

individuals associated with the Project. The Design-Builder shall also use best efforts to minimize the likelihood of any strike, work stoppage, slowdowns, disputes, or other labor disturbance. If the Work is to be performed by trade unions, the Design-Builder shall make all necessary arrangements to reconcile, without delay, damage, or cost to the County and without recourse to the County or the County, any conflict between the Contract Documents and any agreements or regulations of any kind at any time in force among members or councils that regulate or distinguish the activities that shall not be included in the Work of any particular trade. Except as specifically provided in Paragraph 8.4 herein, Design-Builder shall be liable to County for all damages suffered by County as a result of work stoppage, slowdowns, or strikes related to labor disputes.

#### **15.10.2 Picketing.**

Design-Builder agrees that should there be picketing or a threat of picketing by any labor organization at or near the Site, Design-Builder, in cooperation with County, shall establish a reserve gate system and require employees of Design-Builder, Subcontractors, and suppliers to use one or more designated gates. In that event, it shall be the affirmative obligation of Design-Builder, as a material consideration of this Agreement to ensure that employees of Design-Builder, Subcontractors, and suppliers use only the gates or other entryways designated by County from time to time on the Project.

Notwithstanding the establishment or non-establishment of a reserve gate, in the event employees of Design-Builder, Subcontractors or suppliers refuse to work because of any labor disputes or grievances (including any "secondary" or "sympathy" strike or boycott directed against the Project) not caused by County or its Separate Contractors and not the result of an industry-wide strike and that actually prevent performance of the Work, Design-Builder shall not be relieved of its obligation to supply enough properly skilled workers to perform the Work without interruption or further delay.

**15.10.3 Labor Disputes.** Design-Builder and County agree to cooperate fully with each other and their Project Manager and attorneys with respect to any labor dispute that should arise on the Site, including, but not limited to the giving of testimony and evidence to the agent or judge of the National Labor Relations Board or testimony in connection with proceedings in state or federal court. Design-Builder hereby warrants that it is not now nor will Design-Builder be delinquent in the payment or reporting to any labor management benefit trust.

#### **15.11 No Personal Liability**

Notwithstanding any contrary provision in this Agreement or the Contract Documents, no member, principal, officer, employee, agent, Project Manager, or subsidiary of County (each a "direct affiliate of County"), or member, general partner, limited partner, principal, officer, employee, agent, or Project Manager of any direct affiliate of County (together with direct affiliates of County, the "affiliates of County") shall have any personal liability or the performance of any contractual obligations, or in respect of any liability of County under this Agreement and no monetary or other judgment shall be sought or enforced against any such individuals or their assets, all such personal contractual liability being expressly waived by Design-Builder. Further, the covenants and obligations contained in this agreement on the part of County shall be covenants and obligations of the County only, and not of any affiliate of County. No affiliate of County shall be individually liable for breach of any covenant or obligation of County, and no recourse shall be had against the assets of any affiliate of County (except to the extent of County's assets but excluding therefrom any negative capital account of any such affiliate of County) for payment of any sums due or enforcement of any other relief, based upon any claim made by Design-Builder for breach of any of County's covenants or obligations. Notwithstanding the foregoing, Design-Builder does not waive any rights under applicable law of the state of the Project concerning the commission of fraud or conversion.

#### **15.12 Compliance With Restrictions**

Design-Builder shall comply with all conditions, restrictions and reservations of record, statutes, regulations, and ordinances, including, without limitation, all pollution control, environmental protection, zoning, planning, land use requirements, all restrictions and requirements affecting the Project and adjoining properties, and disabled access imposed by the County, the County and all other governmental entities including, without limitation, the requirements of any general plan and environmental requirements in connection with use, occupancy and building permits, and requirements of public utilities which affect construction of the Work in effect at the time of execution of this Agreement.

**END OF GENERAL CONDITIONS**

**EXHIBIT C**  
**Payment & Performance Bond**

Project No. \_\_\_\_\_

Bond No. \_\_\_\_\_

## **PAYMENT BOND**

(Public Work - Civil Code Sections 9550 et seq.)

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors on \_\_\_\_\_, 20\_\_, has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project text;

AND, WHEREAS, said Principal is required by the Contract and/or by Division 3, Part IV, Title XV, Chapter 7 (commencing at Section 9550) of the California Civil Code to furnish a payment bond in connection with the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors, or assigns approved by County, or its subcontractors, of any contracting tier, shall fail to pay any person or persons named in California Civil Code, Section 9554, then Surety will pay for the same, in or to an amount not exceeding the penal amount hereinabove set forth, and also will pay to the prevailing party if suit is brought upon this bond, reasonable attorney's fees as provided in California Civil Code, Section 9564.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the Work to be performed thereunder, nor any rescission or attempted rescission of the Contract or this bond, nor any conditions precedent or subsequent in the bond or Contract attempting to limit the right of recovery of any claimant otherwise entitled to recover under the Contract or this bond shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety is not released from liability to those for whose benefit this bond has been given, by reason of any breach of the Contract by County or Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

**By** \_\_\_\_\_  
**(Signature – Attached Notary's Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note: Notary acknowledgment of signatures of Bidder and Surety, and Surety's Power of Attorney, must be included or attached**

Project No. \_\_\_\_\_

Bond No. \_\_\_\_\_

## **PERFORMANCE BOND**

(Public Work – Public Contract Code Section 20129 (b))

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the County of Riverside ("County") by action of the Board of Supervisors on \_\_\_\_\_, 20\_\_, has awarded Construction Contract Number \_\_\_\_\_ ("Contract") to the undersigned \_\_\_\_\_ as Principal ("Principal") to perform the work ("Work") for the following project: text, which Contract is by this reference hereby incorporated herein and made a part hereof;

AND, WHEREAS, said Principal is required by the Contract and/or by California Public Contract Code, Section 20129 (b) to furnish a performance bond for the faithful performance of the Contract;

NOW THEREFORE, we, the Principal and \_\_\_\_\_ ("Surety"), an admitted surety insurer pursuant to Code of Civil Procedure, Section 995.120, are held and firmly bound unto County in the penal sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), this amount being not less than one hundred percent (100%) of the total sum payable by County under the Contract at the time the Contract is awarded by County to the Principal, lawful money of the United States of America, for the payment of which sum well and truly to be made, we, Principal and Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, its heirs, executors, administrators, successors or assigns approved by County, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract, including, without limitation, all obligations during the original term and any extensions thereof as may be granted by County, with or without notice to Surety thereof (including, without limitation, the obligation for Principal to pay liquidated damages), all obligations during the period of any warranties and guarantees required under the Contract and all other obligations otherwise arising under the terms of the Contract (such as, but not limited to, obligations of indemnification), all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

Whenever Principal shall be, and is declared by County to be, in default under the Contract, the Surety shall promptly either remedy the default, or, if the Contract is terminated by County or the Principal's performance of the Work is discontinued, Surety shall promptly complete the Contract through its agents or independent contractors, subject to acceptance of such agents or independent contractors by County as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all

obligations of Principal under the Contract (including, without limitation, all obligations with respect to payment of liquidated damages) less the "Balance of the Contract Price" (as hereinafter defined); subject to the penal amount of this bond as set forth above. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by County under the Contract and any modifications thereto, less the amount previously paid by County to the Principal and less amounts that County is authorized to withhold under the terms of the Contract.

If County determines that completion of the Contract by Surety or its agents or independent contractors must be performed by a lowest responsible bidder selected pursuant to a competitive bidding process, then Surety shall comply with such processes in accordance with the requirements of County and applicable laws. Unless otherwise approved by District, in the exercise of its sole and absolute discretion, Surety shall not utilize Principal in completing performance of the Work.

No right of action shall accrue on this bond to or for the use of any person or entity other than County or its successors or assigns.

In the event any legal proceeding or arbitration is brought upon this bond by County and judgment or award is entered in favor of County as the prevailing party, Surety shall pay all costs and attorney's fees incurred by the County.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

Surety, for value received, agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, shall in any way impair or affect Surety's obligation under this bond, and Surety does hereby waive notice of any such changes, extensions of time, alterations or additions.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, joint and severally, or against any one or more of them or against less than all of them, without impairing County's rights against the others.

**Affix Seal if Corporation**

\_\_\_\_\_  
**(Firm Name – Principal)**

\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

By \_\_\_\_\_  
**(Original Signature)**

\_\_\_\_\_  
**(Title)**

\_\_\_\_\_  
**(Corporation Name – Surety)**

**Affix Corporate Seal**

\_\_\_\_\_

\_\_\_\_\_  
**(Business Address)**

By \_\_\_\_\_  
**(Signature – Attached Notary’s Acknowledgment)**

\_\_\_\_\_  
**ATTORNEY-IN-FACT**  
**(Title-Attach Power of Attorney)**

**Note:** Notary acknowledgment of signatures of Bidder and Surety, and Surety’s Power of Attorney, must be included or attached



# **EXHIBIT D**

## **Proposal Package**

Exhibit D-1 Proposal Form  
Exhibit D-2 Subcontractor Listing  
Exhibit D-3 Proposal Bond  
Exhibit D-4 Non-Collusion Affidavit  
Exhibit D-5 Iran Contracting Act

## EXHIBIT D-1 PROPOSAL FORM

### SECTION I – PROPOSAL FORMS

#### DESIGN AND CONSTRUCTION PROPOSAL

TO THE BOARD OF SUPERVISORS Date OF RIVERSIDE COUNTY Proposer

The undersigned, having carefully examined the proposed site and the Request for Proposals, the Instructions to Proposers, Proposal/Project Timeline, the Qualification Documents, the Proposal Forms, the Bond Forms, the General Conditions, and the Technical Conditions, for the Design and Construction of the County Structure Parking, Indio, California, hereby proposes and agrees to furnish all design, tools, equipment, services, apparatus, facilities, transportation, labor and materials necessary to complete the construction in strict conformity with the Project Manual, including all work specified in Addenda numbered and dated:

Addendum No. \_\_\_\_ Date \_\_\_\_\_

Addendum No. \_\_\_\_ Date \_\_\_\_\_

Addendum No. \_\_\_\_ Date \_\_\_\_\_

Proposals must be submitted on all Items. Failure to Propose on all Items may result in the Proposal being deemed non-responsive.

For the total sum including all applicable taxes, permits and licenses as follows:

1. Total Construction: \$ \_\_\_\_\_ (Lump Sum Proposal Price in Figures)  
(Lump Sum Proposal Price in Words)

2. Total Design: \$ \_\_\_\_\_ (Lump Sum Proposal Price in Figures)  
(Lump Sum Proposal Price in Words)

3. Total County Design Completion Allowance: \$ \_\_\_\_\_ ( )

3. Total Design & Construction Base Bid inclusive of Total Construction, Design and County Design Allowance \$ \_\_\_\_\_ (Lump Sum Proposal Price in Figures)  
(Lump Sum Proposal Price in Words)

Contract Duration: 281 calendar days

Provide Breakdown of Total Lump Sum Proposal Price on the following page:

## PROPOSAL PRICE DETAIL

PROPOSER:

\_\_\_\_\_

DATE:

\_\_\_\_\_

**PROJECT TITLE: County Parking Structure, Indio, CA.**

The undersigned proposer hereby offers, in the amount stated below, to furnish all labor, materials, tools, equipment, apparatus, facilities, transportation, and permits for the design and construction of the County Parking Structure, Indio, California in accordance with all the requirements of the Request for Proposal.

1. Design	\$ _____
2. Preconstruction/ (non-design)	\$ _____
3. Offsite Site Development	\$ _____
4. On-Site Site Development	\$ _____
5. Parking Structure	\$ _____
6. Project Total	\$ _____

Signature \_\_\_\_\_

Print Name \_\_\_\_\_

Date \_\_\_\_\_

## SECTION II – PROPOSAL FORMS

### AWARD OF CONTRACT

The undersigned fully understands that a Contract is formed upon the acceptance of this proposal by the Owner, and the undersigned further agrees that upon request he will promptly execute and deliver to Owner a written memorial of the contract together with the required labor, material and performance bonds, and insurance policies.

### BID GUARANTEE

The enclosed certified or cashier's check or proposer's bond on approved form, made payable to the Owner in the amount of ten percent (10%) of the total proposal including all additive alternates submitted herewith, is hereby given as a guarantee that the Proposer will execute and deliver the above mentioned written memorial and required bonds if awarded the contract, and in the event that the undersigned fails or refuses to execute and deliver said documents, such check or bond is to be charged with the costs of the damages experienced by the Owner as a result of such failure or refusal, including but not limited to publication costs, the difference in money between the amount of the bid of the said Principal and the amount for which obligee may legally contract with another party to perform the said work if such amount be in excess of the former, building lease or rental costs, transportation costs and additional salary costs that result from the delay due to the Principal's default on the awarded contract. In no event, however, shall the Surety's liability exceed the penal sum hereof.

In accordance with The Owner's REQUEST FOR PROPOSALS, the undersigned PROPOSER hereby proposes to furnish all materials, equipment, tools, labor and incidentals required for the above stated project as set forth in the Proposal Documents and any addenda thereto, and to perform all work in the manner and time prescribed therein.

PROPOSER declares that this proposal is based upon careful examination of the site, Request for Proposals, Exhibits and Addendum(s), Instructions to Proposers, and all other contract documents. If this proposal is accepted for award, PROPOSER agrees to enter into a contract with Owner at the lump sum prices set forth. PROPOSER understands that failure to enter into a contract in the manner and time prescribed will result in forfeiture to Owner of the PROPOSAL BOND accompanying this proposal.

PROPOSER understands that a proposal is required for the entire work. It is agreed that the lump sum prices bid include all appurtenant expenses, bonds, taxes, royalties, transportation and fees.

If awarded the Contract, the undersigned further agrees that in the event of the PROPOSER'S default in executing the required contract and filing the necessary bonds and insurance certificates within four (4) calendar days after the date of the Owner's notice of award of contract to the PROPOSER, the proceeds of the security accompanying this bid shall become the property of the Owner and this proposal and the acceptance hereof may, at the Owner's option, be considered null and void.

The Economic Development Agency reserves the right, after opening the proposals, to reject all proposals or to make an award to the lowest responsive, responsible Proposer.

\_\_\_\_\_  
Signature of Proposer

\_\_\_\_\_  
Date

Name of Proposer: \_\_\_\_\_

Type of Organization: \_\_\_\_\_

Signed By: \_\_\_\_\_

Title of Signer: \_\_\_\_\_

Address of Proposer: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number ( \_\_\_ ) \_\_\_\_\_ FAX Number ( \_\_\_ ) \_\_\_\_\_

Contractor's License Number \_\_\_\_\_ Classification \_\_\_\_\_

Expiration Date (Proposer certifies under penalty of perjury that the license information herein is true.)

**If Proposer is a corporation, and signer is not President or Secretary, attach certified copy of Bylaws or resolution authorizing execution. If Proposer is a corporation, affix corporate seal. If signer is an agent, attach Power of Attorney. If Proposer is not an individual, list names of other persons authorized to bind the organization.**

## EXHIBIT D-2

### SUBCONTRACTOR LISTING

All subcontracts that are not listed by the DBE in accordance with Public Contract Code section 20133 shall be awarded by the DBE. Specifically California Public Contract Code Section 20133(f) requires that all subcontractors not listed by the Design-Builder in its submission in response to the Request for Proposals be awarded in accordance with the design-build process set forth by the County. The County process allows the selection of subcontractors based upon the best value to the Project and requires the Design-Builder do both of the following: (1) Provide public notice of the availability of work to be subcontracted in accordance with the publication requirements applicable to the competitive bidding process of the County and (2) Provide a fixed date and time on which the subcontracted work will be awarded in accordance with the procedure established pursuant to Public Contract Code Section 20133(f).

The Design-Builder shall list its Subcontractors, and shall make no substitution except in accordance with Public Contract Code Sections 4100 et seq. ("Subcontractor Listing Law"). As soon as practicable after award of the Contract, Design-Builder shall provide County with the description of work, name of Subcontractor, business phone and address and contact person for each Subcontractor performing Work on the Project and shall continuously update the County upon selection of each Subcontractor not required to be listed pursuant to the Subcontractor Listing Law.

Substitution Process. Any request of the Design-Builder to substitute a listed Subcontractor will be considered by the County only if such request is in strict conformity with this Paragraph 3.14 and California Public Contract Code Section 4107. All costs and fees incurred by the County in the review and evaluation of a request to substitute a listed Subcontractor shall be borne by the Design-Builder; such costs and fees may be deducted by the County from the Contract Sum then or thereafter due the Design-Builder.

**EXHIBIT D-2**

**LIST OF SUBCONTRACTORS**

Designation of subcontractors in compliance with section 4101 of the government code, the Undersigned submits the following list of each subcontractor, know at the time of design-build proposal submittal, who will perform work or labor or render services as part in or about the construction in an amount in excess of ½ of 1% of said total bid.

Note: Repeat this page for additional subcontractors:

WORK

SUBCONTRACTOR

ADDRESS

## EXHIBIT D-3 PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned \_\_\_\_\_, as Principal, and as Surety are hereby held and firmly bound unto the Economic Development Agency, hereinafter called the "Owner", in the sum of \_\_\_\_\_ dollars (\$ ) for the payment of which sum, well and truly to be made, were hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

WHEREAS, the said Principal is herewith submitting its proposal for the design and construction of the County Parking Structure, Indio, California.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the aforesaid Principal shall be awarded the contract upon said proposal and shall, within the required number of days after the notice of such award, execute a written memorial of the awarded contract and submit the required labor and material and faithful performance bond, then this obligation shall be null and void; and in the event that the Principal fails and/or refuses to execute and deliver said documents this bond will be charged with the costs of the damages experienced by the Owner as a result of such refusal, including but not limited to, publication costs, the difference in money between the amount of the bid of said Principal and the amount for which the obligee may legally contract with another party to perform the said work if such amount be in excess of the former, building lease or rental costs, transportation costs, and additional salary costs that result from the delay due to the Principal's default on the awarded contract. In no event, however, shall the surety's liability exceed the penal sum hereof.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals this day of, \_\_\_\_\_ 201\_, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Business Address

Attest: Surety

Business Address By (Affix Corporate Seal)



**EXHIBIT D-4**  
**NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY PROPOSER AND**  
**SUBMITTED WITH THE PROPOSAL**

\_\_\_\_\_, being first duly sworn,  
deposes and says:

That he or she is of \_\_\_\_\_ the party making the foregoing proposal; that the proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and, further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature of officer administering oath

**NOTE:**

***Execution of this affidavit must be acknowledged before a Notary Public and Notary's certificate of acknowledgement must be attached.***

**EXHIBIT D-5**  
**Iran Contracting Act**  
**(Public Contract Code sections 2200-2208)**

In accordance with Public Contract Code Section 2204(a), prior to bidding on, submitting a proposal or executing a contract or renewal for a County of Riverside contract for goods or services of \$1,000,000 or more, a Contractor must either:

- a) Certify it is not on the current list of persons engaged in investment activities in Iran created by the California Department of General Services ("DGS") pursuant to Public Contract Code section 2203(b) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person, for 45 days or more, if that other person will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS; or
- b) Demonstrate it has been exempted from the certification requirement for that solicitation or contract pursuant to Public Contract Code section 2203(c) or (d).

To comply with this requirement, please insert your Contractor or financial institution name and Federal ID Number (if available) and complete one of the options below. Please note: California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Public Contract Code section 2205.)

**Option #1 – Certification**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the Contractor/financial institution identified below, and the Contractor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>	
<i>By (Authorized Signature)</i>			
<i>Printed Name and Title of Person Signing</i>			
<i>Date Executed</i>		<i>Executed in</i>	

**Option #2 – Exemption**

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a Contractor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services.

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Contractor Name/Financial Institution (Printed)</i>		<i>Federal ID Number (or n/a)</i>	
<i>By (Authorized Signature)</i>			
<i>Printed Name and Title of Person Signing</i>			
<i>Date Executed</i>		<i>Executed in</i>	

**EXHIBIT E**  
**Fax Acknowledgement**

**FAX ACKNOWLEDGEMENT OF RECEIPT OF RFP AND-OR ADDENDUM**

**COUNTY PARKING STRUCTURE PROJECT**

We hereby acknowledge our receipt of:

*[DBE to circle and insert as applicable]*

RFP dated \_\_\_\_\_, 2013

Addendum No. \_\_\_ dated \_\_\_\_\_, 2013

For the design and construction of the County Parking Structure Project. We also acknowledge that the individual listed below is our single point of contact and that no communications regarding this solicitation or Project are allowed between any other individual, consultant or subcontractor and any County staff member or its designated representatives, other than as specifically allowed by the RFP. We understand that a breach of this condition may be grounds for disqualification of our Proposal.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Representing: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Please fax immediately upon receipt to the attention of:

Peter M. Watts, Project Manager, Vanir Construction Management at (909) 381-7534.

