LAFAYETTE
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September 18, 2006

Judy Zavadil
Senior Project Manager
East Bay Municipal Utility District
375 Eleventh Street (Mail Slot #701)
Oakland, CA 94607-4240

RE: EBMUD Water Treatment and Transmission Improvement Program (WTTIP)– Review of Draft Environmental Impact Report (EIR)

Dear Ms. Zavadil:

Thank you for providing the City of Lafayette the opportunity to respond to the Draft Environmental Impact Report for the East Bay Municipal Utility District's Water Treatment and Transmission Improvements Program. I have reviewed the Draft Environmental Impact Report with members of the City Council, and have identified the following critical issues that need to be addressed within the Final Environmental Impact Report, before the EBMUD Board of Directors determines which alternative to pursue.

Alternatives

The Draft Environmental Impact Report addresses two alternatives. Alternative 1 maintains the Lafayette Water Treatment Plant as one of the three key treatment plants and well as additional minor upgrades to the Orinda and Walnut Creek Water Treatment Plants. Alternative 2 involves decommissioning the Lafayette Water Treatment Plant and constructing a new pipeline and tunnel from the Orinda Water Treatment Plant to serve patrons who would no longer be served via the decommissioned facility. Table 6-11 discusses these two alternatives, as well as four alternative scenarios and ranks them based upon reliability, regulatory and water quality, operations, implementation, environmental impact, and economics. Alternative 1 ranks first in one category and second in four categories, while Alternative 2 ranks first in four categories and third in one category. The City questions the rationale and methodology behind Alternative 1 being the "preferred alternative" while Alternative 2 clearly ranks higher, based upon EBMUD's screening criteria. On August 14, 2006, EBMUD personnel explained that this table was utilized when selecting the alternatives to be reviewed in the Environmental Impact Report and that Alternative 1 is preferred due to redundancy. If redundancy is the key determining factor, thus having more weight than all other criteria, then this table must be revised accordingly and further emphasis should be placed on explaining why redundancy is a more important factor than reliability, environmental impacts, economics, et al.

LAF-1

Besides these two alternatives, EBMUD considered expanding the Walnut Creek Water Treatment Plant and decommissioning the Lafayette Water Treatment Plant, upgrades to the Lafayette and Orinda Water Treatment Plants, expanding the Lafayette and Walnut Creek Water Treatment Plants, and expanding the Orinda and Walnut Creek Water Treatment Plants

LAF-2

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and decommissioning the Lafayette Water Treatment Plant. If redundancy is the key determining factor, the City requests that additional analysis be provided for Alternative 4, which is a hybrid of Alternatives 1 and 2. LAF-2

Visibility / Aesthetics

While the majority of the proposed development is screened due to topography and existing vegetation, visibility and aesthetics will likely be jeopardized by new construction and removal of existing landscaping. The City requests that EBMUD utilize a darker color palette to aid the development to blend in the natural environment, particularly for the Lafayette Water Treatment Plant, Highland Reservoir, Sunnyside Pumping Plant, and development on hillsides. EBMUD shall utilize natural earth tones, preferably in the brown and green range. The existing body color for the Lafayette Water Treatment Plant is substantially too light and the roof color/material stands out from the environment. The City encourages EBMUD to review their revised colors and materials with the Planning Services Division and potentially with a representative from the Design Review Commission. The City also requests that EBMUD seek review, consultation, and design input of all development and site improvements by the Design Review Commission, prior to construction LAF-3

Currently, the Draft EIR refers to the Highland Reservoir as a significant unavoidable impact in terms of effects on views and scenic vistas. The inadequacy of the visibility analysis for the Highland demands additional review and analysis. No photos have been taken or simulations created from Mt. Diablo Blvd. towards the proposed Highland Reservoir site. No analysis has been relayed from the northwest direction. No photos or photo simulations have been prepared for the Alternative sites, pursuant to Appendix J. The City requests that additional visual analysis (including at least three additional photo simulations) be addressed from public viewpoints towards the proposed site, and for the alternative sites. LAF-4

To further mitigate off-site visibility concerns about the Highland Reservoir, the City requests that EBMUD negotiate with the property owners to purchase the parcels 252-050-014, owned by Ray and Angelina Leal, and 252-050-015, owned by the DeSilva Group Inc. These properties will be used for construction access. Once the project is completed, the parcels shall be owned and maintained by EBMUD and permanently reserved as open space. LAF-5

The City requests that all photographs and photo simulations be dated. LAF-6

Removal of Protected Trees

Table 3.6-4 demonstrates that between 160 and 220 protected trees are proposed to be removed within the City of Lafayette, due to the WTTIP (for Alternative 1). The protected trees to be removed include 15-25 oak trees for the Lafayette Water Treatment Plant, 95-110 oak trees for the Highland Reservoir and Pipelines, 8 oak and alder trees for the Lafayette Reclaimed Water Pipeline, 40-60 oak trees for the Moraga Road Pipeline (located at the Lafayette Reservoir Recreation Area), 10-15 oak trees for the Moraga Road Pipeline (north of Nemea Court), and 3 pine trees for the Sunnyside Pumping Plant. In addition to the removed protected trees, EBMUD anticipates potentially damaging between 99 and 144 protected trees. EBMUD proposes to also remove a significant number of non-protected trees. LAF-7

EBMUD proposes to replace protected trees at a ration of 3:1 for protected trees and 1:1 for non-protected trees. The City encourages EBMUD to utilize the ratio of two 15-gallon replacement trees for every six-inches or fraction of the diameter of the protected tree to be removed. EBMUD shall also include a Table in Section 3.6 Biological Resources, which includes the exact species and size of all protected trees proposed to be removed. The City also encourages EBMUD to utilize a tree species replacement ratio, which reflects the tree species breakdown of the site. For instance, if the site includes 50% Valley Oaks, 25% Coast Live Oaks, and 25% California Buckeye, then 2 Valley Oaks, 1 Coast Live Oak, and 1 California Buckeye shall be planted for every four required replacement mitigation trees. LAF-8 LAF-9 LAF-10

The City has reviewed conceptual landscape plans included in Section 3.3 Visual Quality of the Draft Environmental Impact Report. The City requests that finalized landscape plans be reviewed by the City of Lafayette, the City Landscape Consultant (at the expense of EBMUD), and potentially a representative of the Lafayette Design Review and Planning Commissions to address appropriate tree replacement and screening mitigation. The City is concerned that conceptual landscape plans do not accurately reflect the required mitigation trees discussed in the Draft EIR. (i.e. 44 replacement trees are shown for the Highland Reservoir, where a minimum of 90 replacement trees are required). LAF-11

Traffic, Noise, and Construction Impacts

EBMUD shall adequately post all construction sites with signs that state the permitted hours of construction. The construction signs shall clearly identify the construction project as development initiated by EBMUD and shall provide contact information for inquiries, comments, and complaints, so as to prevent an influx of calls to local government agencies. LAF-12

The City strongly urges EBMUD to reduce its construction hours from 7:00 a.m. - 6:00 p.m. to 8:00 a.m. - 6:00 p.m., Monday through Friday (for *all* noise-generating construction). The City requires that no noise-generating construction be permitted on national holidays. Construction hours shall be further reduced for construction of the Orinda-Lafayette Aqueduct between Upper Happy Valley Road and Bentley School parking lot to not impact traffic prior to and directly after school (if Alternative 2 is selected). The City requests that construction hours be substantially reduced where road closure is necessary, so as to not affect peak-period traffic, which occurs prior to 9:00 a.m. and after 4:00 p.m. Advance notices for all road closures shall be posted at least two weeks in advance at the location of the road closure. All property owners along Glen Road, Nordstrom Lane, Hilltop Drive, and Hastings Court shall be notified at least 21-days in advance of all lane closures associated with the Glen Pipeline Improvements project. LAF-13 LAF-14 LAF-15 LAF-16 LAF-17

The City requests that EBMUD construct a protected walkway along both sides of Mt. Diablo Blvd. between Village Center and the Lafayette Reservoir, which includes a landscaped median and grade change between pedestrian and vehicular use. The design should be very similar or identical to the new walkway that is currently being installed along Pleasant Hill Road south of Mt. Diablo Boulevard. The walkway shall be completed in advance of all construction. Refer to attached plans for design details and specifications. LAF-18

The City requests that EBMUD maintain a detour for the Lafayette Reservoir Rim Trail throughout the entirety of construction of the Highland Reservoir. LAF-19

New Technologies

The Draft Environmental Impact Report discusses a membrane filtration alternative for the Lafayette Water Treatment Plant, which is likely to reduce environmental impacts, with the exception of visual impacts created by two new structures that are approximately 25-feet in height. The City requests that the reliability and feasibility of this technology be further discussed and analyzed in the Final Environmental Impact Report. The City also requests visual analysis, using photo simulation technologies, for this alternative and more refined and specific environmental analysis (i.e. specific number of trees that will be removed with this alternative opposed to alternative 1 without the membrane filtration alternative). LAF-20

Economics / Finances

The Draft EIR fails to analyze the potential financial implications of both alternatives. While EBMUD staff has maintained the position that finances will not play a role in determining the alternative chosen, no documentation or analysis has been presented to date. The City requested that EBMUD address the financial circumstances for both alternatives, in our letter dated January 10, 2006. Despite this request, it appears that no supporting documentation is contained within the Draft EIR. The City reiterates this request. LAF-21

Thank you once again for giving the City of Lafayette the opportunity to offer our comments of the Draft Environmental Impact Report. If you have any questions, please feel free to contact Michael Cass, Planning Technician, at 925.299.3219 or at MCass@ci.lafayette.ca.us.

Sincerely,

Steven Falk
City Manager, City of Lafayette

Enc.: Lafayette Tree Protection Ordinance
Pleasant Hill Road Walkway Construction Drawings

Chapter 6-17

TREE PROTECTION

Sections:

LAF-22

6-1701 Purpose and findings.

(a) Purpose. The City of Lafayette consists of oak woodland and savannah covered hills, and valleys that originally contained many large and majestic trees, orchards and creeks lined with giant valley oak, madrone, buckeye and black walnut trees. Historically, in the course of development, especially for residential purposes, many of these original trees were destroyed. It is now recognized that the preservation of trees enhances the natural scenic beauty, increases property values, encourages quality development, aids in tempering the effect of extreme temperatures, helps to reduce air and noise pollution, furnishes habitat for wildlife and gives Lafayette an identity and quality that enhances the environment for all residents and the business community. The Lafayette general plan has goals and policies for the preservation of the community's biological resources, including its trees, and it is the purpose of this chapter to implement these goals and policies.

(b) Findings. The City Council finds that:

(1) The policies of the city are to protect existing woodlands and their associated vegetation, protect native trees, preserve riparian habitat, encourage the planting of native species, and avoid the cutting of mature trees.

(2) In order to implement these policies and to promote the public health, safety and welfare, it is necessary to protect existing trees and require the replacement of trees that have been destroyed or removed.

(3) Protected trees are valuable assets to the city and the community, and the public shall be compensated when a protected tree is destroyed or removed in a manner that is not in compliance with this chapter.

(Ord. 539 § 1 (part), 2003)

6-1702 Definitions.

In this chapter, unless the context otherwise requires:

(a) "Arborist" is a person having one of the following qualifications:
(1) Current listing as a certified arborist by the International Society of Arboriculture; or
(2) Current American Society of Consulting Arborists registered consulting arborist.

(b) "Arborist report" means a report of an arborist developed in a manner consistent with the guidelines for report writing by the American Society of Consulting Arborists on the following:
(1) Description of the tree's location, genus, species, diameter and dripline;
(2) Health and condition of the tree, including existing hazards to the tree;
(3) Potential impact of development on the tree or existing tree condition;
(4) Evaluation of preservation potential based on the tree's existing condition and in relation to any potential development; and
(5) Recommendations for protection and preservation techniques and requirements, including restorative or other remedial actions that might be feasible to maintain and improve tree health or to assure survival.

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(c) "Construction" means the act of placing, erecting, modifying or relocating a structure or the act of preparing property for such work, including clearing, stockpiling, trenching, grading, compaction, paving or change in ground elevation.

(d) "Destroy" means an action that kills or endangers the health or vigor of a tree, and includes excessive or improper pruning, topping, grading, irrigation, application of chemicals, trenching within the drip line or protected perimeter, soil compaction within the protected perimeter, or damage caused to the trunk or primary limbs during construction.

(e) "Developed property" means an existing lot of record that cannot be further subdivided under applicable city regulations and that has an existing legal structure.

(f) "Development application" means an application to subdivide, alter, develop or use a property that, if approved, will require the issuance of a development permit, including a building or grading permit.

(g) "Diameter" means the distance across the tree from outside bark to outside bark with the distance being determined by the circumference of the tree measured at 4.5 feet above the natural grade of the tree (also known as diameter at standard height) and divided by π (3.1416). The diameter of a multi-trunk tree is the sum of the diameters of its component trunks.

(h) "Dripline area" means the soil area surrounding tree trunk whose outer perimeter is defined by the length of the outermost branch tips.

(i) "Manager" means the planning and building services manager or the manager's designee.

(j) "Native riparian tree" means a tree indigenous to a riparian habitat along a perennial or intermittent creek, stream or other watercourse and that is within 30 feet of the top of a creek bank or that is beyond 30 feet but in such proximity to a creek bank that it requires or tolerates soil moisture levels in excess of that available in adjacent uplands.

(k) "Native tree" means a tree indigenous to an oak woodland, chaparral, grassland or riparian habitat.

(l) "Protected area" means the delineated area encompassing the rooting zone of a tree to be protected from encroachment by construction activities. The area is determined by projecting from the base of the trunk two feet for every one inch of trunk diameter.

(m) "Protected tree" means a tree on public or private property meeting one or more of the following standards:

(1) Located on a developed property, that has a trunk diameter of 12 inches or more, and that is one of the following species:

- coast live oak (*Quercus agrifolia*)
- canyon oak (*Q. chrysolepis*)
- blue oak (*Q. douglasii*)
- white oak (*Q. garryana*)
- black oak (*Q. kelloggii*)
- valley oak (*Q. lobata*)
- interior live oak (*Q. wislizenii*)
- California bay (*Umbellularia californica*)
- California buckeye (*Aesculus californica*)
- madrone (*Arbutus menziesii*)

(2) Of any size or species and designated to be protected and preserved as part of an approved development application;

(3) Is a native riparian tree with a trunk diameter of six inches or more or has a multi-trunk with a diameter of four inches or more and that is one of the following species:

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- bigleaf maple (Acer marophyllum)
- boxelder (A. negundo)
- California buckeye (Aesculus californica)
- white alder (Alnus rhombifolia)
- black walnut (Juglans hindsii)
- cottonwood (Populus fremontii)
- red willow (Salix laevigata)
- arroyo willow (S. lasiolepis)
- coast live oak (Quercus agrifolia)
- valley oak (Q. lobata)
- California bay (Umbellularia californica)

(4) Of any species with a diameter of six inches or more and located on an undeveloped property;

(5) Is a replacement tree planted as restitution for a violation of this chapter; or

(6) Is a native tree of any size or species within a restricted ridgeline area.

(n) "Pruning" means the removal of tree parts. Proper pruning is performed in a manner intended to achieve a specific goal while minimizing the negative effects on the tree. Improper pruning is that which may be coupled with a specific goal, not employ techniques with the identified goals, or result in negative physiological or structural impacts on the tree. Improper pruning includes topping.

(o) "Remove" means to top excessively, cut down or relocate a tree.

(p) "Restricted ridgeline area" means a class III ridgeline or an area within 400 feet of a class I ridge or 250 feet of a class II ridge, as designated on the Lafayette Area Ridge Map pursuant to subsection 6-2004(a)(1).

(q) "Topping" means a pruning cut that removes the main stem or stems between nodes, buds or laterals or to a lateral branch or limb not large enough to assume the terminal role that would result in serious decay and/or permanent alteration of the tree's structure.

(r) "Tree" means a large woody perennial plant with one or more trunks that generally reaches a minimum height of ten feet at maturity. It does not include shrubs shaped to tree forms.

(s) "Undeveloped property" means a vacant parcel, a parcel that can be subdivided or developed under applicable city regulations, or a parcel with an existing illegal structure.

(Ord. 539 § 1 (part), 2003)

6-1703 Destruction of a protected tree.

It is a violation of this chapter for any person to destroy a protected tree. (Ord. 539 § 1 (part), 2003)

6-1704 Permit required to remove a protected tree.

No person may remove a protected tree without a category I or category II permit under section 6-1706 or 6-1707. (Ord. 539 § 1 (part), 2003)

6-1705 Exceptions.

A category I or category II permit is not required:

(a) When a hazardous or dangerous condition requires immediate action to protect life or property as determined by the city manager or when the imminent threat is certified by an arborist;

(b) Under emergency conditions when ordered by the city manager, an official of the Contra Costa Consolidated Fire District, or an official of the Contra Costa County Building Department;

(c) To maintain a firebreak on land covered by flammable material, as required by Public Resources Code §4291; or

(d) To maintain an unobstructed flow of water for flood control safety in a creek or other waterways as determined by the city engineer.

(Ord. 539 § 1 (part), 2003)

6-1706 Permit category I — Protected tree on property not associated with a development application.

(a) Permit required. A category I permit is required to remove a protected tree on property not currently associated with a development application or that will not be associated with a development application for a minimum of one year from the date of the issuance of the permit.

(b) Application. An application for a category I permit shall be filed with the manager on a form approved by the city together with a fee fixed by resolution of the City Council. The application shall include the following information:

(1) Identification of the location, species and diameter of each protected tree to be removed;

(2) Statement justifying the permit request; and

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(3) Supplemental information as may be necessary for the manager to properly review the application, such as photographs or an arborist report concerning the health and quality of the tree and possible alternative actions.

(c) Application review. The manager shall review the application and inspect the subject tree. The manager may refer the application to a city commission or the City Council. The manager may refer the application to an arborist or landscape consultant with arborist certification for additional review and report. The applicant shall pay the costs of this additional review and report.

(d) Determination. Within 30 days of deeming an application complete, the manager shall approve or deny the application. If the application is referred to a city commission or the City Council, the application shall be approved or denied within 60 days of the date the application is deemed complete. In acting on the application, the manager, or committee, commission or City Council, shall consider the following factors:

(1) Health, condition and form of the tree;

(2) Number, size and location of other trees to remain in the area;

(3) Relationship of the property to ripanan corridors, a scenic or biological resource area or a restricted ridgeline area;

(4) Role of the tree in a tree grove or woodland habitat;

(5) Value of the tree to the neighborhood in terms of visual effect, wind screening and privacy;

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(6) Damage caused by the tree to utilities, streets, sidewalks or existing private structures or improvements;

(7) Role of the tree in mitigating drainage, erosion or geologic stability impacts; and

(8) Health and condition of the area within the protected perimeter.

(e) Permit conditions. The permit may include reasonable conditions, such as planting replacement trees pursuant to subsection 6-1707(G).

(f) Expiration of permit. The permit is valid for 60 days from the date of issuance unless a longer period is stated in the permit. If the applicant does not begin the work authorized by the permit by the expiration date, the permit shall expire.

(Ord. 539 § 1 (part), 2003)

6-1707 Permit category II — Protected tree on property associated with a development application.

(a) Permit required. A category II permit is required if the proposed construction may result in the destruction or removal of a protected tree.

(b) Application. An application for a category II permit shall be filed with the manager concurrently with the development application. The category II application shall be on a form approved by the city together with a fee fixed by resolution by the City Council. The application shall include the following information:

(1) Depending on the type of development application, one of the following is required:

(A) Site plan showing the trunk location, diameter, species and dripline of each protected tree within 50 feet of any proposed construction on the subject property

and adjacent properties and indicating which protected tree is proposed to be pruned or removed; or

(B) For those development applications that require a survey by a licensed surveyor or engineer, a field-verified topographical survey showing the trunk location, elevation at the base, diameter, species and accurate dripline of each protected tree within 100 feet of any proposed construction on the subject property and adjacent properties, and a table that identifies each protected tree, its diameter and species, and whether the tree is proposed to be pruned or removed; and

(2) Arborist report;

(3) Statement justifying the removal of each protected tree;

(4) Evidence of compliance with the requirements of responsible agencies for the removal of a protected tree if applicable; and

(5) Supplemental information required by the manager.

(c) Application review. The category II permit application shall be reviewed concurrently with the development application by the manager, design review commission, planning commission or City Council as required by type of development application. The time limit associated with the review of the development application applies to the review of the category II permit application. The manager may refer the applicant's arborist report to an arborist for peer review. The applicant shall pay the cost of a peer review.

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(d) Determination. The application shall be approved or denied by the manager, design review commission, planning commission or City Council based on the factors in subsection 6-1706(D) and the following additional factors:

(1) Necessity for the pruning or removal in order to construct a required improvement on public property or within a public right-of-way or to construct an improvement that allows reasonable economic enjoyment of private property;

(2) Extent to which a proposed improvement may be modified to preserve and maintain a protected tree; and

(3) Extent to which a proposed change in the existing grade within the protected perimeter may be modified to preserve and maintain a protected tree.

(e) Permit condition. An approved category II permit shall include a condition where the applicant shall guarantee the health and vigor of each protected tree to be preserved during construction as provided in subsection (f) of this section and shall enter into a landscape maintenance agreement with the city assuring the long-term maintenance of the protected trees. The applicant shall replace a protected tree that is destroyed as provided in section 6-1710.

(f) Tree protection during construction. The applicant shall comply with the following requirements:

(1) Before the start of construction, the applicant shall install fencing per city specifications at the perimeter of the protected area, or other area identified in an arborist report, of each protected trees to be preserved as shown on the approved construction plans. The manager shall inspect and approve the fencing and its location before the issuance of a development permit.

(2) No construction may occur within the perimeter of the protected area unless approved as a condition of the application. The manager may require an arborist to be present to observe the construction and prepare a report identifying further requirements for tree protection upon completion of construction.

(3) No construction may occur within the perimeter of the protected area until pruning of the tree required for access of construction equipment is completed under the supervision of an arborist.

(4) Under each circumstance where an arborist is required to supervise or observe construction, the arborist may require additional mitigation measures or halt construction if necessary to protect the subject trees. The applicant shall pay the costs of an arborist's supervision or observation.

(5) The parking or storing of a vehicles, construction trailers, equipment and material shall not be allowed within the perimeter of the protected area of a tree to be preserved.

(g) Protected tree replacement. When the removal of a protected tree is permitted, the applicant shall comply with the following requirements:

(1) For each six inches or its fraction of the diameter of the tree to be removed, two 15-gallon trees shall be planted. If the tree that is removed is listed in subsections 6-1702(m)(1) and 6-1702(m)(3), each replacement tree shall be of the same genus and species as the removed tree. The manager may require larger trees for the benefit of the project. In addition, the manager, design review commission, planning commission or City Council may substitute a lesser number of larger trees or another species based on the finding from an arborist that such a substitution will be more beneficial to the health and vigor of other protected trees on the property. LAF-22

(2) If the property associated with the development application cannot accommodate a replacement tree, as a condition of the permit, the applicant shall make an in-lieu payment of an amount set by resolution by the City Council for each 15-gallon replacement tree. The in-lieu payment shall be used by the city for a tree education or tree-planting program.

(h) Permit expiration. A permit is valid for the same period of time as the approved development permit. If the work authorized by the permit is not started before the expiration date, the permit expires.

(Ord. 539 § 1 (part), 2003)

6-1708 Appeal.

An appeal of a decision made pursuant to this chapter is governed by Sections 6-225 through 6-238. (Ord. 539 § 1 (part), 2003)

6-1709 Restriction on the issuance of a development permit.

A development permit may not be issued for construction on a property upon which a protected tree was destroyed or removed without a permit for a period of five years from the date of violation as determined by the manager. The manager may waive this time limit if the tree is replaced as

GENERAL NOTES:

1. THE IMPROVEMENT PLANS FOR PLEASANT HILL ROAD HAVE BEEN PREPARED USING THE TOPOGRAPHIC SURVEY SUPPLIED BY ENKE AND ASSOCIATES IN AUGUST, 2004.
2. UNDERGROUND FACILITIES AND OBSTRUCTIONS INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE WORK AREA PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (U.S.A.) AT (800) 227-2600 A MINIMUM OF TWO WORKING DAYS IN ADVANCE OF ANY EXCAVATION. EXCAVATION SHALL NOT BEGIN UNTIL UNDERGROUND UTILITIES HAVE BEEN LOCATED.
3. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES PRIOR TO THE START OF ANY WORK WHICH MAY AFFECT THEIR FACILITIES. THE FOLLOWING UTILITIES AND AGENCIES ARE KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS:

CENTRAL CONTRA COSTA SANITARY DISTRICT	(925) 228-9500
EAST BAY MUNICIPAL UTILITY DISTRICT (WATER)	(510) 287-0834
SBC (TELEPHONE)	(415) 542-9000
PACIFIC GAS & ELECTRIC (GAS)	(510) 784-3211
PACIFIC GAS & ELECTRIC (ELECTRIC)	(510) 784-3236
CITY OF LAFAYETTE ENGINEERING SERVICES (STORM DRAIN)	(925) 284-1951
CONSOLIDATED FIRE PROTECTION DISTRICT	(925) 930-5531
COMCAST (CABLE TELEVISION)	(925) 349-3300
SPRINT	(650) 513-2545

4. THE CONTRACTOR SHALL INSPECT THE PROJECT SITE PRIOR TO SUBMITTING A BID IN ORDER TO OBSERVE AND DETERMINE THE EXISTING SITE CONDITIONS.
5. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL TRAFFIC CONTROL AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES" ISSUED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.
6. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. THESE PLANS DO NOT INCLUDE COMPONENTS NECESSARY FOR CONSTRUCTION SAFETY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF THE PROJECT.
7. THE CONTRACTOR SHALL COMPLY WITH THE RULES AND REGULATIONS OF CAL/OSHA. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
8. THE CONTRACTOR SHALL PROVIDE FOR CONTINUOUS INGRESS AND EGRESS TO ALL PUBLIC AND PRIVATE PROPERTIES ADJACENT TO THE WORK THROUGHOUT THE PERIOD OF CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE SITE OR THE SURROUNDING AREA AS A RESULT OF THE CONTRACTOR'S WORK OR OPERATIONS. EXISTING CURB, GUTTER AND OTHER IMPROVEMENTS THAT ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL LOCATE, REFERENCE, AND SET SUFFICIENT MARKS FOR ALL CITY OWNED AND NON-CITY OWNED EXISTING MANHOLE COVERS, VALVE COVERS, SURVEY MONUMENTS, IRON PIPES, RAILROAD SPIKES, ETC., PRIOR TO STARTING ANY WORK IN THE PAVEMENT AREA WITHIN THE PROJECT LIMITS.
11. THE CONTRACTOR SHALL ADJUST EXISTING STORM DRAIN MANHOLES AND SURVEY MONUMENT FRAMES AND LIDS TO GRADE. EACH UTILITY COMPANY AND AGENCY WILL BE RESPONSIBLE FOR ADJUSTING THEIR FACILITIES. THE CONTRACTOR SHALL NOTIFY AND COORDINATE THIS WORK WITH THE UTILITY COMPANIES.
12. THE FINAL ADJUSTMENT TO FINISHED GRADE OF ALL STORM DRAIN MANHOLES AND SURVEY MONUMENTS SHALL BE MADE FOLLOWING PLACEMENT OF THE ASPHALT CONCRETE OVERLAY.
13. DIMENSIONS SHOWN ARE TO FACE OF CURB OR DIKE UNLESS OTHERWISE NOTED.

APPLICABLE STANDARD PLANS

INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

CALTRANS STANDARD PLANS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS
DATED JULY 2002 (EXCEPT ALL WORK WITHIN CALTRANS R/W SHALL BE PER CALTRANS STANDARD PLANS DATED 2004)

A20 A,B,C,D	PAVEMENT MARKERS AND TRAFFIC LINES, TYPICAL DETAILS
A24 A,B,C,D,E	PAVEMENT MARKINGS, ARROWS, SYMBOLS, WORDS AND CROSSWALKS
A87	CURBS, DIKES AND DRIVEWAYS
ES-1 A,B,C	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-2 A,C,O	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-3 C	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-4 A,B,C,D,E	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-5 A,B,C,D	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-6 A	LIGHTING STANDARDS
ES-7 A,B,C,E,F,M,N	SIGNAL AND LIGHTING STANDARDS
ES-8	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-10	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-11	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
ES-13 A,B	SIGNAL, LIGHTING AND ELECTRICAL SYSTEMS
RSP A88 A,B	CURB RAMP DETAILS
T11	TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

CONTRA COSTA COUNTY STANDARD DETAILS (LATEST EDITION)

CA73(	CONCRETE VALLEY GUTTER AND CONCRETE LINED DITCH DETAILS
CA90(	MAILBOX DETAILS
CD11(	INLET FRAME AND GRATE
CD16(	STANDARD MANHOLE ON EXISTING TYPE "C" INLET BASE
CD20(	TYPE "A" INLET
CD21(	TYPE "B" INLET
CD30(	PRECAST MANHOLE, TYPE I BASE, FRAME & COVER
CD31(	TYPE II MANHOLE BASE

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

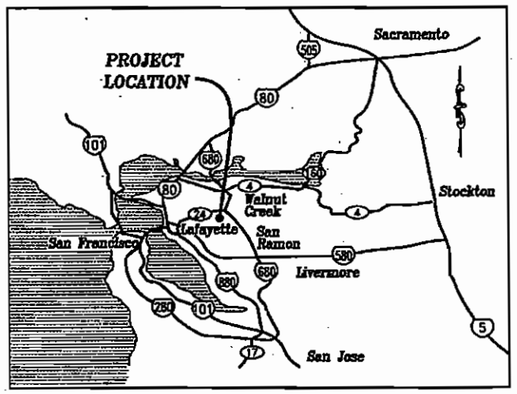
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

(MT DIABLO BOULEVARD TO RELIEZ STATION ROAD)

PROJECT NO. 014-9654

FEDERAL AID PROJECT NO. STPL – 5404 (014)



LOCATION MAP
NTS

LEGEND

SYMBOL PROPOSED	SYMBOL EXISTING	DESCRIPTION
		STORM DRAIN
	D	STORM DRAIN MANHOLE
		EX FENCE
	CB	CATCH BASIN
	SS	SANITARY SEWER LINE
	SSMH	SANITARY SEWER MANHOLE
	SSRIO	SANITARY SEWER RODDING INLET
	W	WATER LINE
	WVO	WATER VALVE
	WM	WATER METER
	G	GAS LINE
	GVO	GAS VALVE
	FH	FIRE HYDRANT
	E	UNDERGROUND ELECTRICAL LINE
	E OR PG&E	PG&E VAULT
	T	UNDERGROUND TELEPHONE LINE
	TV	UNDERGROUND CABLE TV LINE
	OPP	POWER POLE
	SP	SIGNAL POLE
	PH	TELEPHONE VAULT/MH
		SURVEY CONTROL POINT
	MON	SURVEY MONUMENT W/FRAME & COVER
		STREET SIGN
		AC DITCH
		EARTH SWALE
		DETAIL No.
		SHEET No.
		CORE LOCATION AND CORE NO.
		AC DWY CONFORM PAVING
		6" WEDGE GRIND
		NEW AC PATHWAY
		LIMIT OF AC OVERLAY
		LIMIT OF BASE FAILURE REPAIR
		AC ROADWAY CONFORM PAVING

SHEET INDEX

ABBREVIATIONS

AC	ASPHALT CONCRETE	F	FACE	RAD	RADIUS POINT
AB	AGGREGATE BASE	FACP	FRONT OF AC PATH	RCP	REINFORCED CONCRETE PIPE
BACP	BACK OF AC PATH	F/C	FACE OF CURB	REL	RELATIVE
BC	BEGIN CURVE	F/F	FACE OF CURB TO FACE OF CURB	RET	BEGIN/END CURB RETURN
BSW	BACK OF SIDEWALK	F/W	FACE OF WALL	R/W	RIGHT OF WAY
C&G	CURB AND GUTTER	FG	FINISH GRADE	SW	SIDEWALK
CB	CATCH BASIN	GALV	GALVANIZED	STA	STATION
CCC	CONTRA COSTA COUNTY	IP	IRON PIPE	SL, S	STATION LINE
CCL	CROWN CONTROL LINE	LF	LINEAR FEET	SD	STORM DRAIN
CIDH	CAST-IN-DRILL-HOLE	LIP	LIP OF GUTTER	STD	STANDARD
CL, C	CENTER LINE	MAX	MAXIMUM	TC	TOP OF CURB
CONST	CONSTRUCT	MIN	MINIMUM	TD	TOP OF DIKE
CMP	CORRUGATED METAL PIPE	MBGR	METAL BEAM GUARD RAILING	(T)	TOTAL LENGTH
CR	CURB RETURN	MSA	MAXIMUM SIZE AGGREGATE	TYP	TYPICAL
CTB	CEMENT TREATED BASE	NTS	NOT TO SCALE	VG	VALLEY GUTTER
D/W	DRIVEWAY	OC	ON CENTER	W	WHITE
EC	END CURVE	PCC	PORTLAND CEMENT CONCRETE	Y	YELLOW
EP	EDGE OF PAVEMENT	PROP	PROPOSED		
EX	EXISTING	PVMT	PAVEMENT		

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41731 — Exp. 03-31-06 — CIVIL — STATE OF CALIFORNIA

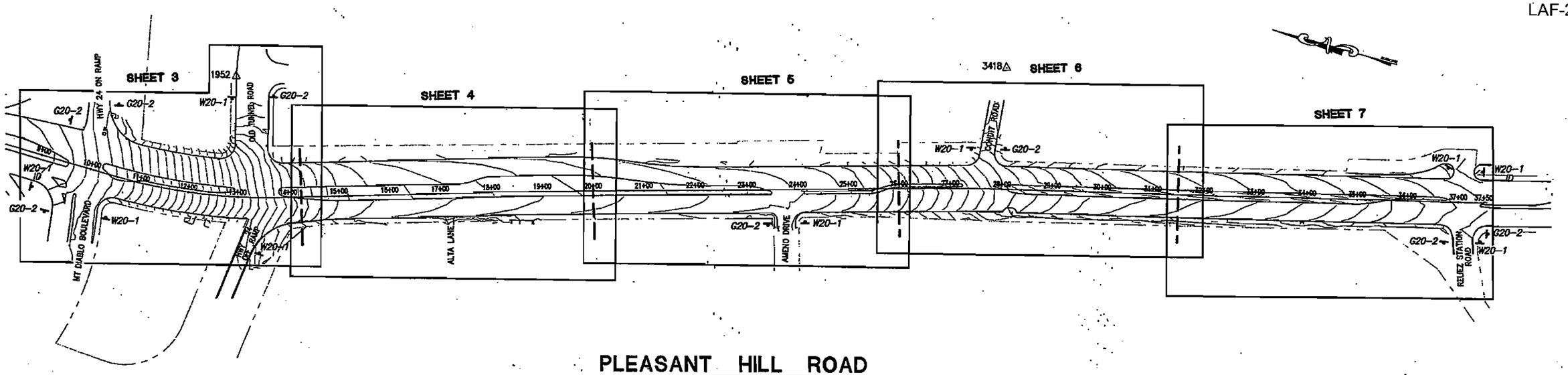
APPROVED August 4, 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS
TITLE SHEET

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE: NO SCALE	
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET 1 OF 38	
DATE: JULY 19, 2005	DWG: 2307-1TS		



PLEASANT HILL ROAD
KEY MAP AND CONSTRUCTION AREA SIGNS

PLEASANT HILL ROAD STATION LINE (SL) ALIGNMENT DATA

Desc.	Station	Spiral/Curve Data		Northing	Easting
PC	6+35.85			2153120.6572	6101223.6063
RP				2153024.9485	6099717.8447
		Delta:	04-04-22		
		Radius:	1509.00		
		Length:	107.27		
		Chord:	107.24	Course:	S 01-36-00 E
PT	7+43.12			2153013.4558	6101226.6009
		Length:	301.46	Course:	S 00-26-11 W
PC	10+44.58			2152712.0018	6101224.3054
RP				2152703.6940	6102315.2737
		Delta:	17-38-04		
		Radius:	1091.00		
		Length:	335.79		
		Chord:	334.46	Course:	S 08-22-51 E
PT	13+80.37			2152381.1105	6101273.0545
		Length:	446.35	Course:	S 17-11-53 E
PC	18+26.72			2151954.7136	6101405.0312
RP				2151363.3598	6099494.4552
		Delta:	00-49-33		
		Radius:	2000.00		
		Length:	28.83		
		Chord:	28.83	Course:	S 16-47-07 E
PT	18+55.55			2151927.1152	6101413.3559
		Length:	836.85	Course:	S 16-22-20 E
PC	26+92.40			2151124.1970	6101649.2458
RP				2150560.4416	6099730.3452
		Delta:	02-22-09		
		Radius:	2000.00		
		Length:	82.70		
		Chord:	82.69	Course:	S 15-11-16 E
PT	27+75.10			2151044.3919	6101670.9101
		Length:	974.90	Course:	S 14-00-11 E
	37+50			2150098.4616	6101906.8121

PLEASANT HILL ROAD CONTROL POINTS

Point	Northing	Easting	Elevation	Description
1952	2152525.2190	6101478.4000	258.33	CS 1
3418	2151073.9590	6101907.8550	234.65	CS 22\702
3419*	2151086.9620	6102058.8250	233.76	CS OLD 4 MON
3224*	2153454.0340	6101158.3710	293.94	NAIL\CAL TRANS

