0220-03145-0347

TRANSMITTAL

TO	DATE	COUNCIL FILE NO.
Council	08-20-20	20-0856
FROM		**COUNCIL DISTRICT**
Proposition K – L.A. For Kids Steering Committee		3

At its meeting held on July 30, 2020, the L.A. for Kids Steering Committee adopted the recommendations of the attached Bureau of Engineering (BOE) report, which is hereby transmitted for Council consideration. Approval of the report recommendation would: 1) Direct program staff to work with the Council Office and the Department of Recreation and Parks (RAP) to identify up to $975,000 in funding to acquire a portion of the adjacent parcels owned by the Magnolia Science Academy (Magnolia); 2) Request that the Board of Recreation and Parks Commissioners (Board) approve the acquisition and related authorities, including an associated parking agreement; and, 3) Authorize BOE to continue implementation of the design phase and proceed with the proposed acquisition concurrently.

A determination was made during the pre-design phase that additional space would be needed to accommodate the programming needs for the project's roller hockey, ice skating rink and parking lot components. In June 2020, the departments of General Services (GSD), Recreation and Parks (RAP), and the Office of City Attorney were instructed by Council Motion to negotiate a purchase and sale agreement with the owner of the adjacent property, Magnolia, to acquire the additional space required of approximately 6,625 square feet (C.F. 20-0856). Staff was instructed to negotiate a sale price maximum of up to $975,000 based on GSD's appraised value. There is no immediate impact on the General Fund at this time. However, in addition to the acquisition costs, there is also a $5 million construction shortfall that requires addressing by 2021-22 to maintain scheduled construction activities.

Yolanda Chavez

for Richard H. Llewellyn, Jr
City Administrative Officer
Chair, L.A. For Kids Steering Committee

RHL:BSW:05210022

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE
L.A. FOR KIDS STEERING COMMITTEE MEETING, JULY 30, 2020
AGENDA ITEM (6)
RESEDA SKATE PARK FACILITY PROJECT - ACQUISITION & DEVELOPMENT
CD3, SPECIFIED ID #S-23)
BUREAU OF ENGINEERING

DATE: July 30, 2020

TO: Proposition K – L.A. for Kids Steering Committee

FROM: Neil Drucker, Program Manager
Proposition K, L.A. for Kids Program
Bureau of Engineering

NEIL DRUCKER
Electronically signed by
Neil Drucker

SUBJECT: RESEDA SKATE FACILITY PROJECT (PROPOSITION K – L.A. FOR KIDS PROGRAM SPECIFIED, PROPOSITION K ID # S-23, CD 3) RECOMMENDATIONS RELATIVE TO THE PROPOSED SITE ACQUISITION OF A 25' BY 265' PORTION OF THE PRIVATELY OWNED PARKING LOT LOCATED AT 18216 SHERMAN WAY, TO ADD ADDITIONAL PROPERTY TO PREVIOUSLY ACQUIRED PROPERTY LOCATED AT 18210 AND 18128 SHERMAN WAY

RECOMMENDATIONS

The Bureau of Engineering (BOE) requests that the Proposition K - L.A. for Kids Steering Committee (LAFKSC) recommends that the Los Angeles City Council:

1. Direct Prop K staff to work with Council District No. 3 (CD3), and the Department of Recreation and Parks (RAP) to identify funding to acquire a 25' by 265' Linear Foot portion of the adjacent parcels owned by the Magnolia Science Academy (Magnolia), located at 18216 Sherman Way (APNs 2125-036-105 and 2125-036-106) (Additional Parcels), as shown in the attached map (Attachment 1) for an amount not to exceed $975,000;

2. Requests to the Board of Recreation and Parks Commissioners (Board) that the Board take all necessary actions to proceed with negotiations with Magnolia to acquire the Additional Parcels;

3. Direct staff to work with Magnolia, to determine if the City and Magnolia can enter into a shared Parking Memorandum of Understanding (Parking MOU), or other equivalent agreement, as a part of the acquisition negotiations to establish the parking during operating hours of the school and skating facility;

4. Instruct staff to report to the Board and Council to request approval of the terms and conditions of the acquisition and Parking MOU prior to execution of the agreements; and

5. Authorize the Bureau of Engineering to proceed with the Design Phase of the Reseda Skate Facility project.

DISCUSSION/BACKGROUND

The Proposition K – L.A. for Kids Program (Prop K) ballot measure includes a specified project (Proposition K ID #S-23), in Council District No. 3, for the acquisition and construction of an ice hockey and roller blading facility in Reseda, Los Angeles California.

Acquisition

CRA/LA Parcels

On August 18, 2017, Council adopted a Motion (Blumenfield – Buscaino) (C.F. 17-0832) instructing the Department of Recreation and Parks, with the assistance of the Bureau of Engineering (BOE) and other involved departments to proceed with the acquisition of a property located at 18210 Sherman Way owned by the CRA/LA, a Designated Local Authority and successor agency to the former Community Redevelopment Agency of the City of Los Angeles (current owner referred herein as CRA/LA) and to prepare a financing plan for the development of an ice and roller rink facility at the property, which is located in Reseda. The property consists of four parcels (Los Angeles County Assessor's Parcel Numbers (APN) 2125-036-900, 2125-036-901, 2125-036-902, and 2125-036-903) (CRA/LA Parcels).

A working group team was formed to coordinate functions needed to implement Council's instructions, consisting of staff from Council District 3 (CD 3), the Office of the Mayor, City Administrative Officer, Chief Legislative Analyst, City Attorney, the Economic and Workforce Development Department (EWDD), the Department of Recreation and Parks (RAP), the Department of Public Works, Bureau of Engineering (BOE), and the Department of General Services (GSD).

Prior to the adoption of the aforementioned Motion, the City had already entered into an Option Agreement (Property Retained for Future Development) with the CRA/LA to acquire the CRA/LA Parcels. Under that Option Agreement, the City had the exclusive right to exercise its option to acquire the CRA/LA Parcels, which consisted of multiple parcels on non-contiguous properties. As required, the City provided due notice, in writing, to the CRA/LA by March 2, 2018, that the City wished to exercise the option to acquire.

On January 17, 2018, the Board authorized RAP to proceed with the acquisition of the property for park purposes (Board Report No. 18-014). The Board action included various requests for GSD to implement the property acquisition on behalf of RAP. The Board also approved the proposed conceptual plan for the project (Option 3**,** Attachment 2) to locate the roller hockey rink and the ice skating rink on the 18210 Sherman Way parcel and locate the parking lot on the 18128 Sherman Way parcel. The conceptual plan included:

1. A 60' x 120' roller hockey rink built on grade with a shade structure and 1,200 square foot building to house related rink offices, restrooms and storage.

2. An approximately 26,800 square foot ice rink building with a 85' x 200' ice surface, cooling infrastructure, ice grooming equipment storage, Zamboni machine room, locker rooms for two teams, restrooms, office space, public seating, skate rental area, pro shop and concessions space, and other ancillary spaces required by ice hockey and figure skating.

3. A 127-space parking lot with driveways, fencing, landscaping and security lighting

The properties were acquired on September 7, 2018, after a series of environmental due diligence studies were conducted. Subsequently, after acquisition, the BOE Environmental Management and Geotechnical staffs and their consultants conducted additional environmental site assessments, which resulted in a recommended soil management plan. The soil management plan includes procedures to address soil management, monitoring and procedures during any soil removal, grading and trenching activity to address the potential that hazardous or other impaired soil is identified (Attachment 3).

Additional Parcels

After the acquisition of the CRA/LA Parcels, BOE initiated predesign activities for the project in November 2019. During the predesign, it was determined that additional space would be needed in order to achieve the optimal and most cost efficient design for the facility that also meets all the programming and operation and maintenance requirements.

Motion (Blumenfield – Koretz) introduced on June 30, 2020 instructs the Department of General Services, with the assistance of RAP and the City Attorney, to negotiate a purchase and sale agreement with the owner of the adjacent property, Magnolia Science Academy (Magnolia), to acquire approximately 6,625 sq. ft. (25' x 265') of the surface parking lot located at 18216 Sherman Way (APNs 2125-036-105 and 2125-036-106) (Additional Parcels) to accommodate the development plans for the Reseda Skate Facility

(C.F. 20-0856). The Additional Parcels, if acquired, would be used to expand the footprint of the Reseda Skate Facility, to allow the inclusion of adequate Fire Lane and other requirements, without the need to construct a multi-story Ice Skating Facility on the current site.

The appraisal obtained by GSD dated February 28, 2020 includes two valuations of the Additional Parcels. One valuation is the property value based on comparables in the area (Base Property Value) ($525,000) and the second valuation includes the Base Property Value plus Severance Damages due to the loss of parking revenue for 17 parking spaces, potential loss if the parcel was developed for office space, and loss of existing site improvements. The second valuation is $975,000. CD 3 and City staff are currently in discussions with Magnolia to determine a purchase price and the amount may be less than $975,000 if the City and Magnolia enter into a shared Parking Memorandum of Understanding (discussed further below).

CD 3 is currently working with RAP, CLA and the CAO to identify funding for the acquisition

of the Additional Parcels. There is a verbal commitment from CD 3 to utilize their AB1290 funds to satisfy this acquisition. A portion of the Proposition K funding was already utilized for the acquisition of the CRA/LA Parcels and the remaining Proposition K funding is earmarked for the construction of the project. Therefore, Proposition K will not be used to acquire the Additional Parcels.

Design Status

On November 4, 2019, the Board of Public Works (BPW) authorized the City Engineer to award a design contract, in the amount of $2,200,000, to Brooks + Scarpa (Consultant) (Contract No.C-124703), from the Pre-Qualified On Call (PQOC) Consultant list, to provide Architectural & Engineering Design Services for the Reseda Ice Hockey/Ice Skating and Roller Rink Facility, as indicated in Task Order Solicitation (TOS) No. 57 Request for Proposal. The Notice to Proceed, in the full amount of $2,200,000, was issued on November 19, 2019.

The scope of the design services was divided into five main parts: Predesign, Design, Bid & Award, Construction, and Post Construction. As part of the Predesign, the Consultant, RAP, AEG, and City staff conducted meetings to establish programming space, operating and maintenance requirements for the Reseda Skate Facility.

Currently, the overall project is at the end of Predesign and at the start of Design. At the

Predesign meetings, it was discussed that there are two leading structure types to be considered that would help expedite the construction and provide cost savings: the "Butler" prefabricated structure and a "Sprung" structure. The Consultant has indicated

that the use of either of these structure types with the current programming, operating and maintenance requirements, will most likely result in the need to have a two-story facility in order to fit within the current footprint, which greatly increases the cost of the construction of the building and maintenance.

Magnolia has indicated its interest in negotiating with the City to allow the City to acquire a partial, non-conforming lot to add space to the skating facility. If consummated, the additional space provided by this acquisition will greatly increase the chance to have all of the administrative facilities and programing space on one floor, thereby achieving cost savings to the project.

The Consultant has informed BOE that, even with the purchase of the Additional Parcels, a second floor will be needed for mechanical and electrical equipment rooms. The BOE Architectural Division is currently looking at options for site layouts which might be able to eliminate this concern.

As part of the negotiations, the City is requesting that Magnolia enter a Shared Use Parking Memorandum of Understanding with RAP, which could allow the City and Magnolia greater flexibility in establishing the parking available during the operating hours of the school and skating facility.

The BOE has been directed by the 3rd Council District to issue the Notice to Proceed with Design at the earliest possible convenience, assuming that the acquisition of the subject portion of the adjacent parcel will occur. Therefore, BOE has issued an Authority to Proceed with Schematic Design (ATP) as of June 11, 2020. The ATP authorize the consultant to proceed the design with the additional 25 feet of land included in the building footprint. The intent is to save time and expedite the project schedule while waiting for the acquisition of the parcel. It should be noted that the NTP for the full scope of work, including the construction documents, will require further authorization for the Board of Public Works.

CD 3 **Budget**

The overall budget for the project(s) is as follows:

Proposed Budget – Reseda Skate Facility	
	Amount
Original Budget as approved January 25, 2018*	$ 25,705,000
Estimated Budget after the Environmental Investigation	$31,379,700
Estimated Cost of Acquisition of Additional Parcels**	$975,000
TOTAL PROJECT COST:	$ 32,354,00
TOTAL AVAILABLE FUNDING:	$ 25,705,000
Current Projected Project Shortfall	$6,649,700***

*See attachment 4 for the approved funding.
**This is a not-to-exceed amount. Cost of the acquisition is still under negotiation.
***Shortfall may be reduced if CD 3 identifies funding for the acquisition cost of the additional parcels.

Public Private Partnership

The project is proposed as a public private partnership to be operated by an outside vendor. As currently reflected in the Memorandum of Understanding between the Department of Recreation and Parks and Anschutz Entertainment Group, Inc., or designated subsidiary (AEG); American Sports Entertainment Company, LLC (ASEC), and the Los Angeles Kings Hockey Club, L.P. (LA Kings) that was executed in 2018 (MOU), the City would execute a Management Agreement with a joint venture to be formed between AEG, ASEC, and the LA Kings to serve as the operator of the facility (the joint venture is hereafter referred to as the "Operator"). The City, through RAP, would retain ownership of the facility with BOE managing the project design and construction. Design would be subject to final approval by the RAP Board, which would also bid out and award the construction contract. The MOU contains language regarding terms to be included in the Management Agreement. One of these terms is that the Operator pays $6.5 million to the City towards the cost of constructing the skate facility (the "Private Contribution"). The Operator would be permitted to recuperate the $6.5 million investment from the facility's operating profits during the initial years of operation, after which a negotiated profit sharing between the City and Operator would apply.

The discussions on the Management Agreement between City and the proposed Operator are ongoing. Staff will report back to the respective oversight committee(s) on the results of these discussions prior to the execution of a Management Agreement that would be subject to final approval by the RAP Board.

The BOE believes that it is in the best interest of the City to acquire the subject partial parcel for the reasons described herein. Council District 3 and the Department of Recreation and Parks are in support of these recommendations.

Attachment 1 - Appraisal Report
Attachment 2 - Reseda Skate and Roller Rink Site Plan Option 3
Attachment 3 - Geotechnical Engineering Report Reseda Skate Facility Project
Attachment 4 - Prop K Steering Committee Reseda Ice Skate & Roller Funding Letter

cc:
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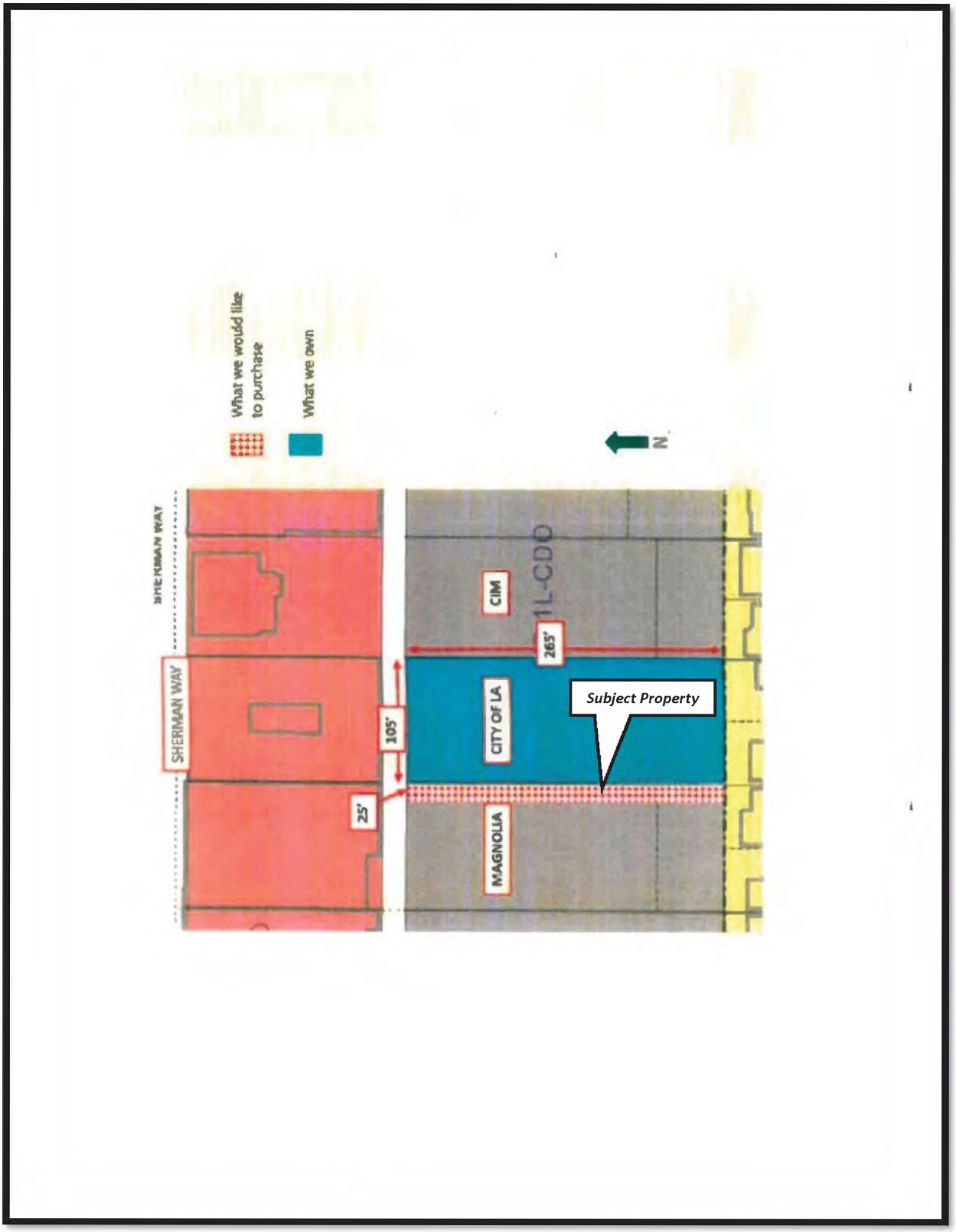
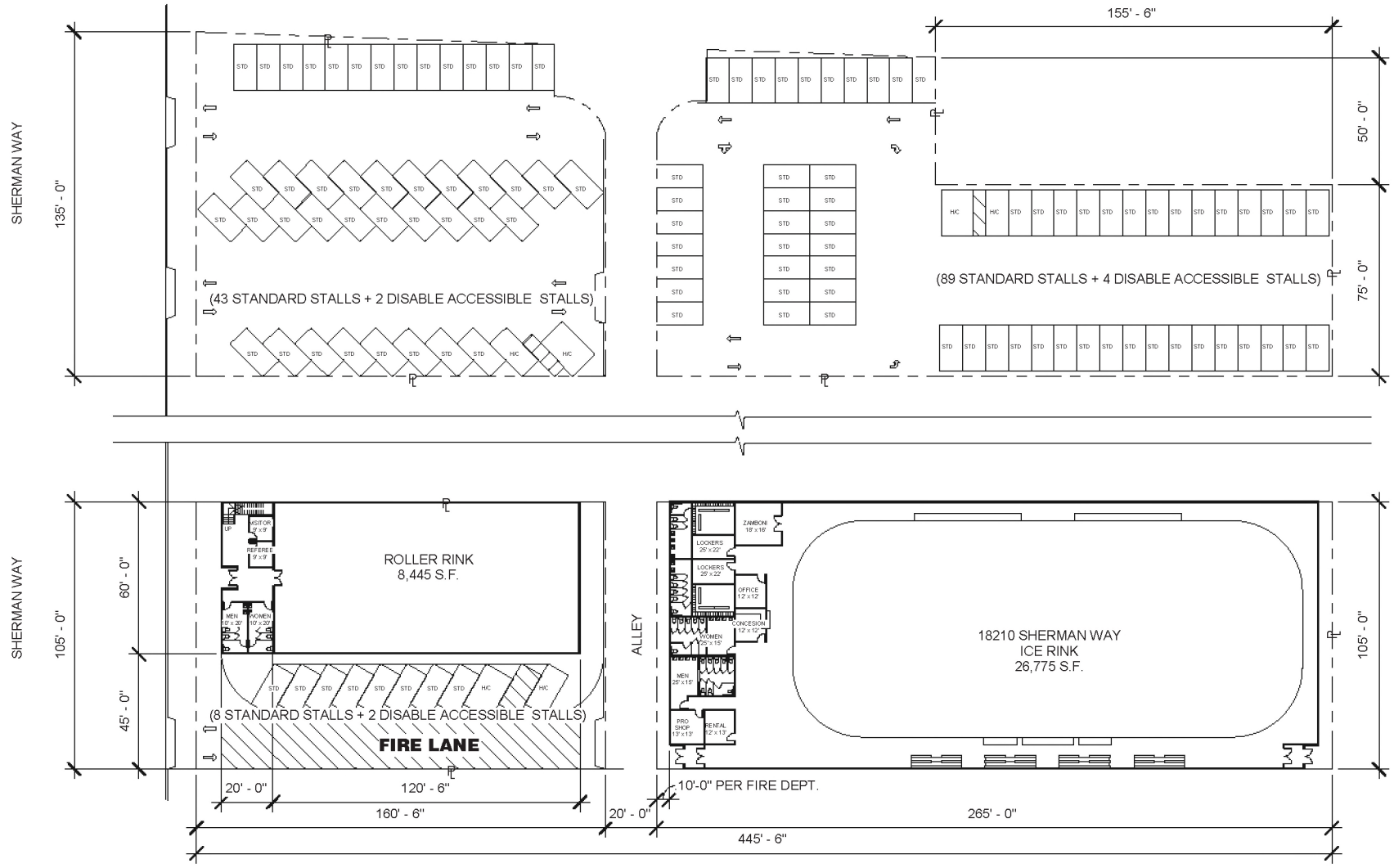
Elizabeth Ene, CD13
John Popoch, CD13

City of Los Angeles Planning Department Acquisition Map



Attachment No. 2



1 OPTION 3
1" = 40'-0"

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

ENGINEERING

SITE PLAN - OPTION 3

Project number	E170121D
Date	7/5/2017
Drawn by	T.YOUNGE
Checked by	R. ABANO
Scale	1" = 40'-0"

A101

RESEDA ICE AND ROLLER RINK

18210 SHERMAN WAY
LOS ANGELES, CA. 91335

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING

GEOTECHNICAL ENGINEERING DIVISION

GEOTECHNICAL ENGINEERING REPORT
RESEDA SKATE FACILITY PROJECT
18210, 18128, AND 18138 WEST SHERMAN WAY
LOS ANGELES, CALIFORNIA

W.O.# E170121B
GED FILE # 19-080
AUGUST 28, 2019

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Appendix A - Converse Consultants, Geotechnical Data Report, Reseda Ice and Roller Rink Project, 18210, 18128, and 18138 West Sherman Way, Reseda, Los Angeles, California, dated August 28, 2019.

