATE

GRADING, DRAINAGE & UTILITY PLAN
TITLE SHEET
2807 PORT CHICAGO HIGHWAY
CONCORD, CA

SHEET
C1

DATE
12-04-2015

PROJECT # 1030

DIAL TOLL FREE
1 800 227 2600
AT LEAST TWO DAYS
BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE:
THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES DURING CONSTRUCTION.

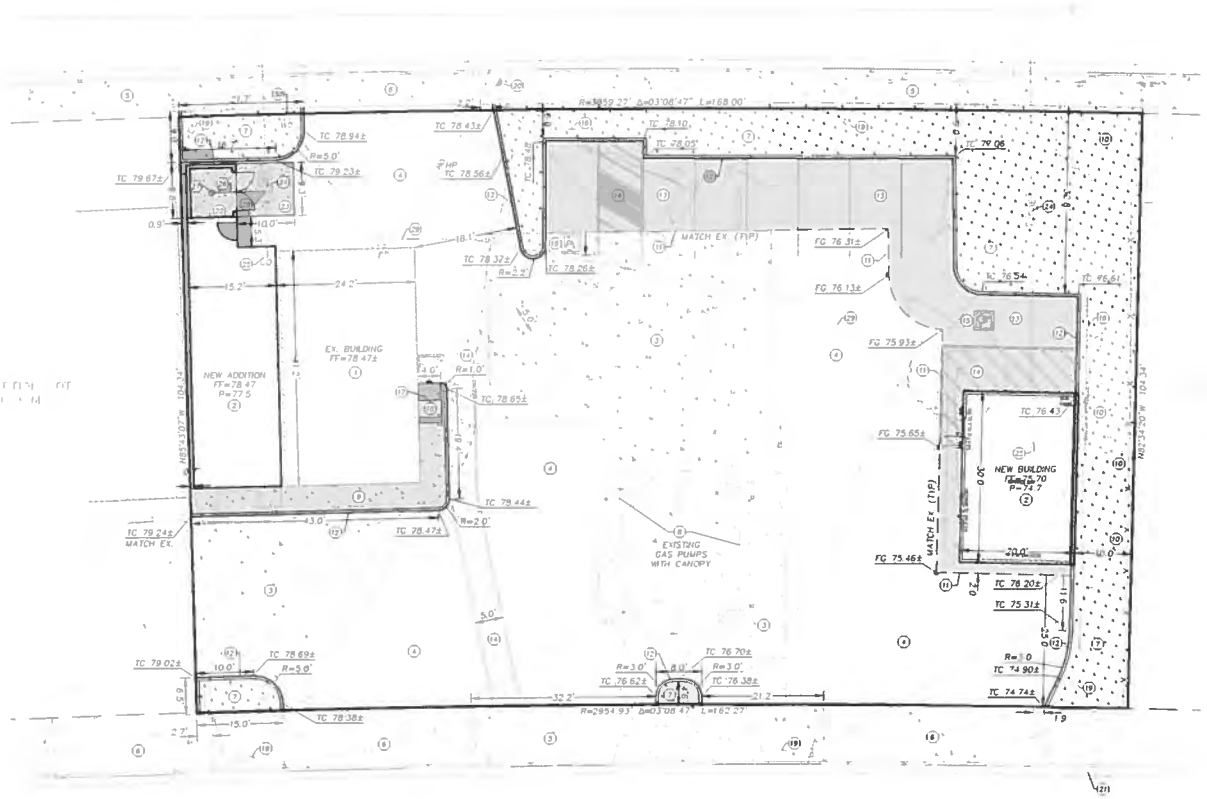
PRELIMINARY GRADING & DRAINAGE PLAN

2807 PORT CHICAGO HIGHWAY

CITY OF CONCORD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA

GRAPHIC SCALE
(IN FEET)
1 inch = 10 feet

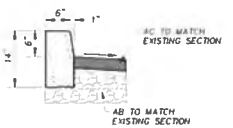
GARDEN AVENUE



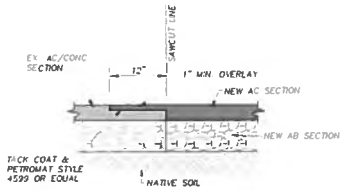
PORT CHICAGO HIGHWAY

KEY LEGEND

1. EXISTING BUILDING TO REMAIN
2. PROPOSED BUILDING SEE ARCHITECTURAL PLANS
3. EXISTING CONCRETE TO REMAIN
4. EXISTING ASPHALT TO REMAIN
5. EXISTING SIDEWALK TO REMAIN
6. EXISTING DRIVEWAY APPROACH TO REMAIN
7. PROPOSED LANDSCAPE AREA REMOVE EXISTING ASPHALT AS NEEDED
8. EXISTING GAS PUMPS WITH CANOPY TO REMAIN
9. PROPOSED CONCRETE WALKWAY 4" CONC/4" AB
10. EXISTING TREE TO REMAIN
11. PAVEMENT SAWCUT/MATCH LINE (TYP.) SEE PAVEMENT TRANSITION DETAIL BELOW