* NOT SHOWN ON KEY MAP – OUTSIDE WORK LIMITS

PLEASANT HILL ROAD EXISTING PAVEMENT AND CORE DATA

CORE NO	CORE DIA	AC THICKNESS	CTB THICKNESS	SUBGRADE CLASSIFICATION AND CONDITION
①	2-3/4"	3-1/2"	N/A	N/A
②	8"	4"	9"	BROWN CLAYEY SAND W/GRAVEL, DRY
③	2-3/4"	3"	N/A	N/A
④	8"	5-3/4"	7-1/4"	BROWN CLAY, DRY
⑤	8"	4-1/4"	8-3/4"	BROWN CLAYEY SAND W/GRAVEL
⑥	2-3/4"	3-1/2"	N/A	N/A
⑦	8"	3-3/4"	10"	BROWN CLAYEY SAND W/GRAVEL, DRY
⑧	2-3/4"	5-3/4"	N/A	N/A

CONSTRUCTION AREA SIGNS:

TYPE	DESCRIPTION & SIZE	QUANTITY
ID –	PROJECT IDENTIFICATION/FUNDING	2 EA
W20-1 –	"ROAD WORK AHEAD" (36"x36")	8 EA
G20-2 –	"END ROAD WORK" (42"x18")	9 EA
		19 TOTAL

CONSTRUCTION AREA SIGN NOTES:

1. THE LOCATION FOR EACH SIGN SHALL BE APPROVED IN ADVANCE BY THE ENGINEER. UNLESS OTHERWISE SHOWN ON THE PLANS, SIGNS SHALL BE MOUNTED ON 4"x4" WOOD POSTS, SECURELY BURIED IN THE GROUND. (PROJECT IDENTIFICATION/FUNDING SIGN PANELS SHALL BE MOUNTED ON TYPE III BARRICADES.)
2. ALL EXCAVATION FOR CONSTRUCTION AREA SIGNS SHALL BE DONE BY METHODS USING HAND TOOLS WITHOUT THE USE OF POWER TOOLS OR DRILLS. EXISTING UTILITIES SHALL BE MARKED BY UNDERGROUND SERVICE ALERT (USA TEL.: 1-800-227-2600) PRIOR TO COMMENCING ANY EXCAVATION.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41751 — Exp. 09-07-06 — CIVIL — STATE OF CALIFORNIA

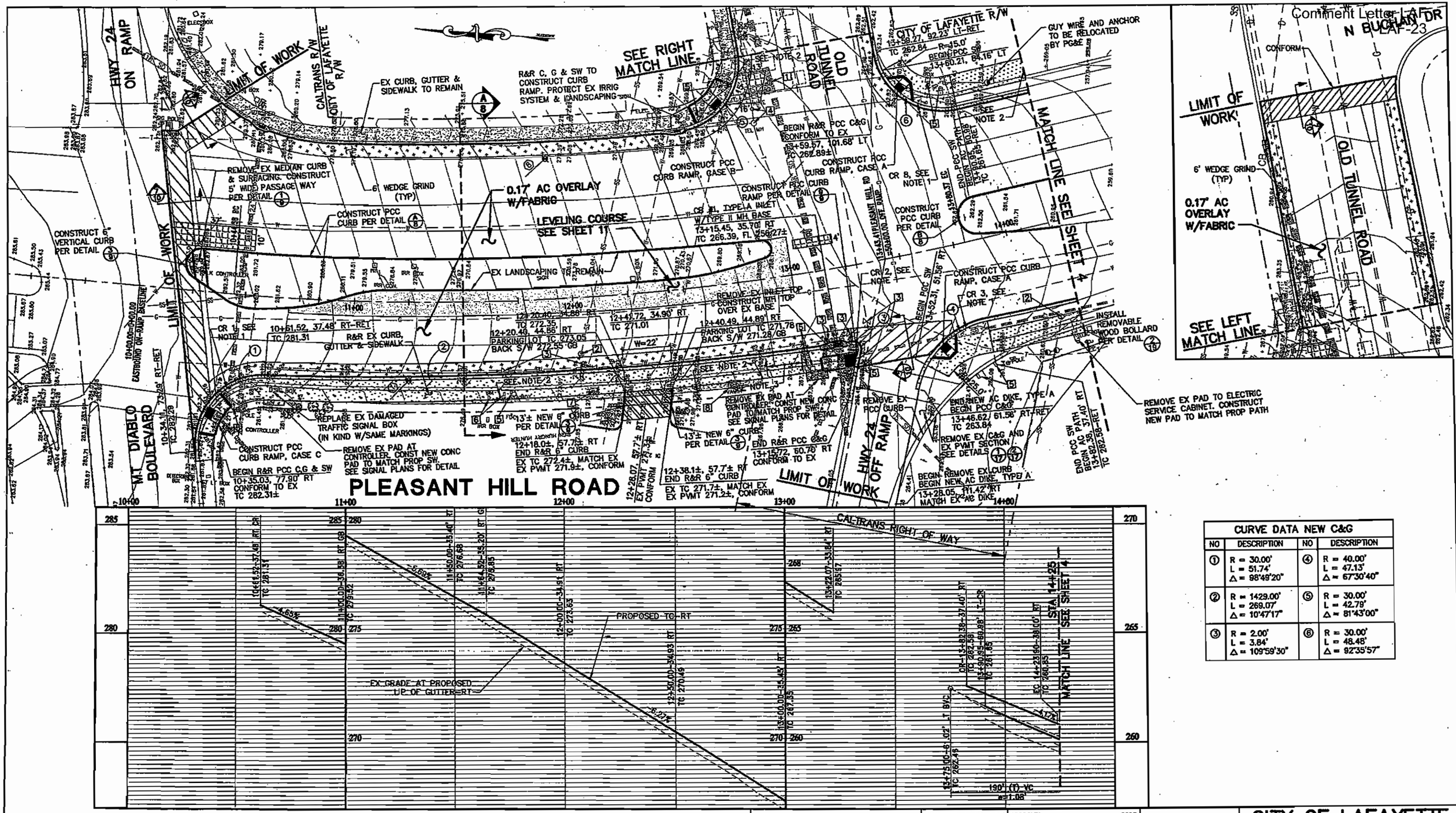
APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS				
NO.	DESCRIPTION	BY	DATE	DATE: JULY 19, 2005

CITY OF LAFAYETTE
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS
KEY MAP & CONSTRUCTION AREA SIGNS

DESIGNED: MA/JOV	PROJECT NO.: 014-9654	SCALE: 1"=100'
DRAWN: JJH	ROLL FRAME	
CHECKED: MA	AEI NO: 2307	SHEET 2 OF 38
	DWG: 2307-KM	



CURVE DATA NEW C&G			
NO	DESCRIPTION	NO	DESCRIPTION
①	R = 30.00' L = 51.74' Δ = 98°49'20"	④	R = 40.00' L = 47.13' Δ = 67°30'40"
②	R = 1429.00' L = 269.07' Δ = 10°47'17"	⑤	R = 30.00' L = 42.79' Δ = 81°43'00"
③	R = 2.00' L = 3.84' Δ = 109°59'30"	⑥	R = 30.00' L = 48.48' Δ = 92°35'57"

NOTES

1. FOR CURB RETURN (CR) ELEVATION DATA, SEE SHEET 17.
2. FOR SIGN RELOCATION, REMOVAL OR INSTALLATION SEE SIGNING AND STRIPING PLAN.
3. TRANSITION SIDEWALK CROSS SLOPE FROM 2% TOWARD CURB AT STA 12+75 TO 2% TOWARD BACK OF SIDEWALK AT STA 13+00

UTILITY LEGEND

1. RAISE SDMH TO GRADE
2. RAISE SSMH TO GRADE (BY CCCSD)
3. RAISE WATER VALVE TO GRADE (BY EBMUD)
4. RAISE TELEPHONE MH/VALVE TO GRADE (BY SBC)
5. RAISE TRAFFIC SIGNAL BOX TO GRADE
6. RAISE WATER METER TO GRADE
7. RAISE FIRE HYDRANT TO GRADE (BY EBMUD)
8. RAISE PG&E VAULT TO GRADE (BY PG&E)
9. RAISE ELEC BOX TO GRADE

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

REGISTERED PROFESSIONAL ENGINEER ARNOLD AZARI No. C 41731 Exp. 03-31-06 CIVIL STATE OF CALIFORNIA

SUBMITTED JULY 5, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS			
NO.	DESCRIPTION	BY	DATE

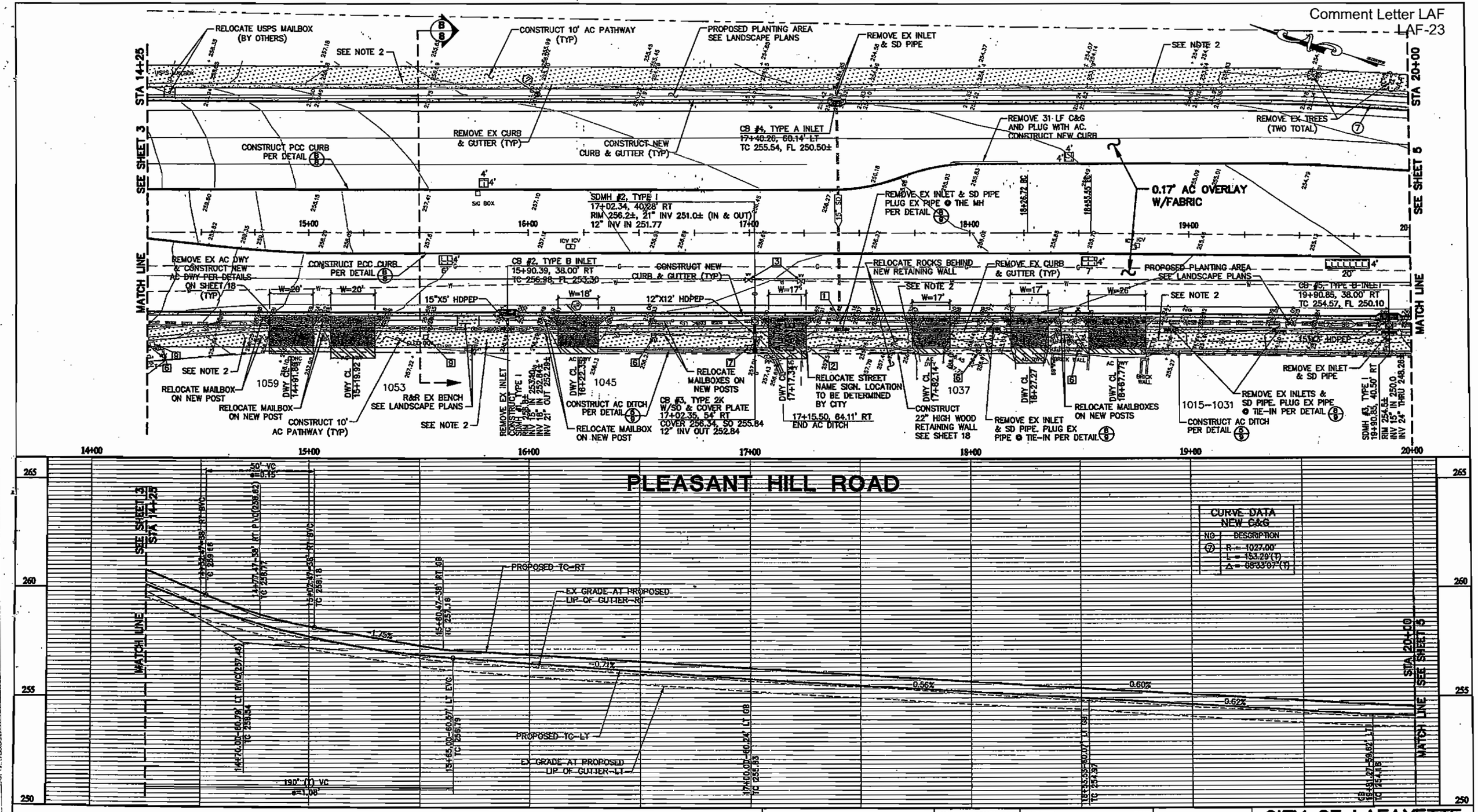
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

PLAN AND PROFILE STA 10+00 TO STA 14+25

DESIGNED: MA/JDV | PROJECT NO.: 014-9654 | SCALE: H 1"=20' V 1"=2'
DRAWN: JJH | ROLL - FRAME
CHECKED: MA | AEI NO: 2307 | SHEET 3 OF 38
DATE: JULY 19, 2005 | DWG: 2307-PL1

Comment Letter LAF
LAF-23



CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

NOTES

1. PROPOSED DRIVEWAY DETAILS, ELEVATIONS AND CONFORMS ARE SHOWN ON SHEET 18.
2. FOR SIGN RELOCATION, REMOVAL OR INSTALLATION SEE SIGNING AND STRIPING PLAN.

UTILITY LEGEND

1. RAISE SDMH TO GRADE
2. RAISE SSMH TO GRADE (BY CCCSD)
3. RAISE WATER VALVE TO GRADE (BY EBMUD)
4. RAISE TELEPHONE MH/VALVE TO GRADE (BY SBC)
5. RAISE TRAFFIC SIGNAL BOX TO GRADE
6. RAISE WATER METER TO GRADE
7. RAISE FIRE HYDRANT TO GRADE (BY EBMUD)
8. RAISE PG&E VAULT TO GRADE (PG&E)
9. RAISE ELEC BOX TO GRADE

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

REGISTERED PROFESSIONAL ENGINEER — No. C 41931 — Exp. 03-31-06 — CIVIL — STATE OF CALIFORNIA

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS: NO.	DESCRIPTION	BY	DATE

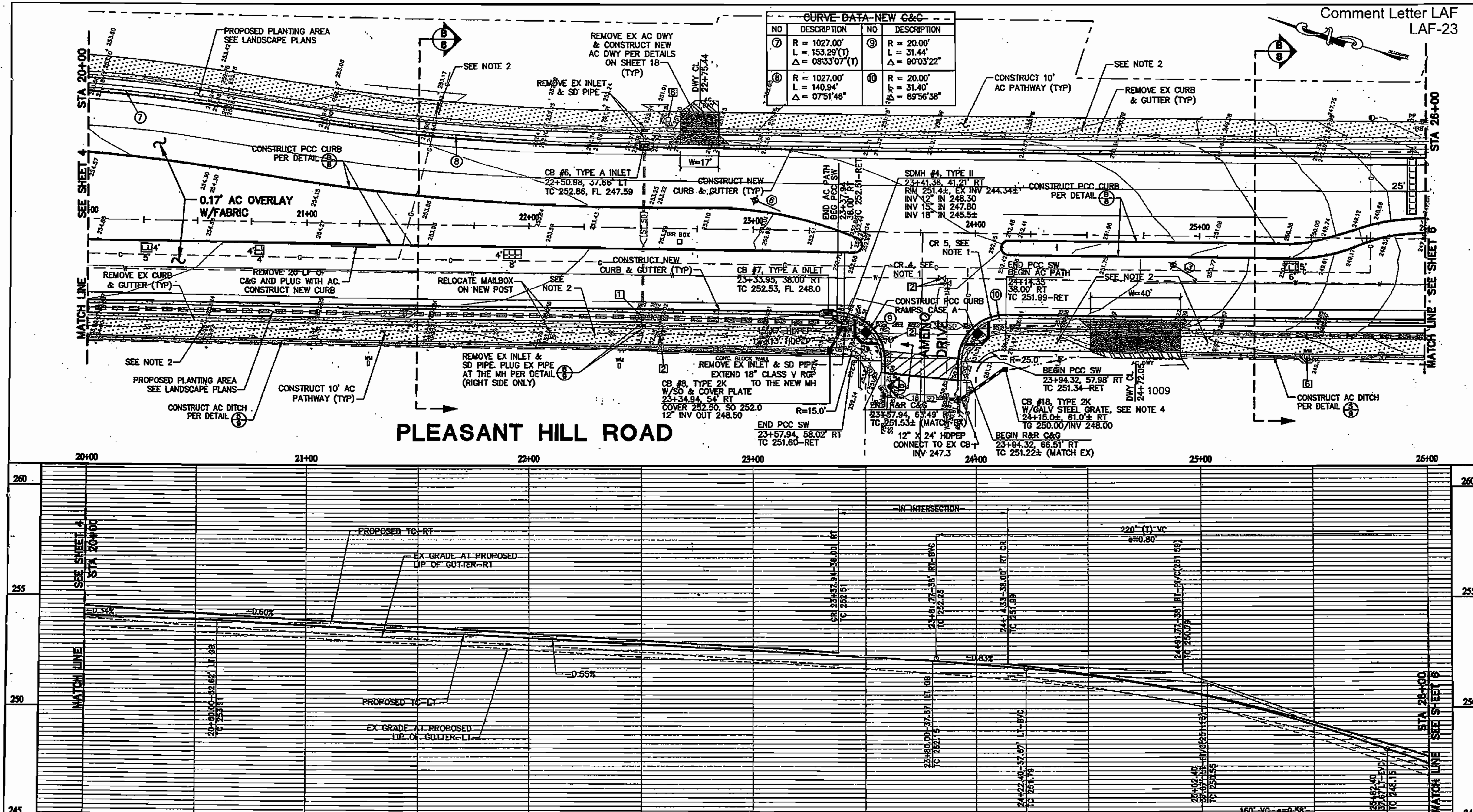
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

PLAN AND PROFILE STA 14+25 TO STA 26+00

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H 1"=20' V 1"=2'
DRAWN: JSH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	4 OF 38
DATE: JULY 19, 2005	DWG: 2307-PL2		

Comment Letter LAF
LAF-23



CURVE DATA NEW C&G			
NO	DESCRIPTION	NO	DESCRIPTION
7	R = 1027.00' L = 153.29'(T) Δ = 08°33'07"(T)	9	R = 20.00' L = 31.44' Δ = 90°03'22"
8	R = 1027.00' L = 140.94' Δ = 07°51'46"	10	R = 20.00' L = 31.40' Δ = 89°56'38"

NOTES

1. FOR CURB RETURN (CR) ELEVATION DATA, SEE SHEET 17.
2. FOR SIGN RELOCATION, REMOVAL OR INSTALLATION SEE SIGNING AND STRIPING PLAN.
3. PROPOSED DRIVEWAY DETAILS, ELEVATIONS AND CONFORMS ARE SHOWN ON SHEET 18.
4. REMOVE EX VEGETATION AROUND CB #18 AND GRADE AREA TO DRAIN INTO INLET.

UTILITY LEGEND

1. RAISE SDMH TO GRADE
2. RAISE SSMH TO GRADE (BY CCCSD)
3. RAISE WATER VALVE TO GRADE (BY EBMUD)
4. RAISE TELEPHONE MH/VALVE TO GRADE (BY SBC)
5. RAISE TRAFFIC SIGNAL BOX TO GRADE
6. RAISE WATER METER TO GRADE
7. RAISE FIRE HYDRANT TO GRADE (BY EBMUD)
8. RAISE PG&E VAULT TO GRADE (PG&E)
9. RAISE ELEC BOX TO GRADE

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED ________ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED ________
PROJECT ENGINEER

REVISIONS | NO. | DESCRIPTION | BY | DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLAN AND PROFILE
STA 20+00 TO STA 26+00

DESIGNED: MA/JDV | PROJECT NO.: 014-9654
DRAWN: JJH | ROLL FRAME
CHECKED: MA | AEI NO: 2307
DATE: JULY 19, 2005 | DWG: 2307-PL3
SCALE: H 1"=20' V 1"=2'
SHEET 5 OF 38

CURVE DATA – NEW C&G			
NO	DESCRIPTION	NO	DESCRIPTION
11	R = 30.00' L = 41.61' Δ = 79°27'39"	12	R = 30.00' L = 51.90' Δ = 99°07'04"

PLEASANT HILL ROAD

NOTES

1. FOR CURB RETURN (CR) ELEVATION DATA, SEE SHEET 17.
2. FOR SIGN RELOCATION, REMOVAL OR INSTALLATION SEE SIGNING AND AND STRIPING PLAN.
3. PROPOSED DRIVEWAY DETAILS, ELEVATIONS AND CONFORMS ARE SHOWN ON SHEET 18.

UTILITY LEGEND

1. RAISE SDMH TO GRADE
2. RAISE SSMH TO GRADE (BY CCCSD)
3. RAISE WATER VALVE TO GRADE (BY EBMUD)
4. RAISE TELEPHONE MH/VALVE TO GRADE (BY SBC)
5. RAISE TRAFFIC SIGNAL BOX TO GRADE
6. RAISE WATER METER TO GRADE
7. RAISE FIRE HYDRANT TO GRADE (BY EBMUD)
8. RAISE PG&E VAULT TO GRADE (PG&E)
9. RAISE ELEC BOX TO GRADE
10. RAISE GAS VALVE TO GRADE (BY PG&E)

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

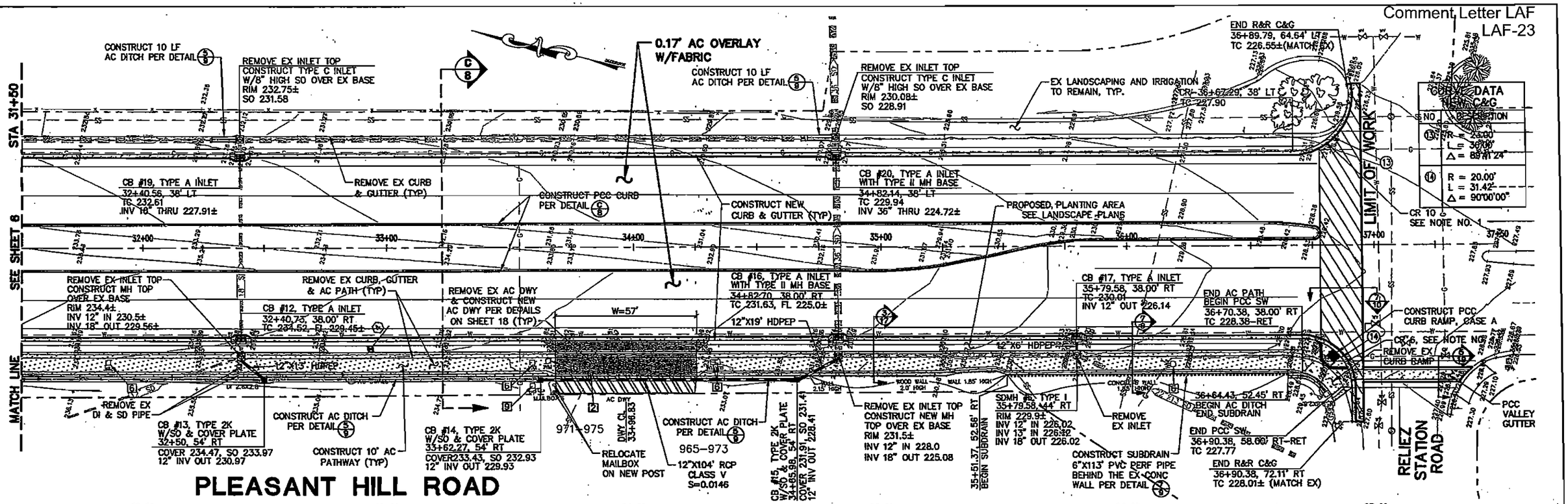
NO.	DESCRIPTION	BY	DATE

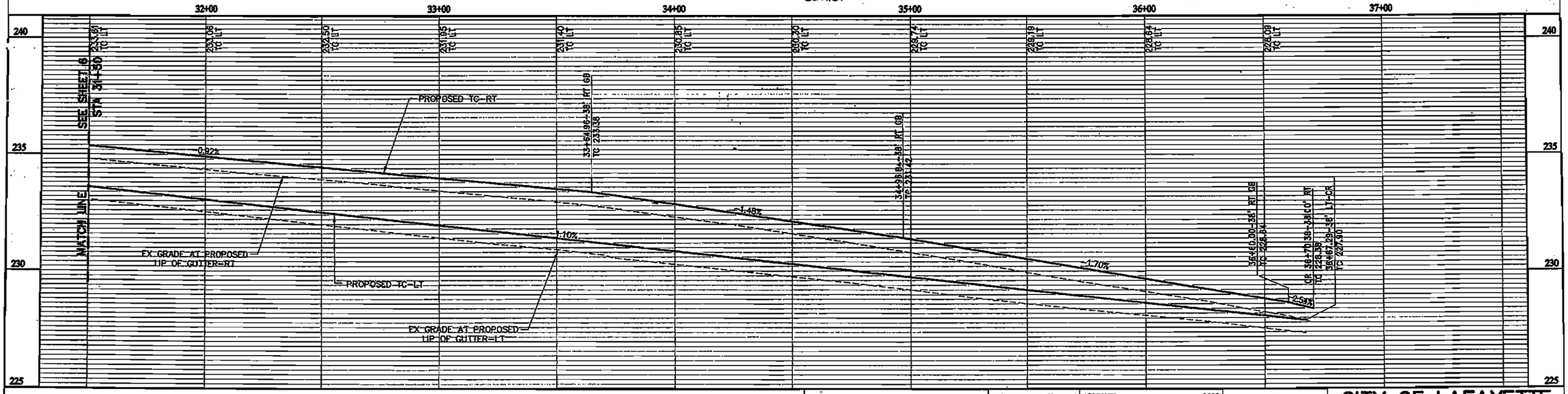
CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLAN AND PROFILE
STA 26+00 TO STA 31+50

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H 1"=20' V 1"=2'
DRAWN: JJH	ROLL: FRAME		
CHECKED: MA	AEI NO: 2307	SHEET 6 OF 38	
DATE: JULY 19, 2005	DWG: 2307-PL4		





NOTES

1. FOR CURB RETURN (CR) ELEVATION DATA, SEE SHEET 17.
2. FOR SIGN RELOCATION, REMOVAL OR INSTALLATION SEE SIGNING AND STRIPING PLAN.
3. PROPOSED DRIVEWAY DETAILS, ELEVATIONS AND CONFORMS ARE SHOWN ON SHEET 18.

UTILITY LEGEND

1. RAISE SDMH TO GRADE
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8. RAISE PG&E VAULT TO GRADE (PG&E)
9. RAISE ELEC BOX TO GRADE

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AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER RICHARD A. AZARI No. C 41731 Exp. 03-31-06 CIVIL STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

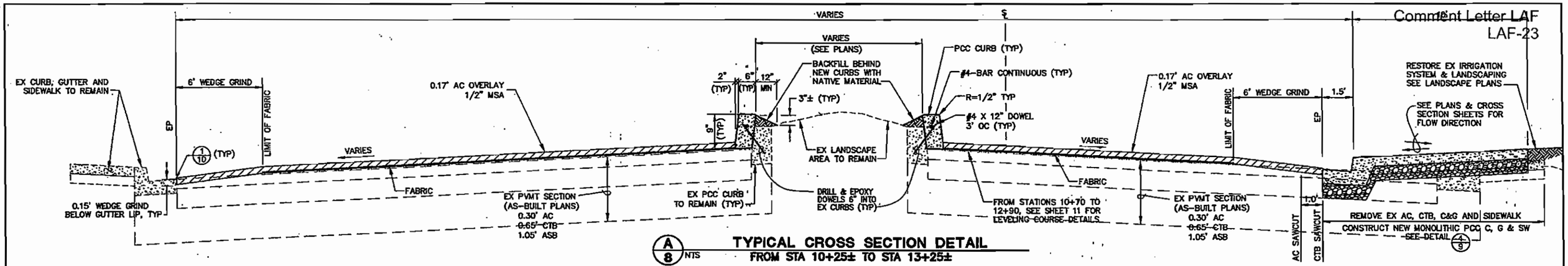
REVISIONS NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

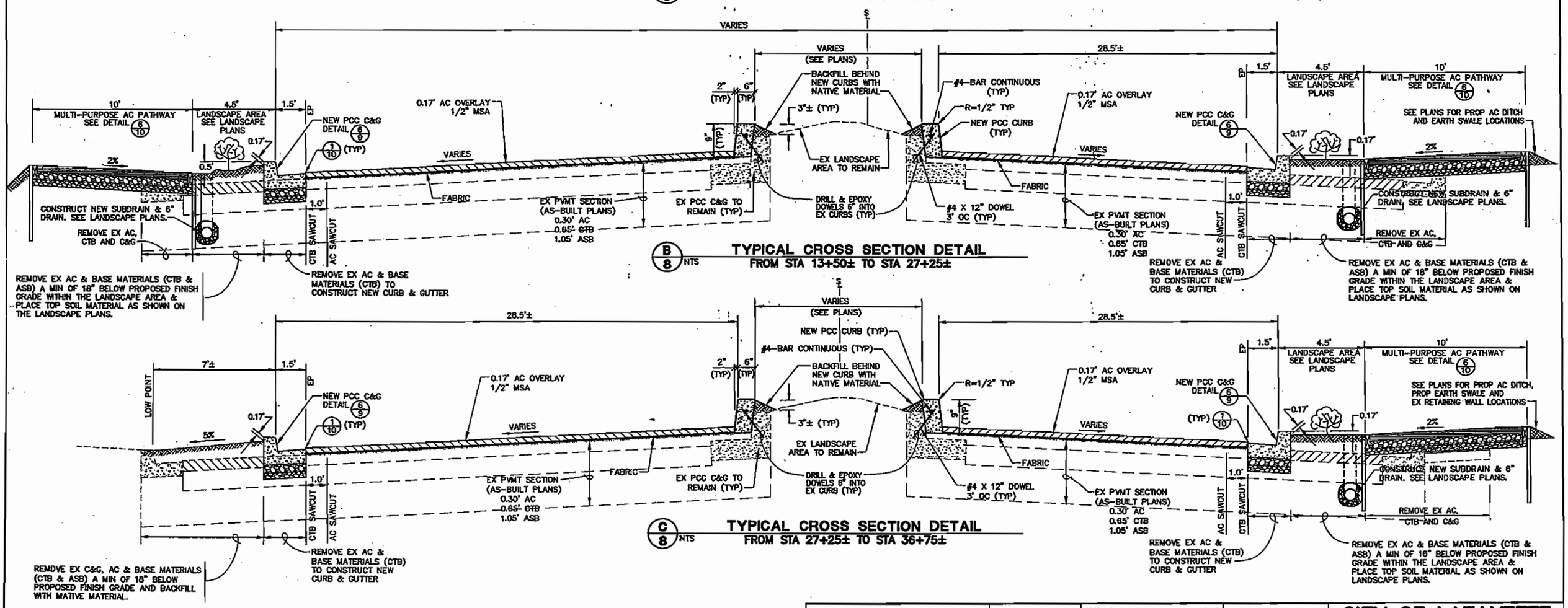
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

PLAN AND PROFILE STA 31+50 TO STA 37+00

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H 1"=20' V 1"=2'
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	7 OF 38
DATE: JULY 19, 2005	DWG: 2307-PL5		



A/8 NTS — TYPICAL CROSS SECTION DETAIL
FROM STA 10+25± TO STA 13+25±



B/8 NTS — TYPICAL CROSS SECTION DETAIL
FROM STA 13+50± TO STA 27+25±

C/8 NTS — TYPICAL CROSS SECTION DETAIL
FROM STA 27+25± TO STA 36+75±

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41731 — Exp. 03-31-06 — CIVIL — STATE OF CALIFORNIA

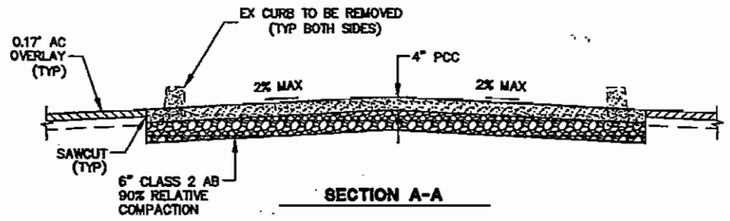
APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

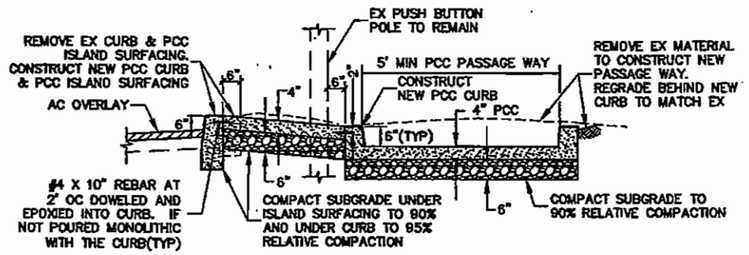
REVISIONS NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS
TYPICAL CROSS SECTIONS

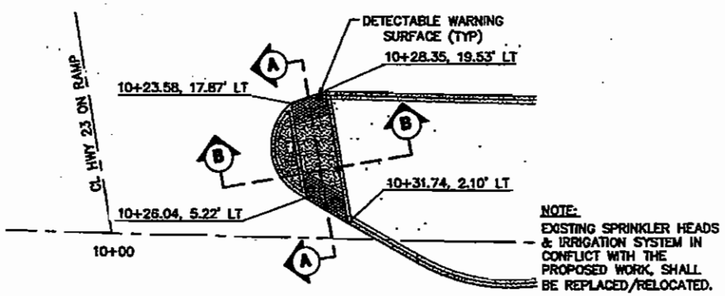
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE: NO SCALE	
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET 8 OF 38	
DATE: JULY 19, 2005	DWG: 2307-XS		



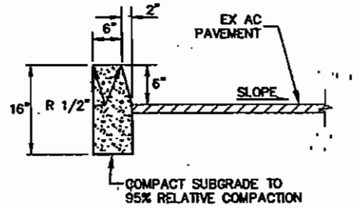
SECTION A-A



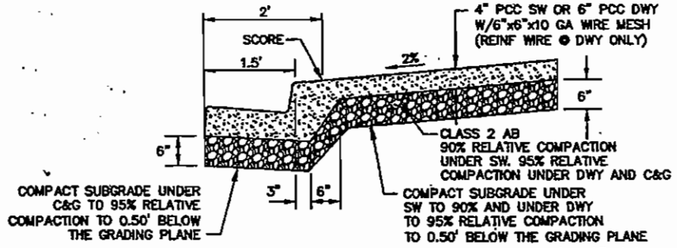
SECTION B-B



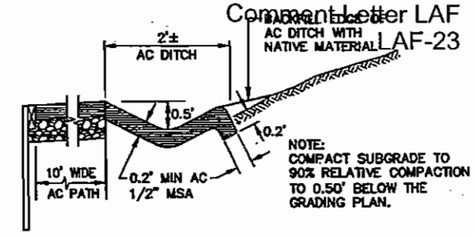
1/9 NTS **MEDIAN PASSAGE WAY AND SURFACING DETAIL**
AT MT DIABLO BLVD AND PLEASANT HILL ROAD INTERSECTION



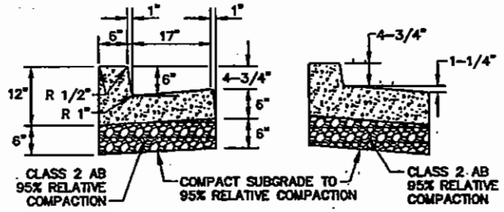
3/9 NTS **VERTICAL CURB DETAIL**



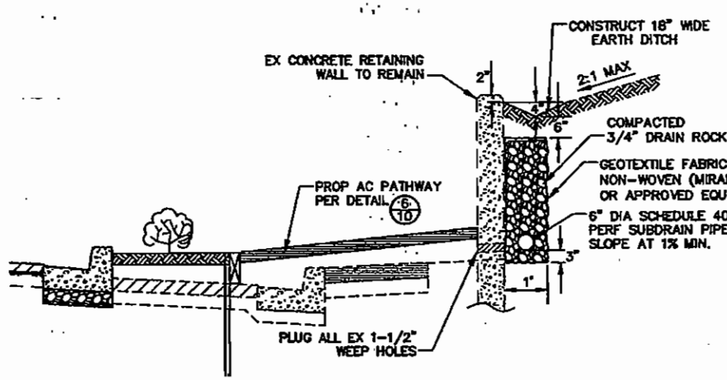
4/9 NTS **MONOLITHIC CURB, GUTTER AND SIDEWALK**



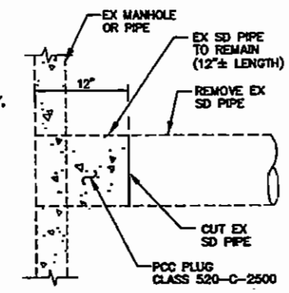
5/9 NTS **AC DITCH**



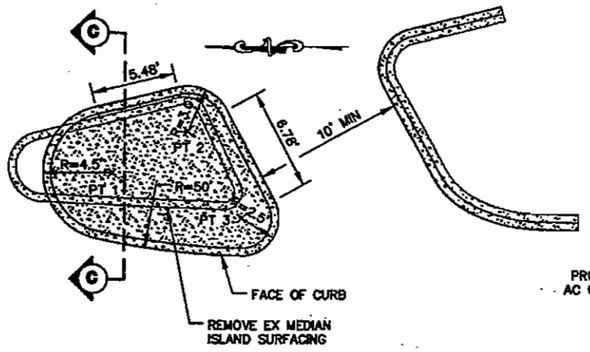
6/9 NTS **CURB AND GUTTER DETAIL**



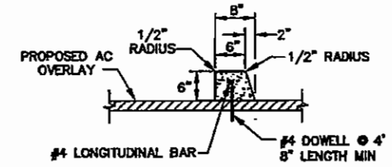
7/9 NTS **PATHWAY AT EX CONC WALL/SUBDRAIN DETAIL**



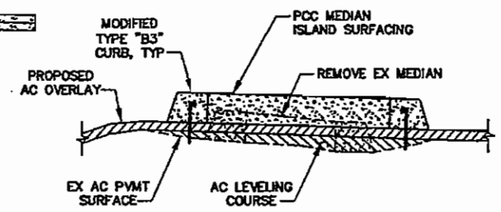
8/9 NTS **PLUG EX STORM DRAIN**



POINT	STA	OFFSET	DESCRIPTION
1	27+90.41	5.15' LT	CENTER OF RADIUS
2	27+95.89	6.65' LT	CENTER OF RADIUS
3	27+88.04	0.20' LT	CENTER OF RADIUS