1.0 INTRODUCTION

This report presents the results of our geotechnical investigation for the proposed Reseda Skate Facility project. The project sites, as shown on Figure 1 – Vicinity Map, are located on the south side of Sherman Way between Lindley Avenue and Etiwanda Avenue. The proposed development area, as shown on Figure 2 – Site Location Map, includes six parcels. Three of these six parcels currently have an address and the remaining three don't have an address. The three parcels with addresses are 18210, 18128 and 18138 West Sherman Way.

The purposes of this investigation were to evaluate the nature and engineering properties of the subsurface materials and develop geotechnical recommendations for design and construction of the project. The City of Los Angeles, Department of Public Works, Bureau of Engineering, Geotechnical Engineering Division (GED) has prepared this report in response to the Architectural Division's request on April 29, 2019.

2.0 PROJECT DESCRIPTION

The proposed site plan is presented on Figure 3. As shown on Figure 3, the project consists of constructing a roller rink in the northwest portion (18210 West Sherman Way) and an indoor ice skating rink in the southwest portion (no current address). The east portion will be used for parking. The indoor ice skating rink will extend to the east and west property boundaries; however, it will be set back 10 feet from the north and south property boundaries. The roller rink will extend to the east property boundary. The west side of the roller rink parcel will be used for parking with a fire lane. The proposed grades are expected to be within one to two feet of the existing ones.

Structural loads for the proposed roller rink and ice skating rink were not provided to us at the time of this report. We expect the applied static bearing pressure for shallow foundations will not exceed 2,500 pounds per square foot (psf).

If significant changes to the project are proposed, the findings and recommendations in this report may not be applicable, and a supplemental report may be required. The GED shall be provided an opportunity to review any proposed changes and determine if a supplemental report is required.

3.0 GEOTECHNICAL INVESTIGATION

Our geotechnical investigation included field exploration and laboratory testing, which was completed by Converse Consultants (Converse). A copy of their data report is provided in Appendix A of this report. The findings and information presented in this report are based on the information contained in Converse's data report. The GED has reviewed their report, concurs with the information contained in it, and accepts responsibility for the use of its contents.

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

MFC Agenda Item No. 6
LAFKSC Agenda Item No. 3
Revised Report

Attachment No. 4

Date: January 25, 2018

To: The Municipal Facilities Committee
Proposition K – L.A. for Kids Steering Committee

From: CAO Staff

Subject: **RESEDA SKATE FACILITY (CD 3): APPROVAL OF CONCEPTUAL PLAN, PROPOSED FUNDING AND IMPLEMENTING ACTIONS**

RECOMMENDATIONS

1. That the Municipal Facilities Committee (MFC) and the Proposition K - LA for Kids Steering Committee approves and authorizes staff to transmit the following recommendations to Council, for final consideration:

   a. Acknowledge the actions taken by the Board of Recreation and Park Commissioners at its meeting held on January 17, 2018 (Board Report No. 18-014), authorizing the acquisition of parcels at 18128 and 18210 Sherman Way for construction of the Reseda Skate Facility, and acknowledge the action that is scheduled to be taken by the CRA/LA Bond Oversight Committee at its meeting scheduled to occur on January 25, 2018, to authorize the proposed use of CRA Excess Bond Proceeds towards the cost of site acquisition;

   b. Approve the proposed project conceptual plan and the proposed project financing plan, as presented within this report;

   c. Authorize MFC staff to provide Controller's instructions to utilize the designated project funding sources on an as-needed basis to acquire the site and fund project design and construction costs, including the transfer of project funds into an escrow account for site acquisition;

   d. Instruct the Department of Public Works, Bureau of Engineering to implement the project design phase on behalf of the Department of Recreation and Parks following the completion of site acquisition for the subject facility;

   e. Find that the proposed project is categorically exempt from CEQA pursuant to Article 19, Sections 15325 and 15332 of the State CEQA Guidelines, and direct staff to file a Notice of Exemption;

   f. Direct MFC staff to provide quarterly updates to the appropriate oversight Committees on the status of project implementation, including any significant changes that impact the project timeline, estimated costs or financing plan; and,

g. Authorize the City Administrative Officer to make technical corrections to the transactions authorized through this report, as needed to implement the Mayor and Council's intentions.

2. That the Municipal Facilities Committee, request that the Mayor exercise the City's Option to acquire the subject property, pursuant to the terms and procedures identified in the Option Agreement between the City of Los Angeles and CRA/LA, a Designated Local Authority and successor agency to the former Community Redevelopment Agency of the City of Los Angeles (CRA/LA) (City Contract No. C-125180; Option Agreement).

3. That the Proposition K - L.A. for Kids Steering Committee approves and authorizes staff to transmit the following recommendations to Council for final consideration:

   a. Find that the proposed project conceptual plan for the Reseda Skate Facility conforms with the Proposition K specified project scope, as reflected in the 1997 Proposition K Ballot Measure that established the program – Reseda Skate Facility (Project ID: S23) – Acquisition and Construction of Ice Hockey and Roller Blading Facility;

   b. Approve use of Proposition K funds totaling $13,705,000, which consists of specified funds ($4,000,000), program interest and inflation monies ($2,943,600), and specified funding to be programmed in future years ($6,761,400), to fund the acquisition and development of the Reseda Skate Facility Project;

   c. Authorize the award of $1,850,569 in 2017-18 Proposition K inflation funds for the project acquisition phase and authorize staff to take the necessary actions to reflect the inflation award as part of the adopted 2017-18 Proposition K Five Year Plan and related documents; and,

   d. Authorize the Controller's to transfer $1,850,569 in Proposition K inflation funds from Fund 43K, Department 10, Account 10P800 - "INFLATION" to a new account within Fund 43K, Department 10, Account TBD, Account Title "INF – Reseda Skate Facility."

SUMMARY

On August 18, 2017, Council adopted a Motion (CF 17-0832) instructing the Department of Recreation and Parks, with the assistance of the Bureau of Engineering (BOE) and other involved departments to proceed with the acquisition of a CRA/LA property located at 18210 Sherman Way and to prepare a financing plan for the development of an ice and roller rink facility at the property, which is located in Reseda. A working group team was formed to coordinate functions needed to implement Council's instructions, consisting of staff from Council District (CD) Three, the Office of the Mayor, City Administrative Officer, Chief Legislative Analyst, and City Attorney, the Economic and Workforce Development Department (EWDD), the Department of Recreation and Parks (RAP), the Department of Public Works, Bureau of Engineering (BOE), and the Department of General Services (GSD).

The property proposed for acquisition consists of four parcels (Los Angeles County Assessor's Parcel Numbers (APN) 2125-036-900, 2125-036-901, 2125-036-902, and 2125-036-903) that are currently owned by the CRA/LA, a Designated Local Authority and successor agency to the former Community Redevelopment Agency of the City of Los Angeles (the current owner is referred to herein as "CRA/LA"). Prior to the adoption of the aforementioned Motion, the City had already entered into an Option Agreement (Property Retained for Future Development) with the CRA/LA to acquire the property. Under this Option Agreement (City Contract No. C-125180) , the City has the exclusive right to exercise its option to acquire the property. However, the City must provide due notice, in writing, to the CRA/LA by March 2, 2018, that the City wishes to exercise the option to acquire. Any extension of this deadline would require approval by the CRA/LA Governing Board.

On January 17, 2018, the Board of Recreation and Park Commissioners (RAP Board) authorized RAP to proceed with the acquisition of the property for park purposes (Report No. 18-014). The RAP Board action includes various requests for the GSD to implement the property acquisition on behalf of RAP. The Board also approved the proposed conceptual plan for the project to locate the roller hockey rink and the ice skating rink on the 18210 Sherman Way parcel and locate the parking lot on the 18128 Sherman Way parcel. The detailed conceptual plan for the Reseda Skate Facility Project is provided as an attachment to this report. The project conceptual plan assumes the development of:

- A 60 feet x 120 feet roller hockey rink built on grade with a shade structure and 1,200 square foot building to house related rink offices, restrooms and storage.
- An approximately 26,800 square foot ice rink building with a 85 feet x 200 feet ice surface, cooling infrastructure, ice grooming equipment storage, Zamboni machine room, locker rooms for two teams, restrooms, office space, public seating, skate rental area, pro shop and concessions space, and other ancillary spaces required by ice hockey and figure skating.
- A 127-space parking lot with driveways, fencing, landscaping and security lighting.

The facility will be designed to be Americans with Disabilities Act (ADA) accessible. The total cost estimate for the preferred option, including land acquisition costs, design and soft costs, construction costs, and project escalation and contingencies is approximately $25,705,000.

Proposition K Scope Conformity and Proposed Funding Plan

The Ballot Measure for Proposition K – LA For Kids Program includes a specified line item for Reseda Skate Facility (Project ID: S23) that funds "acquisition and construction of an ice hockey and roller blading facility." The Ballot Measure identifies $4,000,000 in specified funds for this project. City Attorney has advised that in order to utilize Proposition K Program monies for the proposed project, a finding on the part of the L.A. for Kids Steering Committee is needed that the proposed conceptual plan adopted by the RAP Board conforms with the Proposition K specified scope, as reflected in the 1996 Proposition K Ballot Measure that established the Program. Additionally, Proposition K funds must be utilized for both acquisition and development costs for both the ice rink and the roller rink to fully satisfy the specified scope. Staff has included Proposition K program monies as part of the project funding plan, subject to the required finding, as detailed in the table below:

Proposed Funding Plan – Reseda Skate Facility		
Source	**Interim Funding**	**Permanent Funding**
Proposition K – Specified Funds	$ 4,000,000	$ 4,000,000
Proposition K – Interest and Inflation	2,943,600	2,943,600
Proposition K – Future Allocations of Additional Specified Funding [1]	1,761,400	6,761,400
Private Contribution [2]	6,500,000	6,500,000
Private Loan [3]	5,000,000	--
CD 3 CRA/LA Excess Bond Proceeds [4]	4,000,000	4,000,000
Community Development Block Grant (CDBG) Funds [5]	1,000,000	1,000,000
Park Fees [6]	500,000	500,000
TOTAL:	**$ 25,705,000**	**$ 25,705,000**

1. *Proposition K – this additional specified funding reflects a future allocation. Approval of these funds will be requested in subsequent annual Proposition K Assessment Reports to fund construction.*
2. *Refer to the section below titled "Public Private Partnership."*
3. *Private Loan is an interest-free contribution from the Operator to be used as cash flow for eligible acquisition and construction costs that would be repaid by future-year allocations of Proposition K additional specified funds, allocated through the annual Proposition K Assessment Report and budget adoption process. Refer to the section below titled "Public Private Partnership."*
4. *Allocation of CRA/LA Excess Bond Proceeds is subject to the approval of the Bond Oversight Committee, to be considered at its meeting scheduled for January 25, 2018, and subsequent Council approval.*
5. *CDBG Funds is a future allocation that is subject to Council approval as part of the annual City budget adoption process.*
6. *The allocation of Park Fees was approved by the RAP Board on January 17, 2018 (BR 18-014).*

Public Private Partnership

The project is proposed as a public private partnership to be operated by an outside vendor. As currently reflected in the draft term sheet, the City would execute a Lease/Operating Agreement with a joint venture to be formed between the Anschutz Entertainment Group, Inc., or designated subsidiary (AEG); American Sports Entertainment Company, LLC (ASEC), and the Los Angeles Kings Hockey Club, L.P. (LA Kings) to serve as the operator of the facility. The joint venture is hereafter referred to as the "Operator." The City, through RAP, would retain

ownership of the facility, with BOE managing the design and construction. Design would be subject to final approval by the RAP Board, which would also bid out of the project and award the construction contract.

Discussions on the Lease/Operating Agreement between City staff and the proposed operator are ongoing. As currently proposed, the provisions set forth in the draft term sheet would require the operator to provide the following financial contributions to the project:

- Temporary, Interest-Free Cash Flow Loan ($5 million) – the Operator would be required to provide the City with a $5 million interest-free loan to cash flow eligible Proposition K acquisition and construction expenses (the "Private Loan"). This loan would be repaid with future-year allocations of Proposition K additional specified funds.

- Permanent Funding ($6.5 million) - The Operator would also be required to contribute $6.5 million in permanent funding towards the cost of constructing the skate facility (the "Private Contribution"). The Operator's investment would include $2.6 million in equity and $3.9 million in private debt (total investment of $6.5 million). The private debt would be repaid annually by the Operator from the revenue from the Facility after operating expenses. The City would receive funds either as a flat percentage of net cash flow or as part of a revenue sharing agreement for revenue over a certain threshold. The equity investment would be recouped from net cash flow after the City's funds are deducted.

Staff will report back to the respective oversight committee(s) on the results of these discussions prior to the execution of a Lease/Operating Agreement that would be subject to final approval by the RAP Board.

Assessed Fair Market Value

The Option Agreement with the CRA/LA specifies the process for determining the fair market value of the property and the purchase price. GSD reviewed the appraisal reports to determine if the purchase price for the property is consistent with their professional opinion of market value, including escrow fees and title insurance fees. Based on the process defined in the Option Agreement, the purchase price of the property is $6,845,000.

Project Implementation

The Option Agreement includes various terms and conditions for the acquisition. One of these conditions is that the City acquires the property in an "As-Is" condition. To that end, the City has undertaken a Phase I and subsequent Phase II Environmental Site Assessment (ESA) for Hazardous Materials. Based on the results of the Phase I ESA, which identified the potential for site contamination, a Phase II study was undertaken. The Phase II study has been completed, however, based on the results additional testing has been requested. That testing is currently underway but results are still forthcoming and the anticipated likelihood for significant contamination is low based on the initial Phase II testing.

On January 17, 2018, RAP Board found that the proposed project is categorically exempt from California Environmental Quality Act (CEQA) and directed staff to file a Notice of Exemption. It should be noted that if the results of further testing trigger additional CEQA compliance, that compliance and any actions by the RAP Board will occur prior to initiating the construction phase of the project

BOE will initiate the design process for the project once site acquisition is complete, which will be subject to RAP Board approval. RAP Board approval will also be required to authorize bid and award of the construction contract. BOE's current project schedule anticipates that project construction would begin in November 2019, with an anticipated completion date of March 2021.

Environmental Impact Statement

The proposed project will consist of acquisition of a 2.2-acre parcel of land for future park purposes, including construction of a skate facility consisting of a 28,000 square foot indoor ice rink, an 8,445 square foot roller rink, project required parking, fencing, landscaping, and security lighting.

Environmental due diligence in the form of a Phase I Environmental Site Assessment (ESA) was performed for the subject property on November 8, 2017, in accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessments (Standard Designation E 1527-13) approved in November 2013, and the United States Environmental Protection Agency (US EPA) 40 CFR Part 312 Standards and Practices for All Appropriate Inquiries (AAI) – Final Rule adopted November 1, 2006. The ESA initially found that a vapor encroachment condition (VEC) exists due to the site's proximity to several dry-cleaning establishments. Upon further review of additional information, the City's Bureau of Engineering Geotechnical Group determined that a Phase II soil sampling to confirm possible off-site contamination affecting the project site was needed.

According to the preliminary Phase II report, on-site soil vapor levels were slightly above residential screening levels at the northeast section of the project site. Therefore, to delineate further the extent of potential site contamination, BOE's Geotechnical Group recommended additional sampling. Groundwater sampling was also recommended, to help identify any off-site sources of contamination, in addition to Cavalier Cleaners (i.e., the current RWQCB Leaking Underground Fuel Tank [LUFT] site to the east). If the responsible party for the off-site contamination is not Cavalier Cleaners and remains unidentified, regulatory agencies could require the City, as a new landowner, to proceed with further investigation.

Based on the current information, the current plans identify the area of potential contamination as a portion of the parking area that forms a cap on the soil contamination. This area would remain capped as a proposed parking lot. As such, potential significant impacts related to hazardous materials can be ruled out at this time.

Therefore, the project currently qualifies for a California Environmental Quality Act (CEQA) exemption as an acquisition of land for future park development. In addition, it qualifies as an urban in-fill development, as it meets the following conditions:

1. It will be located within City limits on a site no larger than five acres that is substantially surrounded by urban uses;

2. It will be consistent with the City General Plan designation and policies, as well as zoning regulations;

3. It does not have any value as habitat for endangered, rare or threatened species;

4. It will not have any significant environmental effects to traffic, noise, air quality, or water quality based on the results of various related technical studies; and,

5. It will be adequately served by all required utilities and public services.

Therefore, staff recommends that Council determine that the project is categorically exempt from the provisions of CEQA pursuant to Article 19, Sections 15325, Class 25(f), and 15332, Class 32 of the State CEQA Guidelines. Filing of a Notice of Exemption with the Los Angeles County Clerk will occur upon Council approval.

If the Project changes or the circumstances that define the project change at any time, a re-evaluation of CEQA will be required.

FISCAL IMPACT

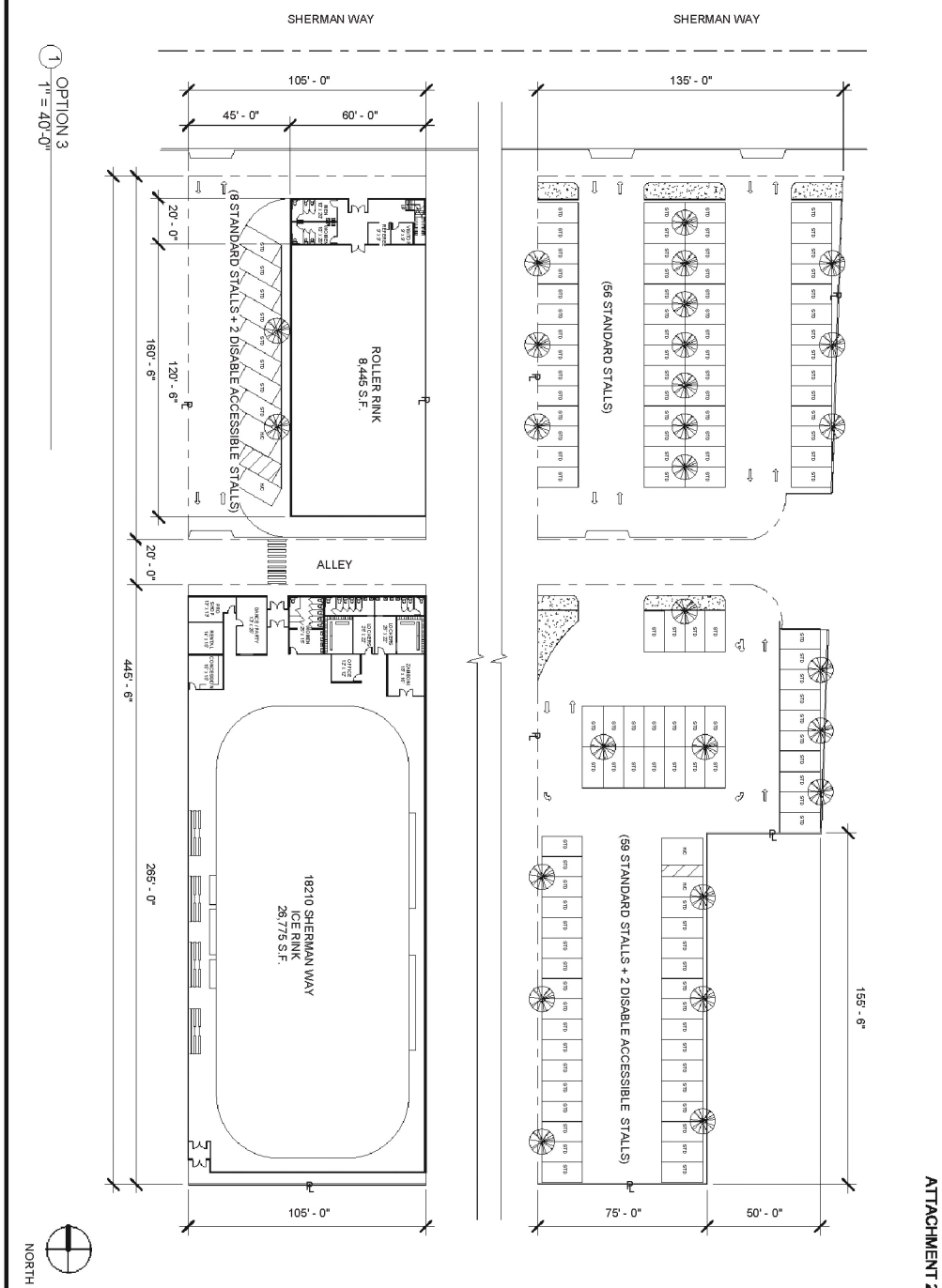
There is no impact on the General Fund anticipated. The proposed funding plan would utilize a combined total of $25,705,000 comprised of Special Funds ($14.2 million - interim funding; $19.2 million - permanent funding) and private contributions ($11.5 million - interim funding; $6.5 million - permanent funding) that would be provided by the proposed operator through a public private partnership. Of this total amount, $14.26 million in proposed funding sources are subject to additional approvals, as noted within this report for the following sources: Proposition K - future allocations of additional specified funds ($6.76 million); Private contributions ($6.5 million); and, CDBG funds ($1 million).

In the event that the project is not completed, any expenditures funded by Proposition K, CDBG funds and potentially the CRA/LA Excess Bond Proceeds (if not used for an acceptable redevelopment purpose) would have to be reimbursed from other funding sources. To the extent that sufficient Special Fund monies cannot be identified, any potential repayment of expended project funding sources could become a General Fund liability.