*NOTE: This acknowledgement shall be either typewritten or the DBE must print legibly with consideration of it being a facsimile.*

**EXHIBIT F**  
**Scope of Work**

**COUNTY PARKING STRUCTURE**  
**OASIS ST. & PLAZA AVE., SE CORNER, INDIO, CA**

11.12.2013

**BRIDGING DOCUMENTS**  
**EXHIBIT F: SCOPE OF WORK**

The demolition of an existing surface parking lot and the design and construction of a new three-level open-air parking structure at the corner of Plaza Ave. to the North and Oasis St. to the West. The demolition will require the removal of existing curbs, sidewalks, asphalt, landscaping, light poles, and irrigation systems on site to allow for the new structure, which is to contain a minimum of 800 stalls. The ground floor level will be designated "Reserved" for Riverside County and Sheriff Department personnel and will include an enclosed office, general purpose space, and adjacent restroom. The remaining two levels will be for public vehicle use. The open third level shall have parking stall shade covering capable of adapting a photovoltaic panel system. Photovoltaic panels shall be provided as an add-alternate in the RFP.

In addition, the project will include fully-landscaped grounds along Oasis Street to the West and Plaza Avenue to the North while maintaining, as much as possible, the existing mature trees along the East and South property boundaries. The exterior façade will receive an exterior finish to appropriately compliment the adjacent new East County Detention Center.

\*\*\*END OF SECTION\*\*\*

**EXHIBIT G**  
**Performance Narrative**



## COUNTY PARKING STRUCTURE OASIS ST. & PLAZA AVE., SE CORNER, INDIO, CA

11.12.2013

### BRIDGING DOCUMENTS EXHIBIT G: PERFORMANCE NARRATIVE

The parking structure, to be constructed at the Southeast corner of Oasis Street & Plaza Avenue, will consist of the demolition of the existing surface parking lot and accompanying curbs, sidewalks, asphalt, landscaping, light poles, and irrigation systems. The construction of the three (3)-level open-air parking structure is to include a minimum of 800 parking stalls total across its three levels, while maximizing/increasing this total beyond the minimum while staying within the project budget is encouraged. The facility is also to include a 150 square foot office, an adjacent restroom, and additional 250 square foot general purpose space, all of which must be mechanically air-conditioned and integrated into the ground level of the structure near the Northwest corner of the site. This location is most desirable due to its proximity to the East County Detention Center and its placement within the flow of pedestrian traffic from the facility toward the North.

The ground level of the structure is to be reserved for Riverside County and Sheriff Department personnel only, secured via automated access control gates. The most advantageous vehicle entrance for this is along Oasis Street. The ground level does not need vehicle access to the second or third levels and vice versa, as this area will be prohibited from public parking and access. The second and third levels will not require access control and should be accessible via separate speed ramps from Plaza Avenue and Oasis Street. A minimum of three (3) total vehicle entrances into the structure will be necessary, with at least one reserved exclusively for the Sheriff Department and Riverside County Employees on the ground level and the other two reserved exclusively for the second and third levels.

Elevators, circulation stairs, and site hardscape will require appropriate placement to accommodate heavy foot traffic from the parking structure to the new East County Detention Center and existing Larson Justice Center to the North. Because public parking will occupy the top two levels and not the ground level, elevators and circulation stairs will need to allow public access from upper levels to the ground without impacting or disturbing activity in or around the ground level parking. Automated pay-on-foot stations near circulation cores will be the centralized form of parking payment for the public on the upper two levels. The aforementioned office on the ground level should house an on-site parking attendant for special assistance only.

Video surveillance of the entire facility will be required, to be viewed from within the facility's ground-level office, either wirelessly or via routed wiring. Any design solutions that maximize security on the ground level, such as exterior walls, screens, etc., while maintaining the open-air requirement and offering aesthetically pleasing results are encouraged.

The footprint of the structure shall maintain a minimum distance of 45 feet from East property line to allow for clearance of existing water easements, the incorporation of accessible fire access, and to maintain a courtesy buffer from the adjacent mobile home park. Along the South property line, a setback of a minimum of 60 feet shall be maintained for these same reasons. This setback should also allow for the preservation of several mature trees along the boundaries, to help maintain privacy between the new structure and the adjacent residential areas to the East and South. The Scope of Work for the project should also include fully-landscaped grounds along the East side of Oasis Street and Plaza Avenue to the North to account for the demolition of the existing well-landscaped areas around the site's current surface parking lot.

Because the structure will be open-air, the open top level will require a parking stall shade covering over all exposed parking stalls to combat the high temperatures and direct sunlight in the region. These shade coverings MUST be capable of integrating a photovoltaic panel system, which shall be provided as an add-alternate. It is recommended that all proposals include a sectional diagram indicating sun angles and appropriate shading capabilities.

Exterior finishes along the North and West façades, particularly in the northwest corner of the structure, should appropriately compliment the adjacent East County Detention Center. Maximizing the quality of these finishes appropriately within the budget, while maximizing the facility's total number of parking stalls, is a priority. The Northwest corner will be in direct visual access of the Detention Center and will accommodate the heaviest foot traffic. For this reason, anti-graffiti coating must be applied to decorative surfaces in these areas. Exterior signage will also be necessary to appropriately identify separate entrances for public and law enforcement/County parking.

**\*\*\*END OF SECTION\*\*\***

**EXHIBIT H**  
**Example Parking Structure**  
**Drawings**

**EXHIBIT H.1**  
**Example Parking Equipment**  
**Specs**

# 3M™ Parking Pay Station

## Parking Pay Station

### Experience pays off

The Parking Pay Station from 3M combines a half-century of application experience with best-in-class components to create a patron friendly, service-friendly payment kiosk for today's parking applications.

### Designed around the patron

Designed for high volume payment applications, the Pay Station recognizes either magstripe tickets or prox cards, calculates the patron's fee (including any vouchers or validations), then accepts credit card, coin or bank notes. The patron can also elect to receive a receipt from the thermal printer.

The 15" display directs the patron throughout the transaction. A carefully designed series of screens and component locations allow optimal user-friendliness and ergonomics for all patrons regardless of age or size.

### Resistance to theft and vandalism

The Pay Station is designed to resist theft and vandalism to a high degree by using heavy gauge steel construction and a three-point locking mechanism with additional internal locks for all cash-handling components. In addition, cabinet access is monitored and recorded.

## Features

Patron Friendly Workflow

High-Strength Design

Capable of high transaction volumes

Service-friendly internal layout

Proven components for reliability

Options:

Prox reader

Credit Card Insertion Reader

Bank note accepting

Bank note dispensing, up to 4 denominations

Coin accepting

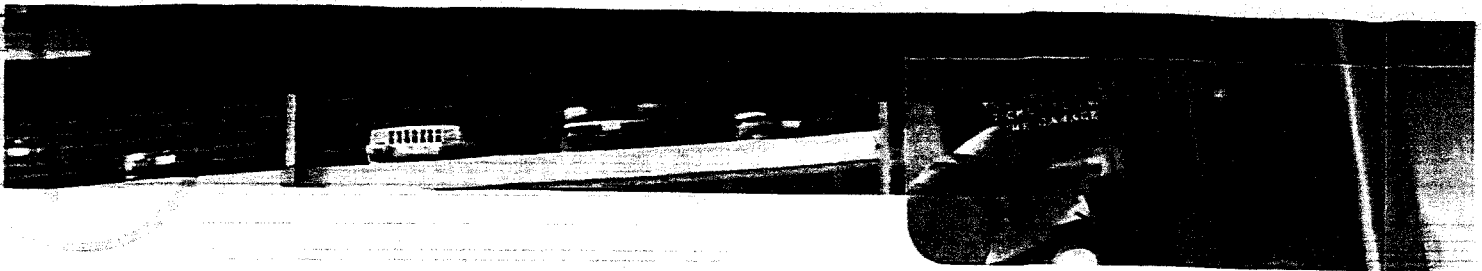
Coin dispensing, up to 3 denominations

Voice Annunciator with Walk-up Sensor



Standard Colors:  
Silver, White, Yellow

# 3M



# 3M™ Parking Pay Station

## Specifications

Electrical	Mechanical	Environmental
90-130VAC or 180-240VAC external power	66"H x 27"W x 22"D (168cm x 69cm x 56cm)	Insulated, heated and cooled to maintain internal temperature and humidity ranges
Maximum draw, fully configured: 90-130VAC: 15A	Weight (fully configured): Approx 540lbs (245kg)	Suitable for Outdoor Use
Maximum draw: fully configured 180-240VAC: 6A	Heavy gauge steel construction	
Three 90-130VAC outlets for service (fully configured)	Powder-coated cladding	
Segregated AC circuit for optional UPS unit		
Conforms to: ANSI / UL STD 751		
Certified to: CAN/CSA STD C22.2 No. 128-95		



The Parking Pay Station's ergonomic design and intuitive instruction screens allow for optimal user-friendliness for all patrons regardless of age or size.

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# 3M™ Parking Reader Controller

## Features

- Operates with 3M™ Enterprise FMS hostbased operation or offline for standalone operation
- Capacity to store over 100,000 unique ID numbers
- Two programmable relay contact outputs for pulsed or latched activation
- Four programmable 12VDC inputs for digital signals:
  - Inhibit, Monitor, Egress, & Link
- Message up to 16 characters long for display option
- Storage for all programming is retained in battery backed RAM
  - Information stored includes:
    - Valid/Void Status
    - 16 time zones, 16 groups
    - 16 holidays
    - Mode of operation of each input
    - Message text

## Reader Controller

The 3M™ Parking Reader Controller is an access control device that provides a vend signal when a valid access credential is presented. The vend signal allows a door lock, barrier gate or other control device to be actuated, allowing patron access to the facility. The Reader Controller provides all the control you need. This reader features a wide range of technology and program flexibility to satisfy your access requirements. It allows you to match a variety of configurations and reader technologies, including Proximity, Magnetic Stripe, AVI, and Barcode.

## Intelligent Reader

The Reader Controller can be linked as part of a computerized, online facility management system, or used as a standalone offline device. This intelligent reader gives you the security you need with an advanced distribution processing architecture, ensuring continual and independent operations at all times. Decisions such as ID status, time zones, and issue levels are made at the reader and do not require external memory.

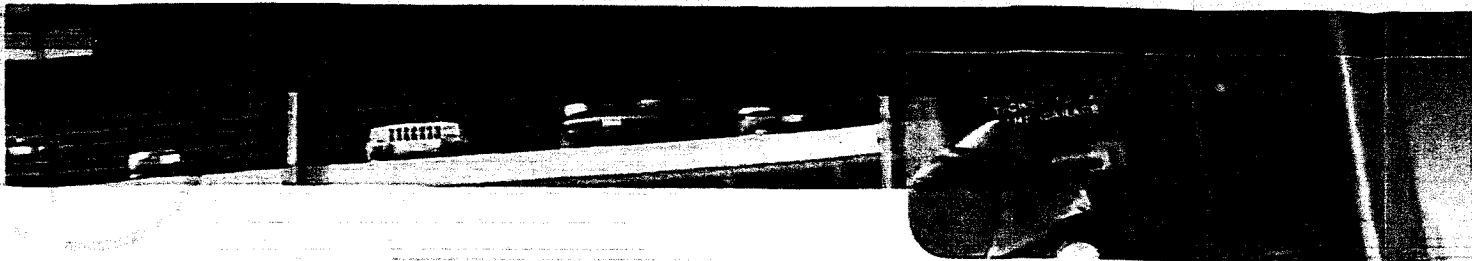
## Computer Control

This versatile reader system offers the advantage of centralized computer control. By using 3M facility management software you can create, store, send, and retrieve all programming from a central desktop computer. With simple keyboard commands you can track monthly patrons, and control access to certain areas, lots, and even entire buildings. You can send commands to generate a remote vend, set the antipassback mode, resync a single credential passback status, and automatically resync all credentials on a daily basis. Real-time activity reports can be printed from a central computer.

## Reader Programming

The Parking Reader Controller functions offline for standalone operation, or online with Enterprise FMS host-based operation. Programming can be accomplished by using our facility management software. Processing and storing programmed information can be done locally.

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## 3M™ Parking Reader Controller

### Mechanical

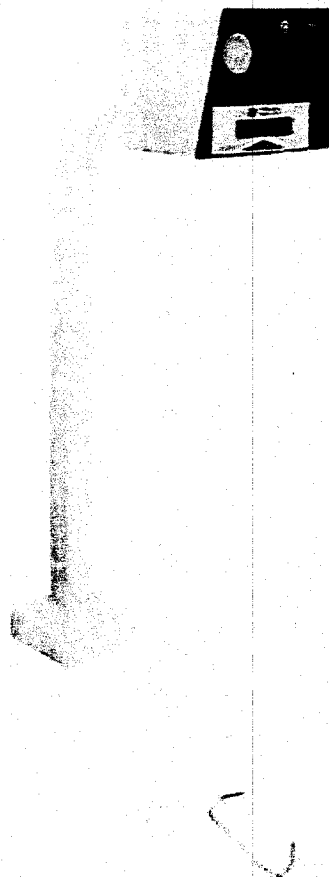
<b>Magnetic Stripe read head:</b>	6 1/4" W x 1 3/4" H x 1 1/2" D (159 mm W x 45 mm H x 38 mm D)
<b>Proximity read head:</b>	5 1/2" W x 1 11/16" H x 3/4" D (5 mm W x 61 mm H x 20 mm D)
<b>Barcode Read Head:</b>	4 7/8" W x 1 3/8" H x 1 1/4" D (124 mm W x 61 mm H x 32 mm D)
<b>Controller:</b>	8 11/16" W x 5 1/2" H x 1 1/2" D (220 mm W x 140 mm H x 40 mm D)
<b>Power Supply:</b>	2 7/8" W x 4 5/8" H x 1 1/4" D (64 mm W x 112 mm H x 30 mm D)
<b>Metal Enclosure:</b>	10" W x 7 7/8" H x 8 1/2" D (254 mm W x 199 mm H x 216 mm D)
<b>Gooseneck Stand:</b>	2" square (50.8 mm) tubing, 35" H (889 mm). When mounted on a 6" (152.4 mm) curb, center of enclosure mounting plate is 41" (1041 mm) H from pavement.

### Electrical

<b>Magnetic Stripe Read Head:</b>	35 mA at +5 volts
<b>Proximity Read Head:</b>	+12 VDC nominal (max of 1A)
<b>Controller:</b>	0.2 Ampere at 12 VDC (input), +/- 10%
<b>Power Supply:</b>	1 A at 110 VAC input, 2.5 A at 12 VDC output

### Environmental

<b>Controller:</b>	operates at a -40° to 140° F (-40° to 60° C)
<b>Display:</b>	operates at -5° to 122° F (-20° to 50° C)



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# 3M™ Parking Barrier Gate

## 3M™ Parking Barrier Gate

### Intelligent Operations

The heart of the 3M Parking Barrier Gate is the Omega LCD Controller™. This fully integrated controller provides a system approach for convenient, accurate and cost-effective lane management.

The gate can handle numerous lane configurations - including reversing lanes with three vehicle detectors - with software options embedded into the unit's Configuration Module. This factory programmed microcontroller plugs into the power board and defines the software options used in the gate.

### Durability

The 3M Parking Barrier Gate is built on a tradition of high quality barrier gates that you depend on from 3M. The gate is extremely durable in the harshest environments. Its heavy-gauge aluminum cabinet is armored with a weather-resistant finish to keep your installation looking clean and new for years of rust-free service.

### Dependability

The 3M Parking Barrier Gate allows you to design an on-board information center with counting functions integrated into a single self-contained device. The controller's software logic integrates optional counting functions such as resettable and non-resettable totalizing counts, single and dual differential counts, hourly counts and a host of statistical counts. These counts can be viewed on the controller's visual display and are accessed by the menu-driven keypad.

In addition, three integrated and automatically self-tuning vehicle detectors are available. These high-speed detectors provide a sensitive tailgating recognition system that is capable of recognizing two separate vehicles traveling over a detector loop simultaneously. Diagnostic and metering tools are also built into the controller.

### Features

Advanced Omega LCD Controller™ with visual display

Power Supply Board provides multiple input/output terminals

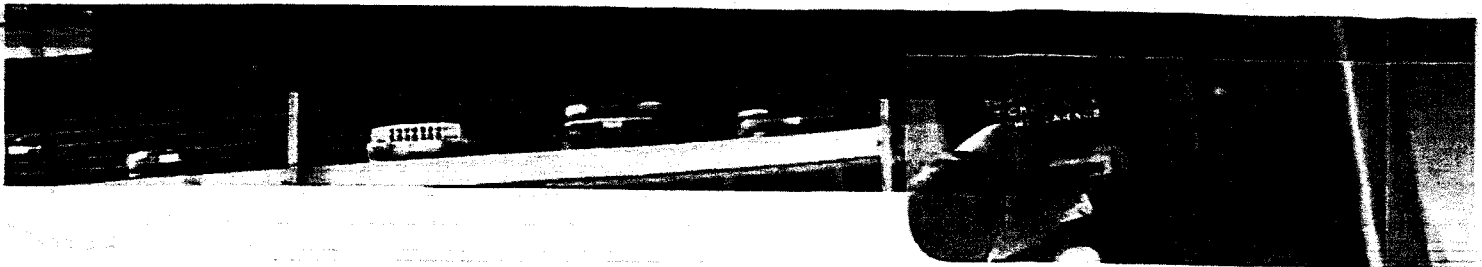
Total lane management with:

- Two built-in vehicle detectors
- Sensitive reversing logic
- Built-in diagnostics
- Event history report
- Back-out timer
- 7 day memory & data storage

Options include:

- Third integrated vehicle detector
- Totalizing & differential counts
- Automatic time zone controls
- Hourly statistical reports
- Directional logic
- Communications interface to facility management system





# 3M™ Parking Barrier Gate

## Specifications

Electrical	Mechanical	Environmental
Input: 115 VAC, 15A standard, 220 V optional	Heavy-gauge aluminum construction, finished in a weather-resistant powder coat	Suitable for wide range of operating conditions
One high voltage plug-in relay with two form C contacts, second relay option	All reducers and motors mounted on a single 3/16" (4.76 mm) uni-bracket weldment for maximum strength in high-load applications	Weather resistant to IP54 standards
115 VAC convenience outlet provided	Gasketed door has flush-mounted, T-handle lock	
Built-in thermal overload switch protection	1/3 HP, heavy-duty, high output torque, 115 VAC, single phase, instant-reversing motor	
Conforms to ANSI / UL STD 751	Cams allow adjustment of gate arm travel, no mechanical stops or braking devices required	
Certified to: CAN/CSA STD C22.2 No. 128-95	15" W x 40" H x 15" D (381 mm x 1016 mm x 316 mm) with a flange arm height of 35.5" (902 mm)	



An advanced, maintenance-free safety and monitoring system provides safer gate operations by instantly sensing gate arm obstructions, limit switch failures and gate arm position - without the use of electromechanical systems.

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## 3M™ Parking Ticket Dispenser & Exit Verifier

## 3M™ Parking Ticket Dispenser & Exit Verifier

### Versatility for parking

The 3M Parking Ticket Dispenser & Exit Verifier can be configured to dispense or verify magstripe tickets in entry or exit lanes. The cabinet is optimized for a wide range of vehicle heights, while the easy-to-read display and membrane pushbutton ensure quick, easy and reliable transient processing. Automated ticketing (when a vehicle is present) remains a configured option, eliminating the need for the patron to "press for ticket". In addition, the unit can be configured to support peripheral access control readers - whether mounted near the ticket throat or on a separate stand - for monthly patrons.

### Cashless payment options

The 3M Parking Ticket Dispenser & Exit Verifier can also be configured as a credit card-only pay station. It offers comfortable ergonomics for patrons using the kiosk whether on foot or in a vehicle. In addition, the configuration options allow it to function in Credit In, Credit Out (CICO) or Pre-pay modes. With this flexibility, efficient cashless payment can be processed in the entry lane, the exit lane or the lobby.