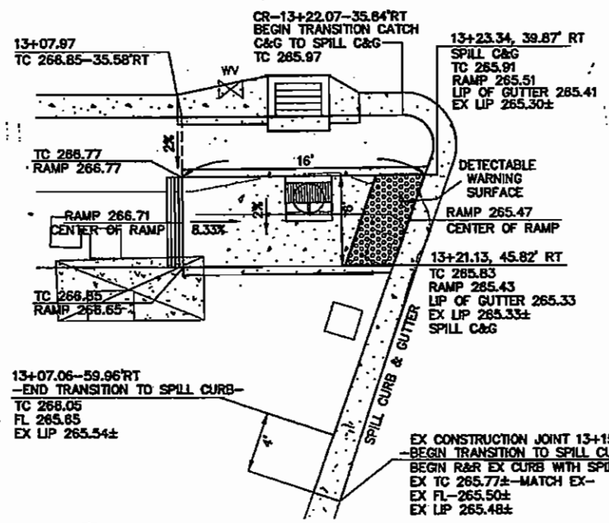
MODIFIED TYPE "B3" CURB



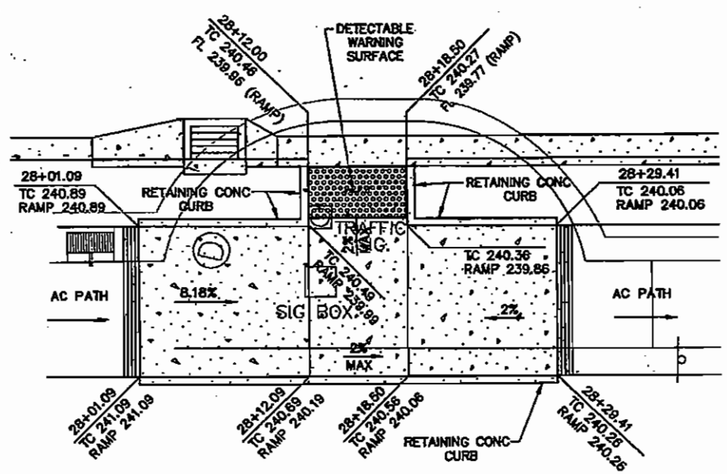
SECTION C-C

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

2/9 NTS **REMOVE & REPLACE PCC MEDIAN ISLAND SUFACING**
AT CONDIT ROAD & PLEASANT HILL ROAD INTERSECTION



9/9 NTS **CURB RAMP AT STA 13+25± RT**



10/9 NTS **CURB RAMP AT STA 28+15± RT**

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

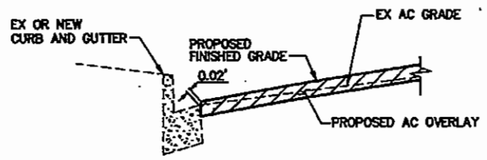
NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

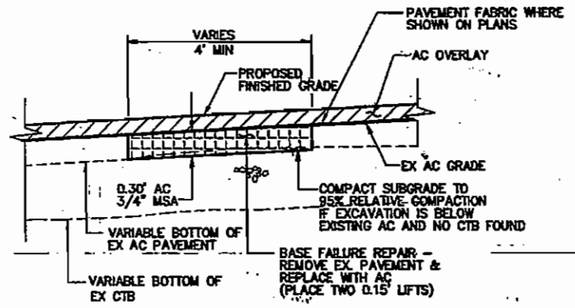
PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

CONSTRUCTION DETAILS

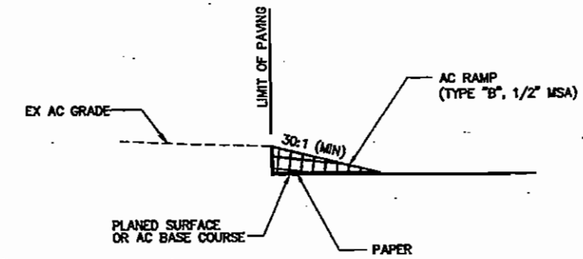
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE: NO SCALE
DRAWN: JJH	ROLL FRAME	
CHECKED: MA	AEI NO: 2307	SHEET 9 OF 38
DATE: JULY 19, 2005	DWG: 2307-CD1	



1/10 NTS **AC PAVING AT GUTTER LIP**

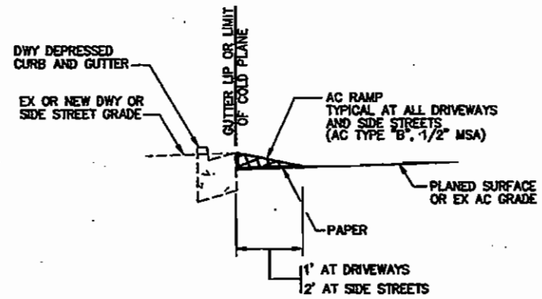


2/10 NTS **AC BASE FAILURE REPAIR**

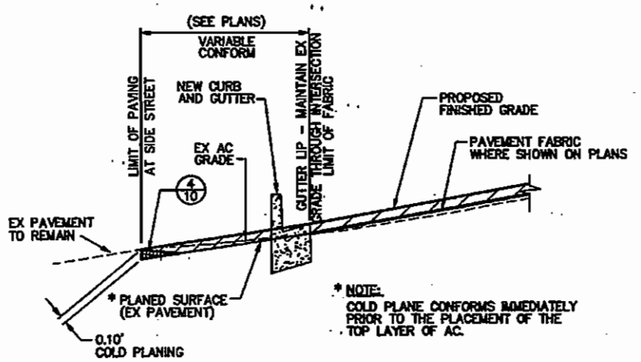


NOTE: CONTRACTOR SHALL ALSO CONSTRUCT TEMPORARY RAMP AT A MINIMUM 30:1 SLOPE LONGITUDINALLY ALONG THE TRAVEL LANE TO PROVIDE A SMOOTH APPROACH/ DEPARTURE TRANSITION FOR TRAFFIC.

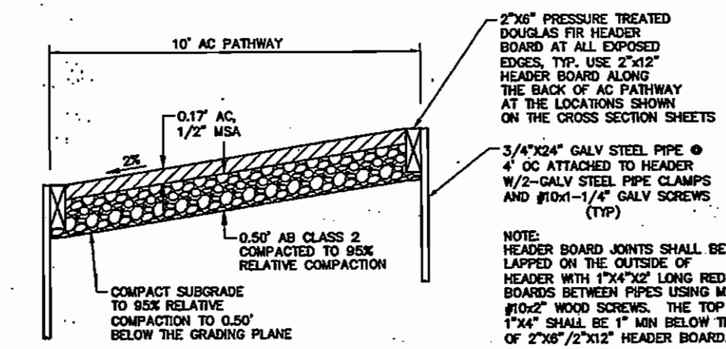
3/10 NTS **TEMPORARY ASPHALT CONCRETE RAMP AT AC PAVEMENT TRANSVERSE CONFORMS**



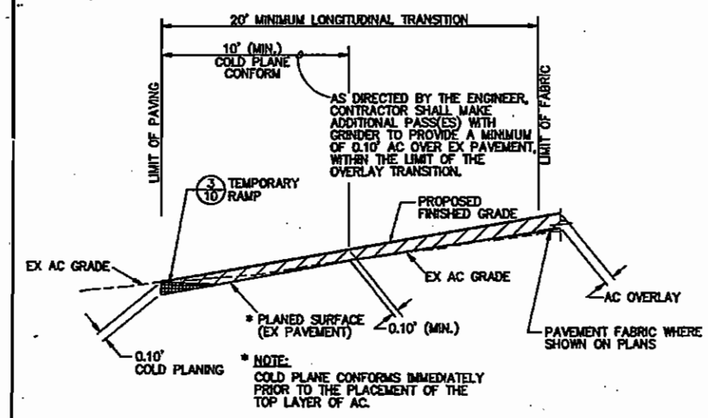
4/10 NTS **TEMPORARY ASPHALT CONCRETE RAMP AT DRIVEWAYS AND SIDE STREET CONFORMS**



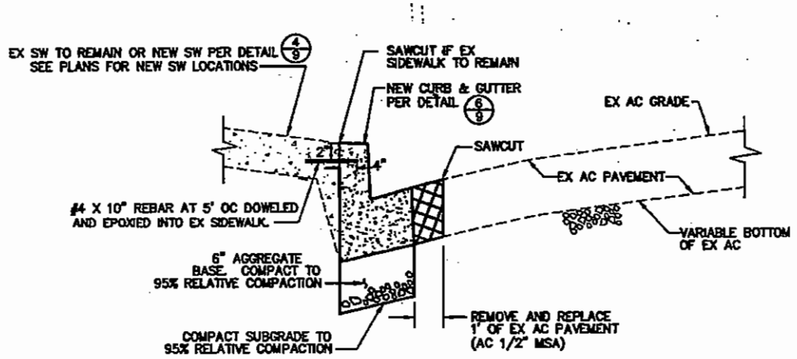
5/10 NTS **AC OVERLAY TRANSITION AT SIDE STREET CONFORMS (WITH CURB AND GUTTER)**



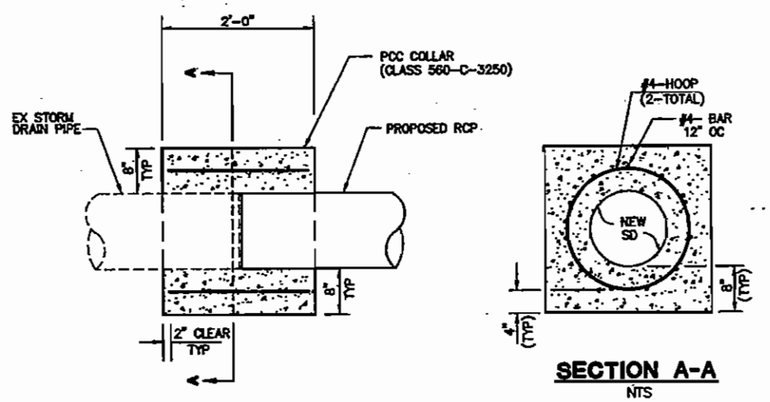
6/10 NTS **NEW 10' MULTI-PURPOSE AC PATHWAY PLEASANT HILL ROAD**



7/10 NTS **AC OVERLAY TRANSITION AT TRANSVERSE CONFORMS**



8/10 NTS **NEW CURB AND GUTTER AT EXISTING PAVEMENT**



SECTION A-A
NTS

9/10 NTS **PCC COLLAR**

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. C 41731 Exp. 09-31-06 CIVIL STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

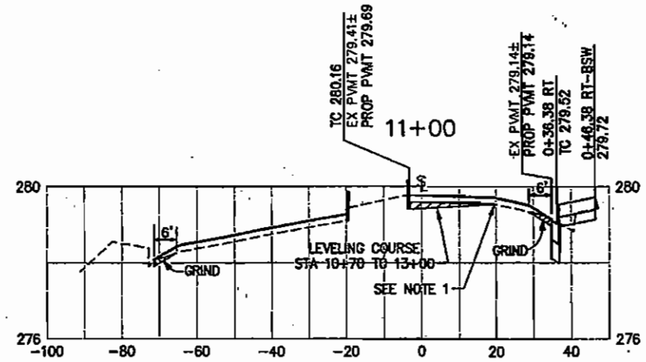
NO.	DESCRIPTION	BY	DATE
REVISIONS			

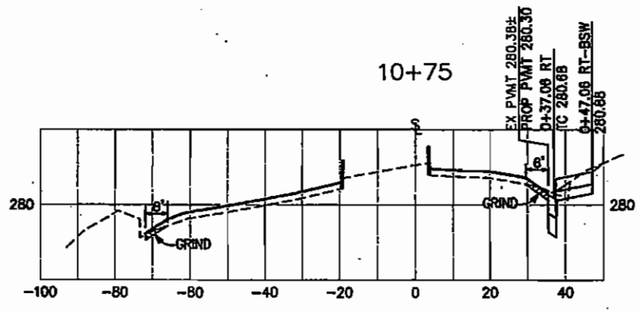
CITY OF LAFAYETTE

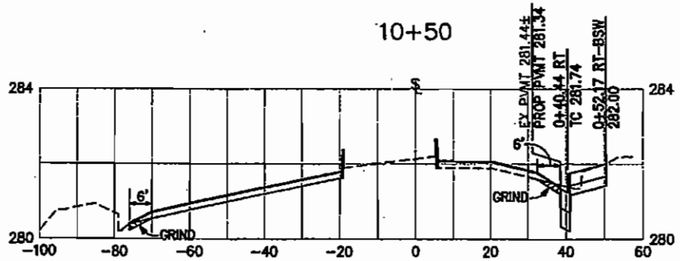
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

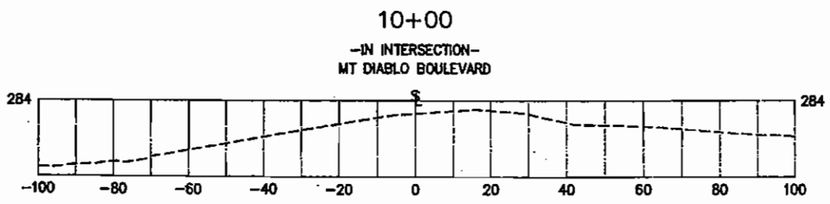
CONSTRUCTION DETAILS

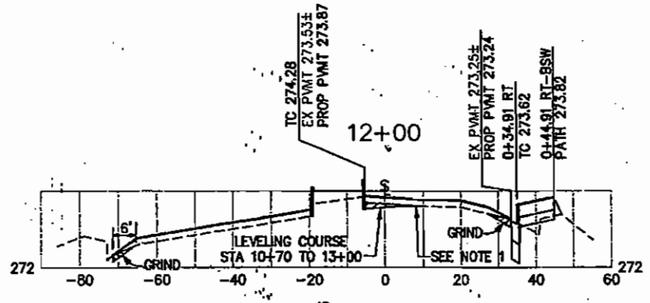
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE: NO SCALE
DRAWN: JJH	ROLL FRAME	
CHECKED: MA	ASD NO: 2307	SHEET 10 OF 38
DATE: JULY 19, 2005	DWG: 2307-CD2	

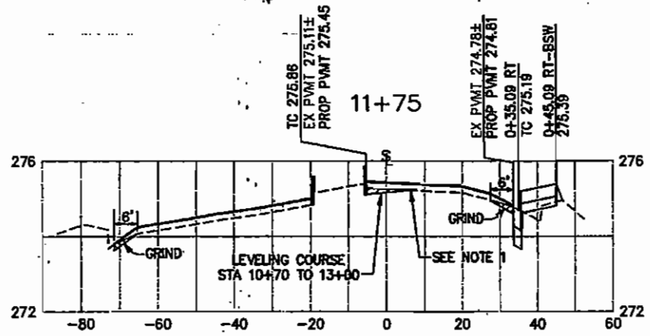


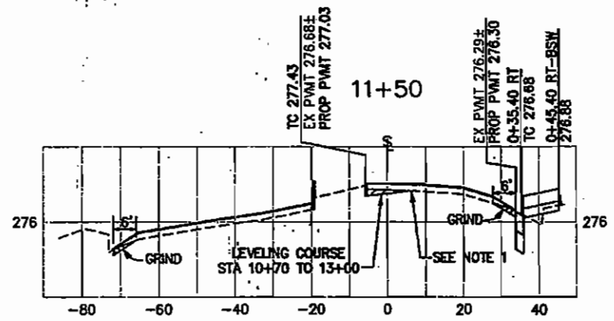


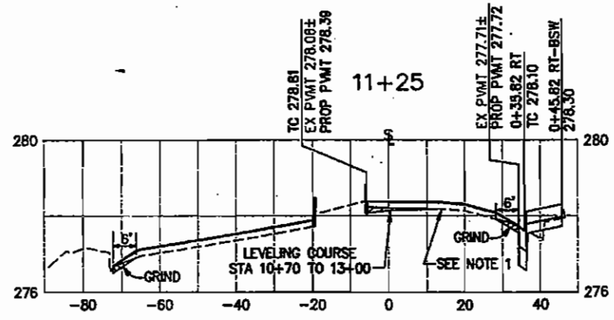


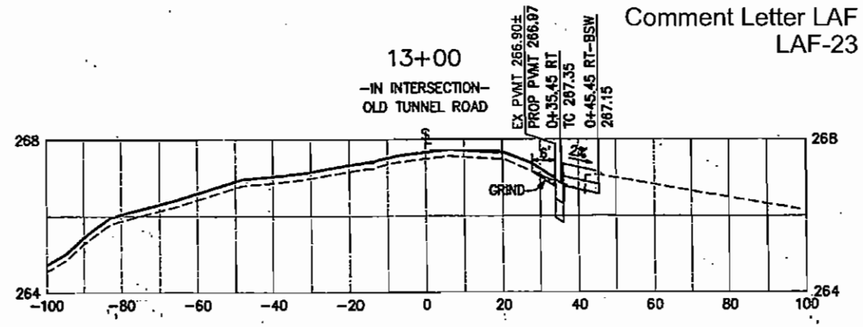


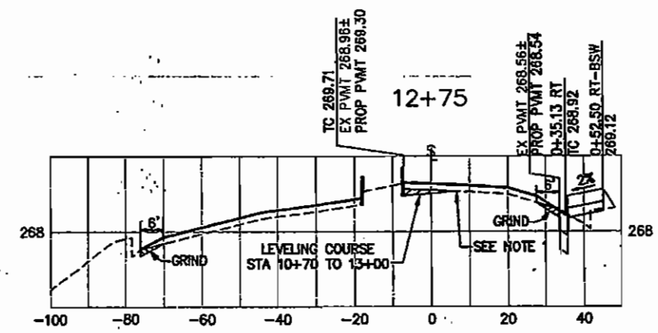


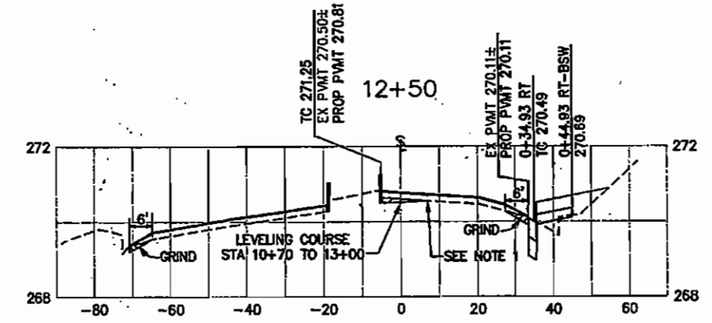


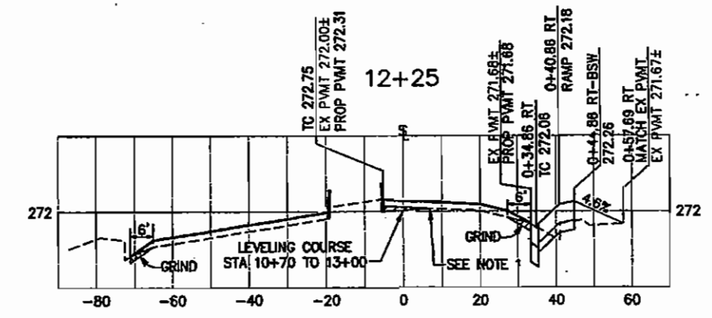












CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

NOTE

1. FEATHER ASPHALT CONCRETE LEVELING COURSE TO MATCH EXISTING SURFACE. PAVEMENT REINFORCEMENT FABRIC SHALL BE PLACED ABOVE THE LEVELING COURSE.

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — RICHARD AZARI — No. C 41731 — Exp. 06-30-06 — CIVIL — STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS				
NO.	DESCRIPTION	BY	DATE	

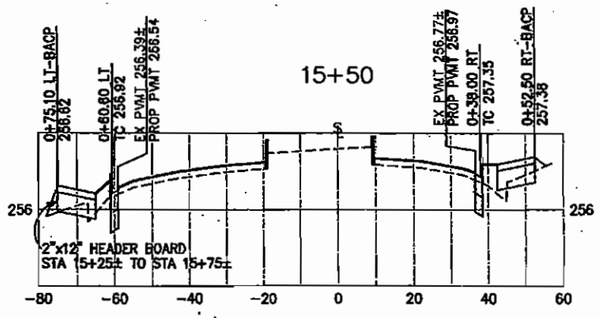
CITY OF LAFAYETTE

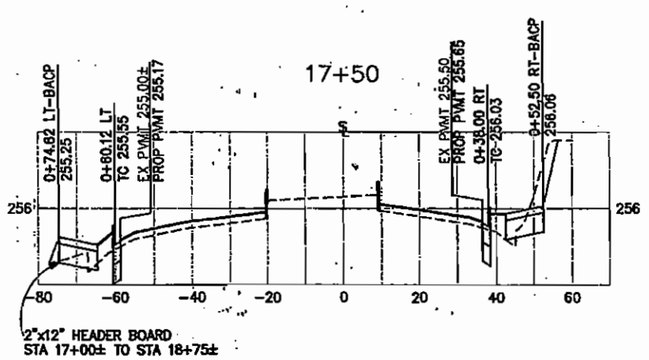
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

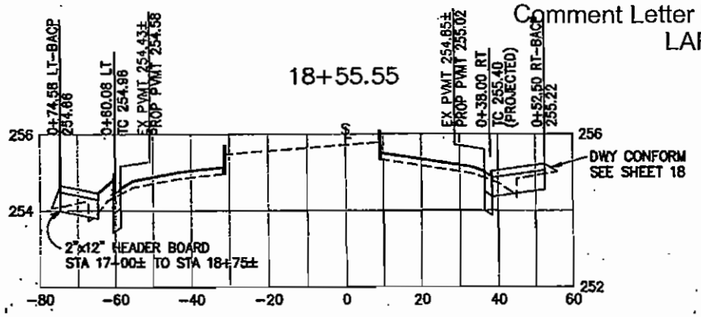
CROSS SECTIONS STA 10+00 TO 13+00

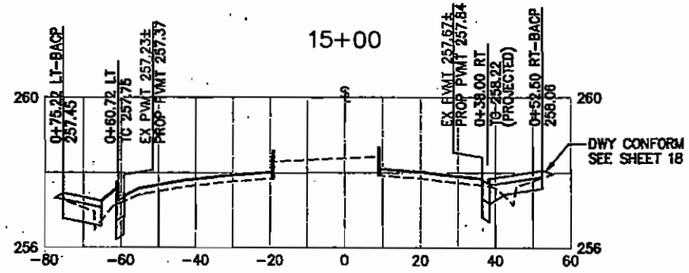
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H: 1"=20' V: 1"=2'
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	11 OF 38
DATE: JULY 19, 2005	DWG: 2307-XSEC		

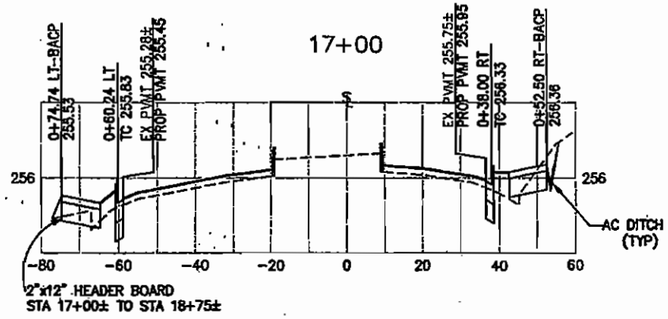
Comment Letter LAF
LAF-23

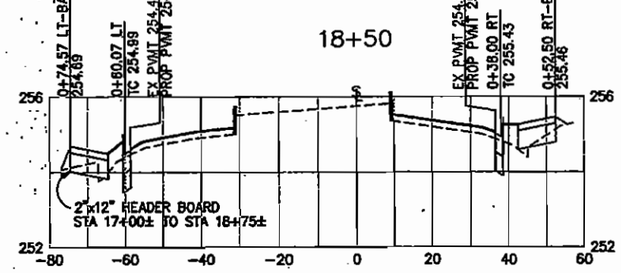


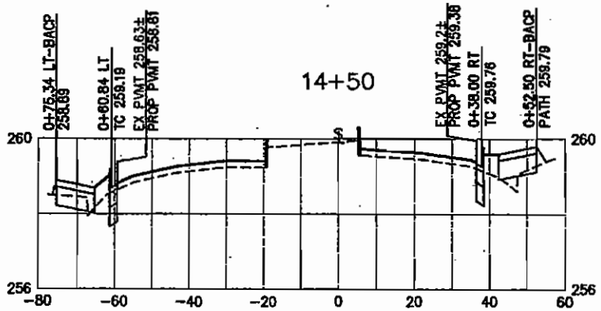


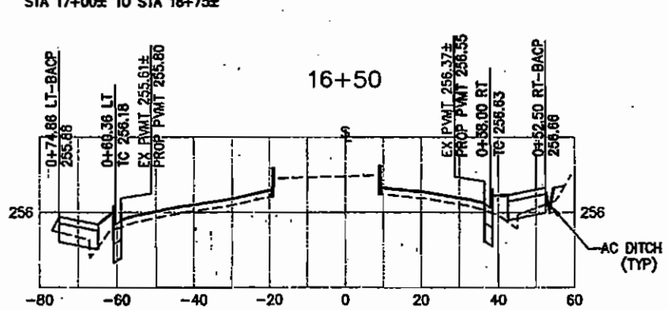


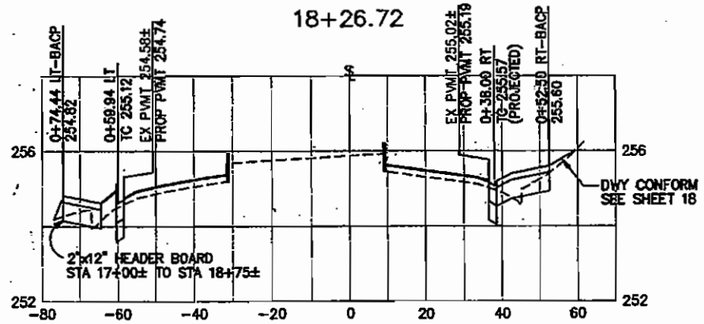


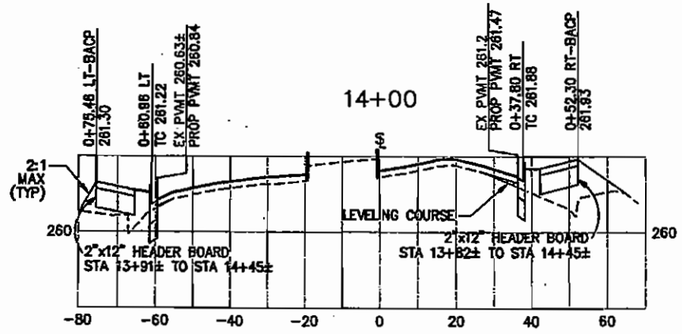


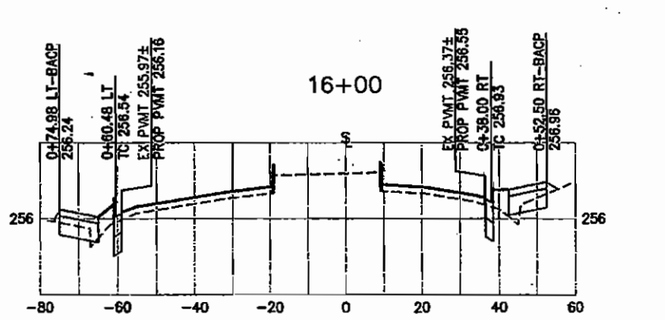


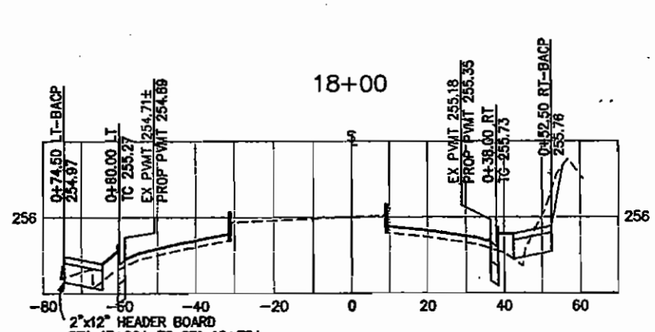












CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT: (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41731 — Exp. 06-30-06 — CIVIL — STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS NO.	DESCRIPTION	BY	DATE

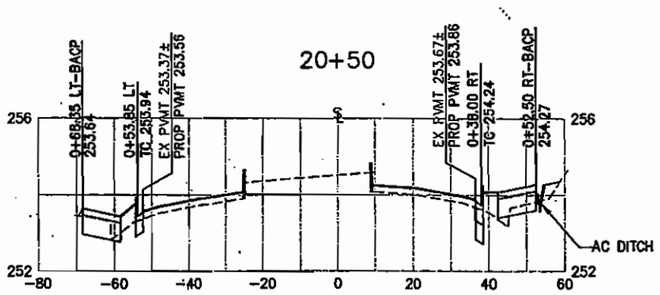
CITY OF LAFAYETTE

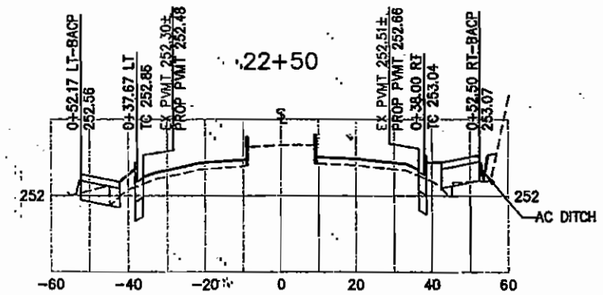
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

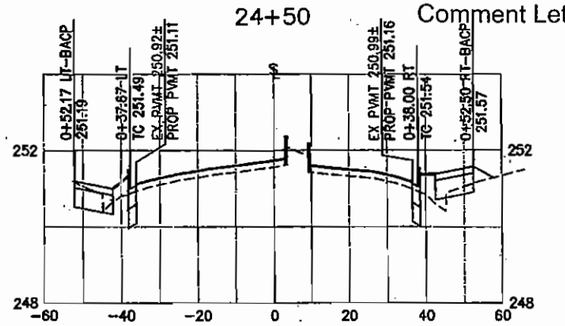
CROSS SECTIONS STA 14+00 TO 18+55.55

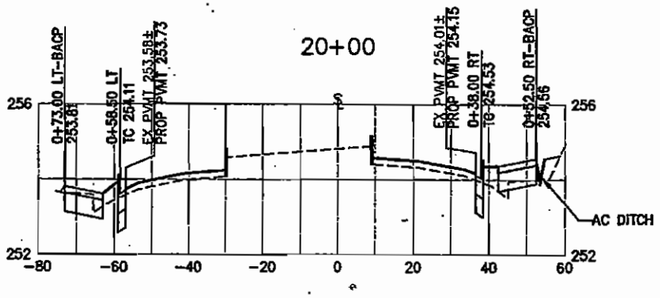
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H: 1"=20' V: 1"=2'
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	12 OF 38
DATE: JULY 19, 2005	DWG: 2307-XSEC		

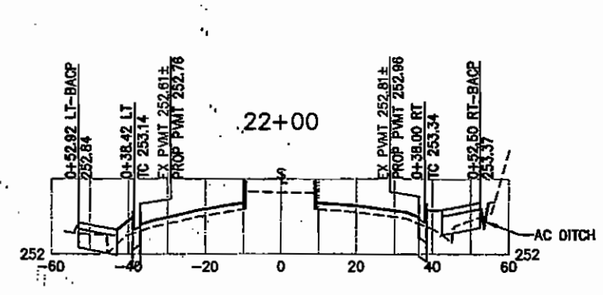
Comment Letter LAF
LAF-23

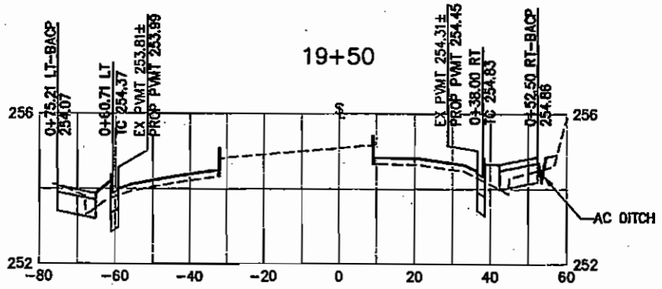


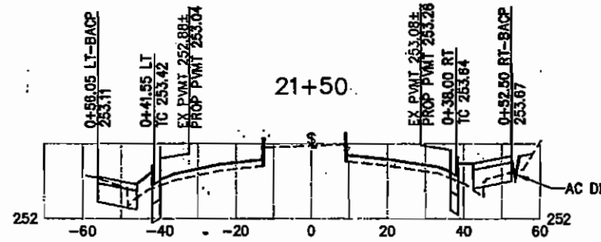


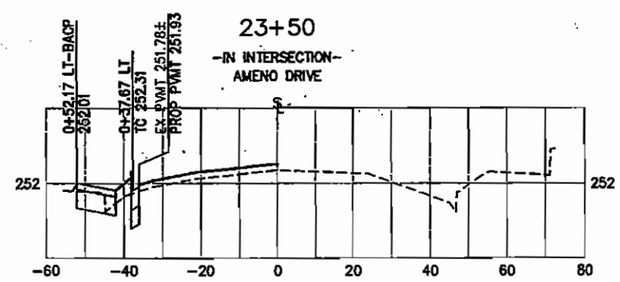


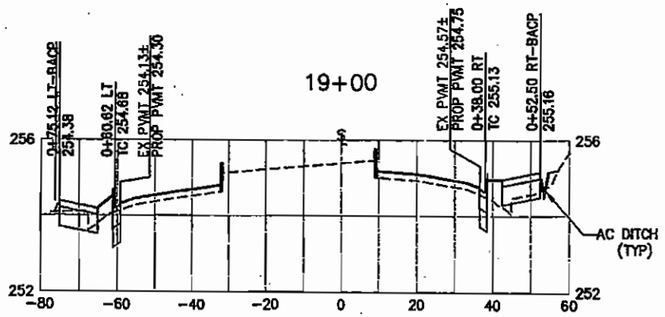


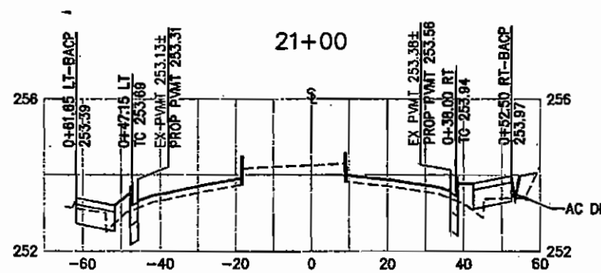


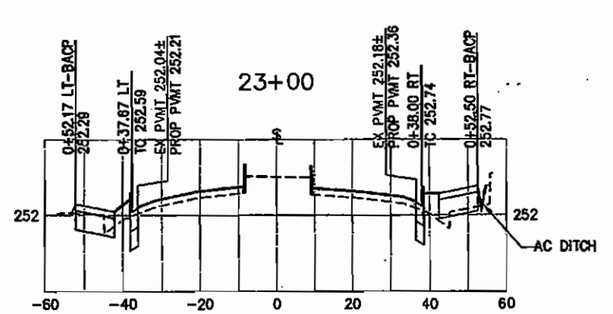












CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41731 — Exp. 03-31-06 — CIVIL — STATE OF CALIFORNIA

CITY OF LAFAYETTE

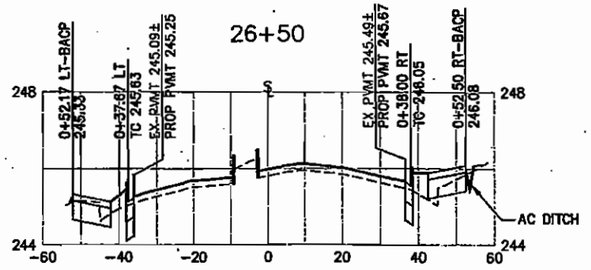
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