RHL:MGR:05180085c

Attachment - Reseda Skate Facility Preferred Option Conceptual Plan

Attachment



ATTACHMENT 2

CITY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING

GARY LEE MOORE, PE, ENV SP
CITY ENGINEER

RESEDA ICE AND ROLLER RINK

18210 SHERMAN WAY
LOS ANGELES, CA. 91335

SITE PLAN - OPTION 3

Project number	E170121D	A101	
Date	7/26/2017		
Drawn by	T.YOUNGE		
Checked by	R. ABANO	Scale	1" = 40'-0"

ENGINEERING

3.1 Field Exploration

The field exploration consisted of drilling nine hollow-stem auger (HSA) borings, each to a total depth of approximately 16½ feet below ground surface (bgs). The approximate boring locations are presented on the Boring Locations Map in Converse's data report (Appendix A). The subsurface conditions encountered in the borings are discussed in Section 4.2.

The field exploration also included a geophysical survey within the proposed roller rink and ice skating rink sites. The purpose of the geophysical survey was to help identify underground utilities and buried substructures.

3.2 Laboratory Testing

The laboratory testing program consisted of in-situ moisture content and dry density, direct shear, consolidation, fines content, hydrometer, Atterberg Limits, expansion index, compaction, Resistance (R-) value, and corrosion potential. The laboratory test results were used to develop the soil engineering properties, which are discussed in Section 4.4.

4.0 DISCUSSION OF FINDINGS

The following discussion of findings is based on our observations and the results of the field exploration and laboratory testing programs (Appendix A).

4.1 Site Conditions

As shown on Figure 2, the proposed development area consists of four main sites. Each site is accessed from an existing paved alley that extends between Lindley Avenue and Etiwanda Avenue. At the time of our visit, all sites were, for the most part, unoccupied. The ground surface in the proposed south parking area and ice skating rink sites is paved with asphalt concrete (AC). The ground surface in the proposed north parking area and roller rink sites is unpaved. The sites and surrounding areas are relatively flat with an average elevation of approximately 740 feet above mean sea level (NavigateLA).

There is a newly renovated building that occupies the adjacent property on the west side of the proposed roller rink site. This building, which is part of the Magnolia Science Academy charter school, extends to the property boundary. The adjacent property on the west side of the proposed ice skating rink consists of a parking lot, which has been recently paved with AC. The adjacent properties on the east side of the ice skating rink and roller rink sites are vacant (i.e. undeveloped). Also, there is a residential neighborhood on the south side of the proposed development area.

4.2 Subsurface Conditions

Uncertified fill was encountered in all nine HSA borings, and the fill thickness varies from approximately 4 to 5 feet. The fill is mostly comprised of lean clay with sand. Very few fill indicators were observed, and as such, it was difficult to distinguish the fill from the native soil. Based on the field Standard Penetration Test (SPT) blow counts, the fill consistency is generally soft to medium stiff.

The composition of the native soil is similar to that of the uncertified fill. The native soil mostly consists of lean clay with varying amounts of sand. The field SPT blow counts range from 2 to 11 with an average value of 6. The consistency is generally soft to medium stiff.

4.3 GROUNDWATER

Groundwater was not encountered in any of the borings to the maximum explored depth of approximately 16½ feet below ground surface (bgs). Groundwater information obtained from California Department of Conservation, Division of Mines and Geology (DMG, 1997) indicates the shallowest reported historic groundwater depth is approximately 10 feet bgs. Groundwater levels are expected to fluctuate with seasonal rainfalls and dry weather (i.e. drought conditions); however, groundwater is not anticipated during construction.

4.4 SOIL ENGINEERING PROPERTIES

Laboratory tests were performed on selected samples to characterize the engineering properties of the fill and native soil. The individual laboratory test results are included in Converse's data report (Appendix A).

Moisture content and in-situ dry density tests were performed on samples of the native soil to evaluate the total unit weight. The in-situ dry density and moisture content of the native soil was found to range from approximately 72 to 115 pounds per cubic foot (pcf) and 8 to 25 percent, respectively. The total unit weight of the native soil was found to range from approximately 89 to 132 pcf with an average value of 110 pcf.

Direct shear tests were performed on two remolded samples of the existing clayey fill material and on an undisturbed sample of the native lean clay. Both remolded samples were compacted to 90 percent relative compaction (RC) at 2 percent above the optimum moisture content. Based on Converse's interpretation of the test results, the ultimate friction angle and cohesion value of the remolded fill ranges from 25 to 27 degrees and 70 to 100 psf, respectively. The ultimate friction and cohesion value of the native lean clay is 24 degrees and 200 psf, respectively.

Consolidation tests were performed on two remolded samples of the existing clayey fill and on an undisturbed sample of the native lean clay. Both remolded samples were compacted to 90 percent RC at 2 percent above the optimum moisture content. The results indicate the remolded samples have a modified recompression index, C_{er}, ranging from approximately 1.0 to 1.8 percent.

Atterberg Limits tests were performed on two samples of the native lean clay. Each sample was collected at a depth of approximately 5½ feet bgs. The plasticity index (PI) of the lean clay is between 12 and 14, which indicates this material has a moderately low shrink-swell potential.

Expansion index (EI) tests were performed on two samples of the clayey fill material, and the expansion index was found to range from 38 to 46. These EI values indicate the near surface soil has a low expansion potential.

Two compaction tests were performed on bulk samples of the clayey fill material to determine the maximum dry density and optimum moisture content. The compaction test results indicate that the optimum moisture content and maximum dry density of this material ranges from approximately 13 to 14 percent, and 114 to 116 pcf, respectively.

Finally, R-value tests were performed on two samples of the clayey fill material and the R-value was found to range from 20 to 21.

5.0 SEISMIC CONSIDERATIONS

The following sections present seismic design parameters and discuss seismic hazards for the site.

5.1 2017 LABC SEISMIC DESIGN PARAMETERS

Seismic design parameters for the project were developed in accordance with the ASCE 7-16 procedures. The parameters are based on mapped spectral acceleration values and the site conditions.

The seismic design parameters for the site are summarized in Table 1.

TABLE 1 – SEISMIC DESIGN PARAMETERS

Parameter	Value	Reference
Site Class	D	ASCE 7-16
S_s	1.896	ASCE 7-16
S_1	0.645	ASCE 7-16
S_{MS}	1.896	ASCE 7-16
S_{M1}	Null (see Section 11.4.8)	ASCE 7-16
S_{DS}	1.264	ASCE 7-16
S_{D1}	Null (See Section 11.4.8)	ASCE 7-16
T_O (seconds)	0.100	ASCE 7-16
T_S (seconds)	0.501	ASCE 7-16

The peak ground acceleration (PGA_M) at the site is 0.85g.

5.2 SEISMIC HAZARDS

This section provides the results of our evaluation of earthquake-related geologic/geotechnical hazards for the site, including surface fault rupture, and liquefaction.

5.2.1 Surface Fault Rupture

The project sites are not located within a State of California Alquist-Priolo Special Study Zone, and nor are they located within a Los Angeles Preliminary Fault Rupture Study Area (NavigateLA). The closest fault is the Northridge Hills Fault, which is approximately 3 miles northeast of the site. Based on this information, the potential for surface fault rupture to occur at the site is considered remote.

5.2.2 Liquefaction

Based on the Seismic Hazard Zones map for the Canoga Park Quadrangle (California Department of Conservation, DMG, 1998), the site isn't located within a liquefiable area. Therefore, the potential for liquefaction to occur at the site is considered remote.

6.0 RECOMMENDATIONS

Based on the results of our investigation, the proposed project is considered geotechnically feasible provided the recommendations presented in this report are incorporated into the design and construction. If changes in the design are made, or variations or changed conditions are encountered during construction, the GED shall be notified to determine if supplemental recommendations are required.

6.1 Key Design Issue

The key geotechnical issue associated with the proposed development is the presence of soft uncertified fill and soft native soil. These materials are prone to settlement that could adversely impact the proposed structures and improvements. The earthwork and foundation recommendations provided in this report will help reduce the potential for settlement(s) to exceed acceptable limits.

6.2 Earthwork

All earthwork shall be performed in accordance with the geotechnical recommendations presented in this report and the Los Angeles Department of Building and Safety (LADBS), Grading Division's requirements. Furthermore, all earthwork shall be performed under the GED's observation.

6.2.1 Site Preparation

Site preparation will initially involve the removal of the existing AC pavement in the paved portions of the site(s). Following demolition, the construction area shall be cleared of any vegetation and stripped of miscellaneous debris and other deleterious material. Organic matter and other material that may interfere with construction shall be removed. Vegetation and organic matter should not be incorporated into the fill material. Organic rich soil, if present, may be stockpiled for future landscaping.

Any utilities, whether active or inactive, shall be identified. If required, these utility lines shall be properly abandoned and/or relocated per project plans and specifications. Any depressions resulting from removal of any existing utility lines shall be properly backfilled and compacted (see Section 6.2.6).

6.2.2 Over-Excavation

All existing fill shall be removed beneath slab-on-grade floors. Vertical over-excavation is not required for footings embedded into native soil. In areas where vertical over-excavation is performed, the existing fill and native soil shall be removed at least 30 inches below the bottom of the footings. The excavation shall extend laterally at least 5 feet beyond the edges of the building or to the property boundaries, whichever is less. Due to property boundary constraints, lateral over-excavation will not be feasible on the east side of the roller rink and on the east and west sides of the ice skating rink.

The existing uncertified fill may be left in-place beneath new paved areas. The earthwork beneath pavement areas, including the subgrade preparation (see Section 6.2.3), shall result in at least 18 inches of compacted fill beneath the pavement section.

6.2.3 Subgrade Preparation and Stabilization

Excavation bottoms shall be scarified at least 6 inches, moisture conditioned to within 3 percent above the optimum moisture content, and compacted to a minimum 90 percent RC, as determined by ASTM D1557. All excavation bottoms shall be observed, tested, and approved by a representative of the GED and the LADBS, Grading Inspector prior to placement of fill.

Based on the laboratory test results (see Section 4.4), the in-situ moisture content of the exposed native soil along excavation bottoms may be significantly higher than the optimum moisture content. An active drying and/or mixing (i.e. blending) operation may be required to achieve adequate compaction.

If adequate compaction cannot be achieved by a drying/mixing/blending operation, bottom stabilization shall be performed. The bottom shall be excavated an additional 12 inches (separate and in addition to the over-excavation discussed in Section 6.2.2). The "new" bottom shall be lined with Mirafi 600X or approved equal stabilization geotextile. A 12-inch thick layer of ¾-inch to 1-inch crushed rock shall be placed on top of stabilization geotextile. The top of the crushed rock layer shall be covered with Mirafi 140N or approved equal filter cloth.

6.2.4 Temporary Excavations

Based on our observations during subsurface investigation and results of laboratory tests, the materials at the site should be readily excavated by conventional earthmoving equipment in good operating condition. All temporary excavations shall conform to the State of California Construction Safety Orders (CAL/OSHA).

Unsurcharged vertical excavations shall not exceed 5 feet. Unsurcharged excavations greater than 5 feet and to a maximum of 10 feet shall be sloped at a 1:1 (H:V) or flatter inclination from the ground surface to the bottom of the excavation. Excavations greater than 10 feet shall be shored.

6.2.5 Temporary Shoring

Cantilever *or* braced shoring may be considered at this site as an alternative to temporary excavations. The maximum retained height for a cantilever shoring system shall not exceed 15 feet. All shoring systems shall be designed such that the maximum deflection does not exceed ½-inch. Box shoring, trench shields, and/or speed shores may only be used at the discretion of the GED.

Prior to excavation, it is recommended that walls, structures, or portions of structures within a horizontal distance of 1½ times the depth of the excavation be inspected to determine their present condition. For documentation purposes, photographs should be taken of preconstruction conditions.

During construction, deflection of the shoring system shall be initially monitored on a daily basis until it can be demonstrated that adjacent structures/utilities are not adversely impacted. At that time, weekly monitoring can be performed. In addition, structures shall be periodically monitored for signs of distress. If distress is observed, the GED shall be contacted immediately to provide supplemental recommendations.

Lateral Earth Pressures

Cantilever or braced shoring shall be designed for the lateral earth pressures shown on Figure 4. These values are based on the assumption that (1) the shored soil material is level at ground surface, (2) the exposed height of the shoring is no greater than 15 feet, and (3) the shoring is temporary, and will not be required to support the soil longer than about six months. Surcharge coefficients of 0.33 and 0.50 may be used with uniform vertical surcharges for cantilever and braced shoring lateral earth pressures, respectively. These surcharge pressures should be added to the lateral earth pressures.

Soldier Piles and Lagging Design

Drilled holes for soldier piles shall be backfilled with Controlled Low Strength Material (CLSM) per Greenbook Section 201, from the bottom of lagging (i.e. proposed excavation depth) to the ground surface. The CLSM shall contain a minimum of one sack of Portland cement per cubic yard of slurry and a maximum of two sacks of Portland cement per cubic yard of slurry. Drilled holes below the excavation bottom shall be backfilled with structural concrete. To reduce the potential for sloughing and caving of the soils, continuous lagging shall be installed between the soldier piles. All lumber shall be pressure-treated in accordance with Specification C-2 of the American Wood Preservers Association.

6.2.6 Fill Materials and Placement

The onsite clayey fill and native soil may be reused as compacted fill, except as subgrade below the concrete slab-on-grade floor. The onsite soils are suitable for reuse only if they are free of organic material, debris, and don't contain fragments greater than 3 inches in maximum dimension. Drying of wet site soils or mixing of these soils with dryer soils may be required prior to being used as compacted fill.

The upper 12 inches of compacted fill beneath concrete slab-on-grade floors shall consist of import fill. Import fill material shall be predominantly granular (minimum 80% passing number 4 sieve and between 10% and 35% passing the number 200 sieve), and non-expansive (EI less than 25). Also, the import fill material shall be free of organic or inorganic debris, contamination and materials with any dimension larger than 3 inches. Import material shall be reviewed for approval by the GED prior to importing to the job site. The GED shall be notified a minimum of three working days prior to scheduled importing of soil to the project site.

Fill material shall be placed in loose lifts not exceeding 8 inches in thickness, moisture conditioned to within 3 percent above optimum, and mechanically compacted. The hydrometer test results indicate the onsite materials have a clay content greater than 15 percent; therefore, primary structural fill shall be compacted to at least 90 percent RC. Non-structural (i.e. secondary) fill shall also be compacted to at least 90 percent RC. All crushed miscellaneous base (CMB) and/or crushed aggregate base (CAB) beneath pavements shall be compacted to at least 95 percent RC.

Fill placement and compaction shall be observed and tested by the GED. Compacted fill soils shall be kept moist (at or slightly above the specified moisture content at the time of compaction), but not flooded, until covered with subsequent construction. If compacted fill becomes disturbed, it shall be reworked or removed and replaced. Certification and inspection approvals for compromised soils are void and invalid.

6.2.7 Utility Trench Backfill

Trench excavations for utility pipes may be backfilled with the onsite soils under the observation of a representative of the GED. After utility pipes have been laid, properly bedded, and covered per the project specifications, they shall be backfilled to the ground surface or design subgrade with controlled backfill. Controlled backfill shall be moisture conditioned, placed and compacted in accordance with the recommendations presented in Section 6.2.6 of this report. Densification by flooding or jetting is not allowed.

6.2.8 Fill Certification

Upon successful completion of fill placement and compaction, the GED will issue a Compaction Certification for the fill. Unless approved by the Building Inspector during construction, the Contractor shall not pour footings until an approval letter is issued by the LADBS, Grading Division for the Compaction Certification. The contractor may excavate in compacted fill for foundation elements before the fill certification approval letter is issued, but does so at his/her own risk.

6.3 Shallow Foundations

The roller rink and ice skating rink may be supported on shallow foundations consisting of continuous and/or isolated (i.e. column) footings. Recommendations for bearing capacity and settlement and lateral load resistance are provided in the following sections.

6.3.1 Bearing Capacity and Settlement

Continuous and isolated footings bearing on at least 36 inches of compacted fill shall be embedded at least 24 inches below the lowest adjacent grade. Footings in areas where lateral over-excavation is not feasible, shall be embedded at least 6 inches into the native lean clay. Footings underlain by native soil along the property boundaries are expected to be approximately 5 feet deep. Continuous footings shall be at least 18 inches wide, and isolated footings shall be at least 24 inches wide.

Footings underlain by compacted fill may be designed using an allowable (net) bearing capacity of 2,500 psf, which applies to combined dead and sustained live loads. Footings underlain by native soil may be designed using an allowable (net) bearing capacity of 2,000 psf. These allowable bearing capacity values may be increased by ⅓ when considering transient live loads, including wind and seismic forces.

Based on the allowable bearing value recommended above, total static settlement of the shallow footings is anticipated to be less than 1-inch. Differential settlement is expected to be less than ½-inch.

6.3.2 Lateral Load Resistance

Lateral load resistance for footings will be developed by passive soil pressure against the sides of the footing and by friction acting at the base of the footing. An allowable passive pressure of 250 psf per foot of depth, beginning from 1 foot below the lowest adjacent grade, may be used for design purposes. An allowable passive pressure of 250 psf per foot of depth, beginning from the ground surface, may be used if the footing is located adjacent to an exterior slab or paved surface. The allowable passive pressure is only applicable for level (ground slope equal to or flatter than 5:1) conditions. An allowable coefficient of friction of 0.35 may be used for dead and sustained live loads for frictional resistance of the footings constructed directly on compacted fill. A safety factor of 1.5 has been incorporated into both the allowable passive and frictional resistance values. The passive pressure and frictional resistance may be increased by ⅓ under seismic and wind loading conditions.

6.4 Concrete Slab-on-Grade Floors

Concrete slab-on-grade floors shall be supported on compacted fill, and the upper 12 inches of compacted fill shall consist of import granular fill material. In areas where a moisture-sensitive floor covering (such as vinyl, tile, or carpet) is desired, the slab can be protected by placing a minimum 10-mil-thick polyethylene vapor barrier between the slab and compacted subgrade. If the barrier is used, it should be placed between two 1-inch layers of sand to protect it from punctures and to aid in the concrete cure. Vapor barrier seams should be overlapped a minimum of 6 inches and taped or otherwise sealed. The actual requirements for a barrier and protective sand layer shall be determined by the designer.

Structural design information shall include concrete mix design, steel reinforcement, concrete placement procedures, concrete curing, and control joints. In addition, it is imperative that the floor slab is designed such that the subgrade soil beneath the ice skating rink will not freeze.

6.5 Corrosion and Sulfate Attack Resistance

Chemical analyses including, pH, minimum resistivity, chloride, and sulfate content tests were performed on two samples; a sample of the clayey fill material and the native lean clay. The results of the tests are presented in Appendix A.

The soil pH ranges from 7.7 to 7.8, the minimum saturated resistivity ranges from 730 to 860, the chloride concentration ranges from 200 to 215 ppm, and the soluble sulfate is approximately 0.03 percent. Caltrans (2012) considers a soil to be corrosive if one or more of the following conditions exist:

- Chloride concentration is 500 ppm or greater;
- Sulfate concentration is 2,000 ppm or greater;
- pH is 5.5 or less.

Based on Caltran's (2012) criteria, the onsite fill and native soil are not corrosive when in contact with ferrous metals. According to criteria by other agencies such as NAVFAC, however, the onsite soils may be classified as very to severely corrosive. If desired or required, a corrosion specialist should be consulted regarding selection of construction materials and/or protective design. The results of the sulfate concentration tests indicate that, based on the American Concrete Institute (ACI, 2008) criteria, these soils have negligible sulfate attack potential on concrete. Refer to ACI 318-08 for appropriate concrete mix design.

6.6 Pavement Design

Based on the laboratory test results, the R-value of the near surface clayey fill material is between 20 and 21. Traffic indexes were not provided to us at the time of this report. The recommended asphalt concrete (AC) layer thicknesses are as follows:

Table 2 - AC Pavement Section Layer Thicknesses (inches)

Layer	Traffic Index = 5.0	Traffic Index = 6.0	Traffic Index = 7.0	Traffic Index = 8.0	Traffic Index = 9.0
AC	2.5	3.0	3.5	4.0	5.0
Aggregate Base (95% RC)	8.0	10.0	12.0	15.0	16.0
Compacted Subgrade (90% RC)	18	18	18	18	18

AC shall conform to Sections 203 and 302 of the latest edition of the Standard Specifications for Public Works Construction. CAB and CMB shall conform to Section 200 of the latest edition of the Greenbook.

Portland cement concrete (PCC) pavement may also be used in areas of the site that are not paved with AC. For TIs between 6 and 7, a section of 6 inches of PCC over 12 inches of CAB or CMB is recommended. For TIs of 8 and 9, the PCC section should be increased to 7 and 8 inches, respectively. The Portland Cement Concrete should have a minimum modulus of rupture of 650 psi at 28 days.

All pavement areas shall be designed for a minimum surface gradient of at least 1 percent and all flow lines should have gradients of 2 percent in order to prevent water percolation through the pavement and subsequent saturation of the subgrade. It would be desirable to locate the flow lines away from high traffic areas.

7.0 SUPPLEMENTAL GEOTECHNICAL SERVICES

7.1 REVIEW OF PLANS AND SPECIFICATIONS

The grading plans and specifications should implement the recommendations presented in this report and should be reviewed by the GED to ensure proper interpretation and application of our recommendations.

7.2 GEOTECHNICAL OBSERVATION AND TESTING DURING CONSTRUCTION

All grading, excavation, and construction of foundations should be performed under the observation and testing of the GED at the following stages:

- During site preparation;
- During excavation;
- During subgrade preparation;
- During fill placement and compaction;
- During footing excavation(s) and immediately prior to placement of foundation and/or pool concrete
- During excavation and backfilling of all utility trenches; and
- When any unusual or unexpected geotechnical conditions are encountered.

8.0 CLOSURE

If you have any questions about the contents of this report, please contact Easton Forcier at (213) 847-0476.