### Reduced cost of ownership

The 3M Parking Ticket Dispenser & Exit Verifier minimizes the maintenance effort required to keep your system running reliably. Pulling from a stack of up to 5,000 tickets, a burster mechanism delivers individual tickets to the patron. The burster also reduces dust when compared with cutting designs, reducing one of the key problems in transport maintenance. When maintenance is required, the housing is designed with a side door to keep technicians out of the lane, clear sight lines to all indicators, easy access to commonly-handled components and internal lighting for poorly-lit areas. If damaged, its design allows the replacement of key components or external cladding without the need to scrap the entire device.

### Features

Magstripe ticket dispensing, exit verifying

Cashless payment processing

Online or offline operation

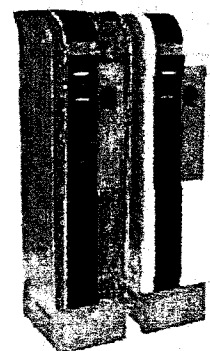
Proven lane logic for superior revenue control

Proven components for reliability

Backlit LCD Display

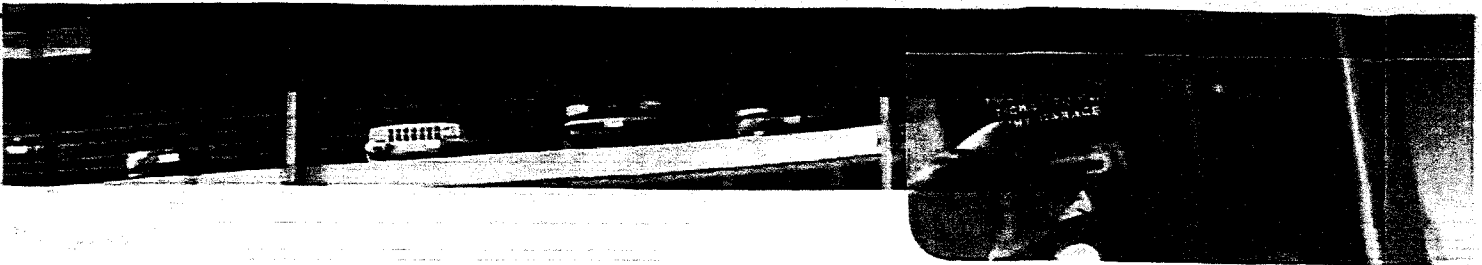
Service-friendly internal layout

Proven components for reliability



Standard Colors:  
Silver, White, Yellow

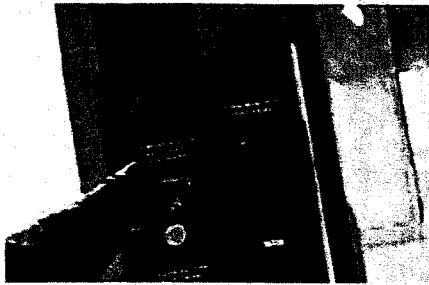
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## 3M™ Parking Ticket Dispenser & Exit Verifier

### Specifications

Electrical	Mechanical	Environmental
90-130VAC or 180-240VAC external power	58"H x 14"W x 20"D (147cm x 36cm x 51cm)	Insulated, heated to maintain internal temperature and humidity ranges
Maximum draw, fully configured: 90-130VAC: 8A	Weight (fully configured): Approx. 178lbs (81kg)	Suitable for outdoor use
Maximum draw, fully configured: 180-240VAC: 4A	Heavy gauge steel frame construction	
24VDC internal circuit for low voltage components	Powder-coated aluminum cladding construction	
Segregated AC circuit for optional UPS unit		
Conforms to: ANSI / UL STD 751		
Certified to: CAN/CSA STD C22.2 No. 128-95		



In the lane or in the lobby, the Parking Ticket Dispenser & Exit Verifier is a patron-friendly, service-friendly kiosk that delivers efficient performance in a wide range of parking applications.

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## 3M™ Parking Enterprise Facility Management Software

### Today, operational excellence starts with software

Hardware is certainly vital to your parking enterprise. Yet it does not possess the power to drive your business toward top tier performance and lasting operational excellence. So, what will be the most critical element for future success? We believe it's a smarter, more data-driven software platform.

### We put more into 3M Enterprise FMS so you can get more out of it

The 3M Parking Enterprise FMS software platform coalesces years of acquired systems expertise gleaned from thousands of installed customer sites and exacting real-world environments into the very best in modern software architecture. At once, you will see that your user experience is specifically designed to turn raw data into useful, accessible information. Plus, the platform is open, interoperable and scalable, allowing you to easily use solutions for a variety of providers and gain maximum flexibility in creating business rules that fit your operational design.

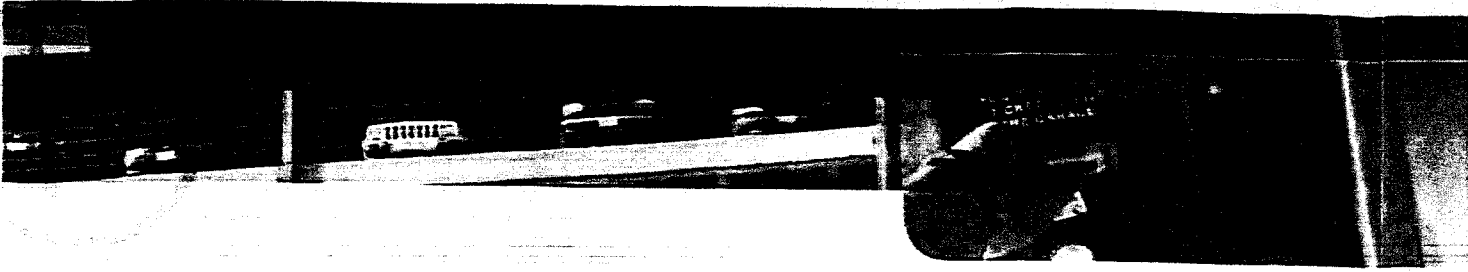
### Enjoy the flexibility to manage your current systems on your own terms

3M Parking Enterprise FMS is a bold step forward in operational management — but it is only the first step. As we build more software modules, hardware options and third party interfaces onto the platform, you can be sure they will exhibit the same focused attention to delivering real world value that's inherently innovative.

## Features

Standardized Platform	3M Parking Enterprise FMS uses the industry standard TCP/IP protocol for all interprocess communications.
Open and Flexible Structure	3M Parking Enterprise FMS will allow access and licensing to all service APIs within the platform to 3rd party developers. Customers and 3rd party developers will continue to expand 3M Enterprise FMS through the development of applications.
Modular Architecture	The modular architecture of 3M Parking Enterprise FMS facilitates integration, isolates services in a modular format and further simplifies development and upgrades. Because of its modular architecture, additional modules can be developed without modifying the foundation platform code. This feature promotes system stability and long term reliability.
Interoperability	Interoperability promotes the capability for 3rd party hardware (devices) to be recognized by the platform. Additional device modules may be developed and integrated with the platform, facilitating the platform's interoperable capability.
Standard SQL Database	3M Parking Enterprise FMS has a standard MS SQL Database Management System with ODBC accessibility. SQL provides maximum options for open architecture (data sharing among multiple software systems) and scalability unlike other open-architecture solutions.
Single, Standard Interface	3M Parking Enterprise FMS uses a standard XML module through which all exposed APIs may be accessed by 3rd party applications. Everything that can be hooked into the platform can do so through the XML module. One place to interface, one standard way of doing it.

# 3M



# 3M™ Parking Enterprise Facility Management System

## Hardware Requirements

The 3M Parking Enterprise FMS server is an optimized application that will operate within a very small footprint on most standard Windows PC's and server machines. The minimum hardware and configuration requirements for a single server solution are:

- 2.4 GHz Dual Core Processor
- 4 GB memory
- 120 GB Hard Disk
- 4X DVD ROM
- One (1) network connection card to provide 1 GBps to connect to the network
- Enterprise Area Controllers, as specified by the Field Application Engineer
- Network Connectivity for the Area Controller(s) and Server

The minimum hardware and configuration requirements for a multiple (two or more) server solution are:

- Two (2) Enterprise FMS Servers, as described above
- Enterprise Area Controllers, as specified by the Field Application Engineer
- Network connectivity for the Enterprise Area Controller(s) and Server
- Network devices, as specified by the Field Application Engineer
- Separate NAS, if required for high levels of data retention

*Note: The application server and the reports server can exist on the same machine, however, a separate reports server can be configured if desired.*

## Software Requirements

The following table identifies the software that is needed to run 3M Enterprise FMS. Please note that all required software (except Message Queuing) will automatically install during the installation process.

Windows Server 2008 or Windows

Internet Information Server (IIS)

Message Queuing

Microsoft Visual C++ 2010 Redistributable Package (x86)

ASP.NET

Internet Explorer 8

.NET Framework 4.0 Full

SAP Crystal Reports 2008 Runtime 12.3.0.601 (SP3) or higher

Microsoft SQL Server 2008 R2 Standard Edition

Symantec Endpoint Protection 11.0.6005.562 or higher

Optional— if you are running Symantec Endpoint Protection, you must manually upgrade to this version. This software is not required to run 3M Enterprise FMS.



3M Parking Enterprise FMS reporting is accessible on your laptop, PC or mobile device through a standard web browser. The software application to manage your enterprise is installed as a thin client on your laptop or PC and accessible wherever you have an internet connection.

**Warranty, Limited Remedy, and Disclaimer:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. Unless a different warranty is specifically stated on the applicable 3M product packaging, product literature, terms of sale or software license agreement, 3M warrants that (i) the 3M product will be free from substantial defects in material and workmanship under normal use and service, wear and tear excepted, for two (2) years from the original date of purchase, and (ii) for software products, for ninety (90) days from the original date of purchase, the software will materially perform the functions described in the accompanying documentation. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, to replace or repair any defective part or parts.

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## 3M

Traffic Safety and Security Division  
3M Center, Building 235-3A-09  
P.O. Box 33225  
St. Paul, MN 55133-3225  
www.3M.com/fms

3M Canada Company  
P.O. Box 5757  
London, Ontario N6A 4T1  
1-800-3MHELPS

3M México, S.A. de C.V.  
Av. Santa Fe No. 55  
Col. Santa Fe, Del. Alvaro Obregón  
México, D.F. 01210

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**EXHIBIT H.2**  
**Example Parking Structure**  
**Drawings**

**COUNTY PARKING STRUCTURE**  
OASIS ST. & PLAZA AVE., SE CORNER, INDIO, CA

11.11.2013

**BRIDGING DOCUMENTS**  
EXHIBIT H: EXAMPLE PARKING STRUCTURE DRAWINGS

NOTE: The following example parking structure documents were produced by Holt Architects, Inc. and are for reference purposes only.



DATE: 10/10/10

BY: [Signature]

NO. 1

NO. 2

NO. 3

NO. 4

NO. 5

NO. 6

NO. 7

NO. 8

NO. 9

NO. 10

NO. 11

NO. 12

NO. 13

NO. 14

NO. 15

NO. 16

NO. 17

NO. 18

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NO. 89

NO. 90

NO. 91

NO. 92

NO. 93

NO. 94

NO. 95

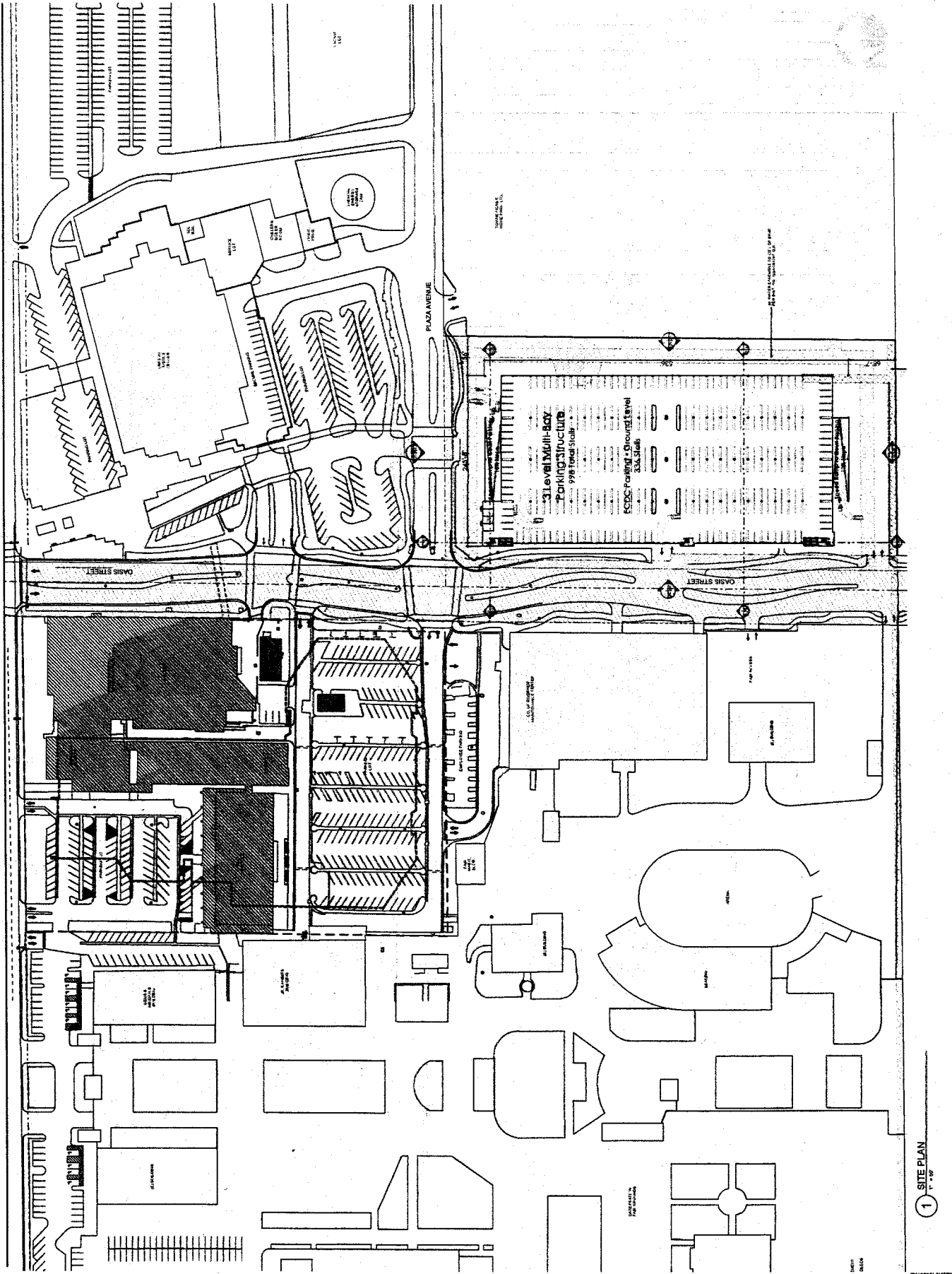
NO. 96

NO. 97

NO. 98

NO. 99

NO. 100



1 SITE PLAN  
11-4-07





Project  
EAST COUNTY  
DETENTION CENTER  
Prepared For  
County of Riverside  
3400 Tenth Street, Suite 300  
Riverside, CA 92501  
Contact No. 712.604.00



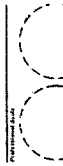
1630 Jefferson Boulevard  
Folsom, CA 95630  
707.771.0100  
www.irk.com



1400 S. Bascom Avenue, Suite 100  
San Jose, CA 95128  
408.951.4000  
www.dowberry.com



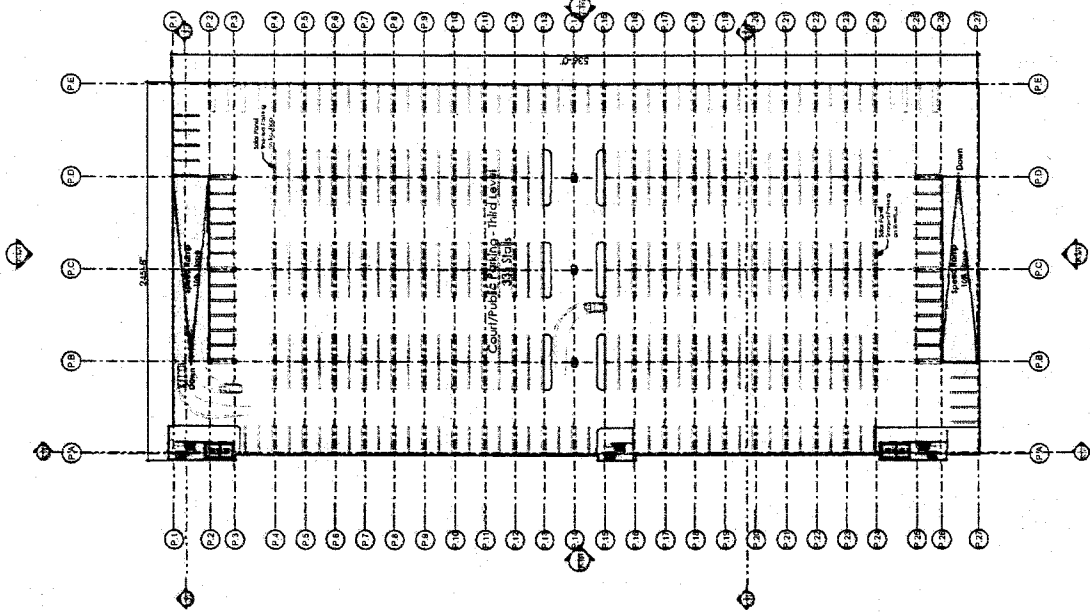
11111 Main Street  
San Diego, CA 92120  
619.444.1111  
www.holt-engineering.com



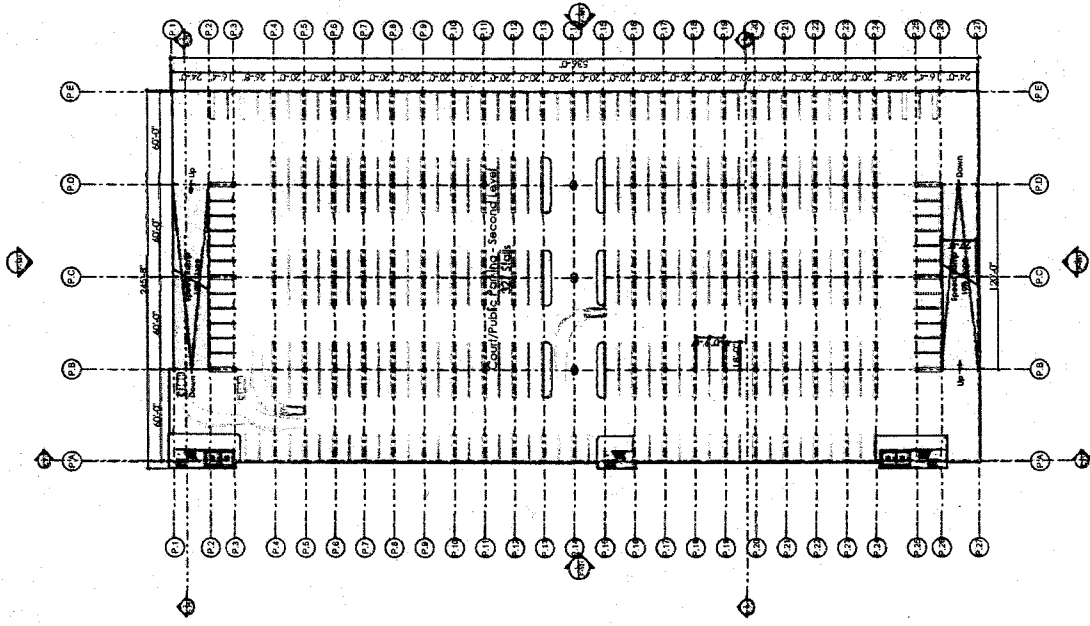
Project Name	EAST COUNTY DETENTION CENTER
Project No.	13-20046-00
Revision No.	13-20046-00
Author	SEBASTIAN, CHRISTOPHER
Checker	
Designer	
Engineer	
Surveyor	
Architect	
Structural	
Mechanical	
Electrical	
Plumbing	
Fire	
Other	

Version Title  
PARKING STRUCTURE  
SECOND & THIRD LEVEL  
- OPTION 2

P-103



3 THIRD LEVEL  
1/2" = 1' - 0"



2 SECOND LEVEL  
1/2" = 1' - 0"



Project:  
EAST COUNTY  
DETENTION CENTER  
Prepared For:  
County of Riverside  
3000 E. Street  
Riverside, CA 92501  
Computer No.: 12345678