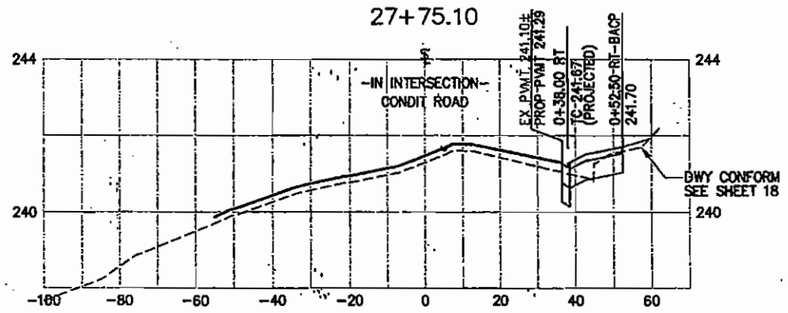
CROSS SECTIONS STA 19+00 TO 24+50

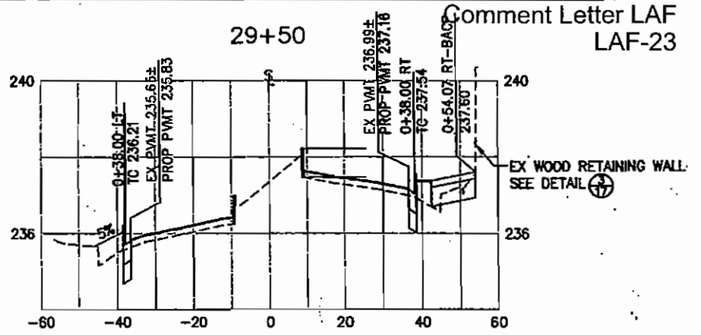
REVISIONS NO.	DESCRIPTION	BY	DATE

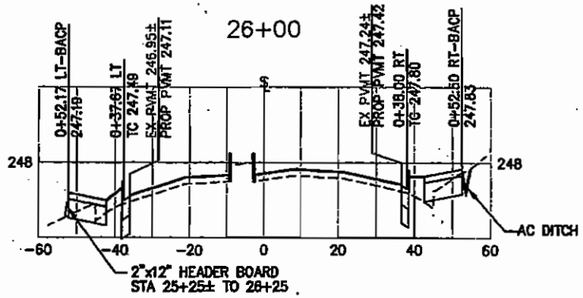
DESIGNED: MA/JDV | PROJECT NO.: 014-9654
DRAWN: JJH | ROLL FRAME
CHECKED: MA | AEI NO: 2307
DATE: JULY 19, 2005 | DWG: 2307-XSEC
SCALE: H: 1"=20' V: 1"=2'

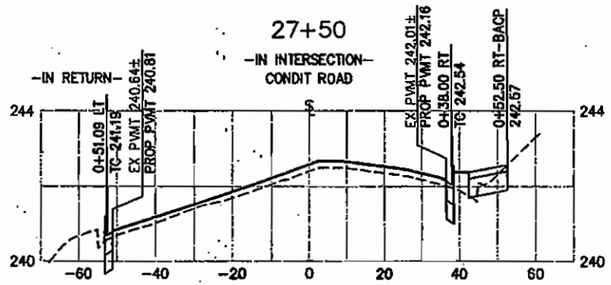
Comment Letter LAF
LAF-23

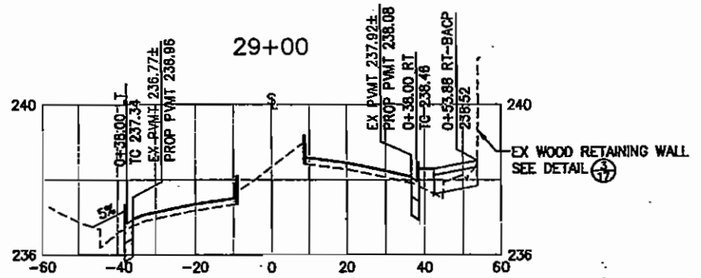


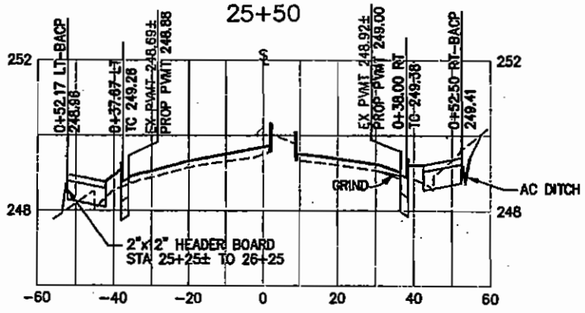


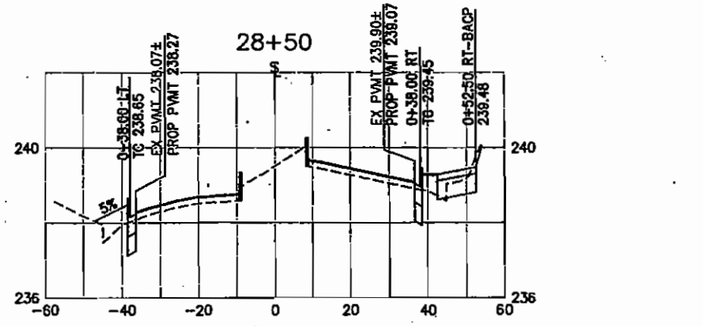


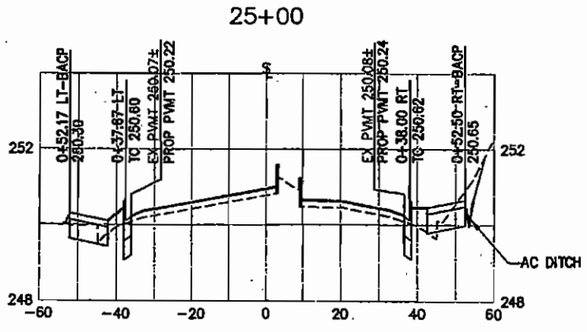


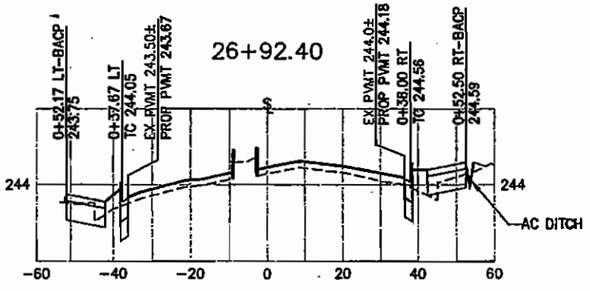


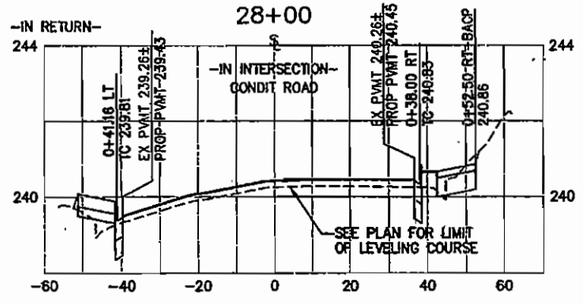












CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — MOHSEN AZARI — No. C 41781 — Exp. 09-31-06 — CIVIL — STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

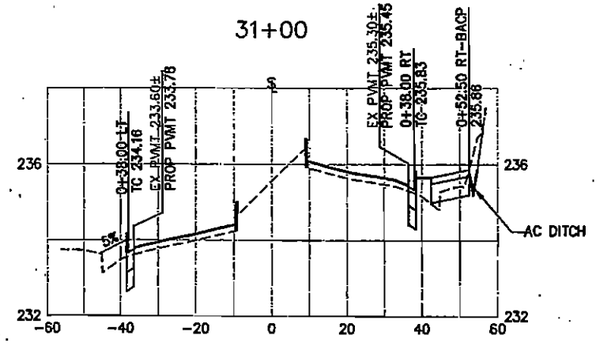
REVISIONS NO.	DESCRIPTION	BY	DATE

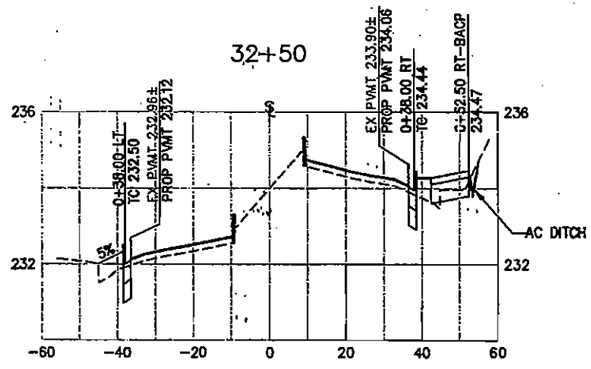
CITY OF LAFAYETTE

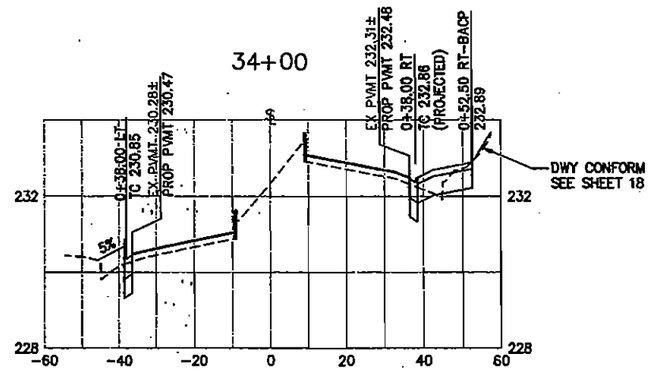
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

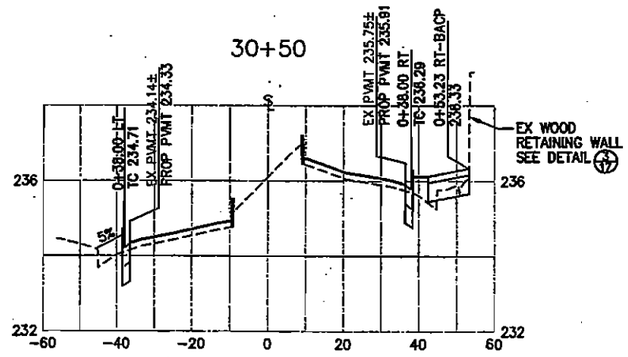
CROSS SECTIONS STA 25+00 TO 29+50

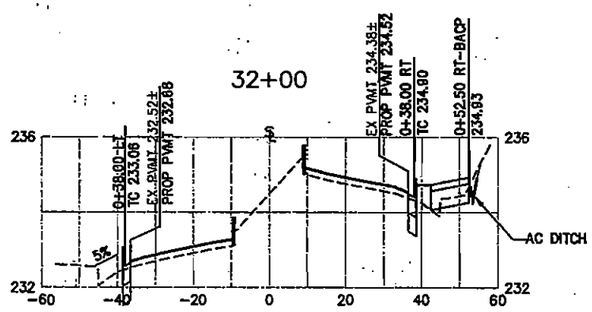
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H: 1"=20' V: 1"=2'
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	14 OF 38
DATE: JULY 19, 2005	DWG: 2307-XSEC		

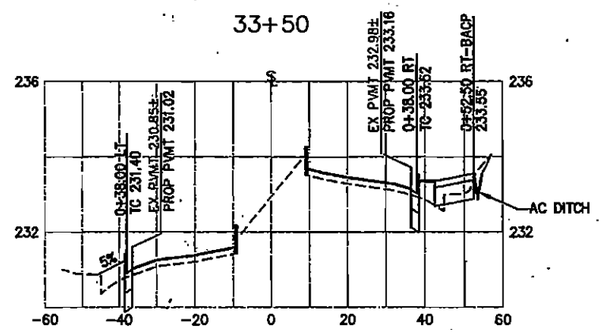


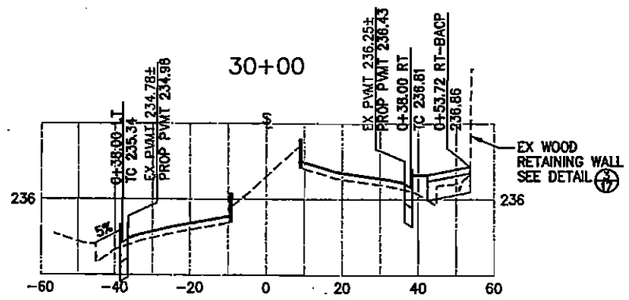


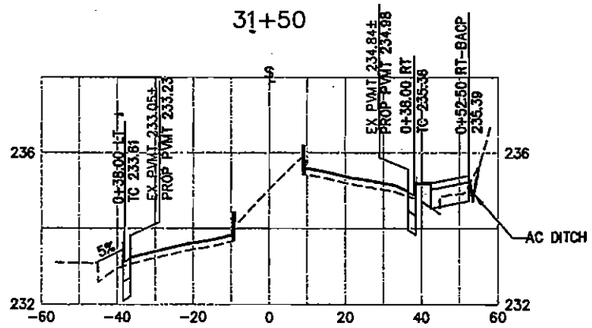


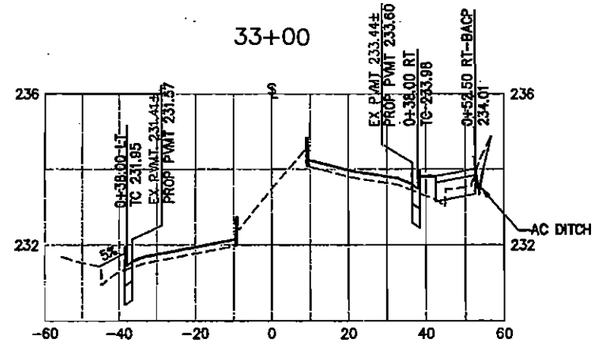












CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 13, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. C 41781 Exp. 09-31-06 CIVIL STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

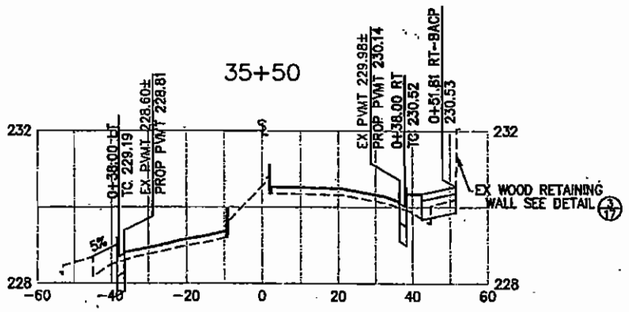
CITY OF LAFAYETTE

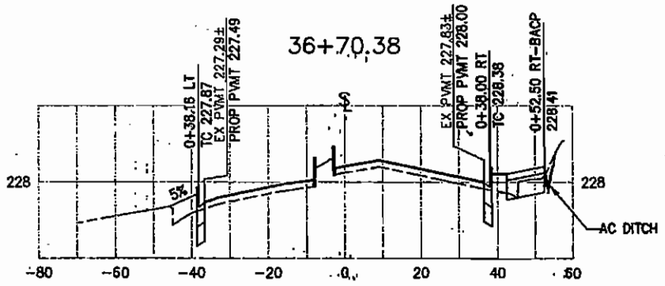
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

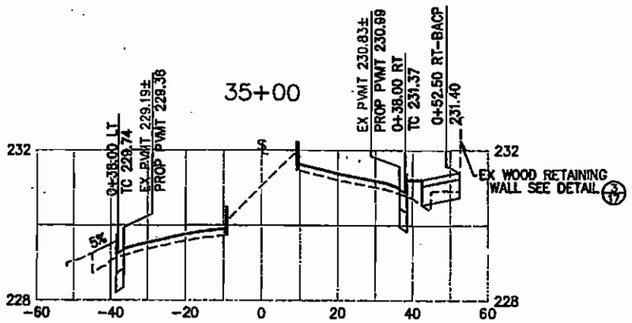
CROSS SECTIONS STA 30+00 TO 34+00

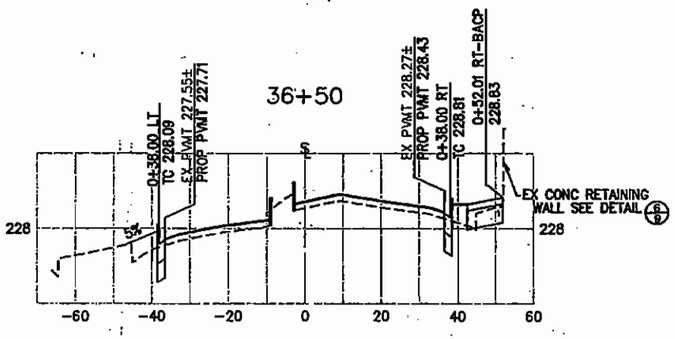
REVISIONS NO.	DESCRIPTION	BY	DATE

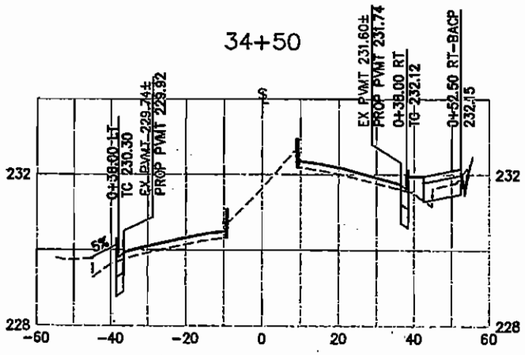
DESIGNED: MA/JDV | PROJECT NO.: 014-9654 | SCALE: H: 1"=20' V: 1"=2'
DRAWN: JJH | ROLL | FRAME
CHECKED: MA | AEI NO: 2307
DATE: JULY 19, 2005 | DWG: 2307-XSEC

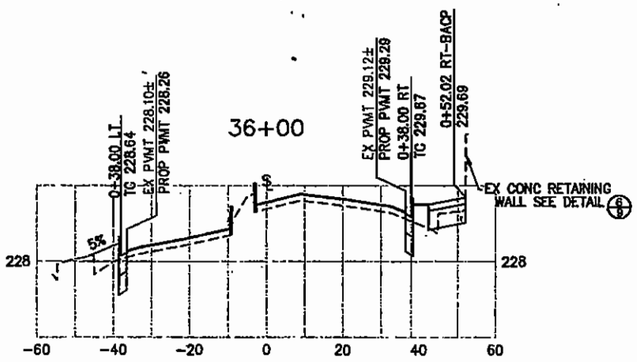


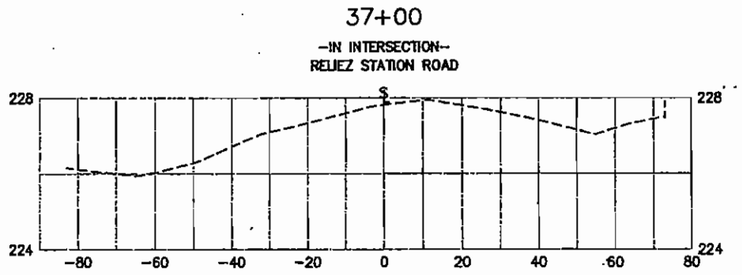












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4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — GERALD AZARI — No. C 41781 — Exp. 09-31-06 — CIVIL — STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS NO.	DESCRIPTION	BY	DATE

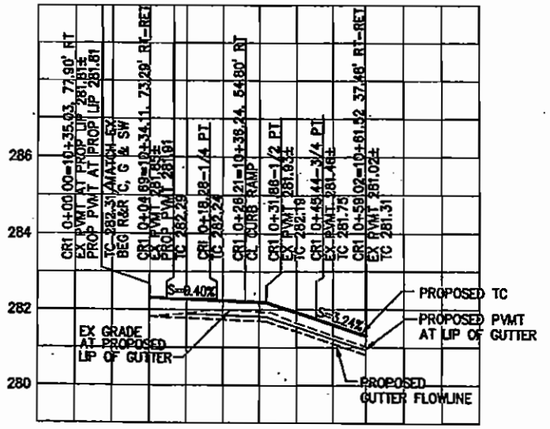
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

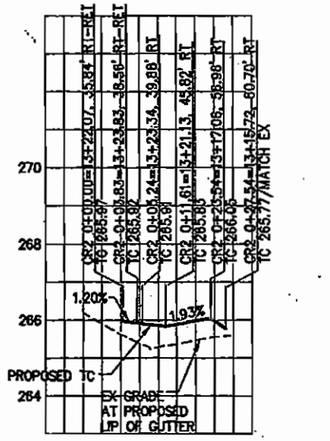
CROSS SECTIONS STA 34+50 TO 36+70.38

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H: 1"=20' V: 1"=2'
DRAWN: JJH	ROLL - FRAME		
CHECKED: MA	AEI NO: 2307		
DATE: JULY 19, 2005	DWG: 2307-XSEC	SHEET	16 OF 38

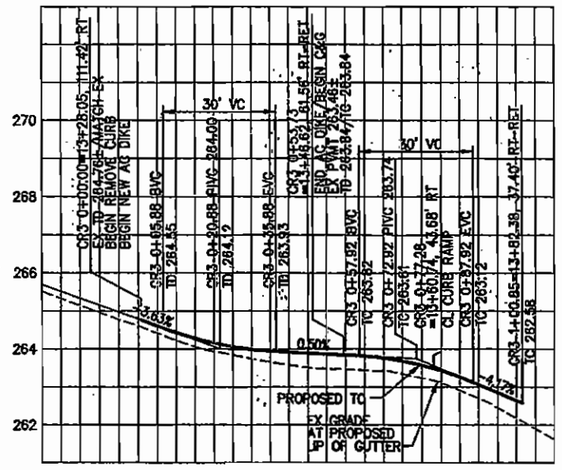
Comment Letter LAF
LAF-23



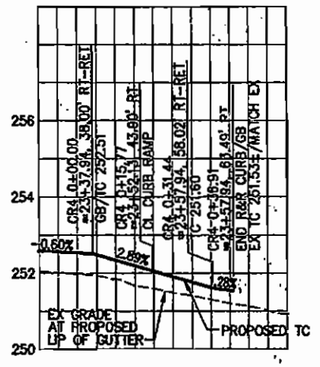
CR1
SOUTHWEST CR AT MT DIABLO BLVD



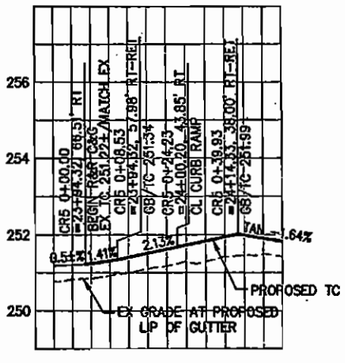
CR2
NORTHWEST CR AT SR 24 E/B OFF-RAMP



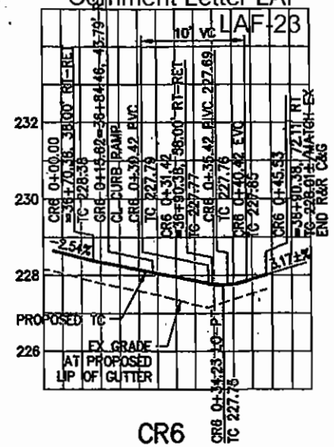
CR3
SOUTHWEST CR AT SR 24 E/B OFF-RAMP



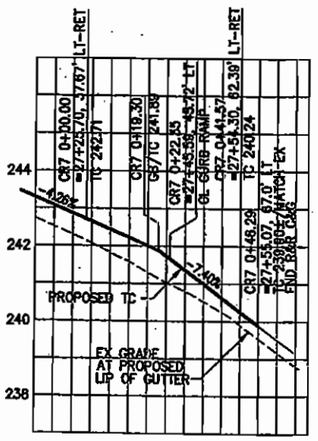
CR4
NORTHWEST CR AT AMENO DR



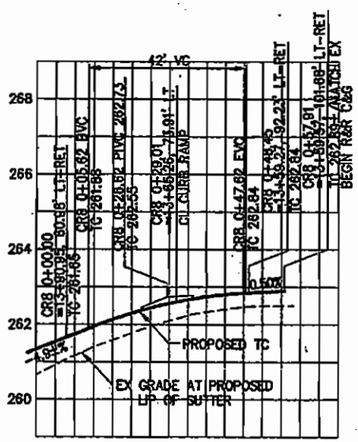
CR5
SOUTHWEST CR AT AMENO DR



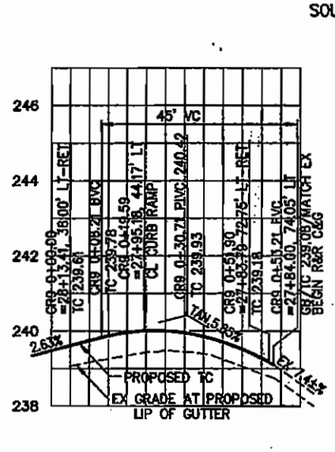
CR6
NORTHWEST CR AT RELIEZ STATION RD



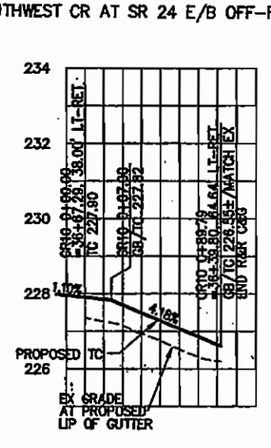
CR7
NORTHEAST CR AT CONDIT RD



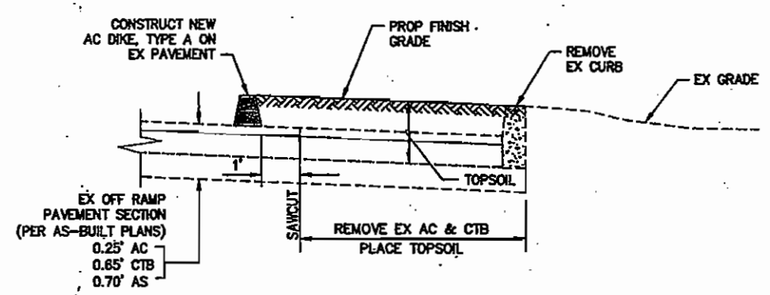
CR8
SOUTHEAST CR AT OLD TUNNEL RD



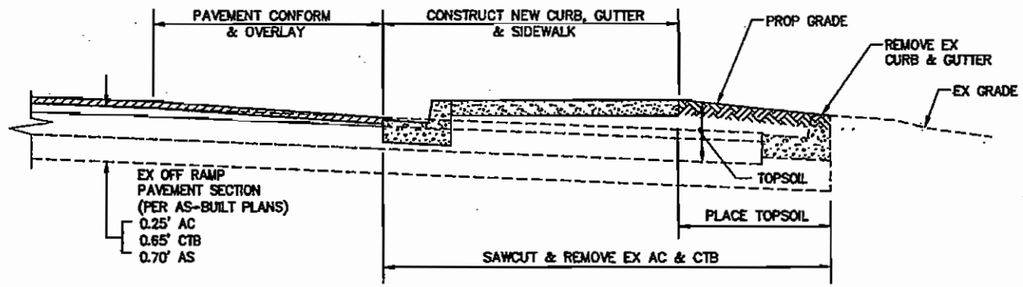
CR9
SOUTHEAST CR AT CONDIT RD



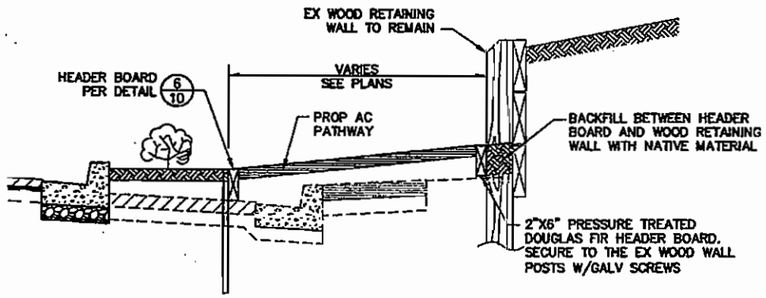
CR10
NORTHEAST CR AT RELIEZ LANE



1/17 NTS **TYPICAL CROSS SECTION AT HWY 24 EB OFF RAMP WITHIN PROPOSED AC DIKE AREA**



2/17 NTS **TYPICAL CROSS SECTION AT HWY 24 EB OFF RAMP WITHIN PROPOSED SIDEWALK AREA**



3/17 NTS **PATHWAY AT EX WOOD RETAINING WALL**

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER — No. C 41781 — Exp. 09-31-06 — CIVIL — STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

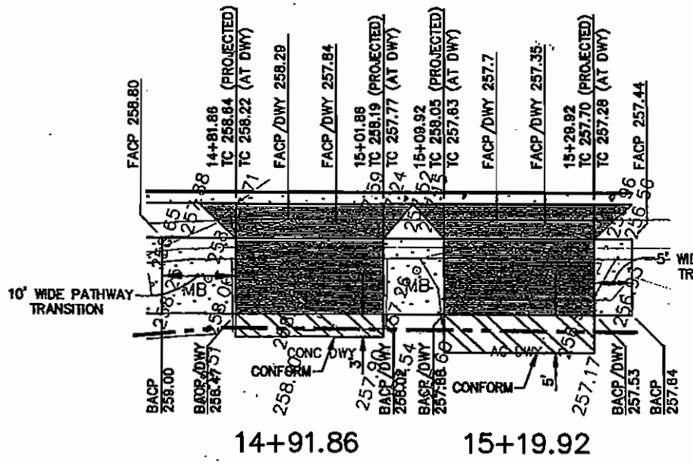
REVISIONS			
NO.	DESCRIPTION	BY	DATE

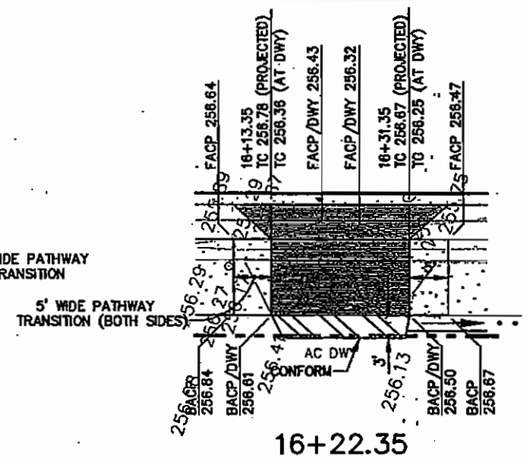
CITY OF LAFAYETTE

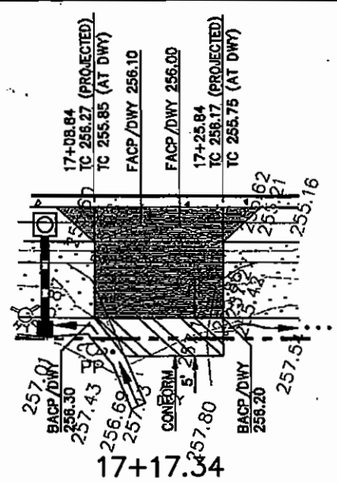
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

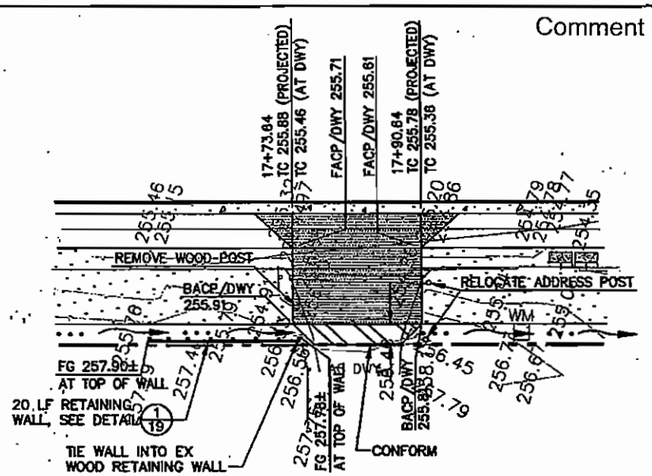
CONSTRUCTION DETAILS AND CURB RETURN PROFILES

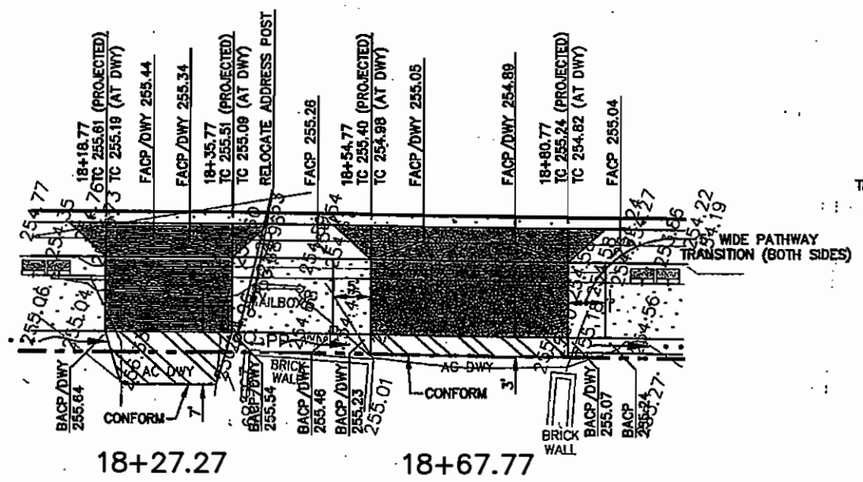
DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE:	H 1"=20' V 1"=2'
DRAWN: JJH	ROLL FRAME		
CHECKED: MA	AEI NO: 2307	SHEET	17 OF 38
DATE: JULY 19, 2005	DWG: 2307-CRCJ		

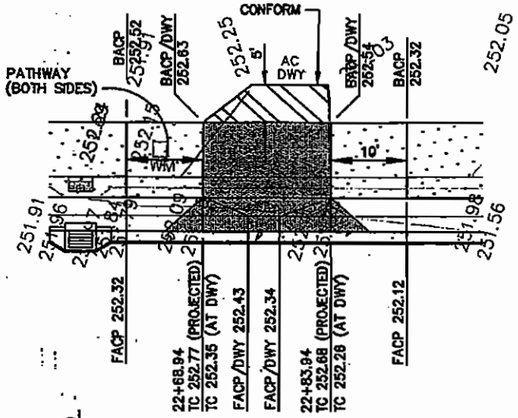


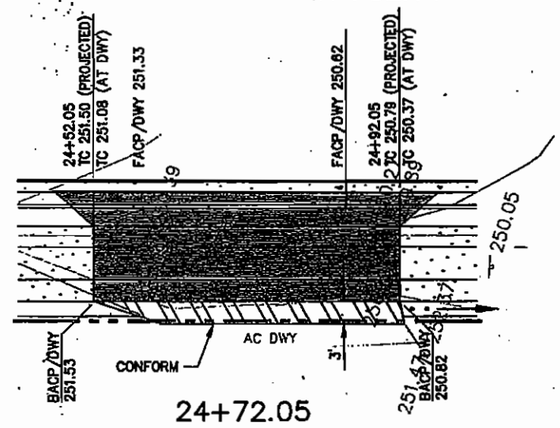


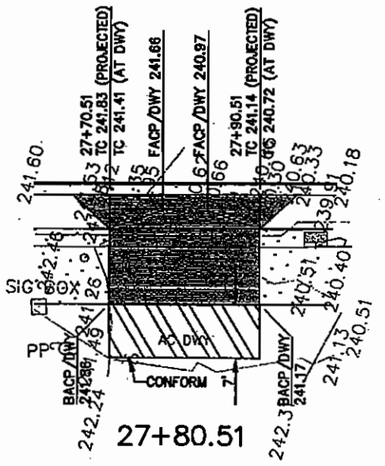


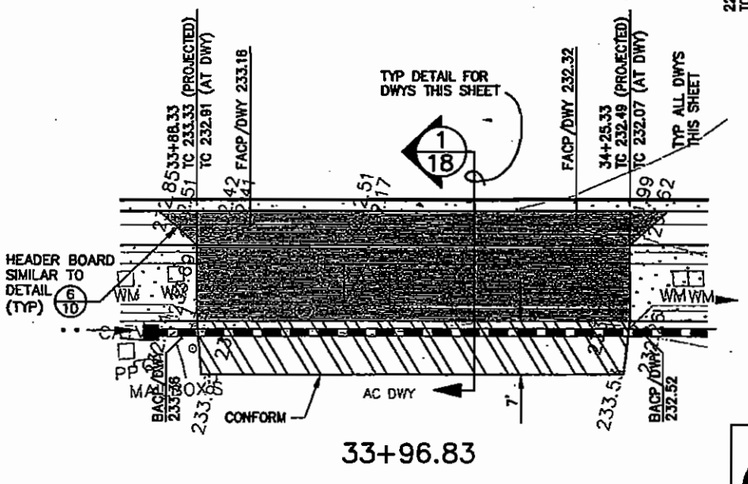


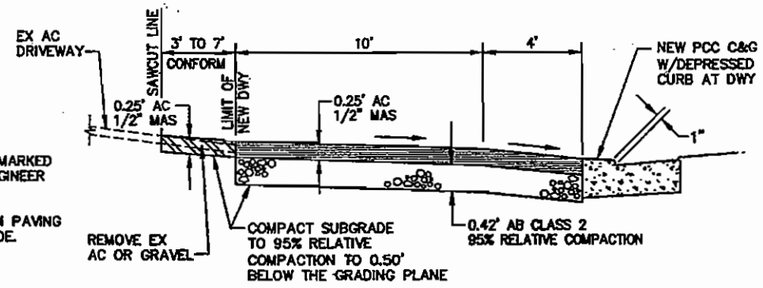












NOTES:

1. SAWCUT LINE SHALL BE MARKED IN THE FIELD BY THE ENGINEER PRIOR TO SAWCUTTING.
2. RAMP SIDES OF CONFORM PAVING TO MATCH EXISTING GRADE.