8-28-19

Easton Forcier, GE 2948
Geotechnical Engineer II

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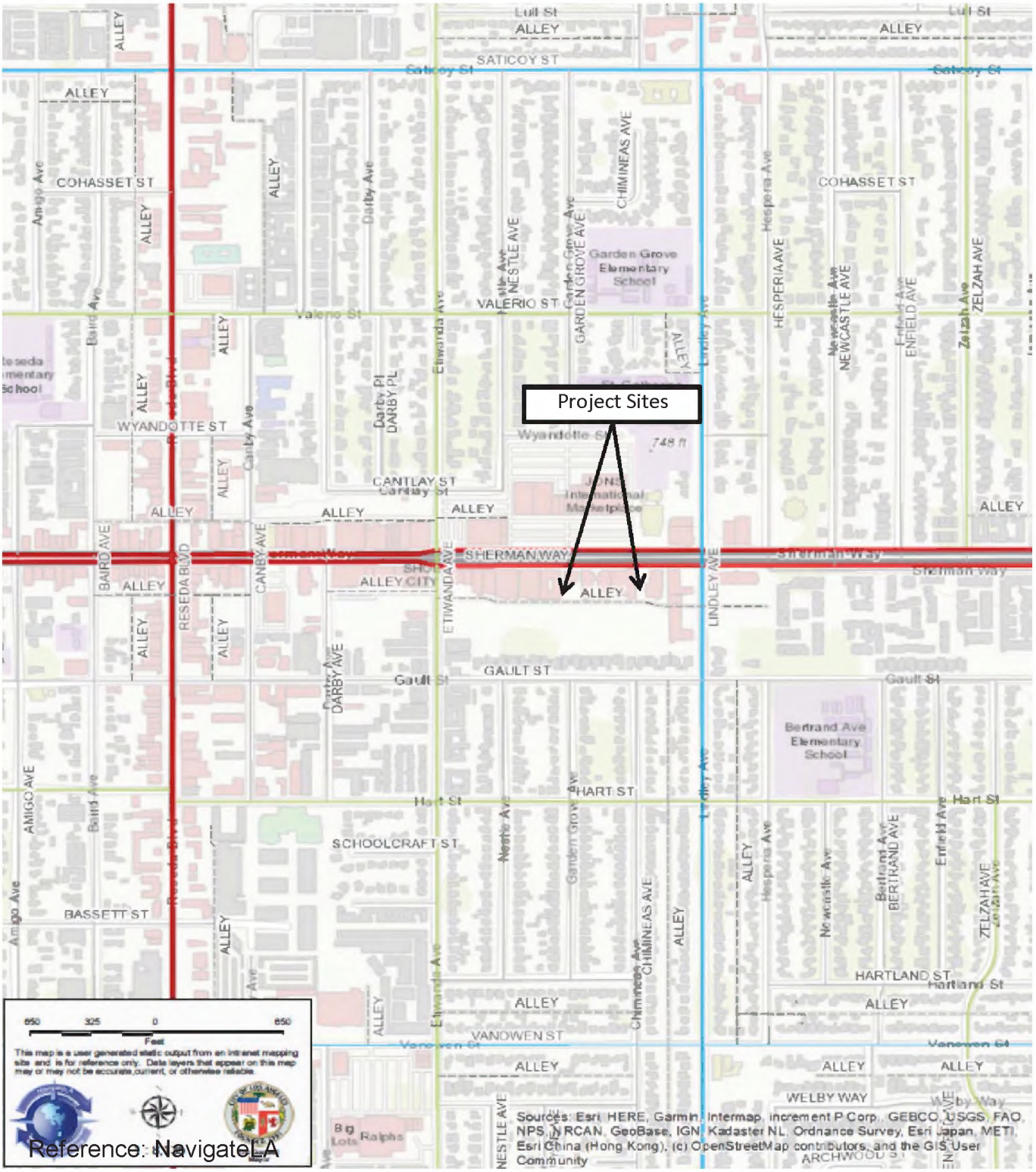
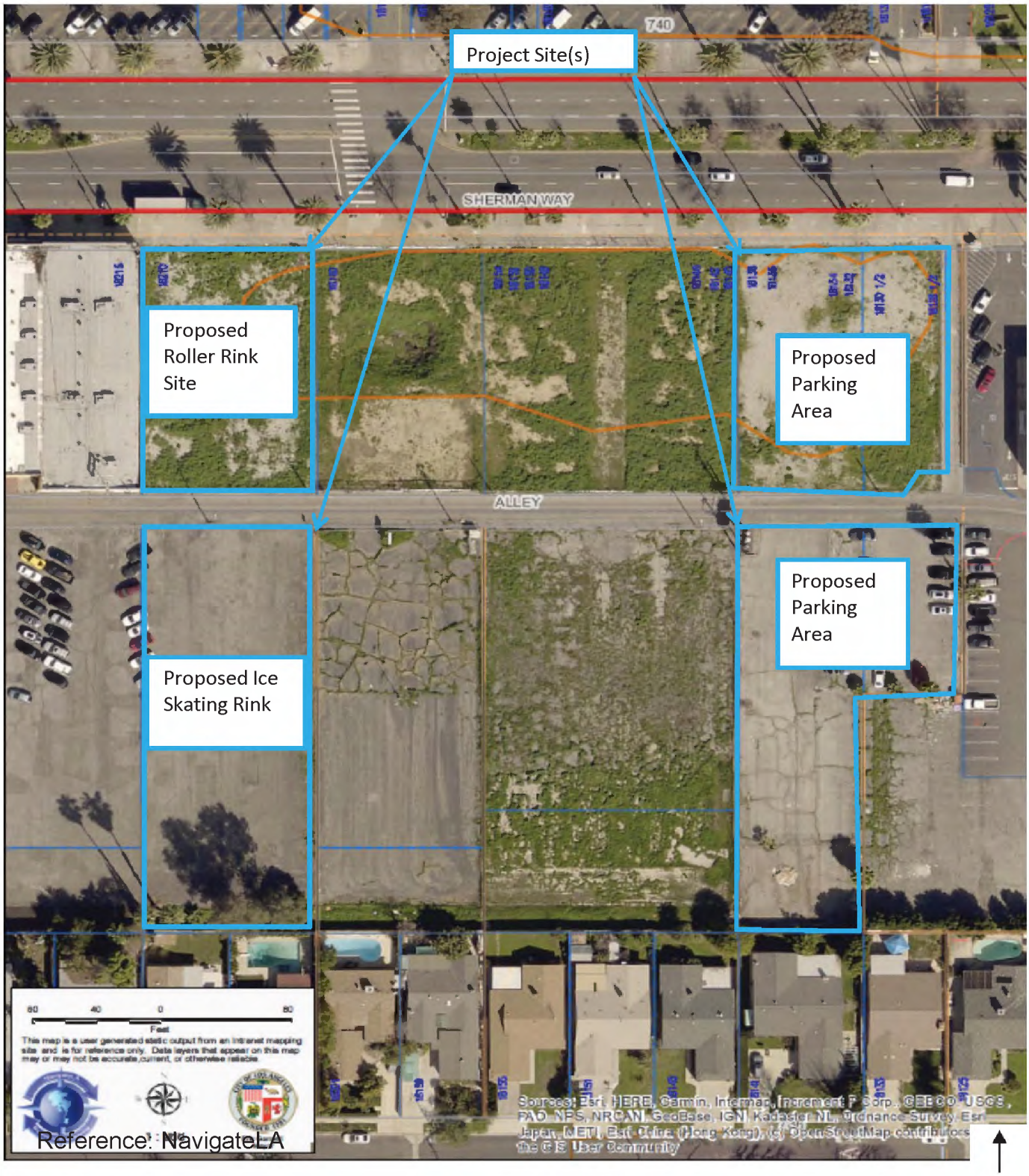
NavigateLA, City of Los Angeles, http://boemaps.eng.ci.la.ca.us/index01.cfm

FIGURES



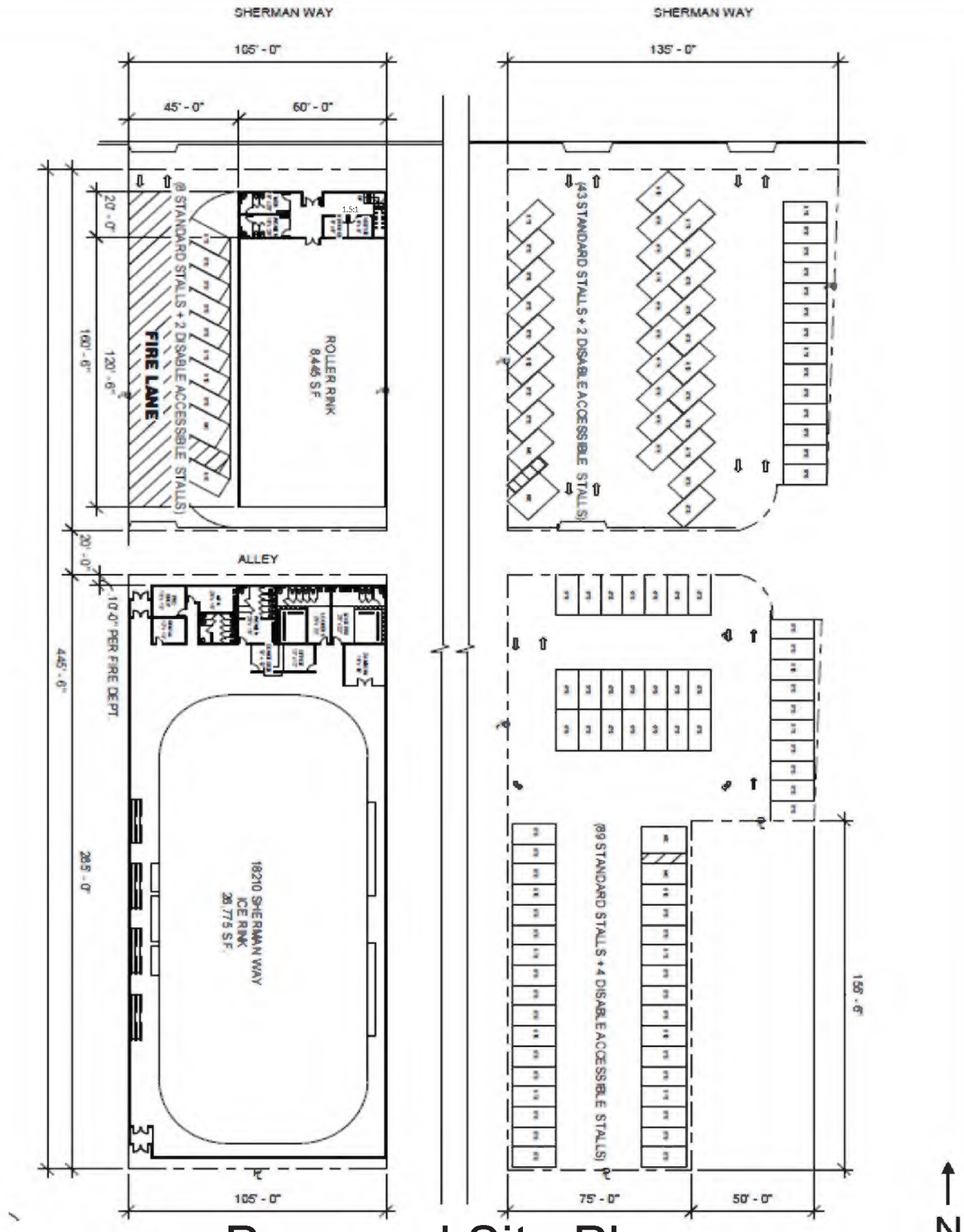
Vicinity Map

Reseda Skate Facility 18210 West Sherman Way Los Angeles	BUREAU OF ENGINEERING GEOTECHNICAL ENGINEERING DIVISION (GED) GED FILE NO.: 19-080 DATE: AUGUST 2019	FIGURE NO. 1



Site Location Map

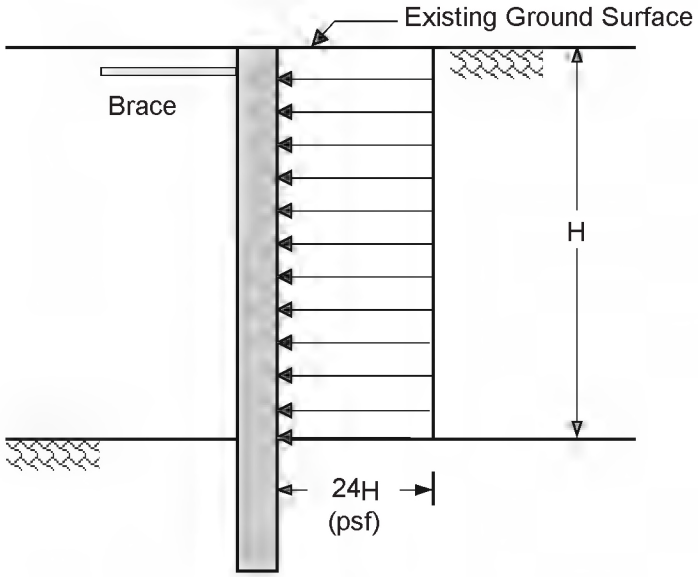
Reseda Skate Facility 18210 West Sherman Way Los Angeles	BUREAU OF ENGINEERING GEOTECHNICAL ENGINEERING DIVISION (GED) GED FILE NO.: 19-080 DATE: AUGUST 2019	FIGURE NO. 2



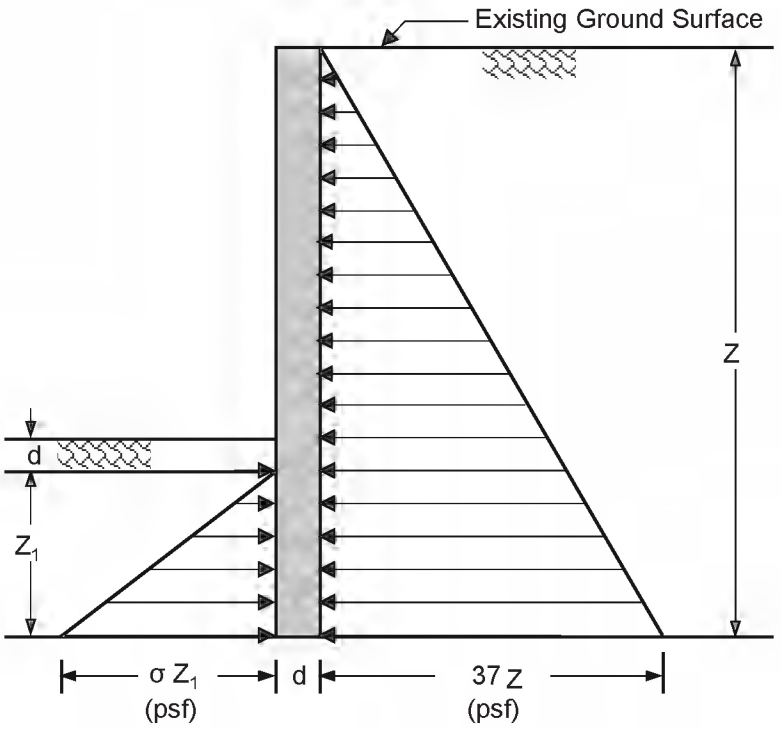
Proposed Site Plan

Reseda Skate Facility 18210 West Sherman Way Los Angeles	BUREAU OF ENGINEERING GEOTECHNICAL ENGINEERING DIVISION (GED) GED FILE NO.: 19-080 DATE: AUGUST 2019	FIGURE NO. 3

Q:\PROJECTS\2019\19-080 Reseda Skate Park\Analysis\Lateral earth pressures shoring



BRACED SHORING



CANTILEVER SHORING

σ = 440 pcf for soldier piles spaced at least 2.5d apart
σ = 220 pcf for soldier piles spaced less than 2.5d apart

Notes:
1. Not to scale.
2. Dimensions are in feet.
3. Earth pressures shown are based on level backfill conditions behind shoring elements and groundwater below bottom of shoring elements.

LATERAL EARTH PRESSURES FOR TEMPORARY SHORING SYSTEMS
RESEDA SKATE FACILITY PROJECT
Los Angeles, California

By: ERF	Date: 8/27/2019	GED Fil No.: 19-080
City of Los Angeles, DPW, BOE, Geotechnical Engineering Division		Figure **4**

APPENDIX A

Geotechnical Data Report
Reseda Ice and Roller Rink Project
18210, 18128, and 18138 West Sherman Way
Reseda, Los Angeles, California
by Converse Consultants
dated August 28, 2019

Converse Consultants
Geotechnical Engineering
Environmental & Groundwater Science
Inspection & Testing Services

GEOTECHNICAL DATA REPORT

RESEDA ICE AND ROLLER RINK PROJECT

18210, 18128 AND 18138 WEST SHERMAN WAY
RESEDA, LOS ANGELES, CALIFORNIA

CONVERSE PROJECT NO. 16-31-260-16

Prepared For:

CITY OF LOS ANGELES BUREAU OF ENGINEERING
Mr. Patrick J. Schmidt, PE, GE
Division Engineer
Geotechnical Engineering Division
Department of Public Works
1149 South Broadway, 1st Floor, MS 495
Los Angeles, California 90015

Presented By:

CONVERSE CONSULTANTS
717 South Myrtle Avenue
Monrovia, California 91016
626-930-1200

August 28, 2019

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

August 28, 2019

Mr. Patrick J. Schmidt, PE, GE
Division Engineer
Geotechnical Engineering Division
City of Los Angeles Bureau of Engineering
Department of Public Works
1149 South Broadway, 1st Floor, MS 495
Los Angeles, California 90015

Subject: **GEOTECHNICAL DATA REPORT**
Reseda Ice and Roller Rink Project
18210, 18128 and 18138 West Sherman Way
Reseda, Los Angeles, California
Contract No. C-130603, TOS 19-080, Work Order No. E170121B
Converse Project No. 16-31-260-16

Dear Mr. Schmidt,

Converse Consultants (Converse) has prepared this geotechnical data report to present the findings of a geophysical survey and our geologic and geotechnical study for the proposed Reseda Ice and Roller Rink Project located in the Reseda area of the City of Los Angeles, California.

We appreciate the opportunity to be of continued service to City of Los Angeles. If you should have any questions, please do not hesitate to contact us at (626) 930-1275.

Sincerely,

CONVERSE CONSULTANTS

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
Senior Vice President/Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
KATHIRAVETPILLAI SIVATHASAN
No. 2708
Exp. 6-30-20
GEOTECHNICAL
STATE OF CALIFORNIA

Dist: 4/Addressee
Copy: Easton Forcier

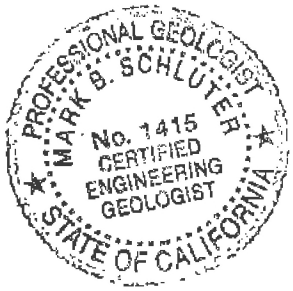
PA/MBS/SKS:jjl

PROFESSIONAL CERTIFICATION

This data report for the Proposed Reseda Ice and Roller Rink Project located in the Reseda area of the City of Los Angeles, California, has been prepared by the staff of Converse under the professional supervision of the individuals whose seals and signatures appear hereon.

The findings contained in this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice in this area of Southern California. There is no warranty, either expressed or implied.

Parameswaran Ariram, EIT
Senior Staff Engineer



Mark B. Schluter, PG, CEG, CHG
Senior Engineering Geologist

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE
Senior Vice President/Principal Engineer

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3.2 GEOPHYSICAL INVESTIGATION 3
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3.4 LABORATORY TESTING 4
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Appendices

Appendix A ..... Field Exploration
Appendix B ..... Laboratory Testing Program
Appendix C ..... Spectrum Geophysical Investigation Dated August 12, 2019

1.0 INTRODUCTION

This report contains the findings of our geotechnical study performed at the site of the proposed Reseda Ice and Roller Rink project located in the Reseda area of the City of Los Angeles, California.

This data report is written for the project described herein and is intended for use solely by city of Los Angeles and its design team. It should not be used as a bidding document but may be made available to the potential contractors for information on factual data only. For bidding purposes, the contractors should be responsible for making their own interpretation of the data contained in this report.

2.0 SITE AND PROJECT DESCRIPTION

2.1 Site Description

The project site consists of four (4) separate parcels that are located along the south side of West Sherman Way. The parcels are divided by an existing east-west alley way, parcel fences and private properties located southwest of the intersection of West Sherman Way and Lindley Avenue in the Reseda area of Los Angeles.

The subject site for the proposed ice and roller rink has ground surface elevations ranging from approximately 733 feet to 735 feet relative to mean-sea-level (MSL) respectively, with surface gradients flowing down gradient toward the south and southwest. The site coordinates are: North latitude: 34.20044 degrees, West longitude: 118.52981 degrees.

2.2 Project Description

The project site consists of four (4) separate parcels that are divided by an existing alley way and private properties located southwest of the intersection of West Sherman Way and Lindley Avenue in the Reseda area of Los Angeles. Existing structures have been demolished and removed from the properties and the parcels are vacant and undeveloped. The project consists of construction of a new roller rink and indoor ice-skating rink in Reseda along the south side of Sherman Way. The roller rink and ice-skating rink will occupy a footprint of approximately 8,500 and 27,000 square feet, respectively. The northeast and southeast parcels will be used for parking.

3.0 SCOPE OF WORK

The scope of our work included a site reconnaissance, subsurface exploration with soil sampling, laboratory testing, engineering analysis, and preparation of this report.

3.1 Site Reconnaissance

Our field exploration included a site reconnaissance by a Converse geologist on August 24th, 2019. The purpose of the site reconnaissance was to observe surface conditions and to mark exploratory boring locations based on a proposed boring location map provided by Geotechnical Engineering Division, City of Los Angeles. The borings were located using existing boundary features as a guide and should be considered accurate only to the degree implied by the method used. Underground Service Alert (USA) of Southern California was notified of our proposed drilling locations at least 48 hours prior to initiation of the subsurface field work.

3.2 Geophysical Investigation

A geophysical investigation of the northwest and southwest parcels was performed by Spectrum Geophysics on July 24th and 25th, 2019. The purpose of the investigation was to locate buried features such as footings, debris or metallic utility lines. The equipment used during the geophysical investigation included a Geonics EM-31 terrain conductivity meter, EM-61 MK2 digital metal detector, Noggin Smart Cart ground penetrating radar, Fisher TW-6 M-Scope shallow focus metal detector, and RadioDetection RD4000 electromagnetic utility locator. The systems were linked to a NavCom DGPS unit and Allegro field computer to map geographic coordinates and record survey data positions for a site map. Results of the geophysical investigation are presented in a separate report in Appendix C.