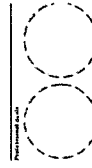


HPK  
11001 Jefferson Boulevard  
Oakland, CA 94621, USA  
Tel: (415) 884-6677 Fax: (415) 884-6668



Dewberry  
11101 Market Street, Suite 500  
San Francisco, CA 94143  
HOLT  
ARCHITECTURE  
1000 Market Street, Suite 1000  
San Francisco, CA 94102

Sheet No.:



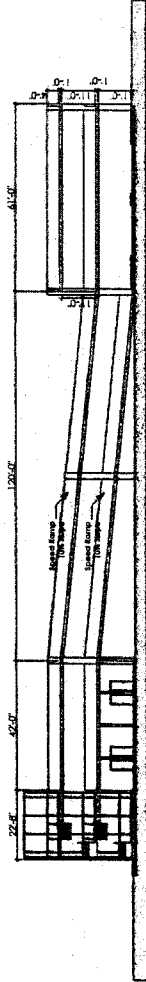
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Project No.:	12345678
Project Date:	12/31/2000
Project Location:	12345678
Project Scale:	12345678
Project Description:	12345678
Project Status:	12345678
Project Owner:	12345678
Project Architect:	12345678
Project Engineer:	12345678
Project Designer:	12345678
Project Checker:	12345678
Project Approver:	12345678
Project Date:	12/31/2000

SECTION 1  
PARKING STRUCTURE  
SECTIONS  
- OPTION 2

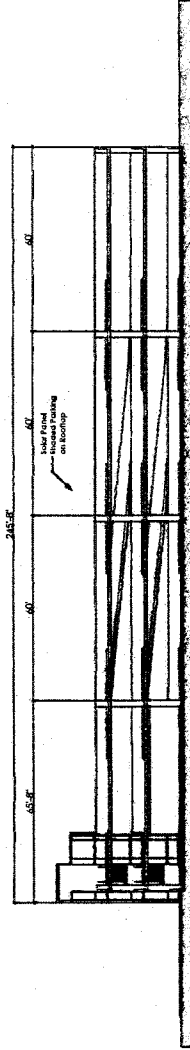
P-201



① SECTION 1  
1/8" = 1'-0"



② SECTION 2  
1/8" = 1'-0"

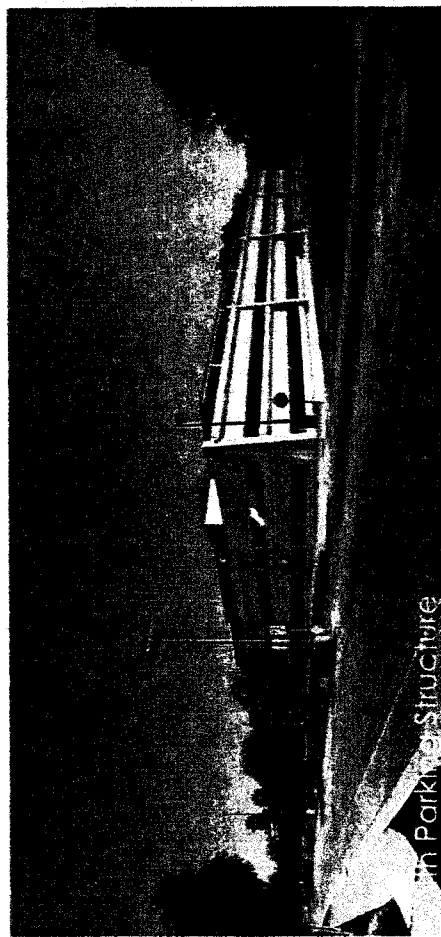


③ SECTION 3  
1/8" = 1'-0"

Parking Structure - View Perspectives



Current Site



With Parking Structure

SW Corner



Current Site



With Parking Structure

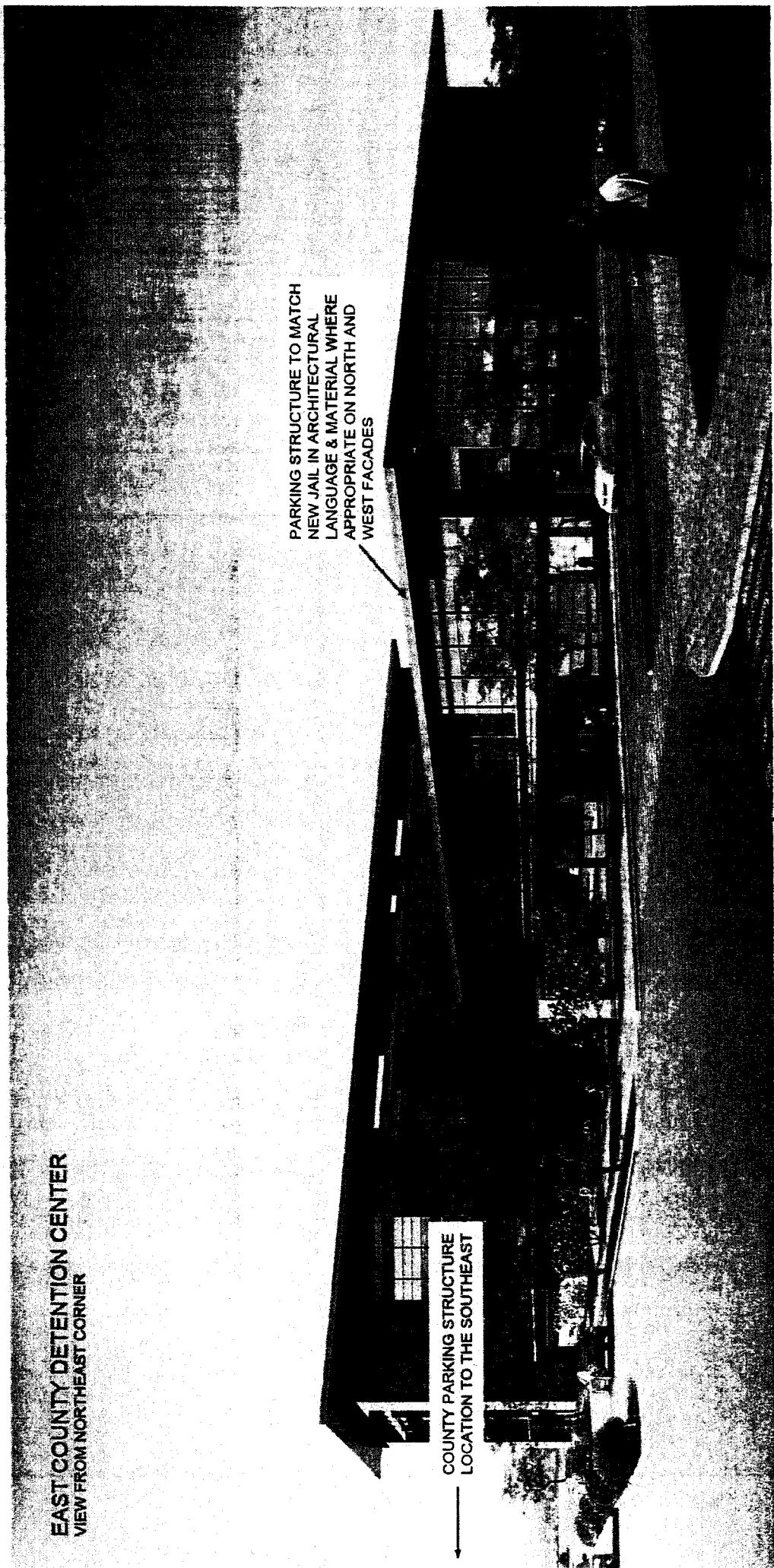
NW Corner

**EXHIBIT H.3**  
**Architectural Appearance**

**EAST COUNTY DETENTION CENTER**  
VIEW FROM NORTHEAST CORNER

PARKING STRUCTURE TO MATCH  
NEW JAIL IN ARCHITECTURAL  
LANGUAGE & MATERIAL WHERE  
APPROPRIATE ON NORTH AND  
WEST FACADES

COUNTY PARKING STRUCTURE  
LOCATION TO THE SOUTHEAST



**EAST COUNTY DETENTION CENTER**  
AERIAL VIEW

COUNTY PARKING STRUCTURE  
LOCATION TO THE SOUTHEAST

PARKING STRUCTURE TO MATCH  
NEW JAIL IN ARCHITECTURAL  
LANGUAGE & MATERIAL WHERE  
APPROPRIATE ON NORTH AND  
WEST FACADES





**EXHIBIT I**  
**General Requirements**

**COUNTY PARKING STRUCTURE**  
**OASIS ST. & PLAZA AVE., SE CORNER, INDIO, CA**

11.12.2013

**BRIDGING DOCUMENTS**  
**EXHIBIT I: GENERAL REQUIREMENTS**

**1. GENERAL**

- a. **ADA Requirements**
  - i. The project shall meet all ADA standards and requirements.
- b. **LEED Compliance**
  - i. The facility shall be LEED COMPLIANT.
- c. **Capacity**
  - i. The facility shall allow for a TOTAL minimum capacity of 800 parking stalls.
- d. **Conditioned space**
  - i. A mechanically conditioned 150 square foot minimum office, adjacent restroom, and additional 250 square foot general purpose space shall be required within the facility near the Northwest corner on the ground level.

**2. SETBACKS**

- a. The footprint of the structure shall maintain a minimum distance of 45 FEET from the east property boundary to allow for clearance from existing water easements and the incorporation of accessible fire access.
- b. A minimum setback of 60 FEET shall be required along the south boundary of the site.

**3. VEHICLE ACCESS**

- a. An access control gate shall be required at the vehicle entrance to the ground-level parking, which shall be reserved for Riverside County and Sheriff Department personnel only.
  - i. Access control shall require CARD ACCESS or similar for entrance.
  - ii. Control gate can be an entirely automated system.
- b. A minimum of three (3) total vehicle entrances shall be required.

**4. PEDESTRIAN CIRCULATION**

- a. Elevators, circulation stairs, and site hardscape will require appropriate placement to accommodate heavy foot traffic from the parking structure to the new East County Detention Center and existing Larson Justice Center to the North.

**5. SURVEILLANCE**

- a. Adequate video surveillance of the entire facility shall be required.
  - i. Surveillance video shall be capable of recording and storage.
- b. The on-site required office shall be capable of overseeing the video from these surveillance cameras, either wirelessly or via routed wiring.

**6. SHADE COVERING**

- a. The open third level shall require parking stall shade covering over all exposed parking stalls.
  - i. The shade covering shall be capable of incorporating photovoltaic panels and wiring.
    - 1. Photovoltaic panels shall be proposed as an ADD-ALTERNATE

**7. LANDSCAPING**

- a. The scope of work shall include fully-landscaped grounds along Oasis Street and Plaza Avenue comparable to the existing landscaping in these areas.
- b. Existing mature trees along the east and south boundaries of the site shall be preserved as much as possible, and supplemented with additional landscaping as necessary.

**8. APPEARANCE/SIGNAGE**

- a. Exterior finishes along the North and West façades shall appropriately compliment the adjacent East County Detention Center.
- b. Anti-graffiti coating is required on all decorative surfaces.
- c. Signage
  - i. Exterior signage must appropriately identify separate entrances for public and law enforcement parking.

**\*\*\*END OF SECTION\*\*\***

**EXHIBIT J**  
**Topographic Maps**

SCALE: 1" = 20'

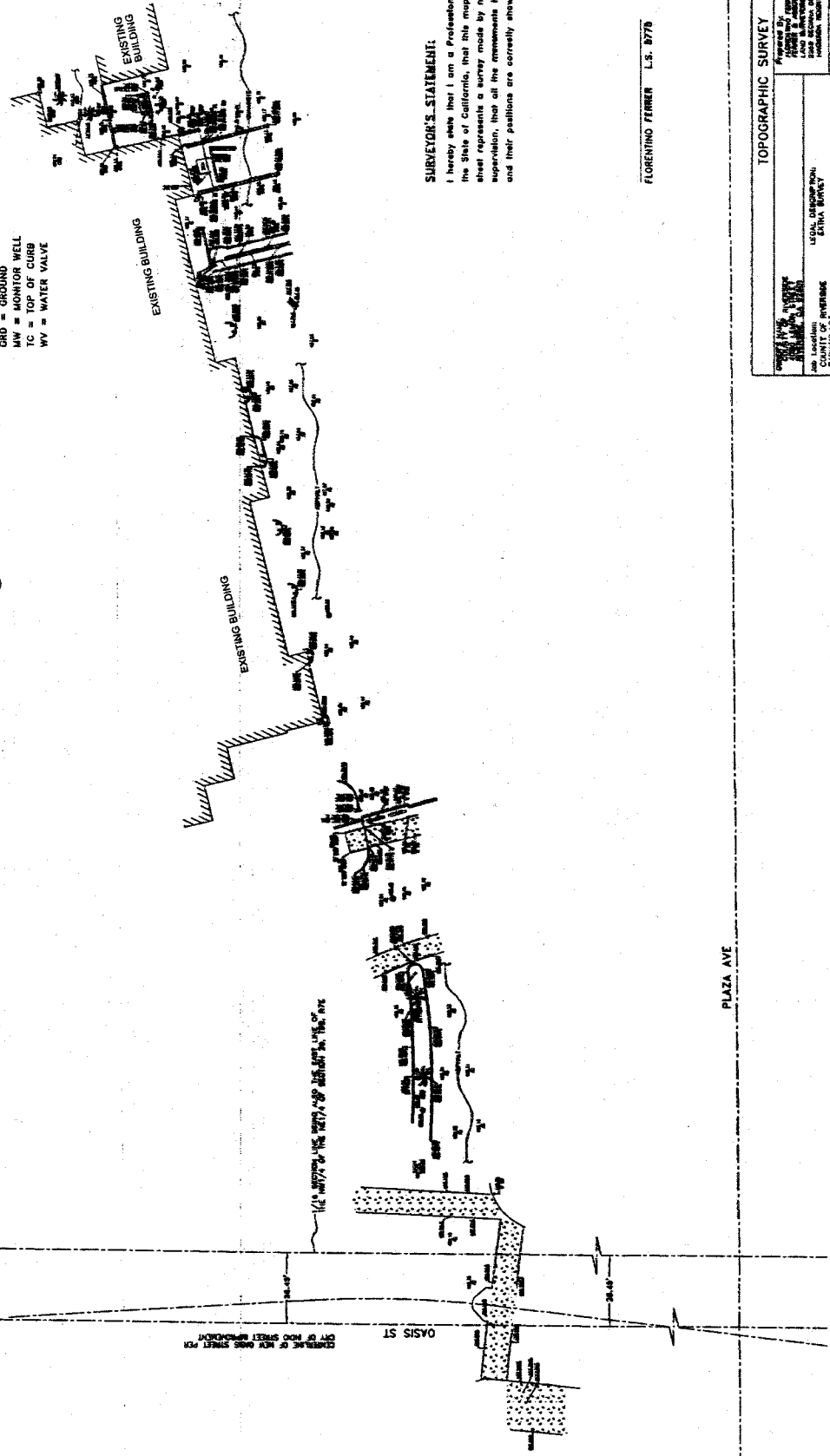
- ABBREVIATIONS**
- AC = ASPHALT CONCRETE
  - BC = BOTTOM OF CURB
  - BSW = BACK OF SIDEWALK
  - C = CONCRETE
  - CSLAB = CONCRETE SLAB
  - EG = EDGE OF GUTTER
  - FL = FLOWLINE
  - GRD = GROUND
  - MW = MONITOR WELL
  - TC = TOP OF CURB
  - WV = WATER VALVE

- LEGENDS**
- BUILDING
  - CONCRETE
  - WALL
  - COLUMN
  - MONITOR WELL
  - PALM
  - POST
  - LIGHT
  - WATER VALVE

**BENCHMARK**  
 TOP OF FIRE HYDRANT NE CORNER HWY 111 AND OASIS ST  
 CITY OF INDIO - BENCHMARK NO. 22  
 ELEV. = 420.25' NAVD 1989

**BASELINE BEARING**  
 THE BASIS OF BEARINGS FOR THIS TOPOGRAPHIC SURVEY IS  
 THE EAST LINE OF THE WEST HALF OF THE SOUTHWEST  
 QUARTER OF SECTION 28, BEING N 00°11'54" E PER MAP  
 BOOK 404, PAGES 42-51.

CENTRAL LINE OF NEW OASIS STREET PER  
 CITY OF INDIO STREET BENCHMARK



**SURVEYOR'S STATEMENT:**  
 I hereby state that I am a Professional Land Surveyor of  
 the State of California, that this map, consisting of 1  
 sheet represents a survey made by me or under my  
 supervision, that all the measurements herein actually made  
 and their positions are correctly shown.

FLORENTINO FERRELL L.S. 3779

**TOPOGRAPHIC SURVEY**

Approved By:  
 FLORENTINO FERRELL  
 State of California  
 License No. 3779  
 Date of License: 01/12/13

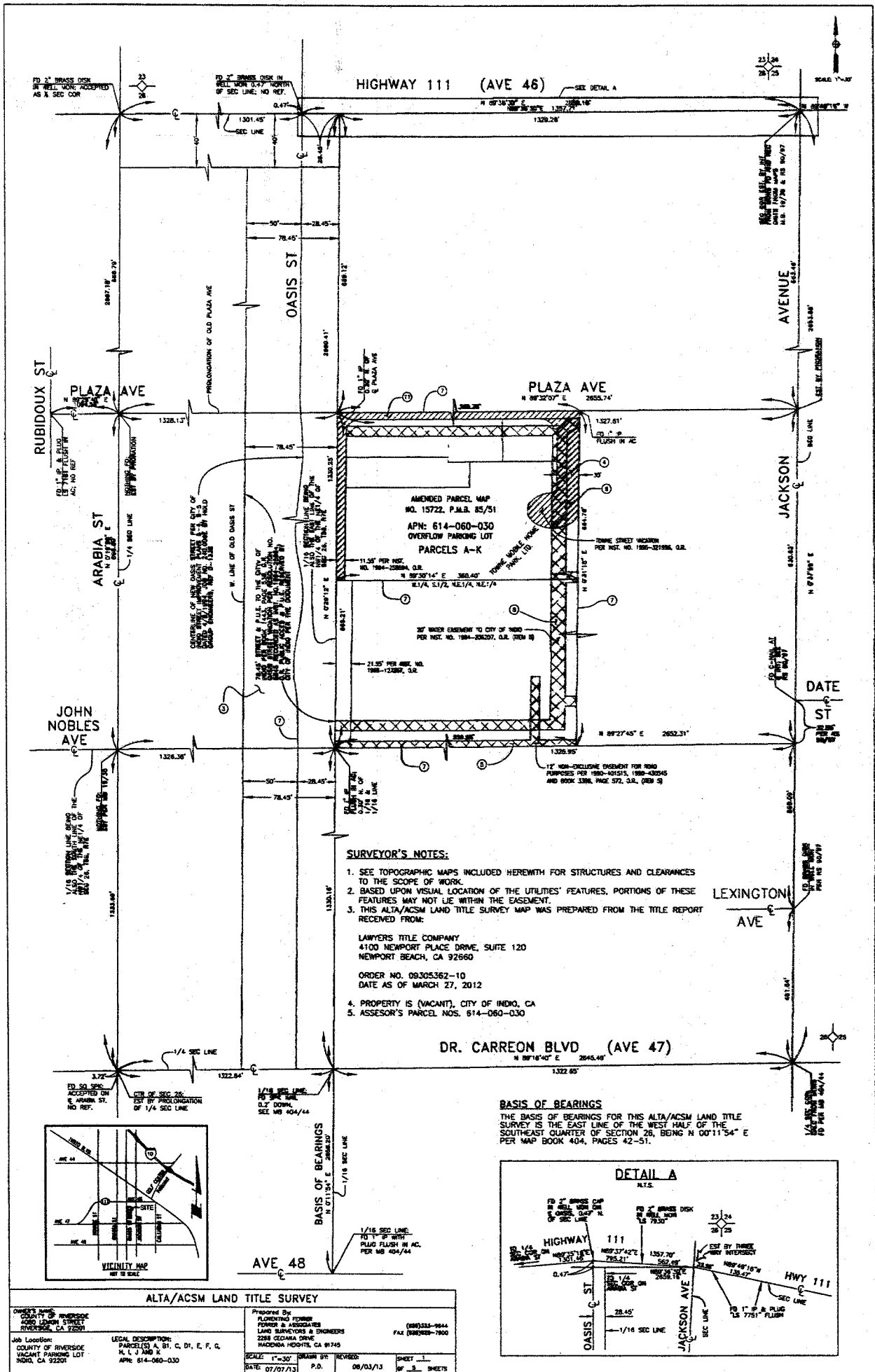
Job Location:  
 COUNTY OF RIVERSIDE  
 INDIO, CA 92501

LEGAL DESCRIPTION:  
 EXTRA SURVEY

APN: 000-000-000

DATE: 07/27/13 P.O.