1/18 NTS **NEW DRIVEWAY & PAVING CONFORM DETAIL**
(FOR ALL DRIVEWAYS SHOWN ON THIS SHEET)

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

NO.	DESCRIPTION	BY	DATE

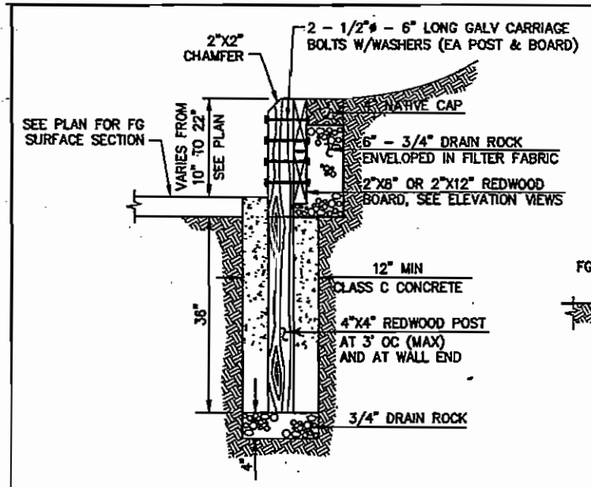
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

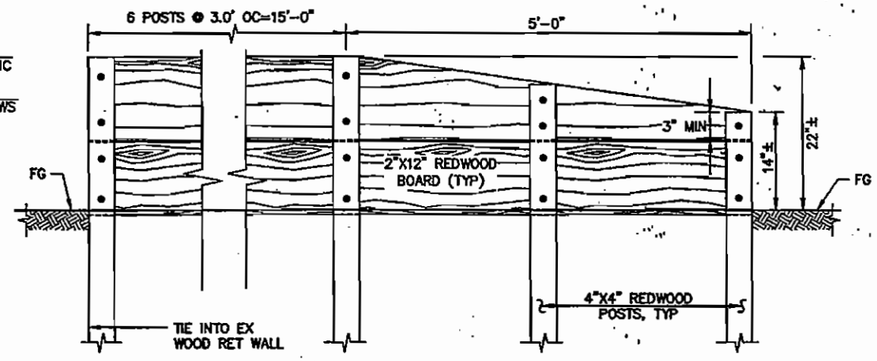
PROPOSED DRIVEWAYS AND CONFORM DETAILS

DESIGNED: MA/JDV	PROJECT NO.: 014-9654	SCALE: 1"=10'	
DRAWN: JJH	ROLL FRAME.		
CHECKED: MA	ADJ NO: 2307	SHEET 18 OF 38	
DATE: JULY 19, 2005	DWG: 2307-DWY		

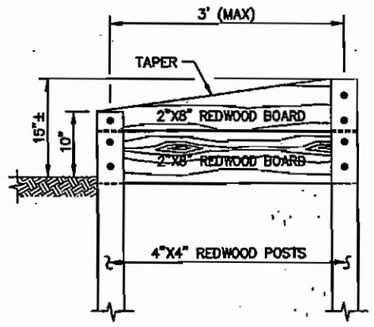
Comment Letter LAF
LAF-23



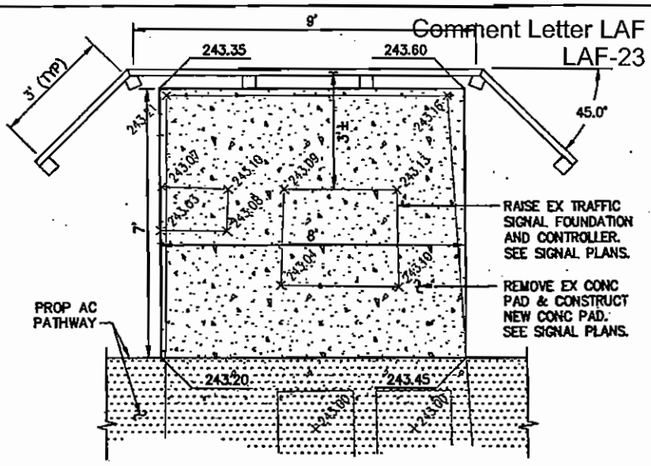
TYPICAL RETAINING WALL SECTION



RETAINING WALL ELEVATION AT STA 17+65±.



WING WALL ELEVATION AT STA 27+25±



RETAINING WALL PLAN AT STA 27+25±

NOTE:
FOR RETAINING WALL PLAN AT STATION 17+65±, SEE SHEET 18

1/19 NTS **WOOD RETAINING WALLS**

STAGE I
- INSTALL CONSTRUCTION AREA SIGNS
- CLEARING AND GRUBBING
- CONSTRUCT STORM DRAIN FACILITIES
- CONSTRUCT NEW SIGNAL FACILITIES (EXCEPT LOOPS)
- RECONSTRUCT CURB, GUTTER & SIDEWALK FROM STA 10+35±(RT) TO STA 13+85±(RT)
- RESTORE EXISTING LANDSCAPING FROM STA 10+35±(RT) TO STA 12+00±(RT)

STAGE II
- REMOVE EXISTING CURB & GUTTER STA 13+85 TO STA 37+00
- REMOVE EXISTING PAVEMENT & BASE TO CONSTRUCT NEW CURB & GUTTER
- REMOVE EXISTING PAVEMENT SECTION WITHIN THE PROPOSED LANDSCAPE AREAS
- GRADE FOR PROPOSED PATHWAY
- CONSTRUCT NEW CURB, GUTTER & CURB RAMPS
- CONSTRUCT NEW RETAINING WALL
- CONSTRUCT AC PATHWAY
- INSTALL NEW SUBDRAIN SYSTEM
- INSTALL NEW IRRIGATION & LANDSCAPING

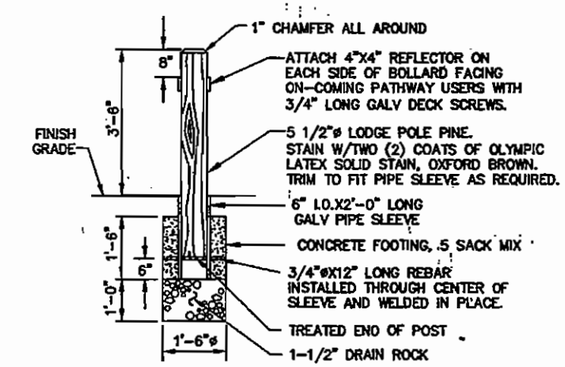
STAGE III
- CONSTRUCT BASE FAILURE REPAIRS
- WEDGE GRIND
- CRACK SEALING
- COLD PLANE CONFORMS
- REMOVE EXISTING STRIPING/PLACE TEMPORARY STRIPING
- PLACE AC OVERLAY/TEMP STRIPING

STAGE IV
- RAISE EXISTING UTILITIES WITHIN THE PAVEMENT AREA
- PLACE PERMANENT MARKINGS AND STRIPING
- REMOVE CONSTRUCTION AREA SIGNS
- BEGIN LANDSCAPE MAINTENANCE PERIOD

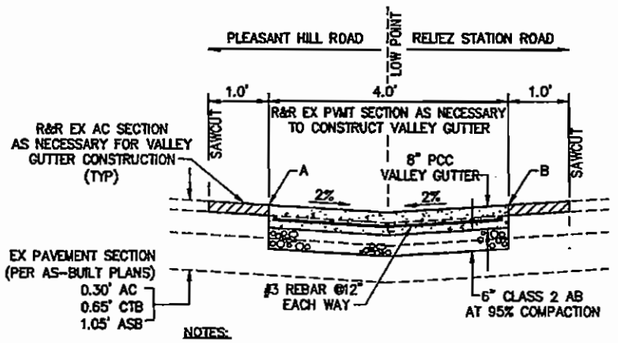
GENERAL NOTE:

PRIOR TO COMMENCING ANY WORK OR ACTIVITY ON ANY SUBSEQUENT STAGES OF CONSTRUCTION, THE PREVIOUS STAGE OF CONSTRUCTION SHALL BE COMPLETED IN ITS ENTIRETY TO THE SATISFACTION OF THE ENGINEER, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

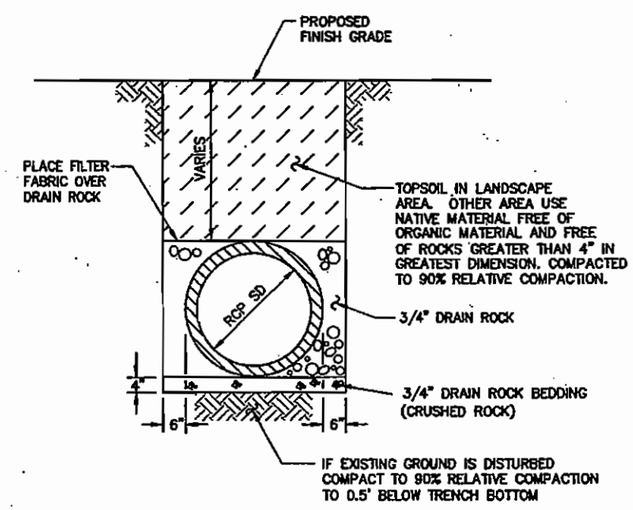


2/19 NTS **REMOVABLE WOOD BOLLARD**

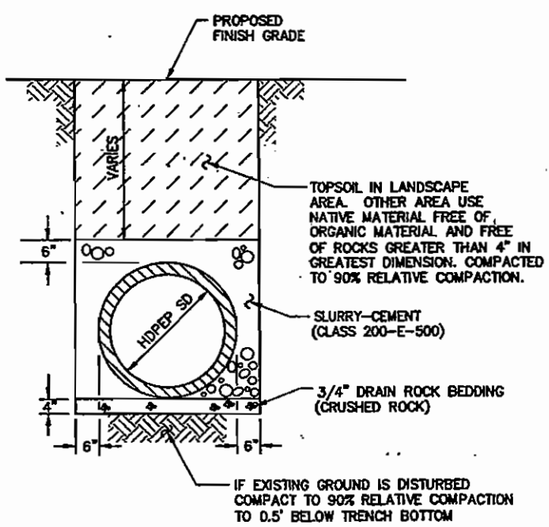


NOTES:
1. POINTS A & B SHALL BE AT THE SAME STATION
2. SEE CCC STANDARD PLAN CA731 FOR ADDITIONAL NOTES

5/19 NTS **VALLEY GUTTER AT RELIEZ STATION ROAD**



3/19 NTS **RCP STORM DRAIN TRENCH BACKFILL & BEDDING IN NON-ROADWAY AREAS**



4/19 NTS **HDPEP STORM DRAIN TRENCH BACKFILL & BEDDING IN NON-ROADWAY AREAS**

AZARI ENGINEERING, INC.
4807 CLAYTON ROAD, SUITE 200
CONCORD, CA 94521
TEL: (925) 676-3700
FAX: (925) 676-4800

SUBMITTED JULY 19, 2005
PROJECT ENGINEER

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

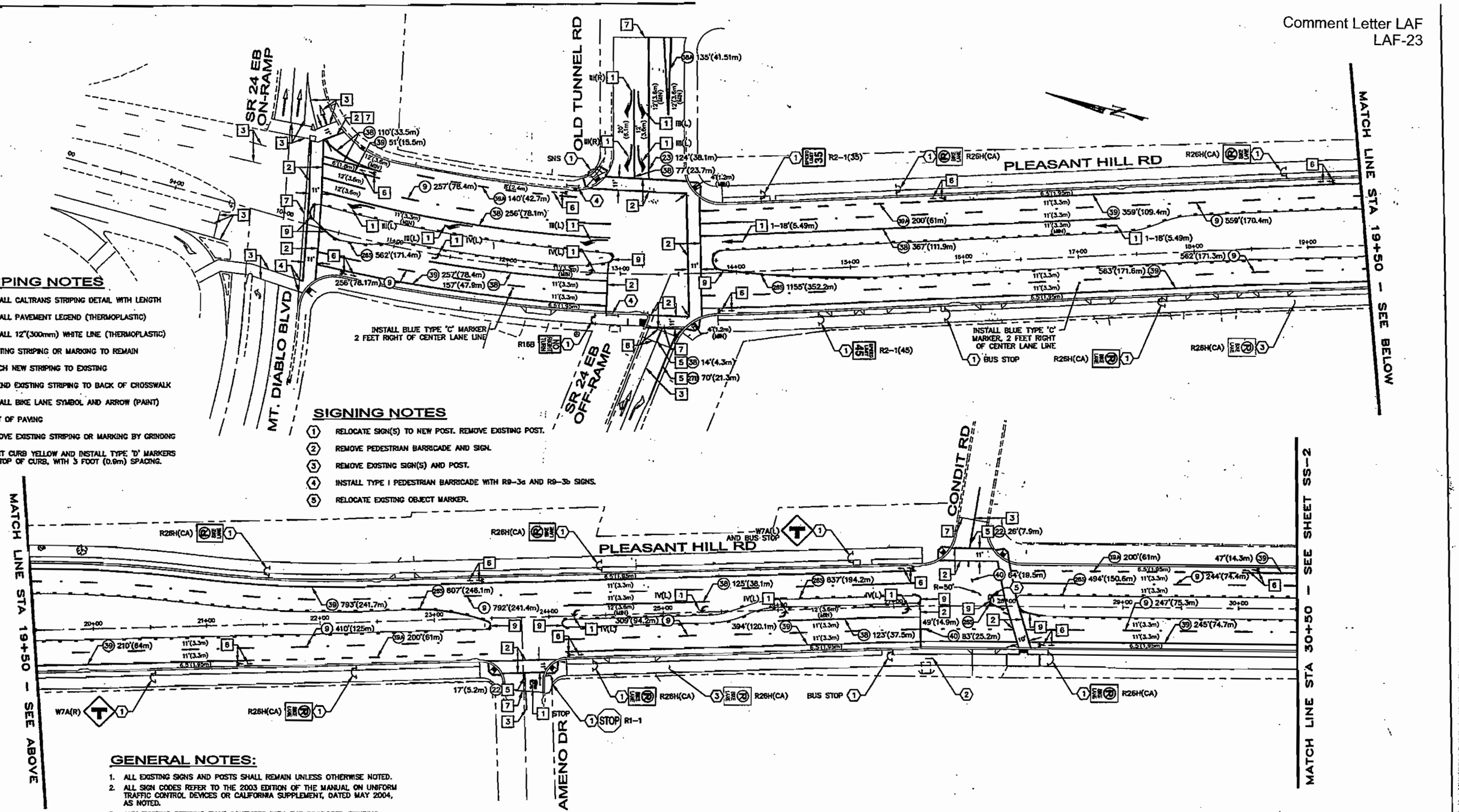
NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

CONSTRUCTION DETAILS & STAGE CONSTRUCTION PLAN

DESIGNED: MA/JDV | PROJECT NO.: 014-9654 | SCALE: NO SCALE
DRAWN: JJH | ROLL FRAME
CHECKED: MA | AEI NO: 2307 | SHEET 19 OF 38
DATE: JULY 19, 2005 | DWG: 2307-SC



STRIPING NOTES

- (XX) INSTALL CALTRANS STRIPING DETAIL WITH LENGTH
- [1] INSTALL PAVEMENT LEGEND (THERMOPLASTIC)
- [2] INSTALL 12"(300mm) WHITE LINE (THERMOPLASTIC)
- [3] EXISTING STRIPING OR MARKING TO REMAIN
- [4] MATCH NEW STRIPING TO EXISTING
- [5] EXTEND EXISTING STRIPING TO BACK OF CROSSWALK
- [6] INSTALL BIKE LANE SYMBOL AND ARROW (PAINT)
- [7] LIMIT OF PAVING
- [8] REMOVE EXISTING STRIPING OR MARKING BY GRINDING
- [9] PAINT CURB YELLOW AND INSTALL TYPE 'D' MARKERS ON TOP OF CURB, WITH 3 FOOT (0.9m) SPACING.

SIGNING NOTES

- (1) RELOCATE SIGN(S) TO NEW POST. REMOVE EXISTING POST.
- (2) REMOVE PEDESTRIAN BARRICADE AND SIGN.
- (3) REMOVE EXISTING SIGN(S) AND POST.
- (4) INSTALL TYPE I PEDESTRIAN BARRICADE WITH R9-3d AND R9-3b SIGNS.
- (5) RELOCATE EXISTING OBJECT MARKER.

GENERAL NOTES:

1. ALL EXISTING SIGNS AND POSTS SHALL REMAIN UNLESS OTHERWISE NOTED.
2. ALL SIGN CODES REFER TO THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR CALIFORNIA SUPPLEMENT, DATED MAY 2004, AS NOTED.
3. ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED.
4. ALL BIKE LANE WIDTHS, WHEN ADJACENT TO THE CURB AND GUTTER, ARE MEASURED FROM THE FACE OF CURB.
5. LAYOUT AND CONTROL MARKS SHALL BE PLACED BY THE CONTRACTOR AND APPROVED BY THE CITY PRIOR TO THE PLACEMENT OF ANY PERMANENT STRIPING, MARKERS, OR MARKING.

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

CA: 1-800-227-2600
CALL BEFORE YOU DIG
USA UNDERGROUND SERVICE ALERT
CA: 1-800-227-2600
CALL TWO WORKING DAYS BEFORE YOU DIG

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410
San Ramon, California 94583
Tel. No. (925) 543-0640
Fax No. (925) 543-0639
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SUBMITTED JULY 15, 2005
PROJECT ENGINEER
APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. 50296 06/30/06 STATE OF CALIFORNIA

LAFAYETTE

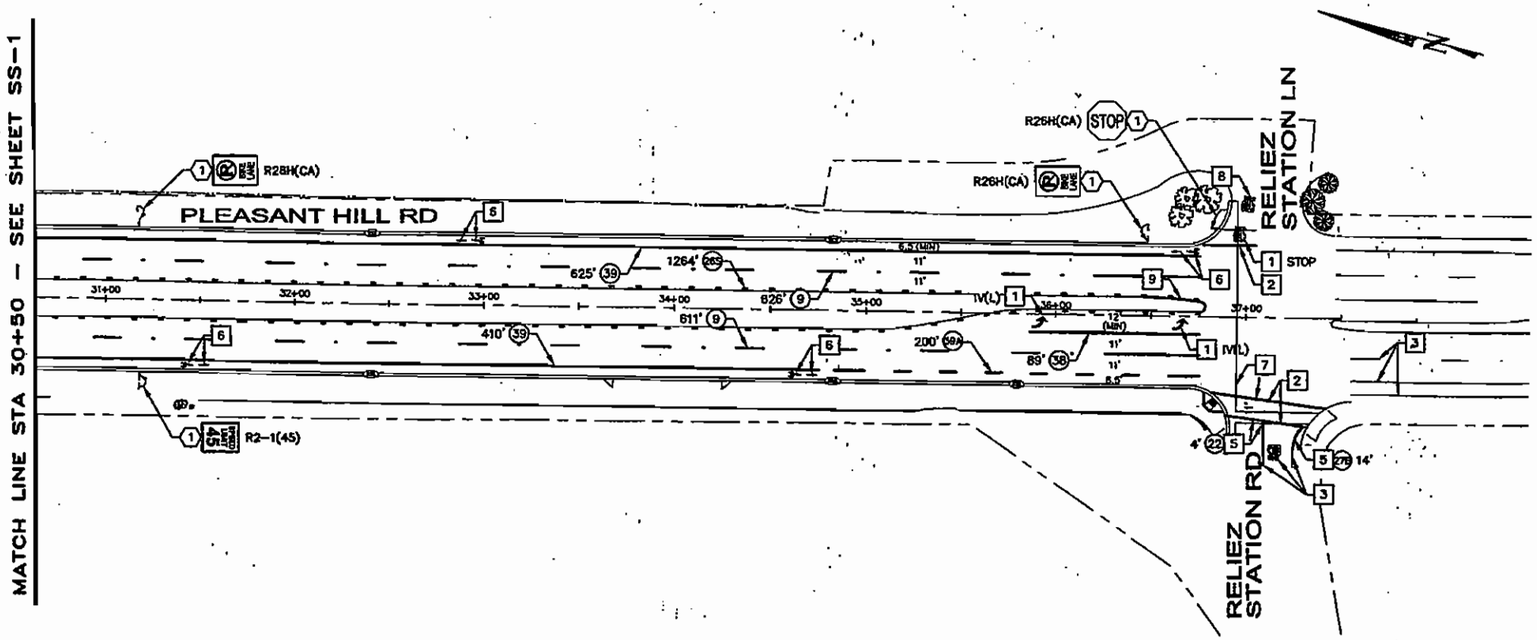
CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

SIGNING AND STRIPING PLAN STA 8+00 TO STA 30+50 SS-1

REVISIONS NO.	DESCRIPTION	BY	DATE

DESIGNED: DTB | CHECKED: BES | SCALE: 1" = 40'
DRAWN: LAM | DATE: 7/18/05
ROLL FRAME | PROJECT NO.: 014-9654 | SHEET 20 OF 38
AEI NO: 2307



STRIPING NOTES

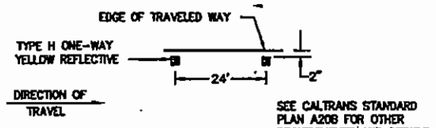
- (XX) INSTALL CALTRANS STRIPING DETAIL WITH LENGTH
- [1] INSTALL PAVEMENT LEGEND (THERMOPLASTIC)
- [2] INSTALL 12"(300mm) WHITE LINE (THERMOPLASTIC)
- [3] EXISTING STRIPING OR MARKING TO REMAIN
- [4] MATCH NEW STRIPING TO EXISTING
- [5] EXTEND EXISTING STRIPING TO BACK OF CROSSWALK
- [6] INSTALL BIKE LANE SYMBOL AND ARROW (PAINT)
- [7] LIMIT OF PAVING
- [8] REMOVE EXISTING STRIPING OR MARKING BY GRINDING
- [9] PAINT CURB YELLOW AND INSTALL TYPE 'D' MARKERS ON TOP OF CURB, WITH 3 FOOT (0.9m) SPACING.

SIGNING NOTES

- (1) RELOCATE SIGN(S) TO NEW POST. REMOVE EXISTING POST.
- (2) REMOVE PEDESTRIAN BARRICADE AND SIGN.
- (3) REMOVE EXISTING SIGN(S) AND POST.
- (4) INSTALL TYPE I PEDESTRIAN BARRICADE WITH R9–3a AND R9–3b SIGNS.
- (5) RELOCATE EXISTING OBJECT MARKER.

GENERAL NOTES:

1. ALL EXISTING SIGNS AND POSTS SHALL REMAIN UNLESS OTHERWISE NOTED.
2. ALL SIGN CODES REFER TO THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR CALIFORNIA SUPPLEMENT, DATED MAY 2004, AS NOTED.
3. ANY EXISTING STRIPING THAT CONFLICTS WITH THE PROPOSED STRIPING SHALL BE REMOVED.
4. ALL BIKE LANE WIDTHS, WHEN ADJACENT TO THE CURB AND GUTTER, ARE MEASURED FROM THE FACE OF CURB.
5. LAYOUT AND CONTROL MARKS SHALL BE PLACED BY THE CONTRACTOR AND APPROVED BY THE CITY PRIOR TO THE PLACEMENT OF ANY PERMANENT STRIPING, MARKERS, OR MARKING.



SEE CALTRANS STANDARD PLAN A20B FOR OTHER REQUIREMENTS AND DETAILS

DETAIL 26S
NTS

STRIPING SCHEDULE

DETAIL	PATTERN OR LEGEND	INSTALL(LF)
9	LANE LINE	4873
22	CENTER LINE	47
23	CENTER LINE	124
26B	LEFT EDGELINE	4988
27B	RIGHT EDGE LINE	84
38	CHANNELIZING LINE	1318
38A	CHANNELIZING LINE	135
39	BIKE LANE LINE	3954
39A	INTERSECTION BIKE LANE LINE	940
40	CENTER LINE EXTENSION (YELLOW)	147
	TOTAL	16590

THERMOPLASTIC UNLESS OTHERWISE NOTED

SIGN SCHEDULE

MUTCD CODE	DESCRIPTION	RELOCATE	INSTALL	REMOVE
R1–1	STOP SIGN	2	–	–
R2–1	SPEED LIMIT SIGN	3	–	–
R9–3a	NO PEDESTRIAN CROSSING SIGN	–	2	–
R9–3b	USE CROSSWALK SIGN	–	2	–
R16b	NO RIGHT TURN	1	–	–
R26H(CA)	NO PARKING SYMBOL/BIKE LANE	10	–	2
R49(CA)	PED. CROSSING BARRICADE SIGN	–	–	1
W7A	T–INTERSECTION SYMBOL SIGN	2	–	–
–	BUS STOP	3	–	–
–	K–1 OBJECT MARKER	1	–	–
–	STREET NAME SIGN	1	–	–
	TOTAL	23	4	3

PAVEMENT MARKING SCHEDULE

PATTERN OR LEGEND		INSTALL No.	INSTALL TOTAL SQ. FT.
.12" WHITE THERMOPLASTIC LINE		1247 LF	1247
YELLOW REFLECTOR PAINT		390 LF	390
(THERMOPLASTIC)	TYPE III(L)	5	210
(THERMOPLASTIC)	TYPE III(R)	2	84
(THERMOPLASTIC)	TYPE IV(L)	8	120
(THERMOPLASTIC)	TYPE I–18"	2	50
(PAINT)	BIKE LANE ARROW	15	105
(PAINT)	BIKE LANE SYMBOL	15	105
(THERMOPLASTIC)	STOP WORD	2	44
TOTAL			2355

CA: 1–800–227–2600
CALL BEFORE YOU DIG
USA
UNDERGROUND SERVICE ALERT
CA: 1–800–227–2600
CALL TWO WORKING DAYS BEFORE YOU DIG

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410
San Ramon, California 94583
Tel. No. (925) 543-0540
Fax No. (925) 543-0539
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SUBMITTED JULY 19, 2005
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER BRIAN L. SOLEM No. 60295 06/30/08 CIVIL STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

LAFAYETTE

CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

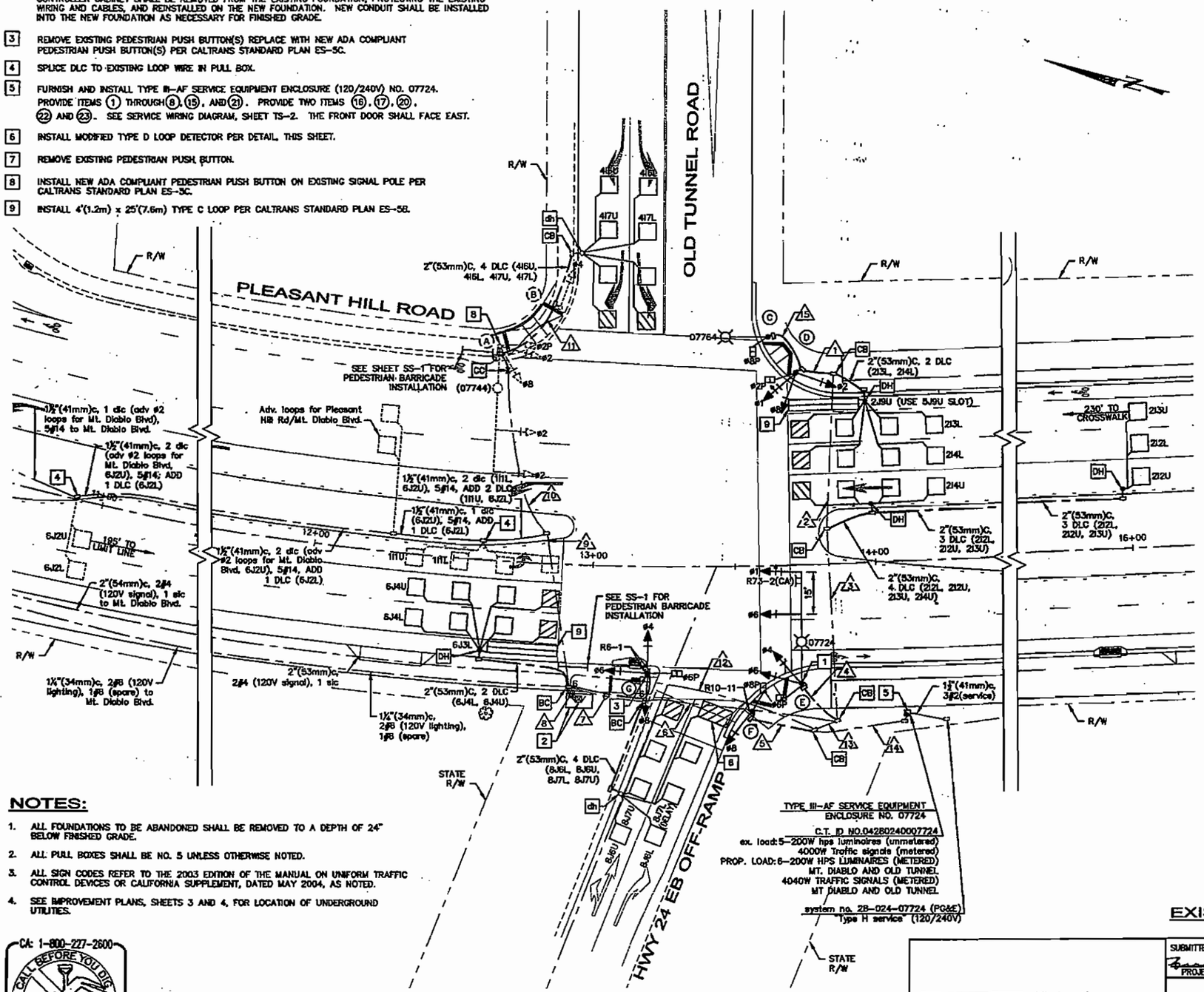
SIGNING AND STRIPING PLAN STA 30+50 TO STA 38+50 SS-2

REVISIONS NO.	DESCRIPTION	BY	DATE

DESIGNED: DTB | CHECKED: BES | SCALE: 1" = 40'
DRAWN: LAM | DATE: 7/18/05
ROLL FRAME | PROJECT NO.: 014–9654 | SHEET 21 OF 38
AEI NO: 2307

CONSTRUCTION NOTES

1. FURNISH AND INSTALL PHOTO ELECTRIC UNIT (PEU) PER CALTRANS STANDARD PLAN ES-7N.
2. REMOVE EXISTING CONTROLLER PAD AND FOUNDATION AND INSTALL NEW PAD AND FOUNDATION (SEE CALTRANS STANDARD PLAN ES-3C FOR DETAIL) AT THE NEW PROPOSED GRADE. THE EXISTING CONTROLLER CABINET SHALL BE REMOVED FROM THE EXISTING FOUNDATION, PROTECTING THE EXISTING WIRING AND CABLES, AND REINSTALLED ON THE NEW FOUNDATION. NEW CONDUIT SHALL BE INSTALLED INTO THE NEW FOUNDATION AS NECESSARY FOR FINISHED GRADE.
3. REMOVE EXISTING PEDESTRIAN PUSH BUTTON(S) REPLACE WITH NEW ADA COMPLIANT PEDESTRIAN PUSH BUTTON(S) PER CALTRANS STANDARD PLAN ES-5C.
4. SPLICE DLC TO EXISTING LOOP WIRE IN PULL BOX.
5. FURNISH AND INSTALL TYPE III-AF SERVICE EQUIPMENT ENCLOSURE (120/240V) NO. 07724. PROVIDE ITEMS (1) THROUGH (8), (15), AND (21). PROVIDE TWO ITEMS (16), (17), (20), (22) AND (23). SEE SERVICE WIRING DIAGRAM, SHEET TS-2. THE FRONT DOOR SHALL FACE EAST.
6. INSTALL MODIFIED TYPE D LOOP DETECTOR PER DETAIL, THIS SHEET.
7. REMOVE EXISTING PEDESTRIAN PUSH BUTTON.
8. INSTALL NEW ADA COMPLIANT PEDESTRIAN PUSH BUTTON ON EXISTING SIGNAL POLE PER CALTRANS STANDARD PLAN ES-3C.
9. INSTALL 4'(1.2m) x 25'(7.6m) TYPE C LOOP PER CALTRANS STANDARD PLAN ES-5B.



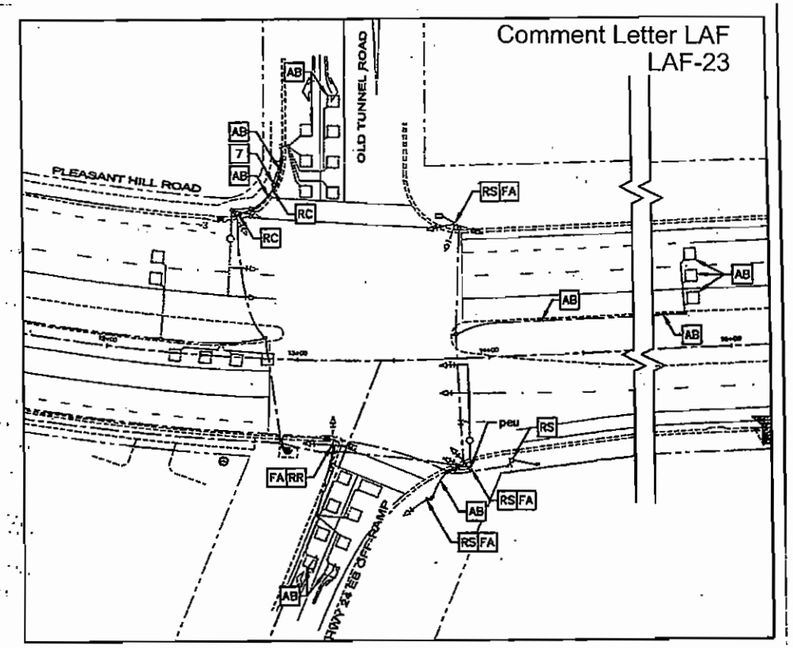
NOTES:

1. ALL FOUNDATIONS TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF 24" BELOW FINISHED GRADE.
2. ALL PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
3. ALL SIGN CODES REFER TO THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR CALIFORNIA SUPPLEMENT, DATED MAY 2004, AS NOTED.
4. SEE IMPROVEMENT PLANS, SHEETS 3 AND 4, FOR LOCATION OF UNDERGROUND UTILITIES.

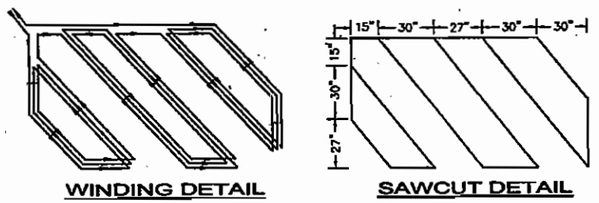
GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

CA: 1-800-227-2600 CALL BEFORE YOU DIG 811 UNDERGROUND SERVICE ALERT CA: 1-800-227-2600 CALL TWO WORKING DAYS BEFORE YOU DIG

Comment Letter LAF
LAF-23



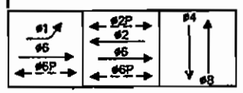
EXISTING SIGNAL EQUIPMENT
SCALE 1"=40'



DETAIL
MODIFIED TYPE D LOOP DETECTOR

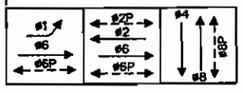
1. ROUND CORNERS OF ACUTE ANGLE SAWCUTS TO PREVENT DAMAGE TO CONDUCTORS.
2. INSTALL 3 TURNS WHEN ONLY ONE TYPE D LOOP IN ON A SENSOR UNIT CHANNEL. INSTALL 5 TURNS WHEN ON TYPE D LOOP IS CONNECTED IN SERIES WITH 3 ADDITIONAL 1.8 m (6'x6') LOOPS ON A SENSOR UNIT CHANNEL.
3. ALL OTHER INSTALLATION DETAILS PER CALTRANS STANDARD PLAN ES-5A.