3.3 Subsurface Exploration

Nine (9) exploratory borings (BH-1 through BH-9) were drilled at the project site on July 29th, 2019. The borings were advanced using a truck mounted drill rig with an 8-inch diameter hollow stem auger to depths of 16.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse engineer and sampled at regular intervals and at changes in subsurface soils. Detailed descriptions of the field exploration and sampling program are presented in Appendix A, *Field Exploration*.

California Modified Sampler (Ring samples), Standard Penetration Test samples , and bulk soil samples were obtained for laboratory testing. Standard Penetration Tests (SPTs) were performed in selected borings at selected intervals using a standard (1.4 inches inside diameter and 2.0 inches outside diameter) split-barrel sampler. The bore holes were backfilled with cement grout and patched with cold mix concrete to match the surface conditions if applicable following the completion of drilling.

A MultiRAE Lite PID meter calibrated to hexane was used to screen the soil samples for volatile organic compounds during drilling. The results of the PID meter screening are presented on the boring logs.

The approximate locations of the exploratory borings are shown in Figure No. 1, *Boring Location Map.* For a description of the field exploration and sampling program see Appendix A, *Field Exploration*.

3.4 Laboratory Testing

Representative samples of the site soils were tested in the laboratory to aid in the classification and to evaluate relevant engineering properties. The tests performed included:

- *In situ* moisture contents and dry densities (ASTM Standard D2216)
- Hydrometer (ASTM Standard D7928)
- Maximum dry density and optimum-moisture content relationship (ASTM Standard D1557)
- Direct shear (ASTM Standard D3080)
- Expansion Index (ASTM Standard D4829)
- Consolidation (ASTM Standard D2435)
- R-value (ASTM Standard D2844)
- Atterberg Limits (ASTM Standard D4318)
- Soil Corrosivity Tests (Caltrans 643, 422, 417, and 532)

3.5 Data Report

Data obtained from the exploratory fieldwork and laboratory-testing program were analyzed and evaluated with respect to the planned construction. This report was prepared to provide the findings and data developed during our study and evaluation.

BORING LOCATIONS MAP

Converse Consultants

Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Drawing No. 1

Appendix A

Field Exploration

APPENDIX A: FIELD EXPLORATION

Field exploration included an initial site reconnaissance, and subsurface drilling. During the site reconnaissance, surface conditions were noted, and the locations of the test borings were determined. Borings were approximately located using existing features as a guide.

Nine (9) exploratory borings (BH-1 through BH-9) were drilled at the project site on July 29th, 2019. The borings were advanced using a truck mounted drill rig with an 8-inch diameter hollow stem auger to depth of 16.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse engineer and sampled at regular intervals and at changes in subsurface soils.

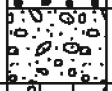
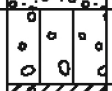
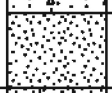
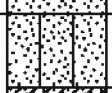
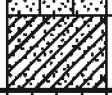
Relatively undisturbed ring and bulk samples of the subsurface soils were obtained at frequent intervals in the borings. The undisturbed samples were obtained using a California Steel Sampler (2.4 inches inside diameter and 3.0 inches outside diameter) lined with thin sample rings. The sampler was driven into the bottom of the boreholes with successive drops of a 140-pound hammer falling 30 inches by means of a mechanically driven pulley. The number of successive drops of the driving weight ("blows") required for every 6-inch of penetration of the sampler are shown on the Logs of Borings in the "blows" column.

The soil sample was retained in brass rings (2.4 inches in diameter and one inch in height). The central portion of the sample was retained and carefully sealed in waterproof plastic containers for shipment to the laboratory. Bulk soil samples from boreholes BH-1 to BH-4, BH-8 and BH-9 were also collected in plastic bags as per the field direction and brought to the laboratory.

Standard Penetration Tests (SPTs) were also performed. In this test, a standard split-spoon sampler (1.4 inches inside diameter and 2.0 inches outside diameter) was driven into the ground with successive drops of a 140-pound hammer falling 30 inches by means of an automatic hammer. The number of successive drops of the driving weight ("blows") required for every 6-inch of penetration of the sampler are shown on the Logs of Borings in the "blows" column. The soil retrieved from the spoon sampler was carefully sealed in waterproof plastic containers for shipment to the laboratory.

It should be noted that the exact depths at which material changes occur cannot always be established accurately. Changes in material conditions that occur between driven samples are indicated in the logs at the top of the next drive sample. A key to soil symbols and terms is presented as Figure No. A-1, *Soil Classification Chart*. The logs of the exploratory boring are presented in Figure Nos. A-2 through A-10, *Log of Borings.*

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SAMPLE TYPE

- STANDARD PENETRATION TEST — Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE 2.42" I.D. sampler.
- DRIVE SAMPLE No recovery
- BULK SAMPLE
- GRAB SAMPLE
- GROUNDWATER WHILE DRILLING
- GROUNDWATER AFTER DRILLING

BORING LOG SYMBOLS

LABORATORY TESTING ABBREVIATIONS

TEST TYPE
(Results shown in Appendix B)

CLASSIFICATION

Plasticity	pi
Grain Size Analysis	ma
Passing No. 200 Sieve	wa
Sand Equivalent	se
Expansion Index	ei
Compaction Curve	max
Hydrometer	h

STRENGTH

Pocket Penetrometer	p
Direct Shear	ds
Direct Shear (single point)	ds*
Unconfined Compression	uc
Triaxial Compression	tx
Vane Shear	vs
Consolidation	c
Collapse Test	col
Resistance (R) Value	r
Chemical Analysis	ca
Electrical Resistivity	er

UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. **16-31-260-16**

Figure No. **A-1**

Log of Boring No. BH-1

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 734' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		FILL (Af): **LEAN CLAY WITH SAND (CL):** dry to moist, soft, light brown.	■		2/2/3	12	88	39 PPM
5		**ALLUVIUM (Qal):** **LEAN CLAY (CL):** Moist, firm, olive brown.	■		2/3/4	20	95	31 PPM
			■		4/6/9	15	95	24 PPM
10			■		3/6/9	15	101	18 PPM
		moist, stiff, brown to dark brown	■		7/8/11	20	110	41 PPM
15			■		4/7/7	14	89	30 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20090, W118.52971 Bottom elevation of boring is 717.5 feet Location of BH-1: 18 feet south from north fence and 15 feet west from east fence						

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-2

Log of Boring No. BH-2

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 734' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		FILL (Af): **LEAN CLAY WITH SAND (CL):** rock fragments, soft, light brown.						ds, c, max, h, ei
					2/2/2			9 PPM
5		**ALLUVIUM (Qal):** **LEAN CLAY WITH SAND (CL):** few gravel, rock fragments, stiff, moist, light brown.			2/3/4			18 PPM
					2/3/3			14 PPM
10		firm to stiff, moist, light brown to brown			3/5/6			3 PPM
					3/4/3			9 PPM
15		stiff, moist, light brown			3/3/5			3 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20076, W118.52979 Bottom elevation of boring is 717.5 feet Location of BH-2: 97 feet north from center of the alley and 47 feet west from east fence						

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-3

Log of Boring No. BH-3

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 734' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		FILL (Af): **LEAN CLAY WITH SAND (CL):** rock fragments, trace fine sand, medium stiff, moist, light brown.	■		3/3/5			3 PPM
5		**ALLUVIUM (Qal):** **LEAN CLAY (CL):** few sand and gravel, medium stiff, dry to moist, light brown.	■		3/4/5			4 PPM, pi
		few gravel, light brown	■		3/5/7			5 PPM
10		stiff, moist, brown	■		5/7/8			8 PPM
			■		7/8/10			3 PPM
15		stiff, moist, dark brown	■		8/8/10			
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20065, W118.52968 Bottom elevation of boring is 717.5 feet Location of BH-3: 45 feet north from center of the alley and 18 feet west from east fence.						

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-4

Log of Boring No. BH-4

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 733' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		ASPHALT 3" BASE 0"						ds, c, max, h, ei
		FILL (Af):						
		LEAN CLAY WITH SAND (CL): with trace gravel, soft, moist, brown.	X		1/1/1			2 PPM
		ALLUVIUM (Qal):						
5		**LEAN CLAY (CL):** soft, moist, brown.	X		1/1/1			4 PPM
			X		1/1/1			4 PPM
10		moist, brown	X		1/2/2			5 PPM
			X		2/2/3			1 PPM
15		medium stiff, moist, light brown	X		2/3/4			4 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout and patched with quick set concrete on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20044, W118.52981 Bottom elevation of boring is 716.5 feet Location of BH-4: 20 feet south from center of the alley and 50 feet west from east fence.						

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West Sherman Way
Los Angeles, CA

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Figure No. A-5

Log of Boring No. BH-5

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 734' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		ASPHALT 5" BASE 0"						
		FILL (Af): **LEAN CLAY (CL):** few gravel, medium stiff, moist, brown.	■		3/3/3	18	117	2PPM
5		**ALLUVIUM (Qal):** **LEAN CLAY (CL):** soft, moist, light brown.	■		1/2/2	12	115	3PPM, c, ds
			■		3/4/5	25	85	3PPM
10		Clay with trace fine sand, moist, light brown to brown	■		2/4/5	24	103	4PPM
			■		5/12/15	23	86	1PPM
15		stiff, moist, brown	■		4/5/6	19	85	8PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout and patched with quick set concrete on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20025, W118.52967 Bottom elevation of boring is 717.5 feet Location of BH-5: 87 feet south from center of the alley and 15 feet west from east fence.						

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Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-6

Log of Boring No. BH-6

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 733' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		ASPHALT 3" BASE 0"						
		FILL (Af):						
		LEAN CLAY (CL): soft, dry to moist, dark brown.	X		2/2/1			2 PPM
		ALLUVIUM (Qal):						
5		**LEAN CLAY (CL):** stiff, moist, light brown.	X		1/1/6			3 PPM
			X		1/2/3			3 PPM
10		soft, moist, light brown	X		1/1/2			1 PPM
			X		3/4/6			2 PPM
15		medium stiff, moist, light brown	X		1/2/3			3 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout and patched with quick set concrete on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20009, W118.52981 Bottom elevation of boring is 716.5 feet Location of BH-6: 150 feet south from center of the alley and 55 feet west from east fence.						

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Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-7

Log of Boring No. BH-7

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 733' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		ASPHALT 4" BASE 0"						
		FILL (Af):						
		LEAN CLAY (CL): medium stiff, moist, brown.	■		5/4/3			2 PPM
		ALLUVIUM (Qal):						
5		**LEAN CLAY (CL):** medium stiff, moist, brown.	■		1/3/4			6 PPM
			■		2/5/6			7 PPM
10		stiff, moist, brown to light brown	■		4/6/8			1 PPM
			■		5/9/10			2 PPM
15		moist, stiff, light brown	■		5/8/8			4 PPM

End of boring at 16.5 below ground level.
No ground water encountered.
Borehole was backfilled with cement grout and patched with quick set concrete on 7/29/2019.
Soil Cuttings were stockpiled on site and adjacent to borehole.

Coordinates: N34.19987, W118.52970
Bottom elevation of boring is 716.5 feet

Location of BH-7:
220 feet south from center of the alley and 16 feet west from east fence.

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Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-8

Log of Boring No. BH-8

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 735' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		FILL (Af): **LEAN CLAY WITH SAND (CL):** trace gravel, soft, dry, light brown.						r
			X		1/1/1			3 PPM
		ALLUVIUM (Qal):						
5		**LEAN CLAY (CL):** few silt, soft, dry to moist, brown.	X		1/1/1			3 PPM
			X		1/2/2			3 PPM
10		trace gravel, soft, moist,	X		1/1/1			2 PPM
			X		2/4/5			1 PPM
15		medium stiff, moist, light brown	X		1/2/2			1 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: N34.20073, W118.52860 Bottom elevation of boring is 718.5 feet Location of BH-8: 77 feet north from center of the alley and 65 feet west from east fence.						

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Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-9

Log of Boring No. BH-9

Dates Drilled: 7/29/2019 Logged by: PA Checked By: MBS

Equipment: HSA 8" diameter Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 735' Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/6"	MOISTURE (%)	DRY UNIT WT. (pcf)	PID and Lab Tests
		ASPHALT 2.5" BASE 0"						
		FILL (Af):						
		LEAN CLAY WITH SAND (CL): dry, stiff, light brown.	■		4/7/5	15	84	r
5		**ALLUVIUM (Qal):**	■		1/2/3	8	92	34 PPM, pi
		LEAN CLAY (CL): with trace sand, medium stiff, dry to moist, light brown.	■		4/6/8	23	72	58 PPM
10			■		2/4/8	18	86	16 PPM
			■		6/9/9	17	103	3 PPM
15		stiff, moist, olive brown	■		4/6/8	19	86	4 PPM
		End of boring at 16.5 below ground level. No ground water encountered. Borehole was backfilled with cement grout on 7/29/2019. Soil Cuttings were stockpiled on site and adjacent to borehole. Coordinates: 34.20014, W118.52862 Bottom elevation of boring is 716.5 feet Location of BH-9: 58 feet east from west fence and 8 feet south from parking lot curb						

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. A-10

Appendix B

Laboratory Testing Program

APPENDIX B: LABORATORY TESTING PROGRAM

Tests were conducted in our laboratory on representative soil samples for the purpose of classification and evaluation of their relevant physical characteristics and engineering properties. The amount and selection of tests were based on the geotechnical requirements of the project. Test results are presented herein and on the Logs of Borings in Appendix A, *Field Exploration*. The following is a summary of the laboratory tests conducted for this project.

Moisture Content and Dry Density

Results of moisture content and dry density tests performed on relatively undisturbed ring samples were used to aid in the classification of the soils and to provide quantitative measure of the *in situ* dry density. Data obtained from this test provides qualitative information on strength and compressibility characteristics of site soils. For test results, see the Logs of Borings in Appendix A, *Field Exploration*.

Grain-Size Analysis

To assist in hydrometer analyses Converse retained the AP Engineering and Testing, Inc., located in Pomona, California. hydrometer analysis was performed on two (2) selected samples. Testing were performed in general accordance with the ASTM Standard D7928 test method. Grain-size curves are shown in Figure No. B-1, *Grain Size Distribution Curve*.

Maximum Dry Density Test

Laboratory maximum dry density-moisture content relationship test was performed on two (2) representative bulk samples. The test was conducted in accordance with ASTM Standard D1557 laboratory procedure. The test result is presented on Figure No. B-2, *Moisture-Density Relationship Results*.

Direct Shear

Direct shear tests were performed on two (2) remolded soil samples and one (1) undisturbed sample. For samples BH-2 (one foot to 5 feet below ground level) and BH-4 (one foot to 5 feet below ground level), remolded bulk samples to 90% relative compaction at 2% above the moisture content were prepared. For the sample BH-5 at the depth of 5 feet to 6 feet, contained in brass sampler rings, was placed directly into the test apparatus and subjected to a range of normal loads appropriate for the anticipated conditions. The tests were performed at soaked moisture conditions. The samples were then sheared at a constant strain rate of 0.004 inch/minute. Shear deformation was recorded until a maximum of about 0.25-inch shear displacement was achieved. Ultimate strength was selected from the shear-stress deformation data and plotted to determine the shear strength parameters. For test data, including sample density and moisture content, see Figure No. B-3a through B-3c, *Direct Shear Test Results,* and in the following table:

Table No. B-1, Direct Shear Test Results

Boring No.	Depth (feet below ground level)	Soil Classification	Ultimate Strength Parameters	
			Friction Angle (degrees)	Cohesion (psf)
BH-2	1-5	Lean Clay with Sand (CL)	27	100
BH-4	1-5	Lean Clay with Sand (CL)	25	70
BH-5	5-6	Lean Clay (CL)	24	200

Consolidation Test

Consolidation test was performed on two (2) remolded soil samples and one (1) undisturbed sample. For samples BH-2 (one foot to 5 feet below ground level) and BH-4 (one foot to 5 feet below ground level), remolded bulk samples to 90% relative compaction at 2% above the moisture content were prepared. For the sample BH-5 at the depth of 5 feet to 6 feet, contained in brass sampler rings, was placed directly into the test apparatus. Preparation for this test involved trimming the sample and placing the 1-inch high brass ring into the test apparatus, which contained porous stones, both top and bottom, to accommodate drainage during testing. Normal axial loads were applied to one end of the sample through the porous stones, and the resulting deflections were recorded at various time periods. The load was increased after the sample reached a reasonable state equilibrium. Normal loads were applied at a constant load-increment ratio, successive loads being generally twice the preceding load. The sample was tested at field and submerged conditions. The test results, including sample density and moisture content, are presented in Figure No. B-4a through B-4c, *Consolidation Test Results*.

Atterberg Limits

Atterberg limits test was performed on two (2) sample to assist the classification of the soil and fill materials according to ASTM Standard D4318 test method. The test results are presented in the following table and on Figure No. B-5, *Atterberg Limit Test Results*.

Table No. B-2, Atterberg Limit Test Results

Boring No.	Depth (feet)	Soil Classification	Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)
BH-3	5.5	Lean Clay (CL)	24	12	12
BH-9	5.5	Lean Clay (CL)	27	13	14

Expansion Index Test

Two (2) representative bulk samples were tested to evaluate the expansion potential of material encountered at the site. The tests were conducted in accordance with California Building Code (CBC, 2019). Test results are presented in the following table:

Table No. B-3, Expansion Index Test Result

Boring No.	Depth (feet)	Soil Description	Expansion Index	Expansion Potential
BH-2	1 - 5	Lean Clay with Sand (CL)	46	Low
BH-4	1 - 5	Lean Clay with Sand (CL)	38	Low

R- Value

Two (2) representative bulk soil sample was tested for resistance value (R-value) in accordance with ASTM D2844 Standard. This test is designed to provide a relative measure of soil strength for use in pavement design. The test results are shown in the following table:

Table No. B-4, R-value Test Result

Boring No.	Depth (feet)	Soil Classification	Measured R-value
BH-8	1-5	Lean Clay with Sand (CL)	20
BH-9	1-5	Lean Clay with Sand (CL)	21

Soil Corrosivity

Converse retained the Environmental Geotechnology Laboratory, Inc., located in Arcadia, California, to test two (2) bulk soil samples taken in the general area of the proposed structures. The tests included minimum resistivity, pH, soluble sulfates, and chloride content, with the results summarized on the following table:

Table No. B-5, Corrosivity Test Result

Boring No.	Sample Depth (feet)	pH (Caltrans 643)	Soluble Chlorides (Caltrans 422) ppm	Soluble Sulfate (Caltrans 417) (%) by weight	Saturated Resistivity (Caltrans 532) Ohm-cm
BH-3	5-6	7.76	215	0.029	730
BH-4	1-5	7.71	200	0.030	860

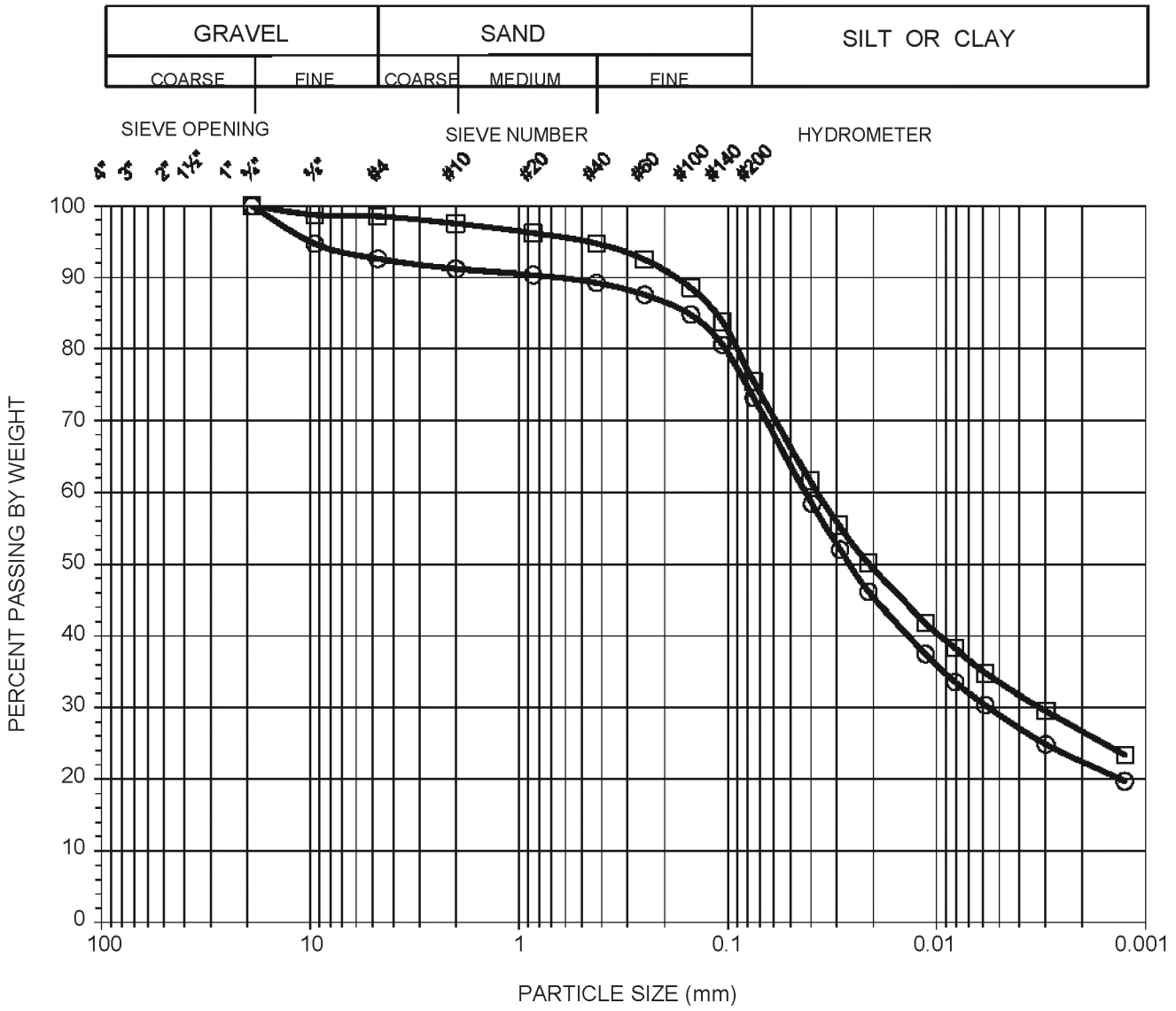
Sample Storage

Soil samples presently stored in our laboratory will be discarded 30 days after the date of this report, unless this office receives a specific request to retain the samples for a longer period.