12. PROPOSED 6" CURB SEE DETAIL BELOW
13. PROPOSED ASPHALT SECTION BY OTHERS
14. ACCESS AISLE STRIPED AREA WITH 36" MAX. SPACING
15. 36"x36" ACCESSIBILITY STALL EMBLEM (TYP.)
16. ACCESSIBLE PARKING SPACE SIGN
17. TRUNCATED DOME DETECTABLE WARNING SURFACE
18. PROPOSED 6' LONG CURB RAMP (8.33% MAX)
19. EXISTING LIGHT POLE TO REMAIN
20. EXISTING POWER POLE TO REMAIN
21. EXISTING CATCH BASIN TO REMAIN
22. PROPOSED TRASH ENCLOSURE PER ARCHITECTURAL PLAN
23. PROPOSED CONCRETE PAD SECTION BY OTHERS
24. EXISTING SANITARY SEWER LATERAL
25. EXISTING SANITARY SEWER CLEANOUT
26. PROPOSED 4" SANITARY SEWER LATERAL
27. PROPOSED 4" SANITARY SEWER CLEANOUT
28. CONNECT TO EXISTING SANITARY SEWER LATERAL
29. EXISTING JOINT TRENCH (GAS, ELECTRICAL) TO REMAIN
30. EXISTING WATER METER TO REMAIN



PARKING AREA
CURB DETAIL
NOT TO SCALE



TRANSITION NEW ASPHALT
TO EX. PAVEMENT
NOT TO SCALE

APEX
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817 Arnold Drive, Ste. 30
Martinez, CA 94553
Ph. (925) 476-8499
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REVISIONS