Sheet 1 of 1 sheets



HIGHWAY 111 (AVE 46)

FD 2" BRASS DISK IN WELL, NOT ACCEPTED AS A SEC COR

FD 2" BRASS DISK IN WELL, WORK ACCEPTED AS A SEC COR

SEE DETAIL A

SCALE 1"=30'

RUBIDOUX ST

PLAZA AVE

OASIS ST

PLAZA AVE

JACKSON AVENUE

JOHN NOBLES AVE

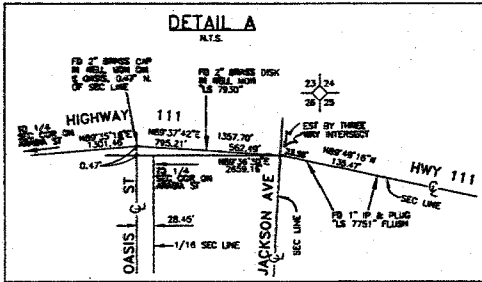
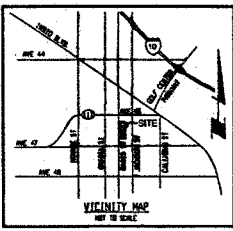
DATE ST

LEXINGTON AVE

DR. CARREON BLVD (AVE 47)

**SURVEYOR'S NOTES:**

1. SEE TOPOGRAPHIC MAPS INCLUDED HERewith FOR STRUCTURES AND CLEARANCES TO THE SCOPE OF WORK
2. BASED UPON VISUAL LOCATION OF THE UTILITIES' FEATURES, PORTIONS OF THESE FEATURES MAY NOT LIE WITHIN THE EASEMENT
3. THIS ALTA/ACSM LAND TITLE SURVEY MAP WAS PREPARED FROM THE TITLE REPORT RECEIVED FROM:  
 LAWYERS TITLE COMPANY  
 4100 NEWPORT PLACE DRIVE, SUITE 120  
 NEWPORT BEACH, CA 92660  
 ORDER NO. 09305362-10  
 DATE AS OF MARCH 27, 2012
4. PROPERTY IS (VACANT), CITY OF INDO, CA
5. ASSESSOR'S PARCEL NOS. 614-060-030



<p><b>OWNER'S NAME</b> CITY OF INDO 4350 LEXINGTON STREET RIVERSIDE, CA 92501</p>		<p>Prepared By: FLORINDO FORNER FORNER &amp; ASSOCIATES LAND SURVEYORS &amp; ENGINEERS 2281 COLIMA DRIVE MAGNOLIA HEIGHTS, CA 91745 FAX (951)533-9644 (951)389-7800</p>	
<p><b>JOB LOCATION</b> COUNTY OF RIVERSIDE VACANT PARKING LOT INDO, CA 92501</p>		<p><b>LEGAL DESCRIPTION</b> PARCELS A, B1, C, D1, E, F, G, H, I, J AND K APN: 614-060-030</p>	
<p><b>SCALE</b> 1"=30' <b>DATE</b> 07/07/13</p>		<p><b>REVISIONS</b> BY: [ ] DATE: 06/03/13</p>	

**ZONING DISTRICT.**

THIS PROPERTY IS LOCATED IN ZONING DISTRICT P, PUBLIC DISTRICT.  
THE P DESIGNATION PROVIDES FOR A VARIETY OF PUBLIC OR QUASI-PUBLIC FACILITIES WHICH SUPPORT THE COMMUNITY AND ARE OPERATED BY GOVERNMENTAL AGENCIES OR NON-PROFIT ORGANIZATIONS. (SECTION 159.360 OF THE CITY OF INDO ZONING REGULATIONS)

**GENERAL DEVELOPMENT STANDARDS:**

BUILDING SETBACKS, HEIGHTS AND DEVELOPMENT REGULATIONS ARE DETERMINED ON A CASE BY CASE BASIS BASED ON THE COMPATIBILITY OF THE PROPOSED USE WITH EXISTING OR PROPOSED USES SURROUNDING THE SITE. (SECTION 159.365 OF THE CITY OF INDO ZONING REGULATIONS)

**UTILITY NOTE:**

THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND UTILITIES, RECORDS, AND EXISTING DRAWINGS PROVIDED BY THE UTILITY COMPANIES AND THE CLIENT. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED FROM THE INFORMATION PROVIDED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

**SOURCES OF UTILITY INFORMATION:**

VALLEY SANITATION DISTRICT, SOUTHERN CALIFORNIA GAS COMPANY, COMACHELLA VALLEY WATER DISTRICT, VERIZON, TIME WARNER-CABLE, CITY OF INDO, IMPERIAL IRRIGATION DISTRICT AND THE CLIENT.

**FLOOD ZONE.**

THIS PROPERTY IS LOCATED WITHIN SHADED ZONE X, PER FEMA FLOOD INSURANCE RATE MAP NUMBER 06065C2233G, DATED AUGUST 28, 2008.

SHADED ZONE X INDICATES AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**PROPERTY ADDRESS.**

VACANT PARKING LOT, INDO, CALIFORNIA 92201

**SURVEYOR'S CERTIFICATE.**

TO: COUNTY OF RIVERSIDE AND LAWYERS TITLE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS. THE FIELD WORK WAS COMPLETED ON JULY 6, 2013.

DATE: FLORENTINO FERRER L.S. 5779

**LEGAL DESCRIPTION PER TITLE REPORT.**

THE FOLLOWING LEGAL DESCRIPTION IS PER TITLE REPORT, FILE NO. 09305362-10, DATED MARCH 27, 2012, PREPARED BY LAWYERS TITLE COMPANY.  
ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF RERN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL A: (614-060-030)

COUNTY 1 THROUGH 4 OF AMENDED PARCEL MAP NO. 15722, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP FILED IN BOOK 85, PAGES 50 AND 51 OF PARCEL MAPS RECORDS OF RIVERSIDE COUNTY.

PARCEL B: (614-060-030)

PARCEL NO. 1:

THE SOUTH 125 FEET OF THE EASTERLY 50 FEET OF THE SOUTH HALF OF THE WEST QUARTER OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL NO. 2:

TOGETHER WITH A NON-EXCLUSIVE EASEMENT FOR ROAD PURPOSES OVER THE ACROSS THE SOUTH 125 FEET OF THE SOUTH HALF OF THE WEST QUARTER OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL C: (614-060-030)

THE NORTH 50 FEET OF THE SOUTH 182 FEET OF THE WEST 175.95 FEET OF THE NORTH HALF OF THE WEST QUARTER OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL D: (614-060-030)

PARCEL 1:

THE EAST 50 FEET OF THE SOUTH HALF OF THE WEST QUARTER OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

EXCEPTING THERE FROM THE SOUTH 125 FEET OF SAID EASTERLY 50 FEET.

PARCEL 2:

A NON-EXCLUSIVE EASEMENT FOR ROAD PURPOSES OVER AND ACROSS THE SOUTH 12 FEET OF THE SOUTH HALF OF THE WEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL 3:

A NON-EXCLUSIVE EASEMENT FOR ROAD PURPOSES ALONG AND ACROSS THE WESTERN 12 FEET OF THE SOUTH 137 FEET OF THE EASTERLY 62 FEET OF THE SOUTH HALF OF THE WEST QUARTER OF THE SOUTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN.

PARCEL E: (614-060-030)

THAT PORTION OF THE SOUTH ONE-HALF OF THE WEST ONE-HALF OF THE SOUTH ONE-HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 WEST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION; THENCE SOUTH ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 60 FEET; THENCE EAST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 100 FEET; THENCE SOUTH ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 60 FEET; THENCE WEST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, TO THE POINT OF BEGINNING;

EXCEPTING THE WESTERN 21.55 FEET THEREOF, CONNECTED TO THE CITY OF INDO, RECORDED DECEMBER 12, 1969 AS INSTRUMENT NO. 127267 OF OFFICIAL RECORDS.

PARCEL F: (614-060-030)

THE SOUTH ONE-HALF OF THE WEST ONE-QUARTER OF THE SOUTH ONE-HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 WEST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN;

EXCEPTING THEREFROM THE EASTERLY 50 FEET; ALSO EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION; THENCE SOUTH ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 60 FEET; THENCE EASTERN PARALLEL WITH THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 100 FEET; THENCE NORTH TO A POINT ON THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 60 FEET; THENCE WEST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, 60 FEET; THENCE WEST ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION, TO THE POINT OF BEGINNING. ALSO EXCEPTING THEREFROM THAT PORTION THEREOF RECORDED JUNE 7, 1969 AS INSTRUMENT NO. 59367 OF OFFICIAL RECORDS OF SAID COUNTY.

PARCEL G: (614-060-030)

THE SOUTH 50 FEET OF THE NORTHERLY 150 FEET OF THE EASTERLY 150 FEET OF THE NORTH ONE HALF OF THE WEST ONE QUARTER OF THE SOUTH ONE HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

EXCEPTING THEREFROM THAT PORTION LYING WITHIN TOWNE STREET.

PARCEL H: (614-060-030)

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF PLAZA TRACT AS SHOWN BY MAP ON FILE BOOK 19, PAGE 25 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE SOUTH 89° 37' 09" WEST A DISTANCE OF 101.64 FEET; THENCE SOUTH 00° 30' 08" WEST A DISTANCE OF 190.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 89° 28' 30" WEST A DISTANCE OF 150.00 FEET; THENCE SOUTH 00° 30' 08" WEST A DISTANCE OF 48.00 FEET; THENCE NORTH 89° 28' 30" EAST A DISTANCE OF 150.00 FEET; THENCE NORTH 00° 30' 08" EAST A DISTANCE OF 48.00 FEET TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM ANY PORTION LYING WITHIN TOWNE STREET.

**ALTA/ACSM LAND TITLE SURVEY**

Surveyor Information: Florentino Ferrer, L.S. 5779, State of California. License No. 614-060-030. Date: 07/02/13. Includes fields for Project Name, Location, and Survey Details.

PARCEL I: (614-060-030)

PARCEL 1: THE SOUTH 50 FEET OF THE SOUTH 132 FEET OF THE NORTH HALF OF THE WEST HALF OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

EXCEPTING THEREFROM:  
 A SECTION CORNER OF THE NORTHEAST 1/4 OF SECTION 28, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:  
 BEGINNING AT THE SOUTHWEST CORNER OF THE PLAZA TRACT AS DESCRIBED IN MAP BOOK 19, PAGE 35, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;  
 THENCE SOUTH 00° 27' 00" WEST, A DISTANCE OF 198.00 FEET TO THE TRUE POINT OF BEGINNING;  
 THENCE NORTH 89° 28' 30" EAST, A DISTANCE OF 11.55 FEET;  
 THENCE SOUTH 00° 27' 00" WEST, A DISTANCE OF 50.00 FEET;  
 THENCE SOUTH 89° 28' 30" WEST, A DISTANCE OF 11.55 FEET;  
 THENCE NORTH 00° 27' 00" EAST, A DISTANCE OF 50.00 FEET, TO THE TRUE POINT OF BEGINNING.

PARCEL 2:  
 THE SOUTH 82 FEET OF THE SOUTH 132 FEET OF THE NORTH HALF OF THE WEST OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 5 SOUTH, RANGE 7 EAST, IN THE CITY OF INDO, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, SAN BERNARDINO BASE AND MERIDIAN.

EXCEPTING THEREFROM A PORTION OF THE NORTHEAST 1/4 OF SECTION 28, TOWNSHIP 5 SOUTH, RANGE 7 EAST, SAN BERNARDINO BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:  
 BEGINNING AT THE SOUTHWEST CORNER OF THE PALAZA TRACT AS DESCRIBED IN MAP BOOK 19, PAGE 35, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA;  
 THENCE SOUTH 00° 27' 00" WEST, A DISTANCE OF 248.00 FEET TO THE TRUE POINT OF BEGINNING;  
 THENCE NORTH 89° 28' 30" EAST, A DISTANCE OF 11.55 FEET;  
 THENCE SOUTH 00° 27' 00" WEST, A DISTANCE OF 82.00 FEET;  
 THENCE SOUTH 89° 28' 30" WEST, A DISTANCE OF 11.55 FEET;  
 THENCE NORTH 00° 27' 00" EAST, A DISTANCE OF 82.00 FEET, TO THE TRUE POINT OF BEGINNING.

PARCEL J: (614-060-030)  
 THOSE PORTIONS OF OASIS STREET AND PLAZA AVENUE VACATED BY THE CERTAIN "RESOLUTION NO. 5845" RECORDED JUNE 27, 1994 AS INSTRUMENT NO. 258694 OF OFFICIAL RECORDS, WHICH WOULD PAS BY OPERATION OF LAW.

PARCEL K: (614-060-030)  
 THAT PORTION OF TOWNE STREET VACATED BY THAT CERTAIN "RESOLUTION NO. 5862" RECORDED SEPTEMBER 27, 1995 AS INSTRUMENT NO. 321996 OF OFFICIAL RECORDS, WHICH WOULD PASS BY OPERATION OF LAW.

ABBREVIATIONS

- AC = ASPHALT CONCRETE
- APRM = APRON
- BC = BOTTOM OF CURB
- BSW = BACK OF SIDEWALK
- BWAL = BOTTOM OF WALL
- BX = BOTTOM OF CURB AT X
- C OR CONC = CONCRETE
- CB = CATCH BASIN
- CLF = CHAIN LINK FENCE
- CPAD OR CSLAB = CONCRETE SLAB
- EG = EDGE OF GUTTER
- ELEC = ELECTRICAL
- EPB = ELECTRICAL PULLBOX
- FL = FLOWLINE
- FSW = FRONT OF SIDEWALK
- GB = GRADE BREAK
- GRD = GROUND
- GV = GAS VALVE
- IPB = IRRIGATION PULLBOX
- ICV = IRRIGATION CONTROL VALVE
- LP = LIGHT POLE
- MOLDSTRIP = MOLDSTRIP
- LAW = MONITOR WELL
- PB = PULL BOX
- PP = POWER POLE
- SDMH OR CSLAB = CONCRETE SLAB
- SMH = SEWER MANHOLE
- TC = TOP OF CURB
- TK = TOP OF CURB AT X
- WV = WATER VALVE

SCHEDULE B, SECTION B: EXCEPTIONS (SEE TITLE REPORT)

ITEM NO.	DESCRIPTIONS
1	WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS. (NOT PLOTTABLE)
2	PORTS OF THE PUBLIC IN AND TO THAT PORTION OF THE LAND LING WITHIN ANY ROAD, STREET OR HIGHWAY. (NOT PLOTTABLE)
3	GOVERNMENT CONDITIONS AND RESTRICTIONS AS SET FORTH IN THE DOCUMENT RECORDED MAY 5, 1945 AS INSTRUMENT NO. 494, IN BOOK 617, PAGE 104 OF OFFICIAL RECORDS. (PLOTTED)
4	AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THEREIN AS SET FORTH IN A DOCUMENT RECORDED JUNE 19, 1956 IN BOOK 1930, PAGE 246 OF OFFICIAL RECORDS. (PLOTTED)
5	AN EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THEREIN AS SET FORTH IN A DOCUMENT RECORDED MAY 6, 1962 AS INSTRUMENT NO. 46384 IN BOOK 1386, PAGE 104 OF OFFICIAL RECORDS. (PLOTTED)
6	AFFECTS: SAID LAND MORE PARTICULARLY DESCRIBED THEREIN. (PLOTTED)
7	AFFECTS: SAID LAND MORE PARTICULARLY DESCRIBED THEREIN. (PLOTTED)
8	AFFECTS: SAID LAND MORE PARTICULARLY DESCRIBED THEREIN. (PLOTTED)

SCHEDULE B, SECTION B: EXCEPTIONS (SEE TITLE REPORT)

ITEM NO.	DESCRIPTIONS
9	THE MATTERS CONTAINED IN A DOCUMENT ENTITLED "CONACHELLA VALLEY RECREATION AND PARK DISTRICT REDEVELOPMENT DISTRICT NO. 84-1 (INDO COMMUNITY CENTER AND PARK PROJECT) LIMITED OBLIGATION UNDER THE COMMUNITY DEVELOPMENT ACT OF AUGUST 2, 1964 AS INSTRUMENT NO. 53031 OF OFFICIAL RECORDS. (NOT PLOTTABLE)
10	THE MATTERS CONTAINED IN A DOCUMENT ENTITLED "CARLE WEAVER LICENSE AGREEMENT BY AND BETWEEN LORNA MARLE ROUE PARK AND LORNA MARLE ROUE PARK, INCORPORATED, A CALIFORNIA CORPORATION, NO. 037189 OF OFFICIAL RECORDS. (NOT PLOTTABLE)
11	THE MATTERS CONTAINED IN A DOCUMENT ENTITLED "COUNTY OF INDO AGREEMENT, BETWEEN CO. OF INDIANWELL AND CITY OF INDO, RECORDED NOVEMBER 10, 1995 AS INSTRUMENT NO. 2007-057185 OF OFFICIAL RECORDS. (PLOTTED)
12	A LIEN FOR THE AMOUNT SHOWN AND ANY OTHER AMOUNTS DUE. IN FAVOR OF: CONACHELLA VALLEY RECREATION AND PARK DISTRICT, RECORDED IN INSTRUMENT NO. 42877 OF OFFICIAL RECORDS. (NOT PLOTTABLE)
13	THE FACT THAT SAID LAND IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT PLAN OF SAID PROJECT HAD BEEN INSTRUMENTED UNDER THE REDEVELOPMENT LAW (SUCH AS SUCH REDEVELOPMENT TO PROCEED ONLY AFTER THE ADOPTION OF THE REDEVELOPMENT PLAN) AS RECORDED IN INSTRUMENT NO. 2007-057185 OF OFFICIAL RECORDS. (NOT PLOTTABLE)
19	ANY EASEMENTS NOT DISCLOSED BY THESE PUBLIC RECORDS WHICH MIGHT CONSTITUTE NOTICE AND WHICH ARE NOT VISIBLE AND APPARENT FROM AN INSPECTION OF THE SURFACE OF SAID LAND. (NOT PLOTTABLE)
17	DISCREPANCIES: CONFLICTS IN BOUNDARY LINES, SHOWINGS IN AREA WOULD DISCLOSE, AND WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS. (NOT PLOTTABLE)

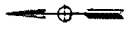
LEGENDS

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- CHAIN LINK FENCE [Symbol]
- BOLAR [Symbol]
- CATCH BASIN [Symbol]
- ELECTRICAL [Symbol]
- ELECTRICAL BOX [Symbol]
- ELECTRICAL PULLBOX [Symbol]
- FIRE HYDRANT [Symbol]
- GAS VALVE [Symbol]
- IRRIGATION CONTROL VALVE [Symbol]
- WALL [Symbol]
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- TIME [Symbol]
- UTILITY BOX [Symbol]
- VALET [Symbol]
- WATER PULLBOX [Symbol]
- WATER SYSTEM [Symbol]
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- MONITORING WELL [Symbol]
- PALM [Symbol]
- POST [Symbol]
- POWER POLE [Symbol]
- SEWER MANHOLE [Symbol]
- STORM DRAIN MANHOLE [Symbol]
- SIGN [Symbol]