AP Engineering and Testing, Inc.
DBE|MBE|SBE
2607 Pomona Boulevard | Pomona, CA 91768
t. 909.869.6316 | f. 909.869.6318 | www.aplaboratory.com

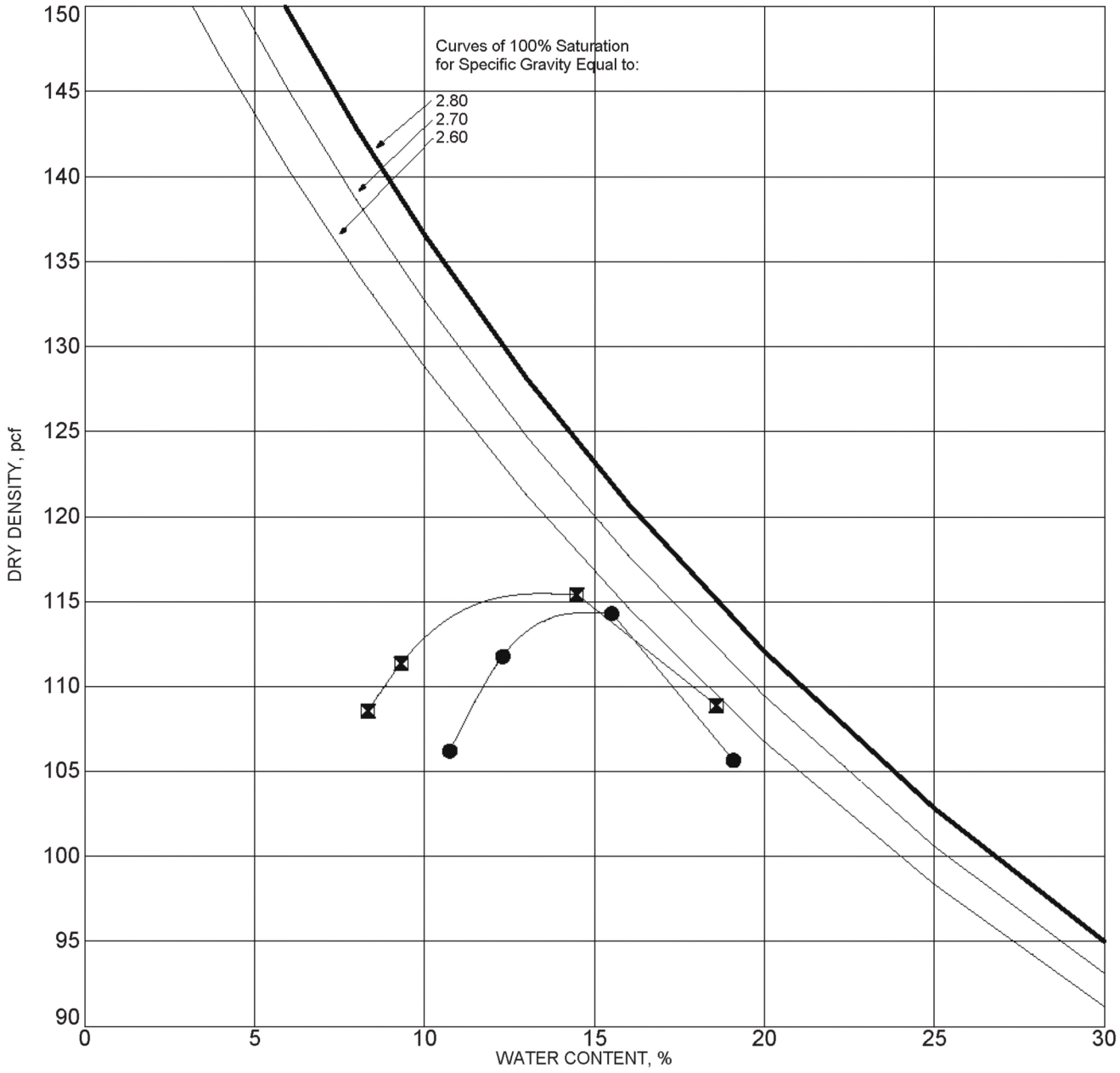
GRAIN SIZE DISTRIBUTION CURVE
ASTM D 6913 & D 7928

Client Name:	Converse Consultants	Tested by:	NG	Date:	08/14/19
Project Name:	Reseda Ice Rink and Roller Rink Project	Computed by:	NR	Date:	08/15/19
Project Number:	16-31-260-16	Checked by:	AP	Date:	08/15/19



Symbol	Boring No.	Sample No.	Sample Depth (feet)	Percent			Atterberg Limits LL:PL:PI	Soil Type U.S.C.S
				Gravel	Sand	Silt & Clay		
○	BH-2	1	1-5	7	20	73	N/A	CL*
□	BH-4	1	1-5	1	23	76	N/A	CL*

**Note: Based on visual classification of sample*



SYMBOL	BORING NO.	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	BH-2	1-5	Lean Clay with Sand (CL)	D1557 Method B	14	114.3
⊠	BH-4	1-5	Lean Clay with Sand (CL)	D1557 Method B	13	116

NOTE:

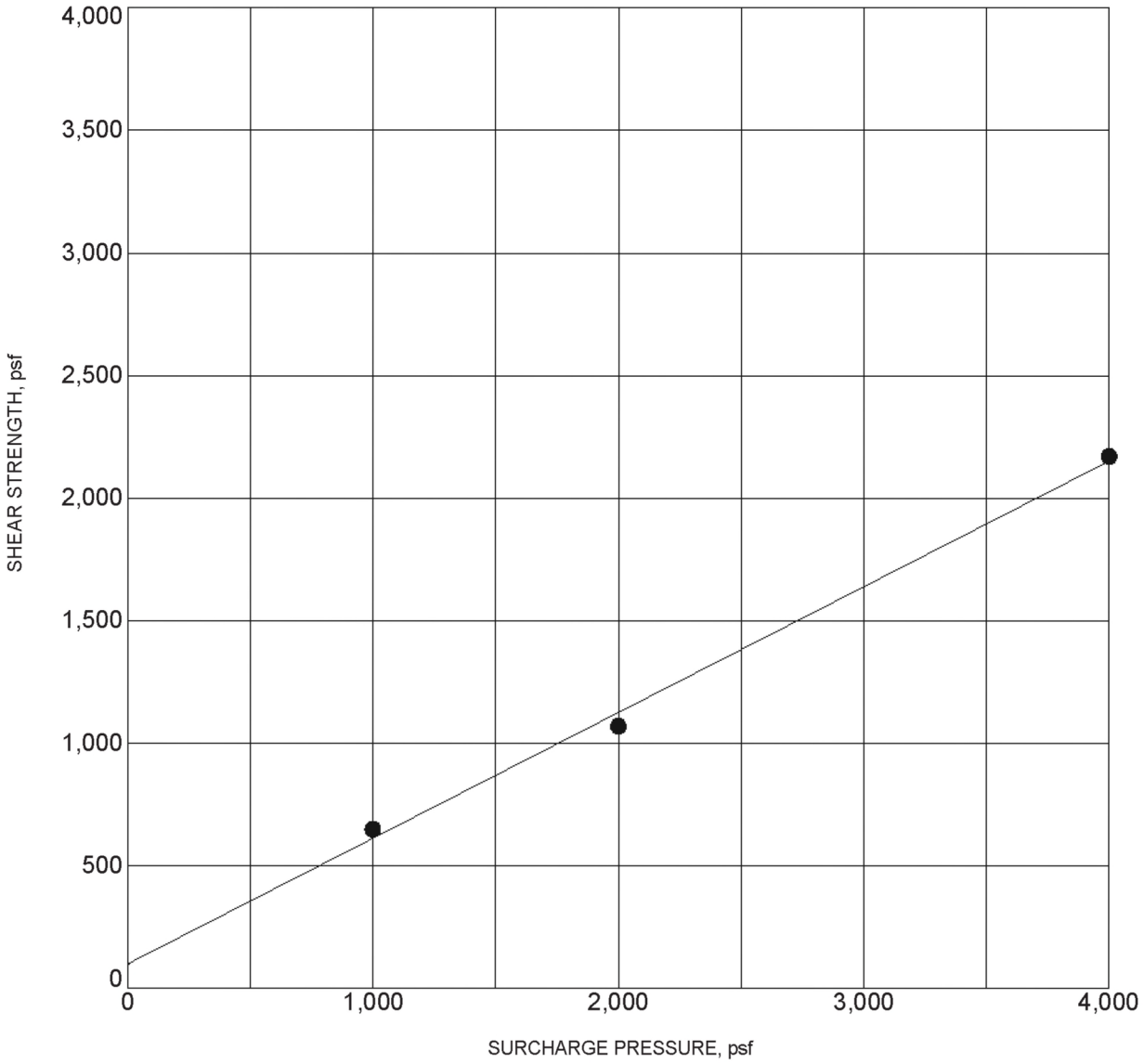
MOISTURE-DENSITY RELATIONSHIP RESULTS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No.
16-31-260-16

Figure No.
B-2



BORING NO.	:	**BH-2**	DEPTH (ft)	:	**1-5**
DESCRIPTION	:	**Lean Clay with Sand (CL)**			
COHESION (psf)	:	**100**	FRICTION ANGLE (degrees)	:	**27**
MOISTURE CONTENT (%)	:	**17.0**	DRY DENSITY (pcf)	:	**104.0**

NOTE: Ultimate Strength.

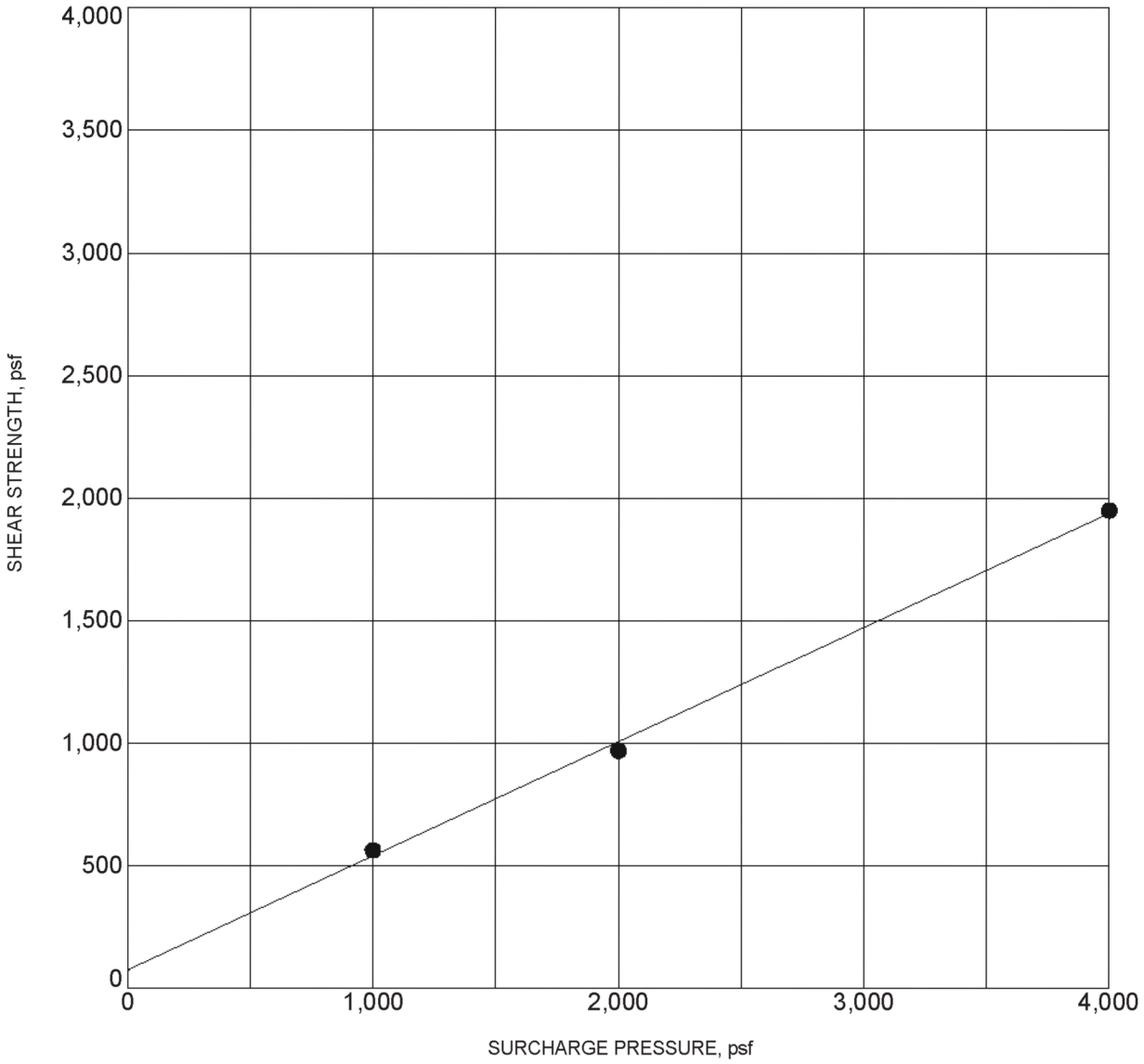
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No.
16-31-260-16

Figure No.
B-3a



BORING NO.	:	**BH-4**	DEPTH (ft)	:	**1-5**
DESCRIPTION	:	**Lean Clay with Sand (CL)**			
COHESION (psf)	:	**70**	FRICTION ANGLE (degrees)	:	**25**
MOISTURE CONTENT (%)	:	**16.0**	DRY DENSITY (pcf)	:	**107.5**

NOTE: Ultimate Strength.

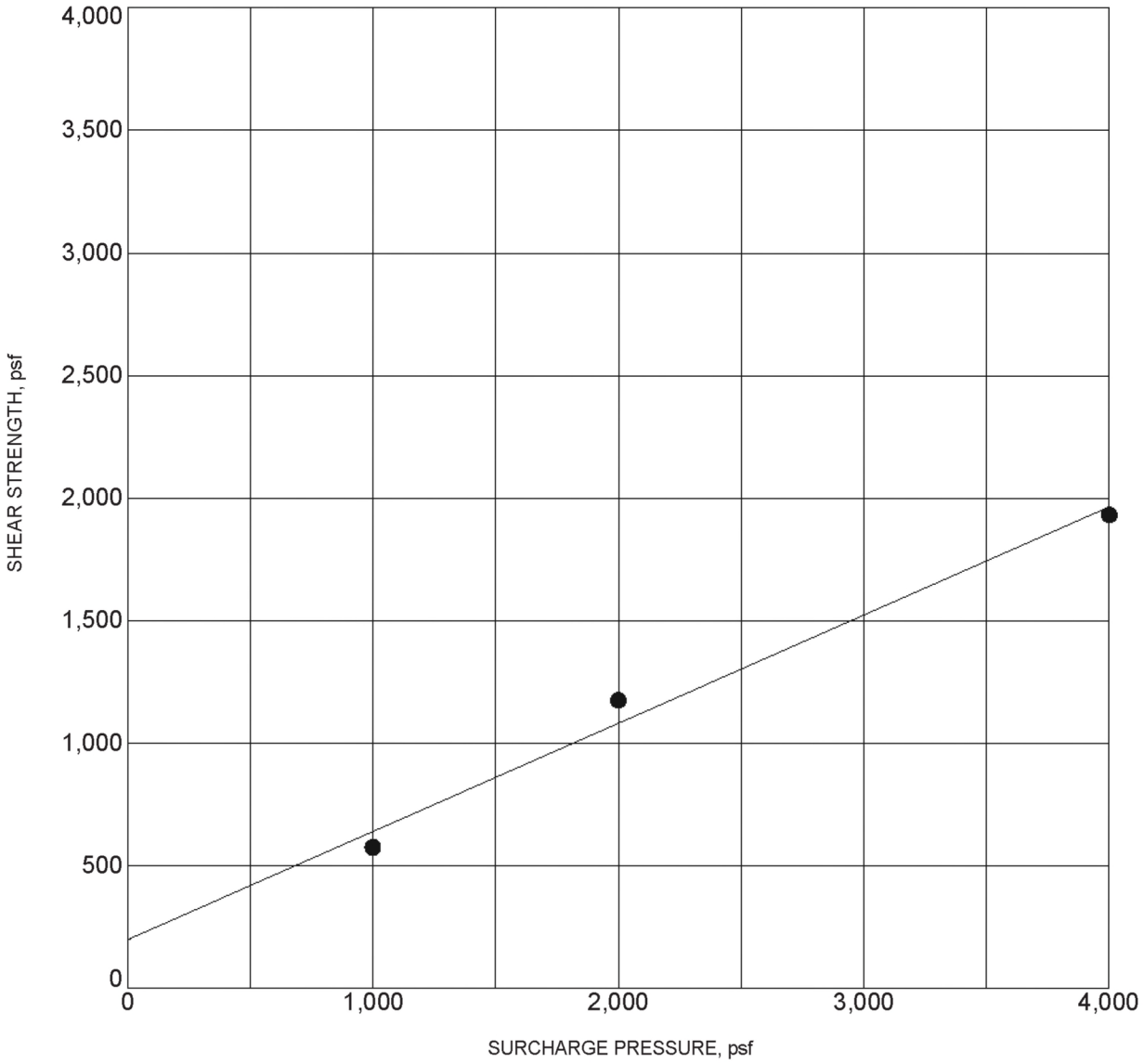
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No.
16-31-260-16

Figure No.
B-3b



BORING NO.	:	**BH-5**	DEPTH (ft)	:	**5-6**
DESCRIPTION	:	**Lean Clay (CL)**			
COHESION (psf)	:	**200**	FRICTION ANGLE (degrees)	:	**24**
MOISTURE CONTENT (%)	:	**12.0**	DRY DENSITY (pcf)	:	**115.0**

NOTE: Ultimate Strength.

DIRECT SHEAR TEST RESULTS

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Project Name
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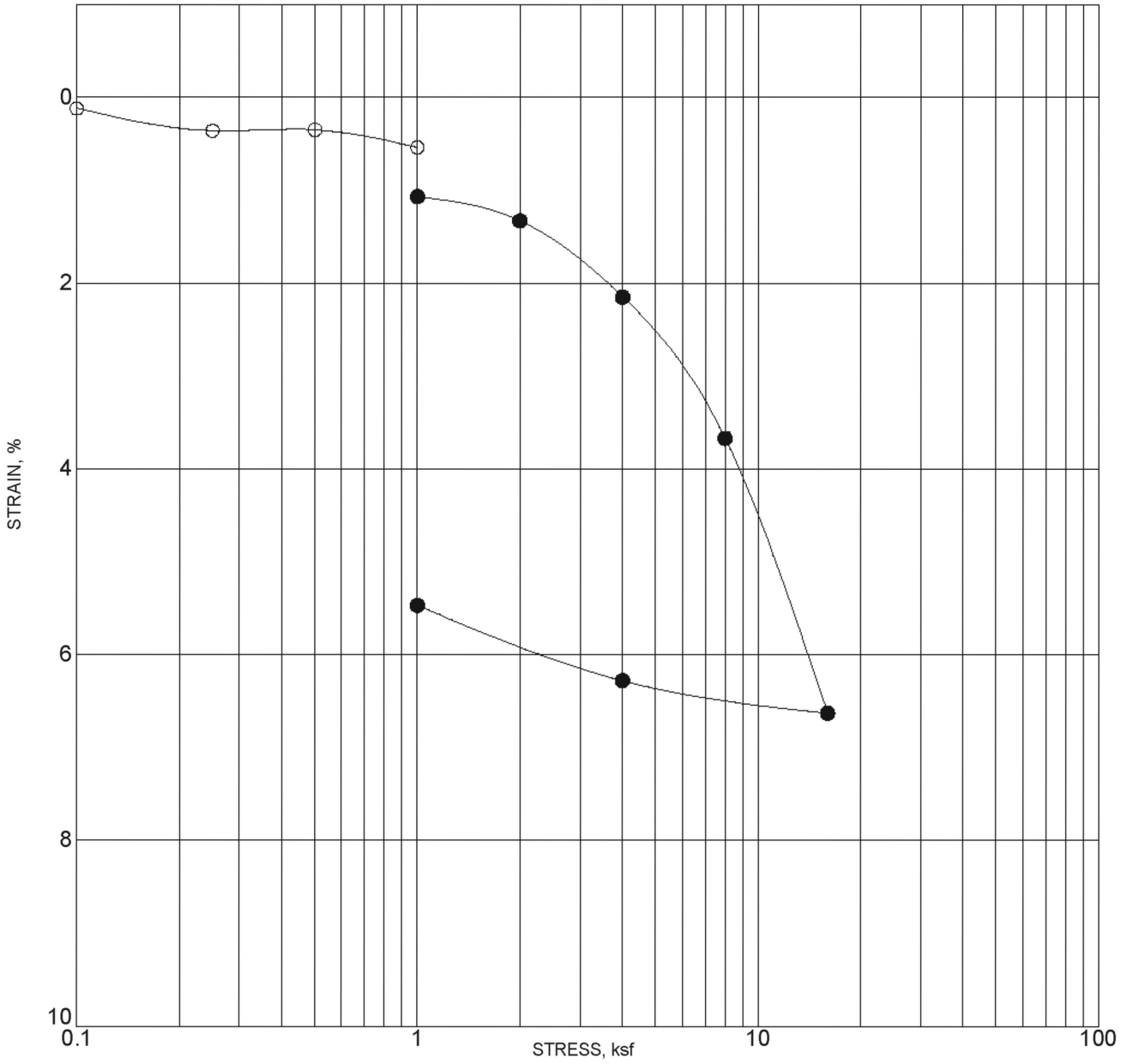
West Sherman Way
Los Angeles, CA

Project No.
16-31-260-16

Figure No.
B-3c



BORING NO. :	BH-2	DEPTH (ft) :	1-5
DESCRIPTION :	Lean Clay with Sand (CL)		

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL	16.5	108.3	83	0.527
FINAL	14.7	116.5	90	0.419