STEADY DEMAND SEQUENCE



EXISTING PHASE DIAGRAM

STEADY DEMAND SEQUENCE



PROPOSED PHASE DIAGRAM

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410
San Ramon, California 94583
Tel. No. (925) 543-0840
Fax No. (925) 543-0839
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SUBMITTED JULY 19, 2005 — PROJECT ENGINEER 7/18/05
APPROVED _____ 2005 — CITY ENGINEER
RECORD DRAWING (NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER _____
REGISTERED PROFESSIONAL ENGINEER BRIAN C. SOARES No. 60295 06/30/06 CIVIL STATE OF CALIFORNIA

LAFAYETTE

CITY OF LAFAYETTE
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS
HWY 25/OLD TUNNEL ROAD SIGNAL MODIFICATION
TS-1

REVISIONS NO.	DESCRIPTION	BY	DATE

DESIGNED: DTB | CHECKED: BES | SCALE: 1" = 20'
DRAWN: LAM | DATE: 7/18/05
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9654
SHEET 22 OF 38

Comment Letter LAF
LAF-23

CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS RUN NUMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NO. 14	#1	3	3	3	3	–	3	3	3	–	–	–	–	–	–	–
	#2	3	3	3	–	–	3	3	6	3	3	–	–	–	–	–
	#4	–	–	–	3	–	3	3	6	3	3	3	–	–	–	–
	#6	–	–	–	3	–	3	3	3	–	–	–	–	–	–	–
	#8	3	3	3	–	3	–	–	3/5	3	3	–	3	3	–	–
	#2P	2	2	2	–	–	–	2	2	2	2	–	2	2	–	–
	#6P	–	–	–	2	–	–	2	2	–	–	–	2	2	–	–
	#8P	2	2(N)	2(N)	–	2	–	–	2(N)	–	–	–	2(N)	2(N)	–	2
	PPB(#2P)	1	1	1	–	–	–	–	1	1	1	–	1	1	–	1
	PPB(#6P)	–	–	–	–	1	–	1	1	–	–	–	1	1	–	–
	PPB(#8P)	1	1(N)	1(N)	1	–	–	–	1	–	–	–	1	1	–	–
	PPB COMMON	1	1	1	–	3	1	2	2	1	1	–	3	3	–	1
	SPARES	3	3	3	3	3	3	3	5/3	3	3	3	3	3	–	3
	PCU	–	–	–	3	–	–	–	–	–	–	–	–	3	3	–
	TOTAL NO. 14	19	19	19	19	10	16	22	47	16	16	6	16	18	3	7
NO. 10	SIGNAL COMMON	1	1	1	1	1	1	1	2	1	1	1	1	1	–	1
	120V LIGHTING	2	2(N)	2(N)	2	–	1/1	1/1	–	1/1	2	–	–	–	2	2
	TOTAL NO. 10	3	3	3	3	1	3	3	2	3	3	1	1	3	2	3
NO. 8	120V SIGNAL	–	–	–	–	–	–	–	2	–	–	–	2	–	2	–
	TOTAL NO. 8	–	–	–	–	–	–	–	2	–	–	–	2	–	2	–
NO. 6	120V LIGHTING (MT DIABLO)	–	–	–	–	–	–	–	–	–	–	–	2	–	2	–
	SPARE (MT DIABLO)	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–
	TOTAL NO. 6	–	–	–	–	–	–	–	–	–	–	–	3	–	3	–
NO. 4	120V SIGNAL (MT DIABLO)	–	–	–	–	–	–	–	–	–	–	–	2	–	2	–
	TOTAL NO. 4	–	–	–	–	–	–	–	–	–	–	–	2	–	2	–
DETECTOR LEAD IN CABLE	1H1L	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–
	1H1U	–	–	–	–	–	–	–	1(N)	1(N)	–	–	–	–	–	–
	2H2U, 2H2L, 2I3U	–	–	3(N)	–	–	3(N)	3(N)	3(N)	–	–	–	–	–	–	–
	2I4U	–	–	1(N)	–	–	1(N)	1(N)	1(N)	–	–	–	–	–	–	–
	2I3L, 2I4L, 2J9U	–	3(N)	3(N)	–	–	3(N)	3(N)	3(N)	–	–	–	–	–	–	–
	4I6U, 4I6L, 4I7U, 4I7L	–	–	–	–	–	–	–	4(N)	4(N)	4(N)	4(N)	–	–	–	–
	6J2U	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–
	6J2L	–	–	–	–	–	–	–	1(N)	1(N)	–	–	–	–	–	–
	6J3L, 6J4U, 6J4L	–	–	–	–	–	–	–	3(N)	–	–	–	–	–	–	–
	8J6U, 8J6L, 8J7U, 8J7L	–	–	–	–	–	–	4(N)	4(N)	–	–	–	–	–	–	–
	TOTAL DLC	–	3	7	–	–	7	11	22	8	4	4	–	–	–	–
	SIC	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–
	CONDUIT SIZE (mm)	3"(N) (78)	2" (53)	2" (53)	3"(N) (78)	3"(N) (78)	2" (53)	2" (53) 3"(N) (78)	2-2" (53) 2-3" (53) 3"(N) (78)	2" (53)	2" (53)	2"(N) (53)	3" (78)	2" (53)	2" (53)	3"(N) (78)

(N) = NEW CONDUIT, CONDUCTOR OR CABLE
X/X = EX. CONDUCTOR / NEW CONDUCTOR
ALL NEW DLC AND CONDUCTOR CABLES SHALL BE INSTALLED IN THE NEW CONDUITS SHOWN.
RUNS 1, 4, 5, 11 AND 15 SHALL HAVE NEW CONDUCTORS.
ALL CONDUIT, CONDUCTORS AND CABLES ARE EXISTING UNLESS OTHERWISE NOTED.

TYPE III–A SERVICE (120/240 V) EQUIPMENT LEGEND

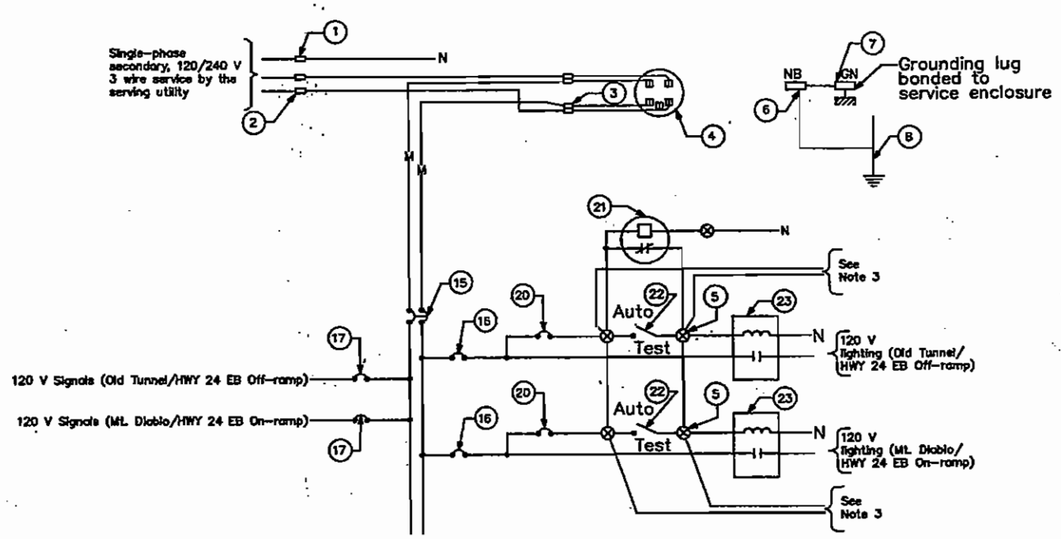
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
(1)	Neutral lug				
(2)	Landing lug		(15)	100A, 240V, 2P, CB	Main Breaker
(3)	Test bypass facility		(16)	30A, 120V, 1P, CB	Lighting
(4)	Meter socket and support		(17)	50A, 120V, 1P, CB	Signals
(5)	Terminal blocks				
(6)	Neutral bus				
(7)	Grounding bus		(20)	15A, 120V, 1P, CB	Lighting Control
(8)	Grounding electrode		(21)	Photoelectric unit	
			(22)	15A, 1P, Test Switch	Lighting Test Switch
			(23)	60A, 1PNO Contactor	Lighting

NOTES: (FOR SERVICE EQUIPMENT)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, all service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Item No. (1) and (6) shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. PG&E shall install Time of Use meter.

LEGEND

P	Pole		External conductor
CB	Circuit breaker		Conductor or bus
A	Ampere		Tie point
V	Volt		Contactor coil
M	Metered		
UM	Unmetered		Terminal block
SN	Solid neutral		Contactor, Contact NO Enclosure bond
NO	Normally open		
NC	Normally closed		Ground Contactor, Contact NC



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

SIGNAL AND LIGHTING SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM - TYPE III-A SERIES

SEE ES-2C & ES-2D FOR OTHER NOTES.
NO SCALE

EQUIPMENT SCHEDULE

LOCATION	STANDARD TYPE	STANDARD SIGNAL MAST ARM	STANDARD LUMINAIRE MAST ARM	HPS LUMINAIRE WATTAGE	VEHICLE SIGNAL MOUNTING MAST ARM	VEHICLE SIGNAL MOUNTING POLE	PED SIGNAL MOUNTING	PED PUSH BUTTON** ø	PED PUSH BUTTON** ARROW	STREET NAME SIGN (S.N.S.) LEGEND	*SPECIAL REQUIREMENTS
(A)	26-3-70	45'	15'	200	MAT MAS	SV-2-T	SP-1-T	#2 N	<- N		
(B)	1-B					TV-1-T					REMOVE EXISTING PEDESTRIAN PUSH BUTTON.
(C)	15TS N		15' N	200 N			SP-1-T N	#2 N	<- N		
(D)	1-B N					SV-3-TB N	SP-1-T N	#8 N	-> N		
(E)	26-4-129 N	40' N	15' N	200 N	MAS N MAS	SV-2-TD N	SP-1-T N	#8 N	<- N		INSTALL R73-2(CA) SIGN ON SIGNAL MAST ARM
(F)	1-B N					TV-1-T N	SP-1-T N	#6 N	-> N		INSTALL R10-11 SIGN ON SIGNAL POLE
(G)	1-B					TV-3-T	SP-1-T	#6 N	-> N		POLE AND EQUIPMENT RELOCATED

ALL POLE AND SIGNAL EQUIPMENT ARE EXISTING UNLESS OTHERWISE NOTED
* OTHER REQUIREMENTS ARE COVERED BY NOTES, LEGEND, SPECIAL PROVISIONS AND CALTRANS STANDARD SPECIFICATIONS. FOR TYPE OF STANDARD, VEHICLE AND PEDESTRIAN MOUNTING, SEE CALTRANS STANDARD PLANS, DATED JULY 2004.
** PEDESTRIAN PUSH BUTTONS SHALL BE TYPE B PER CALTRANS STANDARD PLAN ES-5C.
N = NEW EQUIPMENT

CA: 1-800-227-2600 CALL BEFORE YOU DIG UNDERGROUND SERVICE ALERT CA: 1-800-227-2600 CALL TWO WORKING DAYS BEFORE YOU DIG

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410, San Ramon, California 94583
Tel. No. (925) 543-0840 Fax No. (925) 543-0839 ©2005

SUBMITTED JULY 19, 2005
PROJECT ENGINEER 7/19/05
REGISTERED PROFESSIONAL ENGINEER BRIAN L. SOWERS No. 60296 06/30/08 CIVIL STATE OF CALIFORNIA

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

LAFAYETTE

CITY OF LAFAYETTE
PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS
HWY. 24/OLD TUNNEL RD. CONDUCTOR AND EQUIPMENT SCHEDULES
TS-2

REVISIONS NO.	DESCRIPTION	BY	DATE

DESIGNED: DTB | CHECKED: BES | SCALE: NO SCALE
DRAWN: LAM | DATE: 7/18/05
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9654
SHEET 23 OF 38

NOTES:

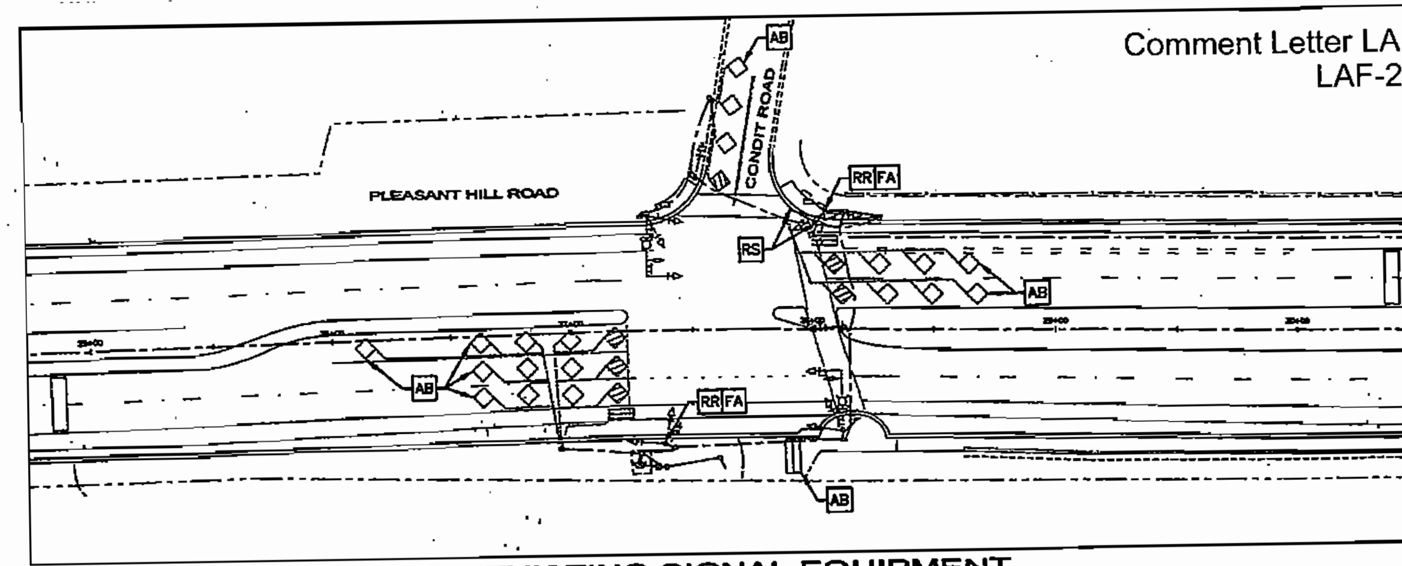
1. ALL FOUNDATIONS TO BE ABANDONED SHALL BE REMOVED TO A DEPTH OF 24" BELOW FINISHED GRADE.
2. ALL PULL BOXES SHALL BE NO. 5 UNLESS OTHERWISE NOTED.
3. ALL SIGN CODES REFER TO THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR CALIFORNIA SUPPLEMENT, DATED MAY 2004, AS NOTED.

CONSTRUCTION NOTES

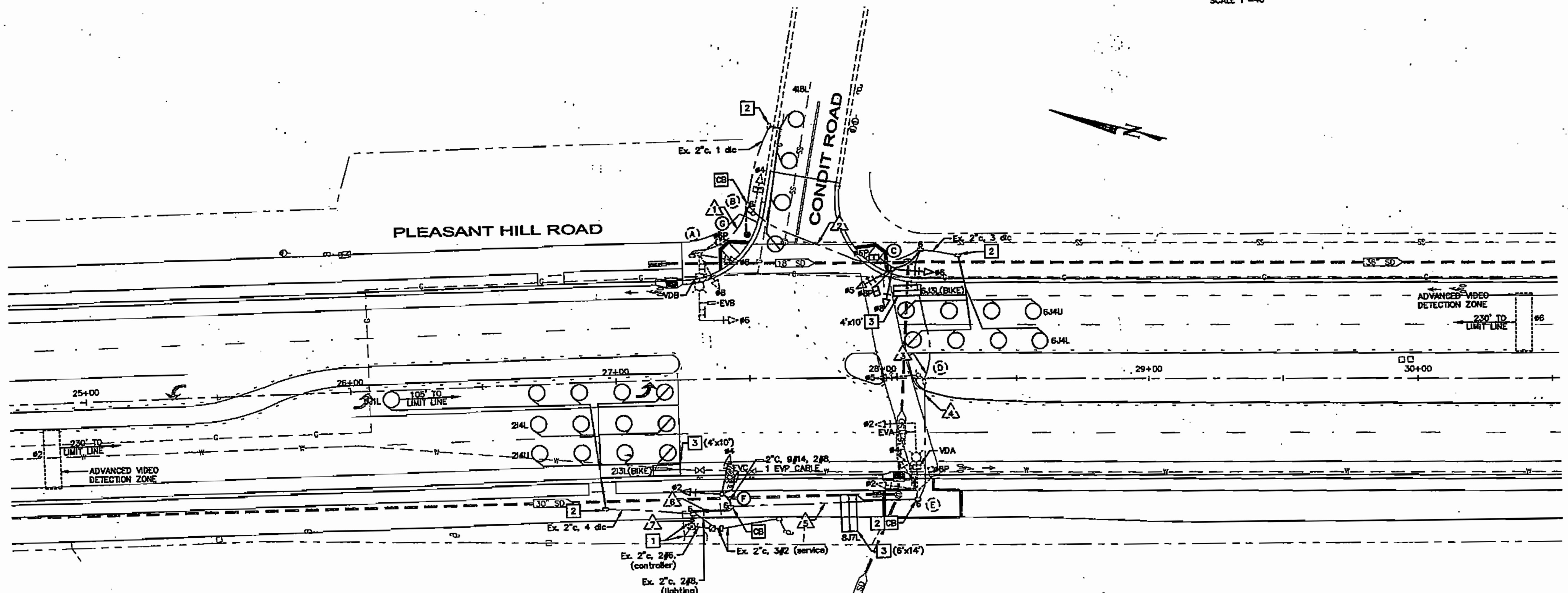
[1] REMOVE EXISTING CONTROLLER PAD AND FOUNDATION AND INSTALL NEW PAD AND FOUNDATION (SEE CALTRANS STANDARD PLAN ES-3C FOR DETAIL) AT THE NEW PROPOSED GRADE. THE EXISTING CONTROLLER CABINET SHALL BE REMOVED FROM THE EXISTING FOUNDATION, PROTECTING THE EXISTING WIRING AND CABLES, AND REINSTALLED ON THE NEW FOUNDATION. NEW CONDUIT SHALL BE INSTALLED INTO THE NEW FOUNDATION AS NECESSARY FOR FINISHED GRADE.

[2] SPLICE NEW DETECTOR LOOP WIRES TO EXISTING DLC IN PULL BOX.

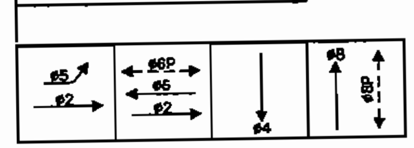
[3] INSTALL TYPE C LOOP DETECTOR (SEE CALTRANS STANDARD PLAN ES-5B FOR DETAIL).



EXISTING SIGNAL EQUIPMENT
SCALE 1"=40'



STEADY DEMAND SEQUENCE



EXISTING PHASE DIAGRAM

EVA = ø2 & ø5   VDA = ø2
EVB = ø6   VDB = ø6
EVC = ø4

CA: 1-800-227-2600
CALL BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
CA: 1-800-227-2600
CALL TWO WORKING DAYS BEFORE YOU DIG

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

Kimley-Horn and Associates, Inc.
2000 Crow Canyon Place, Suite 410 San Ramon, California 94583
Tel. No. (925) 543-0840 Fax No. (925) 543-0839 ©2005

SUBMITTED JULY 18, 2005
[signature] 7/18/05
PROJECT ENGINEER

REGISTERED PROFESSIONAL ENGINEER BRIAN E. SOWERS No. 60296 CIVIL STATE OF CALIFORNIA

APPROVED ______ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED ______
PROJECT ENGINEER

REVISIONS NO.	DESCRIPTION	BY	DATE

LAFAYETTE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

CONDIT ROAD
SIGNAL MODIFICATION PLAN
TS-3

DESIGNED: DTB	CHECKED: BES	SCALE: 1" = 20'
DRAWN: LAM	DATE: 7/18/05	
ROLL FRAME	PROJECT NO.: 014-9854	SHEET 24 OF 38
AEI NO: 2307		

CONDUCTOR SCHEDULE

AWG OR CABLE	CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS RUN NUMBER /1\	/2\	/3\	/4\	/5\	/6\	/7\
NO. 14	#2	–	–	–	–	3	6	6
	#4	–	3	3	3	3	6	6
	#5	–	–	3	3	3	3	3
	#6	3	3	3	3	3	3	3
	#8	3	3	3	3	3	3	3
	#6P	2	2	2	2	2	2	2
	#8P	–	–	2	2	2	2	2
	PPB(#6P)	–	1	1	1	1	1	1
	PPB(#8P)	–	–	1	1	1	1	1
	PPB COMMON	–	1	1	1	1	1	1
	SPARES	3	3	3	3	3	6	6
	TOTAL NO. 14	11	13	19	19	22	31	31
NO. 8	SIGNAL COMMON	1	1	1	1	1	1	1
	STREET LIGHTING (240V)	2	2	2	2	2	2	–
	BOND (BARE)	1	1	1	1	1	1	1
	TOTAL NO. 8	4	4	4	4	4	4	2
DETECTOR LEAD IN CABLE	2(4L, 2(4U, 2(3L(BIKE)	–	–	–	–	–	–	3
	4(6L	–	1	1	1	1	1	1
	5(7L	–	–	–	–	–	–	1
	6(4L, 6(4U, 6(3L(BIKE)	–	–	3	3	3	3	3
	8(7L	–	–	–	–	1	1	1
	TOTAL DLC	–	1	4	4	5	5	9
EMERGENCY VEHICLE PREEMPTION (OPTICOM) CABLE	CHANNEL A	–	–	–	–	1	1	1
	CHANNEL B	1	1	1	1	1	1	1
	CHANNEL C	–	–	–	–	–	1(N)	1(N)
	TOTAL EVP CABLE	1	1	1	1	2	3	3
VIDEO DETECTOR CABLES	VDA	–	–	–	–	1	1	1
	VDB	1	1	1	1	1	1	1
	TOTAL VIDEO CABLE	1	1	1	1	2	2	2
	CONDUIT SIZE	3"	3"	3"	3"	3"	2-3"	2-3"

ALL CONDUIT, CONDUCTORS AND CABLES ARE EXISTING UNLESS OTHERWISE NOTED.
(N) = NEW CONDUCTOR OR CABLE
EXISTING EVP AND VIDEO DETECTOR CABLES TO BE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR.

EQUIPMENT SCHEDULE

LOCATION	STANDARD: TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	HPS LUMINAIRE WATTAGE	VEHICLE SIGNAL MOUNTING: MAST ARM	POLE	PED SIGNAL MOUNTING	PED PUSH BUTTON: ø	ARROW	STREET NAME SIGN (S.N.S.) LEGEND	*SPECIAL REQUIREMENTS
(A)	19-3-129	30'	15'	200	MAS	SV-2-TD	SP-1-T			Condit Rd.	
(B)	1-B					TV-1-T					
(C)	1-B					TV-3-T	SP-2-T	#4 #6	->
->		INSTALL RELOCATED POLE AND EQUIPMENT.
(D)	1-B (14')					TV-1-T		#4	<->		
(E)	19A-3-129	25'	15'	200		SV-2-TD	SP-1-T	#4	->	Condit Rd.	INSTALL RELOCATED POLE AND EQUIPMENT.
(F)	1-B (14')					TV-1-T SV-1-T				Pleasant Hill Rd.	INSTALL RELOCATED POLE AND EQUIPMENT.
(G)	PPB POST N							#6 N	->		

ALL POLE AND SIGNAL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED

* OTHER REQUIREMENTS ARE COVERED BY NOTES, LEGEND, SPECIAL PROVISIONS AND CALTRANS STANDARD SPECIFICATIONS. FOR TYPE OF STANDARD, VEHICLE AND PEDESTRIAN MOUNTING, SEE CALTRANS STANDARD PLANS.

N = NEW EQUIPMENT

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USA
UNDERGROUND SERVICE ALERT
CA: 1-800-227-2600
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San Ramon, California 94583
tel. No. (925) 543-0540 ©2005
Fax No. (925) 543-0579

REGISTERED PROFESSIONAL ENGINEER BRIAN E. SOMERS No. 60298 06/30/06 STATE OF CIVIL CALIFORNIA

SUBMITTED JULY 19, 2005
PROJECT ENGINEER 7/19/05

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

LAFAYETTE

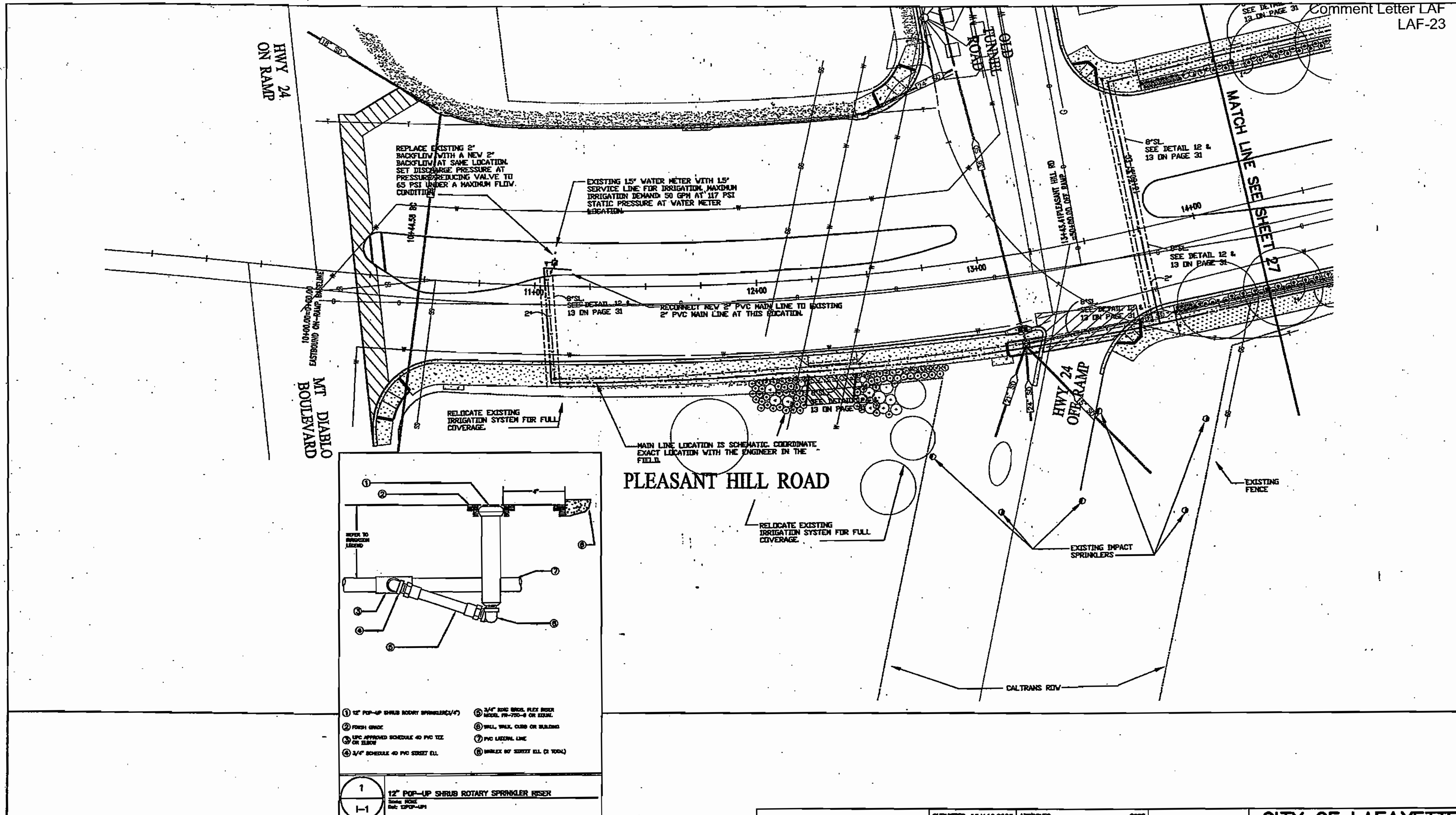
REVISIONS NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD MULTI-PURPOSE PATH IMPROVEMENTS

CONDIT ROAD CONDUCTOR AND EQUIPMENT SCHEDULES TS-4

DESIGNED: DTB	CHECKED: BES	SCALE: NO SCALE	
DRAWN: LAM	DATE: 7/18/05		
ROLL FRAME	PROJECT NO.: 014-9654	SHEET 25 OF 38	
AEI NO: 2307			


HWY 24 ON RAMP
OLD TUNNEL ROAD
MATCH LINE SEE SHEET 27
REPLACE EXISTING 2" BACKFLOW WITH A NEW 2" BACKFLOW AT SAME LOCATION. SET DISCHARGE PRESSURE AT PRESSURE REDUCING VALVE TO 65 PSI UNDER A MAXIMUM FLOW CONDITION.
EXISTING 1.5" WATER METER WITH 1.5" SERVICE LINE FOR IRRIGATION. MAXIMUM IRRIGATION DEMAND: 50 GPM AT 117 PSI STATIC PRESSURE AT WATER METER LOCATION.
8"SL SEE DETAIL 12 & 13 ON PAGE 31
RECONNECT NEW 2" PVC MAIN LINE TO EXISTING 2" PVC MAIN LINE AT THIS LOCATION.
SEE DETAIL 12 & 13 ON PAGE 31
MT DIABLO BOULEVARD
HWY 24 OFF RAMP
RELOCATE EXISTING IRRIGATION SYSTEM FOR FULL COVERAGE.
MAIN LINE LOCATION IS SCHEMATIC. COORDINATE EXACT LOCATION WITH THE ENGINEER IN THE FIELD.
PLEASANT HILL ROAD
EXISTING FENCE
EXISTING IMPACT SPRINKLERS
CALTRANS ROW
1 12" POP-UP SHRUB ROTARY SPRINKLER(3/4")
2 FINISH GRADE
3 UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW
4 3/4" SCHEDULE 40 PVC STREET ELL
5 3/4" KING BROS. FLEX RISER MODEL FR-750-6 OR EQUAL
6 WALL, WALK, CURB OR BUILDING
7 PVC LATERAL LINE
8 MARLEX 90° STREET ELL (2 TOTAL)
12" POP-UP SHRUB ROTARY SPRINKLER RISER
SCALE: NONE
1
I-1

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

Irrigation Consultant:
Russell D. Mitchell Associates, Inc.

SUBMITTED JULY 19 2005 — PROJECT LANDSCAPE ARCHITECT

APPROVED ____________ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED ________
PROJECT ENGINEER

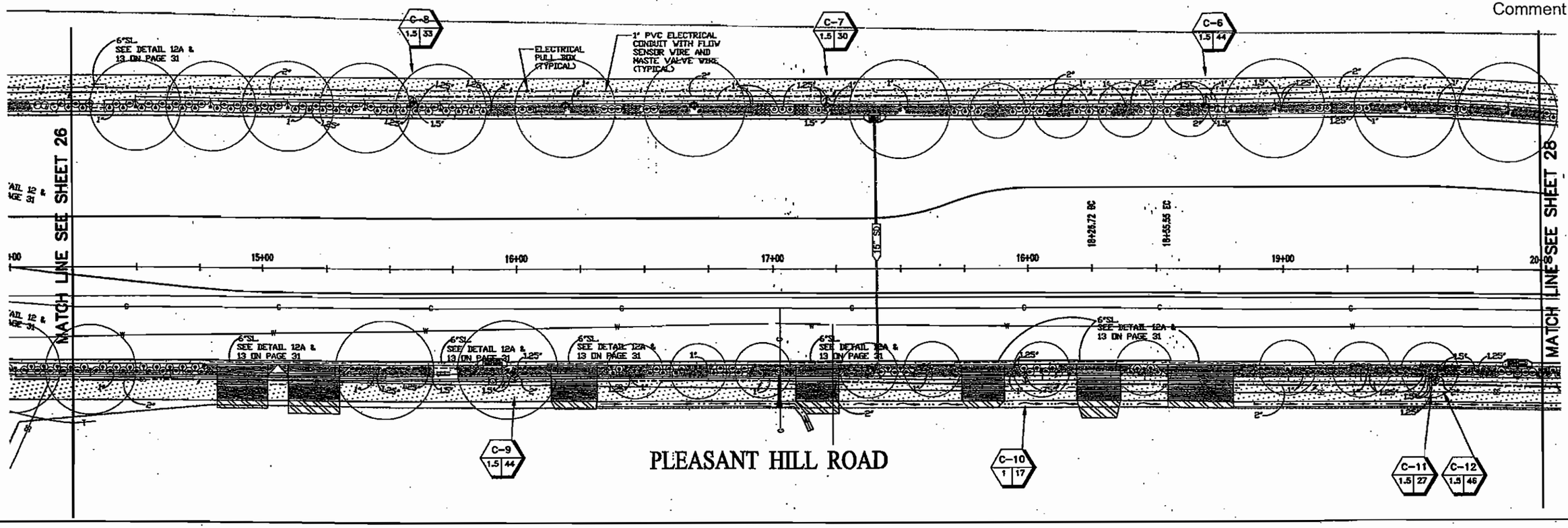
NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION
STA 10+00 TO STA 14+25

DESIGNED: JC	CHECKED: CM	SCALE: 1"=20'	
DRAWN: JC	DATE: JULY 19, 2005		
ROLL FRAME			
AEI NO: 2307	PROJECT NO.: 014-9654	SHEET 26 OF 38	



CONTRACTOR TO VERIFY
EXISTING UTILITY LOCATIONS
PRIOR TO ANY EXCAVATION
CALL USA AT (800) 227-2800

Irrigation Consultant
Russell D. Mitchell Associates, Inc.
2780 Gordon Dobbs
Walnut Creek, CA 94597
Phone (925) 930-3883
Fax (925) 932-6871
Email: RMA@MARROKTON.COM

SUBMITTED JULY 19 2005
PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

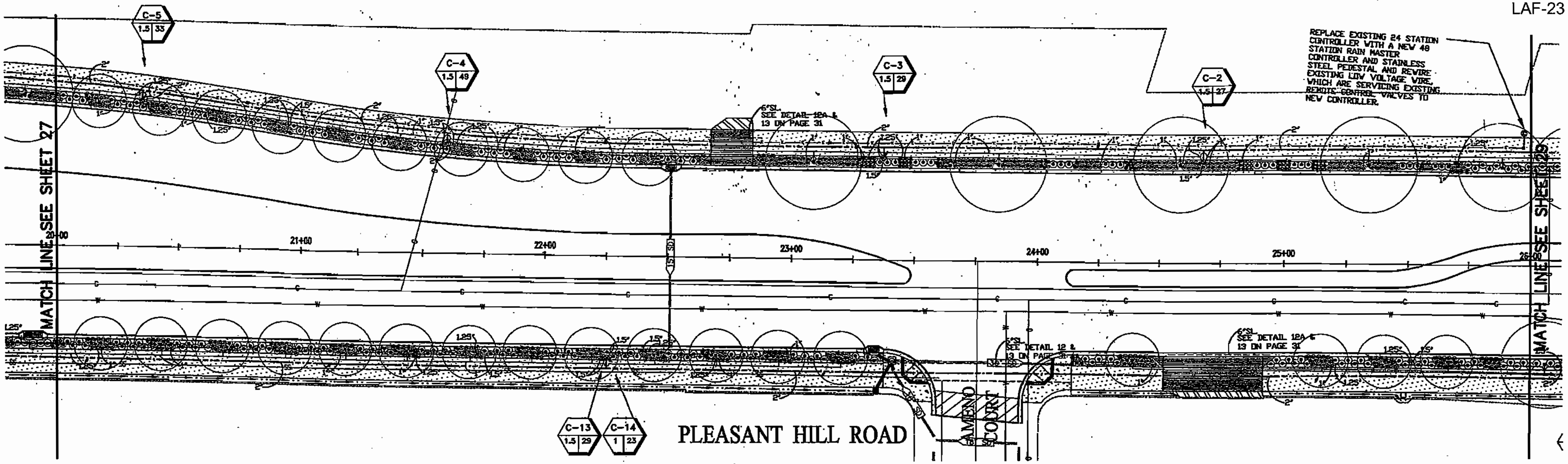
REVISIONS			
NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION
STA 14+25 TO STA 26+00

DESIGNED: JC	CHECKED: CM	SCALE: 1"=20'
DRAWN: JC	DATE: JULY 19, 2005	
ROLL FRAME	PROJECT NO.: 014-0654	SHEET 27 OF 38
AEI NO: 2307		



CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

Irrigation Consultant:
Russell D. Mitchell Associates, Inc.
2760 Camino Diablo
Walnut Creek, CA 94597
Phone (925) 939-3985
Fax (925) 932-5671
Email: RMA@RMAIRRIGATION.COM

SUBMITTED JULY 19 2005
PROJECT LANDSCAPE ARCHITECT

1-30-06
7-8-05

APPROVED ______________ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED ______________
PROJECT ENGINEER

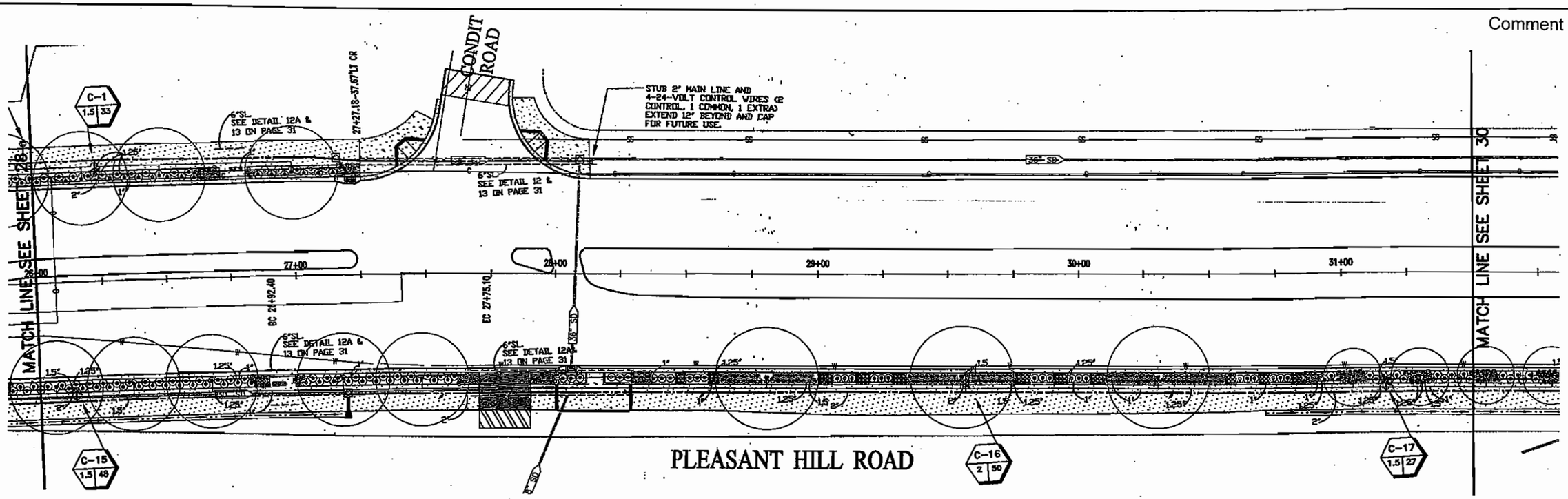
REVISIONS NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION
STA 20+00 TO STA 26+00

DESIGNED: JC	CHECKED: CM	SCALE: 1"=20'
DRAWN: JC	DATE: JULY 19, 2005	
ROLL FRAME	PROJECT NO.: 014-0654	SHEET 28 OF 38
AEI NO: 2307		



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SUBMITTED JULY 19 2005
PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005
CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

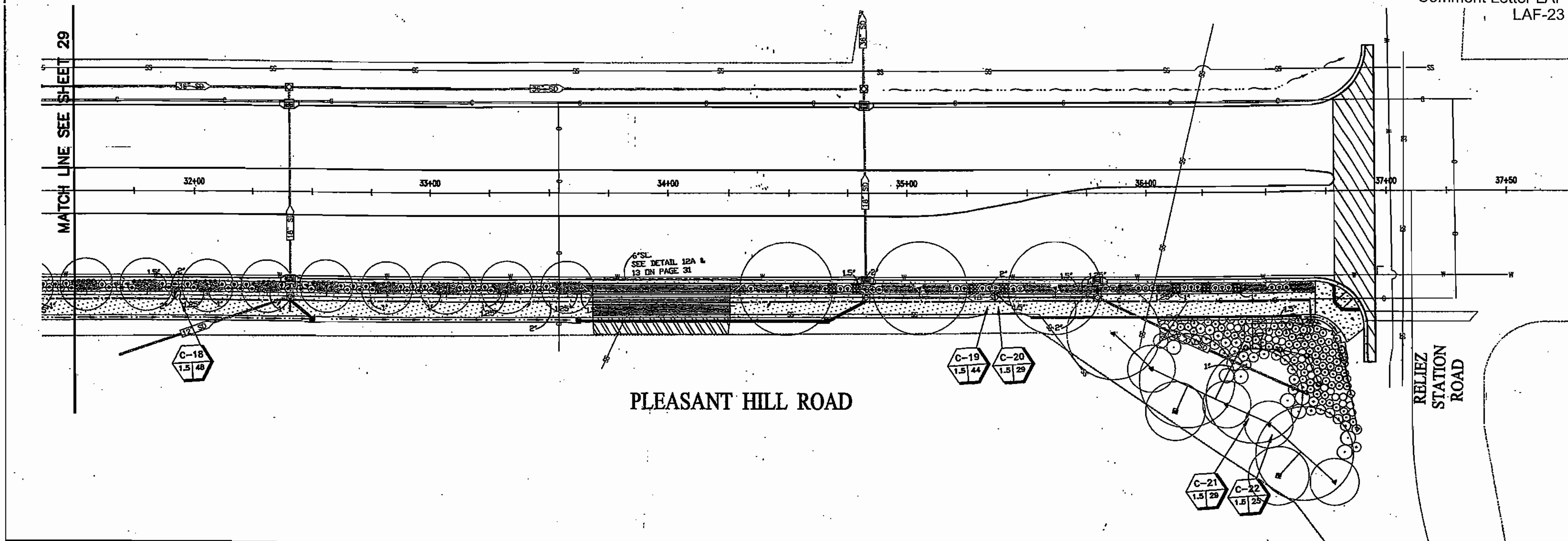
REVISIONS				
NO.	DESCRIPTION	BY	DATE	

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION
STA 26+00 TO STA 31+50

DESIGNED: JC	CHECKED: CM	SCALE: 1"=20'
DRAWN: JC	DATE: JULY 19, 2005	
ROLL FRAME:	PROJECT NO.: 014-9654	SHEET 29 OF 38
AD NO: 2307		



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SUBMITTED JULY 19 2005
PROJECT LANDSCAPE ARCHITECT

APPROVED ____ 2005
CITY ENGINEER
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DATE ACCEPTED ____
PROJECT ENGINEER

REVISIONS | NO. | DESCRIPTION | BY | DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION
STA 31+50 TO STA 37+00

DESIGNED: JC	CHECKED: CM	SCALE: 1"=20'
DRAWN: JC	DATE: JULY 19, 2005	
ROLL FRAME		
AEI NO: 2307	PROJECT NO.: 014-9654	SHEET 30 OF 38

IRRIGATION NOTES

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.

2. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE MAINTENANCE CONTRACTOR TO PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE AND WIND EXPOSURES.

4. IT IS THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT A.C. (2.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE TO THE IRRIGATION CONTROLLER LOCATIONS(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE INSTALLATION AND TO MAKE FINAL CONNECTION FROM ELECTRICAL SERVICE STUB-OUT TO CONTROLLER(S). PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.

5. PROVIDE EACH CONTROLLER WITH ITS OWN GROUND ROD. SEPARATE THE GROUND RODS BY A MINIMUM OF EIGHT FEET. THE GROUND ROD SHALL BE AN EIGHT FOOT LONG BY 5/8" DIAMETER U.L. APPROVED COPPER CLAD ROD. INSTALL NO MORE THAN 6" OF THE GROUND ROD ABOVE FINISH GRADE. CONNECT #6 GAUGE WIRE WITH A U.L. APPROVED GROUND ROD CLAMP TO ROD AND BACK TO GROUND SCREW AT BASE OF CONTROLLER WITH APPROPRIATE CONNECTOR. MAKE THIS WIRE AS SHORT AS POSSIBLE, AVOIDING KINKS OR BENDING.

6. PROVIDE EACH IRRIGATION CONTROLLER WITH ITS OWN INDEPENDENT LOW VOLTAGE COMMON GROUND WIRE.

7. SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.

8. IRRIGATION CONTROL WIRES: SOLID COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. CONTROL WIRE SERVICING REMOTE CONTROL VALVES: SIZE #14-1 WIRE WITH A UNIQUE COLOR INSULATING JACKET FOR EACH CONTROLLER. COMMON GROUND WIRE: SIZE #12-1 WIRE WITH A WHITE INSULATING JACKET AND A STRIPE OF COLOR WHICH MATCH'S THE CONTROL WIRE COLOR CHOICE FOR SPECIFIC CONTROLLER. SPARE WIRE: #14-1 WIRE WITH BLACK INSULATION JACKET. SPLICES SHALL BE MADE WITH 3M-DBY SEAL PACKS OR APPROVED EQUAL.

9. INSTALL A MINIMUM OF ONE SPARE CONTROL WIRE OF A DIFFERENT COLOR ALONG THE ENTIRE MAIN LINE. QUANTITY OF SPARE WIRES SHALL EQUAL THE QUANTITY OF UNUSED STATION AT THE CONTROLLER. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.

10. SPLICING OF LOW VOLTAGE WIRES IS PERMITTED IN VALVE BOXES ONLY. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. DO NOT TAPE WIRES TOGETHER WHERE CONTAINED WITHIN SLEEVING OR CONDUIT.

11. INSTALL GREEN PLASTIC VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE, CARSON OR APPROVED EQUAL.

12. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX AN EQUAL DISTANCE FROM THE WALK, CURB, BUILDING OR LANDSCAPE FEATURE AND PROVIDE 12" BETWEEN BOX TOPS. ALIGN THE SHORT SIDE OF RECTANGULAR VALVE BOXES PARALLEL TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE.

13. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS (NOT IN LAWN AREA).

14. THE REMOTE CONTROL VALVE SPECIFIED ON THE DRAWINGS IS A PRESSURE REDUCING TYPE. SET THE DISCHARGE PRESSURE AS FOLLOWS:
    1. SPRAY HEADS=40 PSI
    2. BUBBLERS=30 PSI

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15. FLUSH AND ADJUST IRRIGATION OUTLETS AND NOZZLES FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF ARC AND RADIUS TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH CONTROL ZONE.

16. SET SPRINKLER HEADS PERPENDICULAR TO FINISH GRADE.

17. LOCATE BUBBLERS ON UPHILL SIDE OF PLANT OR TREE.

18. INSTALL A HUNTER HCV SERIES, KBI CV-SERIES, OR APPROVED EQUAL SPRING LOADED CHECK VALVE IN SPRINKLER RISER ASSEMBLIES WHERE LOW OUTLET DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.

19. NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

20. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

21. PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL. AS CHANGES IN LAYOUT OCCUR DURING CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.

22. PIPE THREAD SEALANT COMPOUND SHALL BE PERMATEX 51 OR RECTOR SEAL T+2.

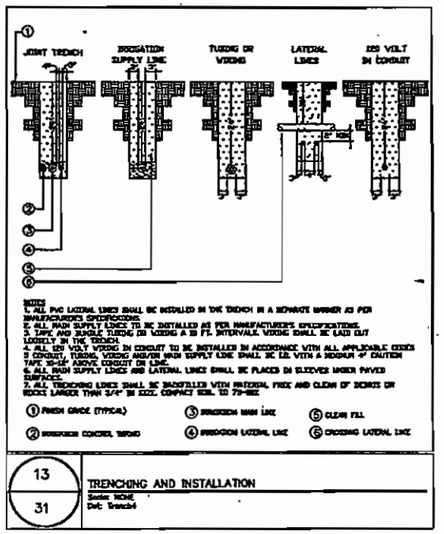
23. A. ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL TWO BUBBLERS AT EACH TREE AS DETAILED.

    B. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.

    C. UNSIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).

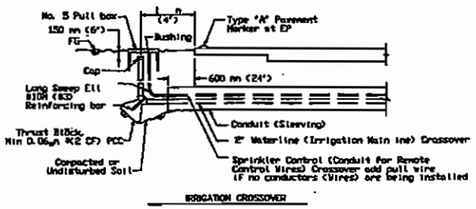
    D. SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:

.75"	0-6 GPM	1.25"	13-20 GPM	2"	33-50 GPM
1"	7-12 GPM	1.5"	21-32 GPM		

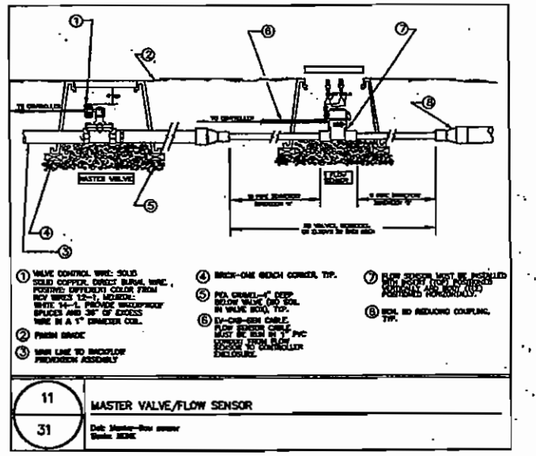


13 / 31 — TRENCHING AND INSTALLATION

Scale: NONE
Det: Trench4

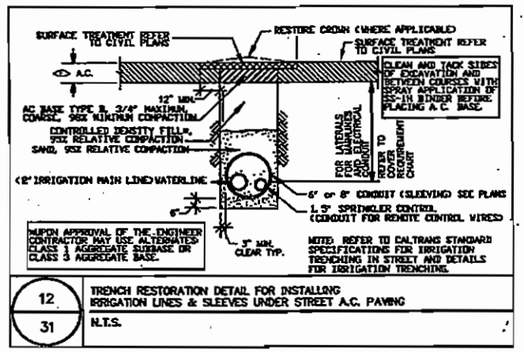


IRRIGATION CROSSOVER



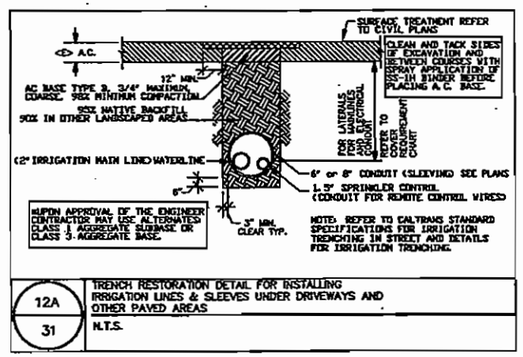
11 / 31 — MASTER VALVE/FLOW SENSOR

Det: Master-flow sensor
Scale: NONE



12 / 31 — TRENCH RESTORATION DETAIL FOR INSTALLING IRRIGATION LINES & SLEEVES UNDER STREET A.C. PAVING

N.T.S.



12A / 31 — TRENCH RESTORATION DETAIL FOR INSTALLING IRRIGATION LINES & SLEEVES UNDER DRIVEWAYS AND OTHER PAVED AREAS

N.T.S.

Comment Letter LAF

IRRIGATION LEGEND

SYMBOL	NUMBER	DESCRIPTION	NOZZLE GPM	OPERATING PSI	OPERATING RADIUS (FEET)
⊙ V V	570Z-12P-PRX-COM/ 15-PC F,H,Q	TORO POP-UP SPRAY SPRINKLER (SHRUB)	3,1.5,0.8	30	12-15
⊙ V V	570Z-12P-PRX-COM/ 12-PC F,H,Q	TORO POP-UP SPRAY SPRINKLER (SHRUB)	2,1,0.5	30	10-12
⊙ V V	570Z-12P-PRX-COM/ 10-PC F,H,Q	TORO POP-UP SPRAY SPRINKLER (SHRUB)	1.5,0.8,0.4	30	8-10
⊙ V V	570Z-12P-PRX-COM/ 8-PC F,H,Q	TORO POP-UP SPRAY SPRINKLER (SHRUB)	1,0.5,0.25	30	6-8
V V	570Z-12P-PRX-COM/ 5-PC H,Q	TORO POP-UP SPRAY SPRINKLER (SHRUB)	0.2,0.1	30	4-5
⊙	FB-25-PC	TORO BUBBLER (SHRUB)	0.25	30	TRICKLE
■	FB-50-PC	TORO BUBBLER (TREE) 2 PER TREE	0.5	30	TRICKLE
⊛	100P-OMR-100	IRRITROL REMOTE CONTROL VALVE W/PRESURE REGULATING VALVE			
⬬	33 DNP	RAIN BIRD QUICK COUPLING VALVE			
⋈	T113-IRR				
◪	REFER TO SATELLITE MODEL NUMBER	NIBCO GATE VALVE (LINE SIZE)			
⊠	975XLVSR 2"	UGT FLOW SENSOR ASSEMBLY/MASTER VALVE, NORMALLY OPEN (1-1/2" UNLESS OTHERWISE NOTED)			
Ⓒ	SA6-RM7-48/ PMR/FSAV-150B/RSO	WILKINS REDUCED PRESSURE BACKFLOW ASSEMBLY W/Y STRAINER AND PRESSURE REDUCING VALVE			
		UGT SATELLITE ASSEMBLY WITH A TOP ENTRY PEDESTAL MOUNTED RAIN MASTER EVOLUTION CONTROLLER WITH PHONE MODEM AND RAINMASTER FM REMOTE TRANSMITTER/RECEIVER PAIR. CONTACT UGT AT (925)609-2180.			
		CONTROLLER AND STATION NUMBER			
		FLOW (GPM)			
		REMOTE CONTROL VALVE SIZE (IN INCHES)			
		MAIN LINE: 2 1/2" AND SMALLER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS.			
		LATERAL LINE: 3/4" AND LARGER: 1120-CL. 200 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS.			
"SL"		SHOWN ON DRAWING (TYP.)			
		SLEEVING: 1120-CL. 200 PVC PLASTIC PIPE. COVER TO BE AS INDICATED IN SPECIFICATIONS OR AS INDICATED BELOW FOR PIPE DEPTH OF COVER.			
E E		1" PVC ELECTRICAL CONDUIT WITH PULL BOXES AND 1- EV-CAB-SEN -SENSOR WIRE AND 4- #12-1 THWN WIRES FOR MASTER VALVE.			

MINIMUM COVER REQUIREMENTS

IRRIGATION COMPONENT	COVER REQUIRED, UNDER VEHICLE AREA	PAVED WALKS	LANDSCAPE
CONTROL WIRING	36 INCHES	24 INCHES	18 INCHES
PIPE (PRESSURE)	36 INCHES	24 INCHES	18 INCHES
PIPE (NON PRESSURE)	36 INCHES	24 INCHES	18 INCHES
SLEEVES	36 INCHES	24 INCHES	N/A

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SUBMITTED JULY 19 2005
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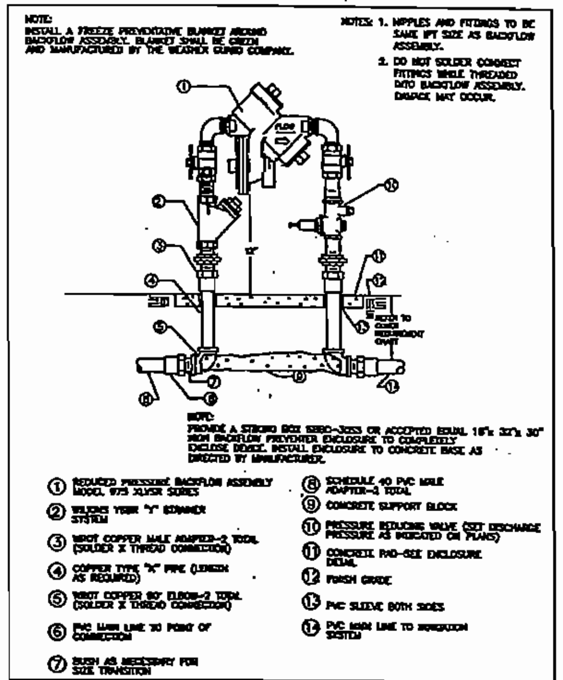
CITY OF LAFAYETTE

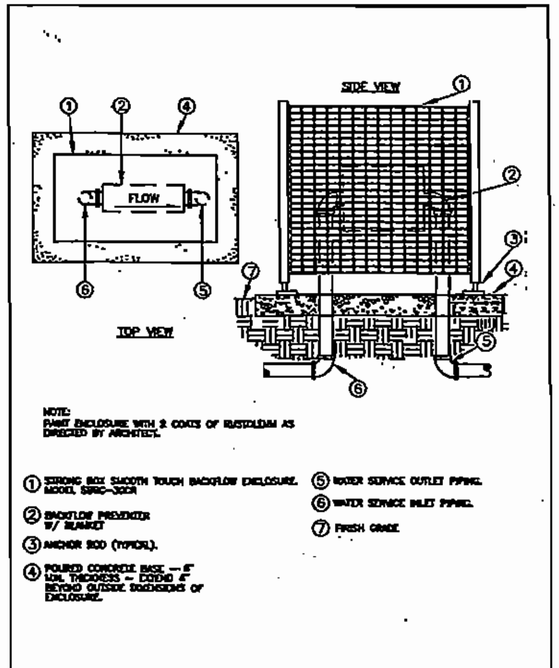
PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION LEGEND AND NOTES

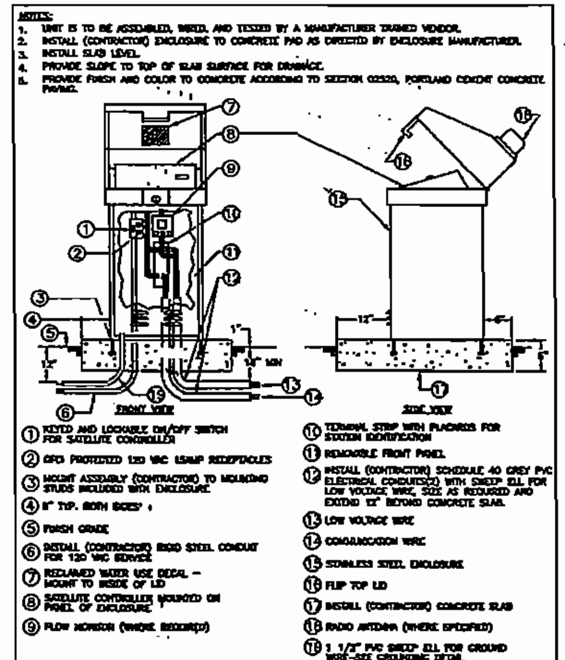
DESIGNED: JC	CHECKED: CM	SCALE: NTS	
DRAWN: JC	DATE: JULY 19, 2005		
ROLL FRAME	PROJECT NO.: 014-9654	SHEET 31 OF 38	
AEI NO: 2307			



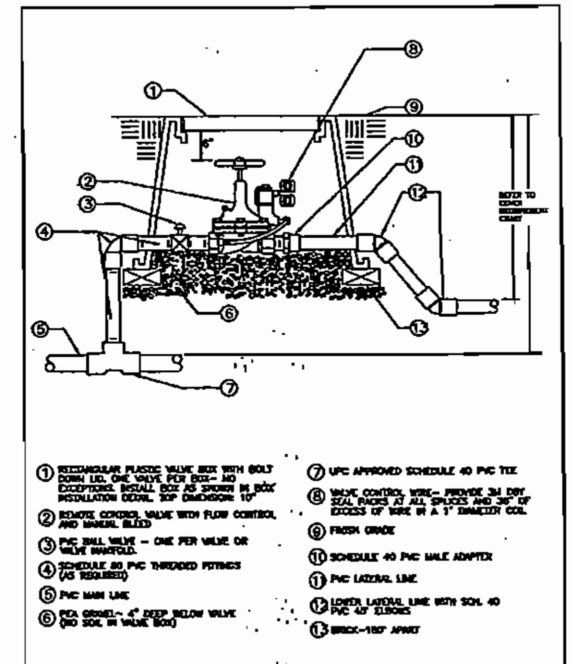
1 / 32 REDUCED PRESSURE BACKFLOW ASSEMBLY



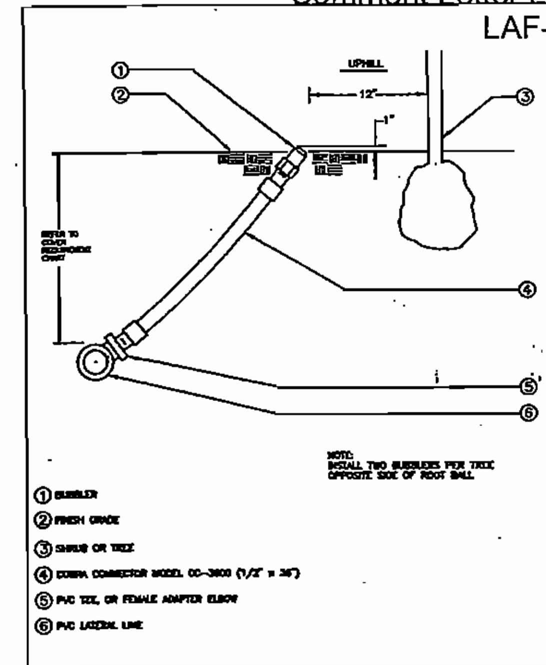
2 / 32 SMOOTH TOUCH BACKFLOW ENCLOSURE



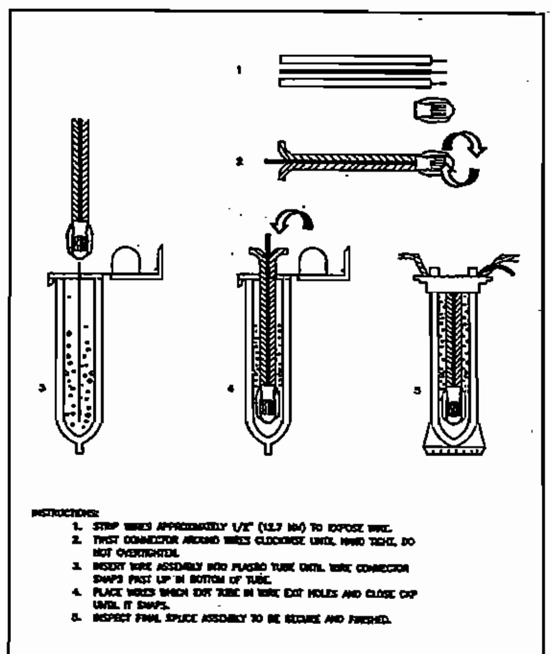
3 / 32 CONTROLLER IN ENCLOSURE



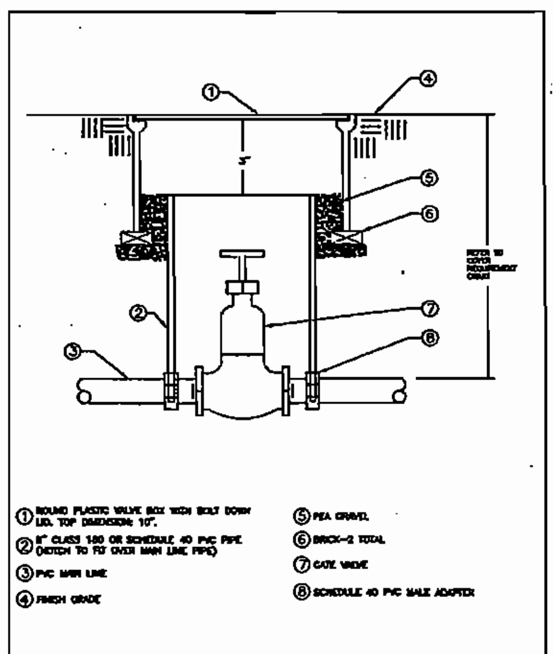
4 / 32 REMOTE CONTROL VALVE



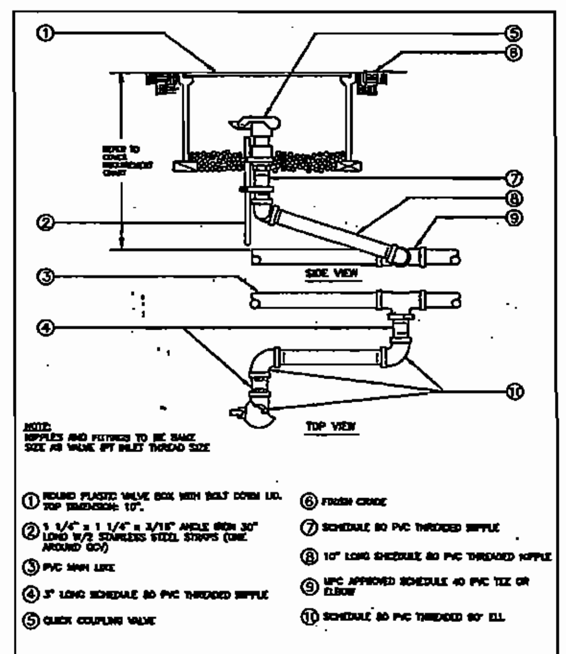
5 / 32 SHRUB AND TREE BUBBLER



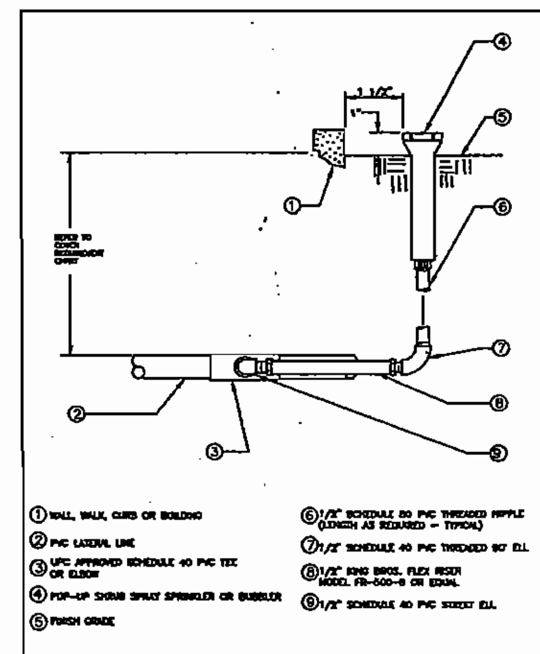
6 / 32 WEATHERPROOF SPLICE ASSEMBLY



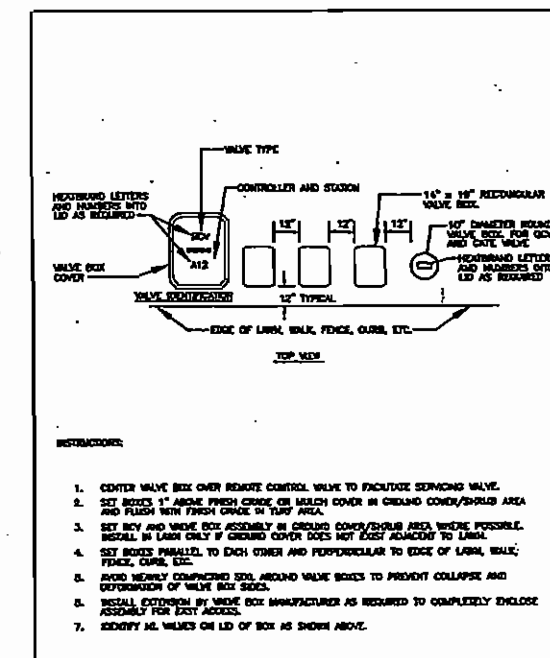
7 / 32 GATE VALVE



8 / 32 QUICK COUPLING VALVE



9 / 32 POP-UP SPRAY SPRINKLER RISER



10 / 32 VALVE BOX INSTALLATION

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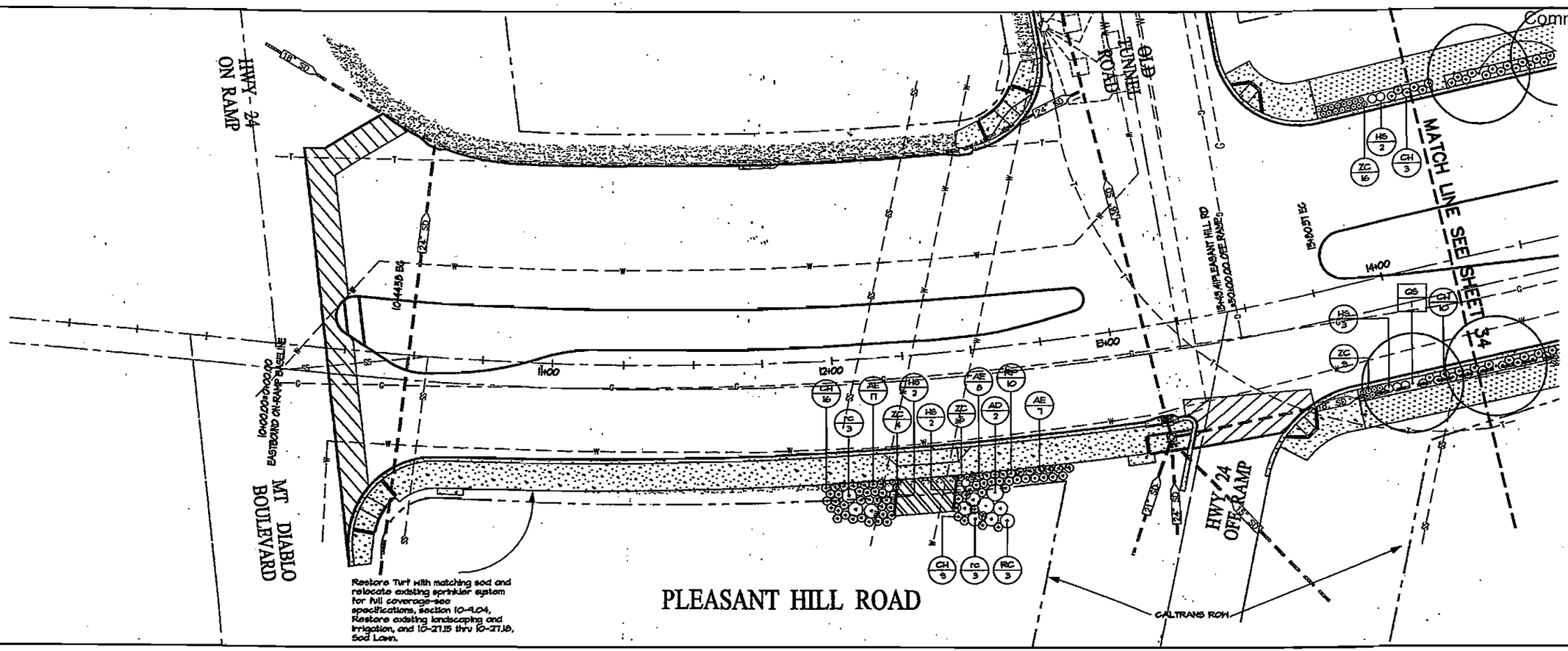
CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

IRRIGATION DETAILS

DESIGNED: JC	CHECKED: CM	SCALE: NTS
DRAWN: JC	DATE: JULY 19, 2005	
ROLL FRAME	PROJECT NO.: 014-9654	SHEET 32 OF 38
AEI NO: 2307		



Planting Legend

SYM	SCIENTIFIC NAME	COMMON NAME	SIZE	QTY.
TREES				(ALL SHEETS)
CO	Cercis occidentalis	Western Redbud	15 gal	4
CC	Cotinus coggygria	Smoke Tree	15 gal.	2
GB	Ginkgo biloba	Maidenhair Tree	24" box	32
QA	Quercus agrifolia	Coast Live Oak	15 gal.	14
QS	Quercus shumardii	Shumard Red Oak	15 gal.	16
SHRUBS				
AD	Arctostaphylos densiflora 'Howard McMinn'	Manzanita 'Howard McMinn'	5 gal	15
AE	Arctostaphylos edmundsii 'Carmel Sur'	Manzanita 'Carmel Sur'	1 gal	32
AP	Artistida purpurea'	Purple three-awn	1 gal	155
CH	Cotoneaster horizontalis	Cotoneaster	1 gal	208
HS	Helictotrichon sempervirens	Blue Oat Grass	1 gal	144
IO	Iris douglasiana 'Pacific Coast Hybrid'	Iris	1 gal	403
RC	Rhamnus californica 'Eve Case'	Coffeeberry	5 gal	5
rc	Rhamnus californica 'Seaview Improved'	Coffeeberry "sl"	1 gal	6
RS	Ribes sanguineum	Red flowering currant	5 gal	53
RP	Rubus pentalobus	Bramble	1 gal	342
SP	Stipa pulchra	Feather grass	1 gal	151
ZC	Zauschneria californica (Epilobium)	California fuchsia	1 gal	613

QS / 4 — TREE SYMBOL - SEE PLANT LIST / QUANTITY

CO / 1 — SHRUB SYMBOL - SEE PLANT LIST / QUANTITY

EXISTING TREE TO REMAIN

PLANTING NOTES

1. STAKE ALL TREES AS PER DETAIL
2. TREE LOCATION AND MASSING TO BE VERIFIED IN THE FIELD BY LANDSCAPE ARCHITECT.
3. BRANCHING HEIGHT OF TREES SHALL BE A 6'-0" MINIMUM ABOVE FINISHED GRADE.
4. ALL TREES IN A FORMAL GROUP PLANTING SHALL BE MATCHING IN SIZE AND SHAPE.
5. PROVIDE CONTINUOUS WATER BARRIERS PER DETAIL.
6. SEE CIVIL PLANS FOR LOCATION OF PAVING, UTILITIES AND ALL EXISTING TREES TO REMAIN. ALL GRADING SHOWN IS FOR REFERENCE ONLY. SEE CIVIL PLANS FOR FINAL GRADING PLANS. CONTRACTOR TO CLOSELY COORDINATE WITH WITH ALL OTHER CONTRACTORS.
7. CONTRACTOR SHALL CLOSELY COORDINATE THE LOCATION OF ALL TREES WITH ALL UNDERGROUND AND ABOVE GRADE UTILITIES.
8. CONTRACTOR SHALL LOCATE AND TAG ALL TREES AT NURSERY AT TIME OF ACCEPTANCE OF CONTRACT TO ENSURE AVAILABILITY OF HEALTHY SPECIMENS. TREES TO BE APPROVED BY LANDSCAPE ARCHITECT. SEE SPECIFICATIONS.
9. PLANT QUANTITIES ARE FOR GENERAL REFERENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING QUANTITIES SHOWN ON PLAN.
10. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

6" DRAIN LOCATION AND TIE-IN TO STORM DRAIN SYSTEM
(Mt. Diablo Boulevard to Reliez Station Road)
City Project No. 014-9654

RIGHT SIDE DRAIN LOCATION	TIE-IN TO STORM DRAIN SYSTEM
Sta. 14+75±	
Sta. 15+65±	
Sta. 16+10±	
Sta. 17+00±	
	MH @ Sta. 17+02±
Sta. 11+75±	
Sta. 12+35±	
Sta. 14+65±	
	MH @ Sta. 14+91±
Sta. 20+50±	
Sta. 21+65±	
Sta. 22+95±	
Sta. 23+25±	
	CB @ Sta. 23+44±
Sta. 24+45±	
Sta. 25+50±	
Sta. 26+60±	
Sta. 27+65±	
	CB @ Sta. 28+06±
Sta. 29+00±	
Sta. 30+00±	
Sta. 30+65±	
Sta. 33+85±	
	CB @ Sta. 32+41±
Sta. 33+60±	
Sta. 34+15±	
	CB @ Sta. 34+85±
Sta. 36+20±	
	CB @ Sta. 38+80±
	(End of Subdrain System RT)
TOTALS 22 Drains	7 Connections

LEFT SIDE DRAIN LOCATION	TIE IN TO STORM DRAIN SYSTEM
Sta. 14+75±	
Sta. 14+75±	
Sta. 16+20±	
Sta. 17+00±	
	CB @ Sta. 17+40±
Sta. 18+00±	
Sta. 19+25±	
Sta. 20+00±	
Sta. 21+75±	
Sta. 22+00±	
	CB @ Sta. 22+31±
Sta. 22+60±	
Sta. 23+50±	
Sta. 24+25±	
Sta. 25+25±	
Sta. 26+70±	
Sta. 27+20±	
	CB @ Sta. 27+22±
	(End of Subdrain System LT)
TOTALS 14 Drains	5 Connections