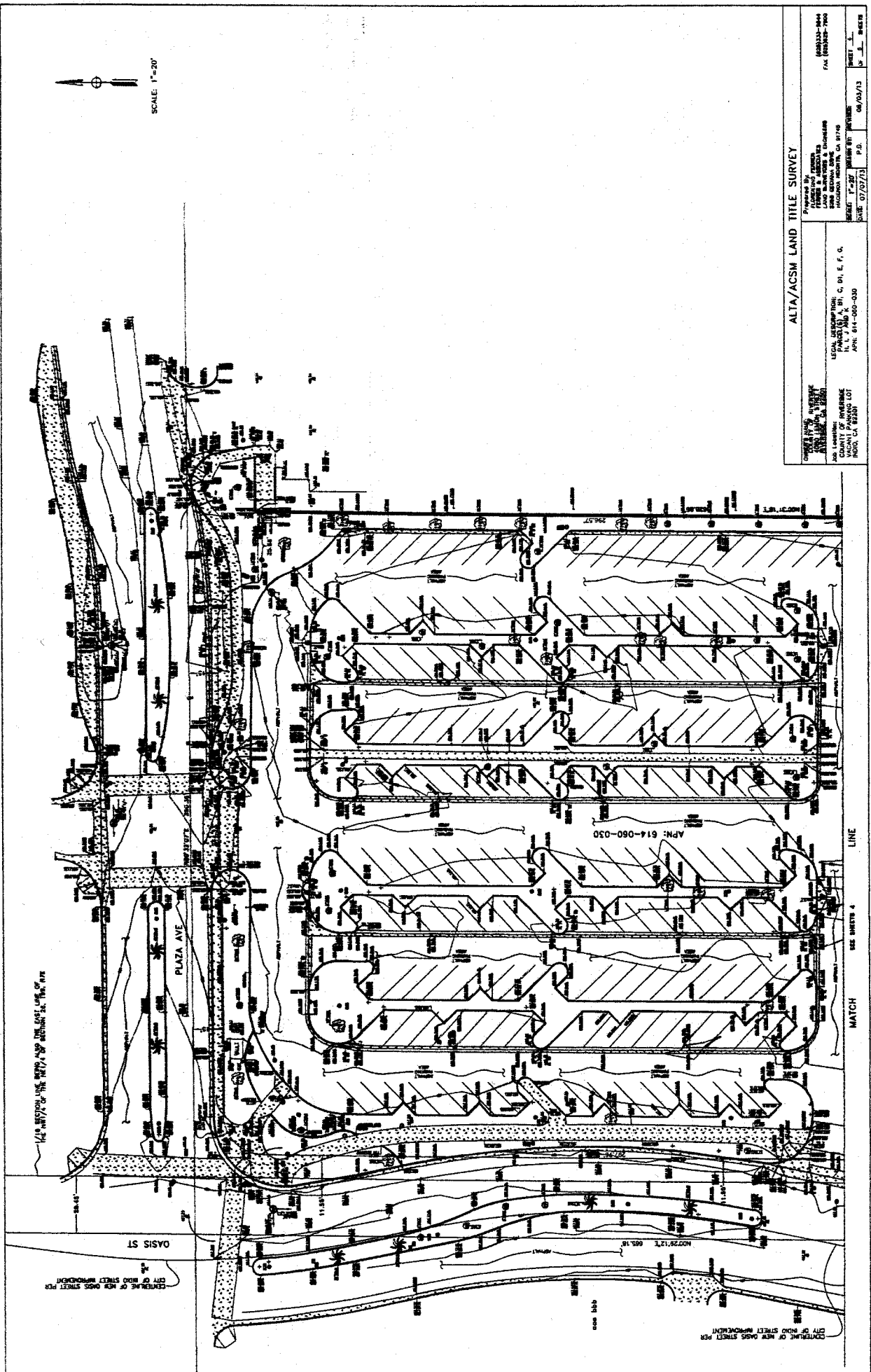
ALTA/ACSM LAND TITLE SURVEY

Prepared By:  
 ALTA SURVEYING, INC.  
 1400 S. GARDEN AVENUE, SUITE 100  
 RIVERSIDE, CALIFORNIA 92507  
 PHONE: (951) 514-9900  
 FAX: (951) 514-9900  
 DATE: 07/27/13 P.D.  
 SHEET 1 OF 1





SCALE: 1"=20'



ALTA/ACSM LAND TITLE SURVEY

Prepared By:  
 JAMES W. LARSEN  
 LAND SURVEYOR & ENGINEER  
 14000 BAYVIEW BLVD., SUITE 100  
 REDWOOD CITY, CA 94061  
 PHONE: 650-992-1100  
 FAX: 650-992-1100

APN: 614-080-030

DATE: 07/27/73

06/03/73

1

CITY OF NEW OASIS STREET PER CITY OF RIND STREET IMPROVEMENT

OASIS ST

PLAZA AVE

APN: 614-080-030

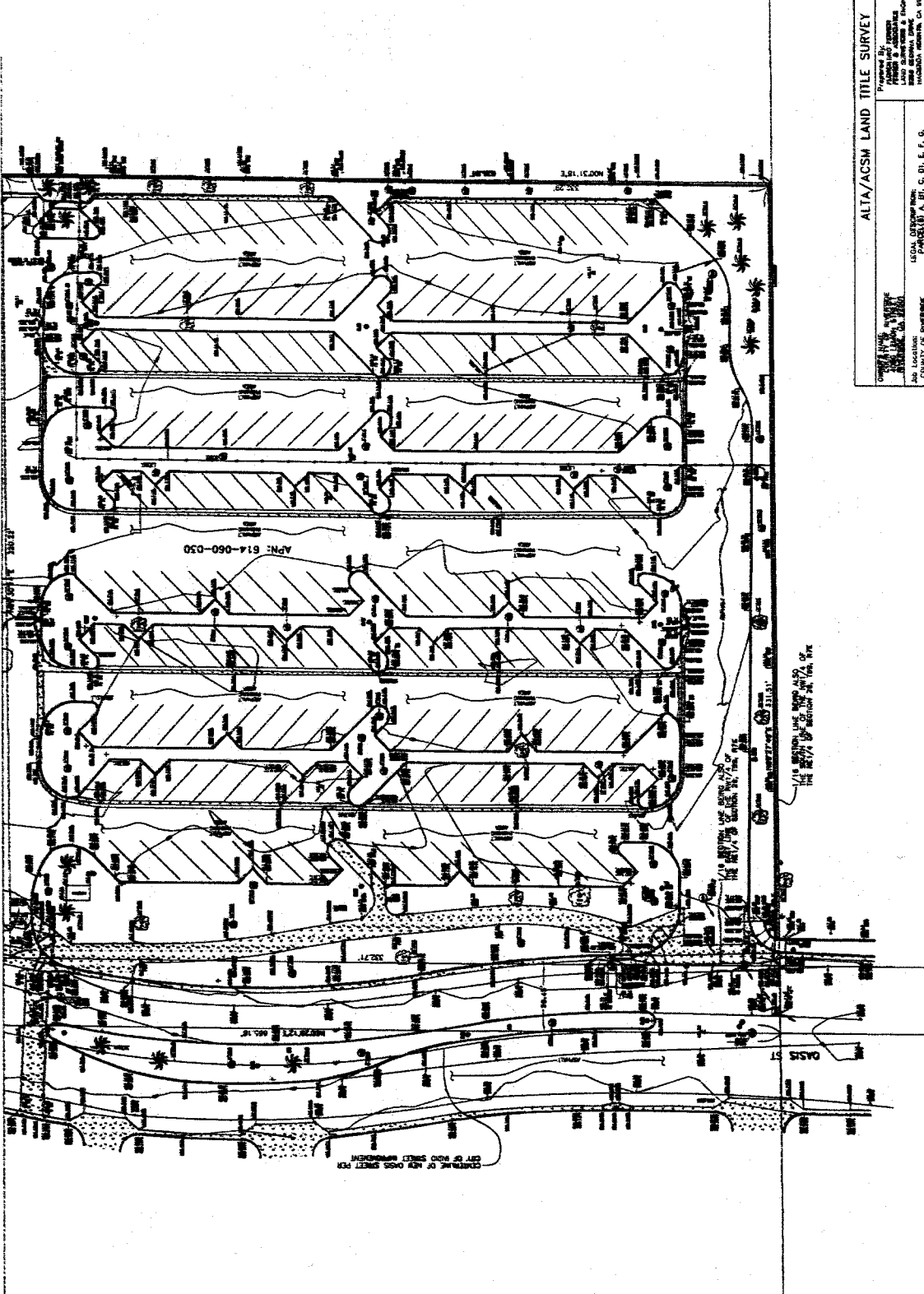
MATCH SEE SHEETS 4

CITY OF NEW OASIS STREET PER CITY OF RIND STREET IMPROVEMENT

CITY OF NEW OASIS STREET PER CITY OF RIND STREET IMPROVEMENT



MATCH SEE SHEET 2 LINE

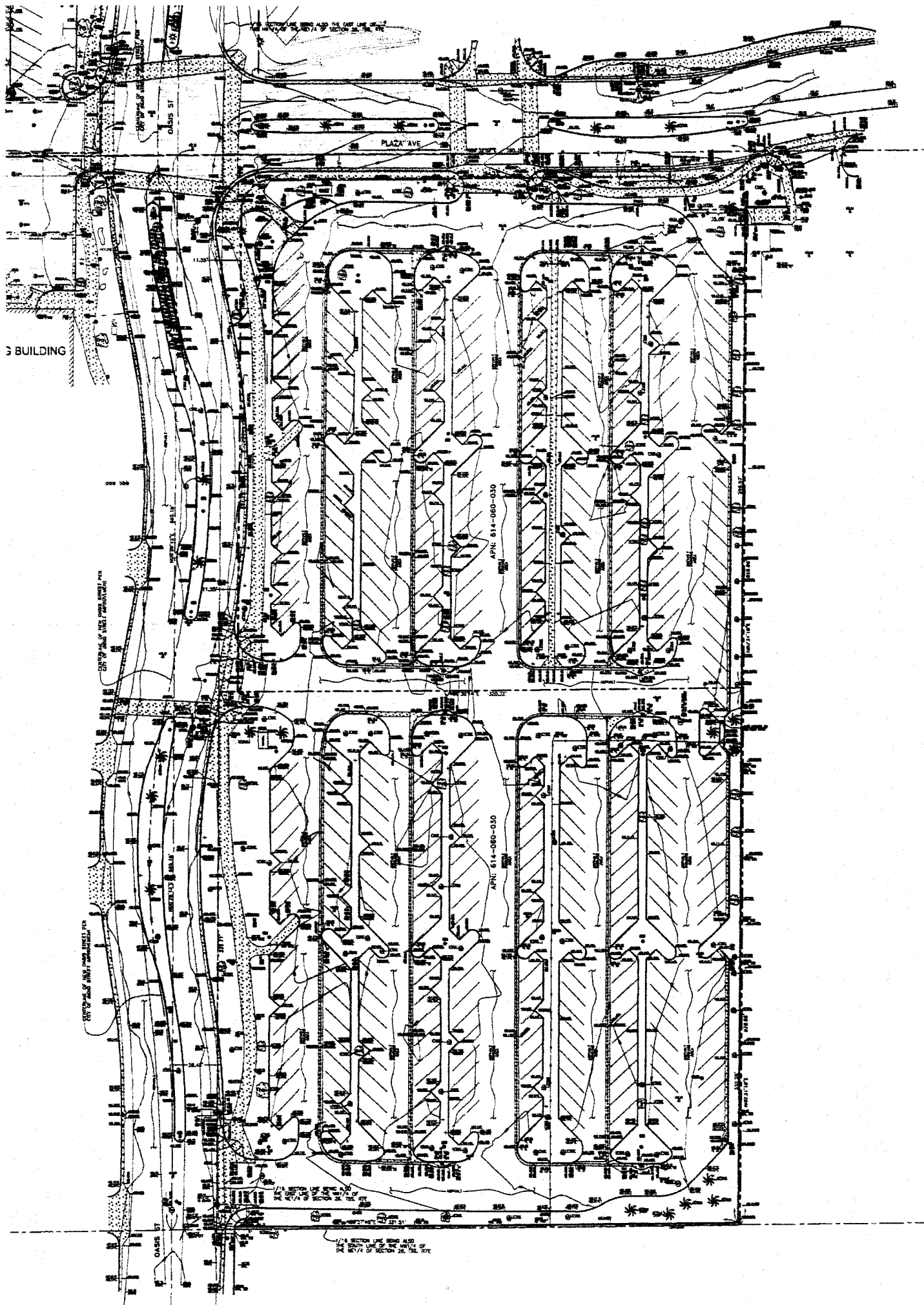


**ALTA/ACSM LAND TITLE SURVEY**

Prepared by: Planning & Surveying LAND SURVEYING & ENGINEERING MICHAEL J. MURPHY, P.E. MICHAEL J. MURPHY, P.E. 10000 S. GARDEN ST., SUITE 100 HOUSTON, TEXAS 77036 PHONE: 281-460-1111 FAX: 281-460-1112 E-MAIL: MICHAEL@MURPHYENGINEERS.COM DATE: 07/02/13	LEGAL DESCRIPTION: G. D., E. F. G. H. I. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z. APN: 614-060-050	SHEET 3 OF 3 SHEETS
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CITY OF HOOD SHEET MANAGEMENT

AT THE OFFICE OF THE CLERK OF THE SUPERIOR COURT OF THE COUNTY OF HOUSTON, TEXAS



3 BUILDING

PLAZA AVE

APN: 614-080-030

APN: 614-080-030

CONTRACT NO. 100-100-100-100

CONTRACT NO. 100-100-100-100

DATE: 10/10/2010

**EXHIBIT K**  
**Survey**





**EXHIBIT L**

**Geotechnical Investigation Report**



# CHJ Consultants

1395 E. Cooley Drive, Suite C, Colton, CA 92324 • Phone (909) 824-7311 • Fax (909) 583-1136  
15345 Anacapa Road, Suite D, Victorville, CA 92392 • Phone (760) 243-0506 • Fax (760) 243-1225  
77-564A Country Club Drive, Suite 122, Palm Desert, CA 92211 • Phone (760) 772-8234 • Fax (909) 503-1136

April 1, 2013

County of Riverside  
Economic Development Agency  
3403 10th Street, Suite 500  
Riverside, California 92501  
Attention: Mr. Rizaldy Balayot

Job No. 13143-3

Dear Mr. Balayot:

This letter transmits six copies of our Geotechnical Investigation report for the proposed East County Detention Center parking structure, to be located southeast of the intersection of Oasis Street and Plaza Avenue in the City of Indio, California.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact this firm at your convenience.

Respectfully submitted,

CHJ CONSULTANTS

Fred Yi, Ph.D., G.E.  
Chief Engineer

FY:lb

Distribution: County of Riverside (6)





**GEOTECHNICAL INVESTIGATION  
PROPOSED EAST COUNTY DETENTION CENTER  
PARKING STRUCTURE  
SOUTHEAST OF OASIS STREET  
AND PLAZA AVENUE  
INDIO, CALIFORNIA  
PREPARED FOR  
COUNTY OF RIVERSIDE  
ECONOMIC DEVELOPMENT AGENCY  
JOB NO. 13143-3**



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April 1, 2013

County of Riverside  
Economic Development Agency  
3403 10th Street, Suite 500  
Riverside, California 92501  
Attention: Mr. Rizaldy Balayot

Job No. 13143-3

Dear Mr. Balayot:

Attached herewith is the Geotechnical Investigation report, prepared for the proposed East County Detention Center parking structure, to be located southeast of the intersection of Oasis Street and Plaza Avenue in the City of Indio, California.

This report was based upon a scope of services generally outlined in our proposal, dated March 5, 2013, and other written and verbal communications.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact this firm at your convenience.

Respectfully submitted,  
CHJ CONSULTANTS

Fred Yi, Ph.D., G.E.  
Chief Engineer

FY:lb

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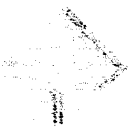
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**GEOTECHNICAL INVESTIGATION  
PROPOSED EAST COUNTY DETENTION CENTER PARKING STRUCTURE  
SOUTHEAST OF OASIS STREET AND PLAZA AVENUE  
INDIO, CALIFORNIA  
PREPARED FOR  
COUNTY OF RIVERSIDE  
ECONOMIC DEVELOPMENT AGENCY  
JOB NO. 13143-3**

**INTRODUCTION**

During March and April of 2013, a geotechnical investigation was performed by this firm for the proposed East County Detention Center (ECDC) parking structure, to be located southeast of the intersection of Oasis Street and Plaza Avenue in the City of Indio, California. The purposes of this investigation were to explore and evaluate the geotechnical engineering/engineering geologic conditions of the site and to provide appropriate geotechnical engineering and engineering geologic recommendations for design and construction of the proposed development.

To orient our investigation at the site, an electronic copy of the 30-scale ECDC Parking Structure Space Plan, dated January 22, 2013, prepared by Holt Architecture, was provided to us. Google Earth's aerial imagery was also utilized. The approximate location of the proposed facility is shown on the attached Index Map (Appendix "A").

C.H.J., Incorporated performed a geotechnical investigation for the County Administrative Center/Law Library improvement project in 2008 (Job No. 08659-3, dated October 17, 2008). A geotechnical investigation was performed by CHJ Consultants, Inc. for the ECDC project in 2012 (Job No. 12643-3, dated October 23, 2012), proposed for construction northwest of the intersection of Plaza Avenue and Oasis Street. Information obtained for these investigations was referenced during the preparation of this report.

The results of our investigation, together with our conclusions and recommendations, are presented in this report.



### **PROJECT CONSIDERATIONS**

It is our understanding, based on the Parking Structure Space Plan (dated January 22, 2013, prepared by Holt Architecture), that a three-level, multi-bay structure is being added to ECDC. The proposed parking structure will include 330 stalls per level with dimensions of approximately 240 feet east-west and 474 feet north-south. The total footprint will occupy approximately 113,760 square feet.

The site is currently occupied by a paved parking lot.

Project grading plans were not available at the time of our investigation. However, observation of site topography and of adjacent developments indicates that development of this site will entail minor cuts and fills. The final project grading plan should be reviewed by the geotechnical engineer.

### **SCOPE OF SERVICES**

The scope of services provided during this geotechnical investigation included the following:

- Review of published and unpublished geologic literature, maps and prior pertinent geotechnical/geologic reports prepared by C.H.J., Incorporated, CHJ Consultants and others
- Review of aerial photographs flown between 1974 and 2011
- Field reconnaissance of the site and surrounding area
- Marking of exploration locations in the field and notification of Underground Service Alert
- Geophysical investigation of the proposed boring locations to avoid utility conflicts
- Placement of nine exploratory borings within the anticipated parking structure area
- Logging and sampling of the nine exploratory borings for testing and evaluation
- Laboratory testing on selected samples



- Evaluation of geologic hazards
- Evaluation of the geotechnical data to develop site-specific recommendations for site grading, shallow and deep foundation design, preliminary asphalt concrete (AC) and Portland cement concrete (PCC) pavement structural section design, and mitigation of potential geotechnical concerns and hazards, such as liquefaction and seismic settlement

### **SITE DESCRIPTION**

The site is located east of Oasis Street and south of Plaza Avenue in the City of Indio, Riverside County, California, and is developed as an existing parking lot with associated infrastructure. The site is relatively level and is approximately 11 feet below mean sea level (msl). Evidence of underground utilities was observed throughout the site.

In the reviewed aerial photographs dated 1974, 1980 and 1984, the site appears to be largely undeveloped, although several structures are present in the center and northern portions of the site. At those times, none of the subject site was paved. Aerial images dated 1996 show the site to be in its approximate present condition. No evidence of faulting or other geologic hazards was seen in the aerial photographs reviewed or at the site during the geologic reconnaissance.

No other surface features pertinent to this investigation were noted.

### **FIELD INVESTIGATION**

The soil conditions underlying the subject site were explored by means of nine hollow-stem auger borings drilled with a truck-mounted CME 75 drill rig equipped for soil sampling. The exploratory borings were drilled to a maximum depth of 76-1/2 feet below the existing ground surface (bgs). The approximate locations of our exploratory borings are indicated on the attached Site Plan (Enclosure "A-2").





Continuous logs of the subsurface conditions, as encountered within the exploratory borings, were recorded at the time of drilling by a staff geologist from this firm. Both a standard penetration test (SPT) sampler (2-inch outer diameter and 1-3/8-inch inner diameter) and a modified California sampler (3-inch outer diameter and 2-3/8-inch inner diameter) were utilized in our investigation. Relatively undisturbed samples were obtained by driving the modified California sampler (a split-spoon ring sampler) ahead of the borings at selected levels. The penetration resistance was recorded on the boring logs as the number of hammer blows used to advance the sampler in 6-inch increments (or less if noted). Samplers are driven with an automatic hammer that drops a 140-pound weight 30 inches for each blow. After the required seating, the sampler is advanced up to 18 inches, providing up to three sets of blowcounts at each sampling interval. The recorded blows are raw numbers without any corrections for hammer type (automatic vs. manual cathead) or sampler size (California sampler vs. SPT sampler). Relatively undisturbed as well as bulk samples of typical soil types obtained were returned to the laboratory in sealed containers for testing and evaluation.