NOTE: SOLID CIRCLES INDICATE READINGS AFTER ADDITION OF WATER

CONSOLIDATION TEST RESULTS

Converse Consultants

Project Name
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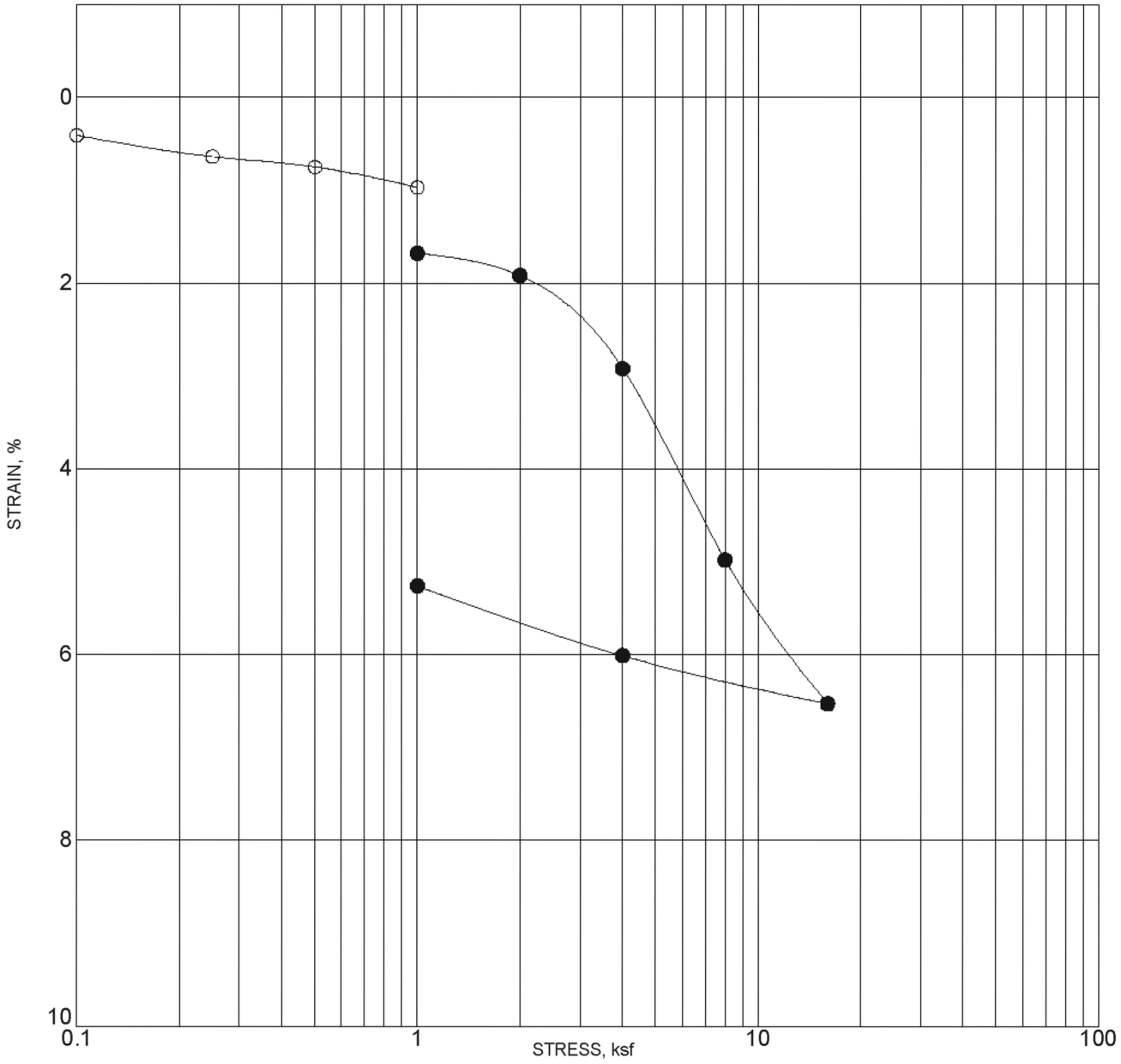
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. B-4a



BORING NO. :	BH-4	DEPTH (ft) :	1-5
DESCRIPTION :	Lean Clay with Sand(CL)		

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL	15.4	107.9	77	0.532
FINAL	13.1	115.6	80	0.430

NOTE: SOLID CIRCLES INDICATE READINGS AFTER ADDITION OF WATER

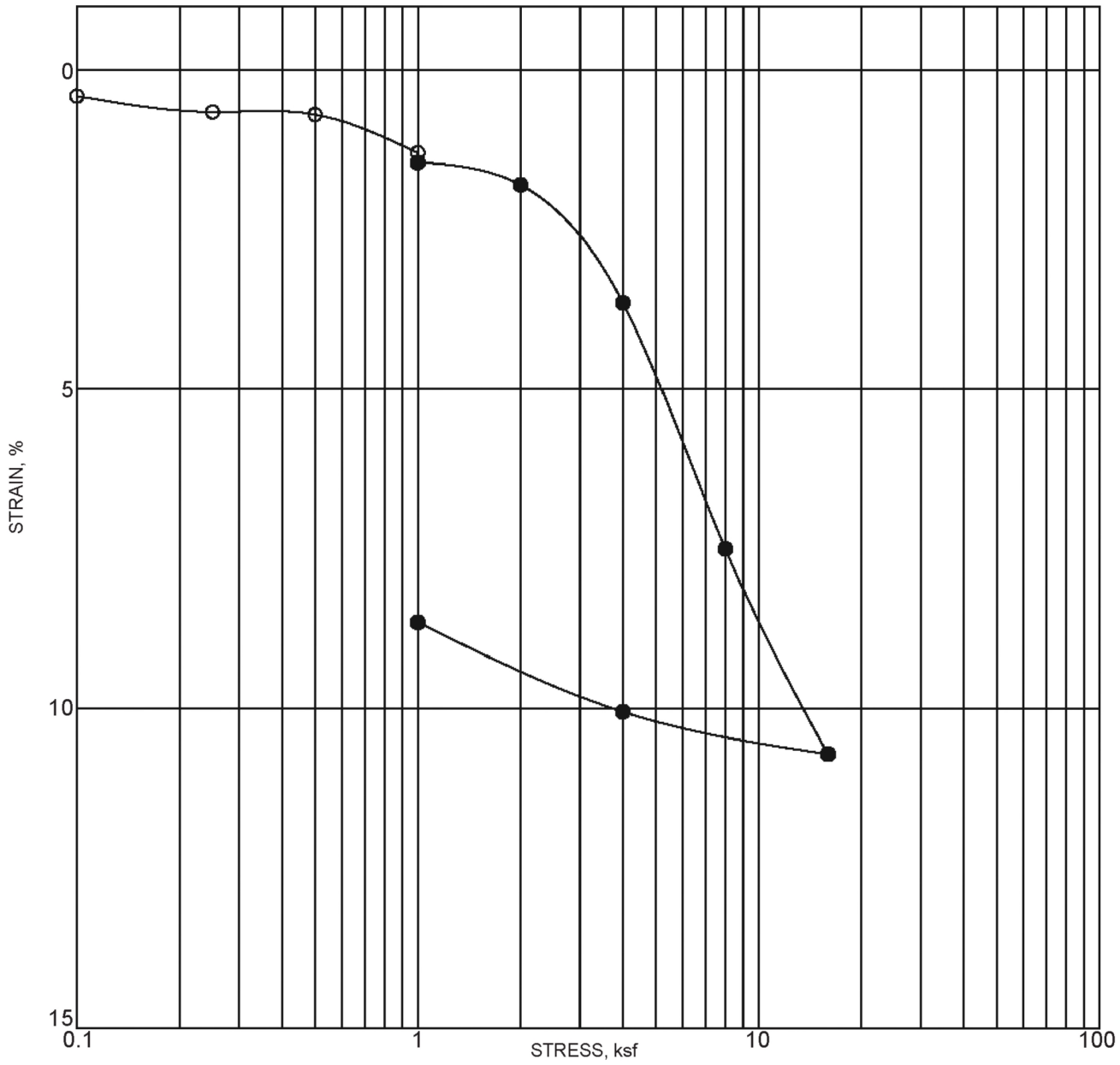
CONSOLIDATION TEST RESULTS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. 16-31-260-16

Figure No. B-4b



BORING NO. :	BH-5	DEPTH (ft) :	5
DESCRIPTION :	Lean Clay (CL)		

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL	12	115.9	75	0.426
FINAL	6.5	129.6	60	0.276

NOTE: SOLID CIRCLES INDICATE READINGS AFTER ADDITION OF WATER

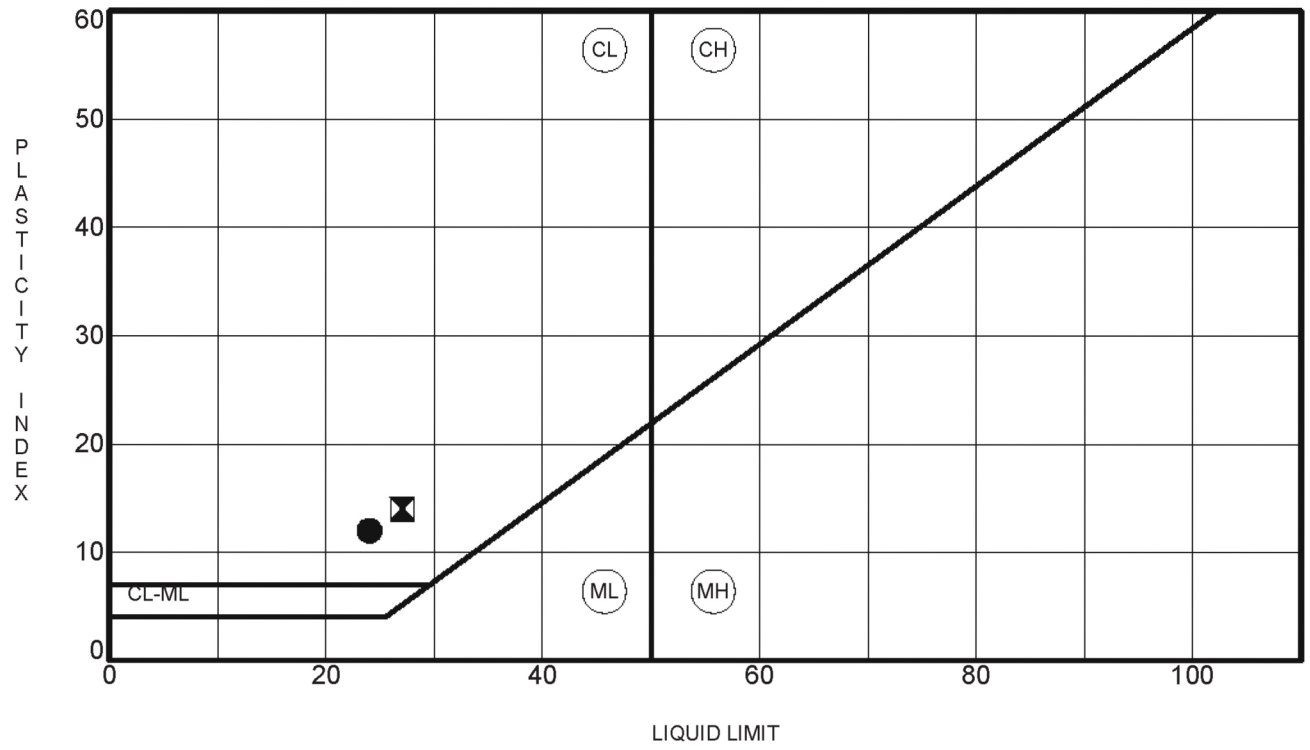
CONSOLIDATION TEST RESULTS

Converse Consultants

Project Name
Reseda Ice and Roller Rink
West Sherman Way
Los Angeles, CA

Project No. **16-31-260-16**

Figure No. **B-4c**



Symbol	Boring No.	Depth (ft)	LL (%)	PL (%)	PI (%)	Description
●	**BH-3**	**5.5**	**24**	**12**	**12**	**Lean Clay (CL)**
⧓	**BH-9**	**5.5**	**27**	**13**	**14**	**Lean Clay (CL)**

ATTERBERG LIMITS RESULTS

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Project Name
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West Sherman Way
Los Angeles, CA

Project No.
16-31-260-16

Figure No.
B-5

Appendix C

Geophysical Investigation

Geophysical Investigation

Converse Consultants
Reseda Ice and Roller Rink
18210 Sherman Way
Reseda, California
Project #1244

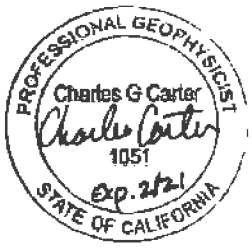
spectrum geophysics
REVEALING THE SUBSURFACE
20434 Corisco Street
Chatsworth, California 91311
1-877-565-3595

Geophysical Investigation
Reseda Ice and Roller Rink
18210 Sherman Way
Reseda, California

Prepared For:
Converse Consultants
717 South Myrtle Avenue
Monrovia, CA 91016

Prepared By:
Spectrum Geophysics
20434 Corisco Street
Chatsworth, CA 91311

August 12, 2019



Charles Carter
California Professional Geophysicist, P.Gp. 1051

spectrum geophysics
REVEALING THE SUBSURFACE

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spectrum geophysics

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5	Contour Map of GPR Signal Intensity (0 – 9ns)

1.0 INTRODUCTION

Spectrum Geophysics conducted a geophysical investigation on July 24th and 25th, 2019 in the vacant lots located at 18210 Sherman Way in Reseda, California. The purpose of the investigation was to locate buried features such as footings, debris or metallic utility lines. The area of investigation, as designated by Mark Schluter of Converse Consultants, included the soil covered lot in the northern portion of the property and the asphalt lot in the southern portion of the property. The lots were separated by an alley way and were surrounded by construction fences although the southern lot was bounded by a block wall at the southern limit of the property. The approximate dimensions of the survey areas were 90 feet by 160 feet and 90 feet by 260 feet for the north and south lots, respectively.

The survey area was located within an area mapped as Quaternary alluvial valley deposits consisting of unconsolidated clay, silt, sand and gravel. The depth to the water table was expected to be below the maximum depth of investigation (approximately 15 feet), but moisture in the upper five feet of soil can contribute to signal attenuation in ground penetrating radar data and corrosion of survey targets. Site interferences included the fences, construction equipment and surface obstructions like pallets and a metal plate.

2.0 EQUIPMENT

The equipment used during this investigation consisted of a Geonics EM-31 terrain conductivity meter (EM-31) and EM-61 MK2 digital metal detector (EM-61) both linked to a Juniper Systems Allegro CX field computer (Allegro), a NavCom SF-2050G Differential Global Positioning System (DGPS) unit with submeter accuracy, a Sensors & Software "Noggin Smart Cart" ground penetrating radar (GPR) unit coupled to a 500-MHz antenna, a Fisher TW-6 M-Scope shallow-focus metal detector (M-Scope) and a RadioDetection RD4000 electromagnetic utility locator (RD4000). The NavCom DGPS unit and the Allegro field computer were coupled to marry EM-31 and EM-61 measurements to their corresponding geographic coordinates and to record survey data for the site map.

3.0 METHODS AND FIELD PROCEDURES

Prior to data acquisition, colored flagging ribbons were placed on the chain-link construction fences on the along the north and south sides of the soil covered northern lot and in the soil or soil piles at the southern end of the property. Each row of flagging ribbons was color coordinated with the flagging ribbons spaced 10 feet apart. A five color sequence was used to distinguish south-north survey lines (red=0E, blue =10E, yellow =20E, pink=30E, green = 40E, red=50E, etc.). Navigation with the EM-31 and EM-61 was accomplished with the operator walking between flagging ribbons of the same color on south-to-north traverses (from red at 0E on south side to red at 0E on north side) and in between the flagging ribbons on north-to-south traverses (between the red at 0E and blue at 10E for the survey line on 5E). Using this procedure the EM-31 and EM-61 data were acquired on roughly parallel north-south survey lines spaced 5 feet apart on average.

Before EM-31 data were acquired, a base station was established in an area with no surface metal within 4 meters of the instrument. The EM-31 was assembled, the battery level was checked and verified per the manufacturer instructions. Once an acceptable battery reading was verified, the in-phase component of the EM-31 was nulled with the instrument at normal operating height and the instrument boom oriented in the primary direction of EM-31 data acquisition. Finally, the instrument phase was checked and tuned if necessary. A file with roughly 50 measurements was recorded at the base station prior to acquiring the data to verify consistency of readings.

Before EM-61 data were collected, the battery level was checked and found to be greater than 12.5 volts. After the EM-61 had a few minutes to warm up, the instrument was nulled at a base station with more than four meters of separation between the coils and any known metallic objects. A static test was run in which the instrument response to the soil and a metal bolt was monitored for amplitude and consistency of the readings. A cable-shake test was then performed to assure the cables were in good working condition and the connectors were fastened properly. The EM-61 used in this survey was found to be working as expected.

The NavCom DGPS unit was allowed to warm up until submeter accuracy was achieved before any EM-31, EM-61 or survey data were acquired.

3.1 EM-31 Terrain Conductivity Meter

The EM-31 terrain conductivity meter was used in an effort to locate buried metallic objects, building foundations or footings. During this investigation EM-31 readings were collected at a rate of five readings per second along parallel south-nortb lines spaced roughly 5 feet apart within the area of the investigation. DGPS positions were streamed to the Allegro field computer at one second intervals, and EM-31 measurements were interpolated between DGPS positions. This resulted in a 1-foot station spacing on average. The acquisition software displayed the DGPS accuracy in real time and gave a visual warning if submeter accuracy was lost. The DGPS accuracy during data acquisition at this site was consistently submeter. A brief description of how the EM-31 works follows.

EM-31 Data Acquisition

The EM-31 (an electromagnetic induction instrument) consists of two coils (transmitter and receiver) mounted on the ends of a 4-meter-long plastic boom (the EM-31 coil separation is 3.66 meters). An alternating current is applied to the transmitter coil, which sends a primary electromagnetic (EM) field into the ground. This primary field induces eddy currents in buried conductive material that is encountered, and these eddy currents generate a secondary magnetic field. This secondary magnetic field is measured at the receiver and compared to the primary field [as a ratio of the secondary field to primary field in parts per thousand (ppt)] and recorded as the in-phase component. The EM-31 also measures the component 90 degrees out of phase with the primary EM field (the quadrature component). The quadrature component is converted to read apparent conductivity in millimhos per meter (mmhos/m). The in-phase component is set to read 0 in background materials, and is sensitive to metal. The primary field generated by the EM-31 can travel 1.5 times the coil spacing in

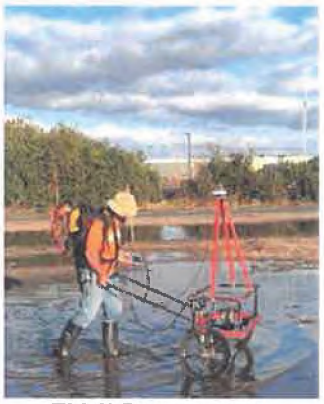
the vertical plane (5.5 meters or 18 feet) and 0.5 times the coil spacing in the horizontal plane (1.8 meters or 6 feet).

The EM-31 instrument has a long history of demonstrated use for the delineation of undocumented disposal, chemical waste and large buried metallic objects. Conductivity values from the EM-31 measurements can be used to delineate lateral contrasts in subsurface materials. With the aid of a regularly spaced grid, the EM-31 can be used to distinguish the boundaries between materials exhibiting contrasts in conductivity such as coarse-grained sediments vs. finer-grained soils, metallic material vs. non-metallic material, and chemical contrasts in soils.

3.2 EM-61 Digital Metal Detector

The EM-61 high-sensitivity metal detector was used in an effort to delineate areas where metallic objects may be buried. The EM-61 transmitter generates short pulses of a primary magnetic field that induces electromagnetic currents in nearby metallic objects. Between pulses, the two receiver coils measure the decay of these electromagnetic currents in millivolts (mV). The measured values are proportional to the metal content (ferrous and non-ferrous) of the nearby objects.

During this investigation, EM-61 readings were recorded and stored in the Allegro at a rate of 5 readings per second along north-south survey lines spaced approximately 5 feet apart. DGPS positions were streamed to the Allegro at 1-second intervals and EM-61 measurements were interpolated between DGPS positions. This resulted in a 1-foot station spacing on average. These data were processed in the field and used to generate contour maps to assist in identifying anomalous areas that may be caused by buried metallic features.



EM-61 Data acquisition

Top coil, bottom coil and differential (top coil data minus the bottom coil data) EM-61 data were recorded. Data from the bottom coil and differential channels were processed but only the differential data are presented. Some surficial metal was filtered out of the differential data while the buried features were not.

3.3 Ground Penetrating Radar

GPR was used to investigate anomalies detected with the EM-61. A GPR grid was established parallel and perpendicular to the construction fences in the northern half of the soil covered lot. North-south GPR traverses spaced 5 feet apart were acquired within the 60-foot by 65-foot grid. During the GPR survey, an antenna containing both a transmitter and a receiver was pushed along the ground surface on south-north survey lines. The transmitter radiated short pulses of high-frequency electromagnetic energy (with a center frequency of 500 MHz for this survey) into the ground. As the radio waves propagated into the ground, these signals were

reflected at boundaries with contrasting electrical conductivity. These reflected signals were then received at the antenna and displayed as vertical profiles on the GPR unit.

GPR data collected during this investigation were processed using GPR-Slice™ V7.0. GPR-Slice™ allows the user to combine 2D radargrams to generate a series of map view time slices or 3D volume. A series of 9 nanosecond time slices were generated and contoured based on GPR signal strength (absolute amplitude of reflected GPR scans). Each 9 nanosecond time slice represents approximately 1.2 vertical feet. The contour maps were used to identify GPR anomalies with lateral extents expected for footings, pipes or buried debris. GPR profiles were reviewed in order to distinguish between horizontal GPR reflectors which may be the result of a conductive soil layer, dipping GPR reflectors which may be the result of a sloped edge of a backfilled excavation or parabolic reflectors that may be the result of a buried pipe. All GPR profiles and time slices were reviewed, and Figure 5 is presented with a representative time slice.