NO.	BY	DATE

PRELIMINARY GRADING & DRAINAGE PLAN
2807 PORT CHICAGO HIGHWAY
CONCORD, CA

SHEET
C2

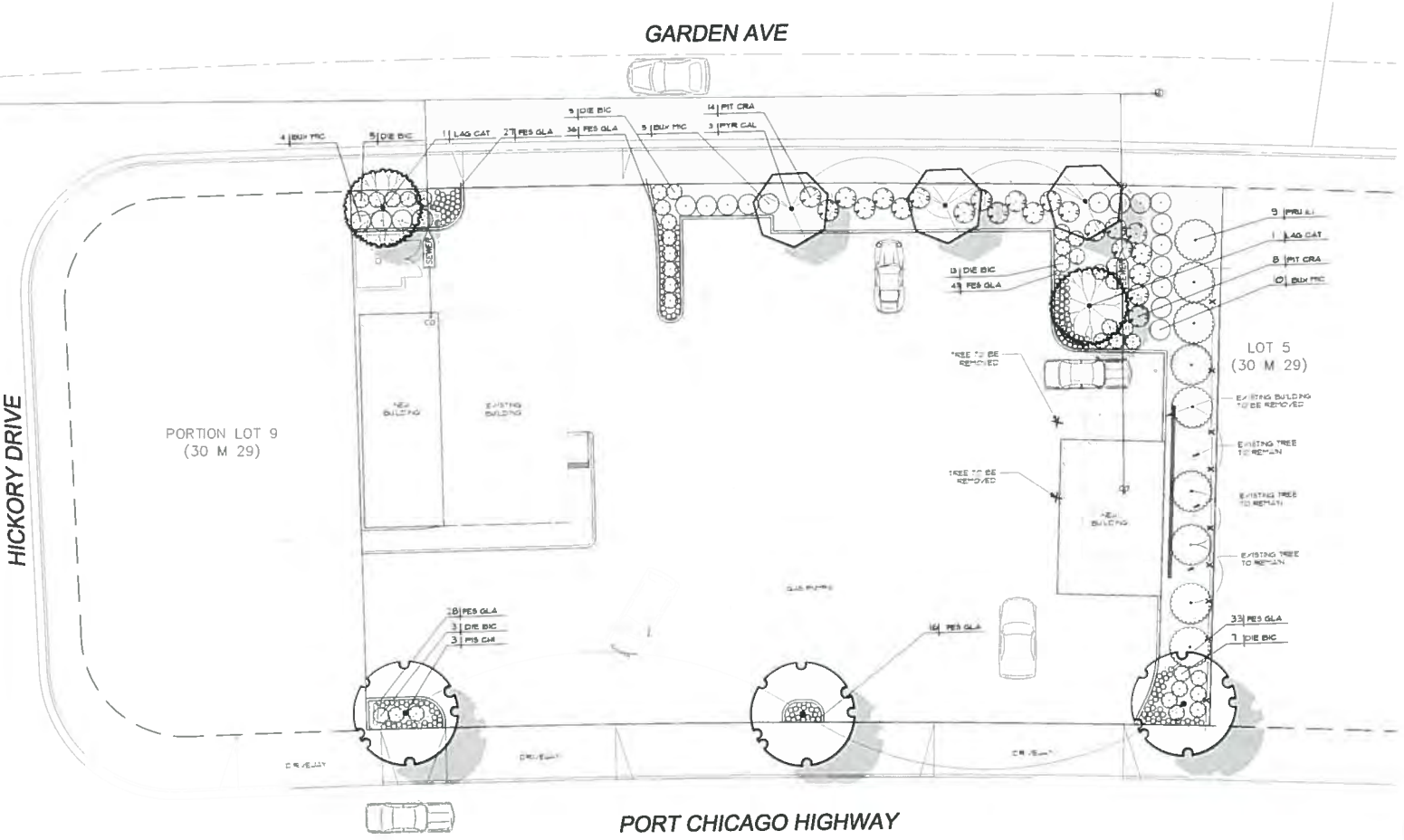
DATE
12-04-2015

PROJECT # 14150

Plant Palette

Symbol	Botanical Name	Common Name	Size
TREES:			
LAG CAT	Lagerstroemia indica 'Catawba	CATAWBA CRAPE MYRTLE	15 gallon
PIS CHI	Pistacia chinensis	CHINESE PISTACHIO	24" Box
PYR CAL	Pyrus calleryana 'Aristocrat'	ARISTOCRAT FLOWERING PEAR	24" Box
SHRUBS:			
BUX MIC	Buxus microphylla japonica 'Green Beauty'	GREEN BEAUTY BOXWOOD	5 gallon
DIE BIC	Dietes bicolor	FORTNIGHT LILY	1 gallon
FES GLA	Festuca glauca 'Elijah Blue'	ELIJAH BLUE FESCUE	1 gallon
PIT CRA	Pittosporum crassifolium 'Nana'	DWARF KARO	5 gallon
PRU ILI	Prunus ilicifolia	CATALINA CHERRY	5 gallon

NOTES
MULCH ALL PLANTING AREAS WITH 3 INCH DEEP LAYER OF WOOD BARK MULCH
ALL PLANTING AREAS SHALL BE IRRIGATED WITH AUTOMATIC WATER CONSERVING IRRIGATION SYSTEM IN COMPLIANCE WITH THE CITY OF CONCORD WATER CONSERVATION ORDINANCE



Camp & Camp Associates
Planning & Landscape Architecture
2540 CAMINO DIABLO
SUITE. 201
WALNUT CREEK, CA 94597
P. (925) 941-6490
F. (925) 941-6455
EMAIL. lc@campandcamp.com