Our exploratory boring logs, together with our in-place blowcounts per 6-inch increment, are presented in Appendix "B". The stratification lines presented on the boring logs represent approximate boundaries between soil types, which may include gradual transitions.

### LABORATORY INVESTIGATION

Included in our laboratory testing program were field moisture content tests on all samples returned to the laboratory and field dry density tests on all relatively undisturbed ring samples. The results are included on the boring logs. Optimum moisture content - maximum dry density relationships were established for typical soil types. Direct shear tests were performed on selected relatively undisturbed and remolded samples in order to provide shear strength parameters for bearing capacity, earth pressure and settlement evaluations. Consolidation tests were performed on selected relatively undisturbed samples in order to provide parameters for settlement and hydroconsolidation evaluations. Sieve analyses were performed on selected samples as an aid to classification and to provide fines



contents for liquefaction and seismic settlement analyses. Atterberg limits testing was conducted on selected clay-like soils as an aid to classification. An expansion index test was performed on a selected sample to evaluate the expansion potential of the on-site soils.

Sieve analyses, sand equivalent tests and R-value tests were performed on probable pavement sub-grade soils to develop criteria for preliminary pavement design recommendations. Selected samples of materials were delivered to HDR|Schiff for chemical/corrosivity testing.

Summaries of the laboratory test results appear in Appendix "C". Soil classifications provided in our geotechnical investigation report are generally per the Unified Soil Classification System (USCS).

### **SITE GEOLOGY AND SUBSURFACE SOIL CONDITIONS**

The site is located in the central Coachella Valley in the Colorado Desert geomorphic province. The Coachella Valley extends southeastward from the San Geronio Pass to the Salton Sea region and is traversed by segments of the San Andreas fault zone. The lowland of the Coachella Valley accumulates sediments from surrounding highlands in the form of alluvial and eolian (wind-deposited) materials. The valley in the area of the site is bounded on the southwest by the San Jacinto and Santa Rosa mountains and on the northeast by the Indio Hills. The channel of the Whitewater River is located about 1-1/4 miles northeast of the site. According to published geologic mapping (Dibblee, 2008, Enclosure "A-3"), the site is underlain by alluvial sand and clay.

Data from our exploratory borings indicate that the soil profile at the site typically consists of silt/sandy silt (ML) with interlayered silty sand (SM) to depths ranging from approximately 60 to 65 feet bgs, underlain by silty sand (SM) and/or sand (SP-SM, SP) to the maximum depths explored. The soils encountered generally ranged from loose to medium dense, generally increasing in density with depth. The approximate locations of the exploratory borings are shown on the attached Site Plan (Enclosure "A-2").



Fill classified as silty sand (SM) was encountered in all of our exploratory borings to depths ranging from approximately 3 to 7 feet bgs.

Groundwater was encountered within Exploratory Boring Nos. 1, 2 and 3 at depths of 70, 70, and 69 feet bgs, respectively.

Refusal to further advancement of the drill auger was not experienced in any of the exploratory borings.

Bedrock was not encountered within the exploratory borings.

No caving of the boring walls in the upper 10 feet of the borings was observed upon removal of the augers.

A graphic depiction of the subsurface soil conditions encountered is presented on the attached boring logs (Appendix "B").

Expansion testing performed on samples of silt-bearing soil indicated a "very low" potential for expansion when tested as per ASTM D4829.

The results of corrosivity testing are discussed in the "Soil Corrosion" section of this report.

### **FAULTING**

The following section describes and summarizes the regional and local hazards related to faults and fault-related phenomena for the site.



### **FAULT RUPTURE HAZARD POTENTIAL:**

The site is not located within an Alquist-Priolo Earthquake Fault Zone (APZ) designated by the State of California for active faults. According to the County of Riverside General Plan (2005) and City of Indio General Plan (2006), faults are not located beneath the site. The closest APZ, designated for faults of the Coachella segment of the San Andreas fault zone, is located approximately 4 kilometers (2.5 miles) northeast of the site. Active faults are not mapped within or projecting through the site, and evidence of faulting was not observed in the aerial imagery reviewed. Therefore, the potential for fault rupture beneath the site is considered low.

### **LOCAL AND REGIONAL FAULTS:**

The tectonics of the Southern California area are dominated by the interaction of the North American plate and the Pacific plate, which are sliding past each other in a translational manner. Although some of the motion may be accommodated by rotation of crustal blocks such as the western Transverse Ranges (Dickinson, 1996), the San Andreas fault zone is thought to represent the major surface expression of the tectonic boundary and to be accommodating most of the translational motion between the Pacific plate and the North American plate. However, some of the plate motion is accommodated by other northwest-trending, strike-slip faults that are thought to be related to the San Andreas system, such as the San Jacinto fault and the Elsinore fault. Local compressional or extensional strain resulting from the translational motion along this boundary is accommodated by left-lateral, reverse and normal faults (Matti and others, 1992; Morton and Matti, 1993). A map showing the site in relation to regional faults is presented in Appendix "A" (Enclosure "A-4").

### **San Andreas Fault Zone**

The San Andreas fault zone (SAFZ) traverses the eastern side of the Coachella Valley along the southwest flank of the Indio Hills located to the northeast of the site. The SAFZ begins a "bend" in the northwest portion of the Coachella Valley where it assumes a more westerly trend as it bounds the southern flank of the San Bernardino Mountains region. This bend results in a complex interaction of faults in the region northwest of the site, with compressional, translational and extensional styles of faulting of varying age. Closer to the site, the northwest-trending San Andreas fault zone consists



of two main sub-parallel strands. The closest mapped trace of the San Andreas fault is located approximately 4.3 kilometers (2-3/4 miles) northeast of the site. The San Andreas fault is characterized by youthful fault scarps, vegetational lineaments, springs and offset drainages. The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 28 percent ( $\pm 13$  percent) probability to a major earthquake occurring on the San Bernardino Mountains segment of the San Andreas fault between 1994 and 2024. More recent studies of the southern segment of the San Andreas fault, which includes the portion located near the site, suggest that the southern segment is capable of producing a large earthquake (Fialko, 2006).

The Mission Creek, Banning and Garnet Hill segments of the San Andreas fault zone branch from the Coachella Valley segment at a point located approximately 7 kilometers (4-1/2 miles) north of the site. Multiple fault strands distributed across a zone approximately 500 meters wide with concentrated faulting in a 200-meter-wide zone are interpreted for the Mission Creek fault in the Desert Hot Springs area based on seismic imaging studies (Catchings et al., 2009). Near-surface strands of the Mission Creek fault form a groundwater barrier and converge at depth into a vertical to southwest-dipping fault zone (Catchings et al., 2009). The Banning fault dips toward the Mission Creek fault located to the northeast, forming a single fault zone at depth (Catchings et al., 2009).

The SAFZ is considered the most important fault with respect to the potential to produce strong ground shaking at the site.

### **San Gorgonio Pass Fault Zone**

The active San Gorgonio Pass fault zone (SGPFZ), located in the San Gorgonio Pass area approximately 40 kilometers (25 miles) northwest of the site, is a youthful, east-west-trending system of thrust and reverse faults that has been overprinting and lies south of the Banning fault. This fault system forms a portion of the southern boundary of the Transverse Ranges and is also associated with the San Andreas fault zone. The SGPFZ is characterized by several discontinuous, northwest-trending, en echelon faults. These faults form a zone approximately 1 mile wide in early- to mid-Holocene age alluvial fan deposits and are evidence of an active system of strike-slip/thrust



faults that roughly parallel Interstate 10 and bound the mountain front between Banning and Whitewater River (Yule and Sieh, 2003).

#### **Eureka Peak and Burnt Mountain Faults**

The Eureka Peak and Burnt Mountain faults were revealed as a result of surface rupture along the southern portion of the Landers earthquake rupture system. The faults are located approximately 29 kilometers (18 miles) north-northwest of the site and are thought to be significant in transferring slip from the SAFZ into the Eastern California shear zone. Geologic investigations suggest that the last pre-Landers earthquake to occur on the Eureka Peak fault was more than 11,000 years before the present (Yucca Valley, 1995).

#### **Brawley Seismic Zone**

The Brawley seismic zone is a linear zone of seismicity that includes surface and concealed faults located approximately 105 kilometers (66 miles) south-southeast of the site. The Brawley seismic zone is associated with a right step between the Imperial fault zone and San Andreas fault zone, forming an inferred spreading center segment beneath the Imperial Valley (Treiman, 1999). Earthquake swarms associated with the Brawley zone occurred in 1975, 1981, 2005 and most recently in August/September 2012.

#### **San Jacinto Fault Zone**

The San Jacinto fault zone is a system of northwest-trending, right-lateral strike-slip faults. The Anza/Clark segment of the San Jacinto fault zone is located approximately 35 kilometers (22 miles) southwest of the site and is associated with the moment magnitude ( $M_w$ ) 6.4 San Jacinto earthquake of 1954. The most recent surface rupture along the San Jacinto fault zone occurred in 1968 along the Coyote Creek segment during an  $M_w$  6.5 earthquake. More large historic earthquakes have occurred on the San Jacinto fault than any other fault in Southern California (Working Group on California Earthquake Probabilities, 1988). The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 37 percent ( $\pm 17$  percent) probability of a major earthquake



on the San Bernardino Valley segment of the San Jacinto fault for the 30-year interval from 1994 to 2024.

### **Pinto Mountain Fault**

The Pinto Mountain fault is a left lateral, strike-slip fault system trending eastward approximately 28 kilometers (45 miles) from the eastern San Bernardino mountains to the Twentynine Palms area (Jennings, 1994). The closest portion of the fault to the site is located approximately 48 kilometers (29 miles) northwest of the site. This fault exhibits Holocene-age activity and experienced triggered slip during the 1992 Landers earthquake event. Portions of the Pinto Mountain fault are included within Alquist-Priolo Earthquake Fault Zones designated by the State of California.

### **HISTORICAL EARTHQUAKES**

A map of recorded earthquake epicenters is included as Enclosure "A-5" (Epi Software, 2000). This map includes the California Institute of Technology database for earthquakes with magnitudes of 4.0 or greater from 1932 through 2011.

The Working Group on California Earthquake Probabilities (1988) lists seven Mw 6.0 or greater earthquakes that have occurred on the San Jacinto fault since 1899, although they acknowledge that several of the earlier episodes may have occurred on other nearby faults. The Clark segment of the San Jacinto fault zone is associated with the Mw 6.4 San Jacinto earthquake of 1954. The most recent surface rupture along the San Jacinto fault zone occurred in 1968 along the Coyote Creek segment during an Mw 6.5 earthquake. Two earthquakes took place in the San Bernardino Valley. An Mw 6.5 event in 1899 near Lytle Creek and an Mw 6.2 event in 1923 near Loma Linda may have occurred on the San Jacinto fault. However, Fife and others (1976) and Matti and Carson (1991) suggest that the 1923 event took place on an unnamed fault parallel to and east of the San Jacinto fault.



The Coachella Valley segment of the San Andreas fault was the locus for the 1948 Mw 6.5 earthquake in the Desert Hot Springs area and for the 1986 Mw 5.6 earthquake in the North Palm Springs area. Surface rupture occurred on the Mojave segment of the San Andreas fault in the great 1857 Fort Tejon earthquake. Using dendrochronological evidence, Jacoby and others (1987) inferred that a great earthquake on December 8, 1812, ruptured the northern reaches of the San Bernardino Mountains segment. Recent trenching studies have revealed evidence of rupture on the San Andreas fault at Wrightwood within this time frame (Fumal and others, 1993). Comparison of rupture events at the Wrightwood site and Pallett Creek, and analysis of reported intensities at the coastal missions, led Fumal and others (1993) to conclude that the December 8, 1812, event ruptured the San Bernardino Mountains segment of the San Andreas fault largely to the southeast of Wrightwood, possibly extending into the San Bernardino Valley.

Surface slip/rupture occurred on the Burnt Mountain and Eureka Peak faults during the Landers earthquake sequence in 1992. These relatively short faults are postulated to produce moderate earthquakes of magnitude 6.4 to 6.7 during independent earthquake events.

Significant historic earthquakes have not specifically been attributed to the Pinto Mountain fault or San Geronio Pass fault zone. The magnitude 7.3 Landers earthquake occurred June 28, 1992, approximately 64 kilometers (40 miles) northwest of the site. The Mw 7.1 Hector Mine earthquake occurred on October 16, 1999, approximately 97 kilometers (60 miles) north of the site.

### **DESIGN ACCELERATION PARAMETERS**

Based on the geologic setting and anticipated earthwork for construction of the proposed project, the soils underlying the site are classified as Site Class "D", according to the 2010 California Building Code (CBC) and ASCE 7-05.

The design acceleration parameters are summarized in the following table.





Table 1

Design Acceleration Parameters	
Mapped Spectral Acceleration Parameters	$S_s = 1.71$ and $S_1 = 0.69$
Site Coefficients	$F_a = 1.0$ and $F_v = 1.5$
Adjusted Maximum Considered Earthquake Spectral Response Parameters	$S_{MS} = 1.71$ and $S_{M1} = 1.04$
Design Spectral Acceleration Parameters	$S_{DS} = 1.14$ and $S_{D1} = 0.69$

The corresponding value of peak ground acceleration (PGA) from the design response spectrum is 0.46g. Based on the design spectral acceleration parameters and ASCE 7-05, the project is considered Seismic Design Category "D".

### GROUNDWATER

The site is located in Section 26 of Township 5 South, Range 7 East in the Thermal subarea of the Whitewater subbasin of the Coachella Valley Groundwater Basin. Groundwater data in the vicinity of the site are summarized in the following table.

Table 2

Data ID	Date Measured	Depth to Water (feet)	Water Surface Elevation (feet)	Location of Data Point	Reference
1961 Contour Map	1961	20	-30	Regional Mapping	DWR (1964)
Contour Map	1978-1988	10 to 30	-20 to -40	Regional Mapping	CVWD (2010)
Boring 2 (CHJ 13143-3)	10-01-2012	69.3	-79.3	On-site	CHJ (2012)
Boring 5 (CHJ 13143-3)	10-02-2012	70.5	-80.5	On-site	
Boring 10 (CHJ 13143-3)	10-03-2012	72.0	-82.0	On-site	
Boring 1 (CHJ 08659-3)	10-03-2008	62.0	-72.0	On-site	CHJ (2008)



Groundwater was encountered at depths of 70, 70, and 69 feet bgs in Boring Nos. 1, 2 and 3 in our current borings at the site.

Based on the available historic and recent groundwater data for the site and the anticipated groundwater conditions during the project lifetime, the depth to historic high groundwater is 20 feet bgs.

### **LIQUEFACTION POTENTIAL AND SEISMIC SETTLEMENT**

According to the County of Riverside (2012) and the City of Indio (2006), the site is located within an area identified as having a potential for liquefaction based on the potential for shallow groundwater.

Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. Soil types susceptible to liquefaction include sand, silty sand, sandy silt and silt, as well as soils having a plasticity index (PI) less than 7 (Boulanger and Idriss, 2006). Loose soils with a PI less than 12 and moisture content greater than 85 percent of the liquid limit are also susceptible to liquefaction (Bray and Sancio, 2006). For sandy soils, the geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth), 2) the presence of unconsolidated sandy alluvium, typically Holocene in age, and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

For clayey soils, recent studies indicate that deposits of clays and plastic silts (i.e., cohesive soils) have also experienced failure during earthquakes (Idriss and Boulanger, 2008). This kind of failure is called cyclic softening. "The term '*cyclic softening*' is used in reference to strength loss and deformation in clays and plastic silts, while the term '*liquefaction*' is used in reference to strength loss and deformation in saturated sands and other cohesionless soils. As such, the terms '*cyclic*



*softening* and *liquefaction* can also be used in reference to the engineering procedures that have been developed for these respective soil types" (Idriss and Boulanger, 2008).

Due to the potential for the presence of shallow groundwater beneath the site (20 feet), the liquefaction potential of the site has been evaluated based on the SPT and cone penetrometer test (CPT) data obtained and using the simplified procedure described by Seed and Idriss (1982), Seed and others (1985), modified in the 1996 National Center for Earthquake Engineering Research (NCEER) and 1998 NCEER/National Science Foundation (NSF) workshops (Youd and Idriss, 2001) and recently summarized by Idriss and Boulanger (2008). The method of evaluating liquefaction potential consists of comparing the cyclic stress ratio (CSR) developed in the soil by the earthquake motion to cyclic resistance ratio (CRR), which will cause liquefaction of the soil for a given number of cycles. In the simplified procedure, the CSR developed in the soil is calculated from a formula that incorporates ground surface acceleration, total and effective stresses in the soil at different depths (which in turn are related to the location of the groundwater table), non-rigidity of the soil column and a number of simplifying assumptions.

For sandy soils, the CRR that will cause liquefaction is related to the relative density of the soil, expressed in terms of SPT blowcounts  $(N_1)_{60}$  (Seed and Idriss, 1982; Seed and others, 1985; Youd and Idriss, 2001; Idriss and Boulanger, 2008), cone penetration resistance ( $q_{c1N}$ ) (Robertson and Wride, 1998; Youd and Idriss, 2001; Idriss and Boulanger, 2008) or shear wave velocity ( $V_{s1}$ ) (Andrus and Stokoe, 2000; Youd and Idriss, 2001; Andrus and others, 2004), all normalized for an effective overburden pressure of 1 ton per square foot and corrected to equivalent clean sand resistance. For clayey soils, the CRR is related to cyclic undrained shear strength ratio,  $s_u/\sigma_{vc}$  (Idriss and Boulanger, 2008). For this investigation, SPT blowcounts were obtained and utilized in the analysis. A projected future depth to groundwater of 5 feet bgs was utilized to calculate the liquefaction potential in the area. The recommended design PGA of 0.46g and a deaggregated earthquake magnitude of 7.65 were utilized as input into the liquefaction analysis program GeoSuite 2008, version 2.2 (Yi, 2013).



Prediction of seismic-induced settlement is also very important. Seismic-induced settlement includes settlement that occurs both in dry sands and saturated sands (California Geological Survey, 2008). Severe seismic shaking may cause dry sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive and fine-grained soils being less prone to significant settlement. For saturated soils, significant settlement is anticipated if the soils exhibit liquefaction during seismic shaking.

The methods for evaluating seismic settlement in saturated sands can generally be classified into two groups. The method for the first group was developed during the 1970s and 1980s, generally based on the relationship between cyclic stress ratio,  $(N_1)_{60}$ , and volumetric strain (Silver and Seed, 1971; Lee and Albaisa, 1974; Tokimatsu and Seed, 1987). The method for the second group was developed in the early 1990s with the paper by Ishihara and Yoshimine (1992) as the first publication in the category, modified and improved by various researchers (Robertson and Wride, 1998; Yoshimine et al., 2006; Idriss and Boulanger, 2008; and Yi, 2010a), and is generally based on the relationship between volumetric strain and the factor of safety for liquefaction. Idriss and Boulanger (2008) modified the methods to incorporate both SPT and CPT data. Yi (2010b, 2010c) modified the methods to incorporate shear wave velocity data.

Research related to the estimation of dry sand settlement during earthquake excitation was initiated in the early 1970s by Silver and Seed (1971), followed by the works of several researchers (Seed and Silver, 1972; Pyke et al., 1975; Tokimatsu and Seed, 1987; Pradel, 1998). A simplified method of evaluating earthquake-induced settlements in dry, sandy soils based on the Tokimatsu and Seed procedure has been developed by Pradel (1998) and is recommended by Martin and Lew (1999) as one of the standard methods for the estimation of earthquake-induced settlements of dry sands in California. All of these methods generally utilize SPT data.

The procedures and corrections recently summarized by Idriss and Boulanger (2008) were utilized to evaluate the liquefaction potential and seismic settlement of saturated sandy soils for SPT data. The seismic settlement of dry sands was evaluated based on the Pradel's method (Pradel, 1998) and Yi's



modified method for CPT data (Yi, 2010a). All of these methods were incorporated into a liquefaction and seismic settlement program, GeoSuite 2008, version 2.2 (Yi, 2013).

Liquefaction potential was evaluated for the soil profiles encountered in exploratory borings using an SPT sampler. Seismic settlement was estimated for the same soil profiles utilized in the liquefaction analyses. The results of liquefaction potential and seismic settlement evaluations are shown in Enclosures "D-1" through "D-6".