3.4 Electromagnetic Utility Location

During this investigation, active electromagnetic (EM) utility-locating methods were used to relocate linear EM-61 anomalies and to delineate the surface trace of detectable underground utilities.

Active locating was initiated by conducting an EM signal at a known frequency (8 kHz for this site) on an exposed conductor found within the survey area. A receiver, tuned to 8 kHz, was then used to locate the signal maxima (or surface trace) of the applied signal.

The Fisher M-Scope metal detector was used to relocate shallow buried metallic features identified in the EM-61 data. The M-Scope has a transmitter and a receiver at the ends of a short boom. The transmitter emits a radio-frequency source signal that induces a secondary magnetic field in metallic material in its immediate vicinity. The receiver measures the signal strength of this secondary magnetic field and emits an audible response, the volume and pitch of which increase in the presence of metallic material. The sensitivity of the M-Scope allows the operator to locate the lateral boundaries of a metallic object.

Detected utilities were marked on the ground with surveyor's paint. Lines that could not be traced to a pipe stick up are labelled with an "L" and marked in pink on the Figures. Unknown lines that were not detected in the field but were interpreted from the EM-61 data are also labeled with an "L" and are marked with dashed pink lines in the Figures.

4.0 RESULTS

A geophysical interpretation map is presented in Figure 1, contour maps of the EM-31 conductivity and in-phase data are presented in Figure 2 and Figure 3, respectively and a contour map of the EM-61 differential data is presented as Figure 4. A contour map of GPR signal intensity of the upper foot of soil is presented in Figure 5.

4.1 EM-31

The colors in the EM-31 contour maps represent the magnitudes of the measured values where yellow to light green colors represent background readings, deep green to blue colors represent measured values below background and orange to pink colors represent increasing values above background. The dimensions of EM-31 anomalies are usually much larger than the dimensions of the corresponding sources, however small objects like scrap metal are usually undetected by the EM-31. It should be noted that the orientation of the EM-31 coils relative to a conductor will influence the magnitude of the measured values. When crossing a linear conductor at a right angle to oblique angle, the EM-31 response is typically negative over the conductor with positive "shoulders" either side of the conductor. When surveying parallel to a linear conductor the EM-31 response is typically positive and well above background readings. A discussion of the anomalies identified within the area of investigation may be found below.

There are several moderate- to high-amplitude linear EM-31 anomalies within the survey area. The construction fences surrounding the area of investigation produced linear conductivity and in-phase highs along the perimeter of the survey area. A linear in-phase low was detected running through the alley and may be the result of an electric line.

Surface metal such as the metal plate and sign located adjacent to pallets in the soil covered lot produced the most significant high-amplitude EM-31 anomalies.

The conductivity is slightly higher in the southern asphalt covered lot compared to the northern soil covered lot. The fill in the southern lot may be finer or may hold more moisture.

4.2 EM-61

The color scale in the contour map of the EM-61 differential data shows the magnitudes of the measured EM-61 values where yellow to light green colors represent background readings, deep green colors represent measured values below background and orange to pink represent increasing values above background. Due to the sensitivity of the EM-61, anomalies are usually exaggerated compared to the actual dimensions of the source metal. It is common for a sheared fence post to produce a 7-foot by 7-foot EM-61 anomaly while a 600-gallon UST buried 4 feet below ground surface can produce an EM-61 anomaly with dimensions of 15 feet by 15 feet. The findings of the survey are discussed below.

There are several moderate-amplitude linear EM-61 anomalies. These anomalies are the result of surface metal such as the fences and buried linear conductors. Many of the linear anomalies were reinvestigated with the M-Scope metal detector to confirm the locations of the anomalies. Linear anomalies not traced to a riser are marked in pink. Some of these lines may be abandoned pipes, but could also be rebar or other features related to the demolished structures that were present on the site. There are also several low-amplitude anomalies that were not detected with the utility locators. These anomalies were dashed in pink on the Figures. The sources of these anomalies could be discarded metallic features from the demolition of the former building. Small EM-61 anomalies are marked with pink diamonds on the maps. The sources of these anomalies are expected to be buried debris.

4.3 GPR

GPR profiles were acquired in the northernmost portion of the site where the majority of EM-61 anomalies were detected. The GPR was effective at imaging some shallow buried features. The anomalies detected with the GPR were all within a foot of the ground surface. The detected GPR reflectors were generally horizontal and very close to the surface which may indicate that the sources of these anomalies are construction debris.

5.0 LIMITATIONS

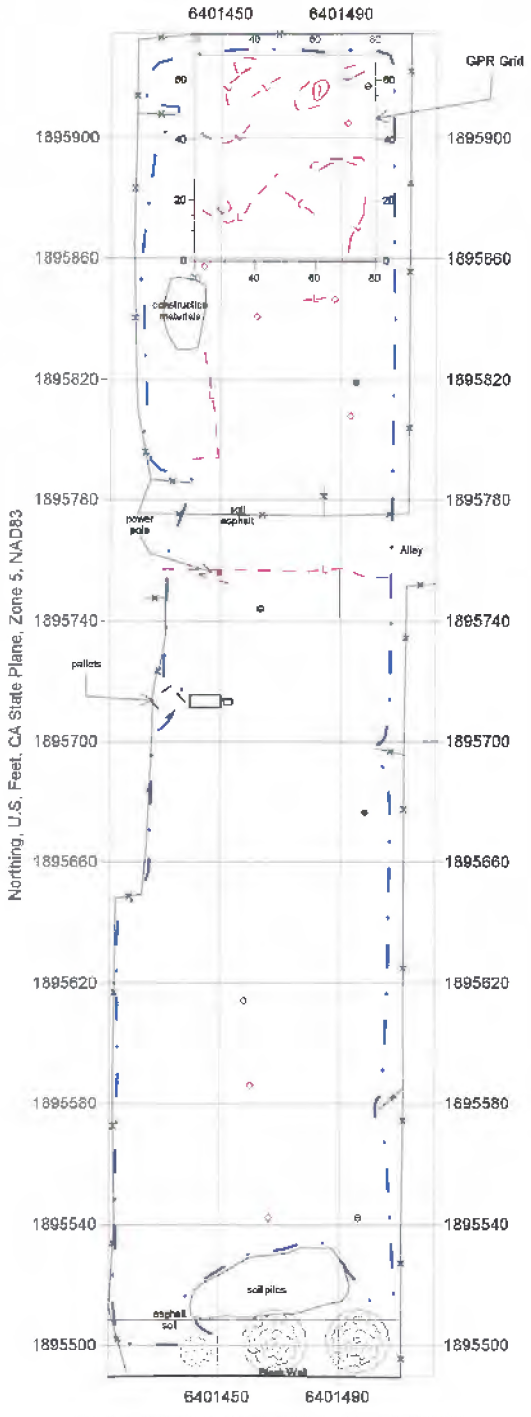
The detection of subsurface objects and utilities is dependent upon acquiring reliable data with geophysical instruments above ground. These data may be interpreted as representative of subsurface objects. The electromagnetic fields being measured, however, may be attenuated and/or distorted by a number of factors including soil moisture, corrosion and proximity to other surface and subsurface structures. A discussion of the limitations of each method follows.

5.1 EM-31 & EM-61

The EM-31 and EM-61 are capable of detecting a 55-gallon drum up to a depth of 3 meters under favorable conditions. We recommended a minimum 10-foot buffer between the survey area and any metal bearing surface cultural features such as fences, reinforced concrete or above ground pipes which could severely compromise the quality of the data. The EM data collected within 8 feet of surface metal at this site such as the fences, metal plates or construction materials influenced the EM-31 and EM-61 responses adversely. As a result, Spectrum cannot guarantee that subsurface features were detectable beneath of adjacent to surface metal.

5.2 GPR

The performance capability of GPR is dependent on the electrical conductivity of the soil at the site. If the soil conductivity is high, attenuation of the radar signal in the soil can severely restrict the maximum penetration depth of the radar signal. Under favorable conditions depth of penetration can be greater than 10 feet; however, average depths of GPR penetration in Southern California tend to range between 2-5 feet. Soil moisture, especially in clay rich soils, only increases the radar signal attenuation, further limiting the radar performance. The penetration depth of the GPR signal was approximately 3 feet at this site.



N

W E

S

LEGEND

- Area of Geophysical Investigation
- Linear Conductor (dashed where interpreted from EM Data)
- GPR Anomaly
- Buried Metal
- Fence
- Surface Metal
- Tree
- Proposed Boring Location

0 20 40
(feet)

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MAP: **Site Map with Geophysical Interpretation**

PROJECT: Future Reseda Ice & Roller Rink
18210 Sherman Way
Reseda, California

FIGURE NO.: **1**

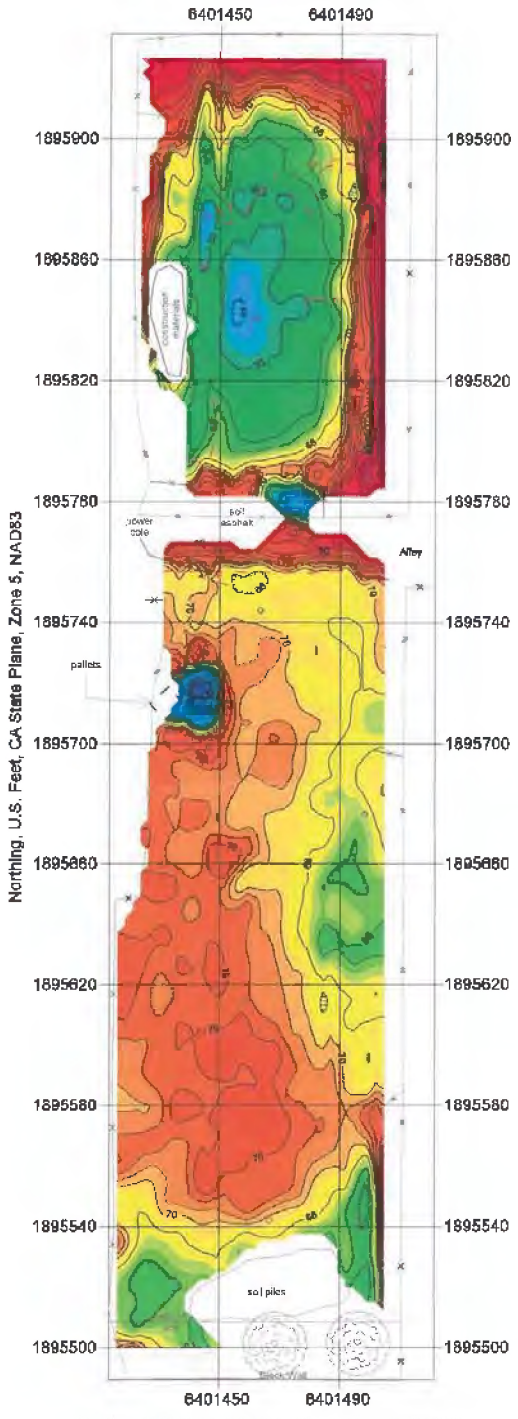
PREPARED FOR: Converse Consultants
Monrovia, California

PROJECT NO.: 1244

SCALE: 1 inch = 40 feet

DRAWN BY: C. Carter

DATE: 08/13/19



LEGEND

- Linear Conductor (dashed where interpreted from EM Data)
- GPR Anomaly
- Buried Metal
- Fence
- Surface Metal
- Tree
- Proposed Boring Location

0 20 40 (feet)

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MAP: Contour Map of EM-31 Conductivity Data

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FIG. NO.: 2

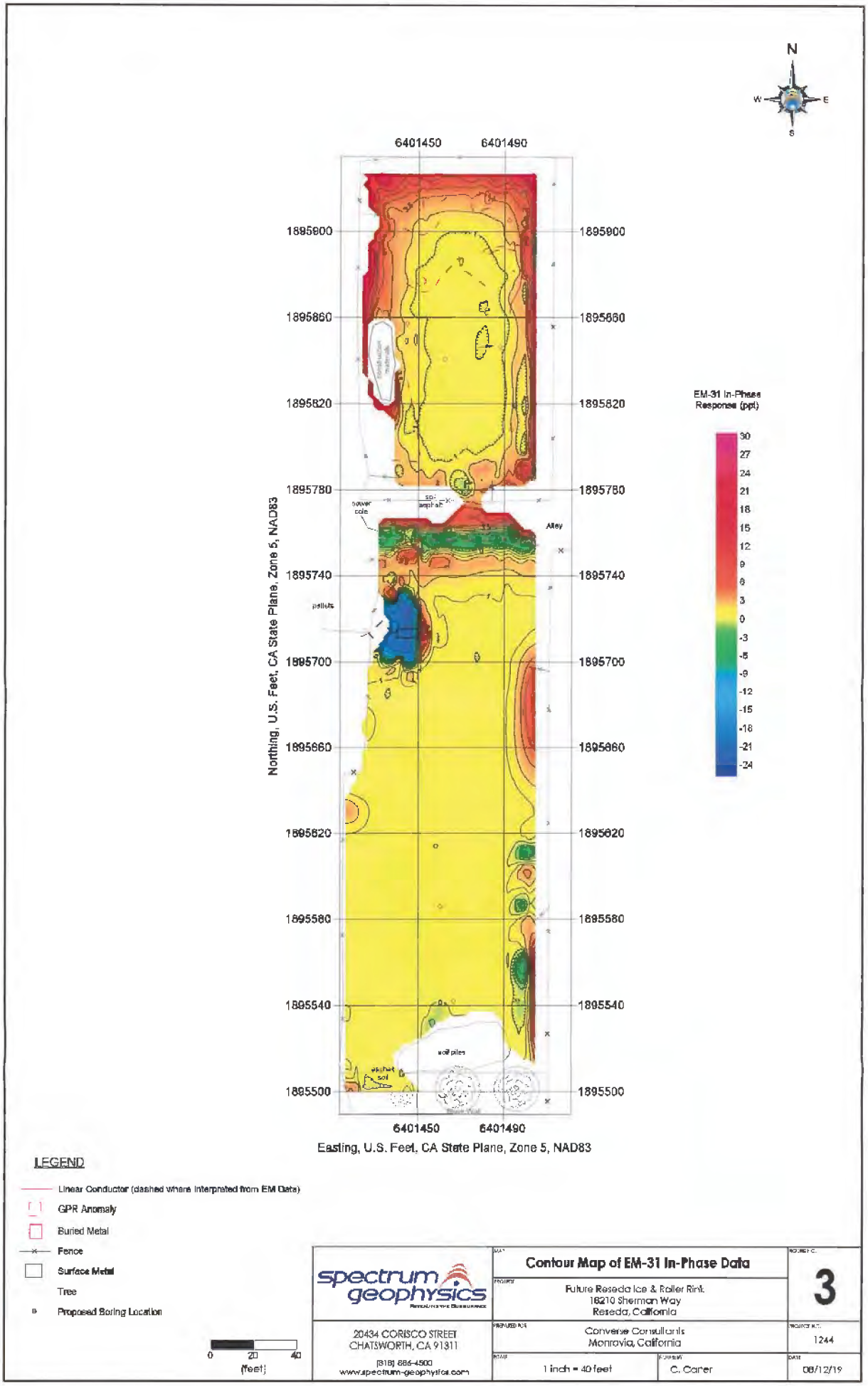
PREPARED FOR: Converse Consultants
Monrovia, California

PROJECT NO.: 1244

SCALE: 1 inch = 40 feet

DRAWN BY: C. Carter

DATE: 08/ 2/19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E
S
6401450
6401490
1895900
1895860
1895820
1895780
1895740
1895700
1895660
1895620
1895580
1895540
1895500
Northing, U.S. Feet, CA State Plane, Zone 5, NAD83
Easting, U.S. Feet, CA State Plane, Zone 5, NAD83
EM-31 In-Phase Response (ppt)
30
27
24
21
18
15
12
9
6
3
0
-3
-6
-9
-12
-15
-18
-21
-24
sd: asphalt
power pole
Alley
pellets
soil piles
washed soil
LEGEND
Linear Conductor (dashed where interpreted from EM Data)
GPR Anomaly
Buried Metal
Fence
Surface Metal
Tree
Proposed Boring Location
0
20
40
(feet)
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Contour Map of EM-31 In-Phase Data
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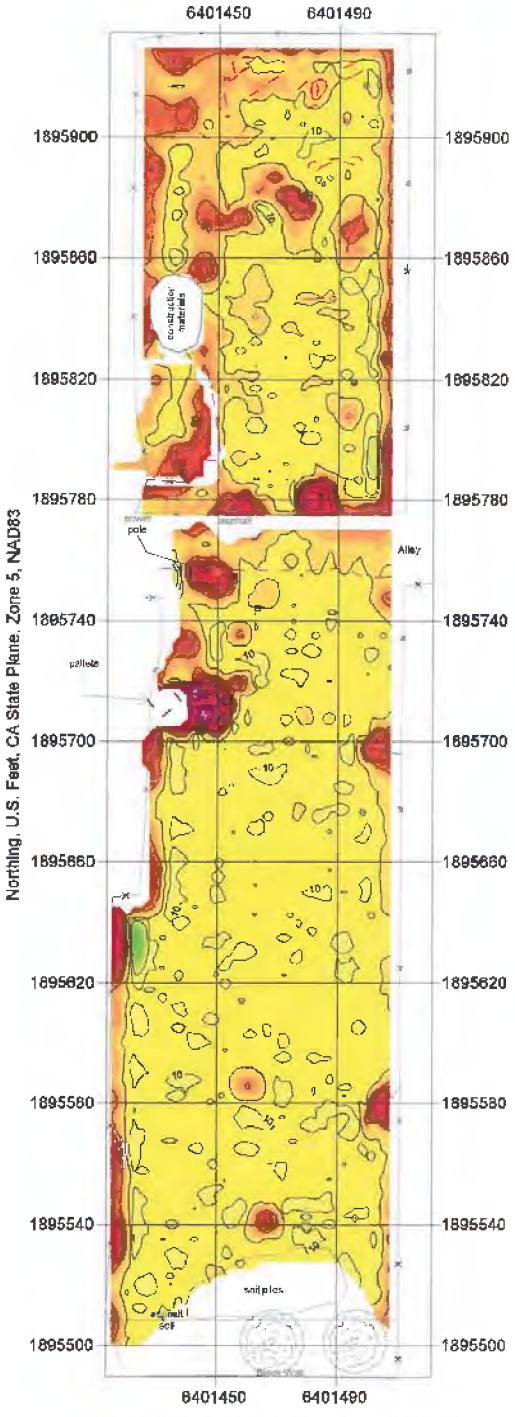
18210 Sherman Way
Reseda, California
3
Converse Consultants
Monrovia, California
1244
1 inch = 40 feet
C. Carter
08/12/19



N
W
E
S

LEGEND

- Linear Conductor (dashed where interpreted from EM Data)
- GPR Anomaly
- Buried Metal
- Fence
- Surface Metal
- Tree
- Proposed Boring Location

0 20 40
(feet)

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MAP: Contour Map of EM-61 Differential Data

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Reseda, California

PREPARED FOR: Converse Consultants
Monrovia, California

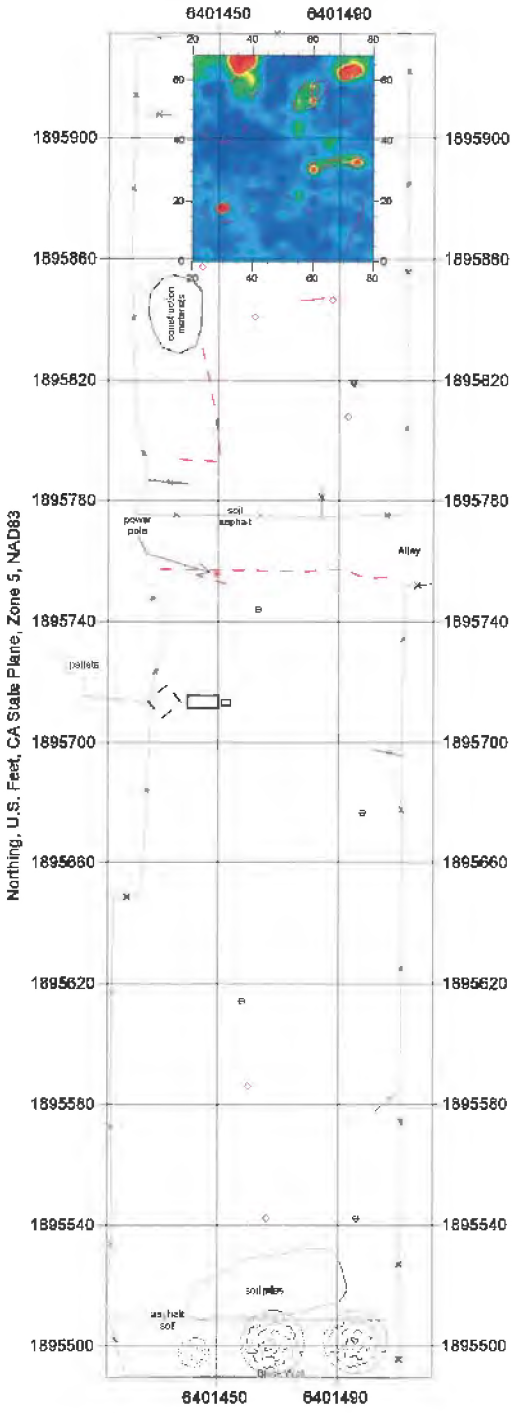
SCALE: 1 Inch = 40 feet

ENGINEER: C. Carter

FIGURE NO.: 4

PROJECT NO.: 1244

DATE: 08/12/19



N
W
E
S

GPR Signal Intensity

High-Amplitude

Low-Amplitude

LEGEND

- Linear Conductor (dashed where interpreted from EM Data)
- GPR Anomaly
- Buried Metal
- Fence
- Surface Metal
- Tree
- Proposed Boring Location

0 20 40
(feet)

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Contour Map of GPR Signal Intensity (0 - 9ns)

FIGURE NO. 5

PROJECT: Future Reseda Ice & Roller Rink
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Reseda, California

PREPARED FOR: Converse Consultants
Monrovia, California

PROJECT NO.: 1244

SCALE: 1 inch = 40 feet

REVIEWED: C. Carter

DATE: 08/12/19