El Primo Tire
2807 Port Chicago Highway
Concord, CA

PRELIMINARY LANDSCAPE PLAN

REVISIONS:

DATE 03/03/2015
SCALE 1" = 10'-0"
JOB # 15-008

SHEET
L-1

Plant Palette

Symbol	Botanical Name	Common Name	Size
TREES:			
LAG CAT	Lagerstroemia indica 'Catawba'	CATAWBA CRAPE MYRTLE	15 gallon
PIS CHI	Pistacia chinensis	CHINESE PISTACHIO	24" Box
PYR CAL	Pyrus calleryana 'Aristocrat'	ARISTOCRAT FLOWERING PEAR	24" Box
SHRUBS:			
BUX MIC	Buxus microphylla japonica 'Green Beauty'	GREEN BEAUTY BOXWOOD	5 gallon
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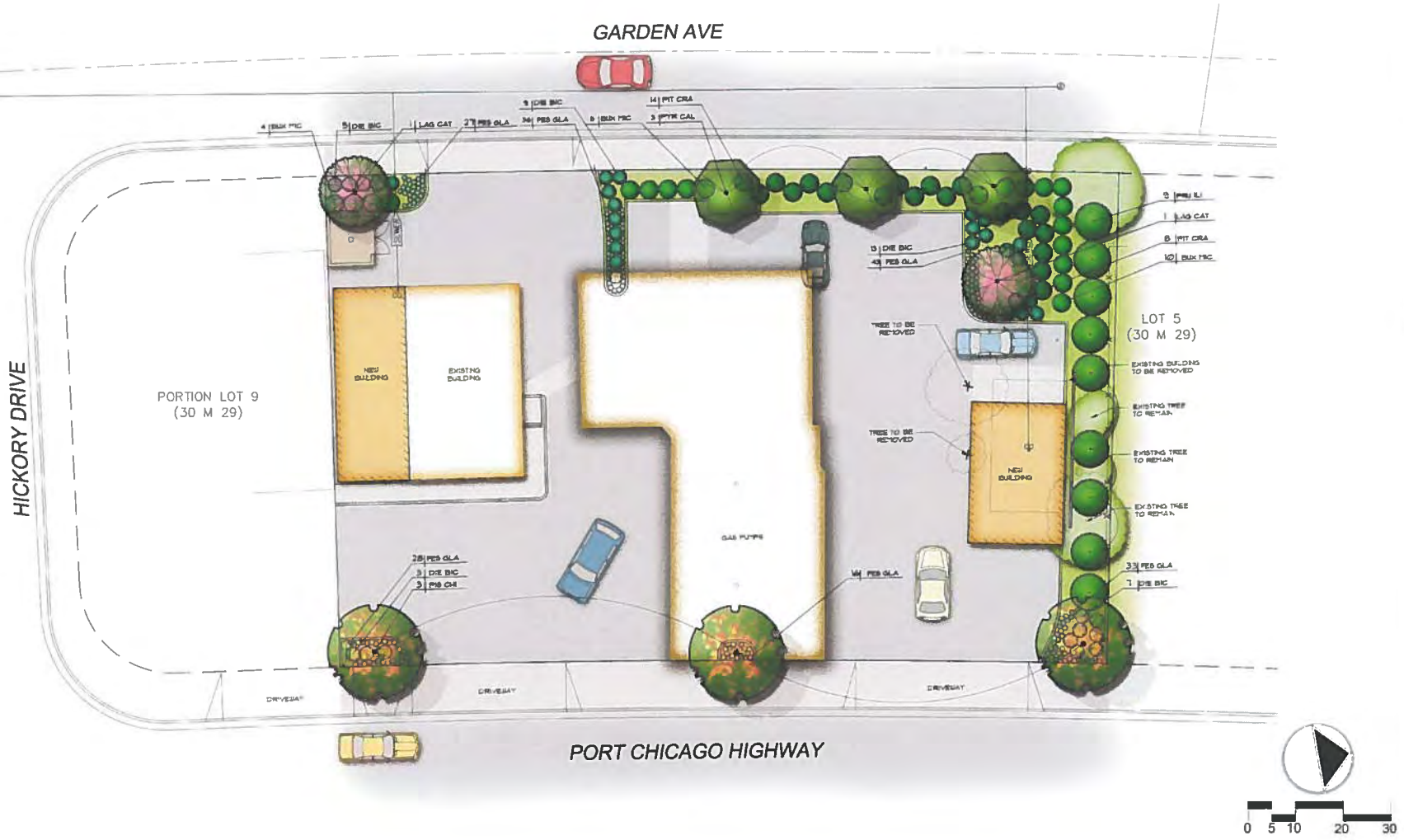
FES GLA	Festuca glauca 'Elijah Blue'	ELIJAH BLUE FESCUE	1 gallon
PIT CRA	Pittosporum crassifolium 'Nana'	DWARF KARO	5 gallon
PRU ILI	Prunus illicifolia	CATALINA CHERRY	5 gallon