Our calculations indicate that liquefaction could occur within thin localized layers. However, overall, liquefaction potential is considered to be insignificant. Our analysis indicates that seismic settlement (including liquefaction-induced settlement and dry sand settlement) could range from approximately 1.3 to 2.0 inches based on SPT data soil profiles using the Idriss and Boulanger (2008) method. We estimate a maximum seismic settlement of 2 inches and a maximum seismic differential settlement of 3/8 inch over 40 feet. Seismic settlement will generally occur in soil layers below 20 feet bgs to as deep as 65 feet bgs.

Examination of the liquefaction analysis results indicates that the maximum thickness of the liquefiable layer ( $H_2$ ) was 5 feet. According to Ishihara (1985), the surface manifestation of liquefaction (such as boils, ground fissure, etc.) can be minimized by adequate thickness of the non-liquefiable crust ( $H_1$ ) at the site. For the thickness of the liquefiable layer ( $H_2$ ) of 5 feet, Ishihara's charts indicate that the surface manifestation effects on the structure will be absent if the non-liquefiable crust is thicker than 13.5 feet for a maximum ground acceleration of 0.4 to 0.5g. Based on these data, it is the opinion of this firm that the surface manifestation effects of liquefaction on the structure will be negligible. However, seismic settlement and differential settlement are anticipated.

### **SLOPE STABILITY AND LANDSLIDE POTENTIAL**

The relatively flat-lying topography of the site precludes the potential for slope instability or landslides. Temporary slopes for construction should be managed according to applicable safety and



parking structure regulations. The soils on-site are considered to be Type C with regard to CAL OSHA excavation standards. The potential for landsliding or lateral spreading is considered to be very low.

**FLOODING**

Evidence of recent flooding of the site and surrounding area was not observed on the aerial photographs reviewed. As depicted on Flood Insurance Rate Map No. 06065C2253G (FEMA, 2008) dated August 28, 2008, the site is located in a shaded zone "X". This zone is described in the map legend as:

"Zones B and X (shaded) are areas of 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance (base flood) sheet flow flooding with average depths of less than 1 foot, areas of base flood stream flooding with a contributing drainage area of less than 1 square mile, or areas protected from the base flood by levees. No Base Flood Elevation (BFEs) or depths are shown in this zone, and insurance purchase is not required."

According to the County of Riverside (2012), the site is not located within a potential inundation zone for seismically induced dam/reservoir failure from dams or reservoirs. The site is not located in a coastal area. No large water storage facilities are known to exist within the area of the site. Therefore, the potential for precipitation-induced or seismically induced flooding due to dam failure or seiche to affect the site is considered to be low.

**SUBSIDENCE POTENTIAL**

Subsidence due to groundwater withdrawal is documented in the vicinity of the site and in other areas of the Coachella Valley (Sneed et al., 2001; Sneed et al., 2002; Sneed and Brandt, 2007; CVWD, 2010; Sneed, 2010). According to the Coachella Valley Water District (2010), the demand for water has exceeded the deliveries of imported surface water to the East Valley area of the Coachella



Valley since the 1970s, resulting in increased groundwater pumping and groundwater level declines. By 2005, levels in many wells in the East Valley area had declined 50 to 100 feet.

Land subsidence studies by Ikehara and others (1997) reported that subsidence may have been as much as 1/2 foot in the southern parts of Coachella Valley between 1930 and 1996. A more recent study (Sneed, 2010) documented three main areas of subsidence in the Coachella Valley: the Palm Desert, Indian Wells and La Quinta areas. The site is not located within a documented subsidence area. The 2007 report did not establish a direct relation between subsidence and groundwater pumping/declining water levels; however, the 2010 report suggests a direct relationship between water level declines and subsidence in the Coachella Valley region.

Ground subsidence alone is not expected to pose a significant hazard to the project. Ground cracking may be a potential hazard should significant subsidence occur in the future. The potential for significant subsidence during the lifetime of the project is considered to be low to very low.

### **HYDROCONSOLIDATION**

To evaluate the potential deformation that may be caused by the addition of water, hydroconsolidation tests were performed on selected, representative relatively undisturbed samples. The results are shown in Enclosure "C-3". Based on the test results, the site soils have moderate hydroconsolidation potential.

### **CONCLUSIONS**

On the basis of our research and field and laboratory investigations, it is the opinion of this firm that construction of the proposed East County Detention Center parking structure is feasible from a geotechnical engineering standpoint, provided the recommendations contained in this report are implemented during planning, grading and construction.



Moderate to severe seismic shaking can be expected at the site.

No evidence of recent significant flooding of the site was observed during the field reconnaissance or on the aerial images reviewed. The upper soils encountered within the site consist of silty sands and silt that are moderately susceptible to erosion by wind and water.

Groundwater was encountered at depths ranging from 69 to 70 feet bgs in our exploratory borings at the site. The historical high groundwater depth for this site is 20 feet. Liquefaction could occur within localized thin layers during the design earthquake. Because of the adequate thickness of the non-liquefiable crust at the site, surface manifestation effects of liquefaction on the structure will be minimal. However, seismic settlement and differential settlement are anticipated.

Refusal to further advancement of the drilling augers was not experienced.

Slight caving was noted within the exploratory borings utilized for this investigation; trenches, larger diameter borings or excavations that remain open for longer periods of time may be subject to caving.

Bedrock was not encountered in any of our exploratory borings.

Fill classified as silty sand (SM) was encountered to depths of 3 to 7 feet below existing grade in the exploratory borings. Additional areas of fill may be present between boring locations within the site.

Based on the classification and density of and the lack of significant soil cementation exhibited by the soils encountered in our exploratory borings, site grading and utility trenching are expected to be feasible with conventional heavy grading and trenching equipment, respectively.

Conditions conducive to landsliding or lateral spreading (lurching) are not present at the site. No significant slopes are proposed.





The site is not within a documented subsidence area. Should significant subsidence occur in the future, ground cracking may be a potential hazard. The hazard is considered to be low to very low.

Based on the expansion index test results, significant expansion is not anticipated.

Hydroconsolidation test results indicate moderate hydrocollapse potential.

Based upon our field investigation and test data, it is our opinion that the near-surface soils, undocumented fill and underlying native soils in their present condition will not provide uniform or adequate support for the proposed structure or other site improvements.

Settlement resulting from seismic shaking may be on the order of 2 inches and 3/8 inches over 40 feet differentially. Static settlement from anticipated foundation loading may result in a total settlement on the order of 1 inch and a differential settlement of approximately one half of the total. Due to the presence of relatively deep undocumented fills and loose native soils, we are recommending subexcavation of the upper 8 feet of existing soils and replacement as properly compacted fill within the proposed parking structure area if the structure is to be supported by conventional shallow foundations.

Subexcavation to a minimum depth of 3 feet within remaining settlement-sensitive areas to be graded (parking areas, hardscape areas and any other settlement-sensitive areas) is recommended. This recommended subexcavation operation should include removal of any undocumented fills and observation of the exposed surface by the project geologist or geotechnical engineer prior to processing for fill placement. The removed and cleaned soils may be reused as properly compacted fill.

Prior to replacement of the excavated soil, the bottom of the excavation should be observed and approved by the project geologist, scarified to a depth of approximately 12 inches, moistened to near optimum moisture content and recompacted to a minimum relative compaction of 95 percent (as per ASTM D1557). The excavation should then be refilled with properly compacted fill. The limits of



the structure pad area include the parking structure area to a distance of 10 feet beyond footings, where possible.

The mandatory removal and replacement of the upper 8 feet of existing soil will accommodate footings as deep as 5 feet below existing grade. If footings extending beyond a depth of 5 feet are proposed, additional removal and replacement will be necessary to provide the recommended fill mat thickness.

**GENERAL RECOMMENDATIONS**

**SEISMIC DESIGN CONSIDERATIONS:**

Based on the geologic setting and anticipated earthwork for construction of the proposed project, the soils underlying the site are classified as Site Class "D, stiff soil profile", according to the 2010 CBC and ASCE 7-05. The design acceleration parameters are summarized in the table below.

Table 3

<b>Design Acceleration Parameters</b>	
Mapped Spectral Acceleration Parameters	$S_s = 1.71$ and $S_1 = 0.69$
Site Coefficients	$F_a = 1.0$ and $F_v = 1.5$
Adjusted Maximum Considered Earthquake Spectral Response Parameters	$S_{MS} = 1.71$ and $S_{MI} = 1.04$
Design Spectral Acceleration Parameters	$S_{DS} = 1.14$ and $S_{DI} = 0.69$

The corresponding value for the design PGA is 0.46g.

**GENERAL SITE GRADING:**

It is imperative that no clearing and/or grading operations be performed without the presence of a representative of the geotechnical engineer. An on-site, pre-job meeting with the owner, the contractor and the geotechnical engineer should occur prior to all grading-related operations.



Observation, testing, documenting and reporting of the grading operation should be performed by the geotechnical engineer of record. A final compaction report should be issued by the geotechnical engineer of record at the completion of the grading operation. Operations undertaken at the site without the geotechnical engineer present may result in exclusion of affected areas from the final compaction report for the project.

Grading of the subject site should be performed, at a minimum, in accordance with these recommendations and with applicable portions of the 2010 CBC. The following recommendations are presented for your assistance in establishing proper grading criteria.

**INITIAL SITE PREPARATION:**

All areas to be graded should be stripped of significant vegetation and other deleterious materials. These materials should be removed from the site for disposal. Any existing utility lines should be traced, removed and rerouted from areas to be graded.

Any existing undocumented fills encountered during grading should be completely removed from all areas to be graded and cleaned of significant deleterious materials; they may be reused as compacted fill.

To assist in undocumented fill and/or loose native soil identification and removal, it is our opinion that all areas to be graded should be subexcavated to a minimum depth of 3 feet bgs. Depending on the foundation type selected, additional removal may be necessary. If conventional shallow foundations are utilized, all loose material in the parking structure pad area should be completely removed. A minimum removal of 8 feet should be performed. The removal should extend beyond the footing at the bottom of the excavation to a distance of 10 feet, where possible. For areas where the removal width is less than 10 feet, lateral retaining structures, such as sheet piles installed during excavation, should remain permanently.



Removal depths greater than 8 feet may be necessary. An engineering geologist from this firm should be present during the subexcavation operation prior to scarification and refilling in order to identify existing fills or loose soils extending below this depth. A relative compaction of at least 85 percent may be utilized as preliminary quantitative criteria to supplement the engineering geologist's qualitative evaluation of suitable base of excavation. The bottoms of all excavations should be observed and approved by the engineering geologist.

If deep foundations are utilized, all undocumented fill in the parking structure pad area should be completely removed. A minimum removal of 3 feet should be performed. The removal should extend beyond the foundation edge at the bottom of the excavation to a distance of 10 feet, where possible.

In addition, it is our recommendation that all existing undocumented fills and loose soils under any proposed paved or other flatwork areas be removed and replaced with properly compacted and controlled fills. If this is not done and any undocumented fills are left, premature structural distress of the paved and flatwork areas can be expected.

Cavities created by removal of subsurface obstructions should be thoroughly cleaned of loose soil, organic matter and other deleterious materials; shaped to provide access for construction equipment; and backfilled as recommended for site fill.

#### **PREPARATION OF FILL AREAS:**

The bottoms of the excavations should be observed by the engineering geologist to verify the complete removal of undocumented fill material and loose/disturbed native soils. Following approval, the bottoms should be scarified to a depth of approximately 12 inches, brought to near optimum moisture content and recompacted to at least 95 percent relative compaction (ASTM D1557).



**COMPACTED FILLS:**

The on-site soils should provide adequate quality fill material, provided they are free from organic matter and other deleterious materials.

Import fill, if needed, should be inorganic, non-expansive, granular soil free from rocks or lumps greater than 6 inches in maximum dimension. Sources for import fill should be observed and approved by the geotechnical engineer prior to their use.

Fill should be spread in near-horizontal layers, approximately 8 inches in thickness. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift should be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to near optimum moisture content and compacted to a minimum relative compaction of 95 percent in accordance with ASTM D1557. Our experience on nearby projects with similar soil conditions indicates that proper mixing of the soils to obtain the desired moisture content is critical in obtaining the desired compaction.

It should be noted that very moist soils were encountered during our investigation. These soils were generally deeper than the anticipated excavation depths; however, very moist, near-surface soils may be encountered during grading. Such soils will require specialized grading techniques such as spreading, drying and mixing to obtain the recommended moisture content.

Based upon the relative compaction of the native soils tested during this investigation and the relative compaction anticipated for compacted fill soils, we estimate a compaction shrinkage of approximately 10 to 15 percent. Therefore, 1.10 to 1.15 cubic yards of in-place soil material would be necessary to yield 1 cubic yard of properly compacted fill material. In addition, we would anticipate subsidence of approximately 0.1 foot. These values are exclusive of losses due to stripping, tree removal or the removal of other subsurface obstructions, if encountered, and may vary due to differing conditions within the project boundaries and the limitations of this investigation.



Values presented for shrinkage and subsidence are estimates only. Final grades should be adjusted and/or contingency plans to import or export material should be made to accommodate possible variations in actual quantities during site grading.

It is crucial that the geotechnical engineer be present to observe these operations. Further recommendations may be made in the field, depending on the actual conditions encountered.

**LATERAL LOADING:**

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 350 pounds per square foot (psf) per foot of depth. Base friction may be computed at 0.36 times the normal load. Base friction and passive earth pressure may be combined without reduction.

Other than conservative soil modeling, the lateral passive earth pressure and base friction values recommended do not include factors of safety. If the design is to be based on allowable lateral resistance values, we recommend that minimum factors of safety of 1.5 and 2.0 be applied to the friction coefficient and passive lateral earth pressure, respectively. The resulting allowable lateral resistance values are:

**Table 4**

	<b>Ultimate</b>	<b>Allowable</b>	<b>Factor of Safety</b>
<b>Passive Lateral Earth Pressure (psf/ft)</b>	350	175	2.0
<b>Base Friction Coefficient</b>	0.36	0.24	1.5

For preliminary retaining wall design, a lateral active earth pressure developed at a rate of 35 psf per foot of depth and 20 degrees from horizontal should be utilized for unrestrained conditions (resulting in a horizontal component of 33 psf and a vertical component of 12 psf per foot of depth). The



typical earth pressure distributions are included in Enclosure "D-7" for an assumed wall height of 15 feet.

For restrained conditions, an at-rest earth pressure of 60 psf per foot of depth should be utilized. The "at-rest" condition applies toward braced walls that are not free to tilt. The "active" condition applies toward unrestrained cantilevered walls where wall movement is anticipated. The structural designer should use judgment in determining the wall fixity and may utilize values interpolated between the "at-rest" and "active" conditions where appropriate.

For walls 10 feet high or less, a uniform construction surcharge load of 72 psf or an alternative traffic surcharge load of 100 psf should be applied in addition to active earth pressure. For walls higher than 10 feet, a uniform construction surcharge load of 72 psf or an alternative traffic surcharge load of 100 psf should be applied only up to 10 feet. The resulting additional surcharge pressure should be applied to the wall as a rectangular distribution, from top to bottom, or 10 feet, whichever is smaller.

These values should be verified prior to construction when the backfill materials and conditions have been determined. These values are applicable only to level, properly drained backfill with no additional surcharge loadings and do not include a factor of safety other than conservative modeling of the soil strength parameters. If inclined backfills are proposed, this firm should be contacted to develop appropriate active earth pressure parameters. If import material is to be utilized for backfill, an engineer from this firm should verify the backfill has equivalent or superior strength values.

Backfill behind retaining walls should consist of a soil of sufficient granularity that the backfill will properly drain. The granular soil should be classified per the USCS as GW, GP, SW, SP, SW-SM or SP-SM. Surface drainage should be provided to prevent ponding of water behind walls. A drainage system should be installed behind all retaining walls consisting of either of the following:



1. A 4-inch diameter perforated PVC (Schedule 40) pipe or equivalent at the base of the stem encased in 2 cubic feet of granular drain material per linear foot of pipe or
2. Synthetic drains such as Enkadrain, Miradrain, Hydraway 300 or equivalent.

Perforations in the PVC pipe should be 3/8 inch in diameter. Granular drain material should be wrapped with filter cloth such as Mirafi 140 or equivalent to prevent clogging of the drains with fines. Walls should be waterproofed to prevent nuisance seepage. Water should outlet to an approved drain.

#### **SEISMIC LATERAL EARTH PRESSURE:**

The seismic earth pressure acting on a cantilevered retaining wall was calculated by the Mononobe-Okabe ("M-O") method (Okabe, 1926; Mononobe and Matsuo, 1929). It is recommended by AASHTO (LRFD Bridge Design Specifications, Fifth Edition, 2010, Section C11.8.6) that the pseudostatic horizontal seismic coefficient ( $k_h$ ) be taken equal to  $k_h=0.50 \times \text{PGA}=0.23g$ . The pseudostatic vertical seismic coefficient ( $k_v$ ) is usually taken as one-half of  $k_h$ . For retaining walls with on-site soils as backfill materials, a unit weight of 119 pounds per cubic foot (pcf) and a friction angle of 30 degrees were utilized in the calculation. These values should be verified prior to construction when the backfill materials and conditions have been determined and are applicable only to level, properly drained backfill with no additional surcharge loadings.

A total lateral active seismic earth pressure (including static active earth pressure) developed at a rate of 55 psf per foot of depth (psf/ft) and 20 degrees from horizontal should be utilized for unrestrained conditions (resulting in a horizontal component of 51 and a vertical component of 19 psf/ft). A triangular distribution of total seismic earth pressure should be used in the design (Atik and Sitar, 2010). Refer to Enclosure "D-7".





The above lateral earth pressures are for level backfill. If inclined backfills are proposed, this firm should be contacted.

### **POTENTIAL EROSION:**

The potential for erosion should be mitigated by proper drainage design. Water should not be allowed to flow over graded areas or natural areas so as to cause erosion. Graded areas should be planted or otherwise protected from erosion by wind or water.

### **EXPANSIVE SOILS:**

Silty soil materials tested during this investigation exhibited a "very low" potential for expansion (expansion index of 2) in accordance with ASTM D4829. The results of these tests are presented in the Appendix "C". Based on these results, it is the opinion of this firm that special structural design and/or construction procedures to specifically mitigate the effects of expansive soil movements are not necessary. Requirements for reinforcing steel to satisfy structural criteria are not affected by this recommendation. Additional evaluation of soils for expansion potential should be conducted by the geotechnical engineer during construction.

### **SOIL CORROSION:**

Selected samples of material were delivered to our subconsultant, HDR|Schiff, for soil corrosivity testing. Laboratory testing consisted of pH, resistivity and major soluble salts commonly found in soils. The results of the laboratory tests appear in Enclosure "C-13". These tests have been performed in order to screen the site for potentially corrosive soils.

Values from the soil tested indicate that the soils are "mildly corrosive" and "corrosive" to ferrous metals at as-received and saturated conditions, respectively. Specific corrosion control measures, such as coating of pipe with non-corrosive material or alternative non-metallic pipe material, are considered to be needed if there is a potential for saturated soils.



Results of the soluble sulfate testing indicate a "negligible" anticipated exposure to sulfate attack, as indicated in Appendix "C". Based upon the criteria from Table 4.3.1. of the American Concrete Institute Manual of Concrete Practice (2000), no special measures, such as specific cement types, water-cement ratios, etc., will be needed for this "negligible" exposure to sulfate attack.

Soluble chloride content of soil was not at levels high enough to be of concern with respect to corrosion of ferrous materials. It was, however, at levels high enough to be of concern with respect to corrosion of reinforcing steel. The results should be considered in combination with the soluble chloride content of the hardened concrete in determining the effect of chloride on the corrosion of reinforcing steel.

Ammonium contents did not indicate a concern with respect to corrosion of buried copper, while nitrate contents did.

CHJ Consultants does not practice corrosion engineering. If further information concerning the corrosion characteristics or if interpretation of the results submitted herein is required, then a competent corrosion engineer should be consulted.

**PRELIMINARY FLEXIBLE PAVEMENT DESIGN:**

The following recommended structural sections were calculated based on traffic indices (TIs) provided in the Caltrans Highway Design Manual for Safety Roadside Rest Areas (Caltrans, 2008). Based upon our preliminary sampling and testing, the structural sections tabulated below should provide satisfactory AC pavement.