GRAND TOTAL = 56 DRAINS 10 CONNECTIONS

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

WOLFE MASON ASSOCIATES
LANDSCAPE ARCHITECTS
RESTORATION SPECIALISTS
6573 Shattuck Avenue
Oakland, CA 94609
Phone 510.594.8160
Fax 510.594.8165
wolfemason.com

SUBMITTED JULY 19, 2005
PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

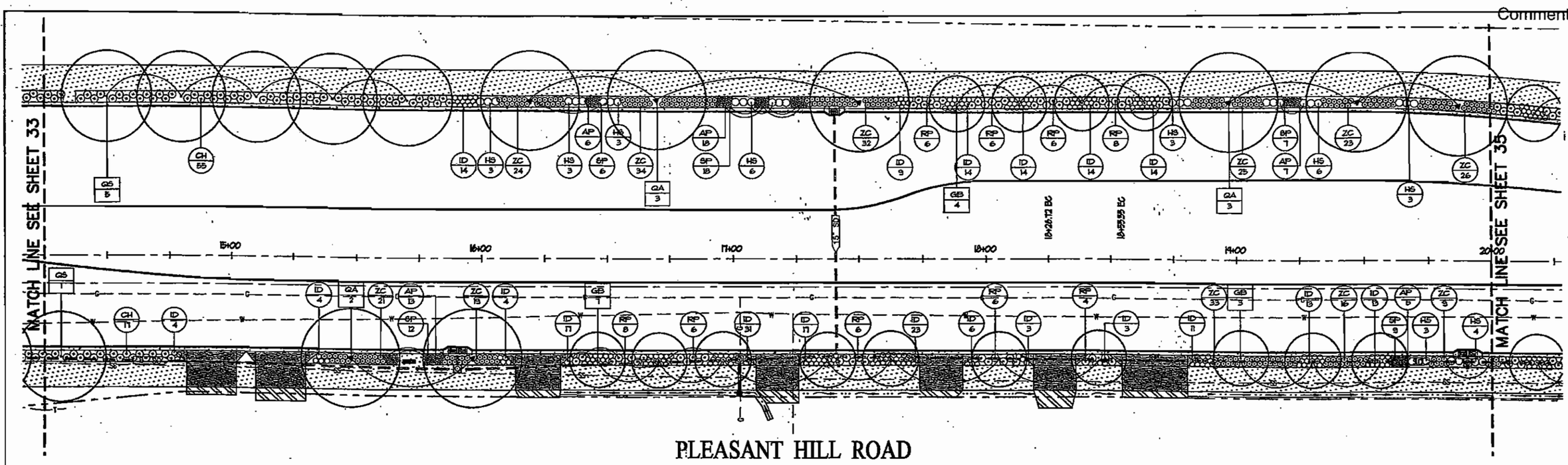
NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLANTING PLAN
STA 10+00 TO STA 14+25

DESIGNED: JH/CPD	CHECKED: SS	SCALE: 1"=20'	
DRAWN: JH/CPD	DATE: JULY 19, 2005		
ROLL	FRAME	PROJECT NO.: 014-9654	SHEET 33 OF 38
AEI NO: 2307			



CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

WOLFE MASON ASSOCIATES

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RESTORATION SPECIALISTS

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Oakland, CA 94609
Phone 510.594.8180
Fax 510.594.8185
wolfemason.com

SUBMITTED JULY 19, 2005

PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005

CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)

DATE ACCEPTED _____

PROJECT ENGINEER

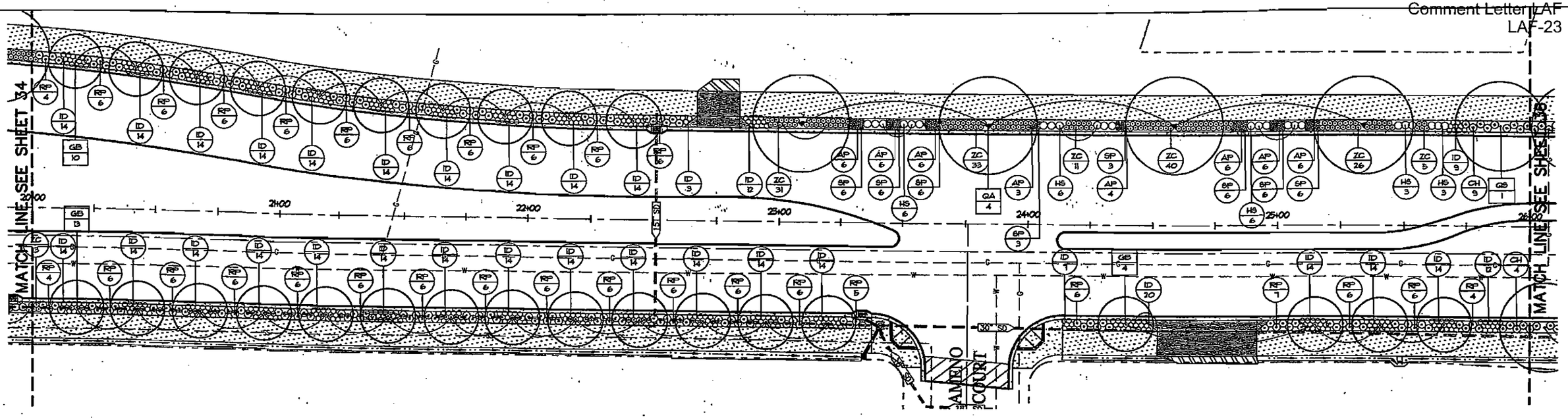
REVISIONS				
NO.	DESCRIPTION	BY	DATE	APP'D

CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLANTING PLAN
STA 14+25 TO STA 26+00

DESIGNED: JH/CPD | CHECKED: SS | SCALE: 1"=20'
DRAWN: JH/CPD | DATE: JULY 19, 2005
ROLL: FRAME: | PROJECT NO.: 014-9654 | SHEET 34 OF 38



PLEASANT HILL ROAD

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2800

WOLFE MASON ASSOCIATES

LANDSCAPE ARCHITECTS
RESTORATION SPECIALISTS

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Oakland, CA 94609
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Fax 510.594.8165
wa@wolfemason.com

SUBMITTED JULY 19, 2005

PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005

CITY ENGINEER

RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____

PROJECT ENGINEER

REVISIONS				
NO		BY	DATE	

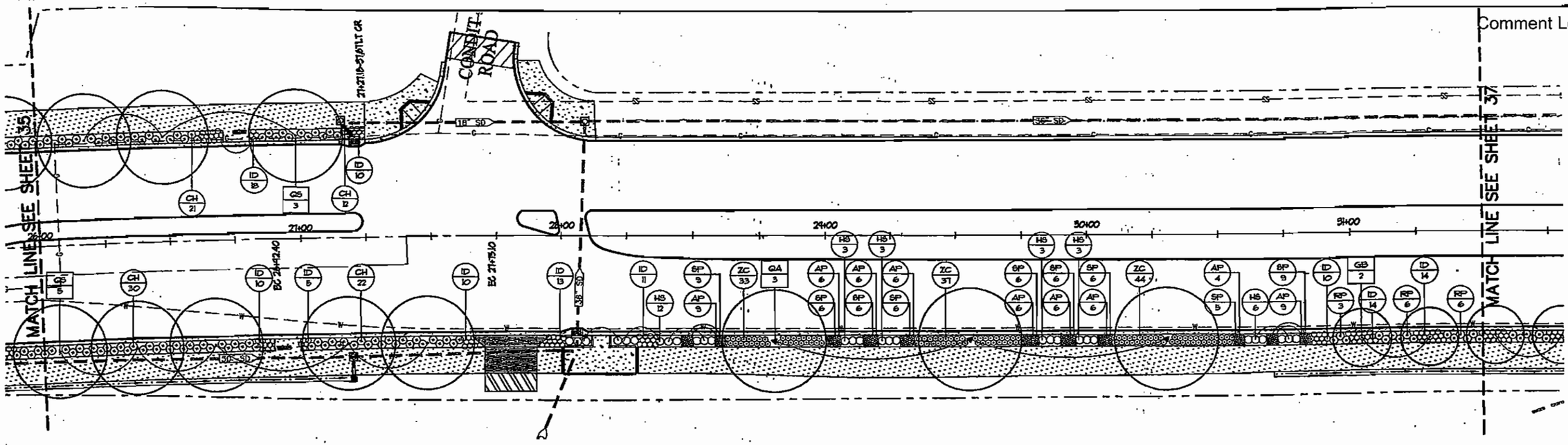
CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLANTING PLAN
STA 20+00 TO STA 26+00

DESIGNED: JH/CPD | CHECKED: SS | SCALE: 1"=20'
DRAWN: JH/CPD | DATE: JULY 19, 2005
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9654
SHEET 35 OF 38

Comment Letter LAF
LAF-23



PLEASANT HILL ROAD

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

WOLFE MASON ASSOCIATES

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wolfemason.com

SUBMITTED JULY 19, 2005
PROJECT LANDSCAPE ARCHITECT
1-30-06
3-28-05

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

REVISIONS

NO.	DESCRIPTION	BY	DATE

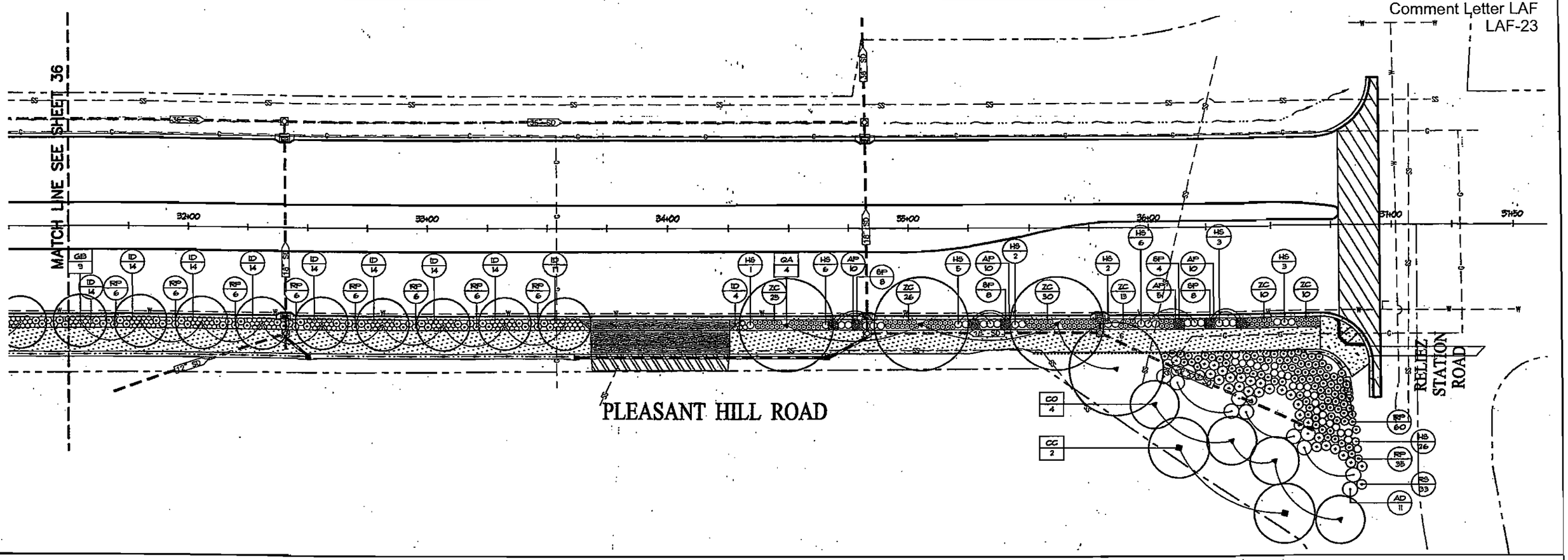
CITY OF LAFAYETTE

PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLANTING PLAN
STA 26+00 TO STA 31+50

DESIGNED: JH/CPD | CHECKED: SS | SCALE: 1"=20'
DRAWN: JH/CPD | DATE: JULY 19, 2005
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9654
SHEET 36 OF 38

Comment Letter LAF
LAF-23



CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

WOLFE MASON ASSOCIATES

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SUBMITTED JULY 19, 2005
PROJECT LANDSCAPE ARCHITECT

1-25-06
2-8-05

APPROVED _____ 2005
CITY ENGINEER
RECORD DRAWING
(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

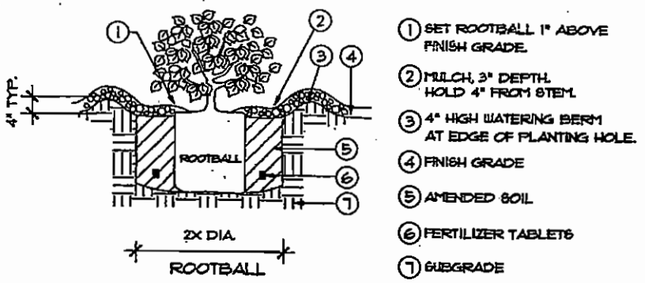
REVISIONS NO.	DESCRIPTION	BY	DATE

CITY OF LAFAYETTE

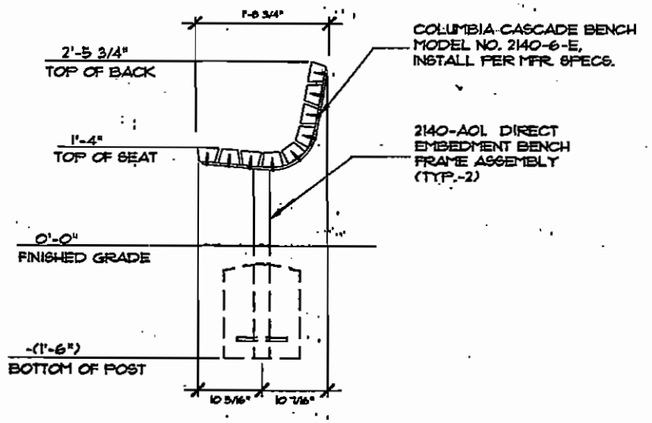
PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS

PLANTING PLAN
STA 31+50 TO STA 37+00

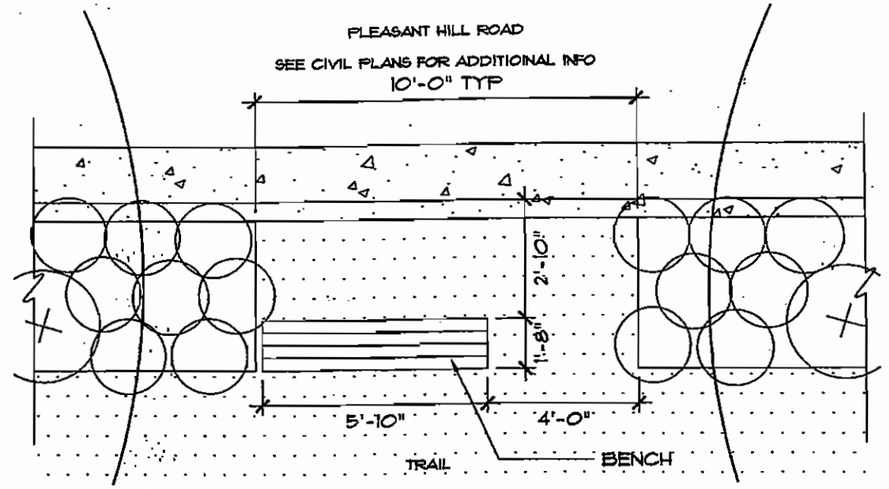
DESIGNED: JH/CPD | CHECKED: SS | SCALE: 1"=20'
DRAWN: JH/CPD | DATE: JULY 19, 2005
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9654
SHEET 37 OF 38



1 SHRUB PLANTING
SCALE: NTS

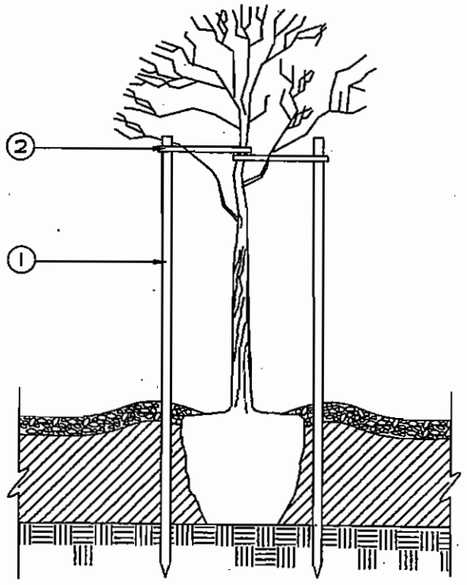


2 BENCH INSTALLATION
SCALE: 1"=1'



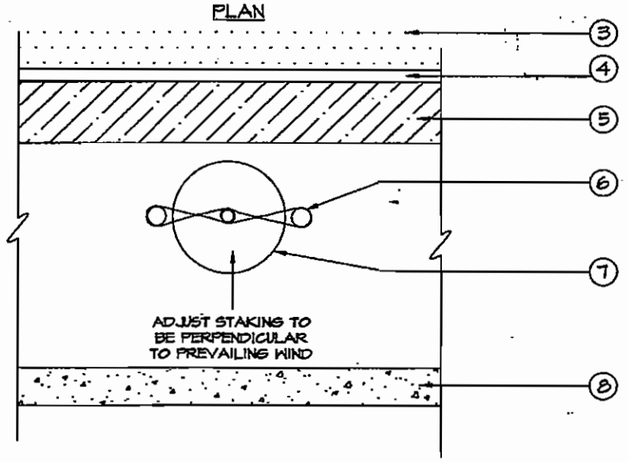
3 BUS STOPS
SCALE: 1/2"=1'

SECTION

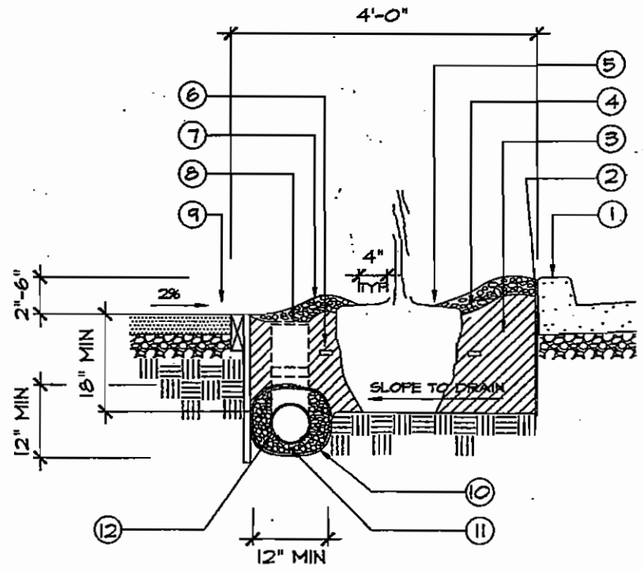


LEGEND:
1. STAKES. HOLD VERTICAL. DO NOT PENETRATE ROOTBALL.
2. TREE STRAPS, SEE SPECS
3. SIDEWALK, SEE CIVIL
4. HEADER AND STEEL STAKE, SEE CIVIL
5. DRAINLINE/DRAIN ROCK, SEE TREE PLANTING DETAIL
6. STAKES AND TREE STRAPS, SEE SPECS
7. ROOT BALL
8. CURB, SEE CIVIL

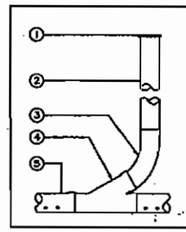
PLAN



4 TREE STAKING
SCALE: 1"=1'



LEGEND:
1. CURB, SEE CIVIL PLANS
2. WATER BARRIER CONT. - DEEP ROOT CORP., MODEL WB 24 OR EQUAL. INSTALL TOP OF BARRIER ½" ABOVE SOIL GRADE
3. BACKFILL
4. 3" LAYER OF MULCH - HOLD 4" AWAY FROM TREE TRUNK
5. ROOTBALL
6. FERTILIZER TABLET, TYP.
7. 4" WATERING BERM AROUND TREE
8. 6" DIAMETER PVC PIPE, WITH DRAIN FITTINGS, REFER TO DRAIN LOCATION AND DETAIL. RISER TO BE LOCATED NO CLOSER THAN 12 FEET FROM ANY TREE.
9. TRAIL- SEE CIVIL PLANS
10. FILTER FABRIC - OVERLAP TOP MIN. 12", SEE SPECS
11. DRAINROCK, SEE SPECS.
12. 6" DIAMETER PERFORATED PVC PIPE - TIE TO SD SYSTEM.



LEGEND:
1. NDS 904, 6" ROUND HEAVY DUTY CAST IRON GRATE WITH BLACK POWDER COATING. OPEN SURFACE AREA 180 SQUARE INCHES. 11,75 GPM. H-20 LOAD RATING. SET RIM 2" BELOW ADJACENT PAVING.
2. 6" PVC DRAIN PIPE
3. 6" ⅛ BEND
4. 6" WYE
5. 6" DIAMETER PERFORATED PVC PIPE

5 TREE PLANTING AND DRAIN CONNECTION
SCALE: 1"=1'

CONTRACTOR TO VERIFY EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION CALL USA AT (800) 227-2600

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SUBMITTED JULY 19, 2005
PROJECT LANDSCAPE ARCHITECT

APPROVED _____ 2005
CITY ENGINEER
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(NO WARRANTY AS TO ACCURACY)
DATE ACCEPTED _____
PROJECT ENGINEER

CITY OF LAFAYETTE
PLEASANT HILL ROAD
MULTI-PURPOSE PATH IMPROVEMENTS
PLANTING PLAN DETAILS

REVISIONS					
NO.	DESCRIPTION	BY	DATE		

DESIGNED: JH/CPD | CHECKED: SS | SCALE: NTS
DRAWN: JH/CPD | DATE: JULY 19, 2005
ROLL FRAME | AEI NO: 2307 | PROJECT NO.: 014-9854
SHEET 38 OF 38

2.7 Steven Falk, City Manager, City of Lafayette

LAF-1 Alternatives 1 and 2 had the best performance in four out of five of the weighting scenarios and were selected for more detailed study in the DEIR. The remaining four alternatives were eliminated from further study for the reasons summarized in Section 6.10.1 of the DEIR. The June 2005 "Lamorinda Water System Improvements Program Facility Plan" (referenced on DEIR p. 6-71), p. 6-1 states "Alternatives 1 and 2 are recommended for further evaluation. Further evaluation will include….public outreach with these alternatives as a basis of discussion." Alternative 1 was selected as the preferred alternative, because it is the environmentally superior alternative. Section 6.11 of the DEIR presents a comparison of Alternative 1 and 2. Alternative 1 is considered environmentally superior to Alternative 2, because of the impacts associated with the tunnel, the greater number of residences closer to the Orinda WTP, the more extensive construction footprints and greater excavation requirement, the potential cumulative construction impacts to Camino Pablo, and the fewer protected trees lost under Alternative 1.

Redundancy is a factor that several Board Members of EBMUD have indicated is also important in their preference between the two alternatives. However, consistent with the CEQA Guidelines, Section 15126.6(a), the comparison of alternatives and determination of the environmentally superior alternative is based on the ability of the alternative to meet the basic objectives of the project while avoiding or substantially lessening any significant impacts.

LAF -2 The alternatives listed in this comment are Alternatives 3, 4, 5, and 6 from the Lamorinda Water System Improvements Program Facilities Plan (Lamorinda Facilities Plan). These alternatives were evaluated by their performance relative to project objectives. Alternative 1 and 2 had the best performance in four out of five of the weighting scenarios and were selected for more detailed study. The remaining four alternatives were eliminated from further study for the reasons summarized in Section 6.10.1 of the DEIR (starting on p.6-43).

Alternative 4 is a hybrid of Alternatives 1 and 2 and it essentially combines the impacts of both. The fact that some facilities at the Orinda WTP would be smaller than those proposed under Alternative 2 could reduce the duration of some construction activities, such as clearwell excavation, but these reductions would have little or no effect on other activities, such as tunnel construction. See **Response LAF-1**.

LAF-3 As part of the design process, EBMUD will coordinate with the City of Lafayette Design Review Commission and Planning Services Division when selecting color schemes and materials for the proposed projects. EBMUD understands that the City of Lafayette would like the new structures to blend into the natural environment to the extent possible. The use of natural earth tones, particularly in the brown and green range, is acceptable for this project and will be discussed with the city (refer to

Measure 3.3-2c, DEIR p. 3.3-36). Please also refer to Section 2.1.3, Master Response on EBMUD Obligations to Comply with Local Ordinances, Obtain Local Agency Approvals and Permits, and Pay Local Agency Fees for additional response pertinent to this comment.

LAF-4 Visual simulations, presented as Figures 17 through 20, are included to show the appearance of the revised Highland Reservoir site. Figures 17 and 18 show a close range "before" and "after" view of the new tank structure as seen from the Rim Trail both with and without the new landscaping that is proposed as part of the project. The photo was taken in October 2006. A conceptual landscape plan proposes native tree and shrub planting in the area between the trail and the new reservoir. New trees are also proposed around portions of the tank perimeter for screening purposes (refer to Figure 16).

Figures 19 and 20 present a second simulation view from the Big Oak Trail at a distance of over one half mile away. Figure 15 is an annotated photo taken from the Rim Trail showing the Revised Highland Reservoir tank site location. This is the same photo that was used for the visual simulation of the DEIR Proposed Highland Reservoir site (refer to DEIR Figures 3.3-HIGHRES-1 and 3.3-HIGHRES-5 and-6). The new visual simulations and photographs demonstrate that the DEIR Proposed and the Revised Highland Reservoir sites would generally result in the same type and magnitude of visual impact with respect to effects on views from the Lafayette Reservoir Recreation Area. As discussed below, the Revised Highland Reservoir site would also result in minor effects on views from a limited residential area to the north.

Figure 14 presents two annotated photos of the Revised Highland Reservoir site taken from the hillside residential area that is located about three quarters of a mile to the north. The photos were taken in October 2006. As shown in these annotated photos the reservoir would appear against a landscape backdrop and would be partially screened by existing vegetation. Given the viewing distance and the presence of a landscape backdrop as well as existing intervening landscape screening, the new tank and proposed tree removal would not be particularly evident from this location. Over time the landscape proposed as part of the project would provide additional screening. These visual effects are considered less than significant.

LAF-5 Converting parcels 252-050-014 and 252-050-16 from private ownership to public open space would neither improve nor in any way affect the visual impacts associated with the Highland Reservoir. Both properties are at a substantially lower elevation than the reservoir and are hundreds of feet away from the proposed site.

Parcel 252-050-014 is shown on Map C-HIGHRES-1 as a construction access road and stockpile area. This use is temporary. While negotiations with the landowners may lead to EBMUD's purchase of the property, the District plans to rent the property for the duration of the project.

LAF-6 The dates of photos including visual simulation photos that are presented in the DEIR and this Response to Comments document are as follows. The * denotes photographs used for visual simulations.

Photo Numbers	Photo Date
A1-A8 (A7*)	October 13, 2005
A9 - A-12	July 20, 2005
F1- F4 (F1*)	November 8, 2005
F5, F6	October 13, 2005
F7, F8	November 8, 2005
G1-G4	November 26, 2005
H1*, H2, H3, H4*	November 10, 2005
HP1	November 10, 2005
HP2	February 14, 2006
HP3	November 10, 2005
HP4	November 8, 2005
HV1*, HV2	February 14, 2006
HV3, HV4	October 20, 2005
L1*	November 8, 2005
L2*, L3, L4	October 12, 2005
L5	October 13, 2005
L6	October 12, 2005
L7, L8	October 13, 2005
M1-M3	October 13, 2005
O1-O5 (O3*)	October 20, 2006
O6*	December 31, 2005
O7-O11	October 20, 2005
S1, S2*	October 20, 2005
S3	February 14, 2006
S4	October 20, 2005
S5-S11	February 14, 2006
SS1, SS2, SS3*	February 8, 2006
SS4	October 20, 2005
T1	July 20, 2005
T2	November 10, 2005
T3*	November 8, 2005
T4	July 20, 2005
U1-U8	November 8, 2005
W1	October 12, 2005
W2*, W3	November 10, 2005
W4	October 12, 2005
WC1-8 (WC2*, WC6*)	December 6, 2005

LAF-7 In response to this comment and others expressing concern about loss of and disturbance to trees at the Highland Reservoir site, EBMUD has analyzed a Revised Highland Reservoir Site and is considering this site. The text of Measure 3.6-1e has been modified accordingly (refer to Section 3.2, Text Revisions, in this Response to

Comments document). Please see Section 3.3 in this Response to Comments document for additional information.

LAF-8 The WTTIP project spans multiple jurisdictions, most of which do not specify tree replacement ratios. The DEIR uses a standard tree replacement ratio often used by the California Department of Fish and Game (CDFG), that would be uniformly applied at all WTTIP project sites requiring tree replacement. While the District is willing to consider the city's recommendation, the CDFG ratio is an approach that the District prefers to adopting ratios promulgated by a single jurisdiction.

LAF-9 CEQA requires that a good faith effort at full disclosure be made in the EIR (CEQA Guidelines Section 15204 [a]), and the DEIR makes this effort to estimate impacts to protected trees. As noted on DEIR p. 3.6-1, a general tree assessment was completed to estimate the number of protected trees that would be affected in accordance with each city's or county's tree ordinance. Prior to project implementation and/or further site-specific CEQA review for project elements analyzed at a program level, trees would be mapped and information regarding the species and size, as well as numbers of trees, would be compiled so that tree removal could be properly mitigated for. See DEIR Measure 3.6-1a, Tree Protection Measures During Construction and Measure 3.6-1b, Protected Tree Pruning and Replacement.

LAF-10 This request regarding protected trees is acknowledged. In response to **Comments LAF-10**, **CAOF-2**, **MB-5**, and **TJK-4**, regarding clarification and specification in terms of replacement trees, Measure 3.6-1b, Protected Tree Pruning and Replacement, of the DEIR is revised (refer to Section 3.2, Text Revisions, in this Response to Comments document).

LAF-11 Consistent with Measure 3.2-2a (see third bullet on DEIR p.3.3-35), the District will get input from the City regarding final landscape plans. The District will adhere to the performance and prescriptive standards for landscaping and tree replacement set forth in Measures 3.6-1a through 3.6-1e and 3.3-2a through 3.3-2c. The conceptual landscape plans developed for the DEIR are representative and illustrate the scale and extent of landscaping needed to mitigate visual impacts. The DEIR acknowledges that the landscape plans will be refined and that the measures to compensate for tree loss will need to dovetail with the landscaping plans. With respect to the Highland Reservoir (and other project sites), some replacement trees would be planted elsewhere (for the Highland Reservoir, elsewhere within the Lafayette Reservoir Recreation Area as first choice and if not feasible for all trees, the balance will be placed at the District's Pinole Valley property) because the site is not big enough to accommodate the replacement trees at the specified ratios.

Please also refer to Section 2.1.3, Master Response on EBMUD Obligations to Comply with Local Ordinances, Obtain Local Agency Approvals and Permits, and Pay Local Agency Fees for additional response pertinent to this comment.

LAF-12 A measure is added to the list of mitigation requirements in Measure 3.8-1 on DEIR p. 3.8-13 to provide that the requested signage will be incorporated into contract specifications for the project (refer to Section 3.2, Text Revisions, in this Response to Comments document).

LAF-13 On DEIR p. 3.10-31, Measure 3.10-1b states that, "Construction at the WTTIP project sites will be restricted to the hours of operation specified by each jurisdiction's noise ordinance (as listed in Table 3.10-1, including restrictions provided in footnotes and any other ordinance exceptions and provisions in effect at the time of EIR publication), except during critical water service outages or other emergencies and special situations. Any equipment operating beyond these hours will be subject to the day and night noise limits of each jurisdiction (as listed in Table 3.10-1) for various activities in single-family residential zones." Some equipment must be operated 24 hours per day for purposes of ground control and ventilation (in projects involving tunneling) and dewatering (for excavation below the groundwater table). To address coordination with local jurisdictions when work occurs outside of the hours of 7:00 a.m. and 6:00 p.m., EBMUD has revised Measure 3.10-1b in response to this and similar comments (refer to Section 3.2, Text Revisions, in this Response to Comments document).

To ensure that these standards could be met at the closest sensitive receptors, EBMUD will conduct a noise monitoring program prior to implementation of any project where construction would extend beyond ordinance time limits to accurately determine baseline ambient noise levels at the closest residential receptors and to measure noise levels at these receptors during a test run of equipment proposed to be operated on the site during the more noise-sensitive nighttime hours. Project noise limits will be adjusted appropriately depending on the existing ambient noise levels[1] to ensure noise disturbance is maintained at a less-than-significant level at the closest residential receptors. Measures that could be implemented to reduce noise levels (as demonstrated in Table 3.10-6) to meet local nighttime standards include engine controls listed in Measure 3.10-1a, tunnel-related measures listed in Measure 3.10-1c, and temporary sound barriers listed in Measure 3.10-1e.

LAF-14 As shown in Table 3.10-1 (DEIR p. 3.10-4), the Lafayette Municipal Code allows construction between 10:00 a.m. and 6:00 p.m. on Sundays and holidays with a permit, if noise is less than 83 dBA at 50 feet (25 feet if enclosed) or the noise level at the nearest affected property shall not exceed 80 dBA. Section 5-209 provides exceptions if compliance would be impractical or unreasonable. Should special

[1] If baseline noise levels already exceed standards at the closest residential receptors, the standards will be increased appropriately so that construction noise levels do not result in a noticeable increase in ambient noise levels at these receptors.

circumstances require construction on holidays, the District will coordinate construction with local agencies.

LAF-15 Measure 3.8-1, DEIR pp. 3.8-13 through 3.8-15, sets forth elements of the traffic safety / traffic management plans that contractor(s) will be required to submit, as part of the encroachment permit process for work in the public right-of-way, to the agencies with jurisdiction over the roads affected by the project. Because project facilities have different circumstances and needs, Measure 3.8-1 does not attempt to list all elements to be included for each facility. Instead, the measure lists the elements most likely to be included, but does not limit the plans to only those elements.

The elements stipulate that construction activities will be coordinated, to the extent possible, to minimize traffic disturbances adjacent to schools (e.g., work during summer). For construction activities that occur during the school year, the contractor(s) will provide flaggers at the start and end of the school day at all schools in the vicinity of a pipeline project (e.g., Bentley School on El Nido Ranch Road), to ensure traffic and pedestrian safety.

LAF-16 The District would comply with the construction hours specified in encroachment permits required for the project. Note that reducing the hours of construction where road closures are necessary prolongs the overall duration of construction. The proposed construction hours (9:00 a.m. to 4:00 p.m. for hauling and 8:30 a.m. to 4:30 p.m. for pipeline work in roads) reflect an attempt to balance the trade-off between construction hours for each specific day and overall duration. Measure 3.8-1 (DEIR p. 3.8-13 through 3.8-15) states “to the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.”

LAF-17 The Glen Pipeline Improvements project is the only project in Lafayette requiring full street closure where no detour routing is available. Access impacts on this road would be significant and unavoidable. Measure 3.8-1 (DEIR p.3.8-13) has been modified to include a 21-day advance notice of full street closures associated with this project to the property owners along Glen Road, Nordstrom Lane, Hilltop Drive, and Hastings Court (refer to Section 3.2, Text Revision, in this Response to Comments document).

LAF-18 As discussed on DEIR p. 2-40, the District intends to relocate the existing Walter Costa Trail and would coordinate with the City to establish the new alignment. EBMUD has discussed with City staff measures that would be consistent with Measure 3.8-1.

LAF-19 The commenter requests that a detour for the Lafayette Reservoir Rim Trail be maintained throughout construction of the Highland Reservoir. As described on DEIR p. 3.2-18, a segment of the Rim Trail, from the Lakeside Trail intersection to

just beyond the proposed reservoir location would be closed during construction of the reservoir. EBMUD has not considered the addition of a Rim Trail detour route. It would increase the project footprint in this area, and could potentially require removal of additional protected trees, disturb other natural resources and increase soil erosion. However, as noted on DEIR p. 3.2-18, Rim Trail users could bypass the closed trail section through use of the Westview Trail or other trails that link the Lakeside and Rim Trails. Therefore, detour routing for the Rim Trail will be available throughout the construction period.

LAF-20 Refer to **Response BM-10**. EBMUD has not rejected implementation of a membrane filtration alternative at the Lafayette WTP. If, during design, EBMUD decides to implement a membrane filtration plant, the District will provide additional information to and coordinate with the City regarding the appearance of the Lafayette WTP.

LAF-21 The DEIR (p.2-89, first paragraph) identifies the cost estimates for Alternatives 1 and 2. The focus of the EIR is on evaluating the environmental impacts of the proposed project.

EBMUD has a capital improvement program (CIP) that typically expends approximately $100 million each fiscal year. These projects, spread over some ten years, are expected to keep the CIP at current rates and currently anticipated rate increases.

LAF-22 This comment is a copy of the City of Lafayette Tree Ordinance, which was used in preparation of Section 3.6 of the DEIR.

LAF-23 This comment is a copy of design details for the walkway referenced in **Comment LAF-18**.