NOTES:
MULCH ALL PLANTING AREAS WITH 3 INCH DEEP LAYER OF WOOD BARK MULCH
ALL PLANTING AREAS SHALL BE IRRIGATED WITH AUTOMATIC WATER CONSERVING IRRIGATION SYSTEM IN COMPLIANCE WITH THE CITY OF CONCORD WATER CONSERVATION ORDINANCE



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El Primo Tire
2807 Port Chicago Highway
Concord, CA

PRELIMINARY LANDSCAPE PLAN

REVISIONS:

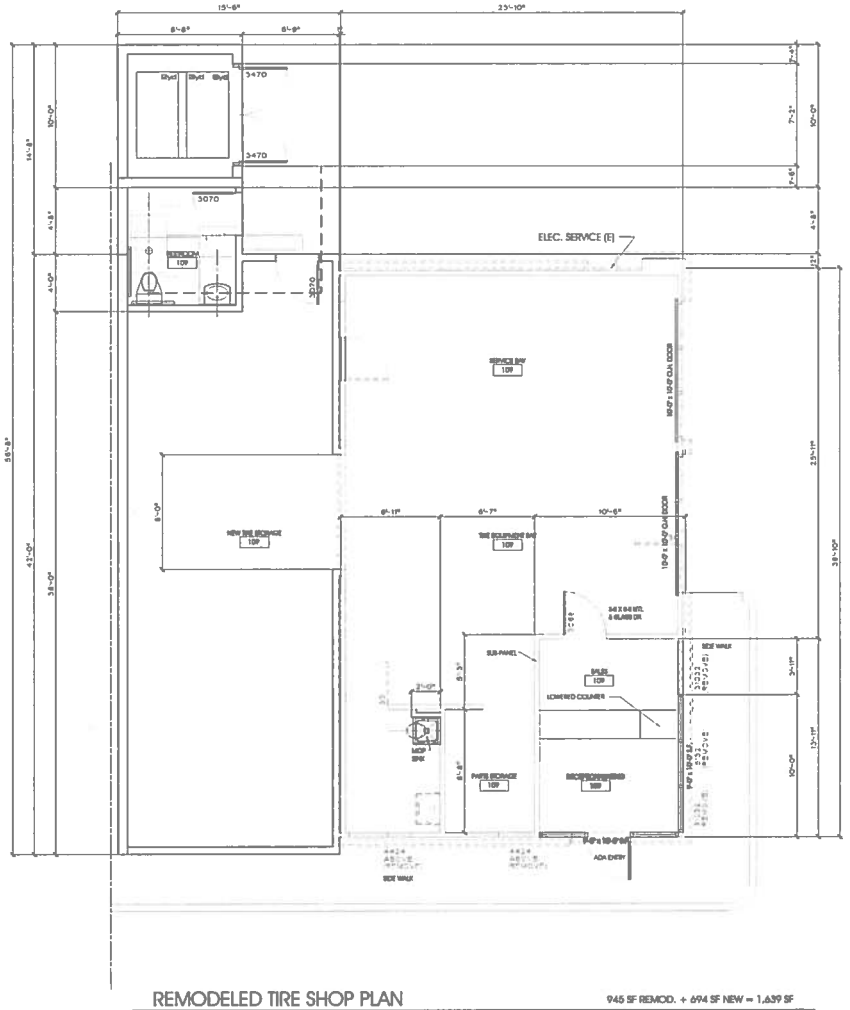
DATE:

SCALE:

JOB # 15-005

SHEET

L-1



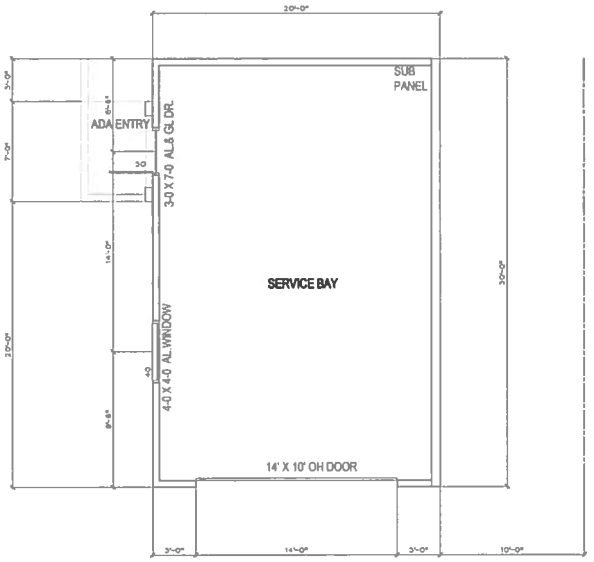
REMODELED TIRE SHOP PLAN

945 SF REMOD. + 694 SF NEW = 1,639 SF

SCALE: 1/4" = 1'-0"

BUILDING REMODEL NOTES

- SEE EXISTING PLAN FOR RELOCATION OF INTERIOR WALLS AND FIXTURES.
- STORE FRONT WINDOWS TO BE RELOCATED TO NEW OFFICE WINDOWS.
- 2- NEW 10'x10' ROLL & TO REPLACE EXISTING STORE FRONT WINDOWS.
- 1- NEW 6'x8' UP DOOR



NEW SERVICE BUILDING PLAN

600 SF NEW

SCALE: 1/4" = 1'-0"

NEW BUILDING NOTES

- WALLS TO BE CMU (R. SIDE) AND 2x6 DF # 2 STUDS w/ CEMENT STUCCO FINISH.
- NEW DOORS AND WINDOWS
- 1 - NEW 14'x10' ROLL UP DOOR & 1- NEW 3'-0"x7'-0" ALUM. MAN DOOR
- ROOF TO BE SINGLE PLY SELF SEALING PVC VINYL

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Concord, California
a commercial building addition
and improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

FLOOR / DEMOLITION PLANS

drawn KAS check

date 8/3/0

job 5154 sht A4

A2

FRONT (EAST) ELEVATION

RIGHT SIDE (NORTH) ELEVATION

BACK (WEST) ELEVATION

anetê, inc.
architecture
1420 oakbrook street, suite b concord, california
94520 925 672-5588

2807 Port Chicago Highway
Concord, California
commercial building addition
tenant improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

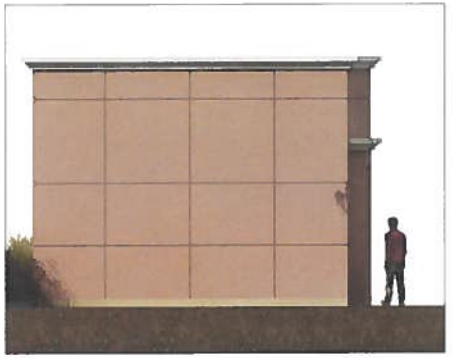
RENOVATION BUILDING
COLORED EXTERIOR ELEVATIONS

drawn KAS
checked
date 8/3/00
job 5154
sheet A4

R1

FRONT (EAST) ELEVATION

SIDE (NORTH) ELEVATION



BACK (WEST) ELEVATION

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architecture
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94520 925 672-5888

NEW BUILDING
COLORED EXTERIOR ELEVATIONS

2807 Port Chicago Highway
Concord, California
a commercial building addition/
facade improvement for
Raj Singh
2807 Port Chicago Highway
Concord, CA 94520

drawn K+S final
check
date 8/3/00
SCALE: 1/4" = 1'-0"
job 9944 sht A4

R2